

T E T R A - Diseños Estructurales

Calle 19 # 9 - 50 - Oficina 907

Edificio DIARIO DEL OTUN

Tel. 324 50 18

Pereira - Colombia

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PROGRAMA - E T A B S -

PORTICOS TRIDIMENSIONALES

DATOS DE ENTRADA

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S T O R Y D A T A

STORY	SIMILAR TO	HEIGHT	ELEVATION
CUBN+16.10	None	1.300	23.800
CUBN+14.80	None	3.700	22.500
P4N+11.10	None	3.700	18.800
P3N+7.40	None	3.700	15.100
P2N+3.70	None	3.700	11.400
P1N+0.00	None	3.700	7.700
SOT1N-3.70	None	4.000	4.000
BASE	None		0.000

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M A T E R I A L P R O P E R T Y D A T A

MATERIAL NAME	MATERIAL TYPE	DESIGN TYPE	MATERIAL DIR/PLANE	MODULUS OF ELASTICITY	POISSON'S RATIO	THERMAL COEFF	SHEAR MODULUS
STEEL	Iso	Steel	All	20389019.158	0.3000	1.1700E-05	7841930.445
CONC	Iso	Concrete	All	2188200.000	0.2000	9.9000E-06	911750.000
OTHER	Iso	None	All	20389019.158	0.3000	1.1700E-05	7841930.445
CONC3500	Iso	Concrete	All	2363520.000	0.2000	9.9000E-06	984800.000

M A T E R I A L P R O P E R T Y M A S S A N D W E I G H T

MATERIAL NAME	MASS PER UNIT VOL	WEIGHT PER UNIT VOL
STEEL	7.9814E-01	7.8334E+00
CONC	2.4480E-01	2.4026E+00
OTHER	7.9814E-01	7.8334E+00
CONC3500	2.4000E-01	2.4000E+00

M A T E R I A L D E S I G N D A T A F O R S T E E L M A T E R I A L S

MATERIAL NAME	STEEL FY	STEEL FU	STEEL COST (\$)
STEEL	35153.481	45699.526	27679.91

M A T E R I A L D E S I G N D A T A F O R C O N C R E T E M A T E R I A L S

MATERIAL NAME	LIGHTWEIGHT CONCRETE	CONCRETE FC	REBAR FY	REBAR FYS	LIGHTWT REDUC FACT
CONC	No	2100.000	42000.000	42000.000	N/A
CONC3500	No	2100.000	42000.000	42000.000	N/A

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F R A M E S E C T I O N P R O P E R T Y D A T A

FRAME SECTION NAME	MATERIAL NAME	SECTION SHAPE NAME OR NAME IN SECTION DATABASE FILE	CONC COL	CONC BEAM
VIG50X60	CONC3500	Rectangular		Yes
VIG33X40	CONC3500	Rectangular		Yes
VIG30X60	CONC3500	Rectangular		Yes
COL50X50	CONC3500	Rectangular	Yes	
COL60X100	CONC3500	Rectangular	Yes	
COL40X40	CONC3500	Rectangular	Yes	
VT12X60	CONC3500	Rectangular		Yes
VT20X60	CONC3500	Rectangular		Yes
IPE200	STEEL	IPE200		
COL50X80	CONC3500	Rectangular	Yes	
VIG50X80	CONC3500	Rectangular		Yes
VT15X60	CONC3500	Rectangular		Yes

F R A M E S E C T I O N P R O P E R T Y D A T A

FRAME SECTION NAME	SECTION DEPTH	FLANGE WIDTH TOP	FLANGE THICK TOP	WEB THICK	FLANGE WIDTH BOT	FLANGE THICK BOT
VIG50X60	0.6000	0.5000	0.0000	0.0000	0.0000	0.0000
VIG33X40	0.4000	0.3300	0.0000	0.0000	0.0000	0.0000
VIG30X60	0.6000	0.3000	0.0000	0.0000	0.0000	0.0000
COL50X50	0.5000	0.5000	0.0000	0.0000	0.0000	0.0000
COL60X100	1.0000	0.6000	0.0000	0.0000	0.0000	0.0000
COL40X40	0.4000	0.4000	0.0000	0.0000	0.0000	0.0000

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VT12X60	0.6000	0.1200	0.0000	0.0000	0.0000	0.0000
VT20X60	0.6000	0.2000	0.0000	0.0000	0.0000	0.0000
IPE200	0.2000	0.1000	0.0085	0.0056	0.1000	0.0085
COL50X80	0.8000	0.5000	0.0000	0.0000	0.0000	0.0000
VIG50X80	0.8000	0.5000	0.0000	0.0000	0.0000	0.0000
VT15X60	0.6000	0.1500	0.0000	0.0000	0.0000	0.0000

FRAME SECTION PROPERTY DATA

FRAME SECTION NAME	SECTION AREA	TORSIONAL CONSTANT	MOMENTS OF INERTIA		SHEAR AREAS	
			I33	I22	A2	A3
VIG50X60	0.3000	0.0124	0.0090	0.0063	0.2500	0.2500
VIG33X40	0.1320	0.0024	0.0018	0.0012	0.1100	0.1100
VIG30X60	0.1800	0.0037	0.0054	0.0014	0.1500	0.1500
COL50X50	0.2500	0.0088	0.0052	0.0052	0.2083	0.2083
COL60X100	0.6000	0.0451	0.0500	0.0180	0.5000	0.5000
COL40X40	0.1600	0.0036	0.0021	0.0021	0.1333	0.1333
VT12X60	0.0720	0.0003	0.0022	0.0001	0.0600	0.0600
VT20X60	0.1200	0.0013	0.0036	0.0004	0.1000	0.1000
IPE200	0.0029	0.0000	0.0000	0.0000	0.0011	0.0014
COL50X80	0.4000	0.0204	0.0213	0.0083	0.3333	0.3333
VIG50X80	0.4000	0.0204	0.0213	0.0083	0.3333	0.3333
VT15X60	0.0900	0.0006	0.0027	0.0002	0.0750	0.0750

FRAME SECTION PROPERTY DATA

FRAME SECTION NAME	SECTION MODULI		PLASTIC MODULI		RADIUS OF GYRATION	
	S33	S22	Z33	Z22	R33	R22
VIG50X60	0.0300	0.0250	0.0450	0.0375	0.1732	0.1443
VIG33X40	0.0088	0.0073	0.0132	0.0109	0.1155	0.0953
VIG30X60	0.0180	0.0090	0.0270	0.0135	0.1732	0.0866
COL50X50	0.0208	0.0208	0.0313	0.0313	0.1443	0.1443
COL60X100	0.1000	0.0600	0.1500	0.0900	0.2887	0.1732
COL40X40	0.0107	0.0107	0.0160	0.0160	0.1155	0.1155
VT12X60	0.0072	0.0014	0.0108	0.0022	0.1732	0.0346
VT20X60	0.0120	0.0040	0.0180	0.0060	0.1732	0.0577
IPE200	0.0002	0.0000	0.0002	0.0000	0.0826	0.0223
COL50X80	0.0533	0.0333	0.0800	0.0500	0.2309	0.1443
VIG50X80	0.0533	0.0333	0.0800	0.0500	0.2309	0.1443
VT15X60	0.0090	0.0023	0.0135	0.0034	0.1732	0.0433

FRAME SECTION WEIGHTS AND MASSES

FRAME SECTION NAME	TOTAL WEIGHT	TOTAL MASS
VIG50X60	669.3984	66.9398
VIG33X40	29.6525	2.9652
VIG30X60	65.2536	6.5254
COL50X50	104.4000	10.4400
COL60X100	319.3920	31.9392
COL40X40	9.9456	0.9946
VT12X60	666.5242	66.6524
VT20X60	17.9712	1.7971
IPE200	1.0314	0.1051
COL50X80	36.9600	3.6960
VIG50X80	54.0480	5.4048
VT15X60	10.1088	1.0109

CONCRETE COLUMN DATA

FRAME SECTION NAME	REINF CONFIGURATION		REINF SIZE/TYPE	NUM BARS 3DIR/2DIR	NUM BARS CIRCULAR	BAR COVER
	LONGIT	LATERAL				
COL50X50	Rectangular Ties		#6/Design	4/4	N/A	0.0400
COL60X100	Rectangular Ties		#6/Design	5/7	N/A	0.0500
COL40X40	Rectangular Ties		#6/Design	3/3	N/A	0.0500
COL50X80	Rectangular Ties		#5/Design	5/7	N/A	0.0400

CONCRETE BEAM DATA

FRAME SECTION NAME	TOP COVER	BOT COVER	TOP LEFT AREA	TOP RIGHT AREA	BOT LEFT AREA	BOT RIGHT AREA
VIG50X60	0.0500	0.0500	0.0	0.0	0.0	0.0
VIG33X40	0.0500	0.0500	0.0	0.0	0.0	0.0
VIG30X60	0.0500	0.0500	0.0	0.0	0.0	0.0
VT12X60	0.0500	0.0500	0.0	0.0	0.0	0.0
VT20X60	0.0500	0.0500	0.0	0.0	0.0	0.0

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VIG50X80 0.0500 0.0500 0.0 0.0 0.0 0.0
VT15X60 0.0500 0.0500 0.0 0.0 0.0 0.0

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S H E L L S E C T I O N P R O P E R T Y D A T A

SHELL SECTION	MATERIAL NAME	SHELL TYPE	LOAD DIST ONE WAY	MEMBRANE THICK	BENDING THICK	TOTAL WEIGHT	TOTAL MASS
PAN20	CONC3500	Shell-Thin	No	0.2000	0.2000	49.7280	4.9728
LOSA	CONC3500	Membrane	No	0.0700	0.0700	532.5466	53.2547
CUBIERTA	CONC3500	Membrane	Yes	0.0250	0.0250	31.0752	3.1075
PAN50	CONC3500	Shell-Thin	No	0.5000	0.5000	144.3840	14.4384
PAN30	CONC3500	Shell-Thin	No	0.3000	0.3000	158.1552	15.8155

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S T A T I C L O A D C A S E S

STATIC CASE	CASE TYPE	AUTO LAT LOAD	SELF WT MULTIPLIER	NOTIONAL FACTOR	NOTIONAL DIRECTION
DEAD	DEAD	N/A	1.0000		
LIVE	LIVE	N/A	0.0000		

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R E S P O N S E S P E C T R U M C A S E S

RESP SPEC CASE: ESPECX

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
SRSS	SRSS	0.0500	0.0000	0.0500

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	ESPECTRO	12.5860
U2	----	N/A
UZ	----	N/A

RESP SPEC CASE: ESPECY

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
SRSS	SRSS	0.0500	0.0000	0.0500

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	----	N/A
U2	ESPECTRO	11.2630
UZ	----	N/A

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L O A D I N G C O M B I N A T I O N S

COMBO	COMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
COMB1	ADD	DEAD	Static	1.4000
COMB2	ADD	DEAD	Static	1.2000
		LIVE	Static	1.6000
COMB3	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		ESPECX	Spectra	0.2200
		ESPECY	Spectra	0.0660
COMB4	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		ESPECX	Spectra	0.0660
		ESPECY	Spectra	0.2200
COMB5	ADD	DEAD	Static	0.9000
		ESPECX	Spectra	0.2200
		ESPECY	Spectra	0.0660

COMB6	ADD	DEAD	Static	0.9000
		ESPECX	Spectra	0.0660
		ESPECY	Spectra	0.2200
CIMEN1	ADD	DEAD	Static	1.0000
		LIVE	Static	1.0000
CIMEN2	ADD	DEAD	Static	1.0000
		ESPECX	Spectra	0.1540
		ESPECY	Spectra	0.0470
CIMEN3	ADD	DEAD	Static	1.0000
		ESPECX	Spectra	0.0470
		ESPECY	Spectra	0.1540
CIMEN4	ADD	DEAD	Static	1.0000
		LIVE	Static	0.7500
		ESPECX	Spectra	0.1160
		ESPECY	Spectra	0.0350
CIMEN5	ADD	DEAD	Static	1.0000
		LIVE	Static	0.7500
		ESPECX	Spectra	0.0350
		ESPECY	Spectra	0.1160

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R E S P O N S E S P E C T R U M F U N C T I O N - U S E R

FUNCTION NAME: ESPECTRO

PERIOD	ACCEL
0.0000	0.9000
0.1000	0.9000
0.2000	0.9000
0.3000	0.9000
0.4000	0.9000
0.5000	0.9000
0.6000	0.9000
0.7000	0.9000
0.8000	0.9000
0.9000	0.8000
1.0000	0.7200
1.1000	0.6550
1.2000	0.6000
1.3000	0.5540
1.4000	0.5140
1.5000	0.4800
1.6000	0.4500
1.7000	0.4240
1.8000	0.4000
1.9000	0.3790
2.0000	0.3600
2.1000	0.3430
2.2000	0.3270
2.3000	0.3130
2.4000	0.3000
2.5000	0.2880
2.6000	0.2770
2.7000	0.2670
2.8000	0.2570
2.9000	0.2480
3.0000	0.2400
3.1000	0.2320
3.2000	0.2250
3.3000	0.2180
3.4000	0.2120
3.5000	0.2060
3.6000	0.2000
3.7000	0.1950
3.8000	0.1890
3.9000	0.1850
4.0000	0.1800
4.1000	0.1760
4.2000	0.1710
4.3000	0.1670
4.4000	0.1640
4.5000	0.1600
4.6000	0.1570
4.7000	0.1530
4.8000	0.1500
4.9000	0.1470
5.0000	0.1440

T E T R A - Diseños Estructurales

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Ing. Civil, M.Sc., Ph.D.

Matr. 25202-46529 Cund.

PROGRAMA - E T A B S -

PORTICOS TRIDIMENSIONALES

RESUMEN RESULTADOS:

- DESPLAZAMIENTOS DE LA ESTRUCTURA**
- CHEQUEO DE DERIVAS**
- PERIODOS DE VIBRACIÓN**

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PROJECT INFORMATION

Company Name = tetra

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STORY DATA

STORY	SIMILAR TO	HEIGHT	ELEVATION
CUBN+16.10	None	1.300	23.800
CUBN+14.80	None	3.700	22.500
P4N+11.10	None	3.700	18.800
P3N+7.40	None	3.700	15.100
P2N+3.70	None	3.700	11.400
P1N+0.00	None	3.700	7.700
SOT1N-3.70	None	4.000	4.000
BASE	None		0.000

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STATIC LOAD CASES

STATIC CASE	CASE TYPE	AUTO LAT LOAD	SELF WT MULTIPLIER	NOTIONAL FACTOR	NOTIONAL DIRECTION
DEAD	DEAD	N/A	1.0000		
LIVE	LIVE	N/A	0.0000		

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RESPONSE SPECTRUM CASES

RESP SPEC CASE: ESPECK

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
SRSS	SRSS	0.0500	0.0000	0.0500

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	ESPECTRO	12.5860
U2	----	N/A
U3	----	N/A

} CORRECCION EN "X"

RESP SPEC CASE: ESPEY

BASIC RESPONSE SPECTRUM DATA

MODAL COMBO	DIRECTION COMBO	MODAL DAMPING	SPECTRUM ANGLE	TYPICAL ECCEN
SRSS	SRSS	0.0500	0.0000	0.0500

RESPONSE SPECTRUM FUNCTION ASSIGNMENT DATA

DIRECTION	FUNCTION	SCALE FACT
U1	----	N/A
U2	ESPECTRO	11.2630
U3	----	N/A

} CORRECCION EN "Y"

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MASS SOURCE DATA

MASS FROM	LATERAL MASS ONLY	LUMP MASS AT STORIES
Loads	Yes	Yes

MASS SOURCE LOADS

LOAD	MULTIPLIER
DEAD	1.0000

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DIAPHRAGM MASS DATA

STORY	DIAPHRAGM	MASS-X	MASS-Y	MMI	X-M	Y-M
CUBN+16.10	D1	1.006E+01	1.006E+01	3.568E+02	15.600	24.567
CUBN+14.80	D1	9.441E+00	9.441E+00	1.146E+03	15.600	17.024
P4N+11.10	D1	5.588E+01	5.588E+01	6.012E+03	15.600	18.924
P3N+7.40	D1	6.060E+01	6.060E+01	6.770E+03	15.600	18.976
P2N+3.70	D1	6.154E+01	6.154E+01	6.977E+03	15.600	18.921
P1N+0.00	D1	1.015E+02	1.015E+02	1.617E+04	15.731	13.955
SOTIN-3.70	D1	1.103E+02	1.103E+02	1.852E+04	15.751	14.319

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ASSEMBLED POINT MASSES

STORY	UX	UY	UZ	RX	RY	RZ
CUBN+16.10	1.006E+01	1.006E+01	0.000E+00	0.000E+00	0.000E+00	3.568E+02
CUBN+14.80	1.159E+01	1.159E+01	0.000E+00	0.000E+00	0.000E+00	1.146E+03
P4N+11.10	5.588E+01	5.588E+01	0.000E+00	0.000E+00	0.000E+00	6.012E+03
P3N+7.40	6.060E+01	6.060E+01	0.000E+00	0.000E+00	0.000E+00	6.770E+03
P2N+3.70	6.191E+01	6.191E+01	0.000E+00	0.000E+00	0.000E+00	6.977E+03
P1N+0.00	1.015E+02	1.015E+02	0.000E+00	0.000E+00	0.000E+00	1.617E+04
SOTIN-3.70	1.103E+02	1.103E+02	0.000E+00	0.000E+00	0.000E+00	1.852E+04
BASE	1.045E+01	1.045E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Totals	4.223E+02	4.223E+02	0.000E+00	0.000E+00	0.000E+00	5.595E+04

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CENTERS OF CUMULATIVE MASS & CENTERS OF RIGIDITY

STORY LEVEL	DIAPHRAGM NAME	/-----CENTER OF MASS-----/		/---CENTER OF RIGIDITY---/	
		MASS	ORDINATE-X	ORDINATE-Y	ORDINATE-X
CUBN+16.10	D1	1.006E+01	15.600	24.567	15.602
CUBN+14.80	D1	1.950E+01	15.600	20.915	15.603
P4N+11.10	D1	7.538E+01	15.600	19.439	15.612
P3N+7.40	D1	1.360E+02	15.600	19.233	15.615
P2N+3.70	D1	1.975E+02	15.600	19.136	15.619
P1N+0.00	D1	2.990E+02	15.645	17.377	15.625
SOTIN-3.70	D1	4.093E+02	15.673	16.553	15.635

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MODAL PERIODS AND FREQUENCIES

MODE NUMBER	PERIOD (TIME)	FREQUENCY (CYCLES/TIME)	CIRCULAR FREQ (RADIANS/TIME)
Mode 1	0.57093	1.75153	11.00517
Mode 2	0.35698	2.80132	17.60119
Mode 3	0.23635	4.23108	26.58468
Mode 4	0.19952	5.01205	31.49162
Mode 5	0.17057	5.86280	36.83703
Mode 6	0.15071	6.63511	41.68964
Mode 7	0.12248	8.16437	51.29828
Mode 8	0.08630	11.58682	72.80215
Mode 9	0.06715	14.89093	93.56245
Mode 10	0.05977	16.73103	105.12419
Mode 11	0.05096	19.62337	123.29727
Mode 12	0.04322	23.13511	145.36217
Mode 13	0.04098	24.40079	153.31467
Mode 14	0.03699	27.03085	169.83985
Mode 15	0.03450	28.98312	182.10629
Mode 16	0.03176	31.48257	197.81085
Mode 17	0.02957	33.81872	212.48928
Mode 18	0.02818	35.48543	222.96156

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MODAL PARTICIPATING MASS RATIOS

MODE NUMBER	X-TRANS %MASS <SUM>	Y-TRANS %MASS <SUM>	Z-TRANS %MASS <SUM>	RX-ROTN %MASS <SUM>	RY-ROTN %MASS <SUM>	RZ-ROTN %MASS <SUM>
Mode 1	53.24 < 53>	0.00 < 0>	0.00 < 0>	0.00 < 0>	92.44 < 92>	4.65 < 5>
Mode 2	0.00 < 53>	60.05 < 60>	0.00 < 0>	95.53 < 96>	0.00 < 92>	0.00 < 5>
Mode 3	0.46 < 54>	0.00 < 60>	0.00 < 0>	0.00 < 96>	0.04 < 92>	32.05 < 37>
Mode 4	11.36 < 65>	0.00 < 60>	0.00 < 0>	0.00 < 96>	2.74 < 95>	3.39 < 40>
Mode 5	0.00 < 65>	11.50 < 72>	0.00 < 0>	3.15 < 99>	0.00 < 95>	0.00 < 40>
Mode 6	3.02 < 68>	0.00 < 72>	0.00 < 0>	0.00 < 99>	0.20 < 95>	11.77 < 52>
Mode 7	19.83 < 88>	0.00 < 72>	0.00 < 0>	0.00 < 99>	3.90 < 99>	9.96 < 62>
Mode 8	0.00 < 88>	22.96 < 95>	0.00 < 0>	1.26 <100>	0.00 < 99>	0.00 < 62>
Mode 9	7.31 < 95>	0.00 < 95>	0.00 < 0>	0.00 <100>	0.61 <100>	5.17 < 67>

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Mode 10	0.17 < 95>	0.00 < 95>	0.00 < 0>	0.00 <100>	0.01 <100>	26.06 < 93>
Mode 11	0.01 < 95>	0.00 < 95>	0.00 < 0>	0.00 <100>	0.01 <100>	0.08 < 93>
Mode 12	0.00 < 95>	4.22 < 99>	0.00 < 0>	0.05 <100>	0.00 <100>	0.00 < 93>
Mode 13	0.02 < 95>	0.00 < 99>	0.00 < 0>	0.00 <100>	0.00 <100>	0.02 < 93>
Mode 14	3.31 < 99>	0.00 < 99>	0.00 < 0>	0.00 <100>	0.04 <100>	0.01 < 93>
Mode 15	0.00 < 99>	0.20 < 99>	0.00 < 0>	0.01 <100>	0.00 <100>	0.00 < 93>
Mode 16	0.00 < 99>	0.99 <100>	0.00 < 0>	0.00 <100>	0.00 <100>	0.00 < 93>
Mode 17	0.37 < 99>	0.00 <100>	0.00 < 0>	0.00 <100>	0.00 <100>	1.62 < 95>
Mode 18	0.90 <100>	0.00 <100>	0.00 < 0>	0.00 <100>	0.00 <100>	3.25 < 98>

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MODAL LOAD PARTICIPATION RATIOS
(STATIC AND DYNAMIC RATIOS ARE IN PERCENT)

TYPE	NAME	STATIC	DYNAMIC
Load	DEAD	0.2929	0.0000
Load	LIVE	0.2638	0.0000
Accel	UX	100.0000	99.9992
Accel	UY	99.9994	99.9260
Accel	UZ	0.0000	0.0000
Accel	RX	100.0000	99.9987
Accel	RY	100.0000	99.9977
Accel	RZ	36.6766	98.0323

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TOTAL REACTIVE FORCES (RECOVERED LOADS) AT ORIGIN

LOAD	FX	FY	FZ	MX	MY	MZ
DEAD	1.566E-12	4.592E-12	3.428E+03	7.023E+04	-6.632E+04	-7.648E-04
LIVE	1.078E-12	2.286E-12	1.611E+03	2.587E+04	-2.513E+04	-4.960E-04
ESPECX	2.733E+03	2.803E+00	1.183E-09	2.199E+01	4.049E+04	5.518E+04
ESPECY	2.508E+00	2.733E+03	4.309E-10	3.877E+04	2.472E+01	4.832E+04

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STORY FORCES

STORY	LOAD	P	VX	VY	T	MX	MY
CUBN+16.10	ESPECX	2.369E-12	2.660E+02	2.771E-01	6.799E+03	3.608E-01	3.466E+02
CUBN+14.80	ESPECX	5.487E-12	5.131E+02	4.093E-01	1.208E+04	1.814E+00	2.250E+03
P4N+11.10	ESPECX	4.840E-10	1.249E+03	1.394E+00	2.711E+04	5.463E+00	6.555E+03
P3N+7.40	ESPECX	2.534E-09	1.833E+03	1.749E+00	3.936E+04	1.093E+01	1.318E+04
P2N+3.70	ESPECX	4.878E-09	2.205E+03	1.741E+00	4.686E+04	1.580E+01	2.117E+04
P1N+0.00	ESPECX	1.013E-09	2.529E+03	1.923E+00	5.225E+04	1.768E+01	3.012E+04
SOT1N-3.70	ESPECX	1.183E-09	2.733E+03	2.803E+00	5.518E+04	2.199E+01	4.049E+04
CUBN+16.10	ESPECY	3.123E-13	3.367E-01	2.568E+02	4.211E+03	3.346E+02	4.483E-01
CUBN+14.80	ESPECY	1.404E-11	4.952E-01	5.033E+02	8.380E+03	2.200E+03	2.165E+00
P4N+11.10	ESPECY	1.175E-10	1.244E+00	1.172E+03	2.009E+04	6.271E+03	5.480E+00
P3N+7.40	ESPECY	2.466E-10	1.304E+00	1.714E+03	2.948E+04	1.247E+04	9.458E+00
P2N+3.70	ESPECY	5.409E-10	1.378E+00	2.059E+03	3.563E+04	1.993E+04	1.310E+01
P1N+0.00	ESPECY	4.943E-10	1.808E+00	2.457E+03	4.305E+04	2.856E+04	1.766E+01
SOT1N-3.70	ESPECY	4.309E-10	2.508E+00	2.733E+03	4.832E+04	3.877E+04	2.472E+01

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STORY DRIFTS

STORY	DIRECTION	LOAD	MAX DRIFT
CUBN+16.10	X	ESPECX	1/141
CUBN+14.80	X	ESPECX	1/102
P4N+11.10	X	ESPECX	1/103
P3N+7.40	X	ESPECX	1/103
P2N+3.70	X	ESPECX	1/124
P1N+0.00	X	ESPECX	1/206
SOT1N-3.70	X	ESPECX	1/478
CUBN+16.10	Y	ESPECY	1/167
CUBN+14.80	Y	ESPECY	1/133
P4N+11.10	Y	ESPECY	1/323
P3N+7.40	Y	ESPECY	1/332
P2N+3.70	Y	ESPECY	1/390
P1N+0.00	Y	ESPECY	1/502
SOT1N-3.70	Y	ESPECY	1/891

DERIVAS

OK

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DISPLACEMENTS AT DIAPHRAGM CENTER OF MASS

STORY	DIAPHRAGM	LOAD	UX	UY	RZ
CUBN+16.10	D1	ESPECX	0.1658	0.0001	0.00145
CUBN+14.80	D1	ESPECX	0.1510	0.0001	0.00142

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P4N+11.10	D1	ESPECX	0.1176	0.0001	0.00113
P3N+7.40	D1	ESPECX	0.0838	0.0000	0.00092
P2N+3.70	D1	ESPECX	0.0497	0.0000	0.00072
P1N+0.00	D1	ESPECX	0.0191	0.0000	0.00052
SOT1N-3.70	D1	ESPECX	0.0062	0.0000	0.00017
CUBN+16.10	D1	ESPECY	0.0034	0.0678	0.00058
CUBN+14.80	D1	ESPECY	0.0005	0.0619	0.00051
P4N+11.10	D1	ESPECY	0.0013	0.0397	0.00026
P3N+7.40	D1	ESPECY	0.0012	0.0294	0.00019
P2N+3.70	D1	ESPECY	0.0011	0.0194	0.00012
P1N+0.00	D1	ESPECY	0.0005	0.0108	0.00007
SOT1N-3.70	D1	ESPECY	0.0002	0.0041	0.00002

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STORY MAXIMUM AND AVERAGE LATERAL DISPLACEMENTS

STORY	LOAD	DIR	MAXIMUM	AVERAGE	RATIO
CUBN+16.10	ESPECX	X	0.1701	0.1657	1.027
CUBN+14.80	ESPECX	X	0.1562	0.1525	1.024
P4N+11.10	ESPECX	X	0.1276	0.1199	1.064
P3N+7.40	ESPECX	X	0.0918	0.0856	1.073
P2N+3.70	ESPECX	X	0.0561	0.0512	1.097
P1N+0.00	ESPECX	X	0.0263	0.0195	1.351
SOT1N-3.70	ESPECX	X	0.0084	0.0063	1.333
CUBN+16.10	ESPECY	Y	0.0722	0.0700	1.032
CUBN+14.80	ESPECY	Y	0.0698	0.0658	1.060
P4N+11.10	ESPECY	Y	0.0437	0.0417	1.048
P3N+7.40	ESPECY	Y	0.0323	0.0309	1.048
P2N+3.70	ESPECY	Y	0.0213	0.0203	1.047
P1N+0.00	ESPECY	Y	0.0118	0.0113	1.045
SOT1N-3.70	ESPECY	Y	0.0045	0.0043	1.045

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T E T R A - Diseños Estructurales

Calle 19 # 9 - 50 - Oficina 907

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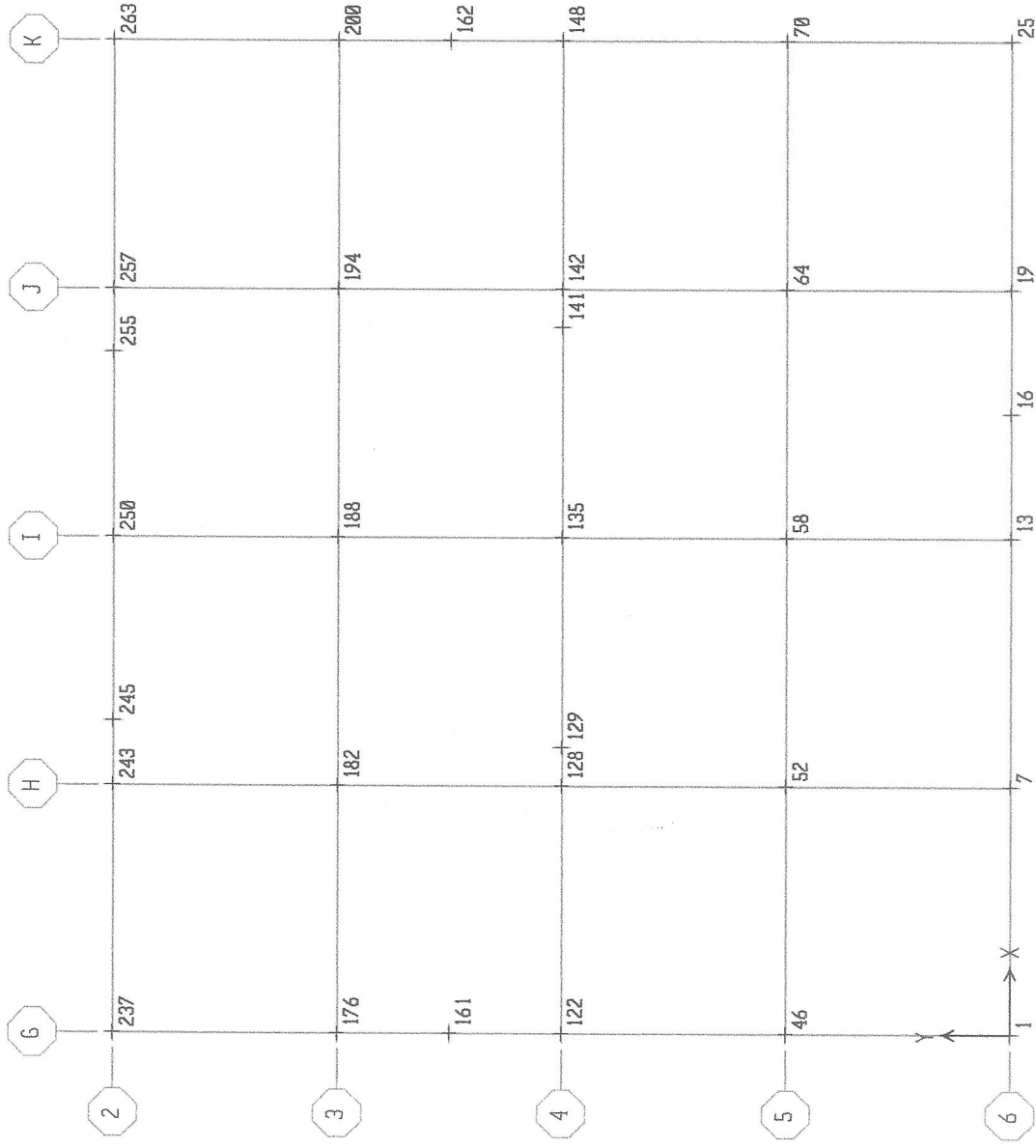
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PROGRAMA - E T A B S -

PORTICOS TRIDIMENSIONALES

FUERZAS EN LA CIMENTACION

DES PARA CARGAS EN CIMENTACION



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LOADING COMBINATIONS

COMBO	COMBO TYPE	CASE	CASE TYPE	SCALE FACTOR
CIMEN1	ADD	DEAD	Static	1.0000
		LIVE	Static	1.0000
CIMEN2	ADD	DEAD	Static	1.0000
		ESPECX	Spectra	0.1540
		ESPECY	Spectra	0.0470
CIMEN3	ADD	DEAD	Static	1.0000
		ESPECX	Spectra	0.0470
		ESPECY	Spectra	0.1540
CIMEN4	ADD	DEAD	Static	1.0000
		LIVE	Static	0.7500
		ESPECX	Spectra	0.1160
		ESPECY	Spectra	0.0350
CIMEN5	ADD	DEAD	Static	1.0000
		LIVE	Static	0.7500
		ESPECX	Spectra	0.0350
		ESPECY	Spectra	0.1160

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SUPPORT REACTIONS

STORY	POINT	LOAD	FX	FY	FZ	MX	MY	MZ
BASE	1	DEAD	1.29	0.97	34.15	-1.321	1.660	0.000
BASE	1	LIVE	0.60	0.43	12.59	-0.596	0.769	0.000
BASE	1	CIMEN1	1.88	1.41	46.74	-1.917	2.430	-0.001
BASE	1	CIMEN2 Max	1.80	1.48	36.71	0.286	3.334	0.058
BASE	1	CIMEN2 Min	0.77	0.46	31.59	-2.928	-0.013	-0.058
BASE	1	CIMEN3 Max	1.48	1.75	36.03	0.947	2.258	0.025
BASE	1	CIMEN3 Min	1.09	0.19	32.27	-3.589	1.063	-0.026
BASE	1	CIMEN4 Max	2.12	1.68	45.52	-0.563	3.498	0.043
BASE	1	CIMEN4 Min	1.34	0.92	41.66	-2.973	0.977	-0.044
BASE	1	CIMEN5 Max	1.88	1.88	45.00	-0.062	2.683	0.018
BASE	1	CIMEN5 Min	1.59	0.71	42.18	-3.474	1.792	-0.019
BASE	7	DEAD	-0.12	1.50	62.99	-2.011	-0.180	0.000
BASE	7	LIVE	-0.05	0.78	27.08	-1.046	-0.079	0.000
BASE	7	CIMEN1	-0.18	2.28	90.07	-3.057	-0.259	-0.001
BASE	7	CIMEN2 Max	0.75	1.85	64.56	-0.930	1.978	0.058
BASE	7	CIMEN2 Min	-1.00	1.15	61.41	-3.091	-2.337	-0.058
BASE	7	CIMEN3 Max	0.19	2.20	64.70	0.027	0.575	0.025
BASE	7	CIMEN3 Min	-0.43	0.79	61.27	-4.049	-0.934	-0.026
BASE	7	CIMEN4 Max	0.50	2.35	84.48	-1.986	1.386	0.043
BASE	7	CIMEN4 Min	-0.82	1.82	82.11	-3.604	-1.864	-0.044
BASE	7	CIMEN5 Max	0.07	2.61	84.59	-1.262	0.324	0.018
BASE	7	CIMEN5 Min	-0.39	1.55	82.00	-4.329	-0.801	-0.019
BASE	13	DEAD	3.57	1.49	53.38	-1.894	-1.826	0.008
BASE	13	LIVE	0.93	0.78	16.55	-0.993	-0.836	0.004
BASE	13	CIMEN1	4.50	2.27	69.93	-2.887	-2.662	0.012
BASE	13	CIMEN2 Max	82.12	1.86	372.48	-0.741	21.498	0.195
BASE	13	CIMEN2 Min	-74.99	1.12	-265.71	-3.048	-25.149	-0.180
BASE	13	CIMEN3 Max	31.05	2.52	162.46	1.498	6.404	0.241
BASE	13	CIMEN3 Min	-23.91	0.46	-55.69	-5.287	-10.055	-0.225
BASE	13	CIMEN4 Max	63.43	2.35	306.11	-1.779	15.113	0.152
BASE	13	CIMEN4 Min	-54.89	1.79	-174.53	-3.499	-20.018	-0.130
BASE	13	CIMEN5 Max	24.76	2.85	147.13	-0.084	3.687	0.186
BASE	13	CIMEN5 Min	-16.23	1.29	-15.55	-5.194	-8.592	-0.164
BASE	19	DEAD	-4.90	7.34	78.89	-9.453	1.563	-0.009
BASE	19	LIVE	-1.47	3.54	27.90	-4.571	0.733	-0.005
BASE	19	CIMEN1	-6.37	10.88	106.79	-14.025	2.296	-0.014
BASE	19	CIMEN2 Max	73.74	7.90	398.06	-7.480	24.986	0.121
BASE	19	CIMEN2 Min	-83.54	6.77	-240.28	-11.427	-21.860	-0.139
BASE	19	CIMEN3 Max	22.61	8.59	187.94	-5.507	9.824	0.199
BASE	19	CIMEN3 Min	-32.41	6.08	-30.16	-13.399	-6.697	-0.218
BASE	19	CIMEN4 Max	53.22	10.42	340.19	-11.405	19.753	0.085
BASE	19	CIMEN4 Min	-65.23	9.57	-140.57	-14.359	-15.527	-0.111
BASE	19	CIMEN5 Max	14.52	10.94	181.13	-9.912	8.275	0.144
BASE	19	CIMEN5 Min	-26.53	9.05	18.49	-15.852	-4.049	-0.170
BASE	25	DEAD	-1.28	0.99	33.81	-1.334	-1.690	0.000
BASE	25	LIVE	-0.59	0.44	12.45	-0.599	-0.781	0.000
BASE	25	CIMEN1	-1.87	1.43	46.26	-1.933	-2.470	-0.001
BASE	25	CIMEN2 Max	-0.66	1.51	37.52	0.284	0.119	0.058
BASE	25	CIMEN2 Min	-1.90	0.47	30.10	-2.952	-3.498	-0.058
BASE	25	CIMEN3 Max	-1.05	1.79	36.20	0.962	-1.040	0.025
BASE	25	CIMEN3 Min	-1.51	0.19	31.42	-3.630	-2.339	-0.026
BASE	25	CIMEN4 Max	-1.26	1.71	45.94	-0.570	-0.913	0.043
BASE	25	CIMEN4 Min	-2.19	0.93	40.36	-2.997	-3.637	-0.044

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BASE	25	CIMEN5 Max	-1.55	1.92	44.94	-0.057	-1.791	0.018
BASE	25	CIMEN5 Min	-1.90	0.72	41.36	-3.511	-2.759	-0.019
BASE	46	DEAD	2.05	-0.02	62.03	-0.033	2.667	0.000
BASE	46	LIVE	1.09	0.00	26.76	-0.026	1.422	0.000
BASE	46	CIMEN1	3.15	-0.02	88.79	-0.059	4.089	-0.001
BASE	46	CIMEN2 Max	2.66	0.87	64.96	2.075	4.657	0.058
BASE	46	CIMEN2 Min	1.45	-0.90	59.10	-2.141	0.678	-0.058
BASE	46	CIMEN3 Max	2.25	1.22	64.31	2.848	3.291	0.025
BASE	46	CIMEN3 Min	1.86	-1.26	59.74	-2.914	2.043	-0.026
BASE	46	CIMEN4 Max	3.33	0.65	84.30	1.529	5.232	0.043
BASE	46	CIMEN4 Min	2.42	-0.68	79.90	-1.634	2.235	-0.044
BASE	46	CIMEN5 Max	3.02	0.92	83.81	2.114	4.198	0.018
BASE	46	CIMEN5 Min	2.73	-0.95	80.38	-2.219	3.269	-0.019
BASE	52	DEAD	-0.21	-0.05	112.37	0.015	-0.292	0.000
BASE	52	LIVE	-0.10	-0.02	55.42	0.005	-0.142	0.000
BASE	52	CIMEN1	-0.31	-0.08	167.78	0.021	-0.433	-0.001
BASE	52	CIMEN2 Max	0.74	0.51	113.21	1.376	2.158	0.058
BASE	52	CIMEN2 Min	-1.16	-0.61	111.53	-1.345	-2.741	-0.058
BASE	52	CIMEN3 Max	0.09	0.96	112.83	2.460	0.469	0.025
BASE	52	CIMEN3 Min	-0.51	-1.06	111.91	-2.429	-1.052	-0.026
BASE	52	CIMEN4 Max	0.43	0.35	154.56	1.039	1.447	0.043
BASE	52	CIMEN4 Min	-1.00	-0.49	153.30	-1.000	-2.243	-0.044
BASE	52	CIMEN5 Max	-0.07	0.69	154.28	1.859	0.168	0.018
BASE	52	CIMEN5 Min	-0.51	-0.83	153.58	-1.820	-0.964	-0.019
BASE	58	DEAD	5.21	0.13	142.73	-0.243	6.496	-0.001
BASE	58	LIVE	2.45	0.06	67.69	-0.120	3.062	0.000
BASE	58	CIMEN1	7.67	0.19	210.42	-0.363	9.558	-0.001
BASE	58	CIMEN2 Max	6.96	0.61	143.11	0.870	13.551	0.134
BASE	58	CIMEN2 Min	3.47	-0.36	142.35	-1.356	-0.559	-0.135
BASE	58	CIMEN3 Max	5.77	1.38	143.03	2.974	8.693	0.058
BASE	58	CIMEN3 Min	4.66	-1.13	142.43	-3.459	4.300	-0.059
BASE	58	CIMEN4 Max	8.37	0.53	193.79	0.497	14.106	0.100
BASE	58	CIMEN4 Min	5.74	-0.19	193.21	-1.163	3.478	-0.103
BASE	58	CIMEN5 Max	7.47	1.12	193.73	2.089	10.429	0.042
BASE	58	CIMEN5 Min	6.64	-0.78	193.28	-2.755	7.156	-0.045
BASE	64	DEAD	0.00	0.00	0.00	0.000	0.000	0.000
BASE	64	LIVE	0.00	0.00	0.00	0.000	0.000	0.000
BASE	64	CIMEN1	0.00	0.00	0.00	0.000	0.000	0.000
BASE	64	CIMEN2 Max	0.00	0.00	0.00	0.000	0.000	0.000
BASE	64	CIMEN2 Min	0.00	0.00	0.00	0.000	0.000	0.000
BASE	64	CIMEN3 Max	0.00	0.00	0.00	0.000	0.000	0.000
BASE	64	CIMEN3 Min	0.00	0.00	0.00	0.000	0.000	0.000
BASE	64	CIMEN4 Max	0.00	0.00	0.00	0.000	0.000	0.000
BASE	64	CIMEN4 Min	0.00	0.00	0.00	0.000	0.000	0.000
BASE	64	CIMEN5 Max	0.00	0.00	0.00	0.000	0.000	0.000
BASE	64	CIMEN5 Min	0.00	0.00	0.00	0.000	0.000	0.000
BASE	70	DEAD	-7.86	-0.02	91.95	-0.042	-9.948	-0.001
BASE	70	LIVE	-3.84	0.00	38.98	-0.032	-4.864	0.000
BASE	70	CIMEN1	-11.70	-0.03	130.92	-0.074	-14.813	-0.001
BASE	70	CIMEN2 Max	-6.37	1.09	95.95	2.923	-3.239	0.134
BASE	70	CIMEN2 Min	-9.34	-1.14	87.95	-3.007	-16.658	-0.135
BASE	70	CIMEN3 Max	-7.37	1.60	94.68	4.086	-7.850	0.058
BASE	70	CIMEN3 Min	-8.34	-1.64	89.22	-4.171	-12.047	-0.059
BASE	70	CIMEN4 Max	-9.62	0.81	124.19	2.158	-8.543	0.100
BASE	70	CIMEN4 Min	-11.86	-0.86	118.17	-2.290	-18.651	-0.103
BASE	70	CIMEN5 Max	-10.38	1.19	123.23	3.039	-12.034	0.042
BASE	70	CIMEN5 Min	-11.10	-1.24	119.13	-3.171	-15.160	-0.045
BASE	122	DEAD	2.89	15.99	176.89	0.205	3.580	0.000
BASE	122	LIVE	1.53	5.24	60.13	0.032	1.910	0.000
BASE	122	CIMEN1	4.42	21.23	237.02	0.237	5.490	0.001
BASE	122	CIMEN2 Max	5.13	84.42	525.83	27.227	12.288	0.555
BASE	122	CIMEN2 Min	0.64	-52.43	-172.06	-26.818	-5.127	-0.554
BASE	122	CIMEN3 Max	3.69	105.69	637.38	37.616	6.539	0.214
BASE	122	CIMEN3 Min	2.08	-73.70	-283.61	-37.207	0.621	-0.213
BASE	122	CIMEN4 Max	5.73	71.26	483.80	20.499	11.571	0.418
BASE	122	CIMEN4 Min	2.35	-31.42	-39.83	-20.042	-1.545	-0.417
BASE	122	CIMEN5 Max	4.64	87.37	568.25	28.364	7.219	0.160
BASE	122	CIMEN5 Min	3.43	-47.52	-124.28	-27.906	2.806	-0.159
BASE	148	DEAD	-2.96	15.36	174.09	0.461	-3.792	0.000
BASE	148	LIVE	-1.57	4.93	58.70	0.156	-2.002	0.000
BASE	148	CIMEN1	-4.53	20.29	232.79	0.617	-5.794	0.001
BASE	148	CIMEN2 Max	-0.72	83.69	521.54	27.481	4.911	0.555
BASE	148	CIMEN2 Min	-5.21	-52.97	-173.36	-26.559	-12.496	-0.554
BASE	148	CIMEN3 Max	-2.16	105.07	633.63	37.911	-0.839	0.214
BASE	148	CIMEN3 Min	-3.77	-74.35	-285.45	-36.989	-6.745	-0.213
BASE	148	CIMEN4 Max	-2.45	70.33	478.81	20.847	1.262	0.418
BASE	148	CIMEN4 Min	-5.83	-32.21	-42.59	-19.691	-11.849	-0.417
BASE	148	CIMEN5 Max	-3.54	86.51	563.66	28.742	-3.092	0.160
BASE	148	CIMEN5 Min	-4.74	-48.40	-127.44	-27.586	-7.495	-0.159
BASE	128	DEAD	62.16	0.00	171.01	-0.083	-0.741	0.042

BASE	128	LIVE	26.53	-0.01	71.95	-0.034	-0.368	0.022
BASE	128	CIMEN1	88.69	-0.01	242.95	-0.117	-1.109	0.064
BASE	128	CIMEN2 Max	80.30	1.03	265.17	2.116	7.651	0.500
BASE	128	CIMEN2 Min	44.02	-1.02	76.84	-2.283	-9.133	-0.416
BASE	128	CIMEN3 Max	69.67	1.66	206.46	4.184	1.930	0.944
BASE	128	CIMEN3 Min	54.65	-1.66	135.56	-4.351	-3.413	-0.860
BASE	128	CIMEN4 Max	95.72	0.77	295.88	1.537	5.304	0.402
BASE	128	CIMEN4 Min	68.40	-0.77	154.06	-1.755	-7.338	-0.284
BASE	128	CIMEN5 Max	87.67	1.24	251.43	3.103	0.973	0.738
BASE	128	CIMEN5 Min	76.45	-1.25	198.50	-3.321	-3.008	-0.621
BASE	135	DEAD	0.00	0.02	276.07	-0.190	-0.133	-0.002
BASE	135	LIVE	0.00	0.00	121.54	-0.090	-0.053	-0.001
BASE	135	CIMEN1	0.01	0.02	397.61	-0.280	-0.186	-0.003
BASE	135	CIMEN2 Max	5.28	0.62	278.51	1.624	20.305	0.295
BASE	135	CIMEN2 Min	-5.27	-0.58	273.63	-2.005	-20.572	-0.300
BASE	135	CIMEN3 Max	1.70	1.95	283.61	5.699	6.543	0.127
BASE	135	CIMEN3 Min	-1.69	-1.92	268.53	-6.080	-6.809	-0.132
BASE	135	CIMEN4 Max	3.98	0.46	369.04	1.094	15.221	0.221
BASE	135	CIMEN4 Min	-3.97	-0.43	365.40	-1.609	-15.567	-0.227
BASE	135	CIMEN5 Max	1.27	1.47	372.90	4.178	4.802	0.094
BASE	135	CIMEN5 Min	-1.26	-1.44	361.54	-4.694	-5.149	-0.100
BASE	142	DEAD	-60.46	-6.51	214.89	7.098	0.970	-0.040
BASE	142	LIVE	-25.87	-3.10	90.64	3.367	0.462	-0.021
BASE	142	CIMEN1	-86.33	-9.60	305.52	10.465	1.432	-0.061
BASE	142	CIMEN2 Max	-46.11	-4.92	317.81	11.947	10.345	0.340
BASE	142	CIMEN2 Min	-74.82	-8.09	111.97	2.249	-8.405	-0.420
BASE	142	CIMEN3 Max	-54.39	-3.54	254.04	16.501	3.986	0.829
BASE	142	CIMEN3 Min	-66.54	-9.47	175.73	-2.305	-2.046	-0.908
BASE	142	CIMEN4 Max	-69.06	-7.64	360.36	13.253	8.378	0.229
BASE	142	CIMEN4 Min	-90.68	-10.02	205.36	5.994	-5.744	-0.339
BASE	142	CIMEN5 Max	-75.33	-6.60	312.10	16.700	3.564	0.598
BASE	142	CIMEN5 Min	-84.41	-11.06	253.63	2.546	-0.931	-0.709
BASE	176	DEAD	3.04	-10.61	116.07	-2.422	3.777	-0.004
BASE	176	LIVE	1.60	-2.42	27.87	-1.187	2.002	-0.002
BASE	176	CIMEN1	4.64	-13.03	143.94	-3.609	5.779	-0.006
BASE	176	CIMEN2 Max	5.64	54.58	432.44	24.700	13.904	0.108
BASE	176	CIMEN2 Min	0.43	-75.80	-200.29	-29.544	-6.349	-0.117
BASE	176	CIMEN3 Max	4.04	78.14	566.52	35.053	7.411	0.056
BASE	176	CIMEN3 Min	2.03	-99.36	-334.37	-39.897	0.144	-0.064
BASE	176	CIMEN4 Max	6.20	36.48	374.25	17.033	12.905	0.079
BASE	176	CIMEN4 Min	2.28	-61.33	-100.31	-23.658	-2.348	-0.090
BASE	176	CIMEN5 Max	4.99	54.32	475.75	24.871	7.989	0.039
BASE	176	CIMEN5 Min	3.49	-79.17	-201.81	-31.495	2.568	-0.051
BASE	200	DEAD	-3.08	-11.25	119.11	-2.203	-3.927	-0.004
BASE	200	LIVE	-1.63	-2.73	29.41	-1.080	-2.069	-0.002
BASE	200	CIMEN1	-4.70	-13.98	148.52	-3.283	-5.997	-0.006
BASE	200	CIMEN2 Max	-0.49	53.84	434.26	24.886	6.177	0.108
BASE	200	CIMEN2 Min	-5.66	-76.33	-196.05	-29.293	-14.032	-0.117
BASE	200	CIMEN3 Max	-2.08	77.50	568.82	35.276	-0.302	0.056
BASE	200	CIMEN3 Min	-4.08	-99.99	-330.61	-39.683	-7.553	-0.064
BASE	200	CIMEN4 Max	-2.35	35.53	377.54	17.308	2.130	0.079
BASE	200	CIMEN4 Min	-6.24	-62.13	-95.20	-23.334	-13.089	-0.090
BASE	200	CIMEN5 Max	-3.55	53.44	479.40	25.173	-2.775	0.039
BASE	200	CIMEN5 Min	-5.04	-80.03	-197.07	-31.199	-8.184	-0.051
BASE	188	DEAD	-0.04	0.21	322.91	-0.727	-0.097	-0.002
BASE	188	LIVE	-0.02	0.09	147.91	-0.357	-0.044	-0.001
BASE	188	CIMEN1	-0.06	0.30	470.82	-1.084	-0.141	-0.003
BASE	188	CIMEN2 Max	2.78	1.37	324.42	3.539	9.617	0.295
BASE	188	CIMEN2 Min	-2.86	-0.95	321.40	-4.994	-9.811	-0.300
BASE	188	CIMEN3 Max	0.94	4.00	327.68	13.212	3.272	0.127
BASE	188	CIMEN3 Min	-1.02	-3.57	318.14	-14.666	-3.466	-0.132
BASE	188	CIMEN4 Max	2.07	1.14	434.97	2.182	7.186	0.221
BASE	188	CIMEN4 Min	-2.18	-0.58	432.72	-4.172	-7.446	-0.227
BASE	188	CIMEN5 Max	0.67	3.13	437.44	9.504	2.383	0.094
BASE	188	CIMEN5 Min	-0.79	-2.57	430.25	-11.494	-2.643	-0.100
BASE	182	DEAD	0.06	0.17	294.30	-0.692	0.038	-0.002
BASE	182	LIVE	0.02	0.08	129.50	-0.359	0.011	-0.001
BASE	182	CIMEN1	0.08	0.25	423.80	-1.052	0.049	-0.003
BASE	182	CIMEN2 Max	3.09	1.98	301.23	7.454	10.018	0.295
BASE	182	CIMEN2 Min	-2.97	-1.65	287.37	-8.839	-9.943	-0.300
BASE	182	CIMEN3 Max	1.24	4.33	298.94	15.035	3.661	0.127
BASE	182	CIMEN3 Min	-1.12	-3.99	269.65	-16.420	-3.586	-0.132
BASE	182	CIMEN4 Max	2.36	1.59	396.64	5.136	7.562	0.221
BASE	182	CIMEN4 Min	-2.20	-1.13	386.21	-7.060	-7.470	-0.227
BASE	182	CIMEN5 Max	0.96	3.36	394.91	10.875	2.750	0.094
BASE	182	CIMEN5 Min	-0.80	-2.90	387.94	-12.799	-2.658	-0.100
BASE	194	DEAD	-0.12	0.36	292.30	-0.879	-0.199	-0.002
BASE	194	LIVE	-0.05	0.17	128.56	-0.445	-0.081	-0.001
BASE	194	CIMEN1	-0.17	0.53	420.86	-1.324	-0.280	-0.003
BASE	194	CIMEN2 Max	2.91	2.20	298.98	7.280	9.779	0.295
BASE	194	CIMEN2 Min	-3.15	-1.49	285.62	-9.038	-10.177	-0.300

BASE	194	CIMEN3 Max	1.06	4.56	296.81	14.887	3.425	0.127
BASE	194	CIMEN3 Min	-1.30	-3.84	287.80	-16.645	-3.823	-0.132
BASE	194	CIMEN4 Max	2.12	1.86	393.74	4.895	7.254	0.221
BASE	194	CIMEN4 Min	-2.44	-0.90	383.70	-7.320	-7.774	-0.227
BASE	194	CIMEN5 Max	0.72	3.65	392.10	10.654	2.444	0.094
BASE	194	CIMEN5 Min	-1.04	-2.68	385.34	-13.079	-2.964	-0.100
BASE	237	DEAD	1.52	-1.05	24.84	1.313	1.967	0.000
BASE	237	LIVE	0.71	-0.48	7.11	0.600	0.916	0.000
BASE	237	CIMEN1	2.22	-1.53	31.96	1.913	2.883	-0.001
BASE	237	CIMEN2 Max	2.78	-0.39	28.29	3.115	5.638	0.058
BASE	237	CIMEN2 Min	0.25	-1.71	21.40	-0.489	-1.704	-0.058
BASE	237	CIMEN3 Max	2.00	-0.12	28.48	3.779	3.319	0.025
BASE	237	CIMEN3 Min	1.04	-1.98	21.21	-1.152	0.615	-0.026
BASE	237	CIMEN4 Max	3.00	-0.91	32.77	3.115	5.419	0.043
BASE	237	CIMEN4 Min	1.09	-1.90	27.59	0.411	-0.110	-0.044
BASE	237	CIMEN5 Max	2.40	-0.71	32.91	3.617	3.663	0.018
BASE	237	CIMEN5 Min	1.69	-2.11	27.45	-0.091	1.645	-0.019
BASE	263	DEAD	-1.49	-1.05	25.93	1.330	-1.961	0.000
BASE	263	LIVE	-0.71	-0.48	7.16	0.608	-0.931	0.000
BASE	263	CIMEN1	-2.21	-1.54	33.09	1.938	-2.892	-0.001
BASE	263	CIMEN2 Max	-0.37	-0.39	30.32	3.136	1.532	0.058
BASE	263	CIMEN2 Min	-2.62	-1.72	21.53	-0.477	-5.453	-0.058
BASE	263	CIMEN3 Max	-1.06	-0.11	29.84	3.807	-0.670	0.025
BASE	263	CIMEN3 Min	-1.93	-1.99	22.01	-1.147	-3.251	-0.026
BASE	263	CIMEN4 Max	-1.18	-0.92	34.60	3.141	-0.029	0.043
BASE	263	CIMEN4 Min	-2.88	-1.91	28.00	0.431	-5.289	-0.044
BASE	263	CIMEN5 Max	-1.70	-0.71	34.24	3.649	-1.696	0.018
BASE	263	CIMEN5 Min	-2.35	-2.12	28.36	-0.077	-3.622	-0.019
BASE	243	DEAD	23.03	-2.50	135.48	2.374	-0.994	0.040
BASE	243	LIVE	5.98	-1.29	35.23	1.210	-0.453	0.021
BASE	243	CIMEN1	29.01	-3.79	170.71	3.585	-1.447	0.062
BASE	243	CIMEN2 Max	46.59	-0.46	386.85	11.676	22.614	0.316
BASE	243	CIMEN2 Min	-0.53	-4.54	-115.89	-6.927	-24.601	-0.236
BASE	243	CIMEN3 Max	33.51	1.92	232.66	20.577	7.793	0.864
BASE	243	CIMEN3 Min	12.55	-6.92	38.30	-15.829	-9.781	-0.783
BASE	243	CIMEN4 Max	45.25	-1.94	351.19	10.244	16.444	0.262
BASE	243	CIMEN4 Min	9.78	-4.99	-27.38	-3.680	-19.111	-0.149
BASE	243	CIMEN5 Max	35.35	-0.14	234.46	16.982	5.225	0.676
BASE	243	CIMEN5 Min	19.68	-6.79	89.34	-10.418	-7.892	-0.564
BASE	250	DEAD	-0.04	-2.30	176.70	2.324	-0.083	-0.002
BASE	250	LIVE	-0.02	-1.18	65.98	1.183	-0.036	-0.001
BASE	250	CIMEN1	-0.05	-3.48	242.69	3.507	-0.119	-0.003
BASE	250	CIMEN2 Max	4.28	-1.30	180.77	6.388	12.511	0.295
BASE	250	CIMEN2 Min	-4.35	-3.30	172.64	-1.740	-12.677	-0.300
BASE	250	CIMEN3 Max	1.54	0.96	189.95	15.596	4.474	0.127
BASE	250	CIMEN3 Min	-1.61	-5.56	163.46	-10.948	-4.640	-0.132
BASE	250	CIMEN4 Max	3.20	-2.44	229.22	6.238	9.374	0.221
BASE	250	CIMEN4 Min	-3.30	-3.93	223.16	0.185	-9.594	-0.227
BASE	250	CIMEN5 Max	1.13	-0.73	236.17	13.209	3.290	0.094
BASE	250	CIMEN5 Min	-1.23	-5.64	216.22	-6.786	-3.510	-0.100
BASE	257	DEAD	-23.86	-2.50	138.79	2.413	0.580	-0.041
BASE	257	LIVE	-6.29	-1.29	36.24	1.233	0.281	-0.022
BASE	257	CIMEN1	-30.16	-3.78	175.02	3.646	0.861	-0.062
BASE	257	CIMEN2 Max	-0.44	-0.45	389.64	11.691	24.175	0.237
BASE	257	CIMEN2 Min	-47.29	-4.54	-112.07	-6.864	-23.015	-0.319
BASE	257	CIMEN3 Max	-13.46	1.92	235.85	20.599	9.371	0.783
BASE	257	CIMEN3 Min	-34.27	-6.91	41.72	-15.772	-8.212	-0.865
BASE	257	CIMEN4 Max	-10.95	-1.93	354.86	10.282	18.559	0.150
BASE	257	CIMEN4 Min	-46.22	-4.99	-22.93	-3.606	-16.978	-0.264
BASE	257	CIMEN5 Max	-20.81	-0.14	238.44	17.025	7.352	0.564
BASE	257	CIMEN5 Min	-36.36	-6.79	93.49	-10.350	-5.771	-0.678
BASE	245	DEAD	-25.72	-0.10	95.92	0.082	-0.192	-0.042
BASE	245	LIVE	-7.23	-0.05	25.37	0.041	-0.088	-0.022
BASE	245	CIMEN1	-32.96	-0.15	121.29	0.123	-0.281	-0.065
BASE	245	CIMEN2 Max	12.53	0.51	306.23	2.194	17.158	0.463
BASE	245	CIMEN2 Min	-63.98	-0.70	-114.38	-2.029	-17.543	-0.548
BASE	245	CIMEN3 Max	-9.61	0.99	177.91	4.795	6.311	0.881
BASE	245	CIMEN3 Min	-41.83	-1.18	13.94	-4.630	-6.696	-0.965
BASE	245	CIMEN4 Max	-2.35	0.32	273.31	1.691	12.807	0.320
BASE	245	CIMEN4 Min	-59.95	-0.59	-43.41	-1.466	-13.325	-0.438
BASE	245	CIMEN5 Max	-19.11	0.68	176.17	3.661	4.595	0.635
BASE	245	CIMEN5 Min	-43.19	-0.95	53.73	-3.435	-5.113	-0.754
BASE	255	DEAD	25.05	-0.09	94.04	0.087	-0.133	0.039
BASE	255	LIVE	6.89	-0.05	24.45	0.043	-0.049	0.021
BASE	255	CIMEN1	31.94	-0.13	118.49	0.130	-0.182	0.059
BASE	255	CIMEN2 Max	63.38	0.52	304.67	2.194	17.210	0.542
BASE	255	CIMEN2 Min	-13.27	-0.69	-116.59	-2.020	-17.476	-0.465
BASE	255	CIMEN3 Max	41.21	0.99	176.09	4.797	6.376	0.961
BASE	255	CIMEN3 Min	8.90	-1.17	12.00	-4.623	-6.642	-0.883
BASE	255	CIMEN4 Max	59.08	0.33	270.98	1.695	12.890	0.431
BASE	255	CIMEN4 Min	1.36	-0.57	-46.23	-1.456	-13.230	-0.323

BASE	255	CIMEN5 Max	42.29	0.69	173.64	3.665	4.689	0.748
BASE	255	CIMEN5 Min	18.15	-0.93	51.12	-3.427	-5.029	-0.640
BASE	129	DEAD	-65.28	-0.08	178.15	-0.052	-0.487	-0.042
BASE	129	LIVE	-28.06	-0.04	75.36	-0.021	-0.232	-0.022
BASE	129	CIMEN1	-93.35	-0.12	253.51	-0.073	-0.719	-0.065
BASE	129	CIMEN2 Max	-49.79	0.44	264.59	1.818	7.911	0.491
BASE	129	CIMEN2 Min	-80.78	-0.59	91.71	-1.922	-8.886	-0.576
BASE	129	CIMEN3 Max	-58.45	0.85	210.89	3.881	2.180	0.892
BASE	129	CIMEN3 Min	-72.12	-1.00	145.40	-3.984	-3.155	-0.977
BASE	129	CIMEN4 Max	-74.66	0.28	299.76	1.331	5.665	0.340
BASE	129	CIMEN4 Min	-98.00	-0.49	169.57	-1.466	-6.987	-0.459
BASE	129	CIMEN5 Max	-81.22	0.59	259.11	2.893	1.326	0.644
BASE	129	CIMEN5 Min	-91.44	-0.81	210.22	-3.028	-2.649	-0.763
BASE	141	DEAD	64.82	-0.51	175.34	1.503	0.668	0.039
BASE	141	LIVE	27.90	-0.25	74.26	0.712	0.302	0.021
BASE	141	CIMEN1	92.72	-0.76	249.59	2.216	0.969	0.059
BASE	141	CIMEN2 Max	82.93	0.00	269.65	3.237	8.851	0.570
BASE	141	CIMEN2 Min	46.72	-1.02	81.02	-0.231	-7.516	-0.493
BASE	141	CIMEN3 Max	72.20	0.35	210.29	5.199	3.289	0.972
BASE	141	CIMEN3 Min	57.45	-1.37	140.38	-2.193	-1.954	-0.895
BASE	141	CIMEN4 Max	99.38	-0.31	302.06	3.335	7.058	0.452
BASE	141	CIMEN4 Min	72.11	-1.08	160.00	0.740	-5.270	-0.344
BASE	141	CIMEN5 Max	91.25	-0.05	257.12	4.820	2.847	0.757
BASE	141	CIMEN5 Min	80.24	-1.34	204.94	-0.745	-1.059	-0.649
BASE	16	DEAD	2.74	0.02	76.70	0.000	0.000	0.000
BASE	16	LIVE	1.28	0.01	25.43	0.000	0.000	0.000
BASE	16	CIMEN1	4.01	0.03	102.12	0.000	0.000	0.000
BASE	16	CIMEN2 Max	72.54	0.23	77.17	0.000	0.000	0.000
BASE	16	CIMEN2 Min	-67.06	-0.19	76.22	0.000	0.000	0.000
BASE	16	CIMEN3 Max	28.07	0.44	77.90	0.000	0.000	0.000
BASE	16	CIMEN3 Min	-22.60	-0.40	75.49	0.000	0.000	0.000
BASE	16	CIMEN4 Max	56.26	0.18	96.12	0.000	0.000	0.000
BASE	16	CIMEN4 Min	-48.87	-0.13	95.41	0.000	0.000	0.000
BASE	16	CIMEN5 Max	22.60	0.34	96.67	0.000	0.000	0.000
BASE	16	CIMEN5 Min	-15.21	-0.29	94.86	0.000	0.000	0.000
BASE	161	DEAD	0.10	-2.67	138.18	0.000	0.000	0.000
BASE	161	LIVE	0.05	-1.45	41.31	0.000	0.000	0.000
BASE	161	CIMEN1	0.16	-4.13	179.49	0.000	0.000	0.000
BASE	161	CIMEN2 Max	0.72	49.25	153.79	0.000	0.000	0.000
BASE	161	CIMEN2 Min	-0.52	-54.60	122.57	0.000	0.000	0.000
BASE	161	CIMEN3 Max	0.32	64.80	143.00	0.000	0.000	0.000
BASE	161	CIMEN3 Min	-0.11	-70.14	133.36	0.000	0.000	0.000
BASE	161	CIMEN4 Max	0.61	35.20	180.92	0.000	0.000	0.000
BASE	161	CIMEN4 Min	-0.32	-42.73	157.40	0.000	0.000	0.000
BASE	161	CIMEN5 Max	0.30	46.97	172.75	0.000	0.000	0.000
BASE	161	CIMEN5 Min	-0.02	-54.49	165.57	0.000	0.000	0.000
BASE	162	DEAD	-0.09	-3.24	138.29	0.000	0.000	0.000
BASE	162	LIVE	-0.05	-1.72	41.36	0.000	0.000	0.000
BASE	162	CIMEN1	-0.14	-4.96	179.65	0.000	0.000	0.000
BASE	162	CIMEN2 Max	0.53	48.83	153.81	0.000	0.000	0.000
BASE	162	CIMEN2 Min	-0.71	-55.32	122.78	0.000	0.000	0.000
BASE	162	CIMEN3 Max	0.12	64.53	143.10	0.000	0.000	0.000
BASE	162	CIMEN3 Min	-0.31	-71.02	133.48	0.000	0.000	0.000
BASE	162	CIMEN4 Max	0.34	34.55	181.00	0.000	0.000	0.000
BASE	162	CIMEN4 Min	-0.60	-43.60	157.63	0.000	0.000	0.000
BASE	162	CIMEN5 Max	0.03	46.43	172.90	0.000	0.000	0.000
BASE	162	CIMEN5 Min	-0.29	-55.49	165.73	0.000	0.000	0.000
Summation	0, 0, Base	DEAD	0.00	0.00	3428.27	47572.859	-51108.020	-544.440
Summation	0, 0, Base	LIVE	0.00	0.00	1610.86	17947.865	-19922.454	-228.566
Summation	0, 0, Base	CIMEN1	0.00	0.00	5839.13	65520.724	-71030.474	-773.006
Summation	0, 0, Base	CIMEN2 MAX	455.24	393.29	7572.54	80089.441	-66301.752	-2023.703
Summation	0, 0, Base	CIMEN2 MIN	-455.24	-393.29	884.01	15056.278	-35914.288	934.824
Summation	0, 0, Base	CIMEN3 MAX	175.10	538.88	6832.04	69152.174	-62656.335	1981.792
Summation	0, 0, Base	CIMEN3 MIN	-175.10	-538.88	1624.51	25993.544	-39559.705	-3070.671
Summation	0, 0, Base	CIMEN4 MAX	342.81	295.04	7950.91	85493.167	-77474.566	-1838.699
Summation	0, 0, Base	CIMEN4 MIN	-342.81	-295.04	2921.92	36574.348	-54625.155	406.971
Summation	0, 0, Base	CIMEN5 MAX	130.73	405.25	7390.34	77213.554	-74714.952	1193.498
Summation	0, 0, Base	CIMEN5 MIN	-130.73	-405.25	3482.49	44853.962	-57384.770	-2625.227

T E T R A - Diseños Estructurales

Calle 19 # 9 - 50 - Oficina 907

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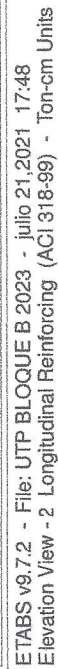
PROGRAMA - E T A B S -

PORTICOS TRIDIMENSIONALES

DISEÑO SISMO-RESISTENTE

VIGAS Y COLUMNAS

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Portico AE 3

6	3	H	3	I	3	J	3	K	3	
	6.6	2.5	5.5	10.1	3.8	11.8	11.8	3.8	10.1	CUBN+16.10
	4.9	4.9	5.5	8.6	3.1	5.7	5.7	3.1	6.6	CUBN+14.80
33.8				5.2	3.8	5.5	5.5	3.8	5.2	
	29.8	8.9	26.7	29.9	9.0	28.7	28.6	8.9	29.9	P4N+11.10
	13.8	14.0	12.5	13.9	17.4	13.4	13.3	17.4	13.9	
60.0				32.3	9.2	30.7	30.6	9.2	32.3	P3N+7.40
	34.4	9.2	28.1	14.9	17.4	14.2	14.2	17.4	14.9	
60.0				30.7	9.2	29.4	29.3	9.2	30.7	P2N+3.70
	15.7	14.0	13.1	14.2	17.4	13.7	13.6	17.3	14.2	
60.0				25.6	7.8	25.0	24.8	7.8	25.6	P1N+0.00
	31.7	9.2	27.2	12.0	17.5	11.8	11.7	17.4	12.0	
	14.6	14.0	12.7	60.0			60.0			SOTIN-3.70
60.0				20.9	6.5	20.4	20.2	6.5	20.9	
	25.8	7.8	22.8	9.9	17.5	9.7	9.6	17.4	9.9	
	12.1	13.9	10.8	60.0			60.0			BASE
83.6				20.1	6.4	20.6	20.5	6.4	20.2	
	104.8			9.6	16.9	9.8	9.8	16.9	9.6	
				104.4			60.0			

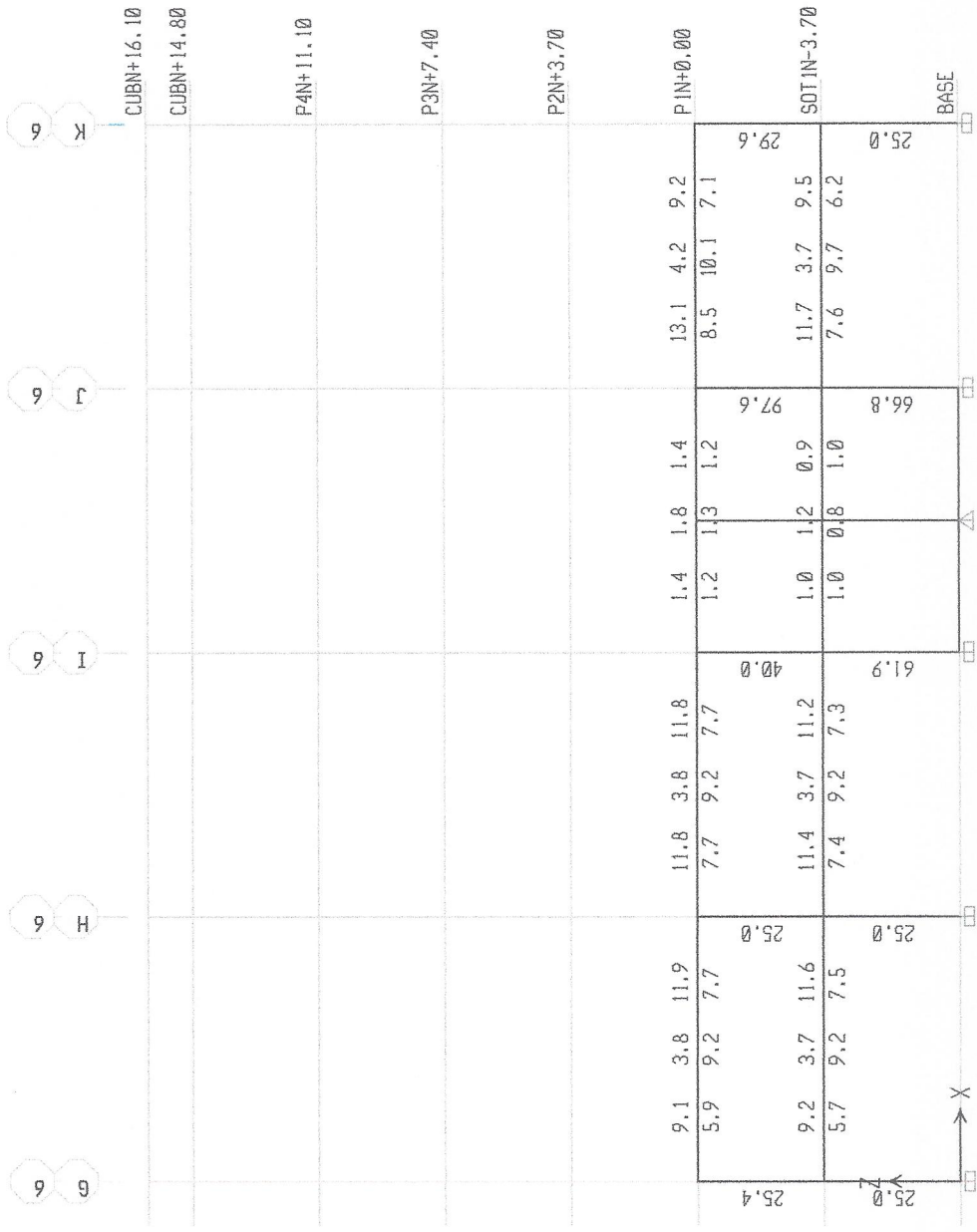
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ETABS v9.7.2 - File: UTP BLOQUE B 2023 - julio 21, 2021 17:50
Elevation View - 4 Longitudinal Reinforcing (ACI 318-99) - Ton-cm Units

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PORTICO 6



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ETABS v9.7.2 - File: UTP BLOQUE B 2023 - julio 21, 2021 17:53
Elevation View - G Longitudinal Reinforcing (ACI 318-99) - Ton-cm Units

ETABS v9.7.2 - File: UTP BLOQUE B 2023 - julio 21, 2021 17:53
Elevation View - H Longitudinal Reinforcing (ACI 318-99) - Ton-cm Units

PORTICO DE I

6	5	4	3	2	
I	I	I	I	I	
			13.1 4.8 15.0	CUBN+16.10	
		2.5.6.4	8.9 3.0 4.8	8.5 11.9 8.2	CUBN+14.80
		2.2.4.1	5.5 5.0 5.5	5.4 3.9 5.5	
		19.8			
		9.23.37.9	21.3 6.6 10.2	12.8 5.0 15.9	P4N+11.10
		9.2.27.1	10.1 10.6 8.4	8.3 11.6 9.2	
		60.0			
		9.23.38.1	18.3 5.7 11.0	11.9 4.5 14.1	P3N+7.40
		9.2.27.2	9.2 10.8 8.1	7.7 11.5 9.1	
		60.0			
		10.32.48.8	20.0 6.2 10.3	11.8 4.4 13.9	P2N+3.70
		10.10.22.1	9.5 10.6 8.2	7.7 11.6 9.0	
		60.0			
		13.1 4.2 12.8	14.1 4.5 11.2	11.3 4.1 12.8	P1N+0.00
		8.5 11.1 8.4	9.1 11.0 7.7	7.4 11.6 8.3	
		60.0			
		11.0 3.8 11.8			SOTIN-3.70
		8.8 11.1 7.7			
		44.3			
		12.5 4.0 12.2	13.6 4.3 10.5	10.9 3.7 11.4	
		8.3 11.1 7.9	8.8 10.9 7.6	7.1 11.5 7.4	
		40.0			
		61.9	60.0	60.0	60.0
		40.0			BASE

Portico DE 5

		J 6		J 5		J 4		J 3		J 2		
		97.6		66.8		40.0		60.0		71.3		BASE
		21.5		33.8		16.6		9.2		11.4		SOTIN-3.70
		47.0		12.6		12.6		5.2		4.1		
		18.5		37.2		25.4		10.6		9.2		
		39.8		12.6		12.6		5.9		3.9		
		25.0		25.0		25.0		6.8		4.2		PIN+0.00
		10.3		22.1		10.5		11.0		9.2		
		10.3		22.1		10.5		6.8		4.2		P2N+3.70
		9.2		25.0		25.0		11.0		8.9		
		9.2		25.0		25.0		8.8		9.2		P3N+7.40
		9.2		25.0		25.0		10.4		13.7		
		9.2		25.0		25.0		6.6		4.4		P4N+11.10
		9.2		25.0		25.0		7.4		5.0		
		9.2		25.0		25.0		9.7		15.7		
		2.2		2.2		2.2		5.3		4.4		CUBN+14.80
		2.2		2.2		2.2		3.8		3.8		
		2.2		2.2		2.2		5.5		8.3		CUBN+16.10
		10.1		10.1		10.1		3.8		4.5		
		10.6		10.6		10.6		4.5		14.0		

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ETABS v9.7.2 - File: UTP BLOQUE B 2023 - julio 21, 2021 17:55
Elevation View - K Longitudinal Reinforcing (ACI 318-99) - Ton-cm Units