

**THE SOLOMON ISLANDS
MINISTRY OF INFRASTRUCTURE DEVELOPMENT**

**OUTLINE DESIGN DRAWINGS
FOR**

**THE PREPARATORY SURVEY ON
THE PROJECT FOR
UPGRADING OF THE KUKUM HIGHWAY
IN THE SOLOMON ISLANDS**

AUGUST 2014

**JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL**

**THE PREPARATORY SURVEY ON THE PROJECT FOR
UPGRADING OF THE KUKUM HIGHWAY IN THE SOLOMON ISLANDS**

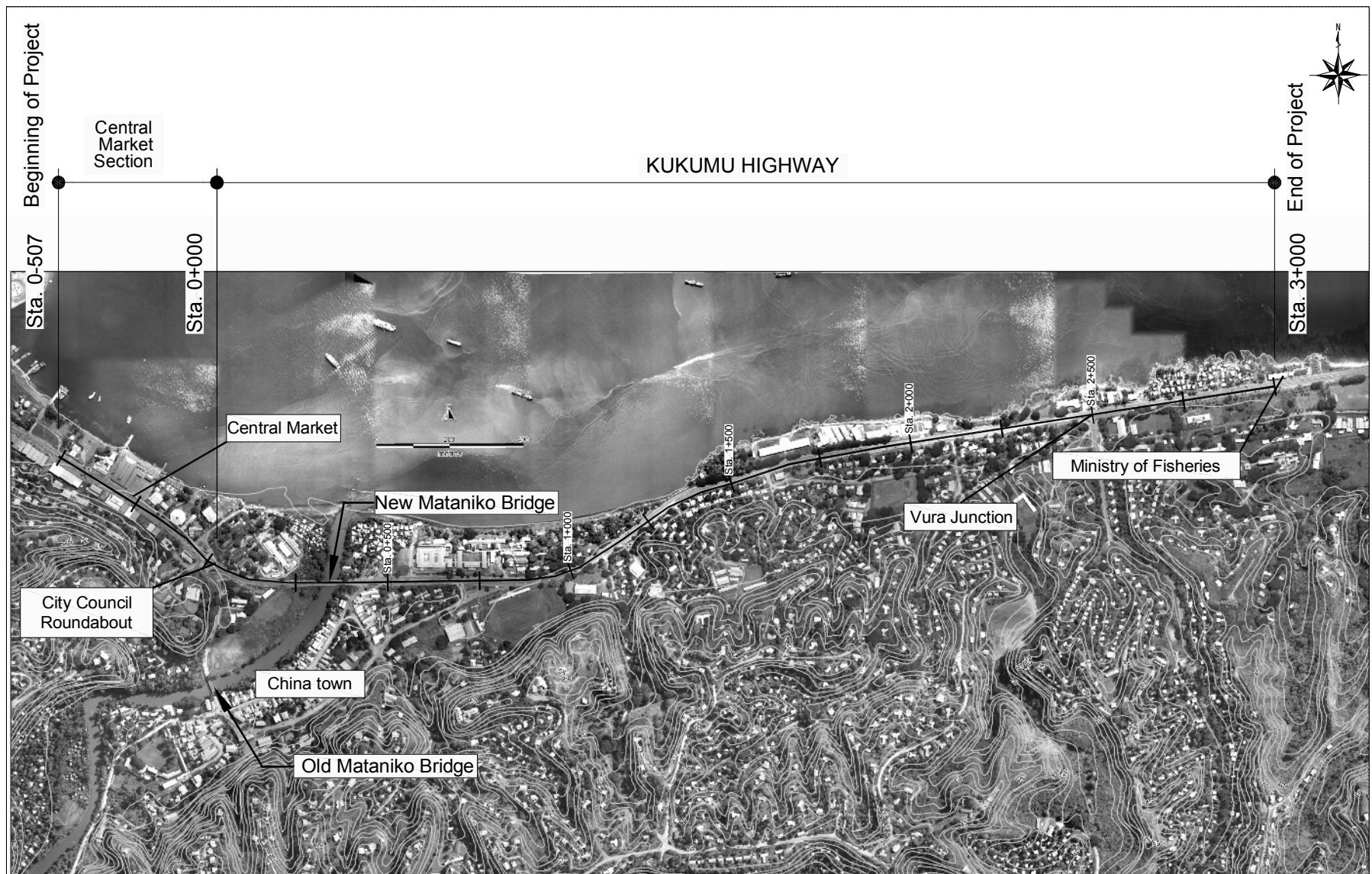
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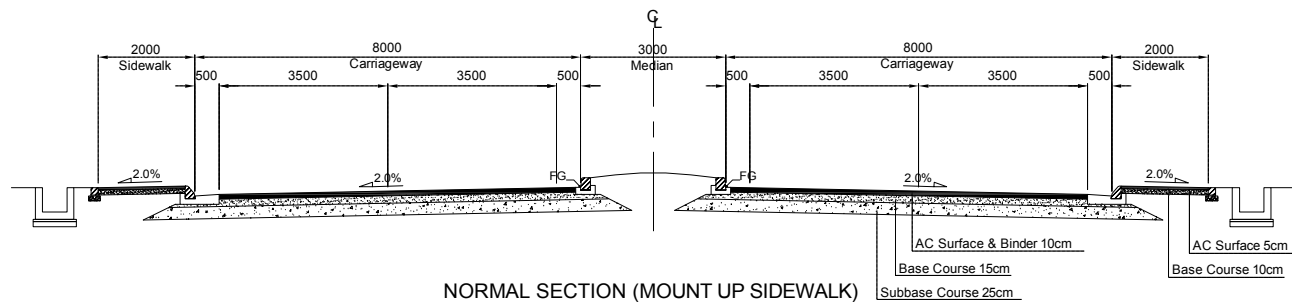
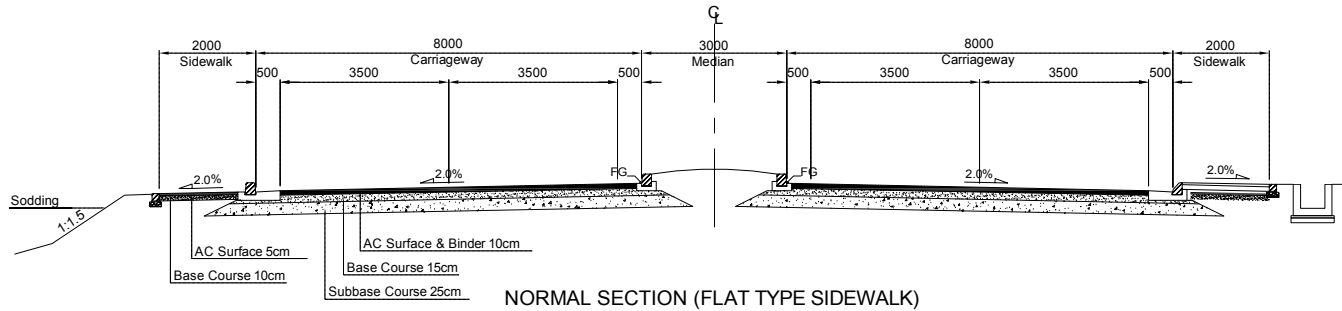
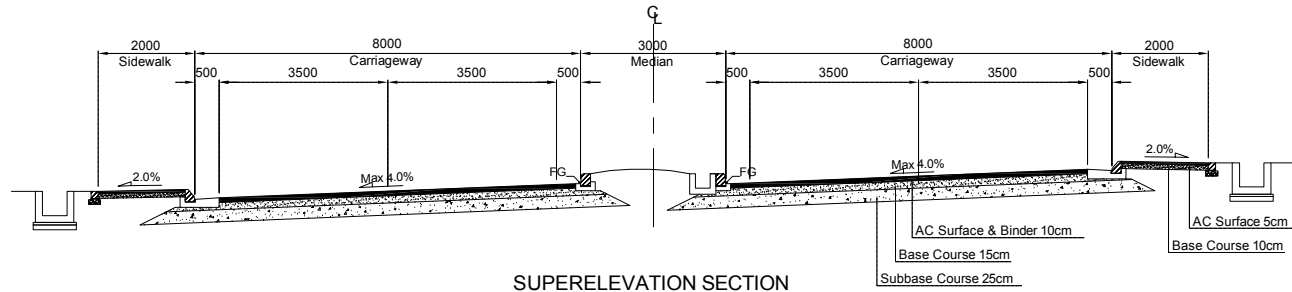
TOTAL 98 SHEETS

CLASSIFICATION		ABBREVIATION	DESCRIPTION	DRAWING NO.	CLASSIFICATION		ABBREVIATION	DESCRIPTION	DRAWING NO.	
CURBS	CURB STONE	CS-200A	For curb between carriageway and sidewalk for mounted type	CU-01	DRAINAGE	LINE DITCH	U1-300	Concrete ditch W300 H300	DR-01	
		CS-200B	For curb between carriageway and sidewalk for sloped sidewalk				U1-300C	Concrete ditch W300 H300 with concrete cover	DR-03	
		CS-200C	For curb between carriageway and sidewalk for flat type				U1-300G	Concrete ditch W300 H300 with grating cover	DR-05	
		CS-50	For sidewalk or crosswalk				U2-300	Concrete ditch W500 H300	DR-01	
		CS-50A	For sidewalk or crosswalk				U2-300C	Concrete ditch W500 H300 with concrete cover	DR-03	
		CS-M-200	For median strip				U2-300G	Concrete ditch W500 H300 with grating cover	DR-05	
		CS-20A	For crosswalk	CU-02			U-400	Concrete ditch W500 H400	DR-01	
		CS-20B	For crosswalk				U-400C	Concrete ditch W500 H400 with concrete cover	DR-03	
		CS-M-250	For boundary between carriageway and sidewalk				U-400G	Concrete ditch W500 H400 with grating cover	DR-05	
		CS-150A	For sidewalk				U-500	Concrete ditch W500 H500	DR-01	
		CS-150B	For boundary between carriageway and bus bay				U-500C	Concrete ditch W500 H500 with concrete cover	DR-03	
		CS-150C	For boundary between bus stop and sidewalk at a bus bay				U-720	Concrete ditch W500 H720	DR-05	
		CS-150D	For sloped sidewalk or crosswalk	CU-03			U-720C	Concrete ditch W500 H720 with concrete cover	DR-04	
		CS-150E	For sloped sidewalk or crosswalk				U-720G	Concrete ditch W500 H720 with grating cover	DR-05	
		CS-BSM-A	For boundary between carriageway and bus bay				U-800	Concrete ditch W800 H800	DR-02	
		CS-BSM-B	For boundary between carriageway and bus bay				U-800S	Concrete ditch W800 H800 with filter pipe	DR-06	
		VB	For boundary between sidewalk and green belt				CU-01	U-800C	Concrete ditch W800 H800 with concrete cover	DR-04
								U-800CS	Concrete ditch W800 H800 with concrete cover and filter pipe	DR-06
		DRAINAGE	CONCRETE PIPE CULVERT	DP400			Concrete pipe with 360 degree concrete base, Diameter=400mm	DR-07	U-1000	Concrete ditch W1000 H1000
DP600	Concrete pipe with 360 degree concrete base, Diameter=600mm			U-1000S	Concrete ditch W1000 H1000 with filter pipe	DR-06				
DP800	Concrete pipe with 360 degree concrete base, Diameter=800mm			DR-08	U-1000C	Concrete ditch W1000 H1000 with concrete cover	DR-04			
DP1000	Concrete pipe with 360 degree concrete base, Diameter=1000mm				U-1000CS	Concrete ditch W1000 H1000 with concrete cover and filter pipe	DR-06			
GUARDRAIL	-	Gr-B-E	Earth type guardrail	GR-01						

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : ABBREVIATION	Drawing No.	AB-01
				SCALE	-
				DATE	AUG. 2014

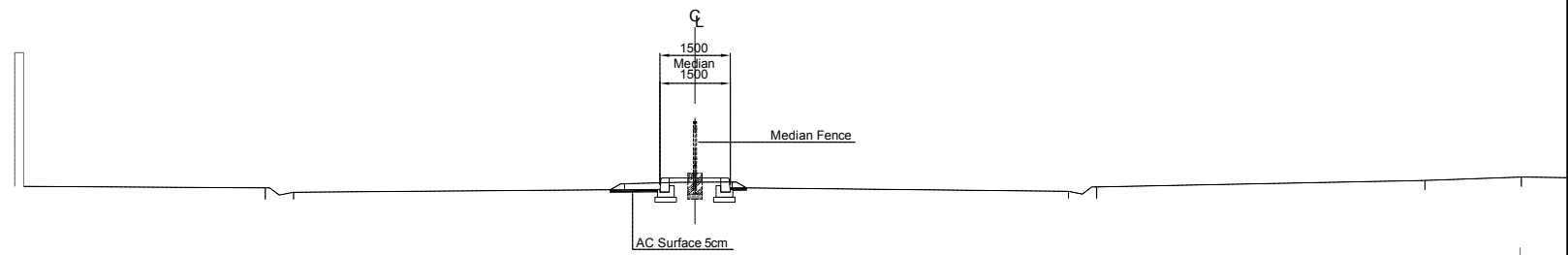


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : LOACATION MAP	Drawing No.	LM-1
				SCALE	1/100,000
				DATE	AUG. 2014

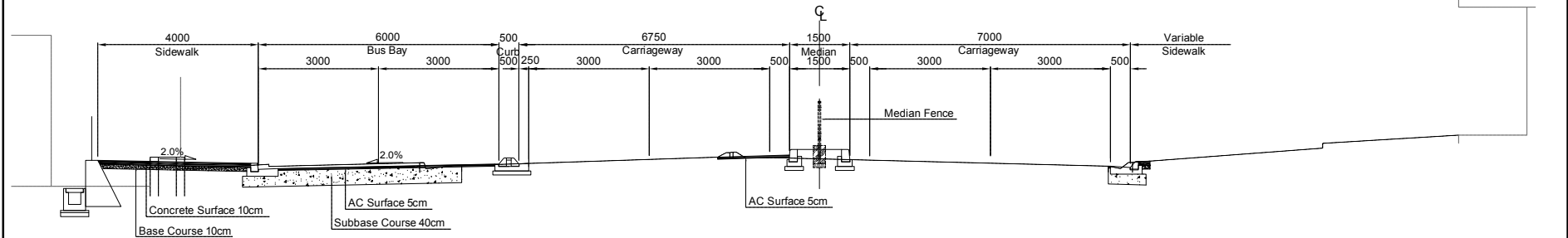


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : TYPICAL CROSS SECTION (KUKUM HIGHWAY)	
			Drawing No.	TC-01
			SCALE	S=1/100
			DATE	AUG. 2014

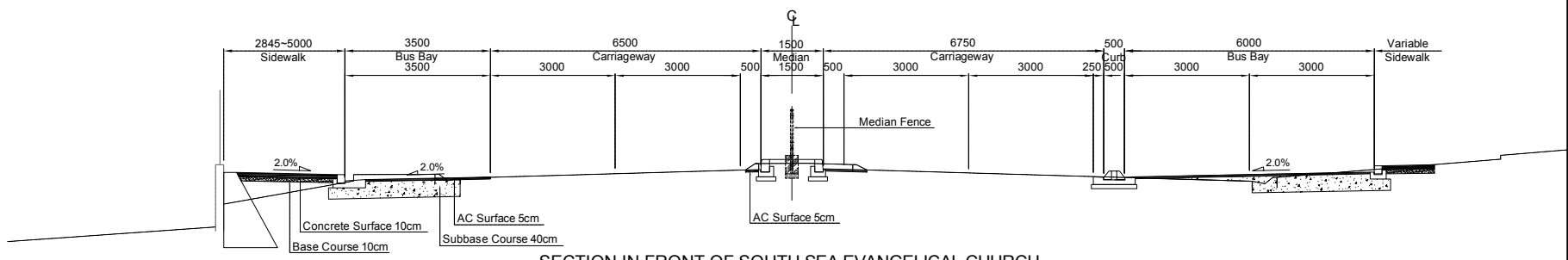
9-ITV



SECTION IN FRONT OF HYUNDAI MALL



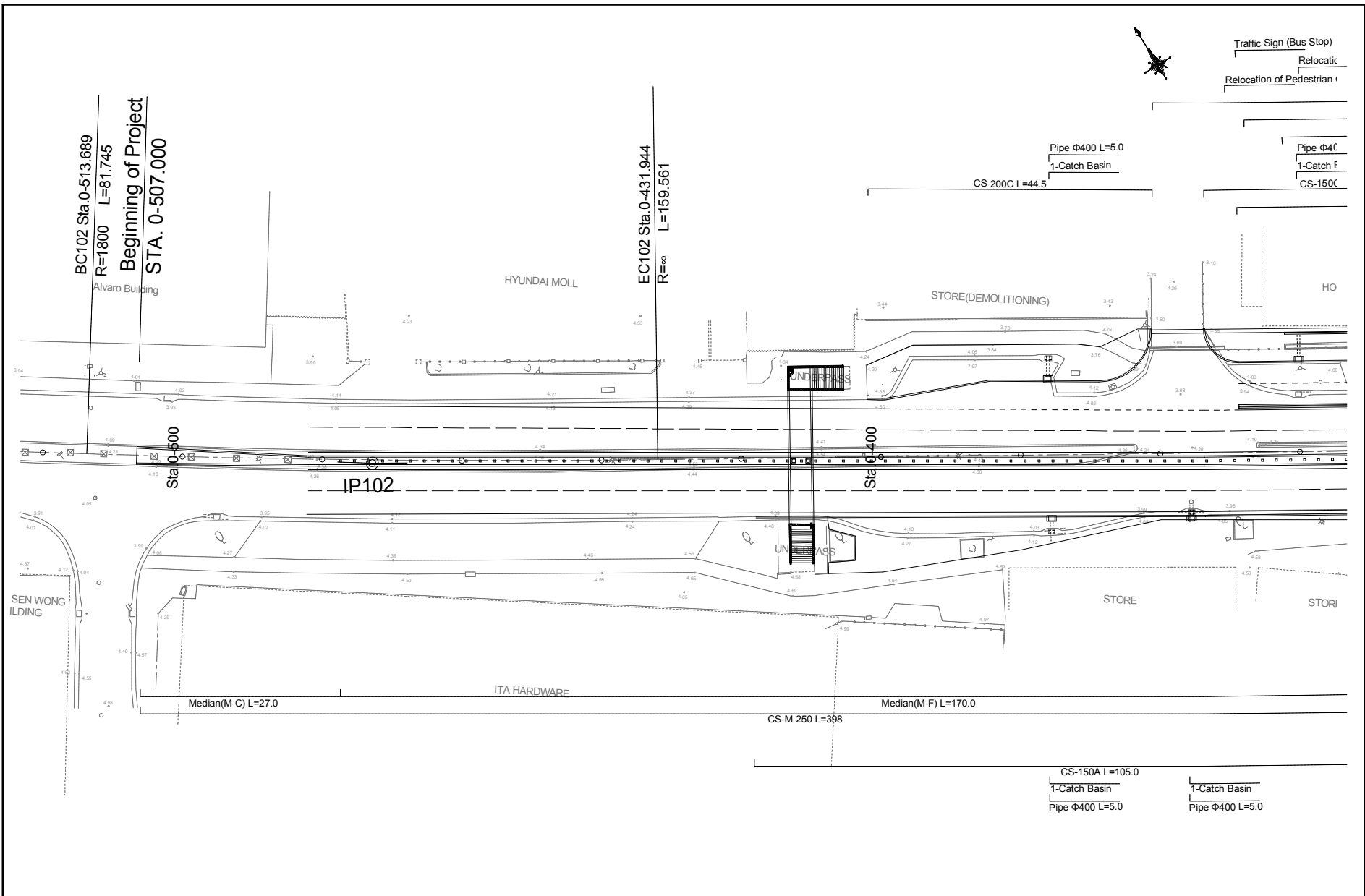
SECTION IN FRONT OF CENTRAL MARKET



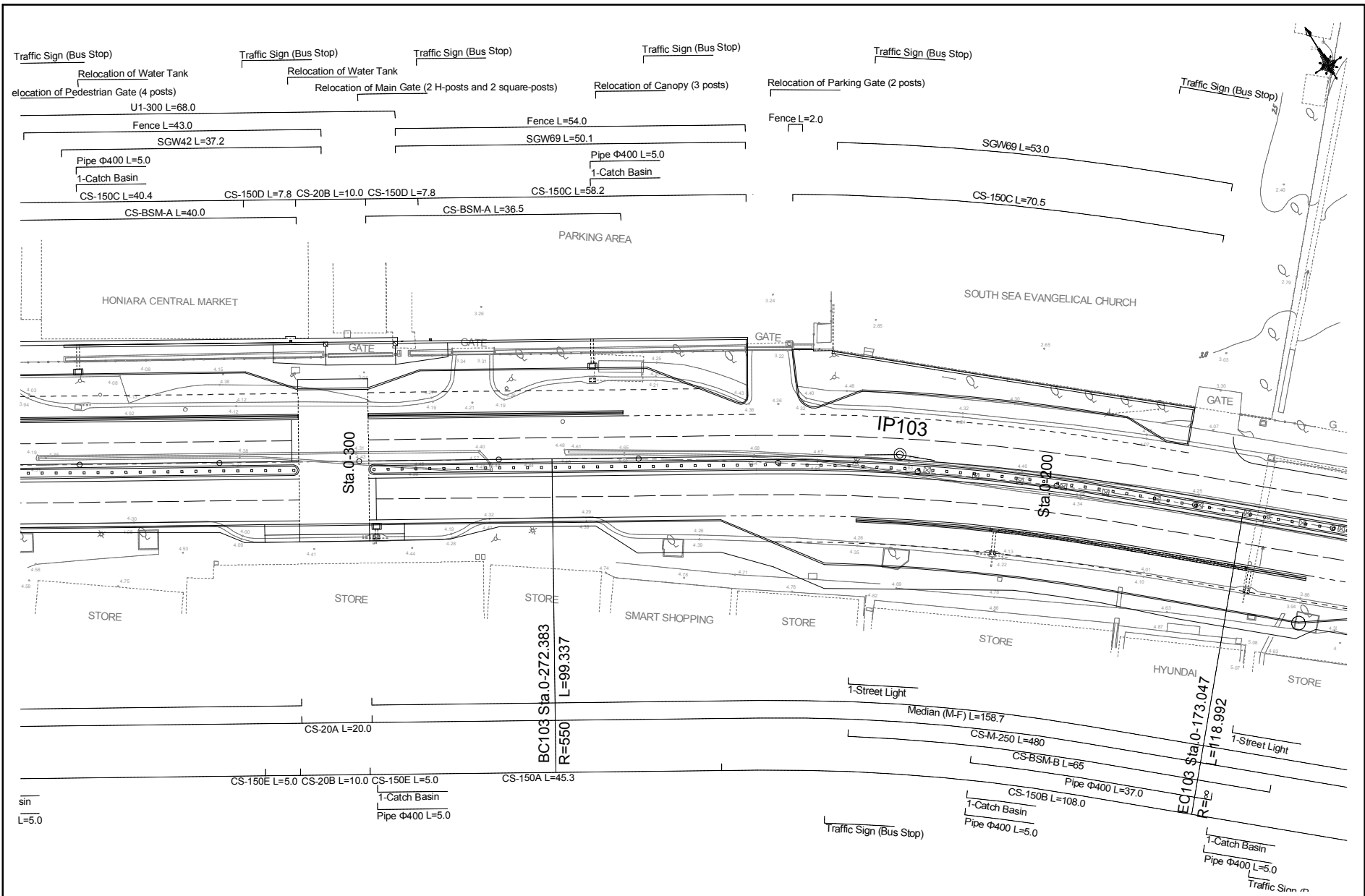
SECTION IN FRONT OF SOUTH SEA EVANGELICAL CHURCH

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : TYPICAL CROSS SECTION (CENTRAL MARKET SECTION)	Drawing No.	TC-02
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				DATE	AUG. 2014

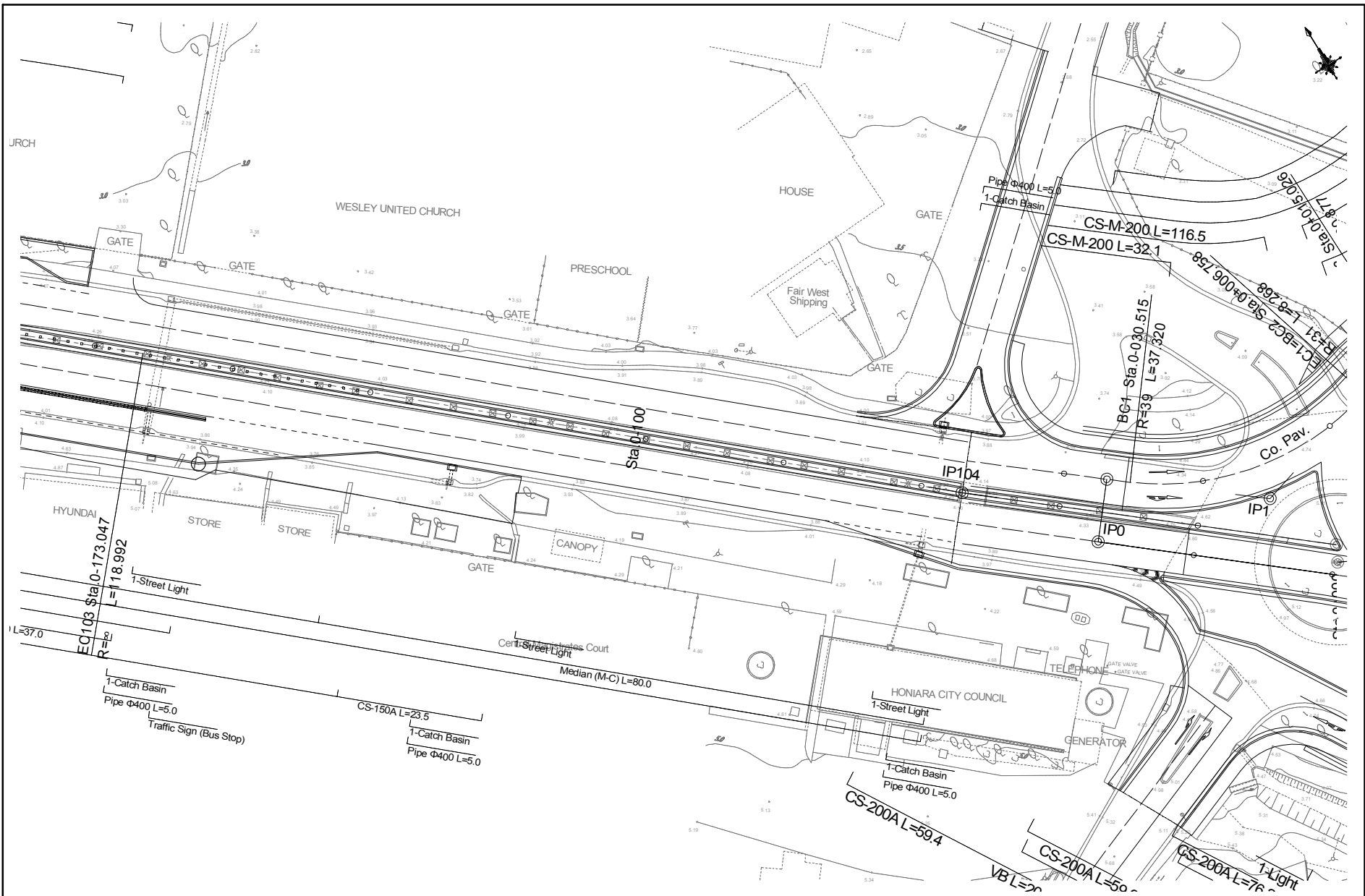
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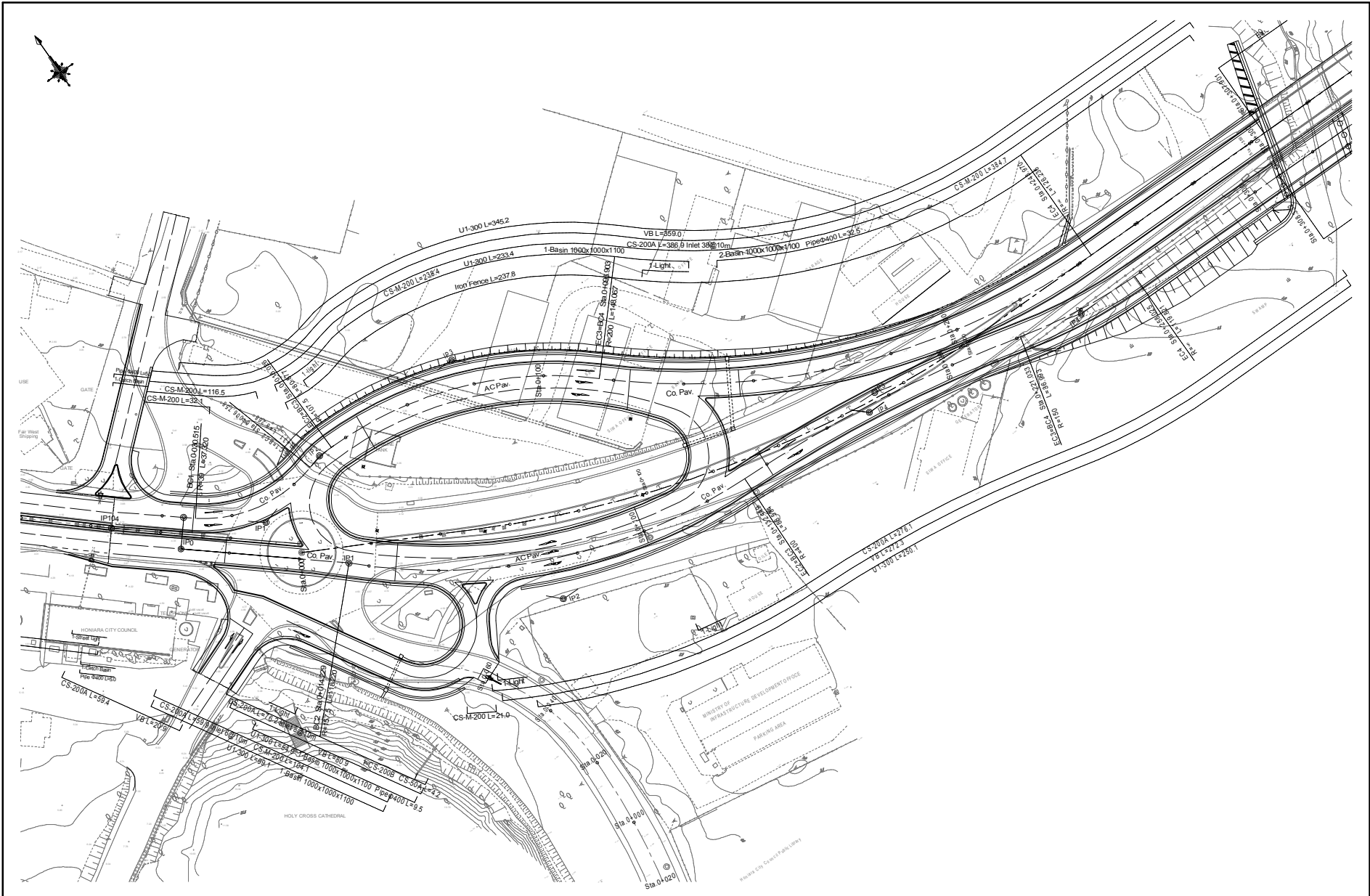
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PLAN	Drawing No.	PL-01
				(STA. 0-500 ~ STA. 0-340)	SCALE	S=1/500
					DATE	AUG. 2014



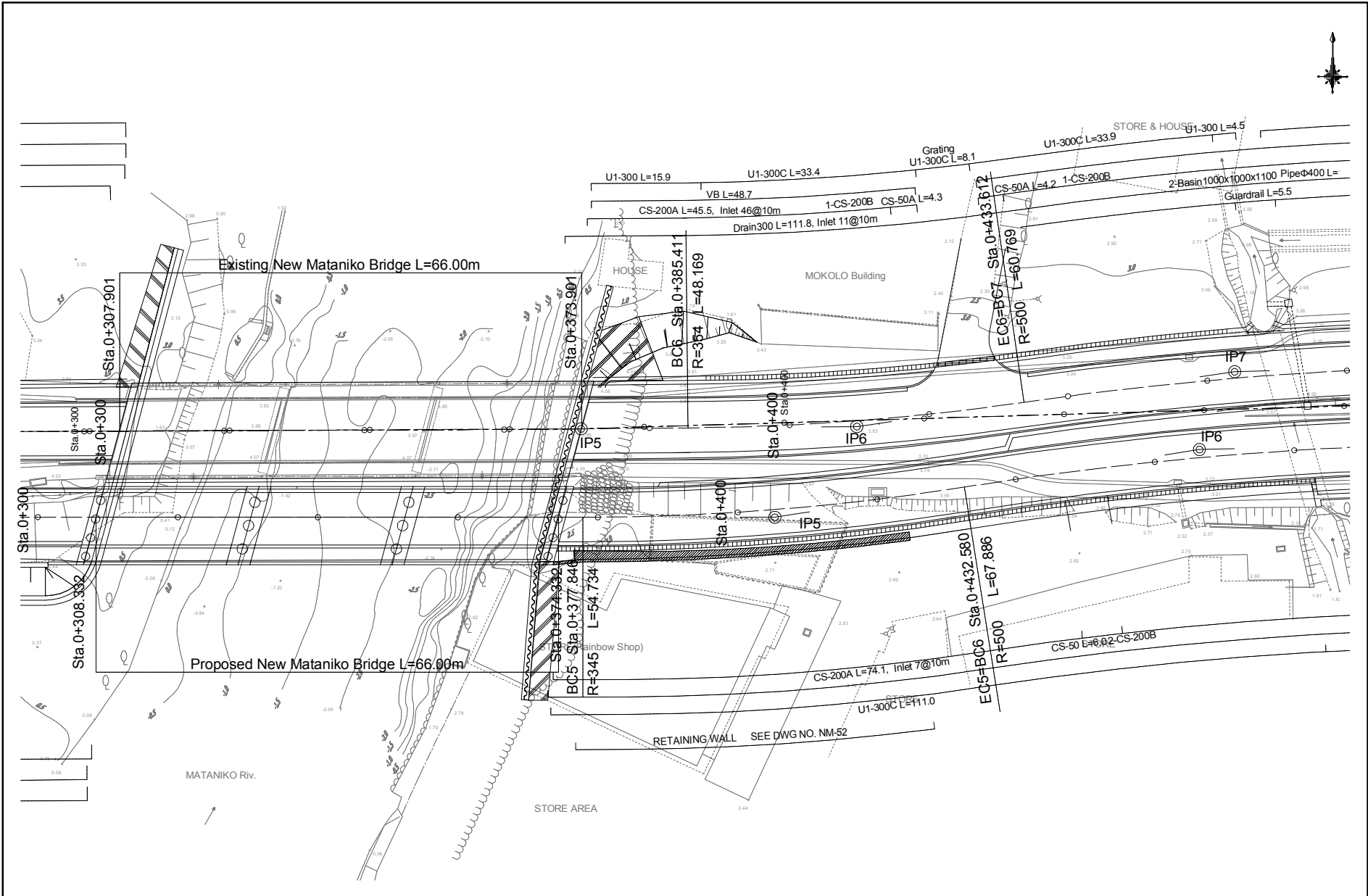
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				SCALE	S=1/500
				DATE	AUG. 2014



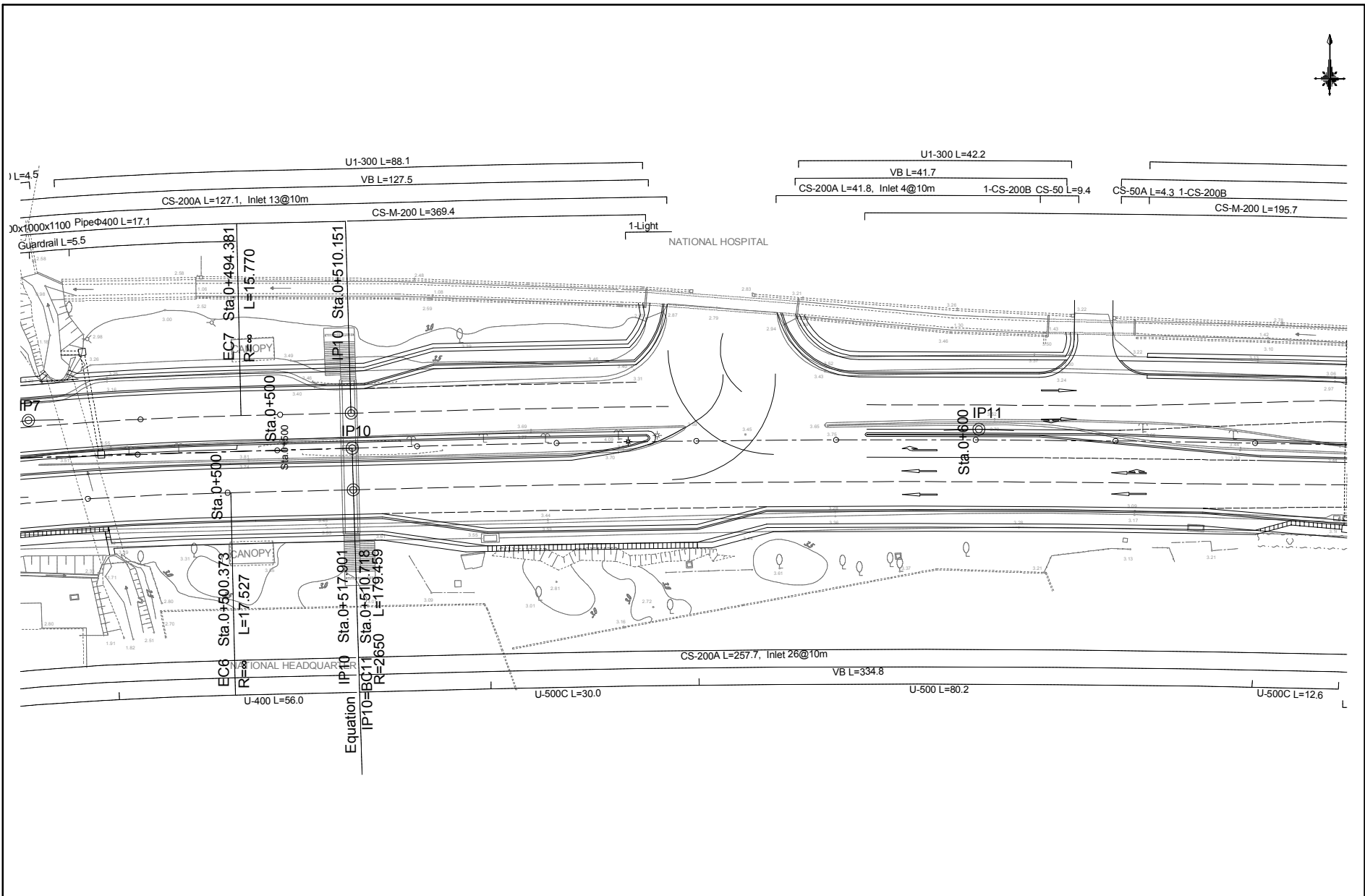
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PLAN	Drawing No.	PL-03
				(STA. 0-160 ~ STA. 0-060)	SCALE	S=1/500
					DATE	AUG. 2014



<p>MINISTRY OF INFRASTRUCTURE DEVELOPMENT</p>	<p>JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL</p>	<p>THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS</p>	<p>TITLE : PLAN (STA. 0+060 ~ STA. 0+290)</p>	<table border="1"> <tr> <td>Drawing No.</td> <td>PL-04</td> </tr> <tr> <td>SCALE</td> <td>S=1/1000</td> </tr> <tr> <td>DATE</td> <td>AUG. 2014</td> </tr> </table>	Drawing No.	PL-04	SCALE	S=1/1000	DATE	AUG. 2014
Drawing No.	PL-04									
SCALE	S=1/1000									
DATE	AUG. 2014									



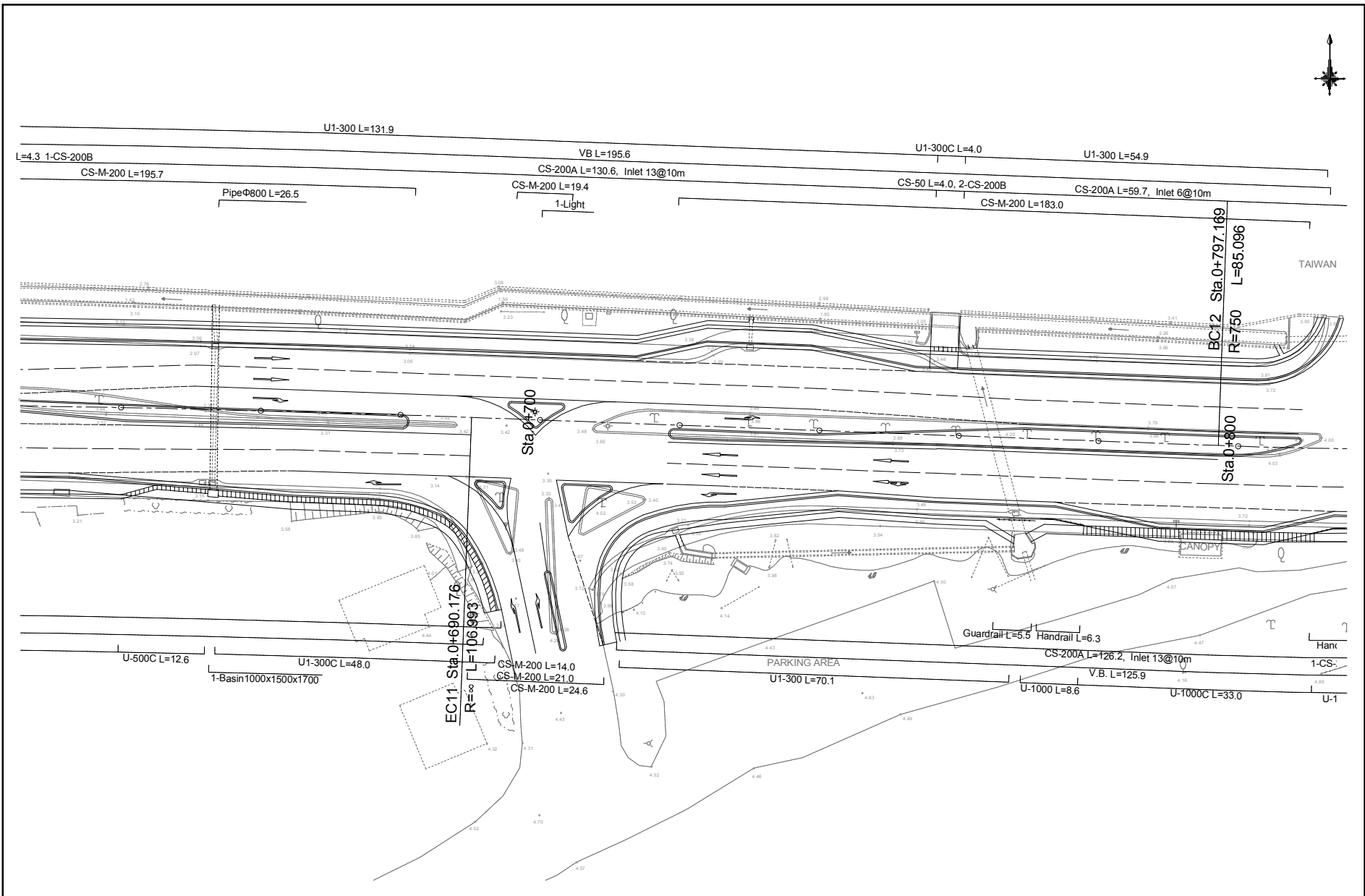
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PLAN	Drawing No.	PL-05
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					DATE	AUG. 2014



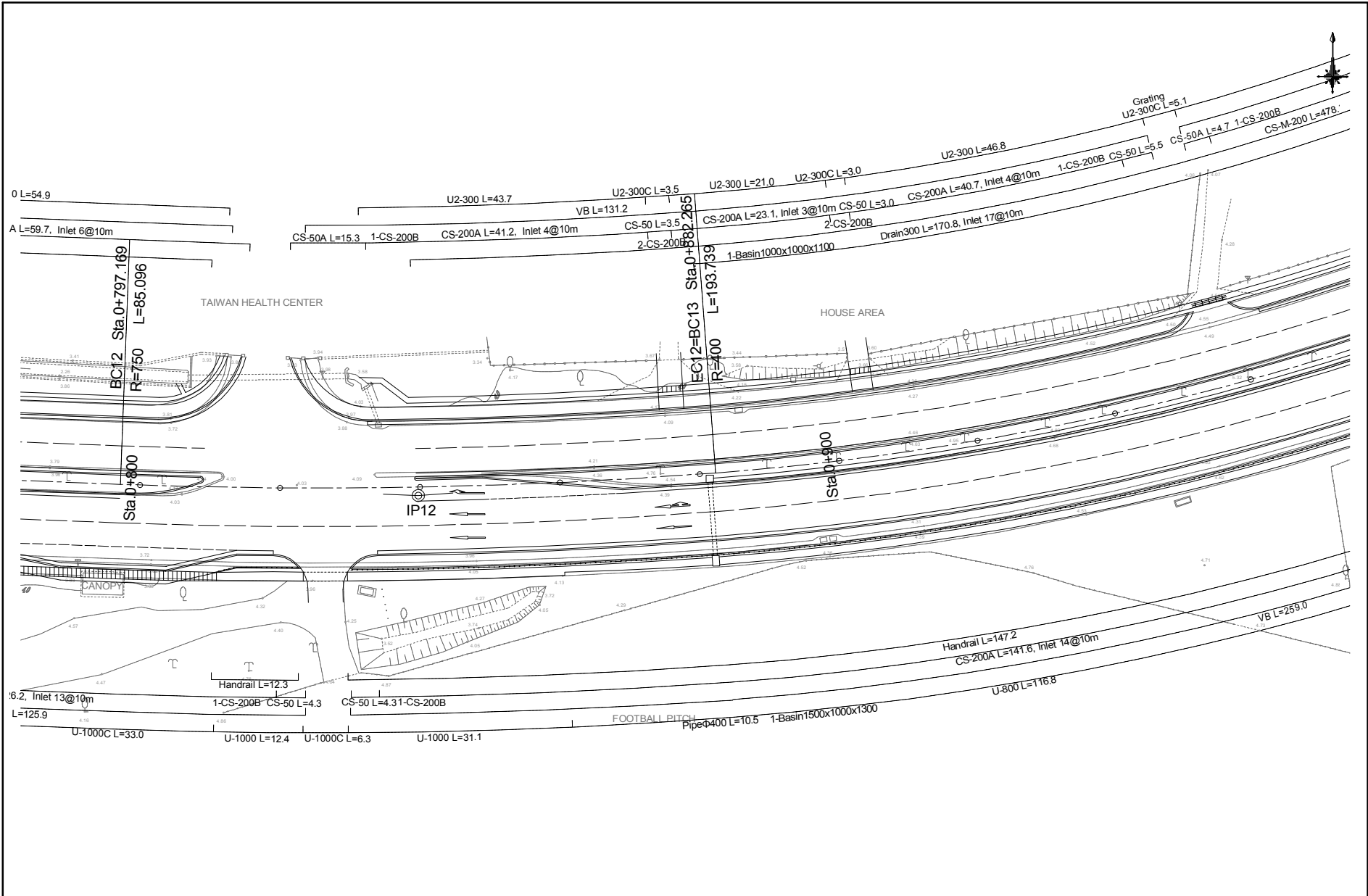
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PLAN (STA. 0+470 ~ STA. 0+640)	
			Drawing No.	PL-06
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			DATE	AUG. 2014



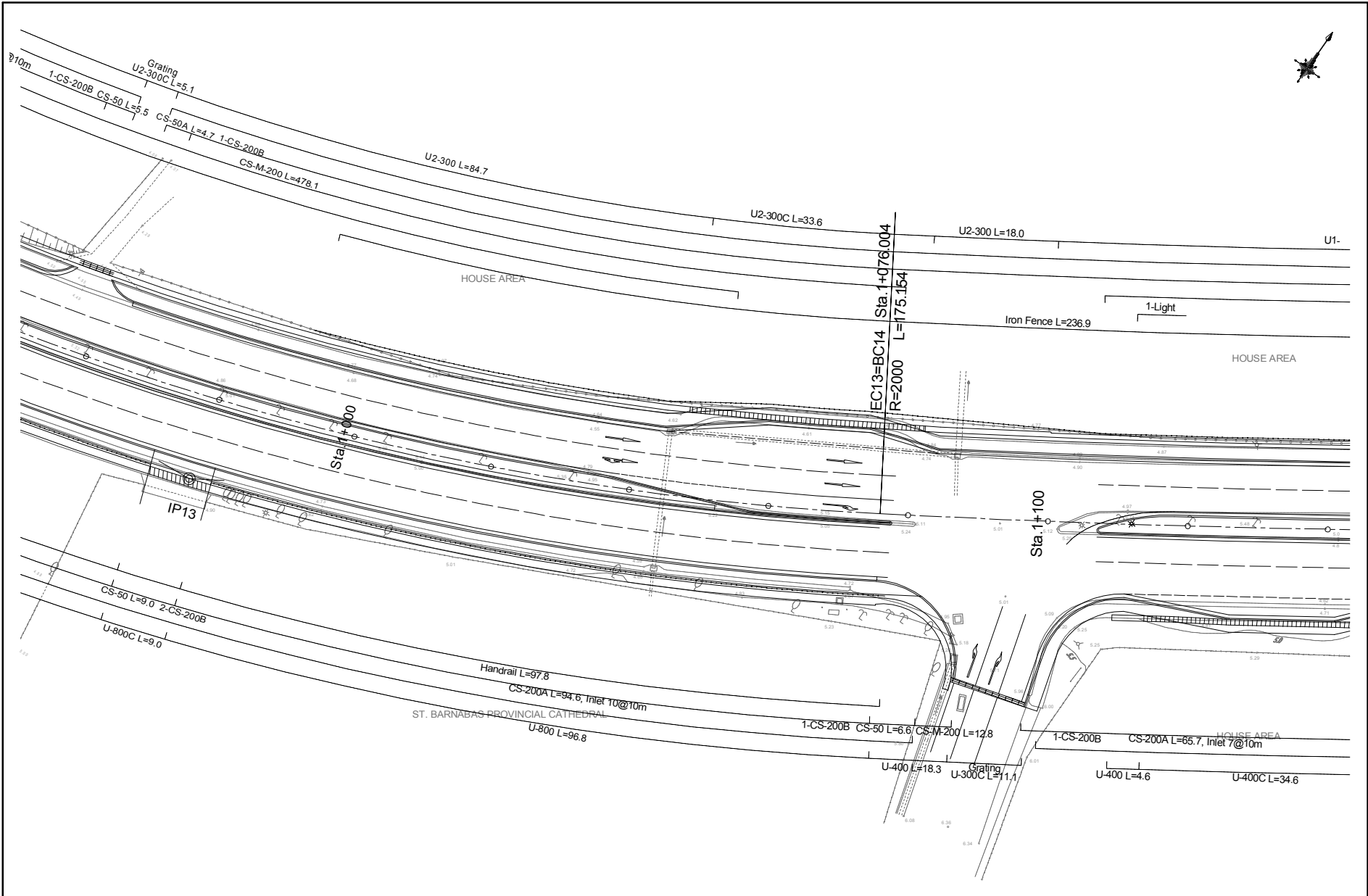
A11-13



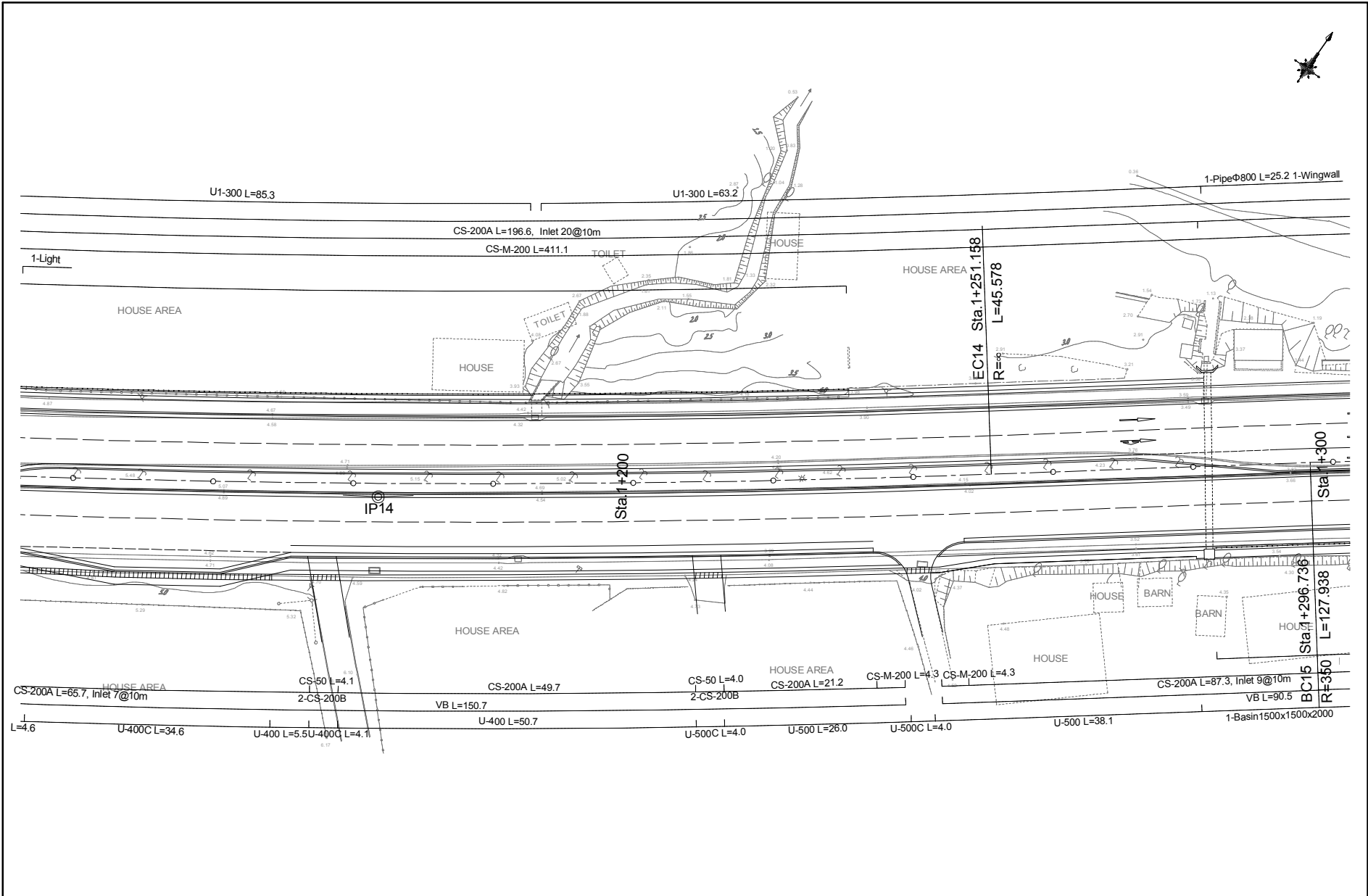
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PLAN	Drawing No.	PL-07
				(STA. 0+640 ~ STA. 0+800)	SCALE	S=1/500
					DATE	AUG. 2014



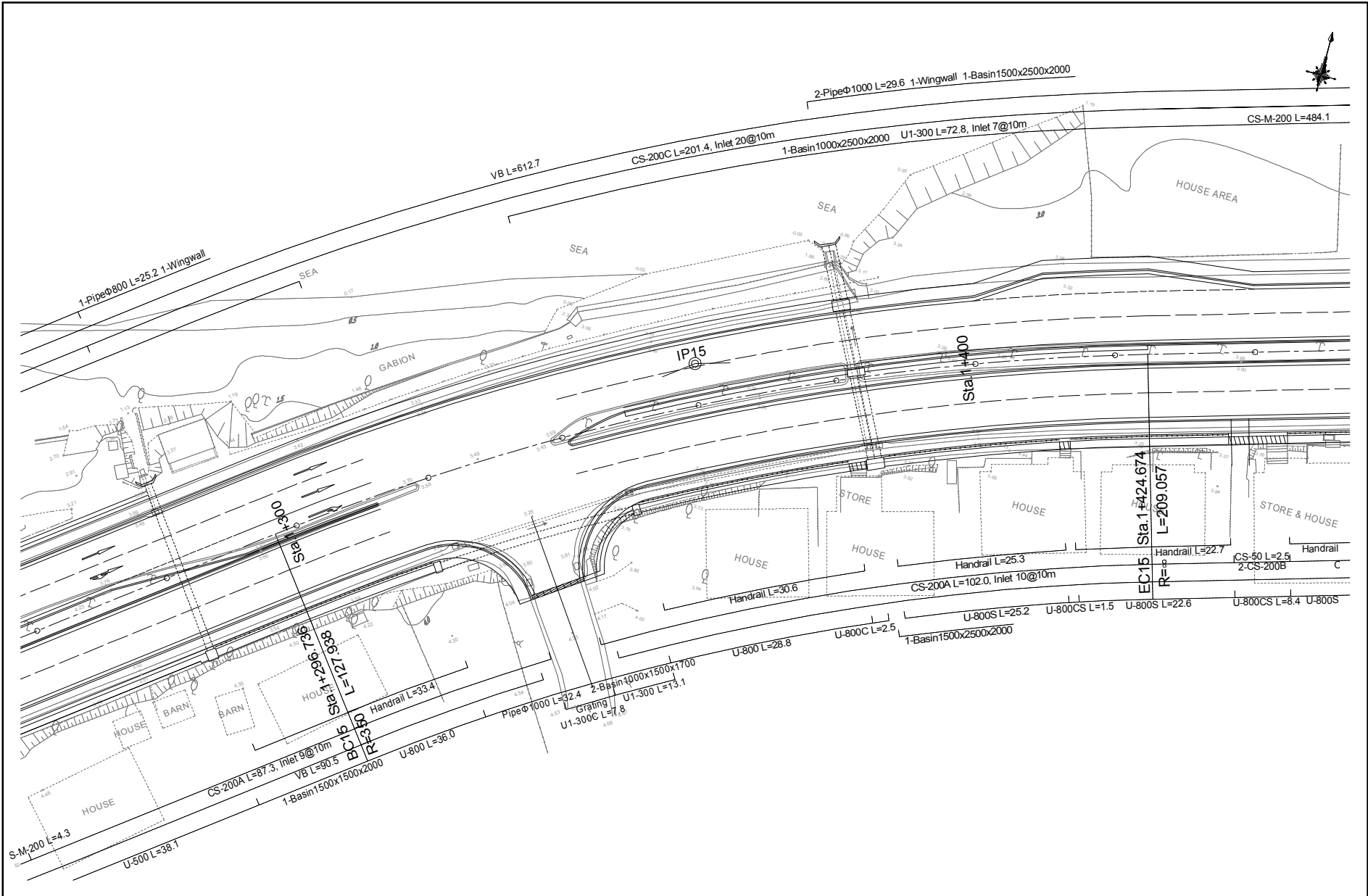
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PLAN	Drawing No.	PL-08
				(STA. 0+800 ~ STA. 0+960)	SCALE	S=1/500
					DATE	AUG. 2014



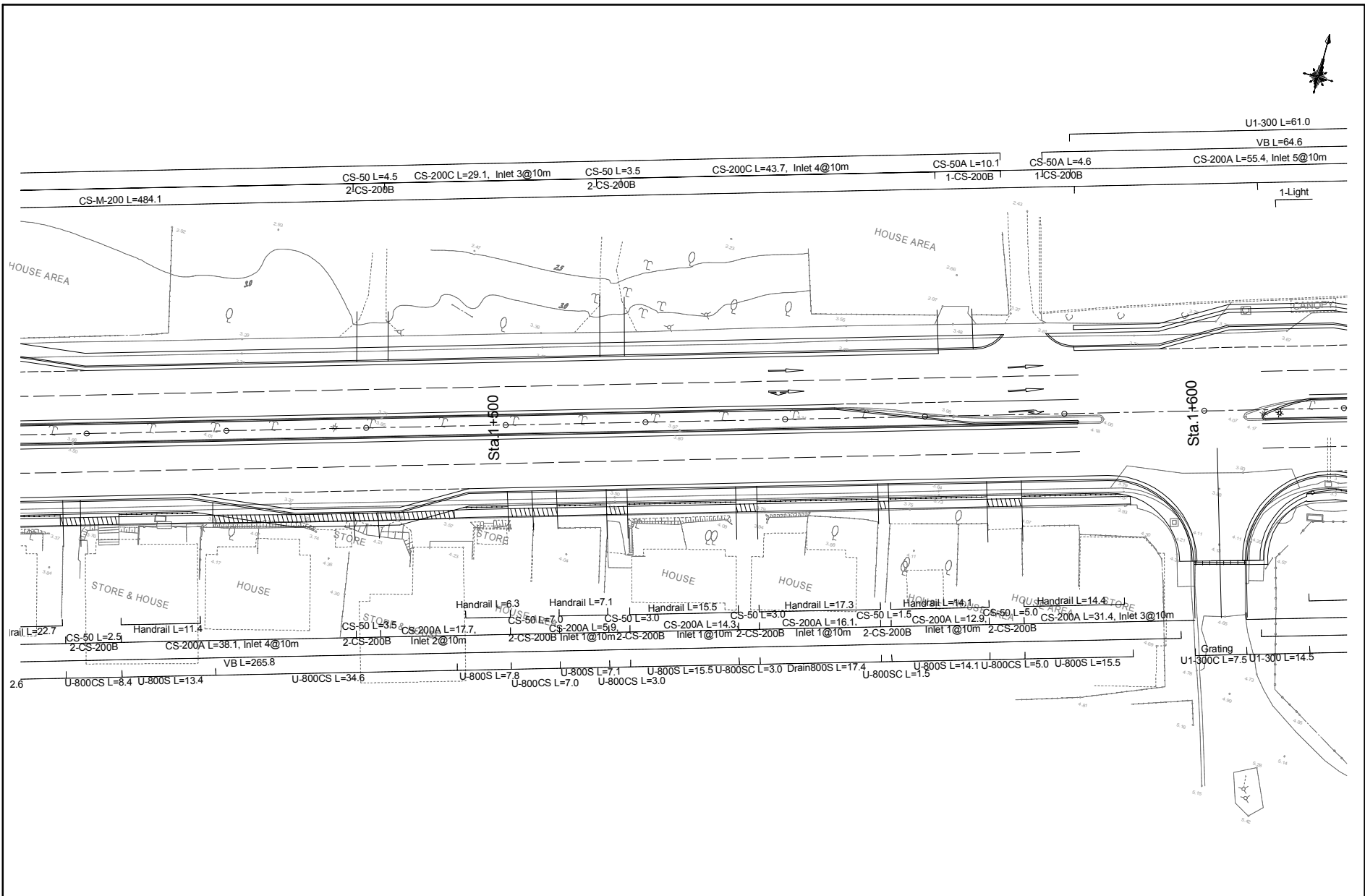
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PLAN	Drawing No.	PL-09
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					DATE	AUG. 2014



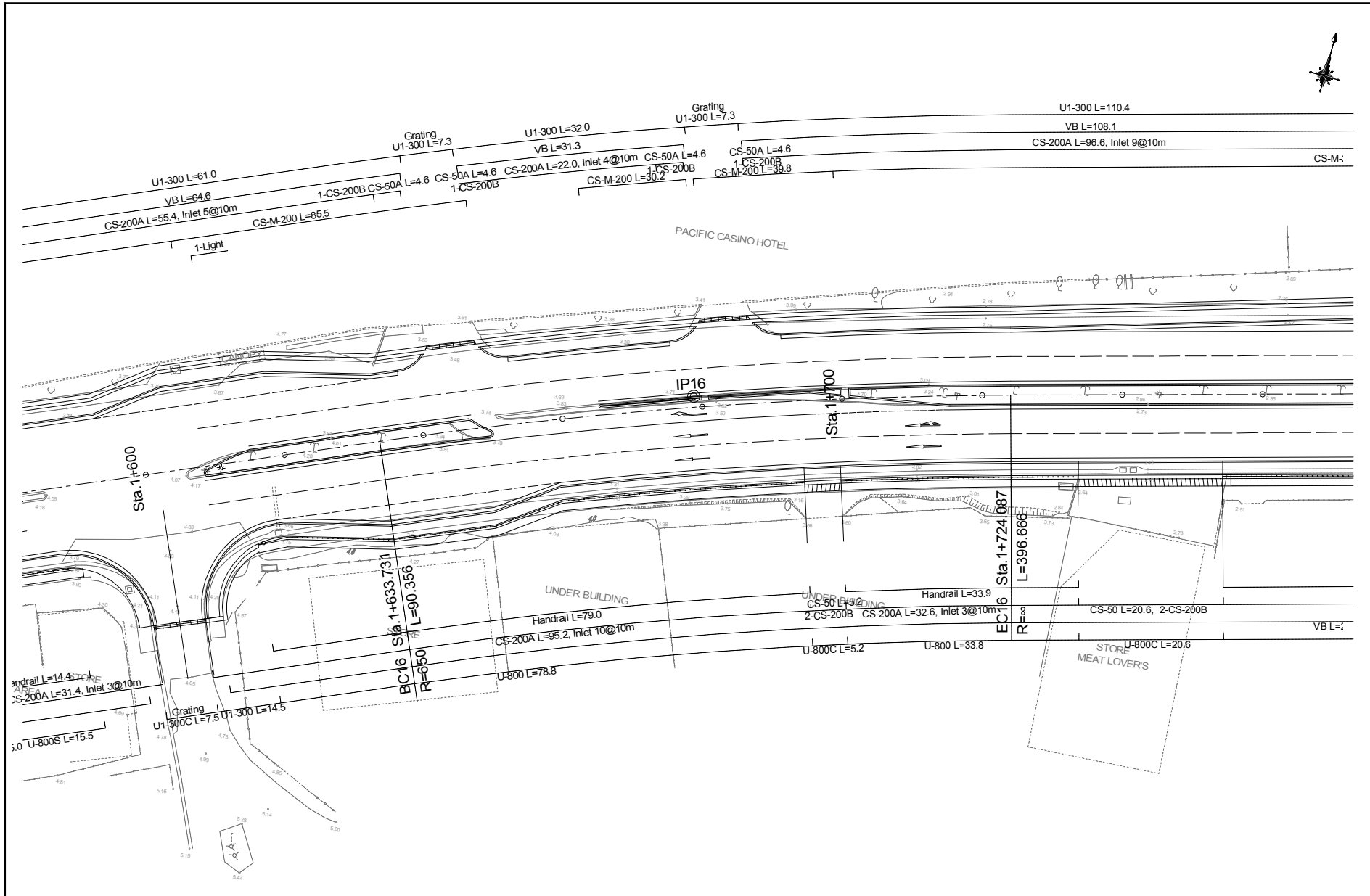
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PLAN (STA. 1+120 ~ STA. 1+280)	Drawing No.	PL-10
				SCALE	S=1/500
				DATE	AUG. 2014



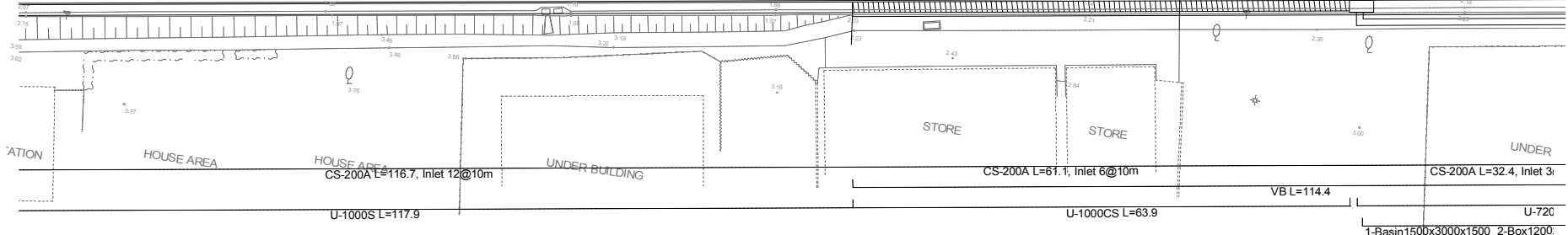
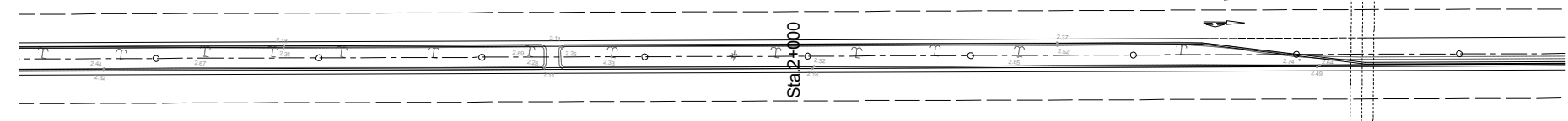
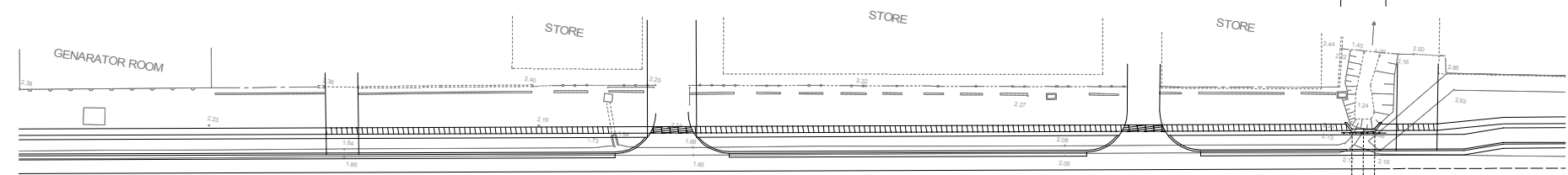
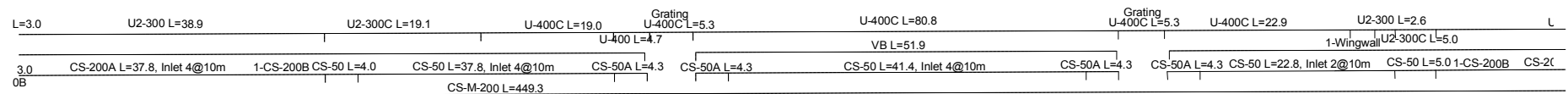
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PLAN	Drawing No.	PL-11
				(STA. 1+280 ~ STA. 1+440)	SCALE	S=1/500
					DATE	AUG. 2014



MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PLAN	Drawing No.	PL-12
				(STA. 1+440 ~ STA. 1+600)	SCALE	S=1/500
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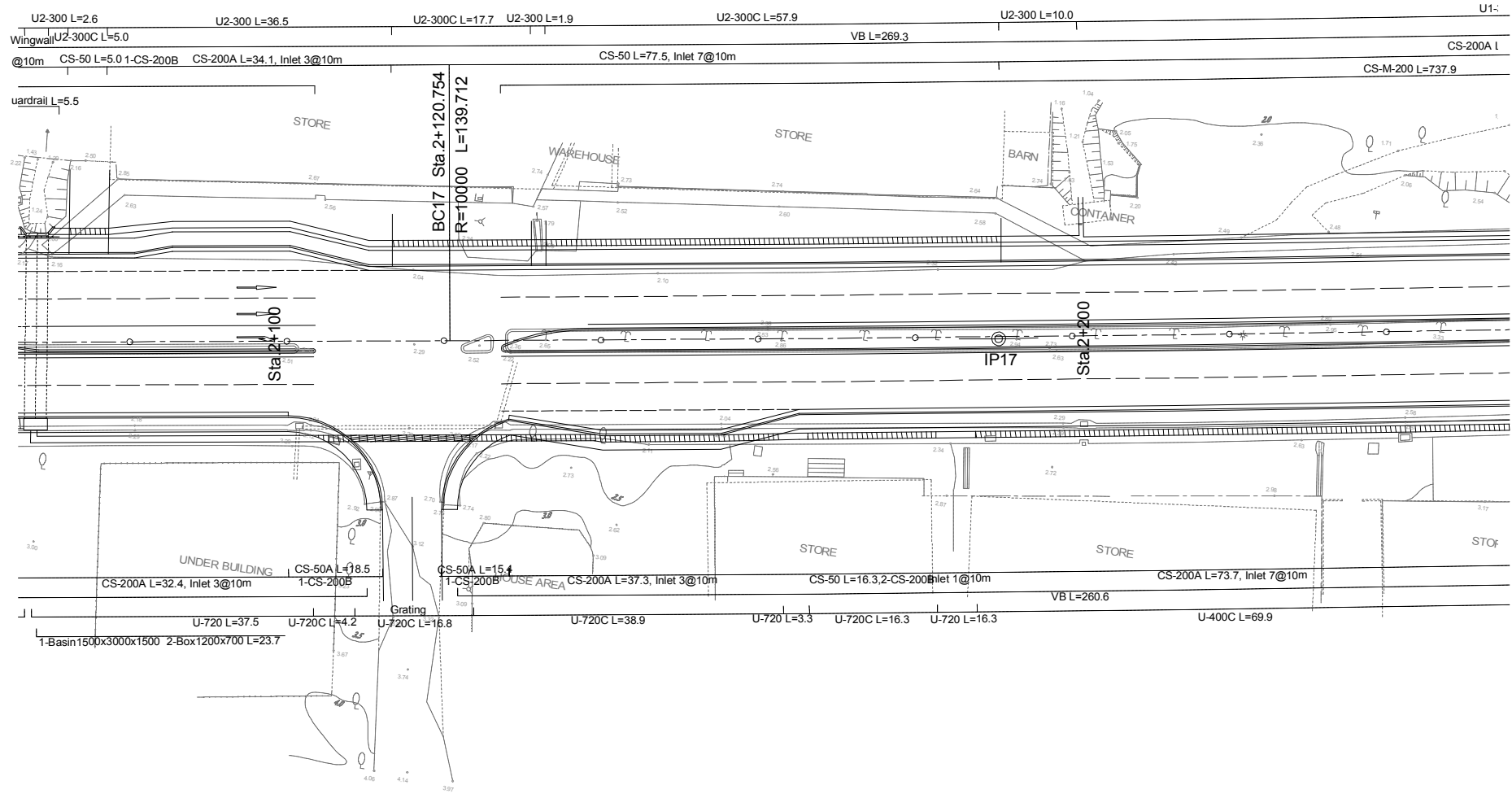


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PLAN	Drawing No.	PL-13
				(STA. 1+600 ~ STA. 1+760)	SCALE	S=1/500
					DATE	AUG. 2014



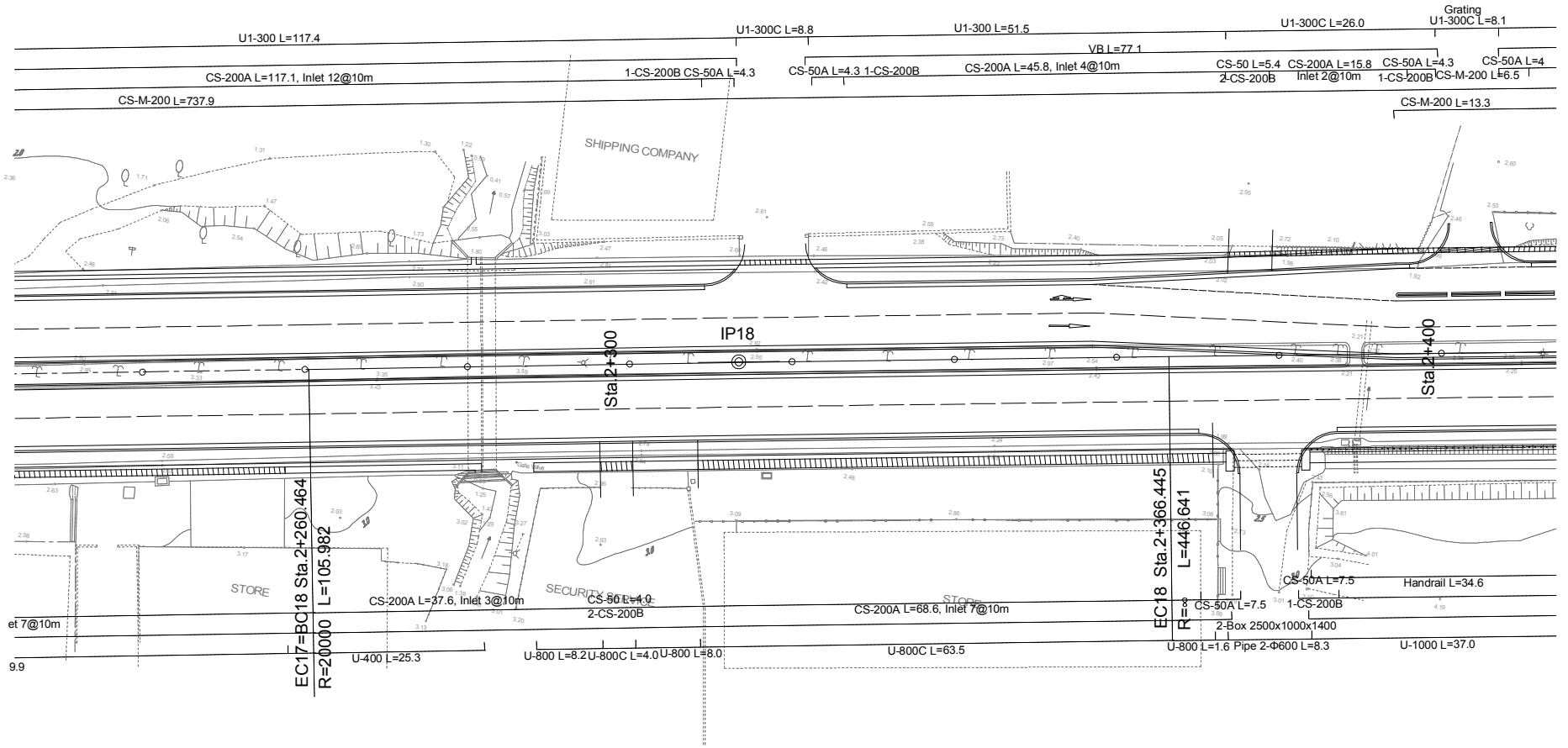
A11-21

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PLAN (STA. 1+920 ~ STA. 2+080)	Drawing No.	PL-15
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				DATE	AUG. 2014



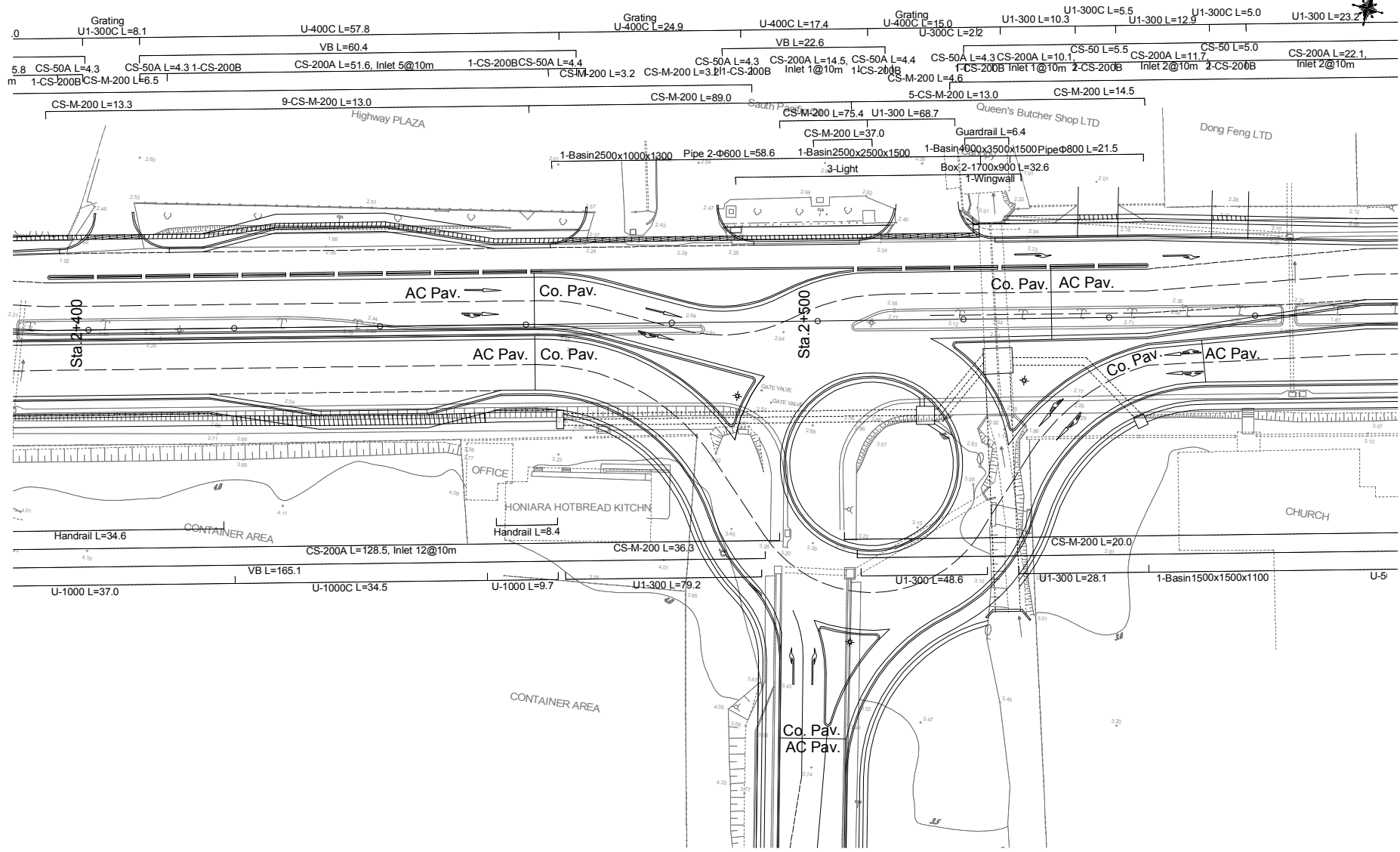
A11-22

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PLAN (STA. 2+080 ~ STA. 2+240)		Drawing No. PL-16
					SCALE S=1/500
					DATE AUG. 2014



A11-23

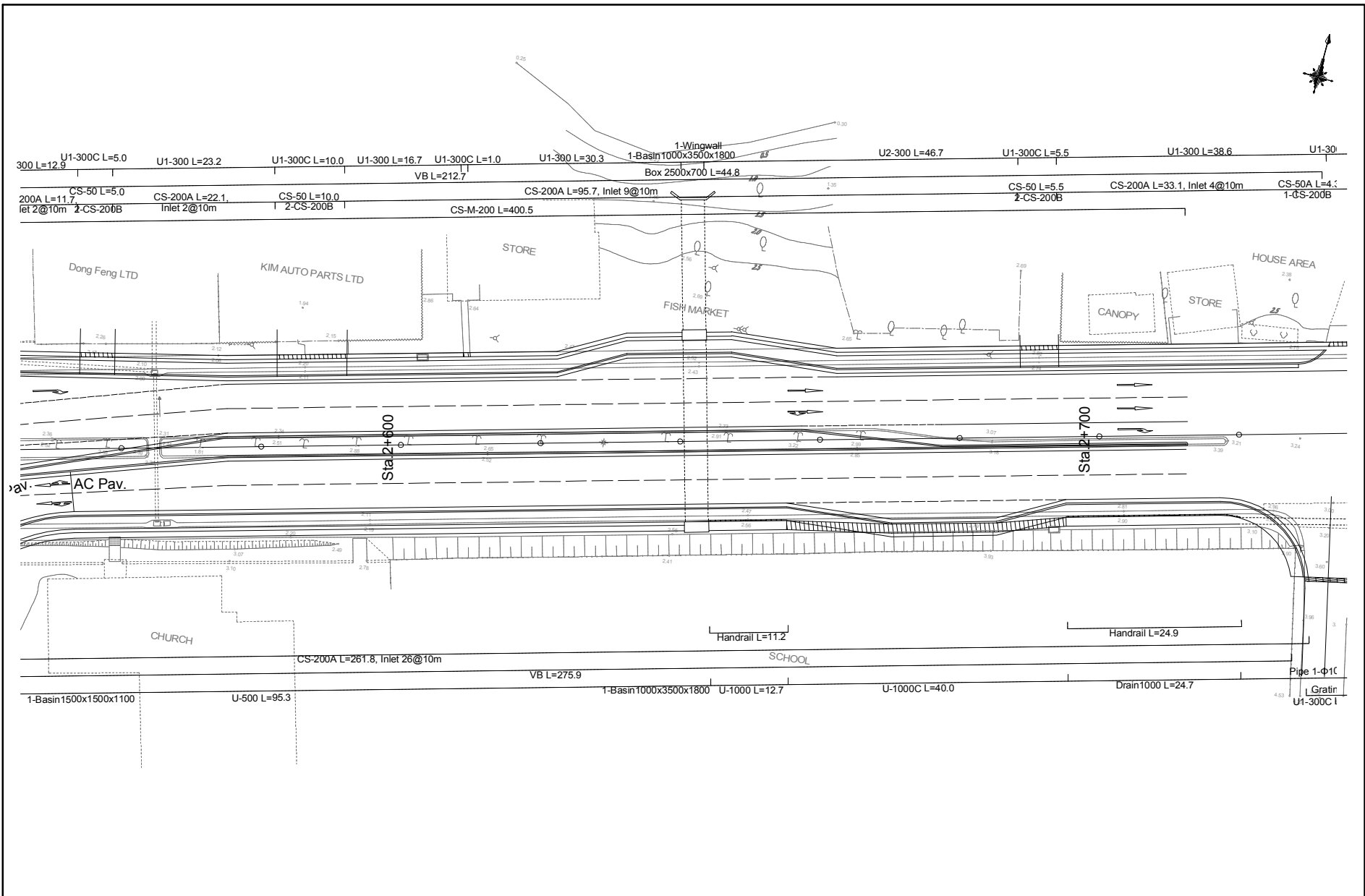
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PLAN	Drawing No.	PL-17
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					DATE	AUG. 2014



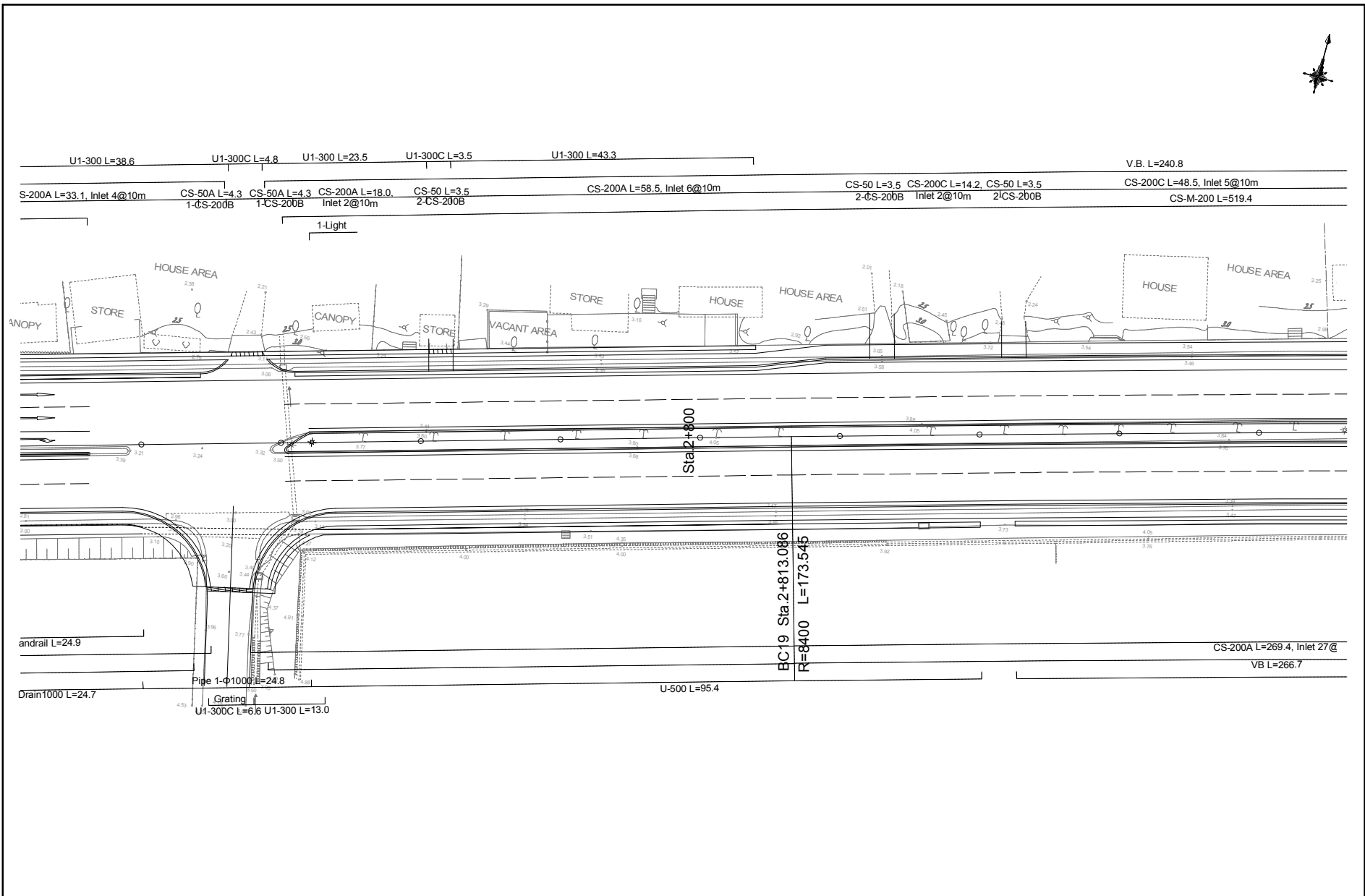
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MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :		Drawing No.	PL-18
			PLAN (STA. 2+240 ~ STA. 2+560)		SCALE	S=1/500
					DATE	AUG. 2014

A11-25



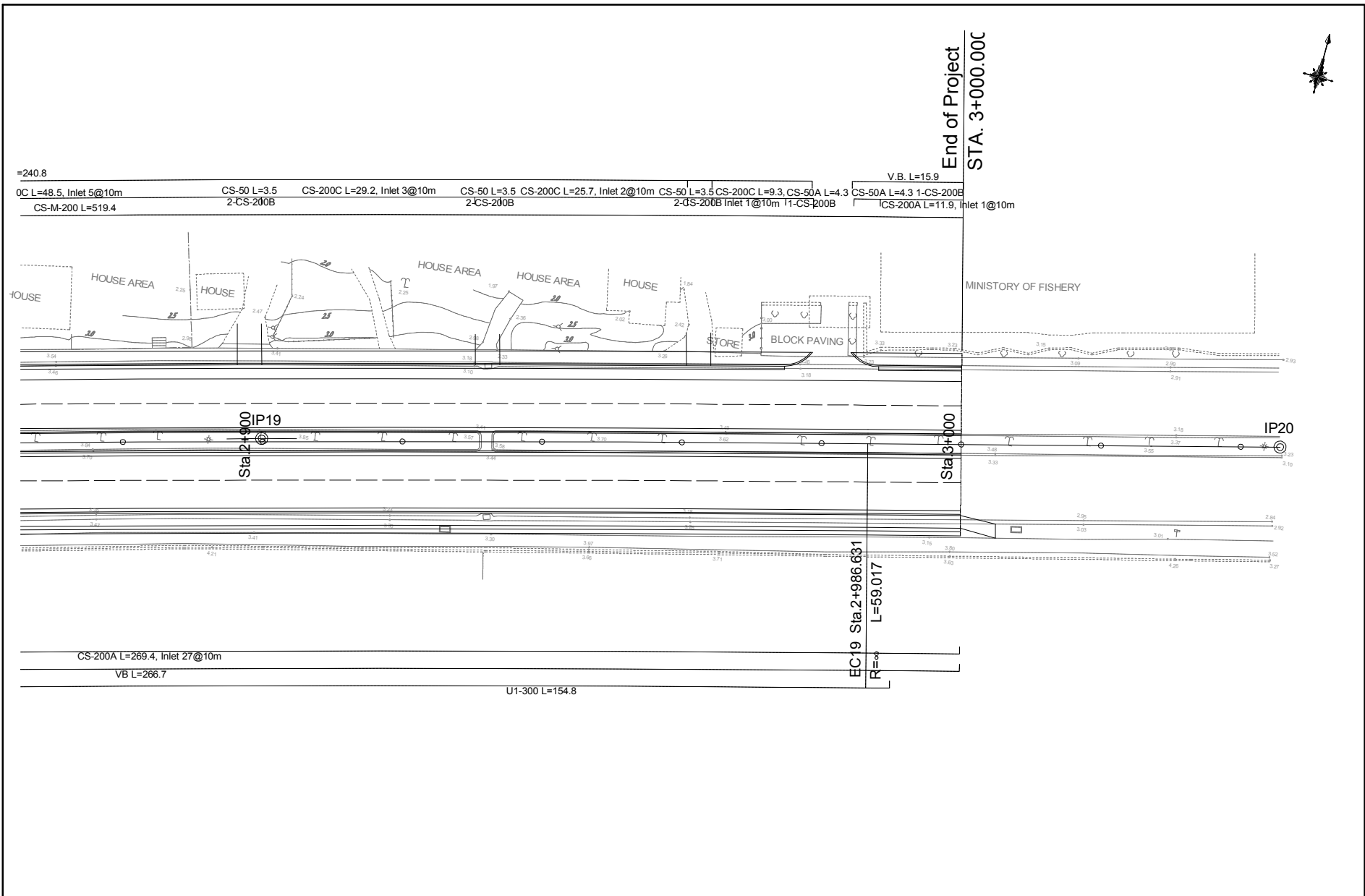
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			PLAN (STA. 2+560 ~ STA. 2+720)	SCALE	S=1/500
				DATE	AUG. 2014



A11-26

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PLAN (STA. 2+720 ~ STA. 2+880)		Drawing No. PL-20
					SCALE S=1/500
					DATE AUG. 2014

A11-27



=240.8
 0C L=48.5, Inlet 5@10m CS-50 L=3.5 CS-200C L=29.2, Inlet 3@10m CS-50 L=3.5 CS-200C L=25.7, Inlet 2@10m CS-50 L=3.5 CS-200C L=9.3, CS-50A L=4.3 CS-50A L=4.3 1-CS-200B
 CS-M-200 L=519.4 2-CS-200B 2-CS-200B 2-CS-200B Inlet 1@10m 11-CS-200B 1CS-200A L=11.9, Inlet 1@10m
 V.B. L=15.9

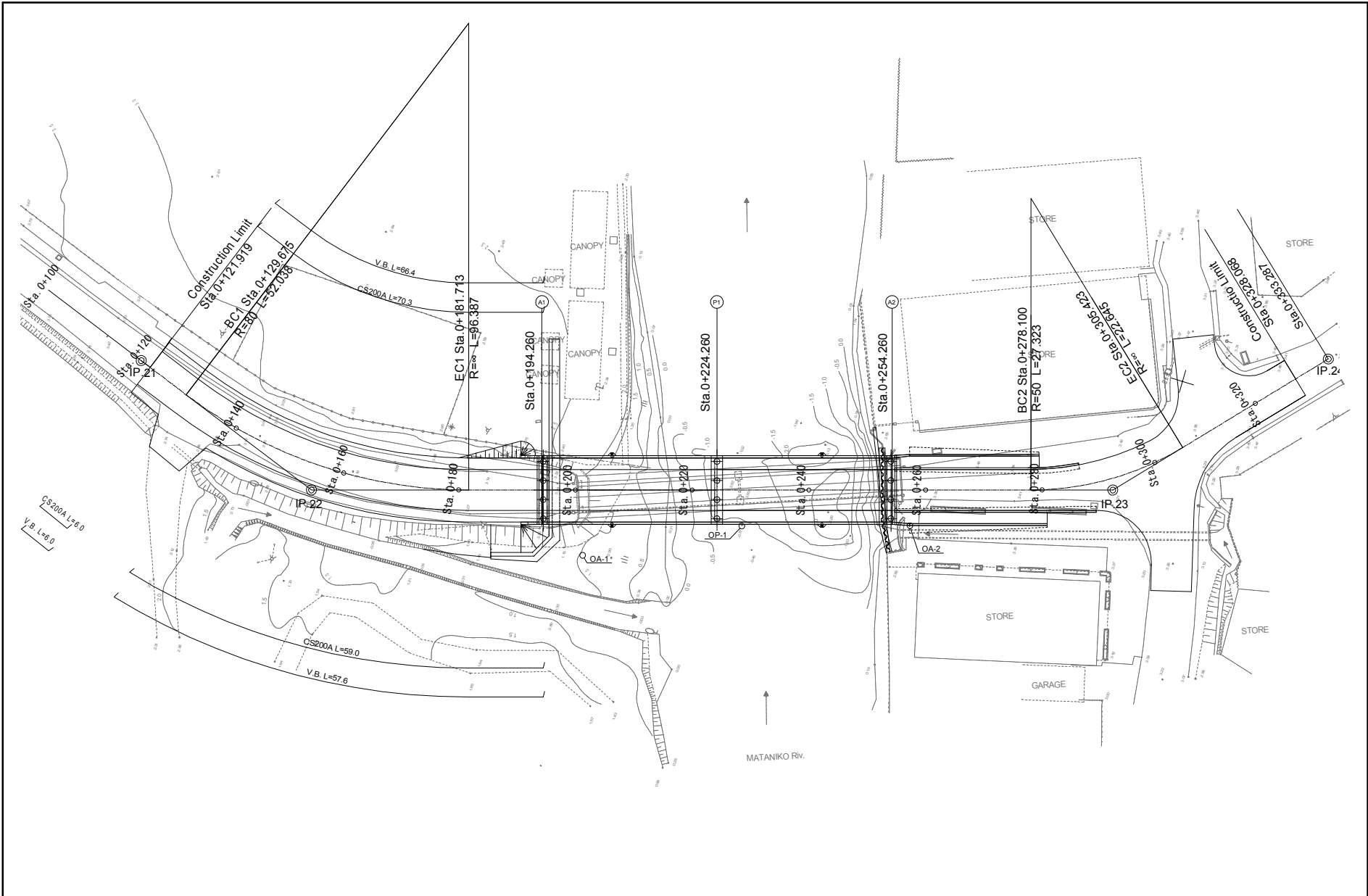
End of Project
 STA. 3+000.000

CS-200A L=269.4, Inlet 27@10m
 VB L=266.7

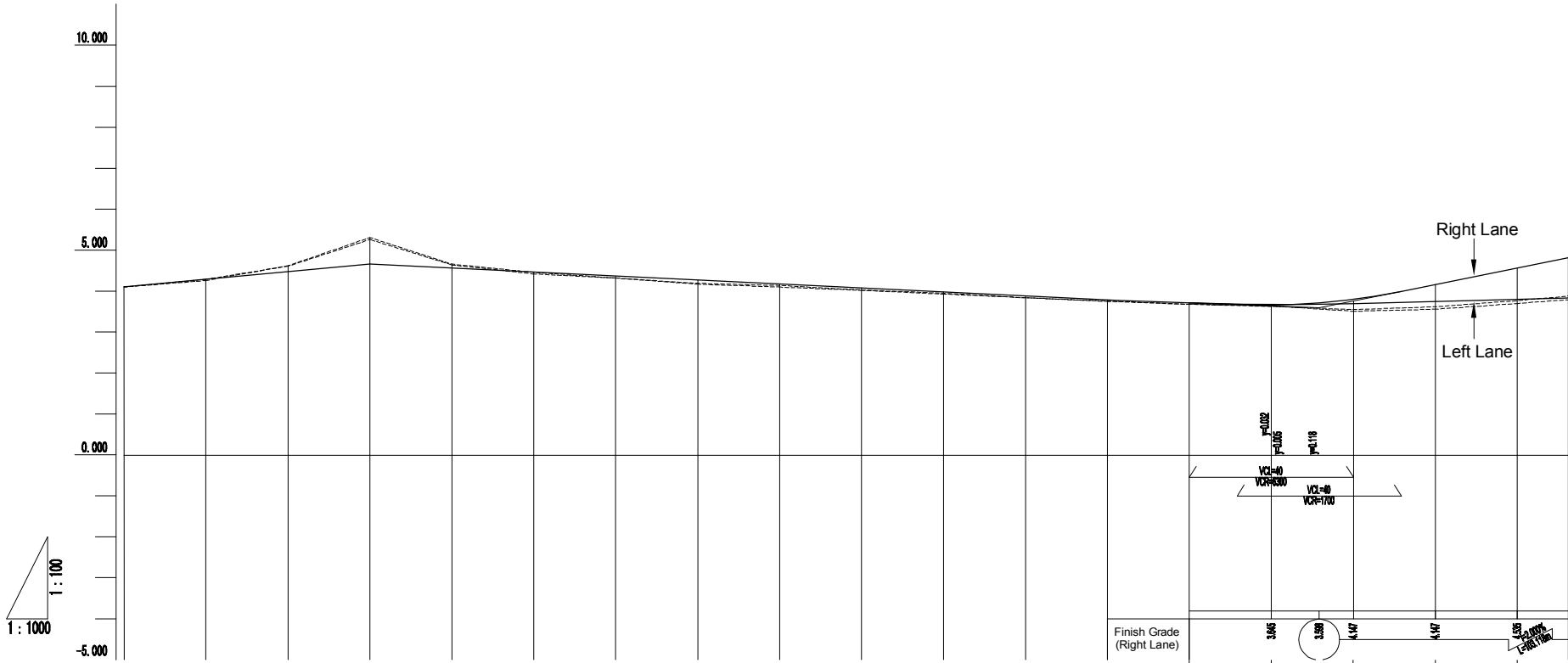
U1-300 L=154.8

EC 19 Sta. 2+986.631
 L=59.017
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MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PLAN (STA. 2+880 ~ STA. 3+000)		Drawing No. PL-21
					SCALE S=1/500
					DATE AUG. 2014

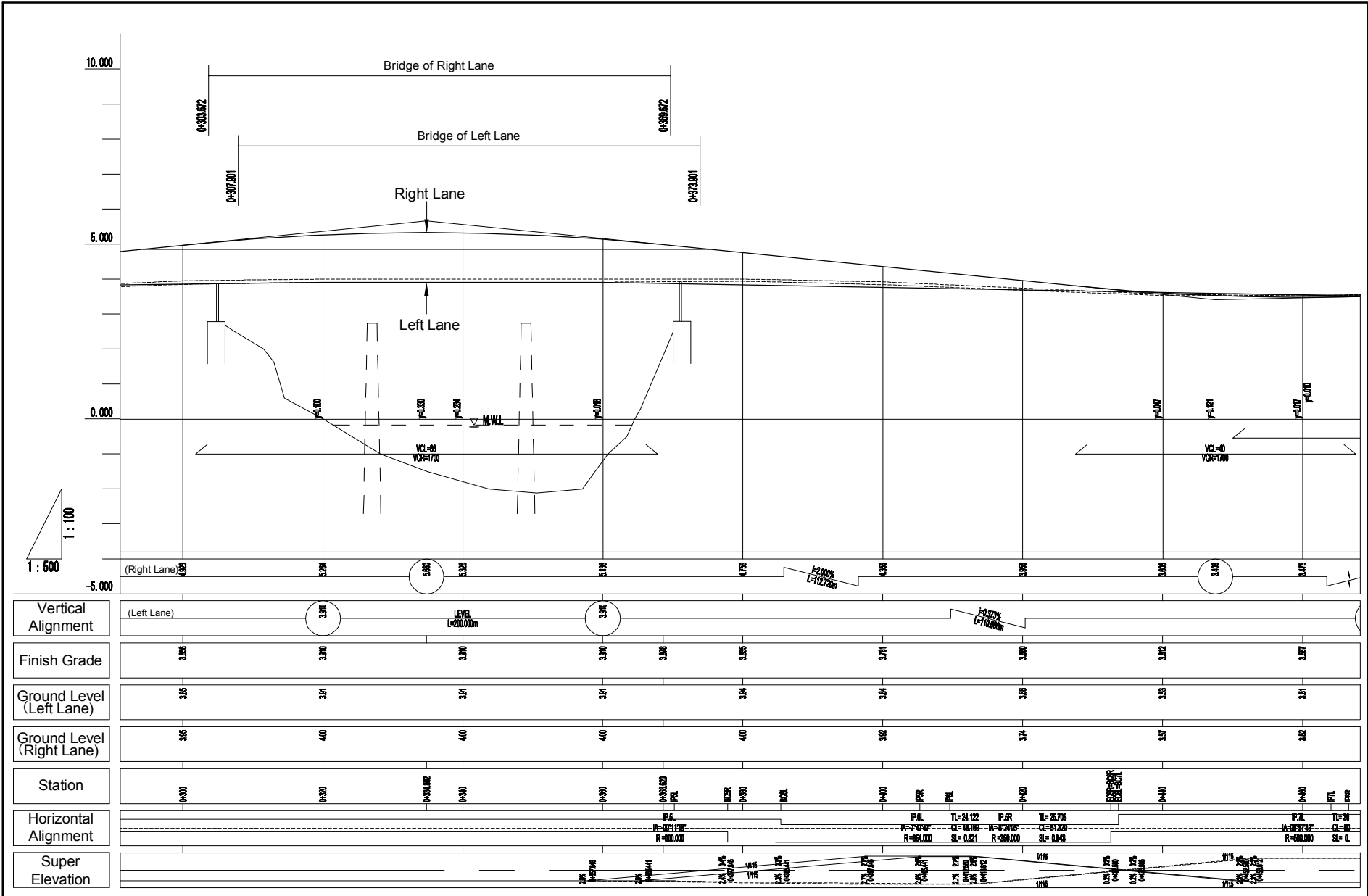


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	
			PLAN (OLD MATANIKO BRIDGE)	
			Drawing No.	PL-22
			SCALE	S=1/600
			DATE	AUG. 2014

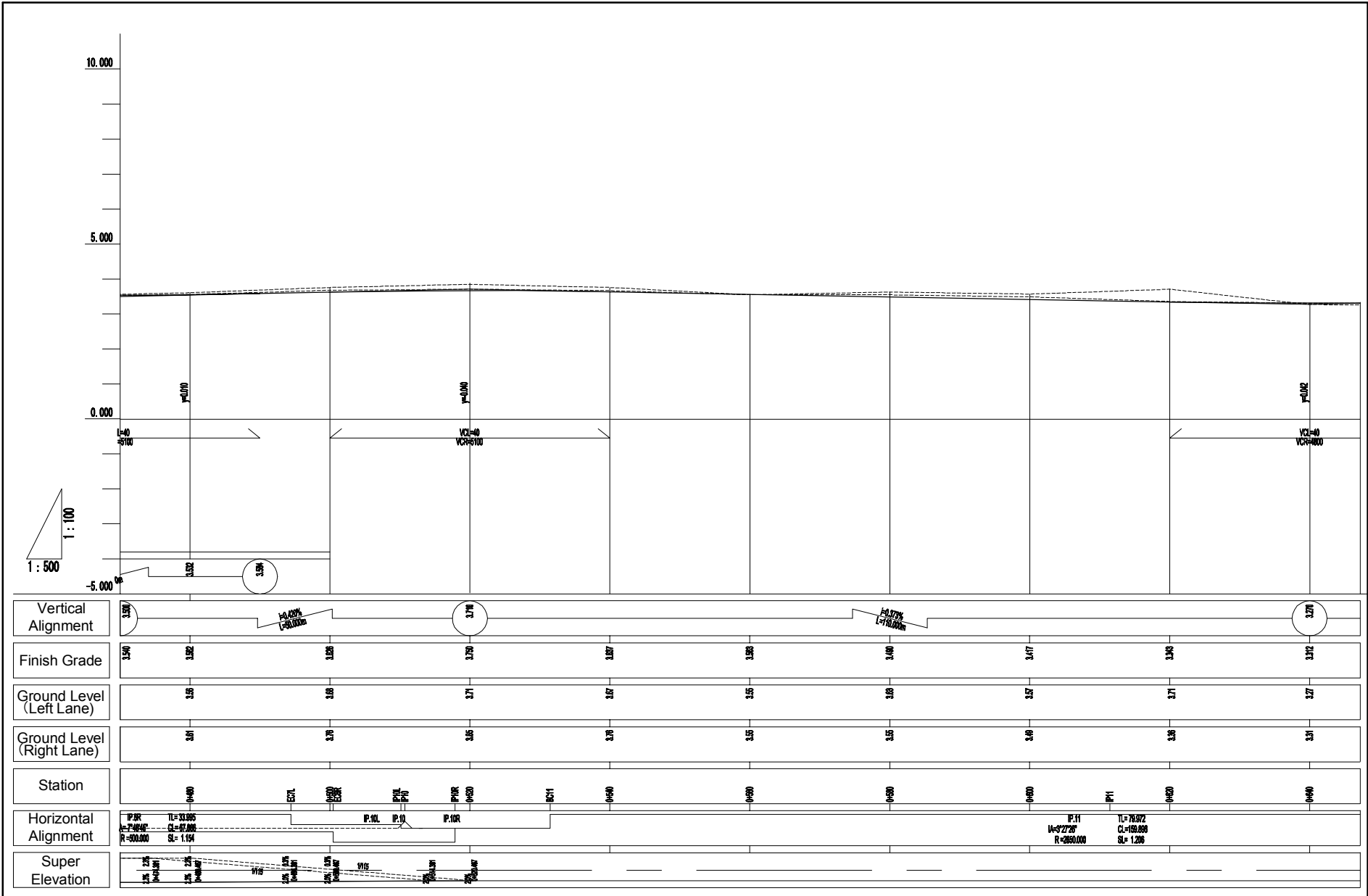


Vertical Alignment	4.00	4.27	4.73	4.89	4.89	4.85	4.75	4.17	4.10	4.07	3.92	3.85	3.75	3.75	3.73	3.77	3.84	3.76	3.70	
Finish Grade	4.10	4.29	4.61	5.28	4.64	4.42	4.32	4.19	4.14	4.03	3.95	3.84	3.75	3.68	3.64	3.54	3.51	3.46	3.40	
Ground Level (Left Lane)	4.10	4.29	4.61	5.28	4.64	4.42	4.32	4.19	4.14	4.03	3.95	3.84	3.75	3.68	3.64	3.54	3.51	3.46	3.40	
Ground Level (Right Lane)	4.10	4.29	4.61	5.28	4.64	4.42	4.32	4.19	4.14	4.03	3.95	3.84	3.75	3.68	3.64	3.54	3.51	3.46	3.40	
Station	0+000	0+040	0+080	0+120	0+160	0+200	0+240	0+280	0+320	0+360	0+400	0+440	0+480	0+520	0+560	0+600	0+640	0+680	0+720	
Horizontal Alignment	PI=0	PI=1	PI=2	PI=3	PI=4	PI=5	PI=6	PI=7	PI=8	PI=9	PI=10	PI=11	PI=12	PI=13	PI=14	PI=15	PI=16	PI=17	PI=18	
Super Elevation	2%																			

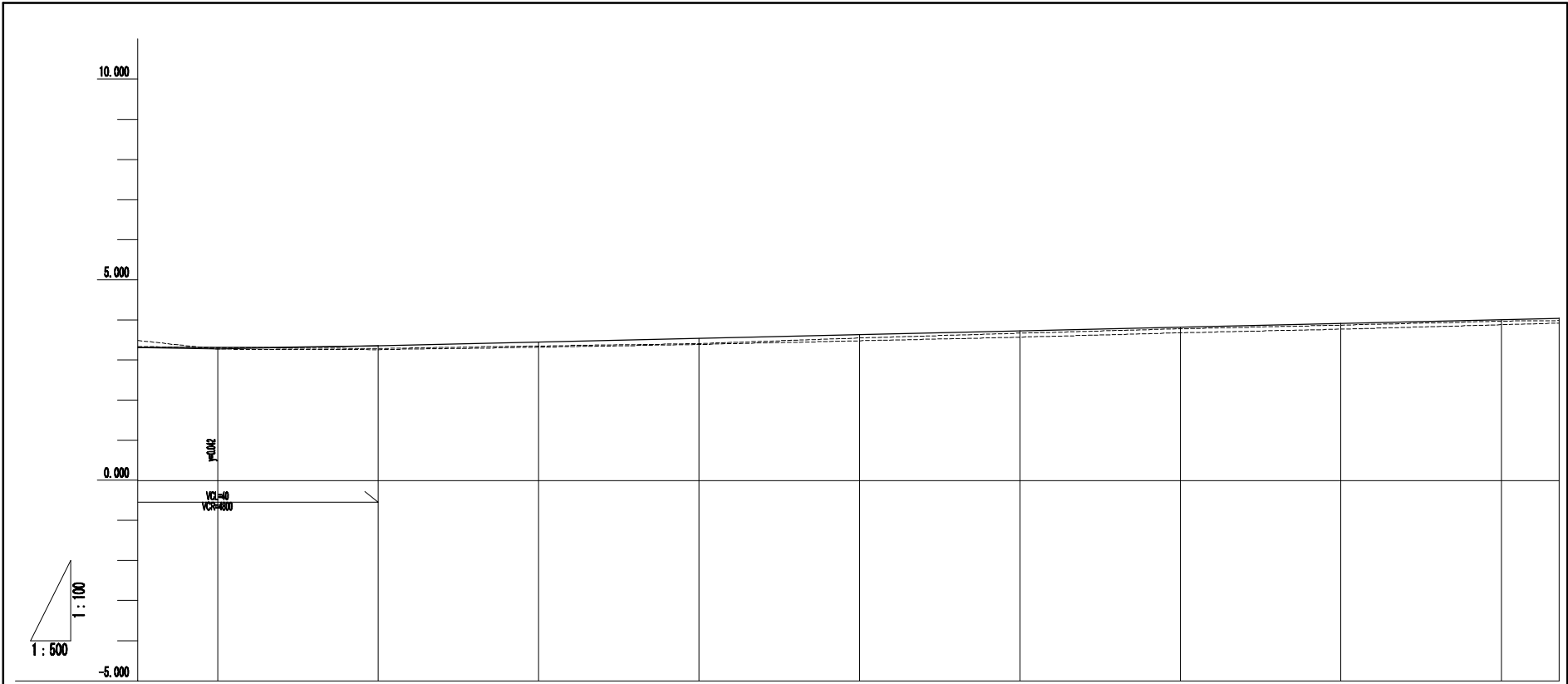
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA.0-060~STA.0+290)	Drawing No. PR-01	SCALE V=1/100 H=1/1,000
				DATE AUG. 2014	



MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA.0+290 ~ STA.0+470)	Drawing No.	PR-02
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014

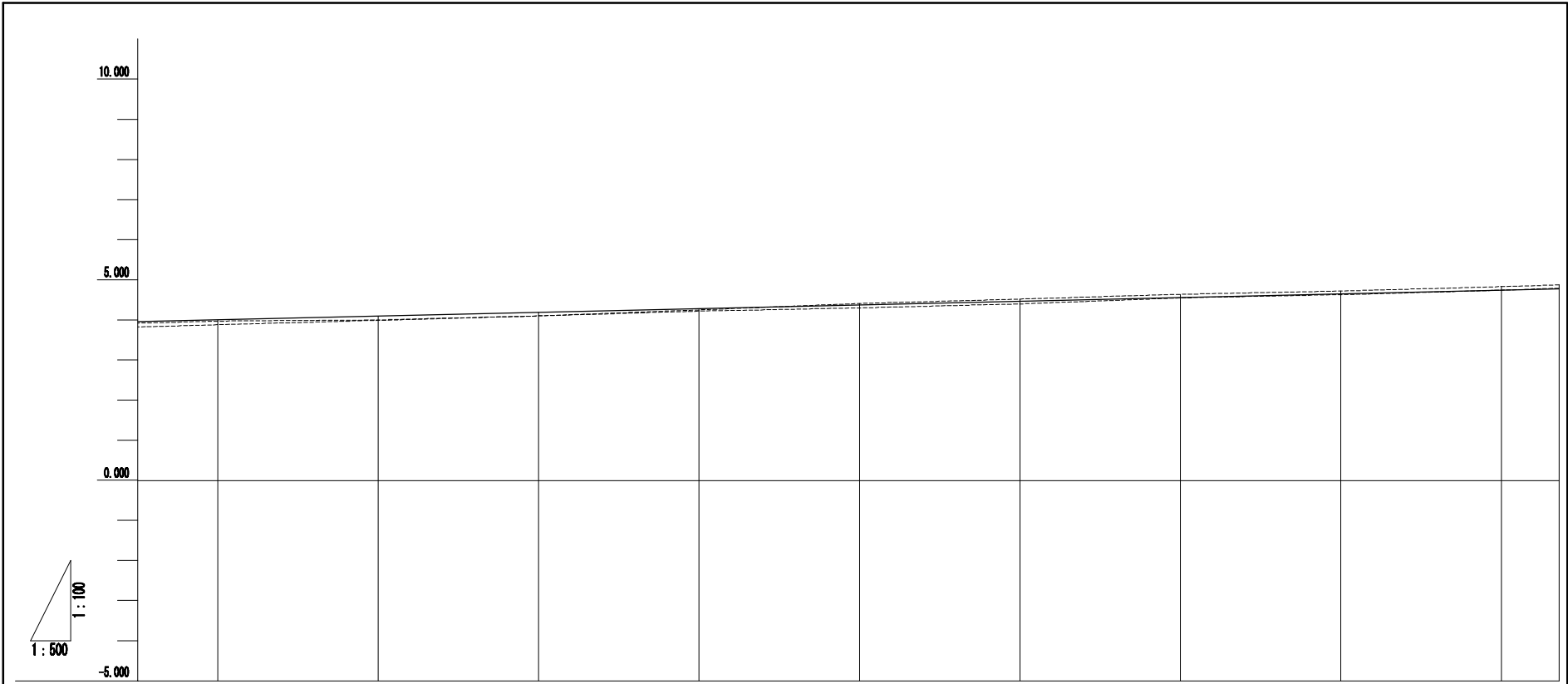


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PROFILE (STA.0+470~STA.0+640)	Drawing No.	PR-03
			SCALE	V=1/100 H=1/500	DATE	AUG. 2014



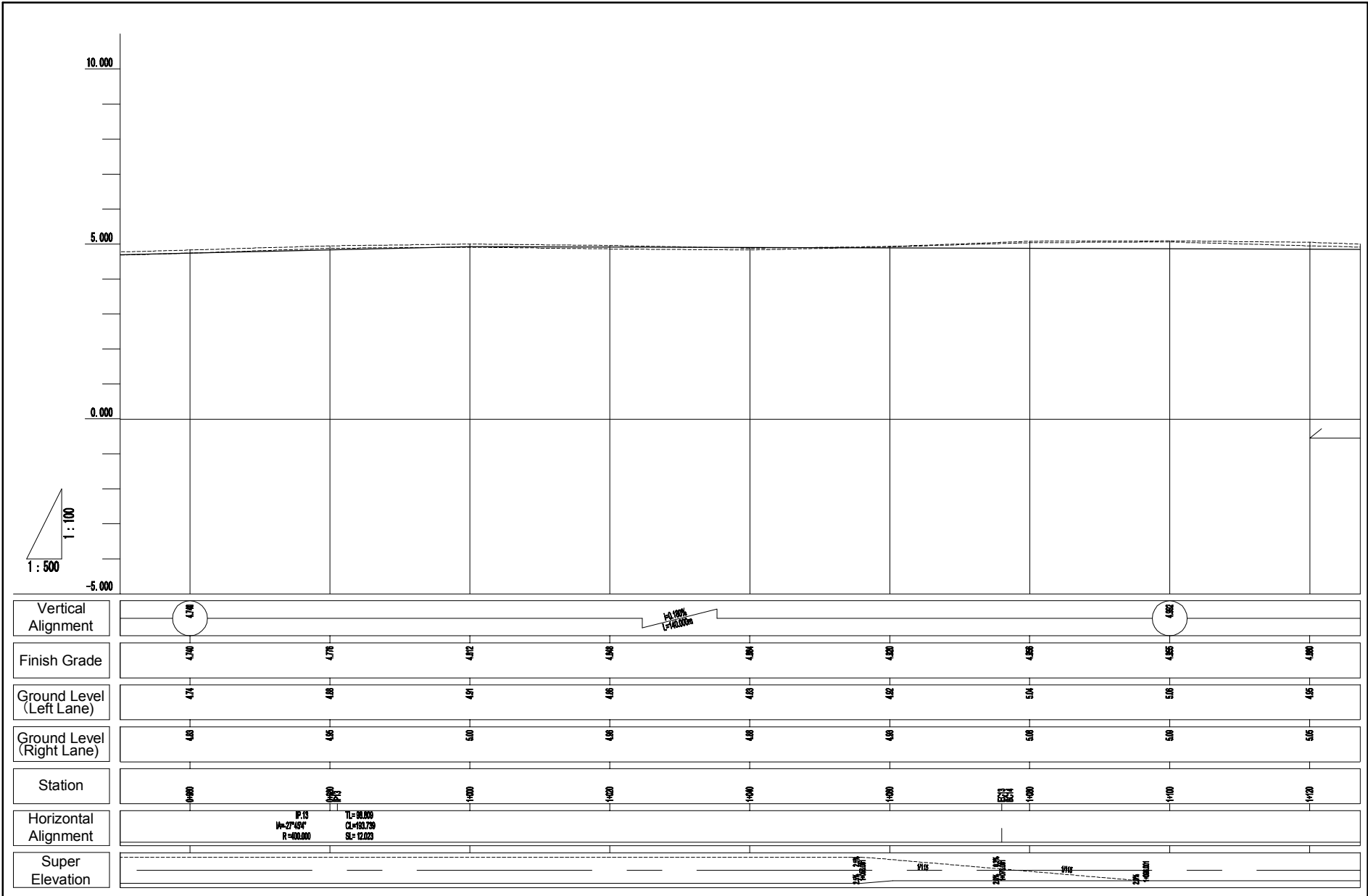
Vertical Alignment	
Finish Grade	3.72 3.92 4.54 5.56 6.88 8.29 9.81 11.93 14.05
Ground Level (Left Lane)	3.27 3.25 3.32 3.39 3.46 3.57 3.68 3.77 3.88
Ground Level (Right Lane)	3.31 3.29 3.35 3.41 3.55 3.67 3.78 3.87 3.97
Station	+640 +680 +720 EC11 +760 +800 +840 +880 BC12 +920
Horizontal Alignment	
Super Elevation	

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA.0+640~STA.0+800)	Drawing No.	PR-04
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014

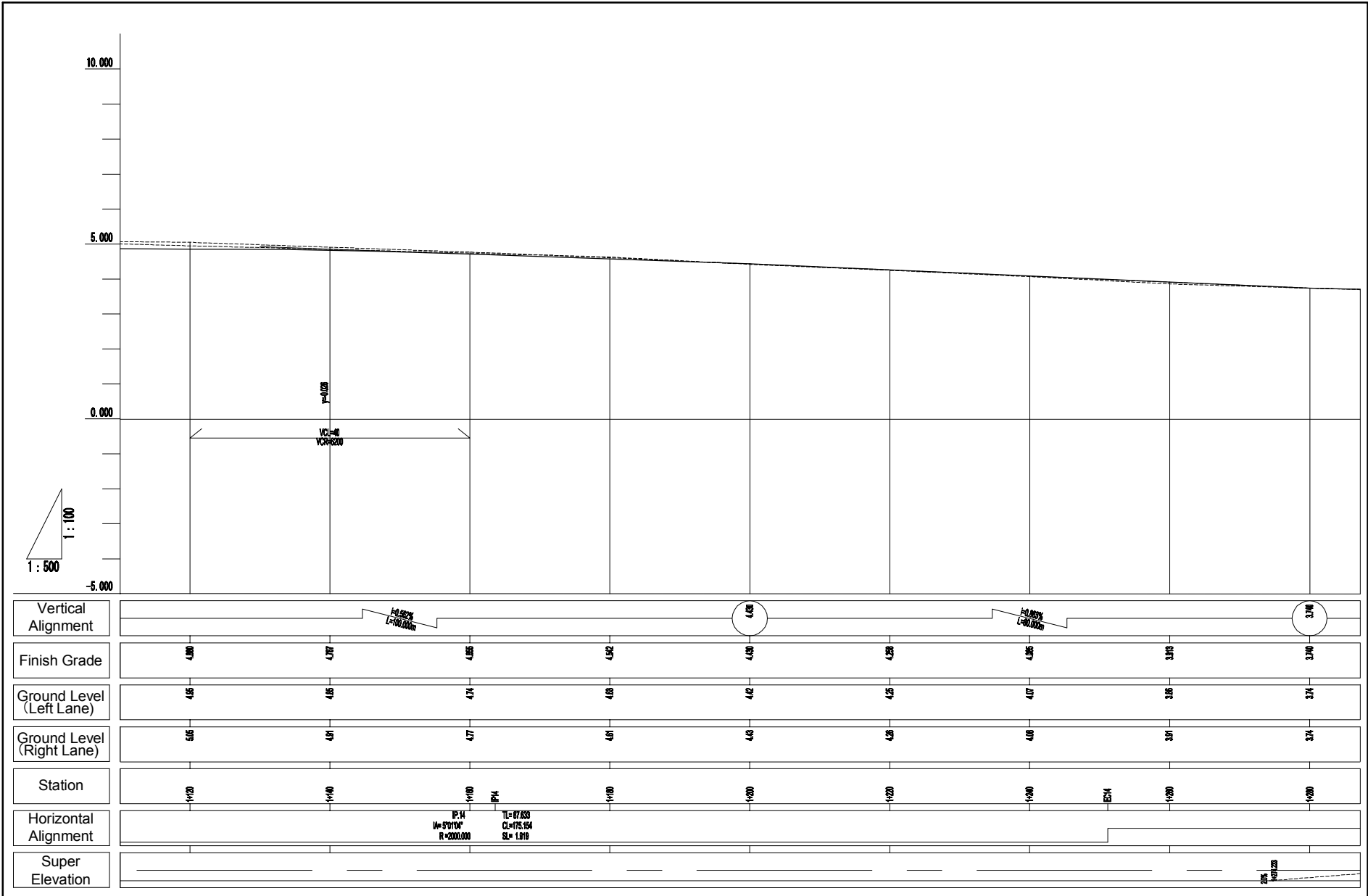


Vertical Alignment	
Finish Grade	4.35 4.37 4.39 4.28 4.23 4.24 4.26 4.28 4.29 4.30
Ground Level (Left Lane)	3.8 3.9 4.0 4.2 4.3 4.4 4.5 4.6 4.7
Ground Level (Right Lane)	3.7 4.0 4.0 4.25 4.1 4.2 4.4 4.7 4.8
Station	0+800 0+820 0+840 0+860 0+880 0+900 0+920 0+940 0+960
Horizontal Alignment	<p> P.C. 0+800 P.T. 0+840 P.I. 0+820 T.L. 0+960 M=630.05 T=42.94 C.I.=65.07 S.L.=1.26 R=750.00 </p>
Super Elevation	

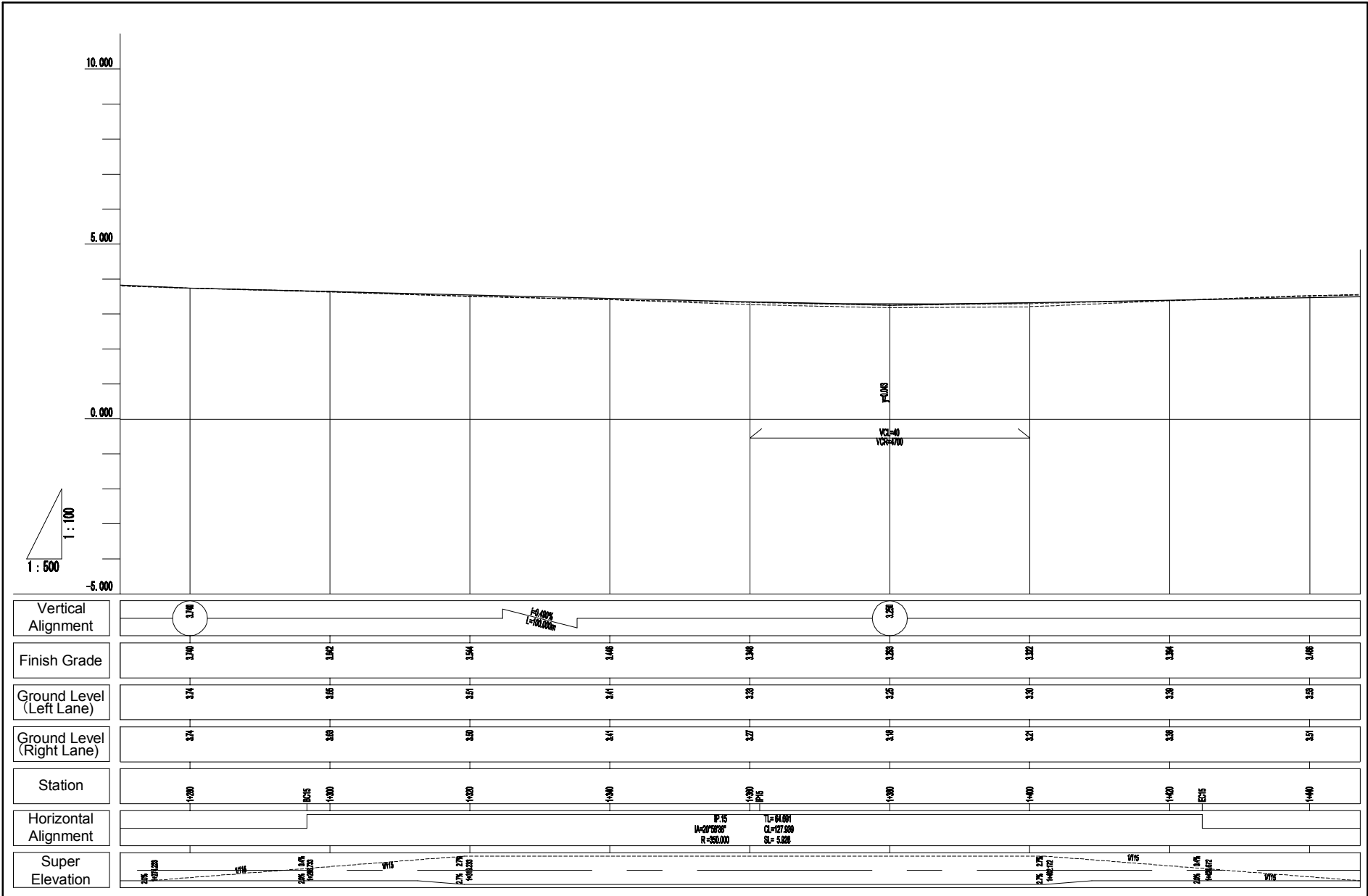
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PROFILE (STA.0+800~STA.0+960)	Drawing No.	PR-05
					SCALE	V=1/100 H=1/500
					DATE	AUG. 2014



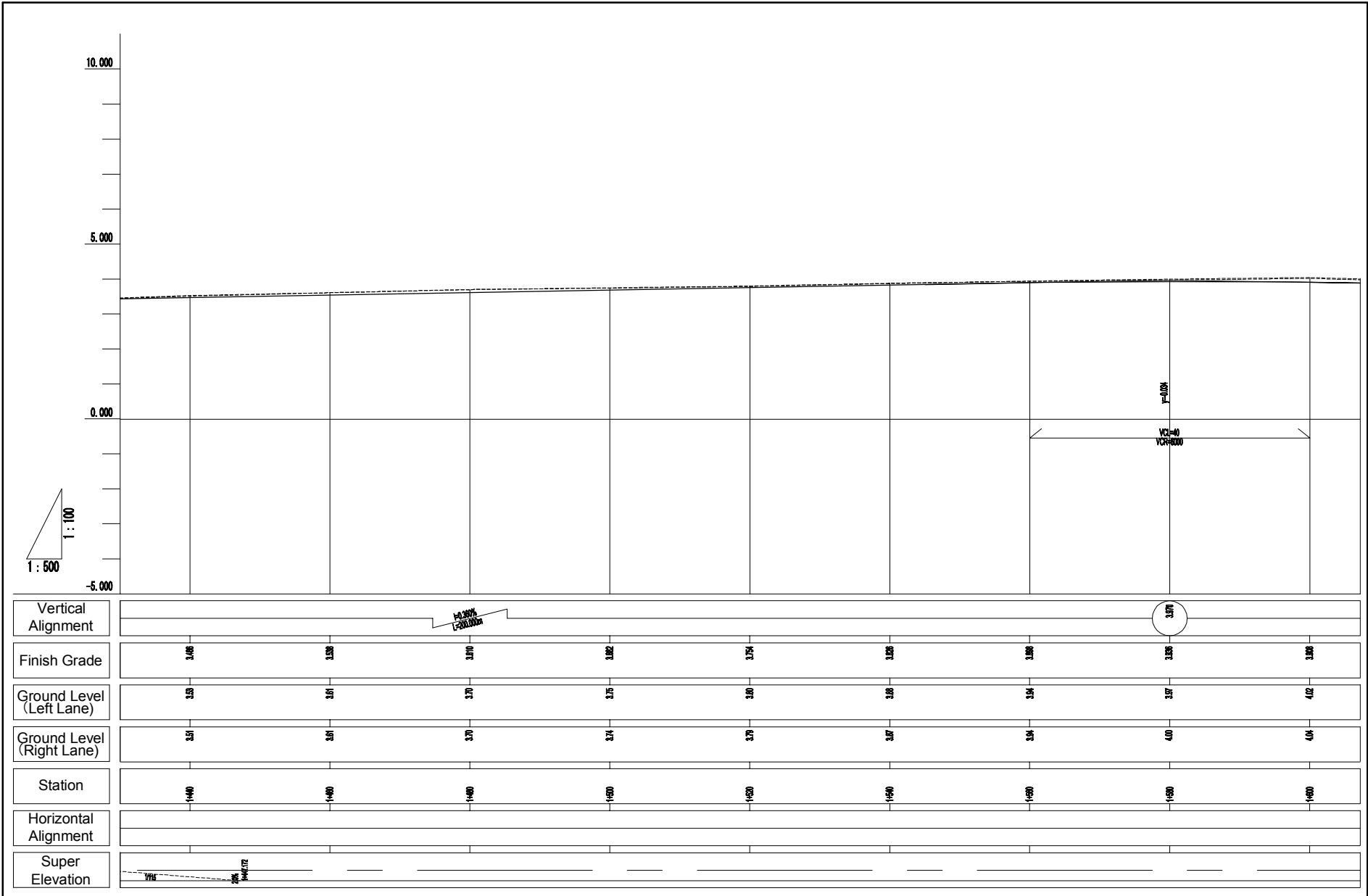
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PROFILE (STA.0+960~STA.1+120)	Drawing No.	PR-06
			SCALE	V=1/100 H=1/500	DATE	AUG. 2014



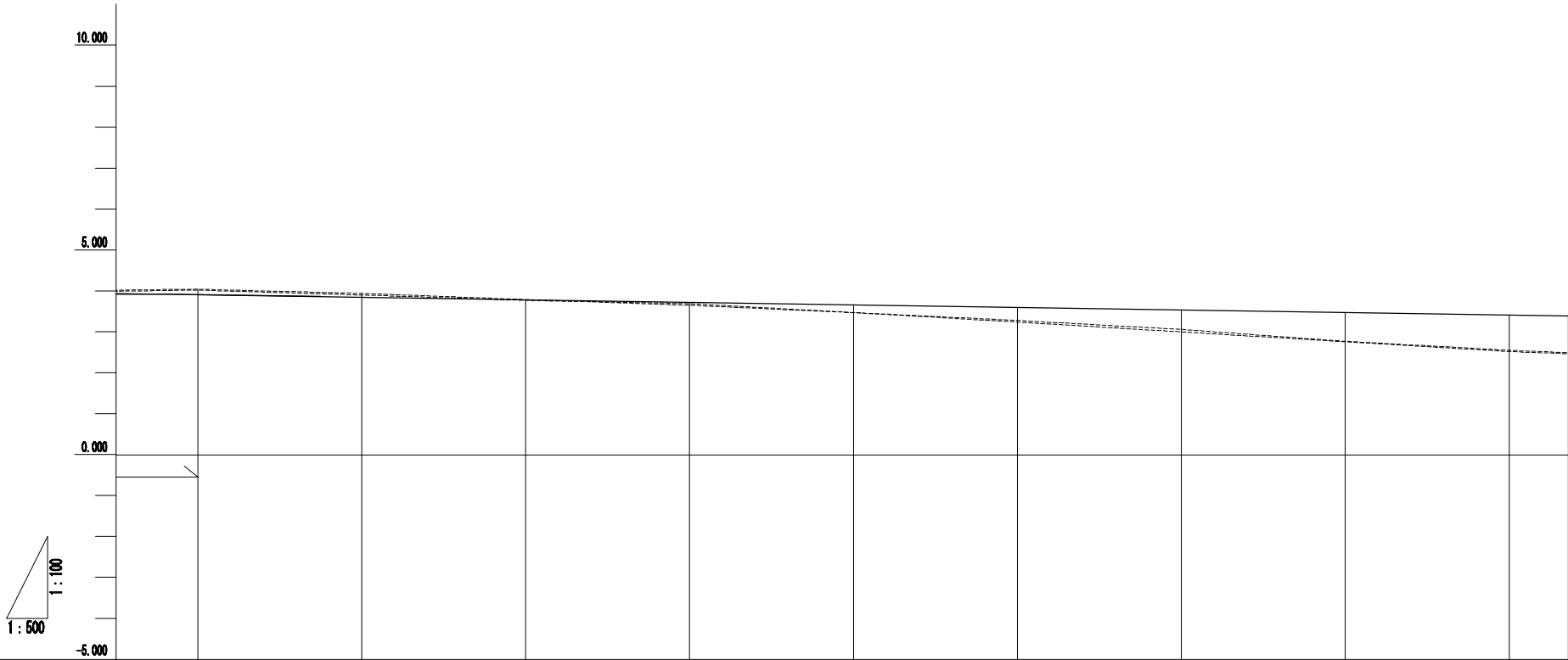
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA. 1+120 ~ STA. 1+280)	Drawing No.	PR-07
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014



MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA. 1+280 ~ STA. 1+440)	Drawing No.	PR-08
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014

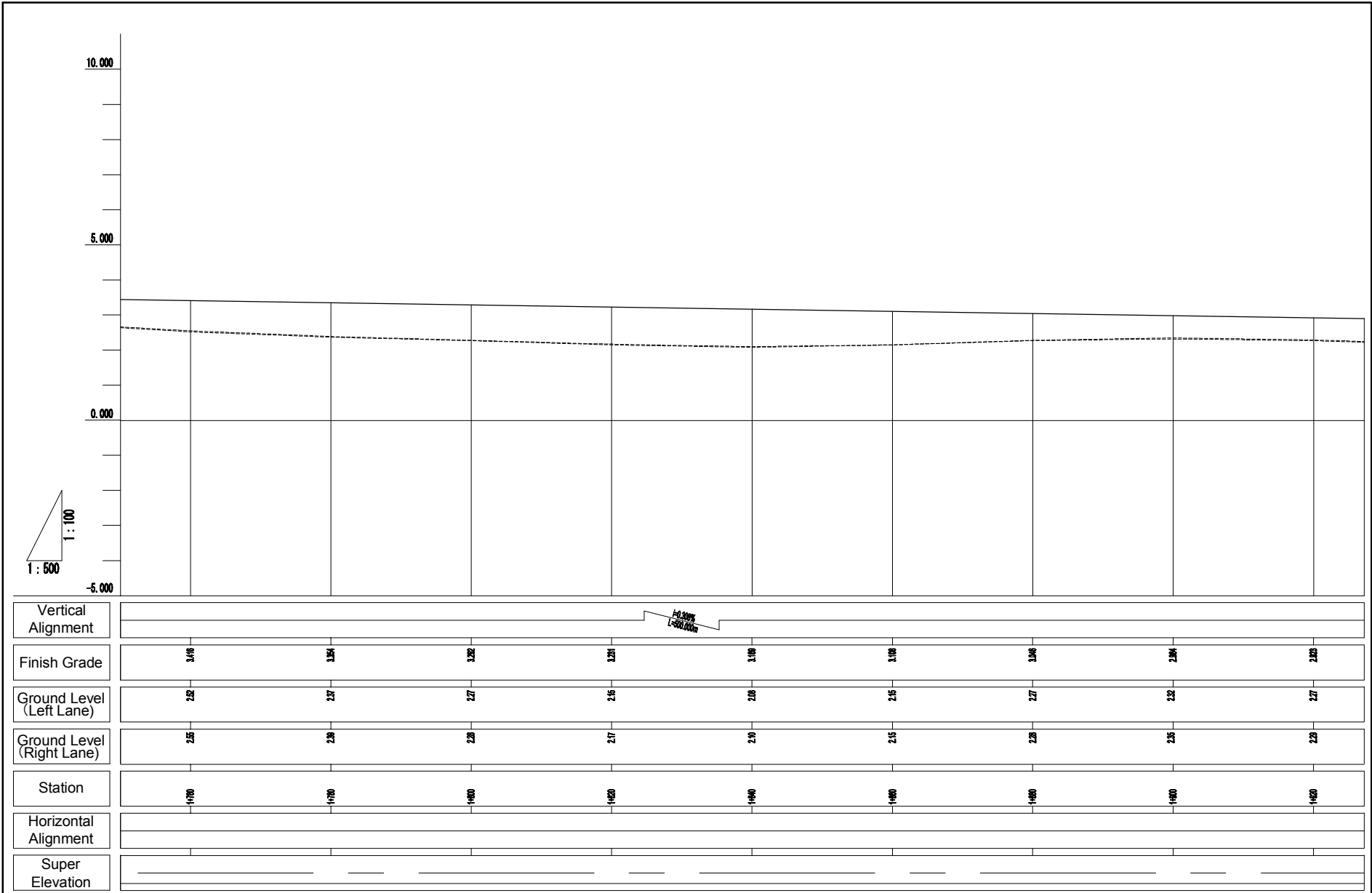


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA. 1+440 ~ STA. 1+600)	Drawing No.	PR-09
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014

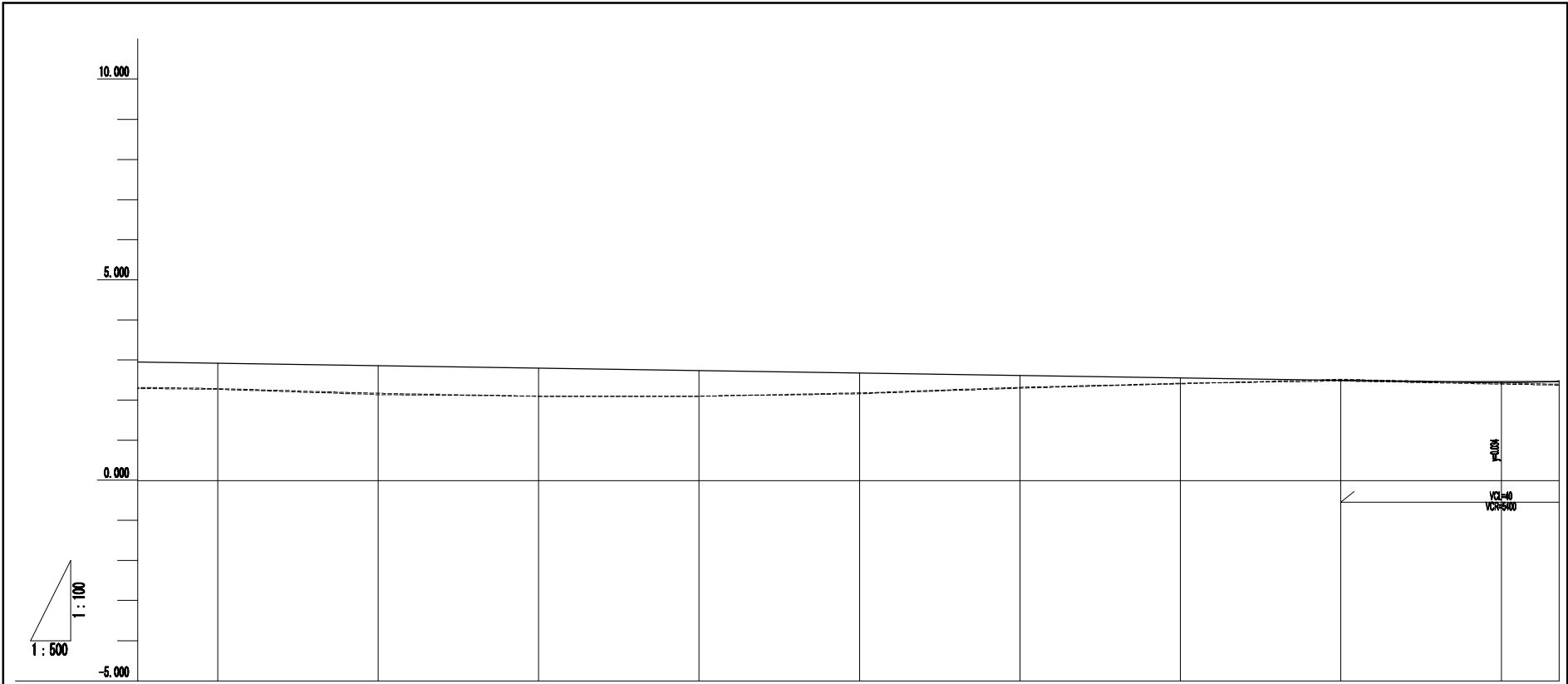


Vertical Alignment										
Finish Grade	3.98	3.97	3.95	3.94	3.92	3.90	3.89	3.87	3.86	3.85
Ground Level (Left Lane)	4.02	3.90	3.77	3.69	3.67	3.64	3.60	3.56	3.52	3.48
Ground Level (Right Lane)	4.04	3.94	3.82	3.65	3.67	3.68	3.68	3.67	3.65	3.62
Station	1+600	1+620	1+640	1+660	1+680	1+700	1+720	1+740	1+760	
Horizontal Alignment	<p> $P=16$ $H=757.53'$ $R=62,000$ $L=45.251$ $C=90.358$ $S=1.573$ </p>									
Super Elevation	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	PROFILE (STA. 1+600 ~ STA. 1+760)	Drawing No.	PR-10
					SCALE	V=1/100 H=1/500
					DATE	AUG. 2014

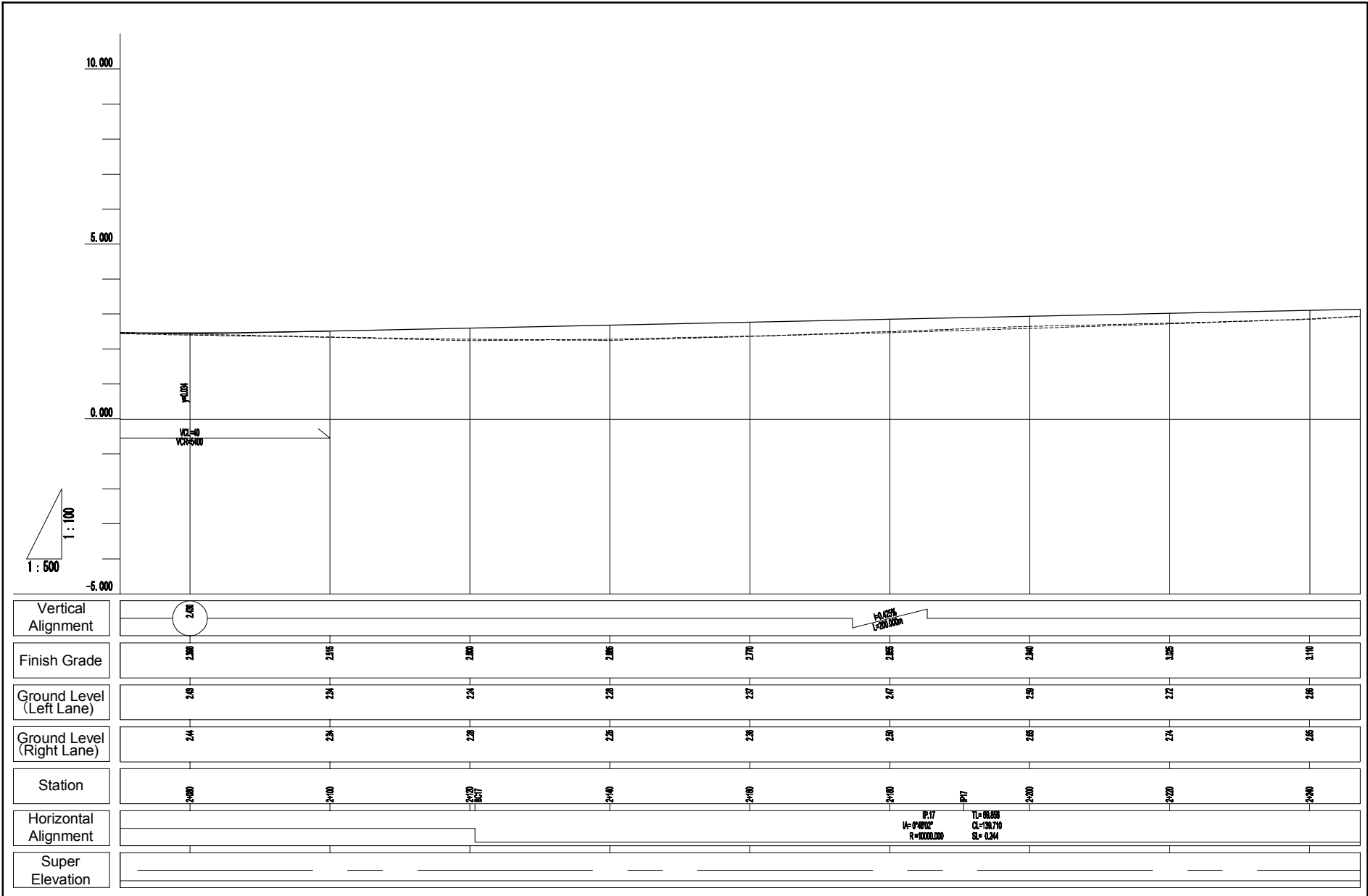


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA. 1+760 ~ STA. 1+920)	Drawing No.	PR-11
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014

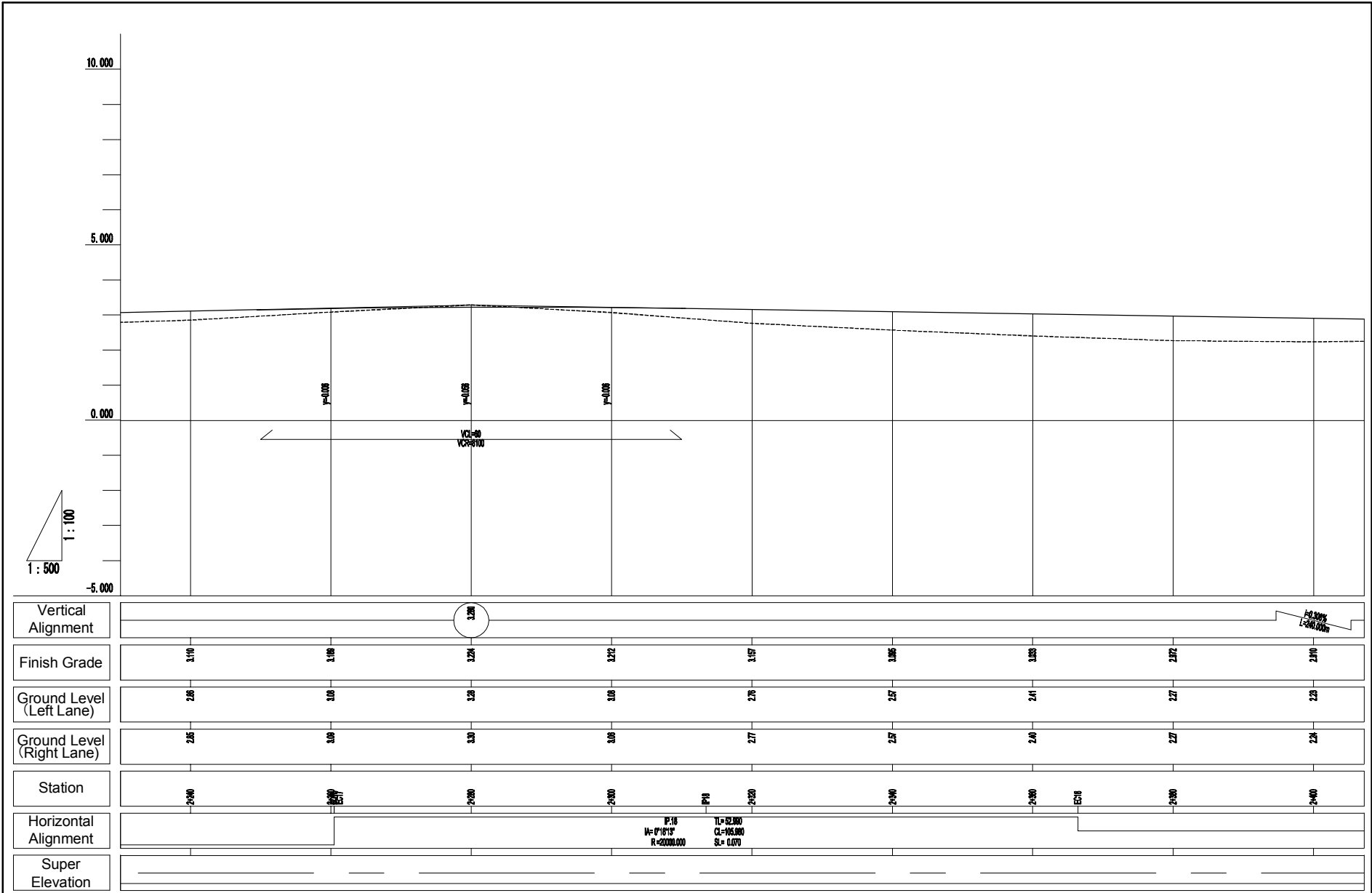


Vertical Alignment	(2.08)									
Finish Grade	2.25	2.26	2.26	2.25	2.25	2.15	2.25	2.22	2.26	2.26
Ground Level (Left Lane)	2.27	2.14	2.10	2.10	2.16	2.20	2.41	2.52	2.6	2.6
Ground Level (Right Lane)	2.25	2.27	2.10	2.10	2.18	2.22	2.2	2.6	2.6	2.4
Station	1+920	1+940	1+960	1+980	2+000	2+020	2+040	2+060	2+080	2+080
Horizontal Alignment										
Super Elevation										

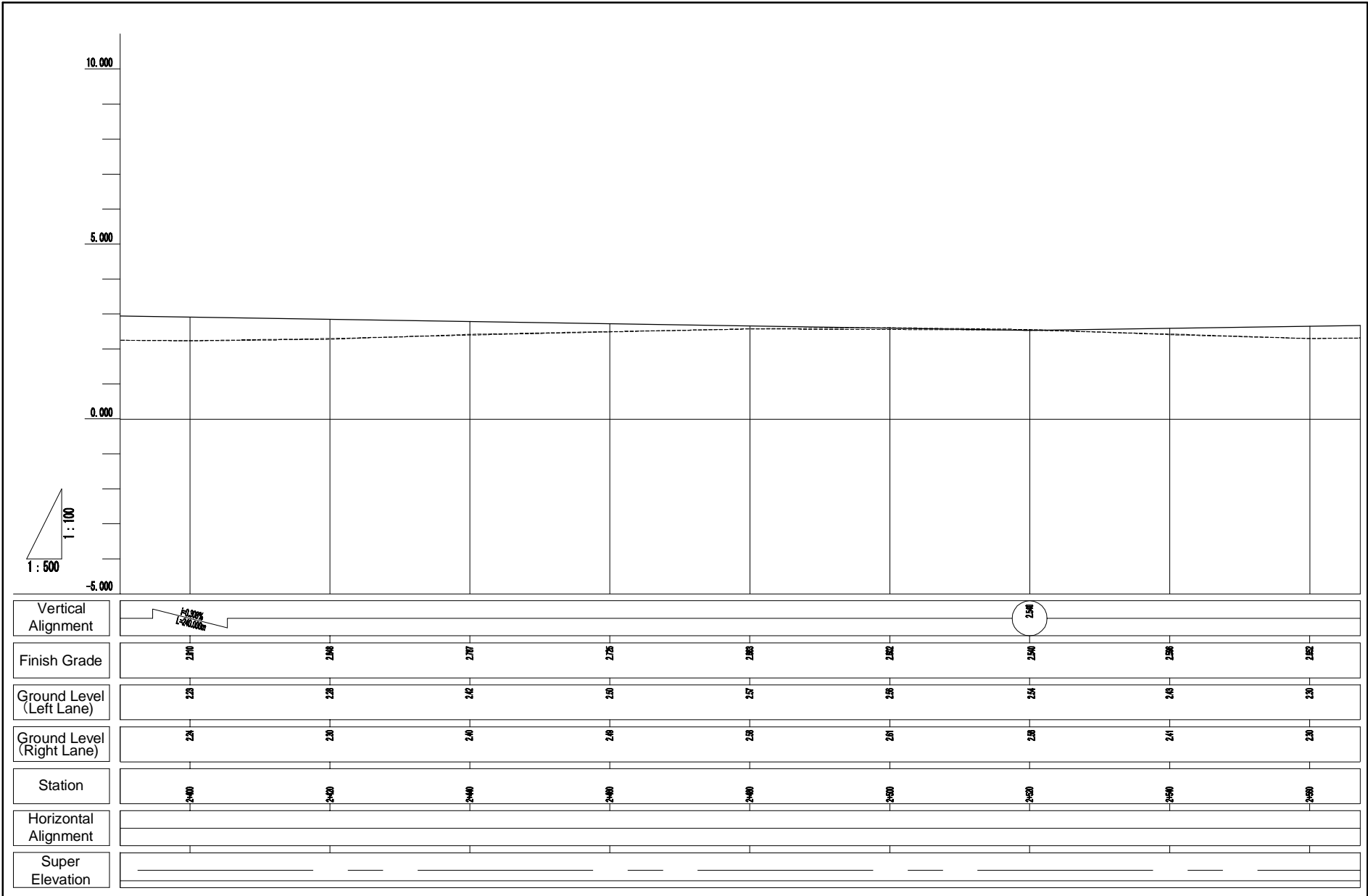
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA.1+920~STA.2+080)	Drawing No.	PR-12
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014



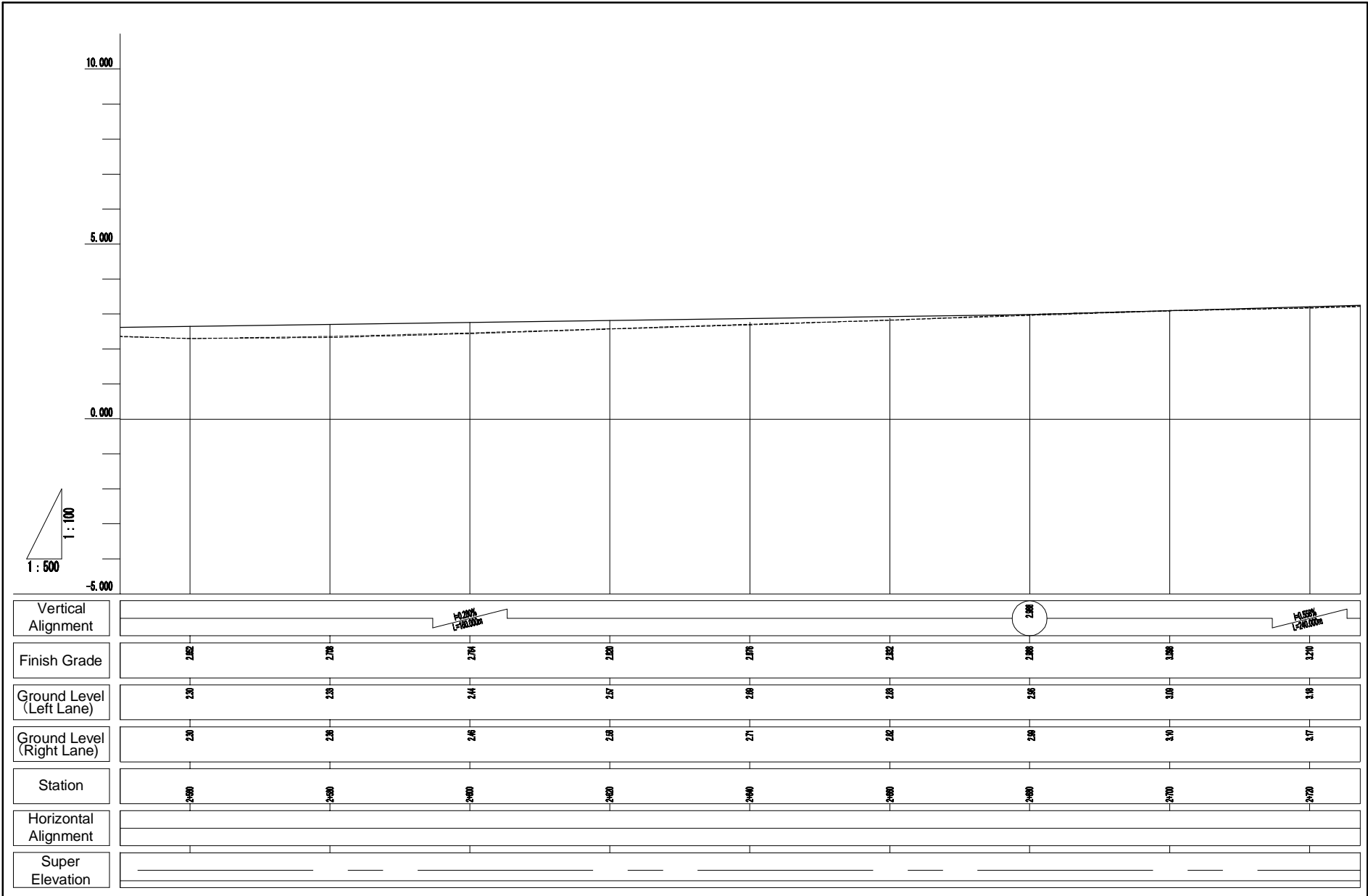
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA.2+080~STA.2+240)	Drawing No.	PR-13
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014



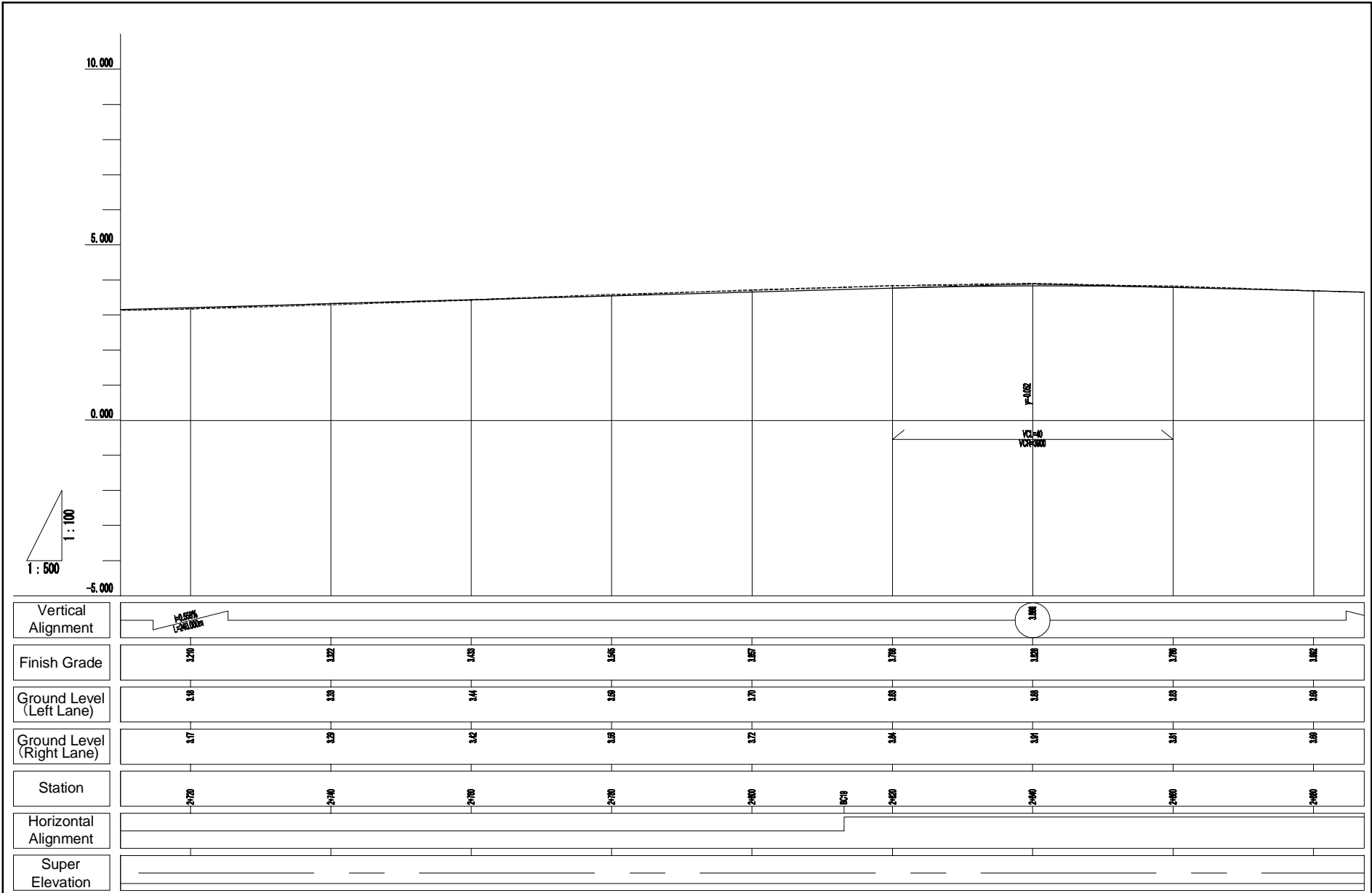
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA.2+240 ~ STA.2+400)	Drawing No.	PR-14
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014



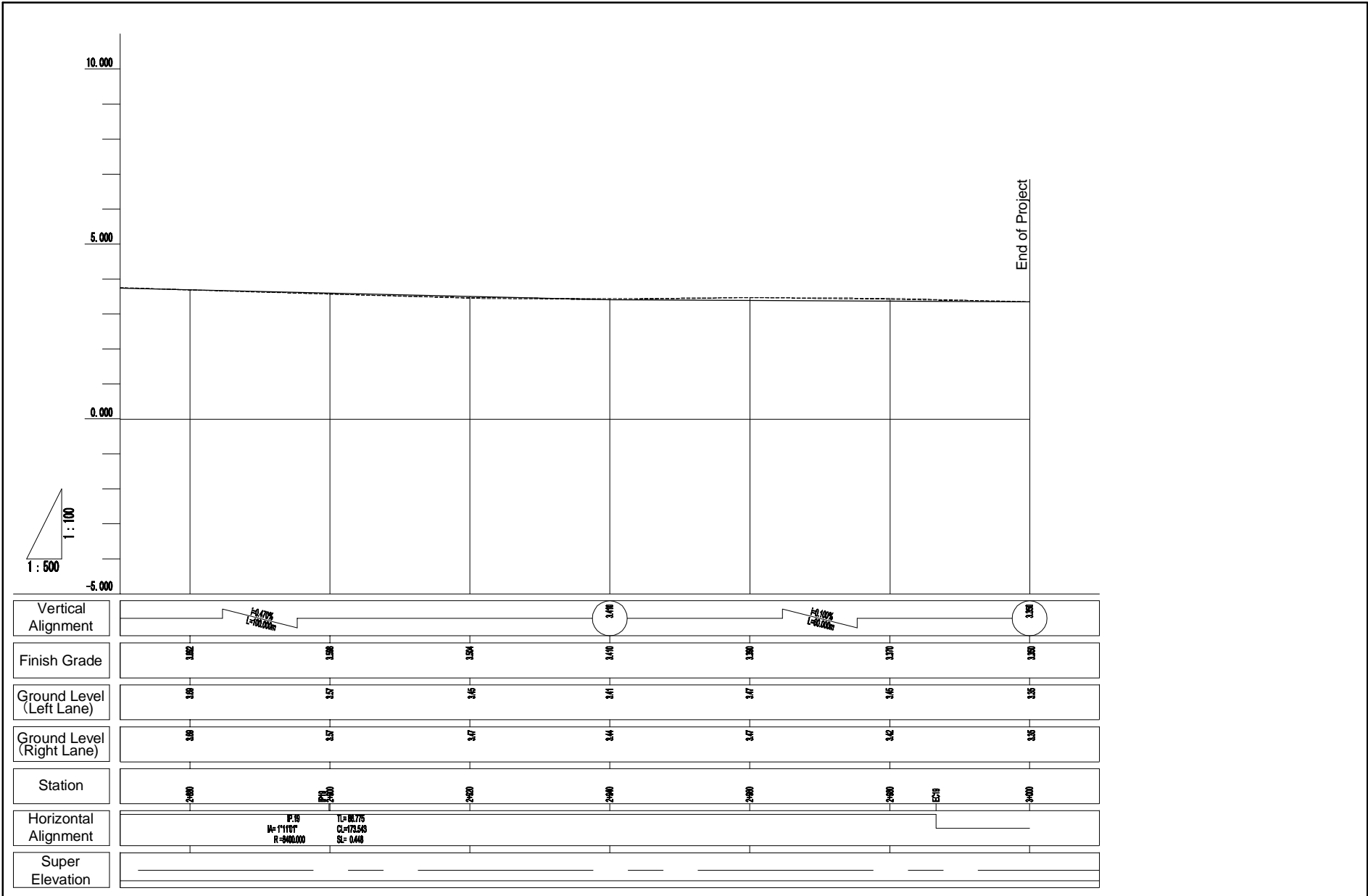
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA.2+400~STA.2+560)	Drawing No.	PR-15
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014



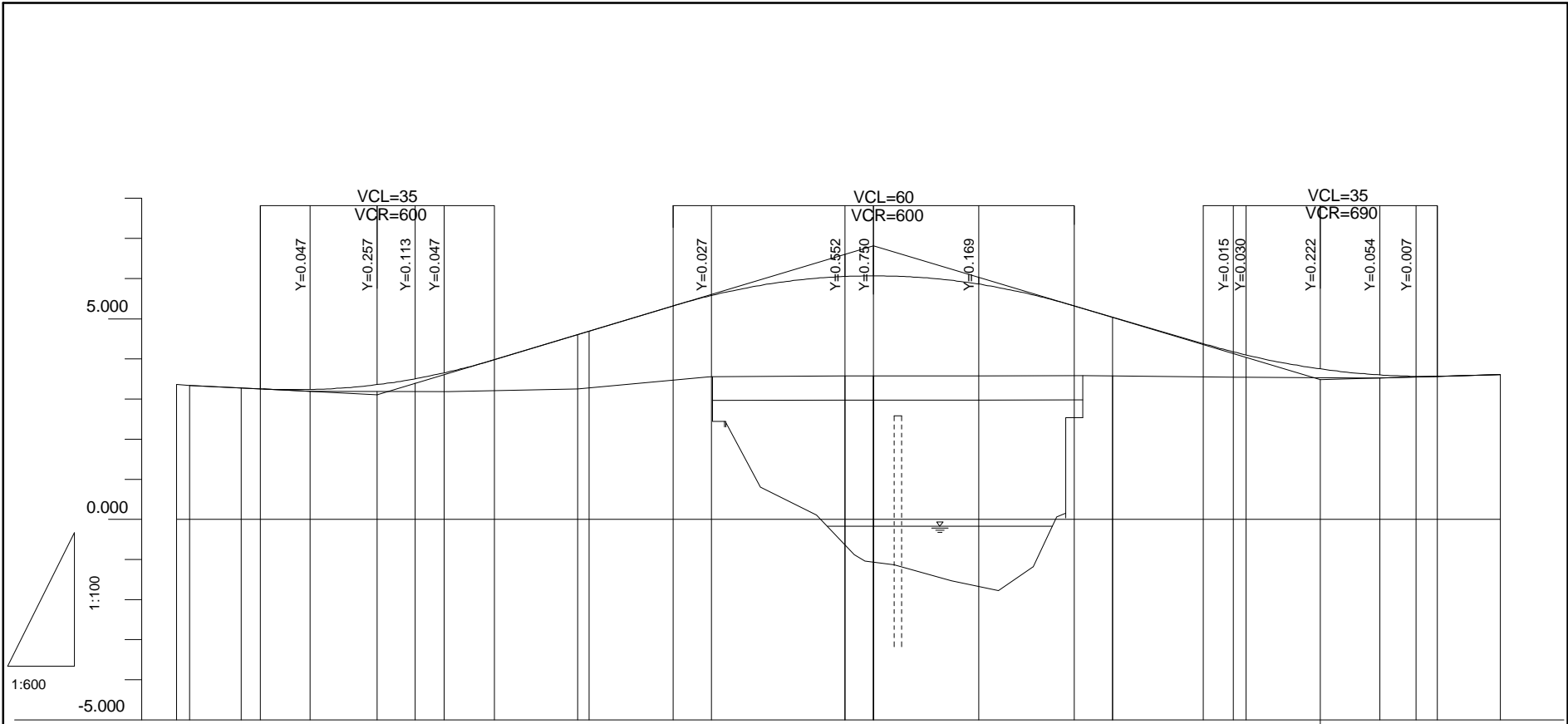
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA.2+560~STA.2+720)	Drawing No.	PR-16
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014



MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA.2+720~STA.2+880)	Drawing No.	PR-17
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014

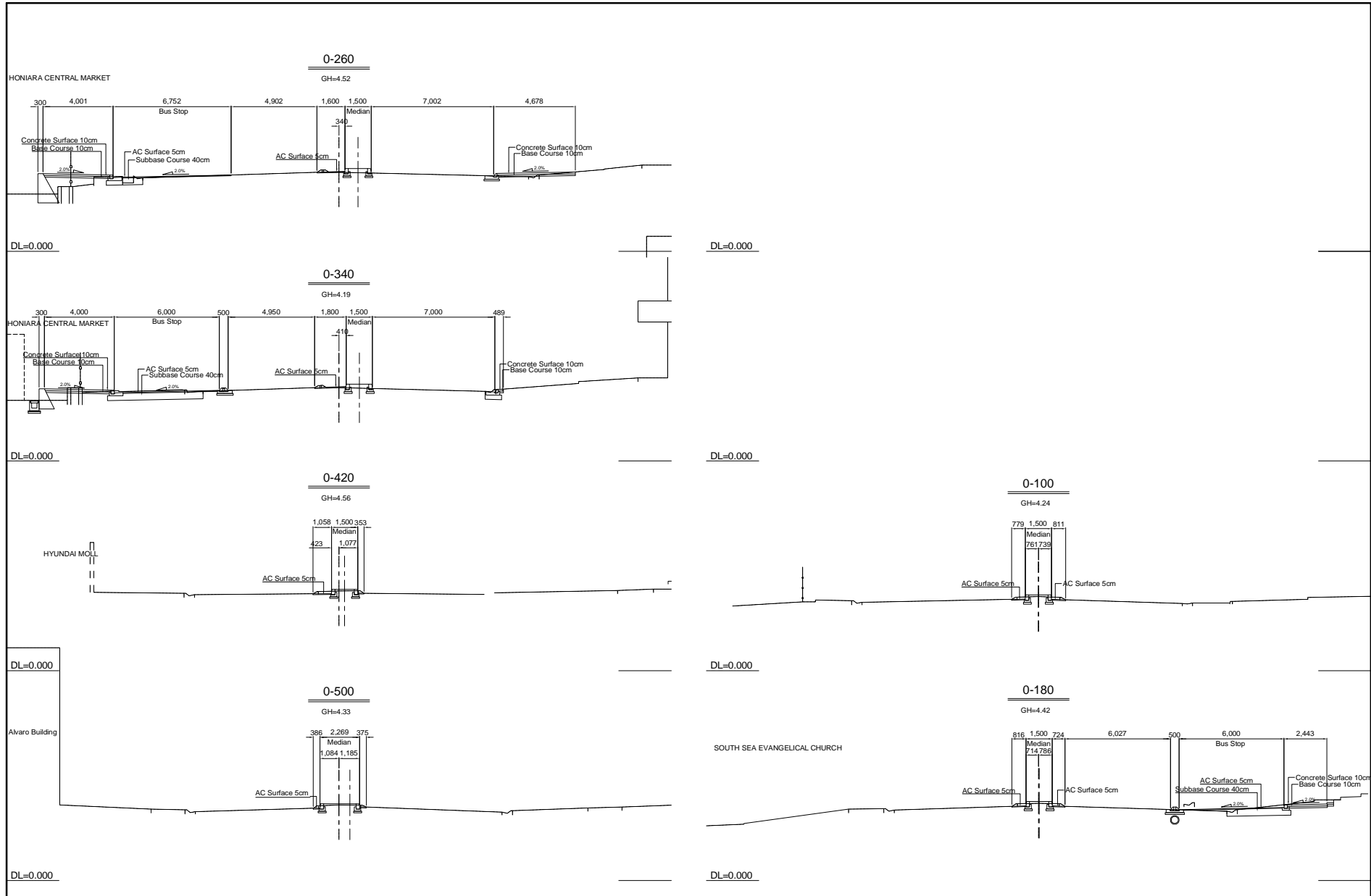


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (STA.2+880~STA.3+000)	Drawing No.	PR-18
				SCALE	V=1/100 H=1/500
				DATE	AUG. 2014



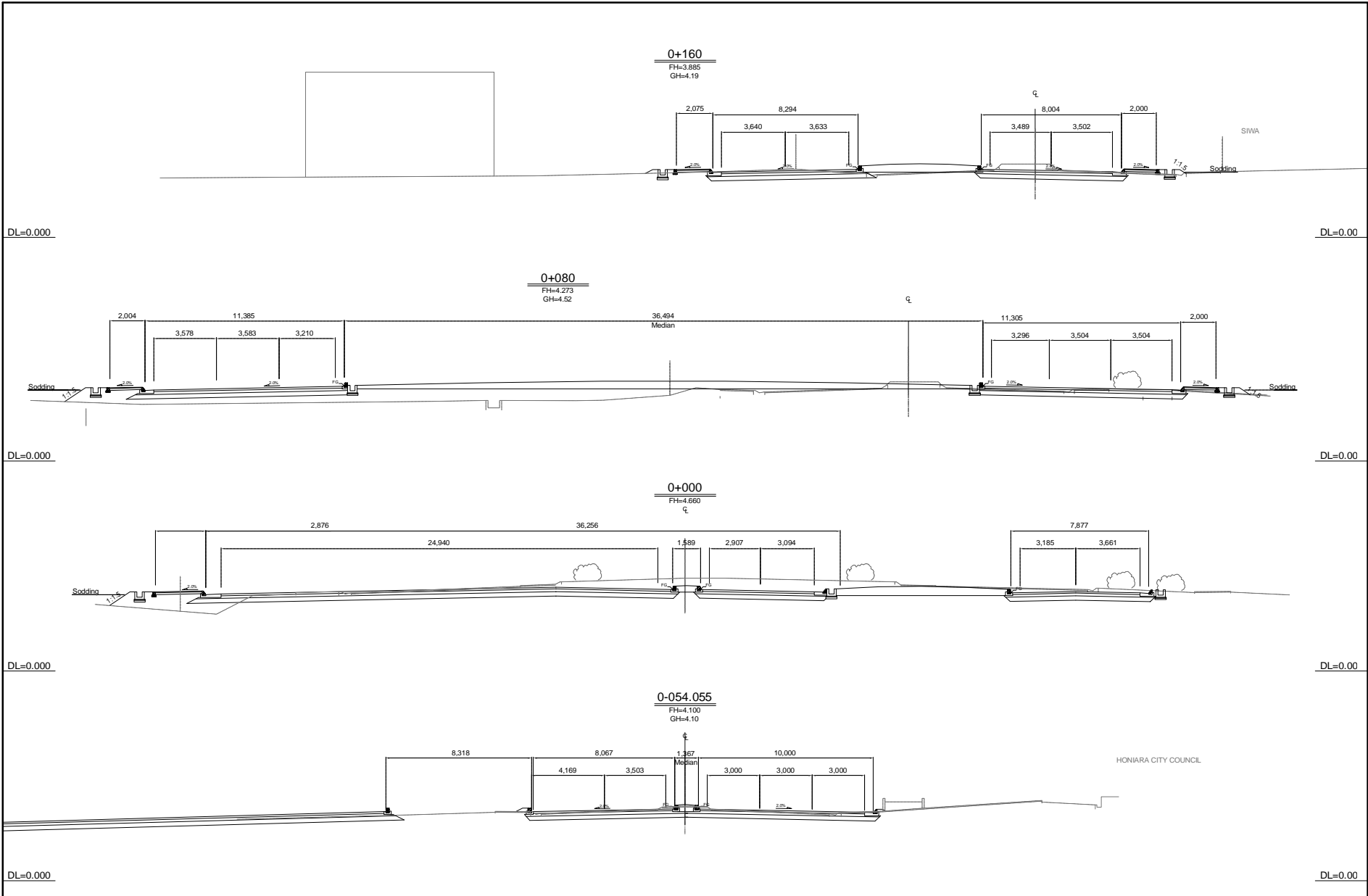
Vertical Alignment																										
Finish Grade	3.3	3.27	3.22	3.24	3.34	3.34	3.54	3.64	3.92	4.07	4.08	5.32	5.32	6.05	6.07	5.84	5.32	5.03	4.33	4.14	4.08	3.70	3.56	3.55	3.57	3.61
Ground Level	3.3	3.27	3.22	3.19	3.16	3.12	3.19	3.05	3.25	3.27	3.47	3.5	3.57	3.57	3.57	3.57	3.57	3.57	3.54	3.54	3.54	3.52	3.52	3.54	3.54	3.61
Station	0+00 SP 21	0+22	0+42.500	0+40	0+60.000	0+72	0+90	0+102.500	0+100	0+22	0+42.25	0+200	0+220	0+242.25	0+240	0+262.500	0+280	0+270.000	0+22	0+20	0+20	0+201.100 SP 23	0+300	0+22	0+400.000	0+500.000
Horizontal Alignment	IP 22 IA=37°16'11" R=80.000 TL=26.977 CL=52.038 SL=4.426										IP 23 IA=31°18'37" R=50.000 TL=14.012 CL=27.323 SL=1.926															
Super Elevation	2.00%																									

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : PROFILE (OLD MATANIKO BRIDGE)	Drawing No.	PR-19
				SCALE	V=1/100 H=1/600
				DATE	AUG. 2014

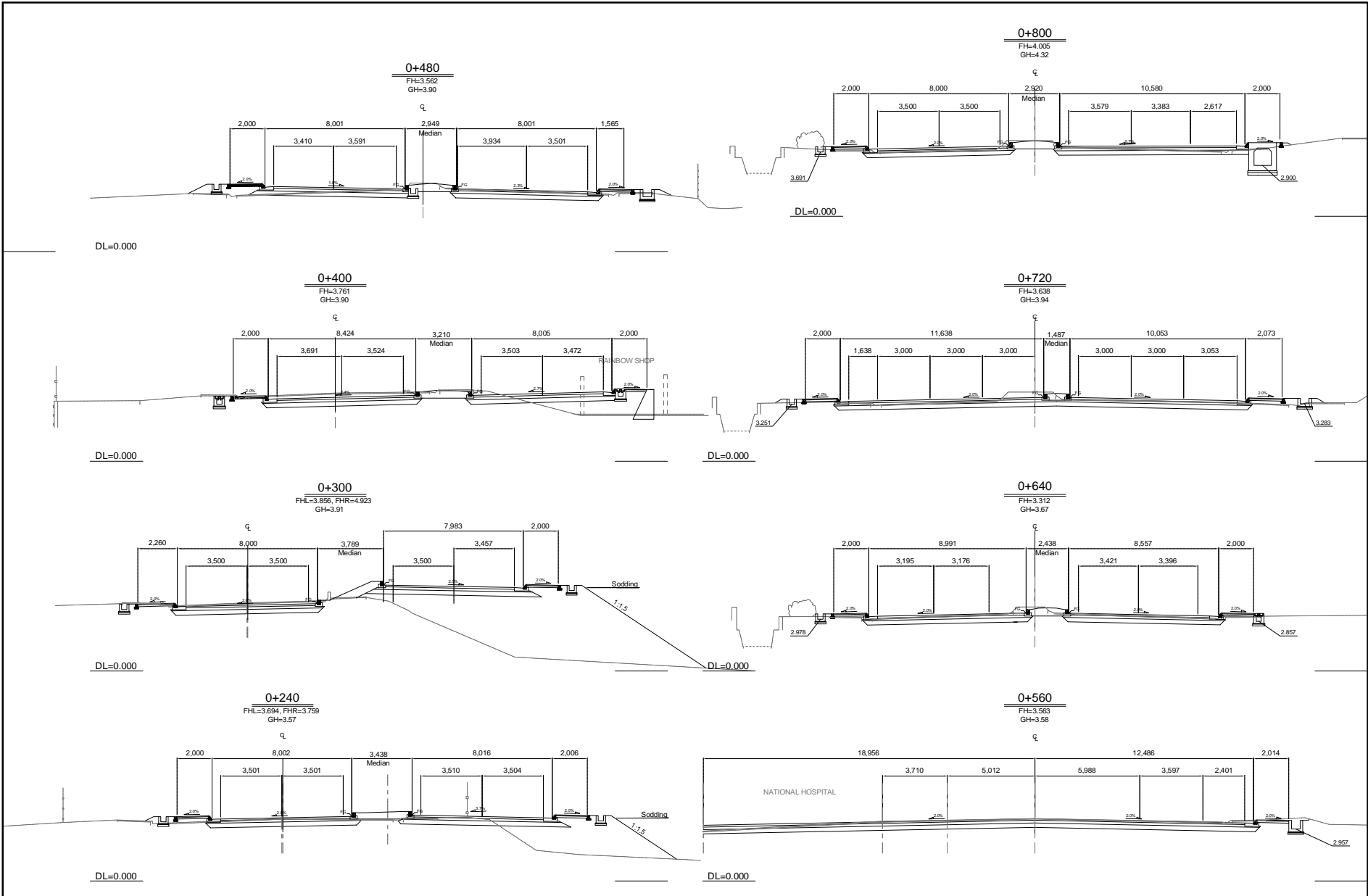


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	Drawing No. CS-01	
			CROSS SECTION (STA.0-500~STA.0-100)		SCALE S=1/200
					DATE AUG. 2014

A11-49

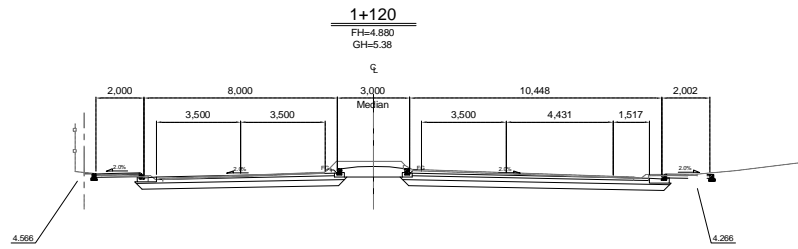


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : CROSS SECTION (STA.0-054~ STA.0+160)	Drawing No.	CS-02
				SCALE	S=1/200
				DATE	AUG. 2014

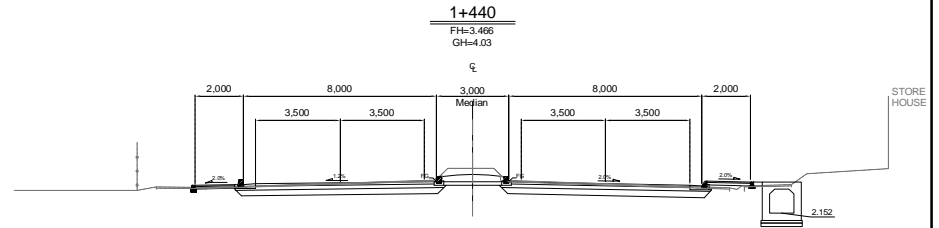


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	CROSS SECTION (STA.0+240~STA.0+800)	Drawing No.	CS-03
					SCALE	S=1/200
					DATE	AUG. 2014

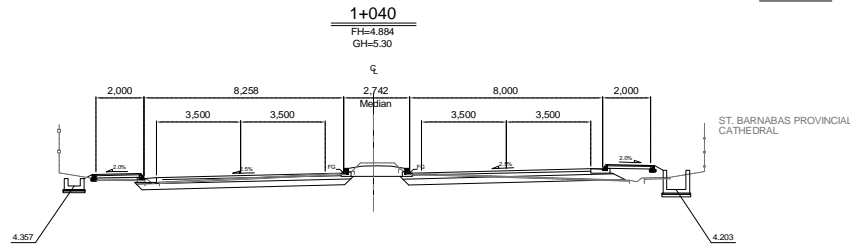
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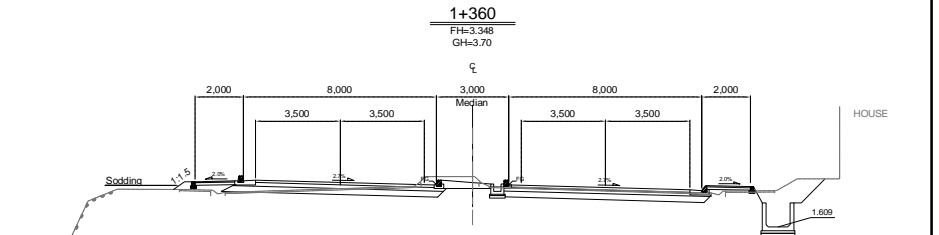
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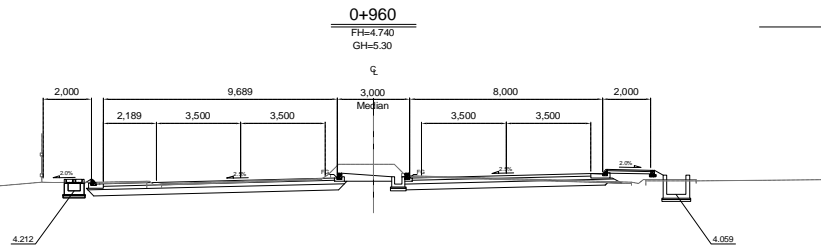
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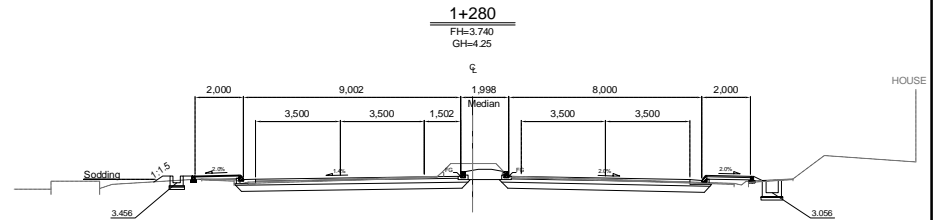
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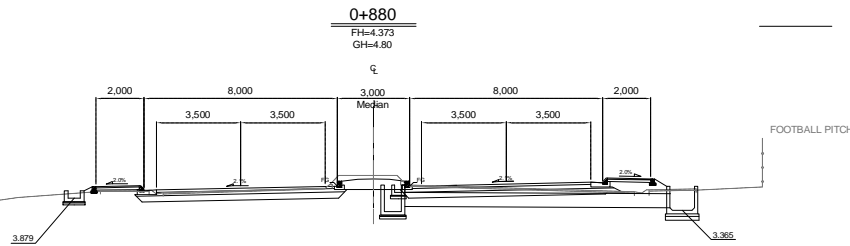
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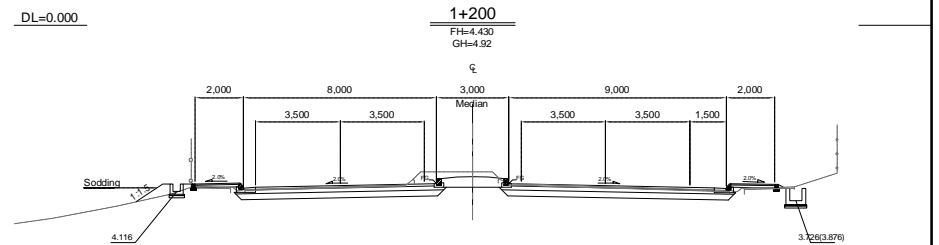
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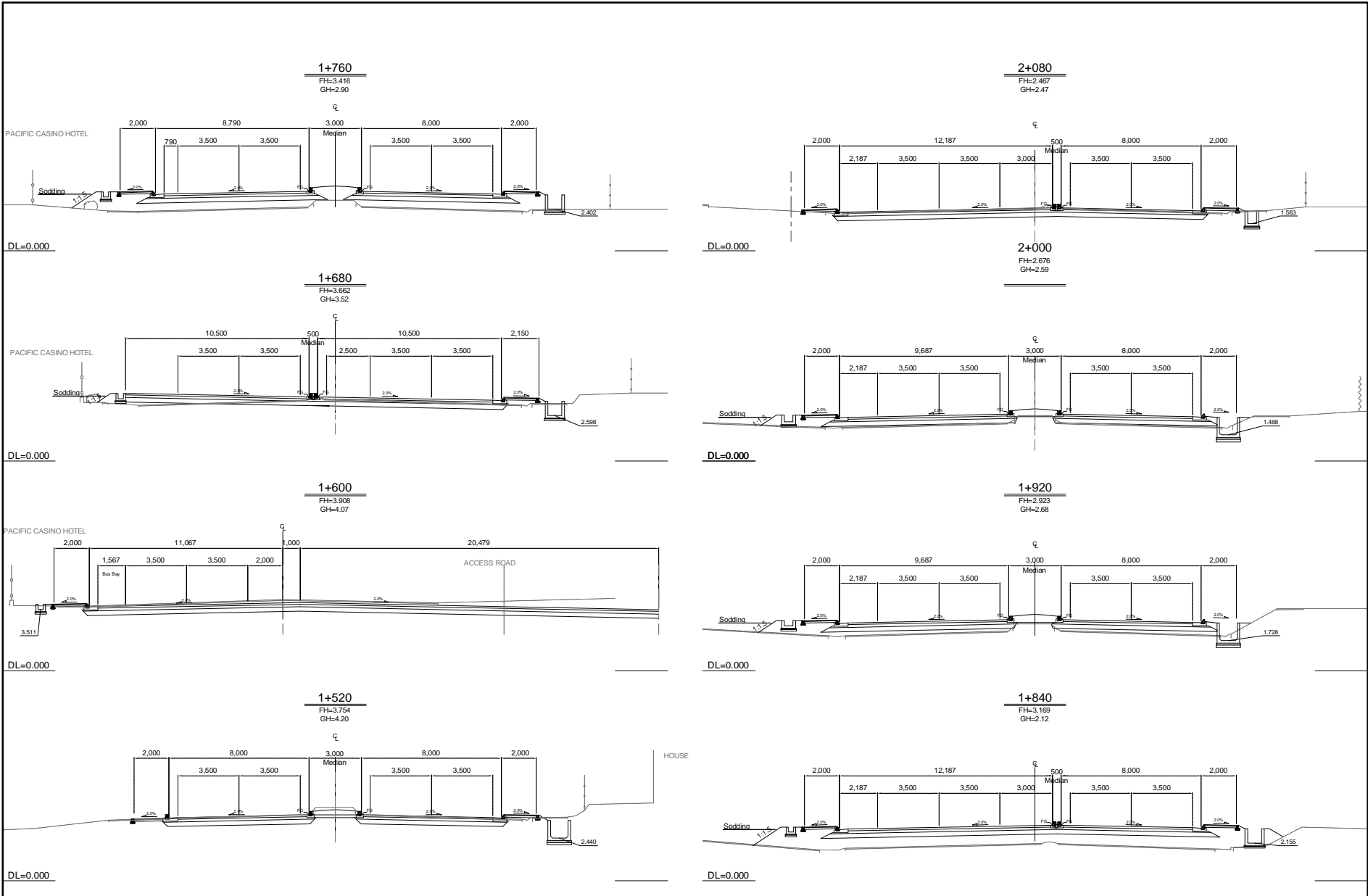
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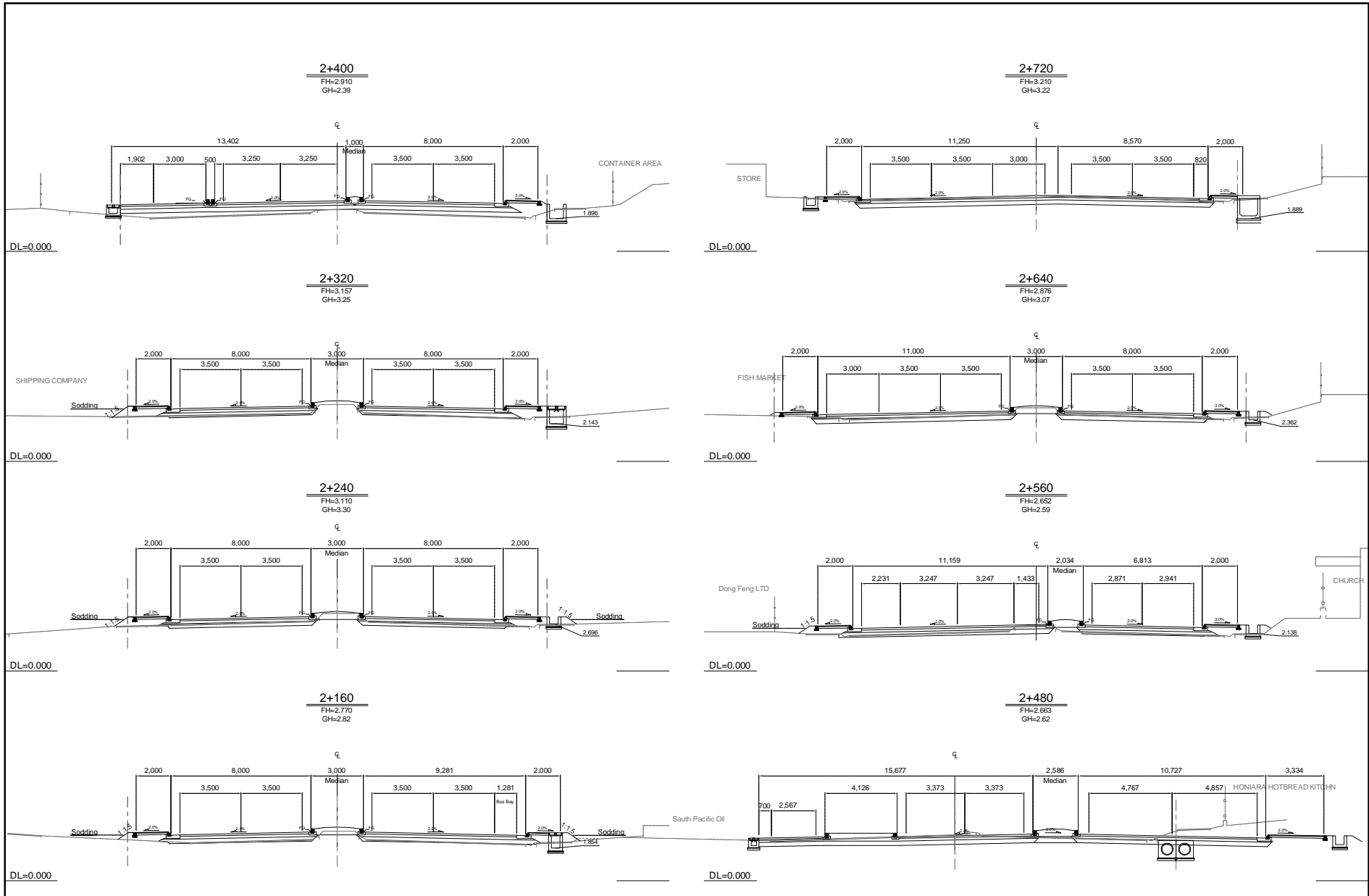
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MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	CROSS SECTION (STA.0+880 ~ STA.1+440)	Drawing No.	CS-04
					SCALE	S=1/200
					DATE	AUG. 2014

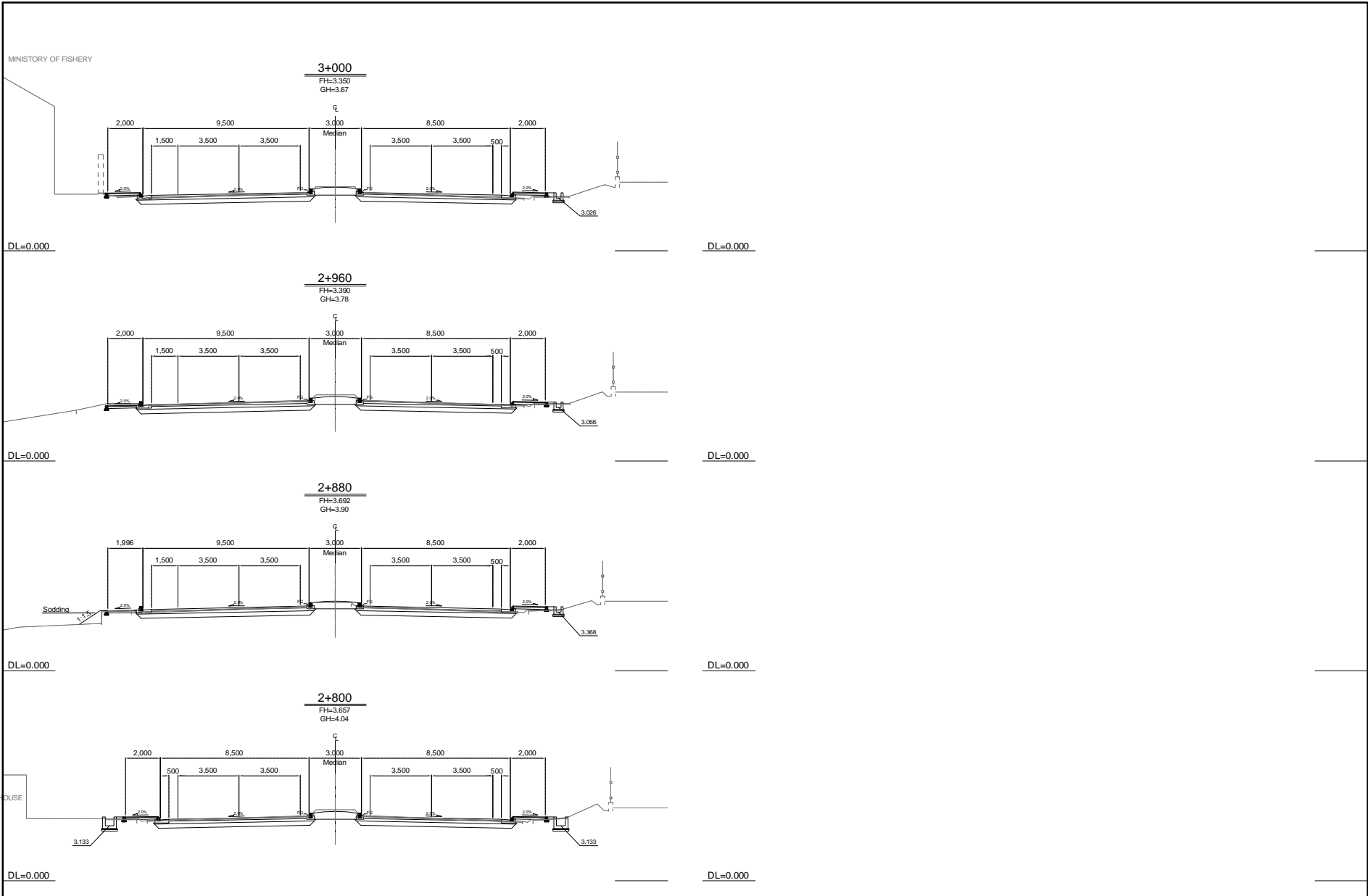
A11-52



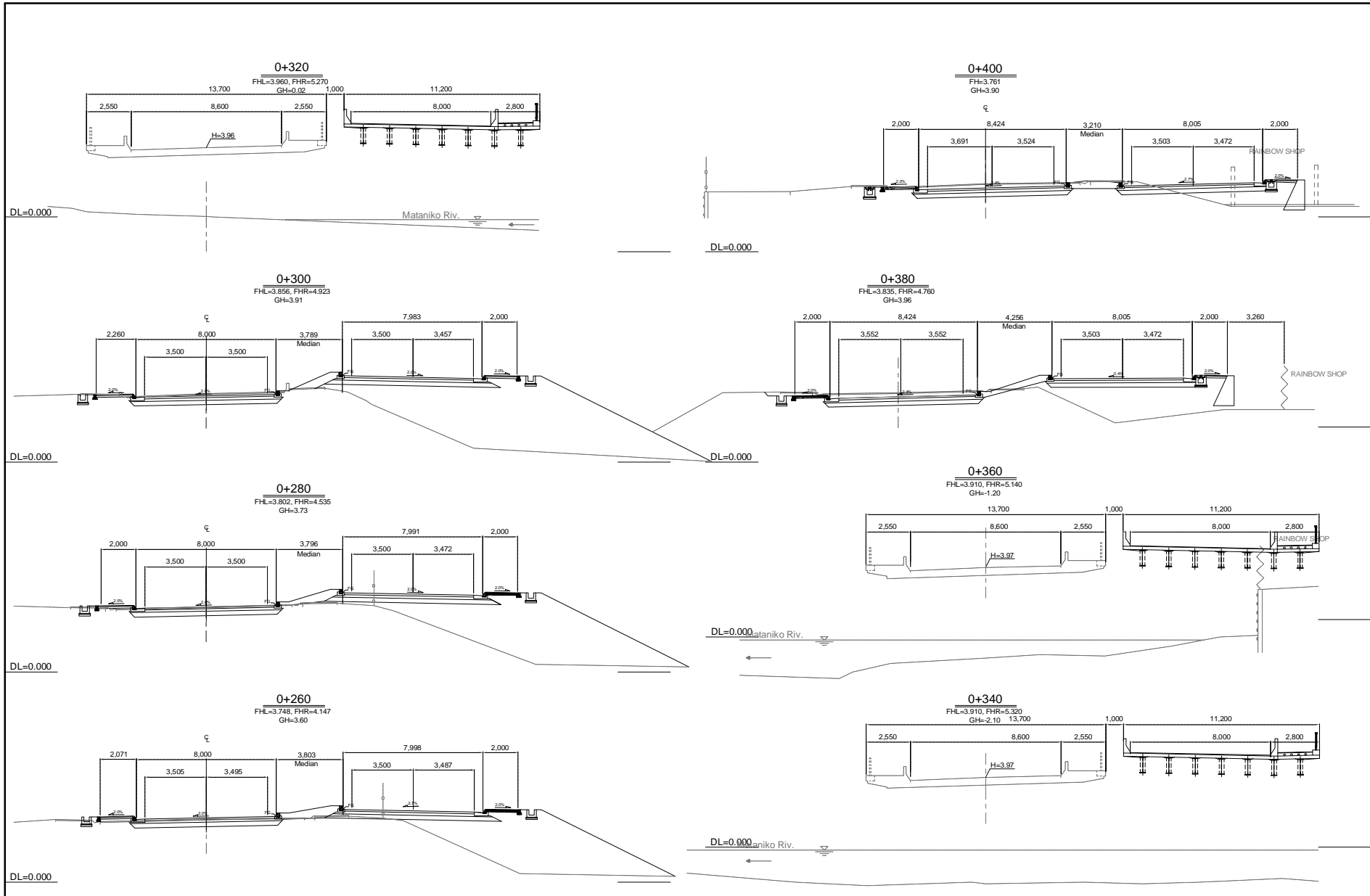
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	Drawing No.	CS-05
			CROSS SECTION (STA. 1+520~STA. 2+080)	SCALE	S=1/200
				DATE	AUG. 2014



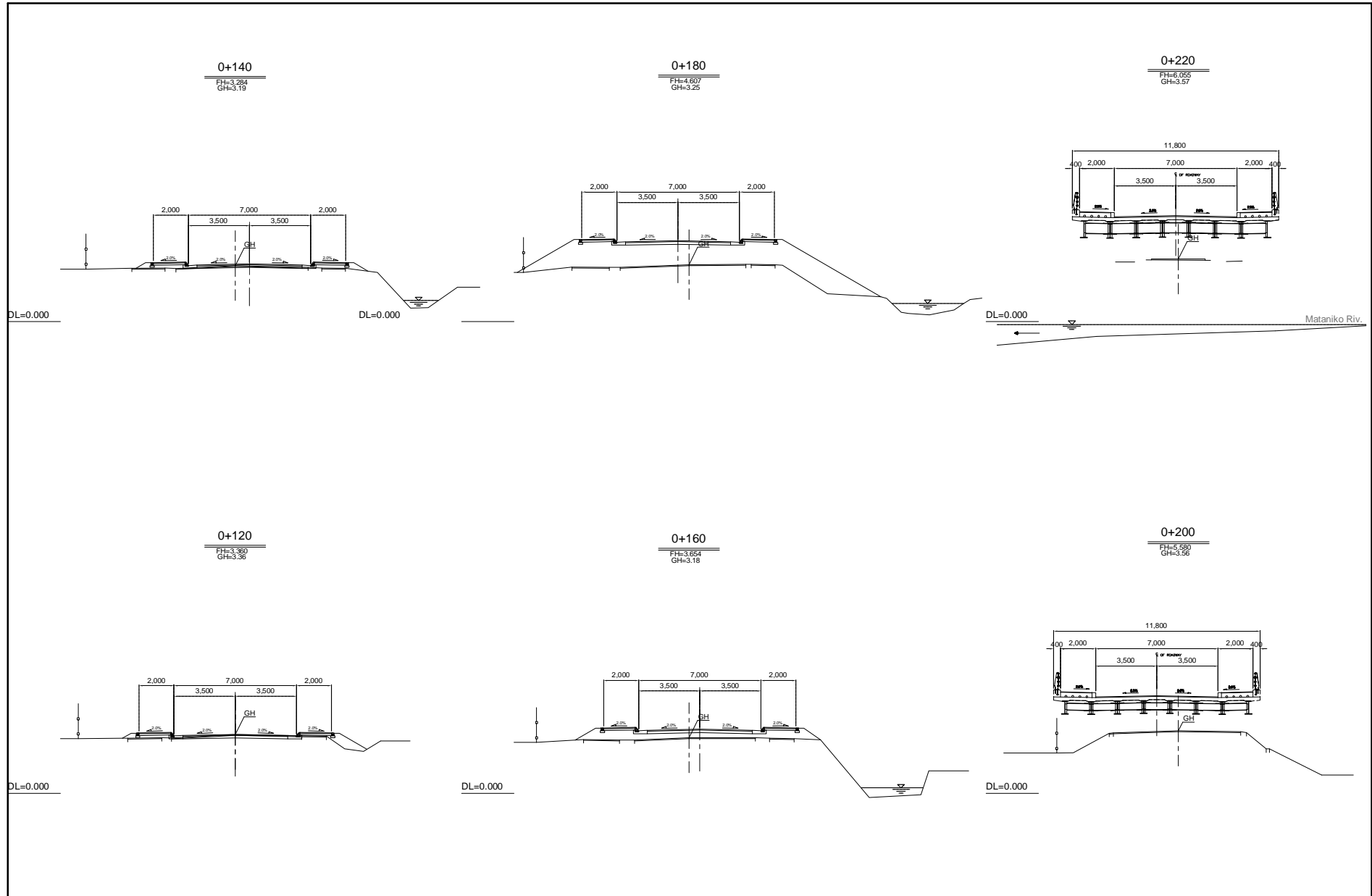
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	Drawing No.	CS-06
			CROSS SECTION (STA.2+160~STA.2+720)	SCALE	S=1/200
				DATE	AUG. 2014



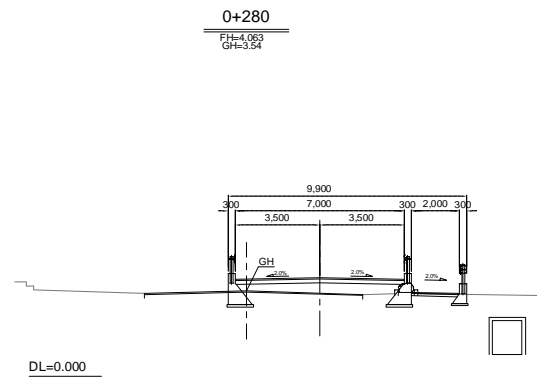
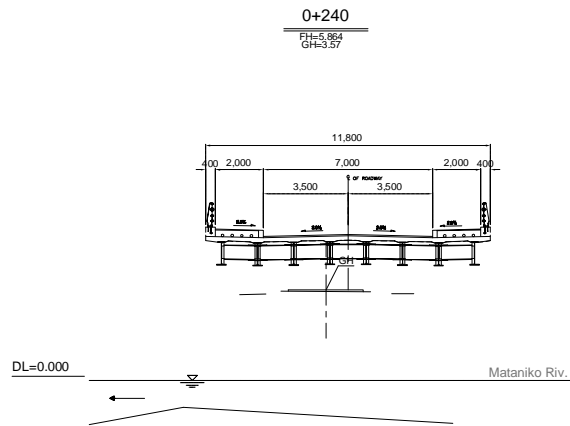
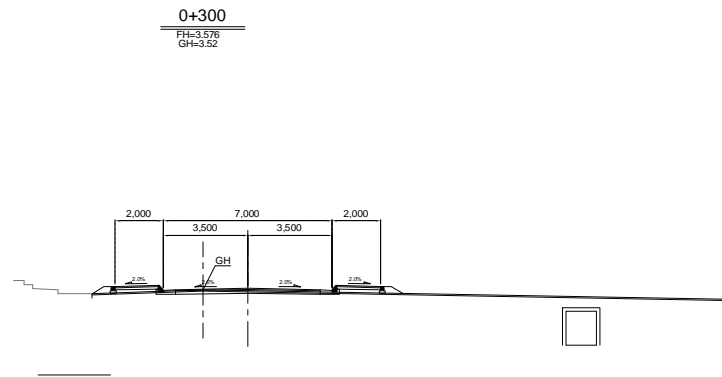
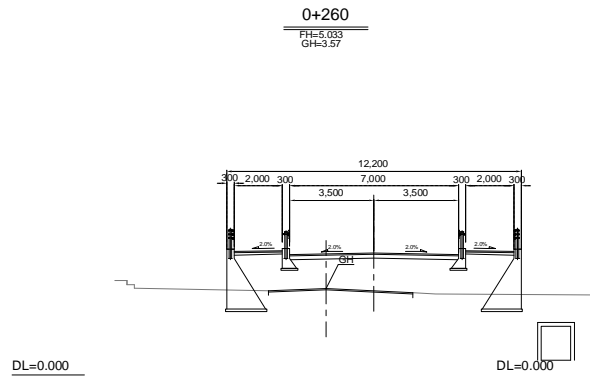
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : CROSS SECTION (STA.2+800~STA.3+000)	
			Drawing No.	CS-07
			SCALE	S=1/200
			DATE	AUG. 2014



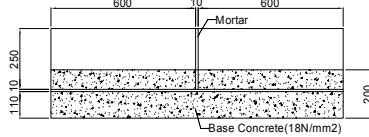
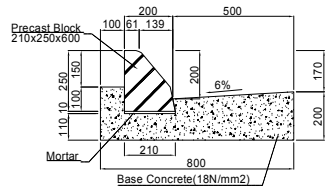
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : NEW MATANIKO BRIDGE APPROACH ROAD CROSS SECTION (STA.0+260~STA.0+400)	
			Drawing No.	CS-08
			SCALE	S=1/200
			DATE	AUG. 2014



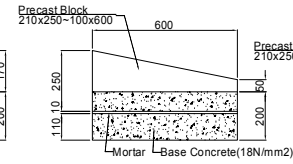
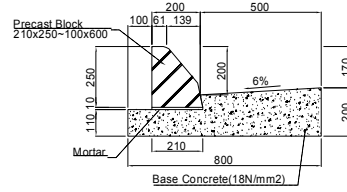
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : OLD MATANIKO BRIDGE APPROACH ROAD CROSS SECTION (STA.0+120~STA.0+220)	
			Drawing No.	CS-09
			SCALE	S=1/200
			DATE	AUG. 2014



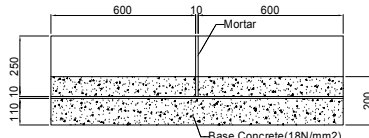
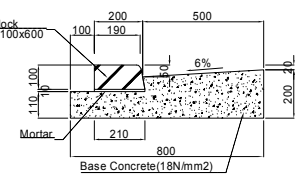
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : OLD MATANIKO BRIDGE APPROACH ROAD CROSS SECTION (STA.0+240~0+300)	
			Drawing No.	CS-10
			SCALE	S=1/200
			DATE	AUG. 2014



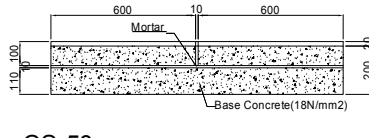
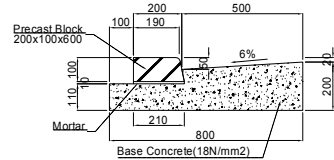
CS-200A
(CURB STONE FOR SIDE WALK)



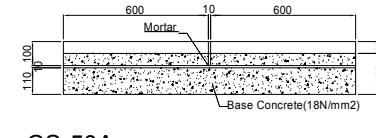
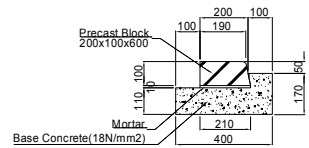
CS-200B
(CURB STONE FOR SIDE WALK)



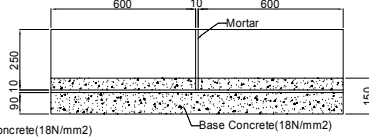
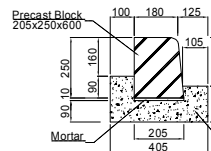
CS-200C
(CURB STONE FOR SIDE WALK)



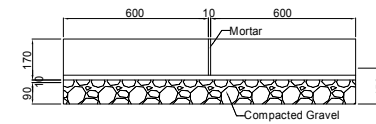
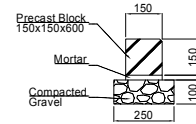
CS-50
(CURB STONE FOR SIDE WALK OR CROSS WALK)



CS-50A
(CURB STONE FOR SIDE WALK OR CROSS WALK)

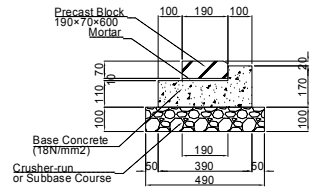


CS-M-200
(CURB STONE FOR MEDIAN STRIP)

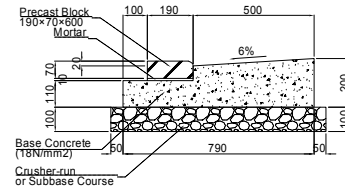
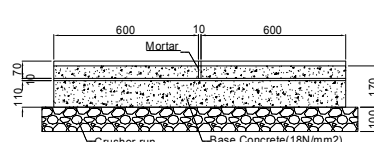


VB
(VERGE BLOCK)

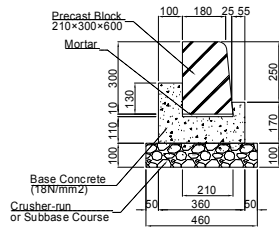
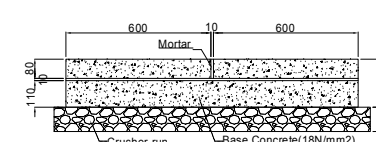
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	Drawing No.	CU-01
			CURB STONE (1 OF 3)	SCALE	S=1/40
				DATE	AUG. 2014



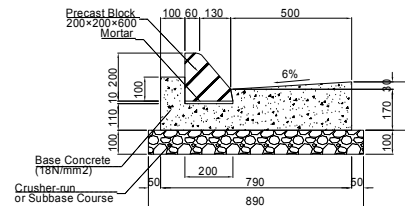
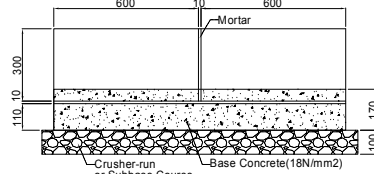
CS-20A
(CURB STONE FOR CROSSWALK)



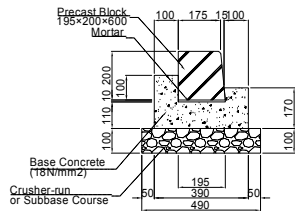
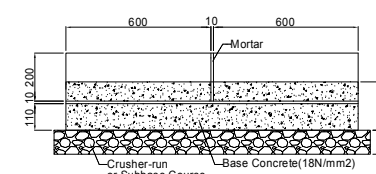
CS-20B
(CURB STONE FOR CROSSWALK)



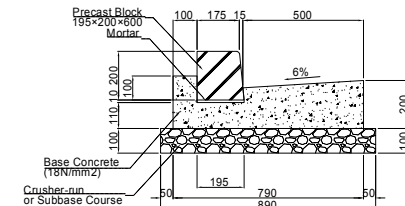
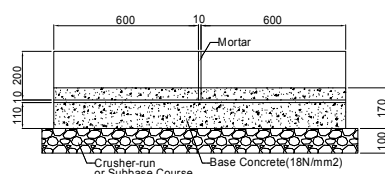
CS-M-250
(CURB STONE FOR MEDIAN STRIP)



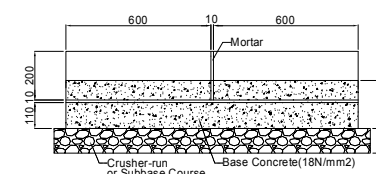
CS-150A
(CURB STONE FOR SIDE WALK)



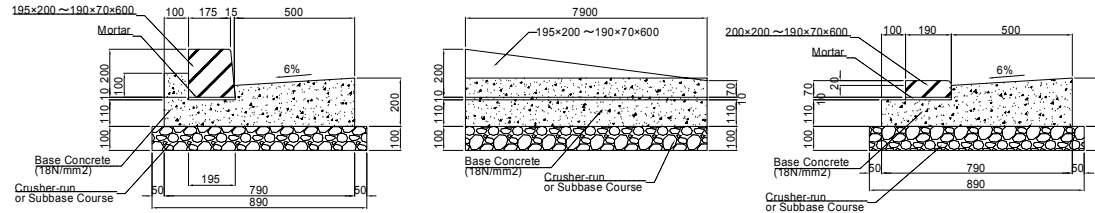
CS-150B
(CURB STONE FOR BUS STOP)



CS-150C
(CURB STONE FOR BUS STOP)

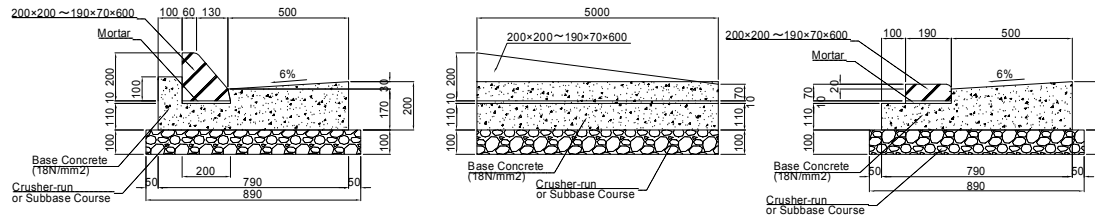


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	Drawing No.	CU-02
			CURB STONE (2 OF 3)	SCALE	S=1/40
				DATE	AUG. 2014



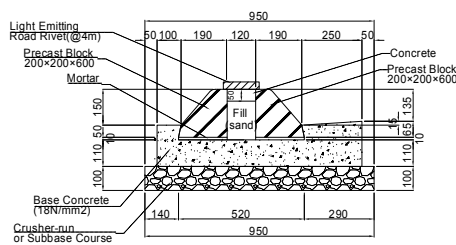
CS-150D

(CURB STONE FOR SIDE WALK OR CROSS WALK)



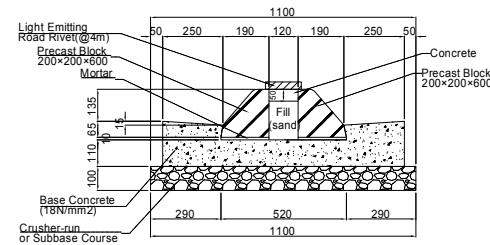
CS-150E

(CURB STONE FOR SIDE WALK OR CROSS WALK)



CS-BSM-A

(CURB STONE FOR BUS STOP MEDIAN)



CS-BSM-B

(CURB STONE FOR BUS STOP MEDIAN)

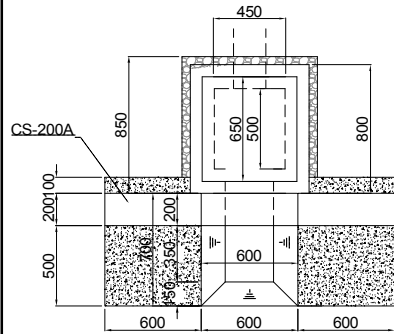
MINISTRY OF
INFRASTRUCTURE DEVELOPMENT

JAPAN INTERNATIONAL
COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL

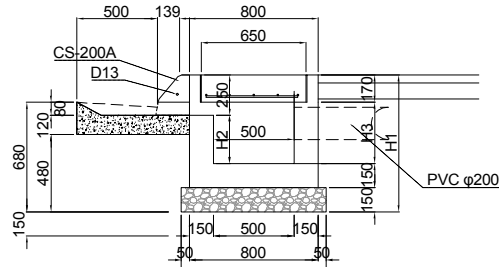
THE PREPARATORY SURVEY ON
THE PROJECT FOR UPGRADING OF
KUKUM HIGHWAY IN THE SOLOMON ISLANDS

TITLE :
CURB STONE (3 OF 3)

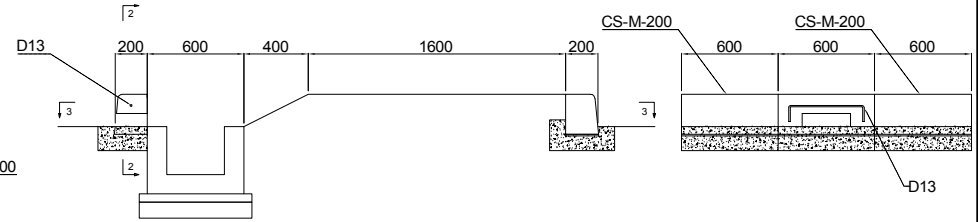
Drawing No.	CU-03
SCALE	S=1/40
DATE	AUG. 2014



PLAN

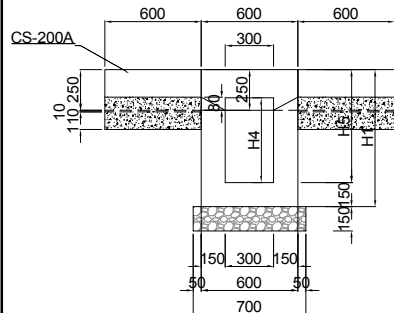


CROSS SECTION

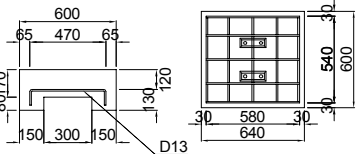


Section 1 - 1 (Cross Section)

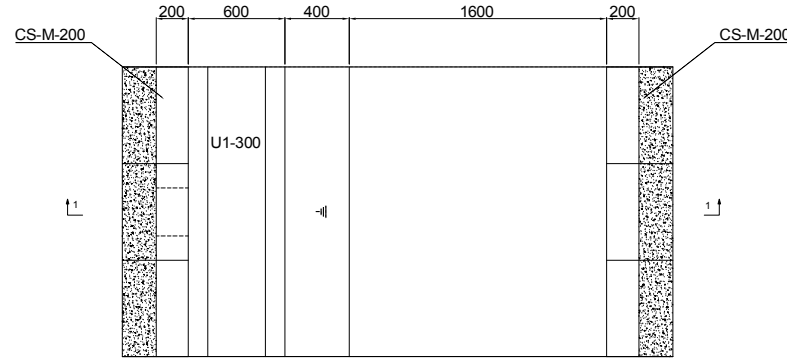
Section 2 - 2 (Side Section)



SIDE SECTION



Size	H1	H2	H3	H4	H5
U1-300	850	300	380	525	700
U2-300	850	300	380	525	700
U-400	870	320	400	545	720
U-500	970	420	500	645	820

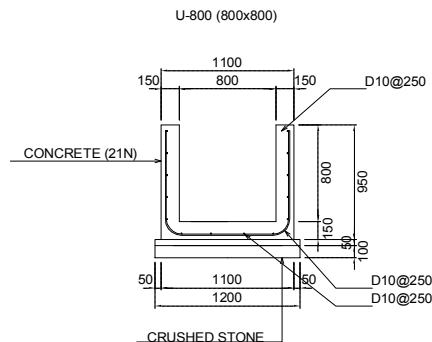
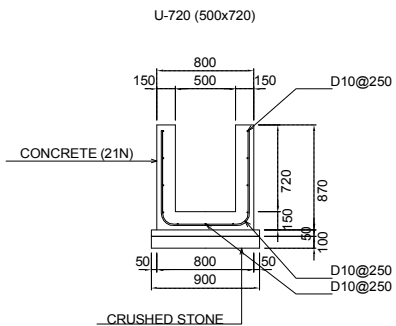
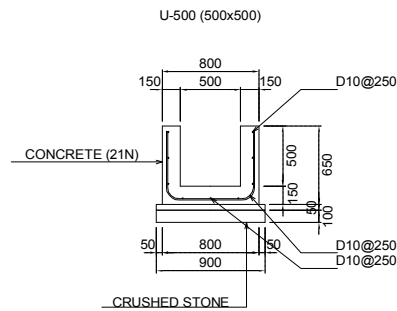
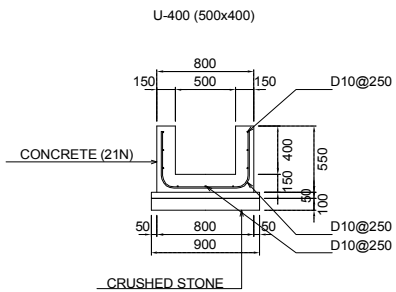
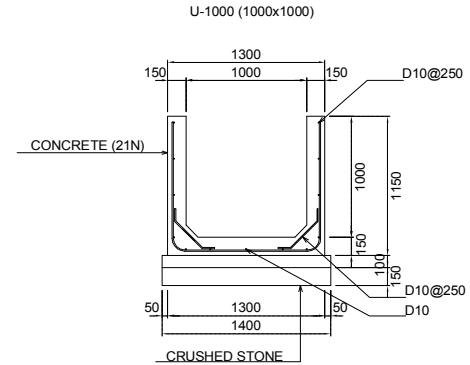
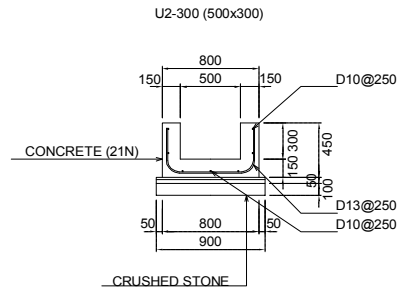
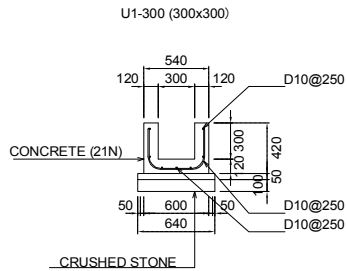


Section 3 - 3 (Plan)

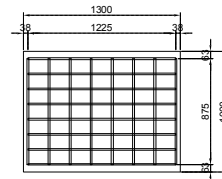
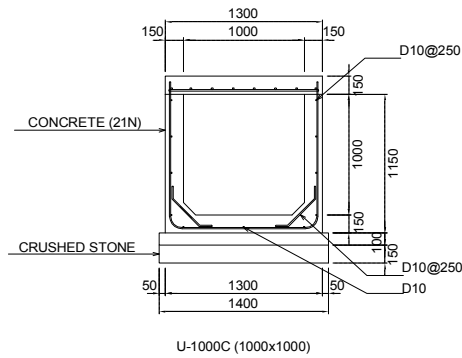
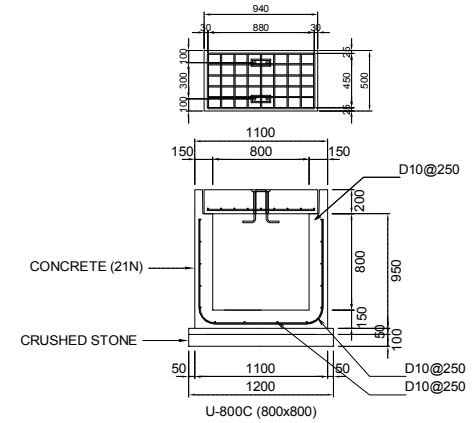
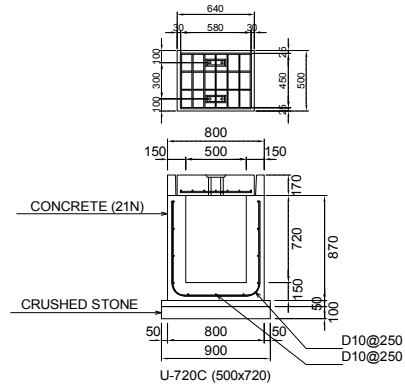
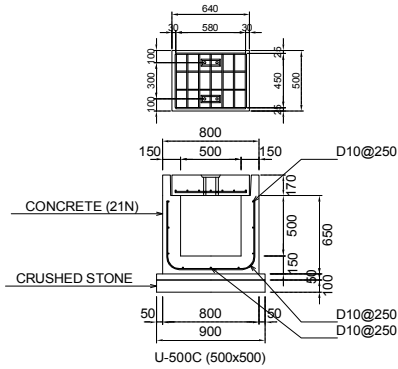
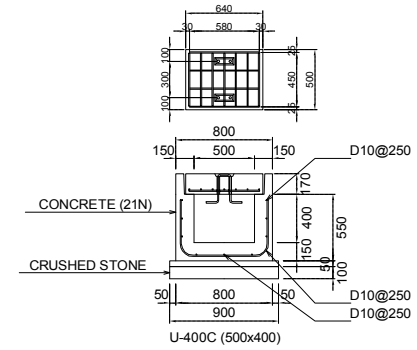
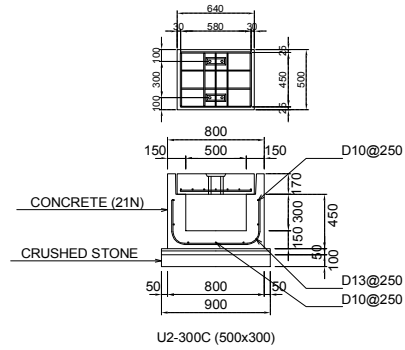
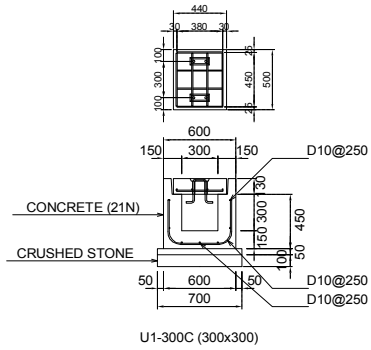
CATCH BASIN FOR INLET

INLET OF U1-300

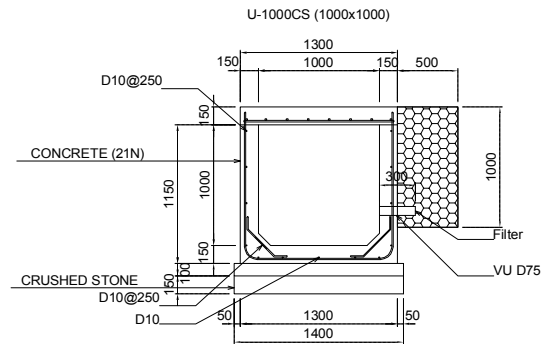
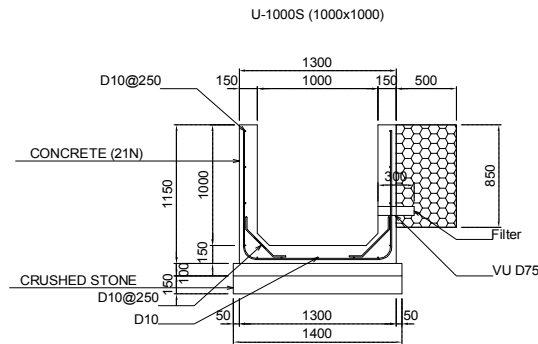
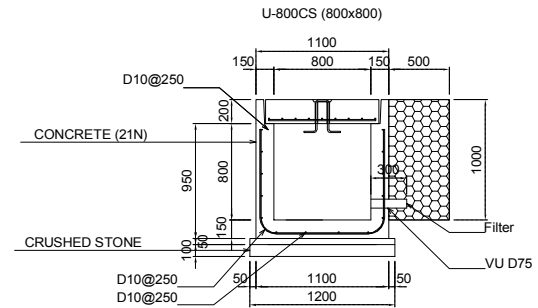
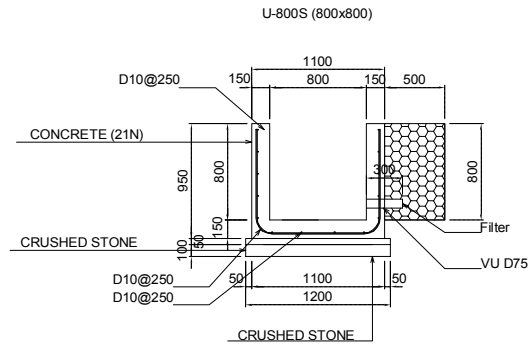
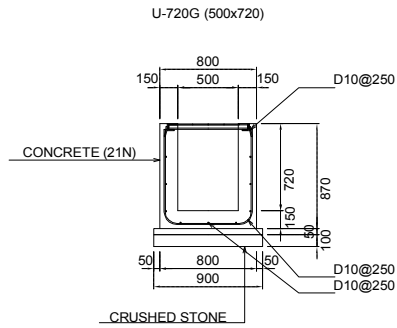
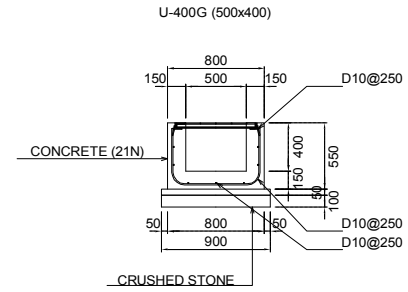
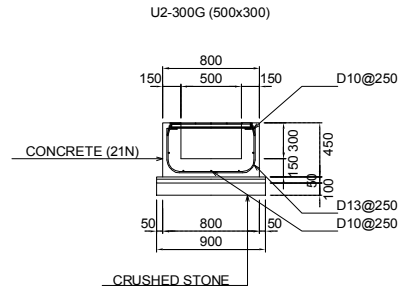
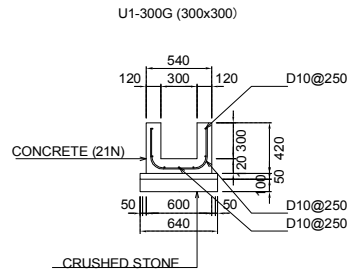
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : CATCH BASIN FOR INLET INLET FOR U1-300	
			Drawing No.	IN-01
			SCALE	S=1/30
			DATE	AUG. 2014



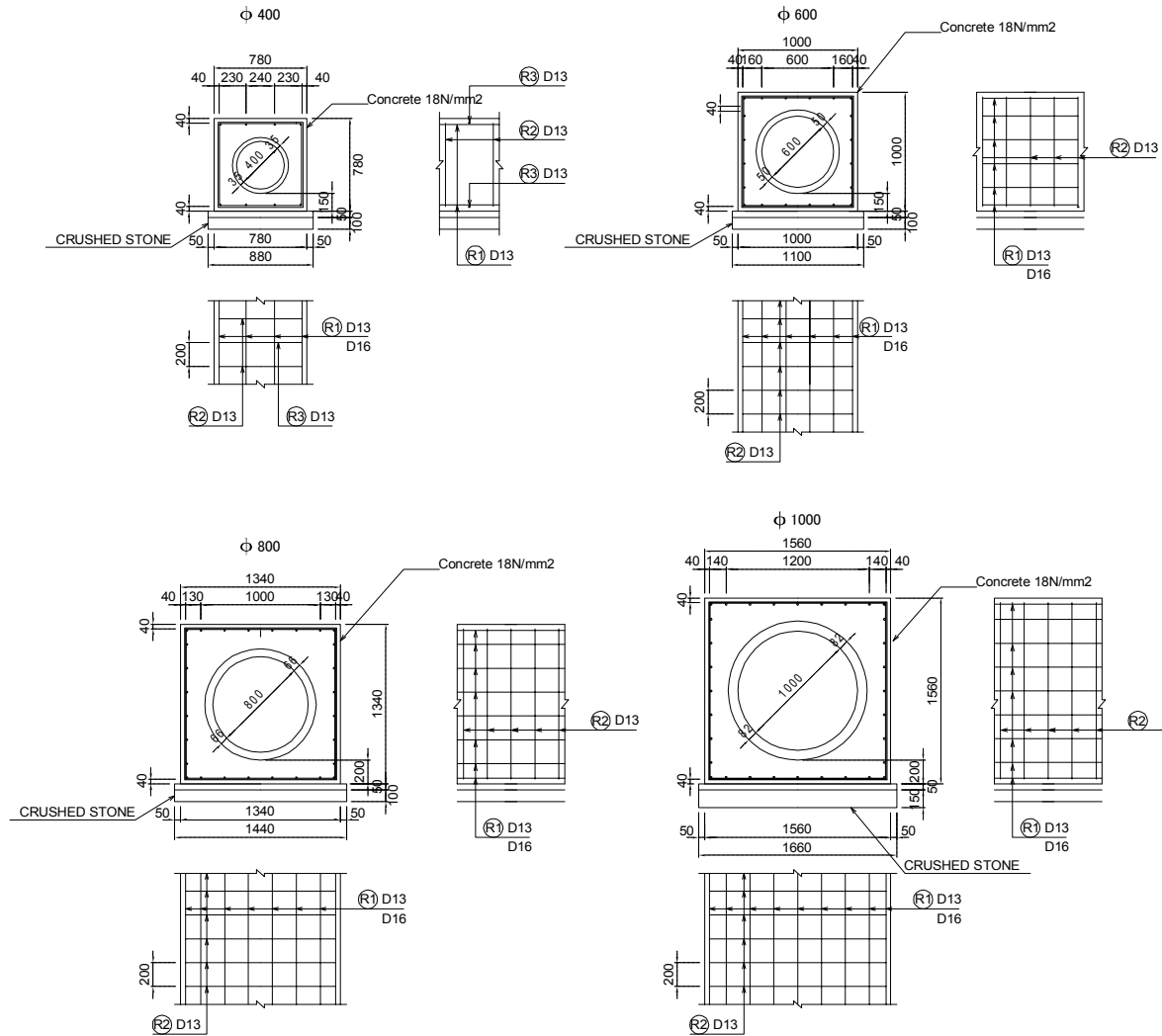
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : DRAINAGE STRUCTURES (1/5)		Drawing No.	DR-01
					SCALE	S=1/40
					DATE	AUG. 2014



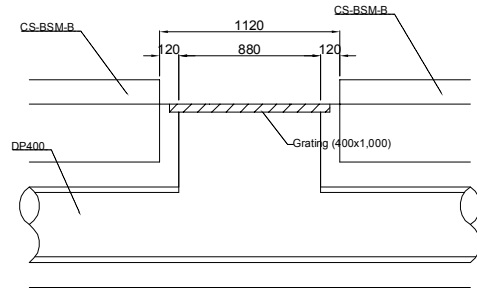
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : DRAINAGE STRUCTURES (2/5)		Drawing No. DR-02
					SCALE S=1/40
					DATE AUG. 2014



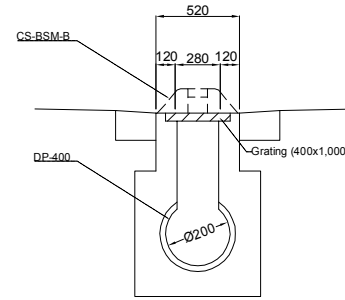
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : DRAINAGE STRUCTURES (3/5)		Drawing No.	DR-03
					SCALE	S=1/40
					DATE	AUG. 2014



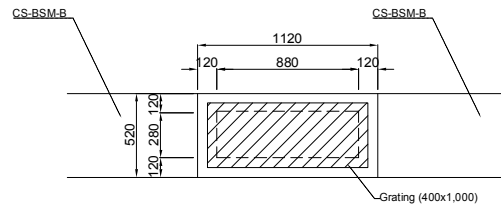
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : DRAINAGE STRUCTURES (4/5)		Drawing No. DR-04
					SCALE S=1/40
					DATE AUG. 2014



Section 1 - 1 (Side Section)

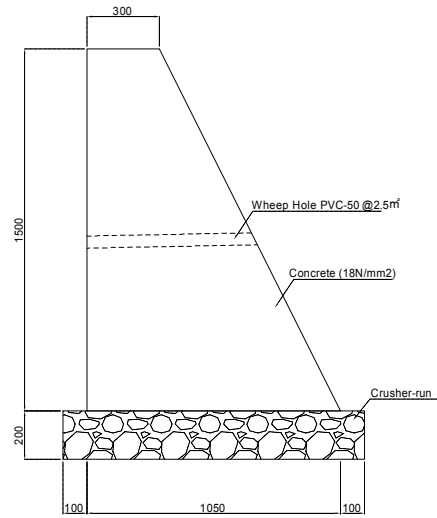


Section 2 - 2 (Cross Section)

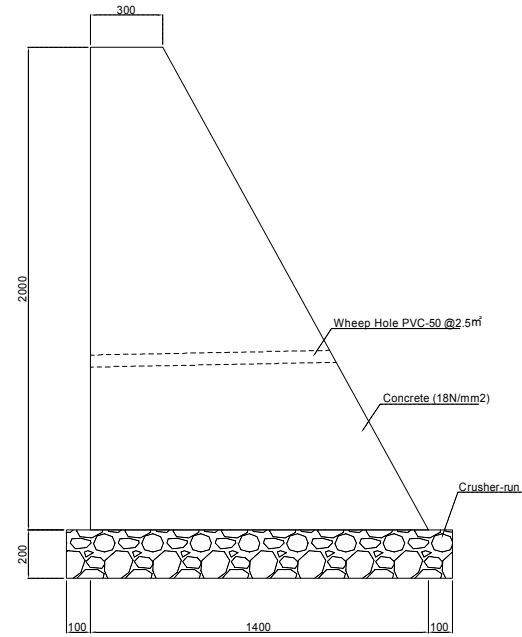


Section 3 - 3 (Plan)

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : DRAINAGE STRUCTURES (5/5) (BETWEEN BUS BAY & CARRIAGWAY) (CENTRAL MARKET)		Drawing No.	DR-05
					SCALE	S=1/30
					DATE	AUG. 2014

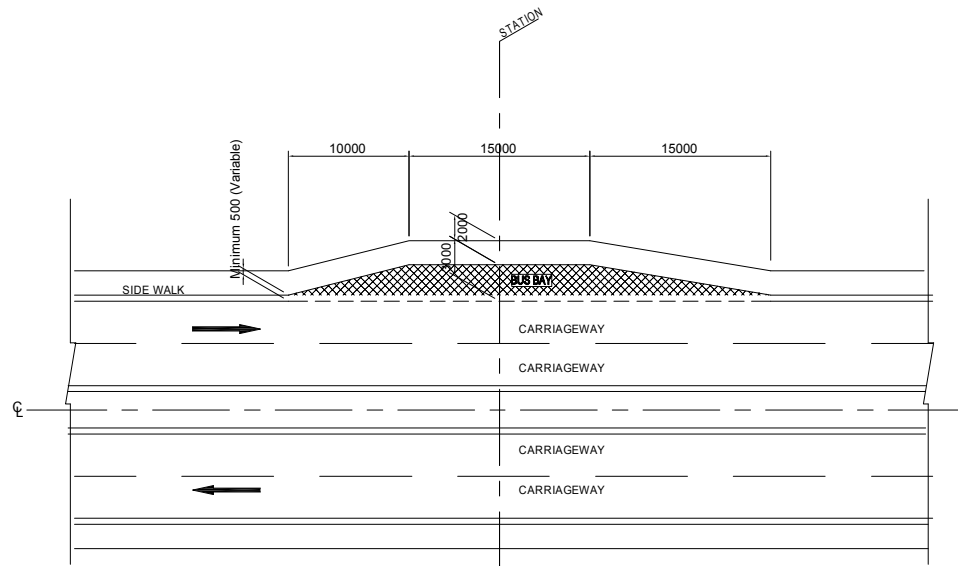


SGW42
(RETAINING WALL)

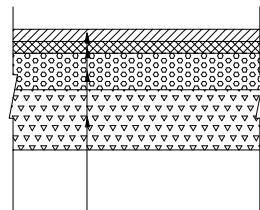


SGW69
(RETAINING WALL)

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : RETAINING WALL	Drawing No.	RW-01
				SCALE	S=1/50
				DATE	AUG. 2014

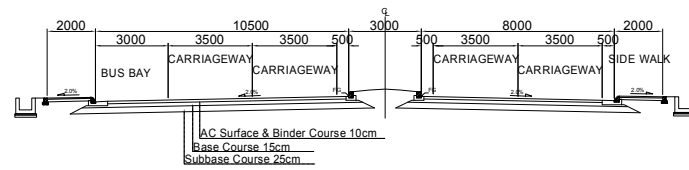


PLAN S=1/400



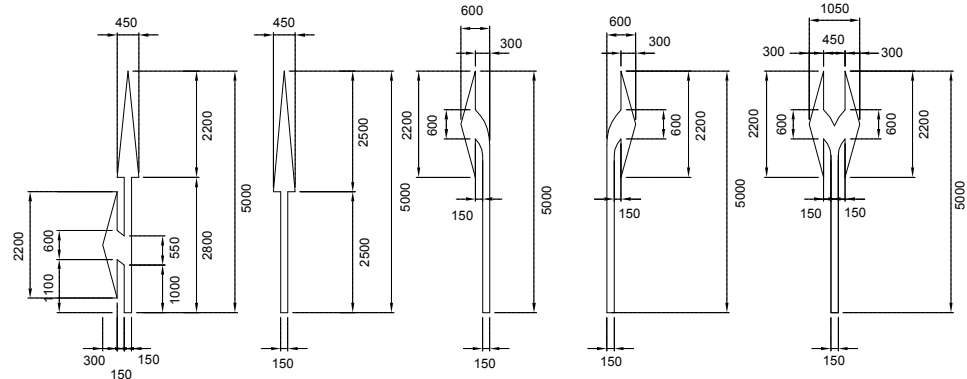
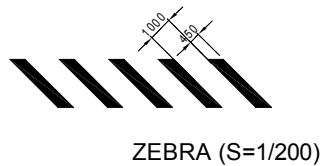
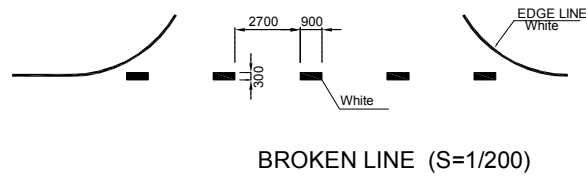
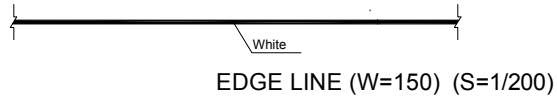
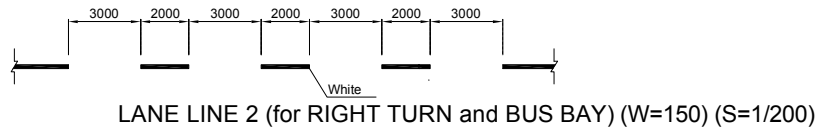
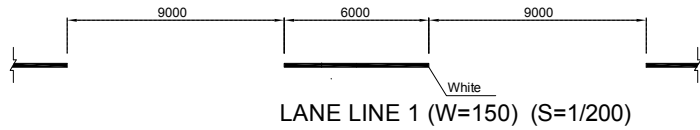
- AC Surface Course (t=5cm)
- AC Binder Course (t=5cm)
- Base Course (t=15cm)
- Subbase Course (t=25cm)

PAVEMENT TYPE S=1/20

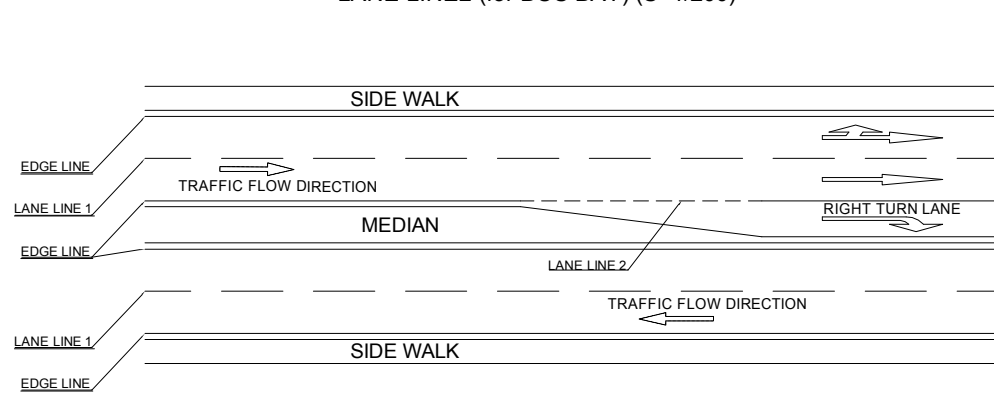
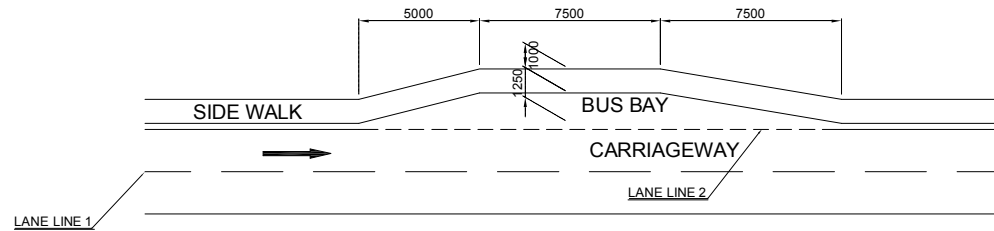


TYPICAL CROSS SECTION S=1/200

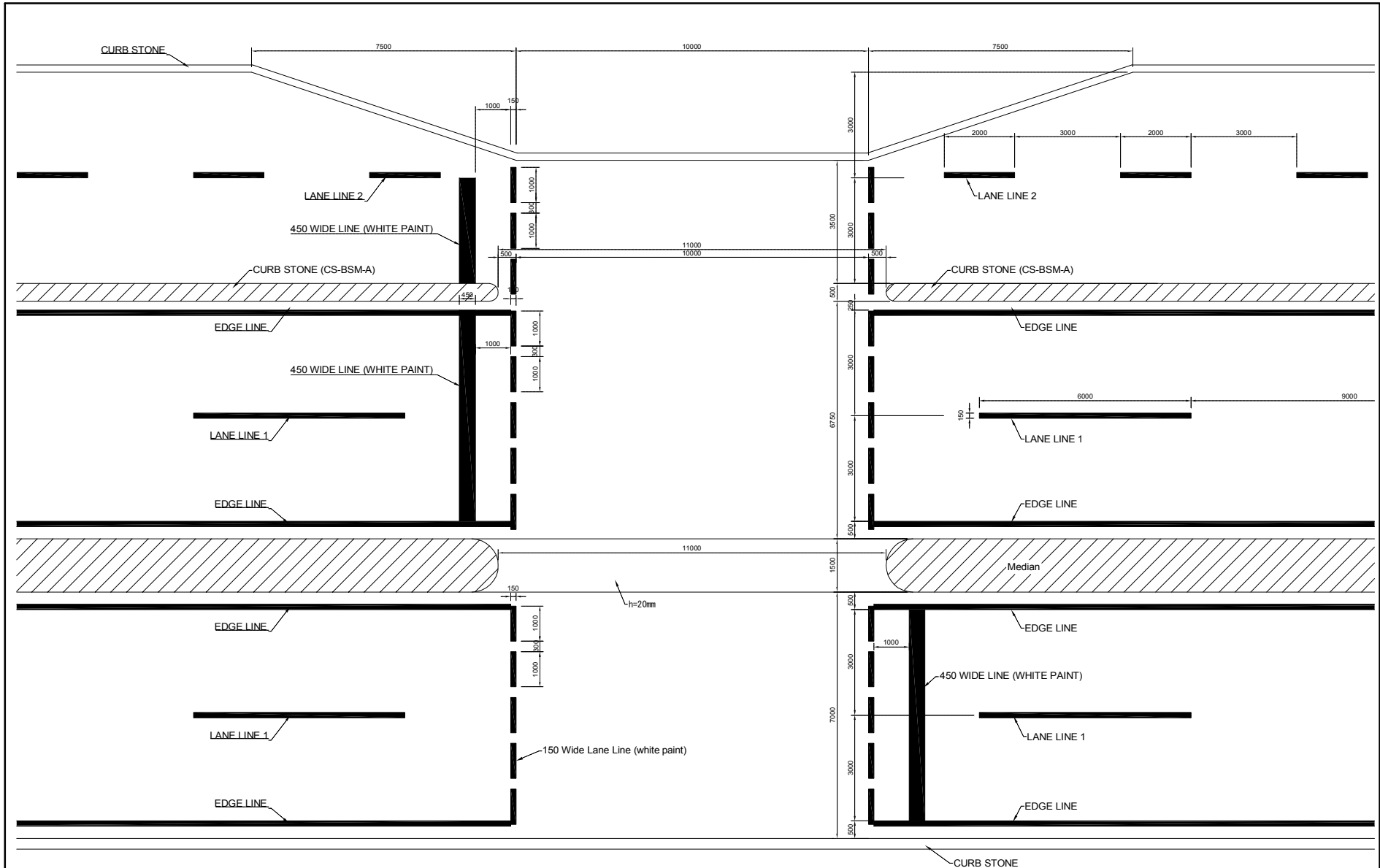
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : BUS BAY	Drawing No.	BB-01
				SCALE	AS SHOWN
				DATE	AUG. 2014



DIRECTIONAL ARROWS (S=1/100)

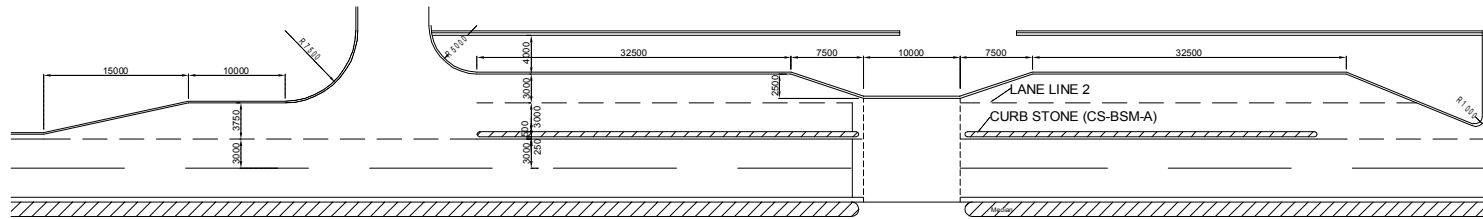


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : ROAD MARKINGS	Drawing No.	RM-01
				SCALE	AS SHOWN
				DATE	AUG. 2014

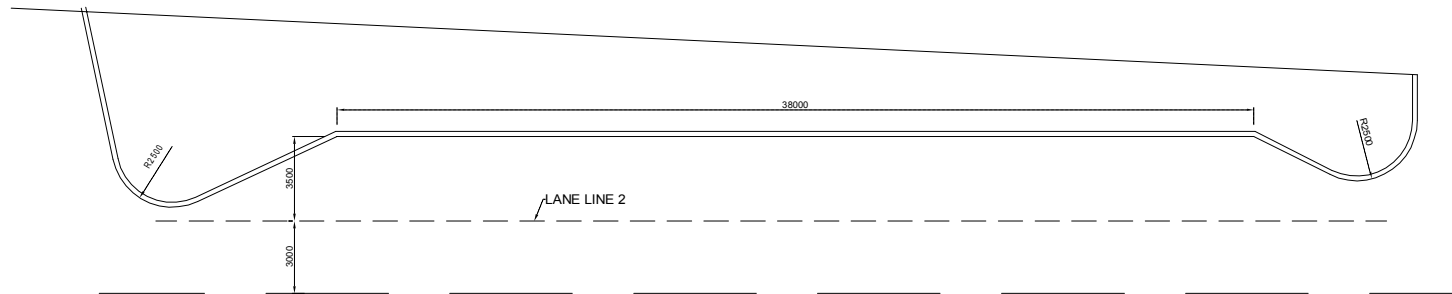


Crosswalk

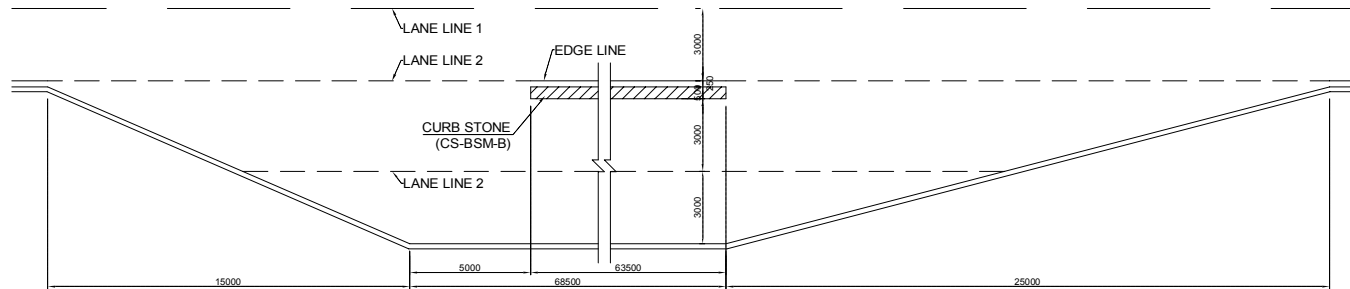
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : ROAD MARKING (CROSSWALK)		Drawing No.	RM-02
					SCALE	S=1/100
					DATE	AUG. 2014



East Bound Bus Bay (In front of the Central Market)

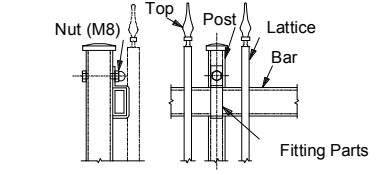
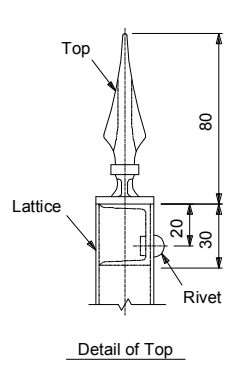
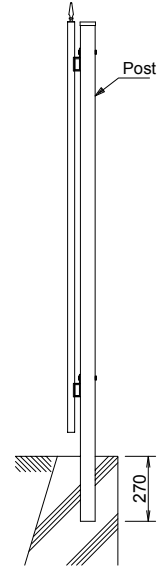
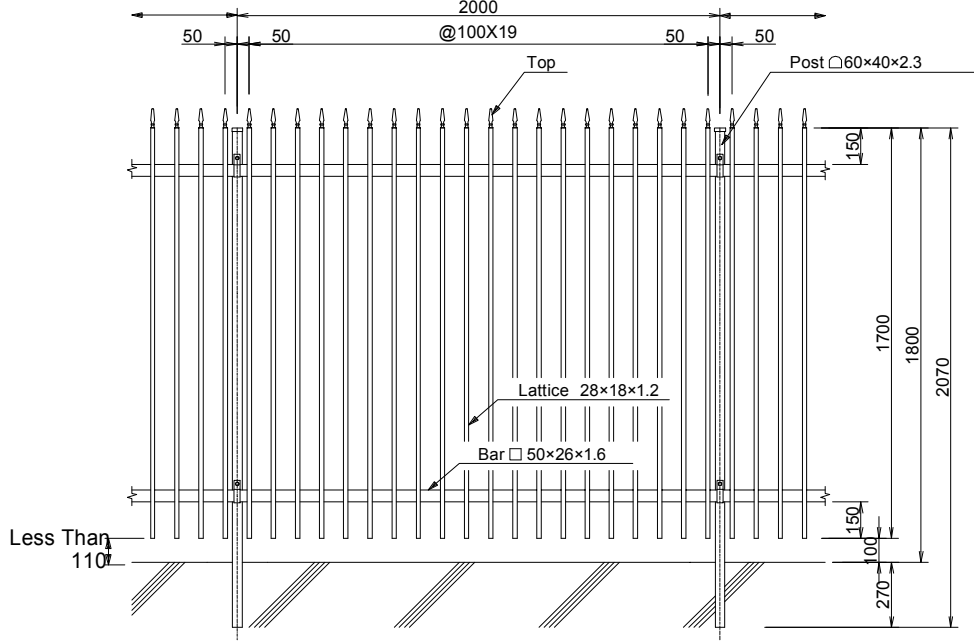
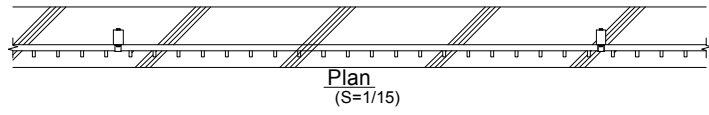


East Bound Bus Bay (In front of South Sea Evangelical Church)

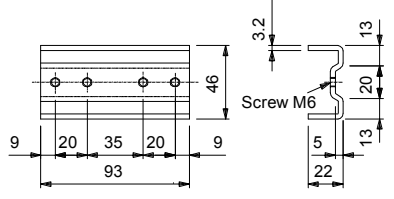
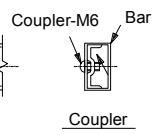
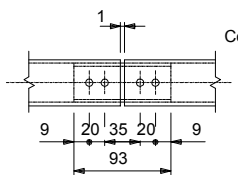
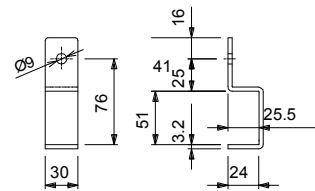
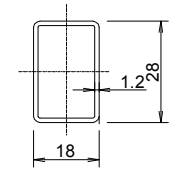
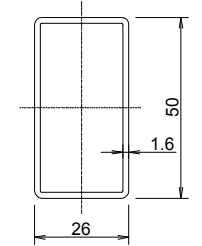
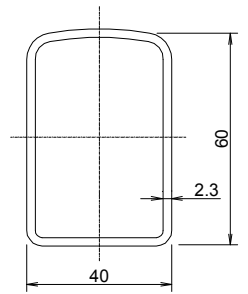
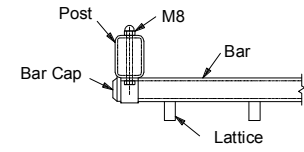
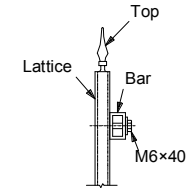


West Bound Bus Bay

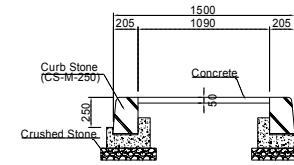
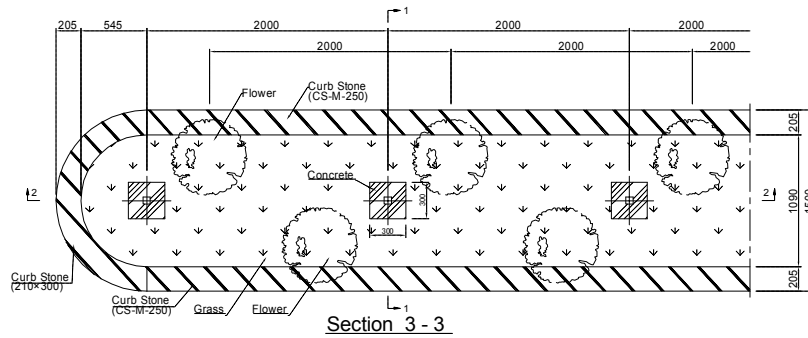
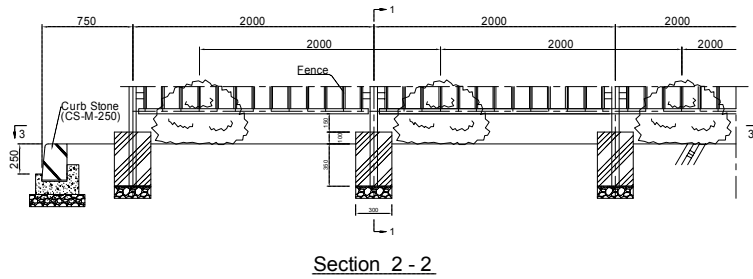
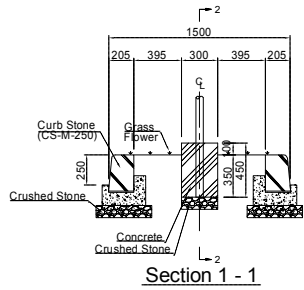
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : ROAD MARKING (BUS BAY)		Drawing No. RM-03
					SCALE S=1/500
					DATE AUG. 2014



Connection Point between Post and Bar



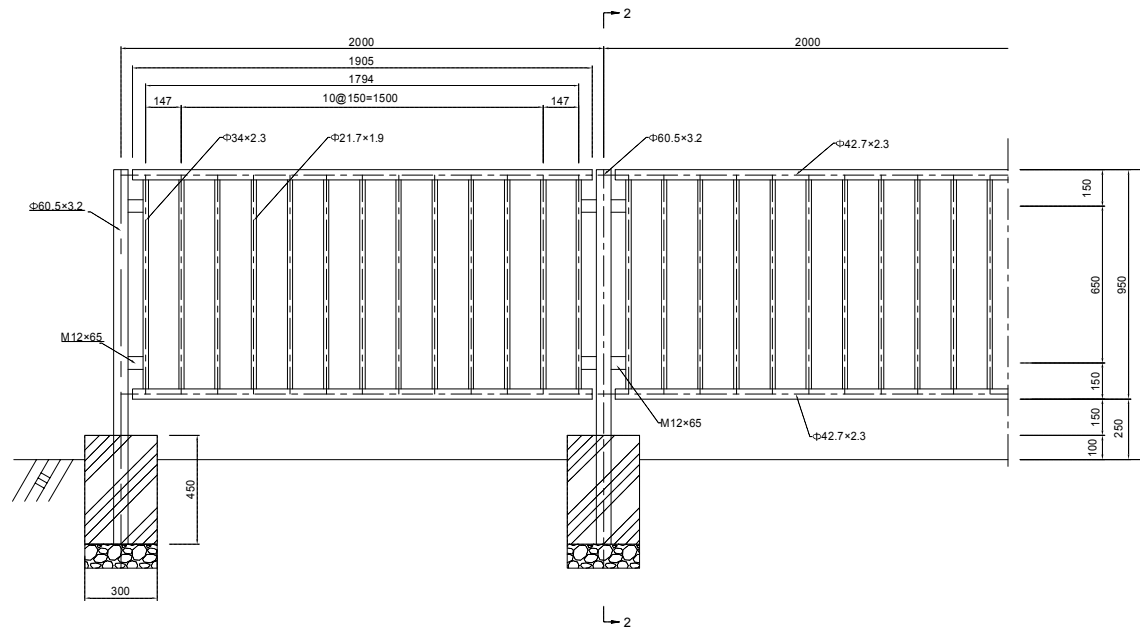
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : FENCE (H=1.8m)	Drawing No.	FE-01
				SCALE	AS SHOWN
				DATE	AUG. 2014



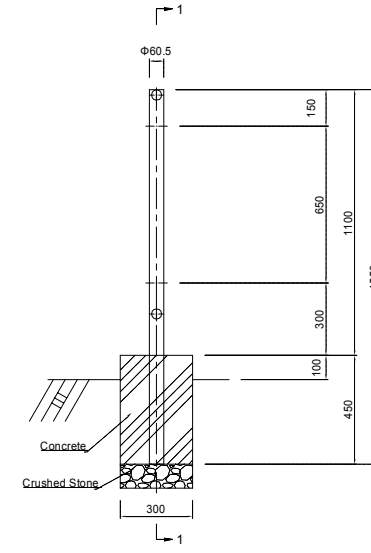
Median (Type M-C)

Median (Type M-F)

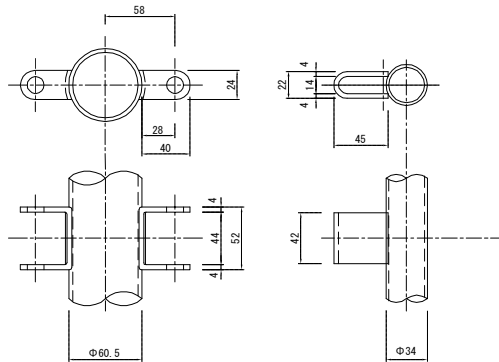
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : MEDIAN FENCE (1/2)	Drawing No.	MF-01
				SCALE	S=1/40
				DATE	AUG. 2014



Section 1 - 1



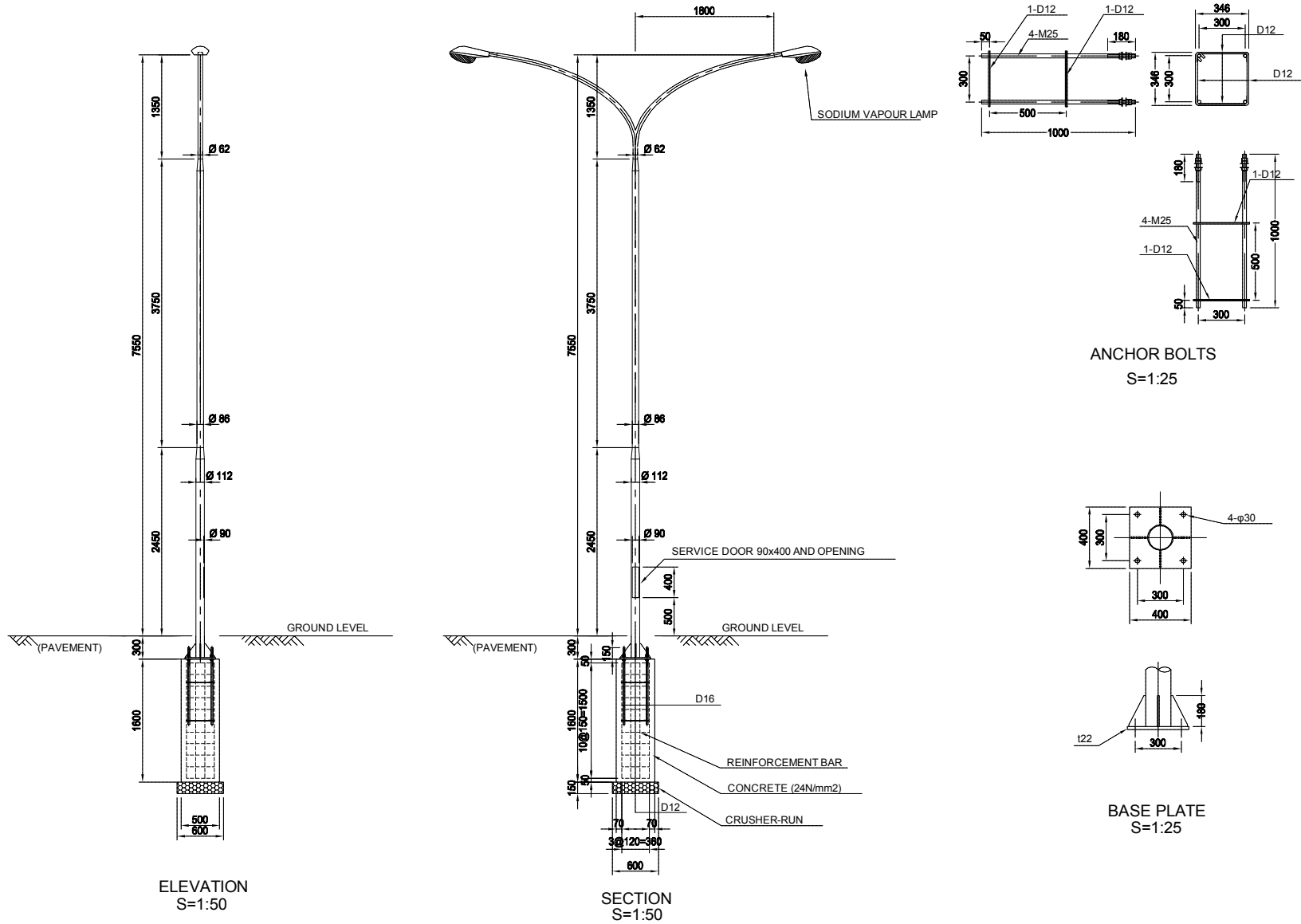
Section 2 - 2



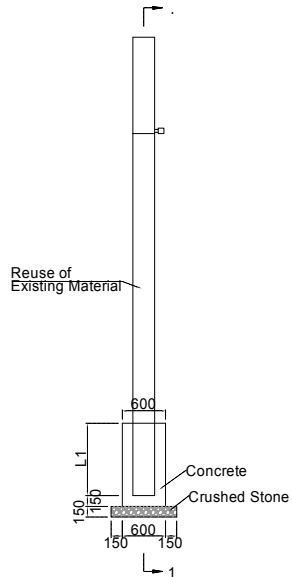
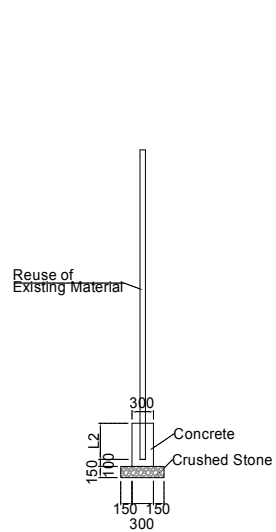
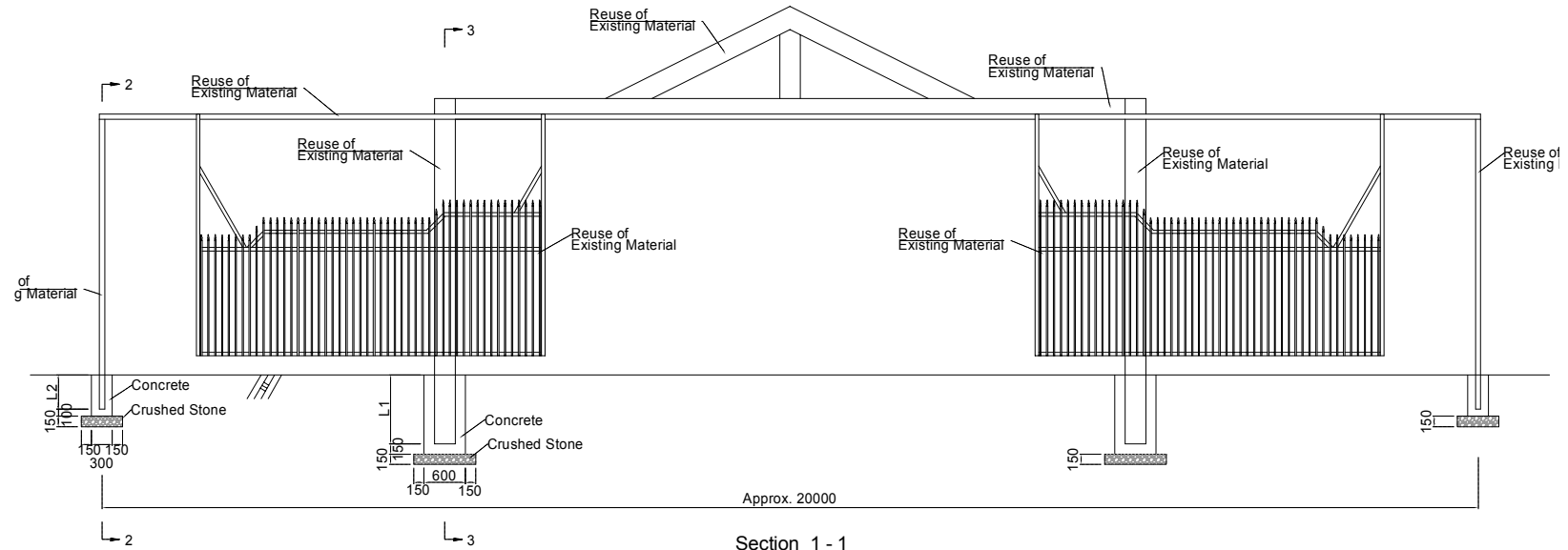
Detail of Fitting Parts

Note:
Surface Finishing Hot Dip Galvanizing (HDZ35)
+ Power Coating

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : MEDIAN FENCE (2/2)	Drawing No.	MF-02
				SCALE	S=1/20
				DATE	AUG. 2014

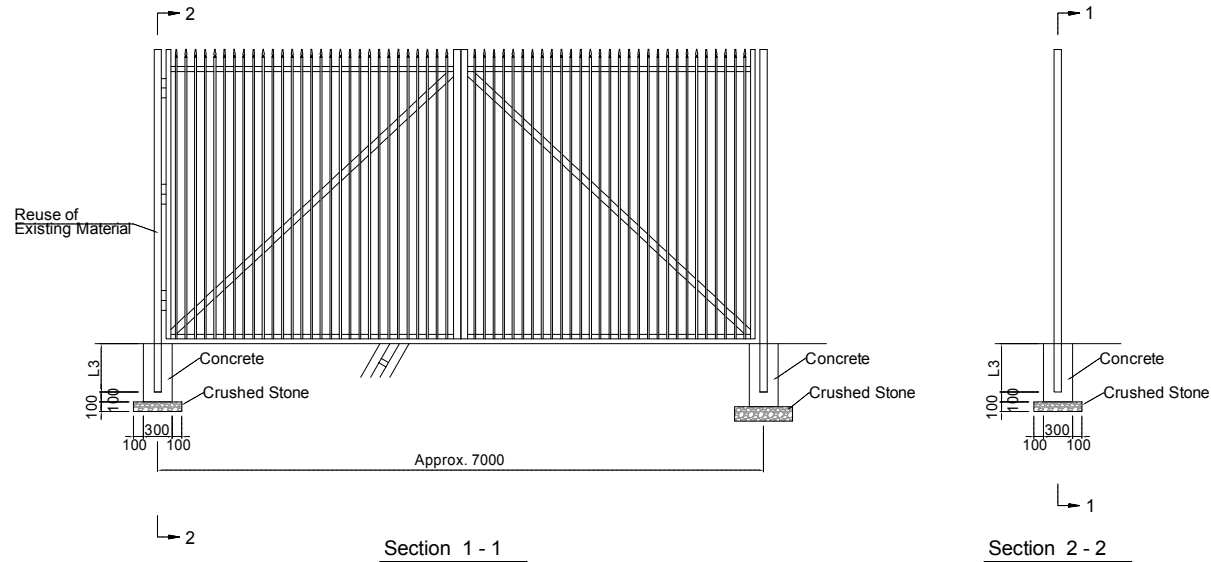


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : STREET LIGHTING	Drawing No.	SL-01
				SCALE	AS SHOWN
				DATE	AUG. 2014

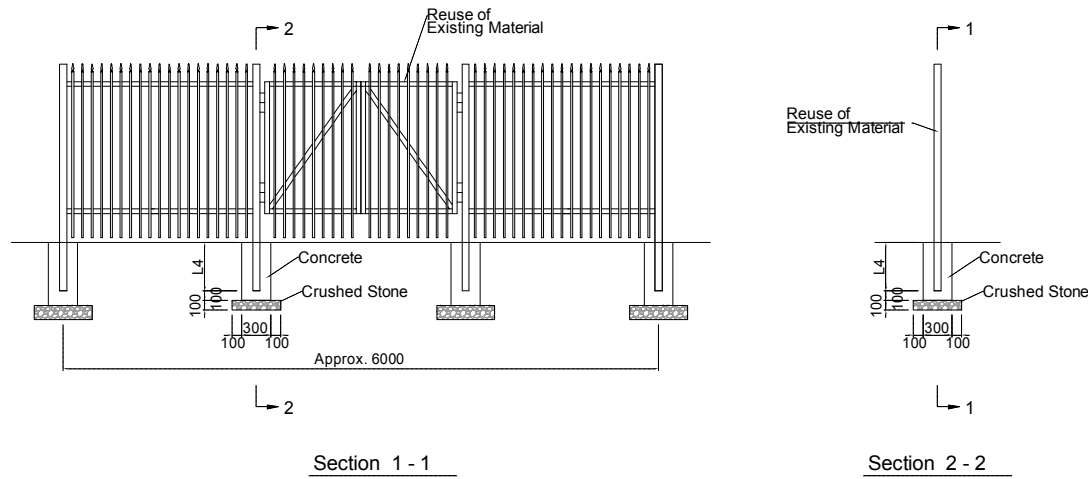


Note: L1 and L2 are the existing length in foundation.
All materials except concrete base are reused existing material.

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE: RELOCATION OF MAIN GATE (CENTRAL MARKET)		Drawing No.	RL-01
					SCALE	S=1/60
					DATE	AUG. 2014



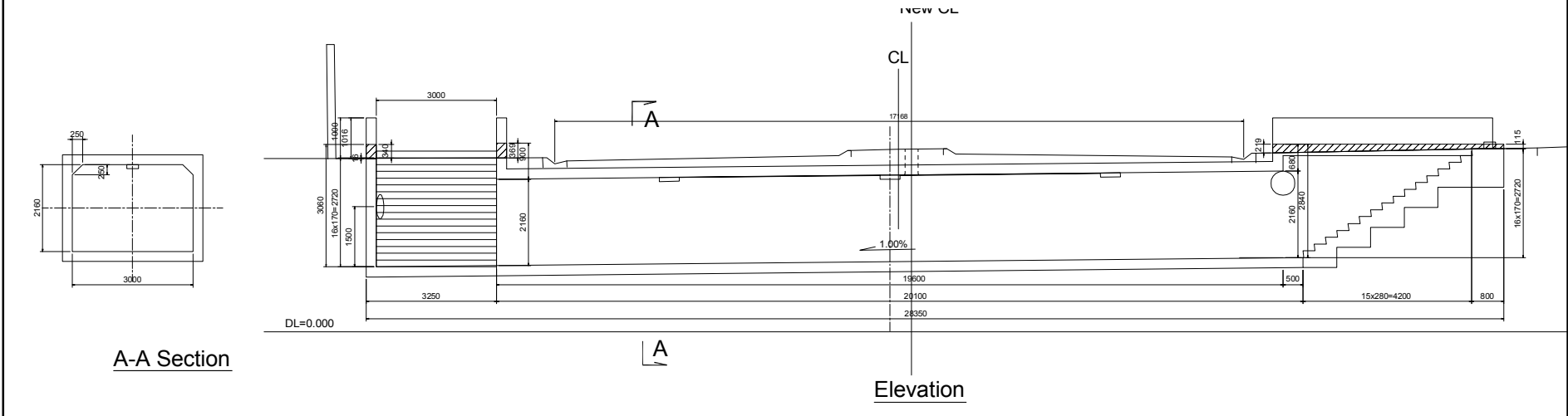
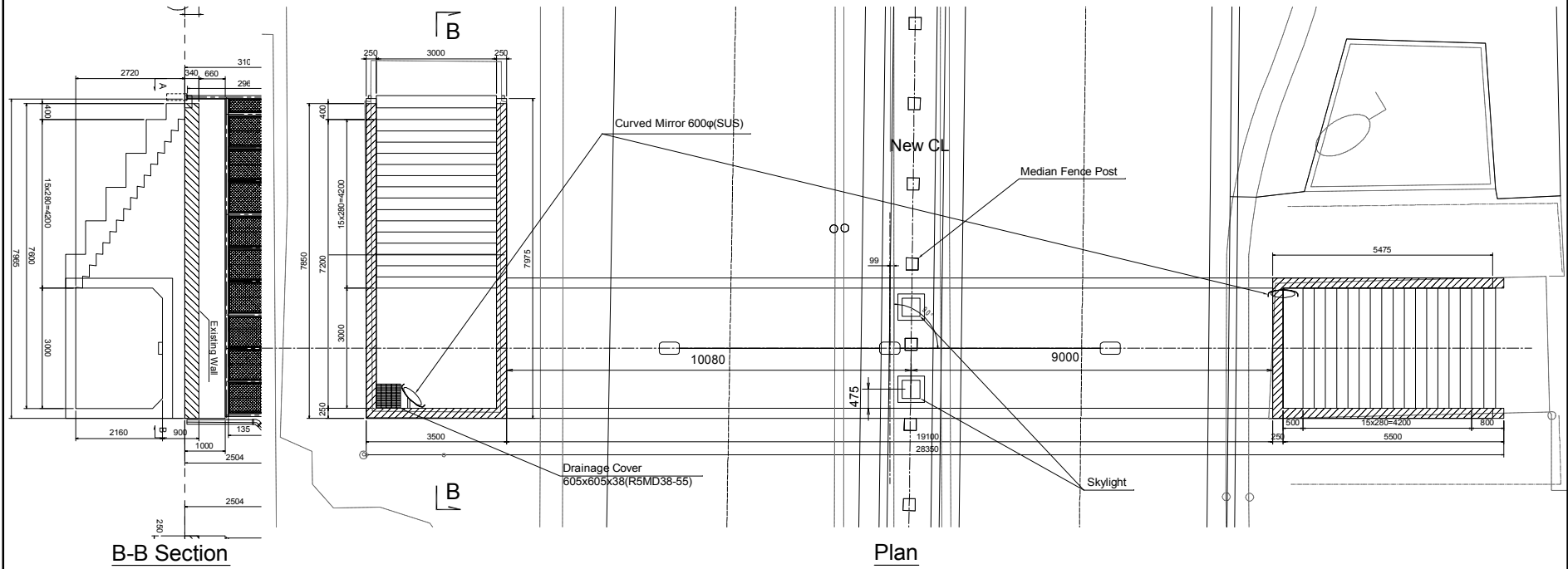
Parking Gate for the Central Market



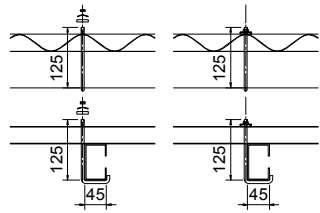
Pedestrian Gate for the Central Market

Note: L3 and L4 are the existing length in foundation.
All materials except concrete base are reused existing material.

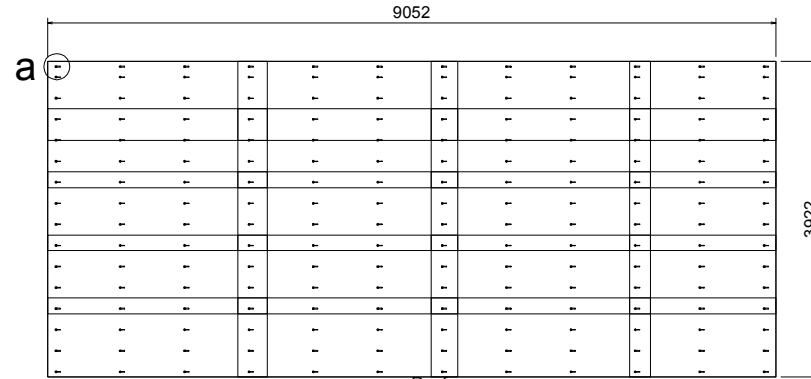
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE: RELOCATION OF PARKING AND PEDESTRIAN GATE (CENTRAL MARKET)	
			Drawing No.	RL-02
			SCALE	S=1/60
			DATE	AUG. 2014



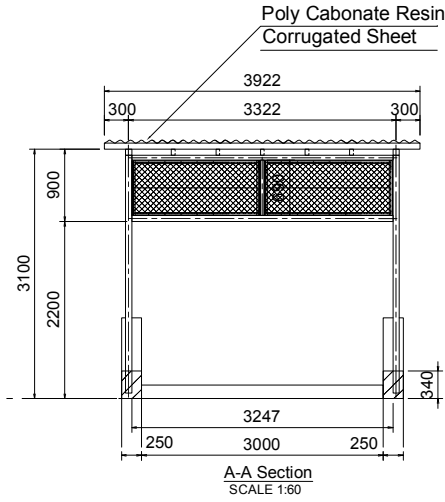
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : RENOVATION OF UNDER PASS GENERAL PLAN	
			Drawing No.	UP-01
			SCALE	S=1/100
			DATE	AUG. 2014



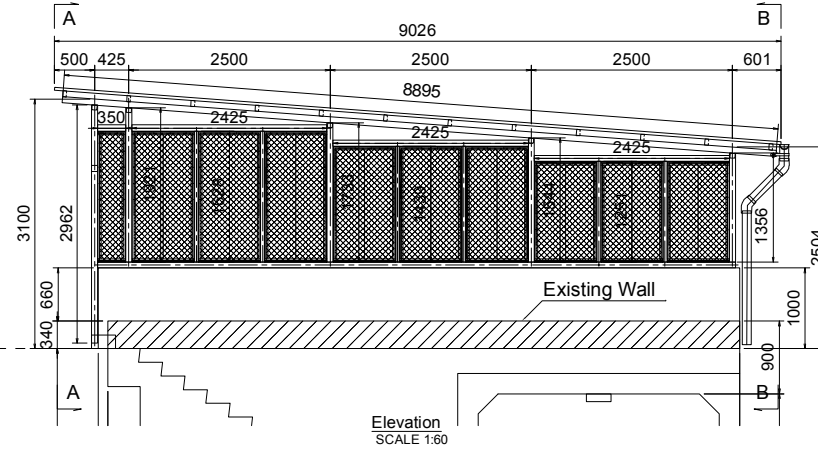
a
SCALE 1:10



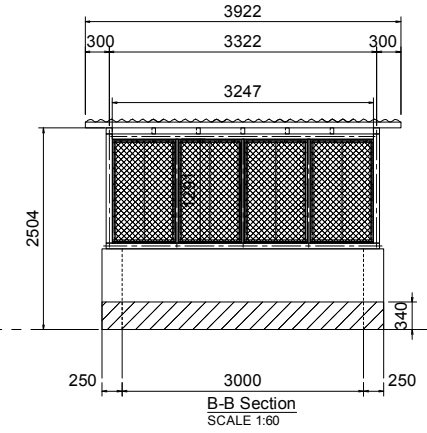
Roof
SCALE 1:60



A-A Section
SCALE 1:60

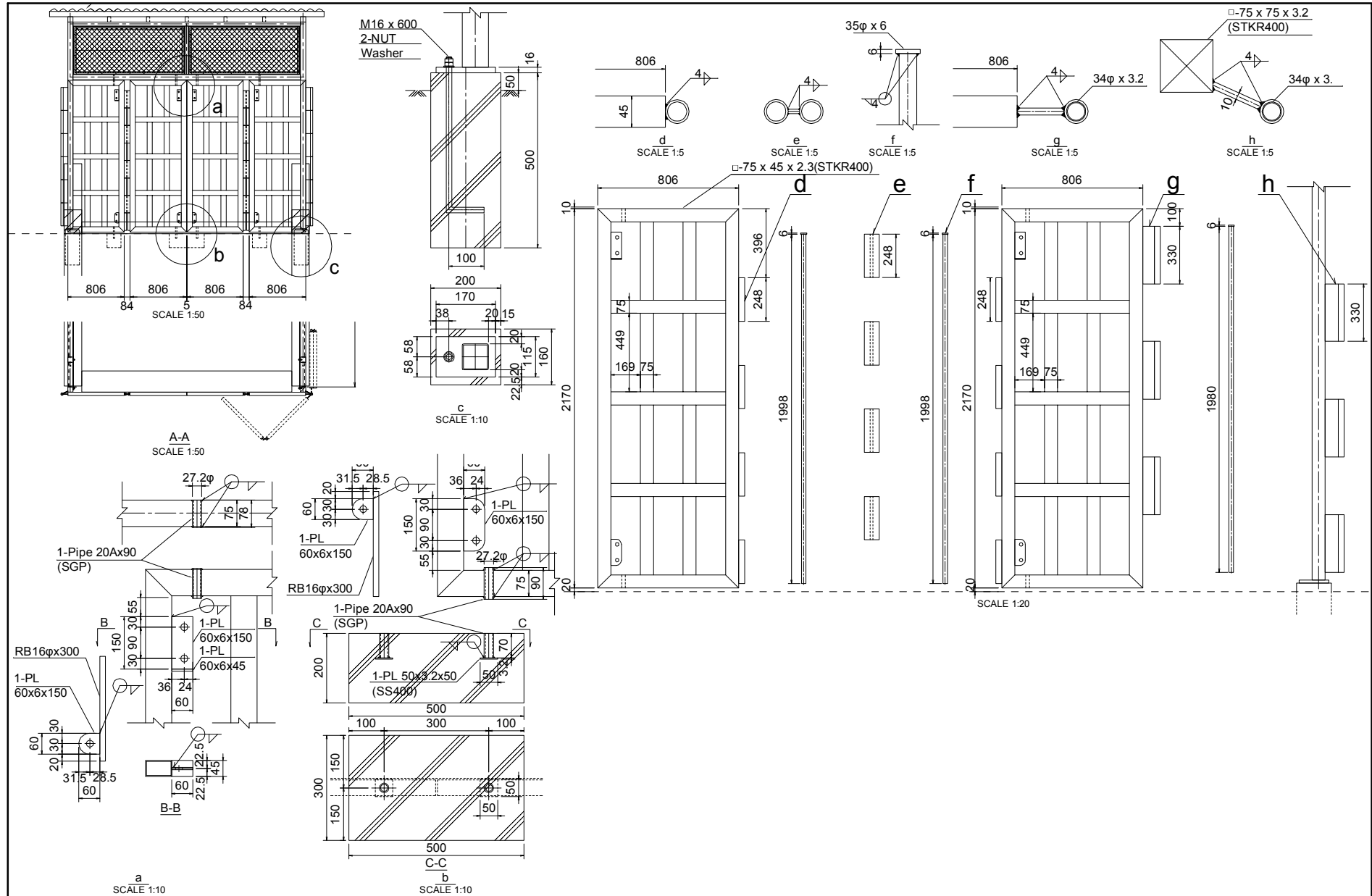


Elevation
SCALE 1:60

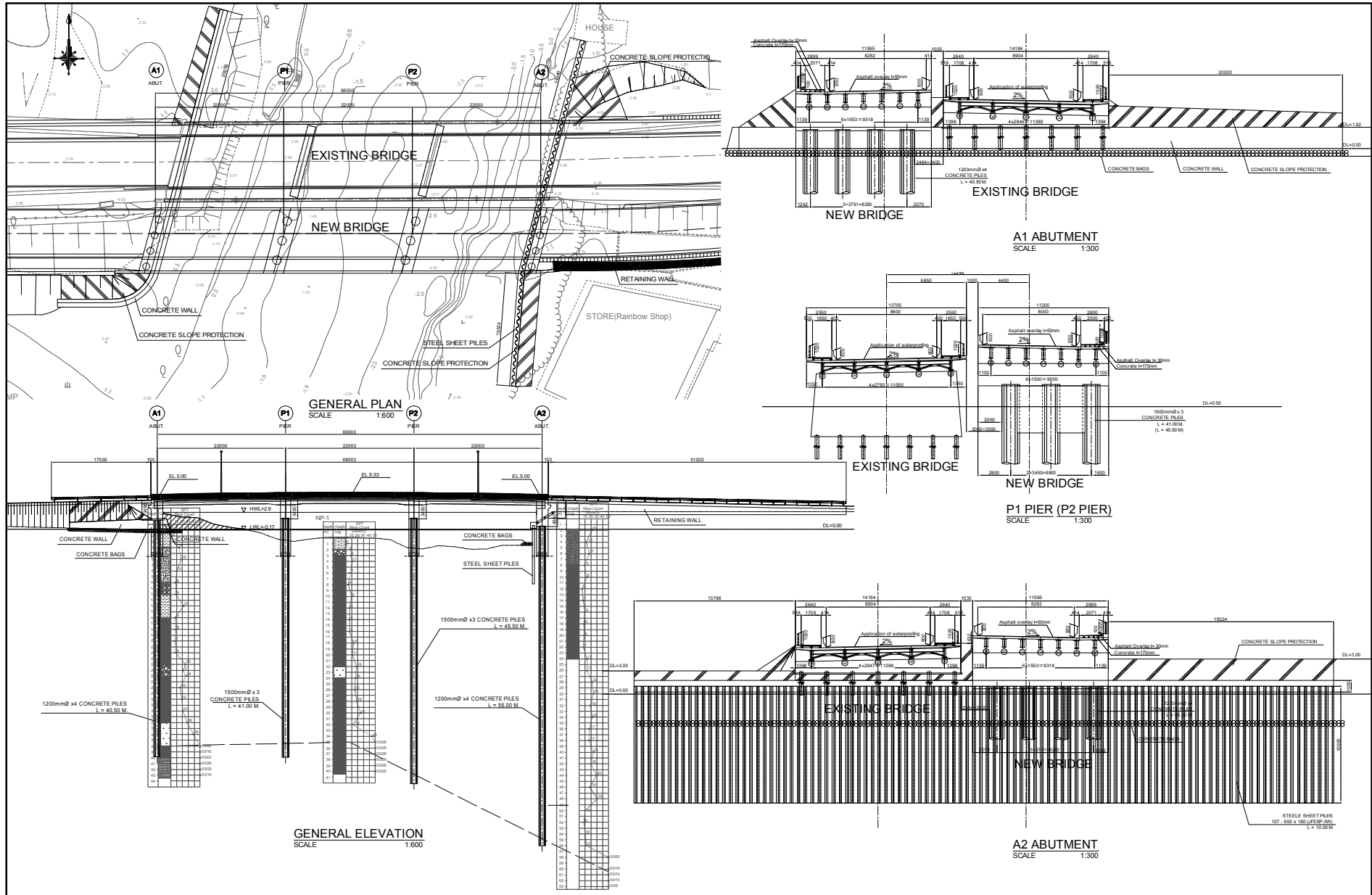


B-B Section
SCALE 1:60

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : RENOVATION OF UNDER PASS FRAMEWORK, NET FENCE AND ROOF FOR STAIR A	
			Drawing No.	UP-02
			SCALE	AS SHOWN
			DATE	AUG. 2014

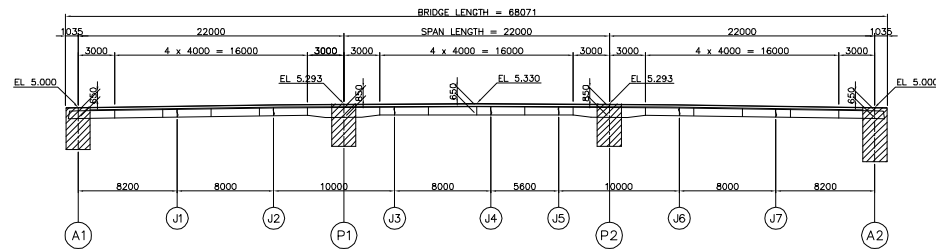


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : RENOVATION OF UNDER PASS FRONT DOOR A · B	
			Drawing No.	UP-05
			SCALE	AS SHOWN
			DATE	AUG. 2014

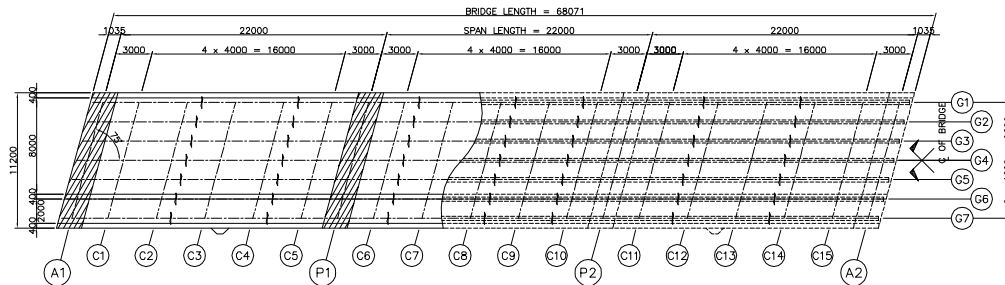


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE TITLE :	
			NEW MATANIKO BRIDGE GENERAL VIEW	
			Drawing No.	NM-01
			SCALE	AS SHOWN
			DATE	AUG. 2014

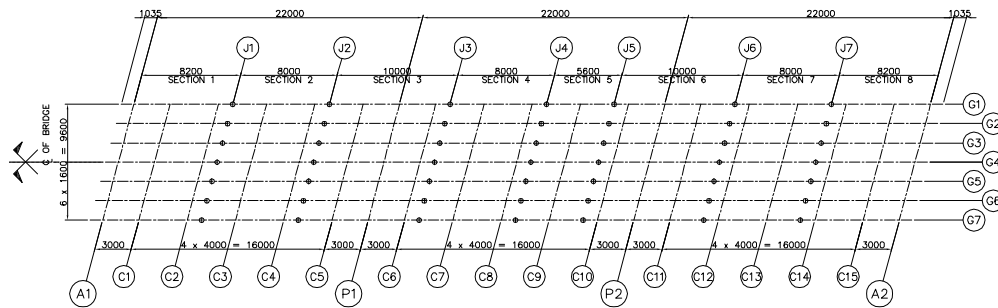
A11-82



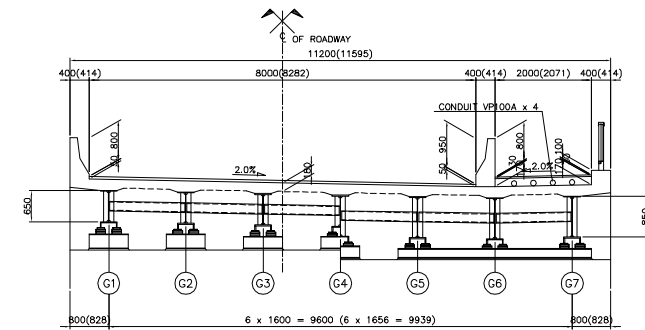
1 ELEVATION
SCALE 1:200



2 PLAN
SCALE 1:200

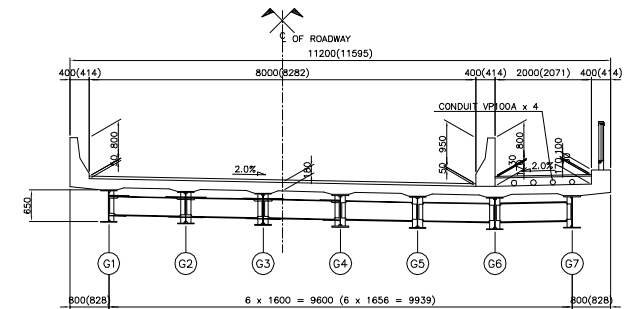


3 KEY PLAN
SCALE 1:200



4 SECTION @ A1,A2
SCALE 1:50

5 SECTION @ P1,P2
SCALE 1:50

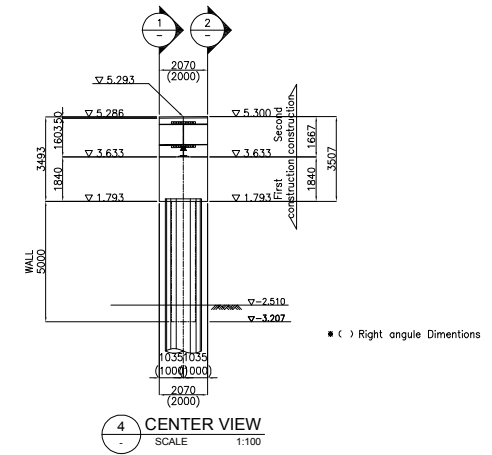
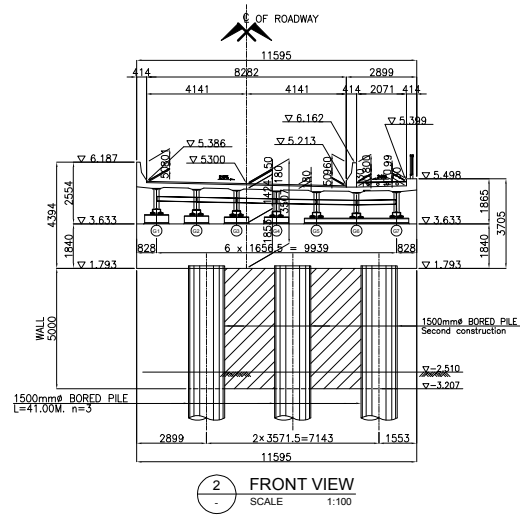
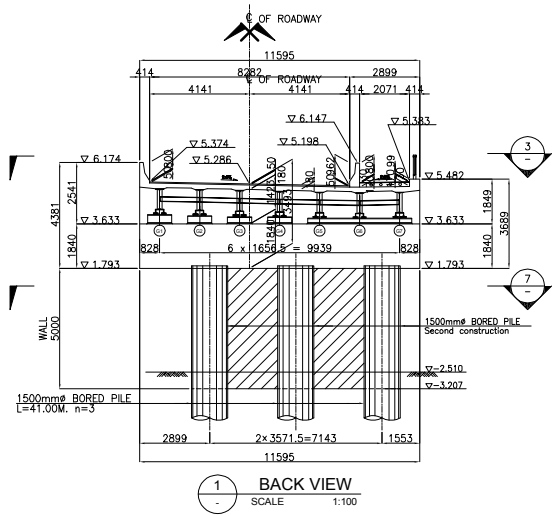


6 SECTION @ C3,C8,C13
SCALE 1:50

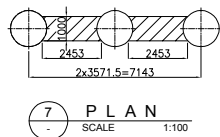
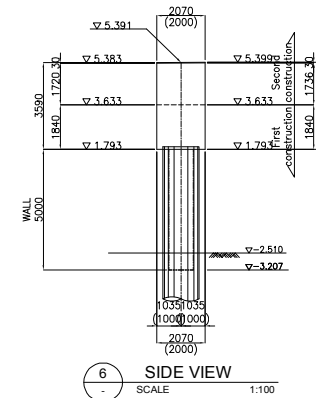
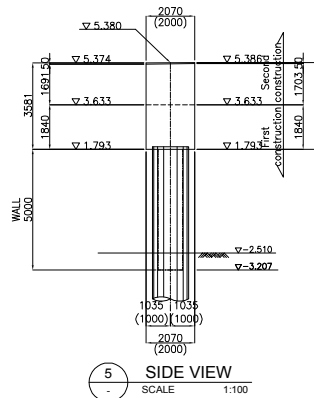
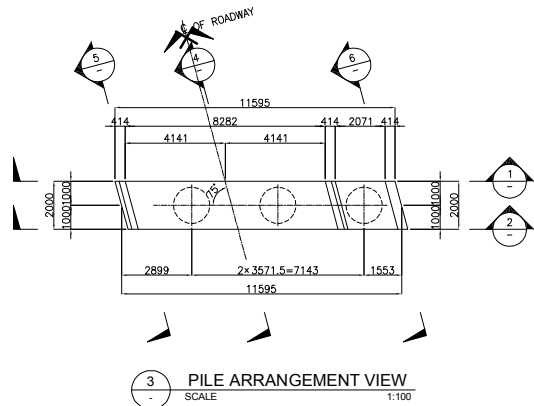
7 SECTION @ C1-C2,C4-C7, C9-C12,C14-C15
SCALE 1:50

ITEM	DESIGN CONDITION SPECIFICATION
Bridge Length	68.071 m
Span Length (Bearing to Bearing)	22.00 m + 22.00 m + 22.00 m
Type of Bridge	Integral Steel Bridge
Effective Width	0.40 m + 8.00 m + 0.40 m + 2.00 m + 0.40 m
Skew Angle	75° 0'00"
Number of Girders	7
Thickness of Non-Composite Deck Slab	180 mm
Horizontal Alignment	R = ∞
Transverse Slope	2.0 % 2x0 %
Vertical Alignment	2.0 % VCL=66.0 % 2.0 %
Steel Material (JIS Specification)	SM490Y SM400, SS400, S10T
Concrete Material (Deck Slab)	Fc' = 30 N/mm ²

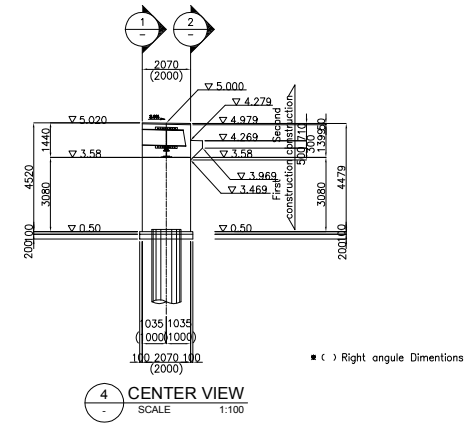
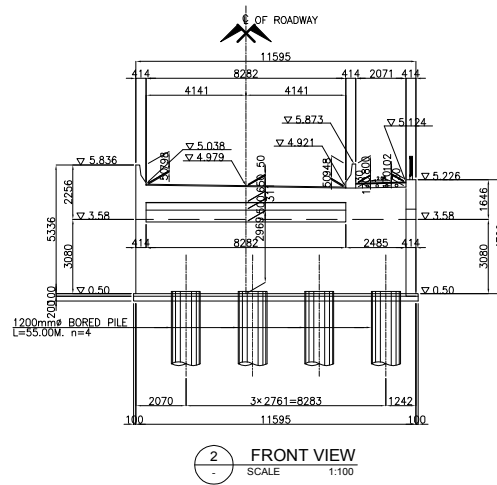
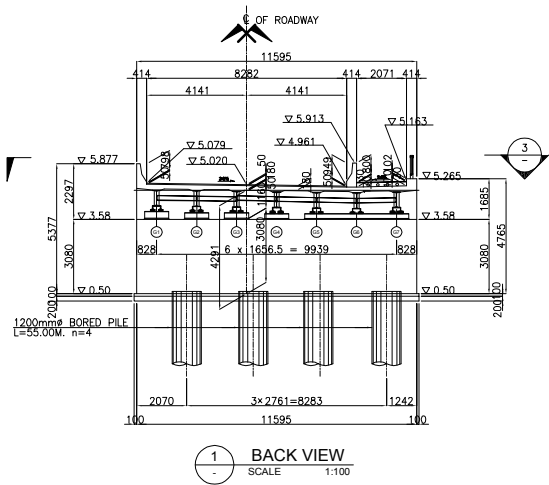
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE: NEW MATANIKO BRIDGE STRUCTURAL DETAIL	Drawing No.	NM-02
				SCALE	AS SHOWN
				DATE	AUG. 2014



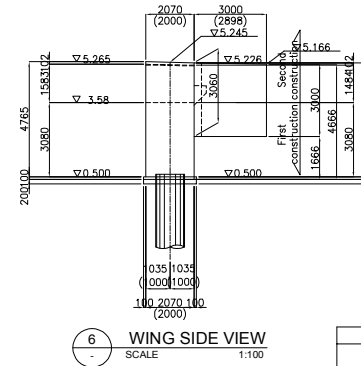
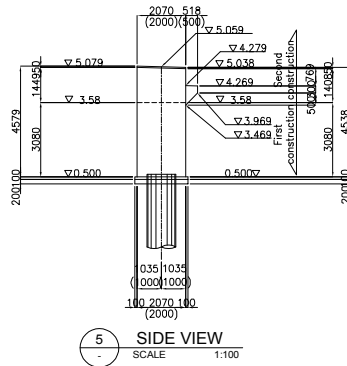
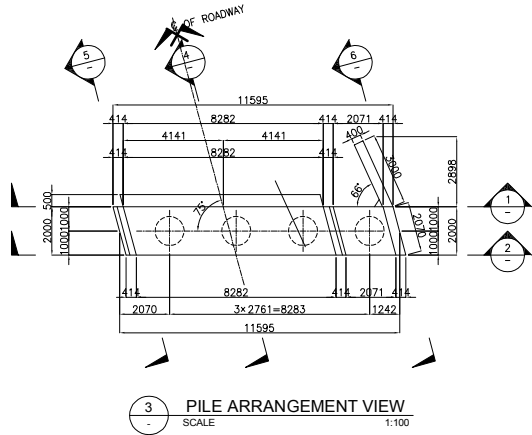
() Right angle Dimensions



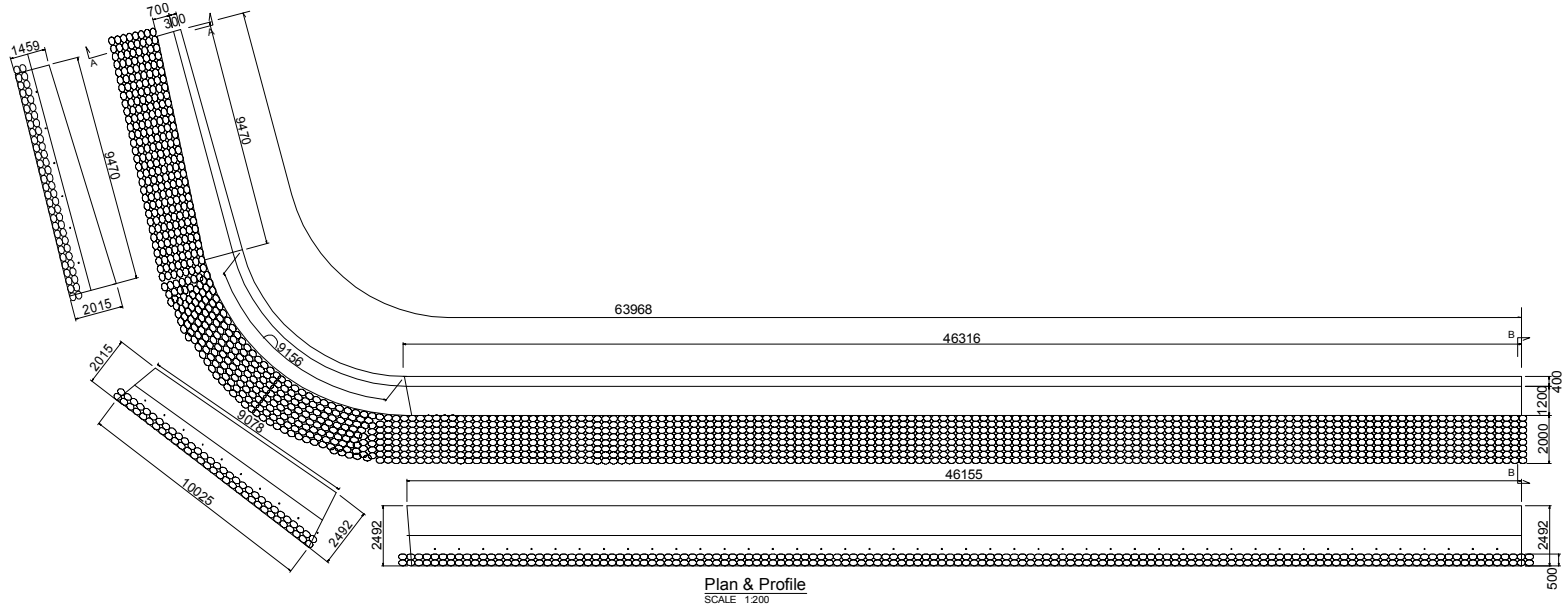
USE MATERIAL			
CONCRETE	WALL	First	e ck=24N/mm ²
		Second	e ck=30N/mm ²
	FOOTING		e ck=24N/mm ²
REINFORCING BAR	BORED PILE		e ck=30N/mm ²
	LEVELING CONCRETE		e ck=18N/mm ²
CRUSHED STONES	WALL		SD345
	FOOTING		SD345
	BORED PILE		SD345
			C40



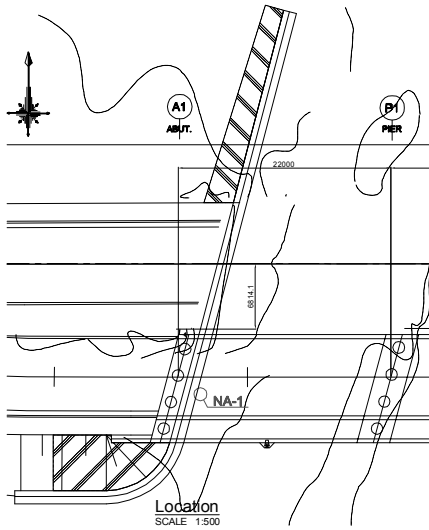
⊠ () Right angle Dimensions



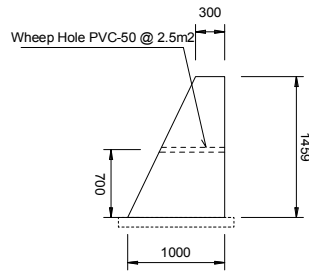
USE MATERIAL			
CONCRETE	WALL	First	e ck=24N/mm ²
		Second	e ck=30N/mm ²
	FOOTING		e ck=24N/mm ²
BORED PILE			e ck=30N/mm ²
	LEVELING CONCRETE		e ck=18N/mm ²
REINFORCING BAR	WALL		SD345
	FOOTING		SD345
	BORED PILE		SD345
	CRUSHED STONES		C40



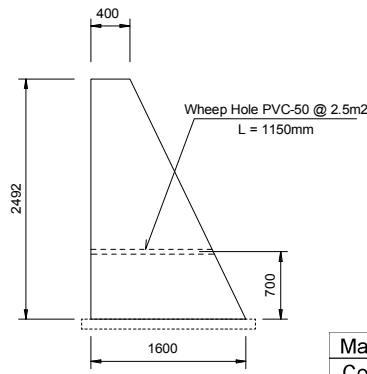
Plan & Profile
SCALE 1:200



Location
SCALE 1:500



Section A-A
SCALE 1:50

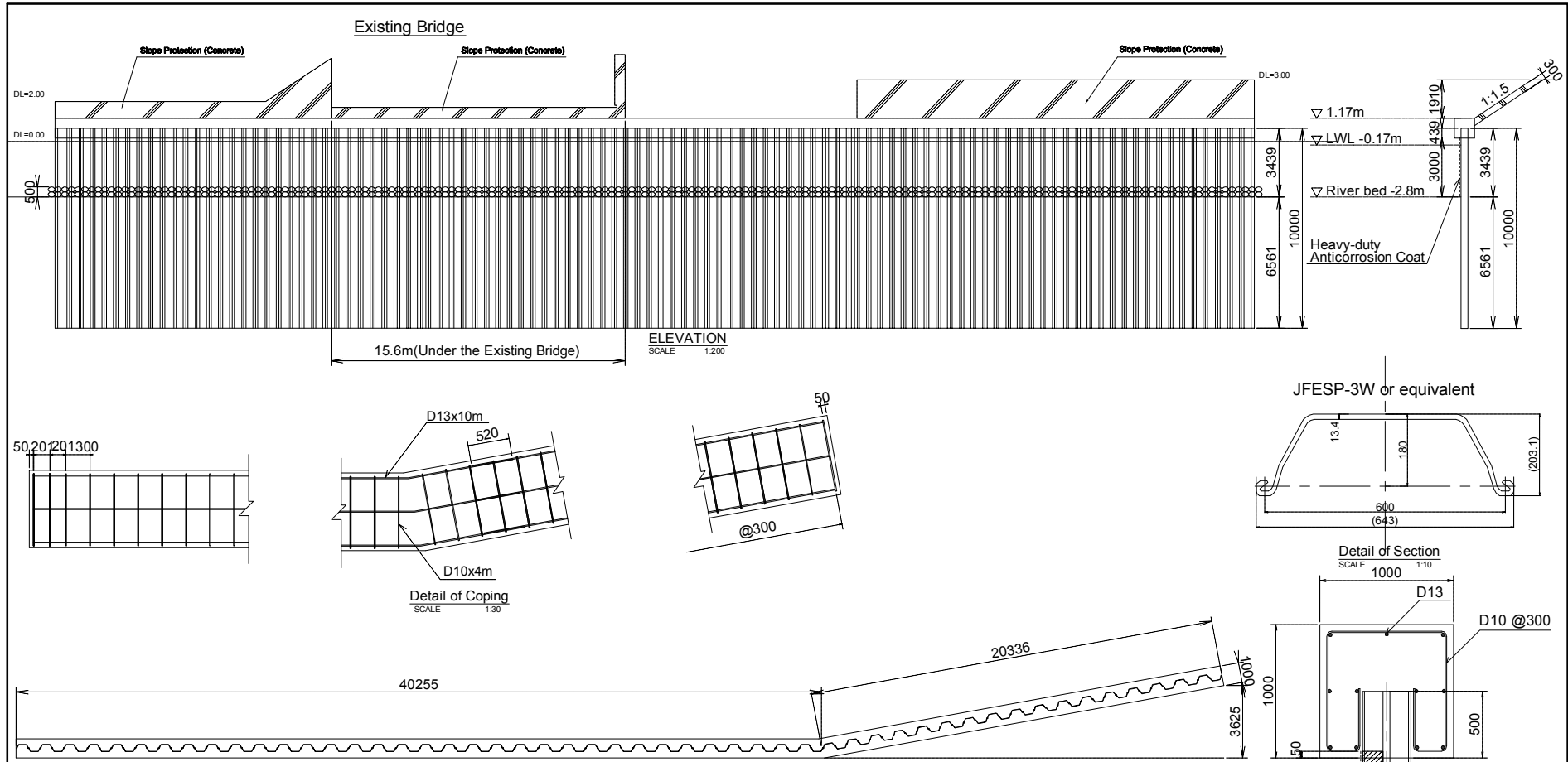


Section B-B
SCALE 1:50

Note)
1. Expansion Joint is applied 10m each length.

Materials	unit	Length	number	quantity	Remarks
Concrete	m3	64.7	1	148.5	$\sigma_{ck}=18N/mm^2$
Sandbag	m3			64.7	0.02m3/bag
VP-50A	m	1.15	59	67.9	PVC-50

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : NEW MATANIKO BRIDGE A1 ABUTMENT RETAINING WALL		Drawing No.	NM-49
					SCALE	AS SHOWN
					DATE	AUG. 2014



ELEVATION
SCALE 1:200

PLAN
SCALE 1:200

Detail of Section
SCALE 1:10

Materials List

Materials	unit	Size	number	unitweight	quantity	Remarks
Sheet pile	kg	600x180x10000	102	81.6	83232	JFESP-3type
	m2	0.84m x 3m x 2mm	51		129	Urethane elastomer
		0.72m x 3m x 2mm	51		110	
Rebar	kg	D10x4000	203	0.56	455	
		D13x10000	66	0.995	657	
		D13x360	11	0.995	4	
		sub total			1115	
Concrete	m3	1.0x1.0x60.6	1		60.6	σck=18N/mm2

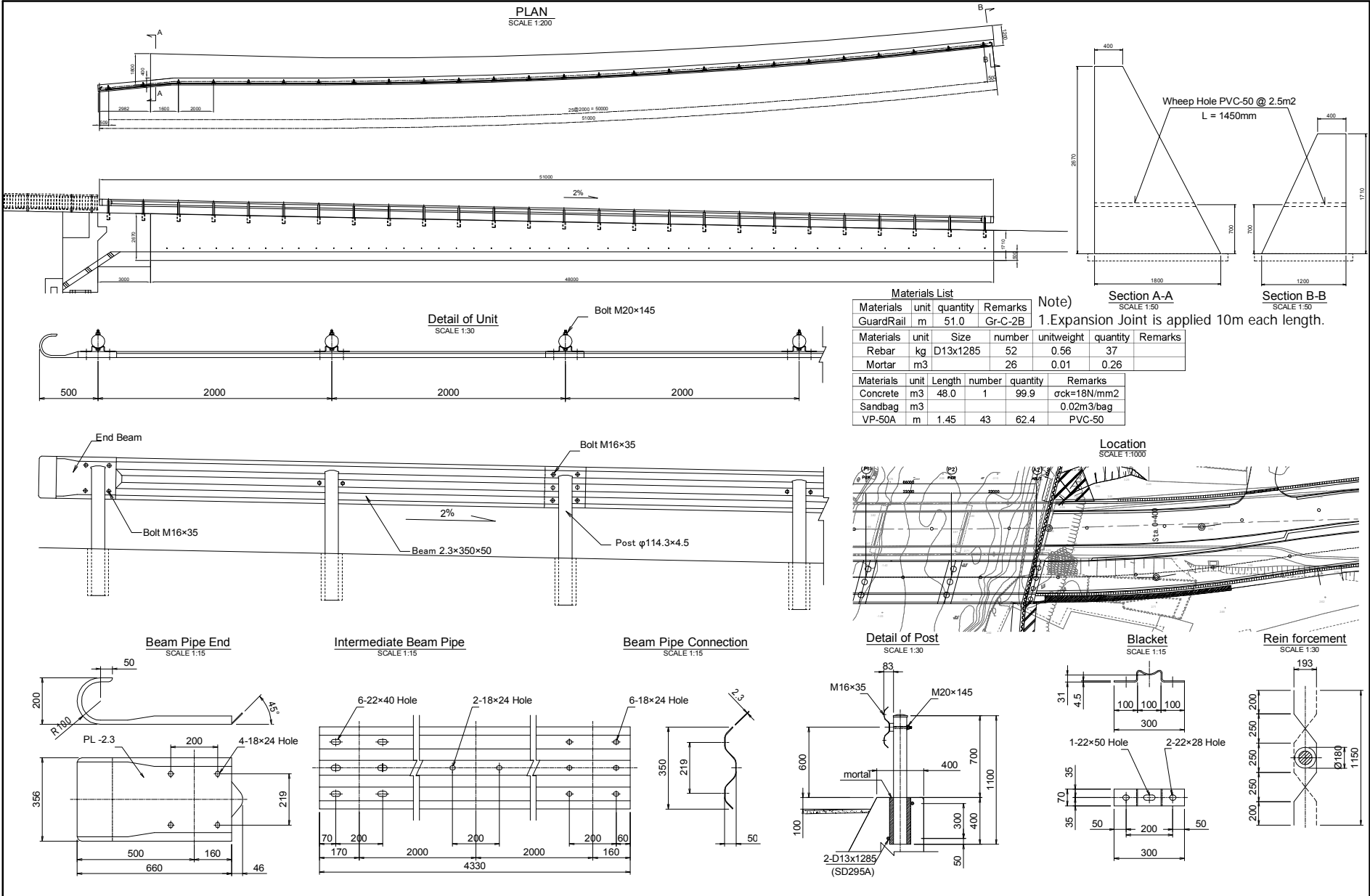
Specification of Heavy-duty anticorrosion coating (Urethane elastomer)

Item	unit	Value
Specific gravity	(g/cm3)	1.0
Tensile Strength	(Mpa)	8.0
Adhesive Strength	(Mpa)	3.0
film thickness	mm	2.0
Color		Black

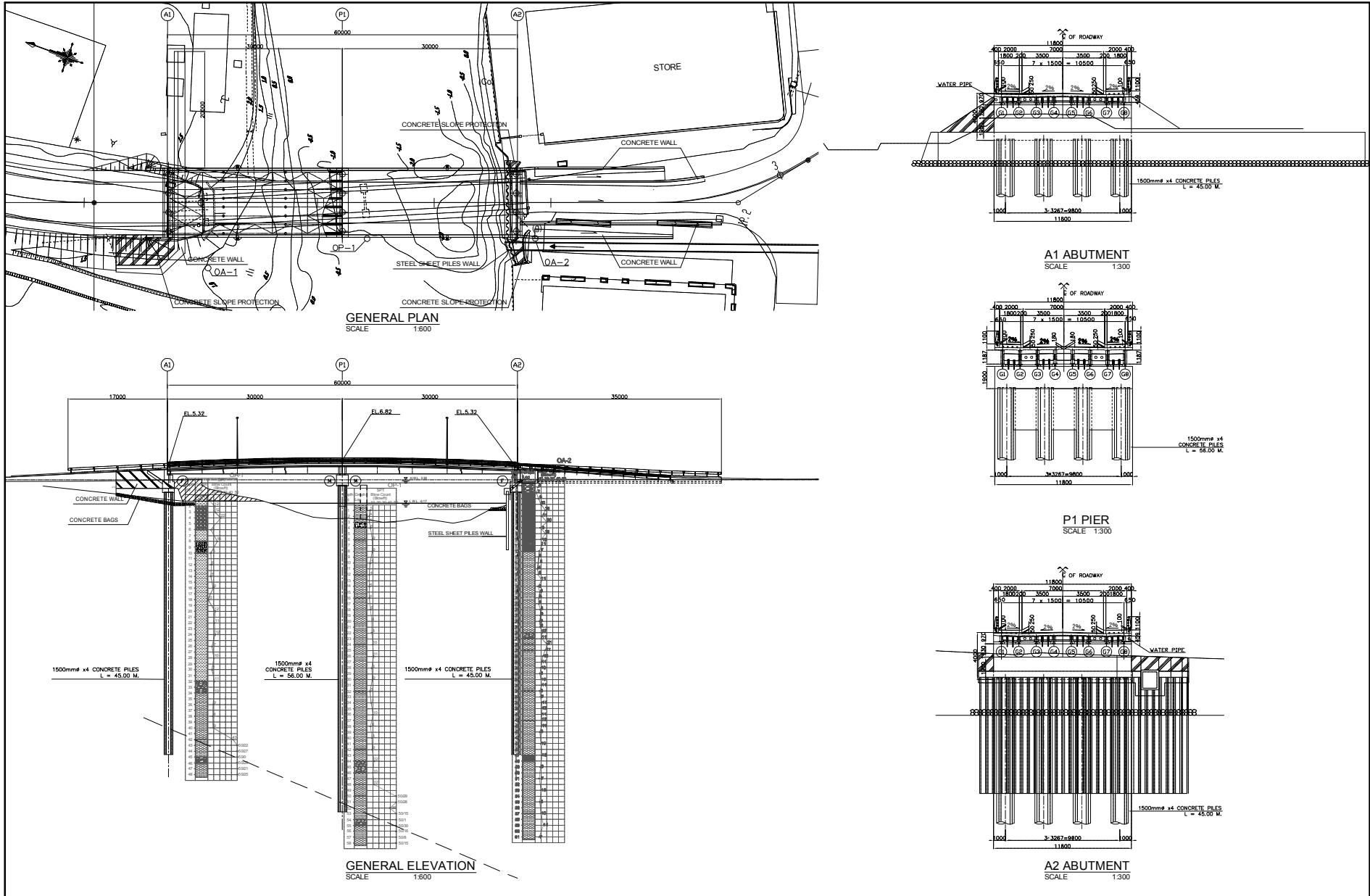
※This application will be treated in the supplier's factory

Materials	unit	Length	quantity	Remarks
Concrete	m3	60.6	60.6	σck=18N/mm2
Sandbag	m3			0.02m3/bag

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : NEW MATANIKO BRIDGE A2 ABUTMENT STEEL SHEET PILE WALL	
			Drawing No.	NM-51
			SCALE	AS SHOWN
			DATE	AUG. 2014

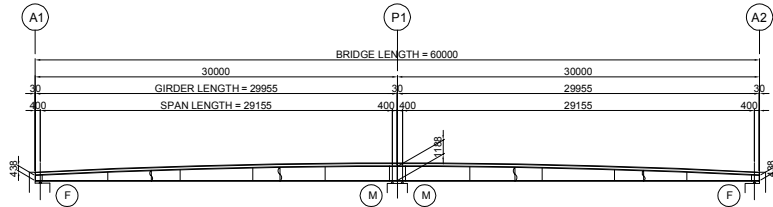


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	NEW MATANIKO BRIDGE	Drawing No.	NM-52
				A2 ABUTMENT GUARD RAIL(Gr-C-2B) AND RETAINING WALL	SCALE	AS SHOWN
					DATE	AUG. 2014

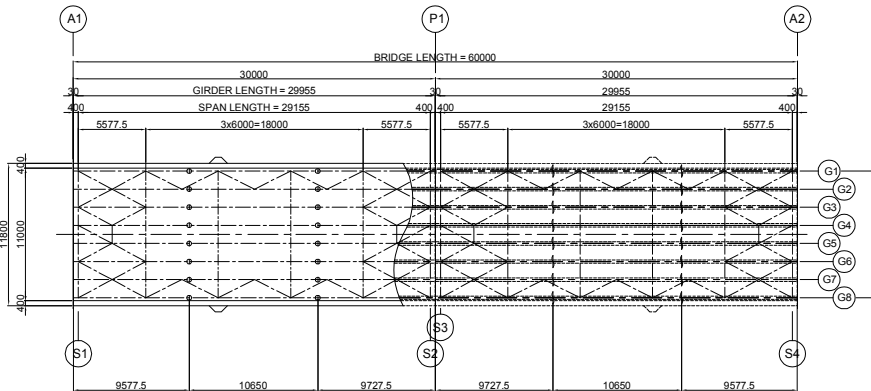


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : OLD MATANIKO BRIDGE GENERAL VIEW	
			Drawing No.	OM-01
			SCALE	AS SHOWN
			DATE	AUG. 2014

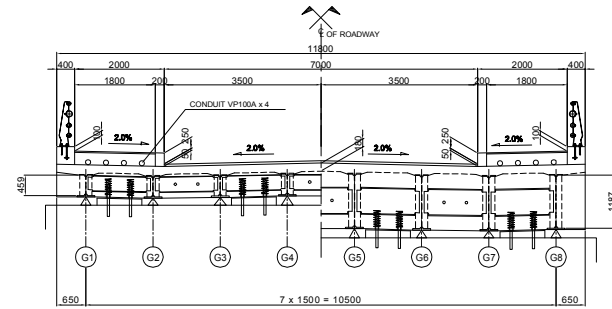
06-11V



1 ELEVATION
SCALE 1:200

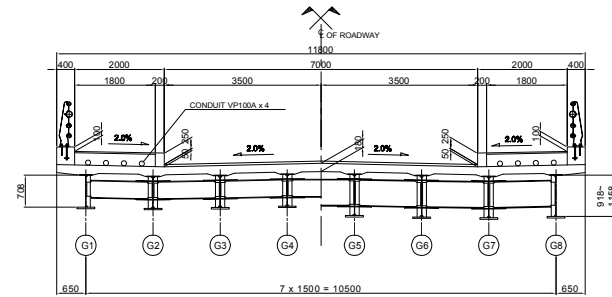


2 PLAN
SCALE 1:200



3 SECTION @ A1, A2
SCALE 1:50

4 SECTION @ P1
SCALE 1:50



5 INTERMEDIATE SECTION
SCALE 1:50

ITEM	DESIGN CONDITION SPECIFICATION
Bridge Type	2 Simple Span Composite Bridge
Bridge Length	L = 60,000 m
Span Length	L = 29,115 m + 29,115 m
Total Width	11,800 m
Carriageway Width	7,000 m
Sidewalk Width	2 x 2,000 m
Horizontal Alignment	R = ∞
Vertical Slope	5.000% VCL = 60.0m 5.000%
Transverse Slope	2.000% 2.000% 2.000% 2.000%
Skew Angle	90-00-00
Live Load	B-Line Load Sidewalk Live Load
Slab	Reinforced Concrete Slab 180mm
Carriageway Pavement	Asphalt Overlay 50mm
Sidewalk Pavement	Asphalt Overlay 30mm
Earthquake Load	KI= 0.39

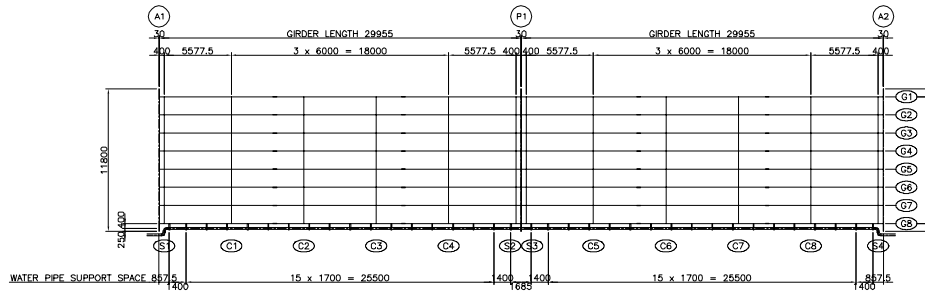
MINISTRY OF
INFRASTRUCTURE DEVELOPMENT

JAPAN INTERNATIONAL
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KATAHIRA & ENGINEERS INTERNATIONAL

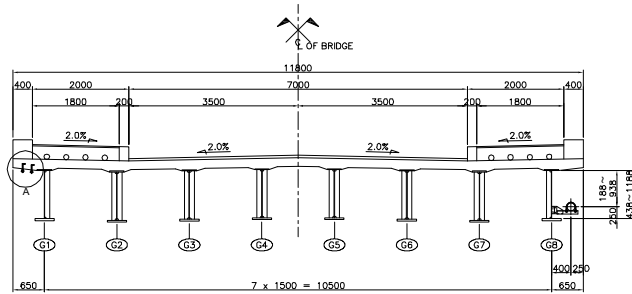
THE PREPARATORY SURVEY ON
THE PROJECT FOR UPGRADING OF
KUKUM HIGHWAY IN THE SOLOMON ISLANDS

TITLE :
OLD MATANIKO BRIDGE
STRUCTURAL GENERAL PLAN

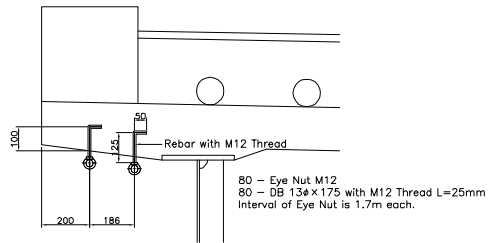
Drawing No.	OM-02
SCALE	AS SHOWN
DATE	AUG. 2014



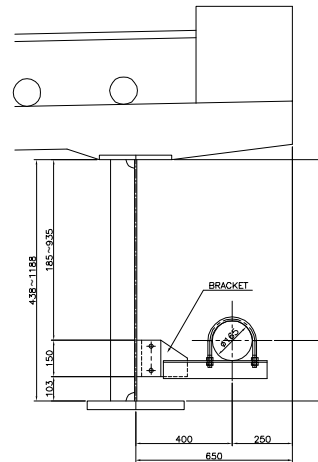
1 LAYOUT PLAN
SCALE 1:200



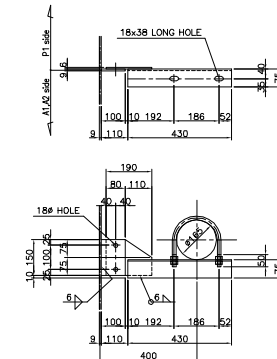
2 STANDARD SECTION
SCALE 1:50



5 A - Rebar with M12 Thread
SCALE 1:10



3 WATER PIPE SUPPORT DETAIL
SCALE 1:10

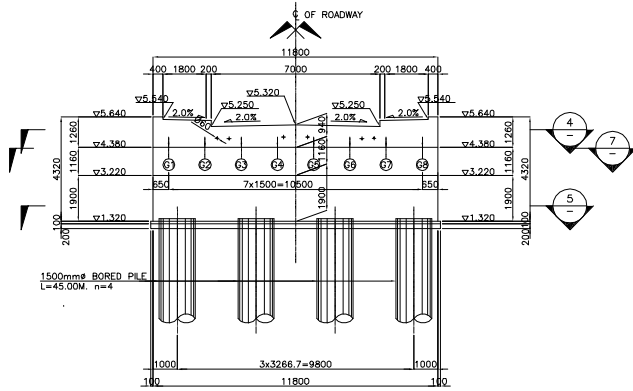


- 36SET
- 1-PL 100 x 9 x 150 (SM400A)
 - 1-PL 150 x 6 x 190
 - 1-L 75 x 75 x 6 x 430
 - 2-BN M16 x 45 (1-Washer)(1-U.Nut)
 - 1-RB ϕ 16 x 510
 - 4-NUT M16

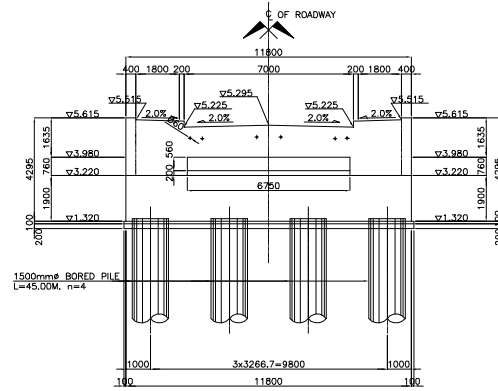
4 BRACKET
SCALE 1:10

- NOTES:
1. ALL MATERIALS SHALL BE SS400, UNLESS OTHERWISE NOTED.
 2. ALL MATERIALS WITHOUT PRECEDED BY * SHALL BE GALVANIZED (JIS H8641, HDZ55).
 3. BOLTS-NUTS SHALL BE GALVANIZED (JIS H8641, HDZ35).

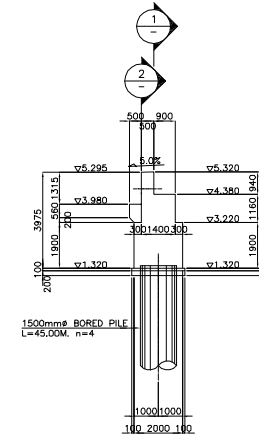
MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE:	Drawing No.	OM-22
			OLD MATANIKO BRIDGE WATER PIPE SUPPORT	SCALE	AS SHOW
				DATE	AUG. 2014



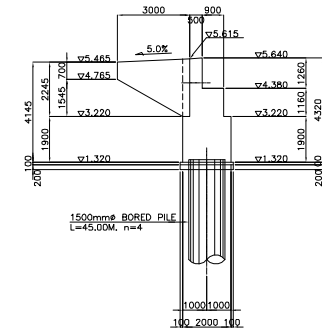
1 FRONT VIEW
SCALE 1:100



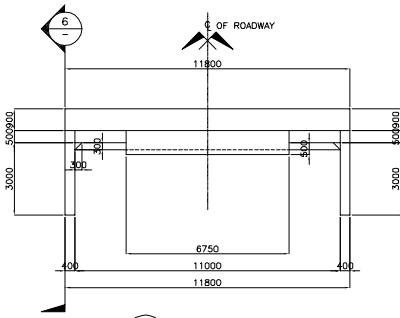
2 BACK VIEW
SCALE 1:100



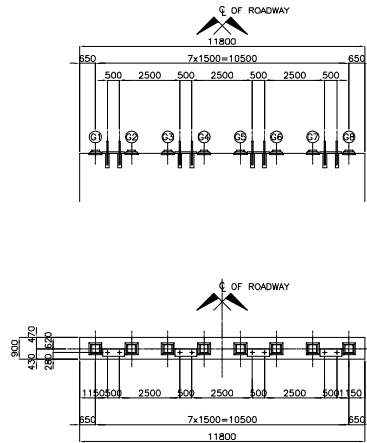
3 SIDE VIEW
SCALE 1:100



6 WING SIDE VIEW
SCALE 1:100

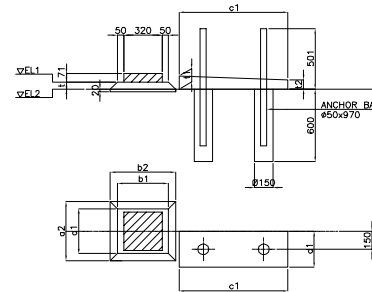


4 PLAN
SCALE 1:100



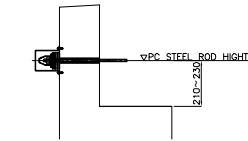
7 BEARING SUPPORT ARRANGEMENT
SCALE 1:100

BEARING SUPPORT DETAIL				
		EL1	EL2	t
BEARING SUPPORT				
BOTTOM END				
G1	G8	+4.439	+4.380	59
G2	G7	+4.409	+4.380	29
G3	G6	+4.429	+4.380	49
G4	G5	+4.459	+4.380	79



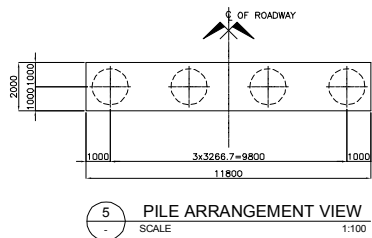
8 BEARING SUPPORT VIEW
SCALE 1:20

		a1	a2	b1	b2	c1	d1	t1	t2	
G1	G5	370	490	420	540	G1-G2	900	300	110	80
G2	G6	370	430	420	480	G3-G4	900	300	100	130
G3	G7	370	470	420	520	G5-G6	900	300	130	100
G4	G8	370	530	420	580	G7-G8	900	300	80	110



PC Steel Rod Height	G2-G3, G7-G8	G4-G5
	4.768	4.748
	4.808	4.808

9 FALL-OFF PREVENTION SYSTEMS DETAILS
SCALE 1:30



5 PILE ARRANGEMENT VIEW
SCALE 1:100

USE MATERIAL		
CONCRETE	WALL	$\sigma_{ck}=24N/mm^2$
	FOOTING	$\sigma_{ck}=24N/mm^2$
	BORED PILE	$\sigma_{ck}=30N/mm^2$
	LEVELING CONCRETE	$\sigma_{ck}=18N/mm^2$
REINFORCING BAR	WALL	SD345
	FOOTING	SD345
	BORED PILE	SD345
	CRUSHED STONES	C40

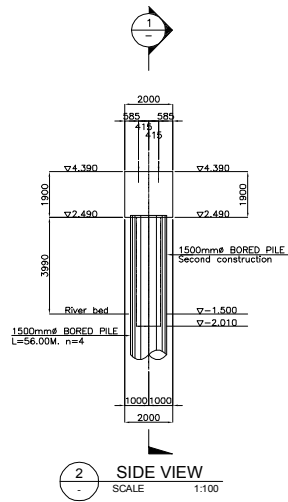
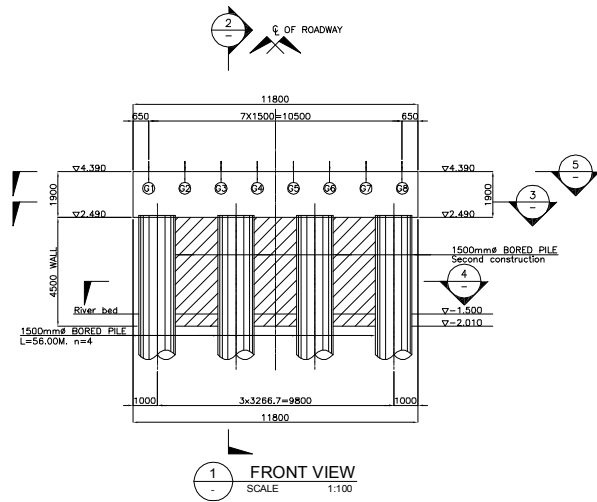
MINISTRY OF
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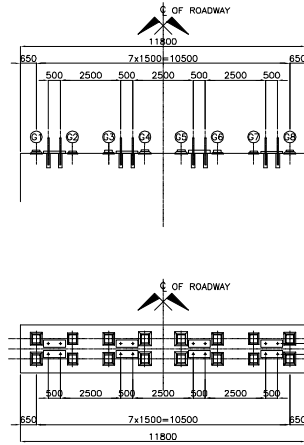
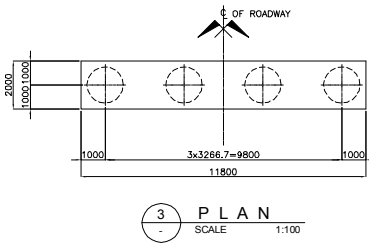
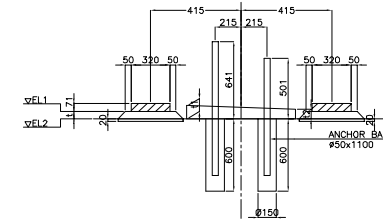
THE PREPARATORY SURVEY ON
THE PROJECT FOR UPGRADING OF
KUKUM HIGHWAY IN THE SOLOMON ISLANDS

TITLE :
OLD MATANIKO BRIDGE
A1 ABUTMENT STRUCTURAL PLAN

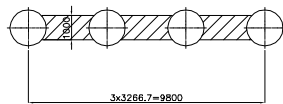
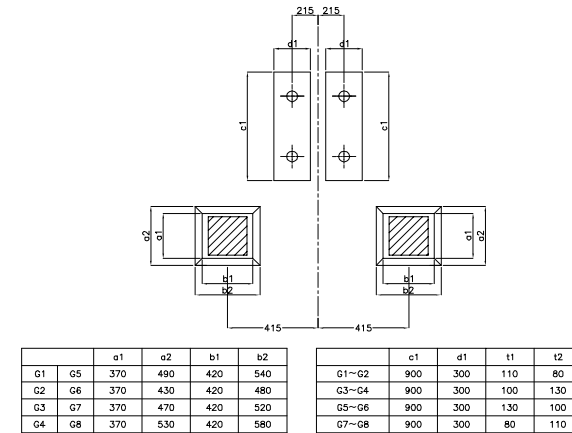
Drawing No.	OM-25
SCALE	AS SHOWN
DATE	AUG. 2014



BEARING SUPPORT DETAIL					
		EL1	EL2	t	
		BEARING SUPPORT BOTTOM END	BRIDGE SEAT LEVEL	MORTAL THICKNESS	
G1	G5	+4.449	+4.390	59	
G2	G6	+4.419	+4.390	29	
G3	G7	+4.439	+4.390	49	
G4	G8	+4.469	+4.390	79	



5 BEARING SUPPORT VIEW
SCALE 1:100



	a1	a2	b1	b2	
G1	G5	370	490	420	540
G2	G6	370	430	420	480
G3	G7	370	470	420	520
G4	G8	370	530	420	580

	c1	d1	t1	t2
G1~G2	900	300	110	80
G3~G4	900	300	100	130
G5~G6	900	300	130	100
G7~G8	900	300	80	110

USE MATERIAL		
CONCRETE	WALL	$\sigma_{ck}=24N/mm^2$
	FOOTING	$\sigma_{ck}=24N/mm^2$
	BORED PILE	$\sigma_{ck}=30N/mm^2$
	LEVELING CONCRETE	$\sigma_{ck}=18N/mm^2$
REINFORCING BAR	WALL	SD345
	FOOTING	SD345
	BORED PILE	SD345
	CRUSHED STONES	C40

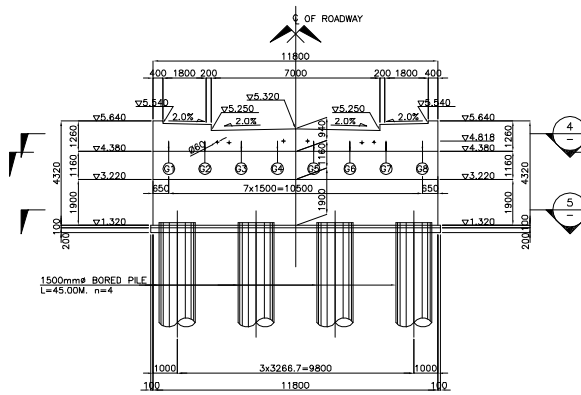
MINISTRY OF
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KATAHIRA & ENGINEERS INTERNATIONAL

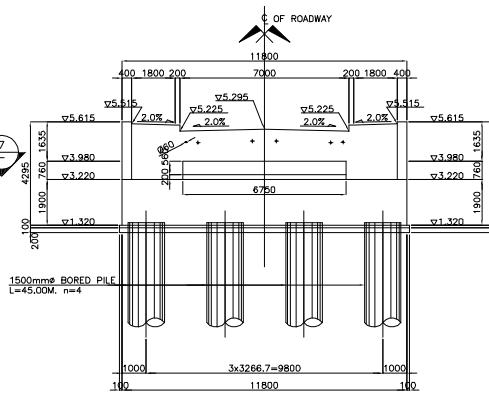
THE PREPARATORY SURVEY ON
THE PROJECT FOR UPGRADING OF
KUKUM HIGHWAY IN THE SOLOMON ISLANDS

TITLE :
OLD MATANIKO BRIDGE
P1 PIER STRUCTURAL PLAN

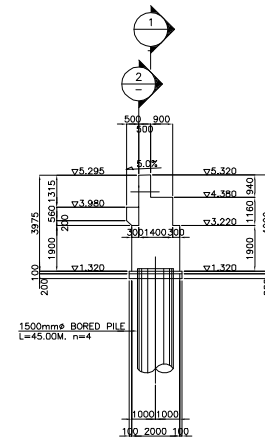
Drawing No.	OM-26
SCALE	AS SHOWN
DATE	AUG. 2014



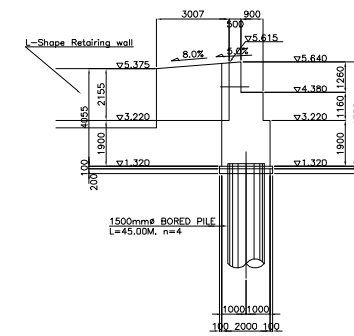
1 FRONT VIEW
SCALE 1:100



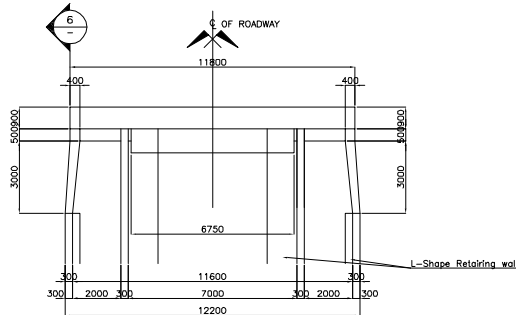
2 BACK VIEW
SCALE 1:100



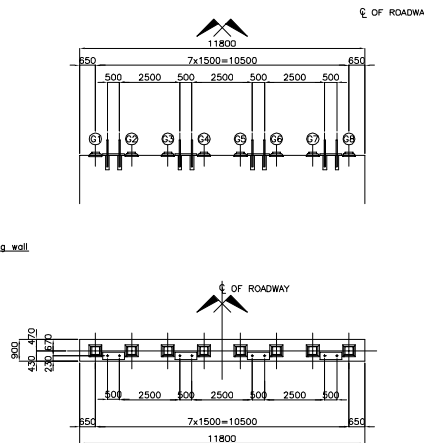
3 SIDE VIEW
SCALE 1:100



6 WING SIDE VIEW
SCALE 1:100

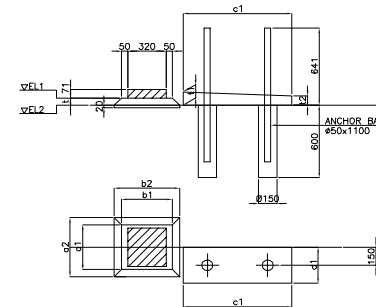


4 PLAN
SCALE 1:100



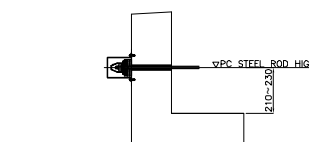
7 BEARING SUPPORT ARRANGEMENT
SCALE 1:100

BEARING SUPPORT DETAIL				
		EL1	EL2	t
BEARING SUPPORT				
BOTTOM END				
G1	G8	+4.439	+4.380	59
G2	G7	+4.409	+4.380	29
G3	G6	+4.429	+4.380	49
G4	G5	+4.459	+4.380	79



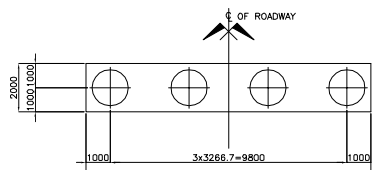
8 BEARING SUPPORT VIEW
SCALE 1:20

		a1	a2	b1	b2	c1	d1	t1	t2
G1	G5	370	490	420	540	900	300	110	80
G2	G6	370	430	420	480	900	300	100	130
G3	G7	370	470	420	520	900	300	130	100
G4	G8	370	530	420	580	900	300	80	110



PC steel Rod Height	G2-G3, G7-G8	G4-G5
	4.768	4.808

9 FALL-OFF PREVENTION SYSTEMS DETAILS
SCALE 1:30



5 PILE ARRANGEMENT VIEW
SCALE 1:100

USE MATERIAL		
CONCRETE	WALL	$\sigma_{ck}=24N/mm^2$
	FOOTING	$\sigma_{ck}=24N/mm^2$
	BORED PILE	$\sigma_{ck}=30N/mm^2$
REINFORCING BAR	LEVELING CONCRETE	$\sigma_{ck}=18N/mm^2$
	WALL	SD345
	FOOTING	SD345
	BORED PILE	SD345
CRUSHED STONES		C40

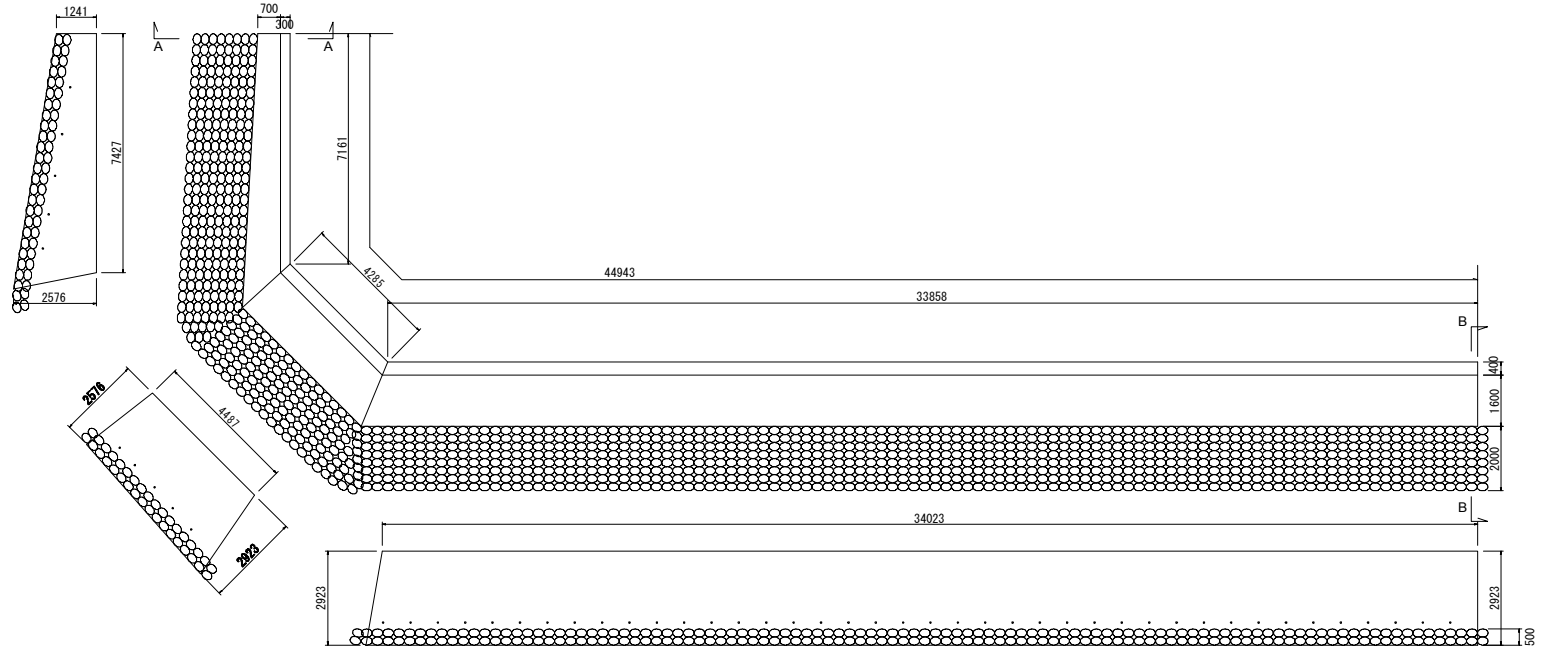
MINISTRY OF
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KATAHIRA & ENGINEERS INTERNATIONAL

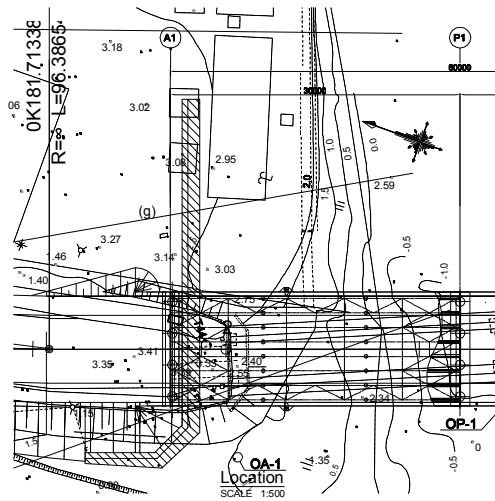
THE PREPARATORY SURVEY ON
THE PROJECT FOR UPGRADING OF
KUKUM HIGHWAY IN THE SOLOMON ISLANDS

TITLE :
OLD MATANIKO BRIDGE
A2 ABUTMENT STRUCTURAL PLAN

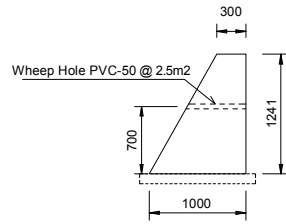
Drawing No.	OM-27
SCALE	AS SHOWN
DATE	AUG. 2014



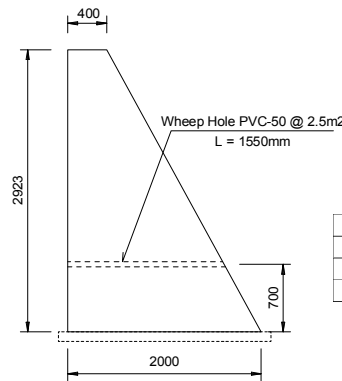
Plan & Profile
SCALE 1:200



OA-1
Location
SCALE 1:500



Section A-A
SCALE 1:50

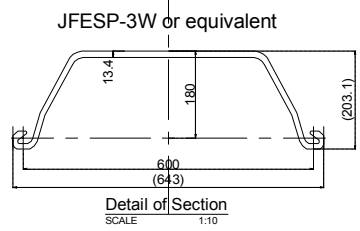
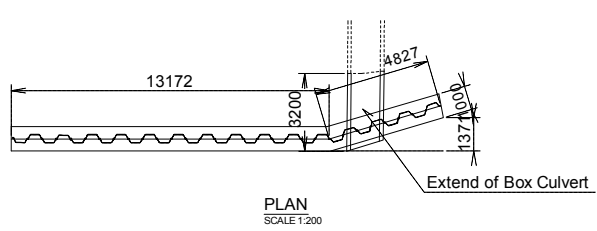
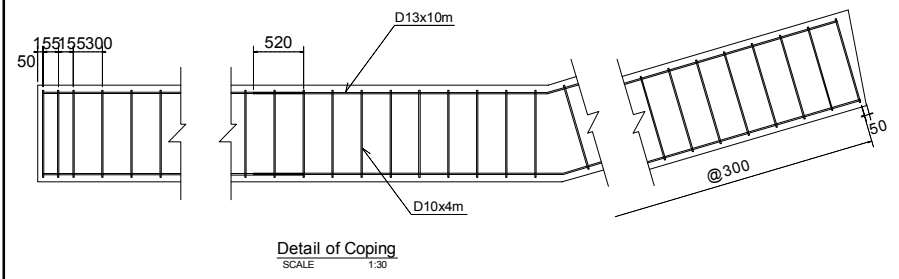
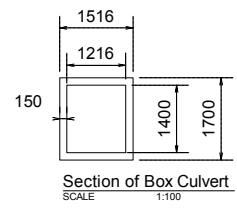
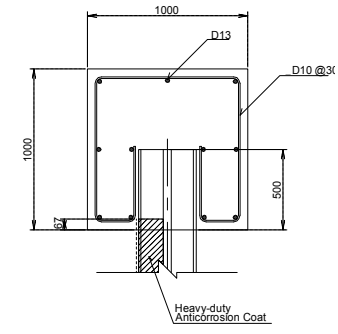
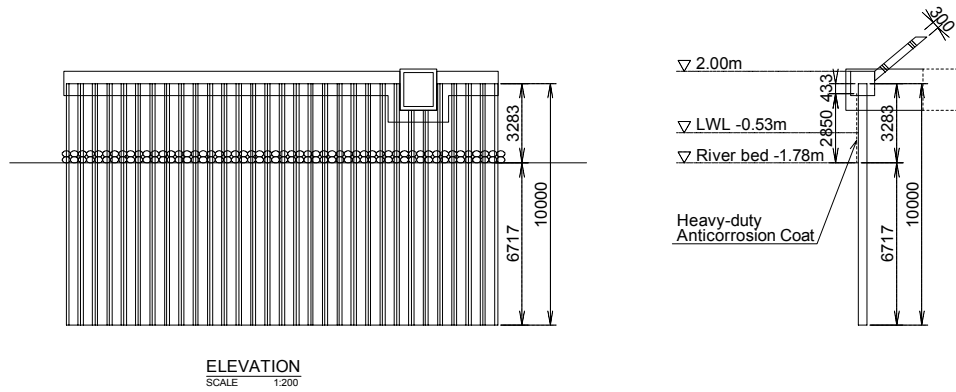


Section B-B
SCALE 1:50

Note)
1. Expansion Joint is applied 10m each length.

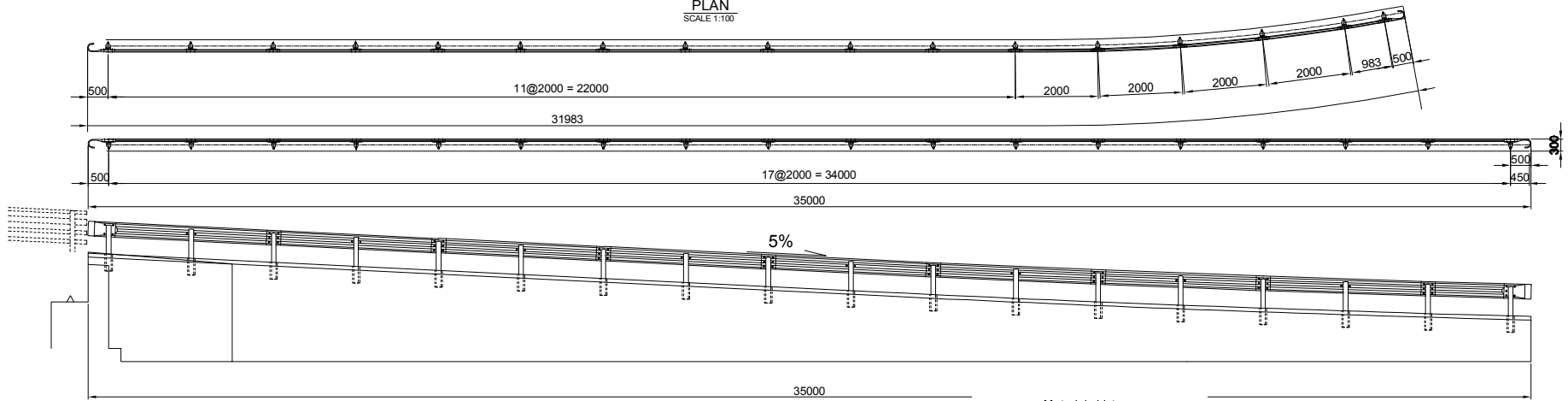
Materials	unit	Length	number	quantity	Remarks
Concrete	m3	44.943	1		$\sigma_{ck}=18N/mm^2$
Sandbag	m3	44.943			
VP-50A	m	1.55	50	77.5	PVC-50

MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : OLD MATANIKO BRIDGE A1 ABUTMENT RETAINING WALL	Drawing No.	OM-41
				SCALE	AS SHOWN
				DATE	AUG. 2014

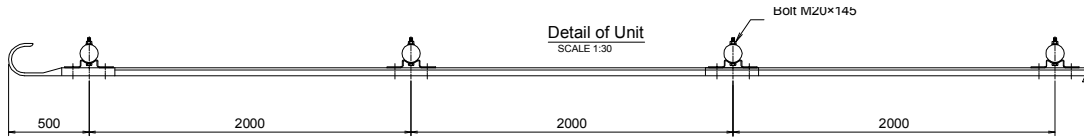


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : OLD MATANIKO BRIDGE A2 ABUTMENT STEEL SHEET PILE WALL	
			Drawing No.	OM-43
			SCALE	AS SHOWN
			DATE	AUG. 2014

PLAN
SCALE 1:100



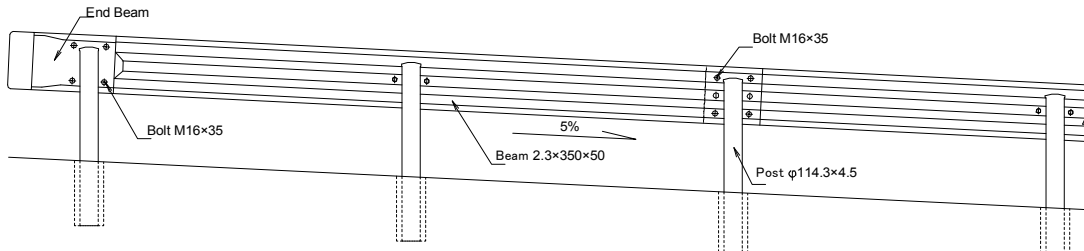
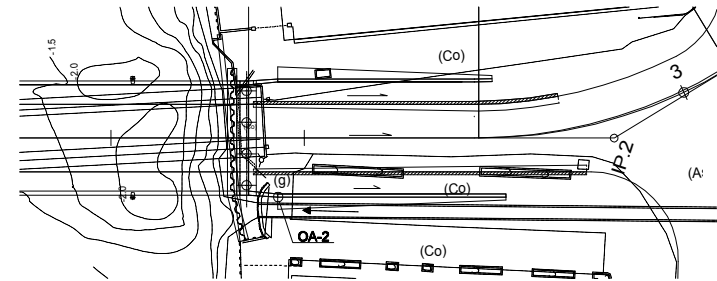
Detail of Unit
SCALE 1:30



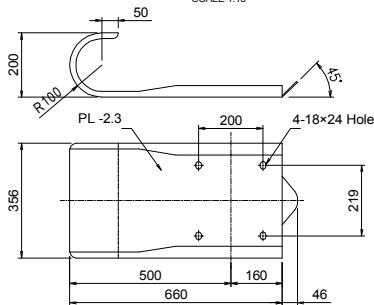
Materials List

Item	unit	quantity	Remarks	Materials	unit	Size	number	unitweight	quantity
GuardRail L-1	m	32.0	Gr-C-2B	Rebar	kg	D13x1285	70	0.56	50
GuardRail L-2	m	35.0	Gr-C-2B	Mortar	m3		35	0.01	0.35

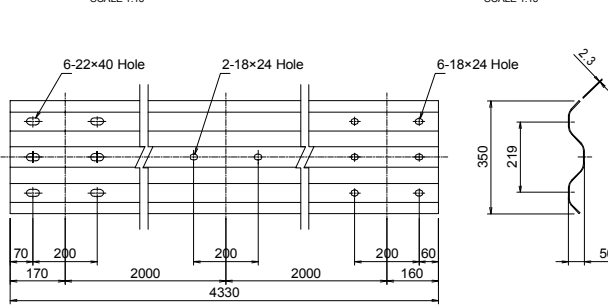
Location



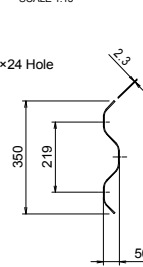
Beam Pipe End
SCALE 1:15



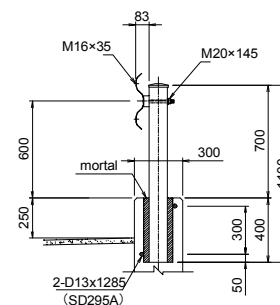
Intermediate Beam Pipe
SCALE 1:15



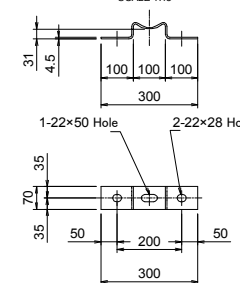
Beam Pipe Connection
SCALE 1:15



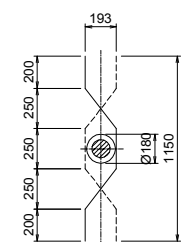
Detail of Post
SCALE 1:30



Bracket
SCALE 1:15



Reinforcement
SCALE 1:30



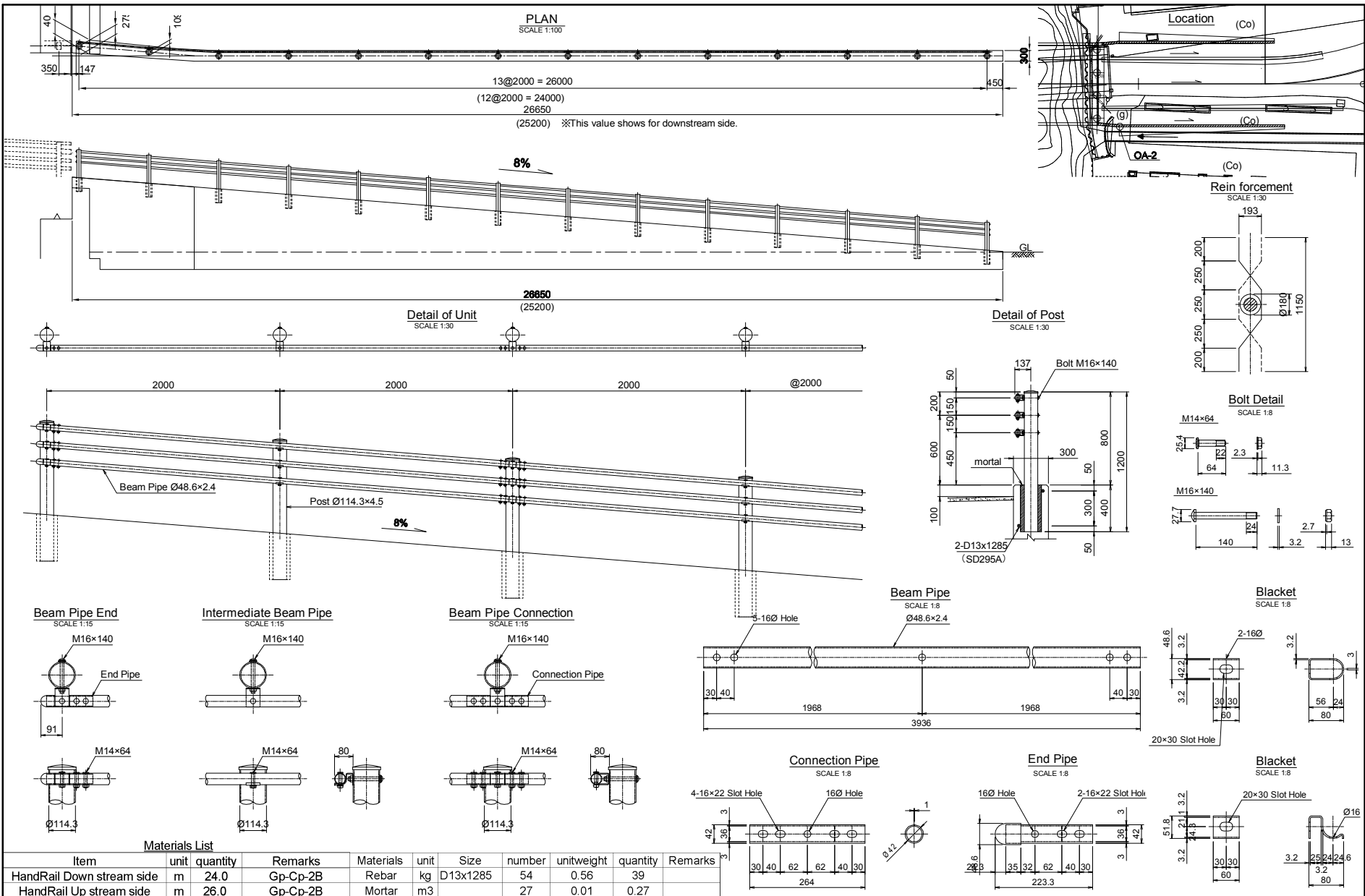
MINISTRY OF
INFRASTRUCTURE DEVELOPMENT

JAPAN INTERNATIONAL
COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL

THE PREPARATORY SURVEY ON
THE PROJECT FOR UPGRADING OF
KUKUM HIGHWAY IN THE SOLOMON ISLANDS

TITLE : OLD MATANIKO BRIDGE
A2 ABUTMENT GUARD RAIL
(Gr-C-2B)

Drawing No.	OM-45
SCALE	AS SHOWN
DATE	AUG. 2014



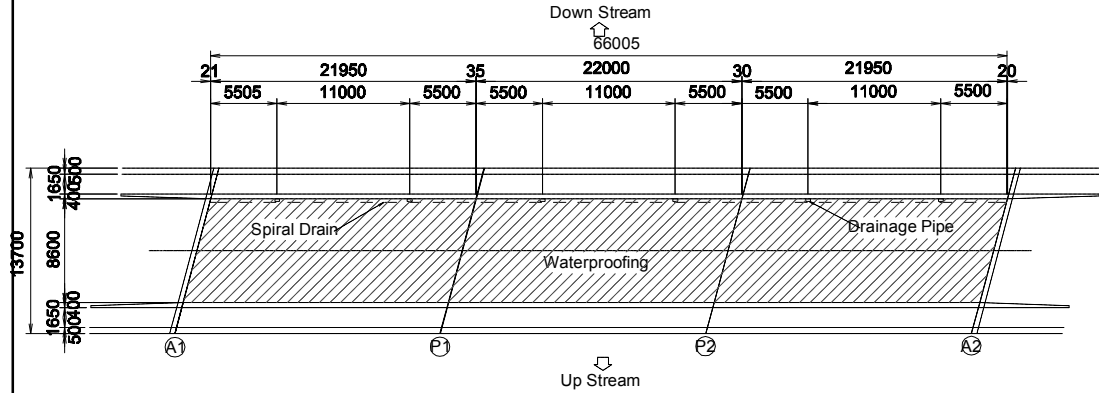
Materials List

Item	unit	quantity	Remarks	Materials	unit	Size	number	unitweight	quantity	Remarks
HandRail Down stream side	m	24.0	Gp-Cp-2B	Rebar	kg	D13x1285	54	0.56	39	
HandRail Up stream side	m	26.0	Gp-Cp-2B	Mortar	m3		27	0.01	0.27	

66-IIV

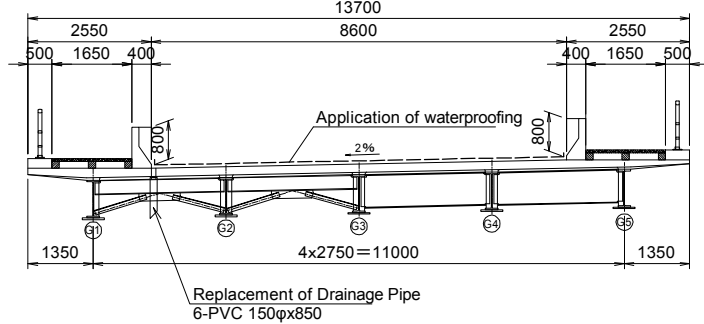
Application of Waterproofing

SCALE 1:400



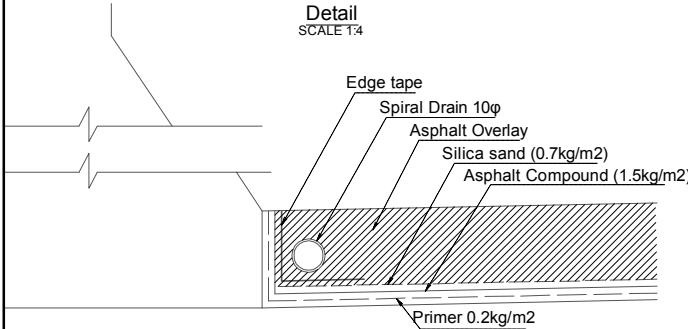
Cross Section

SCALE 1:100



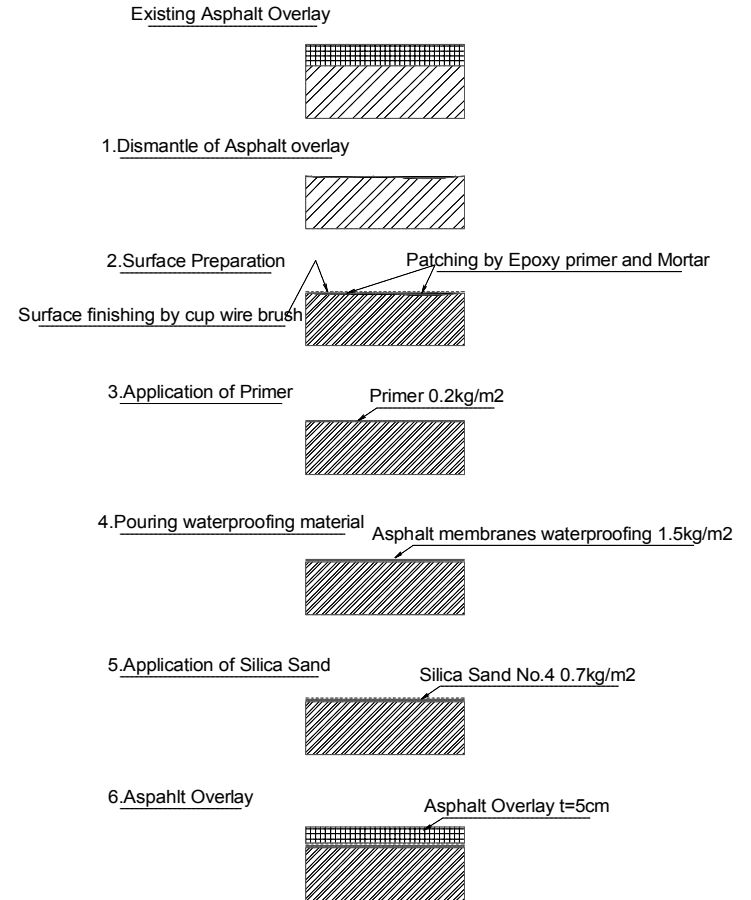
Detail

SCALE 1:4



Methorology of Application of Waterproofing

SCALE 1:15

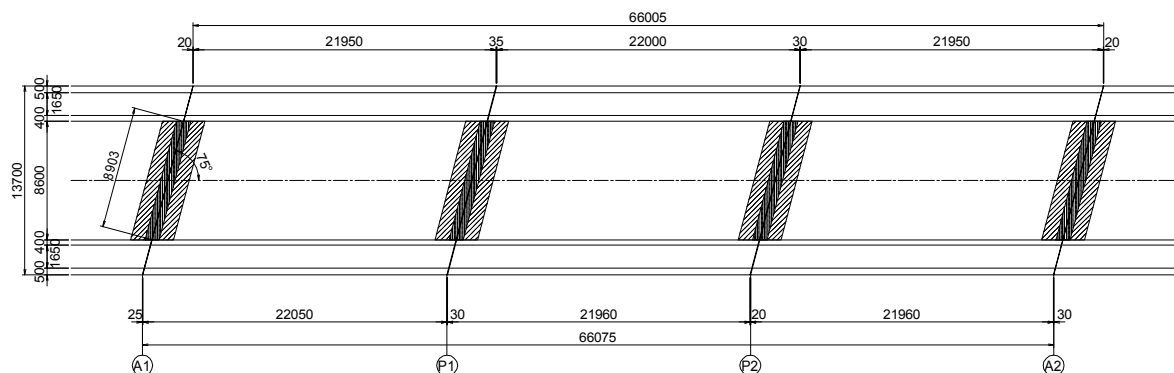


MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE : EXISTING NEW MATANIKO BRIDGE APPLICATION OF WATERPROOFING	
			Drawing No.	ENM-01
			SCALE	S=1/500
			DATE	AUG. 2014

A11-100

Replacement of Expansion Joint (Buried Type Joint)

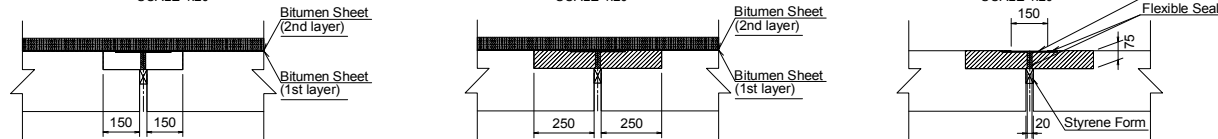
SCALE 1:350



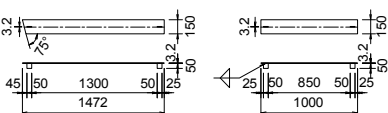
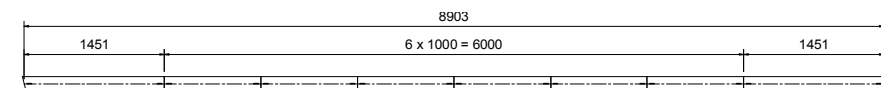
Detail on A1,A2 and P1
SCALE 1:20

Detail on P2
SCALE 1:20

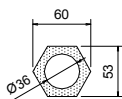
Detail of Buried Joint
SCALE 1:20



Steel Plate
SCALE 1:50

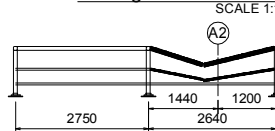


Loosen Nut of Bearing
SCALE 1.5



Note: Screw module of the Nut will be confirmed by contractor measurement
30 pcs will be supplied for loosen Nut for repair

Damaged handrail on A2 upstream side
SCALE 1:100

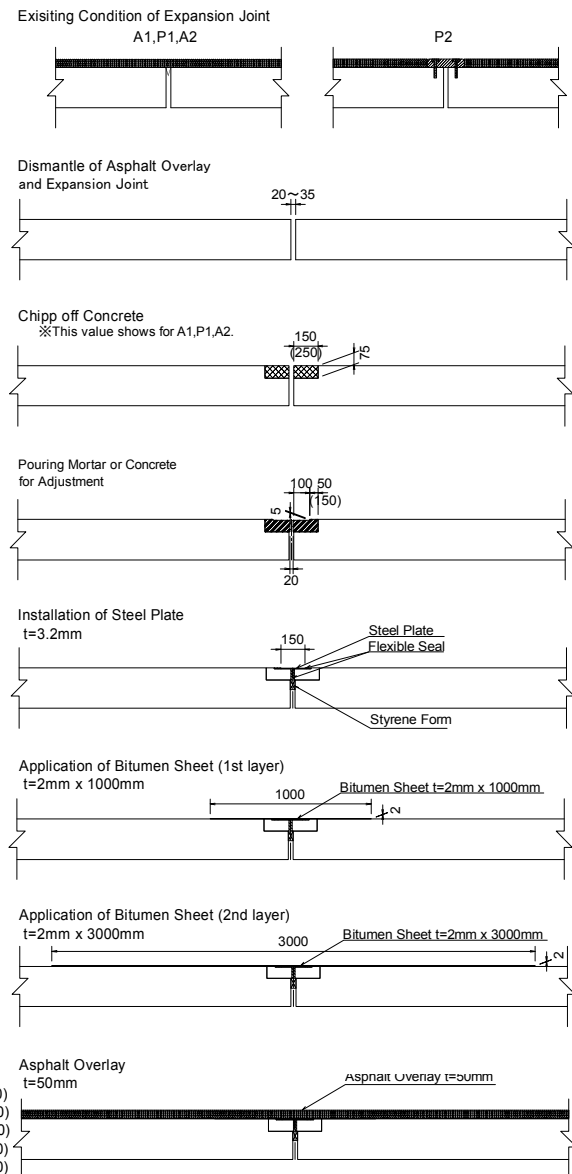


Replacement of member component will be applied as follows

- Post 1-□75x75x4.5x1000(STKR400)
- Top Beam 1-□75x75x3.2x2345(STKR400)
- Bottom Beam 2-□75x45x3.2x2345(STKR400)
- Connection Plate 1-□60x60x3.2x120 (STKR400)
- Connection Plate 2-□60x30x2.3x120 (STKR400)

Methodology of Replacement of Expansion Joint

SCALE 1:30



MINISTRY OF INFRASTRUCTURE DEVELOPMENT	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL	THE PREPARATORY SURVEY ON THE PROJECT FOR UPGRADING OF KUKUM HIGHWAY IN THE SOLOMON ISLANDS	TITLE :	Drawing No.	ENM-02
			EXISTING NEW MATANIKO BRIDGE REPLACEMENT OF EXPANSION JOINT and OTHER REPAIR PARTS	SCALE	AS SHOWN
				DATE	AUG. 2014