

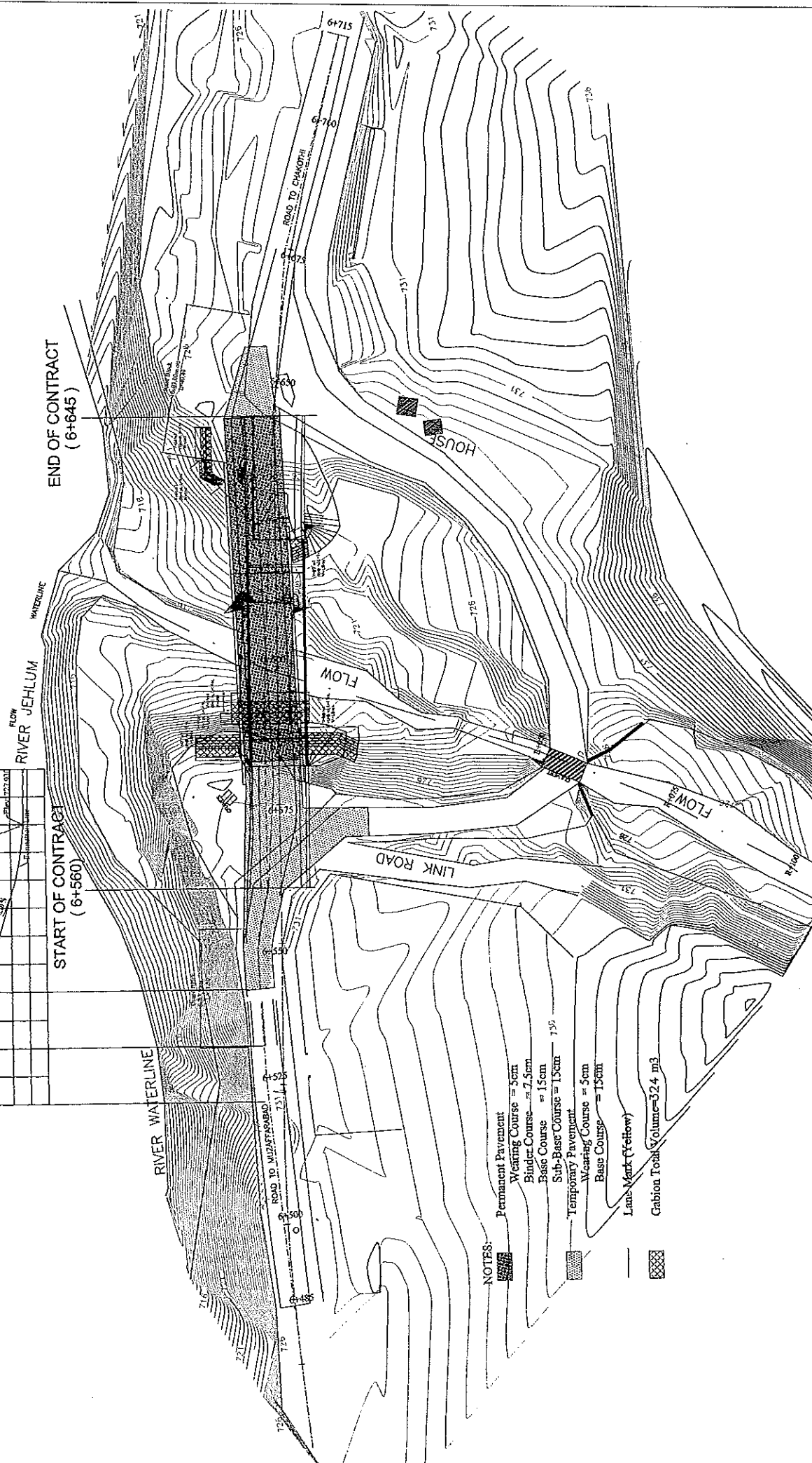
## **APPENDIX - A**

### ***A-1: As Build Drawings (Summary)***

**PROFILE**  
Scale Horizontal = 1:500  
Scale Vertical = 1:200



**PLAN (Bridge No.1)**  
Scale Horizontal = 1:500  
Scale Vertical = 1:200



- NOTES:**
- Permanent Pavement
    - Wearing Course = 5cm
    - Binder Course = 7.5cm
    - Base Course = 15cm
    - Sub-Base Course = 15cm
  - Temporary Pavement
    - Wearing Course = 5cm
    - Base Course = 15cm
  - Lane Mark (Yellow)
  - Gabion Total Volume = 324 m<sup>3</sup>

**GOVERNMENT OF PAKISTAN**  
**MINISTRY OF COMMUNICATIONS**  
**NATIONAL HIGHWAY AUTHORITY**

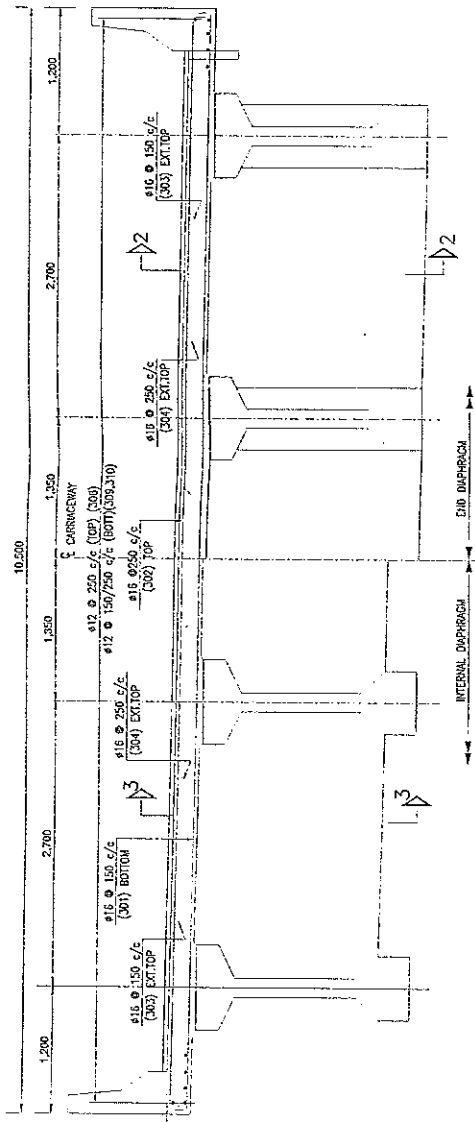
**JAPAN INTERNATIONAL COOPERATION AGENCY**  
ASSIGNED TO:  
**NIPPON KOEI CO., LTD. (JAPAN)**  
CONSTRUCTED BY:  
**SAMBU CONSTRUCTION CO.LTD. (KOREA)**

**AS BUILT DRAWING**

Date:	10 Nov. 2007	Mr. Ehsan Munir
Prepared By:	Q.S	Mr. E.J. Lee
Checked By:	Samba	Mr. Yamashita
Approved By:	Nippon Koi	

Technical Assistance for Reconstruction Project  
of Bridges Damaged by October 8th Earthquake  
on The Jhelum Valley Road  
**SITE NO.1 BRIDGE WORKS**

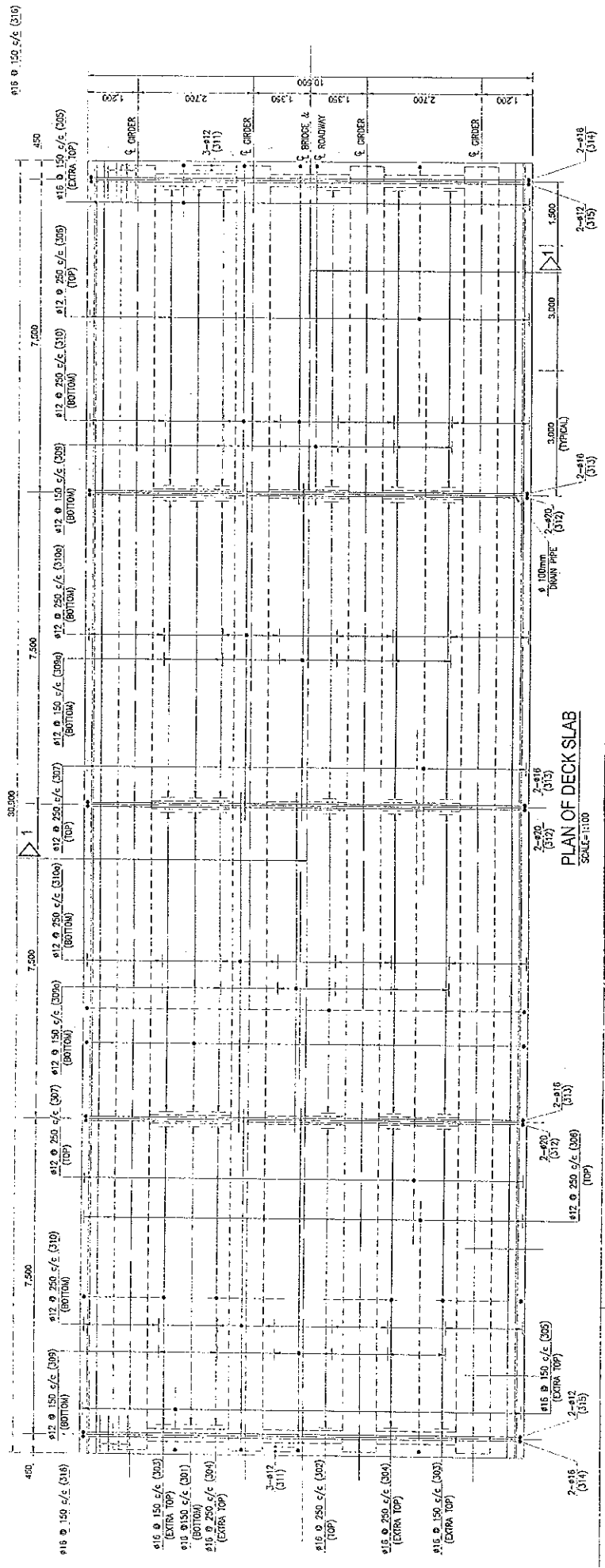




SECTION 1-1  
SCALE 1:50

NOTES:

FOR LOCATION OF S11, S13, S14, S15, S16, S17 SEE ENCLAPPAL DWG. NO. S1B-02-009



PLAN OF DECK SLAB  
SCALE: 1:100

<p>GOVERNMENT OF PAKISTAN MINISTRY OF COMMUNICATIONS NATIONAL HIGHWAY AUTHORITY</p>	<p>JAPAN INTERNATIONAL COOPERATION AGENCY ASSIGNED TO: NIPPON KOEI CO., LTD. (JAPAN) CONSTRUCTED BY: SAMBU CONSTRUCTION CO., LTD. (KOREA)</p>	<p>As Built Drawing</p>		<p>Technical Assistance for Reconstruction Project of Bridges Damaged by October 8th Earthquake on The Jhelum Valley Road SITE NO. 1 BRIDGE WORKS</p>	<p>Reinforcement of Deck Slab</p>	<p>Scale As Shown</p>
		<p>Date: 10 Nov 2007</p>	<p>Prepared By: Q.S. Mr. Ehsan Minir</p>			

DWG. NO. S1B-02-009

**NOTES:**

- Permanent Pavement
- Wearing Course = 5cm
- Binder Course = 7.5cm
- Base Course = 15cm
- Sub-Base Course = 15cm
- Temporary Pavement
- Wearing Course = 5cm
- Base Course = 15cm
- Lane Mark (Yellow)
- Gabion
- Total Volume = 25.5 m<sup>3</sup>

PLAN (Bridge No.2)  
Scale = 1:500

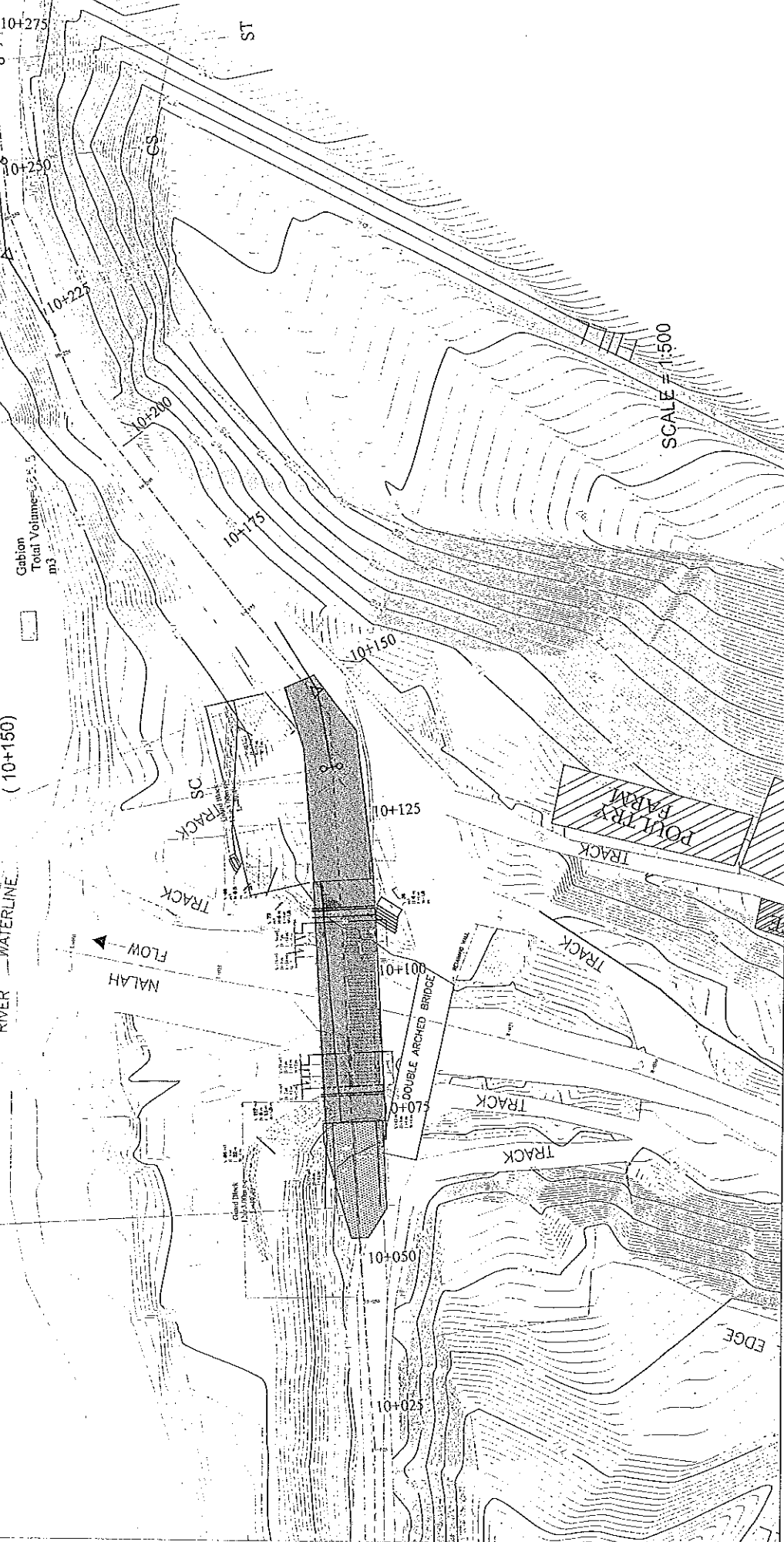
RIVER JEHLUM

START OF CONTRACT  
(10+060)

END OF CONTRACT  
(10+150)

RIVER WATERLINE

ROAD TO CHAKOTHI



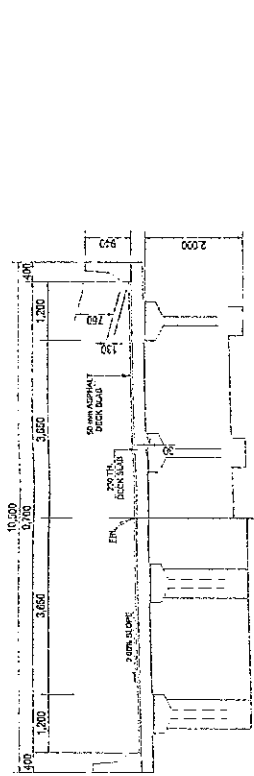
GOVERNMENT OF PAKISTAN  
MINISTRY OF COMMUNICATIONS  
NATIONAL HIGHWAY AUTHORITY

JAPAN INTERNATIONAL COOPERATION AGENCY  
ASSIGNED TO:  
NIPPON KOEI CO., LTD. (JAPAN)  
CONSTRUCTED BY:  
SAMBU CONSTRUCTION CO., LTD. (KOREA)

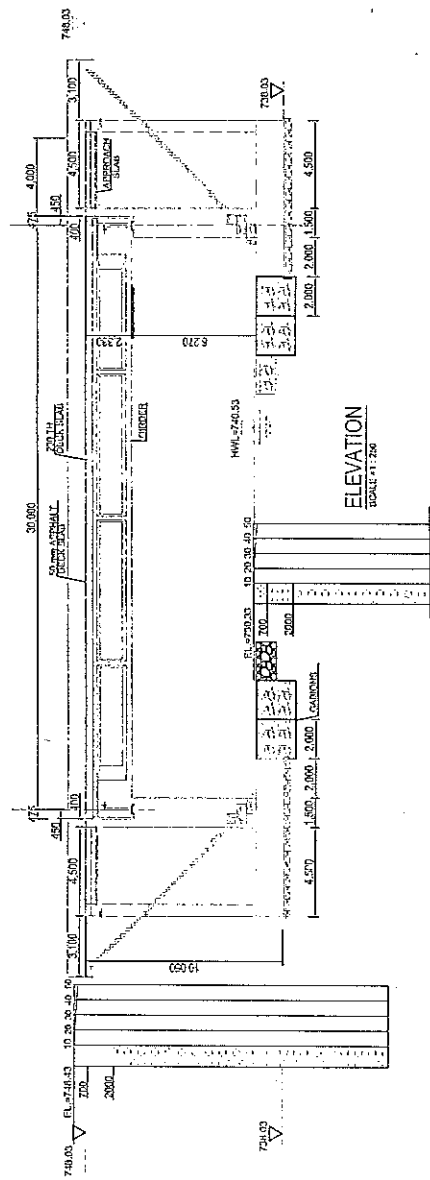
AS BUILT DRAWING  
Date: 10 Nov 2007  
Prepared By: Q.S. Mr. Ehsan Minhat  
Checked By: Sombu Mr. E.J. Lee  
Approved By: Nippon Koi Mr. Yamashita

Technical Assistance for Reconstruction Project  
of Bridges Damaged by October 8th Earthquake  
on The Jhelum Valley Road  
SITE NO.2 BRIDGE WORKS

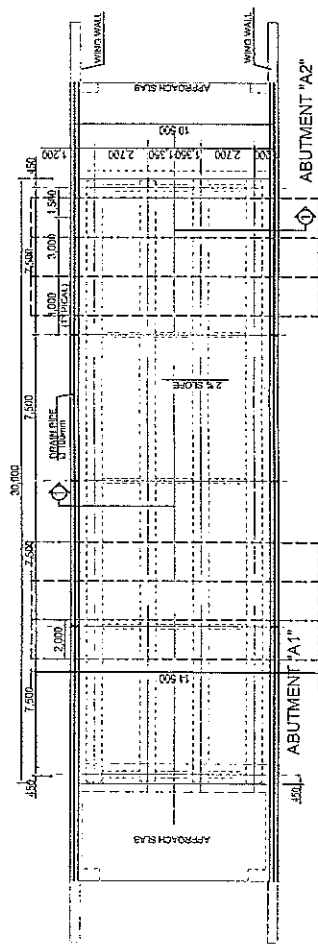
General View of Site No. 2  
Scale 1:1,000  
DATE: March, 2006  
DWG. NO. S2B-01-001



SECTION -1-1  
SCALE: 1:100



ELEVATION  
SCALE: 1:200



PLAN OF DECK SLAB  
SCALE: 1:200

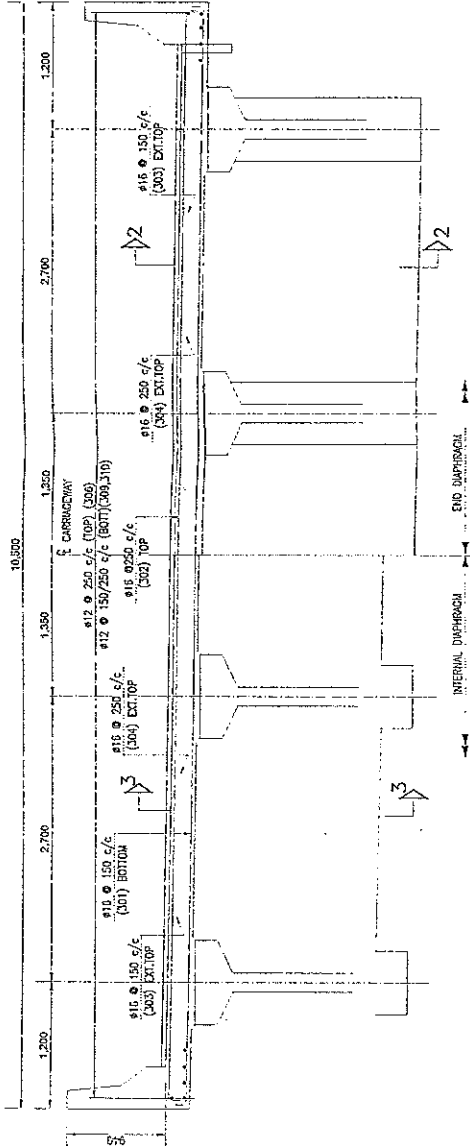
GOVERNMENT OF PAKISTAN  
MINISTRY OF COMMUNICATIONS  
NATIONAL HIGHWAY AUTHORITY

JAPAN INTERNATIONAL COOPERATION AGENCY  
NIPPON KOGI CO., LTD. (JAPAN)  
CONSTRUCTED BY  
SAMSU CONSTRUCTION CO. LTD. (KOREA)

As Built Drawing  
Date: 10 Nov 2007  
Prepared By: Q.S  
Checked By: Simbu  
Approved By: Nippon Koi  
Mr. Ehsan Minir  
Mr. E. Lee  
Mr. Yamashita

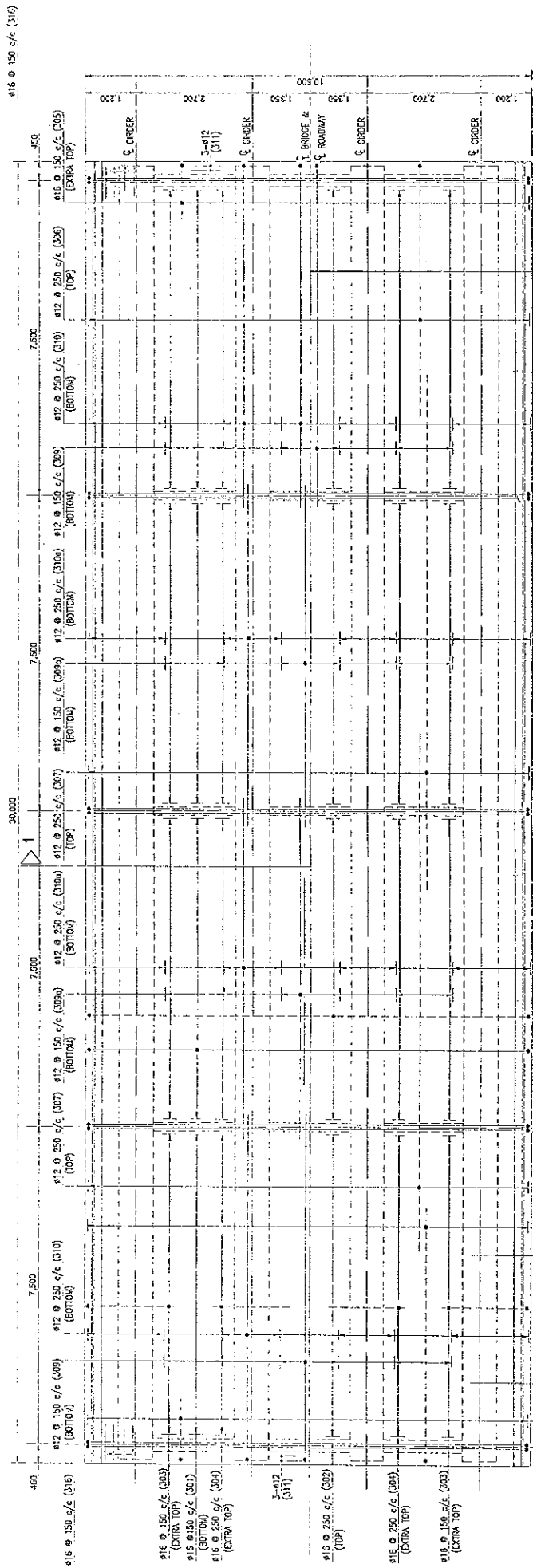
Technical Assistance for Reconstruction Project  
of Bridges Damaged by October 8th Earthquake  
on The Jhelum Valley Road  
SITE NO.2 BRIDGE WORKS

General View of Bridge No. 2  
Scale: As Shown  
DWG. NO. S2B-01-002



NOTES:  
 1. REFER TO DRAWING NO. S2B-02-001 FOR THE GENERAL ARRANGEMENT OF THE BRIDGE.

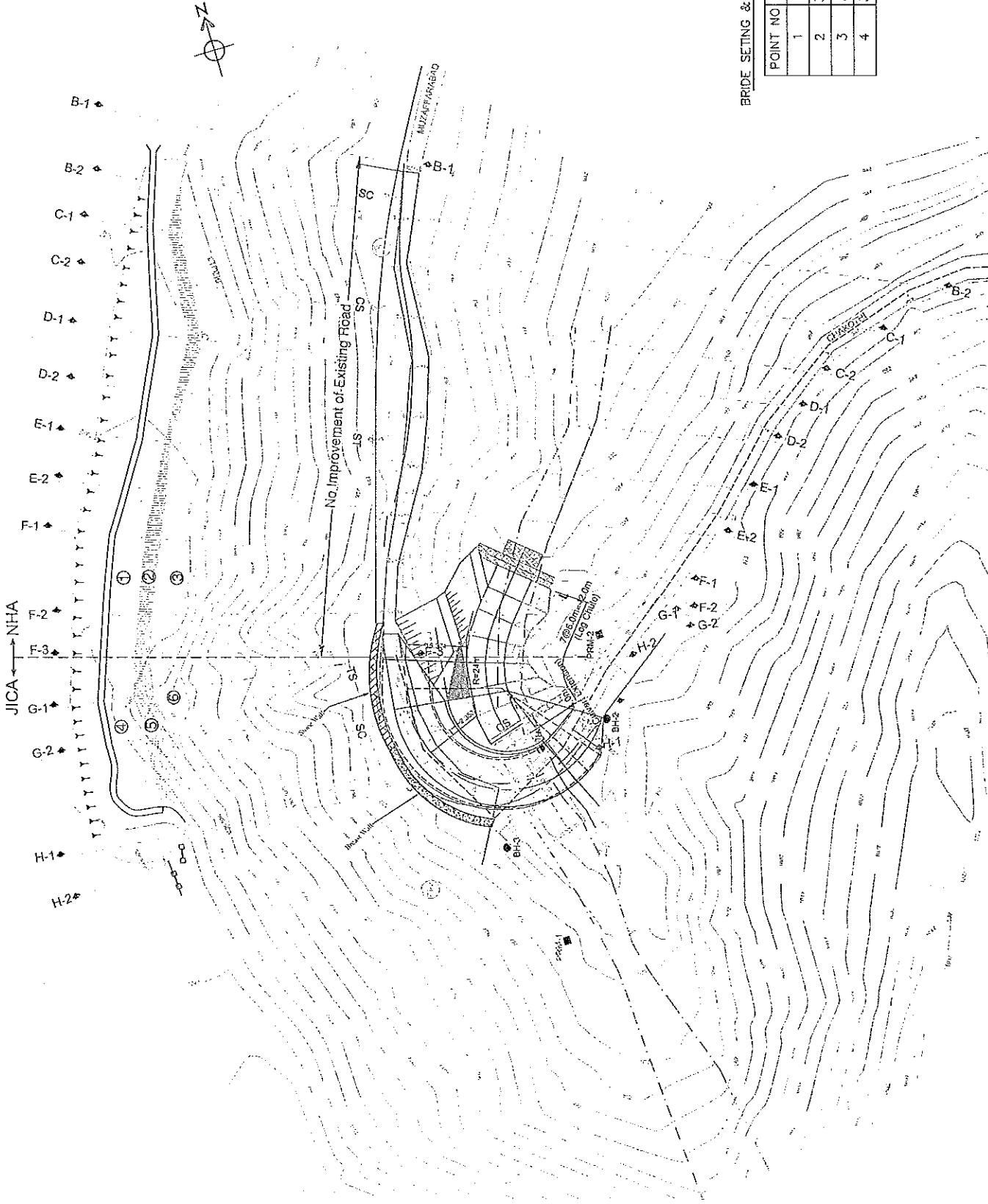
SECTION 1-1  
 SCALE 1:50



PLAN OF DECK SLAB  
 SCALE 1:100

<p>GOVERNMENT OF PAKISTAN          MINISTRY OF COMMUNICATIONS          NATIONAL HIGHWAY AUTHORITY</p>	<p>JAPAN INTERNATIONAL COOPERATION AGENCY          ASSIGNED TO:          NIPPON KOEI CO., LTD. (JAPAN)          CONSTRUCTED BY:          SAMBU CONSTRUCTION CO. LTD. (KOREA)</p>	<p>As Built Drawing</p>		<p>Technical Assistance for Reconstruction Project          of Bridges Damaged by October 8th Earthquake          on The Jhelum Valley Road          SITE NO.2 BRIDGE WORKS</p>	<p>Reinforcement of Deck Slab          Scale As Shown</p>
		<p>Date: 10 Nov 2007</p>	<p>Prepared By: Q.S. Mr. Ehsan Munir</p>		

S2B-02-009



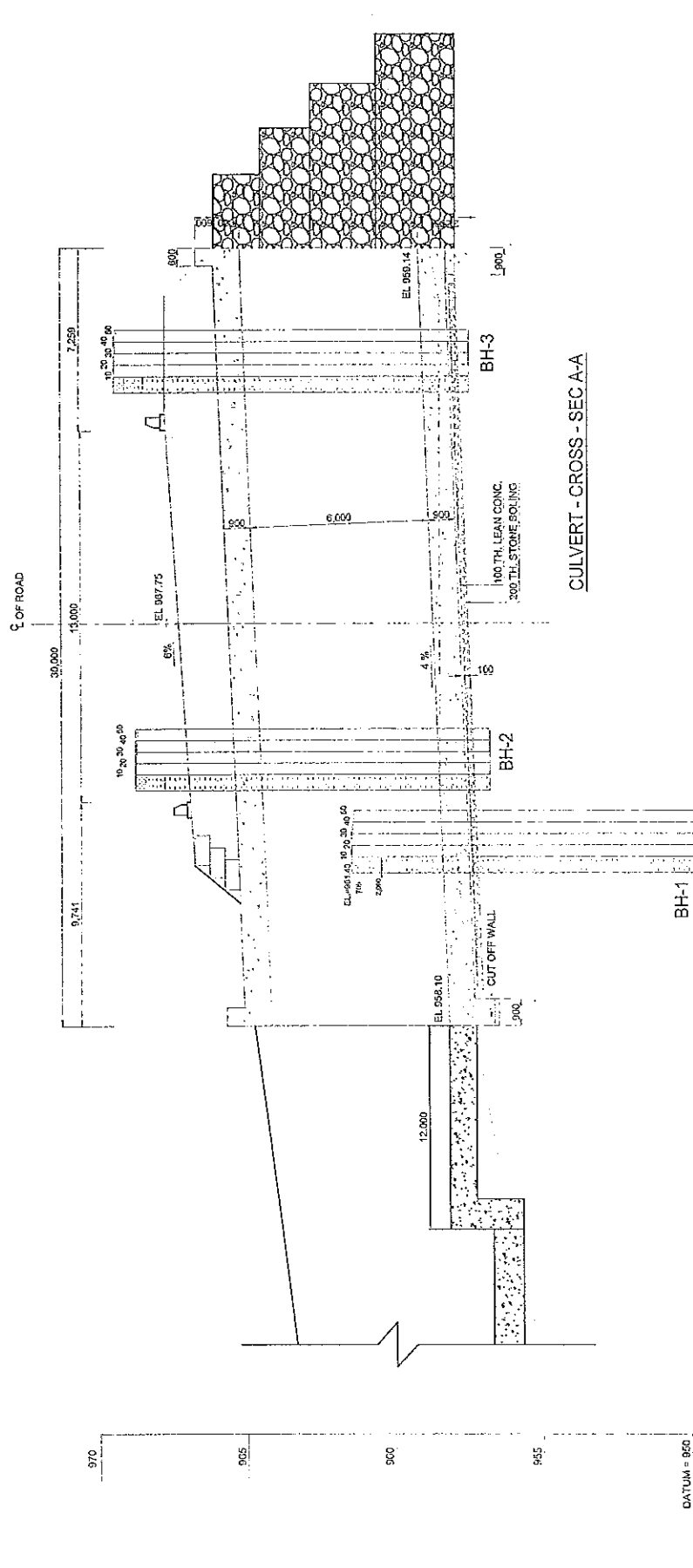
BRIDGE SETTING & CURVE SECTION COORDINATION

POINT NO	E	N
1	3270591.312	1120288.166
2	3270586.974	1120262.830
3	3270504.149	1120277.270
4	3270580.783	1120316.757

<b>GOVERNMENT OF PAKISTAN</b> <b>MINISTRY OF COMMUNICATIONS</b> <b>NATIONAL HIGHWAY AUTHORITY</b>	<b>JAPAN INTERNATIONAL COOPERATION AGENCY</b> <small>ASSISTED BY</small> <b>NIPPON KOGI CO., LTD. (INK)</b> <b>ALAFIC CORPORATION LTD. (ALAMEC)</b>	<b>AS BUILT DRAWING</b> DATE: 30 Jun 2008 PREPARED BY: O.S. CHECKED BY: Sambu APPROVED BY: Nippon Kof Mr. Yamashita	<b>General View Plan</b> Scale: 1:1000 Site No.: 3
	Technical Assistance for Reconstruction Project of Bridges Damaged by October 8th Earthquake on The Jhelum Valley Road		







CULVERT - CROSS - SEC-A-A

NSL	LEVEL	DISTANCE
	955.26	-23.59
	955.13	-22.00
	956.13	-18.00
	957.13	-12.50
	957.93	-7.00
	959.13	-5.00
	958.13	0.00
	958.13	2.25
	958.93	13.50
	959.53	17.00
	950.93	22.00
	961.93	25.00

DATUM = 950

GOVERNMENT OF PAKISTAN  
 MINISTRY OF COMMUNICATIONS  
 NATIONAL HIGHWAY AUTHORITY

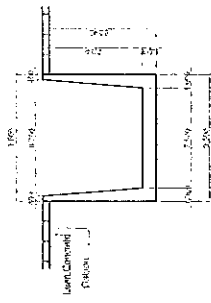
JAPAN INTERNATIONAL COOPERATION AGENCY  
 ASSIGNED TO:  
 NIPPON KOEI CO., LTD. (INK)  
 ALMIEC CORPORATION LTD. (ALMIEC)

AS BUILT DRAWING  
 DATE: 30 Jan 2008  
 PREPARED BY: G.S. Sambu  
 CHECKED BY: Mr. E. Lee  
 APPROVED BY: Mr. Yamashita

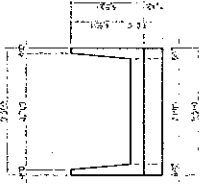
Technical Assistance for Reconstruction Project  
 of Bridges Damaged by October 8th Earthquake  
 on The Jhelum Valley Road  
 SITE NO.3 BRIDGE WORKS

Longitudinal Section of Box Culvert  
 DWG. NO. S3B-02-004  
 S = 1:150

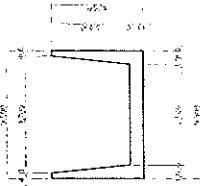
**A-A Section**



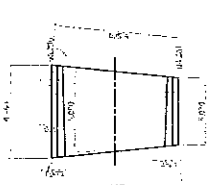
**B-B Section**



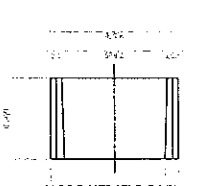
**C-C Section**



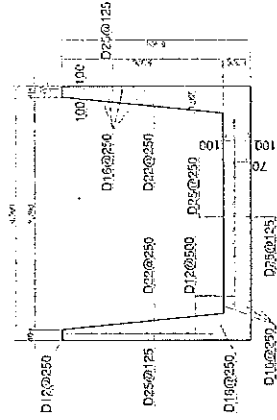
**Block No.1 - 5**



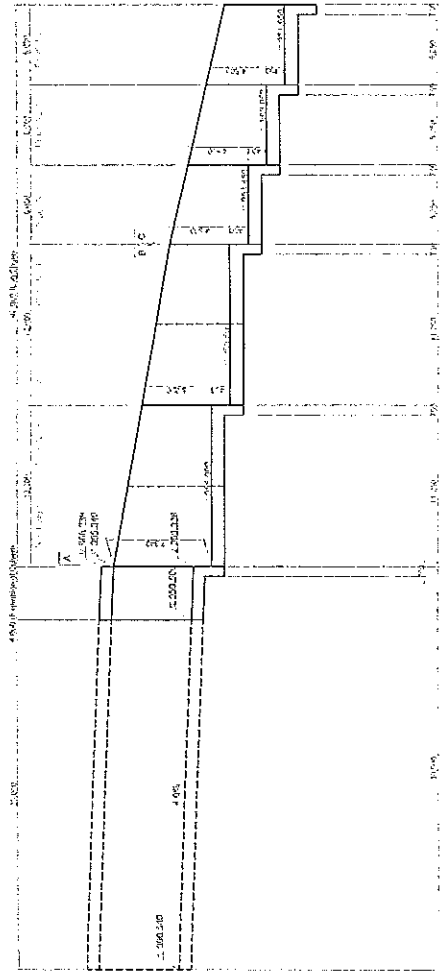
**Block No.6 - 7**



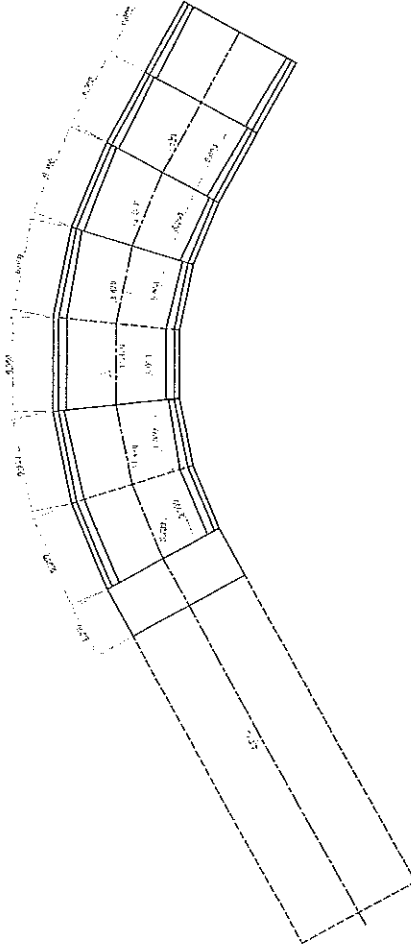
**Reinforcement**



**Profile of Log Chute**



**Plane of Log Chute**



GOVERNMENT OF PAKISTAN  
MINISTRY OF COMMUNICATIONS  
NATIONAL HIGHWAY AUTHORITY

JAPAN INTERNATIONAL COOPERATION AGENCY  
ASSIGNED TO:  
NIPPON KOEI CO., LTD. (NKC)  
ALMEC CORPORATION LTD. (ALMEC)

AS BUILT DRAWING

Date	30 Jun 2008
Prepared By	Q.S. Mr. Ehsan Munir
Checked By	Semau Mr. E. Lere
Approved By	Nippon Koi Mr. Yamashita

Technical Assistance for Reconstruction Project  
of Bridge Damaged by October 8th Earthquake  
on The Jhelum Valley Road  
Site No. 3 Slope Protection

DRAWING TITLE

Structure of Log Chute  
Revised

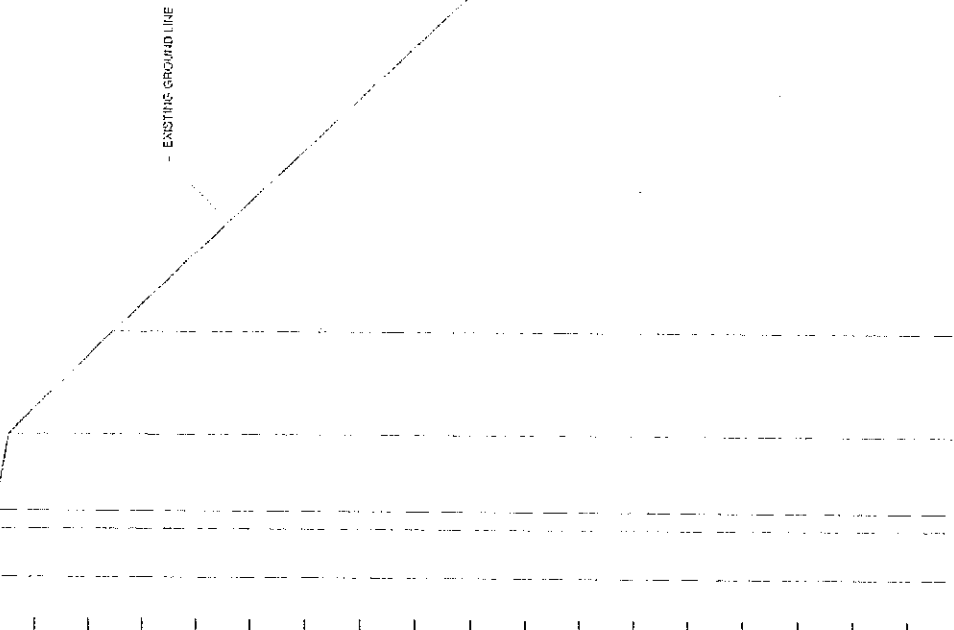
DWG. NO.

SCALE  
1:400

SIC-9/1

1040

1035  
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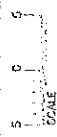


- EXISTING GROUND LINE

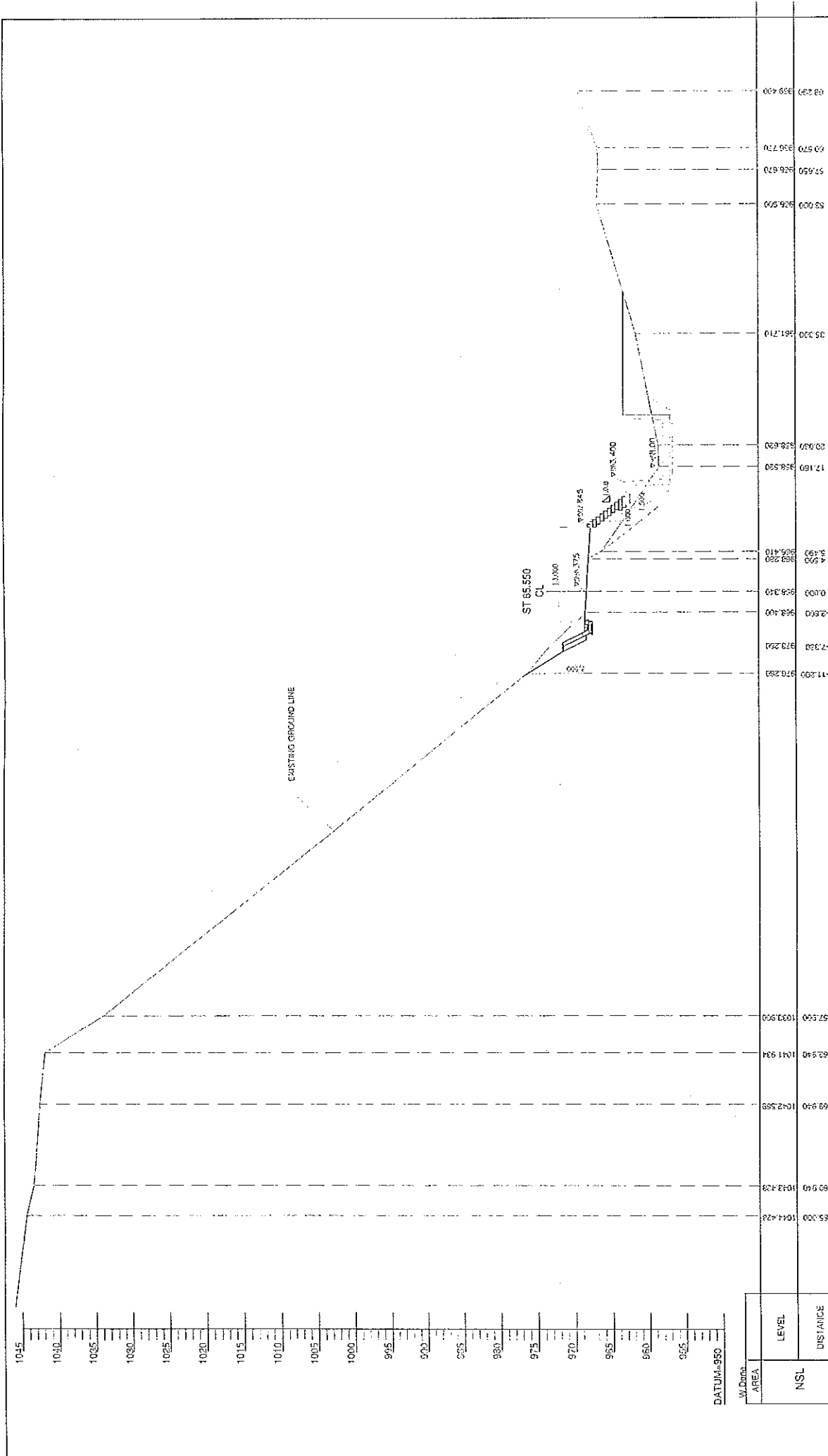
ST 38.650  
CL

10.361  
14.374  
12.250  
1.000  
1.000  
1.000  
1.000  
1.000  
1.000

DATUM - 850	
NSL	LEVEL
94.55	1039.922
60.00	1653.922
-78.00	1039.876
-71.00	1027.951
-61.870	1027.430
-15.100	978.330
-7.850	971.280
-5.210	970.000
0.000	959.430
4.020	959.270
8.870	955.470
28.270	955.540
57.650	958.830
64.900	963.250
81.290	968.350

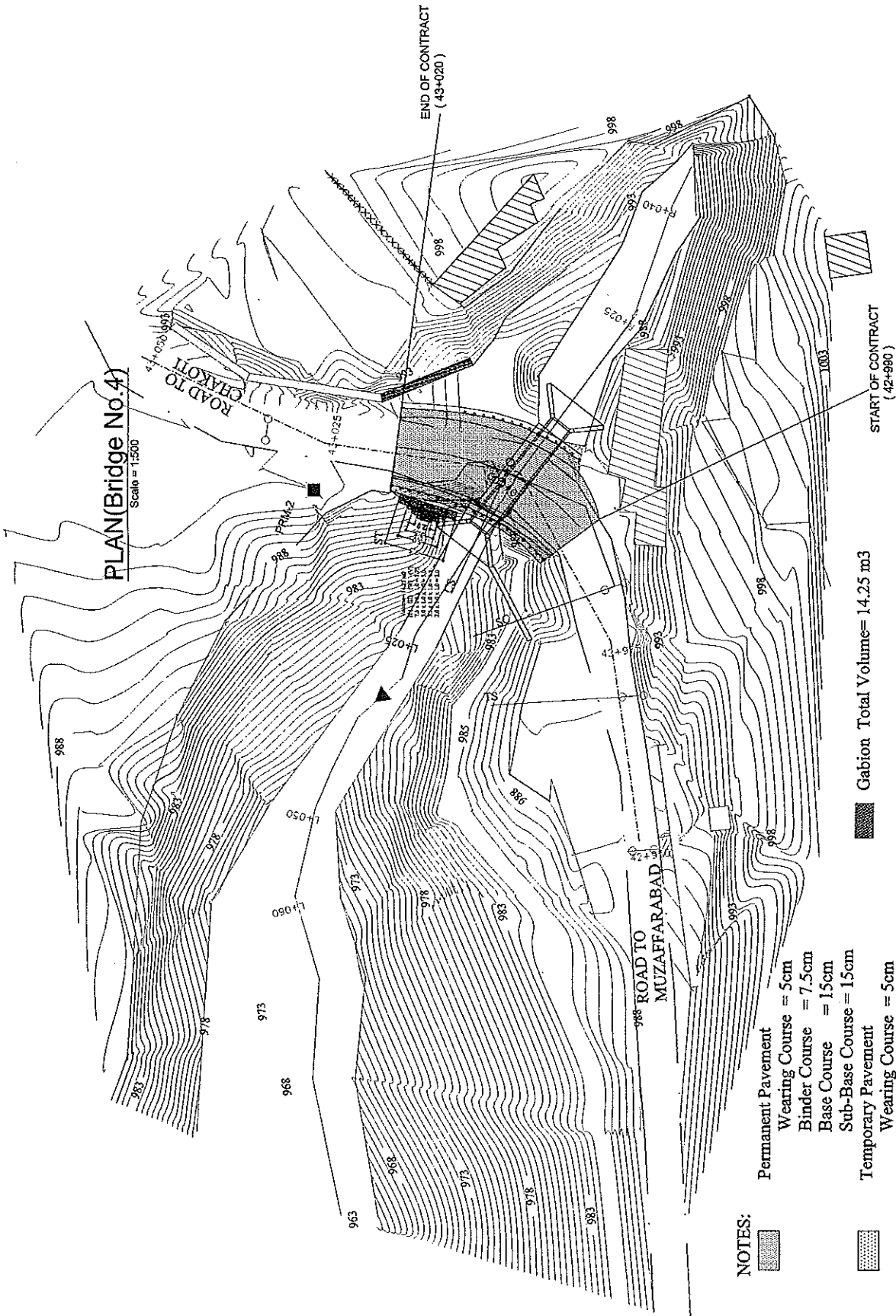


<p>GOVERNMENT OF PAKISTAN MINISTRY OF COMMUNICATIONS NATIONAL HIGHWAY AUTHORITY</p>	<p>JAPAN INTERNATIONAL COOPERATION AGENCY ASSIGNED TO: NIPPON KOEI CO., LTD. (NKC) ALMEC CORPORATION LTD. (ALMEC)</p>	<p>AS BUILT DRAWING</p>		<p>Technical Assistance for Reconstruction Project of Bridge Damaged by October 8th Earthquake on The Jhalum Valley Road Site No. 3 Slope Protection</p>	<p>DRAWING TITLE Cross Section F3-F3</p>	<p>SCALE 1:700</p>
		<p>Date 30 Jun 2008</p>	<p>Prepared BY Q.S. Sambu</p>			






NSL	LEVEL	DISTANCE
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-950		


<p>DATE: 30 Jan 2003</p> <p>Prepared BY: Mr. Ehsan Munir</p> <p>CHECKED BY: Mr. E. J. Leo</p> <p>APPROVED BY: Mr. Yamasahita</p>		<p>AS BUILT DRAWING</p>		<p>Technical Assistance for Reconstruction Project of Bridge Damaged by October 8th Earthquake on The Jhelum Valley Road</p> <p>Site No. 3 Slope Protection</p>		<p>DRAWING TITLE</p> <p>Cross Section H2-H2</p>		<p>SCALE</p> <p>1:700</p>	
<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>ASSIGNED TO:</p> <p>NIPPON KOGI CO., LTD. (NKS)</p> <p>ALMIEC CORPORATION LTD. (ALMIEC)</p>		<p>Mr. Ehsan Munir</p> <p>Mr. E. J. Leo</p> <p>Mr. Yamasahita</p>		<p>AS BUILT DRAWING</p>		<p>Cross Section H2-H2</p>		<p>DWG. NO.</p> <p>258-01-002</p>	
<p>GOVERNMENT OF PAKISTAN</p> <p>MINISTRY OF COMMUNICATIONS</p> <p>NATIONAL HIGHWAY AUTHORITY</p>									



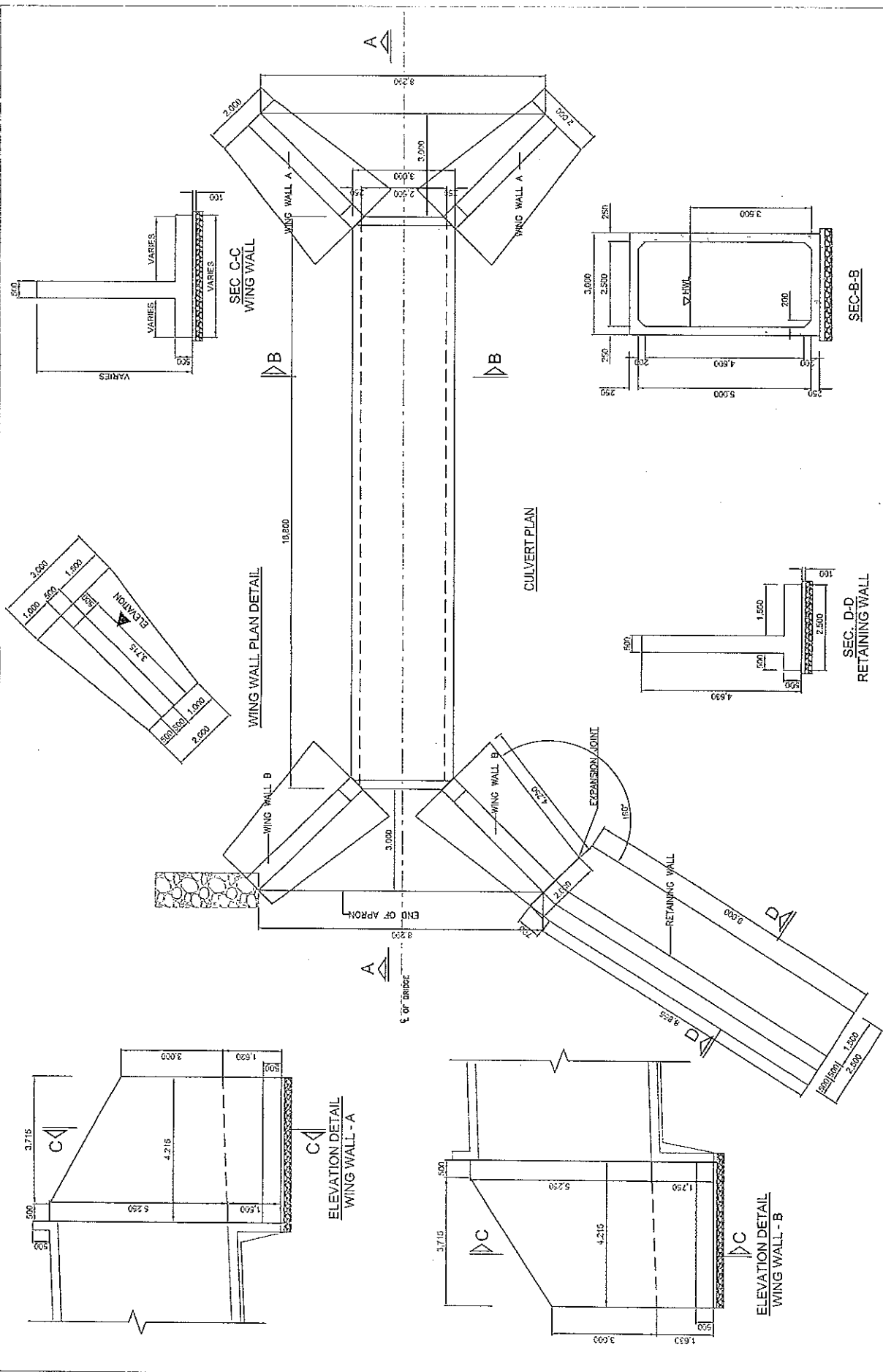
**PLAN(Bridge No.4)**  
Scale = 1:500

**NOTES:**

-  Permanent Pavement
  - Wearing Course = 5cm
  - Binder Course = 7.5cm
  - Base Course = 15cm
  - Sub-Base Course = 15cm
-  Temporary Pavement
  - Wearing Course = 5cm
  - Base Course = 15cm
-  Lane Mark (Yellow)

 Gabion Total Volume= 14.25 m3

JAPAN INTERNATIONAL COOPERATION AGENCY ASSIGNED TO: <b>NIPPON KOEI CO., LTD. (JAPAN)</b> CONSTRUCTED BY: <b>SAMBU CONSTRUCTION CO.LTD. (KOREA)</b>		Technical Assistance for Reconstruction Project of Bridges Damaged by October 8th Earthquake on The Jhelum Valley Road SITE NO.1 BRIDGE WORKS	General View of Site No. 4 DWG. NO.	Scale 1:1,000
AS BUILT DRAWING				
Date:-	10 Nov 2007			
Prepared By:	Q.S	Mr.Ehsan Munir		
Checked By:	Sambu	Mr.E.I.Lee		
Approved By:	Nippon Koi	Mr. Yamashita		
<b>GOVERNMENT OF PAKISTAN</b> <b>MINISTRY OF COMMUNICATIONS</b> <b>NATIONAL HIGHWAY AUTHORITY</b>				



General View of Structure No.4  
 S-1:100  
 DWG. NO. 548-02-002

Technical Assistance for Reconstruction Project  
 of Bridges Damaged by October 8th Earthquake  
 on The Jhelum Valley Road  
 SITE NO.4 BRIDGE WORKS

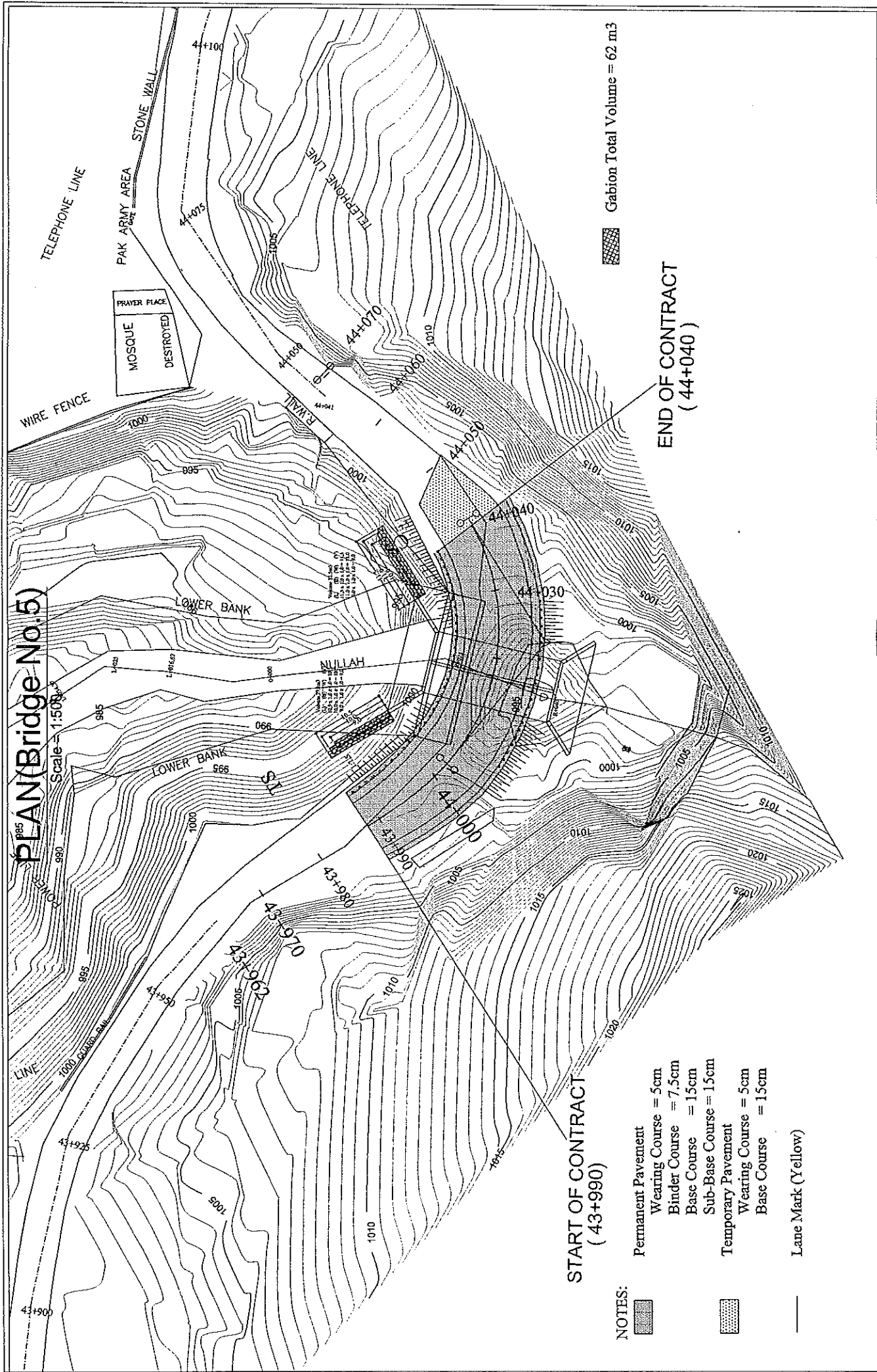
As-Built Drawing	
Date:	10 Nov 2007
Prepared By:	Mr. Ehsan Munir
Checked By:	Mr. Ejaz
Approved By:	Mr. Yashir

JAPAN INTERNATIONAL COOPERATION AGENCY  
 ASSAID FOR  
 NIPPON KOKI CO., LTD. (JAPAN)  
 CONSULTANT  
 SAMBU CONSTRUCTION CO. LTD. (KOREA)

GOVERNMENT OF PAKISTAN  
 MINISTRY OF COMMUNICATIONS  
 NATIONAL HIGHWAY AUTHORITY







Gabion Total Volume = 62 m<sup>3</sup>

END OF CONTRACT  
( 44+040 )

START OF CONTRACT  
( 43+990 )

- NOTES:
- Permanent Pavement
  - Wearing Course = 5cm
  - Binder Course = 7.5cm
  - Base Course = 15cm
  - Sub-Base Course = 15cm
  - Temporary Pavement
  - Wearing Course = 5cm
  - Base Course = 15cm
  - Lane Mark (Yellow)

PLAN (Bridge No. 5)  
Scale = 1:1500

JAPAN INTERNATIONAL COOPERATION AGENCY <small>ASSOCIATED TO:</small> NIPPON KOEI CO. LTD. (JAPAN) <small>CONSTRUCTED BY:</small> SAMBU CONSTRUCTION CO. LTD. (KOREA)			GOVERNMENT OF PAKISTAN MINISTRY OF COMMUNICATIONS NATIONAL HIGHWAY AUTHORITY
AS BUILT DRAWING Date: 10 Nov 2007 Prepared By: Q.S. Mr. Fahim Munir Checked By: Samba Mr. E. Lee Approved By: Nippon Koi Mr. Yamashita		Technical Assistance for Reconstruction Project of Bridges Damaged by October 8th Earthquake on The Jhelum Valley Road SITE NO. 1 BRIDGE WORKS	
Scale 1:1,000		General View of Site No. 5 DWG. NO. SIB-01-001	





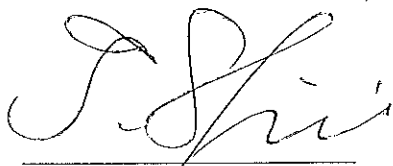
## **APPENDIX - A**

### ***A-2: Minute of Meetings for the Change in the No.3 Bridge Slope Protection Work and Approach Roads***

**MINUTES OF MEETING**  
**BETWEEN JAPAN INTERNATIONAL COOPERATION AGENCY**  
**AND**  
**NATIONAL HIGHWAY AUTHORITY OF THE GOVERNMENT OF ISLAMIC REPUBLIC**  
**OF PAKISTAN**  
**ON THE SLOPE PROTECTION WORKS AT BRIDGE NO.3: JHELM VALLEY ROAD**  
**PROJECT FOR RECONSTRUCTION OF BRIDGES DAMAGED BY OCT 8, 2005**  
**EARTHQUAKE**

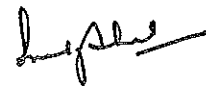
Japan International Cooperation Agency (JICA), Pakistan Office and National Highway Authority (NHA) on September 7, 2007 had a meeting to discuss and reach a common understanding on the necessary design amendments to the Bridge 3 site following the physical site inspection by Project Coordinator (NHIP) on behalf of NHA.

As a result of the discussions, both parties have agreed to the mutual decision taken in the document attached hereto. Both parties will convey the contents of the Minutes of Meeting to their respective higher authority/Governments.

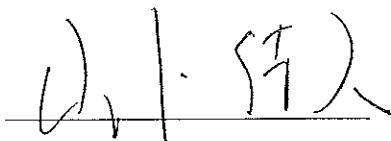


Mr. Tsutomu SHIMIZU  
Senior Deputy Resident Representative  
JICA Pakistan Office

Islamabad: September 7, 2007



Maj Gen Imtaiz Ahmed  
Chairman  
National Highway Authority  
Islamic Republic of Pakistan



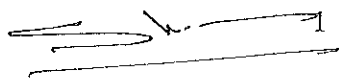
Mr. Yoshihisa YAMASHITA  
Project Manager  
JICA Study Team

The Subject matter at issue, during this meeting, was discussed as under.

- Project Manager, JICA Study Team presented the drawings and cost estimates amounting to the PKR Twenty Five Million (25,000,000.000) to the Chairman NHA with the explanation that resultant to the site visit and subsequent discussions made with the Project Co-ordinator (NHIP), the cost of NHA portion has been reduced to the afore-mentioned budgetary amount. He further explained that the JICA Study Team's design proposal although acceptable to NHA in principle, yet the same has been curtailed in its scope of implementation due to budgetary constraints of NHA. However, the PM emphasised that the design proposal, curtailed for the purpose, shall necessitate its implementation by the NHA in fast succession to avoid the possibility of risk involving traffic safety and slope stability to that part of this work which is to be completed by the JICA Contractor. The Chairman, upon this, approved this proposal and appreciated the necessity of implementation of the remaining part by NHA to achieve sustainable and safe construction within the proposed reach of the subject project. The Chairman gave further instructions to the GM and the Project Co-ordinator NHIP to make necessary arrangement through NHA contractor to undertake the works on priority footing against the remaining portion of the JICA Study Team's overall design proposal in the larger interest of the project.
- PM JICA Study Team thereafter, furnished a copy of the draft contract agreement to the Chairman NHA, who on perusal of its contents said that this contract agreement shall be signed by the Member (Operation) on behalf of NHA who could therefore, be contacted for fulfilment of the requisite codal formality.

The meeting was called off by Chairman of NHA with a vote of thanks to all the participants of the meeting.

TS



g.

**List of Annexure attached to the Minutes of Meeting:**

- |  |            |
|--|------------|
| 1. List of participants of September 7, 2007 Meeting | Annexure A |
| 2. Revised Drawings                                  | Annexure B |
| 3. Revised cost Summary                              | Annexure C |
| 4. Original Drawings                                 | Annexure D |
| 5. Contract Agreement                                | Annexure E |

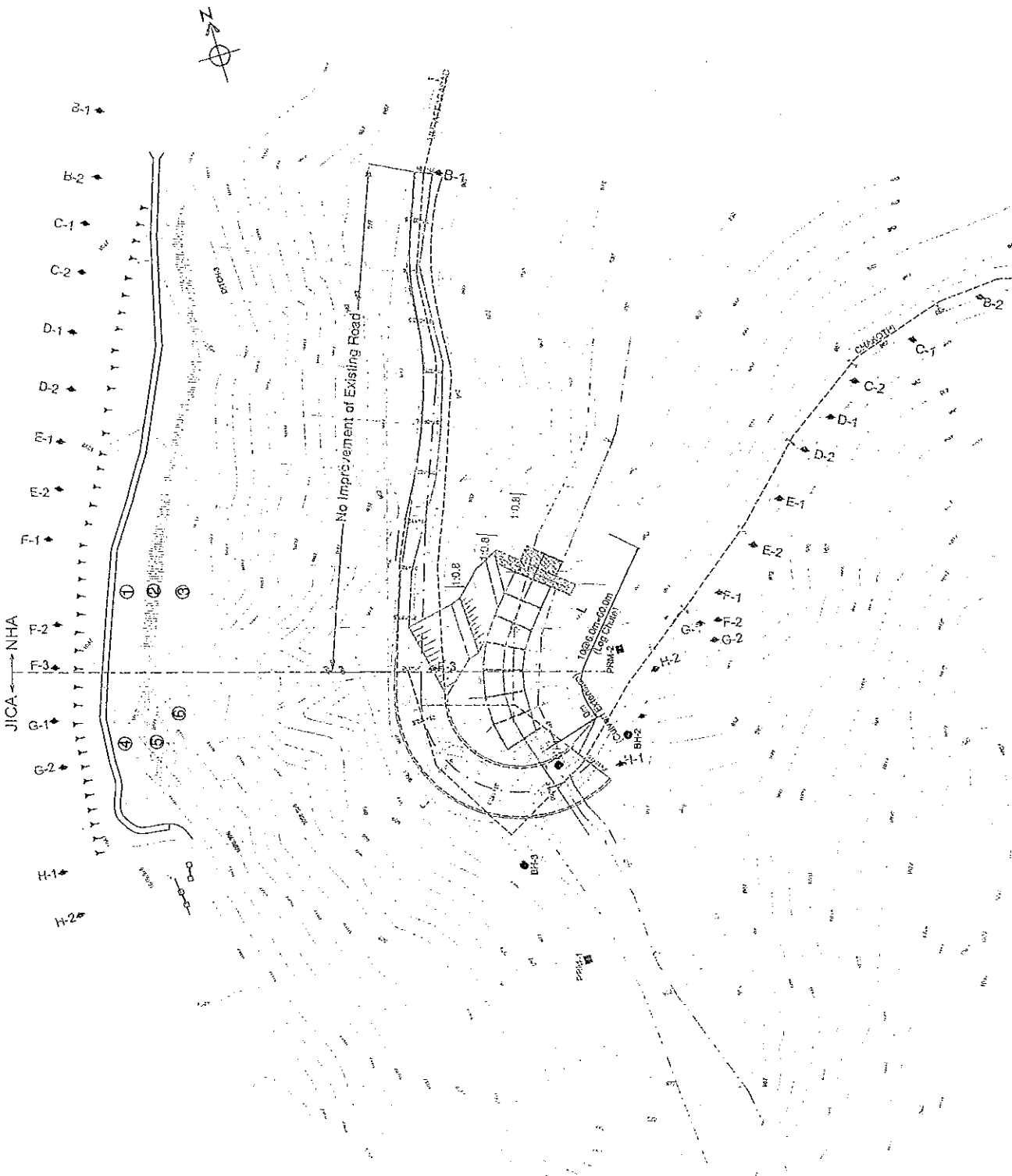
*TS*     *W*     *g.*

## LIST OF PARTICIPANTS

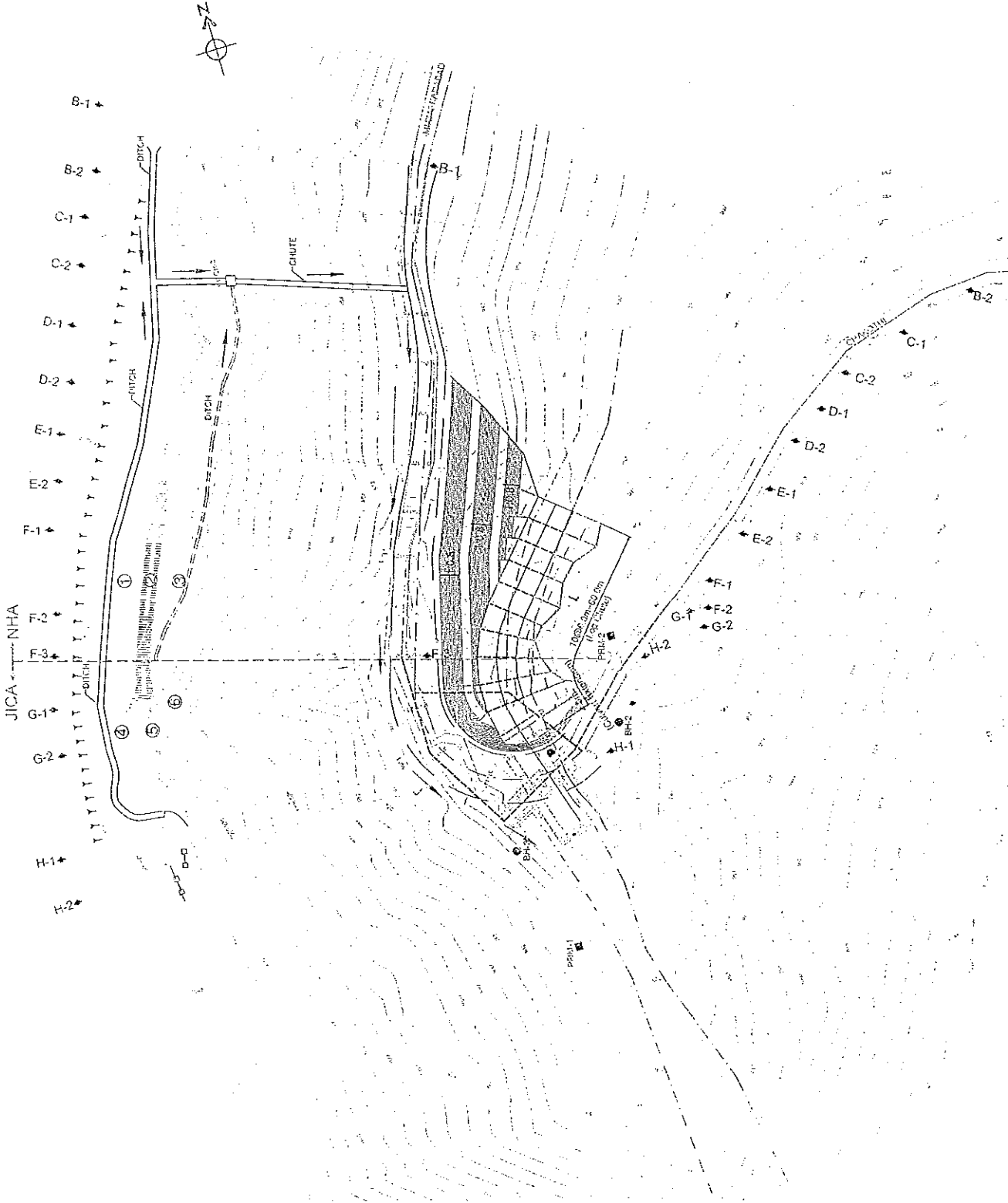
Organization	Name	Designation
NHA	• Major Gen. Imtiaz Ahmed	Chairman
	• Brig. Shahryar Ashraf	General Manager (NHIP)
	• Col® Mansoor Qureshi	Project Co-ordinator (NHIP)
	• Shigeki TAKAHASHI	JICA Expert
JICA	• Tsutomu SHIMIZU	Sr.Dy. Resident Representative
	• Sohail Ahmad	Senior Programme Officer
JICA STUDY TEAM	• Yoshihisa YAMASHITA	Project Manager
	• G.N.MALIK	Dy. Project Manager

TB A /

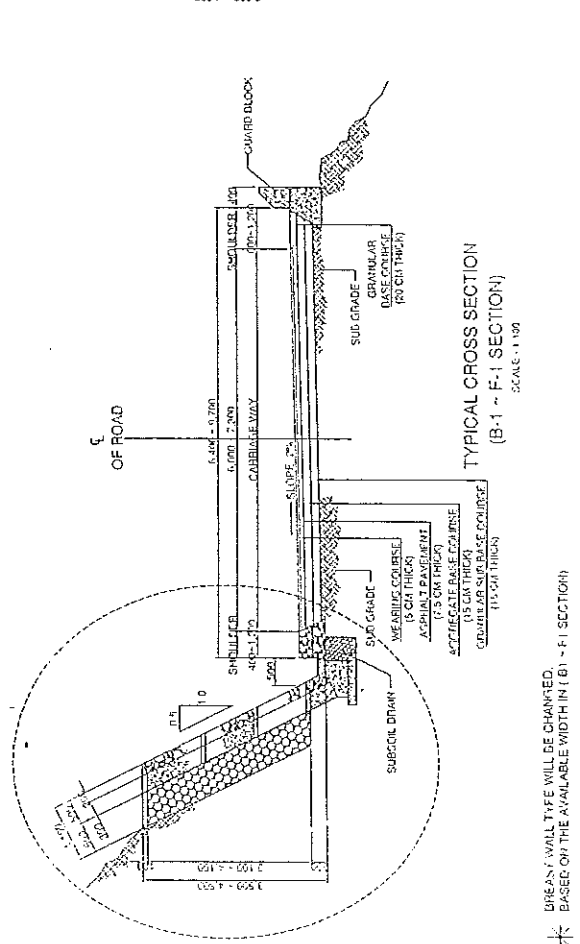
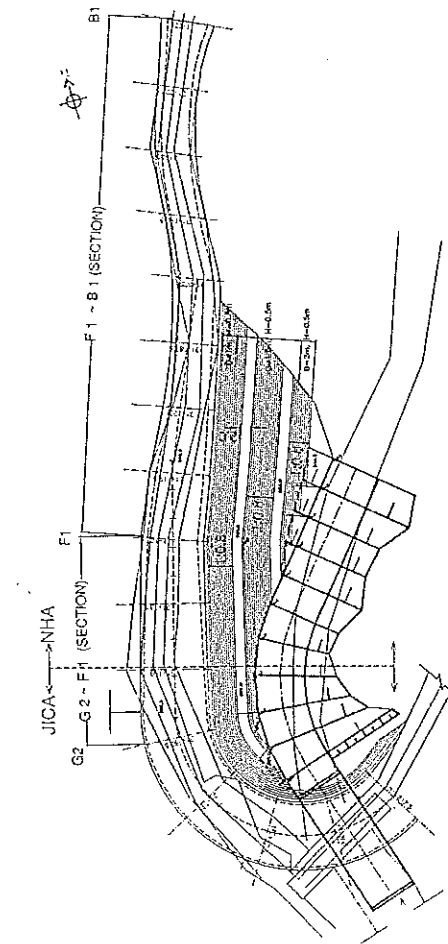
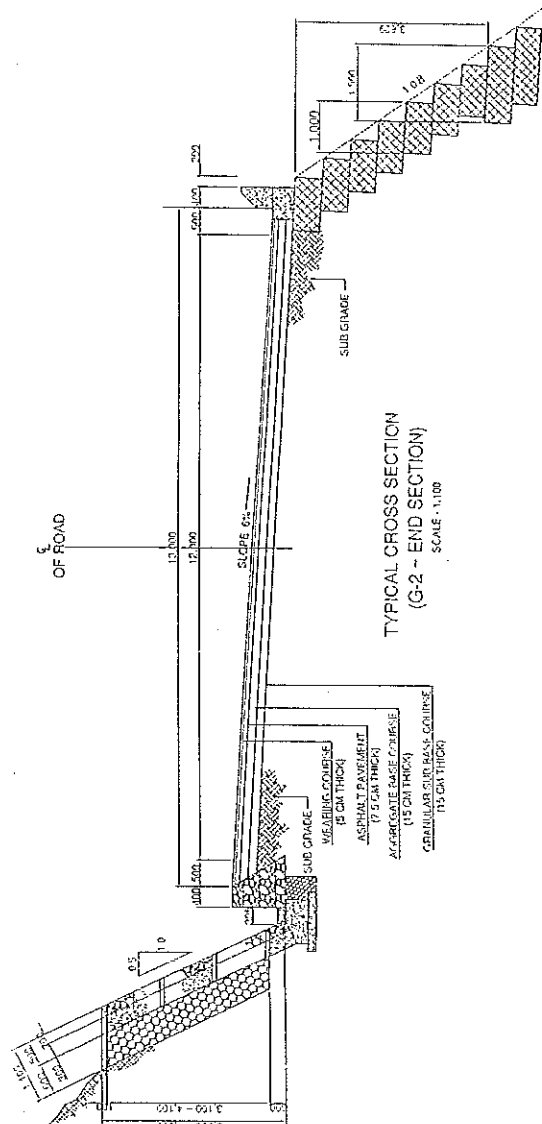
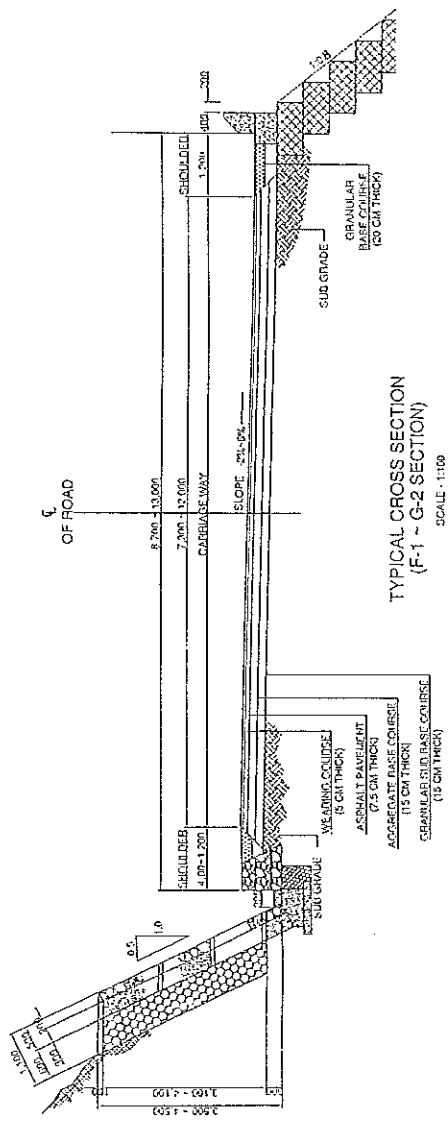




GOVERNMENT OF PAKISTAN MINISTRY OF COMMUNICATIONS NATIONAL HIGHWAY AUTHORITY	JAPAN INTERNATIONAL COOPERATION AGENCY JICA ALUMINUM CORPORATION OF JAPAN (AJICO)	PREP. DATE 01 APR 2006	CHECKED BY A. HUSSEIN B.	DESIGNED BY A. HUSSEIN B.	DRAWN BY A. HUSSEIN B.	REVISION NO. 02	REVISION DATE 02 APR 2007	PROJECT NO. 01 APR 2006	PROJECT NAME JICA-NHA MOTORWAY	SCALE 1:1000	SHEET NO. 134
		Technical Assistance for Reconstruction Project of Motorway Managed by National Highway Authority of The Jhelum Valley Road Site No. 3									



GOVERNMENT OF PAKISTAN MINISTRY OF COMMUNICATIONS NATIONAL HIGHWAY AUTHORITY	JAPAN INTERNATIONAL COOPERATION AGENCY JICA TECHNICAL ASSISTANCE FOR RECONSTRUCTION PROJECT OF ROAD DAMAGED BY EARTHQUAKE ON THE HADIM VALLEY ROAD Site No. 3	General View Plan		SCALE 1:1000
		PROJECT NO. DRAWING NO. SHEET NO. DATE	PROJECT NO. DRAWING NO. SHEET NO. DATE	PROJECT NO. DRAWING NO. SHEET NO. DATE



\* DREASY WALL TYPE WILL BE CHANGED, BASED ON THE AVAILABLE WIDTH IN (B) - F1 SECTION

REV.		DATE	DESCRIPTION	APPROVED BY	RECOMMENDED BY	DESIGNED BY	ATTACHMENT - 3	
04							GRADING TITLE	SCALE AS SHOWN
03							TYPICAL CROSS SECTION	DWG. NO.
02								
01								

Technical Assistance for Reconstruction Project of Bridge Damaged by October 8th Earthquake on The Jhelum Valley Road Site No. 3 Slope Protection

JICA INTERNATIONAL COOPERATION AGENCY  
MINORU KOJIMA, LTD. (JIK)  
ALMEC CONSTRUCTION LTD. (ALMEC)

GOVERNMENT OF PAKISTAN  
MINISTRY OF COMMUNICATIONS  
NATIONAL HIGHWAY AUTHORITY

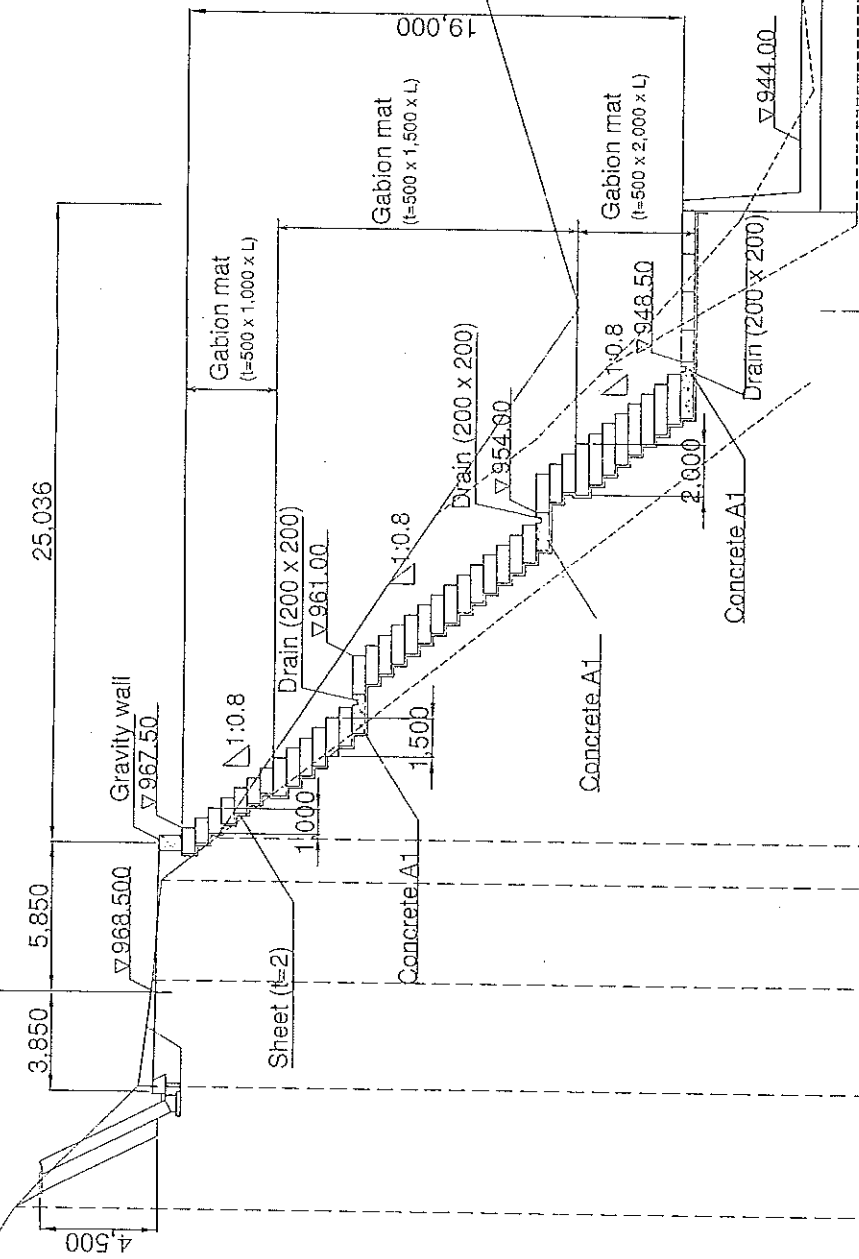
DATE: MAY 2007  
SCALE: 1:100





ST -02.125

CL

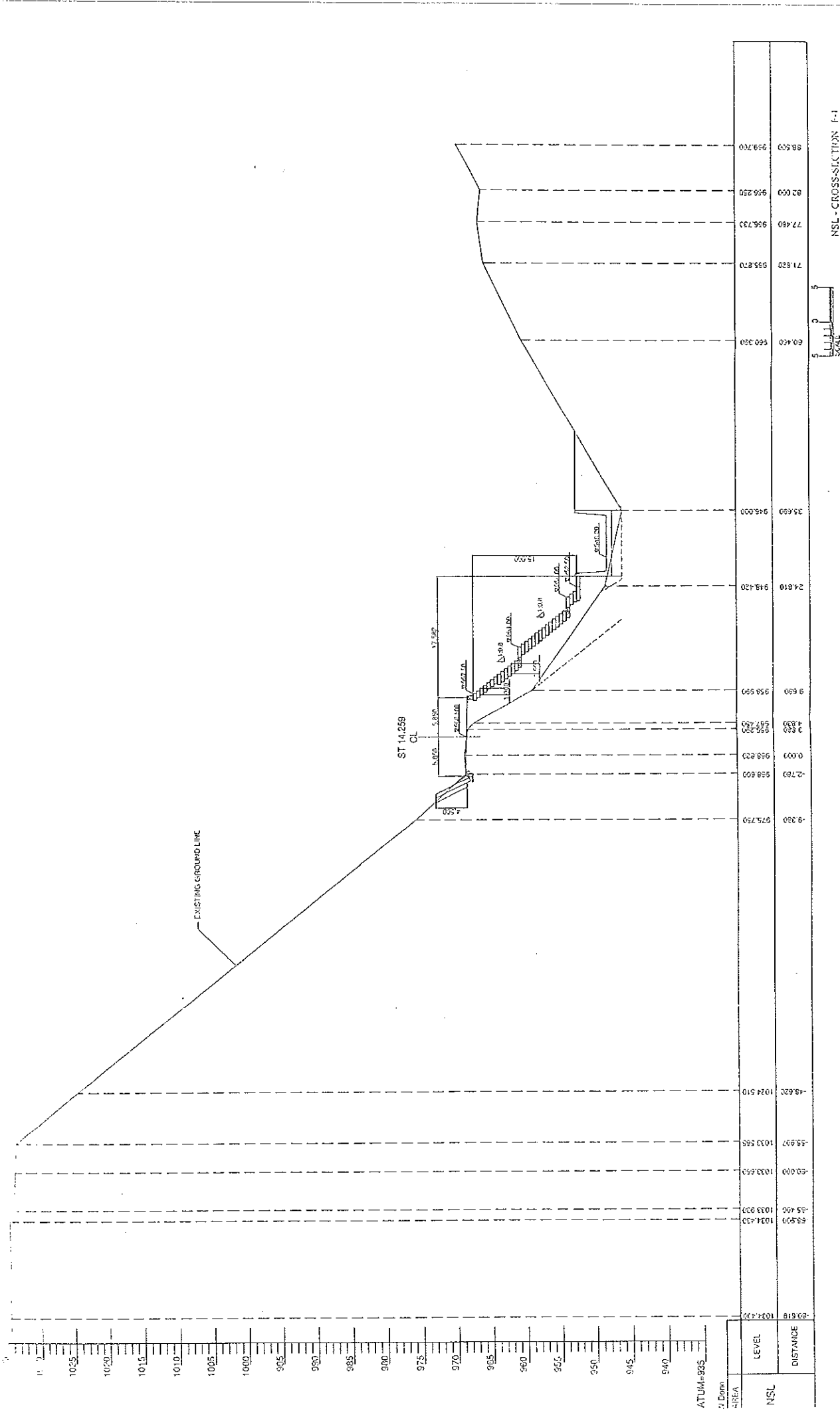


All Dimensions in Millimeters

<p>GOVERNMENT OF PAKISTAN MINISTRY OF COMMUNICATIONS NATIONAL HIGHWAY AUTHORITY</p>		<p>JAPAN INTERNATIONAL COOPERATION AGENCY ASSISTED BY DAIICHI KOGI CO., LTD. (DKI) ALMFC CORPORATION LTD. (ALMFC)</p>		<p>DESIGNED BY DRAWN BY CHECKED BY REVISIONS BY</p>		<p>TECHNICAL ASSISTANCE FOR RECONSTRUCTION PROJECT OF BRIDGES DAMAGED BY OCTOBER 8TH EARTHQUAKE ON THE JHELM VALLEY ROAD SITE No. 3, Shiraz PAVEMENT</p>		<p>DRAWING TITLE Cross Section a-a' (detail) E2 Section</p>	
04	01	02	01	FILE	DATE	CALCULATION	DATE	DATE	DATE

7.3





NSL - CROSS-SECTION F-1

All Dimensions in Meters (1:100)

DRAWING TITLE  
Cross Section b-b'

Technical Assistance for Reconstruction Project  
of Damage Damaged by October 18th Earthquake  
on The Jhalum Valley Road  
Site No. 1 Shilpa Protection

DESIGNED BY  
DRAWN BY  
CHECKED BY  
APPROVED BY

NO.	DATE	DESCRIPTION
01		
02		
03		
04		

JAPAN INTERNATIONAL COOPERATION AGENCY  
NSL  
SHIPPON KOEI CO., LTD. (INS)  
ALMIEC CORPORATION LTD. (ALMIEC)

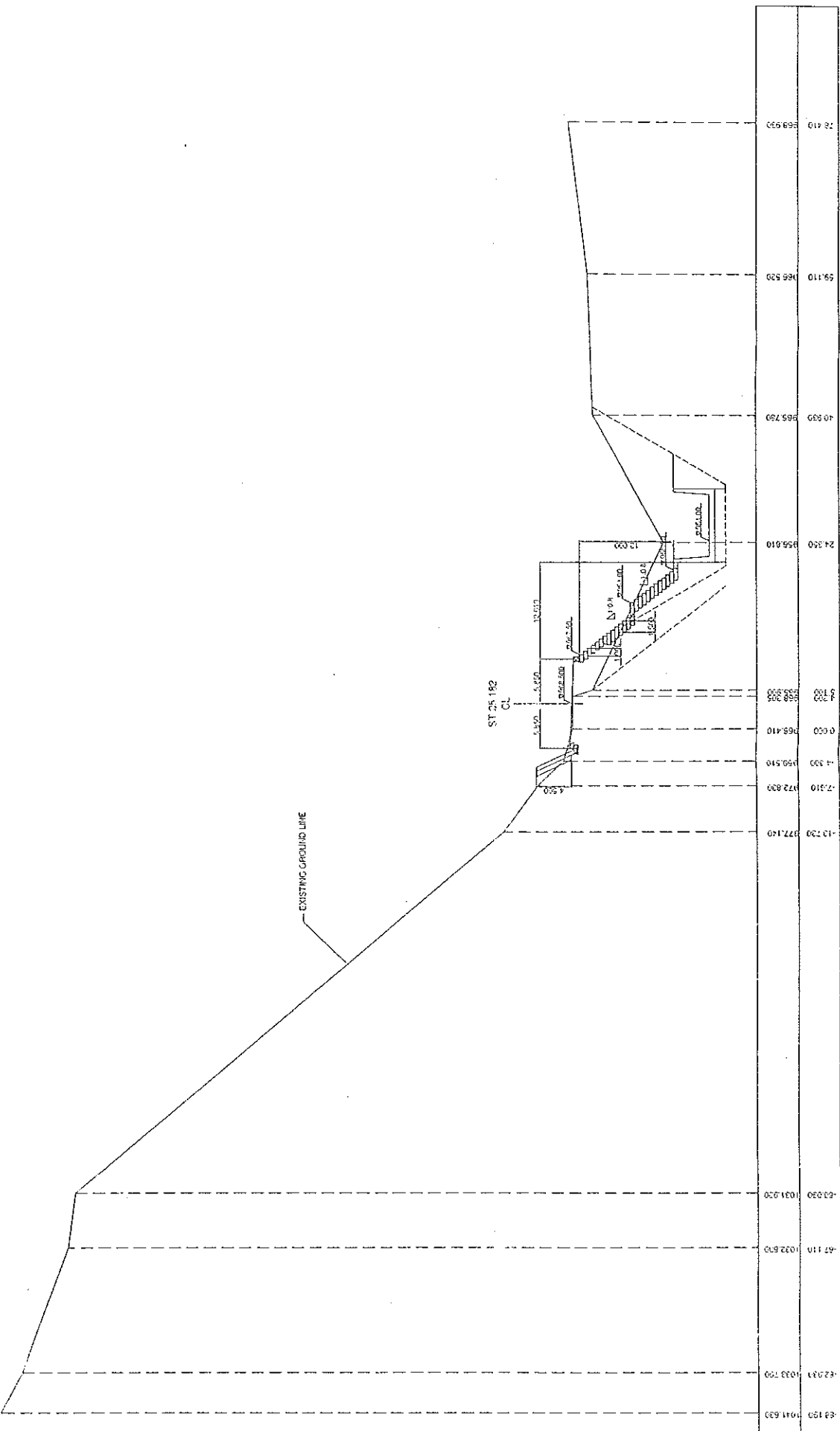
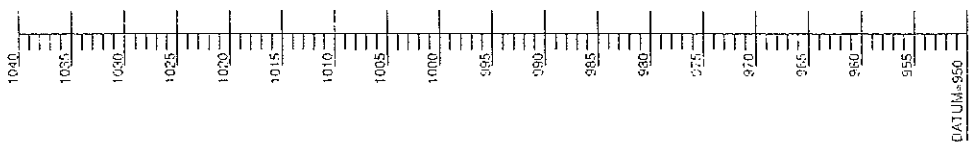
GOVERNMENT OF PAKISTAN  
MINISTRY OF COMMUNICATIONS  
NATIONAL HIGHWAY AUTHORITY

TS-100

LEVEL	DISTANCE
1024.20	-9.350
1024.50	-7.750
1033.900	0.000
958.200	9.650
958.200	24.810
948.420	33.650
948.000	35.650
958.870	71.820
956.730	77.480
956.250	82.000
959.700	88.500

ATUM-885





AREA	LEVEL	DISTANCE
955	0+00	1941.830
960	0+00	1941.830
965	0+00	1941.830
970	0+00	1941.830
975	0+00	1941.830
980	0+00	1941.830
985	0+00	1941.830
990	0+00	1941.830
995	0+00	1941.830
1000	0+00	1941.830
1005	0+00	1941.830
1010	0+00	1941.830
1015	0+00	1941.830
1020	0+00	1941.830
1025	0+00	1941.830
1030	0+00	1941.830
1035	0+00	1941.830
1040	0+00	1941.830

NSL - CROSS-SECTION P-2

All Dimensions in Millimeters

Drawing Title  
Cross Section c-c'

Scale  
1:500

Date  
MAY 2007

DWG NO  
035/02/004

Technical Assistance for Reconstruction Project  
of Bridge Damaged by October 8th Earthquake  
on The Helium Valley Road  
Site No. 3 Slope Protection

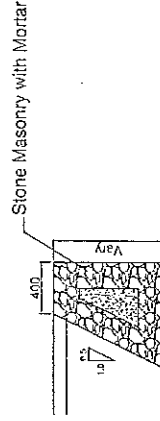
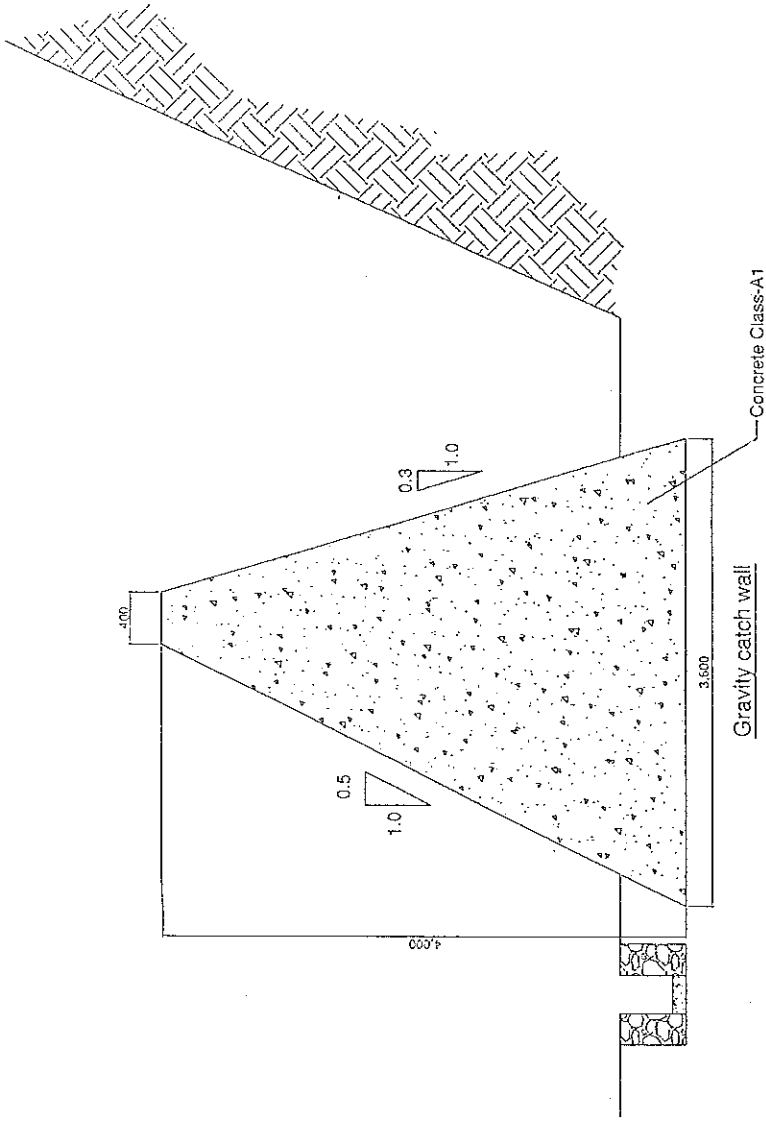
NO	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY	APPROVED BY
01					
02					

JAPAN INTERNATIONAL COOPERATION AGENCY  
ASSISTANT  
ATTACHMENT KOEI CO., LTD. (INR)  
ALMEC CORPORATION LTD. (ALMEC)

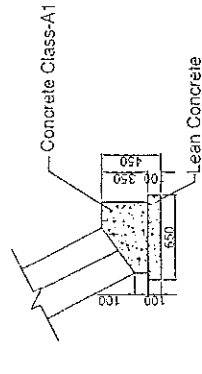
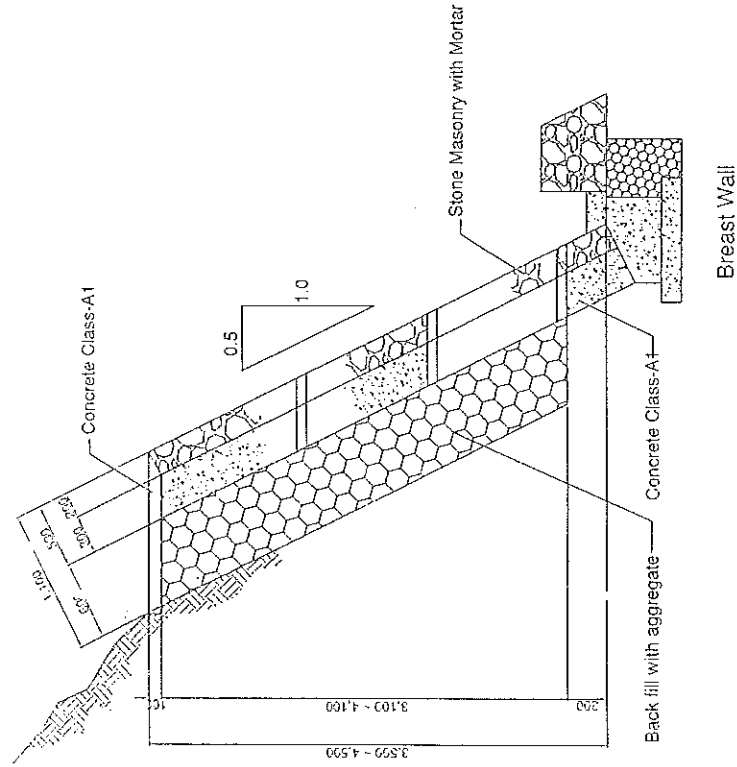
GOVERNMENT OF PAKISTAN  
MINISTRY OF COMMUNICATIONS  
NATIONAL HIGHWAY AUTHORITY







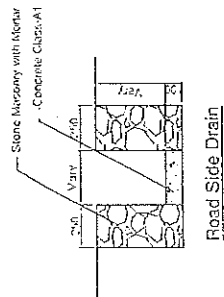
Road Side Gravity Wall



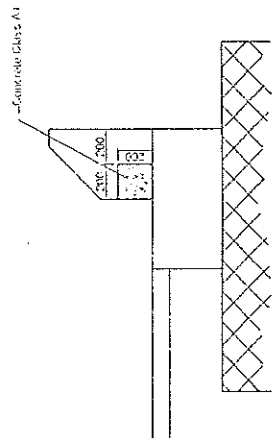
Foundation of Breast Wall

All Dimensions in Millimeters

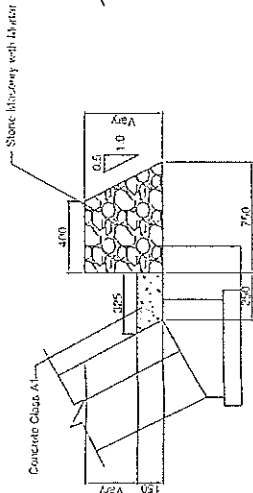
GOVERNMENT OF PAKISTAN MINISTRY OF COMMUNICATIONS NATIONAL HIGHWAY AUTHORITY	JAPAN INTERNATIONAL COOPERATION AGENCY ASSIGNED TO: NIPPON KOGI CO., LTD. (NKC) ALMEC CORPORATION LTD. (ALMEC)	04	DESIGNED BY	Technical Assistance for Reconstruction Project of Bridge Damaged by October 8th Earthquake on The Jhelum Valley Road Site No. 3 Slope Protection	SCALE	DRAWING TITLE DETAILS OF WALLS	1:40
		03	DRAWN BY		DATE		JUNE - 2002
		02	ASSISTED BY		DWG. NO.		535-03-0013
		01	RECOMMENDED BY		DATE		
			APPROVED BY				
			DESCRIPTION				



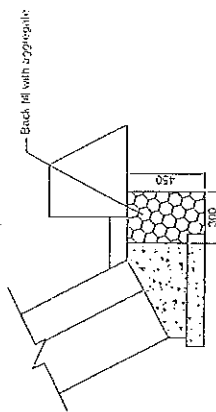
Road Side Drain



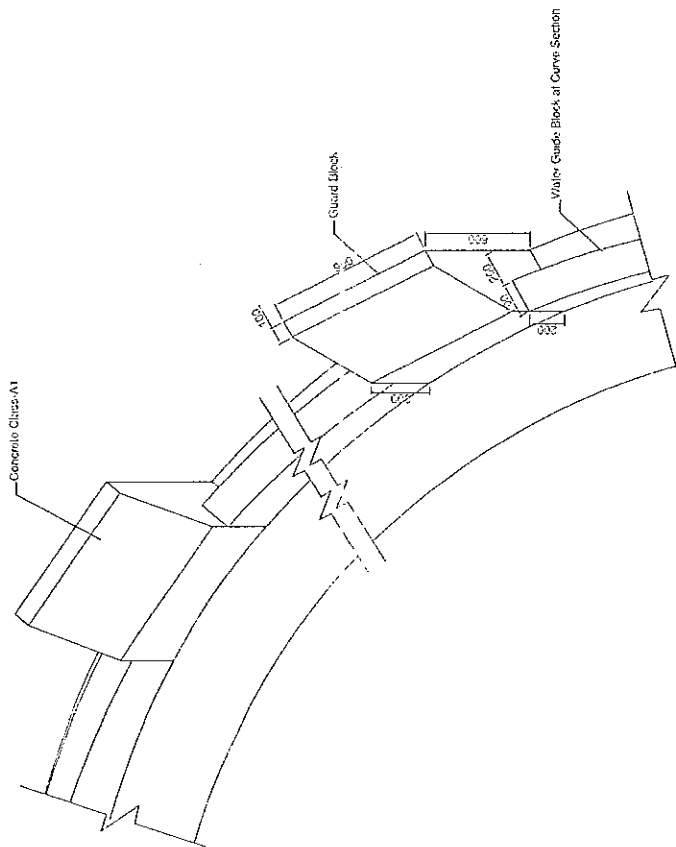
Water Guide Block at Curve Section



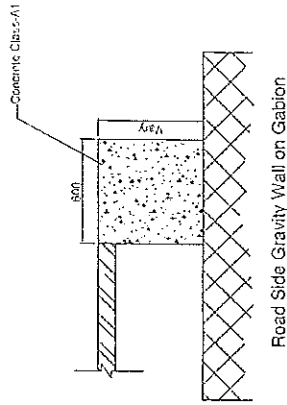
Road Side Drain



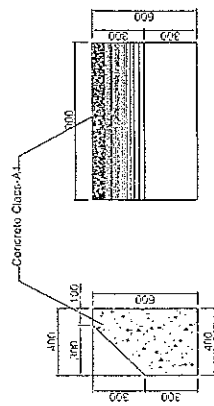
Subsoil Drain 300x450



Lean Concrete



Road Side Gravity Wall on Gabion



Guard Block

All Dimensions in Millimeters

<p>GOVERNMENT OF PAKISTAN MINISTRY OF COMMUNICATIONS NATIONAL HIGHWAY AUTHORITY</p>	<p>JAPAN INTERNATIONAL COOPERATION AGENCY ASSISTED BY NIPPON KOEI CO., LTD. (NSK) ALMEC CORPORATION LTD. (ALMEC)</p>	04	DESIGNED BY	<p>Technical Assistance for Reconstruction Project of Bridges Damaged by October 8th Earthquake on The Jhelum Valley Road Site No. 3 Slope Protection</p>	DRAWING TITLE	<p>SCALE 1:30</p>	
		03	DRAWN BY		DETAILS OF ROAD SIDE DRAIN AND BLOCKS		
		02	ASSISTED BY		DATE		<p>DWG. NO. JUNE 2007</p>
		01	RECOMMENDED BY		APPROVED BY		
		REV.	DATE	DESCRIPTION			

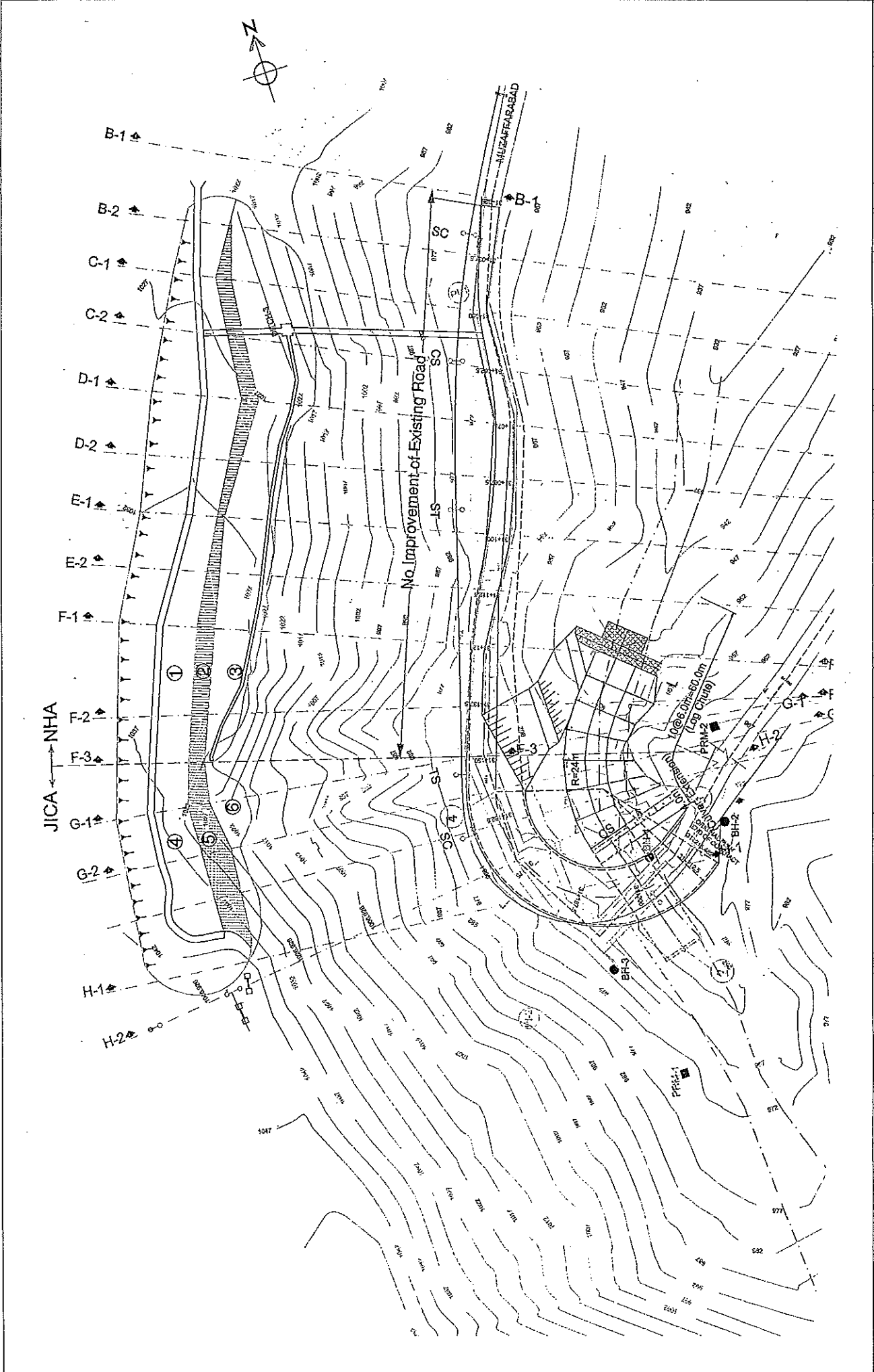
535/2007



Bridge No.3 Revised Cost Summary

Cost Estimate based on the modified new rates estimated and prepared by Nippon Koei

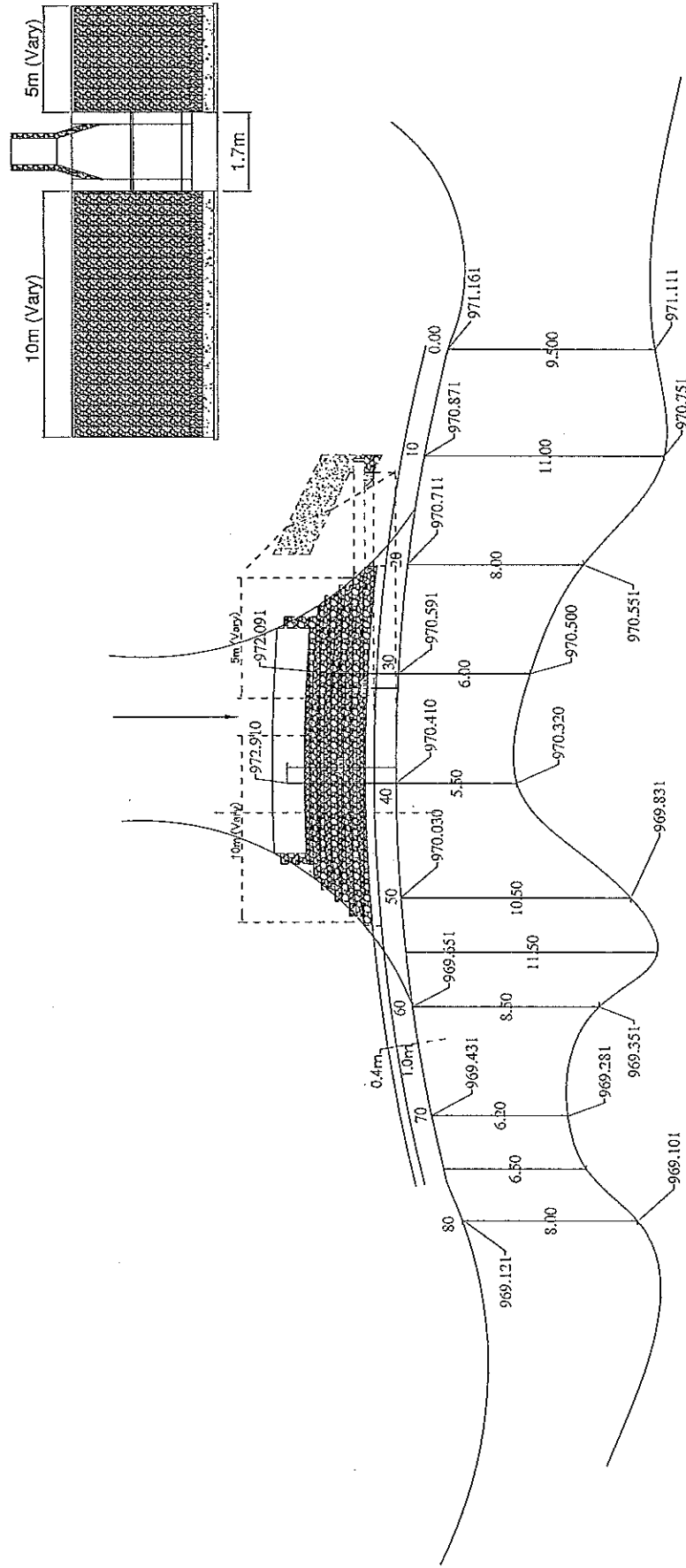
	JICA (Original)	JICA (Revised)	NHA (Original)	NHA (Revised)	NHA (Revision considering 25 M Budget limit)	Remarks
Bridge No.3	23,513,314	22,392,668	0	0		
Slope Protection	20,654,570	3,461,956	47,394,527	8,853,876	8,853,876	
Road Works	8,182,368	5,113,773	2,605,474	12,731,134	1,000,000	Part of embankment (tentative)
Log Chute	0	8,815,606	0	20,444,768	11,700,000	JICA 3 blocks, NHA (7 to 4 blocks)
Additional gabion at the end of the log chute					620,000	250m3 (tentative) x 2469Rs/m3
Fiscal Contingency	0	0	0	4,202,978	2,217,388	10% of above
Add. Indirect Cost	0	4,000,000	0	0		Expected figure after negotiation
<b>Total</b>	<b>52,350,252</b>	<b>43,784,003</b>	<b>50,000,002</b>	<b>46,232,756</b>	<b>24,391,264</b>	
Difference		(8,566,249)		(3,767,246)		
Additional (Aug 2007-Feb. 2008) supervision fee		5,500,000				11,000,000 J. Yen
Additional gabion for slope protection of embankment around wing-walls and consolidation blocks at No.1&2 Bridge		3,000,000				500m3 x 2 x 2469Rs+500,000(*)=2,969,000, (*)Excavation & etc.
<b>Estimated final balance of JICA portion</b>		<b>(66,249)</b>				




<p>GOVERNMENT OF PAKISTAN MINISTRY OF COMMUNICATIONS NATIONAL HIGHWAY AUTHORITY</p>	<p>JAPAN INTERNATIONAL COOPERATION AGENCY ASSIGNED TO: <b>JICA</b> NIPPON KAIEN CO., LTD. (N.K.) ALMEC CORPORATION LTD. (ALMEC)</p>		<p>As Built Drawing</p>		<p>Scale 1:1000</p>
	<p>04</p>	<p>03</p>	<p>02</p>	<p>01</p>	<p>REV.</p>
<p>Technical Assistance for Reconstruction Project of Bridges Damaged by October 8th Earthquake on The Jhelum Valley Road SITE NO.1 BRIDGE WORKS</p>			<p>General View of Sho No. 3</p>		<p>DWG. NO. SSB-01-001</p>



Place and Extension of the Gabion Wall and The End Chute will be fixed based on the site condition



GOVERNMENT OF PAKISTAN  
 MINISTRY OF COMMUNICATIONS  
 NATIONAL HIGHWAY AUTHORITY

JAPAN INTERNATIONAL COOPERATION AGENCY  
 ASSIGNED TO:  
  
 NIPPON KOEI CO., LTD. (NKS)  
 ALMEC CORPORATION LTD. (ALMEC)

As Built Drawing

04	
03	
02	
01	
REV.	

Technical Assistance for Reconstruction Project  
 of Bridges Damaged by October 8th Earthquake  
 on The Jhelum Valley Road  
 SITE NO.1 BRIDGE WORKS

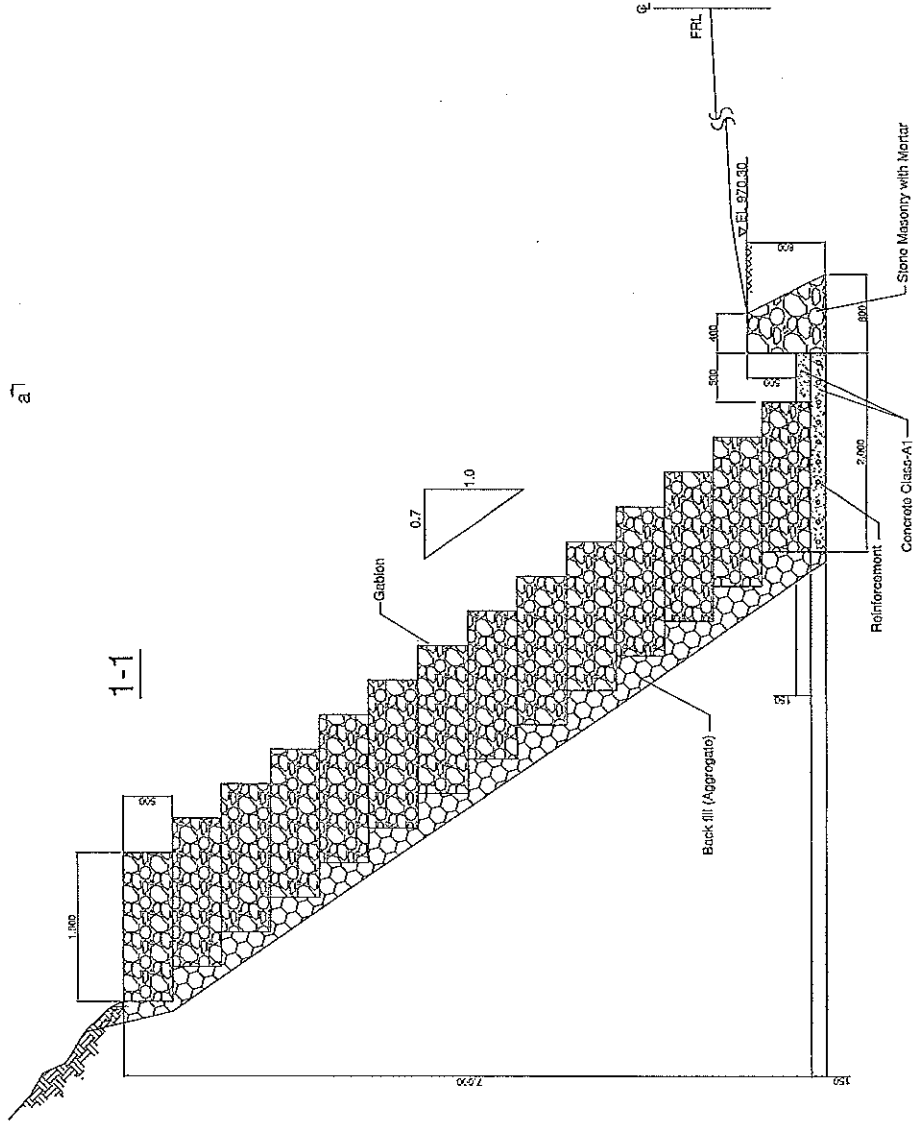
Scale  
 1:200

Details of Walls - 1

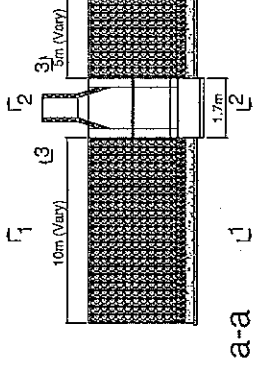
DMC NO. 518-02-001

# Breast Wall

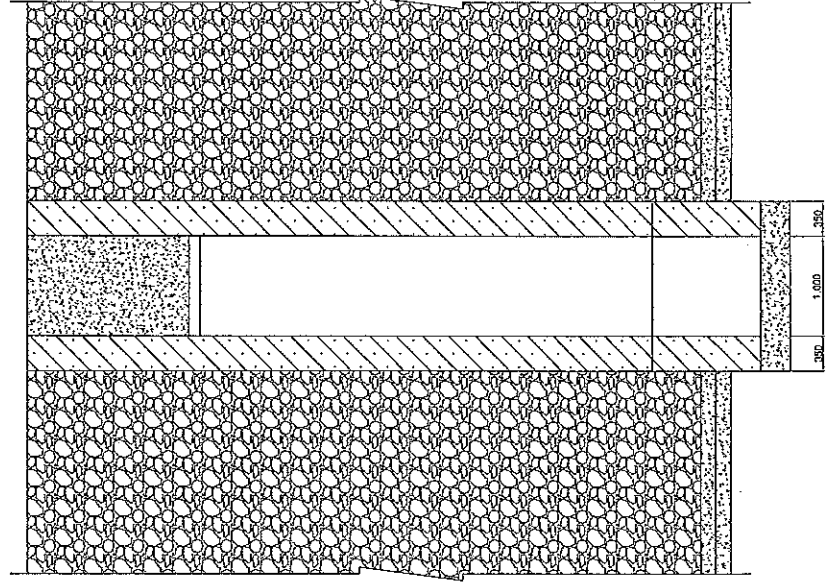
1-1



a)



a-a



GOVERNMENT OF PAKISTAN  
MINISTRY OF COMMUNICATIONS  
NATIONAL HIGHWAY AUTHORITY

JAPAN INTERNATIONAL COOPERATION AGENCY  
ASSIGNED TO:  
**JICA** NIPPON KOEI CO., LTD. (NKS)  
ALMEC CORPORATION LTD. (ALMEC)

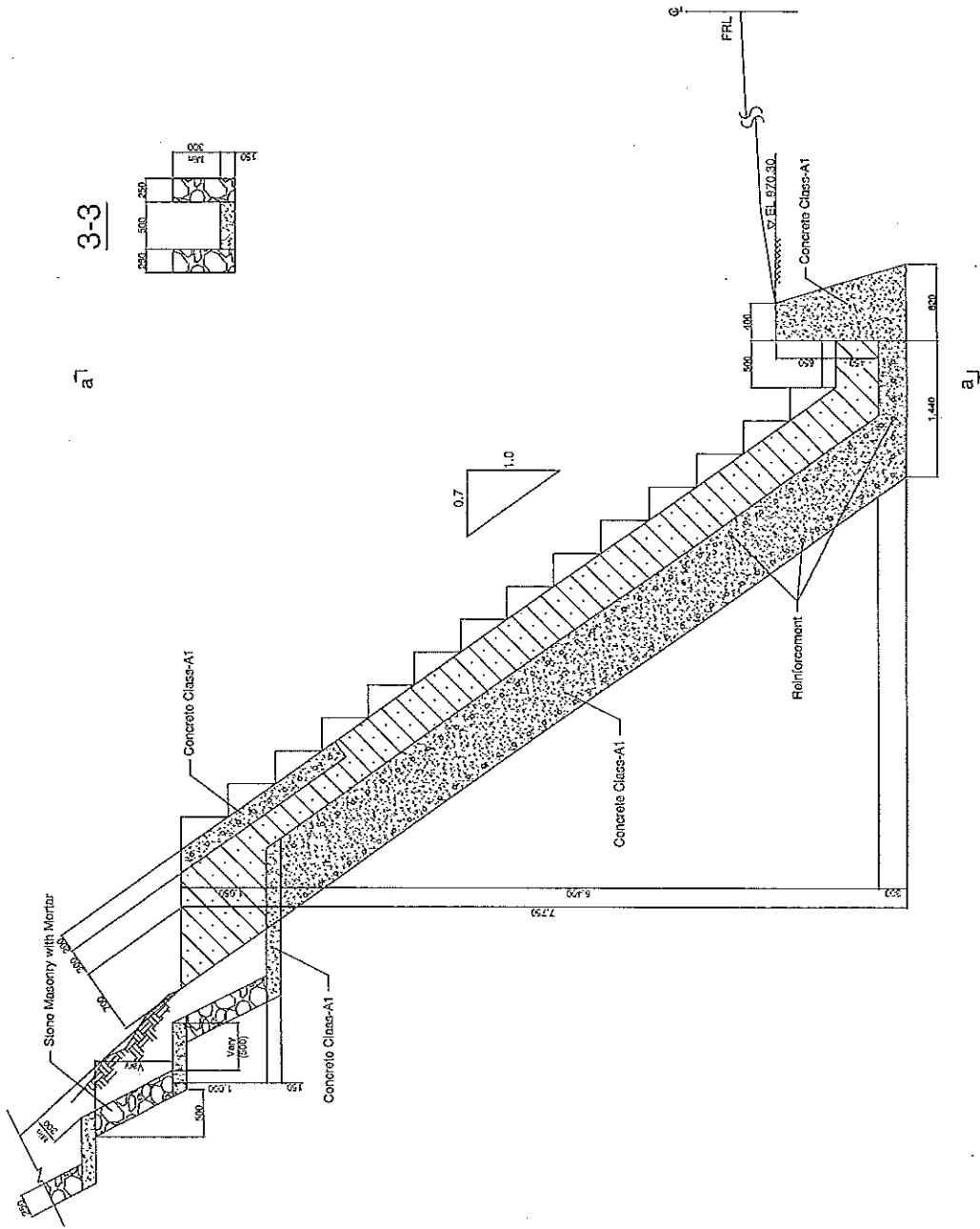
REV.	DATE	DESCRIPTION
04		As Built Drawing
03		
02		
01		
REV.		

Technical Assistance for Reconstruction Project  
of Bridges Damaged by October 8th Earthquake  
on The Jhelum Valley Road  
SITE NO.1 BRIDGE WORKS

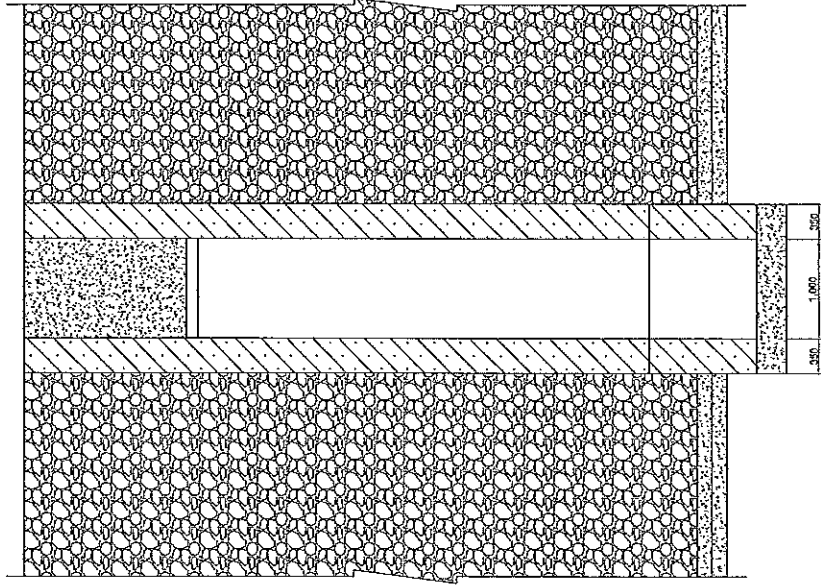
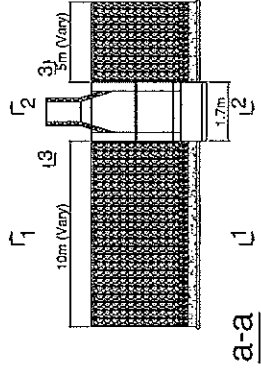
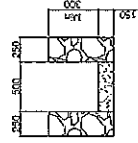
Scale  
1:50  
Details of Wall - 2  
DRAWING NO.  
SCB-02-002

# Breast Wall

2-2



a' 3-3



GOVERNMENT OF PAKISTAN  
MINISTRY OF COMMUNICATIONS  
NATIONAL HIGHWAY AUTHORITY

JAPAN INTERNATIONAL COOPERATION AGENCY  
ASSIGNED TO:  
**JICA**  
ANIPRON KOEI CO., LTD. (NIK)  
ALMEC CORPORATION LTD. (ALMEC)

As Built Drawing

Technical Assistance for Reconstruction Project  
of Bridges Damaged by October 8th Earthquake  
on The Jhelum Valley Road  
SITE NO.1 BRIDGE WORKS

Details of Wall - 3  
DWG. NO. SCB-02-003

Scale  
1:50