

Company: Company

Project: IE HECTOR MANUEL VIDES BALLESTEROS (MÓDULO 3)

File: C:\IE REGIDOR\MOD3.rcb

Engineer: Name

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GENERAL INPUT DATA

Structure type: Three-Dimensional Frame Structure
Number of Floor Grids = 1
Building total length = 25.29 m
Building total width = 11.4 m

STORY INFORMATION

Number of Stories = 1
Total Frame Height = 3.65 m

Floor	Story Height	Grid No
1	3.65	1
2	-	1

* Story Height in (m)

STRUCTURAL GRID INFORMATION

GRID No 1

Grid Point	X	Y
A'-18	0.00	0.00
F-18	0.00	1.31
B'-18	0.00	4.00
C'-18	0.00	6.69
I-18	0.00	9.38
D'-18	0.00	11.40
A'-1'	2.81	0.00
F-1'	2.81	1.31
B'-1'	2.81	4.00
C'-1'	2.81	6.69
I-1'	2.81	9.38
D'-1'	2.81	11.40
A'-2'	5.62	0.00
F-2'	5.62	1.31
B'-2'	5.62	4.00
C'-2'	5.62	6.69
I-2'	5.62	9.38
D'-2'	5.62	11.40
A'-22	8.43	0.00
F-22	8.43	1.31
B'-22	8.43	4.00
C'-22	8.43	6.69
I-22	8.43	9.38
D'-22	8.43	11.40
A'-3'	11.24	0.00
F-3'	11.24	1.31
B'-3'	11.24	4.00
C'-3'	11.24	6.69
I-3'	11.24	9.38
D'-3'	11.24	11.40
A'-4'	14.05	0.00
F-4'	14.05	1.31
B'-4'	14.05	4.00
C'-4'	14.05	6.69
I-4'	14.05	9.38
D'-4'	14.05	11.40
A'-26	16.86	0.00
F-26	16.86	1.31
B'-26	16.86	4.00
C'-26	16.86	6.69
I-26	16.86	9.38
D'-26	16.86	11.40
A'-5'	19.67	0.00
F-5'	19.67	1.31
B'-5'	19.67	4.00
C'-5'	19.67	6.69
I-5'	19.67	9.38
D'-5'	19.67	11.40
A'-6'	22.48	0.00
F-6'	22.48	1.31
B'-6'	22.48	4.00
C'-6'	22.48	6.69
I-6'	22.48	9.38
D'-6'	22.48	11.40
A'-30	25.29	0.00
F-30	25.29	1.31
B'-30	25.29	4.00

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Grid Point	X	Y
C'-30	25.29	6.69
I-30	25.29	9.38
D'-30	25.29	11.40

* Coordinates X & Y are in (m)

MATERIALS

Number of materials = 2

REINFORCED CONCRETE

Mat	Name	f'c Kg/cm2	fy Kg/cm2	fys1 Kg/cm2	fys2 Kg/cm2	E Kg/cm2	G Kg/cm2	w Kg/m3
1	RConcrete1	210	4200	4200	4200	218540	87430	2400.0
2	RConcrete2	280	4200	4200	4200	252350	100940	2400.0

f'c: Compressive strength of concrete

fy: Yield strength of longitudinal reinforcement

fys1: Yiel strength of shear reinforcement, bar sizes <= 3/8"

fys2: Yiel strength of shear reinforcement, bar sizes > 3/8"

MEMBER DATA

Total number of members..... = 68
 Number of columns..... = 8
 Number of beams = 70
 Number of braces = 0

COLUMN SECTIONS

Number of prismatic sections = 1

Sec	Name	Shape	b (cm)	h (cm)	tw (cm)	tf (cm)	P1 (cm)	P2 (cm)	A (cm2)	I2 (cm4)	I3 (cm4)	J (cm4)
1	C-30X50	Rectang	30.00	50.00	-	-	-	-	1500.0	312500	112500	279900

COLUMNS

Column	Story	L (m)	Lu (m)	a (m)	c (m)	Theta (o)	Sec -	Mat -	System -
I-30	1	3.65	3.13	0.00	0.53	0.0	1	2	G&L
F-30	1	3.65	3.13	0.00	0.53	0.0	1	2	G&L
I-26	1	3.65	3.13	0.00	0.53	0.0	1	2	G&L
F-26	1	3.65	3.13	0.00	0.53	0.0	1	2	G&L
I-22	1	3.65	3.13	0.00	0.53	0.0	1	2	G&L
F-22	1	3.65	3.13	0.00	0.53	0.0	1	2	G&L
I-18	1	3.65	3.13	0.00	0.53	0.0	1	2	G&L
F-18	1	3.65	3.13	0.00	0.53	0.0	1	2	G&L

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BEAM SECTIONS

Number of prismatic sections = 3

Sec	Name	Shape	b (cm)	h (cm)	tw (cm)	tf (cm)	P1 (cm)	P2 (cm)	A (cm ²)	I2 (cm ⁴)	I3 (cm ⁴)	J (cm ⁴)
1	VG-30X60	Rectang	30.00	60.00	-	-	-	-	1800.0	540000	135000	369900
2	VG-20X60	Rectang	20.00	60.00	-	-	-	-	1200.0	360000	40000	126400
3	VC-30X45	Rectang	30.00	45.00	-	-	-	-	1350.0	227812	101250	234900

BEAMS

Beam	Floor	L (m)	Lu (m)	a (m)	c (m)	Sec -	Mat -	System -
18 (A'-F)	2	1.31	1.06	0.00	0.25	1	2	G&L
F (18-1')	2	2.81	2.66	0.15	0.00	1	2	G&L
F (1'-2')	2	2.81	2.81	0.00	0.00	1	2	G&L
F (2'-22)	2	2.81	2.66	0.00	0.15	1	2	G&L
F (22-3')	2	2.81	2.66	0.15	0.00	1	2	G&L
F (3'-4')	2	2.81	2.81	0.00	0.00	1	2	G&L
F (4'-26)	2	2.81	2.66	0.00	0.15	1	2	G&L
F (26-5')	2	2.81	2.66	0.15	0.00	1	2	G&L
F (5'-6')	2	2.81	2.81	0.00	0.00	1	2	G&L
F (6'-30)	2	2.81	2.66	0.00	0.15	1	2	G&L
I (18-1')	2	2.81	2.66	0.15	0.00	1	2	G&L
I (1'-2')	2	2.81	2.81	0.00	0.00	1	2	G&L
I (2'-22)	2	2.81	2.66	0.00	0.15	1	2	G&L
I (22-3')	2	2.81	2.66	0.15	0.00	1	2	G&L
I (3'-4')	2	2.81	2.81	0.00	0.00	1	2	G&L
I (4'-26)	2	2.81	2.66	0.00	0.15	1	2	G&L
I (26-5')	2	2.81	2.66	0.15	0.00	1	2	G&L
I (5'-6')	2	2.81	2.81	0.00	0.00	1	2	G&L
I (6'-30)	2	2.81	2.66	0.00	0.15	1	2	G&L
D' (18-1')	2	2.81	2.66	0.15	0.00	2	2	G
D' (1'-2')	2	2.81	2.81	0.00	0.00	2	2	G
D' (2'-22)	2	2.81	2.66	0.00	0.15	2	2	G
D' (22-3')	2	2.81	2.66	0.15	0.00	2	2	G
D' (3'-4')	2	2.81	2.81	0.00	0.00	2	2	G
D' (4'-26)	2	2.81	2.66	0.00	0.15	2	2	G
D' (26-5')	2	2.81	2.66	0.15	0.00	2	2	G
D' (5'-6')	2	2.81	2.81	0.00	0.00	2	2	G
A' (18-1')	2	2.81	2.66	0.15	0.00	2	2	G
A' (1'-2')	2	2.81	2.81	0.00	0.00	2	2	G
A' (2'-22)	2	2.81	2.66	0.00	0.15	2	2	G
A' (22-3')	2	2.81	2.66	0.15	0.00	2	2	G
A' (3'-4')	2	2.81	2.81	0.00	0.00	2	2	G
A' (4'-26)	2	2.81	2.66	0.00	0.15	2	2	G
A' (26-5')	2	2.81	2.66	0.15	0.00	2	2	G
A' (5'-6')	2	2.81	2.81	0.00	0.00	2	2	G
A' (6'-30)	2	2.81	2.66	0.00	0.15	2	2	G
I (18-22)	1	8.43	8.13	0.15	0.15	3	2	G&L
I (22-26)	1	8.43	8.13	0.15	0.15	3	2	G&L
I (26-30)	1	8.43	8.13	0.15	0.15	3	2	G&L
F (18-22)	1	8.43	8.13	0.15	0.15	3	2	G&L
F (22-26)	1	8.43	8.13	0.15	0.15	3	2	G&L
F (26-30)	1	8.43	8.13	0.15	0.15	3	2	G&L
18 (F-I)	1	8.07	7.57	0.25	0.25	3	2	G&L
22 (F-I)	1	8.07	7.57	0.25	0.25	3	2	G&L
26 (F-I)	1	8.07	7.57	0.25	0.25	3	2	G&L
30 (F-I)	1	8.07	7.57	0.25	0.25	3	2	G&L
D' (6'-30)	2	2.81	2.66	0.00	0.15	2	2	G
18 (F-I)	2	8.07	7.57	0.25	0.25	1	2	G&L
18 (I-D')	2	2.02	1.77	0.25	0.00	1	2	G&L
1' (A'-F)	2	1.31	1.16	0.00	0.15	2	2	G
1' (I-D')	2	2.02	1.87	0.15	0.00	2	2	G
2' (A'-F)	2	1.31	1.16	0.00	0.15	2	2	G
2' (I-D')	2	2.02	1.87	0.15	0.00	2	2	G
22 (A'-F)	2	1.31	1.06	0.00	0.25	1	2	G&L
22 (F-I)	2	8.07	7.57	0.25	0.25	1	2	G&L
22 (I-D')	2	2.02	1.77	0.25	0.00	1	2	G&L
3' (A'-F)	2	1.31	1.16	0.00	0.15	2	2	G
3' (I-D')	2	2.02	1.87	0.15	0.00	2	2	G
4' (A'-F)	2	1.31	1.16	0.00	0.15	2	2	G
4' (I-D')	2	2.02	1.87	0.15	0.00	2	2	G
26 (A'-F)	2	1.31	1.06	0.00	0.25	1	2	G&L
26 (F-I)	2	8.07	7.57	0.25	0.25	1	2	G&L
26 (I-D')	2	2.02	1.77	0.25	0.00	1	2	G&L
5' (A'-F)	2	1.31	1.16	0.00	0.15	2	2	G

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Beam	Floor	L	Lu	a	c	Sec	Mat	System
5' (I-D')	2	2.02	1.87	0.15	0.00	2	2	G
6' (A'-F)	2	1.31	1.16	0.00	0.15	2	2	G
6' (I-D')	2	2.02	1.87	0.15	0.00	2	2	G
30 (A'-F)	2	1.31	1.06	0.00	0.25	1	2	G&L
30 (F-I)	2	8.07	7.57	0.25	0.25	1	2	G&L
30 (I-D')	2	2.02	1.77	0.25	0.00	1	2	G&L

FOUNDATION SOIL PROPERTIES

Number of soil properties = 1

Soil	Name	Pressure Distribution	Allowable gross pres. Pa T/m2	Increase Pa Combinations incl.EQ & WL (%)	MODULUS OF SUBGRADE REACTION Gravity load Analysis, Kg T/m3	Lateral load Analysis, Ks T/m3
1	Soil1	Linear	7.4	33	400.0	400.0

* Values of subgrade reaction are used only on footings with rotations and/or vert-displac. permitted.

FOUNDATION BEAM DATA

Number of foundation beams = 10

FOUNDATION BEAMS

Beam	Floor	L (m)	Lu (m)	a (m)	c (m)	TWidth (m)	Sec -	Mat -	Soil -	System -
I (18-22)	1	8.43	8.13	0.15	0.15	1.00	3	2	1	G&L
I (22-26)	1	8.43	8.13	0.15	0.15	1.00	3	2	1	G&L
I (26-30)	1	8.43	8.13	0.15	0.15	1.00	3	2	1	G&L
F (18-22)	1	8.43	8.13	0.15	0.15	1.00	3	2	1	G&L
F (22-26)	1	8.43	8.13	0.15	0.15	1.00	3	2	1	G&L
F (26-30)	1	8.43	8.13	0.15	0.15	1.00	3	2	1	G&L
18 (F-I)	1	8.07	7.57	0.25	0.25	1.00	3	2	1	G&L
22 (F-I)	1	8.07	7.57	0.25	0.25	1.00	3	2	1	G&L
26 (F-I)	1	8.07	7.57	0.25	0.25	1.00	3	2	1	G&L
30 (F-I)	1	8.07	7.57	0.25	0.25	1.00	3	2	1	G&L

GROUND SUPPORT DATA

Total number of ground supports = 8

K = Spring constant(ton/cm)

Characteristics for All Degrees of Freedom
Value = K Dash = free C = constrained

Support	Floor	Type	Ux	Uy	Uz	TetX	TetY	TetZ
F-18	1	Fixed	C	C	C	C	C	C
I-18	1	Fixed	C	C	C	C	C	C
F-22	1	Fixed	C	C	C	C	C	C
I-22	1	Fixed	C	C	C	C	C	C
F-26	1	Fixed	C	C	C	C	C	C
I-26	1	Fixed	C	C	C	C	C	C
F-30	1	Fixed	C	C	C	C	C	C
I-30	1	Fixed	C	C	C	C	C	C

SUMMARY OF TOTAL FLOOR LOADS

LOAD CASE 1 : SELFW (D0)

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Floor	Force (ton)			Moment (ton-m)		
	Px	Py	Pz	Mx	My	Mz
2	0.00	0.00	70.87	0.0	0.0	0.0
1	0.00	0.00	24.36	0.0	0.0	0.0
Total	0.00	0.00	95.23	0.0	0.0	0.0

LOAD CASE 2 : DEAD (DL)

Floor	Force (ton)			Moment (ton-m)		
	Px	Py	Pz	Mx	My	Mz
2	0.00	0.00	67.41	0.0	0.0	0.0
1	0.00	0.00	0.00	0.0	0.0	0.0
Total	0.00	0.00	67.41	0.0	0.0	0.0

LOAD CASE 3 : ROOF L (RFL)

Floor	Force (ton)			Moment (ton-m)		
	Px	Py	Pz	Mx	My	Mz
2	0.00	0.00	27.05	0.0	0.0	0.0
1	0.00	0.00	0.00	0.0	0.0	0.0
Total	0.00	0.00	27.05	0.0	0.0	0.0

LOAD CASE 4 : EQUAKE X (EQX) - TYPE : SPECTRAL

Floor	Force (ton)			Acc. Tors. Mom. (ton-m)		
	Px	Py	Pz	Mx	My	Mz
2	99.39	0.00	0.00	0.0	0.0	56.7
1	0.00	0.00	0.00	0.0	0.0	0.0
Total	99.39	0.00	0.00	0.0	0.0	56.7

LOAD CASE 5 : EQUAKE Y (EQY) - TYPE : SPECTRAL

Floor	Force (ton)			Acc. Tors. Mom. (ton-m)		
	Px	Py	Pz	Mx	My	Mz
2	0.00	99.43	0.00	0.0	0.0	125.3
1	0.00	0.00	0.00	0.0	0.0	0.0
Total	0.00	99.43	0.00	0.0	0.0	125.3

LOAD CASE 6 : WIND X (WLX)

Floor	Force (ton)			Moment (ton-m)		
	Px	Py	Pz	Mx	My	Mz
2	1.26	0.00	0.00	0.0	0.0	0.8
1	0.89	0.00	0.00	0.0	0.0	0.0
Total	2.15	0.00	0.00	0.0	0.0	0.8

LOAD CASE 7 : WIND Y (WLY)

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	Px	Py	Pz	Mx	My	Mz
2	0.00	3.26	0.00	0.0	0.0	4.3
1	0.00	0.00	0.00	0.0	0.0	0.0
Total	0.00	3.26	0.00	0.0	0.0	4.3

SUMMARY QUANTITY OF MATERIALS

COLUMNS

Item	Section	Material	Length m	Weight/Len ton/m	Total Weight ton
1	C-30X50	RConcrete2	25.00	0.360	9.00
TOTAL =					9.00

BEAMS

Item	Section	Material	Length m	Weight/Len ton/m	Total Weight ton
1	VG-30X60	RConcrete2	93.28	0.432	40.30
2	VG-20X60	RConcrete2	68.76	0.288	19.80
TOTAL =					60.10

FOUNDATION BEAMS

Item	Section	Material	Length m	Weight/Len ton/m	Total Weight ton
1	VC-30X45	RConcrete2	80.96	0.324	26.23
TOTAL =					26.23

SLABS

Item	Section	Material	Area m²	Weight/Area ton/m²	Total Weight ton
1	Cubierta Plana w =2.4		84.22	0.300	25.26
2	Cubierta Liviana w =2.4		204.09	0.024	4.90
TOTAL =					30.16