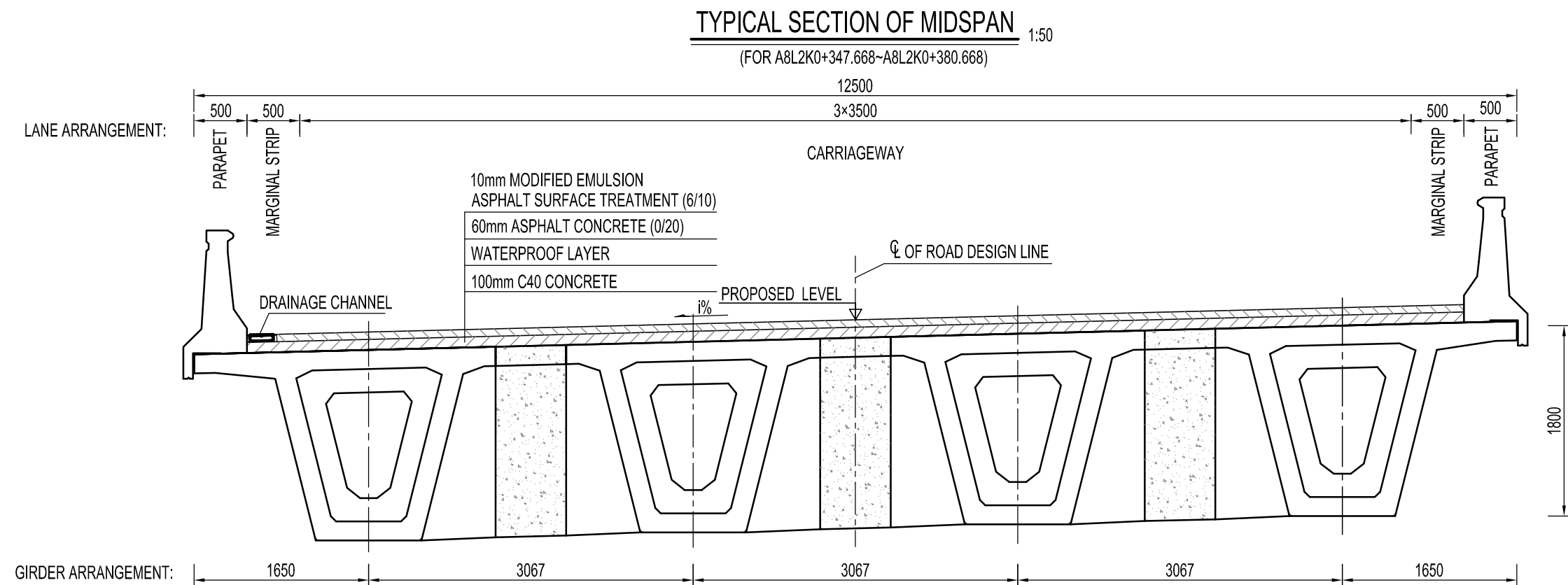
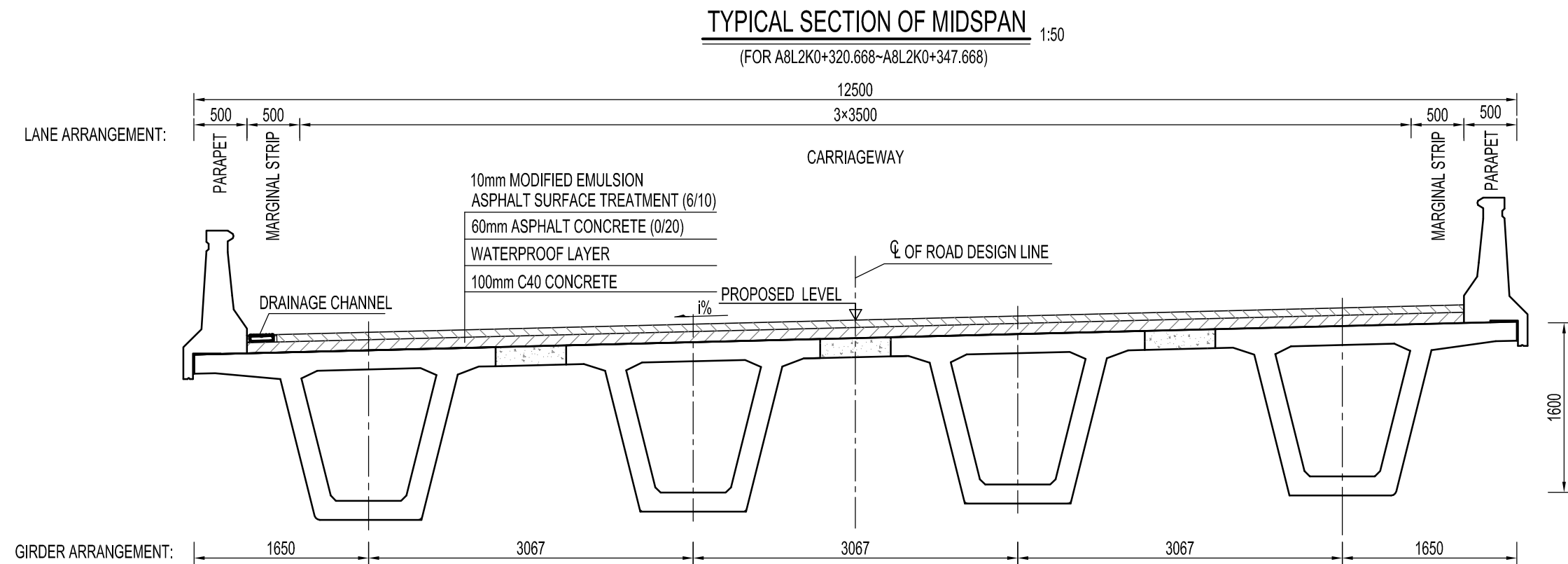


CHAINAGE(m)	A8L200		
PROPOSED LEVEL(m)	1646.318 +320.668	1646.968 +347.668	1647.350 +380.668
GROUND LEVEL(m)	1640.420	1637.320	1640.838
SLOPE(%)	4.45%		
LENGTH(m)	269.895		1649.405 +384.128
HORIZONTAL ALIGNMENT(m)	R=∞		
SUPER ELEVATION	2.5%		
	-2.5%	-2.5%	

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT FOR THE ELEVATION IN METERS.
2. THE ELEVATION SYSTEM IS CONSISTENT WITH THE ELEVATION SYSTEM OF NAIROBI EXPRESSWAY PROJECT.
3. THE COORDINATES IN THE GRAPH ARE THE KENYA INDEPENDENT COORDINATE SYSTEM (WGS-84 ELLIPSOID, GAUSS PROJECTION, THE PROJECTION HEIGHT IS 1640 m, CENTRAL MERIDIAN 37 ° 05 ').



- NOTES:
- 1.ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 - 2.DETAILS OF AUXILIARY REFER TO DWG NO:NEP/CD/FRD/BR/AN/000001~100001.

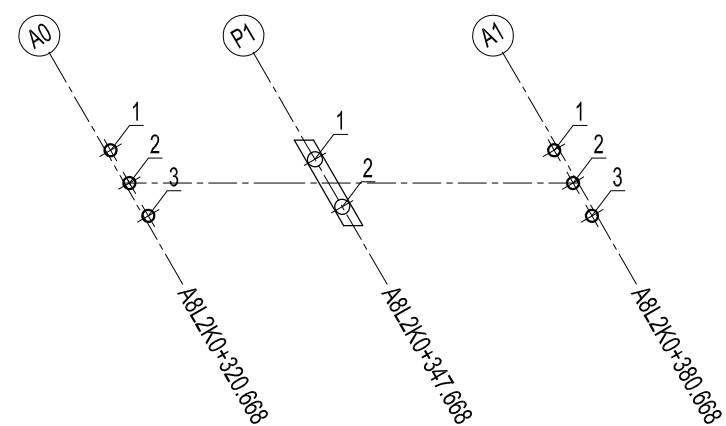


APPROVED

CHECKED

DESIGNED

PLAN ARRANGEMENT OF FOUNDATION COORDINATES



FOUNDATION COORDINATES

PIER/ABUT	LOCATION	NORTHING	EASTING
A0	1	9853240.067	476763.350
	2	9853244.025	476760.294
	3	9853247.982	476757.238
P1	1	9853237.632	476736.369
	2	9853243.369	476731.939
A1	1	9853232.217	476705.125
	2	9853236.174	476702.068
	3	9853240.131	476699.012

- NOTES:
- 1.ALL DIMENSIONS ARE IN THIS DRAWING ARE IN MILLIMETERS,EXCEPT CHAINAGE AND COORDINATES ARE IN METERS.
 - 2.THE COORDINATES IN THE GRAPH ARE THE KENYA INDEPENDENT COORDINATE SYSTEM(WGS-84 ELLIPSOID,GAUSS PROJECTION,THE PROJECTION HEIGHT IS 1640 M,CENTRAL MERIDIAN 37°05'),
 - 3.CONSTRUCTOR SHOULD REVIEW THE COORDINATES BEFORE THE COMMENCEMENT OF SUBSTRUCTURE.



KENYA NATIONAL HIGHWAYS AUTHORITY
CHINA ROAD AND BRIDGE CORPORATION

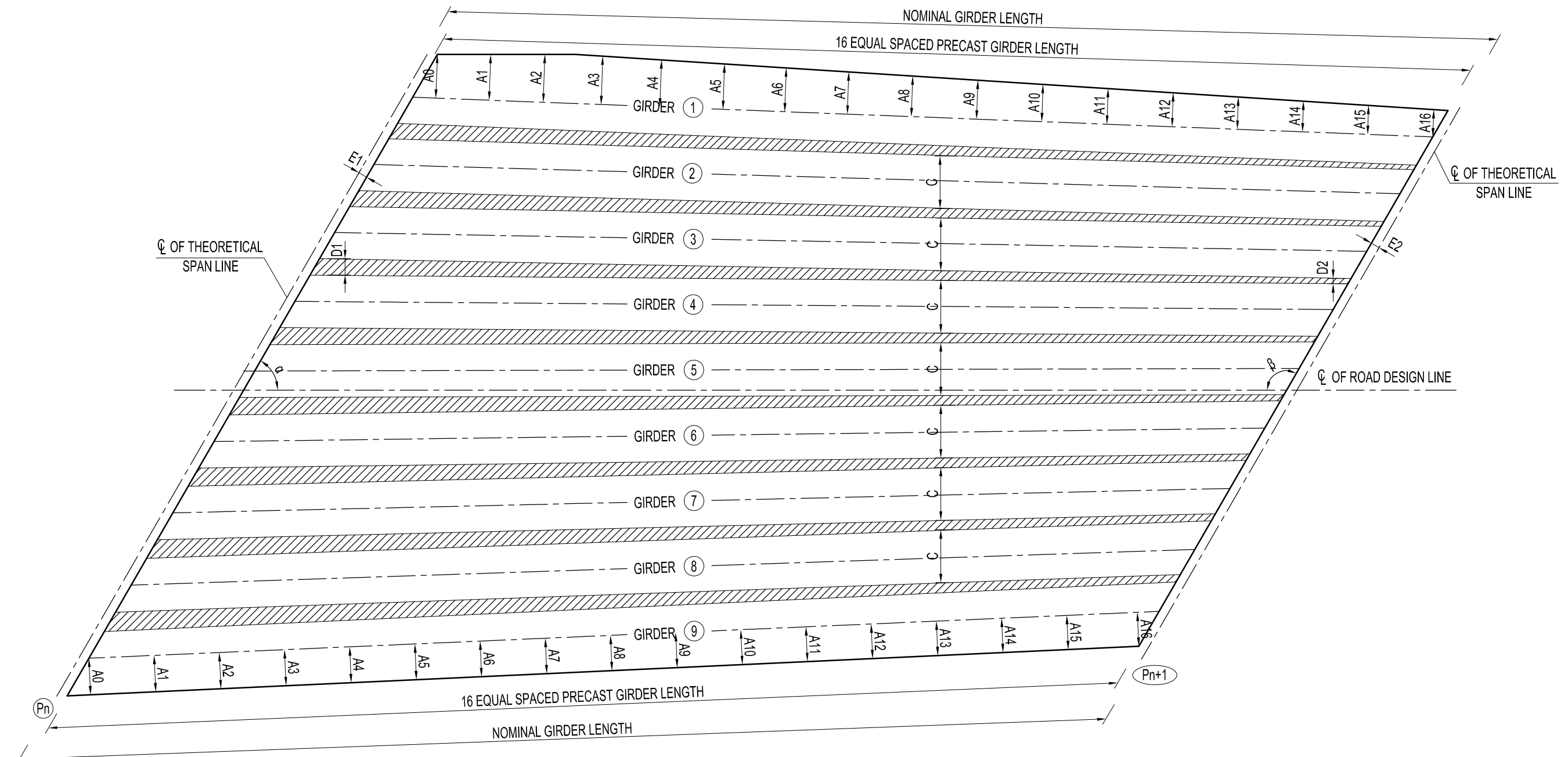
CONSTRUCTION DRAWINGS OF
NAIROBI EXPRESSWAY PROJECT

SEC1(L2K0+320.668 - L2K0+380.668) ROAD RECONSTRUCTION A8L2 - A8L01
FOUNDATION SETTING OUT SCHEDULE,SHEET 1/1

DWG. NO.
DATE

NEP/CD/SEC1/BR/A8L01/240001-E
AUG. 2021

SKETCH FOR PRECAST BOX GIRDER



NOTES:

- 1.ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
- 2.THE PRECAST BOX GRIDGE(SIDE BEAM) IS PREFABRICATED ACCORDING TO THE CANTILEVER VALUE A_1 OF THE ACTUAL SIDE BEAM(A_1 IS ONE FIFTH OF THE SINGLE-SPAN LENGTH) TO MEET THE REQUIREMENTS OF PLAN CURVE.
- 3.AS SHOWN IN THE DRAWING,THE PRECAST BOX GRIDGE OF EACH HOLE OF EACH BRIDGE IS NUMBERED IN ORDER FROM THE LEFT TO THE RIGHT ACCORDING TO THE DIRECTION OF THE ROUTE.
- 4.THE WET JOINT WIDTH VALUES D_1 AND D_2 SHOWN IIN THE CHART ARE VALUES ALONG THE BEAM END.
- 5.DURING CONSTRUCTION,THE ANGLE OF THE BEAMEND AT THE ABOUTMENT(TRANSITION PIER)SHOULD BE PREFABRICATED STRICTLY ACCOORDING TO THE GIVEN VALUES $a_1(a_2)$.
- 6.EACH PREFABRICATED BOX BEAM SHOULD BE NUMBERED DURING CONSTRUCTION TO AVOID MISUSE DURING INSTALLATION.
- 7.THE LENGTH OF THE PRECAST BEAM IS THE LENGTH OF THE BEAM CENTERLINE BETWEEN THE BEAM END LINES(INCLUDING THE LENGTH OF THE ANCHOR SECTION).
- 8.THE NOMNAL BEAM LENGTH IS THE LENGTH OF THE BEAM CENTERLINE BETWEEN THE THEORETICAL SPAN LINES.
- 9.E1 AND E2ARE THE DISTANCES BETWEEN THE END OF THE PRECAST BOX GRIDGE(INCLUDING THE LENGTH OF THE ANCHORING SECTION) AND THE THEORETICAL SPAN LINE.

PRECAST BOX GIRDER PARAMETER

PIER/ABUT.	GIRDER NO.	GIRDER TYPE	GIRDER WIDTH C(mm)	JOINT WIDTH D1(mm)	JOINT WIDTH D2(mm)	START GAP E1(mm)	NOMINAL GIRDER LENGTH (mm)	PRECAST GIRDER LENGTH (mm)	END GAP E2(mm)	$\alpha(^{\circ})$	$\beta(^{\circ})$	TRANSVERSE SLOPE(%)	LONGITUDINAL SLOPE(%)
A0~P1	01	BE03A	2850	-	-	40	27000	26908	40	60	120	2.5	2.52
	02	BE03B	2400	667	667	40	27000	26908	40	60	120	2.5	2.44
	03	BE03B	2400	667	667	40	27000	26908	40	60	120	2.5	2.37
	04	BE03A	2850	667	667	40	27000	26908	40	60	120	2.5	2.30
P1~A1	01	BE06A	2850	-	-	40	33000	32908	40	60	120	2.5	1.56
	02	BE06B	2400	667	667	40	33000	32908	40	60	120	2.5	1.47
	03	BE06B	2400	667	667	40	33000	32908	40	60	120	2.5	1.38
	04	BE06A	2850	667	667	40	33000	32908	40	60	120	2.5	1.29

PRECAST BOX GIRDER FLANGE PARAMETERS

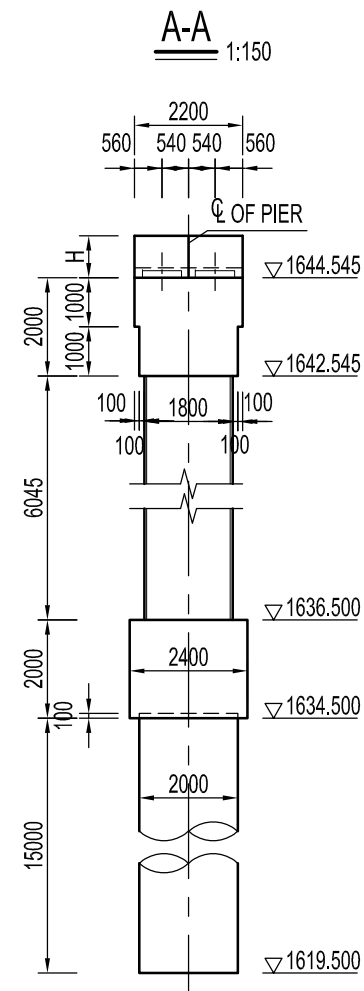
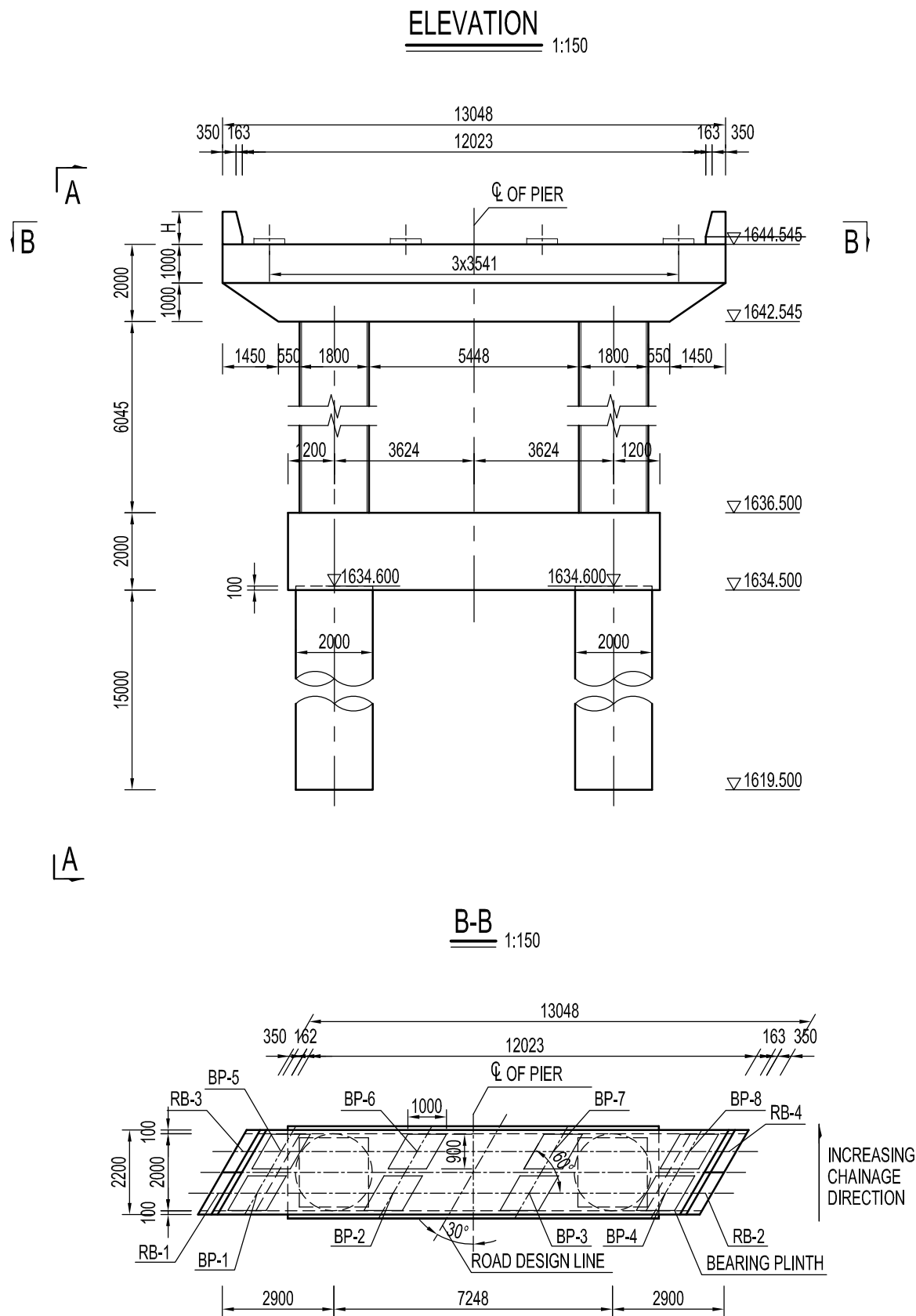
PIER/ABUT.	POSITION	A0(mm)	A1(mm)	A2(mm)	A3(mm)	A4(mm)	A5(mm)	A6(mm)	A7(mm)	A8(mm)	A9(mm)	A10(mm)	A11(mm)	A12(mm)	A13(mm)	A14(mm)	A15(mm)	A16(mm)
A0~P1 P1~A1	LEFT	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
	RIGHT	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650

NOTES:

1.ALL DIMENSIONS ARE IN MILLIMETRES UNLINES OTHERWISE STATED.

2.THE HORRIZONTAL SLOPE IS POSITIVE IF THE RIGHT SIDES IS HIGHER THAN LEFT IN THE DIRECTION OF THEROUTE, AND NEGATIVE IN THE OPPOSITE DIRECTION.





RETAINING BLOCK SCHEDULE

BP MARK	HEIGHT
RB-1	830
RB-2	1200
RB-3	650
RB-4	1000

BEARING PLINTH ELEVATION SCHEDULE

BP MARK	ELEVATION	HEIGHT	BEARING TYPE
BP-1	1644.860	315	GBZY500x110(CR)
BP-2	1644.971	426	GBZY500x110(CR)
BP-3	1645.081	536	GBZY500x110(CR)
BP-4	1645.190	644	GBZY500x110(CR)
BP-5	1644.685	140	GBZY550x110(CR)
BP-6	1644.795	250	GBZY550x110(CR)
BP-7	1644.904	359	GBZY550x110(CR)
BP-8	1645.011	466	GBZY550x110(CR)

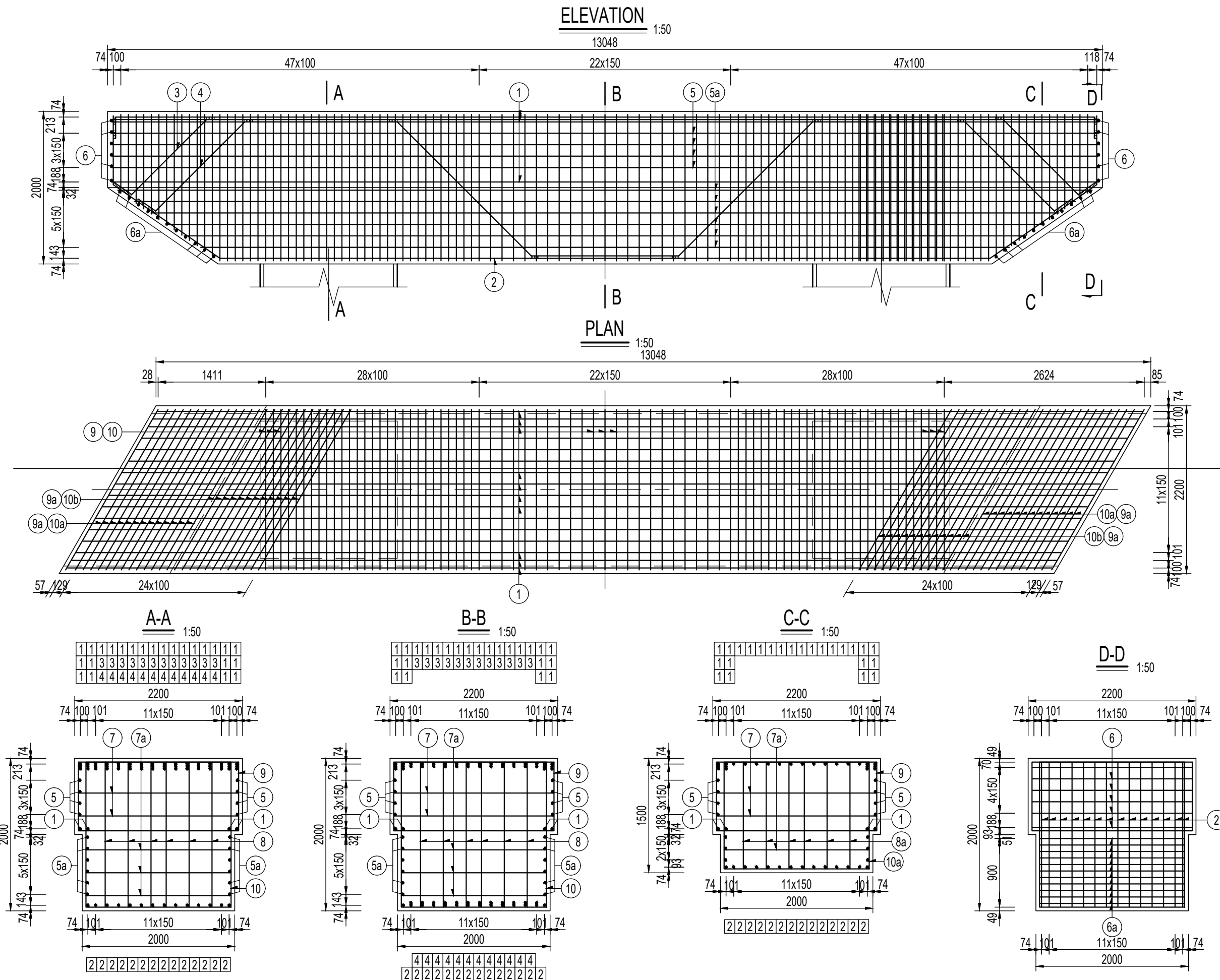
- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES EXCEPT FOR THE ELEVATION IN METRES.
 2. DIMENSION AND REINFORCEMENT OF BEARING PLINTH REFER TO RELEVANT DRAWING IN DETAIL.
 3. DIMENSION AND REINFORCEMENT OF RETAINING BLOCK REFER TO RELEVANT DRAWING IN DETAIL.



APPROVED

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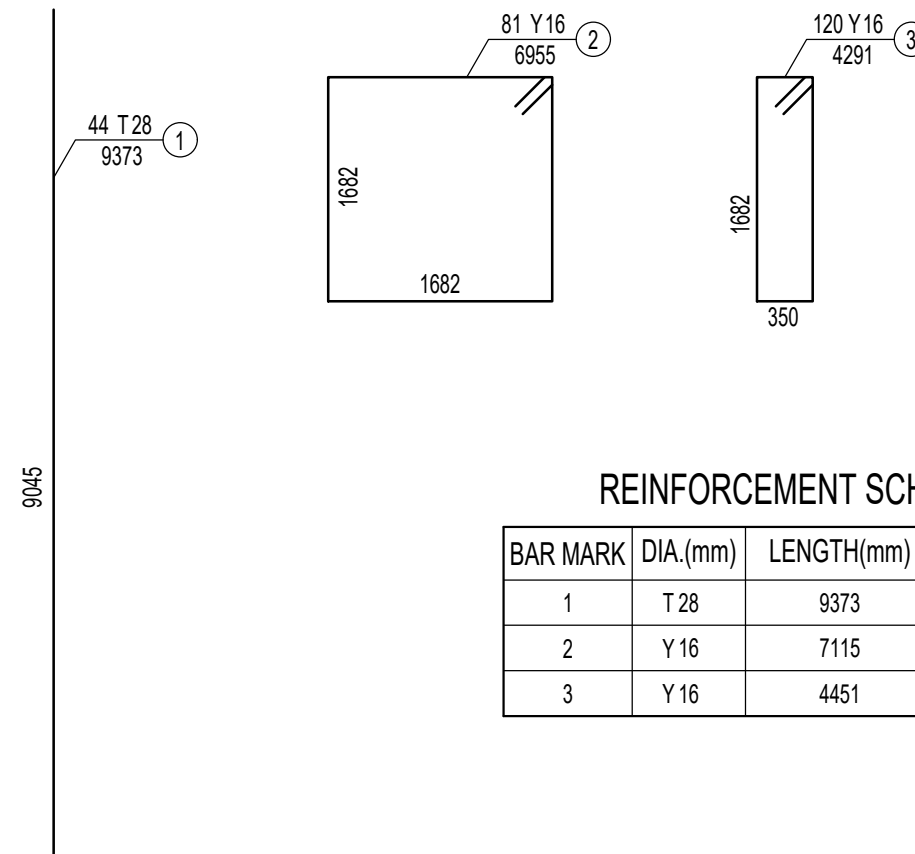
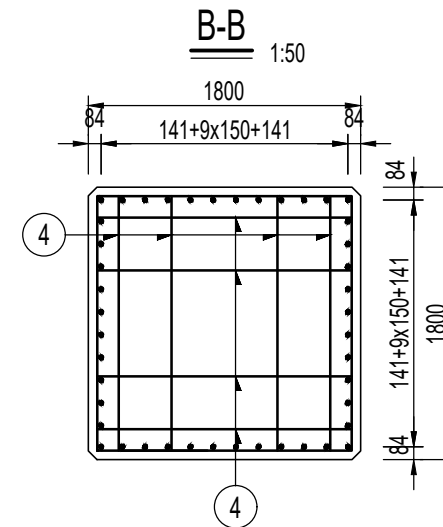
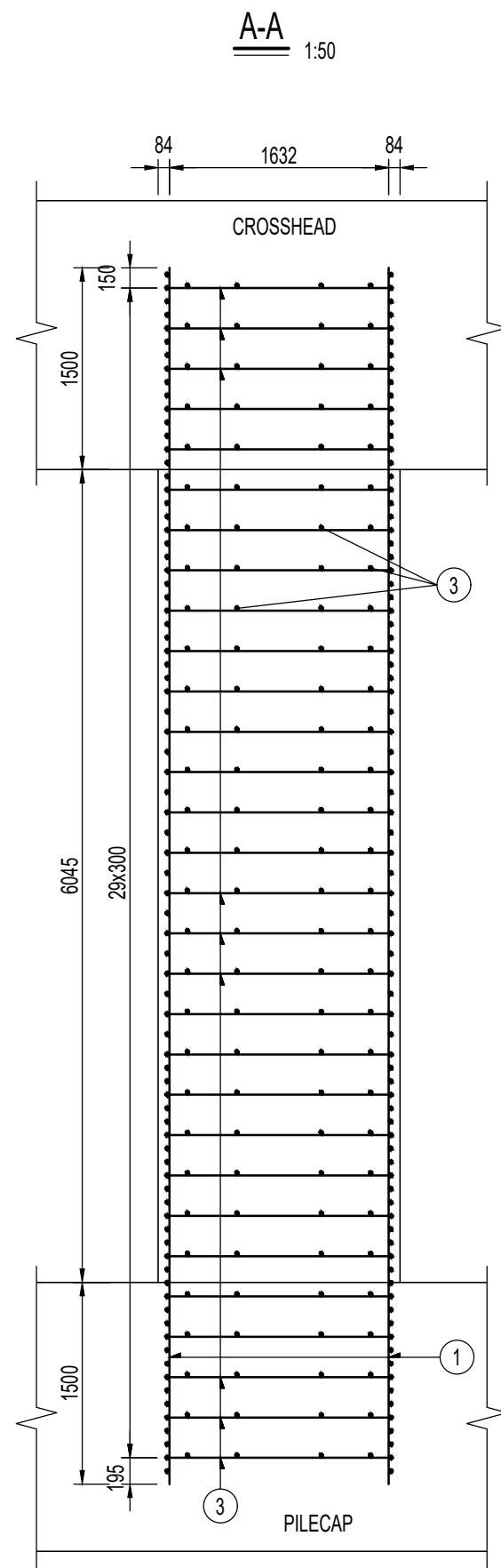
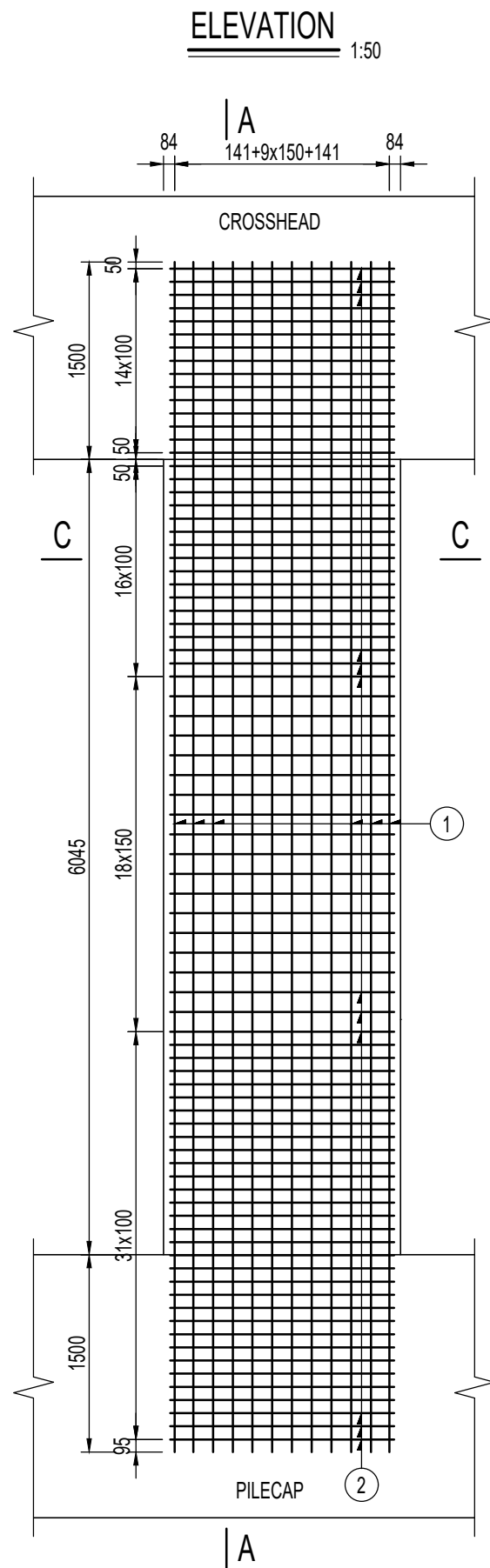


KENYA NATIONAL HIGHWAYS AUTHORITY
CHINA ROAD AND BRIDGE CORPORATION

CONSTRUCTION DRAWINGS OF
NAIROBI EXPRESSWAY PROJECT

SEC1(L2K0+320.668- L2K0+380.668) ROAD RECONSTRUCTION A8L2 - A8L01
PIER CROSSHEAD REINFORCEMENT DETAILS, SHEET 1/2

DWG. NO.	NEP/CD/SEC1/BR/A8L01/410001-E
DATE	AUG. 2021

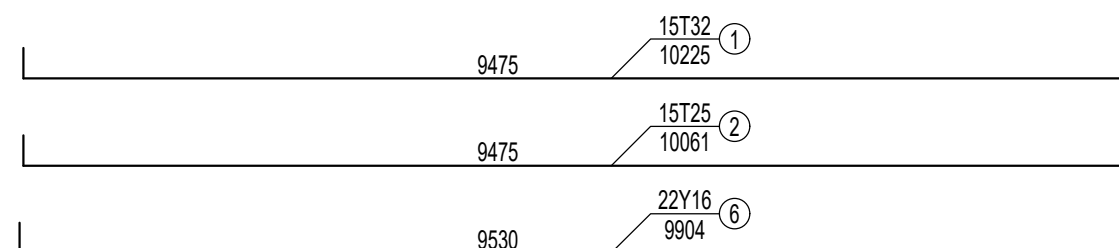
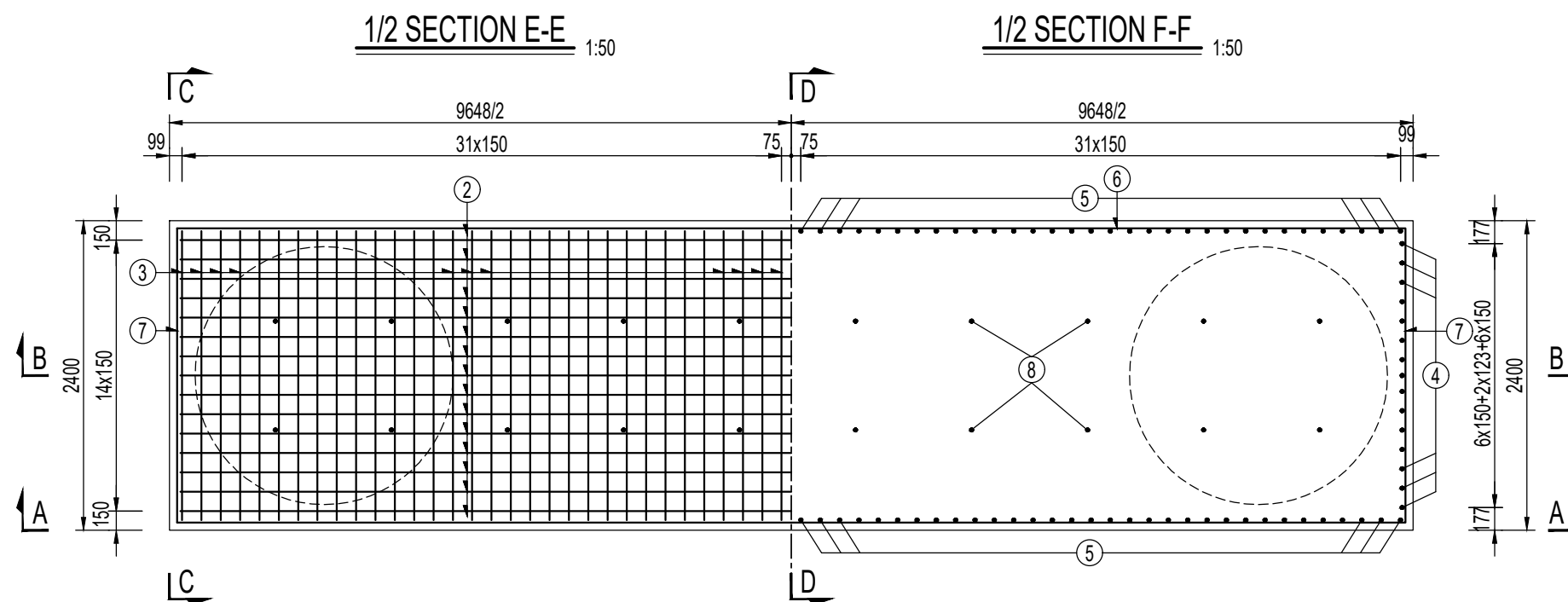
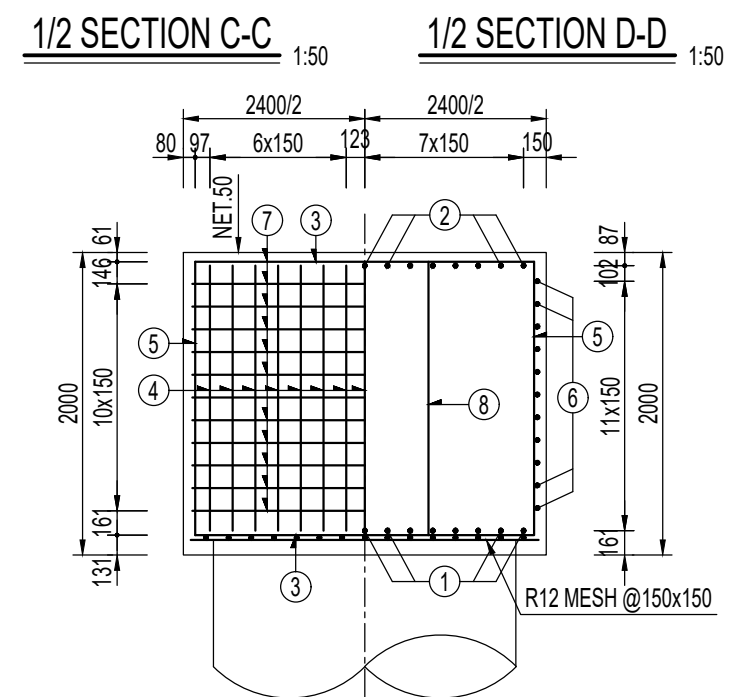
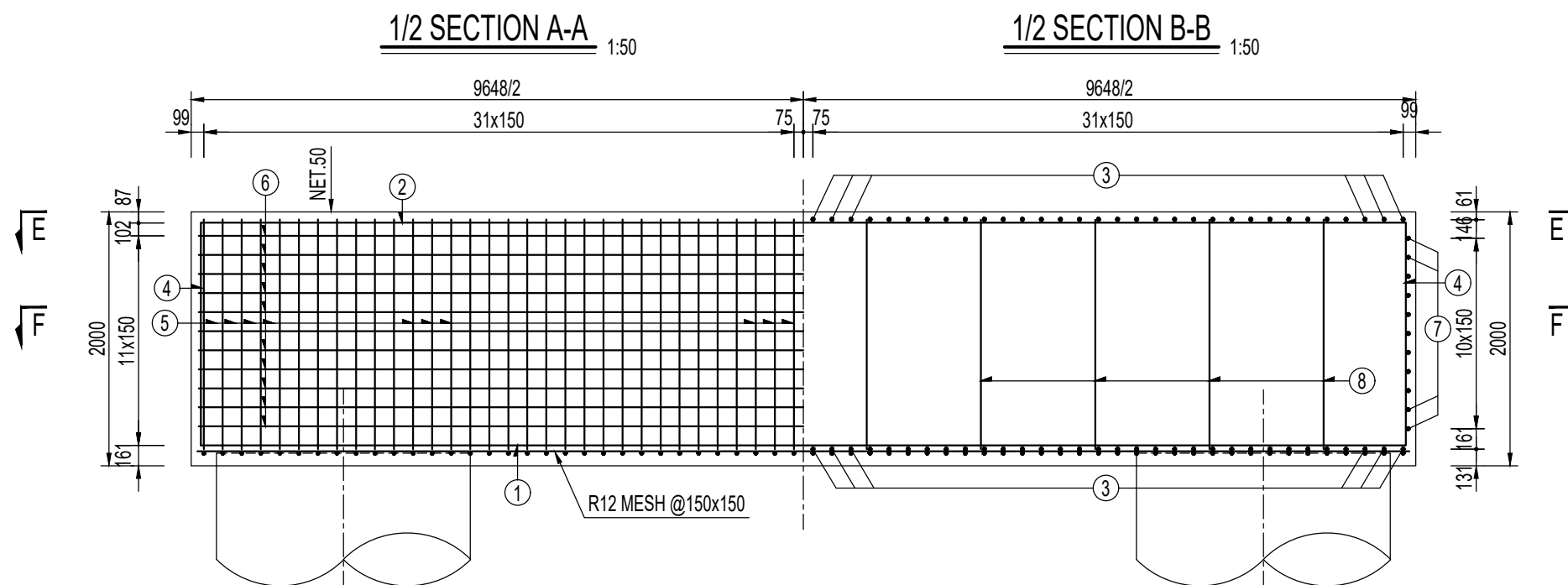


REINFORCEMENT SCHEDULE			
BAR MARK	DIA.(mm)	LENGTH(mm)	NUMBER
1	T 28	9373	44
2	Y 16	7115	81
3	Y 16	4451	120

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.



DESIGNED



2241 $\frac{128T20}{2709}$ ③

1728 $\frac{30Y16}{2102}$ ④

1755 $\frac{128Y16}{2129}$ ⑤

2282 $\frac{22Y16}{2656}$ ⑦

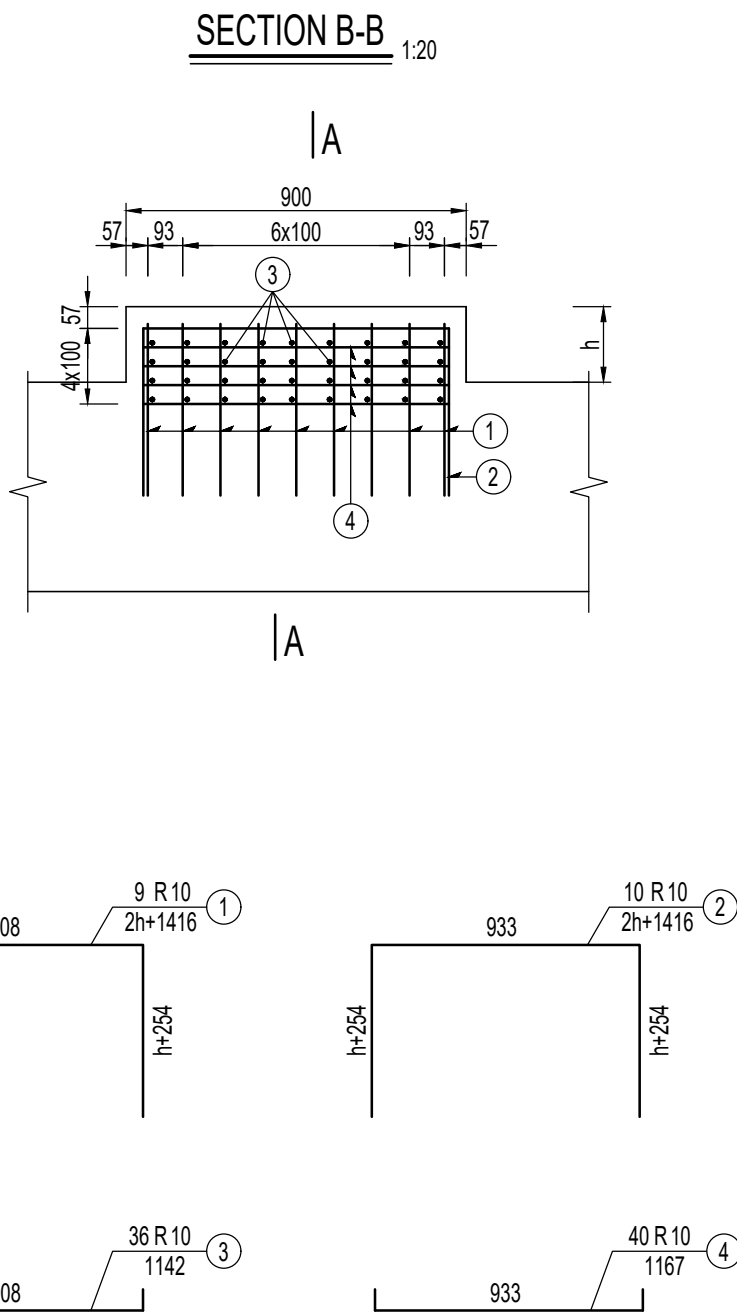
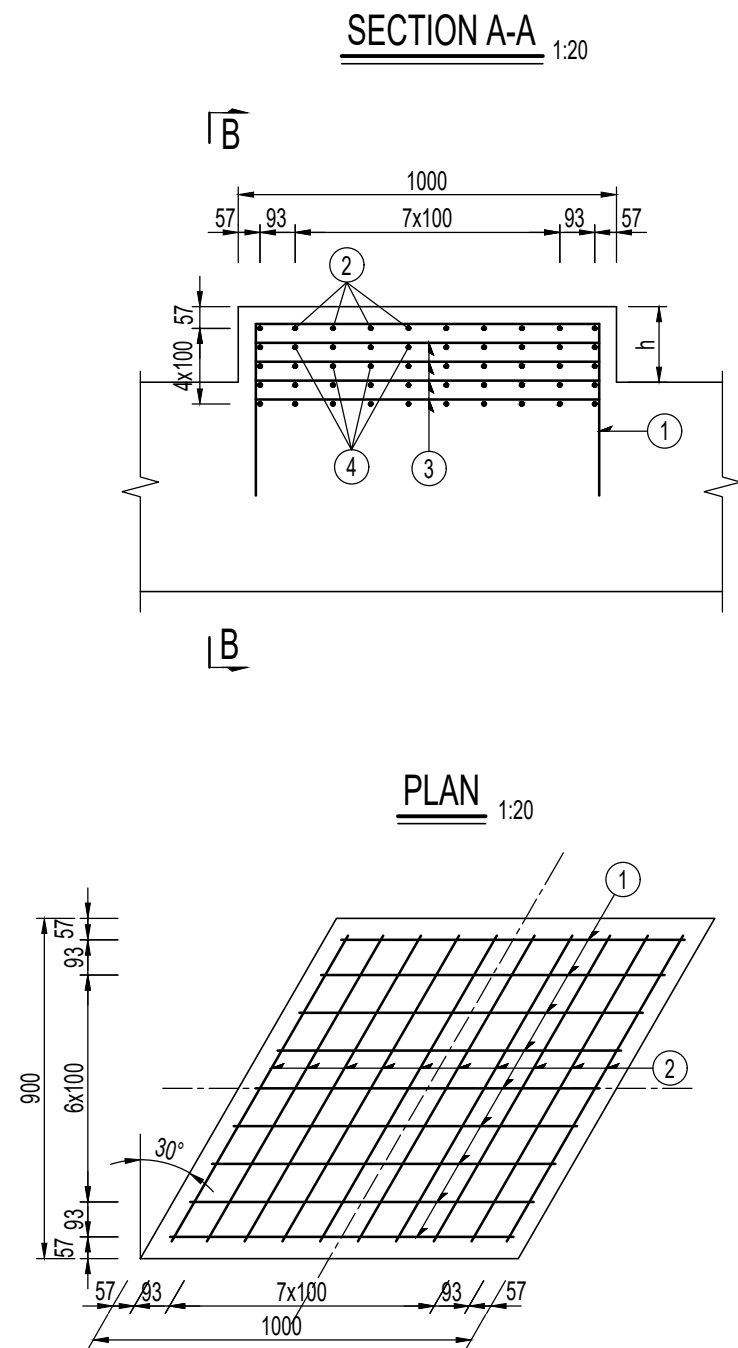
1751 $\frac{20Y25}{2337}$ ⑧

REINFORCEMENT SCHEDULE

BAR MARK	DIA.(mm)	LENGTH(mm)	NUMBER
1	T 32	10225	15
2	T 25	10061	15
3	T 20	2709	128
4	Y 16	2102	30
5	Y 16	2129	128
6	Y 16	9904	22
7	Y 16	2656	22
8	Y 25	2337	20
MESH	R 12	23.16m ²	

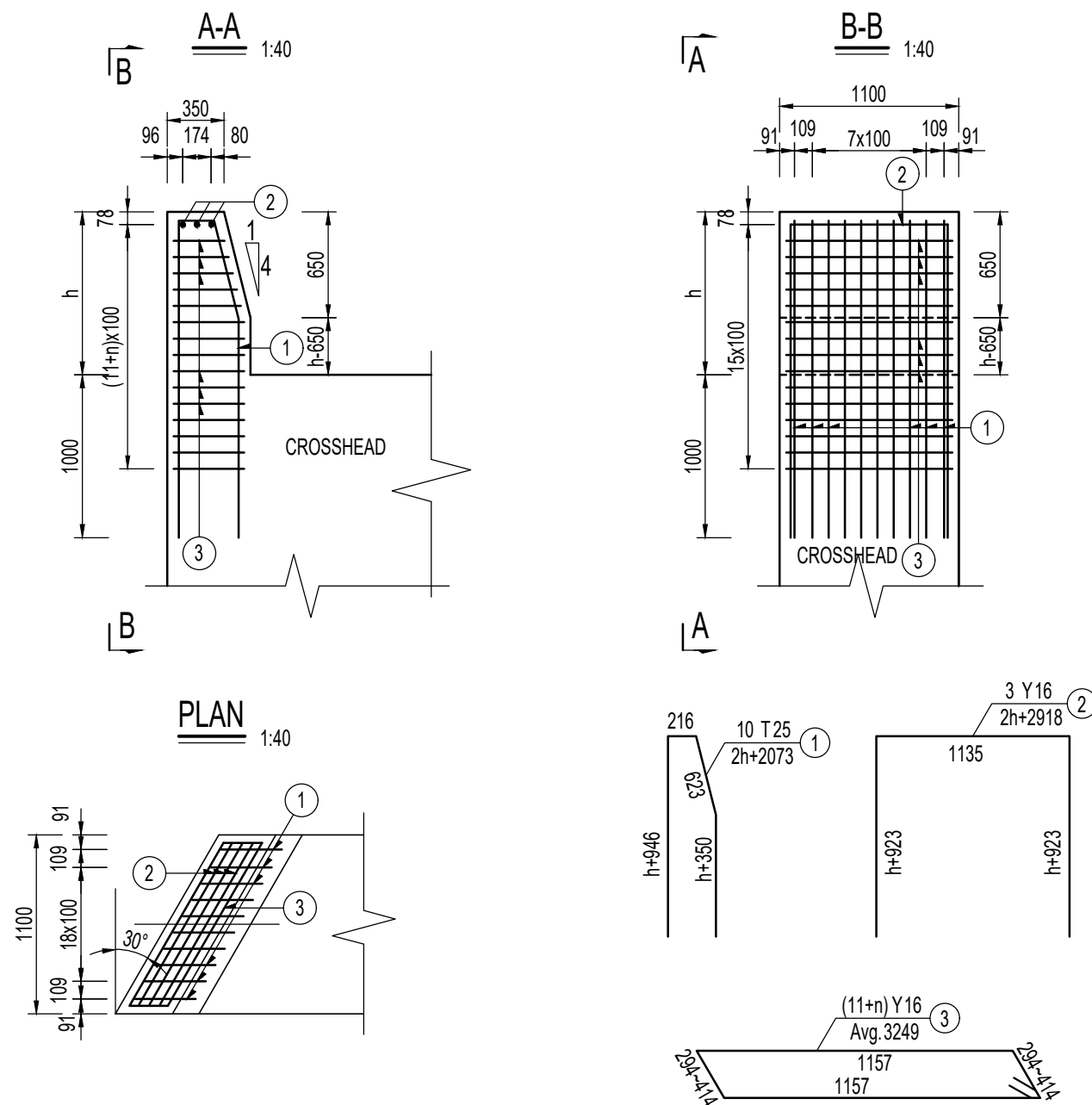
NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. FOR PILE REINFORCEMENT DETAILS, PLEASE REFER TO NEP/CD/RFD/BR/FD/720001
DIA. 2.0m PILE REINFORCEMENT DETAILS IN VOL.3 BOOK 3.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. THE PARAMETER h REPRESENTS THE HEIGHT OF BEARING PLINTHS, PLEASE REFER TO NEP/CD/SEC1/BR/A8L01/400001-E PIER AND FOUNDATION LAYOUT PLAN.





PARAMETERS TABLE

NO.	h(mm)	n
RB1	830	2
RB2	1200	6
RB3	650	0
RB4	1000	4

REINFORCEMENT SCHEDULE
(FOR RB1)

BAR MARK	DIA.(mm)	LENGTH(mm)	NUMBER
1	T 25	3731	10
2	Y 16	4576	3
3	Y 16	Avg. 3249	13

REINFORCEMENT SCHEDULE
(FOR RB2)

BAR MARK	DIA.(mm)	LENGTH(mm)	NUMBER
1	T 25	4535	10
2	Y 16	5380	3
3	Y 16	Avg. 3249	17

REINFORCEMENT SCHEDULE
(FOR RB3)

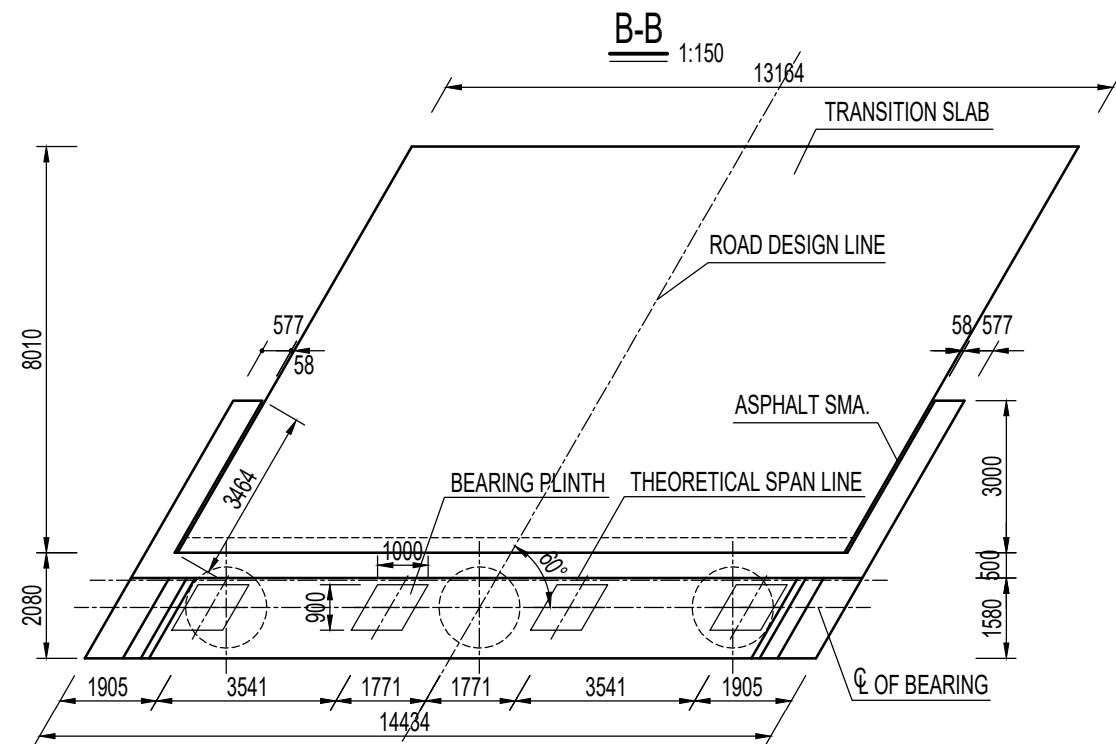
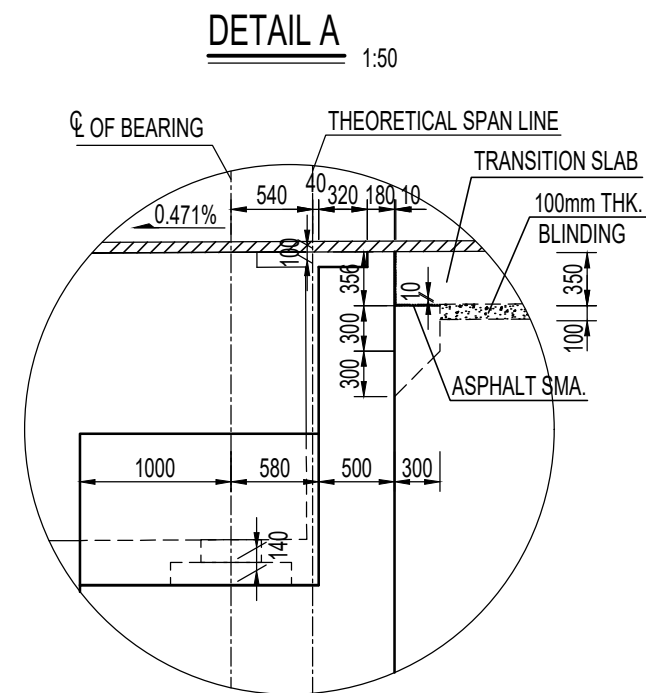
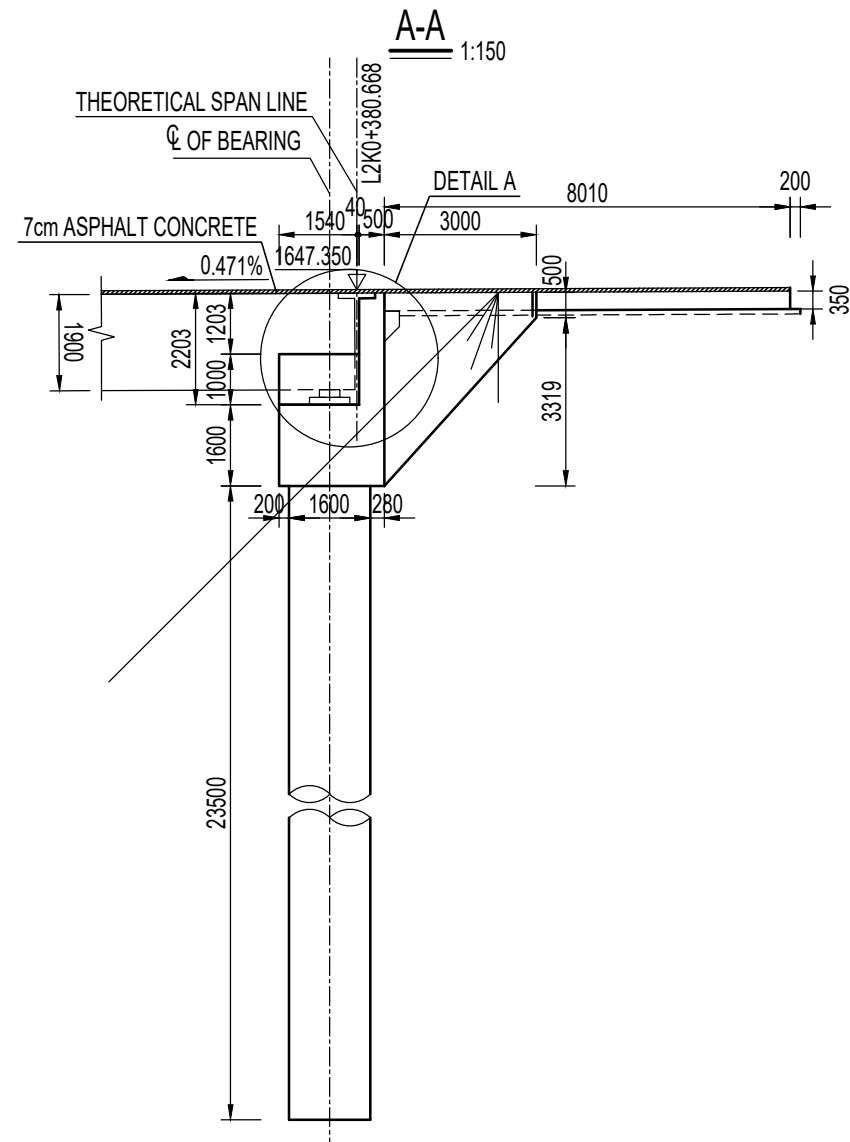
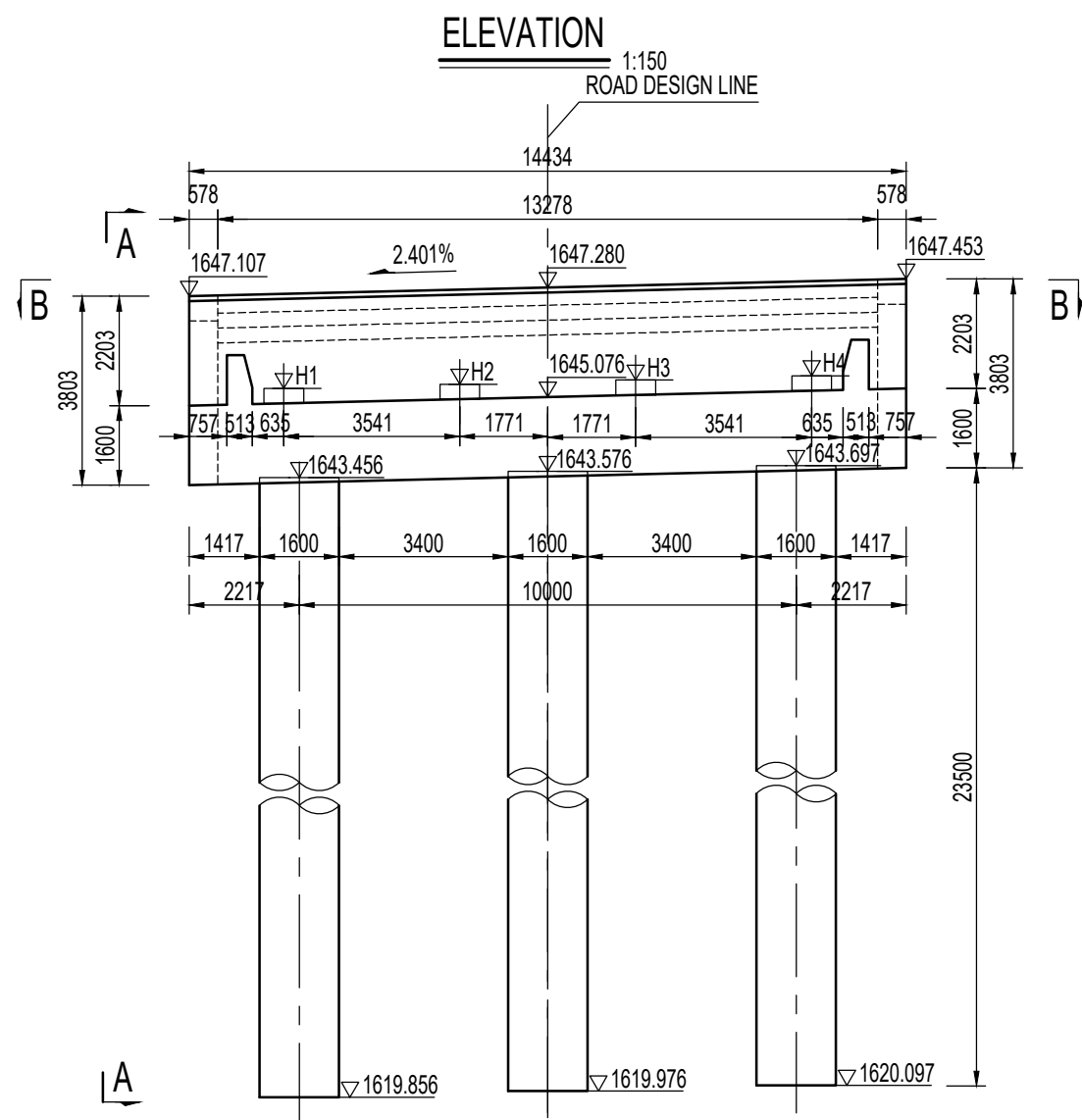
BAR MARK	DIA.(mm)	LENGTH(mm)	NUMBER
1	T 25	3435	10
2	Y 16	4280	3
3	Y 16	Avg. 3249	11

REINFORCEMENT SCHEDULE
(FOR RB4)

BAR MARK	DIA.(mm)	LENGTH(mm)	NUMBER
1	T 25	4135	10
2	Y 16	4980	3
3	Y 16	Avg. 3249	15

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. EVERY REINFORCEMENT SCHEDULE IN THIS DRAWING IS FOR SINGLE RETAINING BLOCK.



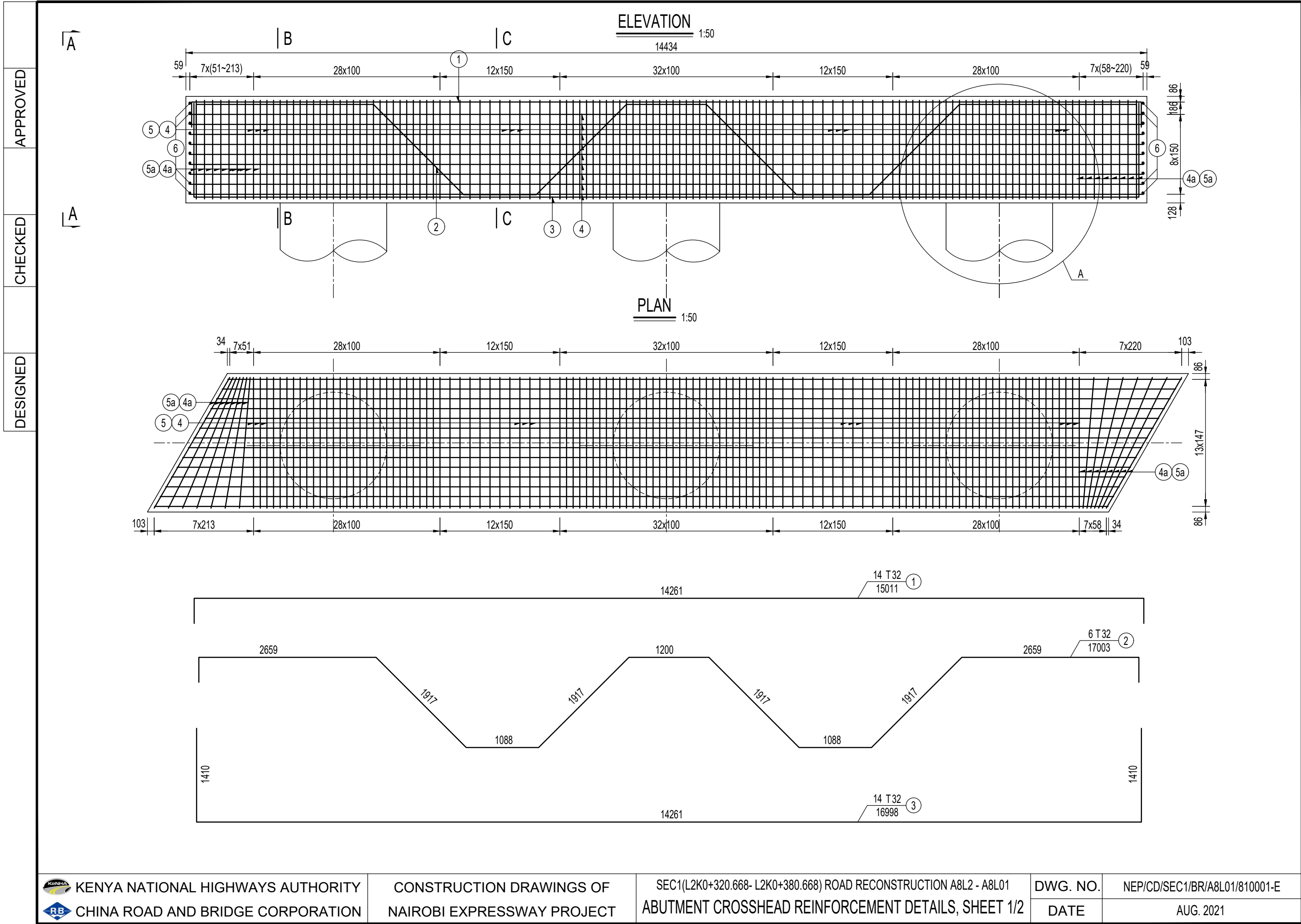


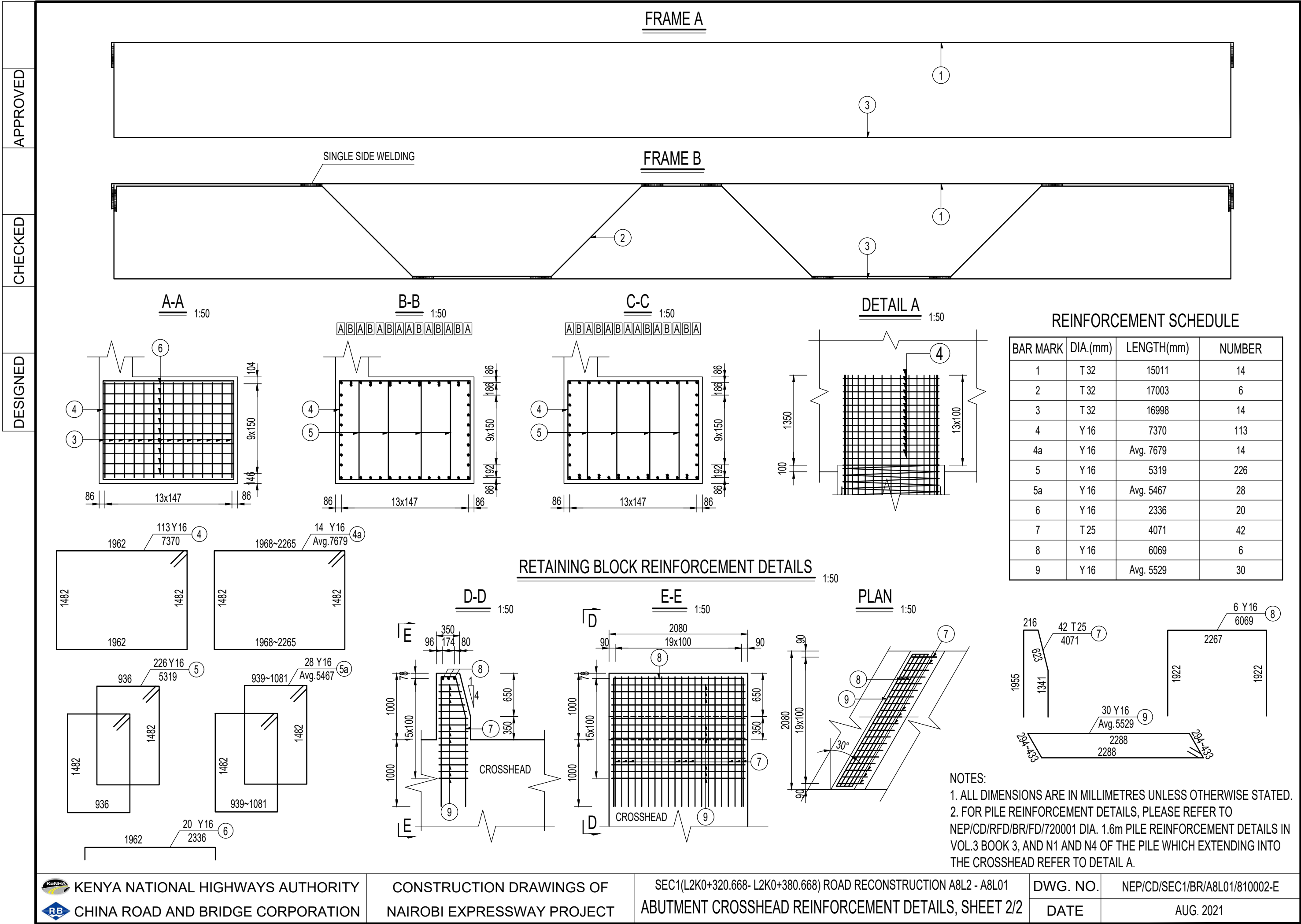
BEARING PLINTH ELEVATION SCHEDULE

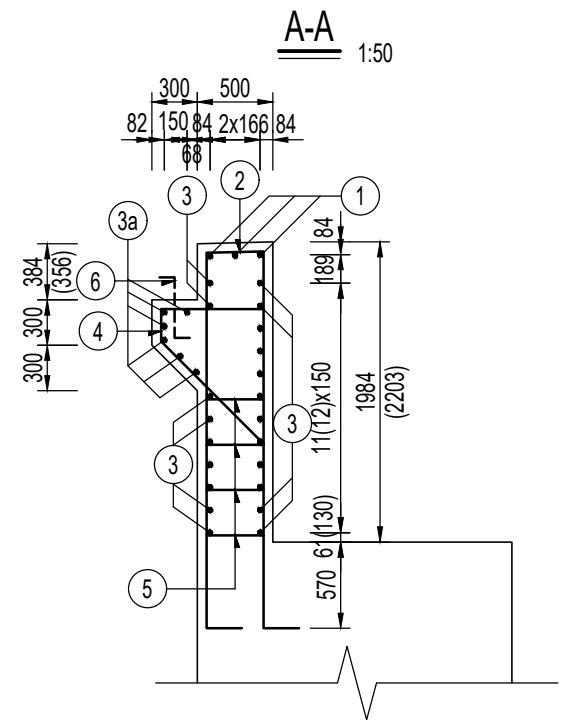
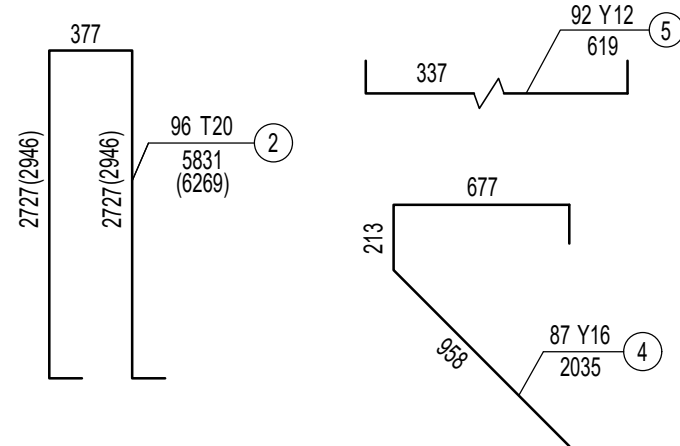
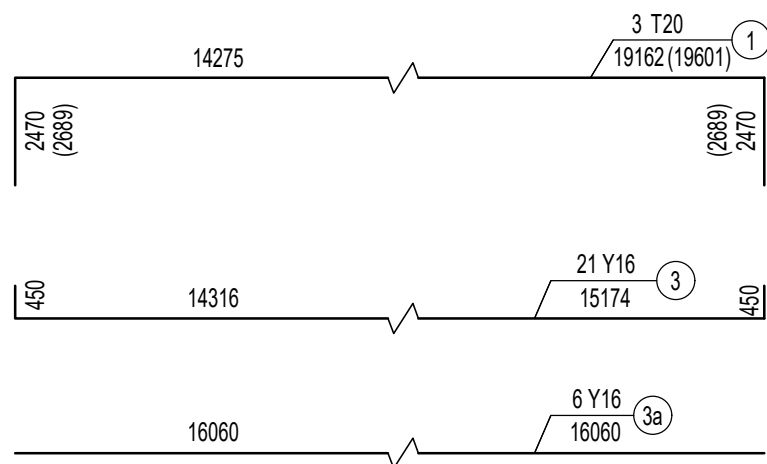
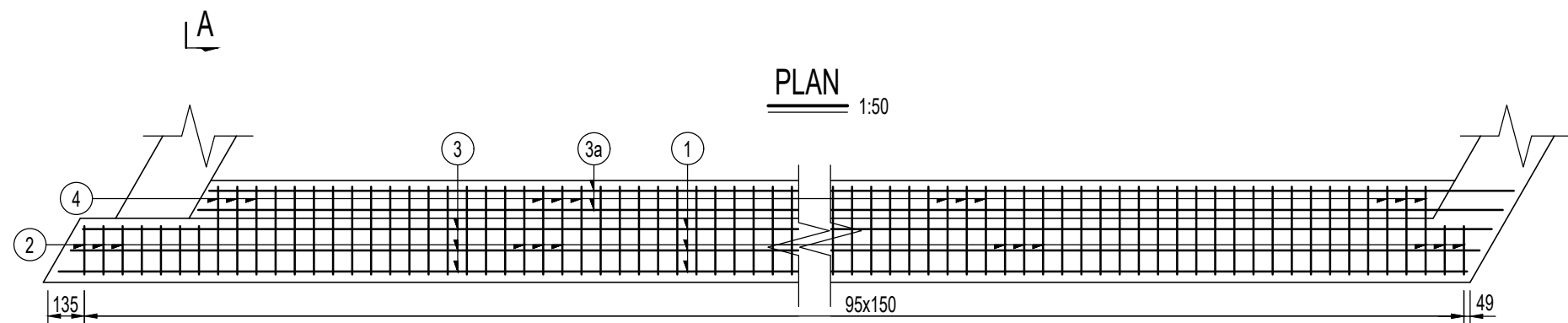
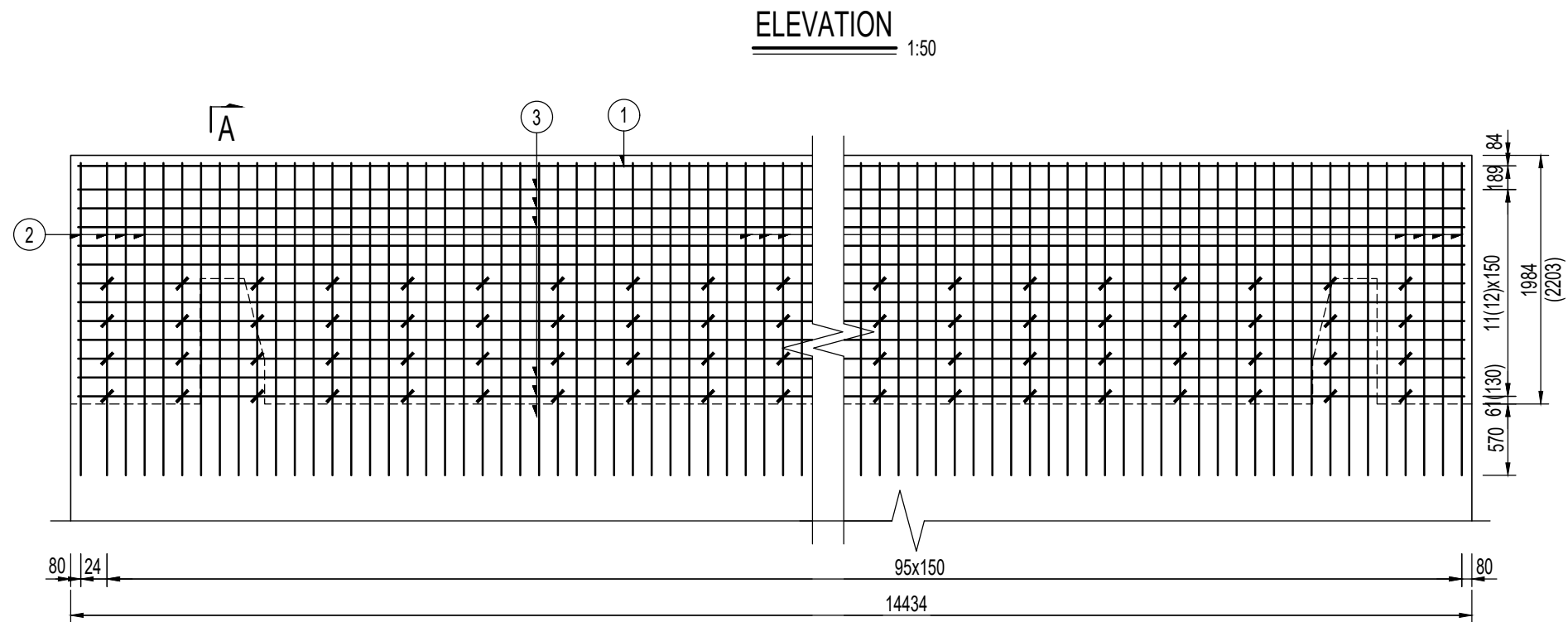
ABUT. No.	H1	H2	H3	H4
A1	1645.087	1645.174	1645.259	1645.343

- NOTES:
- ALL DIMENSIONS ARE IN MILLIMETRES EXCEPT FOR THE ELEVATION IN METRES.
 - THIS DRAWING IS APPLICABLE FOR ABUTMENT A1 AT CHAINAGE A8LK0+380.668.
 - BEARING TYPE IS GBZY550x110(CR), FOR DETAILS PLEASE REFER TO NEP/CD/SEC1/BR/A8L01/670001-E BEARING PLINTH AND LEVELING STEEL PLATE.
 - REINFORCEMENT DETAILS OF BEARING PLINTH REFER TO NEP/CD/RFD/BR/PI/530002.









REINFORCEMENT SCHEDULE
(FOR A0 BACK-WALL)

BAR MARK	DIA.(mm)	LENGTH(mm)	NUMBER
1	T 20	19162	3
2	T 20	5831	96
3	Y 16	15174	21
3a	Y 16	16060	6
4	Y 16	2035	87
5	Y 12	619	92

REINFORCEMENT SCHEDULE
(FOR A1 BACK-WALL)

BAR MARK	DIA.(mm)	LENGTH(mm)	NUMBER
1	T 20	19601	3
2	T 20	6269	96
3	Y 16	15174	23
3a	Y 16	16060	6
4	Y 16	2035	87
5	Y 12	619	92

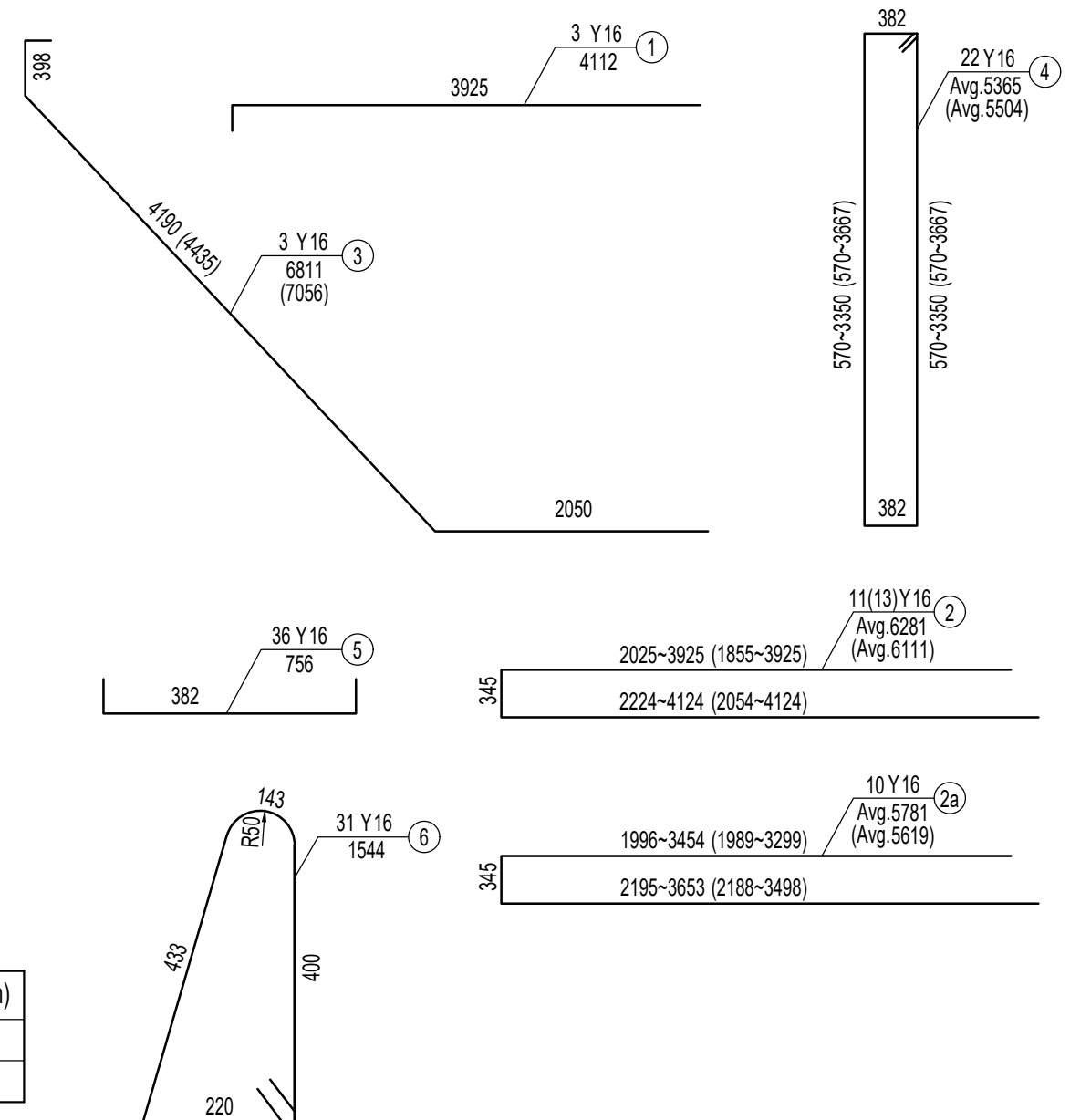
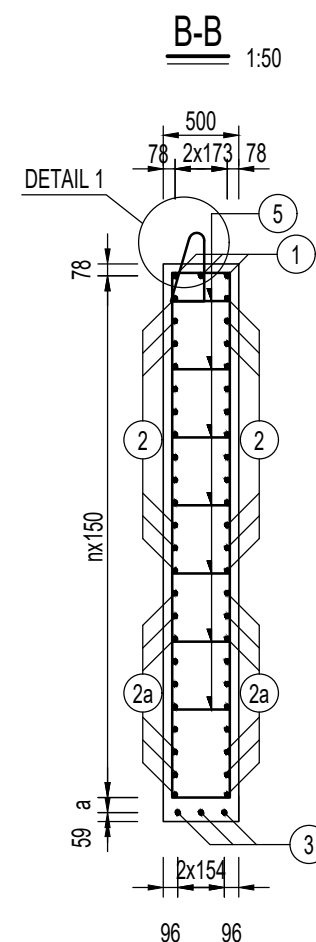
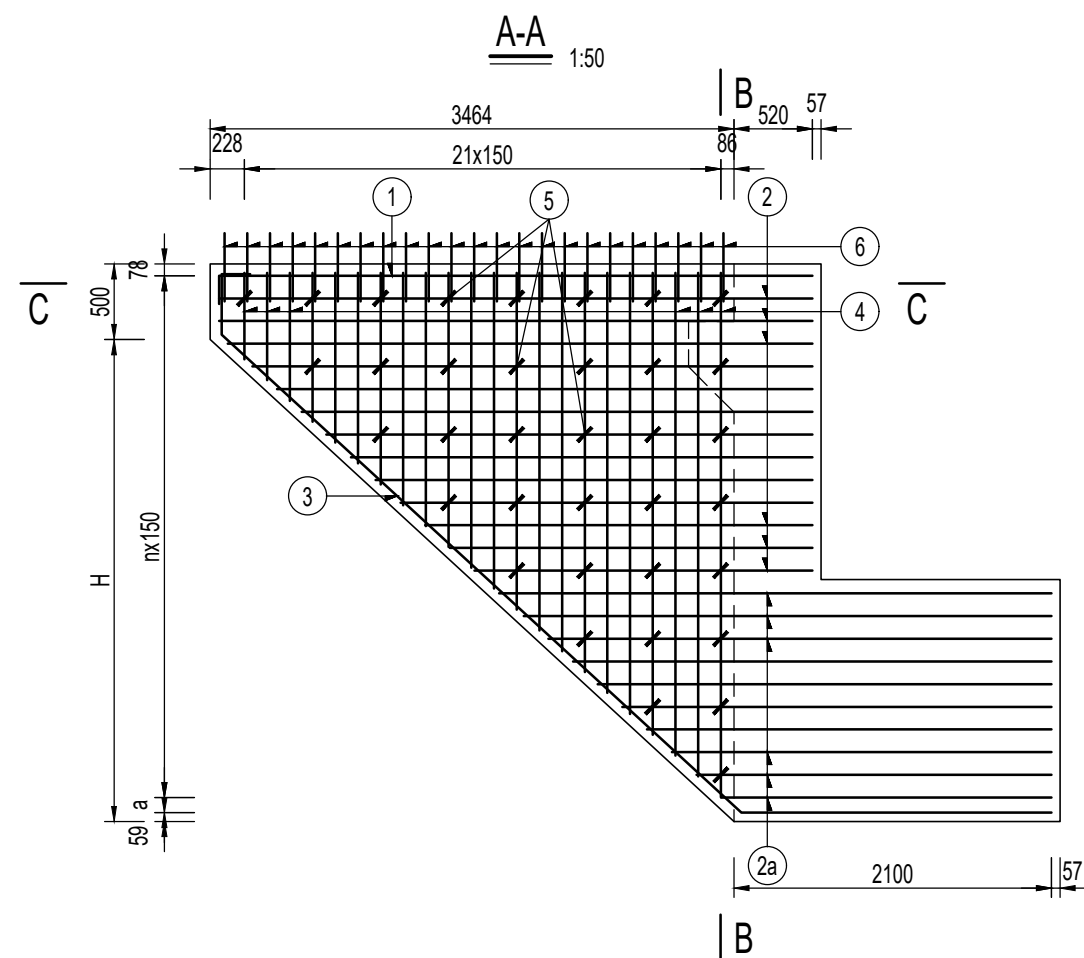
- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. NO.6 ANCHOR BAR IS COUNTED IN TRANSITION SLAB, REFERS TO <AUBTMENT TRANSITION SLAB REINFORCEMENT DETAILS>.
 3. THE VALUES INSIDE THE BRACKETS APPLIES TO A1, AND THE VALUES OUTSIDE THE BRACKETS APPLIES TO A0.



APPROVED

CHECKED

DESIGNED



PARAMETERS TABLE

NO.	H(mm)	n	a(mm)
A0	2980	21	252
A1	3319	23	291

REINFORCEMENT SCHEDULE (FOR A0 WING WALL)

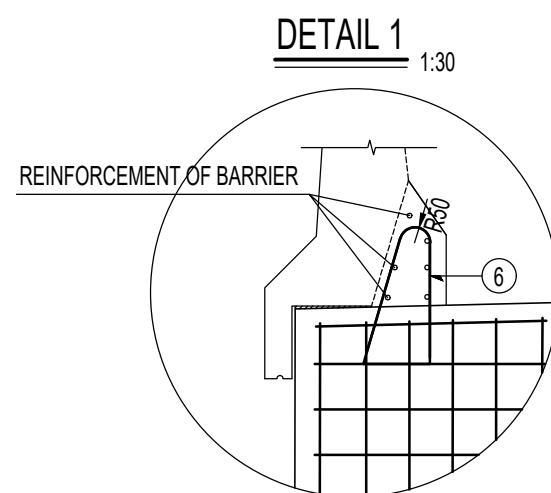
BAR MARK	DIA.(mm)	LENGTH(mm)	NUMBER
1	Y 16	4112	3
2	Y 16	Avg. 6281	11
2a	Y 16	Avg. 5781	10
3	Y 16	6811	3
4	Y 16	Avg. 5187	22
5	Y 16	756	36
6	Y 16	1575	22

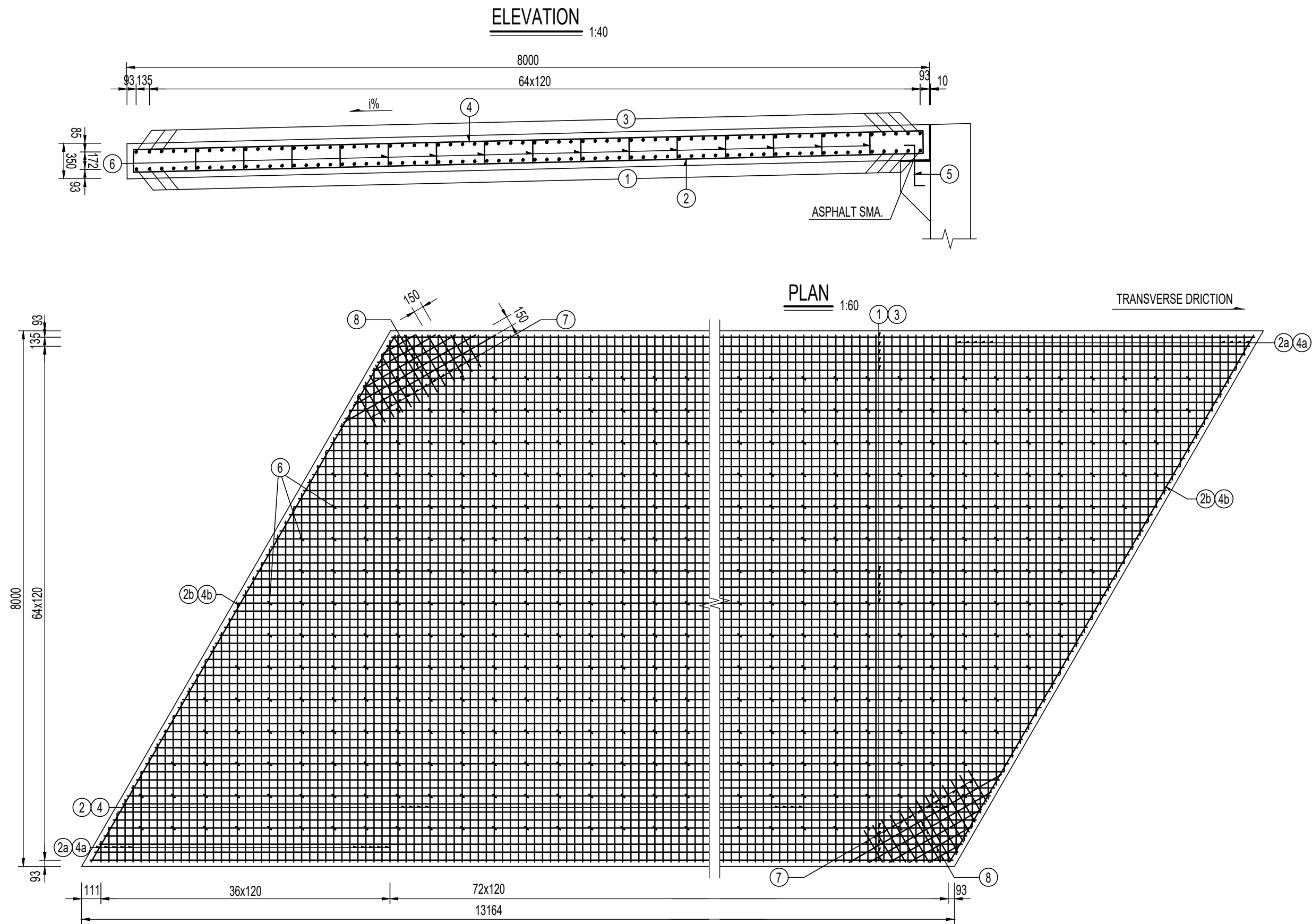
REINFORCEMENT SCHEDULE (FOR A1 WING WALL)

BAR MARK	DIA.(mm)	LENGTH(mm)	NUMBER
1	Y 16	4112	3
2	Y 16	Avg. 6111	13
2a	Y 16	Avg. 5619	10
3	Y 16	7056	3
4	Y 16	Avg. 5504	22
5	Y 16	756	36
6	Y 16	1575	22

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. THE VALUES INSIDE THE BRACKETS APPLIES TO A1, AND THE VALUES OUTSIDE THE BRACKETS APPLIES TO A0.

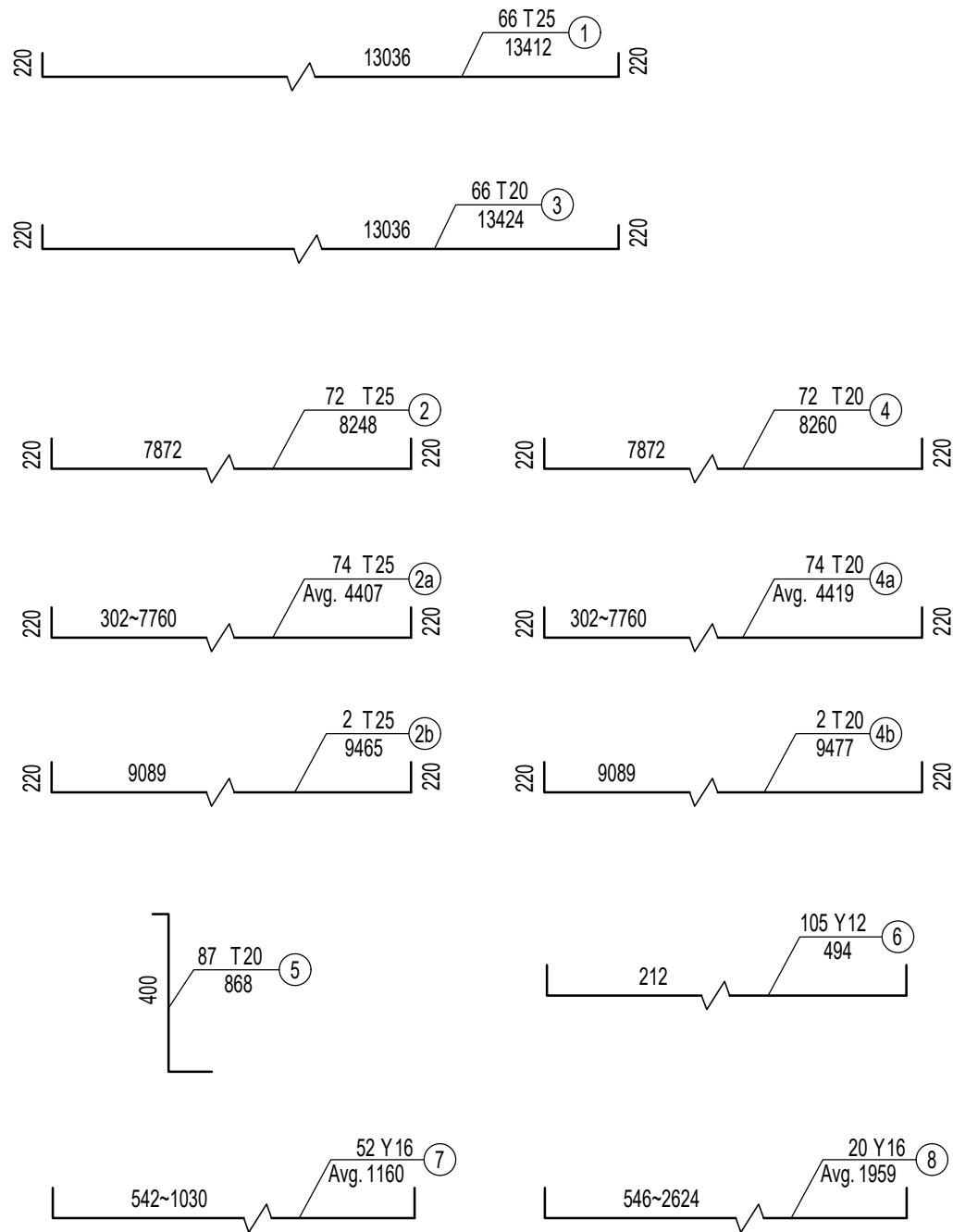




NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

2.N5 STEEL BARS ARE SLAB ANCHOR STEEL BARS WITH A HORIZONTAL DISTANCE OF 150mm.



REINFORCEMENT SCHEDULE

BAR MARK	DIA.(mm)	LENGTH(mm)	NUMBER
1	T 25	13412	66
2	T 25	8248	72
2a	T 25	Avg. 4407	74
2b	T 25	9465	2
3	T 20	13424	66
4	Y 20	8260	72
4a	Y 20	Avg. 4419	74
4b	Y 20	9477	2
5	Y 20	868	87
6	Y 12	494	105
7	Y 16	Avg. 1160	52
8	Y 16	Avg. 1959	20

- NOTES
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 - N5 STEEL BARS ARE SLAB ANCHOR STEEL BARS WITH A HORIZONTAL DISTANCE OF 150mm.



