# 2-2. DESIGN OF STAIR CASE

는 사람이 되는 것이 가장 같이 한다면 되었다. 이 사람들은 사람들은 사람들이 되었다. 그런데 그런데 하는데 그런데 되었다. 	
는 사용하는 경기 등로 가는 사용하는 것이 되고 있다면 하는 경기에 되었다. 그는 사용하는 것이 되었다. 그는 사용하는 것이 되었다. 	
는 보고 가장 하고 있다면 한다면 보는 것이라는 것이라는 것이 하고 있다. 그런 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들이 되었다. 	
는 사용하는 사용하는 사용하는 사용하는 사용하는 사용하는 사용하는 사용하	

### Summary

2 staircases will be constructed on both ends of the Rupsa main bridge. These 4 (2+2) staircases are typical. Therefore analysis and design are carried out for a single staircase. A mathematical model is prepared for the staircase including its sub-structures (pile caps & piles).

The design is carried out following the standard specification for Buildings/Structure,

- Bangladesh National Building Code-1993 (BNBC)
- Building Code Requirements for Reinforced Concrete (ACI 318-89/95)
- American Society for Testing and Materials (ASTM)

### **Mathematical Modeling of Structure**

Super-structure: Columns are considered as vertical member of 3.0m height starting at pile cap. Interior beams at landing levels are considered as two-nodded horizontal member starting from column and extend up to edge of landing. All loads from landing slab are superimposed on landing beams. The exterior landing beams are divided into two consecutive beams with one intermediate node. The flight is considered as a two-nodded member connecting at the intermediate nodes of exterior landing beams. The dead loads and live load are uniformly distributed over the flight beams.

Sub-structure: Sub-structures are started at pile cap level. Pile cap is considered as two nodded horizontal members connected to piles. Piles are considered as consecutive discrete two nodded vertical members of 1.0m length. Supports are provided through the substructure nodes with horizontal spring constants. The spring constant values are derived from the values of spring constants of the piles of the adjacent pier.

#### Loads

The following loads and forces are considered in the design:

**Dead load:** Dead load is consists of the weight of the structure. The following weights are considered in computing the dead loads.

Concrete

24 kN/cubic meter

Steel

7849 kN/cubic meter

Live load: The live load is considered as per BNBC/93 (5 kN/sq. meter)

Wind load: The calculation of wind loads conforms to sub-clause 2.4, chapter 2, part 6 of BNBC.

Seismic load: Seismic load is not considered since the proposed site falls within the lowest seismic risk zone of Bangladesh (fig 6.2.10 BNBC, 1993)

#### **Load Combinations**

R.C structural members is designed to have strength not less that that required to resist the most unfavorable effect of the combinations of the factored loads shown below.

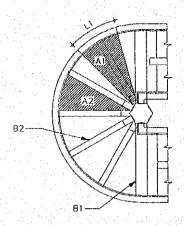
- 1. 1.4D + 1.7L
- 2. 0.75(1.4D+1.7L+1.7W)

(Ref. BNBC, Part 6, Sec. 2.7.5)

However for geotechnical design of foundation (eg. Number and length of ples) following load combination shall be considered.

- 1. D+L
- 2. D+L+W

## **Calculation of Superimposed Loads**



Length of beam is the second second second second in the second s	m :
Area of landing supported by each interior beam (A1) = 3.26	m²
Area of slab supported by each interior = 2.39	$m^2$
beam (A2)	
Unit weight of = 24.00	kN/m <sup>3</sup>
concrete	
Live load [3-1] [1] [2] [2] [2] [4] [4] [4] [4] [4] [4] [4] [4] [4] [4	kN/m <sup>2</sup>
Thickness of slab = 0.30	m
2、 \$P\$ 1、 4、 4、 4、 4、 4、 5、 5、 5、 5、 5、 5、 5、 5、 5、 5、 5、 5、 5、	1000

#### Dead Load over Beams from Slab

Dead load of slab = 2.39 X 0.3 X 24 =	17.21 kN
Uniform dead load over the beam = 17.208/3.8 =	4.53 kN/m
Triangular distribution of load over beam (B2)	9.06 KN▶0 kN
Triangular distribution of load over beam (B1) = 7	4.53 KN▶0 kN
Dead Load over Beams from Edge Wall	
Length of edge beam segment (L1) =	1.92 M
Width of edge beam	0.25 M
Depth of edge beam	0.45 M
Dead load from edge beam segment	5 40 4 LN

Dead	load	nom eage	e beam seyment	1 1 V 19 1	10 T	
		1000	- 0.25Y0.45Y1.0	VCAC	4 July 1	1

	and the state of t	(4) A. A. A. A. March	energy for the	17 4 4 6		Action to the	4000
Concreted load	over beam (	B2)		<b>.</b> .	11	5.18	kΝ
331.313134		,	The second of	1.3 42.4	. 2 -		
			Programme in		44. ju	1.00	
Concreted load	over heam (	R1\	that the state of	=	1.	2.59	κN

	Live Load over Beams from Siab
	Load from landing = 3.26 X 5 = 16.30 kN
	Uniform live load over the beam = 16.3/3.8 = 4.29 kN/m
	고 있는 것이 되는 것을 바꾸는 것도 있는 것이 되었다. 그 있는 것들은 사람들은 것을 보고 있는 것을 하는 것이 되었다. 그것 같아 없는 것이 없는 것이 없는 것이다. 
	Triangular distribution of load over beam (B2) = 8.58 KN ▶ 0 kN
2	Triangular distribution of load over beam (R1)          4.29 KN▶0 kN

Calculation of Basic Wind Speed
As per Bangladesh Natioanl Building Code (BNBC), 1993

Page 2 of 62 C:\Stair\Report.doc

#### Sustained wind pressure qz

=	$C_cC_lC_zV_b^2$
Where C <sub>c</sub> =	47.2x10 <sup>-8</sup> , a constant
C <sub>1</sub> =	structure importance co-efficient
	0.8, low risk structure (Table 6.2.9, BNBC)
C <sub>z</sub> =	height and exposure coefficient (Table 6.2.9, BNBC)
	1.0, for 10m average height & open country (B)
V <sub>b</sub> =	238 km/h, base wind velocity
$q_z$ =	2.14 kN/m <sup>2</sup>
Design Wind Pressure p <sub>z</sub>	$C_6C_6C_7q_7$

	$C_GC_pC_zq_z$
Where $C_G$ =	Gust co-efficient
	1.4 (Sec. 2.4.6.6)
C <sub>p</sub> =	1.3 (Sec2.4.6.7)
p <sub>z</sub> =	1.4 X 1.3 X 2.14
	3.8948 kN/m <sup>2</sup>
	4.00 kN/m² (say)

#### Wind Load on Structure

	X axis

Exposed height of flight	=	0.6 m
Exposed height of railing (10% of actual height)	=	0,09 m
Total exposed height of flight & railing	=	$0.6 \pm 0.09$
	=	0.69 m
Considering average policies discusses at 4.2 m	11.51	and the second second

Considering average column diameter of 1.2 m

Length of flight = 8-0.6X2 = 6.8 m

(actual length was not considered since some area is common to two consecutive flight)

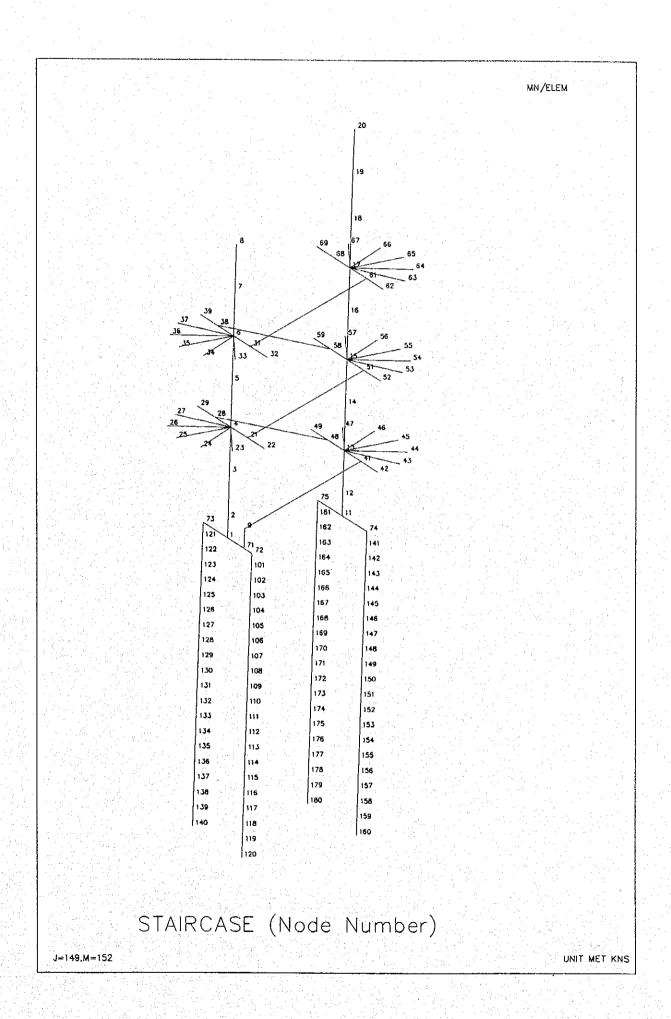
Wind load from flight =	18.8 kN
	有多多的说:
Length of landing = (	(3.8-0.6) m
	3.2 m
Depth of landing = (10%0.9+0.45+(0.6+0.9)/2) =	1.29 m
Wind load from landing	16.6 kN
Load at start of first flight =	9.4 kN
Load at junctions of intermediate flights =	35.4 kN
Load at end of last flight =	26.0 kN

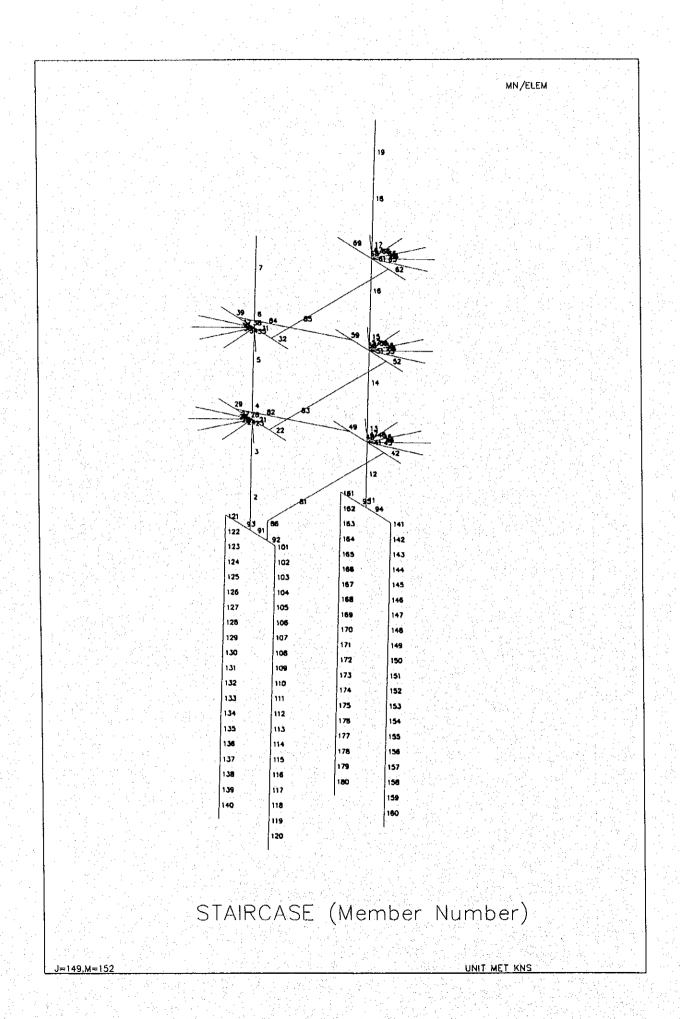
The typical analysis and design output of the staircase is presented wherewith.

MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
		19	-14.57	.00	9.18	.00	-13.85	02
	1.0	18	35.56	-21.42	.00	.00	.29	-59.59
eje se i		19	-14.57	9.18	.00	.00	08	13.75
			er get en t	10 m				4.60 公共的 4.75
101	7 .	72	1646.30	~35.97	46.76	.00	-164.20	-204.32
		101	-1661.29	35.97	-46.76	.00	117.63	168.75
	8	72	2387.79	-52.70	67.88	.00	-238.18	-298.99
	100	101	-2408.78	52.70	-67.88	.00	170.56	246.84
	. 9	72	2285.98		170.27	.00	-383.96	-428.82
		101		127.73			213.69	
	10	72		-281.84		.00	-205.98	-412.45
		101	-2087.85	281.84	-64.17	.00	141.99	130.56
101	_		1350 20	1.00	20.16	00	167 16	100 65
121	7	73	1350.28	1.06	-38.16	.00	167.16	-123.65
	_	121	-1365.27	-1.06	38.16	.00	-129.23	125.05 -180.81
	8	73	1954.37	1.52	-55.32	.00	242.56	182.82
	9	121	-1975.35	-1.52 70.97	55.32 91.72	.00	-187.57	-21.93
	. 9	121	739.25 -754.99	-70.97	-91.72	.00	-75.99 -15.81	93.15
	10	73	1499.61	-65.68			186.04	22.80
	10	121	-1515.35	65.68	36.28		-150.00	-88.47
		121	-1313.33	00.00	30.20		-130.00	
141	7	74	1769.14	23.64	48.77	.00	-195.89	-82.99
	Arrive.	141	-1784.13		-48.77	.00	147.41	107.12
	8	74	2564.48	34.69	70.73	.00	-284.12	-120.63
		141	-2585.46	-34.69	-70.73	.00	213.82	156.03
	9	74	2301.97	41.68	149.90	.00	-378.88	-94.97
		141	-2317.71	-41.68	-149.90	.00	229.16	137.24
	10	74	1549.92		30.08		-135.23	174.95
		141	-1565.66	-6.61	-30.08	.00	105.46	-167.44
161		75	1716.86	11.27	-57.37	.00	218.22	-107.91
191	7		-1731.85	-11.27	57.37	.00		119.65
	8	75		16.49	-83.29	.00	and the second of the second o	-157,30
	નું જેવા	161	-2508.19	-16.49	83.29	.00	-233.93	174.45
	9	75	1166.31	15.08	44.81	.00		-148.76
		161	-1182.05	-15.08	-44.81	.00	32.29 -77.28	164.25
	10	75	1371.87	-130.07	-57.98	.00		-99.70
	- 77	161	-1387.61	130.07	57.98	.00	-150.50	-29.54
				. * * * * * * * * * * * * * * * * * * *				

\*\*\*\*\*\* RESULT \*\*\*\*\*\*\*\*

C:\Stain\Report.doc Page 14 of 62





```
STAAD-III
                      Revision 22.3a
                      Proprietary Program of
                      Research Engineers, Inc.
                               FEB 29, 2000
                      Date≖
                      Time=
                               15:52: 5
               USER ID: Development Design Consultants L
 1. STAAD SPACE RUPSA BRIDGE (ANALYSIS OF STAIRCASE)
2. UNIT KNS METER
3. PAGE EJE
4. JOINT COORDINATES
5. 1 0 0 0; 2 0 1.3 0 8 0 19.3 0; 9 0 1.3 1.9
 6. 11 8 0 0; 12 8 1.3 0 20 8 25.3 0
8. 21 0 7.3 1.9; 22 0 7.3 3.8; 23 -1.9 7.3 3.291; 24 -3.291 7.3 1.9
 9. 25 -3.8 7.3 0; 26 -3.291 7.3 -1.9; 27 -1.9 7.3 -3.291; 28 0 7.3 -1.9
10. 29 0 7.3 -3.8
11. 31 0 13.3 1.9; 32 0 13.3 3.8; 33 -1.9 13.3 3.291; 34 -3.291 13.3 1.9
12. 35 -3.8 13.3 0; 36 -3.291 13.3 -1.9; 37 -1.9 13.3 -3.291; 38 0 13.3 -1.9
13. 39 0 13.3 -3.8
14. 41 8 4.3 1.9; 42 8 4.3 3.8; 43 9.9 4.3 3.291; 44 11.291 4.3 1.9
15. 45 11.8 4.3 0; 46 11.291 4.3 -1.9; 47 9.9 4.3 -3.291; 48 8 4.3 -1.9
16.4984.3 - 3.8
17. 51 8 10.3 1.9; 52 8 10.3 3.8; 53 9.9 10.3 3.291; 54 11.291 10.3 1.9
18. 55 11.8 10.3 0; 56 11.291 10.3 -1.9; 57 9.9 10.3 -3.291; 58 8 10.3 -1.9
19. 59 8 10.3 -3.8
20. 61 8 16.3 1.9; 62 8 16.3 3.8; 63 9.9 16.3 3.291; 64 11.291 16.3 1.9
21. 65 11.8 16.3 0; 66 11.291 16.3 -1.9; 67 9.9 16.3 -3.291; 68 8 16.3 -1.9
22. 69 8 16.3 -3.8
24. *PILECAP
25. 71 0 0 1.9; 72 0 0 2.8; 73 0 0 -2.8; 74 8 0 2.8; 75 8 0 -2.8
27. *PILE
28. 101 0 -1 2.8 120
29. 121 0 -1 -2.8 140
                         0 -20.0
                                   2.8
                         0 -20.0 -2.8
30. 141 8 -1 2.8 160
                         8 -20.0
31. 161 8 -1 -2.8 180 8 -20.0 -2.8
33. MEMBER INCIDENCE
34. *COLUMN 1 TO 7; 11 TO 19
35. 1 1 2 7; 11 11 12 19
37. *BEAM 21 TO 29; 31 TO 39; 41 TO 49; 51 TO 59; 61 TO 69
38. 21 4 21; 22 21 22; 23 4 23; 24 4 24; 25 4 25; 26 4 26
39. 27 4 27; 28 4 28; 29 28 29
40. 31 6 31; 32 31 32; 33 6 33; 34 6 34; 35 6 35; 36 6 36
41. 37 6 37; 38 6 38; 39 38 39
42. 41 13 41; 42 41 42; 43 13 43; 44 13 44; 45 13 45; 46 13 46
43. 47 13 47; 48 13 48; 49 48 49
44. 51 15 51; 52 51 52; 53 15 53; 54 15 54; 55 15 55; 56 15 56
45. 57 15 57; 58 15 58; 59 58 59
46. 61 17 61; 62 61 62; 63 17 63; 64 17 64; 65 17 65; 66 17 66
47, 67, 17, 67; 68, 17, 68; 69, 68, 69
49. *FLIGHT 81 TO 86
50. 81 9 41; 82 28 48; 83 21 51; 84 38 58; 85 31 61
51. 86 9 71
53. *PILECAP 91 TO 95
54. 91 1 71; 92 71 72; 93 1 73; 94 11 74; 95 11 75
56. *PILE
57. 101 72 101; 102 101 102 120
58. 121
          73 121, 122 121 122 140
         74 141; 142 141 142 160
75 161; 162 161 162 180
59. 141
60. 161
62. MEMBER OFFSET
63. 1 11
                START 0.70
64. 21 23 TO 28 START 0.35 65. 31 33 TO 38 START 0.30
66. 41 43 TO 48 START 0.45
```

```
67. 51 53 TO 58 START 0.35
68. 61 63 TO 68 START 0.30
                END
69.86
71. MEMBER PROPERETY
72. *COLUMN
73. 1 2 3 11 12 13
                    PRT YD 1.2
74. 4 5 14 15
                    PRT YD 1.0
75. 6
        16 17
                    PRI YD 0.8
                     PRI YD 0.6
           18
76.
           19
                     PRI YD 0.5
77.
78. 7
                     PRI YD 0.3
80. *BEAM
81. 21 28 31 38 41 48 51 58 61 68
                                    PRI YD 1.20 ZD 0.55
82. 22 29 32 39 42 49 52 59 62 69
                                    PRI YD 0.95 ZD 0.55
83. 23 TO 27 33 TO 37 43 TO 47
                                    PRI YD 1.20 ZD 0.25
                                    PRI YD 1.20 ZD 0.25
84. 53 TO 57 63 TO 67
86. *FLIGHT
                     PRI YD 0.300 ZD 3.2
87. 81 TO 85
88. 86
                     PRI YD 0.500 ZD 3.2
90. *PILECAP
91. 91 TO 95
                   PRI YD 1.40 ZD 2.2
93. *PILE
94. 101 TO 180
                   PRI YD 0.9
96. CONSTANTS
97. E CONCRETE ALL
98. DEN CON ALL
100. SUPPORT
101. *72 TO 75 FIXED
102. 101 TO 161 BY 20 FIXED BUT FY MX MY MZ
                                             KFX 15961
                                                         KFZ 11971
103. 102 TO 162 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 17474
                                                         KFZ 14066
104. 103 TO 163 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 18755
105. 104 TO 164 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 19896
                                                         KFZ 14922
106. 105 TO 165 BY 20 FIXED BUT FY MX MY MZ
                                                         KEZ 15704
                                              KFX 20939
107, 106 TO 166 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 21908
                                                         KFZ 16431
108. 107 TO 167 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 61700
                                                         KFZ 46275
109. 108 TO 168 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 62563
                                                         KFZ 46922
110. 109 TO 169 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 63387
                                                         KFZ 47540
111. 110 TO 170 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 64177
                                                         KFZ 48133
112. 111 TO 171 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 64937
                                                         KFZ 48703
113. 112 TO 172 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 65672
                                                         KFZ 49254
114. 113 TO 173 BY 20 FIXED BUT FY MX MY MZ
                                              KEX 66383
                                                         KFZ 49787
                                                         KFZ 50305
115. 114 TO 174 BY 20 FIXED BUT FY MX MY MZ
                                              KEX 67073
116. 115 TO 175 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 67744
                                                         KFZ 50808
117. 116 TO 176 BY 20 FIXED BUT FY MX MY MZ
                                                         KFZ 51299
                                              KFX 68399
118. 117 TO 177 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 69037
                                                         KFZ 51778
119. 118 TO 178 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 69662
                                                         KFZ 52247
120. 119 TO 179 BY 20 FIXED BUT FY MX MY MZ
                                              KFX 70273
121. 120 TO 180 BY 20 PINNED
123. LOAD 1 : SELFWEIGHT
124. SELF
126. LOAD 2 : DEAD LOAD OVER FLIGHTS AND BEAMS
127. MEM LOAD
128. *OVER FLIGHTS FROM STEP+SIDEWALL+RAILING (4.47+3.6+10)
129. 81 TO 85
               UNI GY -18.07
131. *DEDUCTION OF BEAM SELFWEIGHT
132. 22 29 32 39 42 49 52 59 62 69
                                      TRA GY 0.0 1.98
133. 23 TO 27 33 TO 37 43 TO 47
                                      TRA GY 0.0
                                                  1.80
134. 53 TO 57 63 TO 67
                                      TRA GY 0.0
136. *OVER BEAMS FROM SLAB
137. 21 28 31 38 41 48 51 58 61 68
                                      TRA GY -0.0 -2.275
138. 22 29 32 39 42 49 52 59 62 69
                                      TRA GY -2.275 -4.550
139. 23 TO 27 33 TO 37 43 TO 47
                                      TRA GY -0.0
                                                    -9.100
140. 53 TO 57 63 TO 67
                                      TRA GY -0.0
                                                     -9.100
142. *OVER BEAMS FROM SIDE WALL
143. 22 29 32 39 42 49 52 59 62 69
                                      CON GY -2.6
144. 23 TO 27 33 TO 37 43 TO 47
                                      CON GY -5.2
145. 53 TO 57 63 TO 67
                                       CON GY -5.2
147. *OVER BEAMS FROM RAILING
148. 22 29 32 39 42 49 52 59 62 69
                                      CON GY -4.81
149. 23 TO 27 33 TO 37 43 TO 47
                                       CON GY -9.62
```

```
150, 53 TO 57 63 TO 67
                                     CON GY -9.62
 152. LOAD 3 : FULL LIVE LOAD (5.0 KN/M^2)
 153. MEM LOAD
 154. *OVER FLIGHT
 155. 81 TO 85 UNI GY -13.5
 156. *OVER BEAMS
 157. 21 28 31 38 41 48 51 58 61 68
                                     TRA GY -0.0 -2.15
 158. 22 29 32 39 42 49 52 59 62 69
                                    TRA GY -2.15 -4.30
 159. 23 TO 27 33 TO 37 43 TO 47
                                      TRA GY -0.0 -8.60
 160. 53 TO 57 63 TO 67
                                     TRA GY -0.0
                                                  -8.60
 162. LOAD 4 : PARTIAL LIVE LOAD
 163. MEM LOAD
 164. *OVER FLIGHT
 165. 81 83 85 UNI GY -13.5
 166. *OVER BEAMS
 167. 21 31 41 51 61
                                      TRA GY -0.0 -2.15
 168. 22 32 42 52 62
                                     TRA GY -2.15 -4.30
                                     TRA GY -0.0 -8.60
TRA GY -0.0 -8.60
 169. 23 TO 25 33 TO 35 43 TO 45
 170. 53 TO 55 63 TO 65
 172. LOAD 5 : WIND LOAD IN Z DIRECTION (WIND PRESSURE=4.0 KN/M^2)
 173. *EXP. HEIGHT = 0.6+10\%0.9=0.69M
 174. *LOAD FROM FLIGHT=18.8, FROM LANDING=16.6
175. JOINT LOAD
 176. 2
                FZ 9.4
 177. 4 6 13 15 FZ 35.4
 178. 17
             FZ 26.0
 179. MEM LOAD
 180. 2 3 12 13 UNI GZ 5.6
 181. 4 5 14 15 UNI GZ 4.8
 182. 6 16 17 UNI GZ 4.0
           18
 183.
                UNI GZ 3.2
 184.
            19 UNI GZ 2.4
 185. 7
                UNI GZ 1.2
 187. LOAD 6: WIND LOAD IN X DIRECTION (WIND PRESSURE=4.0 KN/M^2)
 188. JOINT LOAD
 189. 12 FX -24.2
 190. 13 TO 17 FX -48.4
 191. MEM LOAD
 192. 12 13 UNI GX -5.6
 193. 14 15
             UNI GX -4.8
 194. 16 17
             UNI GX -4.0
 195. 18
             UNI GX -3.2
 196. 19
             UNI GX -2.4
 198. LOAD COMB 7 : DL+LL
 199. 1 1.0 2 1.0 3 1.0
 201. LOAD COMB 8 : 1.4DL+1.7LL
 202. 1 1.4 2 1.4 3 1.7
 204. LOAD COMB 9: 0.75(1.4DL+1.7LL+1.7WL(Z))
 205. 1 1.05 2 1.05 4 1.275 5 1.275
 207. LOAD COMB 10 : 0.75(1.4DL+1.7LL+1.7WL(X))
 208. 1 1.05 2 1.05 4 1.275 6 1.275
 210. PDELTA ANALYSIS
         PROBLEM STATISTICS
   NUMBER OF JOINTS/MEMBER+ELEMENTS/SUPPORTS =
                                               149/ 152/
   ORIGINAL/FINAL BAND-WIDTH = 66/ 18
   TOTAL PRIMARY LOAD CASES = 6, TOTAL DEGREES OF FREEDOM =
   SIZE OF STIFFNESS MATRIX = 100548 DOUBLE PREC. WORDS
   REORD/AVAIL. DISK SPACE = 12.84/ 231.8 MB, EXMEM = 1965.6 MB
++ Processing Element Stiffness Matrix.
                                                    15:52: 6
++ Processing Global Stiffness Matrix.
++ Processing Triangular Factorization.
                                                    15:52: 6
++ Calculating Joint Displacements.
                                                    15:52: 6
++ Adjusting Displacements
                                                    15:52: 6
++ Calculating Member Forces.
                                                    15:52: 7
```

C:\Stair\Report.doc Page 6 of 62

<sup>211.</sup> LOAD LIST 7 TO 10 212. PRINT SUPPORT REACTION

		a Parageria					
SUPPORT		IONS -UNIT	KNS METE		URE TYPE =	SPACE	
JOINT	LOAD	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM Z
101	7	-4.47	.00	-6.06	.00	.00	.00
A	8	-6.50	00	-8.81	.00	.00	.00
	. 9	17.47	00	-43.24	.00	.00	.00
	10	98.28	.00	-10.23	.00	.00	.00
121	7	-14.43	.00	1.66	.00	.00	.00
	8	-21.08	.00	2.38	.00	.00	.00
	9	~38.80	.00	-36.06	.00	.00	.00
	10	36.16	.00	-1.10	.00	.00	.00
141	7	-21.50	.00	-3.87	.00	.00	.00
	8	-31.42 -32.10	.00	-5.61	.00	.00	.00
	-	-32.10 15.87	.00	-34.00 - 96	.00	.00	.00
1.61	10 7	-17.94	.00	5.77	.00	.00	.00
161	8	-26.17	.00	8.38	.00	.00	.00
	9	-24.42	.00	-24.43	.00	.00	.00
	10	55.16	.00	7.04		.00	.00
102	7	1.55	.00	-7.79	.00	.00	.00
102	8	2.30	.00	-11.32	.00	.00	.00
	9	22.92	.00	-40.29	.00	.00	.00
	10	81.77	.00	-11.77	.00	.00	.00
122	7	-7.65	.00	4.51	.00	.00	.00
	8	-11.17	.00	6.52	.00	.00	.00
15.00	9	-27.92	.00	-28.85	00	.00	.00
	10	25.97	.00	2.78	.00	.00	.00
142	7	-13.79	.00	-6.75	00	.00	.00
	8	-20.16	.00	-9.79	.00	.00	.00
	9 .	-21.27	.00	-33.18	.00	.00	.00
a system is	10	7.55	.00	-3.36	.00	.00	.00
162	7	-10.59	.00	8.62	.00	.00	.00
	8	-15.45	.00	12.52	.00	.00	.00
the second	9	-14.38	.00	-17.92	.00	.00	.00
1 (1)	10	42.82	.00	9.40	.00	.00	.00
103	7	5.14	.00	-8.05	.00	.00	.00
	8	7.53	.00	-11.69	.00	.00	.00
	9	23.51	.00	-33.89	.00	.00	.00
122	10 7	61.32 -2.46	.00	-11.46 5.86	.00	.00	.00
123	8	-3.59	.00	8.49	.00	.00	.00
	9	-17.65	.00	-20.97	.00	.00	.00
	. 10	16.38	.00	4.99	.00	.00	.00
143	7	-7.25	.00	-7.87	.00	.00	.00
	8	-10.62	.00	-11.41	.00	.00	.00
	9	-11.86	.00	-28.95	.00	.00	.00
	10	1.42	.00	-4.55	.00	.00	.00
163	. 7	-4.67	.00	9.52	.00	.00	.00
	8	-6.83	.00	13.82	00	.00	.00
	9	-6.32	.00	-11.70	.00	.00	.00
	10	29.81	.00	9.88	.00	.00	.00
104	7	6.56	.00	-7.26	.00	.00	.00
	8	9.61	.00	-10.54	.00	00	.00
	. 9	20.78	.00	-25.99	.00	.00	,00
	10	41.30	.00	-9.92	.00	.00	.00
124	7	.91	.00	5.99	.00	00	.00
	8	1.34	.00	8.68	.00	.00	.00
	9	-9.32	.00	-13.70	.00	.00	.00
	10	8.62	.00	5.75	.00	.00	.00
144	7	-2.46	.00	-7.62 -11.05	.00	.00	.00 .00
	8	-3.62	.00	-11.05	.00	.00	.00
Service Services	9 10	-4.78 -2.36	.00	-22.96 -4.73	.00	.00	.00
164	7	-2.36 59	.00	8.94	.00	.00	.00
104	8	87	.00	12.98	.00	.00	.00
100	9	76	.00	-6.54	.00	.00	.00
	10	18.29	.00	9.01	.00	.00	.00
		20.23	• • • •				

JOINT         LOAD         FORCE-X         FORCE-Y         FORCE-Z         MOM-X         MOM-Y         MOM Z           105         7         6.39         .00         -5.85         .00         .00         .00           8         9.36         .00         -8.49         .00         .00         .00           9         16.24         .00         -18.03         .00         .00         .00           10         24.26         .00         -7.73         .00         .00         .00           125         7         2.63         .00         5.28         .00         .00         .00           8         3.85         .00         7.65         .00         .00         .00           9         -3.38         .00         -7.73         .00         .00         .00           10         3.09         .00         5.43         .00         .00         .00           10         3.09         .00         5.43         .00         .00         .00           8         .75         .00         -9.39         .00         .00         .00           9        19         .00         -16.50         .00	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
126     7     3.08     .00     4.09     .00     .00     .00       8     4.51     .00     5.94     .00     .00     .00       9     .27     .00     -3.32     .00     .00     .00       10    30     .00     4.44     .00     .00     .00       146     7     2.00     .00     -4.88     .00     .00     .00	the state of the state of the
9 .27 .00 -3.32 .00 .00 .00 1030 .00 4.44 .00 .00 .00 146 7 2.00 .00 -4.88 .00 .00	
1030 .00 4.44 .00 .00 .00 146 7 2.00 .00 -4.88 .00 .00	
146 7 2.00 .00 -4.88 .00 .00 .00	
.00 - 7.0800 .00 .00 .00 .00 .00 .00 .00 .00 .	
9 2.23 .00 -10.50 .00 .00 .00	
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00	
166 7 2.6600 5.49000000	
8 3.88 .00 7.97 .00 .00 .00 .00 .00 .00 .00 .00 .00 .0	
9 3.6500230000000000000000	
107 7 9.90 .00 -7.10 .00 .00 .00	
8 14.48 .0010.30 .00 .00 .00 .00 .00	
9 17.620014.69	
10 7.46	
8 10.77 .00 10.92 .00 .00 .00	
9 5.51	
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00	
147 7 6.35 6.35 6.36 8.70 6.30 6.00 6.00 6.00	and the second
10	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
167 7 7.07 .00 9.59 .00 .00 .00	
[As a [As a 8 ] 10.31 [As a [As 00 ] 13.92 [As 10 ] 1.00 [As 10.00 ] 1.00 [As 10.00 ]	
3,01	
10	
-5.18 .00 .00 .00 .00 .00 .00	
9 7.81 .00 -4.22 .00 .00 .00	
10 -5.34 .00 -4.11 .00 .00 .00	
128 7 5.34	
7.80	
$^{-6}$ $^{-6}$ $^{-6}$ $^{-6}$ $^{-6}$ $^{-5}$ $^{-6$	
.00 in	
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00	
10 -6.72 .00 -3.52 .00 .00	
168 12 7 16 5 5 1 1 1 1 1 1 1 1 1 5 1 0 1 1 1 1 1 1	
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00	
10 -6.14 .00 4.63 .00 .00 .00	
109 7 2.65 .00 -1.19 .00 .00 .00	
.00 .00 .00	
9 1.65 .00 1.71 .00 .00 .00	
.00 -1.09 .00 .00 .00 .00 .00 .00 .00 .00 .00	

						<del></del>	<del></del>	
JOINT	LOAD	FORCE-X	FORCE-Y	FORCE-Z	мом-х	MOM-Y	MOM Z	
129	7	3,32	.00	1.92	.00	.00	.00	
127	8	4,85	.00	2.79	.00	.00	.00	3.12
	9	5.85	.00	4.54	.00	.00	.00	
	. 10	-5.48	.00	2.59	00	.00	.00	
149	7	3.96	.00	-1.95	.00	.00	.00	
	. 8	5.78	.00	-2.82	.00	.00	.00	
	9 10	5.62 -3.98	.00	.34 -1.61	.00	.00	.00	
169	7	3.68	.00	1.94	.00	.00	.00	
-0,	8	5.37	.00	2.82	.00	.00	.00	
	9	5.02	.00	4.16	.00	.00	.00	24
1,000	10	-7.00	.00	1.61	.00	.00	.00	
110	7	. 67	.00	.19	.00	.00	.00	
	8	.98	.00	.29 4.33	.00 .00	.00	.00	
	9 10	-1.56 -10.50	.00	.59	.00	.00	.00	
130	7	1.70	.00	.41	.00	.00	.00	
	8	2.49	.00	.59	.00	.00	.00	
	9	4.30	.00	4.48	.00	.00	.00	
	10	-4.01	.00	.84	.00	.00	.00	
150	7 8	2.45 3.58	.00	22 31	.00	.00	.00	
	9	3.64	.00	3.11	.00	.00	.00	
	10	-1.90	.00	37	.00	00	00	
170	7.	2.08	.00	.05	.00	.00	.00	
	8	3.04	.00	.07	.00	.00	.00	33 33
	9	2.83	.00	3.34	.00	.00	.00	
111	10 7	-5.98 39	.00	16 .84	.00	.00	.00	
111	8	57	.00	1.22	.00	.00	.00	
	9	-2.73	.00	4.83	.00	.00	.00	
	10	-8.47	.00	1.31	.00	.00	.00	
131	7	. 61	.00	41	.00	.00	00	
	8	.89 2.70	.00	59 3.64	.00	.00	.00	1 1 1
	10	-2.52	.00	17	.00	.00	00	nete, i tuunee
151	7	1.26	.00	.67	.00	.00	.00	
	8	1.84	.00	.98	.00	00	.00	
	9	1.98	.00	3.91	.00	.00	.00	
171	10 7	55	.00	.30 89	.00	.00	.00	
171	8	.91 1.33	.00	-1.30	.00	.00	.00	
	9	1.24	.00	2.34	.00	.00	.00	
	10	-4.30	.00	-1.01	.00	.00	.00	
112	7	80	.00	1.01	.00	.00	.00	
	8	-1.17 -2.72	.00	1.46	.00	.00	.00	
	9 10	-5.80	.00	4.20 1.43	.00	.00	.00	
132	7	02	.00	74	.00	.00	.00	
	8	04	.00	-1.07	.00	.00	.00	
	9	1.41	,00	2.57	.00	.00	.00	
150	10	-1.31 .44	.00	63	.00	.00	.00	41.7
152	7 8	.65	.00	.99 1.43	.00	.00	.00	
	9	.00	.00	3.60	.00	.00	.00	
	10	.19	.00	.58	.00	.00	.00	
172	7	.19	.00	-1.19	.00	.00	.00	
	8	.27	.00	-1.73	.00	.00	.00	
	9	.25 -2.64	.00	1.42 -1.24	.00	.00	.00	e de la
113	10 7	-2.64 82	.00	-1.24 .91	.00	.00	.00	
113	8	-1.21	.00	1.31	.00	.00	.00	
	9	-2.16	.00	3.13	.00	.00	.00	
	10	-3.38	.00	1.23	.00	.00	.00	
133		- 31	.00	76	.00	.00	.00	
	8 9	46 .52	.00	-1.11 1.57	.00 .00	.00	.00	
	10	48	.00	75	.00	.00	.00	

	MOM Z	MOM-Y	MOM-X	FORCE-Z	FORCE-Y	FORCE-X	LOAD	JOINT
2	.00	.00	.00	.96	.00	02	7	153
	.00	.00	.00	1.40	.00	03	8	
	.00	.00	.00	2.79	.00	.09	. 9	
	.00	.00	.00	. 61	.00	.49	10 7	173
	.00	.00	.00 .00	-1.12 -1.63	.00	19 27	8	1/3
	.00	.00	.00	.71	.00	26	9	$a \in \mathbb{N}_{+} \setminus \{ c \}$
	.00	.00	.00	-1.13	.00	-1.33	10	
	.00	.00	.00	.69	.00	67	7	114
	.00	.00	.00	1.00	.00	98	8	
	.00	.00	.00	2.04	.00	-1.45	9	
	.00	.00	.00	.91	.00	-1.56 38	10	134
	.00	.00	00	64 93	.00	56	8	134
	.00	.00	.00	.93	.00	.00	9	4
	.00	.00	00	- 67	.00	.00	10	
	.00	.00	00	.78	.00	24	7	154
	.00	.00	00	1.13	.00	34	8	er jara
	.00	.00	.00	1.89	.00	26	9	
	.00	.00	.00	.51	.00	.53	10	174
	.00	.00	.00	89 -1.29	.00	33 47	. 7 8	174
	.00	.00	.00	.23	.00	- 45	9	
	.00	.00	00	87	.00	45	10	
	.00	.00	.00	.47	.00	46	7	115
	.00	.00	00	.67	.00	68	8	
	.00	.00	.00	1.14	.00	84	9	
	.00	.00	.00	.59	.00	40 34	10 7	135
	.00	.00	.00	47 67	.00	50	8	133
	.00	.00	.00	.28	.00	24	و م	
	.00	.00	. 00	51	.00	.23	10	
100	.00	.00	.00	.55	.00	29	7	155
	.00	.00	.00	.80	.00	42	8	
1.1	.00	.00	00	1.11	.00	37	9	
	.00	.00	00	.38 61	.00	.44	10 7	175
	.00	.00	.00	89	.00	47	8	173
	.00	.00	00	- 04	.00	- 44	9	
	.00	.00	00	59	.00	.05	10	
	.00	.00	.00	.28	.00	28	7	116
Santa da Santa	.00	.00	.00	.40	.00	- 40	8	
	.00	.00	.00	.51	.00	39	9	
法股票	.00	.00	.00	.33 30	.00	.21 25	10 7	136
	.00	.00	.00	- 44	.00	37	8	130
	.00	.00	.00	02	.00	30	9	
	.00	.00	00	- 35	.00	.28	10	
	.00	.00	.00	.34	.00	26	7	156
	.00	.00	00	.50	.00	37	8	
	.00	.00	00	.55	.00	35 .32	9 10	
	.00	.00	.00	.25 38	.00	26	7	176
	.00	.00	.00	55	.00	38	8	1,0
	.00	.00	.00	16	.00	35	9	
	.00	.00	.00	35	.00	.27	10	
	.00	.00	.00	.14	.00	- 14	7	117
	.00	.00	.00	21	.00	21	8	
	.00	.00	00	.15	.00	12	9	
	.00	.00	.00	.16	.00	.43 16	10 7	137
	.00	.00	.00	17 25	.00	16 24	8	101
	.00	.00	.00	14	.00	27	9	
	.00	.00	.00	- 21	.00	.25	10	
	.00	.00	.00	.19	.00	19	7	157
San	.00	.00	.00	.28	.00	28	8	1 . ( v. 1)
	.00	.00	.00	.20	.00	27	9	
114 1443	.00	.00	.00	.14	.00	.20	10	Adv. Selve

		777 (7)	FOR ONLY	Donor a	WOM V	MOM Y	MOM 2
JOINT	LOAD	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM Z
177	7	18	.00	20	.00	.00	.00
	8	26	.00	29	.00	.00	.00
	9	- 24	.00	19	.00	.00	.00
	10	.31	.00	18	.00	.00	.00
118	7	- 06	.00	.06	.00	.00	.00
•	8	09	.00	.09	.00	.00	.00
	9	.00	.00	02	.00	.00	.00
* ***	10	.39	.00	.06	.00	.00	.00
138	7	09	.00	09	.00	.00	.00
	8	- 14	.00	13	.00	.00	.00
	9	~.19	.00	15	.00	.00	.00
	10	.18	.00	11 .09	.00	.00	.00 .00
158	7	- 12 - 17	.00	.13	.00	.00	.00
	8 9	17	.00	.13	.00	.00	.00
	10	.17	.00	.03	.00	.00	.00
178	7	- 11	.00	09	.00	.00	.00
7,0	8	16	.00	14	.00	.00	.00
	9 :	15	.00	- 15	.00	.00	.00
	10	.24	.00	~.08	.00	.00	.00
119	7	02	.00	.02	.00	.00	.00
	8	03	.00	.03	.00	.00	.00
	9	.03	00	- 04	.00	.00	.00
	10	.23	00	.02	.00	.00	.00
139	7	- 04	.00	- 03	.00	.00	.00
	8	06	.00	05	.00	.00	.00
	9	10	.00	09	.00	.00	.00
	10	.09	.00	05	.00	.00	.00
159	7	06	.00	.03	.00	00 -	.00
	8	08	.00	. 05	.00	.00	.00
	9	08	.00	- 02	.00	.00	.00
	10	.05	.00	.03	.00	.00	.00
179	7	05	.00	03	.00	.00	.00
	8	07	.00	05	.00	.00	.00
	9	07 .13	.00	08 03	.00	.00	.00
120	10	.13	1946.08	03 29	.00	.00	.00
120	8	.22	2807.49	42	.00	.00	.00
1.17	9	.49	2600.75	92	.00	.00	.00
	10	.55	2386.88	38	.00	.00	.00
140		.12	1650.06	.25	.00	.00	.00
	8	.18	2374.07	.37	.00	.00	.00
	9	01	1054.03	41	.00	.00	.00
	10	.01	1814.39	.26	.00	.00	.00
160		.07	2068.92	31	00	.00	.00
	8	.11	2984.17	45	.00	.00	.00
	9	.08	2616.73	83	.00	.00	.00
	10	17	1864.69	20	.00	.00	.00
180	7	.10	2016.65	.36	.00	.00	.00
	8	.15	2906.90	.52	.00	.00	.00
	: 9	. 14	1481.09	16	.00	.00	.00
	10	.17	1686.65	.36	.00	.00	.00
4.0	1,11		and the street of the street	and the second section of the		The Art Control of the Control	

MEMBER END FORCES STRUCTURE TYPE = SPACE

ALL UNITS ARE -- KNS METE

- F			MO METE					
MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
1	7	1	2012.87	1073.91		34.59	-169.23	1528.20
		2	-1978.23				178.18	43.47
	8	. 1	2931.16	1563.57		52.13	-249.70	2226.86
		. 2	-2882.66	-1537.46	8.97	-52.13	262.73	62.20
	9	1		1035.70	196.04	1089.02	-2488.52	1432.56
	* * * * * * * * * * * * * * * * * * * *	. 2	-1937.70	-1016.12	-196.04	-1089.02		81.99
	10	1	2342.37	1218,67	-11.48	345,55	458.97	1486.41
		2	-2306.00	-1199.08	11.48	-345.55	475.73	298.85
2	7	2	2242.06	8.75	6.16	-54.02	173.28	43.47
		3	-2162.12	-8.75		54.02	-190.99	-16.51
	8		3267.00		8.97		256.04	62.20
	4 4 4	3	-3155.08	-12.98	-8.97	78.66	-281.84	-22.25
of the A	9	2	2187.83	24.01	-184.05	-83.63	2452.35	81.99
	100	. 3	-2103.89	: -24.01	162.63	83.63	-1931.17	-9.23
	10	2	2598.86	37.53	11 48	78.70	582.69	298.85
		3	-2514.92	-37.53	-11.48	-78.70	-615.97	-186.96
3	7		2162.12	8.75	6.16	-54.02	190.99	16.51
		4	-2082.18	-8.75 12 98	-6.16	54.02	-208.15	10.51
	3 8 1, 2,	3	3155.08		8.97	-78.66	281.84	22.25
	t Author	4	-3043.17	-12.98	-8.97		-306.86	17.77
	9	- 3	2103.89	24.01	-162.62	-83.63	1931.16	9.23
		4	-2019.95	-24.01	141.20	83.63	-1473.32	63.59
	10		2514.91	37.53	11.48		615.97	186.96
		4	-2430.97	-37.53	-11.48	-78.70	-648.36	-74.78
4	7	4	1091.69	54	-6.05	5 71	184.25	-5.43
		5	-1036.17	.54	6.05	5.71	-165.00 271.28 -242.88	4.16
	8		1590.52	.38	-8.93	5.71 -8.22	271.28	-5.23
		5	-1512.80	38	8.93		242.00	6.89
	9	4	1069.89	-17.27	-119.10	20.93	1155.24	-82.77
$(x) = \{x_i\}_{i=1}^n : i \in I$		- 5	-1011.60	17.27	100.74		-823.76	
The State of the Control	10	4	1208.86	-34.01			419.73	
		5	-1150.57		7.01	58.95	-396.99	-22.60
5	7	5	1036.18	54	-6.05	-5.71	165.00	-4.16
		6	-980.66	.54	6.05	5.71	-145.29	2.89
	8	5	1512.81	.38	-8.93	-8.22	242.88	-6.89
		6	-1435.09		8 93	8.22	-213.82	8.53
	9		1011.61	-17.27			823.77	-31.34
			-953.32	17.27	82.38	-20.93	-546.71	
	10		1150.58	-34.01	-7.01	-58.95	396.99	22.61
		6	-1092.29	34.01	7.01	58.95	-373.59	-124.63
6	7	6	40.53	.00	.00	.00	.09	.03
		: 7	-5.00	.00	.00	.00	01	00
	8	6	56.74	.00	.00	.00	.13	.04
		7	-7.00	.00	.00	.00	01	. 00
	9	6	42.55	.00	-19.89	.00	43.70	.03
	10	7	-5.25	.00	4.59	.00	-6.90	.00
	10	6 7	42.55 -5.25	.00	.00	.00	.10 01	.03
7	7	7	5.00	.00	.00	.00	.01	.00
	6	8	.00	.00	.00	.00	.00	.00
	8	7	7.00	.00	.00	.00	.01	.00
	9	8	.00 5.25	.00	4.50	.00	.00	.00
taki dali		8	5.25 .00	.00	-4.59	.00	6.90	.00
	10	7	5.25	.00	.00	.00	.00	00
		8	.00	.00	.00	.00	.01 .00	.00
		Ž				.00	.00	.00
	Maria Salah Salah	1875	もいだい かがる 可疑し		200			

				<del></del>					<del></del> -
			***	OHERD '	OURAN C	MODATON	VOV. V	MOM 0	
MEMBER	LOAD	JŢ	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-2	
11	7	1.1	2728.05	1429 30	-8.60	54 74	-162.12	1964.81	
1.1		12	-2693.41	-1410.65	8.60	-54.74	174.71	131.67	4
	8		3971.18		-12.56	80.88	A company of the comp	2859.95	
		12		-2054.09	12.56	-80.88	257.68	192.01	
	9		2704.92				-2594.55	1885.34	
		12	-2668.55	-1372.44	-194.71	-1157.57	2306.87	155.39	
	10	11	2138.29	1291.63	-27.90	-48.92	-675.36	1821.59	· . ·
		12		-1272.04	27.90	48.92	716.36	69.97	200
12	7	12	3040.27 -2960.33	34.91	8.60	-34.64	179.78	131.67	
	in the		-2960.33	-34.91	-8.60	34.64	-204.74	-26.16	
	8		4427.66	51.18		-50.95			
		13	-4315.74	-51.18 56.76	-12.56 -194.71	50.95 -74.48	-301.72 2579.94	-37.35 155.39	
	9	13	3000.26 -2916.32	-56.76			-2026.45	15.77	
	10		2453.78	-92 60	27 90		607.54		·
	. 10		-2369.84	71.18	27.90 -27.90	382.70			:
			2303.01						
13	7	13	2029.31	-9.88	92	20.68 -20.68	257.91	-58.27	il s
		14	-1949.36	9.88	.92	-20.68	-253.94	29.18	
	8	13	2951.77	-14.73	-1.27	30.04	379.68	-86.82	1
		14	-2839.85	14.73	1.27	-30.04	-374.11	43.41	9. al. 1
	9	. 13	2044.14	-39.99	-183.29	62.96	1994.53	~205.69	
	Marie,	14	-1960.20	39.99	161.87	-62.96	-1474.54		
	10	. 13	1780.34	-75.76	-3.88	-4.17	566.86	-37.28	
		14	-1696.41	54.34	3.88	4.17	-552.94	-156.32	
						20.52	257	-29.18	
14	7	Carlotte Company	1949.36 -1893.84	-9.88	92	20.68 -20.68	253.94	-29.18 04	
	8	15 14	-1893.84 2839.85	9.00 -14.72	-1 27	30.04	-240.94 271 11	04	
	•	15	-2762.13		1.27	-30.04	-367.05	17	gri i
	9	14	1960.20	-39.99	-161.87		1474.54	-86.32	200
		15	-1901.91			-62.96	-1012.67	-33.19	
	10	14	1696.40	7.37	-3.88	-4.17	552.94	156.33	
		1.5	-1638.11	-25.73	3.88	4.17	-537.46	-105.48	
	- P								
15	7		912.39	-63.73	8.50	4.53	304.15	-76.43	
			-856.87	63.73	-8.50	-4.53	-327.80	-114.59	
	8		1324.61	-94.20	12.51	6.98 -6.98	448.40	-113.29	100
	9		-1246.89		-12.51	-6.98	-483.29	-169.07	
	9		933.34 -875.05				945.20 -716.13	-110.98 -100.12	
	1.0	15		-105 14	5.22	8.08	415.97	-137.94	4 E
	10	16	-806.09	86.78			-428.78	-149.56	100
		± 0							100
16	7	16	856.87	-63.73		4.53	327.80	114.59	Ă.
	医结合物	17	-821.34	63.73	-8.50	-4.53	-350.11	-305.02	
	8	16	1246.89	-94.20	12.51	6.98	483.29	169.07	
		17	-1197.14	94.20	-12.51	-6.98	-516.25	-450.59	
	9	16	875.05	-70.43			716.13	100.12	
	. =	17	-837.74			-17.03	-536.02	-310.67	
	10	16	806.09	-25.07		8.08	428.78	149.56	
		17	-768.78	9.77	-5.22	-8.08	-440.05	-200.90	1.
17	7	17	69.39	.00	.00	.00	. 67	.20	4.4.
Ι,		18	-33.86	.00	and the second second	.00	27	- 08	
	8	17	97.15	.00	and the second second	.00	. 94	27	10
er en var eft		18	-47.41	.00	and the state of t	.00	38	- 11	. 77
	9	17	72,86	.00	The second secon	.00	147.58	.21	
		1.8	-35.56	.00		.00	-59.96	- 08	
	10	17	72.86	-36.72	.00	.00	.70	-146.67	
		18	-35.56	21.42	.00	.00	29	59.59	
18	7	18	33.87	.00	and the second of	.00	.27	.08	
		19	-13.88	.00	4 14		08	02	¥4.
	8	18					.38	$\frac{11}{03}$	
		19	-19.43	.00			- 11 59.95	03 .08	
	9	18	35.56	.00	-21.42	.00	39.93		

```
214. PLOT BEN FILE
```

215. PLOT FORCE FILE

216. PLOT DISP FILE

217. START CON DESIGN

218. FC 30000

219. TRACK 1

220. CLEAR 0.05

221. DESIGN COLUMN 1 TO 7 11 TO 18

COLUMN NO. 1 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 1200.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 16851.4 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

21 - 32 MM 1.494 9 STA .700
(EQUALLY SPACED)

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

PO Pn max P-bal. M-bal. e-bal. (MM) 35397.58 28318.07 13656.43 5549.58 406.4 MO P-tens. Des.Pn Des.Mn e/h 3255.17 -6988.57 2820.11 4102.00 .985

COLUMN NO. 2 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 1200.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 12101.4 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

39 - 20 MM 1.083 9 STA .700
(EQUALLY SPACED)

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

PO Pn max P-bal. M-bal. e-bal. (MM) 33595.46 26876.37 13642.51 5048.20 370.0 MO P-tens. Des.Pn Des.Mn e/h 2459.53 -5068.06 3125.47 3505.31 .374

COLUMN NO. 3 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 1200.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 11309.7 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

9 - 40 MM 1.000 7 STA .700
(EQUALLY SPACED)

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

```
PO Pn max P-bal. M-bal. e-bal
33230.09 26584.07 13443.64 4921.88 366.1
         P-tens. Des.Pn Des.Mn e/h
  MO
2255.03 -4678.69 3088.75 273.86 .030
                        4 DESIGN RESULTS
   социми мо.
FY - 413.7 FC - 30.0 MPA, CIRC SIZE 1000.0 MMS DIAMETER TIED
       AREA OF STEEL REQUIRED = 7853.9 SQ. MM
                 REINF PCT. LOAD LOCATION PHI
BAR CONFIGURATION
                    1.024
                                       STA .700
40 - 16 MM
(EQUALLY SPACED)
  COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)
PO Pn max P-bal. M-bal. e-bal.
23150.34 18520.27 9341.11 2858.84 306.0
                             M-bal. e-bal. (MM)
 MO P-tens. Des.Pn Des.Mn e/h
1340.07 -3327.84 1559.55 263.33 .056
     COLUMN NO. 5 DESIGN RESULTS
FY - 413.7 FC - 30.0 MPA, CIRC SIZE 1000.0 MMS DIAMETER TIED
       AREA OF STEEL REQUIRED = 7853.9 SQ. MM
BAR CONFIGURATION
                    REINF PCT. LOAD LOCATION PHI
                                        STA
 40 - 16 MM
                       1.024
                                                   700
(EQUALLY SPACED)
   COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)
PO Pn max P-bal. M-bal. e-ba
23150.34 18520.27 9341.11 2858.84 306.0
MO P-tens. Des.Pn Des.Mn e/h
                                       e-bal. (MM)
 MO P-tens. Des.Pn Des.Mn e/h
1340.07 -3327.84 1480.25 235.79 .053
    COLUMN NO. 6 DESIGN RESULTS
 FY - 413.7 FC - 30.0 MPA, CIRC SIZE 800.0 MMS DIAMETER TIED
       AREA OF STEEL REQUIRED = 5026.5 SQ. MM
                      REINF PCT. LOAD LOCATION PHI
 BAR CONFIGURATION
                       1.000
                                7 STA .700
 4 - 40 MM
 (EQUALLY SPACED)
    COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)
```

11-39

```
Pn max P-bal. M-bal. e-bal. (MM) 1815.14 5664.81 1403.19 247.7
14768.93 11815.14 5664.81 1403.19
         P-tens. Des.Pn Des.Mn
-2079.42 57.89 .14
   MO
                                        e/h
 684.64 -2079.42
    COLUMN NO. 7 DESIGN RESULTS
FY - 413.7 FC - 30.0 MPA, CIRC SIZE 300.0 MMS DIAMETER TIED
       AREA OF STEEL REQUIRED = 706.9 SQ. MM
BAR CONFIGURATION
                   REINF PCT. LOAD LOCATION PHI
                    1.120
 7 - 12 MM
                                (EQUALLY SPACED)
   COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)
         Pn max P-bal. M-bal. e-bal. (MM)
1687.80 647.60 67.90 104.8
 PΛ
  109.75 1687.80 647.60 67.90 104.8

MO P-tens. Des.Pn Des.Mn e/h

34.26 -327.45 7.14 .02 .001
 2109.75
  MO
                             .02
    COLUMN NO. 11 DESIGN RESULTS
FY - 413.7 FC - 30.0 MPA, CIRC SIZE 1200.0 MMS DIAMETER TIED
      AREA OF STEEL REQUIRED = 18434.8 SQ. MM
                     REINF PCT. LOAD LOCATION PHI
BAR CONFIGURATION
23 - 32 MM
                      1.636 9 STA .700
(EQUALLY SPACED)
   COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)
PO Pn max P-bal. M-bal. e-bal. (MM) 36022.13 28817.71 13731.45 5733.12 417.5
  М0
 MO P-tens. Des.Pn Des.Mn
3528.24 -7654.15 3864.17 4581.71
                              Des.Mn e/h
                                      . .803
    COLUMN NO. 12 DESIGN RESULTS
FY - 413.7 FC - 30.0 MPA, CIRC SIZE 1200.0 MMS DIAMETER TIED
       AREA OF STEEL REQUIRED = 11309.7 SO. MM
BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI
                      1.000
 9 - 40 MM
                                7
                                         STA
                                                 .700
(EQUALLY SPACED)
```

COLUMN INTERACTION: MOMENT ABOUT 2/Y -AXIS (KN-MET) PO Pn max P-bal. M-bal. e-bal. (MM) 33230.09 26584.07 13443.64 4921.88 366.1 26584.07 13443.04 4.2... P-tens. Des.Pn Des.Mn 4679 69 4343.24 318.34 e/h М0 -2255.03 -4678.69 4343.24 COLUMN NO. 13 DESIGN RESULTS FY - 413.7 FC - 30.0 MPA, CIRC SIZE 1200.0 MMS DIAMETER TIED AREA OF STEEL REQUIRED = 11309.7 SQ. MM BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI 7 STA .700 9 - 40 MM 1.000 (EQUALLY SPACED) -COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET) PO Pn max P-bal. M-bal. e-bal. (MM) 33230.09 26584.07 13443.64 4921.88 366.1 MO P-tens. Des.Pn Des.Mn e/h 2255.03 -4678.69 2899.01 377.73 .043 COLUMN NO. 14 DESIGN RESULTS FY - 413.7 FC - 30.0 MPA, CIRC SIZE 1000.0 MMS DIAMETER TIED AREA OF STEEL REQUIRED = 7853.9 SQ. MM BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

DAK COMPTO	30KAT TON	VETUC E	JI. LOAD	POCK! TON	FILE
(EQUALLY		1.024		leka Fligatio Hebbishing	.700
P0 23150.34 M0	Pn max 18520.27 9 P-tens. -3327.84 2	P-bal. 341.11 Des.Pn	M-bal. 2858.84 Des.Mn	e-bal. (MM 306.0 e/h	

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 1000.0 MMS DIAMETER TIED

COLUMN NO. 15 DESIGN RESULTS

AREA OF STEEL REQUIRED = 7853.9 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

Page 18 of 62

40 - 16 MM (EQUALLY SPACED) 1.024

7 STA .700

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET) 

Pn max P-bal. M-bal. 23150.34 18520.27 9341.11 2858.84

e-bal (MM)

M0 P-tens. Des.Pn Des.Mn 1340.07 -3327.84 1303.41 448.01

e/h .115

COLUMN NO. 16 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 800.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 6082.1 SQ. MM

REINF PCT. LOAD LOCATION BAR CONFIGURATION

31 - 16 MM (EQUALLY SPACED) 1.240

9 STA

.700

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

PO Pn max P-bal. M-bal. 15237.78 12190.23 5863.69 1524.02 M-bal. e-bal. (MM) 259.9 MO P-tens. Des.Pn Des.Mn 800.13 -2579.07 1250.07 1032.99 Des.Mn e/h .275

\_\_\_\_\_\_

COLUMN NO. 17 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 800.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 5026.5 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

4 - 40 MM(EQUALLY SPACED) 1.000

7

STA

700

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

PO Pn max P-bal. M-bal. 14768.93 11815.14 5664.81 1403.19 MO P-tens. Des.Pn Des.Mn e-bal. (MM) 684.64 -2079.42 99.13 1.00

COLUMN NO. 18 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 600.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 2827.4 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION

```
1.040
                                           STA
                                                    .700
 26 - 12 MM
(EOUALLY SPACED)
   COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)
  PO Pn max P-bal. M-bal. e-bal. (MM)
3351.22 6680.97 3166.67 600.70 189.7
MO P-tens. Des.Pn Des.Mn e/h
282.17 -1216.24 48.38 .40 .003
 8351.22
222. DESIGN BEAM 21 TO 29 31 TO 39 41 TO 49 51 TO 59
       BEAM NO. 21 DESIGN RESULTS - FLEXURE
LEN - 1932. MM FY - 414. FC - 30. MPA, SIZE - 550. X 1200. MMS
                                                           ANCHOR
        HEIGHT BAR INFO
                                  FROM
 LEVET.
                                                           STA END
          (MM)
                                  (MM)
                                             (MM)
        73. 7 - 20MM
                               937.
                                            1932.
    CRITICAL POS MOMENT= 143.95 KN-MET AT 1932.MM, LOAD 10 I
    REQD STEEL= 2067.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 |
    MAX/MIN/ACTUAL BAR SPACING= 428./ 45./ 71. MMS
  BASIC/REQD. DEVELOPMENT LENGTH = 450./ 592. MMS
   2 1127.
                               0.
                  7 - 20MM
                                              1932.
    CRITICAL NEG MOMENT= 825.53 KN-MET AT 0.MM, LOAD 8 | REQD STEEL= 2067.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 |
    MAX/MIN/ACTUAL BAR SPACING= 428./ 45./ 71. MMS
BASIC/REQD. DEVELOPMENT LENGTH = 450./ 819. MMS
       BEAM NO. 21 DESIGN RESULTS - SHEAR
  AT START SUPPORT - Vu= 432.29 KNS Vc= 147.89 KNS Vs= 360.69 KNS
                    Tu= 372.48 KN-MET Ts= 310.8 KN-MET
                    Tc= 127.4 KN-MET
                    PROVIDE 12 MM BARS AT 81. MM C/C FOR 1932. MM
          SUPPORT - Vu = 438.69 KNS Vc = 149.93 KNS Vs = 366.19 KNS
Tu = 372.48 KN-MET Ts = 310.9 KN-MET
Tc = 127.3 KN-MET
  AT END
                    PROVIDE 12 MM BARS AT 81. MM C/C FOR 1932. MM
                                                          -- PAGE NO. 24
  RUPSA BRIDGE (ANALYSIS OF STAIRCASE)
                           1931X 549X 1199_
                                      | 7No20 H1127. | 0.TO 1932
                                    1 / 1
                                   1 25*12c/c 81
```

Page 20 of 62

	0000000	100000001	0000000	100000001		
7#20	7#20	17#20	1 7#20	7#20	0000000    7#20	100000001
1					I I	
						1 1
1	1	1	1 7#20 1	7#20	7#20	
			100000001	0000000  	100000001	0000000
	·			''.		''
E	BEAM NO.	22 DE	SIGNR	ESULTS	B - FLEXURE	
LEN - 1	900. MM FY	- 414. F	C - 30. M	IPA, SIZE -	550. X 950	). MMS
LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	ТО (ММ)		
1	879.	9 - 16MM	0.	1900	YES	S YES
REQU   MAX/	CICAL NEG MON O STEEL= 161 MIN/ACTUAL E CC/REQD. DEVE	.2.MM2, ROW: BAR SPACING	= .0033, RC = .432./	WMX= 0228 41 / 54.	ROWMN= .0030	3   3   3   3   3   3   3   3   3   3
	BEAM NO. RT SUPPORT - SUPPORT -	Vu= 38.0 STIRRUPS A	3 KNS Vc= RE NOT REQU	437.54 KNS	. Vs= .(	00 KNS
AT STAF AT END	RT SUPPORT - SUPPORT -	Vu= 38.0 STIRRUPS A Vu= 24.9 STIRRUPS A	3 KNS Vc= RE NOT REQU 5 KNS Vc= RE NOT REQU 899X 549X	437.54 KNS IRED. 437.54 KNS	. Vs= .(	
AT STAF	RT SUPPORT - SUPPORT -	Vu= 38.0 STIRRUPS A Vu= 24.9 STIRRUPS A 1	3 KNS Vc= RE NOT REQU 5 KNS Vc= RE NOT REQU 899X 549X	437.54 KNS IRED. 437.54 KNS IRED.	. Vs= .(	00 KNS
AT STAR AT END 21J 9No16 H	SUPPORT - SUPPORT - 879. 0.TO	Vu= 38.0 STIRRUPS AVu= 24.9 STIRRUPS AVu= 1900	3 KNS Vc= RE NOT REQU 5 KNS Vc= RE NOT REQU 899X 549X	437.54 KNS IRED. 437.54 KNS IRED. 949	Vs= .(	22J
AT STAR AT END 21J 9No16 H	SUPPORT - SUPPORT - 879. 0.TO	Vu= 38.0 STIRRUPS A Vu= 24.9 STIRRUPS A 1:	3 KNS Vc= RE NOT REQU 5 KNS Vc= RE NOT REQU 899X 549X	437.54 KNS IRED. 437.54 KNS IRED. 949	Vs= (	22J
AT STAR AT END 21J 9No16 H	SUPPORT - SUPPORT - 879. 0.TO	Vu= 38.0 STIRRUPS AVu= 24.9 STIRRUPS AVu= 1900	3 KNS Vc= RE NOT REQU 5 KNS Vc= RE NOT REQU 899X 549X	437.54 KNS IRED. 437.54 KNS IRED. 949	Vs= .(	22J
AT STAR AT END 21J 9No16 H	SUPPORT - SUPPORT - 879. 0.TO	Vu= 38.0 STIRRUPS AVu= 24.9 STIRRUPS AVu= 1900	3 KNS Vc= RE NOT REQU 5 KNS Vc= RE NOT REQU 899X 549X	437.54 KNS IRED. 437.54 KNS IRED. 949	Vs= .(	22J
AT STAR AT END 21J 9No16 H	SUPPORT - SUPPORT - 879. 0.TO	Vu= 38.0 STIRRUPS AVu= 24.9 STIRRUPS AVu= 1900	3 KNS Vc= RE NOT REQU 5 KNS Vc= RE NOT REQU 899X 549X	437.54 KNS IRED. 437.54 KNS IRED. 949	Vs= .(	22J
AT STAR AT END 21J 9No16 H	SUPPORT - SUPPORT - 879. 0.TO	Vu= 38.0 STIRRUPS AVu= 24.9 STIRRUPS AVu= 1900	3 KNS Vc= RE NOT REQU 5 KNS Vc= RE NOT REQU 899X 549X	437.54 KNS IRED. 437.54 KNS IRED. 949	Vs= .(	22J
AT STAF	SUPPORT - SUPPORT - 879. 0.TO	Vu= 38.0 STIRRUPS AVu= 24.9 STIRRUPS AVu= 1900	3 KNS Vc= RE NOT REQU 5 KNS Vc= RE NOT REQU 899X 549X	437.54 KNS IRED. 437.54 KNS IRED. 949	Vs= .(	22J
AT STAR AT END  21J  9No16 H	879. 0.TO	Vu= 38.0 STIRRUPS AI Vu= 24.9 STIRRUPS AI 1900 00   000000     9#16	3 KNS VC= RE NOT REQU 5 KNS VC= RE NOT REQU 899X 549X	437.54 KNS IRED. 437.54 KNS IRED. 949	Vs= .() Vs= .(	22J
AT STAR AT END  21J  9No16 H	879. 0.TO	Vu= 38.0 STIRRUPS AI Vu= 24.9 STIRRUPS AI 1900     000000     9#16	3 KNS VC= RE NOT REQU 5 KNS VC= RE NOT REQU 899X 549X	437.54 KNS IRED. 437.54 KNS IRED. 949  0000000   0	Vs= () Vs	22J
AT STAR AT END  21J  9No16 H	879. 0.TO	Vu= 38.0 STIRRUPS AI Vu= 24.9 STIRRUPS AI 1900     000000     9#16	3 KNS VC= RE NOT REQU 5 KNS VC= RE NOT REQU 899X 549X	437.54 KNS IRED. 437.54 KNS IRED. 949  0000000   0	Vs= () Vs	22J

1	1127.	3 - 20MM	0.	3987.	YES '	YES
I	REQD STEEL= MAX/MIN/ACTUAI	939.MM2, ROW= BAR SPACING=	.61 KN-MET AT .0033, ROWMX= 128./ 45./ GTH = 450./	.0228 ROWMN= 64. MMS	AD 8   .0033	
	BEAMN	O. 23 DES	IGN RESU	L T S - SHEA	<b>\</b> R	
		STIRRUPS AR - Vu= 27.50	KNS VC= 255. E NOT REQUIRED. KNS VC= 255. E NOT REQUIRED.	73 KNS Vs=		
	4J	39	986X 249X 1199_			23J
	0 H1127. 0.	ro 3987				
000     3#20	)   3#2	0   3#2	1000   20   3#20 	) -	20 1	000    3#2 
		O. 24 DE		U L T S - FI	i i	
LEN	- 4107. MM	O. 24 DE		U L T S - FI	EXURE X 1200. ANCE	ior End
	- 4107. MM EL HEIGHT	O. 24 DE S FY - 414. FS BAR INFO		U L T S - FL SIZE - 250. TO (MM)	EXURE X 1200.	IOR END
1 	- 4107. MM  EL HEIGHT (MM)  1127.  CRITICAL NEG REQD STEEL= MAX/MIN/ACTUA	O. 24 DE S FY - 414. FS BAR INFO  3 - 20MM  MOMENT= 26 939.MM2, ROW LL BAR SPACING	S I G N R E S C - 30. MPA,  FROM (MM)	U L T S - FL SIZE - 250.  TO (MM)  4107.  0.MM, LC .0228 ROWMN= / 64. MMS	EXURE X 1200. ANCI STA  YES  DAD 8	HOR END YES
1 	- 4107. MM EL HEIGHT (MM)  1127.  CRITICAL NEG REQD STEEL= MAX/MIN/ACTUA BASIC/REQD. I	O. 24 DE S FY - 414. FO BAR INFO  3 - 20MM  MOMENT= 26 939.MM2, ROW AL BAR SPACING DEVELOPMENT LE	S I G N R E S  C - 30. MPA,  FROM (MM)  0.  5.74 KN-MET AT  = .0033, ROWMX=  = 128./ 45.	U L T S - FL SIZE - 250.  TO (MM)  4107.  0.MM, LO .0228 ROWMN= / 64. MMS 819. MMS	EXURE X 1200. ANCI STA  YES  DAD 8 = .0033	HOR END YES
LEVE	- 4107. MM  EL HEIGHT (MM)  1127.  CRITICAL NEG REQD STEEL= MAX/MIN/ACTUA BASIC/REQD. D  B E A M N  START SUPPOR	O. 24 DES  FY - 414. FO  BAR INFO  3 - 20MM  MOMENT= 26  939.MM2, ROW  L BAR SPACING  DEVELOPMENT LE  1 O. 24 DE  1 - Vu= 95.3  STIRRUPS A  5 - Vu= 27.5  STIRRUPS A	S I G N R E S   C - 30. MPA, FROM (MM)  0. 5.74 KN-MET AT = .0033, ROWMX= 128./ 45. NGTH = 450./	U L T S - FL  SIZE - 250.  TO (MM)  4107.  0.MM, LC 0.228 ROWMN= / 64. MMS 819. MMS 819. MMS Vs= 0.73 KNS Vs=	EXURE X 1200. ANCE STA  YES  DAD 80033  EAR  .00	OR END YES

Page 22 of 62

	000     3   20	000     3#20 	1000     3#20 	000    3#2     		000
					=======================================	
		看到 人名英巴拉	GN RESU			
LEVEL HEIC	GHT BAR	前手 化二氯化二氯化	30. MPA, SI FROM (MM)	TO (MM)	ANCHOR STA END	
			0. ) KN-MET ДТ	0.MM, LOA	YES YES	
REQD STEE   MAX/MIN/A	EL= 939.MM ACTUAL BAR S	12, ROW= .0 SPACING=	0033, ROWMX= . 128./ 45./	.0228 ROWMN= 64. MMS	.0033	
REQD STEE	EL= 939.MM ACTUAL BAR S QD. DEVELOPM	12, ROW= .0 BPACING= MENT LENGTH	0033, ROWMX= . 128./ 45./ I = 450./	.0228 ROWMN= 64. MMS 819. MMS	.0033	
REQD STEE   MAX/MIN/I   BASIC/REC 	EL= 939.MM ACTUAL BAR S QD. DEVELOPM M N O. 25	12, ROW= .0 SPACING= MENT LENGTH	0033, ROWMX=. 128./ 45./ I = 450./	.0228 ROWMN= 64. MMS 819. MMS LTS - SHEA	.0033 i	
REQD STEE MAX/MIN/A BASIC/REC BE A AT START SUE	EL= 939.MM ACTUAL BAR S QD. DEVELOPM M N O. 25 PPORT - Vu=	12, ROW= .0 SPACING= MENT LENGTH DESI 96.34 KN	0033, ROWMX= . 128./ 45./ I = 450./ G N R E S U IS Vc= 255.7 OT REQUIRED.	.0228 ROWMN= 64. MMS 819. MMS  L T S - SHEA	.0033        R   .00 KNS	
REQD STEE   MAX/MIN/#   BASIC/REC 	EL= 939.MM ACTUAL BAR S QD. DEVELOPM  M N O. 25 PPORT - Vu= PPORT - Vu=	12, ROW= .0 SPACING= MENT LENGTH DESI 96.34 KN RRUPS ARE N 36.66 KN	0033, ROWMX= . 128./ 45./ I = 450./ G N R E S U	.0228 ROWMN= 64. MMS 819. MMS  L T S - SHEA	.0033        R   .00 KNS	
REQD STEE MAX/MIN/I BASIC/REC BE A AT START SUE AT END SUE	EL= 939.MM ACTUAL BAR S QD. DEVELOPM  M N O. 25 PPORT - Vu= STIR PPORT - Vu= STIR	12, ROW= .0 EPACING= MENT LENGTH  DEST  96.34 KN RRUPS ARE N  36.66 KN RRUPS ARE N  4149X	0033, ROWMX= 128./ 45./ 1 = 450./  G N R E S U  IS Vc= 255.7 OT REQUIRED. IS Vc= 255.7	.0228 ROWMN= 64. MMS 819. MMS  L T S - SHEA	.0033        R   .00 KNS	
REQD STEE   MAX/MIN/A   BASIC/REC	EL= 939.MM ACTUAL BAR S QD. DEVELOPM  M N O. 25 PPORT - Vu= STIR PPORT - Vu= STIR	12, ROW= .0 EPACING= MENT LENGTH  DEST  96.34 KN RRUPS ARE N  36.66 KN RRUPS ARE N  4149X	0033, ROWMX= 128./ 45./ 1 = 450./  G N R E S U  IS VC= 255.7 OT REQUIRED.	.0228 ROWMN= 64. MMS 819. MMS  L T S - SHEA	.0033        R   .00 KNS   .00 KNS	
REQD STEE   MAX/MIN/A   BASIC/REC 	EL= 939.MM ACTUAL BAR S QD. DEVELOPM  M N O. 25 PPORT - Vu= STIR PPORT - Vu= STIR	12, ROW= .0 EPACING= MENT LENGTH  DEST  96.34 KN RRUPS ARE N  36.66 KN RRUPS ARE N  4149X	0033, ROWMX= 128./ 45./ 1 = 450./  G N R E S U  IS VC= 255.7 OT REQUIRED.	.0228 ROWMN= 64. MMS 819. MMS  L T S - SHEA	.0033        R   .00 KNS   .00 KNS	
REQD STEE   MAX/MIN/A   BASIC/REC 	EL= 939.MM ACTUAL BAR S QD. DEVELOPM  M N O. 25 PPORT - Vu= STIR PPORT - Vu= STIR	12, ROW= .0 EPACING= MENT LENGTH  DEST  96.34 KN RRUPS ARE N  36.66 KN RRUPS ARE N  4149X	0033, ROWMX= 128./ 45./ 1 = 450./  G N R E S U  IS VC= 255.7 OT REQUIRED.	.0228 ROWMN= 64. MMS 819. MMS  L T S - SHEA	.0033        R   .00 KNS   .00 KNS	
REQD STEE   MAX/MIN//   BASIC/REC	EL= 939.MM ACTUAL BAR S QD. DEVELOPM M N O. 25 PPORT - Vu= STIR 0.TO 4150	12, ROW= .0 SPACING= MENT LENGTH  5 DESI 96.34 KN RRUPS ARE N 36.66 KN RRUPS ARE N 4149X	0033, ROWMX=	.0228 ROWMN= 64. MMS 819. MMS  L T S - SHEA 73 KNS Vs= 73 KNS Vs=	.0033   R	1000
REQD STEE   MAX/MIN//   BASIC/REC	EL= 939.MM ACTUAL BAR S QD. DEVELOPM M N O. 25 PPORT - Vu= STIR PPORT - Vu= STIR	12, ROW= .0 SPACING= MENT LENGTH  DEST  96.34 KN RRUPS ARE N 36.66 KN RRUPS ARE N 4149X	0033, ROWMX=	.0228 ROWMN= 64. MMS 819. MMS  L T S - SHEA 73 KNS VS= 73 KNS VS=	.0033   R	1000
REQD STEE MAX/MIN/A BASIC/REG BE A AT START SUE AT END SUE 4J 3No20 H1127.	EL= 939.MM ACTUAL BAR S QD. DEVELOPM M N O. 25 PPORT - Vu= STIR 0.TO 4150	12, ROW= .0 SPACING= MENT LENGTH  5 DESI 96.34 KN RRUPS ARE N 36.66 KN RRUPS ARE N 4149X	0033, ROWMX=	.0228 ROWMN= 64. MMS 819. MMS  L T S - SHEA 73 KNS Vs= 73 KNS Vs=	.0033   R	1000 1000 1000 1 3 #

	4107. MM FY - 414. FC - 30. MPA, SIZE - 250. X 1200. M	MS
EVI	HEIGHT BAR INFO FROM TO ANCHO (MM) (MM) (MM) STA E	
		-
1	1127. 3 - 20MM 0. 4107. YES Y	ES
	RITICAL NEG MOMENT= 265.74 KN-MET AT 0.MM, LOAD 8   EQD STEEL= 939.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033   AX/MIN/ACTUAL BAR SPACING= 128./ 45./ 64. MMS   ASIC/REQD. DEVELOPMENT LENGTH = 450./ 819. MMS	
	BEAM NO. 26 DESIGN RESULTS-SHEAR	
	TART SUPPORT - Vu= 95.38 KNS Vc= 255.73 KNS Vs= .00 F STIRRUPS ARE NOT REQUIRED. ND SUPPORT - Vu= 16.23 KNS Vc= 255.73 KNS Vs= .00 F	
	STIRRUPS ARE NOT REQUIRED.	As sur
	4J 4106X 249X 1199	26J_
 > O   3 # 2		<del> </del>   0
)#2     		
	BEAM NO. 27 DESIGNRESULTS - FLEXURE	
LEN	- 3987. MM FY - 414. FC - 30. MPA, SIZE - 250. X 1200.	MMS
LE	- 1984 - 19시스 크레스 글 장마와 토토 배우리 회사 <u>이렇지만</u>	OR
		YES
	1127. 3 - 20MM 0. 3987. YES	

Page 24 of 62

STIRRUPS ARE NOT REQUIRED. SUPPORT - Vu= 16.23 KNS Vc= 255.73 KNS Vs= .00 KNS STIRRUPS ARE NOT REQUIRED. 3986X 249X 1199 27J 3No20 H1127. 0.TO 3987 10001 1000 10001 10001 toggl Locol 1 3#20 1 3#20 3#20 3#20 3#20 BEAM NO. 28 DESIGN RESULTS - FLEXURE LEN - 1932. MM FY - 414. FC - 30. MPA, SIZE - 550. X 1200. MMS LEVEL HEIGHT FROM BAR INFO TO ANCHOR (MM) (MM) (MM) STA END 73. 7 - 20MM 937. 1932. CRITICAL POS MOMENT= 172.45 KN-MET AT 1932.MM, LOAD 10 | REQD STEEL= 2067.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 428./ 45./ 71. MMS | BASIC/REQD. DEVELOPMENT LENGTH = 450./ 592. MMS | 2 1127. 7 - 20MM 0. 1932. CRITICAL NEG MOMENT= 794.27 KN-MET AT 0.MM, LOAD 8 | REQD STEEL= 2067.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 428./ 45./ 71. MMS | BASIC/REQD. DEVELOPMENT LENGTH = 450./ 819. MMS BEAM NO. 28 DESIGN RESULTS - SHEAR AT START SUPPORT - Vu= 419.88 KNS Vc= 136.98 KNS Vs= 357.00 KNS Tu= 392.67 KN-MET Ts= 333.9 KN-MET 392.67 KN-MET Ts= 333.9 KN-MET Tc= 128.1 KN-MET PROVIDE 12 MM BARS AT 77. MM C/C FOR 1932. MM SUPPORT - Vu= 428.42 KNS Vc= 139.59 KNS Vs= 364.43 KNS Tu≕ 392.67 KN-MET Ts= 334.0 KN-MET Tc= 127.9 KN-MET PROVIDE 12 MM BARS AT 77. MM C/C FOR 1932. MM 1931X 549X 1199

92.69 KNS Vc= 255.73 KNS Vs=

C:\Stair\Report.doc

AT START SUPPORT - Vu=

7*12c/	'c 77			1     7No20 H 73	 . 937.TO 1932	27*12c/d	77
e de la companya de l				) 1			<u> </u>
#20   		0000   20   	0000000     7#20   		0000000    7#20   		0000000    7#20   
				1	7#20     0000000  	4.4	   7#20    0000000  
	R E A M	NO. 29	 D E S I		LTS-FLE	======= XURE	
.EN -					SIZE - 550. X		MMS
EVEL	ta di talih	BAR	INFO		TO (MM)	ANCH STA	OR END
1	71.	9 -	1 6MM	1432.	1900.	NO	YES
				ا برود و افقای در این از ا در مقامه که			
RE(	TICAL PO QD STEEL= X/MIN/ACT	S MOMENT= 1612.MM	.0 12, ROW= . BPACING=	O KN-MET AT	1900.MM, LOF .0228 ROWMN= / 54. MMS	AD 9   .0033	
RE( MAX BA:	ITICAL PO QD STEEL= X/MIN/ACT SIC/REQD	S MOMENT= 1612.MM UAL BAR S DEVELOPM	.0 12, ROW= . SPACING= MENT LENGT	00 KN-MET AT 0033, ROWMX= 432./ 41., H = 288./	1900.MM, LOF .0228 ROWMN= / 54. MMS 389. MMS	0033.   	YES
REG MAX BAS 2 CR REG MA	ITICAL PO QD STEEL= X/MIN/ACT SIC/REQD.  879.  ITICAL NE QD STEEL= X/MIN/ACT	S MOMENT= 1612.MM UAL BAR S DEVELOPM 9	.0012, ROW= .5PACING= MENT LENGT  1.6MM  58.2  42, ROW= .5PACING=	00 KN-MET AT 0033, ROWMX= 432./ 41., 2H = 288./ 0. 21 KN-MET AT 0033, ROWMX= 432./ 41.	1900.MM, LOP .0228 ROWMN= / 54. MMS 389. MMS 1900. 0.MM, LOP .0228 ROWMN=	.0033   YES AD 8   .0033	
REG MAX	ITICAL PO QD STEEL= X/MIN/ACT SIC/REQD. 879. ITICAL NE QD STEEL= X/MIN/ACT SIC/REQD.	S MOMENT= 1612.MN UAL BAR S DEVELOPN  9 G MOMENT= 1612.MN UAL BAR S DEVELOPN		00 KN-MET AT 0033, ROWMX= 432./ 41., H = 288./ 0. 21 KN-MET AT 0033, ROWMX= 432./ 41.	1900.MM, LOP .0228 ROWMN= / 54. MMS 389. MMS 1900. 0.MM, LOP .0228 ROWMN= / 54. MMS	.0033   YES AD 8   .0033	
RE( MAX BA: 2 CR RE( MAA	ITICAL PO QD STEEL= X/MIN/ACT SIC/REQD. 879. ITICAL NE QD STEEL= X/MIN/ACT SIC/REQD.	S MOMENT= 1612.MN UAL BAR S DEVELOPN  9 - GG MOMENT= 1612.MN PUAL BAR S DEVELOPN  N O. 2		00 KN-MET AT 0033, ROWMX= 432./ 41., 21 KN-MET AT 0033, ROWMX= 432./ 41. TH = 288./	1900.MM, LOF .0228 ROWMN= / 54. MMS 389. MMS 1900. .0.MM, LOF .0228 ROWMN= / 54. MMS 568. MMS	.0033   	
RE( MAX BAX BAX BAX BAX BAX BAX BAX BAX BAX B	ITICAL PO QD STEEL= X/MIN/ACT SIC/REQD.  879.  ITICAL NE QD STEEL= X/MIN/ACT SIC/REQD.  B E A M	S MOMENT= 1612.MN UAL BAR S DEVELOPN  G MOMENT= 1612.MN PUAL BAR S DEVELOPN  N O. 2  DRT - Vu= STI  DRT - Vu=	.0012, ROW= .012, ROW= .012, ROW= .014, ROW=	00 KN-MET AT 0033, ROWMX= 432./ 41., CH = 288./  0. 21 KN-MET AT 0033, ROWMX= 432./ 41. FH = 288./  I G N R E S KNS VC= 437 NOT REQUIRED	1900.MM, LOF .0228 ROWMN= / 54. MMS 389. MMS 1900. 0.MM, LOF .0228 ROWMN= / 54. MMS 568. MMS	.0033        YES      AD 8     .0033             AR	kns
REG MAX BAX BAX BAX BAX BAX BAX BAX BAX BAX B	ITICAL PO QD STEEL= X/MIN/ACT SIC/REQD.  879.  ITICAL NE QD STEEL= X/MIN/ACT SIC/REQD.  B E A M PART SUPPO	S MOMENT= 1612.MN UAL BAR S DEVELOPN  G MOMENT= 1612.MN PUAL BAR S DEVELOPN  N O. 2  DRT - Vu= STI  DRT - Vu= STI	.00 12, ROW= .5PACING= 16MM 16MM 16MM 16MM 16MM 16MM 17ME 16MM 18MENT LENGT 18MENT LENGT 18MENT LENGT 18MENT LENGT 18MENT LENGT 18MENT ARE 18MENT ARE	00 KN-MET AT 0033, ROWMX= 432./ 41., CH = 288./  0. 21 KN-MET AT 0033, ROWMX= 432./ 41. FH = 288./  I G N R E S KNS VC= 437 NOT REQUIRED KNS VC= 437 NOT REQUIRED 9X 549X 949_	1900.MM, LOF .0228 ROWMN= / 54. MMS 389. MMS 1900. 0.MM, LOF .0228 ROWMN= / 54. MMS 568. MMS	.0033        YES      AD 8     .0033   	KNS KNS
REG MAX BAX BAX BAX BAX BAX BAX BAX BAX BAX B	ITICAL PO QD STEEL= X/MIN/ACT SIC/REQD.  879.  ITICAL NE QD STEEL= X/MIN/ACT SIC/REQD.  B E A M PART SUPPO	S MOMENT= 1612.MN UAL BAR S DEVELOPN  9 - G MOMENT= 1612.MN PUAL BAR S DEVELOPN  N O. 2  DRT - Vu= STI  DRT - Vu= STI	.00 12, ROW= .5PACING= 1ENT LENGT  1.6MM  - 58.2 42, ROW= .5PACING= MENT LENGT  9 D E S  38.03 1 RRUPS ARE  20.76 1 RRUPS ARE	00 KN-MET AT 0033, ROWMX= 432./ 41., CH = 288./  0. 21 KN-MET AT 0033, ROWMX= 432./ 41. FH = 288./  I G N R E S KNS VC= 437 NOT REQUIRED KNS VC= 437 NOT REQUIRED 9X 549X 949_	1900.MM, LOF .0228 ROWMN= / 54. MMS 389. MMS 1900. 0.MM, LOF .0228 ROWMN= / 54. MMS 568. MMS U L T S - SHEA .54 KNS Vs=	.0033   YES  YES  AD 8   .0033      AR .71.1432	KNS KNS

Page 26 of 62

				   9#16  00000000	9#16       00000000
<u> </u>		\ <u></u> \			
# <b>#</b> ##################################		~~~~~	*********	# <b>#</b> \$======	=======
BEA	M N O. 31	DESIG	N RESUL	TS - FLEX	URE
LEN - 1924.	MM FY - 4	14. FC - 3	0. MPA, SIZE	- 550. X	1200. MMS
geligen ein Area	GHT BAR		`ROM		ANCHOR
(MM)				MM)	STA END
1 112	25. 5 -	25MM	0. 1	924.	YES YES
			N-MET AT		8
REQD STEE	L= 2417.MM	2, ROW≕ .003	9, ROWMX= .02	28 ROWMN≃ .	0033
BASIC/REC	DEVELOPM	ENT LENGTH =	703./ 91	4. MMS	
1					
BEA	M NO. 31	DESIG	N RESUL	T S - SHEAR	
AT START SUP			Vc= 108.17		44.40 KNS
	Tu= Tc=	460.92 KN-ME 129.6 KN-ME	ET Ts= 412. T	6 KN-MET	
3. SVI	PROV	IDE 12 MM BA	RS AT 66. MM	C/C FOR 1	924. MM
	7 PURT - VIII				
AT END SUE	Tu=	460.92 KN-M	Vc= 110.26 ET Ts= 412.	KNS Vs= 3 7 KN-MET	51.40 KNS
AT END SUF	Tu= Tc=	460.92 KN-ME 129.5 KN-ME	ET Ts= 412.	7 KN-MET	
AT END SU	Tu= Tc=	460.92 KN-ME 129.5 KN-ME	ET Ts= 412.	7 KN-MET	
AT END SUP	Tu= Tc= PROV	460.92 KN-M 129.5 KN-ME IDE 12 MM BA	ET Ts= 412.	7 KN-MET C/C FOR 1	
	Tu= Tc= PROV	460.92 KN-M 129.5 KN-ME IDE 12 MM BA	MET Ts= 412. MT MRS AT 66. MM	7 KN-MET C/C FOR 1	924. MM
6J ====================================	Tu= Tc= PROV	460.92 KN-M 129.5 KN-ME IDE 12 MM BA	MET Ts= 412. MT MRS AT 66. MM	7 KN-MET C/C FOR 1	924. MM 31J
6J	Tu= Tc= PROV	460.92 KN-M 129.5 KN-ME IDE 12 MM BA	MET Ts= 412. MT MRS AT 66. MM	7 KN-MET C/C FOR 1	924. MM
6J ====================================	Tu= Tc= PROV	460.92 KN-M 129.5 KN-ME IDE 12 MM BA	MET Ts= 412. MT MRS AT 66. MM	7 KN-MET C/C FOR 1	924. MM 31J
6J ====================================	Tu= Tc= PROV	460.92 KN-M 129.5 KN-ME IDE 12 MM BA	MET Ts= 412. MT MRS AT 66. MM	7 KN-MET C/C FOR 1	924. MM 31J
6J 5No25 H1125, 31*12c/c 66	Tu= Tc= PROV 0.TO 1924	460.92 KN-M 129.5 KN-ME IDE 12 MM BA 1923X 5	MET Ts= 412.  TT  MRS AT 66. MM  49X 1199	7 KN-MET C/C FOR 1	924. MM  31J  1*12c/c 66
6J 5No25 H1125, 31*12c/c 66	Tu= Tc= PROV	460.92 KN-M 129.5 KN-ME IDE 12 MM BA 1923X 5	MET Ts= 412.  TT  MRS AT 66. MM  49X 1199	7 KN-MET C/C FOR 1	924. MM 31J 
6J 5No25 H1125, 31*12c/c 66	Tu= Tc= PROV 0.TO 1924	460.92 KN-M 129.5 KN-ME IDE 12 MM BA 1923X 5	MET Ts= 412.  TT  MRS AT 66. MM  49X 1199	7 KN-MET C/C FOR 1	924. MM  31J  1*12c/c 66
6J 5No25 H1125, 31*12c/c 66	Tu= Tc= PROV 0.TO 1924	460.92 KN-M 129.5 KN-ME IDE 12 MM BA 1923X 5	MET Ts= 412.  TT  MRS AT 66. MM  49X 1199	7 KN-MET C/C FOR 1	924. MM  31J  1*12c/c 66
6J 5No25 H1125, 31*12c/c 66	Tu= Tc= PROV 0.TO 1924	460.92 KN-M 129.5 KN-ME IDE 12 MM BA 1923X 5	MET Ts= 412.  TT  MRS AT 66. MM  49X 1199	7 KN-MET C/C FOR 1	924. MM  31J  1*12c/c 66
6J 5No25 H1125, 31*12c/c 66	Tu= Tc= PROV 0.TO 1924	460.92 KN-M 129.5 KN-ME IDE 12 MM BA 1923X 5	MET Ts= 412.  TT  MRS AT 66. MM  49X 1199	7 KN-MET C/C FOR 1	924. MM  31J  1*12c/c 66
6J 5No25 H1125, 31*12c/c 66	Tu= Tc= PROV 0.TO 1924	460.92 KN-M 129.5 KN-ME IDE 12 MM BA 1923X 5	MET Ts= 412.  TT  MRS AT 66. MM  49X 1199	7 KN-MET C/C FOR 1	924. MM  31J  1*12c/c 66
6J 5No25 H1125. 31*12c/c 66 00000	Tu= Tc= PROV  0.TO 1924	100000     5#25	MET Ts= 412.  TT  MRS AT 66. MM  49X 1199	7 KN-MET C/C FOR 1  3    00000     5#25	924. MM  31J  1*12c/c 66
6J 5No25 H1125. 31*12c/c 66 00000	Tu= Tc= PROV  0.TO 1924  0.TO 1924  M N O. 32	100000   1   5#25   1   1   1   1   1   1   1   1   1	IET Ts= 412.  IRS AT 66. MM  49X 1199	7 KN-MET C/C FOR 1  3    00000     5#25	924. MM  31J  1*12c/c 66

```
879. 9 - 16MM 0.
                                              1900.
                                                           YES YES
    CRITICAL NEG MOMENT= 58.21 KN-MET AT 0.MM, LOAD 8 |
    REQD STEEL= 1612.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 432./ 41./ 54. MMS |
    BASIC/REQD. DEVELOPMENT LENGTH = 288./ 568. MMS
       BEAM NO. 32 DESIGN RESULTS - SHEAR
 AT START SUPPORT - Vu= 38.04 KNS Vc= 437.54 KNS Vs=
                                                             .00 KNS
                  STIRRUPS ARE NOT REQUIRED.
                                                          .00 KNS
  AT END SUPPORT - Vu= 24.95 KNS Vc= 437.54 KNS Vs=
                    STIRRUPS ARE NOT REQUIRED.
                     1899X 549X 949<u>--</u>
 9No16 H 879. 0.TO 1900
| | 000000000 |
                                                 1 9#16
 9#16 7 | | 9#16 7 | | 9#16 7 |
        BEAM NO. 33 DESIGN RESULTS - FLEXURE
 LEN - 3959. MM FY - 414. FC - 30. MPA, SIZE - 250. X 1200. MMS
 LEVEL HEIGHT BAR INFO
                                  FROM
                                                TO
                                                             ANCHOR
                                                (MM)
                                    (MM)
                                                             STA END
                                  0.
         1127. 3 - 20MM
                                              3959
  CRITICAL NEG MOMENT= 248.38 KN-MET AT 0.MM, LOAD 8 | REQD STEEL= 939.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 128./ 45./ 64. MMS | BASIC/REQD. DEVELOPMENT LENGTH = 450./ 819. MMS |
        BEAM NO. 33 DESIGN RESULTS - SHEAR
   AT START SUPPORT - Vu= 92.07 KNS Vc= 255.73 KNS Vs=
                                                              .00 KNS
                    STIRRUPS ARE NOT REQUIRED.
           SUPPORT - Vu= 36.66 KNS VC= 255.73 KNS Vs= STIRRUPS ARE NOT REQUIRED.
                                                              .00 KNS
                            3958X 249X 1199
                                                                   33J
| 3No20 H1127. 0.TO 3959
```

11-403

	· · · · · · · · · · · · · · · · · · ·				<del></del>	
00   3#20 	000     3#20 		000     3#20 	000	20	
1.000			IGN RESU			
ersiksiya (B			FROM (MM)	ТО (ММ)	ANCHOR STA END	
1	1127.	3 - 20MM	0.	4063.	YES YES	
CRIT						
REQD   MAX/	'ICAL NEG MO STEEL= 'MIN/ACTUAL	OMENT= 260. 939 MM2, ROW= BAR SPACING=	50 KN-MET AT .0033, ROWMX= .128./ 45./ PH = 450./	0.MM, LC .0228 ROWMN= 64. MMS	DAD 8 1	
REQD   MAX/   BASI	'ICAL NEG MO ) STEEL= MIN/ACTUAL C/REQD. DE	OMENT= 260. 939.MM2, ROW= BAR SPACING= VELOPMENT LENG	50 KN-MET AT .0033, ROWMX= .128./ 45./	0.MM, LC .0228 ROWMN= 64. MMS 819. MMS	AD 8 1 0033	
REQD   MAX/   BASI   B AT STAR	CICAL NEG MO STEEL= MIN/ACTUAL C/REQD. DE  BEAM NO	OMENT= 260. 939.MM2, ROW= BAR SPACING= VELOPMENT LENG  O. 34 D E S  - Vu= 94.39   STIRRUPS ARE - Vu= 27.50	50 KN-MET AT .0033, ROWMX= .128./ 45./ TH = 450./	0.MM, LC .0228 ROWMN= 64. MMS 819. MMS L T S - SHE	AD 8 1	
REQD   MAX/   BASI 	CICAL NEG MODELE  MIN/ACTUAL  C/REQD. DE  BEAM NO  ST SUPPORT  SUPPORT	OMENT= 260. 939.MM2, ROW= BAR SPACING= VELOPMENT LENG  O. 34 D E S  - Vu= 94.39   STIRRUPS ARE  STIRRUPS ARE	50 KN-MET AT .0033, ROWMX= .128./ 45./ TH = .450./  I G N R E S U  KNS VC= .255. NOT REQUIRED.  KNS VC= .255. NOT REQUIRED.	0.MM, LC .0228 ROWMN= 64. MMS 819. MMS L T S - SHE 73 KNS Vs=	DAD 8 1 0033	
REQD   MAX/   BASI 	CICAL NEG MODELE  MIN/ACTUAL  C/REQD. DE  BEAM NO  ST SUPPORT  SUPPORT	OMENT= 260. 939.MM2, ROW= BAR SPACING= VELOPMENT LENG  O. 34 D E S  - Vu= 94.39   STIRRUPS ARE - Vu= 27.50   STIRRUPS ARE  406	50 KN-MET AT .0033, ROWMX= .128./ 45./ TH = .450./  I G N R E S U  KNS VC= .255. NOT REQUIRED.  KNS VC= .255. NOT REQUIRED.	0.MM, LC .0228 ROWMN= 64. MMS 819. MMS L T S - SHE 73 KNS Vs=	AAR .00 KNS	
REQD   MAX/   BASI 	CICAL NEG MODELE CONTROL NEG MINIMACTUAL CONTROL NEG MINIMACTUAL CONTROL NEG MINIMACTUAL NEG	OMENT= 260. 939.MM2, ROW= BAR SPACING= VELOPMENT LENG  O. 34 D E S  - Vu= 94.39 STIRRUPS ARE - Vu= 27.50 STIRRUPS ARE  406	50 KN-MET AT .0033, ROWMX= .128./ 45./ TH = .450./  I G N R E S U  KNS VC= .255. NOT REQUIRED.  KNS VC= .255. NOT REQUIRED.  2X 249X 1199	0.MM, LC .0228 ROWMN= 64. MMS 819. MMS L T S - SHE 73 KNS Vs=	AD 8 1 .0033	
REQD   MAX/   BASI 	ICAL NEG MO STEEL= MIN/ACTUAL C/REQD. DEV  S E A M N O STEEL= MIN/ACTUAL C/REQD. DEV  S E A M N O S E	OMENT= 260. 939.MM2, ROW= BAR SPACING= VELOPMENT LENG  O. 34 D E S  - Vu= 94.39   STIRRUPS ARE  - Vu= 27.50   STIRRUPS ARE	50 KN-MET AT .0033, ROWMX= .128./ 45./ TH = .450./  I G N R E S U  KNS VC= .255. NOT REQUIRED.  KNS VC= .255. NOT REQUIRED.  2X 249X 1199	0.MM, LC .0228 ROWMN= 64. MMS 819. MMS L T S - SHE 73 KNS Vs= 73 KNS Vs=	AD 8 1 .0033	J

BEAM NO. 35 DESIGNRESULTS - FLEXURE

VEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANC! STA	
	(17.17		,			
1	1127.	3 ~ 20MM	0.	4100.	YES	YES
REQ MAX	D STEEL= /MIN/ACTUAL	OMENT= 264. 939.MM2, ROW= BAR SPACING= VELOPMENT LENG	.0033, ROWN	4X= .0228 RO 45./ 64. M	WMN≕ .0033 MS	
	BEAM N	O. 35 DES	IGN RE	SULTS-	SHEAR	
		- Vu= 95.22 STIRRUPS ARE - Vu= 27.50 STIRRUPS ARE	E NOT REQUII KNS Vc= :	RED. 255.73 KNS	Vs= .00 Vs= .00	
6J		400	00V 240V 11	00		35J
	, ,===================================	409				
<u>-</u> ○   #20 	<mark>000</mark>     3#2	4.6			000    3#20 	10
					3#20	i i
	3#2	3   3   2   3   2   3   2   3   3   2   3   3	0	3#20   	3#20	i i
#20               	3#2'	O   3#24	O	3#20	3#20 	
#20               	3#2'	3   3   2   3   2   3   2   3   3   2   3   3	O	3#20	3#20 	MMS
#20               	3#2'	O   3#24	O	3#20	3#20 	MMS
#20   	3#2	O   3#24	O	3#20	3#20   	MMS

BEAM NO. 36 DESIGNRESULTS - SHEAR

Page 30 of 62

```
AT START SUPPORT - Vu=
                         94.39 KNS Vc= 255.73 KNS Vs=
                                                         .00 KNS
          STIRRUPS ARE NOT REQUIRED.

SUPPORT - Vu= 16.23 KNS Vc= 255.73 KNS Vs=
                                                         .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
 ໌ 6J_
                          4062X 249X 1199
| 3No20 H1127. 0.TO 4063
000
            Logot
                         Logot
                                     10001
                                                  1000
1 3#20
            1 3#20
                         | 3#20
                                     1 3#20
                                                  3#20
                                                                1 3#2
                           . 1
       BEAM NO. 37 DESIGN RESULTS - FLEXURE
 LEN - 3959. MM FY - 414. FC - 30. MPA, SIZE - 250. X 1200. MMS
                                            то
 LEVEL
        HEIGHT BAR INFO
                                 FROM
                                                        ANCHOR
         (MM)
                                 (MM)
                                            (MM)
                                                        STA END
          1127. 3 - 20MM 0. 3959.
   CRITICAL NEG MOMENT= 248.38 KN-MET AT 0.MM, LOAD 8 |
  REQD STEEL= 939.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 128./ 45./ 64. MMS
   BASIC/REQD. DEVELOPMENT LENGTH = 450./ 819. MMS
       BEAM NO. 37 DESIGN RESULTS - SHEAR
  AT START SUPPORT - Vu= 92.07 KNS Vc= 255.73 KNS Vs= .00 KNS
              STIRRUPS ARE NOT REQUIRED.
  AT END SUPPORT - Vu= 16.23 KNS Vc= 255.73 KNS Vs= .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
                          3958X 249X 1199
 3No20 H1127. 0.TO 3959
10001
            10001
                         000
                                     10001
                                                 10001
                                                                10001
                                     1 3#20
1 3#20
            1 3#20
                         | 3#20
                                                 1 3#20
                         1 \leq 1
                                     1 + \epsilon + 1
```

BEAM NO. 38 DESIGN RESULTS - FLEXURE LEN - 1924. MM FY - 414. FC - 30. MPA, SIZE - 550. X 1200. MMS FROM TO : LEVEL HEIGHT BAR INFO STA END (MM) (MM) (MM) 73. 7 - 20MM 1091. 1924. NO YES CRITICAL POS MOMENT= 53.84 KN-MET AT 1924.MM, LOAD 10 | REQD STEEL= 2067.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 428./ 45./ 71. MMS | BASIC/REQD. DEVELOPMENT LENGTH = 450./ 592. MMS | 1127. 7 - 20MM 1127. 0. 1924. CRITICAL NEG MOMENT= 772.84 KN-MET AT 0.MM, LOAD 8 | REQD STEEL= 2067.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 |
MAX/MIN/ACTUAL BAR SPACING= 428./ 45./ 71. MMS |
BASIC/REQD. DEVELOPMENT LENGTH = 450./ 819. MMS | BEAM NO. 38 DESIGN RESULTS - SHEAR AT START SUPPORT - Vu= 386.95 KNS Vc= 123.87 KNS Vs= 331.36 KNS Tu= 402.45 KN-MET Ts= 344.6 KN-MET Tc= 128.8 KN-MET PROVIDE 12 MM BARS AT 77. MM C/C FOR 1924. MM SUPPORT - Vu= 394.67 KNS Vc= 126.22 KNS Vs= Tu= 402.45 KN-MET Ts= 344.8 KN-MET 338.10 KNS Tc= 128.7 KN-MET PROVIDE 12 MM BARS AT 76. MM C/C FOR 1924. MM 1923X 549X 1199 | 7No20 H1127. 0.TO 1924 27\*12c/c 77 7No20 H 73.1091.TO 1924 | | [0000000] 100000001 100000001 0000000 100000001 0000000 7#20 | 1 7#20 1 1 7#20 1 1 7#20 1 1 7#20 1 1 7#20 7#20 1 7#20 | [0000000] 0000000 [0000000] ...

BEAM NO. 39 DESIGN RESULTS - FLEXURE

Page 32 of 62

```
LEN - 1900. MM FY - 414. FC - 30. MPA, SIZE - 550. X 950. MMS
  LEVEL
          HEIGHT -
                      BAR INFO
                                     FROM
                                                   TO
                                                                ANCHOR
           (MM)
                                     (MM)
                                                   (MM)
                                                                STA END
            879. 9 - 16MM 0. 1900.
                                                         YES YES
   CRITICAL NEG MOMENT= 58.21 KN-MET AT 0.MM, LOAD 8 1
     REQD STEEL= 1612.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 432./ 41./ 54. MMS | BASIC/REQD. DEVELOPMENT LENGTH = 288./ 568. MMS |
        BEAM NO. 39 DESIGN RESULTS - SHEAR
  AT START SUPPORT - Vu= 38.04 KNS Vc= 437.54 KNS Vs=
                                                                .00 KNS
                     STIRRUPS ARE NOT REQUIRED.
           SUPPORT - Vu= 20.76 KNS Vc= 437.54 KNS Vs=
                                                                 .00 KNS
                     STIRRUPS ARE NOT REQUIRED.
                              1899X 549X 949
                                                                    39J
 9No16 H 879. 0.TO 1900
[00000000] [000000000] [000000000]
                                                    10000000001
                                                                   10000000001
            | 9#16 |
                          | 9#16
                                      | 9#16 |
        BEAM NO. 41 DESIGN RESULTS - FLEXURE
 LEN - 1953. MM FY - 414. FC - 30. MPA, SIZE - 550. X 1200. MMS
         HEIGHT
  LEVEL
                     BAR INFO
                                     FROM
                                                   TO.
                                                                ANCHOR
            (MM)
                                     (MM)
                                                   (MM)
                                                               STA END
                    7 - 20MM
   1 73.
                                 954.
                                                 1953.
     CRITICAL POS MOMENT= 82.23 KN-MET AT 1953.MM, LOAD 9
     REQD STEEL= 2067.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 428./ 45./ 71. MMS | BASIC/REQD. DEVELOPMENT LENGTH = 450./ 592. MMS |
                    7 - 20MM
         1127.
                                                 1953.
     CRITICAL NEG MOMENT= 891.83 KN-MET AT 0.MM, LOAD 8 |
     REQD STEEL= 2187.MM2, ROW= .0035, ROWMX= .0228 ROWMN= .0033 |
     MAX/MIN/ACTUAL BAR SPACING= 428./ 45./ 71. MMS
```

```
BASIC/REOD. DEVELOPMENT LENGTH = 450./ 819. MMS
       BEAM NO. 41 DESIGN RESULTS - SHEAR
 AT START SUPPORT - Vu= 391.69 KNS Vc= 140.33 KNS Vs= 320.48 KNS Tu= 356.99 KN-MET Ts= 292.1 KN-MET
                  Tc= 127.9 KN-MET
                  PROVIDE 12 MM BARS AT 88. MM C/C FOR 1953. MM
  AT END SUPPORT - Vu= 399.71 KNS Vc= 143.02 KNS Vs= 327.23 KNS
                  Tu= 356.99 KN-MET Ts= 292.3 KN-MET Tc= 127.7 KN-MET
                  PROVIDE 12 MM BARS AT 87. MM C/C FOR 1953. MM
                         1952X 549X 1199
7No20 H1127. 0.TO 1953
                                         24*12c/c 88 /
                                7No20 H |73.|954.TO 1953| | 1
                      100000001
                                100000001 100000001 100000001
0000000
           0000000
                      1 7#20 1
                                1 7#20 1
                                            | 7#20 |
                                                           7#20
 7#20 |
           1 7#20
                                            | 7#20 |
                               | 7#20 |
                                            100000001
                                  100000001
                                                           0000000
       BEAM NO. 42 DESIGN RESULTS - FLEXURE
 LEN - 1900. MM FY - 414. FC - 30. MPA, SIZE - 550. X 950. MMS
        HEIGHT
                   BAR INFO
                                FROM
                                            TO
                                                       ANCHOR
                                                       STA END
                                (MM)
                                            (MM)
          (MM)
        879. 9 - 16MM
                                 0
                                          1900.
   CRITICAL NEG MOMENT= 58.21 KN-MET AT 0.MM, LOAD 8 |
    REQD STEEL= 1612.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 1
   MAX/MIN/ACTUAL BAR SPACING= 432./ 41./ 54. MMS
BASIC/REQD. DEVELOPMENT LENGTH = 288./ 568. MMS
       BEAM NO. 42 DESIGN RESULTS - SHEAR
  AT START SUPPORT - Vu= 38.04 KNS Vc= 437.54 KNS Vs= .00 KNS
                  STIRRUPS ARE NOT REQUIRED.
          SUPPORT - Vu= 24.96 KNS Vc= 437.54 KNS Vs= STIRRUPS ARE NOT REQUIRED.
                                                        .00 KNS
                       1899X 549X 949
| 9No16 H 879. 0.TO 1900
```

Page 34 of 62

)#16			000000     9#16 		00000000	         	9#16
				1 1		!   	
						     <sub>.</sub>	
			**=====			*****	
a di basi ki k			IGN RES			1.0	
		an Disk in Ag	- 30. MPA,				
	HEIGHT (MM)	BAR INFO	and the second of the second o	TO (MM)		ANCI STA	IOR END
1	1127.	3 - 20MM	0.	3596		YES	YES
REQD MAX/	STEEL= 93 MIN/ACTUAL E	9.MM2, ROW= BAR SPACING=	41 KN-MET A .0033, ROWMX 128./ 45 GTH = 450./	= .0228 I	ROWMN= .( MMS	8   0033	
REQD MAX/ BASI 	STEEL= 93 MIN/ACTUAL E C/REQD. DEVE E A M N O. T SUPPORT -	9.MM2, ROW= DAR SPACING= CLOPMENT LENG 43 D E S  Vu= 83.98 STIRRUPS ARE Vu= 27.50	.0033, ROWMX 128./ 45 TH = 450./ I G N R E S KNS VC= 25 NOT REQUIRE KNS VC= 25	= .0228 I ./ 64. 819. N U L T S 5.73 KNS D. 5.73 KNS	. (MMOS MMS MMS - SHEAR 'VS=	.00	KNS
REQD MAX/ BASI  B AT STAR	STEEL= 93 MIN/ACTUAL E C/REQD. DEVE E A M N O. T SUPPORT -	9.MM2, ROW= DAR SPACING= CLOPMENT LENG 43 D E S  Vu= 83.98 STIRRUPS ARE Vu= 27.50	.0033, ROWMX 128./ 45 TH = 450./ I G N R E S KNS Vc= 25 NOT REQUIRE	= .0228 I ./ 64. 819. N U L T S 5.73 KNS D. 5.73 KNS	. (MMOS MMS MMS - SHEAR 'VS=	.00	KNS
REQD MAX/ BASI BASI AT STAR AT END	STEEL= 93 MIN/ACTUAL E C/REQD. DEVE E A M N O. T SUPPORT - SUPPORT -	9.MM2, ROW= PAR SPACING= LOPMENT LENG  43 D E S  Vu= 83.98 STIRRUPS ARE Vu= 27.50 STIRRUPS ARE	.0033, ROWMX 128./ 45 TH = 450./ I G N R E S KNS VC= 25 NOT REQUIRE KNS VC= 25	= .0228 I ./ 64. 819. N U L T S 5.73 KNS D. 5.73 KNS	. (MMOS MMS MMS - SHEAR 'VS=	.00	KNS
REQD MAX/ BASI BASI AT STAR AT END	STEEL= 93 MIN/ACTUAL E C/REQD. DEVE E A M N O. T SUPPORT - SUPPORT -	9.MM2, ROW= PAR SPACING= LOPMENT LENG  43 D E S  Vu= 83.98 STIRRUPS ARE Vu= 27.50 STIRRUPS ARE	.0033, ROWMX 128./ 45 ETH = 450./  I G N R E S  KNS VC= 25 NOT REQUIRE KNS VC= 25 NOT REQUIRE	= .0228 I ./ 64. 819. N U L T S 5.73 KNS D. 5.73 KNS	. (MMOS MMS MMS - SHEAR 'VS=	.00	KNS
REQD MAX/ BASI  BAT STAR AT END  13J  No20 H1	STEEL= 93 MIN/ACTUAL E C/REQD. DEVE E A M N O. T SUPPORT - SUPPORT -	9.MM2, ROW= PAR SPACING= LOPMENT LENG  43 D E S  Vu= 83.98 STIRRUPS ARE Vu= 27.50 STIRRUPS ARE	.0033, ROWMX 128./ 45 ETH = 450./  I G N R E S  KNS VC= 25 NOT REQUIRE KNS VC= 25 NOT REQUIRE	= .0228 I ./ 64. 819. E U L T S 5.73 KNS D. 5.73 KNS	. (MMOS MMS MMS - SHEAR 'VS=	.00	KNS
REQD MAX/ BASI BASI AT STAR AT END	STEEL= 93 MIN/ACTUAL E C/REQD. DEVE E A M N O. T SUPPORT - SUPPORT -	9.MM2, ROW= PAR SPACING= LOPMENT LENG  43 D E S  Vu= 83.98 STIRRUPS ARE  Vu= 27.50 STIRRUPS ARE  3596	.0033, ROWMX 128./ 45 ETH = 450./  I G N R E S  KNS VC= 25 NOT REQUIRE KNS VC= 25 NOT REQUIRE	= .0228 I ./ 64. 819. E U L T S 5.73 KNS D. 5.73 KNS	ROWMN= .( MMS  - SHEAR  'VS=  VS=	.00	KNS KNS 43J

EVEL	HEIGHT	BAR IN	FO	FROM		TO		ANCH	OR	
	(MM)			(MM)		(MM)		STA	END	
		. 18 4					4 41 5		<del></del>	
1	1127.	3 - 20	мм	0.		3418.		YES	YES	
	TICAL NEG N							1 8 I		
REQ MAX	TICAL NEG N D STEEL= /MIN/ACTUAL IC/REQD. DE	939.MM2, BAR SPA	ROW= .0 .CING=	033, R 128./	OWMX= 45./	.0228 R	OWMN≔ .( MMS			
								I		· · · ·
	BEAM N	O. 44	DESI	GN P	RESU	JLTS	- SHEAR			
AT STA	RT SUPPORT						Vs=	.00	KNS	
AT END	SUPPORT		JPS ARE N 36.66 KN		1		۷s=	.00	KNS	
			JPS ARE N							
									447	
*****		=======	3417X 	: 249X ======	1199_				44J_ =====	
No20 F	11127. 0.	TO 3418								를 [
										300   310
· · · · · · · · · · · · · · · · · · ·							1. F - 21			
					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					'
001	<u> </u>   000     3#2		000     3#20		000     3#2	0	10001   3#20		and the second control of	000
00   3#20						0			and the second control of	
00  			1 3#20		1 3#2	0			and the second control of	3#2
00   3#20			1 3#20		1 3#2	0			and the second control of	3#2
00  			1 3#20		1 3#2	0			and the second control of	3#2
			1 3#20		1 3#2	0			and the second control of	3#2
	3#2	0	3#20                           	G N	3#2   1   3   1   1   1	0	3#20		and the second control of	3#2
#20   #20 	3#2 	0. 45	3#20                                 DESI	ng Asi	3#2	O LTS	3#20 	ÜRE		3#2
00   3#20   1   1   1   1   1   1   1   1   1	3#2 	0 l O. 45	3#20                                       DESI	30.	3#2   	O LTS	3#20 	ÜRE 1200.	MMS	3#2
00   3#20   1   1   1   1   1   1   1   1   1	3#2 	0 l O. 45	3#20                                       DESI	ng Asi	3#2 	O LTS	3#20 	ÜRE	MMS HOR	3#2
00   3#20   1   1   1   1   1   1   1   1   1	3#2	0 l O. 45	3#20                                       DESI	30 FROM	3#2 	U L T S SIZE -	3#20 	ÜRE 1200.	MMS HOR	3#2
00   3#20   1   1   1   1   1   1   1   1   1	3#2	0 I O. 45 FY - 41 BAR I	3#20 	30. FROM (MM)	3#2 	U L T S SIZE - TO (MM)	3#20 	CURE 1200. ANC STA	MMS HOR END	3#2
	3#2	0 O. 45 FY - 41 BAR I	3#20 	30. FROM (MM)	3#2 	U L T S SIZE - TO (MM)	3#20 	CURE 1200. ANC STA	MMS HOR END	3#2
DO	3#2	0 I O. 45 FY - 41 BAR I 3 - 2 MOMENT=	3#20 	30. FROM (MM)	3#2- 	U L T S SIZE - TO (MM)	3#20 	CURE 1200. ANC STA YES	MMS HOR END YES	3#2
	3#2	0	3#20 	30. FROM (MM) 0. 2 KN-M 0033, 128./	3#2- 	U L T S SIZE - TO (MM) 3350	3#20 	CURE 1200. ANC STA YES	MMS HOR END YES	3#2
DO   3#20	3#2	0	3#20 	30. FROM (MM) 0. 2 KN-M 0033, 128./	3#2- 	U L T S SIZE - TO (MM) 3350	3#20 	CURE 1200. ANC STA YES	MMS HOR END YES	3#2
	3#2	0	3#20 	30. FROM (MM) 0. 2 KN-M 0033, 128./	3#2 	U L T S SIZE - TO (MM) 3350	3#20 	CURE 1200. ANC STA YES	MMS HOR END YES	3#2
DO   3#20	3#2	0 0. 45 FY - 41 BAR I 3 - 2 MOMENT= 939.MM2 AL BAR SE DEVELOPME	3#20 	30. FROM (MM)  0. 2 KN-M 0033, 128./	3#2 	U L T S SIZE - TO (MM) 3350	3#20   	CURE 1200. ANC STA YES .0033	MMS HOR END YES	3#2

Page 36 of 62

STIRRUPS ARE NOT REQUIRED.

AT END SUPPORT - Vu= 31.56 KNS Vc= 255.73 KNS Vs= .00 KNS STIRRUPS ARE NOT REQUIRED.

3No20 8	11107 0 00					
	11127. О.ТО	3350				
						<u> 1998 - 1998</u>
001	10001	10001	1000		1000	loc
3#20 	3#20	3#20 	3#2	20 I	3#20	1 3
1 1 4 7 2 1 2 1				]		1
1.			i i			
_i			<u>                                     </u>			
			edekali Kabupatèn Kabup			
			*********	<b>7222244</b> 3		
		46 DESIG				
EN -	3418. MM FY	- 414. FC -	30. MPA,	SIZE -	250. X 1200.	MMS
EVEL	HEIGHT !	BAR INFO		TO (MM)	ANC STA	HOR END
* 1 1 2 1				(2117)		
		3 - 20MM	0.	3418	. YES	YES
CRI	TITCAL NEC MOME					4.0
REC	D STEEL= 939	ENT= 189.99 9.MM2, ROW= .0(	KN-MET AT	0.1 0.228 I	MM, LOAD 8	
REC MAX	D STEEL= 939 MIN/ACTUAL BA	0.MM2, ROW= .00 AR SPACING= 1	033, ROWMX= L28./ 45.	= .0228 E ./ 64.	ROWMN= .0033 MMS	
REC MAX	D STEEL= 939 MIN/ACTUAL BA	9  MM2,  ROW = .00	033, ROWMX= L28./ 45.	= .0228 E ./ 64.	ROWMN= .0033 MMS	
REC MAX	D STEEL= 939 MIN/ACTUAL BA	0.MM2, ROW= .00 AR SPACING= 1	033, ROWMX= L28./ 45.	= .0228 E ./ 64.	ROWMN= .0033 MMS	
REC MAX BAS	D STEEL= 939  /MIN/ACTUAL BA BIC/REQD. DEVE	0.MM2, ROW= .00 AR SPACING= 1	033, ROWMX= 128./ 45. = 450./	= .0228 E ./ 64. 819. N	ROWMN≃ .0033 MMS MMS	
REC MAX BAS	D STEEL= 939  MIN/ACTUAL BA  SIC/REQD. DEVE	O.MM2, ROW= .00  AR SPACING= 1  OPMENT LENGTH	O33, ROWMX= L28./ 45. = 450./	= .0228 F. / 64. 819. N	ROWMN= .0033 MMS MMS 	
REC MAX BAS	D STEEL= 938  /MIN/ACTUAL BA IC/REQD. DEVEI  B E A M N O.  RT SUPPORT - V	O.MM2, ROW= .00  AR SPACING= 1  LOPMENT LENGTH  46 DESIC	O33, ROWMX= L28./ 45. = 450./ G N R E S	= .0228 E ./ 64. 819. N	ROWMN= .0033 MMS MMS 	KNS
REC MAX BAS AT STA	D STEEL= 930 (/MIN/ACTUAL BA IC/REQD. DEVEI  B E A M N O.  ART SUPPORT - 1	AMM2, ROW= .00  AR SPACING= 1  OPMENT LENGTH  46 DESIC  Vu= 80.00 KNS  STIRRUPS ARE NO  Vu= 16.23 KNS	33, ROWMX= 128./ 45. = 450./ 5 N R E S S VC= 255 OT REQUIRED 5 VC= 255	= .0228 E ./ 64. 819. N	ROWMN= .0033 MMS MMS - SHEAR Vs= .00	I I I I
REC MAX BAS AT STA	D STEEL= 938  /MIN/ACTUAL BA SIC/REQD. DEVEL  BEAMNO.  ART SUPPORT - 1	O.MM2, ROW= .00  AR SPACING= 1  OPMENT LENGTH  46 DESIC  Vu= 80.00 KNS  STIRRUPS ARE NO	33, ROWMX= L28./ 45. = 450./ G N R E S S VC= 255 DT REQUIRED S VC= 255 DT REQUIRED	= .0228 E ./ 64. 819. N	ROWMN= .0033 MMS MMS - SHEAR Vs= .00	I I I I

	BEAM	NO.	47 DES 1	IGN RI	ESULTS	- FLEXU	NE .	el carret
LEN -	3596. M	M FY -	414. FC -	- 30. M	PA, SIZE -	250. X 1	200. MMS	
LEVEL	HEIGH (MM)		AR INFO	FROM (MM)	TO (MM)		ANCHOR STA END	
1	1127	. 3	- 20MM	0.	3596	•	YES YES	
R	EQD STEEL	= 939. CTUAL BAR	MM2, ROW= R SPACING=	.0033, RO	OWMX= .0228 45./ 64. 60./ 819.	ROWMN≔ .0 MMS		
	BEAN	1 NO.	47 DES	IGN R	ESULTS	- SHEAR		
AT S	START SUP		u= 83.98 TIRRUPS ARE		255.73 KNS JIRED.	Vs=	.00 KNS	
AT E	END SUPI	PORT - V	u= 16.23	KNS Vc=	255.73 KNS	Vs=	.00 KNS	
Endowed States 1		S'	TIRRUPS ARE	NOT KEQU				
=====	13J ) H1127.		359	16X 249X 1	1199		47,1	
3No2(     1 	) H1127.	0.TO 3	359 596 	6X 249X 1	L199			
3No2(	) H1127.	0.TO 3	359 596	6X 249X 1	1199    000	10001		
=====   3No20   	) H1127.	0.TO 3	359 596 	6x 249x 1	199 	ooo     3#20		
= = = =   3No20	D H1127.	0.TO 3 0.TO 3 3#20	359 596	1 G N R	199   Ooo     3#20	000     3#20	JRE	
=====   3No20   	D H1127.	0.TO 3 0000[ 3#20	359 596	1 G N R	199	OOO     3#20                               	JRE	
=====   3No20   	D H1127.	0.TO 3 0.TO 3 3#20	359 596	I G N R - 30. t FROM (MM)	199		JRE L200 MMS ANCHOR STA END	

```
BASIC/REQD, DEVELOPMENT LENGTH = 450./ 592. MMS
         1125. 5 - 25MM
                                  0. 1953.
CRITICAL NEG MOMENT= 979.42 KN-MET AT 0.MM, LOAD 8 |
  REQD STEEL= 2415.MM2, ROW= .0039, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 423./ 50./ 106. MMS
  BASIC/REQD. DEVELOPMENT LENGTH = 703./ 914. MMS
       BEAM NO. 48 DESIGN RESULTS - SHEAR
 AT START SUPPORT - Vu= 426.61 KNS Vc= 140.41 KNS Vs= 361.48 KNS
                   Tu= 388.57 KN-MET Ts= 329.2 KN-MET
                   Tc= 127.9 KN-MET
                   PROVIDE 12 MM BARS AT 78. MM C/C FOR 1953. MM
        SUPPORT - Vu= 434.63 KNS Vc= 142.89 KNS Vs= 368.45 KNS
 AT END
                   Tu= 388.57 KN-MET Ts= 329.4 KN-MET Tc= 127.7 KN-MET
                   PROVIDE 12 MM BARS AT 77. MM C/C FOR 1953. MM
  135
                           1952X 549X 1199_
5No25 H1125. 0.TO 1953
                                                           27*12c/c 78
                                                      | 27*12c/c 77 | |
                                                         8 T - 1 T - 1 G - 1
                                               7No20 H [73.1279.TO 1953]
                                              1 00000 1
00000 1
                         00000 I
                                   1 00000 |
                                               00000
                                                               1 00000
5#25 |
                         5#25 |
                                    1 5#25 ]
                                                | 5#25 |
                                                               : | 5#25
                                                 | 7#20 |
                                                                 1.7#20
                                                 100000001
                                                                 100000001
      BEAM NO. 49 DESIGN RESULTS - FLEXURE
LEN - 1900. MM FY - 414. FC - 30. MPA, SIZE - 550. X 950. MMS
LEVEL
        HEIGHT
                   BAR INFO
                                  FROM
                                               TO
                                                            ANCHOR
         . (MM)
                                  (MM)
                                               (MM)
                                                           STA END
                 9 - 16MM 1432.
         71.
                                         1900
 CRITICAL POS MOMENT= .00 KN-MET AT 1900.MM, LOAD 9 |
   REQD STEEL= 1612.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 432./ 41./ 54. MMS | BASIC/REQD. DEVELOPMENT LENGTH = 288./ 389. MMS |
         879. 9 - 16MM
                                  1900.
   CRITICAL NEG MOMENT= 58.21 KN-MET AT
                                               0.MM, LOAD 8 |
   REQD STEEL= 1612.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 432./ 41./ 54. MMS | 1
```

```
BASIC/REOD. DEVELOPMENT LENGTH = 288./ 568. MMS
       BEAM NO. 49 DESIGN RESULTS - SHEAR
  AT START SUPPORT - Vu= 38.04 KNS Vc= 437.54 KNS Vs= .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
  AT END SUPPORT - Vu= 20.76 KNS Vc= 437.54 KNS Vs=
                                                         .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
                          1899X 549X 949
                                                              49J
9No16 H 879. 0.TO 1900
                                               9No16 H 71.1432.TO 1900
                                                    ______
1000000001 10000000001 10000000001
                                               1000000000
                                   Logogogogo
                                                             1000000000
                       1 9#16
                                    1 9#16
                                                9#16
 9#16
           | 9#16
                                               | 9#16
                                                1000000000
        BEAM NO. 51 DESIGN RESULTS - FLEXURE
  LEN - 1932. MM FY - 414. FC - 30. MPA, SIZE - 550. X 1200. MMS
                                                           ANCHOR
                   BAR INFO
                                  FROM
                                               TO
  LEVEL HEIGHT
                                  (MM)
                                               (MM)
                                                          STA END
           (MM)
            73. 7 - 20MM 1098.
                                             1932.
     CRITICAL POS MOMENT=
                           88.04 KN-MET AT 1932.MM, LOAD 9 |
     REQD STEEL= 2067.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 |
MAX/MIN/ACTUAL BAR SPACING= 428./ 45./ 71. MMS |
BASIC/REQD. DEVELOPMENT LENGTH = 450./ 592. MMS |
                 3 - 32MM 0.
       1121.
                                          1932.
     CRITICAL NEG MOMENT= 903.01 KN-MET AT 0.MM, LOAD 8 1
     REQD STEEL= 2228.MM2, ROW= .0036, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 416./ 64./ 208. MMS |
   BASIC/REQD. DEVELOPMENT LENGTH = 1152./ 1498. MMS
```

BEAMNO. 51 DESIGN RESULTS - SHEAR

AT START SUPPORT - Vu= 424.91 KNS Vc= 144.10 KNS Vs= 355.78 KNS

Tu= 376.44 KN-MET Ts= 315.2 KN-MET

Tc= 127.7 KN-MET

PROVIDE 12 MM BARS AT 81. MM C/C FOR 1932. MM

Page 40 of 62

AT END SUPPORT - Vu=433.45 KNS Vc=146.80 KNS Vs=363.13 KN: Tu=376.44 KN-MET Ts=315.4 KN-MET Tc=127.5 KN-MET PROVIDE 12 MM BARS AT 80. MM C/C FOR 1932. MM

15J	1931X 549X 1199	51J
3No32 H1121. 0.TO 1932 25*12c/c 81		
		000   000 3#32   3#32         7#20   7#20 0000000   000000
	DESIGN RESULTS	
LEN - 1900. MM FY - 41 LEVEL HEIGHT BAR I	4. FC - 30. MPA, SIZE -	550. X 950. MMS
LEN - 1900. MM FY - 41  LEVEL HEIGHT BAR II  (MM)  1 879. 9 - 10    CRITICAL NEG MOMENT=   REQD STEEL= 1612.MM2   MAX/MIN/ACTUAL BAR SPA	4. FC - 30. MPA, SIZE -  NFO FROM TO (MM) (MM)  6MM 0. 1900  58.21 KN-MET AT 0. , ROW= .0033, ROWMX= .0228 ACING= 432./ 41./ 54.	ANCHOR STA END  O. YES YES  MM, LOAD 8   ROWMN= .0033
LEN - 1900. MM FY - 41-  LEVEL HEIGHT BAR II  (MM)  1 879. 9 - 11-  1 CRITICAL NEG MOMENT=  1 REQD STEEL= 1612. MM2.  1 MAX/MIN/ACTUAL BAR SPA  1 BASIC/REQD. DEVELOPMENT  1 BASIC/REQD TO THE STIRRING AT END SUPPORT - Vu=	4. FC - 30. MPA, SIZE -  NFO FROM TO  (MM) (MM)  6MM 0. 1900  58.21 KN-MET AT 0.  , ROW= .0033, ROWMX= .0228	ANCHOR ANCHOR STA END  O. YES YES  MM, LOAD 8   ROWMN= .0033   MMS   MMS   MMS   S - SHEAR

513	r i 1897 - Paris Albert	1899	X 549X 949		52J
9No16 H	1879. О.ТО	1900			
		e i de la comunicación de la comun Comunicación de la comunicación de			
	001 10000000	0     00000000	00000000	01 100000000	0 000000000
9#16	9#16	9#16	9#16	9#16	9#16
		i I i I, i i i i i i i i i i i i i i i i			

LEN -	3638. MM FY -			U L T S - SIZE - 250		<b>1</b> S
LEVEL	HEIGHT BAR (MM)		FROM (MM)	TO (MM)	ANCHO STA EN	₹
1	1127. 3 -	· 20MM	0.	3638.	YES YI	ES
REG MA	ITICAL NEG MOMENT DD STEEL= 939.M K/MIN/ACTUAL BAR SIC/REQD. DEVELOP	M2, ROW= .0 SPACING=	0033, ROWMX <del>-</del> 128./ 45	= .0228 ROWM ./ 64. MMS	IN= .0033	
	BEAM NO. 5	53 DESI	GN RES	ULTS-5	SHEAR	
er da la la el	ART SUPPORT - Vu= STI D SUPPORT - Vu=	IRRUPS ARE N	NOT REQUIRE	D. 5.73 KNS V		
		IRRUPS ARE N	NOT REQUIRE	D.		
15	STI	IRRUPS ARE 1				
T=====	STI	IRRUPS ARE N	X 249X 1199			53 <b>J</b>
T=====	ST)	IRRUPS ARE N	X 249X 1199			53 <b>J</b>
T=====	ST)	IRRUPS ARE N	X 249X 1199			53 <b>J</b>
3No20 3No20	ST)	IRRUPS ARE N	X 249X 1199		DOO   3#20	53 <b>J</b>
3No20	ST1  J  H1127. 0.TO 365	36372 38	X 249X 1199		000	53J 
3No20 3No20	ST1  J  H1127. 0.TO 365	36372 38	X 249X 1199		000	53J 
3No20 3No20	ST1  J  H1127. 0.TO 365	36372 38	X 249X 1199		000	53J 
3No20 3No20	J H1127. 0.TO 36: 	3637) 38    OOO     3#20                     1     54 DESI	1000   3#   1	220	DOO   3#20	53J
3No20 3No20	1000    3#20 	3637) 38    000    3#20                     1     4     54 DESI 414 FC -	1000   3#   1	220	DOO   3#20	53J

Page 42 of 62

.00 KNS

```
REQD STEEL= 939.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 |
MAX/MIN/ACTUAL BAR SPACING= 128./ 45./ 64. MMS |
BASIC/REQD. DEVELOPMENT LENGTH = 450./ 819. MMS |

B E A M N O. 54 D E S I G N R E S U L T S - SHEAR

AT START SUPPORT - Vu= 81.86 KNS Vc= 255.73 KNS Vs= .00

STIRRUPS ARE NOT REQUIRED.
```

SUPPORT - Vu= 27.50 KNS Vc= 255.73 KNS Vs=

STIRRUPS ARE NOT REQUIRED.

	15J		3501X 2	49X 1199		54J	
1	3No20 H1127	7. 0.TO 3501					
	000  3#20	000     3#20	000     3#20	10001	<u></u>  000    3#2	1 1	000     3#2
)   							
ļ							1

BEAM NO. 55 DESIGN RESULTS - FLEXURE

LEN - 3450. MM FY - 414. FC - 30. MPA, SIZE - 250. X 1200. MMS

LEVEL HEIGHT BAR INFO FROM TO ANCHOR

(MM) (MM) (MM) STA END

1 1127. 3 - 20MM 0. 3450. YES Y

CRITICAL NEG MOMENT= 193.25 KN-MET AT 0.MM, LOAD 8 |

REQD STEEL= 939.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 |

MAX/MIN/ACTUAL BAR SPACING= 128./ 45./ 64. MMS |

BASIC/REQD. DEVELOPMENT LENGTH = 450./ 819. MMS |

BEAM NO. 55 DESIGN RESULTS - SHEAR

AT START SUPPORT - Vu= 80.72 KNS Vc= 255.73 KNS Vs= .00 KNS STIRRUPS ARE NOT REQUIRED.

AT END SUPPORT - Vu= 27.50 KNS Vc= 255.73 KNS Vs= .00 KNS STIRRUPS ARE NOT REQUIRED.

.15J	3449X 249X	1199	55J
	== # # # # # # # # # # # # # # # # # #		 =======
3No20 H1127. 0.TO 3450			

 ool 3#20	000    3#20	1000     3#20 	000     3#20	000     3#20 	100   3
	BEAM NO. 5 3501. MM FY -		Charles Marie Security		. MMS
ar Pak	HEIGHT BAR (MM)	info fi		) AN	
   CRI	1127. 3 -	= 198.51 K		).MM, LOAD 8	<del>-</del> 1
CRI REQ MAX BAS		= 198.51 KI M2, ROW= .003 SPACING= 12 MENT LENGTH =	N-MET AT 0 3, ROWMX= .0228 8./ 45./ 64 450./ 819.	).MM, LOAD 8 8 ROWMN= .0033 1. MMS	<del>-</del> 1
CRI REQ MAX BAS	TICAL NEG MOMENT D STEEL= 939.M (/MIN/ACTUAL BAR SIC/REQD. DEVELOF B E A M N O. 5 ART SUPPORT - Vu= STI	= 198.51 KM H2, ROW= .003 SPACING= 12 MENT LENGTH = H6 D E S I G H 81.86 KMS RRUPS ARE NOT	N-MET AT 0 3, ROWMX= .0228 8./ 45./ 64 450./ 819. N R E S U L T  VC= 255.73 KR REQUIRED. VC= 255.73 KR	) MM, LOAD 8 3 ROWMN= .0033 4. MMS MMS S - SHEAR	-         
CRI REQ MAX BAS	TICAL NEG MOMENT D STEEL= 939.M (/MIN/ACTUAL BAR SIC/REQD. DEVELOF B E A M N O. 5  ART SUPPORT - Vu= STI D SUPPORT - Vu= STI	= 198.51 KM M2, ROW= .003 SPACING= 12 MENT LENGTH =  66 D E S I G  = 81.86 KNS RRUPS ARE NOT = 36.66 KNS RRUPS ARE NOT 3501X 2	N-MET AT 0 3, ROWMX= .0228 8./ 45./ 64 450./ 819. N R E S U L T  VC= 255.73 KR REQUIRED. VC= 255.73 KR	) MM, LOAD 8 3 ROWMN= .0033 4. MMS MMS S - SHEAR	-         
CRI REQ MAX BAS	TICAL NEG MOMENT D STEEL= 939.M (/MIN/ACTUAL BAR SIC/REQD. DEVELOF B E A M N O. 5  ART SUPPORT - Vu= STI D SUPPORT - Vu= STI	= 198.51 KM M2, ROW= .003 SPACING= 12 MENT LENGTH =  66 D E S I G  = 81.86 KNS RRUPS ARE NOT = 36.66 KNS RRUPS ARE NOT  3501X 2	N-MET AT 3, ROWMX= .0228 8./ 45./ 64 450./ 819.  N R E S U L T  VC= 255.73 KR REQUIRED. VC= 255.73 KR REQUIRED.	) MM, LOAD 8 3 ROWMN= .0033 4. MMS MMS S - SHEAR	-       1   

BEAM NO. 57 DESIGN RESULTS - FLEXURE

Page 44 of 62

```
LEN - 3638. MM FY - 414. FC - 30. MPA, SIZE - 250. X 1200. MMS
 LEVEL
          HEIGHT
                    BAR INFO
                                   FROM
                                                            ANCHOR
           (MM)
                                    (MM)
                                                (MM)
                                                            STA END
          1127.
                 3 - 20MM
     CRITICAL NEG MOMENT= 212.81 KN-MET AT 0.MM, LOAD 8 |
   REQD STEEL= 939.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 128./ 45./ 64. MMS |
    BASIC/REQD. DEVELOPMENT LENGTH = 450./ 819. MMS
        BEAM NO. 57 DESIGN RESULTS - SHEAR
  AT START SUPPORT - Vu= 84.91 KNS Vc= 255.73 KNS Vs=
                                                             .00 KNS
                    STIRRUPS ARE NOT REQUIRED.
           SUPPORT - Vu= 16.23 KNS Vc= 255.73 KNS Vs=
                                                             .00 KNS
                    STIRRUPS ARE NOT REQUIRED.
     15J
                             3637X 249X 1199
 3No20 H1127. 0.TO 3638
000
             000
                           000
                                        10001
                                                      10001
                                                                     Lógot
1 3#20
             1 3#20
                           1 3#20
                                        | 3#20
                                                                     1 3#2
        BEAM NO. 58 DESIGN RESULTS - FLEXURE
 LEN - 1932. MM FY - 414. FC - 30. MPA, SIZE - 550. X 1200. MMS
 LEVEL
          HEIGHT
                  BAR INFO
                                   FROM
                                                TΟ
                                                             ANCHOR
           (MM)
                                   (MM)
                                                (MM)
                                    0.
                                               1932.
     CRITICAL NEG MOMENT= 988.47 KN-MET AT 0.MM, LOAD 8 |
   REQD STEEL= 2438 MM2, ROW= .0039, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 423./ 50./ 106. MMS
    BASIC/REQD. DEVELOPMENT LENGTH = 703./ 914. MMS
        BEAM NO. 58 DESIGN RESULTS - SHEAR
  AT START SUPPORT - Vu= 459.13 KNS Vc= 149.39 KNS Vs= 390.77 KNS
```

Tu= 391.34 KN-MET Ts= 333.1 KN-MET

Tc= 127.3 KN-MET
PROVIDE 12 MM BARS AT 75. MM C/C FOR 1932. MM
AT END SUPPORT - Vu= 467.68 KNS Vc= 151.97 KNS Vs= 398.24 KNS
Tu= 391.34 KN-MET Ts= 333.2 KN-MET
Tc= 127.2 KN-MET
PROVIDE 12 MM BARS AT 75. MM C/C FOR 1932. MM

No25 H1125. 0.TO 1932				
7*12c/c 75			27*12c/	c 75
00000     00000	00000	00000	00000 ]	1 00000
#25     5#25	5#25	5#25	5#25   	5#25 
			<u> </u>	<u> i                                    </u>
BEAM NO. 59				
LEN - 1900. MM FY - 41			550. X 950.	MMS
LEVEL HEIGHT BAR II (MM)	NFO FRO		ANC STA	and the second section
				<del></del> -
	CMM 1.4.20	2. 1900	). NO	VPC
$\frac{1}{2}$ 71. 9 - 1	DMM 1432	1900	J. 190	100
CRITICAL POS MOMENT=   REQD STEEL= 1612.MM2	, ROW= .0033,	ROWMX= .0228	ROWMN = .0033	
	, ROW= .0033, ACING= .432.	ROWMX= .0228 ./ 41./ 54	ROWMN= .0033 . MMS	
REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP	, ROW= .0033, ACING= .432.	ROWMX= .0228 ./ 41./ 54	ROWMN= .0033 . MMS	
REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP	, ROW= .0033, ACING= 432 NT LENGTH =	ROWMX= .0228 ./ 41./ 54 288./ 389.	ROWMN= .0033 . MMS MMS	
REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME  2 879. 9 - 1 CRITICAL NEG MOMENT=	, ROW= .0033, ACING= 432. NT LENGTH =  6MM (  58.21 KN-	ROWMX= .0228 ./ 41./ 54 .288./ 389. ). 190 -MET AT 0	ROWMN= .0033 . MMS MMS 0. YES	YES
REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME  2 879. 9 - 1 CRITICAL NEG MOMENT= REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP	, ROW= .0033, ACING= 432. NT LENGTH =  6MM (  58.21 KN- , ROW= .0033, PACING= 432	ROWMX= .0228 ./ 41./ 54 288./ 389. ). 190 -MET AT 0 , ROWMX= .0228 ./ 41./ 54	ROWMN= .0033 .MMS MMS 0. YES .MM, LOAD 8 ROWMN= .0033	YES
REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME  2 879. 9 - 1 CRITICAL NEG MOMENT= REQD STEEL= 1612.MM2	, ROW= .0033, ACING= 432. NT LENGTH =  6MM (  58.21 KN- , ROW= .0033, PACING= 432	ROWMX= .0228 ./ 41./ 54 288./ 389. ). 190 -MET AT 0 , ROWMX= .0228 ./ 41./ 54	ROWMN= .0033 .MMS MMS 0. YES .MM, LOAD 8 ROWMN= .0033	YES
REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME  2 879. 9 - 1 CRITICAL NEG MOMENT= REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP	, ROW= .0033, ACING= 432. NT LENGTH =  6MM (  58.21 KN- , ROW= .0033, PACING= 432	ROWMX= .0228 ./ 41./ 54 288./ 389. ). 190 -MET AT 0 , ROWMX= .0228 ./ 41./ 54	ROWMN= .0033 .MMS MMS 0. YES .MM, LOAD 8 ROWMN= .0033	YES
REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME  2 879. 9 - 1 CRITICAL NEG MOMENT= REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME	, ROW= .0033, ACING= 432. NT LENGTH =  6MM (  58.21 KN- , ROW= .0033, PACING= 432. NT LENGTH =	ROWMX= .0228 ./ 41./ 54 288./ 389. ). 190 -MET AT 0, ROWMX= .0228 ./ 41./ 54 288./ 568.	ROWMN= .0033 .MMS MMS 0. YES .MM, LOAD 8 ROWMN= .0033 .MMS	YES
REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME  2 879. 9 - 1 CRITICAL NEG MOMENT= REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP	, ROW= .0033, ACING= 432. NT LENGTH =  6MM (  58.21 KN- , ROW= .0033, PACING= 432. NT LENGTH =	ROWMX= .0228 ./ 41./ 54 288./ 389. ). 190 -MET AT 0, ROWMX= .0228 ./ 41./ 54 288./ 568.	ROWMN= .0033 .MMS MMS 0. YES .MM, LOAD 8 ROWMN= .0033 .MMS	YES
REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME  2 879. 9 - 1 CRITICAL NEG MOMENT= REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME  B E A M N O. 59  AT START SUPPORT - Vu=	, ROW= .0033, ACING= 432. NT LENGTH =  6MM (  58.21 KN- , ROW= .0033, PACING= 432. NT LENGTH =  D E S I G N  38.04 KNS	ROWMX= .0228 ./ 41./ 54 288./ 389. ). 190 -MET AT 0 , ROWMX= .0228 ./ 41./ 54 288./ 568. R E S U L T	ROWMN= .0033 . MMS . MMS . MMS	YES
REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME  2 879. 9 - 1 CRITICAL NEG MOMENT= REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME  BEAM NO. 59  AT START SUPPORT - Vu= STIRE AT END SUPPORT - Vu=	, ROW= .0033, ACING= 432 NT LENGTH =  .6MM ( .58.21 KNROW= .0033, PACING= 432 NT LENGTH =  D E S I G N  .38.04 KNS RUPS ARE NOT .20.76 KNS	ROWMX= .0228 ./ 41./ 54 .288./ 389 190 190 MET AT 0 ROWMX= .0228 ./ 41./ 54 288./ 568.  R E S U L T VC= 437.54 KN REQUIRED. VC= 437.54 KN	ROWMN= .0033 . MMS . MMS . MMS YES . MM, LOAD 8 . ROWMN= .0033 . MMS . MMS . MMS . S - SHEAR . S Vs= .00	YES
REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME  2 879. 9 - 1 CRITICAL NEG MOMENT= REQD STEEL= 1612.MM2 MAX/MIN/ACTUAL BAR SP BASIC/REQD. DEVELOPME  BEAM NO. 59  AT START SUPPORT - Vu= STIRE AT END SUPPORT - Vu=	, ROW= .0033, ACING= 432. NT LENGTH = .6MM ( .58.21 KN ROW= .0033, PACING= 432. NT LENGTH = .00	ROWMX= .0228 ./ 41./ 54 .288./ 389 190 190 MET AT 0 ROWMX= .0228 ./ 41./ 54 288./ 568.  R E S U L T VC= 437.54 KN REQUIRED. VC= 437.54 KN	ROWMN= .0033 . MMS . MMS . MMS YES . MM, LOAD 8 . ROWMN= .0033 . MMS . MMS . MMS . S - SHEAR . S Vs= .00	YES

Page 46 of 62

					71.1432.TO	
					<u> </u>	
				00   0000000		
				         9#16	           9#1	16 (
					000   0000     1	000000 
<b></b>	=======================================					
В	EAM NO. 8	1 DESIG	N RES	JLTS- FI	ÆXURE	
LEN - 8	544. MM FY -	414. FC -	30. MPA, S	SIZE - 3200.	X 300. MMS	3
LEVEL	HEIGHT BAR (MM)	INFO			ANCHOR STA END	)
1	69, 30 -	12MM 1	458.	7442.	ио ио	
REQD   MAX/I	ICAL POS MOMENT STEEL= 3333.M MIN/ACTUAL BAR C/REQD. DEVELOP	M2, ROW= .00 SPACING= 30	45, ROWMX= 86./ 37.,	.0228 ROWMN=	AD 8   .0033	
	229. 32 -	1 6MM				
1			0.	2573.	YES NO	. i
REQD   MAX/N	ICAL NEG MOMENT STEEL= 6402 M MIN/ACTUAL BAR C C/REQD. DEVELOP	= 507.89 M2, ROW= 00 SPACING= 30	KN-MET AT 87, ROWMX= 82./ 41./	0.MM, LC .0228 ROWMN= 99. MMS	AD 10	
REQD   MAX/N	ICAL NEG MOMENT STEEL= 6402.MI MIN/ACTUAL BAR	= 507.89 M2, ROW= .00 SPACING= 30 MENT LENGTH	KN-MET AT 87, ROWMX= 82./ 41./ = 288./	0.MM, LC .0228 ROWMN= 99. MMS 437. MMS	AD 10	
REQD MAX/N BASIC	ICAL NEG MOMENT STEEL= 6402.MI MIN/ACTUAL BAR C/REQD. DEVELOPI	= 507.89 M2, ROW= .00 SPACING= 30 MENT LENGTH  12MM 6 = 375.04 M42, ROW= .00 SPACING= 30	KN-MET AT 87, ROWMX= 82./ 41./ = 288./ 	0.MM, LC .0228 ROWMN= 99. MMS 437. MMS 8544. 8544.MM, LC .0228 ROWMN= 77. MMS	NO YES	
REQD MAX/N BASIC  CRITI REQD MAX/N BASIC	ICAL NEG MOMENT STEEL= 6402 M MIN/ACTUAL BAR C/REQD. DEVELOPE  231. 41 -  ICAL NEG MOMENT STEEL= 4630 M MIN/ACTUAL BAR	= 507.89 M2, ROW= .00 SPACING= 30 MENT LENGTH  12MM 6 = 375.04 M42, ROW= .00 SPACING= 30 MENT LENGTH	KN-MET AT 87, ROWMX= 82./ 41./ = 288./ 437. KN-MET AT 63, ROWMX= 86./ 37./ = 162./	0.MM, LC .0228 ROWMN= 99. MMS 437. MMS 8544. 8544.MM, LC .0228 ROWMN= 77. MMS	NO YES	
REQD MAX/N BASIC  CRITI REQD MAX/N BASIC	ICAL NEG MOMENT: STEEL= 6402 MI MIN/ACTUAL BAR: C/REQD. DEVELOPI  231. 41 - ICAL NEG MOMENT: STEEL= 4630 MI MIN/ACTUAL BAR: C/REQD. DEVELOPI  E A M N O. 8	= 507.89 M2, ROW= .00 SPACING= 30 MENT LENGTH  12MM 6 = 375.04 M42, ROW= .00 SPACING= 30 MENT LENGTH	KN-MET AT 87, ROWMX= 82./ 41./ = 288./ 437. 	0.MM, LC .0228 ROWMN= 99. MMS 437. MMS 8544. 8544.MM, LC .0228 ROWMN= 77. MMS 327. MMS	NO YES	
REQD MAX/N BASIC CRITI REQD MAX/N BASIC BASIC BASIC	ICAL NEG MOMENT: STEEL= 6402 MI MIN/ACTUAL BAR: C/REQD. DEVELOPI  231. 41 ICAL NEG MOMENT: STEEL= 4630 MI MIN/ACTUAL BAR: C/REQD. DEVELOPI  E A M N O. 8: I SUPPORT - Vu= PROV SUPPORT - Vu=	= 507.89 M2, ROW= .00 SPACING= 30 MENT LENGTH  12MM 6 = 375.04 M2, ROW= .00 SPACING= 30 MENT LENGTH  L D E S I G  310.11 KNS MIDE 12 MM B 295.59 KNS	KN-MET AT 87, ROWMX= 82./ 41./= 288./ 437. KN-MET AT 63, ROWMX= 86./ 37./= 162./ N R E S U VC= 653. ARS AT 85. VC= 653.	0.MM, LC0228 ROWMN= 99. MMS 437. MMS  8544.  8544.MM, LC0228 ROWMN= 77. MMS 327. MMS  L T S - SHE  75 KNS Vs= MM C/C FOR	NO 10	
REQD MAX/N BASIC CRITI REQD MAX/N BASIC BASIC BASIC	ICAL NEG MOMENT: STEEL= 6402 MI MIN/ACTUAL BAR: C/REQD. DEVELOPI  231. 41 ICAL NEG MOMENT: STEEL= 4630 MI MIN/ACTUAL BAR: C/REQD. DEVELOPI  E A M N O. 8: I SUPPORT - Vu= PROV SUPPORT - Vu= PROV	= 507.89 M2, ROW= .00 SPACING= 30 MENT LENGTH  12MM 6 = 375.04 M2, ROW= .00 SPACING= 30 MENT LENGTH  L D E S I G  310.11 KNS MIDE 12 MM B MENT LENGTH  295.59 KNS MIDE 12 MM B	KN-MET AT 87, ROWMX= 82./ 41./= 288./ 437	0.MM, LC .0228 ROWMN= 99. MMS 437. MMS  8544.  8544.MM, LC .0228 ROWMN= 77. MMS 327. MMS  L T S - SHE  75 KNS Vs= MM C/C FOR 75 KNS Vs= MM C/C FOR	NO 10   .0033   .0033   .00 YES .0033   .0033   .00 KNS 356. MM .00 KNS	
REQD   MAX/N   BASIC	ICAL NEG MOMENT: STEEL= 6402 MI MIN/ACTUAL BAR: C/REQD. DEVELOPI  231. 41 ICAL NEG MOMENT: STEEL= 4630 MI MIN/ACTUAL BAR: C/REQD. DEVELOPI  E A M N O. 8: I SUPPORT - Vu= PROV SUPPORT - Vu= PROV	= 507.89 M2, ROW= .00 SPACING= 30 MENT LENGTH  12MM 6 = 375.04 M2, ROW= .00 SPACING= 30 MENT LENGTH  L D E S I G  310.11 KNS MIDE 12 MM B  295.59 KNS MIDE 12 MM B  8543X3	KN-MET AT 87, ROWMX= 82./ 41./= 288./ 437.  KN-MET AT 63, ROWMX= 86./ 37./= 162./  N R E S U  VC= 653. ARS AT 85. VC= 653. ARS AT 85.	0.MM, LC .0228 ROWMN= 99. MMS 437. MMS  8544.  8544.MM, LC .0228 ROWMN= 77. MMS 327. MMS  L T S - SHE  75 KNS Vs= MM C/C FOR 75 KNS Vs= MM C/C FOR	NO 10	

	 	41#12	00000000000	000000
		ada a a a a a a a a a a a a a a a a a a		
	3 DESIGN RE 114. FC - 30. MP			S
EVEL HEIGHT BAR (MM)	INFO FROM	ТО (ММ)	ANCHOR STA EN	
73. 11 -	20MM 1237.	7663.	NO NO	
CRITICAL POS MOMENT REQD STEEL= 3440 M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOP	M2, ROW= .0046, ROW SPACING= 3078./	MX= .0228 ROWM 45./ 308 MMS	N= .0033   	
2 231. 45 -	12MM 0.	1751.	YES NO	
CRITICAL NEG MOMENT REQD STEEL= 5060.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOP	M2, ROW= .0068, ROW SPACING= 3086./	MX= .0228 ROWN 37./ 70. MMS	N= .0033	
3 231. 43 -	12MM 6437.	8544.	NO YE	S
CRITICAL NEG MOMENT REQD STEEL= 4850.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOP	M2, ROW= .0067, ROW SPACING= 3086./	MMX= .0228 ROWN 37./ 73. MMS	N= .0033	
AT START SUPPORT - Vu=	VIDE 12 MM BARS AT	653.75 KNS V 85. MM C/C	s= .00 KI FOR 356. MM	
PRO	OVIDE 12 MM BARS AT	85. MM C/C	FOR 356. MM	
21J	8543X3199X		The stage of the s	51J
5No12 H 231. 0.TO 175 6*12c/c 85 11No20 H 73.1		43No12	H 231.6437.T 6*12c/c	0 8544

Page 48 of 62

化工厂 医结合结构 医颅 女子等 化二氯化异合物 机电压 经国际 医电流放射 网络克拉克斯斯
BEAM NO. 85 DESIGNRESULTS - FLEXURE  JEN - 8544. MM FY - 414. FC - 30. MPA, SIZE - 3200. X 300. MMS  JEVEL HEIGHT BAR INFO FROM TO ANCHOR  (MM) (MM) (MM) STA END  1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8    REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033    MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
BEAM NO. 85 DESIGNRESULTS - FLEXURE  JEN - 8544. MM FY - 414. FC - 30. MPA, SIZE - 3200. X 300. MMS  JEVEL HEIGHT BAR INFO FROM TO ANCHOR  (MM) (MM) (MM) STA END  1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8 REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033    MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
BEAM NO. 85 DESIGNRESULTS - FLEXURE  EN - 8544. MM FY - 414. FC - 30. MPA, SIZE - 3200. X 300. MMS  EVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) (MM) (MM) STA END  1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) (MM) (MM) STA END  1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) (MM) (MM) STA END  1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) (MM) (MM) STA END  1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) (MM) (MM) STA END  1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) (MM) (MM) STA END  1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) (MM) (MM) STA END  1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) (MM) (MM) STA END  1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) (MM) (MM) STA END  1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
(MM) (MM) (MM) STA END  1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
1 69. 27 - 12MM 1456. 7444. NO NO  CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
CRITICAL POS MOMENT= 251.53 KN-MET AT 8544.MM, LOAD 8   REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
REQD STEEL= 3021.MM2, ROW= .0041, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 119. MMS
BASIC/REQD. DEVELOPMENT LENGTH = 162./ 324. MMS
2 227. 17 - 20MM 0. 1970. YES NO
CRITICAL NEG MOMENT= 418.93 KN-MET AT 0.MM, LOAD 8
REQD STEEL= 5325.MM2, ROW= .0074, ROWMX= .0228 ROWMN= .0033   MAX/MIN/ACTUAL BAR SPACING= 3078./ 45./ 192. MMS
BASIC/REQD. DEVELOPMENT LENGTH = 450./ 546. MMS
너 한테 동생들은 동생은 화를 할 말하셨던 학교 문화 화학을 받은 사람은 모르는
3 231. 49 - 12MM 6437. 8544. NO YES
CRITICAL NEG MOMENT= 443.52 KN-MET AT 8544.MM, LOAD 8
REQD STEEL= 5479.MM2, ROW= .0074, ROWMX= .0228 ROWMN= .0033
MAX/MIN/ACTUAL BAR SPACING= 3086./ 37./ 64. MMS
BASIC/REQD. DEVELOPMENT LENGTH = 162./ 327. MMS
그 이렇게 하세요 아이들까지 않는 그 그렇게 되는 그 사람이 되는 것이 되었다.
BEAM NO. 85 DESIGN RESULTS - SHEAR
사람이 경우 함께 하는 사람이 하는 것도 모습니다. 나는 사람들은 사람들은 하다 먹었다.
AT START SUPPORT - Vu= 299.97 KNS Vc= 653.75 KNS Vs= .00 KNS
Control (Table 1) PROVIDE 12 MM BARS AT 85. MM C/C FOR 356. MM
AT END SUPPORT - Vu= 305.74 KNS Vc= 653.75 KNS Vs= .00 KNS
PROVIDE 12 MM BARS AT 85, MM C/C FOR 356, MM
9.6. 31J
<u>. 31J % .                                  </u>
사용 하는 생물을 하는 것을 하게 하는 것을 하는 것을 하는 것을 하는 것이 되었다. 그런데 아이들의 사용을 하는 것을 하는 것을 보고 있다. 기술을 하고 있는 것을 하는 것을 하는 것을 하는 것 <del>기업을 기업을 하는 것을 하는</del>
No20 H 227. 0.TO 1970 49No12 H 231.6437.TO 8544
6*12c/c 85
27No12 H 69.1456.TO 7444
来说,这一点,一点,我就是我的一个一个一点,我们的一个一点,我们的一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个
un egy elektrik i kanala kanala ete erine eta eta eta ega erine elektrik eta eta elektrik eta eta eta eta eta Elektrik eta
000000000000000000000000000000000000000

						<b>-'</b>
		91 DESI	C N D F C	III. PQ - Fr	EXIIRE	
		91 DEST	2007			
			FROM	TO 2200.	ANCHOR	
EVEL	HEIGHT (MM)	BAR INFO	(MM)	(MM)	STA END	
1	73. 3	4 - 20MM	0.	1900.	YES YES	
REQD MAX/M	STEEL= 1058 IN/ACTUAL B	ENT= 5075.99 3.MM2, ROW= .0 BAR SPACING= 2 LOPMENT LENGTH	036, ROWMX= 2078./ 45.	= .0228 ROWMN= ./ 63. MMS	AD 8   .0033	
В	EAM NO.	91 DESI	GN RES	U L T S - SHE	:AR	
					00 17370	
	1987年4月2日本	Vu= 1804.17 KN PROVIDE 12 MM	BARS AT 12	3. MM C/C FOR	R 1900. MM	
AT END		Vu= 1747.08 KM PROVIDE 12 MM				
			DARO AT 12	3. MM C/C EUE	( 1900. MM	
1J		1899)			71J	
1J						_ _ 
 17*12c/c		1899)			713	
17*12c/c	123	1899)			713	
17*12c/c	123	1899)			713	
17*12c/c	123 73. 0.TO	1899)			713	
17*12c/c	123 73. 0.TO	1899)			713	
17*12c/c 1No20 H	123 73. 0.TO	1899) 1900	(2199X 1399	1 1 1 34#20	71J 17*12c/c123	
17*12c/c 1No20 H	123 73. 0.TO	1899) 1900	(2199X 1399	1 1 1 34#20	713	
17*12c/c 1No20 H	123 73. 0.TO	1899) 1900	(2199X 1399	1 1 1 34#20	71J 17*12c/c123	
17*12c/c 1No20 H	123 73. 0.TO	1899) 1900	(2199X 1399	1 1 1 34#20	71J 17*12c/c123	
17*12c/c 4No20 H 4#20 00000000	123 73. 0.TO	1899) 1900	0000000000		71J	
17*12c/c 4No20 H 4#20 00000000	123 73. 0.TO	1899)  1900	00000000000000000000000000000000000000		71J	
17*12c/c 4No20 H 4#20 00000000	123 73. 0.TO 00000000000000000000000000000000000	1899)  1900	QN RES		71J	
17*12c/c 4No20 H 4#20 00000000	123 73. 0.TO 00000000000000000000000000000000000	1899)  1900	QN RES		71J	
17*12c/c 4No20 H 4#20 00000000	123 73. 0.TO 00000000000000000000000000000000000	1899)  1900	QN RES		71J	
L7*12c/c 4No20 H 4#20 000000000 B LEN -	123 73. 0.TO 0000000000 000000000000000000000000	1899)  1900	Q N R E S 30. MPA, FROM (MM)		71J  17*12c/c123  17*12c/c123  LEXURE  X 1400. MMS  ANCHOR  STA END	

Page 50 of 62

```
BASIC/REQD. DEVELOPMENT LENGTH = 450./ 630. MMS
          1327. 31 - 20MM 0. 900.
     CRITICAL NEG MOMENT= 383.97 KN-MET AT 900.MM, LOAD 9 |
 REQD STEEL= 9733.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 |
MAX/MIN/ACTUAL BAR SPACING= 2078./ 45./ 69. MMS |
BASIC/REQD. DEVELOPMENT LENGTH = 450./ 819. MMS |
        BEAM NO. 92 DESIGN RESULTS - SHEAR
  AT START SUPPORT - Vu= .04 KNS Vc= 2650.68 KNS Vs= .00 KNS STIRRUPS ARE NOT REQUIRED.
           SUPPORT - Vu= .04 KNS Vc= 2650.68 KNS Vs=
                                                              .00 KNS
                    STIRRUPS ARE NOT REQUIRED.
                               899X2199X 1399
131No20 H1327. 0.TO 900
131No20 H 73. 0.TO 900
1 131#20
                       | |31#20
131#20
                                                  | |31#20
BEAM NO. 93 DESIGN RESULTS - FLEXURE
 LEN - 2800. MM FY - 414. FC - 30. MPA, SIZE - 2200. X 1400. MMS
 LEVEL
          HEIGHT
                    BAR INFO
                                     FROM
                                                  TO
                                                               ANCHOR
           (MM)
                                     (MM)
            73. 32 - 20MM 0. 2800.
     CRITICAL POS MOMENT= 4831.42 KN-MET AT 0.MM, LOAD 8 | REQD STEEL= 10042.MM2, ROW= .0034, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 2078./ 45./ 67. MMS
     BASIC/REQD. DEVELOPMENT LENGTH = 450./ 629. MMS
   2 1327. 31 - 20MM 1864.
                                              2800.
                                                                   YES
     CRITICAL NEG MOMENT= 242.56 KN-MET AT 2800.MM, LOAD 8 | REQD STEEL= 9733.MM2, ROW= .0033, ROWMX= .0228 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 2078./ 45./ 69. MMS
     BASIC/REQD. DEVELOPMENT LENGTH = 450./ 819. MMS
```

## BEAM NO. 93 DESIGN RESULTS - SHEAR

AT START SUPPORT - Vu= 1804.47 KNS Vc= 2650.68 KNS Vs= .00 KNS PROVIDE 12 MM BARS AT 123. MM C/C FOR 2800. MM

AT END SUPPORT - Vu= 1819.79 KNS Vc= 2650.68 KNS Vs= .00 KNS PROVIDE 12 MM BARS AT 123. MM C/C FOR 2800. MM

		1No20 H1327.1864.TO	
			[ l . l
24*12c/c123		24*12c/c1	
2No20 H 73. 0.TO 2800		1 1 1 1 1	 *****
tura jeje 1 ilau iliju arajti <u>jeji 1</u>			<u> </u>
	To the contraction of the contr	000000000000000000000000000000000000000	
		31#20	
2#20 l	132#20	32#20	in indiana. Tanàna
	ooooooooooooooooo		000000
BEAM NO. 9	4 DESIGN RESUL	T S - FLEXURE	
医囊毛 使亲语 医多形性 克里奇特	414. FC - 30. MPA, SIZE		ıs
			ar than agr
LEVEL HEIGHT BAR (MM)	INFO FROM (MM)	TO ANCHOR MM) STA EN	
1 75 28 -			<u>.</u> : <b>S</b>
	25MM 0. 2	2800. YES YE	is
CRITICAL POS MOMENT REQD STEEL= 13696.M	25MM 0. 2 = 6498.16 KN-MET AT M2, ROW= 0047, ROWMX= 02	2800. YES YES YES OMM, LOAD 8 1228 ROWMN= .0033	is
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR	25MM 0. 2 = 6498.16 KN-MET AT MM2, ROW= .0047, ROWMX= .02 SPACING= 2073./ 50./	2800. YES YE 	is.
CRITICAL POS MOMENT REQD STEEL= 13696.MAX/MIN/ACTUAL BAR	25MM 0. 2 = 6498.16 KN-MET AT M2, ROW= 0047, ROWMX= 02	2800. YES YE 	23
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR	25MM 0. 2 = 6498.16 KN-MET AT MM2, ROW= 0047, ROWMX= 02 SPACING= 2073./ 50./ MENT LENGTH = 703./ 98	2800. YES	
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  1 2 1327. 31	25MM 0. 2 = 6498.16 KN-MET AT MM2, ROW= .0047, ROWMX= .02 SPACING= 2073./ 50./ PMENT LENGTH = .703./ 98 - 20MM 1864.	2800. YES YES YES OMM, LOAD 8   228 ROWMN= .0033   77. MMS   31. MMS   32800. NO YES	
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  2 1327. 31 CRITICAL NEG MOMENT REQD STEEL= 9733.0	25MM 0. 2 = 6498.16 KN-MET AT MM2, ROW= .0047, ROWMX= .02 SPACING= 2073./ 50./ PMENT LENGTH = .703./ 98 - 20MM 1864.  I= 378.88 KN-MET AT 28 MM2, ROW= .0033, ROWMX= .03	2800. YES YES YES YES OMM, LOAD 8 1 228 ROWMN= .0033   77. MMS   131. MMS   12800. NO YES	
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  2 1327. 31 CRITICAL NEG MOMENT REQD STEEL= 9733.M MAX/MIN/ACTUAL BAR	25MM 0. 2 = 6498.16 KN-MET AT M2, ROW= 0047, ROWMX= 02 SPACING= 2073./ 50./ PMENT LENGTH = 703./ 98 - 20MM 1864.  T= 378.88 KN-MET AT 28	2800. YES YES YES OMM, LOAD 8 128 ROWMN= .0033 177. MMS 181. MMS 182800. NO YES	
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  2 1327. 31 CRITICAL NEG MOMENT REQD STEEL= 9733.M MAX/MIN/ACTUAL BAR	25MM 0. 2 = 6498.16 KN-MET AT M2, ROW= .0047, ROWMX= .02 SPACING= 2073./ 50./ PMENT LENGTH = 703./ 98 - 20MM 1864.  T= 378.88 KN-MET AT 28 M2, ROW= .0033, ROWMX= .03 SPACING= 2078./ 45./	2800. YES YES YES OMM, LOAD 8 128 ROWMN= .0033 177. MMS 181. MMS 182800. NO YES	
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  2 1327. 31 CRITICAL NEG MOMENT REQD STEEL= 9733.M MAX/MIN/ACTUAL BAR	25MM 0. 2 = 6498.16 KN-MET AT M2, ROW= .0047, ROWMX= .02 SPACING= 2073./ 50./ PMENT LENGTH = 703./ 98 - 20MM 1864.  T= 378.88 KN-MET AT 28 M2, ROW= .0033, ROWMX= .03 SPACING= 2078./ 45./	2800. YES YES YES OMM, LOAD 8 128 ROWMN= .0033 177. MMS 181. MMS 182800. NO YES	
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  2 1327. 31 CRITICAL NEG MOMENT REQD STEEL= 9733.0 MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR	25MM 0. 2 = 6498.16 KN-MET AT M2, ROW= .0047, ROWMX= .02 SPACING= 2073./ 50./ PMENT LENGTH = 703./ 98 - 20MM 1864.  T= 378.88 KN-MET AT 28 M2, ROW= .0033, ROWMX= .03 SPACING= 2078./ 45./	2800. YES YES YES OMM, LOAD 8   228 ROWMN= .0033   77. MMS   181. MMS   182. NO YES   1800. MM, LOAD 9   228 ROWMN= .0033   69. MMS   19. MMS   19	
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  2 1327. 31 CRITICAL NEG MOMENT REQD STEEL= 9733.0 MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR	25MM 0. 2 = 6498.16 KN-MET AT IM2, ROW= .0047, ROWMX= .02 SPACING= 2073./ 50./ PMENT LENGTH = 703./ 98 - 20MM 1864.  T= 378.88 KN-MET AT 28 IM42, ROW= .0033, ROWMX= .03 SPACING= 2078./ 45./ PMENT LENGTH = 450./ 8	2800. YES YES YES OMM, LOAD 8   228 ROWMN= .0033   77. MMS   181. MMS   182. NO YES   1800. MM, LOAD 9   228 ROWMN= .0033   69. MMS   19. MMS   19	
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  2 1327. 31 CRITICAL NEG MOMENT REQD STEEL= 9733.0 MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  B E A M N O.  AT START SUPPORT - Vu	25MM 0. 2  - 6498.16 KN-MET AT  IM2, ROW= .0047, ROWMX= .02  SPACING= 2073./ 50./  MENT LENGTH = .703./ 98  - 20MM 1864.  - 378.88 KN-MET AT .29  MM2, ROW= .0033, ROWMX= .03  SPACING= 2078./ 45./  PMENT LENGTH = .450./ 8  94 DESIGN RESUL  = 2414.58 KNS Vc= 2650.68	2800. YES YES YES OMM, LOAD 8 1228 ROWMN= .0033 177 MMS 181. MMS 182800. NO YES YES ROWMN= .0033 169. MMS 19.	is
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  2 1327. 31 CRITICAL NEG MOMENT REQD STEEL= 9733.0 MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  B E A M N O.  AT START SUPPORT - Vu	25MM 0. 2 = 6498.16 KN-MET AT IM2, ROW= .0047, ROWMX= .02 SPACING= 2073./ 50./ MENT LENGTH = .703./ 98 - 20MM 1864.  I= 378.88 KN-MET AT .23  MM2, ROW= .0033, ROWMX= .03 SPACING= 2078./ 45./ PMENT LENGTH = .450./ 8	2800. YES YES YES OMM, LOAD 8 1228 ROWMN= .0033 177 MMS 181. MMS 182800. NO YES YES ROWMN= .0033 169. MMS 19.	is
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  CRITICAL NEG MOMENT REQD STEEL= 9733.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  BE AM NO.  AT START SUPPORT - Vue PROME AT END SUPPORT - Vue	25MM 0. 2  - 6498.16 KN-MET AT  - MM2, ROW= .0047, ROWMX= .02  - SPACING= 2073./ 50./  - MENT LENGTH = .703./ 98  - 20MM 1864.  - 378.88 KN-MET AT .29  - 378.88 KN-MET AT .29  - MM2, ROW= .0033, ROWMX= .03  - SPACING= 2078./ 45./  - PMENT LENGTH = .450./ 8  - 94 D E S I G N R E S U L  - 2414.58 KNS VC= .2650.68  - OVIDE 12 MM BARS AT 123. M  - 2429.90 KNS VC= .2650.68	2800. YES YES YES OMM, LOAD 8 1228 ROWMN= .0033 177. MMS 181. MMS 182800. NO YES	is Ns
CRITICAL POS MOMENT REQD STEEL= 13696.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  CRITICAL NEG MOMENT REQD STEEL= 9733.M MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOR  BE AM NO.  AT START SUPPORT - Vue PROME AT END SUPPORT - Vue	25MM 0. 2  = 6498.16 KN-MET AT  IM2, ROW= 0047, ROWMX= 02  SPACING= 2073./ 50./  MENT LENGTH = 703./ 98  - 20MM 1864.  F= 378.88 KN-MET AT 28  MM2, ROW= .0033, ROWMX= .03  SPACING= 2078./ 45./  PMENT LENGTH = 450./ 8  94 D E S I G N R E S U L  = 2414.58 KNS Vc= 2650.68  OVIDE 12 MM BARS AT 123. M	2800. YES YES YES OMM, LOAD 8 1228 ROWMN= .0033 177 MMS 181. MMS 182800. NO YES	is

Page 52 of 62

28No25 H 75. 0.TO 280	and the second second		<u> </u>	<u>     i     i          i              </u>	i i
			g Brogger		a a .
			0000000    31#20 	0000000	0000000
   28#25   000000000000000000000000000000000000	  28#25  0000000000	0000000000		0000000	0000000
B E A M N O, 9					MMS
LEVEL HEIGHT BAR (MM)			TO (MM)	ANC STA	
1 73. 42 -	20MM	0. 2. 2.2.	2800.	YES	YES
CRITICAL POS MOMENTS REQD STEEL= 13124 MI MAX/MIN/ACTUAL BAR BASIC/REQD. DEVELOPE	M2, ROW= .004 SPACING= 207	5, ROWMX= . 8./ 45./	0228 ROWMN= 51. MMS	0AD 8 0033	 
2 1327. 31 -	20MM 18	64.	2800.	МО	YES
CRITICAL NEG MOMENT:   REQD STEEL= 9733 M   MAX/MIN/ACTUAL BAR     BASIC/REQD DEVELOPE	M2, ROW= .003 SPACING= 207	3, ROWMX= 8./ 45./	0228 ROWMN= 69. MMS	0AD 8	ri eli ili Ie eli eli Ievi ili eli Ievi ili
BEAM NO. 9	5 DESIG	N RESU	L T S - SHE	AR	
AT END SUPPORT - Vu=	VIDE 12 MM BA	RS AT 123. 7 Vc= 2650.6	MM C/C FOR 8 KNS Vs=	2800. I 117.13	MM KNS
115	2799X21	99X 1399			75J
			31No20 H13		TO   2800
24*12c/c123			1 61 81 1 31 51	 24*12c	 /c123
42No20 H 73. 0.TO 2800	0		$\begin{array}{cccccccccccccccccccccccccccccccccccc$		
			0000000    31#20 		0000000
		机二克 化氯化矿 化二氯化丁二二		4 12	4 4 5 5

| |42#20 | |42#20 142#20 224. CLEAR 0.15 225. DESIGN COLUMN 101 TO 108 141 TO 148 161 TO 168 COLUMN NO. 101 DESIGN RESULTS FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED AREA OF STEEL REQUIRED = 6361.7 SQ. MM BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI 1.003 7 STA .700 13 - 25 MM (EQUALLY SPACED) COLUMN INTERACTION: MOMENT ABOUT 2/Y -AXIS (KN-MET) PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h 865.04 -2639.85 2373.27 374.47 .158 COLUMN NO. 102 DESIGN RESULTS FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED AREA OF STEEL REQUIRED = 6361.7 SQ. MM REINF PCT. LOAD LOCATION PHI BAR CONFIGURATION STA .700 1.003 13 - 25 MM (EQUALLY SPACED) COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET) PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h 865.04 -2639.85 2394.68 293.86 .123 COLUMN NO. 103 DESIGN RESULTS

AREA OF STEEL REQUIRED = 6361.7 SQ. MM

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED

Page 54 of 62

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI 13 - 25 MM 1.003 7 STA .700 (EQUALLY SPACED) COLUMN INTERACTION: MOMENT ABOUT 2/Y -AXIS (KN-MET) PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 Des Mn P-tens. Des.Pn MO e/h 865.04 -2639.85 2416.10 214.06 .089 COLUMN NO. 104 DESIGN RESULTS FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED AREA OF STEEL REQUIRED = 6361.7 SQ. MM BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI 7 13 - 25 MM 1.003 STA .700 (EQUALLY SPACED) COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET) PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 P-tens. Des.Pn Des.Mn e/h M0 865.04 -2639.85 2437.51 142.88 .059 COLUMN NO. 105 DESIGN RESULTS FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED AREA OF STEEL REQUIRED = 6361.7 SQ. MM BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI 13 - 25 MM 1.003 7 STA .700 (EQUALLY SPACED) COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET) PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 M0 P-tens. Des.Pn Des.Mn 304.3 e/h 865.04 -2639.85 2458.92 84.64 .034 COLUMN NO. 106 DESIGN RESULTS FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED

AR CONFIGURATION	REINF PCT.	LOAD	LOCATION	PHI
13 - 25 MM EQUALLY SPACED)	1.003	7	STA	.700
COLUMN INTERACTIO	ON: MOMENT ABOU	T Z/Y -A	XIS (KN-MET	<b>)</b>
PO Pn max 8699.51 14959.61 MO P-tens. 865.04 -2639.85	5951.46 1811 Des.Pn De	.19 s.Mn	304.3 e/h	) 
		=======		
C O L U M N N "Y - 413.7 FC - 30.	.0 MPA, CIRC S	1ZE 900	.0 MMS DIAM	
	L REQUIRED = 6			
BAR CONFIGURATION	REINF PCT.	LOAD	LOCATION	PHI
13 - 25 MM (EQUALLY SPACED)	1.003	<b>7</b>	STA	.700
COLUMN INTERACTIO	ON: MOMENT ABOU	T Z/Y -P	AXIS (KN-ME	Γ)
PO Pn max 18699.51 14959.61 MO P-tens 1865.04 -2639.85	5951.46 1811 Des.Pn De	19 es.Mn	304.3 e/h	м)
o de la composición de la composición En la composición de				
COLUMN N	O. 108 DE	SIGN	RESU	LTS
FY - 413.7 FC - 30	.0 MPA, CIRC	31ZE 90	0.0 MMS DIA	METER TIEC
AREA OF STEE	L REQUIRED =	6361.7	SQ. MM	
BAR CONFIGURATION	REINF PCT.	LOAD	LOCATION	PHI
13 - 25 MM	1.003	7	STA	.700
(EQUALLY SPACED)				ጥነ
(EQUALLY SPACED)  COLUMN INTERACTI	ON: MOMENT ABO	UT 2/Y -	AXIS (KN-ME	11.
	P-bal. M 5951.46 181 Des.Pn D	 -bal 1.19 es.Mn	e-bal. (M	<u>-</u>

Page 56 of 62

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 6361.7 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

13 - 25 MM 1.003 7 STA .700

(EQUALLY SPACED)

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h 865.04 -2639.85 2548.76 303.91 .119

COLUMN NO. 142 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 6361.7 SO. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

13 - 25 MM 1.003 7 STA .700
(EQUALLY SPACED)

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h 865.04 -2639.85 2570.16 260.32 .101

COLUMN NO. 143 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 6361.7 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

13 - 25 MM 1.003 7 STA .700

(EQUALLY SPACED)

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h 865.04 -2639.85 2591.58 214.59 .083

COLUMN NO. 144 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 6361.7 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

13 - 25 MM 1.003 7 STA .700

(EQUALLY SPACED)

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h 865.04 -2639.85 2612.98 167.99 .064

COLUMN NO. 145 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 6361.7 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

13 - 25 MM 1.003 7 STA .700
(EQUALLY SPACED)

COLUMN INTERACTION: MOMENT ABOUT 2/Y -AXIS (KN-MET)

PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h 865.04 -2639.85 2634.40 123.77 .047

COLUMN NO. 146 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 6361.7 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

13 - 25 MM 1.003 7 STA .700 (EQUALLY SPACED)

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h

C:\Stair\Report.doc Page 58 of 62

```
865.04 -2639.85 2655.81 84.94 .032
    COLUMN NO. 147 DESIGN RESULTS
FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED
      AREA OF STEEL REQUIRED = 6361.7 SQ. MM
BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI
                     1.003
13 - 25 MM
                                7 STA .700
(EQUALLY SPACED)
  COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)
PO Pn max P-bal. M-bal.
18699.51 14959.61 5951.46 1811.19
                           M-bal.
                                     e-bal. (MM)
                                   304.3
         P-tens. Des.Pn Des.Mn e/h
 865.04 -2639.85 2677.22
                           54.09
    COLUMN NO. 148 DESIGN RESULTS
FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED
      AREA OF STEEL REQUIRED = 6361.7 SQ. MM
                  REINF PCT. LOAD LOCATION PHI
BAR CONFIGURATION
13 - 25 MM
                  1.003
                                7 STA
(EQUALLY SPACED)
   COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)
PO Pn max P-bal. M-bal. e-bal
18699.51 14959.61 5951.46 1811.19 304.3
                                    e-bal. (MM)
        P-tens. Des.Pn Des.Mn e/h
 865.04 -2639.85 2698.64 35.35
    COLUMN NO. 161 DESIGN RESULTS
FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED
      AREA OF STEEL REQUIRED = 6361.7 SQ. MM
BAR CONFIGURATION
                 REINF PCT. LOAD LOCATION PHI
13 - 25 MM
               1.003
                                      STA
                                               .700
(EQUALLY SPACED)
```

C:\Stair\Report.doc

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

Page 59 of 62

Pn max Pn max P-bal. M-bal. 959.61 5951.46 1811.19 P-tens. Des.Pn Des.Mn P0 e-bal, (MM) 18699.51 14959.61 5951.46 e/h MU P-tens. Des.Ph Des.Mn 865.04 -2639.85 2474.07 347.77 .141 COLUMN NO. 162 DESIGN RESULTS FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED AREA OF STEEL REQUIRED = 6361.7 SQ. MM REINF PCT. LOAD LOCATION PHI BAR CONFIGURATION STA .700 1.003 7 13 - 25 MM (EQUALLY SPACED) COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET) PO Pn max P-bal. M-bal. e-ba 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h e-bal (MM) 304.3 865.04 -2639.85 2495.48 286.72 .115 COLUMN NO. 163 DESIGN RESULTS FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED AREA OF STEEL REQUIRED = 6361.7 SQ. MM BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI 7 STA .700 13 - 25 MM 1.003 (EQUALLY SPACED) COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET) PO Pn max P-bal. M-bal. e-bal. (MM)
18699.51 14959.61 5951.46 1811.19 304.3

MO P-tens. Des.Pn Des.Mn e/h
865.04 -2639.95 2516.00 865.04 -2639.85 2516.90 225.30 COLUMN NO. 164 DESIGN RESULTS FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED AREA OF STEEL REQUIRED = 6361.7 SQ. MM BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI 7 1.003 STA .700 13 - 25 MM (EQUALLY SPACED)

Page 60 of 62

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

· e-bal, (MM)

PO Pn max P-bal. M-bal. e-bal 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h 865.04 -2639.85 2538.31 167.39 .066

COLUMN NO. 165 DESIGN RESULTS

FY ~ 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 6361.7 SQ. MM

REINF PCT. LOAD LOCATION PHI BAR CONFIGURATION

13 - 25 MM 1.003 7 STA .700 (EQUALLY SPACED)

COLUMN INTERACTION: MOMENT ABOUT 2/Y -AXIS (KN-MET)

PO Pn max P-bal. M-bal. e-bal. 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h 865.04 -2639.85 2559.73 116.59 .046

COLUMN NO. 166 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 6361.7 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI

13 - 25 MM 1.003 7 STA (EQUALLY SPACED)

COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET)

PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h 865.04 -2639.85 2581.14 75.46

COLUMN NO. 167 DESIGN RESULTS

FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED

AREA OF STEEL REQUIRED = 6361.7 SQ. MM

BAR CONFIGURATION REINF PCT. LOAD LOCATION

13 - 25 MM 1,003 STA .700 (EQUALLY SPACED) COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET) PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn 865.04 -2639.85 2602.55 46.48 COLUMN NO. 168 DESIGN RESULTS FY - 413.7 FC - 30.0 MPA, CIRC SIZE 900.0 MMS DIAMETER TIED AREA OF STEEL REQUIRED = 6361.7 SQ. MM BAR CONFIGURATION REINF PCT. LOAD LOCATION PHI STA .700 13 - 25 MM 1.003 (EQUALLY SPACED) COLUMN INTERACTION: MOMENT ABOUT Z/Y -AXIS (KN-MET) ر جم الأنواب ويون ندو بأنان و عدد مدونو بأرواب إن إن مي في والذي <u>الثالث و بأران بالذات الدوس</u>ي. PO Pn max P-bal. M-bal. e-bal. (MM) 18699.51 14959.61 5951.46 1811.19 304.3 MO P-tens. Des.Pn Des.Mn e/h 865.04 -2639.85 2623.96 34.64 .013 226. END CON DESIGN 227. FINISH \*\*\*\*\*\*\*\*\* END OF STAAD-III \*\*\*\*\*\*\*\* \*\*\*\* DATE= FEB 29,2000 TIME= 15:52:10 \*\*\*\* \*\*\*\*\*\*\*\*\*\*\* For questions on STAAD-III, contact: Research Engineers, Inc at West Coast: Ph- (714) 974-2500 Fax- (714) 921-2543 East Coast: Ph- (508) 688-3626 Fax- (508) 685-7230 \*

Page 62 of 62

Bearing Capacity of a Pife: Bored into the soil layers as indicated by BH1BA1

Diameter of pile = 0.90 m

Scour depth = 0.00 m

Safety Factor = 2.50

OALL	3	0.0	54.6	62.9	108.8	196.2	286.7	397.2	506.7	602.3	726.0	836.0	941.5	1048.4	1210.1	1374.0	1516.8	1693.3	1850.7	2002.1	2181.7	2382.2	2409.7	2447.2	2531.1	2581.0	2750.5	2933.5	3067.9	3150.1	3242.2	3282.0	3415.8	3599.7	3808.0	4128.7	4612.7	4898.3	5106.5	5314.2	5528.6	5749.8	5897.3	6128.3	6453.7	6701.9	6956.7	7218.4	7486.7
Олт	3	0.0	136.4	164.7	271.9	490.6	716.8	993.0	1266.8	1505.7	1815.1	2089.9	2353.8	2621.1	3025.3	3435.0	3792.0	4233.2	4626.8	5005.3	5454.3	5955.4	6024.3	6118.0	6327.7	6452.5	6876.2	7333.8	8 6992	7875.3	8105.5	8205.0	8539.4	8999.1	9520.1	10321.6	11531.7	12245.6	12766.3	13285.5	13821.5	14374.4	14743.2	15320.7	16134.3	16754.7	17391.9	18045.9	18716.9
≩	3	0.0	13.4	26.7	40.1	53.4	66.8	80.2	93.5	106.9	120.2	133.6	147.0	160.3	173.7	187.0	200.4	213.8	227.1	240.5	253.8	267.2	280.6	293.9	307.3	320.6	334.0	347.4	360.7	374.1	387.4	400.8	414.1	427.5	440.9	454.2	467.6	480.9	494.3	507.7	521.0	534.4	547.7	561.1	574.5	587.8	601.2	614.5	627.9
d	3			45.7	X.8	155.3	246.7	374.7	475.2	520.9	621.4	676.2	712.8	749.3	922.9	1105.7	1242.8	1471.2	1663.1	1836.7	2065.2	2330.2	2147.4	1973.8	1900.7	1727.1	1836.7	1964.7	1955.5	1800.2	1654.0	1361.6	1288.5	1325.0	1407.2	1754.5	2494.7	2723.1	2741.4	2741.4	2741.4	2741.4	2540.4	2531.2	2741.4	2741.4	2741.4	2741.4	2741.4
4	kΡa	0.0	143.6	71.8	86.2	244.2	387.8	588.9	746.9	818.7	8'9/6'	1062.9	-1120.4	1177.8	1450.8	1738.0	1953.5	2312.6	2614.2	2887.2	3246.3	3662.8	3375.5	3102.6	2987.7	2714.8	2887.2	3088.3	3073.9	2829.7	2599.9	2140.2	2025.3	2082.8	2212.1	2757.9	3921.4	4280.5	4309.2	4309.2	4309.2	4309.2	3993.2	3978.8	4309.2	4309.2	4309.2	4309.2	4309.2
1				,			·			1			•		•		-											,	-	ř		·		,	-		•						-	,		,		•	7
			-	,			·					`				-			3			i	-											•	٠	٠	•		•			•		-	•	•	1	1	
a			٠	٠	-	•	7					1		-			-					í,						•	٠			-	_			•	-	•				•		٠	-		-	1	
5	E.	0.0	143.6	71.8	86.2	244.2	367.8	588.9	746.9	818.7	8.976	1062.9	1120:4	1177.8	1450.8	1738.0	1953.5	2312.6	2614.2	2887.2	3246.3	3662.8	3375.5	3102.6	7 2987	2714.8	2887.2	3088.3	3073.9	2829.7	2599.9	2140.2	2025.3	2082.8	2212.1	2757.9	3921.4	4280.5	4309.2	4309.2	4309.2	4309.2	3993.2	3978.8	1309.2	1309.2	1309.2	4309.2	309.2
3,	. 1	0.0	0.0	0.0	00	0.0	00	0.0	0.0	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	00	9	0.0	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	_	9
z		0.0	8.0	9.0	9.0	0.6	9.0	9.0	0.6	0.6	0	0.6	6.0	9.0	0.6	0.6	0.6	0.6	0 6	0.6	0.6	0.6	9.0	9.0	06	9	0.6	0.6	0.6	9.0	9.0	9.0	5 6	9 0	0.6	0.6	9.0	9.0	9.0	9.0	0	9.0	9.0	9.0	9.0	9.0	9	0	6
Ö	1	1	.	145.7	257.1	388.7	536.9	698.5	885.1	1091.8	1313.9	1547.3	1788.0	2032.1	2276.0	2516.3	27497	2975.8	3190.8	3409.1	3642.9	3892.4	4157.4	4438.1	4734.3	5046.1	5373.5	5716.5	6075.0	6449.2	6838.9	7244.2	7665.1	8101.6	8553.7	9021.4	9504.6	0003.5	0519.2	1051.7	1601.1	2167.4	2750.5	3350.5	3967.4	4601.1	5251.7	5919.1	6603.4
Ö	KP2	0.0	58.4	87.3	111,4	131.6	148.2	161.6	186.6	206.7	222.2	233.4	240.6	244.1	243.9	240.3	233.4	226.1	215.0	218.3	233.9	249.5	265.0	280.6	2962	311.8	327.4	343.0	358.6	374.1	389.7	55.3	420.9	436.5	452.1	467.7	483.3	498.8 10003.	515.7/10519	532.61		566.31	583.11	600.01	616.81	633.71		667.4	24.2
4	1 -			20.6	26.3	31.0	34.9	38.1	44.0	487	52.4	55.0	56.7	57.6	57.5	56.7	55.0	53.3	50.7	51.5	55.1	58.8	62.5	66.2	8.69	73.5	77.2	80.9	84.5	88.2	91.9	93.	2 2 2	6 20	8	110.3		17.6	21.6	25.6	3	33.5	37.5	41.5	45.4	49.4	4	7	ਨ ਨ
ő	KP.	3.8	11.5	19.1	26.8	34.4	42.1	49.7	62.2	74.6	87.1	99.5	112.0	124.4	136.9	149.3	161.8	176.5	191.2	205.9	220.6	235.3	250.0	264.7	279.4	294.1	308.8	323.5	338.2	352.9	367.6	32.3	397.0	11.7	426.4	441.1	155.8	5	486.4	202	281	34.1	550.0	565.9]	81.8	597.7	513.61	200	645.4 161
0			1.20		0.98	<u>8</u>	7.5 0.83	0.77	10.5 0.71	0.65	0.60	0.55	15.0	0.46	0.42	0.38	0.34	0.30	0.27	0.25	0.25	0.25	0.25	0.25	0.25	925	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	20	57	6.5
77	ε	0.0	1.5	3.0	4.5	9.9	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0	31.5	33.0	34.5	36.0	37.5	39.0	40.5	42.0	43.5	45.0	46.5	48.0	49.5	51.0	52.5	20	55.5	27 0	% %	0.09	61.5	63.0	64.5	0.99	67.5	<u>ල්</u>	2
onsistenc			7- 1	1							•	*			1.0							er er							•	100	•					i N	-	•				·	•						
4	52	0.0	0.0	0.0	0	00	0	0	0.0	00	00	0.0	0.0	0.0	0.0	0.0	0.0	00	0 0	0.0	0.0	0.0	0.0	00	00	0.0	0.0	00	0.0	0.0	0.0	8	0	0	0.0	0.0	0.0	00	00	0	3	0.0	0.0	0.0	0.0	0.0	00		5
ō		000	0.00	0.00	0.0	8.9	8	0.0	0.00	0.00	0.00	0.00	0.00	000	0.00	0:00	0.00	000	0.00	0.00	000	0.00	0.00	0.00	000	000	0.00	0.00	00.0	0:00	0.00	8	8	9.0	0.0	00	8	8	8	8	900	0.0	0.0	0.0	0.0	8	8		3
soil lype		clayey silt	clayey silt	clayey silt					8.3 silty sand	8.3 silly sand	silty sand			8.3 silty sand		bras vilis		9.8 silty sand	sifty sand	silty sand	9.8 silty sand	9.8 silty sand		9.8 silty sand	silty sand	_	9.8 silty sand	-	9.8 silty sand	9.8 silty sand	bus sand			silty sand		-4	-		_			fine sand	fine sand	Tine Sand					
-		5.1		5.1	5.1	2.	2.1	5.1	8.3	8	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.8	9.8	9.8	9.6	9.6	9.8	9.8	9.6	9.8	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	86	9.8	8.6	9.8	10.6 s	10.6	10.6	10.6	10.6	10.6	10.6	10.6		10.6	10.01
	KN/m³	14.9	14.9	14.9	14.9	14.9	14.9	14.9	18.1	18.1	18.1	18.1	18:1	18.1	18.1	18.1	18.1	19.6	19.6	19.6	9.61	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	504	_ 1	_ 1	20.4	20.4	20.4	٠.		200	Ш	ZU.4
z			5	2	0	0	0	9	11	10	14						20	40	40		45		85			41	40	53	25		4.	- F	_	5		- 1	_	9	8	21	62	87	77	74	2	<u> </u>	æļ.		
Depth	E	0.0	1.5	3.0	4.5	0.0	7.5	0.6	10.5	12:0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0	31.5	33.0	34.5	36.0	37.5	39.0	40.5	42.0	43.5	÷	46.5	48 0	49.5	51.0	52.5	2	2	27.0	58.5	0.09	61.5	63.0	64.5	9	5 5	3 6	

Geotechnical Ultimate Bearing Capacity of Bored Pile

		[ <del>Y</del> ]	:	ľ.				Onli		ő	,											7			0	, E	,				0						j.	į.							
		ile: I								(V)								9, A				i.			10						98	·						>		Ę,					
		ored.																													8	· . :						Capacit	1	2 P					ed Jyrd
		of B	1													6 ·	51 50 50 50 50 50 50 50 50 50 50 50 50 50				AU A		3.0 3.1		N CONTRACTOR						80							Paring	9	Dearling					
2		pacity				4							<u></u> 												1	N. S.		×	4.5 4.70 7.70		92	) 1 	Hed(m)					iral B	֓֞֞֞֜֞֓֓֓֞֜֞֜֞֓֓֓֓֓֓֓֓֓֟֜֟֓֓֓֓֓֓֓֓֓֟֜֟֓֓֓֓֟֓֓֓֟	nncat					
	 	ng Ca	1													iv.											\ \		H. Carlot	The succession	6	3	Kiver		ance	nce	9 4 14	-Ottob		2000				Y. Y.	
		Ultimate Geotechnical Bearing Capacity of Bored Pile: BA1			eraij V				5							. ( ) 본급:								 				V.	2000		Ç	,	Depth from River Bed(m)		Os: Shaft Resintance	Tip Resistance	. Calf Weight	Outs. Themas Georgephoical Rearing Capacity	יוויקוני ס	QALL: Allowable Geotechnical Dearing Capacity					
		nical												<u> </u>		iji Kiji Syli		<u>nte</u> Vice Sit										1		Service Control of the Control of th	Ġ.	} ;	ద్		: Shaf					<u>[</u> . ]					
		otech										0															の対象の		Ţ		5	₹ 		ſ	Ŏ	OT	3	• (	٠.	;;		1			
		ite Ge		-					\$													144 144 25						を		o com	2	3			ő	. (	;;  -	Ē	<b>≩</b> !	- <del>-</del>	,	K OALL			
:		Jitima							G.				6.			5.5 \$15 31.	701s.					30. 30.									•	3		L	:		1		<u>i</u>	1		×	]		
	:	_		- 1		1.1	12.3	3 V. P	· .	45.8	ે		9							7 L		4			. K		4.4	Ė				2	11	· .	Ė,	41	4.1	11:1	4.	2007	15.1	-	26.3		
				. 8			л З		8			8			8		, 6	3		8		. 8	3		8		3	8		~-»		<b>.</b>													ÇĂ.
				100,000		900 00	000,00	****	80 000	3		70,000			000'09	-ar).	· .	200,00		40,000		000	200,00		20,000			10,000		~_»		•	A Ve M												
				100,000		000 00	000,0%		80,000	3		70,000				ж) <sup>(</sup> К	· .	oninc ede	:D #	1. 9		000 00	AU,UK		20,000			10,000		- <b>X</b>															
															(N		(ira	ede	•	गांच																									
	QALL	54.6	65.9	100,000	286.7			902.3		941.5							(ira	ede	2,409.7	गांच		2,750.5		3,150,17		3,282.0			4,128.7				5,528.6	5,749.8	5,897.3	6,128.3	0.400 J	5.056.7	72184	7,486.7					
	Q		Ц	108.8		397.2	506.7	4	0.928	94151	1,048.4	1,210.1	1,374.0	1,516.8	1,093.3 RSII 7	7.002	2,181.7	2,382.7	2,409.7	- 2.531.1 - 2.531.1	2,581.0	2,750.5	3.067.9	1	3,242.2	3,282.0	3,415.0	3,808.0	7	4,612.7	4,898.3	53142	5		2	+	+	_	1						(A)
	Quit Q <sub>AL</sub>	136.4	164.7	271.9 108.8 2001.6 196.9	716.8	993.0 397.2	1,266.8 506.7	1,505.7	0.557 L.C.10,1	2,353.8 941.5	2,621.1 1,048.4	3,025.3 1,210.1	3,435.0 1,374.0	3,792.0 1,516.8	4,233.2 1,093.3 4 424.8 1 850.7	5.005.3 2.002.1	5,454.3 2,181.7	5,955.4 2,382.2	6,024.3 2,409.7	0,110.0 2,447.2 6,407.7 2,531.1	6,452.5 2,581.0	6,876.2 2,750.5	7,555.6 2,555.5	7,875.3	8,105.5 3,242.2	8,205.0 3,282.0	8,539.4 3,415.8 X 000 1 3.599.7	9.520.1 3.808.0	10,321.6	11,531.7 4,612.7	12,245.6 4,898.3	12,700.2 13,285.5 5,314.2	13,821.5	14,374.4	14,743.2 5	15,320.7	10,134.3	0.02	187459	18,716.9					
	Quit Q <sub>AL</sub>	136.4	Ц	271.9 108.8 2001.6 196.9	716.8	397.2	1,266.8 506.7	4	0.557 L.C.10,1	94151	2,621.1 1,048.4	3,025.3 1,210.1	3,435.0 1,374.0	3,792.0 1,516.8	1,093.3 RSII 7	5.005.3 2.002.1	5,454.3 2,181.7	5,955.4 2,382.2	2,409.7	0,110.0 2,447.2 6,407.7 2,531.1	6,452.5 2,581.0	6,876.2 2,750.5	3.067.9	7,875.3	8,105.5 3,242.2	8,205.0 3,282.0	3,415.0	9.520.1 3.808.0	10,321.6	11,531.7 4,612.7	12,245.6 4,898.3	53142	13,821.5	14,374.4 5	14,743.2 5	15,320.7	10,134.5	_	187459	18,716.9					
	Quit Q <sub>AL</sub>	136.4	26.7 164.7	40.1 271.9 108.8	66.8 716.8	80.2 993.0 397.2	93.5 1,266.8 506.7	1,505.7	0.027 1.010,1 2.021	147.0 2.353.8 941.5	160.3 2,621.1 1,048.4	7 173.7 3,025.3 1,210.1	187.0 3,435.0 1,374.0	200.4 3,792.0 1,516.8	215.8 4,253.4 1,023.5	227.1 4,020.0 1,030.	253.8 5,454.3 2,181.7	267.2 5,955.4 2,382.2	280.6 6,024.3 2,409.7	293.9 0,110.0 2,347.2 317.4 6.397.7 2.531.1	320.6 6,452.5 2,581.0	334.0 6,876.2 2,750.5	34.74 (533.0 (523.3)	374.1 7,875.3	387.4 8,105.5 3,242.2	400.8 8,205.0 3,282.0	4.14.1 8,539.4 3,413.0	440.9 9.520.1 3.808.0	454.2 10,321.6 4	467.6 11,531.7 4,612.7	480.9 12,245.6 4,898.3	494.3 112,700.3 3,100.3 (477.7 173.285.3 5.314.2	521.0 13,821.5	534.4 14,374.4 5	547.7 14,743.2 5	561.1 15,320.7	5/4.5 1b,134.5	0 10271 7 173	614 5 18 045 9	627.9 18,716.9					《《《··································
	n Quit Q <sub>AL</sub>	0.0 0.0 13.4 136.4	7 45.7 26.7 164.7	54.8 40.1 271.9 108.8	716.8	374.7 80.2 993.0 397.2	475.2 93.5 1,266.8 506.7	520.9 106.9 1,505.7	0.027 1.010,1 2.021	7128 147.0 2,353.8 941.51	749.3 160.3 2,621.1 1,048.4	922.9 173.7 3,025.3 1,210.1	1,105.7 187.0 3,435.0 1,374.0	1,242.8 200.4 3,792.0 1,516.8	4,233.2 1,093.3 4 424.8 1 850.7	1,005.1 4,020.0 1,050.1	2.065.2 253.8 5,454.3 2,181.7	2,330,2 267.2 5,955.4 2,382.2	2,147.4 280.6 6,024.3 2,409.7	0,110.0 2,447.2 6,407.7 2,531.1	1727.1 320.6 6,452.5 2,581.0	1,836.7 334.0 6,876.2 2,750.5	7,555.6 2,555.5	1,800.2 374.1 7,875.3	1,654.0 387.4 8,105.5 3,242.2	1,361,6 400.8 8,205:0 3,282.0	8,539.4 3,415.8 X 000 1 3.599.7	4072 440.9 9520.1 3.808.0	1,754.5 454.2 10,321.6 4	467.6 11,531.7 4,612.7	2,723.1 480.9 12,245.6 4,898.3	12,700.2 13,285.5 5,314.2	2 741.4 521.0 13,821.5 5	2,741.4 534.4 14,374.4 5	2,540.4 547.7 14,743.2 5	2,531.2 561.1 15,320.7	2,741.4 5,4.5 1b,134.5	0.02	0 241 4 614 5 18 045 9	2,741.4 627.9 18,716.9					

90 100 110

Bearing Capacity of a Pile: Bored into the soil layers as indicated by BH1BA2
Diameter of pile = 0.90 m
Soour depile = 0.00 m
Safety Factor = 2.50

	TV.	Ŕ	0.0	69.2	129.0	537.0	120.1	447.3	628.3	987.4	1041.7	1103.9	1194.2	1314.9	1431.7	1346.7	1000.0	1.6671	2037.0	22280	2385.9	2421.2	2470.0	2528.7	2604.7	2803.8	2950.7	3100.1	3248.5	3414.1	3585.9	3749.3	4010.4	4354.4	4693.7	51827	53073	5361.8	341.4	5706.9	6085.1	6418.8	6708.1	6953.0	7204.7	/403.1	7728.2	8000.0	8278.7	0.504.0	01550	9460 5	9777.9	
d	700	KN	0.0	173.0	322.6	1342.4	300.3	1118.2	1570.8	2468.6	2604:3	2759.7	2985.6	3287.4	3579.2	3800.7	415/.0	0.1554	₹002	55722	5964.7	6052.9	6175.0	6321.8	6511.6	7009.5	7376.7	7750.3	8121.3	8535.2	8964.8	9373.3	10025.9	10896.0	11/34.3	12956.7	13268.2	13404.6	13603.6	14267.2	15212.6	16047.0	16770.3	17382.6	18011.7	1305/.0	19320.4	20000.1	20696.6	221410.0	22140.3	F.70077	24432.2	
3		ĸŊ	0.0	13.4	40.1	53.4	8.99	80.2	93.5	590	1202	1336	147.0	160.3	1/3.7	18/10	\$.00°	227.1	240 \$	253.8	267.2	280.6	293.9	307.3	320.6	334.0	347.4	360.7	374.1	387.4	400.8	414.1	427.5	940.9	454.2	40.70	494.3	507.7	521.0	534.4	547.7	561.1	574.5	587.8	601.2	014.5	627.9	<u>8</u>	654.6	000	604.7	708.1	721.4	
2		kN	0.0	127.9	100.5	1052.1	0.0	627.9	0.0	0,000	612.2	339.1	230.0	0.50	048.8	03:0	0.505	849 8	1087.4	1352.4	1516.9	1361.6	1224.5	1096.6	996.0	1187.9	1233.6	1270.2	1288.5	1334.1	1379.8	1389.0	1626.6	2056.0	2428.1	2741.4	2558.6	2184.0	1855.0	1973.8	2357.6	2613.5	2741.4	2741.4	2741.4	2/41.4	2741.4	2741.4	2741.4	2741.4	2741.4	2741.4	2741.4	
	N L	K.P.a	0.0	201.1	158.0	1653.8	0.0	1034.2	0.0	1091.7	962.4	847.5	833.1	933.7	1019.8	0.001	12467	1335.0	1709 3	2125.9	2384.4	2140.2	1924.8	1723.7	1565.7	1867.3	1939.1	9.9661	2025.3	2097.1	2169.0	2183.3	2556.8	3231.9	3803.9	4309.2	4021.9	3433.0	2915.9	3102.6	3705.9	4108.1	4309.2	4309.2	4309.2	4309.2	4309.2	4309.2	4309.2	7.6004	4309.2	4309.2	4309.2	
pr.				1	+	0.139	0.139	,	0.139	1	1	1	1	1	·	$\dagger$	†			1				-				-		•		+	+	1	+		1					;			+	+	+	+	,	+	+	<del> </del>	<del> </del>	
-				1		.500	.500		9	1	1	1			•	$\dagger$	†	†	+	+			-	٠.				,		-		1	+	+				-			-	,	,	-	+	+	+	+	+	,	+	<del> </del>	-	
-				†		0.015	0.015	_	0.015	+	1	+	1	•	,	+	+	+	+		1	,		-	-	-		-		,		1	+			, ,	,	<u> </u>	-		-		-		+	+	+	+	+		+	+.	-	
å	-	kPa	0.0	201.1	158.0		0.0	1034.2		163	962.4	7	833.1	933.7	860	2.00	0.77	235.0	100	125.9	384.4	140.2	924.8	723.7	1565.7	1867.3	1939.1	9.96	25.3	2097.1	2169.0	2183.3	556.8	9731.9	3803.9	2002	4021.9	133.0	2915.9	02.6	3705.9	4108.1	4309.2	09.7	300	77.6	4309.2	77.6	4309.2	4300.2	4309.2	4309.2	09.2	
		_	₩	000	00	192.5	$\bot$			+	1	+	+		5	2			00	20.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 \ 20	0.0	$\dashv$	0.0	7	_	十	0.0	0.0	<u>6</u>	0.0	0.0	0.0	0 41	~1	0.0	0.0	? ? !	3 (S	)  -  -	3 S	_	0.0	0.0 43	$\overline{}$	
z			L	_1	0	9.01	9.01	0. 0.		_	_1	-: I	하		5	5	5 6	000	Ö	0.6	0.6	0.6	0.6	9.0	9.0	0 6	0.6	0.6	0.6	9.0	_	2	_		2 6	0.6	9.0	0.6	9.0	0.6	9.0	0.6		_1	-1	210	200	2 6			0.0			
0	,	Ķ	0.0	784	262.1	343.8	367.1	540.4	1664.3	1081	2112.3	2324.2	2002.5	2853.7	3104	22002	2000.	2010	1745.5	1473 6	4715.0	6.1761	5244.4	532.5	3836.2	6155.5	6490.4	840.8	206.9	588.5	7985.7	2385	826.9	9270.9	4 30 4	6963	11203.9	728.3	2269.6	827.8	402.8	994.7	4603.4	229.0	5871.5	200	8	200	2 2 2 2 2	19330.0	7 UPA	618.0	22412.2	
٥		кРа	0.0	85 15 15 15 15 15 15 15 15 15 15 15 15 15	116.4	81.6	23.3	173.3	672	210.0			248.4			7.007	2000	0 7	2149	228.1	241.3	. 6.95	172.5	188	.03.7	119.3	334.9 (	50.5	0.99	91.8	_	412.8			439.0		507.611	24.411	541.3112	558.211		591.911			-11:	200	0.0.21		-4-	743 600		777.321618.0	94.222	
-	,	кРа	00	<u> </u>	27.5	19.3	5.5	40.9	265.01		54.5		9	59.2	0.40	200	20.05	; ; ; ;	202	5.18	56.9	9.09	643	67.9	71.6	753	. 0.64	82.6	86.3	90.0	93.7	7	z k		17.0	15.7	19.7.5	23.77.5	27.6 5	31.6.5	35 6 5	39.6	143.5 6	47.5	2		2	2 .	- F	75.27	7 6	183.3 7	1	۱.
	7	kP3	3.8	<u>``</u>	28.0	36.8	44.5	53.3	65.8	78.7	2	103	115.6	128.0	0.0	7	3 6	8	5	2152	27.6	242.3	257.0	17.17	286.4	1.0	115.8	30.5	145.2	59.9	174.6	<u>بر</u>	_+	_	433.4	62.81	478.7 1	94.61	10.51	26.4	542.3 1	58.2	74.1	0.00	6	170		20.00	2000	2 4	17.7	733.111	749.0	
<u>-</u>	ī		1.20	1.20	860			0.77		3	0.60	ŝ	-+	-	0.42 0.42	0.0	1	200		920	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		0.25	0.25	27.0	200	0.25	0.25	0.25	0.25  5	0.25	0.25 5	0.25 5	0.25  5	0.25 5	0.25				0.22	0.55	1357	0.25		
ž	$\perp$	m	0.0	1.5	4.5	0.9	7.5		10.5	0 7	13 5	13.0	16.5	18.0	5.5	21.0	277	2.50	77.0	79.5	30.0	31.5	33.0	34.5	36.0	37.5	39.0	40.5	42.0	43.5	45.0	2	20 C	2 2 2	2 5	540	55.5	57.0	58.5	0.09	61.5	63.0	ŝ			5 6	2	5†  - 	25	2 2	280	51-5		3
coststenc						soft	very soft	100	very suff				•									•	7							•				-											1				,			ŀ		
		×	, ,		000	15.	10.0	0.0	725.0	<i></i>		``I	0		0 0	- 1		3 0		C	00	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3		3 6	2 0	000	0.0	0.0	0.0	00	0.0	0.0	00	0.0		3	5	3 0	) S	3 6	200	0	0.0	
	7		0.0	8	38	0.55	0.55	000	0.55	000	0.00	00.0	000	9 9	0.0	3 5	3 8	38	5	8	80	0.00	90.0	0.00	0.00	000	0.00	0.00	0.00	0.0	0.00	3	8	3 3	3 8	300		8		9.0	8	0.00	0.00	000	8	3	3	3	3 8	3 8	3 6	800	000	
soil lyne	246		clayey silt	clayey silt	clayey silt	cohesive	cohesive	ciayey silt	8.3 cohesive	Sifty sand	silty sand	suty sand	silty sand	Silly sand	suity sand	Sand Sand	our Anno	8 3 silvy sand	silty cand	Siliv cand	sity sand	9.8 salty sand	silty sand	silty sand	silly sand	silty sand	silty sand	ilty sand	ilty sand	illy sand	9.8 silty sand	nity sand	pus Alia	illy sand	Silly Sand	silty sand	ilty sand	10.6 silty sand	silty sand	silty sand	10.6 silty sand	10.6 sitty sand	illy sand	illy sand	10.6 stilly sand	oue Sand	ine sand	ine sand	ine sand	10.0 nne sand	Die sand	10.6 fine sand	ine sand	
,	-		5.1	긺	5.9	5.9	5.1	5.9	8.3	»	<u></u>	×	8	83	200	20	3	0 0	6	00	8.3	8.6	9.8	8.6	8.6	9.8	8.6	9.8	8.6	9.8	9.8		200	200	20.0	9.8	10.6	10.6	10.6	10.6	10.6	10.6 s	10.6	10.6	3 0.0 1.0 1.0		10.01	9	10.0	0.01	10 6	10.61	10.6	
^	-	kN/m <sup>3</sup> 1	14.9	5.	15.7	15.7	14.9	15.7	18.1	2	181	181	18.1	18.1	13	12.1	100	181	187	18 1	18.1										19.6		10.6		0.61	19.61	1	20.4	, ,	20.4	- 1		20.4	20.4	20.4	3 6	407	50.4	4 6	40.4 20.4		20.4	20.4	
2					7 (5)	4	-		47	1	2	2 6				2		3 5	<u>.                                    </u>	. —	12.	1 .		42		31	38	3.1	30	36	45				5 0	82	85	88	89	39	4	52	81	ī.8	2	7	2		717	112	115	120	125	
High		E	0.0	```	ر د د	0.9	7.5	9.0	10.5	2	2.5	2	16.5	18.0	2	71.0	27	3 2 6	37.0	28.5	30.0	31.5	33.0	34.5	36.0 2	37.5	39.0	40.5	42.0	43.5	45.0	2	980	4 5	20.0	54.0	55.55	57.0	58.5	0 09	61.5	63.0	64.5	0.99	67.5		2		2 2			79.5		

1. 1931	( j	ಿ				ुर	11 (2)	ΟŢ	8	<b>8</b> 9		
		100 de 1					数数 多数		iden in India		g. Gity	
100 miles	100 c 244 100 c 244 100 c 244			10 TO						8	Capasi g Capa	
Q., ()			in the	5.00	Net S	人的过去 医数数数				8	aring (	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		100 mg		800 A	04.5					70 Bed(m)	Os: Shaft Resintance OT: Tip Resistance W: Self Weight Qult: Ultimate Geotechnical Bearing Capasity Qall: Allowable Geotechnical bearing Capacity	
7-142 Av.	1 12 728 4 12 728		7 7 7	2 0 5 1 5 15		7 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (			8	40 50 60 70 Depth from River Bed(m)	ance ance ht Geotech e Geote	
					19-23 Pg 19-23 Pg 19-23 Pg					40 50 Depth fro	Shaft Resintance Tip Resistance Self Weight Ultimate Geotec	
		र १६५ हुई। इ.स.च्या			(4) (3)		的可力 建築是	ANGELIS ANGELIS		30 4	OS: Sha OT: Ti Oult: U	
	a (2.5.2)								/			OALL
0.8	\$ 97% to \$ 15 A350		POWER		17.50					50	8 5 ≥ 3  ··	ж
					1.326	7,4,6	1.5		1 2 2	01		
100,000	000;06	80,000	70,000	000,000	20,000	40,000	30,000	20,000	10,000	* 0		
9	ο.	<b>∞</b>			iosqsO əl .v			7				