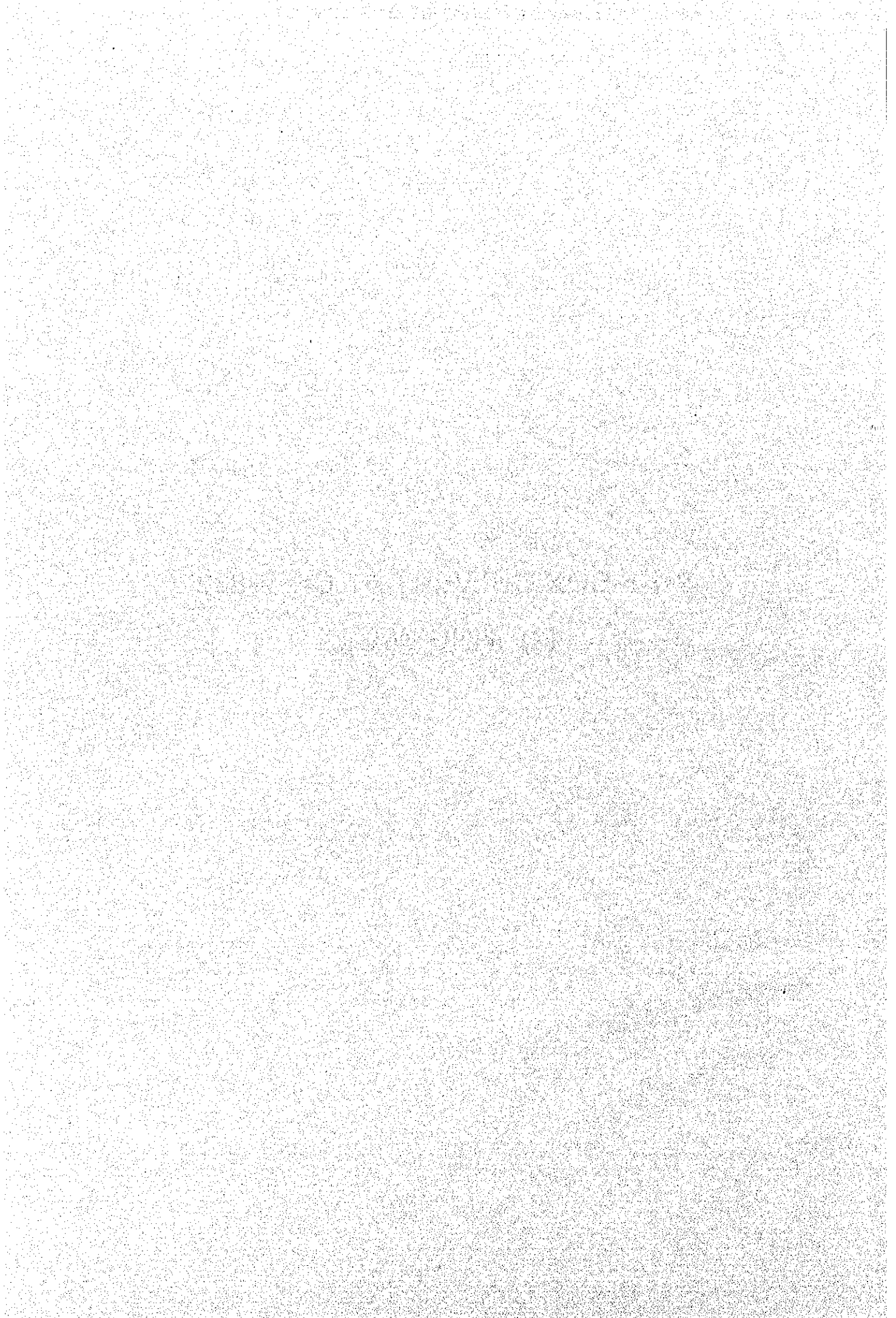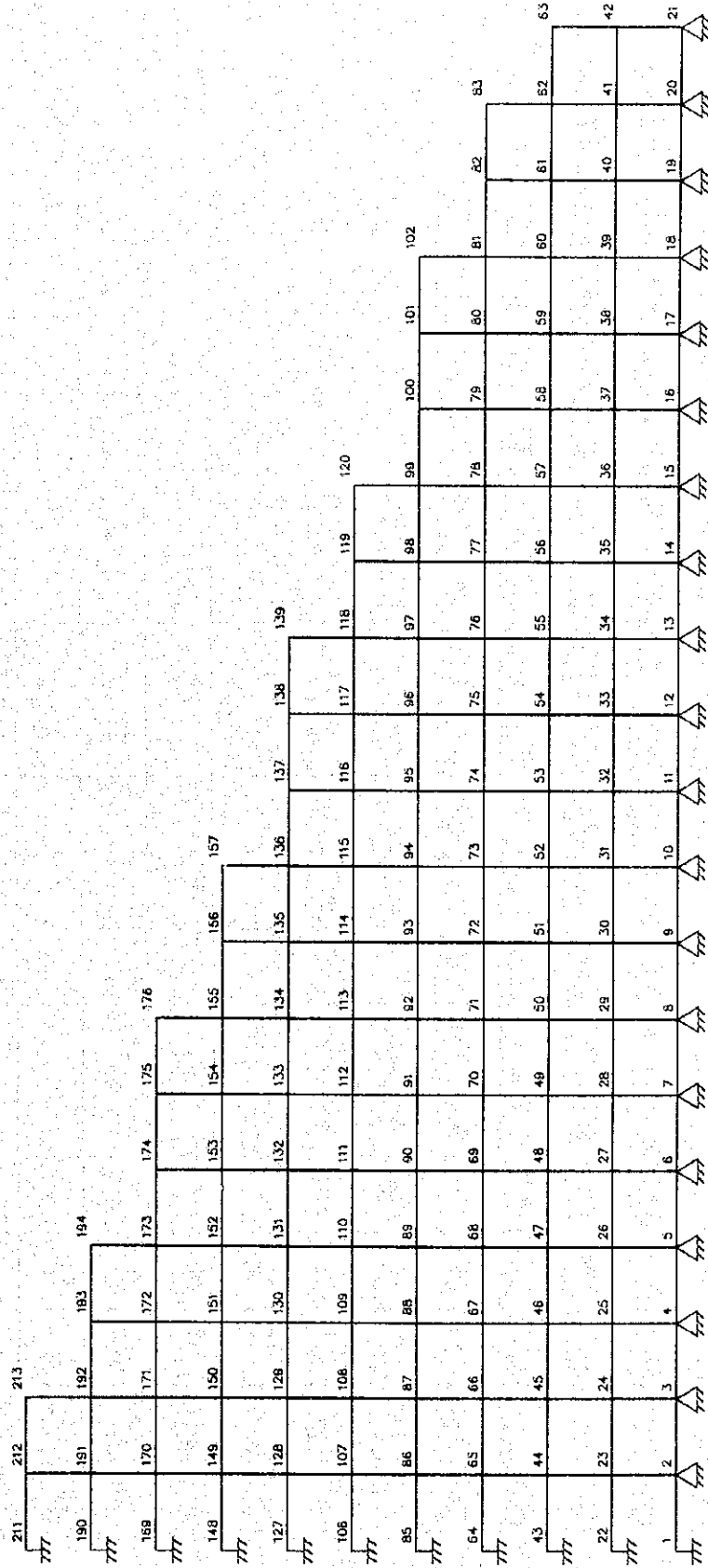# 2-1-5 BOX CULVERT AT CH.5+882

(2) WING WALL
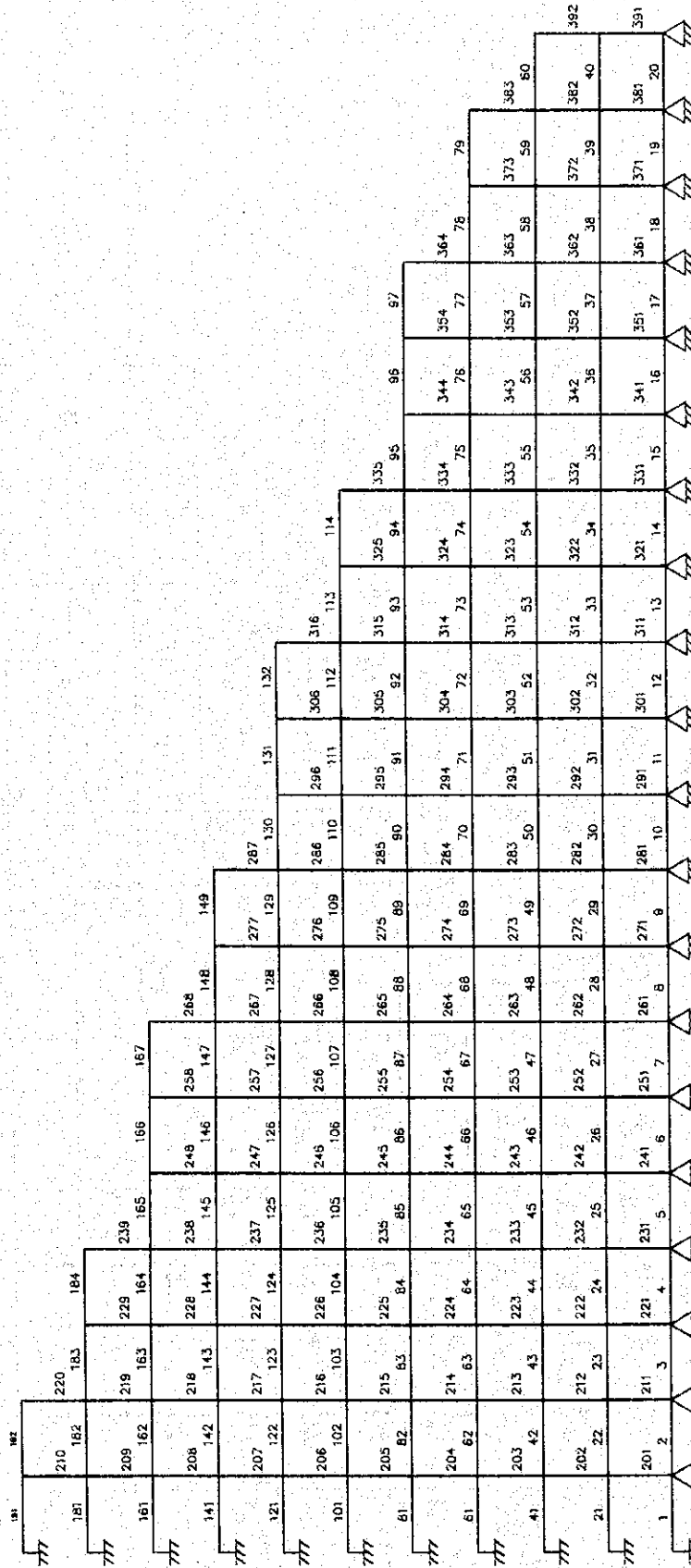
WING WALL AT CH. 4+882

WING WALL WITH JOINT NUMBER

11-235

WING WALL AT CH. 4+882

WING WALL WITH MEMBER NUMBER

11-236

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*********************************************************
*                                                       *
*               S T A A D - III                         *
*               Revision 22.3a                          *
*               Proprietary Program of                  *
*               Re`search Engineers, Inc.               *
*               Date=    JAN 30, 2000                    *
*               Time=     9:17:33                        *
*                                                        *
*        USER ID: Development Design Consultants L       *
*********************************************************
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 1.  STAAD SPACE
 2.  UNIT KNS METER
 3.  PAGE EJE
 4.  JOI COO
 5.       1 0.000 0.000 0.000    21  12.00 0.000 0.000
 6.  R           2 0.000 0.000 0.530
 7.  64       0.000 0.000 1.590     83 11.400 0.000 1.590
 8.  85       0.000 0.000 2.120    102 10.200 0.000 2.120
 9.  106      0.000 0.000 2.650    120  8.400 0.000 2.650
10.  127      0.000 0.000 3.180    139  7.200 0.000 3.180
11.  148      0.000 0.000 3.710    157  5.400 0.000 3.710
12.  169      0.000 0.000 4.240    176  4.200 0.000 4.240
13.  190      0.000 0.000 4.770    194  2.400 0.000 4.770
14.  211      0.000 0.000 5.300    213  1.200 0.000 5.300
16.  MEM INC
17.  *HORIZONTAL MEMBER
18.  1        1      2      20     1      1
19.  R        2      20     21
20.  61       64     65     79     1      1
21.  81       85     86     97     1      1
22.  101      106    107    114    1      1
23.  121      127    128    132    1      1
24.  141      148    149    149    1      1
25.  161      169    170    167    1      1
26.  181      190    191    184    1      1
27.  191      211    212    192    1      1
28.  *VERTICAL MEMBER (START WITH 301)
29.  201      2      23     210    1      21
30.  R        1      10     1
31.  221      4      25     229    1      21
32.  R        1      10     1
33.  241      6      27     248    1      21
34.  R        2      10     1
35.  271      9      30     277    1      21
36.  R        1      10     1
37.  291      11     32     296    1      21
38.  R        2      10     1
39.  321      14     35     325    1      21
40.  R        1      10     1
41.  341      16     37     344    1      21
42.  R        2      10     1
43.  371      19     40     373    1      21
44.  R        1      10     1
45.  391      21     42     392    1      21
47.  MEM PRO
48.  1    TO    20    PRI   YD    3.050   ZD    0.35   IX    1E-06
49.  21   TO    40    PRI   YD    0.300   ZD    0.530  IX    1E-06
50.  41   TO    60    PRI   YD    0.300   ZD    0.530  IX    1E-06
51.  61   TO    79    PRI   YD    0.300   ZD    0.530  IX    1E-06
52.  81   TO    97    PRI   YD    0.300   ZD    0.530  IX    1E-06
53.  101  TO    114   PRI   YD    0.300   ZD    0.530  IX    1E-06
54.  121  TO    132   PRI   YD    0.300   ZD    0.530  IX    1E-06
55.  141  TO    149   PRI   YD    0.300   ZD    0.530  IX    1E-06
56.  161  TO    167   PRI   YD    0.300   ZD    0.530  IX    1E-06
57.  181  TO    184   PRI   YD    0.300   ZD    0.530  IX    1E-06
58.  191  TO    192   PRI   YD    0.300   ZD    0.530  IX    1E-06
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 59.  *VERTICAL
 60.  201   TO   210   PRI   YD   0.300   ZD   0.600   IX   1E-06
 61.  211   TO   220   PRI   YD   0.300   ZD   0.600   IX   1E-06
 62.  221   TO   229   PRI   YD   0.300   ZD   0.600   IX   1E-06
 63.  231   TO   239   PRI   YD   0.300   ZD   0.600   IX   1E-06
 64.  241   TO   248   PRI   YD   0.300   ZD   0.600   IX   1E-06
 65.  251   TO   258   PRI   YD   0.300   ZD   0.600   IX   1E-06
 66.  261   TO   268   PRI   YD   0.300   ZD   0.600   IX   1E-06
 67.  271   TO   277   PRI   YD   0.300   ZD   0.600   IX   1E-06
 68.  281   TO   287   PRI   YD   0.300   ZD   0.600   IX   1E-06
 69.  291   TO   296   PRI   YD   0.300   ZD   0.600   IX   1E-06
 70.  301   TO   306   PRI   YD   0.300   ZD   0.600   IX   1E-06
 71.  311   TO   316   PRI   YD   0.300   ZD   0.600   IX   1E-06
 72.  321   TO   325   PRI   YD   0.300   ZD   0.600   IX   1E-06
 73.  331   TO   335   PRI   YD   0.300   ZD   0.600   IX   1E-06
 74.  341   TO   344   PRI   YD   0.300   ZD   0.600   IX   1E-06
 75.  351   TO   354   PRI   YD   0.300   ZD   0.600   IX   1E-06
 76.  361   TO   364   PRI   YD   0.300   ZD   0.600   IX   1E-06
 77.  371   TO   373   PRI   YD   0.300   ZD   0.600   IX   1E-06
 78.  381   TO   383   PRI   YD   0.300   ZD   0.600   IX   1E-06
 79.  391   TO   392   PRI   YD   0.300   ZD   0.600   IX   1E-06
 81.  CONSTANTS
 82.  E     CONC
 83.  DEN   CONC
 85.  SUPPORT
 86.  1     22   43   64   85   106   127   148   169   190   211   FIXED
 87.  2     TO   21                        FIXED        BUT    MZ    FY
 89.  LOAD 1 : EARTH PRESSURE
 90.  JOINT LOAD
 91.  2     FY   -32.91
 92.  3     FY   -31.89
 93.  4     FY   -30.87
 94.  5     FY   -29.86
 95.  6     FY   -28.84
 96.  7     FY   -27.82
 97.  8     FY   -26.80
 98.  9     FY   -25.78
 99.  10    FY   -24.76
100.  11    FY   -23.75
101.  12    FY   -22.73
102.  13    FY   -21.71
103.  14    FY   -20.69
104.  15    FY   -19.67
105.  16    FY   -18.65
106.  17    FY   -17.64
107.  18    FY     0.00
108.  19    FY     0.00
109.  20    FY     0.00
110.  21    FY     0.00
111.  23    FY   -24.04
112.  24    FY   -23.16
113.  25    FY   -22.29
114.  26    FY   -21.41
115.  27    FY   -20.53
116.  28    FY   -19.65
117.  29    FY   -18.78
118.  30    FY   -17.90
119.  31    FY   -17.02
120.  32    FY   -16.14
121.  33    FY   -15.27
122.  34    FY   -14.39
123.  35    FY   -13.51
124.  36    FY   -12.63
125.  37    FY   -11.76
126.  38    FY   -10.88
127.  39    FY     0.00
128.  40    FY     0.00
129.  41    FY     0.00
130.  42    FY     0.00
131.  44    FY   -20.21
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132.  45     FY     -19.33
133.  46     FY     -18.45
134.  47     FY     -17.57
135.  48     FY     -16.70
136.  49     FY     -15.82
137.  50     FY     -14.94
138.  51     FY     -14.06
139.  52     FY     -13.19
140.  53     FY     -12.31
141.  54     FY     -11.43
142.  55     FY     -10.55
143.  56     FY      -9.68
144.  57     FY      -8.80
145.  58     FY      -7.92
146.  59     FY      -7.04
147.  60     FY       0.00
148.  61     FY       0.00
149.  62     FY       0.00
150.  63     FY       0.00
151.  65     FY     -16.37
152.  66     FY     -15.49
153.  67     FY     -14.61
154.  68     FY     -13.74
155.  69     FY     -12.86
156.  70     FY     -11.98
157.  71     FY     -11.10
158.  72     FY     -10.23
159.  73     FY      -9.35
160.  74     FY      -8.47
161.  75     FY      -7.59
162.  76     FY      -6.72
163.  77     FY      -5.84
164.  78     FY      -4.96
165.  79     FY      -4.08
166.  80     FY      -3.21
167.  81     FY       0.00
168.  82     FY       0.00
169.  83     FY       0.00
170.  86     FY     -12.53
171.  87     FY     -11.66
172.  88     FY     -10.78
173.  89     FY      -9.90
174.  90     FY      -9.02
175.  91     FY      -8.15
176.  92     FY      -7.27
177.  93     FY      -6.39
178.  94     FY      -5.51
179.  95     FY      -4.64
180.  96     FY      -3.76
181.  97     FY      -2.88
182.  98     FY      -2.00
183.  99     FY      -1.13
184.  100    FY      -0.25
185.  101    FY       0.00
186.  102    FY       0.00
187.  107    FY     -10.09
188.  108    FY      -9.21
189.  109    FY      -8.34
190.  110    FY      -7.46
191.  111    FY      -6.58
192.  112    FY      -5.70
193.  113    FY      -4.83
194.  114    FY      -3.95
195.  115    FY      -3.07
196.  116    FY      -2.19
197.  117    FY      -1.32
198.  118    FY      -0.44
199.  119    FY       0.00
200.  120    FY       0.00
201.  128    FY      -7.90
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202.  129     FY      -7.02
203.  130     FY      -6.14
204.  131     FY      -5.27
205.  132     FY      -4.39
206.  133     FY      -3.51
207.  134     FY      -2.63
208.  135     FY      -1.76
209.  136     FY      -0.88
210.  137     FY       0.00
211.  138     FY       0.00
212.  139     FY       0.00
213.  149     FY      -5.70
214.  150     FY      -4.83
215.  151     FY      -3.95
216.  152     FY      -3.07
217.  153     FY      -2.19
218.  154     FY      -1.32
219.  155     FY      -0.44
220.  156     FY       0.00
221.  157     FY       0.00
222.  170     FY      -3.51
223.  171     FY      -2.63
224.  172     FY      -1.76
225.  173     FY      -0.88
226.  174     FY       0.00
227.  175     FY       0.00
228.  176     FY       0.00
229.  191     FY      -1.32
230.  192     FY      -0.44
231.  193     FY       0.00
232.  194     FY       0.00
233.  212     FY       0.00
234.  213     FY       0.00
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236. PER ANA

P R O B L E M   S T A T I S T I C S

      NUMBER OF JOINTS/MEMBER+ELEMENTS/SUPPORTS =   155/ 268/   31
      ORIGINAL/FINAL BAND-WIDTH =   21/   9
      TOTAL PRIMARY LOAD CASES =   1, TOTAL DEGREES OF FREEDOM =   784
      SIZE OF STIFFNESS MATRIX =   43904 DOUBLE PREC. WORDS
      REQRD/AVAIL. DISK SPACE = 12.59/ 245.6 MB, EXMEM = 1964.5 MB

   ++ Processing Element Stiffness Matrix.   9:17:33
   ++ Processing Global Stiffness Matrix.   9:17:33
   ++ Processing Triangular Factorization.   9:17:33
   ++ Calculating Joint Displacements.   9:17:33
   ++ Calculating Member Forces.   9:17:33

   237. PRINT MEM FORCES

   MEMBER END FORCES   STRUCTURE TYPE = SPACE

   ALL UNITS ARE -- KNS   METE

MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
1	1	1	.00	1044.35	.00	.00	.00	4932.96
		2	.00	-1044.35	.00	.00	.00	-4306.35
2	1	2	.00	1001.35	.00	.00	.00	4306.35
		3	.00	-1001.35	.00	.00	.00	-3705.54
3	1	3	.00	934.36	.00	.00	.00	3705.54
		4	.00	-934.36	.00	.00	.00	-3144.92
4	1	4	.00	854.84	.00	.00	.00	3144.91
		5	.00	-854.84	.00	.00	.00	-2632.01
5	1	5	.00	769.97	.00	.00	.00	2632.00
		6	.00	-769.97	.00	.00	.00	-2170.02
6	1	6	.00	684.03	.00	.00	.00	2170.02
		7	.00	-684.03	.00	.00	.00	-1759.60
7	1	7	.00	599.89	.00	.00	.00	1759.61
		8	.00	-599.89	.00	.00	.00	-1399.68
8	1	8	.00	519.36	.00	.00	.00	1399.67
		9	.00	-519.36	.00	.00	.00	-1088.05
9	1	9	.00	443.33	.00	.00	.00	1088.05
		10	.00	-443.33	.00	.00	.00	-822.06
10	1	10	.00	372.18	.00	.00	.00	822.05
		11	.00	-372.18	.00	.00	.00	-598.74
11	1	11	.00	305.94	.00	.00	.00	598.75
		12	.00	-305.94	.00	.00	.00	-415.18
12	1	12	.00	244.27	.00	.00	.00	415.17
		13	.00	-244.27	.00	.00	.00	-268.61
13	1	13	.00	186.92	.00	.00	.00	268.62
		14	.00	-186.92	.00	.00	.00	-156.46
14	1	14	.00	133.90	.00	.00	.00	156.46
		15	.00	-133.90	.00	.00	.00	-76.13

MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
15	1	15	.00	85.48	.00	.00	.00	76.13
		16	.00	-85.48	.00	.00	.00	-24.84
16	1	16	.00	42.41	.00	.00	.00	24.84
		17	.00	-42.41	.00	.00	.00	.61
17	1	17	.00	6.92	.00	.00	.00	-.60
		18	.00	-6.92	.00	.00	.00	4.75
18	1	18	.00	-.85	.00	.00	.00	-4.76
		19	.00	.85	.00	.00	.00	4.25
19	1	19	.00	-3.24	.00	.00	.00	-4.25
		20	.00	3.24	.00	.00	.00	2.31
20	1	20	.00	-3.85	.00	.00	.00	-2.30
		21	.00	3.85	.00	.00	.00	.00
21	1	22	.00	25.35	.00	.00	.00	22.68
		23	.00	-25.35	.00	.00	.00	-7.47
22	1	23	.00	5.77	.00	.00	.00	7.47
		24	.00	-5.77	.00	.00	.00	-4.00
23	1	24	.00	1.75	.00	.00	.00	4.00
		25	.00	-1.75	.00	.00	.00	-2.95
24	1	25	.00	1.06	.00	.00	.00	2.95
		26	.00	-1.06	.00	.00	.00	-2.32
25	1	26	.00	.79	.00	.00	.00	2.32
		27	.00	-.79	.00	.00	.00	-1.84
26	1	27	.00	.59	.00	.00	.00	1.84
		28	.00	-.59	.00	.00	.00	-1.49
27	1	28	.00	.45	.00	.00	.00	1.49
		29	.00	-.45	.00	.00	.00	-1.22
28	1	29	.00	.42	.00	.00	.00	1.22
		30	.00	-.42	.00	.00	.00	-.96
29	1	30	.00	.47	.00	.00	.00	.96
		31	.00	-.47	.00	.00	.00	-.68
30	1	31	.00	.44	.00	.00	.00	.69
		32	.00	-.44	.00	.00	.00	-.42
31	1	32	.00	.41	.00	.00	.00	.42
		33	.00	-.41	.00	.00	.00	-.18
32	1	33	.00	.37	.00	.00	.00	.18
		34	.00	-.37	.00	.00	.00	.05
33	1	34	.00	.21	.00	.00	.00	-.04
		35	.00	-.21	.00	.00	.00	.17
34	1	35	.00	.18	.00	.00	.00	-.17
		36	.00	-.18	.00	.00	.00	.28
35	1	36	.00	.18	.00	.00	.00	-.28
		37	.00	-.18	.00	.00	.00	.39
36	1	37	.00	.11	.00	.00	.00	-.38
		38	.00	-.11	.00	.00	.00	.45
37	1	38	.00	-1.88	.00	.00	.00	-.45
		39	.00	1.88	.00	.00	.00	-.68

MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
38	1	39	.00	-.10	.00	.00	.00	.68
		40	.00	.10	.00	.00	.00	-.74
39	1	40	.00	.91	.00	.00	.00	.74
		41	.00	-.91	.00	.00	.00	-.20
40	1	41	.00	.33	.00	.00	.00	.20
		42	.00	-.33	.00	.00	.00	.00
41	1	43	.00	30.76	.00	.00	.00	31.02
		44	.00	-30.76	.00	.00	.00	-12.56
42	1	44	.00	14.36	.00	.00	.00	12.56
		45	.00	-14.36	.00	.00	.00	-3.95
43	1	45	.00	5.03	.00	.00	.00	3.95
		46	.00	-5.03	.00	.00	.00	-.93
44	1	46	.00	1.57	.00	.00	.00	.93
		47	.00	-1.57	.00	.00	.00	.01
45	1	47	.00	.40	.00	.00	.00	-.01
		48	.00	-.40	.00	.00	.00	.25
46	1	48	.00	-.05	.00	.00	.00	-.25
		49	.00	.05	.00	.00	.00	.23
47	1	49	.00	-.29	.00	.00	.00	-.23
		50	.00	.29	.00	.00	.00	.05
48	1	50	.00	-.24	.00	.00	.00	-.05
		51	.00	.24	.00	.00	.00	-.09
49	1	51	.00	.19	.00	.00	.00	.09
		52	.00	-.19	.00	.00	.00	.02
50	1	52	.00	.41	.00	.00	.00	-.02
		53	.00	-.41	.00	.00	.00	.27
51	1	53	.00	.38	.00	.00	.00	-.27
		54	.00	-.38	.00	.00	.00	.50
52	1	54	.00	.29	.00	.00	.00	-.50
		55	.00	-.29	.00	.00	.00	.67
53	1	55	.00	.08	.00	.00	.00	-.67
		56	.00	-.08	.00	.00	.00	.72
54	1	56	.00	-.04	.00	.00	.00	-.72
		57	.00	.04	.00	.00	.00	.69
55	1	57	.00	.01	.00	.00	.00	-.69
		58	.00	-.01	.00	.00	.00	.70
56	1	58	.00	-.99	.00	.00	.00	-.70
		59	.00	.99	.00	.00	.00	.10
57	1	59	.00	-2.40	.00	.00	.00	-.10
		60	.00	2.40	.00	.00	.00	-1.34
58	1	60	.00	-.53	.00	.00	.00	1.34
		61	.00	.53	.00	.00	.00	-1.66
59	1	61	.00	-.73	.00	.00	.00	1.66
		62	.00	.73	.00	.00	.00	-2.10
60	1	62	.00	3.50	.00	.00	.00	2.10
		63	.00	-3.50	.00	.00	.00	.00

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MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
61	1	64	.00	34.48	.00	.00	.00	38.18
		65	.00	-34.48	.00	.00	.00	-17.49
62	1	65	.00	19.98	.00	.00	.00	17.50
		66	.00	-19.98	.00	.00	.00	-5.51
63	1	66	.00	9.39	.00	.00	.00	5.51
		67	.00	-9.39	.00	.00	.00	.12
64	1	67	.00	3.33	.00	.00	.00	-.12
		68	.00	-3.33	.00	.00	.00	2.12
65	1	68	.00	.57	.00	.00	.00	-2.12
		69	.00	-.57	.00	.00	.00	2.47
66	1	69	.00	-.43	.00	.00	.00	-2.47
		70	.00	.43	.00	.00	.00	2.21
67	1	70	.00	-.70	.00	.00	.00	-2.21
		71	.00	.70	.00	.00	.00	1.79
68	1	71	.00	-.85	.00	.00	.00	-1.79
		72	.00	.85	.00	.00	.00	1.28
69	1	72	.00	-.19	.00	.00	.00	-1.29
		73	.00	.19	.00	.00	.00	1.17
70	1	73	.00	.66	.00	.00	.00	-1.17
		74	.00	-.66	.00	.00	.00	1.57
71	1	74	.00	.49	.00	.00	.00	-1.57
		75	.00	-.49	.00	.00	.00	1.86
72	1	75	.00	-.55	.00	.00	.00	-1.86
		76	.00	.55	.00	.00	.00	1.53
73	1	76	.00	.16	.00	.00	.00	-1.53
		77	.00	-.16	.00	.00	.00	1.63
74	1	77	.00	-.91	.00	.00	.00	-1.63
		78	.00	.91	.00	.00	.00	1.08
75	1	78	.00	-.61	.00	.00	.00	-1.08
		79	.00	.61	.00	.00	.00	.71
76	1	79	.00	-1.92	.00	.00	.00	-.71
		80	.00	1.92	.00	.00	.00	-.44
77	1	80	.00	-3.83	.00	.00	.00	.44
		81	.00	3.83	.00	.00	.00	-2.73
78	1	81	.00	1.47	.00	.00	.00	2.73
		82	.00	-1.47	.00	.00	.00	-1.85
79	1	82	.00	3.08	.00	.00	.00	1.85
		83	.00	-3.08	.00	.00	.00	.00
81	1	85	.00	34.87	.00	.00	.00	42.43
		86	.00	-34.87	.00	.00	.00	-21.50
82	1	86	.00	22.71	.00	.00	.00	21.50
		87	.00	-22.71	.00	.00	.00	-7.88
83	1	87	.00	12.72	.00	.00	.00	7.88
		88	.00	-12.72	.00	.00	.00	-.25
84	1	88	.00	5.55	.00	.00	.00	.25
		89	.00	-5.55	.00	.00	.00	3.08

MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
85	1	89	.00	1.47	.00	.00	.00	-3.08
		90	.00	-1.47	.00	.00	.00	3.96
86	1	90	.00	-.34	.00	.00	.00	-3.96
		91	.00	.34	.00	.00	.00	3.75
87	1	91	.00	-.25	.00	.00	.00	-3.75
		92	.00	.25	.00	.00	.00	3.61
88	1	92	.00	-.36	.00	.00	.00	-3.61
		93	.00	.36	.00	.00	.00	3.39
89	1	93	.00	-1.03	.00	.00	.00	-3.39
		94	.00	1.03	.00	.00	.00	2.77
90	1	94	.00	1.22	.00	.00	.00	-2.77
		95	.00	-1.22	.00	.00	.00	3.51
91	1	95	.00	.76	.00	.00	.00	-3.51
		96	.00	-.76	.00	.00	.00	3.96
92	1	96	.00	-2.20	.00	.00	.00	-3.96
		97	.00	2.20	.00	.00	.00	2.64
93	1	97	.00	-.17	.00	.00	.00	-2.64
		98	.00	.17	.00	.00	.00	2.54
94	1	98	.00	-.98	.00	.00	.00	-2.54
		99	.00	.98	.00	.00	.00	1.95
95	1	99	.00	-3.61	.00	.00	.00	-1.95
		100	.00	3.61	.00	.00	.00	-.22
96	1	100	.00	-.85	.00	.00	.00	.21
		101	.00	.85	.00	.00	.00	-.72
97	1	101	.00	1.19	.00	.00	.00	.72
		102	.00	-1.19	.00	.00	.00	.00
101	1	106	.00	32.82	.00	.00	.00	43.80
		107	.00	-32.82	.00	.00	.00	-24.10
102	1	107	.00	22.68	.00	.00	.00	24.10
		108	.00	-22.68	.00	.00	.00	-10.50
103	1	108	.00	14.34	.00	.00	.00	10.50
		109	.00	-14.34	.00	.00	.00	-1.90
104	1	109	.00	7.34	.00	.00	.00	1.90
		110	.00	-7.34	.00	.00	.00	2.51
105	1	110	.00	2.81	.00	.00	.00	-2.51
		111	.00	-2.81	.00	.00	.00	4.19
106	1	111	.00	.50	.00	.00	.00	-4.19
		112	.00	-.50	.00	.00	.00	4.49
107	1	112	.00	.46	.00	.00	.00	-4.49
		113	.00	-.46	.00	.00	.00	4.77
108	1	113	.00	2.80	.00	.00	.00	-4.77
		114	.00	-2.80	.00	.00	.00	6.45
109	1	114	.00	-1.41	.00	.00	.00	-6.45
		115	.00	1.41	.00	.00	.00	5.61
110	1	115	.00	1.04	.00	.00	.00	-5.61
		116	.00	-1.04	.00	.00	.00	6.23

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MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
111	1	116	.00	-1.92	.00	.00	.00	-6.23
		117	.00	1.92	.00	.00	.00	5.08
112	1	117	.00	1.92	.00	.00	.00	-5.08
		118	.00	-1.92	.00	.00	.00	6.23
113	1	118	.00	-6.86	.00	.00	.00	-6.23
		119	.00	6.86	.00	.00	.00	2.12
114	1	119	.00	-3.54	.00	.00	.00	-2.12
		120	.00	3.54	.00	.00	.00	.00
121	1	127	.00	29.13	.00	.00	.00	42.68
		128	.00	-29.13	.00	.00	.00	-25.20
122	1	128	.00	20.38	.00	.00	.00	25.20
		129	.00	-20.38	.00	.00	.00	-12.97
123	1	129	.00	13.56	.00	.00	.00	12.97
		130	.00	-13.56	.00	.00	.00	-4.83
124	1	130	.00	8.84	.00	.00	.00	4.84
		131	.00	-8.84	.00	.00	.00	.47
125	1	131	.00	3.58	.00	.00	.00	-.47
		132	.00	-3.58	.00	.00	.00	2.62
126	1	132	.00	3.54	.00	.00	.00	-2.62
		133	.00	-3.54	.00	.00	.00	4.74
127	1	133	.00	1.26	.00	.00	.00	-4.74
		134	.00	-1.26	.00	.00	.00	5.50
128	1	134	.00	4.10	.00	.00	.00	-5.50
		135	.00	-4.10	.00	.00	.00	7.96
129	1	135	.00	10.05	.00	.00	.00	-7.96
		136	.00	-10.05	.00	.00	.00	13.99
130	1	136	.00	-9.33	.00	.00	.00	-14.00
		137	.00	9.33	.00	.00	.00	8.40
131	1	137	.00	-6.93	.00	.00	.00	-8.40
		138	.00	6.93	.00	.00	.00	4.24
132	1	138	.00	-7.07	.00	.00	.00	-4.24
		139	.00	7.07	.00	.00	.00	.00
141	1	148	.00	23.07	.00	.00	.00	39.15
		149	.00	-23.07	.00	.00	.00	-25.31
142	1	149	.00	17.83	.00	.00	.00	25.31
		150	.00	-17.83	.00	.00	.00	-14.61
143	1	150	.00	8.75	.00	.00	.00	14.61
		151	.00	-8.75	.00	.00	.00	-9.36
144	1	151	.00	10.29	.00	.00	.00	9.36
		152	.00	-10.29	.00	.00	.00	-3.19
145	1	152	.00	4.14	.00	.00	.00	3.19
		153	.00	-4.14	.00	.00	.00	-.71
146	1	153	.00	7.54	.00	-.01	.00	.70
		154	.00	-7.54	.00	.01	.00	3.82
147	1	154	.00	9.38	.00	-.01	.00	-3.82
		155	.00	-9.38	.00	.01	.00	9.45

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MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
148	1	155	.00	-4.74	.00	.00	.00	-9.45
		156	.00	4.74	.00	.00	.00	6.61
149	1	156	.00	-10.99	.00	-.01	.00	-6.60
		157	.00	10.99	.00	.01	.00	.01
161	1	169	.00	12.05	.00	.00	.00	32.59
		170	.00	-12.05	.00	.00	.00	-25.36
162	1	170	.00	15.61	.00	.00	.00	25.36
		171	.00	-15.61	.00	.00	.00	-16.00
163	1	171	.00	5.12	.00	.00	.00	16.00
		172	.00	-5.12	.00	.00	.00	-12.93
164	1	172	.00	.09	.00	.00	.00	12.93
		173	.00	-.09	.00	.00	.00	-12.87
165	1	173	.00	18.59	.00	-.01	.00	12.88
		174	.00	-18.59	.00	.01	.00	-1.72
166	1	174	.00	5.84	.00	-.01	.00	1.73
		175	.00	-5.84	.00	.01	.00	1.78
167	1	175	.00	-2.94	.00	-.01	.00	-1.77
		176	.00	2.94	.00	.01	.00	.01
181	1	190	.00	5.83	.00	.00	.00	24.99
		191	.00	-5.83	.00	.00	.00	-21.49
182	1	191	.00	-6.39	.00	.00	.00	21.49
		192	.00	6.39	.00	.00	.00	-25.33
183	1	192	.00	23.65	.00	.00	.00	25.34
		193	.00	-23.65	.00	.00	.00	-11.15
184	1	193	.00	18.57	.00	.00	.00	11.15
		194	.00	-18.57	.00	.00	.00	.00
191	1	211	.00	16.21	.00	.00	.00	21.78
		212	.00	-16.21	.00	.00	.00	-12.05
192	1	212	.00	20.06	.00	.01	.00	12.05
		213	.00	-20.06	.00	-.01	.00	-.01
201	1	2	.00	10.09	.00	.00	.00	7.43
		23	.00	-10.09	.00	.00	.00	-2.09
202	1	23	.00	5.63	.00	.00	.00	2.08
		44	.00	-5.63	.00	.00	.00	.90
203	1	44	.00	1.82	.00	.00	.00	-.90
		65	.00	-1.82	.00	.00	.00	1.87
204	1	65	.00	-.05	.00	.00	.00	-1.87
		86	.00	.05	.00	.00	.00	1.84
205	1	86	.00	-.42	.00	.00	.00	-1.84
		107	.00	.42	.00	.00	.00	1.62
206	1	107	.00	-.36	.00	.00	.00	-1.62
		128	.00	.36	.00	.00	.00	1.43
207	1	128	.00	.49	.00	.00	.00	-1.43
		149	.00	-.49	.00	.00	.00	1.69
208	1	149	.00	.02	.00	.00	.00	-1.69
		170	.00	-.02	.00	.00	.00	1.70

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MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
209	1	170	.00	-7.05	.00	.00	.00	-1.70
		191	.00	7.05	.00	.00	.00	-2.03
210	1	191	.00	3.85	.00	.00	.00	2.04
		212	.00	-3.85	.00	.00	.00	.01
211	1	3	.00	35.09	.00	.00	.00	25.02
		24	.00	-35.09	.00	.00	.00	-6.42
212	1	24	.00	15.96	.00	.00	.00	6.42
		45	.00	-15.96	.00	.00	.00	2.04
213	1	45	.00	5.95	.00	.00	.00	-2.04
		66	.00	-5.95	.00	.00	.00	5.19
214	1	66	.00	1.05	.00	.00	.00	-5.19
		87	.00	-1.05	.00	.00	.00	5.75
215	1	87	.00	-.62	.00	.00	.00	-5.75
		108	.00	.62	.00	.00	.00	5.42
216	1	108	.00	-1.49	.00	.00	.00	-5.42
		129	.00	1.49	.00	.00	.00	4.63
217	1	129	.00	-1.69	.00	.00	.00	-4.63
		150	.00	1.69	.00	.00	.00	3.74
213	1	150	.00	2.56	.00	.00	.00	-3.74
		171	.00	-2.56	.00	.00	.00	5.10
219	1	171	.00	10.42	.00	.00	.00	-5.10
		192	.00	-10.42	.00	.00	.00	10.62
220	1	192	.00	-20.06	.00	-.01	.00	-10.63
		213	.00	20.06	.00	.01	.00	-.01
221	1	4	.00	48.65	.00	.00	.00	38.93
		25	.00	-48.65	.00	.00	.00	-13.14
222	1	25	.00	27.05	.00	.00	.00	13.14
		46	.00	-27.05	.00	.00	.00	1.20
223	1	46	.00	12.06	.00	.00	.00	-1.19
		67	.00	-12.06	.00	.00	.00	7.59
224	1	67	.00	3.51	.00	.00	.00	-7.59
		88	.00	-3.51	.00	.00	.00	9.45
225	1	88	.00	-.10	.00	.00	.00	-9.45
		109	.00	.10	.00	.00	.00	9.40
226	1	109	.00	-1.44	.00	.00	.00	-9.40
		130	.00	1.44	.00	.00	.00	8.64
227	1	130	.00	-2.86	.00	.00	.00	-8.64
		151	.00	2.86	.00	.00	.00	7.12
228	1	151	.00	-8.35	.00	.00	.00	-7.12
		172	.00	8.35	.00	.00	.00	2.69
229	1	172	.00	-5.08	.00	.00	.00	-2.70
		193	.00	5.08	.00	.00	.00	.00
231	1	5	.00	55.01	.00	.00	.00	48.36
		26	.00	-55.01	.00	.00	.00	-19.20
232	1	26	.00	33.87	.00	.00	.00	19.20
		47	.00	-33.87	.00	.00	.00	-1.25

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MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
233	1	47	.00	17.47	.00	.00	.00	1.25
		68	.00	-17.47	.00	.00	.00	8.01
234	1	68	.00	6.49	.00	.00	.00	-8.01
		89	.00	-6.49	.00	.00	.00	11.45
235	1	89	.00	.67	.00	.00	.00	-11.45
		110	.00	-.67	.00	.00	.00	11.80
236	1	110	.00	-2.26	.00	.00	.00	-11.80
		131	.00	2.26	.00	.00	.00	10.61
237	1	131	.00	-2.27	.00	.00	.00	-10.61
		152	.00	2.27	.00	.00	.00	9.40
238	1	152	.00	.81	.00	.00	.00	-9.41
		173	.00	-.81	.00	.00	.00	9.84
239	1	173	.00	-18.57	.00	.00	.00	-9.84
		194	.00	18.57	.00	.00	.00	.00
241	1	6	.00	57.10	.00	.00	.00	53.94
		27	.00	-57.10	.00	.00	.00	-23.68
242	1	27	.00	36.77	.00	.00	.00	23.68
		48	.00	-36.77	.00	.00	.00	-4.19
243	1	48	.00	20.52	.00	.00	.00	4.19
		69	.00	-20.52	.00	.00	.00	6.69
244	1	69	.00	8.65	.00	.00	.00	-6.68
		90	.00	-8.65	.00	.00	.00	11.27
245	1	90	.00	1.45	.00	.00	.00	-11.27
		111	.00	-1.45	.00	.00	.00	12.04
246	1	111	.00	-2.81	.00	.00	.00	-12.04
		132	.00	2.81	.00	.00	.00	10.55
247	1	132	.00	-7.16	.00	.00	.00	-10.55
		153	.00	7.16	.00	.00	.00	6.76
248	1	153	.00	-12.75	.00	.01	.00	-6.76
		174	.00	12.75	.00	-.01	.00	.00
251	1	7	.00	56.32	.00	.00	.00	56.38
		28	.00	-56.32	.00	.00	.00	-26.53
252	1	28	.00	36.82	.00	.00	.00	26.53
		49	.00	-36.82	.00	.00	.00	-7.02
253	1	49	.00	21.24	.00	.00	.00	7.02
		70	.00	-21.24	.00	.00	.00	4.23
254	1	70	.00	9.52	.00	.00	.00	-4.23
		91	.00	-9.52	.00	.00	.00	9.28
255	1	91	.00	1.28	.00	.00	.00	-9.28
		112	.00	-1.28	.00	.00	.00	9.96
256	1	112	.00	-4.39	.00	.00	.00	-9.96
		133	.00	4.39	.00	.00	.00	7.63
257	1	133	.00	-5.62	.00	.01	.00	-7.63
		154	.00	5.62	.00	-.01	.00	4.65
258	1	154	.00	-8.78	.00	.01	.00	-4.65
		175	.00	8.78	.00	-.01	.00	.00

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MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
261	1	8	.00	53.74	.00	.00	.00	56.46
		29	.00	-53.74	.00	.00	.00	-27.98
262	1	29	.00	34.98	.00	.00	.00	27.98
		50	.00	-34.98	.00	.00	.00	-9.44
263	1	50	.00	19.99	.00	.00	.00	9.44
		71	.00	-19.99	.00	.00	.00	1.15
264	1	71	.00	9.04	.00	.00	.00	-1.15
		92	.00	-9.04	.00	.00	.00	5.94
265	1	92	.00	1.89	.00	.00	.00	-5.94
		113	.00	-1.89	.00	.00	.00	6.94
266	1	113	.00	-5.27	.00	.00	.00	-6.94
		134	.00	5.27	.00	.00	.00	4.15
267	1	134	.00	-10.74	.00	.00	.00	-4.15
		155	.00	10.74	.00	.00	.00	-1.55
268	1	155	.00	2.94	.00	.01	.00	1.55
		176	.00	-2.94	.00	-.01	.00	.01
271	1	9	.00	50.25	.00	.00	.00	54.96
		30	.00	-50.25	.00	.00	.00	-28.33
272	1	30	.00	32.31	.00	.00	.00	28.33
		51	.00	-32.31	.00	.00	.00	-11.21
273	1	51	.00	17.81	.00	.00	.00	11.21
		72	.00	-17.81	.00	.00	.00	-1.76
274	1	72	.00	6.93	.00	.00	.00	1.77
		93	.00	-6.93	.00	.00	.00	1.91
275	1	93	.00	1.20	.00	.00	.00	-1.90
		114	.00	-1.20	.00	.00	.00	2.54
276	1	114	.00	1.46	.00	.00	.00	-2.54
		135	.00	-1.46	.00	.00	.00	3.31
277	1	135	.00	-6.25	.00	.00	.00	-3.31
		156	.00	6.25	.00	.00	.00	.00
281	1	10	.00	46.37	.00	.00	.00	52.44
		31	.00	-46.37	.00	.00	.00	-27.86
282	1	31	.00	29.38	.00	.00	.00	27.86
		52	.00	-29.38	.00	.00	.00	-12.29
283	1	52	.00	15.97	.00	.00	.00	12.29
		73	.00	-15.97	.00	.00	.00	-3.83
284	1	73	.00	5.76	.00	.00	.00	3.83
		94	.00	-5.76	.00	.00	.00	-.77
285	1	94	.00	-1.99	.00	.00	.00	.77
		115	.00	1.99	.00	.00	.00	-1.83
286	1	115	.00	-7.51	.00	.00	.00	1.83
		136	.00	7.51	.00	.00	.00	-5.81
287	1	136	.00	10.99	.00	.01	.00	5.82
		157	.00	-10.99	.00	-.01	.00	.01
291	1	11	.00	42.50	.00	.00	.00	49.21
		32	.00	-42.50	.00	.00	.00	-26.68

11- 250

MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
292	1	32	.00	26.39	.00	.00	.00	26.68
		53	.00	-26.39	.00	.00	.00	-12.69
293	1	53	.00	14.11	.00	.00	.00	12.70
		74	.00	-14.11	.00	.00	.00	-5.21
294	1	74	.00	5.81	.00	.00	.00	5.22
		95	.00	-5.81	.00	.00	.00	-2.14
295	1	95	.00	1.63	.00	.00	.00	2.14
		116	.00	-1.63	.00	.00	.00	-1.27
296	1	116	.00	2.40	.00	.00	.00	1.27
		137	.00	-2.40	.00	.00	.00	.00
301	1	12	.00	38.94	.00	.00	.00	45.43
		33	.00	-38.94	.00	.00	.00	-24.80
302	1	33	.00	23.71	.00	.00	.00	24.80
		54	.00	-23.71	.00	.00	.00	-12.23
303	1	54	.00	12.37	.00	.00	.00	12.23
		75	.00	-12.37	.00	.00	.00	-5.67
304	1	75	.00	5.82	.00	.00	.00	5.67
		96	.00	-5.82	.00	.00	.00	-2.59
305	1	96	.00	5.03	.00	.00	.00	2.59
		117	.00	-5.03	.00	.00	.00	.07
306	1	117	.00	-.14	.00	.00	.00	-.07
		138	.00	.14	.00	.00	.00	.00
311	1	13	.00	35.64	.00	.00	.00	41.12
		34	.00	-35.64	.00	.00	.00	-22.23
312	1	34	.00	21.42	.00	.00	.00	22.23
		55	.00	-21.42	.00	.00	.00	-10.87
313	1	55	.00	11.07	.00	.00	.00	10.87
		76	.00	-11.07	.00	.00	.00	-5.01
314	1	76	.00	3.64	.00	.00	.00	5.01
		97	.00	-3.64	.00	.00	.00	-3.08
315	1	97	.00	-1.27	.00	.00	.00	3.08
		118	.00	1.27	.00	.00	.00	-3.75
316	1	118	.00	7.07	.00	.00	.00	3.75
		139	.00	-7.07	.00	.00	.00	.00
321	1	14	.00	32.32	.00	.00	.00	36.18
		35	.00	-32.32	.00	.00	.00	-19.05
322	1	35	.00	18.83	.00	.00	.00	19.05
		56	.00	-18.83	.00	.00	.00	-9.06
323	1	56	.00	9.28	.00	.00	.00	9.06
		77	.00	-9.28	.00	.00	.00	-4.14
324	1	77	.00	4.51	.00	.00	.00	4.15
		98	.00	-4.51	.00	.00	.00	-1.76
325	1	98	.00	3.31	.00	.00	.00	1.76
		119	.00	-3.31	.00	.00	.00	.00
331	1	15	.00	28.77	.00	.00	.00	30.62
		36	.00	-28.77	.00	.00	.00	-15.38

11-251

MEMBER	LOAD	JT	AXIAL	SHEAR-Y	SHEAR-Z	TORSION	MOM-Y	MOM-Z
332	1	36	.00	16.14	.00	.00	.00	15.38
		57	.00	-16.14	.00	.00	.00	-6.82
333	1	57	.00	7.29	.00	.00	.00	6.82
		78	.00	-7.29	.00	.00	.00	-2.96
334	1	78	.00	2.04	.00	.00	.00	2.96
		99	.00	-2.04	.00	.00	.00	-1.88
335	1	99	.00	3.54	.00	.00	.00	1.88
		120	.00	-3.54	.00	.00	.00	.00
341	1	16	.00	24.41	.00	.00	.00	24.35
		37	.00	-24.41	.00	.00	.00	-11.42
342	1	37	.00	12.72	.00	.00	.00	11.42
		58	.00	-12.72	.00	.00	.00	-4.67
343	1	58	.00	5.80	.00	.00	.00	4.67
		79	.00	-5.80	.00	.00	.00	-1.60
344	1	79	.00	3.02	.00	.00	.00	1.60
		100	.00	-3.02	.00	.00	.00	.00
351	1	17	.00	17.86	.00	.00	.00	17.06
		38	.00	-17.86	.00	.00	.00	-7.59
352	1	38	.00	8.96	.00	.00	.00	7.59
		59	.00	-8.96	.00	.00	.00	-2.84
353	1	59	.00	3.33	.00	.00	.00	2.84
		80	.00	-3.33	.00	.00	.00	-1.08
354	1	80	.00	2.03	.00	.00	.00	1.08
		101	.00	-2.03	.00	.00	.00	.00
361	1	18	.00	7.76	.00	.00	.00	8.84
		39	.00	-7.76	.00	.00	.00	-4.73
362	1	39	.00	5.99	.00	.00	.00	4.73
		60	.00	-5.99	.00	.00	.00	-1.55
363	1	60	.00	4.11	.00	.00	.00	1.55
		81	.00	-4.11	.00	.00	.00	.63
371	1	19	.00	2.41	.00	.00	.00	2.87
		40	.00	-2.41	.00	.00	.00	-1.59
372	1	40	.00	1.40	.00	.00	.00	1.59
		61	.00	-1.40	.00	.00	.00	-.85
373	1	61	.00	1.60	.00	.00	.00	.85
		82	.00	-1.60	.00	.00	.00	.00
381	1	20	.00	.58	.00	.00	.00	-.71
		41	.00	-.58	.00	.00	.00	1.01
382	1	41	.00	1.15	.00	.00	.00	-1.02
		62	.00	-1.15	.00	.00	.00	1.63
391	1	21	.00	-3.83	.00	.00	.00	-3.88
		42	.00	3.83	.00	.00	.00	1.85
392	1	42	.00	-3.50	.00	.00	.00	-1.85
		63	.00	3.50	.00	.00	.00	.00

************** END OF LATEST ANALYSIS RESULT **************

238. PLOT BEN FILE
239. PLOT DISP FILE
240. START CON DESIGN
241. FC   25000
242. CLEAR 0.065
243. TRACK 1
244. MAXMAIN 25
245. DESIGN BEAM 141 TO 144 161 TO 164 251 TO 254 261 TO 264

B E A M   N O. 141   D E S I G N   R E S U L T S -   FLEXURE

LEN -   600. MM FY - 414. FC -   25. MPA, SIZE -   530. X   300. MMS

LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANCHOR STA END
1	216.	5 - 12MM	0.	600.	YES YES

```
|------------------------------------------------------------------|
|   CRITICAL NEG MOMENT=     39.15 KN-MET  AT     0.MM, LOAD    1 |
|   REQD STEEL=   508.MM2, ROW= .0044, ROWMX= .0194 ROWMN= .0033 |
|   MAX/MIN/ACTUAL BAR SPACING=   416./   37./  104. MMS         |
|   BASIC/REQD. DEVELOPMENT LENGTH =   177./   359. MMS          |
|------------------------------------------------------------------|
```

B E A M   N O. 141   D E S I G N   R E S U L T S - SHEAR

AT START SUPPORT - Vu=   23.07 KNS Vc=   92.24 KNS Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
AT END   SUPPORT - Vu=   23.07 KNS Vc=   92.24 KNS Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.

```
  148J_____599X 529X 299_____149J
|                                                              |
| |==============================================================| |
| 5No12 H 216.   0.TO  600                                      |
|                                                              |
|                                                              |
|                                                              |
|--------------------------------------------------------------|

|-------------------|  |-------------------|  |-------------------|
|                   |  |                   |  |                   |
|      00000        |  |      00000        |  |      00000        |
| 5#12              |  | 5#12              |  | 5#12              |
|                   |  |                   |  |                   |
|                   |  |                   |  |                   |
|-------------------|  |-------------------|  |-------------------|
```


B E A M   N O. 142   D E S I G N   R E S U L T S -   FLEXURE

LEN -   600. MM FY - 414. FC -   25. MPA, SIZE -   530. X   300. MMS

LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANCHOR STA END
1	214.	2 - 16MM	0.	600.	YES YES

11-253

```
|-------------------------------------------------------------------|
|  CRITICAL NEG MOMENT=     25.31 KN-MET  AT      0.MM, LOAD    1 |
|  REQD STEEL=   379.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033  |
|  MAX/MIN/ACTUAL BAR SPACING=   412./   41./  412. MMS          |
|  BASIC/REQD. DEVELOPMENT LENGTH =   316./   478. MMS           |
|-------------------------------------------------------------------|
```

B E A M   N O. 142   D E S I G N   R E S U L T S - SHEAR

AT START SUPPORT - Vu=   17.83 KNS Vc=   92.24 KNS Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
AT END   SUPPORT - Vu=   17.83 KNS Vc=   92.24 KNS Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.

```
___149J_____599X 529X 299_____150J____
|                                                                     |
|                                                                     |
||=========================================================||
| 2No16 H 214.   0.TO  600                                             |
|                                                                     |
|                                                                     |
|                                                                     |
|                                                                     |
```

```
|-----------------|  |-----------------|  |-----------------|
|        oo       |  |        oo       |  |        oo       |
| 2#16            |  | 2#16            |  | 2#16            |
|                 |  |                 |  |                 |
|                 |  |                 |  |                 |
|-----------------|  |-----------------|  |-----------------|
```

B E A M   N O. 143   D E S I G N   R E S U L T S - FLEXURE

LEN -   600. MM FY -   414. FC -   25. MPA, SIZE - 530. X 300. MMS

LEVEL   HEIGHT   BAR INFO   FROM   TO   ANCHOR
         (MM)   (MM)   (MM)   STA END
_____

   1   214.   2 - 16MM   0.   600.   YES YES
```
|-------------------------------------------------------------------|
|  CRITICAL NEG MOMENT=     14.61 KN-MET  AT      0.MM, LOAD    1 |
|  REQD STEEL=   379.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033  |
|  MAX/MIN/ACTUAL BAR SPACING=   412./   41./  412. MMS          |
|  BASIC/REQD. DEVELOPMENT LENGTH =   316./   478. MMS           |
|-------------------------------------------------------------------|
```

B E A M   N O. 143   D E S I G N   R E S U L T S - SHEAR

AT START SUPPORT - Vu=   8.75 KNS Vc=   92.24 KNS Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
AT END   SUPPORT - Vu=   8.75 KNS Vc=   92.24 KNS Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.

```
___150J_____599X 529X 299_____151J____
|                                                                     |
|                                                                     |
||=========================================================||
| 2No16 H 214.   0.TO  600                                             |
|                                                                     |
|                                                                     |
|                                                                     |
```

```
 _____       __         _____       __       _____
|                      |     |  |       |                  |     |  |     |                      |
|        oo            |     |  |       |       oo         |     |  |     |        oo            |
|                      |     |  |       |                  |     |  |     |                      |
| 2#16                 |     |  | 2#16  |                  |     |  | 2#16 |                      |
|                      |     |  |       |                  |     |  |     |                      |
|                      |     |  |       |                  |     |  |     |                      |
| _____|    |  |       |_____|    |  |     |_____|
```

B E A M N O. 144 D E S I G N R E S U L T S - FLEXURE

LEN - 600. MM FY - 414. FC - 25. MPA, SIZE - 530. X 300. MMS

LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANCHOR STA	END
1	214.	2 - 16MM	0.	600.	YES	YES

```
|--------------------------------------------------------------------|
|   CRITICAL NEG MOMENT=      9.36 KN-MET  AT     0.MM, LOAD   1      |
|   REQD STEEL=   379.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033      |
|   MAX/MIN/ACTUAL BAR SPACING=   412./   41./  412. MMS              |
|   BASIC/REQD. DEVELOPMENT LENGTH =   316./   478. MMS               |
|--------------------------------------------------------------------|
```

B E A M N O. 144 D E S I G N R E S U L T S - SHEAR

```
AT START SUPPORT - Vu=  10.29 KNS  Vc=  92.24 KNS  Vs=    .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
AT END   SUPPORT - Vu=  10.29 KNS  Vc=  92.24 KNS  Vs=    .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
```

```
 ___151J_____       599X 529X  299_____152J_____
|                                                                              |
|                                                                              |
| |===========================================================================| |
| 2No16 H 214.   0.TO  600                                                      |
|                                                                              |
|                                                                              |
|                                                                              |
|_____|
```

```
 _____       __         _____       __       _____
|                      |     |  |       |                  |     |  |     |                      |
|        oo            |     |  |       |       oo         |     |  |     |        oo            |
|                      |     |  |       |                  |     |  |     |                      |
| 2#16                 |     |  | 2#16  |                  |     |  | 2#16 |                      |
|                      |     |  |       |                  |     |  |     |                      |
|                      |     |  |       |                  |     |  |     |                      |
|_____|     |  |       |_____|     |  |     |_____|
```

B E A M N O. 161 D E S I G N R E S U L T S - FLEXURE

LEN - 600. MM FY - 414. FC - 25. MPA, SIZE - 530. X 300. MMS

LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANCHOR STA	END
1	216.	4 - 12MM	0.	600.	YES	YES

11-255

```
|-------------------------------------------------------------------|
|   CRITICAL NEG MOMENT=      32.59 KN-MET  AT      0.MM, LOAD   1 |
|   REQD STEEL=    420.MM2, ROW= .0037, ROWMX= .0194 ROWMN= .0033  |
|   MAX/MIN/ACTUAL BAR SPACING=    416./   37./  139. MMS          |
|   BASIC/REQD. DEVELOPMENT LENGTH =   177./   359. MMS            |
|-------------------------------------------------------------------|
```

B E A M   N O. 161   D E S I G N   R E S U L T S - SHEAR

AT START SUPPORT - Vu=   12.05 KNS Vc=   92.24 KNS Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
AT END   SUPPORT - Vu=   12.05 KNS Vc=   92.24 KNS Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.

```
    169J_____    599X 529X  299_____  170J____
   |                                                                      |
   |                                                                      |
   ||==================================================================|| |
   | 4No12 H 216.   0.TO   600                                           |
   |                                                                      |
   |                                                                      |
   |                                                                      |
   |                                                                      |
   |_____|


    _____       _____       _____
   |                   | |   | |                 | |   | |                 |
   |       oooo        | |   | |      oooo        | |   | |      oooo       |
   |                   | |   | |                 | |   | |                 |
   | 4#12              | |   | | 4#12            | |   | | 4#12            |
   |                   | |   | |                 | |   | |                 |
   |                   | |   | |                 | |   | |                 |
   |                   | |   | |                 | |   | |                 |
   |_____| |   |_|_____|_|   |_|_____|
```

B E A M   N O. 162   D E S I G N   R E S U L T S - FLEXURE

LEN -   600. MM FY -   414. FC -   25. MPA, SIZE -   530. X 300. MMS

LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANCHOR STA END
1	214.	2 - 16MM	0.	600.	YES YES

```
|-------------------------------------------------------------------|
|   CRITICAL NEG MOMENT=      25.36 KN-MET  AT      0.MM, LOAD   1 |
|   REQD STEEL=    379.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033  |
|   MAX/MIN/ACTUAL BAR SPACING=    412./   41./  412. MMS          |
|   BASIC/REQD. DEVELOPMENT LENGTH =   316./   478. MMS            |
|-------------------------------------------------------------------|
```

B E A M   N O. 162   D E S I G N   R E S U L T S - SHEAR

AT START SUPPORT - Vu=   15.61 KNS Vc=   92.24 KNS Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
AT END   SUPPORT - Vu=   15.61 KNS Vc=   92.24 KNS Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.

```
    170J_____    599X 529X  299_____  171J____
   |                                                                      |
   |                                                                      |
   ||==================================================================|| |
   | 2No16 H 214.   0.TO   600                                           |
   |                                                                      |
   |                                                                      |
   |                                                                      |
   |                                                                      |
   |_____|
```

11-256

```
 ------------------     |  | ------------------    |  | ------------------
|                   |   |  ||                  |   |  ||                  |
|                   |   |  ||                  |   |  ||                  |
|            oo     |   |  ||           oo     |   |  ||          oo      |
|                   |   |  ||                  |   |  ||                  |
| 2#16              |   |  || 2#16             |   |  || 2#16             |
|                   |   |  ||                  |   |  ||                  |
|                   |   |  ||                  |   |  ||                  |
|                   |   |  ||                  |   |  ||                  |
 ------------------     |  | ------------------    |  | ------------------
```

B E A M   N O. 163   D E S I G N   R E S U L T S - FLEXURE

LEN -   600. MM FY - 414. FC - 25. MPA, SIZE - 530. X 300. MMS

LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANCHOR STA	END
1	214.	2 - 16MM	0.	600.	YES	YES

```
|------------------------------------------------------------------------|
|   CRITICAL NEG MOMENT=      16.00 KN-MET   AT      0.MM, LOAD   1  |
|   REQD STEEL=    379.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033  |
|   MAX/MIN/ACTUAL BAR SPACING=    412./   41./   412. MMS         |
|   BASIC/REQD. DEVELOPMENT LENGTH =    316./   478. MMS           |
|------------------------------------------------------------------------|
```

B E A M   N O. 163   D E S I G N   R E S U L T S - SHEAR

AT START SUPPORT - Vu=   5.12 KNS Vc=   92.24 KNS Vs=   .00 KNS
                STIRRUPS ARE NOT REQUIRED.
AT END   SUPPORT - Vu=   5.12 KNS Vc=   92.24 KNS Vs=   .00 KNS
                STIRRUPS ARE NOT REQUIRED.

```
____171J_____599X 529X  299_____172J____
|                                                                   |
||==================================================================||
| 2No16 H 214.   0.TO   600                                          |
|                                                                   |
|                                                                   |
|                                                                   |
```

```
 ------------------     |  | ------------------    |  | ------------------
|                   |   |  ||                  |   |  ||                  |
|                   |   |  ||                  |   |  ||                  |
|            oo     |   |  ||           oo     |   |  ||          oo      |
|                   |   |  ||                  |   |  ||                  |
| 2#16              |   |  || 2#16             |   |  || 2#16             |
|                   |   |  ||                  |   |  ||                  |
|                   |   |  ||                  |   |  ||                  |
|                   |   |  ||                  |   |  ||                  |
 ------------------     |  | ------------------    |  | ------------------
```

B E A M   N O. 164   D E S I G N   R E S U L T S - FLEXURE

LEN -   600. MM FY - 414. FC - 25. MPA, SIZE - 530. X 300. MMS

LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANCHOR STA	END
1	214.	2 - 16MM	0.	600.	YES	YES

11-257

```
|----------------------------------------------------------------------|
|   CRITICAL NEG MOMENT=      12.93 KN-MET  AT      0.MM, LOAD   1 |
|   REQD STEEL=   379.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 |
|   MAX/MIN/ACTUAL BAR SPACING=    412./   41./  412. MMS          |
|   BASIC/REQD. DEVELOPMENT LENGTH =   316./   478. MMS            |
|----------------------------------------------------------------------|
```
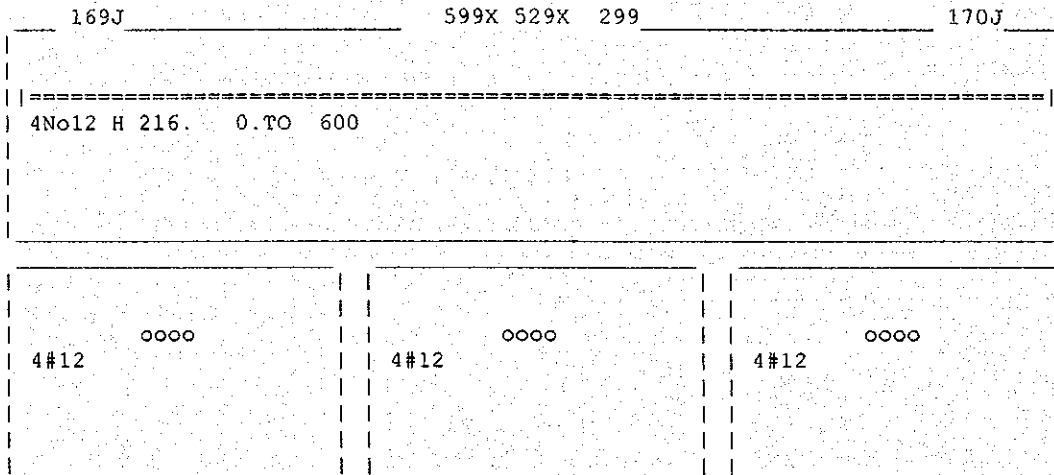
             B E A M   N O. 164   D E S I G N   R E S U L T S - SHEAR

AT START SUPPORT - Vu=   .09 KNS Vc=   92.24 KNS Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
   AT END   SUPPORT - Vu=   .09 KNS Vc=   92.24 KNS Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.

```
    172J                          599X 529X  299                    173J
 |-------------------------------------------------------------------|
 |                                                                   |
 ||===================================================================||
 | 2No16 H 214.    0.TO   600                                         |
 |                                                                   |
 |                                                                   |
 |                                                                   |
 |-------------------------------------------------------------------|

 |----------------------|  |-------------------|  |-------------------|
 |                      |  |                   |  |                   |
 |          oo          |  |        oo         |  |        oo         |
 | 2#16                 |  | 2#16              |  | 2#16              |
 |                      |  |                   |  |                   |
 |                      |  |                   |  |                   |
 |----------------------|  |-------------------|  |-------------------|
```

             B E A M   N O. 251   D E S I G N   R E S U L T S - FLEXURE

LEN -   530. MM FY - 414. FC - 25. MPA, SIZE - 600. X 300. MMS

LEVEL   HEIGHT   BAR INFO   FROM   TO   ANCHOR
           (MM)   (MM)   (MM)   STA END

    1   216.   7 - 12MM   0.   530.   YES   YES
```
|----------------------------------------------------------------------|
|   CRITICAL NEG MOMENT=      56.38 KN-MET  AT      0.MM, LOAD   1 |
|   REQD STEEL=   741.MM2, ROW= .0057, ROWMX= .0194 ROWMN= .0033 |
|   MAX/MIN/ACTUAL BAR SPACING=    486./   37./   81. MMS          |
|   BASIC/REQD. DEVELOPMENT LENGTH =   177./   359. MMS            |
|----------------------------------------------------------------------|
```
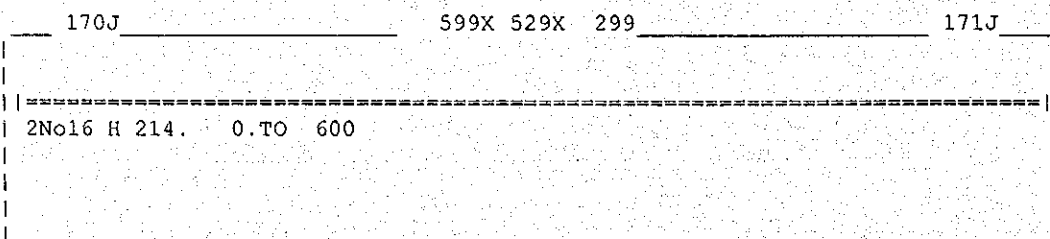
             B E A M   N O. 251   D E S I G N   R E S U L T S - SHEAR

AT START SUPPORT - Vu=   56.32 KNS Vc= 104.42 KNS Vs=   .00 KNS
                   PROVIDE 12 MM BARS AT 105. MM C/C FOR   530. MM
   AT END   SUPPORT - Vu=   56.32 KNS Vc= 104.42 KNS Vs=   .00 KNS
                   PROVIDE 12 MM BARS AT 105. MM C/C FOR   530. MM

```
      7J                          529X 599X  299                     28J
 |-------------------------------------------------------------------|
 |                                                                   |
 ||===================================================================||
 | 7No12cHc216.    0.TO   530                       7*12c/c105        |
 |                                                                   |
 |                                                                   |
 |                                                                   |
 |-------------------------------------------------------------------|
```

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    |                             | |  |                          | |  |                            |
    |                             | |  |                          | |  |                            |
    |      ooooooo                | |  |     ooooooo              | |  |      ooooooo               |
    | 7#12                        | |  | 7#12                     | |  | 7#12                       |
    |                             | |  |                          | |  |                            |
    |                             | |  |                          | |  |                            |
    |                             | |  |                          | |  |                            |
```

B E A M   N O. 252   D E S I G N   R E S U L T S - FLEXURE

LEN -   530. MM   FY - 414.   FC - 25. MPA, SIZE - 600. X 300. MMS

LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANCHOR STA	END
1	216.	4 - 12MM	0.	530.	YES	YES

```
|-------------------------------------------------------------------|
|    CRITICAL NEG MOMENT=     26.53 KN-MET  AT     0.MM, LOAD   1    |
|    REQD STEEL=   433.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033    |
|    MAX/MIN/ACTUAL BAR SPACING=   486./   37./  162. MMS            |
|    BASIC/REQD. DEVELOPMENT LENGTH =   177./   359. MMS             |
|-------------------------------------------------------------------|
```

B E A M   N O. 252   D E S I G N   R E S U L T S - SHEAR

AT START SUPPORT - Vu=   36.82 KNS   Vc= 104.42 KNS   Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
AT END   SUPPORT - Vu=   36.82 KNS   Vc= 104.42 KNS   Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.

```
___28J_____529X 599X  299_____49J____
|                                                                          |
|                                                                          |
||========================================================================||
| 4No12 H 216.   0.TO   530                                                 |
|                                                                          |
|                                                                          |
|                                                                          |
|                                                                          |
```

```
    |                             | |  |                          | |  |                            |
    |                             | |  |                          | |  |                            |
    |      oooo                   | |  |     oooo                 | |  |      oooo                  |
    | 4#12                        | |  | 4#12                     | |  | 4#12                       |
    |                             | |  |                          | |  |                            |
    |                             | |  |                          | |  |                            |
    |                             | |  |                          | |  |                            |
```

B E A M   N O. 253   D E S I G N   R E S U L T S - FLEXURE

LEN -   530. MM   FY - 414.   FC - 25. MPA, SIZE - 600. X 300. MMS

LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANCHOR STA	END
1	84.	4 - 12MM	0.	530.	YES	YES

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```
|---------------------------------------------------------------|
|   CRITICAL POS MOMENT=       4.23 KN-MET  AT     530.MM, LOAD   1 |
|   REQD STEEL=   433.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 |
|   MAX/MIN/ACTUAL BAR SPACING=    486./   37./  162. MMS        |
|   BASIC/REQD. DEVELOPMENT LENGTH =   177./   343. MMS          |
|---------------------------------------------------------------|


    2       216.     4 - 12MM          0.          530.      YES  YES
|---------------------------------------------------------------|
|   CRITICAL NEG MOMENT=       7.02 KN-MET  AT      0.MM, LOAD   1 |
|   REQD STEEL=   433.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 |
|   MAX/MIN/ACTUAL BAR SPACING=    486./   37./  162. MMS        |
|   BASIC/REQD. DEVELOPMENT LENGTH =   177./   359. MMS          |
|---------------------------------------------------------------|
```

B E A M   N O. 253   D E S I G N   R E S U L T S - SHEAR

```
AT START SUPPORT - Vu=   21.24 KNS  Vc=  104.42 KNS  Vs=     .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
AT END    SUPPORT - Vu=   21.24 KNS  Vc=  104.42 KNS  Vs=     .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
```

```
___49J_____529X 599X  299_____70J____
|                                                                      |
|                                                                      |
| |====================================================================| |
| 4No12 H 284.   0.TO   530                                           | |
| |====================================================================| |
|                                                                      |
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|                                                                      |
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|              | |      | |              | |    | |              |    |
|              | |      | |              | |    | |              |    |
|     0000     | |      | |     0000     | |    | |     0000     |    |
| 4#12         | |      | | 4#12         | |    | | 4#12         |    |
|     0000     | |      | |     0000     | |    | |     0000     |    |
|              | |      | |              | |    | |              |    |
|              | |      | |              | |    | |              |    |
|_____| |_____| |_____| |____| |_____|____|
```

B E A M   N O. 254   D E S I G N   R E S U L T S - FLEXURE

```
LEN -   530. MM  FY - 414.  FC - 25.  MPA, SIZE - 600. X  300. MMS

LEVEL    HEIGHT    BAR INFO      FROM          TO          ANCHOR
         (MM)                    (MM)          (MM)        STA  END


    1       84.     4 - 12MM          0.          530.      YES  YES
|---------------------------------------------------------------|
|   CRITICAL POS MOMENT=       9.28 KN-MET  AT     530.MM, LOAD   1 |
|   REQD STEEL=   433.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 |
|   MAX/MIN/ACTUAL BAR SPACING=    486./   37./  162. MMS        |
|   BASIC/REQD. DEVELOPMENT LENGTH =   177./   343. MMS          |
|---------------------------------------------------------------|
```

B E A M   N O. 254   D E S I G N   R E S U L T S - SHEAR

```
AT START SUPPORT - Vu=    9.52 KNS  Vc=  104.42 KNS  Vs=     .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
AT END    SUPPORT - Vu=    9.52 KNS  Vc=  104.42 KNS  Vs=     .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
```

```
      70J                        529X 599X  299                        91J
  |                                                                        |
  |                                                                        |
  |                                                                        |
  | 4No12 H  84.   0.TO   530                                              |
  |==========================================================================|
  |                                                                        |
  |                                                                        |
  |                                                                        |
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  |                        | | |                        | | |                        |
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  | 4#12                   | | | 4#12                   | | | 4#12                   |
  |        oooo            | | |        oooo            | | |        oooo            |
  |                        | | |                        | | |                        |
  |                        | | |                        | | |                        |
  |_____| | |_____| | |_____|
```

B E A M   N O.   261   D E S I G N   R E S U L T S - FLEXURE

LEN -   530. MM FY - 414. FC - 25. MPA, SIZE - 600. X 300. MMS

LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANCHOR STA	END
1	216.	7 - 12MM	0.	530.	YES	YES

```
|--------------------------------------------------------------------------|
|   CRITICAL NEG MOMENT=    56.46 KN-MET  AT      0.MM, LOAD   1 |
|   REQD STEEL=   742.MM2, ROW=  .0057, ROWMX=  .0194 ROWMN= .0033 |
|   MAX/MIN/ACTUAL BAR SPACING=    486./   37./   81. MMS          |
|   BASIC/REQD. DEVELOPMENT LENGTH =   177./   359. MMS            |
|--------------------------------------------------------------------------|
```

B E A M   N O.   261   D E S I G N   R E S U L T S - SHEAR

AT START SUPPORT - Vu=   53.74 KNS Vc= 104.42 KNS Vs=   .00 KNS
                   PROVIDE 12 MM BARS AT 105. MM C/C FOR   530. MM
AT END   SUPPORT - Vu=   53.74 KNS Vc= 104.42 KNS Vs=   .00 KNS
                   PROVIDE 12 MM BARS AT 105. MM C/C FOR   530. MM

```
       8J                        529X 599X  299                        29J
  |                                                                        |
  |                                                                        |
  |==========================================================================|
  | 7No12cHc216.   0.TO   530                            7*12c/c105 |
  |                                                                        |
  |                                                                        |
  |                                                                        |
```

```
  |                        | | |                        | | |                        |
  |                        | | |                        | | |                        |
  |        ooooooo         | | |        ooooooo         | | |        ooooooo         |
  | 7#12                   | | | 7#12                   | | | 7#12                   |
  |                        | | |                        | | |                        |
  |                        | | |                        | | |                        |
  |_____| | |_____| | |_____|
```

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B E A M   N O. 262   D E S I G N   R E S U L T S -   FLEXURE

LEN -   530. MM   FY -   414.   FC -   25.   MPA, SIZE -   600. X   300. MMS

LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANCHOR STA END
1	216.	4 - 12MM	0.	530.	YES YES

```
|-------------------------------------------------------------------|
|   CRITICAL NEG MOMENT=     27.98 KN-MET  AT      0.MM, LOAD   1    |
|   REQD STEEL=   433.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033     |
|   MAX/MIN/ACTUAL BAR SPACING=    486./   37./  162. MMS            |
|   BASIC/REQD. DEVELOPMENT LENGTH =   177./   359. MMS              |
|-------------------------------------------------------------------|
```

B E A M   N O. 262   D E S I G N   R E S U L T S -   SHEAR

AT START SUPPORT - Vu=   34.98 KNS   Vc= 104.42 KNS   Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
AT END   SUPPORT - Vu=   34.98 KNS   Vc= 104.42 KNS   Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.

```
    29J                      529X 599X  299                        50J
|                                                                      |
||==================================================================== |
| 4No12 H 216.   0.TO   530                                             |
|                                                                      |
|                                                                      |
|                                                                      |
```

```
|             |  |             |  |             |
|    oooo     |  |    oooo     |  |    oooo     |
| 4#12        |  | 4#12        |  | 4#12        |
|             |  |             |  |             |
|             |  |             |  |             |
|             |  |             |  |             |
```

B E A M   N O. 263   D E S I G N   R E S U L T S -   FLEXURE

LEN -   530. MM   FY -   414.   FC -   25.   MPA, SIZE -   600. X   300. MMS

LEVEL	HEIGHT (MM)	BAR INFO	FROM (MM)	TO (MM)	ANCHOR STA END
1	84.	4 - 12MM	121.	530.	NO YES

```
|-------------------------------------------------------------------|
|   CRITICAL POS MOMENT=      1.15 KN-MET  AT   530.MM, LOAD   1     |
|   REQD STEEL=   433.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033     |
|   MAX/MIN/ACTUAL BAR SPACING=    486./   37./  162. MMS            |
|   BASIC/REQD. DEVELOPMENT LENGTH =   177./   343. MMS              |
|-------------------------------------------------------------------|
```

| 2 | 216. | 4 - 12MM | 0. | 530. | YES   YES |

```
|-------------------------------------------------------------------|
|   CRITICAL NEG MOMENT=      9.44 KN-MET  AT      0.MM, LOAD   1    |
|   REQD STEEL=   433.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033     |
|   MAX/MIN/ACTUAL BAR SPACING=    486./   37./  162. MMS            |
|   BASIC/REQD. DEVELOPMENT LENGTH =   177./   359. MMS              |
|-------------------------------------------------------------------|
```

B E A M   N O. 263   D E S I G N   R E S U L T S - SHEAR

AT START SUPPORT - Vu=   19.99 KNS   Vc= 104.42 KNS   Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
AT END   SUPPORT - Vu=   19.99 KNS   Vc= 104.42 KNS   Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.

```
 ___ 50J_____  529X 599X  299_____ 71J____
|                                                                         |
|                                                                         |
||=======================================================================|||
| 4No12 H 216.   04No12SHO 84. 121.TO   530                               |
|    ========================================================================|||
|                                                                         |
|                                                                         |
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|                         | |                   | |                  |
|           oooo          | |         oooo       | |       oooo       |
| 4#12                    | | 4#12               | | 4#12             |
|                         | |         oooo       | |       oooo       |
|                         | |                    | |                  |
|                         | |                    | |                  |
|_____| |_____| |_____|
```

B E A M   N O. 264   D E S I G N   R E S U L T S - FLEXURE

LEN - 530. MM FY - 414. FC - 25. MPA, SIZE - 600. X 300. MMS

LEVEL   HEIGHT   BAR INFO   FROM   TO   ANCHOR
          (MM)   (MM)   (MM)   STA END

```
  1        84.     4 - 12MM         0.         530.        YES  YES
|-----------------------------------------------------------------|
|   CRITICAL POS MOMENT=      5.94 KN-MET   AT   530.MM, LOAD   1  |
|   REQD STEEL=   433.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033   |
|   MAX/MIN/ACTUAL BAR SPACING=   486./   37./  162. MMS           |
|   BASIC/REQD. DEVELOPMENT LENGTH =   177./   343. MMS            |
|-----------------------------------------------------------------|
```

B E A M   N O. 264   D E S I G N   R E S U L T S - SHEAR

AT START SUPPORT - Vu=   9.04 KNS   Vc= 104.42 KNS   Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.
AT END   SUPPORT - Vu=   9.04 KNS   Vc= 104.42 KNS   Vs=   .00 KNS
                   STIRRUPS ARE NOT REQUIRED.

```
 ___ 71J_____  529X 599X  299_____ 92J____
|                                                                         |
|                                                                         |
|                                                                         |
| 4No12 H  84.   0.TO  530                                                |
||=======================================================================|||
|                                                                         |
|                                                                         |
|                                                                         |
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|                         | |                   | |                  |
|                         | |                   | |                  |
| 4#12                    | | 4#12              | | 4#12             |
|           oooo          | |         oooo      | |       oooo       |
|                         | |                   | |                  |
|                         | |                   | |                  |
|_____| |_____| |_____|
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```
*********************END OF BEAM DESIGN************************
```

246. END CON DESIGN
247. FINISH

```
*************** END OF STAAD-III ***************

**** DATE= JAN 30,2000   TIME=  9:17:34 ****

***************************************************************
*          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       *
***************************************************************
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