

結構系統:

一、構架

本建築物 1F~2F~R1F 採用鋼筋混凝土建造(梁柱韌性立體剛構架)。

二、樓版

2F~R1F                    15 cm R.C. 版

三、基礎

採筏式基礎設計。

壹、分析方法:

一、依彈性構架理論,以勁度法分析構架應力及應變。

二、分析程式及設計：

- 1. 構架採用 CSI-ETABS 程式分析。
- 2. 採用強度設計法 (USD),並考慮韌性設計。
- 3. 設計規範：
  - a.內政部營建署『建築技術規則』
  - b.內政部營建署『結構混凝土工程設計規範』(土木 401-86a)
  - c.內政部營建署『建築物耐震設計規範及解說』(94 年)
  - d. ACI『Building Code Requirements for structural Concrete』ACI 318-99

貳、設計載重 (T/m<sup>2</sup>)

R1FL			
	1. 15cm 鋼筋混凝土版		0.360
	2. 防水層		0.030
	3. 1.5cm 水泥砂漿粉光		0.020
	4. 天花及其他		0.030
<hr/>			
	靜載重 (D.L.)	合計=	0.440
	活載重 (L.L.)	=	0.200
	水箱載重(TON)	=	2.000
2FL			
	1. 15cm 鋼筋混凝土版		0.360
	2. 地磚		0.030
	3. 1.5cm 水泥砂漿粉光		0.020
	4. 天花及其他		0.030
<hr/>			
	靜載重 (D.L.)	合計=	0.440

活載重 (L.L.) = 0.200

參、材料強度:

鋼筋：Fy = 4200 kg/cm<sup>2</sup> (≥#6)  
Fy = 2800 kg/cm<sup>2</sup> (<#6)  
(鋼筋材質符合 CNS560 熱軋竹節鋼筋之規定)  
混凝土：  
fc’ = 210 kg/cm<sup>2</sup> (RC)  
(混凝土 28 天抗壓強度)

肆、地震力分析

一、用途係數:

第四類建築物 I=1.00

二、第二類地盤 (普通地盤)

三、最小設計水平總橫力:

$$V = \frac{S_{aD}IW}{1.4\alpha_yFu} = \frac{I}{1.4\alpha_y}\left(\frac{S_{aD}}{Fu}\right)_m W$$

避免中度地震降伏之設計地震力:

$$\text{一般工址與近斷層區域：} \quad *V = \frac{IFu}{4.2\alpha_y}\left(\frac{S_{aD}}{Fu}\right)_m W$$

$$\text{台北盆地：} V^* = \frac{IFu}{3.5\alpha_y}\left(\frac{S_{aD}}{Fu}\right)_m W$$

避免最大考量地震崩塌之設計地震力:

$$V_M = \frac{I}{1.4\alpha_y}\left(\frac{S_{aM}}{Fu_M}\right)_m W$$

四、基本振動週期:

T = 0.07H<sup>0.75</sup> (H = 結構物總高度)

T = 0.05H<sup>0.75</sup> (H = 結構物總高度)

伍、結構桿件分析程式及分析後結果

1. 地震力分析結果 (如下附件)

2. 結構分析輸入（如下附件）
3. 結構桿件分析結果（如下附件）
4. 結構平面圖（如下附件）

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*****
*                地震力計算                *
*    依據我國建築物耐震設計規範          *
*    (2007.01版)                            *
*    BY: S. L. LEE                          *
*    01/03/2007                             *
*****
工程名稱:CHEN225
日期:04/28/2008
時間:14:26:38

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INPUT ECHO
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屋突樓層數	(NP):	0
地面樓層數	(NF):	2
地下樓層數	(NB):	0
用途係數	(I):	1.00
基礎種類		第二類地盤
震區短週期水平譜加速度係數	(SsD):	.700
	(SsM):	.900
震區1秒週期水平譜加速度係數	(SID):	.400
	(SIM):	.500
反應譜等加速度段之工址放大係數:		
	(Fab):	1.000
	(FaM):	1.000
反應譜等速度段之工址放大係數:		
	(FvD):	1.300
	(FvM):	1.100
工址設計水平譜加速度係數	(SDs):	.700
	(SDI):	.520
工址最大水平譜加速度係數	(SMs):	.900
	(SMI):	.550
設計地震近斷層調整因子	NA:	1.00
	NV:	1.00
最大考量地震近斷層調整因子	NAM:	1.00
	NVM:	1.00
短週期與中週期分界點	(TOD):	.743
	(TOM):	.611
起始降伏地震力放大倍數	:	1.50
地面建物總高(不含屋突)	(HnF):	6.7

LEVEL	Hi	Wi	XMi	YMi	DXi	DYi	IXYi
RFL	3.70	109.99	4.16	10.06	4.75	14.12	18.49
2FL	3.00	128.98	3.36	8.24	6.54	17.12	26.44
1FL	.00	128.98	3.36	8.24	6.54	17.12	26.44

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設計參數計算

X-向:	
結構系統種類	: 鋼筋混凝土
韌性容量	(R): 4.00
容許韌性容量	(Ra): 3.00
建物靜力基本震動周期	(Ts): .292
動力基本震動周期	(Td): .533
周期上限係數	(Cu): 1.200
設計用基本震動周期	(T): .350
計算設計地震力 V 之參數	:
設計水平譜加速度係數	(SaD): .700
地震力折減係數	(Fu): 2.236
	[(SaD/Fu)m]: .307
計算中小度地震設計地震力 V* 之參數:	
設計水平譜加速度係數	(SaD): .700
地震力折減係數	(Fu): 2.236
	[(SaD/Fu)m]: .307
計算最大考量地震設計地震力 VM 之參數:	
設計水平譜加速度係數	(SaM): .900
地震力折減係數	(FuM): 2.646
	[(SaM/FuM)m]: .321
計算層間位移角及建物間隔之參數:	
基本震動周期	(T): .533
設計水平譜加速度係數	(SaD): .700
	[(SaD/Fu)m]: .307

地震力折減係數 (Fu): 2.236  
結構系統容許韌性容量 (Ra\*): 3.000

Y-向:		
結構系統種類		:其他構造
韌性容量	(R):	4.00
容許韌性容量	(Ra):	3.00
建物靜力基本震動周期	(Ts):	.208
動力基本震動周期	(Td):	.390
周期上限係數	(Cu):	1.200
設計用基本震動周期	(T):	.250
計算設計地震力 V 之參數	:	
設計水平譜加速度係數	(SaD):	.700
地震力折減係數	(Fu):	2.236
	[ (SaD/Fu)m ]:	.307
計算中小度地震設計地震力 V* 之參數:		
設計水平譜加速度係數	(SaD):	.700
地震力折減係數	(Fu):	2.236
	[ (SaD/Fu)m ]:	.307
計算最大考量地震設計地震力 VM 之參數:		
設計水平譜加速度係數	(SaM):	.900
地震力折減係數	(FuM):	2.646
	[ (SaM/FuM)m ]:	.321
計算層間位移角及建物間隔之參數:		
基本震動周期	(T):	.390
設計水平譜加速度係數	(SaD):	.700
	[ (SaD/Fu)m ]:	.307
地震力折減係數	(Fu):	2.236
結構系統容許韌性容量	(Ra*):	3.000

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## RESULTS

設計水平地震力：								
X-向：V=		34.91	V*=	26.02	Vm=	36.52	used V=	36.52
Y-向：V=		34.91	V*=	26.02	Vm=	36.52	used V=	36.52
LEVEL	HEIGHT	H	W	FX	TMX	FY	TMX	TY
				(FTPX=	.00	FTPY=	.00)	
				(FTX=	.00	FTY=	.00)	
RFL	6.70	3.70	109.99		23.94	16.90		23.94
RFL	3.00	3.00	128.98		12.57	10.76		12.57
(SUM)				238.97	36.52	27.67		36.52
FL	.00	.00	128.98		11.61	9.94		11.61
	OMX=	198.1	OMY=	198.1				
	RMX=	1324.3	RMY=	3232.1				

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計算層間位移用水平地震力:

X-向 : V= 39.03  
Y-向 : V= 39.03  
容許層間位移角放大倍數(根據設計地震力分析結果)  
X向 : 1.06890 Y向 : 1.06890  
設計地震力下之容許層間位移角  
X向 : .00468 Y向 : .00468  
建物間隔所需之位移放大倍數(根據設計地震力分析結果)  
X向 : 3.78000 Y向 : 3.78000

設計垂直地震力計算：

X-向	Tx/10:	.350	SaDvx:	.467			
	Tx/15:	.035	Fuvx:	1.215	(Sa/Fu)m:	.296	Kzx: .141
	Tx/15:	.023	Fuvx:	1.144	(Sa/Fu)m:	.308	Kzx: .147
	建議使用垂直地震力係數(Kzx): .14676						
Y-向	Ty/10:	.250	SaDvy:	.467			
	Ty/15:	.025	Fuvy:	1.154	(Sa/Fu)m:	.306	Kzy: .146
	Ty/15:	.017	Fuvy:	1.103	(Sa/Fu)m:	.316	Kzy: .151
	建議使用垂直地震力係數(Kzy): .15052						

\$ PROGRAM INFORMATION

\$ CONTROLS

UNITS "KGF" "CM"  
PREFERENCE MORTGUL 0.1  
KLPF METHOD "TRIRAREAUCBYCT" USEDDEFAULTWIN "YES"

\$ STORIES - IN SEQUENCE FROM TOP

STORY "R1F" HEIGHT 270 MASTERSTORY "Yes"  
STORY "2F" HEIGHT 300 MASTERSTORY "Yes"  
STORY "BASE" ELEV 0

\$ DIAPHRAGM NAMES

DIAPHRAGM "D1"

\$ GRIDS

COORDSYSTEM "GLOBAL" TYPE "CARTESIAN" BUBBLESIZE 0  
GRID "GLOBAL" LABEL "A" DIR "X" COORD 0 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "B" DIR "X" COORD 180.5 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "C" DIR "X" COORD 404.5 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "D" DIR "X" COORD 619.5 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "1" DIR "Y" COORD 0 GRIDTYPE "PRIMARY" BUBBLELOC "SWITCHED" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "2" DIR "Y" COORD 300 GRIDTYPE "PRIMARY" BUBBLELOC "SWITCHED" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "3" DIR "Y" COORD 620 GRIDTYPE "PRIMARY" BUBBLELOC "SWITCHED" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "4" DIR "Y" COORD 1240 GRIDTYPE "PRIMARY" BUBBLELOC "SWITCHED" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "5" DIR "Y" COORD 1467 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"  
GRID "GLOBAL" LABEL "6" DIR "Y" COORD 1689.5 GRIDTYPE "PRIMARY" BUBBLELOC "DEFAULT" GRIDWIDE "NO"

\$ MATERIAL PROPERTIES

MATERIAL "STEEL" M 7.98142E-06 W 7.833414E-03 TYPE "ISOTROPIC" E 2038902 U 0.3 A 1.169999989542412E-05  
MATERIAL "STEEL" DESIGNTYPE "STEEL" FY 3515.348 FU 4569.952 PRICE 2.767991E-07  
MATERIAL "CONC280" M 2.448E-06 W 0.002403 TYPE "ISOTROPIC" E 250998 U 0.2 A 9.8999989542412E-06  
MATERIAL "CONC280" DESIGNTYPE "CONCRETE" FY 4200 FC 280 FYS 2800  
MATERIAL "OTHER" M 7.98142E-06 W 7.833414E-03 TYPE "ISOTROPIC" E 2038902 U 0.3 A 1.169999989542412E-05  
MATERIAL "OTHER" DESIGNTYPE "OTHER"  
MATERIAL "CONC210" M 2.448E-06 W 0.002403 TYPE "ISOTROPIC" E 217371 U 0.2 A 9.8999989542412E-06  
MATERIAL "CONC210" DESIGNTYPE "CONCRETE" FY 4200 FC 210 FYS 2800

\$ FRAME SECTIONS

FRAMESECTION "B35X50" MATERIAL "CONC210" SHAPE "Rectangular" D 50 B 35  
FRAMESECTION "C45X45" MATERIAL "CONC210" SHAPE "Rectangular" D 45 B 45  
FRAMESECTION "B25X50" MATERIAL "CONC210" SHAPE "Rectangular" D 50 B 25  
FRAMESECTION "C25X50" MATERIAL "CONC210" SHAPE "Rectangular" D 25 B 50  
FRAMESECTION "B30X50" MATERIAL "CONC210" SHAPE "Rectangular" D 50 B 30  
FRAMESECTION "B35X50" JMOD 0.1  
FRAMESECTION "B25X50" JMOD 0.1

\$ REBAR DEFINITIONS

REBARDEFINITION "#2" AREA 0.32258 DIA 0.635  
REBARDEFINITION "#3" AREA 0.709676 DIA 0.9525  
REBARDEFINITION "#4" AREA 1.29032 DIA 1.27  
REBARDEFINITION "#5" AREA 1.999966 DIA 1.5875  
REBARDEFINITION "#6" AREA 2.838704 DIA 1.905  
REBARDEFINITION "#7" AREA 3.87096 DIA 2.2225  
REBARDEFINITION "#8" AREA 5.096704 DIA 2.54  
REBARDEFINITION "#9" AREA 6.4516 DIA 2.86512  
REBARDEFINITION "#10" AREA 8.10532 DIA 3.2258  
REBARDEFINITION "#11" AREA 10.0645 DIA 3.5814  
REBARDEFINITION "#14" AREA 14.5161 DIA 4.30022  
REBARDEFINITION "#18" AREA 25.8064 DIA 5.73278  
REBARDEFINITION "10M" AREA 1 DIA 1.13  
REBARDEFINITION "15M" AREA 2 DIA 1.6  
REBARDEFINITION "20M" AREA 3 DIA 1.95  
REBARDEFINITION "25M" AREA 5 DIA 2.52  
REBARDEFINITION "30M" AREA 7 DIA 2.99  
REBARDEFINITION "35M" AREA 10 DIA 3.57  
REBARDEFINITION "45M" AREA 15 DIA 4.37  
REBARDEFINITION "55M" AREA 25 DIA 5.64  
REBARDEFINITION "64" AREA 0.283 DIA 0.6  
REBARDEFINITION "84" AREA 0.503 DIA 0.8  
REBARDEFINITION "104" AREA 0.786 DIA 1  
REBARDEFINITION "124" AREA 1.13 DIA 1.2  
REBARDEFINITION "144" AREA 1.54 DIA 1.4  
REBARDEFINITION "164" AREA 2.01 DIA 1.6  
REBARDEFINITION "204" AREA 3.14 DIA 2  
REBARDEFINITION "254" AREA 4.91 DIA 2.5  
REBARDEFINITION "264" AREA 5.31 DIA 2.6  
REBARDEFINITION "284" AREA 6.16 DIA 2.8

\$ CONCRETE SECTIONS

CONCRETESECTION "C45X45" TYPE "COLUMN" PATTERN "R-4-4" TRANSREINF "TIES" COVER 6.9 REBAR "#10" DESIGNCHECK "DESIGN"  
CONCRETESECTION "C25X50" TYPE "COLUMN" PATTERN "R-3-3" TRANSREINF "TIES" COVER 6.9 REBAR "#7" DESIGNCHECK "DESIGN"  
CONCRETESECTION "B35X50" TYPE "BEAM" COVERTOP 6.55 COVERBOTTOM 6.55 ATI 0 ABI 0 ATI 0 ABI 0  
CONCRETESECTION "B25X50" TYPE "BEAM" COVERTOP 6.55 COVERBOTTOM 6.55 ATI 0 ABI 0 ATI 0 ABI 0  
CONCRETESECTION "B30X50" TYPE "BEAM" COVERTOP 6.55 COVERBOTTOM 6.55 ATI 0 ABI 0 ATI 0 ABI 0

\$ WALL/SLAB/DECK PROPERTIES

SHELLPROP "WALL25" MATERIAL "CONC210" PROPTYPE "WALL" TYPE "MEMBRANE" TM 25 TB 25  
SHELLPROP "SLAB15" MATERIAL "CONC210" PROPTYPE "SLAB" TYPE "MEMBRANE" TM 15 TB 15  
SHELLPROP "DECK1" PROPTYPE "DECK" TYPE "MEMBRANE"  
SHELLPROP "DECK1" DECKTYPE "FILLED" CONCMATERIAL "CONC280" SLABDEPTH 8.89  
SHELLPROP "DECK1" RIBDEPTH 7.62 RIBWIDTH 15.239999771182 RIBSPACING 30.48 WEIGHT 1.122958E-03  
SHELLPROP "DECK1" STUBDIA 1.905 STUBHEIGHT 15.24 STUBLENGTH 4218.418  
SHELLPROP "PLANK1" MATERIAL "CONC280" PROPTYPE "SLAB" TYPE "MEMBRANE" ONDRAY "YES" TM 25 TB 25  
SHELLPROP "PLANK1" FIMMOD 0.01 F22MOD 0.01

\$ LINK PROPERTIES

LINKPROP "ALPH" TYPE "DAMPER"  
LINKPROP "ALPH" DOP "UI"

\$ PIECE/SPANDREL NAMES

PIERNAME "P1"  
SPANDRELNAME "S1"

\$ POINT COORDINATES

POINT "1" 0 0  
POINT "2" 189.5 0  
POINT "3" 619.5 0  
POINT "4" 0 300  
POINT "5" 189.5 300  
POINT "6" 619.5 300  
POINT "7" 0 620  
POINT "8" 189.5 620  
POINT "9" 619.5 620  
POINT "10" 0 1246  
POINT "11" 189.5 1246  
POINT "12" 619.5 1246  
POINT "13" 0 1467  
POINT "14" 189.5 1467  
POINT "15" 619.5 1467  
POINT "16" 189.5 1689.5  
POINT "17" 619.5 1689.5

\$ LINE CONNECTIVITIES

LINE "C1" COLUMN "1" "1" 1  
LINE "C2" COLUMN "2" "2" 1  
LINE "C3" COLUMN "3" "3" 1  
LINE "C4" COLUMN "4" "4" 1  
LINE "C5" COLUMN "5" "5" 1  
LINE "C6" COLUMN "6" "6" 1

LINE "C7" COLUMN "7" "7" 1  
LINE "C8" COLUMN "8" "8" 1  
LINE "C9" COLUMN "9" "9" 1  
LINE "C10" COLUMN "10" "10" 1  
LINE "C11" COLUMN "11" "11" 1  
LINE "C12" COLUMN "12" "12" 1  
LINE "C13" COLUMN "13" "13" 1  
LINE "C14" COLUMN "14" "14" 1  
LINE "C15" COLUMN "15" "15" 1  
LINE "B1" BEAM "1" "2" 0  
LINE "B2" BEAM "2" "3" 0  
LINE "B3" BEAM "1" "4" 0  
LINE "B4" BEAM "2" "5" 0  
LINE "B5" BEAM "3" "6" 0  
LINE "B6" BEAM "4" "5" 0  
LINE "B7" BEAM "5" "6" 0  
LINE "B8" BEAM "4" "7" 0  
LINE "B9" BEAM "5" "8" 0  
LINE "B10" BEAM "6" "9" 0  
LINE "B11" BEAM "7" "8" 0  
LINE "B12" BEAM "8" "9" 0  
LINE "B13" BEAM "7" "10" 0  
LINE "B14" BEAM "8" "11" 0  
LINE "B15" BEAM "9" "12" 0  
LINE "B16" BEAM "10" "11" 0  
LINE "B17" BEAM "11" "12" 0  
LINE "B18" BEAM "10" "13" 0  
LINE "B19" BEAM "11" "14" 0  
LINE "B20" BEAM "12" "15" 0  
LINE "B21" BEAM "13" "14" 0  
LINE "B22" BEAM "14" "15" 0  
LINE "B23" BEAM "14" "16" 0  
LINE "B24" BEAM "15" "17" 0  
LINE "B25" BEAM "16" "17" 0

\$ AREA CONNECTIVITIES

AREA "W1" PANEL 4 "1" "4" "4" "1" 1 1 0 0  
AREA "W2" PANEL 4 "4" "7" "7" "4" 1 1 0 0  
AREA "W3" PANEL 4 "7" "10" "10" "7" 1 1 0 0  
AREA "W4" PANEL 4 "10" "13" "13" "10" 1 1 0 0  
AREA "F1" FLOOR 4 "1" "4" "5" "2" 0 0 0 0  
AREA "F2" FLOOR 4 "2" "5" "6" "3" 0 0 0 0  
AREA "F3" FLOOR 4 "4" "7" "8" "5" 0 0 0 0  
AREA "F4" FLOOR 4 "5" "8" "9" "6" 0 0 0 0  
AREA "F5" FLOOR 4 "7" "10" "11" "8" 0 0 0 0  
AREA "F6" FLOOR 4 "8" "11" "12" "9" 0 0 0 0  
AREA "F7" FLOOR 4 "10" "13" "14" "11" 0 0 0 0  
AREA "F8" FLOOR 4 "11" "14" "15" "12" 0 0 0 0  
AREA "F9" FLOOR 4 "14" "16" "17" "15" 0 0 0 0

\$ POINT ASSIGNS

POINTASSIGN "1" "2F" DIAPH "D1"  
POINTASSIGN "4" "2F" DIAPH "D1"  
POINTASSIGN "7" "2F" DIAPH "D1"  
POINTASSIGN "10" "2F" DIAPH "D1"  
POINTASSIGN "13" "2F" DIAPH "D1"  
POINTASSIGN "14" "2F" DIAPH "D1"  
POINTASSIGN "15" "2F" DIAPH "D1"  
POINTASSIGN "2" "2F" DIAPH "D1"  
POINTASSIGN "5" "2F" DIAPH "D1"  
POINTASSIGN "8" "2F" DIAPH "D1"  
POINTASSIGN "11" "2F" DIAPH "D1"  
POINTASSIGN "16" "2F" DIAPH "D1"  
POINTASSIGN "17" "2F" DIAPH "D1"  
POINTASSIGN "18" "2F" DIAPH "D1"  
POINTASSIGN "12" "2F" DIAPH "D1"  
POINTASSIGN "9" "2F" DIAPH "D1"  
POINTASSIGN "1" "BASE" DIAPH "D1"  
POINTASSIGN "14" "BASE" DIAPH "D1"  
POINTASSIGN "9" "BASE" DIAPH "D1"  
POINTASSIGN "12" "BASE" DIAPH "D1"  
POINTASSIGN "15" "BASE" DIAPH "D1"  
POINTASSIGN "1" "BASE" DIAPH "D1"  
POINTASSIGN "4" "BASE" DIAPH "D1"  
POINTASSIGN "7" "BASE" DIAPH "D1"  
POINTASSIGN "10" "BASE" DIAPH "D1"  
POINTASSIGN "13" "BASE" DIAPH "D1"  
POINTASSIGN "14" "R1F" DIAPH "D1"  
POINTASSIGN "15" "R1F" DIAPH "D1"  
POINTASSIGN "5" "R1F" DIAPH "D1"  
POINTASSIGN "8" "R1F" DIAPH "D1"  
POINTASSIGN "11" "R1F" DIAPH "D1"  
POINTASSIGN "16" "R1F" DIAPH "D1"  
POINTASSIGN "17" "R1F" DIAPH "D1"  
POINTASSIGN "18" "R1F" DIAPH "D1"  
POINTASSIGN "9" "R1F" DIAPH "D1"  
POINTASSIGN "12" "R1F" DIAPH "D1"  
POINTASSIGN "2" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "3" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "5" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "6" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "8" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "11" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "14" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "9" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "12" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "15" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "1" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "4" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "7" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "10" "BASE" RESTRAINT "UX UY UZ"  
POINTASSIGN "13" "BASE" RESTRAINT "UX UY UZ"

\$ LINE ASSIGNS

LINEASSIGN "B3" "2F" SECTION "B25X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B8" "2F" SECTION "B25X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B13" "2F" SECTION "B25X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B18" "2F" SECTION "B25X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B21" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B22" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B1" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B4" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B9" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B14" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B25" "2F" SECTION "B30X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B5" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B10" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B19" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B20" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B24" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B16" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B17" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B12" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B6" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B7" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"

LINEASSIGN "B2" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "C2" "2F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C3" "2F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C5" "2F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C6" "2F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C8" "2F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C11" "2F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C14" "2F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C9" "2F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C12" "2F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C15" "2F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "B22" "R1F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B9" "R1F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B14" "R1F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B25" "R1F" SECTION "B30X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B10" "R1F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B15" "R1F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B20" "R1F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B24" "R1F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B17" "R1F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B12" "R1F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B7" "R1F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "C5" "R1F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C6" "R1F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C8" "R1F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C11" "R1F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C14" "R1F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C9" "R1F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C12" "R1F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C15" "R1F" SECTION "C45X45" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C1" "2F" SECTION "C25X50" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C4" "2F" SECTION "C25X50" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C7" "2F" SECTION "C25X50" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C10" "2F" SECTION "C25X50" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "C13" "2F" SECTION "C25X50" ANG 0 MINNUMSTA 3 MESH "POINTSANDLINES"  
LINEASSIGN "B10" "R1F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B23" "R1F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B19" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"  
LINEASSIGN "B23" "2F" SECTION "B35X50" ANG 0 MAISTASPC 50 CARDINALPT 8 MESH "POINTSANDLINES"

\$ AREA ASSIGNS

AREAASSIGN "W1" "2F" SECTION "WALL25" OBJMESHTYPE "NAUTOMESH"  
AREAASSIGN "W2" "2F" SECTION "WALL25" OBJMESHTYPE "NAUTOMESH"  
AREAASSIGN "W3" "2F" SECTION "WALL25" OBJMESHTYPE "NAUTOMESH"  
AREAASSIGN "W4" "2F" SECTION "WALL25" OBJMESHTYPE "NAUTOMESH"  
AREAASSIGN "F1" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F2" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F3" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F4" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F5" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F6" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F7" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F8" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F9" "2F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F4" "R1F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F6" "R1F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F8" "R1F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"  
AREAASSIGN "F9" "R1F" SECTION "SLAB15" OBJMESHTYPE "DEFAULT"

\$ STATIC LOADS

LOADCASE "DEAD" TYPE "DEAD" SELFWEIGHT 1  
LOADCASE "LIVE" TYPE "LIVE" SELFWEIGHT 0  
LOADCASE "EQU" TYPE "EQUAKE" SELFWEIGHT 0  
LOADCASE "EQW" TYPE "EQUAKE" SELFWEIGHT 0  
LOADCASE "EQV" TYPE "EQUAKE" SELFWEIGHT 0  
LOADCASE "EQVM" TYPE "EQUAKE" SELFWEIGHT 0  
SEISMIC "EQX" "USER LOADS" ECC -0.05  
SEISMIC "EQY" "USER LOADS" ECC -0.05  
SEISMIC "EQX" USERLOAD "R1F" "D1" FX 23940  
SEISMIC "EQY" USERLOAD "R1F" "D1" FY 23940  
SEISMIC "EQX" "USER LOADS" ECC -0.05  
SEISMIC "EQY" "USER LOADS" ECC -0.05  
SEISMIC "EQX" USERLOAD "2F" "D1" FX 12570  
SEISMIC "EQY" USERLOAD "2F" "D1" FY 12570  
SEISMIC "EQX" "USER LOADS" ECC -0.05  
SEISMIC "EQY" "USER LOADS" ECC -0.05  
SEISMIC "EQX" USERLOAD "2F" "D1" FX 23940  
SEISMIC "EQY" USERLOAD "2F" "D1" FY 23940  
SEISMIC "EQX" USERLOAD "2F" "D1" FX 12570  
SEISMIC "EQY" USERLOAD "2F" "D1" FY 12570

\$ AREA OBJECT LOADS

AREALOAD "W1" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "W2" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "W3" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "W4" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "F1" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "F2" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "F3" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "F4" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "F5" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "F6" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "F7" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "F8" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "F9" "2F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.03  
AREALOAD "W1" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "W2" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "W3" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "W4" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "F1" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "F2" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "F3" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "F4" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "F5" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "F6" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "F7" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "F8" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "F9" "2F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.02  
AREALOAD "F4" "R1F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.069  
AREALOAD "F6" "R1F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.069  
AREALOAD "F8" "R1F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.069  
AREALOAD "F9" "R1F" TYPE "UNIFF" DIR "GRAV" LC "DEAD" FVAL 0.069  
AREALOAD "F4" "R1F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.06  
AREALOAD "F6" "R1F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.06  
AREALOAD "F8" "R1F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.06  
AREALOAD "F9" "R1F" TYPE "UNIFF" DIR "GRAV" LC "LIVE" FVAL 0.06

\$ ANALYSIS OPTIONS

ACTIVEDOF "UX UY UZ RX RY RZ"  
DYNAMICS MODES 100 MORETYPE "EIGEN" TOL 0.000001  
MASSOPTIONS GRAVITY 860.665 SOURCE "MASS" LATERALONLY "YES" STORYLEVELONLY "YES"

\$ LOAD COMBINATIONS

COMBO "EQV" TYPE "ADD"  
COMBO "EQV" LOAD "DEAD" SF 0.12652  
COMBO "COMB1" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB1" LOAD "DEAD" SF 1.4  
COMBO "COMB2" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB2" LOAD "DEAD" SF 1.4  
COMBO "COMB2" LOAD "LIVE" SF 1.7  
COMBO "COMB3" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB3" LOAD "DEAD" SF 1.65  
COMBO "COMB3" LOAD "LIVE" SF 1.275  
COMBO "COMB3" LOAD "EQV" SF 1.4025

COMBO "COMB3" COMBO "EQV" SF 0.42075  
COMBO "COMB4" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB4" LOAD "DEAD" SF 1.65  
COMBO "COMB4" LOAD "LIVE" SF 1.275  
COMBO "COMB4" LOAD "EQV" SF 1.4025  
COMBO "COMB4" COMBO "EQV" SF -0.42075  
COMBO "COMB5" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB5" LOAD "DEAD" SF 1.65  
COMBO "COMB5" LOAD "LIVE" SF 1.275  
COMBO "COMB5" LOAD "EQV" SF -1.4025  
COMBO "COMB5" COMBO "EQV" SF 0.42075  
COMBO "COMB6" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB6" LOAD "DEAD" SF 1.65  
COMBO "COMB6" LOAD "LIVE" SF 1.275  
COMBO "COMB6" LOAD "EQV" SF -1.4025  
COMBO "COMB6" COMBO "EQV" SF 0.42075  
COMBO "COMB7" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB7" LOAD "DEAD" SF 0.9  
COMBO "COMB7" LOAD "EQV" SF 1.43  
COMBO "COMB7" COMBO "EQV" SF 0.429  
COMBO "COMB8" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB8" LOAD "DEAD" SF 1.65  
COMBO "COMB8" LOAD "LIVE" SF 1.275  
COMBO "COMB8" LOAD "EQV" SF 1.43  
COMBO "COMB8" COMBO "EQV" SF -0.429  
COMBO "COMB9" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB9" LOAD "DEAD" SF 1.65  
COMBO "COMB9" LOAD "LIVE" SF 1.275  
COMBO "COMB9" LOAD "EQV" SF 1.43  
COMBO "COMB9" COMBO "EQV" SF 0.429  
COMBO "COMB10" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB10" LOAD "DEAD" SF 0.9  
COMBO "COMB10" LOAD "EQV" SF 1.43  
COMBO "COMB10" COMBO "EQV" SF -0.429  
COMBO "COMB11" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB11" LOAD "DEAD" SF 1.65  
COMBO "COMB11" LOAD "LIVE" SF 1.275  
COMBO "COMB11" COMBO "EQV" SF 0.42075  
COMBO "COMB12" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB12" LOAD "DEAD" SF 1.65  
COMBO "COMB12" LOAD "LIVE" SF 1.275  
COMBO "COMB12" LOAD "EQV" SF 1.4025  
COMBO "COMB12" COMBO "EQV" SF -0.42075  
COMBO "COMB13" TYPE "ADD" DESIGN "CONCRETE"  
COMBO "COMB13" LOAD "DEAD" SF 1.65

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COMBO "COMB33" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB33" LOAD "DEAD" SF 0.9
COMBO "COMB33" LOAD "EQVM" SF -1.43
COMBO "COMB33" COMBO "EQ" SF 0.429
COMBO "COMB34" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB34" LOAD "DEAD" SF 0.9
COMBO "COMB34" LOAD "EQVM" SF -1.43
COMBO "COMB34" COMBO "EQ" SF -0.429
COMBO "COMB35" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB35" LOAD "DEAD" SF 1.05
COMBO "COMB35" LOAD "LIVE" SF 1.275
COMBO "COMB35" LOAD "EQ" SF 0.42075
COMBO "COMB35" COMBO "EQ" SF 1.4025
COMBO "COMB36" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB36" LOAD "DEAD" SF 1.05
COMBO "COMB36" LOAD "LIVE" SF 1.275
COMBO "COMB36" LOAD "EQ" SF 0.42075
COMBO "COMB36" COMBO "EQ" SF -1.4025
COMBO "COMB37" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB37" LOAD "DEAD" SF 1.05
COMBO "COMB37" LOAD "LIVE" SF 1.275
COMBO "COMB37" LOAD "EQ" SF -0.42075
COMBO "COMB37" COMBO "EQ" SF 1.4025
COMBO "COMB38" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB38" LOAD "DEAD" SF 1.05
COMBO "COMB38" LOAD "LIVE" SF 1.275
COMBO "COMB38" LOAD "EQ" SF -0.42075
COMBO "COMB38" COMBO "EQ" SF -1.4025
COMBO "COMB39" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB39" LOAD "DEAD" SF 0.9
COMBO "COMB39" LOAD "EQ" SF 0.429
COMBO "COMB39" COMBO "EQ" SF 1.43
COMBO "COMB40" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB40" LOAD "DEAD" SF 0.9
COMBO "COMB40" LOAD "EQ" SF 0.429
COMBO "COMB40" COMBO "EQ" SF -1.43
COMBO "COMB41" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB41" LOAD "DEAD" SF 0.9
COMBO "COMB41" LOAD "EQ" SF -0.429
COMBO "COMB41" COMBO "EQ" SF 1.43
COMBO "COMB42" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB42" LOAD "DEAD" SF 0.9
COMBO "COMB42" LOAD "EQ" SF -0.429
COMBO "COMB42" COMBO "EQ" SF -1.43
COMBO "COMB43" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB43" LOAD "DEAD" SF 1.05
COMBO "COMB43" LOAD "LIVE" SF 1.275
COMBO "COMB43" LOAD "EQ" SF 0.42075
COMBO "COMB43" COMBO "EQ" SF 1.4025
COMBO "COMB44" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB44" LOAD "DEAD" SF 1.05
COMBO "COMB44" LOAD "LIVE" SF 1.275
COMBO "COMB44" LOAD "EQ" SF 0.42075
COMBO "COMB44" COMBO "EQ" SF -1.4025
COMBO "COMB45" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB45" LOAD "DEAD" SF 1.05
COMBO "COMB45" LOAD "LIVE" SF 1.275
COMBO "COMB45" LOAD "EQ" SF -0.42075
COMBO "COMB45" COMBO "EQ" SF 1.4025
COMBO "COMB46" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB46" LOAD "DEAD" SF 1.05
COMBO "COMB46" LOAD "LIVE" SF 1.275
COMBO "COMB46" LOAD "EQ" SF -0.42075
COMBO "COMB46" COMBO "EQ" SF -1.4025
COMBO "COMB47" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB47" LOAD "DEAD" SF 0.9
COMBO "COMB47" LOAD "EQ" SF 0.429
COMBO "COMB47" COMBO "EQ" SF 1.43
COMBO "COMB48" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB48" LOAD "DEAD" SF 0.9
COMBO "COMB48" LOAD "EQ" SF 0.429
COMBO "COMB48" COMBO "EQ" SF -1.43
COMBO "COMB49" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB49" LOAD "DEAD" SF 0.9
COMBO "COMB49" LOAD "EQ" SF -0.429
COMBO "COMB49" COMBO "EQ" SF 1.43
COMBO "COMB50" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB50" LOAD "DEAD" SF 0.9
COMBO "COMB50" LOAD "EQ" SF -0.429
COMBO "COMB50" COMBO "EQ" SF -1.43
COMBO "COMB51" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB51" LOAD "DEAD" SF 1.05
COMBO "COMB51" LOAD "LIVE" SF 1.275
COMBO "COMB51" LOAD "EQVM" SF 0.42075
COMBO "COMB51" COMBO "EQ" SF 1.4025
COMBO "COMB52" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB52" LOAD "DEAD" SF 1.05
COMBO "COMB52" LOAD "LIVE" SF 1.275
COMBO "COMB52" LOAD "EQVM" SF 0.42075
COMBO "COMB52" COMBO "EQ" SF -1.4025
COMBO "COMB53" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB53" LOAD "DEAD" SF 1.05
COMBO "COMB53" LOAD "LIVE" SF 1.275
COMBO "COMB53" LOAD "EQVM" SF -0.42075
COMBO "COMB53" COMBO "EQ" SF 1.4025
COMBO "COMB54" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB54" LOAD "DEAD" SF 1.05
COMBO "COMB54" LOAD "LIVE" SF 1.275
COMBO "COMB54" LOAD "EQVM" SF -0.42075
COMBO "COMB54" COMBO "EQ" SF -1.4025
COMBO "COMB55" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB55" LOAD "DEAD" SF 0.9
COMBO "COMB55" LOAD "EQVM" SF 0.429
COMBO "COMB55" COMBO "EQ" SF 1.43
COMBO "COMB56" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB56" LOAD "DEAD" SF 0.9
COMBO "COMB56" LOAD "EQVM" SF 0.429
COMBO "COMB56" COMBO "EQ" SF -1.43
COMBO "COMB57" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB57" LOAD "DEAD" SF 0.9
COMBO "COMB57" LOAD "EQVM" SF -0.429
COMBO "COMB57" COMBO "EQ" SF 1.43
COMBO "COMB58" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB58" LOAD "DEAD" SF 0.9
COMBO "COMB58" LOAD "EQVM" SF -0.429
COMBO "COMB58" COMBO "EQ" SF -1.43
COMBO "COMB59" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB59" LOAD "DEAD" SF 1.05
COMBO "COMB59" LOAD "LIVE" SF 1.275
COMBO "COMB59" LOAD "EQVM" SF 0.42075
COMBO "COMB59" COMBO "EQ" SF 1.4025
COMBO "COMB60" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB60" LOAD "DEAD" SF 1.05
COMBO "COMB60" LOAD "LIVE" SF 1.275
COMBO "COMB60" LOAD "EQVM" SF 0.42075
COMBO "COMB60" COMBO "EQ" SF -1.4025
COMBO "COMB61" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB61" LOAD "DEAD" SF 1.05
COMBO "COMB61" LOAD "LIVE" SF 1.275
COMBO "COMB61" LOAD "EQVM" SF -0.42075
COMBO "COMB61" COMBO "EQ" SF 1.4025
COMBO "COMB62" TYPE "ADD" DESIGN "CONCRETE"
```

```
COMBO "COMB62" LOAD "DEAD" SF 1.05
COMBO "COMB62" LOAD "LIVE" SF 1.275
COMBO "COMB62" LOAD "EQVM" SF -0.42075
COMBO "COMB62" COMBO "EQ" SF -1.4025
COMBO "COMB63" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB63" LOAD "DEAD" SF 0.9
COMBO "COMB63" LOAD "EQVM" SF 0.429
COMBO "COMB63" COMBO "EQ" SF 1.43
COMBO "COMB64" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB64" LOAD "DEAD" SF 0.9
COMBO "COMB64" LOAD "EQVM" SF 0.429
COMBO "COMB64" COMBO "EQ" SF -1.43
COMBO "COMB65" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB65" LOAD "DEAD" SF 0.9
COMBO "COMB65" LOAD "EQVM" SF -0.429
COMBO "COMB65" COMBO "EQ" SF 1.43
COMBO "COMB66" TYPE "ADD" DESIGN "CONCRETE"
COMBO "COMB66" LOAD "DEAD" SF 0.9
COMBO "COMB66" LOAD "EQVM" SF -0.429
COMBO "COMB66" COMBO "EQ" SF -1.43
```

```
$ STEEL DESIGN PREFERENCES
STEELPREFERENCE CODE "AISC-LRF03" THDESIGN "ENVELOPS" FRAMETYPE "MOMENT FRAME"
STEELPREFERENCE CONSIDERDEFLECTION "YES" RELATIVEDEFLECTION "BOTH"
STEELPREFERENCE DLDEFLECTIONLIMIT 120 SLDEFLECTIONLIMIT 120 LLDEFLECTIONLIMIT 360 TLDEFLECTIONLIMIT 240
TMDEFLECTIONLIMIT 240
STEELPREFERENCE PLDEFLECTIONLIMITABS 2.54 SLDEFLECTIONLIMITABS 2.54 LLDEFLECTIONLIMITABS 2.54 TLDEFLECTIONLIMITABS 2.54
TMDEFLECTIONLIMITABS 2.54
STEELPREFERENCE CALCULATECAMBER "NO" PERCENTCAMBERDL 1 CAMBERRELMAXLIMIT 180 CAMBERINORELIMIT 1.905
STEELPREFERENCE CAMBERABSMAXLIMIT 10.16 CAMBERINTERVAL 0.635 CAMBERROUNDOWN "YES"
STEELPREFERENCE PATTERNLLF 0.75 MAXITERATION 1 SLLIMIT 0.95
```

```
$ CONCRETE DESIGN PREFERENCES
CONCRETEPREFERENCE CODE "ACI 318-99" THDESIGN "ENVELOPS" CONSIDERINRECENTRICITY "YES"
CONCRETEPREFERENCE NUMINTERCURVES 24 NUMINTERPOINTS 11 PATTERNLLF 0.75 UPLIMIT 0.95
CONCRETEPREFERENCE FRIBENDING 0.9 PHICOMP(7) 0.7 PHICOMP(S) 0.75 PHISHEAR 0.85
```

```
$ COMPOSITE DESIGN PREFERENCES
COMPOSITEPREFERENCE CODE "AISC-LRF03"
COMPOSITEPREFERENCE PHI-B 0.9 PHI-BCNE 0.9 PHI-BCVP 0.85 PHI-BCPE 0.9 PHI-BCPP 0.85 PHI-V 0.9
COMPOSITEPREFERENCE SHOREP "NO" MAXDOLERANGE 70 PATTERNLLF 0.75 SLLIMIT 1 SINGLESEGMENT "NO" STUDINCREASEFACTOR 1
MINUMEXTRASTATUS 0
COMPOSITEPREFERENCE DLLIMIT 0 SLLIMIT 120 LLLIMIT 360 TLLIMIT 240 CREEPFACTOR 1
COMPOSITEPREFERENCE MAXCAMBER 100 CAMBERIGNORE 1.905 CAMBERABSMAX 10.16 CAMBERRELMAX 180 CAMBERINTERVAL 0.635
CAMBERROUNDOWN "YES"
COMPOSITEPREFERENCE AVIRBL 25 CONSIDERFREQ "NO" MINFREQ 8 CONSIDERDAMP "NO" SINERENTDAMP 4
COMPOSITEPREFERENCE OPTIMIZEPRICE "NO" CONNECTORPRICE 0 CAMBERPRICE 0
```

```
$ WALL DESIGN PREFERENCES
WALLPREFERENCE CODE "IBC07" THDESIGN "ENVELOPS"
WALLPREFERENCE REBARUNITS "in/2" REBAR/LENGTHUNITS "in/2/ft"
WALLPREFERENCE PHI-B 0.9 PHI-C 0.7 PHI-VNS 0.85 PHI-VS 0.6 PMAXFACTOR 0.8
WALLPREFERENCE NUMCURVES 24 NUMPOINTS 11
WALLPREFERENCE PPMAX 0.06 PCMAX 0.04 IPMAX 0.02 IPMIN 0.0025
WALLPREFERENCE UPLIMIT 0.95
```

```
$ SPECIAL SEISMIC DATA
SPECIALSEISMICDATA USEFORDESIGN "YES"
```

```
$ DIMENSION LINES
DIMENSIONLINE X1 0 Y1 0 Z1 0 XJ 0 YJ 600 ZJ 0 XC -75 YC 300 ZC 0
DIMENSIONLINE X1 0 Y1 600 Z1 0 XJ 0 YJ 1200 ZJ 0 XC -75 YC 900 ZC 0
DIMENSIONLINE X1 0 Y1 1200 Z1 0 XJ 0 YJ 1800 ZJ 0 XC -75 YC 1500 ZC 0
DIMENSIONLINE X1 0 Y1 1800 Z1 0 XJ 600 YJ 1800 ZJ 0 XC 300 YC 1875 ZC 0
DIMENSIONLINE X1 600 Y1 1800 Z1 0 XJ 1200 YJ 1800 ZJ 0 XC 900 YC 1875 ZC 0
DIMENSIONLINE X1 1200 Y1 1800 Z1 0 XJ 1800 YJ 1800 ZJ 0 XC 1500 YC 1875 ZC 0
```

```
$ LOG
STARTCOMMENTS
ENDCOMMENTS

END
$ END OF MODEL FILE END
```



\*\*\*\*\*  
\* Column Fabrication Detailing (COL.DAT) by bpmtohm \*  
\* Version 1.0  
\*\*\*\*\*

TABLE: 1 L T  
ROW: 1 2F 2F  
ROW: 2 1F 1F

COL: C1 1  
SEC: 2 RR  
ITEM\_1: 25 50  
ITEM\_2: #7 2 2  
ITEM\_3: #7 0 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C2 1  
SEC: 2 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C3 1  
SEC: 2 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0

:  
1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C11 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

SEC: 2 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C12 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

SEC: 2 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C13 1  
SEC: 2 RR  
ITEM\_1: 25 50  
ITEM\_2: #7 2 2  
ITEM\_3: #7 0 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C14 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

SEC: 2 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C15 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

SEC: 2 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C4 1  
SEC: 2 RR  
ITEM\_1: 25 50  
ITEM\_2: #7 2 2  
ITEM\_3: #7 0 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C5 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

SEC: 2 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C6 1  
SEC: 1 RR  
ITEM\_1: 45 45

ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

SEC: 2 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C7 1  
SEC: 2 RR  
ITEM\_1: 25 50  
ITEM\_2: #7 2 2  
ITEM\_3: #7 0 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C8 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

SEC: 2 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C9 1  
SEC: 1 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

SEC: 2 RR  
ITEM\_1: 45 45  
ITEM\_2: #7 2 2  
ITEM\_3: #7 2 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010  
ITEM\_7: 1#3010-12 TIED

COL: C10 1  
SEC: 2 RR  
ITEM\_1: 25 50  
ITEM\_2: #7 2 2  
ITEM\_3: #7 0 2  
ITEM\_4: 0  
ITEM\_5: #0 0  
ITEM\_6: 1#3010