

Name of the Project: Construction Work at NCA

Agency : NCA, Gelephu

Name of the Work : Traditional Entrance Gate,

BoQ

Sl. No.	BSR code	Item Description	Quantity	Unit	Rate	Amount
1	EW0106	Excavation in foundation trenches or drains, width <1.5m, area <10 sq.m in plan, including dressing & ramming, disposal of surplus soil within 50m lead & 1.5m lift - <i>Hard Soil</i>	2.74	cu.m		
2	EW0195	Filling of trenches, sides of foundations etc. in layers <200mm using selected excavated earth, ramming etc. within lead 50 m & lift 1.5m	0.04	cu.m		
3	PT0055	Providing and applying finishing coats - Aluminium paint two coats on new work	18.00	sq.m		
4	CW0013	Providing and laying in position plain cement concrete 1:5:10 (1 cement : 5 sand : 10 graded gravel/shingles 40 mm nominal size) excluding the cost of centering and shuttering - All work upto plinth level.	0.14	cu.m		
5	RC0002	Providing & laying in position reinforced cement concrete 1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size) excluding the cost of centering, shuttering and reinforcement - all work upto plinth level	3.27	cu.m		
6	RC0018	Providing & laying in position RCC work 1:1.5:3 (1 cement : 1.5 sand : 3 graded crushed rock 20 mm nominal size) in beams, lintels, bands, plain window sills, staircases upto floor five level excl. the cost of centering, shuttering and reinforcement	1.08	cu.m		
7	RC0083-12	Providing & fixing Thermo-Mechanically Treated reinforcement bar (Yield Strength 415 MPa) for R.C.C work including cutting, bending, binding and placing in position complete	405.49	kg		
8	RC0092	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork - Lintels, beams, girders, bressumers, cantilevers etc.	29.56	sq.m		
10	RF0001	Providing & fixing Pre-painted (PPGI-350Mpa) sheets 24g including bolts hooks 0.5mm CRIL or equivalent.	33.68	sq.m		
9	RF0005	Providing & fixing Pre-painted (PPGI-350Mpa) ridging 24g including bolts hooks 0.5mm CRIL or equivalent. 600mm wide	9.04	m		

10	SM0026 +SM004 0	Providing and laying course rubble masonry chisel dressed (facing) with hard stone (average volume 0.008 cu.m) in concrete mortar 1:3:6 20mm aggregates	3.51	cu.m		
11	SW0003	Steel work in single section including cutting, hoisting, fixing and applying priming coat of red lead paint - In Tees, angles and channels				
			20.32	kg		
12	PO0006	Providing & laying G.I. pipes including G.I. fittings (excluding trenching, refilling & thrust block) - 50mm	29.00	m		
13	SW0090	Providing, making and fixing M.S. straps, flats, sole plates etc.	50.00	kg		
14	WW006 0	Providing & fixing roof framing, in trusses, purlins, rafters, posts, post plates including hoisting, etc (excluding steel items) - Mixed Conifer	1.59	cu.m		
15	RC0040	Providing, making and fixing Bhutan type Traditional Cornices in R.C.C 1:2:4, 20 mm aggregate (2 layer bhow + one layer phana) including cost of formwork including finishing with 6mm thick plaster on the exposed surface with cement mortar 1:3, excluding reinforcement & decorative painting cost as per standard design (Measurement to be taken along the cornice and wall junction)	12.64	m		
		Plastering				-
16	PL0011	Providing & laying 6mm cement plaster (in ceilings) - C.M 1:4	3.80	sq.m		
17	PT0111	Providing, prapering and applying Sumdang washable painting-Ding	210.24	sq.m		
18	PO0017	Providing & laying H.D.P.E pipes, pressure class 10kg/sq.m, including H.D.P.E fittings (excluding trenching, refilling & thrust block)-40mm for electrical wiring	15.00	m		
					Total(A)	-

Name of Work: Construction of Guard Room and Culvert						
Reference: BSR-2015, Rates at Gelephu.						
		BoQ				
Sl. No.	BSR Code	Description of Items	Unit	Qty.	Rate (Nu.)	Amount (Nu.)
		Dismantlin/Demolition work				
1	DD0006	Demolishing stone rubble masonry including stacking useful materials & disposal of s per the instruction of site engineer /Site supervisor-In cement mortar-boundary fencing wall	cum	4.4		
2	DD0017	Demolishing brick work including stacking useful materials & disposal of rubbish as per the instruction of site engineer /Site supervisor- security guard room	cum	3.20		
3	DD0026	Dismantling wood work of sectional area <40 sq.cm in frames, trusses including stacking within 50m lead-truss	m	24		
4	DD0032	Taking out doors, windows and clerestory window shutters >3sq.m (steel or wood) including stacking within 50m lead	each	4		
		entrance gate including post	lumps um			
5	DD0045	Dismantling G.I sheets including ridges, hips, valleys, gutters & stacking materials within 50m lead	sqm	9		
6	DD0001	Demolishing cement concrete 1:3:6 & richer, including disposal of materials within 50m lead - gurad room floor	cum	1.5		
		Total for Dismantling(B)				
		Subwork :Construction of Culvert and fencing				
1	EW0106	Excavation in foundation trenches or drains not exceeding 1.5m in width or area 10 sq.m on plan, including back filling and disposal of surplus soil as per the instruction of site supervisor or engineer-Hard Soil.-	cum	9.99		
2	SM0005	Providing & laying Random Rubble Masonry with hard stone in foundation & plinth- In cement mortar 1:4	cum	20.70		
3	CW0006	Providing and laying in position plain cement concrete 1:4:8 (1 cement :4 sand : 8 graded crushed stone 40 mm nominal size) excluding the cost of centering and shuttering - All work upto plinth level.	cum	2.20		
4	SW0003	Steel work in single section including cutting, hoisting, fixing and applying priming coat of red lead paint- In, angles -50x50x5 mm	kg	15.20		
5	RW0202	P&F GI bar wire netting, including fixing of posts or struts, GI staples (excluding the cost of posts/struts, earthwork, concrete. etc) 2.5mm, (12SWG)	m	20.00		

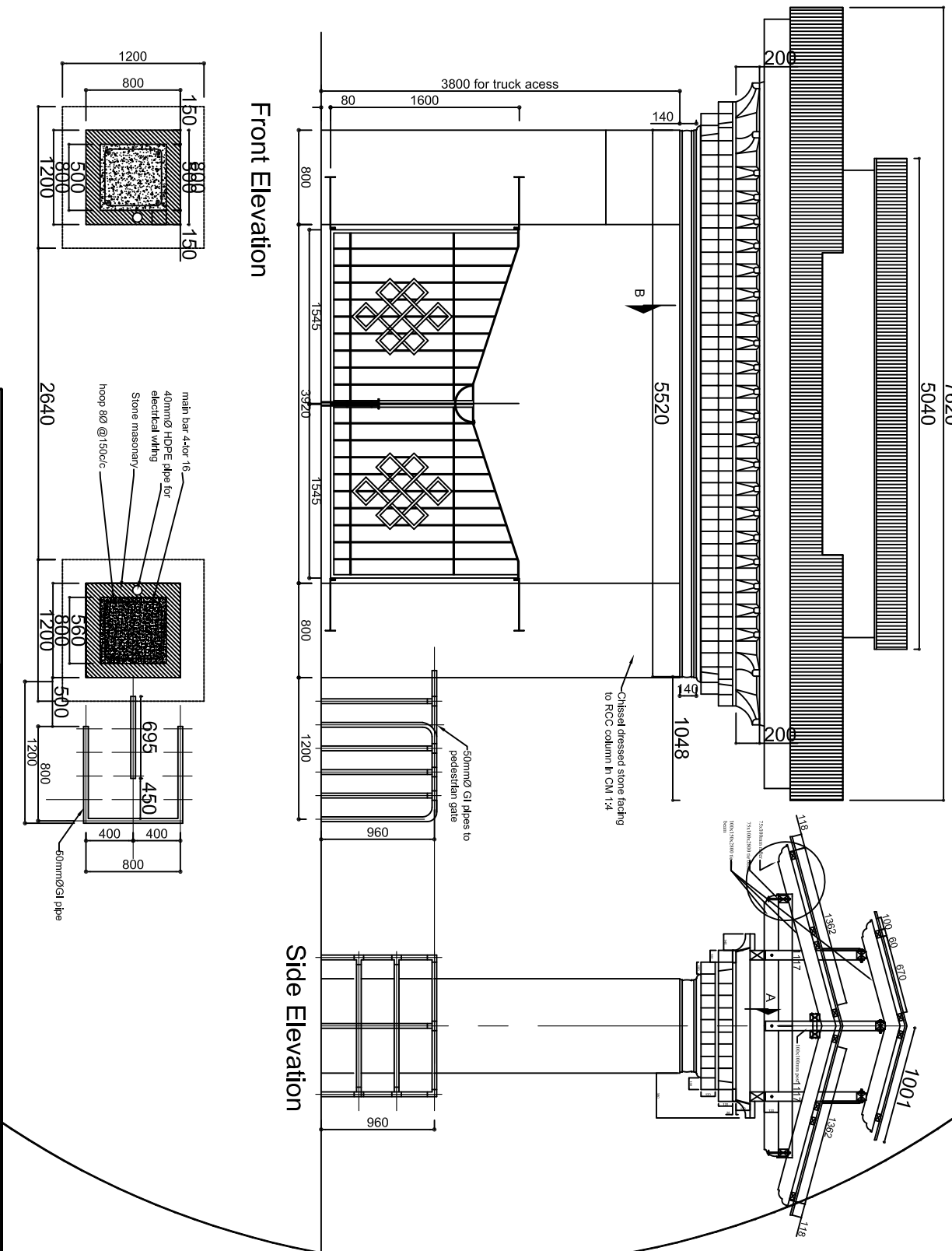
6	CW0005	providing and laying cement conc.1:3:6, 20mm agg excluding the cost of form work.-for fixing angle post	cum	0.03		
7	RC0007	Providing & laying in position reinforced cement concrete work in walls (any thickness) including attached pilasters buttresses, piers, abutments etc. excluding the cost of centering, shuttering and reinforcement- 1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)-slab and side post	cum	8.41		
8	RC0091	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork-Walls, pilasters, buttresses, string course etc.	sq.m	33.26		
9	RC0083	Providing & fixing Thermo-Mechanically Treated reinforcement bar (Yield Strength 500 MPa) for R.C.C work including cutting, bending, binding and placing in position complete	kg	1033.62		
10	DR0092	Providing & laying NP2 class R.C pipes, including collars, jointing in cement mortar 1:2 including testing of joints etc. complete				
		450mm dia	m	4.00		
		600 mm dia	m	4.00		
		Total(C)				-

Subwork D- 15 m Concrete Road

1	RW003 1	Excavation in excavation over areas, depth >300mm, width >1.5m, area >10 sq.m in plan, including disposal of excavated earth within 50m lead and 1.5m lift & disposal soil to be neatly dressed.	cum	12		
		Subgrade				
		Preparation of sub grade with proper camber by excavating earth to depth equal to pavement thickness, consolidation with roller, disposal of surplus earth up to 50m				
2	RW012 1	All kinds of soil	cum	9		
3	RW012 3	Cossolidation of subgrade with roller, and making good the undulationwith earth and re-rolling the subgrade	cum	9		
4	RW012 0	Providing and laying Hammer dressed stone edging 150 x 250 mm with stones including excavation, refilling and disposal of surplus earth within 30 m lead	m	30		
5	RW013 0	Providing and laying Granular sub-base course (GSB) to required degree of compaction with proper formation of cross fall using motor for laying and compacted to required density as per material gradation and aggregate quality specified	cum	9		
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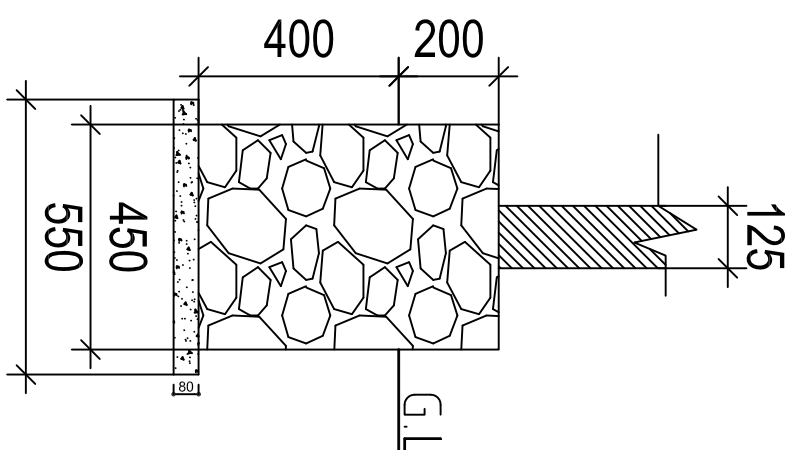
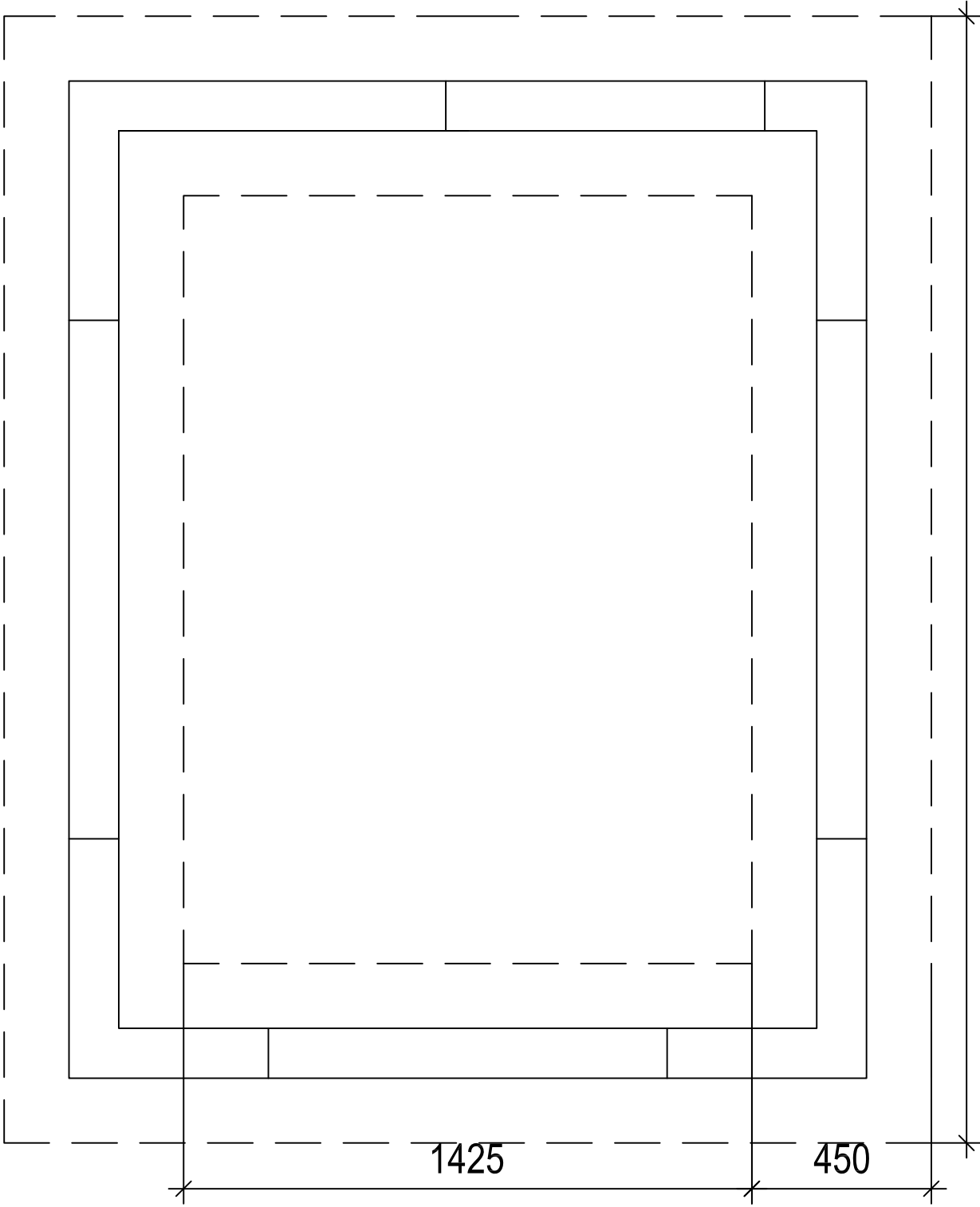
6	CW000 6	Providing and laying in position plain cement concrete 1:4:8 (1 cement :4 sand : 8 graded crushed stone 40 mm nominal size) excluding the cost of centering and shuttering - All work upto plinth level.	cum	9.00		
		Total(D)				-
		Subwork E- Security Guard Room				
1	EW010 6	Excavation in foundation trenches or drains not exceeding 1.5m in width or area 10 sq.m on plan, including back filling and disposal of surplus soil as per the instruction of site supervisor or engineer- Hard Soil.	cum	1.53		
2	SM0005	Providing & laying Random Rubble Masonry with hard stone in foundation & plinth- In cement mortar 1:4	cum	2.3		
3	SM0072	p&l.hand packed stone soling with stones in foundation	cum	0.59		
4	CW000 5	P/L PCC 1:3:6, 20mm agg. Execluding the cost of centering and shuttering	cum	0.63		
5	BW002 1	providing and laying second class half brick work(125mm) in superstructure in cement moter 1:4.,	sq.m	16.66		
6	RC0019	Providing & laying in position reinforced cement concrete work in beams, lintels, bands, plain window sills, staircases, spiral staircases upto floor five level excluding the cost of centering, shuttering and reinforcement-1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	cum	0.16		
7	RC0083	Providing and fixing Thermo-mechanically Treated reinforcement bar (Fe415) for RCC work incl. cutting, bending, binding and placing in position in complete.	kg	44.39		
		Providing and fixing centering and shuttering (formwork), including strutting, proppoing etc, and removal of formwork	sq.m	2.21		
9	WW006 1	Providing & fixing roof framing, in trusses, purlins, rafters, posts, post plates including hoisting, etc.- Mixed conifer	cum	0.12		
10	WW000 1	Providing & fixing in position dressed wood work in frames of doors, windows, clerestory windows and other frames, wrought and framed including hinges, glass (4 mm thick),etc. complete - Blue pine	cum	0.04		
11	ww0030	providing and fixing eves board(200x30) with moulding fitted and fixed with necessary fittings	m	11.8		
12	xxx	p/fixing to frame with cement eaverst board with necessary nail, beatings, etc (excludingcost of frame)	sq.m	3.94		
13	FL0060	Providing and laying concrete flooring 1:3:6 finishing with a floating coat of neat cement (20mm agg, 50mm)	sq.m	3.9375		

14	RF0001	providing and fixing CGI sheeting, incl. bolts hooks,nuts 8mm dia. With bitumen and Gi limpet and washers with white lead for connection excluding the cost of tusses. 24 g	sq.m	9.18		
15	PL0074	Providing & laying cement plaster, finished with floating coat of neat cement- 15mm plaster in C.M 1:4	sq.m	33.32		
16	PT0040	Providing and applying finish coats of dry distemper, two caots on new work, including white priming coat	sq.m	37.26		
17	PT0012	p/l coat of primer- pink on wood works	sq.m	3.5		
18	PT0047	p/l synthetic enamel for wood works (item same as primer)	sq.m	3.5		
19		Providing & fixing anodised Aluminium section for windows, ventilators, framing of specified sections including all accessories such as U-rubber gasket for fixing glass panes, weather strips or weather seals, roller, springs, etc complete including cost of glass (4mm thick)	sqm	2.99		
20	WW069 5	providing and fixing MS hold fast, 40x3-400mm long, fixing to frame with nut and bolts, embedding into the conc.	each	4		
Total E						-
Total (A+B+C+D+E)						-



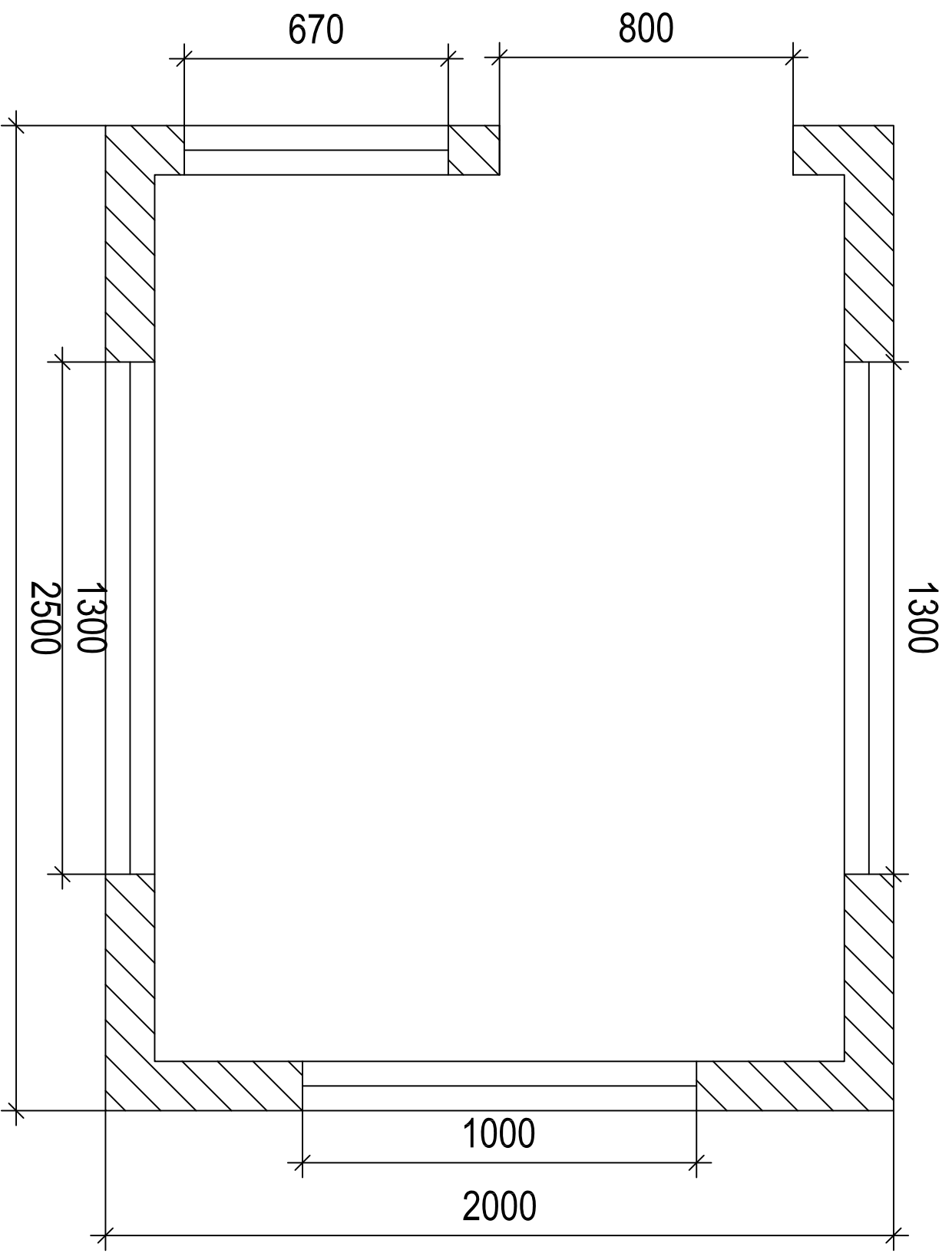
NCA, Gelephu		Maintenance work		Drawing No 01	
Entrance Gate		Scale			
Advised By Program Director	NCA, Gelephu	Design & Drawing by DoL, Thimphu	Lobzang Tshering	Checked by - DoA, MoAF, Thimphu	DoA Engineering Division
				Approved by - Director	DoL, MoAF, Thimphu

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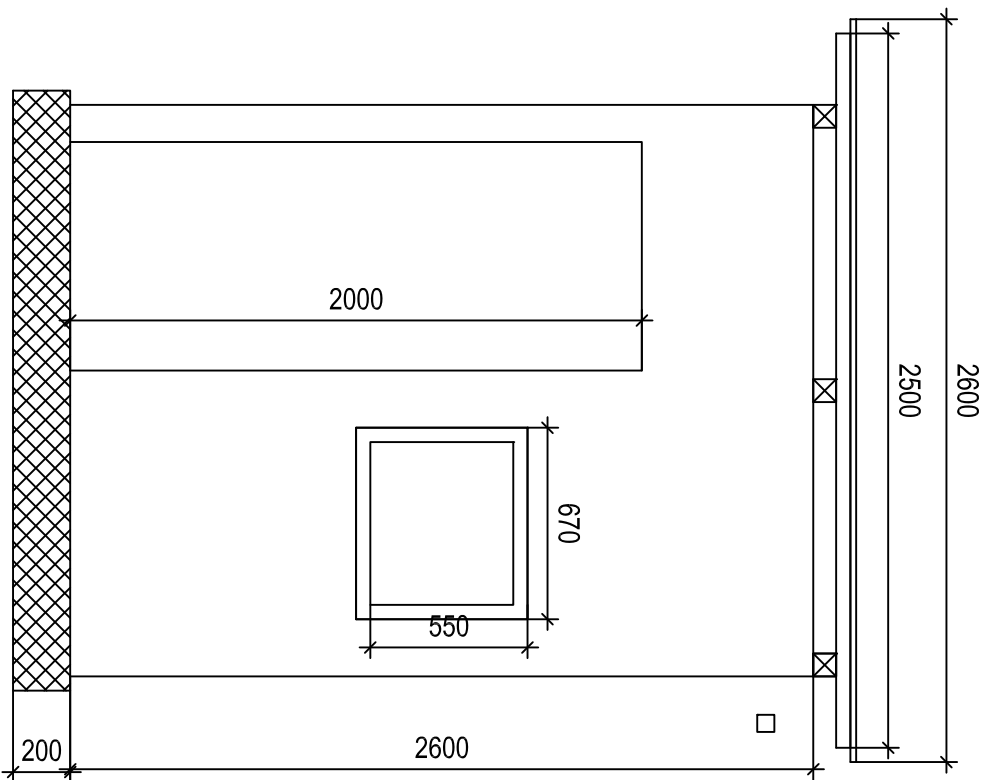


RRM wall detail

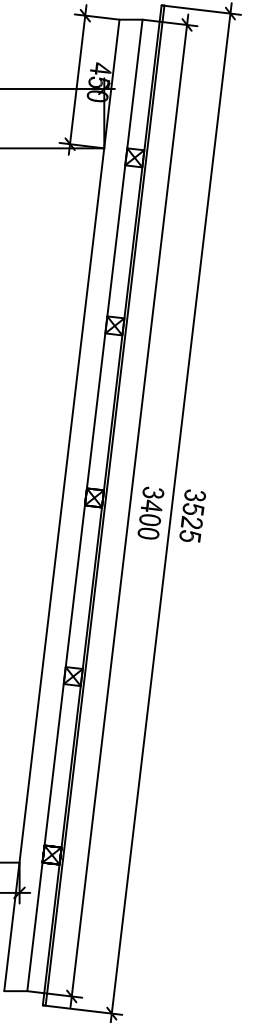
NCA, Gelephu		Change room		Drawing No.01	
foundation plan				Scale	
Advised By Program Director	NCA, Gelephu	Design & Drawing by Lobzang Tshering DoL, Thimphu	Checked by - DoA Engineering Division DoA, MoAF, Thimphu	Approved by - Director DoL, MoAF, Thimphu	



NCA, Gelephu		Change room		Drawing No.01	
Plan		Scale			
Advised By Program Director	NCA, Gelephu	Design & Drawing by Lobzang Tshering DoL, Thimphu	Checked by - DoA Engineering Division DoA, MoAF, Thimphu	Approved by - Director DoL, MoAF, Thimphu	

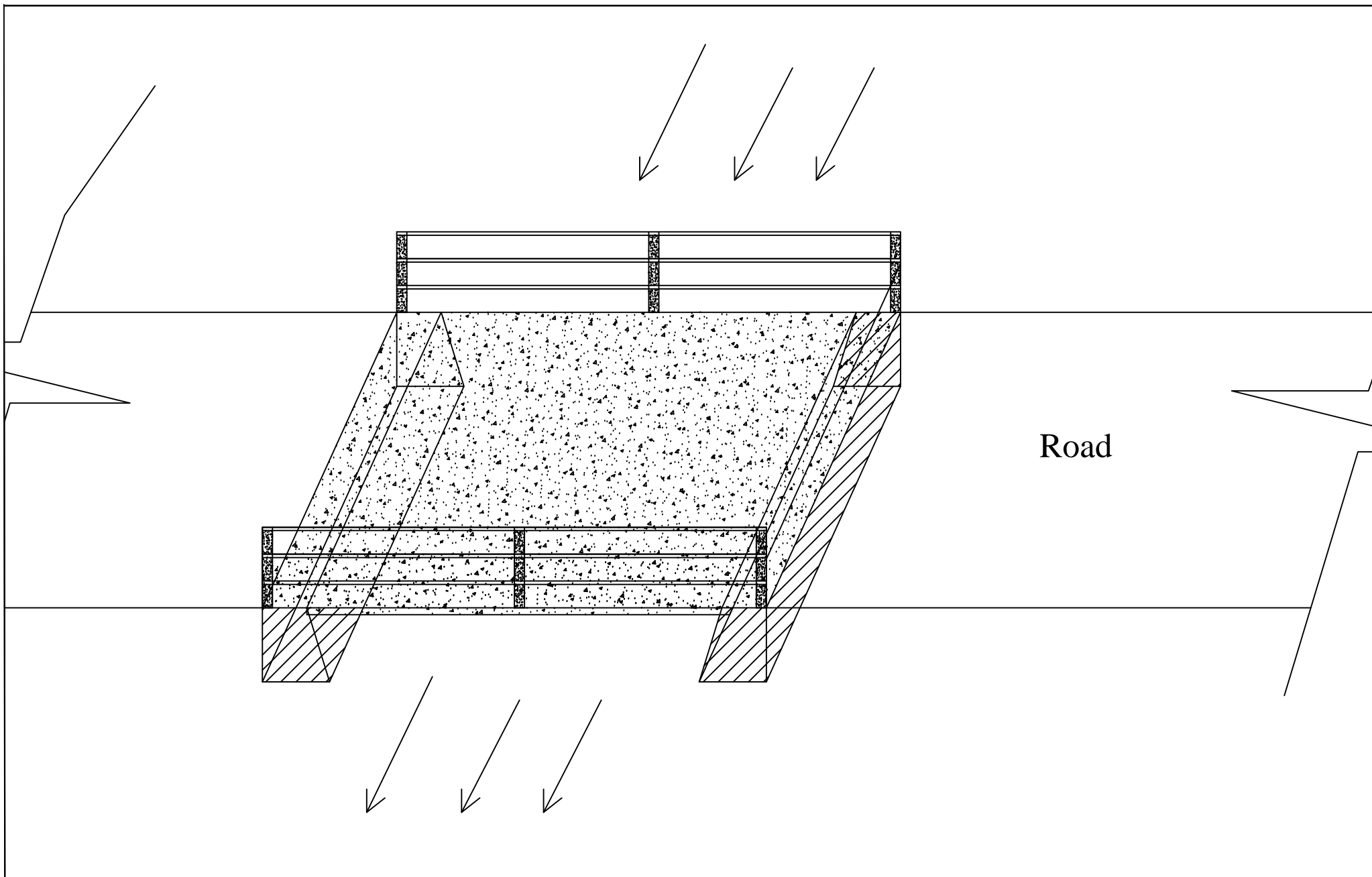


Front

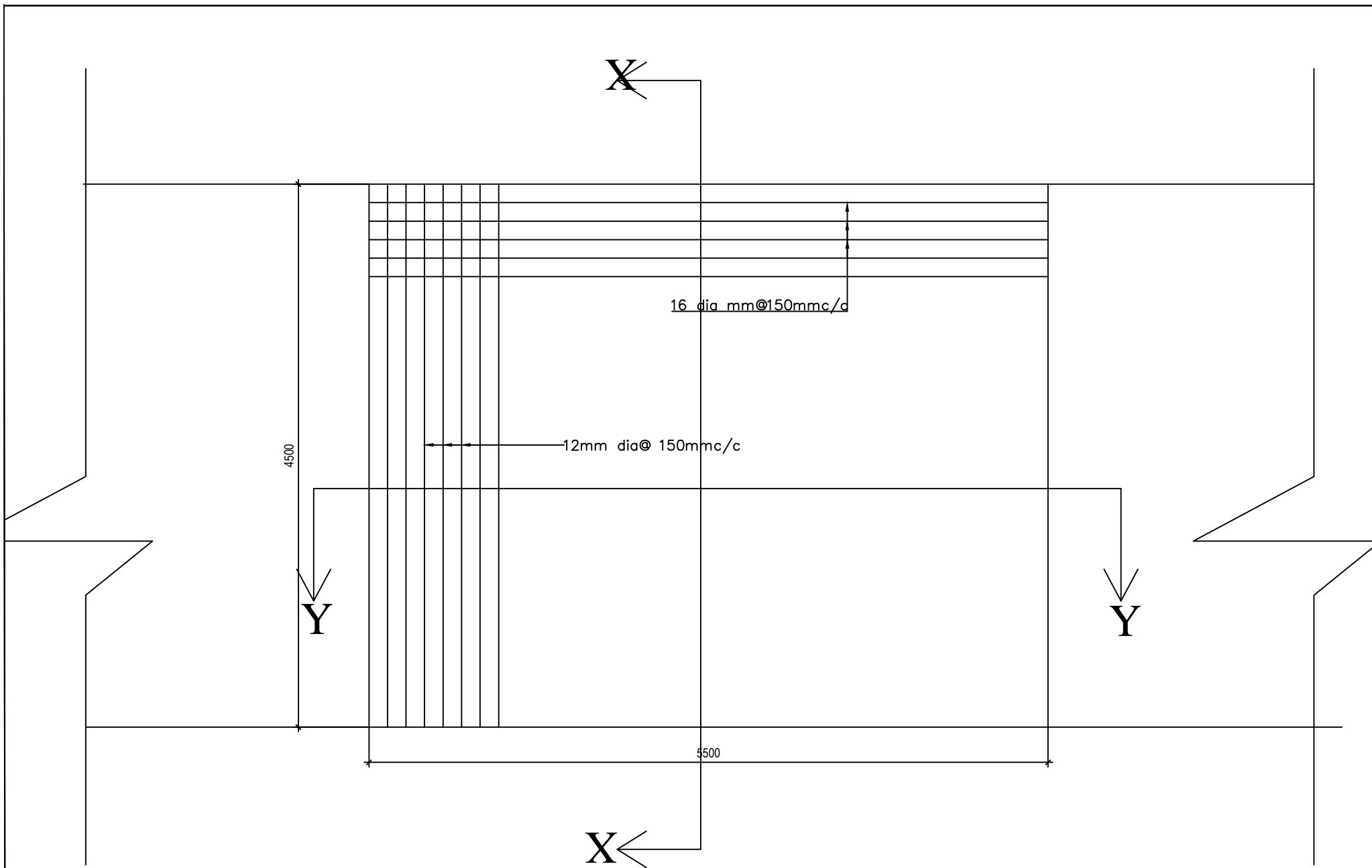


left and right

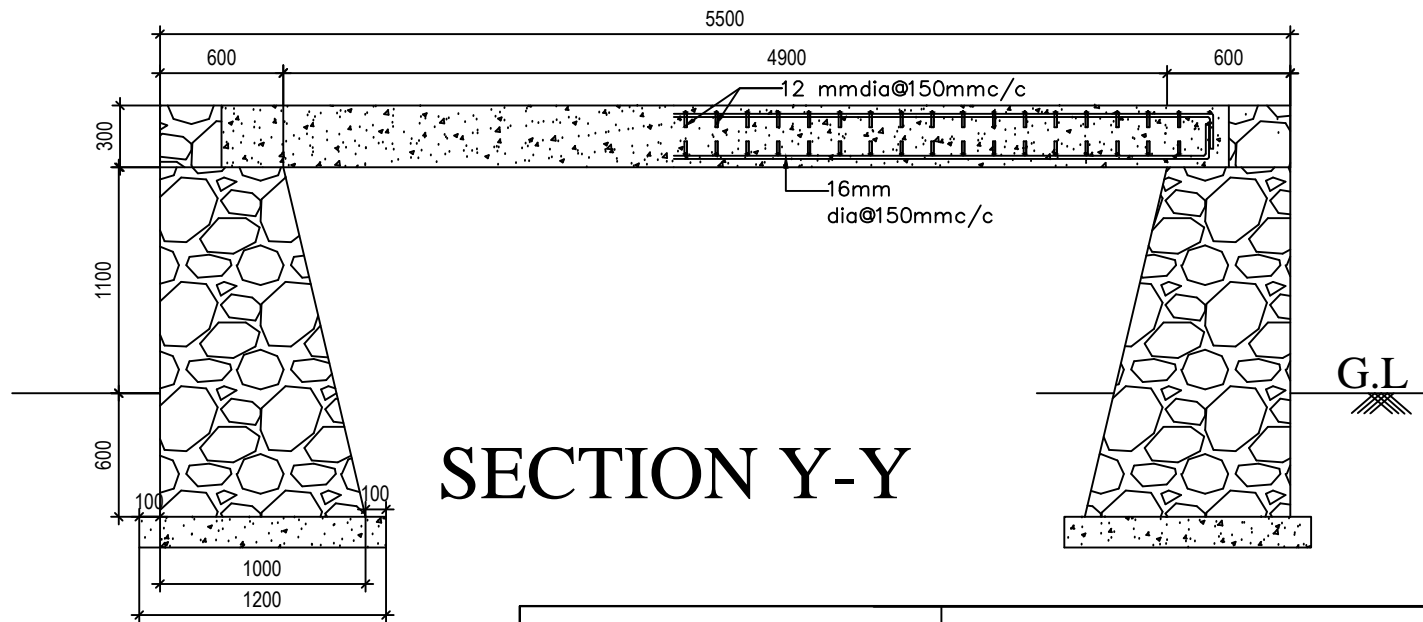
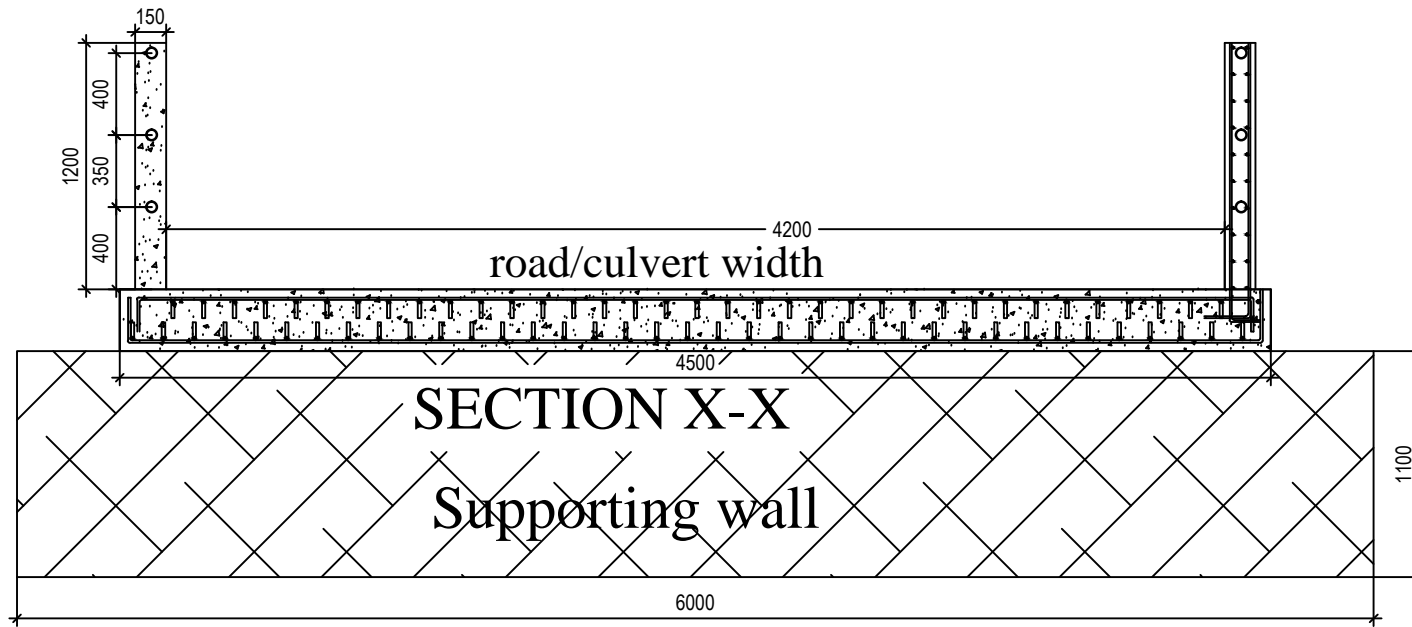
NCA, Gelephu		Change room		Drawing No 01	
Elevation		Scale			
Advised By Program Director	NCA, Gelephu	Design & Drawing by DoL, Thimphu	Lobzang Tshering	Checked by - DoA, MoAF, Thimphu	DoA Engineering Division
				Approved by - DoL, MoAF, Thimphu	Director



NCA, Gelephu		Maintenance work		Drawing No.01
		Culvert		Scale
Advised By Program Director	Design & Drawing by Lobzang Tshering DoL, Thimphu	Checked by- DoA Engineering Division DoA, MoAF, Thimphu	Approved by - Director DoL, MoAF, Thimphu	



NCA, Gelephu	Maintenance work		Drawing No.01
	Culvert		Scale
Advised By Program Director	Design & Drawing by Lobzang Tshering DoL, Thimphu	Checked by- DoA Engineering Division DoA, MoAF, Thimphu	Approved by - Director DoL, MoAF, Thimphu



NCA, Gelephu	Maintenance work		Drawing No.01
	Culvert		Scale
Advised By Program Director	Design & Drawing by Lobzang Tshering DoL, Thimphu	Checked by- DoA Engineering Division DoA, MoAF, Thimphu	Approved by - Director DoL, MoAF, Thimphu