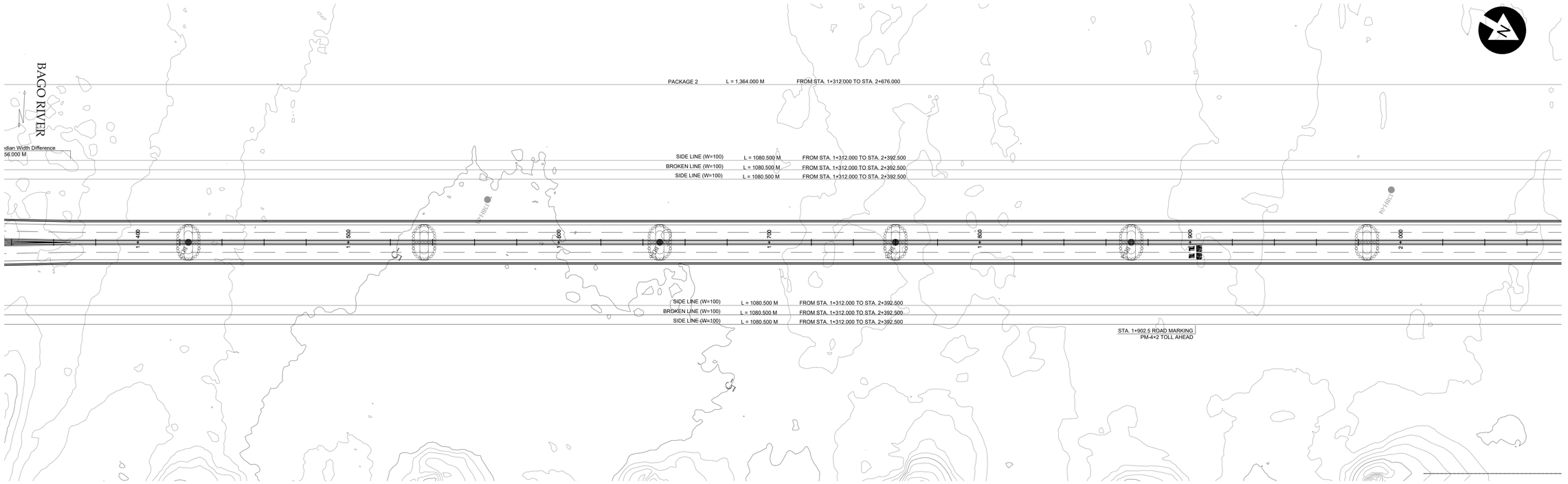
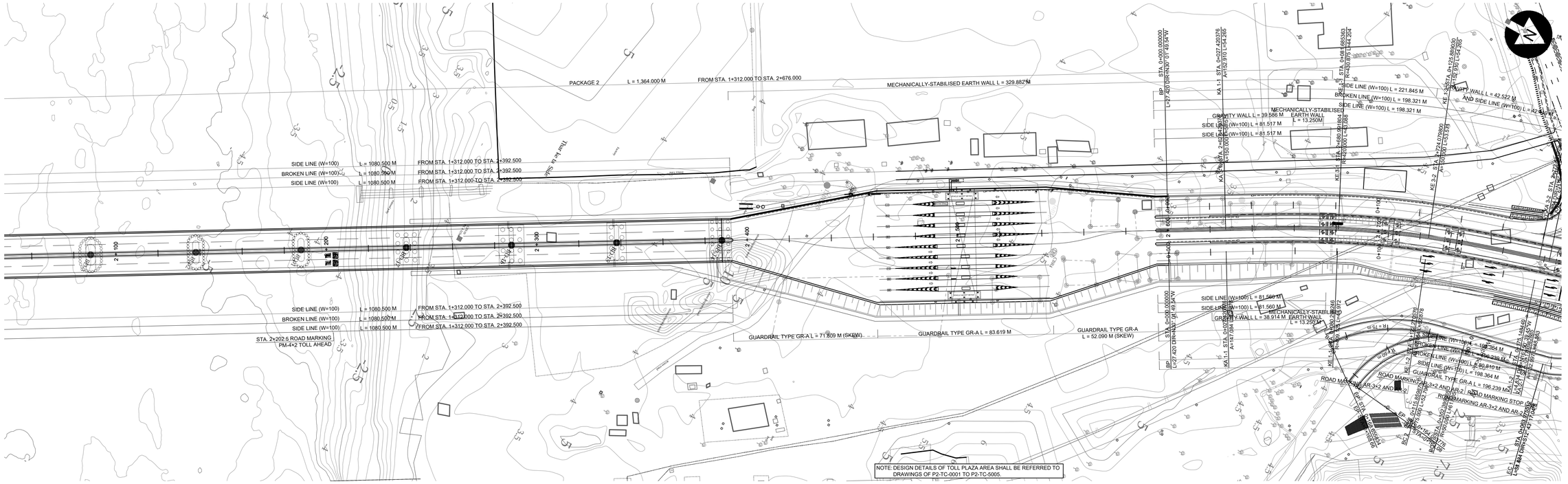
B. ROAD DESIGN



PROJECT NAME	DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT
FINANCED BY	JAPAN INTERNATIONAL COOPERATION AGENCY
COUNTERPART	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE
JICA STUDY TEAM	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO., LTD. NIPPON ENGINEERING CONSULTANTS CO., LTD.

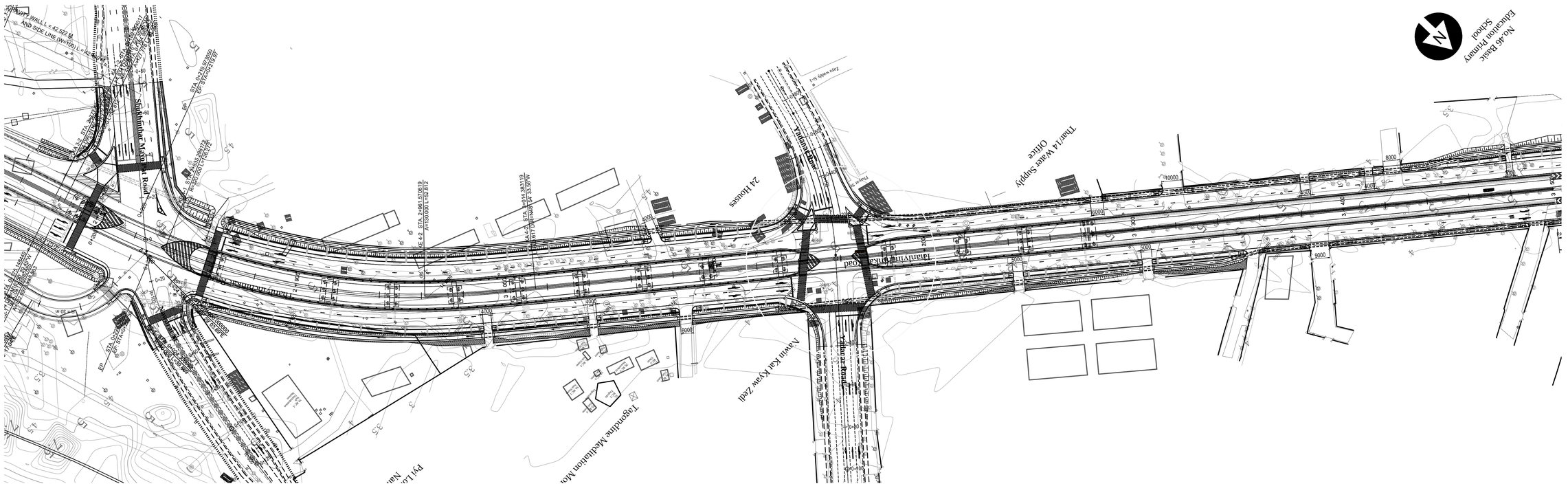
	NAME	SIGNATURE	DATE
PREPARED BY	E. YOKOTA		15 JUNE 2017
CHECKED BY	T. HAYAKAWA		20 JUNE 2017
APPROVED BY	Y. SANO		21 JUNE 2017

DRAWING TITLE	PLAN AND PROFILE (1/3)
PACKAGE	2
DWG No.	P2-RD-0100



PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM		
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO., LTD. NIPPON ENGINEERING CONSULTANTS CO., LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	E. YOKOTA		15 JUNE 2017	PLAN AND PROFILE (2/3)	2
CHECKED BY	T. HAYAKAWA		20 JUNE 2017		DWG No.
APPROVED BY	Y. SANO		21 JUNE 2017		P2-RD-0110

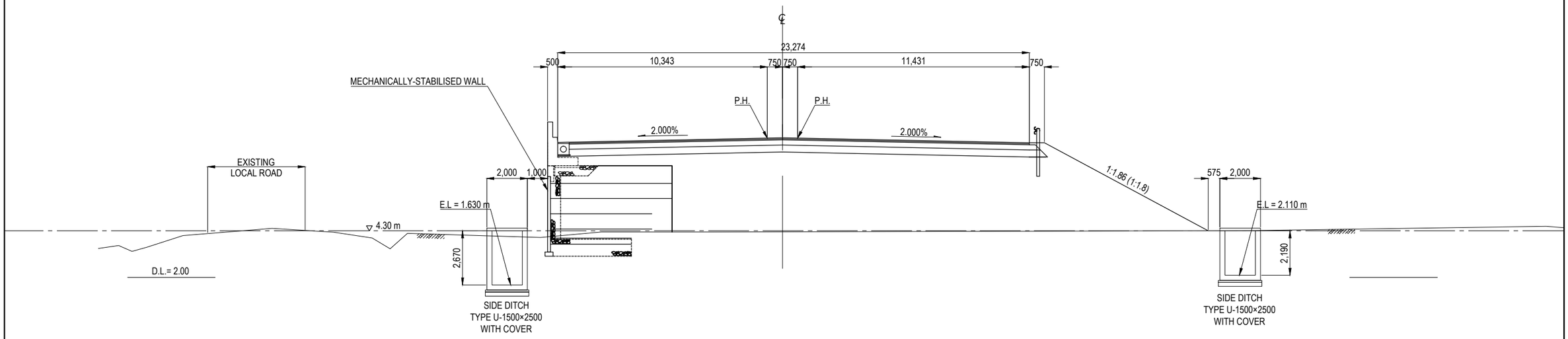


PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM		
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO., LTD. NIPPON ENGINEERING CONSULTANTS CO., LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	E. YOKOTA		15 JUNE 2017	PLAN AND PROFILE (3/3)	2
CHECKED BY	T. HAYAKAWA		20 JUNE 2017		DWG No.
APPROVED BY	Y. SANO		21 JUNE 2017		P2-RD-0120

STA. 2+400

GH=4.25
PH=8.870



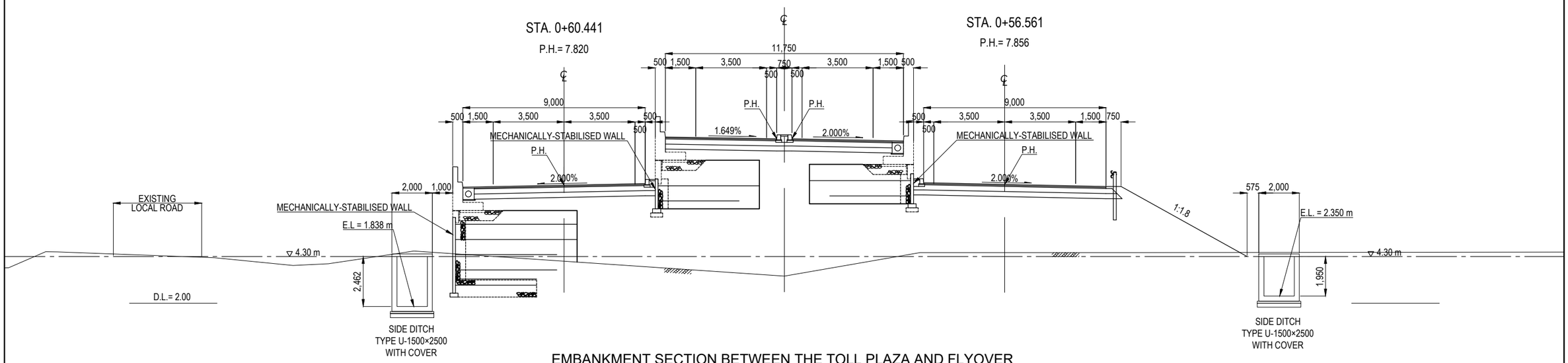
TRANSITION SECTION BETWEEN BAGO RIVER BRIDGE AND TOLL PLAZA
WITH MECHANICALLY-STABILISED WALL AT THE LEFT SIDE

STA. 2+660

GH=3.33
PH=10.105

STA. 0+60.441
P.H.= 7.820

STA. 0+56.561
P.H.= 7.856



EMBANKMENT SECTION BETWEEN THE TOLL PLAZA AND FLYOVER
WITH THE APPLICATION OF MECHANICALLY-STABILISED WALL

NOTE: ELEVATION IS BASED ON MSL (MEAN SEA LEVEL).
ELEVATION OF 4.30 M SHOWN IN THE DRAWING IS THE PROPOSED HEIGHT OF CONSTRUCTION YARD.

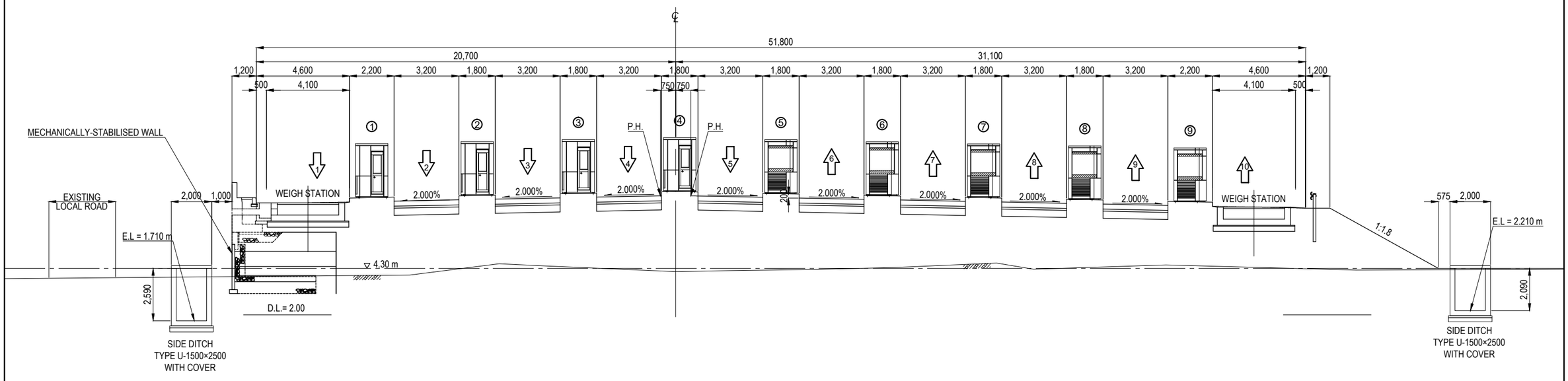
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	E. YOKOTA		15 JUNE 2017
CHECKED BY	T. HAYAKAWA		20 JUNE 2017
APPROVED BY	Y. SANO		21 JUNE 2017

DRAWING TITLE	PACKAGE
TYPICAL CROSS SECTION (1/2)	2
	DWG No.
	P2-RD-0200

STA. 2+500

GH=4.14
PH=7.879



TOLLBOOTH SECTION WITH MECHANICALLY-STABILISED WALL AT THE LEFT SIDE S = 1:200

NOTE: ELEVATION IS BASED ON MSL (MEAN SEA LEVEL).
ELEVATION OF 4.30 M SHOWN IN THE DRAWING IS THE PROPOSED HEIGHT OF CONSTRUCTION YARD.

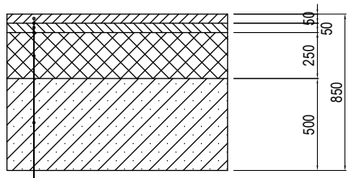
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	E. YOKOTA		15 JUNE 2017
CHECKED BY	T. HAYAKAWA		20 JUNE 2017
APPROVED BY	Y. SANO		21 JUNE 2017

DRAWING TITLE	PACKAGE
TYPICAL CROSS SECTION (2/2)	2
	DWG No.
	P2-RD-0210

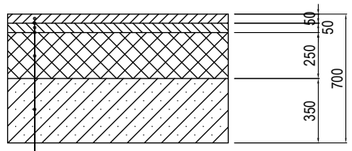
PAVEMENT LAYER S=1:30

Type E1



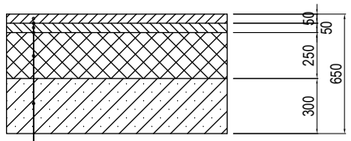
AC SURFACE COURSE (t=50mm)
TACK COAT 0.4 l/m2
AC SURFACE BASE (t=50mm)
PRIME COAT 0.4 l/m2
BASE COURSE (t=250mm)
SUB BASE (t=500mm)

Type E2



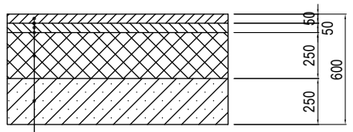
AC SURFACE COURSE (t=50mm)
TACK COAT 0.4 l/m2
AC SURFACE BASE (t=50mm)
PRIME COAT 0.4 l/m2
BASE COURSE (t=250mm)
SUB BASE (t=350mm)

Type E3



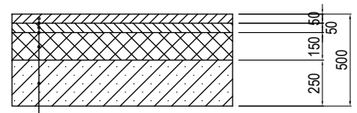
AC SURFACE COURSE (t=50mm)
TACK COAT 0.4 l/m2
AC SURFACE BASE (t=50mm)
PRIME COAT 0.4 l/m2
BASE COURSE (t=250mm)
SUB BASE (t=300mm)

Type E4



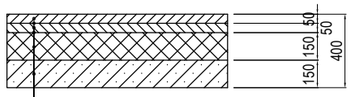
AC SURFACE COURSE (t=50mm)
TACK COAT 0.4 l/m2
AC SURFACE BASE (t=50mm)
PRIME COAT 0.4 l/m2
BASE COURSE (t=250mm)
SUB BASE (t=250mm)

Type E5



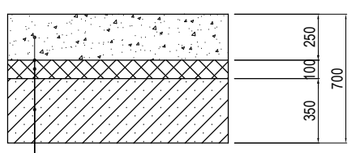
AC SURFACE COURSE (t=50mm)
TACK COAT 0.4 l/m2
AC SURFACE BASE (t=50mm)
PRIME COAT 0.4 l/m2
BASE COURSE (t=150mm)
SUB BASE (t=250mm)

Type E6



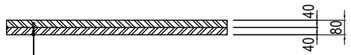
AC SURFACE COURSE (t=50mm)
TACK COAT 0.4 l/m2
AC SURFACE BASE (t=50mm)
PRIME COAT 0.4 l/m2
BASE COURSE (t=150mm)
SUB BASE (t=150mm)

Type C



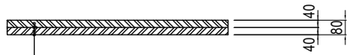
CONCRETE (t=250mm)
PRIME COAT 0.4 l/m2
BASE COURCE (t=100mm)
SUB BASE(t=350mm)

Type B1 (FOR CONCRETE DECK)



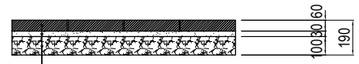
AC SURFACE COURSE (t=40mm)
TACK COAT 0.4 l/m2
AC SURFACE BASE (t=40mm)
WATERPROOFING
BONDING COAT

Type B2 (FOR STEEL DECK)



POLTMER-MODIFIED ASPHALT II (t=40mm)
TACK COAT 0.4 l/m2
POLTMER-MODIFIED ASPHALT III-WF(t=40mm)
WATERPROOFING
BONDING COAT

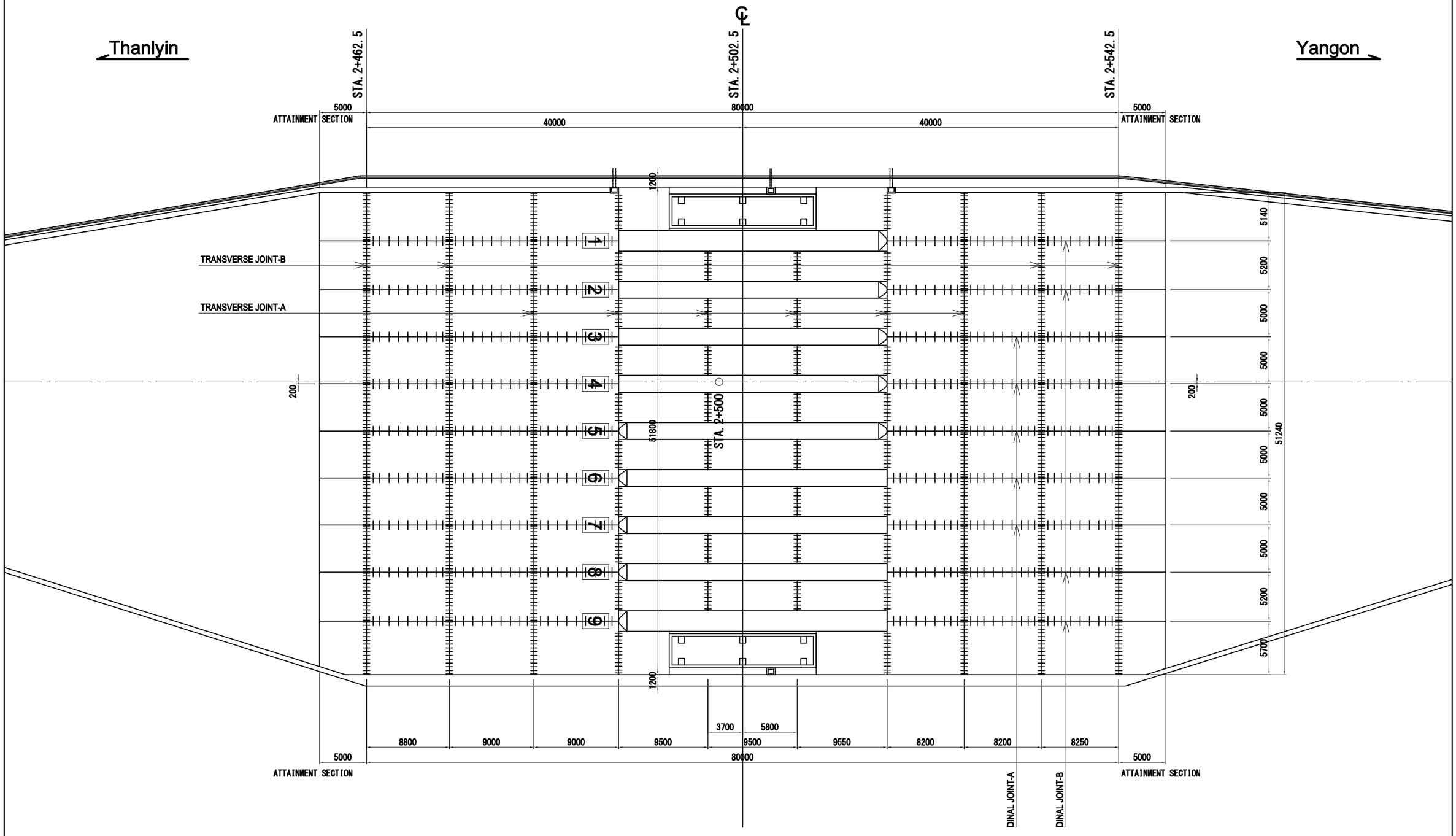
Side Walk



PRECAST CONCRETE PAVING BLOCK (300x300mm x t=60mm)
SAND(t=30mm)
SOIL AGGREGATE:C-30(t=100mm)

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	PAVEMENT LAYER	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-0300

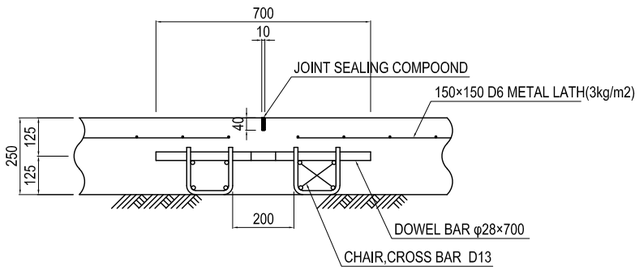
DETAIL OF CEMENT CONCREATE PAVEMENT(1) S=1:400



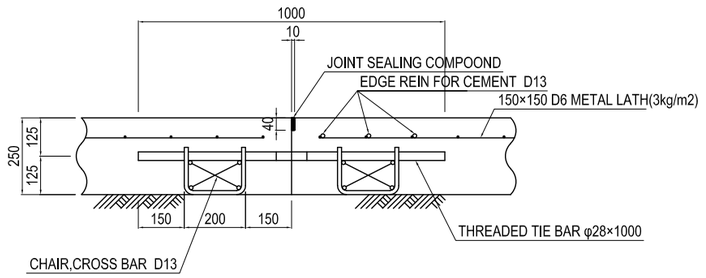
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM		NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	PREPARED BY	J.TSUCHIYA		15 Jun. 2017	DETAIL OF CEMENT CONCREATE PAVEMENT(1)	2
				CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
				APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-0310

DETAIL OF CEMENT CONCREATE PAVEMENT(2) S=1:20

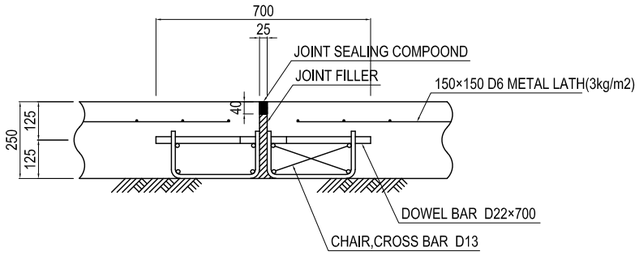
TRANSVERSE JOINT-A



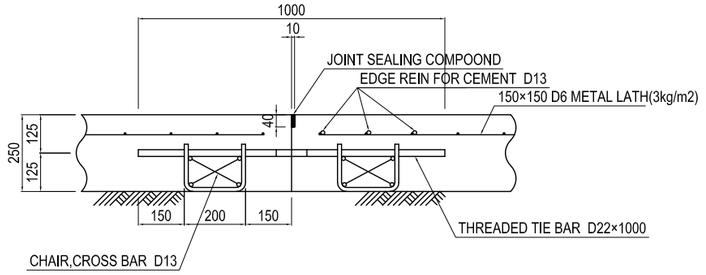
LONGITUDINAL JOINT-A



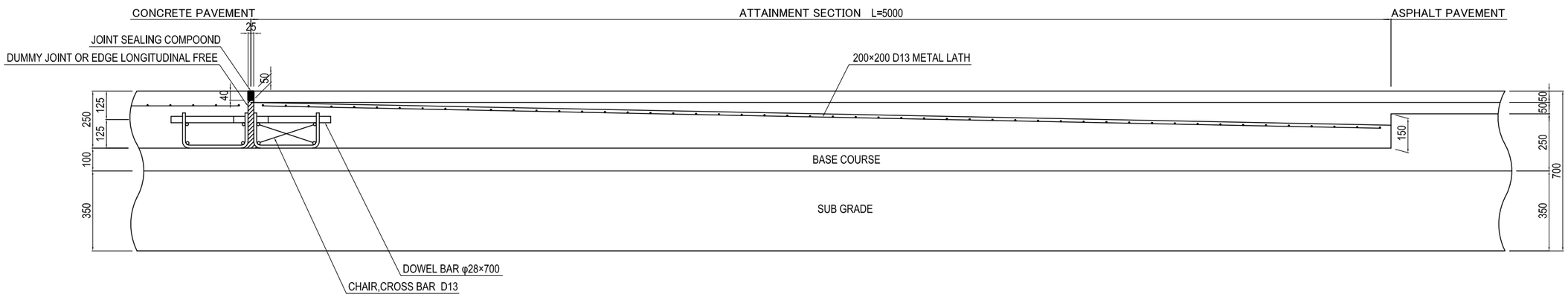
TRANSVERSE JOINT-B



LONGITUDINAL JOINT-B



ATTAINMENT SECTION

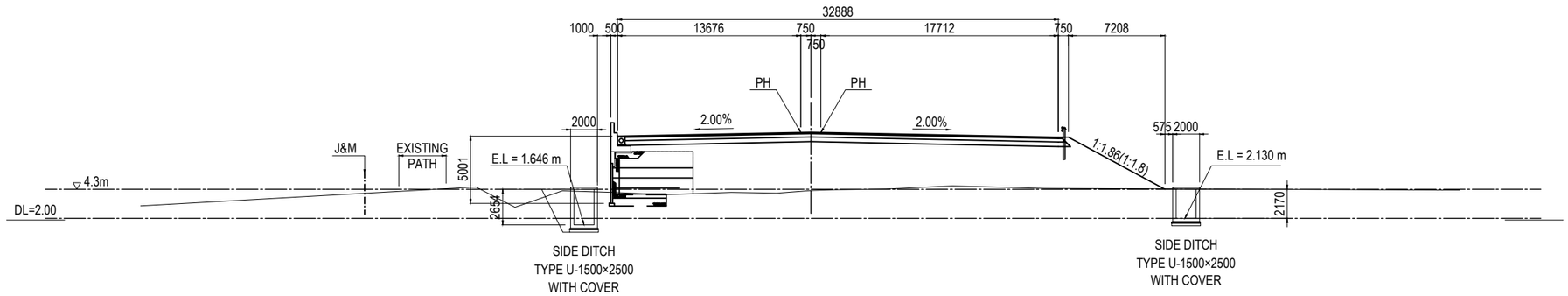


PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM	
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

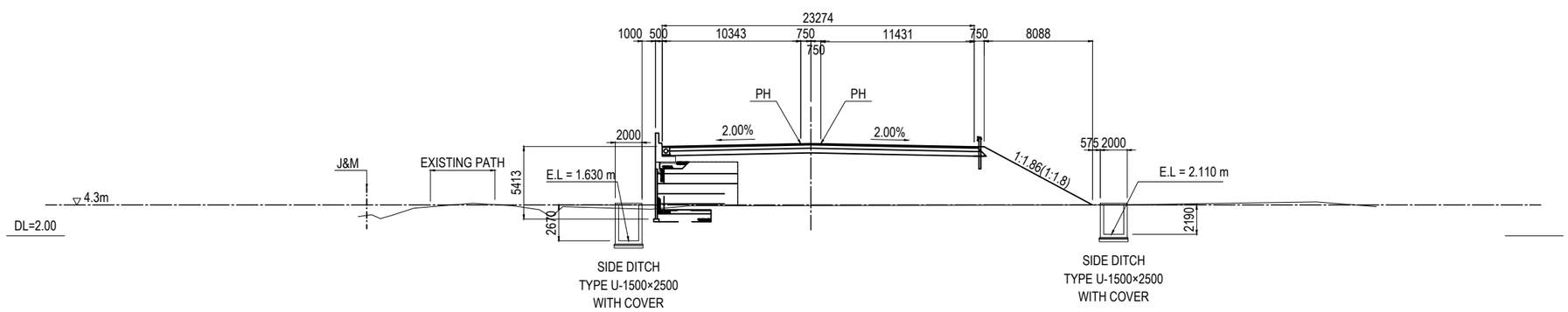
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	DETAIL OF CEMENT CONCREATE PAVEMENT(2)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-0320

CROSS SECTION MAIN ROAD (1) S=1:400

STA.2+420
GH=4.20
PH=8.525



STA.2+400
GH=4.25
PH=8.870



Note: Elevation is based on MSL (Mean Sea Level)

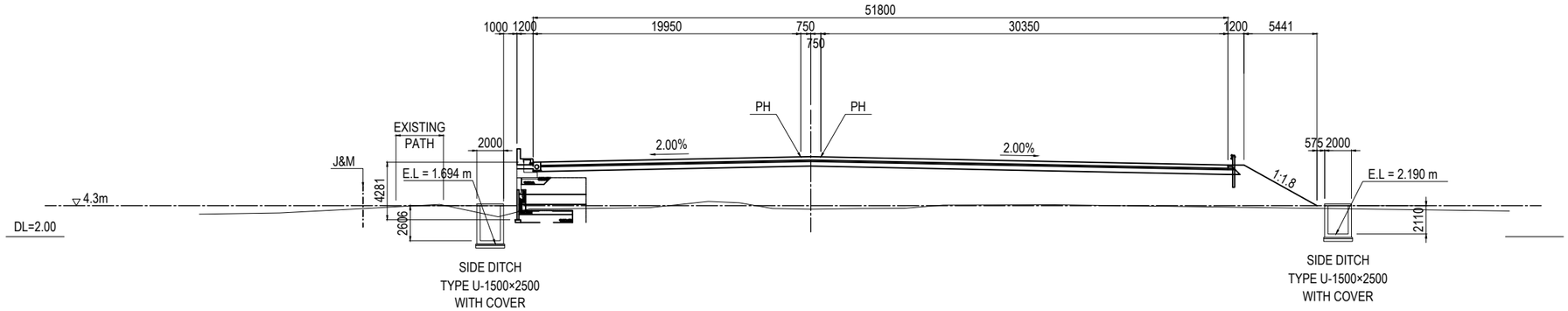
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	M. TORIU		15 Jun. 2017
CHECKED BY	T. HAYAKAWA		20 Jun. 2017
APPROVED BY	Y. SANO		21 Jun. 2017

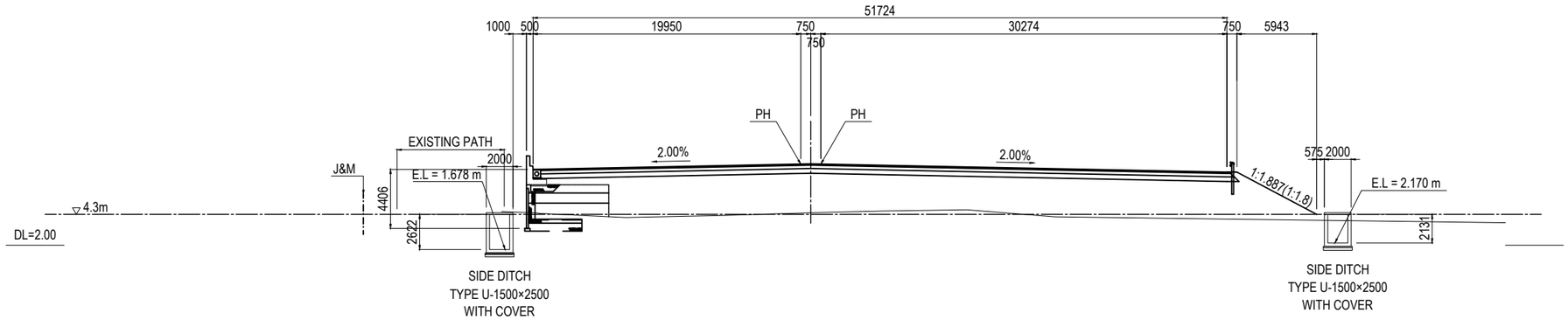
DRAWING TITLE	PACKAGE
CROSS SECTION MAIN ROAD (1)	2
	DWG No.
	P2-RD-0400

CROSS SECTION MAIN ROAD (2) S=1:400

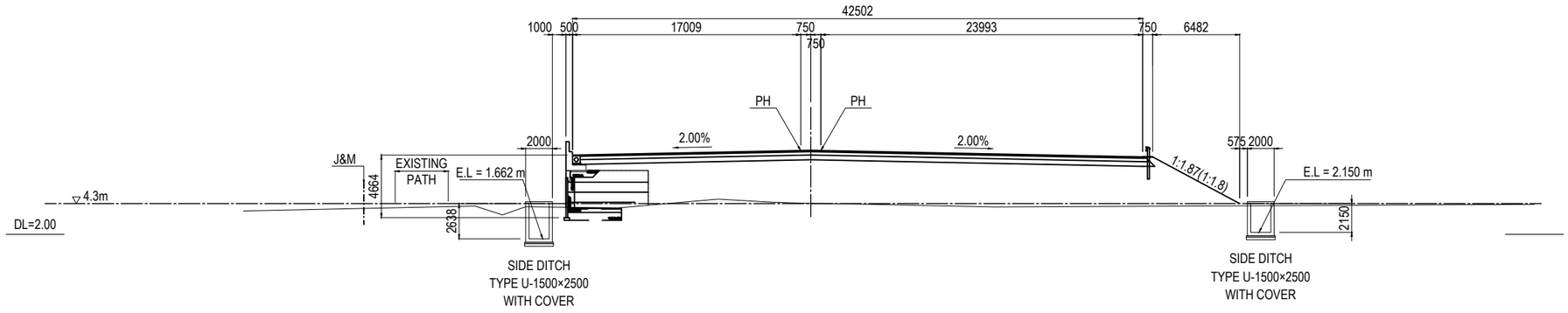
STA.2+480
GH=4.04
PH=7.930



STA.2+460
GH=4.42
PH=8.055



STA.2+440
GH=4.30
PH=8.254



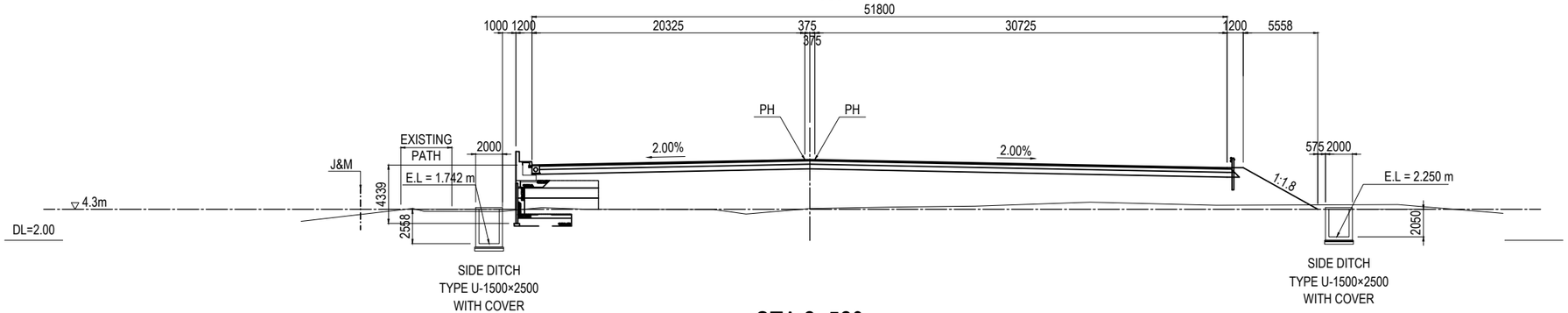
Note: Elevation is based on MSL (Mean Sea Level)

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.			
				NAME	SIGNATURE	DATE
			PREPARED BY	M. TORIU		15 Jun. 2017
			CHECKED BY	T. HAYAKAWA		20 Jun. 2017
			APPROVED BY	Y. SANO		21 Jun. 2017

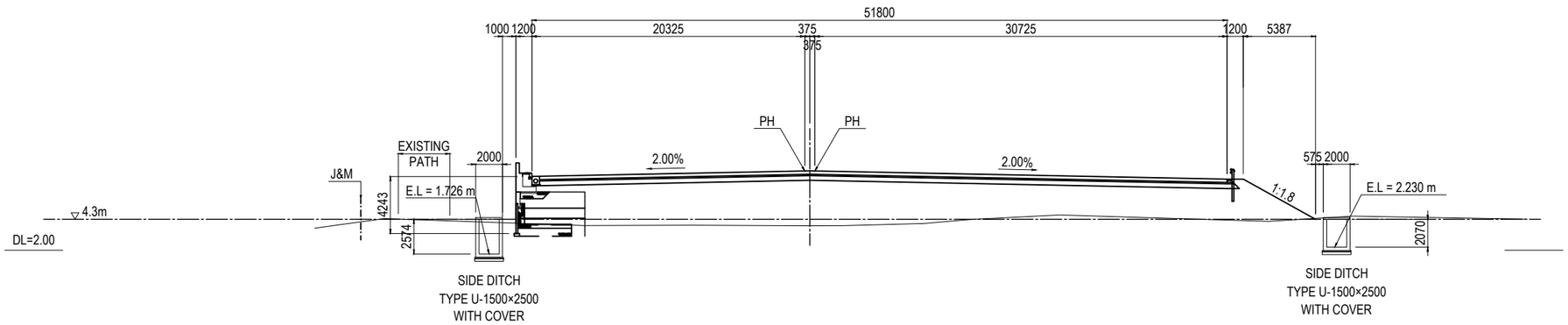
DRAWING TITLE	PACKAGE
CROSS SECTION MAIN ROAD (2)	2
	DWG No.
	P2-RD-0410

CROSS SECTION MAIN ROAD (3) S=1:400

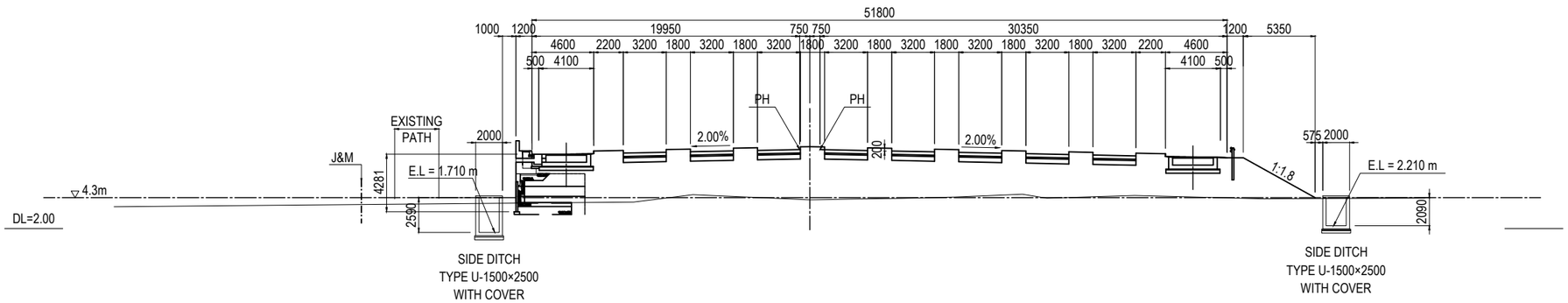
STA.2+540
GH=4.35
PH=7.995



STA.2+520
GH=3.82
PH=7.900



STA.2+500
GH=4.14
PH=7.879



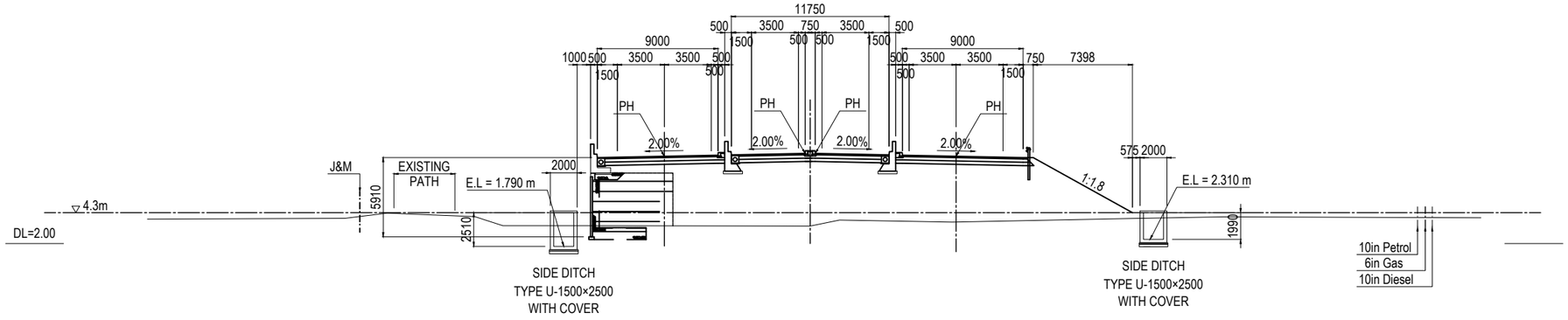
Note: Elevation is based on MSL (Mean Sea Level)

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.			
				NAME	SIGNATURE	DATE
				PREPARED BY	M. TORIU	15 Jun. 2017
				CHECKED BY	T. HAYAKAWA	20 Jun. 2017
				APPROVED BY	Y. SANO	21 Jun. 2017

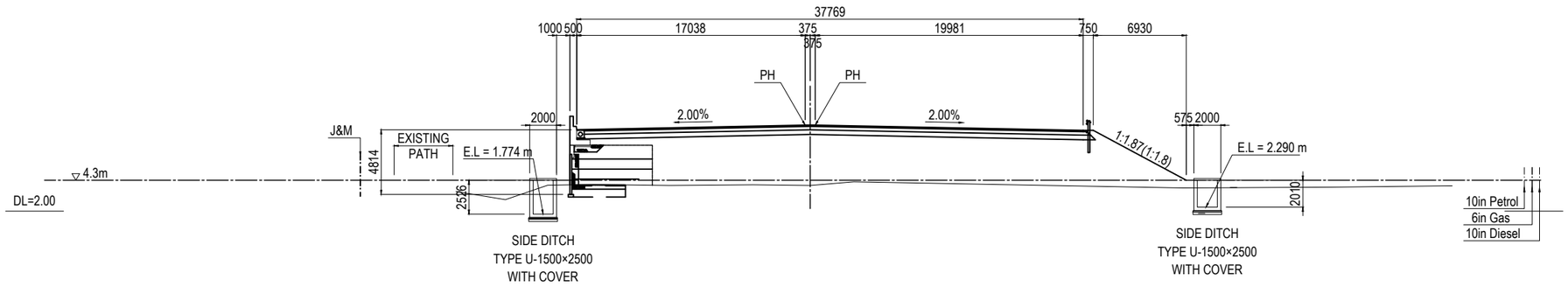
DRAWING TITLE	PACKAGE
CROSS SECTION MAIN ROAD (3)	2
	DWG No.
	P2-RD-0420

CROSS SECTION MAIN ROAD (4) S=1:400

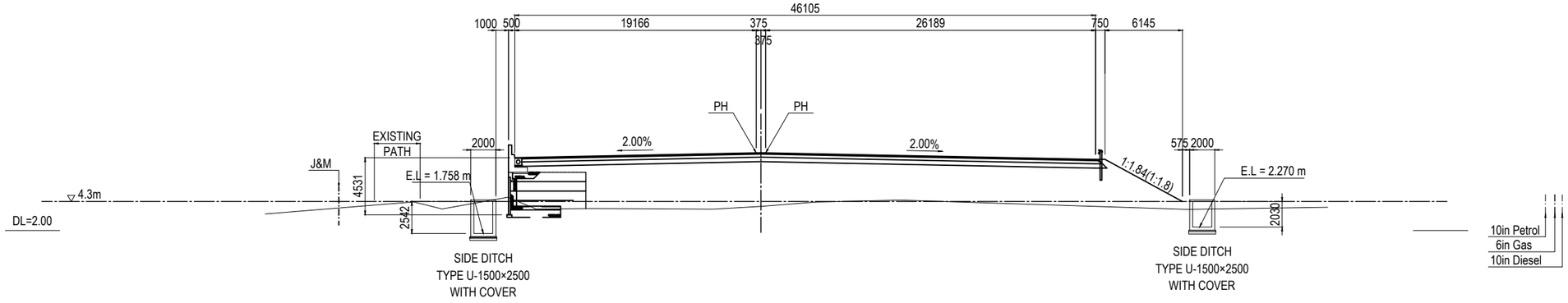
STA.0 / STA.2+600 / STA.0
PH=8.510 | GH=3.31, PH=8.720 | PH=8.510



STA.2+580
GH=3.91
PH=8.405



STA.2+560
GH=3.91
PH=8.164



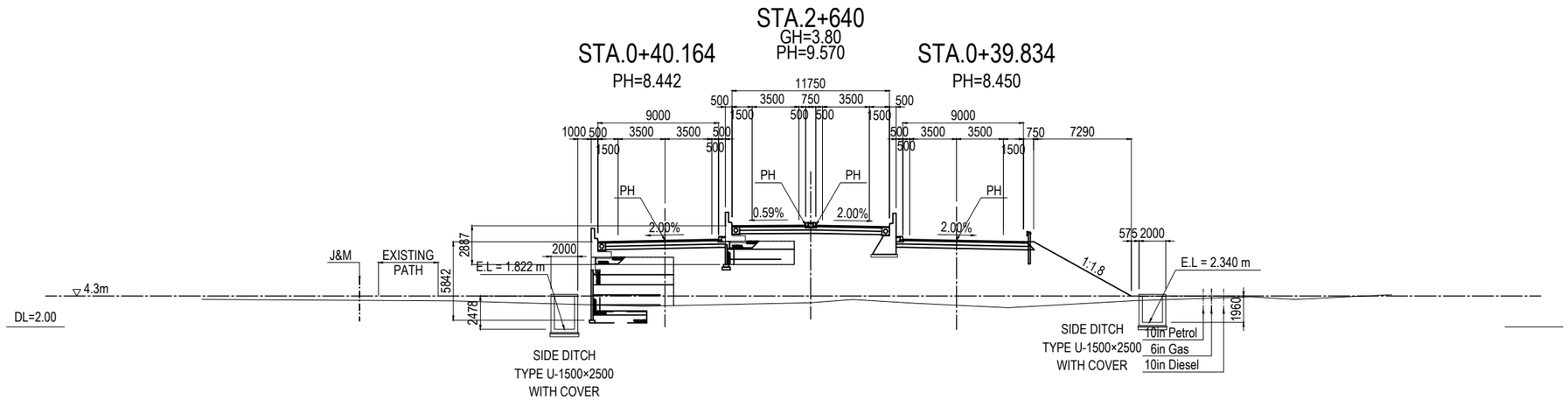
Note: Elevation is based on MSL (Mean Sea Level)

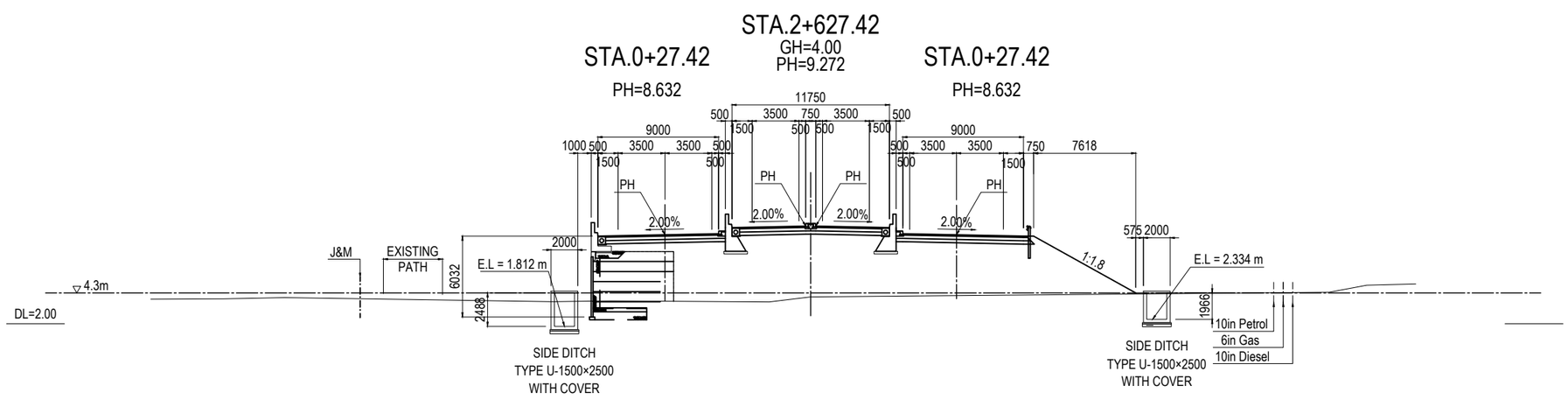
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

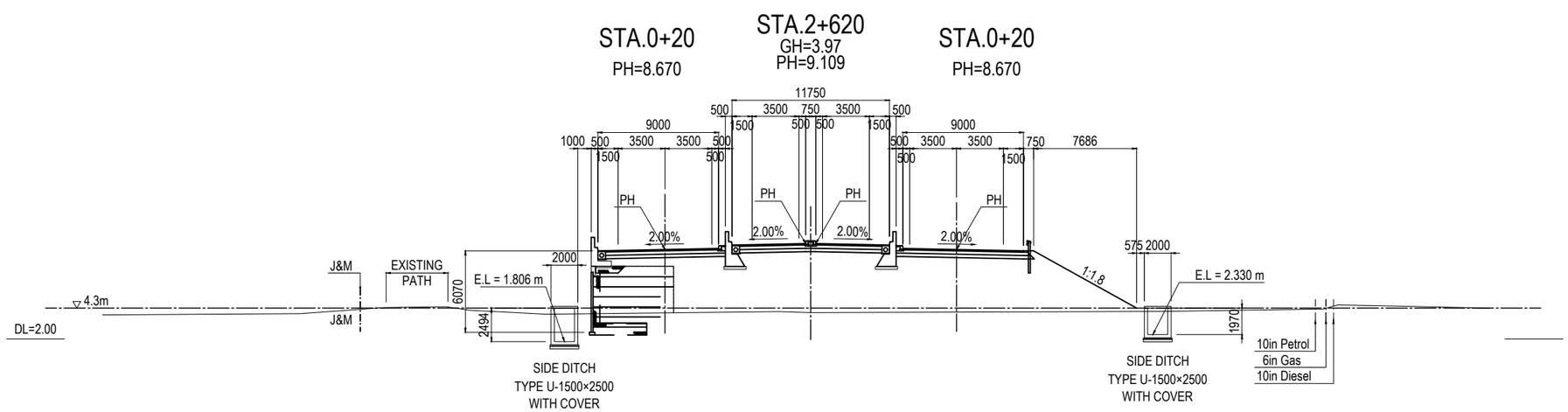
	NAME	SIGNATURE	DATE
PREPARED BY	M. TORIU		15 Jun. 2017
CHECKED BY	T. HAYAKAWA		20 Jun. 2017
APPROVED BY	Y. SANO		21 Jun. 2017

DRAWING TITLE	PACKAGE
CROSS SECTION MAIN ROAD (4)	2
	DWG No.
	P2-RD-0430

CROSS SECTION MAIN ROAD (5) S=1:400



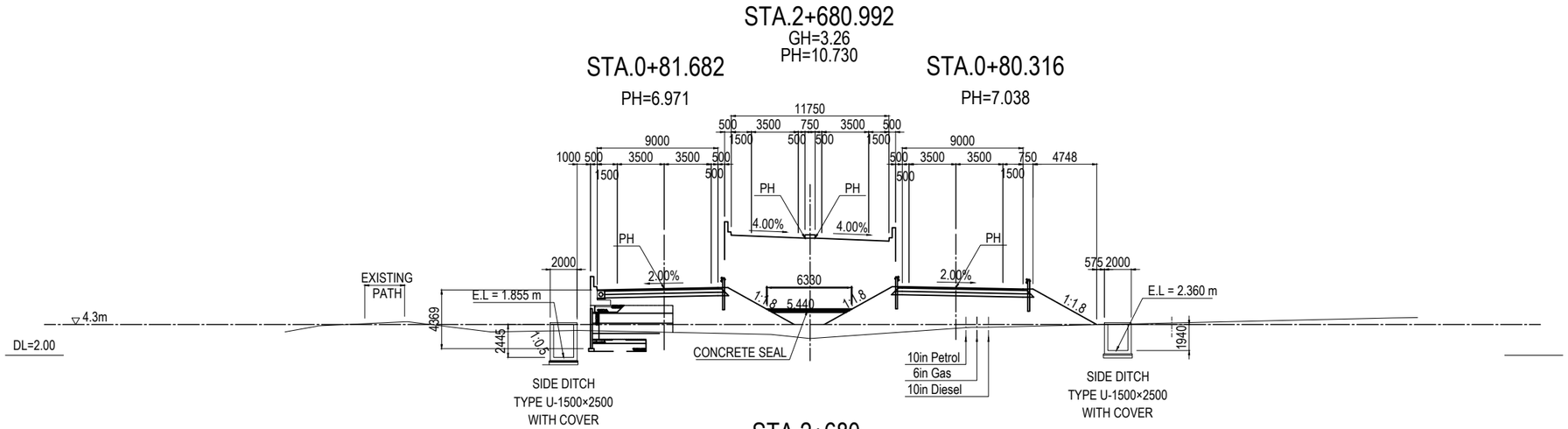


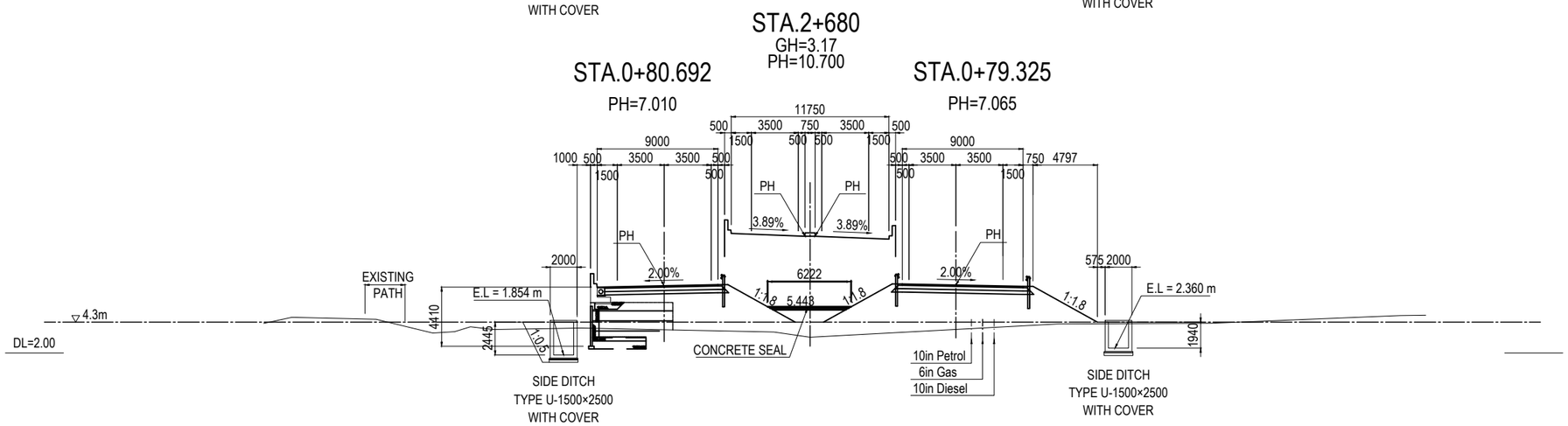


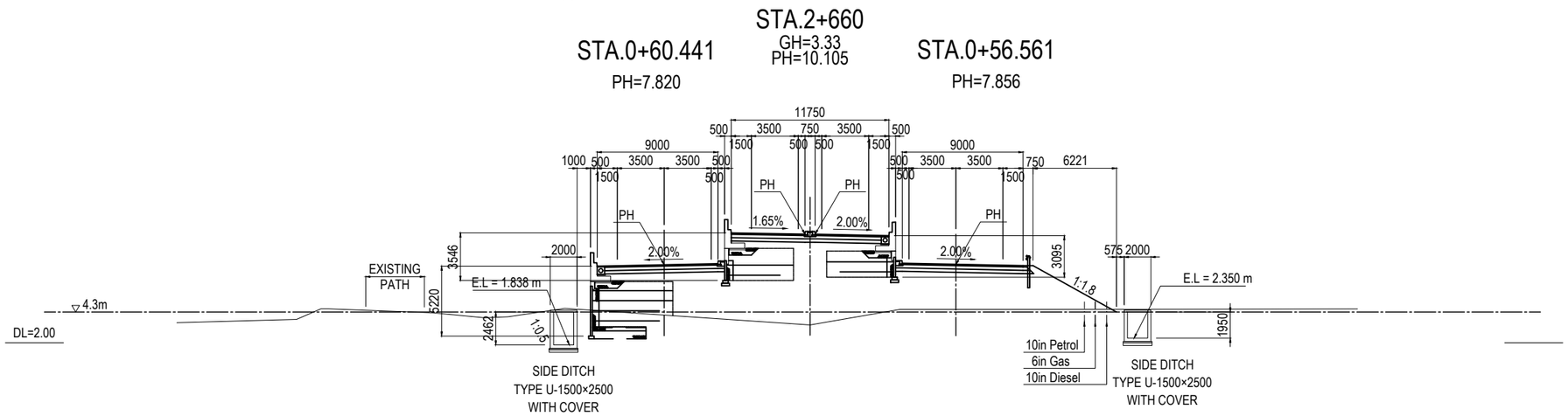
Note: Elevation is based on MSL (Mean Sea Level)

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.			
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	CROSS SECTION MAIN ROAD (5)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-0440

CROSS SECTION MAIN ROAD (6) S=1:400





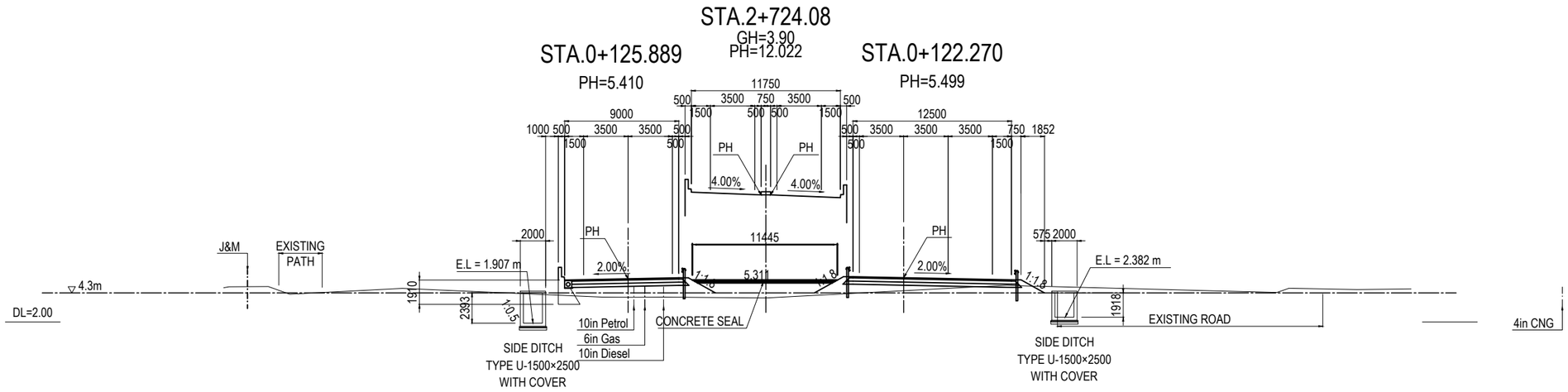


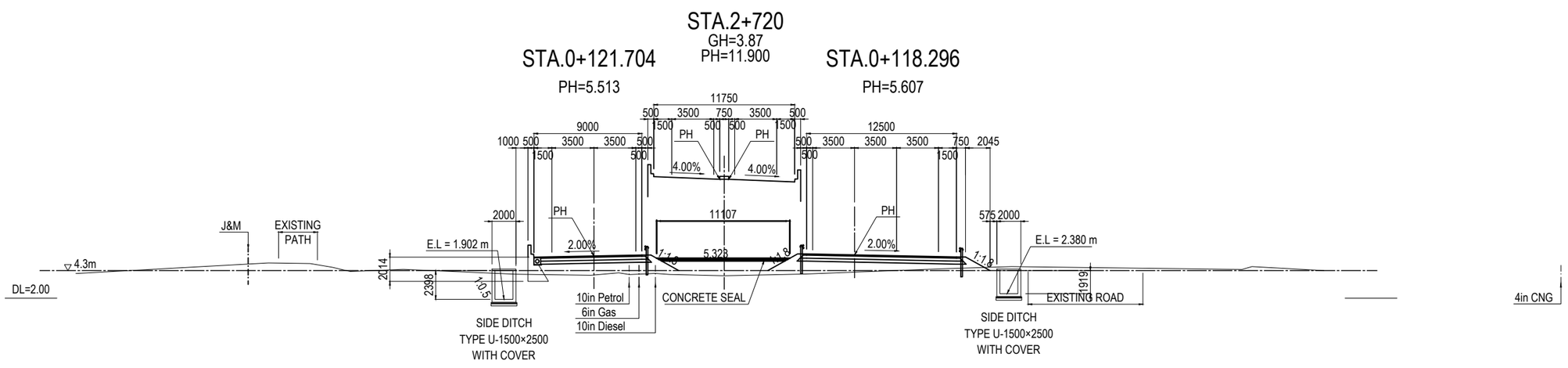
Note: Elevation is based on MSL (Mean Sea Level)

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	CROSS SECTION MAIN ROAD (6)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-0450

CROSS SECTION MAIN ROAD (7) S=1:400





Note: Elevation is based on MSL (Mean Sea Level)

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	M. TORIU		15 Jun. 2017
CHECKED BY	T. HAYAKAWA		20 Jun. 2017
APPROVED BY	Y. SANO		21 Jun. 2017

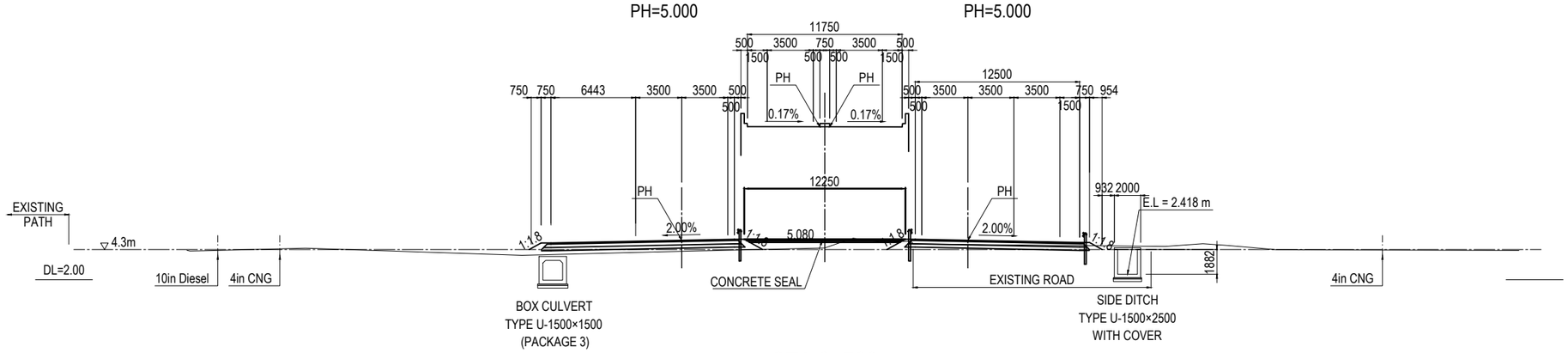
DRAWING TITLE	PACKAGE
CROSS SECTION MAIN ROAD (7)	2
	DWG No.
	P2-RD-0460

CROSS SECTION MAIN ROAD (8) S=1:400

STA.2+777.651
GH=4.42
PH=13.615

STA.0+180.152
PH=5.000

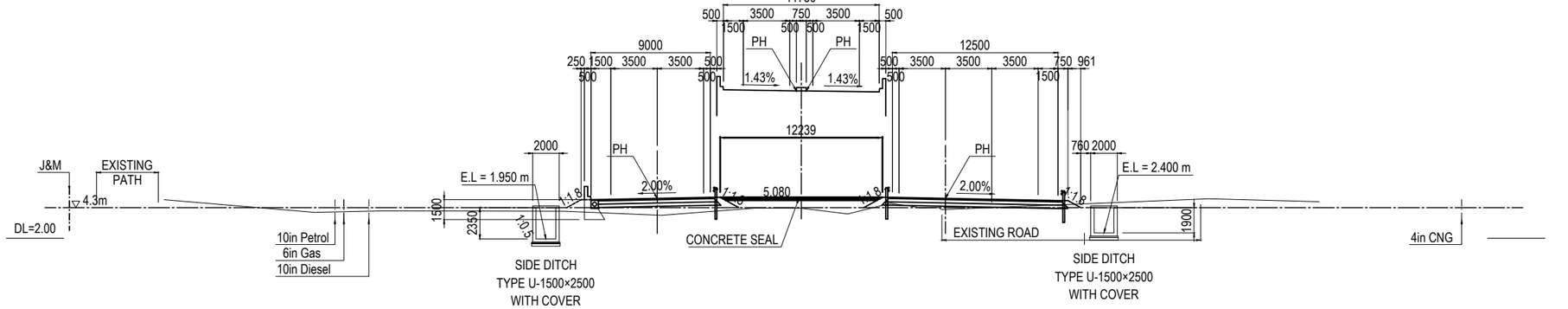
STA.0+175.149
PH=5.000



STA.2+760
GH=4.26
PH=13.100

STA.0+162.276
PH=5.000

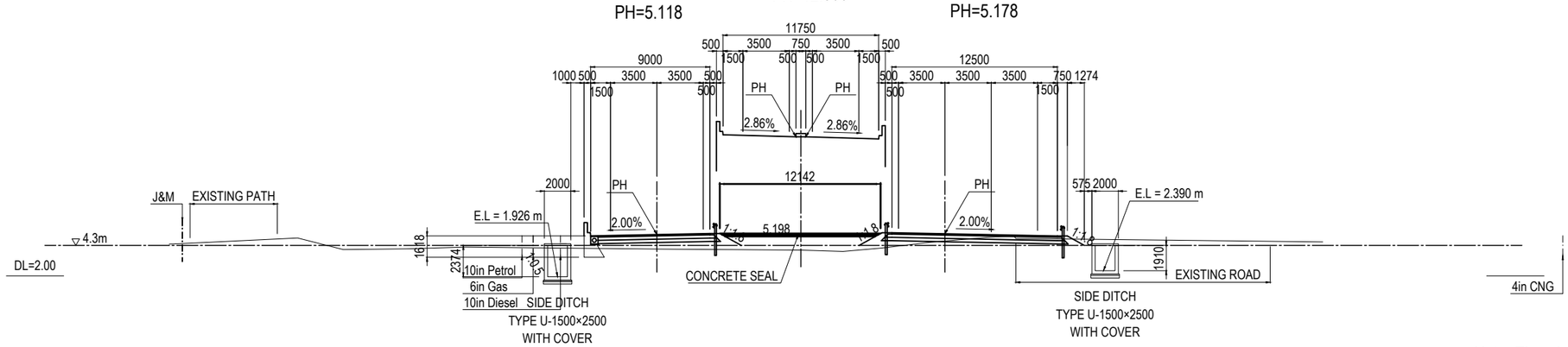
STA.0+157.704
PH=5.004



STA.2+740
GH=3.95
PH=12.500

STA.0+142.036
PH=5.118

STA.0+137.985
PH=5.178

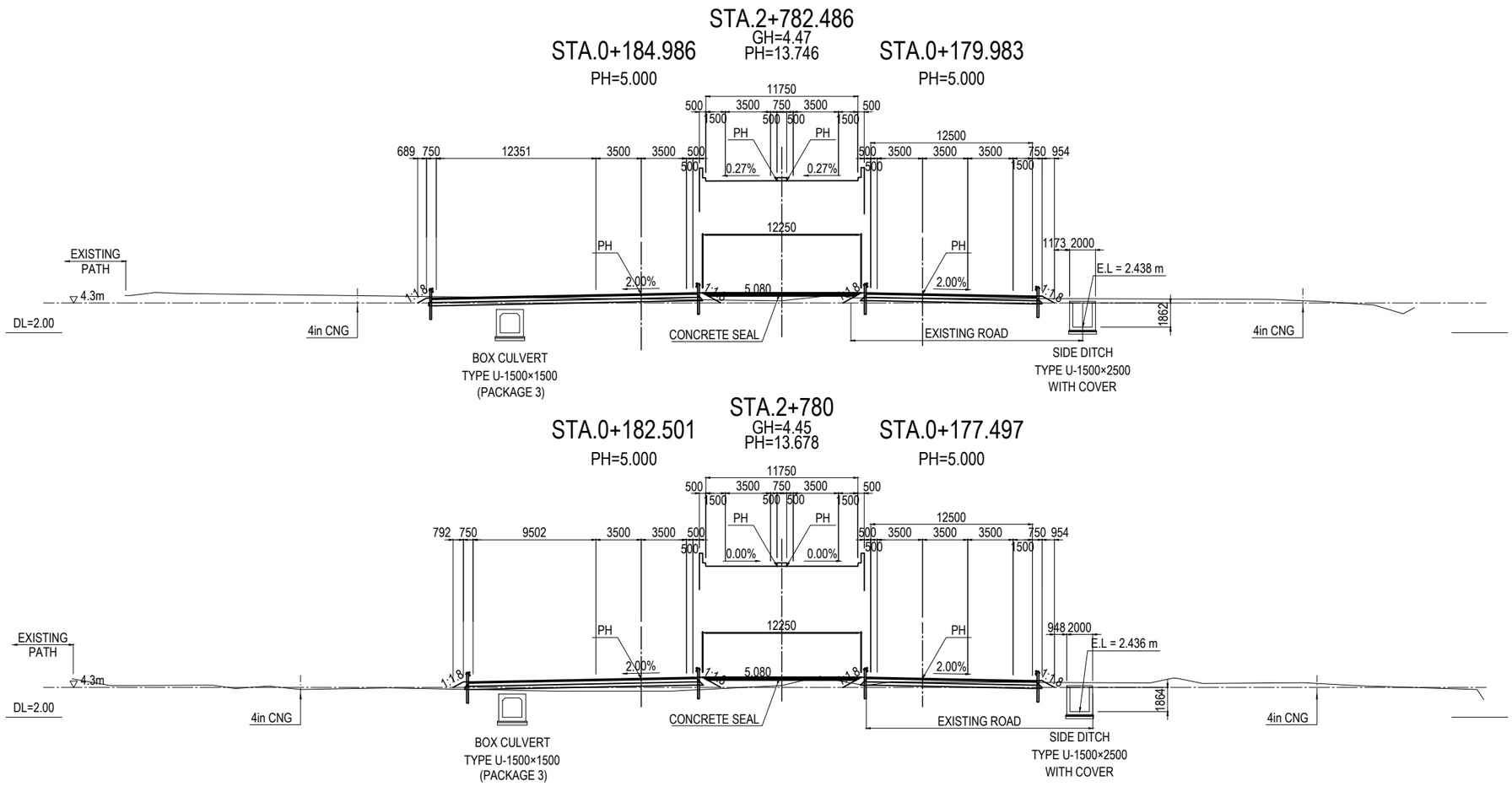


Note: Elevation is based on MSL (Mean Sea Level)

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		
				PREPARED BY: M. TORIU	15 Jun. 2017
				CHECKED BY: T. HAYAKAWA	20 Jun. 2017
				APPROVED BY: Y. SANO	21 Jun. 2017

NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
			CROSS SECTION MAIN ROAD (8)	2
				DWG No.
				P2-RD-0470

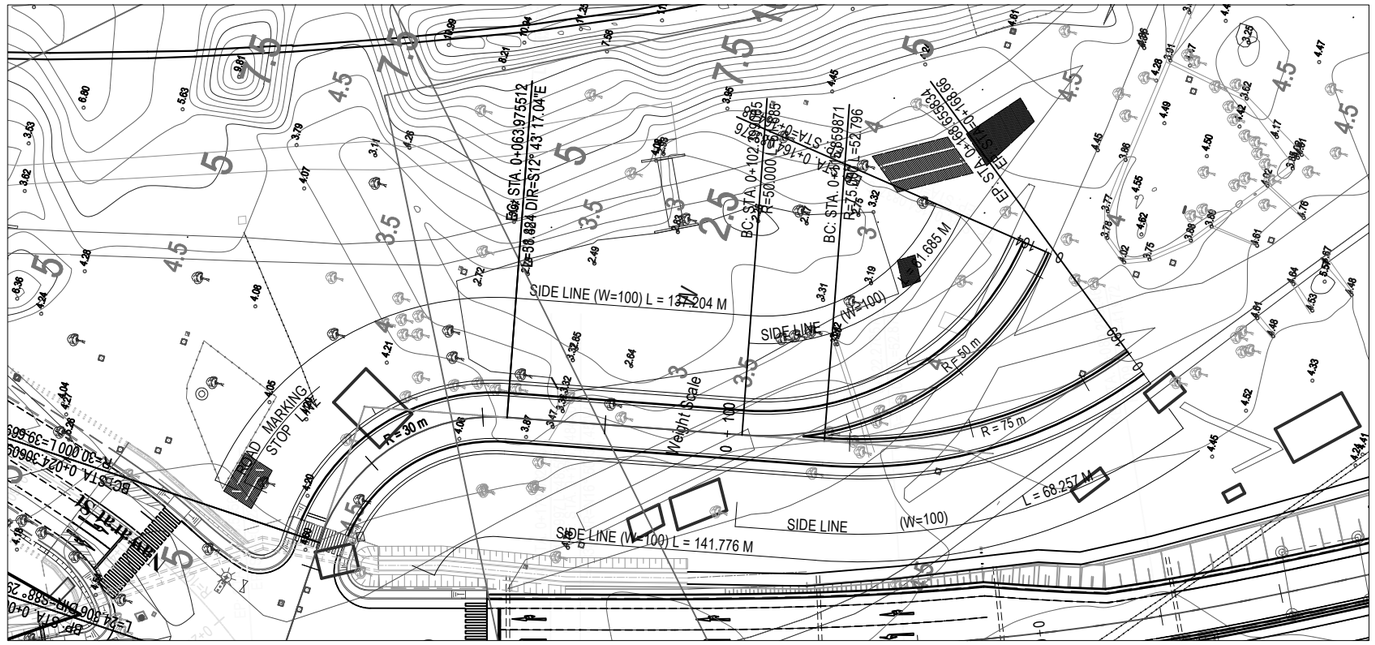
CROSS SECTION MAIN ROAD (9) S=1:400



Note: Elevation is based on MSL (Mean Sea Level)

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.			
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	CROSS SECTION MAIN ROAD (9)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-0480

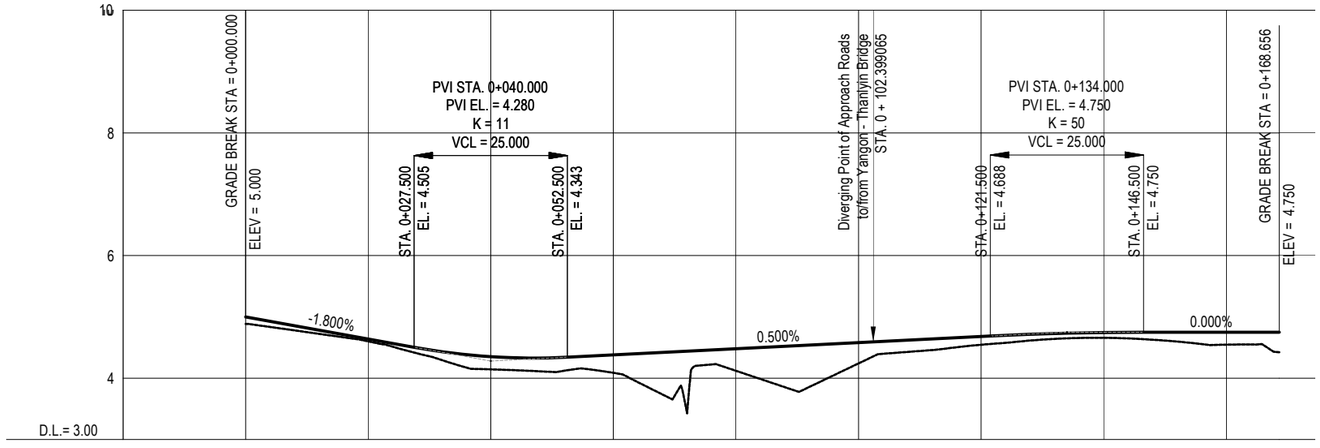
PLAN SCALE = 1:1000



V = 1:100

PROFILE SCALE H = 1:1000

RELOCATION ROAD FROM SHUKHINTHAR MAYOPAT ROAD TO YANGON-THANLYIN BRIDGE

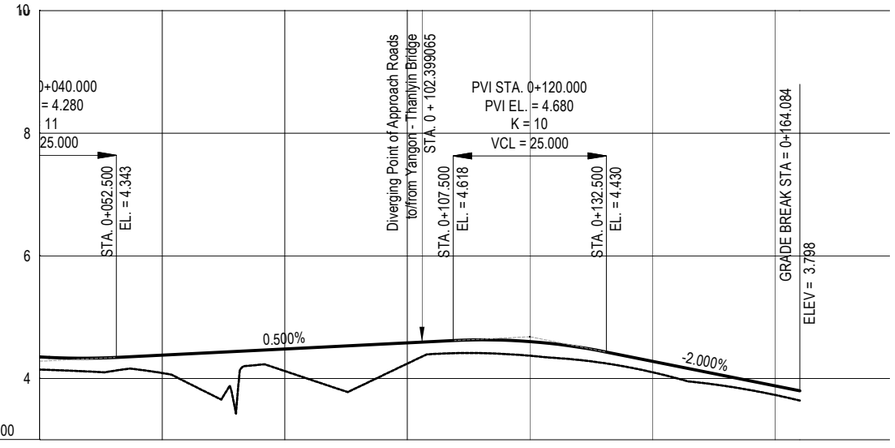


GRADE	0+000.000 5.000	i = -1.800% L = 40.000 m	0+027.500 4.505	4.280	0+052.500 4.343	i = 0.500% L = 94.000 m	0+121.500 4.688	4.750	0+146.500 4.750	i = 0.000% L = 34.656 m 0+168.656 4.750
PROPOSED HEIGHT	5.000	4.640		4.352		4.380	4.480	4.580	4.680	4.746 4.750
EXISTING HEIGHT	4.88	4.60		4.14		4.09	4.12	4.24	4.55	4.66 4.55
STATION	0+000	+020		+040		+060	+080	0+100	+120	+140 +160
CURVE ELEMENTS	R = ∞ L=24.306m		R=30.000m L=39.669m			R = ∞ L=51.884m			R=75.000m L=52.796m	

V = 1:100

PROFILE SCALE H = 1:1000

RELOCATION ROAD FROM YANGON-THANLYIN BRIDGE TO SHUKHINTHAR MAYOPAT ROAD



GRADE	4.280	0+052.500 4.343	i = 0.500% L = 80.000 m		0+107.500 4.618	4.680	0+132.500 4.430	i = -2.000% L = 44.084 m	0+164.084 3.798	
PROPOSED HEIGHT		4.380	4.480	4.580		4.602	4.280	3.880		
EXISTING HEIGHT		4.09	4.12	4.24		4.37	4.10	3.73		
STATION		+060	+080	0+100		+120	+140	+160		
CURVE ELEMENTS	=30.000m =39.669m		R = ∞ L=38.424m			R=50.000m L=61.685m				

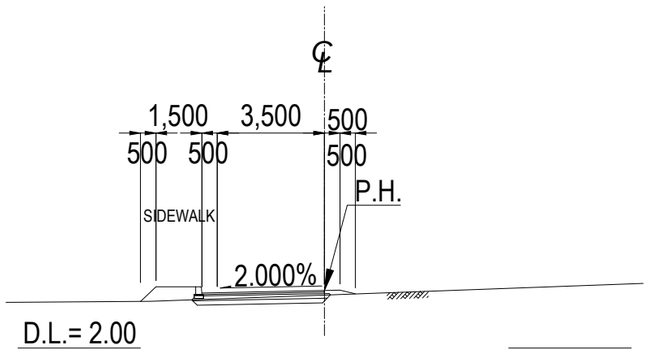
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM	
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	E. YOKOTA		15 JUNE 2017	RELOCATION ROAD BETWEEN SHUKHINTHAR MAYOPAT ROAD AND YANGON-THANLYIN BRIDGE PLAN AND PROFILE	2
CHECKED BY	T. HAYAKAWA		20 JUNE 2017		DWG No.
APPROVED BY	Y. SANO		21 JUNE 2017		P2-RD-1000

TYPICAL CROSS SECTION OF RELOCATION ROAD SCALE = 1:200

STA. 0+160

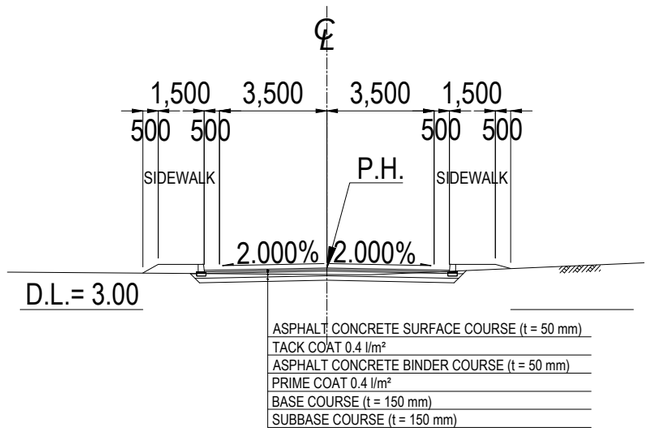
G.L.= 3.73
P.H.= 3.880



TYPICAL CROSS SECTION OF RELOCATION ROAD
FROM YANGON - THANLYIN BRIDGE TO SHUKHINTHAR MAYOPAT ROAD
AFTER STA. 0+102.399

STA. 0+040

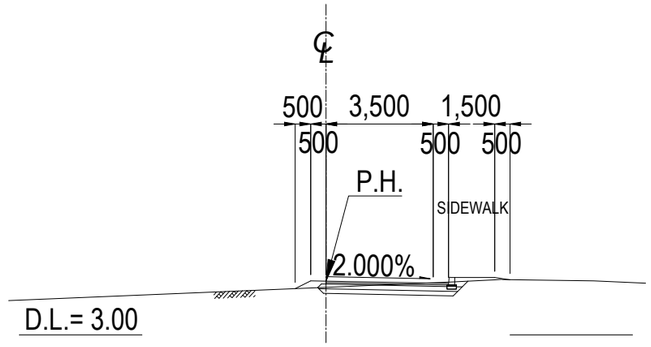
G.L.= 4.14
P.H.= 4.352



TYPICAL CROSS SECTION OF RELOCATION ROAD
FROM SHUKHINTHAR MAYOPAT ROAD TO STA. 0+102.399

STA. 0+160

G.L.= 4.55
P.H.= 4.750



TYPICAL CROSS SECTION OF RELOCATION ROAD
FROM SHUKHINTHAR MAYOPAT ROAD TO YANGON - THANLYIN BRIDGE
AFTER STA. 0+102.399

NOTE: ELEVATION IS BASED ON MSL (MEAN SEA LEVEL).

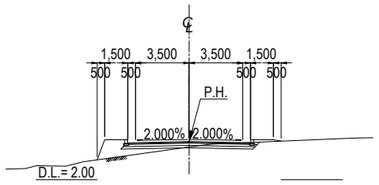
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	E. YOKOTA		15 JUNE 2017	RELOCATION ROAD BETWEEN SHUKHINTHAR MAYOPAT ROAD AND YANGON-THANLYIN BRIDGE TYPICAL CROSS SECTION	2
CHECKED BY	T. HAYAKAWA		20 JUNE 2017		DWG No.
APPROVED BY	Y. SANO		21 JUNE 2017		P2-RD-1010

CROSS SECTION OF RELOCATION ROAD SCALE = 1:400

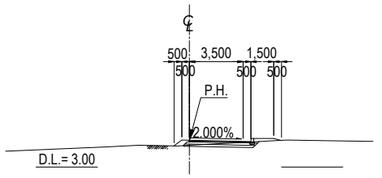
STA. 0+080

G.L.= 4.12
P.H.= 4.480



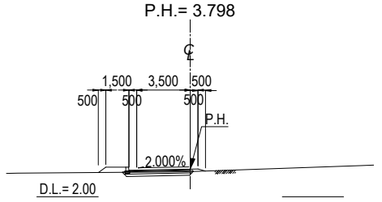
STA. 0+168.656

G.L.= 4.42
P.H.= 4.750



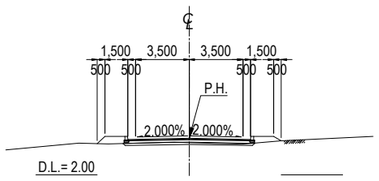
STA. 0+164.084

G.L.= 3.64
P.H.= 3.798



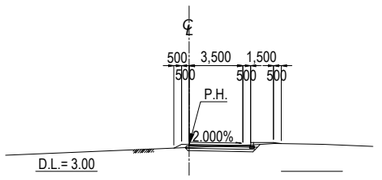
STA. 0+060

G.L.= 4.09
P.H.= 4.380



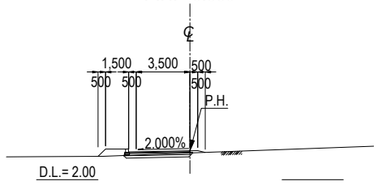
STA. 0+160

G.L.= 4.55
P.H.= 4.750



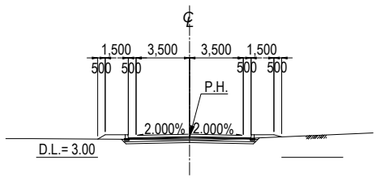
STA. 0+160

G.L.= 3.73
P.H.= 3.880



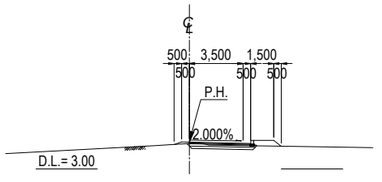
STA. 0+040

G.L.= 4.14
P.H.= 4.352



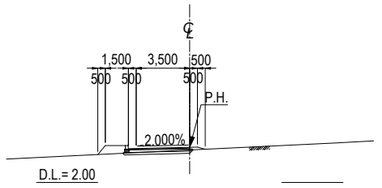
STA. 0+140

G.L.= 4.66
P.H.= 4.746



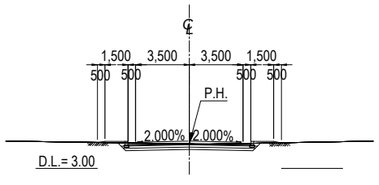
STA. 0+140

G.L.= 4.10
P.H.= 4.280



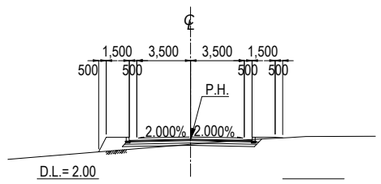
STA. 0+020

G.L.= 4.60
P.H.= 4.640



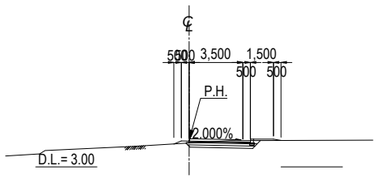
STA. 0+100

G.L.= 4.24
P.H.= 4.580



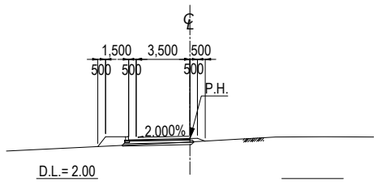
STA. 0+120

G.L.= 4.55
P.H.= 4.680



STA. 0+120

G.L.= 4.37
P.H.= 4.602



CROSS SECTION OF RELOCATION ROAD
FROM SHUKHINTHAR MAYOPAT ROAD TO STA. 0+102.399

CROSS SECTION OF RELOCATION ROAD
FROM SHUKHINTHAR MAYOPAT ROAD TO YANGON - THANLYIN BRIDGE
AFTER STA. 0+102.399

CROSS SECTION OF RELOCATION ROAD
FROM YANGON - THANLYIN BRIDGE TO SHUKHINTHAR MAYOPAT ROAD
AFTER STA. 0+102.399

NOTE: ELEVATION IS BASED ON MSL (MEAN SEA LEVEL).

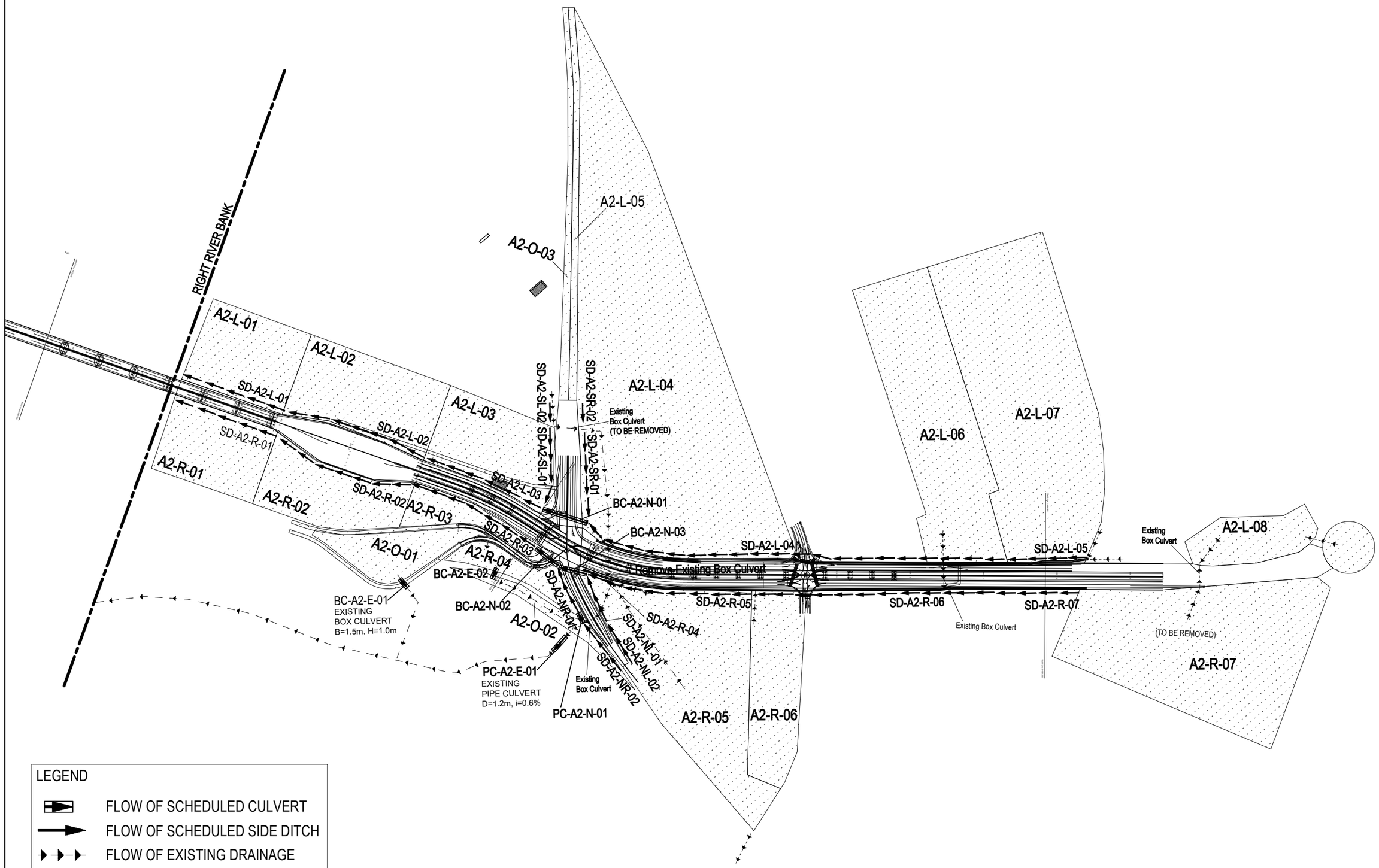
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	E. YOKOTA		15 JUNE 2017
CHECKED BY	T. HAYAKAWA		20 JUNE 2017
APPROVED BY	Y. SANO		21 JUNE 2017

DRAWING TITLE	PACKAGE
RELOCATION ROAD BETWEEN SHUKHINTHAR MAYOPAT ROAD AND YANGON-THANLYIN BRIDGE CROSS SECTION	2
	DWG No.
	P2-RD-1020

DRAINAGE SYSTEM PLAN AND OUTLETS (RIGHT RIVER BANK)

S= 1:5000



LEGEND

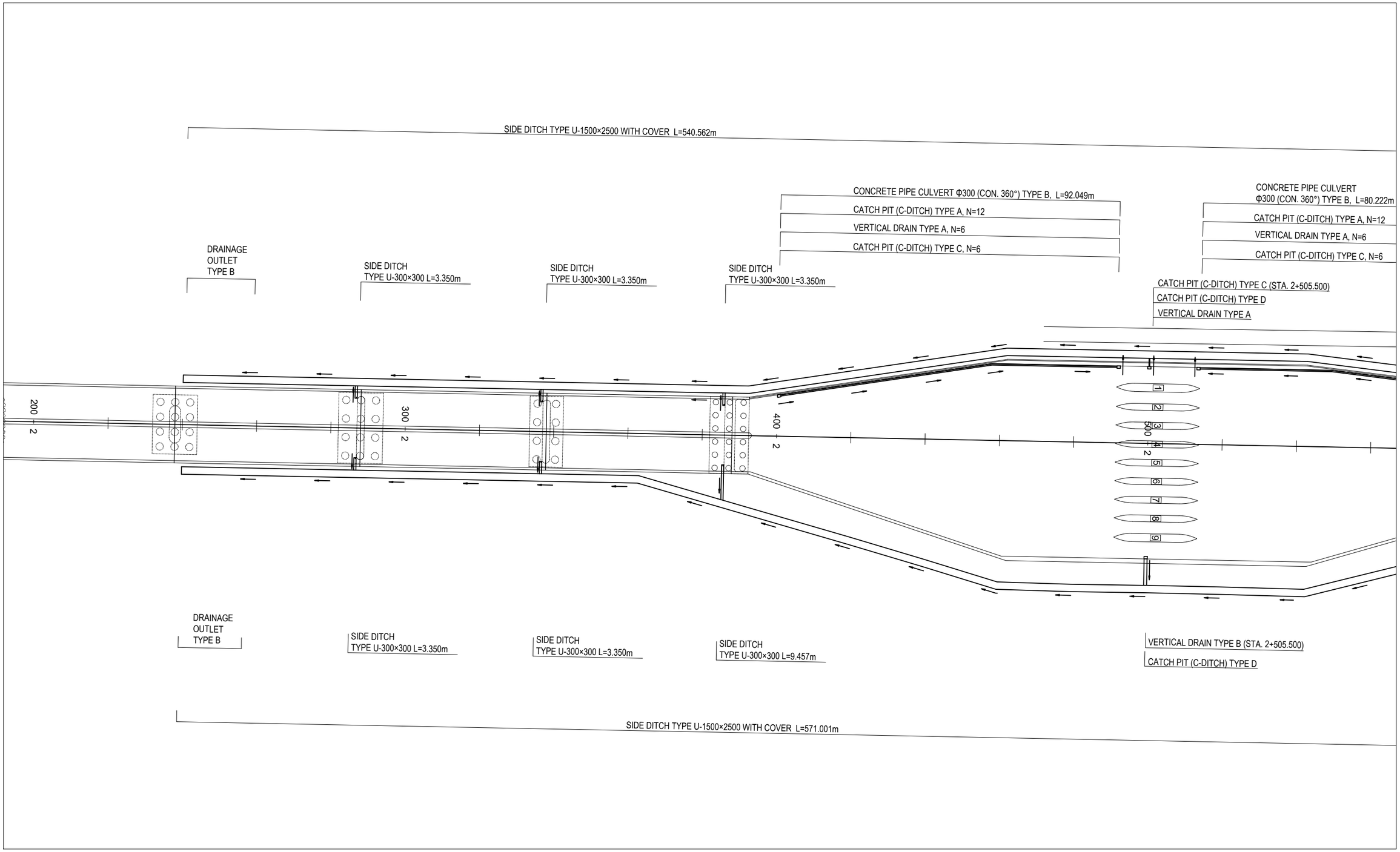
- FLOW OF SCHEDULED CULVERT
- FLOW OF SCHEDULED SIDE DITCH
- FLOW OF EXISTING DRAINAGE
- CATCHMENT AREA

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	EMY DORITA		15 Jun. 2017
CHECKED BY	T. HAYAKAWA		20 Jun. 2017
APPROVED BY	Y. SANO		21 Jun. 2017

DRAWING TITLE	PACKAGE
DRAINAGE SYSTEM PLANS AND OUTLETS (RIGHT RIVER BANK) S= 1:5000	2
	DWG No.
	P2-RD-3000

DRAINAGE SYSTEM PLAN (1) S= 1:1000

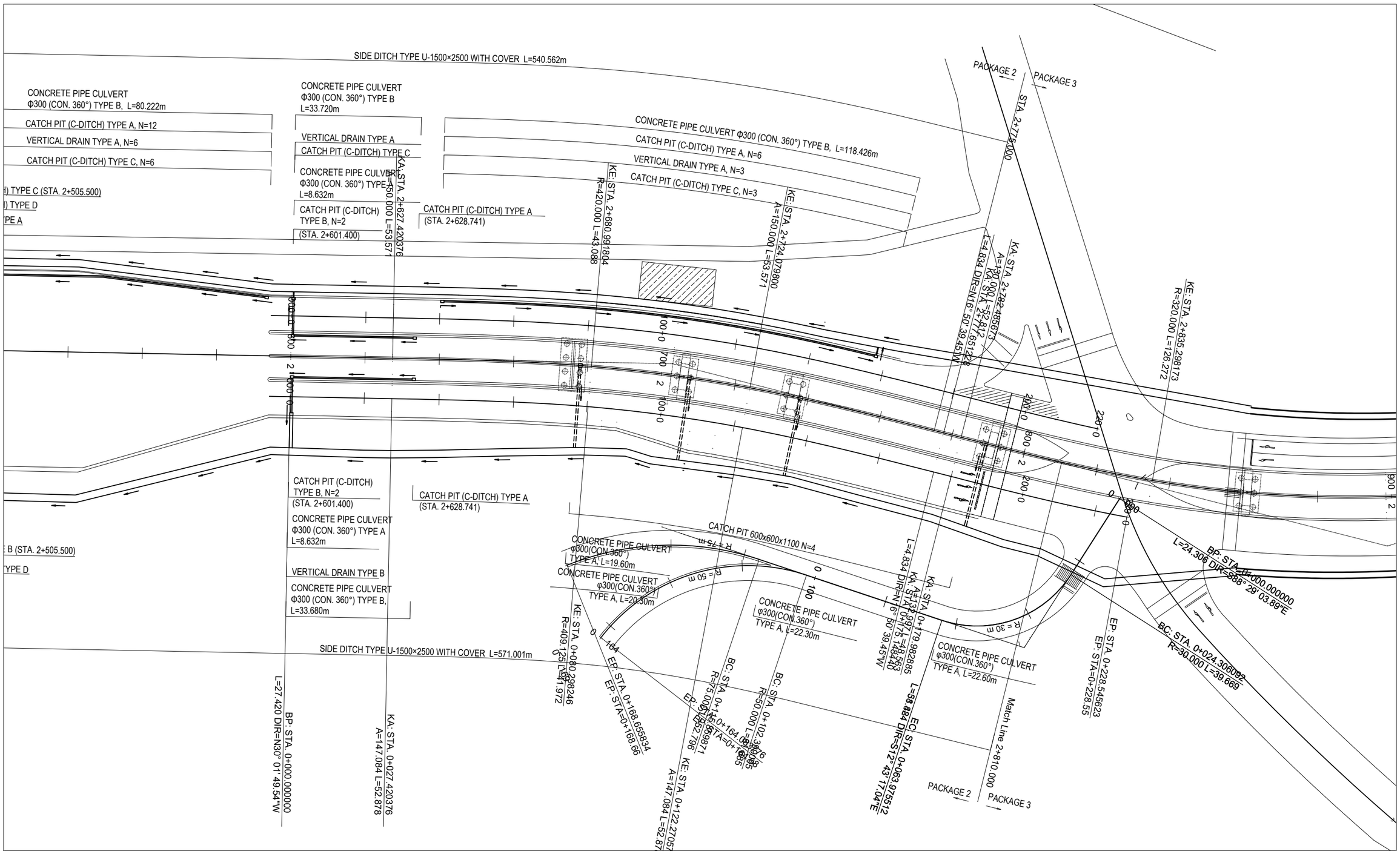


PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	M. TORIU		15 Jun. 2017
CHECKED BY	T. HAYAKAWA		20 Jun. 2017
APPROVED BY	Y. SANO		21 Jun. 2017

DRAWING TITLE	PACKAGE
DRAINAGE SYSTEM PLAN(1) S=1:1000	2
	DWG No.
	P2-RD-3010

DRAINAGE SYSTEM PLAN (2) S= 1:1000



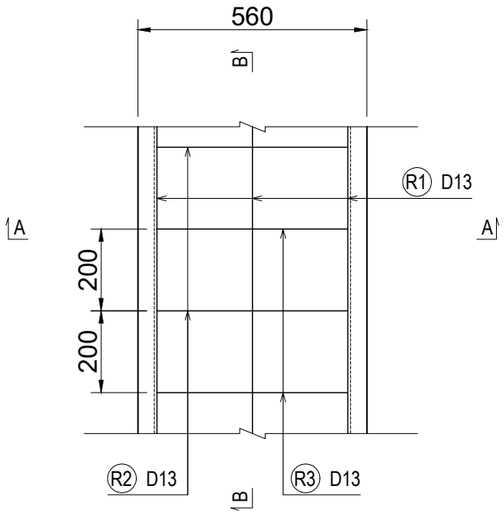
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DRAINAGE SYSTEM PLAN(1) S=1:1000	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3011

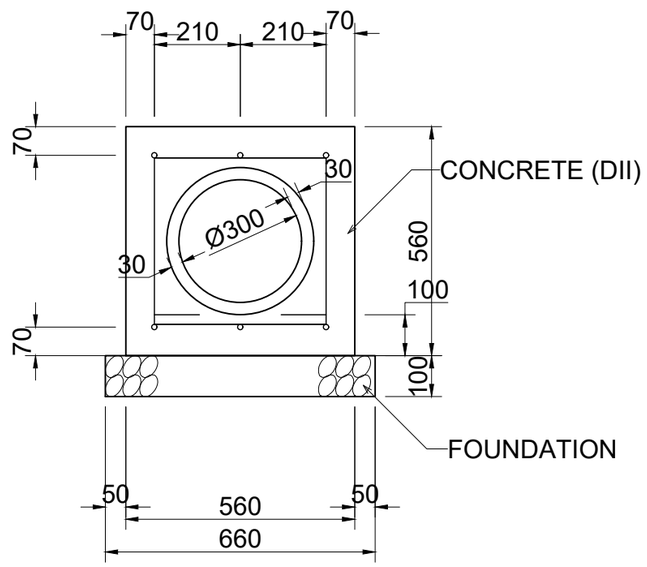
DETAIL OF CONCRETE PIPE CULVERT Φ300 (CON.360°) TYPE A S= 1:15

CONCRETE PIPE CULVERT
Φ300 (CON.360°)TYPE A

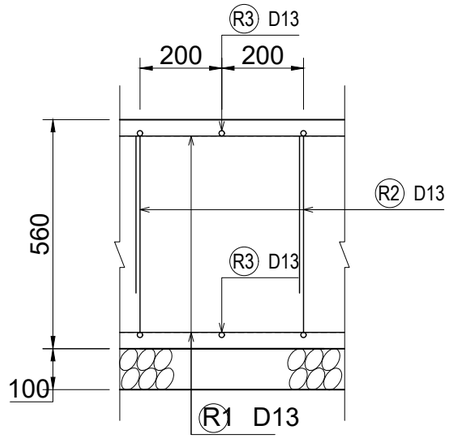
A - A



PLAN



SECTION A - A



SECTION B - B

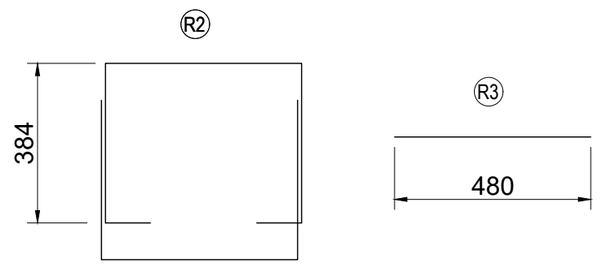
WORK QUANTITIES PER UNIT (PER 10m)

ITEM	UNIT	QUANTITY	REMARKS
R.C.PIPE Φ 300	m	10.000	JIS A 5303 CLASS 1
CONCRETE (DII)	m3	2.118	28 days = 240 kg/cm2
FOUNDATION	m2	6.600	GRAVEL / t=100mm
FORM	m2	11.200	

WORK QUANTITIES PER UNIT FOR REINFORCEMENT BAR (PER 1.0m)

Dia	Nos	Length (mm/nos)	Unit Weight (kg/m)	Weight (kg)	Remarks
D13	6	1,000	0.995	5.970	R1 / SD345
D13	5	420	0.995	2.090	R2 / SD345
D13	5	1,310	0.995	6.517	R3 / SD345
TOTAL				14.557	

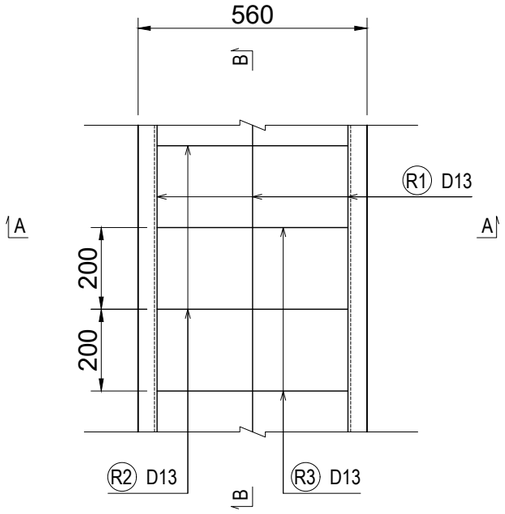
DETAIL OF STEEL REINFORCEMENT



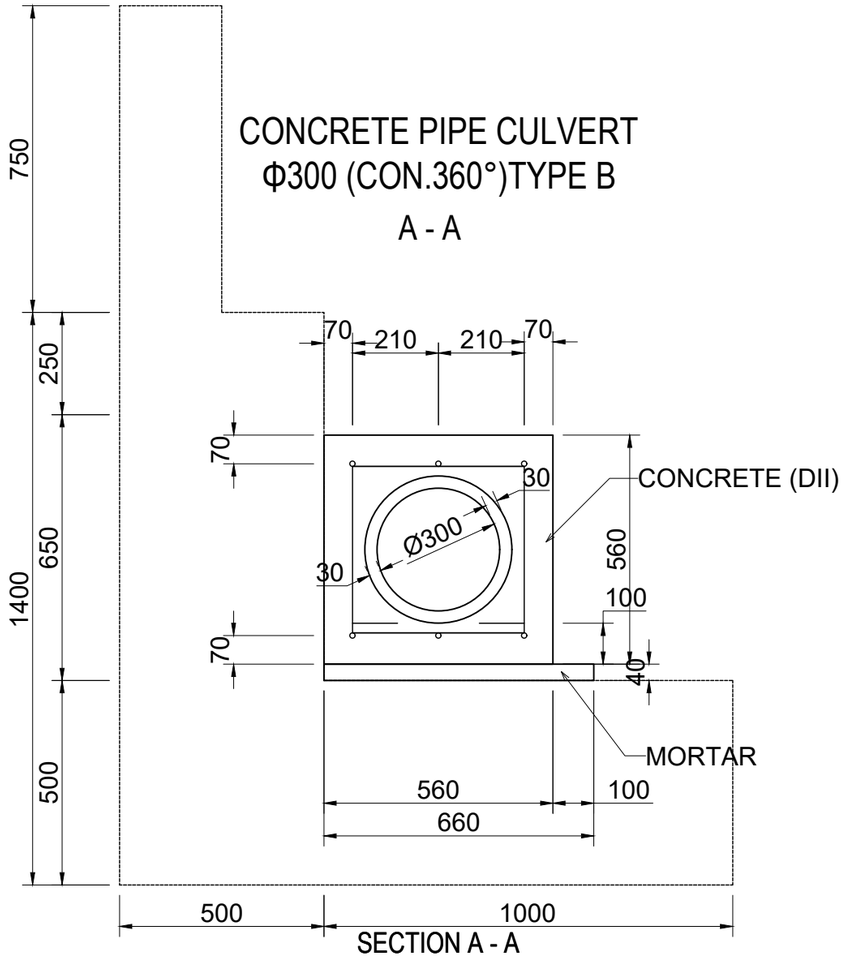
Note: Precast R.C. Pipe Φ300, Reinforced Spun and Centrifugal Reinforced Concrete Pipes shall be Selected.

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DETAIL OF CONCRETE PIPE CULVERT Φ300 (CON.360°) TYPE A S=1:15	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3020

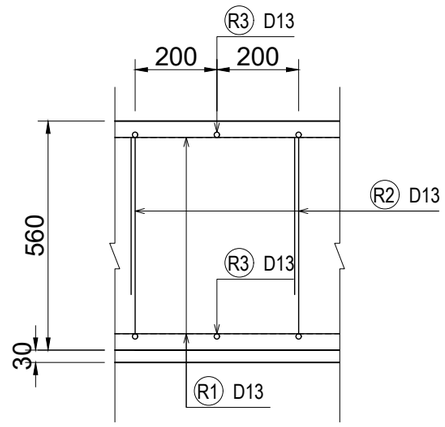
DETAIL OF CONCRETE PIPE CULVERT Φ300 (CON.360°) TYPE B S= 1:15



PLAN



SECTION A - A



SECTION B - B

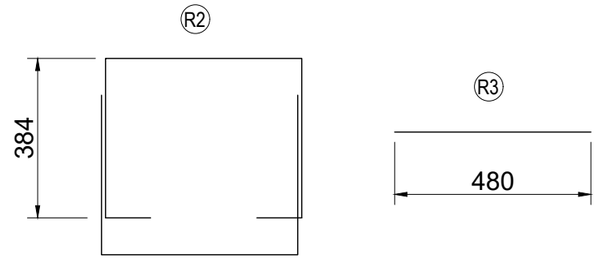
WORK QUANTITIES PER UNIT (PER 10m)

ITEM	UNIT	QUANTITY	REMARKS
R.C.PIPE Φ 300	m	10.000	JIS A 5303 CLASS 1
CONCRETE (DII)	m3	2.118	28 days = 240 kg/cm2
MORTAR	m2	0.264	
FORM	m2	11.200	

WORK QUANTITIES PER UNIT FOR REINFORCEMENT BAR (PER 1.0m)

Dia	Nos	Length (mm/nos)	Unit Weight (kg/m)	Weight (kg)	Remarks
D13	6	1,000	0.995	5.970	R1 / SD345
D13	5	420	0.995	2.090	R2 / SD345
D13	5	1,310	0.995	6.517	R3 / SD345
TOTAL				14.557	

DETAIL OF STEEL REINFORCEMENT



Note: Precast R.C. Pipe Φ300, Reinforced Spun and Centrifugal Reinforced Concrete Pipes shall be Selected.

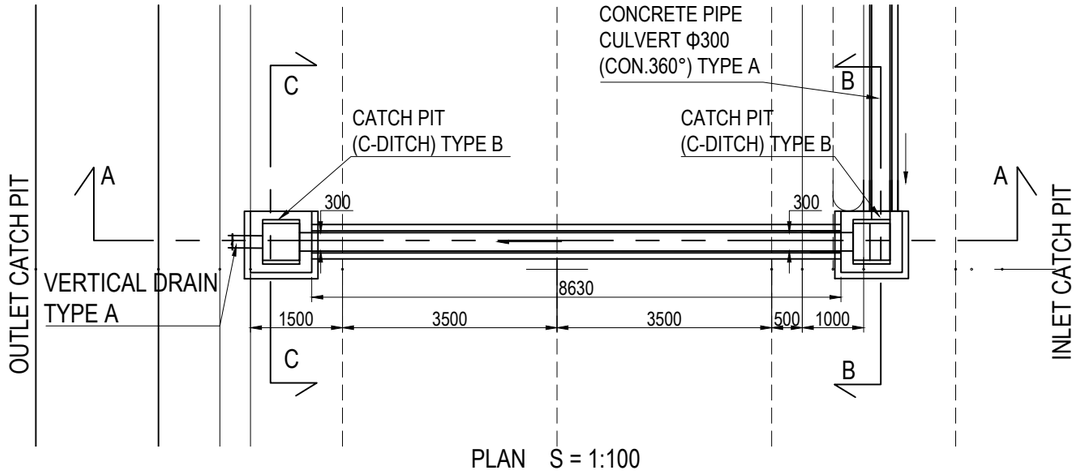
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	M. TORIU		15 Jun. 2017
CHECKED BY	T. HAYAKAWA		20 Jun. 2017
APPROVED BY	Y. SANO		21 Jun. 2017

DRAWING TITLE	PACKAGE
DETAIL OF CONCRETE PIPE CULVERT Φ300 (CON.360°) TYPE B S=1:15	2
	DWG No.
	P2-RD-3021

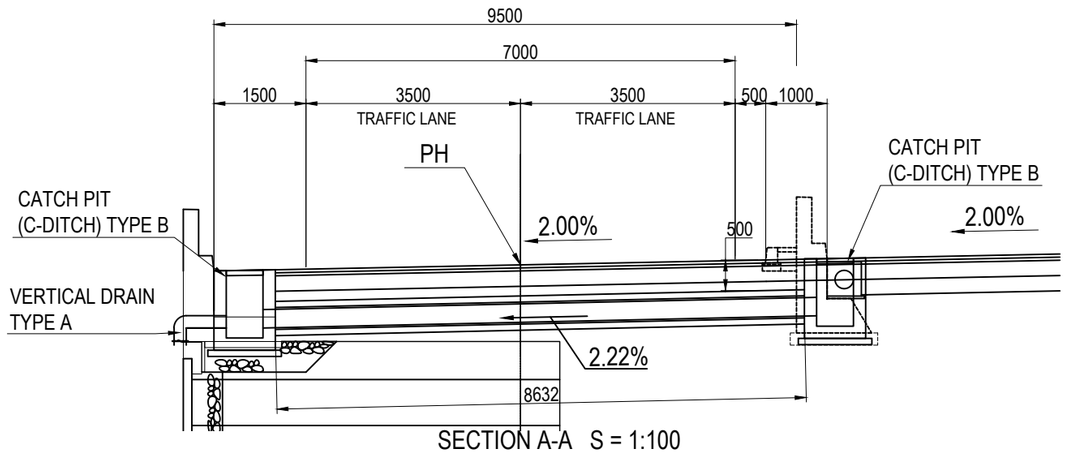
GENERAL VIEW OF CONCRETE PIPE CULVERT (1)

STA. 2+601.400 (L)

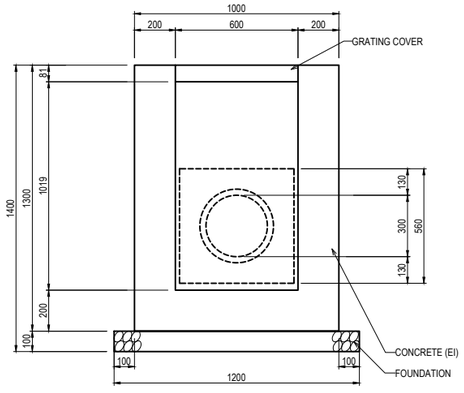


PLAN S = 1:100

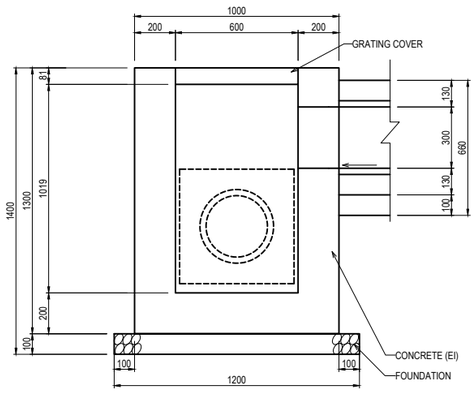
KEY PLAN



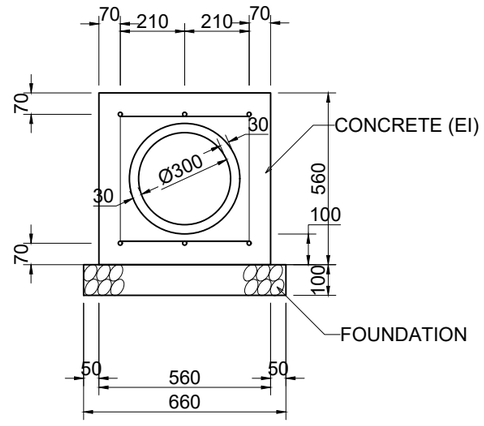
SECTION A-A S = 1:100



SECTION C-C (OUTLET) S = 1:30



SECTION B-B (INLET) S = 1:30



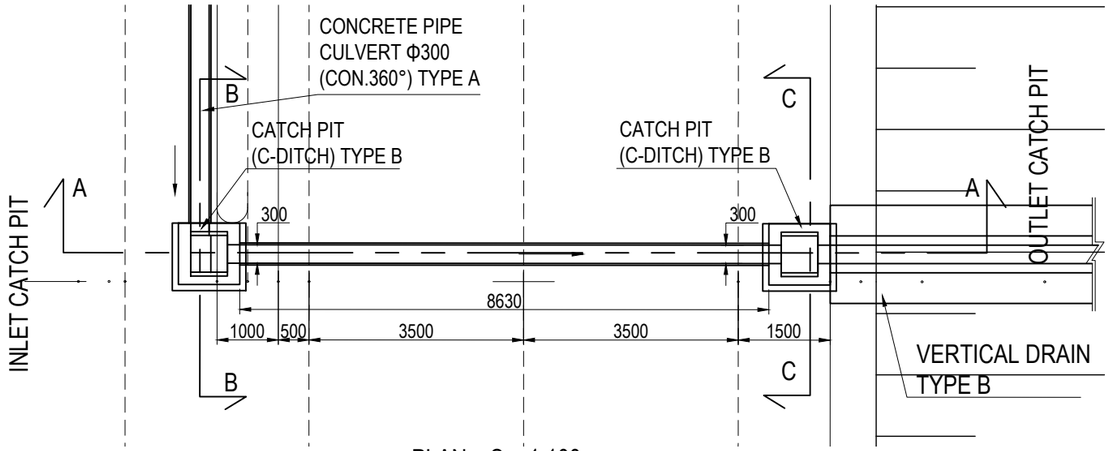
CROSS SECTION S = 1:20

CONCRETE PIPE CULVERT Φ300 (CON.360°) TYPE A

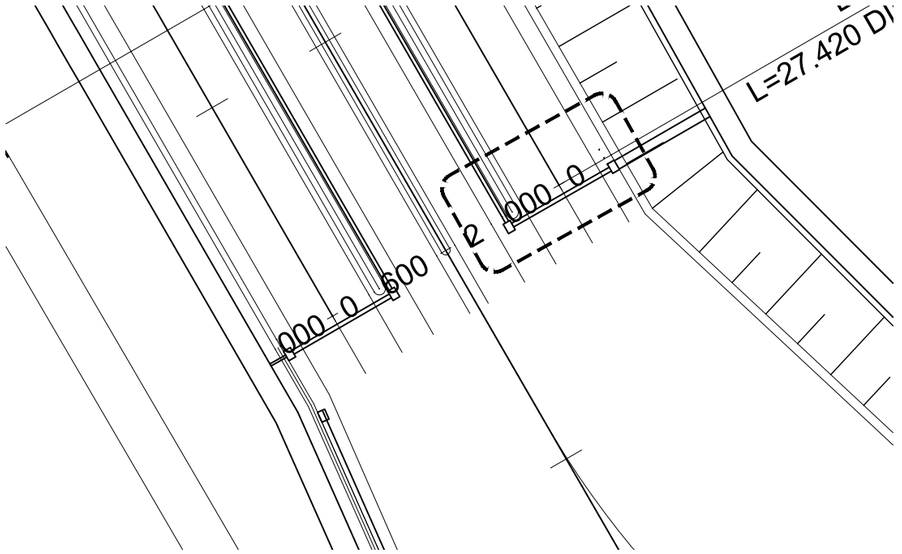
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	GENERAL VIEW OF PIPE CULVERT (1) STA. 2+600 (L)	1
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3030

GENERAL VIEW OF CONCRETE PIPE CULVERT (2)

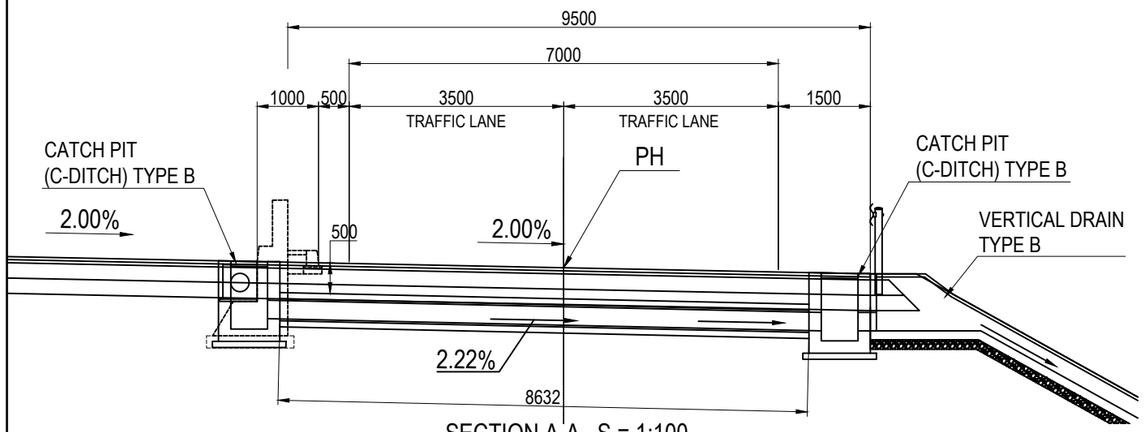
STA.2+601.400 (R)



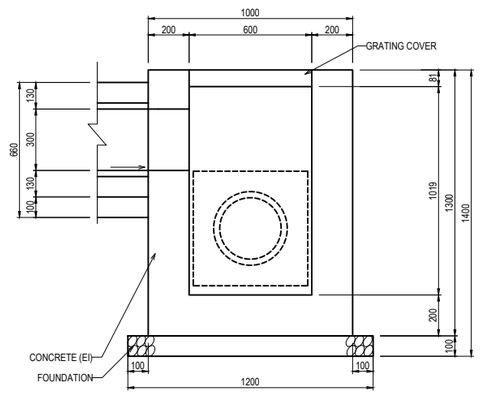
PLAN S = 1:100



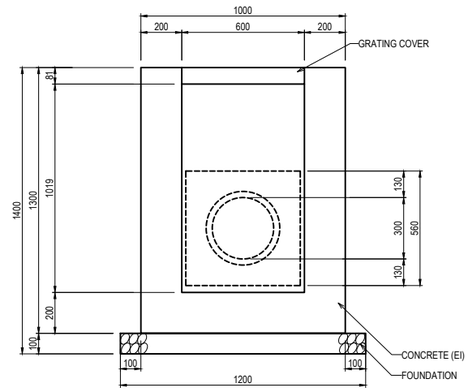
KEY PLAN



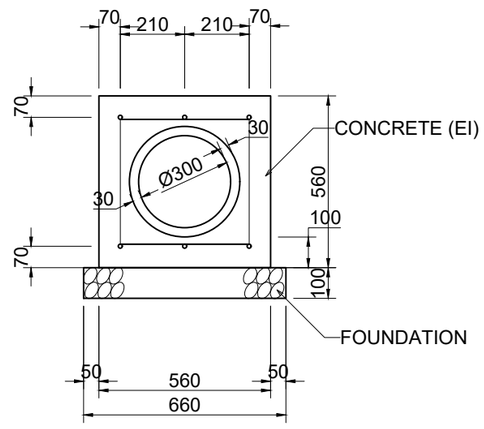
SECTION A-A S = 1:100



SECTION B-B (INLET) S = 1:20



SECTION C-C (OUTLET) S = 1:20



CROSS SECTION S = 1:20

CONCRETE PIPE CULVERT Φ300 (CON.360°) TYPE A

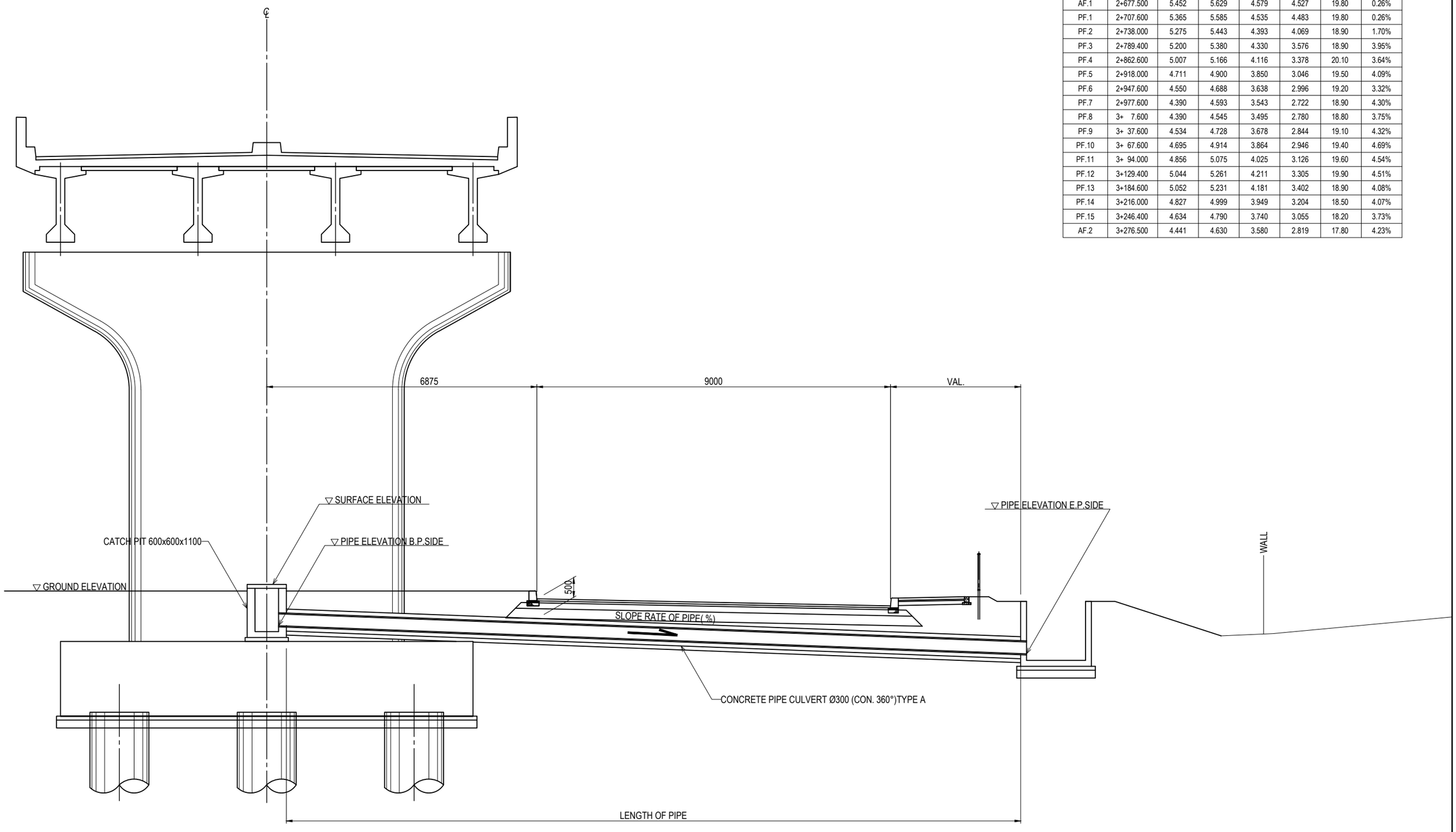
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	GENERAL VIEW OF PIPE CULVERT (2) STA. 2+600 (R)	1
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3031

GENERAL VIEW OF CONCRETE PIPE CULVERT (3) S=1:100

CONCRETE PIPE CULVERT Ø300 (CON. 360°)TYPE A

No.	STA.	GROUND ELEVATION (EL.m)	SURFACE ELEVATION (EL.m)	PIPE ELEVATION B.P.SIDE (EL.m)	PIPE ELEVATION E.P.SIDE (EL.m)	LENGTH OF PIPE (m)	SLOPE RATE OF PIPE (%)
AF.1	2+677.500	5.452	5.629	4.579	4.527	19.80	0.26%
PF.1	2+707.600	5.365	5.585	4.535	4.483	19.80	0.26%
PF.2	2+738.000	5.275	5.443	4.393	4.069	18.90	1.70%
PF.3	2+789.400	5.200	5.380	4.330	3.576	18.90	3.95%
PF.4	2+862.600	5.007	5.166	4.116	3.378	20.10	3.64%
PF.5	2+918.000	4.711	4.900	3.850	3.046	19.50	4.09%
PF.6	2+947.600	4.550	4.688	3.638	2.996	19.20	3.32%
PF.7	2+977.600	4.390	4.593	3.543	2.722	18.90	4.30%
PF.8	3+ 7.600	4.390	4.545	3.495	2.780	18.80	3.75%
PF.9	3+ 37.600	4.534	4.728	3.678	2.844	19.10	4.32%
PF.10	3+ 67.600	4.695	4.914	3.864	2.946	19.40	4.69%
PF.11	3+ 94.000	4.856	5.075	4.025	3.126	19.60	4.54%
PF.12	3+129.400	5.044	5.261	4.211	3.305	19.90	4.51%
PF.13	3+184.600	5.052	5.231	4.181	3.402	18.90	4.08%
PF.14	3+216.000	4.827	4.999	3.949	3.204	18.50	4.07%
PF.15	3+246.400	4.634	4.790	3.740	3.055	18.20	3.73%
AF.2	3+276.500	4.441	4.630	3.580	2.819	17.80	4.23%



PROJECT NAME	DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT		
FINANCED BY	JAPAN INTERNATIONAL COOPERATION AGENCY		
COUNTERPART	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE		
JICA STUDY TEAM	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE
PREPARED BY	K. TACHIBANA		15 JUNE 2017
CHECKED BY	T. HAYAKAWA		20 JUNE 2017
APPROVED BY	Y. SANO		21 JUNE 2017

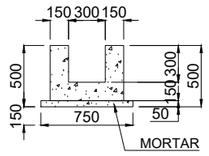
DRAWING TITLE	PACKAGE
GENERAL VIEW OF CONCRETE PIPE CULVERT (3) S=1:100	2
	DWG No.
	P2-RD-3032

DETAIL OF SIDE DITCH (1)

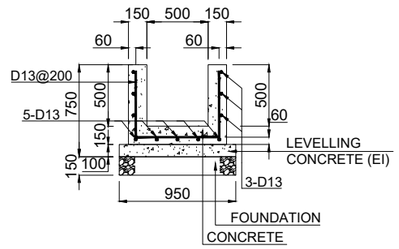
S=1:50

NOTES:
1. Concrete Class DII
 (240 kg/cm²)
2. Steel Reinforcement
 SD345
3. Pit of Steel Reinforcement
 is 200mm

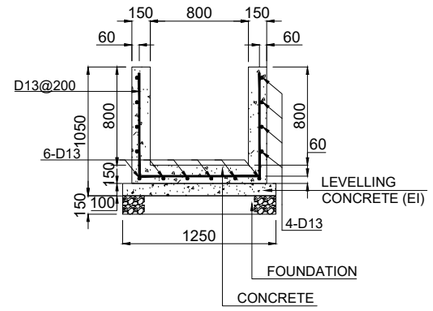
SIDE DITCH TYPE U-300×300



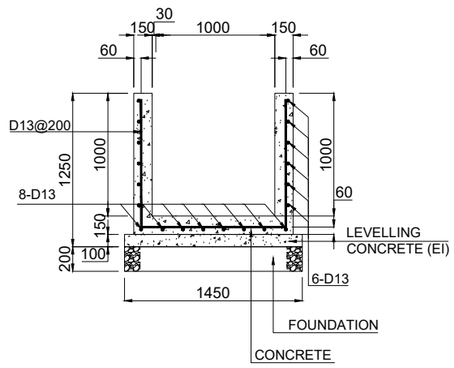
SIDE DITCH TYPE U-500×500



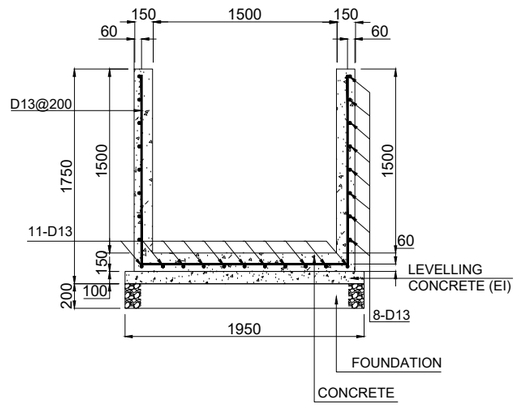
SIDE DITCH TYPE U-800×800



SIDE DITCH TYPE U-1000×1000



SIDE DITCH TYPE U-1500×1500



PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

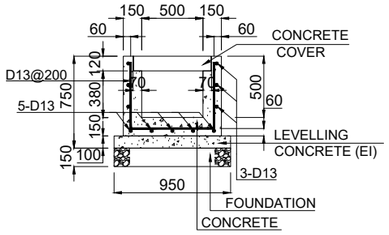
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DETAIL OF SIDE DITCH (1) S=1:50	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3040

DETAIL OF SIDE DITCH (2)

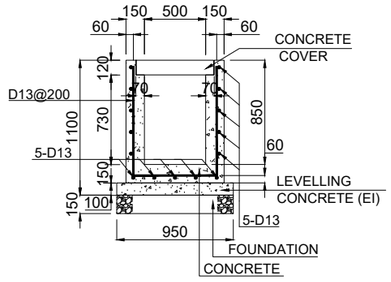
S=1:50

NOTES:
1. Concrete Class DII (240 kg/cm²)
2. Steel Reinforcement SD345
3. Pit of Steel Reinforcement is 200mm

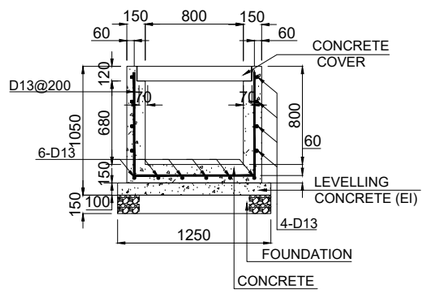
SIDE DITCH TYPE U-500×500
WITH COVER



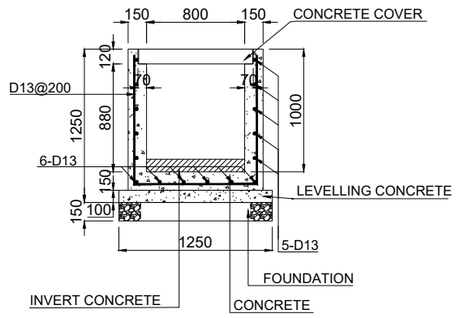
SIDE DITCH TYPE U-500×850
WITH COVER



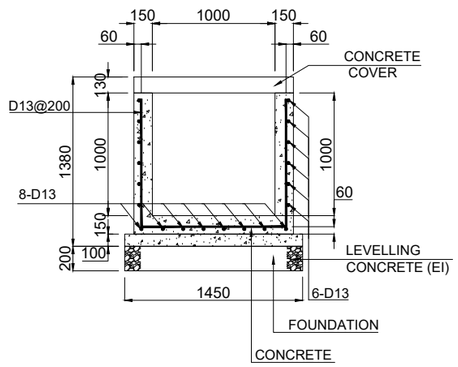
SIDE DITCH TYPE U-800×800
WITH COVER



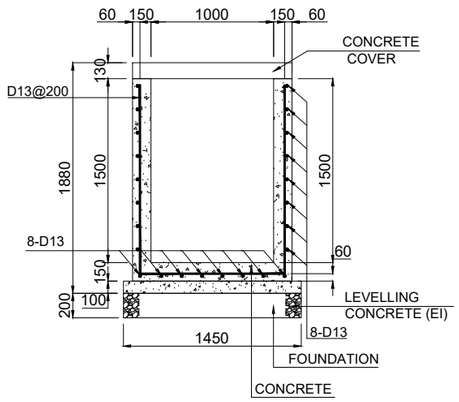
SIDE DITCH TYPE U-800x1000
WITH COVER



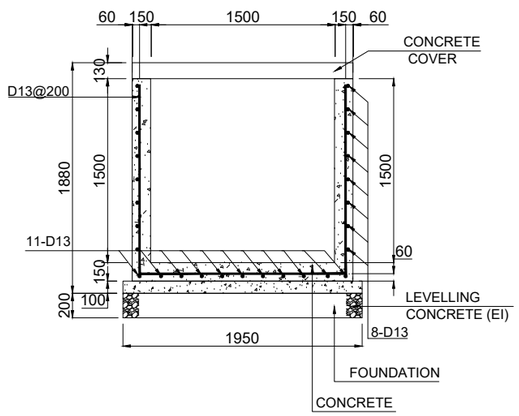
SIDE DITCH TYPE U-1000×1000
WITH COVER



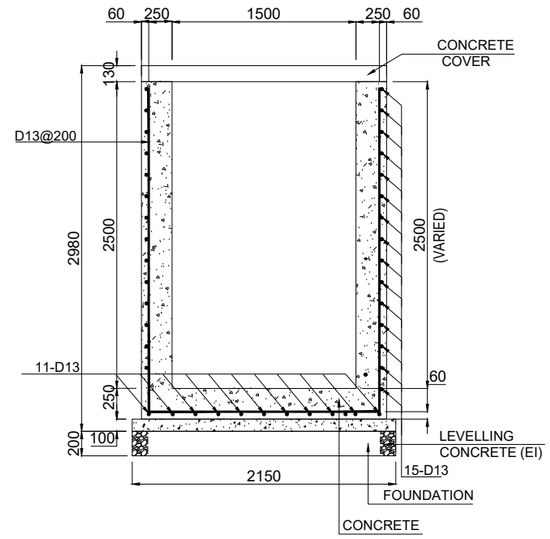
SIDE DITCH TYPE U-1000×1500
WITH COVER



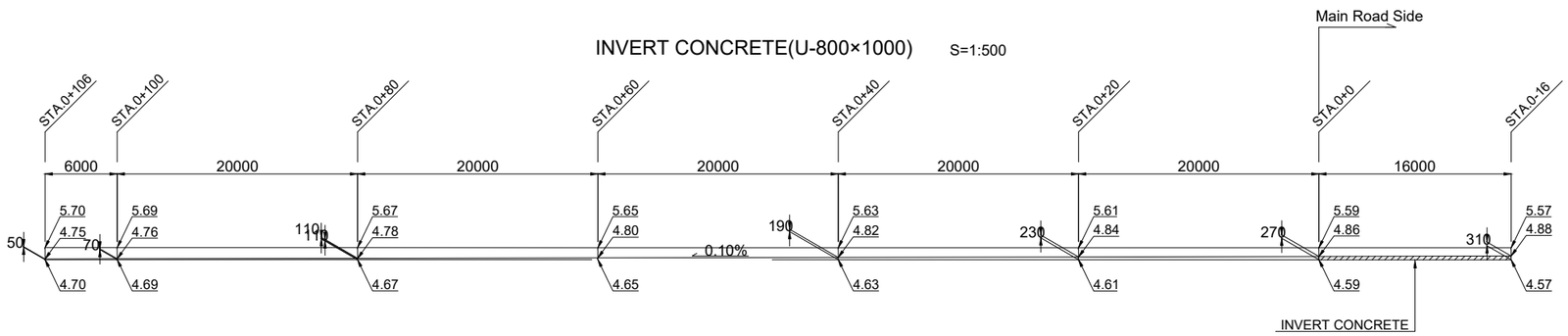
SIDE DITCH TYPE U-1500×1500
WITH COVER



SIDE DITCH TYPE U-1500×2500
WITH COVER



INVERT CONCRETE(U-800×1000) S=1:500



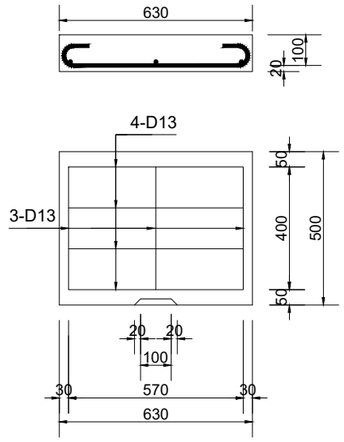
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DETAIL OF SIDE DITCH (2) S=1:50, 1:500	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3041

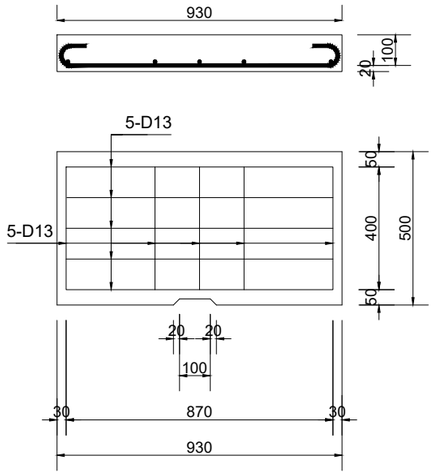
DETAIL OF SIDE DITCH (3)

S=1:20

CONCRETE COVER
SIDE DITCH TYPE U-500×500 WITH COVER

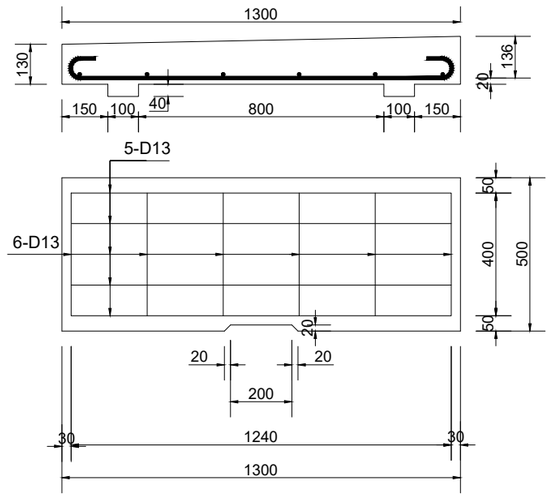


CONCRETE COVER
SIDE DITCH TYPE U-800×800 WITH COVER
SIDE DITCH TYPE U-800×1000 WITH COVER

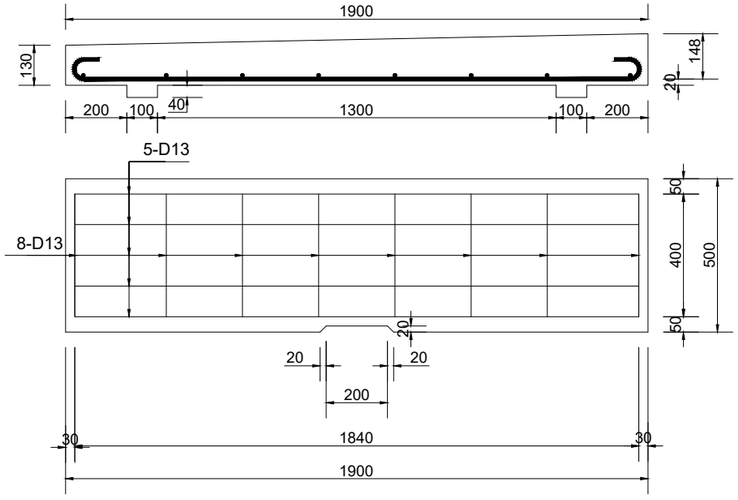


NOTES:
1. Concrete Class DII (240 kg/cm²)
2. Steel Reinforcement SD345
3. Pit of Steel Reinforcement is 200mm

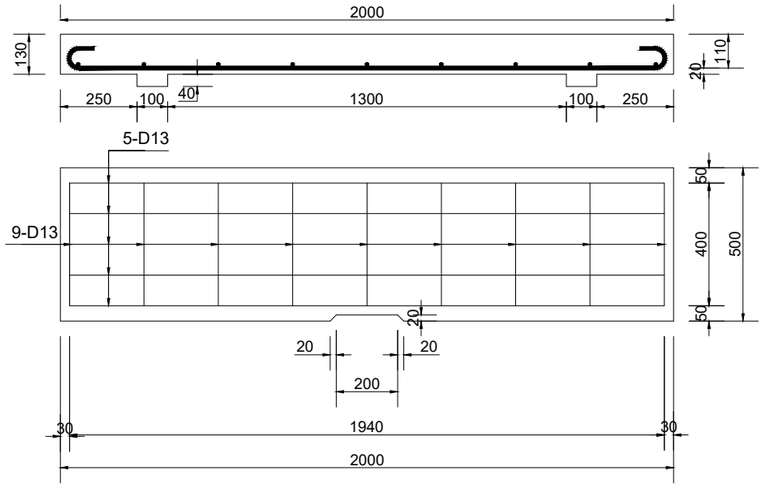
CONCRETE COVER
SIDE DITCH TYPE U-1000×1000 WITH COVER
SIDE DITCH TYPE U-1000×1500 WITH COVER



CONCRETE COVER
SIDE DITCH TYPE U-1500×1700 WITH COVER



CONCRETE COVER
SIDE DITCH TYPE U-1500×2500 WITH COVER

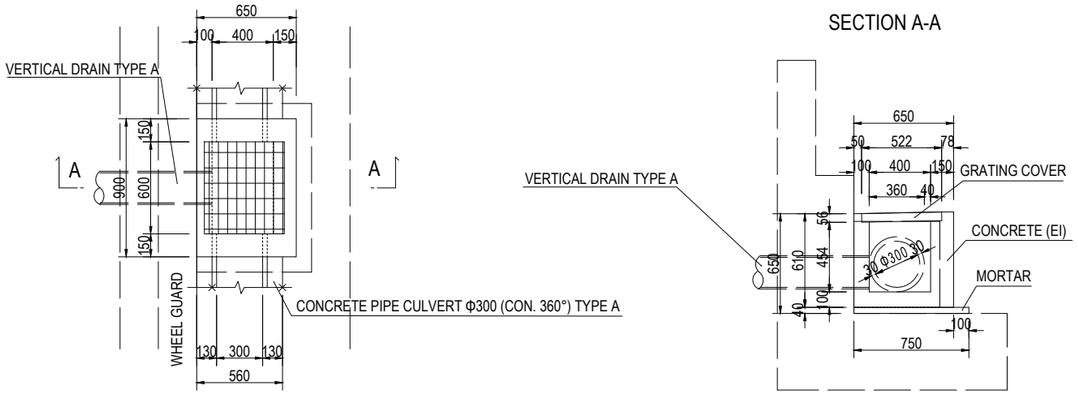


PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DETAIL OF SIDE DITCH (3) S=1:20	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3042

DETAIL OF CATCH PIT (1)

DETAIL OF CATCH PIT (C-DITCH) TYPE A S=1:40



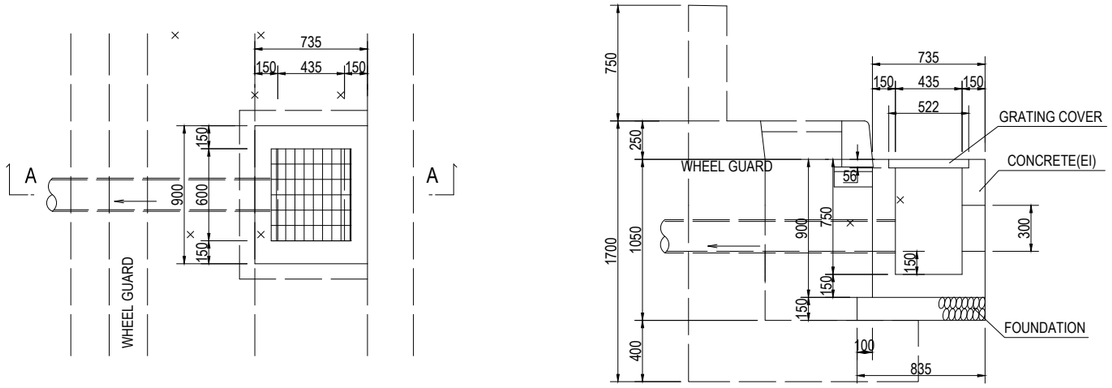
SECTION A-A

DETAIL OF CATCH PIT (C-DITCH) TYPE C S=1:40

SECTION A-A

DETAIL OF CATCH PIT (C-DITCH) TYPE D S=1:40

SECTION A-A



SCHEDULE OF CATCH PIT & VERTICAL DRAIN

PACKAGE	ROAD	SIDE	STATION	CATCH PIT (C-DITCH)				VERTICAL DRAIN TYPE A	VERTICAL DRAIN TYPE B
				TYPE A	TYPE B	TYPE C	TYPE D		
				Nos.	Nos.	Nos.	Nos.	Nos.	Nos.
1	MAIN	LEFT	325.000	1	-	1	-	1	-
			305.000	1	-	-	-	-	-
			285.000	1	-	1	-	1	-
			270.000	1	-	-	-	-	-
			260.000	1	-	1	-	1	-
	TOTAL			5	-	3	-	3	-
2	MAIN	LEFT	2413.416	1	-	-	-	-	-
			2428.416	1	-	1	-	1	-
			2438.416	1	-	-	-	-	-
			2448.416	1	-	1	-	1	-
			2453.416	1	-	-	-	-	-
			2458.416	1	-	1	-	1	-
			2463.416	1	-	-	-	-	-
			2468.416	1	-	1	-	1	-
			2473.416	1	-	-	-	-	-
			2478.416	1	-	1	-	1	-
			2483.416	1	-	-	-	-	-
			2488.416	1	-	1	-	1	-
			2505.500	-	-	1	1	1	-
			2518.741	1	-	1	-	1	-
			2523.741	1	-	-	-	-	-
			2528.741	1	-	1	-	1	-
			2533.741	1	-	-	-	-	-
			2538.741	1	-	1	-	1	-
			2543.741	1	-	-	-	-	-
			2548.741	1	-	1	-	1	-
			2553.741	1	-	-	-	-	-
			2558.741	1	-	1	-	1	-
			2568.741	1	-	-	-	-	-
			2578.741	1	-	1	-	1	-
			2588.741	1	-	-	-	-	-
		RIGHT	2505.500	-	-	-	1	-	1
	FLYOVER	LEFT	2601.400	-	2	1	-	1	-
			2628.741	1	-	-	-	-	-
		RIGHT	2601.400	-	2	-	-	-	1
			2628.741	1	-	-	-	-	-
	ON-RAMP	LEFT	2645.000	1	-	-	-	-	-
			2675.000	1	-	-	-	-	-
			2705.000	1	-	1	-	1	-
			2730.000	1	-	1	-	1	-
			2745.000	1	-	-	-	-	-
			2755.000	1	-	1	-	1	-
	TOTAL			32	4	17	2	17	2

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

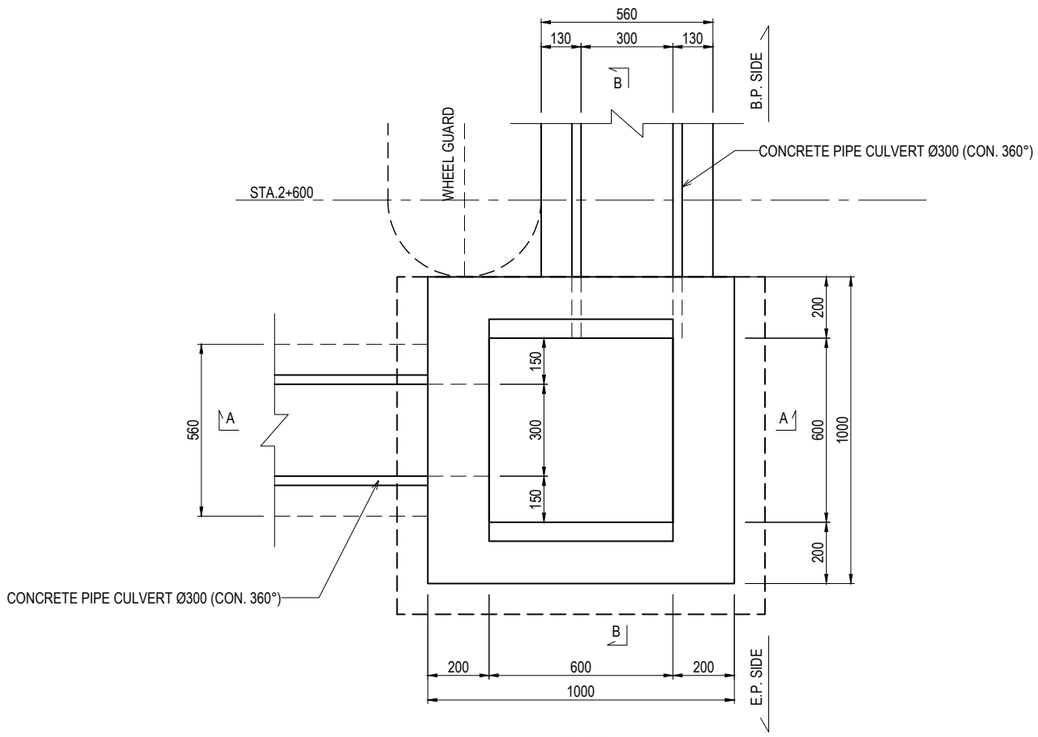
	NAME	SIGNATURE	DATE
PREPARED BY	M. TORIU		15 Jun. 2017
CHECKED BY	T. HAYAKAWA		20 Jun. 2017
APPROVED BY	Y. SANO		21 Jun. 2017

DRAWING TITLE	PACKAGE
DETAIL OF CATCH PIT (1)	2
	DWG No.
	P02-RD-3050

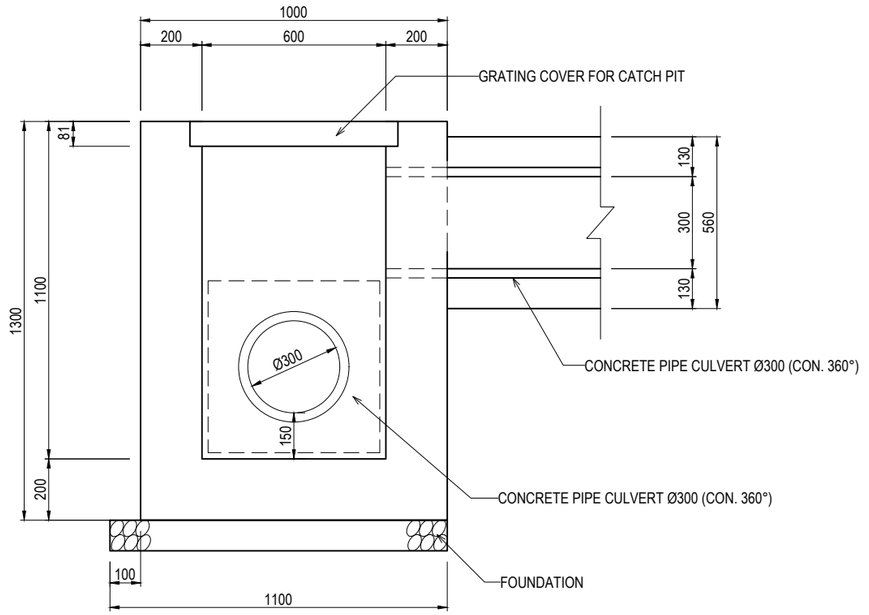
DETAIL OF CATCH PIT (2) S=1:20

CATCH PIT (C-DITCH) TYPE B

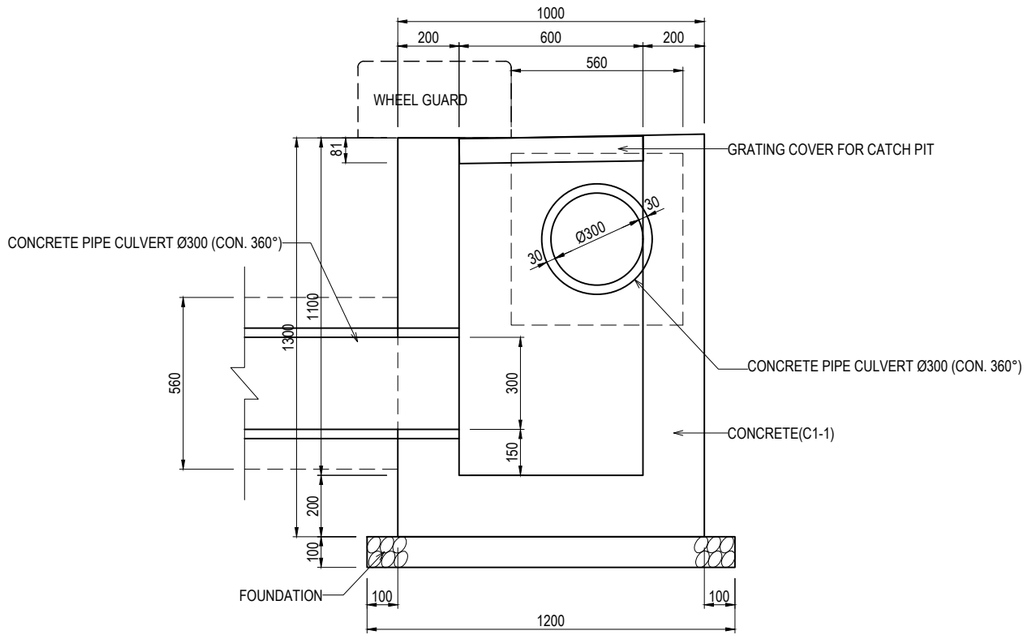
Note
1. Specification of Plain Concrete should be CLASS EI



PLAN

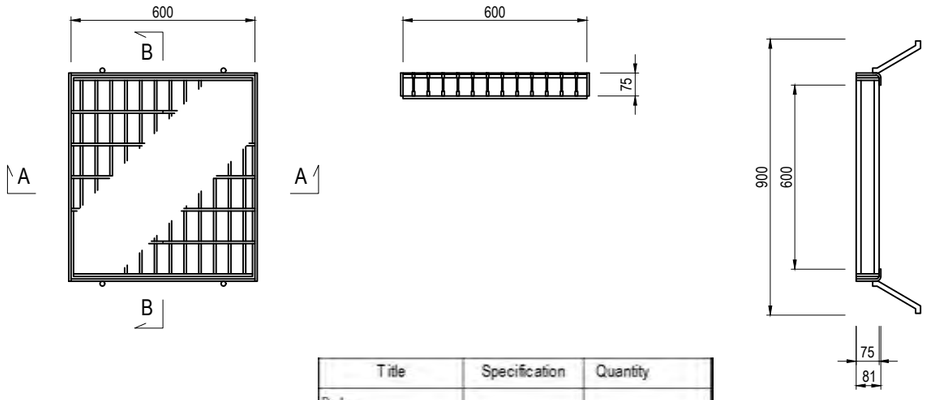


SECTION B - B



SECTION A - A

DETAIL OF GRATING COVER FOR CATCH PIT



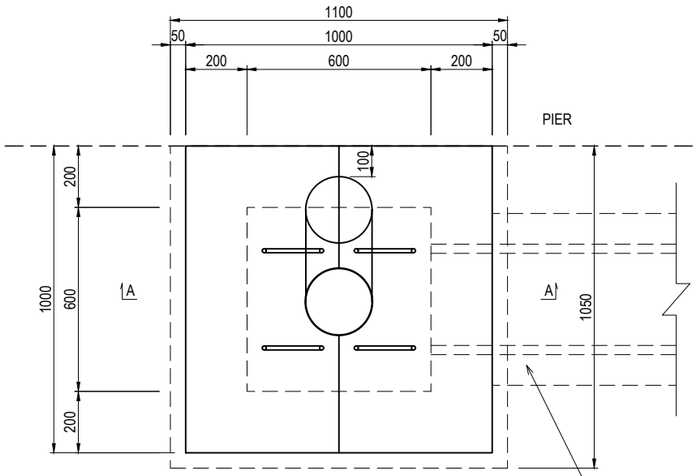
Title	Specification	Quantity	
Body			
Concrete	18N/mm2	8.570	m3
Reinforcing bar			kg
Form		78.40	m2
Foundation	t=100	13.20	m2
Cover			
Grating Cover		10	each

PROJECT NAME	DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT		
FINANCED BY	JAPAN INTERNATIONAL COOPERATION AGENCY		
COUNTERPART	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE		
JICA STUDY TEAM	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

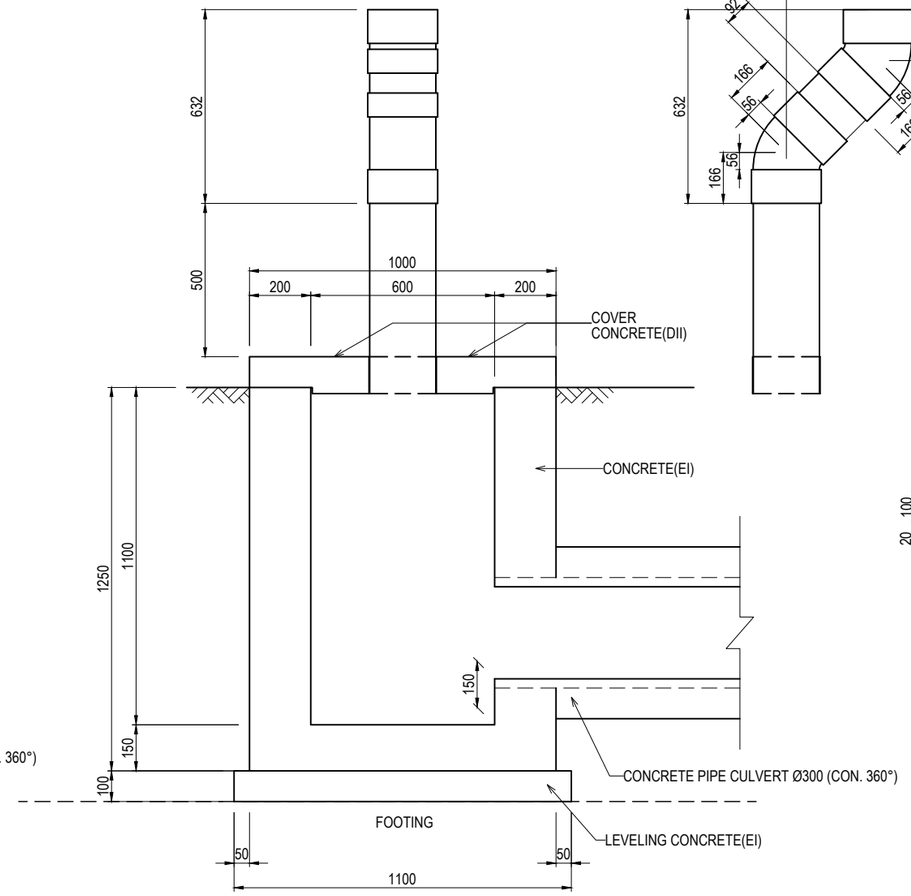
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DETAIL OF CATCH PIT (2) S=1:20	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3051

DETAIL OF CATCH PIT (3) S=1:20

CATCH PIT 600x600x1100

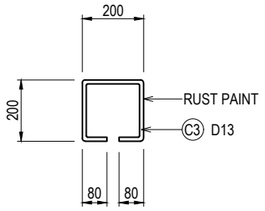


PLAN

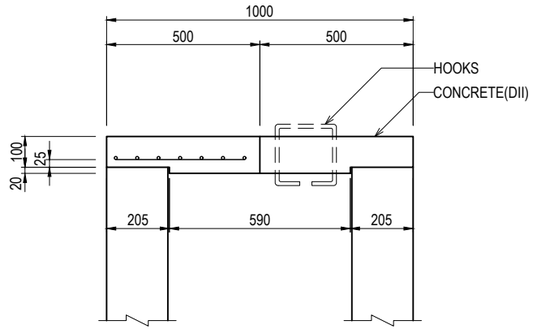


SECTION A - A

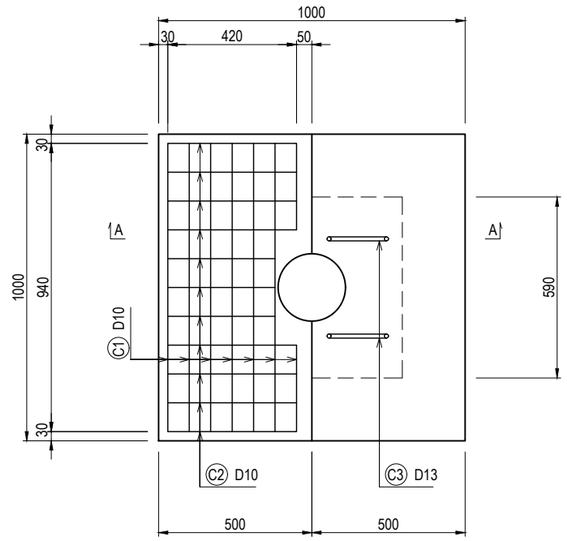
DETAIL OF HOOKS



DETAIL OF COVER SECTION A - A



PLAN



QUANTITY Per 10 each

Title	Specification	Quantity	
Body			
Concrete	18 N/mm2	8.40	m3
Form		80.60	m2
Leveling Concrete	t=100	11.55	m2
Cover			
Concrete	DII	1.03	m3
Reinforcing Bar	D13	150.73	kg
Form		7.20	m2
Pipe	VP φ200	8.50	m
Peipe Elbow	45°	20	each

Note
1. Specification of Plain Concrete should be CLASS EI
2. Specification of Reinforced Concrete should be CLASS DII
3. Specification of Steel reinforcement bar should be SD345

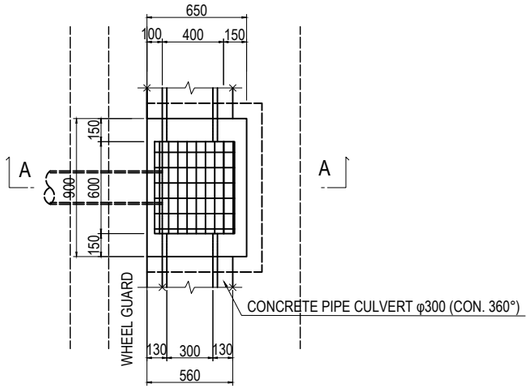
PROJECT NAME	DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT		
FINANCED BY	JAPAN INTERNATIONAL COOPERATION AGENCY		
COUNTERPART	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE		
JICA STUDY TEAM	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE
PREPARED BY	K. TACHIBANA		15 JUNE 2017
CHECKED BY	T. HAYAKAWA		20 JUNE 2017
APPROVED BY	Y. SANO		21 JUNE 2017

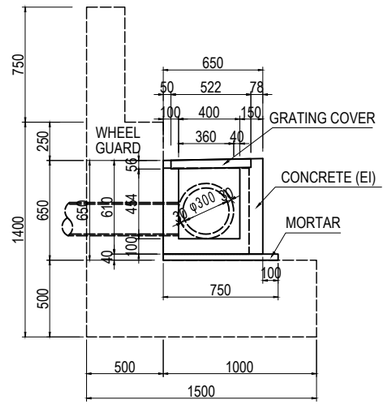
DRAWING TITLE	PACKAGE
DETAIL OF CATCH PIT (3) S=1:20	2
	DWG No.
	P2-RD-3052

VERTICAL DRAIN TYPE A (1)

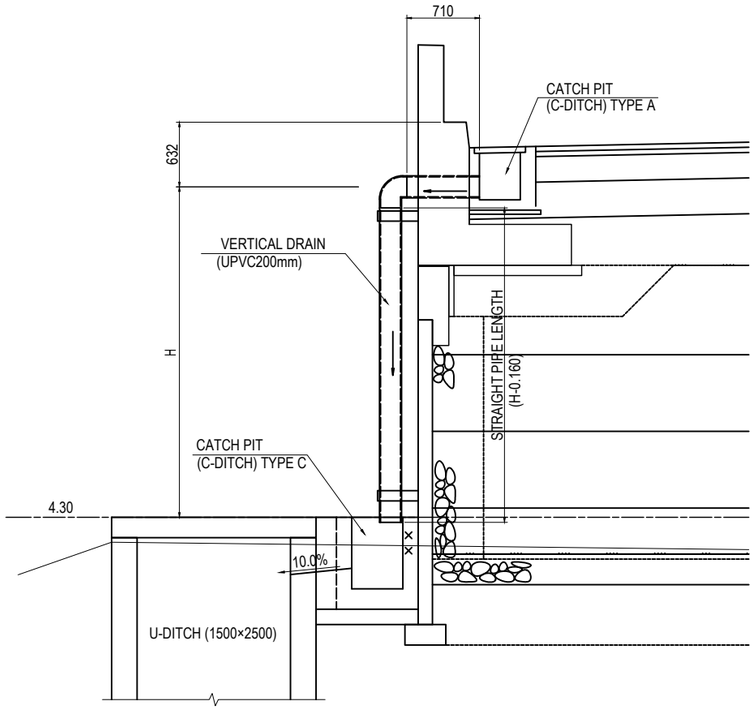
DETAIL OF CATCH PIT (C-DITCH) TYPE A S=1:20



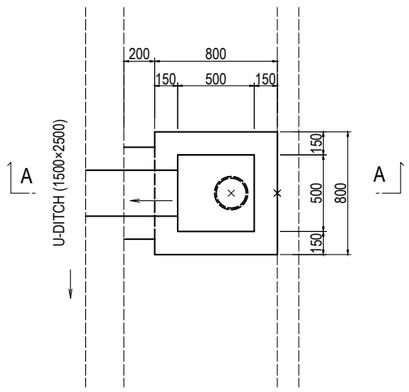
SECTION A-A



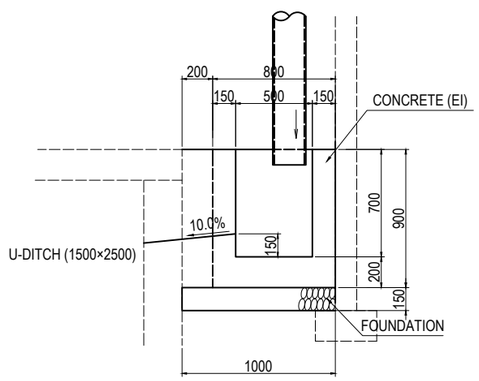
DETAIL OF VERTICAL DRAIN S=1:30



DETAIL OF CATCH PIT (C-DITCH) TYPE C S=1:20



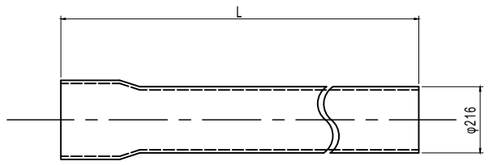
SECTION A-A



PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR, MINISTRY OF CONSTRUCTION, DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. / ORIENTAL CONSULTANTS GLOBAL CO., LTD. / METROPOLITAN EXPRESSWAY COMPANY LIMITED / CHODAI CO.,LTD. / NIPPON ENGINEERING CONSULTANTS CO.,LTD.		
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	VERTICAL DRAIN TYPE A (1)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3060

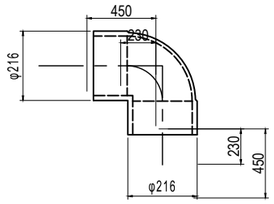
VERTICAL DRAIN TYPE A (2)

UPVC200mm(8inch) S=1:10
(O.D.216mm)

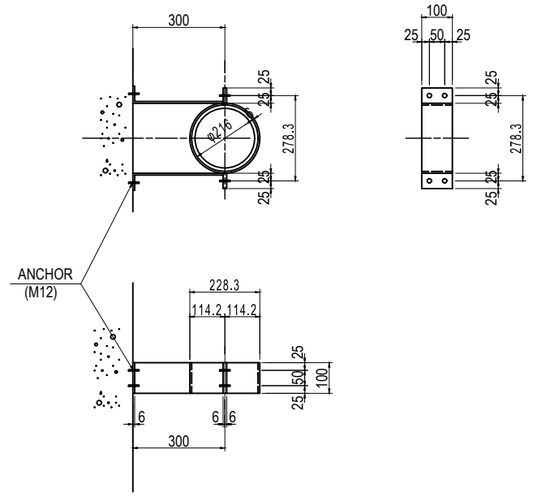


Note: UPVC pipes one end with Socket shape

JOINT (90°) 200mm (8inch) S=1:10



PIPE BRACE S=1:10
(200mm)



Vertical Drain Location		Ground	H	Pipe Length (m)			JOINT (nos.)	Remark
				Straight	Cross	Total		
PK1(Thanlyin side)	0+260.000	4.30	1.684	1.524	0.710	2.8570	1	
	0+285.000	4.30	2.261	2.101	0.710	3.434	1	
	0+325.000	4.30	3.074	2.914	0.710	4.247	1	
					Total	10.538	3	
PK2(Thaketa side)	2+428.400	4.30	3.429	3.268	0.710	4.601	1	
	2+448.400	4.30	3.125	2.965	0.710	4.298	1	
	2+458.400	4.30	2.996	2.836	0.710	4.169	1	
	2+468.400	4.30	2.920	2.760	0.973	4.356	1	
	2+478.400	4.30	2.859	2.699	0.973	4.295	1	
	2+488.400	4.30	2.849	2.689	0.973	4.285	1	
	2+505.500	4.30	2.719	2.559	0.973	4.155	1	CATCH PIT TYPE C
	2+518.700	4.30	2.814	2.654	0.973	4.250	1	
	2+528.700	4.30	2.853	2.693	0.973	4.289	1	
	2+538.700	4.30	2.901	2.741	0.973	4.337	1	
	2+548.700	4.30	2.987	2.827	0.710	4.160	1	
	2+558.700	4.30	3.086	2.926	0.710	4.259	1	
	2+578.700	4.30	3.363	3.203	0.710	4.536	1	
	2+600.000	4.30	3.728	3.568	0.710	4.901	1	
	2+705.000	4.30	1.246	1.086	0.710	2.419	1	
	2+730.000	4.30	0.277	0.117	0.710	1.450	1	
	2+755.000	4.30	0.218	0.058	0.710	1.391	1	
					Total	66.151	17	

PROJECT NAME
DETAILED DESIGN ON
BAGO RIVER BRIDGE
CONSTRUCTION PROJECT

FINANCED BY
JAPAN INTERNATIONAL
COOPERATION AGENCY

COUNTERPART
REPUBLIC OF THE UNION OF MYANMAR
MINISTRY OF CONSTRUCTION
DEPARTMENT OF BRIDGE

JICA STUDY TEAM
NIPPON KOEI CO., LTD.
ORIENTAL CONSULTANTS GLOBAL CO., LTD.
METROPOLITAN EXPRESSWAY COMPANY LIMITED
CHODAI CO.,LTD.
NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	M. TORIU		15 Jun. 2017
CHECKED BY	T. HAYAKAWA		20 Jun. 2017
APPROVED BY	Y. SANO		21 Jun. 2017

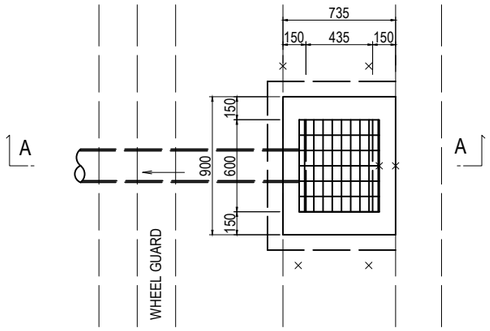
DRAWING TITLE: VERTICAL DRAIN TYPE A (2)

PACKAGE: 2

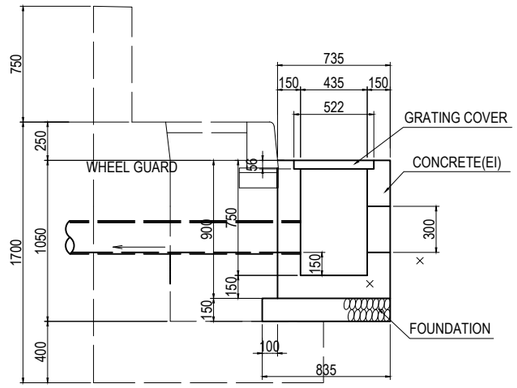
DWG No.: P2-RD-3061

VERTICAL DRAIN TYPE A (3)

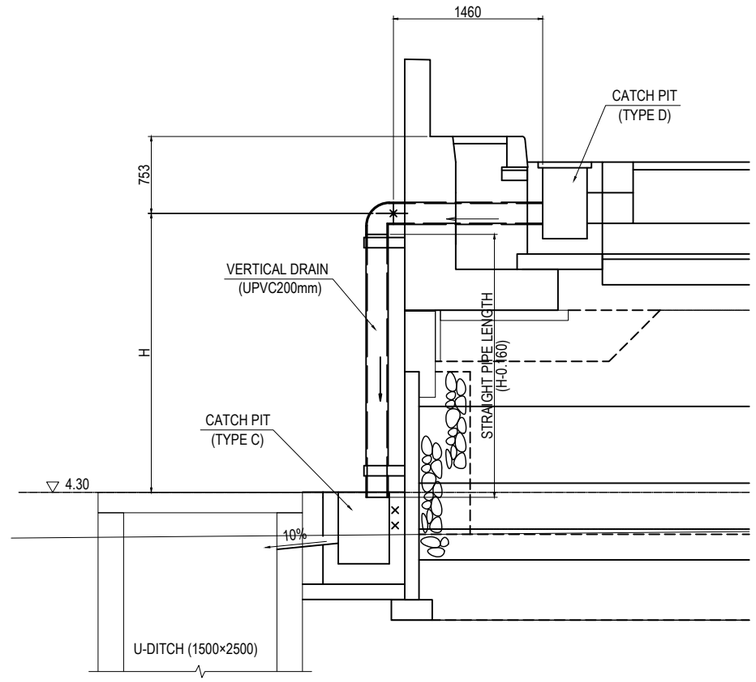
DETAIL OF CATCH PIT (C-DITCH) TYPE D S=1:20
(STA.2+505.500)



SECTION A-A



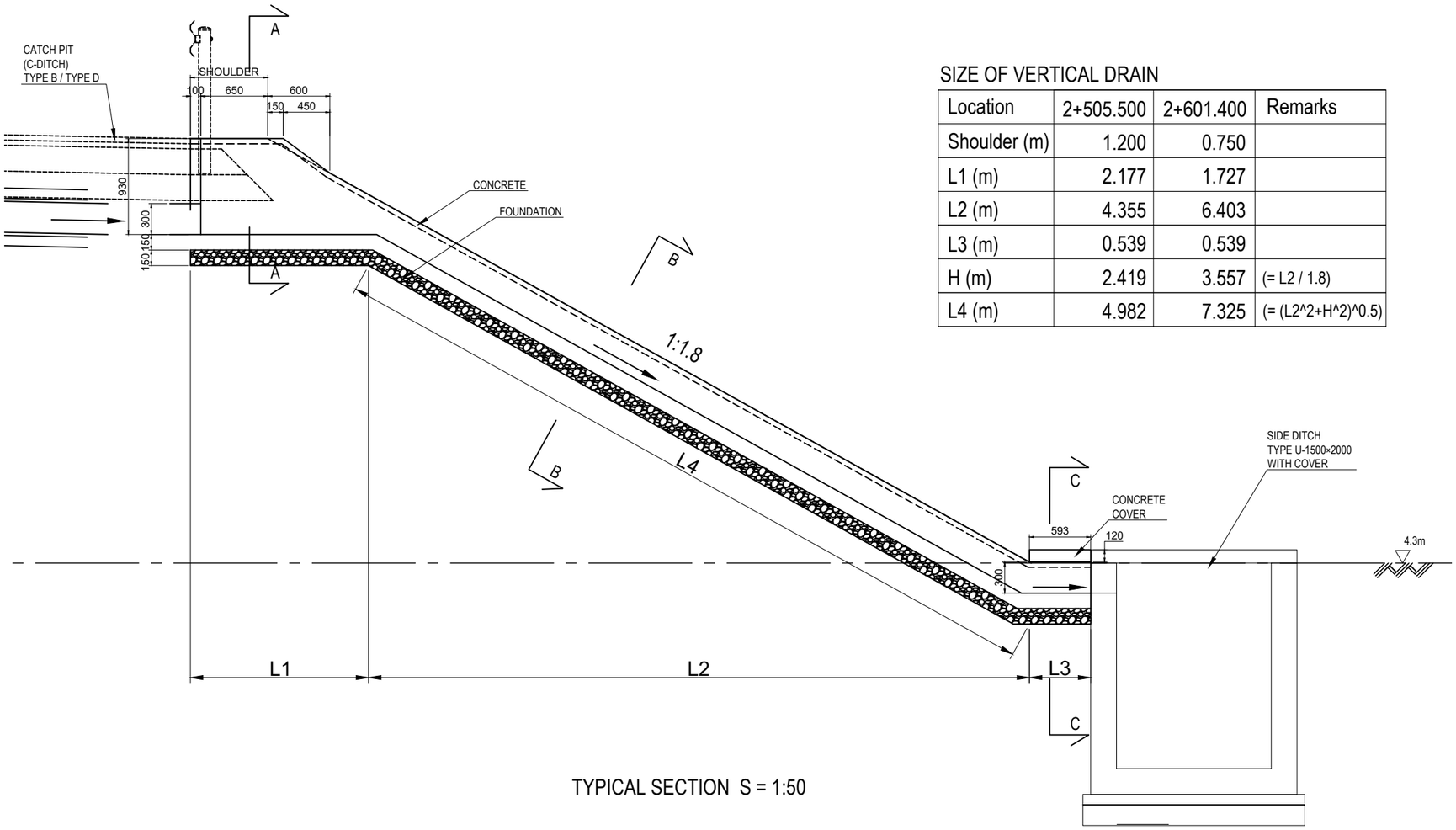
DETAIL OF VERTICAL DRAIN S=1:30
(STA.2+505.500)



PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		
				NAME / SIGNATURE / DATE	DRAWING TITLE / PACKAGE
				PREPARED BY: M. TORIU — 15 Jun. 2017	VERTICAL DRAIN TYPE A (3) — 2
				CHECKED BY: T. HAYAKAWA — 20 Jun. 2017	DWG No.
				APPROVED BY: Y. SANO — 21 Jun. 2017	P2-RD-3062

VERTICAL DRAIN TYPE B

Note : Steel Reinforcement SD345



TYPICAL SECTION S = 1:50

SIZE OF VERTICAL DRAIN

Location	2+505.500	2+601.400	Remarks
Shoulder (m)	1.200	0.750	
L1 (m)	2.177	1.727	
L2 (m)	4.355	6.403	
L3 (m)	0.539	0.539	
H (m)	2.419	3.557	(= L2 / 1.8)
L4 (m)	4.982	7.325	(= (L2^2+H^2)^0.5)

UNIT QUANTITY (SECTION A-A) Per 1.0m

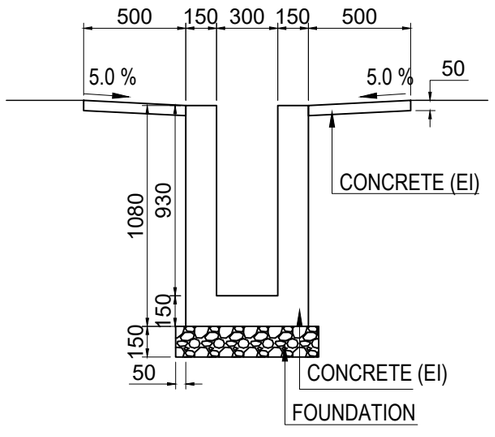
Item	Qty	Remarks
Concrete (m3)	0.419	180 kg/cm2
Foundation (m3)	0.105	Gravel / t=150mm
Form (m2)	4.120	

UNIT QUANTITY (SECTION B-B) Per 1.0m

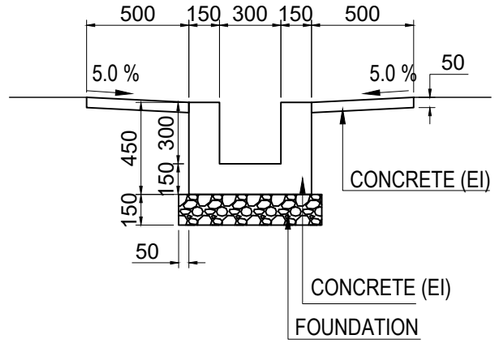
Item	Qty	Remarks
Concrete (m3)	0.230	180 kg/cm2
Foundation (m3)	0.105	Gravel / t=150mm
Form (m2)	1.600	

UNIT QUANTITY (SECTION C-C) Per 1.0m

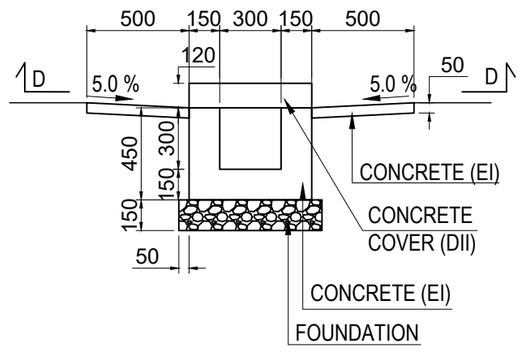
Item	Qty	Remarks
Concrete (m3)	0.302	180 kg/cm2
Foundation (m3)	0.105	Gravel / t=150mm
Form (m2)	1.600	
Reinforcement Bar (kg)	7.012	D13, SD345



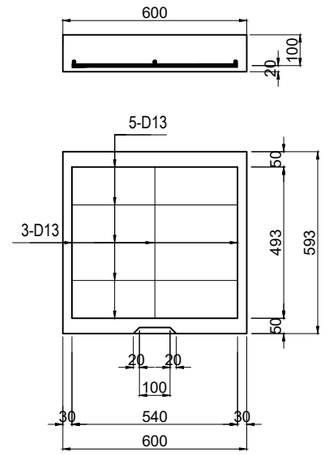
SECTION A-A S = 1:30



SECTION B-B S = 1:30



SECTION C-C S = 1:30



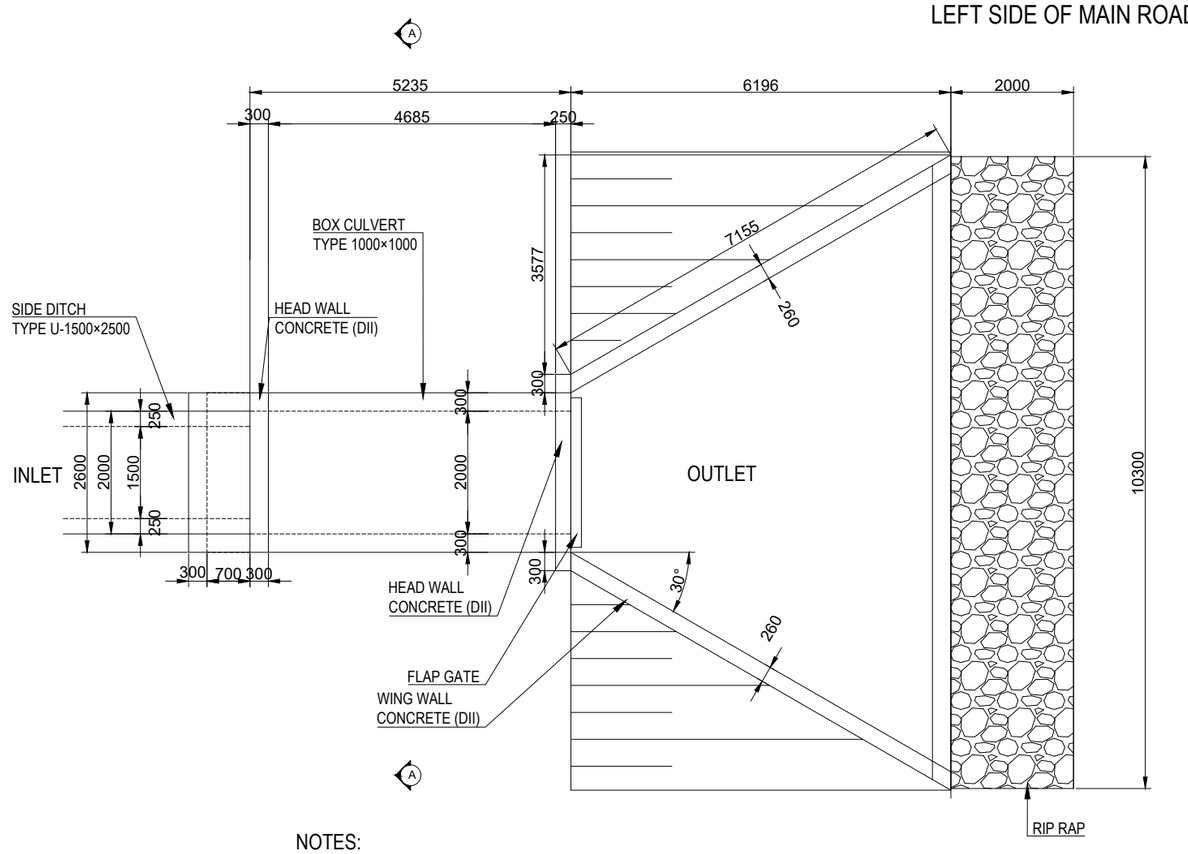
SECTION D-D CONCRETE COVER S = 1:20

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	VERTICAL DRAIN TYPE B	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3063

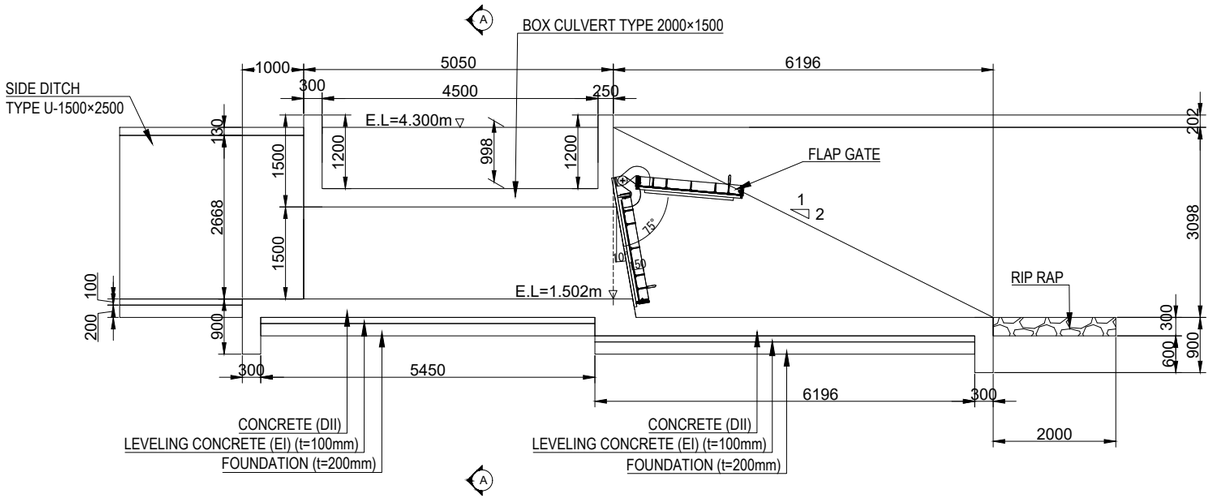
DRAINAGE OUTLET TYPE-B (1)

LEFT SIDE OF MAIN ROAD S=1:100



NOTES:
1. Concrete Class DII (240 kg/cm²)
2. Steel Reinforcement SD345

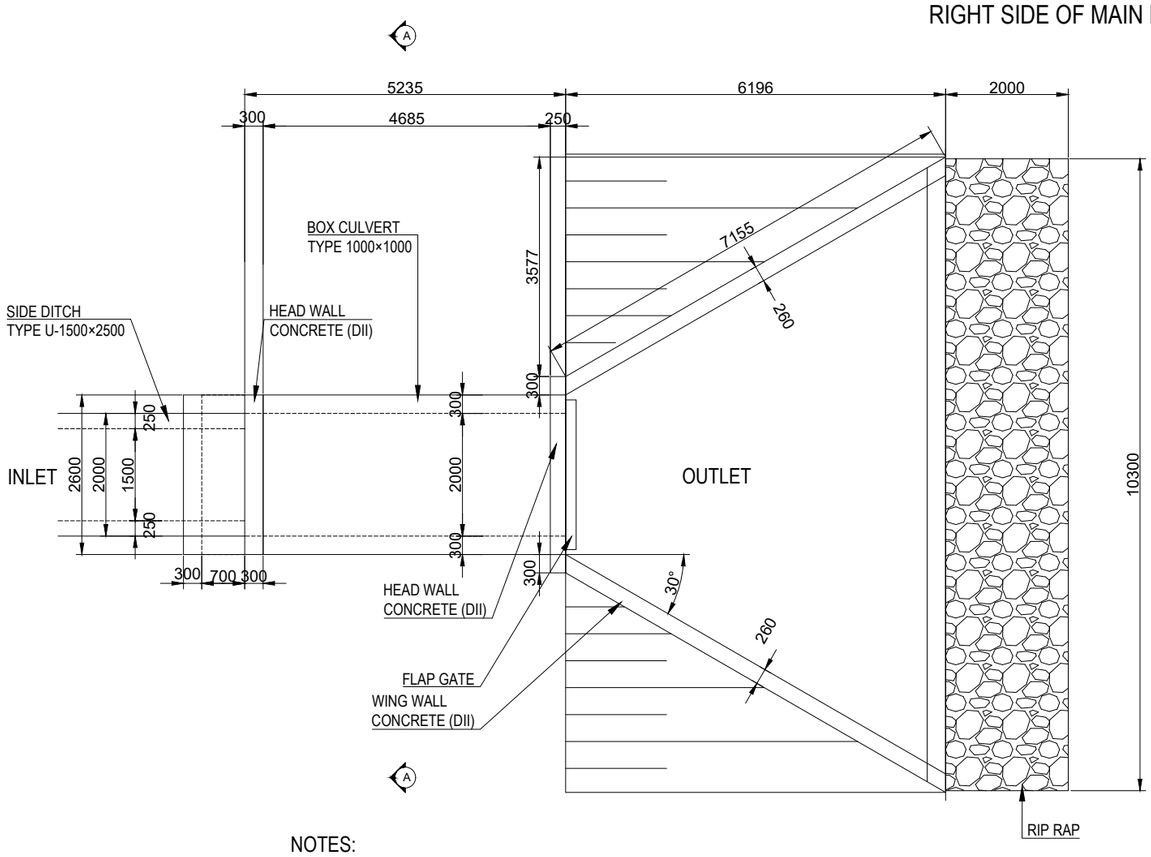
LOCATION		RIGHT RIVER BANK
INSIDE DIMENSION	WIDTH	2.000 m
	HEIGHT	1.500 m
TOTAL BOX CULVERT LENGTH		5.050 m
UNIT WEIGHT	REINFORCED CONCRETE	24.5 kN/m3
	SOIL	18.0 kN/m3
CONCRETE DESIGN STRENGTH		24.0 N/mm3
ALLOWABLE STRESS	COMPRESSIVE STRESS DUE TO BENDING	8 N/mm3
	SHEARING STRESS	0.39 N/mm3
	TENSILE STRESS (SD345)	160 N/mm3
COEFFICIENT OF EARTH PRESSURE		0.5000
IMPACT COEFFICIENT		-
SEISMIC COEFFICIENT		-
ANGLE OF SKEW		90°0'0"
RADIUS OF CURVATURE		R = ∞
GRADIENT OF BOX CULVERT		i = 0.080 %



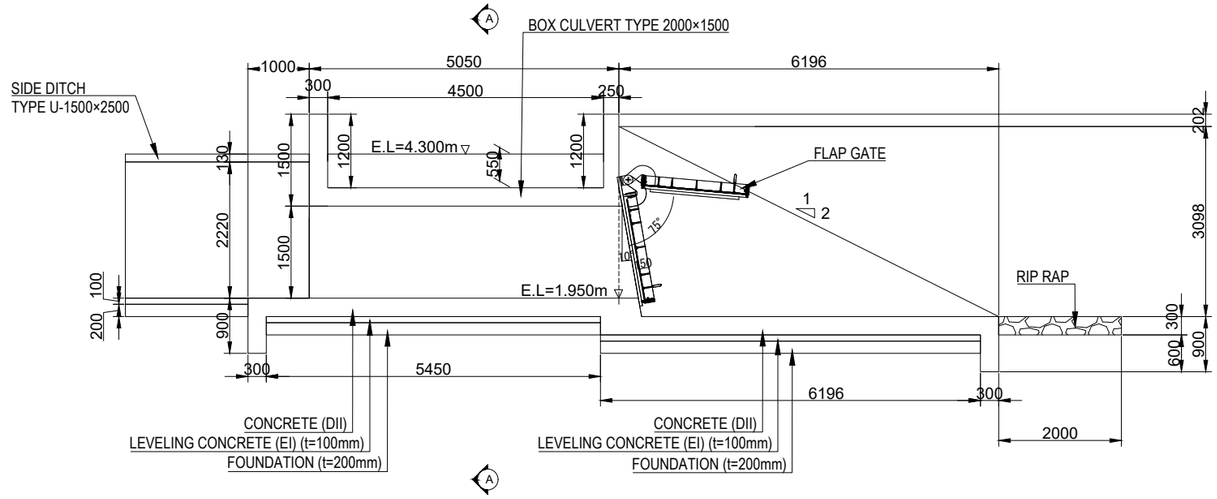
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.			
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DRAINAGE OUTLET TYPE-B (1)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3070

DRAINAGE OUTLET TYPE-B (2)

RIGHT SIDE OF MAIN ROAD S=1:100



LOCATION		RIGHT RIVER BANK
INSIDE DIMENSION	WIDTH	2.000 m
	HEIGHT	1.500 m
TOTAL BOX CULVERT LENGTH		5.050 m
UNIT WEIGHT	REINFORCED CONCRETE	24.5 kN/m3
	SOIL	18.0 kN/m3
CONCRETE DESIGN STRENGTH		24.0 N/mm3
ALLOWABLE STRESS	COMPRESSIVE STRESS DUE TO BENDING	8 N/mm3
	SHEARING STRESS	0.39 N/mm3
	TENSILE STRESS (SD345)	160 N/mm3
COEFFICIENT OF EARTH PRESSURE		0.5000
IMPACT COEFFICIENT		-
SEISMIC COEFFICIENT		-
ANGLE OF SKEW		90°0'0"
RADIUS OF CURVATURE		R = ∞
GRADIENT OF BOX CULVERT		i = 0.100 %



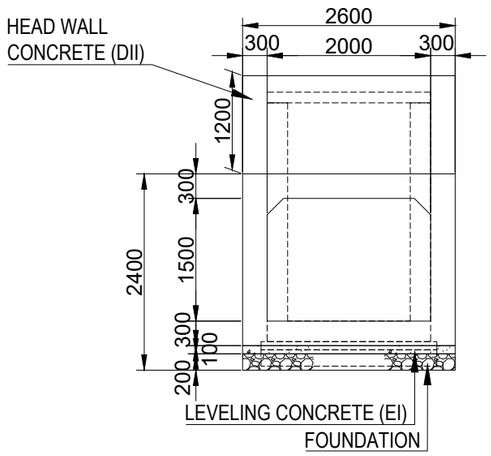
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DRAINAGE OUTLET TYPE-B (2)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3071

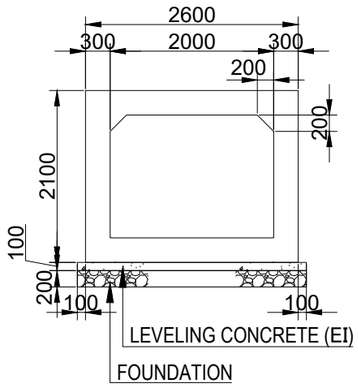
DRAINAGE OUTLET TYPE-B (3)

INLET AND OUTLET FOR TYPE B S=1:100 , S=1:75

FRONT ELEVATION (INLET) S=1:75



SECTION A-A S=1:75



FRONT ELEVATION (OUTLET) S=1:100

No.	Description	Width	Length	Thickness	Height	Number	Unit	Quantity
		W	L	T	H	N		
1	Box 2000x1500		5.050				m	5.050
2	Leveling concrete						m3	4.258
	Outlet Slab1	3.200	6.146	0.100		1	m3	1.967
	Outlet Slab2	3.577	5.896	0.100		1	m3	2.109
	Inlet Slab	2.600	0.700	0.100		1	m3	0.182
3	Foundation						m3	8.515
	Outlet Slab1	3.200	6.146	0.200		1	m3	3.933
	Outlet Slab2	3.577	5.896	0.200		1	m3	4.218
	Inlet Slab	2.600	0.700	0.200		1	m3	0.364
4	Reinforced Concrete (DII)						m3	26.919
	Inlet Front Slab	2.600	0.700	0.300		1	m3	0.546
	Inlet Head Wall1	2.600		0.300	3.900	1	m3	3.042
	Inlet Head Wall2	2.600		0.300	1.500	-1	m3	-1.170
	Outlet Slab1	3.200	6.446	0.300		1	m3	6.188
	Outlet Slab2	3.577	6.196	0.300		1	m3	6.649
	Outlet Slab3	3.200	0.500	0.300		1	m3	0.480
	Outlet Wing Wall1	7.155		0.260	3.098	1	m3	5.763
	Outlet Wing Wall2	10.300		0.300	0.900	1	m3	2.781
	Outlet Wing Wall3	0.300		0.250	3.300	2	m3	0.495
	Outlet Head Wall	2.600		0.250	3.300	1	m3	2.145
5	Formwork of out-let						m2	90.673
	Inlet Wall1	2.600			3.900	2	m2	20.280
	Inlet Wall2	2.600			1.500	-2	m2	-7.800
	Outlet Slab	10.300			0.900	2	m2	18.540
	Outlet Wing Wall1	7.155			3.098	2	m2	44.332
	Outlet Wing Wall2	0.300			3.400	4	m2	4.080
	Outlet Head Wall	2.600			1.500	2	m2	7.800
	Leveling Concrete1	3.300			0.100	2	m2	0.660
	Leveling Concrete2	27.810			0.100	1	m2	2.781
6	Riprap for Bedding Stone	10.300	2.000	0.300		1	m3	6.180

PROJECT NAME	DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT		
FINANCED BY	JAPAN INTERNATIONAL COOPERATION AGENCY		
COUNTERPART	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE		
JICA STUDY TEAM	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

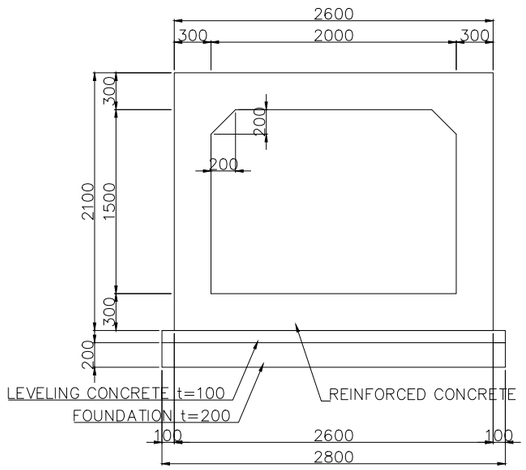
	NAME	SIGNATURE	DATE
PREPARED BY	M. TORIU		15 Jun. 2017
CHECKED BY	T. HAYAKAWA		20 Jun. 2017
APPROVED BY	Y. SANO		21 Jun. 2017

DRAWING TITLE	PACKAGE
DRAINAGE OUTLET TYPE-B (3)	2
	DWG No.
	P2-RD-3072

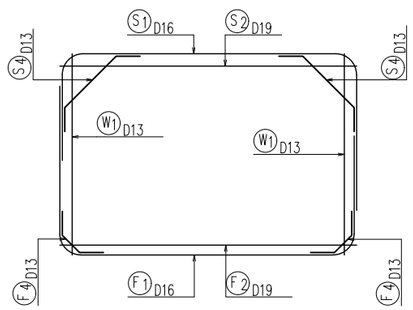
DRAINAGE OUTLET TYPE-B (4)

BAR ARRANGEMENT OF BOX CULVERT S=1:50

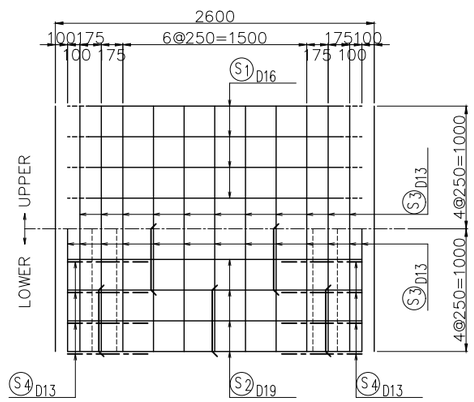
GENERAL DRAWING S=1:50



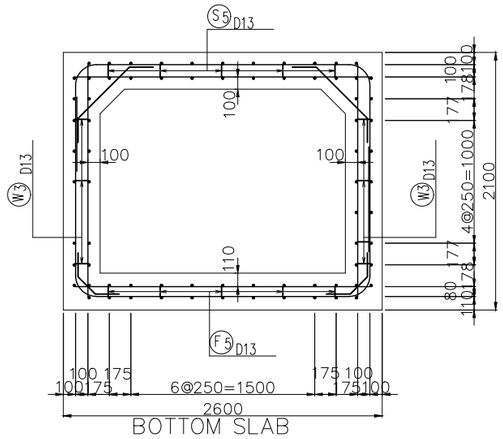
ERECTION DIAGRAM OF MAIN REINFORCEMENT



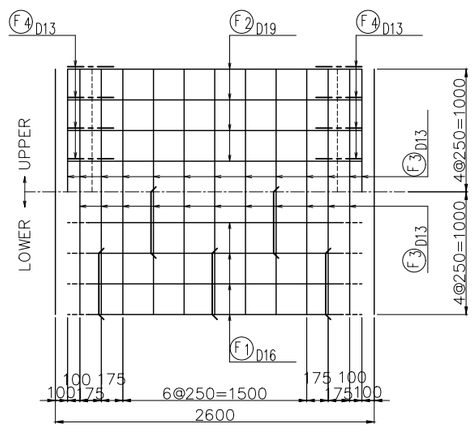
TOP SLAB



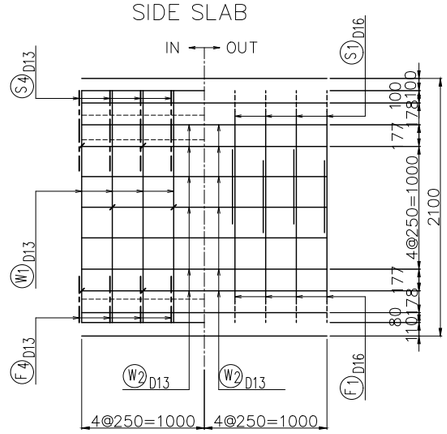
SECTION S=1:50



BOTTOM SLAB



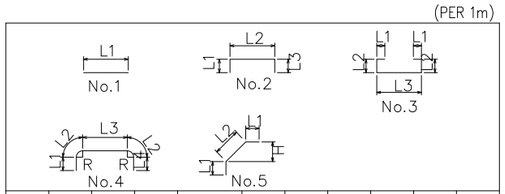
SIDE SLAB



DESIGN CRITERIA

INSIDE DIMENSION	WIDTH	2.00 m
	HEIGHT	1.50 m
LIVE LOAD		T-TYPE LIVE LOAD
UNIT WEIGHT	REINFORCED CONCRETE	24.5 kN/m³
	SOIL	18 kN/m³
CONCRETE DESIGN STRENGTH		24 N/mm²
ALLOWABLE STRESS		
COMPRESSIVE STRESS DUE TO BENDING		8 N/mm²
SHEARING STRESS		0.39 N/mm²
TENSILE STRESS (SD345)		160 N/mm²
COEFFICIENT OF EARTH PRESSURE		0.5
IMPACT COEFFICIENT		–
SEISMIC COEFFICIENT		–
ANGLE OF SKEW		90°00'00"
RADIUS OF CURVATURE		R=∞
GRADIENT OF BOX CULVERT		i=0.100%

(PER 1m)



MARK	No.	SEC.	EACH	LENGTH (mm)	L 1 (mm)	L 2 (mm)	L 3 (mm)	L 4 (mm)	H (mm)	R (mm)
S 1	4	D16	4	4500	900	267	2060	1006		170
S 2	1	D19	4	2400	2400					
S 3	1	D13	24	1000	1000					
S 4	5	D13	8	1040	195	649			459	
S 5	3	D13	5	1000	—	131	—			
W 1	1	D13	8	1890	1890					
W 2	1	D13	28	1000	1000					
W 3	2	D13	12	360	—	154				
F 1	4	D16	4	5000	1150	267	2060	1256		170
F 2	1	D19	4	2400	2400					
F 3	1	D13	24	1000	1000					
F 4	5	D13	8	650	195	255			180	
F 5	3	D13	5	960	—	111	—			

LIST OF REINFORCEMENT

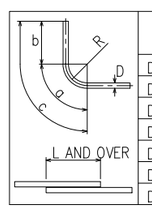
(PER 1m)

MARK	SEC.	LENGTH (mm)	EACH	WEIGHT (kg/m)	WEIGHT/one (kg)	WEIGHT (kg)	REMARKS
S 1	D16	4500	4	1.56	7.020	28.080	
S 2	D19	2400	4	2.25	5.400	21.600	
S 3	D13	1000	24	0.995	0.995	23.880	
S 4	D13	1040	8	0.995	0.995	8.280	
S 5	D13	1000	5	0.995	0.995	4.975	
W 1	D13	1890	8	0.995	1.881	15.048	
W 2	D13	1000	28	0.995	0.995	27.860	
W 3	D13	360	12	0.995	0.358	4.296	
F 1	D16	5000	4	1.56	7.800	31.200	
F 2	D19	2400	4	2.25	5.400	21.600	
F 3	D13	1000	24	0.995	0.995	23.880	
F 4	D13	650	8	0.995	0.647	5.176	
F 5	D13	960	5	0.995	0.955	5.000	

MATERIALS

(PER 1m)

KIND		UNIT	QUANTITY
CONCRETE	TOP	m³	0.780
	SIDE	m³	0.940
	BOTTOM	m³	0.780
	TOTAL	m³	2.500
FORM		m²	8.966
REINFORCING BAR	D19	kg	44
	D16	kg	59
	D13	kg	118
	TOTAL	kg	221
LEVELING CONCRETE (EI) t=100		m²	0.280
FOUNDATION t=200		m²	0.560



D	a (mm)	b (mm)	c (mm)	R (mm)	L (mm)
D13	66	164	230	42	410
D16	75	195	270	48	500
D19	94	236	330	60	600
D22	104	266	370	66	690
D25	122	308	430	78	790
D29	141	349	490	90	910
D32	151	389	540	96	1000

Note1: Size of Box Culvert and Bar Arrangement are based on Standard Drawing of Ministry of Land, Infrastructure, Transport and Tourism of Japan

Note2: Speficication of Steel Reinforcement Bar shall comply with SD345 (JIS G3112) or equivalent

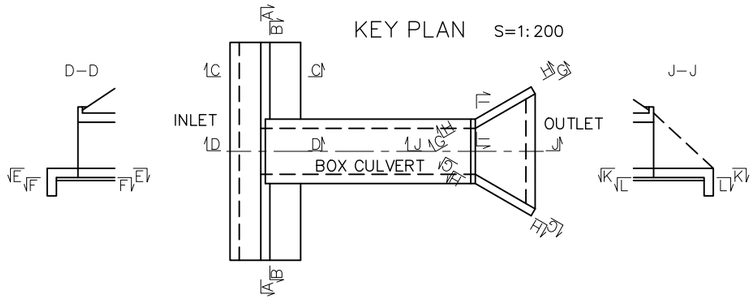
PROJECT NAME	DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT			
FINANCED BY	JAPAN INTERNATIONAL COOPERATION AGENCY			
COUNTERPART	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE			
JICA STUDY TEAM	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.			
	NAME	SIGNATURE	DATE	DRAWING TITLE
PREPARED BY	M. TORIU		15 Jun. 2017	DRAINAGE OUTLET TYPE-B (4) BAR ARRANGEMENT OF BOX CULVERT
CHECKED BY	T. HAYAKAWA		20 Jun. 2017	
APPROVED BY	Y. SANO		21 Jun. 2017	

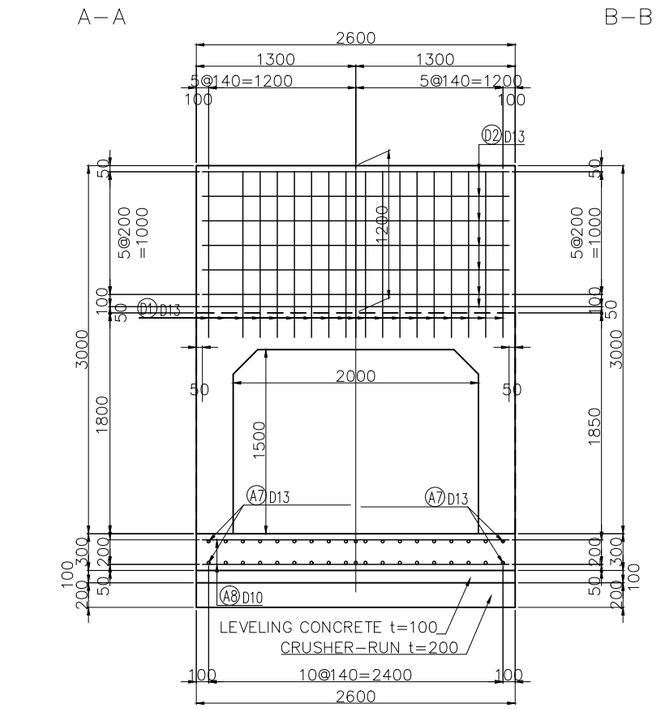
PACKAGE
2
DWG No.
P2-RD-3073

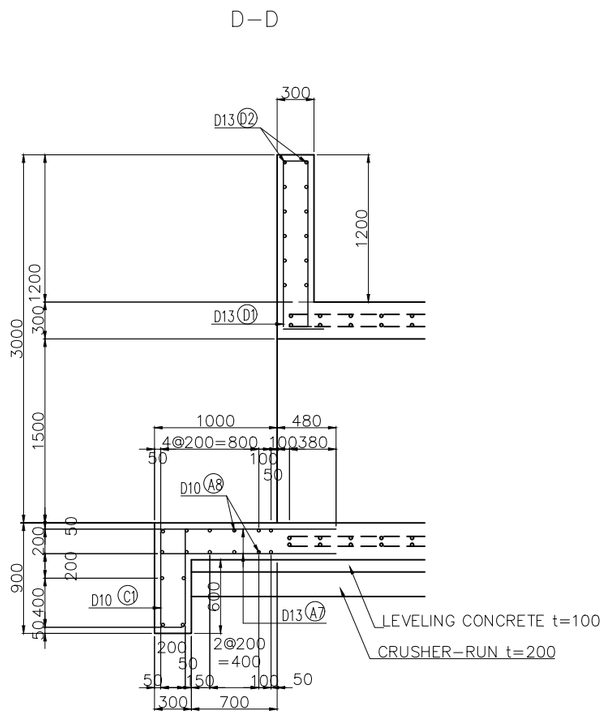
DRAINAGE OUTLET TYPE-B (5)

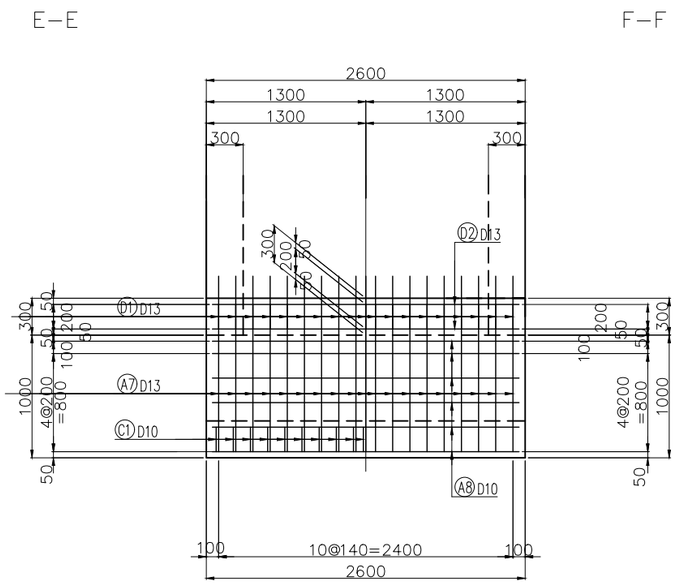
BAR ARRANGEMENT OF INLET S=1:50

(2000x1500)









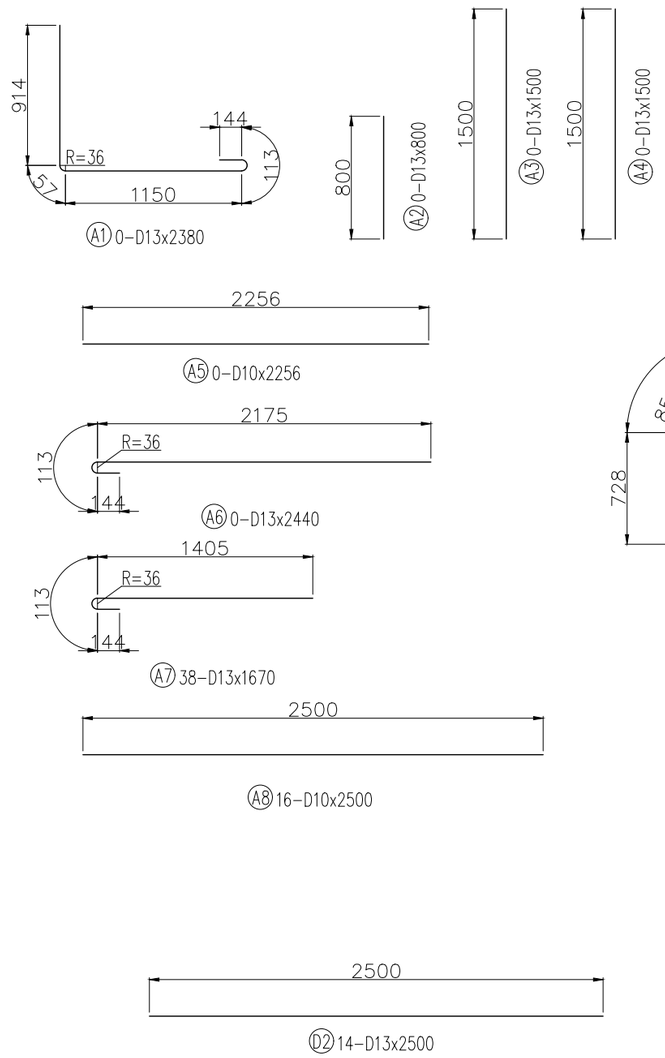
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DRAINAGE OUTLET TYPE-B (5)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3074

DRAINAGE OUTLET TYPE-B (6)

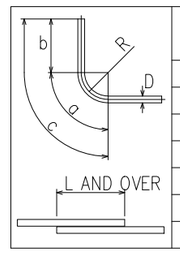
BAR ARRANGEMENT OF INLET S=1:40

INLET



LIST OF REINFORCEMENT(INLET)

MARK	SEC.	LENGTH (mm)	EACH	WEIGHT (kg/m)	WEIGHT/one (kg)	WEIGHT (kg)	REMARKS
A 1	D13	2 380	0	0.995	2.368	0	
A 2	〃	800	0	〃	0.796	0	
A 3	〃	1 500	0	〃	1.493	0	
A 4	〃	1 500	0	〃	1.493	0	
A 5	D10	2 256	0	0.560	1.263	0	
A 6	D13	2 440	0	0.995	2.428	0	
A 7	〃	1 670	38	〃	1.662	63	
A 8	D10	2 500	16	0.560	1.400	22	
C 1	〃	2 300	23	〃	1.288	30	
D 1	D13	3 410	19	0.995	3.393	64	
D 2	〃	2 500	14	〃	2.488	35	
				SUB TOTAL		214 kg	
				D10		52 kg	
				D13		162 kg	
				Total		214 kg	



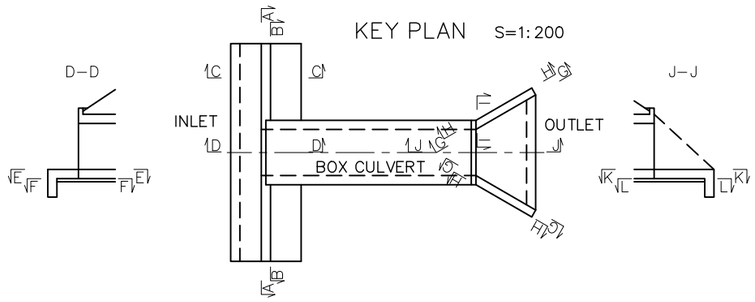
D	a (mm)	b (mm)	c (mm)	R (mm)	L (mm)
D10	47	120	167	30	320
D13	57	144	201	36	380
D16	75	195	270	48	500
D19	94	240	334	60	630

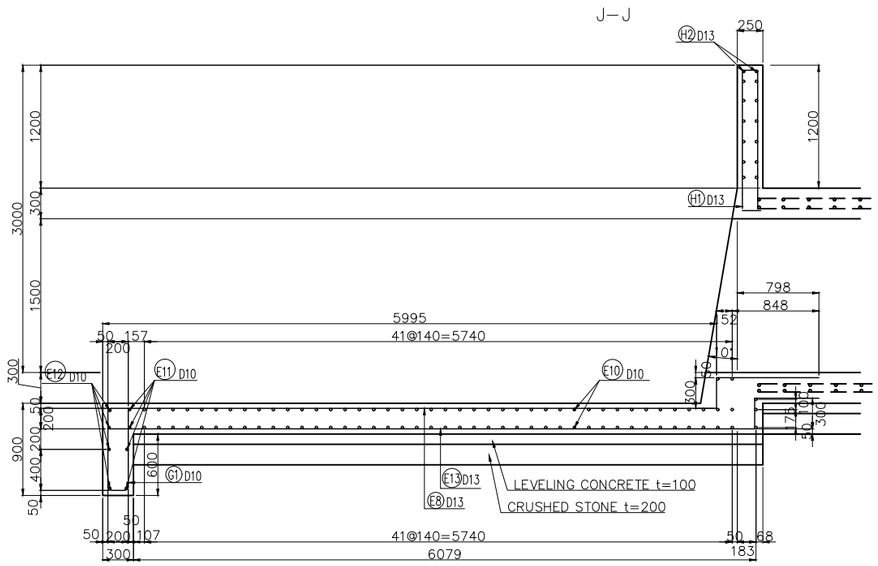
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.			

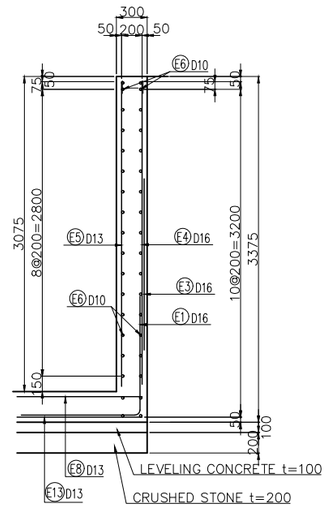
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DRAINAGE OUTLET TYPE-B (6)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3075

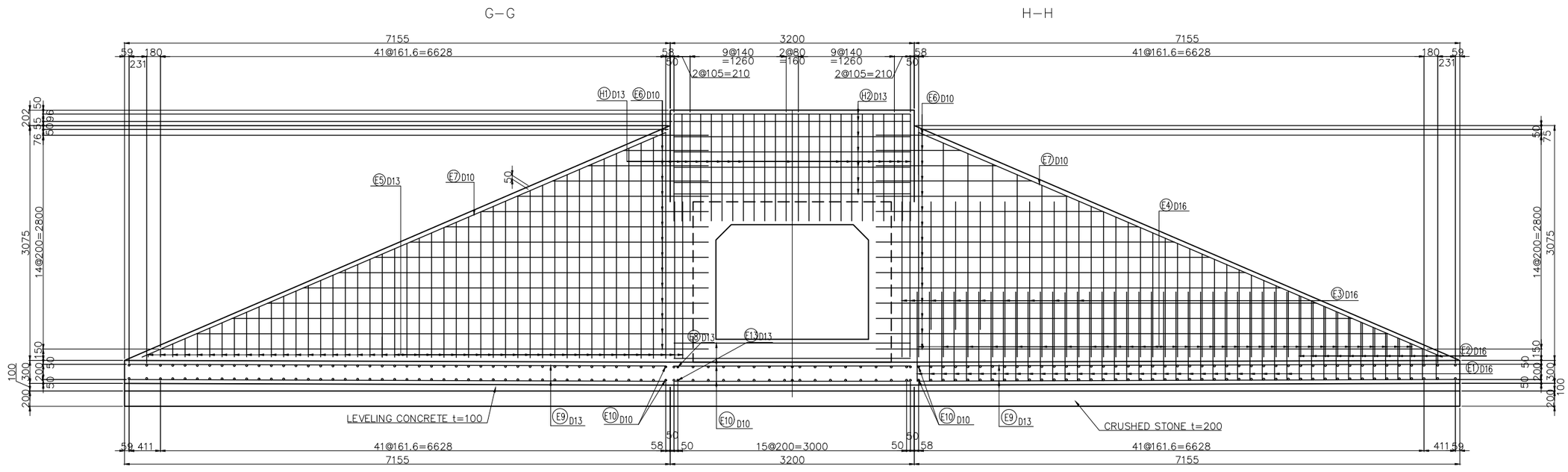
DRAINAGE OUTLET TYPE-B (7)

BAR ARRANGEMENT OF OUTLET S=1:60







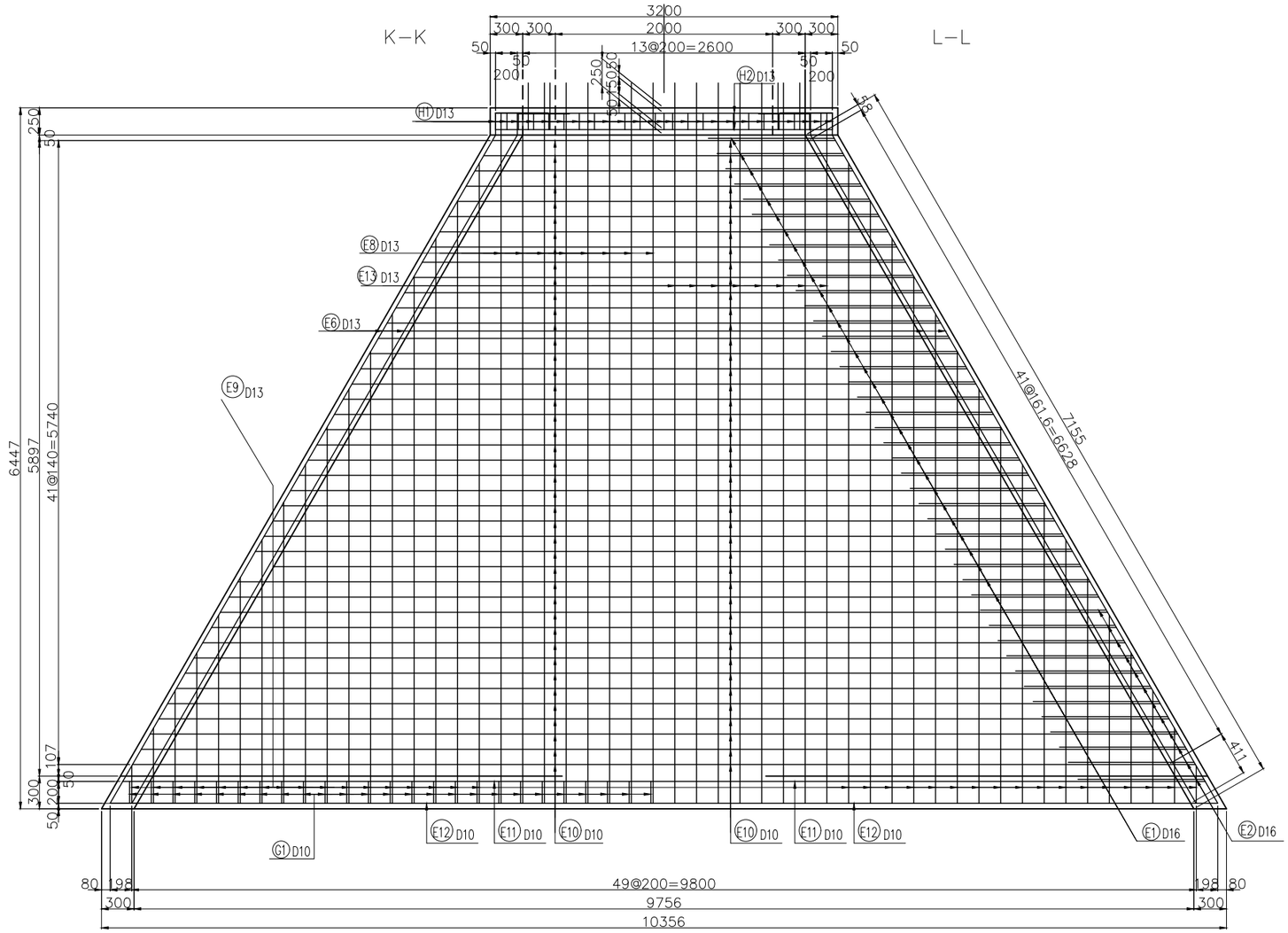


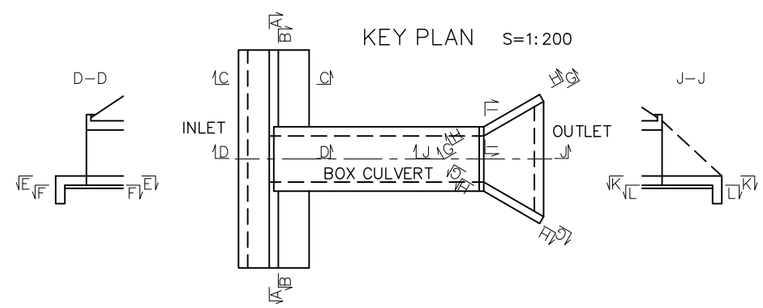
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.			

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DRAINAGE OUTLET TYPE-B (7)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3076

DRAINAGE OUTLET TYPE-B (8)

BAR ARRANGEMENT OF OUTLET S=1:50



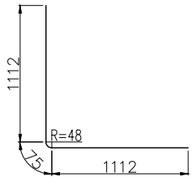


PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.			

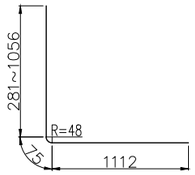
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DRAINAGE OUTLET TYPE-B (8)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3077

DRAINAGE OUTLET TYPE-B (9)

BAR ARRANGEMENT OF OUTLET S=1:50

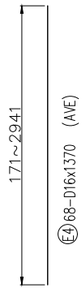


(E1) 62-D16x2300

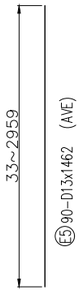


(E2) 24-D16x1837 (AVE)

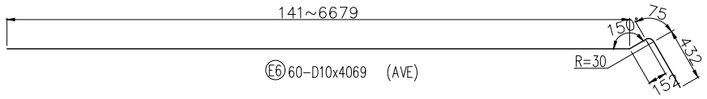
(E3) 18-D16x1672



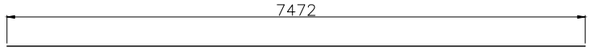
(E4) 68-D16x1370 (AVE)



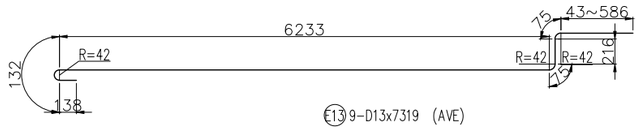
(E5) 90-D13x1462 (AVE)



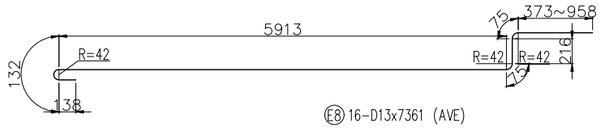
(E6) 60-D10x4069 (AVE)



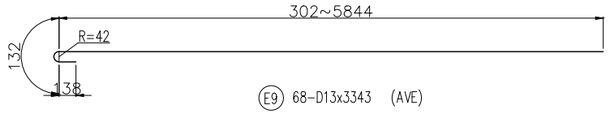
(E7) 4-D10x7472



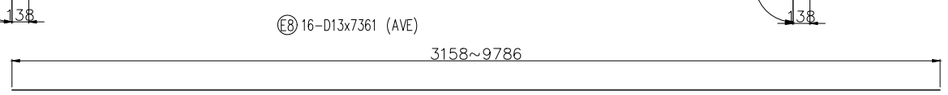
(E13) 9-D13x7319 (AVE)



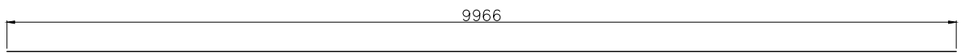
(E8) 16-D13x7361 (AVE)



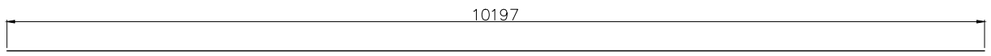
(E9) 68-D13x3343 (AVE)



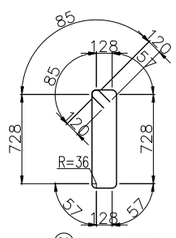
(E10) 89-D10x6282 (AVE)



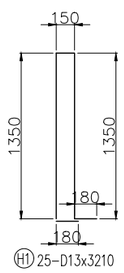
(E11) 4-D10x9966



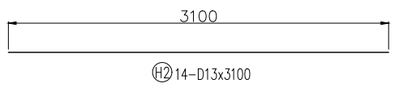
(E12) 4-D10x10197



(G1) 50-D10x2300



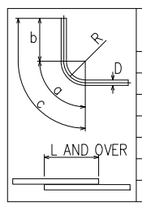
(H1) 25-D13x3210



(H2) 14-D13x3100

LIST OF REINFORCEMENT(INLET)

MARK	SEC.	LENGTH (mm)	EACH	WEIGHT (kg/m)	WEIGHT/one (kg)	WEIGHT (kg)	REMARKS
E 1	D16	2 300	62	1.560	3.588	222	
E 2	〃	1 837	24	〃	2.866	69	(AVE)
E 3	〃	1 672	18	〃	2.608	47	
E 4	〃	1 370	68	〃	2.137	145	(AVE)
E 5	D13	1 462	90	0.995	1.455	131	(AVE)
E 6	D10	4 069	60	0.560	2.279	137	(AVE)
E 7	〃	7 472	4	〃	4.184	17	
E 8	D13	4 880	16	0.995	4.856	78	
E 9	〃	3 363	68	〃	3.346	228	(AVE)
E 10	D10	6 282	89	0.560	3.518	313	(AVE)
E 11	〃	9 966	4	〃	5.581	22	
E 12	〃	10 197	4	〃	5.710	23	
E 13	D13	7 319	16	0.995	7.282	117	
G 1	〃	2 300	50	〃	2.289	114	
H 1	D13	3 210	25	0.995	3.194	80	
H 2	〃	3 100	14	〃	3.085	43	
					SUB TOTAL	1 786	kg
					D10	512	kg
					D13	791	kg
					D16	483	kg
					Total	1 786	kg



D	a (mm)	b (mm)	c (mm)	R (mm)	L (mm)
D10	47	120	167	30	320
D13	66	164	230	42	410
D16	75	195	270	48	500
D19	94	236	330	60	600

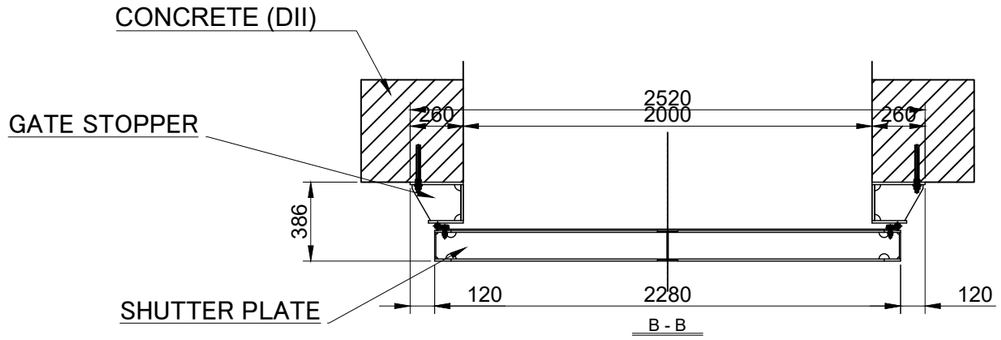
PROJECT NAME	DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT		
FINANCED BY	JAPAN INTERNATIONAL COOPERATION AGENCY		
COUNTERPART	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE		
JICA STUDY TEAM	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

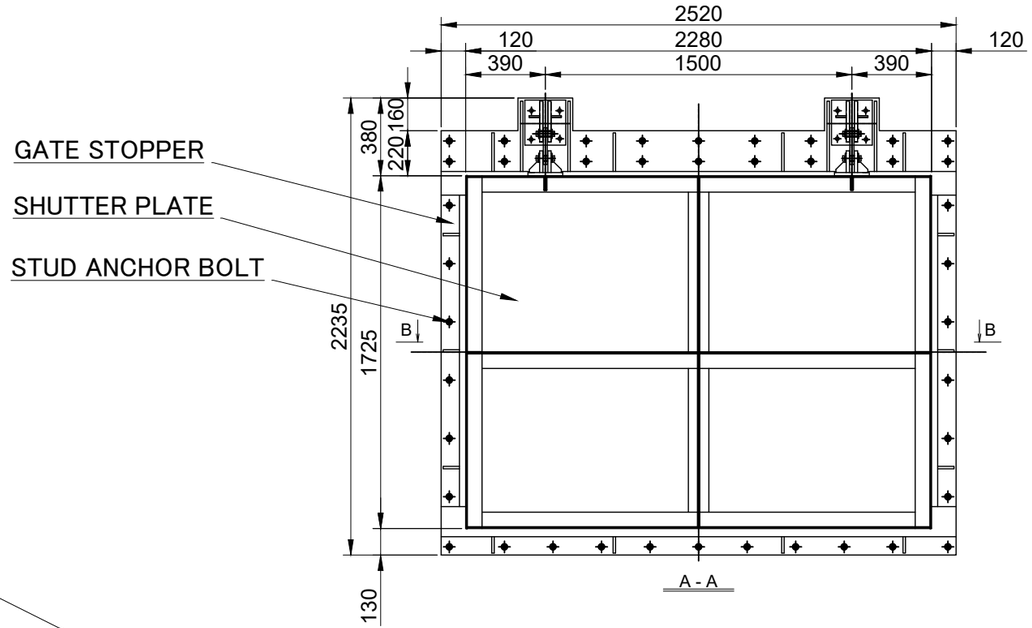
	NAME	SIGNATURE	DATE
PREPARED BY	M. TORIU		15 Jun. 2017
CHECKED BY	T. HAYAKAWA		20 Jun. 2017
APPROVED BY	Y. SANO		21 Jun. 2017

DRAWING TITLE	PACKAGE
DRAINAGE OUTLET TYPE-B (9)	2
	DWG No.
	P2-RD-3078

DRAINAGE OUTLET TYPE-B (10)

DETAIL OF FLAP GATE S=1/30





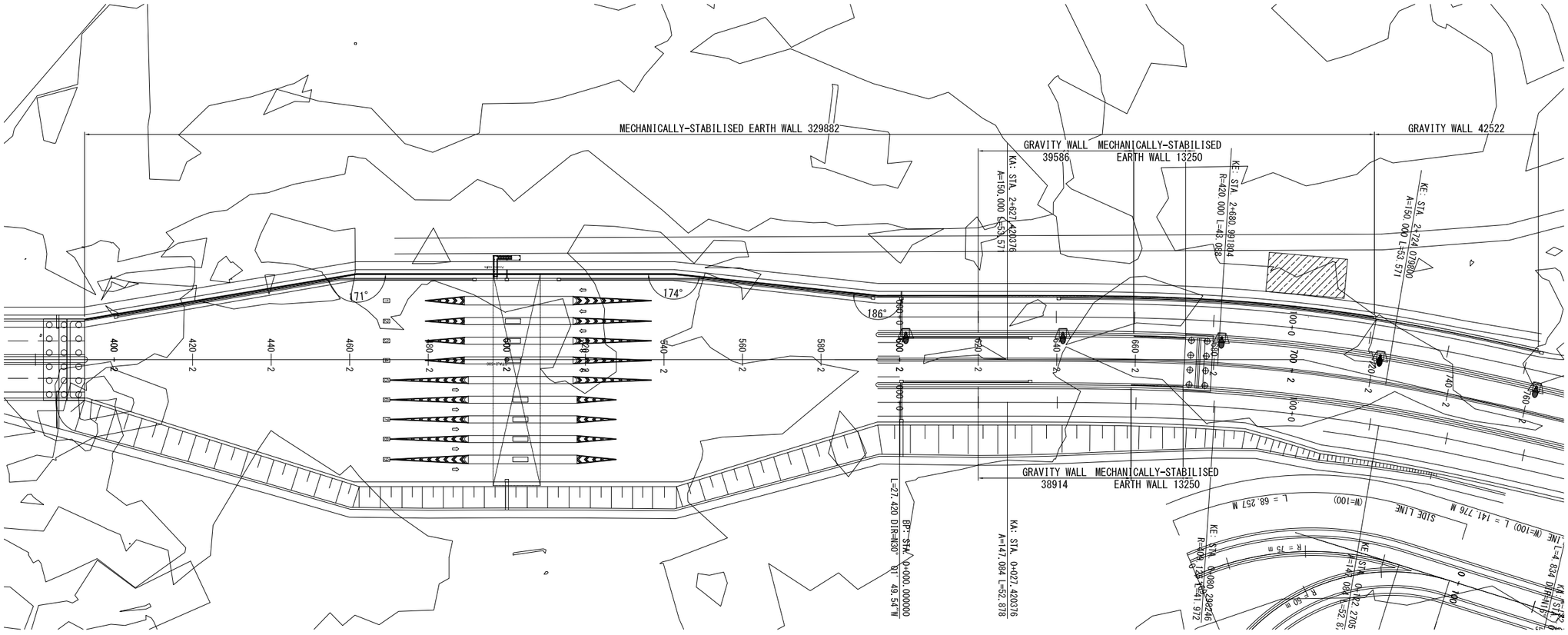
SIDE VIEW

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	M. TORIU		15 Jun. 2017	DRAINAGE OUTLET TYPE-B (10)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-3079

MECHANICALLY STABILISED EARTH WALL(1)

PLAN S=1:600

Toll Plaza~Approach road(STA.2+390~2+760)

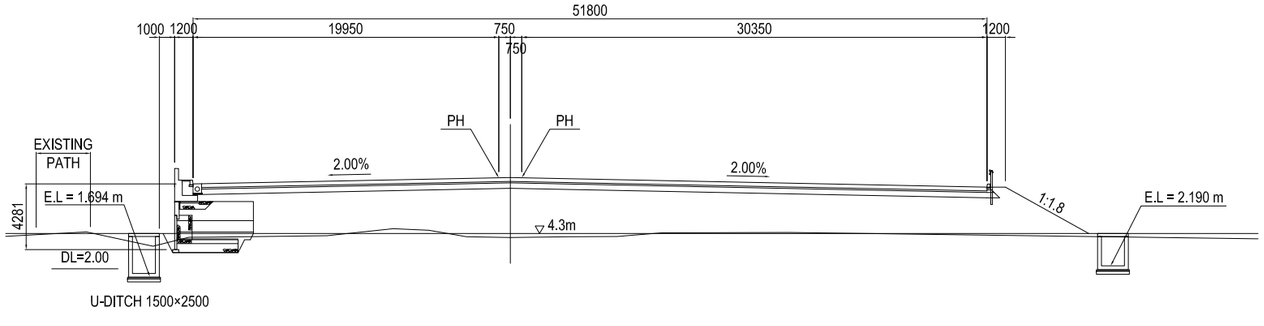


CROSS SCTION S=1:200

Toll Plaza~Approach road(STA.2+388~2+600)

STA.2+480

GH=4.04
PH=7.930



Main Load(STA.2+600~2+672.686)

STA.2+660

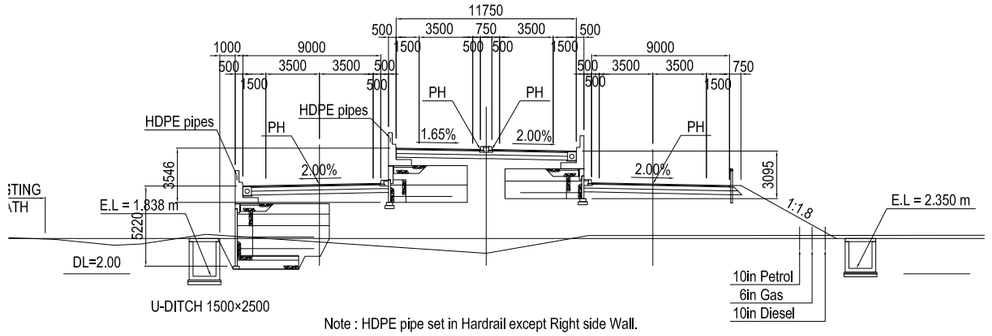
GH=3.33
PH=10.105

STA.0+60.441

PH=7.820

STA.0+56.561

PH=7.856



Note : HDPE pipe set in Hardrail except Right side Wall.

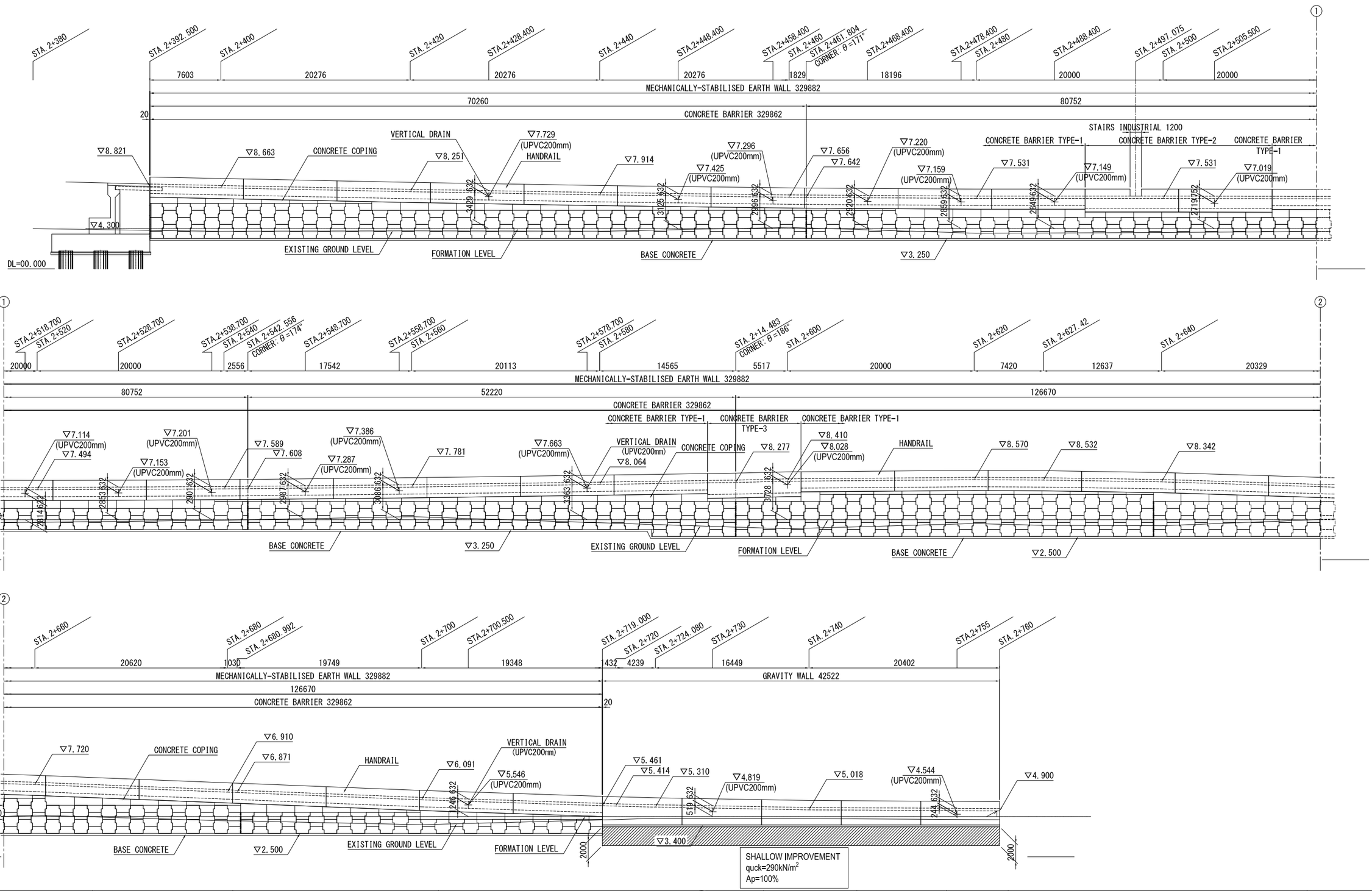
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	MECHANICALLY STABILISED EARTH WALL(1)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4000

MECHANICALLY STABILISED EARTH WALL(2)

LEFT SIDE(DEVELOP FROM BACK SIDE) S=1:200

Toll Plaza~Approach road(STA.2+390~2+760)



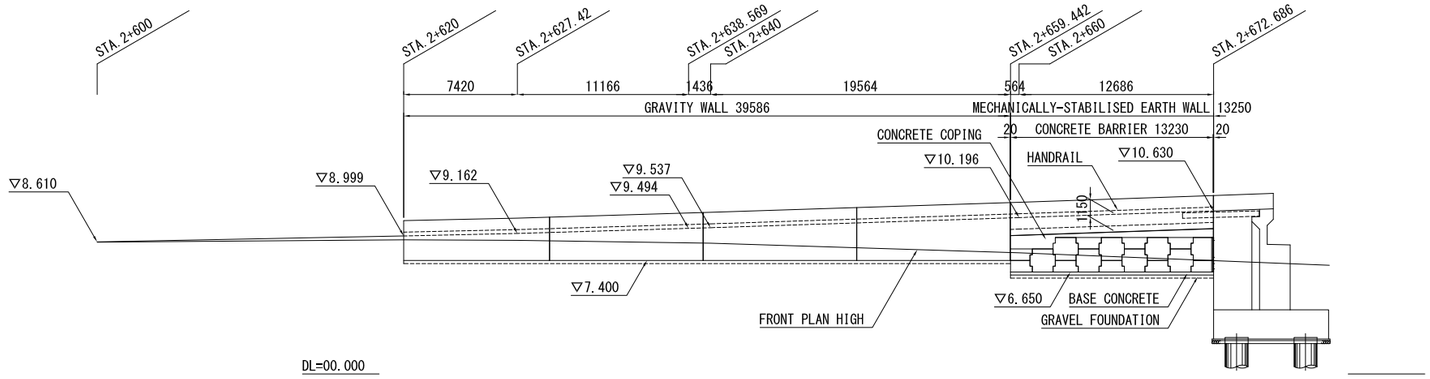
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM		
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	MECHANICALLY STABILISED EARTH WALL(2)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4010

MECHANICALLY STABILISED EARTH WALL(3)

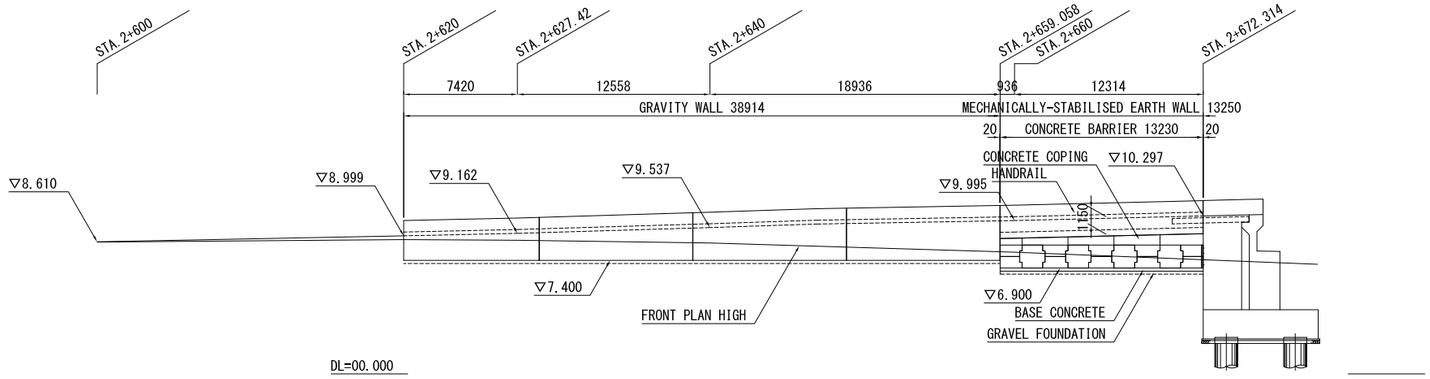
LEFT SIDE(DEVELOP FROM BACK SIDE) S=1:200

Main Load(STA.2+600~2+672.686)



RIGHT SIDE S=1:200

Main road(STA.2+600~2+672.314)



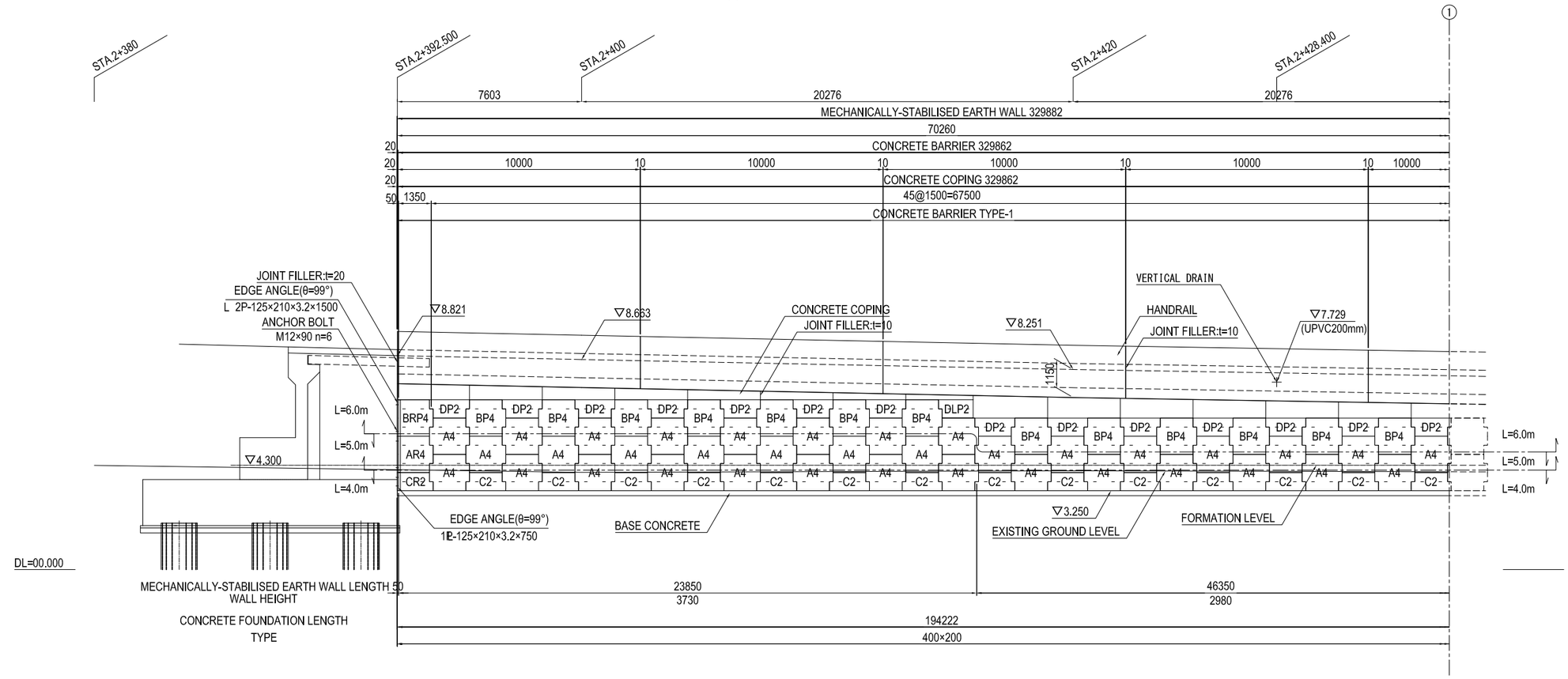
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	MECHANICALLY STABILISED EARTH WALL(3)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4020

MECHANICALLY STABILISED EARTH WALL(4)

LEFT SIDE(DEVELOP FROM BACK SIDE) S=1:200

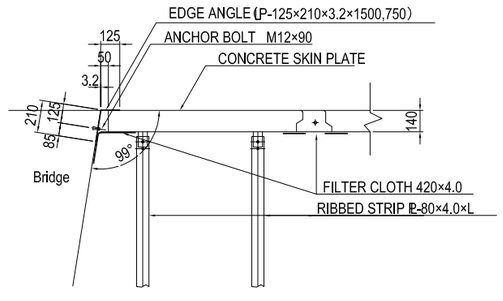
Toll Plaza~Approach road(STA.2+390~2+760)



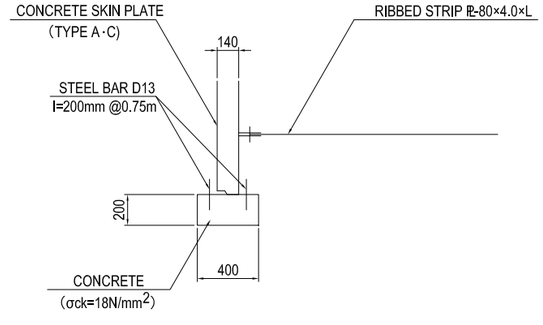
NOTE)

1) The mark "L" indicates the length of steel strip determined by the stability calculation.
2) Wall length indicates the length of wall surface.

EDGE DETAIL DRAWING S=1:40



CONCRETE FOUNDATION DRAWING S=1:40



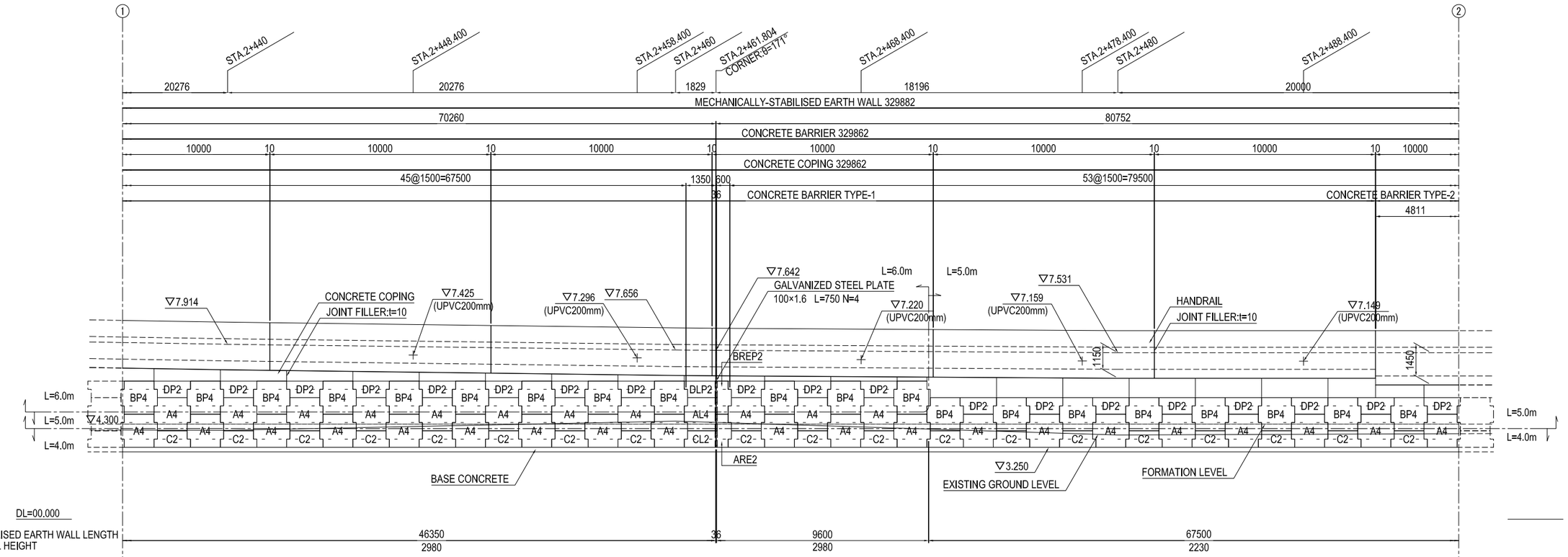
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	MECHANICALLY STABILISED EARTH WALL(4)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4030

MECHANICALLY STABILISED EARTH WALL(5)

LEFT SIDE(DEVELOP FROM BACK SIDE) S=1:200

Toll Plaza~Approach road(STA.2+390~2+760)

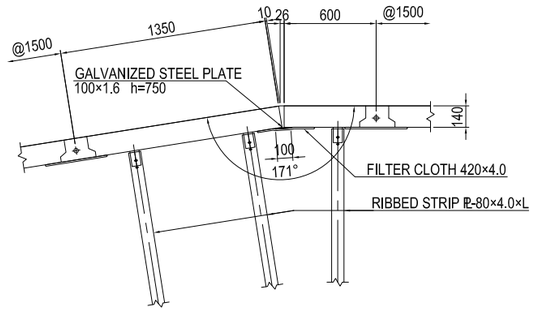


DL=00.000			
MECHANICALLY-STABILISED EARTH WALL LENGTH	46350	36	9600 / 67500
WALL HEIGHT	2980		2980 / 2230
CONCRETE FOUNDATION LENGTH	194222		
TYPE	400×200		

NOTE)
1) The mark "L" indicates the length of steel strip determined by the stability calculation.
2) Wall length indicates the length of wall surface.

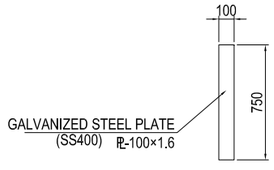
JOINT DETAIL DRAWING S=1:40

(θ=171°)



GALVANIZED STEEL PLATE S=1:40

FRONT VIEW DRAWING



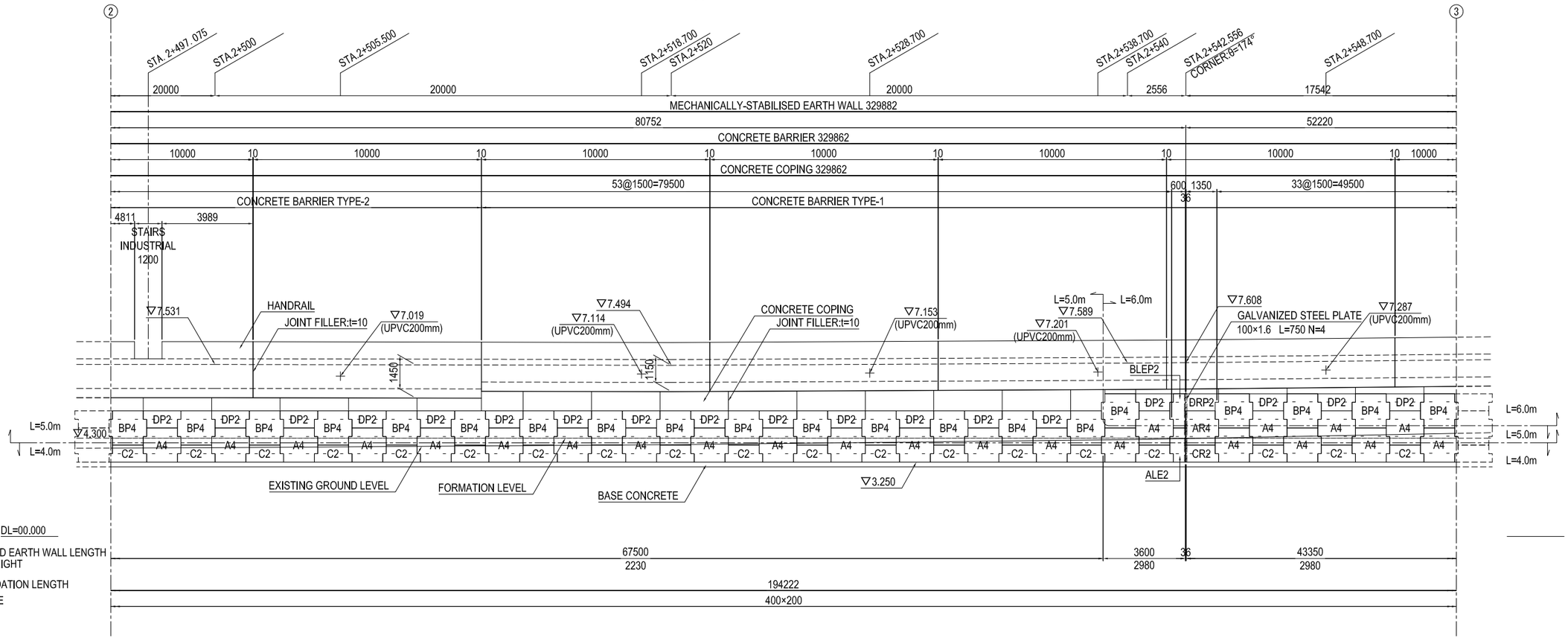
CROSS SECTION

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM		NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	PREPARED BY	J.TSUCHIYA	土屋 潤	15 Jun. 2017	MECHANICALLY STABILISED EARTH WALL(5)	2
				CHECKED BY	T. HAYAKAWA	早川 知邦	20 Jun. 2017		DWG No.
				APPROVED BY	Y. SANO	佐野 祐一	21 Jun. 2017		P2-RD-4040

MECHANICALLY STABILISED EARTH WALL(6)

LEFT SIDE(DEVELOP FROM BACK SIDE) S=1:200

Toll Plaza~Approach road(STA.2+390~2+760)

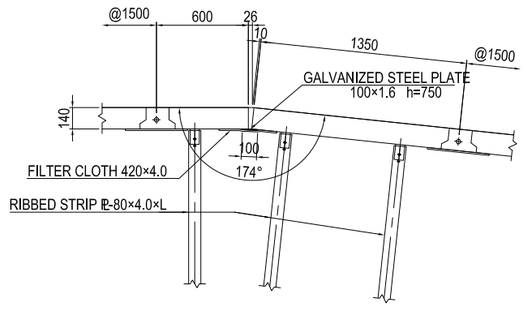


DL=00.000			
MECHANICALLY-STABILISED EARTH WALL LENGTH	67500	3600	43350
WALL HEIGHT	2230	2980	2980
CONCRETE FOUNDATION LENGTH	194222		
TYPE	400×200		

NOTE)
1) The mark "L" indicates the length of steel strip determined by the stability calculation.
2) Wall length indicates the length of wall surface.

JOINT DETAIL DRAWING S=1:40

(θ=174°)



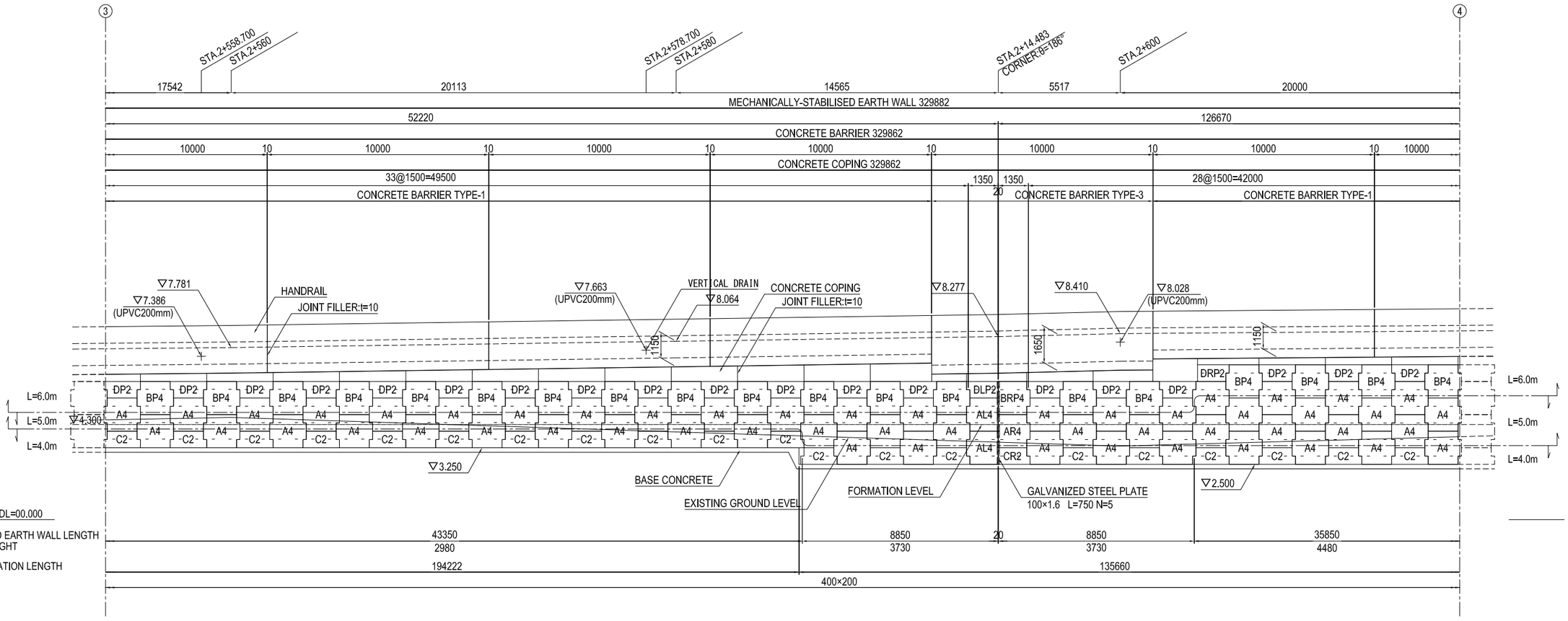
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	MECHANICALLY STABILISED EARTH WALL(6)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4050

MECHANICALLY STABILISED EARTH WALL(7)

LEFT SIDE(DEVELOP FROM BACK SIDE) S=1:200

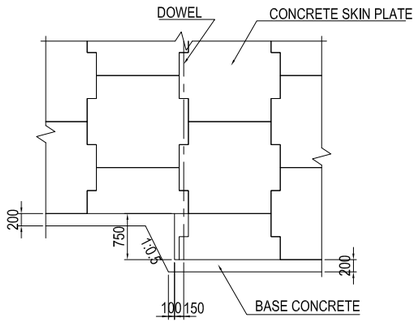
Toll Plaza~Approach road(STA.2+390~2+760)



NOTE)

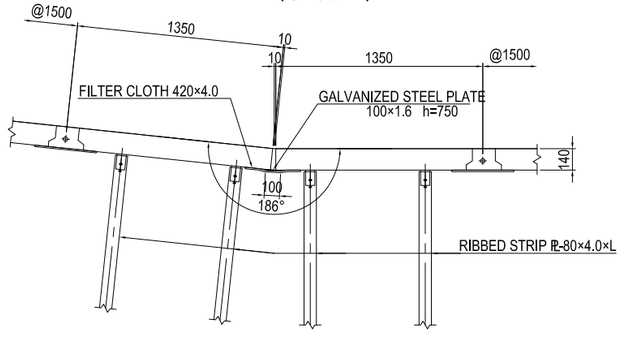
1) The mark "L" indicates the length of steel strip determined by the stability calculation.
2) Wall length indicates the length of wall surface.

STEP DETAIL DRAWING S=1:100



JOINT DETAIL DRAWING S=1:40

(θ=186°)



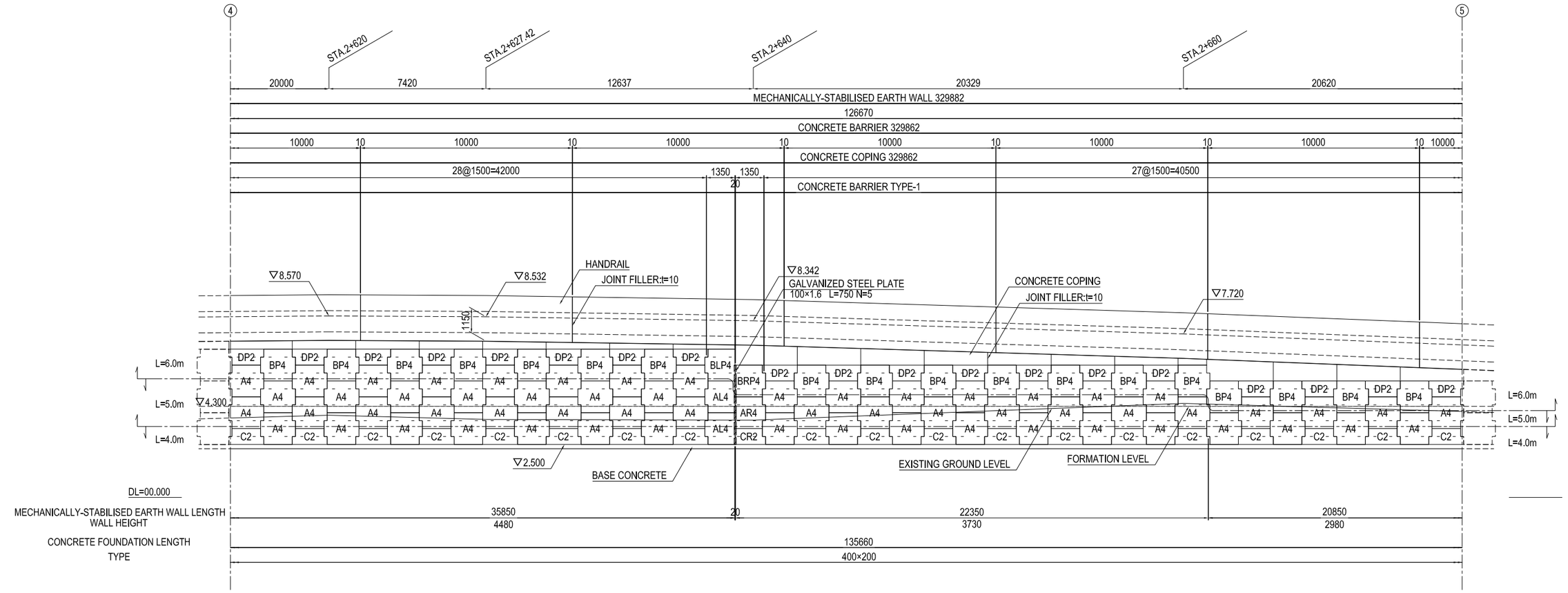
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	MECHANICALLY STABILISED EARTH WALL(7)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4060

MECHANICALLY STABILISED EARTH WALL(8)

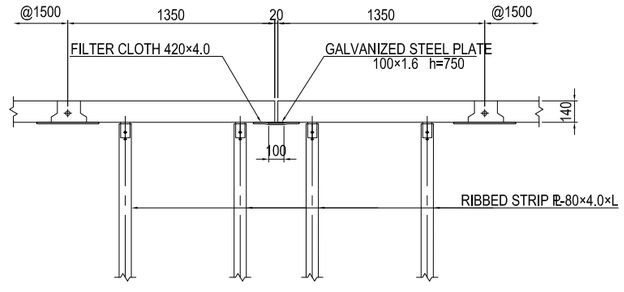
LEFT SIDE(DEVELOP FROM BACK SIDE) S=1:200

Toll Plaza~Approach road(STA.2+390~2+760)



NOTE)
1) The mark "L" indicates the length of steel strip determined by the stability calculation.
2) Wall length indicates the length of wall surface.

JOINT DETAIL DRAWING S=1:40



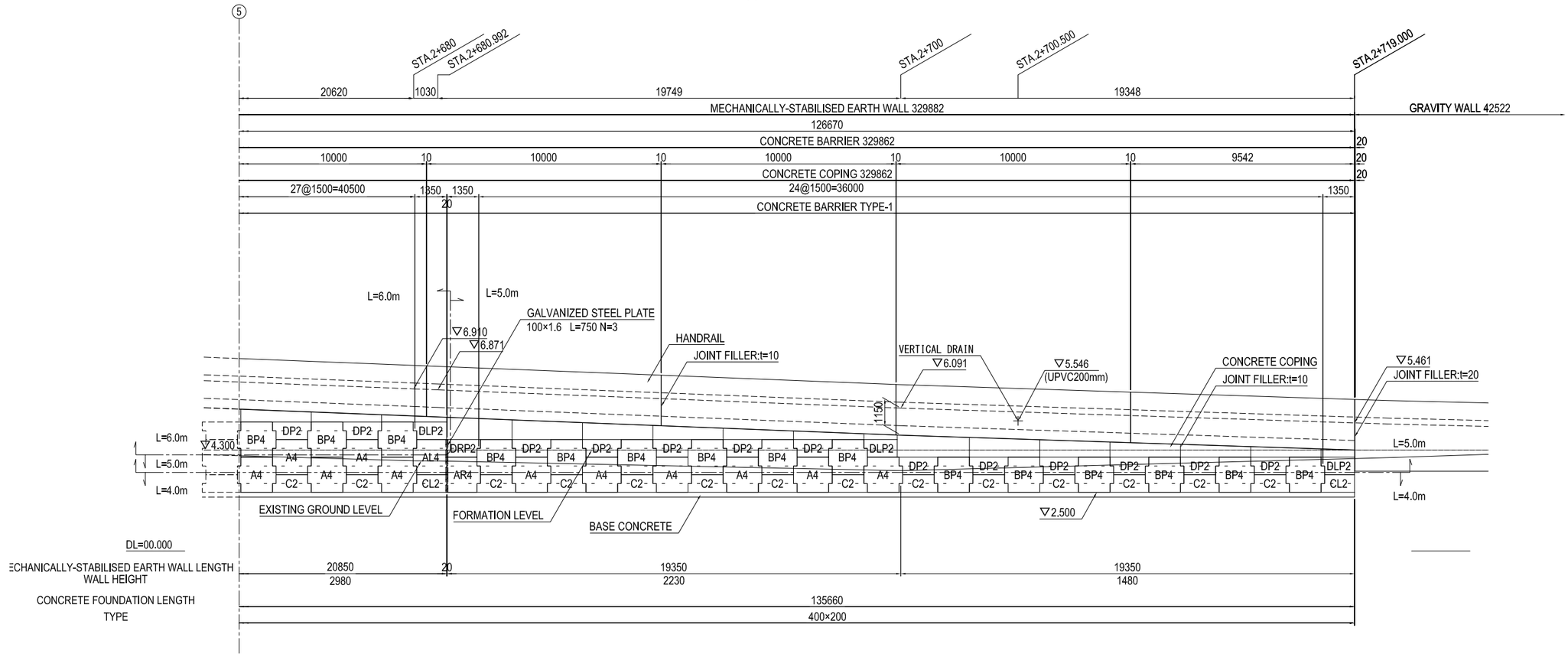
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	MECHANICALLY STABILISED EARTH WALL(8)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4070

MECHANICALLY STABILISED EARTH WALL(9)

LEFT SIDE(DEVELOP FROM BACK SIDE) S=1:200

Toll Plaza~Approach road(STA.2+390~2+760)



NOTE)

1) The mark "L" indicates the length of steel strip determined by the stability calculation.
2) Wall length indicates the length of wall surface.

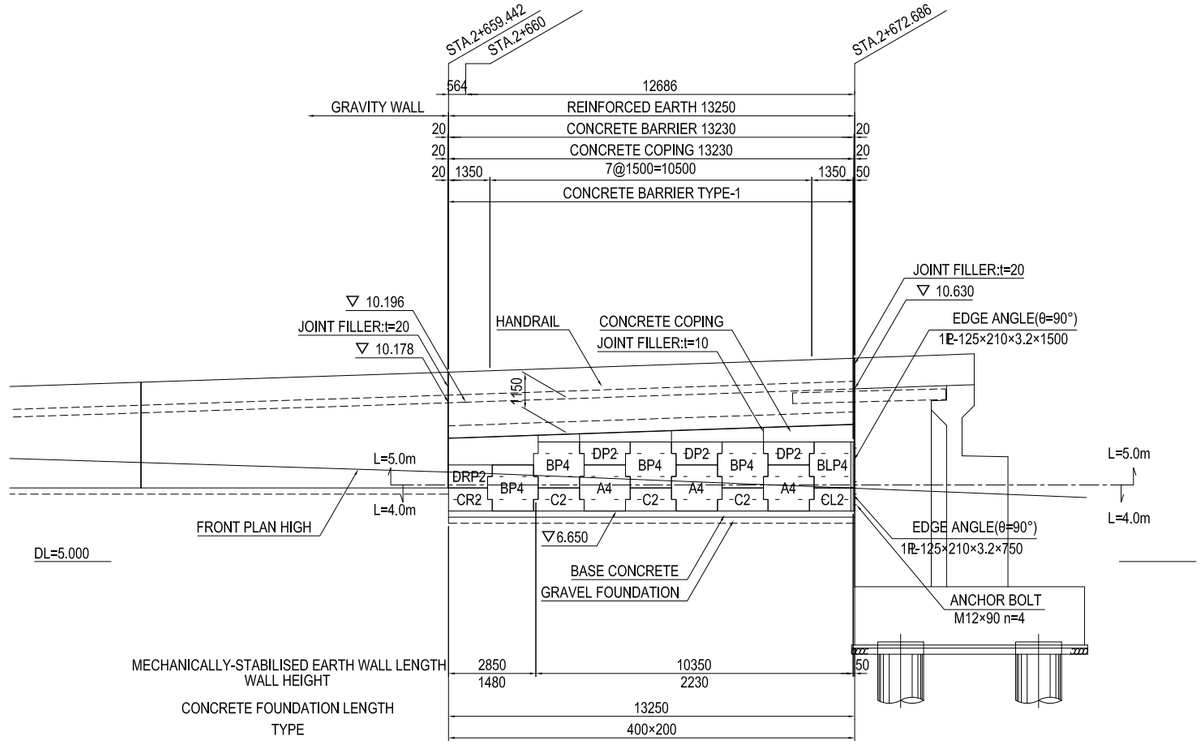
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	MECHANICALLY STABILISED EARTH WALL(9)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4080

MECHANICALLY STABILISED EARTH WALL(10)

LEFT SIDE(DEVELOP FROM BACK SIDE) S=1:200

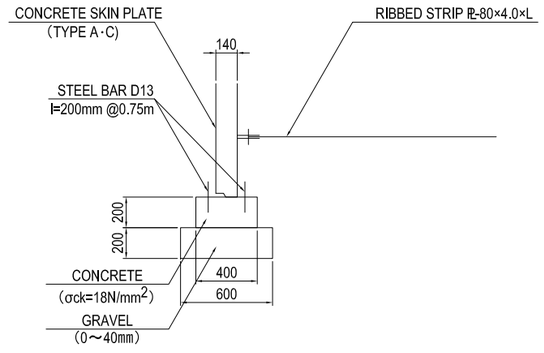
Main Load(STA.2+600~2+672.686)



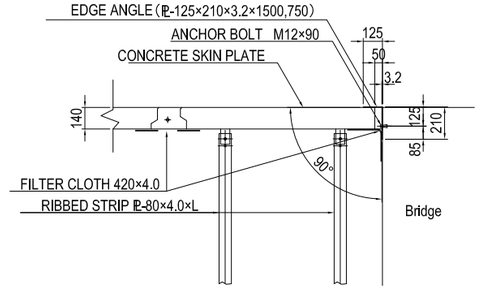
NOTE)

1) The mark "L" indicates the length of steel strip determined by the stability calculation.
2) Wall length indicates the length of wall surface.

CONCRETE FOUNDATION DRAWING S=1:40



EDGE DETAIL DRAWING S=1:40



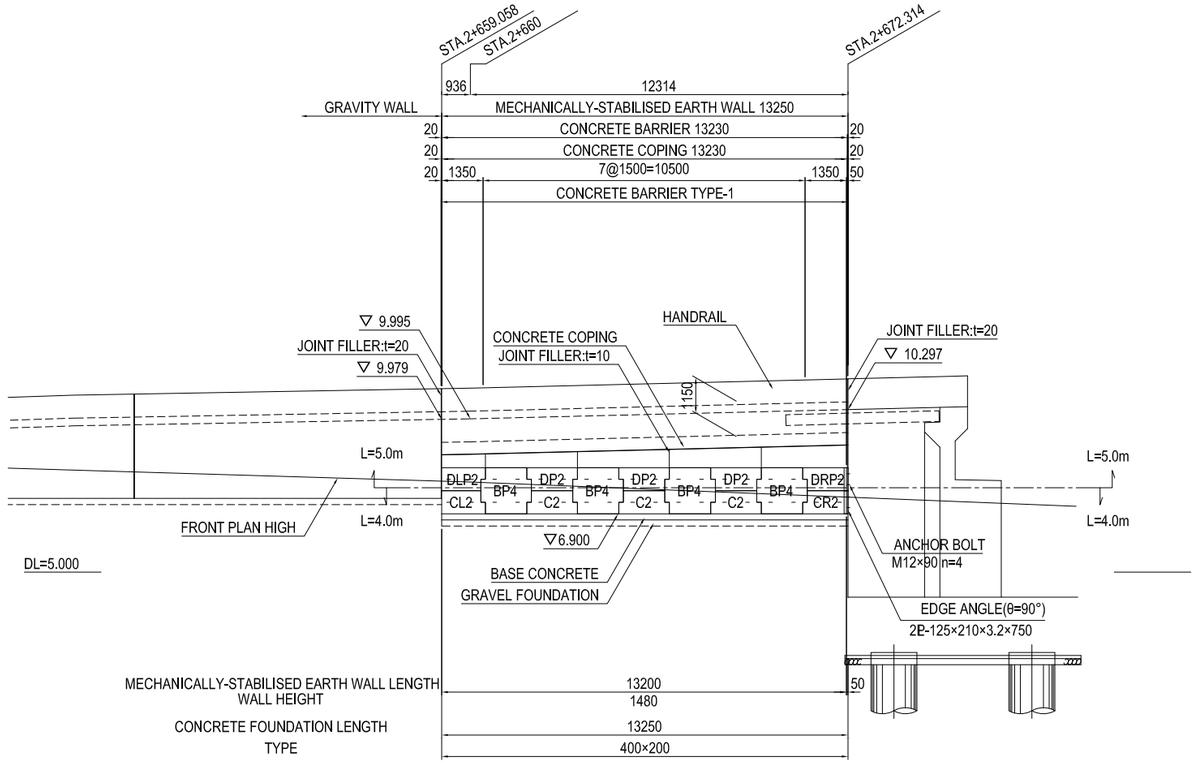
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	MECHANICALLY STABILISED EARTH WALL(10)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4090

MECHANICALLY STABILISED EARTH WALL(11)

RIGHT SIDE S=1:200

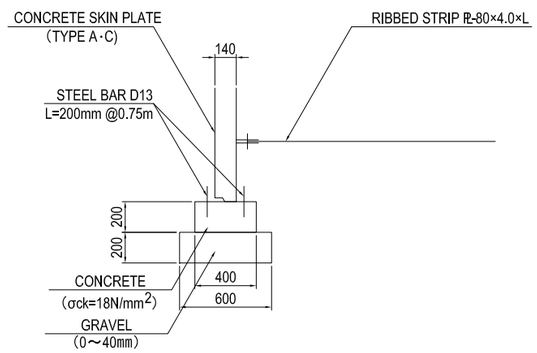
Main road(STA.2+600~2+672.314)



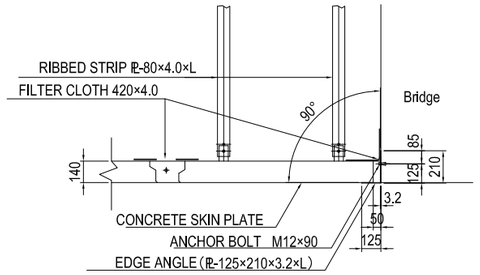
NOTE)

1) The mark "L" indicates the length of steel strip determined by the stability calculation.
2) Wall length indicates the length of wall surface.

CONCRETE FOUNDATION DRAWING S=1:40



EDGE DETAIL DRAWING S=1:40

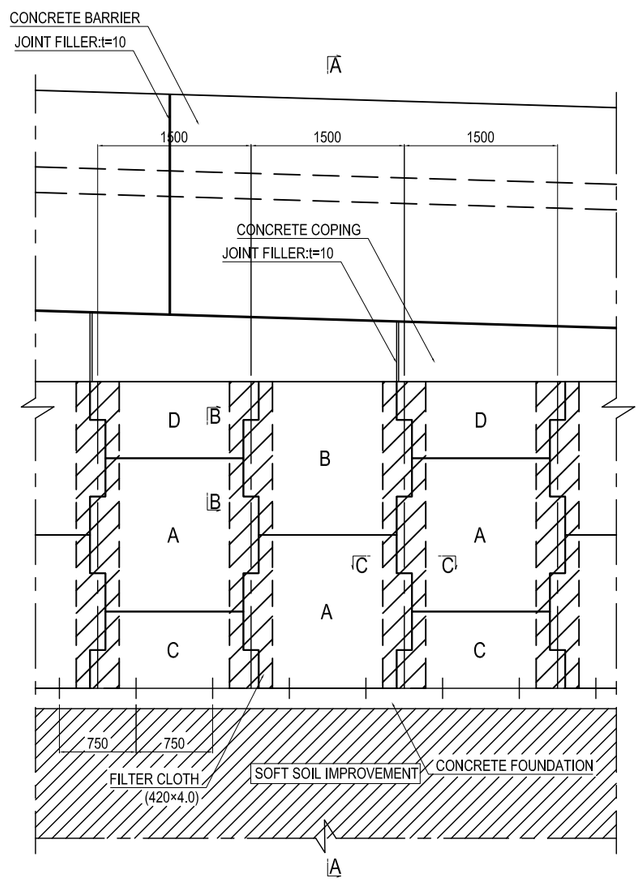


PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

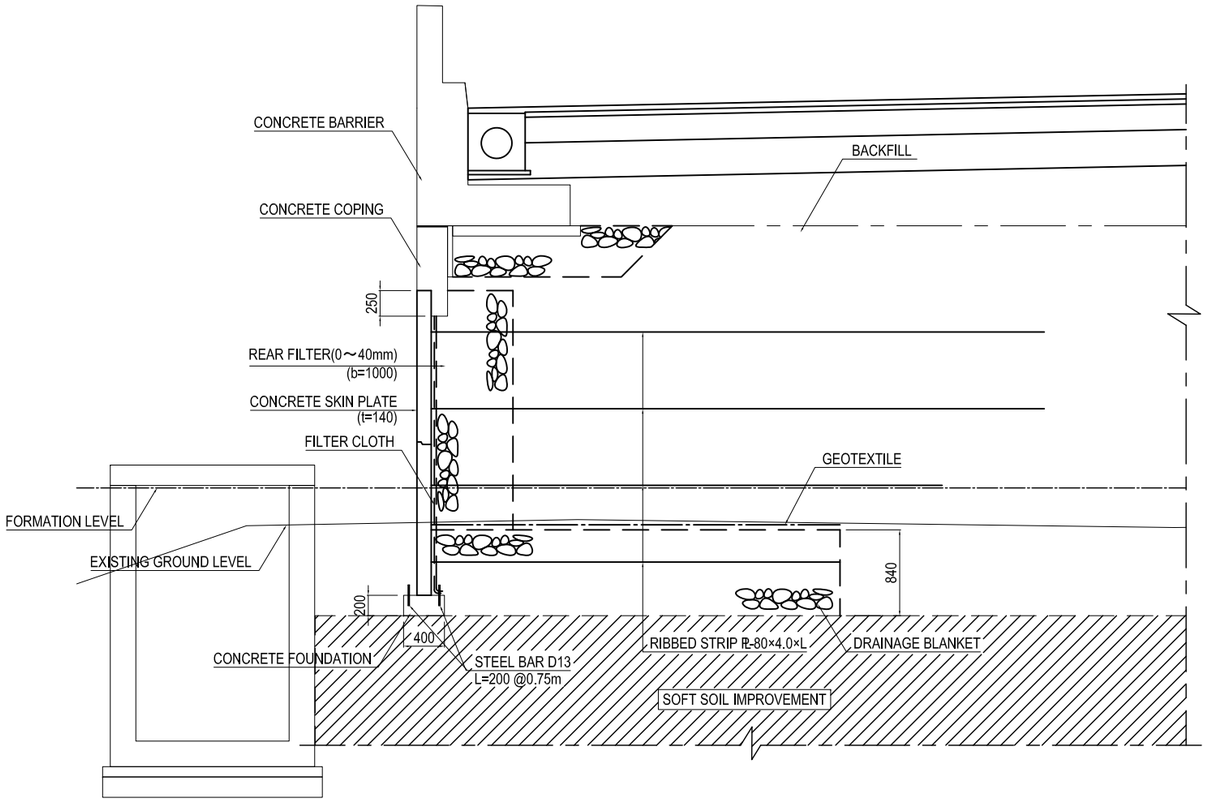
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	MECHANICALLY STABILISED EARTH WALL(11)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4100

DETAIL OF MECHANICALLY STABILISED EARTH WALL(1)

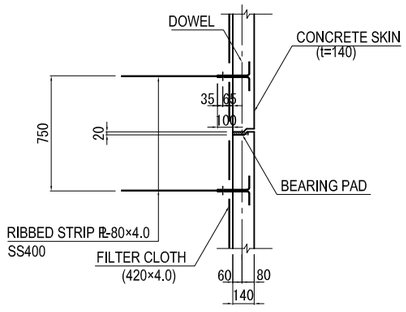
SKIN ARRANGEMENT S=1:60



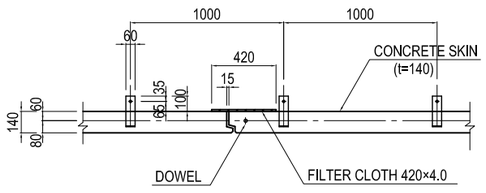
A-A CROSS SECTION S=1:60



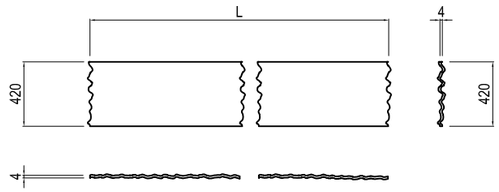
B-B CROSS SECTION S=1:40



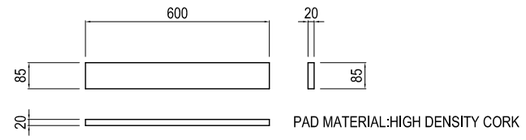
C-C CROSS SECTION S=1:40



FILTER CLOTH S=1:40



BEARING PAD S=1:20



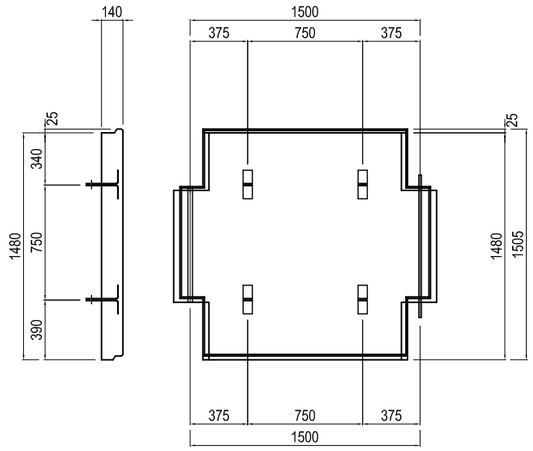
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM	
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	DETAIL OF MECHANICALLY STABILISED EARTH WALL(1)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4110

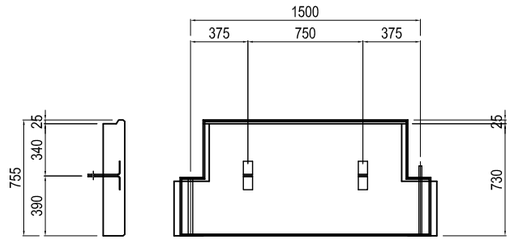
DETAIL OF MECHANICALLY STABILISED EARTH WALL(2)

TYPE OF CONCRETE SKIN S=1:40

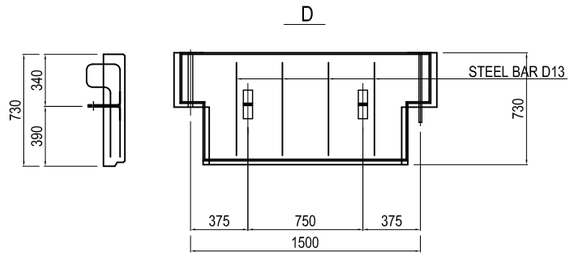
A

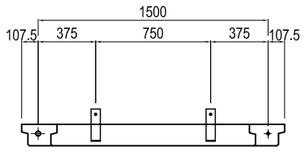


C

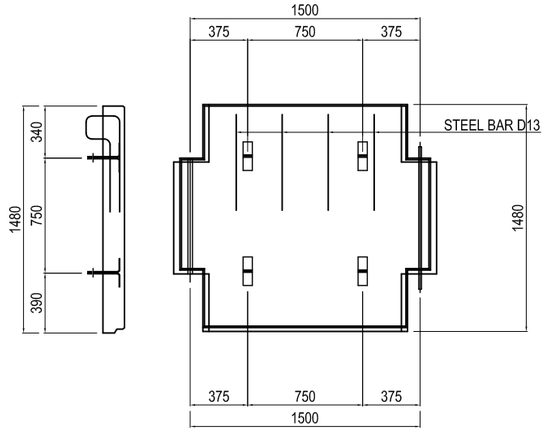


D

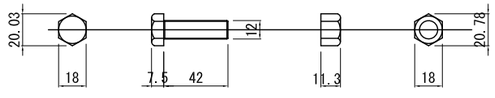




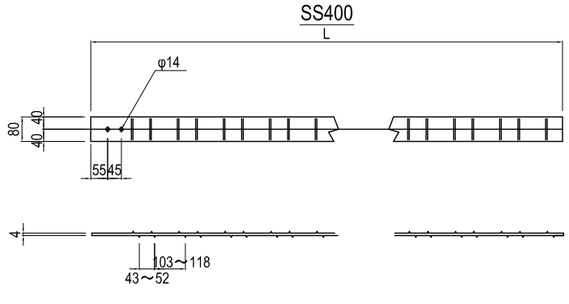
B



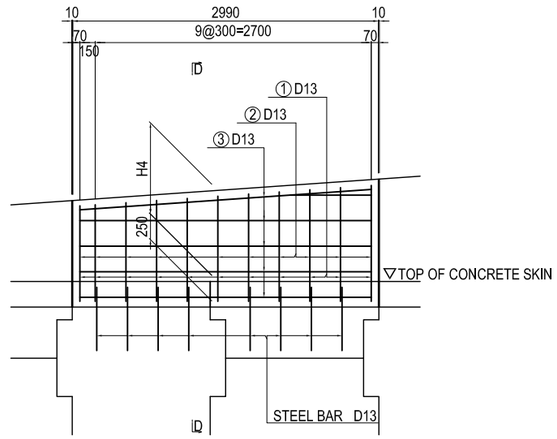
BOLT NUT（M12×40） S=1:4



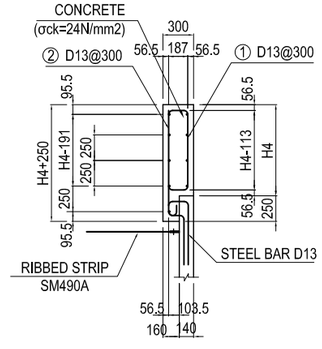
RIBBED STRIP S=1:20



COPING REINFORCEMENT S=1:60

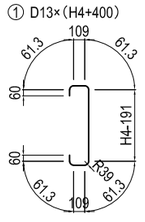


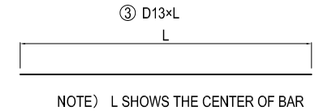
D-D CROSSSECTION



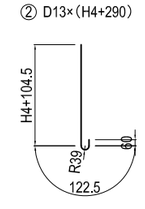
NOTE)"H4" IS THE HIGH
OF COPING REINFORCEMENT

BAR SCHEDULING





NOTE） L SHOWS THE CENTER OF BAR



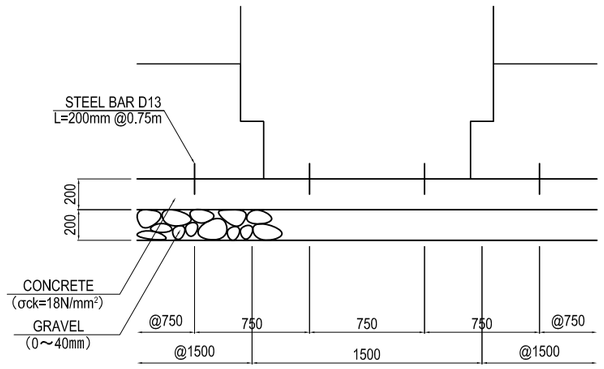
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM	
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	DETAIL OF MECHANICALLY STABILISED EARTH WALL(2)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4120

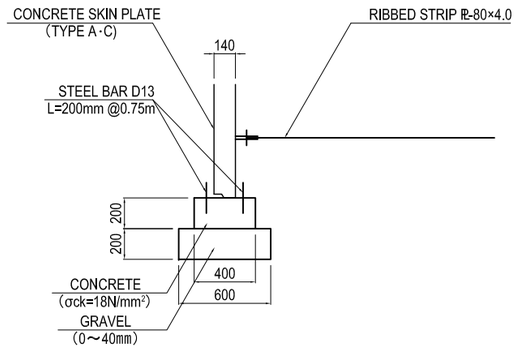
DETAIL OF MECHANICALLY STABILISED EARTH WALL(3)

CONCRETE FOUNDATION DRAWING S=1:40

FRONT VIEW DRAWING



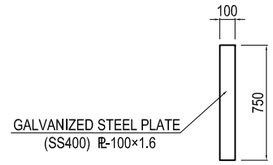
CROSS SECTION



NOTE) 1. FOUNDATION WORK OF TOP FINISH:TROWEL FINISH

GALVANIZED STEEL PLATE S=1:40

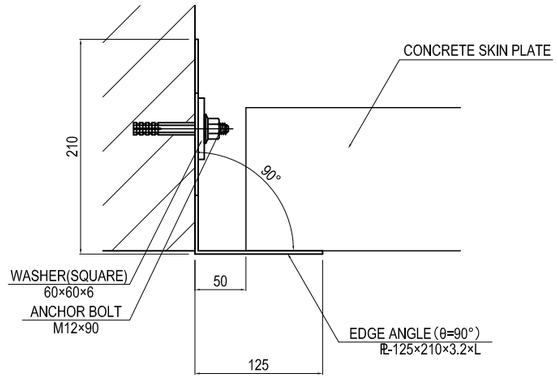
FRONT VIEW DRAWING



CROSS SECTION

EDGE DETAIL DRAWING

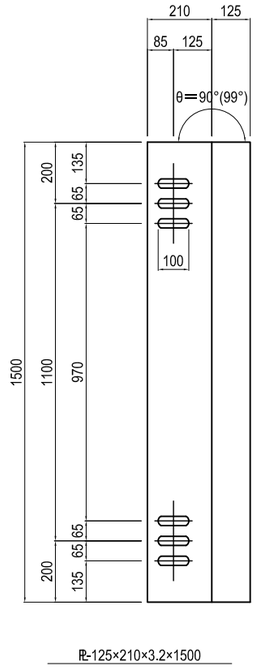
CROSS SECTION S=1:6



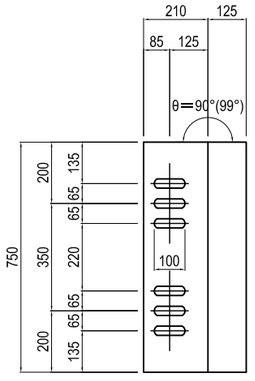
NOTE) 1. BOLT IT IS USED TWO PER ONE EDGE ANGLE

EDGE ANGLE BRACKET S=1:20

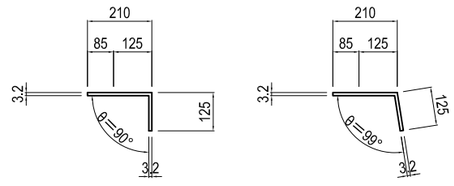
L=1500



L=750



PL-125×210×3.2×750

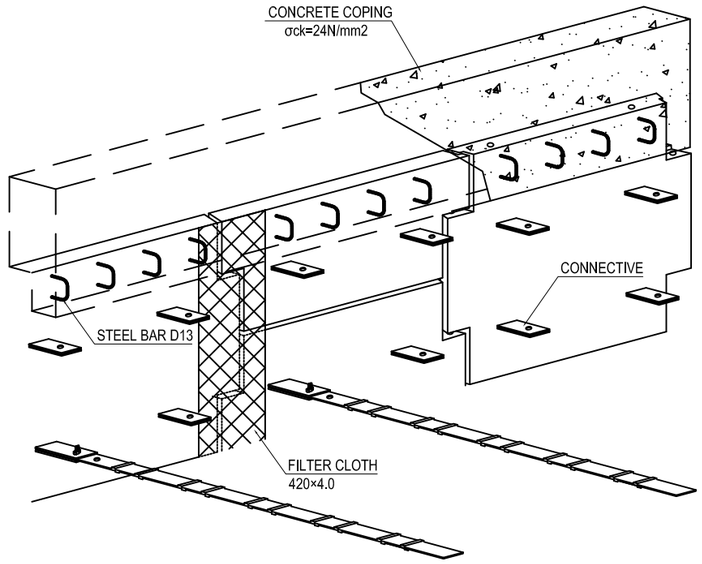


PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM	
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

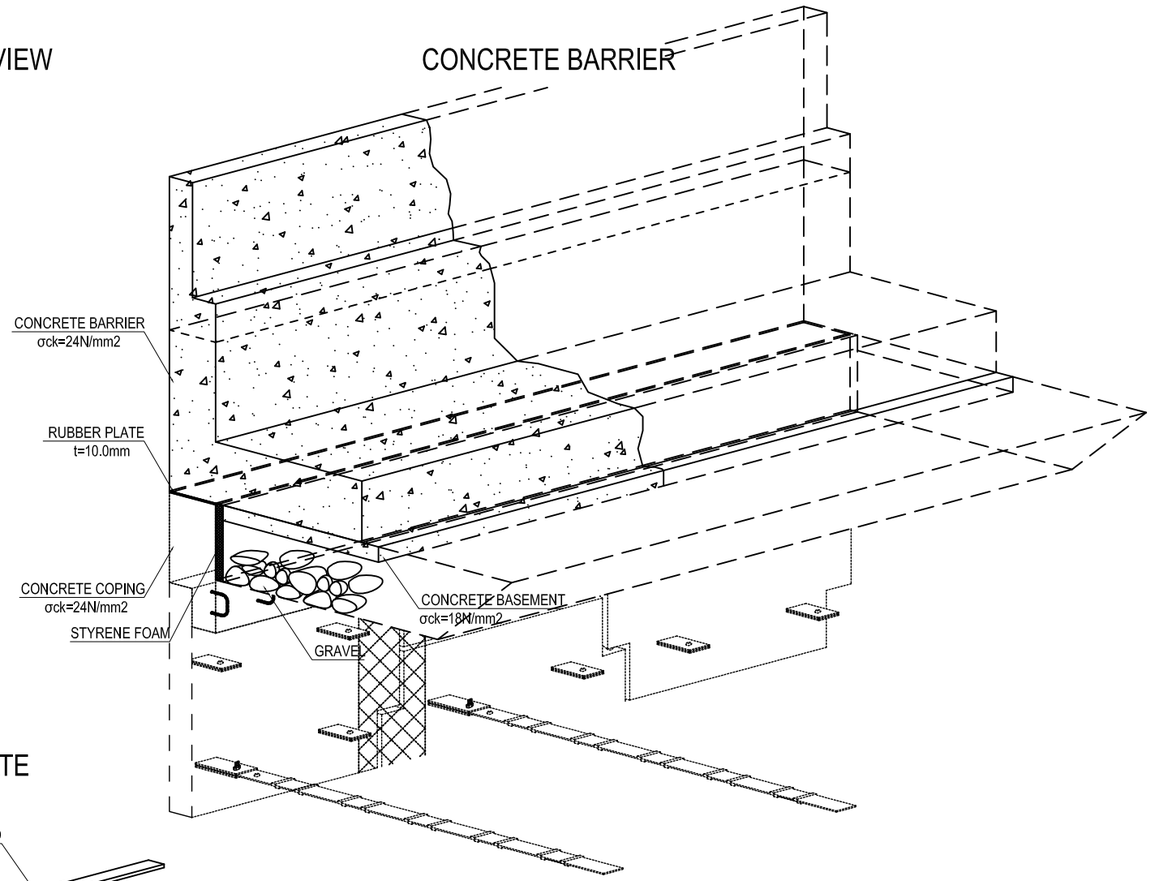
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	DETAIL OF MECHANICALLY STABILISED EARTH WALL(3)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4130

DETAIL OF MECHANICALLY STABILISED EARTH WALL(4)

CONCRETE COPING

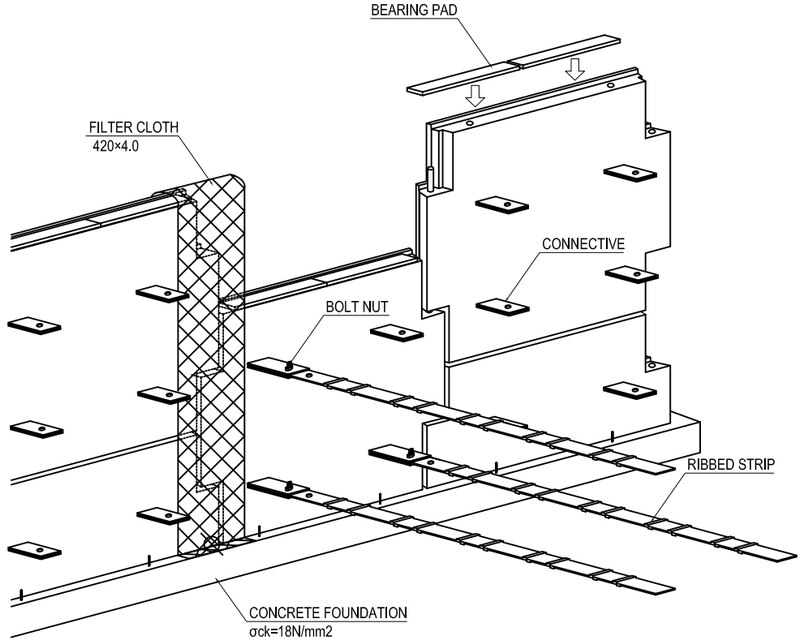


BIRD'S EYE VIEW



CONCRETE BARRIER

CONCRETE SKIN PLATE



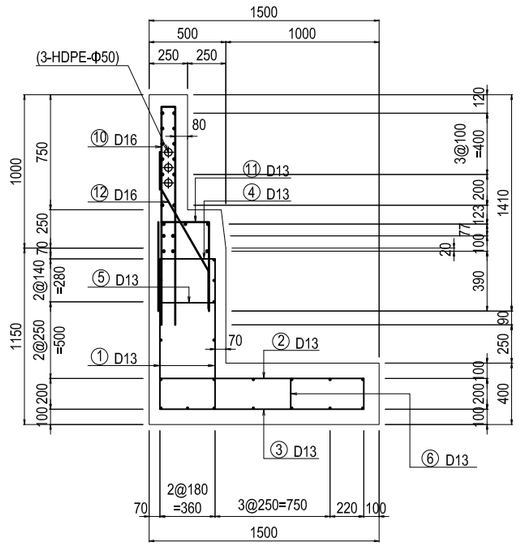
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	DETAIL OF MECHANICALLY STABILISED EARTH WALL(4)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4140

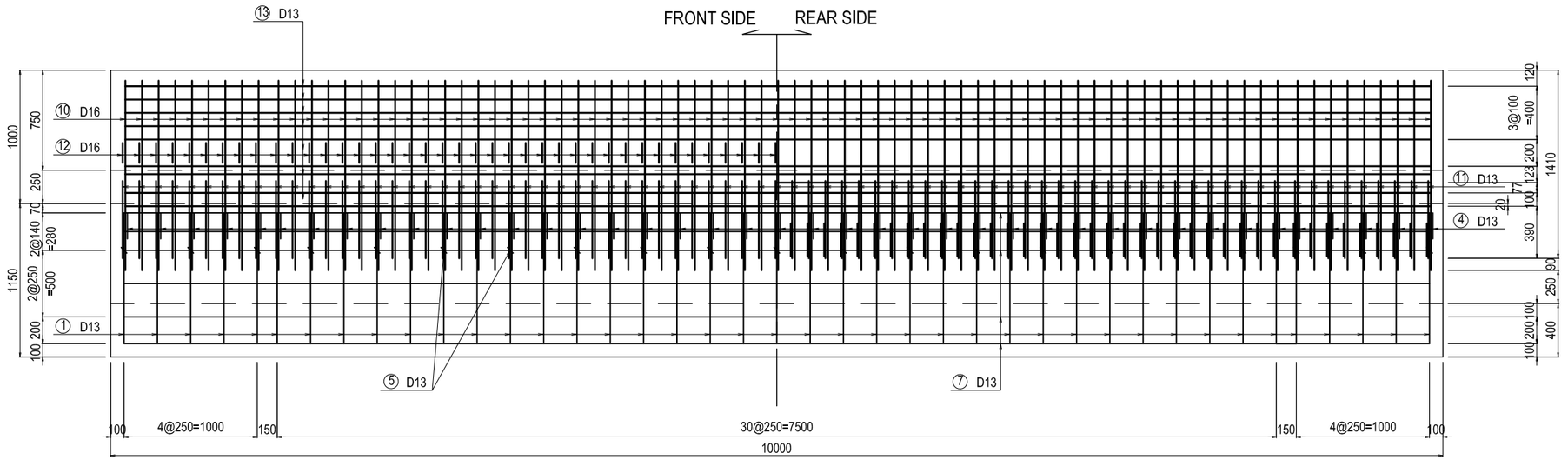
HANDRAIL ON MECHANICALLY STABILISED EARTH WALL(1) S=1:40

(TYPE-1)

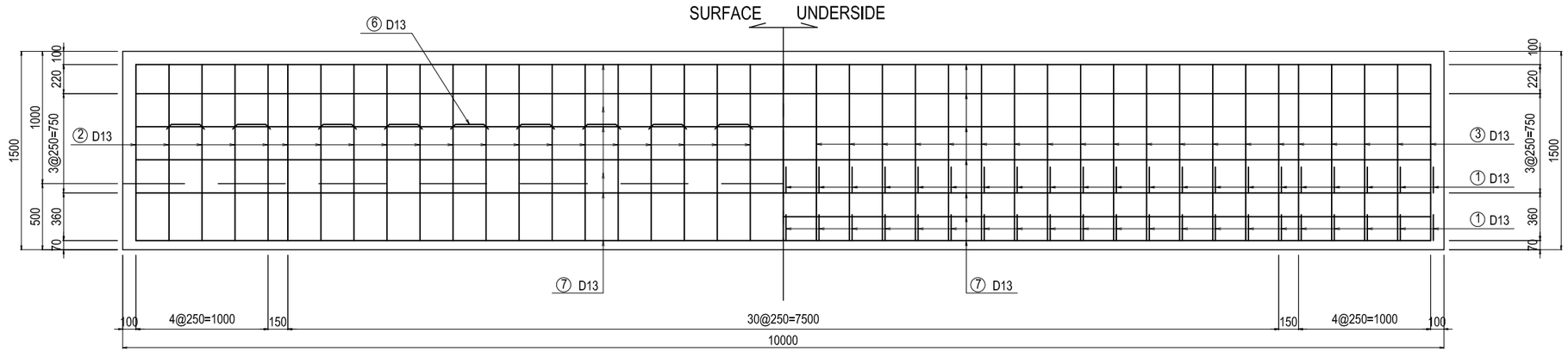
SECTION



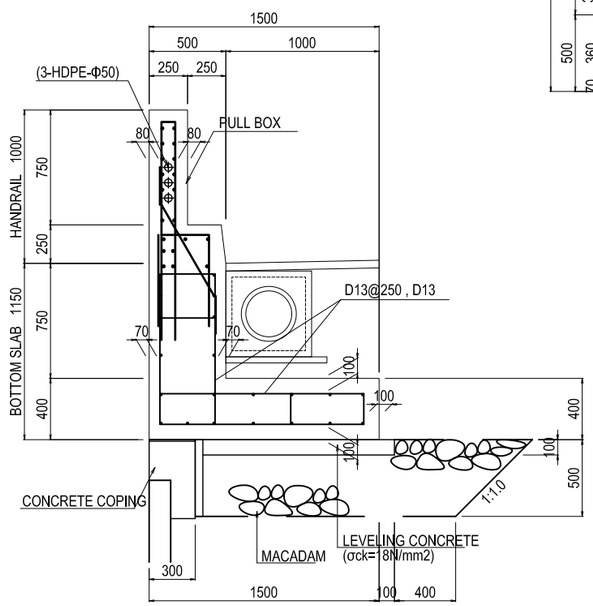
BREST WALL



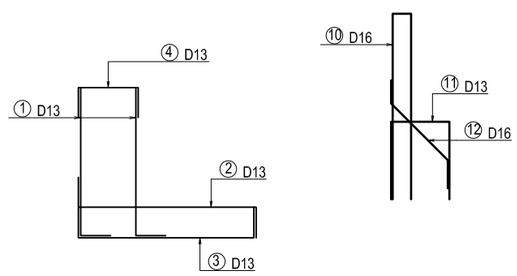
BOTTOM SLAB



SETTING



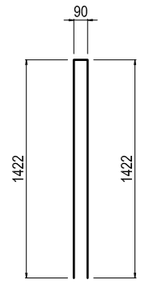
BAR ASSEMDLING



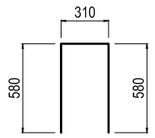
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	HANDRAIL ON MECHANICALLY STABILISED EARTH WALL(1)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4150

HANDRAIL ON MECHANICALLY STABILISED EARTH WALL(2)
(TYPE-1)

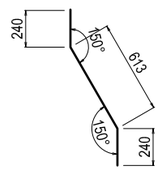
BAR SCHEDULING



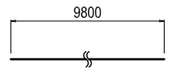
⑩ 79- D16× 2940



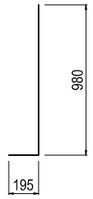
⑪ 41- D13× 1470



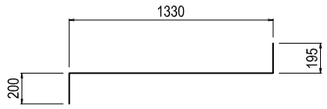
⑫ 41- D16× 1100



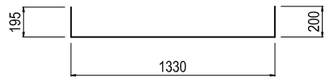
⑬ 20 - D13× 9800



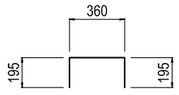
① 82- D13× 1180



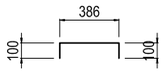
② 41- D13× 1730



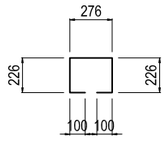
③ 41- D13× 1730



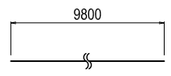
④ 41- D13× 750



⑤ 21- D13× 590



⑥ 18 - D13× 930

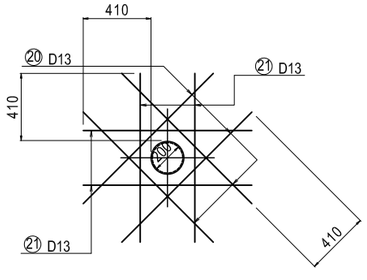


⑦ 21 - D13× 9800

LIST OF REINFORCEMENT (per10.0m)

NAME	PIANETER	LENGTH (mm)	NUMBER (本)	UNIT WEIGHT (kg/m)	WEIGHT/BAR (kg)	WEIGHT (kg)	REMARKS
HANDRAIL							
10	D16	2940	79	1.560	4.59	363	
11	D13	1470	41	0.995	1.46	60	
12	D16	1100	41	1.560	1.72	71	
13	D13	9800	20	0.995	9.75	195	
BOTTOM SLAB							
1	D13	1180	82	0.995	1.17	96	
2	D13	1730	41	0.995	1.72	71	
3	D13	1730	41	0.995	1.72	71	
4	D13	750	41	0.995	0.75	31	
5	D13	590	21	0.995	0.59	12	
6	D13	930	18	0.995	0.93	17	
7	D13	9800	21	0.995	9.75	205	
					D16	434	kg
					D13	758	kg
				total		1192	kg

φ200 BOX WITHOUT REINFORCEMENT VIEW



LIST OF REINFORCEMENT (per 1 place)

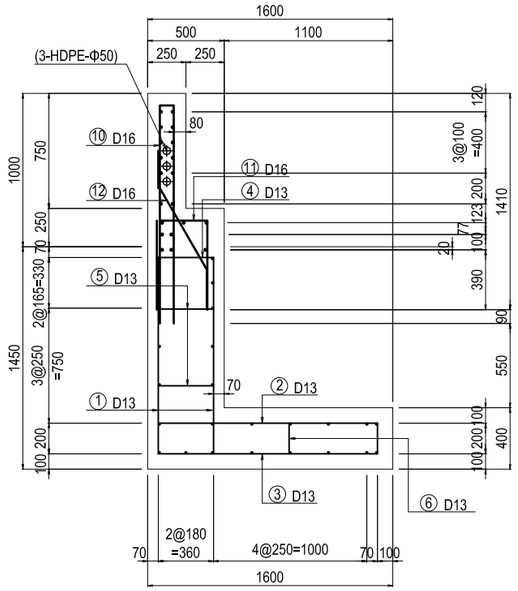
NAME	PIANETER	LENGTH (mm)	NUMBER (nos.)	UNIT WEIGHT (kg/m)	WEIGHT/BAR (kg)	WEIGHT (kg)	REMARKS
HANDRAIL							
20	D13	1200	8	0.995	1.19	10	
21	D13	1100	8	0.995	1.09	9	
					D13	19	kg
				total		19	kg

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM		NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	PREPARED BY	J.TSUCHIYA	土屋 潤	15 Jun. 2017	HANDRAIL ON MECHANICALLY STABILISED EARTH WALL(2)	2
				CHECKED BY	T. HAYAKAWA	早川 知邦	20 Jun. 2017		DWG No.
				APPROVED BY	Y. SANO	佐野 祐一	21 Jun. 2017		P2-RD-4160

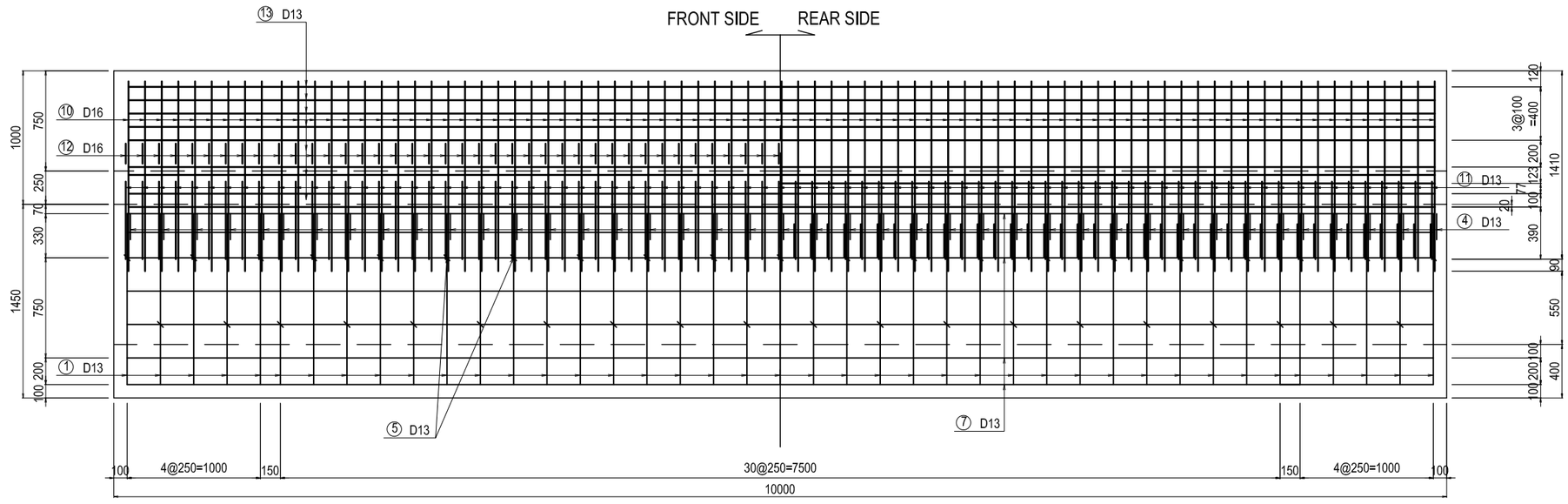
HANDRAIL ON MECHANICALLY STABILISED EARTH WALL(3) S=1:20

(TYPE-2)

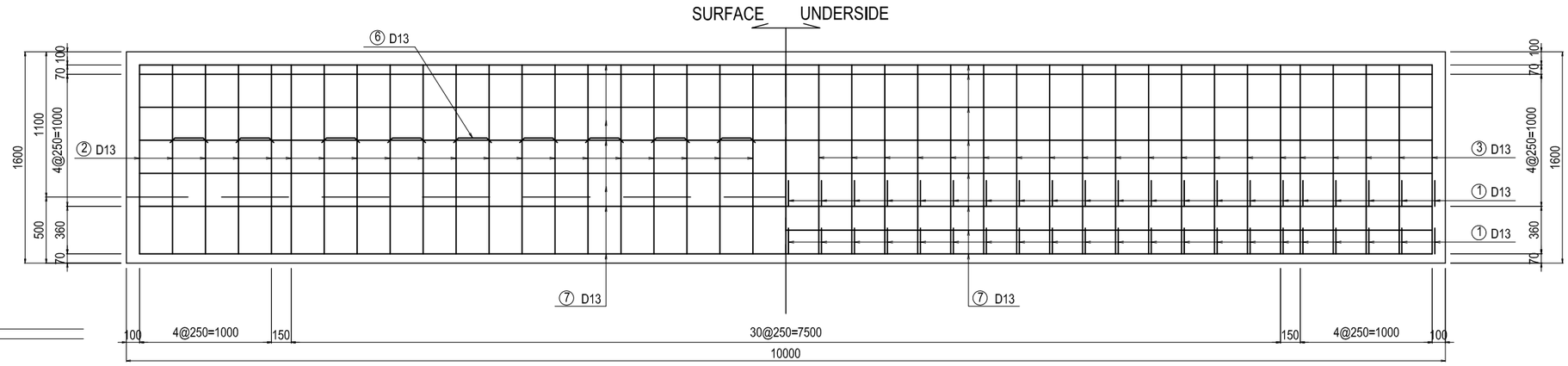
SECTION



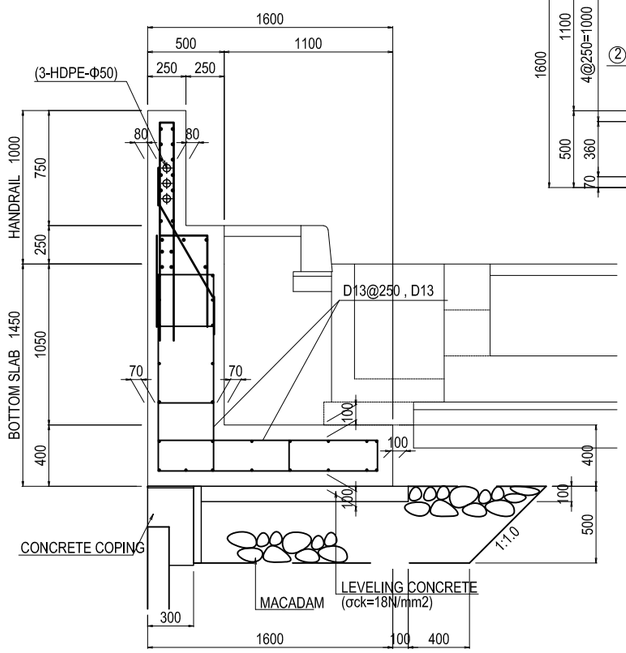
BREST WALL



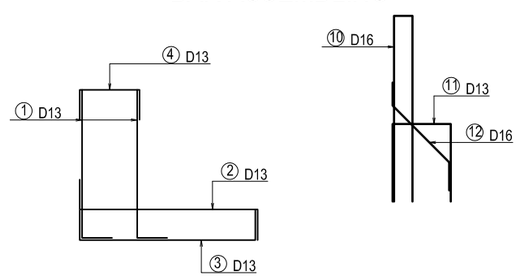
BOTTOM SLAB



SETTING



BAR ASSEMDLING

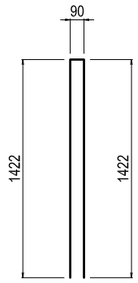


PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM		
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

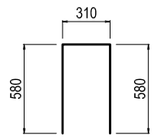
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	HANDRAIL ON MECHANICALLY STABILISED EARTH WALL(3)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4170

HANDRAIL ON MECHANICALLY STABILISED EARTH WALL(4)
(TYPE-2)

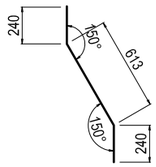
BAR SCHEDULING



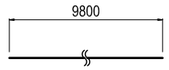
⑩ 79- D16× 2940



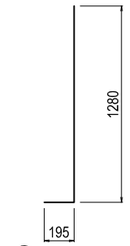
⑪ 41- D13× 1470



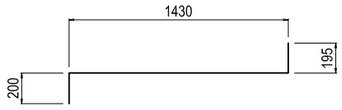
⑫ 41- D16× 1100



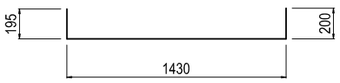
⑬ 20 - D13× 9800



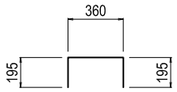
① 82- D13× 1480



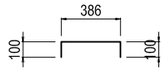
② 41- D13× 1830



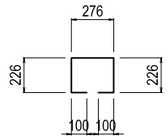
③ 41- D13× 1830



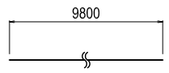
④ 41- D13× 750



⑤ 41- D13× 590



⑥ 18 - D13× 930

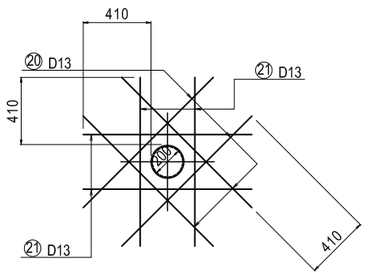


⑦ 25 - D13× 9800

LIST OF REINFORCEMENT（per10.0m）

NAME	PIANETER	LENGTH (mm)	NUMBER (nos.)	UNIT WEIGHT (kg/m)	WEIGHT/BAR (kg)	WEIGHT (kg)	REMARKS
HANDRAIL							
10	D16	2940	79	1.560	4.59	363	
11	D13	1470	41	0.995	1.46	60	
12	D16	1100	41	1.560	1.72	71	
13	D13	9800	20	0.995	9.75	195	
BOTTOM SLAB							
1	D13	1480	82	0.995	1.47	121	
2	D13	1830	41	0.995	1.82	75	
3	D13	1830	41	0.995	1.82	75	
4	D13	750	41	0.995	0.75	31	
5	D13	590	41	0.995	0.59	24	
6	D13	930	18	0.995	0.93	17	
7	D13	9800	25	0.995	9.75	244	
					D16	434	kg
					D13	842	kg
					total	1276	kg

φ200 BOX WITHOUT REINFORCEMENT VIEW



LIST OF REINFORCEMENT（per 1 place）

NAME	PIANETER	LENGTH (mm)	NUMBER (nos.)	UNIT WEIGHT (kg/m)	WEIGHT/BAR (kg)	WEIGHT (kg)	REMARKS
HANDRAIL							
20	D13	1200	8	0.995	1.19	10	
21	D13	1100	8	0.995	1.09	9	
					D13	19	kg
					total	19	kg

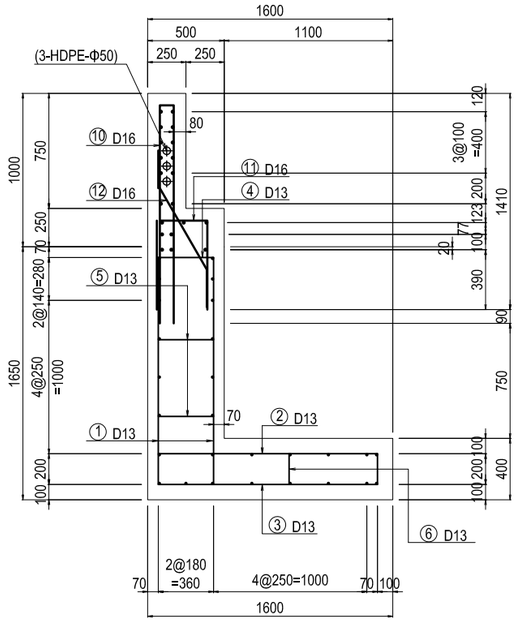
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM		
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	HANDRAIL ON MECHANICALLY STABILISED EARTH WALL(4)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4180

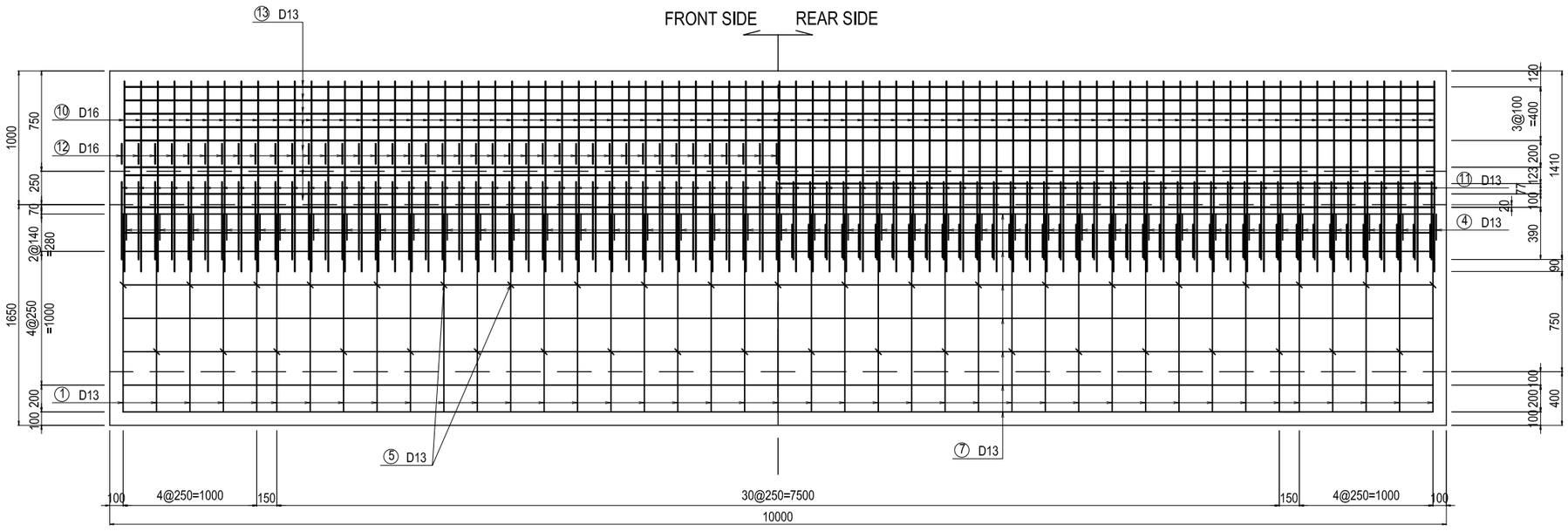
HANDRAIL ON MECHANICALLY STABILISED EARTH WALL(5) S=1:20

(TYPE-3)

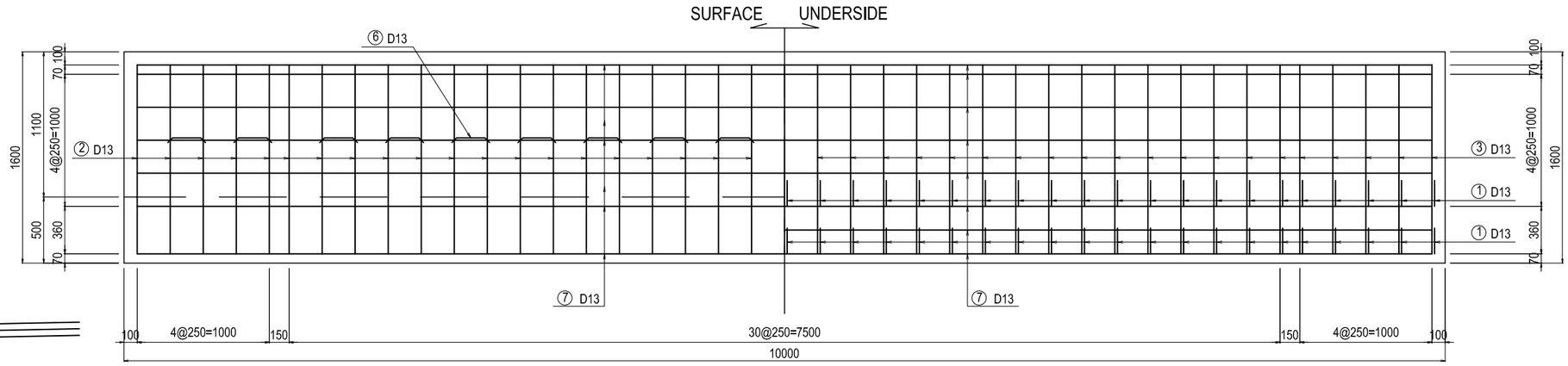
SECTION



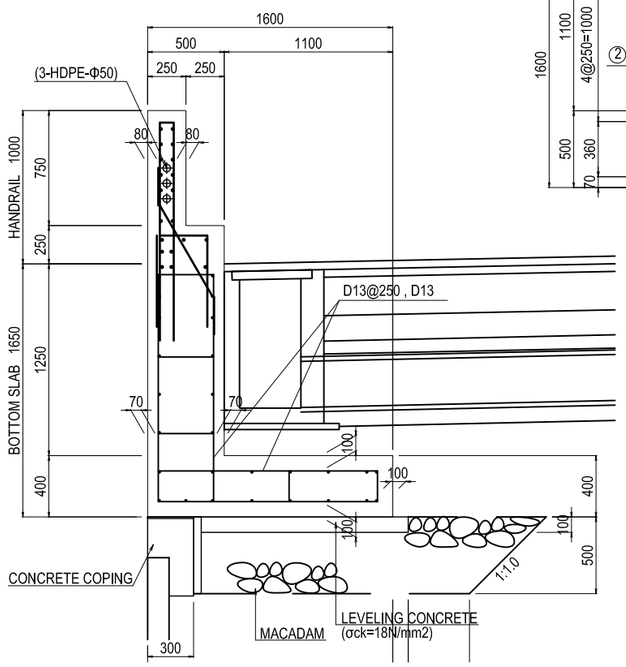
BREST WALL



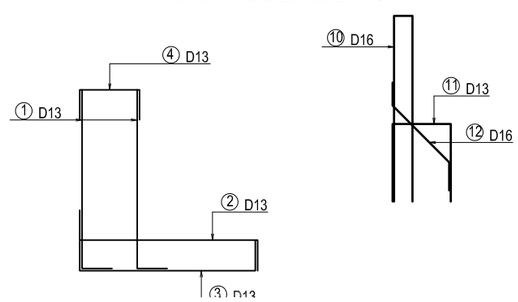
BOTTOM SLAB



SETTING



BAR ASSEMDLING

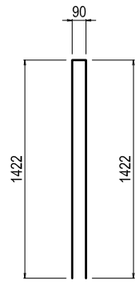


PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	DRAWING TITLE: HANDRAIL ON MECHANICALLY STABILISED EARTH WALL(5)	PACKAGE: 2
					DWG No.: P2-RD-4190

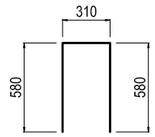
	NAME	SIGNATURE	DATE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017
CHECKED BY	T. HAYAKAWA		20 Jun. 2017
APPROVED BY	Y. SANO		21 Jun. 2017

HANDRAIL ON MECHANICALLY STABILISED EARTH WALL(6)
(TYPE-3)

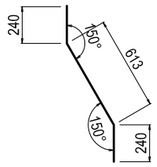
BAR SCHEDULING



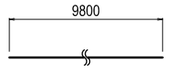
⑩ 79- D16× 2940



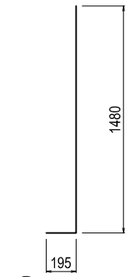
⑪ 41- D13× 1470



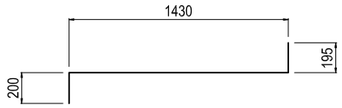
⑫ 41- D16× 1100



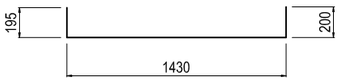
⑬ 20 - D13× 9800



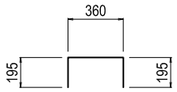
① 82- D13× 1680



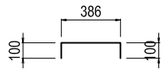
② 41- D13× 1830



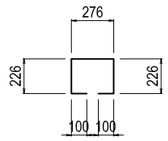
③ 41- D13× 1830



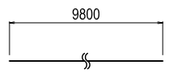
④ 41- D13× 750



⑤ 41- D13× 590



⑥ 18 - D13× 930

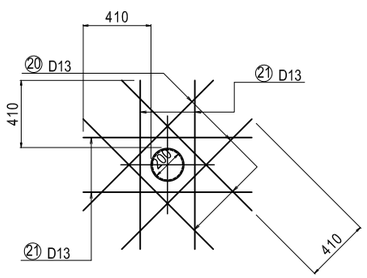


⑦ 27 - D13× 9800

LIST OF REINFORCEMENT（per10.0m）

NAME	PIANETER	LENGTH (mm)	NUMBER (nos.)	UNIT WEIGHT (kg/m)	WEIGHT/BAR (kg)	WEIGHT (kg)	REMARKS
HANDRAIL							
10	D16	2940	79	1.560	4.59	363	
11	D13	1470	41	0.995	1.46	60	
12	D16	1100	41	1.560	1.72	71	
13	D13	9800	20	0.995	9.75	195	
BOTTOM SLAB							
1	D13	1680	82	0.995	1.67	137	
2	D13	1830	41	0.995	1.82	75	
3	D13	1830	41	0.995	1.82	75	
4	D13	750	41	0.995	0.75	31	
5	D13	590	41	0.995	0.59	24	
6	D13	930	18	0.995	0.93	17	
7	D13	9800	27	0.995	9.75	263	
					D16	434	kg
					D13	877	kg
					total	1311	kg

φ200 BOX WITHOUT REINFORCEMENT VIEW



LIST OF REINFORCEMENT（per 1 place）

NAME	PIANETER	LENGTH (mm)	NUMBER (nos.)	UNIT WEIGHT (kg/m)	WEIGHT/BAR (kg)	WEIGHT (kg)	REMARKS
HANDRAIL							
20	D13	1200	8	0.995	1.19	10	
21	D13	1100	8	0.995	1.09	9	
					D13	19	kg
					total	19	kg

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM		
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA	土屋 淵	15 Jun. 2017	HANDRAIL ON MECHANICALLY STABILISED EARTH WALL(6)	2
CHECKED BY	T. HAYAKAWA	平川 知男	20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO	佐野 祐一	21 Jun. 2017		P2-RD-4200

GRAVITY WALL(1)

LEFT SIDE(DEVELOP FROM BACK SIDE) S=1:200

Toll Plaza~Approach road(STA.2+720~2+760)

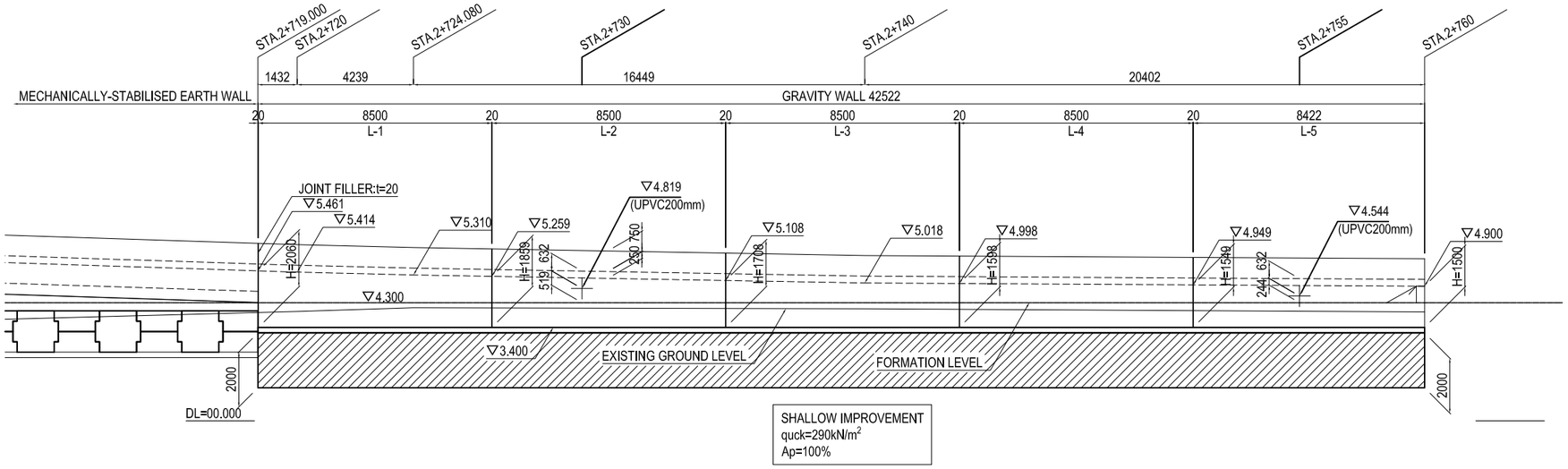
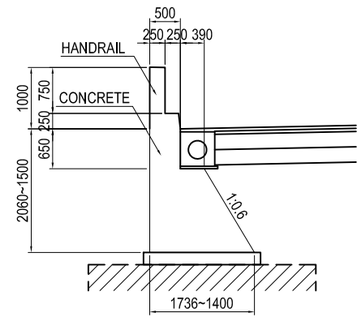


FIGURE OF CROSS SECTION S=1:50



CROSS SECTION S=1:200

STA.2+720

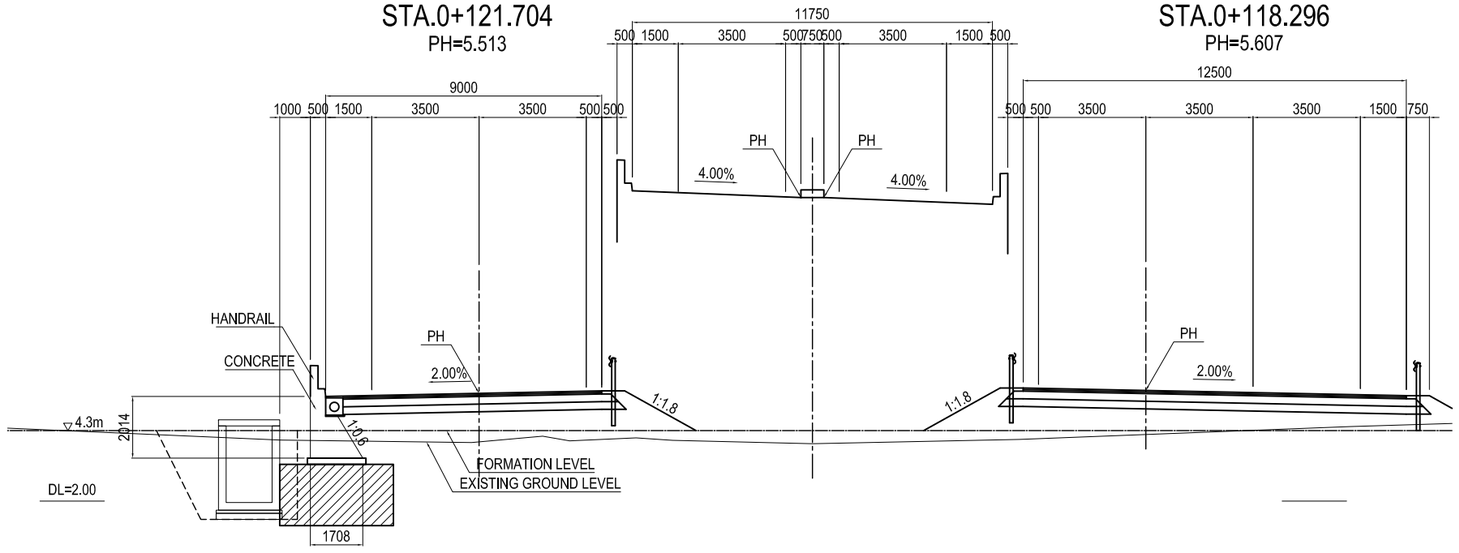
GH=3.87
PH=11.900

STA.0+121.704

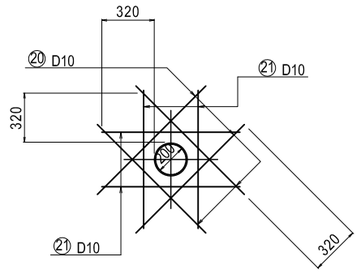
PH=5.513

STA.0+118.296

PH=5.607



φ200 BOX WITHOUT REINFORCEMENT VIEW



LIST OF REINFORCEMENT (per 1 place)

NAME	PIANETER	LENGTH (mm)	NUMBER (nos.)	UNIT WEIGHT (kg/m)	WEIGHT/BAR (kg)	WEIGHT (kg)	REMARKS
HANDRAIL							
20	D10	1000	8	0.560	0.56	4	
21	D10	900	8	0.560	0.50	4	
					D13	8 kg	
					total	8 kg	

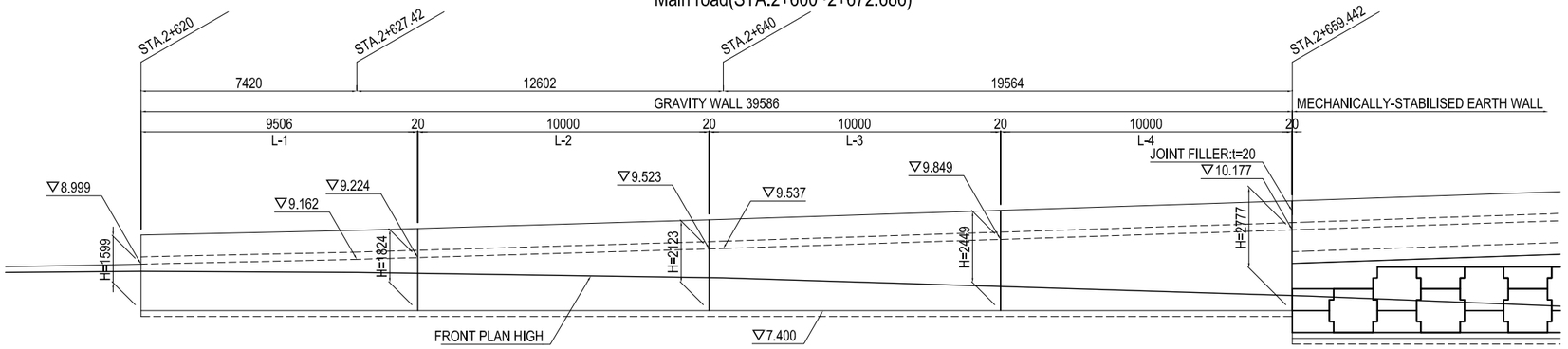
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	GRAVITY WALL(1)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4210

GRAVITY WALL(2)

LEFT SIDE(DEVELOP FROM BACK SIDE) S=1:200

Main road(STA.2+600~2+672.686)



RIGHT SIDE S=1:200

Main road(STA.2+600~2+672.314)

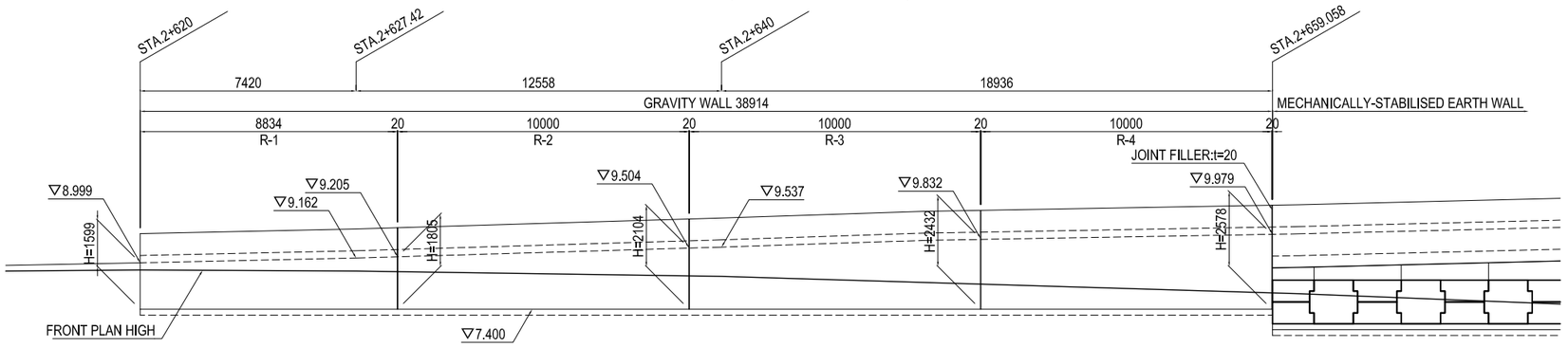
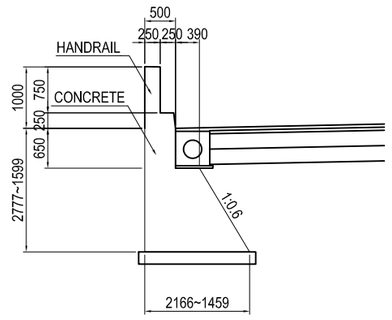


FIGURE OF CROSS SECTION S=1:50

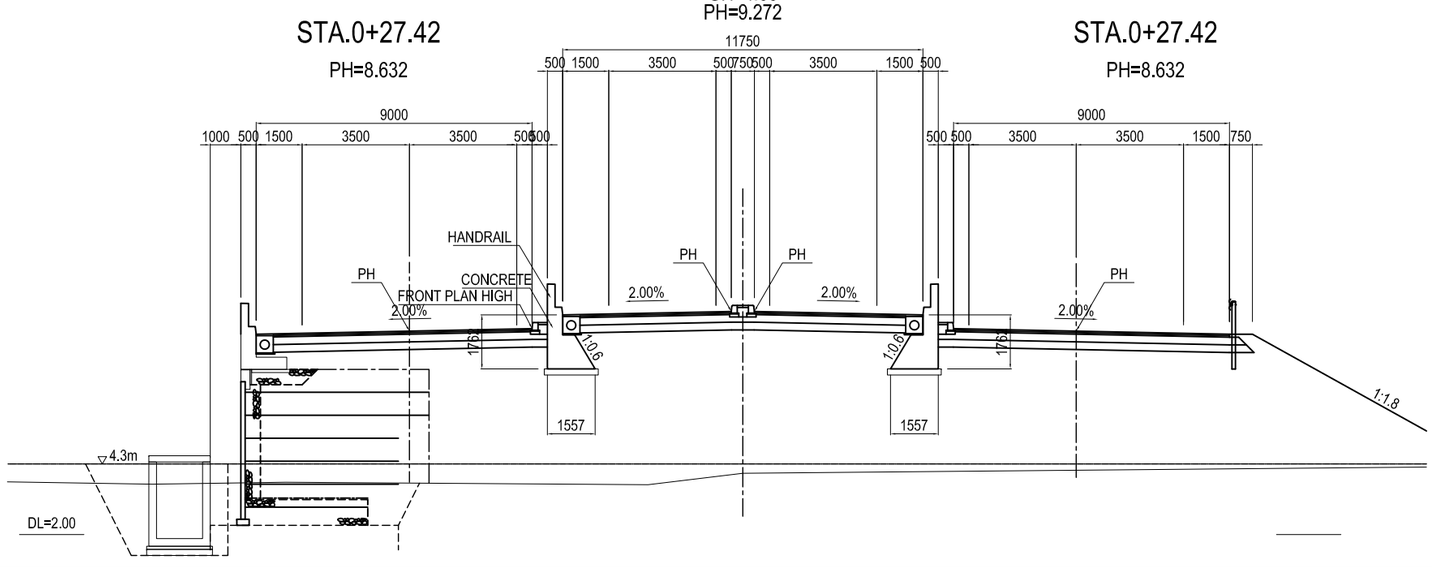


CROSS SECTION S=1:200

STA.2+627.42

GH=4.00

PH=9.272

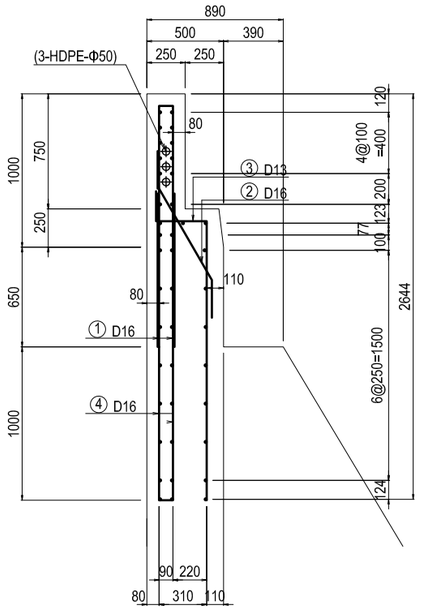


PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

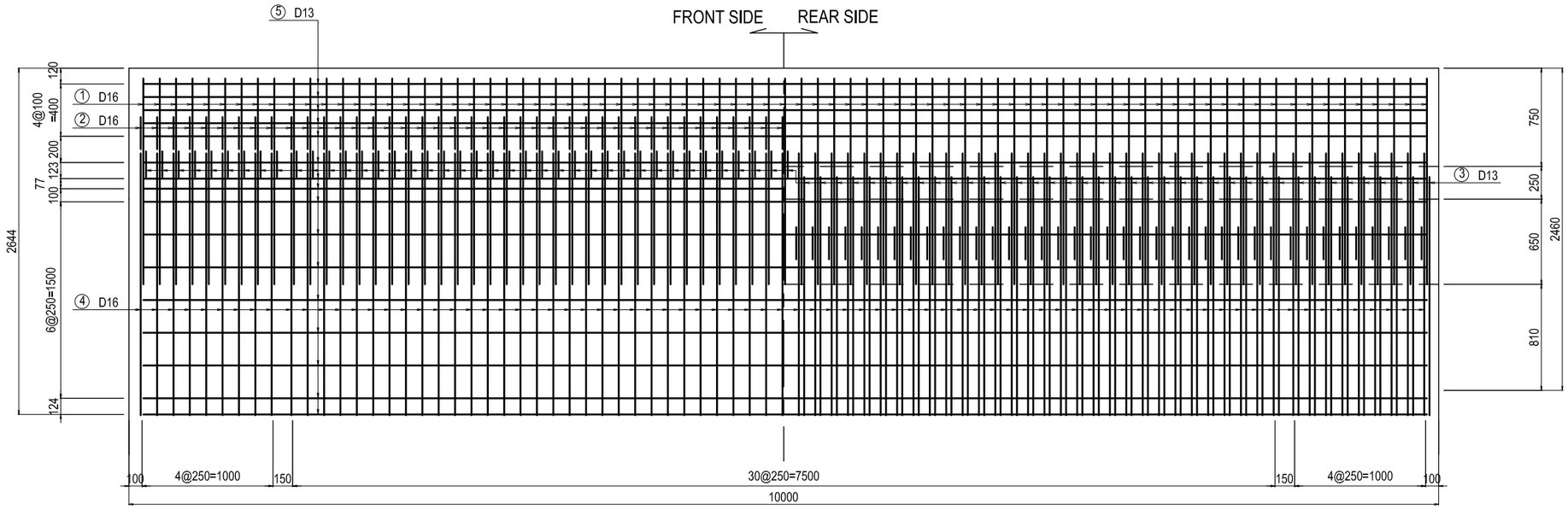
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	GRAVITY WALL(2)	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4220

HANDRAIL ON GRAVITY WALL S=1:40

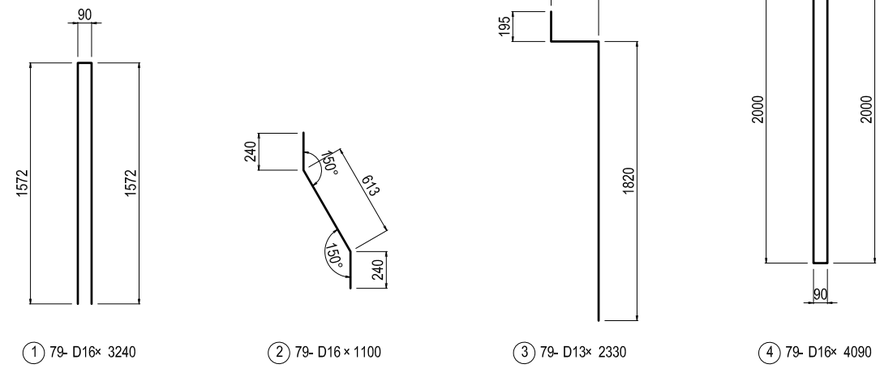
SECTION



BREST WALL



BAR SCHEDULING

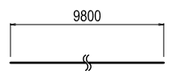


① 79- D16× 3240

② 79- D16 × 1100

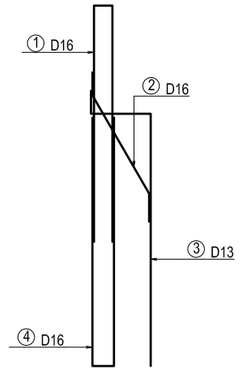
③ 79- D13× 2330

④ 79- D16× 4090

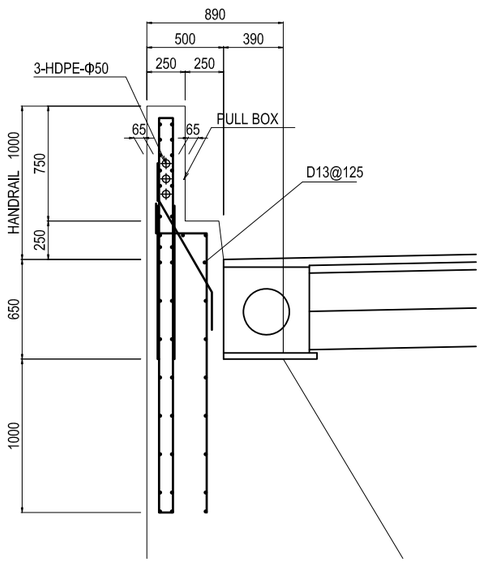


⑤ 41 - D13× 9800

BAR ASSEMDLING



SETTING



LIST OF REINFORCEMENT（per10.0m）

NAME	PIANETER	LENGTH (mm)	NUMBER (本)	UNIT WEIGHT (kg/m)	WEIGHT/BAR (kg)	WEIGHT (kg)	REMARKS
HANDRAIL							
1	D16	3240	79	1.560	5.05	399	
2	D16	1100	79	1.560	1.72	136	
3	D13	2330	79	0.995	2.32	183	
4	D16	4090	79	1.560	6.33	500	
5	D13	9800	41	0.995	9.75	400	
					D16	1035	kg
					D13	583	kg
				total		1618	kg

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM		NAME / SIGNATURE / DATE
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	PREPARED BY	J.TSUCHIYA 15 Jun. 2017
				CHECKED BY	T. HAYAKAWA 20 Jun. 2017
				APPROVED BY	Y. SANO 21 Jun. 2017

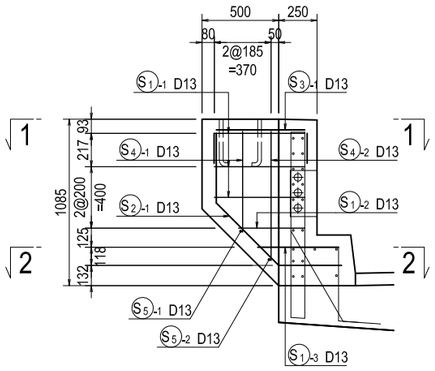
DRAWING TITLE: HANDRAIL ON GRAVITY WALL

PACKAGE: 2

DWG No.: P2-RD-4230

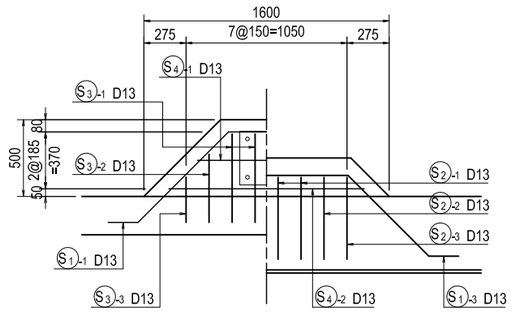
DETAIL OF LIGHTING FOUNDATION

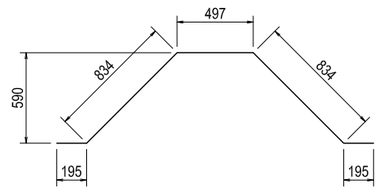
CROSS SECTION S=1:40



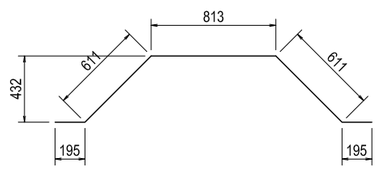
PLAN S=1:40

1-1 2-2

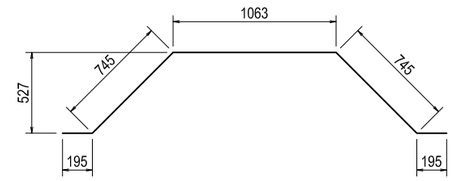




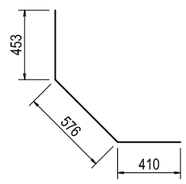
S1-1 3-D13x2560



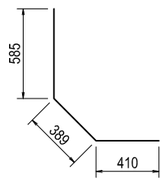
S1-2 1-D13x2430



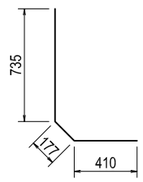
S1-3 1-D13x2950



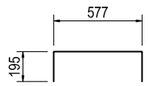
S2-1 4-D13x1440



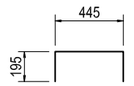
S2-2 2-D13x1390



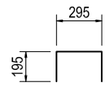
S2-3 2-D13x1330



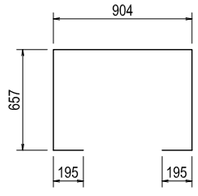
S3-1 4-D13x970



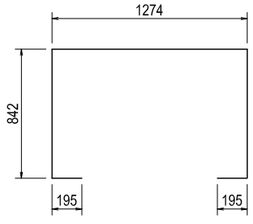
S3-2 2-D13x840



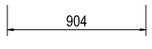
S3-3 2-D13x690



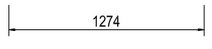
S4-1 1-D13x2610



S4-2 1-D13x3350



S5-1 1-D13x910



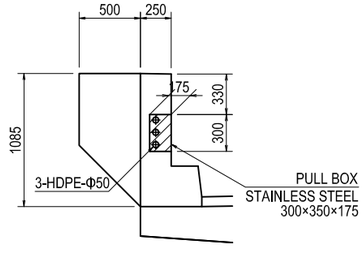
S5-2 1-D13x1280

BAR LIST

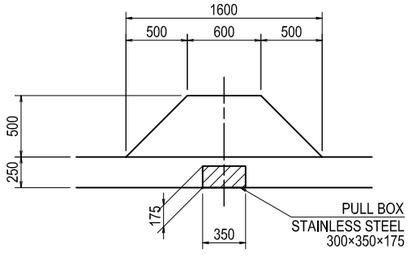
REBAR NO.	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT/ONE (kg)	WEIGHT (kg)	REMARKS
S 1 -1	D13	2560	3	0.995	2.55	8	
S 1 -2	D13	2430	1	0.995	2.42	2	
S 1 -3	D13	2950	1	0.995	2.94	3	
S 2 -1	D13	1440	4	0.995	1.43	6	
S 2 -2	D13	1390	2	0.995	1.38	3	
S 2 -3	D13	1330	2	0.995	1.32	3	
S 3 -1	D13	970	4	0.995	0.97	4	
S 3 -2	D13	840	2	0.995	0.84	2	
S 3 -3	D13	690	2	0.995	0.69	1	
S 4 -1	D13	2610	1	0.995	2.60	3	
S 4 -2	D13	3350	1	0.995	3.33	3	
S 5 -1	D13	910	1	0.995	0.91	1	
S 5 -2	D13	1280	1	0.995	1.27	1	
						40 kg	
					TOTAL	40 kg	

PULLBOX DETAIL S=1:50

CROSS SECTION



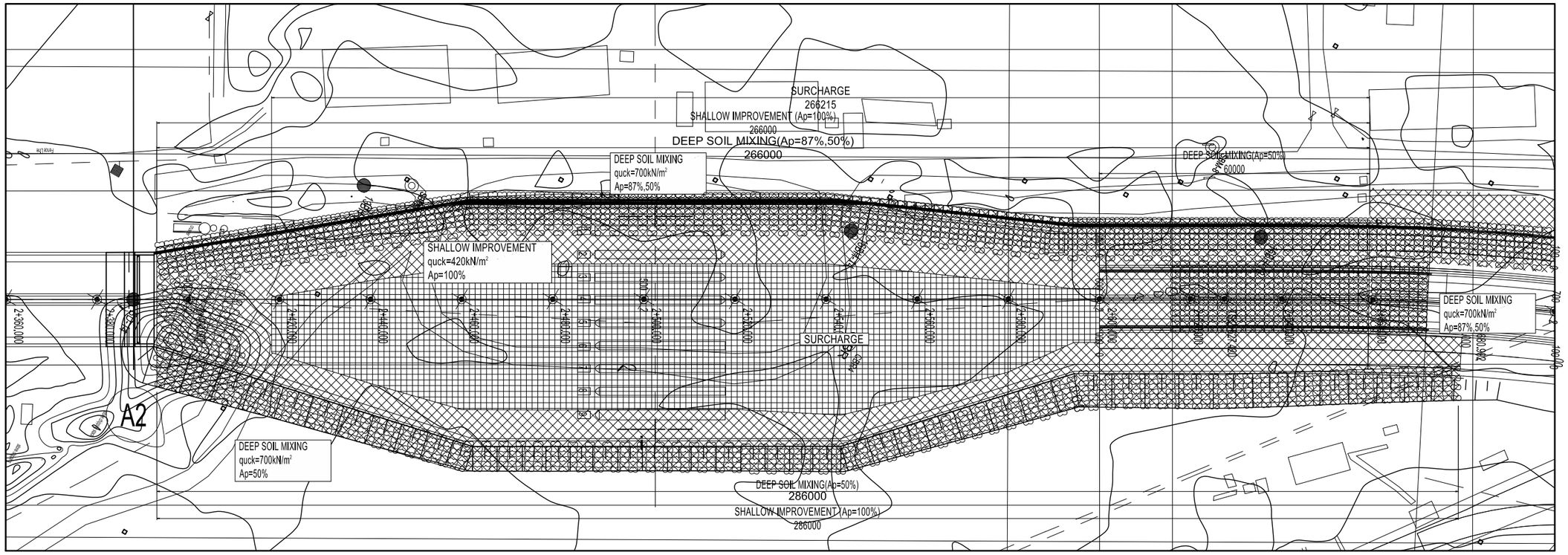
PLAN



PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	J.TSUCHIYA		15 Jun. 2017	DETAIL OF LIGHTING FOUNDATION	2
CHECKED BY	T. HAYAKAWA		20 Jun. 2017		DWG No.
APPROVED BY	Y. SANO		21 Jun. 2017		P2-RD-4240

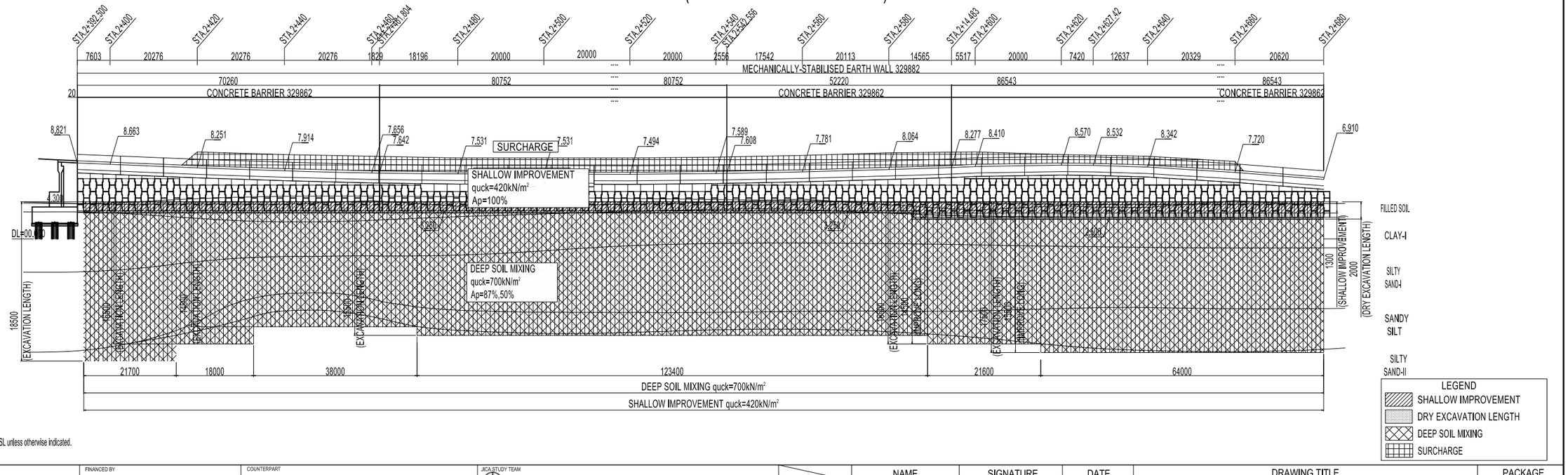
SOFT SOIL IMPROVEMENT MEASURES(1)

PLAN S=1:1000



PROFILE V=1:500 H=1:1000

LEFT SIDE(DEVELOP FROM BACK SIDE)



Elevation represents above MSL unless otherwise indicated.

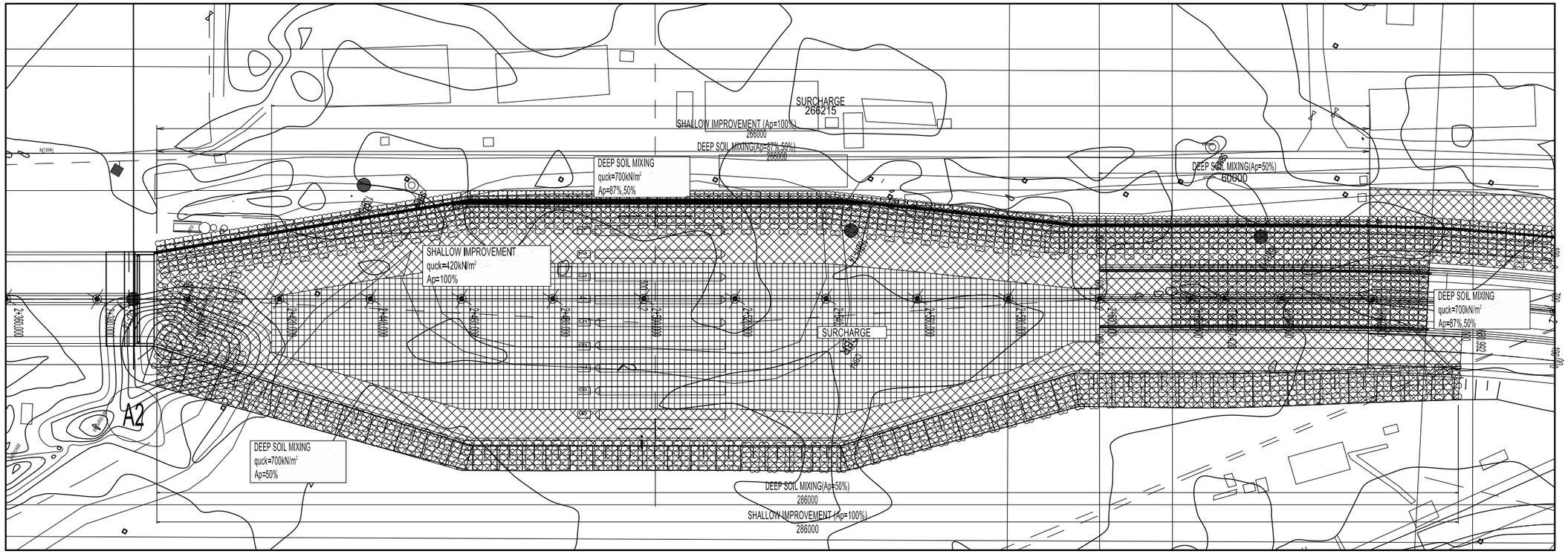
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	R. HOSOKAWA		29 Sept. 2017
CHECKED BY	T. HAYAKAWA		3 Oct. 2017
APPROVED BY	Y. SANO		6 Oct. 2017

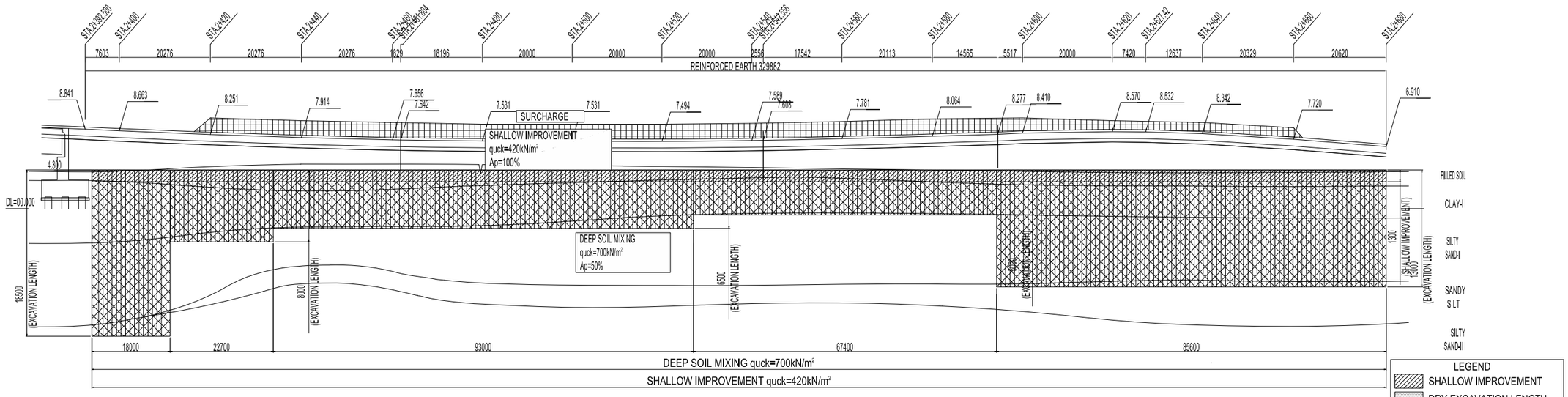
DRAWING TITLE	PACKAGE
SOFT SOIL IMPROVEMENT MEASURES(1)	2
	DWG No.
	P2-RD-5000

SOFT SOIL IMPROVEMENT MEASURES(2)

PLAN S=1:1000



PROFILE RIGHT SIDE V=1:500 H=1:1000



Elevation represents above MSL unless otherwise indicated.

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	R. HOSOKAWA		29 Sept. 2017	SOFT SOIL IMPROVEMENT MEASURES(2)	2
CHECKED BY	T. HAYAKAWA		3 Oct. 2017		DWG No.
APPROVED BY	Y. SANO		6 Oct. 2017		P2-RD-5010

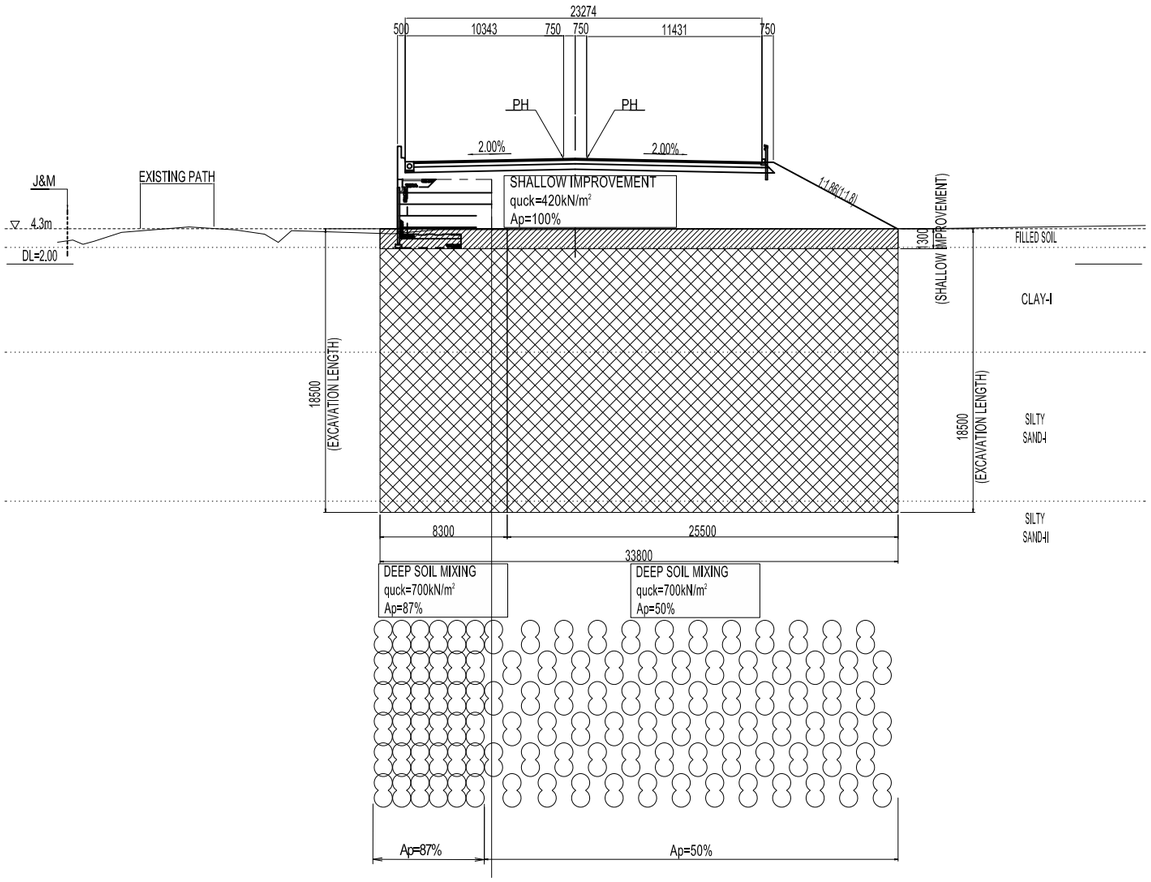
CROSS SECTION OF DEEP MIXING(1)

S=1:400

STA.2+400

GH=4.25

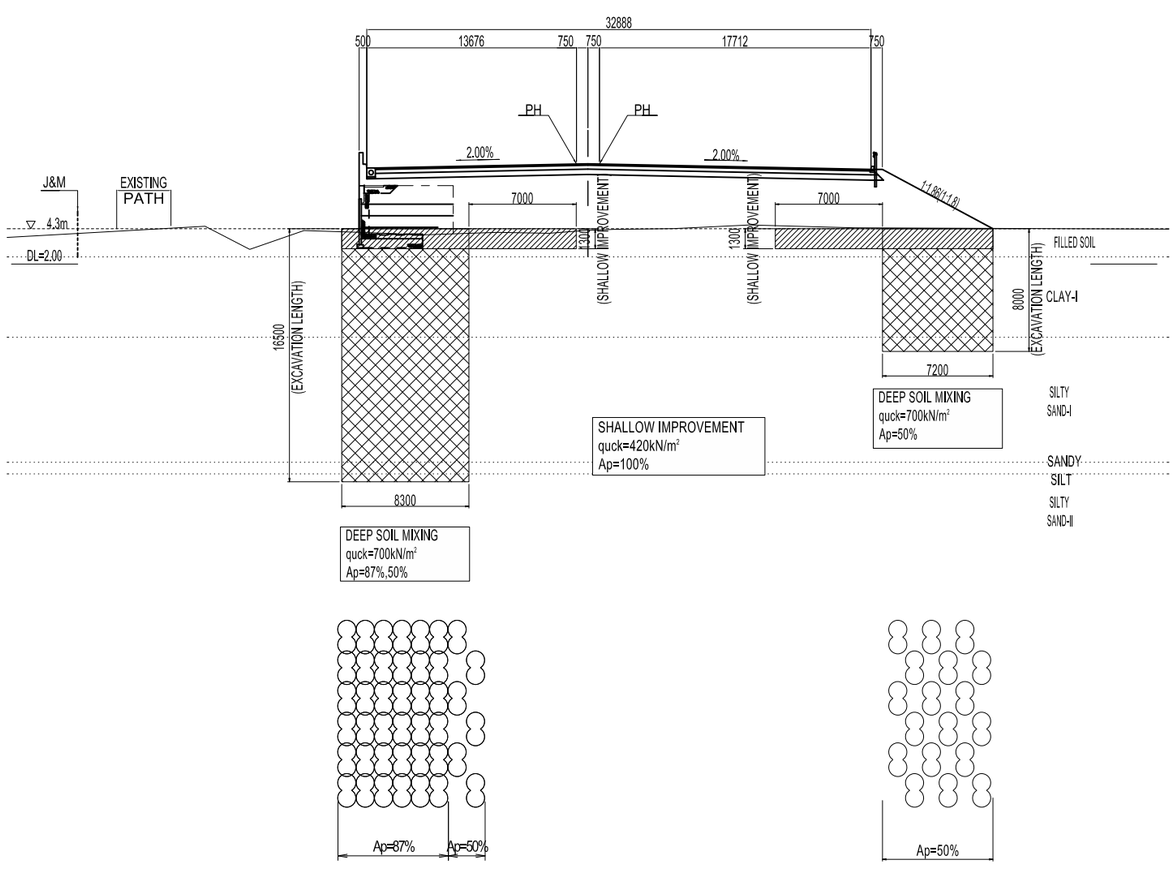
PH=8.870



STA.2+420

GH=4.20

PH=8.525



LEGEND
- SHALLOW IMPROVEMENT
- DRY EXCAVATION LENGTH
- DEEP SOIL MIXING
- SURCHARGE

Elevation represents above MSL unless otherwise indicated.

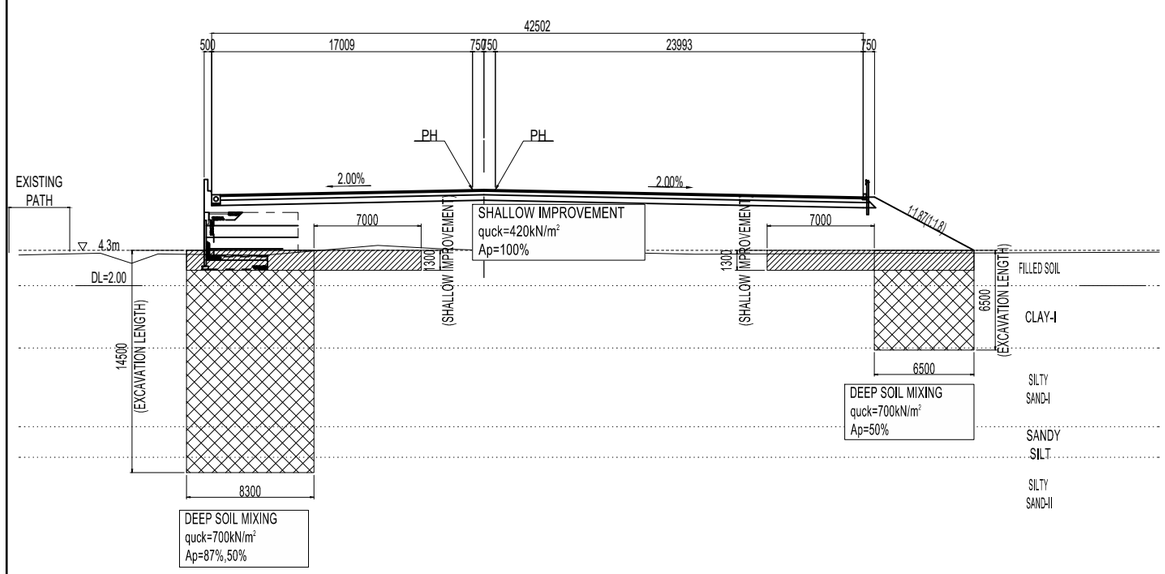
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM	
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

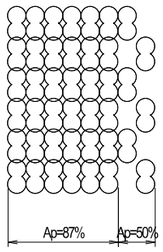
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	R. HOSOKAWA		29 Sept. 2017	CROSS SECTION OF DEEP MIXING(1)	2
CHECKED BY	T. HAYAKAWA		3 Oct. 2017		DWG No.
APPROVED BY	Y. SANO		6 Oct. 2017		P2-RD-5020

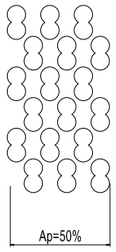
CROSS SECTION OF DEEP MIXING(2)

S=1:400

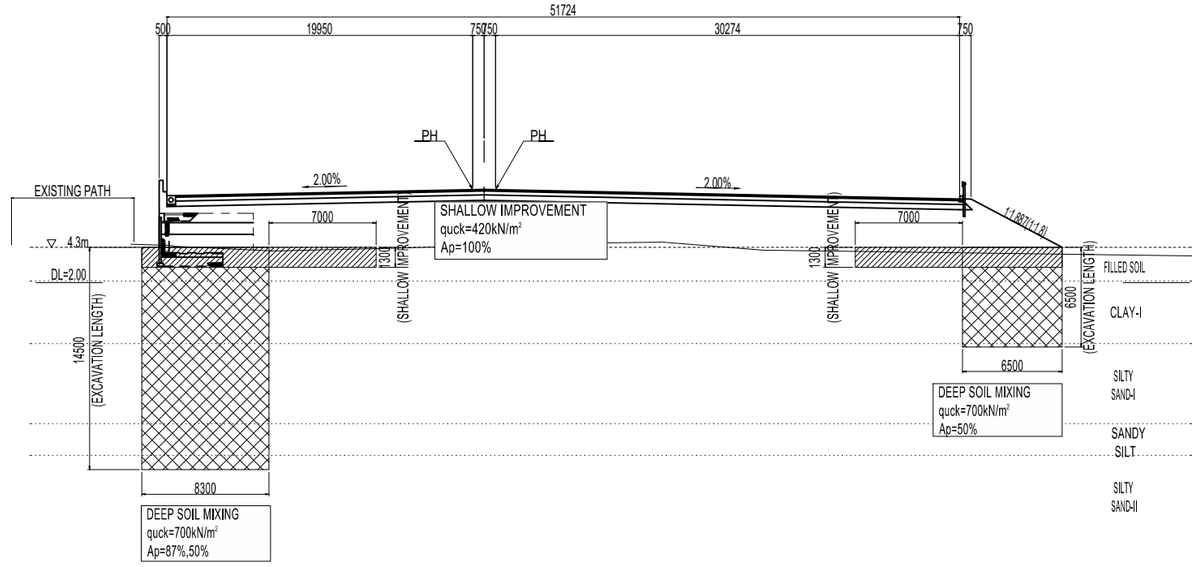
STA.2+440
GH=4.30
PH=8.254

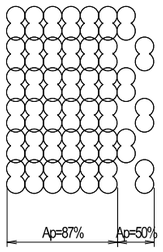


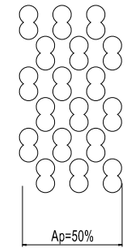




STA.2+460
GH=4.42
PH=8.055







LEGEND
- SHALLOW IMPROVEMENT
- DRY EXCAVATION LENGTH
- DEEP SOIL MIXING
- SURCHARGE

Elevation represents above MSL unless otherwise indicated.

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM	
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

	NAME	SIGNATURE	DATE
PREPARED BY	R. HOSOKAWA	細川亮介	29 Sept. 2017
CHECKED BY	T. HAYAKAWA	早川知彩	3 Oct. 2017
APPROVED BY	Y. SANO	佐野雄一	6 Oct. 2017

DRAWING TITLE	PACKAGE
CROSS SECTION OF DEEP MIXING(2)	2
	DWG No.
	P2-RD-5030

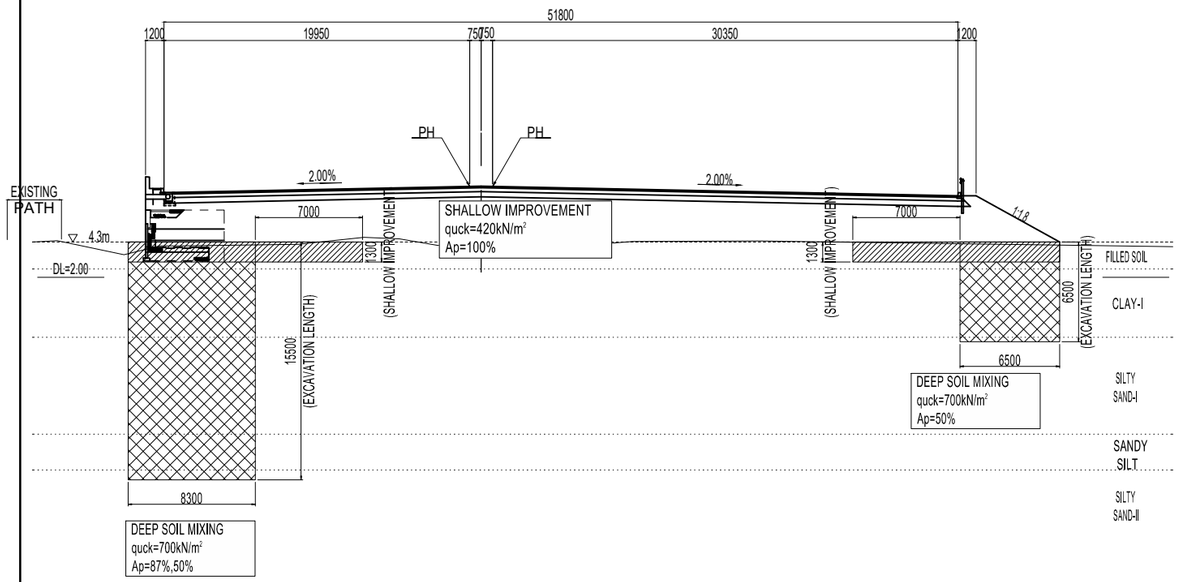
CROSS SECTION OF DEEP MIXING(3)

S=1:400

STA.2+480

GH=4.04

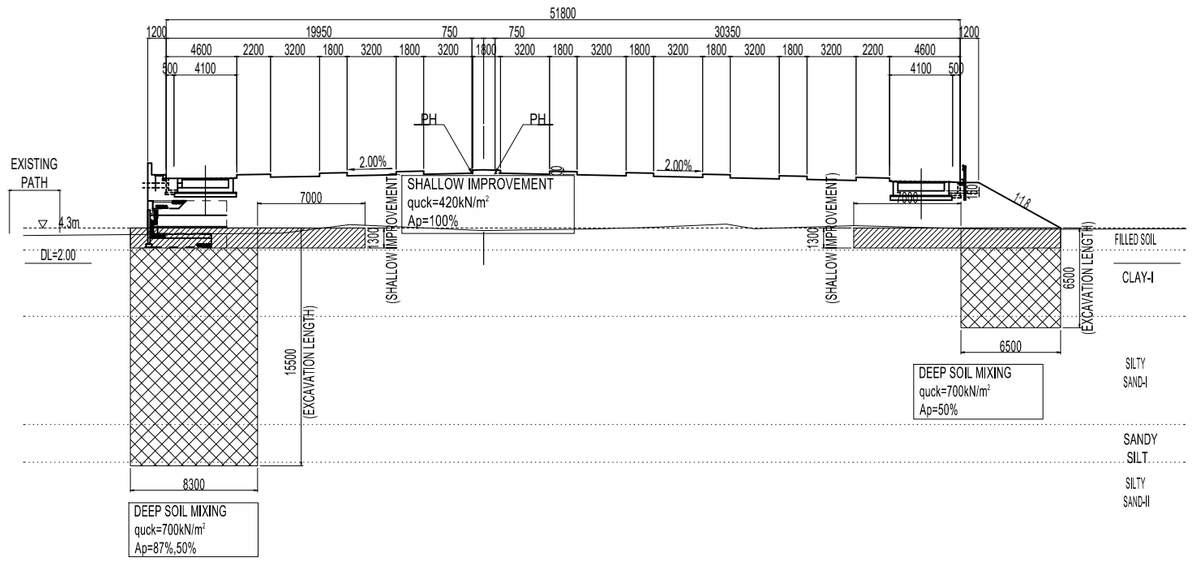
PH=7.930

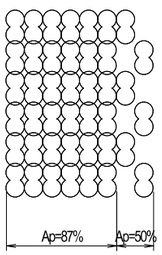


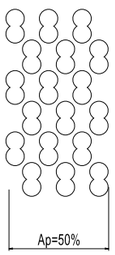
STA.2+500

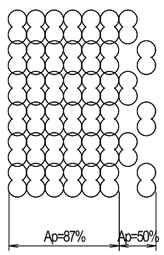
GH=4.14

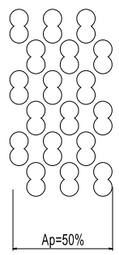
PH=7.879











LEGEND
- SHALLOW IMPROVEMENT
- DRY EXCAVATION LENGTH
- DEEP SOIL MIXING
- SURCHARGE

Elevation represents above MSL unless otherwise indicated.

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

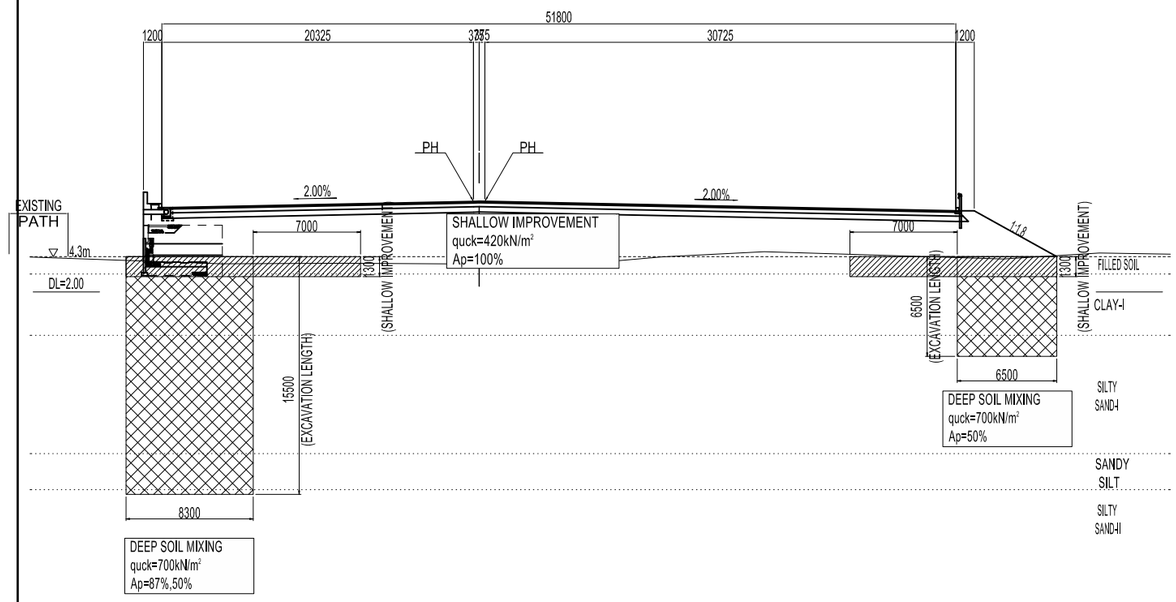
	NAME	SIGNATURE	DATE
PREPARED BY	R. HOSOKAWA		29 Sept. 2017
CHECKED BY	T. HAYAKAWA		3 Oct. 2017
APPROVED BY	Y. SANO		6 Oct. 2017

DRAWING TITLE	PACKAGE
CROSS SECTION OF DEEP MIXING(3)	2
	DWG No. P2-RD-5040

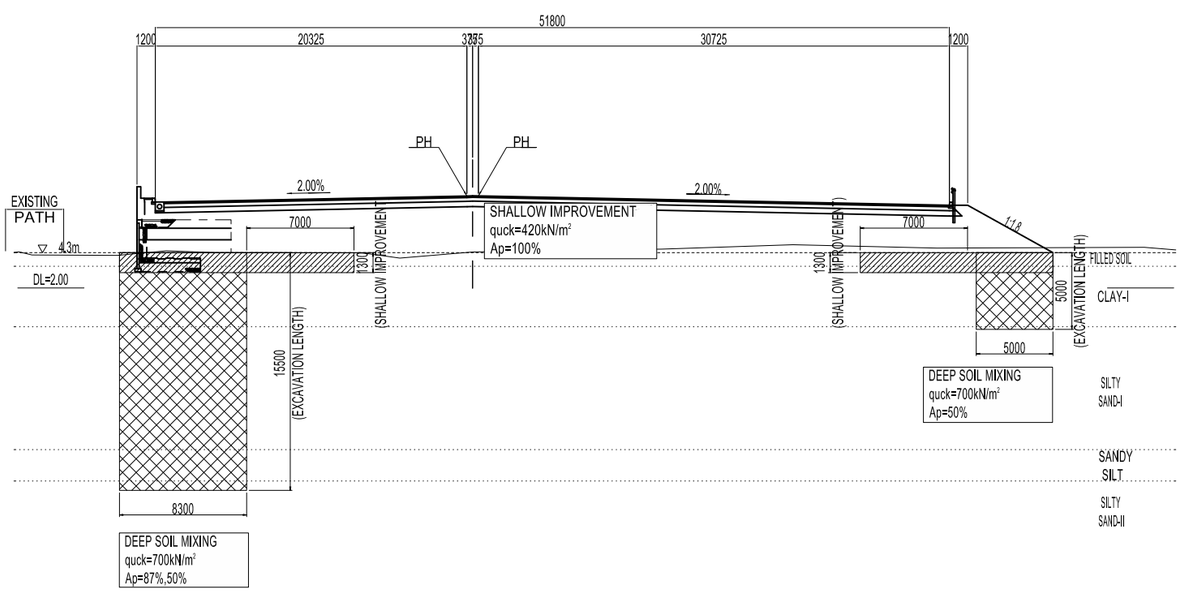
CROSS SECTION OF DEEP MIXING(4)

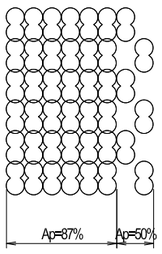
S=1:400

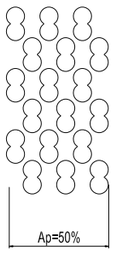
STA.2+520
GH=3.82
PH=7.900

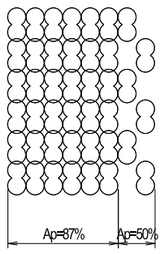


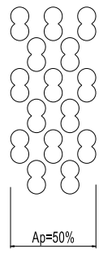
STA.2+540
GH=4.35
PH=7.995











LEGEND
- SHALLOW IMPROVEMENT
- DRY EXCAVATION LENGTH
- DEEP SOIL MIXING
- SURCHARGE

Elevation represents above MSL unless otherwise indicated.

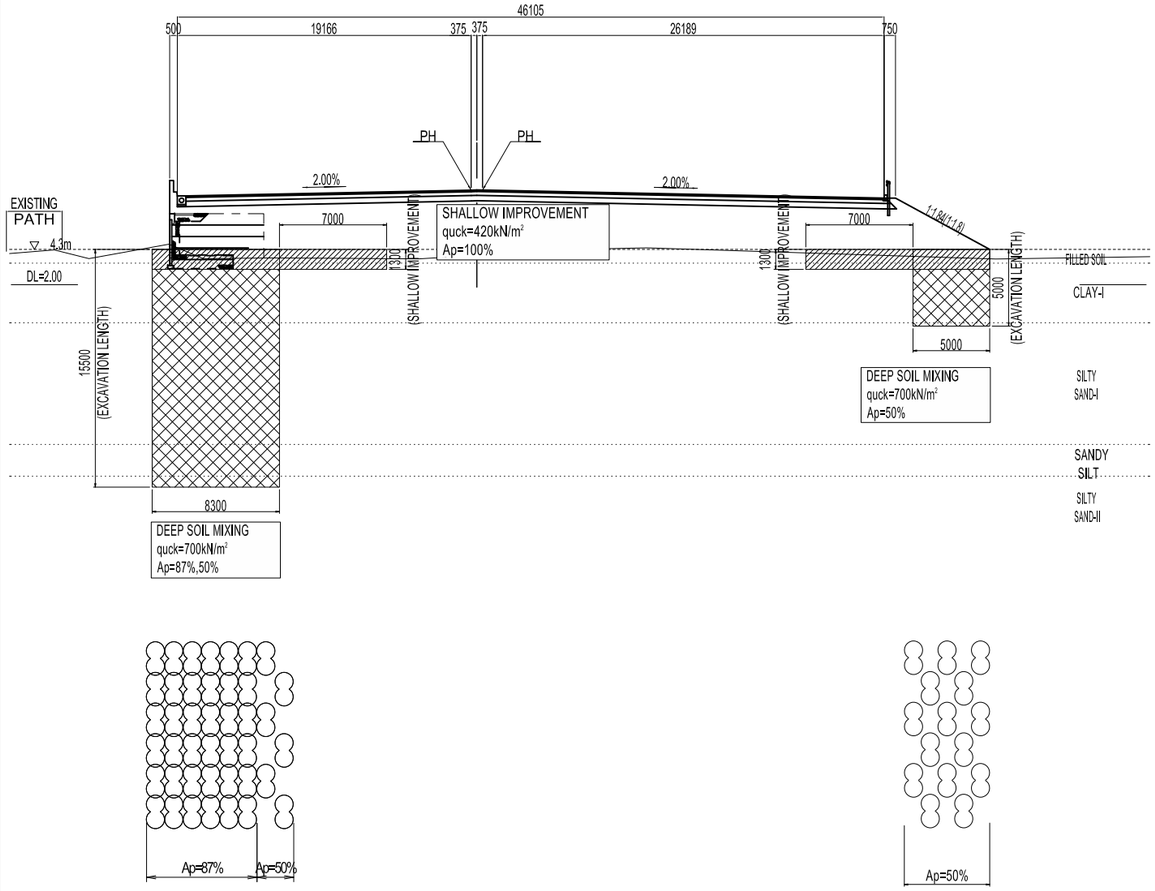
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	R. HOSOKAWA		29 Sept. 2017	CROSS SECTION OF DEEP MIXING(4)	2
CHECKED BY	T. HAYAKAWA		3 Oct. 2017		DWG No.
APPROVED BY	Y. SANO		6 Oct. 2017		P2-RD-5050

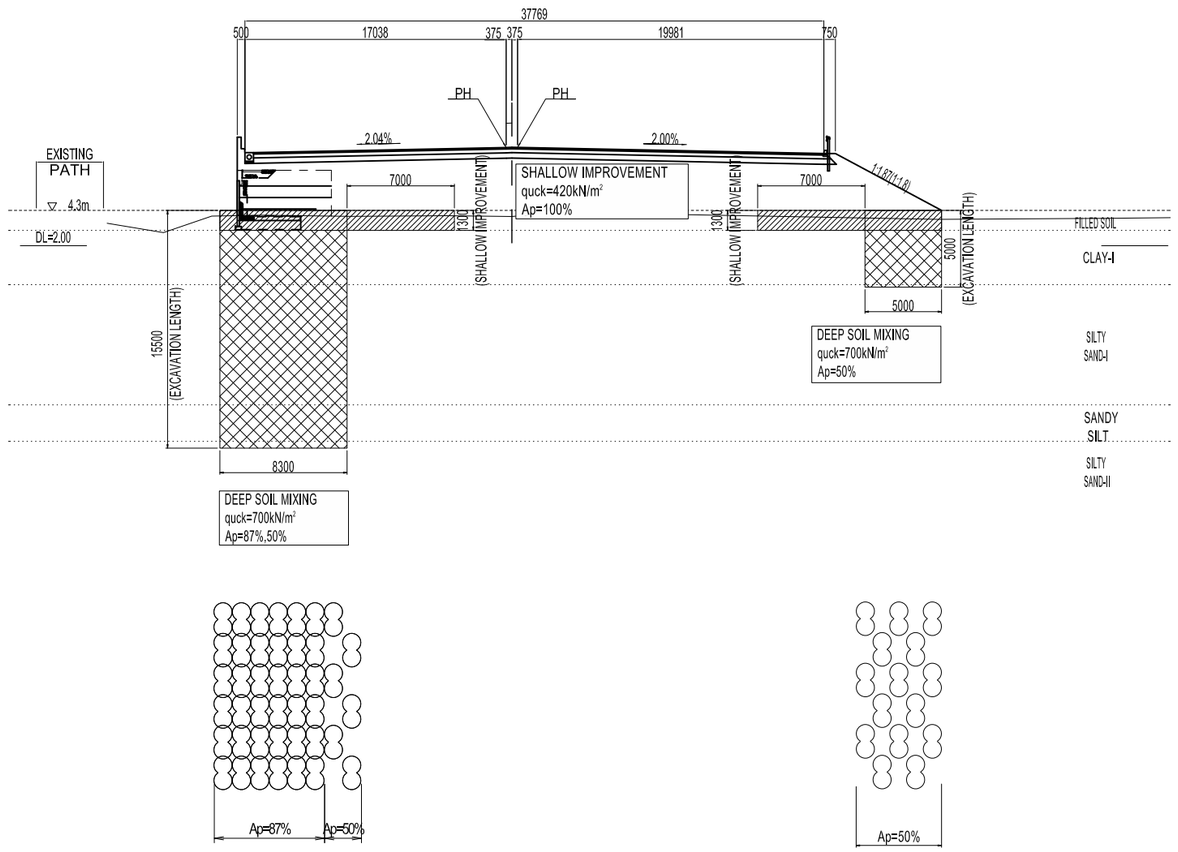
CROSS SECTION OF DEEP MIXING(5)

S=1:400

STA.2+560
GH=3.91
PH=8.164



STA.2+580
GH=3.91
PH=8.405



LEGEND
- SHALLOW IMPROVEMENT
- DRY EXCAVATION LENGTH
- DEEP SOIL MIXING
- SURCHARGE

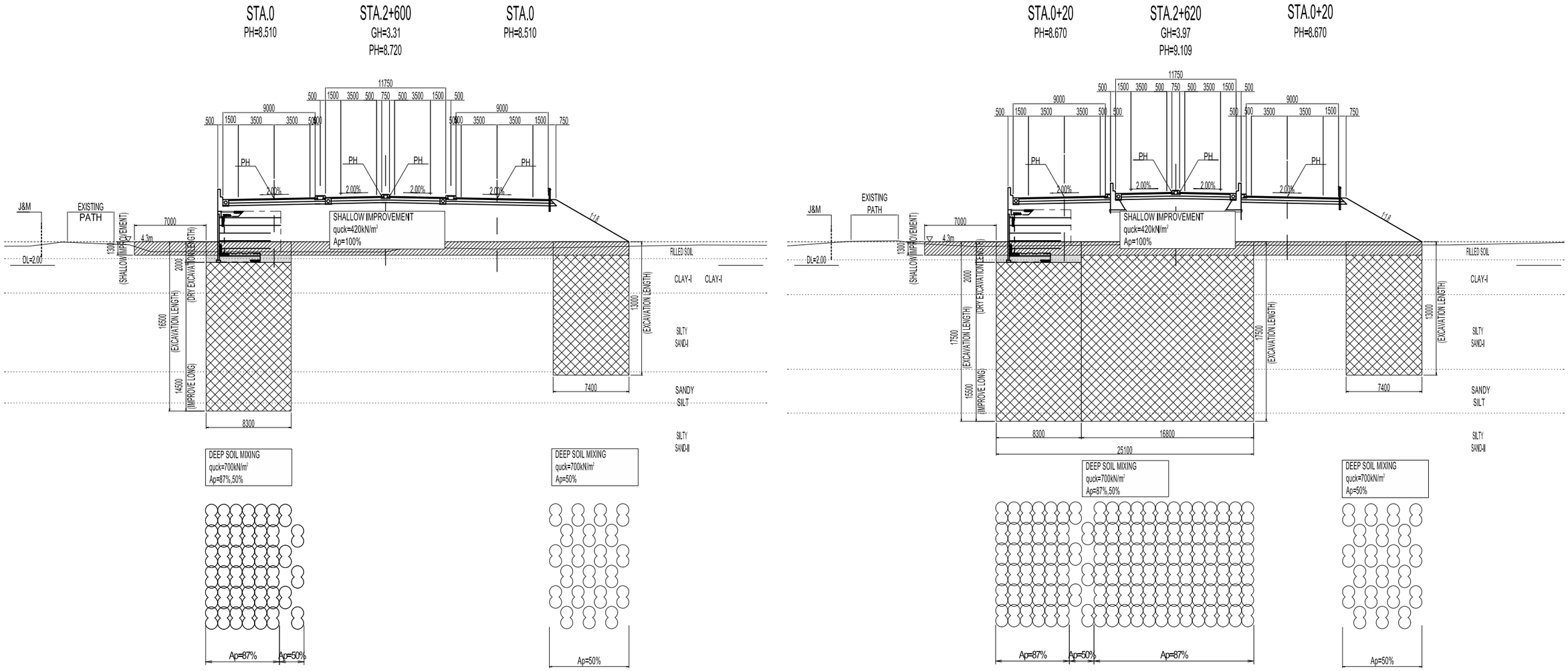
Elevation represents above MSL unless otherwise indicated.

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM	
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	R. HOSOKAWA		29 Sept. 2017	CROSS SECTION OF DEEP MIXING(5)	2
CHECKED BY	T. HAYAKAWA		3 Oct. 2017		DWG No.
APPROVED BY	Y. SANO		6 Oct. 2017		P2-RD-5060

CROSS SECTION OF DEEP MIXING(6)

S-1:400



LEGEND
- SHALLOW IMPROVEMENT
- DRY EXCAVATION LENGTH
- DEEP SOIL MIXING
- SURCHARGE

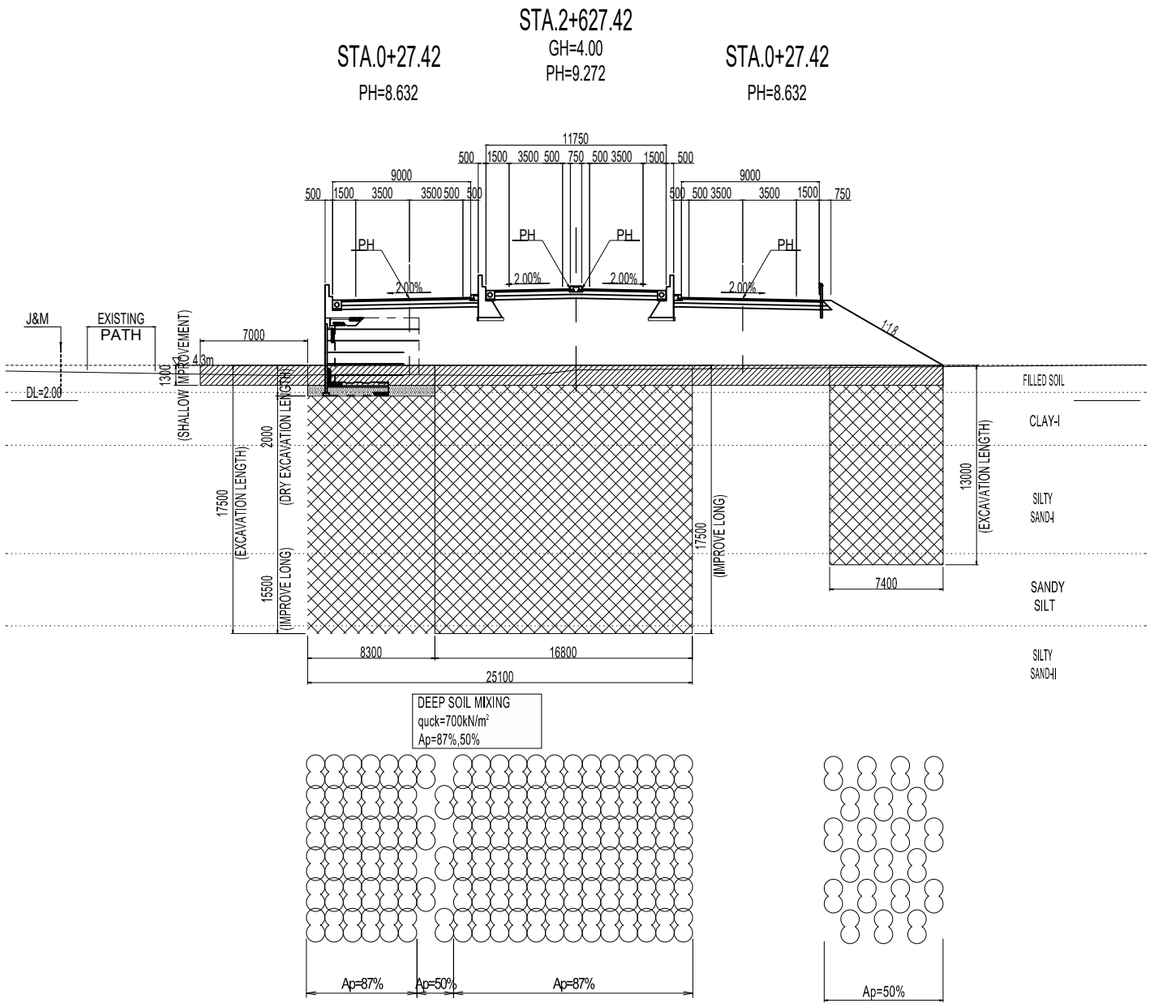
Elevation represents above MSL, unless otherwise indicated.

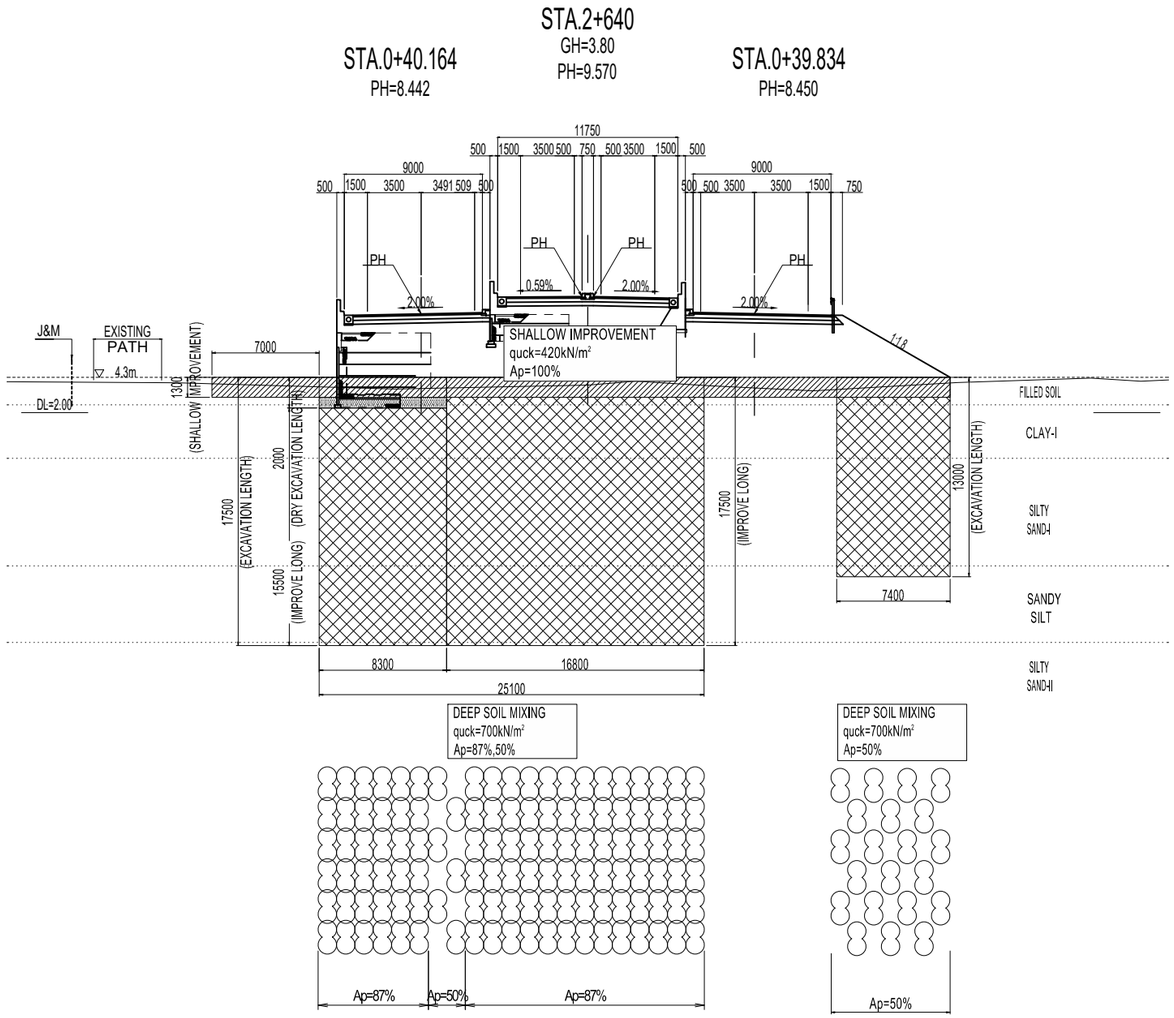
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM	
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.	

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	R. HOSOKAWA		29 Sept. 2017	CROSS SECTION OF DEEP MIXING(6)	2
CHECKED BY	T. HAYAKAWA		3 Oct. 2017		DWG No.
APPROVED BY	Y. SANO		6 Oct. 2017		R2-RD-5070

CROSS SECTION OF DEEP MIXING(7)

S=1:400





LEGEND
- SHALLOW IMPROVEMENT
- DRY EXCAVATION LENGTH
- DEEP SOIL MIXING
- SURCHARGE

Elevation represents above MSL unless otherwise indicated.

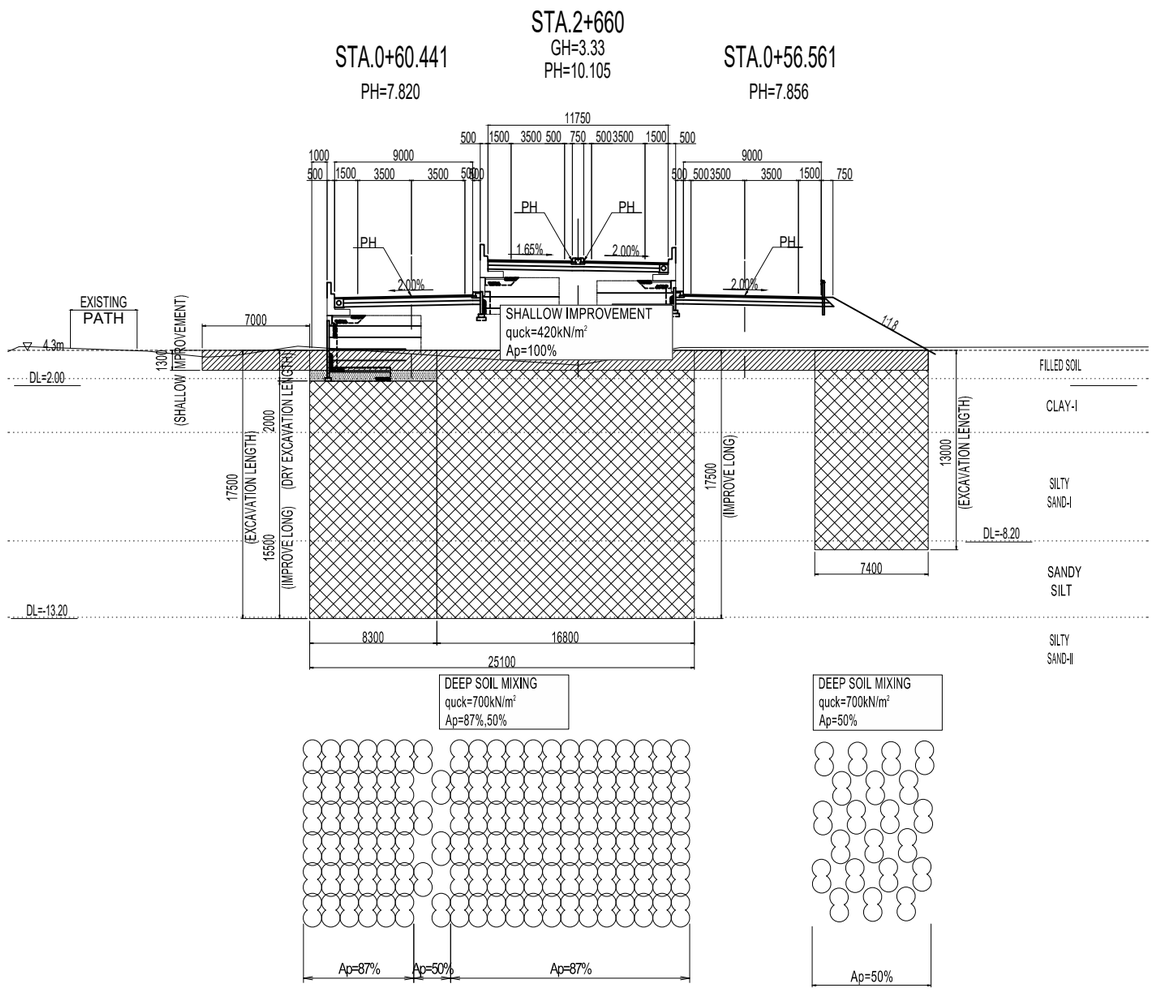
PROJECT NAME	DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT		
FINANCED BY	JAPAN INTERNATIONAL COOPERATION AGENCY		
COUNTERPART	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE		
JICA STUDY TEAM	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

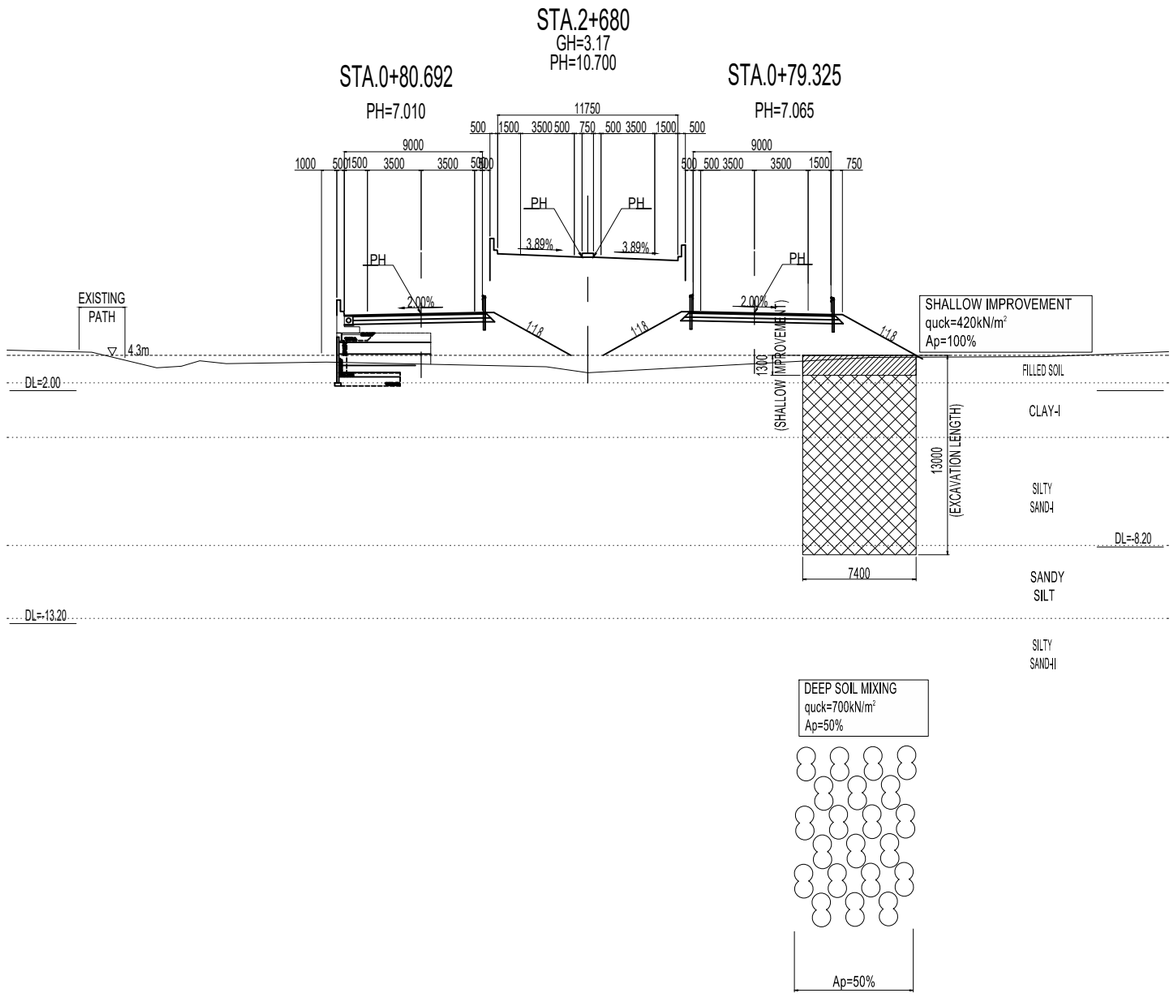
	NAME	SIGNATURE	DATE
PREPARED BY	R. HOSOKAWA		29 Sept. 2017
CHECKED BY	T. HAYAKAWA		3 Oct. 2017
APPROVED BY	Y. SANO		6 Oct. 2017

DRAWING TITLE	PACKAGE
CROSS SECTION OF DEEP MIXING(7)	2
	DWG No.
	P2-RD-5080

CROSS SECTION OF DEEP MIXING(8)

S=1:400





LEGEND
- SHALLOW IMPROVEMENT
- DRY EXCAVATION LENGTH
- DEEP SOIL MIXING
- SURCHARGE

Elevation represents above MSL unless otherwise indicated.

PROJECT NAME	DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT		
FINANCED BY	JAPAN INTERNATIONAL COOPERATION AGENCY		
COUNTERPART	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE		
JICA STUDY TEAM	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE
PREPARED BY	R. HOSOKAWA	細川亮介	29 Sept. 2017
CHECKED BY	T. HAYAKAWA	早川知彦	3 Oct. 2017
APPROVED BY	Y. SANO	佐野雄一	6 Oct. 2017

DRAWING TITLE	PACKAGE
CROSS SECTION OF DEEP MIXING(8)	2
	DWG No.
	P2-RD-5090

CROSS SECTION OF SURCHARGE(1)

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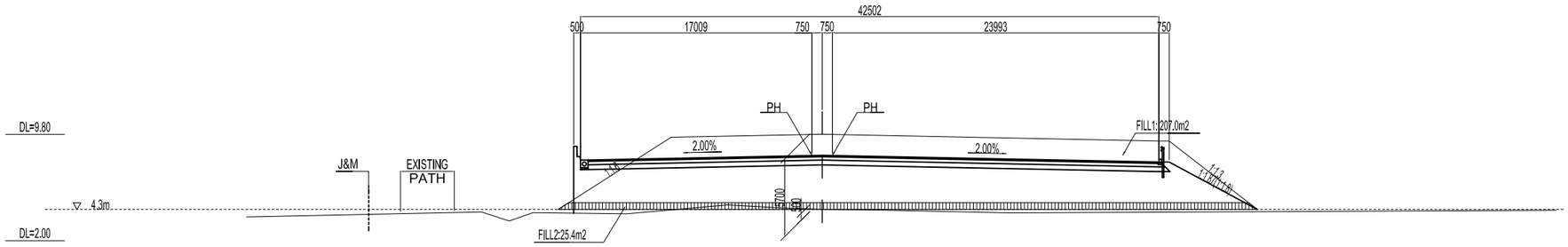
STA.2+440

GH=4.30

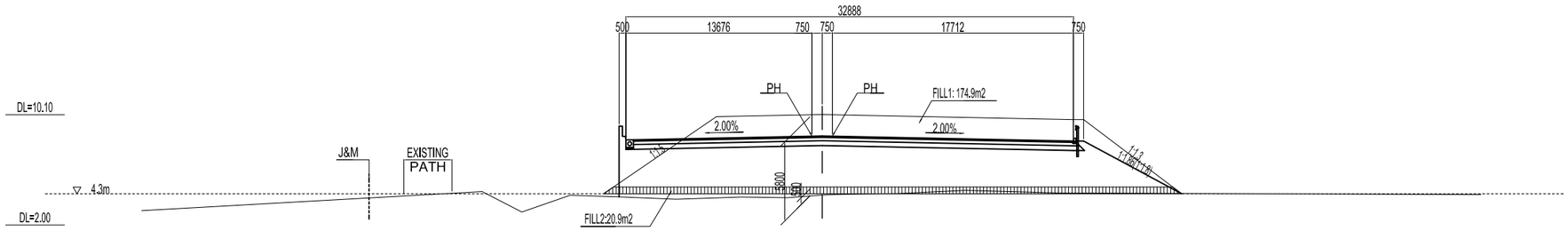
PH=8.254



STA.2+420

GH=4.20

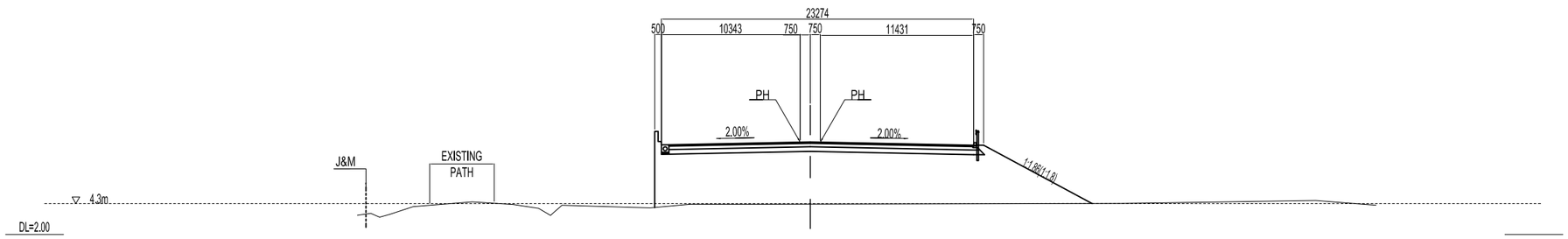
PH=8.525



STA.2+400

GH=4.25

PH=8.870



Elevation represents above MSL unless otherwise indicated.

LEGEND

SAND MAT

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	R. HOSOKAWA	細川 亮介	29 Sept. 2017
CHECKED BY	T. HAYAKAWA	早川 知彦	3 Oct. 2017
APPROVED BY	Y. SANO	佐野 佳一	6 Oct. 2017

DRAWING TITLE	PACKAGE
CROSS SECTION OF SURCHARGE(1)	2
	DWG No.
	P2-RD-5100

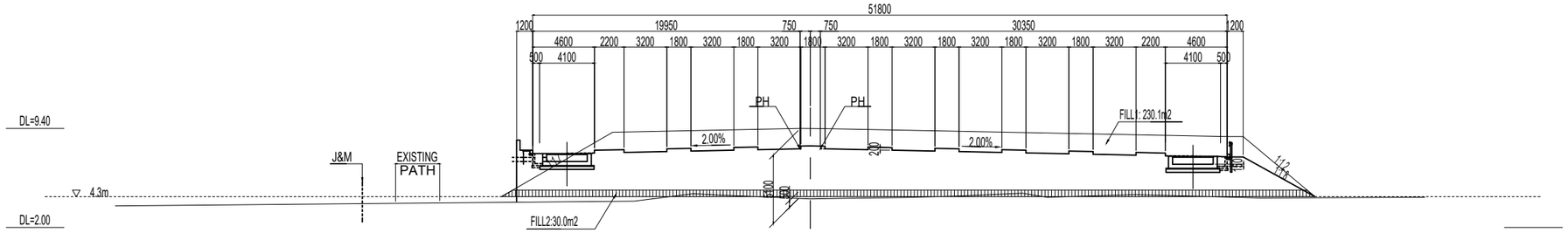
CROSS SECTION OF SURCHARGE(2)

S=1:400

STA.2+500

GH=4.14

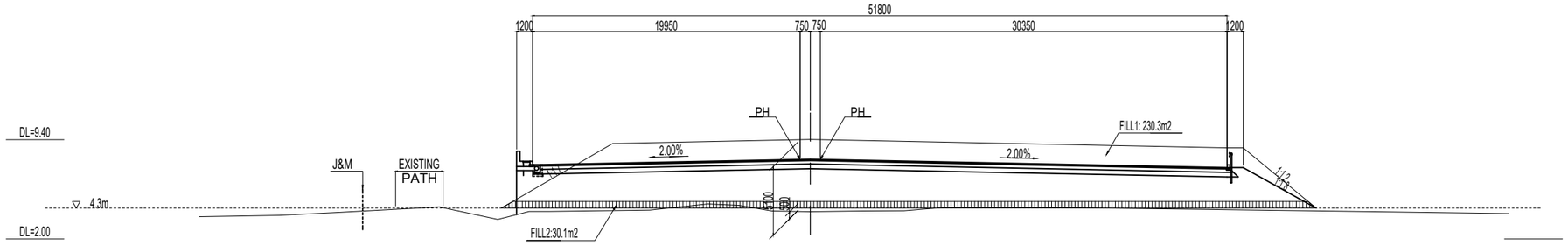
PH=7.879



STA.2+480

GH=4.04

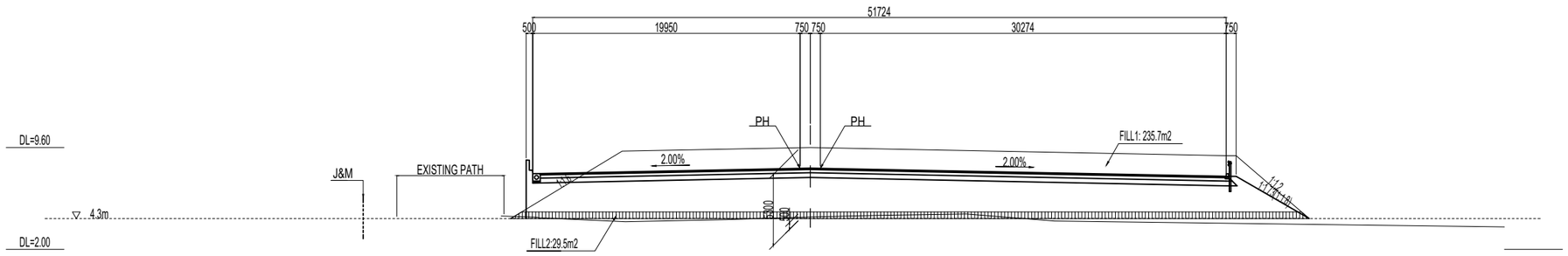
PH=7.930



STA.2+460

GH=4.42

PH=8.055



Elevation represents above MSL unless otherwise indicated.

LEGEND

SAND MAT

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

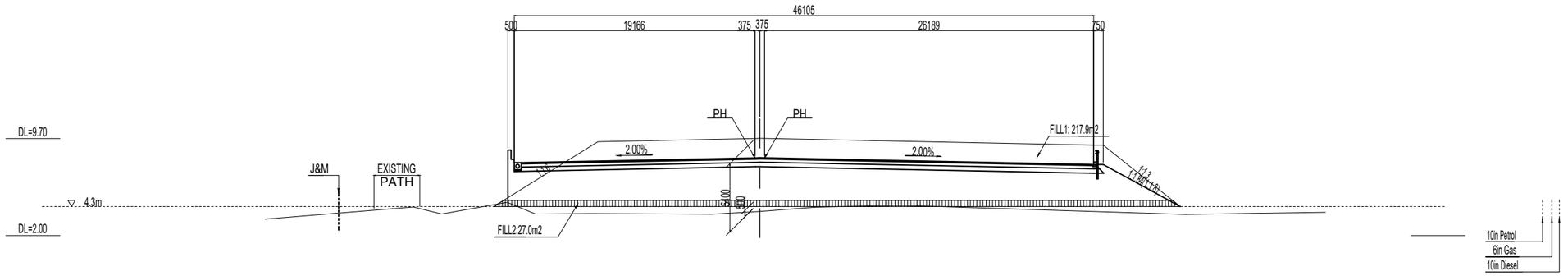
	NAME	SIGNATURE	DATE
PREPARED BY	R. HOSOKAWA		29 Sept. 2017
CHECKED BY	T. HAYAKAWA		3 Oct. 2017
APPROVED BY	Y. SANO		6 Oct. 2017

DRAWING TITLE	PACKAGE
CROSS SECTION OF SURCHARGE(2)	2
	DWG No.
	P2-RD-5110

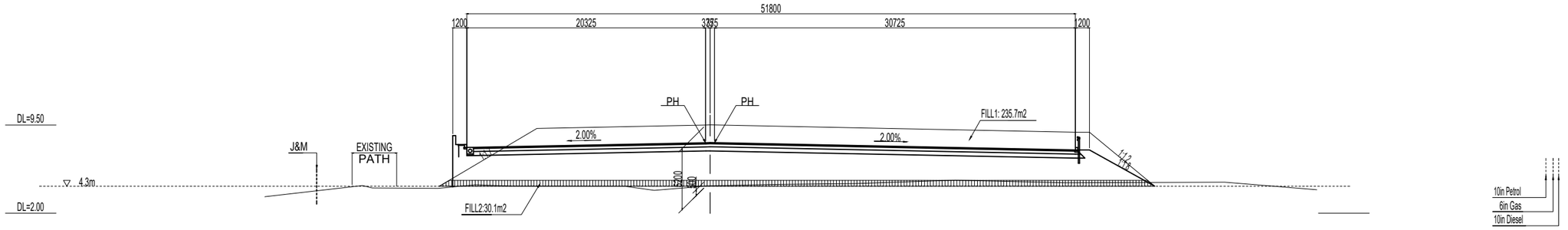
CROSS SECTION OF SURCHARGE(3)

S=1:400

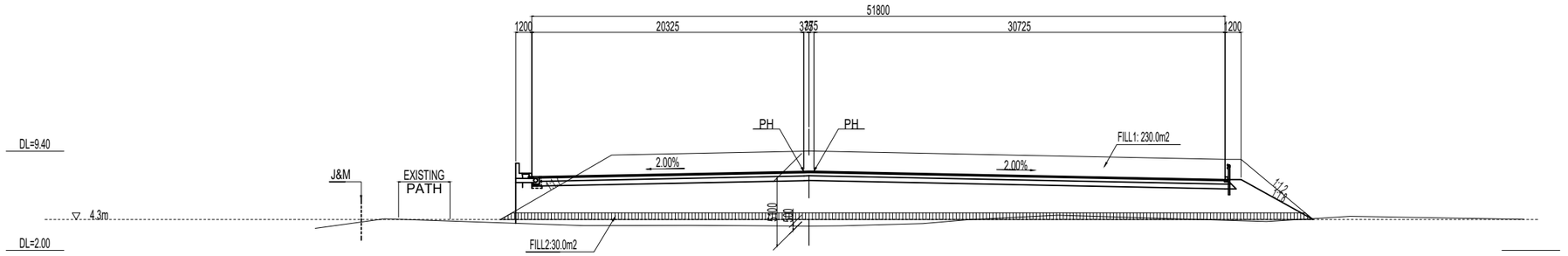
STA.2+560
GH=3.91
PH=8.164



STA.2+540
GH=4.35
PH=7.995



STA.2+520
GH=3.82
PH=7.900



Elevation represents above MSL unless otherwise indicated.

LEGEND
SAND MAT

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	R. HOSOKAWA		29 Sept. 2017
CHECKED BY	T. HAYAKAWA		3 Oct. 2017
APPROVED BY	Y. SANO		6 Oct. 2017

DRAWING TITLE	PACKAGE
CROSS SECTION OF SURCHARGE(3)	2
	DWG No. P2-RD-5120

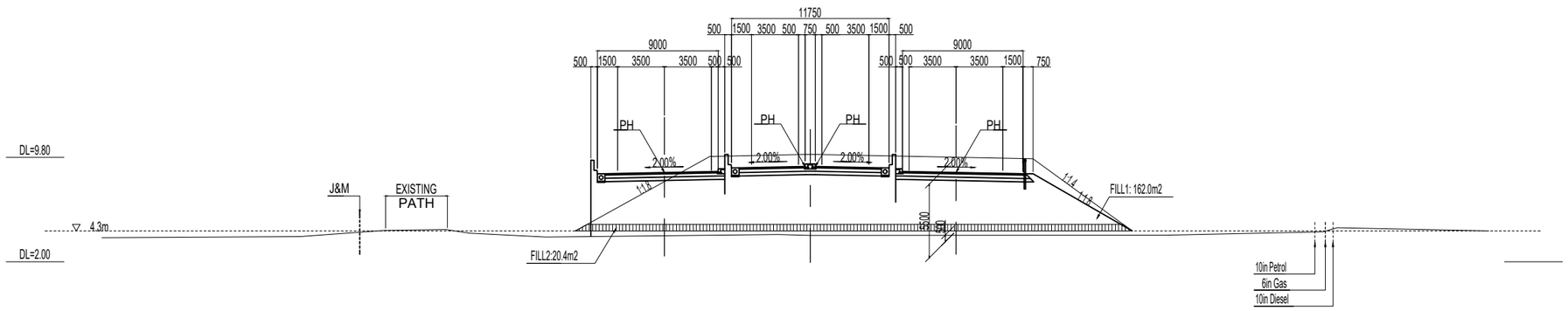
CROSS SECTION OF SURCHARGE(4)

S=1:400

STA.0+20
PH=8.670

STA.2+620
GH=3.97
PH=9.109

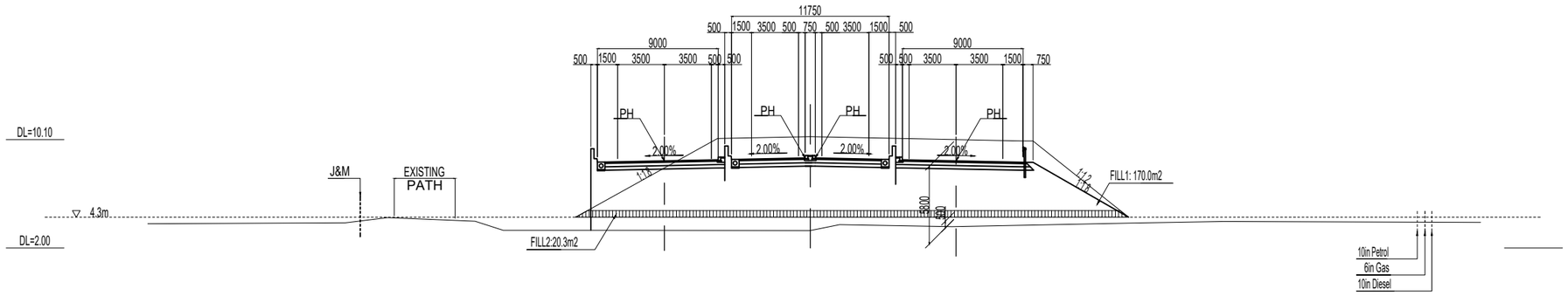
STA.0+20
PH=8.670



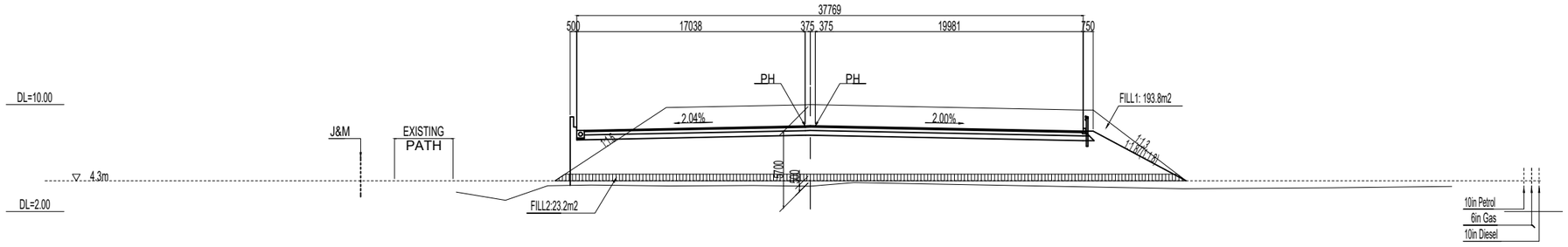
STA.0
PH=8.510

STA.2+600
GH=3.31
PH=8.720

STA.0
PH=8.510



STA.2+580
GH=3.91
PH=8.405



Elevation represents above MSL unless otherwise indicated.

LEGEND
SAND MAT

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	R. HOSOKAWA	細川 亮介	29 Sept. 2017
CHECKED BY	T. HAYAKAWA	早川 知邦	3 Oct. 2017
APPROVED BY	Y. SANO	佐野 裕一	6 Oct. 2017

DRAWING TITLE: CROSS SECTION OF SURCHARGE(4)

PACKAGE: 2

DWG No.: P2-RD-5130

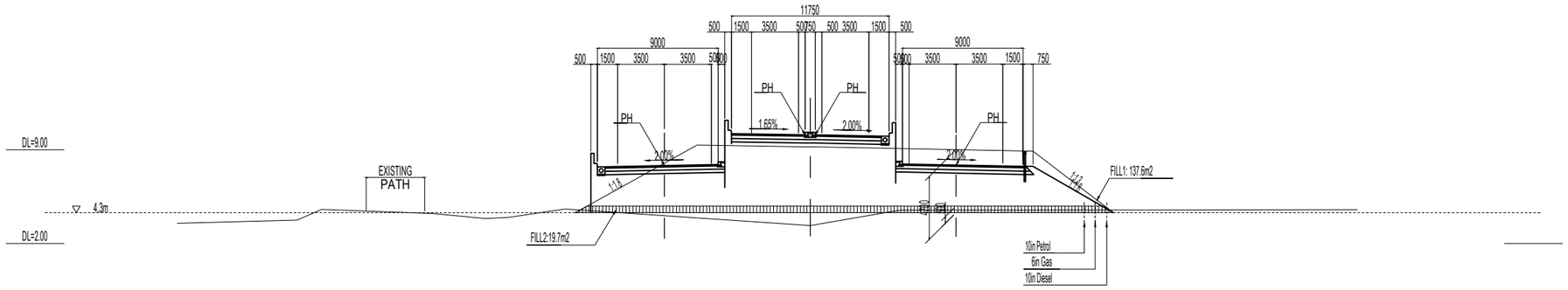
CROSS SECTION OF SURCHARGE(5)

S=1:400

STA.0+60.441
PH=7.820

STA.2+660
GH=3.33
PH=10.105

STA.0+59.561
PH=7.856



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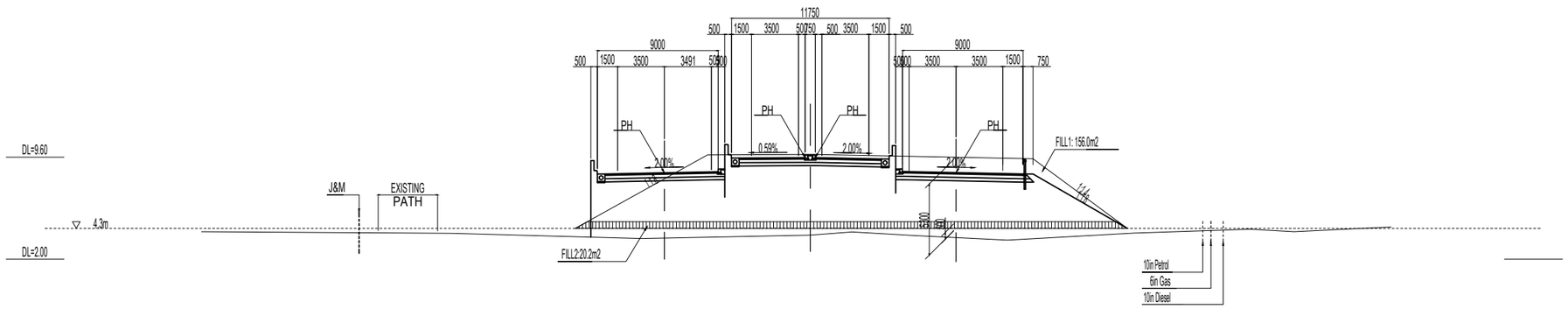
PH=8.442

STA.2+640
GH=3.80
PH=9.570

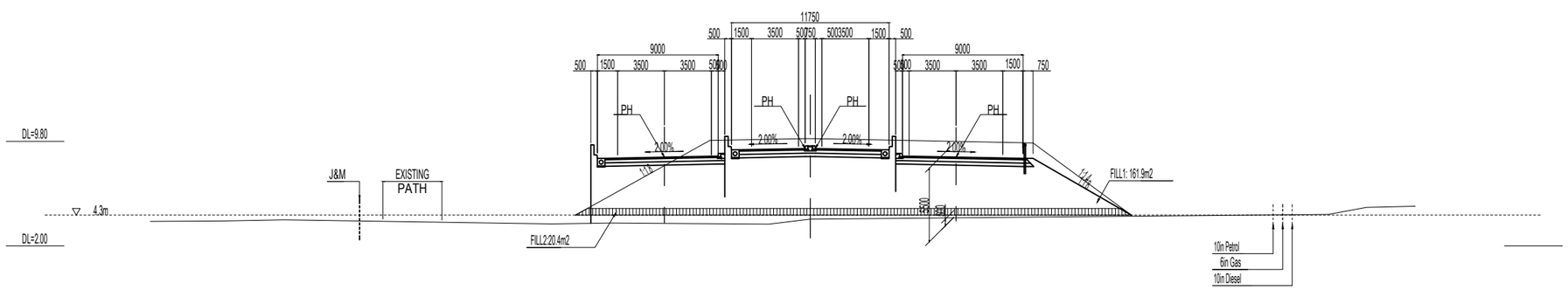
STA.0+39.834
PH=8.450



STA.0+27.42
PH=8.632

STA.2+627.42
GH=4.00
PH=9.272

STA.0+27.42
PH=8.632



Elevation represents above MSL unless otherwise indicated.

LEGEND
SAND MAT

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

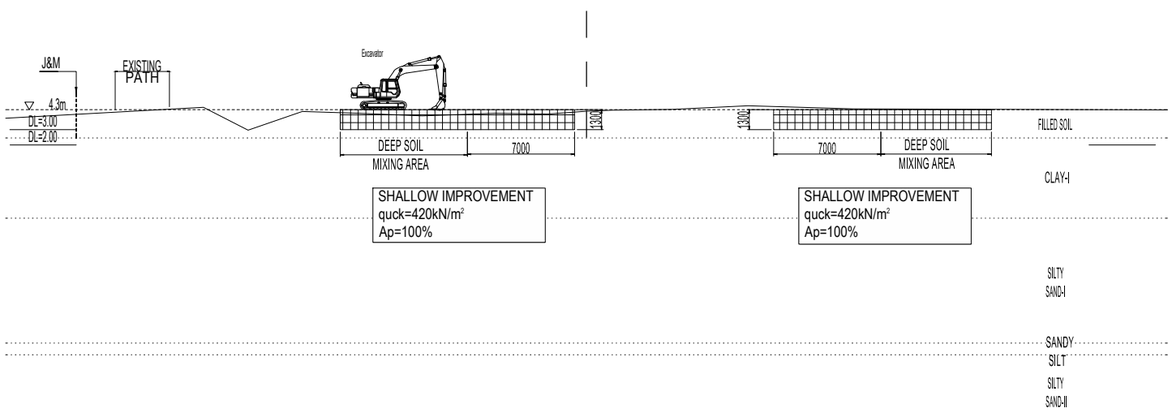
	NAME	SIGNATURE	DATE
PREPARED BY	R. HOSOKAWA		29 Sept. 2017
CHECKED BY	T. HAYAKAWA		3 Oct. 2017
APPROVED BY	Y. SANO		6 Oct. 2017

DRAWING TITLE	PACKAGE
CROSS SECTION OF SURCHARGE(5)	2
	DWG No.
	P2-RD-5140

(REFERENCE) CONSTRUCTION PROCEDUERE(1) S=1:400

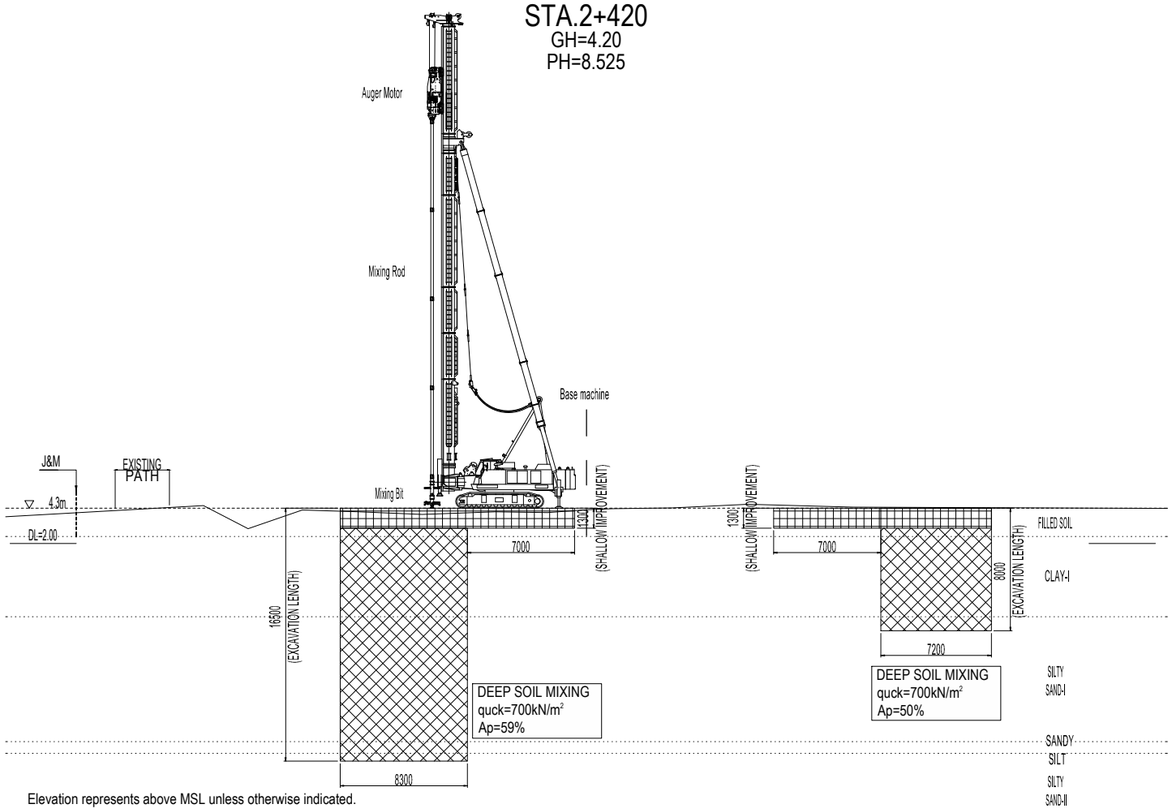
1.CONSTRUCTION OF SHALLOW IMPROVEMENT

STA.2+420
GH=4.20
PH=8.525



2.CONSTRUCTION OF DEEP SOIL MIXING

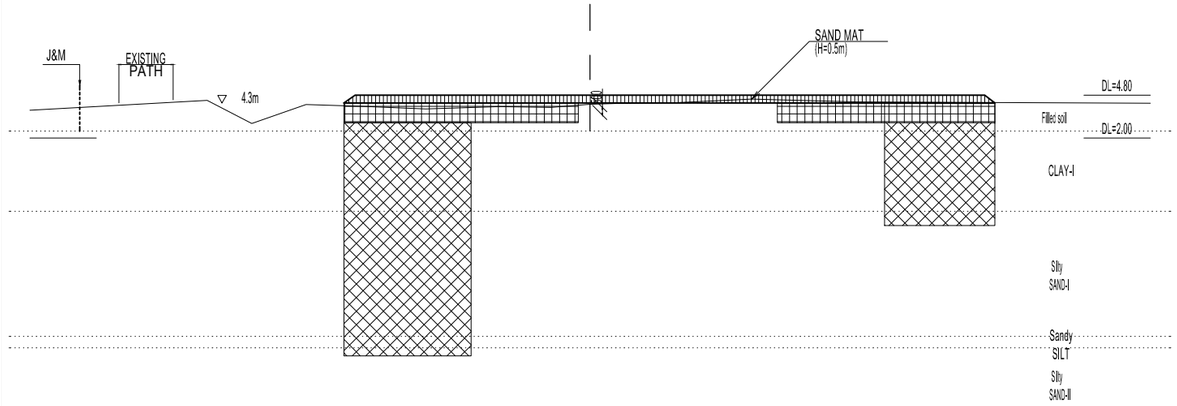
STA.2+420
GH=4.20
PH=8.525



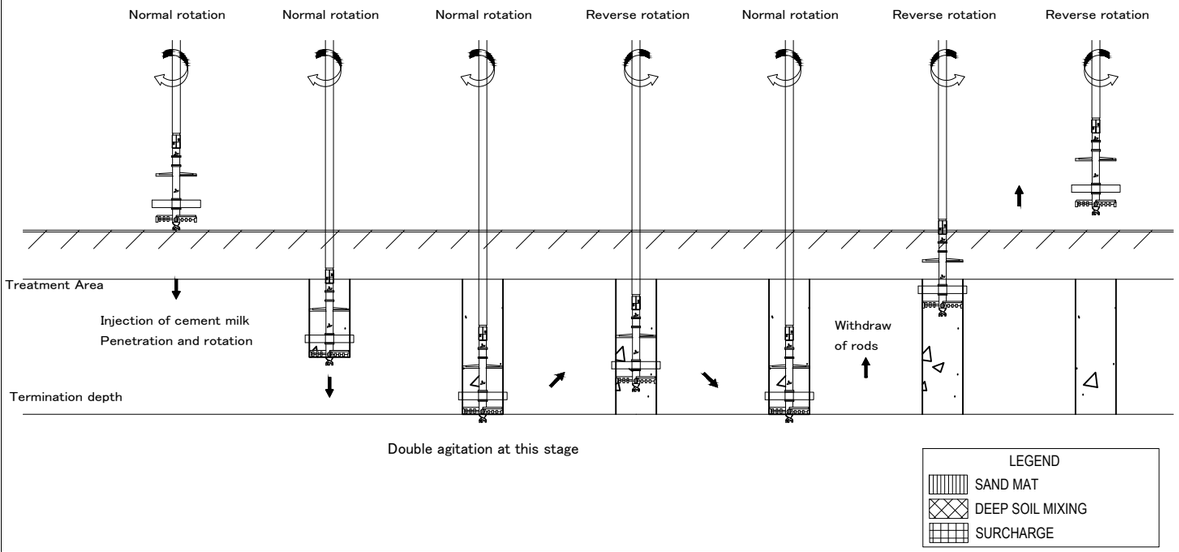
Elevation represents above MSL unless otherwise indicated.

3.CONSTRUCTION OF SAND MAT

STA.2+420
GH=4.20
PH=8.525



CONSTRUCTION CYCLE



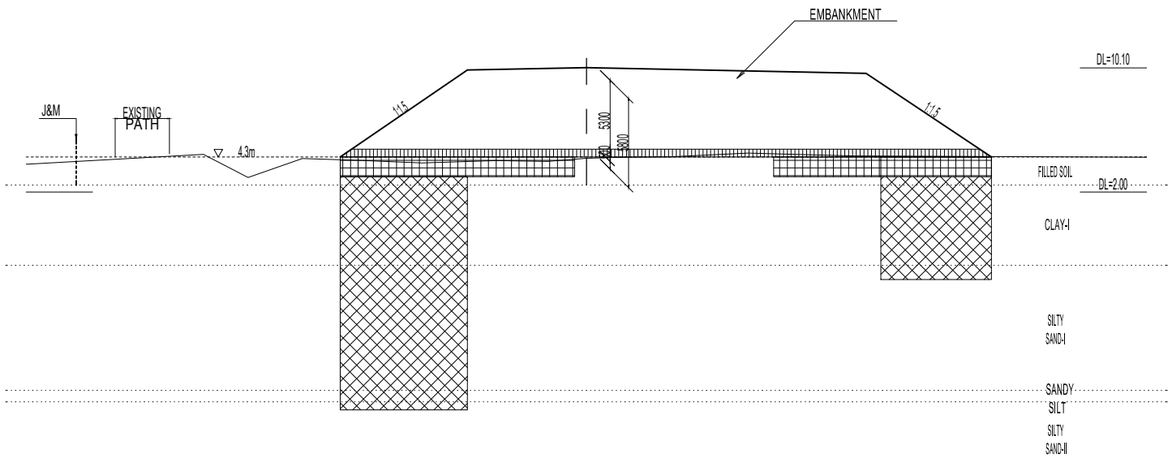
PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM		
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	R. HOSOKAWA		29 Sept. 2017	(REFERENCE) CONSTRUCTION PROCEDUERE(1)	2
CHECKED BY	T. HAYAKAWA		3 Oct. 2017		DWG No.
APPROVED BY	Y. SANO		6 Oct. 2017		P2-RD-5150

(REFERENCE) CONSTRUCTION PROCEDUERE(2) S=1:400

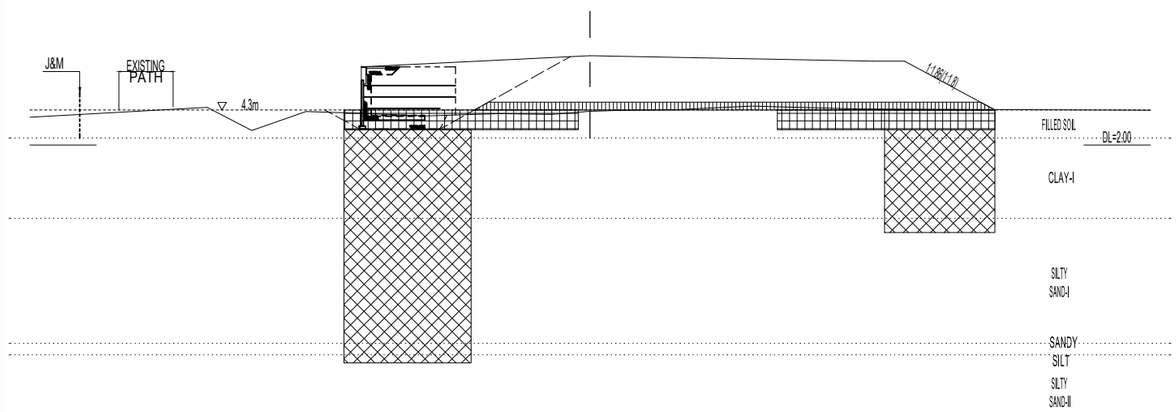
4.EMBANKMENT CONSTRUCTION

STA.2+420
GH=4.20
PH=8.525



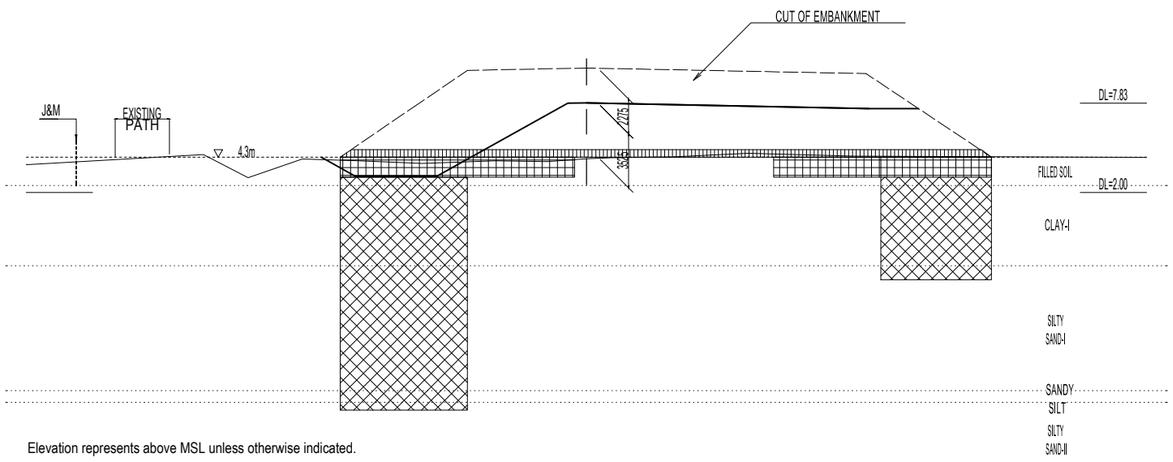
6.CONSTRUCTION OF MECHANICALLY-STABILISED EARTH WALL

STA.2+420
GH=4.20
PH=8.525



5.CUT OF EMBANKMENT

STA.2+420
GH=4.20
PH=8.525

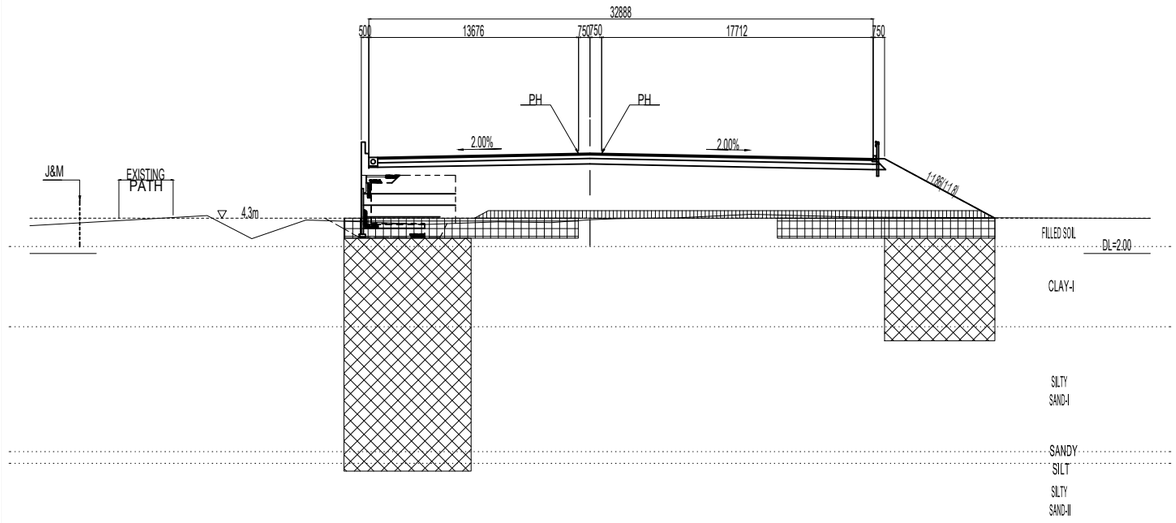


Elevation represents above MSL unless otherwise indicated.

7.PAVING WORK ETC.

STA.2+420
GH=4.20
PH=8.525

LEGEND
SAND MAT
DEEP SOIL MIXING
SURCHARGE

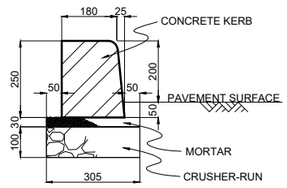


PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

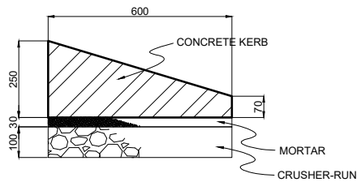
	NAME	SIGNATURE	DATE
PREPARED BY	R. HOSOKAWA	細川 亮介	29 Sept. 2017
CHECKED BY	T. HAYAKAWA	早川 知邦	3 Oct. 2017
APPROVED BY	Y. SANO	佐野 祐一	6 Oct. 2017

DRAWING TITLE	PACKAGE
(REFERENCE) CONSTRUCTION PROCEDUERE(2)	2
	DWG No.
	P2-RD-5160

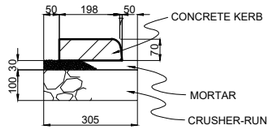
DETAILS OF KERB SCALE = 1:20



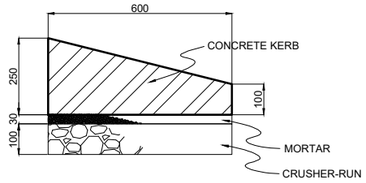
CONCRETE KERB TYPE A-1



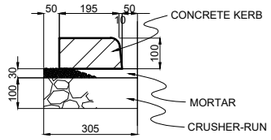
CONCRETE KERB TYPE A-2
TRANSITION BLOCK BETWEEN
TYPE A-1 AND TYPE A-3



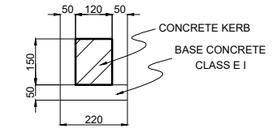
CONCRETE KERB TYPE A-3



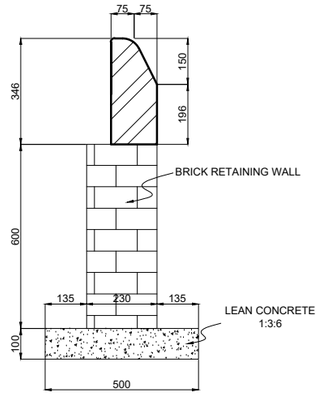
CONCRETE KERB TYPE A-4
TRANSITION BLOCK BETWEEN
TYPE A-1 AND TYPE A-5



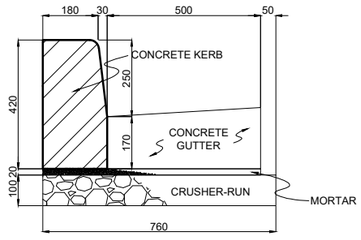
CONCRETE KERB TYPE A-5



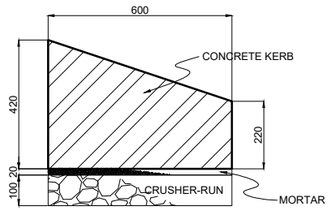
CONCRETE KERB TYPE C



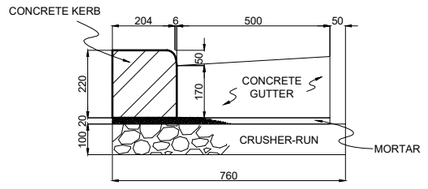
CONCRETE KERB TYPE D



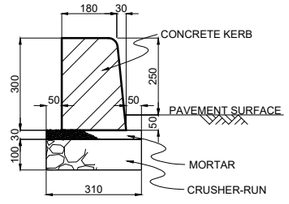
CONCRETE KERB TYPE B-1



CONCRETE KERB TYPE B-2
TRANSITION BLOCK BETWEEN
TYPE B-1 AND TYPE B-3



CONCRETE KERB TYPE B-3



CONCRETE KERB TYPE E

MATERIAL LIST (QUANTITIES PER 10 M)

TYPE	A-1	A-2	A-3	A-4	A-5	B-1	B-2	B-3
DIMENSION	180/205×H250×L600	180/205×H250 ×L600 198/205×H70	198/205×H70×L600	180/205×H250 ×L600 195/205×H100	195/205×H100×L600	180/210×H420×L600	180/210×H420 ×L600 204/210×H220	204/210×H220×L600
CONCRETE	CLASS E I	CLASS E I	CLASS E I	CLASS E I	CLASS E I	CLASS E I	CLASS E I	CLASS E I
MORTAR (1:3)	0.0915 m^3	0.0915 m^3	0.0915 m^3	0.0915 m^3	0.0915 m^3	0.142 m^3	0.142 m^3	0.142 m^3
CRUSHER-RUN	0.305 m^3	0.305 m^3	0.305 m^3	0.305 m^3	0.305 m^3	0.760 m^3	0.760 m^3	0.760 m^3
GUTTER CONCRETE	-	-	-	-	-	0.925 m^3	0.925 m^3	0.925 m^3

MATERIAL LIST (QUANTITIES PER 10 M)

TYPE	C	D	E
DIMENSION	120×H150×L600	75/150×H346×L600	180/210×H300×L600
CONCRETE	CLASS E I	CLASS E I	CLASS E I
MORTAR (1:3)	-	-	-
CRUSHER-RUN	-	-	0.093 m^3
BASE CONCRETE	0.110 m^3	-	0.310 m^3
LEAN CONCRETE	-	0.500 m^3	-
BRICK	-	1.380 m^3	-

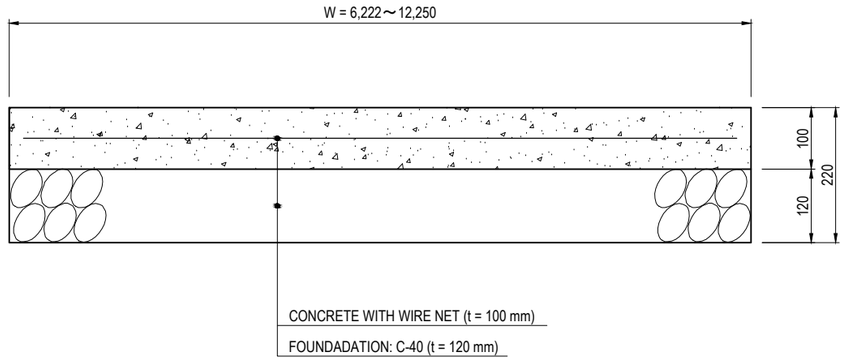
PROJECT NAME	DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT		
FINANCED BY	JAPAN INTERNATIONAL COOPERATION AGENCY		
COUNTERPART	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE		
JICA STUDY TEAM	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE
PREPARED BY	K. TACHIBANA		15 JUNE 2017
CHECKED BY	T. HAYAKAWA		20 JUNE 2017
APPROVED BY	Y. SANO		21 JUNE 2017

DRAWING TITLE	PACKAGE
DETAILS OF KERB	2
	DWG No.
	P2-RD-6000

DETAILS OF CONCRETE SEAL S=1:10

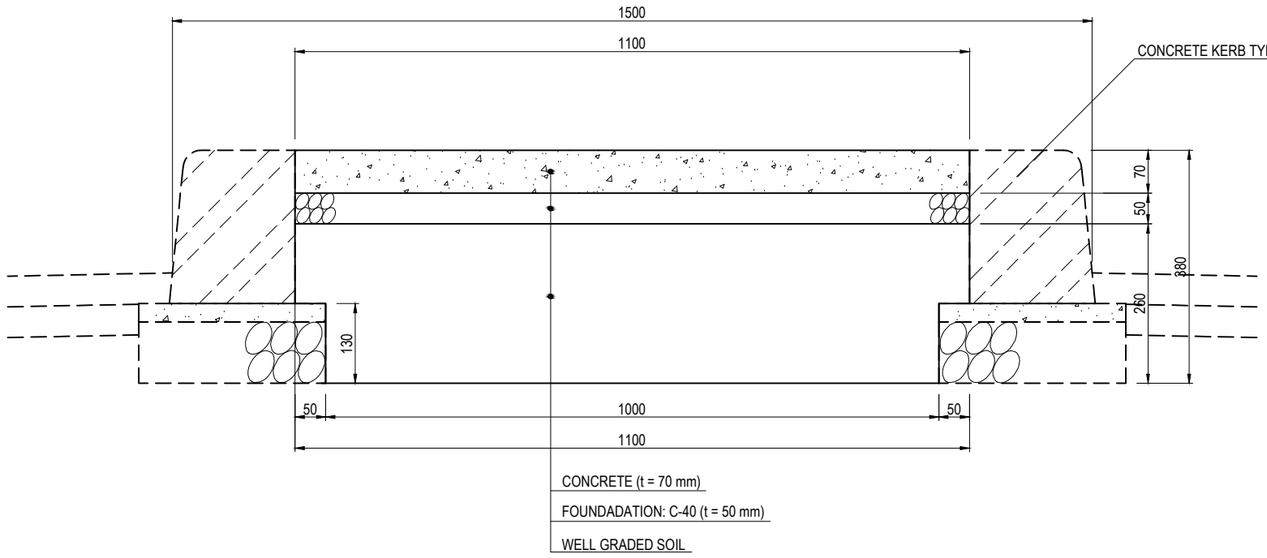
NOTE
1. SPECIFICATION OF PLAIN CONCRETE SHOULD BE CLASS EI



QUANTITY PER 100 M

TITLE	SPECIFICATION	QUANTITY
CONCRETE	18 N/mm², t = 100	100.00 M²
WIRE NET		100.00 M²
FOUNDATION	t = 120	100.00 M²

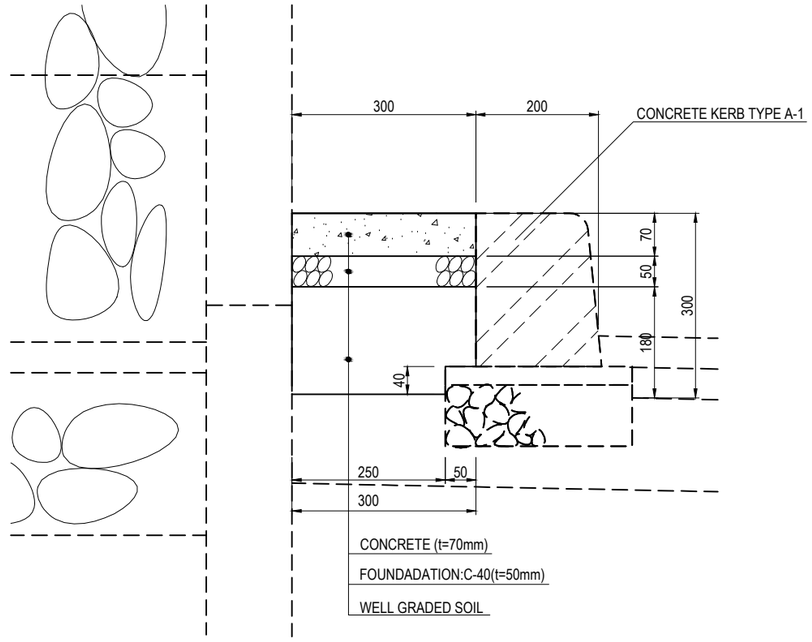
CONCRETE SEAL (t = 100 mm) UNDER FLYOVER SECTION



MEDIAN TYPE C (t = 70 mm) EARTHWORK SECTION

QUANTITY PER 100 M

TITLE	SPECIFICATION	QUANTITY
CONCRETE	18 N/mm², t = 70	7.70 M^3
FOUNDATION	t = 50	110.00 M^2
WELL GRADED SOIL		27.30 M^3



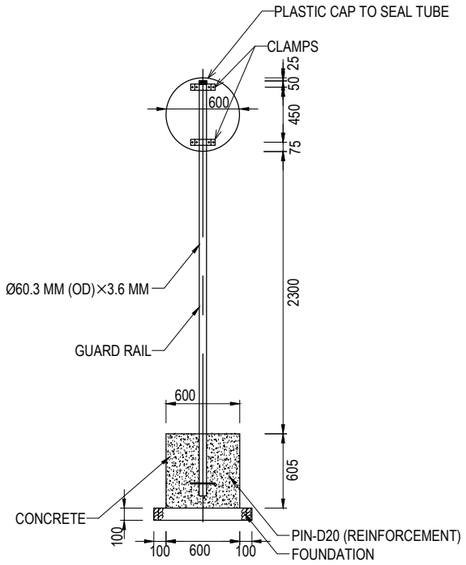
MEDIAN TYPE B (t = 70 mm) MECHANICALLY STABILISED EARTH WALL/GRAVITY WALL SECTION

QUANTITY PER 100 M

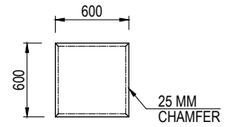
TITLE	SPECIFICATION	QUANTITY
CONCRETE	18 N/mm², t = 70	2.10 M^3
FOUNDATION	t = 50	30.00 M^2
WELL GRADED SOIL		5.20 M^3

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.			
				NAME	SIGNATURE / DATE
				PREPARED BY	E. YOKOTA — 15 JUNE 2017
				CHECKED BY	T. HAYAKAWA — 20 JUNE 2017
				APPROVED BY	Y. SANO — 21 JUNE 2017
				DRAWING TITLE	DETAILS OF CONCRETE SEAL S=1:10
				PACKAGE	2
				DWG No.	P2-RD-6005

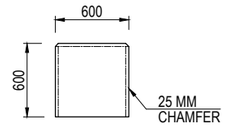
DETAIL OF SIGNBOARD FOUNDATION AND POST



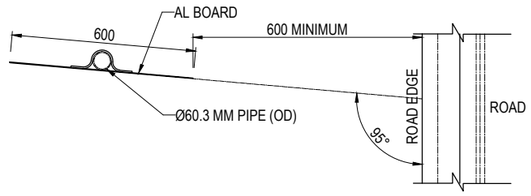
SIGN POST
S=1:50



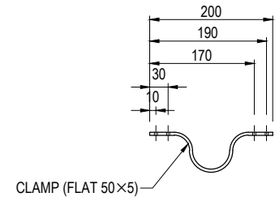
FOUNDATION PLAN
S=1:50

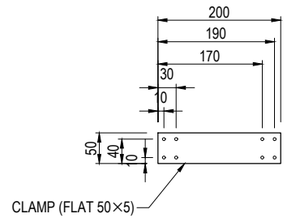


FOUNDATION ELEVATION
S=1:50

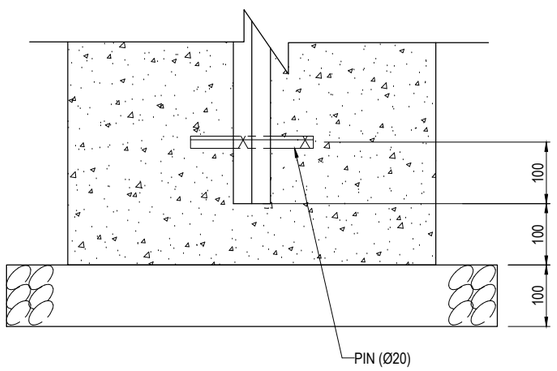


TOP VIEW
PLAN OF SIGN BOARD
S=1:20

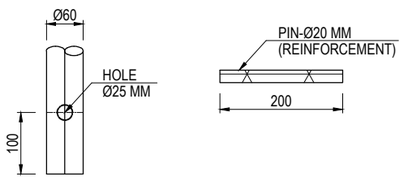


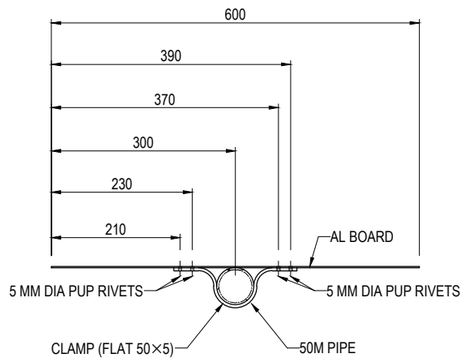


CLAMP DETAILS-2
S=1:10



DETAIL OF "A"
S=1:10





CLAMP DETAILS-1
S=1:10

QUANTITY PER 10 EACH

TITLE	SPECIFICATION	QUANTITY	DESCRIPTION
SIGNBOARD	ALMINIUM: t = 2.0 MM	10 EACH	WIDE-ANGLE PRISM TYPE
POST	60.3×3380×3.6	10 EACH	COATING SPECIFICATION
CONCRETE	E I	2.18 M³	
FOUNDATION	t = 100	6.40 M²	
FORM		14.52 M²	

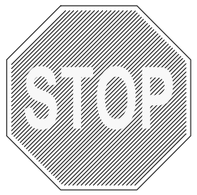
NOTE
1. SPECIFICATION OF PLAIN CONCRETE SHOULD BE CLASS EI

PROJECT NAME	DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT		
FINANCED BY	JAPAN INTERNATIONAL COOPERATION AGENCY		
COUNTERPART	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE		
JICA STUDY TEAM	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE
PREPARED BY	K. TACHIBANA		15 JUNE 2017
CHECKED BY	T. HAYAKAWA		20 JUNE 2017
APPROVED BY	Y. SANO		21 JUNE 2017

DRAWING TITLE	PACKAGE
DETAIL OF SIGNBOARD FOUNDATION AND POST	2
	DWG No.
	P2-RD-6010

DETAIL OF SIGNBOARD



TS-1
STOP
SIZE: 600 MM×600 MM

TS-2
SPEED LIMIT 60 KM/H
SIZE: 600 MM DIAMETER

TS-3
SPEED LIMIT 40 KM/H
SIZE: 600 MM DIAMETER

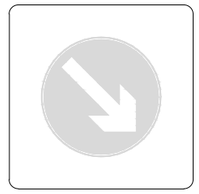
TS-4
SPEED LIMIT 30 KM/H
SIZE: 600 MM DIAMETER

TS-5
NO U-TURN
SIZE: 600 MM DIAMETER

TS-6
CROSS ROAD
SIZE: 600 MM×600 MM

TS-7
TRAFFIC SIGNAL
SIZE: 600 MM×600 MM

TS-8
PEDESTRIAN CROSSING
SIZE: 600 MM×600 MM



TS-9
KEEP RIGHT (THIS WAY)
SIZE: 600 MM×600 MM

TS-10
SLOW DOWN
SIZE: 600 MM×600 MM

TS-11
SCHOOL ZONE
SIZE: 600 MM×600 MM

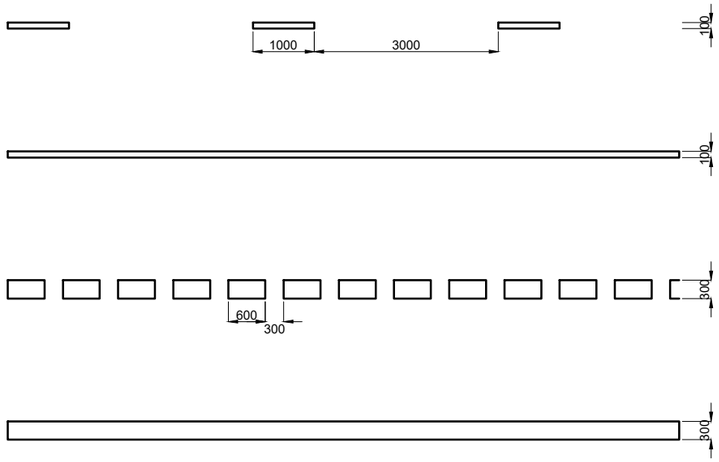
TS-12
REVERSE TURN (RIGHT)
SIZE: 600 MM×600 MM

TS-13
REVERSE TURN (LEFT)
SIZE: 600 MM×600 MM

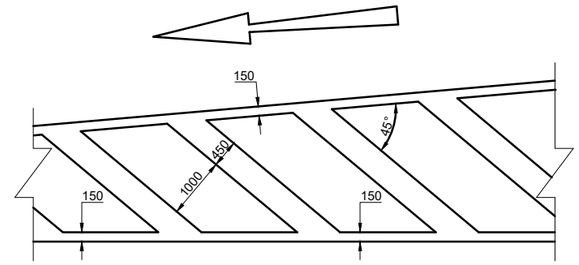
COLORS: BLACK RED YELLOW GREEN WHITE LIGHT BLUE

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

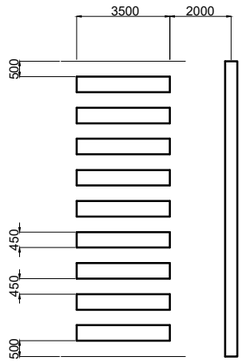
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	K. TACHIBANA		15 JUNE 2017	DETAIL OF SIGNBOARD	2
CHECKED BY	T. HAYAKAWA		20 JUNE 2017		DWG No.
APPROVED BY	Y. SANO		21 JUNE 2017		P2-RD-6020



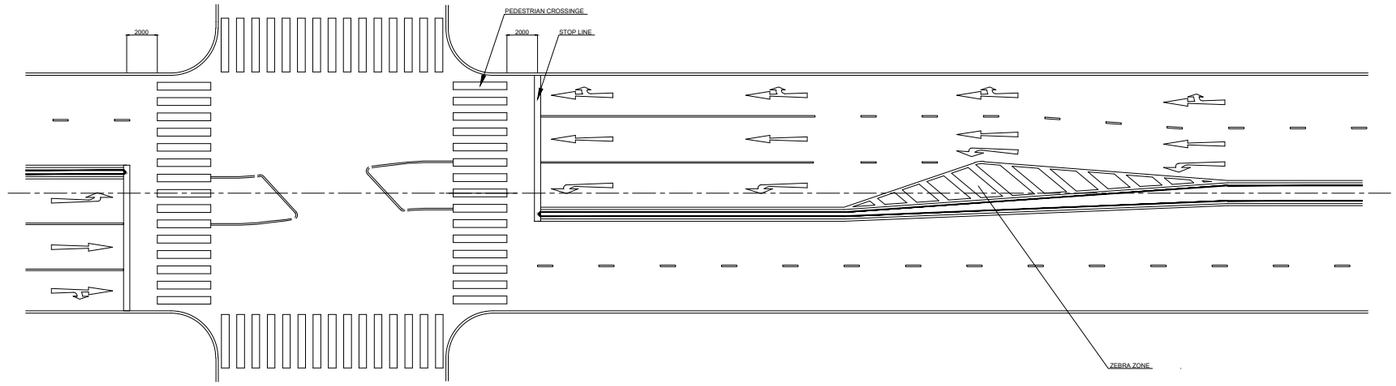
LINE MARKINGS SCALE = 1:100



ZEBRA ZONE SCALE = 1:100



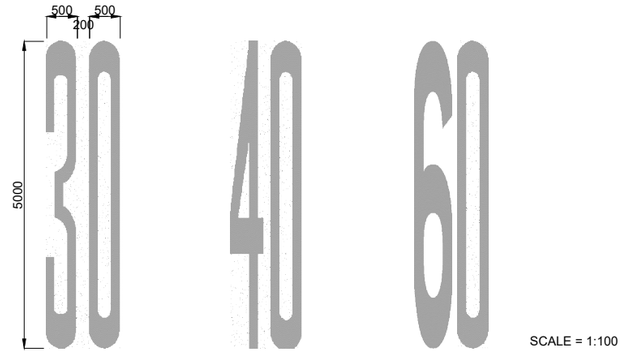
DETAILED ARRANGEMENT OF
PEDESTRIAN CROSSING AND STOP LINE SCALE = 1:200



PAVEMENT MARKINGS AT CROSS ROAD NO SCALE

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	K. TACHIBANA		15 JUNE 2017	ROAD MARKING DETAILS (1)	2
CHECKED BY	T. HAYAKAWA		20 JUNE 2017		DWG No.
APPROVED BY	Y. SANO		21 JUNE 2017		P2-RD-6080

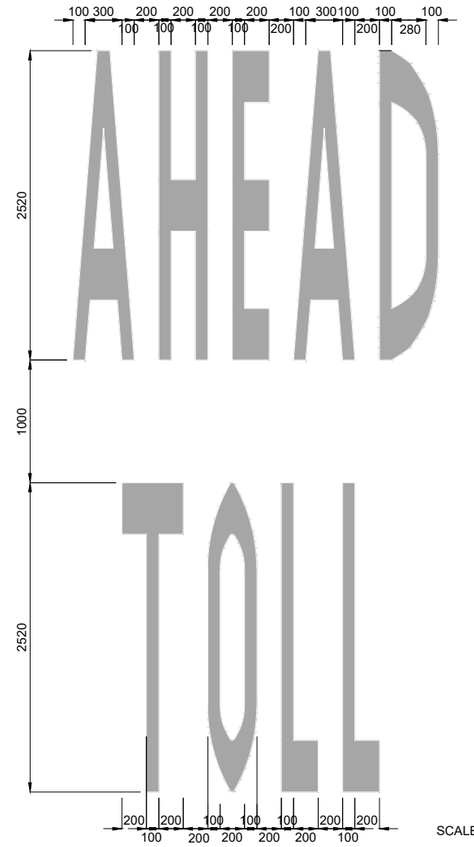


SCALE = 1:100

PM-1
SPEED LIMIT 30 KM/H

PM-2
SPEED LIMIT 40 KM/H

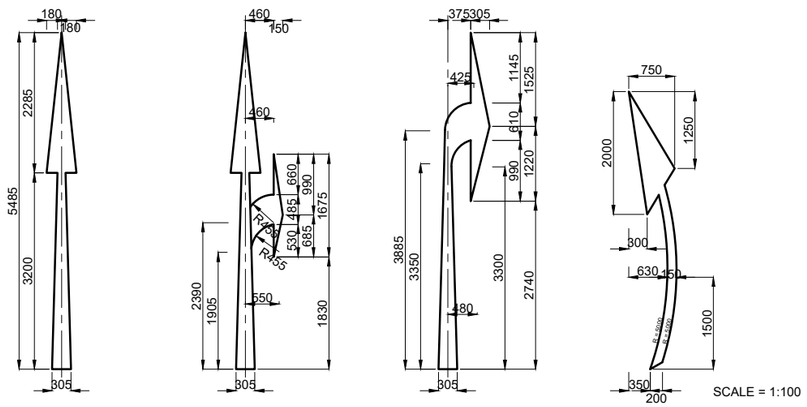
PM-3
SPEED LIMIT 60 KM/H



SCALE = 1:50

PM-4
TOLL AHEAD

REFERENCE SHALL BE MADE TO
DRAWING NO. PWD(RD)/SD91/20-1,
ROAD AND TRANSPORTATION DIVISION,
PUBLIC WORKS DEPARTMENT



SCALE = 1:100

PM-AR1 PM-AR2 PM-AR3 PM-AR4

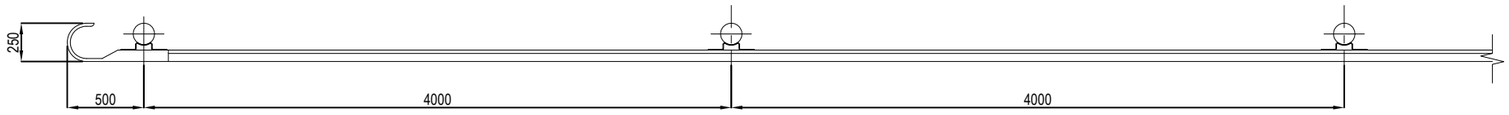
ARROW MARKS

REFERENCE SHALL BE MADE TO
DRAWING NO. PWD(RD)/SD91/8-2
ROAD AND TRANSPORTATION DIVISION,
PUBLIC WORKS DEPARTMENT

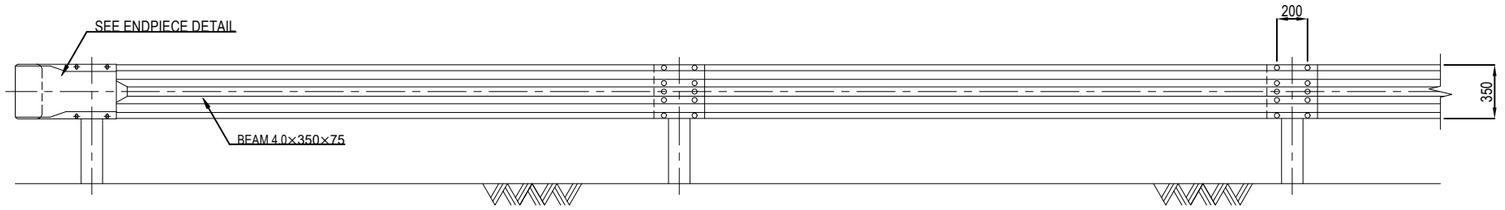
COLORS: WHITE ORANGE

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	K. TACHIBANA		15 JUNE 2017	ROAD MARKING DETAILS (2)	2
CHECKED BY	T. HAYAKAWA		20 JUNE 2017		DWG No.
APPROVED BY	Y. SANO		21 JUNE 2017		P22-RD-6090

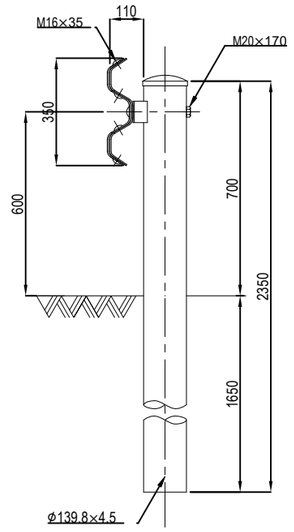
GUARDRAIL TYPE-A (GR-A)



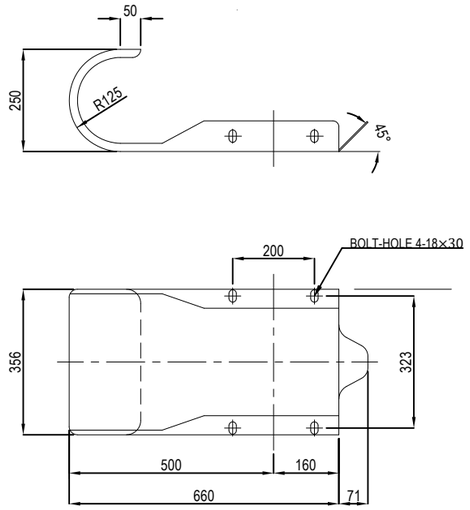
PLAN S = 1:40



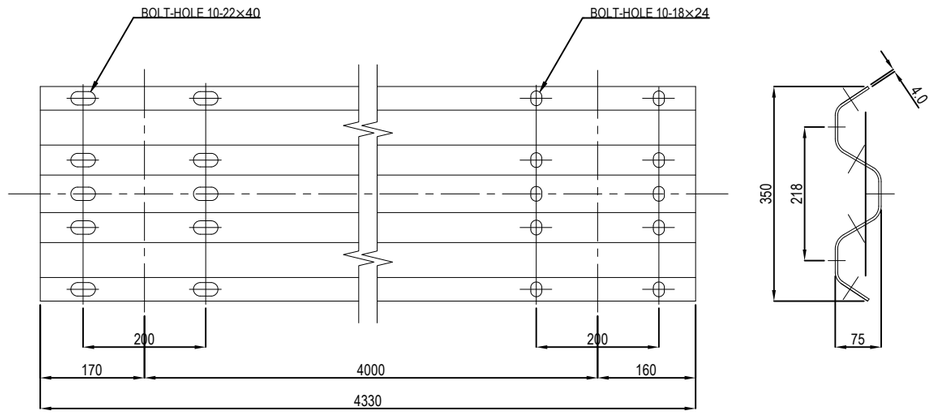
ELEVATION S = 1:40



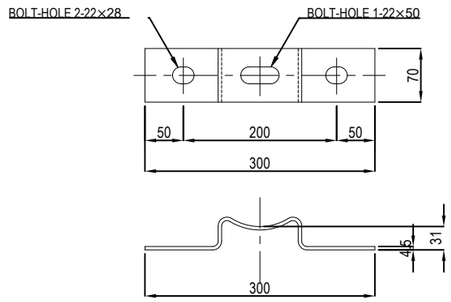
GR-A SECTION S = 1:20



ENDPIECE DETAIL S = 1:15



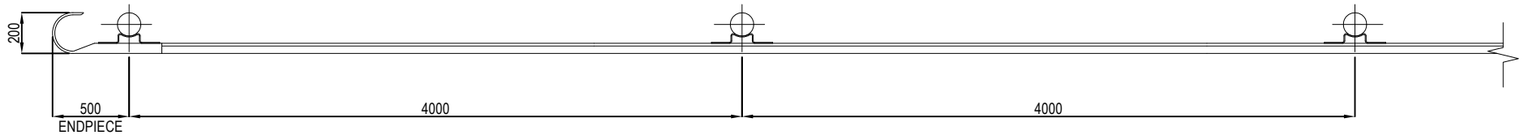
BEEM S = 1:40



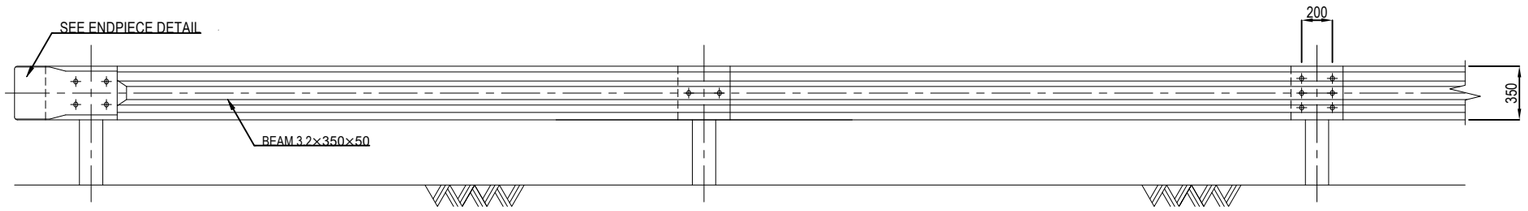
BRACKET S = 1:8

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		
				NAME / SIGNATURE / DATE	DRAWING TITLE / PACKAGE
				PREPARED BY: E. YOKOTA — 15 JUNE 2017	DETAILS OF GUARDRAIL (1) TYPE-A — 2
				CHECKED BY: T. HAYAKAWA — 20 JUNE 2017	DWG No.
				APPROVED BY: Y. SANO — 21 JUNE 2017	P2-RD-6100

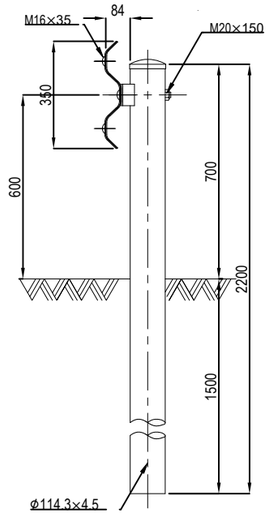
GUARDRAIL TYPE-B (GR-B)



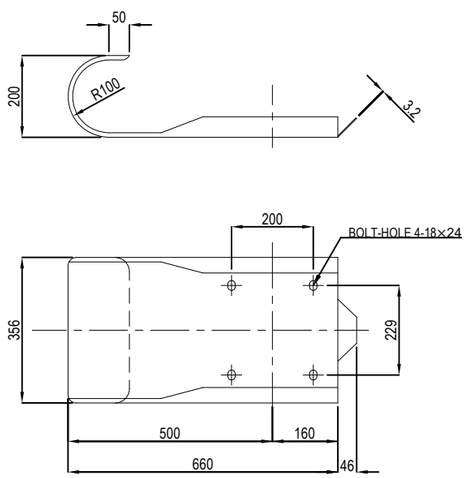
PLAN S = 1:40



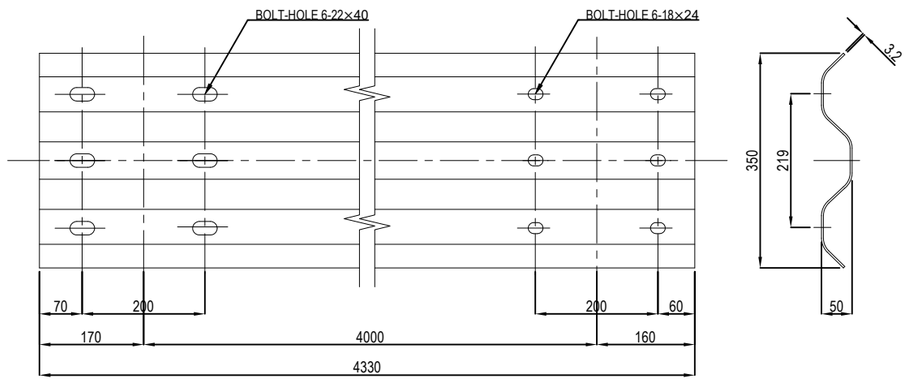
ELEVATION S = 1:40



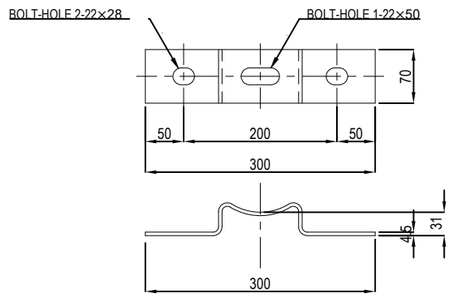
GR-B SECTION S = 1:20



ENDPIECE DETAIL S = 1:15



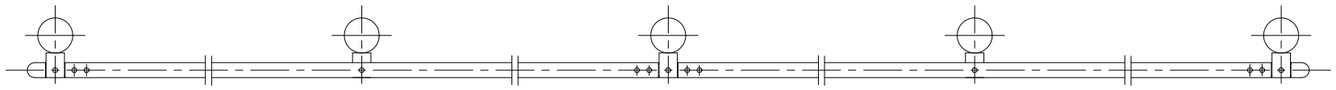
BEEM S = 1:40



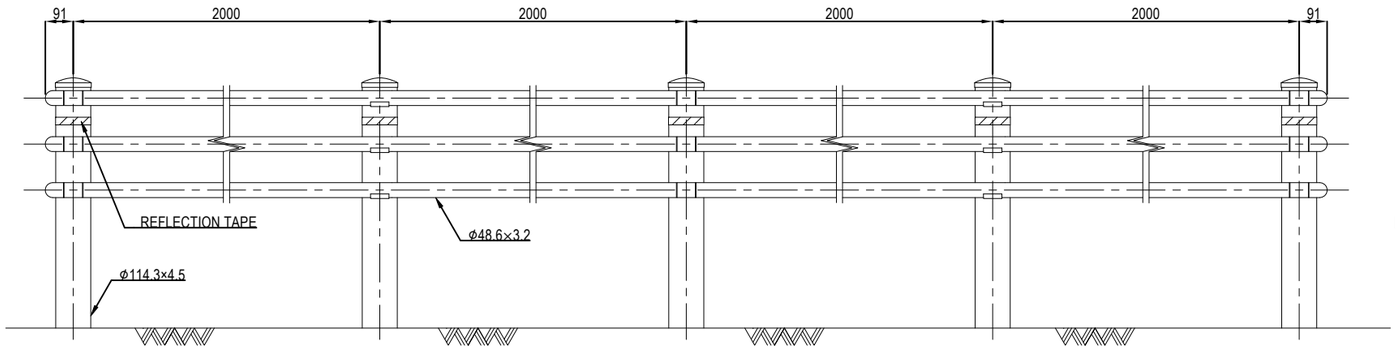
BRACKET S = 1:8

PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		
	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	E. YOKOTA		15 JUNE 2017	DETAILS OF GUARDRAIL (2) TYPE-B	2
CHECKED BY	T. HAYAKAWA		20 JUNE 2017		DWG No.
APPROVED BY	Y. SANO		21 JUNE 2017		P2-RD-6110

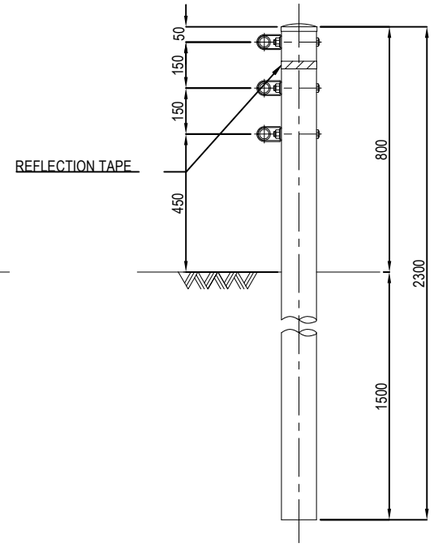
GUARD PIPE TYPE-A (GP-A)



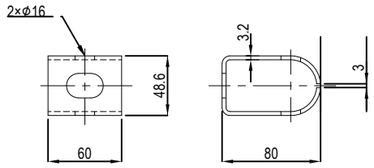
PLAN S = 1:20



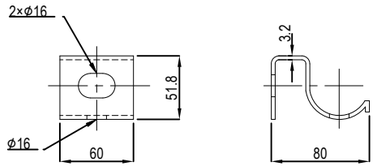
ELEVATION S = 1:20



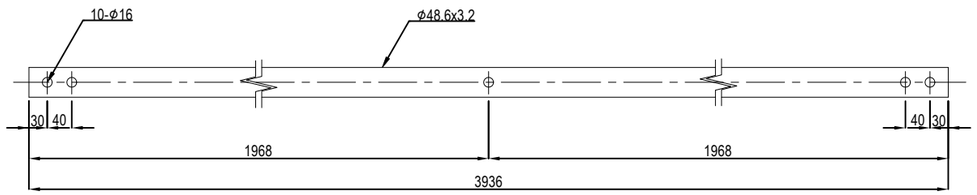
SECTION S = 1:20



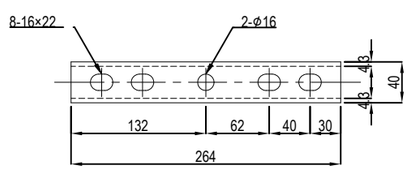
JOINT BLACKET S = 1:5



INTERMEDIATE BLACKET S = 1:5



GP-A BEAM S = 1:10



INNER SLEAVE S = 1:10

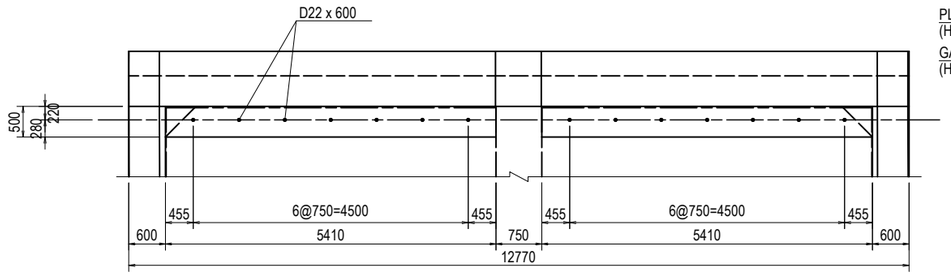
PROJECT NAME: DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	FINANCED BY: JAPAN INTERNATIONAL COOPERATION AGENCY	COUNTERPART: REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	JICA STUDY TEAM: NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.

	NAME	SIGNATURE	DATE
PREPARED BY	E. YOKOTA		15 JUNE 2017
CHECKED BY	T. HAYAKAWA		20 JUNE 2017
APPROVED BY	Y. SANO		21 JUNE 2017

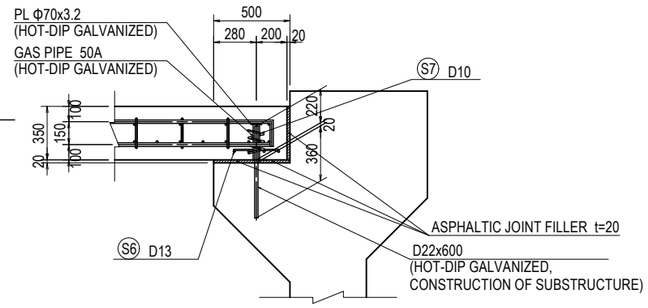
DRAWING TITLE	PACKAGE
DETAILS OF GUARD PIPE TYPE-A	2
	DWG No.
	P2-RD-6120

APPROACH CUSHION SLAB (AF1)
BAR ARRANGEMENT OF AF1 ABUTMENT S=1:100

1-1



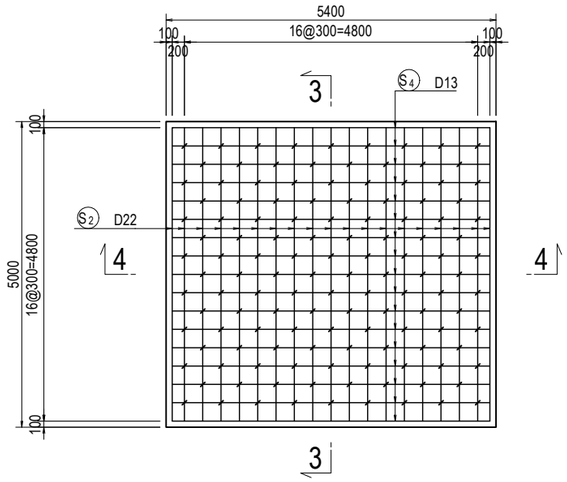
DETAIL OF PEDESTAL S=1:40



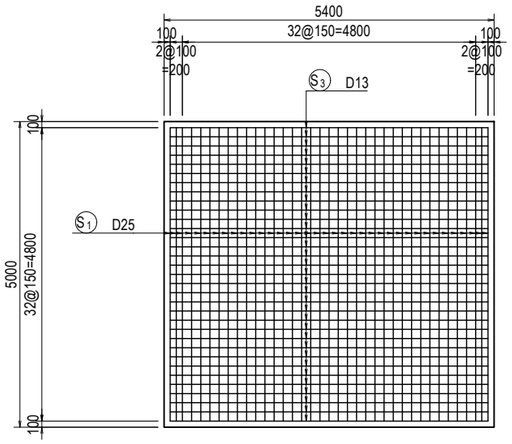
BAR LIST

REBAR NO.	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT/ONE (kg)	WEIGHT (kg)	REMARKS
S 1	D25	4800	74	3.98	19.10	1413	
S 2	D22	5100	38	3.04	15.50	589	
S 3	D13	5200	66	0.995	5.17	341	
S 4	D13	5430	34	0.995	5.40	184	
S 5	D13	570	256	0.995	0.57	146	
S 6	D13	300	112	0.995	0.30	34	
S 7	D10	960	14	0.56	0.54	8	
					D25	1413 kg	
					D22	589 kg	
					D13	705 kg	
					D10	8 kg	
					TOTAL	2715 kg	
GAS PIPE 50A		230	14	5.31	1.22	17	
PL		Φ70x3.2	14		0.10	1	

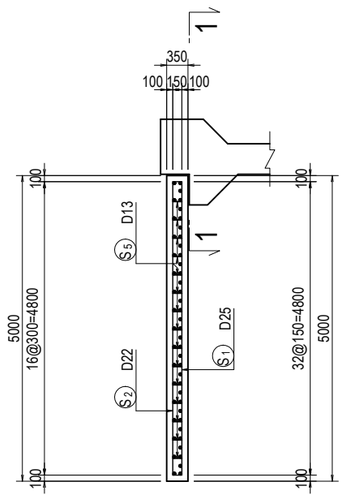
2-2

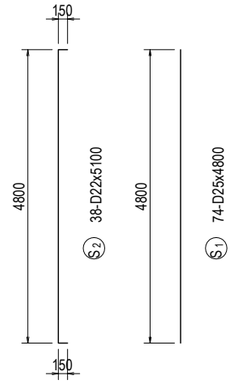


3-3

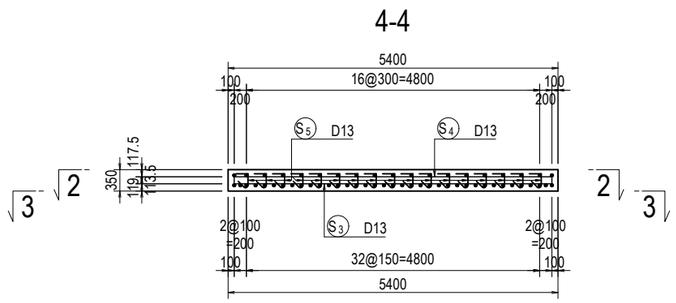


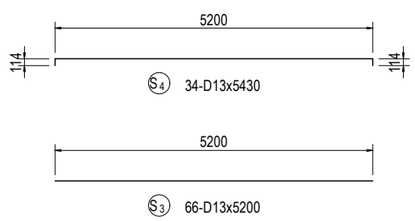
5-5

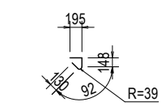




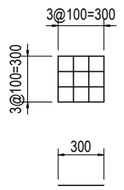
4-4



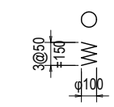




S5 256-D13x570



S6 112-D13x300



S7 14-D10x960

PROJECT NAME	FINANCED BY	COUNTERPART	JICA STUDY TEAM		
DETAILED DESIGN ON BAGO RIVER BRIDGE CONSTRUCTION PROJECT	JAPAN INTERNATIONAL COOPERATION AGENCY	REPUBLIC OF THE UNION OF MYANMAR MINISTRY OF CONSTRUCTION DEPARTMENT OF BRIDGE	NIPPON KOEI CO., LTD. ORIENTAL CONSULTANTS GLOBAL CO., LTD. METROPOLITAN EXPRESSWAY COMPANY LIMITED CHODAI CO.,LTD. NIPPON ENGINEERING CONSULTANTS CO.,LTD.		

	NAME	SIGNATURE	DATE	DRAWING TITLE	PACKAGE
PREPARED BY	Y. SUZUKI		15 Jun.2017	APPROACH CUSHION SLAB (AF1) BAR ARRANGEMENT OF AF1 ABUTMENT	2
CHECKED BY	T. HAYAKAWA		20 Jun.2017		DWG No.
APPROVED BY	Y. SANO		21 Jun.2017		P2-RD-6200