

REPUBLIQUE DE COTE D'IVOIRE



Union - Discipline - Travail

MINISTRE DES INFRASTRUCTURES ECONOMIQUES
AGENCE DE GESTION DES ROUTES (AGEROUTE)

ÉTUDE PRÉPARATOIRE POUR LE PROJET D'AMÉLIORATION DU CARREFOUR DE SOLIBRA EN RÉPUBLIQUE DE CÔTE D'IVOIRE

PLANS DE CONCEPTION D'AVANT-PROJET



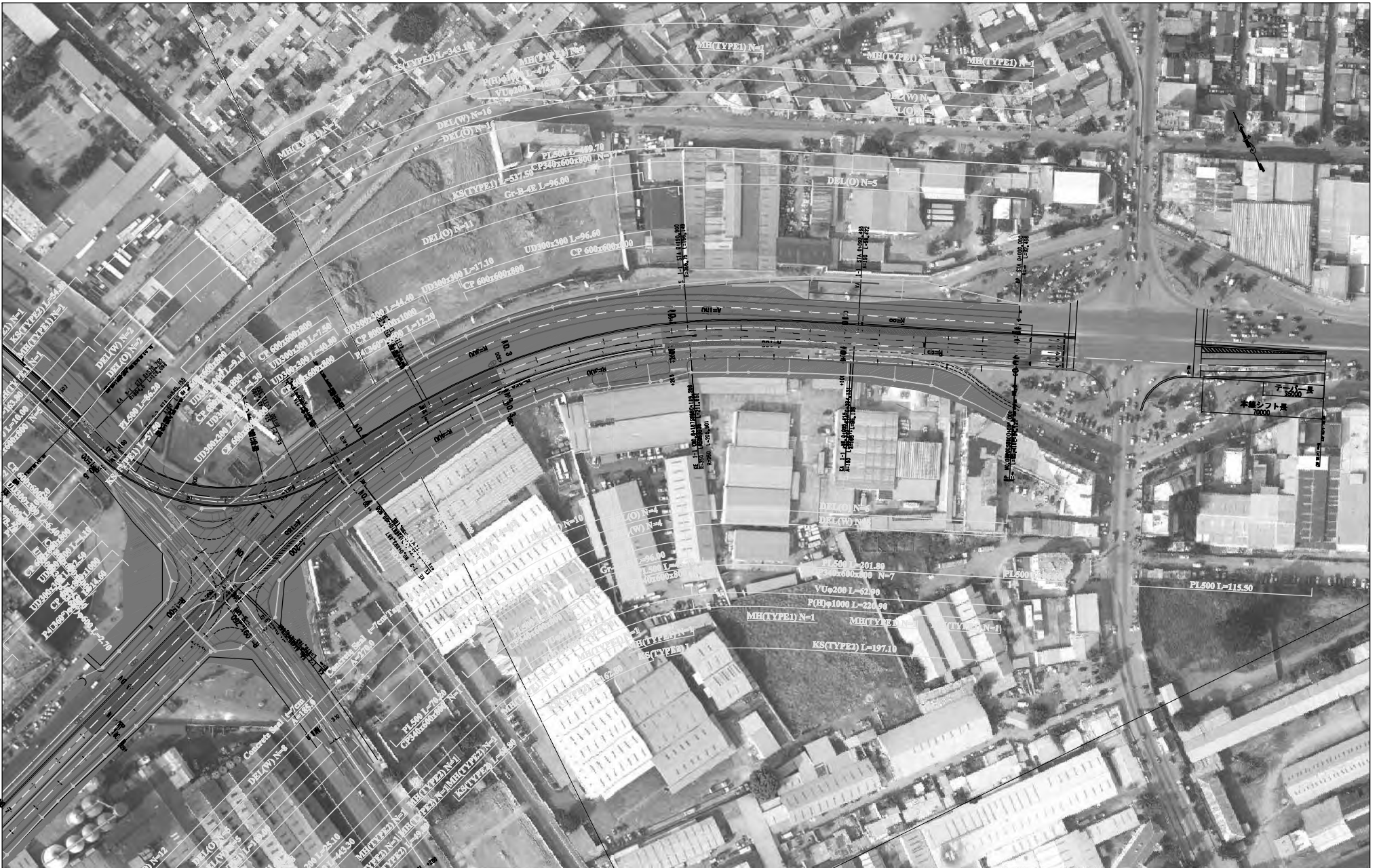
AGENCE JAPONAISE DE COOPÉRATION INTERNATIONALE (JICA)



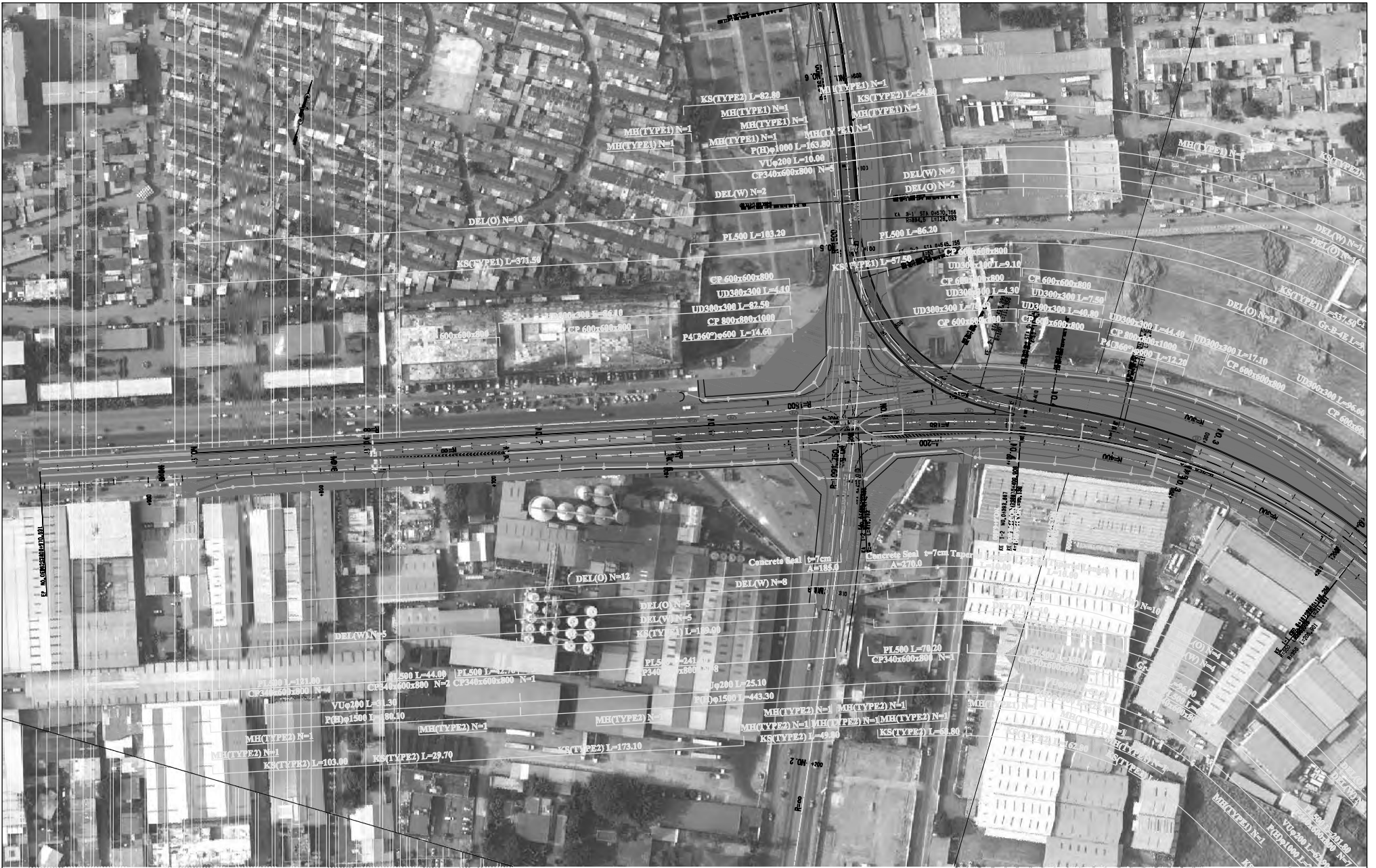
ORIENTAL CONSULTANTS GLOBAL CO., LTD.
CENTRAL CONSULTANT INC.
ASIA AIR SURVEY CO., LTD.



Drawing Title	Scale (in A3)	Page	Remarks
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Cable Connection & Hand hole	Non,	E-15	



CLIENT  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co. Ltd, Central Consultants, Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Boulevard Valéry Giscard d'Estaing (VGE) Improvement Plan (1/2)	Scale:	DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY: DATE:				
	DIRECTOR RESPONSIBLE FOR DESIGN:								1:2000 (A3)					
	SIGNATURE: DATE:													
	STAMP:												Drawing No:R-3 SHEET No:	



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	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:					
	SIGNATURE: DATE:									CHECKED BY:					
	STAMP:									APPROVED BY:					Drawing No: R-4
										DATE:					SHEET No:

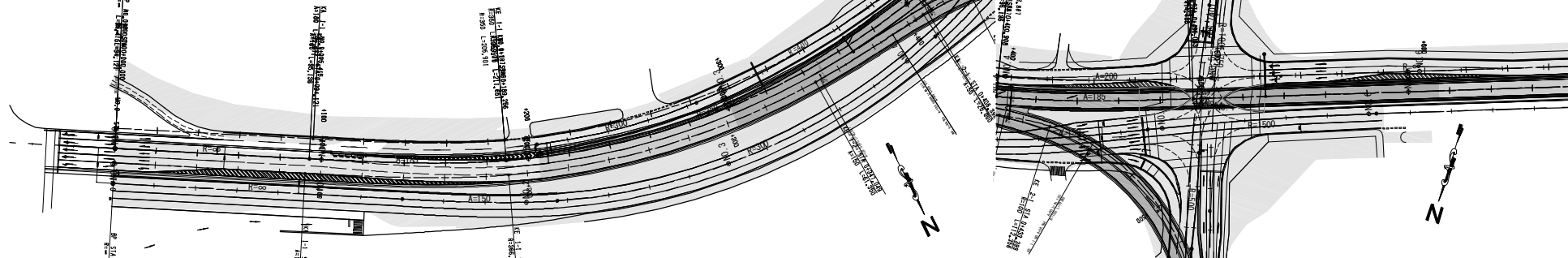
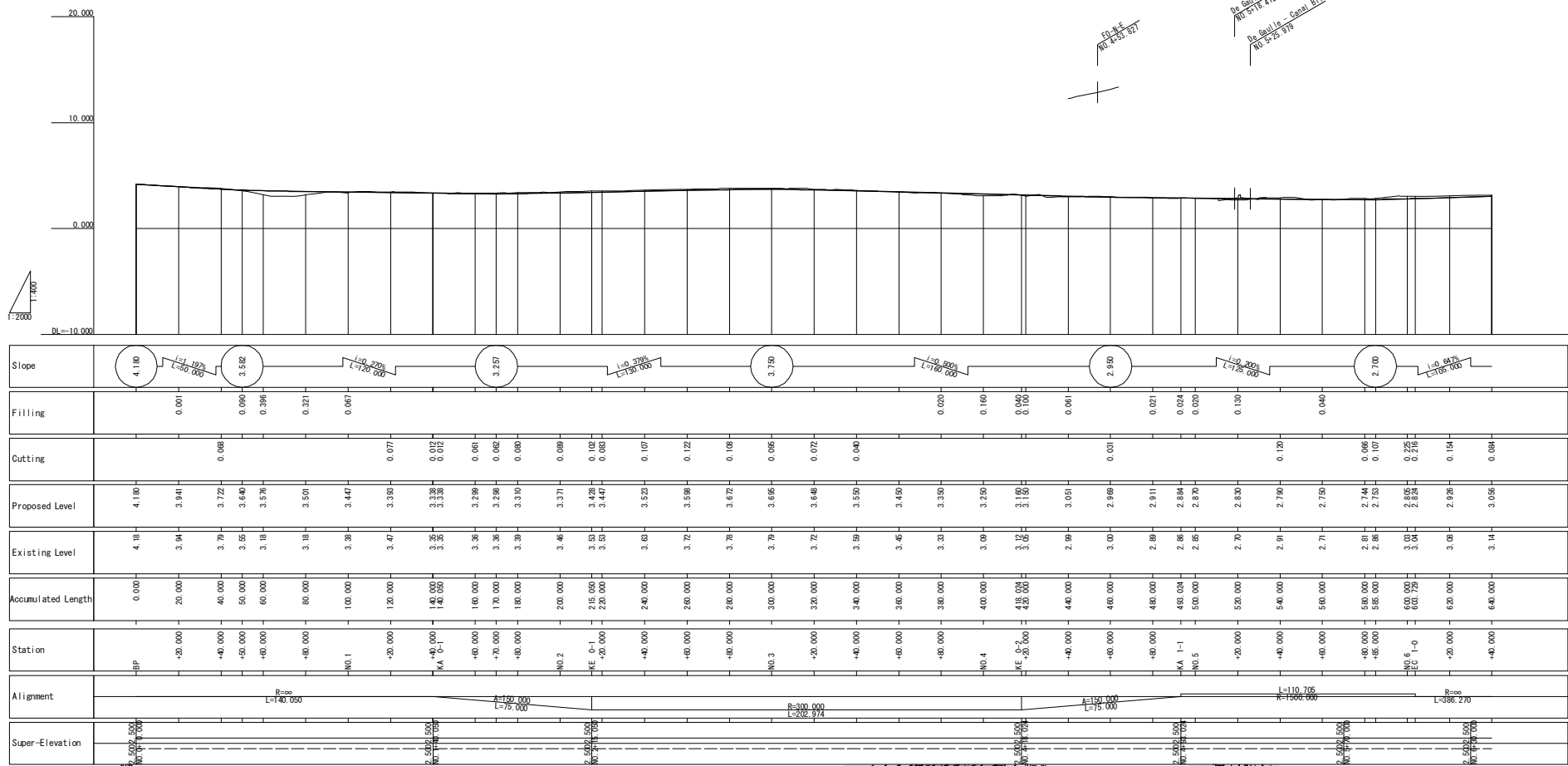


<u>CLIENT</u>  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	<u>CONSULTANT</u> The Consortium of Oriental Consultants Global Co., Ltd., Central Consultants Inc., and Asia Air Survey Co., Ltd.	<u>PROJECT</u> The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE:	Scale:	DESIGNED BY:				
	DIRECTOR RESPONSIBLE FOR DESIGN:							Boulevard de Gaulle- Canal Improvement Plan	1:2000 (A3)	DRAWN BY:				
	SIGNATURE: DATE:									CHECKED BY:				
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										DATE:		SHEET No:		

Profile VGE E-W(1) V=1:400 H=1:2000

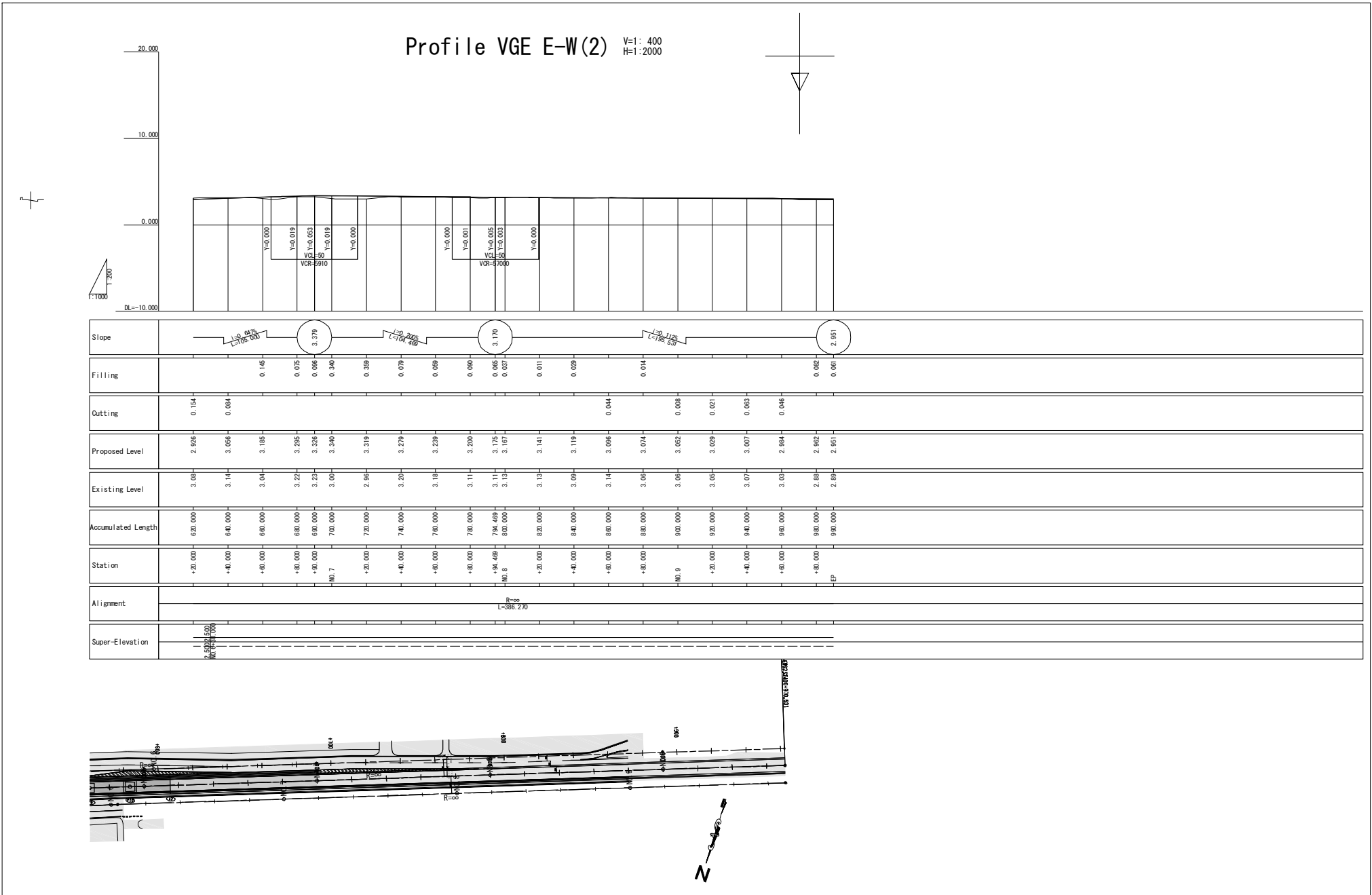
De Gulle - Canal Aline
No. 5118.412
De Gulle - Canal Bline
No. 5425.979

FO.A.E
No. 1431.971

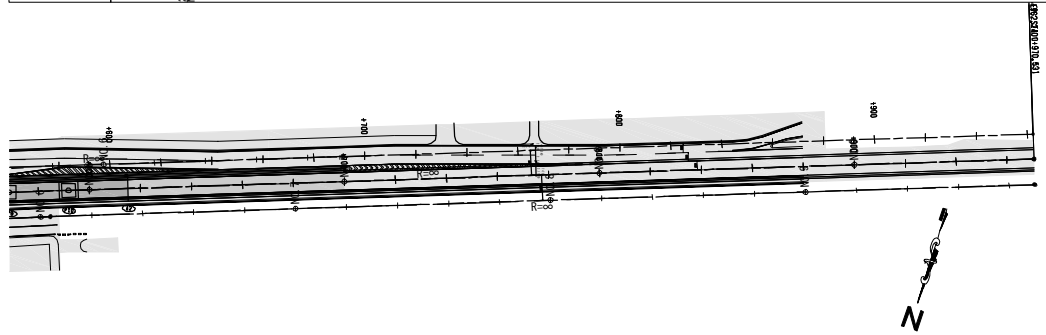


Appendix - 24

CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL: DIRECTOR RESPONSIBLE FOR DESIGN: SIGNATURE: _____ DATE: _____ STAMP: _____	REVISION DESCRIPTION BY DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd. , Central Consultants Inc. , and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Profile of Boulevard Valéry Giscard d'Estaing (VGE) (1/2)	Scale: H=1:2000 V=1:400 (A3)	DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY: DATE:	Drawing No: R-6 SHEET No:



Slope	1:50.000 L=105.000		1:50.000 L=105.000		1:50.000 L=105.000		1:50.000 L=105.000		1:50.000 L=105.000														
Filling	0.146	0.075	0.096	0.340	0.358	0.078	0.058	0.090	0.065	0.031	0.011	0.029	0.044	0.008	0.021	0.063	0.046	0.082	0.061				
Cutting	0.154	0.084																					
Proposed Level	2.926	3.056	3.185	3.295	3.326	3.340	3.319	3.278	3.238	3.200	3.175	3.167	3.141	3.119	3.096	3.074	3.052	3.029	3.007	2.984	2.962	2.951	
Existing Level	3.08	3.14	3.04	3.22	3.23	3.06	2.96	3.20	3.18	3.11	3.11	3.15	3.13	3.09	3.14	3.05	3.05	3.05	3.07	3.03	2.88	2.89	
Accumulated Length	620.000	640.000	660.000	680.000	690.000	700.000	720.000	740.000	760.000	780.000	794.468	800.000	820.000	840.000	860.000	880.000	900.000	920.000	940.000	960.000	980.000	990.000	
Station	+20.000	+40.000	+60.000	+80.000	+90.000	+100.7	+20.000	+40.000	+60.000	+80.000	+84.468	+80.000	+20.000	+40.000	+60.000	+80.000	+100.9	+20.000	+40.000	+60.000	+80.000	+90.000	EP
Alignment	R=385.270																						
Super-Elevation	2.5000 5.0000 10.0000																						

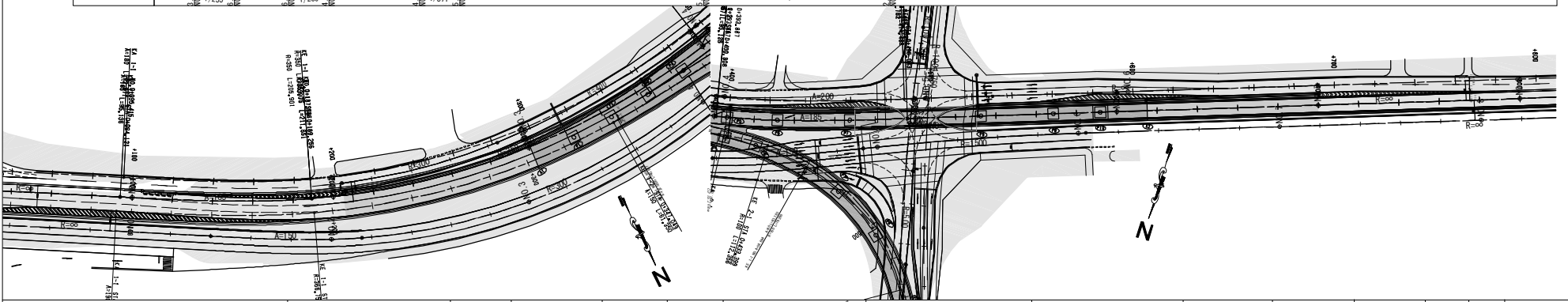
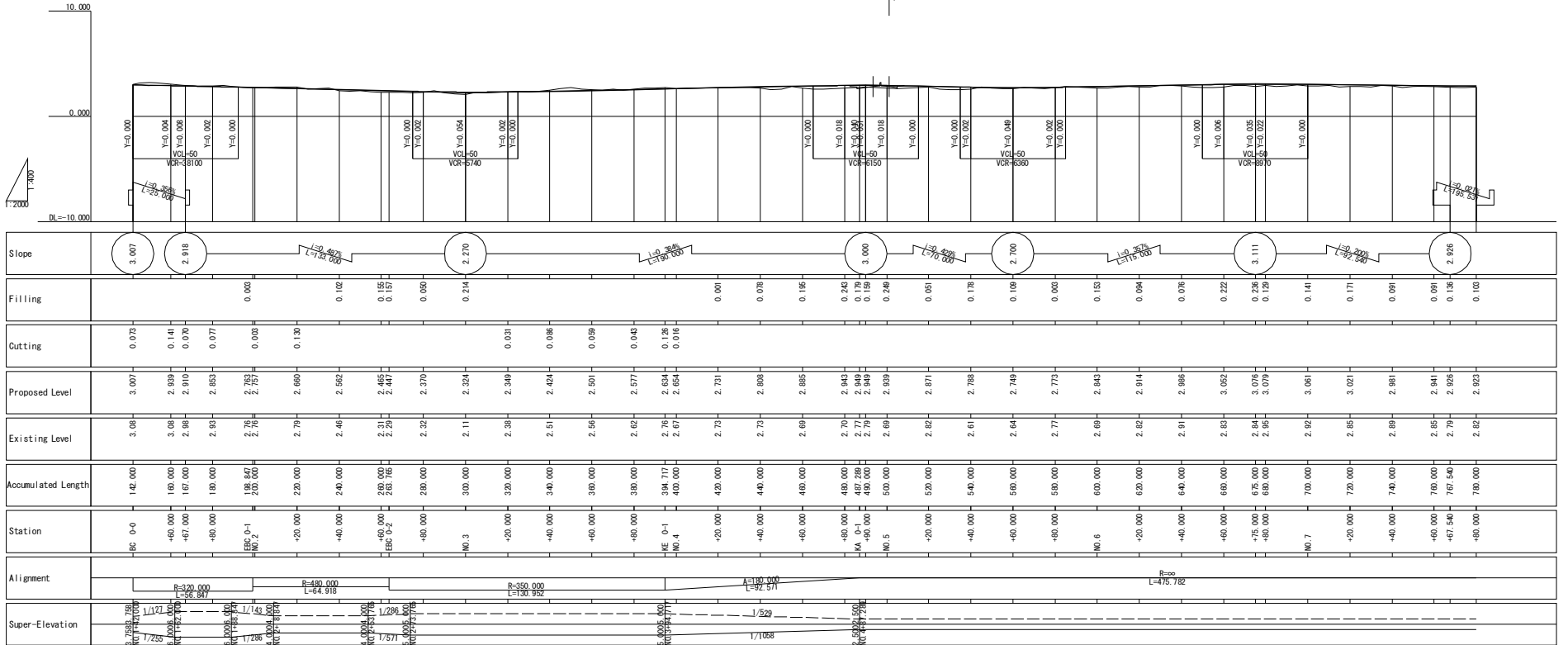


Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultants, Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE:	Scale:	DESIGNED BY:					
	DIRECTOR RESPONSIBLE FOR DESIGN:							Profile of Boulevard Valéry Giscard d'Estaing (VGE) (2/2)	H=1:2000 V=1:400 (A3)	DRAWN BY:					
	SIGNATURE: DATE:								CHECKED BY:						
	STAMP:								APPROVED BY:						Drawing No: R-7 SHEET No:

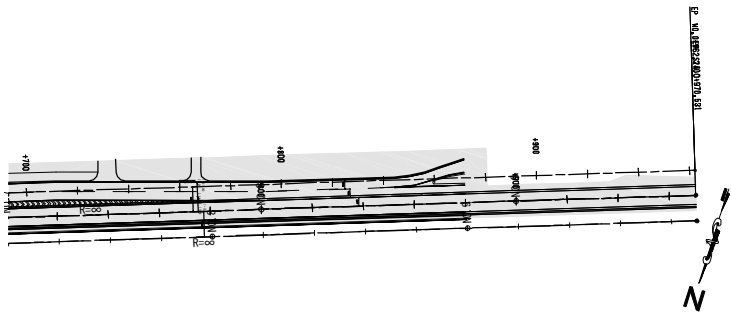
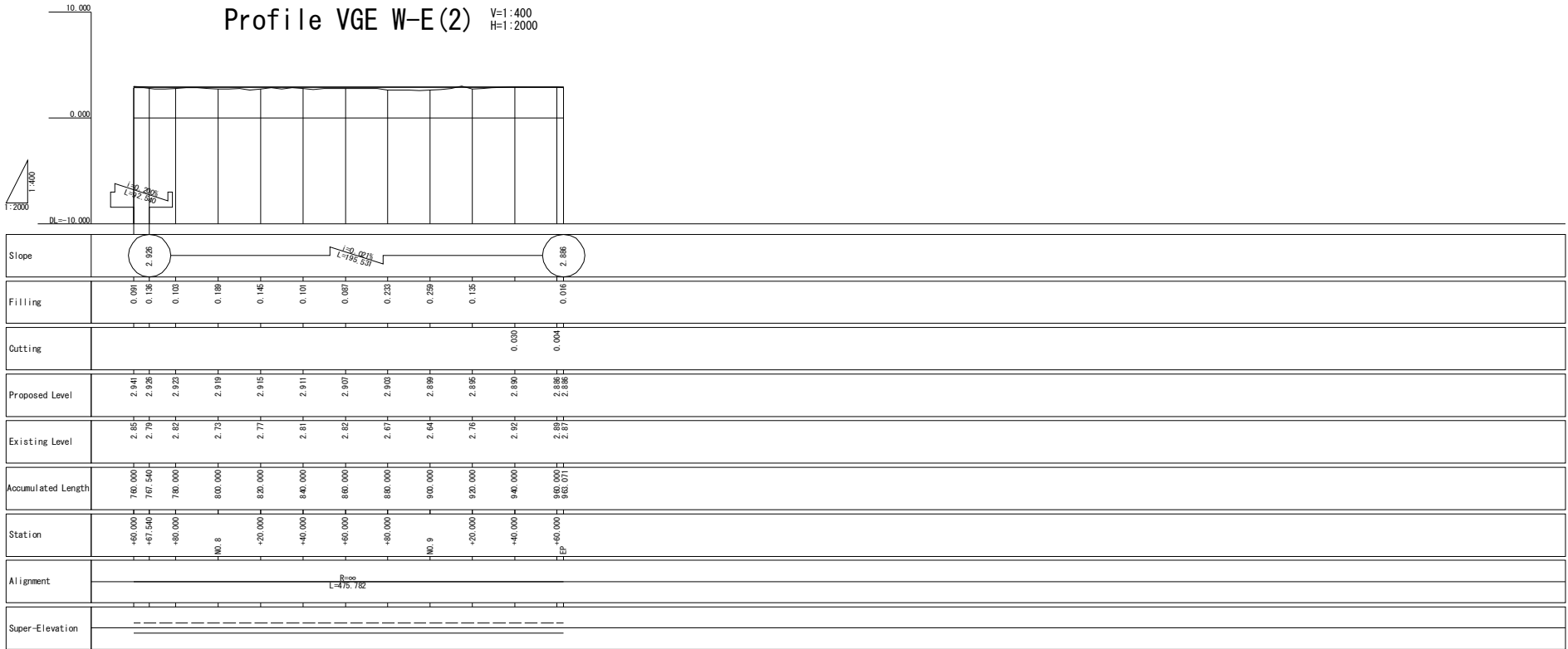
Profile VGE W-E(1)

V=1:400
H=1:2000

Dr. Saouli - Canal Aline
NO 432.510
Dr. Saouli - Canal B Line
NO 547.048



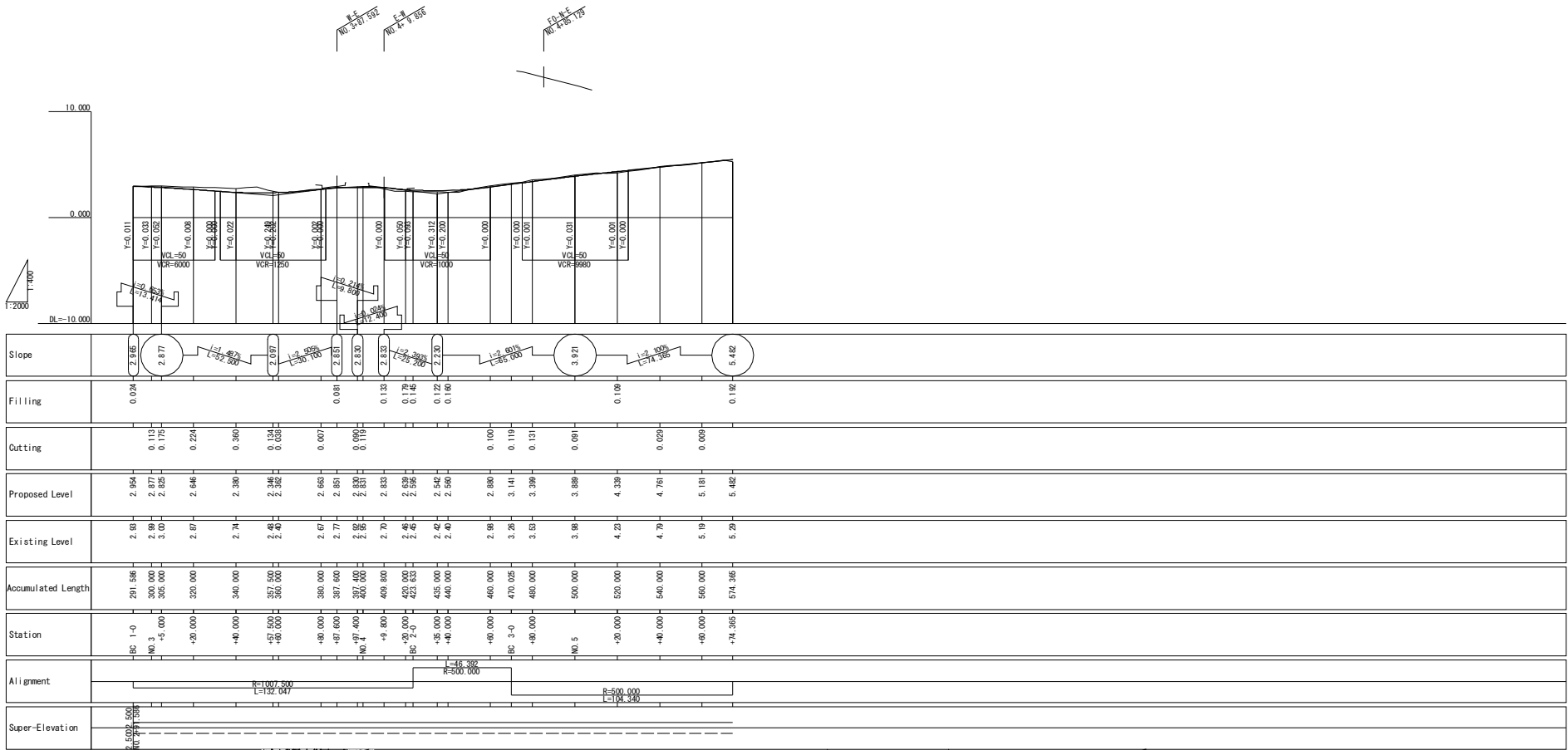
<p>Japan International Cooperation Agency (JICA)</p>	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	<p>CONSULTANT</p> <p>The Consortium of</p> <p>Oriental Consultants Global Co., Ltd.</p> <p>Central Consultants Inc.</p> <p>and</p> <p>Asia Air Survey Co., Ltd.</p>	<p>PROJECT</p> <p>The Preparatory Survey for</p> <p>Improvement of SOUBRA Intersection</p> <p>(Outline Design)</p>	<p>TITLE:</p> <p>Profile of Boulevard Valéry</p> <p>Giscard d'Estaing (VGE) (1/2)</p>	<p>Scale:</p> <p>H=1:2000</p> <p>V=1:400 (A3)</p>	DESIGNED BY:		<p>Drawing No: R-8</p> <p>SHEET No:</p>
	DIRECTOR RESPONSIBLE FOR DESIGN:									CHECKED BY:		
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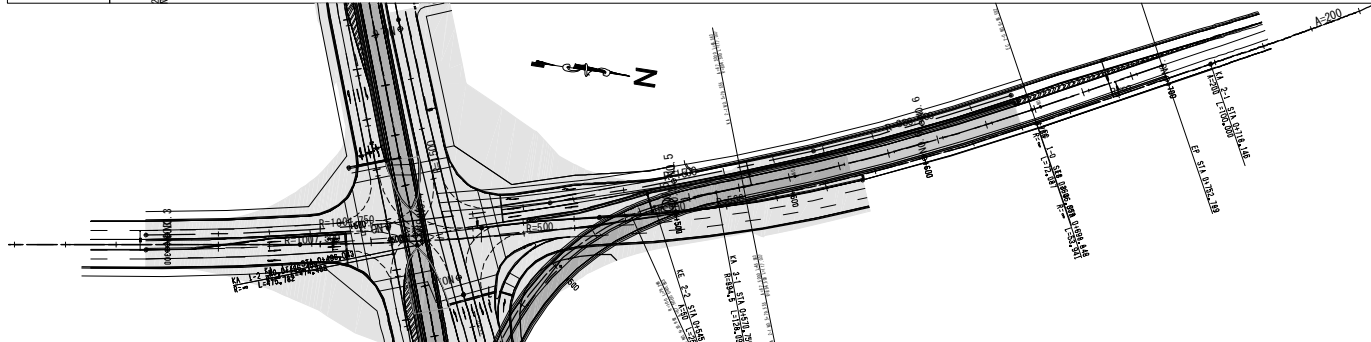
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	DIRECTOR RESPONSIBLE FOR DESIGN:					The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	Profile of Boulevard Valéry Giscard d'Estaing (VGE) (2/2)	H=1:2000 V=1:400 (A3)	DRAWN BY:		
	SIGNATURE: DATE:									CHECKED BY:		
	STAMP:									APPROVED BY:		
										DATE:		

Profile of De Gaulle - Canal A Line

V=1: 400
H=1:2000



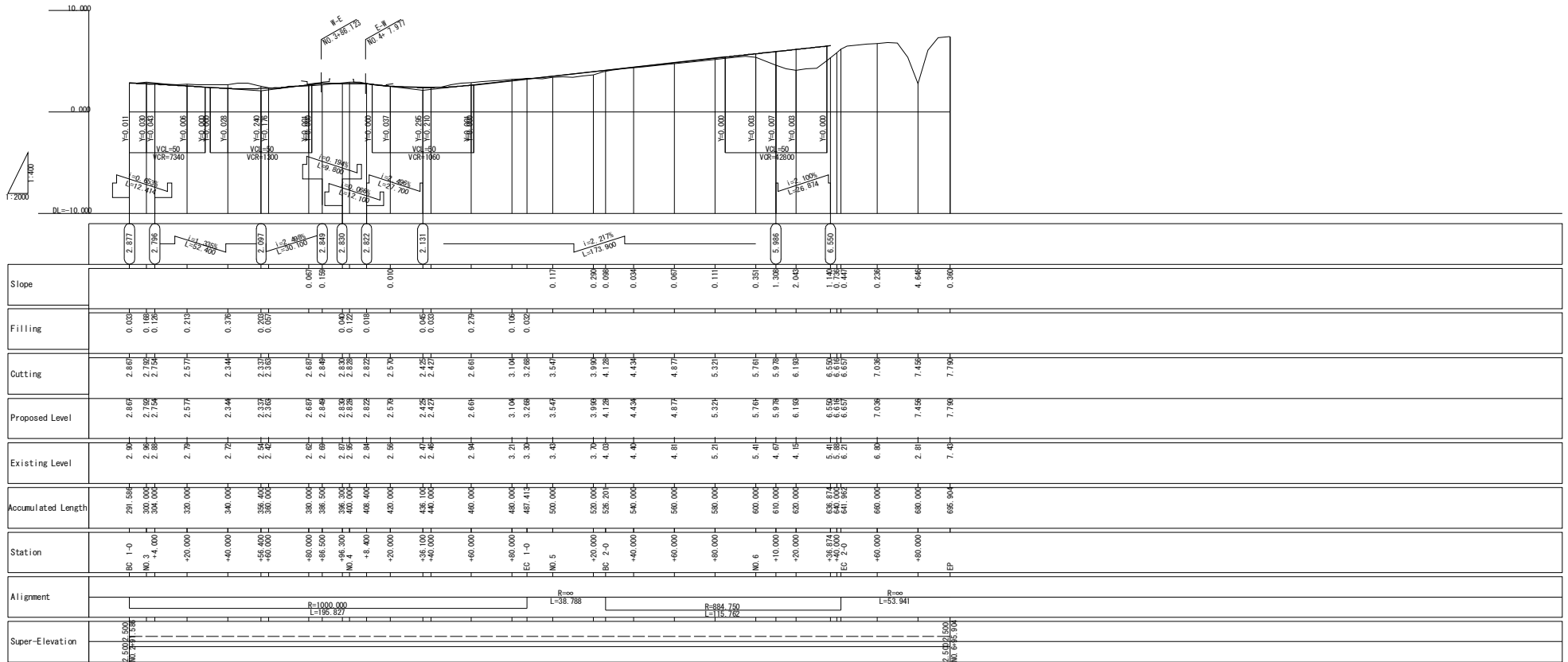
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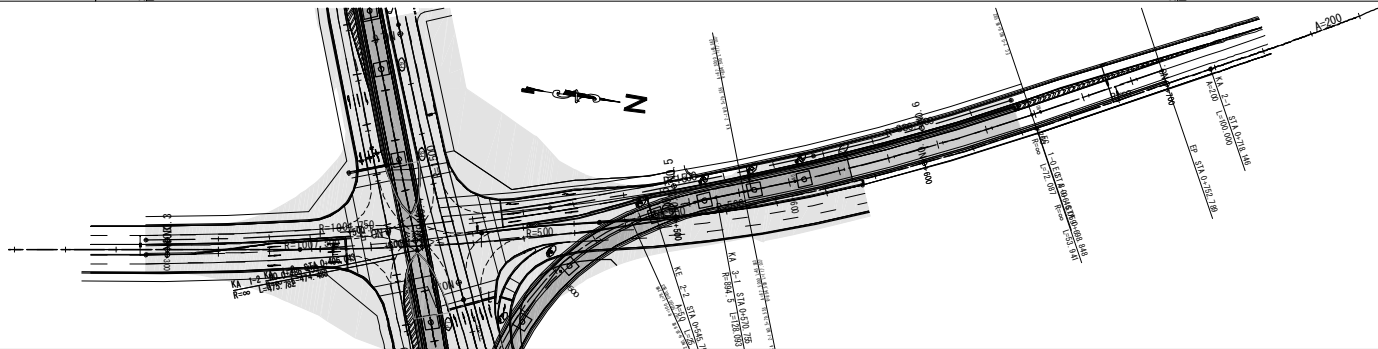
CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL: DIRECTOR RESPONSIBLE FOR DESIGN: SIGNATURE: _____ DATE: _____ STAMP: _____	REVISION DESCRIPTION BY DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd. Central Consultants, Inc. and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Profile of De Gaulle - Canal A Line	Scale: H=1:2000 V=1:400 (A3)	DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY: DATE:	Drawing No: R-10 SHEET No:

Profile of De Gaulle - Canal B Line

V=1:400
H=1:2000

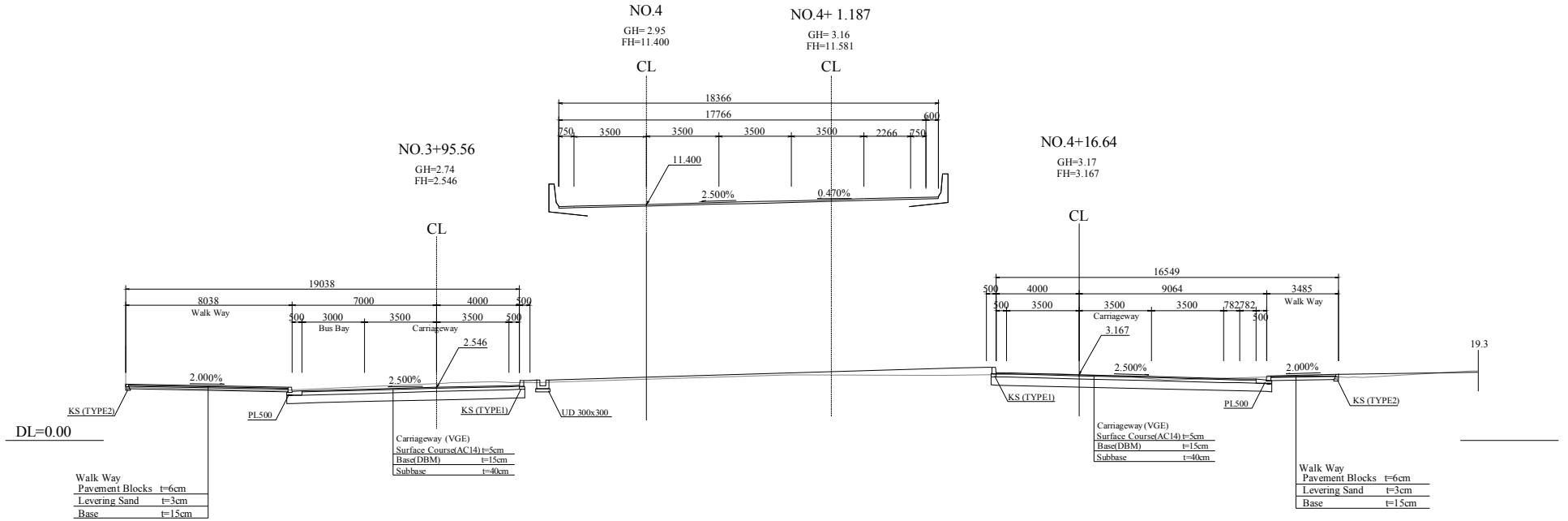


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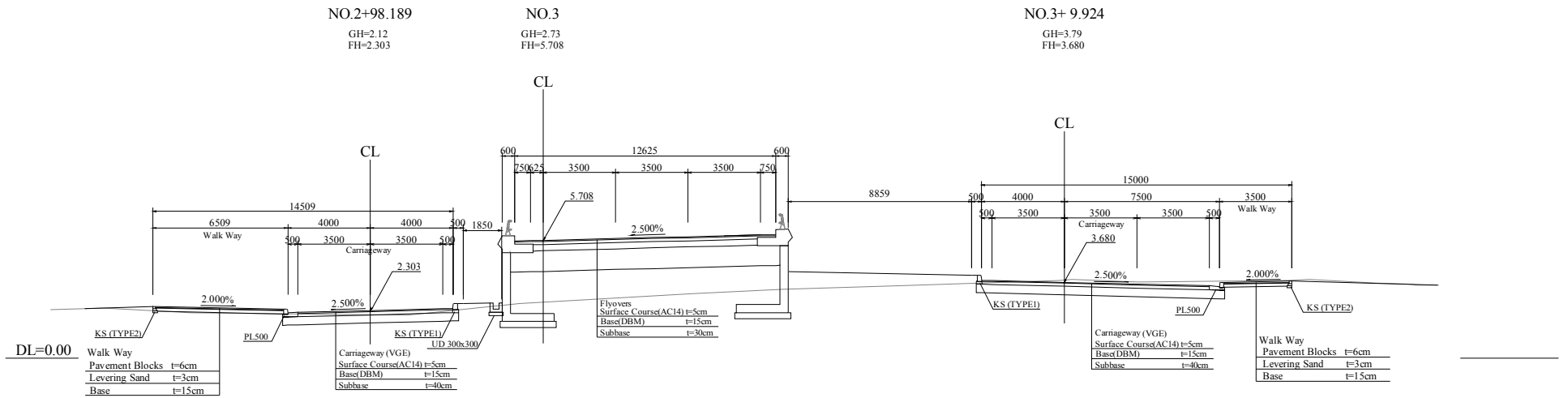


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	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
	SIGNATURE: DATE:									CHECKED BY:			
	STAMP:									APPROVED BY:			
										DATE:			

Bridge Section(VGE)

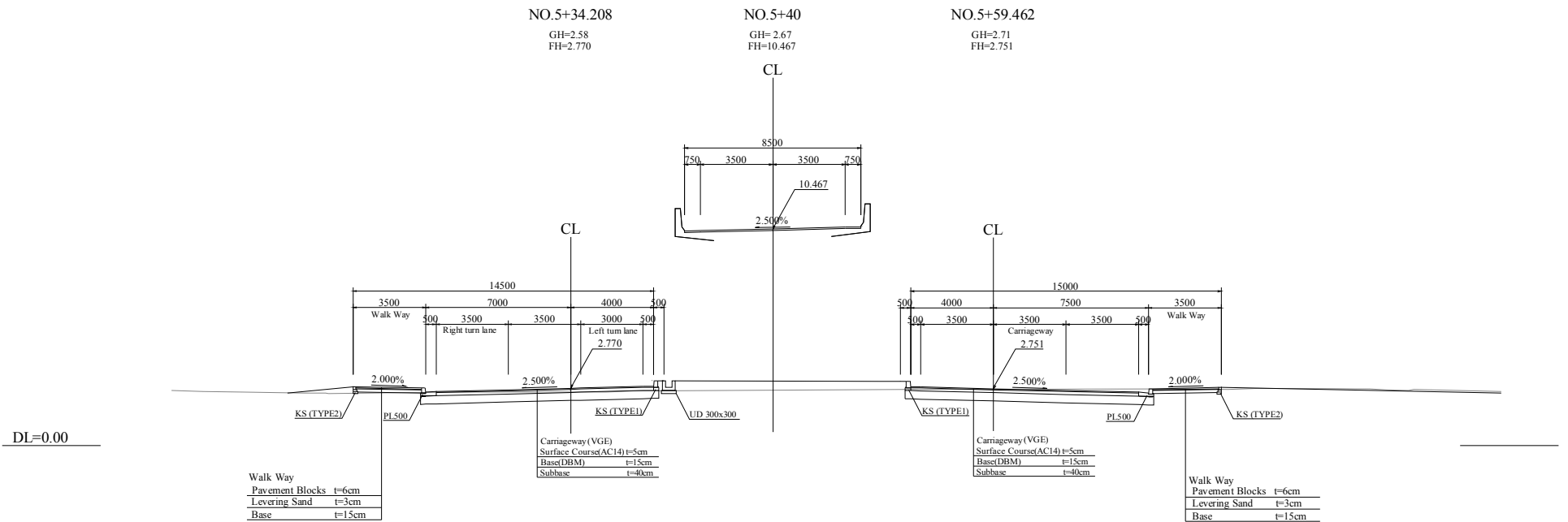


Wall Section(VGE)



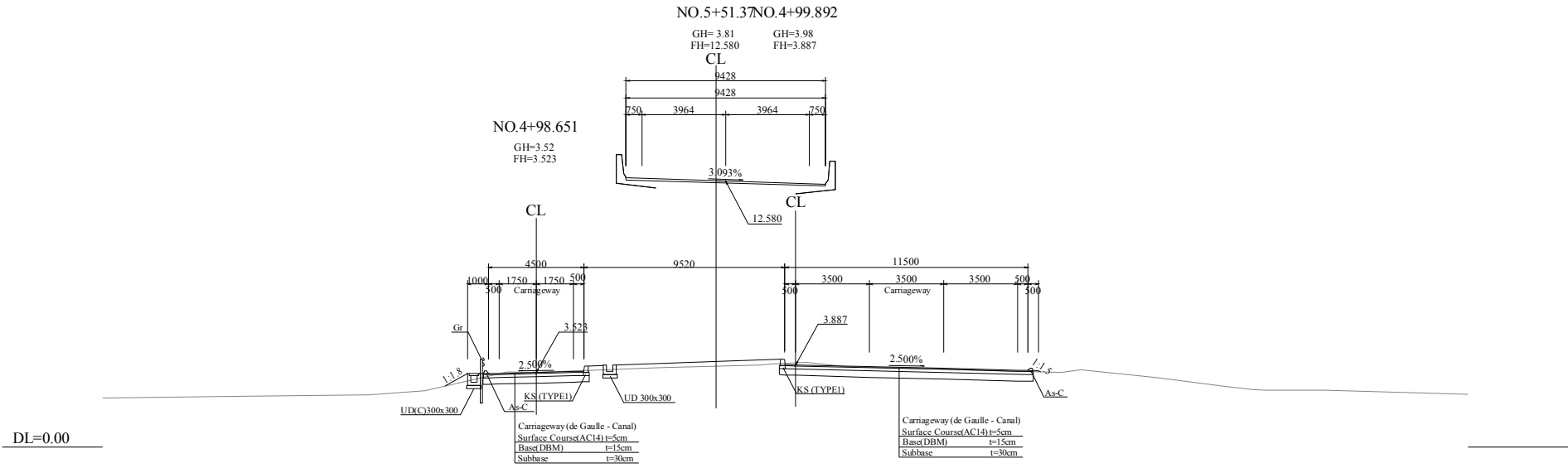
CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co. Ltd, Central Consultant Inc, and Asia Air Survey Co, Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Typical Cross Section (VGE)(1/2)	Scale: 1:400 (A3)	DESIGNED BY:				Drawing No:R-12 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:				
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Intersection(VGE)

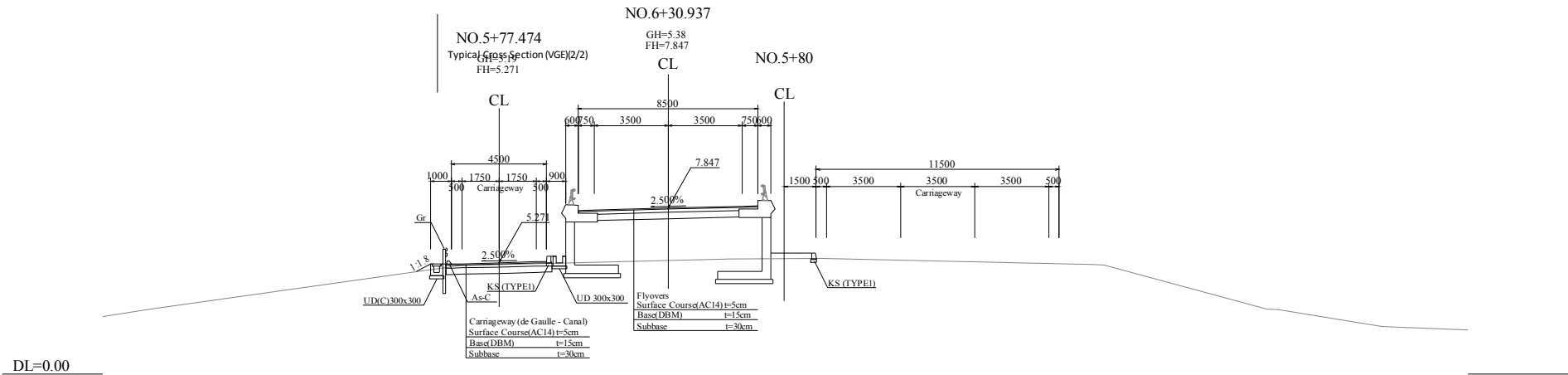


<u>CLIENT</u> Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	<u>CONSULTANT</u> The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	<u>PROJECT</u> The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Typical Cross Section (VGE)(2/2)	Scale: 1:400 (A3)	DESIGNED BY:		
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:		
	SIGNATURE: DATE:									CHECKED BY:		
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Drawing No:R-13												
SHEET No:												

Bridge Section(de Gaulle - Canal)

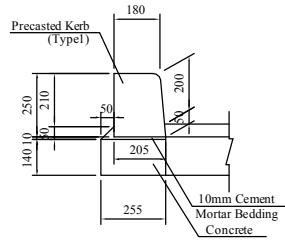


Wall Section(de Gaulle - Canal)



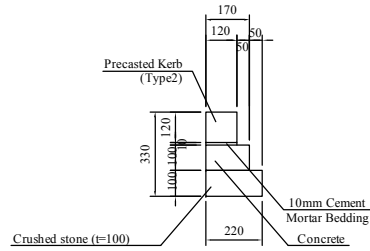
CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd. Central Consultants, Inc. and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE:	Scale:	DESIGNED BY:			Drawing No: R-14 SHEET No:
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	STAMP:							APPROVED BY:					
								DATE:					

KS(TYPE1) Scale 1:20



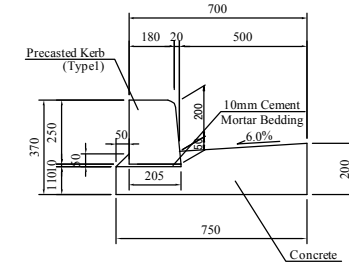
MATERIALS LIST					PER 10m
ITEM	STANDARD	UNIT	QUANTITY	REMARK	
Concrete	$\sigma_{ck}=18MPa$	cu.m	0.357		
Form		sq.m	2.800		
Cement mortar	1:3	cu.m	0.033		
Precasted kerb	Type1	nos	16.7		

KS(TYPE2) Scale 1:20



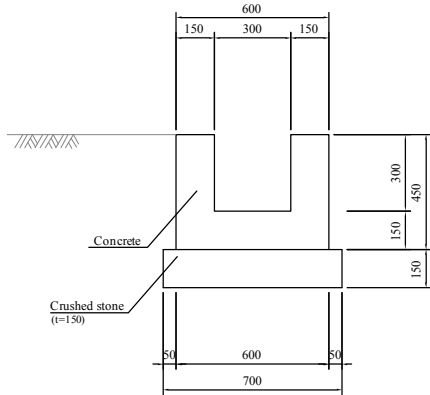
MATERIALS LIST					PER 10m
ITEM	STANDARD	UNIT	QUANTITY	REMARK	
Concrete	$\sigma_{ck}=18MPa$	cu.m	0.170		
Form		sq.m	2.000		
Cement mortar	1:3	cu.m	0.012		
Precasted kerb	Type2	nos	16.7		
Crushed stone	t=100mm	cu.m	0.220		

PL500 Scale 1:20



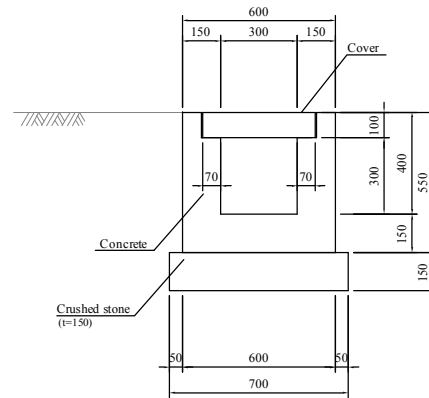
MATERIALS LIST					PER 10m
ITEM	STANDARD	UNIT	QUANTITY	REMARK	
Concrete	$\sigma_{ck}=18MPa$	cu.m	1.145		
Form		sq.m	3.100		
Cement mortar	1:3	cu.m	0.033		
Precasted kerb	Type1	nos	16.7		

UD300x300 Scale 1:20



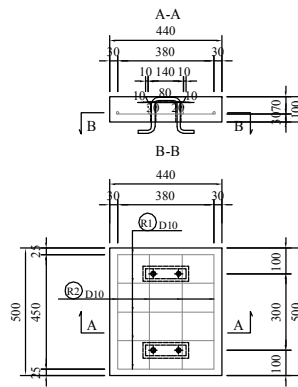
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ITEM	STANDARD	UNIT	QUANTITY	REMARK	
Concrete	$\sigma_{ck}=18MPa$	cu.m	1.800		
Form		sq.m	15.000		
Crushed stone	t=150	cu.m	1.050		

UD(C)300x300 Scale 1:20



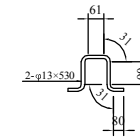
MATERIALS LIST					PER 10m
ITEM	STANDARD	UNIT	QUANTITY	REMARK	
Concrete	$\sigma_{ck}=18MPa$	cu.m	1.950		
Form		sq.m	19.000		
Crushed stone	t=150	cu.m	1.050		
Cover	300x300	nos	20		

(Cover)

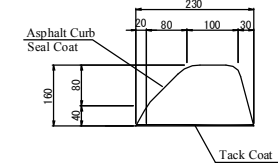


MATERIALS LIST(Cover)					PER Each
CLASSIFICATION	STANDARD	UNIT	QUANTITY	REMARK	
CONCRETE	$\sigma_{ck}=18MPa$	cu.m	0.022		
FORM		sq.m	0.408		
REINFORCED	D10,p13	kg	3.174		

Handle



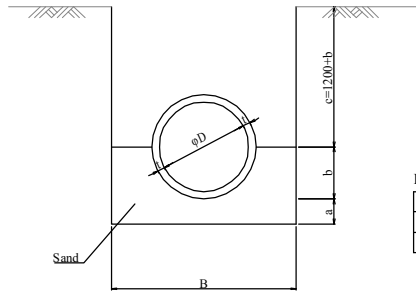
As-C Scale 1:10



MATERIALS LIST					PER 10m
ITEM	STANDARD	UNIT	QUANTITY	REMARK	
Asphalt Curb		cu.m	0.300		
Seal Coat		sq.m	4.600		
Tack Coat		sq.m	2.300		

<p>Japan International Cooperation Agency (JICA)</p>	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT: The Consortium of Oriental Consultants Global Co., Ltd., Central Consultants, Inc., and Asia Air Survey Co., Ltd.	PROJECT: The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Road Structure Details (1/4)	Scale: As Shown (A3)	DESIGNED BY:			Drawing No: R-16 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
	SIGNATURE: DATE:									CHECKED BY:			
	STAMP:									APPROVED BY:			

P(H) φ1000
P(H) φ1500



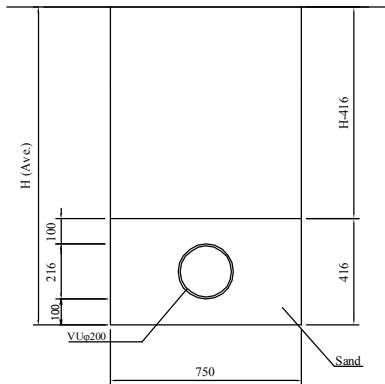
DIMENSION LIST

D	t	B	a	b	c
1000	82	2050	200	582	1782
1500	140	2650	200	890	2090

MATERIAL LIST

ITEM	STANDARD	UNIT	QUANTITY		REMARKS
			φ1000	φ1500	
Pipe Culvert	φ1000(L=2430)	nos.	4.1	—	
	φ1500(L=2430)	nos.	—	4.1	
Filling Material	Sand	cu.m	10.710	16.443	

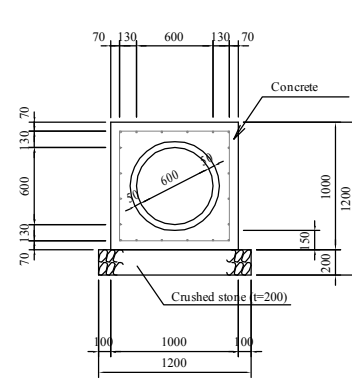
VUφ200 Scale 1:20



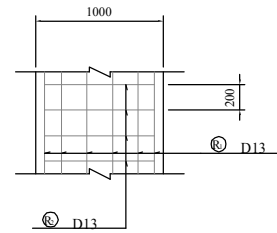
MATERIAL LIST (MULTI CELL TYPE)

ITEM	STANDARD	UNIT	QUANTITY	REMARKS
Pipe	VUφ200	m	10.000	
Filling Material	Sand	cu.m	2.754	

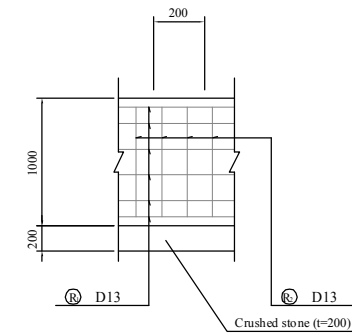
P4 φ600 Scale 1:40



(SKY VIEW)



(SIDE VIEW)



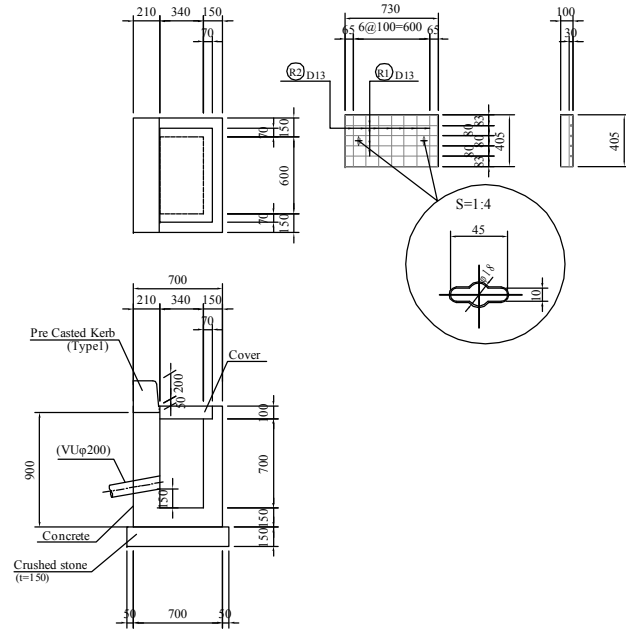
MATERIALS LIST

ITEM	STANDARD	UNIT	QUANTITY	REMARK
Pipe Culvert	φ600		4.6	
Concrete	σck=18MPa	cu.m	6.152	
Form		sq.m	20.000	
Crushed stone	t=200	cu.m	2.400	
Reinforced	D13	kg	416.905	

<p>CLIENT</p> <p>Japan International Cooperation Agency (JICA)</p>	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	<p>CONSULTANT</p> <p>The Consortium of</p> <p>Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.</p>	<p>PROJECT</p> <p>The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)</p>	<p>TITLE:</p> <p>Road Structure Details (2/4)</p>	<p>Scale:</p> <p>As Shown (A3)</p>	DESIGNED BY:			<p>Drawing No: R-17</p> <p>SHEET No:</p>
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
	SIGNATURE: DATE:									CHECKED BY:			
	STAMP:									APPROVED BY:			
										DATE:			

CP 340x600x800

(Cover 340x600)



MATERIALS LIST(Cover) PER Each

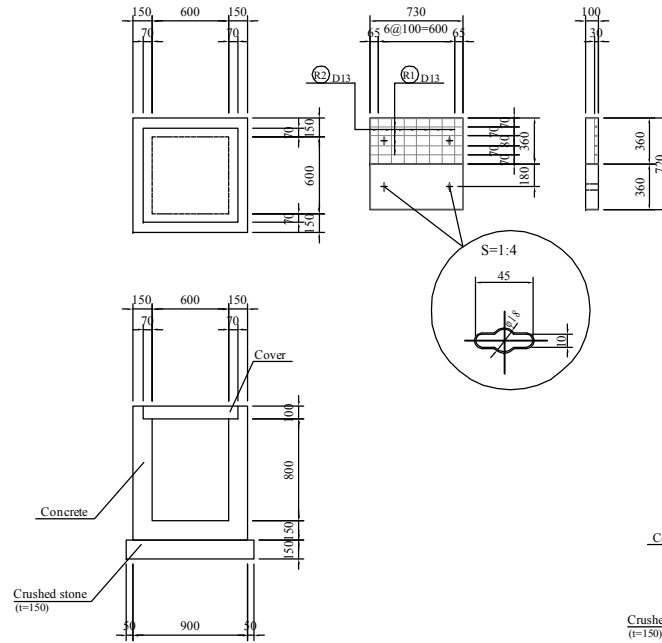
ITEM	STANDARD	UNIT	QUANTITY	REMARK
Concrete	σck=18MPa	cu.m	0.030	
Form		sq.m	0.296	
Reinforced	D13	kg	5.726	
Plate	SS400	kg	5.702	
Suspender		nos	2	

MATERIALS LIST PER Each

ITEM	STANDARD	UNIT	QUANTITY	REMARK
Concrete	σck=18MPa	cu.m	0.510	
Form		sq.m	2.721	
Crushed stone	t=150	cu.m	0.108	
Cover	340x600	nos	1	

CP 600x600x800

(Cover 600x600)



MATERIALS LIST(Cover) PER Each

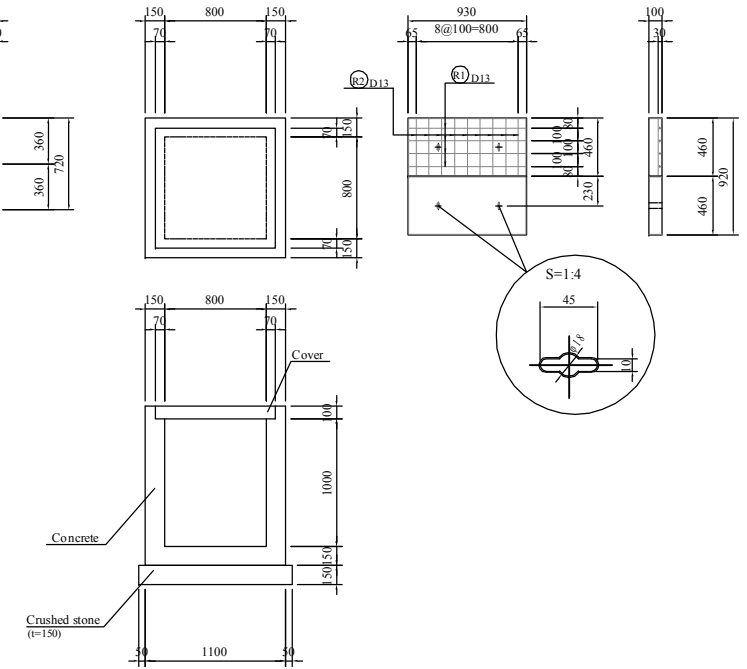
ITEM	STANDARD	UNIT	QUANTITY	REMARK
Concrete	σck=18MPa	cu.m	0.026	
Form		sq.m	0.263	
Reinforced	D13	kg	5.413	
Plate	SS400	kg	5.476	
Suspender		nos	2	

MATERIALS LIST PER Each

ITEM	STANDARD	UNIT	QUANTITY	REMARK
Concrete	σck=18MPa	cu.m	0.508	
Form		sq.m	6.356	
Crushed stone	t=150	cu.m	0.150	
Cover	600x600	nos	2	

CP 800x800x1000

(Cover 800x800)



MATERIALS LIST(Cover) PER Each

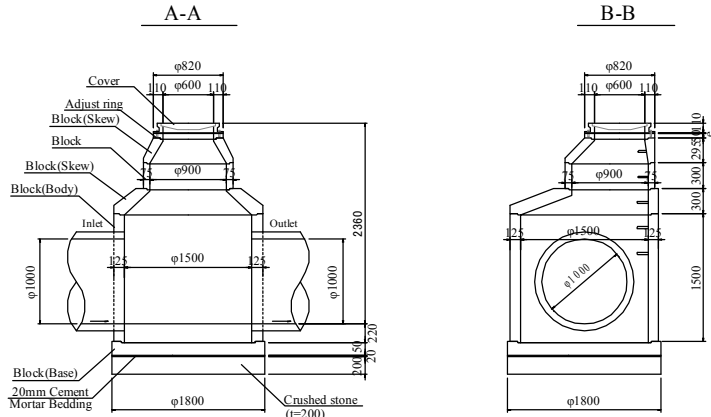
ITEM	STANDARD	UNIT	QUANTITY	REMARK
Concrete	σck=18MPa	cu.m	0.043	
Form		sq.m	0.428	
Reinforced	D13	kg	7.821	
Plate	SS400	kg	6.983	
Suspender		nos	2	

MATERIALS LIST PER Each

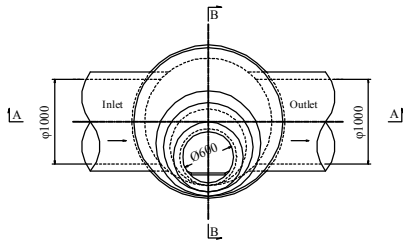
ITEM	STANDARD	UNIT	QUANTITY	REMARK
Concrete	σck=18MPa	cu.m	0.784	
Form		sq.m	9.556	
Crushed stone	t=150	cu.m	0.144	
Cover	800x800	nos	2	

<p>CLIENT</p> <p>Japan International Cooperation Agency (JICA)</p>	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	<p>CONSULTANT</p> <p>The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.</p>	<p>PROJECT</p> <p>The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)</p>	TITLE:	Scale:	DESIGNED BY:				
	DIRECTOR RESPONSIBLE FOR DESIGN:							Road Structure Details (3/4)	As Shown (A3)	DRAWN BY:				
	SIGNATURE: DATE:								CHECKED BY:					
	STAMP:								APPROVED BY:					
												SHEET No:		

MH(TYPE1)

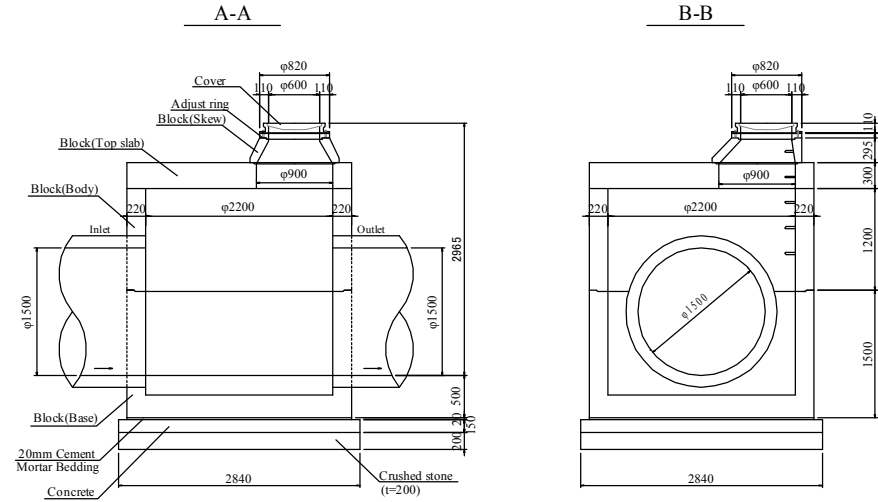


Plan

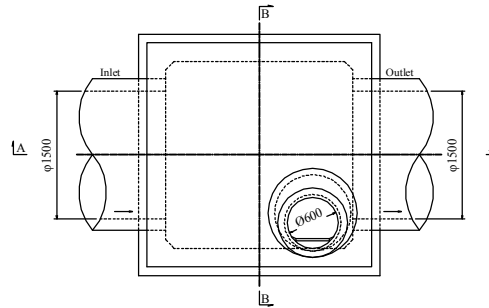


MATERIALS LIST		PER Each		
ITEM	STANDARD	UNIT	QUANTITY	REMARK
Block(Base)		nos	1	
Block(Body)	φ1500x1500	nos	1	
Block(Skew)	φ600xφ900x295	nos	1	
	φ900xφ1500x300	nos	1	
Block	φ900x300	nos	1	
Adjust ring	φ600x50	nos	1	
Cover	φ600	nos	1	
Cement mortar	1:3	cu.m	0.051	
Crushed stone	t=200mm	cu.m	0.509	

MH(TYPE2)



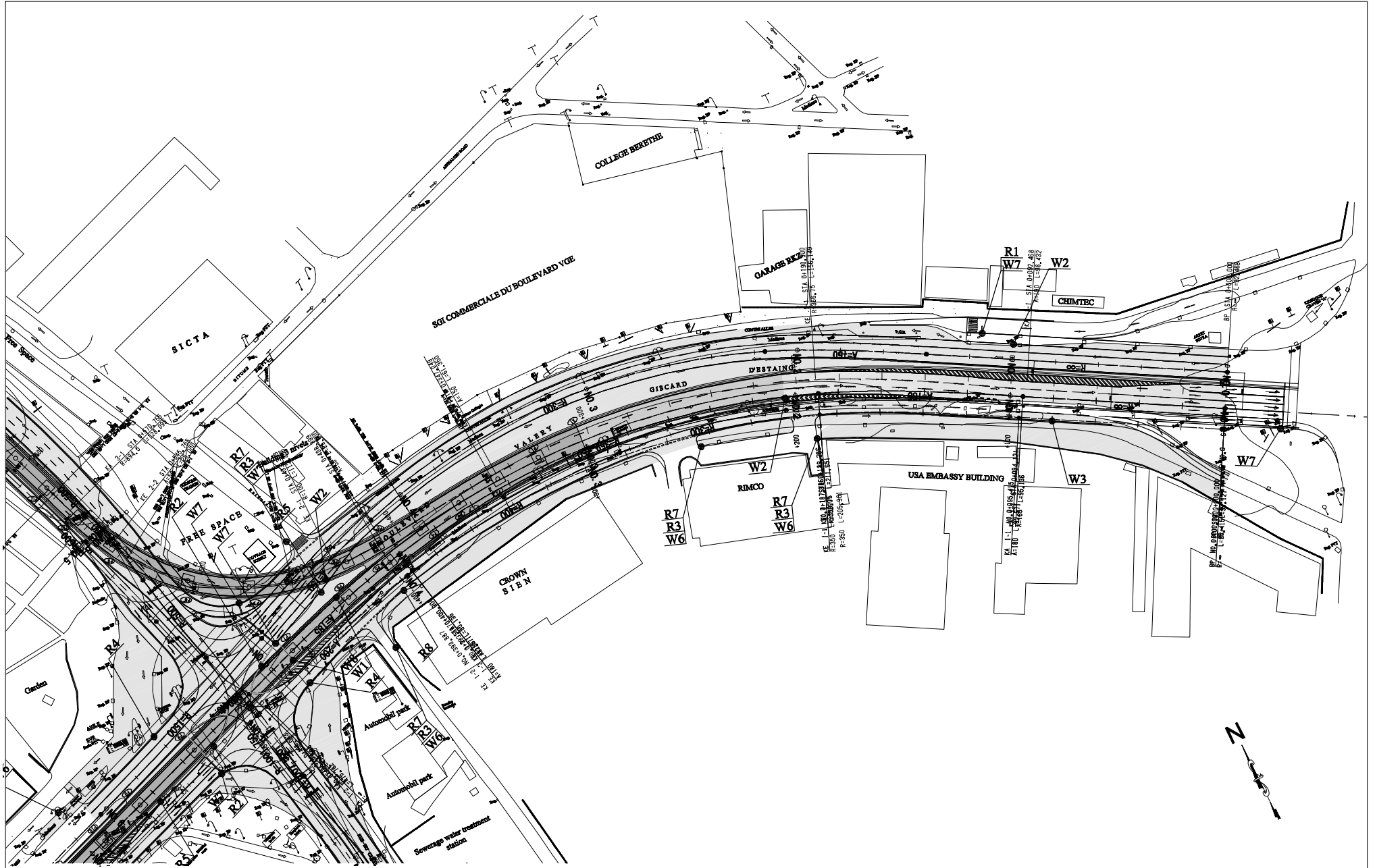
Plan



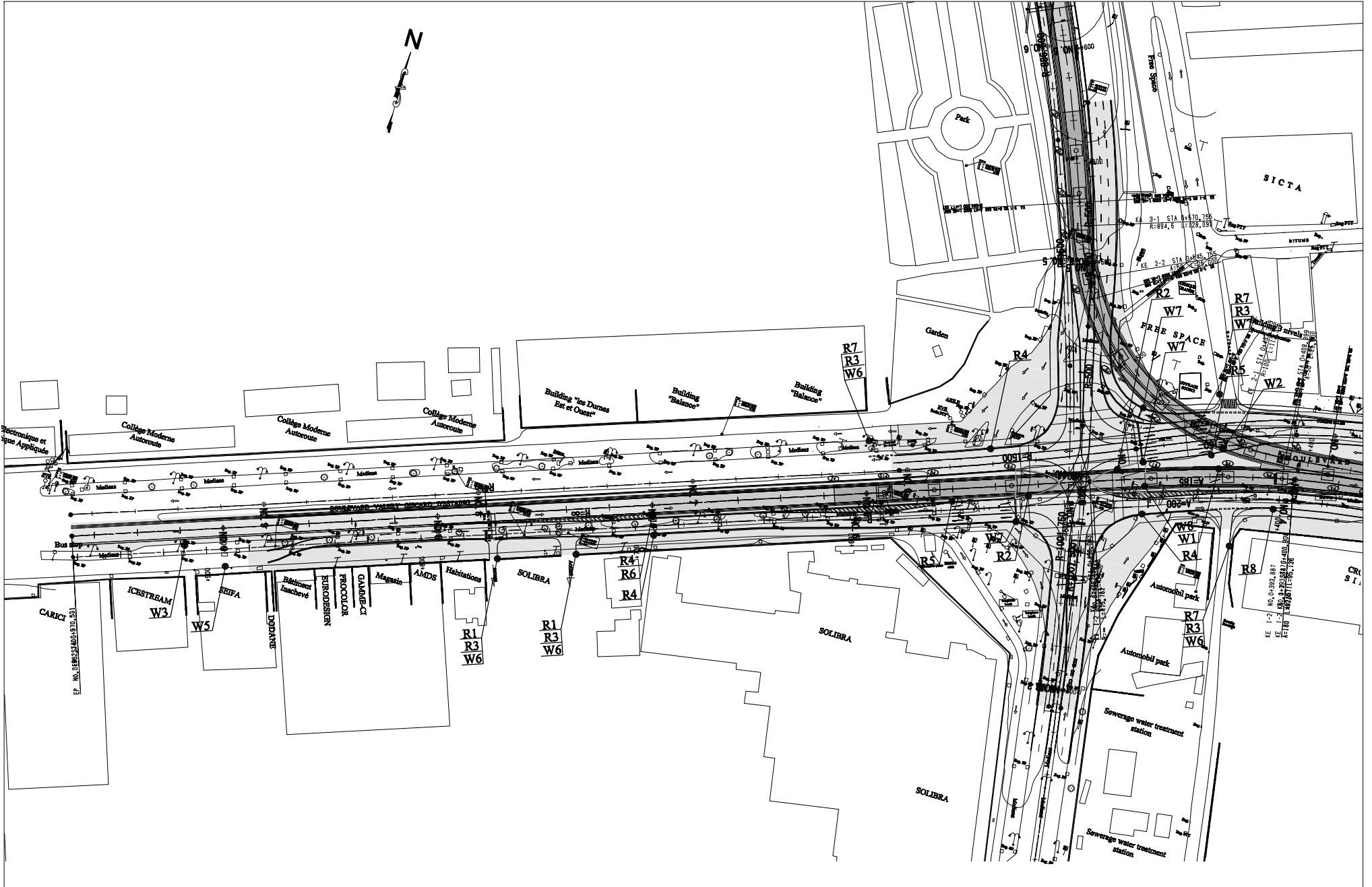
MATERIALS LIST		PER Each		
ITEM	STANDARD	UNIT	QUANTITY	REMARK
Block(Base)	2200x2200x1500	nos	1	
Block(Body)	2200x2200x1200	nos	1	
Block(Top slab)	2640x2640x300	nos	1	
Block(Skew)	φ600xφ900x295	nos	1	
Adjust ring	φ600x50	nos	1	
Cover	φ600	nos	1	
Concrete	σck=18MPa	cu.m	1.210	
Form		sq.m	1.704	
Cement mortar	1:3	cu.m	0.139	
Crushed stone	t=200mm	cu.m	1.613	

CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE
DIRECTOR RESPONSIBLE FOR DESIGN:				
SIGNATURE: _____ DATE: _____				
STAMP:				

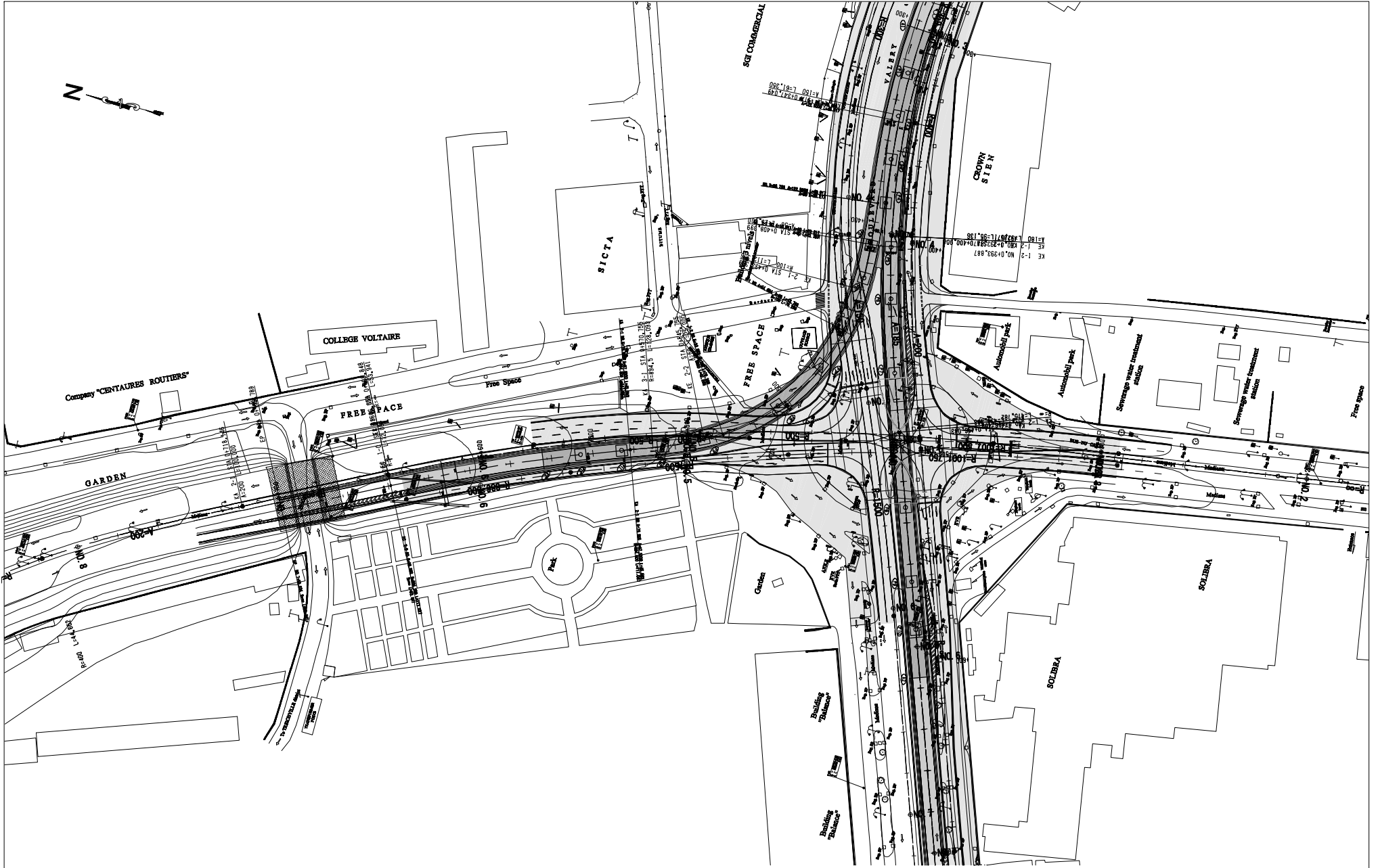
DESIGNED BY:			
DRAWN BY:			
CHECKED BY:			
APPROVED BY:			
DATE:			



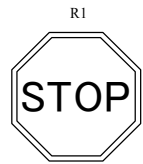
<u>CLIENT</u>  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL: DIRECTOR RESPONSIBLE FOR DESIGN: SIGNATURE: _____ DATE: _____ STAMP: _____	REVISION _____ _____ _____	DESCRIPTION _____ _____ _____	BY _____ _____ _____	DATE _____ _____ _____	<u>CONSULTANT</u> The Consortium of Oriental Consultants Global Co., Ltd, Central Consultant Inc, and Asia Air Survey Co., Ltd.	<u>PROJECT</u> The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Road Safety Sign Posts Layout Plan (1/3)	Scale: 1:1600 (A3)	DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____ APPROVED BY: _____ DATE: _____	Drawing No: R-20 SHEET No: _____
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<u>CLIENT</u>  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	<u>CONSULTANT</u> The Consortium of Oriental Consultants Global Co., Ltd, Central Consultant Inc., and Asia Air Survey Co., Ltd.	<u>PROJECT</u> The Preparatory Survey for Improvement of SOLIBRA Intersection (Outline Design)	TITLE: Road Safety Sign Posts Layout Plan (2/3)	Scale: 1:1600 (A3)	DESIGNED BY:			Drawing No: R-21 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
	SIGNATURE: DATE:									CHECKED BY:			
	STAMP:									APPROVED BY:			
										DATE:			

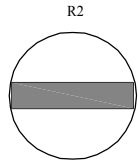


<u>CLIENT</u>  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	<u>CONSULTANT</u> The Consortium of Oriental Consultants Global Co., Ltd. , Central Consultants Inc. , and Asia Air Survey Co., Ltd.	<u>PROJECT</u> The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Road Safety Sign Posts Layout Plan (3/3)	Scale:	DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY: DATE:	Drawing No: R-22 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:										
	SIGNATURE: DATE:										
	STAMP:										



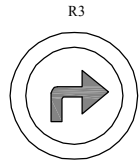
R1

STOP



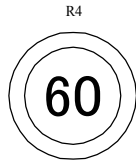
R2

NO ENTRY



R3

TURN RIGHT AHEAD



R4

SPEED LIMIT



R5

HEIGHT LIMIT



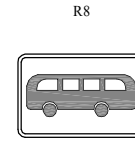
R6

NO CYCLISTS AND PEDESTRIANS



R7

GIVE WAY



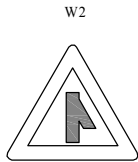
R8

BUS STOP



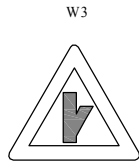
W1

SHARP JUNCTION (LEFT)



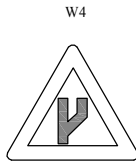
W2

SHARP JUNCTION (RIGHT)



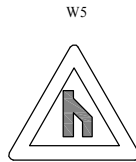
W3

SHARP JUNCTION (HALF RIGHT)



W4

START OF DUAL ROADWAY



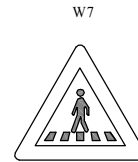
W5

END OF DUAL ROADWAY



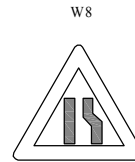
W6

PEDESTRIANS



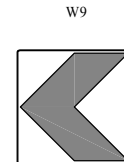
W7

PEDESTRIAN CROSSING



W8

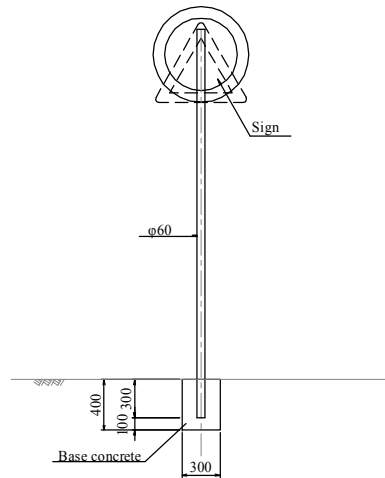
ROAD NARROWS FROM RIGHT SIDE



W9

SHARP CURVE CHEVRON (TO THE LEFT)

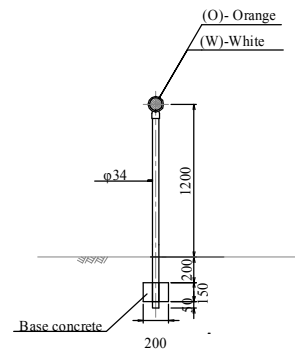
Sign post



MATERIAL LIST

ITEM	STANDARD	UNIT	QUANTITY	PER each	REMARKS
Base concrete	σck=18MPa	cu.m	0.035		
Sign post		nos	1		

DEL(O)
DEL(W)

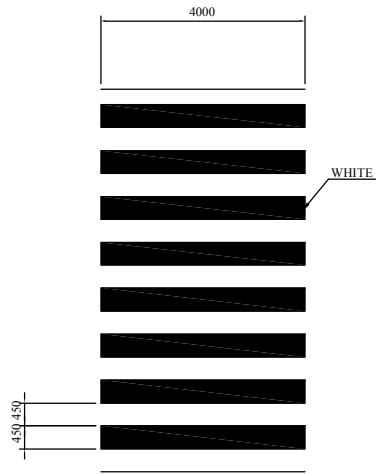


MATERIAL LIST

ITEM	STANDARD	UNIT	QUANTITY	PER each	REMARKS
Base concrete	σck=18MPa	cu.m	0.006		
DEL		nos	1		

<p>Japan International Cooperation Agency (JICA)</p>	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT: The Consortium of Oriental Consultants Global Co., Ltd. , Central Consultant Inc. , and Asia Air Survey Co., Ltd.	PROJECT: The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Road Safety Facilities	Scale:	DESIGNED BY:			Drawing No: R-23 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:								Non	DRAWN BY:			
	SIGNATURE: DATE:								CHECKED BY:				
	STAMP:								APPROVED BY:				
									DATE:				

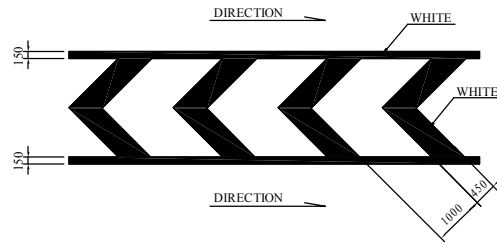
Pedestrian-Crossing (W=450mm)
SCALE 1:100



Stop Line (W=450mm) SCALE 1:100



Zebra Marking SCALE 1:100



Continuous Line (W=150mm) SCALE 1:100

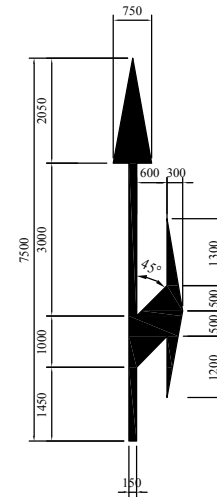


Lane Line (W=150mm) NO SCALE

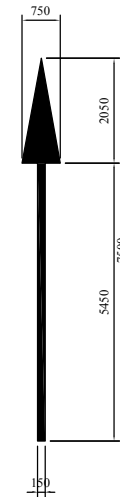


Arrow Mark SCALE 1:100

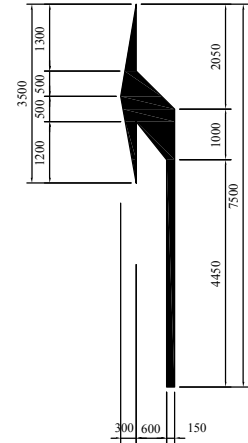
Straight-Turn



Straight

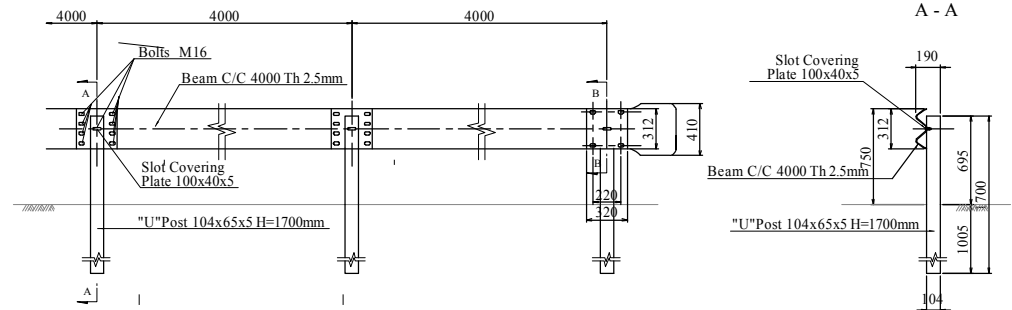


Turn



GR SCALE 1:40

VIEW

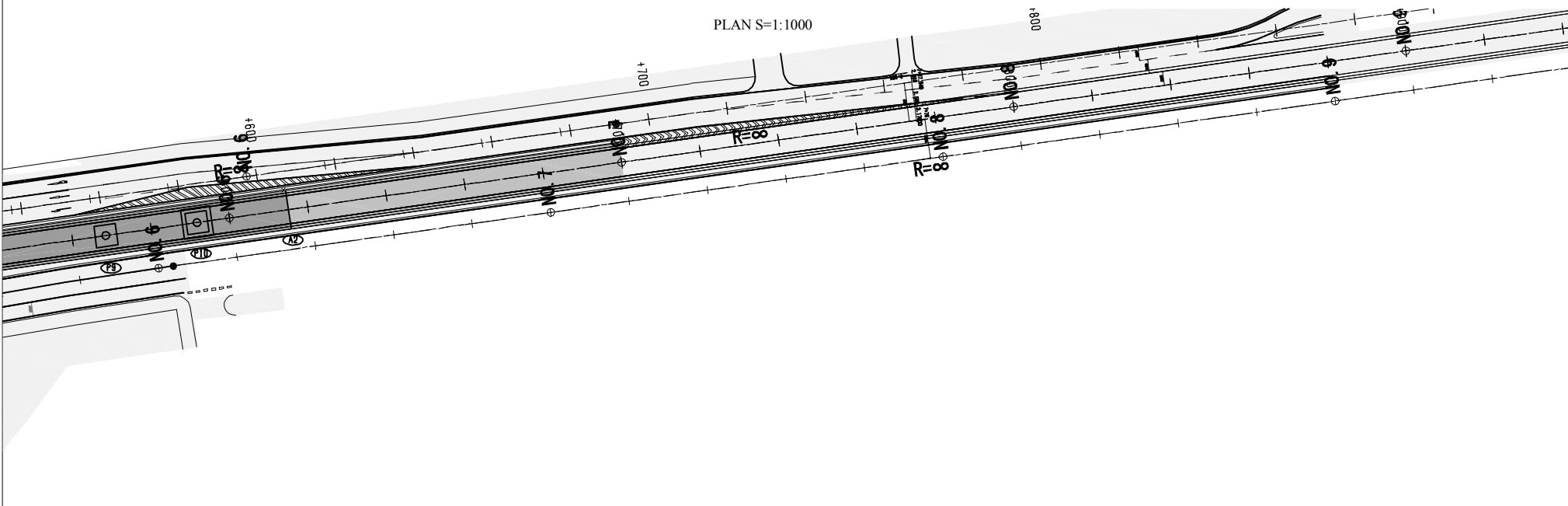
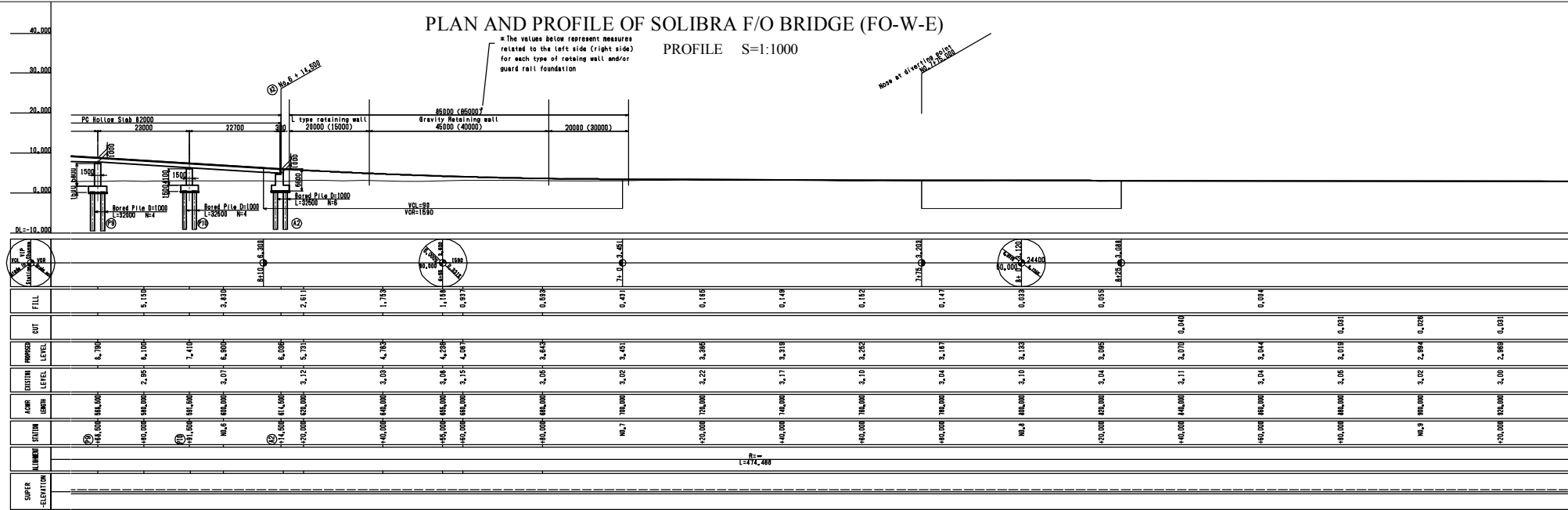


CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultants, Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE:	Scale:	DESIGNED BY:				
	DIRECTOR RESPONSIBLE FOR DESIGN:							Beam C/C 4000 Th 2.5mm	1:100 (A3)	DRAWN BY:				
	SIGNATURE: DATE:							Slot Covering Plate 100x40x5		CHECKED BY:				
	STAMP:							"U" Post 104x65x5 H=1700mm		APPROVED BY:				
											DATE:			

PLAN AND PROFILE OF SOLIBRA F/O BRIDGE (FO-W-E)

PROFILE S=1:1000

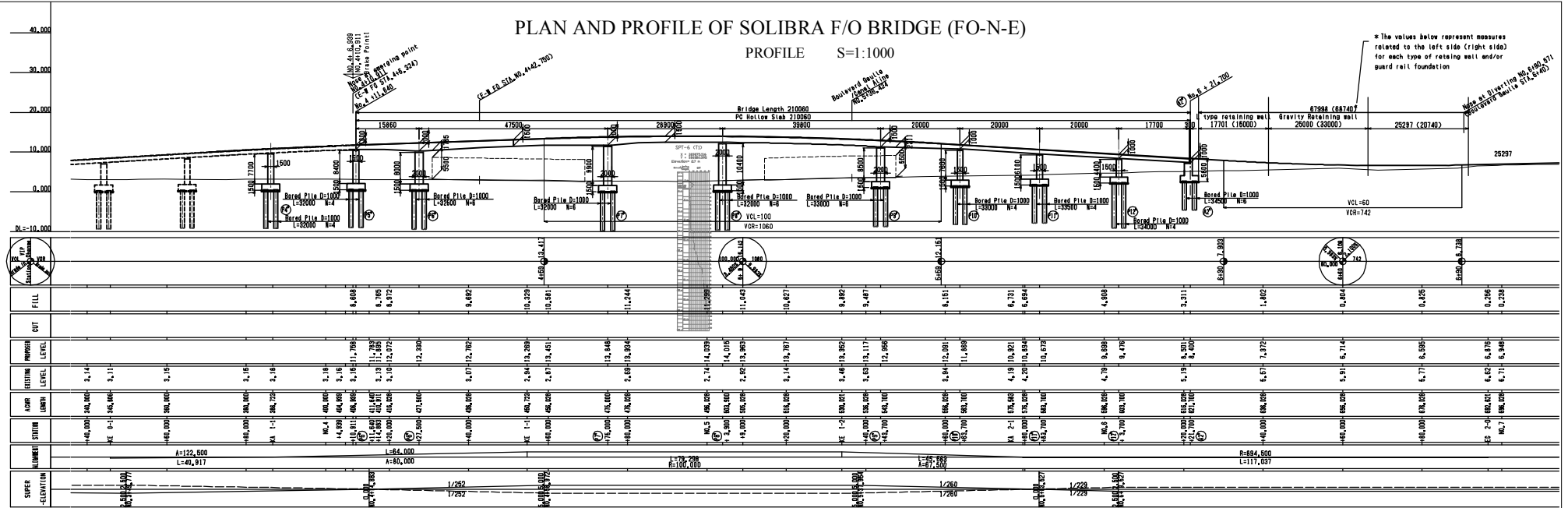
* The values below represent measures related to the left side (right side) for each type of retaining wall and/or guard rail foundation



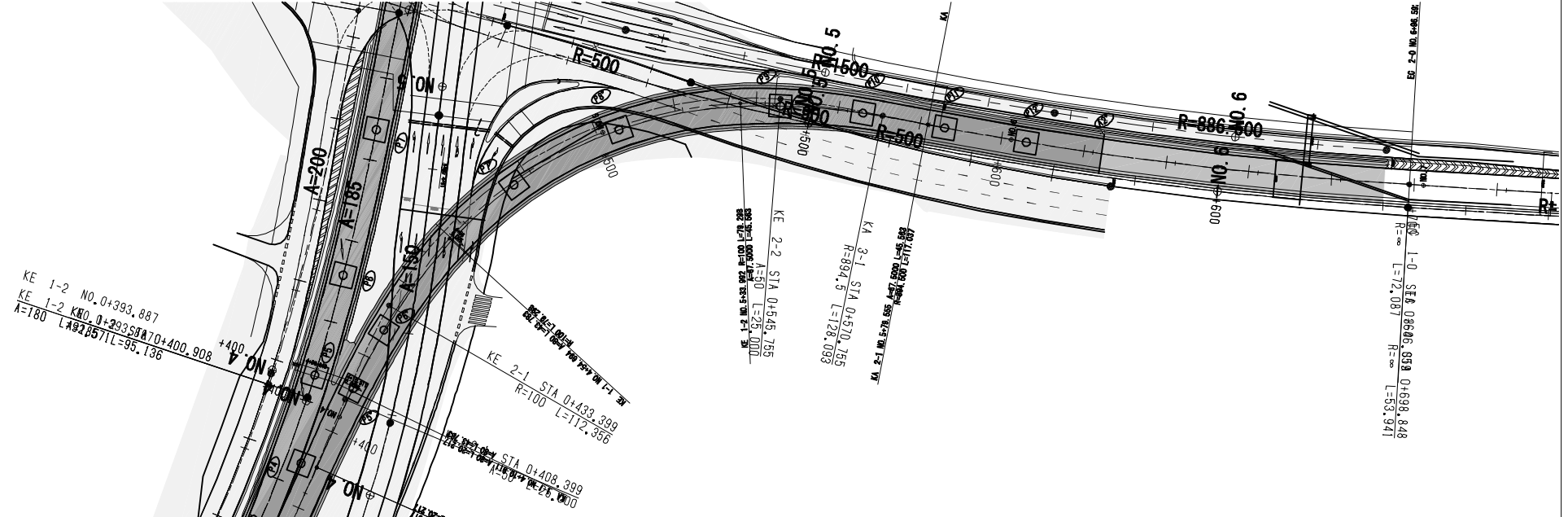
CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultants Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Flyover Bridge Layout Plan FO W-E (2/2)	Scale: 1:1000 (A3)	DESIGNED BY:			Drawing No: B-2 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									CHECKED BY:			
	SIGNATURE: DATE:									APPROVED BY:			
	STAMP:									DATE:			

PLAN AND PROFILE OF SOLIBRA F/O BRIDGE (FO-N-E)

PROFILE S=1:1000



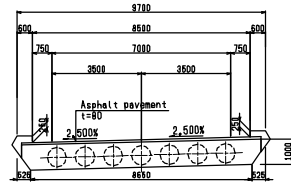
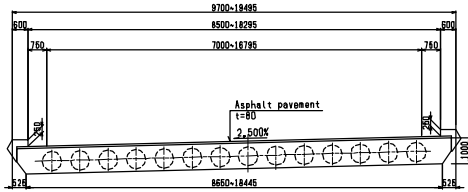
PLAN S=1:1000



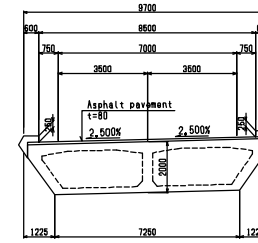
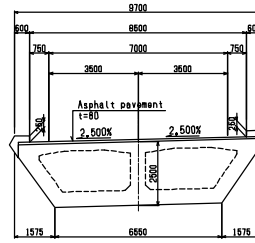
<p>CLIENT</p> Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	<p>CONSULTANT</p> The Consortium of Oriental Consultants Global Co., Ltd., Central Consultants, Inc., and Asia Air Survey Co., Ltd.	<p>PROJECT</p> The Preparatory Survey for Improvement of SOLIBRA Intersection (Outline Design)	<p>TITLE:</p> Flyover Bridge Layout Plan FO-N-E	<p>Scale:</p> 1:1000 (A3)	DESIGNED BY:		Drawing No: B-3 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									CHECKED BY:		
	SIGNATURE: DATE:									APPROVED BY:		
	STAMP:									DATE:		

CROSS-SECTION OF SOLIBRA F/O BRIDGE (1)

SECTION S=1:200
(PC HOLLOW SLAB BRIDGE)



SECTION S=1:200
(PC BOX GIRDER BRIDGE)



DESIGN CRITERIA (FO-W-E)

CATEGORY	PRESTRESSED CONCRETE ROAD BRIDGE
TYPE	7 SPAN PC HOLLOW SLAB BRIDGE 1 SPAN PC BOX GIRDER BRIDGE 8 SPAN PC HOLLOW SLAB BRIDGE
TOTAL BRIDGE LENGTH	L=312,000m
BRIDGE LENGTH	7 SPAN PC HOLLOW SLAB : L=186,0m(20,0+4#21,0+25,0+36,0) 1 SPAN PC BOX GIRDER : L=65,0m 8 SPAN PC HOLLOW SLAB : L=82,0m(38,0+23,0+23,0)
WIDTH	TOTAL 8,700~13,800m
LIVE-LOAD	B-Live Load
ANGLE OF SKEW	90° 00' 00"
RADIUS OF CURVATURE	R=369,750 + A=185,000
SECTION SLOPE	i=2,500%
LONGITUDINAL SLOPE	i=6,000% ↘ ↙ i=8,000%

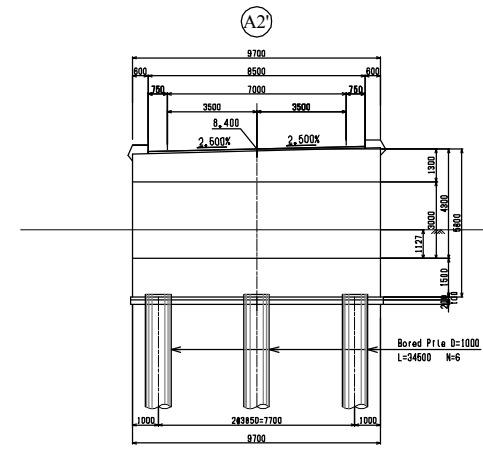
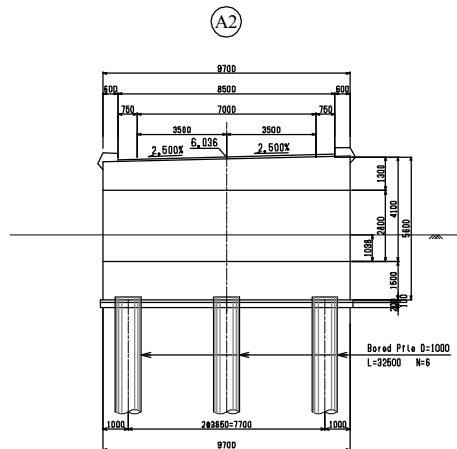
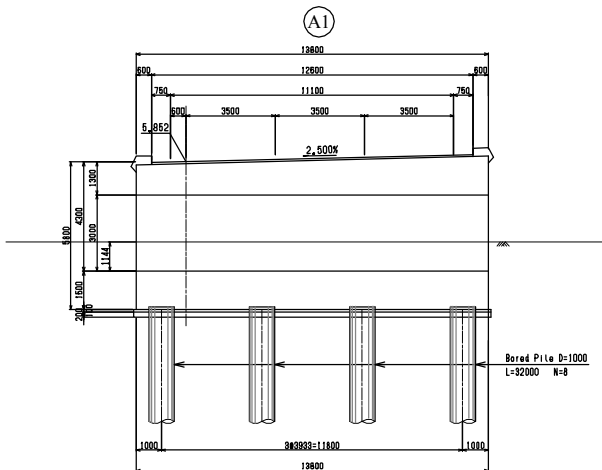
DESIGN CRITERIA (FO-N-E)

CATEGORY	PRESTRESSED CONCRETE ROAD BRIDGE
TYPE	8 SPAN PC HOLLOW SLAB BRIDGE
TOTAL BRIDGE LENGTH	L=210,060m
BRIDGE LENGTH	8 SPAN PC HOLLOW SLAB : L=210,060m (18,860+47,500+28,800+9#28,000+18,000)
WIDTH	TOTAL 8,700~11,200m
LIVE-LOAD	B-Live Load
ANGLE OF SKEW	90° 00' 00"
RADIUS OF CURVATURE	A=80,000 + R=100,000 + A=87,500
SECTION SLOPE	i=2,500%~5,000%
LONGITUDINAL SLOPE	i=3,460% ↘ ↙ i=8,880%

MATERIALS

CONCRETE	PC HOLLOW SLAB	$\sigma_{ck}=38,0$ N/mm ²
	PC BOX GIRDER	$\sigma_{ck}=36,0$ N/mm ²
SUBSTRUCTURE	P7, P8	$\pm \sigma_{ck}=30,0$ N/mm ²
	except P7, P8	$\sigma_{ck}=24,0$ N/mm ²
PC STEEL	PC HOLLOW SLAB	S212,7 (SWPRTL) S228,6 (SWPRTL)
	PC BOX GIRDER	S212,7 (SWPRTL) S1916,2 (SWPRTL)
		S228,6 (SWPRTL)
	DEFORMED BAR	SUPERSTRUCTURE
SUBSTRUCTURE		SD345

CROSS SECTION S=1:200

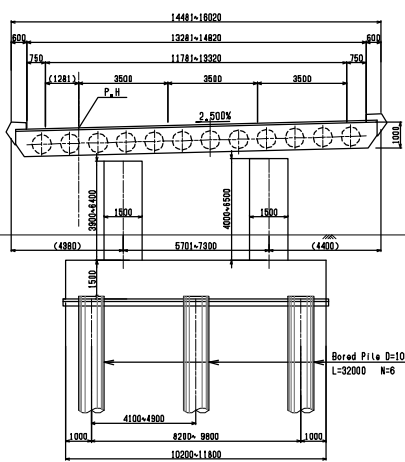


CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOLIBRA Intersection (Outline Design)	TITLE: CROSS-SECTION OF SOLIBRA F/O BRIDGE -INBOUND (1)	Scale:	DESIGNED BY:				
	DIRECTOR RESPONSIBLE FOR DESIGN:								1:200 (A3)	DRAWN BY:				
	SIGNATURE: DATE:									CHECKED BY:				
	STAMP:									APPROVED BY:				
											SHEET No:			

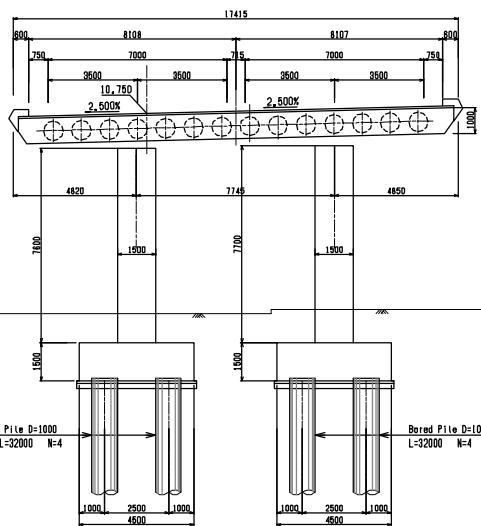
CROSS-SECTION OF SOLIBRA F/O BRIDGE (2)

CROSS SECTION S=1:200

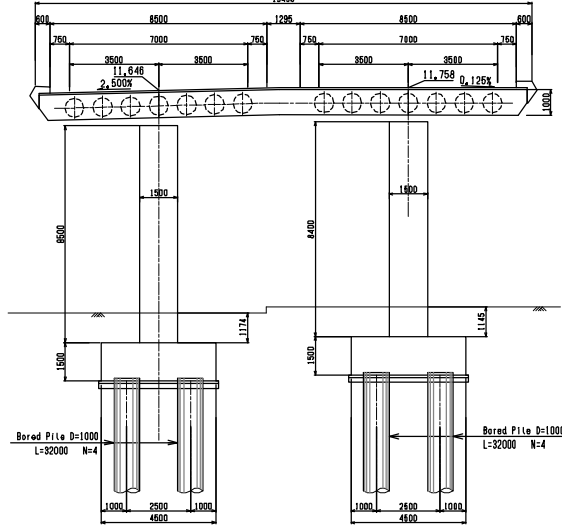
(P1) (P2) (P3)



(P4)



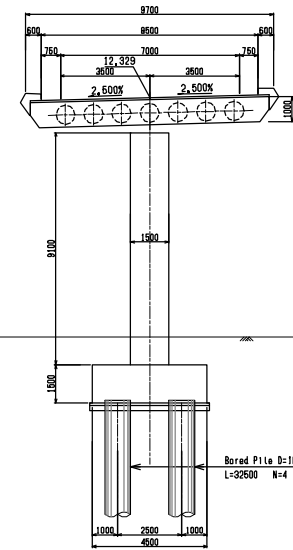
(P4')



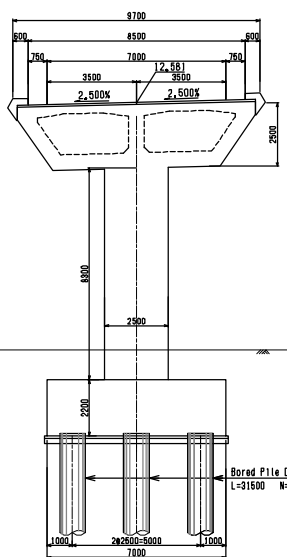
(P5)

(P5')

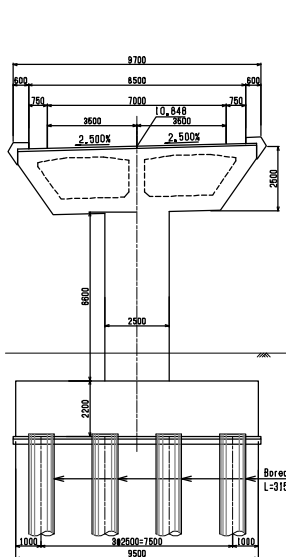
(P6)



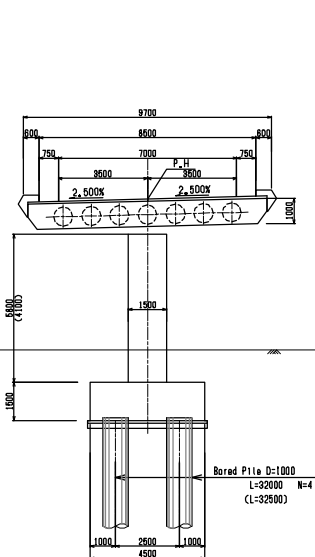
(P7)



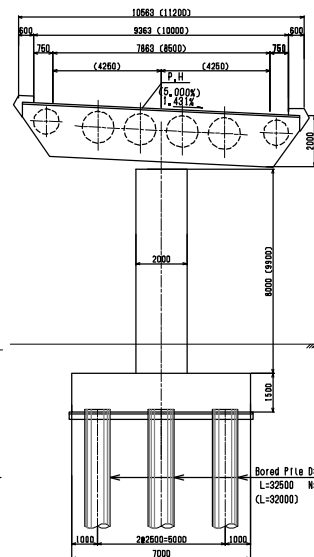
(P8)



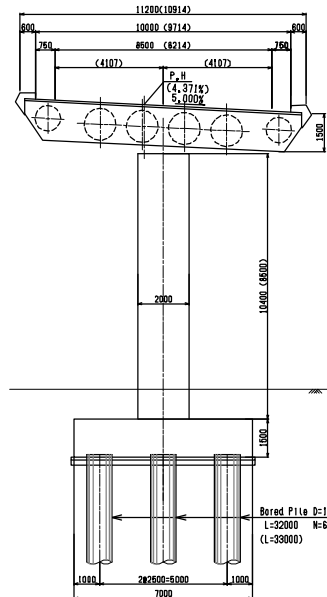
(P9) (P10)



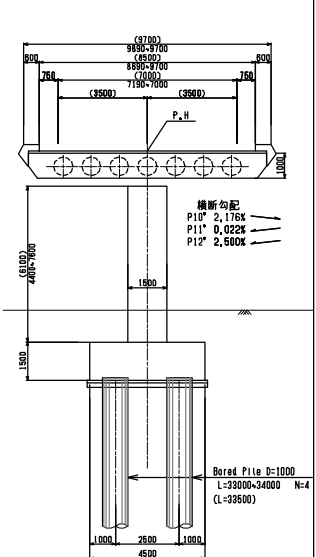
(P6') (P7')



(P8') (P9')



(P10') (P11') (P12')



Appendix -47

CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultants, Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOLIBRA Intersection (Outline Design)	TITLE: CROSS-SECTION OF SOLIBRA F/O BRIDGE -INBOUND (2)	Scale: 1:200 (A3)	DESIGNED BY:		Drawing No: B-5 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									CHECKED BY:		
	SIGNATURE: DATE:									APPROVED BY:		
	STAMP:									DATE:		

SUBSTRUCTURE AND FOUNDATION (1) S=1:200

A1

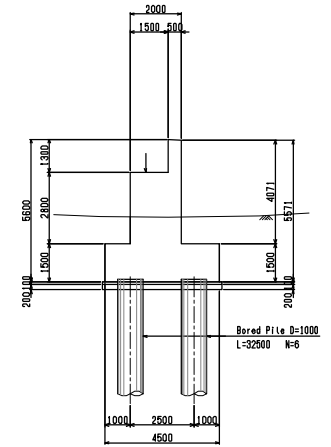
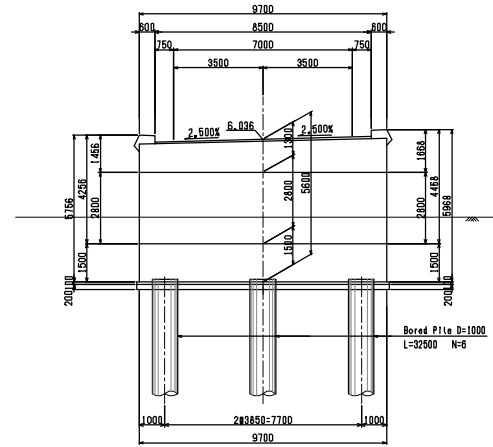
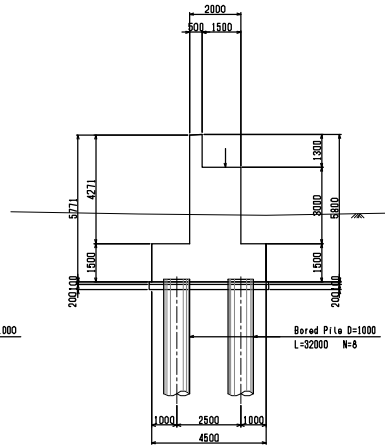
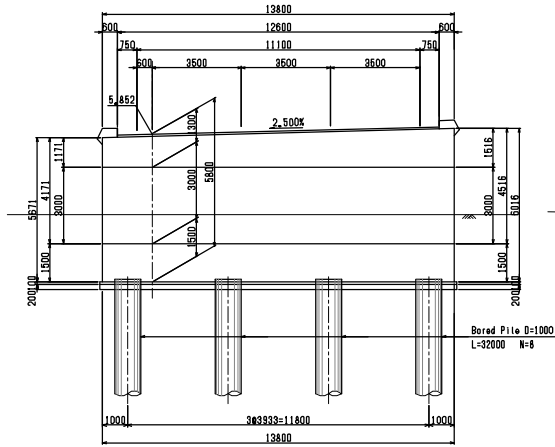
A2

FRONT VIEW

SIDE VIEW

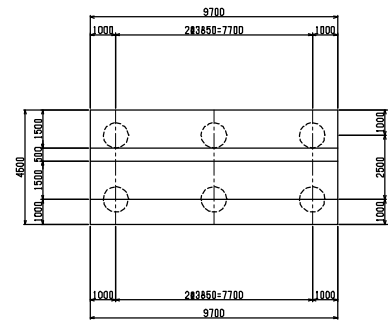
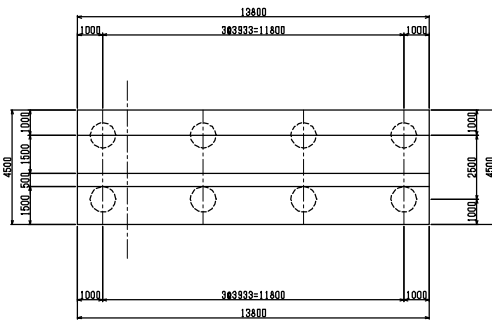
FRONT VIEW

SIDE VIEW



PLAN VIEW

PLAN VIEW

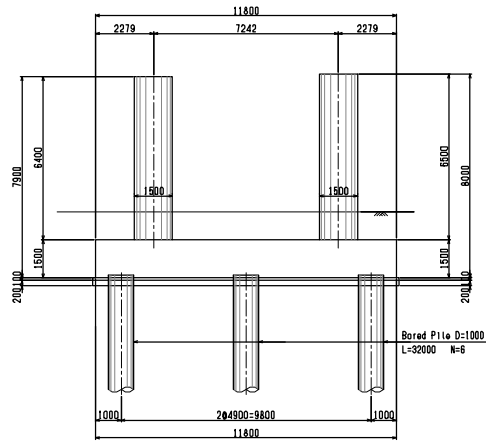


CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Substructure & Foundation (1)	Scale: 1:200 (A3)	DESIGNED BY:			Drawing No: B-6 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
	SIGNATURE: DATE:									CHECKED BY:			
	STAMP:									APPROVED BY:			
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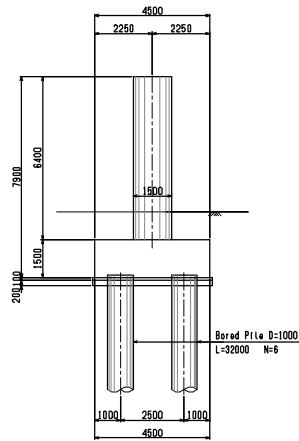
SUBSTRUCTURE AND FOUNDATION (3) S=1:200

P3

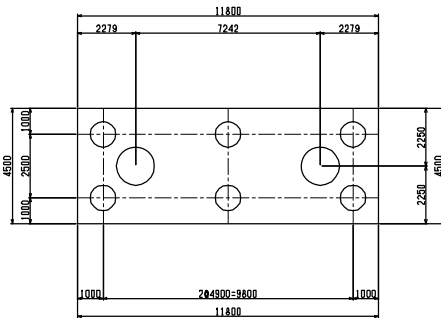
FRONT VIEW



SIDE VIEW

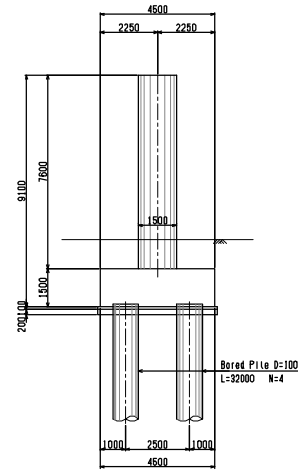


PLAN VIEW

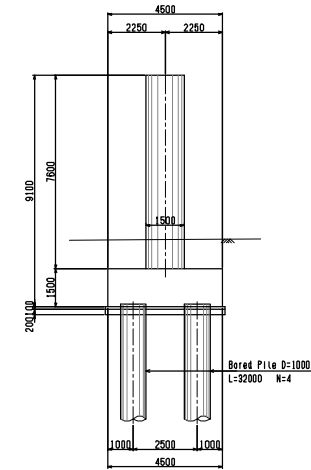


P4

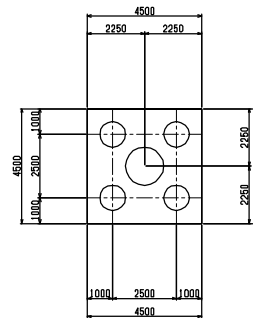
FRONT VIEW



SIDE VIEW



PLAN VIEW

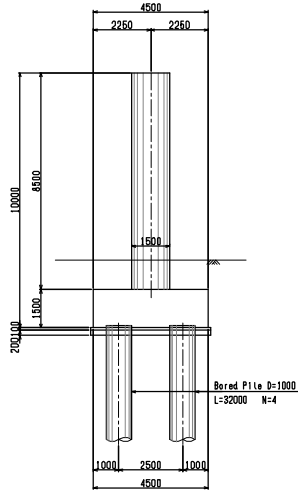


CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Substructure & Foundation (3)	Scale: 1:200 (A3)	DESIGNED BY:		Drawing No: B-8 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:		
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										DATE:		

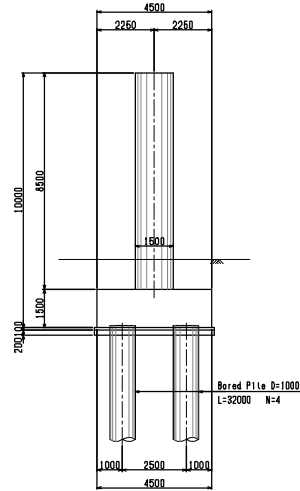
SUBSTRUCTURE AND FOUNDATION (4) S=1:200

P5

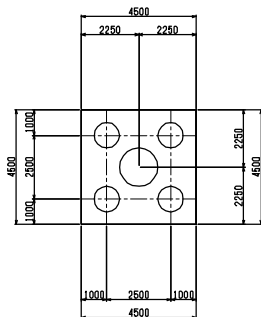
FRONT VIEW



SIDE VIEW

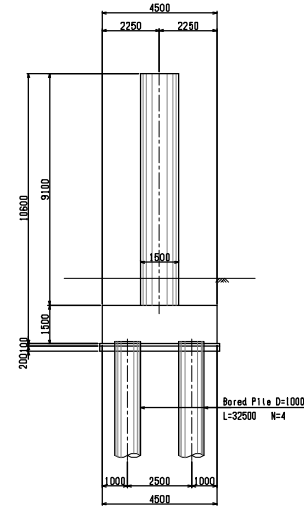


PLAN VIEW

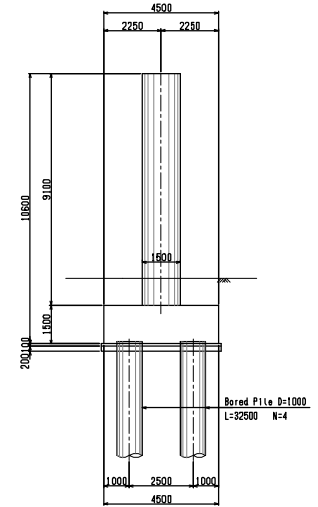


P6

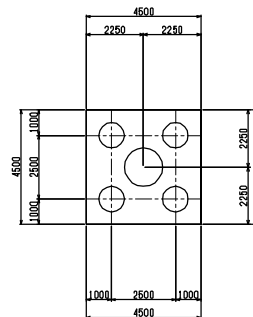
FRONT VIEW



SIDE VIEW



PLAN VIEW



CLIENT  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Substructure & Foundation (4)	Scale: 1:200 (A3)	DESIGNED BY:			Drawing No: B-9 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
	SIGNATURE: DATE:									CHECKED BY:			
	STAMP:									APPROVED BY:			
										DATE:			

SUBSTRUCTURE AND FOUNDATION (5) S=1:200

P7

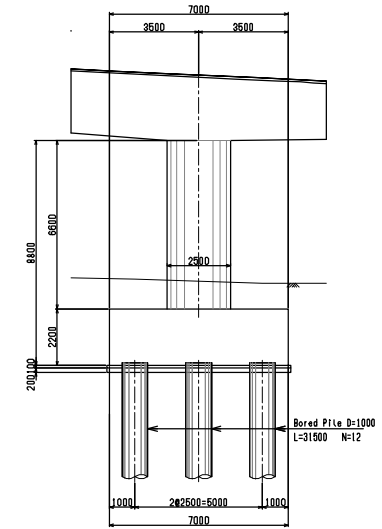
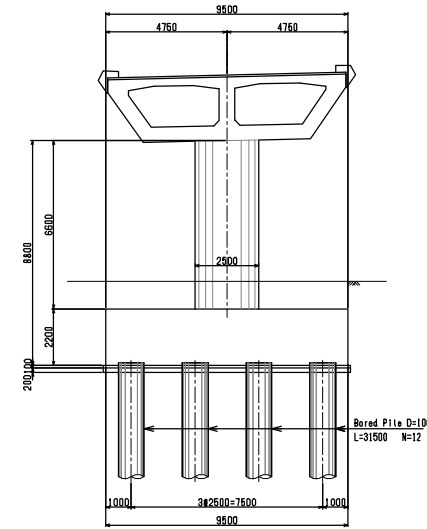
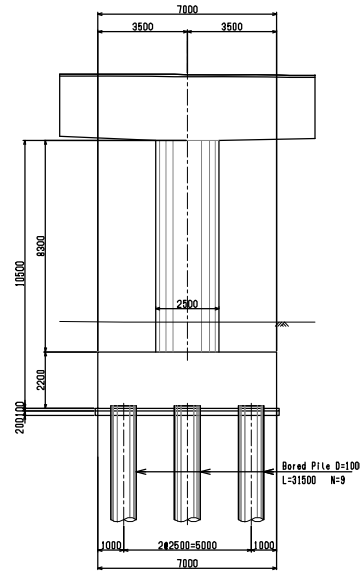
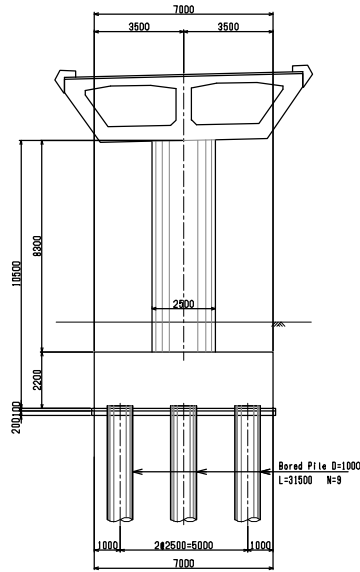
P8

FRONT VIEW

SIDE VIEW

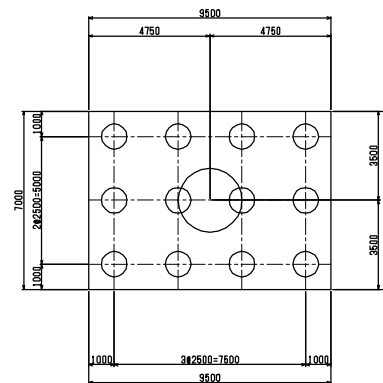
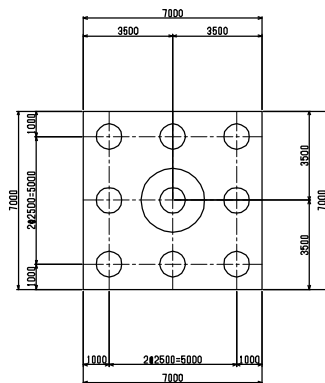
FRONT VIEW

SIDE VIEW



PLAN VIEW

PLAN VIEW



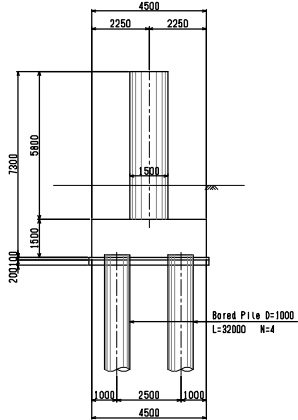
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CLIENT  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Substructure & Foundation (5)	Scale: 1:200 (A3)	DESIGNED BY:			Drawing No: B-10 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
	SIGNATURE: DATE:									CHECKED BY:			
	STAMP:									APPROVED BY:			
										DATE:			

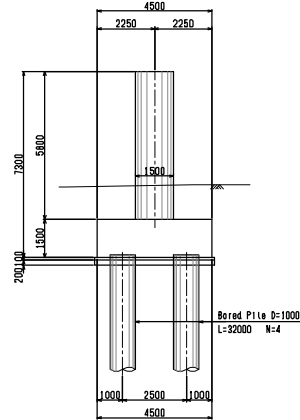
SUBSTRUCTURE AND FOUNDATION (6) S=1:200

P9

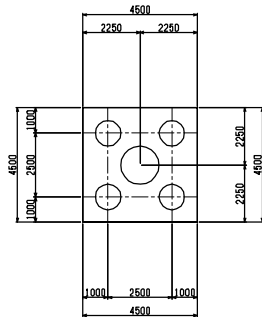
FRONT VIEW



SIDE VIEW

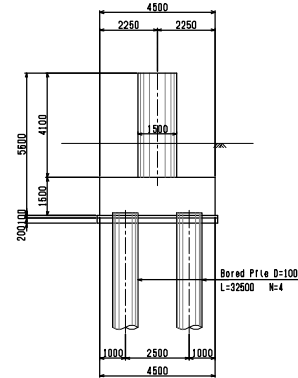


PLAN VIEW

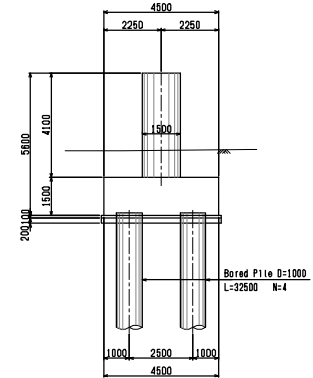


P10

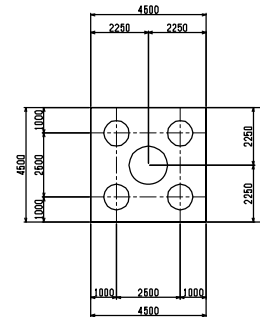
FRONT VIEW



SIDE VIEW



PLAN VIEW

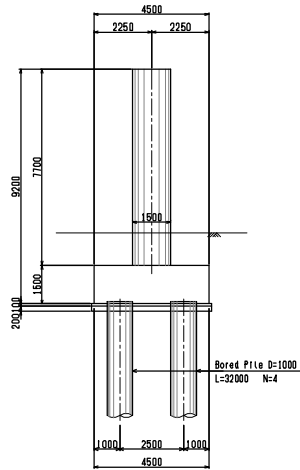


 Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Substructure & Foundation (6)	Scale: 1:200 (A3)	DESIGNED BY:			Drawing No: B-11 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
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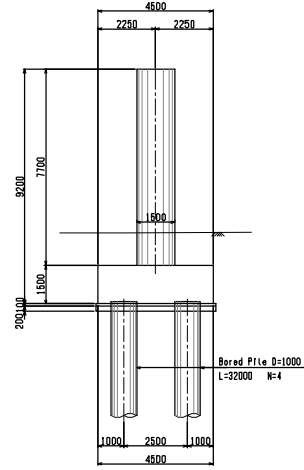
SUBSTRUCTURE AND FOUNDATION (7) S=1:200

P4'

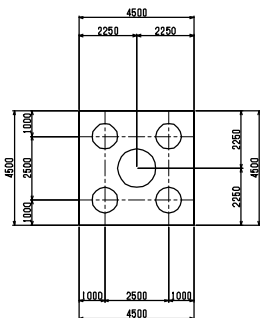
FRONT VIEW



SIDE VIEW

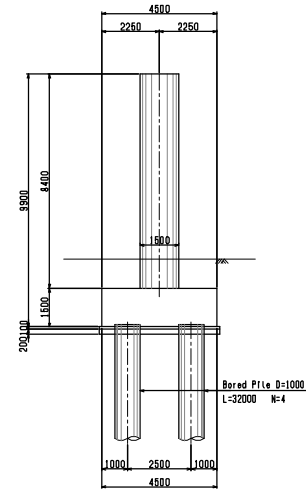


PLAN VIEW

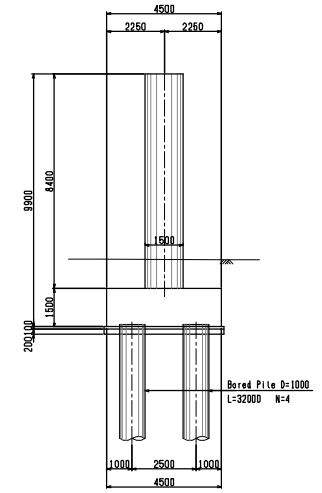


P5'

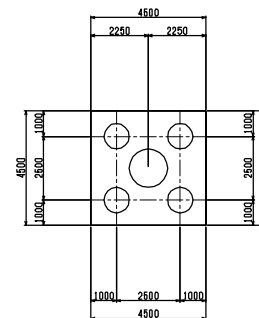
FRONT VIEW



SIDE VIEW



PLAN VIEW

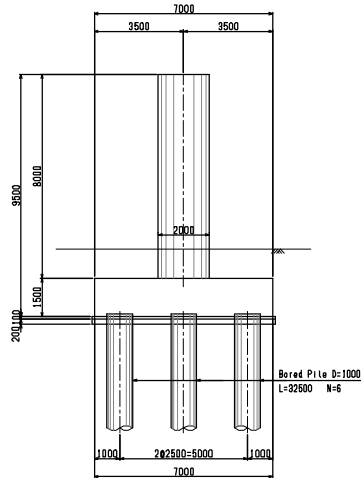


CLIENT  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Substructure & Foundation (7)	Scale: 1:200 (A3)	DESIGNED BY:			Drawing No: B-12 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
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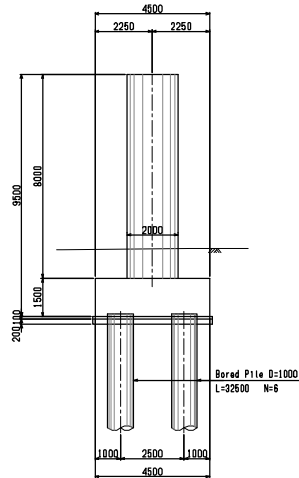
SUBSTRUCTURE AND FOUNDATION (8) S=1:200

P6'

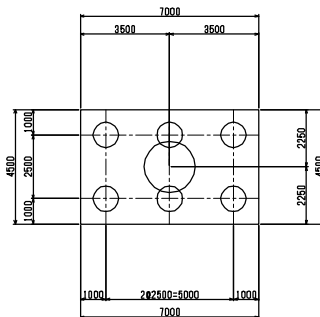
FRONT VIEW



SIDE VIEW

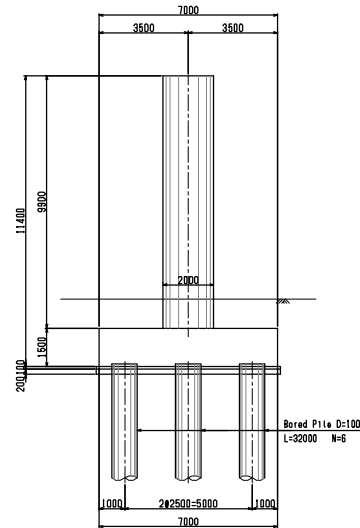


PLAN VIEW

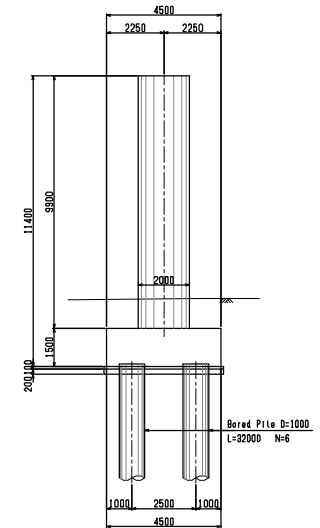


P7'

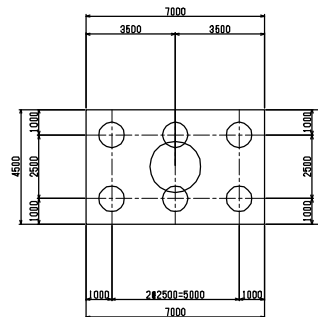
FRONT VIEW



SIDE VIEW



PLAN VIEW

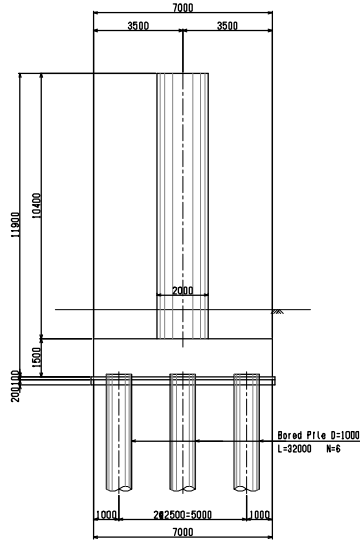


 Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT: The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT: The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Substructure & Foundation (8)	Scale: 1:200 (A3)	DESIGNED BY:			Drawing No: B-13 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
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	STAMP:									APPROVED BY:			
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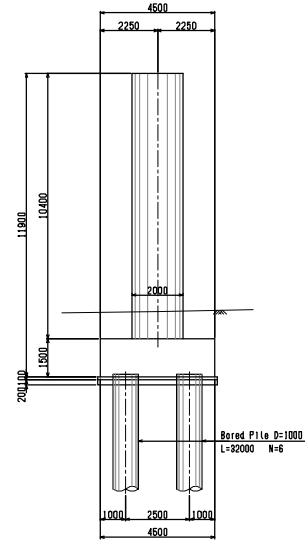
SUBSTRUCTURE AND FOUNDATION (9) S=1:200

P8'

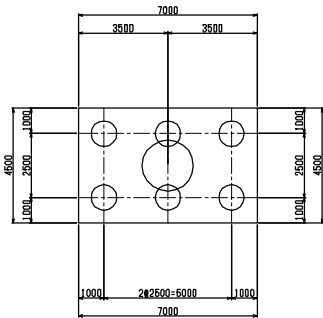
FRONT VIEW



SIDE VIEW

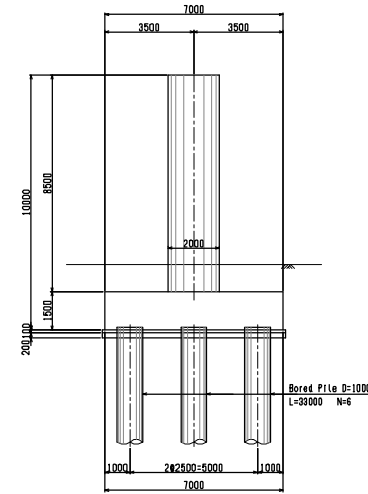


PLAN VIEW

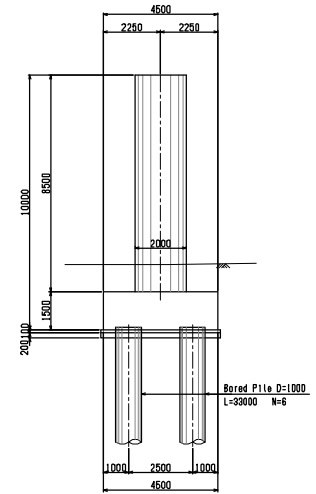


P9'

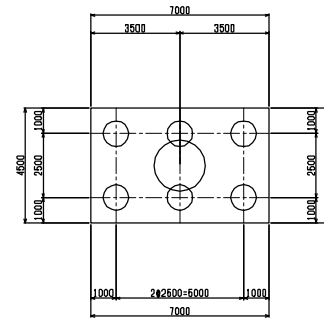
FRONT VIEW



SIDE VIEW



PLAN VIEW

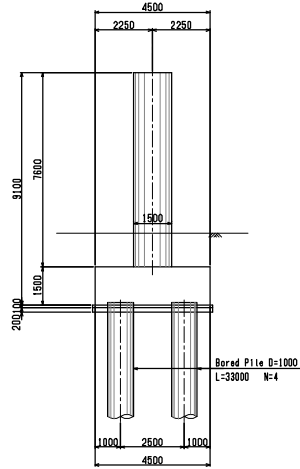


 Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Substructure & Foundation (9)	Scale: 1:200 (A3)	DESIGNED BY:		Drawing No: B-14 SHEET No:
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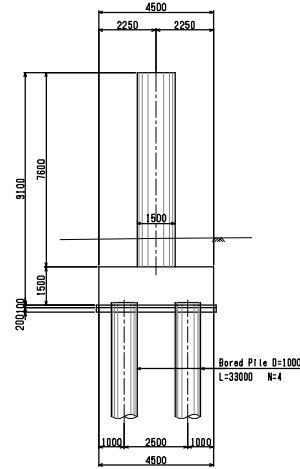
SUBSTRUCTURE AND FOUNDATION (10) S=1:200

P10'

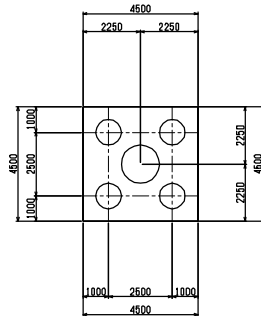
FRONT VIEW



SIDE VIEW

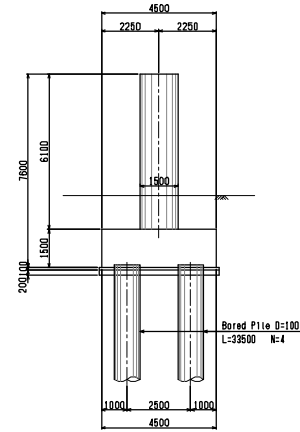


PLAN VIEW

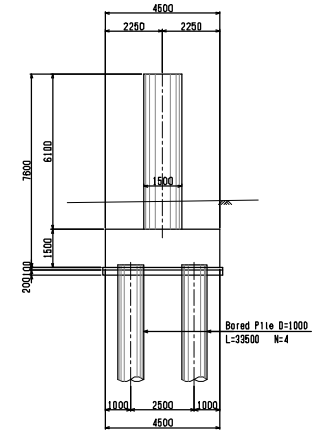


P11'

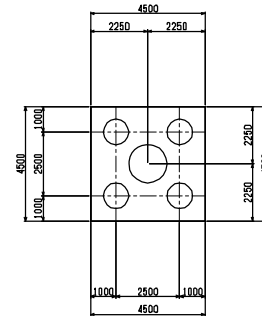
FRONT VIEW



SIDE VIEW



PLAN VIEW



 Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	<u>PROJECT</u> The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Substructure & Foundation (10)	Scale: 1:200 (A3)	DESIGNED BY:			Drawing No: B-15 SHEET No:
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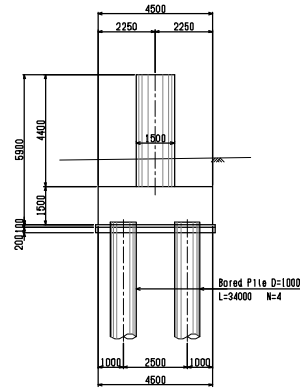
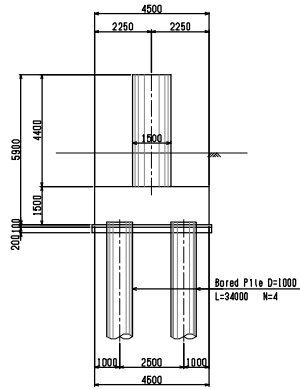
SUBSTRUCTURE AND FOUNDATION (11) S=1:200

P12'

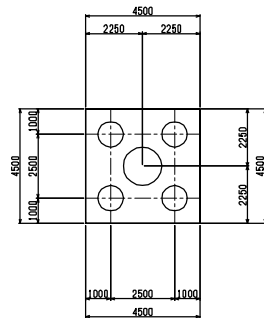
A2'

FRONT VIEW

SIDE VIEW

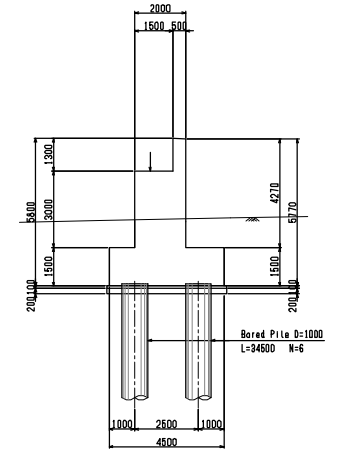
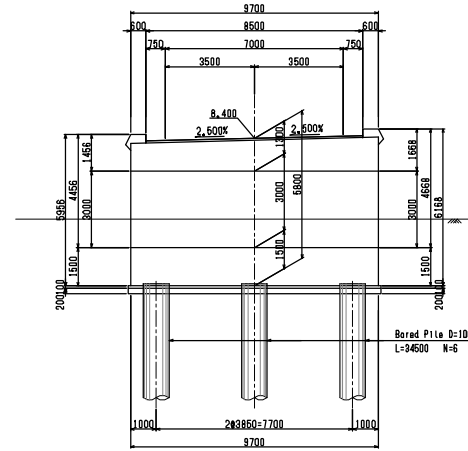


PLAN VIEW

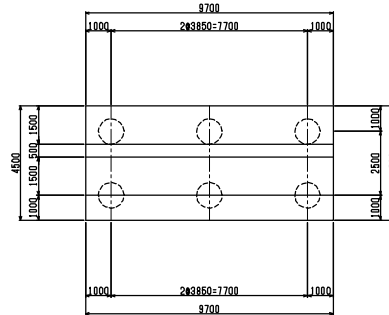


FRONT VIEW

SIDE VIEW



PLAN VIEW

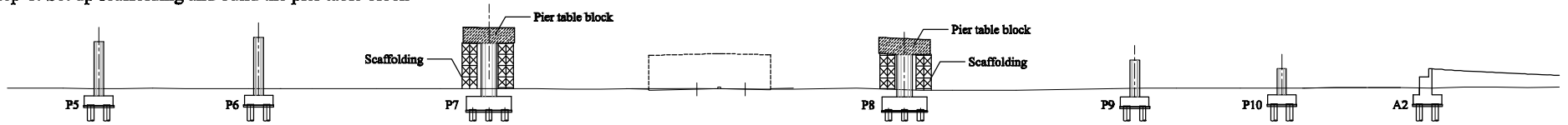


CLIENT  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Substructure & Foundation (11)	Scale: 1:200 (A3)	DESIGNED BY:			Drawing No: B-16 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
	SIGNATURE: DATE:									CHECKED BY:			
	STAMP:									APPROVED BY:			
										DATE:			

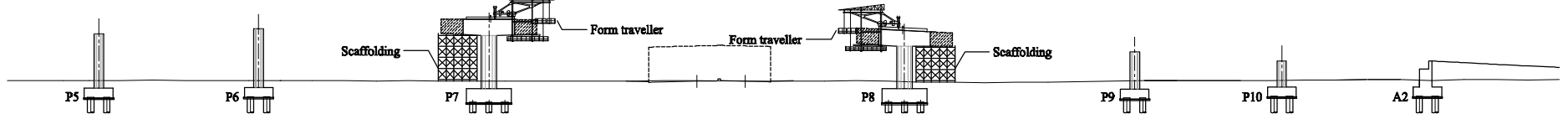
SOLIBRA F/O BRIDGE ERECTION PROCEDURE

S=NTS

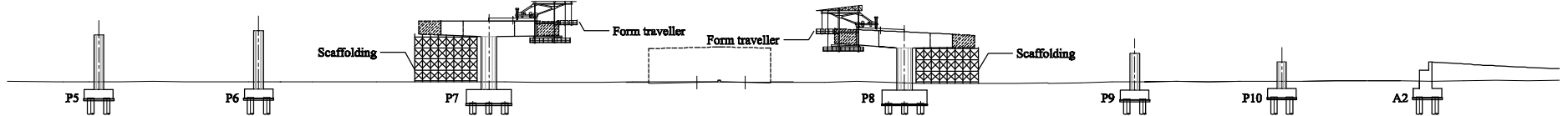
Step-1: Set up scaffolding and build the pier table block



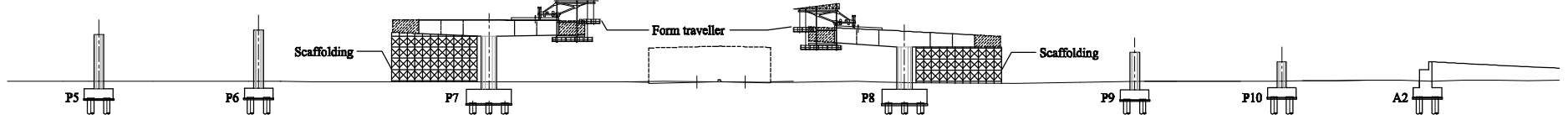
Step-2: Install the form traveller system, cast and stress the first pair of segments



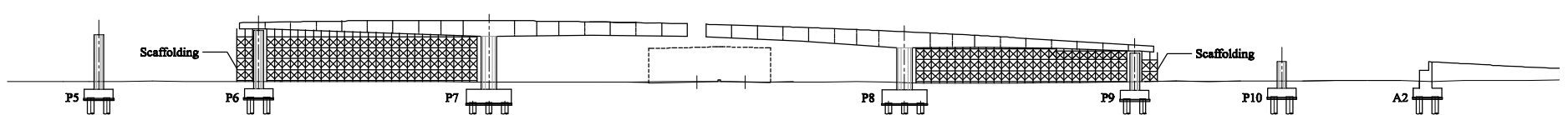
Step-2': Move the form traveller, cast and stress the second pair of segments



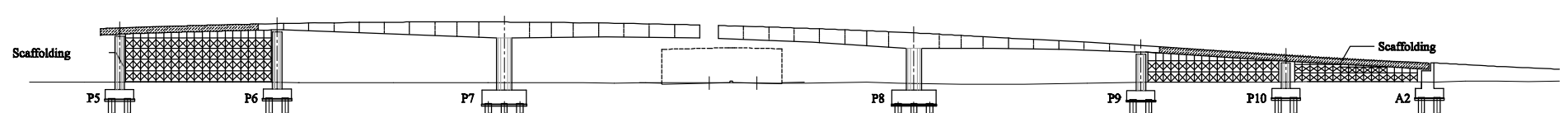
Step-2'': Move the form traveller, cast and stress the third pair of segments



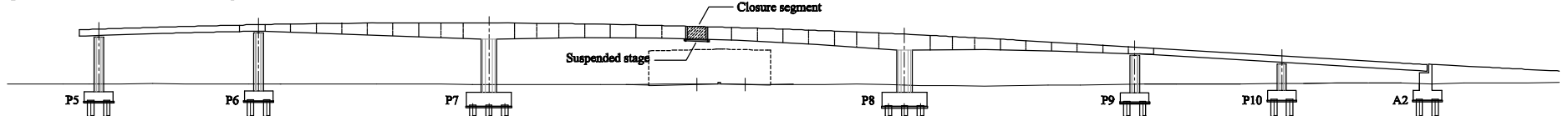
Step-2''': Successively move the form traveller, cast and stress each pair of segments



Step-3: Assemble the spans P5-P6 and P9-A2



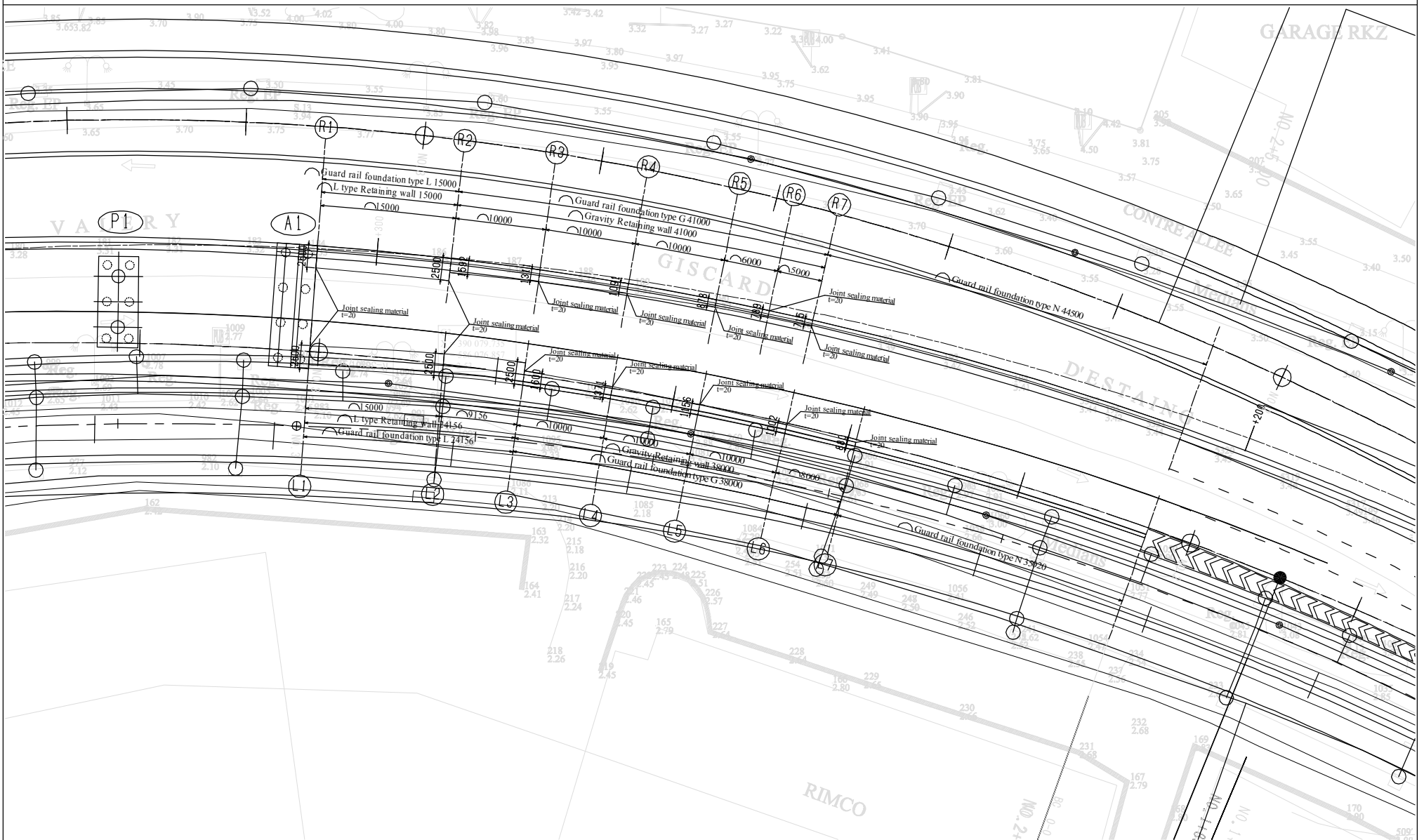
Step-4: Assemble the closure segment



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CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL: DIRECTOR RESPONSIBLE FOR DESIGN: _____ SIGNATURE: _____ DATE: _____ STAMP: _____	REVISION _____ _____ _____	DESCRIPTION _____ _____ _____	BY _____ _____ _____	DATE _____ _____ _____	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOLIBRA Intersection (Outline Design)	TITLE: SOLIBRA F/O BRIDGE ERECTION PROCEDURE	Scale: 1:1000 (A3)	DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____ APPROVED BY: _____ DATE: _____	Drawing No: B-17 SHEET No: _____
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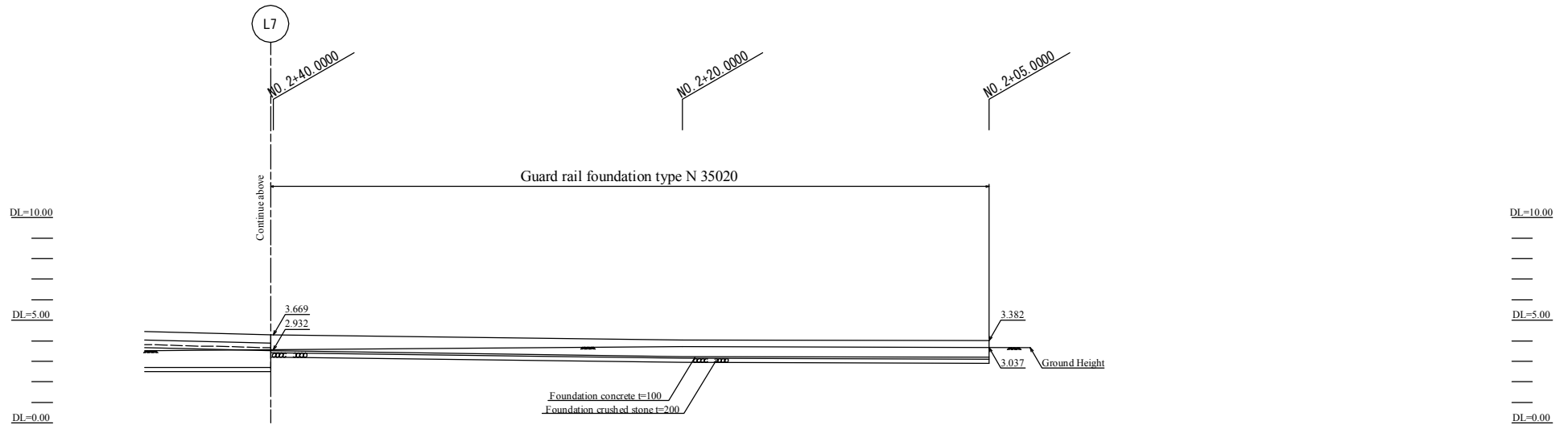
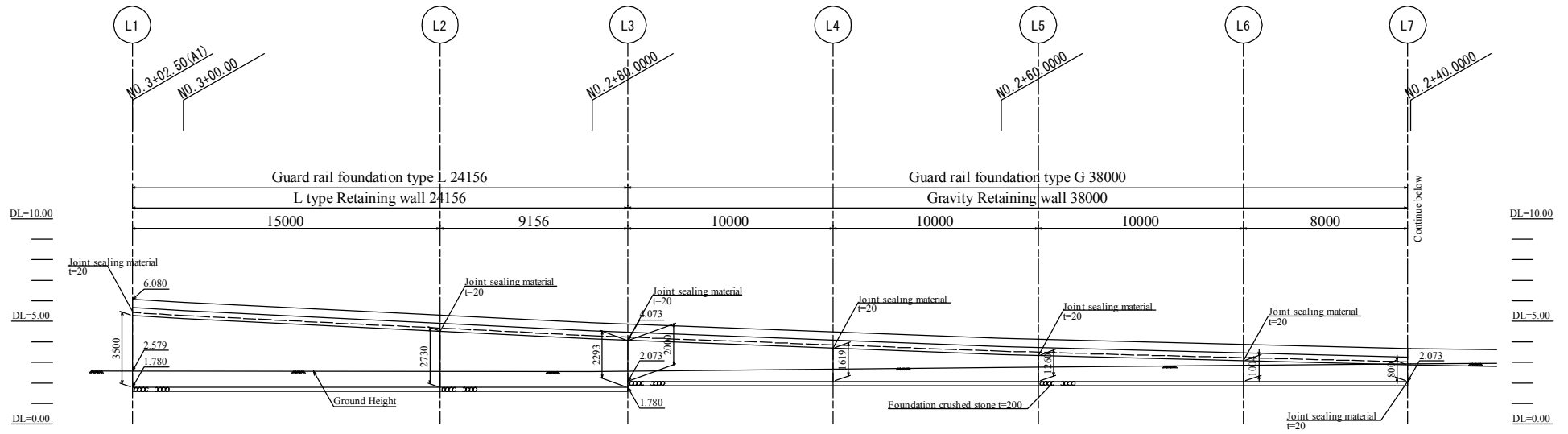
Retaining wall - Plan (A1)



Appendix - 60

<u>CLIENT</u> Japan International Cooperation Agency (JICA)	<u>CLIENTS APPROVAL:</u>	<u>REVISION</u>	<u>DESCRIPTION</u>	<u>BY</u>	<u>DATE</u>	<u>CONSULTANT</u>	<u>PROJECT</u>	<u>TITLE:</u>	<u>Scale:</u>	<u>DESIGNED BY:</u>		Drawing No: B-18 SHEET No:
	DIRECTOR RESPONSIBLE FOR HIGHWAY DESIGN:					The Consortium of Oriental Consultants CO., LTD., Central Consultant Inc., and Asia Air Survey Co., Ltd.	The Preparatory Survey for Improvement of Solibra Intersection (Outline Design)	Retaining Wall (I)	1:400	<u>DRAWN BY:</u>		
	SIGNATURE: DATE:							<u>CHECKED BY:</u>				
	<u>STAMP:</u>							<u>APPROVED BY:</u>				
					<u>DATE:</u>							

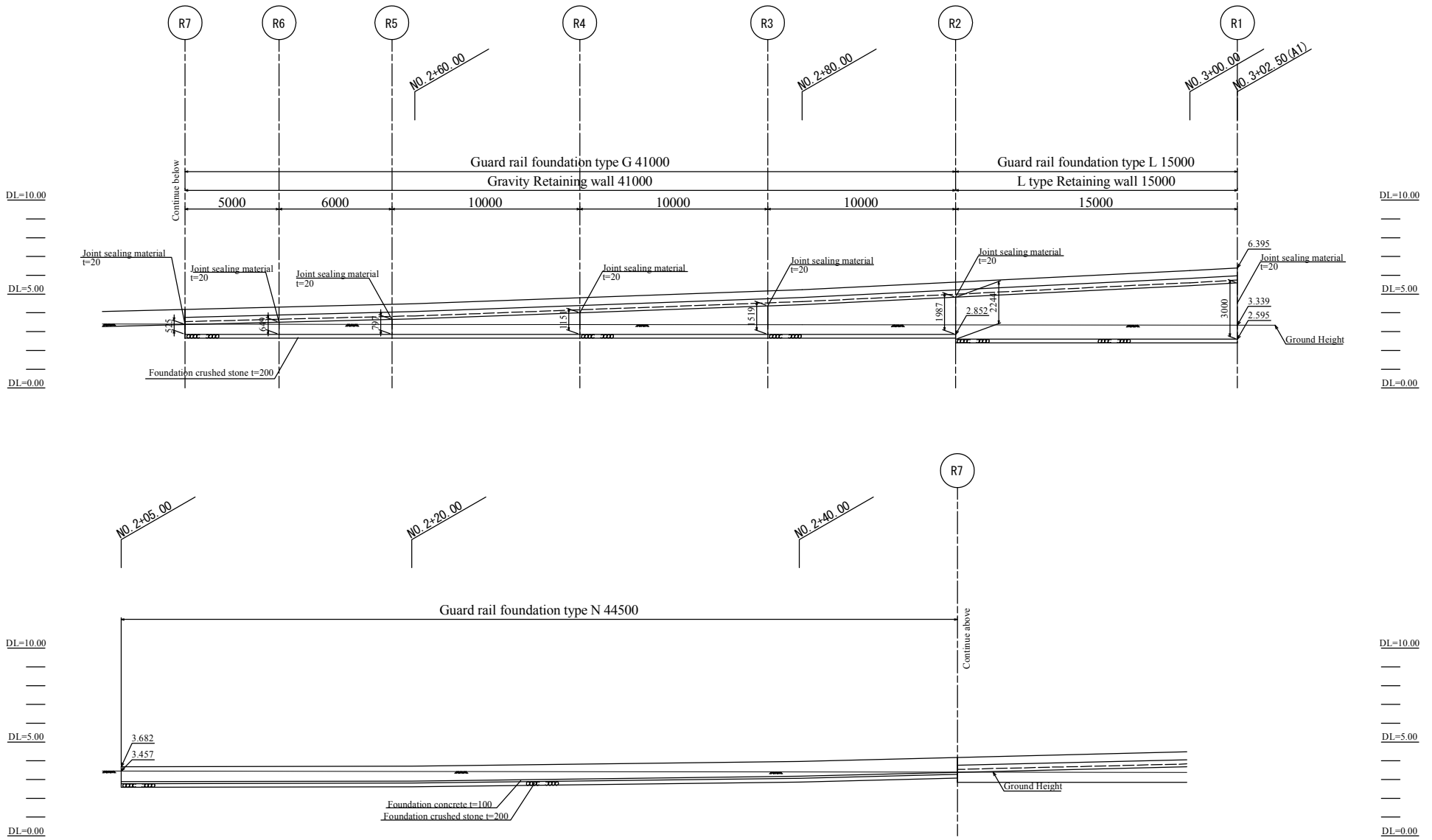
FO W-E A1 (L)




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CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants CO, LTD., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of Solibra Intersection (Outline Design)	TITLE:	Scale:	DESIGNED BY:			Drawing No: B-19 SHEET No:
	DIRECTOR RESPONSIBLE FOR HIGHWAY DESIGN:							Retaining Wall (2)	1:100	DRAWN BY:			
	SIGNATURE: DATE:									CHECKED BY:			
	STAMP:									APPROVED BY:			
								DATE:					

FO W-E A1(R)



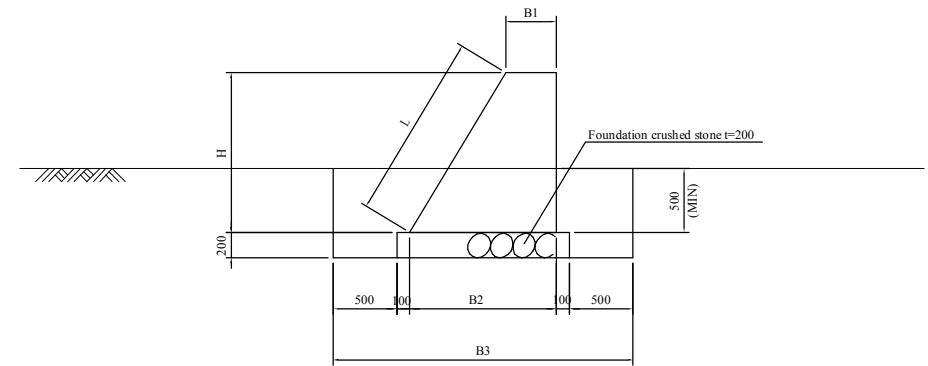
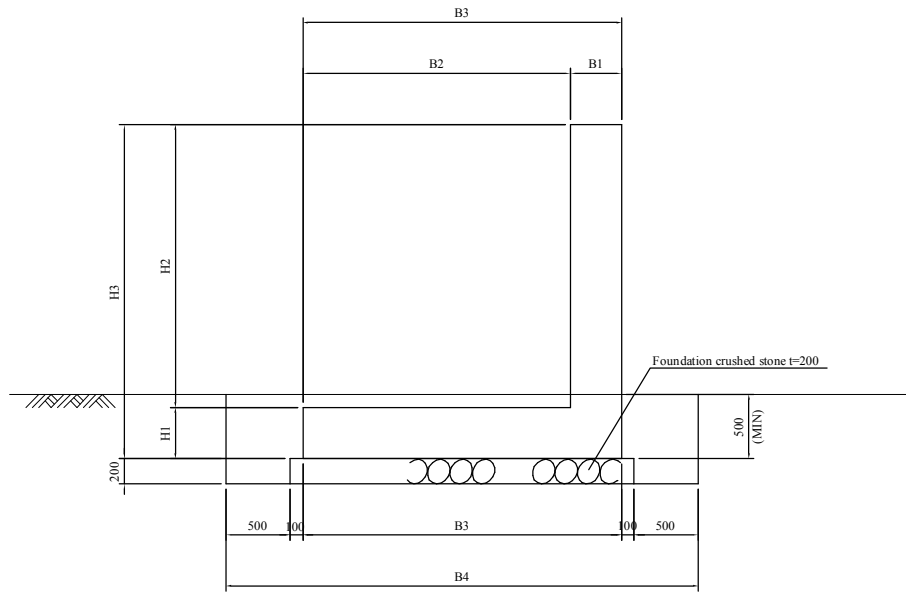
Appendix - 63

CLIENT  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants CO., LTD., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of Solibra Intersection (Outline Design)	TITLE:	Scale: 1:100	DESIGNED BY:			Drawing No: B-21 SHEET No:
	DIRECTOR RESPONSIBLE FOR HIGHWAY DESIGN:							CHECKED BY:					
	SIGNATURE: DATE:							APPROVED BY:					
	STAMP:							DATE:					

FO W-E A1 (R)

L type Retaining wall

Gravity Retaining wall

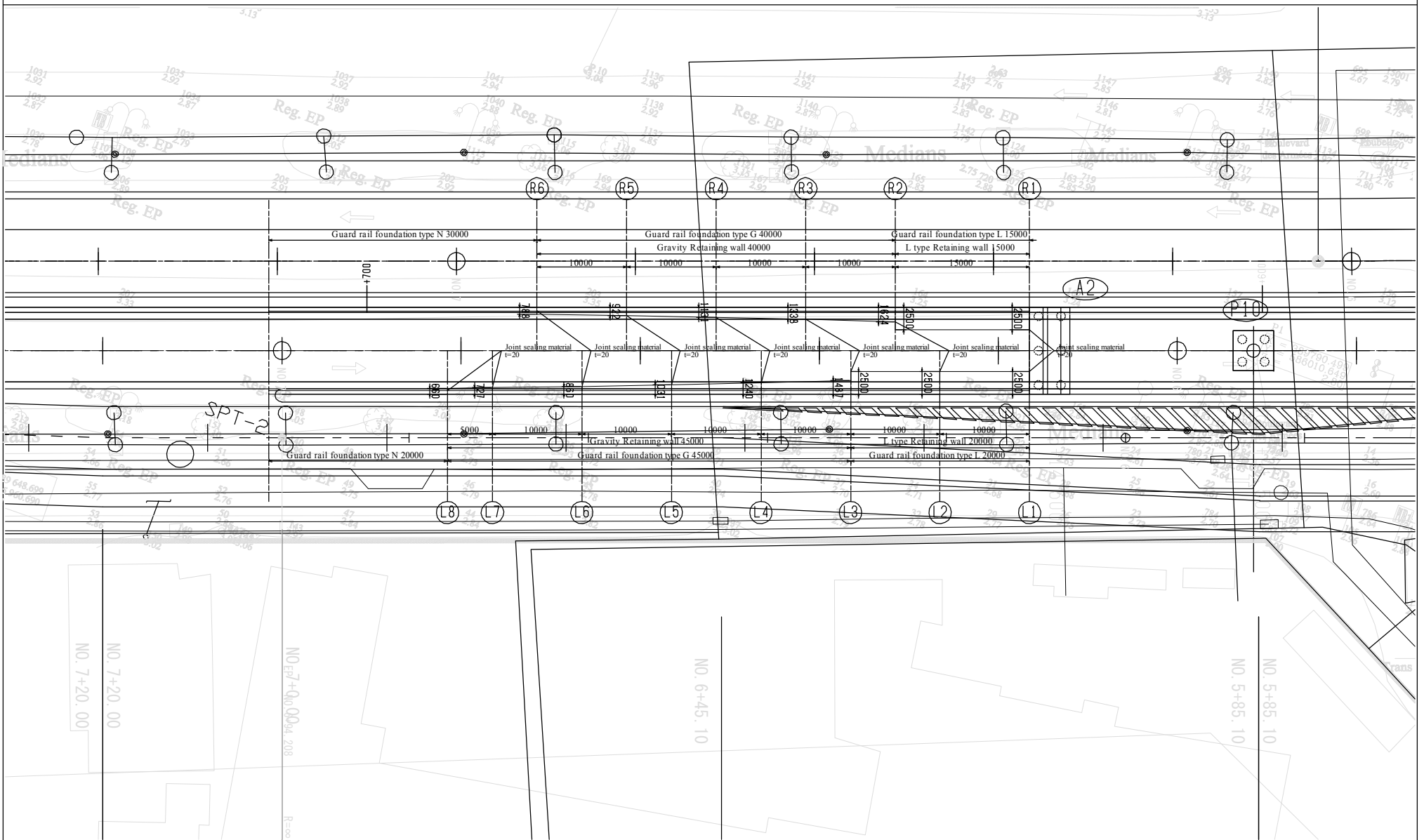


	R1	R2
B1	400	400
B2	2100	2100
B3	2500	2500
B4	3700	3700
H1	400	400
H2	2600	1844
H3	3000	2244

	R2	R3	R4	R5	R6	R7
B1	400	400	400	400	400	400
B2	1592	1311	1091	878	789	715
B3	2792	2511	2291	2078	1989	1915
H	1987	1519	1151	797	649	525
L	2317	1771	1342	929	757	612

CLIENT  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants CO, LTD., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of Solibra Intersection (Outline Design)	TITLE:	Scale: NTS	DESIGNED BY:			Drawing No: B-22 SHEET No:
	DIRECTOR RESPONSIBLE FOR HIGHWAY DESIGN:							CHECKED BY:					
	SIGNATURE: DATE:							APPROVED BY:					
	STAMP:							DATE:					

Retaining wall - Plan (A2)

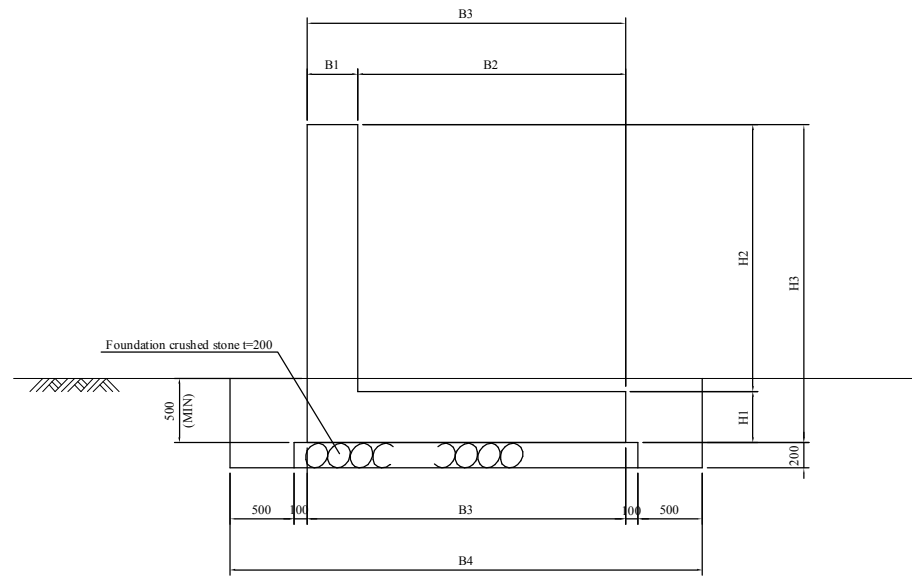


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<u>CLIENT</u> Japan International Cooperation Agency (JICA)	<u>CLIENTS APPROVAL:</u>	<u>REVISION</u>	<u>DESCRIPTION</u>	<u>BY</u>	<u>DATE</u>	<u>CONSULTANT</u> The Consortium of Oriental Consultants CO., LTD. , Central Consultant Inc. , and Asia Air Survey Co., Ltd.	<u>PROJECT</u> The Preparatory Survey for Improvement of Solibra Intersection (Outline Design)	<u>TITLE:</u> Retaining Wall (6)	<u>Scale:</u> 1:200	<u>DESIGNED BY:</u>		Drawing No: B-23 SHEET No:
	DIRECTOR RESPONSIBLE FOR HIGHWAY DESIGN:									<u>DRAWN BY:</u>		
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	STAMP:									<u>APPROVED BY:</u>		
										<u>DATE:</u>		

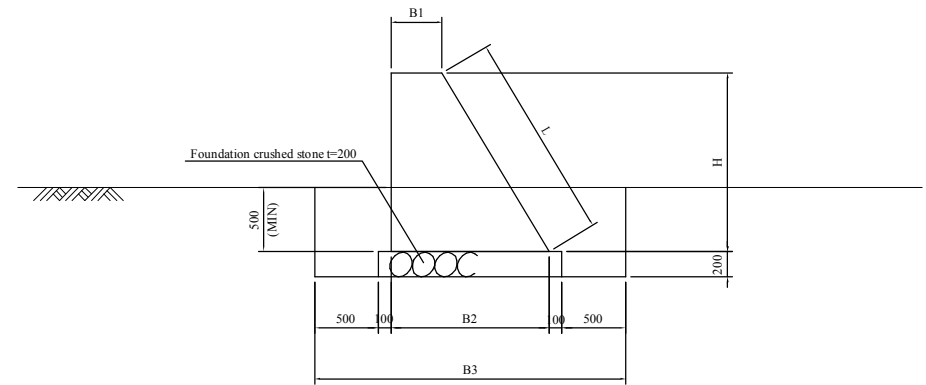
FO W-E A2 (L)

L type Retaining wall




	L1	L2	L3
B1	400	400	400
B2	2100	2100	2100
B3	2500	2500	2500
B4	3700	3700	3700
H1	400	400	400
H2	2600	2058	1584
H3	3000	2458	1984

Gravity Retaining wall

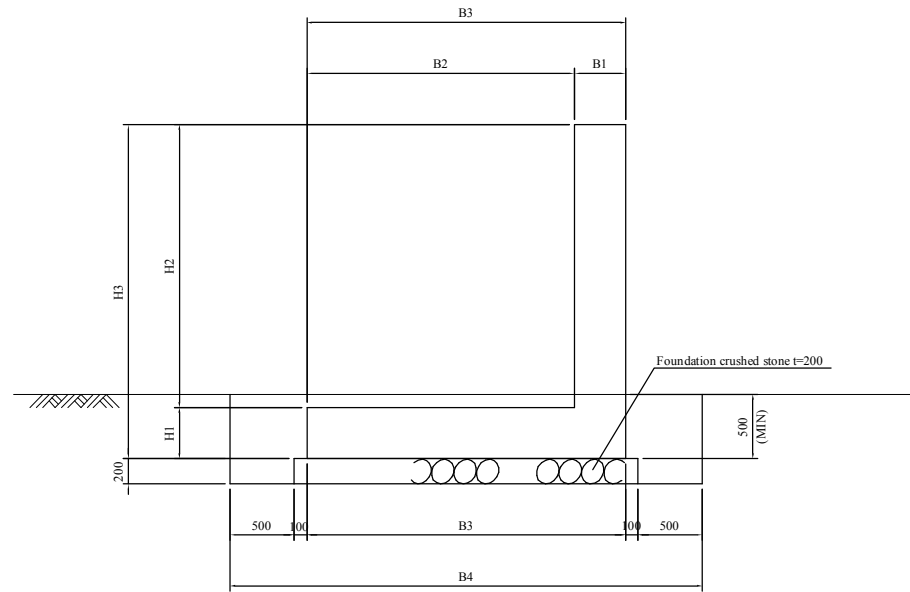


	L3	L4	L5	L6	L7	L8
B1	400	400	400	400	400	400
B2	1487	1240	1031	860	727	660
B3	2687	2440	2231	2060	1927	1860
H	1811	1400	1052	767	545	434
L	2112	1633	1227	894	636	506

CLIENT  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants CO, LTD., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of Solibra Intersection (Outline Design)	TITLE:	Scale: NTS	DESIGNED BY:			Drawing No: B-25 SHEET No:
	DIRECTOR RESPONSIBLE FOR HIGHWAY DESIGN:							CHECKED BY:					
	SIGNATURE: DATE:							APPROVED BY:					
	STAMP:							DATE:					

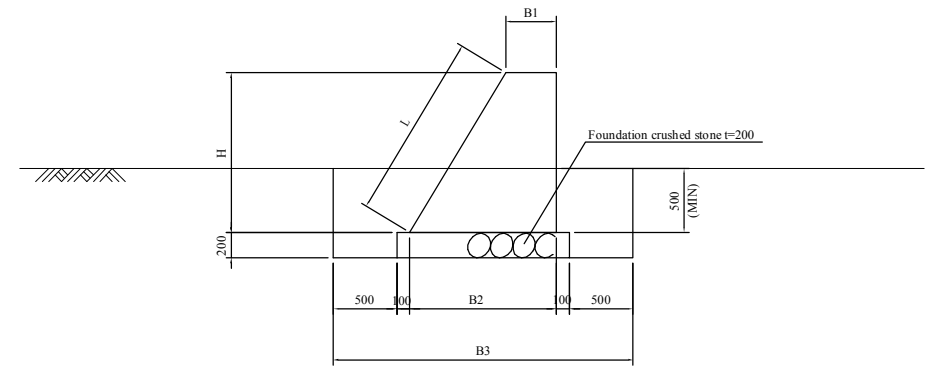
FO W-E A2 (R)

L type Retaining wall




	R1	R2
B1	400	400
B2	2100	2100
B3	2500	2500
B4	3700	3700
H1	400	400
H2	2600	1822
H3	3000	2222

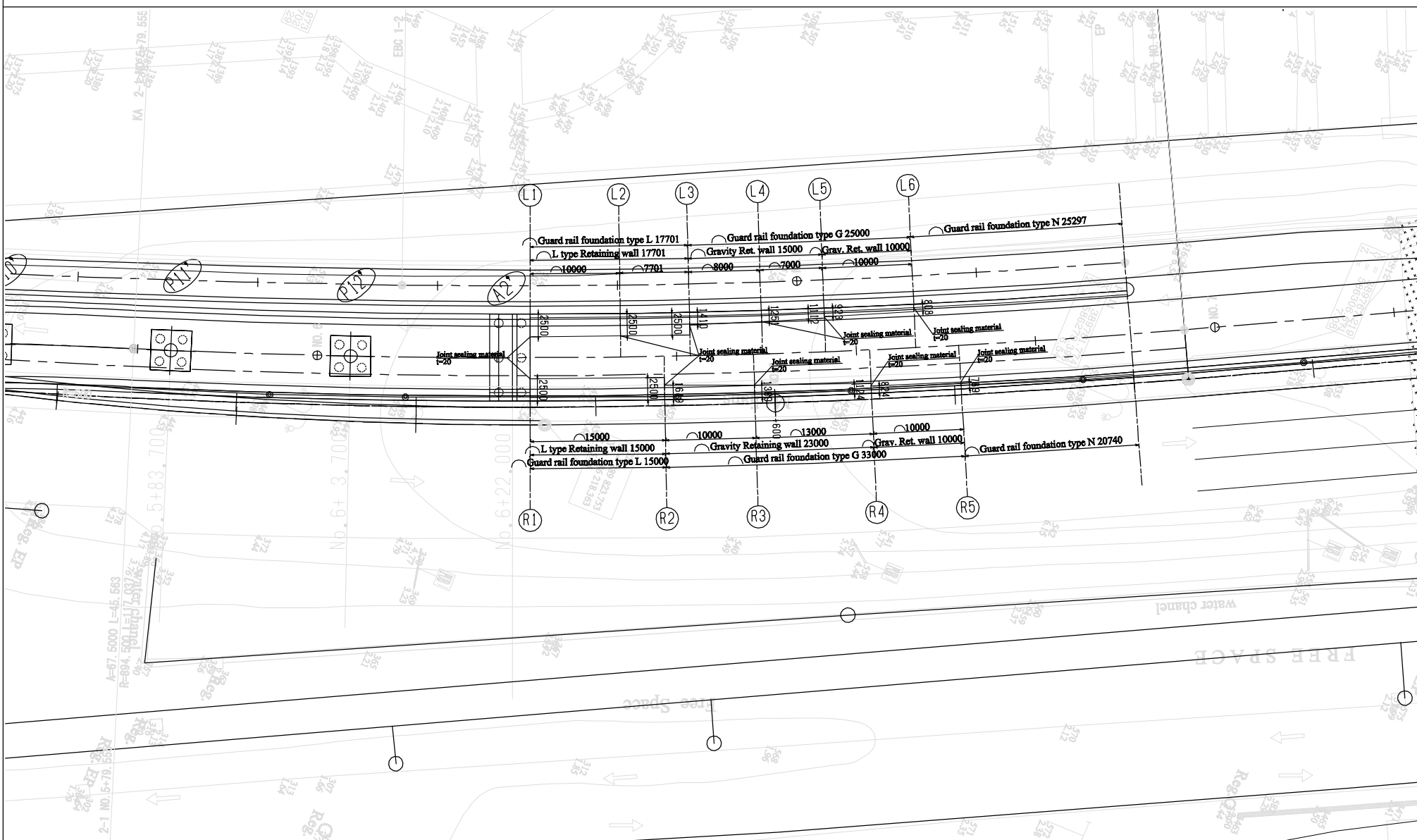
Gravity Retaining wall



	R2	R3	R4	R5	R6
B1	400	400	400	400	400
B2	1624	1338	1131	922	788
B3	2824	2538	2331	2122	1988
H	2040	1563	1218	870	647
L	2379	1823	1420	1015	755

CLIENT  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants CO, LTD., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of Solibra Intersection (Outline Design)	TITLE:	Scale: NTS	DESIGNED BY:			Drawing No: B-27 SHEET No:
	DIRECTOR RESPONSIBLE FOR HIGHWAY DESIGN:							CHECKED BY:					
	SIGNATURE: DATE:							APPROVED BY:					
	STAMP:							DATE:					

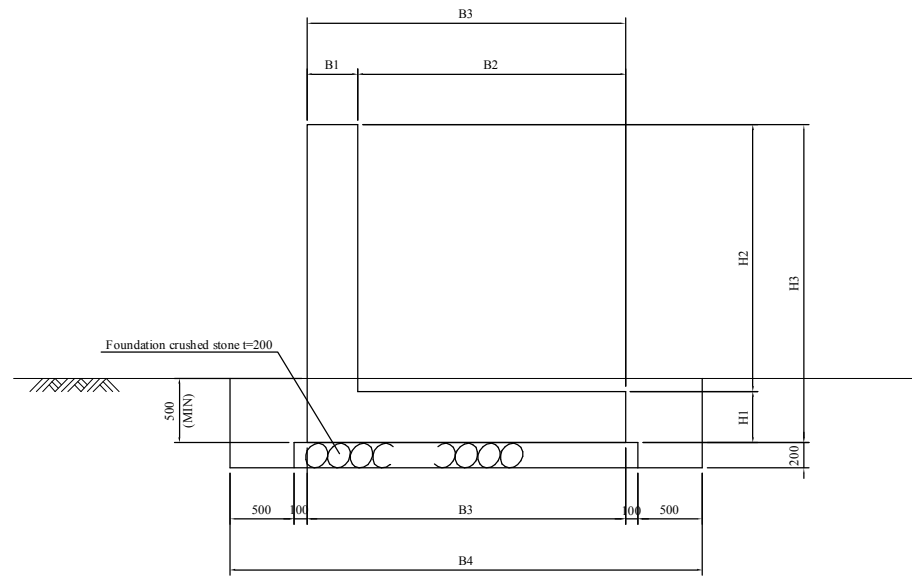
Retaining wall - Plan (A2')



CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT	PROJECT	TITLE:	Scale:	DESIGNED BY:		Drawing No: B-28 SHEET No:
	DIRECTOR RESPONSIBLE FOR HIGHWAY DESIGN:					The Consortium of Oriental Consultants CO., LTD., Central Consultant Inc., and Asia Air Survey Co., Ltd.	The Preparatory Survey for Improvement of Solibra Intersection (Outline Design)	Retaining Wall (11)	1:200	DRAWN BY:		
	SIGNATURE: DATE:							CHECKED BY:		APPROVED BY:		
	STAMP:							DATE:				

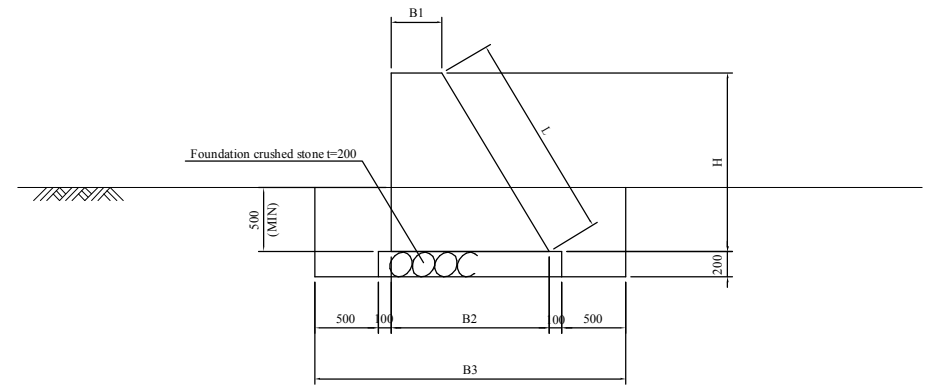
FO N-E A2' (L)

L type Retaining wall




	L1	L2	L3
B1	400	400	400
B2	2100	2100	2100
B3	2500	2500	2500
B4	3700	3700	3700
H1	400	400	400
H2	2600	2019	1572
H3	3000	2419	1972

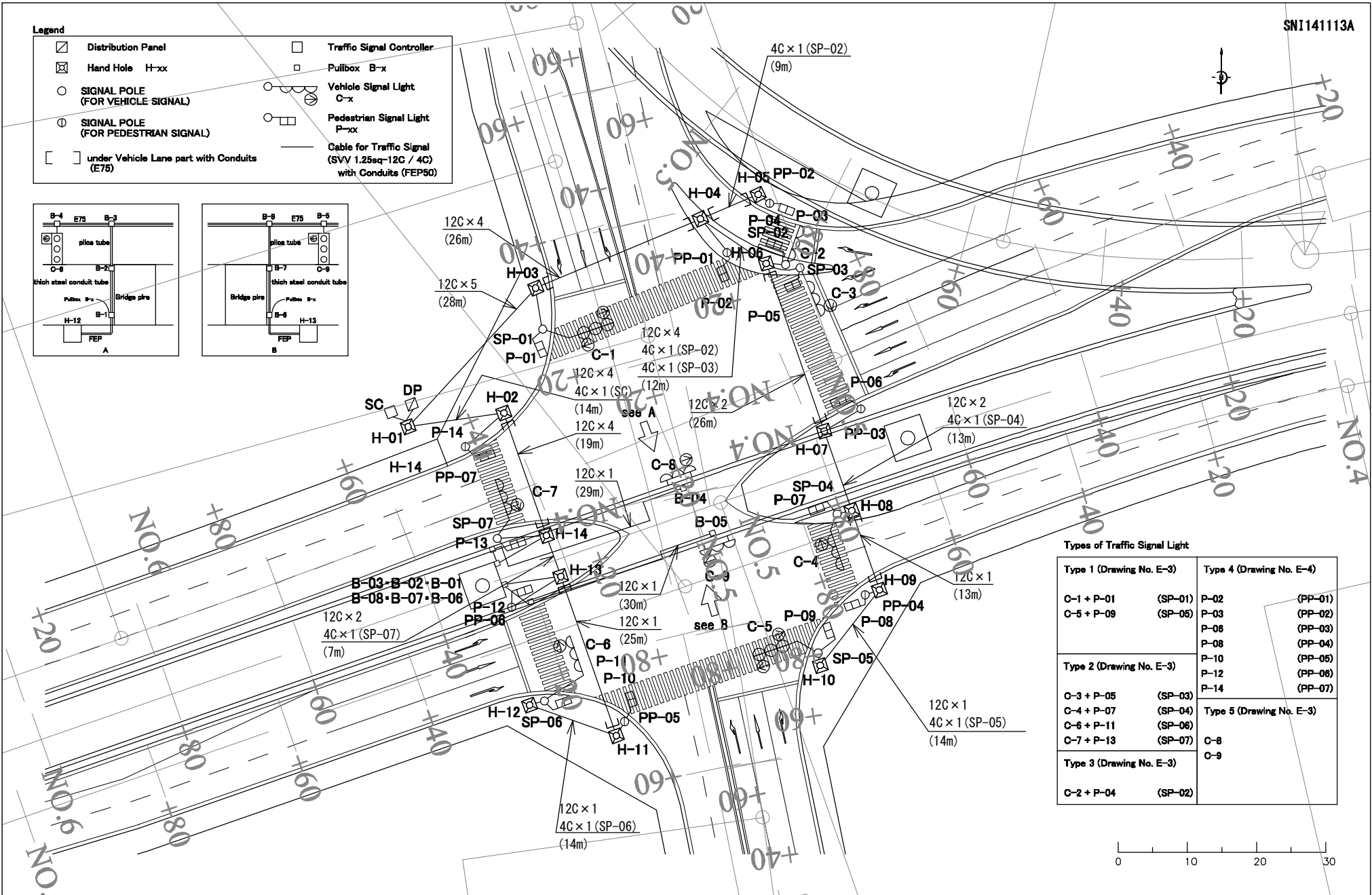
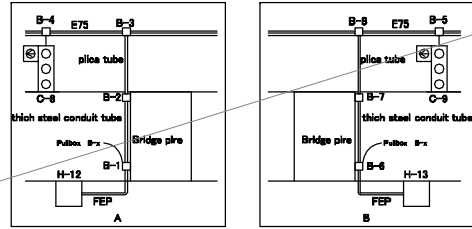
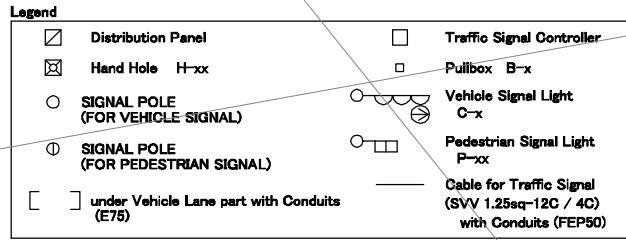
Gravity Retaining wall



	L3	L4	L5
B1	400	400	400
B2	1410	1251	1112
B3	2610	2451	2312
H	1683	1418	1187
L	1963	1654	1384

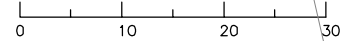
	L5	L6
B1	400	400
B2	923	808
B3	2123	2008
H	872	680
L	1017	793

CLIENT  Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants CO, LTD., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of Solibra Intersection (Outline Design)	TITLE: Retaining Wall (13)	Scale: NTS	DESIGNED BY:			Drawing No: B-30 SHEET No:
	DIRECTOR RESPONSIBLE FOR HIGHWAY DESIGN:									DRAWN BY:			
	SIGNATURE: DATE:									CHECKED BY:			
	STAMP:									APPROVED BY:			



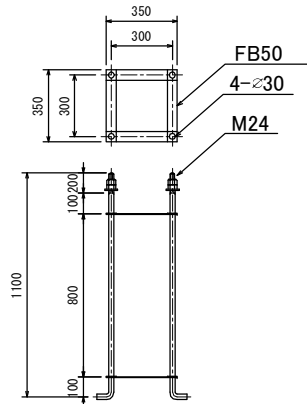
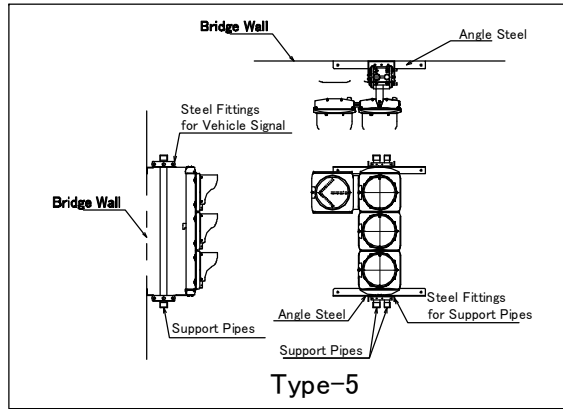
Types of Traffic Signal Light

Type 1 (Drawing No. E-3)	Type 2 (Drawing No. E-3)	Type 3 (Drawing No. E-3)	Type 4 (Drawing No. E-4)	Type 5 (Drawing No. E-3)
C-1 + P-01	C-3 + P-05	C-2 + P-04	P-02	C-8
C-5 + P-09	C-4 + P-07		P-03	C-9
	C-6 + P-11		P-06	
	C-7 + P-13		P-08	
			P-10	
			P-12	
			P-14	
			PP-01	
			PP-02	
			PP-03	
			PP-04	
			PP-05	
			PP-06	
			PP-07	

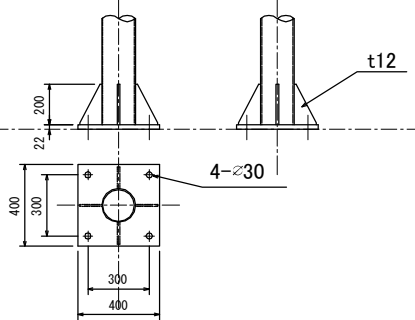


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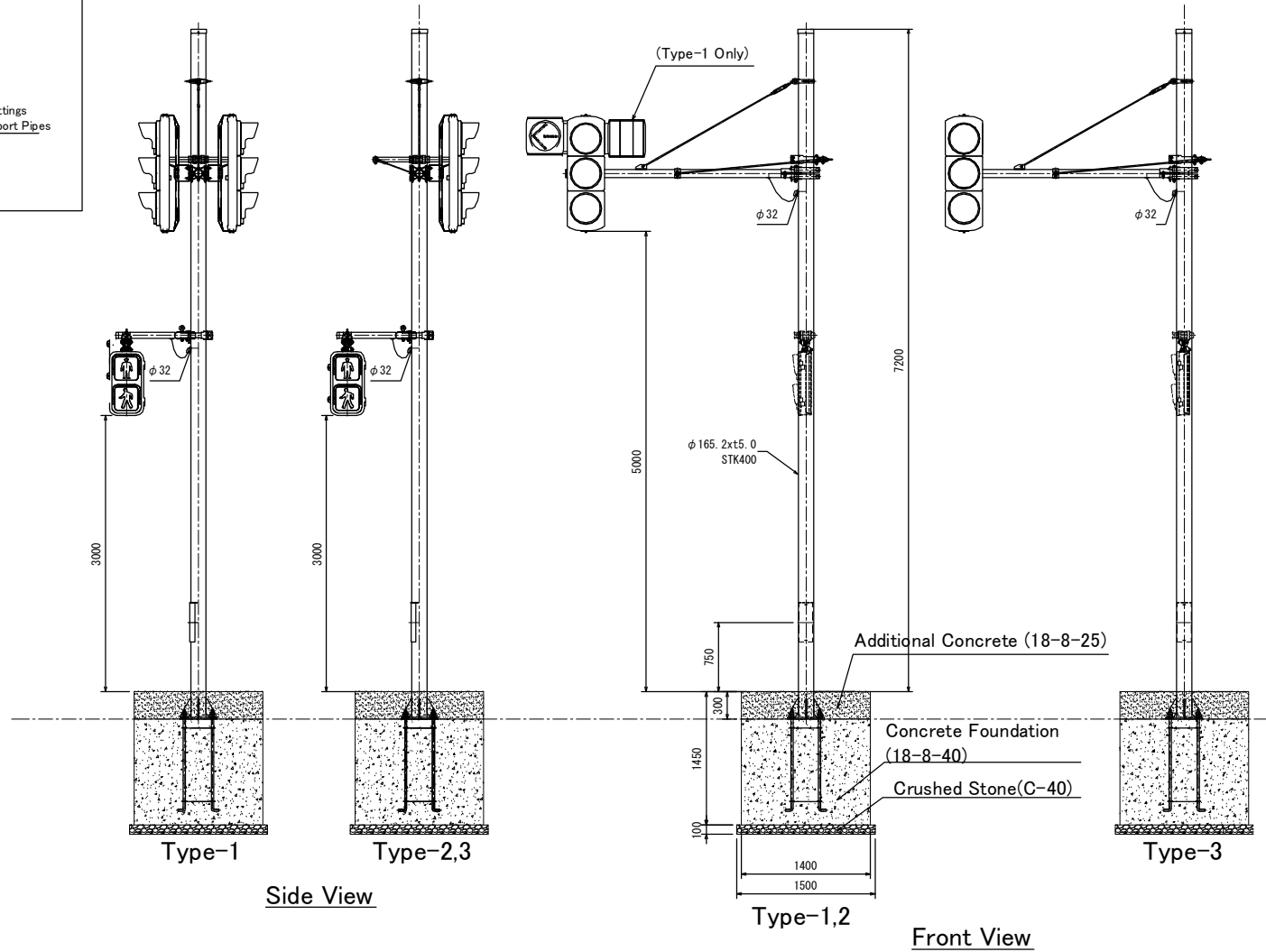
<p>CLIENT</p> <p>Japan International Cooperation Agency (JICA)</p>	<p>CLIENTS APPROVAL:</p> <p>DIRECTOR RESPONSIBLE FOR DESIGN:</p> <p>SIGNATURE: _____ DATE: _____</p> <p>STAMP:</p>	<p>REVISION</p> <p>DESCRIPTION</p> <p>BY</p> <p>DATE</p>	<p>CONSULTANT</p> <p>The Consortium of</p> <p>Oriental Consultants Global Co., Ltd.,</p> <p>Central Consultants, Inc.,</p> <p>and</p> <p>Asia Air Survey Co., Ltd.</p>	<p>PROJECT</p> <p>The Preparatory Survey for</p> <p>Improvement of SOUBRA Intersection</p> <p>(Outline Design)</p>	<p>TITLE:</p> <p>Traffic Lights (Signal) Layout Plan</p> <p>(1/2) SOUBRA Intersection</p>	<p>Scale:</p> <p>1:500 (A3)</p>	<p>DESIGNED BY:</p> <p>DRAWN BY:</p> <p>CHECKED BY:</p> <p>APPROVED BY:</p> <p>DATE:</p>	<p>Drawing No: E-1</p> <p>SHEET No:</p>
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Detail of Anchor Bolt (S=1/25)

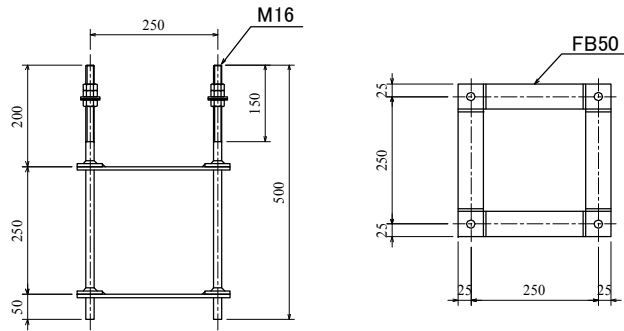


Detail of Base Plate (S=1/25)

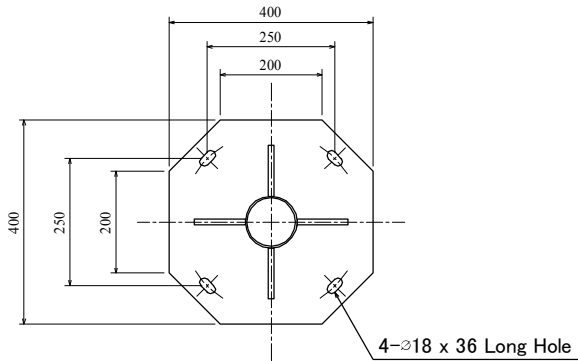
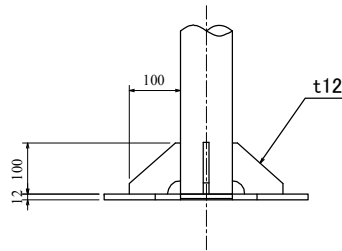


Traffic Light (Signal) Elevation (S=1/50)

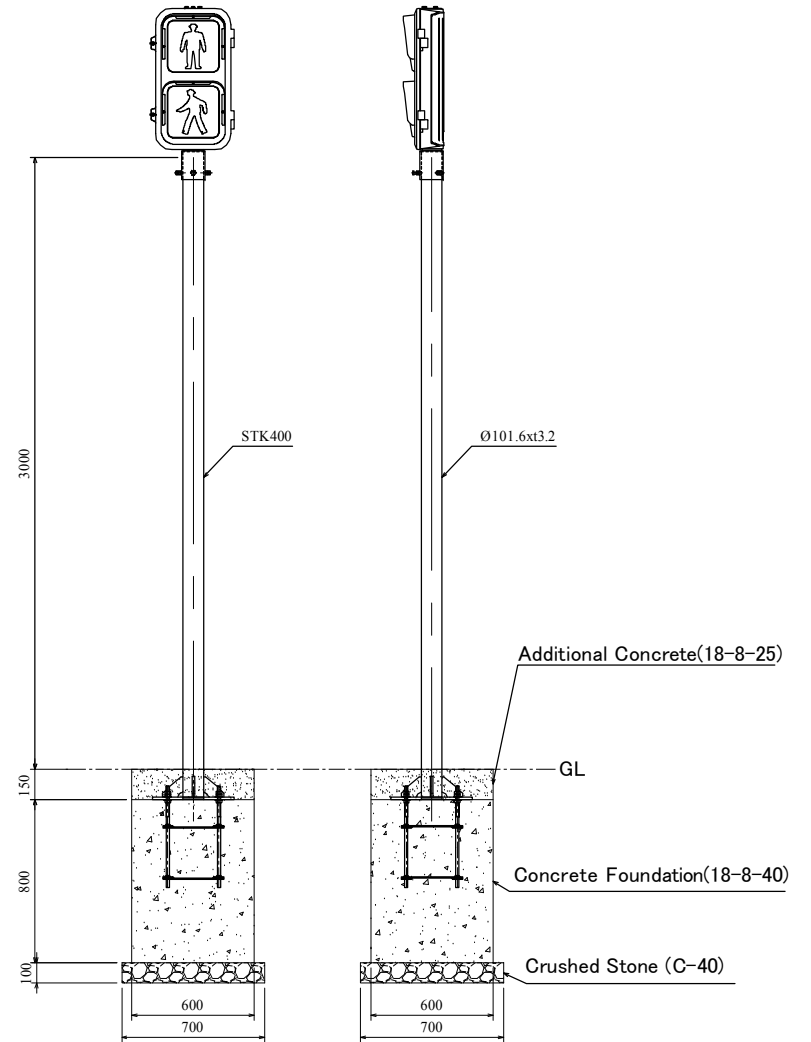
CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Traffic Light(Signal) Type-1,2,3&5 Details	Scale: As Shown(A3)	DESIGNED BY:			Drawing No: E-3 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
	SIGNATURE: DATE:									CHECKED BY:			
	STAMP:									APPROVED BY:			
											DATE:		



Detail of Anchor Bolt (S=1/10)

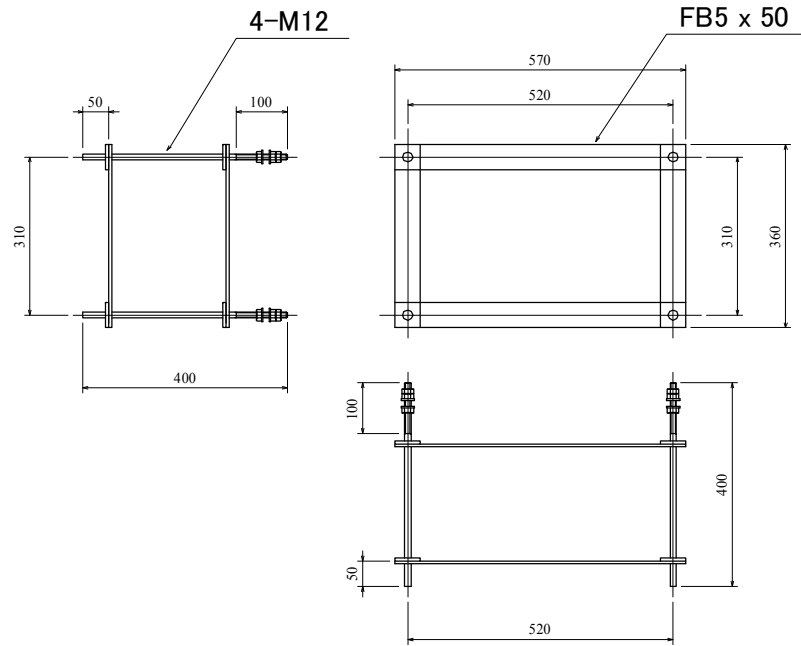


Detail of Base Plate (S=1/10)

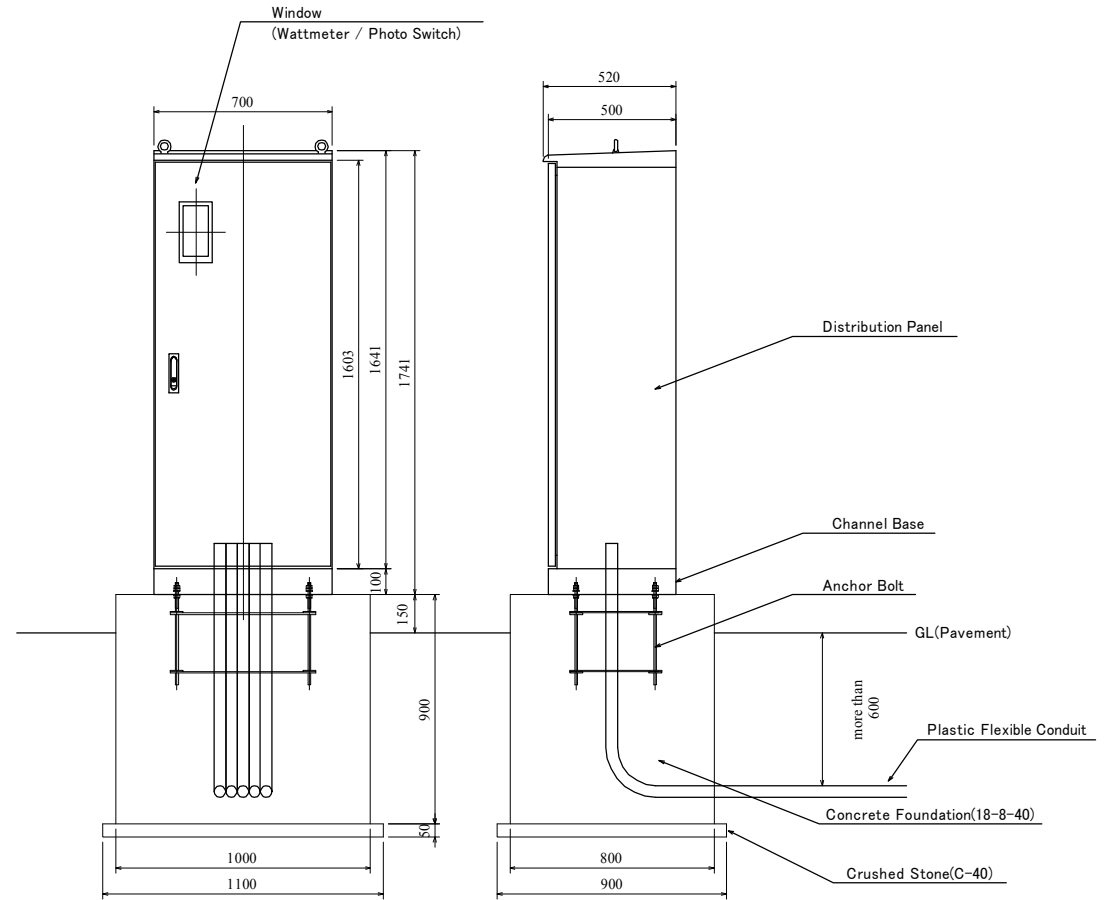


Pedestrian Pole (S=1/25)

<p>CLIENT</p>  <p>Japan International Cooperation Agency (JICA)</p>	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	<p>CONSULTANT</p> <p>The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.</p>	<p>PROJECT</p> <p>The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)</p>	<p>TITLE:</p> <p>Traffic Light (Signal) Type-4 Detail</p>	<p>Scale:</p> <p>As Shown(A3)</p>	DESIGNED BY:		<p>Drawing No: E-4 SHEET No:</p>
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:		
	SIGNATURE: DATE:									CHECKED BY:		
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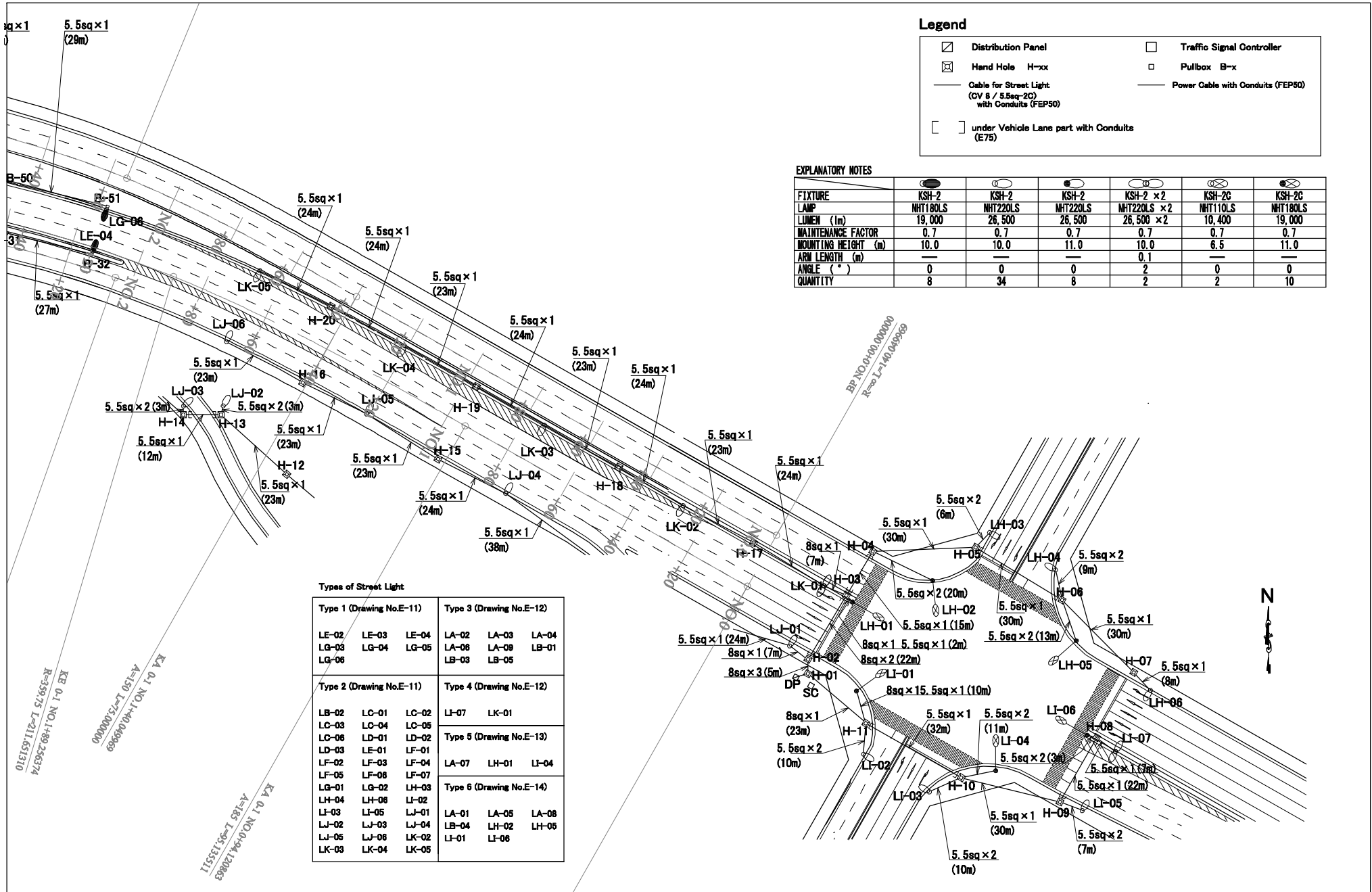


DETAIL OF ANCHOR BOLTS (S=1/10)



Distribution Elevation (S=1/20)

<p>Japan International Cooperation Agency (JICA)</p>	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	<p>CONSULTANT</p> <p>The Consortium of Oriental Consultants Global Co., Ltd. Central Consultants, Inc. and Asia Air Survey Co., Ltd.</p>	<p>PROJECT</p> <p>The Preparatory Survey for Improvement of SOUBARA Intersection (Outline Design)</p>	<p>TITLE:</p> <p>Distribution Panel</p>	<p>Scale:</p> <p>As Shown</p>	DESIGNED BY:			<p>Drawing No: E-6 SHEET No:</p>
	DIRECTOR RESPONSIBLE FOR DESIGN:									CHECKED BY:			
	SIGNATURE: DATE:									APPROVED BY:			
	STAMP:									DATE:			



Legend

	Distribution Panel		Traffic Signal Controller
	Hand Hole H-xx		Pullbox B-x
	Cable for Street Light (CV 8 / 5.5sq-2C) with Conduits (FEP50)		Power Cable with Conduits (FEP50)
	under Vehicle Lane part with Conduits (E75)		

EXPLANATORY NOTES

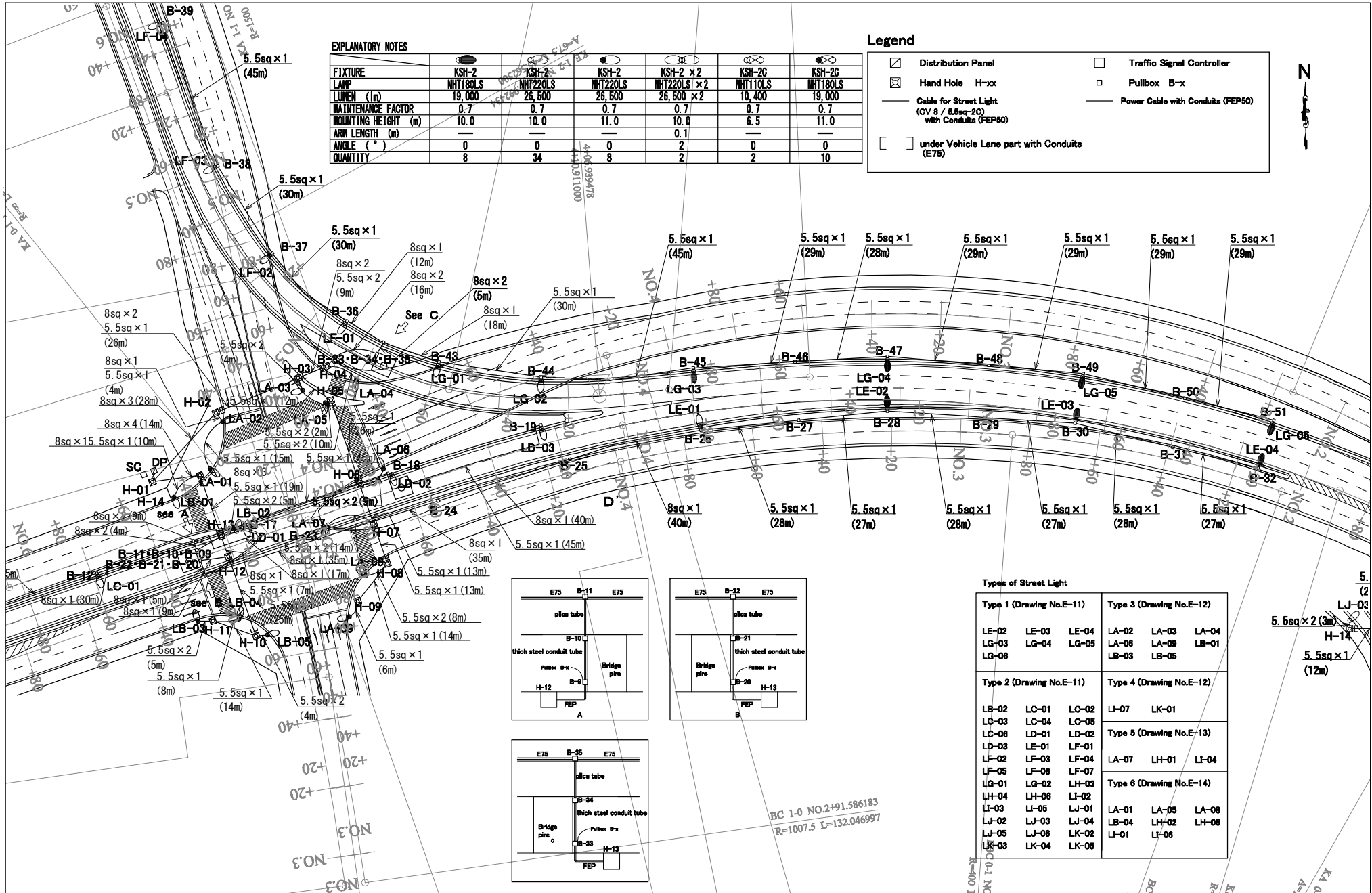
FIXTURE	KSH-2	KSH-2	KSH-2	KSH-2 x 2	KSH-2C	KSH-2C
LAMP	NHT180LS	NHT220LS	NHT220LS	NHT220LS x 2	NHT110LS	NHT180LS
LUMEN (lm)	19,000	26,500	26,500	26,500 x 2	10,400	19,000
MAINTENANCE FACTOR	0.7	0.7	0.7	0.7	0.7	0.7
MOUNTING HEIGHT (m)	10.0	10.0	11.0	10.0	6.5	11.0
ARM LENGTH (m)	—	—	—	0.1	—	—
ANGLE (°)	0	0	0	2	0	0
QUANTITY	8	34	8	2	2	10

Types of Street Light

Type 1 (Drawing No.E-11)			Type 3 (Drawing No.E-12)		
LE-02	LE-03	LE-04	LA-02	LA-03	LA-04
LG-03	LG-04	LG-05	LA-06	LA-08	LB-01
LG-06			LB-03	LB-05	
Type 2 (Drawing No.E-11)			Type 4 (Drawing No.E-12)		
LB-02	LC-01	LC-02	LF-07	LK-01	
LC-03	LC-04	LC-05	Type 5 (Drawing No.E-13)		
LD-03	LD-01	LD-02	LA-07	LH-01	LI-04
LE-01	LE-01	LE-01	Type 6 (Drawing No.E-14)		
LF-02	LF-03	LF-04	LA-01	LA-05	LA-08
LF-05	LF-06	LF-07	LB-04	LH-02	LH-05
LG-01	LG-02	LH-03	LI-01	LI-06	
LH-04	LH-06	LI-02			
LI-03	LI-05	LJ-01			
LJ-02	LJ-03	LJ-04			
LJ-05	LJ-06	LK-02			
LK-03	LK-04	LK-05			

KA 0.1 NO.1-40104000000
 A=150 L=75,0000000
 KE 0.1 NO.1-89 266374
 R=359.73 L=211.6513110
 KA 0.1 NO.0-4-120883
 A=185 L=95,135511

CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant, Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOLIBRA Intersection (Outline Design)	TITLE:	Scale:	DESIGNED BY:					
	DIRECTOR RESPONSIBLE FOR DESIGN:							Street Lights Layout Plan (1/4) SOLIBRA Intersection	1:1000 (A3)	DRAWN BY:					
	SIGNATURE: DATE:									CHECKED BY:					
	STAMP:									APPROVED BY:					Drawing No:E-7 SHEET No:



EXPLANATORY NOTES

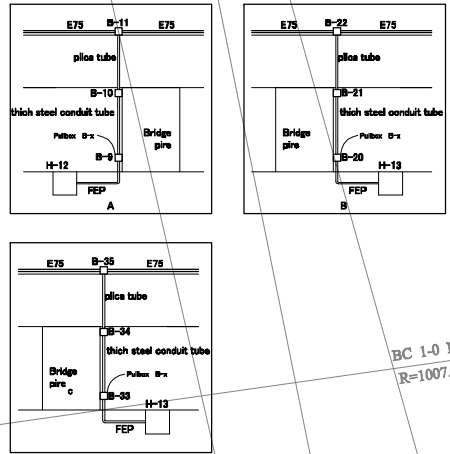
FIXTURE	KSH-2	KSH-2	KSH-2	KSH-2 × 2	KSH-2C	KSH-2C
LAMP	NHT180LS	NHT220LS	NHT220LS	NHT220LS × 2	NHT110LS	NHT180LS
LUMEN (lm)	19,000	26,500	26,500	26,500 × 2	10,400	19,000
MAINTENANCE FACTOR	0.7	0.7	0.7	0.7	0.7	0.7
MOUNTING HEIGHT (m)	10.0	10.0	11.0	10.0	6.5	11.0
ARM LENGTH (m)				0.1		
ANGLE (°)	0	0	0	2	0	0
QUANTITY	8	34	8	2	2	10

Legend

- Distribution Panel
- Traffic Signal Controller
- ⊗ Hand Hole H-xx
- Pullbox B-x
- Cable for Street Light (CV 8 / 5.5sq-2C) with Conduits (FEP50)
- Power Cable with Conduits (FEP50)
- [] under Vehicle Lane part with Conduits (E75)

Types of Street Light

Type 1 (Drawing No.E-11)	Type 3 (Drawing No.E-12)
LE-02 LG-03 LG-06	LA-02 LA-03 LA-04 LA-06 LA-09 LB-01 LB-03 LB-05
Type 2 (Drawing No.E-11)	Type 4 (Drawing No.E-12)
LB-02 LC-03 LC-04 LC-05 LC-06 LD-01 LD-02 LD-03 LE-01 LE-04 LE-05 LE-06 LE-07 LG-01 LG-02 LG-03 LH-04 LH-06 LH-02 LH-03 LH-05 LJ-01 LJ-02 LJ-03 LJ-04 LJ-05 LJ-06 LK-03 LK-04 LK-06	LH-07 LH-01 LH-04
	Type 5 (Drawing No.E-13)
	Type 6 (Drawing No.E-14)
	LA-01 LA-05 LA-08 LB-04 LH-02 LH-05 LH-01 LH-06



<p>Japan International Cooperation Agency (JICA)</p>	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT: The Consortium of Oriental Consultants Global Co., Ltd., Central Consultants, Inc., and Asia Air Survey Co., Ltd.	PROJECT: The Preparatory Survey for Improvement of SOLIBRA Intersection (Outline Design)	TITLE:	Scale:	DESIGNED BY:					
	DIRECTOR RESPONSIBLE FOR DESIGN:							Street Lights Layout Plan (2/4) SOLIBRA Intersection	1:1000 (A3)	DRAWN BY:					
	SIGNATURE: DATE:								CHECKED BY:		APPROVED BY:				
	STAMP:								DATE:						Drawing No:E-8 SHEET No:



Legend

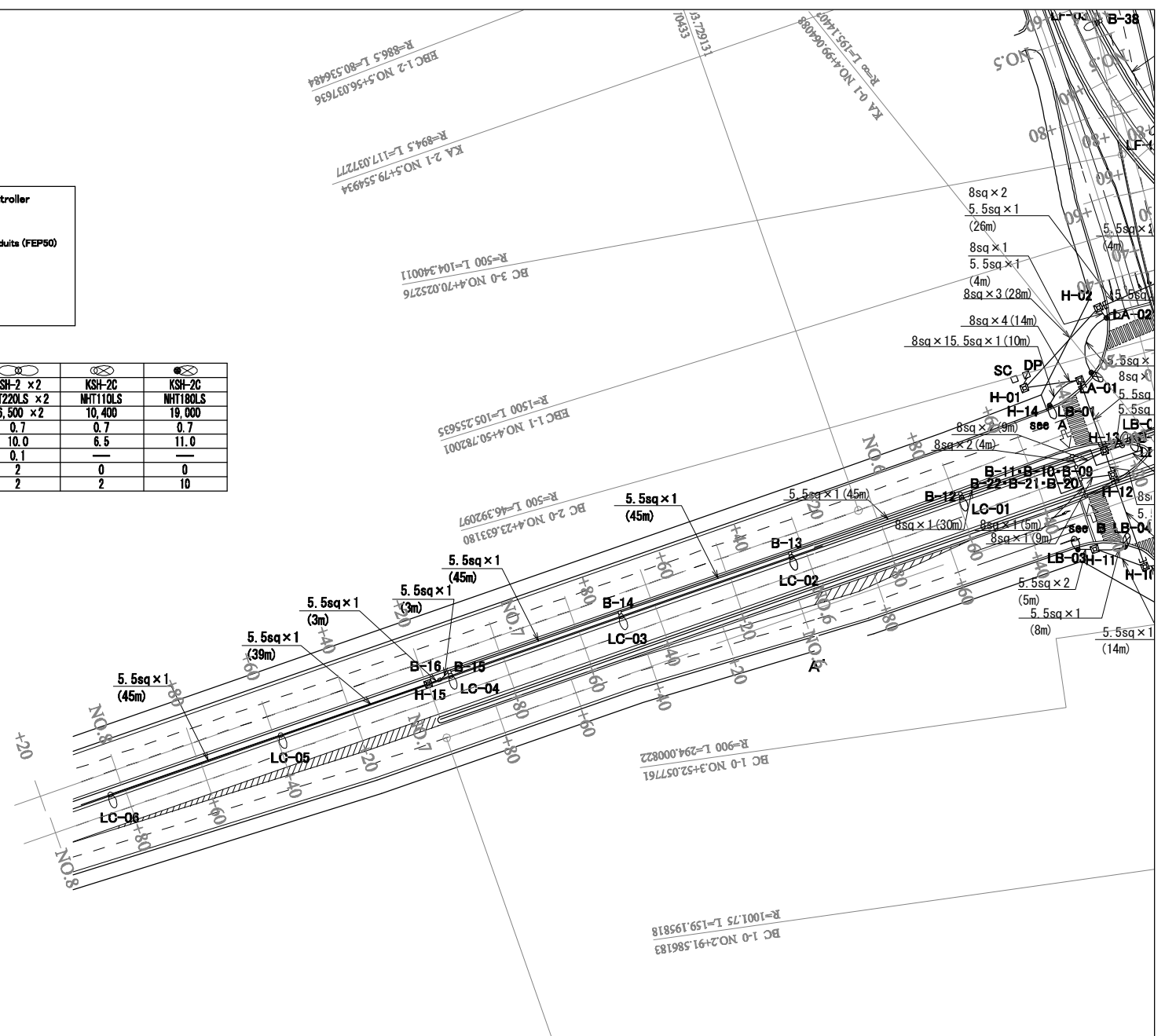
- Distribution Panel
- Hand Hole H-xx
- Traffic Signal Controller
- Pullbox B-x
- Cable for Street Light (CV 8 / 5.5sq-2C) with Conduits (FEP80)
- Power Cable with Conduits (FEP50)
- under Vehicle Lane part with Conduits (E75)

EXPLANATORY NOTES

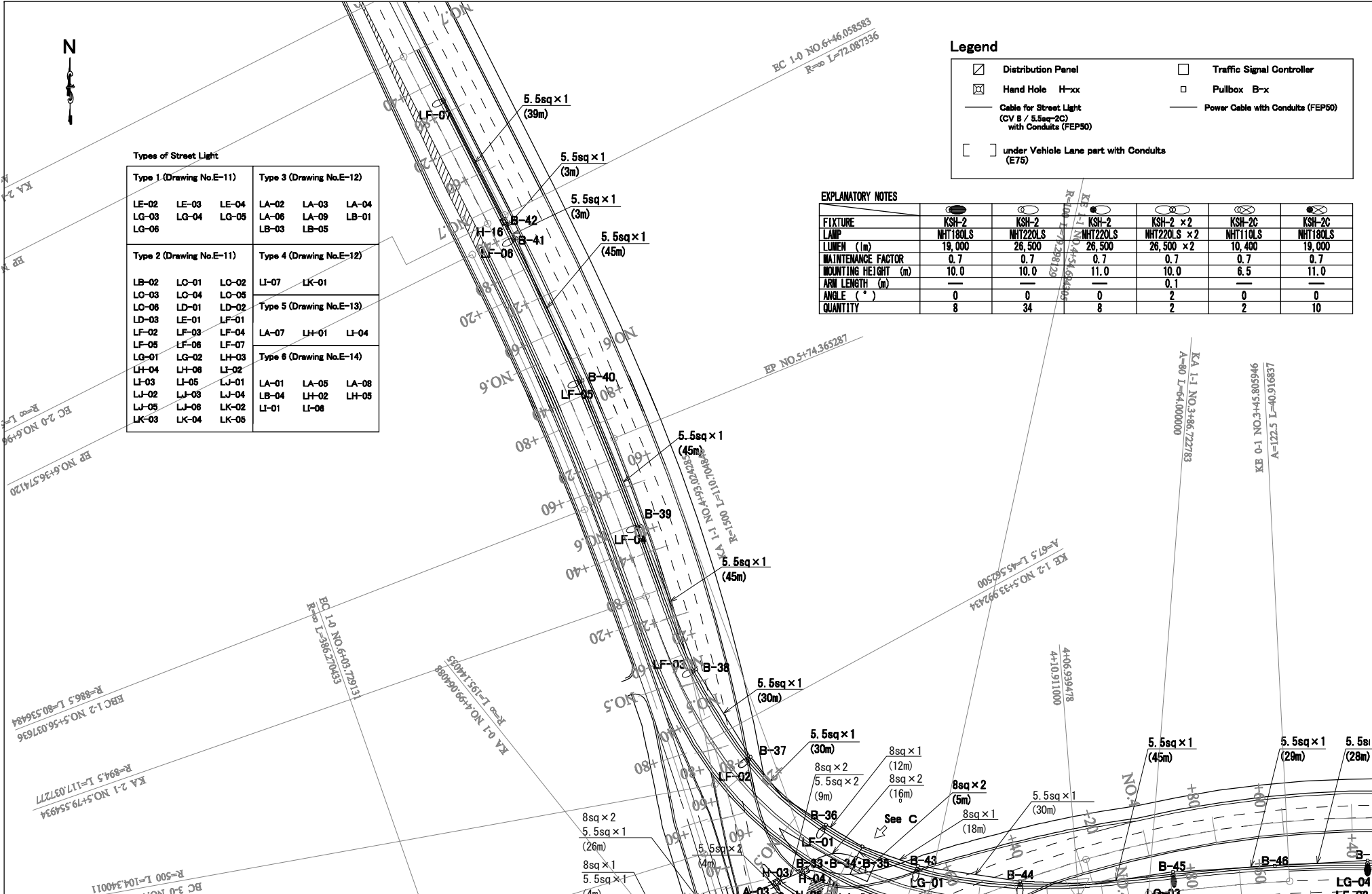
FIXTURE	KSH-2	KSH-2	KSH-2	KSH-2 x 2	KSH-2C	KSH-2C
LAMP	NHT180LS	NHT220LS	NHT220LS	NHT220LS x 2	NHT110LS	NHT180LS
LUMEN (lm)	19,000	26,500	26,500	26,500 x 2	10,400	19,000
MAINTENANCE FACTOR	0.7	0.7	0.7	0.7	0.7	0.7
MOUNTING HEIGHT (m)	10.0	10.0	11.0	10.0	6.5	11.0
ARM LENGTH (m)	—	—	—	0.1	—	—
ANGLE (°)	0	0	0	2	0	0
QUANTITY	8	34	8	2	2	10

Types of Street Light

Type 1 (Drawing No.E-11)			Type 3 (Drawing No.E-12)		
LE-02	LE-03	LE-04	LA-02	LA-03	LA-04
LG-03	LG-04	LG-05	LA-06	LA-09	LB-01
LG-08			LB-03	LB-05	
Type 2 (Drawing No.E-11)			Type 4 (Drawing No.E-12)		Type 5 (Drawing No.E-13)
LB-02	LC-01	LC-02	LO-07	LK-01	
LC-03	LC-04	LC-05	Type 6 (Drawing No.E-14)		
LC-06	LD-01	LD-02			
LD-03	LE-01	LE-01	LA-07	LH-01	LI-04
LF-02	LF-03	LF-04			
LF-05	LF-06	LF-07			
LG-01	LG-02	LH-03			
LH-04	LH-06	LI-02			
LJ-03	LJ-05	LJ-01			
LJ-02	LJ-03	LJ-04			
LJ-05	LJ-06	LK-02			
LK-03	LK-04	LK-05			
LA-01	LA-05	LA-08			
LB-04	LH-02	LH-05			
LI-01	LI-06				



CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOLIBRA Intersection (Outline Design)	TITLE: Street Lights Layout Plan (3/4) SOLIBRA Intersection	Scale:	DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY: DATE:	Drawing No: E-9 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:								1:1000 (A3)		
	SIGNATURE: DATE:										
	STAMP:										



Types of Street Light

Type 1 (Drawing No.E-11)			Type 3 (Drawing No.E-12)		
LE-02	LE-03	LE-04	LA-02	LA-03	LA-04
LG-03	LG-04	LG-05	LA-06	LA-09	LB-01
LG-06			LB-03	LB-05	
Type 2 (Drawing No.E-11)			Type 4 (Drawing No.E-12)		
LB-02	LC-01	LC-02	LI-07	LK-01	
LC-03	LC-04	LC-05			
LC-06	LD-01	LD-02	Type 5 (Drawing No.E-13)		
LD-03	LE-01	LE-01	LA-07	LH-01	LI-04
LF-02	LF-03	LF-04			
LF-05	LF-06	LF-07	Type 6 (Drawing No.E-14)		
LG-01	LG-02	LH-03	LA-01	LA-05	LA-08
LH-04	LH-06	LI-02	LB-04	LH-02	LH-05
LI-03	LI-05	LJ-01	LI-01	LI-06	
LJ-02	LJ-03	LJ-04			
LJ-05	LJ-06	LK-02			
LK-03	LK-04	LK-05			

Legend

	Distribution Panel		Traffic Signal Controller
	Hand Hole H-x		Pullbox B-x
	Cable for Street Light (CV B / 5.5sq-2C) with Conduits (FEP50)		Power Cable with Conduits (FEP50)
	under Vehicle Lane part with Conduits (E75)		

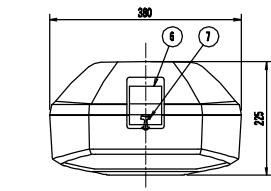
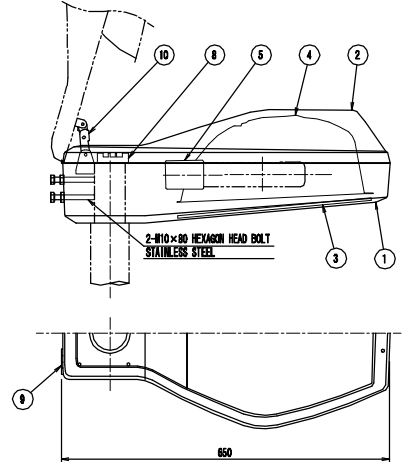
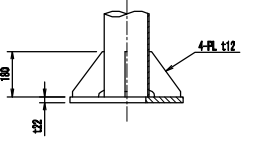
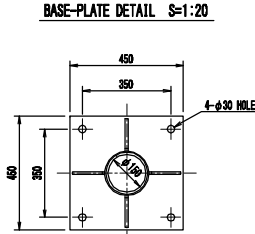
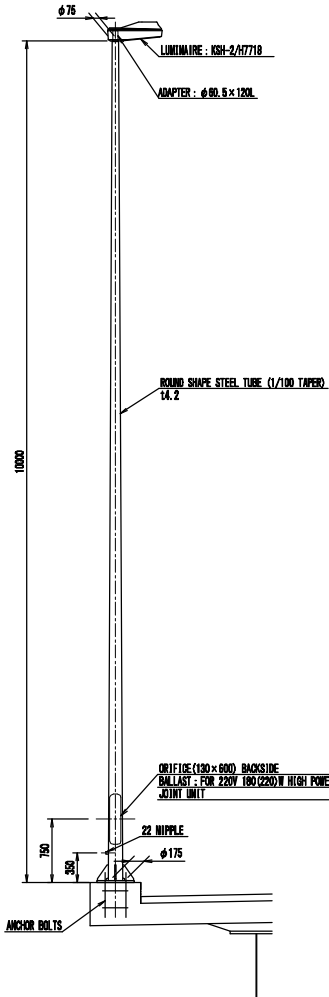
EXPLANATORY NOTES

FIXTURE						
LAMP	KSH-2	KSH-2	KSH-2	KSH-2	KSH-2C	KSH-2C
LUMEN (lm)	NHT180LS	NHT220LS	NHT220LS	NHT220LS x 2	NHT110LS	NHT180LS
MAINTENANCE FACTOR	0.7	0.7	0.7	0.7	0.7	0.7
MOUNTING HEIGHT (m)	10.0	10.0	11.0	10.0	6.5	11.0
ARM LENGTH (m)				0.1		
ANGLE (°)	0	0	0	2	0	0
QUANTITY	8	34	8	2	2	10

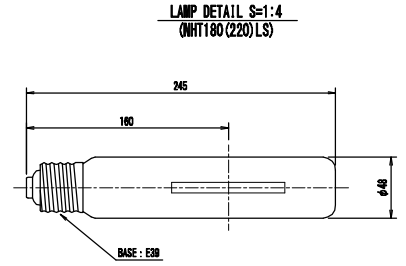
<p>CLIENT</p> <p>Japan International Cooperation Agency (JICA)</p>	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	<p>CONSULTANT</p> <p>The Consortium of Oriental Consultants Global Co., Ltd., Central Consulting, Inc., and Asia Air Survey Co., Ltd.</p>	<p>PROJECT</p> <p>The Preparatory Survey for Improvement of SOLIBRA Intersection (Outline Design)</p>	<p>TITLE:</p> <p>Street Lights Layout Plan (4/4) SOLIBRA Intersection</p>	<p>Scale:</p> <p>1:1000 (A3)</p>	DESIGNED BY:		<p>Drawing No: E-10 SHEET No:</p>
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:		
	SIGNATURE: DATE:									CHECKED BY:		
	STAMP:									APPROVED BY:		
										DATE:		

ELEVATION DIAGRAM OF LIGHTING S=1:60

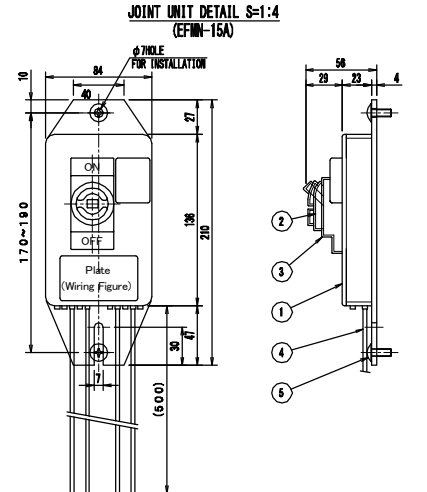
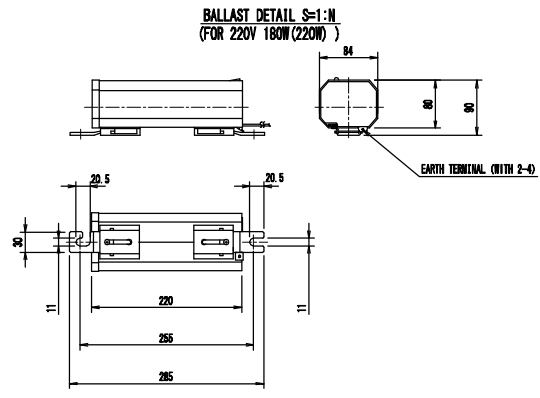
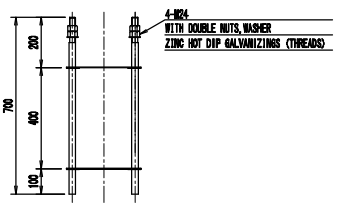
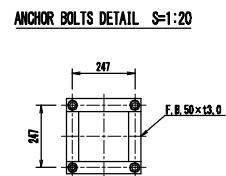
ELEVATION DIAGRAM OF LIGHTING S=1:60, 20, 10



No.	PARTS	MATERIAL	Q'T	SUMMARY
1	BODY	ALUMINUM ALLOY DIE CASTING	1	
2	UPPER COVER	ALUMINUM ALLOY DIE CASTING	1	
3	FRONT GLASS	TEMPERED GLASS 8A	1	CLEAR
4	REFLECTOR	ALUMINUM ALLOY SHEET	1	ALUMITE TREATMENT
5	LAMP SOCKET	PORCELAIN	1	E39
6	LATCH	ALUMINUM ALLOY DIE CASTING	1	
7	OPEN PREVENTION SPRING	STAINLESS STEEL	1	
8	TERMINAL BLOCK	STAINLESS STEEL	1	3P - TERMINAL SCHER 8A
9	HINGE	STAINLESS STEEL	2	
10	OPEN-CLOSE STOPPER	STAINLESS STEEL	1	



TYPE	REF. NO.	LAMP DIA (mm)	LAMP VOLTAGE (V)	LAMP VOLTAGE (A)	LAMP CURRENT (A)	MIN. LUMIN. (lm)	MIN. COLOR TEMP. (K)	FINISH COLOR	MIN. LIFE (h)
TYPE 1		180	120	1.80	20,000	2100	25		24,000
TYPE 2		220	130	2.10	26,500	2100	25		24,000

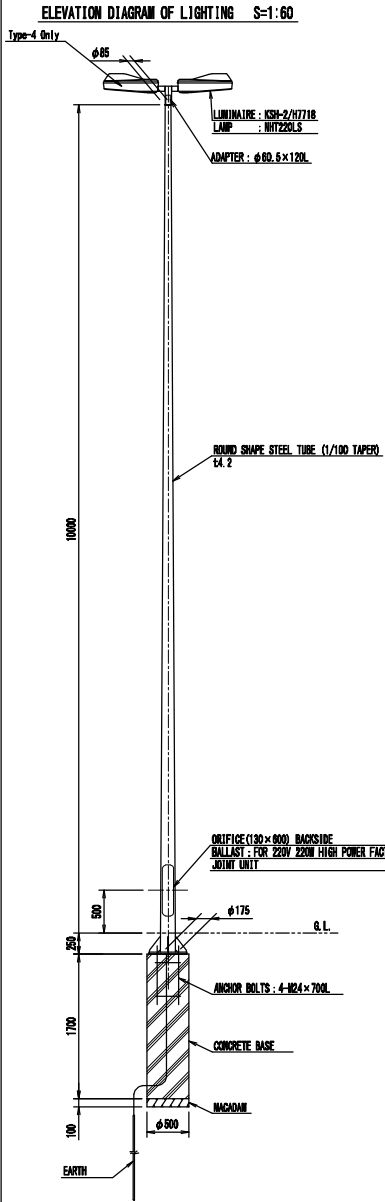


No.	PARTS	MATERIAL	Q'T	SUMMARY
1	BODY	ABS RESIN	1	BLACK
2	CORNER-BRACKETS FOR PRESSURE PROTECTION	ALUMINUM ALLOY DIE CASTING	1	2P, 30A, 15AT, 110/220V
3	FRONT-BRACKETS OVER	EP-RUBBER	1	BLACK
4	LEAD WIRE	EM-IE WIRE	1SET	2mm ² x 500mm
5	TWISTED IRON SCREW (CROSS HEAD)	STAINLESS STEEL	2	M8 x 18

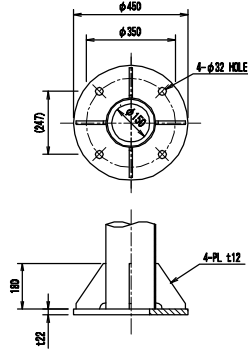
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<p>CLIENT</p> <p>Japan International Cooperation Agency (JICA)</p>	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	<p>CONSULTANT</p> <p>The Consortium of Oriental Consultants Global Co., Ltd., Central Consultants, Inc., and Asia Air Survey Co., Ltd.</p>	<p>PROJECT</p> <p>The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)</p>	<p>TITLE:</p> <p>Street Light (Type-1&2) Details</p>	<p>Scale:</p> <p>As Shown (A3)</p>	DESIGNED BY:		<p>Drawing No: E-11 SHEET No:</p>
	DIRECTOR RESPONSIBLE FOR DESIGN:									CHECKED BY:		
	SIGNATURE: DATE:									APPROVED BY:		
	STAMP:									DATE:		

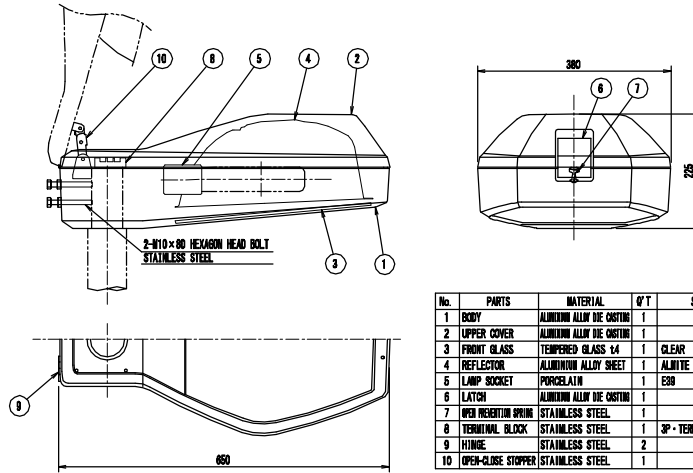
ELEVATION DIAGRAM OF LIGHTING S=1:60, 20, 10



BASE-PLATE DETAIL S=1:20

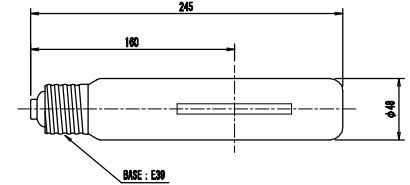


LUMINAIRES DETAIL S=1:10 (KSH-2)



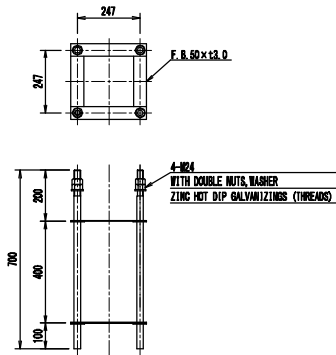
No.	PARTS	MATERIAL	Q/T	SUMMARY
1	BODY	ALUMINUM ALLOY DIE CASTING	1	
2	UPPER COVER	ALUMINUM ALLOY DIE CASTING	1	
3	FRONT GLASS	TEMPERED GLASS 14	1	CLEAR
4	REFLECTOR	ALUMINUM ALLOY SHEET	1	ALMITE TREATMENT
5	LAMP SOCKET	PORCELAIN	1	E30
6	LATCH	ALUMINUM ALLOY DIE CASTING	1	
7	OPEN RESISTION SPRING	STAINLESS STEEL	1	
8	TERMINAL BLOCK	STAINLESS STEEL	1	3P-TERMINAL SCREW IN
9	HINGE	STAINLESS STEEL	2	
10	OPEN-CLOSE STOPPER	STAINLESS STEEL	1	

LAMP DETAIL S=1:4 (HNT220LS)

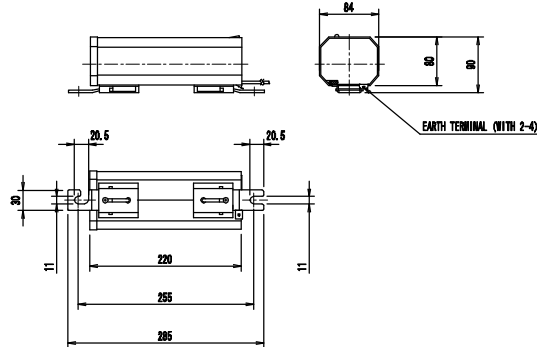


TYPE	WEIGHT (kg)	LAMP HEIGHT (mm)	LAMP VOLTAGE (V)	LAMP CURRENT (A)	WATTAGE (W)	OPERATING HOURS (h)	AVERAGE COLOR RENDERING INDEX (Ra)	AVERAGE LIFE (h)
HNT220LS	CLEAR	220	130	2.10	26,500	2100	25	24,000

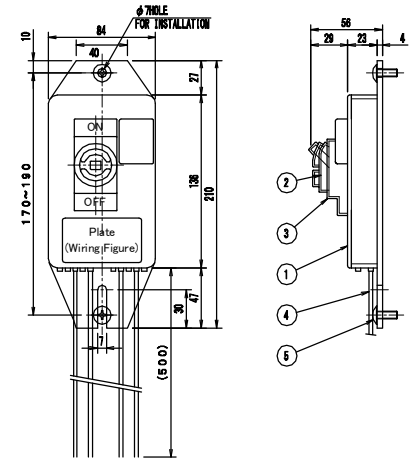
ANCHOR BOLTS DETAIL S=1:20



BALLAST DETAIL S=1:N (FOR 220V 220W)



JOINT UNIT DETAIL S=1:4 (EFTM-15A)

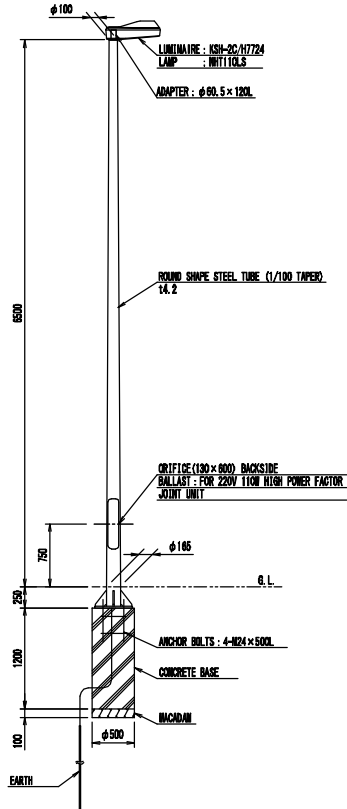


No.	PARTS	MATERIAL	Q/T	SUMMARY
1	BODY	ABS RESIN	1	BLACK
2	CIRCUIT-BREAKERS FOR OVERCURRENT PROTECTION	ALUMINUM ALLOY DIE CASTING	1	2P, 30AF, 15AT, 110/220V
3	CIRCUIT-BREAKERS COVER	EP-RUBBER	1	BLACK
4	LEAD WIRE	EN-1E WIRE	1SET	2mm ² \times 500mm
5	TURNS HEAD SCREW	STAINLESS STEEL	2	M6 \times 10

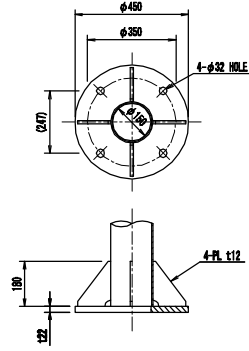
CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co. Ltd., Central Consultant Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Street Light (Type-3&4) Details	Scale: As Shown (A3)	DESIGNED BY:			Drawing No: E-12 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:									DRAWN BY:			
	SIGNATURE: DATE:									CHECKED BY:			
	STAMP:									APPROVED BY:			

ELEVATION DIAGRAM OF LIGHTING S=1:30, 10, 5

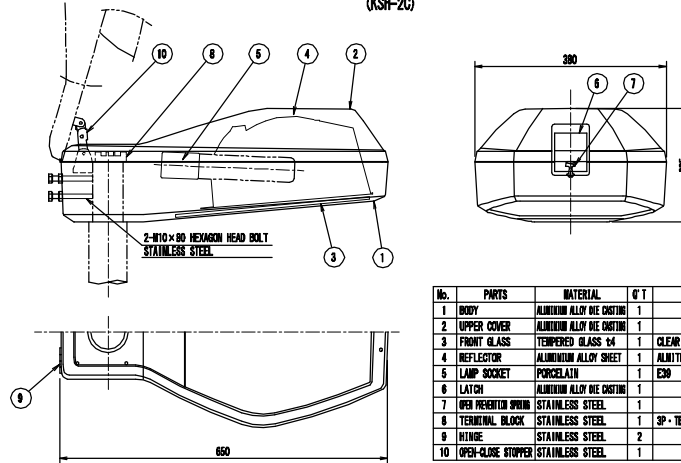
ELEVATION DIAGRAM OF LIGHTING S=1:60



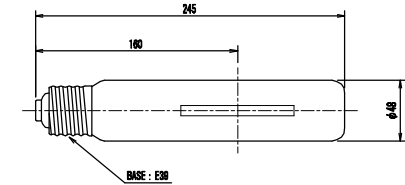
BASE-PLATE DETAIL S=1:20



LUMINAIRES DETAIL S=1:10 (KSH-20C)



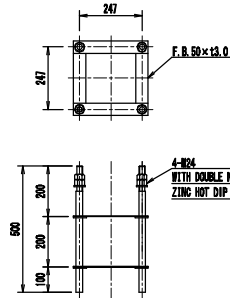
LAMP DETAIL S=1:4 (NHT110LS)



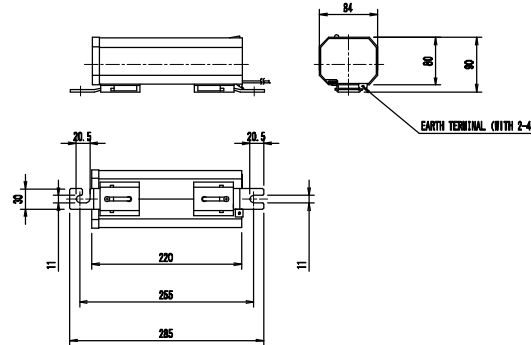
TYPE	OPERATION	LAMP WATTAGE (W)	LAMP VOLTAGE (V)	LAMP CURRENT (A)	INITIAL NUMBER (lm)	COLOR TEMPERATURE (K)	AVERAGE COLOR RENDERING INDEX (Ra)	AVERAGE LIFE (h)
NHT110LS	CLEAR	110	116	1.16	11,000	2100	26	24,000

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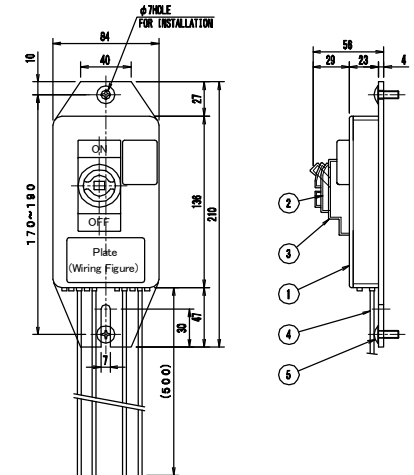
ANCHOR BOLTS DETAIL S=1:20



BALLAST DETAIL S=1:N (FOR 220V 110W)



JOINT UNIT DETAIL S=1:2 (EFMN-15A)



No.	PARTS	MATERIAL	Q'T	SUMMARY
1	BODY	ABS RESIN	1	BLACK
2	CURRENT-BREAKERS FOR OVERCURRENT PROTECTION	ALUMINIUM ALLOY DIE CASTING	1	2P, 30AF, 15AT, 110/220V
3	CURRENT-BREAKERS COVER	EP-RUBBER	1	BLACK
4	LEAD WIRE	EM-IE WIRE	1SET	2mm ² x 500mm
5	TURNOVER HEAD SCREEN (RING RECES)	STAINLESS STEEL	2	φ60x16

CLIENT
Japan International Cooperation Agency (JICA)

CLIENTS APPROVAL:
DIRECTOR RESPONSIBLE FOR DESIGN:
SIGNATURE: _____ DATE: _____
STAMP:

CONSULTANT
The Consortium of
Oriental Consultants Global Co., Ltd.,
Central Consultants Inc.,
and
Asia Air Survey Co., Ltd.

PROJECT
The Preparatory Survey for
Improvement of SOUBRA Intersection
(Outline Design)

TITLE:
Street Light (Type-5) Detail

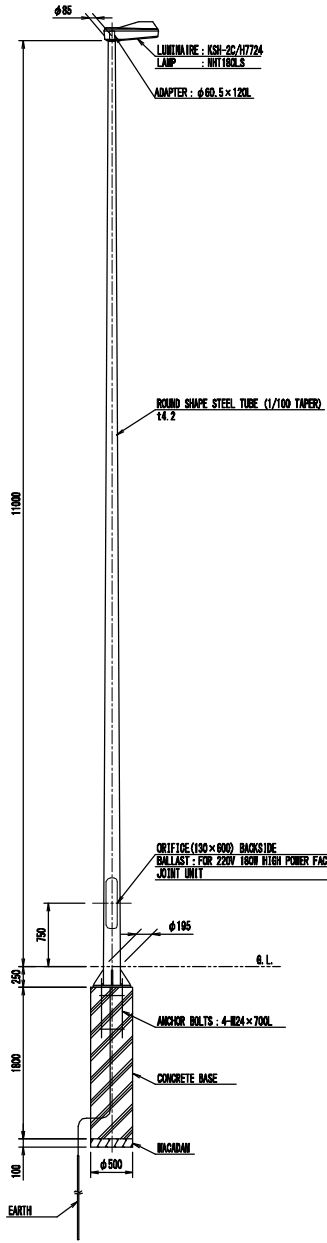
Scale:
1:1000 (A3)

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
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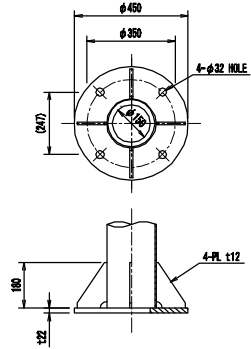
Drawing No: E-13
SHEET No:

ELEVATION DIAGRAM OF LIGHTING S=1:60

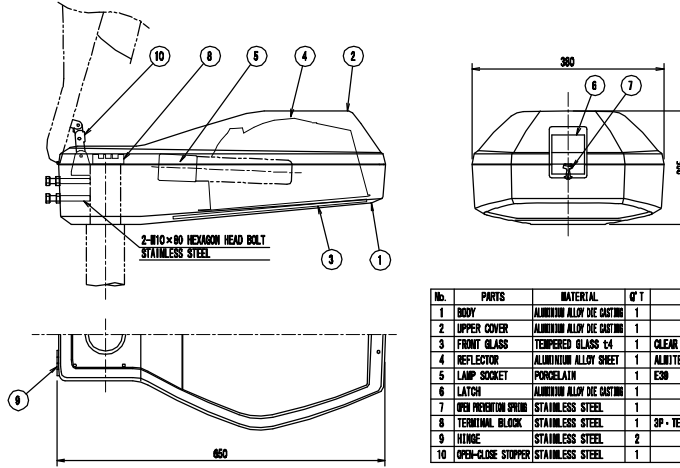
ELEVATION DIAGRAM OF LIGHTING S=1:60, 20, 10



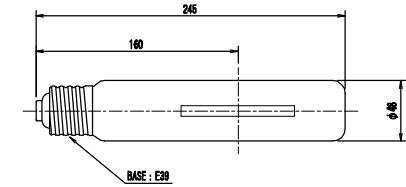
BASE-PLATE DETAIL S=1:20



LUMINAIRES DETAIL S=1:10 (KSH-2C)

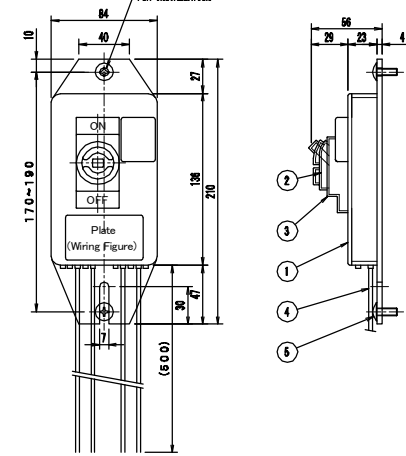


LAMP DETAIL S=1:4 (MH180LS)



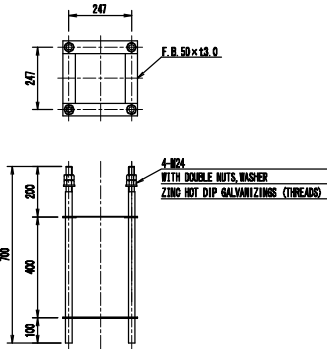
TYPE	REF. NO. (mm)	LAMP VOLTAGE (V)	LAMP WATTAGE (W)	LAMP CURRENT (A)	MINIMUM LUMEN (lm)	OPERATING TEMPERATURE (K)	BEAM ANGLE (°)	AVERAGE LIFE (h)
MH180LS	CLEAR	180	120	1.90	20,000	2100	25	24,000

JOINT UNIT DETAIL S=1:4 (EFMN-15A)

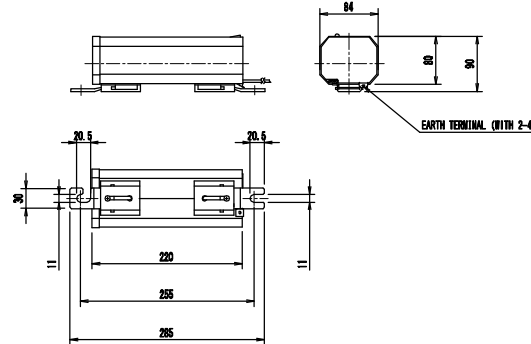


No.	PARTS	MATERIAL	Q/T	SUMMARY
1	BODY	ABS RESIN	1	BLACK
2	CONDUIT-HEADERS FOR OPEN-CLOSE PREVENTION	ALUMINIUM ALLOY DIE CASTING	1	2P, 30AF, 15AT, 110/220V
3	CONDUIT-HEADERS COVER	EP-RUBBER	1	BLACK
4	LEAD WIRE	EP-1E WIRE	1SET	2mm ² x 500mm
6	THICKEN HEAD SCREW (WITH WEDGES)	STAINLESS STEEL	2	M6 x 16

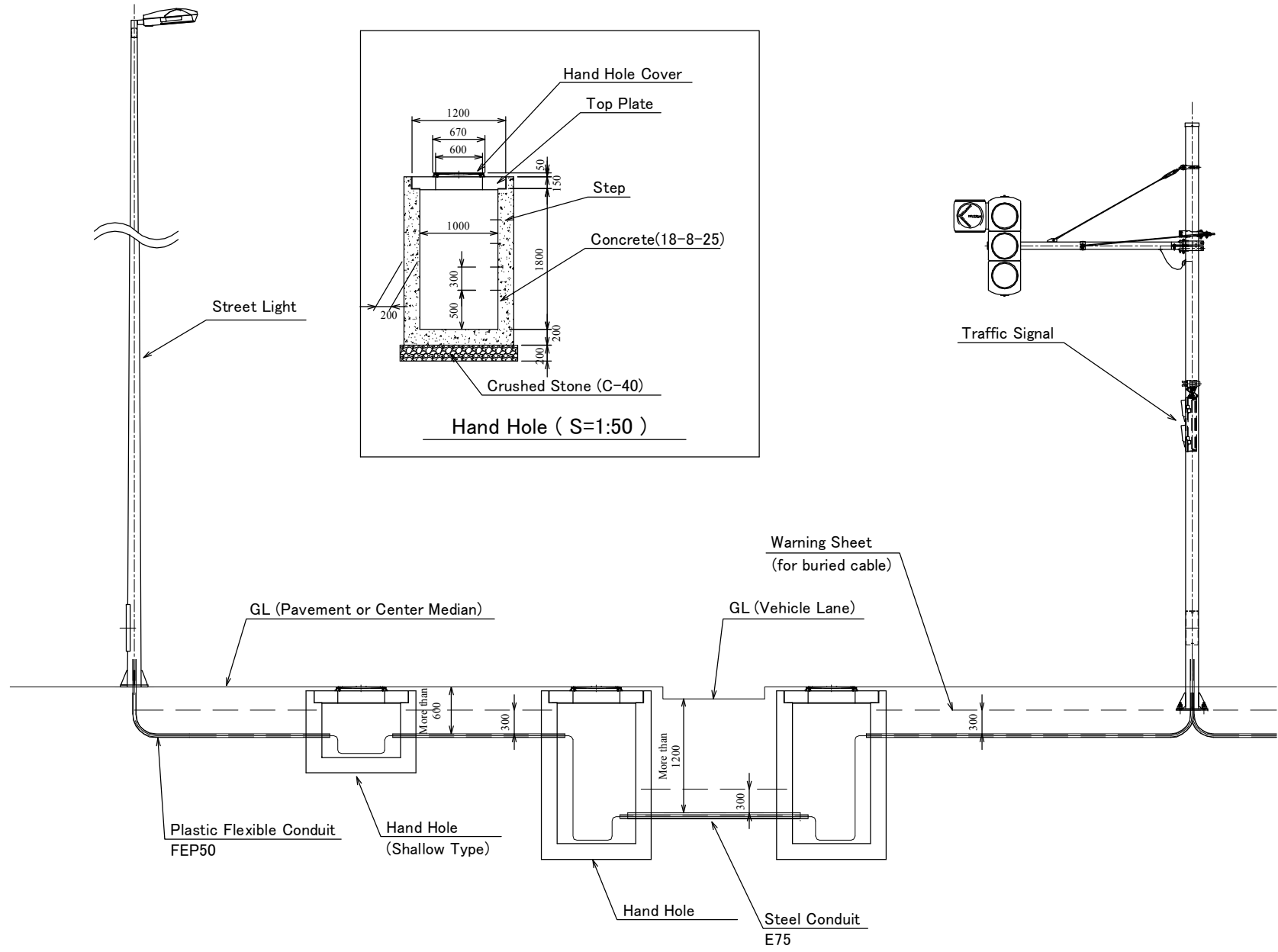
ANCHOR BOLTS DETAIL S=1:20



BALLAST DETAIL S=1:N (FOR 220V 180W)



CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd., Central Consultants, Inc., and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE: Street Light (Type-6) Detail	Scale: As Shown (A3)	DESIGNED BY:		Drawing No.: E-14 SHEET No.:
	DIRECTOR RESPONSIBLE FOR DESIGN:									CHECKED BY:		
	SIGNATURE: DATE:									APPROVED BY:		
	STAMP:									DATE:		



CLIENT Japan International Cooperation Agency (JICA)	CLIENTS APPROVAL:	REVISION	DESCRIPTION	BY	DATE	CONSULTANT The Consortium of Oriental Consultants Global Co., Ltd, Central Consultant Inc, and Asia Air Survey Co., Ltd.	PROJECT The Preparatory Survey for Improvement of SOUBRA Intersection (Outline Design)	TITLE:	Scale:	DESIGNED BY:			Drawing No: E-15 SHEET No:
	DIRECTOR RESPONSIBLE FOR DESIGN:							Cable Connection & Hand Hole	Non, 1:50 (A3)	DRAWN BY:			
	SIGNATURE: DATE:								CHECKED BY:				
	STAMP:								APPROVED BY:				
									DATE:				