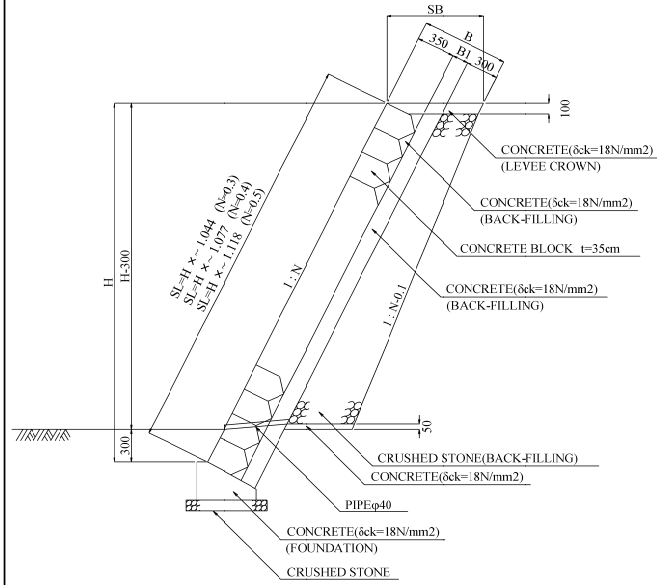


RETAINING WALL(1) SCALE AS SHOWN

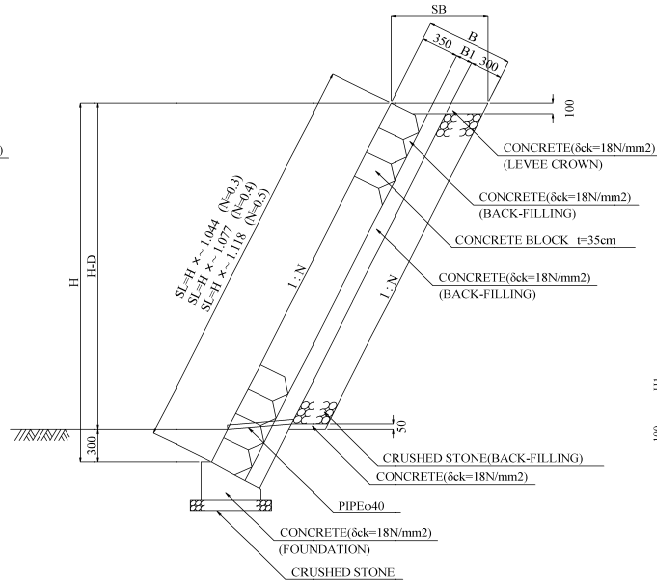
STONE MASONRY RETAINING WALL

EMBANKMENT TYPE
SCALE A3 1:40



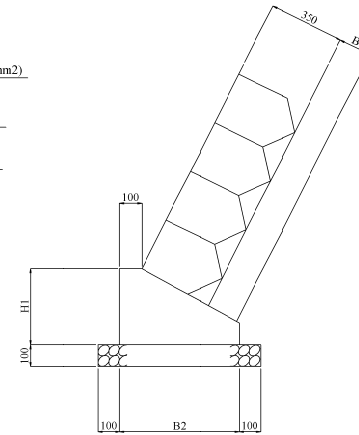
DIMENSION LIST					mm
H	B1	B	SB	REMARKS	
0~1.5	—	650	679	N=0.3	Foundation TypeA
1.5~3.0	—	650	700	N=0.4	Foundation TypeA
3.0~5.0	150	800	884	N=0.5	Foundation TypeC

CUT TYPE
SCALE A3 1:40



DIMENSION LIST					mm
H	B1	B	SB	REMARKS	
1.5~3.0	100	750	783	N=0.3	Foundation TypeB
3.0~5.0	150	800	862	N=0.4	Foundation TypeC

DETAIL OF FOUNDATION
SCALE A3 1:20

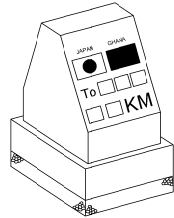
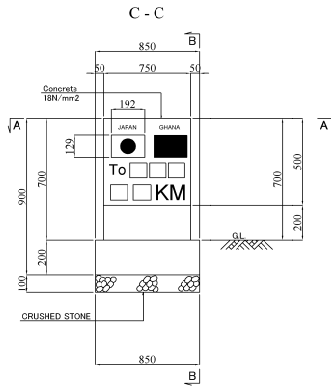
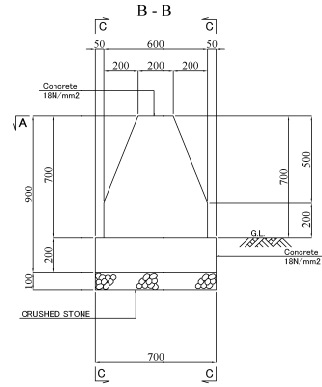
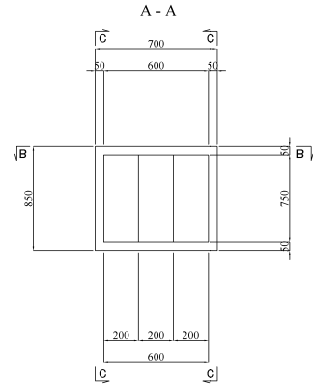


DIMENSION LIST					mm
TYPE	H1	B1	B2	REMARKS	
Type A	250	0	430		
Type B	300	100	510		
Type C	350	150	510		

MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No.:
	CONSTRUCTION PROJECT CONSULTANTS, INC.(CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	RETAINING WALL(1)	PREPARED BY:	BD-24
				CHECKED BY:	

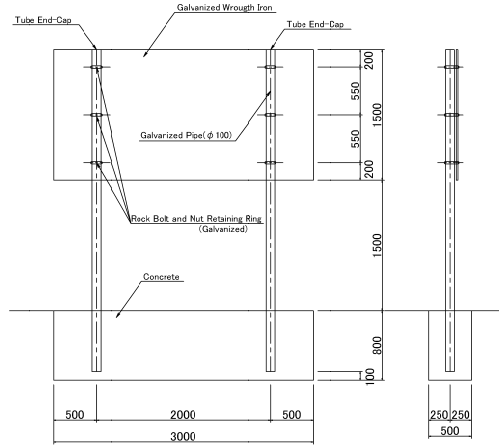
TRAFFIC SAFETY STRUCTURE (1) SCALE AS SHOWN

KILOMETER POST SCALE A3 1:25

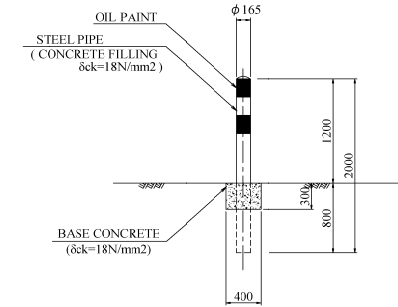


Note: Installation of kilopost shall be set alternately in each 1km

PROJECT PUBLIC BOARD SCALE A3 1:50



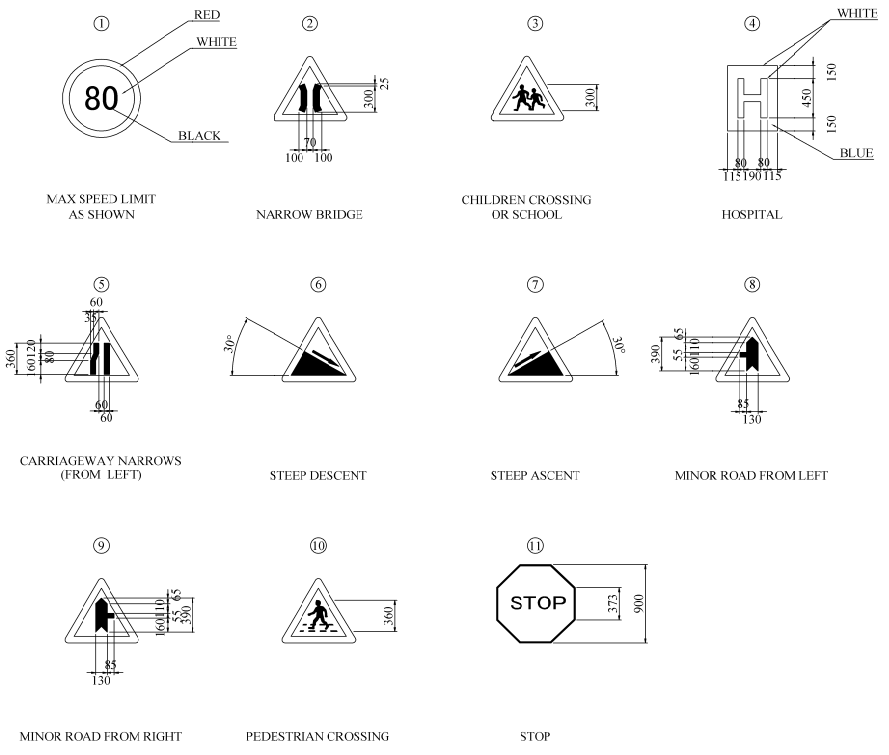
BOLLARD MAKER FOR CROSSING CURVERT
SCALE A3 1:50



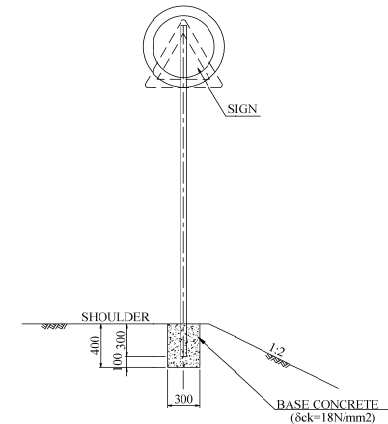
A - 82

MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS: CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	PROJECT NAME: BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	DRAWING TITLE: TRAFFIC SAFETY STRUCTURE (1)	DATE: PREPARED BY: CHECKED BY:	DRAWING No. : BD-25
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TRAFFIC SAFETY STRUCTURE (4) SCALE AS SHOWN



SIGN POST DETAILS SCALE A3 1:40

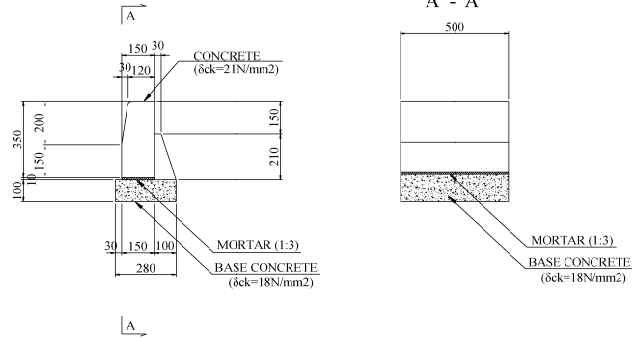


Note: The size, shape and dimensions of Road Signs shall be in accordance to The Standard of Ghana

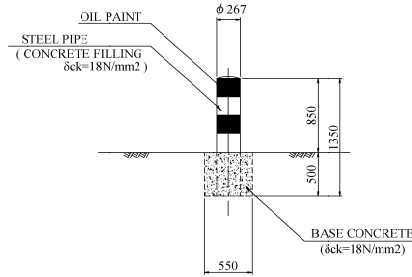
MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS: CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	PROJECT NAME: BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	DRAWING TITLE: TRAFFIC SAFETY STRUCTURE (2)	DATE: PREPARED BY: CHECKED BY:	DRAWING No. : BD-26
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TRAFFIC SAFETY STRUCTURE (7) SCALE AS SHOWN

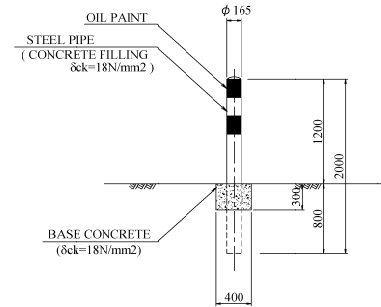
BOUNDARY BLOCK SCALE A3 1:20



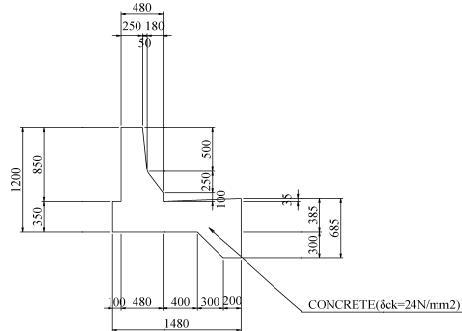
DELINEATION POST SCALE A3 1:50



GUARD POST SCALE A3 1:50



STIFF SAFETY FENCE SCALE A3 1:50

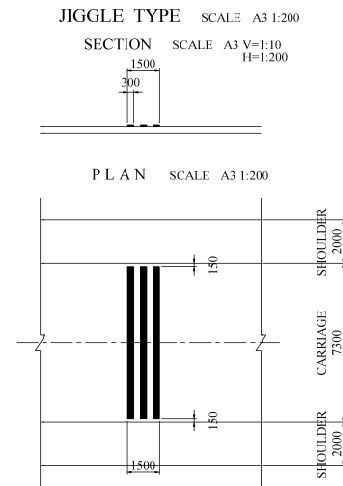
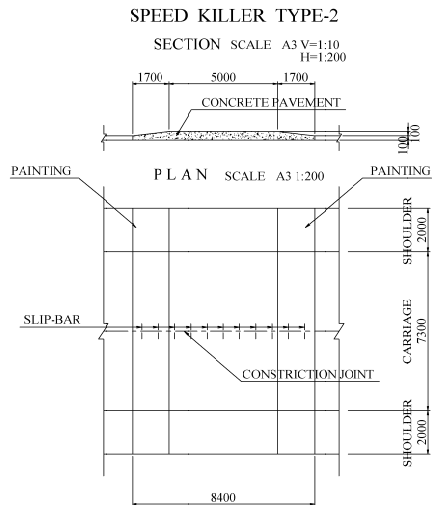
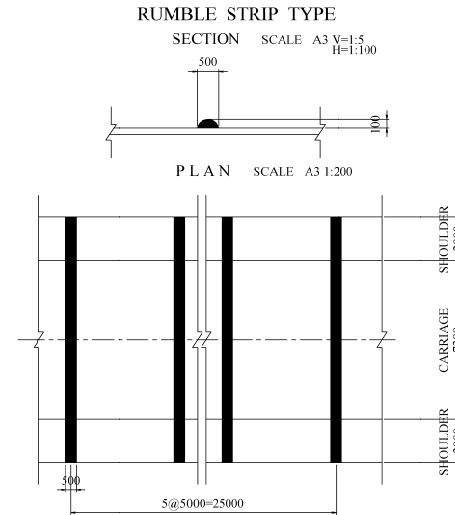
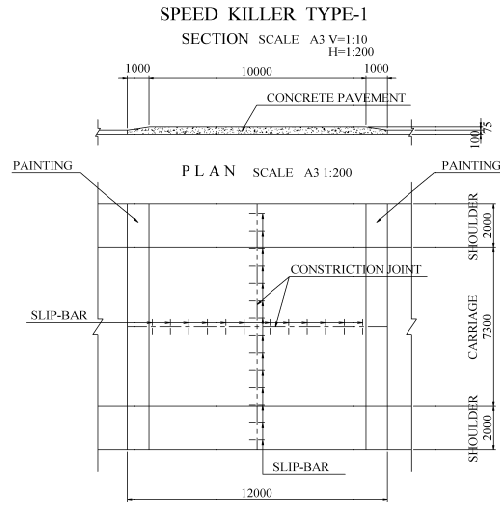


TRAFFIC SAFETY STRUCTURE

No	STATION	LR	STIFF SAFETY FENCE (nos)	DELINEATION POST (nos)	GUARD POST (nos)	REMARKS
1	ASSIN FRASO 0 + 200 ~ 0 + 355	LR			3	c.c=4m
2	" 0 + 355 ~ 0 + 370	LR		8		c.c=5m
3	" 0 + 370 ~ 0 + 380	LR	4			10m / each
4	ADANSE FRASO 0 + 505 ~ 0 + 525	LR	4			10m / each
5	" 0 + 525 ~ 0 + 540	LR		8		c.c=5m
6	" 0 + 540 ~ 0 + 725	LR			3	c.c=4m
7	BANK 1 + 30 ~ 1 + 450	LR			212	"
8	BANK 22 + 80 ~ 22 + 380	LR			152	c.c=4m
9	ASBIL (UNUSEO) 24 + 63 ~ 24 + 91	LR			16	"
10	ASBIL (HYDRIMASEO) 28 + 385 ~ 39 + 9	R			35	"
11	ASBILT (M) 43 + 600 ~ 43 + 700	L			26	"
12	" 43 + 870 ~ 44 + 20	L			38	"
13	" 43 + 650 ~ 43 + 770	R			31	"
14	" 43 + 370 ~ 44 + 180	R			58	"
15	" 44 + 170 ~ 44 + 320	R			38	"
16	R=140(M) 44 + 320 ~ 44 + 370	R			26	c.c=2m
17	ASBILT (M) 44 + 370 ~ 44 + 600	R			58	c.c=4m
18	" 45 + 250 ~ 45 + 420	L			44	"
19	" 45 + 580 ~ 45 + 750	L			41	"
20	" 45 + 900 ~ 46 + 0	L			26	"
21	" 46 + 120 ~ 46 + 380	L			86	"
22	" 46 + 450 ~ 46 + 620	R			44	"
23	R=200(FOHENA) 46 + 740 ~ 46 + 950	LR			212	c.c=2m
24	R=200(FOHENA) 47 + 300 ~ 47 + 450	LR			152	"
	+ ~ +					
	+ ~ +					
	+ ~ +					
			8	16	1,285	
TOTAL						

MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS: CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	PROJECT NAME: BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	DRAWING TITLE: TRAFFIC SAFETY STRUCTURE (7)	DATE: PREPARED BY: CHECKED BY:	DRAWING No. : BD-27
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TRAFFIC SAFETY STRUCTURE (8) SCALE AS SHOWN HUMP

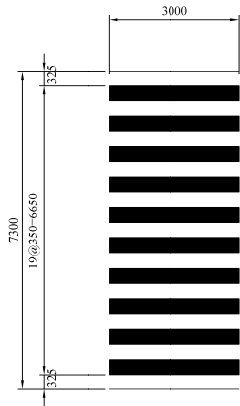


MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS: CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	PROJECT NAME: BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	DRAWING TITLE: TRAFFIC SAFETY STRUCTURE (8)	DATE: PREPARED BY: CHECKED BY:	DRAWING No. : BD-28
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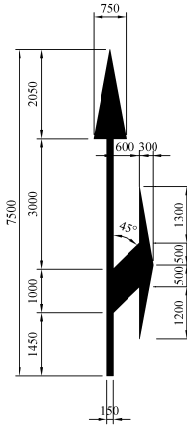
TRAFFIC MARKING (1) SCALE AS SHOWN

ARROW MARK SCALE A3 1:100

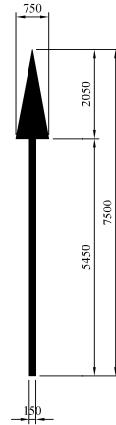
PEDESTRIAN-CROSSING



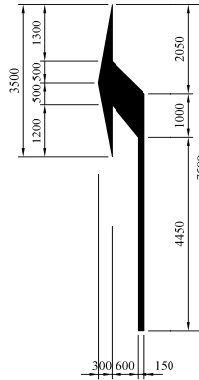
STRAIGHT-RIGHT-TURN



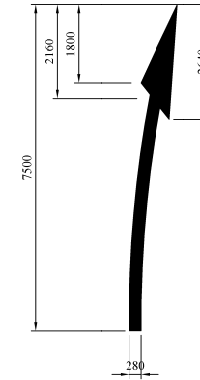
STRAIGHT



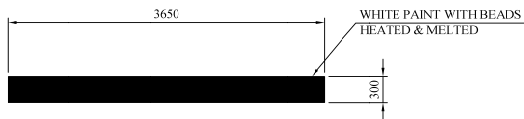
TURN



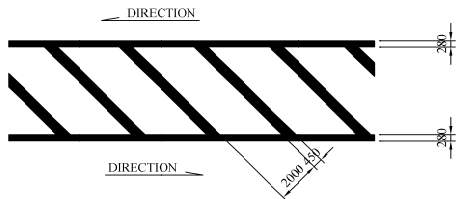
DEFLECTING-ARROWS



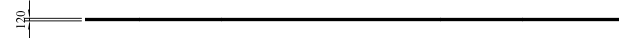
STOP LINE SCALE A3 1:50



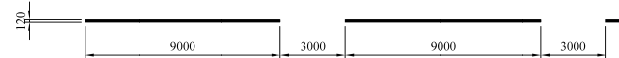
ZEBRA MARKING SCALE A3 1:200



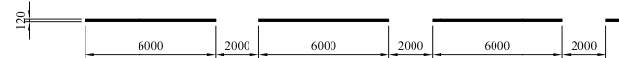
CONTINUOUS LINE -WHITE



DASHED LINE -WHITE FOR SPEED 80Km/h



FOR SPEED < 50Km/h

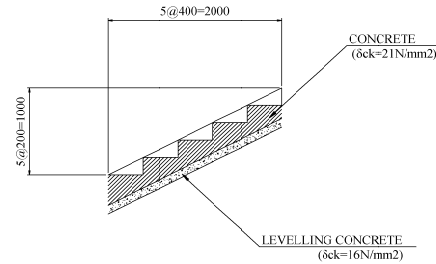


MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No.:
	CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	TRAFFIC MARKING (1)	PREPARED BY:	BD-29
				CHECKED BY:	

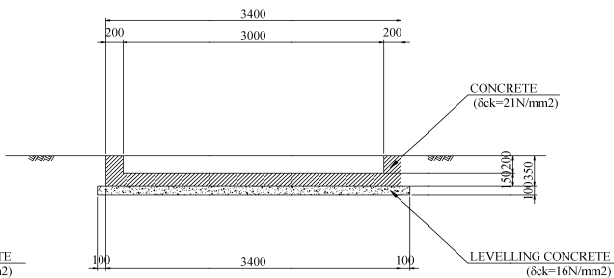
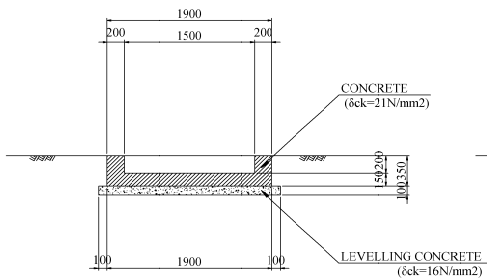
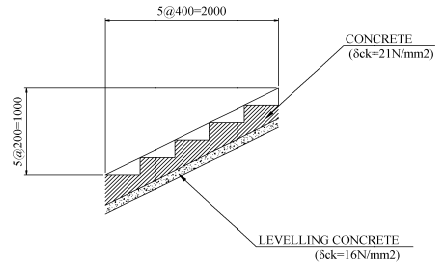
STEP

SCALE A3 1:50

TYPE-1



TYPE-2



STEP

	STATION	L(m)	W=1.5m (nos)	W=3.0m (nos)	REMARKS
ASSIN PRASO	0 + 340			2	LR
ADANSE PRASO	0 + 575			2	LR
AMUDURASI	18 + 390			1	R
FUNSO	23 + 770			2	LR
"	23 + 920			2	LR
"	24 + 20		1		R
"	24 + 70		1		L
"	24 + 170		1		R
"	24 + 250		1		L
"	24 + 300		1		L
"	24 + 370		2		LR
"	24 + 420		2		LR
"	24 + 470		2		LR
FUNSO	24 + 570		1		R
KWADWO NKWANTA	26 + 260		2		LR
"	26 + 310		2		LR
"	26 + 410		1		L
KWADWO NKWANTA	26 + 510			2	LR
ANWE ASO	28 + 410		1		L
"	28 + 460		1		L
"	28 + 490		1		L
ANWE ASO	28 + 560		1		L
AKWANSREM	33 + 610		1		R
"	33 + 660		1		R
"	33 + 860		1		L
AKWANSREM	34 + 10		1		L
OBOASE NKWANTA	42 + 590		1		L
FOMENA	47 + 40			1	L
"	47 + 570			1	L
"	47 + 580			1	L
"	47 + 670			1	L
"	47 + 680			1	L
"	47 + 750			1	L
"	47 + 770			1	L
TOTAL (nos)		0	26	18	

x 1.5m x 2 78 42
x 8.0m x 2.0 64

TOTAL (m)			78	106	
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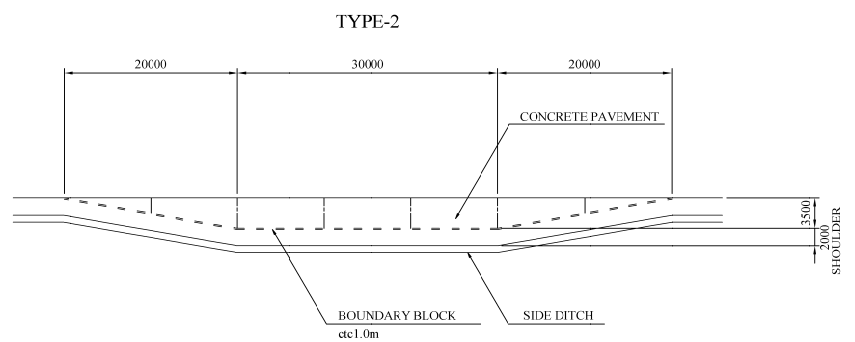
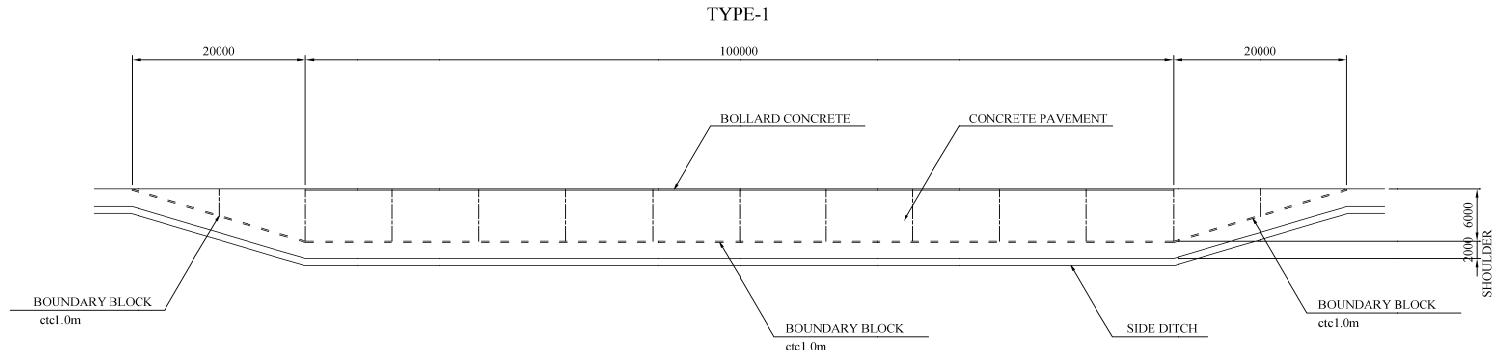
MATERIAL LIST per m

ITEM	STANDARD	QUANTITY		REMARKS	
		TYPE-1	TYPE-2		
Concrete	21N/mm ²	sqm	0.52	0.89	
Reinforcing Bar		ton	0.05	0.09	
Form		sqm	1.65	2.43	
Levelling Concrete	16MPa	sqm	2.10	3.63	
Form	Levelling Concrete	sqm	0.20	0.23	

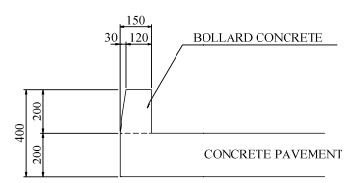
A - 87

MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No. :
	CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	STEP	PREPARED BY: CHECKED BY:	BD-30

LAY BY SCALE A3 1:500



DETALE OF BOLLARD CONCRETE SCALE 1:200



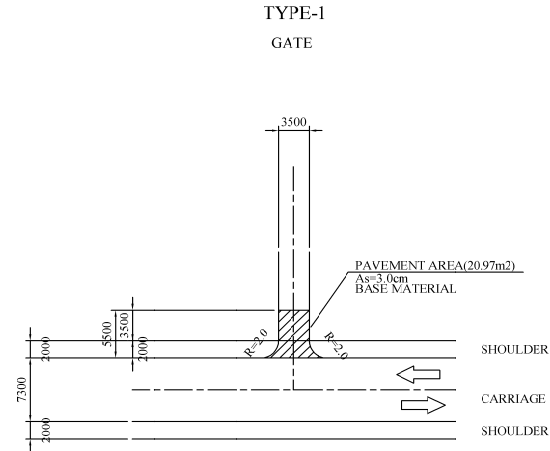
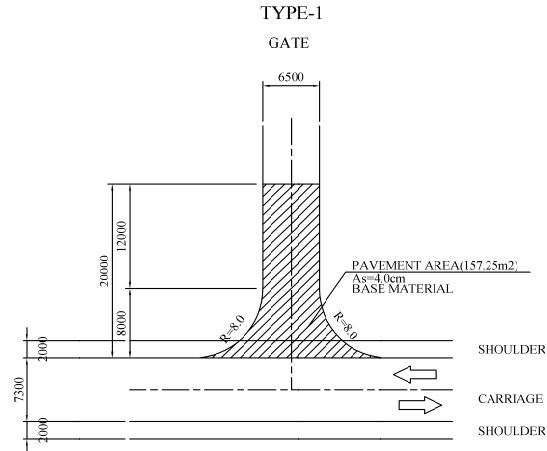
TRAFFIC SAFETY STRUCTURE (LAY BY) (1)

STATION	TYPE-1 (nos)	TYPE-2 (nos)	REMARKS
ASSIN PRASO 0 + 100		1	R
ADANSE PRASO 0 + 700		1	L
ATASI NKWANIA 4 + 850		2	LR
APAGYA 7 + 580		2	LR
ADANSE AYIYERASE 8 + 665		2	LR
NEW ADLERASE 15 + 415		2	LR
ZIMUDURASI 18 + 115		2	LR
ANSA 20 + 715		2	LR
DUKO 24 + 100	2		LR
KWADWO NKWANIA 26 + 375		2	LR
ANWESIO 28 + 700		2	LR
NEW AKROFIDOM 29 + 615		2	LR
AYOKOA 31 + 200		2	LR
KWANEREM 33 + 615		2	LR
KYEREBOSO 37 + 185		2	LR
HWEREMDASE 39 + 505		2	LR
ADANSE ASOKWA 42 + 25		2	LR
FOMENA 47 + 325		2	LR
DOMPOASE 50 + 905		2	LR
KYEADOSO 53 + 705		2	LR
MEDUMA 55 + 165		2	LR
ESANKWANIA 56 + 60		2	LR
TOTAL	2	40	

MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No.:
	CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	LAY BY	PREPARED BY: CHECKED BY:	BD-31

ACCESS ROAD STRUCTURE(1)

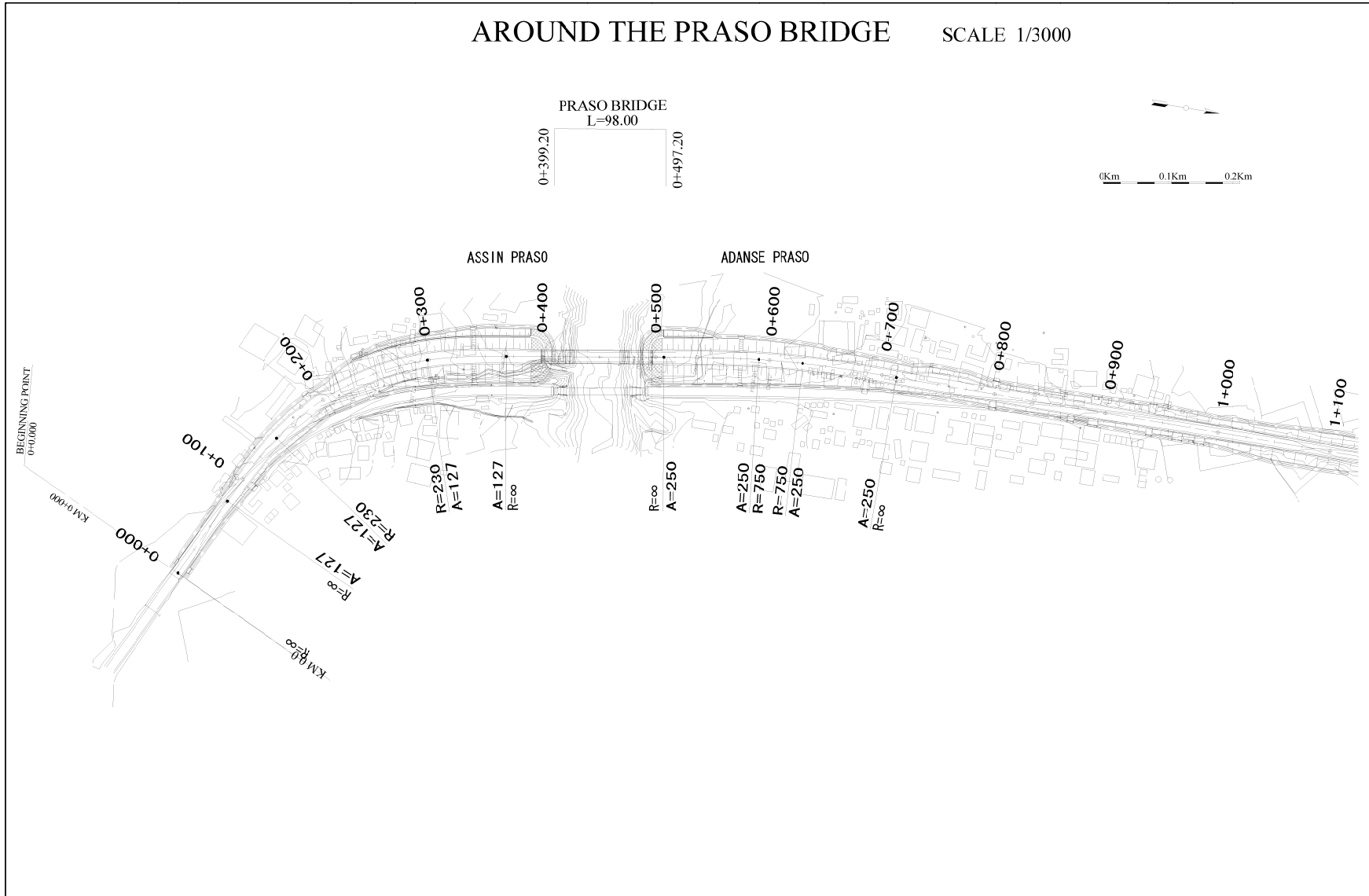
SCALE A3 1:500



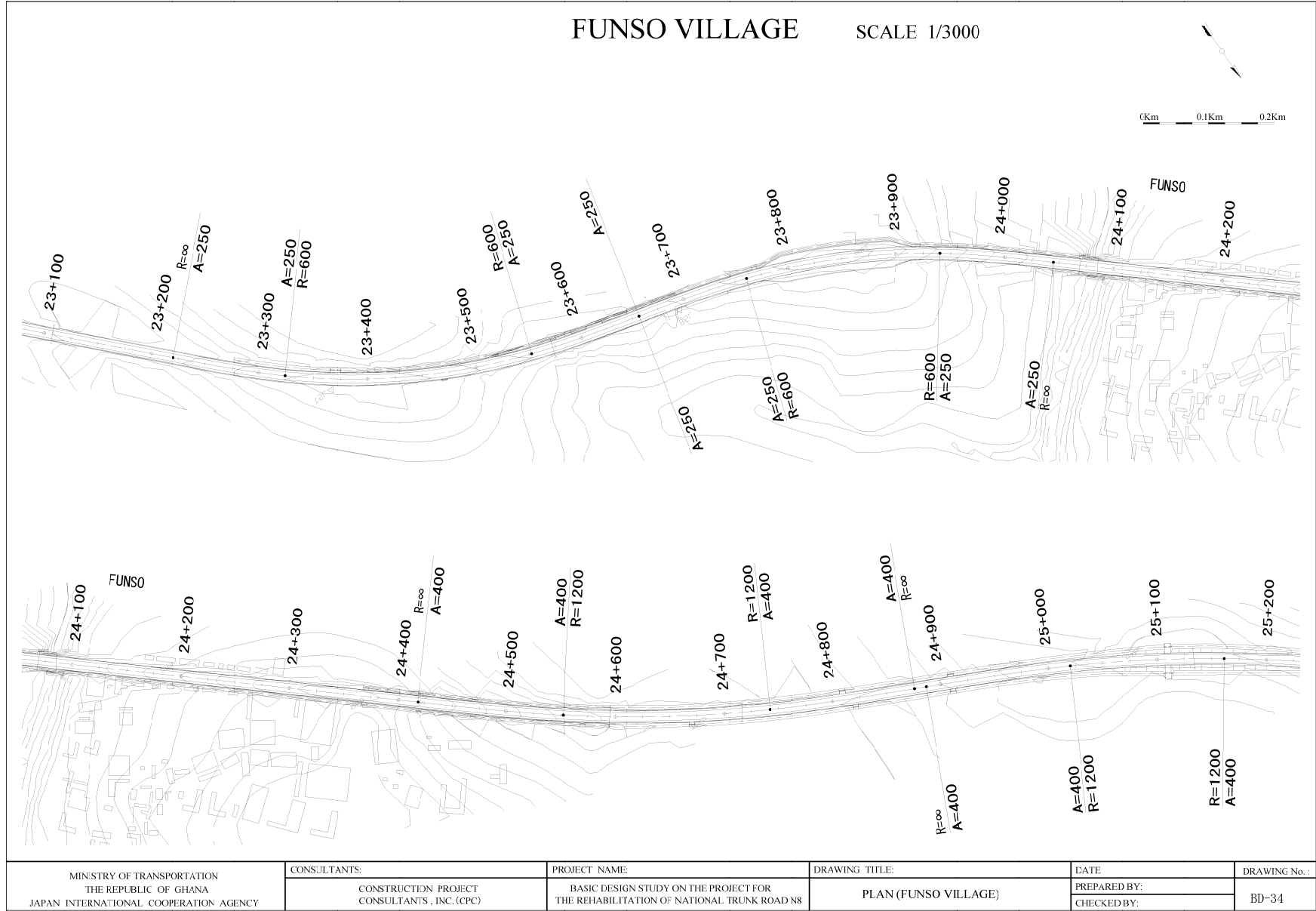
MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No.:
	CONSTRUCTION PROJECT CONSULTANTS, INC.(CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	ACCESS ROAD STRUCTURE(1)	PREPARED BY: CHECKED BY:	BD-32

AROUND THE PRASO BRIDGE

SCALE 1/3000



MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No. :
	CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	PLAN (AROUND PRASO BRIDGE)	PREPARED BY: CHECKED BY:	BD-33



MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	EATE	DRAWING No.:
	CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	PLAN (FUNSO VILLAGE)	PREPARED BY: CHECKED BY:	BD-34

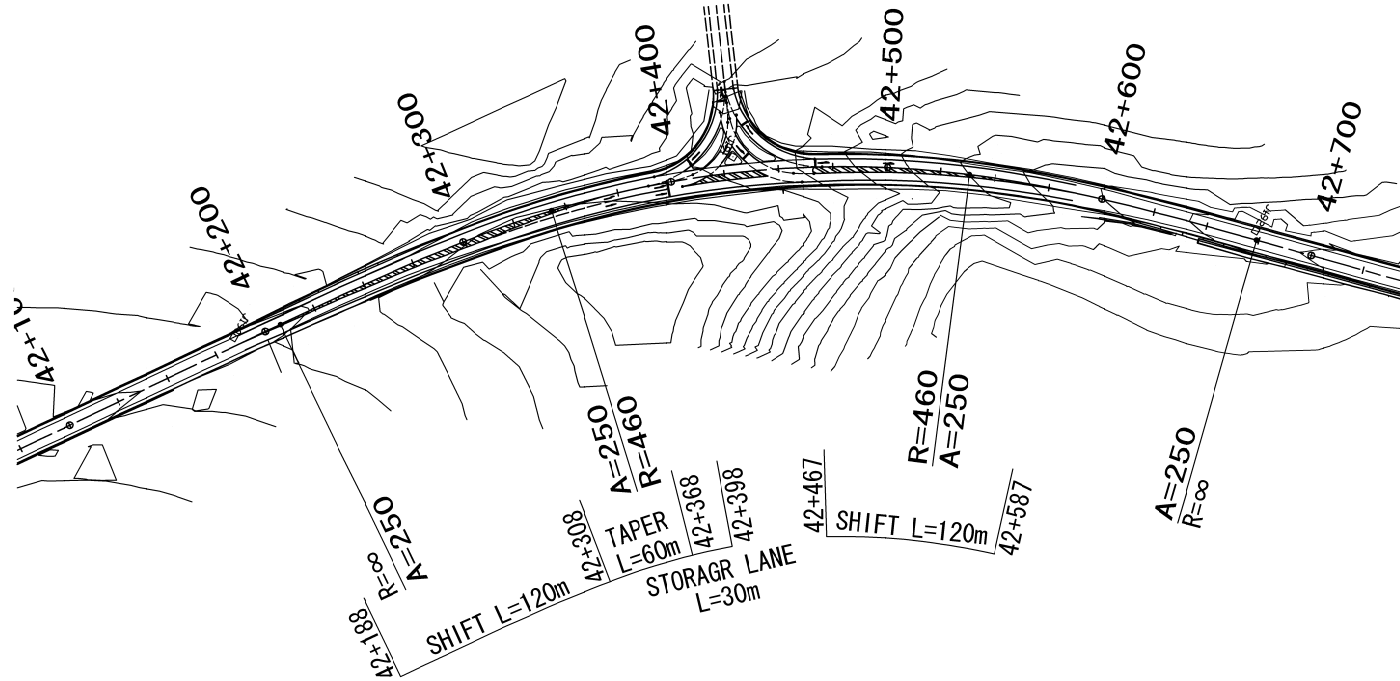
ASOKWA JCT

SCALE 1/2000



0Km 0.1Km 0.2Km

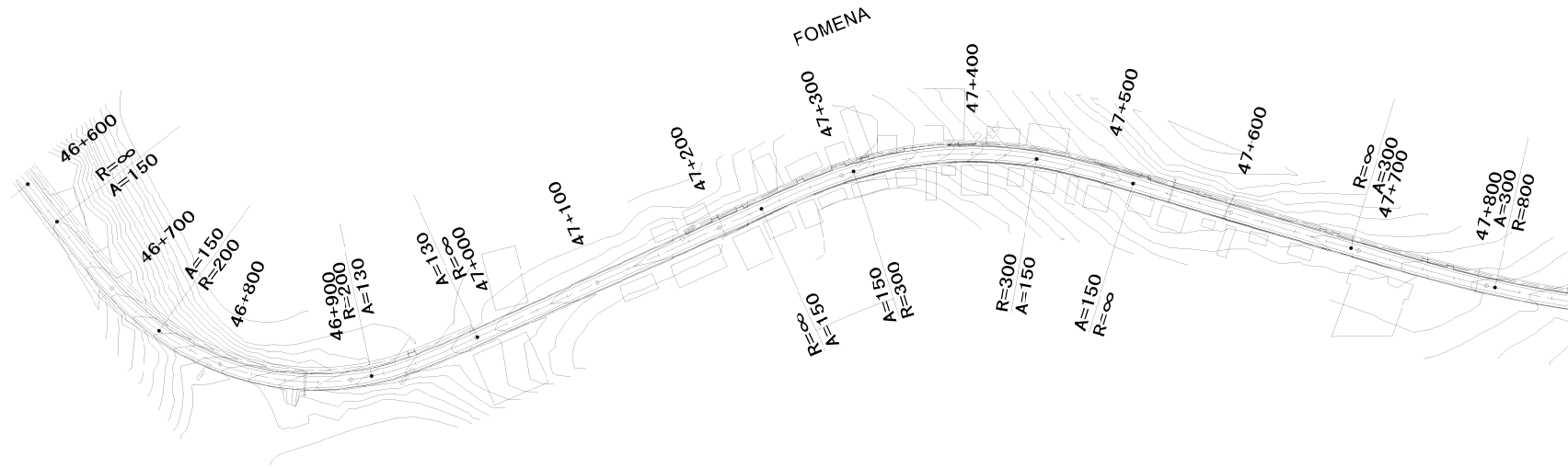
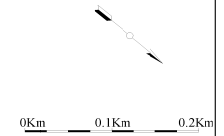
OBOASE NKWANTA



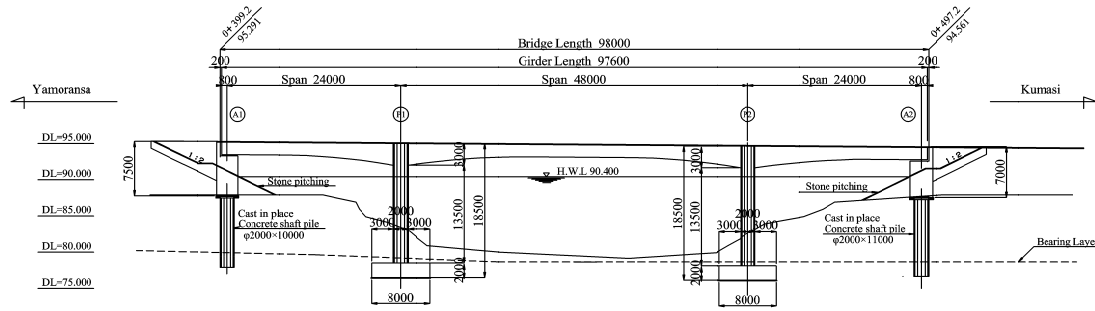
A - 92

MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No.:
	CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	PLAN (OBOASE JCT)	PREPARED BY: CHECKED BY:	BD-35

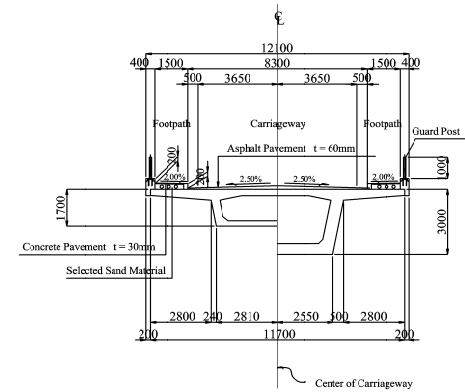
FOMENA VILLAGE SCALE 1/3000



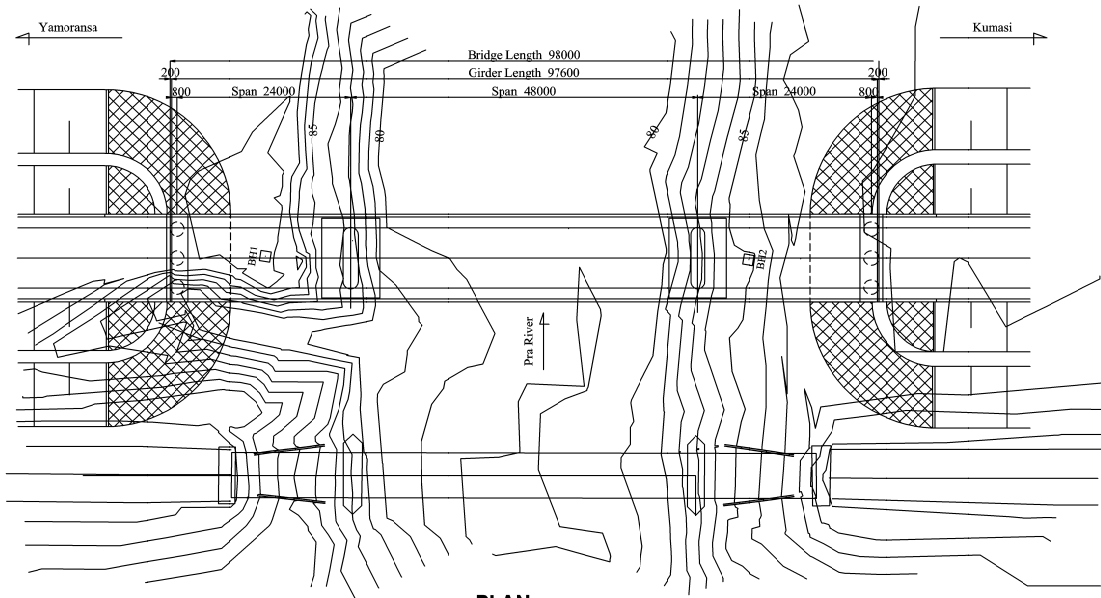
MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No.:
	CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	PLAN (FOMENA VILLAGE)	PREPARED BY: CHECKED BY:	BD-36



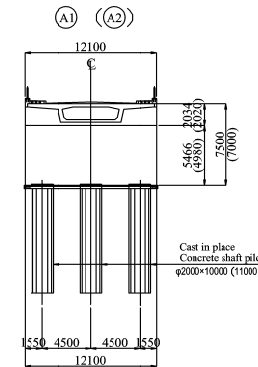
ELEVATION $\S = 1:300$



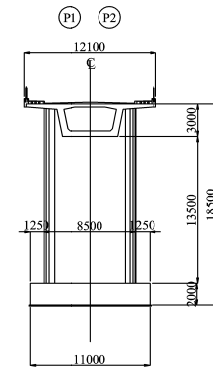
DECK SECTION $\S = 1:100$



PLAN $\S = 1:300$



ABUTMENT SECTION $\S = 1:200$

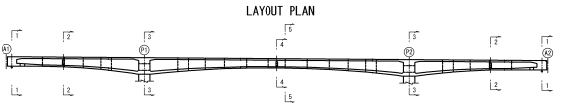
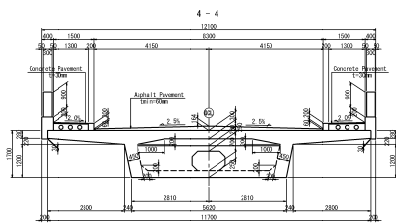
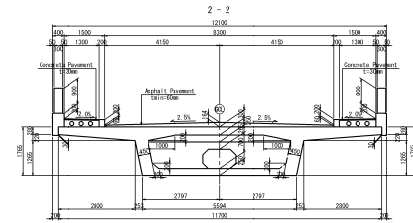
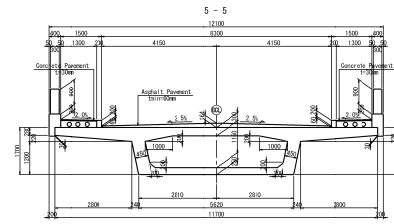
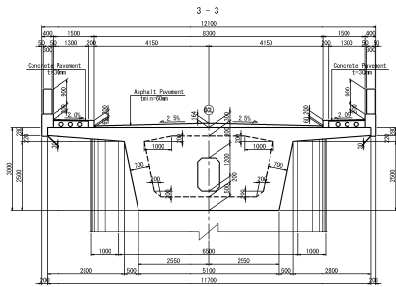
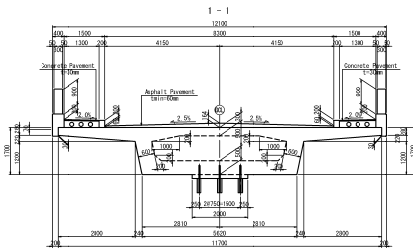


PIER SECTION $\S = 1:300$

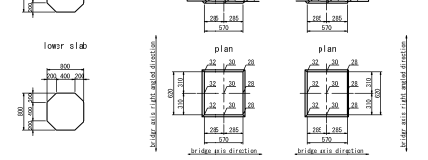
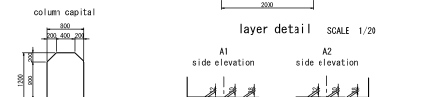
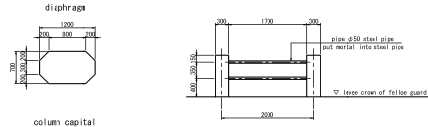
MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS: CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	PROJECT NAME: BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	DRAWING TITLE: NEW BRIDGE GENERAL DRAWING	DATE: PREPARED BY: CHECKED BY:	DRAWING No.: BD-37
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GENERAL ARRANGEMENT OF SUPERSTRUCTURE (2)

CROSS SECTION SCALE 1/20



manhole detail SCALE 1/30 point of handrail foundation SCALE 1/30



design condition

Type	prestressed concrete highway bridge
Span	prestressed concrete multi-span rigid-frame box girder bridge
Bridge Length	80.00 m (263')
Bridge Length	97.000 m (318')
Span	24.000 m=40.000 m+24.000 m (78')
Full width	11.100 m (36')
width formation	0.4 m+1.50 m+3.2 m+1.5 m+0.4 m=12.100 m
lane	2 lanes, 100%
clear width	9.700 m (31')
cross slope	+2.5% -2.5%
longitudinal grade	0.100%
impact coefficient	+10 (IC=1.0, span)

material strength and allowable stress

concrete	unit: g/cm ³	1000 kg/m ³
density	(N/m ³)	(N/m ³)
design strength	40.0	40.4
grossing compressive strength	31.0	30.4
allowable compressive stress due to bending	18.0	18.4
allowable compressive stress due to torsion	design load	15.4
allowable tensile stress due to bending	design load	-1.5
allowable tensile stress due to torsion	design load	0.9
allowable shear stress	design load	-2.0
allowable shear stress	design load	-2.0
average shear stress that concrete can bear	0.55	—
shear stress	shear torsion	5.3
shear stress	shear torsion	6.1
shear stress	shear torsion	-1.0
shear stress	shear torsion	-1.2
shear stress	shear torsion	-2.0
shear stress	shear torsion	-2.0

prestressing	tensile tendon	
	SP70A	SP70B
unit	(N/m ²)	(N/m ²)
tensile strength	1800	1800
yield stress	1600	1600
at the time of prestressing	1400	1400
just after the prestressing	1200	1200
design load	1100	1000

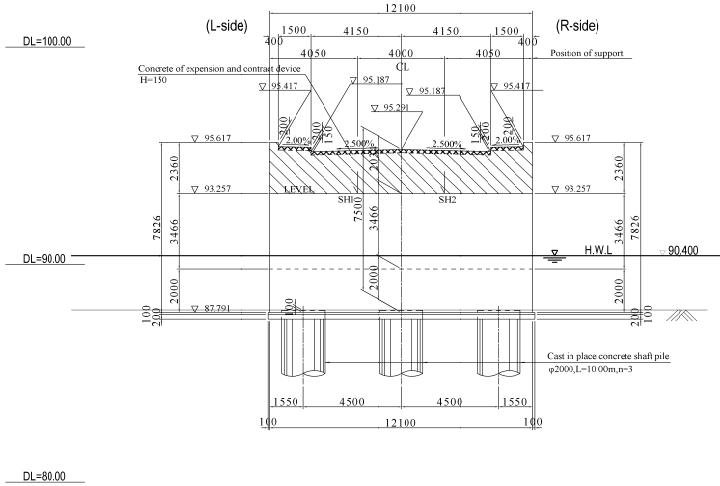
reinforcement	SD 345
unit	(N/m ²)
yield stress	340
allowable tensile stress	180
allowable tensile stress	180
allowable tensile stress	180

MINISTRY OF TRANSPORTATION
THE REPUBLIC OF GHANA
JAPAN INTERNATIONAL COOPERATION AGENCY

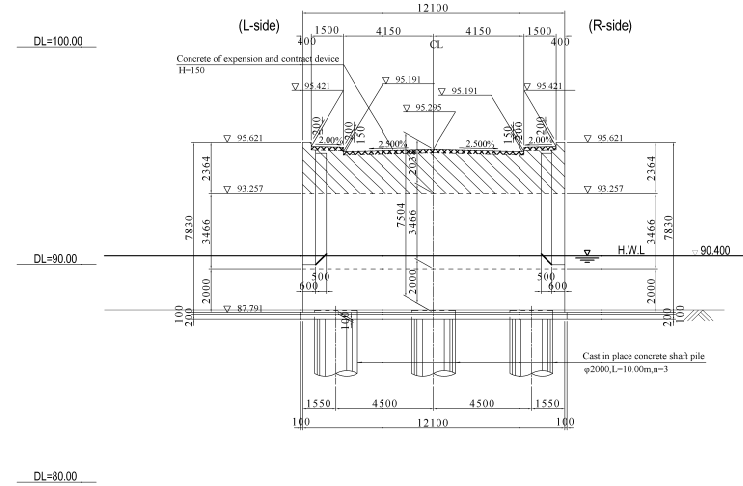
CONSULTANTS: CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	PROJECT NAME: BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	DRAWING TITLE: GENERAL ARRANGEMENT OF SUPERSTRUCTURE (2)	DATE: PREPARED BY: CHECKED BY:	DRAWING No.: EJ-39
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A1-ABUT GENERAL DRAWING(1) SCALE 1:100

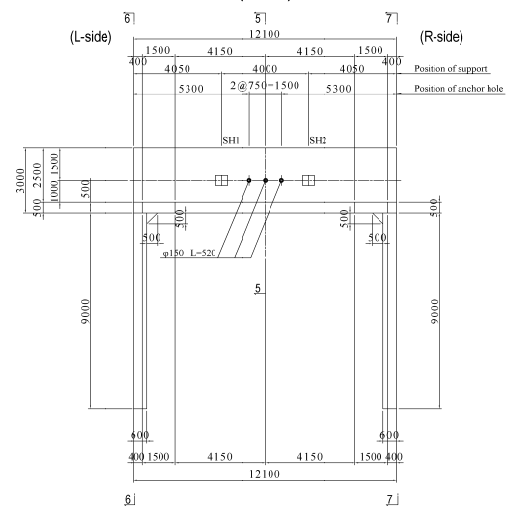
1-1
(Front)



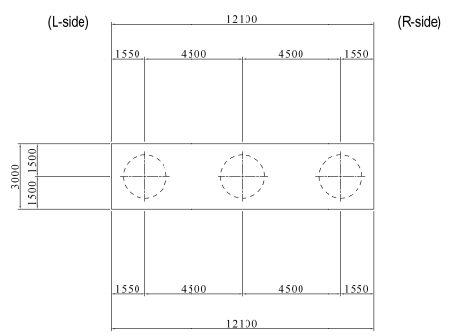
2-2
(Back)



3-3
(Plan)



4-4
(Plan)

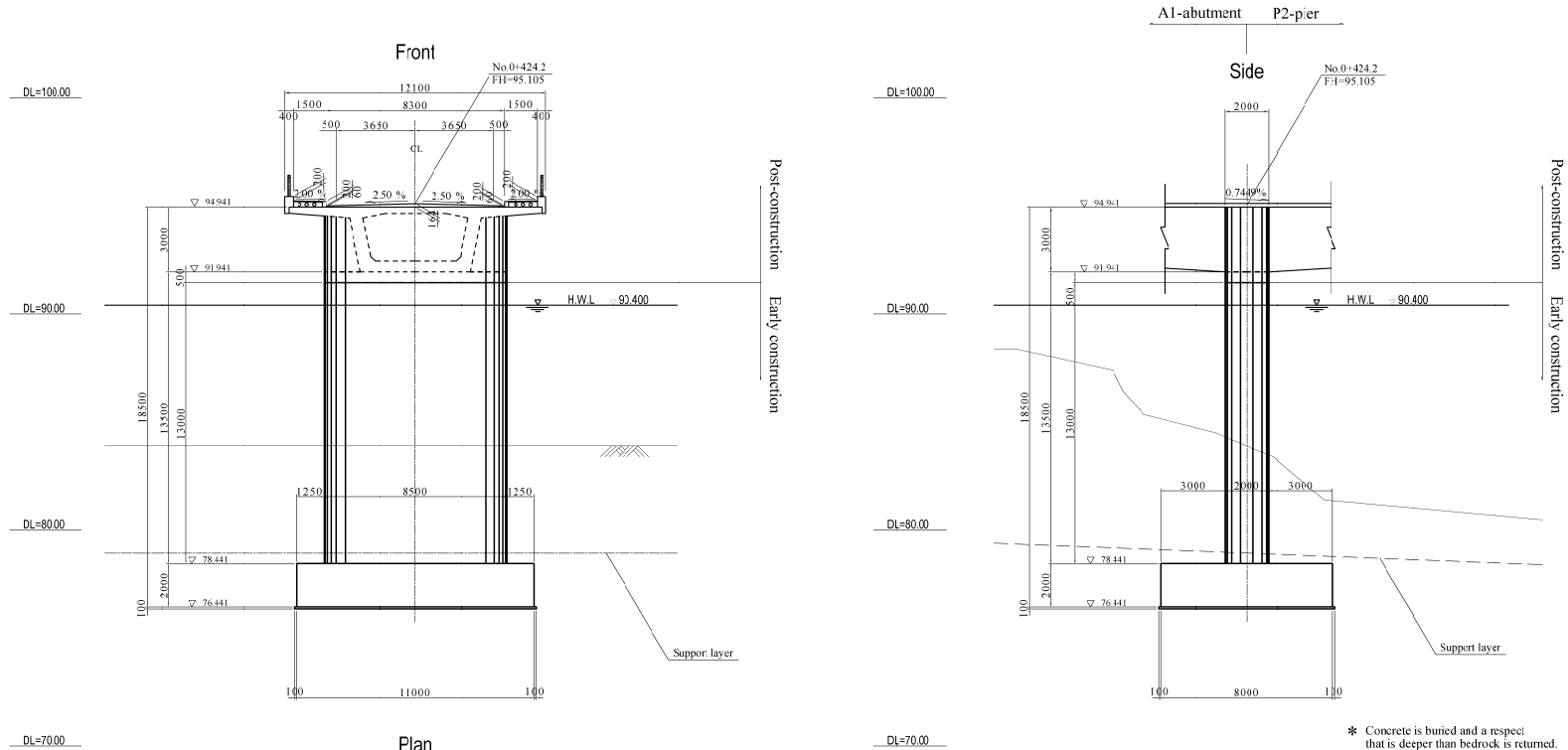


A - 97

MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No.:
	CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	A1-ABUT GENERAL DRAWING(1)	PREPARED BY:	BD-40
				CHECKED BY:	

P1-PIER GENERAL DRAWING

SCALE 1:100



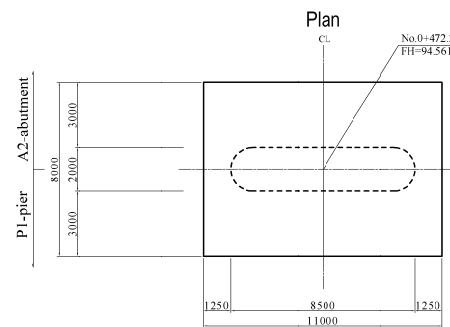
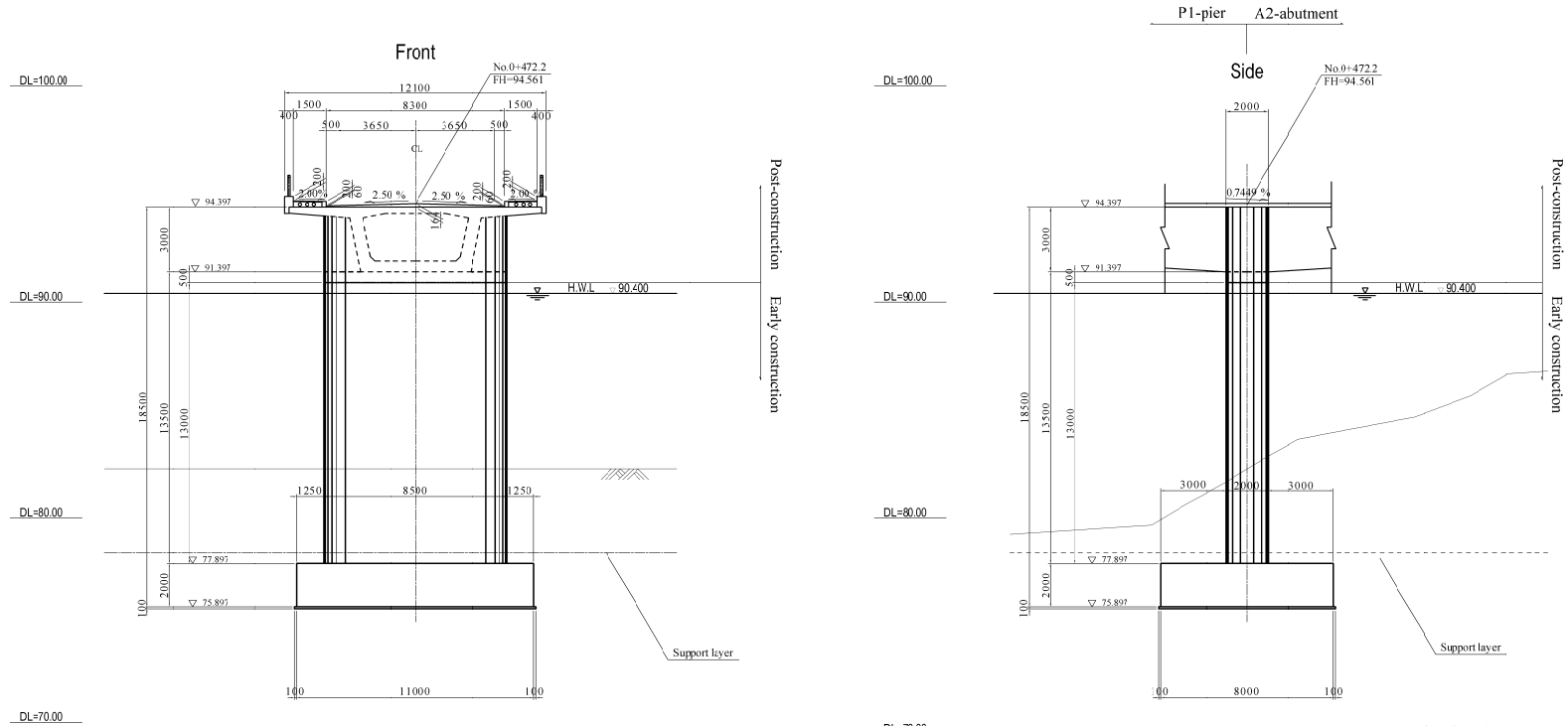
Material

Post-construction of pier-concrete	40-8-25
Early-construction of pier-concrete	24-8-25
Base concrete	18-8-40
Rainforced concrete	SD345

MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No. :
	CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	P1-PIER GENERAL DRAWING	PREPARED BY:	BD-41
				CHECKED BY:	

P2-PIER GENERAL DRAWING

SCALE 1:100

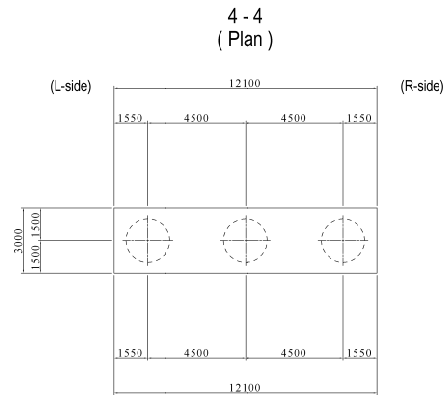
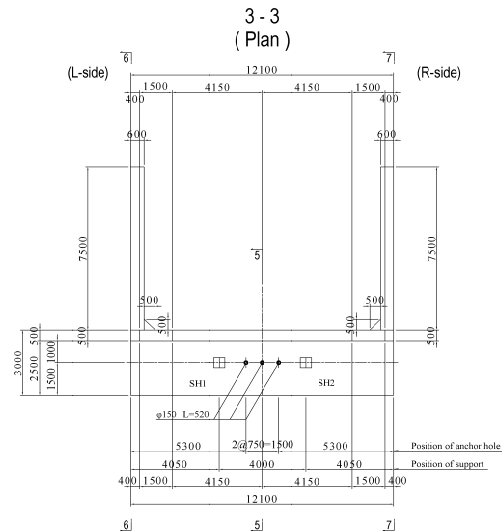
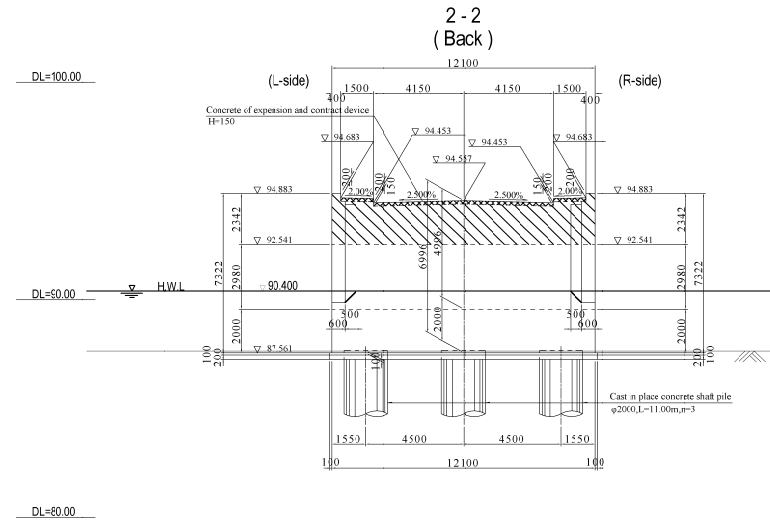
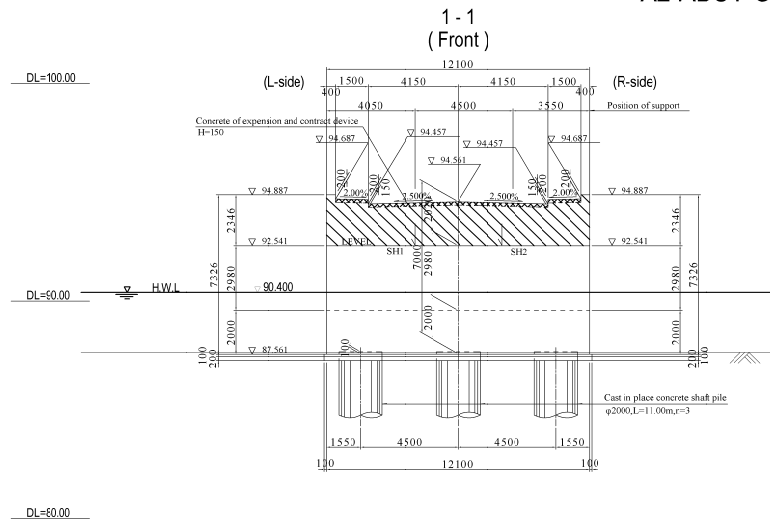


Material

Post-construction of pier-concrete	40-8-25
Early-construction of pier-concrete	24-8-25
Base concrete	18-8-40
Reinforced concrete	SD345

MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No. :
	CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	P2-PIER GENERAL DRAWING	PREPARED BY:	BD-42
				CHECKED BY:	

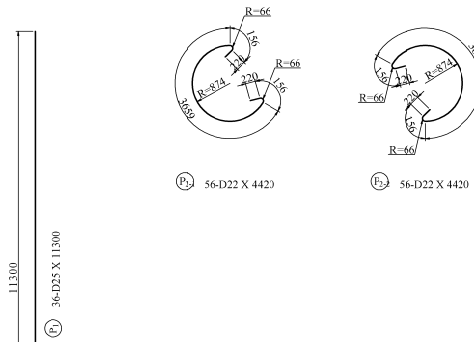
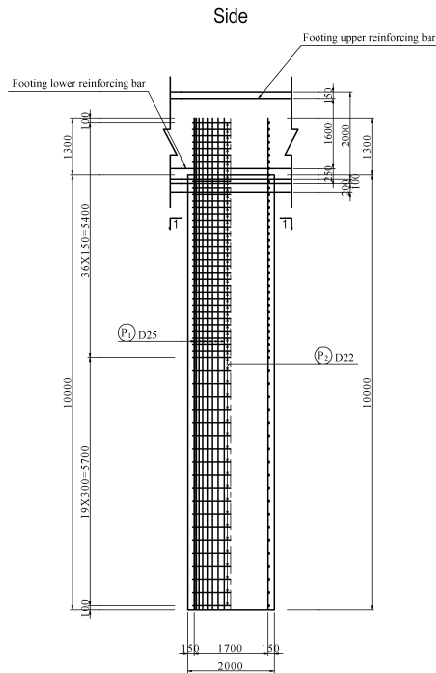
A2-ABUT GENERAL DRAWING(1) SCALE 1:100



MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS: CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	PROJECT NAME: BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	DRAWING TITLE: A2-ABUT GENERAL DRAWING (1)	DATE: PREPARED BY: CHECKED BY:	DRAWING No. : BD-43
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A1-ABUT CAST IN PLACE CONCRETE SHAFT PILE

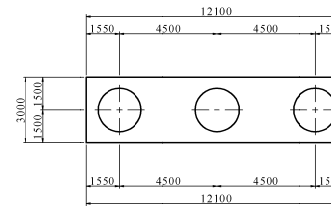
SCALE 1:50



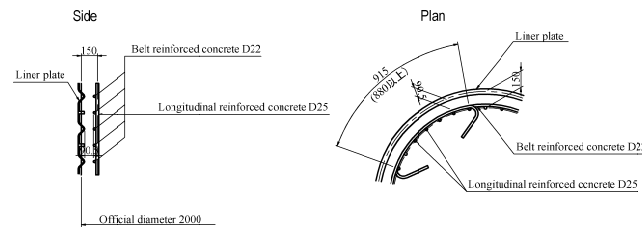
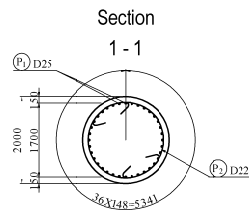
LIST OF REINFORCEMENT

BAR MARK	SIZE	LENGTH (mm)	NO. RECO	UNIT WT (kg/m)	WT/BAR (kg)	TOTAL WT (kg)	REMARK
P ₁	D25	11300	36	3.98	44.97	1619	
P ₂₋₁	D22	4420	56	3.04	13.44	753	C
P ₂₋₂	"	4420	56	"	13.44	753	C
				One pile hit		Hit by one	
				D25		1619 kg X 3 places = 4857 kg	
				D22		1306 kg X 3 places = 4518 kg	
				TOTAL E/WIGHT		3125 kg X 3 places = 9375 kg	

Plaing arrangement chart scale=1:100

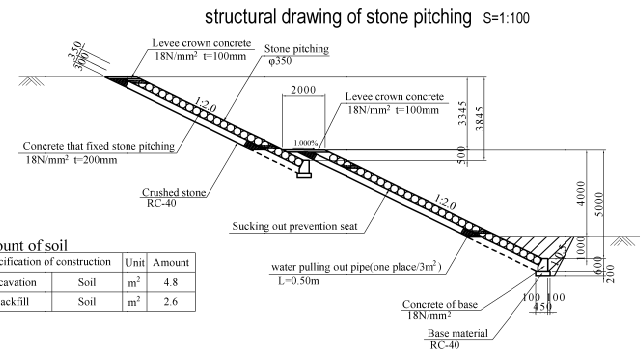
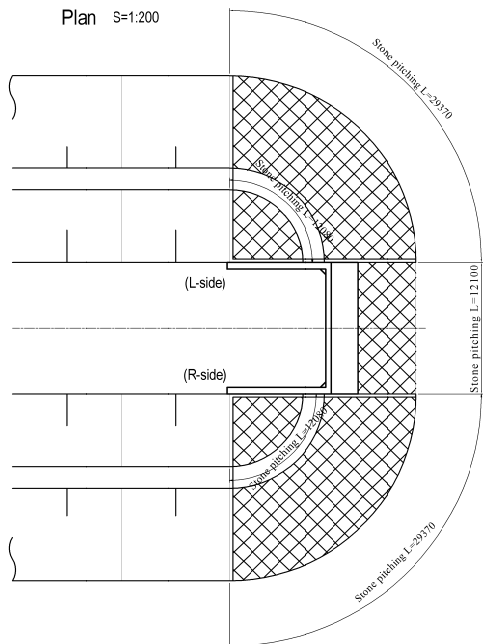
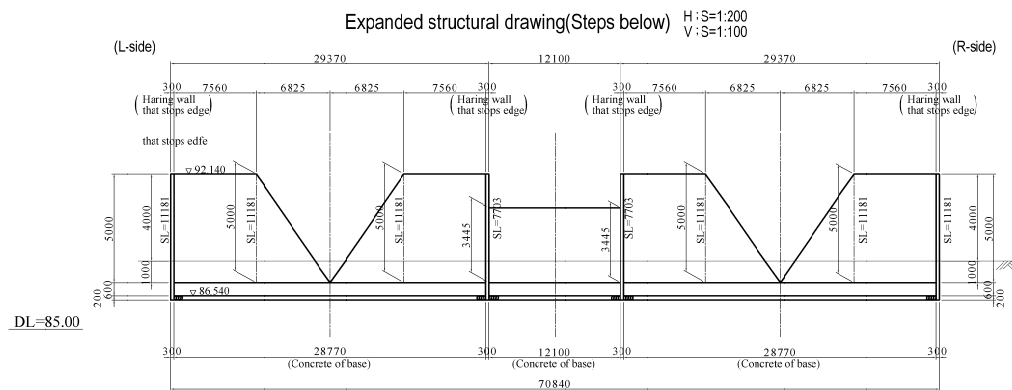
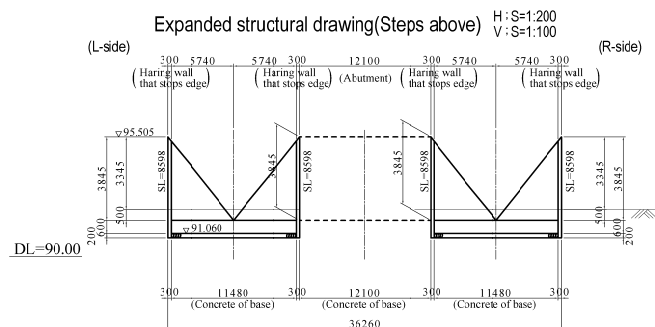


Detailed chart scale=1:20



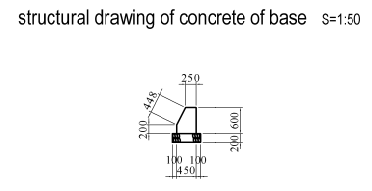
MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No. :
	CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	A1-ABUT CAST IN PLACE CONCRETE SHAFT PILE	PREPARED BY:	BD-44
				CHECKED BY:	

STRUCTURAL DRAWING OF STONE PITCHING(A1-ABUT)



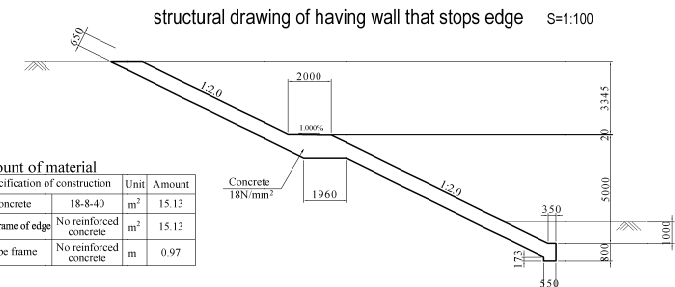
Amount of soil

Specification of construction	Unit	Amount
Excavation	Soil	m ² 4.8
Backfill	Soil	m ² 2.6



Amount of concrete of base

Specification of construction	Unit	Amount
Concrete	8-8-40	m ² 0.23
Base material	RC-40	m 0.65
Type frame	No reinforced concrete	m 0.80



Amount of material

Specification of construction	Unit	Amount
Concrete	18-8-40	m ² 15.13
Type frame of edge	No reinforced concrete	m ² 15.12
Type frame	No reinforced concrete	m 0.97

MINISTRY OF TRANSPORTATION THE REPUBLIC OF GHANA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS:	PROJECT NAME:	DRAWING TITLE:	DATE:	DRAWING No.:
	CONSTRUCTION PROJECT CONSULTANTS, INC. (CPC)	BASIC DESIGN STUDY ON THE PROJECT FOR THE REHABILITATION OF NATIONAL TRUNK ROAD N8	STRUCTURAL DRAWING OF STONE PITCHING (A1-ABUT)	PREPARED BY:	BD-45
				CHECKED BY:	

7-6 認可・同意書

(1) 環境許可 (EP)

Tel: 233 (021) 664697 / 664698,
662465 / 667524

Fax: 233 (021) 662690

Email: support@epaghana.org



Environmental Protection Agency

P.O. Box M 326
Ministries Post Office
Accra, Ghana

Our Ref.: CI1460/01/09

January 20, 2009

**The Chief Executive
Ghana Highway Authority
P. O. Box 1641
Accra**

Dear Sir,

**RE: FINAL EIA REPORT
REHABILITATION OF NATIONAL TRUNK ROAD N8 (ASSIN PRASO BEKWAI)
AND THE RECONSTRUCTION OF ASSIN PRASO BRIDGE**

We acknowledge receipt of the final Environmental Impact Statement on the above project and the payment of the Environmental Permit fee and wish to indicate that the Agency is in the process of issuing the Environmental Permit. The permit is expected to be ready by January 26, 2009.

Yours faithfully,

**E. Appah-Sampong
Deputy Director/EAA Dept.
for Executive Director**

(2) 土地収用

GHANA HIGHWAY AUTHORITY

*In case of reply the number
and date of this letter
should be quoted.*

Head Office,
P. O. Box 1641
Accra, Ghana.

My ref. No., **GHAIRSED** / 57 / 14

Your ref. No.

20th January 2009

Tel. 666591 - 4
664627 - 9
664620

Telegrams
Cablegrams } HIGHWAYS

The Resident Representative
JICA Ghana Office
Accra

Dear Sir/Madam,

Rehabilitation of National Trunk Road N8 (Assin Praso-Bekwai) and the Reconstruction of Assin Praso Bridge


Environmental Permit and Consensus from Landowners

We wish to inform you that the Ghana Highway Authority has fulfilled all the necessary procedures including the payment of fees to the Environmental Protection Agency in Ghana and is awaiting the issuance of the Environmental Permit for the above mentioned road and bridge projects. The EPA (as per the attached letter) has indicated that the Environmental Permit would be ready by 26th January 2009.

We also wish to inform you that the GHA has received consensus from all property and land owners to be affected by the proposed projects. The details are being compiled and would be forwarded as soon as possible.

Counting on your usual co-operation.

Yours faithfully,


(E. Oduro-Konadu)
Chief Executive

Cc: Dy. Chief Exe. (Dev)
Director (RSED)
Project Manager (CPC)