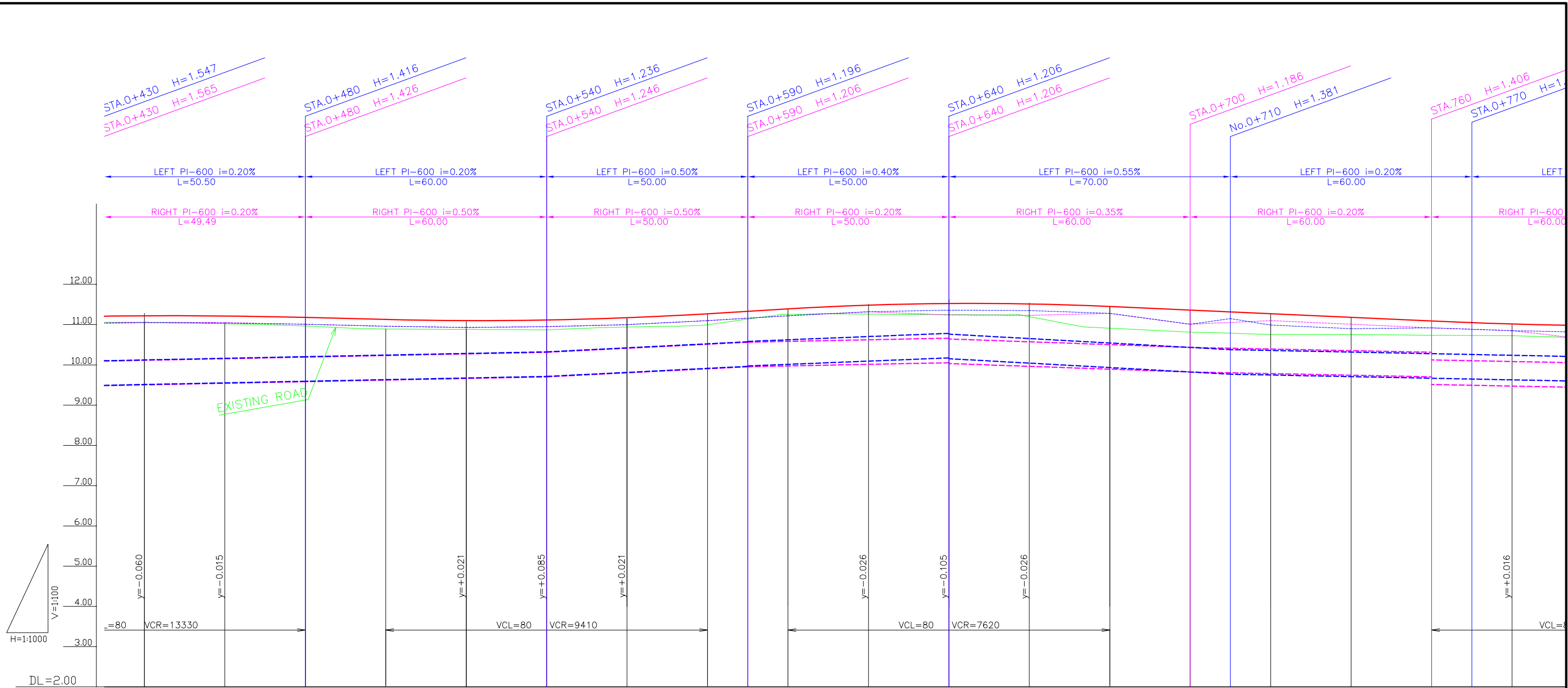
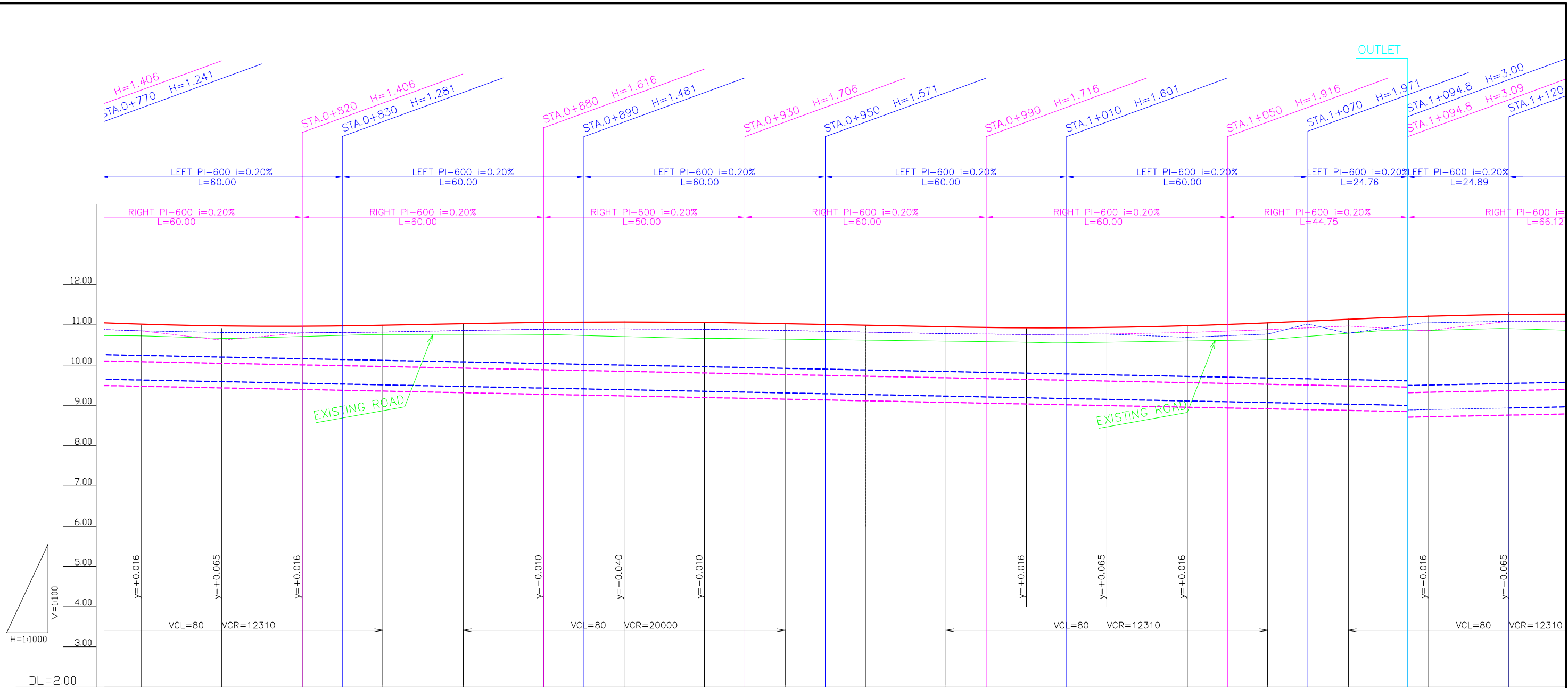


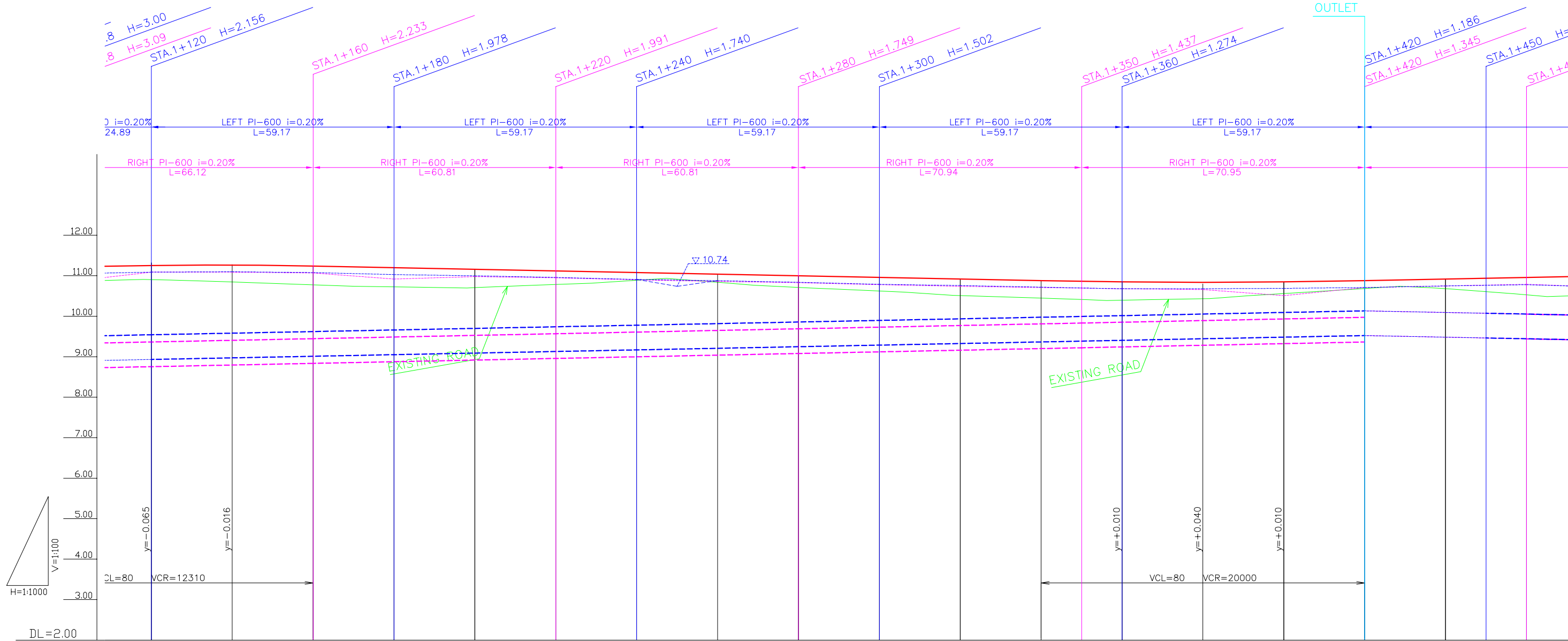
VERTICAL ALIGNMENT	PAVEMENT HEIGHT	GROUND HEIGHT	STATION	HORIZONTAL CURVATURE	SUPER-ELEVATION
11.200	11.200	11.16	STA.0+100	R=∞ L=48.031	NC=3.0%
	11.159	11.27	+120		
	11.118	11.22	+140		
	11.102	11.04	BC-1-0		
	11.077	11.12	+160		
	11.036	11.06	+180		
	10.995	10.97	+200		
	10.954	10.88	+220		
	10.913	10.66	+240		
	10.872	10.64	+260		
	10.845	10.72	+280		
	10.846	10.81	+300	L=313.096 R=800	
	10.874	10.84	+320		
	10.930	10.77	+340		
	11.000	10.86	+360		
	11.070	10.96	+380		
	11.140	11.05	+400		
	11.195	11.06	+420		
	11.220	11.06	+440		
					NC=3.0%



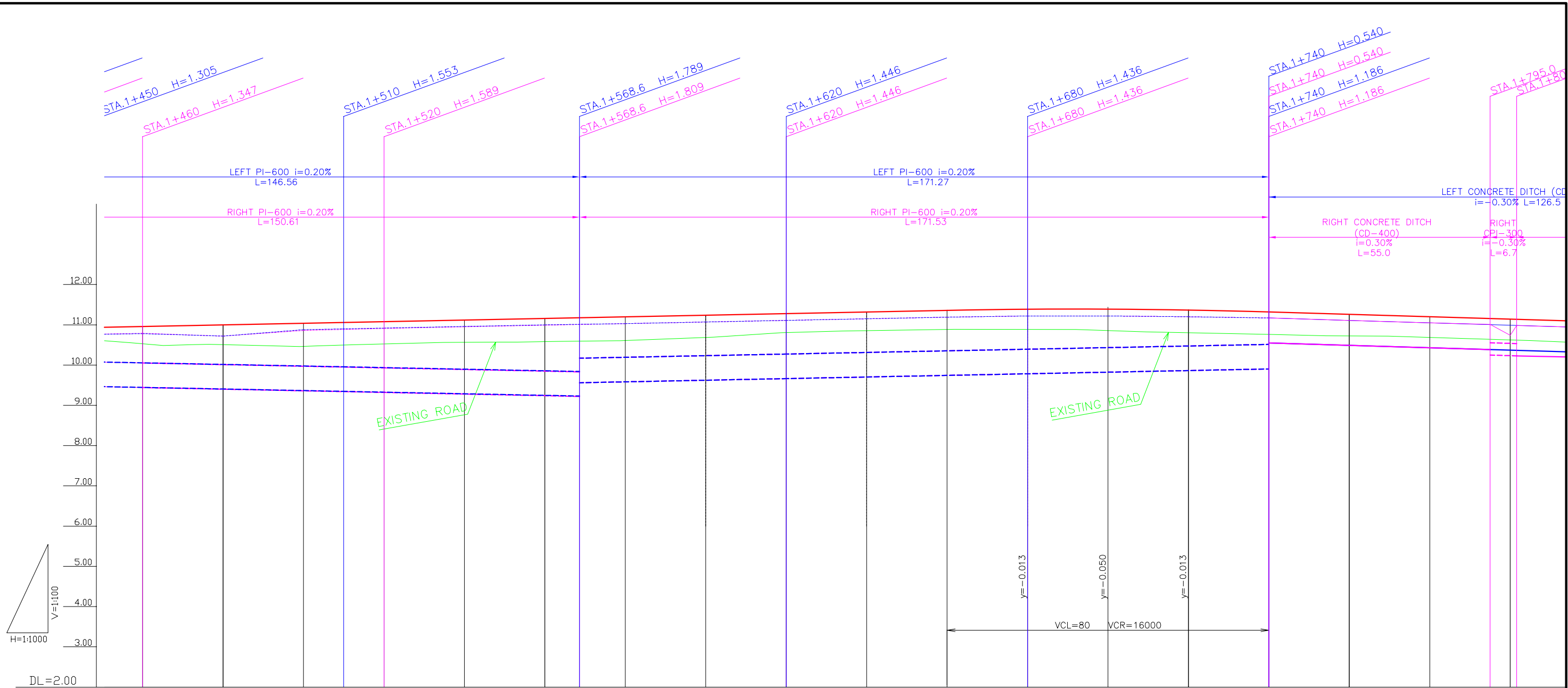
VERTICAL ALIGNMENT	PAVEMENT HEIGHT	GROUND HEIGHT	STATION	HORIZONTAL CURVATURE	SUPER-ELEVATION
11.280	11.220	11.06	+440	L=313.096 R=800	
$i = -0.250\%$ L=100.00	11.215 11.214	11.02	+460		
	11.180	10.96	+480		
	11.130	10.89	+500		
	11.101	10.88	+520		
	11.115	10.87	+540		
$i = 0.600\%$ L=100.00	11.171	10.94	+560		
	11.270	11.00	+580	R=∞ L=633.638	NC=3.0%
	11.390	11.26	+600		
	11.484	11.26	+620		
	11.525	11.25	+640		
$i = -0.450\%$ L=160.00	11.514	11.20	+660		
	11.450	10.91	+680		NC=3.0%
	11.360	10.82	+700		
	11.270	10.76	+720		
	11.180	10.75	+740		
	11.090	10.74	+760		
	11.016	10.73	+780		



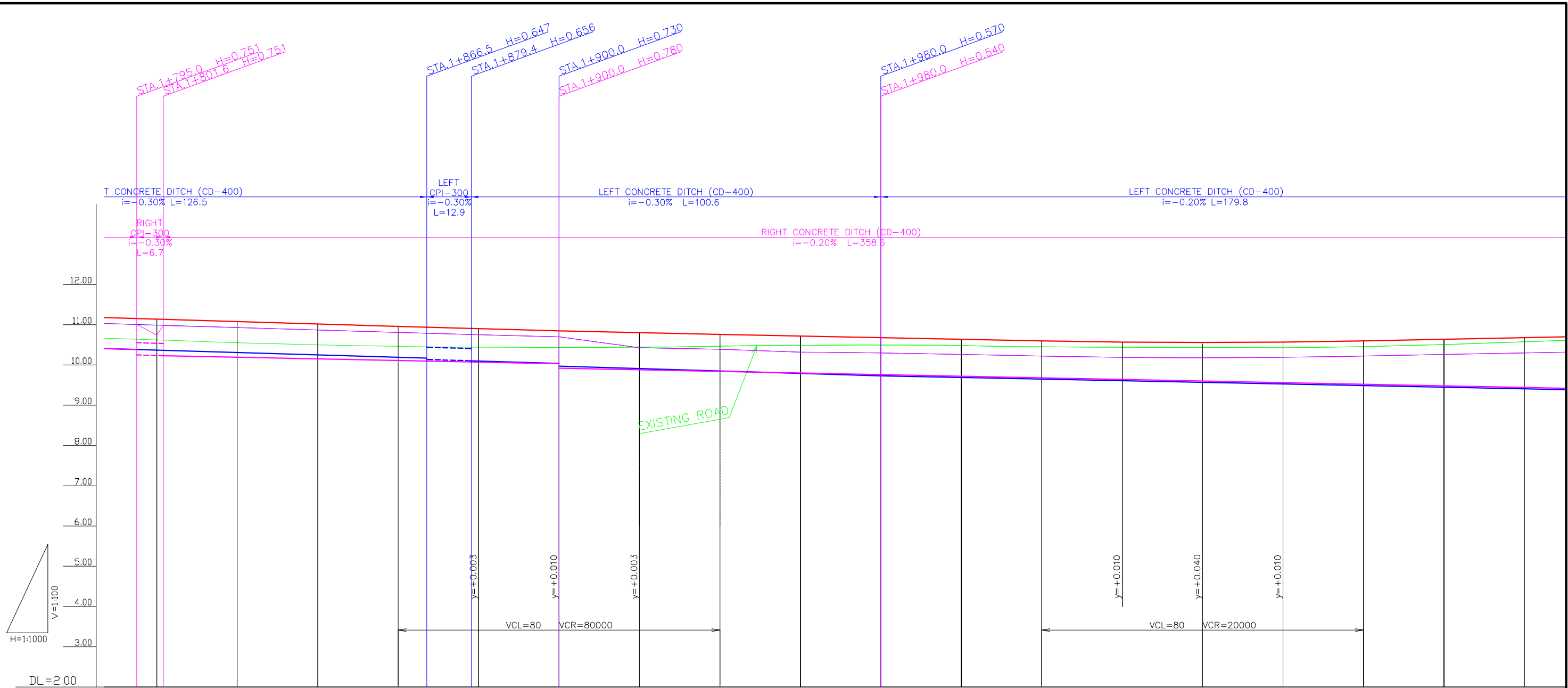
VERTICAL ALIGNMENT	PAVEMENT HEIGHT	GROUND HEIGHT	STATION	HORIZONTAL CURVATURE	SUPER-ELEVATION
10.910	11.016	10.73	+780		
	10.975	10.66	+800		
	10.966	10.71	+820		
	10.990	10.75	+840		
	11.030	10.75	+860		
	11.060	10.75	+880		
	11.070	10.71	+900		
	11.060	10.66	+920		
	11.030	10.64	+940		
	10.990	10.62	+960		
	10.950	10.59	+980		
	10.926	10.57	STA.1 +20		
	10.935	10.57	+40		
	10.976	10.60	+60		
	11.050	10.63	+80		
	11.140	10.79	BC-2-0 +100		
	11.198	10.86	+120		
	11.214	10.91			
	11.255	10.91			
				R=8 L=633.638	
					NC=3.0%



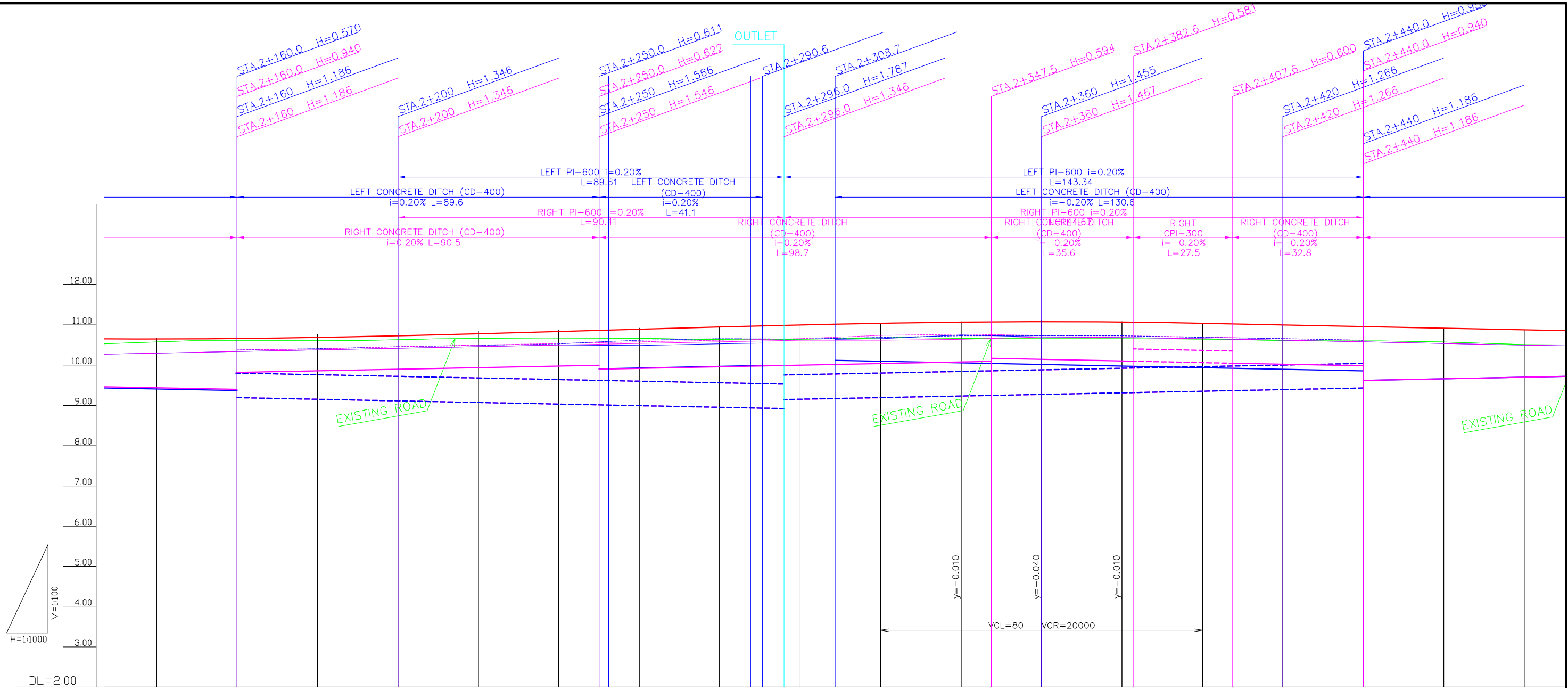
VERTICAL ALIGNMENT	PAVEMENT HEIGHT	GROUND HEIGHT	STATION	HORIZONTAL CURVATURE	SUPER-ELEVATION
11.320	11.255	10.91	+120		
	11.264	10.85	+140		
	11.240	10.78	+160		
	11.200	10.73	+180	L=483.143 R=950	NC=3.0%
	11.160	10.71	+200		
	11.120	10.78	+220		
	11.080	10.89	+240		
	11.040	10.84	+260		
	11.000	10.71	+280		
	10.960	10.63	+300		
	10.920	10.51	+320		
	10.880	10.45	+340		
	10.850	10.40	+360		
	10.840	10.43	+380		
	10.850	10.56	+400	L=483.143 R=950	NC=3.0%
	10.880	10.69	+420		
	10.920	10.68	+440		
	10.960	10.53	+460		



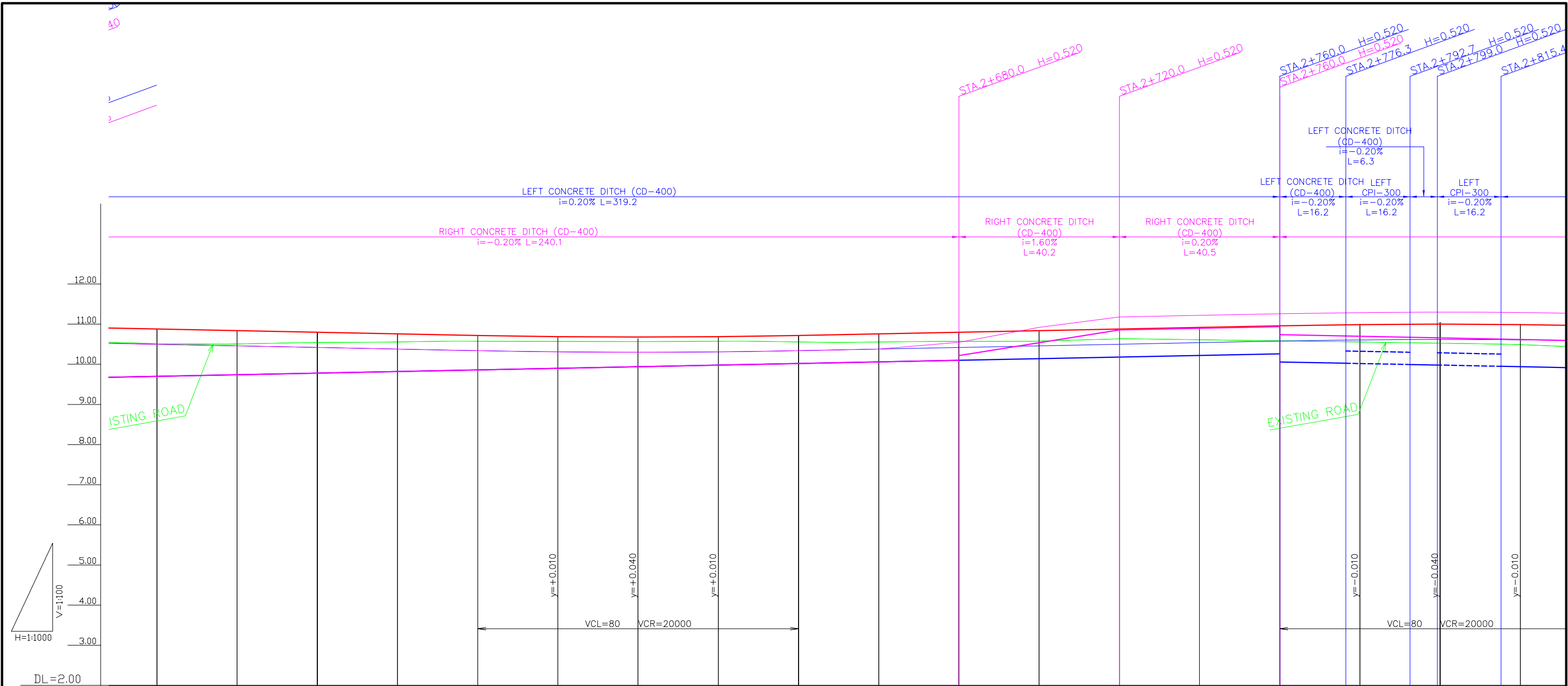
VERTICAL ALIGNMENT	$i=0.200\%$ $L=320.00$																	$i=-0.300\%$ $L=200.00$		
PAVEMENT HEIGHT	10.960	11.000	11.040	11.080	11.120	11.160	11.196	11.200	11.240	11.280	11.320	11.360	11.388	11.390	11.368	11.320	11.260	11.200	11.140	
GROUND HEIGHT	10.53	10.51	10.47	10.52	10.56	10.58	10.61	10.69	10.81	10.86	10.89	10.88	10.86	10.80	10.76	10.72	10.69	10.62		
STATION	+460	+480	+500	+520	+540	+560	EC-2-0 +580	+600	+620	+640	+660	+680	+700	+720	+740	+760	+780	+800		
HORIZONTAL CURVATURE	$R=8$ $L=534.378$																			
SUPER-ELEVATION	$NC=3.0\%$																			



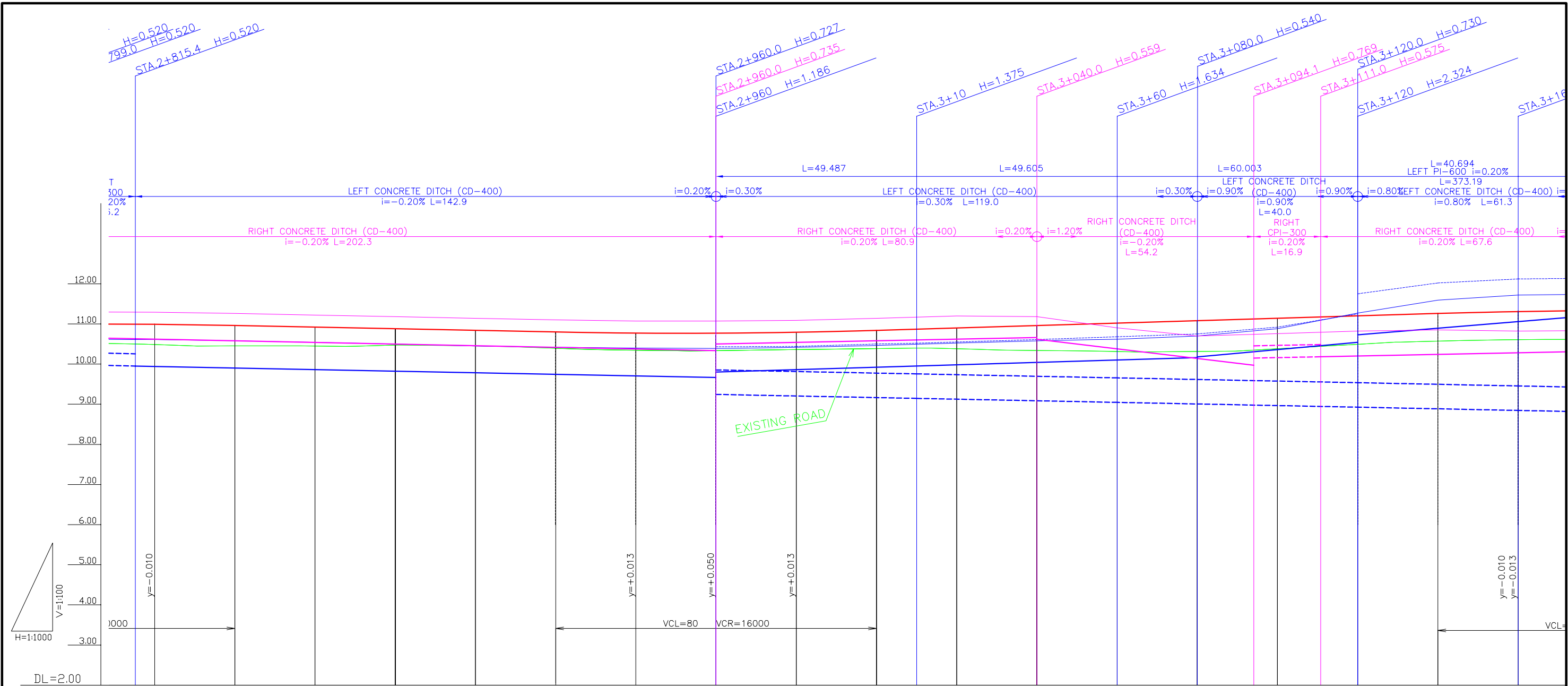
VERTICAL ALIGNMENT	PAVEMENT HEIGHT	GROUND HEIGHT	STATION	HORIZONTAL CURVATURE	SUPER-ELEVATION
$i = -0.300\%$ $L = 200.00$	11.140	10.62	+800		
	11.080	10.55	+820		
	11.020	10.50	+840		
	10.960	10.46	+860		
	10.903	10.44	+880		
	10.850	10.43	+900		
	10.803	10.44	+920		
	10.760	10.47	+940		
	10.720	10.49	+960		
	10.680	10.49	+980		
	10.640	10.48	STA.2	$R = 8$ $L = 534.378$	
	10.600	10.45	+20		
	10.570	10.44	+40		
	10.560	10.43	+60		
	10.570	10.43	+80		
	10.600	10.46	+100		
	10.625	10.51	BC-3-0		
	10.640	10.51	+120		
	10.680	10.58	+140		
					NC=3.0%



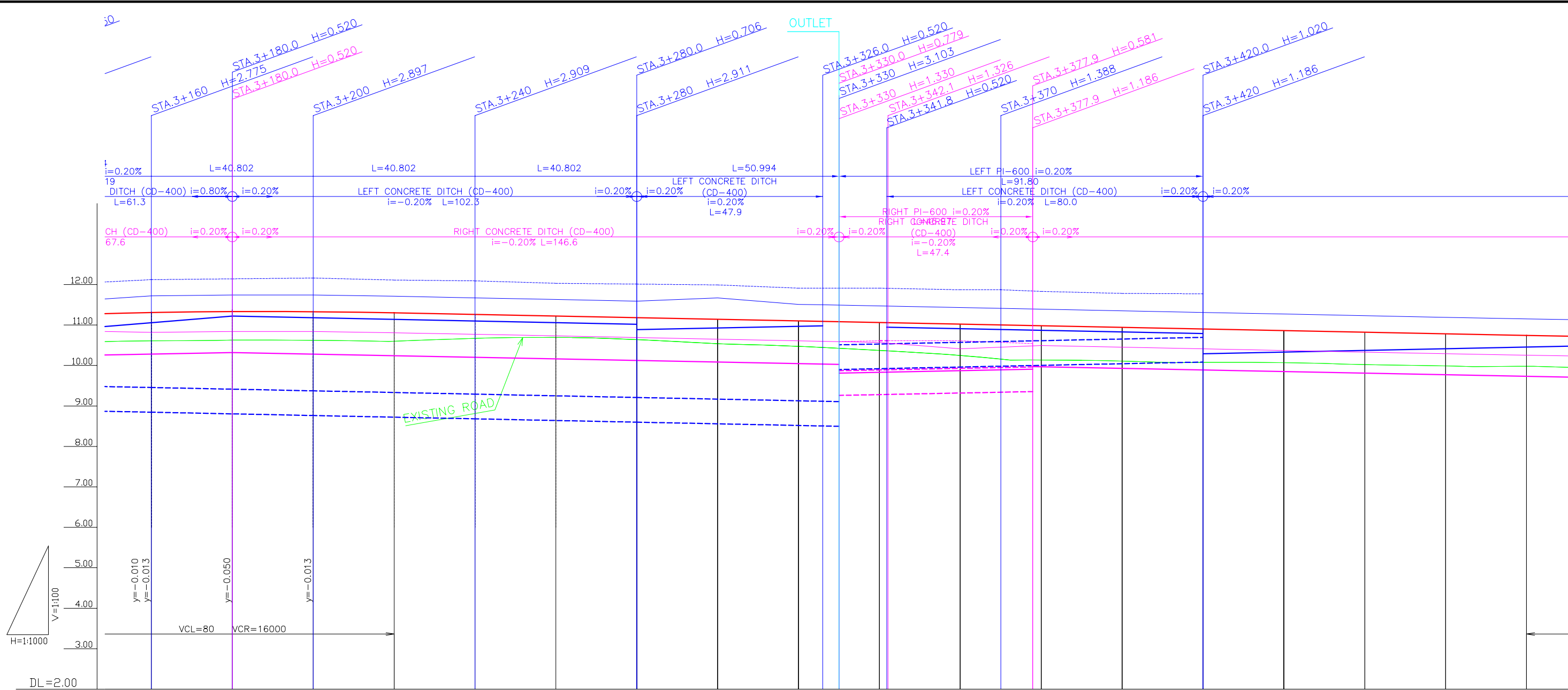
VERTICAL ALIGNMENT	$i=0.200\%$ $L=300.00$																		$i=-0.200\%$ $L=240.00$	
PAVEMENT HEIGHT	10.680	10.720	10.760	10.800	10.840	10.880	10.920	10.960	11.000	11.040	11.070	11.080	11.070	11.040	11.000	10.960	10.920	10.880		
GROUND HEIGHT	10.58	10.61	10.61	10.63	10.66	10.68	10.67	10.63	10.64	10.68	10.67	10.66	10.66	10.64	10.61	10.60	10.58	10.51		
STATION	+140	+160	+180	+200	+220	+240	+260	+280	+300	+320	+340	+360	+380	+400	+420	+440	EC-3-0 +460	+480		
HORIZONTAL CURVATURE	$L=344.220$ $R=2200$																			
SUPER-ELEVATION	$NC=3.0\%$																			



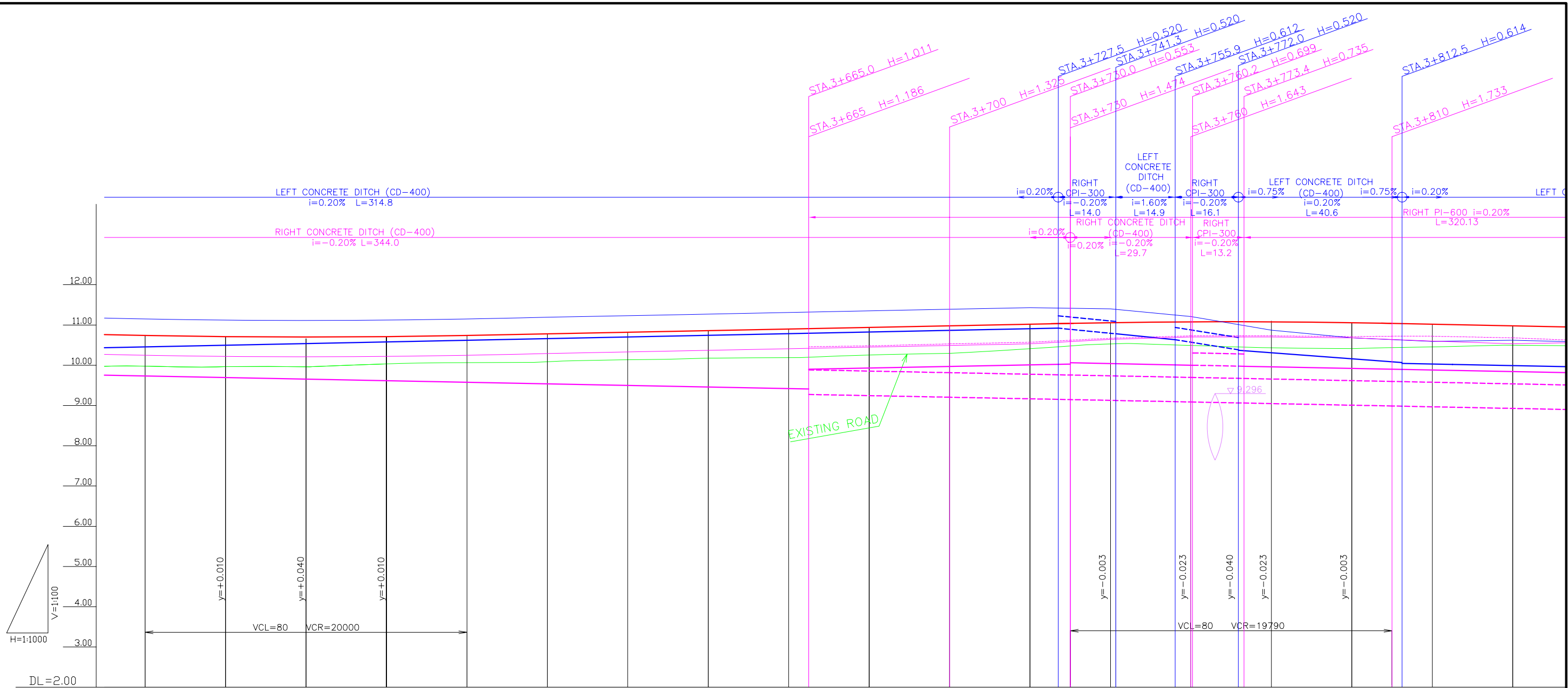
VERTICAL ALIGNMENT	PAVEMENT HEIGHT	GROUND HEIGHT	STATION	HORIZONTAL CURVATURE	SUPER-ELEVATION
$i=-0.200\%$ $L=240.00$	10.880	10.51	+480	$R=\infty$ $L=243.170$	NC=3.0%
	10.840	10.51	+500		
	10.800	10.54	+520		
	10.760	10.56	+540		
	10.720	10.58	+560		
	10.690	10.57	+580		
	10.680	10.57	+600		
	10.690	10.58	+620		
	10.720	10.56	+640		
	10.760	10.56	+660		
	10.800	10.57	+680		
	10.839 10.840	10.58	BC-4-0 +700		
	10.880	10.64	+720		
	10.920	10.61	+740		
	10.960	10.59	+760		
	10.990	10.56	+780		
	11.000	10.53	+800	$L=348.756$ $R=1000$	
	10.990	10.49	+820		



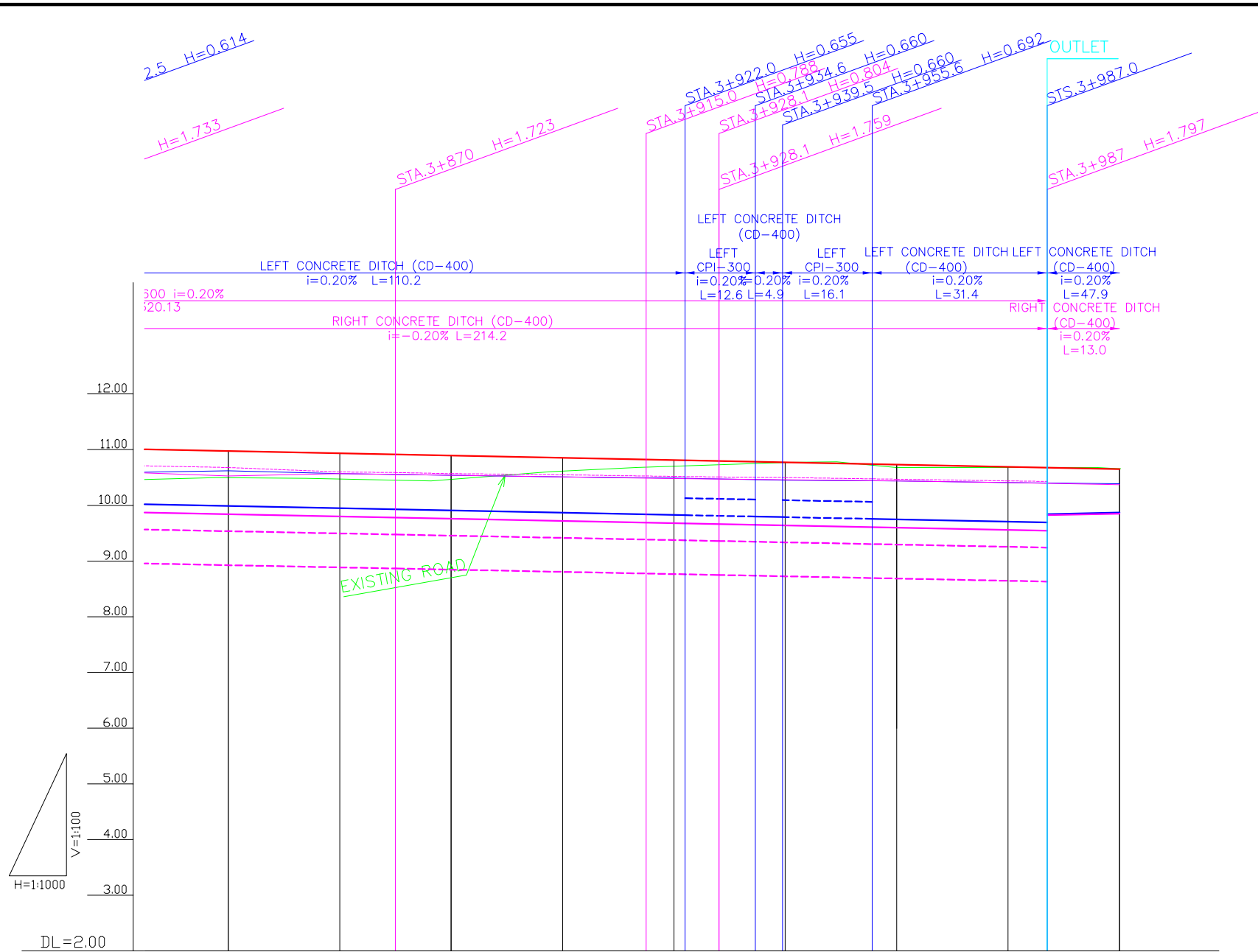
VERTICAL ALIGNMENT	PAVEMENT HEIGHT	GROUND HEIGHT	STATION	HORIZONTAL CURVATURE	SUPER-ELEVATION
$i = -0.200\%$ $L = 160.00$	10.990	10.49	+820		
	10.960	10.45	+840		
	10.920	10.45	+860		
	10.880	10.47	+880		
	10.840	10.45	+900		
	10.800	10.40	+920		
	10.773	10.35	+940		
10.720	10.770	10.34	+960	$L = 348.756$ $R = 1000$	
	10.793	10.36	+980		
	10.840	10.38	STA.3		
	10.900	10.38	+20		
	10.960	10.34	+40		
	10.985	10.31	EC-4-0		
	11.020	10.31	+60	$R = 18$ $L = 44.892$	
	11.080	10.31	+80		
	11.120	10.38	KA-5-1		
	11.140	10.49	+100	$L = 64.800$ $A = 180$	
	11.200	10.57	+120		
	11.260	10.61	+140		
	11.304	10.61	KE-5-1		
	11.308		+160		
					3.00% 3.00% 3.00% 2.81% 3.00% 1.05% 3.00% 0.68% 3.00% NC=3.00% 3.00% 3.00% 2.00% 3.00% 1.00% 3.00% 3.00% 3.27% 4.00%



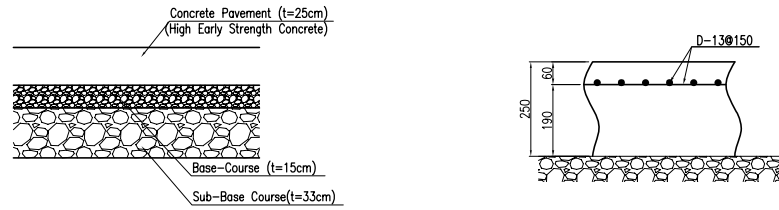
VERTICAL ALIGNMENT	PAVEMENT HEIGHT	GROUND HEIGHT	STATION	HORIZONTAL CURVATURE	SUPER-ELEVATION
11.360	11.304 11.308	10.61	KE-5+160 +160		4.00%
	11.330	10.63	+180		
	11.328	10.62	+200		
	11.300	10.60	+220	L=567.042 R=500	
	11.260	10.67	+240		
	11.220	10.69	+260		
	11.180	10.64	+280		
	11.140	10.54	+300		
	11.100	10.47	+320		
	11.060	10.37	+340	L=567.042 R=500	
	11.020	10.24	+360		
	10.980	10.13	+380		
	10.940	10.11	+400		
	10.900	10.07	+420		
	10.860	10.07	+440		
	10.820	10.02	+460		
	10.780	9.99	+480		
	10.740	9.98	+500		



VERTICAL ALIGNMENT	PAVEMENT HEIGHT	GROUND HEIGHT	STATION	HORIZONTAL CURVATURE	SUPER-ELEVATION
10.660	10.740	9.98	+500		
	10.710	9.96	+520		
	10.700	9.96	+540		
	10.710	10.03	+560		
	10.740	10.06	+580		
	10.780	10.09	+600		
	10.820	10.13	+620	L=567.042 R=500	
	10.860	10.17	+640		
	10.900	10.19	+660		
	10.940	10.25	+680		
	10.980	10.29	+700		
	11.020	10.41	+720		
	11.030	10.41	+720	KE-5-2	
	11.057	10.53	+740		
	11.077	10.49	+760		
	11.080	10.43	+770	L=64.800 A=180	
	11.077	10.43	+780		
	11.069	10.41	+800	R=∞ L=210.034	
	11.056	10.41	+800		NC=3.0%
	11.018	10.45	+820		
	10.977	10.50	+840		NC=3.0%



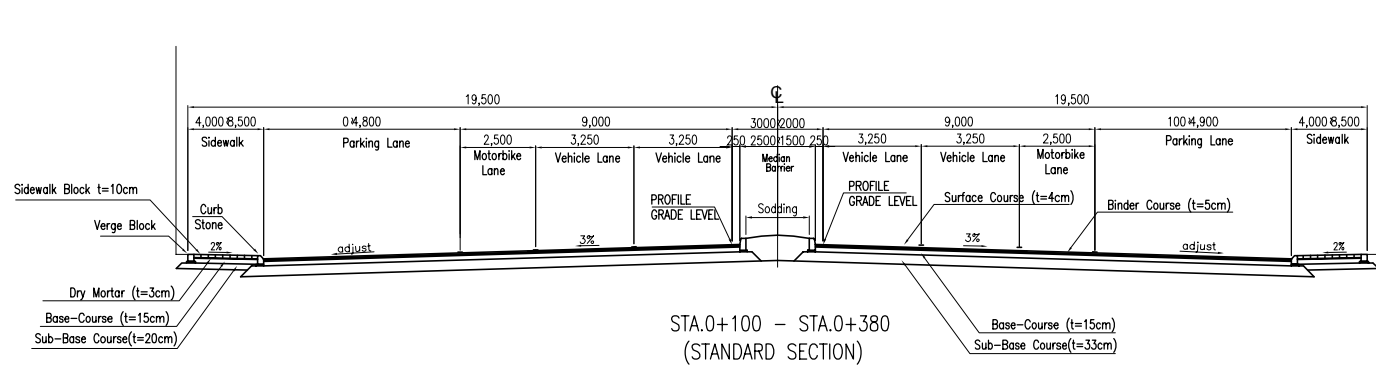
VERTICAL ALIGNMENT										
PAVEMENT HEIGHT	10.977	10.936	10.895	10.854	10.813	10.773	10.732	10.691	10.650	
GROUND HEIGHT	10.50	10.47	10.47	10.61	10.70	10.77	10.68	10.68	10.66	
STATION	+840	+860	+880	+900	+920	+940	+960	+980	STA. 4	
HORIZONTAL CURVATURE										
SUPER-ELEVATION	NC=3.0%					NC=3.0%				



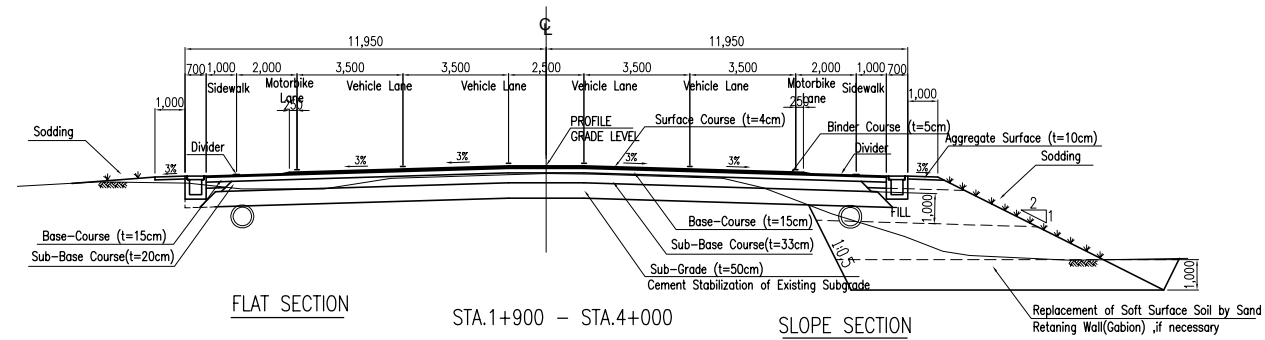
SCALE 1:50

STA. 0+70
(MONIBONG BR. LEFT TURN LANE)
CONCRETE PAVEMENT

SCALE 1:20



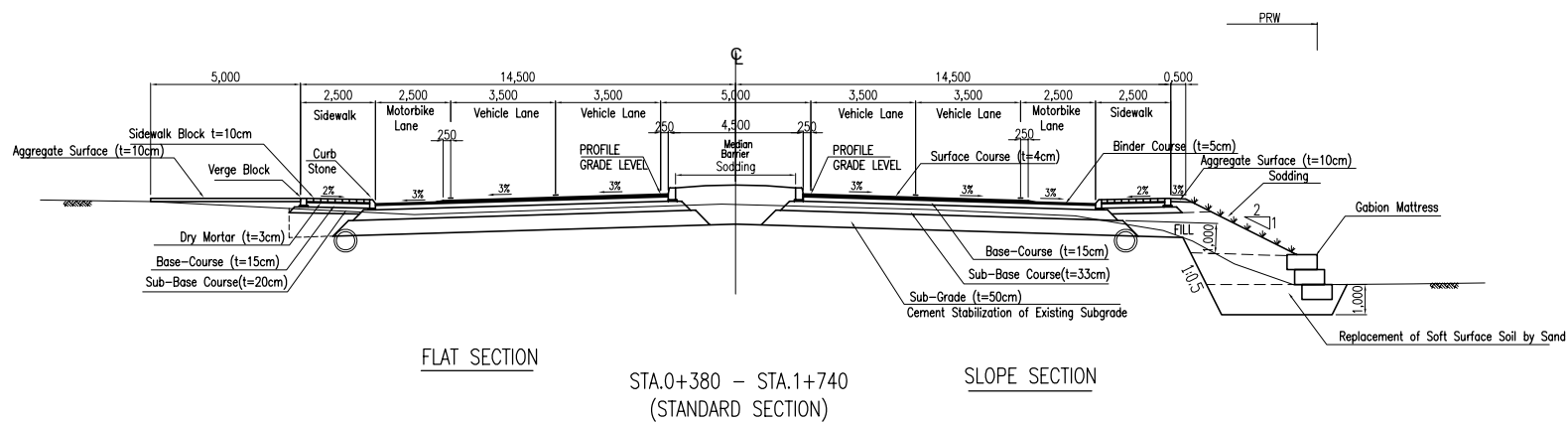
STA. 0+100 - STA. 0+380
(STANDARD SECTION)



FLAT SECTION

STA. 1+900 - STA. 4+000

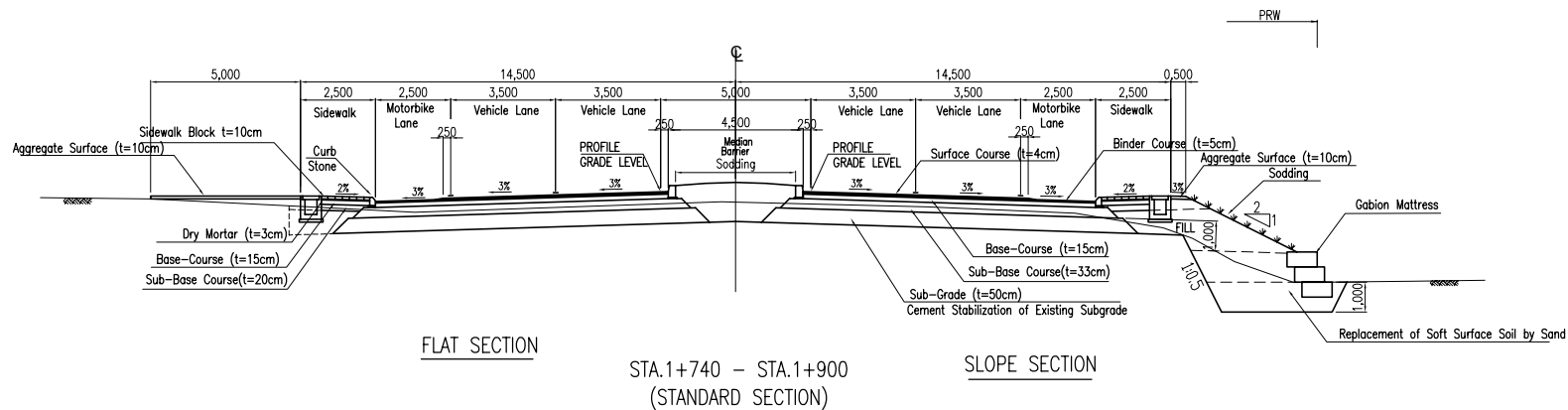
SLOPE SECTION



FLAT SECTION

STA. 0+380 - STA. 1+740
(STANDARD SECTION)

SLOPE SECTION



FLAT SECTION

STA. 1+740 - STA. 1+900
(STANDARD SECTION)

SLOPE SECTION

TYPICAL CROSS SECTION SCALE 1:250



KINGDOM OF CAMBODIA
MINISTRY OF PUBLIC WORKS AND TRANSPORT

Approved by : _____ Date : _____



KATAHIRA & ENGINEERS INTERNATIONAL

Designed by : _____ Date : _____
Checked by : _____ Date : _____

PROJECT : JAPAN GRANT AID PROJECT
THE PROJECT FOR THE IMPROVEMENT OF THE
NATIONAL ROAD NO. 1

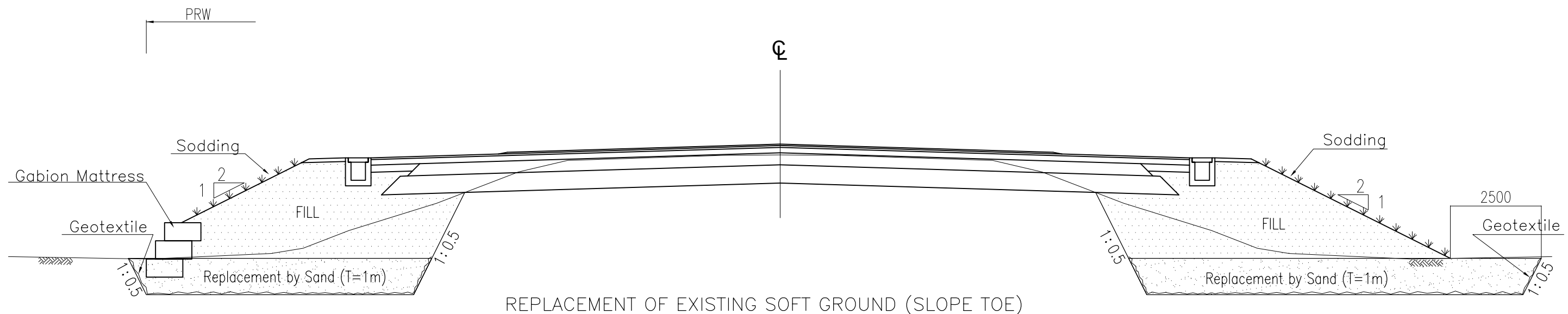
TITLE :

TYPICAL CROSS SECTION

DRAWING No.
TC - 1

SCALE:
As Shown

R4



REPLACEMENT OF EXISTING SOFT GROUND (SLOPE TOE)

SCHEDULE OF REPLACEMENT

Left Side(Mekon Side)			Right Side		
Beg. Sta.	End Sta.	Length	Beg. Sta.	End Sta.	Length
410	490	80	530	570	40
510	530	20	630	670	40
590	630	40	810	830	20
670	690	20	850	890	40
730	750	20	1,050	1,090	40
770	890	120	1,110	1,170	60
910	930	20	1,430	1,590	160
950	970	20	1,610	1,710	100
1,090	1,130	40	1,730	1,790	60
1,150	1,190	40			
1,230	1,250	20			
1,290	1,350	60			
1,490	1,510	20			
1,530	1,550	20			
1,590	1,610	20			
1,690	1,750	60			
1,890	1,900	10			
Sub Total		630	Sub Total		560
1,900	1,970	70	2,150	2,190	40
2,230	2,270	40	2,250	2,290	40
2,950	2,990	40	2,370	2,390	20
3,210	3,270	60	2,630	2,650	20
3,330	3,370	40	2,830	2,850	20
3,390	3,430	40	2,930	3,030	100
3,490	3,510	20	3,070	3,090	20
3,630	3,730	100	3,130	3,270	140
3,850	3,930	80	3,450	3,530	80
3,950	4,000	50	3,610	3,730	120
			3,750	3,770	20
			3,790	3,810	20
			3,870	3,910	40
			3,930	3,950	20
Sub Total		540	Sub Total		700
Total		1,170	Total		1,260

※ Replacement section shall be finalized by the Engineer as of the construction stage in accordance with the actual site condition.



KINGDOM OF CAMBODIA
MINISTRY OF PUBLIC WORKS AND TRANSPORT

Approved by : _____ Date : _____



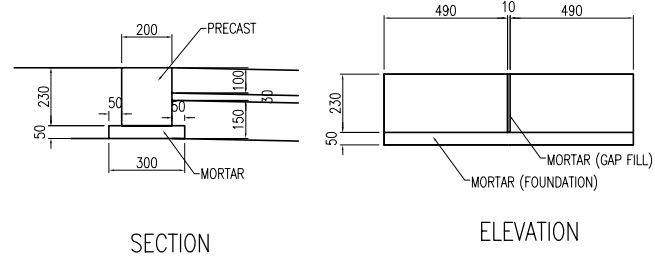
KATAHIRA & ENGINEERS INTERNATIONAL

Designed by : _____ Date : _____
Checked by : _____ Date : _____

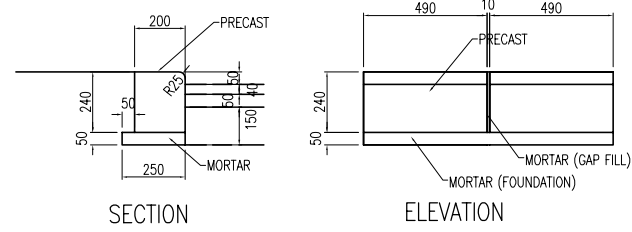
PROJECT : JAPAN GRANT AID PROJECT
THE PROJECT FOR THE IMPROVEMENT OF THE
NATIONAL ROAD NO. 1

TITLE :
REPLACEMENT OF EXISTING SOFT
GROUND (SLOPE TOE)

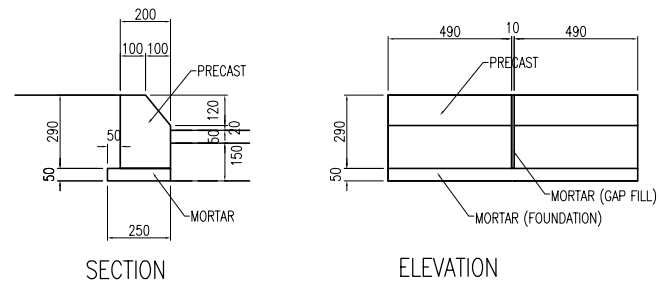
DRAWING No:
RP - 1
SCALE:
None Scale
Rv.



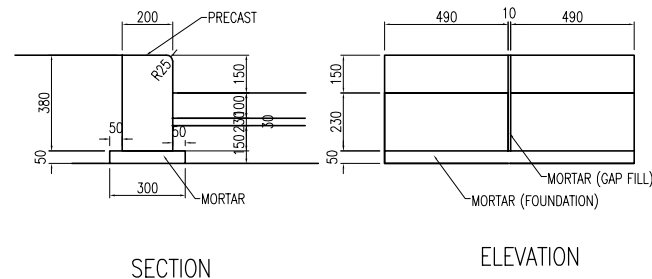
VERGE BLOCK
(VB)



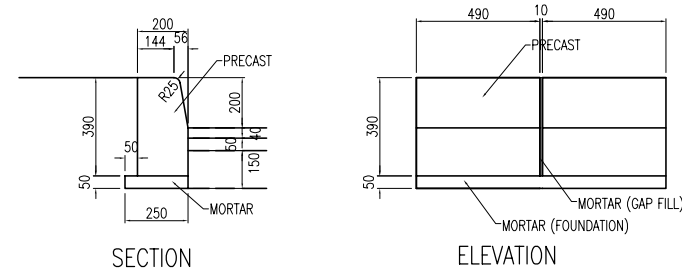
CURB STONE FOR MEDIAN X SIDEWALK
(CS-50)



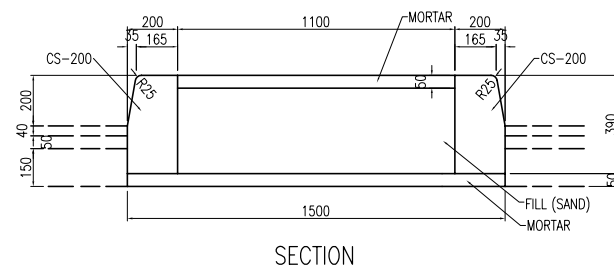
CURB STONE FOR SIDEWALK
(CS-120)



CURB STONE FOR SIDEWALK X MEDIAN
(CS-150)

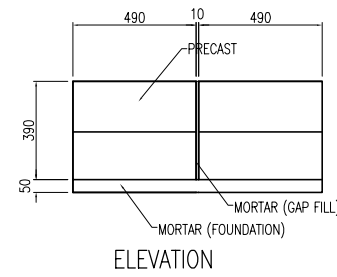


CURB STONE FOR MEDIAN
(CS-200)

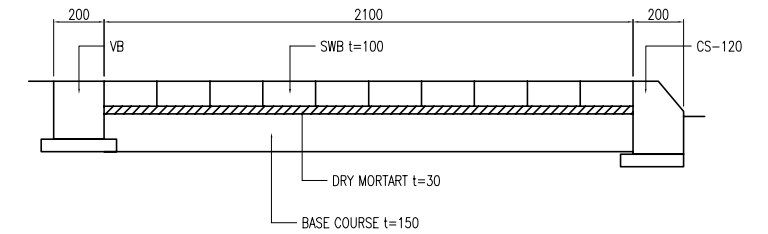


SECTION

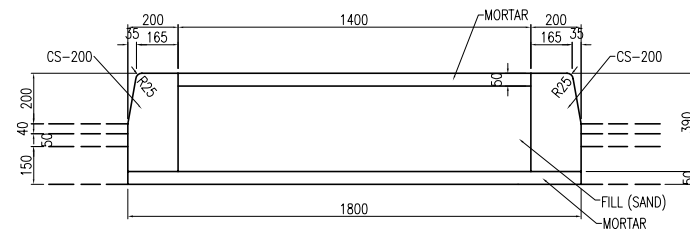
MEDIAN BARRIER
(MB-200X1500)



ELEVATION

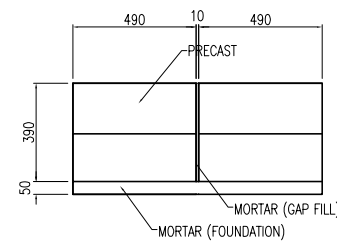


TYPICAL CROSS SECTION OF SIDEWALK

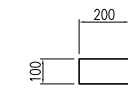


SECTION

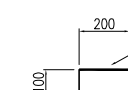
MEDIAN BARRIER
(MB-200X1800)



ELEVATION

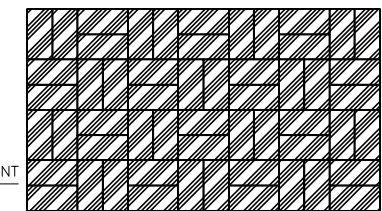


PLAN



ELEVATION

TOP SIDE TO BE APPLIED WITH THERMAL INSULATION PAINT



PLAN LAYOUT OF SIDEWALK BLOCK

SIDEWALK BLOCK WITH THERMAL INSULATION PAINT
(SWB)



KINGDOM OF CAMBODIA
MINISTRY OF PUBLIC WORKS AND TRANSPORT

Approved by: _____ Date: _____



KATAHARA & ENGINEERS INTERNATIONAL

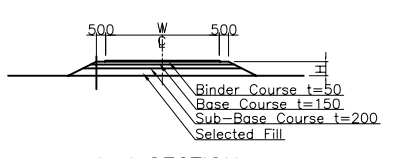
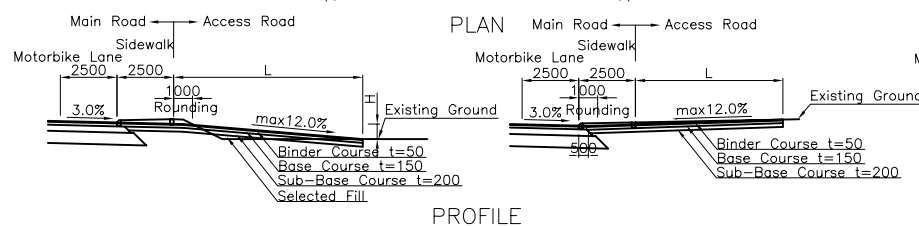
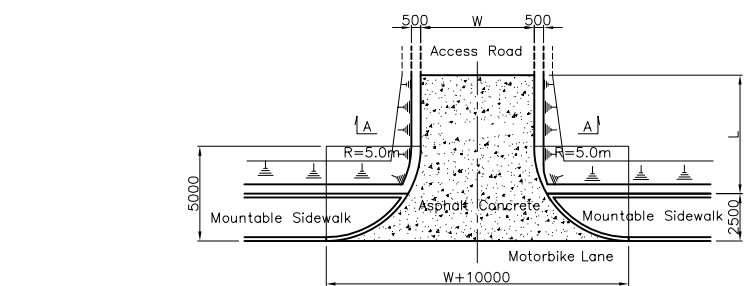
Designed by: _____ Date: _____
Checked by: _____ Date: _____

PROJECT : JAPAN GRANT AID PROJECT
THE PROJECT FOR THE IMPROVEMENT OF THE
NATIONAL ROAD NO. 1

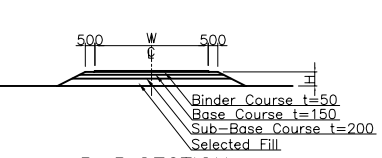
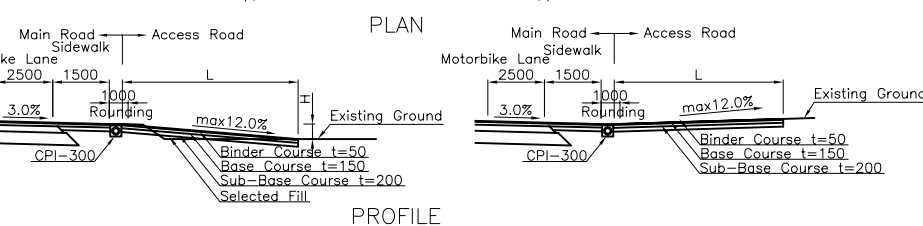
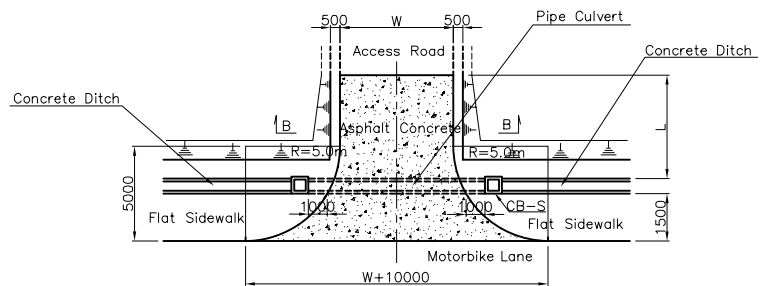
TITLE :
**ROAD STRUCTURES OF CURB STONE,
MEDIAN BARRIER, SIDEWALK BLOCK, ETC.**

DRAWING No:
RS - 1
SCALE:
1:30

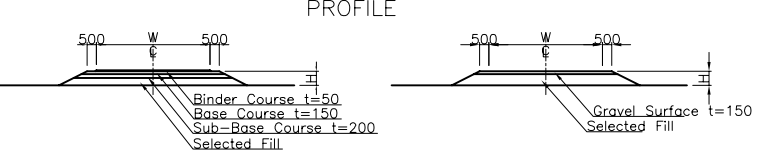
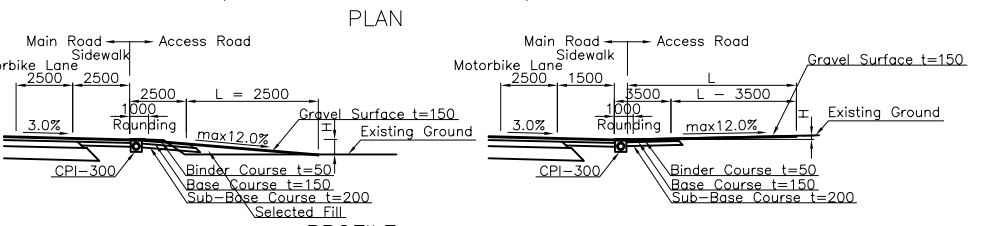
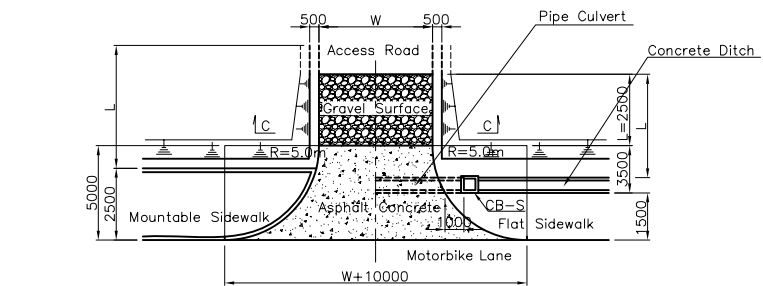
R.v.



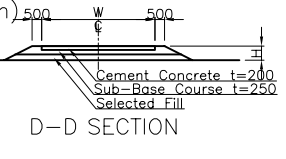
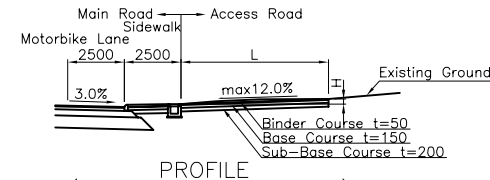
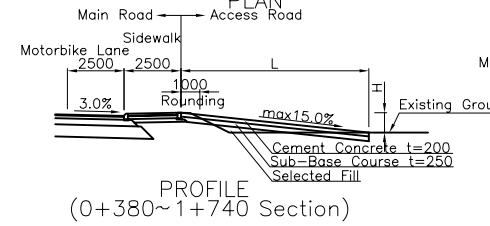
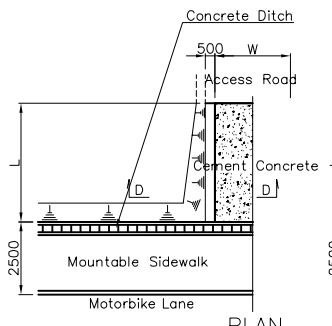
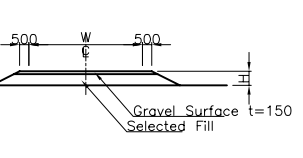
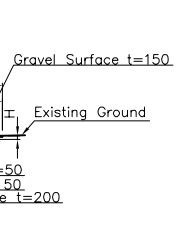
A-A SECTION
AC-TYPE-A
(4-Lane Section)



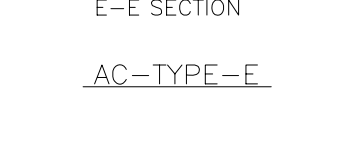
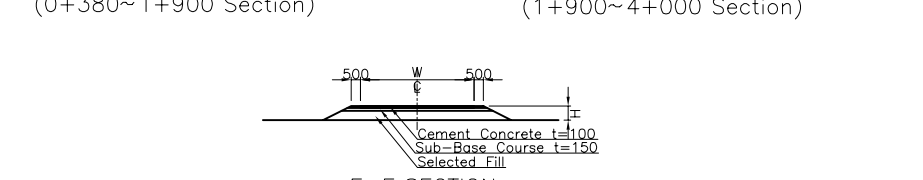
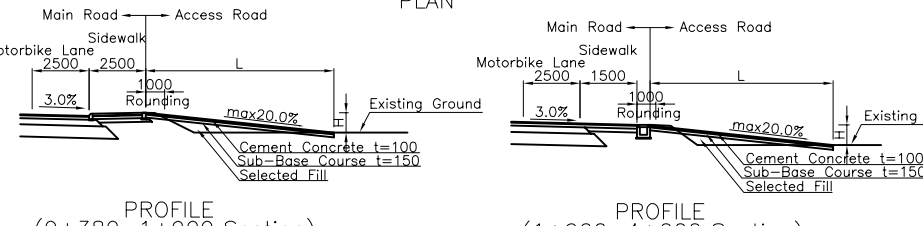
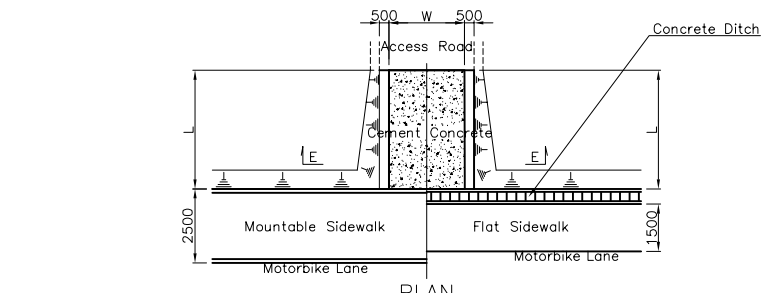
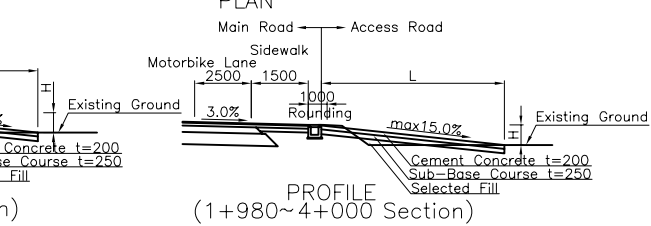
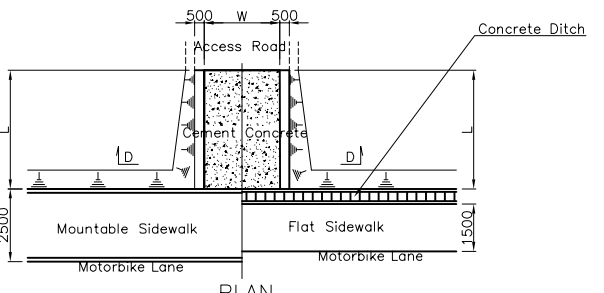
B-B SECTION
AC-TYPE-B



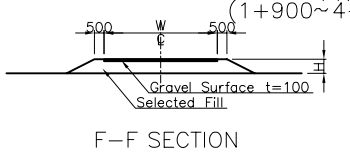
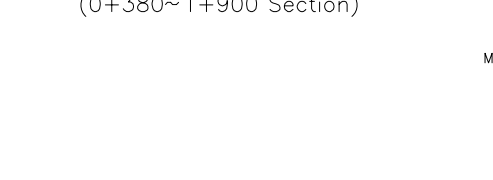
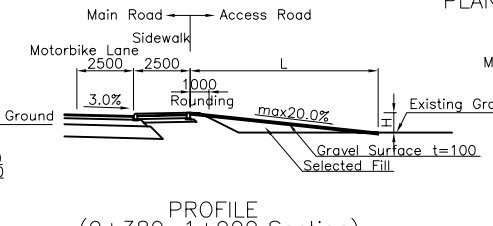
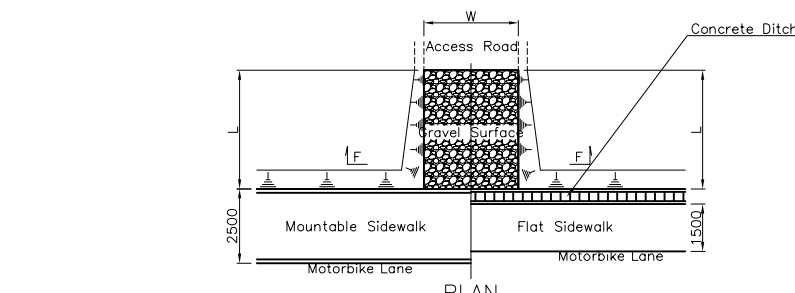
C-C SECTION
(Asphalt Section)
AC-TYPE-C
(2-Lane Section)



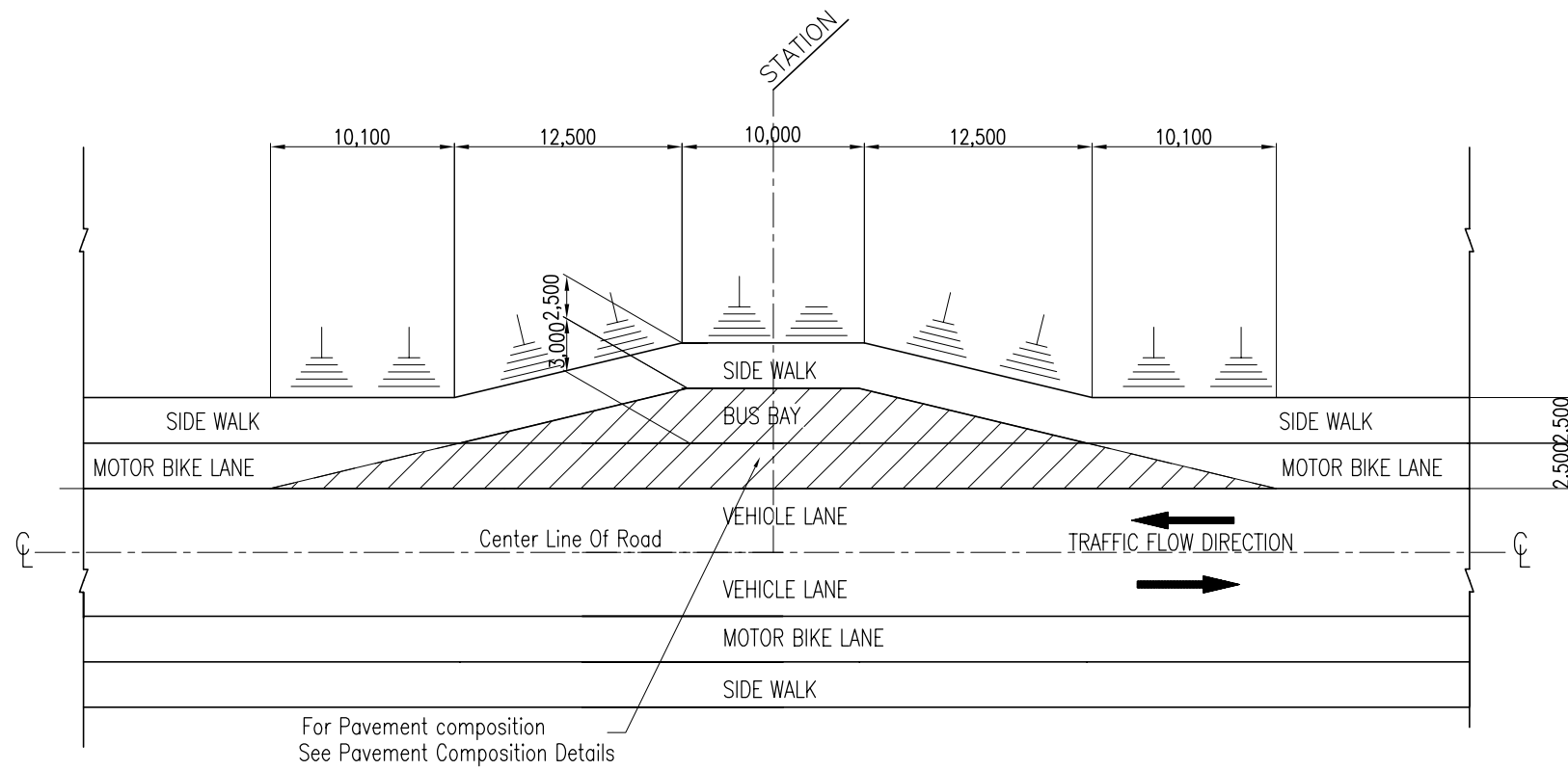
D-D SECTION
AC-TYPE-D



E-E SECTION
AC-TYPE-E



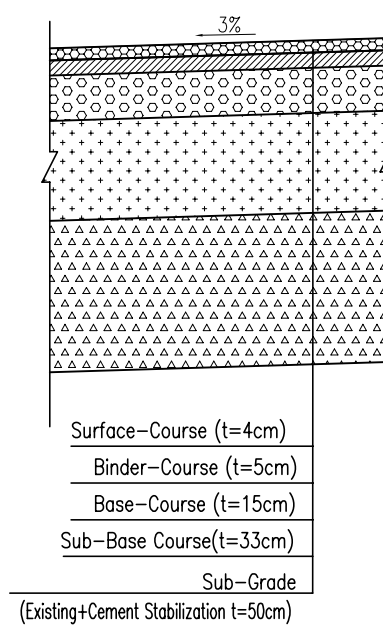
F-F SECTION
AC-TYPE-F



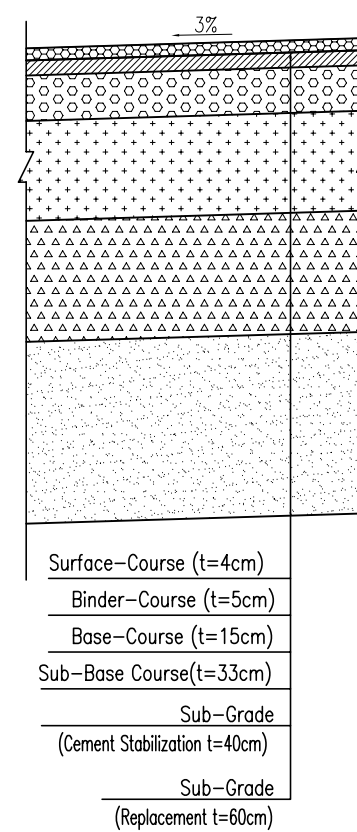
PLAN S=1:400

SCHEDULE OF BUS BAY

No.	STATION(km)	WIDENING SIDE	PAVEMENT TYPE
1	0+650	Right side	Type 1
2	0+730	Left side	Type 1
3	1+050	Left side	Type 1
4	1+180	Right side	Type 1
5	1+475	Right side	Type 1
6	1+482.5	Left side	Type 1
7	2+270	Left side	Type 1
8	2+330	Right side	Type 1
9	3+300	Left side	Type 2
10	3+360	Right side	Type 2
11	3+830	Left side	Type 2
12	3+832.5	Right side	Type 2
TOTAL		12	



TYPE 1



TYPE 2

PAVEMENT TYPE S=1:250



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Approved by : _____ Date : _____



KATAHIRA & ENGINEERS INTERNATIONAL

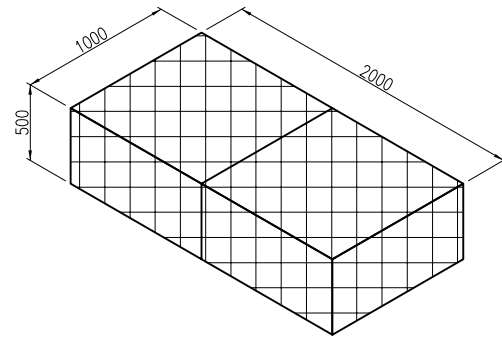
Designed by : _____ Date : _____
Checked by : _____ Date : _____

PROJECT : JAPAN GRANT AID PROJECT
THE PROJECT FOR THE IMPROVEMENT OF THE
NATIONAL ROAD NO. 1

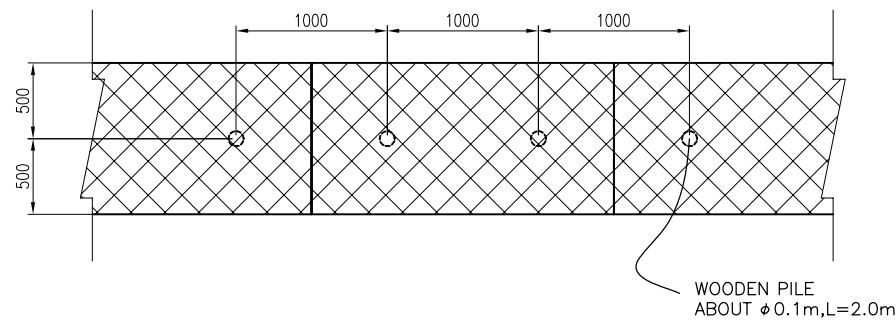
TITLE :

BUS BAY DETAIL

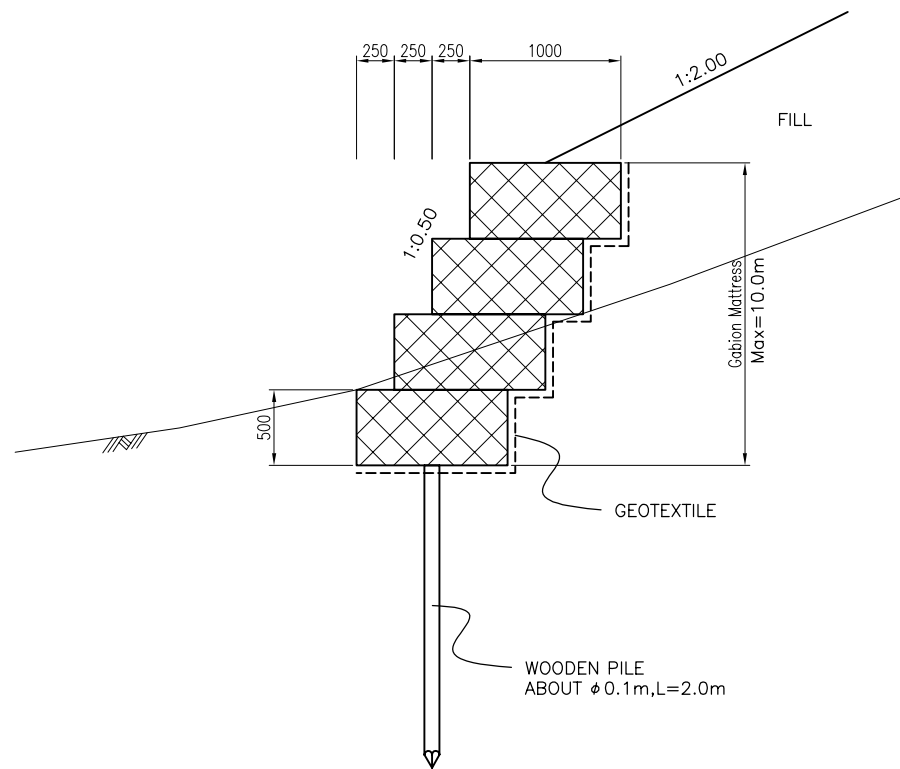
DRAWING No:
BB - 1
SCALE:
AS SHOWN



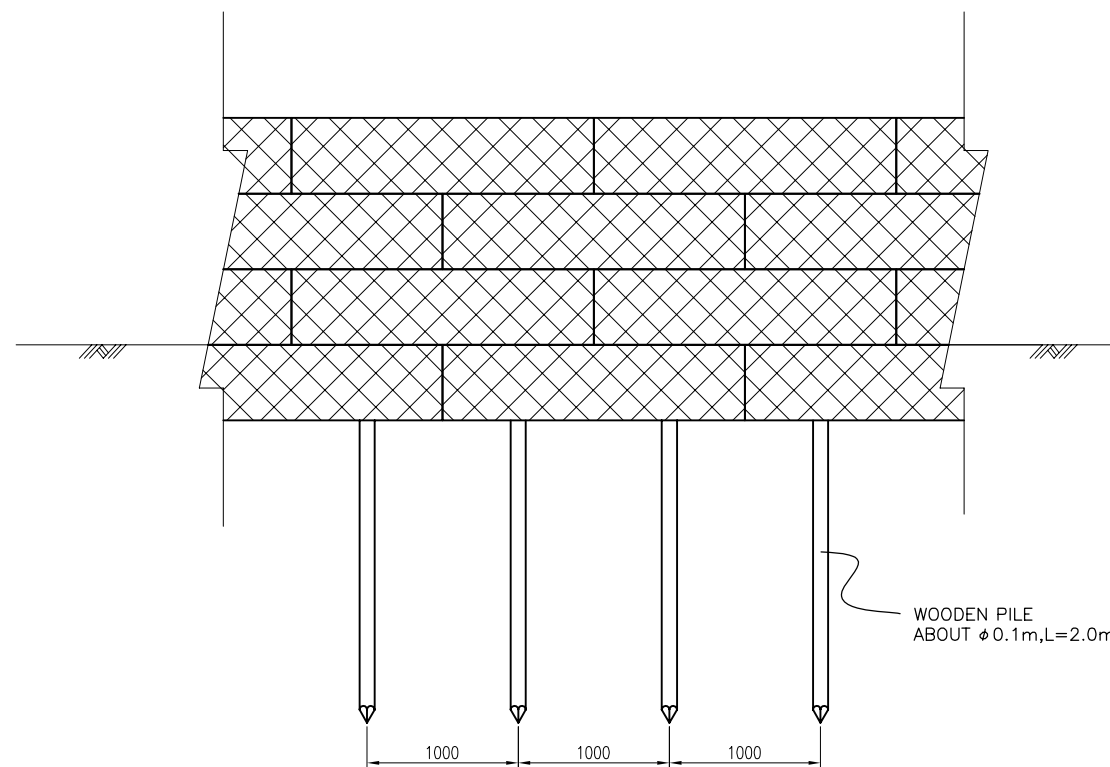
GABION MATTRESS (GM)



WOOD PILE LOCATION PLAN



CROSS SECTION



ELEVATION

Note: Gabion mesh and Boulders shall comply with the Technical Specifications of this Contract. Gabion Mattress shall be placed on Geotextile Fabric.



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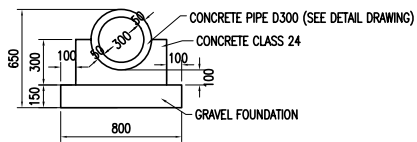
Designed by: _____ Date: _____
Checked by: _____ Date: _____

PROJECT : JAPAN GRANT AID PROJECT
THE PROJECT FOR THE IMPROVEMENT OF THE
NATIONAL ROAD NO. 1

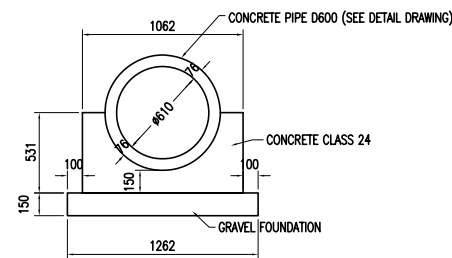
TITLE :

GABION MATTRESS WALL

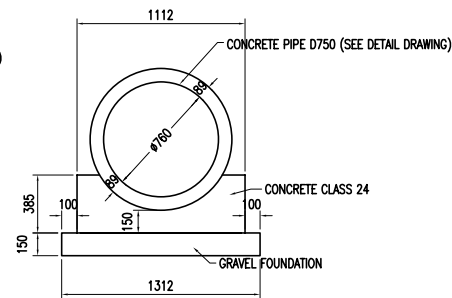
DRAWING No:
GM - 1
SCALE:
1:50
Rv.



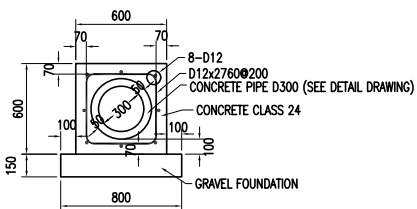
CONCRETE PIPE D300
(PI-300)



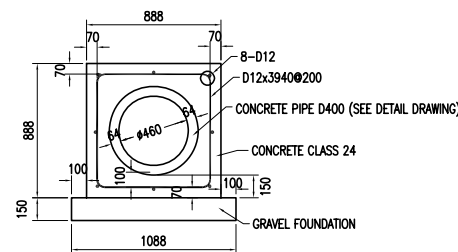
CONCRETE PIPE D600
(PI-600)



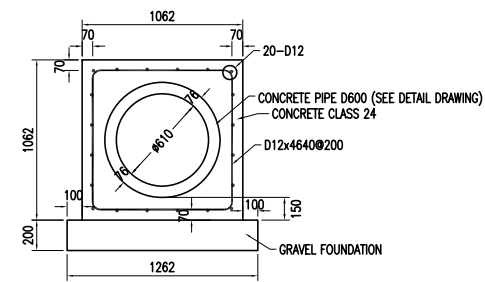
CONCRETE PIPE D750
(PI-750)



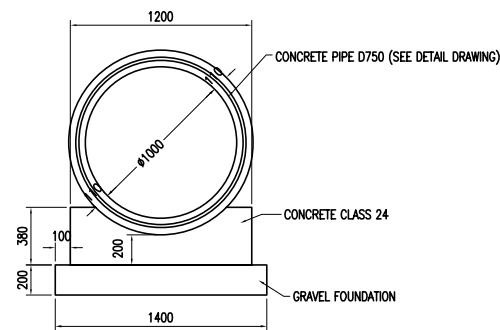
CONCRETE PIPE D300
(CPI-300)



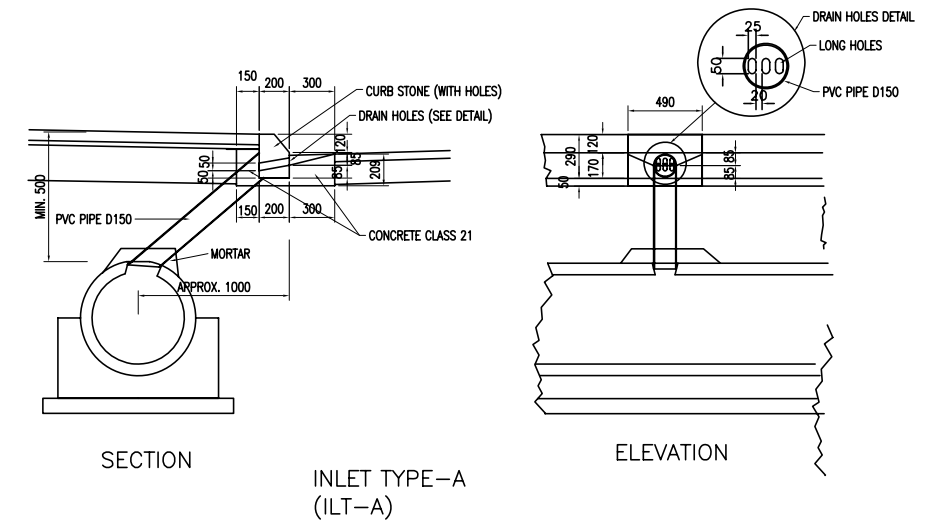
CONCRETE PIPE D400
(CPI-400)



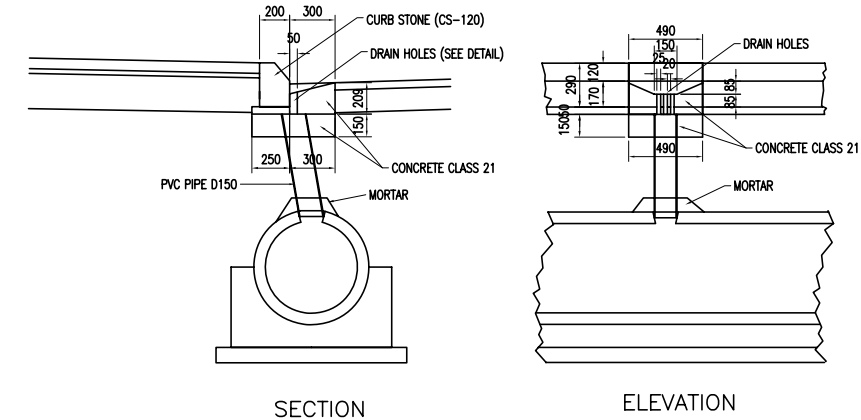
CONCRETE PIPE D600
(CPI-600)



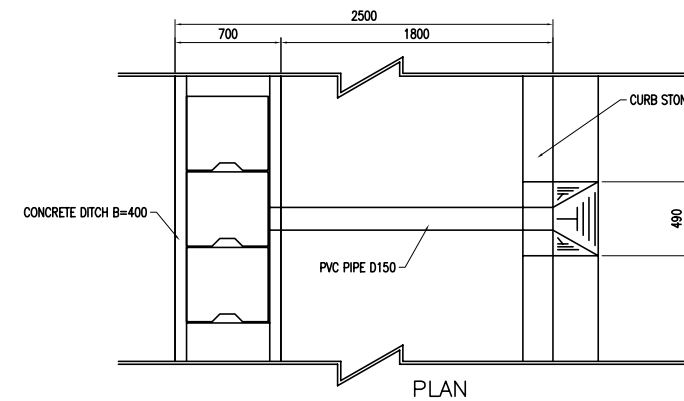
CONCRETE PIPE D1000
(PI-1000)



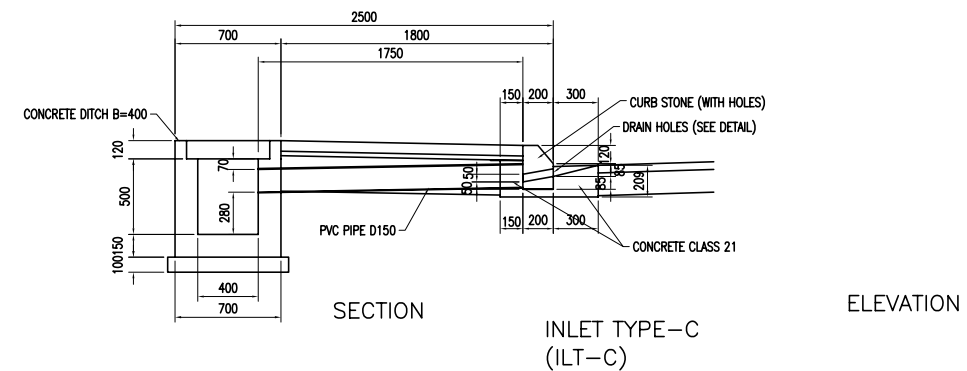
SECTION
INLET TYPE-A
(ILT-A)



SECTION
INLET TYPE-B
(ILT-B)



PLAN



SECTION
INLET TYPE-C
(ILT-C)



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MINISTRY OF PUBLIC WORKS AND TRANSPORT

Approved by: _____ Date: _____



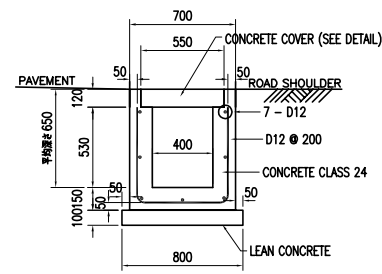
KATAHIRA & ENGINEERS INTERNATIONAL

Designed by: _____ Date: _____
Checked by: _____ Date: _____

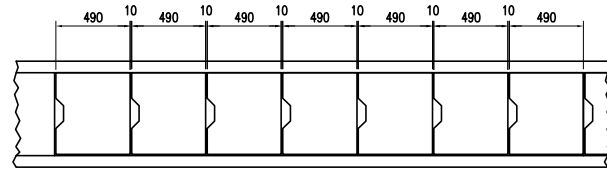
PROJECT : JAPAN GRANT AID PROJECT
THE PROJECT FOR THE IMPROVEMENT OF THE
NATIONAL ROAD NO. 1

TITLE : DRAINAGE STRUCTURES (1/8)

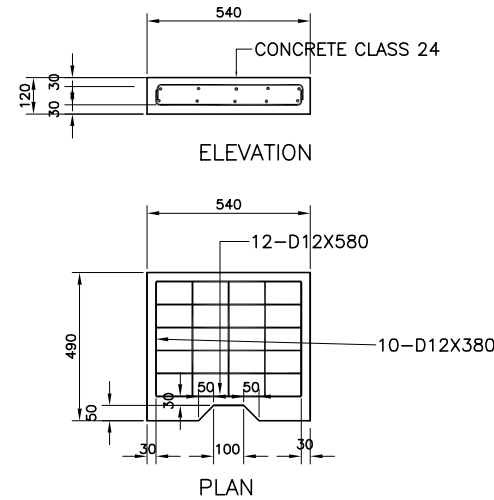
DRAWING No: DR - 1
SCALE: 1:50
Rv.



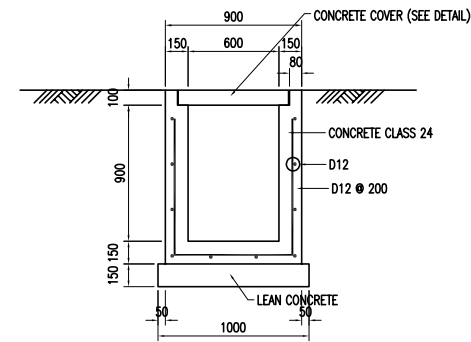
CONCRETE DITCH B=400
(CD-400)



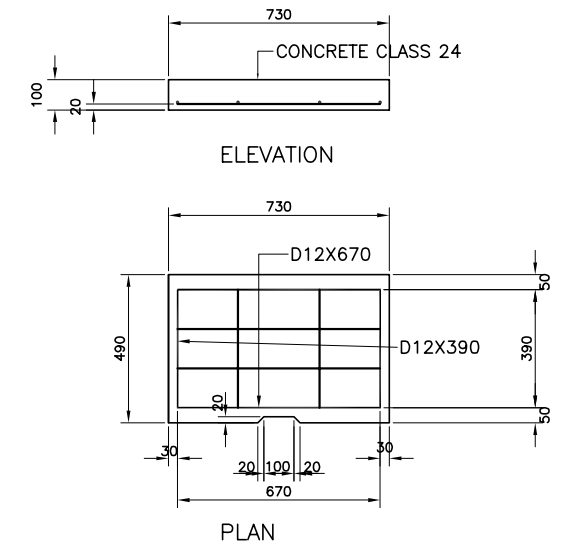
COVER LAYOUT PLAN FOR SECTIONS WITHOUT VEHICLE CROSSING



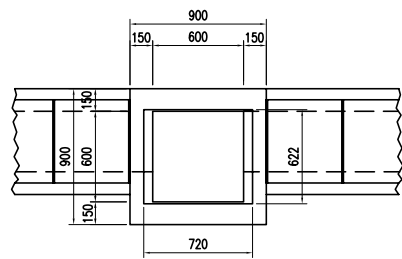
MOVABLE COVER
(MC-400)



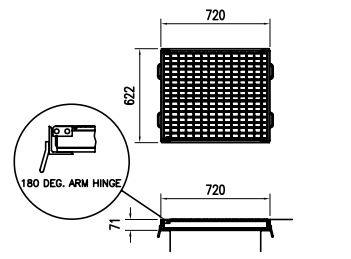
CONCRETE DITCH B=600
(CD-600)



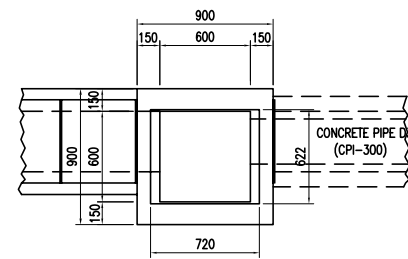
MOVABLE COVER
(MC-600)



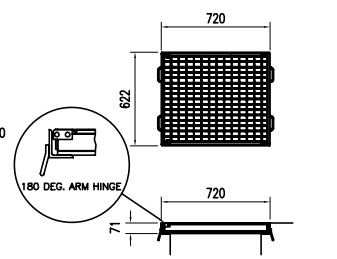
PLAN



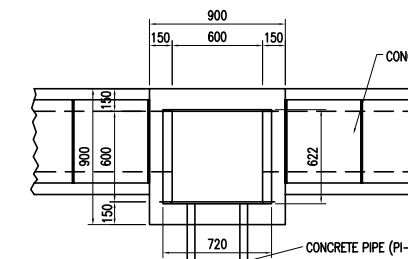
GRATING DETAIL
(DIKURE R5SM65-66 OR EQUIVALENT)



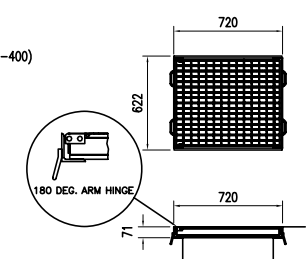
PLAN



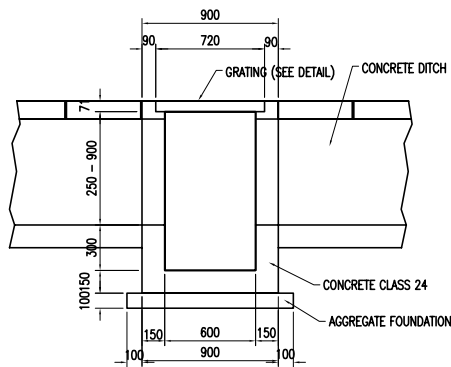
GRATING DETAIL
(DIKURE R5SM65-66 OR EQUIVALENT)



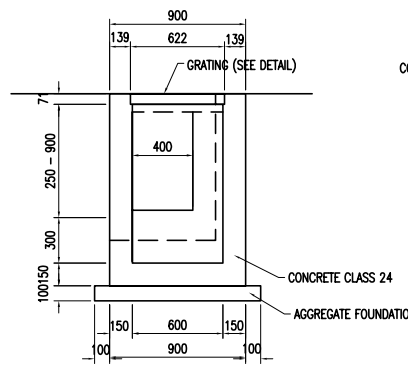
PLAN



GRATING DETAIL
(DIKURE R5SM65-66 OR EQUIVALENT)

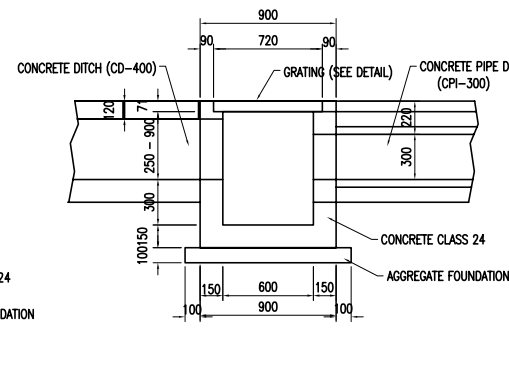


ELEVATION

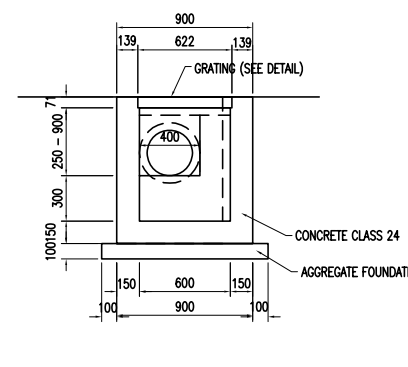


SECTION

CATCH BASIN FOR DITCH-400
(CB-S)

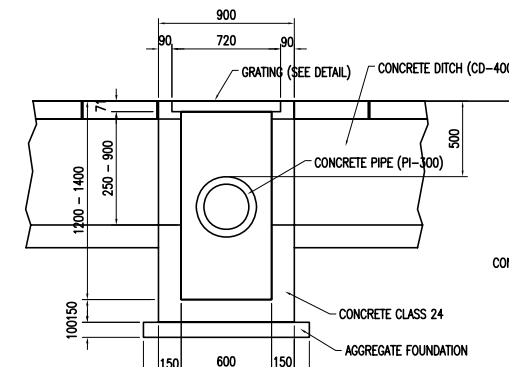


ELEVATION

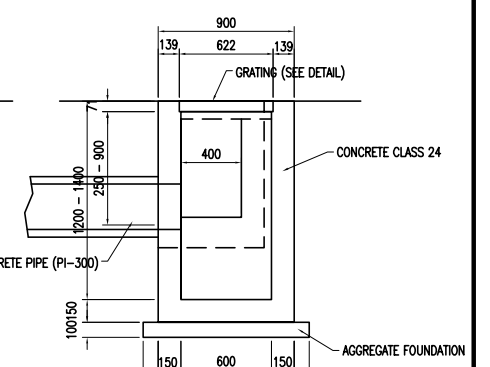


SECTION

CATCH BASIN FOR DITCH-400
(CB-C)



ELEVATION



SECTION

CATCH BASIN FOR DITCH-OUTLET
(CB-SP)



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Approved by: _____ Date: _____



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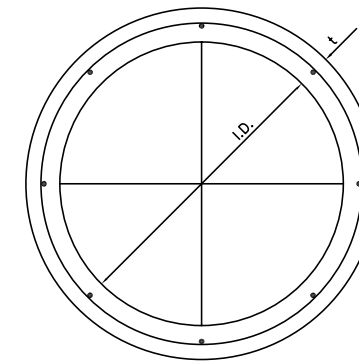
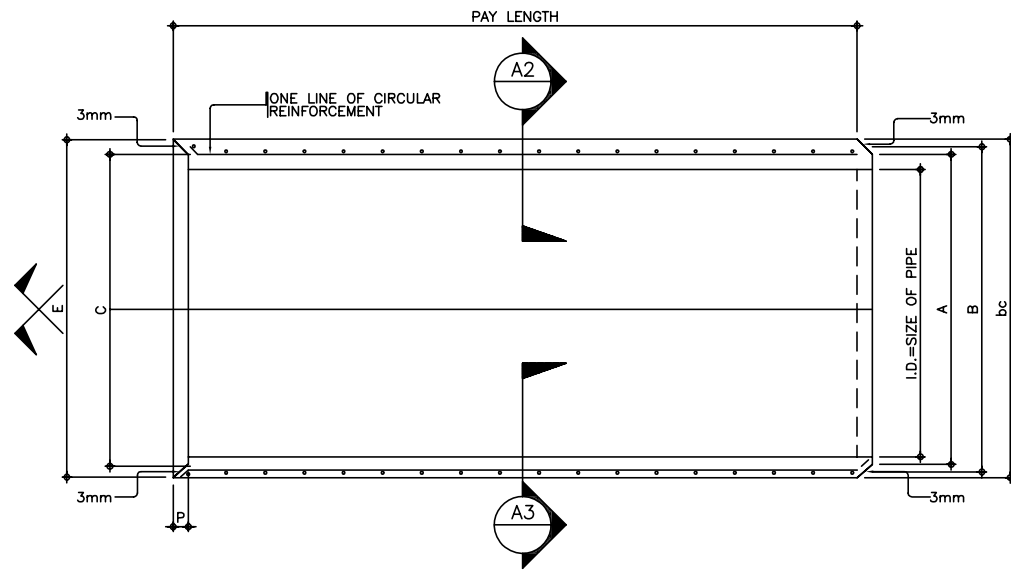
Designed by: _____ Date: _____
Checked by: _____ Date: _____

PROJECT : JAPAN GRANT AID PROJECT
THE PROJECT FOR THE IMPROVEMENT OF THE
NATIONAL ROAD NO. 1

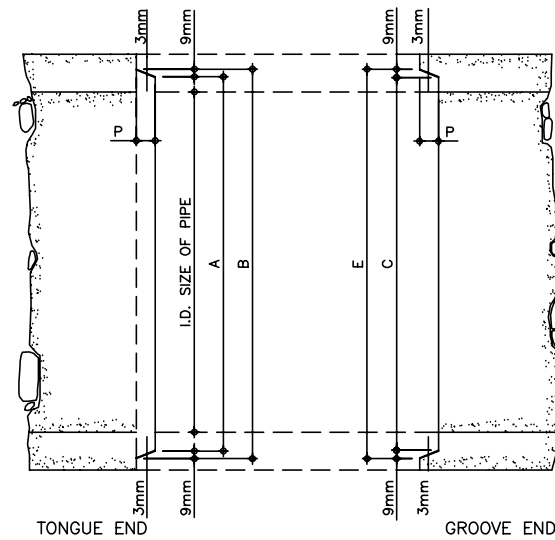
TITLE :

DRAINAGE STRUCTURES (2/8)

DRAWING No:
DR - 2
SCALE:
1:50
Rv.



ONE LINE OF CIRCULAR REINFORCEMENT



REINFORCED CONCRETE PIPE DETAIL

STANDARD DESIGN OF REINFORCED CONCRETE PIPE

PIPE NOMINAL SIZE (mm)	PIPE INNER SIZE (mm)	WALL THICKNESS (mm)	TONGUE (mm)		GROOVE (mm)		DEPTH (mm)	CONCRETE STRENGTH (kg/cm ²)
			A	B	C	E		
I.D.	I.D.	t	A	B	C	E	P	
300	300	50	338	354	346	362	30	240
400	460	64	508	527	514	534	44	240
600	610	76	673	692	680	699	44	240
750	760	89	858	857	845	864	51	240
1000	1000	110	1086	1126	1094	1134	45	240



KINGDOM OF CAMBODIA
MINISTRY OF PUBLIC WORKS AND TRANSPORT

Approved by: _____ Date: _____



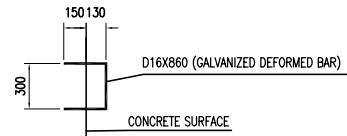
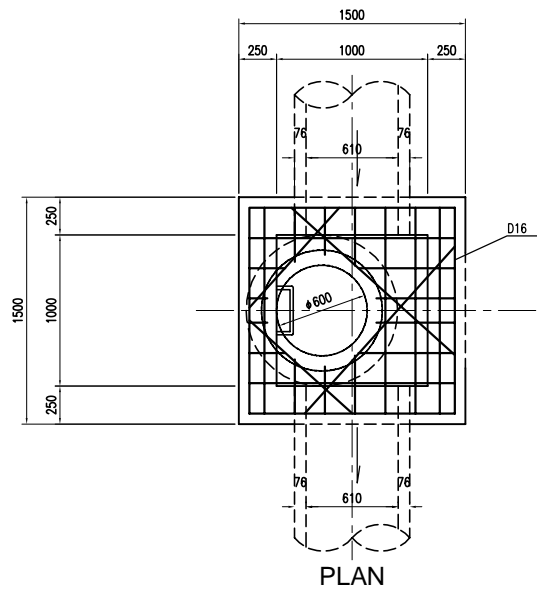
KATAHIRA & ENGINEERS INTERNATIONAL

Designed by: _____ Date: _____
Checked by: _____ Date: _____

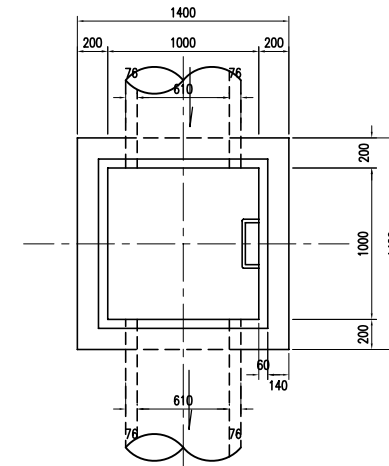
PROJECT : JAPAN GRANT AID PROJECT
THE PROJECT FOR THE IMPROVEMENT OF THE
NATIONAL ROAD NO. 1

TITLE : DRAINAGE STRUCTURES (3/8)
RC PIPE

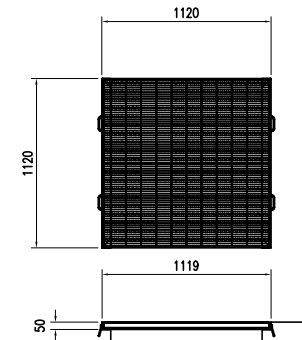
DRAWING No: DR - 3
SCALE: None Scale
Rv



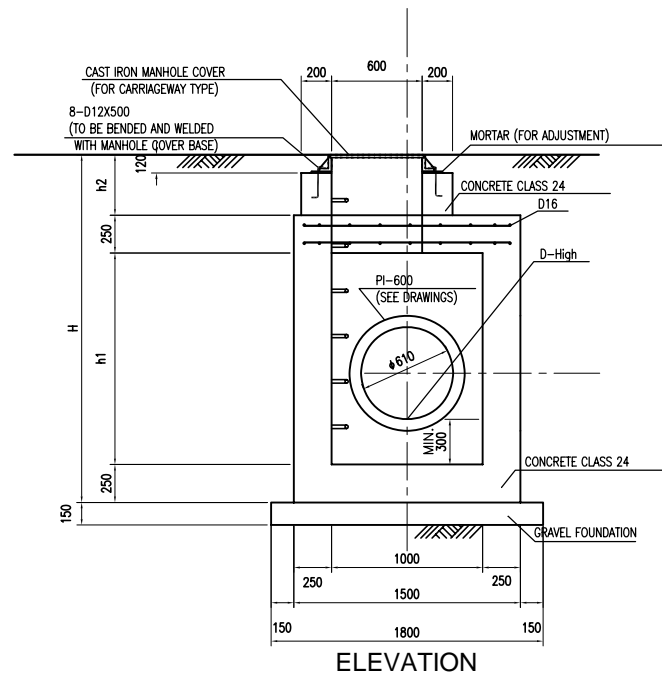
FOOT STEPS DETAIL



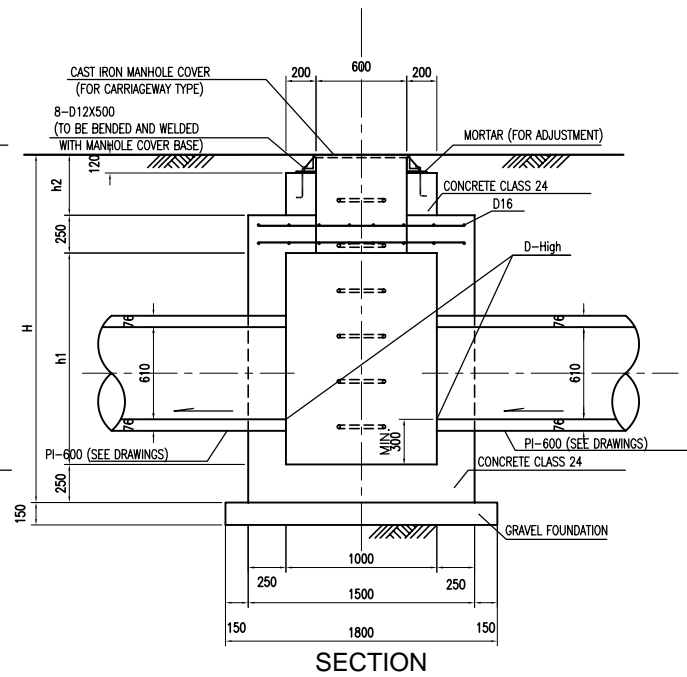
PLAN



GRATING DETAIL
(DIKURE HD44-10 OR EQUIVALENT)

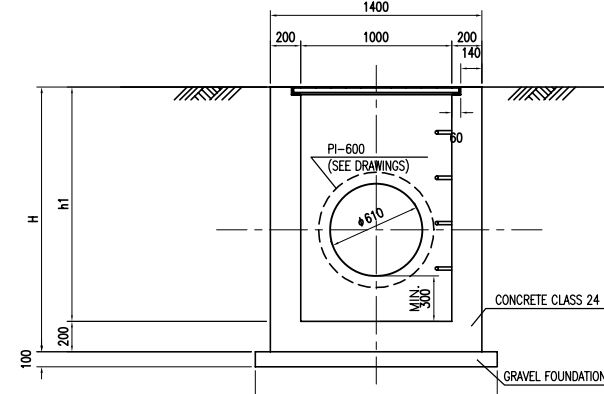


ELEVATION

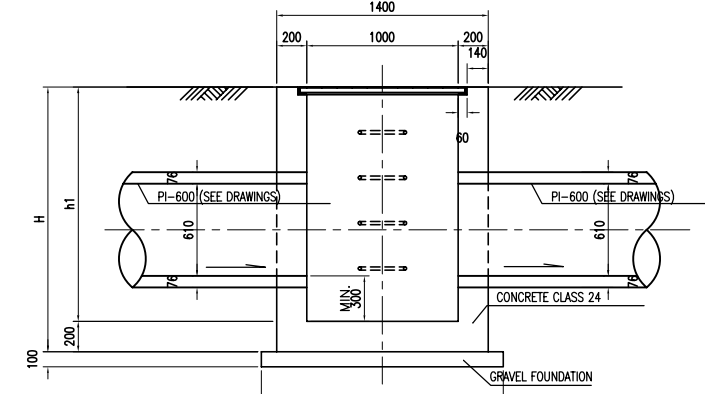


SECTION

CATCH BASIN
(MH-N)

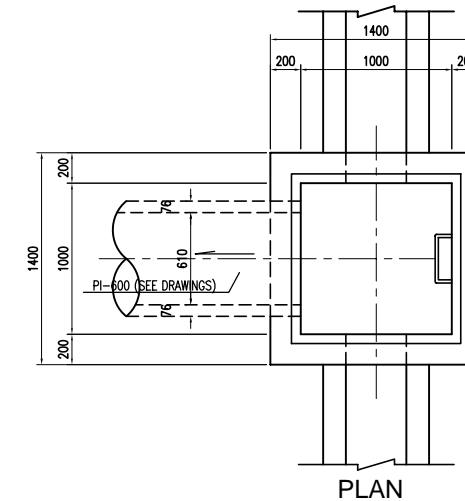


ELEVATION

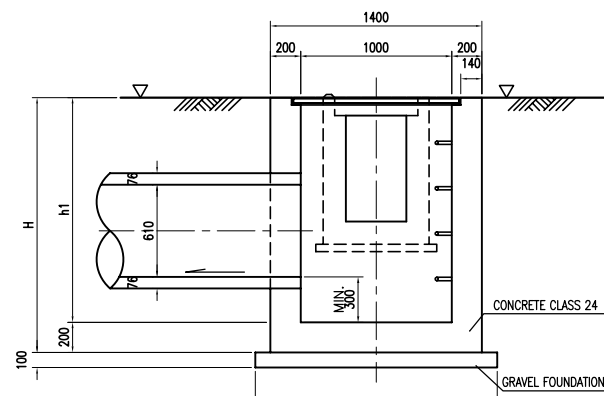


SECTION

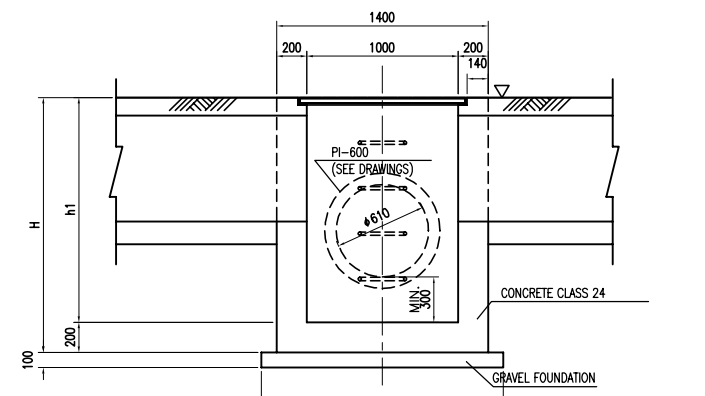
CATCH BASIN
(MH-D)



PLAN



ELEVATION



SECTION

CATCH BASIN
(MH-C)



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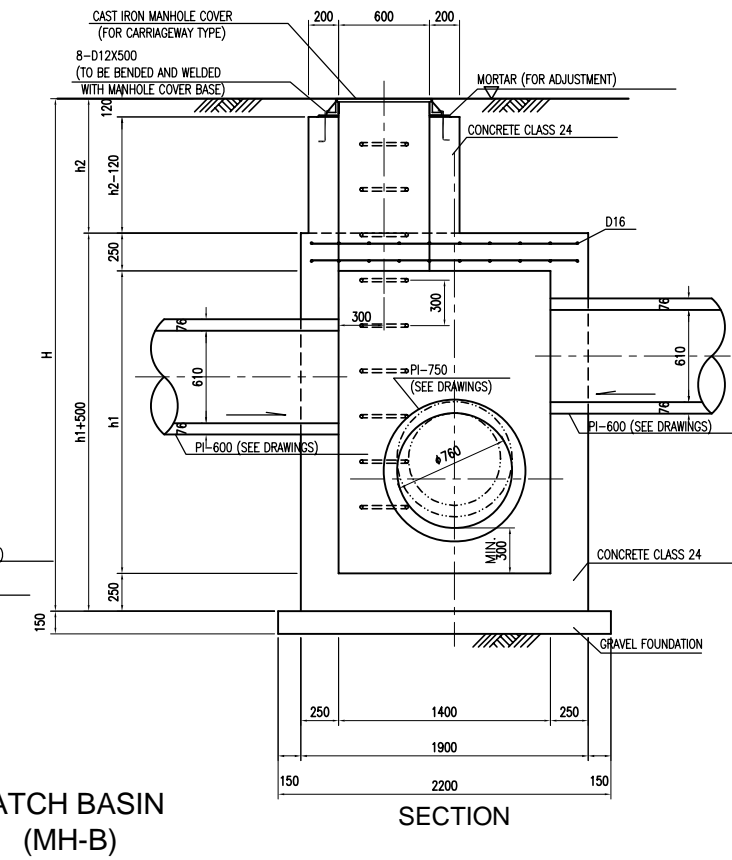
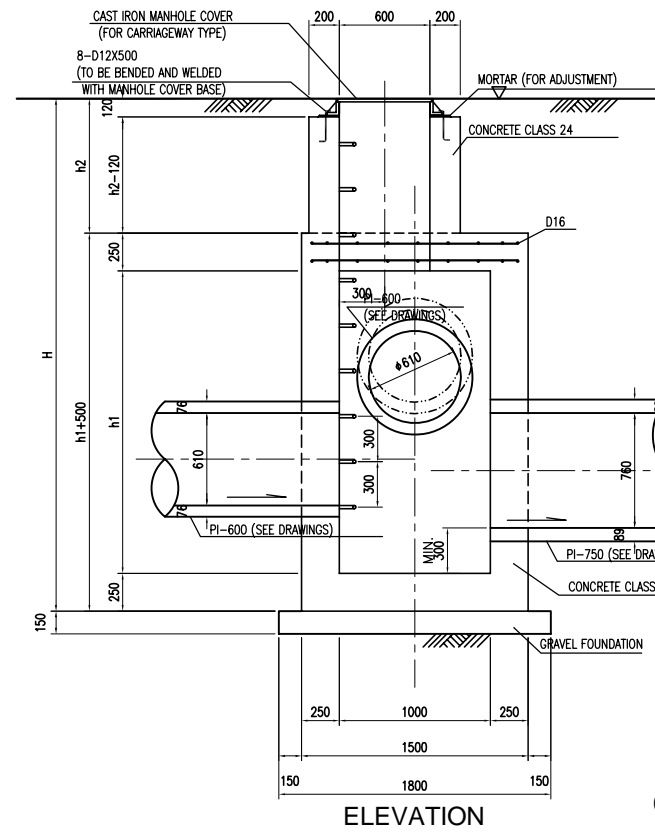
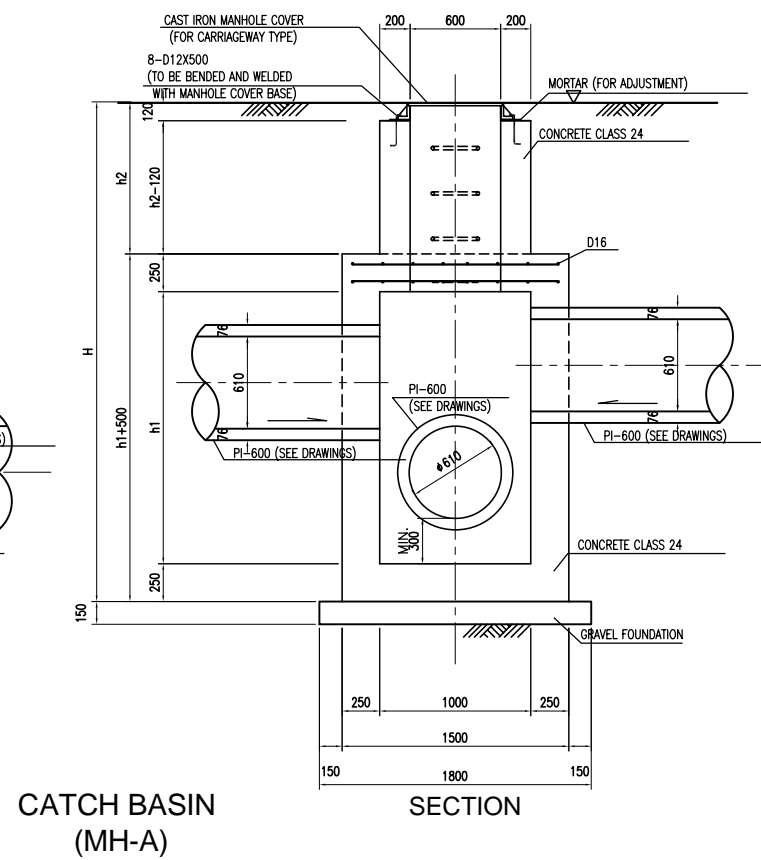
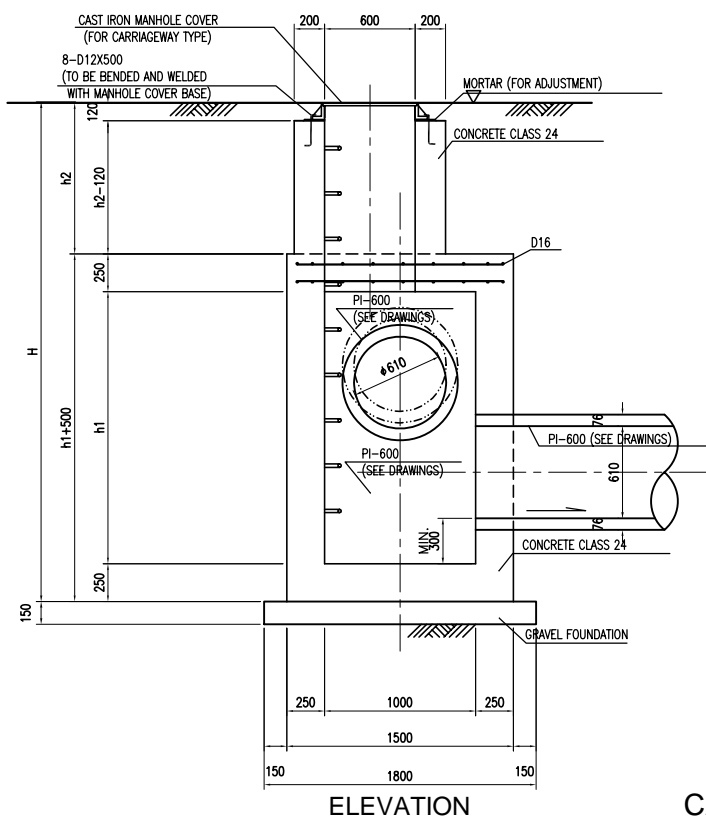
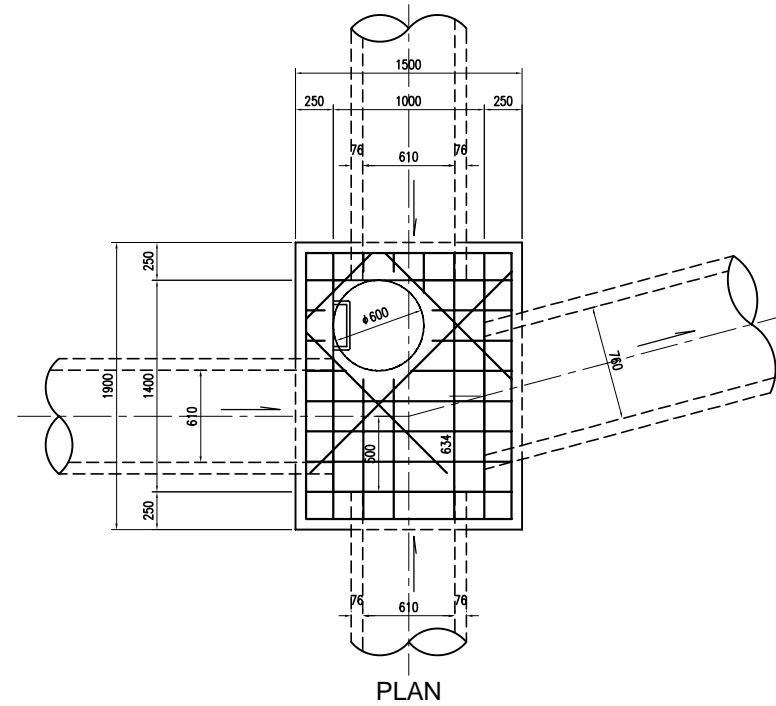
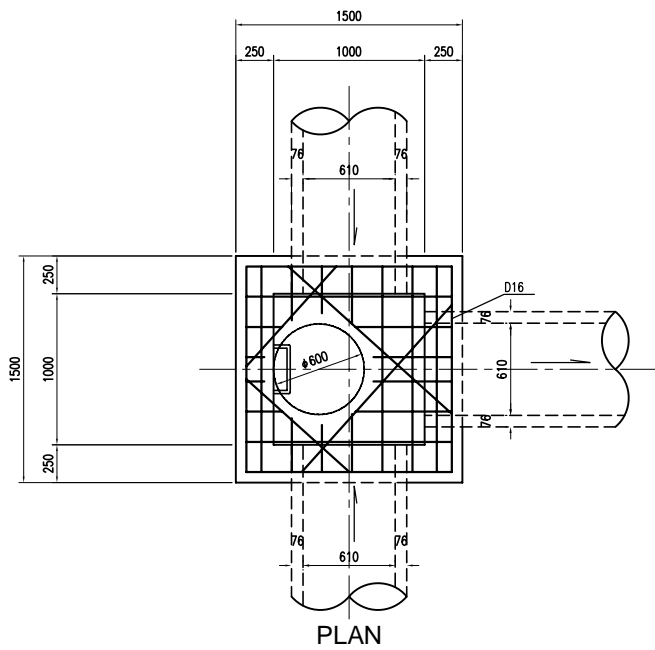
KATAHARA & ENGINEERS INTERNATIONAL

Designed by: _____ Date: _____
Checked by: _____ Date: _____

PROJECT : JAPAN GRANT AID PROJECT
THE PROJECT FOR THE IMPROVEMENT OF THE
NATIONAL ROAD NO. 1

TITLE : DRAINAGE STRUCTURES (4/8)

DRAWING No: DR - 4
SCALE: 1:50
Rv.



KINGDOM OF CAMBODIA
MINISTRY OF PUBLIC WORKS AND TRANSPORT

Approved by: _____ Date: _____



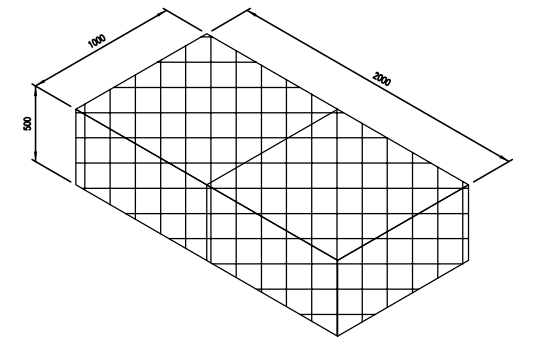
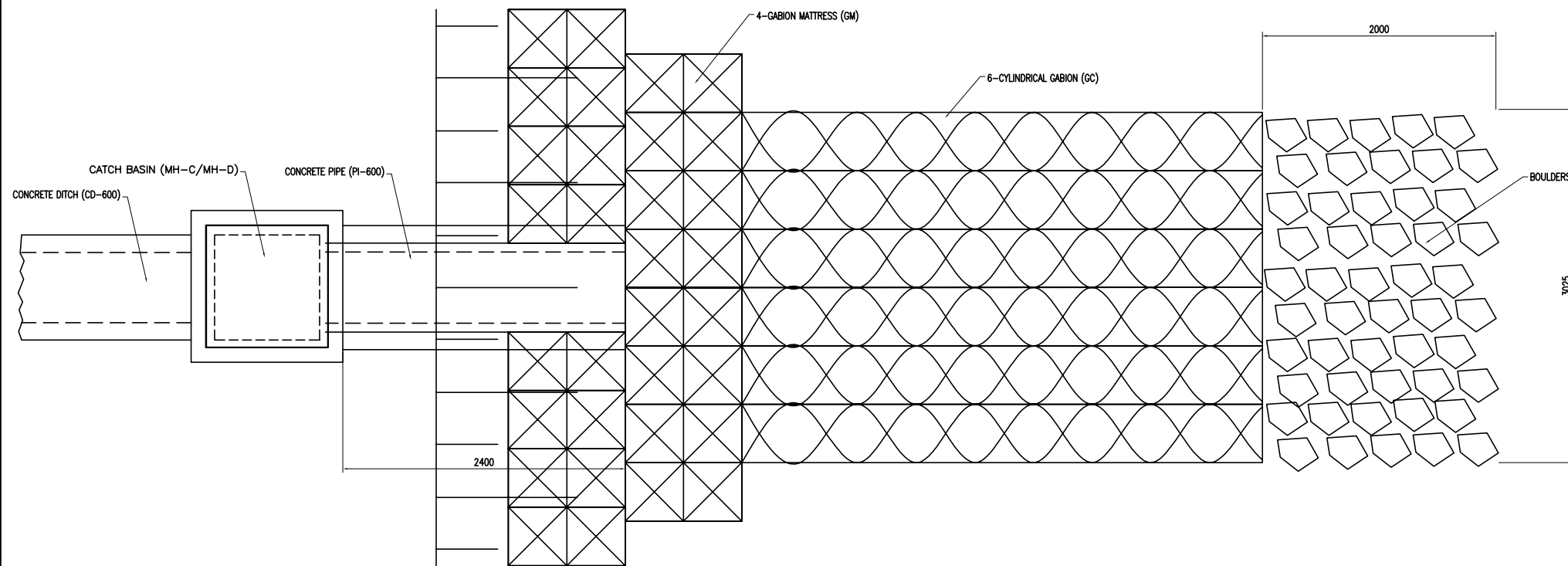
KATAHARA & ENGINEERS INTERNATIONAL

Designed by: _____ Date: _____
Checked by: _____ Date: _____

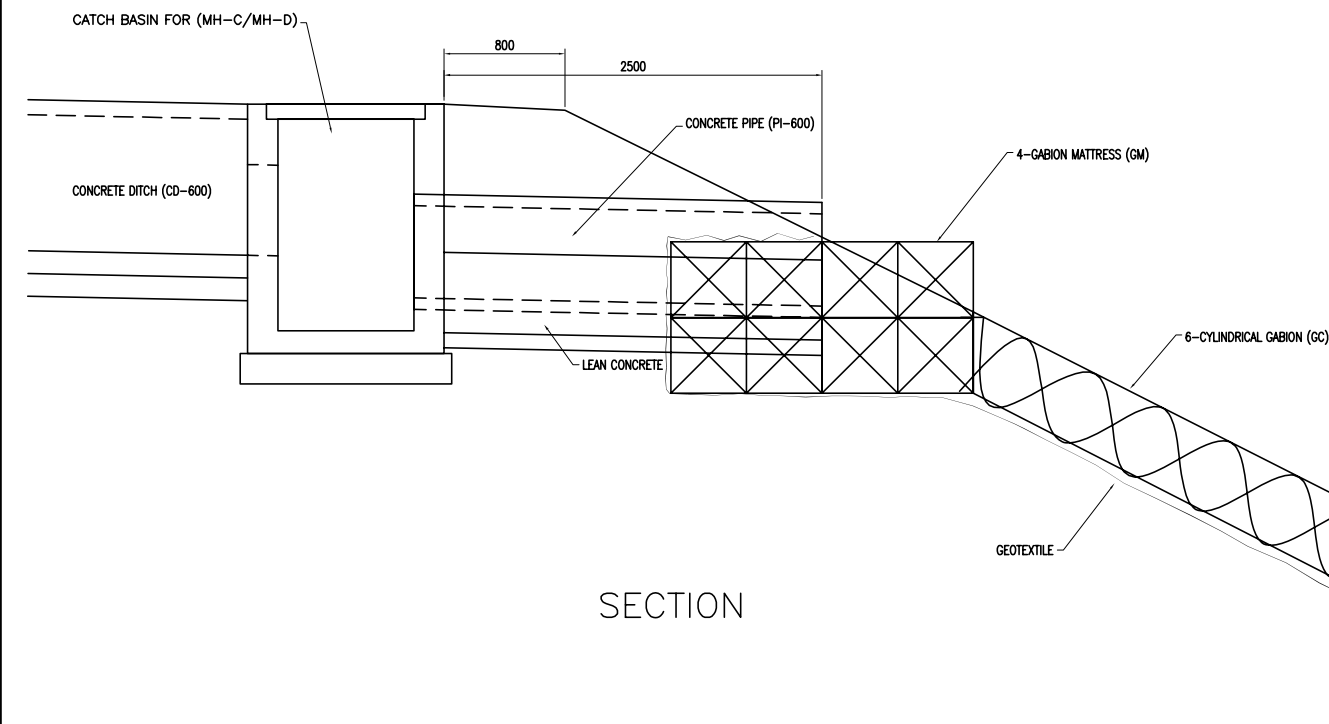
PROJECT : JAPAN GRANT AID PROJECT
THE PROJECT FOR THE IMPROVEMENT OF THE
NATIONAL ROAD NO. 1

TITLE : DRAINAGE STRUCTURES (5/8)

DRAWING No:
DR - 5
SCALE:
1:50
Rv.

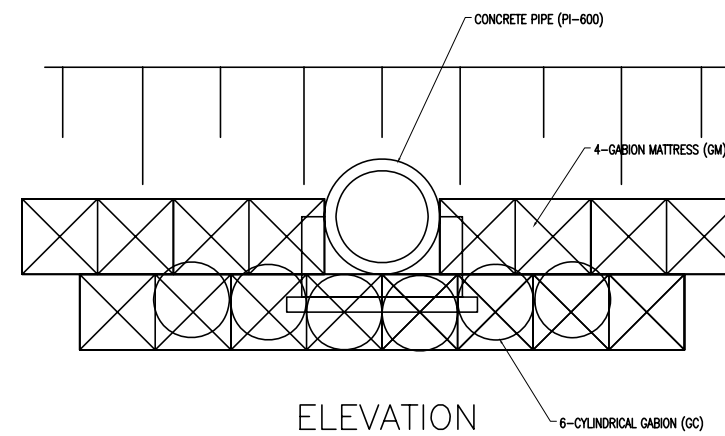


GABION MATTRESS (GM)

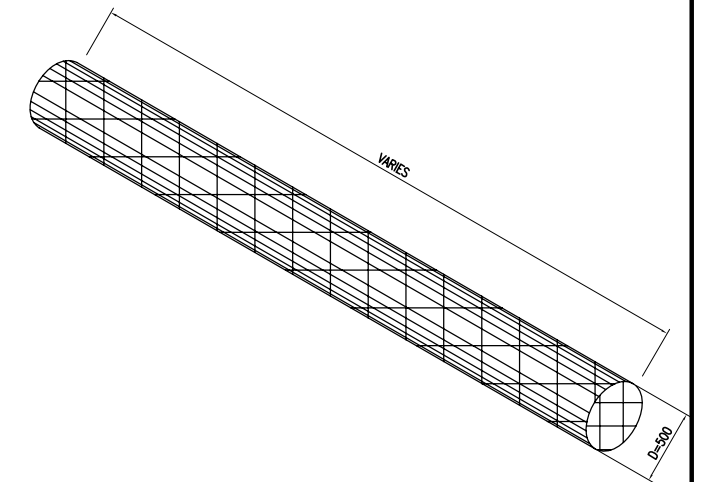


SECTION

DRAIN OUTLET (DOUT)

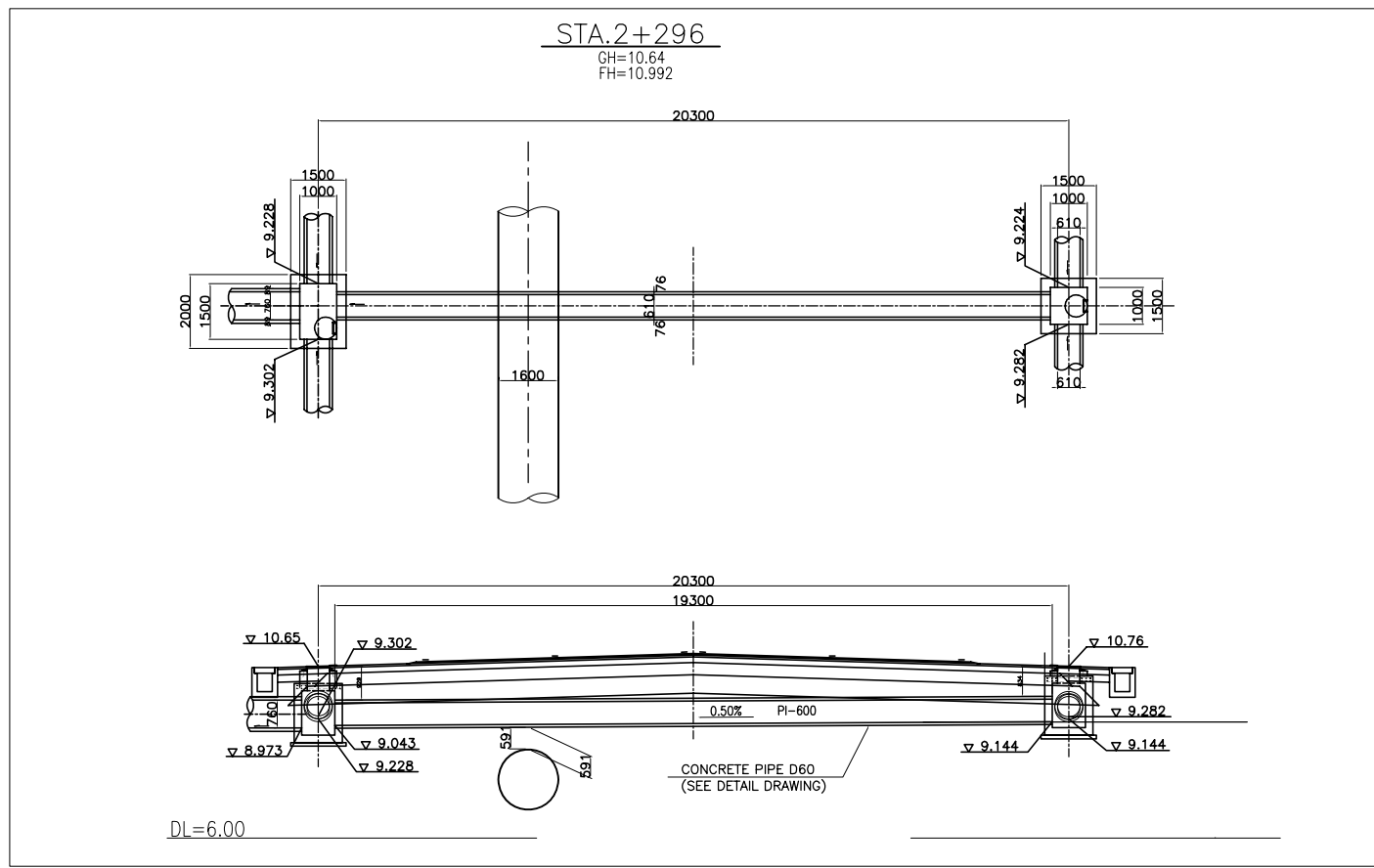
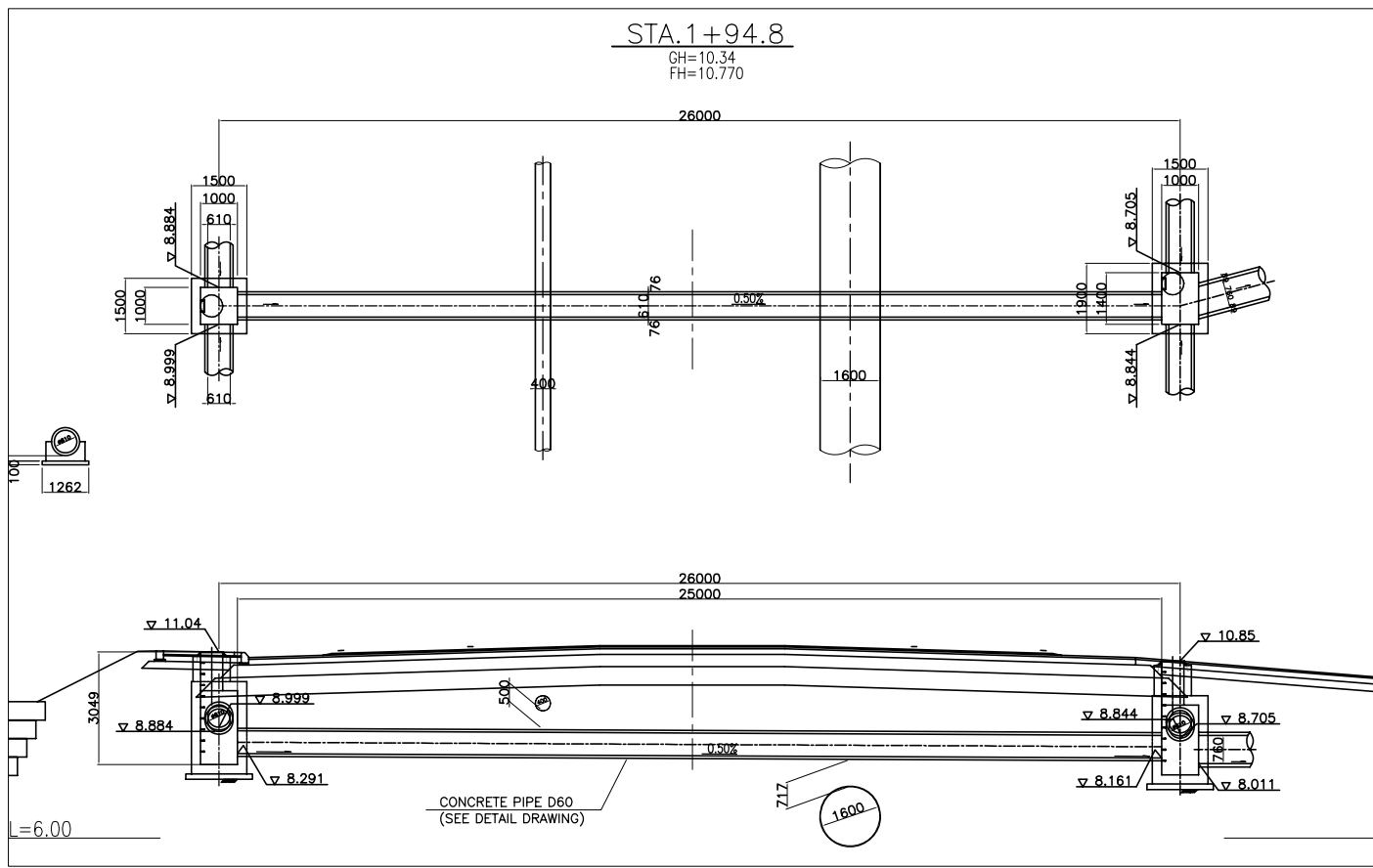
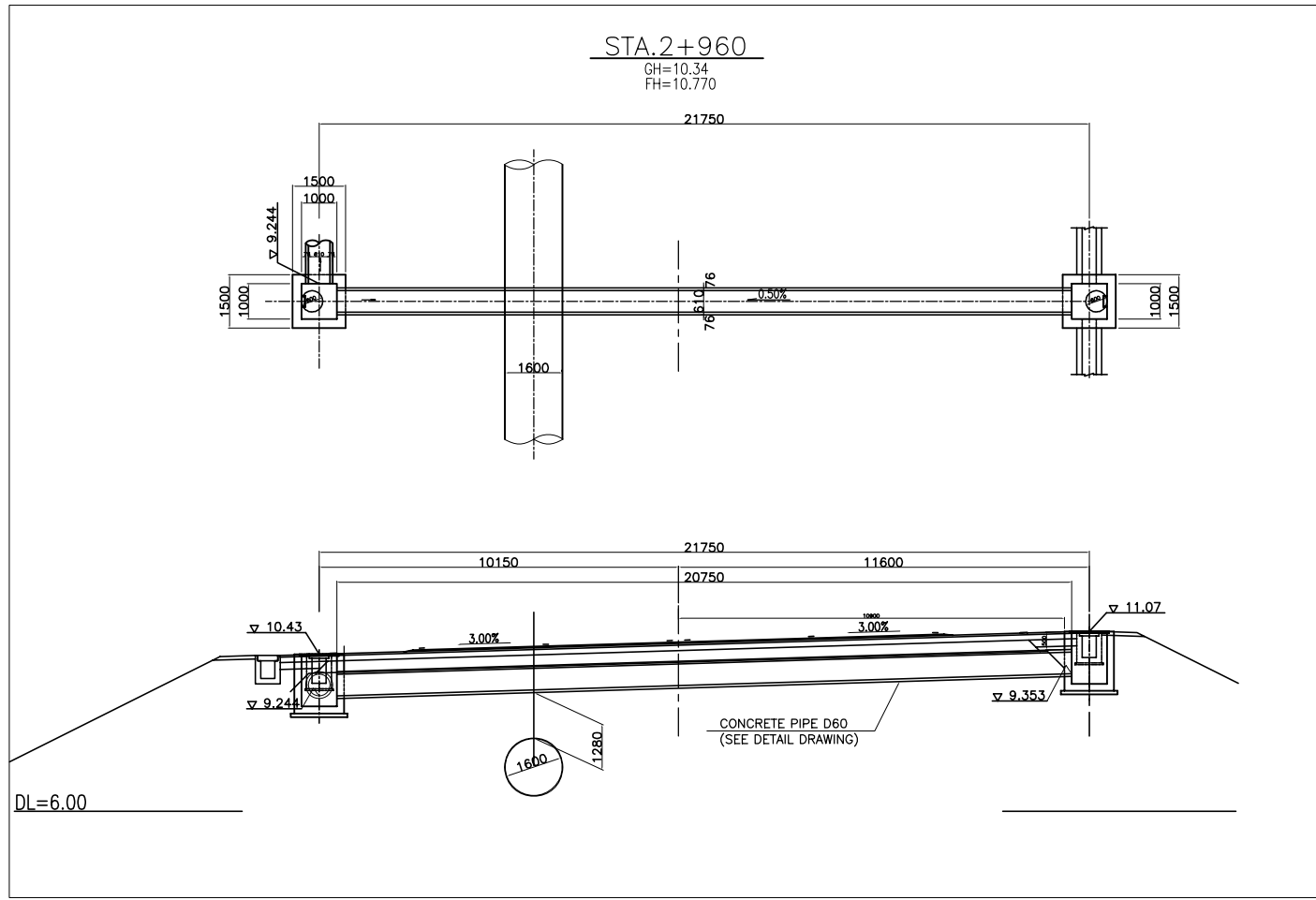
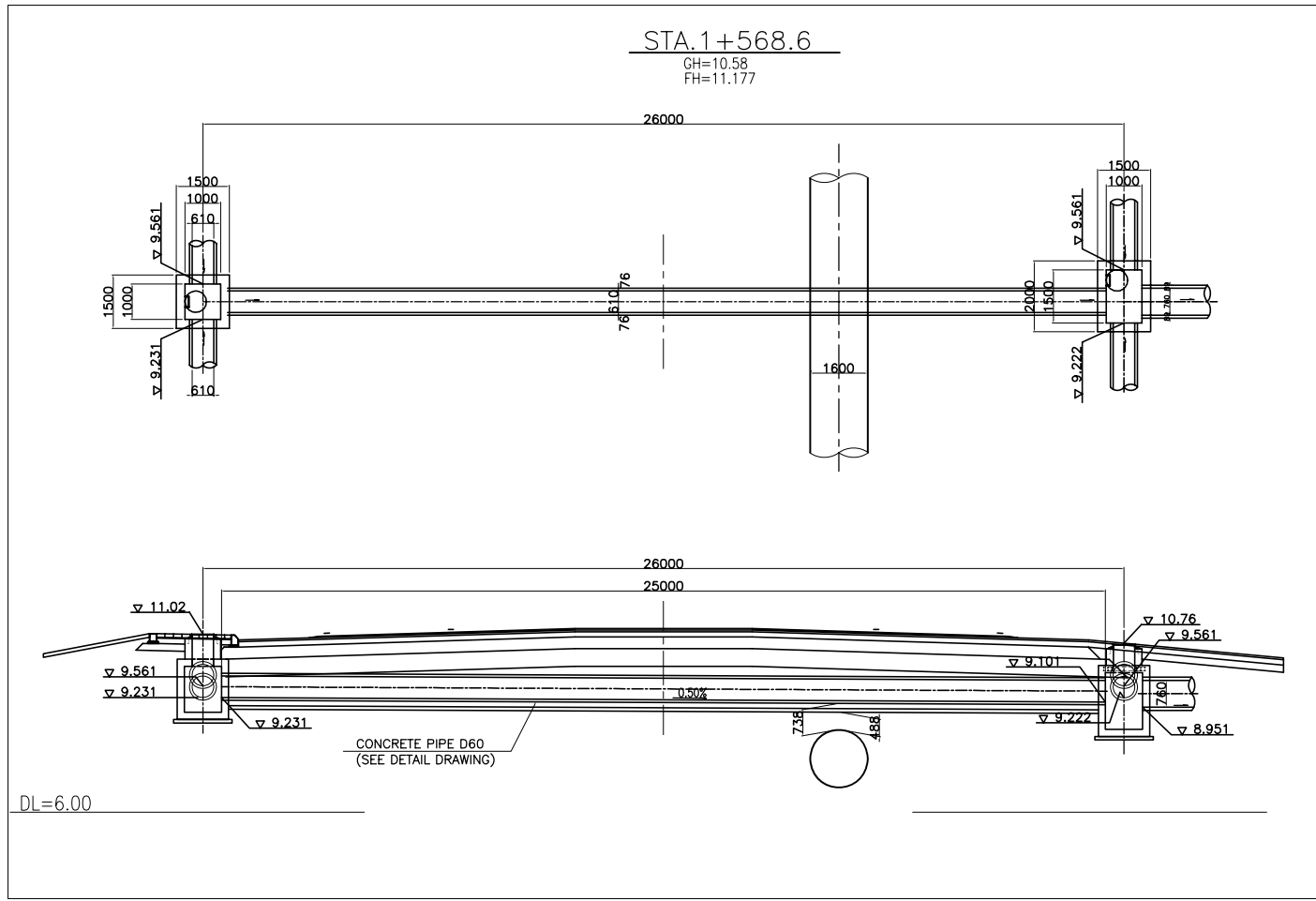


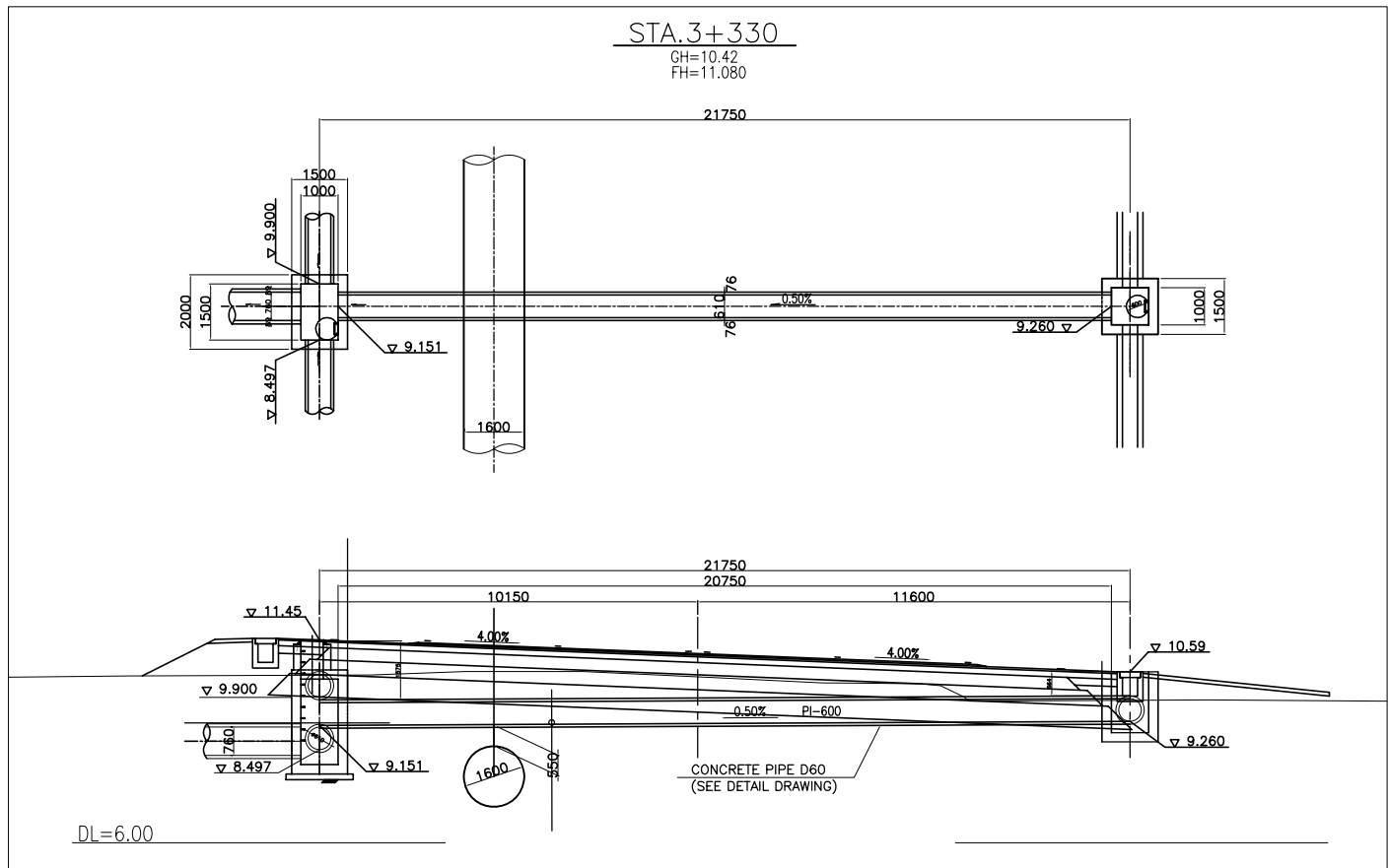
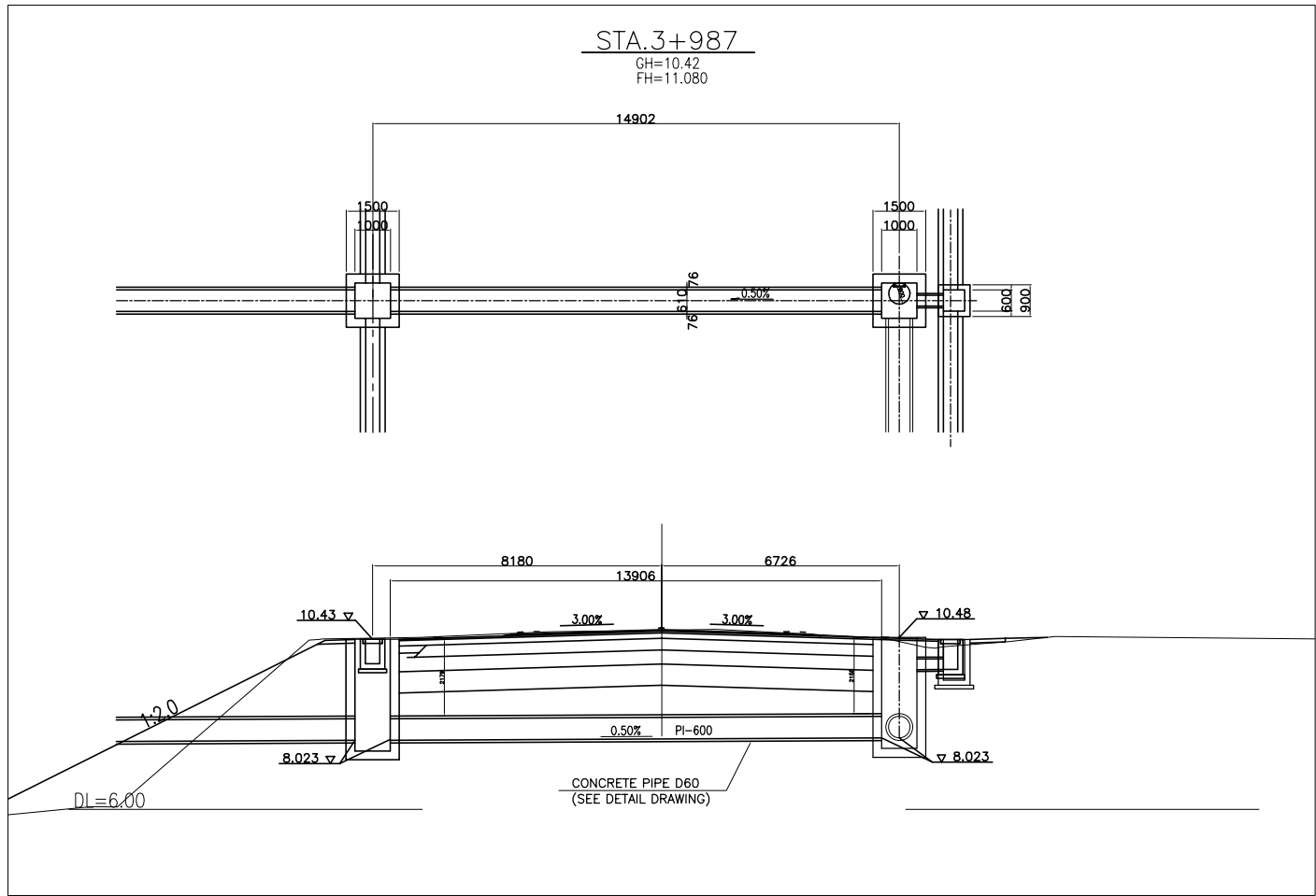
ELEVATION

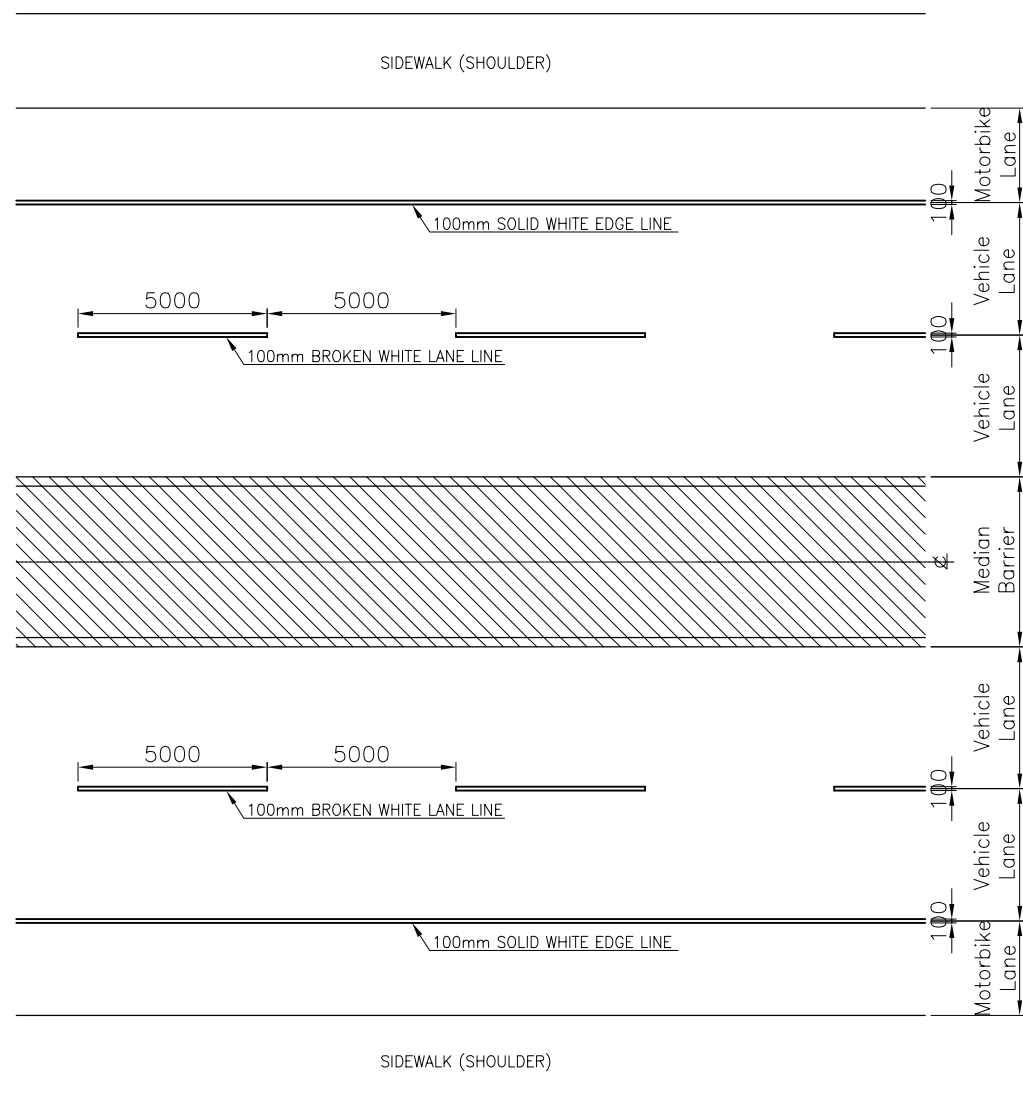


CYLINDRICAL GABION (GC)

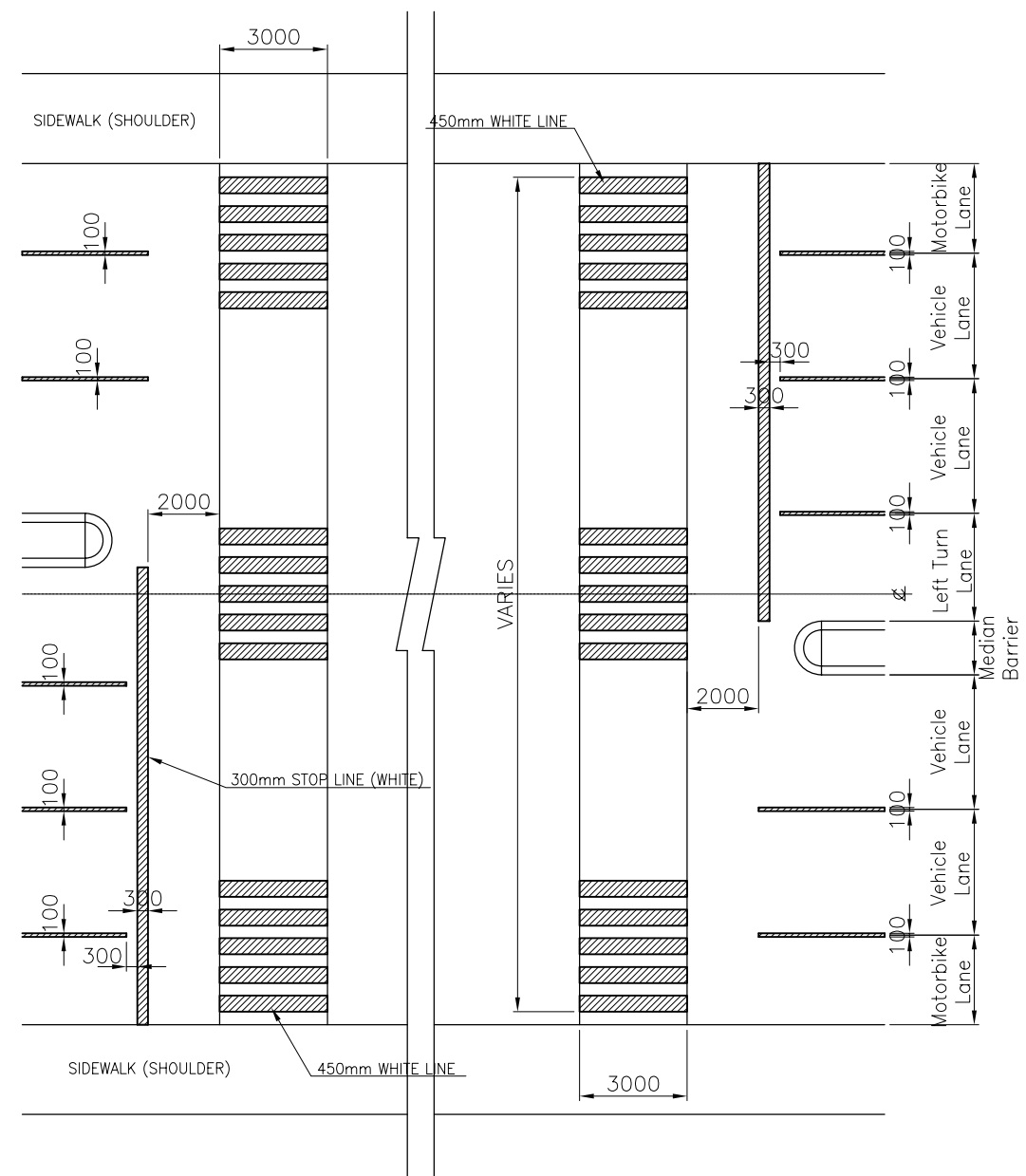
Note: Gabion mesh and Boulders shall comply with the Technical Specifications of this Contract. Gabion Mattress and Cylindrical Gabion shall be placed on Geotextile Fabric.







EDGE & LANE LINE MARKINGS
 STA.0+100~1+900, 4 LANE & MOTORBIKE LANE
 S=1/200



PEDESTRIAN CROSSING(ZEBRA TYPE) AT INTERSECTION
 STA.0+100~1+900, 4 LANE & MOTORBIKE LANE
 S=1/200

NOTES :

PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE LATEST CAMBODIA ROAD DESIGN GUIDE ON PAVEMENT MARKINGS.



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Designed by : _____ Date : _____
 Checked by : _____ Date : _____

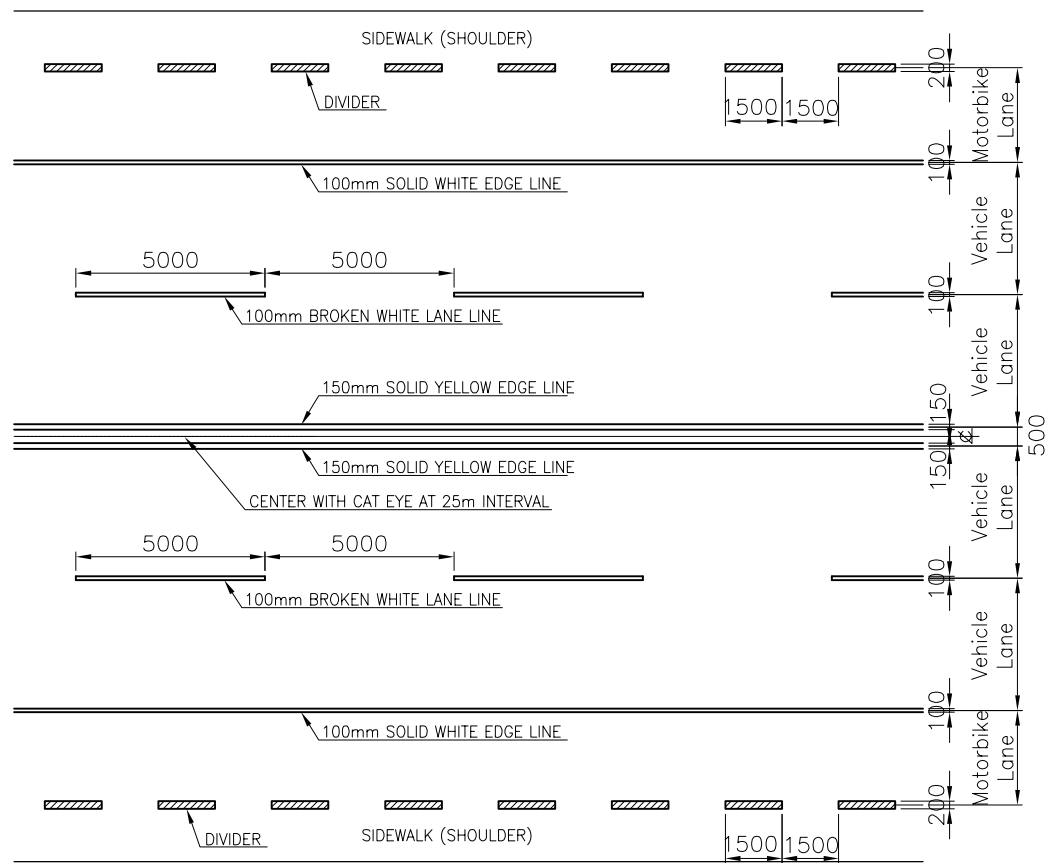
PROJECT : JAPAN GRANT AID PROJECT
 THE PROJECT FOR THE IMPROVEMENT OF THE
 NATIONAL ROAD NO. 1

TITLE :

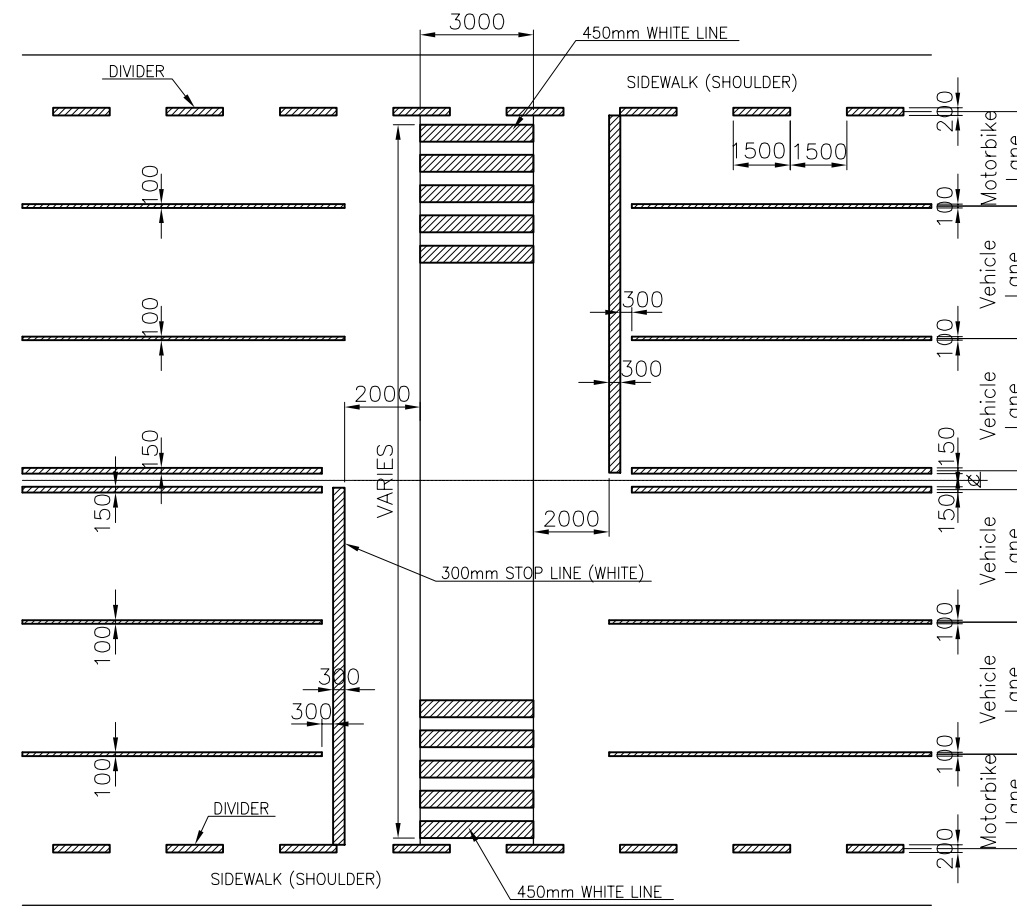
ROAD MARKING (1/3)

DRAWING No:
 RM - 1
 SCALE:
 As Shown

Rv

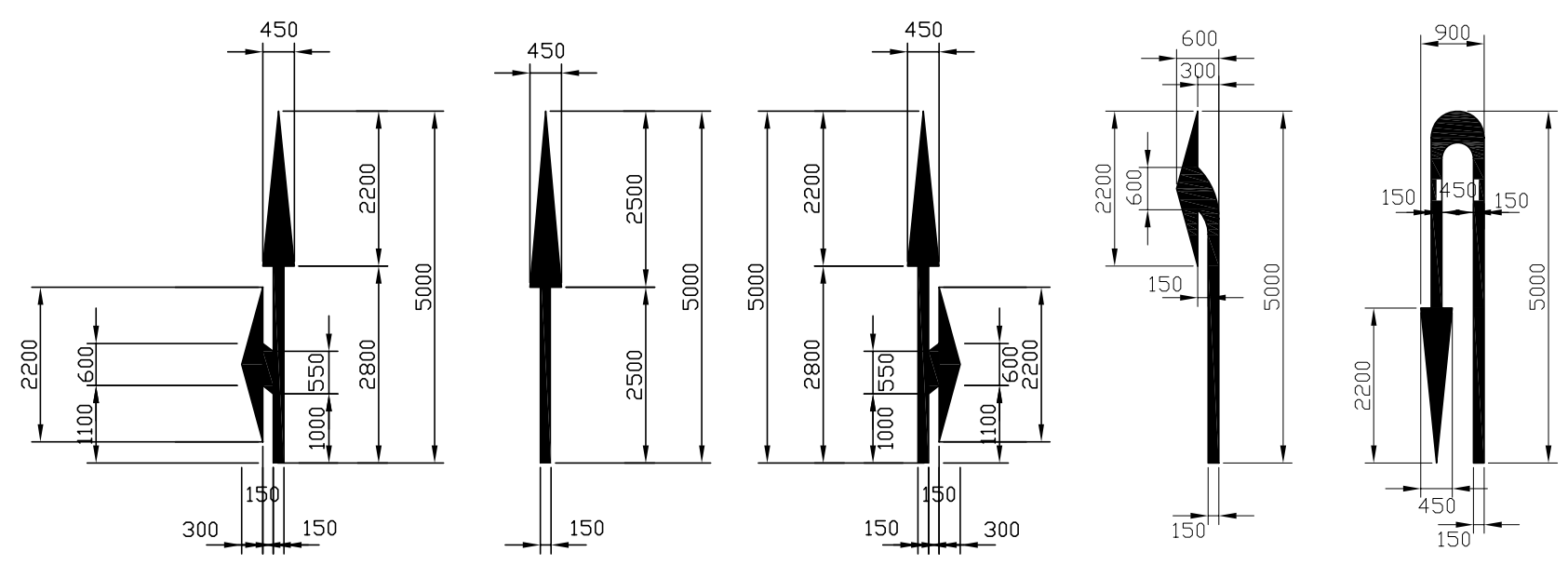
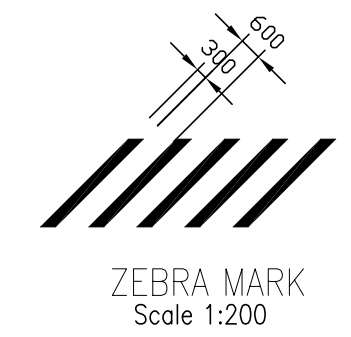
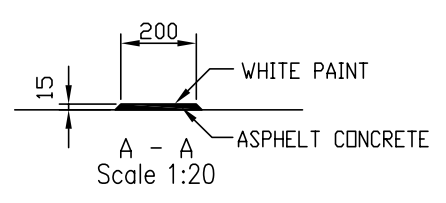
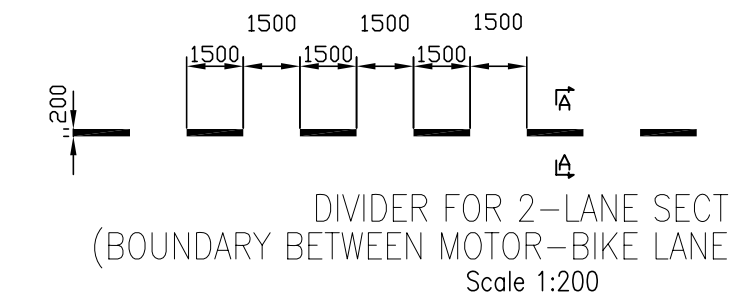
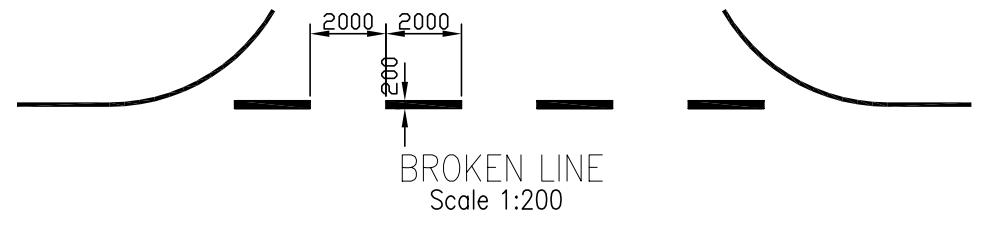
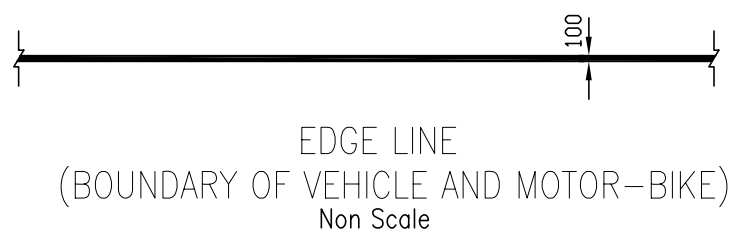
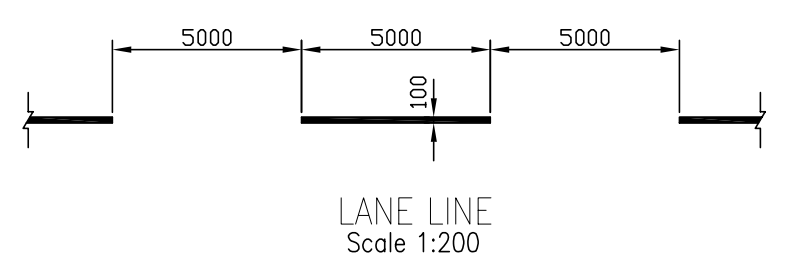
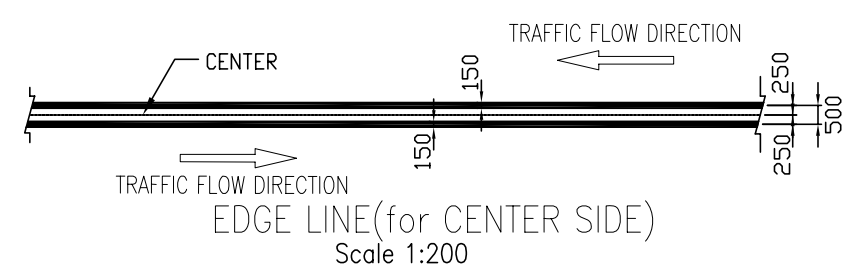


CENTER , EDGE & LANE LINE MARKINGS
 STA.1+900~4+000, 4 LANE & MOTORBIKE LANE
 S=1/200

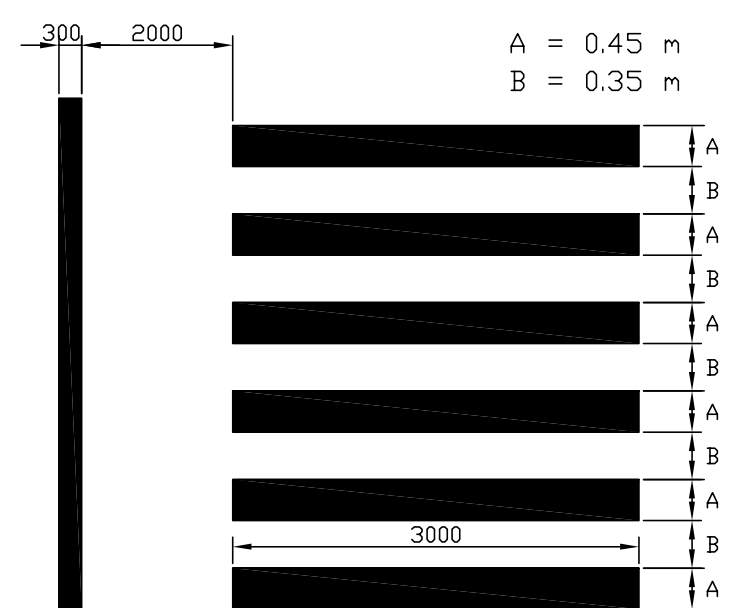


PEDESTRIAN CROSSING(ZEBRA TYPE)
 STA.1+900~4+000, 4 LANE & MOTORBIKE LANE
 S=1/200

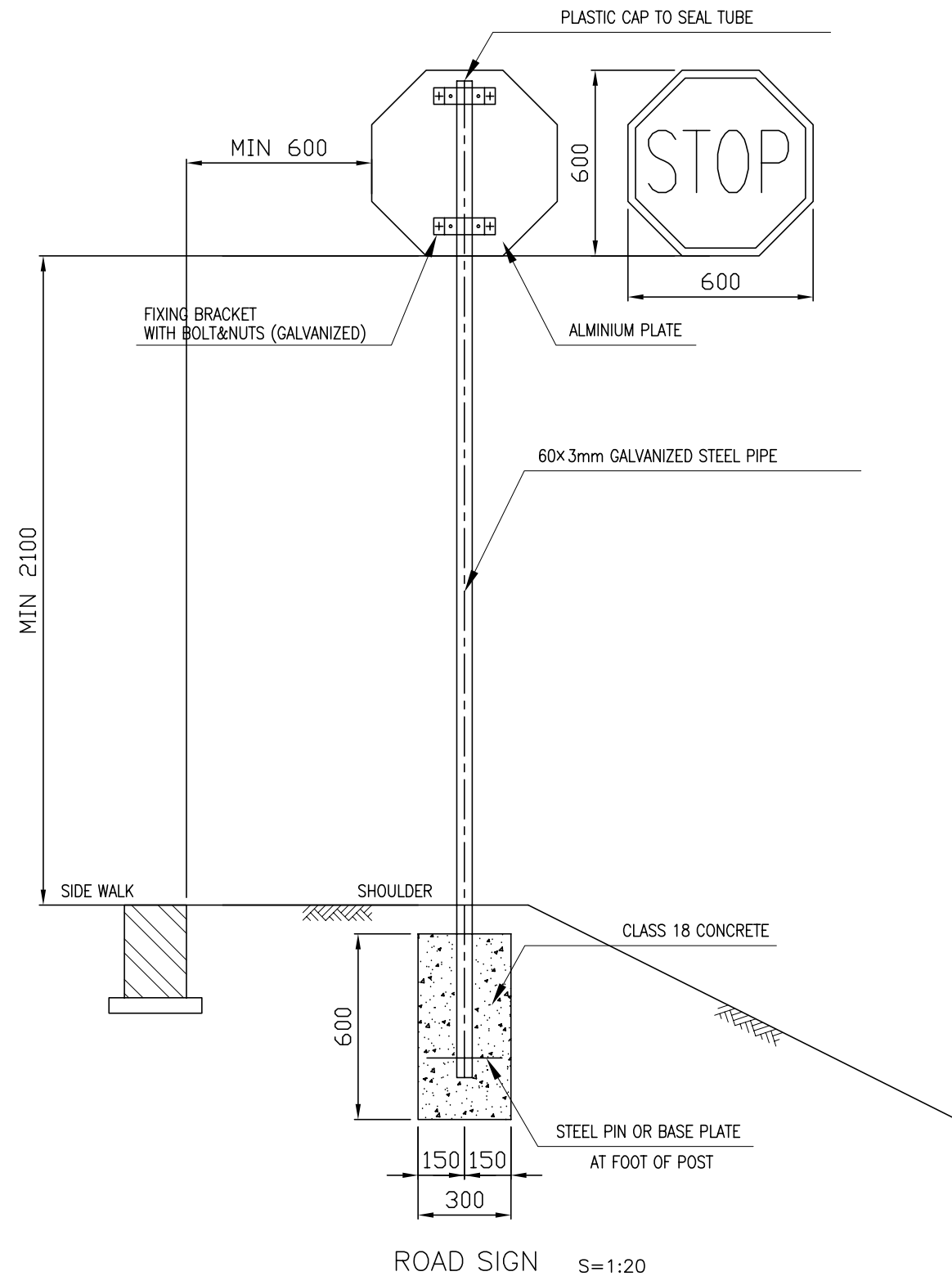
NOTES :
 PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE LATEST CAMBODIA ROAD DESIGN GUIDE ON PAVEMENT MARKINGS.



ARROOW MARKS Scale 1:100



ROAD SIGN INSTALLATION SCLEDULE



TYPE OF ROAD SIGN	LOCATION OF ROAD SIGN				
40 km/h Max	0+110-L	0+110-R	0+300-L	0+300-R	0+490-L
	0+490-R	0+690-L	0+700-R	0+900-L	0+890-R
	1+120-L	1+120-R	1+300-L	1+300-R	1+500-L
	1+500-R	1+700-L	1+700-R	1+900-L	
60 km/h Max	2+100-L	2+100-R	2+310-L	2+290-R	2+500-L
	2+500-R	2+700-L	2+700-R	2+900-L	2+900-R
	3+080-L	3+110-R	3+290-L	3+280-R	3+500-L
	3+500-R	3+700-L	3+700-R	3+900-L	3+930-R
No Left Turn	0+040-L	0+170-L	0+180-R	0+240-L	0+255-R
	0+305-L	0+325-R			
No Right Turn	0+080-L				
Stop	0+040-L	0+170-L	0+180-R	0+240-L	0+255-R
	0+305-L	0+325-R	0+695-L	0+800-R	1+245-L
	1+570-R	1+870-L	2+295-L	3+330-L	3+730-L
	3+925-L	3+925-R	3+945-L	4+000-R	
No Entry	0+040-L	0+085-R			
Bus Stop Ahead	0+620-R	0+760-L	1+090-L	1+150-R	1+450-R
	1+505-L	2+300-R	2+310-L	3+330-L	3+340-L
	3+800-R	3+860-L			
Intersection Ahead	0+630-R	0+735-R	0+760-L	0+860-L	1+160-R
	1+315-L	1+500-R	1+640-L	1+810-R	2+270-R
	2+330-L	3+300-R	3+360-L	3+700-R	3+800-L
	3+880-R	3+980-L			
Crosswalk Ahead	1+500-R	1+600-L	3+050-R	3+130-L	3+870-R
	3+960-L				
Road Width Narrower	3+800-R				
Road Width Wider	4+000-L				



KINGDOM OF CAMBODIA
MINISTRY OF PUBLIC WORKS AND TRANSPORT

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KATAHIRA & ENGINEERS INTERNATIONAL

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Checked by : _____ Date : _____

PROJECT : JAPAN GRANT AID PROJECT
THE PROJECT FOR THE IMPROVEMENT OF THE
NATIONAL ROAD NO. 1

TITLE :

ROAD SIGN DETAIL

DRAWING No:
RS - 1

SCALE:
1:20

Rv

