ROGRAM : General Frame Analysis v1.58 TIME : Mon Mar 02 12:36:59 1992

PLW. INC. JOB NO. : 10

JOB : GSA - 517 GOLD - EXTERIOR SMRF

JN : 1

E L E M E N T F O R C E S

ELEM NO	LOAD COMB	NODE NO	AXIAL	SHEAR	MOMENT
	2	55	-94.3361	-52.7741	707.3727
		65	-94.3361	-63.9941	-752.2292
104	1	56	-78.8680	-29.6141	409.7194
		66	-78.8680	-38.9641	-447.5080
	2	56	-118.3709	-45.8235	620.4197
		66	-118.3709	-57.0435	-665.4167
105	1	57	-94.3181	-23.9151	338.4692
		67	-94.3181	-33.2651	-376.2828
	2	57	-141.5212	-37.2748	513.5421
		67	-141.5212	-48.4948	-558.5776
106	1	58	-109.5750	-17.1894	254.3928
		68	-109.5750	-26.5394	-292.2172
	2	58	-164.3475	-27.1855	387.4153
		68	-164.3475	-38.4055	-432.4731
107	1	59	-124.5699	-9.4239	157.2893
		69	-124.5699	-18.7739	-195.1828
	2	59	-186.6423	-15.5354	241.7290
		69	-186.6423	-26.7554	-286.9059
108	1	60	-137.2391	-1.0476	52.3421
		70	-137.2391	-10.3976	-90.7221
	2	60	-205.2362	-2.9715	84.3171
		70	-205.2362	-14.1915	-130.2194
110	1	62	-80.8175	101.9708	-651.0224
		63	-80.3335	101.9708	470.6562
	2	62	-97.6115	152.9562	-976.5336
		63	-97.0307	152.9562	705.9843
111	1	63	-70.5712	99.5422	-550.0513
		64	-70.0872	99.5422	544.9127

E L E M E N T F O R C E S

ELEM NO	LOAD COMB	NODE NO	AXIAL	SHEAR	MOMENT
	2	63	-85.1912	149.3133	-825.0769
		64	-84.6104	149.3133	817.3691
112	1	64	-60.3973	93.1000	-504.9464
		65	-59.9133	93.1000	519.1541
	2	64	-72.8806	139.6501	-757.4196
		65	-72.2998	139.6501	778.7312
113	1	65	-50.2833	83.7342	-450.3197
		66	-49.7993	83.7342	470.7565
	2	65	-60.6602	125.6013	-675.4796
		66	-60.0794	125.6013	706.1348
114	1	66	-40.1896	71.9500	-383.1355
		67	-39.7056	71.9500	408.3147
	2	66	-48.4701	107.9250	-574.7033
		67	-47.8893	107.9250	612.4721
115	1	67	-30.1012	57.8241	-303.1714
		68	-29.6172	57.8241	332.8935
	2	67	-36.2885	86.7361	-454.7571
		68	-35.7077	86.7361	499.3402
116	1	68	-20.0161	41.3874	-210.4881
		69	-19.5321	41.3874	244.7729
	2	68	-24.1131	62.0810	-315.7322
		69	-23.5323	62.0810	367.1593
117	1	69	-9.9535	22.3832	-104.7273
		70	-9.4695	22.3832	141.4874
	2	69	-11.9753	33.5747	-157.0909
		70	-11.3945	33.5747	212.2311
118	1	62	0.0000	0.5500	-2.2917
		72	0.0000	-0.5500	-2.2917

E L E M E N T F O R C E S

LEM N	LOAD COMB	NODE NO	AXIAL	SHEAR	MOMENT
	2	62	0.0000	0.6600	-2.7500
		72	0.0000	-0.6600	-2.7500
9	1	63	-18.9185	-35.9524	489.1567
		73	-18.9185	-45.3024	-526.5276
	2	63	-28.4693	-55.3305	739.5741
		73	-28.4693	-66.5505	-783.9381
20	1	64	-38.1633	-37.1547	504.0337
		74	-38.1633	-46.5047	-541.7094
	2	64	-57.3500	-57.1346	761.8949
		74	-57.3500	-68.3546	-806.7213
21	1	65	-53.4663	-33.9679	464.0909
		75	-53.4663	-43.3179	-501.9812
	2	65	-80.2873	-52.3545	701.9816
		75	-80.2873	-63.5745	-747.1308
122	1	66	-67.0838	-29.3543	406.3840
		76	-67.0838	-38.7043	-444.3496
	2	66	-100.6946	-45.4342	615.4214
		76	-100.6946	-56.6542	-660.6838
123	1	67	-80.1921	-23.6607	335.2034
		77	-80.1921	-33.0107	-373.1898
	2	67	-120.3323	-36.8939	508.6516
		77	-120.3323	-48.1139	-553.9464
124	1	68	-93.1383	-16.9383	251.1644
		78	-93.1383	-26.2883	-289.1677
	2	68	-139.6925	-26.8110	382.5993
		78	-139.6925	-38.0310	-427.9256
125	1	69	-105.5657	-9.1953	154.3174
		79	-105.5657	-18.5453	-192.4402

E L E M E N T F O R C E S

ELEM NO	LOAD COMB	NODE NO	AXIAL	SHEAR	MOMENT
	2	69	-158.1359	-15.1984	237.3442
		79	-158.1359	-26.4184	-282.8653

R E A C T I O N S

NODE NO	LOAD COMB	PX	PY	MOMENT
	Units :	K	K	K -Ft
2	1	-121.4913	-208.1445	624.9829
	2	-182.5681	-325.4496	938.1229
12	1	-111.7397	89.2076	707.8241
	2	-167.6571	110.6644	1062.0043
22	1	-107.7474	84.4664	688.0048
	2	-161.6546	102.7313	1032.1976
32	1	-106.2327	83.4182	677.7980
	2	-159.3697	101.1687	1016.8194
42	1	-104.6310	82.7213	667.7649
	2	-156.9596	100.1355	1001.7246
52	1	-103.2283	82.3159	658.9186
	2	-154.8488	99.5289	988.4150
62	1	-101.9708	81.9175	651.0224
	2	-152.9562	98.9315	976.5336
72	1	-100.8419	81.5265	643.9717
	2	-151.2565	98.3448	965.9204

LOAD COMBINATIONS:

COMB 1 : 1.00 X CASE 1
+ 1.00 X CASE 3

COMB 2 : 1.20 X CASE 1
+ 1.50 X CASE 3

R E A C T I O N S

NODE	LOAD COMB	PX	PY	MOMENT
82	1	-99.8121	81.1475	637.6053
	2	-149.7051	97.7748	956.3307
92	1	-98.8751	80.5894	631.8321
	2	-148.2919	96.9256	947.6259
102	1	-97.7524	79.7221	625.5393
	2	-146.5950	95.6149	938.1186
112	1	-98.5186	70.1514	626.2055
	2	-147.7303	82.0802	939.0402
122	1	-75.5838	272.0968	537.4234
	2	-113.0446	394.9123	805.4864

BPLW

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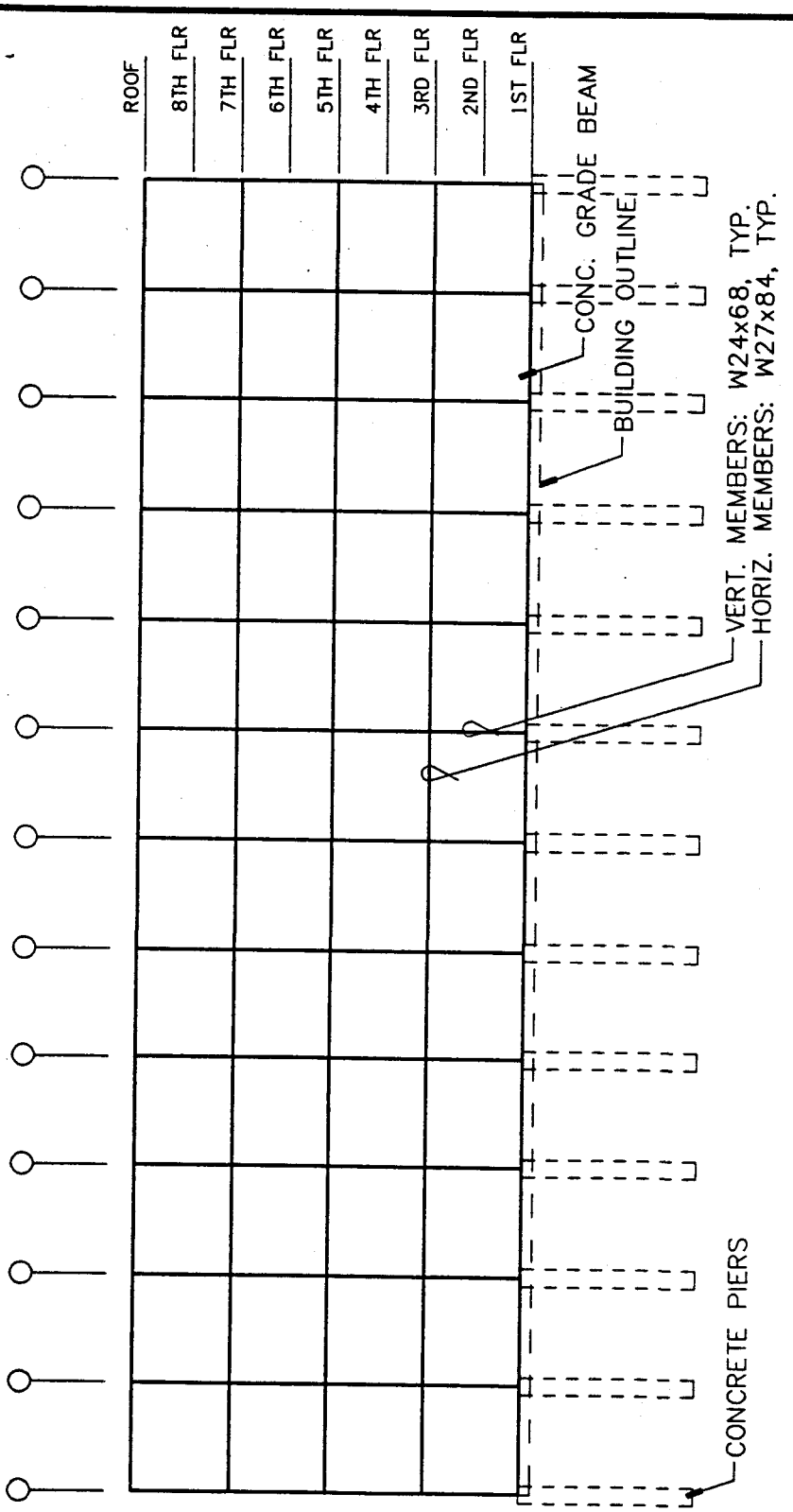

OPTION 2B
FRAMING ELEVATION
N.T.S.

BPLW

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Project _____

Subject _____

Project No. _____ Date _____ By _____

- ☐ Memorandum
- ☐ Telephone record
- ☐ Note to the file
- ☐ Minutes of meeting
- ☐ To be typed
- ☐ _____

OPTION 3A

SEISMIC ANALYSIS

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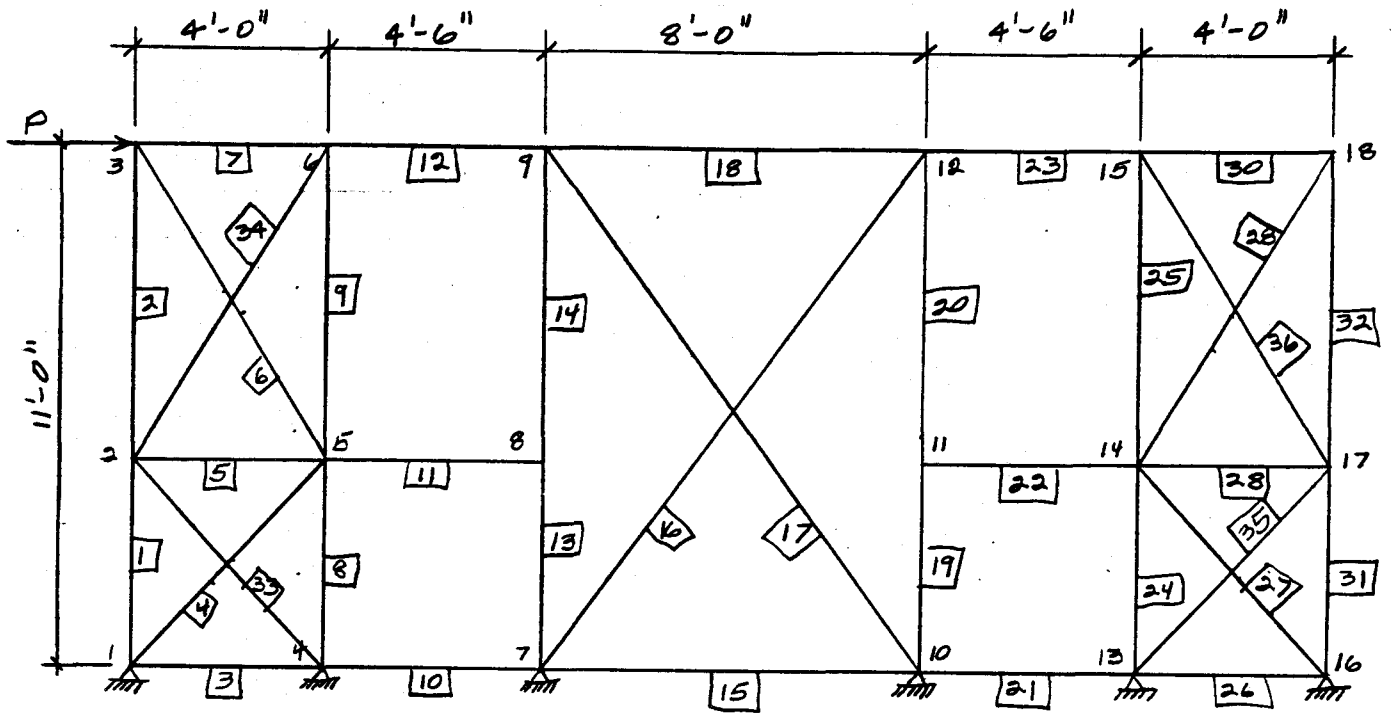

DISTRIBUTE P TO NODES 3, 6, 9, 12, 15, & 18 $\quad p = \frac{250}{6} = 41.67^k$

FOR OPTION 3B: $\quad p = \frac{108}{6} = 18^k$

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June 1990

Designing to Shape the Future

N O D A L I N F O R M A T I O N

NODE NO	NODAL COORDINATES X	Y	SUPPORT CONDITIONS CODE	PX STIFF	PY STIFF	M STIFF
Units :	Ft	Ft		K /In	K /In	K -In /Deg
1	0.000	0.000	H			
2	0.000	4.330				
3	0.000	11.000				
4	4.000	0.000	H			
5	4.000	4.330				
6	4.000	11.000				
7	8.500	0.000	H			
8	8.500	4.330				
9	8.500	11.000				
10	16.500	0.000	H			
11	16.500	4.330				
12	16.500	11.000				
13	21.000	0.000	H			
14	21.000	4.330				
15	21.000	11.000				
16	25.000	0.000	H			
17	25.000	4.330				
18	25.000	11.000				

E L E M E N T I N F O R M A T I O N

ELEM NO	NE NODE	PE NODE	ELEM LENGTH	BETA ANGLE	PROP TYPE	ELEM TYPE	NE HINGE	PE HINGE
		Units :	Ft	Deg				
1	1	2	4.330	90.00	1	BEAM		
2	2	3	6.670	90.00	1	BEAM		
3	1	4	4.000	0.00	1	BEAM		
4	1	5	5.895	47.27	2	BEAM		
5	2	5	4.000	0.00	1	BEAM		
6	5	3	7.777	120.95	2	BEAM		
7	3	6	4.000	0.00	1	BEAM		
8	4	5	4.330	90.00	1	BEAM		
9	5	6	6.670	90.00	1	BEAM		
10	4	7	4.500	0.00	1	BEAM		
11	5	8	4.500	0.00	1	BEAM		
12	6	9	4.500	0.00	1	BEAM		
13	7	8	4.330	90.00	1	BEAM		
14	8	9	6.670	90.00	1	BEAM		
15	7	10	8.000	0.00	1	BEAM		
16	7	12	13.601	53.97	3	BEAM		
17	10	9	13.601	126.03	3	BEAM		
18	9	12	8.000	0.00	1	BEAM		
19	10	11	4.330	90.00	1	BEAM		
20	11	12	6.670	90.00	1	BEAM		

ELEMENT INFORMATION

ELEM NO	NE NODE	PE NODE	ELEM LENGTH	BETA ANGLE	PROP TYPE	ELEM TYPE	NE HINGE	PE HINGE
21	10	13	4.500	0.00	1	BEAM		
22	11	14	4.500	0.00	1	BEAM		
23	12	15	4.500	0.00	1	BEAM		
24	13	14	4.330	90.00	1	BEAM		
25	14	15	6.670	90.00	1	BEAM		
26	13	16	4.000	0.00	1	BEAM		
27	16	14	5.895	132.73	2	BEAM		
28	14	17	4.000	0.00	1	BEAM		
29	14	18	7.777	59.05	2	BEAM		
30	15	18	4.000	0.00	1	BEAM		
31	16	17	4.330	90.00	1	BEAM		
32	17	18	6.670	90.00	1	BEAM		
33	4	2	5.895	132.73	2	BEAM		
34	2	6	7.777	59.05	2	BEAM		
35	13	17	5.895	47.27	2	BEAM		
36	17	15	7.777	120.95	2	BEAM		

PROPERTY INFORMATION

PROP NO	SECTION NAME	MODULUS	AREA	I	DIST
	Units :	K /In 2	In2	In4	Ft
1	TS4X3X.1875	2.9e+004	2.39	3.34	
2	TS4X4X.25	2.9e+004	3.59	8.22	
3	TS 6X4X.375	2.9e+004	6.58	29.7	

NODAL LOAD INFORMATION

REC NO	LOAD CASE	LOAD TYPE	PX DX	PY DY	M BETA
		Units :	K Ft	K Ft	Ft-K Deg

Description : SEISMIC
Node List : 3.6.9.12.15.18

1	3	FORCE	41.67	0.00	0.00

N O D A L D I S P L A C E M E N T S

ODE	LOAD COMB	DX	DY	ROTATION
	Units :	In	In	Deg

COMBINATIONS:

1 : 1.00 X CASE 3

2 : 1.50 X CASE 3

1	1	0.0000	0.0000	-0.0608
	2	0.0000	0.0000	-0.0912
2	1	0.1126	0.0736	-0.2148
	2	0.1689	0.1104	-0.3221
3	1	0.5046	0.1172	-0.3399
	2	0.7570	0.1758	-0.5098
4	1	0.0000	0.0000	-0.0246
	2	0.0000	0.0000	-0.0369
5	1	0.1124	-0.0714	-0.1290
	2	0.1686	-0.1070	-0.1936
6	1	0.4918	-0.1093	-0.0860
	2	0.7377	-0.1639	-0.1291
7	1	0.0000	0.0000	-0.1380
	2	0.0000	0.0000	-0.2071
8	1	0.1126	0.0766	-0.0171
	2	0.1689	0.1149	-0.0256
9	1	0.4628	0.1964	-0.0864
	2	0.6942	0.2946	-0.1296
0	1	0.0000	0.0000	-0.1380
	2	0.0000	0.0000	-0.2071
1	1	0.1126	-0.0766	-0.0171