



**GOVERNMENT OF WEST BENGAL
OFFICE OF THE SUPERINTENDING ENGINEER, WEST CIRCLE
MUNICIPAL ENGINEERING DIRECTORATE
PATAL BAZAR, 3RD FLOOR, TINKONIA, BURDWAN**

Memo. No. MED/SE(W)/ 458 / W-120 / 04; Pt.-VI

Dated : 22.11.07

**From : The Superintending Engineer,
West Circle, M.E.Dte.**

**To : The Project Director,
C.M.U/ KUSP, I L G U S Bhavan,
H.C.Block, Sector-3,
Kol.-106..**



*Dr. Goswami
ay
23/11*

S u b : Approval of schemes under Health System for the year 2007-08 under KUSP programme for Bansberia Municipality.

Sir,

I am forwarding herewith the above scheme noted under the subject in respect of **Bansberia Municipality** in single set (two copies) for favour of your approval.

The details of the scheme and amount recommended for approval is furnished below :

Name of Scheme	Scheme Code.				Scheme Type.	Name of Work.	Approved Amt.(Rs.)
	ULB	Ward No.	Scheme No	Full Part			
Health System.	004	18, 21	001	01	Infrastructure	* 1) Construction of Health Sub-Centre.	4,95,524.00
						** 2) Extension of ESOPD \$ Maternity Building.	19,21,119.00
Total							24,16,643.00

(N.B. The amount of work beyond the fund allotted by C.M.U. will be borrowed by the U.L.B.)

This is for favour of your information and necessary action.

Encl:- One set (two copies) of the scheme as stated.

** already AM & FS accorded
** Proposal sent to DIO for Rs 10.00 lakhs*

Yours faithfully

[Signature]

**for Superintending Engineer
West Circle, Burdwan M. E. Dte.**

Deptt of Municipal Affairs,

Govt of West Bengal

19/11/07
contd ...P / 2

22-11-07

all fund 07/07/07 71 lakhs.

Memo. No. MED/SE(W)/ / W-120 / 04; Pt.-V1

Dated :


Copy forwarded for information to :

1. The Chairperson, Bansberia Municipality with a set of Scheme and other documents in original.
2. The Chief Engineer, M.E.Dte., Salt Lake, Bikash Bhavan, Kolkata.-91.
3. The Executive Engineer, Hooghly Division, M.E.Dte.- With a set of Scheme and other documents in original.

Superintending Engineer
West Circle, M. E. Dte.

Approved Amt. Rs.	Name of Work	Scheme Type	Scheme Code		Name of Scheme
			110	111	
1,00,000.00	Construction of...
1,00,000.00
2,00,000.00	Total				

Yours faithfully


 Superintending Engineer
 West Circle, M. E. Dte.
 Salt Lake, Kolkata-91

Furniture	Equipment	Drug	Ambulance	Repair & renovation
251600 ✓	959100 ✓	251100 ✓	500000	1000000
65400 ✓	399750 ✓	313010 ✓	500000	300000
318500 ✓	922000 ✓	<i>Panik</i> 50000 ✓	500000	1000000
108300 ✓	1612400 ✓	18450 ✓	500000	1000000
112900 ✓	1301400 ✓	69900 ✓		
306300 ✓	218900 ✓	50000 ✓		
15750 ✓	1157320 ✓	33100 ✓		
1435550 ✓	209500 ✓	50000 ✓		
142800 ✓	1539500 ✓	131400 ✓		
143500 ✓	48000 ✓	72500 ✓		
87400 ✓	260000 ✓	50000 ✓		
160000 ✓	927800 ✓	66000 ✓		
145000 ✓	345000	10000		
98750 ✓	905100 ✓			
72800 ✓	353000 ✓			
16200 ✓	791500 ✓			
345480 ✓	75000 ✓			
190800 ✓	24900 ✓			
214450 ✓	55500 ✓			
124650 ✓	356000 ✓			
99400 ✓	82700 ✓			
109400 ✓	34900 ✓			
242800 ✓	370000 ✓			
345000 ✓	204000 ✓			
	160500 ✓			
	218300 ✓			
	128500 ✓			
	492800 ✓			
	209300 ✓			
	56000 ✓			
	399600 ✓			
	100000 ✓			

Total	4807730	14918270	1145460	2000000	3300000
	5152730	14578270	1155460		
			G. Total		26171460

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Philux S-50 (5 in 1) + S-50 (5 in 1) with sterling in
Constant Voltage Transformer

22. Tally	209300	124650.	50,000	20,00000	33,000000
		99400			

23. gskampir	56000	109400	66000		
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24. siliguri	999600				
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25. Aswar	<u>14276720</u>	<u>4952930</u>	<u>1105610</u>	20,00000	33,000000
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		5152930.	1155610		
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25. Newst. →	14576720				
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gamm. →
Gamm. →

~~2618526~~
2618526

BOUW
145.77

FUR
51.53

DRUG
11.56

AND
20.00

REPAIR.
33.00

a) under 1 week/171/1
 b) 1 week to under 1 month
 c) 1 month to under 1 year
 d) 1 year to under 5 years

11.	Child Deaths		
		c) Deaths	
		b) Treated with ORS	
		a) Respon	
10.	Acute Diarrhoeal Diseases under 5 years		
		c) Deaths	
		b) Treated with Co-trim	
		a) Cases	180
9.	ARI under 5 years (Pneumonia)		
		ii) Deaths	
		i) Cases	
		c) Leprosy	
		i) Cases	3
		b) Tuberculosis	
		ii) Deaths	
		a) Malaria	
8.	Other specified communicable diseases		
		ii) Deaths	
		i) Cases	
		b) Measles	
		ii) Deaths	
		i) Cases	
		e) Whooping Cough	
		iii) Deaths	
		ii) Deaths	
		i) Cases	
		d) Tetanus other than N	
		iii) Deaths	
		i) Cases	
		c) Non Natal Tetanus	
		i) Cases	
		b) Poliomyelitis	
		iii) Deaths	
		i) Cases	
		a) Diphtheria	
		years children	
8.	Vaccine preventable diseases for under - 5		
No.	July to Sept		

DR. PRADEEP KUMAR IN THE REPORTING QUARTER

11. Child Deaths

10. Acute Diarrhoeal Diseases under 5 years

9. ARI under 5 years (Pneumonia)

8. Other specified communicable diseases

8. Vaccine preventable diseases for under - 5

No. July to Sept

11. Child Deaths

10. Acute Diarrhoeal Diseases under 5 years

9. ARI under 5 years (Pneumonia)

8. Other specified communicable diseases

8. Vaccine preventable diseases for under - 5

No. July to Sept

11. Child Deaths

10. Acute Diarrhoeal Diseases under 5 years

9. ARI under 5 years (Pneumonia)

8. Other specified communicable diseases

8. Vaccine preventable diseases for under - 5

No. July to Sept

STRUCTURAL DESIGN & ANALYSIS REPORT
FOR
THE PROPOSED EXTENSION OF SECOND FLOOR
OF ESOPD & MATERNITY BUILDING
AT
SAHAPUR MAIN ROAD, WARD NO.-12
UNDER
THE BANSBERIA MUNICIPALITY

CLIENT : -
BANSBERIA MUNICIPALITY

JOB EXECUTED BY-

M/S GEOCONS
10, SOURIN ROY ROAD
KOLKATA-700034

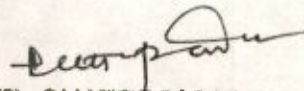
REF. NO GCS-BANSBERIA/07-08

Dated:

STRUCTURAL DESIGN & ANALYSIS REPORT
FOR
THE PROPOSED EXTENSION OF SECOND FLOOR
OF ESOPD & MATERNITY BUILDING
AT
SAHAPUR MAIN ROAD, WARD NO. - 12
UNDER
THE BANSBERIA MUNICIPALITY

CLIENT : -
BANSBERIA MUNICIPALITY

DESIGNED BY-
FOR GEOCONS
P.K. CHATTOPADHYAY
(B.E. Civil, MIGS LM-2014)


PRABIR KR. CHATTOPADHYAY
B.E. CIVIL, MIGS
Regd. no A/301157/5

CALCULATION OF LOAD

1. a) Dead Load Over Structure

a) Brick load (member load / UDL)

i) Load due to 250 mm thick wall for Stair Head Room

$$= (0.25 + 0.033) \times 2.10 \times 1.0 \times 1.92 \times 0.75 = 0.856 \text{ t/m}$$

[Assuming the average depth of beam 0.40 m , Height = 2.50-0.40 = 2.10m]

ii) Load due to 125 mm thick parapet wall

$$= (0.125 + 0.036) \times 0.90 \times 1.0 \times 1.92 = 0.278 \text{ t/m}$$

b) Load Coming From Roof Slab

i) Dead load of slab = $0.12 \times 2.50 = 0.30 \text{ t/m}^3$

ii) Load of plaster of slab = $0.006 \times 2.40 = 0.0144 \text{ t/m}^3$

iii) Load of roof treatment = $0.10 \times 2.40 = 0.240 \text{ t/m}^3$

2. Load Applied For Analysis By STAAD Environment

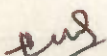
Load Case i) Self weight of structure (it is auto generated)

Load Case ii) Live load

Load Case iii) Dead load (it is applied as floor load)

Load Case iv) Seismic load on X direction

Load Case v) Seismic load on Z direction



DESIGNED BY

DATA AVAILABLE

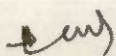
- | | | |
|----|------------------------------|-----------|
| 1. | Height Of Second Floor | = 3.50 m |
| 2. | Height Of Stair Head Room | = 2.50 m |
| 3. | Thickness of outside wall | = 0.25 m |
| 4. | Thickness of partition wall | = 0.125 m |
| 5. | Thickness of outside plaster | = 18 mm |
| 6. | Thickness of inside plaster | = 15 mm |
| 7. | Grade of Concrete | = M20 |
| 8. | Grade of Steel | = Fe-415 |

ASSUMED DATA

1. Clear cover to main reinforcement shall be as follows:

Items	Top	Bottom	Side
i) Column	-	40 mm	40 mm
ii) Floor Beam	15 mm	25 mm	25 mm
iii) Roof Slab	15 mm	15 mm	25 mm

2.	i) Unit weight of P.C.C. as per IS code	= 2.40 t/m ³
	ii) Unit weight of R.C.C. as per IS code	= 2.50 t/m ³
	iii) Unit weight of Brick work IS code	= 1.92 t/m ³
	iv) Live load of floor	= 0.3 t/m ²
	v) Live load of roof (accessible)	= 0.15 t/m ²
	vi) Live load of roof (non-accessible)	= 0.075 t/m ²



DESIGNED BY

Design of slab [Consider Critical Slab Panel]
(Assumed Thickness of the slab 120 mm)

Calculation for load on slab –

i)	Self weight of slab	=	
	0.120×2500	=	300 kg / m^2
ii)	Load due to floor finish	=	
	0.1×2400	=	240 kg / m^2
iii)	Load due to ceiling plaster	=	
	0.006×2400	=	14.4 kg / m^2
iv)	Live load	=	150 kg / m^2
	Total load	=	704.4 kg / m^2
			Say 705 kg / m^2

From IS 456, table 26, for $l_y/l_x = 6.2 / 3.10 = 2.0$

(Two adjacent edge continuous)

The bending moment co-efficient are $\alpha_x = 0.091$, $\alpha'_x = 0.047$

$\alpha_y = 0.069$, $\alpha'_y = 0.035$

Now maximum moments per meter width = $0.091 \times 3.1^2 \times 705 \text{ kgm/m}$
= $617 \text{ kgm/m} = 6.17 \text{ knm/m}$

flexure moment = $1.5 \times 6.17 = 9.26 \text{ knm/m}$.

From SP – 16, table – 37 and 36 the spacing required for 8 mm ϕ bar against the above values = 187 mm

Provide 8 mm ϕ bar @ 175 mm c/c. at bottom in shorter direction and 8 mm ϕ bar @ 175 mm c/c at top of support in shorter direction

And 8 mm ϕ bar @ 175 mm c/c. at bottom in longer direction and 8 mm ϕ bar @ 175 mm c/c at top of support in longer direction

Area of steel required = 267 mm^2

Area of steel provided = 286 mm^2

Percentage of tension reinforcement = 0.24%

Check for vertical deflection (Re- cl. 23.2.1 & fig. 4 of IS 456)

$f_s = 0.58 \times 415 \times 267/286 = 225 \text{ n/mm}^2$

from fig – 4, modification factor = 1.65

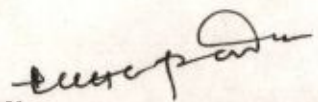
Effective depth required from deflection criteria = $3100/26 \times 1.65 = 72 \text{ mm}$

Effective depth provided = $120 \text{ mm} - 15 \text{ mm} = 105 \text{ mm} > 72 \text{ mm}$

Considering 15 mm clear cover (from IS 456, table 16, with mild exposure, note 1)

Hence safe.

DESIGNED BY


PRABIR KR. CHATTOPADHYAY

B.E. CIVIL, MGS

Regd. no A/501157/5



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Job No **GCS_BNS - 01** Sheet No **1** Rev

Part SAHAPUR MAIN ROAD, W - 12

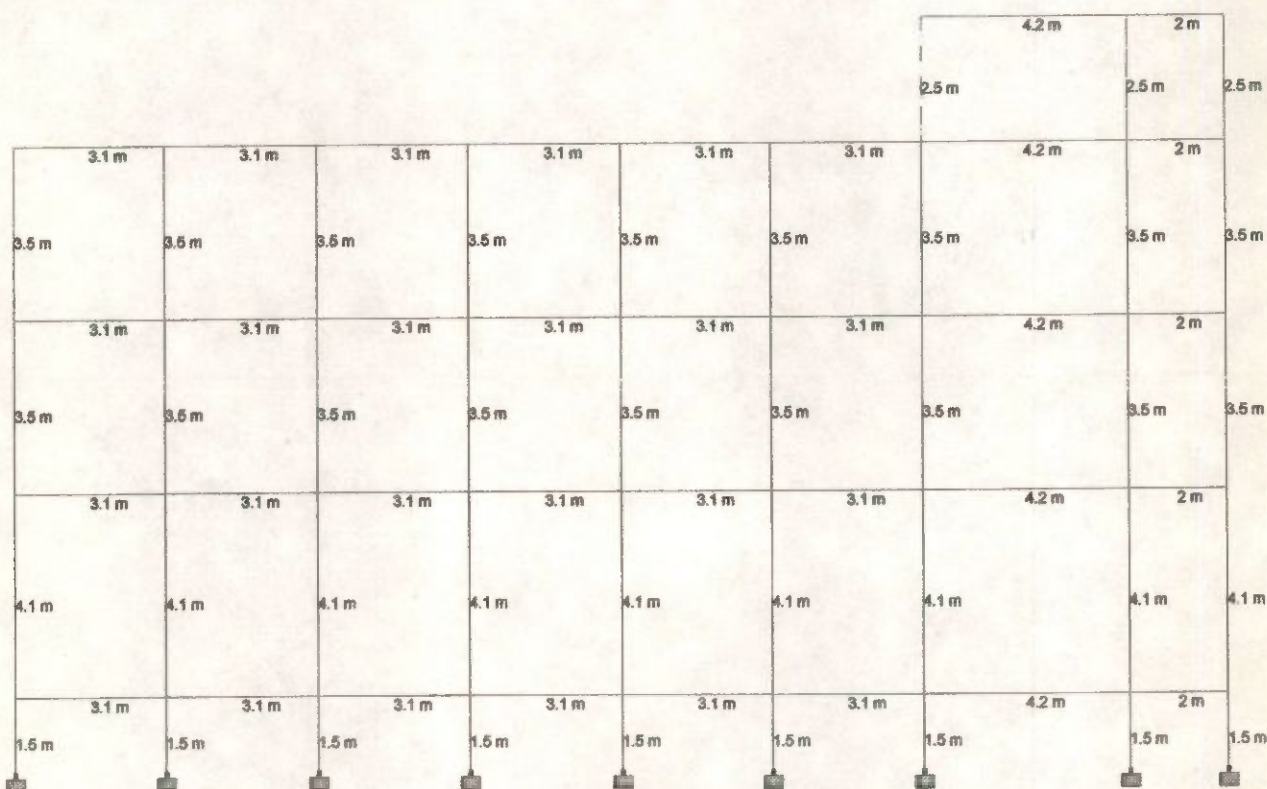
Job Title **EXTENSION OF ESOPD & MATERNITY BLDG**

Ref **QUOTATION - 2488/HEALTH/KUSP**

By **PKC** Date **02-Aug-07** Chd

Client **BANSBERIA MUNICIPALITY**

File **ESOPD.std** Date/Time **02-Aug-2007 15:03**





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Job No
GCS_BNS - 01

Sheet No
1

Rev

Part **SAHAPUR MAIN ROAD, W - 12**

Job Title **EXTENSION OF ESOPD & MATERNITY BLDG**

Ref **QUOTATION - 2488/HEALTH/KUSP**

By **PKC**

Date **02-Aug-07**

Chd

Client **BANSBERIA MUNICIPALITY**

File **ESOPD.std**

Date/Time **02-Aug-2007 15:03**





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Job No **GCS_BNS - 01** Sheet No **1** Rev

Part SAHAPUR MAIN ROAD, W - 12

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Ref **QUOTATION - 2488/HEALTH/KUSP**

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Client **BANSBERIA MUNICIPALITY**

File **ESOPD.std** Date/Time **02-Aug-2007 15:03**

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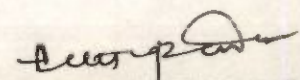
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4. JOB CLIENT BANSBERIA MUNICIPALITY
5. JOB NO GCS_BNS - 01
6. JOB PART SAHAPUR MAIN ROAD, W - 12
7. JOB REF QUOTATION - 2488/HEALTH/KUSP
8. ENGINEER NAME PKC
9. ENGINEER DATE 02-AUG-07
10. END JOB INFORMATION
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12. UNIT METER MTON
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PRABIR KR. CHATTOPADHYAY
 R.E. CIVIL, MFS
 Regd. no A/501157/5

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 79. 134 22 93; 135 24 94; 136 93 94; 137 93 95; 138 94 96; 139 26 95; 140 28 96
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 81. 148 98 100; 149 34 99; 150 36 100; 151 99 100; 152 85 101; 153 86 102
 82. 154 88 103; 155 90 104; 156 92 105; 157 94 106; 158 96 107; 159 100 108
 83. 160 101 102; 161 39 101; 162 40 102; 163 102 103; 164 42 103; 165 103 104
 84. 166 44 104; 167 104 105; 168 46 105; 169 105 106; 170 48 106; 171 106 107
 85. 172 50 107; 173 54 108; 174 101 109; 175 102 110; 176 103 111; 177 104 112
 86. 178 105 113; 179 106 114; 180 107 117; 181 108 118; 182 109 110; 183 57 109
 87. 184 58 110; 185 110 111; 186 60 111; 187 111 112; 188 62 112; 189 112 113
 88. 190 64 113; 191 113 114; 192 66 114; 193 114 115; 194 68 115; 195 72 116
 89. 196 117 115; 197 74 117; 198 118 116; 199 76 118; 200 115 119; 201 117 121
 90. 202 78 119; 203 120 119; 204 80 120; 205 120 118; 206 119 116; 207 121 120
 91. 208 98 121; 209 122 123; 210 83 122; 211 84 123; 212 124 125; 213 85 124
 92. 214 86 125; 215 122 124; 216 123 125; 217 123 126; 218 125 127; 219 87 126
 93. 220 88 127; 221 126 127; 222 126 128; 223 127 129; 224 89 128; 225 90 129
 94. 226 128 129; 227 128 130; 228 129 131; 229 91 130; 230 92 131; 231 130 131
 95. 232 130 132; 233 131 133; 234 93 132; 235 94 133; 236 132 133; 237 132 134
 96. 238 133 135; 239 95 134; 240 96 135; 241 134 135; 242 134 136; 243 135 137

97. 244 97 136; 245 98 137; 246 136 137; 247 136 138; 248 137 139; 249 99 138
 98. 250 100 139; 251 138 139; 252 124 140; 253 125 141; 254 127 142; 255 129 143
 99. 256 131 144; 257 133 145; 258 135 146; 259 139 147; 260 140 141; 261 101 140
 100. 262 102 141; 263 141 142; 264 103 142; 265 142 143; 266 104 143; 267 143 144
 101. 268 105 144; 269 144 145; 270 106 145; 271 145 146; 272 107 146; 273 108 147
 102. 274 140 148; 275 141 149; 276 142 150; 277 143 151; 278 144 152; 279 145 153
 103. 280 146 156; 281 147 157; 282 148 149; 283 109 148; 284 110 149; 285 149 150
 104. 286 111 150; 287 150 151; 288 112 151; 289 151 152; 290 113 152; 291 152 153
 105. 292 114 153; 293 153 154; 294 115 154; 295 116 155; 296 156 154; 297 117 156
 106. 298 157 155; 299 118 157; 300 154 158; 301 156 160; 302 119 158; 303 159 158
 107. 304 120 159; 305 159 157; 306 158 155; 307 160 159; 308 137 160; 310 122 161
 108. 311 123 162; 313 124 163; 314 125 164; 319 126 165; 320 127 166; 324 128 167
 109. 325 129 168; 329 130 169; 330 131 170; 334 132 171; 335 133 172; 339 134 173
 110. 340 135 174; 344 136 175; 345 137 176; 349 138 177; 350 139 178; 361 140 179
 111. 362 141 180; 364 142 181; 366 143 182; 368 144 183; 370 145 184; 372 146 185
 112. 373 147 186; 383 148 187; 384 149 188; 386 150 189; 388 151 190; 390 152 191
 113. 392 153 192; 394 154 193; 395 155 194; 397 156 195; 399 157 196; 402 158 197
 114. 404 159 198; 409 193 200; 410 194 201; 411 195 202; 412 196 203; 413 197 204
 115. 414 198 205; 416 202 200; 417 203 201; 418 200 204; 420 205 204; 421 205 203
 116. 422 204 201; 423 202 205; 901 161 162; 902 163 164; 903 161 163; 904 162 164
 117. 905 162 165; 906 164 166; 907 165 166; 908 165 167; 909 166 168; 910 167 168
 118. 911 167 169; 912 168 170; 913 169 170; 914 169 171; 915 170 172; 916 171 172
 119. 917 171 173; 918 172 174; 919 173 174; 920 173 175; 921 174 176; 922 175 176
 120. 923 175 177; 924 176 178; 925 177 178; 926 163 179; 927 164 180; 928 166 181
 121. 929 168 182; 930 170 183; 931 172 184; 932 174 185; 933 178 186; 934 179 180
 122. 935 180 181; 936 181 182; 937 182 183; 938 183 184; 939 184 185; 940 179 187
 123. 941 180 188; 942 181 189; 943 182 190; 944 183 191; 945 184 192; 946 185 195
 124. 947 186 196; 948 187 188; 949 188 189; 950 189 190; 951 190 191; 952 191 192
 125. 953 192 193; 954 195 193; 955 196 194; 956 193 197; 957 195 199; 958 198 197
 126. 959 198 196; 960 197 194; 961 199 198; 962 176 199
 127. DEFINE MATERIAL START
 128. ISOTROPIC CONCRETE
 129. E 2.21467E+006
 130. POISSON 0.17
 131. DENSITY 2.40262
 132. ALPHA 1E-005
 133. DAMP 0.05
 134. END DEFINE MATERIAL
 135. MEMBER PROPERTY AMERICAN
 136. 6 12 17 22 27 32 37 55 57 59 61 63 65 97 104 114 120 125 130 135 140 145 162 -
 137. 164 166 168 170 172 197 204 214 220 225 230 235 240 245 262 264 266 268 270 -
 138. 272 297 304 314 320 325 330 335 340 345 362 364 366 368 370 372 397 404 411 -
 139. 414 PRIS YD 0.35 ZD 0.35
 140. 2 3 5 11 16 21 26 31 36 41 42 54 69 80 81 83 85 87 89 91 95 99 102 110 111 -
 141. 113 119 124 129 134 139 144 149 150 161 173 183 184 186 188 190 192 194 195 -
 142. 199 202 210 211 213 219 224 229 234 239 244 249 250 261 273 283 284 286 288 -
 143. 290 292 294 295 299 302 310 311 313 319 324 329 334 339 344 349 350 361 373 -
 144. 383 384 386 388 390 392 394 395 399 402 409 410 412 -
 145. 413 PRIS YD 0.4 ZD 0.25
 146. 7 8 13 18 23 28 33 38 43 T0 50 52 Y0 T0 76 Y6 96 101 105 107 108 115 116 121 -
 147. 126 131 136 141 146 151 T0 159 174 T0 181 196 201 205 207 208 215 216 221 -
 148. 226 231 236 241 246 251 T0 259 274 T0 281 296 301 305 307 308 416 421 423 -
 149. 903 904 907 910 913 916 919 922 925 T0 933 940 T0 947 954 957 959 961 -
 150. 962 PRIS YD 0.5 ZD 0.25
 151. 1 4 9 10 14 15 19 20 24 25 29 30 34 35 39 40 53 56 58 60 62 64 79 82 84 86 -
 152. 88 90 98 100 103 106 109 112 117 118 122 123 127 128 132 133 137 138 142 -

153. 143 147 148 160 163 165 167 169 171 182 185 187 189 191 193 198 200 203 206 -
 154. 209 212 217 218 222 223 227 228 232 233 237 238 242 243 247 248 260 263 265 -
 155. 267 269 271 282 285 287 289 291 293 298 300 303 306 417 418 420 422 901 902 -
 156. 905 906 908 909 911 912 914 915 917 918 920 921 923 924 934 TO 939 -
 157. 948 TO 953 955 956 958 960 PRIS YD 0.35 ZD 0.25
 158. CONSTANTS
 159. BETA 90 MEMB 2 5 41 42 54 69 80 95 110 113 149 150 161 173 183 195 210 213 -
 160. 249 250 261 273 283 295 310 313 349 350 361 373 383 395 410
 161. MATERIAL CONCRETE MEMB 1 TO 50 52 TO 65 69 TO 76 78 TO 91 95 TO 308 310 311 -
 162. 313 314 319 320 324 325 329 330 334 335 339 340 344 345 349 350 361 362 364 -
 163. 366 368 370 372 373 383 384 386 388 390 392 394 395 397 399 402 404 -
 164. 409 TO 414 416 TO 418 420 TO 423 901 TO 962
 165. SUPPORTS
 166. 1 2 5 6 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 38 41 43 45 47 49 53 55 -
 167. 56 59 61 63 65 67 71 73 75 77 79 FIXED
 168. MEMBER RELEASE
 169. 108 208 308 962 END MZ
 170. DEFINE 1893 LOAD
 171. ZONE 0.05 I 1.6 K 1 B 1
 172. SELFWEIGHT
 173. MEMBER WEIGHT
 174. *250MM THICK OUTER WALL
 175. 109 115 117 122 127 132 137 142 147 151 152 159 174 181 182 185 187 189 191 -
 176. 193 198 200 206 209 215 217 222 227 232 237 242 247 251 252 259 274 281 282 -
 177. 285 287 289 291 293 298 300 306 UNI 1.26
 178. *125 MM THICK INTERNAL PARTITION WALL
 179. 112 116 118 121 123 126 128 131 133 136 138 141 143 146 148 153 TO 158 160 -
 180. 163 165 167 169 171 175 TO 180 196 201 203 205 207 208 212 216 218 221 223 -
 181. 226 228 231 233 236 238 241 243 246 248 253 TO 258 260 263 265 267 269 271 -
 182. 275 TO 280 296 301 303 305 307 308 UNI 0.784
 183. *250MM THICK OUTER WALL FOR STAIR HEAD ROOM
 184. 954 TO 957 959 TO 961 UNI 0.856
 185. *125 MM THICK PARAPET WALL
 186. 901 903 905 908 911 914 917 920 923 925 926 933 940 947 TO 953 UNI 0.278
 187. LOAD 5 EQ ALONG Z
 188. 1893 LOAD Z 1
 189. LOAD 6 EQ ALONG X
 190. 1893 LOAD X 1
 191. LOAD 1 SELF WT
 192. SELFWEIGHT Y -1
 193. LOAD 2 DEAD LOAD OF SLAB
 194. FLOOR LOAD
 195. YRANGE 5.2 9.5 FLOAD -0.434
 196. YRANGE 12 13 FLOAD -0.554
 197. YRANGE 14.8 15.5 FLOAD -0.554
 198. LOAD 3 LIVE LOAD ON SLAB
 199. FLOOR LOAD

200. YRANGE 5.2 9.5 FLOAD -0.25
 201. YRANGE 12 13 FLOAD -0.15
 202. YRANGE 14.8 15.5 FLOAD -0.075
 203. LOAD 4 BRICK LOAD
 204. MEMBER LOAD
 205. *250MM THICK OUTER WALL
 206. 109 115 117 122 127 132 137 142 147 151 152 159 174 181 182 185 187 189 191 -
 207. 193 198 200 206 209 215 217 222 227 232 237 242 247 251 252 259 274 281 282 -
 208. 285 287 289 291 293 298 300 304 UNI GY -1.26
 209. *125 MM THICK INTERNAL PARTITION WALL
 210. 112 116 118 121 123 126 128 131 133 136 138 141 143 146 148 153 TO 158 160 -
 211. 163 165 167 169 171 175 TO 180 196 201 203 205 207 208 212 216 218 221 223 -
 212. 226 228 231 233 236 238 241 243 246 248 253 TO 258 260 263 265 267 269 271 -
 213. 275 TO 280 296 301 303 305 307 308 UNI GY -0.784
 214. *250MM THICK OUTER WALL FOR STAIR HEAD ROOM
 215. 954 TO 957 959 TO 961 UNI GY -0.856
 216. *125 MM THICK PARAPET WALL
 217. 901 903 905 908 911 914 917 920 923 925 926 933 940 947 TO 953 UNI GY -0.278
 218. LOAD COMB 20 1.1 DL + 1.1 LL
 219. 1 1.1 2 1.1 3 1.1 4 1.1
 220. LOAD COMB 21 SELF+DL+LL+BRICK FOR BEAM COL DESIGN
 221. 1 1.5 2 1.5 3 1.5 4 1.5
 222. LOAD COMB 22 SELF+DL+LL+BRICK+SL(+VE X) FOR BEAM COL DESIGN
 223. 1 1.2 2 1.2 3 1.2 4 1.2 5 1.2
 224. LOAD COMB 23 SELF+DL+LL+BRICK+SL(-VE X) FOR BEAM COL DESIGN
 225. 1 1.2 2 1.2 3 1.2 4 1.2 5 -1.2
 226. LOAD COMB 24 SELF+DL+LL+BRICK+SL(+VE Z) FOR BEAM COL DESIGN
 227. 1 1.2 2 1.2 3 1.2 4 1.2 6 1.2
 228. LOAD COMB 25 SELF+DL+LL+BRICK+SL(-VE Z) FOR BEAM COL DESIGN
 229. 1 1.2 2 1.2 3 1.2 4 1.2 6 -1.2
 230. PERFORM ANALYSIS

PROBLEM STATISTICS

NUMBER OF JOINTS/MEMBER+ELEMENTS/SUPPORTS = 206/ 413/ 38
 ORIGINAL/FINAL BAND-WIDTH= 75/ 23/ 114 DOF
 TOTAL PRIMARY LOAD CASES = 6, TOTAL DEGREES OF FREEDOM = 972
 SIZE OF STIFFNESS MATRIX = 111 DOUBLE KILO-WORDS
 REQRD/AVAIL. DISK SPACE = 13.9/ 16086.4 MB

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*****
*
* TIME PERIOD FOR Z 1893 LOADING = 0.66159 SEC *
* FACTOR C PER 1893= 0.732, LOAD FACTOR= 1.000 *
* FACTOR V PER 1893= 0.0585 X 846.49 *
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*
* TIME PERIOD FOR X 1893 LOADING = 0.68181 SEC *
* FACTOR C PER 1893= 0.713, LOAD FACTOR= 1.000 *
* FACTOR V PER 1893= 0.0571 X 846.49 *
*
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231. *SUPPORT REACTION FOR FOUNDATION DESIGN
232. LOAD LIST 20
233. *PRINT SUPPORT REACTION
234. UNIT MMS NEWTON
235. LOAD LIST 21 TO 25
236. *BEAM COL DESIGN
237. START CONCRETE DESIGN
CONCRETE DESIGN
238. CODE INDIAN
239. FC 20 ALL
240. DESIGN BEAM 901 TO 906 921 924 925 940 941 956 TO 962
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BEAM NO. 901 DESIGN RESULTS

M20

Fe415 (Main)

Fe415 (Sec.)

LENGTH: 3100.0 mm SIZE: 250.0 mm X 350.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	775.0 mm	1550.0 mm	2325.0 mm	3100.0 mm
TOP REINF.	179.22 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)	179.22 (Sq. mm)
BOTTOM REINF.	0.00 (Sq. mm)	163.34 (Sq. mm)	163.34 (Sq. mm)	163.34 (Sq. mm)	0.00 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	775.0 mm	1550.0 mm	2325.0 mm	3100.0 mm
TOP REINF.	2-120 1 layer(s)	2-120 1 layer(s)	2-120 1 layer(s)	2-120 1 layer(s)	2-120 1 layer(s)
BOTTOM REINF.	2-120 1 layer(s)	2-120 1 layer(s)	2-120 1 layer(s)	2-120 1 layer(s)	2-120 1 layer(s)
SHEAR REINF.	2 legged 80 @ 120 mm c/c	2 legged 80 @ 120 mm c/c	2 legged 80 @ 120 mm c/c	2 legged 80 @ 120 mm c/c	2 legged 80 @ 120 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 440.0 mm AWAY FROM START SUPPORT

VY = 18.00 MX = -3.48 LD= 21

Provide 2 Legged 80 @ 120 mm c/c

SHEAR DESIGN RESULTS AT 515.0 mm AWAY FROM END SUPPORT

VY = -19.26 MX = -3.48 LD= 21

Provide 2 Legged 80 @ 120 mm c/c

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BEAM NO. 902 DESIGN RESULTS

M20

Fe415 (Main)

Fe415 (Sec.)

LENGTH: 3100.0 mm SIZE: 250.0 mm X 350.0 mm COVER: 25.0 mm

SUMMARY OF PROVIDED REINF. AREA

SECTION	Ø.Ø mm	155Ø.Ø mm	31ØØ.Ø mm	465Ø.Ø mm	62ØØ.Ø mm
TOP REINF.	3-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	4-12Ø 1 layer(s)
BOTTOM REINF.	2-1ØØ 1 layer(s)	4-1ØØ 1 layer(s)	5-1ØØ 1 layer(s)	4-1ØØ 1 layer(s)	2-1ØØ 1 layer(s)
SHEAR REINF.	2 legged 8Ø @ 15Ø mm c/c	2 legged 8Ø @ 15Ø mm c/c	2 legged 8Ø @ 15Ø mm c/c	2 legged 8Ø @ 15Ø mm c/c	2 legged 8Ø @ 15Ø mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 665.Ø mm AWAY FROM START SUPPORT

VY = 52.47 MX = 0.13 LD= 21
Provide 2 Legged 8Ø @ 15Ø mm c/c

SHEAR DESIGN RESULTS AT 665.Ø mm AWAY FROM END SUPPORT

VY = -61.5Ø MX = 0.13 LD= 21
Provide 2 Legged 8Ø @ 15Ø mm c/c

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BEAM NO. 9Ø4 DESIGN RESULTS

A2Ø Fe415 (Main) Fe415 (Sec.)
LENGTH: 62ØØ.Ø mm SIZE: 25Ø.Ø mm X 5ØØ.Ø mm COVER: 25.Ø mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	Ø.Ø mm	155Ø.Ø mm	31ØØ.Ø mm	465Ø.Ø mm	62ØØ.Ø mm
TOP REINF.	281.3Ø (Sq. mm)	0.ØØ (Sq. mm)	0.ØØ (Sq. mm)	0.ØØ (Sq. mm)	732.54 (Sq. mm)
BOTTOM REINF.	0.ØØ (Sq. mm)	374.24 (Sq. mm)	58Ø.59 (Sq. mm)	239.13 (Sq. mm)	0.ØØ (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	Ø.Ø mm	155Ø.Ø mm	31ØØ.Ø mm	465Ø.Ø mm	62ØØ.Ø mm
TOP REINF.	4-1ØØ 1 layer(s)	2-1ØØ 1 layer(s)	2-1ØØ 1 layer(s)	2-1ØØ 1 layer(s)	1Ø-1ØØ 2 layer(s)
BOTTOM REINF.	2-16Ø 1 layer(s)	2-16Ø 1 layer(s)	3-16Ø 1 layer(s)	2-16Ø 1 layer(s)	2-16Ø 1 layer(s)
SHEAR REINF.	2 legged 8Ø @ 15Ø mm c/c	2 legged 8Ø @ 15Ø mm c/c	2 legged 8Ø @ 15Ø mm c/c	2 legged 8Ø @ 15Ø mm c/c	2 legged 8Ø @ 15Ø mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 590.0 mm AWAY FROM START SUPPORT

VY = 71.65 MX = -0.13 LD= 21
Provide 2 legged 8@ @ 150 mm c/c

SHEAR DESIGN RESULTS AT 640.0 mm AWAY FROM END SUPPORT

VY = -97.03 MX = -0.13 LD= 21
Provide 2 legged 8@ @ 150 mm c/c

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BEAM NO. 905 DESIGN RESULTS

M20 Fe415 (Main) Fe415 (Sec.)
LENGTH: 3100.0 mm SIZE: 250.0 mm X 350.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	775.0 mm	1550.0 mm	2325.0 mm	3100.0 mm
TOP REINF.	163.34 (Sq. mm)	163.34 (Sq. mm)	0.00 (Sq. mm)	163.34 (Sq. mm)	163.34 (Sq. mm)
BOTTOM REINF.	0.00 (Sq. mm)	163.34 (Sq. mm)	163.34 (Sq. mm)	163.34 (Sq. mm)	0.00 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	775.0 mm	1550.0 mm	2325.0 mm	3100.0 mm
TOP REINF.	2-12@ 1 layer(s)	2-12@ 1 layer(s)	2-12@ 1 layer(s)	2-12@ 1 layer(s)	2-12@ 1 layer(s)
BOTTOM REINF.	2-12@ 1 layer(s)	2-12@ 1 layer(s)	2-12@ 1 layer(s)	2-12@ 1 layer(s)	2-12@ 1 layer(s)
SHEAR REINF.	2 legged 8@ @ 120 mm c/c	2 legged 8@ @ 120 mm c/c	2 legged 8@ @ 120 mm c/c	2 legged 8@ @ 120 mm c/c	2 legged 8@ @ 120 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 515.0 mm AWAY FROM START SUPPORT

VY = 18.18 MX = -0.16 LD= 25
Provide 2 legged 8@ @ 120 mm c/c

SHEAR DESIGN RESULTS AT 515.0 mm AWAY FROM END SUPPORT

VY = -18.49 MX = -0.20 LD= 21
Provide 2 legged 8@ @ 120 mm c/c

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SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	775.0 mm	1550.0 mm	2325.0 mm	3100.0 mm
TOP REINF.	270.49 (Sq. mm)	163.86 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)	163.86 (Sq. mm)
BOTTOM REINF.	0.00 (Sq. mm)	163.34 (Sq. mm)	163.34 (Sq. mm)	163.34 (Sq. mm)	0.00 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	775.0 mm	1550.0 mm	2325.0 mm	3100.0 mm
TOP REINF.	4-100 1 layer(s)	3-100 1 layer(s)	2-100 1 layer(s)	2-100 1 layer(s)	3-100 1 layer(s)
BOTTOM REINF.	2-120 1 layer(s)	2-120 1 layer(s)	2-120 1 layer(s)	2-120 1 layer(s)	2-120 1 layer(s)
SHEAR REINF.	2 legged 80 @ 120 mm c/c	2 legged 80 @ 120 mm c/c	2 legged 80 @ 120 mm c/c	2 legged 80 @ 120 mm c/c	2 legged 80 @ 120 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 490.0 mm AWAY FROM START SUPPORT

VY = 29.30 MX = -2.61 LD= 21
Provide 2 legged 80 @ 120 mm c/c

SHEAR DESIGN RESULTS AT 490.0 mm AWAY FROM END SUPPORT

VY = -20.62 MX = -2.61 LD= 21
Provide 2 Legged 80 @ 120 mm c/c

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BEAM NO. 924 DESIGN RESULTS

M20 Fe415 (Main) Fe415 (Sec.)

LENGTH: 3100.0 mm SIZE: 250.0 mm X 350.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	775.0 mm	1550.0 mm	2325.0 mm	3100.0 mm
TOP REINF.	164.12 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)	170.04 (Sq. mm)
BOTTOM REINF.	0.00 (Sq. mm)	163.34 (Sq. mm)	163.34 (Sq. mm)	163.34 (Sq. mm)	0.00 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	Ø.Ø mm	775.Ø mm	155Ø.Ø mm	2325.Ø mm	31ØØ.Ø mm
TOP REINF.	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)
BOTTOM REINF.	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)
SHEAR REINF.	2 legged 8Ø Ø 12Ø mm c/c	2 legged 8Ø Ø 12Ø mm c/c	2 legged 8Ø Ø 12Ø mm c/c	2 legged 8Ø Ø 12Ø mm c/c	2 legged 8Ø Ø 12Ø mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 49Ø.Ø mm AWAY FROM START SUPPORT

VY = 24.93 MX = 1.29 LD= 21

Provide 2 legged 8Ø Ø 12Ø mm c/c

SHEAR DESIGN RESULTS AT 44Ø.Ø mm AWAY FROM END SUPPORT

VY = -25.68 MX = 1.29 LD= 21

Provide 2 legged 8Ø Ø 12Ø mm c/c

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BEAM NO. 925 DESIGN RESULTS

M2Ø

Fe415 (Main)

Fe415 (Sec.)

LENGTH: 62ØØ.Ø mm

SIZE: 25Ø.Ø mm X 5ØØ.Ø mm COVER: 25.Ø mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	Ø.Ø mm	155Ø.Ø mm	31ØØ.Ø mm	465Ø.Ø mm	62ØØ.Ø mm
TOP REINF.	319.61 (Sq. mm)	Ø.ØØ (Sq. mm)	Ø.ØØ (Sq. mm)	Ø.ØØ (Sq. mm)	415.78 (Sq. mm)
BOTTOM REINF.	Ø.ØØ (Sq. mm)	24Ø.66 (Sq. mm)	358.48 (Sq. mm)	24Ø.66 (Sq. mm)	Ø.ØØ (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	Ø.Ø mm	155Ø.Ø mm	31ØØ.Ø mm	465Ø.Ø mm	62ØØ.Ø mm
TOP REINF.	3-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	4-12Ø 1 layer(s)
BOTTOM REINF.	2-1ØØ 1 layer(s)	4-1ØØ 1 layer(s)	5-1ØØ 1 layer(s)	4-1ØØ 1 layer(s)	2-1ØØ 1 layer(s)
SHEAR REINF.	2 legged 8Ø Ø 15Ø mm c/c	2 legged 8Ø Ø 15Ø mm c/c	2 legged 8Ø Ø 15Ø mm c/c	2 legged 8Ø Ø 15Ø mm c/c	2 legged 8Ø Ø 15Ø mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 665.0 mm AWAY FROM START SUPPORT

VY = 52.58 MX = -0.51 LD= 21
Provide 2 Legged 8@ @ 150 mm c/c

SHEAR DESIGN RESULTS AT 665.0 mm AWAY FROM END SUPPORT

VY = -61.39 MX = -0.51 LD= 21
Provide 2 Legged 8@ @ 150 mm c/c

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BEAM NO. 940 DESIGN RESULTS

M20 Fe415 (Main) Fe415 (Sec.)

LENGTH: 5600.0 mm SIZE: 250.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1400.0 mm	2800.0 mm	4200.0 mm	5600.0 mm
TOP REINF.	330.74 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)	244.09 (Sq. mm)
BOTTOM REINF.	0.00 (Sq. mm)	240.66 (Sq. mm)	279.57 (Sq. mm)	240.66 (Sq. mm)	0.00 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1400.0 mm	2800.0 mm	4200.0 mm	5600.0 mm
TOP REINF.	3-12@ 1 layer(s)	2-12@ 1 layer(s)	2-12@ 1 layer(s)	2-12@ 1 layer(s)	3-12@ 1 layer(s)
BOTTOM REINF.	2-10@ 1 layer(s)	4-10@ 1 layer(s)	4-10@ 1 layer(s)	4-10@ 1 layer(s)	2-10@ 1 layer(s)
SHEAR REINF.	2 legged 8@ @ 150 mm c/c	2 legged 8@ @ 150 mm c/c	2 legged 8@ @ 150 mm c/c	2 legged 8@ @ 150 mm c/c	2 legged 8@ @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 665.0 mm AWAY FROM START SUPPORT

VY = 50.75 MX = -0.18 LD= 21
Provide 2 Legged 8@ @ 150 mm c/c

SHEAR DESIGN RESULTS AT 665.0 mm AWAY FROM END SUPPORT

VY = -45.89 MX = -0.18 LD= 21
Provide 2 Legged 8@ @ 150 mm c/c

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BEAM NO. 941 DESIGN RESULTS

M20 Fe415 (Main) Fe415 (Sec.)

LENGTH: 5600.0 mm SIZE: 250.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1400.0 mm	2800.0 mm	4200.0 mm	5600.0 mm
TOP REINF.	545.76 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)	240.66 (Sq. mm)
BOTTOM REINF.	0.00 (Sq. mm)	240.66 (Sq. mm)	460.88 (Sq. mm)	300.61 (Sq. mm)	0.00 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1400.0 mm	2800.0 mm	4200.0 mm	5600.0 mm
TOP REINF.	7-100 2 layer(s)	2-100 1 layer(s)	2-100 1 layer(s)	2-100 1 layer(s)	4-100 1 layer(s)
BOTTOM REINF.	2-100 1 layer(s)	4-100 1 layer(s)	6-100 1 layer(s)	4-100 1 layer(s)	2-100 1 layer(s)
SHEAR REINF.	2 legged 80 @ 150 mm c/c	2 legged 80 @ 150 mm c/c	2 legged 80 @ 150 mm c/c	2 legged 80 @ 150 mm c/c	2 legged 80 @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 640.0 mm AWAY FROM START SUPPORT

VY = 70.71 MX = 0.11 LD= 21
Provide 2 Legged 80 @ 150 mm c/c

SHEAR DESIGN RESULTS AT 590.0 mm AWAY FROM END SUPPORT

VY = -63.17 MX = 0.11 LD= 21
Provide 2 Legged 80 @ 150 mm c/c

BEAM NO. 956 DESIGN RESULTS

M20 Fe415 (Main) Fe415 (Sec.)

LENGTH: 4200.0 mm SIZE: 250.0 mm X 350.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	Ø.Ø mm	1050.0 mm	2100.0 mm	3150.0 mm	4200.0 mm
TOP REINF.	414.02 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)	372.62 (Sq. mm)
BOTTOM REINF.	0.00 (Sq. mm)	163.86 (Sq. mm)	233.56 (Sq. mm)	163.86 (Sq. mm)	0.00 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	Ø.Ø mm	1050.0 mm	2100.0 mm	3150.0 mm	4200.0 mm
TOP REINF.	4-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	4-12Ø 1 layer(s)
BOTTOM REINF.	2-10Ø 1 layer(s)	3-10Ø 1 layer(s)	3-10Ø 1 layer(s)	3-10Ø 1 layer(s)	2-10Ø 1 layer(s)
SHEAR REINF.	2 legged 8Ø Ø 120 mm c/c	2 legged 8Ø Ø 120 mm c/c	2 legged 8Ø Ø 120 mm c/c	2 legged 8Ø Ø 120 mm c/c	2 legged 8Ø Ø 120 mm c/c

SHEAR DESIGN RESULTS AT D (DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 515.0 mm AWAY FROM START SUPPORT

VY = 46.29 MX = -0.29 LD= 21
Provide 2 legged 8Ø Ø 120 mm c/c

SHEAR DESIGN RESULTS AT 515.0 mm AWAY FROM END SUPPORT

VY = -45.29 MX = -0.29 LD= 21
Provide 2 legged 8Ø Ø 120 mm c/c

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BEAM NO. 957 DESIGN RESULTS

M20 Fe415 (Main) Fe415 (Sec.)
LENGTH: 3100.0 mm SIZE: 250.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	Ø.Ø mm	775.0 mm	1550.0 mm	2325.0 mm	3100.0 mm
TOP REINF.	460.10 (Sq. mm)	240.66 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)	0.00 (Sq. mm)
BOTTOM REINF.	0.00 (Sq. mm)	240.15 (Sq. mm)	241.19 (Sq. mm)	324.48 (Sq. mm)	252.14 (Sq. mm)

SHEAR DESIGN RESULTS AT 490.0 mm AWAY FROM START SUPPORT

VY = 25.39 MX = 0.46 LD= 21

Provide 2 Legged 8@ @ 120 mm c/c

SHEAR DESIGN RESULTS AT 440.0 mm AWAY FROM END SUPPORT

VY = -27.68 MX = 0.46 LD= 21

Provide 2 Legged 8@ @ 120 mm c/c

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BEAM NO. 959 DESIGN RESULTS

M20

Fe415 (Main)

Fe415 (Sec.)

LENGTH: 2000.0 mm SIZE: 250.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	500.0 mm	1000.0 mm	1500.0 mm	2000.0 mm
TOP REINF.	240.66 (Sq. mm)	240.66 (Sq. mm)	240.66 (Sq. mm)	240.66 (Sq. mm)	240.66 (Sq. mm)
BOTTOM REINF.	0.00 (Sq. mm)	0.00 (Sq. mm)	240.66 (Sq. mm)	240.66 (Sq. mm)	0.00 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	500.0 mm	1000.0 mm	1500.0 mm	2000.0 mm
TOP REINF.	4-100 1 layer(s)	4-100 1 layer(s)	4-100 1 layer(s)	4-100 1 layer(s)	4-100 1 layer(s)
BOTTOM REINF.	2-100 1 layer(s)	2-100 1 layer(s)	4-100 1 layer(s)	4-100 1 layer(s)	2-100 1 layer(s)
SHEAR REINF.	2 legged 8@ @ 150 mm c/c	2 legged 8@ @ 150 mm c/c	2 legged 8@ @ 150 mm c/c	2 legged 8@ @ 150 mm c/c	2 legged 8@ @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 640.0 mm AWAY FROM START SUPPORT

VY = 13.14 MX = 1.39 LD= 22

Provide 2 Legged 8@ @ 150 mm c/c

SHEAR DESIGN RESULTS AT 665.0 mm AWAY FROM END SUPPORT

VY = -14.60 MX = -2.07 LD= 23

Provide 2 Legged 8@ @ 150 mm c/c

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BEAM NO. 960 DESIGN RESULTS

M20

Fe415 (Main)

Fe415 (Sec.)

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	Ø.Ø mm	5ØØ.Ø mm	1ØØØ.Ø mm	15ØØ.Ø mm	2ØØØ.Ø mm
TOP REINF.	163.34 (Sq. mm)	163.34 (Sq. mm)	Ø.ØØ (Sq. mm)	163.34 (Sq. mm)	163.Ø6 (Sq. mm)
BOTTOM REINF.	163.34 (Sq. mm)	163.34 (Sq. mm)	163.34 (Sq. mm)	163.34 (Sq. mm)	Ø.ØØ (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	Ø.Ø mm	5ØØ.Ø mm	1ØØØ.Ø mm	15ØØ.Ø mm	2ØØØ.Ø mm
TOP REINF.	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)
BOTTOM REINF.	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)
SHEAR REINF.	2 legged 8Ø @ 12Ø mm c/c	2 legged 8Ø @ 12Ø mm c/c	2 legged 8Ø @ 12Ø mm c/c	2 legged 8Ø @ 12Ø mm c/c	2 legged 8Ø @ 12Ø mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 515.Ø mm AWAY FROM START SUPPORT
 VY = 13.83 MX = -Ø.4Ø LD= 25
 Provide 2 Legged 8Ø @ 12Ø mm c/c

SHEAR DESIGN RESULTS AT 44Ø.Ø mm AWAY FROM END SUPPORT
 VY = -19.51 MX = -Ø.32 LD= 24
 Provide 2 Legged 8Ø @ 12Ø mm c/c

*** WARNING: LENGTH TO DEPTH RATIO FOR MEMBER 961 IS LESS THAN 2.5.
 DEEP BEAM IS NOT DESIGNED. ASSUMING IT TO BE A PART OF A
 CONTINUOUS BEAM AND AWAY FROM THE CRITICAL SECTION FOR
 ENHANCED SHEAR, ORDINARY SHEAR CHECK IS PERFORMED.,
 OTHERWISE PROVIDE ENSH AND RENSH PARAMETERS ***

BEAM NO. 961 DESIGN RESULTS

M2Ø Fe415 (Main) Fe415 (Sec.)
 LENGTH: 11ØØ.Ø mm S17E: 25Ø.Ø mm X 5ØØ.Ø mm COVER: 25.Ø mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	Ø.Ø mm	275.Ø mm	55Ø.Ø mm	825.Ø mm	11ØØ.Ø mm
TOP REINF.	Ø.ØØ (Sq. mm)	Ø.ØØ (Sq. mm)	24Ø.66 (Sq. mm)	261.52 (Sq. mm)	431.16 (Sq. mm)
BOTTOM REINF.	259.Ø7 (Sq. mm)	24Ø.66 (Sq. mm)	24Ø.66 (Sq. mm)	Ø.ØØ (Sq. mm)	Ø.ØØ (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	Ø.Ø mm	275.Ø mm	55Ø.Ø mm	825.Ø mm	11ØØ.Ø mm
TOP REINF.	2-12Ø 1 layer(s)	2-12Ø 1 layer(s)	3-12Ø 1 layer(s)	3-12Ø 1 layer(s)	4-12Ø 1 layer(s)
BOTTOM REINF.	4-1ØØ 1 layer(s)	4-1ØØ 1 layer(s)	4-1ØØ 1 layer(s)	2-1ØØ 1 layer(s)	2-1ØØ 1 layer(s)
SHEAR REINF.	2 legged 8Ø @ 15Ø mm c/c	2 legged 8Ø @ 15Ø mm c/c	2 legged 8Ø @ 15Ø mm c/c	2 legged 8Ø @ 15Ø mm c/c	2 legged 8Ø @ 15Ø mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 64Ø.Ø mm AWAY FROM END SUPPORT

VY = -87.58 MX = Ø.84 LD= 21

Provide 2 legged 8Ø @ 15Ø mm c/c

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BEAM NO. 962 DESIGN RESULTS

M2Ø Fe415 (Main) Fe415 (Sec.)
 LENGTH: 51ØØ.Ø mm SIZE: 25Ø.Ø mm X 5ØØ.Ø mm COVER: 25.Ø mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	Ø.Ø mm	1275.Ø mm	255Ø.Ø mm	3825.Ø mm	51ØØ.Ø mm
TOP REINF.	823.21 (Sq. mm)	24Ø.66 (Sq. mm)	Ø.ØØ (Sq. mm)	Ø.ØØ (Sq. mm)	24Ø.66 (Sq. mm)
BOTTOM REINF.	Ø.ØØ (Sq. mm)	Ø.ØØ (Sq. mm)	33Ø.26 (Sq. mm)	327.86 (Sq. mm)	24Ø.66 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	Ø.Ø mm	1275.Ø mm	255Ø.Ø mm	3825.Ø mm	51ØØ.Ø mm
TOP REINF.	11-1ØØ 2 layer(s)	4-1ØØ 1 layer(s)	2-1ØØ 1 layer(s)	2-1ØØ 1 layer(s)	4-1ØØ 1 layer(s)
BOTTOM REINF.	2-1ØØ 1 layer(s)	2-1ØØ 1 layer(s)	5-1ØØ 1 layer(s)	5-1ØØ 1 layer(s)	4-1ØØ 1 layer(s)
SHEAR REINF.	2 legged ØØ Ø 15Ø mm c/c	2 legged ØØ Ø 15Ø mm c/c	2 legged ØØ Ø 15Ø mm c/c	2 legged ØØ Ø 15Ø mm c/c	2 legged ØØ Ø 15Ø mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 64Ø.Ø mm AWAY FROM START SUPPORT

VY = 83.44 MX = -2.25 LD= 21
Provide 2 Legged ØØ Ø 15Ø mm c/c

*****END OF BEAM DESIGN RESULTS*****

241. END CONCRETE DESIGN
242. FINISH

***** END OF THE STAAD.Pro RUN *****

**** DATE= AUG 2,2ØØ7 TIME= 15: 4:19 ****

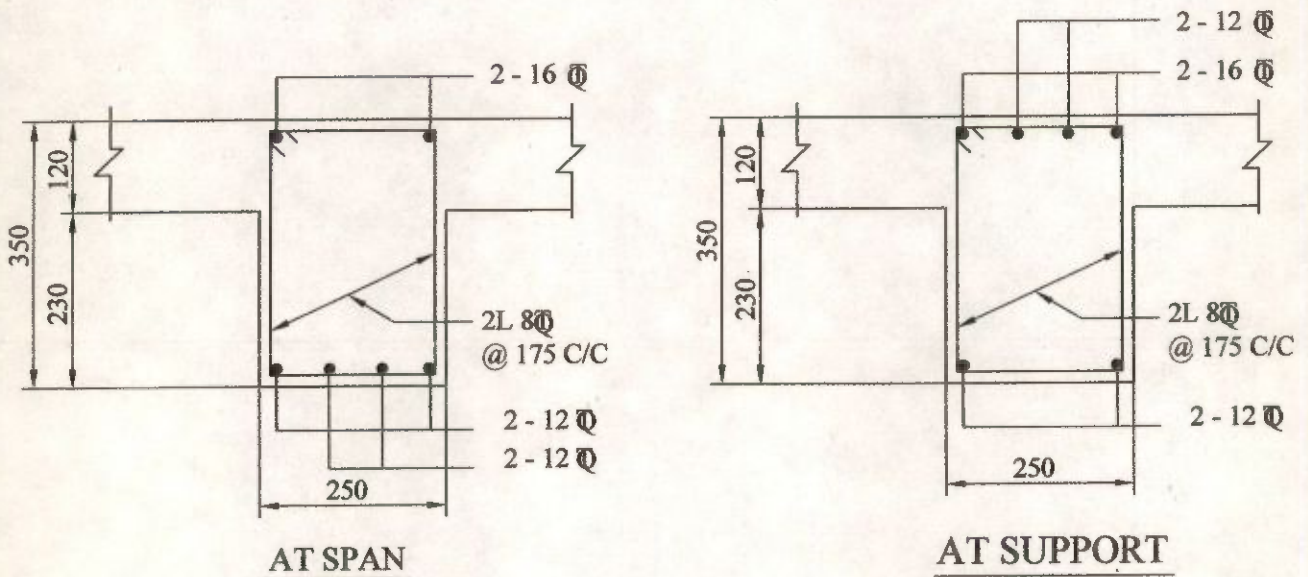
* For questions on STAAD.Pro, please contact : *
* Research Engrs Ltd. *
* email : support@calcutta.reiusa.com *
* E2/4,Block GP, Sector-V,Salt lake, CALCUTTA - 7ØØ Ø91 *
* India : TEL:(Ø33)357-3575 FAX:(Ø33)357-3467 *

SCHEDULE OF BEAM :-

BEAM MKD.	SIZE (MMxMM)	REINF. AT SUPT.		REINF. AT SPAN			REMARKS
		TOP	BOT	TOP	BOT	STRPS	
B1	250x500	2-20 Φ + 2-16 Φ	2-16 Φ	2-16 Φ	2-16 Φ + 2-16 Φ	8 Φ 2L@ 190 C/C	FLOOR BEAM
B2	300x350	2-16 Φ + 2-12 Φ	2-12 Φ	2-16 Φ	2-12 Φ + 2-12 Φ	8 Φ 4L@ 175 C/C	FLOOR BEAM

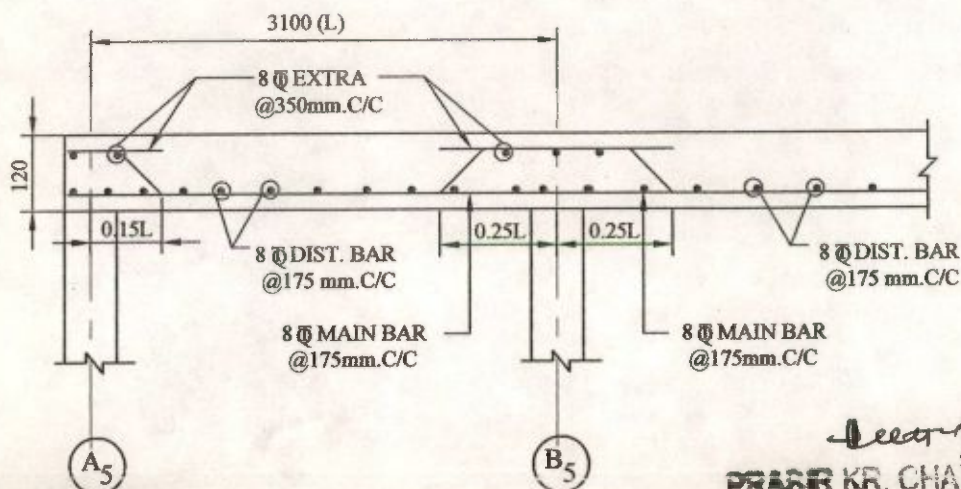
SCHEDULE OF SLAB :-

PANEL MKD.	TH. (mm)	REINFORCEMENT AT BOTTOM		REINFORCEMENT AT TOP (SUPPORT)	
		SHORT DIREC.	LONG DIREC.	SHORT DIREC.	LONG DIREC.
ALL	120	8 Φ @175 mm. C/C ALT. CKD.	8 Φ @175 mm. C/C ALT. CKD.	8 Φ @ 350 mm. C/C EXTRA	8 Φ @ 350 mm. C/C EXTRA



DETAILS OF R.C.C. BEAM

TYPE - B2



DETAILS OF ROOF SLAB

Prasir Kr. Chattopadhyay
PRASIR KR. CHATTOPADHYAY
 S.E. CIVIL. MISS
 Regd. no A/501157/5

BANSBERIA MUNICIPALITY
Details of Measurement and Estimates

Name of work :- Extension of E.S.O.P.D and Maternity Building at Sahapur Main Road in Ward No. 12 URE
 (Part - A) *For 2nd floor*



Sl. No.	Description of items	Quantity	Rate		Amount	
			@	Per	Rs.	P.
1	P-74/IT-1					
	Dismantling all types of masonry excepting cement concrete plain of reinforced stacking serviceable materials at site and removing rubbish as directed within a lead of 75 m.					
	In ground floor including roof					
	(Add per each addl. Floor over the rate of ground (@ Rs. 18.00 per cu.m.) <i>for</i>	16.45m3	209.00 ✓	m3 ✓	3438.05 ✓	
2	P-74/IT-3					
	Dismantling R.C. floor, beams etc. including cutting rods and removing rubbish as directed within a lead of 75 m. including stacking of steel bars.					
	In ground floor including roof.					
	(Add per each addl. Floor over the rate of ground floor @ Rs. 18.00 per cu.m.)	12.788 m3	838.00 ✓	m3 ✓	10716.34 ✓	
3	P-76/IT-4					
	Dismantling terraced roof in ground floor roof taking out carefully tiles with beams, joists, tees or burgahs covering floor below, sorting and stakcing servicable materials at site and removing rubbish as directed within a lead of 75 m					
	(Add for each addl. Floor over the rate of ground floor at Rs. 2 per sq. m)	350.590 m2	104.00 ✓	m2 ✓	36461.36 ✓	
4	P-106/IT-26 (b)					
	250 mm brick work with 1st Class bricks in cement mortar (6:1)					
	b) In superstructure	37.315 m3	2021.00 ✓	m3 ✓	75413.61 ✓	
5	P-108/lt.33(a) & P-114/lt.46(a)					
	125 mm thick brick works with 1st Class bricks in cement mortar (4:1)	244.051m2	293.00 ✓	m2 ✓	71506.94 ✓	
6	P-110/lt.38(a) & P-114/lt.46(a)					
	75 mm brick work with 1st class bricks set in sand, cement mortar (4:1) <i>including H.B. netting in every alternate layers</i>	18.122 m2	173.00 ✓	m2 ✓	3135.10 ✓	
7	P-98/lt.16(a)					
	Hire & Labour charges for shuttering with centreing and necessary					

C.D. Rs. - 200 671.40

Sl. No.	Description of items	Quantity	Rate		Amount	
			@	Per	Rs.	P.
	staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete labs, beams, columns, lintels, curved or straight including fitting, fixing, and striking out after completion of works, (upto roof of ground floor)					
	a) 25 mm. to 30 mm. thick wooden shuttering as per	791.722 m2	155.60 ✓	m2 ✓	123191.94 ✓	
8	P-86/lt.7(a) & P-96/lt.15(a)(i) Nominal Mix M-20 Cement concrete (mix 3:1:5) with graded stone chips (20 mm size) excluding shuttering and reinforcement, if any, in ground floor. A) Pakur/Chandil Variety <i>as per I.S. 456-2000</i>	74.457 m3	3002.00 ✓	m3 ✓	223519.91 ✓	
9	P-96/lt.100(a)(i) & (b)(i) Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders, etc. including supply of rods, initial straightening and removal of loose rust (if necessary) cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black annealed wire at every intersection, complete as per drawing and direction. (a) For works in foundation, basement and upto roof of ground floor/upto 4 p.m. (i) Tor Steel/Mild /Steel (2nd floor)	7.732 M.T	40,765.00 ✓ 32018.00	M.T ✓	3,15,195.00 ✓ 247563.34	
10	P-342/lt.1 (i) b & P-346/lt.4(ii)(a) Plaster (in wall, floor, ceiling etc.) with sand and sand cement mortar including rounding off or chamfering corners as directed and raking out joints or roughening of concrete surface, including throating, nosing and drip course where necessary (ground floor)					
	i) With 6:1 cement mortar					
	b) 20 mm. thick plaster (inside)	646.374 m2	54.60 ✓	m2 ✓	35292.02 ✓	
	c) 15 mm thick plaster (outside)	426.308 m2	48.00 ✓	m2 ✓	20462.78 ✓	
	ii) With 4:1 cement mortar 10 mm. thick plaster c)	489.754 m2	48.60 ✓	m2 ✓	23802.04 ✓	
11	P-128/lt.6(a)(iv) 25 mm. thick (finished) terrazo work, cast in situ in floor and 20 mm. thick (finished) in dado, skirting staircase etc. laid in panels or pattern as					

C10. P.Si-942135.09

Sl. No.	Description of items	Quantity	Rate		Amount	
			@	Per	Rs.	P.
	directed and necessary terrazo topping with mosaic chips including rounding off corners and high polishing etc. complete as per specification laid down in I.S. : 2114-1962 & application of cement slurry before flooring works using cement @ 1.75 kg/sq.m. all complete including all materials & labour. (Add extra @ 1.5% for each additional floor upto and inclusive of 5th floor					
	A) 9 mm. thick terrazo topping, laying and finished to 6 mm. thick after final grinding with 0 to 7 mm. size mosaic chips					
	iv) In silver gray	319.034m2	353.29 ✓	m2 ✓	112711.52 ✓	
12	P-134/lt.9(a)					
	Extra over corresponding items of mosaic work					
	a) For boarders (upto 75 mm. width)	319.034m2	328.00 ✓	%m2 ✓	1046.43 ✓	
13	P-134/lt.10(i)					
	Supplying dividing strip fitted and fixed with cement mortar (3:1) in mosaic or patent stone floor, dado etc.					
	i) Glass : 3 mm thick					
	b) 25 mm wide strip	38.85 m	7.50 ✓	m ✓	285.00 ✓	
14	P-214/lt.1(b)					
	Wood work in door and window frame fitted and fixed complete including a protective coat of painting at the contact surface of the frame Sal - (Siliguri)	0.103 m3	39147.00 ✓	m3 ✓	4032.14 ✓	
15	P-324/lt.159					
	Supplying fitting and fixing in position approved P.V.C. door frame made of extruded P.V.C. multichamber hollow section having dimension 60 mm. x 50 mm. x 53 mm. and suitably reinforced, horizontal section will be joined with vertical section by steel screws after inserting two number steel brackets as reinforcement making suitable for placing hinges, one steel tube 40 mm x 20 mm x 18 gauze will be inserted on one full vertical side of the vertical frame.	24.75 m	294.00 ✓	m ✓	7276.50 ✓	
16	P-280/lt.105 & P-264/lt-95					
	Supplying fitting fixing solid flush type doors of delux decorative (both side) quality conforming to IS 2202 timber frame consisting of top and bottom rail and side styles of well seasoned timber 65 mm wide					
	iv) 25 mm thick shutters(single leaf)	7.404 m2	1918.00 ✓	m2 ✓	14200.87 ✓	

c.o.Rs. 1081,687.55

Sl. No.	Description of items	Quantity	Rate		Amount	
			@	Per	Rs.	P.
17	P-326 /lt. 160					
	Supplying fitting and fixing P.V.C. door shutter of approved quality & shade in position, the style & rail of the P.V.C. door shutter will be made of rigid P.V.C. multicavity hollow chamber of suitable size and section with 2.5 mm. wall thickness, the section will have 2 no. built in beads, horizontal & vertical section shall be fixed to each other by self tapping screws and 2 no. of M.S. tubular galvanised brackets of length 200 mm. x 80 mm. and other 100 mm. x 100 mm. both 18 gauge in each corner of the shutter frame for placing hinges, polymer based multicavity hollow section of 25 mm. thickness will be fitted in the middle with aluminium cleat and steel screws as lock rail, the section frame will then be fitted in by polymer based panels of suitable size and 2 no. of 6 mm. dia bright rod will be inserted horizontally with both sides					
	b) 30 mm. thick shutter with 25 mm. thick panel (wall thickness 1.2 mm. and 60 mm. width styles and rails with lock rail 120 mm.	7.87 m2	2035.00	m2	16015.45	
18	P-266/lt.97& P-264/lt-95					
	Glazed shutters of doors, windows, fan light, clerestory windows, etc. as per design with ordinary glass of 7.4 kg. per m2 fitted with putty bed and teak wood bead and nails.					
	iii) 25 mm thick shutter					
	c) Gamari	1.35m2	1081.00	m2	1459.35	
19	P-206/lt.35					
	Supplying fitting and fixing steel windows with or without integrated grills conforming to IS 1038 - 1975 & manufacture from rolled steel section conforming to IS 7452-1974 with non friction projecting type					
	b)with MS intigrated grill	50.13 m2	2429.64	m2	121797.85	
20	P-376/lt.1(b)					
	Supplying best Indian Sheet glass panes set in putty (as per I.S. specification) and fitted and fixed with teak wood beads and nails complete in all floors:					
	ii) 4 mm. thick	50.13 m2	509.00	m2	25516.17	

Sl. No.	Description of items	Quantity	Rate		Amount	
			@	Per	Rs.	P.
21	P-224/lt.18(a) M.S.clamp for fixing door and window frame made of flat,bent bar,end bifurcated,fixed in cement concrete with stone chios (4:2:1) fitted and fixed complete as per direction.a) 40 mm x 6 mm above 250 mm upto 350 mm length.	22 nos.	28 ✓	nos.	616.00 ✓	
22	P-236/lt.38 Cord for clerestory window fitted and fixed	5 nos.	6.00 ✓	nos.	30.00 ✓	
23	P-226/lt.20(ii) (iv) & (vii) Iron butt hinges of approved quality fitted and fixed with steel screws,with ISI mark					
	iv) 75 mm x 40 mm x 1.12 mm	10 nos	12 ✓	each ✓	120.00 ✓	
	vii) 100 mm. x 50 mm. x 1.25 mm.	48 nos.	24.00 ✓	each ✓	1152.00 ✓	
24	P-244/lt.69 Anodised aluminium barrel/tower/socket bolt (full covered) of approved quality					
	iv) 150 mm. long x 10 mm. dia bolt	5 nos.	51.00 ✓	each ✓	255.00 ✓	
	vii) 225 mm. long x 10 mm. dia bolt	4 nos.	64.00 ✓	each ✓	256.00 ✓	
25	P-236/lt.39(iii) Steel body door holder	4 nos.	90.00 ✓	each ✓	360.00 ✓	
26	P-236/lt.43 Hydraulic door closer of approved quality as per I.S.I standard					
	b)Medium (I.S.I. size-2)	4 nos	796.00 ✓	each ✓	3184.00 ✓	
27	P-248/lt.73(b)(ii) Anodised aluminium D-type handle of approved quality <small>100 mm grip x 10 mm dia red</small>	4 nos.	30.00 ✓	each ✓	120.00 ✓	
28	P-366/lt.7 Priming one coat on timber,plastered or on steel or other metal surface withn synthetic enamel/oil bound primer of approved quality including smoothening surfaces by sand papering etc.					
	a) Wood	71.54 m2	20.00 ✓	m2 ✓	1430.80 ✓	
29	P-366/lt.8(A) (iv) Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface,if necessary					
	a) On timber or plastered surface: <i>with Super glass (hi-glass)</i>					
	iv) Two coats (with any shade except white)	71.54 m2	46.00 ✓	m2 ✓	3290.84 ✓	

C.O. P.Si: 12,57,291.01

Sl. No.	Description of items	Quantity	Rate		Amount	
			@	Per	Rs.	P.
30	P-152/lt.1(b)					
	Line terracing on roof with line concrete (7:2:2) (7 brick khoa:2 lime putty /paste) laid to proper slope thoroughly beaten and cured including top finishing, providing ghoondies at junction with parapet etc. shaping and finishing at mouths of rain water pipes complete as per direction. 125 mm thick					
	(For item 1 add extra for each addl. floor over the rate @ 1.5 % upto 4th floor)	350.590 m2	438.78 ✓	m2 ✓	153831.88 ✓	
31	P-364/lt.5					
	Rendering the surface of walls and ceiling with plaster of paris (thickness not less than 1.5 mm)	799.783 m2	50.00 ✓	m2 ✓	39989.15 ✓	
32	P-358/lt.13 & 16(i)					
	Applying cement primer of approved quality and brand on plaster or concrete surface old or new surface to receive cement based paint including scraping and preparing the surface thoroughly complete as per direction					
	(Add extra for each additional floor over the rate for ground floor)					
	External surface (upto 4th floor)	477.878 m2	1566.00 ✓	% m2 ✓	7483.56 ✓	
33	P-358/lt.14 & 16(ii)					
	Applying decorative cement based paint of approved quality after preparing the surface including scraping the same thoroughly (plastered or concrete surface)					
	iii) Two coats	477.878 m2	25.00 ✓	m2 ✓	11946.95 ✓	
34	P-138/lt.16(i) ^{1st}					
	Supplying fitting and fixing best quality porcelain tiles of any size in walls and floors including borders to match with the existing work, set in sand cement mortar (4:1) including backing concrete (1:2:4) and four nos. of key stones (10 mm) fixed with araldite at the back of each tile and finishing the joint with white cement mixed with colouring oxide					
	i) White	336.345 m2	595.00 ✓	m2 ✓	200125.27 ✓	
35	P-384/lt.8(ii)					
	Supply fitting, fixing cast iron down pipes of approved quality in position with necessary clamps nails including making hole in wall, floor, etc.					
	ii) 100 mm. dia (external)	68.60 m	399.00 ✓	m ✓	27371.40 ✓	

Sl. No.	Description of items	Quantity	Rate		Amount	
			@	Per	Rs.	P.
36	³⁸⁴ P-386/lt.9 c(ii) & (d)(ii) Supplying fitting, fixing C.I. specials of down pipes in position with clamps nails etc c) C.I. bend of down pipe ii) 100 mm. dia d) C.I. shoe of down pipe ii) 100 mm. dia	7 nos. 7 nos.	99.00 100.00	each each	693.00 700.00	
37	P-160/lt.4 (Sanitary & Plumbing) (a) Anglo Indian WC in white glazed vitreous china ware of approved make supplied fitted and fixed complete in position with necessary bolts, nuts, etc. a) With P Strap (with half vent)	4 nos.	2652.00 2652.00	each	10648.00 10648.00	10608.00 10,620.00
38	P-160/lt.1(iii)(Sanitary & Plumbing) Shallow water closet Indian pattern (I.P.W.C.) of approved make in white vitreous chinaware supplied, fitted and fixed in position (excluding cost of concrete for fixing). iii) 450 mm long	3 no.	499.00	each	1497.00	
39	P-162/lt.9a(c)(Sanitary, Plumbing) Foot rest for water closet of size 275 mm x 125 mm with c) Porcelain of approved make	3pair	102.00 152.00	each pair	306.00 456.00	
40	P-84/lt.1 (Sanitary & Plumbing) (ii) Wash basin white vitreous china (best quality) of approved make (without fittings) supplied, fitted and fixed in position on 75 mm x 75 mm x 75 mm wood blocks and C.I. brackets including two coats of painting of C.I. brackets ii) 550 mm. x 400 mm. size	9 nos.	967.00	each	8703.00	
41	P-68/lt.6a(i)(Sanitary & Plumbing) Supplying, fitting and fixing C.I. automatic cistern complete with syphon, C.I. brackets, nose cock etc. including two coats of painting of brackets and cistern iii) 15.0 litre with 32 mm syphon	6 nos.	721.00	each	4326.00	
42	P-166/lt.20 (Sanitary & Plumbing) Supplying fitting and fixing best quality Indian make mirror 5.5 thick with silvering as per ISI specification supported on fibre glass frame of any colour frame size 550 mm x 400 mm	5 nos.	353.00	each	1765.00	
43	P-168/lt.23 (Sanitary & Plumbing) Supplying fitting and fixing porcelain toilet paper holder of approved make with wooden spindle as necessary. i) Roll type holder 250x125 mm.	2 nos.	222.00	each	444.00	

C.O. Rs. 1727231 = 22

Sl. No.	Description of items	Quantity	Rate		Amount	
			@	Per	Rs.	P.
44	P-168/lt.24 (Sanitary & Plumbing) Supplying fitting and fixing porcelain soap tray of approved make					
	ii) Recessed soap tray of size 150 mm x 150 mm	5 nos.	276.00	each	1380.00	
45	P-16/lt.7 (Sanitary & Plumbing) Supplying, fitting and fixing gunmetal stop cock/bib cock of approved make and brand tested to 21 kg per sq. cm.					
	a) 15 mm	9nos.	153.00	each	1377.00	
46	P-10/lt.1 (Sanitary & Plumbing) Supplying fitting & fixing G.I. pipes of TATA make with all necessary accessories, specials viz., socket, bend, tea, union, cross, elbow, nipple, long screw, reducing socket, reducing tea, short piece, etc. fitted with holder bats clamps, including cutting pipes making threads fitting fixing					
	a) ii) 15 mm dia medium quality	40 m	124.00	m	4960.00	
	b)ii) 20 mm dia medium quality	20 m	139.00	m	2780.00	
47	P-88/lt.11 (Sanitary & Plumbing) Lead pipe 3 mm thick metal including making plumbing joint with brass coupling fitted and fixed					
	ii) 20 mm dia	9 no	44.00 65.00	each	396.00 585.00	
48	P-90/lt.12 (Sanitary & Plumbing) Supplying fitting & fixing approved brand P.V.C waste pipes with coupling at one end fitted with CP over brass nut 32 mm dia					
	i) 600 mm long	9 no.	52.00	each	468.00	
49	P-94/lt.23 (Sanitary & Plumbing) Supplying, fitting and fixing pillar cock of approved make					
	a) C.P.					
	i) 15 mm	9 no.	415.00	each	3735.00	
50	P-28/lt.24 (Sanitary & Plumbing) Labour for fitting and fixing high density polythene pipes or PVC pipe for above ground work including cost of joining materials, paints, etc.					
	a).15 mm dia	40.00 m	11.00	m	440.00	
	b).20 mm dia	20.00 m	11.00	m	220.00	

Sl. No.	Description of items	Quantity	Rate		Amount	
			@	Per	Rs.	P.
51	P-E-7, It. - 14, C	ELECTRIC WORKS				
	Supplying and drawing 1.1 KV. grade single core PVC insulated (unsheathed) copper wires (approved make) of the following sizes in the pre-laid polythene pipe and by the pre-laid G.I. fish wire and making necessary connections as required.					
	a. 2 x 1/2.24	250 m	31.02	m	7755.00	
52	P-E-8, It. - 15 a (1)					
	Distn. Wiring with 1/0.44 P.V.C. C.I. insulated and unsheathed wire of copper conductor in 19 mm (3/4") bore, 3 mm, (1/3") thick polythene pipe complete with all accessories embedded in wall to light /an call bell points with piano key type switch (Anchor) fixed on sheet metal (16 S.W.C) switch board with bakelite/per-spex (wall matching colour) top cover (3 mm thick) flushed in wall incl. mending good damages to original finish					
	a) Average run 8 mts. (26-ft)	126 point	430.80	per point	54280.80	
53	P-E-8, It. - 17 a P-E 10 It-17 (a) & (c)					
	Distn. Wiring with 2 x 1/0.44 P.V.C. to 250 V. 5 amps. 3 Pin plug points inc. S & F 250 V. 5 amps. 3 Pin plug socket without top & switch (Anchor) fixed on sheet metal (16 S.W.G.) switch board with bakelite perspex (wall matching colour) top cover (3 mm thick) flushed in wall incl. mending good damages to original finish S & F 1 x No. 16 S.W.G. G.I. earth continuity wire to G.S.					
	a) Average run 1.5 mts. (5 ft.)	13 point	202.80	per point	2636.40	
	a) Average run 4.5 mts. (15-ft)	18 point	321.60	per point	5788.80	
54	P-B-3, It. - 6					
	Iron Clad Main Switches (Rewireable type fuses) Conduit Entry type. 500 D.P. with Fuses on live sides only in <i>SURYA S.S. House</i>					
	63 Amps.	1 point	954.00	per point	954.00	

C.O. Rs: 18,3931 = 22

Sl. No.	Description of Items	Quantity	Rate		Amount
			@	Per	
55	P- G-1, It. - 2 (e) Earthing with 50 mm (2") dia galvanised iron pipe 3.64 mm thick x 3 mts. (10' ft) long and 1 x No. 4 S.W.G. G.I. wire (4 mts. Long), 15 mm (1/2") dia. X 80 mm (3") long G.I. bolt, double nuts and double washers incl. S & F 15 mm dia G.I. pipe protection (1 Mt. long) to be filled with bitumen, partly above the ground level driven to an average depth of 3.65 mts. (12" Ft.) below the ground level and restoring the (1 meter long). <i>Surface duly rammed</i>	1 point	837.60	per point	837.60
56	P- G-1, It. - 4 (f) Connecting the equipments to earth busbar including S & F G.I. wire of sizes as below on wall / floor with staples buried inside floor/wall as required and making connections to equipments with bolts, nuts, washers, cable lugs etc. as required and mending good all the damages. No. 14 S.W.G. (2.30 mm dia.)	50 m	1.44	m	72.00
57	P- B-9, It. - 29 (b) Holders, Cord grip bakelite pendant holder 15.8 mm (5/8") bakelite bracket holder, batten holder bakelite Angular batten holder bakelite	6 nos.	186.60	no.	1119.60
58	P- B-12, It. - 37 Supply of C.F.L. Lamps 60 W Make :- Philips.	6 nos.	12.60	no.	75.60
58	P-B-12, It. -38 & P-C-3, It. -17 Supply of Tube Light Make :-Philips. 230/250 Volt of 40 WT. of length in 4' <i>with fittings</i>	85 nos.	160.80	no.	13668.00
59	P- B-11, It. -35 Supply & Fixing of Fan on Ceiling of 1200 mm dia of 48" <i>50 cycle</i> <i>A.C Fan.</i>	35 nos.	1012.80	no.	35448.00
Add: Contingency @ 3%					53936.43
Total					1851817.76

Approved 29/10/07
Sub. Asst. Engineer,
M. E. D. Hooghly Divn
Chinsurah

KUSP
Forwarded to the Project Director
C.M.U. KUSP.
For further action
22-11-07
Superintending Engineer
West Circle
M. E. Dte.
Govt. of West Bengal

MAY BE APPROVED
06/11/07 - y.
Assistant Eng near
Hooghly Division, M.E. Dte.
Govt. of West Bengal

APPROVED
06/11/07
Executive Engineer
Hooghly Division, M.E. Dte.
Dept of Municipal Affairs
Govt. of West Bengal

18,45,164.02
17,97,221.33
151,954.92
53,976.63

18,51,137.97
19,21,118.94

Say Rs. 18,51,818/- *18,51,138.00*
19,21,119/-

Total
(Rupees)

Rates have been checked.

Sub-Assistant Engineer
Bansberia Municipality
Sub-Assistant Engineer
Bansberia Municipality

Assistant Engineer
Bansberia Municipality
Atak Kumar Bhattacharyya
Sub-Assistant Engineer
Assistant Engineer (KUSP)
BANSBERIA MUNICIPALITY

Chairperson
Bansberia Municipality
Chairperson
Bansberia Municipality

West Circle Bardwan M.E. D
Dept. of Municipal Affairs
Govt. of West Bengal

