

\$-----READING

ETABS 6.0

3F RC-FRAME BUILDING STRUCTURE ANALYSIS

UNIT : KG-METER

T.H. CHENG STRUCTURAL ENGINEERING & ASSOCIATES

\$----- (1) CONTROL DATA

\$ NST NMD NDF NTF NMS NLD NPR NMT NC NB NF NBR NPP NSP IL ID IS IP IR ISL IU  
4 1 1 1 4 4 60 4 4 7 3 1 2 0 0 2 0 1 0 1 2  
\$ GRAV EVT CUT PDFAC PROFILE  
9.8 0.0001 0.01 1

\$----- (2) MASS DATA

\$ MID NSEG SF  
\$ MTYPE AM XC YC BB DD ANG  
1 1 1/9.81 \$PFL  
RECT 1100 10.725 8.075 2.75 5.15 90  
2 1 1/9.81 \$RFL  
RECT 1200 11.17 8.075 13.75 5.15 90 \$1  
3 4 1/9.81 \$3FL  
RECT 1250 2.15 8.95 4.30 6.9 90 \$1  
RECT 1250 11.17 8.075 13.75 5.15 90 \$1  
RECT 1250 14.125 2.75 4.05 5.50 90 \$1  
RECT 1250 10.725 4.225 2.75 2.55 90 \$1  
4 4 1/9.81 \$2FL  
RECT 1250 2.15 8.95 4.30 6.9 90 \$1  
RECT 1250 11.17 8.075 13.75 5.15 90 \$1  
RECT 1250 14.125 2.75 4.05 5.50 90 \$1  
RECT 1250 10.725 4.225 2.75 2.55 90 \$1

\$----- (3) STORY DATA

\$ SID SH NDIA  
\$ ND IMST OMASS DMMI XM YM DKX DKY DKR  
PF 3.2 1  
1 1  
RF 3.2 1  
1 2  
3F 3.2 1  
1 3  
2F 3.5 1  
1 4

\$ (4) MATERIAL PROPERTY

\$ MID MTYPE E U W M ALPHA DP1 DP2 DP3  
1 C 2.1E09 0.17 2400  
2 W 0.2E09 0.17 2400

3	C	2.1E09	0.17	0
4	O	2.1E-2	0.17	2400

\$------(5-1) COLUMN SECTION PROPERTY DATA

\$ ID	ITYPE	IMAT	DMAJ	DMIN	TF	TW
1	RECT	1	0.30	0.50		
2	RECT	1	0.50	0.30		
3	RECT	1	0.30	0.30		
4	RECT	1	0.15	0.50		

\$------(5-2) BEAM SECTION PROPERTY DATA

\$ ID	ITYPE	IMAT	DBMAJ	DAMAJ	DMIN	TF	TW
1	RECT	1	0.50	0.000	0.30		
2	RECT	1	0.50	0.000	0.30		
3	RECT	1	0.50	0.000	0.30		
4	RECT	1	0.40	0.000	0.25		
5	RECT	3	0.80	0.000	0.30		
6	RECT	3	0.80	0.000	0.30		
7	RECT	1	0.45	0.000	0.35		

\$------(5-3) FLOOR PROPERTY DATA

\$ ID	ITYPE	IMAT	T11	T22	T12
1	MEMB	1	0.15		
2	MEMB	1	0.00001		
3	MEMB	1	0.20		

\$------(5-4) BRACE PROPERTY DATA

\$ ID	ITYPE	IMAT	DMAJ	DMIN	TF	TW
1	I-SECT	3	0.400	0.200	0.012	0.008

\$------(5-5) PANEL PROPERTY DATA

\$ ID	ITYPE	IMAT	TV	TH	TSHR	BI	DI	BJ	DJ
1	MEMB	2	0.15						
2	MEMB	2	0.40						

\$------(5-6) SPRING/LINK PROPERTY DATA

\$ ID	ITYPE
\$	K1 K2 K3 K11 K22 K33

\$------(6-1) FRAME CONTROL DATA

/MAIN FRAME/

\$ NF	NC	NB	NF	NJLP	NBLP	NFLP	IJ	MBR	MPAN	MLNK	MCONL
1	21	29	13	10	9	8	1	0	60	0	4

\$------(6-2) COLUMN LINE COORDINATES AND ORIENTATION

\$ N	XC	YC	TC
1	12.100	0.000	0.000
2	16.150	0.000	0.000
3	9.3500	2.950	0.000

4	12.10	2.950	0.000
5	0.00	5.500	0.000
6	4.30	5.500	0.000
7	9.35	5.500	0.000
8	12.1	5.500	0.000
9	14.200	5.500	0.000
10	16.150	5.500	0.000
11	18.050	5.500	0.000
12	0.000	7.200	0.00
13	4.300	7.200	0.000
14	0.00	10.650	0.000
15	4.300	10.650	0.000
16	9.350	10.650	0.000
17	12.100	10.650	0.000
18	14.20	10.650	0.000
19	18.050	10.650	0.000
20	0.000	12.400	0.000
21	4.300	12.400	0.000

\$----- (6-3) BAY CONNECTIVITY

\$ 1 IC JC ISLOPE

1	1	2	0
2	3	4	0
3	5	6	0
4	6	7	0
5	7	8	0
6	8	9	0
7	9	10	0
8	10	11	0
9	14	15	0
10	15	16	0
11	16	17	0
12	17	18	0
13	18	19	0
14	5	12	0
15	12	14	0
16	14	20	0
17	6	13	0
18	13	15	0
19	15	21	0
20	3	7	0
21	7	16	0

22	1	4	0
23	4	8	0
24	8	17	0
25	9	18	0
26	2	10	0
27	11	19	0
28	12	13	0
29	20	21	0

\$----- (6-4) FLOOR BAY CONNECTIVITY

\$ N	IC	JC	KC	LC	ISLOPE	NSF	NBAY
01	1	2	4	9	0	0	0
02	2	9	10	10	0	0	0
03	3	4	7	8	0	0	0
04	5	6	12	13	0	0	0
05	12	13	14	15	0	0	0
06	6	7	13	16	0	0	0
07	13	15	16	16	0	0	0
08	7	8	16	17	0	0	0
09	8	9	17	18	0	0	0
10	9	10	18	19	0	0	0
11	10	11	19	19	0	0	0
12	14	15	20	21	0	0	0
13	4	8	9	9	0	0	0

\$----- (6-5) JOINT LOAD PATT

\$ N	F	FX	FY	MX	MY	MZ
1	3750					
2	750					
3	490					
4	230					
5	1265					
6	590					
7	1550					
8	230					
9	3110					
10	460					

\$----- (6-6) BEAM LOAD PATTERNS

\$ N	NCON	W1	L1	W2	L2	W3	L3	W4	L4
\$ D1	P1	D2	P2	D3	P3	D4	P4		
\$ 1	2	0							
\$	-0.352		8226		-0.69		8226		
\$	H=1.45M,Q=0.28								

1	0	700
2	0	850
3	0	1200
4	0	300
5	0	1000
6	0	330
7	0	-17000
8	0	-30000
9	0	-20000

\$----- (6-7) FLOOR LOAD PATTERNS

\$ N	W	WX	WY
1	120	\$2F~5F	DL
2	200	\$2F~5F	LL
3	250	\$RF	DL
4	150	\$RF	LL
5	500		
6	200		
7	800		
8	200		

\$----- (6-8) JOINT ASSIGNMENTS(DIAPHRAGM AND SPRINGS)

\$ NC1	NC2	NSAME	SD1	SD2	IDIA	ISPR
\$ 27	29	0	P1	P1	1	
\$ 33	33	0	RF	RF	0	

\$----- (6-9) COLUMN ASSIGNMENTS

\$ NC1	NC2	NSAME	SD1	SD2	ID	IPMAJ	IPMIN
\$20	21	0	2F	2F	4	3	3
1	2	0	3F	2F	1		
6	6	0	3F	2F	1		
7	7	0	3F	2F	2		
8	8	0	3F	2F	1		
11	12	0	3F	2F	1		
14	14	0	3F	2F	1		
15	16	0	3F	2F	2		
18	19	0	3F	2F	2		
6	6	0	RF	RF	1		
7	7	0	RF	RF	2		
8	8	0	RF	RF	1		
11	11	0	RF	RF	1		
15	15	0	RF	RF	2		
16	16	0	RF	RF	2		

18	19	0	RF	RF	2
5	5	0	2F	2F	1
12	12	0	2F	2F	0
7	8	0	PF	PF	3
16	17	0	PF	PF	3

\$----- (6-10) BEAM ASSIGNMENTS

\$	NB1	NB2	NSAME	SD1	SD2	ID	IPMAJ	IPMIN	IPI	IPJ
	1	29	0	3F	2F	1				
	24	24	0	3F	3F	1	2	2		
	4	8	0	RF	RF	2				
	10	13	0	RF	RF	2				
	17	18	0	RF	RF	2				
	21	21	0	RF	RF	2				
	24	25	0	RF	RF	2				
	27	27	0	RF	RF	2				
	5	5	0	PF	PF	1				
	11	11	0	PF	PF	1				
	21	21	0	PF	PF	1				
	24	24	0	PF	PF	1				
	28	28	0	2F	2F	0				

\$----- (6-11) FLOOR ASSIGNMENTS

\$	NF1	NF2	NSAME	SD1	SD2	ID
	1	13	0	3F	2F	1
	6	11	0	RF	RF	1
	8	8	0	PF	PF	1

\$----- (6-12) BRACE ASSIGNMENTS

\$	NBR	SD1	SD2	IL	IU	ID	IPMAJ	IPMIN	ISLOPE
	3	R1FL	R1FL	8	43	1			
	4	R1FL	R1FL	21	20	1			

\$----- (6-14) PANEL ASSIGNMENTS

\$	NL	SD1	SD2	I	1	2C	JC	ID
	1	2F	2F	3	4			1
	2	2F	2F	4	5			1
	1	3F	3F	25	26			1
	2	3F	3F	7	17			1
	3	3F	3F	17	26			1

\$----- (6-12) LINK ASSIGNMENTS

\$ NL SD1 SD2 IL IU ID IPMAJ IPMIN ISLOPE  
\$----- (6-15) JOINT LOAD ASSIGNMENTS

\$ NC1 NC2 NSAME SD1 SD2 LI LII LIII LA LB LC  
\$ 8 8 0 RFL RFL 1 2  
\$ 10 10 0 RFL RFL 1 2

\$----- (6-16) BEAM LOAD ASSIGNMENTS

\$ NB1 NB2 NSAME SD1 SD2 LI LII LIII  
1 29 0 3F 2F 1  
\$ 4 8 0 RF RF 3 4  
\$ 10 13 0 RF RF 3 4  
\$ 17 18 0 RF RF 3 4  
\$ 27 27 0 RF RF 3 4  
21 21 0 PF PF 5 6  
24 24 0 PF PF 5 6

\$----- (6-17) FLOOR LOAD ASSIGNMENTS

\$ NF1 NF2 NSAME SD1 SD2 LI LII LIII LA LB LC  
1 13 0 RF RF 3 4  
1 13 0 3F 2F 1 2  
12 12 0 2F 2F 5 6  
8 8 0 PF PF 4 5

\$----- (7) FRAME LOCATION DATA

\$ IF XN YN TN FHED  
1 0 0 0 /MAIN FRAME/

\$----- (8) STATIC LATERAL LOAD DATA

\$ USER DEFINED LATERAL STATIC LOADS

\$ SID ND LC FX FY X Y MZ  
\$ RFL 1 A 11800 0 1.92 6.32 7458  
\$ 4FL 1 A 16400 0 1.92 8.75 14350  
\$ RFL 1 B 0 11800 1.92 6.32 2266  
\$ 4FL 1 B 0 16400 1.92 8.75 3149  
\$ 3FL 1 B 0 11400 1.92 8.75 2189  
\$

CODED SPECTRUM [C=1/8T^(1/2)]

\$ SPECFILE SF IPRN ( Z=0.33 I=1.00 R=4.0 ITYPE=2 ISORT=2 )

\$----- (9) DYNAMIC SPECTRUM DAT

\$ ANG ICQC DAMP  
0 CQC 0.05

\$ SPECFILE SF1 IPRN

SPE95.OUT 9.8 1 1

SPE95.OUT 9.8 1 1

\$----- (11) DATA CASE DEFINITION DATA

\$ L LTYPE XI XII XIII XA XB XC XD1 XD2 XD3

1 0 1

2 0 0 1

3 0 0 0 0 0 0 0 1

4 0 0 0 0 0 0 0 0 1

\$ END OF INPUT DATA