

Name of the State:.....

Name of the District:.....

Distt. Hq. Town/City in Seismic Zone:.....

EMERGENCY OPERATIONS CENTRE
ARCHITECTURAL, STRUCTURAL & COMMUNICATION PLAN

REVISED DRAWINGS AS ON 10th AUGUST, 2004

DISTRICT LEVEL EOC

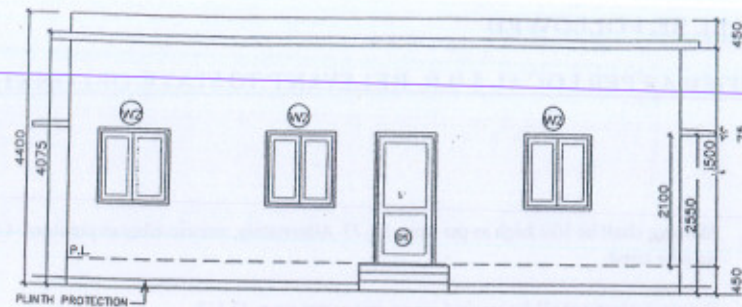


District Headquarters in Seismic Zone V

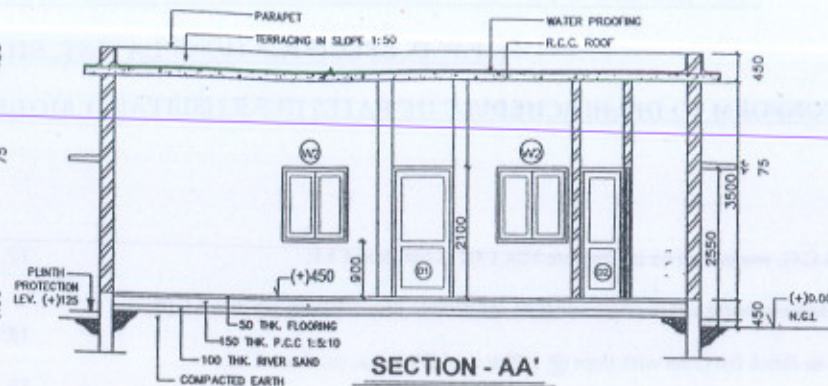
- Part A : Architectural & Structural Drawings, Suggestive Layout of EOC
- Part B : Cost Estimates of Civil Construction Works

Prepared under GoI-UNDP Disaster Risk Management Programme

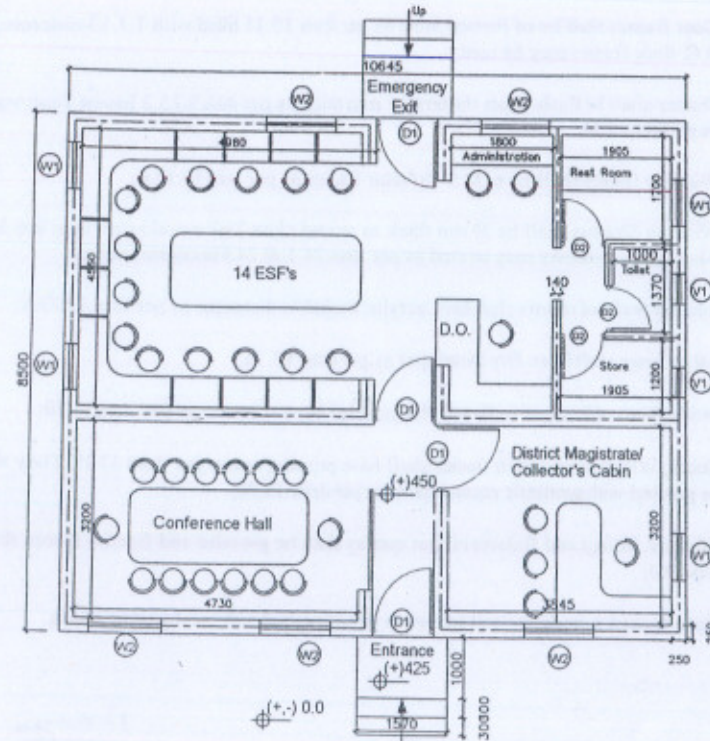
Part: A
Architectural & Structural Drawings,
Suggestive Layout of EOC



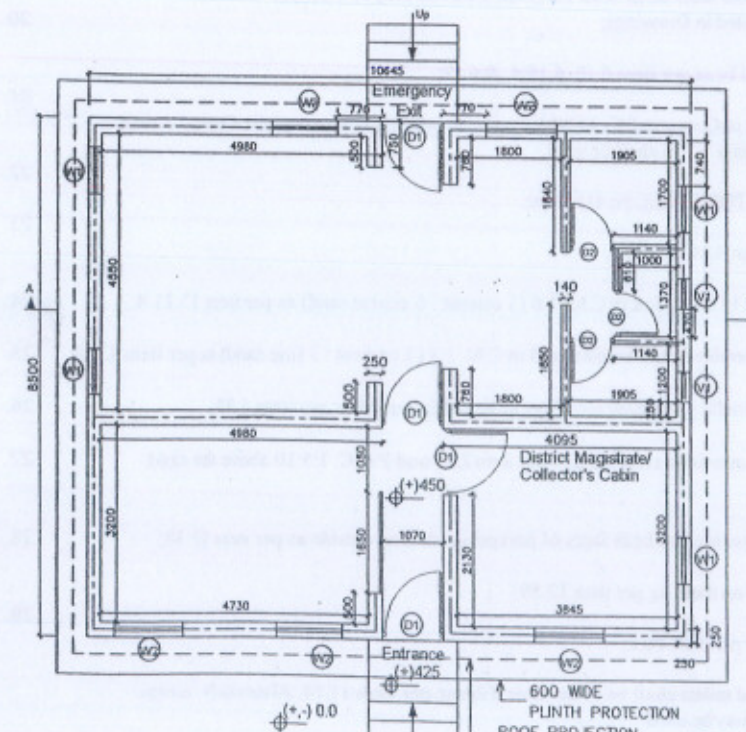
ELEVATION



SECTION - AA'



LAYOUT PLAN



GROUND FLOOR PLAN

RESTRICTED

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL LEVELS ARE IN MILLIMETRES.
3. FOR FINISHING SCHEDULE REFER ATTACHED SPECIFICATIONS

SCHEDULE OF OPENINGS

MARK	TYPE	WIDTH	HEIGHT	CELL HEIGHT	MATERIAL
DOOR					
D1	SINGLE SHUTTER	1070	2100	0	PRESSED STEEL
WINDOW					
W1	DOUBLE SHUTTER	750	1200	800	M.S. TUBES
W2	DOUBLE SHUTTER	1200	1200	800	M.S. TUBES
VENTILATOR					
V1	SINGLE SHUTTER TOP PLUNG	900	500	1600	M.S. TUBES

NO. REVISION DATE SIGN.

TYPE OF BUILDING
DISTRICT EMERGENCY
OPERATION CENTRE
(ALL SEISMIC ZONES)

DRG. TITLE
CONTROL ROOM
FLOOR PLAN, LAYOUT PLAN,
ELEVATION & SECTION

SCALE DRG. NO. DATE
1:50 AD-101/MODIFIED 04-08-2004

FOR
N'D M-DIVISION
MINISTRY OF HOME AFFAIRS
NEW DELHI

Structure Detail By:-
ARVIND NAGARAJU (M.E. Structures)
Technical Officer (UNDP)

Designed & Checked By:-
ANKUSH AGARWAL (Architect/Planner)
Technical Officer (UNDP)

DETAILS BY: APPROVED
R. GOGIA
CHIEF CONSULTANT
ENGINEERING PROJECT
CONSULTANT
DR. A.S. ARYA
National Seismic Advisor
(MHA-UNDP)

REVISED

CONSTRUCTION OF DISTRICT LEVEL EMERGENCY OPERATION CENTRE

C.P.W.D. SPECIFICATIONS-LATEST, SHALL BE FOLLOWED

ITEMS SHALL CONFORM TO DELHI SCHEDULE OF RATES (D.S.R.) (SUITABLY MODIFIED AS PER LOCAL S.O.R. RELEVANT TO STATE OF CONSTRUCTION)

A. CIVIL

1. P.C.C. below R.C.C. works shall be in Concrete Mix 1:4:8 as per item 4.5.8;
2. P.C.C. below Masonry works and in plinths shall be in Concrete Mix 1:5:10 as per item 4.5.10;
3. Terracing shall be Brick Bat Coba with slope @ 1:50 toward Khurra as per item 25.8;
4. Single Brick Masonry work shall be in C.M. 1:6 (item 6.1.14 & 6.3) or C.M. 1:4 (item 6.1.12 & 6.3) as noted in Drawings;
5. Half Brick Masonry shall be as per item 6.18, 6.18.4 & 6.19;
6. All R.C.C. work shall be in Concrete Mix M 20 (or nominal mix 1:1½:3) except for Coastal Areas where M25 (or nominal mix 1:1:2) shall be used;
7. All Reinforcement shall TOR STEEL Fe 415 Bars;
8. D.P.C. shall be as per item 4.24 & 4.26;
9. Inside plastering shall be 12 mm thick in C.M. 1:6 (1 cement : 6 coarse sand) as per item 13.11.4;
10. Roof and other R.C.C. members shall be plastered in C.M. 1:3 (1 cement : 3 fine sand) as per item 13.24;
11. All edges of R.C.C. horizontal projecting members to have drip course as per item 5.38;
12. Sub floor shall have 100 mm thick river sand as per item 2.28 and P.C.C. 1:5:10 above the sand layer as per item 4.5.10;
13. Gola on Roofs shall be provided on both faces of parapet inside and outside as per item 12.38;
14. Khurra shall be provided on roofs as per item 12.39;
15. Plinth protection to be as per item 16.1;
16. Flooring for all rooms and toilets shall be in Ceramic Tiles as per item 11.74. Alternately, mosaic tiles as per item 11.29A may be used;
17. Skirting shall be 100 high as per item 11.73. Alternately, mosaic tiles as per item 11.31 may be used;
18. External plaster shall be washed stone grit as per item 13.112;
19. External plaster shall have grooves as per item 13.113.1;
20. Door frames shall be of Pressed Steel as per item 10.15 filled with 1:1.5:3 concrete. Alternately R.C. door frames may be used;
21. Shutter shall be flush doors shutters 35 mm thick as per item 9.25.2 having Teak wood lipping as per item 9.34;
22. Window frames shall be of M.S. Tubular frames as per item 10.15A;
23. Window Shutters shall be 30 mm thick in second class Teak wood as per item 9.6.3. Alternately Aluminium windows may be used as per item 24.1 & 24.3 in coastal areas;
24. Internal walls of rooms shall have acrylic washable distemper as per item 13.77A;
25. All ceilings shall have Dry Distemper as per item 13.75;
26. Inside faces of Parapet walls and chajjas shall have snowcem as per item 13.79;
27. Doors, Windows and their frames shall have priming coat as per item 13.81. They shall subsequently be painted with synthetic enamel paint as per item 13.94;
28. ISI mark fittings and fixtures of first quality shall be provided and fixed to Doors & windows as required;
29. Open areas e.g. walkway and entrances to be finished with local paving stones.

Barua
6.1.04

RESTRICTED

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL LEVELS ARE IN METRES.
3. FOR FINISHING SCHEDULE REFER ATTACHED SPECIFICATIONS

R.C.C. NOTES

1. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED NEITHER THE BARS SHALL BE COUNTED NOR THE DIMENSIONS SCALED FROM THE DRAWING.
2. CEMENT CONCRETE MIX SHALL BE CONCRETE MIX M - 20 UNLESS NOTED.
3. REINFORCEMENT SHALL CONFORM TO I.S. 1786 - LATEST AND SHALL HAVE CONCRETE COVER (EXCLUSIVE OF PLASTER OR OTHER DECORATIVE FINISH) AS FOLLOWS:
a) BEAM = 30 MM, b) SLAB = 25 MM
4. LAP/DEVELOPMENT LENGTH (L_d) FOR MAIN REIN. BARS SHALL BE AS FOLLOWS:
a) FOR CONCRETE MIX M - 20 = 50 D WHERE (D=DIA FOR BAR)
5. R.C.C. JAMBS TO BE CAST WITH TOOTHING IN WALLS
6. C.C. BLOCKS USED FOR MASONRY TO HAVE MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 50K.G./SQ.CM.
7. BRICKS TO HAVE MIN. CRUSHING STRENGTH OF 50K.G./SQ.CM.

TYPE OF BUILDING

DISTRICT EMERGENCY
OPERATION CENTRE
(ALL SEISMIC ZONES)

ORG. TITLE

CONTROL ROOM
FOUNDATION PLAN & DETAILS

SCALE

1:50

DRG. NO.

ST-101/MODIFIED

DATE

04-08-2004

FOR

N D M-DIVISION
MINISTRY OF HOME AFFAIRS
NEW DELHI

Structure Detail By:-

ARVIND NAGARAJU (M.E. Structures)
Technical Officer (UNDP)

Designed & Checked By:-

ANKUSH AGARWAL (Architect/Planner)
Technical Officer (UNDP)

DETAILS BY:

R. GOGIA
CHIEF CONSULTANT
ENGINEERING PROJECT
CONSULTANT

REVISED

APPROVED

DR. A.S. ARYA
National Seismic Advisor
(MHA-UNDP)

T1 - 230 FOR BRICK WORK
200 FOR BLOCK WORK
(without plaster)

MASONRY
IN C.M.1:4 (FOR ZONE-V)
IN C.M.1:6 (FOR ZONE-IV & IV)

PUNTH BAND (PB1)
6@150C/C
2 TOR 12 (FOR ZONE IV & V)
2 TOR 10 (FOR ZONE II)

MASONRY
IN C.M.1:6

T2 - 345 FOR BRICK WORK
300 FOR CC BLOCK WORK
(without plaster)

TOR 10@200 C/C
TOR 10@150 C/C

P.C.C. 1:4:8
WELL COMPACTED
SOIL

900 / FIRM SOIL

1004

75 750 75

SECTION 1-1

A

1 2

500

900

FOUNDATION PLAN

T - 115 FOR BRICK WORK
100 FOR BLOCK WORK
(without plaster)

C.C. COPING (1:2:4)
6@150C/C
PUNTH BAND (PB1)

2 TOR 12 (FOR ZONE IV & V)
2 TOR 10 (FOR ZONE II)

T1 - 230 FOR BRICK WORK
200 FOR BLOCK WORK
(without plaster)

MASONRY
IN C.M.1:6

P.C.C. (1:4:8)

WELL COMPACTED
SURFACE

500

SECTION 2-2

DWARF WALL FOOTING

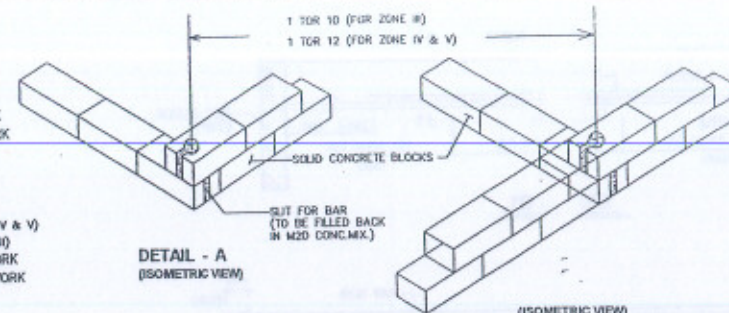
CR (TYP)

1 2

500

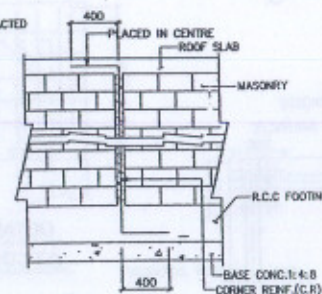
900

FOUNDATION PLAN

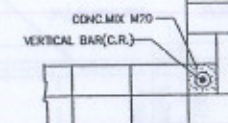


DETAIL - A
(ISOMETRIC VIEW)

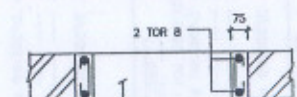
VIEW FOR VERTICAL BAR (C.R.) IN BLOCK WORK



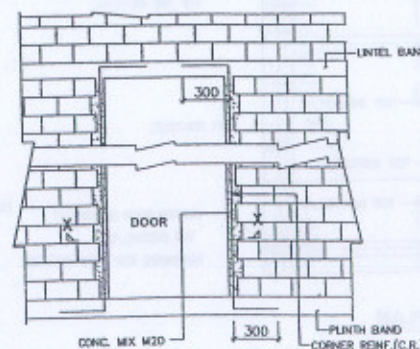
EXTENDED ELEVATION OF
CORNER AND WALL
INTERSECTION REIN. PLACING



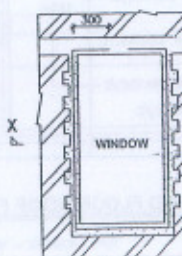
CORNER REINFORCEMENT (C.R.)
IN BRICK WORK (TYP)



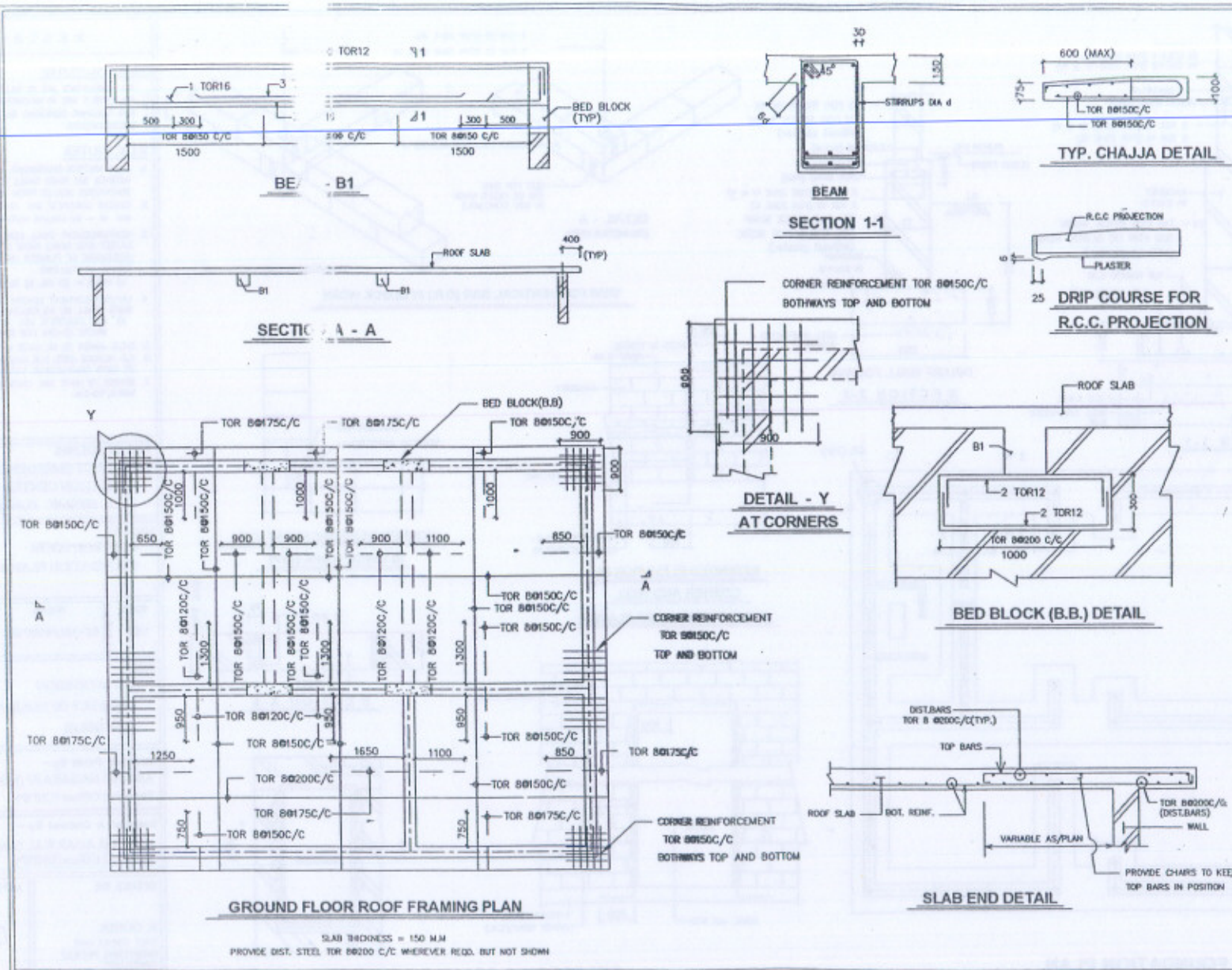
SECTION X-X



REINFORCING DETAILS AT JAMBS



SECTION X-X



RESTRICTED

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TYPE OF BUILDING

DISTRICT EMERGENCY
OPERATION CENTRE
(ALL SEISMIC ZONES)

DRG. TITLE

CONTROL ROOM
GROUND FLOOR ROOF SLAB
REINFORCEMENT DETAILS

SCALE

1:50,
1:10

DRG. NO.

ST-201/MODIFIED

DATE

04-08-2004

FOR

N D M-DIVISION
MINISTRY OF HOME AFFAIRS

Structural Details By:-

ARVIND NAGARAJU (M.E. Structures)
Technical Officer (UNDP)

Checked By:-

ANKUSH AGARWAL (Architect/Planner)
Technical Officer (UNDP)

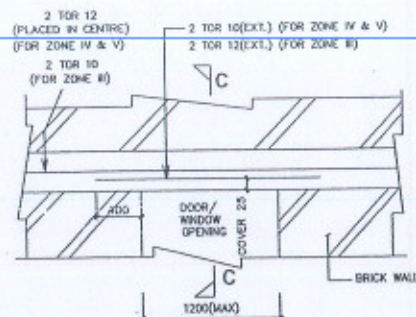
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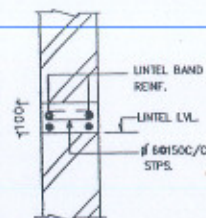
APPROVED

Dr. A. S. Arya
DR. A.S. ARYA
National Seismic Advisor
(MHA-UNDP)

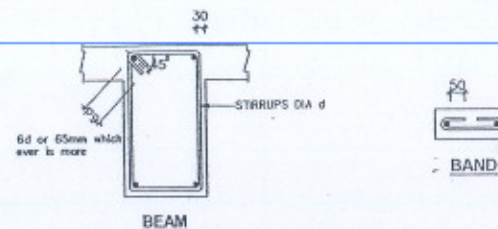
REVISED



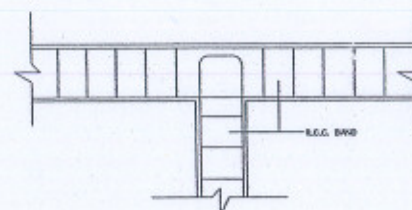
TYP. LINTEL BAND



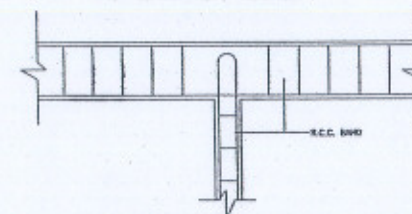
SEC. C-C
(FOR 230/200 THK WALL)



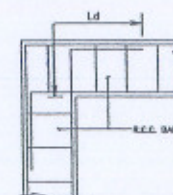
STIRRUP DETAILS



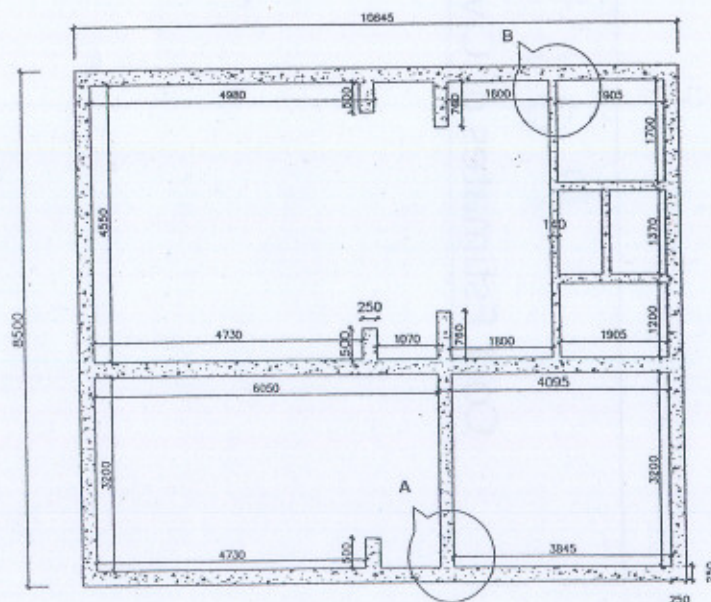
DETAIL OF BAND AT A



DETAIL OF BAND AT B



DETAIL OF BAND AT ENDS



LINTEL / SEISMIC BAND PLAN

(SAME PLAN FOR PLINTH BAND)

RESTRICTED

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TYPE OF BUILDING

DISTRICT EMERGENCY
OPERATION CENTRE
(ALL SEISMIC ZONES)

DRG. TITLE

CONTROL ROOM
PLINTH & LINTEL BAND DETAIL

SCALE

1:50,
1:10

DRG. NO.

ST-301/NEW

DATE

04-08-2004

FOR

N D M-DIVISION
MINISTRY OF HOME AFFAIRS

Structure Detail By:-

ARVIND NAGARAJU (M.E. Structures)
Technical Officer (UNDP)

Designed & Checked By:-

ANKUSH AGARWAL (Architect/Planner)
Technical Officer (UNDP)

DETAILS BY:

R. GOGIA
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ENGINEERING PROJECT
CONSULTANT

REVISED

APPROVED

Dr. A.S. Arya
DR. A.S. ARYA
National Seismic Advisor
(MHA-UNDP)

Part: B

Cost Estimates of Civil Construction Work

**COST ESTIMATE FOR DISTRICT EMERGENCY OPERATION CENTRE (SEISMIC - V)
BASED ON DELHI SCHEDULE OF RATES (D.S.R) - 2002**

S.NO.	DSR NO.	DESCRIPTION	RATE	UNIT	QTY	AMOUNT(Rs)
1	2	EARTH WORK				
1.1	2.6	Earth work in excavation				
1.1.1	2.6.1	All kind of soil	91.5	Cum	0	0
1.2	2.8	Earth work in foundation trenches				
1.2.1	2.8.1	All kinds of soil	93.55	Cum	49	4583.95
1.3	2.26	Filling available excavated earth	30.25	Cum	49	1482.25
1.4	2.28	Supplying and filling river sand	213.5	Cum	8	1708
		TOTAL				7774.2
2	4	CONCRETE WORK				
2.1	4.5	Providing cement concrete				
2.1.1	4.5.3	Mix 1:2:4	1843	Cum	0.5	921.5
2.1.2	4.5.8	Mix 1:4:8	1404.7	Cum	5.5	7725.85
2.1.3	4.5.10	Mix 1:5:10	1289.15	Cum	12	15469.8
2.2	4.9	Centring and shuttering				
2.2.1	4.9.1	Foundations	61.1	Sq.m	13	794.3
2.3	4.24	Providing damp-proof course	84.6	Sq.m	0	0
2.4	4.26	Extra for water proofing material	19.25	Kg	0	0
		TOTAL				24911.45
3	5	REINFORCED CEMENT CONCRETE				
3.1	5.2	Reinforced cement concrete				
3.1.1	5.2.2	Mix 1:1.5:3	2351.35	Cum	0.3	705.405
3.2	5.14	Centring and shuttering				
3.2.1	5.14.1	Foundations	61.1	Sq.m	19	1160.9
3.2.2	5.14.2	walls	106.4	Sq.m	11	1170.4
3.2.3	5.14.3	suspended floors	111.2	Sq.m	92	10230.4
3.2.4	5.14.4	shelves and corners	111.2	Sq.m	0	0
3.2.5	5.14.5	Lintels, beams	87.95	Sq.m	18	1583.1
3.2.6	5.14.6	Columns	135.8		0	0
3.2.7	5.14.17	Edges of slabs				
3.2.7.1	5.14.17.1	Under 20 cms wide	29.9	m	0	0
3.2.8	5.14.20	Weather shade, chajjas	134.45	Sq.m	7	941.15
3.3	5.16	Extra for additional height				
3.3.1	5.16.1	Suspended floors	45.9	Sq.m	0	0
3.4	5.29	Reinforcement				
3.4.1	5.29.1	Mild steel	21.45	Kg	150	3217.5
3.4.2	5.29.3	Cold twisted bars	21.85	Kg	2250	49162.5
3.5	5.38	Add for plaster drip course				
3.6	5.42	Providing machine batched, design mix cement concrete				
3.6.1	5.42.1	upto plinth level	2284.05	Cum	11	25124.55
3.6.2	5.42.2	upto floor five level				
3.6.2.1	5.42.2.1	Walls, columns	2411.4	Cum	0	0
3.6.2.2	5.42.2.2	Beams suspended floors	2518.25	Cum	16	40292
		TOTAL				133587.905

4	6	BRICK WORK				
4.1	6.1	Brick wok in foundation				
4.1.1	6.1.12	Cement mortar 1:4	1478.4	Cum	47	69484.8
4.1.2	6.1.14	Cement mortar 1:6	1384.5	Cum	13.5	18690.75
4.2	6.3	Extra for superstructure	206.4	Cum	47	9700.8
4.3	6.18	Half brick masonry				
4.3.1	6.18.4	Cement mortar 1:4	174.85	Sq.m	30	5245.5
4.5	6.19	Extra for superstructure	22	Sq.m	30	660
4.6	6.20(A)	Extra for 2 No.s 6mm dia	23.65	Sq.m		
		TOTAL				103781.85
5	9	Wood Work				
5.1	9.6	Providing glazed shutters for windows				
5.1.1	9.6.3	Second class teak wood	1182.15	Sq.m	11	13003.65
5.2	9.25	providing flush door shutters				
5.2.1	9.25.2	35mm thick	825.9	Sq.m	12	9910.8
5.3	9.34	Extra for lipping	222.2	Sq.m	12	2666.4
5.4	9.82	Providing M.S. grills				0
5.4.1	9.82.1	Fixed to steel windows	34	Kg	110	3740
		TOTAL				29320.85
6	10	STEEL WORK				
6.1	10.7	Providing 1mm thick M.S. Sheet				
6.1.1	10.7.1	M.S. angles 40*40*6 mm	986.55	Sq.m	0	0
6.2	10.15	Providing pressed steel door frames				
6.2.1	10.15.2	Profile B	177.5	m	31	5502.5
6.3	10.15A	Providing M.S. Tubular frames for windows				
6.3.1	10.15A	Profile of size	52	Kg	75	3900
		TOTAL				9402.5
7	11	Flooring				
7.1	11.4	Cement concrete flooring				
7.1.1	11.4.3	50mm thick	133.6	Sq.m	0	0
7.2	11.73	Providing ceramic glazed tiles	373.3	Sq.m	18	6719.4
7.3	11.74	Providing ceramic glazed floor tiles	478.9	Sq.m	81	38790.9
		TOTAL				45510.3
8	12	ROOFING				
8.1	12.38	Providing gola				
8.1.1	12.38.1	In 75 * 75 mm deep chase	43	m	155	6665
8.2	12.39	making khurras	68.5	Each	4	274
		TOTAL				6939
9	13	FINISHING				
9.1	13.11	12mm cement plaster of mix				
9.1.1	13.11.4	Cement mortar 1:6	46.6	Sq.m	200	9320
9.2	13.12	15mm cement plaster				
9.2.1	13.12.4	Cement mortar 1:6	60.6	Sq.m	70	4242
9.3	13.24	6mm cement plaster of mix				

9.3.1	13.24.1	Cement mortar 1:3	40 Sq.m	110	4400
9.4	13.75	Distempering with dry distemper	19.05 Sq.m	95	1809.75
9.5	13.77A	Distempering with acrylic washable			
		a) Tow or more coats	16.2 Sq.m	250	4050
9.6	13.79	Finishing walls with cement paint			
9.6.1	13.79.1	New Work	23.1 Sq.m	60	1386
9.7	13.81	Applying priming coat			
9.7.1	13.81.1	With ready mixed grey primer	11.75 Sq.m	48	564
9.7.2	13.81.4	with ready mixed yellow primer	4.9 Sq.m	22	107.8
9.8	13.93	painting with synthetic enamel paint			
9.8.1	13.93.1	Tow or more coats	24.25 Sq.m	70	1697.5
9.9	13.112	Washed stone grit plaster	169.25 Sq.m	150	25387.5
9.10.	13.113	Forming groove			
9.10.1	13.113.1	15 mm wide and 15mm deep	9.5 m	650	6175
		TOTAL			59139.55
10	25	WATER PROOFING			
10.1	25.8	Providing integral cement based water proofing			0
10.1.1	25.8.1	With average thickness of 120mm	282.8 Sq.m	85	24038
		TOTAL			24038

S.NO.	DSR NO.	DESCRIPTION	AMOUNT (Rs)
1	2	Earthwork	7774.2
2	4	Concrete work	24911.45
3	5	Reinforced Cement Concrete	133587.9
4	6	Brick work	103781.9
5	9	Wood work	29320.85
6	10	Steel Work	9402.5
7	11	Flooring	45510.3
8	12	Roofing	6939
9	13	Finishing	59139.55
10	25	Waterproofing	24038

444405.6

ADD 10% FOR COST INDEX OVER
D.S.R 2002

44440.56

TOTAL

488846.2

ADD 5% FOR ELECTRICAL
WORKS AND ROOF DRAINAGE

24442.31

GRAND TOTAL

513288.5

LIST OF ITEMS

AS PER DELHI SCHEDULE OF RATES (D.S.R.) - 2002

S.NO.	DSR NO	DESCRIPTION	RATE	UNIT
1.0	2.0	EARTH WORK		
1.1	2.6	Earth work in excavation over areas (exceeding 30 cm in depth. 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m; disposed earth to be levelled and neatly dressed.		
1.1.1	2.6.1	All kinds of soil	91.50	Cum
1.2	2.8	Earth work in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.		
1.2.1	2.8.1	All kinds of soil	93.55	Cum
1.3	2.26	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundation etc, in layers not exceeding 20 cm in depth; consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5 m	30.25	Cum
1.4	2.28	Supplying and filling river sand under floors including, watering, ramming consolidating and dressing complete.	213.30	Cum
2.0	4.0	CONCRETE WORK		
2.1	4.5	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level.		
2.1.1	4.5.3	1:2:4 (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size)	1843.00	Cum
2.1.2	4.5.8	1:4:8 (1 cement : 4 coarse sand : 8 grade stone aggregate 40 mm nominal size)	1404.70	Cum
2.1.3	4.5.10	1:5:10 (1 cement : 5 coarse sand : 10 grade stone aggregate 40 mm nominal size)	1289.15	Cum
2.2	4.9	Centring and shuttering including strutting, propping etc. and removal of form work for		
2.2.1	4.9.1	Foundations, footings, bases of columns	61.10	Sqm
2.3	4.24	Providing and laying damp-proof course 40 mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size).	84.60	Sq.m
2.4	4.26	Extra for providing and mixing water proofing material 'Impermo' or equivalent in cement concrete work @ 1 kg per 50 kg of cement. (per bag of 50 kg of cement used in the mix)	19.25	Kg.
3.0	5.0	REINFORCED CEMENT CONCRETE		
3.1	5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. upto floor five level excluding cost of centring, shuttering, finishing and reinforcement.		
3.1.1	5.2.2	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	2351.35	Cum
3.2	5.14	Centring and shuttering including strutting, propping etc. and removal of form for:		
3.2.1	5.14.1	Foundations, footings, bases of columns etc. for mass concrete.	61.10	Sqm
3.2.2	5.14.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses	106.40	Sqm
3.2.3	5.14.3	Suspended floors, roofs landings, balconies and access platform.	111.20	Sqm
3.2.4	5.14.4	Shelves & Counters (Cast in situ)	111.20	Sqm
3.2.5	5.14.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	87.95	Sqm
3.2.6	5.14.6	Columns, pillars, piers, abutments, posts and struts.	135.80	Sqm
3.2.7	5.14.17	Edges of slabs and breaks in floors and walls.		
3.2.7.1	5.14.17.1	Under 20 cms wide	29.90	Metre
3.2.8	5.14.20	Weather shade, chajjas, corbels etc. including edges.	134.45	Sqm

S.NO.	DSR NO	DESCRIPTION	RATE	UNIT
3.3	5.16	Extra for additional height in centring, shuttering where ever required with adequate bracing propping etc. including cost of de-shuttering and decentring at all levels, over a height of 3.5 m for every additional height of 1 meter or part thereof (Plain area to be measured)		
3.3.1	5.16.1	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured).	45.90	Sqm
3.4	5.29	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.		
3.4.1	5.29.1	Mild steel and medium tensile steel bars	21.45	Kg.
3.4.2	5.29.3	Cold twisted bars	21.85	Kg.
3.5	5.38	Add for plaster drip course/groove in plastered surface or moulding to R.C.C. projections.	8.50	Metre
3.6	5.42	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centring, shuttering, finishing and reinforcement including admixtures in recommended proportions. (as per IS 9103) to accelerate, retard setting of concrete improve workability without impairing strength and durability as per direction of Engineering-in-charge- M-20 grade reinforced cement concrete.		
3.6.1	5.42.1	All work upto plinth level	2284.05	Cum
3.6.2	5.42.2	All work from plinth level upto floor five level		
3.6.2.1	5.42.2.1	Walls, columns, pillars, posts and struts	2411.40	Cum
3.6.2.2	5.42.2.2	Beams, plinth beams, girders, bressumers, cantilevers, Suspended floors lintels roofs and staircases including spiral staircases, shelves etc.	2518.25	Cum
4.0	6.0	BRICK WORK		
4.1	6.1	Brick work with bricks of class designation 75 in foundation and plinth in:		
4.1.1	6.1.12	Cement mortar 1:4 (1 cement : 4 coarse sand)	1478.40	Cum
4.1.2	6.1.14	Cement mortar 1:6 (1 cement : 6 coarse sand)	1384.50	Cum
4.2	6.3	Extra for superstructure above plinth level upto floor V level	206.40	Cum
4.3	6.18	Half brick masonry with bricks of class designation 75 in foundations and plinth in:		
4.3.1	6.18.4	Cement mortar 1:4 (1 cement : 4 coarse sand)	174.85	Sqm
4.5	6.19	Extra for in superstructure above plinth level upto V level.	22.00	Sqm
4.6	6.20(A)	Extra for providing and placing in position 2 Nos. 6 mm dia M.S. bars at every third course of half brick masonry (with F.P.S. bricks)	23.65	Sqm
5.0	9.0	WOOD WORK		
5.1	9.6	Providing and fixing glazed shutters for doors, windows and clerestory windows using 10 kg/square Metre (4 mm thick) glass panes including black enamelled ISI marked M.S. butt hinges with necessary screws.		
5.1.1	9.6.3	Second class teak wood 30 mm thick	1182.15	Sqm
5.2	9.25	Providing and fixing ISI marked flush door shutters non-decorative type, core of block board construction with frame of first class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of		
5.2.1	9.25.2	35 mm thick including Stainless Steel butt hinges with necessary screws.	825.90	Sqm
5.3	9.34	Extra for providing lipping with second class teak wood battens 25 mm minimum depth on all edges of shutters (over all area of door shutter to be measured) over DSR item.	222.20	Sqm
5.4	9.82	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. all complete.		
5.4.1	9.82.1	Fixed to steel windows by welding	34.00	Kg.

S.NO.	DSR NO	DESCRIPTION	RATE	UNIT
6.0	10.0	STEEL WORK		
6.1	10.7	Providing and fixing 1 mm thick M.S. sheet door with frame of 40 x 40 x 6 mm angle iron and 3 mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.		
6.1.1	10.7.1	Using M.S. angles 40 x 40 x 6 mm for diagonal braces	986.55	Sqm
6.2	10.15	Providing and fixing pressed steel door frames manufactured from commercial mild steel sheet of 1.25 mm thickness including hinges jamb, jock jamb bead and if required angle threshold of mild steel angle of section 50x25 mm, or base ties of 1.25 mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 2.5 mm thick with mortar guards, lock strike-plate and shock absorbers as specified and applying a coat of approved steel primer after per-treatment of the surface as directed by Engineer-in-charge.		
6.2.1	10.15.2	Profile B	177.50	Metre
6.3	10.15A	Providing and fixing M.S. Tubular frames for doors, windows, and ventilators with L-Type section made of 1.60 mm thick M.S. sheet, joints mitred and welded and grinded finish with 15 x 3 mm lugs 10 cm long embedded in cement concrete blocks 15 x 10 x 10 cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primers.		
6.3.1	10.15A.	Profile of size 39 x 29 x 35 mm (for window frames)	52.00	Kg.
7.0	11.0	FLOORING		
7.1	11.4	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc. complete.		
7.1.1	11.4.3	50 mm thick with 20 mm nominal size stone aggregate	133.60	Sqm
7.2	11.73	Providing and fixing first quality ceramic glazed tiles conforming to IS:13753 of minimum thickness 5 mm of approved make like NITCO, ORIENT, SOMANY KAJARIA, or equivalent make in all colours, shades except begundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	373.30	Sqm
7.3	11.74	Providing and laying ceramic glazed floor tiles 300 x 300 mm (thickness to be specified by the manufacture) of first quality conforming to IS : 13755 of NITCO, ORIENT, SOMANY KAJARIA, or equivalent make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including pointing the joints with white cement and matching pigment etc. complete.	478.90	Sqm
8.0	12.0	ROOFING		
8.1	12.38	Providing gola 75 x 75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10 mm and down gauge) including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design:		
8.1.1	12.38.1	In 75 x 75 mm deep chase	43.00	Metre
8.2	12.39	Making khurras 45 x 45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x 1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement rounding the edges and making and finishing the outlet complete.	68.50	Each

S.NO.	DSR NO	DESCRIPTION	RATE	UNIT
9.0	13.0	FINISHING		
9.1	13.11	12 mm cement plaster of mix:		
9.1.1	13.11.4	1:6 (1 cement : 6 coarse sand)	46.60	Sqm
9.2	13.12	15 mm cement plaster on the rough side of single or half brick wall of mix:		
9.2.1	13.12.4	1:6 (1 cement : 6 coarse sand)	60.60	Sqm
9.3	13.24	6 mm cement plaster of mix:		
9.3.1	13.24.1	1:3 (1 cement : 3 fine sand)	40.00	Sqm
9.4	13.75	Distempering with dry distemper of approved brand and manufacture (two or more coats) and of required shade on new work, over and including priming coat of whitening to give an even shade.	19.05	Sqm
9.5	13.77A	Distempering with first quality acrylic washable distemper (ready made) of approved manufacturer and or required shade and colour complete as per manufacturer's specification.		
		a) Two or more coats on new work	16.20	Sqm
9.6	13.79	Finishing walls with waterproofing cement paint snowcem-plus of M/s. Snowcem India Ltd. or equivalent of required shade.		
9.6.1	13.79.1	New work (three or more coats applied @ 3.84 kg/10 sqm)	23.10	Sqm
9.7	13.81	Applying priming coat:		
9.7.1	13.81.1	With ready mixed pink or grey primer of approved brand and manufacture on wood work (hard and soft wood)	11.75	Sqm
9.7.2	13.81.4	With ready mixed zinc chromate yellow primer of approved brand and manufacture on steel work (second coat)	4.90	Sqm
9.8	13.93	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:		
9.8.1	13.93.1	Two or more coats on new work	24.25	Sqm
9.9	13.112	Washed stone grit plaster on exterior walls of height upto 10M above level in two layers, under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand) furrowing the under layer with scratching tool applying cement slurry on the under layer @ 2 kg of cement per square metre, top layer 15 mm cement plaster 1:1/2:2 (1 cement : 1/2 coarse sand : 2 stone chipping 10 mm nominal size) in panels with groove all around as per approved pattern including scrubbing and washing, the top layer with brushes and water to expose the stone chippings, complete as per specification and direction of Engineer-in-charge (Payment for providing grooves shall be made separately)	169.25	Sqm
9.10	13.113	Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens nailed to the under layer including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge.		
9.10.1	13.113.1	15 mm wide and 15 mm deep groove	9.50	Metre

S.NO.	DSR NO	DESCRIPTION	RATE	UNIT
10.0	25.0	WATERPROOFING		
10.1	25.8	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc, consisting of following operations.		
		a) Applying and grouting a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with proprietary water proofing compound conforming to IS : 2645 over the R.C.C. slab including cleaning the surface before treatment.		
		b) Laying cement concrete using broken bricks/brick bats 25 mm to 100 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with proprietary water proofing compound conforming to IS : 2645 over 20 mm thick layer of cement mortar of mix 1:5 (1 cement : 5 coarse sand) admixed with proprietary waterproofing compound conforming to IS : 2645 to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs.		
		c) After two days of proper curing applying a second coat of cement slurry admixed with proprietary water proofing compound conforming to IS : 2645		
		d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement : 4 coarse sand) admixed with proprietary waterproofing compound conforming to IS : 2645 and finally finishing the surface with trowel with neat cement slurry and making of 300x300 mm square.		
		e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-charge.		
10.1.1	25.8.1	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	282.80	Sqm