APPENDICES

APPENDIX - 1

MEMBER LIST OF THE STUDY TEAM

Appendices-1: Member List of the Study Team (1st Visit)

The Basic Design Study on the Project for
Extension and Reinforcement of Power Transmission and Distribution System
in Kathmandu Valley (Phase-3)

(Site Survey)

1. Shoshiro HORIGOME
   Team Leader
   Senior Advisor,
   Institute for International Cooperation, JICA

2. Hidetaka SAKABE
   Project Coordinator
   Officer,
   Third Project Management Division,
   Grant Aid Management Department, JICA

3. Tomoyasu FUKUCHI
   Chief Consultant / Power Supply Planner
   Nippon Koei Co., Ltd.

4. Toshinari UEMURA
   Substation Planner
   Nippon Koei Co., Ltd.

5. Hiroyuki MORITA
   Transmission Line Planner
   Nippon Koei Co., Ltd.

6. Kazuyuki TADA
   Procurement Planner / Cost Estimator
   Nippon Koei Co., Ltd.

Appendices-1: Member List of the Study Team (2nd Visit)

The Basic Design Study on the Project for
Extension and Reinforcement of Power Transmission and Distribution System
in Kathmandu Valley (Phase-3)

(Explanation on Draft Basic Design Report)

1. Eitaro MITOMA
   Team Leader
   Resident Representative,
   JICA Nepal Office

2. Hidetaka SAKABE
   Project Coordinator
   Officer,
   Third Project Management Division,
   Grant Aid Management Department, JICA

3. Tomoyasu FUKUCHI
   Chief Consultant / Power Supply Planner
   Nippon Koei Co., Ltd.

4. Toshinari UEMURA
   Substation Planner
   Nippon Koei Co., Ltd.

5. Hiroyuki MORITA
   Transmission Line Planner
   Nippon Koei Co., Ltd.

APPENDIX - 2

STUDY SCHEDULE

Appendices-2: Study Schedule

(Site Survey)

No.	Date	Day	Stay	Official		Consultant		
				JICA Mr. Horigome (Team Leader)	JICA Mr. Sakabe (Project Coordinator)	Mr. Fukuchi	Mr. Uemura	Mr. Morita
1	Apr. 9	Tue	Bangkok		Narita(TG641/11:00)→Bangkok(15:30)			
2	Apr. 10	Wed	Kathmandu		Bangkok(TG319/10:30)→Kathmandu(12:35), Courtesy Call on Embassy of Japan and JICA Office			
3	Apr. 11	Thu	Kathmandu		Courtesy Call on Ministry of Water Resources and Nepal Electricity Authority, General Explanation of the Project			
4	Apr. 12	Fri	Kathmandu		Courtesy Call on Asian Development Bank, Site Survey			
5	Apr. 13	Sat	Kathmandu		Site Survey			
6	Apr. 14	Sun	Kathmandu		Internal Meeting, Data Arrangement and Preparation of Contract on Geological Survey			
7	Apr. 15	Mon	Kathmandu		Discussion between NEA and the Team, Site Survey			
8	Apr. 16	Tue	Kathmandu	Narita(TG641/11:00) →Bangkok(15:30)	Site Survey, Internal Meeting, Data Arrangement and Preparation of Contract on Geological Survey			
9	Apr. 17	Wed	Kathmandu	Bangkok(TG319/10:30) →Kathmandu(12:35), Internal Meeting	Discussion between NEA and the Team, Site Survey, Internal Meeting and Preparation of Contract on Geological Survey			
10	Apr. 18	Thu	Kathmandu	Discussion between NEA and the Team, Site Survey		Site Survey, Data Collection, Preparation of Contract on Geological Survey, Route Survey for 66kV T/L		
11	Apr. 19	Fri	Kathmandu	Signing on the Minutes and Reporting to Embassy of Japan and JICA Office		Site Survey, Data Arrangement and Route Survey for 66kV T/L		
12	Apr. 20	Sat	Kathmandu	Kathmandu(TG320/13:40)→Bangkok(18:10), Bangkok(NH916/23:15)→Narita(07:10, Apr. 19)		Site Survey, Internal Meeting, Data Arrangement and Route Survey for 66kV T/L		
13	Apr. 21	Sun	Kathmandu			Site Survey, Data Arrangement and Route Survey for 66kV T/L		
14	Apr. 22	Mon	Kathmandu			Site Survey, Data Arrangement and Route Survey for 66kV T/L		
15	Apr. 23	Tue	Kathmandu			Site Survey and Data Arrangement		
16	Apr. 24	Wed	Kathmandu			Site Survey and Data Arrangement		
17	Apr. 25	Thu	Kathmandu			Discussion between NEA and the Team, Site Survey and Data Collection		
18	Apr. 26	Fri	Kathmandu			Discussion between NEA and the Team		
19	Apr. 27	Sat	Kathmandu			Internal Meeting and Data Arrangement		
20	Apr. 28	Sun	Kathmandu			Data Arrangement	Kathmandu(TG320/13:40) →Bangkok(18:10)	
21	Apr. 29	Mon	Kathmandu			Site Survey and Data Collection	Bangkok(TG642/11:20) →Narita(19:30)	
22	Apr. 30	Tue	Kathmandu			Data Collection and Reporting to JICA Office		
23	May 1	Wed	Bangkok			Kathmandu(TG320/13:40)→Bangkok(18:10)		
24	May 2	Thu				Bangkok(TG640/11:20)→Narita(19:30)		

Appendices-2: Study Schedule

(Explanation on Draft Basic Design Report)

No.	Date	Day	Stay	Official		Consultant		
				JICA Mr. Mitoma (Team Leader)	JICA Mr. Sakabe (Project Coordinator)	Mr. Fukuchi	Mr. Uemura	Mr. Morita
1	Aug. 31	Sat	Bangkok		Narita(TG641/11:00)→Bangkok(15:30)			
2	Sep. 1	Sun	Kathmandu		Bangkok(TG319/10:30)→Kathmandu(12:35)			
3	Sep. 2	Mon	Kathmandu	Courtesy Call on Ministry of Water Resources, Nepal Electricity Authority(NEA), and Report to Embassy of Japan, JICA KTM				
4	Sep. 3	Tue	Kathmandu	Explanation on Draft Basic Design Report and Discussion with NEA				
5	Sep. 4	Wed	Kathmandu	Discussion with NEA for finalization of Minutes				
6	Sep. 5	Thu	Kathmandu	Discussion with NEA and Signing of Minutes				
7	Sep. 6	Fri	Kathmandu	Report to Embassy of Japan and JICA KTM				
					Kathmandu(TG320/13:40) →Bangkok(18:10), Bangkok(TG642/23:10)→ Narita(07:30, Sep. 7)			
8	Sep. 7	Sat	Kathmandu			Supplementary Survey and Data Collection, Discussion with NEA on Technical Matters		
9	Sep. 8	Sun	Kathmandu					
10	Sep. 9	Mon	Kathmandu					
11	Sep. 10	Tue	Kathmandu					
12	Sep. 11	Wed	(in Flilght)			Kathmandu(TG320/13:40)→Bangkok(18:10), Bangkok(TG642/23:10)→Narita(07:30, Sep.12)		

APPENDIX - 3

LIST OF PARTIES CONCERNED IN THE RECIPIENT COUNTRY

Appendices-3: List of Parties Concerned in the Recipient Country

**The Basic Design Study on the Project for
Extension and Reinforcement of Power Transmission and Distribution System
in Kathmandu Valley (Phase-3)**

(Site Survey)

1. Ministry of Water Resources

1.	Mr. Bishnu B. Thapa	Joint Secretary, Policy, Planning & Environment

2. Nepal Electricity Authority

1.	Mr. Bishnu Bam Malla	Managing Director
2.	Mr. Bhuwan Chand Thakuri	Deputy Managing Director, Generation and Transmission
3.	Mr. Prachar M. S. Pradhan	Deputy Managing Director, Planning & Administration
4.	Mr. D. B. Thapa	Deputy Managing Director, Power Development
5.	Mr. Uttar K. Shrestha	Director, Financial Management Department
6.	Mr. Bhoj Raj Regmi	Director, Medium Hydro Department
7.	Mr. Shyam B. Shrestha	Chief, Grid Operation Department
8.	Mr. Jeevan R. Shrestha	Chief, Corporate Planning Department
9.	Mr. Keshab B. Shrestha	Chief, System Planning Department
10.	Mr. Shree P. J. Rana	Chief, Training Centre
11.	Mr. Mrigendra P. Pradhan	Manager, Load Dispatch Center
12.	Mr. Mahendra L. Shrestha	Manager, Transmission Line Design and Construction Department
13.	Mr. Tirtha M. Shakya	Manager, Bagmati Transmission Division
14.	Mr. Divakar Vaidya	Deputy Manager, Transmission Line Design and Construction Department

3. Department of Roads

1.	Mr. D. B. Thapa	Regional Director, Central Regional Road Directorate No. 2
2.	Mr. Sunil Poudyal	Traffic Engineering and Safety Unit

4. Asian Development Bank

1.	Mr. Krishna R. Panday	Project Implementation Officer

Appendices-3: List of Parties Concerned in the Recipient Country

**The Basic Design Study on the Project for
Extension and Reinforcement of Power Transmission and Distribution System
in Kathmandu Valley (Phase-3)**

(Explanation on Draft Basic Design Report)

1. Ministry of Water Resources

1.	Mr. Bishnu B. Thapa	Joint Secretary, Policy, Planning & Environment

2. Nepal Electricity Authority

1.	Dr. Janak Lall Karmacharya	Managing Director
2.	Mr. Bhuwan Chand Thakuri	Deputy Managing Director, Generation and Transmission
3.	Mr. Gobinda K. C.	General Manager, Generation
4.	Mr. Balaram Shrestha	Director, Transmission Line/Substation Construction Department
5.	Mr. Keshab B. Shrestha	Chief, System Planning Department
6.	Mr. Dipak P. Upadhyay	Chief, Grid Operation Department
7.	Mr. Mrigendra P. Pradhan	Manager, Load Dispatch Center
8.	Mr. Krishna J. Rayamajhi	Project Manager, K-3 Substation Project
9.	Mr. Tirtha. M. Shakya	Manager, Bagmati Transmission Division
10.	Mr. Divakar Vaidya	Deputy Manager, Transmission Line/Substation Construction Department

APPENDIX - 4

MINUTES OF DISCUSSIONS
(April 19 & September 5, 2002)

Minutes of Discussions on the Basic Design Study on the Project for Extension and Reinforcement of Power Transmission and Distribution System in Kathmandu Valley (Phase-3) in the Kingdom of Nepal.

In response to a request from the Government of the Kingdom of Nepal (hereinafter referred to as "Nepal"), the Government of Japan decided to conduct a Basic Design Study on the project for Extension and Reinforcement of Power Transmission and Distribution System in Kathmandu Valley (Phase-3) (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Nepal the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Shoshiro Horigome, a Senior Advisor, Institute for International Cooperation, JICA and is scheduled to stay in the country from April 10 to May 1, 2002.

The Team held discussions with the officials concerned of the Government of Nepal and conducted a field survey at the study area.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

Kathmandu, April 19, 2002

Shoshiro Horigome
Leader
Basic Design Study Team
Japan International Cooperation Agency

Bishunu Bam Malla
Managing Director
Nepal Electricity Authority

ATTACHMENT

1. Objective of the Project

The objective of the Project is to construct the Kathmandu-3 substation (hereinafter referred to as "the K3 substation") and connect transmission line to the Kathmandu-3 substation for reinforcement of the power distribution to the center of Kathmandu city.

2. Project Site

The site of the Project is shown in Annex-1.

3. Responsible and Implementing Organizations

The responsible Ministry is the Ministry of Water Resources (MOWR).

The implementing agency is the Nepal Electricity Authority (NEA).

The organization chart of implementing agency is shown in Annex-2.

4. Items requested by the Government of Nepal

After discussions with the Team, the following components of the Project were finally requested by the Nepalese side.

- Construction of new K3 substation comprising of 66/11kv, 36MVA transformers (including switchgears, 11kV cubicles).
- Procurement and installation of 66kV transmission line and related equipment necessary for feeding to the K3 substation.

JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

5. Japan's Grant Aid Scheme

5-1. The Nepalese side understands the Japan's Grant Aid scheme explained by the Team, as described in Annex-3.

5-2. The Nepalese side will take the necessary measures, as described in Annex-4, for smooth implementation of the Project, as a condition for the Japan's Grant Aid to be implemented.

6. Schedule of the Study

6-1. The consultants will proceed to further study in Nepal until May 1, 2002.

6-2. JICA will prepare the draft report in English and dispatch a mission to Nepal in order to explain its contents the end of August 2002.

6-3. In case that the contents of the report are accepted in principle by the Government of Nepal, JICA will complete the final report and send it to the Government of Nepal by December, 2002.

7. Other Relevant Issues

7-1. The Nepalese side explained that the land for the planned site of the K3 substation had been provided from the Singha Durbar Reconstruction Project, which is responsible for managing the land inside Singha Durbar secretariat.

7-2. The Nepalese side requested the following considerations on the equipment planning.

- the installation of 66kV switchgears in Siuchatar Substation,
- the installation of Remote Terminal Unit (RTU) in the K3 Substation for Load Dispatching Center (LDC) and communication line between Siuchatar and the K3 substation.

7-3. The Nepalese side strongly requested the procurement, install and test of equipment necessary for the connection from the K3 substation to existing 11kV feeder to be implemented by the Grant Aid.

7-4. The Nepalese side confirmed that the following undertakings should be taken by the Nepalese side at the Nepalese expenses.

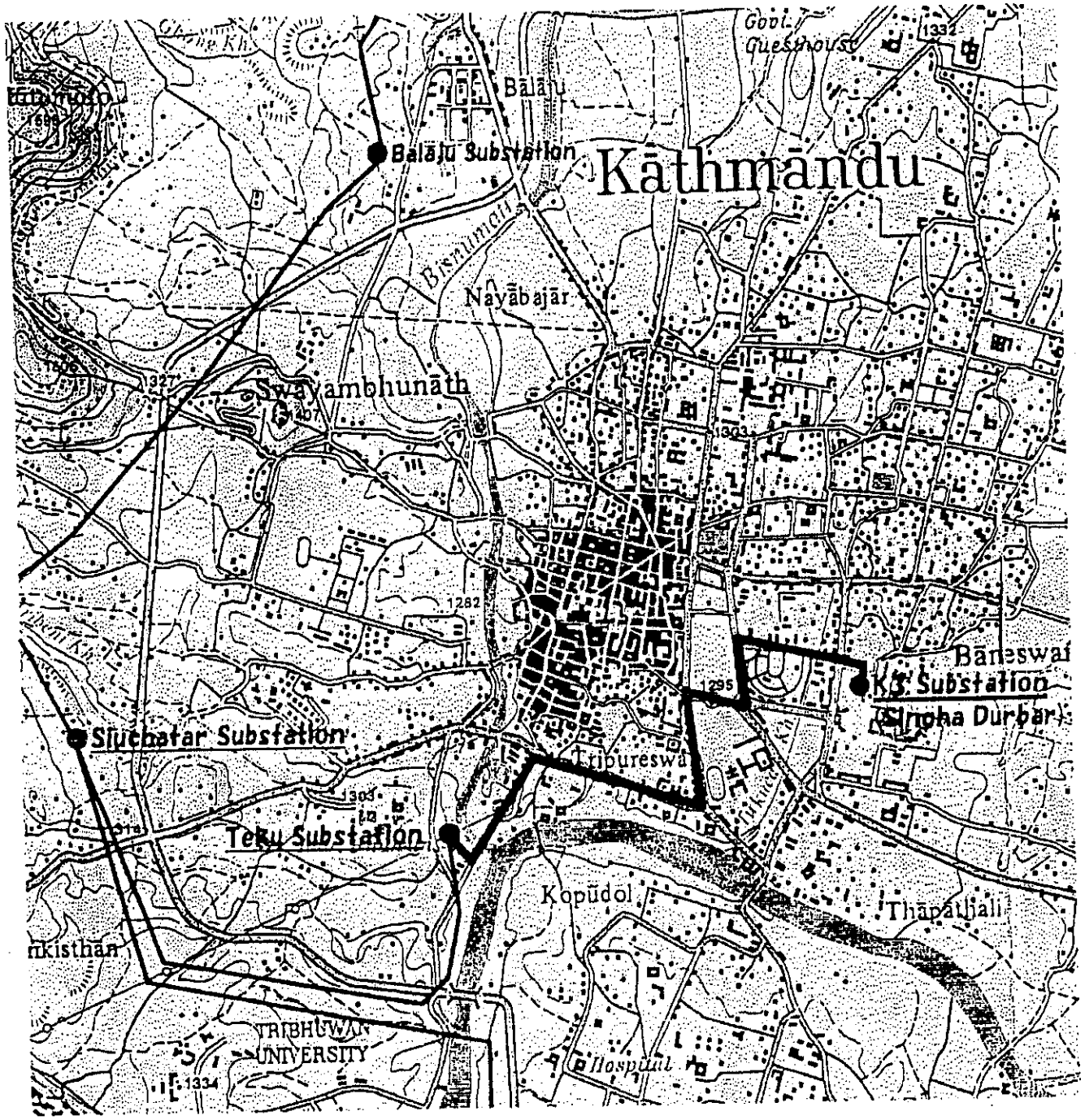
- the security and clearance of the land necessary for the K3 substation and 66kV transmission line (including stock yard),
- the improvement and/or repair of feeder from the K3 substation to customers, if necessary.

7-5. The Nepalese side shall take necessary procedures to implement the Initial Environment Evaluation (IEE) and/or the Environmental Impact Assessment (EIA), if necessary, before the commencement of the Project.

7-6. The Nepalese side shall take necessary procedures to obtain the permissions for implementation of the Project, such as the permission for excavation of roads, construction of building, etc.

7-7. The Nepalese side shall secure enough budget and personnel necessary for the operation and maintenance of the facilities implemented by the Project, including the periodical maintenance work after the completion of the Project.

PROJECT SITE

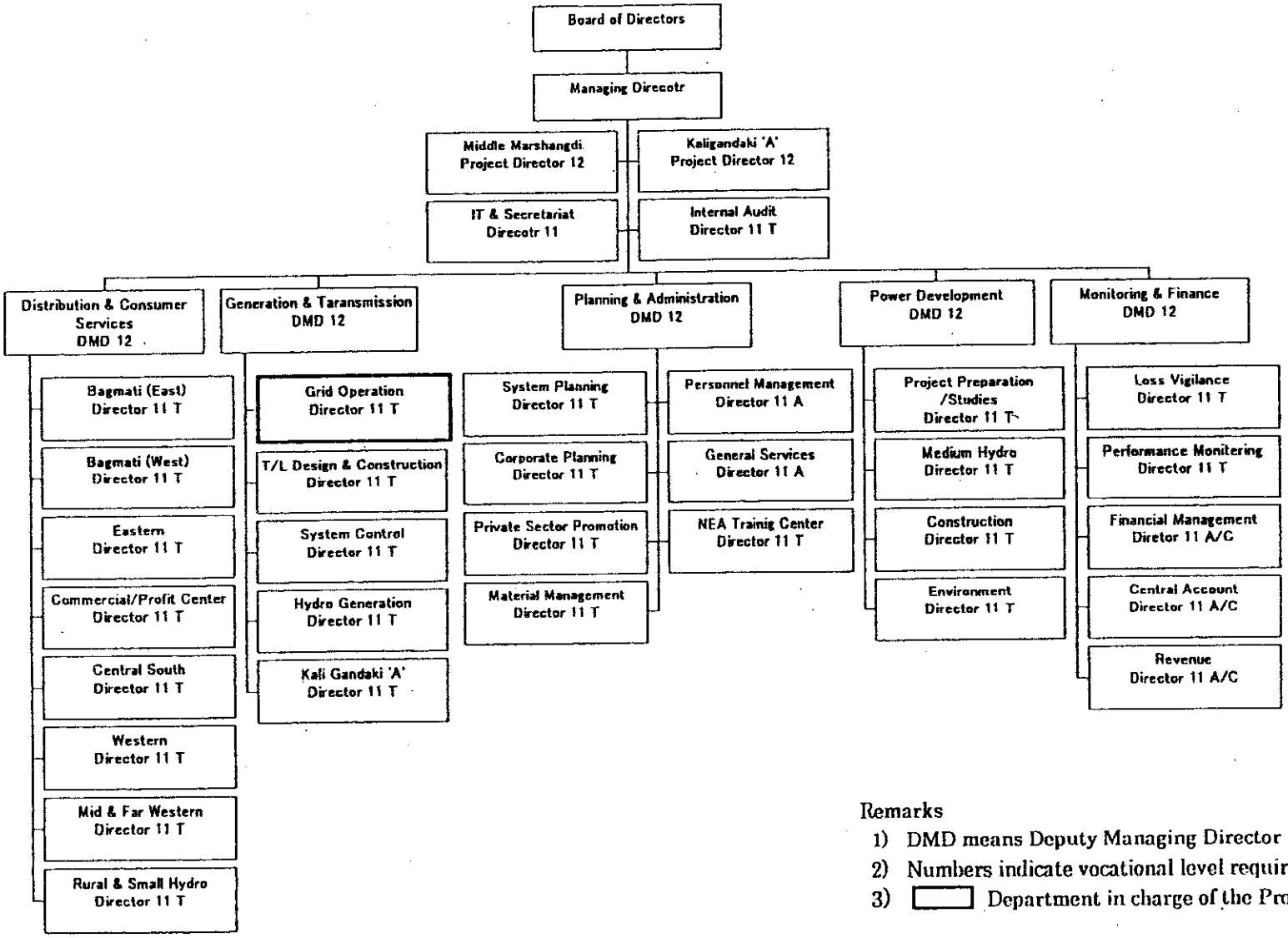


*Remarks

The planned route of 66kv transmission line requested by the Nepalese side

The existing 66kv transmission line

ORGANIZATION CHAT OF NEPAL ELECTRICITY AUTHORITY



Remarks

1) DMD means Deputy Managing Director
2) Numbers indicate vocational level required
3) ☐ Department in charge of the Project

(Annex-2)

-5-

JAPAN'S GRANT AID SCHEME

The Grant Aid scheme provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

Japan's Grant Aid scheme is executed through the following procedures.

Application	(Request made by a recipient country)
Study	(Basic Design Study conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan and Approval by Cabinet)
Determination of Implementation	(The Notes exchanged between the Governments of Japan and the recipient country)

Firstly, the application or request for a Grant Aid Project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (the Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using Japanese consulting firms.

Thirdly, the Government of Japan appraises the Project to see whether or not it is suitable for Japan's Grant Aid scheme, based on the Basic Design Study Report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes (E/N) signed by the Governments of Japan and the recipient country.

Finally, for the smooth implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Basic Design Study

1) Contents of the Study

The aim of the Basic Design Study (hereinafter referred to as "the Study"), conducted by JICA on a requested project (hereinafter referred to as "the Project"), is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid scheme from a technical, social and economic point of view.
- Confirmation of items agreed upon by both parties concerning the basic concept of the Project.

- Preparation of a basic design of the Project.
- Estimation of cost of the Project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid Project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even through they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For smooth implementation of the Study, JICA uses registered consulting firms. JICA selects firms based on proposals submitted by interested firms. The firms selected carry out a Basic Design Study and write a report, based upon terms of reference set by JICA.

The consulting firms used for the Study are recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. Japan's Grant Aid Scheme

1) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

2) "The period of the Grant Aid" means the one fiscal year which the Cabinet approves the project for. Within the fiscal year, all procedure such as exchanging of the Notes, concluding contracts with consulting firms and contractors and final payment to them must be completed.

However, in case of delays in delivery, installation or construction due to unforeseen factors such as natural disaster, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

3) Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However, the prime contractors, namely consulting, contracting and procurement firms, are limited to "Japanese nationals." (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

4) "Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

6

5) Undertakings required to the Government of the recipient country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as the following:

a) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction,
b) To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities in and around the sites,
c) To secure buildings prior to the procurement in case the installation of the equipment,
d) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,
e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies including Value Added Tax which will be imposed in the recipient country with respect to the supply of the products and services under the verified contracts,
f) To accord Japanese nationals, whose services may be required in connection with supply of the products and services under the verified contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

6) "Proper Use"

The recipient country is required to operate and maintain the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

7) "Re-export"

The products purchased under the Grant Aid should not be re-exported from the recipient country.

8) Banking Arrangement (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the verified contracts,
b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay (A/P) issued by the Government of recipient country or its designated authority.

9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions to the Bank.

(ANNEX-4)

Major Undertakings to be Taken by Each Government

NO	Items	To be covered by Grant Aid	To be covered by Recipient side
1	To Secure land (including temporary yard)		●
2	To clear, level and reclaim the site		●
3	To construct gates and fences in and around the site.		●*1
4	To construct the parking lot in the site	●	
5	To construct roads within the site	●	
6	To construct the buildings of K3 substation	●	
7	To provide facilities for the distribution of electricity, water, drainage and other incidental facilities		
	1) Electricity		
	a. The main circuit breaker and transformer	●	
	b. The drop wiring and internal wiring within the site	●	
	2) Water supply		
	a. The city water distribution to the site		●
	b. The supply system within the site (receiving and elevated tank)	●	
	3) Drainage		
	a. The city drainage pipe (for storm, sewer and others) from the site		●
	b. The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site.	●	
	4) Telephone system		
	a. The telephone trunk line to the distribution system frame/panel (MDF) of the building		●
	b. The MDF and the extension after the frame/panel	●	
	5) Furniture and Equipment		
	a. General furniture		●
	b. Project equipment	●	
8	To improve and/or repair of feeder from the K3 substation to customers when needed.		●
9	To bear the following commissions to a bank in Japan for the banking services based upon the B/A		
	1) Advising Commission of A/P		●
	2) Payment commission		●
10	To ensure prompt unloading and customs clearance at the port of disembarkation		
	1) Marine (Air) transportation of the products from Japan to the port of disembarkation	●	
	2) Tax exemption and customs clearance of the products at the port of disembarkation		●
	3) Inland transportation from the port of disembarkation to the project site	●	
11	To accord Japanese nationals, whose services may be required in connection with the supply of the products and the services under the verified contract, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
12	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		●
13	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
14	To bear all the expense, other than those to be borne by the Grant Aid, necessary for construction of the facilities		●

(B/A: Banking Arrangement, A/P: Authorization to pay)

*1. The fences and gates are already existing around the site.

6

Minutes of Discussions
on the Basic Design Study
on the Project for Extension and Reinforcement
of Power Transmission and
Distribution System in Kathmandu Valley (Phase-3)
in the Kingdom of Nepal.
(EXPLANATION OF DRAFT REPORT)

In April 2002, the Japan International Cooperation Agency (JICA) dispatched a Basic Design Study Team on the Project for Extension and Reinforcement of Power Transmission and Distribution System in Kathmandu Valley (Phase-3) (the Project) to the Kingdom of Nepal, and through discussion, field survey, and technical examination of the results in Japan, JICA prepared a draft report of the study.

In order to explain and to consult with the officials concerned of His Majesty's Government of Nepal (HMG/N) on the components of the draft report, JICA sent to the Kingdom of Nepal the Explanation Team (the Team), which is headed by Mr. Eitaro Mitoma, Resident Representative of the JICA Nepal Office, from September 1 to 11, 2002.

As a result of discussions between the Team and Nepal Electricity Authority (NEA), both sides confirmed the main items described on the attached sheets.

Kathmandu, September 5, 2002

Eitaro Mitoma
Leader
Basic Design Study Team
Japan International Cooperation Agency

Janak L. Karmacharya Ph.D
Managing Director
Nepal Electricity Authority

ATTACHMENT

1.Components of the Draft Report

NEA agreed and accepted in principle the components of the draft report, including the design of the building, and draft detailed specifications of the equipment explained by the Team.

2.Japan's Grant Aid Scheme

NEA shall take necessary measures as explained by the Team and described in Annex-3 and Annex-4 of the Minutes of Discussions signed by both parties on April 19, 2002.

3.Schedule of the Study

JICA will complete the final report taking into consideration of the discussions between the Team and NEA, and send it to HMG/N and NEA by the end of December, 2002.

4. Tax Exemption

NEA shall take necessary procedure for the tax exemption for the import of the equipment procured by the Project based on Exchange of Notes, signed between the Government of Japan and HMG/N, and the prevailing rules and regulations of HMG/N.

5. Other Relevant Issues

5-1. The Team handed one copy of the draft detailed specifications of the equipment to Mr. Balaram Shrestha, Director of Transmission Line/Substation Construction Department, NEA. Both sides agreed that this draft specifications were confidential and should not be duplicated or released to any outside parties.

5-2. NEA shall implement the transmission line between the 11kV cubicles in the K3 substation and the existing 11kV transmission line abreast with the implementation of the Project; this work includes the connection to the 11kV cubicles.

5-3. NEA shall submit the application for Initial Environment Evaluation (IEE) to the Ministry of Water Resources (MOWR) by September 10, 2002. And NEA shall endeavor to complete the necessary procedure to implement IEE by the end of November, 2002.

5-4. NEA shall take necessary procedure to obtain permissions for the excavation of roads and approval of the building design for the K3 substation, based on the implementation schedule.

5-5. NEA shall haul earth and carry out the initial leveling of the K3 substation by the end of March, 2003.

5-6. NEA shall ensure smooth implementation of the Project by undertaking necessary activities in timely manner.

5-7. NEA shall secure an oil purifier necessary for the installation of 66/11kV transformer, and lend it gratis to the contractor for the installation work.

5-8. NEA shall secure enough budget and personnel necessary for the operation and maintenance, including the periodical maintenance, after the completion of the Project.

3.9a.

APPENDIX - 5

COST ESTIMATION BORNE BY THE RECIPIENT COUNTRY

APPENDIX - 5 Cost Estimation Borne by The Recipient Country

①	11 kV Distribution line connection	US$ 115,000
②	Reclamation by soil filling (Preparation of soil and initial leveling)	US$ 13,020
③	Wall construction	US$ 9,105
④	Telephone and water, drainage connection and furniture	US$ 2,500
	Total	US$ 139,625

In addition, the costs of B/A and A/P are also to be borne by Nepalese side.

①	Banking Arrangement (B/A)	NRs. 200,000	(US$ 2,600)
②	Reclamation by soil filling	0.1 % of the actual amount of payment	

APPENDIX - 6

LAND ALLOCATION FOR THE CONSTRUCTION OF THE SUBSTATION AT SINGH DURBAR

(April 17, 2002)

Singh Durbar Secretariat
Reconstruction Board

His Majesty's Government of Nepal
Ministry of Physical Planning and Works

SINGHA DURBAR SECRETARIATE RECONSTRUCTION PROJECT

Ref. No.: 058/59 Cha.no. 754

Date: 2059/1/4
(2002/4/17)

Subject: Land Allocation for the Construction of the Substation at Singh Durbar

Nepal Electricity Authority
Generation and Transmission
Grid Operation Department
Bagmati Transmission Division

We acknowledge the receipt of your letter with Ref. No. 2058/059 Cha. No. 727 dated 2058/12/26 on the captioned subject. In this regard, a land area of 2-0-0, (Two Ropanis, about 1000 m^2) has been allocated in the northwest corner of Singh Durbar premises as shown in the map, for the construction of the required Electrical Substation, without affecting the approved Master Plan of Singh Durbar Secretariat. The map with allocated site is attached herewith. You are requested to construct the Substation by demarcating the land in the presence of the technician from this project office.

Signed by
Ram Prasad Belbase
Administrative Officer

C.C:

Ministry of Physical Planning and Works
Singh Durbar

Ministry of Water Resources
Sigh Durbar

Department of Urban Development and Housing
Babarmahal

Nepal Electricity Authority
Durbar Marg

सिंहदरवार सचिवालय
पुनः निर्माण समिति

श्री ५ को सरकार
भौतिक योजना तथा निर्माण मन्त्रालय

सिंहदरवार सचिवालय पुनः निर्माण प्रोजेक्ट

पत्र संख्या :- ०५८\४९-च-२.६४८

प्राप्त पत्र संख्या र मिति :-

मितिः २०५९/१/४

विषय :- सिंहदरवार सब स्टेशन निर्माणको लागि साइट उपलब्ध गराएको ।

श्री नेपाल विद्युत प्राधिकरण
उत्पादन तथा प्रशारण, ग्रीड सन्चालन विभाग
वागमती प्रशारण महाशाखा, नयाँ बानेश्वर ।

उपर्यूक्त विषय ताहाँको प.स..२०५८।०५९ च.नं.७२७ मिति ०५८।१२।२६ को पत्र प्राप्त भै व्यहोरा अवगत भायो । तत्सम्बन्धमा पेश हुँदा सिंहदरवार क्षेत्रको स्वीकृत गुरुयोजना बमोजिम यस क्षेत्रलाई आवश्यक पर्ने विद्युत सब स्टेशन निर्माण गर्न स्वीकृत गुरुयोजनामा असर नपर्ने गरी सिंहदरवार उत्तर पश्चिम कुनामा नक्सामा लोकेट गरीएको स्थानमा २.०.० (दुई रोपनी) जग्गा उपलब्ध गराइएको छ । लोकेट गरीएको नक्सा थान १ एक यसैसाथ छ । उक्त जग्गा यस प्रोजेक्ट कार्यालयका प्राविधिकको रोहवरमा छुट्याई सब स्टेशन निर्माण गर्नु हुन अनुरोध छ ।

(रास प्रसाद बेल्वासे)
प्रशासकीय अधिकृत

प्रशासकिय अधिकृत

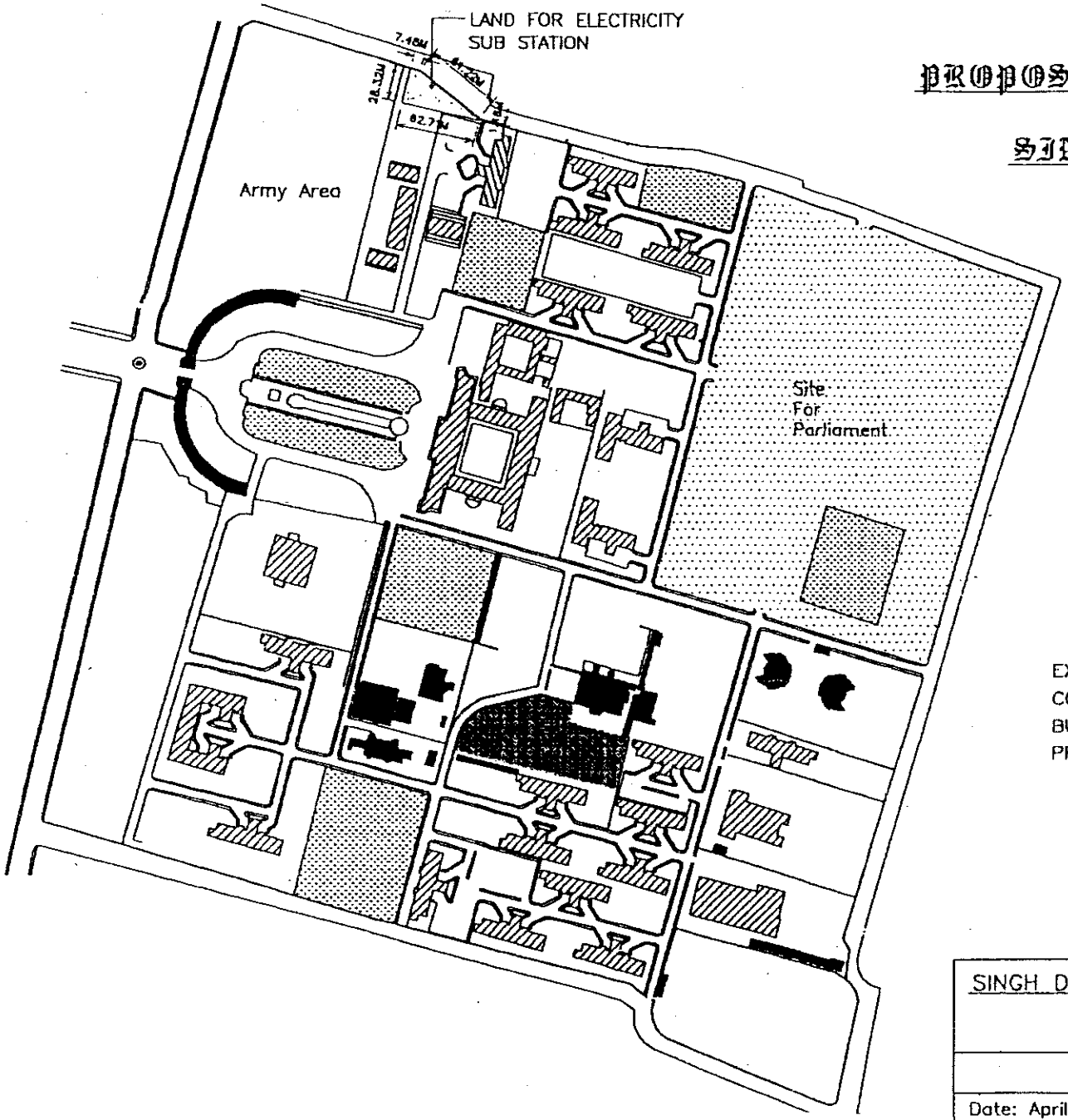
बोधार्थ :
श्री भौतिक योजना तथा निर्माण मन्त्रालय

सिंहदरवार ।
श्री जलश्रोत मन्त्रालय
सिंहदरवार ।

श्री सहरी विकास तथा भवन निर्माण विभाग
बबरमहल ।

श्री नेपाल विद्युत प्राधिकरण
दरबार मार्ग ।

टेलिफोन नं. २-२२७९८, २-४१८९९, फ्याक्स नं. (००९७७-१) २-४१९०७, E-mail: ssrcp@mos.com.np



PROPOSED MASTER PLAN
OF
SINGH DURBAR

EXISTING BUILDING
CONSTRUCTED BUILDING
BUILD. UNDER CONSTRUCTION
PROPOSED BUILDING

इन्जिनीयर

प्रशासकिय अधिकृत

SINGH DURBAR SECRETARIAT RE-CONSTRUCTION PROJECT SINGH DURBAR,KATHMANDU,NEPAL	
	PROJECT MANAGER: P.K.ACHARYA
Date: April, 2002	SENIOR ARCHITECT: J.TAMRAKAR

APPENDIX - 7

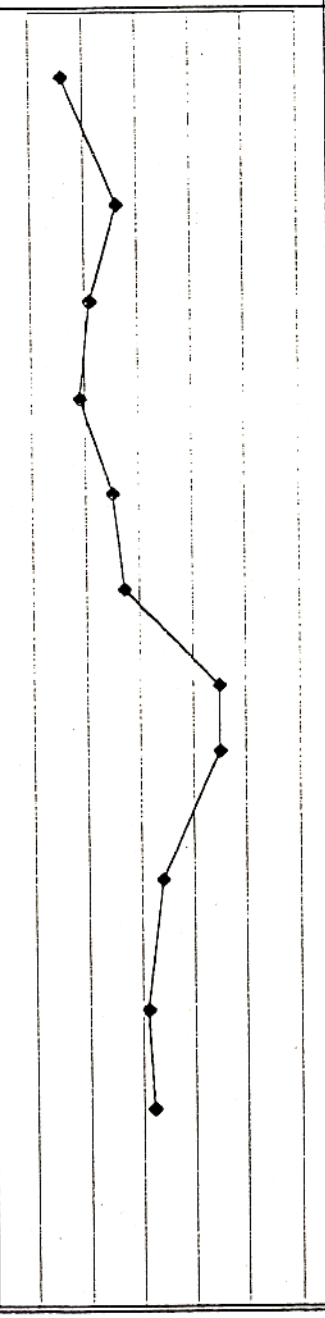
SOIL INVESTIGATION RESULTS

BORE HOLE LOG

PROJECT: Soil Investigation for Sub-Station Site
LOCATION: Singhdurbar, Kathmandu

Bore Hole No.: BH1

ELEVATION	DEPTH	THICKNESS	SYMBOL	SOIL DESCRIPTION	CUMMULATIVE SPT in blows for penetration of (cm)	REMARKS
0					0 10 20 30 40 50	
1	1.25	1.25		Top soil with broken brick followed by fine to medium sand		
2	2.5	1.25		Matrix of medium sand & layers of sandy silt		
3	3.5	1		Coarse sand, pieces of brick & silty sand		
4	4.75	1.25		Coarse to fine sand with silt		
5	6.0	1.25		Medium to fine sand		
6	7.5	1.5		Coarse to medium sand		
8	9.0	1.5		Black sandy medium plastic clay		
9	9.5	0.5		Fine sandy silt		
10	11.0	1.5		Fine to coarse sand		
11	13.5	9.0		Black plastic clay		
14	15.5					
16	17.0					
19	20.0			End of Bore Hole		



BORE HOLE LOG

PROJECT: Soil Investigation for Sub-Station Site
LOCATION: Singhdurbar, Kathmandu

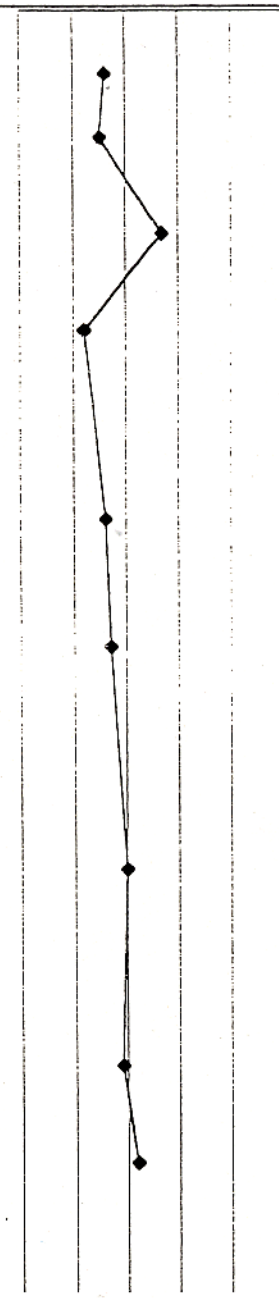
Bore Hole No.: BH2

ELEVATION	DEPTH	THICKNESS	SYMBOL	SOIL DESCRIPTION	REMARKS
0					
		2.0		Top soil with borken brick deposition followed by clayey sand, fine to medium	
2	2.0				
	3.25	1.25		Matrix of silty sand & black clay	
		1.25		Coarse to medium sand	
4	4.5				
	5.0	0.5		Fine sand	
		1.8		Medium to fine sand	
6	6.8				
		1.2		Silty sand with clay	
8	8.0				
	9.0	1		Coarse to medium sand	
	9.5	0.5		Silty sand	
10					
		3.9		Black silty clay of medium plasticity	
12					
	13.4				
14					
16	16.5				
		6.6		Black plastic clay	
18	18.0				
	20.0			End of Bore Hole	

CUMMULATIVE SPT

in blows for penetration of (cm)

0 10 20 30 40 50



TEST RESULT SUMMARY SHEET

Bore Hole No.: **1**

Project **Soil Investigation for Sub-Station Site**

Location: **Singh Durbar, Kathmandu**

Nippon Koei

S.No.	Depth m	Soil Classification	Sieve analysis % passing ASTM					Atterberg Limits			Natural Moisture Content	Density		PT blow	Sp. Gr.	Quit	Direct Shear	
			Gravel	Sand		Silt	Clay	L.L.	P.L.	P.I.		Yw	Yd			kg/cm^2	C kg/cm	ϕ (^{0})
				Coarse to Medium	Fine													
1	2 - 4	SW	13.00	38.00	35.00	14.00	-	-	-	-	16.40	1.90	1.60	-	2.63	-	0.09	30
2	11 - 13	ML	-	-	9.00	42.20	48.13	24.50	19.22	5.28	40.50	1.80	1.31	-	2.69	-	0.16	10

TEST RESULT SUMMARY SHEET

Bore Hole No.: **2**

Project **Soil Investigation for Sub-Station Site**

Location: **Singh Durbar, Kathmandu**

Nippon Koei

S.No.	Depth m	Soil Classification	Sieve analysis % passing ASTM					Atterberg Limits			Natural Moisture Content	Density		PT blow	Sp. Gr.	Quit	Direct Shear	
			Gravel	Sand		Silt	Clay	L.L.	P.L.	P.I.		Yw	Yd			kg/cm^2	C kg/cm^2	ϕ (^{0})
				Coarse to Medium	Fine													
1	2 - 4	SW	15.00	55.00	19.00	11.00	-	18.00	-	-	12.20	1.92	1.71	-	2.63	-	0.14	31
2	9.5 - 11.5	ML	-	2.00	10.00	53.00	35.00	31.40	23.69	7.71	44.00	1.85	1.35	-	2.66	-	0.14	10

Direct Shear Test

Project: **Soil Investigation of Sub-Station Site**
Location: **Singhadurbar kathmandu**

Nippon Koei Co. Ltd.

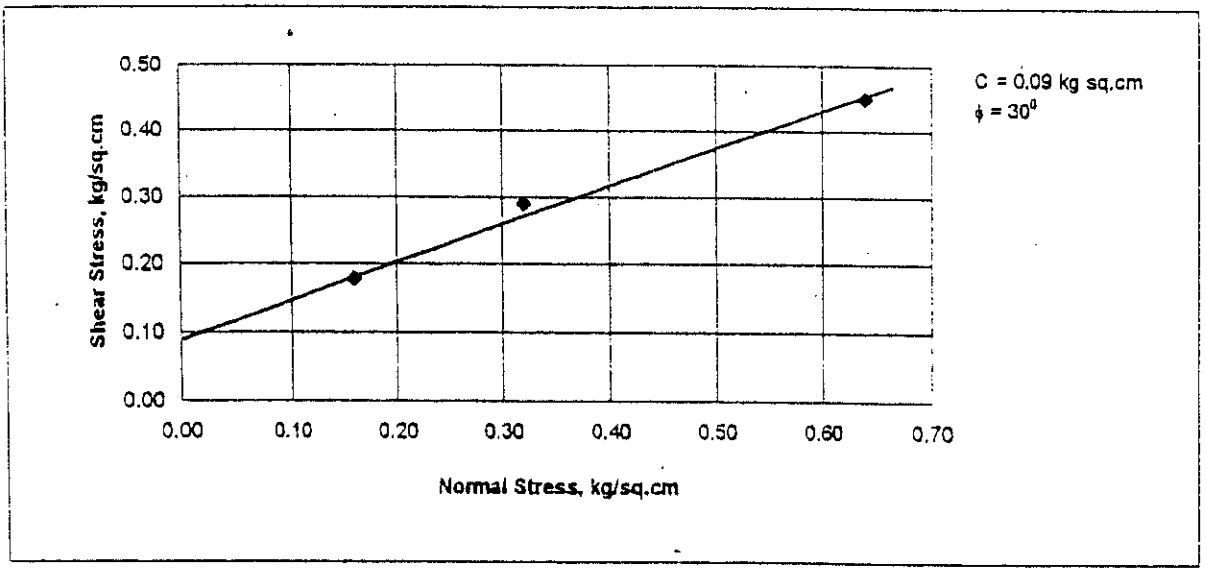
Bore Hole No. 1
Depth, m **2.5**

PRG Factor, kg/Div.: **0.17**
Area cm^2: **25**

Moisture Content: **16.40 %**

Date: 10th May 2002

SDT	Test No. 1		Test No. 2		Test No. 3	
	Normal stress 0.16 kg/cm^2		Normal stress 0.32 kg/cm^2		Normal stress 0.64 kg/cm^2	
mm	PRDRg	SST kg/cm^2	PRDRg	SST kg/cm^2	PRDRg	SST kg/cm^2
0.40	5.00	0.034	7.00	0.048	11.00	0.075
0.80	7.00	0.048	10.00	0.068	14.00	0.096
1.20	10.00	0.068	13.00	0.089	19.00	0.130
1.60	11.00	0.075	18.00	0.123	24.00	0.164
2.00	14.00	0.096	21.00	0.144	28.00	0.191
2.40	16.00	0.109	25.00	0.171	34.00	0.232
2.80	19.00	0.130	28.00	0.191	39.00	0.267
3.20	22.00	0.150	31.00	0.212	43.00	0.294
3.60	23.00	0.157	33.00	0.226	48.00	0.328
4.00	24.50	0.167	35.00	0.239	52.00	0.355
4.40	26.00	0.178	38.00	0.260	55.00	0.376
4.80	26.00	0.178	41.00	0.280	59.00	0.403
5.20	24.00	0.164	43.00	0.294	63.00	0.431
5.60			42.00	0.287	66.00	0.451
6.00					65.00	0.44



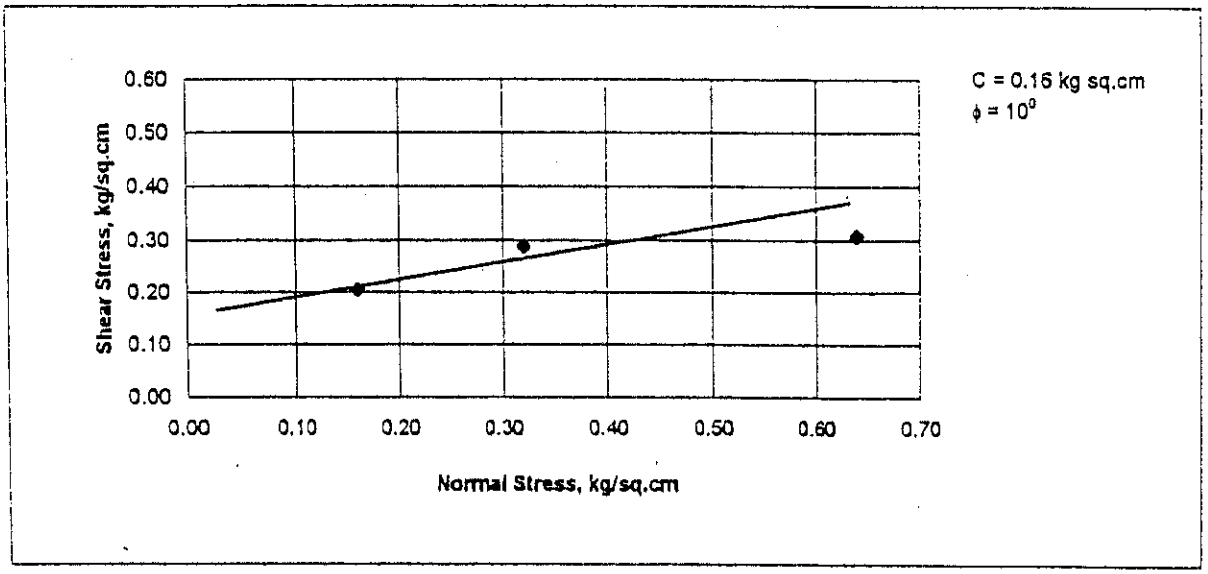
Direct Shear Test

Project: **soil investigation for Sub-Station Site**
Location: **Singhadurbar ,kathmandu** **Nippon Koei Co. Ltd.**

Bore Hole No. **1** PRG Factor, kg/Div.: **0.17**
Depth, m 11 Area cm^2: **25**

Moisture Content: **40.50 %** Date: 10th May 2002

SDT	Test No. 1		Test No. 2		Test No. 3	
	Normal stress 0.16 kg/cm^2		Normal stress 0.32 kg/cm^2		Normal stress 0.64 kg/cm^2	
mm	PRDRg	SST kg/cm^2	PRDRg	SST kg/cm^2	PRDRg	SST kg/cm^2
0.40	6.00	0.041	6.00	0.041	8.00	0.055
0.80	7.00	0.048	10.00	0.068	12.00	0.082
1.20	9.00	0.062	12.00	0.082	14.00	0.096
1.60	10.00	0.068	15.00	0.103	16.00	0.109
2.00	12.00	0.082	20.00	0.137	22.00	0.150
2.40	14.00	0.096	22.00	0.150	26.00	0.178
2.80	17.00	0.116	27.00	0.185	31.00	0.212
3.20	21.00	0.144	28.00	0.191	36.00	0.246
3.60	24.00	0.164	34.00	0.232	40.00	0.273
4.00	28.00	0.191	38.00	0.260	45.00	0.308
4.40	25.00	0.171	40.00	0.273	30.00	0.205
4.80	28.00	0.191	42.00	0.287		
5.20	30.00	0.205	40.00	0.273		
5.60			30.00	0.205		
6.00						



Direct Shear Test

Project: **Soil Investigation of Sub-Station Site**
Location: **Singhadurbar, Kathmandu**

Nippon Koei Co. Ltd.

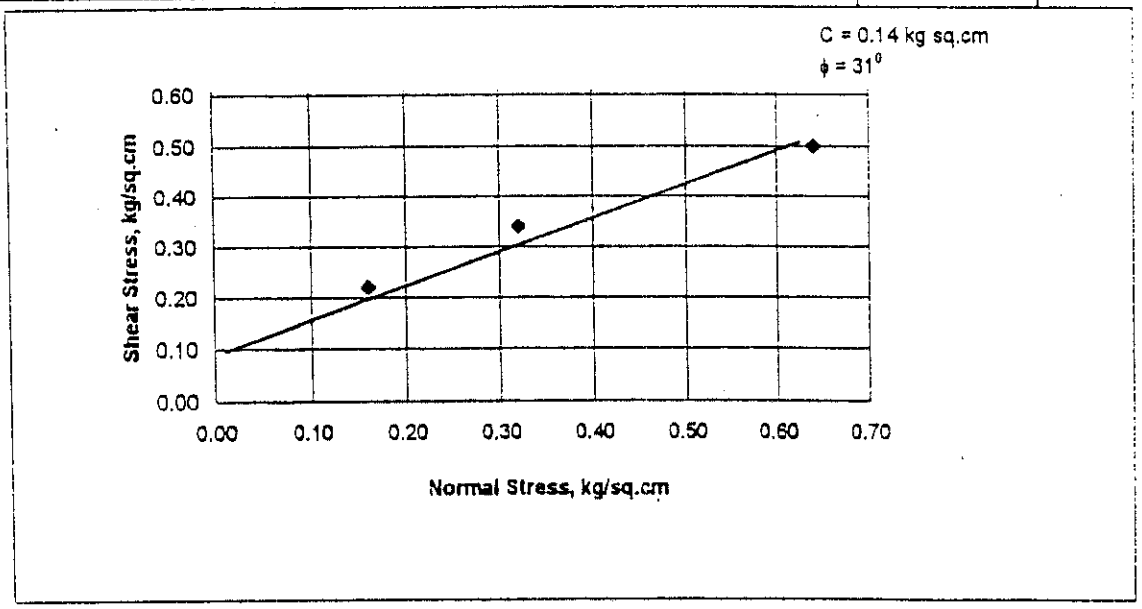
Bore Hole No. **2**
Depth, m **2**

PRG Factor, kg/Div.: **0.17**
Area cm^2: **25**

Moisture Content: **12.2 %**

Date: 10th May 2002

SDT	Test No. 1		Test No. 2		Test No. 3	
	Normal stress 0.16 kg/cm^2		Normal stress 0.32 kg/cm^2		Normal stress 0.64 kg/cm^2	
mm	PRDRg	SST kg/cm^2	PRDRg	SST kg/cm^2	PRDRg	SST kg/cm^2
0.40	5.00	0.054	12.00	0.082	16.00	0.109
0.80	7.00	0.048	14.00	0.095	21.00	0.143
1.20	9.00	0.061	18.00	0.122	24.00	0.163
1.60	12.00	0.082	23.00	0.156	29.00	0.197
2.00	13.00	0.088	25.00	0.170	33.00	0.224
2.40	15.00	0.102	29.00	0.197	37.00	0.252
2.80	17.00	0.116	33.00	0.224	43.00	0.292
3.20	20.00	0.136	38.00	0.258	47.00	0.320
3.60	24.00	0.163	41.00	0.279	51.00	0.347
4.00	27.00	0.184	43.00	0.292	54.00	0.367
4.40	30.00	0.204	45.00	0.306	59.00	0.401
4.80	33.00	0.224	47.00	0.320	65.00	0.442
5.20	32.00	0.218	50.00	0.340	70.00	0.476
5.60			48.00	0.326	74.00	0.503
6.00					73.00	0.496



Direct Shear Test

Project: **Soil Investigation for Sub-Station Site**
Location: **Singhadurbar,Kathmandu**

Nippon Koei Co. Ltd.

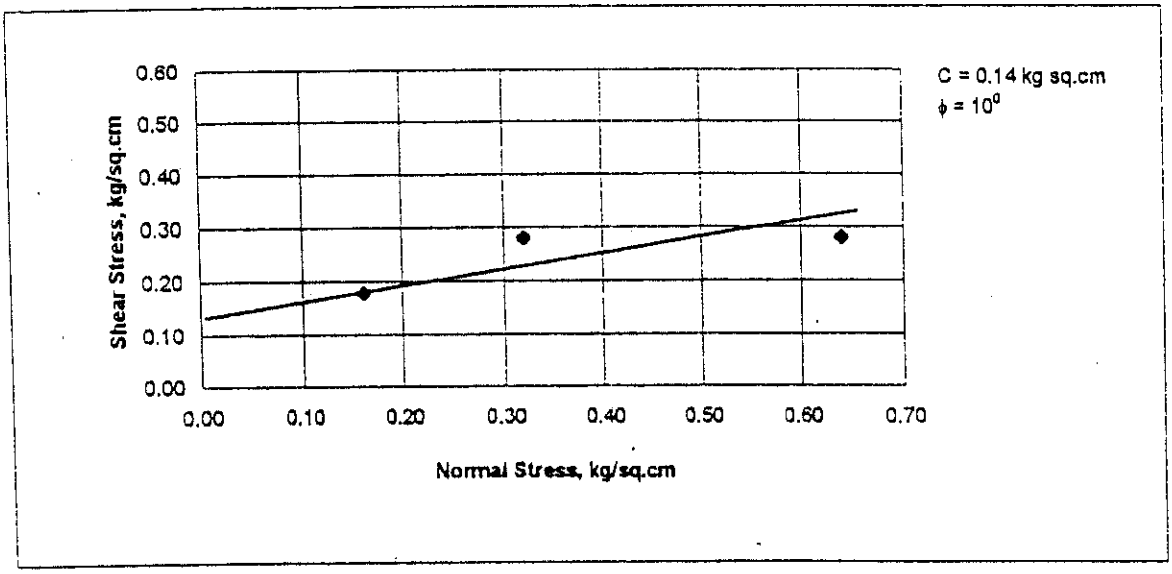
Bore Hole **2**
Depth, m **9.5**

PRG Factor, kg/Div.: **0.17**
Area cm^2: **25**

Moisture Content: **44.0 %**

Date: 10th May 2002

SDT	Test No. 1		Test No. 2		Test No. 3	
	Normal stress 0.16 kg/cm^2		Normal stress 0.32 kg/cm^2		Normal stress 0.64 kg/cm^2	
mm	PRDRg	SST kg/cm^2	PRDRg	SST kg/cm^2	PRDRg	SST kg/cm^2
0.40	6.00	0.041	6.00	0.041	9.00	0.062
0.80	7.00	0.048	10.00	0.068	11.00	0.075
1.20	9.00	0.062	12.00	0.082	14.00	0.096
1.60	11.00	0.075	18.00	0.123	18.00	0.123
2.00	13.00	0.089	22.00	0.150	22.00	0.150
2.40	17.00	0.116	28.00	0.191	30.00	0.205
2.80	19.00	0.130	31.00	0.212	33.00	0.226
3.20	22.00	0.150	34.00	0.232	38.00	0.260
3.60	23.00	0.157	36.00	0.246	40.00	0.273
4.00	24.50	0.167	40.00	0.273	41.00	0.280
4.40	26.00	0.178	41.00	0.280	37.00	0.253
4.80	26.00	0.178	38.00	0.260	32.00	0.219
5.20	24.00	0.164	32.00	0.219		
5.60			32.00	0.219		
6.00						

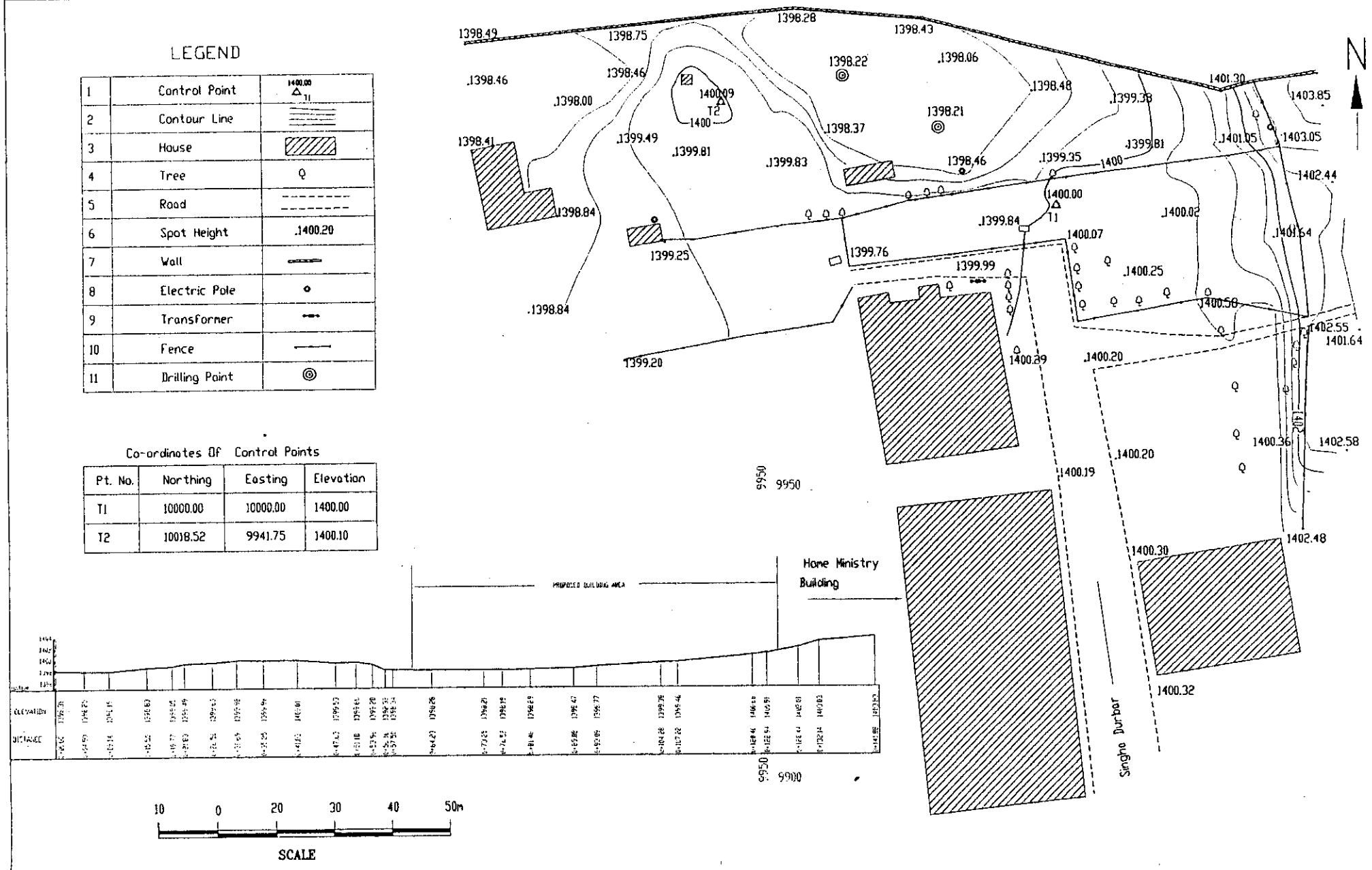


LEGEND

1	Control Point	1400.00 T1
2	Contour Line	
3	House	
4	Tree	
5	Road	
6	Spot Height	1400.20
7	Wall	
8	Electric Pole	
9	Transformer	
10	Fence	
11	Drilling Point	

Co-ordinates Of Control Points

Pt. No.	Northing	Easting	Elevation
T1	10000.00	10000.00	1400.00
T2	10018.52	9941.75	1400.10



K-3, SUBSTATION SINGH DURBAR	TOPOGRAPHICAL MAP (PLAN AND PROFILE)	PARTICULAR	DESIGN BY:	CHECKED BY:	APPROVED BY:
		NAME	Mr.	Mr.	Mr.
		DESIGNATION			
		SIGNATURE			
		DATE:			
	NIPPON KOEI CO. LTD. CONSULTING ENGINEER, TOKYO, JAPAN				Fig : K3-1