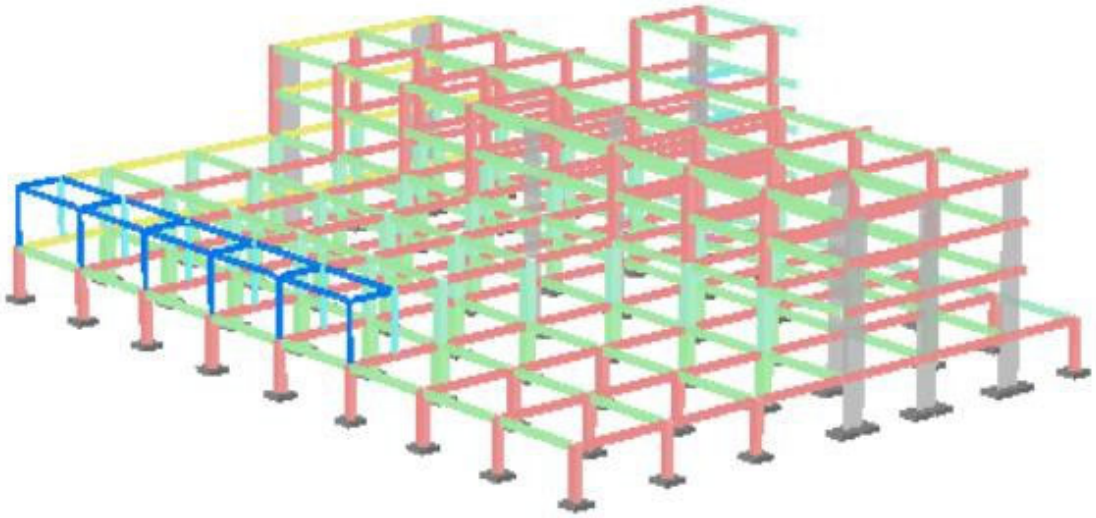
INFORME REVISION ESTRUCTURAL

HOSPITAL DE ENGATIVA BLOQUE B.

Tv. 100a # 80a-50



Enero de 2020

Ing Mauricio Bustamante

Matrícula no. 17202-094951 CLD

1. INTRODUCCIÓN.

Se presenta el informe de revisión estructural del proyecto “HOSPITAL DE ENGATIVA BLOQUE B,”, el cual se encuentra ubicado la Tv 100a # 80a-50, de la ciudad de Bogotá.

Mediante el presente oficio se determinará el cumplimiento de los requisitos de diseño contenidos en la norma sismo resistente NSR-10.

Para la revisión del diseño estructural de este proyecto se realizó por parte nuestra la modelación estructural con la ayuda del software RCB Engsolutions. La modelación estructural se realizó con los parámetros sísmicos y demás características presentadas en las memorias de cálculo por el ingeniero diseñador. Posteriormente se procedió a comparar los resultados obtenidos tanto del análisis de las estructuras como del diseño de los elementos.

A continuación, se describe los parámetros sísmicos y demás características utilizados por el ingeniero Estructural en el reforzamiento del proyecto. La información que se muestra a continuación fue tomada de los siguientes documentos presentados por el Ingeniero Diseñador vía correo electrónico:

- ESTUDIO DE VULNERABILIDAD SISMICA HOSPITAL DE ENGATIVA.
- BLOQUE B- ESQUEMAS DE COLUMNAS POR LEVANTAMIENTO IN SITU EXISTENTE.
- BLOQUE B- PLANTA ESTRUCTURAL DE CIMENTACION EXISTENTE.
- BLOQUE B- PLANTA ESTRUCUTAL DE SEGUNDO PISO EXISTENTE.
- BLOQUE B-PLANTA ESTRUCTURAL DE TERCER PISO EXISTENTE.
- BLOQUE B- PLANTAS ESTRUCTURALES DE CUARTO PISO Y CUBIERTAS EXISTENTES.
- BLOQUE B -PANTALLA DE REFORZAMIENTO.
- BLOQUE B-PLANTA ESTRUCTURAL DE REFUERZO DE CIMENTACIÓN.
- BLOQUE B-REFUERZO DE VIGAS AEREAS.
- BLOQUE B- ESTRUCTURA AMPLIACION CUBIERTA,PLANTAS Y CORTES.
- BLOQUE B-ESTRUCTURA AMPLIACION CUBIERTA, CONEXIONES.

2. INFORMACIÓN RECIBIDA PARA REVISIÓN ESTRUCTURAL.

- Sistema estructural combinado de muros de concreto DMO-Pórticos de concreto DMO, con un Ro=5.00 y un coeficiente de sobre resistencia Ω= 3.0
- Bogotá D.C, Zona de riesgo sísmico INTERMEDIO
- Aa = 0.15
- Av = 0.20
- Fa = 0.95
- Fv = 2.70
- Periodo largo TL = 5.00
- Coeficiente de Importancia I=1.50 (grupo de uso IV)
- Perfil del Suelo: Microzonificación sísmica de Bogotá: Lacustre – 500.
- Irregularidad en altura Øa=0.90

- Irregularidad en planta Øp=0.90
- Ausencia de redundancia Ørx=1.00
- Ausencia de redundancia Øry=1.00
- Cimentación conformada por pilotes que asumen el 100% de la carga con cabezales unidos por vigas de amarre.
- Para la construcción de la cimentación, se utilizó concreto de 28MPa, para columnas y muros de 28Mpa.
- Resistencia del acero de refuerzo para barras corrugadas fy=420 MPa (60000 psi).
- Método de análisis: Análisis dinámico modal espectral.
- Método de diseño empleado: Estados limites de resistencia.
- Carga viva corredores y cuartos: 250 Kg/m2.
- Carga viva cuartos de cirugía: 400 Kg/m2
- Carga muerta sobreimpuesta:
  - Piso tipo: 531 Kg/m2.
  - Cubierta: 201 Kg/m2.

3. VERIFICACIÓN DE ANÁLISIS Y DISEÑO.

3.1. Avaluó de cargas.

El avaluó de cargas realizado en las memorias de cálculo para la construcción del proyecto es adecuado y cumple con los requerimientos de la norma sismo resistente NSR-10.
La carga viva es adecuada y cumple con los requisitos del capítulo B.4 de la norma sismo resistente NSR-10.

3.2. Definición de parámetro de diseño sísmico.

- El coeficiente de importancia de I=1.50 es adecuado.
- El perfil de suelo Lacustre 500 coincide con el perfil dado en el estudio de suelos.
- El sistema estructural de Sistema combinado de muros de concreto DMO-Pórticos de concreto DMO es adecuado para esta estructura.
- Los parámetros sísmicos empleados para el diseño de la edificación cumplen con las especificaciones dadas en el estudio de suelos y con los requerimientos de la norma sismo resistente NSR-10.

3.3. Procedimiento de análisis estructural empleado.

El análisis de la estructura se realizó mediante análisis dinámico según NSR-10, se verifica contra el 80% de la fuerza horizontal equivalente si la estructura es irregular y contra el 90% de la fuerza horizontal equivalente si la estructura es regular.

3.4. Verificación de derivas y deflexiones verticales de la estructura.

Las derivas máximas de cada piso tanto en el centro de masa como en los puntos extremos del diafragma cumplen con los requisitos del Capitulo A.6 de la norma sismo resistente NSR-10. Esto se corroboro en las memorias de cálculo presentadas por el diseñador y en el modelo estructural realizado por nosotros.

3.5. Procedimientos de diseño de .los miembros estructurales.

Las combinaciones de carga utilizadas para el diseño de elementos estructurales cumplen con los requisitos del capítulo B.2-COBINACIONES DE CARGA de la norma sismo resistente NSR-10.

Se revisaron los resultados de diseño de los elementos estructurales teniendo en cuenta los resultados presentados por el ingeniero diseñador en las memorias de cálculo, el refuerzo propuesto en planos y los resultados obtenidos en nuestro análisis y se concluye que se cumple con lo requerido. El diseño de elementos estructurales cumple con los requisitos dados en la norma sismo resistente NSR-10.

3.6. Procedimiento de diseño de la resistencia al fuego de los elementos estructurales.

Se cumple con los requisitos de protección y diseño contra incendios de elementos estructurales del título J de la norma sismo resistente NSR-10.

3.7. Revisión de los planos estructurales.

Los planos contienen las especificaciones de materiales de construcción, tamaño y localización de elementos estructurales, notas de cargas de diseño tanto vivas como muertas, nota de capacidad de disipación de energía, grupo de uso, notas de parámetros de diseño, notas de recomendaciones constructivas y recomendaciones de estudio de suelos.

Los planos estructurales cumplen con los requisitos del título A de la norma sismo resistente NSR-10 y con las especificaciones dadas en el estudio de suelos.

3.8. Contenido de las especificaciones y recomendación de construcción.

Los planos contienen las especificaciones de materiales de construcción tales como resistencias del concreto, resistencia del acero, notas de cargas de diseño tanto vivas como muertas, notas de recomendaciones constructivas y recomendaciones de estudio de suelos.

3.9. Revisión del seguimiento de las recomendaciones del estudio de suelos.

En el diseño y en los planos estructurales se están teniendo en cuenta las recomendaciones de estudio de suelos.

4. CONCEPTO GENERAL.

De acuerdo a los resultados obtenidos de la revisión estructural realizada al proyecto “HOSPITAL DE ENGATIVA BLOQUE B” y expuestas en este informe se considera que se están cumpliendo los requisitos de la Norma Sismo Resistente NSR-10.

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ANEXO REVISION ESTRUCTURAL
HOSPITAL DE ENGATIVA
ESTRUCTURAS EXISTENTES BLOQUE B

1. DESCRIPCIÓN DEL SISTEMA ESTRUCTURAL

El proyecto fue revisado bajo el método de estados límites de resistencia, teniendo en cuenta las combinaciones de carga del numeral B2.4.2 de la NSR-10.

2. MATERIALES

Los materiales especificados para la estructura son los siguientes:

Acero refuerzo para concreto:		Fy = 420 MPa (4200 kg/cm² = 60000 psi)
Concreto:	Columnas y muros: .	f'c = 28 MPa (280kg/cm² = 4000 psi).
	Cimentación: .	f'c = 28 MPa (280kg/cm² = 4000 psi).

3. ANÁLISIS DE CARGAS PARA ESTRUCTURA.

3.1. Carga Muerta.

Las cargas muertas que se consideraron en el análisis de la estructura fueron:

- Piso tipo: 531 Kg/m2.
- Cubierta: 201 Kg/m2.

3.2. Carga Viva.

- Carga viva corredores y cuarto: 250 Kg/m2
- Carga viva cuartos de cirugía: 400 Kg/m2.

3.3 Carga de Granizo.

Se uso carga por Granizo de 100 Kg/m2.

4. PARAMETROS SÍSMICOS DE LA ESTRUCTURA.

Para el análisis sísmico se utilizó la siguiente metodología:

- Análisis Dinámico Modal Espectral.

  Fa = 0.95
  Fv = 2.70
  I= 1.50.

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4.1. Coeficiente de modificación sísmica R.

El factor de disipación de energía R y factor de sobreresistencia para el sistema estructural usado son:

Ro= 5.0.
Ω=3.0.

5. RESISTENCIA AL FUEGO.

Para la norma colombiana de construcción sismo resistente NSR-10, las edificaciones deben clasificarse por grupos de ocupación para establecer la condición de protección al fuego.

De acuerdo a la NSR-10 tabla J.1.1-1 la edificación se encuentra dentro del grupo de ocupación I2-Institucional, Salud o Incapacidad; y de acuerdo al título J.3.3.1 pertenece a la Categoría I- Esta comprende las edificaciones con mayor riesgo de pérdidas de vidas humanas o con alta amenaza de combustión.

- **J.3.5.2.1 Columnas de concreto estructural**

(b) 250 mm DMO (2 horas) / (d) Recubrimiento C.7.7.4 40 mm (3 horas)	**Ancho mínimo de columnas en concreto propuesto**	**Verificación**
250 mm	30mm	**OK**

- **J.3.5.2.3 Losas macizas y viguetas de concreto estructural**

a) losas macizas / vigueta > 150 mm 3 horas b) losas macizas / vigueta > 125 mm 2 horas c) losas macizas / vigueta > 80 mm 1 hora d) recubrimiento C.7.7.1	**Ancho mínimo de losas propuesto**	**Verificación**
80mm	100 mm/ 150mm	**OK**

- **J.3.5.2.4 Vigas de concreto estructural**

(b) 200 mm DMO (2 horas) / (e) Recubrimiento C.7.7.4 40 mm (2 horas)	**Ancho mínimo de vigas propuesto**	**Verificación**
200mm	400mm	**OK**

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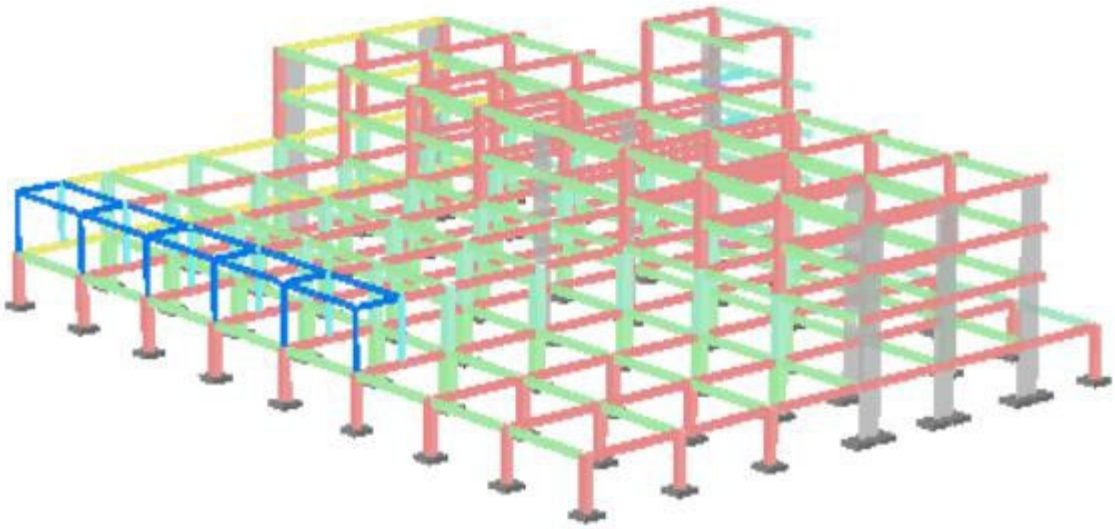
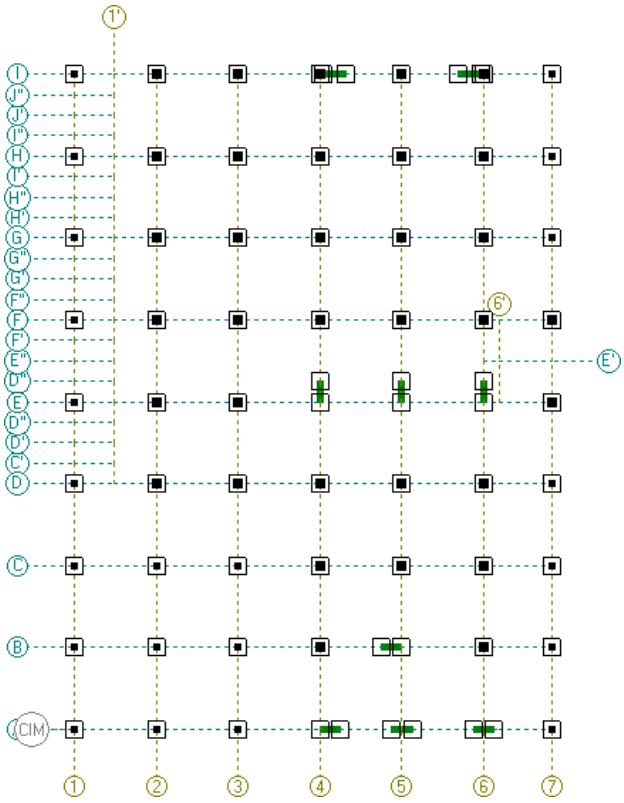
6. IMÁGENES MODELO





7. ANÁLISIS SÍSMICO

A continuación, se presentan los resultados del análisis sísmico de la estructura para diseño y el análisis sísmico por umbral de daño para el chequeo de derivas.

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 9:18:57 p. m. 5/01/2020
File: C:\Users\Laura\Documents\LAURA\IPC\IP\CALLE 80\PL DWG\ING\MODELO RCB BLOQUE B.rcb

S E I S M I C D E S I G N C O D E : COL BOGOTA-10

```
============================================================
 S E I S M I C   B A S E   L E V E L :  CIM
============================================================

S E I S M I C   F O R C E   R E S I S T I N G   S Y S T E M

System X-Direction:   B: Combined System
System Y-Direction:   B: Combined System
------------------------------------------------------------
Energy dissip capacity: 2: Moderate-DMO
------------------------------------------------------------
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RESPONSE SPECTRUM EARTHQUAKE FORCES COL BOGOTA-10

Elastic Modal Base Shear
Vm = Sam Wm'
Sam = Spectral modal acceleration
Wm' = Effective modal weight

```
A N A L Y S I S   P A R A M E T E R S

Number of modes to be included ... =     15

                                  X-direction   Y-direction
                                  -----------   -----------
Energy dissipation coefficient, Ro =    5             5
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S P E C T R A L   M O D A L   A C C E L E R A T I O N

  Sam = 2.5 Aa Fa I               For Tm <= Tc
  Sam = 1.2 Av Fv I/Tm            For Tc < Tm < Tl
  Sam = 1.2 Av Fv Tl I/Tm²        For Tm > Tl

Eff. peak acceleration & veloc., Aa =    .15     Av =    .20

Importance coefficient, I ........ =    1.5

   GROUP                                              COEFFICIENT
   IV - Essential facilities                             1.50
   III- Public assistance facilities                     1.25
   II - Especial occupancy buildings                     1.10
   I - Normal occupancy buildings                        1.00

Seismic zone No. ............... =      9

    B O G O T A, D. C. - S E I S M I C Z O N E S
    1: CERROS             9: LACUSTRE-500
    2: PIEDEMONTE A      10: LACUSTRE ALUVIAL-200
    3: PIEDEMONTE B      11: LACUSTRE ALUVIAL-300
    4: PIEDEMONTE C      12: ALUVIAL-50
    5: LACUSTRE-50       13: ALUVIAL-100
    6: LACUSTRE-100      14: ALUVIAL-200
    7: LACUSTRE-200      15: ALUVIAL-300
    8: LACUSTRE-300      16: DEPOSITO LADERA
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S P E C T R A L M O D A L A C C E L E R A T I O N

Sam = 2.5 Aa Fa I For Tm <= Tc
Sam = 1.2 Av Fv I/Tm For Tc < Tm < Tl
Sam = 1.2 Av Fv Tl I/Tm² For Tm > Tl

DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS

	Short Periods	Long Periods
Effect. peak acceleration & velc.,	Aa = 0.15	Av = 0.20
Site coefficients (Tables below),	Fa = 0.95	Fv = 2.70

Design response parameters, Aa Fa = 0.14 Av Fv= 0.54

Long-period transition period, Tl sec = 5.00

SEISMIC ZONE	Fa	Fv	Tl
1: Cerros	1.35	1.30	3.0
2: Piedemonte A	1.65	2.00	3.0
3: Piedemonte B	1.95	1.70	3.0
4: Piedemonte C	1.80	1.70	3.0
5: Lacustre-50	1.40	2.90	4.0
6: Lacustre-100	1.30	3.20	4.0
7: Lacustre-200	1.20	3.50	4.0
8: Lacustre-300	1.05	2.90	5.0
9: Lacustre-500	0.95	2.70	5.0*
10: Lacustre Aluvial-200	1.10	2.80	4.0
11: Lacustre Aluvial-300	1.00	2.50	5.0
12: Aluvial-50	1.35	1.80	3.5
13: Aluvial-100	1.20	2.10	3.5
14: Aluvial-200	1.05	2.10	3.5
15: Aluvial-300	0.95	2.10	3.5
16: Deposito ladera	1.65	1.70	3.0

Reduction in R for Irregularity and Lack of Redundancy:

PLAN IRREGULARITIES			ELEVATION IRREGULARITIES	
Type	Description	Øp	Type	Description	Øa
1aP	Torsional	0.9	1aA	Flexible	0.9
1bP	Torsional Extrme	0.8	1bA	Flexible Extrme	0.8
2P	Reentrant corners	0.9	2A	Mass	0.9
3P	Diaph. discontin.	0.9	3A	Geometrical	0.9
4P	Plane shifting	0.8	4A	Plane shifting	0.8
5P	Unparallel grid	0.9	5aA	Weak Story	0.9
			5bA	Weak Story Extr	0.8

NOTE: EngSolutions RCB assumes irregular building.
For regular buildings make (Øp . Øa)= 1.0

	X - D I R E C T I O N	Y - D I R E C T I O N
Reduct. factor, (Øp.Øa) =	.81	.81
Redundancy factor, Ør =	1	1

R = (Øp Øa) Ør Ro

S T A T I C E Q U I V A L E N T B A S E S H E A R

Building Weight, W, (ton) = 6732.57

Peak Acceleration Coeffi., Aa Fa = .14
Peak Velocity Coefficient, Av Fv = .54
Importance factor, I . . . . . = 1.5
Seizmic zone . . . . . = LACUSTRE-500
Coeff. for upper limit period, Cu = 1.2

		X-direction	Y-direction
Computed Period	=	0.505	0.559
Ta = Ct (H)^x	=	0.049 H ¾	0.049 H ¾
	=	0.355	0.355
Tmax = Cu Ta	=	0.426	0.426
Fundamental Period	=	0.426	0.426
Energ-Disspst coeff, R	=	4.05	4.05
1.2 Av Fv I / T	=	2.284	2.284
2.5 Aa Fa I	=	.525	.525
Sa	=	.525	.525
Base Shear, Vo	=	3534.6	3534.6
Static Shear, .9Vo (ton)	=	3181.14	3181.14

S P E C T R A L A C C E L E R A T I O N

MODE No	PERIOD (sec)	Sa (g)	Damping Ratio
1	.559	.525	.05
2	.505	.525	.05
3	.236	.525	.05
4	.169	.525	.05
5	.163	.525	.05
6	.124	.525	.05
7	.103	.525	.05
8	.071	.525	.05
9	.059	.525	.05
10	.056	.525	.05
11	.052	.525	.05
12	.039	.525	.05
13	.034	.525	.05
14	.024	.525	.05
15	.013	.525	.05

M O D A L B A S E S H E A R

MODE No	X - D I R E C T I O N Sax (g)	W'x (ton)	Vx (ton)	Y - D I R E C T I O N Say (g)	W'y (ton)	Vy (ton)
1	.525	1778.8	933.87	.525	2408.21	1264.31
2	.525	3157.11	1657.48	.525	2381.07	1250.06
3	.525	49.19	25.82	.525	319.03	167.49
4	.525	13.63	7.16	.525	542.04	284.57
5	.525	486.34	255.33	.525	382.07	200.58
6	.525	537.91	282.4	.525	125.82	66.06
7	.525	80.86	42.45	.525	115.46	60.62
8	.525	1.8	.94	.525	279.34	146.65
9	.525	8.36	4.39	.525	91.05	47.8
10	.525	561.76	294.93	.525	0	0
11	.525	.85	.44	.525	44.89	23.57
12	.525	.14	.07	.525	28	14.7
13	.525	53.08	27.87	.525	12.74	6.69
14	.525	2.37	1.24	.525	2.76	1.45
15	.525	.38	.2	.525	.08	.04
ELASTIC Ve (combined):		1963.31				1828.4
STATIC(IREG) 0.9Sa(T1)		3181.14				3181.14
Design Base Shear:		3181.14				3181.14

Total Building Weight, W = 6732.57 ton
Participating Mass, ΣW'/W = 100% in X, 100% in Y
W'xm={ΣWj ϕxjm}²/ΣWj ϕxjm² W'ym={ΣWj ϕyjm}²/ΣWj ϕyjm²
Combination of Modal Response: SRSS V = (Sum Vi²)½

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

	X-direction	Y-direction
Accidental eccentricity as a percentage of building dimension, (%)=	5	5

A C C I D E N T A L E C C E N T R I C I T Y:

Level	X - D I R E C T I O N (EQY) δεxo (m)	Ax -	δεx (m)	Y - D I R E C T I O N (EQX) δεyo (m)	Ax -	δεy (m)
MAQ	0.30	1.00	0.30	0.49	1.00	0.49
CUB	1.02	1.48	1.51	2.88	1.00	2.88
4	1.02	1.48	1.51	2.88	1.00	2.88
3	2.10	1.76	3.70	2.88	1.00	2.88
2	2.10	1.42	2.98	2.88	1.00	2.88

Ax: Amplification factor for accidental eccentricity

EQY: Envelope (1) Ex = εx
(2) Ex = εx + δεx
(3) Ex = εx - δεx

EQX: Envelope (1) Ey = εy
(2) Ey = εy + δεy
(3) Ey = εy - δεy

D E S I G N E C C E N T R I C I T Y : E = ε + δε

Level	X - D I R E C T I O N (EQY)				Y - D I R E C T I O N (EQX)			
	Center Mass	Inherent Eccent.	Accident Eccent.	Design Eccent.	Center Mass	Inherent Eccent.	Accident Eccent.	Design Eccent.
-	CMx	εx*	δεx	Ex	CMy	εy*	δεy	Ey
MAQ	38.57	2.48	0.30	2.7878	31.39	1.60	0.49	2.0909
CUB	29.79	0.32	1.51	1.8383	28.82	3.84	2.88	6.7272
4	29.76	0.60	1.51	2.1111	28.85	4.08	2.88	6.9696
3	24.12	-4.88	3.70	-8.588	33.65	8.85	2.88	11.733
2	21.57	-7.22	2.98	-10.20	30.42	5.53	2.88	8.4141

Note: * Inherent eccentricity: εx = CMx - CRx and εy = CMy - CRy
All values are in meters

D E S I G N E C C E N T R I C I T Y : E = ε - δε

Level	X - D I R E C T I O N (EQY)				Y - D I R E C T I O N (EQX)			
	Center Mass	Inherent Eccent.	Accident Eccent.	Design Eccent.	Center Mass	Inherent Eccent.	Accident Eccent.	Design Eccent.
-	CMx	εx*	δεx	Ex	CMy	εy*	δεy	Ey
MAQ	38.57	2.48	0.30	2.1818	31.39	1.60	0.49	1.1111
CUB	29.79	0.32	1.51	-1.199	28.82	3.84	2.88	0.9696
4	29.76	0.60	1.51	-0.911	28.85	4.08	2.88	1.2020
3	24.12	-4.88	3.70	-1.188	33.65	8.85	2.88	5.9797
2	21.57	-7.22	2.98	-4.244	30.42	5.53	2.88	2.6565

Note: * Inherent eccentricity: εx = CMx - CRx and εy = CMy - CRy
All values are in meters

Modal nodal force:

$$Fim = Vm\ \phi im\ /\Sigma Wj\ \phi jm$$
$$Vm = (Sam\ /Rw)\ W'm$$
$$W'm = \{\Sigma Wj\ \phi jm\}^2\ /\ \Sigma Wj\ \phi jm^2$$

C O M B I N E D M O D A L F O R C E

X - DIRECTION

Floor k -	Weight W (ton)	Force F (ton)	Shear V (ton)	Torsion T=F(E-ε) (ton-m)
MAQ	65.94	153.7	153.7	76.09
CUB	835.8	905.5	1059	2608
4	1145	863.7	1923	2490
3	2049	873.6	2797	2518
2	2637	384.4	3181	1107

C O M B I N E D M O D A L F O R C E

Y - DIRECTION

Floor k -	Weight W (ton)	Force F (ton)	Shear V (ton)	Torsion T=F(E-ε) (ton-m)
MAQ	65.94	105.6	105.6	32.09
CUB	835.8	833.6	939.2	1262
4	1145	790.0	1729	1197
3	2049	1019	2748	3772
2	2637	432.6	3181	1291

ACCELERATIONSONNON-STRUCTURALELEMENTS-MZSBOGOTA-2010

F L O O R A C C E L E R A T I O N S

Level	hx	hx/heq	ax
MAQ	17.54	1.33	0.630
CUB	14.00	1.05	0.503
4	10.85	0.82	0.426
3	7.69	0.58	0.364
2	3.50	0.27	0.280

Seismic base level . . . . . = CIM
Height above seismic base, hn . . . . . = 17.55 m
Equivalent height, heq = 0.75 hn . . . . . = 13.16 m
Ground acceleration, As = Aa Fa I . . . . . = 0.210
Spectral acceleration, Sa . . . . . = 0.473

ax = Sa hx/heq for hx > heq
ax = As + (Sa -As) hx/heq for hx < heq

Force on structural non-seismic element : Fp = ax Wp / Ro
Force on nonstructural element : Fp = ax ap Wp / Rp
> 0.5 Aa I Wp

ap : component amplification factor

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MODE - FREQUENCY ANALYSIS

Mass Matrix Combination (Weight / g)

M = (D0 + DL + DL1) / g

Total Building Weight: 6672.45 ton

Modal Information: frequency, period, participation factors & generalized mass

Mode No	Frequency Hz	Period sec	== X-Direction === Part.Fac	GenMass*	== Y-Direction === Part.Fac	GenMass*	== Z-Direction === Part.Fac	GenMass*
1	1.79	0.5580	0.26	0.03	2.09	0.98	0.00	0.00
2	1.97	0.5070	2.07	0.99	-0.30	0.02	0.00	0.00
3	4.28	0.2340	-0.35	1.97	-0.56	0.54	0.00	0.00
4	5.93	0.1690	-0.06	0.45	0.95	0.88	0.00	0.00
5	6.15	0.1630	-0.81	0.99	0.16	0.03	0.00	0.00
6	8.11	0.1230	0.86	0.99	0.18	0.13	0.00	0.00
7	9.71	0.1030	0.22	0.46	-0.46	0.94	0.00	0.00
8	14.02	0.0710	-0.04	0.53	-0.75	1.06	0.00	0.00
9	17.09	0.0590	-0.15	1.96	-0.34	0.73	0.00	0.00
10	17.73	0.0560	-0.88	1.00	0.04	0.01	0.00	0.00
11	19.18	0.0520	0.03	0.92	-0.32	1.15	0.00	0.00
12	25.42	0.0390	0.00	0.19	-0.24	1.02	0.00	0.00
13	29.94	0.0330	0.28	1.07	-0.05	0.08	0.00	0.00
14	41.06	0.0240	0.08	2.15	0.06	0.77	0.00	0.00
15	75.16	0.0130	-0.04	2.42	-0.01	0.56	0.00	0.00

* : ton-sec²/m

Effective Weight and Participating Mass

Mode No	X - D i r e c t i o n Weff*	%Mass	[%-Sum]	Y - D i r e c t i o n Weff*	%Mass	[%-Sum]	Z - D i r e c t i o n Weff*	%Mass	[%-Sum]
1	1798.44	26.95	[27.0]	2334.93	34.99	[35.0]	0.00	0.00	[0.0]
2	3102.69	46.50	[73.5]	2349.66	35.21	[70.2]	0.00	0.00	[0.0]
3	43.92	0.66	[74.1]	306.88	4.60	[74.8]	0.00	0.00	[0.0]
4	5.45	0.08	[74.2]	534.72	8.01	[82.8]	0.00	0.00	[0.0]
5	478.91	7.18	[81.4]	456.45	6.84	[89.7]	0.00	0.00	[0.0]
6	543.41	8.14	[89.5]	122.68	1.84	[91.5]	0.00	0.00	[0.0]
7	77.89	1.17	[90.7]	119.29	1.79	[93.3]	0.00	0.00	[0.0]
8	1.75	0.03	[90.7]	275.68	4.13	[97.4]	0.00	0.00	[0.0]
9	7.90	0.12	[90.8]	80.98	1.21	[98.6]	0.00	0.00	[0.0]
10	555.88	8.33	[99.2]	0.00	0.00	[98.6]	0.00	0.00	[0.0]
11	0.94	0.01	[99.2]	46.50	0.70	[99.3]	0.00	0.00	[0.0]
12	0.00	0.00	[99.2]	28.40	0.43	[99.8]	0.00	0.00	[0.0]
13	52.55	0.79	[100.0]	13.59	0.20	[100.0]	0.00	0.00	[0.0]
14	2.33	0.03	[100.0]	2.62	0.04	[100.0]	0.00	0.00	[0.0]
15	0.37	0.01	[100.0]	0.07	0.00	[100.0]	0.00	0.00	[0.0]

* : ton

S E I S M I C D E S I G N C O D E : COL BOGOTA-10

```
============================================================
 S E I S M I C   B A S E   L E V E L :  CIM
============================================================

S E I S M I C   F O R C E   R E S I S T I N G   S Y S T E M

System X-Direction:   B: Combined System
System Y-Direction:   B: Combined System
------------------------------------------------------------
Energy dissip capacity: 2: Moderate-DMO
------------------------------------------------------------
```

RESPONSE SPECTRUM EARTHQUAKE FORCES COL BOGOTA-10

Elastic Modal Base Shear
Vm = Sam Wm'
Sam = Spectral modal acceleration
Wm' = Effective modal weight

```
A N A L Y S I S   P A R A M E T E R S

Number of modes to be included ... =     15

                                  X-direction   Y-direction
                                  -----------   -----------
Energy dissipation coefficient, Ro =    5             5
```

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

  Sam = 2.5 Aa Fa I               For Tm <= Tc
  Sam = 1.2 Av Fv I/Tm            For Tc < Tm < Tl
  Sam = 1.2 Av Fv Tl I/Tm²        For Tm > Tl

Eff. peak acceleration & veloc., Aa =    .15     Av =    .20

Importance coefficient, I......... =     1.0

   GROUP                                          COEFFICIENT
   IV - Essential facilities                          1.50
   III- Public assistance facilities                  1.25
   II - Especial occupancy buildings                  1.10
   I - Normal occupancy buildings                     1.00

Seismic zone No.................. =      9

    B O G O T A, D. C. - S E I S M I C Z O N E S
    1: CERROS             9: LACUSTRE-500
    2: PIEDEMONTE A      10: LACUSTRE ALUVIAL-200
    3: PIEDEMONTE B      11: LACUSTRE ALUVIAL-300
    4: PIEDEMONTE C      12: ALUVIAL-50
    5: LACUSTRE-50       13: ALUVIAL-100
    6: LACUSTRE-100      14: ALUVIAL-200
    7: LACUSTRE-200      15: ALUVIAL-300
    8: LACUSTRE-300      16: DEPOSITO LADERA
```

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

Sam = 2.5 Aa Fa I For Tm <= Tc
Sam = 1.2 Av Fv I/Tm For Tc < Tm < Tl
Sam = 1.2 Av Fv Tl I/Tm² For Tm > Tl

DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS

	Short Periods	Long Periods
Effect. peak acceleration & velc.,	Aa = 0.15	Av = 0.20
Site coefficients (Tables below),	Fa = 0.95	Fv = 2.70

Design response parameters, Aa Fa = .165 Av Fv= .75

Long-period transition period, Tl sec = 5.00

SEISMIC ZONE	Fa	Fv	Tl
1: Cerros	1.35	1.30	3.0
2: Piedemonte A	1.65	2.00	3.0
3: Piedemonte B	1.95	1.70	3.0
4: Piedemonte C	1.80	1.70	3.0
5: Lacustre-50	1.40	2.90	4.0
6: Lacustre-100	1.30	3.20	4.0
7: Lacustre-200	1.20	3.50	4.0
8: Lacustre-300	1.05	2.90	5.0
9: Lacustre-500	0.95	2.70	5.0*
10: Lacustre Aluvial-200	1.10	2.80	4.0
11: Lacustre Aluvial-300	1.00	2.50	5.0
12: Aluvial-50	1.35	1.80	3.5
13: Aluvial-100	1.20	2.10	3.5
14: Aluvial-200	1.05	2.10	3.5
15: Aluvial-300	0.95	2.10	3.5
16: Deposito ladera	1.65	1.70	3.0

Reduction in R for Irregularity and Lack of Redundancy:

PLAN IRREGULARITIES			ELEVATION IRREGULARITIES	
Type	Description	Øp	Type	Description	Øa
1aP	Torsional	0.9	1aA	Flexible	0.9
1bP	Torsional Extrme	0.8	1bA	Flexible Extrme	0.8
2P	Reentrant corners	0.9	2A	Mass	0.9
3P	Diaph. discontin.	0.9	3A	Geometrical	0.9
4P	Plane shifting	0.8	4A	Plane shifting	0.8
5P	Unparallel grid	0.9	5aA	Weak Story	0.9
			5bA	Weak Story Extr	0.8

NOTE: EngSolutions RCB assumes irregular building.
For regular buildings make (Øp . Øa)= 1.0

	X - D I R E C T I O N	Y - D I R E C T I O N
Reduct. factor, (Øp.Øa) =	0.81	0.81
Redundancy factor, Ør =	1	1

R = (Øp Øa) Ør Ro

S T A T I C E Q U I V A L E N T B A S E S H E A R

Building Weight, W, (ton) = 6672.45

Peak Acceleration Coeffi., Aa Fa = .165
Peak Velocity Coefficient, Av Fv = .75
Importance factor, I . . . . . = 1
Seizmic zone . . . . . = LACUSTRE-500
Coeff. for upper limit period, Cu = 1.2

		X-direction	Y-direction
Computed Period	=	0.507	0.558
Ta = Ct (H)^x	=	0.049 H ¾	0.049 H ¾
	=	0.355	0.355
Tmax = Cu Ta	=	0.426	0.426
Fundamental Period	=	0.426	0.426
Energ-Disspst coeff, R	=	4.05	4.05
1.2 Av Fv I / T	=	2.115	2.115
2.5 Aa Fa I	=	.413	.413
Sa	=	.413	.413
Base Shear, Vo	=	2752.39	2752.39
Static Shear, .9Vo (ton)	=	1189	1189

S P E C T R A L A C C E L E R A T I O N

MODE No	PERIOD (sec)	Sa (g)	Damping Ratio
1	.558	.198	.05
2	.507	.198	.05
3	.234	.161	.05
4	.169	.139	.05
5	.163	.137	.05
6	.123	.123	.05
7	.103	.116	.05
8	.071	.105	.05
9	.059	.100	.05
10	.056	.099	.05
11	.052	.098	.05
12	.039	.094	.05
13	.033	.091	.05
14	.024	.088	.05
15	.013	.085	.05

M O D A L B A S E S H E A R

MODE No	X - D I R E C T I O N Sax (g)	W'x (ton)	Vx (ton)	Y - D I R E C T I O N Say (g)	W'y (ton)	Vy (ton)
1	.198	1798.44	356.09	.198	2334.93	462.32
2	.198	3102.7	614.33	.198	2349.66	465.23
3	.161	43.92	7.07	.161	306.88	49.41
4	.139	5.45	.76	.139	534.72	74.33
5	.137	478.91	65.61	.137	456.45	62.53
6	.123	543.41	66.84	.123	122.68	15.09
7	.116	77.89	9.04	.116	119.29	13.84
8	.105	1.75	.18	.105	275.68	28.95
9	.1	7.9	.79	.1	80.98	8.1
10	.099	555.88	55.03	.099	0	0
11	.098	.94	.09	.098	46.5	4.56
12	.094	0	0	.094	28.4	2.67
13	.091	52.55	4.78	.091	13.59	1.24
14	.088	2.33	.21	.088	2.62	.23
15	.085	.37	.03	.085	.07	.01
ELASTIC Ve (combined):			718.44			665.89
STATIC(IREG) 0.9Sa(T1)W:			1189			1189
Design Base Shear:			1189			1189

Total Building Weight, W = 6672.45 ton
Participating Mass, ΣW'/W = 100% in X, 100% in Y
W'xm={ΣWj ϕxjm}²/ΣWj ϕxjm² W'ym={ΣWj ϕyjm}²/ΣWj ϕyjm²
Combination of Modal Response: SRSS V = (Sum Vi²)½

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

	X-direction	Y-direction
Accidental eccentricity as a percentage of building dimension, (%)=	0	0

Modal nodal force:

$$Fim = Vm\ \phi im\ /\Sigma Wj\ \phi jm$$
$$Vm = (Sam\ /Rw)\ W'm$$
$$W'm = \{\Sigma Wj\ \phi jm\}^2\ /\ \Sigma Wj\ \phi jm^2$$

C O M B I N E D M O D A L F O R C E

X - DIRECTION

Floor k -	Weight W (ton)	Force F (ton)	Shear V (ton)	Torsion T=F(E-ε) (ton-m)
MAQ	65.94	46.91	46.91	0.0
CUB	835.8	346.5	393.4	0.0
4	1145	339.6	733.1	0.0
3	1989	326.6	1060	0.0
2	2637	129.2	1189	0.0

C O M B I N E D M O D A L F O R C E

Y - DIRECTION

Floor k -	Weight W (ton)	Force F (ton)	Shear V (ton)	Torsion T=F(E-ε) (ton-m)
MAQ	65.94	33.38	33.38	0.0
CUB	835.8	316.6	350.0	0.0
4	1145	312.1	662.2	0.0
3	1989	374.7	1037	0.0
2	2637	152.0	1189	0.0

ACCELERATIONS ON NON-STRUCTURAL ELEMENTS - MZS BOGOTA - 2010

FLOOR ACCELERATIONS

Level	hx	hx/heq	ax NSR-10	ax ASCE7-10	ax UBC-97	ax EUROCODE8	ax NZS1170.5
MAQ	17.54	1.33	0.238	0.495	0.660	0.578	0.495
CUB	14.00	1.05	0.190	0.428	0.560	0.494	0.495
4	10.85	0.82	0.176	0.369	0.471	0.420	0.495
3	7.69	0.58	0.173	0.310	0.382	0.346	0.495
2	3.50	0.27	0.169	0.231	0.264	0.247	0.494

Seismic base level . . . . . = CIM
Height above seismic base, hn . . . . . = 17.55 m
Equivalent height, heq = 0.75 hn . . . . . = 13.16 m
Ground acceleration, As = Aa Fa I . . . . . = 0.165
Spectral acceleration, Sa . . . . . = 0.178

NSR-10: ax = Sa hx/heq for hi > heq
ax = As + (Sa -As) hi/heq for hi < heq
ASCE7-10: ax = As (1 + 2 hx/ hn)
UBC-97: ax = As (1 + 3 hx/ hn)
Eurocode 8: ax = As [3/2(1+ hx/hn) - 0.5] for (Ta/T1=0)
NZS 1170.5 ax = As (1 + 2 hx/hl) for hx < hl
ax = 3 As for hx > hl (hl = 0.2 hn)
Note: RCB recommends using ASCE7-10 accelerations for this project

Force on structural non-seismic element : Fp = ai Wp / Ro
Force on nonstructural element : Fp = ai ap Wp / Rp
> 0.5 Aa I Wp
ap : component amplification factor

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MODE - FREQUENCY ANALYSIS

Mass Matrix Combination (Weight / g)

M = (D0 + DL + DL1) / g

Total Building Weight: 6672.45 ton

Modal Information: frequency, period, participation factors & generalized mass

Mode No	Frequency Hz	Period sec	== X-Direction === Part.Fac	GenMass*	== Y-Direction === Part.Fac	GenMass*	== Z-Direction === Part.Fac	GenMass*
1	1.79	0.5580	0.26	0.03	2.09	0.98	0.00	0.00
2	1.97	0.5070	2.07	0.99	-0.30	0.02	0.00	0.00
3	4.28	0.2340	-0.35	1.97	-0.56	0.54	0.00	0.00
4	5.93	0.1690	-0.06	0.45	0.95	0.88	0.00	0.00
5	6.15	0.1630	-0.81	0.99	0.16	0.03	0.00	0.00
6	8.11	0.1230	0.86	0.99	0.18	0.13	0.00	0.00
7	9.71	0.1030	0.22	0.46	-0.46	0.94	0.00	0.00
8	14.02	0.0710	-0.04	0.53	-0.75	1.06	0.00	0.00
9	17.09	0.0590	-0.15	1.96	-0.34	0.73	0.00	0.00
10	17.73	0.0560	-0.88	1.00	0.04	0.01	0.00	0.00
11	19.18	0.0520	0.03	0.92	-0.32	1.15	0.00	0.00
12	25.42	0.0390	0.00	0.19	-0.24	1.02	0.00	0.00
13	29.94	0.0330	0.28	1.07	-0.05	0.08	0.00	0.00
14	41.06	0.0240	0.08	2.15	0.06	0.77	0.00	0.00
15	75.16	0.0130	-0.04	2.42	-0.01	0.56	0.00	0.00

* : ton-sec²/m

Effective Weight and Participating Mass

Mode No	X - D i r e c t i o n Weff*	%Mass	[%-Sum]	Y - D i r e c t i o n Weff*	%Mass	[%-Sum]	Z - D i r e c t i o n Weff*	%Mass	[%-Sum]
1	1798.44	26.95	[27.0]	2334.93	34.99	[35.0]	0.00	0.00	[0.0]
2	3102.69	46.50	[73.5]	2349.66	35.21	[70.2]	0.00	0.00	[0.0]
3	43.92	0.66	[74.1]	306.88	4.60	[74.8]	0.00	0.00	[0.0]
4	5.45	0.08	[74.2]	534.72	8.01	[82.8]	0.00	0.00	[0.0]
5	478.91	7.18	[81.4]	456.45	6.84	[89.7]	0.00	0.00	[0.0]
6	543.41	8.14	[89.5]	122.68	1.84	[91.5]	0.00	0.00	[0.0]
7	77.89	1.17	[90.7]	119.29	1.79	[93.3]	0.00	0.00	[0.0]
8	1.75	0.03	[90.7]	275.68	4.13	[97.4]	0.00	0.00	[0.0]
9	7.90	0.12	[90.8]	80.98	1.21	[98.6]	0.00	0.00	[0.0]
10	555.88	8.33	[99.2]	0.00	0.00	[98.6]	0.00	0.00	[0.0]
11	0.94	0.01	[99.2]	46.50	0.70	[99.3]	0.00	0.00	[0.0]
12	0.00	0.00	[99.2]	28.40	0.43	[99.8]	0.00	0.00	[0.0]
13	52.55	0.79	[100.0]	13.59	0.20	[100.0]	0.00	0.00	[0.0]
14	2.33	0.03	[100.0]	2.62	0.04	[100.0]	0.00	0.00	[0.0]
15	0.37	0.01	[100.0]	0.07	0.00	[100.0]	0.00	0.00	[0.0]

* : ton

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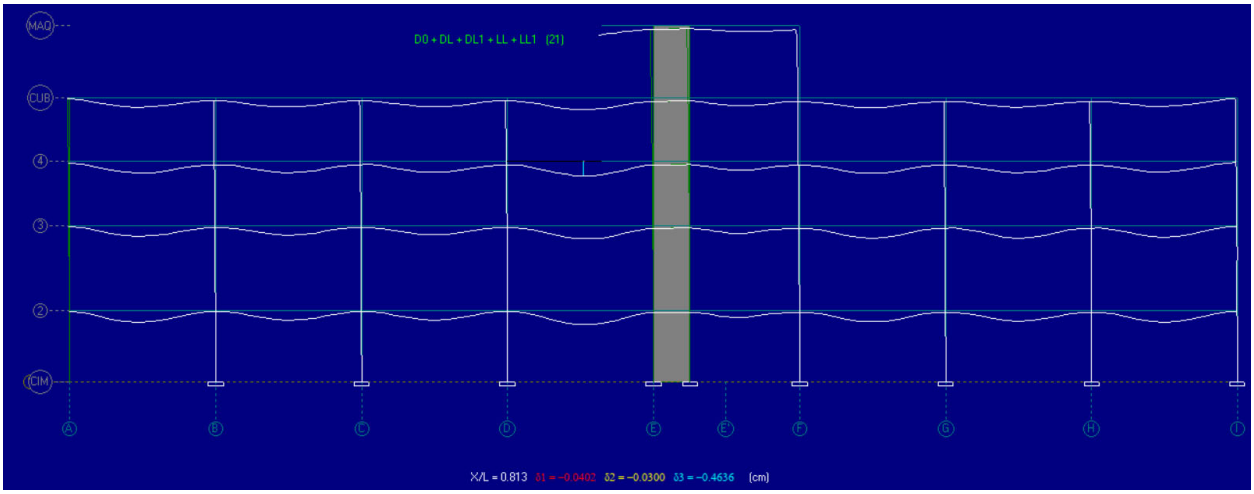
8. DEFLEXIONES VERTICALES Y DERIVAS.

La altura de las vigas del proyecto cumple con lo recomendado por la tabla CR9.5 de la NSR-10, aun así, presentamos el chequeo de deflexiones por cargas permanentes en algunas de las luces mayores de la estructura.



Deflexión máxima permitida: L/240

720/240= 3 cm.

Deflexión máxima presentada: 0.464.cm.

A continuación, mostramos los resultados de derivas donde se evidencia la revisión y cumplimiento según la NSR-10.

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P-DELTA ANALYSIS - SUMMARY MAXIMUM STORY DRIFT RATIO, Δ/h

	Drift-Ratio at CENTER OF MASS			MAXIMUM Corner Story-Drift-Ratio			
Story	DriftX	DriftY	DriftR	DriftX	DriftY	DriftR	Axis
CUB	0.0025	0.0021	0.0025	0.0026	0.0022	0.0027	E-7
4	0.0025	0.0023	0.0025	0.0034	0.0024	0.0034	A:6a
3	0.0026	0.0027	0.0027	0.0035	0.0028	0.0035	A:6a
2	0.0019	0.0023	0.0023	0.0028	0.0025	0.0029	A:6a
CIM	0.0009	0.0010	0.0010	0.0011	0.0011	0.0011	A-1
Maxima	0.0026	0.0027	0.0027	0.0035	0.0028	0.0035	

DriftX = (Δx/h)max
DriftY = (Δy/h)max
DriftR = ([(Δx/h)² + (Δy/h)²]½)max

P-DELTA ANALYSIS - DETAILED MAXIMUM STORY DRIFT RATIO, δ/h

Story	ColAxis	(δx/h)max	(δy/h)max	([(δx/h)² + (δy/h)²]½)max
CUB	E-6	0.0026	0.0021	0.0026
	6:Ea	0.0025	0.0021	0.0025
	F-6	0.0021	0.0021	0.0021
	E-7	0.0026	0.0022	0.0027
	F-7	0.0021	0.0022	0.0022
4	A-4	0.0034	0.0023	0.0034
	B-4	0.0032	0.0023	0.0032
	C-4	0.0030	0.0023	0.0030
	D-4	0.0027	0.0023	0.0027
	E-4	0.0025	0.0023	0.0025
	4:Ea	0.0024	0.0023	0.0024
	F-4	0.0023	0.0023	0.0023
	G-4	0.0020	0.0023	0.0023
	H-4	0.0018	0.0023	0.0023
	I-4	0.0016	0.0023	0.0023
	I:4a	0.0016	0.0023	0.0023
	A:4a	0.0034	0.0023	0.0034
	I:4b	0.0016	0.0023	0.0023
	B:4a	0.0032	0.0023	0.0032
	A:4b	0.0034	0.0023	0.0034
	A-5	0.0034	0.0023	0.0034
	B-5	0.0032	0.0023	0.0032
	C-5	0.0030	0.0023	0.0030
	D-5	0.0027	0.0023	0.0027
	E-5	0.0025	0.0023	0.0025
	5:Ea	0.0024	0.0023	0.0024
	F-5	0.0023	0.0023	0.0023
	G-5	0.0020	0.0023	0.0023
	H-5	0.0018	0.0023	0.0023
	I-5	0.0016	0.0023	0.0023
	A:5a	0.0034	0.0023	0.0034
	I:5a	0.0016	0.0023	0.0023
	A:5b	0.0034	0.0024	0.0034
	I:5b	0.0016	0.0024	0.0024
	A-6	0.0034	0.0024	0.0034
	B-6	0.0032	0.0024	0.0032
	C-6	0.0030	0.0024	0.0030
	D-6	0.0027	0.0024	0.0027
	E-6	0.0025	0.0024	0.0025
	6:Ea	0.0024	0.0024	0.0025
	F-6	0.0023	0.0024	0.0024
	G-6	0.0020	0.0024	0.0024
	H-6	0.0018	0.0024	0.0024
	I-6	0.0016	0.0024	0.0024
	A:6a	0.0034	0.0024	0.0034
	E-7	0.0025	0.0024	0.0025
	F-7	0.0023	0.0024	0.0024

3	A-4	0.0035	0.0026	0.0035
	B-4	0.0033	0.0026	0.0033
	C-4	0.0030	0.0026	0.0030
	D-4	0.0028	0.0026	0.0028
	E-4	0.0026	0.0026	0.0026
	4:Ea	0.0025	0.0026	0.0026
	F-4	0.0023	0.0026	0.0026
	G-4	0.0021	0.0026	0.0026
	H-4	0.0019	0.0026	0.0026
	I-4	0.0016	0.0026	0.0026
	I:4a	0.0016	0.0026	0.0026
	A:4a	0.0035	0.0026	0.0035
	I:4b	0.0016	0.0026	0.0026
	B:4a	0.0033	0.0027	0.0033
	A:4b	0.0035	0.0027	0.0035
	A-5	0.0035	0.0027	0.0035
	B-5	0.0033	0.0027	0.0033
	C-5	0.0030	0.0027	0.0030
	D-5	0.0028	0.0027	0.0028
	E-5	0.0026	0.0027	0.0027
	5:Ea	0.0025	0.0027	0.0027
	F-5	0.0023	0.0027	0.0027
	G-5	0.0021	0.0027	0.0027
	H-5	0.0019	0.0027	0.0027
	I-5	0.0016	0.0027	0.0027
	A:5a	0.0035	0.0027	0.0035
	I:5a	0.0016	0.0027	0.0027
	A:5b	0.0035	0.0027	0.0035
	I:5b	0.0016	0.0027	0.0027
	A-6	0.0035	0.0027	0.0035
	B-6	0.0033	0.0027	0.0033
	C-6	0.0030	0.0027	0.0031
	D-6	0.0028	0.0027	0.0028
	E-6	0.0026	0.0027	0.0027
	6:Ea	0.0025	0.0027	0.0027
	F-6	0.0023	0.0027	0.0027
	G-6	0.0021	0.0027	0.0027
	H-6	0.0019	0.0027	0.0027
	I-6	0.0016	0.0027	0.0027
	A:6a	0.0035	0.0027	0.0035
	E-7	0.0026	0.0028	0.0028
	F-7	0.0023	0.0028	0.0028
2	D-1	0.0023	0.0022	0.0024
	E-1	0.0021	0.0022	0.0022
	F-1	0.0019	0.0022	0.0022
	G-1	0.0017	0.0022	0.0022
	H-1	0.0015	0.0022	0.0022
	I-1	0.0013	0.0022	0.0022
	D-1'	0.0023	0.0022	0.0023
	E-1'	0.0021	0.0022	0.0022
	F-1'	0.0019	0.0022	0.0022
	G-1'	0.0017	0.0022	0.0022
	H-1'	0.0015	0.0022	0.0022
	I-1'	0.0013	0.0022	0.0022
	D-2	0.0023	0.0022	0.0023
	E-2	0.0021	0.0022	0.0022
	F-2	0.0019	0.0022	0.0022
	G-2	0.0017	0.0022	0.0022
	H-2	0.0015	0.0022	0.0022
	I-2	0.0013	0.0022	0.0022
	D-3	0.0023	0.0023	0.0023
	E-3	0.0021	0.0023	0.0023
	F-3	0.0019	0.0023	0.0023
	G-3	0.0017	0.0023	0.0023
	H-3	0.0015	0.0023	0.0023
	I-3	0.0013	0.0023	0.0023
	A-4	0.0028	0.0023	0.0028
	B-4	0.0027	0.0023	0.0027
	C-4	0.0025	0.0023	0.0025
	D-4	0.0023	0.0023	0.0023
	E-4	0.0021	0.0023	0.0023
	4:Ea	0.0020	0.0023	0.0023
	F-4	0.0019	0.0023	0.0023
	G-4	0.0017	0.0023	0.0023
	H-4	0.0015	0.0023	0.0023
	I-4	0.0013	0.0023	0.0023

	I:4a	0.0013	0.0023	0.0023
	A:4a	0.0028	0.0023	0.0028
	I:4b	0.0013	0.0023	0.0024
	B:4a	0.0027	0.0024	0.0027
	A:4b	0.0028	0.0024	0.0028
	A-5	0.0028	0.0024	0.0028
	B-5	0.0027	0.0024	0.0027
	C-5	0.0025	0.0024	0.0025
	D-5	0.0023	0.0024	0.0024
	E-5	0.0021	0.0024	0.0024
	5:Ea	0.0020	0.0024	0.0024
	F-5	0.0019	0.0024	0.0024
	G-5	0.0017	0.0024	0.0024
	H-5	0.0015	0.0024	0.0024
	I-5	0.0013	0.0024	0.0024
	A:5a	0.0028	0.0024	0.0028
	I:5a	0.0013	0.0024	0.0024
	A:5b	0.0028	0.0024	0.0029
	I:5b	0.0013	0.0024	0.0024
	A-6	0.0028	0.0024	0.0029
	B-6	0.0027	0.0024	0.0027
	C-6	0.0025	0.0024	0.0025
	D-6	0.0023	0.0024	0.0024
	E-6	0.0021	0.0024	0.0024
	6:Ea	0.0020	0.0024	0.0024
	F-6	0.0019	0.0024	0.0024
	G-6	0.0017	0.0024	0.0024
	H-6	0.0015	0.0024	0.0024
	I-6	0.0013	0.0024	0.0025
	A:6a	0.0028	0.0025	0.0029
	E-7	0.0021	0.0025	0.0025
	F-7	0.0019	0.0025	0.0025
	G-7	0.0017	0.0025	0.0025
	H-7	0.0015	0.0025	0.0025
	I-7	0.0013	0.0025	0.0025
CIM	A-1	0.0011	0.0010	0.0011
	B-1	0.0011	0.0010	0.0011
	C-1	0.0010	0.0010	0.0010
	D-1	0.0009	0.0010	0.0010
	E-1	0.0009	0.0010	0.0010
	F-1	0.0008	0.0010	0.0010
	G-1	0.0007	0.0010	0.0010
	H-1	0.0007	0.0010	0.0010
	I-1	0.0006	0.0010	0.0010
	A-2	0.0011	0.0010	0.0011
	B-2	0.0011	0.0010	0.0011
	C-2	0.0010	0.0010	0.0010
	D-2	0.0009	0.0010	0.0010
	E-2	0.0009	0.0010	0.0010
	F-2	0.0008	0.0010	0.0010
	G-2	0.0007	0.0010	0.0010
	H-2	0.0007	0.0010	0.0010
	I-2	0.0006	0.0010	0.0010
	A-3	0.0011	0.0010	0.0011
	B-3	0.0011	0.0010	0.0011
	C-3	0.0010	0.0010	0.0010
	D-3	0.0009	0.0010	0.0010
	E-3	0.0009	0.0010	0.0010
	F-3	0.0008	0.0010	0.0010
	G-3	0.0007	0.0010	0.0010
	H-3	0.0007	0.0010	0.0010
	I-3	0.0006	0.0010	0.0010
	A-4	0.0011	0.0010	0.0011
	B-4	0.0011	0.0010	0.0011
	C-4	0.0010	0.0010	0.0010
	D-4	0.0009	0.0010	0.0010
	E-4	0.0009	0.0010	0.0010
	4:Ea	0.0009	0.0010	0.0010
	F-4	0.0008	0.0010	0.0010
	G-4	0.0007	0.0010	0.0010
	H-4	0.0007	0.0010	0.0010
	I-4	0.0006	0.0010	0.0010
	I:4a	0.0006	0.0010	0.0010
	A:4a	0.0011	0.0010	0.0011
	I:4b	0.0006	0.0010	0.0011
	B:4a	0.0011	0.0011	0.0011

A:4b	0.0011	0.0011	0.0011
A-5	0.0011	0.0011	0.0011
B-5	0.0011	0.0011	0.0011
C-5	0.0010	0.0011	0.0011
D-5	0.0009	0.0011	0.0011
E-5	0.0009	0.0011	0.0011
5:Ea	0.0009	0.0011	0.0011
F-5	0.0008	0.0011	0.0011
G-5	0.0007	0.0011	0.0011
H-5	0.0007	0.0011	0.0011
I-5	0.0006	0.0011	0.0011
A:5a	0.0011	0.0011	0.0011
I:5a	0.0006	0.0011	0.0011
A:5b	0.0011	0.0011	0.0011
I:5b	0.0006	0.0011	0.0011
A-6	0.0011	0.0011	0.0011
B-6	0.0011	0.0011	0.0011
C-6	0.0010	0.0011	0.0011
D-6	0.0009	0.0011	0.0011
E-6	0.0009	0.0011	0.0011
6:Ea	0.0009	0.0011	0.0011
F-6	0.0008	0.0011	0.0011
G-6	0.0007	0.0011	0.0011
H-6	0.0007	0.0011	0.0011
I-6	0.0006	0.0011	0.0011
A:6a	0.0011	0.0011	0.0011
A-7	0.0011	0.0011	0.0011
B-7	0.0011	0.0011	0.0011
C-7	0.0010	0.0011	0.0011
D-7	0.0009	0.0011	0.0011
E-7	0.0009	0.0011	0.0011
F-7	0.0008	0.0011	0.0011
G-7	0.0007	0.0011	0.0011
H-7	0.0007	0.0011	0.0011
I-7	0.0006	0.0011	0.0011

Note: Drift amplification factor, D: 1 in X; 1 in Y
MAXIMA DRIFT: $(\delta/h)x = 0.0035$; $(\delta/h)y = 0.0028$; $(\delta/h)r = 0.0035$

Nit. **901.134.339-5**
D: Calle 45 No.45 - 16 of 3801 **T:** 318 735 1464
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9. DISEÑO DE ELEMENTOS.

- Diseño de columnas.

A continuación, mostramos los resultados de diseño de las columnas donde se evidencia la revisión y el cumplimiento de la NSR-10.

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:33:04 p. m. 5/01/2020
File: C:\Users\Laura\Documents\LAURA\IPC\IP\CALLE 80\PL DWG\ING\MODELO RCB BLOQUE B.rcb

LOAD COMBINATIONS

No	Load combination
1	1.4D0 + 1.4DL + 1.4DL1
2	1.2D0 + 1.2DL + 1.2DL1 + 1.6LL + 1.6LL1
3	1.2D0 + 1.2DL + 1.2DL1 + 1.6LL
4	1.2D0 + 1.2DL + 1.2DL1 + 1.6LL1
5	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + EQX + .3EQY
6	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - EQX - .3EQY
7	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + EQX - .3EQY
8	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - EQX + .3EQY
9	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + .3EQX + EQY
10	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - .3EQX - EQY
11	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - .3EQX + EQY
12	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + .3EQX - EQY
13	.9D0 + .9DL + .9DL1 + EQX + .3EQY
14	.9D0 + .9DL + .9DL1 - EQX - .3EQY
15	.9D0 + .9DL + .9DL1 + EQX - .3EQY
16	.9D0 + .9DL + .9DL1 - EQX + .3EQY
17	.9D0 + .9DL + .9DL1 + .3EQX + EQY
18	.9D0 + .9DL + .9DL1 - .3EQX - EQY
19	.9D0 + .9DL + .9DL1 - .3EQX + EQY
20	.9D0 + .9DL + .9DL1 + .3EQX - EQY

MATERIALS

Number of materials = 3

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"

COLUMN SECTIONS

Number of prismatic sections = 6

Sec	Name	Shape	b (cm)	h (cm)	tw (cm)	tf (cm)	P1 (cm)	P2 (cm)	A (cm2)	I2 (cm4)	I3 (cm4)	J (cm4)
1	C60X60	Rectang	60.00	60.00	-	-	-	-	3600.0	1080000	1080000	1598400
2	C180X60	Rectang	180.00	60.00	-	-	-	-	10800.0	3240000	29160000	10238400
3	C80X80	Rectang	80.00	80.00	-	-	-	-	6400.0	3413333	3413333	5051734
4	C75X75	Rectang	75.00	75.00	-	-	-	-	5625.0	2636719	2636719	3902344
5	C35X35	Rectang	35.00	35.00	-	-	-	-	1225.0	125052	125052	185077
6	W16x50	I	17.96	41.30	0.97	1.60	0.00	-	94.8	27430	1548	63

Design Results - Columns (DMO)

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:33:04 p. m. 5/01/2020

Column	Story	L (m)	Lu (m)	Sec Mat	bxh (cm)	TRANSVERSE REINFORCEMENT TIES	XTIES	Sec	LONGITUDINAL REINFORCEMENT LdCmb critc	Pu (ton)	Mu2 (ton-m)	Mu3 (ton-m)	RHO -	As (cm2)
I-7	2	4.20	3.70	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	10	25.64	32.04	2.79	0.0100	36.00
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	10	25.64	34.86	2.55	0.0100	36.00
I-7	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	1	41.31	5.91	1.37	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	10	51.32	19.74	1.71	0.0100	36.00
H-7	2	4.20	3.70	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	23.50	29.19	0.78	0.0100	36.00
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	17	23.50	31.62	1.51	0.0100	36.00
H-7	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	1	73.02	2.43	2.43	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	1	73.02	2.43	2.43	0.0100	36.00
G-7	2	4.20	3.70	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	21.21	29.66	1.44	0.0100	36.00
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	17	21.21	31.98	2.73	0.0100	36.00
G-7	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	1	72.06	2.40	2.40	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	1	72.06	2.40	2.40	0.0100	36.00
F-7	CUB	3.55	3.05	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	6	24.43	20.67	19.82	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	6	24.43	16.81	14.03	0.0100	36.00
F-7	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	1	32.85	5.86	2.36	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	1	32.85	7.73	2.37	0.0100	36.00
F-7	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	10	72.79	24.27	4.75	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	13	9.06	6.52	11.70	0.0100	36.00
F-7	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	92.95	3.51	3.51	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	17	37.71	48.36	7.23	0.0100	56.25
F-7	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	132.15	5.19	5.19	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	17	61.55	53.08	8.40	0.0100	64.00
E-7	CUB	3.55	3.05	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	5	20.99	15.47	17.21	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	13	11.29	14.06	19.97	0.0100	36.00
E-7	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	1	44.98	1.63	5.00	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	1	44.98	1.50	4.11	0.0100	36.00
E-7	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	1	70.18	2.33	2.34	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	1	70.18	2.33	2.95	0.0100	36.00
E-7	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	98.97	3.74	3.74	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	18	49.60	42.09	10.59	0.0100	56.25
E-7	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	132.00	5.18	5.18	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	18	70.51	54.99	12.28	0.0100	64.00
D-7	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	20.30	19.73	1.43	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	17	20.30	28.72	6.27	0.0100	36.00
C-7	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	18	18.83	14.71	6.12	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	13	12.21	12.24	21.45	0.0100	36.00
B-7	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	14.85	15.02	3.46	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	13	12.01	12.24	23.47	0.0100	36.00
A-7	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	5	10.95	16.21	13.50	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	5	10.95	16.64	26.25	0.0100	36.00
I-6	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	12	11.03	34.45	7.12	0.0101	36.42
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	7	1.15	19.28	10.99	0.0100	36.00
I-6	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	7	-29.48	17.43	14.21	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	7	-29.48	18.10	19.05	0.0107	38.53
I-6	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	7	-90.73	30.50	25.20	0.0104	58.55
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	7	-90.73	30.12	39.06	0.0121	67.97
I-6	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	13	-174.78	24.52	0.69	0.0103	65.90
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	15	-199.11	14.09	39.21	0.0142	90.80
H-6	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	25.31	29.05	0.84	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	25.31	18.33	0.84	0.0100	36.00
H-6	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	60.73	22.38	2.02	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	60.73	20.75	2.02	0.0100	36.00
H-6	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	173.61	6.55	6.55	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	17	111.06	48.04	4.58	0.0100	56.25
H-6	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	250.92	9.85	9.85	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	1	250.92	9.85	9.85	0.0100	64.00
G-6	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	24.69	29.29	0.90	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	24.69	18.47	0.82	0.0100	36.00

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Column	Story	L	Lu	Sec	bxh	TIES	XTIES	Sec	LdCmb	Pu	Mu2	Mu3	RHO	As
G-6	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	60.16	22.28	2.00	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	60.16	20.50	2.61	0.0100	36.00
G-6	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	176.17	6.65	6.65	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	17	111.08	47.67	6.93	0.0100	56.25
G-6	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	254.32	9.98	9.98	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	1	254.32	9.98	9.98	0.0100	64.00
F-6	CUB	3.55	3.05	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	6	10.08	13.61	16.13	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	6	10.08	6.38	16.27	0.0100	36.00
F-6	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	29.64	23.60	3.75	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	14	31.36	6.27	17.44	0.0100	36.00
F-6	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	66.18	28.45	4.45	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	66.18	26.49	5.13	0.0100	36.00
F-6	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	189.99	7.17	7.17	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	17	110.80	54.98	9.74	0.0100	56.25
F-6	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	263.32	10.33	10.33	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	1	263.32	10.33	10.33	0.0100	64.00
D-6	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	24.24	30.27	3.40	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	24.24	19.47	1.83	0.0100	36.00
D-6	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	58.42	23.14	2.47	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	58.42	21.18	2.55	0.0100	36.00
D-6	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	160.97	6.07	6.07	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	17	95.05	49.98	13.35	0.0100	56.25
D-6	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	233.44	9.16	9.16	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	17	141.13	53.27	15.28	0.0100	64.00
C-6	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	24.01	28.51	4.21	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	24.01	18.07	2.30	0.0100	36.00
C-6	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	58.28	22.29	2.90	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	58.28	20.46	2.98	0.0100	36.00
C-6	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	158.51	5.98	5.98	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	13	84.36	21.22	42.76	0.0100	56.25
C-6	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	225.87	8.86	8.86	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	13	128.60	21.02	46.31	0.0100	64.00
B-6	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	24.36	28.46	5.39	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	24.36	17.86	2.97	0.0100	36.00
B-6	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	59.52	21.80	3.24	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	1	98.21	3.26	3.26	0.0100	36.00
B-6	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	160.10	6.04	6.04	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	13	87.89	20.62	46.71	0.0100	56.25
B-6	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	228.94	8.98	8.98	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	13	134.05	20.70	50.00	0.0100	64.00
I-5	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	7	31.02	32.34	30.06	0.0142	51.19
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	6	31.53	27.04	21.96	0.0101	36.42
I-5	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	12	79.58	33.08	7.95	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	7	72.93	22.13	19.44	0.0100	36.00
I-5	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	112.83	22.78	4.26	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	12	129.94	59.48	16.03	0.0100	56.25
I-5	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	157.58	20.16	6.18	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	18	120.47	51.50	4.73	0.0100	64.00
H-5	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	19	35.05	27.23	9.46	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	16	34.86	5.70	17.18	0.0100	36.00
H-5	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	1	132.07	4.39	4.39	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	1	132.07	4.39	4.39	0.0100	36.00
H-5	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	214.11	8.08	8.08	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	19	138.30	43.82	11.87	0.0100	56.25
H-5	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	295.86	11.61	11.61	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	1	295.86	11.61	11.61	0.0100	64.00
G-5	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	19	35.01	26.07	8.83	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	14	34.94	4.44	17.31	0.0100	36.00
G-5	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	1	132.88	4.42	4.42	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	1	132.88	4.42	4.42	0.0100	36.00
G-5	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	215.64	8.14	8.14	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	1	215.64	8.14	8.14	0.0100	56.25
G-5	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	298.09	11.70	11.70	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	1	298.09	11.70	11.70	0.0100	64.00

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Column	Story	L	Lu	Sec	bxh	TIES	XTIES	Sec	LdCmb	Pu	Mu2	Mu3	RHO	As
F-5	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	11	50.97	42.35	8.44	0.0113	40.64
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	11	50.97	30.71	6.38	0.0100	36.00
F-5	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	71.21	28.82	4.08	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	71.21	26.69	4.92	0.0100	36.00
F-5	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	193.38	8.70	7.30	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	17	116.11	53.49	9.61	0.0100	56.25
F-5	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	267.97	10.51	10.51	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	1	267.97	10.51	10.51	0.0100	64.00
D-5	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	13	35.06	10.68	29.98	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	16	34.93	7.02	21.86	0.0100	36.00
D-5	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	84.48	22.04	6.36	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	1	133.70	4.44	4.44	0.0100	36.00
D-5	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	217.23	8.20	8.20	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	17	137.10	46.30	15.61	0.0100	56.25
D-5	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	300.62	11.80	11.80	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	1	300.62	11.80	11.80	0.0100	64.00
C-5	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	14	35.78	10.66	34.96	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	13	34.49	6.12	23.79	0.0100	36.00
C-5	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	18	85.48	21.81	7.86	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	14	87.37	7.39	24.16	0.0100	36.00
C-5	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	217.86	8.22	8.22	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	14	141.91	17.35	49.91	0.0100	56.25
C-5	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	301.72	11.84	11.84	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	1	301.72	11.84	11.84	0.0100	64.00
I-4	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	7	18.49	12.39	31.91	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	8	15.51	4.63	34.21	0.0100	36.00
I-4	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	7	42.44	12.32	29.49	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	6	41.40	14.96	26.45	0.0100	36.00
I-4	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	8	-74.66	30.42	20.98	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	6	-56.84	35.03	32.81	0.0103	57.69
I-4	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	16	-198.20	22.64	1.82	0.0112	71.52
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	16	-198.20	8.02	39.59	0.0132	84.24
H-4	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	19	19.40	27.72	2.90	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	19	19.40	17.57	1.46	0.0100	36.00
H-4	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	50.70	20.39	2.29	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	19	45.92	20.28	4.66	0.0100	36.00
H-4	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	155.77	5.88	5.88	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	19	98.56	44.32	12.00	0.0100	56.25
H-4	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	237.11	9.30	9.30	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	1	237.11	9.30	9.30	0.0100	64.00
G-4	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	21.38	25.45	4.97	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	19	19.28	17.47	1.14	0.0100	36.00
G-4	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	50.64	20.39	2.88	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	19	45.99	20.20	4.35	0.0100	36.00
G-4	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	158.31	5.97	5.97	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	19	99.05	44.03	11.05	0.0100	56.25
G-4	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	240.48	9.44	9.44	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	1	240.48	9.44	9.44	0.0100	64.00
F-4	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	11	26.71	38.61	1.23	0.0101	36.42
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	11	26.71	26.71	0.89	0.0100	36.00
F-4	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	19	35.98	26.61	1.55	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	19	35.98	26.62	4.01	0.0100	36.00
F-4	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	142.26	9.51	5.37	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	19	80.95	53.19	10.44	0.0100	56.25
F-4	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	216.89	8.51	8.51	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	19	126.70	49.91	11.93	0.0100	64.00
D-4	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	21.62	26.35	7.86	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	21.62	15.71	4.75	0.0100	36.00
D-4	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	50.94	21.14	4.81	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	9	80.79	25.82	6.40	0.0100	36.00
D-4	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	144.78	15.72	5.46	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	9	148.46	58.72	16.26	0.0100	56.25
D-4	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	212.56	9.96	8.34	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	17	136.56	49.73	14.78	0.0100	64.00

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Column	Story	L	Lu	Sec	bxh	TIES	XTIES	Sec	LdCmb	Pu	Mu2	Mu3	RHO	As
C-4	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	22.50	25.55	9.17	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	22.50	15.96	6.08	0.0100	36.00
C-4	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	53.32	20.40	5.42	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	17	53.32	19.16	5.71	0.0100	36.00
C-4	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	124.27	4.69	4.69	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	14	62.42	11.69	42.97	0.0100	56.25
C-4	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	184.48	8.42	7.24	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	14	100.26	15.07	46.36	0.0100	64.00
B-4	4	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	16	11.11	13.79	23.58	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	16	11.11	9.80	15.66	0.0100	36.00
B-4	3	3.15	2.65	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	57.52	19.46	6.62	0.0100	36.00
				2		6 #3 @ 24 cm (ctr)	2 (h)	Bot	16	28.97	9.88	16.30	0.0100	36.00
B-4	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	123.37	4.66	4.66	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	14	46.56	7.56	51.98	0.0100	56.25
B-4	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	195.15	7.66	7.66	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	14	88.77	12.50	51.40	0.0100	64.00
I-3	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	12	46.69	55.87	10.52	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	12	46.69	67.77	14.62	0.0100	56.25
I-3	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	11	80.81	50.31	5.88	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	20	65.63	48.15	16.34	0.0100	64.00
H-3	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	19	45.91	38.64	9.65	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	19	45.91	52.58	13.53	0.0100	56.25
H-3	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	153.10	6.01	6.01	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	19	98.83	45.63	14.93	0.0100	64.00
G-3	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	19	45.37	36.93	8.92	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	19	45.37	51.63	12.71	0.0100	56.25
G-3	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	152.99	6.00	6.00	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	19	98.30	45.60	13.25	0.0100	64.00
F-3	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	19	45.15	37.82	7.95	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	19	45.15	52.35	11.68	0.0100	56.25
F-3	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	152.14	5.97	5.97	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	19	97.75	45.84	11.48	0.0100	64.00
E-3	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	18	45.76	34.21	10.69	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	16	46.39	24.34	41.31	0.0100	56.25
E-3	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	153.86	6.04	6.04	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	1	153.86	6.04	6.04	0.0100	64.00
D-3	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	8	44.39	47.45	31.55	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	8	44.39	46.72	48.58	0.0100	56.25
D-3	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	101.17	6.93	3.97	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	17	71.16	47.78	13.95	0.0100	64.00
C-3	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	10	47.01	27.64	6.93	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	18	27.57	25.74	10.08	0.0100	36.00
B-3	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	1	56.38	1.87	1.87	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	14	35.47	4.20	26.77	0.0100	36.00
A-3	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	5	33.54	30.26	17.32	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	8	33.32	21.69	25.99	0.0100	36.00
I-2	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	12	36.71	43.42	5.88	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	12	36.71	63.07	9.73	0.0100	56.25
I-2	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	11	72.40	53.91	2.84	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	12	93.87	54.40	13.86	0.0100	64.00
H-2	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	19	32.30	39.80	12.84	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	11	53.51	56.68	21.00	0.0100	56.25
H-2	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	140.74	5.52	7.65	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	19	90.15	46.39	17.16	0.0100	64.00
G-2	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	19	31.80	38.20	11.55	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	11	52.96	54.47	19.29	0.0100	56.25
G-2	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	140.20	5.50	6.73	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	19	89.10	46.25	15.20	0.0100	64.00

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Column	Story	L	Lu	Sec	bxh	TIES	XTIES	Sec	LdCmb	Pu	Mu2	Mu3	RHO	As
F-2	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	19	31.73	38.76	10.84	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	11	52.76	55.31	18.25	0.0100	56.25
F-2	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	139.62	5.48	6.59	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	19	88.91	46.43	13.51	0.0100	64.00
E-2	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	19	31.79	38.50	10.80	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	16	31.33	30.75	44.78	0.0100	56.25
E-2	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	141.62	5.56	6.98	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	19	89.70	46.13	12.24	0.0100	64.00
D-2	2	4.20	3.70	4	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	8	33.76	36.52	31.47	0.0100	56.25
				2		8 #3 @ 26 cm (ctr)	3 (h)	Bot	8	33.76	41.97	49.37	0.0100	56.25
D-2	CIM	3.50	3.08	3	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	105.32	4.13	4.13	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	19	73.38	49.23	10.00	0.0100	64.00
C-2	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	1	54.95	1.83	1.83	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	16	36.04	11.94	22.76	0.0100	36.00
B-2	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	1	56.28	1.87	1.87	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	15	36.05	11.44	23.22	0.0100	36.00
A-2	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	8	34.17	32.61	15.61	0.0101	36.42
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	8	34.17	23.42	25.95	0.0101	36.42
I-1'	2	4.20	3.76	5	35x35	7 #3 @ 10 cm (end)	1 (b)	Top	1	7.18	0.18	0.18	0.0100	12.25
				2		12 #3 @ 20 cm (ctr)	1 (h)	Bot	1	7.18	0.18	0.18	0.0100	12.25
H-1'	2	4.20	3.77	5	35x35	7 #3 @ 10 cm (end)	1 (b)	Top	1	15.45	0.40	0.40	0.0100	12.25
				2		12 #3 @ 20 cm (ctr)	1 (h)	Bot	1	15.45	0.40	0.40	0.0100	12.25
G-1'	2	4.20	3.77	5	35x35	7 #3 @ 10 cm (end)	1 (b)	Top	1	14.08	0.36	0.36	0.0100	12.25
				2		12 #3 @ 20 cm (ctr)	1 (h)	Bot	1	14.08	0.36	0.36	0.0100	12.25
F-1'	2	4.20	3.77	5	35x35	7 #3 @ 10 cm (end)	1 (b)	Top	1	14.06	0.36	0.36	0.0100	12.25
				2		12 #3 @ 20 cm (ctr)	1 (h)	Bot	1	14.06	0.36	0.36	0.0100	12.25
E-1'	2	4.20	3.77	5	35x35	7 #3 @ 10 cm (end)	1 (b)	Top	1	15.41	0.40	0.40	0.0100	12.25
				2		12 #3 @ 20 cm (ctr)	1 (h)	Bot	1	15.41	0.40	0.40	0.0100	12.25
D-1'	2	4.20	3.76	5	35x35	7 #3 @ 10 cm (end)	1 (b)	Top	1	7.15	0.18	0.18	0.0100	12.25
				2		12 #3 @ 20 cm (ctr)	1 (h)	Bot	1	7.15	0.18	0.18	0.0100	12.25
I-1	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	7	33.83	21.55	14.76	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	12	33.70	28.15	11.05	0.0100	36.00
H-1	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	7	60.30	5.04	23.06	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	20	36.42	22.84	11.05	0.0100	36.00
G-1	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	7	59.23	5.89	21.93	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	20	36.21	22.92	9.90	0.0100	36.00
F-1	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	7	59.33	5.83	22.14	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	20	36.01	22.91	9.08	0.0100	36.00
E-1	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	7	60.64	6.11	24.14	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	7	60.64	11.62	24.67	0.0100	36.00
D-1	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	5	49.49	5.89	18.99	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	19	27.00	25.36	2.48	0.0100	36.00
C-1	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	17	21.57	13.86	5.63	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	15	22.69	12.63	20.27	0.0100	36.00
B-1	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	20	21.93	16.80	3.76	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	15	23.59	13.28	21.48	0.0100	36.00
A-1	CIM	3.50	3.08	1	60x60	6 #3 @ 12 cm (end)	2 (b)	Top	9	22.44	22.78	5.94	0.0100	36.00
				2		7 #3 @ 24 cm (ctr)	2 (h)	Bot	8	17.97	19.21	21.21	0.0100	36.00

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- Muros estructurales.

A continuación, mostramos el resultado de diseño de los muros donde se evidencia la revisión y el cumplimiento de la NSR-10

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File: C:\Users\Laura\Documents\LAURA\IPC\IP\CALLE 80\PL DWG\ING\MODELO RCB BLOQUE B.rcb

LOAD COMBINATIONS

No	Load combination
1	1.4D0 + 1.4DL + 1.4DL1
2	1.2D0 + 1.2DL + 1.2DL1 + 1.6LL + 1.6LL1
3	1.2D0 + 1.2DL + 1.2DL1 + 1.6LL
4	1.2D0 + 1.2DL + 1.2DL1 + 1.6LL1
5	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + EQX + .3EQY
6	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - EQX - .3EQY
7	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + EQX - .3EQY
8	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - EQX + .3EQY
9	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + .3EQX + EQY
10	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - .3EQX - EQY
11	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - .3EQX + EQY
12	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + .3EQX - EQY
13	.9D0 + .9DL + .9DL1 + EQX + .3EQY
14	.9D0 + .9DL + .9DL1 - EQX - .3EQY
15	.9D0 + .9DL + .9DL1 + EQX - .3EQY
16	.9D0 + .9DL + .9DL1 - EQX + .3EQY
17	.9D0 + .9DL + .9DL1 + .3EQX + EQY
18	.9D0 + .9DL + .9DL1 - .3EQX - EQY
19	.9D0 + .9DL + .9DL1 - .3EQX + EQY
20	.9D0 + .9DL + .9DL1 + .3EQX - EQY

M A T E R I A L S

Number of materials = 3

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"

Design Results - Walls (DMO)

NOTE: Shear Walls are designed according to NSR-10 including confinement provitions of ACI318-14
Method selected for design of boundary elements: Displacement-based method
Height of plasic zone: Larger of Lw and Mu/4Vu (Lw: Individual wall length)
Provitions for confinement above plastic zone to prevent compression failure are considered
Boundary elements are extended vertically above hinge area until c/Lw < 0.4

						HORIZONTAL REINFORCEMENT			VERTICAL REINFORCEMENT						
Wall	Story	B (m)	H (m)	t (cm)	Mat -	LCmb crit	Vu (ton)	Reinforcement	LCmb crit	Pu (ton)	Mu2 (ton-m)	As tot (cm2)	As ctr (cm2)	As end (cm2)	Ends
6(E-Ea)	CUB	1.80	3.55	60.0	2	8	12.93	2Ly#3@11 .0020	¤14	15.43	33.56	22.71	-	-	-
6(E-Ea)	4	1.80	3.15	60.0	2	11	25.81	2Ly#3@11 .0020	11	121.41	83.83	12.96	-	-	-
6(E-Ea)	3	1.80	3.15	60.0	2	12	49.61	2Ly#4@16 .0025	12	201.61	34.50	27.00	-	-	-
6(E-Ea)	2	1.80	4.20	60.0	2	10	55.33	2Ly#4@16 .0025	10	283.82	185.25	27.00	-	-	-
6(E-Ea)	CIM	1.80	3.50	60.0	2	12	78.52	2Ly#4@16 .0025	17	264.98	409.89	119.45	21.60	48.93	60x60

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Wall	Story	B	H	t	Mat	LCmb	Vu	Reinforcement	LCmb	Pu	Mu2	As tot	As ctr	As end	Ends
										Est #3 @15 cm		XTies:	T: 2	X: 2 @18 cm	
5(E-Ea)	4	1.80	3.15	60.0	2	9	23.01	2Ly#3@11 .0020	17	45.59	82.09	17.04	-	-	-
5(E-Ea)	3	1.80	3.15	60.0	2	12	52.43	2Ly#4@16 .0025	12	159.08	29.40	27.00	-	-	-
5(E-Ea)	2	1.80	4.20	60.0	2	10	49.79	2Ly#4@16 .0025	10	250.99	150.91	27.00	-	-	-
5(E-Ea)	CIM	1.80	3.50	60.0	2	10	76.00	2Ly#4@16 .0025	17	237.19	397.10	113.73	21.60	46.06	60x60
										Est #3 @15 cm		XTies:	T: 2	X: 2 @18 cm	
4(E-Ea)	4	1.80	3.15	60.0	2	9	18.81	2Ly#3@11 .0020	17	30.57	79.22	18.67	-	-	-
4(E-Ea)	3	1.80	3.15	60.0	2	12	52.49	2Ly#4@16 .0025	18	53.65	124.33	27.79	-	-	-
4(E-Ea)	2	1.80	4.20	60.0	2	12	46.38	2Ly#4@16 .0025	12	186.19	153.44	27.00	-	-	-
4(E-Ea)	CIM	1.80	3.50	60.0	2	10	73.36	2Ly#4@16 .0025	19	192.94	376.26	107.01	21.60	42.70	60x60
										Est #3 @15 cm		XTies:	T: 2	X: 2 @18 cm	
I(5a-5b)	4	2.00	3.15	60.0	2	7	9.84	2Ly#3@11 .0020	7	32.20	3.22	14.39	-	-	-
I(5a-5b)	3	2.00	3.15	60.0	2	7	58.34	2Ly#4@16 .0025	16	-15.57	114.90	37.86	-	-	-
I(5a-5b)	2	2.00	4.20	60.0	2	7	56.43	2Ly#4@16 .0025	16	-75.83	194.69	79.25	-	-	-
I(5a-5b)	CIM	2.00	3.50	60.0	2	8	104.11	2Ly#4@16 .0025	16	-167.00	425.07	194.46	60.06	67.19	60x60
										Est #3 @15 cm		XTies:	T: 2	X: 2 @18 cm	
I(4a-4b)	4	2.00	3.15	60.0	2	7	16.19	2Ly#3@11 .0020	7	20.76	38.15	14.39	-	-	-
I(4a-4b)	3	2.00	3.15	60.0	2	6	51.97	2Ly#4@16 .0025	6	16.02	180.61	49.34	-	-	-
I(4a-4b)	2	2.00	4.20	60.0	2	8	63.90	2Ly#4@16 .0025	15	-55.86	247.71	91.94	29.22	31.36	60x60
										Est #3 @15 cm		XTies:	T: 2	X: 2 @18 cm	
I(4a-4b)	CIM	2.00	3.50	60.0	2	8	103.61	2Ly#4@16 .0025	15	-157.27	442.55	200.27	60.52	69.87	60x60
										Est #3 @15 cm		XTies:	T: 2	X: 2 @18 cm	
B(4a-5)	4	1.80	3.15	60.0	2	5	34.79	2Ly#4@16 .0025	5	64.97	14.81	27.00	-	-	-
B(4a-5)	3	1.80	3.15	60.0	2	5	61.77	2Ly#4@16 .0025	5	149.49	91.56	27.00	-	-	-
B(4a-5)	2	1.80	4.20	60.0	2	5	68.73	2Ly#4@16 .0025	13	145.50	250.24	55.74	-	-	-
B(4a-5)	CIM	1.80	3.50	60.0	2	5	60.22	2Ly#4@16 .0025	13	199.66	373.85	106.66	21.60	42.52	60x60
A(5b-6a)	4	1.80	3.15	60.0	2	6	12.61	2Ly#3@11 .0020 ¤	9	32.13	9.89	25.92	-	-	-
A(5b-6a)	3	1.80	3.15	60.0	2	6	50.88	2Ly#4@16 .0025	13	31.85	106.95	30.95	-	-	-
A(5b-6a)	2	1.80	4.20	60.0	2	6	56.20	2Ly#4@16 .0025	13	51.68	311.57	108.50	21.60	43.45	60x60
										Est #3 @15 cm		XTies:	T: 2	X: 2 @18 cm	
A(5b-6a)	CIM	1.80	3.50	60.0	2	14	53.72	2Ly#4@16 .0025	13	82.12	456.67	162.08	21.60	70.23	60x60
										Est #3 @15 cm		XTies:	T: 2	X: 2 @18 cm	
A(4b-5a)	4	1.80	3.15	60.0	2	6	28.29	2Ly#3@11 .0020 ¤	8	44.61	70.37	36.29	-	-	-
A(4b-5a)	3	1.80	3.15	60.0	2	6	58.95	2Ly#4@16 .0025	6	94.72	117.95	27.00	-	-	-
A(4b-5a)	2	1.80	4.20	60.0	2	5	62.08	2Ly#4@16 .0025	13	80.54	288.39	93.62	21.60	36.00	60x60
										Est #3 @15 cm		XTies:	T: 2	X: 2 @17 cm	
A(4b-5a)	CIM	1.80	3.50	60.0	2	5	51.13	2Ly#4@16 .0025	13	111.34	418.36	140.74	21.60	59.56	60x60
										Est #3 @15 cm		XTies:	T: 2	X: 2 @17 cm	

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Project: Untitled 6:35:24 p. m. 5/01/2020

Wall	Story	B	H	t	Mat	LCmb	Vu	Reinforcement		LCmb	Pu	Mu2	As tot	As ctr	As end	Ends
A(4-4a)	4	1.80	3.15	60.0	2	8	14.60	2Ly#3@11	.0020	¤ 8	16.27	51.16	26.77	-	-	-
A(4-4a)	3	1.80	3.15	60.0	2	8	51.77	2Ly#4@16	.0025	16	17.62	93.51	29.37	-	-	-
A(4-4a)	2	1.80	4.20	60.0	2	6	60.47	2Ly#4@16	.0025	6	49.34	294.26	97.94	21.60	38.16	60x60
										Est #3 @15 cm			XTies:	T: 2	X: 2 @18 cm	
A(4-4a)	CIM	1.80	3.50	60.0	2	6	57.20	2Ly#4@16	.0025	14	42.13	422.57	150.03	21.60	64.22	60x60
										Est #3 @15 cm			XTies:	T: 2	X: 2 @18 cm	

¤ : Design of wall element is controlled by Out-of-plane bending.
Vert. reinf. could be reduced by assigning a lower OutPlane stiffness reduction factor.
* : Wall requires confinement Boundary Elements at its ends. Provide confinement Stirrups (Est)
Cross-ties (Xties)are assumed same diameter as stirrups. T: Long. X-ties, X: Transv. X-ties

Nit. **901.134.339-5**
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- Vigas.

A continuación, mostramos los resultados de diseño de las vigas donde se evidencia la revisión y el cumplimiento de la NSR-10.

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:37 p. m. 5/01/2020
File: C:\Users\Laura\Documents\LAURA\IPC\IP\CALLE 80\PL DWG\ING\MODELO RCB BLOQUE B.rcb

LOAD COMBINATIONS

No	Load combination
1	1.4D0 + 1.4DL + 1.4DL1
2	1.2D0 + 1.2DL + 1.2DL1 + 1.6LL + 1.6LL1
3	1.2D0 + 1.2DL + 1.2DL1 + 1.6LL
4	1.2D0 + 1.2DL + 1.2DL1 + 1.6LL1
5	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + EQX + .3EQY
6	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - EQX - .3EQY
7	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + EQX - .3EQY
8	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - EQX + .3EQY
9	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + .3EQX + EQY
10	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - .3EQX - EQY
11	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - .3EQX + EQY
12	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + .3EQX - EQY
13	.9D0 + .9DL + .9DL1 + EQX + .3EQY
14	.9D0 + .9DL + .9DL1 - EQX - .3EQY
15	.9D0 + .9DL + .9DL1 + EQX - .3EQY
16	.9D0 + .9DL + .9DL1 - EQX + .3EQY
17	.9D0 + .9DL + .9DL1 + .3EQX + EQY
18	.9D0 + .9DL + .9DL1 - .3EQX - EQY
19	.9D0 + .9DL + .9DL1 - .3EQX + EQY
20	.9D0 + .9DL + .9DL1 + .3EQX - EQY

MATERIALS

Number of materials = 3

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"

BEAM SECTIONS

Number of prismatic sections = 8

Sec	Name	Shape	b (cm)	h (cm)	tw (cm)	tf (cm)	P1 (cm)	P2 (cm)	A (cm2)	I2 (cm4)	I3 (cm4)	J (cm4)
1	VG40X50	Rectang	40.00	50.00	-	-	-	-	2000.0	416667	266667	529067
2	VG35X50	Rectang	35.00	50.00	-	-	-	-	1750.0	364583	178646	399452
3	VG45X50	Rectang	45.00	50.00	-	-	-	-	2250.0	468750	379687	657619
4	VG37.5X50	Rectang	37.50	50.00	-	-	-	-	1875.0	390625	219726	463623
5	VG28X50	Rectang	28.00	50.00	-	-	-	-	1400.0	291667	91467	236789
6	W16x36	I	17.74	40.28	0.75	1.09	0.00	-	68.4	18647	1020	22
7	W10x12	I	10.06	25.07	0.48	0.53	0.00	-	22.8	2239	91	2
8	VT15X50	Rectang	15.00	50.00	-	-	-	-	750.0	156250	14062	45619

Design Results - Beams (DMO)

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:37 p. m. 5/01/2020

BEAM: A(1-2) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-11.39	-8.46	-5.82	-3.51	-2.31	-2.31	-2.31	-3.13	-5.64	-8.46	-11.53
Mu(+), ton-m:	8.41	7.32	6.11	4.79	3.23	2.31	2.56	3.93	5.19	6.34	7.33
As(-), cm2:	6.77	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.86
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.75	4.64	4.29	3.95	3.60	3.47	3.82	4.16	4.51	4.86	4.97
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A-1 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 A-2

BEAM: A(2-3) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-10.43	-7.66	-5.16	-2.98	-2.15	-2.15	-2.15	-3.03	-5.32	-7.92	-10.76
Mu(+), ton-m:	6.96	6.08	5.07	3.96	2.64	2.15	2.54	3.78	4.89	5.87	6.70
As(-), cm2:	6.18	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.38
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.43	4.32	3.97	3.62	3.28	3.04	3.38	3.73	4.08	4.43	4.54
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 A-3

BEAM: A(3-4) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.90 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.99	1.68	2.37	3.06	3.75	4.44	5.13	5.82	6.51	7.20
Mu(-), ton-m:	-11.93	-8.78	-5.93	-3.43	-2.42	-2.42	-2.42	-3.49	-5.99	-8.90	-12.08
Mu(+), ton-m:	7.99	6.96	5.77	4.45	2.91	2.42	2.95	4.48	5.77	7.00	8.02
As(-), cm2:	7.10	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.20
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.78	4.65	4.27	3.89	3.51	3.34	3.72	4.10	4.48	4.86	4.99
Tu, ton-m:	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A-3 11 #3 @ 10 21 #3 @ 22.5 11 #3 @ 10 A-4

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:37 p. m. 5/01/2020

BEAM: A(4-4a) FLOOR: 2

Length: L = 1.80 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-7.95	-6.31	-4.68	-3.08	-1.59	-1.59	-1.59	-3.09	-4.66	-6.25	-7.86
Mu(+), ton-m:	7.49	6.02	4.53	3.04	1.59	1.59	1.62	3.16	4.67	6.16	7.65
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	9.98	9.98	9.98	9.93	9.83	9.72	9.64	9.75	9.79	9.79	9.79
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

A-4 18 #3 @ 10 A:4a

BEAM: A(4a-4b) FLOOR: 2

Length: L = 4.50 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 4.50 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.45	0.90	1.35	1.80	2.25	2.70	3.15	3.60	4.05	4.50
Mu(-), ton-m:	-20.58	-16.11	-11.75	-7.58	-4.12	-4.12	-4.12	-7.68	-11.82	-16.12	-20.56
Mu(+), ton-m:	18.84	15.31	11.70	8.08	4.33	4.12	4.52	8.30	11.96	15.57	19.13
As(-), cm2:	12.60	9.72	6.99	6.16	6.16	6.16	6.16	6.16	7.04	9.73	12.59
As(+), cm2:	11.47	9.21	6.96	6.16	6.16	6.16	6.16	6.16	7.12	9.38	11.65
Vu, ton:	10.87	10.87	10.62	10.36	10.10	9.84	10.03	10.28	10.54	10.80	10.80
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

A:4a 11 #3 @ 10 10 #3 @ 22.5 11 #3 @ 10 A:4b

BEAM: A(4b-5) FLOOR: 2

Length: L = 0.90 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-9.51	-7.73	-5.97	-4.20	-2.44	-1.90	-1.90	-2.95	-4.66	-6.38	-8.11
Mu(+), ton-m:	9.04	7.34	5.63	3.93	2.22	1.90	1.90	2.83	4.56	6.29	8.02
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	21.91	21.91	21.91	21.91	21.91	21.91	21.91	21.91	21.91	21.91	21.91
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

A:4b 9 #3 @ 10 A-5

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:37 p. m. 5/01/2020

BEAM: A(5-5a) FLOOR: 2

Length: L = 0.90 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-8.35	-6.58	-4.81	-3.04	-1.83	-1.83	-2.30	-4.01	-5.72	-7.44	-9.17
Mu(+), ton-m:	7.92	6.23	4.53	2.83	1.83	1.83	2.23	3.97	5.70	7.44	9.17
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	21.92	21.92	21.92	21.92	21.92	21.92	21.92	21.92	21.92	21.92	21.92
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

A-5 9 #3 @ 10 A:5a

BEAM: A(5a-5b) FLOOR: 2

Length: L = 5.40 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 5.40 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.54	1.08	1.62	2.16	2.70	3.24	3.78	4.32	4.86	5.40
Mu(-), ton-m:	-16.85	-12.99	-9.38	-5.90	-3.60	-3.60	-3.60	-6.31	-10.00	-13.90	-17.98
Mu(+), ton-m:	15.33	12.64	9.91	7.01	3.95	3.60	3.94	6.81	9.61	12.34	14.94
As(-), cm2:	10.19	7.76	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.33	10.91
As(+), cm2:	9.22	7.54	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.35	8.98
Vu, ton:	7.97	7.92	7.61	7.30	6.99	7.03	7.34	7.65	7.96	8.27	8.32
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A:5a 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 A:5b

BEAM: A(5b-6) FLOOR: 2

Length: L = 0.90 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-8.81	-7.17	-5.54	-3.91	-2.29	-1.76	-1.76	-2.62	-4.18	-5.75	-7.32
Mu(+), ton-m:	8.28	6.74	5.19	3.64	2.08	1.76	1.76	2.56	4.15	5.74	7.34
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	20.30	20.30	20.30	20.30	20.30	20.30	20.30	20.30	20.30	20.30	20.30
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

A:5b 9 #3 @ 10 A-6

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:38 p. m. 5/01/2020

BEAM: A(6-6a) FLOOR: 2

Length: L = 0.90 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-7.60	-5.98	-4.38	-2.77	-1.64	-1.64	-2.03	-3.57	-5.11	-6.66	-8.21
Mu(+), ton-m:	7.14	5.62	4.10	2.57	1.64	1.64	2.01	3.59	5.17	6.74	8.31
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	20.02	20.02	20.02	20.02	20.02	20.02	20.02	20.02	20.02	20.02	20.02
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

A-6 9 #3 @ 10 A:6a

BEAM: A(6a-7) FLOOR: 2

Length: L = 5.06 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 4.76 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.48	0.95	1.43	1.91	2.38	2.86	3.33	3.81	4.29	4.76
Mu(-), ton-m:	-16.62	-13.05	-9.57	-6.19	-3.51	-3.51	-3.51	-6.19	-9.84	-13.64	-17.57
Mu(+), ton-m:	15.99	13.21	10.30	7.27	4.11	3.51	3.76	6.41	9.28	12.08	14.79
As(-), cm2:	10.04	7.80	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.17	10.65
As(+), cm2:	9.64	7.90	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.20	8.88
Vu, ton:	8.66	8.66	8.40	8.14	7.89	8.03	8.29	8.55	8.80	9.06	9.07
Tu, ton-m:	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

A:6a 11 #3 @ 10 11 #3 @ 22.5 11 #3 @ 10 A-7

BEAM: B(1-2) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-12.01	-8.47	-5.40	-2.96	-2.44	-2.44	-2.44	-2.63	-5.27	-8.51	-12.19
Mu(+), ton-m:	6.93	6.39	5.68	4.91	3.76	2.44	3.13	4.10	4.83	5.46	5.90
As(-), cm2:	7.15	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.26
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.63	5.45	4.87	4.28	3.70	3.33	3.91	4.50	5.08	5.67	5.84
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

B-1 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 B-2

BEAM: B(2-3) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-10.41	-7.49	-4.89	-2.70	-2.08	-2.08	-2.08	-2.64	-4.86	-7.48	-10.42
Mu(+), ton-m:	5.89	5.32	4.59	3.73	2.68	2.08	2.58	3.61	4.46	5.18	5.73
As(-), cm2:	6.17	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.17
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.59	4.46	4.03	3.59	3.16	2.76	3.19	3.62	4.06	4.49	4.62
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	B-2			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			B-3

BEAM: B(3-4) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.95	1.60	2.25	2.90	3.55	4.20	4.85	5.50	6.15	6.80
Mu(-), ton-m:	-12.27	-8.84	-5.71	-2.99	-2.74	-2.74	-2.74	-4.47	-7.19	-10.27	-13.68
Mu(+), ton-m:	7.76	6.65	5.38	4.00	2.74	2.74	3.90	5.52	6.94	8.23	9.37
As(-), cm2:	7.31	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.19
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.54	5.42	5.00	4.58	4.17	3.75	4.07	4.49	4.91	5.33	5.45
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	B-3			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			B-4

BEAM: B(4-4a) FLOOR: 2

	Length:	L = 5.40 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.00 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.90	1.40	1.90	2.40	2.90	3.40	3.90	4.40	4.90	5.40
Mu(-), ton-m:	-19.04	-14.73	-10.73	-7.04	-3.81	-3.81	-3.81	-5.11	-8.83	-12.95	-17.32
Mu(+), ton-m:	15.69	13.23	10.67	8.01	5.14	3.81	3.81	5.92	8.54	11.14	13.57
As(-), cm2:	11.60	8.85	6.37	6.16	6.16	6.16	6.16	6.16	6.16	7.74	10.49
As(+), cm2:	9.45	7.91	6.33	6.16	6.16	6.16	6.16	6.16	6.16	6.62	8.12
Vu, ton:	9.00	8.96	8.49	8.02	7.55	7.59	8.06	8.53	9.00	9.47	9.50
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	B-4			11 #3 @ 10		12 #3 @ 22.5		11 #3 @ 10			B:4a

BEAM: B(4a-5) FLOOR: 2

	Length:	L = 1.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-7.83	-6.23	-4.65	-3.09	-1.57	-1.57	-1.57	-2.92	-4.40	-5.90	-7.41
Mu(+), ton-m:	7.07	5.68	4.29	2.87	1.57	1.57	1.57	2.96	4.43	5.87	7.30
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	9.82	9.82	9.82	9.78	9.67	9.57	9.46	9.36	9.36	9.36	9.36
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	B:4a				18 #3 @ 10						B-5

BEAM: B(5-6) FLOOR: 2

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.80 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.68	1.36	2.04	2.72	3.40	4.08	4.76	5.44	6.12	6.80
Mu(-), ton-m:	-13.13	-9.35	-6.01	-3.15	-3.06	-3.06	-3.06	-4.79	-7.87	-11.41	-15.32
Mu(+), ton-m:	8.66	7.50	6.17	4.70	3.06	3.06	4.19	5.83	7.27	8.55	9.63
As(-), cm2:	7.84	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.79	9.22
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	6.11	5.95	5.46	4.96	4.46	3.97	4.37	4.87	5.36	5.86	6.02
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	B-5			11 #3 @ 10		20 #3 @ 22.5		11 #3 @ 10			B-6

BEAM: B(6-7) FLOOR: 2

	Length:	L = 5.96 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.26 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.93	1.45	1.98	2.51	3.03	3.56	4.08	4.61	5.14	5.66
Mu(-), ton-m:	-14.87	-11.66	-8.61	-5.69	-2.97	-2.97	-2.97	-4.58	-7.81	-11.22	-14.77
Mu(+), ton-m:	13.74	11.57	9.28	6.83	4.24	2.97	2.97	4.84	7.14	9.35	11.44
As(-), cm2:	8.93	6.94	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.66	8.87
As(+), cm2:	8.23	6.88	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.80
Vu, ton:	6.93	6.90	6.67	6.39	6.10	6.22	6.50	6.78	7.07	7.35	7.39
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	B-6			11 #3 @ 10		14 #3 @ 22.5		11 #3 @ 10			B-7

BEAM: C(1-2) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-11.58	-8.00	-4.95	-2.59	-2.37	-2.37	-2.37	-2.37	-4.88	-8.11	-11.83
Mu(+), ton-m:	6.01	5.71	5.23	4.70	3.75	2.37	3.17	3.92	4.42	4.82	5.01
As(-), cm2:	6.88	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.04
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.65	5.45	4.81	4.17	3.53	3.11	3.75	4.39	5.04	5.68	5.87
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-1 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 C-2

BEAM: C(2-3) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-10.05	-7.12	-4.54	-2.40	-2.01	-2.01	-2.01	-2.33	-4.45	-7.03	-9.97
Mu(+), ton-m:	5.09	4.73	4.19	3.54	2.66	2.01	2.59	3.46	4.11	4.64	5.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.57	4.43	3.96	3.48	3.01	2.54	3.01	3.48	3.95	4.43	4.57
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 C-3

BEAM: C(3-4) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.95	1.60	2.25	2.90	3.55	4.20	4.85	5.50	6.15	6.80
Mu(-), ton-m:	-11.09	-8.07	-5.29	-2.80	-2.44	-2.44	-2.44	-4.13	-6.54	-9.24	-12.19
Mu(+), ton-m:	7.14	6.07	4.85	3.51	2.44	2.44	3.45	5.01	6.39	7.64	8.75
As(-), cm2:	6.59	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.27
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.92	4.82	4.48	4.14	3.80	3.47	3.66	4.00	4.33	4.67	4.77
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-3 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 C-4

BEAM: C(4-5) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-15.28	-11.24	-7.57	-4.36	-3.06	-3.06	-3.06	-4.37	-7.52	-11.13	-15.13
Mu(+), ton-m:	9.90	8.60	7.12	5.49	3.67	3.06	3.77	5.64	7.28	8.78	10.11
As(-), cm2:	9.19	6.68	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.61	9.10
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	6.56	6.43	5.93	5.43	4.94	4.44	4.87	5.37	5.86	6.36	6.50
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 C-5

BEAM: C(5-6) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-14.77	-10.84	-7.33	-4.29	-3.09	-3.09	-3.09	-4.36	-7.65	-11.38	-15.46
Mu(+), ton-m:	10.25	8.90	7.40	5.77	3.85	3.09	3.58	5.33	6.93	8.38	9.63
As(-), cm2:	8.87	6.43	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.76	9.31
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	6.46	6.32	5.82	5.33	4.83	4.59	5.09	5.58	6.08	6.58	6.72
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 C-6

BEAM: C(6-7) FLOOR: 2

	Length:	L = 5.96 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.26 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.93	1.45	1.98	2.51	3.03	3.56	4.08	4.61	5.14	5.66
Mu(-), ton-m:	-13.66	-10.67	-7.85	-5.16	-2.73	-2.73	-2.73	-4.18	-7.16	-10.33	-13.63
Mu(+), ton-m:	12.45	10.51	8.47	6.26	3.91	2.73	2.73	4.46	6.53	8.51	10.38
As(-), cm2:	8.18	6.33	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.16
As(+), cm2:	7.43	6.23	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	6.43	6.41	6.18	5.90	5.61	5.69	5.97	6.25	6.54	6.82	6.86
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

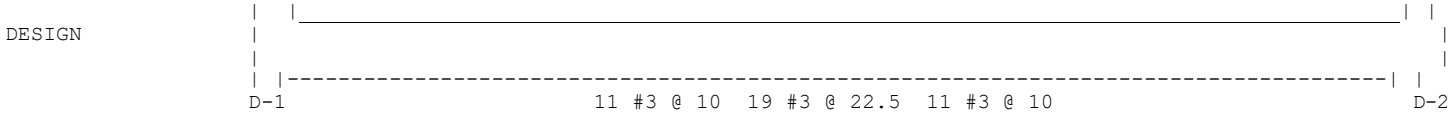
C-6 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 C-7

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:38 p. m. 5/01/2020

BEAM: D(1-2) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.50 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

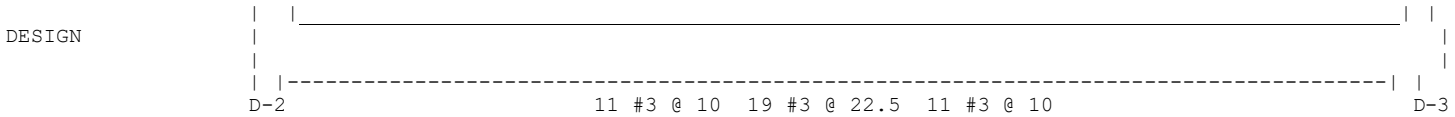
X, m:	0.30	0.95	1.60	2.25	2.90	3.55	4.20	4.85	5.50	6.15	6.80
Mu(-), ton-m:	-19.36	-12.61	-6.32	-3.87	-3.87	-3.87	-3.87	-3.87	-7.23	-11.38	-15.96
Mu(+), ton-m:	6.85	6.10	5.31	5.06	6.13	10.84	9.19	6.78	4.74	3.87	5.32
As(-), cm2:	11.80	7.52	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.77	9.62
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.43	6.16	6.16	6.16	6.16	6.16
Vu, ton:	10.31	10.18	9.75	9.31	8.87	8.33	8.64	9.05	9.46	9.87	9.99
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



BEAM: D(2-3) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

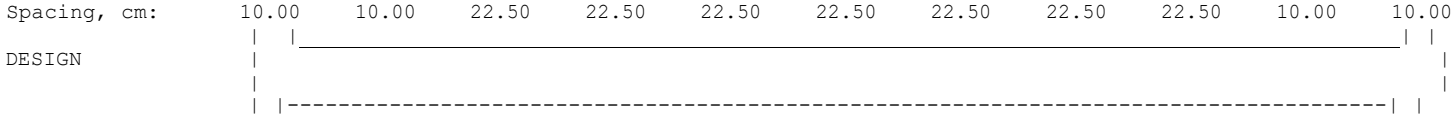
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-14.03	-10.47	-7.20	-4.28	-2.81	-2.81	-2.81	-4.23	-7.17	-10.46	-14.04
Mu(+), ton-m:	9.84	8.43	6.86	5.18	3.32	2.81	3.25	5.09	6.78	8.34	9.75
As(-), cm2:	8.41	6.21	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.20	8.41
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.82	5.71	5.31	4.92	4.53	4.16	4.55	4.94	5.34	5.73	5.84
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



BEAM: D(3-4) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-13.52	-10.18	-7.08	-4.27	-2.70	-2.70	-2.70	-4.11	-6.86	-9.91	-13.20
Mu(+), ton-m:	9.78	8.32	6.72	4.99	3.14	2.70	3.09	4.98	6.72	8.34	9.84
As(-), cm2:	8.09	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.89
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.49	5.40	5.07	4.74	4.42	4.09	4.35	4.68	5.00	5.33	5.42
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:38 p. m. 5/01/2020

BEAM: D(4-5) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-13.75	-10.17	-6.91	-4.02	-2.75	-2.75	-2.75	-3.99	-6.84	-10.07	-13.63
Mu(+), ton-m:	9.21	7.97	6.56	5.03	3.32	2.75	3.33	5.06	6.60	8.01	9.27
As(-), cm2:	8.23	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.82	5.70	5.28	4.86	4.44	4.01	4.40	4.82	5.24	5.66	5.78
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 D-5

BEAM: D(5-6) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-13.16	-9.71	-6.60	-3.89	-2.77	-2.77	-2.77	-3.97	-6.91	-10.22	-13.83
Mu(+), ton-m:	9.32	8.07	6.67	5.17	3.40	2.77	3.16	4.76	6.25	7.59	8.76
As(-), cm2:	7.87	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.28
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.70	5.58	5.16	4.74	4.32	4.14	4.56	4.98	5.40	5.83	5.94
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 D-6

BEAM: D(6-7) FLOOR: 2

	Length:	L = 5.96 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.26 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.93	1.45	1.98	2.51	3.03	3.56	4.08	4.61	5.14	5.66
Mu(-), ton-m:	-13.27	-10.08	-7.16	-4.51	-2.65	-2.65	-2.65	-3.59	-6.50	-9.74	-13.26
Mu(+), ton-m:	10.71	9.18	7.60	5.92	3.99	2.65	2.70	4.38	5.99	7.50	8.88
As(-), cm2:	7.93	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.93
As(+), cm2:	6.35	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	6.70	6.68	6.40	5.93	5.46	5.14	5.61	6.08	6.55	7.03	7.09
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-6 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 D-7

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:38 p. m. 5/01/2020

BEAM: E(1-2) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.95	1.60	2.25	2.90	3.55	4.20	4.85	5.50	6.15	6.80
Mu(-), ton-m:	-24.91	-15.61	-6.93	-4.98	-4.98	-4.98	-4.98	-4.98	-8.31	-15.29	-22.76
Mu(+), ton-m:	8.30	4.98	4.98	6.87	11.63	17.83	13.34	7.80	4.98	4.98	7.59
As(-), cm2:	15.48	9.40	6.16	6.16	6.16	6.16	6.16	6.16	6.16	9.20	14.03
As(+), cm2:	6.16	6.16	6.16	6.16	6.92	10.82	7.98	6.16	6.16	6.16	6.16
Vu, ton:	15.42	15.32	14.97	14.63	14.29	14.37	14.81	15.15	15.48	15.81	15.91
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-1 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 E-2

BEAM: E(2-3) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-13.31	-9.85	-6.68	-3.85	-2.66	-2.66	-2.66	-3.69	-6.37	-9.42	-12.79
Mu(+), ton-m:	8.29	7.22	5.96	4.55	3.02	2.66	3.07	4.68	6.10	7.39	8.51
As(-), cm2:	7.96	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.63
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.67	5.55	5.13	4.71	4.28	3.86	4.14	4.56	4.98	5.40	5.52
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 E-3

BEAM: E(3-4) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.08	1.76	2.44	3.12	3.80	4.48	5.16	5.84	6.52	7.20
Mu(-), ton-m:	-12.55	-9.10	-6.01	-3.35	-2.52	-2.52	-2.52	-3.44	-6.03	-9.15	-12.61
Mu(+), ton-m:	7.53	6.68	5.66	4.48	3.06	2.52	3.18	4.62	5.76	6.86	7.70
As(-), cm2:	7.49	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.52
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.23	5.07	4.60	4.12	3.64	3.45	3.93	4.40	4.88	5.35	5.51
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-3 11 #3 @ 10 20 #3 @ 22.5 11 #3 @ 10 E-4

BEAM: E(4-5) FLOOR: 2

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 7.20 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.48	7.20
Mu(-), ton-m:	-11.75	-8.31	-5.25	-2.82	-2.37	-2.37	-2.37	-2.85	-5.30	-8.37	-11.83
Mu(+), ton-m:	6.33	5.84	5.08	4.29	3.14	2.37	3.13	4.27	5.06	5.81	6.28
As(-), cm2:	6.99	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.04
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.12	4.92	4.39	3.86	3.32	2.81	3.34	3.88	4.41	4.94	5.14
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-4 11 #3 @ 10 22 #3 @ 22.5 11 #3 @ 10 E-5

BEAM: E(5-6) FLOOR: 2

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 7.20 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.48	7.20
Mu(-), ton-m:	-11.53	-8.16	-5.19	-2.83	-2.43	-2.43	-2.43	-2.90	-5.52	-8.65	-12.15
Mu(+), ton-m:	6.41	5.90	5.14	4.32	3.12	2.43	2.91	3.98	4.85	5.56	5.99
As(-), cm2:	6.86	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.24
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.09	4.90	4.37	3.83	3.30	2.96	3.49	4.03	4.56	5.09	5.29
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-5 11 #3 @ 10 22 #3 @ 22.5 11 #3 @ 10 E-6

BEAM: E(6-7) FLOOR: 2

	Length:	L = 5.96 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.56 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.56	1.11	1.67	2.23	2.78	3.34	3.89	4.45	5.01	5.56
Mu(-), ton-m:	-22.88	-13.03	-5.34	-4.58	-4.58	-4.58	-4.58	-4.60	-8.49	-12.75	-17.18
Mu(+), ton-m:	7.63	6.98	10.45	9.78	6.85	4.58	4.58	4.78	5.82	6.93	7.91
As(-), cm2:	16.37	10.04	8.42	6.16	6.16	6.16	6.16	6.16	6.16	7.61	10.40
As(+), cm2:	8.42	8.42	8.45	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	19.71	19.66	19.33	7.98	8.27	8.57	8.86	9.15	9.45	9.74	9.79
Tu, ton-m:	2.16	2.16	2.16	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-6 11 #3 @ 10 15 #3 @ 22.5 11 #3 @ 10 E-7

BEAM: E'(6-7) FLOOR: 2

	Length:	L = 5.96 m	a = 0.23 m	Section:	b = 28.0 cm	Sec:	VG28X50			
		Lu = 5.55 m	c = 0.19 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.23	0.78	1.34	1.89	2.45	3.00	3.56	4.11	4.67	5.22	5.78
Mu(-), ton-m:	-1.51	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.67
Mu(+), ton-m:	2.37	8.88	14.80	14.84	13.09	11.23	9.24	7.12	4.87	2.53	0.60
As(-), cm2:	5.27	5.27	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31
As(+), cm2:	5.27	6.25	9.07	9.10	7.97	6.77	5.52	4.31	4.31	4.31	4.31
Vu, ton:	14.18	14.14	3.30	3.03	3.25	3.48	3.70	3.93	4.15	4.37	4.41
Tu, ton-m:	0.68	0.68	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E'-6 11 #3 @ 10 15 #3 @ 22.5 11 #3 @ 10 E'-7

BEAM: F(1-2) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.95	1.60	2.25	2.90	3.55	4.20	4.85	5.50	6.15	6.80
Mu(-), ton-m:	-22.97	-14.40	-6.42	-4.59	-4.59	-4.59	-4.59	-4.59	-7.62	-14.07	-20.99
Mu(+), ton-m:	7.66	4.59	4.59	6.34	10.62	16.24	12.20	7.18	4.59	4.59	7.00
As(-), cm2:	14.18	8.64	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.43	12.86
As(+), cm2:	6.16	6.16	6.16	6.16	6.30	9.80	7.27	6.16	6.16	6.16	6.16
Vu, ton:	14.23	14.13	13.79	13.44	13.10	13.13	13.55	13.88	14.22	14.55	14.65
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-1 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-2

BEAM: F(2-3) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-12.24	-9.06	-6.15	-3.55	-2.45	-2.45	-2.45	-3.37	-5.82	-8.61	-11.68
Mu(+), ton-m:	7.57	6.60	5.45	4.16	2.76	2.45	2.82	4.31	5.62	6.80	7.83
As(-), cm2:	7.30	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.95
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.21	5.10	4.72	4.33	3.95	3.56	3.79	4.17	4.56	4.94	5.05
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-3

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:38 p. m. 5/01/2020

BEAM: F(3-4) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-11.77	-8.67	-5.86	-3.39	-2.35	-2.35	-2.35	-3.27	-5.72	-8.51	-11.59
Mu(+), ton-m:	7.59	6.63	5.52	4.29	2.89	2.35	2.84	4.25	5.50	6.62	7.59
As(-), cm2:	7.01	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.89
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.02	4.92	4.53	4.15	3.76	3.38	3.73	4.11	4.50	4.88	4.99
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-3 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-4

BEAM: F(4-5) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-11.52	-8.46	-5.69	-3.26	-2.30	-2.30	-2.30	-3.23	-5.64	-8.39	-11.43
Mu(+), ton-m:	7.37	6.45	5.38	4.18	2.82	2.30	2.83	4.20	5.40	6.47	7.41
As(-), cm2:	6.85	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.80
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.94	4.83	4.45	4.06	3.68	3.30	3.66	4.04	4.43	4.81	4.92
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-5

BEAM: F(5-6) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-11.38	-8.35	-5.62	-3.23	-2.31	-2.31	-2.31	-3.25	-5.70	-8.48	-11.55
Mu(+), ton-m:	7.46	6.53	5.45	4.25	2.86	2.31	2.79	4.13	5.33	6.40	7.31
As(-), cm2:	6.76	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.87
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.91	4.80	4.42	4.04	3.65	3.33	3.72	4.10	4.49	4.87	4.98
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-6

BEAM: F(6-7) FLOOR: 2

Length: L = 5.96 m a = 0.40 m Section: b = 40.0 cm Sec: VG40X50
Lu = 5.16 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	0.92	1.43	1.95	2.47	2.98	3.50	4.01	4.53	5.05	5.56
Mu(-), ton-m:	-11.93	-9.17	-6.57	-4.09	-2.68	-2.68	-2.68	-4.58	-7.36	-10.30	-13.38
Mu(+), ton-m:	10.72	8.95	7.08	5.06	3.03	2.68	2.87	4.69	6.58	8.37	10.05
As(-), cm2:	7.10	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.00
As(+), cm2:	6.36	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	6.07	6.05	5.83	5.56	5.28	5.36	5.63	5.91	6.18	6.45	6.48
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-6 11 #3 @ 10 13 #3 @ 22.5 11 #3 @ 10 F-7

BEAM: G(1-2) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.50 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.95	1.60	2.25	2.90	3.55	4.20	4.85	5.50	6.15	6.80
Mu(-), ton-m:	-22.77	-14.25	-6.34	-4.55	-4.55	-4.55	-4.55	-4.55	-7.49	-13.94	-20.87
Mu(+), ton-m:	7.59	4.55	4.55	6.30	10.62	16.15	12.10	7.09	4.55	4.55	6.96
As(-), cm2:	14.04	8.55	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.35	12.79
As(+), cm2:	6.16	6.16	6.16	6.16	6.30	9.74	7.21	6.16	6.16	6.16	6.16
Vu, ton:	14.21	14.11	13.76	13.42	13.08	13.09	13.51	13.84	14.18	14.51	14.61
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-1 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-2

BEAM: G(2-3) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-12.03	-8.89	-6.01	-3.45	-2.41	-2.41	-2.41	-3.26	-5.64	-8.35	-11.37
Mu(+), ton-m:	7.28	6.37	5.28	4.03	2.70	2.41	2.78	4.23	5.48	6.61	7.60
As(-), cm2:	7.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.76
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.15	5.04	4.65	4.27	3.89	3.50	3.70	4.08	4.46	4.85	4.96
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-3

BEAM: G(3-4) FLOOR: 2

Length: L = 7.20 m, Lu = 6.40 m, a = 0.40 m, c = 0.40 m, Section: b = 40.0 cm, h = 50.0 cm, Sec: VG40X50, Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-11.27	-8.38	-5.73	-3.36	-2.25	-2.25	-2.25	-3.19	-5.48	-8.05	-10.88
Mu(+), ton-m:	7.46	6.46	5.32	4.06	2.66	2.25	2.66	4.11	5.39	6.56	7.60
As(-), cm2:	6.70	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.45
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.73	4.64	4.31	3.98	3.66	3.33	3.55	3.88	4.21	4.54	4.63
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-3 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-4

BEAM: G(4-5) FLOOR: 2

Length: L = 7.20 m, Lu = 6.40 m, a = 0.40 m, c = 0.40 m, Section: b = 40.0 cm, h = 50.0 cm, Sec: VG40X50, Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-11.32	-8.30	-5.57	-3.17	-2.26	-2.26	-2.26	-3.12	-5.46	-8.14	-11.13
Mu(+), ton-m:	7.09	6.23	5.21	4.06	2.76	2.26	2.79	4.13	5.27	6.30	7.19
As(-), cm2:	6.73	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.61
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.88	4.78	4.39	4.01	3.63	3.24	3.57	3.95	4.34	4.72	4.83
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-5

BEAM: G(5-6) FLOOR: 2

Length: L = 7.20 m, Lu = 6.40 m, a = 0.40 m, c = 0.40 m, Section: b = 40.0 cm, h = 50.0 cm, Sec: VG40X50, Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-11.02	-8.06	-5.40	-3.09	-2.27	-2.27	-2.27	-3.16	-5.58	-8.33	-11.36
Mu(+), ton-m:	7.22	6.33	5.31	4.16	2.82	2.27	2.74	4.01	5.15	6.16	7.01
As(-), cm2:	6.54	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.75
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.81	4.71	4.32	3.94	3.55	3.28	3.66	4.05	4.43	4.82	4.92
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-6

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:38 p. m. 5/01/2020

BEAM: G(6-7) FLOOR: 2

Length: L = 5.96 m a = 0.40 m Section: b = 40.0 cm Sec: VG40X50
Lu = 5.26 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	0.93	1.45	1.98	2.51	3.03	3.56	4.08	4.61	5.14	5.66
Mu(-), ton-m:	-11.62	-8.88	-6.33	-3.92	-2.56	-2.56	-2.56	-4.30	-6.98	-9.82	-12.80
Mu(+), ton-m:	10.10	8.45	6.71	4.82	2.93	2.56	2.74	4.54	6.33	8.02	9.61
As(-), cm2:	6.91	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.64
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.80	5.78	5.55	5.27	4.98	4.97	5.25	5.54	5.82	6.10	6.14
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-6 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 G-7

BEAM: H(1-2) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.50 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.95	1.60	2.25	2.90	3.55	4.20	4.85	5.50	6.15	6.80
Mu(-), ton-m:	-23.68	-14.74	-6.42	-4.74	-4.74	-4.74	-4.74	-4.74	-7.65	-14.63	-22.09
Mu(+), ton-m:	7.89	4.74	4.74	6.65	11.62	17.31	12.79	7.26	4.74	4.74	7.36
As(-), cm2:	14.65	8.85	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.78	13.59
As(+), cm2:	6.16	6.16	6.16	6.16	6.91	10.48	7.63	6.16	6.16	6.16	6.16
Vu, ton:	15.22	15.12	14.78	14.44	14.09	14.13	14.55	14.89	15.22	15.56	15.65
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-1 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 H-2

BEAM: H(2-3) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-11.63	-8.65	-5.90	-3.42	-2.33	-2.33	-2.33	-3.18	-5.43	-7.99	-10.81
Mu(+), ton-m:	7.11	6.18	5.09	3.84	2.52	2.33	2.64	4.09	5.35	6.50	7.51
As(-), cm2:	6.92	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.41
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.93	4.83	4.48	4.14	3.79	3.44	3.55	3.90	4.24	4.59	4.69
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 H-3

BEAM: H(3-4) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-11.05	-8.20	-5.59	-3.26	-2.21	-2.21	-2.21	-3.08	-5.31	-7.82	-10.59
Mu(+), ton-m:	7.20	6.25	5.16	3.95	2.61	2.21	2.62	4.02	5.25	6.38	7.37
As(-), cm2:	6.56	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.28
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.66	4.57	4.24	3.91	3.59	3.26	3.47	3.79	4.12	4.45	4.54
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-3 — 11 #3 @ 10 | 19 #3 @ 22.5 | 11 #3 @ 10 — H-4

BEAM: H(4-5) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-10.89	-8.03	-5.42	-3.12	-2.18	-2.18	-2.18	-3.04	-5.26	-7.79	-10.60
Mu(+), ton-m:	6.95	6.07	5.04	3.89	2.61	2.18	2.65	3.99	5.15	6.19	7.11
As(-), cm2:	6.46	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.28
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.65	4.55	4.21	3.86	3.51	3.17	3.43	3.77	4.12	4.47	4.56
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-4 — 11 #3 @ 10 | 19 #3 @ 22.5 | 11 #3 @ 10 — H-5

BEAM: H(5-6) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-10.57	-7.77	-5.25	-3.03	-2.17	-2.17	-2.17	-3.09	-5.39	-7.99	-10.85
Mu(+), ton-m:	7.09	6.18	5.15	4.00	2.66	2.17	2.59	3.87	5.01	6.04	6.91
As(-), cm2:	6.27	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.44
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	4.55	4.45	4.11	3.76	3.41	3.16	3.51	3.85	4.20	4.55	4.64
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-5 — 11 #3 @ 10 | 19 #3 @ 22.5 | 11 #3 @ 10 — H-6

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:38 p. m. 5/01/2020

BEAM: H(6-7) FLOOR: 2

Length: L = 5.96 m a = 0.40 m Section: b = 40.0 cm Sec: VG40X50
Lu = 5.26 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	0.93	1.45	1.98	2.51	3.03	3.56	4.08	4.61	5.14	5.66
Mu(-), ton-m:	-11.37	-8.68	-6.17	-3.81	-2.48	-2.48	-2.48	-4.15	-6.75	-9.51	-12.42
Mu(+), ton-m:	9.76	8.17	6.49	4.68	2.86	2.48	2.69	4.43	6.17	7.80	9.33
As(-), cm2:	6.76	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.41
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.68	5.65	5.42	5.14	4.85	4.80	5.08	5.36	5.65	5.93	5.97
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-6 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 H-7

BEAM: I(1-2) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 35.0 cm Sec: VG35X50
Lu = 6.50 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.95	1.60	2.25	2.90	3.55	4.20	4.85	5.50	6.15	6.80
Mu(-), ton-m:	-15.35	-9.89	-4.81	-3.07	-3.07	-3.07	-3.07	-3.07	-5.29	-8.99	-13.03
Mu(+), ton-m:	5.12	3.42	3.53	4.07	5.57	9.15	7.39	5.01	3.07	3.07	4.34
As(-), cm2:	9.30	5.88	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	7.83
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.42	5.39	5.39	5.39	5.39	5.39
Vu, ton:	8.41	8.33	8.03	7.73	7.43	7.30	7.62	7.91	8.20	8.50	8.58
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

I-1 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 I-2

BEAM: I(2-3) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 35.0 cm Sec: VG35X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-9.67	-7.18	-4.90	-2.85	-1.93	-1.93	-1.93	-2.73	-4.68	-6.87	-9.29
Mu(+), ton-m:	6.22	5.39	4.44	3.37	2.21	1.93	2.25	3.48	4.56	5.53	6.40
As(-), cm2:	5.74	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.51
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	4.07	3.99	3.70	3.42	3.13	2.84	3.02	3.31	3.60	3.88	3.96
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

I-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 I-3

BEAM: I(3-4) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 35.0 cm Sec: VG35X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-9.72	-7.24	-4.97	-2.95	-1.94	-1.94	-1.94	-2.64	-4.63	-6.88	-9.34
Mu(+), ton-m:	6.57	5.71	4.73	3.66	2.44	1.94	2.22	3.43	4.51	5.50	6.38
As(-), cm2:	5.78	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.54
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	4.04	3.96	3.67	3.39	3.10	2.81	3.07	3.35	3.64	3.93	4.01
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

I-3 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 I-4

BEAM: I(4-4a) FLOOR: 2

Length: L = 0.30 m a = 0.00 m Section: b = 35.0 cm Sec: VG35X50
Lu = 0.30 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0.30
Mu(-), ton-m:	-24.53	-20.98	-17.44	-13.90	-10.36	-6.86	-4.91	-4.91	-6.27	-10.51	-14.76
Mu(+), ton-m:	27.67	23.43	19.19	14.95	10.71	6.51	4.91	4.91	4.91	7.34	10.88
As(-), cm2:	15.41	12.99	10.65	8.38	6.17	5.39	5.39	5.39	5.39	6.26	8.92
As(+), cm2:	17.61	14.65	11.80	9.05	6.38	5.39	5.39	5.39	5.39	5.39	6.49
Vu, ton:	172.15	172.15	172.15	172.15	172.15	172.15	172.15	172.15	172.15	172.15	172.15
Tu, ton-m:	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Stirrup:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S
Spacing, cm:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S

DESIGN

I-4 Insufficient section I:4a

BEAM: I(4a-4b) FLOOR: 2

Length: L = 2.00 m a = 0.00 m Section: b = 35.0 cm Sec: VG35X50
Lu = 2.00 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
Mu(-), ton-m:	-3.15	-2.48	-1.83	-1.21	-0.63	-0.63	-0.63	-1.09	-1.74	-2.40	-3.08
Mu(+), ton-m:	2.87	2.35	1.82	1.27	0.71	0.63	0.63	1.11	1.65	2.18	2.69
As(-), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	3.54	3.54	3.54	3.47	3.37	3.34	3.44	3.54	3.61	3.61	3.61
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

I:4a 20 #3 @ 10 I:4b

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:38 p. m. 5/01/2020

BEAM: I(4b-5) FLOOR: 2

	Length:	L = 4.90 m	a = 0.00 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 4.50 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.45	0.90	1.35	1.80	2.25	2.70	3.15	3.60	4.05	4.50
Mu(-), ton-m:	-12.18	-9.37	-6.67	-4.06	-2.44	-2.44	-2.44	-4.70	-7.10	-9.57	-12.14
Mu(+), ton-m:	9.97	8.10	6.16	4.14	2.44	2.44	3.16	5.37	7.47	9.47	11.40
As(-), cm2:	7.30	5.56	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.68	7.27
As(+), cm2:	5.93	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.62	6.81
Vu, ton:	6.95	6.95	6.75	6.54	6.33	6.12	5.92	5.94	6.14	6.35	6.35
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

I:4b — 11 #3 @ 10 | 10 #3 @ 22.5 | 11 #3 @ 10 — I-5

BEAM: I(5-5a) FLOOR: 2

	Length:	L = 4.90 m	a = 0.40 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 4.50 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.85	1.30	1.75	2.20	2.65	3.10	3.55	4.00	4.45	4.90
Mu(-), ton-m:	-11.96	-9.45	-7.03	-4.69	-2.43	-2.39	-2.39	-3.82	-6.36	-8.99	-11.73
Mu(+), ton-m:	11.15	9.29	7.36	5.32	3.19	2.39	2.39	3.92	5.88	7.77	9.58
As(-), cm2:	7.16	5.61	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	7.02
As(+), cm2:	6.65	5.51	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.69
Vu, ton:	6.19	6.19	5.99	5.78	5.73	5.94	6.14	6.35	6.56	6.76	6.76
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

I-5 — 11 #3 @ 10 | 10 #3 @ 22.5 | 11 #3 @ 10 — I:5a

BEAM: I(5a-5b) FLOOR: 2

	Length:	L = 2.00 m	a = 0.00 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 2.00 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
Mu(-), ton-m:	-3.40	-2.65	-1.93	-1.23	-0.71	-0.71	-0.71	-1.36	-2.07	-2.80	-3.55
Mu(+), ton-m:	3.09	2.50	1.89	1.28	0.71	0.71	0.77	1.40	2.01	2.62	3.20
As(-), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	3.95	3.95	3.95	3.88	3.78	3.69	3.80	3.90	3.97	3.97	3.97
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

I:5a — 20 #3 @ 10 — I:5b

BEAM: I(5b-6) FLOOR: 2

	Length:	L = 0.30 m	a = 0.00 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 0.30 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0.30
Mu(-), ton-m:	-11.08	-7.26	-4.88	-4.88	-5.24	-8.29	-11.50	-14.73	-17.96	-21.19	-24.42
Mu(+), ton-m:	7.87	4.88	4.88	4.88	4.88	8.08	11.88	15.71	19.53	23.36	27.18
As(-), cm2:	6.61	5.39	5.39	5.39	5.39	5.39	6.87	8.90	10.99	13.13	15.33
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	7.11	9.53	12.03	14.60	17.27
Vu, ton:	154.54	154.54	154.54	154.54	154.54	154.54	154.54	154.54	154.54	154.54	154.54
Tu, ton-m:	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Stirrup:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S
Spacing, cm:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S

DESIGN

I:5b — Insufficient section — I-6

BEAM: I(6-7) FLOOR: 2

	Length:	L = 5.96 m	a = 0.40 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 5.26 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.93	1.45	1.98	2.51	3.03	3.56	4.08	4.61	5.14	5.66
Mu(-), ton-m:	-10.52	-7.98	-5.62	-3.43	-2.19	-2.19	-2.19	-3.77	-6.00	-8.39	-10.94
Mu(+), ton-m:	8.57	7.12	5.60	4.00	2.44	2.19	2.63	4.29	5.88	7.40	8.85
As(-), cm2:	6.26	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	6.52
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	5.13	5.10	4.90	4.65	4.41	4.17	4.33	4.57	4.82	5.07	5.10
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

I-6 — 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 — I-7

BEAM: A(4-4a) FLOOR: 3

	Length:	L = 1.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-12.74	-10.14	-7.55	-4.99	-2.55	-2.55	-2.55	-4.90	-7.36	-9.82	-12.31
Mu(+), ton-m:	11.88	9.53	7.16	4.77	2.55	2.55	2.59	5.08	7.55	10.00	12.44
As(-), cm2:	7.60	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.34
As(+), cm2:	7.07	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.42
Vu, ton:	16.14	16.14	16.14	16.09	15.99	15.89	15.78	15.68	15.63	15.63	15.63
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

A-4 — 18 #3 @ 10 — A:4a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:38 p. m. 5/01/2020

BEAM: A(4a-4b) FLOOR: 3

Length: L = 4.50 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 4.50 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.45	0.90	1.35	1.80	2.25	2.70	3.15	3.60	4.05	4.50
Mu(-), ton-m:	-31.32	-24.72	-18.27	-11.92	-6.42	-6.42	-6.42	-12.23	-18.70	-25.33	-32.08
Mu(+), ton-m:	30.26	24.48	18.67	12.73	6.68	6.42	6.76	12.70	18.57	24.40	30.15
As(-), cm2:	19.92	15.35	11.10	7.09	6.16	6.16	6.16	7.29	11.37	15.76	20.46
As(+), cm2:	19.16	15.19	11.35	7.60	6.16	6.16	6.16	7.58	11.29	15.13	19.09
Vu, ton:	16.30	16.30	16.04	15.78	15.53	15.52	15.78	16.04	16.30	16.55	16.55
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

A:4a 11 #3 @ 10 10 #3 @ 22.5 11 #3 @ 10 A:4b

BEAM: A(4b-5) FLOOR: 3

Length: L = 0.90 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-15.83	-12.78	-9.73	-6.69	-3.66	-3.17	-3.17	-5.23	-8.04	-10.85	-13.66
Mu(+), ton-m:	14.33	11.54	8.76	5.97	3.17	3.17	3.17	5.42	8.44	11.45	14.46
As(-), cm2:	9.54	7.63	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.44	8.18
As(+), cm2:	8.59	6.87	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.81	8.68
Vu, ton:	38.98	38.98	38.98	38.98	38.98	38.98	38.98	38.98	38.98	38.98	38.98
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50

DESIGN

A:4b 12 #3 @ 7.5 A-5

BEAM: A(5-5a) FLOOR: 3

Length: L = 0.90 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-14.15	-11.26	-8.36	-5.47	-2.98	-2.98	-3.39	-6.26	-9.13	-12.00	-14.88
Mu(+), ton-m:	13.81	10.95	8.10	5.24	2.98	2.98	3.20	6.07	8.93	11.78	14.64
As(-), cm2:	8.49	6.69	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.15	8.94
As(+), cm2:	8.27	6.50	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.01	8.79
Vu, ton:	35.64	35.64	35.64	35.64	35.64	35.64	35.64	35.64	35.64	35.64	35.64
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50

DESIGN

A-5 12 #3 @ 7.5 A:5a

BEAM: A(5a-5b) FLOOR: 3

Length: L = 5.40 m Lu = 5.40 m a = 0.00 m c = 0.00 m Section: b = 40.0 cm h = 50.0 cm Sec: VG40X50 Mat: RConcrete2

X, m:	0.00	0.54	1.08	1.62	2.16	2.70	3.24	3.78	4.32	4.86	5.40
Mu(-), ton-m:	-25.53	-20.01	-14.62	-9.35	-5.55	-5.55	-5.55	-10.20	-15.89	-21.75	-27.77
Mu(+), ton-m:	24.92	20.40	15.72	10.87	5.86	5.55	5.81	10.44	15.08	19.59	23.97
As(-), cm2:	15.89	12.22	8.78	6.16	6.16	6.16	6.16	6.16	9.58	13.36	17.43
As(+), cm2:	15.48	12.48	9.47	6.45	6.16	6.16	6.16	6.19	9.07	11.95	14.84
Vu, ton:	11.76	11.71	11.40	11.09	10.90	11.21	11.52	11.83	12.14	12.46	12.50
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A:5a 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 A:5b

BEAM: A(5b-6) FLOOR: 3

Length: L = 0.90 m Lu = 0.90 m a = 0.00 m c = 0.00 m Section: b = 40.0 cm h = 50.0 cm Sec: VG40X50 Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-14.60	-11.79	-8.99	-6.19	-3.40	-2.92	-2.92	-4.71	-7.27	-9.84	-12.41
Mu(+), ton-m:	13.13	10.59	8.05	5.50	2.96	2.92	2.92	4.95	7.72	10.49	13.25
As(-), cm2:	8.76	7.02	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.40
As(+), cm2:	7.85	6.28	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.22	7.92
Vu, ton:	35.95	35.95	35.95	35.95	35.95	35.95	35.95	35.95	35.95	35.95	35.95
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50

DESIGN

A:5b 12 #3 @ 7.5 A-6

BEAM: A(6-6a) FLOOR: 3

Length: L = 0.90 m Lu = 0.90 m a = 0.00 m c = 0.00 m Section: b = 40.0 cm h = 50.0 cm Sec: VG40X50 Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-12.97	-10.32	-7.69	-5.05	-2.65	-2.65	-2.94	-5.49	-8.07	-10.65	-13.23
Mu(+), ton-m:	12.45	9.89	7.34	4.78	2.65	2.65	2.84	5.44	8.05	10.65	13.26
As(-), cm2:	7.75	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.32	7.91
As(+), cm2:	7.42	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.32	7.92
Vu, ton:	32.76	32.76	32.76	32.76	32.76	32.76	32.76	32.76	32.76	32.76	32.76
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

A-6 9 #3 @ 10 A:6a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:38 p. m. 5/01/2020

BEAM: A(6a-6b) FLOOR: 3

	Length:	L = 0.42 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.42 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38	0.42
Mu(-), ton-m:	-0.06	-0.05	-0.04	-0.03	-0.02	-0.02	-0.01	-0.01	0.00	0.00	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50
DESIGN	A:6a				3 #3 @ 22.5						A:6b

BEAM: B(4-4a) FLOOR: 3

	Length:	L = 5.40 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.88	1.38	1.88	2.39	2.89	3.39	3.89	4.40	4.90	5.40
Mu(-), ton-m:	-29.78	-23.52	-17.61	-11.98	-6.52	-5.96	-5.96	-8.18	-14.04	-20.29	-26.79
Mu(+), ton-m:	27.23	22.71	18.13	13.40	8.42	5.96	5.96	8.94	13.56	18.14	22.55
As(-), cm2:	18.83	14.54	10.67	7.13	6.16	6.16	6.16	6.16	8.41	12.41	16.76
As(+), cm2:	17.06	14.00	11.01	8.02	6.16	6.16	6.16	6.16	8.11	11.02	13.89
Vu, ton:	13.49	13.45	12.97	12.50	12.02	12.35	12.82	13.29	13.77	14.24	14.28
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	B-4				11 #3 @ 10 12 #3 @ 22.5 11 #3 @ 10						B:4a

BEAM: B(4a-5) FLOOR: 3

	Length:	L = 1.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-12.37	-9.88	-7.40	-4.95	-2.51	-2.47	-2.47	-4.65	-6.98	-9.33	-11.69
Mu(+), ton-m:	11.29	9.05	6.80	4.54	2.47	2.47	2.47	4.69	7.05	9.39	11.72
As(-), cm2:	7.38	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.95
As(+), cm2:	6.71	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.97
Vu, ton:	15.52	15.52	15.52	15.47	15.37	15.27	15.16	15.06	15.01	15.01	15.01
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	B:4a				18 #3 @ 10						B-5

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:39 p. m. 5/01/2020

BEAM: B(5-6) FLOOR: 3

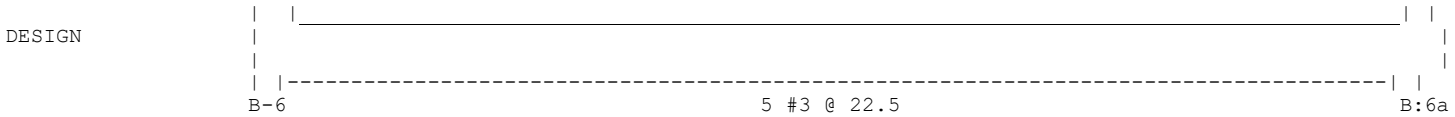
Length: L = 7.20 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.83 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.68	1.37	2.05	2.73	3.41	4.10	4.78	5.46	6.14	6.83
Mu(-), ton-m:	-19.66	-14.40	-9.62	-5.27	-4.81	-4.81	-4.81	-8.73	-13.41	-18.55	-24.05
Mu(+), ton-m:	15.55	12.85	10.02	7.00	4.81	4.81	6.55	9.67	12.62	15.41	17.98
As(-), cm2:	12.00	8.64	6.16	6.16	6.16	6.16	6.16	6.16	8.02	11.28	14.89
As(+), cm2:	9.36	7.67	6.16	6.16	6.16	6.16	6.16	6.16	7.53	9.28	10.91
Vu, ton:	8.58	8.42	7.92	7.42	6.92	6.48	6.98	7.48	7.98	8.48	8.64
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

BEAM: B(6-6a) FLOOR: 3

Length: L = 1.33 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.95 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

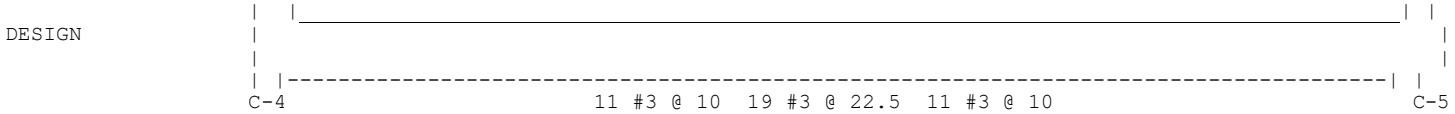
X, m:	0.38	0.47	0.57	0.66	0.76	0.85	0.95	1.04	1.14	1.23	1.33
Mu(-), ton-m:	-0.31	-0.25	-0.20	-0.15	-0.11	-0.08	-0.05	-0.03	-0.01	0.00	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.33	0.33	0.33	0.33	0.33	0.32	0.26	0.19	0.13	0.06	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50



BEAM: C(4-5) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-23.33	-17.71	-12.47	-7.71	-4.67	-4.67	-4.67	-7.20	-11.93	-17.14	-22.74
Mu(+), ton-m:	18.06	15.20	12.16	8.99	5.58	4.67	5.16	8.54	11.71	14.75	17.62
As(-), cm2:	14.41	10.74	7.44	6.16	6.16	6.16	6.16	6.16	7.11	10.37	14.02
As(+), cm2:	10.97	9.14	7.25	6.16	6.16	6.16	6.16	6.16	6.97	8.86	10.68
Vu, ton:	9.23	9.09	8.58	8.08	7.57	7.07	7.54	8.05	8.55	9.06	9.20
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



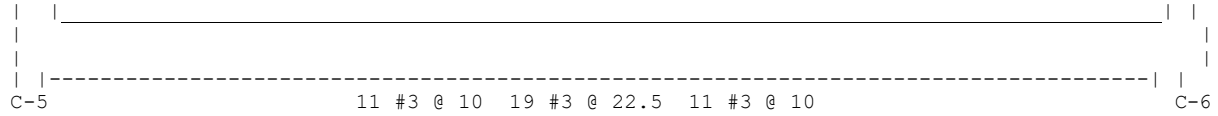
Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:39 p. m. 5/01/2020

BEAM: C(5-6) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-21.99	-16.57	-11.59	-7.03	-4.85	-4.85	-4.85	-7.95	-12.99	-18.45	-24.25
Mu(+), ton-m:	18.16	15.21	12.13	8.87	5.31	4.85	5.41	8.67	11.86	14.86	17.63
As(-), cm2:	13.52	10.01	6.89	6.16	6.16	6.16	6.16	6.16	7.76	11.21	15.03
As(+), cm2:	11.02	9.15	7.23	6.16	6.16	6.16	6.16	6.16	7.06	8.93	10.69
Vu, ton:	9.19	9.05	8.54	8.04	7.54	7.58	8.08	8.59	9.09	9.59	9.74
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

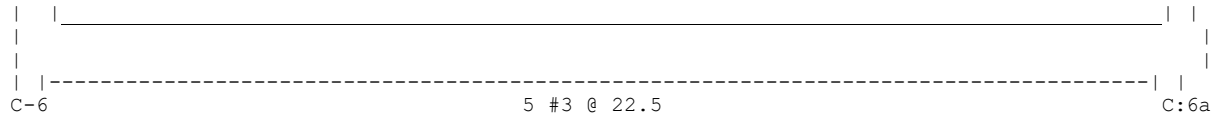


BEAM: C(6-6a) FLOOR: 3

Length: L = 1.33 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.95 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	0.47	0.57	0.66	0.76	0.85	0.95	1.04	1.14	1.23	1.33
Mu(-), ton-m:	-0.31	-0.25	-0.20	-0.15	-0.11	-0.08	-0.05	-0.03	-0.01	0.00	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.33	0.33	0.33	0.33	0.33	0.32	0.26	0.19	0.13	0.06	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

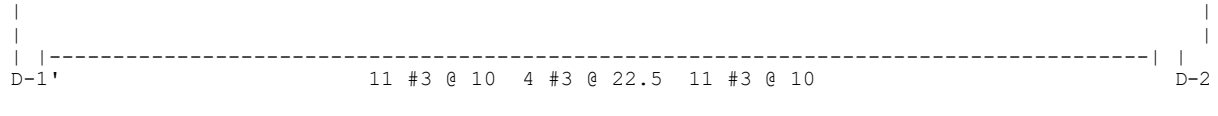


BEAM: D(1'-2) FLOOR: 3

Length: L = 3.67 m a = 0.18 m Section: b = 40.0 cm Sec: VG40X50
Lu = 3.12 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.18	0.49	0.80	1.11	1.42	1.74	2.05	2.36	2.67	2.99	3.30
Mu(-), ton-m:	-3.58	-3.58	-4.00	-5.53	-7.14	-8.80	-10.52	-12.29	-14.11	-15.98	-17.92
Mu(+), ton-m:	3.58	3.58	3.58	3.58	4.40	5.28	6.12	6.92	7.68	8.40	9.08
As(-), cm2:	7.12	7.12	7.12	7.12	7.12	7.12	7.19	8.28	9.42	10.60	11.83
As(+), cm2:	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12
Vu, ton:	7.56	7.56	7.64	7.79	7.94	8.10	8.25	8.40	8.55	8.64	8.64
Tu, ton-m:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	22.50	22.50	22.50	10.00	10.00	10.00	10.00

DESIGN



BEAM: D(2-3) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-17.53	-13.39	-9.51	-5.92	-3.59	-3.59	-3.59	-5.93	-9.68	-13.70	-17.95
Mu(+), ton-m:	14.29	11.93	9.45	6.85	4.06	3.59	3.85	6.53	9.12	11.57	13.87
As(-), cm2:	10.62	8.01	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.20	10.89
As(+), cm2:	8.57	7.10	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.88	8.31
Vu, ton:	6.90	6.80	6.47	6.14	5.80	5.64	5.97	6.30	6.63	6.97	7.06
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 D-3

BEAM: D(3-4) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-18.44	-14.05	-9.89	-6.02	-3.69	-3.69	-3.69	-6.39	-10.12	-14.15	-18.44
Mu(+), ton-m:	14.39	11.95	9.37	6.65	3.86	3.69	4.43	7.38	10.12	12.76	15.28
As(-), cm2:	11.21	8.42	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.48	11.21
As(+), cm2:	8.64	7.12	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.62	9.19
Vu, ton:	7.32	7.22	6.89	6.55	6.22	5.89	6.06	6.39	6.73	7.06	7.16
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-3 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 D-4

BEAM: D(4-5) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-19.90	-15.06	-10.55	-6.43	-3.98	-3.98	-3.98	-6.45	-10.51	-14.97	-19.77
Mu(+), ton-m:	15.22	12.78	10.17	7.43	4.52	3.98	4.62	7.58	10.32	12.95	15.42
As(-), cm2:	12.15	9.06	6.26	6.16	6.16	6.16	6.16	6.16	6.23	9.00	12.07
As(+), cm2:	9.16	7.63	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.73	9.28
Vu, ton:	7.95	7.83	7.40	6.97	6.54	6.11	6.48	6.91	7.34	7.76	7.89
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 D-5

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:39 p. m. 5/01/2020

BEAM: D(5-6) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-19.62	-14.84	-10.42	-6.34	-4.32	-4.32	-4.32	-7.13	-11.62	-16.46	-21.58
Mu(+), ton-m:	16.35	13.69	10.89	7.93	4.71	4.32	4.79	7.75	10.64	13.37	15.90
As(-), cm2:	11.97	8.91	6.17	6.16	6.16	6.16	6.16	6.16	6.91	9.94	13.25
As(+), cm2:	9.87	8.19	6.47	6.16	6.16	6.16	6.16	6.16	6.31	8.00	9.58
Vu, ton:	8.13	8.01	7.58	7.15	6.73	6.77	7.20	7.63	8.06	8.48	8.61
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 D-6

BEAM: D(6-6a) FLOOR: 3

Length: L = 1.33 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.95 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	0.47	0.57	0.66	0.76	0.85	0.95	1.04	1.14	1.23	1.33
Mu(-), ton-m:	-0.31	-0.25	-0.20	-0.15	-0.11	-0.08	-0.05	-0.03	-0.01	0.00	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.33	0.33	0.33	0.33	0.33	0.32	0.26	0.19	0.13	0.06	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

D-6 5 #3 @ 22.5 D:6a

BEAM: E(1'-2) FLOOR: 3

Length: L = 3.67 m a = 0.18 m Section: b = 40.0 cm Sec: VG40X50
Lu = 3.12 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.18	0.49	0.80	1.11	1.42	1.74	2.05	2.36	2.67	2.99	3.30
Mu(-), ton-m:	-4.09	-4.09	-4.82	-6.57	-8.40	-10.28	-12.21	-14.19	-16.23	-18.32	-20.47
Mu(+), ton-m:	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.26	4.69	5.08	6.82
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	7.27	8.51	9.80	11.13	12.53
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	9.59	9.59	9.67	9.83	9.98	10.13	10.29	10.44	10.59	10.67	10.67
Tu, ton-m:	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	22.50	22.50	22.50	10.00	10.00	10.00	10.00

DESIGN

E-1' 11 #3 @ 10 4 #3 @ 22.5 11 #3 @ 10 E-2

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:39 p. m. 5/01/2020

BEAM: E(2-3) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-16.47	-12.42	-8.65	-5.23	-3.29	-3.29	-3.29	-5.17	-8.58	-12.34	-16.39
Mu(+), ton-m:	12.11	10.24	8.22	6.06	3.76	3.29	3.71	6.01	8.17	10.19	12.05
As(-), cm2:	9.95	7.40	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.35	9.90
As(+), cm2:	7.21	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.18
Vu, ton:	6.63	6.51	6.11	5.72	5.32	4.92	5.31	5.71	6.11	6.51	6.62
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 E-3

BEAM: E(3-4) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.82 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.06	1.74	2.42	3.10	3.79	4.47	5.15	5.83	6.52	7.20
Mu(-), ton-m:	-16.28	-12.03	-8.16	-4.72	-3.33	-3.33	-3.33	-5.15	-8.52	-12.42	-16.67
Mu(+), ton-m:	11.18	9.58	7.79	5.85	3.66	3.33	4.16	6.37	8.28	10.15	11.76
As(-), cm2:	9.83	7.17	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.41	10.07
As(+), cm2:	6.64	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.00
Vu, ton:	6.51	6.35	5.87	5.39	4.92	4.69	5.17	5.65	6.13	6.61	6.77
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-3 11 #3 @ 10 20 #3 @ 22.5 11 #3 @ 10 E-4

BEAM: E(4-5) FLOOR: 3

Length: L = 7.20 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 7.20 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.48	7.20
Mu(-), ton-m:	-15.85	-11.58	-7.70	-4.45	-3.22	-3.22	-3.22	-4.58	-7.90	-11.82	-16.12
Mu(+), ton-m:	10.50	9.17	7.57	5.94	3.94	3.22	3.99	5.95	7.59	9.17	10.47
As(-), cm2:	9.55	6.89	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.04	9.73
As(+), cm2:	6.23	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.21
Vu, ton:	6.41	6.21	5.68	5.15	4.61	4.14	4.67	5.20	5.74	6.27	6.46
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-4 11 #3 @ 10 22 #3 @ 22.5 11 #3 @ 10 E-5

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:39 p. m. 5/01/2020

BEAM: E(5-6) FLOOR: 3

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 7.20 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.48	7.20
Mu(-), ton-m:	-15.91	-11.65	-7.80	-4.54	-3.34	-3.34	-3.34	-4.75	-8.27	-12.29	-16.71
Mu(+), ton-m:	10.91	9.50	7.84	6.12	4.01	3.34	3.90	5.86	7.61	9.21	10.54
As(-), cm2:	9.59	6.93	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.33	10.10
As(+), cm2:	6.47	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.25
Vu, ton:	6.48	6.29	5.76	5.22	4.69	4.37	4.90	5.43	5.97	6.50	6.69
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-5 11 #3 @ 10 22 #3 @ 22.5 11 #3 @ 10 E-6

BEAM: E(6-7) FLOOR: 3

	Length:	L = 5.96 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.59 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.56	1.12	1.68	2.24	2.79	3.35	3.91	4.47	5.03	5.59
Mu(-), ton-m:	-28.69	-17.61	-8.80	-5.74	-5.74	-5.74	-5.74	-7.45	-12.73	-18.36	-24.16
Mu(+), ton-m:	11.83	12.14	14.41	12.37	8.03	5.74	5.74	7.32	9.61	11.93	14.12
As(-), cm2:	20.34	12.95	8.44	6.16	6.16	6.16	6.16	6.16	7.60	11.16	14.97
As(+), cm2:	9.32	9.51	10.92	7.37	6.16	6.16	6.16	6.16	6.16	7.10	8.47
Vu, ton:	21.93	21.88	21.55	10.49	10.79	11.08	11.38	11.67	11.97	12.27	12.32
Tu, ton-m:	2.17	2.17	2.17	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-6 13 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 E-7

BEAM: E'(6-7) FLOOR: 3

	Length:	L = 5.96 m	a = 0.23 m	Section:	b = 28.0 cm	Sec:	VG28X50			
		Lu = 5.55 m	c = 0.19 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.23	0.78	1.34	1.89	2.45	3.00	3.56	4.11	4.67	5.22	5.78
Mu(-), ton-m:	-1.67	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.78
Mu(+), ton-m:	2.38	8.90	14.82	14.86	13.10	11.24	9.25	7.12	4.87	2.59	0.66
As(-), cm2:	5.28	5.28	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31
As(+), cm2:	5.28	6.28	9.09	9.11	7.97	6.78	5.53	4.31	4.31	4.31	4.31
Vu, ton:	14.17	14.13	3.32	3.04	3.26	3.48	3.71	3.93	4.15	4.38	4.42
Tu, ton-m:	0.68	0.68	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E'-6 11 #3 @ 10 15 #3 @ 22.5 11 #3 @ 10 E'-7

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:39 p. m. 5/01/2020

BEAM: F(1'-2) FLOOR: 3

	Length:	L = 3.67 m	a = 0.18 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 3.12 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.18	0.49	0.80	1.11	1.42	1.74	2.05	2.36	2.67	2.99	3.30
Mu(-), ton-m:	-3.70	-3.70	-4.34	-5.90	-7.54	-9.23	-10.97	-12.77	-14.62	-16.53	-18.49
Mu(+), ton-m:	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.76	4.12	4.44	6.16
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.51	7.62	8.78	9.98	11.24
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	8.62	8.62	8.70	8.86	9.01	9.16	9.32	9.47	9.62	9.70	9.70
Tu, ton-m:	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	22.50	22.50	22.50	10.00	10.00	10.00	10.00

DESIGN

F-1' 11 #3 @ 10 4 #3 @ 22.5 11 #3 @ 10 F-2

BEAM: F(2-3) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-14.86	-11.18	-7.76	-4.67	-2.97	-2.97	-2.97	-4.54	-7.59	-10.96	-14.61
Mu(+), ton-m:	10.65	9.06	7.30	5.42	3.40	2.97	3.35	5.39	7.28	9.04	10.66
As(-), cm2:	8.93	6.64	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.51	8.77
As(+), cm2:	6.32	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.32
Vu, ton:	6.02	5.91	5.54	5.17	4.79	4.42	4.74	5.12	5.49	5.86	5.97
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-3

BEAM: F(3-4) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-15.37	-11.49	-7.89	-4.64	-3.08	-3.08	-3.08	-4.95	-8.10	-11.61	-15.42
Mu(+), ton-m:	10.90	9.24	7.42	5.47	3.40	3.08	3.85	6.04	8.02	9.88	11.60
As(-), cm2:	9.25	6.83	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.90	9.28
As(+), cm2:	6.47	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.90
Vu, ton:	6.38	6.26	5.87	5.48	5.09	4.70	4.98	5.37	5.76	6.15	6.26
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-3 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-4

BEAM: F(4-5) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-16.12	-12.12	-8.42	-5.05	-3.22	-3.22	-3.22	-5.06	-8.37	-12.03	-15.99
Mu(+), ton-m:	11.81	10.00	8.04	5.95	3.70	3.22	3.79	6.08	8.18	10.16	11.99
As(-), cm2:	9.73	7.22	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.17	9.64
As(+), cm2:	7.03	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.14
Vu, ton:	6.54	6.43	6.04	5.65	5.26	4.87	5.20	5.59	5.98	6.37	6.49
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-5

BEAM: F(5-6) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-15.99	-12.02	-8.37	-5.08	-3.28	-3.28	-3.28	-5.14	-8.58	-12.36	-16.42
Mu(+), ton-m:	12.25	10.37	8.35	6.23	3.87	3.28	3.73	5.99	8.11	10.10	11.93
As(-), cm2:	9.64	7.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.37	9.92
As(+), cm2:	7.30	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.10
Vu, ton:	6.54	6.42	6.03	5.64	5.25	5.01	5.40	5.79	6.18	6.57	6.69
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-6

BEAM: F(6-7) FLOOR: 3

	Length:	L = 5.96 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.21 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.90	1.42	1.94	2.46	2.98	3.50	4.02	4.55	5.07	5.59
Mu(-), ton-m:	-17.31	-13.49	-9.78	-6.18	-4.03	-4.03	-4.03	-7.33	-11.45	-15.73	-20.16
Mu(+), ton-m:	17.16	14.13	10.95	7.61	4.32	4.03	4.09	7.01	10.01	12.89	15.67
As(-), cm2:	10.48	8.07	6.16	6.16	6.16	6.16	6.16	6.16	6.81	9.48	12.32
As(+), cm2:	10.39	8.47	6.50	6.16	6.16	6.16	6.16	6.16	6.16	7.70	9.44
Vu, ton:	8.59	8.56	8.34	8.06	8.12	8.40	8.68	8.95	9.23	9.50	9.54
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-6 11 #3 @ 10 13 #3 @ 22.5 11 #3 @ 10 F-7

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:39 p. m. 5/01/2020

BEAM: G(1'-2) FLOOR: 3

Length: L = 3.67 m a = 0.18 m Section: b = 40.0 cm Sec: VG40X50
Lu = 3.12 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.18	0.49	0.80	1.11	1.42	1.74	2.05	2.36	2.67	2.99	3.30
Mu(-), ton-m:	-3.60	-3.60	-4.22	-5.74	-7.33	-8.97	-10.67	-12.42	-14.23	-16.08	-18.00
Mu(+), ton-m:	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.80	4.09	6.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.33	7.41	8.53	9.70	10.92
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	8.43	8.43	8.51	8.66	8.82	8.97	9.12	9.28	9.43	9.51	9.51
Tu, ton-m:	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	22.50	22.50	22.50	10.00	10.00	10.00	10.00

DESIGN

G-1' 11 #3 @ 10 4 #3 @ 22.5 11 #3 @ 10 G-2

BEAM: G(2-3) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-14.41	-10.82	-7.49	-4.47	-2.88	-2.88	-2.88	-4.30	-7.22	-10.46	-13.99
Mu(+), ton-m:	10.07	8.59	6.95	5.17	3.27	2.88	3.26	5.22	7.00	8.66	10.18
As(-), cm2:	8.65	6.42	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.20	8.38
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.89	5.78	5.41	5.04	4.66	4.29	4.56	4.93	5.30	5.67	5.78
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-3

BEAM: G(3-4) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-14.67	-11.04	-7.64	-4.52	-2.93	-2.93	-2.93	-4.71	-7.61	-10.82	-14.29
Mu(+), ton-m:	10.42	8.78	7.00	5.08	3.09	2.93	3.61	5.79	7.75	9.60	11.34
As(-), cm2:	8.81	6.55	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.42	8.57
As(+), cm2:	6.17	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.74
Vu, ton:	6.03	5.93	5.60	5.27	4.93	4.60	4.69	5.03	5.36	5.69	5.79
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-3 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-4

BEAM: G(4-5) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-15.65	-11.75	-8.12	-4.84	-3.13	-3.13	-3.13	-4.81	-7.96	-11.48	-15.31
Mu(+), ton-m:	11.18	9.50	7.65	5.68	3.57	3.13	3.71	5.91	7.90	9.77	11.50
As(-), cm2:	9.43	6.99	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.83	9.21
As(+), cm2:	6.64	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.84
Vu, ton:	6.41	6.30	5.91	5.52	5.13	4.74	5.00	5.39	5.78	6.17	6.29
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-5

BEAM: G(5-6) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-15.04	-11.27	-7.83	-4.75	-3.15	-3.15	-3.15	-4.81	-8.14	-11.79	-15.73
Mu(+), ton-m:	11.57	9.83	7.98	6.01	3.78	3.15	3.50	5.56	7.51	9.33	10.97
As(-), cm2:	9.04	6.70	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.02	9.47
As(+), cm2:	6.88	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.51
Vu, ton:	6.25	6.14	5.75	5.36	4.97	4.83	5.22	5.61	6.00	6.39	6.50
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-6

BEAM: G(6-7) FLOOR: 3

	Length:	L = 5.96 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.29 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.90	1.43	1.96	2.49	3.02	3.55	4.08	4.61	5.13	5.66
Mu(-), ton-m:	-15.10	-11.81	-8.64	-5.59	-3.22	-3.22	-3.22	-5.27	-8.72	-12.33	-16.09
Mu(+), ton-m:	14.38	12.06	9.58	6.93	4.21	3.22	3.22	5.40	7.82	10.15	12.36
As(-), cm2:	9.08	7.03	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.35	9.70
As(+), cm2:	8.63	7.18	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.37
Vu, ton:	7.22	7.19	6.96	6.68	6.44	6.70	6.98	7.27	7.55	7.84	7.88
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-6 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 G-7

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:39 p. m. 5/01/2020

BEAM: H(1'-2) FLOOR: 3

	Length:	L = 3.67 m	a = 0.18 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 3.12 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.18	0.49	0.80	1.11	1.42	1.74	2.05	2.36	2.67	2.99	3.30
Mu(-), ton-m:	-3.65	-3.65	-4.28	-5.83	-7.44	-9.11	-10.83	-12.61	-14.44	-16.32	-18.26
Mu(+), ton-m:	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	6.09
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.43	7.52	8.66	9.85	11.09
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	8.73	8.73	8.81	8.96	9.12	9.27	9.42	9.58	9.73	9.81	9.81
Tu, ton-m:	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	22.50	22.50	22.50	10.00	10.00	10.00	10.00

DESIGN

H-1' 11 #3 @ 10 4 #3 @ 22.5 11 #3 @ 10 H-2

BEAM: H(2-3) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-13.84	-10.41	-7.22	-4.31	-2.77	-2.77	-2.77	-4.10	-6.84	-9.88	-13.20
Mu(+), ton-m:	9.55	8.14	6.57	4.86	3.06	2.77	3.10	5.00	6.72	8.32	9.79
As(-), cm2:	8.29	6.17	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.89
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.64	5.54	5.20	4.85	4.50	4.16	4.33	4.68	5.02	5.37	5.47
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 H-3

BEAM: H(3-4) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-14.17	-10.64	-7.34	-4.32	-2.83	-2.83	-2.83	-4.47	-7.24	-10.32	-13.67
Mu(+), ton-m:	9.84	8.33	6.66	4.85	2.98	2.83	3.51	5.59	7.44	9.19	10.82
As(-), cm2:	8.50	6.31	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.18
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.42
Vu, ton:	5.87	5.77	5.44	5.11	4.78	4.44	4.50	4.83	5.17	5.50	5.59
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-3 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 H-4

BEAM: H(4-5) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-14.93	-11.24	-7.81	-4.67	-2.99	-2.99	-2.99	-4.58	-7.54	-10.82	-14.38
Mu(+), ton-m:	10.67	9.04	7.26	5.35	3.33	2.99	3.51	5.66	7.59	9.41	11.11
As(-), cm2:	8.97	6.68	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.42	8.63
As(+), cm2:	6.33	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.60
Vu, ton:	6.09	5.99	5.64	5.28	4.93	4.58	4.74	5.09	5.45	5.80	5.90
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-4 — 11 #3 @ 10 | 19 #3 @ 22.5 | 11 #3 @ 10 — H-5

BEAM: H(5-6) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-14.27	-10.74	-7.48	-4.56	-2.97	-2.97	-2.97	-4.60	-7.73	-11.16	-14.84
Mu(+), ton-m:	11.07	9.39	7.59	5.69	3.55	2.97	3.30	5.29	7.19	8.95	10.56
As(-), cm2:	8.56	6.37	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.63	8.92
As(+), cm2:	6.58	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.26
Vu, ton:	5.87	5.76	5.41	5.06	4.71	4.57	4.92	5.27	5.63	5.98	6.08
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-5 — 11 #3 @ 10 | 19 #3 @ 22.5 | 11 #3 @ 10 — H-6

BEAM: H(6-7) FLOOR: 3

	Length:	L = 5.96 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.29 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.90	1.43	1.96	2.49	3.02	3.55	4.08	4.61	5.13	5.66
Mu(-), ton-m:	-14.53	-11.34	-8.29	-5.35	-3.07	-3.07	-3.07	-4.99	-8.29	-11.75	-15.36
Mu(+), ton-m:	13.64	11.45	9.11	6.62	4.04	3.07	3.07	5.20	7.51	9.71	11.81
As(-), cm2:	8.72	6.74	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.99	9.24
As(+), cm2:	8.16	6.81	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.03
Vu, ton:	6.95	6.93	6.69	6.41	6.14	6.35	6.63	6.92	7.20	7.49	7.52
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-6 — 11 #3 @ 10 | 14 #3 @ 22.5 | 11 #3 @ 10 — H-7

BEAM: I(1'-2) FLOOR: 3

	Length:	L = 3.67 m	a = 0.18 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 3.12 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.18	0.49	0.80	1.11	1.42	1.74	2.05	2.36	2.67	2.99	3.30
Mu(-), ton-m:	-2.49	-2.49	-2.74	-3.78	-4.88	-6.03	-7.22	-8.46	-9.75	-11.09	-12.47
Mu(+), ton-m:	2.49	2.49	2.49	2.49	2.49	2.95	3.39	3.80	4.17	4.50	4.80
As(-), cm2:	6.19	6.19	6.19	6.19	6.19	6.19	6.19	6.19	6.59	7.41	8.27
As(+), cm2:	6.19	6.19	6.19	6.19	6.19	6.19	6.19	6.19	6.19	6.19	6.19
Vu, ton:	5.39	5.39	5.46	5.59	5.73	5.86	5.99	6.13	6.26	6.33	6.33
Tu, ton-m:	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	22.50	22.50	22.50	10.00	10.00	10.00	10.00

DESIGN

I-1' 11 #3 @ 10 4 #3 @ 22.5 11 #3 @ 10 I-2

BEAM: I(2-3) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-11.62	-8.74	-6.06	-3.63	-2.32	-2.32	-2.32	-3.47	-5.81	-8.41	-11.23
Mu(+), ton-m:	8.20	6.99	5.66	4.21	2.66	2.32	2.65	4.25	5.70	7.05	8.29
As(-), cm2:	6.95	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	6.71
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	4.73	4.64	4.35	4.06	3.77	3.48	3.67	3.97	4.26	4.55	4.63
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

I-2 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 I-3

BEAM: I(3-4) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-12.73	-9.58	-6.64	-3.96	-2.55	-2.55	-2.55	-4.07	-6.64	-9.48	-12.55
Mu(+), ton-m:	9.32	7.87	6.30	4.63	2.85	2.55	3.14	5.03	6.73	8.34	9.85
As(-), cm2:	7.64	5.69	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.63	7.53
As(+), cm2:	5.53	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.85
Vu, ton:	5.20	5.12	4.83	4.54	4.25	3.96	4.12	4.41	4.70	4.99	5.08
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

I-3 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 I-4

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:39 p. m. 5/01/2020

BEAM: I(4-4a) FLOOR: 3

Length: L = 0.30 m a = 0.00 m Section: b = 35.0 cm Sec: VG35X50
Lu = 0.30 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0.30
Mu(-), ton-m:	-28.31	-25.00	-21.69	-18.38	-15.07	-12.02	-9.07	-6.12	-5.67	-9.29	-13.76
Mu(+), ton-m:	33.78	29.11	24.44	19.77	15.10	10.69	6.38	5.66	5.66	5.66	5.66
As(-), cm2:	18.07	15.73	13.47	11.26	9.12	7.19	5.39	5.39	5.39	5.51	8.29
As(+), cm2:	22.11	18.65	15.35	12.19	9.14	6.37	5.39	5.39	5.39	5.39	5.39
Vu, ton:	204.76	204.76	204.76	204.76	204.76	204.76	204.76	204.76	204.76	204.76	204.76
Tu, ton-m:	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Stirrup:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S
Spacing, cm:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S

DESIGN

I-4 Insufficient section I:4a

BEAM: I(4a-4b) FLOOR: 3

Length: L = 2.00 m a = 0.00 m Section: b = 35.0 cm Sec: VG35X50
Lu = 2.00 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
Mu(-), ton-m:	-4.29	-3.39	-2.52	-1.67	-0.86	-0.86	-0.86	-1.57	-2.45	-3.34	-4.26
Mu(+), ton-m:	4.04	3.28	2.51	1.73	0.94	0.86	0.86	1.55	2.31	3.07	3.80
As(-), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	4.82	4.82	4.82	4.75	4.65	4.67	4.77	4.87	4.94	4.94	4.94
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

I:4a 20 #3 @ 10 I:4b

BEAM: I(4b-5) FLOOR: 3

Length: L = 4.90 m a = 0.00 m Section: b = 35.0 cm Sec: VG35X50
Lu = 4.52 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.45	0.90	1.36	1.81	2.26	2.71	3.17	3.62	4.07	4.52
Mu(-), ton-m:	-17.39	-13.51	-9.73	-6.06	-3.48	-3.48	-3.48	-6.65	-9.97	-13.37	-16.84
Mu(+), ton-m:	14.44	11.65	8.79	5.86	3.48	3.48	4.36	7.63	10.79	13.86	16.82
As(-), cm2:	10.62	8.13	5.78	5.39	5.39	5.39	5.39	5.39	5.93	8.04	10.26
As(+), cm2:	8.72	6.97	5.39	5.39	5.39	5.39	5.39	5.39	6.43	8.35	10.25
Vu, ton:	9.74	9.74	9.53	9.32	9.11	8.90	8.69	8.48	8.53	8.74	8.74
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

I:4b 11 #3 @ 10 10 #3 @ 22.5 11 #3 @ 10 I-5

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:39 p. m. 5/01/2020

BEAM: I(5-5a) FLOOR: 3

	Length:	L = 4.90 m	a = 0.38 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 4.53 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.83	1.28	1.73	2.19	2.64	3.09	3.54	4.00	4.45	4.90
Mu(-), ton-m:	-16.68	-13.27	-9.94	-6.68	-3.50	-3.39	-3.39	-5.80	-9.41	-13.13	-16.95
Mu(+), ton-m:	16.66	13.75	10.75	7.65	4.44	3.39	3.39	5.58	8.45	11.25	13.97
As(-), cm2:	10.16	7.98	5.91	5.39	5.39	5.39	5.39	5.39	5.58	7.89	10.33
As(+), cm2:	10.14	8.29	6.41	5.39	5.39	5.39	5.39	5.39	5.39	6.72	8.42
Vu, ton:	8.58	8.58	8.38	8.34	8.55	8.76	8.97	9.18	9.39	9.60	9.60
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

I-5 — 11 #3 @ 10 | 10 #3 @ 22.5 | 11 #3 @ 10 — I:5a

BEAM: I(5a-5b) FLOOR: 3

	Length:	L = 2.00 m	a = 0.00 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 2.00 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
Mu(-), ton-m:	-5.02	-3.95	-2.90	-1.87	-1.03	-1.03	-1.03	-2.01	-3.03	-4.07	-5.13
Mu(+), ton-m:	4.63	3.73	2.81	1.88	1.03	1.03	1.09	2.04	2.98	3.91	4.82
As(-), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	5.76	5.76	5.76	5.69	5.59	5.49	5.54	5.65	5.72	5.72	5.72
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

I:5a — 20 #3 @ 10 — I:5b

BEAM: I(5b-6) FLOOR: 3

	Length:	L = 0.30 m	a = 0.00 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 0.30 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0.30
Mu(-), ton-m:	-4.81	-4.81	-5.19	-7.43	-9.66	-11.89	-14.29	-16.72	-19.16	-21.60	-24.04
Mu(+), ton-m:	4.81	4.81	4.81	5.53	8.53	11.54	14.71	17.92	21.13	24.35	27.56
As(-), cm2:	5.39	5.39	5.39	5.39	5.74	7.12	8.62	10.19	11.78	13.41	15.07
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	6.90	8.89	10.97	13.09	15.28	17.53
Vu, ton:	135.29	135.29	135.29	135.29	135.29	135.29	135.29	135.29	135.29	135.29	135.29
Tu, ton-m:	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Stirrup:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S
Spacing, cm:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S

DESIGN

I:5b — Insufficient section — I-6

BEAM: I(6-7) FLOOR: 3

	Length:	L = 5.96 m	a = 0.38 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 5.29 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.90	1.43	1.96	2.49	3.02	3.55	4.08	4.61	5.13	5.66
Mu(-), ton-m:	-13.96	-10.80	-7.82	-5.03	-2.79	-2.79	-2.79	-4.57	-7.42	-10.45	-13.63
Mu(+), ton-m:	12.14	10.07	7.94	5.73	3.49	2.79	2.97	5.20	7.40	9.54	11.61
As(-), cm2:	8.42	6.44	5.39	5.39	5.39	5.39	5.39	5.39	5.39	6.22	8.21
As(+), cm2:	7.27	5.99	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.66	6.94
Vu, ton:	6.42	6.40	6.19	5.94	5.70	5.46	5.63	5.88	6.13	6.38	6.41
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

I-6 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 I-7

BEAM: A(4-4a) FLOOR: 4

	Length:	L = 1.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-13.18	-10.48	-7.81	-5.15	-2.64	-2.64	-2.64	-5.07	-7.59	-10.13	-12.68
Mu(+), ton-m:	12.20	9.78	7.34	4.89	2.64	2.64	2.71	5.29	7.85	10.39	12.92
As(-), cm2:	7.87	6.21	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.57
As(+), cm2:	7.27	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.72
Vu, ton:	16.79	16.79	16.79	16.75	16.64	16.54	16.44	16.33	16.29	16.29	16.29
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

A-4 18 #3 @ 10 A:4a

BEAM: A(4a-4b) FLOOR: 4

	Length:	L = 4.50 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.50 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.45	0.90	1.35	1.80	2.25	2.70	3.15	3.60	4.05	4.50
Mu(-), ton-m:	-31.70	-25.06	-18.52	-12.06	-6.56	-6.56	-6.56	-12.52	-19.15	-25.92	-32.82
Mu(+), ton-m:	30.87	25.03	19.07	12.99	6.80	6.56	6.91	12.94	18.93	24.86	30.71
As(-), cm2:	20.18	15.58	11.26	7.18	6.16	6.16	6.16	7.47	11.66	16.16	20.99
As(+), cm2:	19.60	15.55	11.61	7.76	6.16	6.16	6.16	7.73	11.52	15.44	19.48
Vu, ton:	16.57	16.57	16.32	16.06	15.80	15.91	16.17	16.43	16.69	16.94	16.94
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

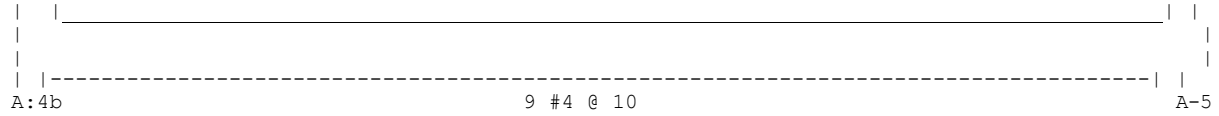
A:4a 11 #3 @ 10 10 #3 @ 22.5 11 #3 @ 10 A:4b

BEAM: A(4b-5) FLOOR: 4

Length: L = 0.90 m, Lu = 0.90 m, a = 0.00 m, c = 0.00 m, Section: b = 40.0 cm, h = 50.0 cm, Sec: VG40X50, Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-16.45	-13.28	-10.12	-6.97	-3.82	-3.29	-3.29	-5.38	-8.25	-11.13	-14.02
Mu(+), ton-m:	14.67	11.81	8.96	6.10	3.29	3.29	3.29	5.61	8.74	11.87	14.99
As(-), cm2:	9.93	7.94	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.61	8.40
As(+), cm2:	8.81	7.03	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.06	9.01
Vu, ton:	40.72	40.72	40.72	40.72	40.72	40.72	40.72	40.72	40.72	40.72	40.72
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

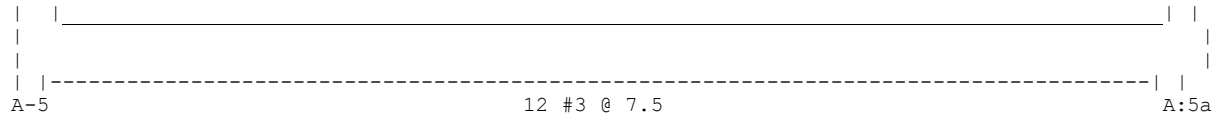


BEAM: A(5-5a) FLOOR: 4

Length: L = 0.90 m, Lu = 0.90 m, a = 0.00 m, c = 0.00 m, Section: b = 40.0 cm, h = 50.0 cm, Sec: VG40X50, Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-14.76	-11.75	-8.75	-5.75	-3.04	-3.04	-3.48	-6.39	-9.32	-12.26	-15.21
Mu(+), ton-m:	14.11	11.19	8.27	5.35	3.04	3.04	3.26	6.22	9.18	12.14	15.11
As(-), cm2:	8.87	6.99	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.31	9.15
As(+), cm2:	8.46	6.65	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.24	9.09
Vu, ton:	37.30	37.30	37.30	37.30	37.30	37.30	37.30	37.30	37.30	37.30	37.30
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50

DESIGN

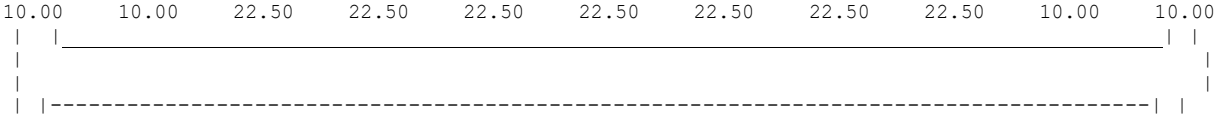


BEAM: A(5a-5b) FLOOR: 4

Length: L = 5.40 m, Lu = 5.40 m, a = 0.00 m, c = 0.00 m, Section: b = 40.0 cm, h = 50.0 cm, Sec: VG40X50, Mat: RConcrete2

X, m:	0.00	0.54	1.08	1.62	2.16	2.70	3.24	3.78	4.32	4.86	5.40
Mu(-), ton-m:	-26.11	-20.46	-14.94	-9.55	-5.79	-5.79	-5.79	-10.67	-16.60	-22.68	-28.94
Mu(+), ton-m:	26.07	21.32	16.41	11.33	6.08	5.79	5.99	10.78	15.54	20.18	24.70
As(-), cm2:	16.29	12.52	8.98	6.16	6.16	6.16	6.16	6.33	10.03	13.98	18.24
As(+), cm2:	16.26	13.08	9.91	6.73	6.16	6.16	6.16	6.39	9.36	12.34	15.33
Vu, ton:	12.12	12.07	11.76	11.45	11.50	11.81	12.12	12.43	12.74	13.05	13.10
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN



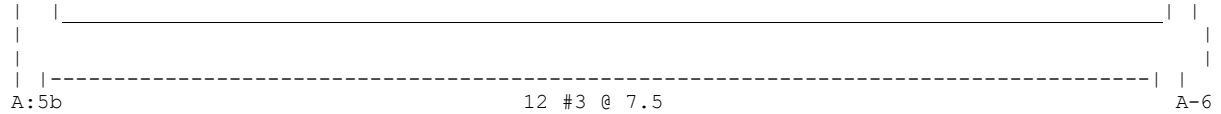
Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:39 p. m. 5/01/2020

BEAM: A(5b-6) FLOOR: 4

Length: L = 0.90 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-14.75	-11.92	-9.10	-6.29	-3.48	-2.95	-2.95	-4.63	-7.15	-9.69	-12.22
Mu(+), ton-m:	12.96	10.46	7.95	5.45	2.95	2.95	2.95	4.92	7.71	10.50	13.28
As(-), cm2:	8.86	7.10	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.28
As(+), cm2:	7.74	6.20	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.23	7.94
Vu, ton:	36.55	36.55	36.55	36.55	36.55	36.55	36.55	36.55	36.55	36.55	36.55
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50

DESIGN



BEAM: A(6-6a) FLOOR: 4

Length: L = 0.90 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-13.03	-10.39	-7.77	-5.14	-2.61	-2.61	-2.83	-5.32	-7.83	-10.35	-12.87
Mu(+), ton-m:	12.18	9.69	7.20	4.70	2.61	2.61	2.72	5.30	7.90	10.50	13.09
As(-), cm2:	7.78	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.68
As(+), cm2:	7.26	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.22	7.82
Vu, ton:	32.99	32.99	32.99	32.99	32.99	32.99	32.99	32.99	32.99	32.99	32.99
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

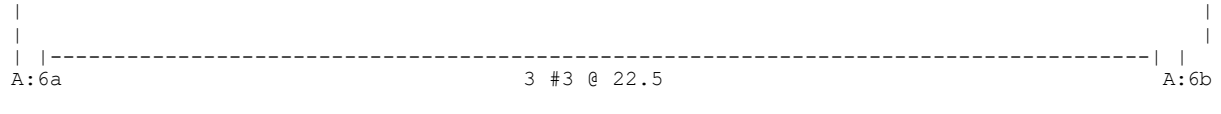
DESIGN

BEAM: A(6a-6b) FLOOR: 4

Length: L = 0.42 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.42 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38	0.42
Mu(-), ton-m:	-0.06	-0.05	-0.04	-0.03	-0.02	-0.02	-0.01	-0.01	0.00	0.00	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN



BEAM: B(4-4a) FLOOR: 4

Length: L = 5.40 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 5.10 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.81	1.32	1.83	2.34	2.85	3.36	3.87	4.38	4.89	5.40
Mu(-), ton-m:	-29.73	-23.57	-17.73	-12.12	-6.69	-5.95	-5.95	-8.05	-14.04	-20.40	-27.03
Mu(+), ton-m:	27.71	23.22	18.64	13.85	8.80	5.95	5.95	8.63	13.23	17.75	22.10
As(-), cm2:	18.79	14.57	10.75	7.22	6.16	6.16	6.16	6.16	8.41	12.48	16.92
As(+), cm2:	17.38	14.34	11.34	8.30	6.16	6.16	6.16	6.16	7.91	10.77	13.60
Vu, ton:	13.42	13.37	12.88	12.39	11.98	12.44	12.93	13.42	13.91	14.39	14.44
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

B-4 11 #3 @ 10 13 #3 @ 22.5 11 #3 @ 10 B:4a

BEAM: B(4a-5) FLOOR: 4

Length: L = 1.80 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-13.10	-10.47	-7.85	-5.26	-2.68	-2.62	-2.62	-4.86	-7.29	-9.74	-12.21
Mu(+), ton-m:	11.79	9.45	7.10	4.74	2.62	2.62	2.62	4.95	7.45	9.93	12.40
As(-), cm2:	7.83	6.20	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.27
As(+), cm2:	7.02	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.39
Vu, ton:	16.53	16.53	16.53	16.48	16.38	16.27	16.17	16.07	16.02	16.02	16.02
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

B:4a 18 #3 @ 10 B-5

BEAM: B(5-6) FLOOR: 4

Length: L = 7.20 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.90 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.69	1.38	2.07	2.76	3.45	4.14	4.83	5.52	6.21	6.90
Mu(-), ton-m:	-19.65	-14.34	-9.54	-5.15	-4.91	-4.91	-4.91	-8.97	-13.75	-18.99	-24.57
Mu(+), ton-m:	15.59	12.86	10.03	6.97	4.91	4.91	6.73	9.84	12.81	15.61	18.17
As(-), cm2:	11.99	8.60	6.16	6.16	6.16	6.16	6.16	6.16	8.23	11.56	15.24
As(+), cm2:	9.39	7.68	6.16	6.16	6.16	6.16	6.16	6.16	7.65	9.40	11.04
Vu, ton:	8.59	8.42	7.91	7.40	6.89	6.56	7.07	7.58	8.09	8.60	8.77
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

B-5 11 #3 @ 10 21 #3 @ 22.5 11 #3 @ 10 B-6

BEAM: B(6-6a) FLOOR: 4

Length: L = 1.33 m, Lu = 1.03 m, a = 0.30 m, c = 0.00 m, Section: b = 40.0 cm, h = 50.0 cm, Sec: VG40X50, Mat: RConcrete2

X, m:	0.30	0.40	0.51	0.61	0.71	0.81	0.92	1.02	1.12	1.22	1.33
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.18	-0.13	-0.09	-0.06	-0.03	-0.02	-0.01	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.38	0.38	0.38	0.38	0.38	0.34	0.28	0.21	0.14	0.07	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

B-6 — 6 #3 @ 22.5 — B:6a

BEAM: C(4-5) FLOOR: 4

Length: L = 7.20 m, Lu = 6.60 m, a = 0.30 m, c = 0.30 m, Section: b = 40.0 cm, h = 50.0 cm, Sec: VG40X50, Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-23.77	-18.00	-12.63	-7.77	-4.75	-4.75	-4.75	-7.39	-12.24	-17.60	-23.35
Mu(+), ton-m:	18.29	15.40	12.33	9.12	5.65	4.75	5.33	8.79	11.99	15.07	17.96
As(-), cm2:	14.71	10.92	7.53	6.16	6.16	6.16	6.16	6.16	7.29	10.66	14.43
As(+), cm2:	11.11	9.27	7.35	6.16	6.16	6.16	6.16	6.16	7.14	9.06	10.90
Vu, ton:	9.30	9.14	8.62	8.09	7.56	7.03	7.54	8.07	8.60	9.13	9.29
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-4 — 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 — C-5

BEAM: C(5-6) FLOOR: 4

Length: L = 7.20 m, Lu = 6.60 m, a = 0.30 m, c = 0.30 m, Section: b = 40.0 cm, h = 50.0 cm, Sec: VG40X50, Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-22.11	-16.67	-11.72	-7.11	-5.02	-5.02	-5.02	-8.12	-13.38	-19.07	-25.11
Mu(+), ton-m:	18.74	15.77	12.68	9.31	5.59	5.02	5.38	8.63	11.83	14.81	17.54
As(-), cm2:	13.60	10.08	6.97	6.16	6.16	6.16	6.16	6.16	8.00	11.61	15.61
As(+), cm2:	11.40	9.50	7.57	6.16	6.16	6.16	6.16	6.16	7.04	8.89	10.63
Vu, ton:	9.25	9.09	8.57	8.04	7.51	7.78	8.31	8.84	9.37	9.89	10.05
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-5 — 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 — C-6

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:40 p. m. 5/01/2020

BEAM: C(6-6a) FLOOR: 4

Length: L = 1.33 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 1.03 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.40	0.51	0.61	0.71	0.81	0.92	1.02	1.12	1.22	1.33
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.18	-0.13	-0.09	-0.06	-0.03	-0.02	-0.01	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.38	0.38	0.38	0.38	0.38	0.34	0.28	0.21	0.14	0.07	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

C-6 6 #3 @ 22.5 C:6a

BEAM: D(4-5) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-21.43	-16.30	-11.50	-7.14	-4.29	-4.29	-4.29	-6.70	-11.10	-15.92	-21.08
Mu(+), ton-m:	16.89	14.20	11.35	8.38	5.16	4.29	4.71	7.86	10.82	13.66	16.33
As(-), cm2:	13.16	9.84	6.84	6.16	6.16	6.16	6.16	6.16	6.59	9.60	12.93
As(+), cm2:	10.21	8.52	6.74	6.16	6.16	6.16	6.16	6.16	6.42	8.18	9.86
Vu, ton:	8.30	8.17	7.72	7.27	6.82	6.41	6.86	7.31	7.76	8.20	8.34
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 D-5

BEAM: D(5-6) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-19.64	-14.86	-10.49	-6.38	-4.48	-4.48	-4.48	-7.33	-12.02	-17.07	-22.41
Mu(+), ton-m:	16.88	14.18	11.39	8.31	4.94	4.48	4.76	7.71	10.60	13.30	15.78
As(-), cm2:	11.98	8.93	6.22	6.16	6.16	6.16	6.16	6.16	7.16	10.33	13.80
As(+), cm2:	10.21	8.50	6.77	6.16	6.16	6.16	6.16	6.16	6.29	7.95	9.51
Vu, ton:	8.17	8.04	7.59	7.14	6.69	6.98	7.43	7.88	8.33	8.78	8.91
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 D-6

BEAM: D(6-6a) FLOOR: 4

Length: L = 1.33 m, Lu = 1.03 m, a = 0.30 m, c = 0.00 m, Section: b = 40.0 cm, h = 50.0 cm, Sec: VG40X50, Mat: RConcrete2

X, m:	0.30	0.40	0.51	0.61	0.71	0.81	0.92	1.02	1.12	1.22	1.33
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.18	-0.13	-0.09	-0.06	-0.03	-0.02	-0.01	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.38	0.38	0.38	0.38	0.38	0.34	0.28	0.21	0.14	0.07	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

D-6 — 6 #3 @ 22.5 — D:6a

BEAM: E(4-5) FLOOR: 4

Length: L = 7.20 m, Lu = 7.20 m, a = 0.00 m, c = 0.00 m, Section: b = 40.0 cm, h = 50.0 cm, Sec: VG40X50, Mat: RConcrete2

X, m:	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.48	7.20
Mu(-), ton-m:	-17.27	-12.75	-8.67	-5.16	-3.53	-3.53	-3.53	-5.03	-8.73	-13.00	-17.66
Mu(+), ton-m:	12.39	10.73	8.85	6.88	4.52	3.53	4.09	6.30	8.24	10.09	11.67
As(-), cm2:	10.46	7.61	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.77	10.71
As(+), cm2:	7.39	6.37	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.94
Vu, ton:	6.87	6.68	6.14	5.61	5.08	4.73	5.27	5.80	6.33	6.87	7.06
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-4 — 11 #3 @ 10 22 #3 @ 22.5 11 #3 @ 10 — E-5

BEAM: E(5-6) FLOOR: 4

Length: L = 7.20 m, Lu = 7.20 m, a = 0.00 m, c = 0.00 m, Section: b = 40.0 cm, h = 50.0 cm, Sec: VG40X50, Mat: RConcrete2

X, m:	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.48	7.20
Mu(-), ton-m:	-16.25	-11.97	-8.15	-4.85	-3.45	-3.45	-3.45	-4.80	-8.51	-12.68	-17.23
Mu(+), ton-m:	11.66	10.14	8.43	6.56	4.32	3.45	3.69	5.67	7.52	9.17	10.54
As(-), cm2:	9.81	7.12	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.57	10.43
As(+), cm2:	6.94	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.25
Vu, ton:	6.60	6.41	5.87	5.34	4.81	4.64	5.18	5.71	6.24	6.78	6.97
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-5 — 11 #3 @ 10 22 #3 @ 22.5 11 #3 @ 10 — E-6

BEAM: E(6-7) FLOOR: 4

Length:	L = 5.96 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 5.66 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.57	1.13	1.70	2.27	2.83	3.40	3.96	4.53	5.10	5.66
Mu(-), ton-m:	-27.67	-16.65	-8.07	-5.53	-5.53	-5.53	-5.53	-7.47	-12.77	-18.40	-24.20
Mu(+), ton-m:	11.44	11.88	14.43	12.33	7.93	5.53	5.53	7.08	9.23	11.37	13.39
As(-), cm2:	19.65	12.36	8.46	6.16	6.16	6.16	6.16	6.16	7.62	11.18	15.00
As(+), cm2:	9.10	9.37	10.96	7.35	6.16	6.16	6.16	6.16	6.16	6.76	8.01
Vu, ton:	21.38	21.32	20.99	10.15	10.45	10.76	11.06	11.37	11.67	11.98	12.04
Tu, ton-m:	2.20	2.20	2.20	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-6 13 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 E-7

BEAM: E'(6-7) FLOOR: 4

Length:	L = 5.96 m	a = 0.23 m	Section:	b = 28.0 cm	Sec:	VG28X50				
	Lu = 5.55 m	c = 0.19 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.23	0.78	1.34	1.89	2.45	3.00	3.56	4.11	4.67	5.22	5.78
Mu(-), ton-m:	-1.67	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.77
Mu(+), ton-m:	2.39	8.92	14.84	14.88	13.12	11.25	9.26	7.14	4.89	2.61	0.68
As(-), cm2:	5.31	5.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31
As(+), cm2:	5.31	6.32	9.10	9.13	7.98	6.79	5.54	4.31	4.31	4.31	4.31
Vu, ton:	14.17	14.14	3.32	3.04	3.26	3.48	3.71	3.93	4.15	4.38	4.42
Tu, ton-m:	0.70	0.70	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E'-6 11 #3 @ 10 15 #3 @ 22.5 11 #3 @ 10 E'-7

BEAM: F(4-5) FLOOR: 4

Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-17.45	-13.18	-9.22	-5.66	-3.49	-3.49	-3.49	-5.36	-9.00	-13.01	-17.33
Mu(+), ton-m:	13.39	11.34	9.14	6.83	4.28	3.49	3.90	6.37	8.67	10.85	12.86
As(-), cm2:	10.57	7.88	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.77	10.50
As(+), cm2:	8.01	6.74	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.44	7.68
Vu, ton:	6.89	6.77	6.36	5.95	5.54	5.21	5.62	6.03	6.43	6.84	6.97
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-5

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:40 p. m. 5/01/2020

BEAM: F(5-6) FLOOR: 4

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-16.24	-12.23	-8.54	-5.22	-3.42	-3.42	-3.42	-5.23	-8.86	-12.84	-17.09
Mu(+), ton-m:	12.80	10.88	8.82	6.63	4.15	3.42	3.71	5.95	8.11	10.12	11.94
As(-), cm2:	9.80	7.29	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.66	10.34
As(+), cm2:	7.64	6.46	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.11
Vu, ton:	6.62	6.50	6.09	5.68	5.28	5.20	5.61	6.01	6.42	6.83	6.95
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	F-5			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			F-6

BEAM: F(6-7) FLOOR: 4

	Length:	L = 5.96 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.36 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.84	1.37	1.91	2.45	2.98	3.52	4.05	4.59	5.13	5.66
Mu(-), ton-m:	-16.67	-12.95	-9.35	-5.88	-4.13	-4.13	-4.13	-7.47	-11.71	-16.11	-20.65
Mu(+), ton-m:	17.50	14.43	11.20	7.80	4.40	4.13	4.13	6.77	9.61	12.34	14.95
As(-), cm2:	10.08	7.74	6.16	6.16	6.16	6.16	6.16	6.16	6.97	9.72	12.64
As(+), cm2:	10.61	8.66	6.65	6.16	6.16	6.16	6.16	6.16	6.16	7.35	8.99
Vu, ton:	8.35	8.31	8.07	8.03	8.32	8.61	8.90	9.19	9.48	9.76	9.81
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	F-6			11 #3 @ 10		14 #3 @ 22.5		11 #3 @ 10			F-7

BEAM: G(4-5) FLOOR: 4

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-16.97	-12.80	-8.93	-5.44	-3.39	-3.39	-3.39	-5.06	-8.52	-12.37	-16.52
Mu(+), ton-m:	12.65	10.75	8.69	6.52	4.13	3.39	3.80	6.17	8.34	10.41	12.31
As(-), cm2:	10.27	7.64	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.37	9.98
As(+), cm2:	7.55	6.38	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.17	7.34
Vu, ton:	6.70	6.58	6.17	5.76	5.35	4.94	5.33	5.73	6.14	6.55	6.67
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	G-4			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			G-5

BEAM: G(5-6) FLOOR: 4

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-15.74	-11.79	-8.20	-4.89	-3.57	-3.57	-3.57	-5.69	-9.45	-13.53	-17.87
Mu(+), ton-m:	12.81	10.85	8.78	6.50	3.95	3.57	3.96	6.21	8.39	10.40	12.21
As(-), cm2:	9.49	7.02	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.09	10.84
As(+), cm2:	7.65	6.44	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.28
Vu, ton:	6.66	6.54	6.13	5.72	5.31	5.43	5.84	6.25	6.65	7.06	7.19
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-6

BEAM: G(6-6a) FLOOR: 4

	Length:	L = 1.33 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.40	0.51	0.61	0.71	0.81	0.92	1.02	1.12	1.22	1.33
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.18	-0.13	-0.09	-0.06	-0.03	-0.02	-0.01	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.38	0.38	0.38	0.38	0.38	0.34	0.28	0.21	0.14	0.07	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

G-6 6 #3 @ 22.5 G:6a

BEAM: H(4-5) FLOOR: 4

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-16.21	-12.27	-8.59	-5.25	-3.24	-3.24	-3.24	-4.84	-8.08	-11.69	-15.57
Mu(+), ton-m:	12.11	10.27	8.28	6.16	3.87	3.24	3.60	5.91	8.02	10.04	11.91
As(-), cm2:	9.78	7.31	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.95	9.38
As(+), cm2:	7.22	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.09
Vu, ton:	6.36	6.25	5.88	5.51	5.14	4.78	5.06	5.43	5.80	6.17	6.28
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 H-5

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:40 p. m. 5/01/2020

BEAM: H(5-6) FLOOR: 4

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-14.94	-11.24	-7.85	-4.70	-3.39	-3.39	-3.39	-5.47	-9.02	-12.86	-16.94
Mu(+), ton-m:	12.31	10.41	8.40	6.17	3.72	3.39	3.73	5.92	8.04	9.99	11.76
As(-), cm2:	8.98	6.68	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.68	10.25
As(+), cm2:	7.34	6.17	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.00
Vu, ton:	6.26	6.15	5.78	5.42	5.05	5.17	5.54	5.91	6.28	6.65	6.76
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 H-6

BEAM: H(6-6a) FLOOR: 4

	Length:	L = 1.33 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			

X, m:	0.30	0.40	0.51	0.61	0.71	0.81	0.92	1.02	1.12	1.22	1.33
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.18	-0.13	-0.09	-0.06	-0.03	-0.02	-0.01	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.38	0.38	0.38	0.38	0.38	0.34	0.28	0.21	0.14	0.07	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

H-6 6 #3 @ 22.5 H:6a

BEAM: I(4-4a) FLOOR: 4

	Length:	L = 0.30 m	a = 0.30 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 0.00 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			

X, m:	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Mu(-), ton-m:	-60.56	-60.56	-60.56	-60.56	-60.56	-60.56	-60.56	-60.56	-60.56	-60.56	-60.56
Mu(+), ton-m:	64.23	64.23	64.23	64.23	64.23	64.23	64.23	64.23	64.23	64.23	64.23
As(-), cm2:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S
As(+), cm2:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S
Vu, ton:	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Tu, ton-m:	14.49	14.49	14.49	14.49	14.49	14.49	14.49	14.49	14.49	14.49	14.49
Stirrup:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S
Spacing, cm:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S

DESIGN

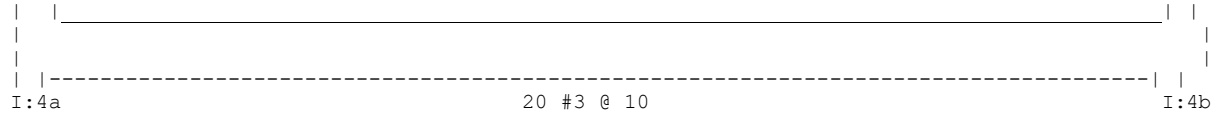
I-4 Insufficient section I:4a

BEAM: I(4a-4b) FLOOR: 4

Length: L = 2.00 m a = 0.00 m Section: b = 35.0 cm Sec: VG35X50
Lu = 2.00 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
Mu(-), ton-m:	-4.19	-3.29	-2.41	-1.56	-0.84	-0.84	-0.84	-1.60	-2.42	-3.27	-4.14
Mu(+), ton-m:	3.77	3.05	2.31	1.56	0.84	0.84	0.89	1.67	2.43	3.16	3.89
As(-), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	4.82	4.82	4.82	4.75	4.65	4.55	4.53	4.63	4.70	4.70	4.70
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

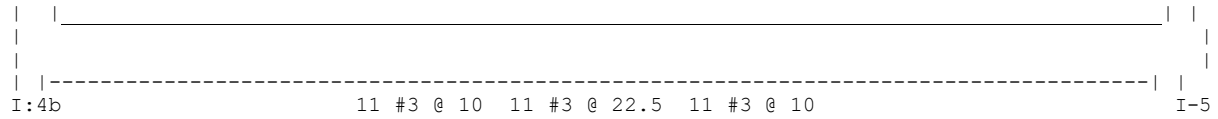


BEAM: I(4b-5) FLOOR: 4

Length: L = 4.90 m a = 0.00 m Section: b = 35.0 cm Sec: VG35X50
Lu = 4.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.46	0.92	1.38	1.84	2.30	2.76	3.22	3.68	4.14	4.60
Mu(-), ton-m:	-18.53	-14.41	-10.40	-6.50	-3.71	-3.71	-3.71	-7.11	-10.67	-14.31	-18.03
Mu(+), ton-m:	15.59	12.58	9.50	6.34	3.71	3.71	4.58	8.06	11.44	14.71	17.88
As(-), cm2:	11.36	8.70	6.19	5.39	5.39	5.39	5.39	5.39	6.36	8.64	11.03
As(+), cm2:	9.46	7.55	5.64	5.39	5.39	5.39	5.39	5.39	6.84	8.89	10.94
Vu, ton:	10.12	10.12	9.90	9.68	9.47	9.25	9.03	8.83	8.99	9.21	9.21
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

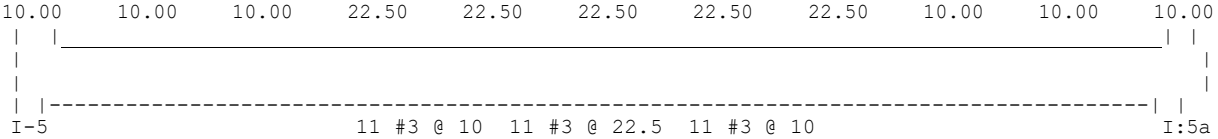


BEAM: I(5-5a) FLOOR: 4

Length: L = 4.90 m a = 0.30 m Section: b = 35.0 cm Sec: VG35X50
Lu = 4.60 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.76	1.22	1.68	2.14	2.60	3.06	3.52	3.98	4.44	4.90
Mu(-), ton-m:	-17.13	-13.65	-10.25	-6.92	-3.68	-3.65	-3.65	-6.20	-10.11	-14.14	-18.27
Mu(+), ton-m:	18.26	15.08	11.80	8.41	4.92	3.65	3.65	5.58	8.50	11.35	14.12
As(-), cm2:	10.45	8.22	6.10	5.39	5.39	5.39	5.39	5.39	6.02	8.53	11.19
As(+), cm2:	11.19	9.13	7.06	5.39	5.39	5.39	5.39	5.39	5.39	6.78	8.52
Vu, ton:	8.89	8.89	8.97	9.19	9.40	9.62	9.84	10.06	10.28	10.49	10.49
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

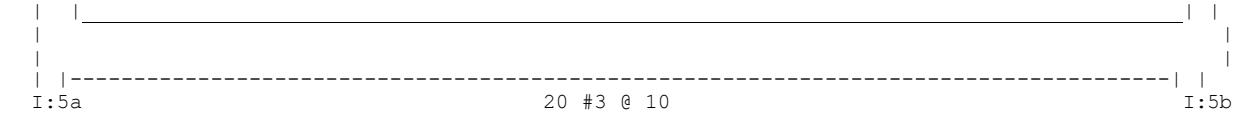


BEAM: I(5a-5b) FLOOR: 4

Length: L = 2.00 m a = 0.00 m Section: b = 35.0 cm Sec: VG35X50
Lu = 2.00 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
Mu(-), ton-m:	-5.38	-4.25	-3.14	-2.04	-1.08	-1.08	-1.08	-2.03	-3.06	-4.11	-5.18
Mu(+), ton-m:	4.81	3.88	2.93	1.97	1.08	1.08	1.12	2.13	3.12	4.10	5.05
As(-), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	6.21	6.21	6.21	6.14	6.04	5.94	5.84	5.86	5.93	5.93	5.93
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

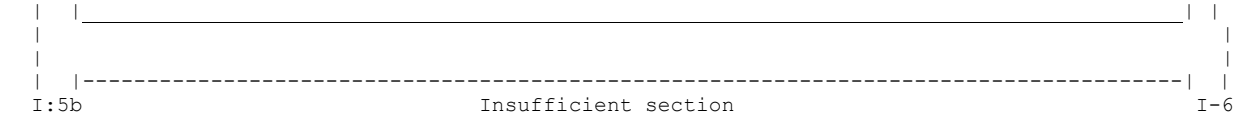


BEAM: I(5b-6) FLOOR: 4

Length: L = 0.30 m a = 0.00 m Section: b = 35.0 cm Sec: VG35X50
Lu = 0.30 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0.30
Mu(-), ton-m:	-11.41	-12.52	-13.63	-14.74	-15.85	-16.96	-18.08	-19.34	-20.61	-21.88	-23.16
Mu(+), ton-m:	7.54	9.29	11.04	12.78	14.53	16.27	18.02	19.91	21.82	23.72	25.62
As(-), cm2:	6.82	7.51	8.21	8.91	9.62	10.34	11.07	11.90	12.74	13.60	14.46
As(+), cm2:	5.39	5.51	6.59	7.67	8.78	9.90	11.03	12.28	13.55	14.85	16.17
Vu, ton:	126.91	126.91	126.91	126.91	126.91	126.91	126.91	126.91	126.91	126.91	126.91
Tu, ton-m:	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Stirrup:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S
Spacing, cm:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S

DESIGN

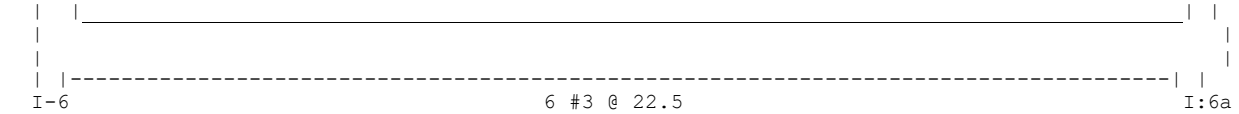


BEAM: I(6-6a) FLOOR: 4

Length: L = 1.33 m a = 0.30 m Section: b = 35.0 cm Sec: VG35X50
Lu = 1.03 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.40	0.51	0.61	0.71	0.81	0.92	1.02	1.12	1.22	1.33
Mu(-), ton-m:	-0.31	-0.25	-0.20	-0.15	-0.11	-0.08	-0.05	-0.03	-0.01	0.00	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	0.33	0.33	0.33	0.33	0.33	0.30	0.24	0.18	0.12	0.06	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

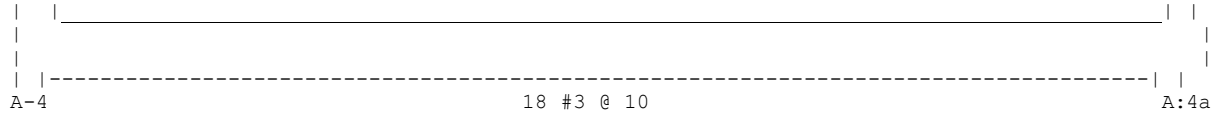


BEAM: A(4-4a) FLOOR: CUB

Length: L = 1.80 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-12.66	-10.06	-7.49	-4.93	-2.53	-2.53	-2.53	-4.88	-7.30	-9.73	-12.18
Mu(+), ton-m:	11.66	9.34	7.00	4.65	2.53	2.53	2.62	5.10	7.56	10.00	12.43
As(-), cm2:	7.55	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.26
As(+), cm2:	6.93	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.41
Vu, ton:	16.18	16.18	16.18	16.13	16.03	15.93	15.82	15.72	15.67	15.67	15.67
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN



BEAM: A(4a-4b) FLOOR: CUB

Length: L = 4.50 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 4.50 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.45	0.90	1.35	1.80	2.25	2.70	3.15	3.60	4.05	4.50
Mu(-), ton-m:	-29.78	-23.53	-17.37	-11.30	-6.18	-6.18	-6.18	-11.73	-17.98	-24.38	-30.89
Mu(+), ton-m:	29.01	23.55	17.96	12.26	6.45	6.18	6.52	12.16	17.76	23.31	28.78
As(-), cm2:	18.83	14.55	10.52	6.71	6.16	6.16	6.16	6.98	10.91	15.11	19.61
As(+), cm2:	18.29	14.56	10.90	7.31	6.16	6.16	6.16	7.25	10.77	14.40	18.13
Vu, ton:	15.63	15.63	15.37	15.11	14.86	14.99	15.24	15.50	15.76	16.02	16.02
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

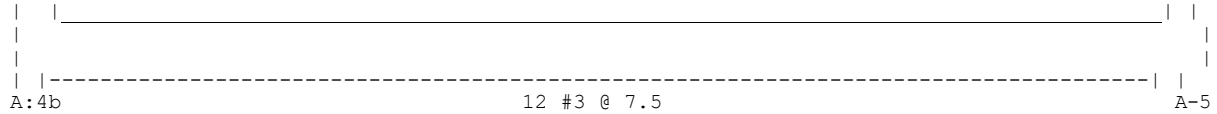
DESIGN

BEAM: A(4b-5) FLOOR: CUB

Length: L = 0.90 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-15.65	-12.66	-9.68	-6.70	-3.72	-3.13	-3.13	-4.92	-7.60	-10.28	-12.96
Mu(+), ton-m:	13.71	11.06	8.40	5.75	3.13	3.13	3.13	5.18	8.14	11.09	14.04
As(-), cm2:	9.43	7.56	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.74
As(+), cm2:	8.21	6.57	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.59	8.41
Vu, ton:	38.77	38.77	38.77	38.77	38.77	38.77	38.77	38.77	38.77	38.77	38.77
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50

DESIGN



Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:40 p. m. 5/01/2020

BEAM: A(5-5a) FLOOR: CUB

Length:	L = 0.90 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 0.90 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-13.74	-10.93	-8.12	-5.32	-2.87	-2.87	-3.36	-6.09	-8.83	-11.58	-14.33
Mu(+), ton-m:	13.11	10.38	7.65	4.91	2.87	2.87	3.10	5.87	8.63	11.39	14.15
As(-), cm2:	8.22	6.49	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.88	8.59
As(+), cm2:	7.83	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.77	8.48
Vu, ton:	34.77	34.77	34.77	34.77	34.77	34.77	34.77	34.77	34.77	34.77	34.77
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50

DESIGN

A-5 12 #3 @ 7.5 A:5a

BEAM: A(5a-5b) FLOOR: CUB

Length:	L = 5.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 5.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.54	1.08	1.62	2.16	2.70	3.24	3.78	4.32	4.86	5.40
Mu(-), ton-m:	-24.67	-19.30	-14.05	-8.93	-5.54	-5.54	-5.54	-10.20	-15.86	-21.70	-27.70
Mu(+), ton-m:	24.77	20.28	15.62	10.79	5.80	5.54	5.78	10.29	14.78	19.14	23.38
As(-), cm2:	15.31	11.76	8.42	6.16	6.16	6.16	6.16	6.16	9.56	13.33	17.38
As(+), cm2:	15.38	12.40	9.41	6.40	6.16	6.16	6.16	6.16	8.88	11.66	14.44
Vu, ton:	11.57	11.52	11.21	10.90	11.00	11.31	11.62	11.93	12.25	12.56	12.60
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A:5a 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 A:5b

BEAM: A(5b-6) FLOOR: CUB

Length:	L = 0.90 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 0.90 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-13.83	-11.21	-8.59	-5.97	-3.36	-2.77	-2.77	-4.13	-6.44	-8.74	-11.06
Mu(+), ton-m:	11.91	9.63	7.34	5.06	2.77	2.77	2.77	4.45	7.04	9.63	12.21
As(-), cm2:	8.28	6.66	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.57
As(+), cm2:	7.09	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.28
Vu, ton:	34.27	34.27	34.27	34.27	34.27	34.27	34.27	34.27	34.27	34.27	34.27
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50

DESIGN

A:5b 12 #3 @ 7.5 A-6

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:40 p. m. 5/01/2020

BEAM: A(6-6a) FLOOR: CUB

	Length:	L = 0.90 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.90 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81	0.90
Mu(-), ton-m:	-11.95	-9.54	-7.12	-4.72	-2.39	-2.39	-2.64	-4.92	-7.22	-9.53	-11.84
Mu(+), ton-m:	11.11	8.83	6.55	4.26	2.39	2.39	2.50	4.86	7.25	9.62	12.00
As(-), cm2:	7.12	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.05
As(+), cm2:	6.60	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.15
Vu, ton:	30.27	30.27	30.27	30.27	30.27	30.27	30.27	30.27	30.27	30.27	30.27
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	A-6				9 #3 @ 10						A:6a

BEAM: A(6a-6b) FLOOR: CUB

	Length:	L = 0.42 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.42 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.30	0.34	0.38	0.42
Mu(-), ton-m:	-0.06	-0.05	-0.04	-0.03	-0.02	-0.02	-0.01	-0.01	0.00	0.00	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50
DESIGN	A:6a				3 #3 @ 22.5						A:6b

BEAM: B(4-4a) FLOOR: CUB

	Length:	L = 5.40 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.10 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.81	1.32	1.83	2.34	2.85	3.36	3.87	4.38	4.89	5.40
Mu(-), ton-m:	-25.46	-20.17	-15.14	-10.26	-5.53	-5.09	-5.09	-7.44	-12.81	-18.47	-24.36
Mu(+), ton-m:	24.35	20.40	16.34	12.05	7.54	5.09	5.09	7.78	11.82	15.78	19.57
As(-), cm2:	15.84	12.33	9.10	6.16	6.16	6.16	6.16	6.16	7.65	11.23	15.10
As(+), cm2:	15.10	12.48	9.87	7.18	6.16	6.16	6.16	6.16	7.04	9.51	11.94
Vu, ton:	11.77	11.72	11.30	10.87	10.78	11.20	11.63	12.05	12.48	12.90	12.94
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	B-4			11 #3 @ 10		13 #3 @ 22.5			11 #3 @ 10		B:4a

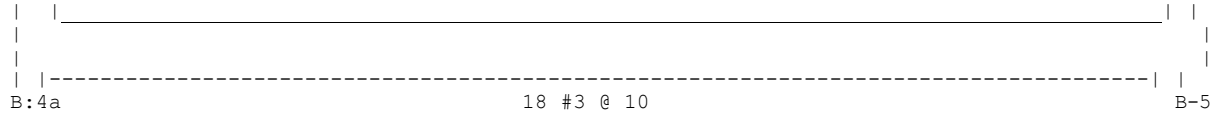
Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:40 p. m. 5/01/2020

BEAM: B(4a-5) FLOOR: CUB

Length: L = 1.80 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-12.82	-10.25	-7.69	-5.16	-2.64	-2.56	-2.56	-4.68	-7.02	-9.38	-11.75
Mu(+), ton-m:	11.31	9.07	6.81	4.54	2.56	2.56	2.56	4.80	7.24	9.66	12.07
As(-), cm2:	7.65	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.99
As(+), cm2:	6.72	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.19
Vu, ton:	16.27	16.27	16.27	16.22	16.12	16.02	15.91	15.81	15.76	15.76	15.76
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

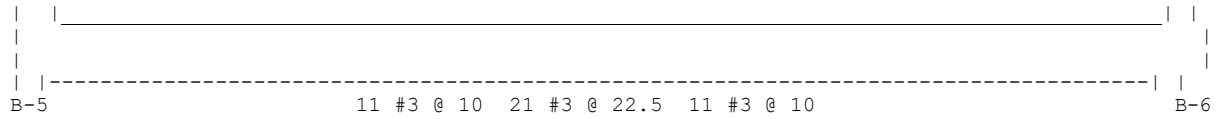


BEAM: B(5-6) FLOOR: CUB

Length: L = 7.20 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.90 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.69	1.38	2.07	2.76	3.45	4.14	4.83	5.52	6.21	6.90
Mu(-), ton-m:	-17.83	-13.01	-8.70	-4.74	-4.39	-4.39	-4.39	-7.85	-12.15	-16.88	-21.94
Mu(+), ton-m:	14.14	11.72	9.23	6.51	4.39	4.39	6.00	8.79	11.44	13.93	16.22
As(-), cm2:	10.81	7.77	6.16	6.16	6.16	6.16	6.16	6.16	7.24	10.21	13.49
As(+), cm2:	8.48	6.97	6.16	6.16	6.16	6.16	6.16	6.16	6.80	8.35	9.79
Vu, ton:	7.78	7.62	7.15	6.68	6.20	5.89	6.36	6.83	7.30	7.77	7.93
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

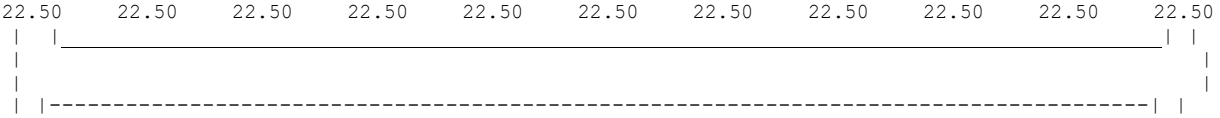


BEAM: B(6-6a) FLOOR: CUB

Length: L = 1.33 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 1.03 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.40	0.51	0.61	0.71	0.81	0.92	1.02	1.12	1.22	1.33
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.18	-0.13	-0.09	-0.06	-0.03	-0.02	-0.01	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.38	0.38	0.38	0.38	0.38	0.34	0.28	0.21	0.14	0.07	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN



BEAM: C(4-5) FLOOR: CUB

Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-20.13	-15.22	-10.69	-6.63	-4.03	-4.03	-4.03	-5.86	-9.95	-14.51	-19.44
Mu(+), ton-m:	15.50	13.14	10.63	8.02	5.15	4.03	4.39	7.17	9.76	12.26	14.59
As(-), cm2:	12.30	9.16	6.34	6.16	6.16	6.16	6.16	6.16	6.16	8.71	11.85
As(+), cm2:	9.33	7.85	6.30	6.16	6.16	6.16	6.16	6.16	6.16	7.31	8.76
Vu, ton:	7.90	7.76	7.28	6.81	6.34	5.90	6.37	6.85	7.32	7.79	7.94
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-4 — 11 #3 @ 10 | 19 #3 @ 22.5 | 11 #3 @ 10 — C-5

BEAM: C(5-6) FLOOR: CUB

Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-18.25	-13.65	-9.48	-5.61	-4.30	-4.30	-4.30	-6.99	-11.47	-16.33	-21.50
Mu(+), ton-m:	15.36	12.95	10.44	7.66	4.61	4.30	4.86	7.51	10.13	12.55	14.77
As(-), cm2:	11.09	8.17	6.16	6.16	6.16	6.16	6.16	6.16	6.82	9.86	13.20
As(+), cm2:	9.25	7.73	6.19	6.16	6.16	6.16	6.16	6.16	6.16	7.49	8.87
Vu, ton:	7.87	7.73	7.26	6.78	6.31	6.58	7.05	7.52	8.00	8.47	8.61
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-5 — 11 #3 @ 10 | 19 #3 @ 22.5 | 11 #3 @ 10 — C-6

BEAM: C(6-6a) FLOOR: CUB

Length:	L = 1.33 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.40	0.51	0.61	0.71	0.81	0.92	1.02	1.12	1.22	1.33
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.18	-0.13	-0.09	-0.06	-0.03	-0.02	-0.01	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.38	0.38	0.38	0.38	0.38	0.34	0.28	0.21	0.14	0.07	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

C-6 — 6 #3 @ 22.5 — C:6a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:40 p. m. 5/01/2020

BEAM: D(4-5) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-17.92	-13.56	-9.51	-5.89	-3.58	-3.58	-3.58	-5.30	-8.98	-13.07	-17.48
Mu(+), ton-m:	13.87	11.77	9.52	7.17	4.57	3.58	3.93	6.43	8.75	10.98	13.05
As(-), cm2:	10.87	8.11	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.81	10.59
As(+), cm2:	8.31	7.00	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.52	7.80
Vu, ton:	7.04	6.92	6.50	6.08	5.66	5.31	5.73	6.15	6.57	6.98	7.11
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 D-5

BEAM: D(5-6) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-16.30	-12.21	-8.50	-5.02	-3.86	-3.86	-3.86	-6.30	-10.32	-14.68	-19.30
Mu(+), ton-m:	13.80	11.64	9.41	6.89	4.13	3.86	4.33	6.73	9.08	11.24	13.22
As(-), cm2:	9.84	7.28	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.81	11.77
As(+), cm2:	8.26	6.93	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.68	7.90
Vu, ton:	7.03	6.90	6.48	6.06	5.65	5.92	6.34	6.75	7.17	7.59	7.72
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 D-6

BEAM: D(6-6a) FLOOR: CUB

Length: L = 1.33 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 1.03 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.40	0.51	0.61	0.71	0.81	0.92	1.02	1.12	1.22	1.33
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.18	-0.13	-0.09	-0.06	-0.03	-0.02	-0.01	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.38	0.38	0.38	0.38	0.38	0.34	0.28	0.21	0.14	0.07	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

D-6 6 #3 @ 22.5 D:6a

BEAM: E(4-5) FLOOR: CUB

Length:	L = 7.20 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 7.20 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.48	7.20
Mu(-), ton-m:	-14.21	-10.39	-7.02	-4.14	-2.91	-2.91	-2.91	-3.82	-6.92	-10.56	-14.56
Mu(+), ton-m:	9.96	8.76	7.39	5.90	4.05	2.91	3.33	5.00	6.42	7.76	8.85
As(-), cm2:	8.52	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.26	8.74
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.83	5.65	5.15	4.66	4.16	3.91	4.41	4.90	5.40	5.90	6.08
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-4 11 #3 @ 10 22 #3 @ 22.5 11 #3 @ 10 E-5

BEAM: E(5-6) FLOOR: CUB

Length:	L = 7.20 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 7.20 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.48	7.20
Mu(-), ton-m:	-14.39	-10.40	-6.84	-3.77	-3.31	-3.31	-3.31	-5.09	-8.50	-12.34	-16.54
Mu(+), ton-m:	9.98	8.60	7.03	5.34	3.31	3.31	4.19	6.03	7.76	9.29	10.57
As(-), cm2:	8.63	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.36	9.99
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.27
Vu, ton:	6.12	5.94	5.44	4.94	4.45	4.24	4.74	5.23	5.73	6.23	6.41
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-5 11 #3 @ 10 22 #3 @ 22.5 11 #3 @ 10 E-6

BEAM: E(6-7) FLOOR: CUB

Length:	L = 5.96 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 5.66 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.57	1.13	1.70	2.27	2.83	3.40	3.96	4.53	5.10	5.66
Mu(-), ton-m:	-29.18	-17.85	-8.93	-5.84	-5.84	-5.84	-5.84	-7.74	-13.18	-18.96	-24.91
Mu(+), ton-m:	12.36	12.61	14.95	12.69	8.13	5.84	5.84	7.70	10.10	12.54	14.85
As(-), cm2:	20.67	13.09	8.42	6.16	6.16	6.16	6.16	6.16	7.88	11.54	15.47
As(+), cm2:	9.63	9.79	11.25	7.57	6.16	6.16	6.16	6.16	6.16	7.48	8.92
Vu, ton:	22.09	22.03	21.71	10.59	10.89	11.20	11.50	11.81	12.11	12.42	12.48
Tu, ton-m:	2.16	2.16	2.16	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-6 13 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 E-7

BEAM: E'(6-7) FLOOR: CUB

	Length:	L = 5.96 m	a = 0.23 m	Section:	b = 28.0 cm	Sec:	VG28X50			
		Lu = 5.55 m	c = 0.19 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.23	0.78	1.34	1.89	2.45	3.00	3.56	4.11	4.67	5.22	5.78
Mu(-), ton-m:	-1.67	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.77
Mu(+), ton-m:	2.39	8.92	14.85	14.89	13.13	11.26	9.27	7.15	4.89	2.61	0.68
As(-), cm2:	5.30	5.30	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31
As(+), cm2:	5.30	6.31	9.11	9.13	7.99	6.79	5.54	4.31	4.31	4.31	4.31
Vu, ton:	14.18	14.14	3.32	3.04	3.26	3.49	3.71	3.93	4.16	4.38	4.42
Tu, ton-m:	0.70	0.70	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E'-6 11 #3 @ 10 15 #3 @ 22.5 11 #3 @ 10 E'-7

BEAM: F(4-5) FLOOR: CUB

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-14.64	-10.98	-7.63	-4.66	-2.93	-2.93	-2.93	-4.23	-7.32	-10.78	-14.53
Mu(+), ton-m:	11.00	9.43	7.71	5.91	3.85	2.93	3.27	5.19	6.97	8.64	10.16
As(-), cm2:	8.79	6.52	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.40	8.72
As(+), cm2:	6.53	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.91	5.79	5.40	5.01	4.62	4.36	4.75	5.14	5.53	5.92	6.04
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-5

BEAM: F(5-6) FLOOR: CUB

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-14.21	-10.54	-7.20	-4.20	-3.15	-3.15	-3.15	-5.00	-8.27	-11.87	-15.74
Mu(+), ton-m:	10.88	9.23	7.46	5.56	3.43	3.15	3.81	5.80	7.69	9.43	11.00
As(-), cm2:	8.52	6.25	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.06	9.48
As(+), cm2:	6.45	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.53
Vu, ton:	6.02	5.90	5.51	5.12	4.73	4.62	5.01	5.40	5.79	6.18	6.30
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-6

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:40 p. m. 5/01/2020

BEAM: F(6-7) FLOOR: CUB

Length: L = 5.96 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 5.36 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.84	1.37	1.91	2.45	2.98	3.52	4.05	4.59	5.13	5.66
Mu(-), ton-m:	-16.43	-12.75	-9.18	-5.75	-4.13	-4.13	-4.13	-7.55	-11.76	-16.14	-20.67
Mu(+), ton-m:	17.28	14.23	11.02	7.64	4.26	4.13	4.13	6.75	9.56	12.24	14.82
As(-), cm2:	9.92	7.61	6.16	6.16	6.16	6.16	6.16	6.16	7.00	9.74	12.65
As(+), cm2:	10.46	8.53	6.54	6.16	6.16	6.16	6.16	6.16	6.16	7.30	8.90
Vu, ton:	8.28	8.24	8.00	8.01	8.30	8.59	8.88	9.17	9.46	9.75	9.79
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-6 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 F-7

BEAM: G(4-5) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-14.31	-10.71	-7.41	-4.48	-2.86	-2.86	-2.86	-4.02	-6.97	-10.30	-13.92
Mu(+), ton-m:	10.43	8.97	7.36	5.65	3.72	2.86	3.24	5.10	6.79	8.38	9.82
As(-), cm2:	8.58	6.35	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.34
As(+), cm2:	6.18	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.76	5.64	5.25	4.86	4.47	4.12	4.51	4.90	5.29	5.68	5.80
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-5

BEAM: G(5-6) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-13.04	-9.66	-6.62	-3.83	-3.05	-3.05	-3.05	-4.73	-7.95	-11.48	-15.27
Mu(+), ton-m:	10.35	8.85	7.27	5.45	3.39	3.05	3.50	5.27	6.98	8.52	9.88
As(-), cm2:	7.79	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.83	9.18
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.73	5.61	5.22	4.83	4.44	4.57	4.96	5.35	5.74	6.14	6.25
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-6

BEAM: G(6-6a) FLOOR: CUB

Length: L = 1.33 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 1.03 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.40	0.51	0.61	0.71	0.81	0.92	1.02	1.12	1.22	1.33
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.18	-0.13	-0.09	-0.06	-0.03	-0.02	-0.01	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.38	0.38	0.38	0.38	0.38	0.34	0.28	0.21	0.14	0.07	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

G-6 6 #3 @ 22.5 G:6a

BEAM: H(4-5) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-13.73	-10.30	-7.14	-4.32	-2.75	-2.75	-2.75	-3.84	-6.63	-9.77	-13.19
Mu(+), ton-m:	9.97	8.57	7.02	5.37	3.52	2.75	3.09	4.91	6.54	8.08	9.48
As(-), cm2:	8.22	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.88
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.47	5.36	5.00	4.64	4.28	3.91	4.26	4.62	4.99	5.35	5.46
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-4 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 H-5

BEAM: H(5-6) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-12.41	-9.21	-6.34	-3.67	-2.91	-2.91	-2.91	-4.55	-7.61	-10.97	-14.56
Mu(+), ton-m:	9.93	8.49	6.97	5.20	3.22	2.91	3.32	5.04	6.69	8.17	9.48
As(-), cm2:	7.40	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.51	8.74
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.43	5.32	4.96	4.59	4.23	4.38	4.74	5.10	5.46	5.82	5.93
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-5 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 H-6

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:40 p. m. 5/01/2020

BEAM: H(6-6a) FLOOR: CUB

Length: L = 1.33 m a = 0.30 m Section: b = 40.0 cm Sec: VG40X50
Lu = 1.03 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.40	0.51	0.61	0.71	0.81	0.92	1.02	1.12	1.22	1.33
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.18	-0.13	-0.09	-0.06	-0.03	-0.02	-0.01	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	0.38	0.38	0.38	0.38	0.38	0.34	0.28	0.21	0.14	0.07	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

H-6 6 #3 @ 22.5 H:6a

BEAM: I(4-4a) FLOOR: CUB

Length: L = 0.30 m a = 0.30 m Section: b = 35.0 cm Sec: VG35X50
Lu = 0.00 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Mu(-), ton-m:	-35.62	-35.62	-35.62	-35.62	-35.62	-35.62	-35.62	-35.62	-35.62	-35.62	-35.62
Mu(+), ton-m:	37.47	37.47	37.47	37.47	37.47	37.47	37.47	37.47	37.47	37.47	37.47
As(-), cm2:	39.92	39.92	39.92	39.92	39.92	39.92	39.92	39.92	39.92	39.92	39.92
As(+), cm2:	41.36	41.36	41.36	41.36	41.36	41.36	41.36	41.36	41.36	41.36	41.36
Vu, ton:	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Tu, ton-m:	14.15	14.15	14.15	14.15	14.15	14.15	14.15	14.15	14.15	14.15	14.15
Stirrup:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S
Spacing, cm:	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S	Insff.S

DESIGN

I-4 I:4a

BEAM: I(4a-4b) FLOOR: CUB

Length: L = 2.00 m a = 0.00 m Section: b = 35.0 cm Sec: VG35X50
Lu = 2.00 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
Mu(-), ton-m:	-3.72	-2.91	-2.12	-1.35	-0.74	-0.74	-0.74	-1.45	-2.18	-2.93	-3.70
Mu(+), ton-m:	3.27	2.64	2.00	1.34	0.74	0.74	0.84	1.53	2.21	2.85	3.49
As(-), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	4.36	4.36	4.36	4.29	4.19	4.09	4.03	4.13	4.20	4.20	4.20
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

I:4a 20 #3 @ 10 I:4b

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:40 p. m. 5/01/2020

BEAM: I(4b-5) FLOOR: CUB

Length: L = 4.90 m a = 0.00 m Section: b = 35.0 cm Sec: VG35X50
Lu = 4.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.46	0.92	1.38	1.84	2.30	2.76	3.22	3.68	4.14	4.60
Mu(-), ton-m:	-16.74	-13.10	-9.56	-6.14	-3.35	-3.35	-3.35	-5.51	-8.57	-11.71	-14.93
Mu(+), ton-m:	13.71	11.20	8.62	5.95	3.35	3.35	3.51	6.52	9.42	12.21	14.91
As(-), cm2:	10.20	7.87	5.68	5.39	5.39	5.39	5.39	5.39	5.39	7.00	9.03
As(+), cm2:	8.26	6.69	5.39	5.39	5.39	5.39	5.39	5.39	5.59	7.32	9.02
Vu, ton:	9.00	9.00	8.78	8.57	8.35	8.13	7.91	7.70	7.81	8.03	8.03
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

I:4b 11 #3 @ 10 11 #3 @ 22.5 11 #3 @ 10 I-5

BEAM: I(5-5a) FLOOR: CUB

Length: L = 4.90 m a = 0.30 m Section: b = 35.0 cm Sec: VG35X50
Lu = 4.60 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.76	1.22	1.68	2.14	2.60	3.06	3.52	3.98	4.44	4.90
Mu(-), ton-m:	-14.04	-11.06	-8.15	-5.33	-3.36	-3.36	-3.36	-5.98	-9.49	-13.10	-16.81
Mu(+), ton-m:	15.59	12.82	9.95	6.97	3.89	3.36	3.36	5.18	7.61	9.96	12.23
As(-), cm2:	8.47	6.60	5.39	5.39	5.39	5.39	5.39	5.39	5.63	7.87	10.24
As(+), cm2:	9.45	7.70	5.91	5.39	5.39	5.39	5.39	5.39	5.39	5.92	7.33
Vu, ton:	7.87	7.87	8.09	8.31	8.53	8.74	8.96	9.18	9.40	9.62	9.62
Tu, ton-m:	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

I-5 11 #3 @ 10 11 #3 @ 22.5 11 #3 @ 10 I:5a

BEAM: I(5a-5b) FLOOR: CUB

Length: L = 2.00 m a = 0.00 m Section: b = 35.0 cm Sec: VG35X50
Lu = 2.00 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
Mu(-), ton-m:	-5.31	-4.20	-3.11	-2.03	-1.06	-1.06	-1.06	-1.92	-2.91	-3.92	-4.95
Mu(+), ton-m:	4.62	3.73	2.83	1.91	1.06	1.06	1.06	2.06	3.03	3.98	4.91
As(-), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
As(+), cm2:	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Vu, ton:	6.16	6.16	6.16	6.09	5.99	5.89	5.79	5.69	5.75	5.75	5.75
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

I:5a 20 #3 @ 10 I:5b

BEAM: I(5b-6) FLOOR: CUB

	Length:	L = 0.30 m	a = 0.00 m	Section:	b = 35.0 cm	Sec:	VG35X50			
		Lu = 0.30 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0.30
Mu(-), ton-m:	-12.62	-12.74	-12.87	-12.99	-13.12	-13.25	-13.37	-13.50	-13.74	-13.98	-14.22
Mu(+), ton-m:	9.69	10.24	10.79	11.34	11.88	12.43	12.98	13.52	14.18	14.84	15.49
As(-), cm2:	8.32	8.40	8.47	8.55	8.63	8.71	8.79	8.87	9.02	9.18	9.33
As(+), cm2:	6.50	6.84	7.18	7.52	7.86	8.20	8.54	8.88	9.30	9.72	10.14
Vu, ton:	43.91	43.91	43.91	43.91	43.91	43.91	43.91	43.91	43.91	43.91	43.91
Tu, ton-m:	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Stirrup:	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	I:5b				3 #4 @ 10						I-6

BEAM: E(6-7) FLOOR: MAQ

	Length:	L = 5.96 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.66 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.57	1.13	1.70	2.27	2.83	3.40	3.96	4.53	5.10	5.66
Mu(-), ton-m:	-20.85	-16.20	-11.73	-7.53	-4.17	-4.17	-4.17	-7.19	-11.46	-15.94	-20.59
Mu(+), ton-m:	18.17	14.97	11.62	8.22	4.64	4.17	4.52	7.84	11.29	14.63	17.86
As(-), cm2:	12.78	9.78	6.98	6.16	6.16	6.16	6.16	6.16	6.81	9.61	12.60
As(+), cm2:	11.04	9.00	6.91	6.16	6.16	6.16	6.16	6.16	6.71	8.79	10.83
Vu, ton:	8.96	8.90	8.58	8.26	7.96	7.65	7.86	8.17	8.47	8.78	8.84
Tu, ton-m:	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	E-6			11 #3 @ 10	15 #3 @ 22.5		11 #3 @ 10				E-7

BEAM: F(6-7) FLOOR: MAQ

	Length:	L = 5.96 m	a = 0.30 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.36 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.84	1.37	1.91	2.45	2.98	3.52	4.05	4.59	5.13	5.66
Mu(-), ton-m:	-16.09	-12.53	-9.08	-5.77	-3.72	-3.72	-3.72	-6.40	-10.31	-14.38	-18.61
Mu(+), ton-m:	16.32	13.57	10.66	7.58	4.46	3.72	3.72	6.25	8.93	11.50	13.95
As(-), cm2:	9.71	7.47	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.63	11.31
As(+), cm2:	9.85	8.12	6.32	6.16	6.16	6.16	6.16	6.16	6.16	6.84	8.36
Vu, ton:	7.86	7.83	7.59	7.30	7.46	7.75	8.04	8.33	8.62	8.91	8.95
Tu, ton-m:	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	F-6			11 #3 @ 10	14 #3 @ 22.5		11 #3 @ 10				F-7

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:41 p. m. 5/01/2020

BEAM: 1(A-B) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-21.71	-12.65	-5.56	-4.74	-4.74	-4.74	-4.74	-4.74	-6.38	-14.10	-23.68
Mu(+), ton-m:	7.24	4.74	6.37	8.45	9.13	8.79	8.06	6.81	4.76	4.74	7.89
As(-), cm2:	13.23	7.51	6.93	6.93	6.93	6.93	6.93	6.93	6.93	8.41	14.52
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	14.94	14.23	11.88	9.52	7.17	5.59	7.95	10.30	12.66	15.01	15.72
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A-1 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 B-1

BEAM: 1(B-C) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-22.01	-13.27	-6.24	-4.40	-4.40	-4.40	-4.40	-4.40	-5.77	-12.59	-21.15
Mu(+), ton-m:	7.34	4.40	4.40	6.11	7.16	7.40	7.35	6.48	4.71	4.40	7.05
As(-), cm2:	13.43	7.90	6.93	6.93	6.93	6.93	6.93	6.93	6.93	7.48	12.87
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	14.49	13.83	11.63	9.43	7.23	5.03	6.96	9.16	11.36	13.56	14.23
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

B-1 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 C-1

BEAM: 1(C-D) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-22.37	-13.33	-6.11	-4.65	-4.65	-4.65	-4.65	-4.65	-6.72	-14.07	-23.23
Mu(+), ton-m:	7.46	4.65	4.74	6.56	7.51	7.74	7.65	6.60	4.71	4.65	7.74
As(-), cm2:	13.66	7.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	8.39	14.22
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	15.02	14.32	12.01	9.70	7.39	5.25	7.57	9.88	12.19	14.50	15.20
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-1 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 D-1

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:41 p. m. 5/01/2020

BEAM: 1(D-E) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-28.06	-15.93	-6.47	-5.68	-5.68	-5.68	-5.68	-5.68	-6.66	-16.19	-28.40
Mu(+), ton-m:	9.35	5.68	5.68	8.62	10.44	10.78	10.36	8.47	5.68	5.68	9.47
As(-), cm2:	17.44	9.55	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.71	17.66
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	20.39	19.35	15.86	12.36	8.87	5.48	8.97	12.47	15.96	19.46	20.50
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-1 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 E-1

BEAM: 1(E-F) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-28.75	-16.51	-6.93	-5.75	-5.75	-5.75	-5.75	-5.75	-6.55	-15.97	-28.07
Mu(+), ton-m:	9.58	5.75	5.75	8.20	10.12	10.58	10.26	8.47	5.75	5.75	9.36
As(-), cm2:	17.90	9.91	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.58	17.44
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	20.60	19.54	16.05	12.55	9.06	5.56	8.85	12.35	15.84	19.34	20.40
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-1 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 F-1

BEAM: 1(F-G) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-28.72	-16.48	-6.91	-5.74	-5.74	-5.74	-5.74	-5.74	-6.55	-15.98	-28.08
Mu(+), ton-m:	9.57	5.74	5.74	8.22	10.14	10.59	10.27	8.48	5.74	5.74	9.36
As(-), cm2:	17.88	9.90	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.58	17.45
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	20.59	19.53	16.04	12.54	9.05	5.55	8.86	12.35	15.84	19.34	20.40
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-1 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 G-1

BEAM: 1(G-H) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-28.60	-16.41	-6.87	-5.72	-5.72	-5.72	-5.72	-5.72	-6.61	-16.05	-28.17
Mu(+), ton-m:	9.53	5.72	5.72	8.22	10.13	10.54	10.17	8.34	5.72	5.72	9.39
As(-), cm2:	17.80	9.85	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.63	17.51
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	20.48	19.42	15.93	12.43	8.94	5.44	8.82	12.31	15.81	19.30	20.36
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-1 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 H-1

BEAM: 1(H-I) FLOOR: 2

	Length:	L = 7.17 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.57 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.27	2.93	3.59	4.24	4.90	5.56	6.22	6.87
Mu(-), ton-m:	-30.47	-17.72	-7.59	-6.09	-6.09	-6.09	-6.09	-6.09	-6.09	-14.45	-26.21
Mu(+), ton-m:	10.16	6.09	6.09	8.16	10.34	11.37	11.87	10.72	7.49	6.09	8.74
As(-), cm2:	19.08	10.68	6.93	6.93	6.93	6.93	6.93	6.93	6.93	8.63	16.19
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	7.04	6.93	6.93	6.93	6.93
Vu, ton:	21.42	20.55	17.65	14.33	10.85	7.37	9.37	12.85	16.19	19.08	19.95
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-1 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 I-1

BEAM: 2(A-B) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-31.59	-16.57	-7.32	-7.32	-7.32	-7.32	-7.32	-7.32	-7.73	-20.45	-36.58
Mu(+), ton-m:	10.53	7.32	7.32	12.32	15.04	16.23	13.49	9.52	7.32	7.32	12.19
As(-), cm2:	19.85	9.95	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.42	23.37
As(+), cm2:	6.93	6.93	6.93	7.31	8.99	9.74	8.04	6.93	6.93	6.93	7.24
Vu, ton:	25.64	24.22	19.42	14.72	10.01	6.99	11.70	16.41	21.11	26.01	27.35
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A-2 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 B-2

BEAM: 2(B-C) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-34.59	-19.25	-7.25	-6.92	-6.92	-6.92	-6.92	-6.92	-6.92	-18.20	-33.31
Mu(+), ton-m:	11.53	6.92	6.92	9.03	12.60	14.71	12.77	9.42	6.92	6.92	11.10
As(-), cm2:	21.95	11.65	6.93	6.93	6.93	6.93	6.93	6.93	6.93	10.98	21.04
As(+), cm2:	6.93	6.93	6.93	6.93	7.49	8.79	7.59	6.93	6.93	6.93	6.93
Vu, ton:	25.80	24.17	19.00	14.33	9.67	5.01	9.31	13.97	18.63	23.77	25.39
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

B-2 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 C-2

BEAM: 2(C-D) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.50 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.95	1.60	2.25	2.90	3.55	4.20	4.85	5.50	6.15	6.80
Mu(-), ton-m:	-35.12	-19.86	-7.77	-7.20	-7.20	-7.20	-7.20	-7.20	-9.30	-20.94	-36.00
Mu(+), ton-m:	11.71	7.20	7.20	9.22	12.17	13.82	13.43	10.88	7.20	7.20	12.00
As(-), cm2:	22.32	12.04	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.73	22.95
As(+), cm2:	6.94	6.93	6.93	6.93	7.22	8.24	8.00	6.93	6.93	6.93	7.12
Vu, ton:	26.09	24.85	20.34	15.82	11.30	7.10	11.05	15.56	19.95	24.02	25.22
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-2 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 D-2

BEAM: 2(D-E) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-49.66	-28.35	-11.64	-9.93	-9.93	-9.93	-9.93	-9.93	-11.18	-27.58	-48.67
Mu(+), ton-m:	16.55	9.93	9.93	13.40	17.56	19.19	17.89	13.95	9.93	9.93	16.22
As(-), cm2:	33.28	17.63	6.93	6.93	6.93	6.93	6.93	6.93	6.93	17.11	32.49
As(+), cm2:	9.94	6.93	6.93	7.98	10.58	11.61	10.78	8.32	6.93	6.93	9.73
Vu, ton:	36.30	34.68	28.34	21.85	15.37	8.88	15.02	21.51	28.00	34.33	35.96
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

D-2 11 #3+1r @ 10 7 #3 @ 10 12 #3 @ 22.5 7 #3 @ 10 11 #3+1r @ 10 E-2

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:41 p. m. 5/01/2020

BEAM: 2(E-F) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-49.31	-28.27	-11.78	-9.86	-9.86	-9.86	-9.86	-9.86	-11.24	-27.48	-48.32
Mu(+), ton-m:	16.44	9.86	9.86	13.40	17.40	18.86	17.59	13.78	9.86	9.86	16.11
As(-), cm2:	33.00	17.58	6.98	6.93	6.93	6.93	6.93	6.93	6.93	17.04	32.22
As(+), cm2:	9.87	6.93	6.93	7.98	10.48	11.40	10.59	8.21	6.93	6.93	9.66
Vu, ton:	35.80	34.20	28.11	21.72	15.34	8.96	15.04	21.42	27.80	33.90	35.49
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

E-2 11 #3+1r @ 10 7 #3 @ 10 12 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 F-2

BEAM: 2(F-G) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-49.87	-28.53	-11.81	-9.97	-9.97	-9.97	-9.97	-9.97	-11.26	-27.72	-48.85
Mu(+), ton-m:	16.62	9.97	9.97	13.53	17.65	19.19	17.85	13.93	9.97	9.97	16.28
As(-), cm2:	33.45	17.75	7.00	6.93	6.93	6.93	6.93	6.93	6.93	17.20	32.64
As(+), cm2:	9.99	6.93	6.93	8.06	10.63	11.61	10.76	8.31	6.93	6.93	9.77
Vu, ton:	36.33	34.71	28.43	21.94	15.45	8.96	15.13	21.62	28.11	34.39	36.02
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

F-2 11 #3+1r @ 10 7 #3 @ 10 12 #3 @ 22.5 7 #3 @ 10 11 #3+1r @ 10 G-2

BEAM: 2(G-H) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-49.38	-28.30	-11.77	-9.88	-9.88	-9.88	-9.88	-9.88	-11.29	-27.60	-48.51
Mu(+), ton-m:	16.46	9.88	9.88	13.41	17.42	18.88	17.60	13.76	9.88	9.88	16.17
As(-), cm2:	33.06	17.60	6.98	6.93	6.93	6.93	6.93	6.93	6.93	17.13	32.37
As(+), cm2:	9.88	6.93	6.93	7.98	10.49	11.41	10.60	8.20	6.93	6.93	9.70
Vu, ton:	35.89	34.28	28.13	21.73	15.33	8.92	15.05	21.46	27.86	34.01	35.61
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

G-2 11 #3+1r @ 10 7 #3 @ 10 12 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 H-2

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:41 p. m. 5/01/2020

BEAM: 2(H-I) FLOOR: 2

Length: L = 7.17 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.37 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.31	2.95	3.59	4.22	4.86	5.50	6.14	6.77
Mu(-), ton-m:	-52.20	-29.78	-12.28	-10.44	-10.44	-10.44	-10.44	-10.44	-10.88	-27.67	-49.53
Mu(+), ton-m:	17.40	10.44	10.44	13.96	18.59	20.97	19.26	15.20	10.44	10.44	16.51
As(-), cm2:	35.34	18.60	7.29	6.93	6.93	6.93	6.93	6.93	6.93	17.17	33.17
As(+), cm2:	10.47	6.93	6.93	8.32	11.23	12.76	11.65	9.10	6.93	6.93	9.91
Vu, ton:	38.31	36.63	30.15	23.33	16.52	9.71	15.64	22.46	29.27	35.75	37.44
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

H-2 11 #3+1r @ 10 8 #3 @ 10 11 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 I-2

BEAM: 3(A-B) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-31.30	-16.35	-7.34	-7.34	-7.34	-7.34	-7.34	-7.34	-7.79	-20.54	-36.68
Mu(+), ton-m:	10.43	7.34	7.34	12.26	14.97	16.16	13.38	9.33	7.34	7.34	12.23
As(-), cm2:	19.65	9.81	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.47	23.43
As(+), cm2:	6.93	6.93	6.93	7.28	8.95	9.69	7.97	6.93	6.93	6.93	7.26
Vu, ton:	25.59	24.15	19.33	14.62	9.91	7.01	11.71	16.42	21.13	26.07	27.40
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A-3 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 B-3

BEAM: 3(B-C) FLOOR: 2

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-35.87	-19.92	-7.43	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-17.04	-32.29
Mu(+), ton-m:	11.96	7.17	7.17	9.20	13.19	15.72	14.00	10.54	7.17	7.17	10.76
As(-), cm2:	22.86	12.08	6.93	6.93	6.93	6.93	6.93	6.93	6.93	10.25	20.33
As(+), cm2:	7.09	6.93	6.93	6.93	7.85	9.42	8.35	6.93	6.93	6.93	6.93
Vu, ton:	27.20	25.52	20.02	15.22	10.42	5.62	9.36	14.16	18.96	24.30	25.98
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

B-3 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 C-3

BEAM: 3(C-D) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.95	1.60	2.25	2.90	3.55	4.20	4.85	5.50	6.15	6.80
Mu(-), ton-m:	-25.19	-15.72	-7.84	-5.04	-5.04	-5.04	-5.04	-5.04	-7.89	-14.86	-23.69
Mu(+), ton-m:	8.40	5.04	5.04	5.38	6.23	6.94	8.20	8.07	6.96	5.55	7.90
As(-), cm2:	15.51	9.42	6.93	6.93	6.93	6.93	6.93	6.93	6.93	8.88	14.52
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	15.82	15.17	12.95	10.74	8.52	6.31	7.22	9.44	11.65	13.87	14.51
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-3 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 D-3

BEAM: 3(D-E) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-48.99	-27.79	-11.23	-9.80	-9.80	-9.80	-9.80	-9.80	-11.06	-27.47	-48.56
Mu(+), ton-m:	16.33	9.80	9.80	13.49	17.67	19.31	17.87	13.82	9.80	9.80	16.19
As(-), cm2:	32.74	17.25	6.93	6.93	6.93	6.93	6.93	6.93	6.93	17.04	32.41
As(+), cm2:	9.80	6.93	6.93	8.03	10.64	11.69	10.77	8.24	6.93	6.93	9.71
Vu, ton:	36.09	34.43	27.98	21.49	15.00	8.51	14.83	21.32	27.81	34.27	35.93
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

D-3 11 #3+1r @ 10 7 #3 @ 10 12 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 E-3

BEAM: 3(E-F) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-48.39	-27.72	-11.52	-9.68	-9.68	-9.68	-9.68	-9.68	-11.03	-27.00	-47.49
Mu(+), ton-m:	16.13	9.68	9.68	13.15	17.10	18.54	17.26	13.50	9.68	9.68	15.83
As(-), cm2:	32.26	17.20	6.93	6.93	6.93	6.93	6.93	6.93	6.93	16.72	31.56
As(+), cm2:	9.67	6.93	6.93	7.83	10.28	11.20	10.39	8.04	6.93	6.93	9.49
Vu, ton:	35.18	33.61	27.57	21.29	15.01	8.74	14.74	21.02	27.29	33.33	34.90
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

E-3 11 #3+1r @ 10 6 #3 @ 12.5 12 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 F-3

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:41 p. m. 5/01/2020

BEAM: 3(F-G) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-49.50	-28.24	-11.59	-9.90	-9.90	-9.90	-9.90	-9.90	-11.11	-27.52	-48.61
Mu(+), ton-m:	16.50	9.90	9.90	13.43	17.60	19.20	17.78	13.79	9.90	9.90	16.20
As(-), cm2:	33.16	17.55	6.93	6.93	6.93	6.93	6.93	6.93	6.93	17.07	32.44
As(+), cm2:	9.91	6.93	6.93	8.00	10.60	11.62	10.72	8.22	6.93	6.93	9.72
Vu, ton:	36.24	34.62	28.20	21.71	15.22	8.73	14.94	21.43	27.92	34.34	35.96
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

F-3 11 #3+1r @ 10 7 #3 @ 10 12 #3 @ 22.5 7 #3 @ 10 11 #3+1r @ 10 G-3

BEAM: 3(G-H) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-49.11	-28.04	-11.56	-9.82	-9.82	-9.82	-9.82	-9.82	-11.18	-27.52	-48.45
Mu(+), ton-m:	16.37	9.82	9.82	13.34	17.41	18.91	17.55	13.60	9.82	9.82	16.15
As(-), cm2:	32.84	17.42	6.93	6.93	6.93	6.93	6.93	6.93	6.93	17.07	32.32
As(+), cm2:	9.83	6.93	6.93	7.94	10.48	11.44	10.57	8.10	6.93	6.93	9.69
Vu, ton:	35.89	34.28	27.94	21.51	15.09	8.66	14.88	21.31	27.73	34.07	35.68
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

G-3 11 #3+1r @ 10 7 #3 @ 10 12 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 H-3

BEAM: 3(H-I) FLOOR: 2

Length: L = 7.17 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.37 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.31	2.95	3.59	4.22	4.86	5.50	6.14	6.77
Mu(-), ton-m:	-53.58	-30.28	-12.23	-10.72	-10.72	-10.72	-10.72	-10.72	-11.09	-28.54	-51.38
Mu(+), ton-m:	17.86	10.72	10.72	14.36	19.42	22.48	20.00	15.41	10.72	10.72	17.13
As(-), cm2:	36.49	18.94	7.26	6.93	6.93	6.93	6.93	6.93	6.93	17.76	34.67
As(+), cm2:	10.77	6.93	6.93	8.57	11.76	13.73	12.13	9.23	6.93	6.93	10.30
Vu, ton:	39.93	38.13	30.86	23.69	16.53	9.36	15.80	22.96	30.13	37.35	39.20
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	20.00	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

H-3 11 #3+1r @ 10 10 #3 @ 10 10 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 I-3

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
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BEAM: 4(A-B) FLOOR: 2

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.80 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.68	1.36	2.04	2.72	3.40	4.08	4.76	5.44	6.12	6.80
Mu(-), ton-m:	-43.96	-24.46	-9.08	-9.08	-9.08	-9.08	-9.08	-9.08	-10.37	-25.66	-45.38
Mu(+), ton-m:	14.65	9.08	9.08	13.80	16.76	17.72	16.34	12.44	9.08	9.08	15.13
As(-), cm2:	28.83	15.03	6.93	6.93	6.93	6.93	6.93	6.93	6.93	15.82	29.91
As(+), cm2:	8.75	6.93	6.93	8.22	10.07	10.68	9.81	7.39	6.93	6.93	9.05
Vu, ton:	33.57	31.75	26.10	20.45	14.80	9.74	13.74	19.07	24.41	29.74	31.47
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	17.50	10.00	10.00
DESIGN	A-4	11 #3+1r @ 10	5 #3 @ 12.5	16 #3 @ 22.5	3 #3 @ 15	11 #3+1r @ 10					B-4

BEAM: 4(B-C) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-44.18	-25.56	-10.94	-8.84	-8.84	-8.84	-8.84	-8.84	-9.97	-24.12	-42.38
Mu(+), ton-m:	14.73	8.84	8.84	11.95	15.41	16.88	15.76	12.66	8.84	8.84	14.13
As(-), cm2:	28.99	15.76	6.93	6.93	6.93	6.93	6.93	6.93	6.93	14.81	27.63
As(+), cm2:	8.80	6.93	6.93	7.09	9.22	10.15	9.45	7.52	6.93	6.93	8.43
Vu, ton:	31.60	30.21	25.24	19.76	14.18	8.61	13.62	19.19	24.68	29.65	31.04
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	17.50	22.50	22.50	22.50	22.50	22.50	17.50	10.00	10.00
DESIGN	B-4	11 #3+1r @ 10	3 #3 @ 15	15 #3 @ 22.5	3 #3 @ 15	11 #3+1r @ 10					C-4

BEAM: 4(C-D) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-31.78	-19.66	-9.85	-6.36	-6.36	-6.36	-6.36	-6.36	-9.48	-19.10	-31.07
Mu(+), ton-m:	10.59	6.36	6.99	8.88	9.84	9.40	10.00	9.18	7.29	6.36	10.36
As(-), cm2:	19.98	11.91	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.55	19.49
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	20.08	19.25	16.30	13.34	10.38	7.43	10.16	13.11	16.07	19.03	19.86
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	C-4	11 #3+1r @ 10	19 #3 @ 22.5	11 #3+1r @ 10							D-4

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:41 p. m. 5/01/2020

BEAM: 4(D-E) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.08	1.76	2.44	3.12	3.80	4.48	5.16	5.84	6.52	7.20
Mu(-), ton-m:	-51.71	-28.64	-10.92	-10.34	-10.34	-10.34	-10.34	-10.34	-10.34	-25.96	-48.99
Mu(+), ton-m:	17.24	10.34	10.34	14.36	19.52	20.87	18.90	13.51	10.34	10.34	16.33
As(-), cm2:	34.94	17.82	6.93	6.93	6.93	6.93	6.93	6.93	6.93	16.03	32.74
As(+), cm2:	10.37	6.93	6.93	8.57	11.82	12.69	11.43	8.05	6.93	6.93	9.80
Vu, ton:	37.40	35.29	28.78	22.27	15.52	8.98	15.44	22.33	29.23	36.12	38.39
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

D-4 11 #3+1r @ 10 9 #3 @ 10 12 #3 @ 22.5 9 #3 @ 10 11 #3+1r @ 10 E-4

BEAM: 4(E-Ea) FLOOR: 2

Length: L = 1.80 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-7.59	-6.04	-4.51	-3.01	-1.52	-1.52	-1.52	-2.86	-4.28	-5.72	-7.19
Mu(+), ton-m:	6.70	5.39	4.05	2.71	1.52	1.52	1.52	2.83	4.22	5.61	6.97
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	9.51	9.51	9.51	9.46	9.34	9.23	9.11	8.99	9.04	9.04	9.04
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

E-4 18 #3+1r @ 10 4:Ea

BEAM: 4(Ea-F) FLOOR: 2

Length: L = 5.40 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 5.00 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Mu(-), ton-m:	-35.15	-21.30	-9.83	-7.42	-7.42	-7.42	-7.42	-7.42	-12.22	-23.30	-37.12
Mu(+), ton-m:	11.72	7.42	7.58	9.87	10.30	11.14	12.20	11.74	9.87	7.45	12.37
As(-), cm2:	22.35	12.97	6.93	6.93	6.93	6.93	6.93	6.93	7.25	14.27	23.75
As(+), cm2:	6.94	6.93	6.93	6.93	6.93	6.93	7.24	6.96	6.93	6.93	7.35
Vu, ton:	30.96	30.60	26.13	21.66	17.19	12.72	13.46	17.93	22.40	26.87	27.22
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

4:Ea 11 #3+1r @ 10 2 #3 @ 15 11 #3 @ 22.5 11 #3+1r @ 10 F-4

BEAM: 4(F-G) FLOOR: 2

Length:	L = 7.20 m	a = 0.40 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-48.34	-27.28	-10.87	-9.67	-9.67	-9.67	-9.67	-9.67	-10.79	-27.14	-48.15
Mu(+), ton-m:	16.11	9.67	9.67	13.36	17.61	19.31	17.70	13.51	9.67	9.67	16.05
As(-), cm2:	32.23	16.91	6.93	6.93	6.93	6.93	6.93	6.93	6.93	16.81	32.08
As(+), cm2:	9.66	6.93	6.93	7.95	10.61	11.69	10.67	8.04	6.93	6.93	9.63
Vu, ton:	35.84	34.04	27.55	21.06	14.57	8.09	14.50	20.99	27.48	33.97	35.76
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

F-4 11 #3+1r @ 10 6 #3 @ 12.5 12 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 G-4

BEAM: 4(G-H) FLOOR: 2

Length:	L = 7.20 m	a = 0.40 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-48.39	-27.47	-11.13	-9.68	-9.68	-9.68	-9.68	-9.68	-10.81	-27.03	-47.84
Mu(+), ton-m:	16.13	9.68	9.68	13.10	17.30	18.92	17.41	13.32	9.68	9.68	15.95
As(-), cm2:	32.27	17.03	6.93	6.93	6.93	6.93	6.93	6.93	6.93	16.74	31.84
As(+), cm2:	9.68	6.93	6.93	7.79	10.41	11.44	10.48	7.93	6.93	6.93	9.56
Vu, ton:	35.69	33.92	27.49	21.07	14.64	8.21	14.47	20.90	27.32	33.75	35.52
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

G-4 11 #3+1r @ 10 6 #3 @ 12.5 12 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 H-4

BEAM: 4(H-I) FLOOR: 2

Length:	L = 7.17 m	a = 0.40 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.37 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.40	1.04	1.68	2.31	2.95	3.59	4.22	4.86	5.50	6.14	6.77
Mu(-), ton-m:	-52.06	-29.26	-11.64	-10.41	-10.41	-10.41	-10.41	-10.41	-10.85	-28.01	-50.46
Mu(+), ton-m:	17.35	10.41	10.41	14.08	19.09	22.13	19.59	14.96	10.41	10.41	16.82
As(-), cm2:	35.23	18.25	6.93	6.93	6.93	6.93	6.93	6.93	6.93	17.40	33.92
As(+), cm2:	10.45	6.93	6.93	8.40	11.54	13.51	11.87	8.95	6.93	6.93	10.11
Vu, ton:	39.08	37.24	29.98	22.93	15.88	8.83	15.32	22.37	29.42	36.64	38.52
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

H-4 11 #3+1r @ 10 8 #3 @ 10 11 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 I-4

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:41 p. m. 5/01/2020

BEAM: 5(A-B) FLOOR: 2

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 7.20 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.48	7.20
Mu(-), ton-m:	-53.39	-28.54	-10.68	-10.68	-10.68	-10.68	-10.68	-10.68	-10.68	-28.20	-53.08
Mu(+), ton-m:	17.80	10.68	10.68	16.09	21.21	23.40	20.76	15.62	10.68	10.68	17.69
As(-), cm2:	36.34	17.75	6.93	6.93	6.93	6.93	6.93	6.93	6.93	17.53	36.07
As(+), cm2:	10.73	6.93	6.93	9.65	12.91	14.33	12.62	9.36	6.93	6.93	10.66
Vu, ton:	36.91	34.36	27.42	20.47	13.53	6.61	13.56	20.50	27.45	34.39	36.94
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

A-5 11 #3+1r @ 10 9 #3 @ 10 14 #3 @ 22.5 9 #3 @ 10 11 #3+1r @ 10 B-5

BEAM: 5(B-C) FLOOR: 2

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.80 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.68	1.36	2.04	2.72	3.40	4.08	4.76	5.44	6.12	6.80
Mu(-), ton-m:	-52.53	-29.20	-10.51	-10.51	-10.51	-10.51	-10.51	-10.51	-10.98	-28.69	-51.71
Mu(+), ton-m:	17.51	10.51	10.51	14.45	18.72	20.35	18.97	14.26	10.51	10.51	17.24
As(-), cm2:	35.62	18.20	6.93	6.93	6.93	6.93	6.93	6.93	6.93	17.86	34.94
As(+), cm2:	10.54	6.93	6.93	8.63	11.31	12.36	11.47	8.51	6.93	6.93	10.37
Vu, ton:	39.12	36.91	30.11	23.30	16.50	9.69	15.71	22.14	28.57	34.99	37.07
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

B-5 11 #3+1r @ 10 9 #3 @ 10 12 #3 @ 22.5 9 #3 @ 10 11 #3+1r @ 10 C-5

BEAM: 5(C-D) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-47.55	-27.25	-11.33	-9.51	-9.51	-9.51	-9.51	-9.51	-10.99	-26.74	-46.91
Mu(+), ton-m:	15.85	9.51	9.51	12.89	16.74	18.14	16.88	13.16	9.51	9.51	15.64
As(-), cm2:	31.60	16.88	6.93	6.93	6.93	6.93	6.93	6.93	6.93	16.55	31.10
As(+), cm2:	9.50	6.93	6.93	7.66	10.06	10.94	10.15	7.83	6.93	6.93	9.37
Vu, ton:	34.56	33.02	27.05	20.87	14.70	8.53	14.50	20.67	26.84	32.82	34.36
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

C-5 11 #3+1r @ 10 5 #3 @ 12.5 13 #3 @ 22.5 5 #3 @ 12.5 11 #3+1r @ 10 D-5

BEAM: 5(D-E) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.08	1.76	2.44	3.12	3.80	4.48	5.16	5.84	6.52	7.20
Mu(-), ton-m:	-52.51	-29.30	-11.40	-10.50	-10.50	-10.50	-10.50	-10.50	-10.50	-26.12	-49.16
Mu(+), ton-m:	17.50	10.50	10.50	14.33	19.44	20.76	18.89	13.67	10.50	10.50	16.39
As(-), cm2:	35.60	18.27	6.93	6.93	6.93	6.93	6.93	6.93	6.93	16.13	32.88
As(+), cm2:	10.54	6.93	6.93	8.55	11.77	12.62	11.42	8.14	6.93	6.93	9.84
Vu, ton:	37.62	35.52	29.00	22.49	15.92	9.36	15.67	22.56	29.46	36.35	38.58
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

D-5 11 #3+1r @ 10 9 #3 @ 10 12 #3 @ 22.5 9 #3 @ 10 11 #3+1r @ 10 E-5

BEAM: 5(E-Ea) FLOOR: 2

Length: L = 1.80 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-7.99	-6.36	-4.76	-3.18	-1.61	-1.60	-1.60	-2.92	-4.38	-5.86	-7.35
Mu(+), ton-m:	6.86	5.51	4.14	2.76	1.60	1.60	1.60	2.95	4.43	5.89	7.32
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	10.12	10.12	10.12	10.07	9.95	9.84	9.72	9.60	9.55	9.55	9.55
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

E-5 18 #3+1r @ 10 5:Ea

BEAM: 5(Ea-F) FLOOR: 2

Length: L = 5.40 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 5.00 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Mu(-), ton-m:	-35.74	-21.77	-10.18	-7.54	-7.54	-7.54	-7.54	-7.54	-12.59	-23.77	-37.71
Mu(+), ton-m:	11.91	7.54	7.87	10.04	10.36	11.17	12.31	11.97	10.22	7.92	12.57
As(-), cm2:	22.76	13.27	6.93	6.93	6.93	6.93	6.93	6.93	7.48	14.58	24.18
As(+), cm2:	7.06	6.93	6.93	6.93	6.93	6.93	7.31	7.10	6.93	6.93	7.47
Vu, ton:	31.14	30.79	26.32	21.84	17.37	12.90	13.62	18.09	22.56	27.03	27.39
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

5:Ea 11 #3+1r @ 10 2 #3 @ 15 11 #3 @ 22.5 11 #3+1r @ 10 F-5

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:41 p. m. 5/01/2020

BEAM: 5(F-G) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-48.73	-27.59	-11.11	-9.75	-9.75	-9.75	-9.75	-9.75	-11.06	-27.50	-48.60
Mu(+), ton-m:	16.24	9.75	9.75	13.55	17.71	19.32	17.79	13.68	9.75	9.75	16.20
As(-), cm2:	32.54	17.12	6.93	6.93	6.93	6.93	6.93	6.93	6.93	17.06	32.44
As(+), cm2:	9.75	6.93	6.93	8.07	10.67	11.69	10.72	8.15	6.93	6.93	9.72
Vu, ton:	36.00	34.28	27.80	21.31	14.83	8.34	14.77	21.26	27.75	34.22	35.94
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

F-5 11 #3+1r @ 10 6 #3 @ 12.5 12 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 G-5

BEAM: 5(G-H) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-48.54	-27.66	-11.34	-9.71	-9.71	-9.71	-9.71	-9.71	-11.09	-27.33	-48.12
Mu(+), ton-m:	16.18	9.71	9.71	13.24	17.29	18.78	17.37	13.40	9.71	9.71	16.04
As(-), cm2:	32.39	17.17	6.93	6.93	6.93	6.93	6.93	6.93	6.93	16.94	32.06
As(+), cm2:	9.71	6.93	6.93	7.88	10.40	11.35	10.46	7.98	6.93	6.93	9.62
Vu, ton:	35.57	33.94	27.60	21.21	14.83	8.45	14.70	21.08	27.47	33.81	35.44
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

G-5 11 #3+1r @ 10 6 #3 @ 12.5 12 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 H-5

BEAM: 5(H-I) FLOOR: 2

Length: L = 7.17 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.37 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.31	2.95	3.59	4.22	4.86	5.50	6.14	6.77
Mu(-), ton-m:	-53.10	-29.88	-11.93	-10.62	-10.62	-10.62	-10.62	-10.62	-11.09	-28.55	-51.40
Mu(+), ton-m:	17.70	10.62	10.62	14.40	19.46	22.53	19.98	15.31	10.62	10.62	17.13
As(-), cm2:	36.09	18.67	7.07	6.93	6.93	6.93	6.93	6.93	6.93	17.77	34.69
As(+), cm2:	10.66	6.93	6.93	8.60	11.78	13.77	12.12	9.17	6.93	6.93	10.31
Vu, ton:	39.77	37.93	30.60	23.43	16.26	9.10	15.68	22.85	30.01	37.30	39.19
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

H-5 11 #3+1r @ 10 8 #3 @ 10 11 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 I-5

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:41 p. m. 5/01/2020

BEAM: 6(A-B) FLOOR: 2

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.80 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.68	1.36	2.04	2.72	3.40	4.08	4.76	5.44	6.12	6.80
Mu(-), ton-m:	-45.15	-25.78	-10.13	-9.03	-9.03	-9.03	-9.03	-9.03	-10.63	-25.64	-44.97
Mu(+), ton-m:	15.05	9.03	9.03	13.63	16.36	17.06	15.92	12.53	9.03	9.03	14.99
As(-), cm2:	29.73	15.90	6.93	6.93	6.93	6.93	6.93	6.93	6.93	15.81	29.60
As(+), cm2:	9.00	6.93	6.93	8.12	9.82	10.26	9.54	7.44	6.93	6.93	8.96
Vu, ton:	33.46	31.69	26.19	20.70	15.21	9.96	13.46	18.65	23.84	29.03	30.70
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	20.00	10.00	10.00

DESIGN

A-6 11 #3+1r @ 10 5 #3 @ 12.5 16 #3 @ 22.5 2 #3 @ 15 11 #3+1r @ 10 B-6

BEAM: 6(B-C) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-43.81	-25.73	-11.47	-8.76	-8.76	-8.76	-8.76	-8.76	-11.02	-25.07	-42.99
Mu(+), ton-m:	14.60	8.76	8.76	12.24	15.07	15.95	15.22	12.55	8.76	8.76	14.33
As(-), cm2:	28.71	15.87	6.93	6.93	6.93	6.93	6.93	6.93	6.93	15.43	28.09
As(+), cm2:	8.72	6.93	6.93	7.26	9.01	9.56	9.11	7.46	6.93	6.93	8.55
Vu, ton:	30.48	29.15	24.42	19.68	14.47	9.14	14.21	19.43	24.16	28.90	30.23
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	17.50	22.50	22.50	22.50	22.50	22.50	20.00	10.00	10.00

DESIGN

B-6 11 #3+1r @ 10 3 #3 @ 15 15 #3 @ 22.5 2 #3 @ 15 11 #3+1r @ 10 C-6

BEAM: 6(C-D) FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.40 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-42.55	-25.07	-11.27	-8.51	-8.51	-8.51	-8.51	-8.51	-11.15	-24.88	-42.31
Mu(+), ton-m:	14.18	8.51	8.51	12.03	14.61	15.32	14.67	12.15	8.51	8.51	14.10
As(-), cm2:	27.76	15.43	6.93	6.93	6.93	6.93	6.93	6.93	6.93	15.31	27.58
As(+), cm2:	8.46	6.93	6.93	7.14	8.72	9.17	8.77	7.21	6.93	6.93	8.41
Vu, ton:	29.41	28.13	23.57	19.00	14.11	8.97	14.03	18.92	23.49	28.05	29.33
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	20.00	22.50	22.50	22.50	22.50	22.50	20.00	10.00	10.00

DESIGN

C-6 11 #3+1r @ 10 2 #3 @ 17.5 15 #3 @ 22.5 2 #3 @ 17.5 11 #3+1r @ 10 D-6

BEAM: 6(D-E) FLOOR: 2

Length:	L = 7.20 m	a = 0.40 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.40	1.08	1.76	2.44	3.12	3.80	4.48	5.16	5.84	6.52	7.20
Mu(-), ton-m:	-48.99	-27.87	-11.53	-9.80	-9.80	-9.80	-9.80	-9.80	-9.80	-25.00	-46.98
Mu(+), ton-m:	16.33	9.80	9.80	13.66	17.95	18.99	17.64	13.63	9.80	9.80	15.66
As(-), cm2:	32.74	17.30	6.93	6.93	6.93	6.93	6.93	6.93	6.93	15.39	31.16
As(+), cm2:	9.80	6.93	6.93	8.14	10.82	11.48	10.62	8.12	6.93	6.93	9.38
Vu, ton:	34.21	32.43	26.90	21.38	15.83	10.07	15.05	21.59	28.31	35.03	37.21
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

D-6 11 #3+1r @ 10 6 #3 @ 12.5 13 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 E-6

BEAM: 6(E-Ea) FLOOR: 2

Length:	L = 1.80 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 1.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-8.11	-6.46	-4.83	-3.22	-1.63	-1.63	-1.66	-3.26	-4.88	-6.52	-8.17
Mu(+), ton-m:	7.55	6.06	4.56	3.04	1.63	1.63	1.63	3.07	4.60	6.11	7.60
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	9.97	9.97	9.97	9.91	9.80	9.73	9.84	9.96	10.01	10.01	10.01
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

E-6 18 #3+1r @ 10 6:Ea

BEAM: 6(Ea-F) FLOOR: 2

Length:	L = 5.40 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 5.00 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Mu(-), ton-m:	-40.92	-25.35	-11.25	-8.38	-8.38	-8.38	-8.38	-8.38	-14.18	-26.61	-41.90
Mu(+), ton-m:	13.64	8.38	8.48	13.76	14.63	14.34	14.17	12.83	10.53	8.38	13.97
As(-), cm2:	28.09	17.18	8.49	8.49	6.93	6.93	6.93	6.93	8.46	16.46	27.27
As(+), cm2:	9.68	8.49	8.49	9.76	8.74	8.56	8.45	7.63	6.93	6.93	8.33
Vu, ton:	35.57	35.37	32.86	30.36	14.86	14.03	18.23	22.44	26.65	30.85	31.19
Tu, ton-m:	1.62	1.62	1.62	1.62	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	7.50	7.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

6:Ea 11 #3+1r @ 10 9 #3 @ 7.5 7 #3 @ 22.5 3 #3 @ 15 11 #3+1r @ 10 F-6

BEAM: 6(F-G) FLOOR: 2

Length:	L = 7.20 m	a = 0.40 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-47.71	-27.40	-11.49	-9.54	-9.54	-9.54	-9.54	-9.54	-11.49	-27.37	-47.65
Mu(+), ton-m:	15.90	9.54	9.54	13.42	17.02	18.23	17.10	13.53	9.54	9.54	15.88
As(-), cm2:	31.73	16.99	6.93	6.93	6.93	6.93	6.93	6.93	6.93	16.97	31.68
As(+), cm2:	9.53	6.93	6.93	7.99	10.23	11.00	10.29	8.06	6.93	6.93	9.52
Vu, ton:	34.41	32.87	27.29	21.15	15.02	8.88	14.98	21.11	27.25	32.83	34.37
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

F-6 11 #3+1r @ 10 6 #3 @ 12.5 12 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 G-6

BEAM: 6(G-H) FLOOR: 2

Length:	L = 7.20 m	a = 0.40 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.40 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-47.71	-27.55	-11.71	-9.54	-9.54	-9.54	-9.54	-9.54	-11.48	-27.24	-47.33
Mu(+), ton-m:	15.90	9.54	9.54	13.23	16.77	17.87	16.84	13.38	9.54	9.54	15.78
As(-), cm2:	31.73	17.09	6.94	6.93	6.93	6.93	6.93	6.93	6.93	16.88	31.43
As(+), cm2:	9.53	6.93	6.93	7.87	10.08	10.77	10.12	7.97	6.93	6.93	9.45
Vu, ton:	34.19	32.67	27.21	21.15	15.08	9.01	14.96	21.03	27.09	32.55	34.07
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

G-6 11 #3+1r @ 10 6 #3 @ 12.5 12 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 H-6

BEAM: 6(H-I) FLOOR: 2

Length:	L = 7.17 m	a = 0.40 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.37 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.40	1.04	1.68	2.31	2.95	3.59	4.22	4.86	5.50	6.14	6.77
Mu(-), ton-m:	-51.09	-29.17	-12.16	-10.22	-10.22	-10.22	-10.22	-10.22	-11.56	-28.21	-49.84
Mu(+), ton-m:	17.03	10.22	10.22	14.17	18.46	20.90	18.91	14.93	10.22	10.22	16.61
As(-), cm2:	34.44	18.19	7.21	6.93	6.93	6.93	6.93	6.93	6.93	17.53	33.43
As(+), cm2:	10.24	6.93	6.93	8.46	11.14	12.70	11.43	8.93	6.93	6.93	9.98
Vu, ton:	37.32	35.68	29.53	22.88	16.22	9.57	15.77	22.43	29.08	35.23	36.87
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	12.50	10.00	10.00

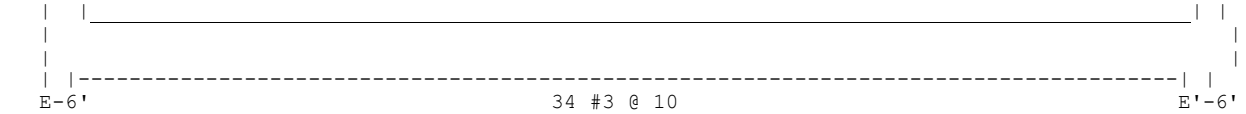
DESIGN

H-6 11 #3+1r @ 10 8 #3 @ 10 11 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 I-6

BEAM: 6'(E-E') FLOOR: 2

	Length:	L = 3.54 m	a = 0.20 m	Section:	b = 15.0 cm	Sec:	VT15X50			
		Lu = 3.34 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.20	0.53	0.87	1.20	1.54	1.87	2.20	2.54	2.87	3.21	3.54
Mu(-), ton-m:	-1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	-0.81
Mu(+), ton-m:	1.57	5.06	8.74	11.33	12.84	13.28	12.63	10.89	8.08	4.23	0.00
As(-), cm2:	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31
As(+), cm2:	2.31	3.03	5.40	7.18	8.26	8.58	8.10	6.87	4.96	2.51	2.31
Vu, ton:	11.41	11.41	9.38	6.12	2.86	0.41	3.67	6.94	10.20	13.46	16.72
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00

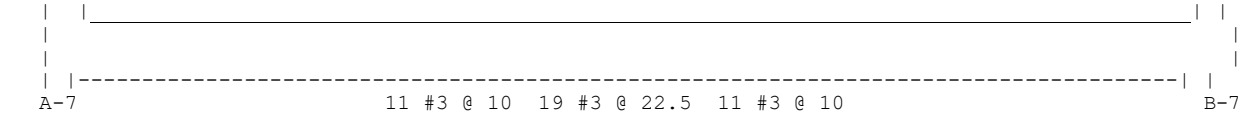
DESIGN



BEAM: 7(A-B) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-18.88	-11.37	-5.42	-4.08	-4.08	-4.08	-4.08	-4.08	-6.04	-12.49	-20.41
Mu(+), ton-m:	6.29	4.62	5.89	7.22	7.47	6.87	6.60	5.90	4.59	4.08	6.80
As(-), cm2:	11.54	6.77	5.78	5.78	5.78	5.78	5.78	5.78	5.78	7.47	12.54
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	12.26	11.69	9.81	7.94	6.06	4.80	6.68	8.55	10.43	12.30	12.87
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

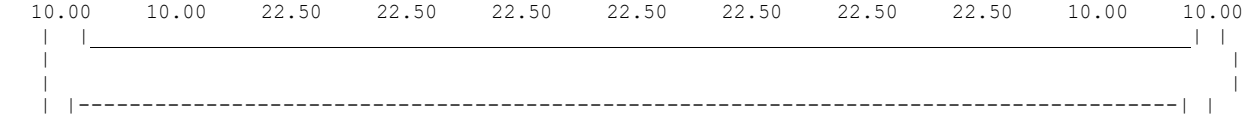
DESIGN



BEAM: 7(B-C) FLOOR: 2

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-19.54	-11.93	-5.78	-3.91	-3.91	-3.91	-3.91	-3.91	-5.57	-11.61	-19.14
Mu(+), ton-m:	6.51	3.91	4.39	5.72	6.39	6.38	6.51	5.94	4.61	3.91	6.38
As(-), cm2:	11.97	7.12	5.78	5.78	5.78	5.78	5.78	5.78	5.78	6.92	11.71
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	12.50	11.93	10.06	8.18	6.31	4.43	6.17	8.05	9.92	11.80	12.37
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN



BEAM: 7(C-D) FLOOR: 2

	Length:	L = 7.20 m Lu = 6.60 m	a = 0.30 m c = 0.30 m	Section:	b = 37.5 cm h = 50.0 cm	Sec: Mat:	VG37.5X50 RConcrete2				
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-19.15	-11.65	-5.63	-3.92	-3.92	-3.92	-3.92	-3.92	-5.84	-11.98	-19.58
Mu(+), ton-m:	6.38	3.92	4.52	5.82	6.40	6.25	6.20	5.50	4.15	3.92	6.53
As(-), cm2:	11.72	6.95	5.78	5.78	5.78	5.78	5.78	5.78	5.78	7.15	12.00
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	12.36	11.79	9.92	8.04	6.17	4.45	6.33	8.20	10.08	11.95	12.52
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	C-7			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			D-7

BEAM: 7(D-E) FLOOR: 2

	Length:	L = 7.20 m Lu = 6.50 m	a = 0.30 m c = 0.40 m	Section:	b = 37.5 cm h = 50.0 cm	Sec: Mat:	VG37.5X50 RConcrete2				
X, m:	0.30	0.95	1.60	2.25	2.90	3.55	4.20	4.85	5.50	6.15	6.80
Mu(-), ton-m:	-24.86	-14.67	-6.45	-5.12	-5.12	-5.12	-5.12	-5.12	-7.76	-15.64	-25.62
Mu(+), ton-m:	8.29	5.12	5.21	7.19	8.22	8.72	9.32	8.51	6.62	5.12	8.54
As(-), cm2:	15.53	8.84	5.78	5.78	5.78	5.78	5.78	5.78	5.78	9.45	16.05
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	16.85	16.08	13.42	10.77	8.12	6.26	8.77	11.31	13.56	15.81	16.46
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	D-7			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			E-7

BEAM: 7(E-F) FLOOR: 2

	Length:	L = 7.20 m Lu = 6.40 m	a = 0.40 m c = 0.40 m	Section:	b = 37.5 cm h = 50.0 cm	Sec: Mat:	VG37.5X50 RConcrete2				
X, m:	0.40	1.04	1.68	2.32	2.96	3.60	4.24	4.88	5.52	6.16	6.80
Mu(-), ton-m:	-22.12	-15.76	-9.67	-5.20	-5.20	-5.20	-5.20	-5.20	-8.19	-16.06	-26.00
Mu(+), ton-m:	7.37	6.32	6.17	6.23	7.04	8.02	8.91	8.85	7.78	6.35	8.67
As(-), cm2:	13.68	9.53	5.78	5.78	5.78	5.78	5.78	5.78	5.78	9.72	16.31
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	11.63	11.54	11.24	10.93	10.62	6.07	7.87	10.23	12.58	14.94	15.60
Tu, ton-m:	0.50	0.50	0.50	0.50	0.50	0.47	0.47	0.47	0.47	0.47	0.47
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	E-7			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			F-7

BEAM: 7(F-G) FLOOR: 2

Length:	L = 7.20 m	a = 0.40 m	Section:	b = 37.5 cm	Sec:	VG37.5X50				
	Lu = 6.50 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.40	1.05	1.70	2.35	3.00	3.65	4.30	4.95	5.60	6.25	6.90
Mu(-), ton-m:	-27.43	-17.16	-8.84	-5.49	-5.49	-5.49	-5.49	-5.49	-8.33	-16.68	-26.90
Mu(+), ton-m:	9.14	5.49	6.96	8.26	8.69	8.03	8.80	8.45	6.99	5.49	8.97
As(-), cm2:	17.31	10.42	5.78	5.78	5.78	5.78	5.78	5.78	5.78	10.12	16.94
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	16.56	15.85	13.41	10.97	8.53	6.44	8.79	11.23	13.67	16.11	16.82
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-7 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 G-7

BEAM: 7(G-H) FLOOR: 2

Length:	L = 7.20 m	a = 0.30 m	Section:	b = 37.5 cm	Sec:	VG37.5X50				
	Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-27.29	-16.81	-8.29	-5.46	-5.46	-5.46	-5.46	-5.46	-8.17	-16.67	-27.12
Mu(+), ton-m:	9.10	5.46	6.55	8.26	8.90	8.36	8.93	8.32	6.68	5.46	9.04
As(-), cm2:	17.21	10.20	5.78	5.78	5.78	5.78	5.78	5.78	5.78	10.11	17.09
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	17.10	16.32	13.78	11.23	8.69	6.14	8.64	11.18	13.73	16.28	17.05
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-7 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 H-7

BEAM: 7(H-I) FLOOR: 2

Length:	L = 7.17 m	a = 0.30 m	Section:	b = 37.5 cm	Sec:	VG37.5X50				
	Lu = 6.57 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.27	2.93	3.59	4.24	4.90	5.56	6.22	6.87
Mu(-), ton-m:	-29.43	-17.96	-8.69	-5.89	-5.89	-5.89	-5.89	-5.89	-8.04	-16.91	-28.05
Mu(+), ton-m:	9.81	5.89	6.65	8.67	9.70	9.95	10.26	9.58	7.58	5.89	9.35
As(-), cm2:	18.72	10.94	5.78	5.78	5.78	5.78	5.78	5.78	5.78	10.26	17.74
As(+), cm2:	5.81	5.78	5.78	5.78	5.78	5.90	6.09	5.78	5.78	5.78	5.78
Vu, ton:	18.81	17.97	15.18	12.39	9.59	6.80	9.10	11.89	14.68	17.47	18.31
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-7 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 I-7

BEAM: 2(D-E) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-38.40	-24.26	-12.90	-7.70	-7.70	-7.70	-7.70	-7.70	-12.56	-24.19	-38.51
Mu(+), ton-m:	12.80	10.47	11.98	13.32	13.28	11.84	12.37	12.13	10.86	9.36	12.84
As(-), cm2:	24.68	14.90	7.67	6.93	6.93	6.93	6.93	6.93	7.46	14.85	24.76
As(+), cm2:	7.61	6.93	7.10	7.93	7.90	7.02	7.34	7.20	6.93	6.93	7.63
Vu, ton:	22.69	21.75	18.49	15.22	11.96	8.98	12.25	15.51	18.78	22.04	22.98
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-2 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 E-2

BEAM: 2(E-F) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-38.24	-24.29	-12.89	-7.65	-7.65	-7.65	-7.65	-7.65	-11.98	-22.93	-36.52
Mu(+), ton-m:	12.75	8.30	9.92	11.21	11.64	10.95	12.03	11.95	10.69	9.19	12.17
As(-), cm2:	24.56	14.92	7.67	6.93	6.93	6.93	6.93	6.93	7.10	14.02	23.32
As(+), cm2:	7.57	6.93	6.93	6.93	6.93	6.93	7.14	7.09	6.93	6.93	7.22
Vu, ton:	22.66	21.75	18.55	15.35	12.15	8.96	11.61	14.81	18.01	21.20	22.12
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-2 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 F-2

BEAM: 2(F-G) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-38.61	-24.45	-12.91	-7.72	-7.72	-7.72	-7.72	-7.72	-12.02	-23.15	-36.98
Mu(+), ton-m:	12.87	8.31	10.03	11.43	11.92	11.25	12.24	12.08	10.72	9.12	12.33
As(-), cm2:	24.83	15.02	7.67	6.93	6.93	6.93	6.93	6.93	7.13	14.17	23.65
As(+), cm2:	7.65	6.93	6.93	6.93	7.07	6.93	7.27	7.17	6.93	6.93	7.32
Vu, ton:	23.02	22.08	18.82	15.55	12.29	9.03	11.79	15.05	18.31	21.58	22.52
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

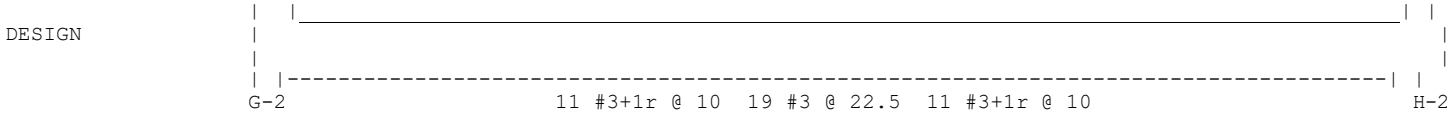
F-2 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 G-2

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:41 p. m. 5/01/2020

BEAM: 2(G-H) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

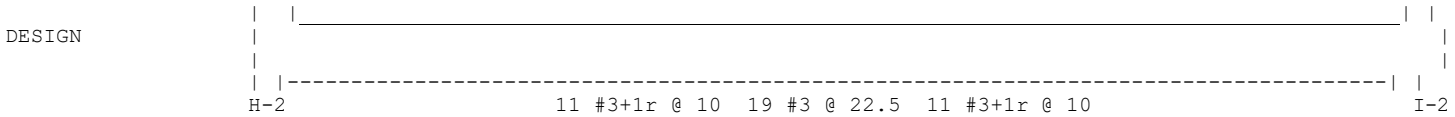
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-38.29	-24.31	-12.89	-7.66	-7.66	-7.66	-7.66	-7.66	-11.96	-22.95	-36.60
Mu(+), ton-m:	12.76	8.36	10.00	11.32	11.75	11.04	12.05	11.94	10.65	9.11	12.20
As(-), cm2:	24.60	14.93	7.67	6.93	6.93	6.93	6.93	6.93	7.09	14.04	23.38
As(+), cm2:	7.59	6.93	6.93	6.93	6.96	6.93	7.15	7.08	6.93	6.93	7.24
Vu, ton:	22.72	21.80	18.59	15.38	12.16	8.95	11.65	14.86	18.07	21.29	22.21
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



BEAM: 2(H-I) FLOOR: 3

Length: L = 7.17 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.42 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

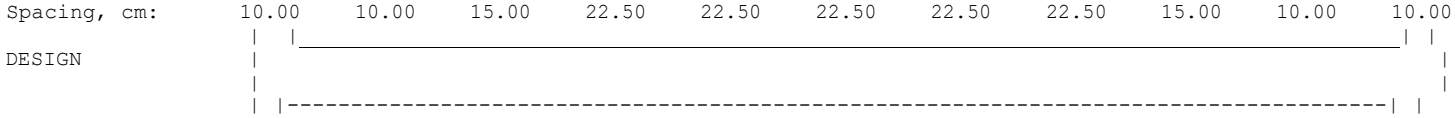
X, m:	0.38	1.02	1.66	2.30	2.95	3.59	4.23	4.87	5.51	6.16	6.80
Mu(-), ton-m:	-39.70	-25.23	-13.35	-7.94	-7.94	-7.94	-7.94	-7.94	-12.22	-23.21	-37.00
Mu(+), ton-m:	13.23	8.68	10.23	11.47	11.94	11.58	13.26	13.55	12.33	10.96	12.33
As(-), cm2:	25.63	15.54	7.94	6.93	6.93	6.93	6.93	6.93	7.25	14.21	23.67
As(+), cm2:	7.88	6.93	6.93	6.93	7.08	6.93	7.89	8.07	7.32	6.93	7.32
Vu, ton:	23.45	22.53	19.28	16.03	12.78	9.53	11.72	14.97	18.22	21.47	22.39
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



BEAM: 3(D-E) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.67	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-47.89	-28.33	-12.98	-9.86	-9.86	-9.86	-9.86	-9.86	-13.38	-29.31	-49.32
Mu(+), ton-m:	15.96	9.86	11.91	16.13	18.12	17.85	16.96	14.44	10.23	9.86	16.44
As(-), cm2:	31.88	17.61	7.72	6.93	6.93	6.93	6.93	6.93	7.97	18.28	33.01
As(+), cm2:	9.57	6.93	7.06	9.67	10.93	10.76	10.20	8.62	6.93	6.93	9.87
Vu, ton:	32.46	31.02	25.99	20.96	15.93	11.59	16.62	21.65	26.68	31.71	33.15
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00



BEAM: 3(E-F) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-48.05	-28.84	-13.51	-9.61	-9.61	-9.61	-9.61	-9.61	-12.66	-27.58	-46.46
Mu(+), ton-m:	16.02	9.61	9.61	13.41	15.88	16.39	16.24	14.10	10.14	9.61	15.49
As(-), cm2:	32.00	17.96	8.04	6.93	6.93	6.93	6.93	6.93	7.52	17.11	30.75
As(+), cm2:	9.60	6.93	6.93	7.99	9.52	9.84	9.74	8.41	6.93	6.93	9.27
Vu, ton:	32.09	30.69	25.82	20.95	16.07	11.16	15.57	20.44	25.31	30.19	31.59
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	17.50	10.00	10.00

DESIGN

E-3 11 #3+1r @ 10 5 #3 @ 12.5 13 #3 @ 22.5 4 #3 @ 15 11 #3+1r @ 10 F-3

BEAM: 3(F-G) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-48.89	-29.19	-13.51	-9.78	-9.78	-9.78	-9.78	-9.78	-12.75	-28.08	-47.50
Mu(+), ton-m:	16.30	9.78	9.78	13.83	16.44	17.03	16.71	14.38	10.16	9.78	15.83
As(-), cm2:	32.66	18.20	8.05	6.93	6.93	6.93	6.93	6.93	7.58	17.45	31.57
As(+), cm2:	9.78	6.93	6.93	8.24	9.87	10.24	10.04	8.58	6.93	6.93	9.49
Vu, ton:	32.93	31.48	26.45	21.42	16.39	11.12	15.96	20.99	26.02	31.05	32.50
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

F-3 11 #3+1r @ 10 6 #3 @ 12.5 13 #3 @ 22.5 5 #3 @ 12.5 11 #3+1r @ 10 G-3

BEAM: 3(G-H) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-48.70	-29.13	-13.53	-9.74	-9.74	-9.74	-9.74	-9.74	-12.69	-27.89	-47.16
Mu(+), ton-m:	16.23	9.74	9.74	13.70	16.29	16.86	16.56	14.27	10.09	9.74	15.72
As(-), cm2:	32.51	18.16	8.06	6.93	6.93	6.93	6.93	6.93	7.54	17.32	31.30
As(+), cm2:	9.74	6.93	6.93	8.17	9.78	10.13	9.95	8.52	6.93	6.93	9.42
Vu, ton:	32.72	31.29	26.30	21.31	16.32	11.13	15.85	20.84	25.83	30.82	32.25
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

G-3 11 #3+1r @ 10 5 #3 @ 12.5 13 #3 @ 22.5 5 #3 @ 12.5 11 #3+1r @ 10 H-3

BEAM: 3(H-I) FLOOR: 3

	Length:	L = 7.17 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.42 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.66	2.30	2.95	3.59	4.23	4.87	5.51	6.16	6.80
Mu(-), ton-m:	-50.49	-30.36	-14.18	-10.10	-10.10	-10.10	-10.10	-10.10	-12.20	-27.11	-46.26
Mu(+), ton-m:	16.83	10.10	10.10	13.75	16.50	17.58	18.11	16.41	12.32	10.10	15.42
As(-), cm2:	33.95	19.00	8.46	6.93	6.93	6.93	6.93	6.93	7.24	16.79	30.59
As(+), cm2:	10.12	6.93	6.93	8.19	9.91	10.59	10.92	9.85	7.32	6.93	9.23
Vu, ton:	33.62	32.20	27.19	22.18	17.17	12.17	15.64	20.65	25.66	30.66	32.09
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	15.00	22.50	22.50	22.50	22.50	22.50	17.50	10.00	10.00

DESIGN

H-3 11 #3+1r @ 10 6 #3 @ 12.5 13 #3 @ 22.5 4 #3 @ 15 11 #3+1r @ 10 I-3

BEAM: 4(A-B) FLOOR: 3

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.83 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.68	1.37	2.05	2.73	3.41	4.10	4.78	5.46	6.14	6.83
Mu(-), ton-m:	-38.97	-24.63	-12.63	-7.79	-7.79	-7.79	-7.79	-7.79	-11.94	-23.12	-37.05
Mu(+), ton-m:	12.99	8.72	10.27	12.08	12.04	11.01	11.95	12.16	10.87	8.93	12.35
As(-), cm2:	25.10	15.14	7.51	6.93	6.93	6.93	6.93	6.93	7.08	14.15	23.70
As(+), cm2:	7.73	6.93	6.93	7.16	7.14	6.93	7.09	7.22	6.93	6.93	7.33
Vu, ton:	23.72	22.65	19.37	16.10	12.82	9.55	10.44	13.72	16.99	20.27	21.34
Tu, ton-m:	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A-4 11 #3+1r @ 10 20 #3 @ 22.5 11 #3+1r @ 10 B-4

BEAM: 4(B-C) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-38.59	-24.73	-13.32	-7.72	-7.72	-7.72	-7.72	-7.72	-12.57	-23.65	-37.24
Mu(+), ton-m:	12.86	8.88	10.54	11.64	11.68	10.27	11.93	12.16	11.10	9.54	12.41
As(-), cm2:	24.82	15.21	7.93	6.93	6.93	6.93	6.93	6.93	7.47	14.50	23.84
As(+), cm2:	7.65	6.93	6.93	6.93	6.93	6.93	7.07	7.21	6.93	6.93	7.37
Vu, ton:	22.35	21.46	18.34	15.22	12.11	8.99	11.70	14.81	17.93	21.04	21.94
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

B-4 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 C-4

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:42 p. m. 5/01/2020

BEAM: 4(C-D) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-37.31	-23.98	-13.02	-7.53	-7.53	-7.53	-7.53	-7.53	-13.22	-24.26	-37.65
Mu(+), ton-m:	12.44	9.29	10.67	11.52	11.26	9.60	11.23	11.44	10.61	9.22	12.55
As(-), cm2:	23.89	14.72	7.74	6.93	6.93	6.93	6.93	6.93	7.86	14.90	24.14
As(+), cm2:	7.39	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	7.45
Vu, ton:	21.45	20.59	17.59	14.59	11.58	8.67	11.68	14.68	17.68	20.68	21.54
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-4 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 D-4

BEAM: 4(D-E) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.82 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.06	1.74	2.42	3.11	3.79	4.47	5.15	5.83	6.52	7.20
Mu(-), ton-m:	-57.05	-32.87	-14.09	-11.41	-11.41	-11.41	-11.41	-11.41	-11.41	-29.37	-53.54
Mu(+), ton-m:	19.02	11.41	11.41	16.99	21.03	21.25	19.51	15.28	11.41	11.41	17.85
As(-), cm2:	38.90	20.74	8.40	6.93	6.93	6.93	6.93	6.93	6.93	18.32	36.45
As(+), cm2:	11.50	6.93	6.93	10.22	12.79	12.93	11.82	9.14	6.93	6.93	10.76
Vu, ton:	38.80	36.66	30.10	23.55	16.99	11.43	18.14	25.06	31.98	38.90	41.16
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	17.50	10.00	10.00	10.00

DESIGN

D-4 11 #3+1r @ 10 11 #3 @ 10 10 #3 @ 22.5 16 #3 @ 7.5 11 #3+1r @ 10 E-4

BEAM: 4(E-Ea) FLOOR: 3

Length: L = 1.80 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-10.79	-8.61	-6.46	-4.32	-2.21	-2.16	-2.16	-4.17	-6.22	-8.29	-10.38
Mu(+), ton-m:	9.78	7.84	5.88	3.91	2.16	2.16	2.16	4.04	6.07	8.08	10.07
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	13.41	13.41	13.41	13.35	13.24	13.12	13.00	12.89	12.92	12.92	12.92
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

E-4 18 #3+1r @ 10 4:Ea

BEAM: 4(Ea-F) FLOOR: 3

Length:	L = 5.40 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 5.03 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.50	1.01	1.51	2.01	2.51	3.02	3.52	4.02	4.52	5.03
Mu(-), ton-m:	-41.87	-26.51	-13.55	-8.80	-8.80	-8.80	-8.80	-8.80	-16.54	-28.87	-44.02
Mu(+), ton-m:	13.96	9.97	10.77	11.81	11.02	11.96	14.12	15.01	14.45	13.26	14.67
As(-), cm2:	27.24	16.39	8.07	6.93	6.93	6.93	6.93	6.93	9.93	17.98	28.87
As(+), cm2:	8.32	6.93	6.93	7.00	6.93	7.09	8.42	8.97	8.63	7.89	8.77
Vu, ton:	33.20	32.82	28.30	23.79	19.27	14.76	15.39	19.91	24.42	28.94	29.32
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	22.50	17.50	10.00	10.00

DESIGN

4:Ea 11 #3+1r @ 10 4 #3 @ 12.5 10 #3 @ 22.5 11 #3+1r @ 10 F-4

BEAM: 4(F-G) FLOOR: 3

Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-54.69	-32.15	-14.29	-10.94	-10.94	-10.94	-10.94	-10.94	-14.03	-31.71	-54.11
Mu(+), ton-m:	18.23	10.94	10.94	15.75	18.99	19.70	19.25	16.16	10.94	10.94	18.04
As(-), cm2:	37.42	20.24	8.53	6.93	6.93	6.93	6.93	6.93	8.37	19.93	36.93
As(+), cm2:	11.00	6.93	6.93	9.44	11.48	11.93	11.65	9.70	6.93	6.93	10.88
Vu, ton:	37.75	36.07	30.21	24.36	18.24	11.70	18.02	24.14	29.99	35.85	37.53
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	17.50	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

F-4 11 #3+1r @ 10 10 #3 @ 10 10 #3 @ 22.5 10 #3 @ 10 11 #3+1r @ 10 G-4

BEAM: 4(G-H) FLOOR: 3

Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-55.21	-32.73	-14.83	-11.04	-11.04	-11.04	-11.04	-11.04	-13.92	-31.38	-53.53
Mu(+), ton-m:	18.40	11.04	11.04	15.42	18.65	19.31	18.98	16.07	11.04	11.04	17.84
As(-), cm2:	37.74	20.64	8.87	6.93	6.93	6.93	6.93	6.93	8.30	19.70	36.45
As(+), cm2:	11.11	6.93	6.93	9.23	11.27	11.69	11.47	9.64	6.93	6.93	10.75
Vu, ton:	37.71	36.05	30.25	24.45	18.56	12.08	18.04	23.93	29.73	35.53	37.19
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	17.50	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

G-4 11 #3+1r @ 10 10 #3 @ 10 10 #3 @ 22.5 10 #3 @ 10 11 #3+1r @ 10 H-4

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:42 p. m. 5/01/2020

BEAM: 4(H-I) FLOOR: 3

Length: L = 7.17 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.42 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.66	2.30	2.95	3.59	4.23	4.87	5.51	6.16	6.80
Mu(-), ton-m:	-55.16	-32.72	-14.81	-11.03	-11.03	-11.03	-11.03	-11.03	-13.53	-30.66	-52.49
Mu(+), ton-m:	18.39	11.03	11.03	15.49	18.70	19.56	19.67	17.11	12.03	11.03	17.50
As(-), cm2:	37.71	20.63	8.85	6.93	6.93	6.93	6.93	6.93	8.06	19.20	35.59
As(+), cm2:	11.10	6.93	6.93	9.27	11.30	11.85	11.92	10.29	7.13	6.93	10.54
Vu, ton:	37.63	36.00	30.26	24.52	18.78	12.85	17.83	23.56	29.30	35.04	36.67
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	17.50	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

H-4 11 #3+1r @ 10 10 #3 @ 10 10 #3 @ 22.5 10 #3 @ 10 11 #3+1r @ 10 I-4

BEAM: 5(A-B) FLOOR: 3

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 7.20 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.48	7.20
Mu(-), ton-m:	-58.89	-32.96	-12.04	-11.78	-11.78	-11.78	-11.78	-11.78	-11.78	-31.34	-57.01
Mu(+), ton-m:	19.63	11.78	11.78	17.67	22.00	23.31	21.65	17.57	11.78	11.78	19.00
As(-), cm2:	40.06	20.80	7.14	6.98	6.98	6.98	6.98	6.98	6.98	19.68	38.88
As(+), cm2:	11.89	6.98	6.98	10.64	13.42	14.27	13.19	10.58	6.98	6.98	11.49
Vu, ton:	39.79	37.28	30.34	23.40	16.45	9.51	16.10	23.04	29.99	36.93	39.44
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

A-5 11 #3+1r @ 10 14 #3 @ 7.5 13 #3 @ 22.5 14 #3 @ 7.5 11 #3+1r @ 10 B-5

BEAM: 5(B-C) FLOOR: 3

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.82 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.68	1.37	2.05	2.73	3.41	4.09	4.78	5.46	6.14	6.82
Mu(-), ton-m:	-58.45	-33.80	-13.77	-11.69	-11.69	-11.69	-11.69	-11.69	-13.90	-32.62	-56.72
Mu(+), ton-m:	19.48	11.69	11.69	16.34	19.71	20.76	20.30	16.82	11.69	11.69	18.91
As(-), cm2:	39.78	21.39	8.21	6.93	6.93	6.93	6.93	6.93	8.29	20.56	38.69
As(+), cm2:	11.80	6.93	6.93	9.80	11.94	12.62	12.32	10.11	6.93	6.93	11.43
Vu, ton:	42.14	39.92	33.09	26.26	19.43	12.60	16.90	23.37	29.85	36.32	38.43
Tu, ton-m:	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	15.00	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

B-5 11 #3+1r @ 10 16 #3 @ 7.5 11 #3 @ 22.5 9 #3 @ 10 11 #3+1r @ 10 C-5

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
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BEAM: 5(C-D) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-54.03	-32.26	-14.89	-10.81	-10.81	-10.81	-10.81	-10.81	-14.20	-31.25	-52.76
Mu(+), ton-m:	18.01	10.81	10.81	15.14	18.01	18.39	18.29	15.68	10.92	10.81	17.59
As(-), cm2:	36.87	20.31	8.90	6.93	6.93	6.93	6.93	6.93	8.47	19.61	35.81
As(+), cm2:	10.86	6.93	6.93	9.06	10.86	11.10	11.04	9.40	6.93	6.93	10.59
Vu, ton:	36.43	34.83	29.26	23.68	18.11	12.15	17.71	23.28	28.86	34.43	36.03
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

C-5 11 #3+1r @ 10 10 #3 @ 10 11 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 D-5

BEAM: 5(D-E) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.82 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.06	1.74	2.42	3.11	3.79	4.47	5.15	5.83	6.52	7.20
Mu(-), ton-m:	-57.95	-33.63	-14.64	-11.59	-11.59	-11.59	-11.59	-11.59	-11.59	-29.25	-53.34
Mu(+), ton-m:	19.32	11.59	11.59	16.69	20.78	21.05	19.44	15.36	11.59	11.59	17.78
As(-), cm2:	39.47	21.27	8.74	6.93	6.93	6.93	6.93	6.93	6.93	18.24	36.29
As(+), cm2:	11.69	6.93	6.93	10.02	12.63	12.81	11.77	9.19	6.93	6.93	10.71
Vu, ton:	39.09	36.96	30.40	23.84	17.28	11.83	18.24	25.16	32.08	39.00	41.26
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	17.50	10.00	10.00	10.00

DESIGN

D-5 11 #3+1r @ 10 11 #3 @ 10 10 #3 @ 22.5 16 #3 @ 7.5 11 #3+1r @ 10 E-5

BEAM: 5(E-Ea) FLOOR: 3

Length: L = 1.80 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-11.18	-8.93	-6.70	-4.50	-2.32	-2.24	-2.24	-4.14	-6.17	-8.22	-10.28
Mu(+), ton-m:	9.67	7.75	5.81	3.85	2.24	2.24	2.24	4.11	6.21	8.29	10.34
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	14.11	14.11	14.11	14.06	13.94	13.83	13.71	13.60	13.54	13.54	13.54
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

E-5 18 #3+1r @ 10 5:Ea

BEAM: 5(Ea-F) FLOOR: 3

Length:	L = 5.40 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 5.03 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.50	1.01	1.51	2.01	2.51	3.02	3.52	4.02	4.52	5.03
Mu(-), ton-m:	-42.29	-26.83	-13.79	-8.82	-8.82	-8.82	-8.82	-8.82	-16.62	-28.95	-44.11
Mu(+), ton-m:	14.10	10.05	10.82	11.81	11.01	11.99	14.23	15.21	14.72	13.58	14.70
As(-), cm2:	27.56	16.61	8.22	6.93	6.93	6.93	6.93	6.93	9.99	18.04	28.94
As(+), cm2:	8.41	6.93	6.93	7.00	6.93	7.11	8.49	9.10	8.79	8.09	8.78
Vu, ton:	33.33	32.95	28.43	23.92	19.40	14.89	15.37	19.88	24.40	28.91	29.30
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	22.50	17.50	10.00	10.00

DESIGN

5:Ea 11 #3+1r @ 10 5 #3 @ 12.5 10 #3 @ 22.5 11 #3+1r @ 10 F-5

BEAM: 5(F-G) FLOOR: 3

Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-54.98	-32.38	-14.47	-11.00	-11.00	-11.00	-11.00	-11.00	-14.18	-31.90	-54.34
Mu(+), ton-m:	18.33	11.00	11.00	15.81	19.01	19.68	19.28	16.25	11.00	11.00	18.11
As(-), cm2:	37.59	20.40	8.64	6.93	6.93	6.93	6.93	6.93	8.46	20.06	37.12
As(+), cm2:	11.06	6.93	6.93	9.48	11.50	11.92	11.67	9.75	6.93	6.93	10.93
Vu, ton:	37.82	36.14	30.29	24.43	18.41	11.87	18.17	24.19	30.05	35.90	37.59
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	17.50	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

F-5 11 #3+1r @ 10 10 #3 @ 10 10 #3 @ 22.5 10 #3 @ 10 11 #3+1r @ 10 G-5

BEAM: 5(G-H) FLOOR: 3

Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-55.11	-32.73	-14.90	-11.02	-11.02	-11.02	-11.02	-11.02	-14.09	-31.53	-53.62
Mu(+), ton-m:	18.37	11.02	11.02	15.49	18.61	19.17	18.89	16.06	11.02	11.02	17.87
As(-), cm2:	37.68	20.64	8.91	6.93	6.93	6.93	6.93	6.93	8.40	19.81	36.52
As(+), cm2:	11.09	6.93	6.93	9.27	11.24	11.60	11.42	9.63	6.93	6.93	10.77
Vu, ton:	37.51	35.86	30.09	24.33	18.53	12.16	18.07	23.87	29.63	35.40	37.05
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	17.50	22.50	22.50	22.50	20.00	12.50	10.00	10.00

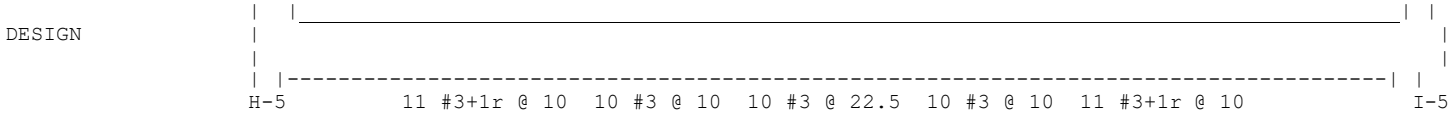
DESIGN

G-5 11 #3+1r @ 10 10 #3 @ 10 10 #3 @ 22.5 10 #3 @ 10 11 #3+1r @ 10 H-5

BEAM: 5(H-I) FLOOR: 3

Length: L = 7.17 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.42 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

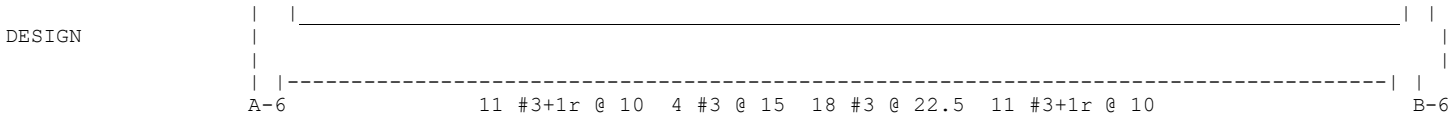
X, m:	0.38	1.02	1.66	2.30	2.95	3.59	4.23	4.87	5.51	6.16	6.80
Mu(-), ton-m:	-55.88	-33.11	-14.97	-11.18	-11.18	-11.18	-11.18	-11.18	-14.10	-31.63	-53.92
Mu(+), ton-m:	18.63	11.18	11.18	15.83	19.00	19.79	19.88	17.23	12.10	11.18	17.97
As(-), cm2:	38.16	20.91	8.95	6.93	6.93	6.93	6.93	6.93	8.41	19.88	36.77
As(+), cm2:	11.25	6.93	6.93	9.48	11.49	12.00	12.05	10.37	7.18	6.93	10.84
Vu, ton:	38.14	36.48	30.65	24.81	18.98	12.90	18.23	24.06	29.90	35.73	37.39
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	17.50	22.50	22.50	22.50	20.00	12.50	10.00	10.00



BEAM: 6(A-B) FLOOR: 3

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.83 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

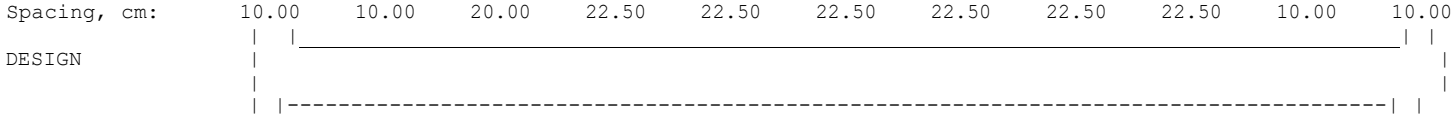
X, m:	0.00	0.68	1.37	2.05	2.73	3.41	4.10	4.78	5.46	6.14	6.83
Mu(-), ton-m:	-47.24	-28.96	-13.85	-9.45	-9.45	-9.45	-9.45	-9.45	-13.09	-27.26	-45.13
Mu(+), ton-m:	15.75	9.45	10.82	14.34	15.32	14.68	15.00	13.99	11.17	9.45	15.04
As(-), cm2:	31.36	18.04	8.25	6.93	6.93	6.93	6.93	6.93	7.79	16.89	29.72
As(+), cm2:	9.44	6.93	6.93	8.56	9.17	8.77	8.97	8.35	6.93	6.93	9.00
Vu, ton:	30.87	29.42	24.98	20.54	16.10	11.65	13.07	17.51	21.95	26.40	27.84
Tu, ton-m:	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	17.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



BEAM: 6(B-C) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.67	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-46.37	-28.97	-14.82	-9.27	-9.27	-9.27	-9.27	-9.27	-14.06	-27.88	-45.02
Mu(+), ton-m:	15.46	9.27	11.42	13.76	14.66	13.69	14.90	14.25	11.95	9.27	15.01
As(-), cm2:	30.68	18.05	8.85	6.93	6.93	6.93	6.93	6.93	8.39	17.31	29.64
As(+), cm2:	9.26	6.93	6.93	8.20	8.76	8.15	8.90	8.51	7.09	6.93	8.97
Vu, ton:	28.46	27.28	23.16	19.03	14.90	10.78	14.50	18.62	22.75	26.87	28.06
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	20.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



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BEAM: 6(C-D) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-45.21	-28.38	-14.67	-9.04	-9.04	-9.04	-9.04	-9.04	-14.15	-27.61	-44.24
Mu(+), ton-m:	15.07	9.04	11.43	13.48	14.15	13.04	14.39	13.93	11.91	9.26	14.75
As(-), cm2:	29.78	17.65	8.76	6.93	6.93	6.93	6.93	6.93	8.44	17.13	29.04
As(+), cm2:	9.01	6.93	6.93	8.03	8.44	7.75	8.59	8.30	7.06	6.93	8.81
Vu, ton:	27.44	26.30	22.35	18.39	14.44	10.49	14.13	18.08	22.03	25.99	27.12
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-6 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 D-6

BEAM: 6(D-E) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.82 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.06	1.74	2.42	3.11	3.79	4.47	5.15	5.83	6.52	7.20
Mu(-), ton-m:	-48.75	-30.00	-14.96	-9.75	-9.75	-9.75	-9.75	-9.75	-9.75	-25.88	-47.41
Mu(+), ton-m:	16.25	9.75	10.53	14.33	16.56	16.45	16.14	14.80	9.95	9.75	15.80
As(-), cm2:	32.55	18.75	8.95	6.93	6.93	6.93	6.93	6.93	6.93	15.97	31.49
As(+), cm2:	9.75	6.93	6.93	8.55	9.95	9.88	9.68	8.85	6.93	6.93	9.47
Vu, ton:	30.07	28.65	24.27	19.89	15.51	11.17	14.26	20.35	27.10	33.84	36.04
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	20.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

D-6 11 #3+1r @ 10 3 #3 @ 15 16 #3 @ 22.5 5 #3 @ 12.5 11 #3+1r @ 10 E-6

BEAM: 6(E-Ea) FLOOR: 3

	Length:	L = 1.80 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 1.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-11.29	-9.02	-6.77	-4.54	-2.33	-2.31	-2.41	-4.66	-6.93	-9.22	-11.53
Mu(+), ton-m:	10.70	8.57	6.43	4.26	2.31	2.31	2.31	4.29	6.44	8.58	10.70
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	13.89	13.89	13.89	13.84	13.73	13.84	13.96	14.07	14.12	14.12	14.12
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

E-6 18 #3+1r @ 10 6:Ea

BEAM: 6(Ea-F) FLOOR: 3

Length: L = 5.40 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 5.03 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.50	1.01	1.51	2.01	2.51	3.02	3.52	4.02	4.52	5.03
Mu(-), ton-m:	-47.50	-30.41	-14.80	-9.86	-9.86	-9.86	-9.86	-9.86	-18.77	-32.62	-49.30
Mu(+), ton-m:	15.83	10.16	11.84	15.89	15.40	15.12	16.13	16.16	15.20	13.93	16.43
As(-), cm2:	33.30	20.77	10.58	8.67	6.93	6.93	6.93	6.93	11.35	20.56	33.00
As(+), cm2:	11.23	8.67	8.76	11.27	9.22	9.05	9.67	9.69	9.10	8.31	9.87
Vu, ton:	37.82	37.61	35.09	32.57	17.02	16.04	20.30	24.56	28.82	33.08	33.44
Tu, ton-m:	1.80	1.80	1.80	1.80	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	7.50	7.50	22.50	22.50	22.50	17.50	12.50	10.00	10.00

DESIGN

6:Ea 11 #3+1r @ 10 9 #3 @ 7.5 7 #3 @ 22.5 5 #3 @ 12.5 11 #3+1r @ 10 F-6

BEAM: 6(F-G) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-54.20	-32.40	-15.03	-10.84	-10.84	-10.84	-10.84	-10.84	-15.02	-32.33	-54.08
Mu(+), ton-m:	18.07	10.84	11.47	16.02	18.50	18.59	18.63	16.20	11.65	10.84	18.03
As(-), cm2:	37.01	20.41	8.99	6.93	6.93	6.93	6.93	6.93	8.98	20.36	36.91
As(+), cm2:	10.90	6.93	6.93	9.61	11.17	11.23	11.26	9.72	6.93	6.93	10.87
Vu, ton:	36.22	34.63	29.09	23.55	18.01	12.47	17.95	23.49	29.03	34.56	36.15
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

F-6 11 #3+1r @ 10 10 #3 @ 10 11 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 G-6

BEAM: 6(G-H) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-54.66	-32.92	-15.52	-10.93	-10.93	-10.93	-10.93	-10.93	-14.78	-31.84	-53.31
Mu(+), ton-m:	18.22	10.93	11.24	15.66	18.17	18.24	18.43	16.19	11.77	10.93	17.77
As(-), cm2:	37.40	20.77	9.29	6.93	6.93	6.93	6.93	6.93	8.84	20.02	36.26
As(+), cm2:	10.99	6.93	6.93	9.38	10.96	11.00	11.13	9.71	6.97	6.93	10.71
Vu, ton:	36.18	34.61	29.13	23.65	18.17	12.69	17.75	23.23	28.71	34.20	35.77
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

G-6 11 #3+1r @ 10 10 #3 @ 10 11 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 H-6

BEAM: 6(H-I) FLOOR: 3

	Length:	L = 7.17 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.42 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.66	2.30	2.95	3.59	4.23	4.87	5.51	6.16	6.80
Mu(-), ton-m:	-54.57	-32.87	-15.48	-10.91	-10.91	-10.91	-10.91	-10.91	-14.90	-31.80	-53.10
Mu(+), ton-m:	18.19	10.91	11.63	15.89	18.25	18.41	19.07	17.15	12.94	10.91	17.70
As(-), cm2:	37.32	20.74	9.27	6.93	6.93	6.93	6.93	6.93	8.91	19.99	36.09
As(+), cm2:	10.97	6.93	6.93	9.53	11.01	11.11	11.53	10.32	7.69	6.93	10.66
Vu, ton:	36.02	34.48	29.06	23.64	18.22	12.80	17.61	23.03	28.45	33.87	35.41
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

H-6 11 #3+1r @ 10 | 10 #3 @ 10 | 11 #3 @ 22.5 | 8 #3 @ 10 | 11 #3+1r @ 10 I-6

BEAM: 6'(E-E') FLOOR: 3

	Length:	L = 3.54 m	a = 0.20 m	Section:	b = 15.0 cm	Sec:	VT15X50			
		Lu = 3.34 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.20	0.53	0.87	1.20	1.54	1.87	2.20	2.54	2.87	3.21	3.54
Mu(-), ton-m:	-1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	-0.82
Mu(+), ton-m:	1.57	5.06	8.73	11.33	12.84	13.27	12.62	10.89	8.07	4.22	0.00
As(-), cm2:	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31
As(+), cm2:	2.31	3.03	5.39	7.17	8.26	8.57	8.10	6.86	4.96	2.51	2.31
Vu, ton:	11.41	11.41	9.38	6.12	2.86	0.41	3.67	6.94	10.20	13.46	16.72
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00

DESIGN

E-6' 34 #3 @ 10 E'-6'

BEAM: 7(Da-E) FLOOR: 3

	Length:	L = 2.54 m	a = 0.00 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 2.16 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.22	0.43	0.65	0.87	1.08	1.30	1.52	1.73	1.95	2.16
Mu(-), ton-m:	0.00	-0.14	-0.48	-1.01	-1.75	-2.70	-3.84	-5.20	-6.82	-8.64	-10.68
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	6.35
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	0.00	0.98	1.96	2.94	3.91	4.89	5.87	6.85	7.71	7.71	7.71
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

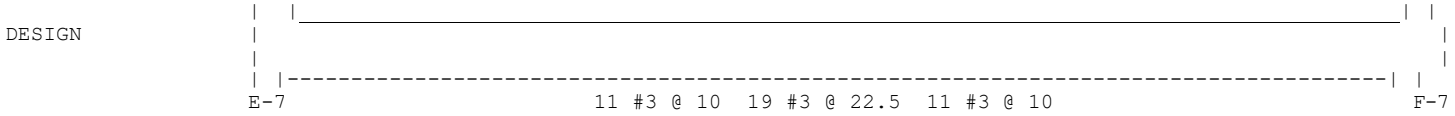
7:Da 11 #3 @ 22.5 E-7

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:42 p. m. 5/01/2020

BEAM: 7(E-F) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 6.45 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

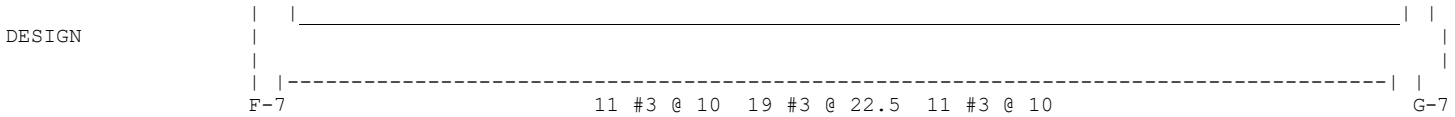
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-28.53	-20.92	-13.60	-6.90	-6.49	-6.49	-6.49	-6.49	-11.79	-21.08	-32.44
Mu(+), ton-m:	12.92	11.64	10.26	9.09	8.63	8.16	9.95	11.05	11.16	10.93	10.81
As(-), cm2:	18.08	12.88	8.16	5.78	5.78	5.78	5.78	5.78	7.04	12.98	20.89
As(+), cm2:	7.74	6.94	6.09	5.78	5.78	5.78	5.90	6.58	6.64	6.50	6.43
Vu, ton:	13.62	13.53	13.22	12.91	12.60	8.03	9.98	12.38	14.77	17.16	17.85
Tu, ton-m:	0.59	0.59	0.59	0.59	0.59	0.54	0.54	0.54	0.54	0.54	0.54
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



BEAM: 7(F-G) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 6.53 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

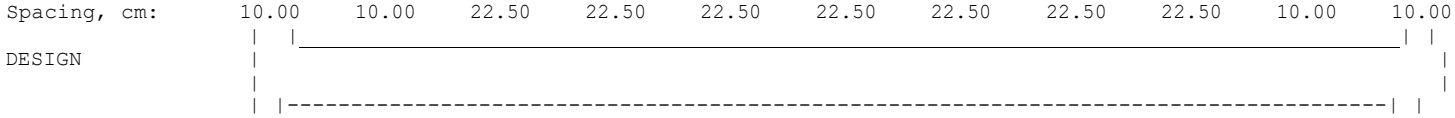
X, m:	0.38	1.03	1.68	2.33	2.99	3.64	4.29	4.94	5.60	6.25	6.90
Mu(-), ton-m:	-31.57	-20.49	-11.40	-6.31	-6.31	-6.31	-6.31	-6.31	-9.75	-18.93	-30.01
Mu(+), ton-m:	10.52	8.59	9.77	10.50	10.20	8.40	8.98	9.18	8.31	7.18	10.00
As(-), cm2:	20.25	12.59	6.79	5.78	5.78	5.78	5.78	5.78	5.78	11.57	19.13
As(+), cm2:	6.25	5.78	5.79	6.24	6.05	5.78	5.78	5.78	5.78	5.78	5.93
Vu, ton:	17.63	16.90	14.41	11.92	9.43	7.23	9.70	12.19	14.68	17.17	17.90
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



BEAM: 7(G-H) FLOOR: 3

Length: L = 7.20 m a = 0.30 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-28.71	-17.93	-9.11	-5.74	-5.74	-5.74	-5.74	-5.74	-8.91	-17.60	-28.28
Mu(+), ton-m:	9.57	5.74	7.24	8.68	9.10	8.40	9.27	8.95	7.50	5.74	9.43
As(-), cm2:	18.21	10.92	5.78	5.78	5.78	5.78	5.78	5.78	5.78	10.71	17.90
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	17.45	16.68	14.13	11.59	9.04	6.50	8.89	11.44	13.98	16.53	17.30
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:42 p. m. 5/01/2020

BEAM: 7(H-I) FLOOR: 3

Length:	L = 7.17 m	a = 0.30 m	Section:	b = 37.5 cm	Sec:	VG37.5X50				
	Lu = 6.57 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.27	2.93	3.59	4.24	4.90	5.56	6.22	6.87
Mu(-), ton-m:	-30.66	-19.33	-9.93	-6.13	-6.13	-6.13	-6.13	-6.13	-8.83	-17.37	-27.98
Mu(+), ton-m:	10.22	6.13	7.55	8.83	9.27	8.96	10.81	11.16	9.94	8.61	9.33
As(-), cm2:	19.60	11.83	5.89	5.78	5.78	5.78	5.78	5.78	5.78	10.56	17.70
As(+), cm2:	6.07	5.78	5.78	5.78	5.78	5.78	6.43	6.64	5.89	5.78	5.78
Vu, ton:	18.20	17.44	14.91	12.37	9.84	7.30	8.75	11.28	13.82	16.35	17.12
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-7 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 I-7

BEAM: 4(A-B) FLOOR: 4

Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.90 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.69	1.38	2.07	2.76	3.45	4.14	4.83	5.52	6.21	6.90
Mu(-), ton-m:	-38.48	-24.04	-12.01	-7.70	-7.70	-7.70	-7.70	-7.70	-11.13	-22.28	-36.19
Mu(+), ton-m:	12.83	7.73	9.63	11.80	12.10	11.29	12.22	12.14	10.42	8.20	12.06
As(-), cm2:	24.74	14.76	7.12	6.93	6.93	6.93	6.93	6.93	6.93	13.60	23.08
As(+), cm2:	7.62	6.93	6.93	7.00	7.18	6.93	7.25	7.20	6.93	6.93	7.16
Vu, ton:	23.72	22.61	19.26	15.91	12.56	9.21	10.41	13.76	17.11	20.46	21.57
Tu, ton-m:	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A-4 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 B-4

BEAM: 4(B-C) FLOOR: 4

Length:	L = 7.20 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-38.34	-24.22	-12.58	-7.67	-7.67	-7.67	-7.67	-7.67	-11.46	-22.61	-36.33
Mu(+), ton-m:	12.78	7.67	9.59	11.28	11.79	10.81	12.18	12.07	10.40	8.39	12.11
As(-), cm2:	24.64	14.87	7.48	6.93	6.93	6.93	6.93	6.93	6.93	13.82	23.19
As(+), cm2:	7.60	6.93	6.93	6.93	6.99	6.93	7.23	7.16	6.93	6.93	7.18
Vu, ton:	22.84	21.85	18.59	15.32	12.06	8.80	11.45	14.72	17.98	21.24	22.23
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

B-4 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 C-4

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:42 p. m. 5/01/2020

BEAM: 4(C-D) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-37.93	-24.12	-12.69	-7.59	-7.59	-7.59	-7.59	-7.59	-11.23	-22.01	-35.28
Mu(+), ton-m:	12.64	7.59	9.46	10.96	11.39	10.42	11.97	12.08	10.60	8.81	11.76
As(-), cm2:	24.34	14.80	7.54	6.93	6.93	6.93	6.93	6.93	6.93	13.43	22.44
As(+), cm2:	7.51	6.93	6.93	6.93	6.93	6.93	7.10	7.17	6.93	6.93	6.97
Vu, ton:	22.30	21.35	18.20	15.06	11.92	8.77	11.10	14.24	17.39	20.53	21.48
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-4 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 D-4

BEAM: 4(D-E) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.99	1.68	2.37	3.06	3.75	4.44	5.13	5.82	6.51	7.20
Mu(-), ton-m:	-38.92	-24.34	-12.52	-7.78	-7.78	-7.78	-7.78	-7.78	-8.04	-19.44	-33.59
Mu(+), ton-m:	12.97	7.78	9.15	11.72	12.92	12.08	11.13	10.55	7.78	7.78	11.20
As(-), cm2:	25.06	14.95	7.44	6.93	6.93	6.93	6.93	6.93	6.93	11.77	21.24
As(+), cm2:	7.72	6.93	6.93	6.94	7.68	7.16	6.93	6.93	6.93	6.93	6.93
Vu, ton:	23.11	21.92	18.35	14.78	11.22	8.61	12.06	15.62	19.19	22.76	23.95
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-4 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 E-4

BEAM: 4(E-Ea) FLOOR: 4

Length: L = 1.80 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-10.45	-8.34	-6.25	-4.18	-2.13	-2.09	-2.09	-3.99	-5.96	-7.94	-9.94
Mu(+), ton-m:	9.38	7.52	5.64	3.75	2.09	2.09	2.09	3.92	5.87	7.81	9.74
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	13.05	13.05	13.05	13.00	12.88	12.77	12.65	12.53	12.48	12.48	12.48
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

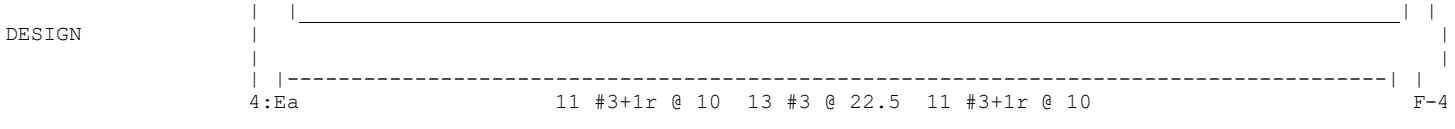
E-4 18 #3+1r @ 10 4:Ea

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:42 p. m. 5/01/2020

BEAM: 4(Ea-F) FLOOR: 4

Length: L = 5.40 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 5.10 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

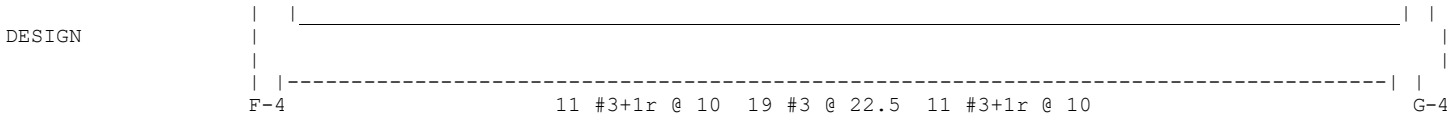
X, m:	0.00	0.51	1.02	1.53	2.04	2.55	3.06	3.57	4.08	4.59	5.10
Mu(-), ton-m:	-31.42	-21.17	-12.24	-6.32	-6.32	-6.32	-6.32	-7.77	-14.02	-22.01	-31.62
Mu(+), ton-m:	10.81	10.62	9.60	8.55	6.68	7.54	10.36	12.72	14.10	15.07	15.65
As(-), cm2:	19.73	12.88	7.26	6.93	6.93	6.93	6.93	6.93	8.36	13.43	19.87
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	7.56	8.41	9.02	9.38
Vu, ton:	21.64	21.40	18.95	16.50	14.05	11.60	11.36	13.81	16.26	18.71	18.95
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



BEAM: 4(F-G) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

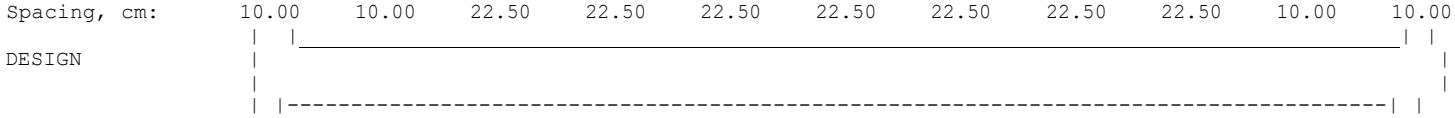
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-37.99	-23.92	-12.33	-7.60	-7.60	-7.60	-7.60	-7.60	-11.43	-22.58	-36.30
Mu(+), ton-m:	12.66	7.60	9.58	11.31	11.82	10.89	12.26	12.12	10.40	8.35	12.10
As(-), cm2:	24.38	14.67	7.32	6.93	6.93	6.93	6.93	6.93	6.93	13.80	23.17
As(+), cm2:	7.52	6.93	6.93	6.93	7.01	6.93	7.28	7.19	6.93	6.93	7.18
Vu, ton:	22.74	21.76	18.49	15.23	11.97	8.70	11.43	14.69	17.95	21.21	22.20
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



BEAM: 4(G-H) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-37.97	-24.04	-12.55	-7.59	-7.59	-7.59	-7.59	-7.59	-11.40	-22.39	-35.91
Mu(+), ton-m:	12.66	7.59	9.56	11.16	11.61	10.60	12.02	11.99	10.41	8.49	11.97
As(-), cm2:	24.37	14.75	7.45	6.93	6.93	6.93	6.93	6.93	6.93	13.68	22.88
As(+), cm2:	7.52	6.93	6.93	6.93	6.93	6.93	7.13	7.11	6.93	6.93	7.10
Vu, ton:	22.50	21.53	18.33	15.13	11.92	8.72	11.30	14.50	17.70	20.91	21.88
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:42 p. m. 5/01/2020

BEAM: 4(H-I) FLOOR: 4

Length: L = 7.17 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.57 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.27	2.93	3.59	4.24	4.90	5.56	6.22	6.87
Mu(-), ton-m:	-37.05	-23.37	-12.10	-7.41	-7.41	-7.41	-7.41	-7.41	-12.28	-23.40	-36.96
Mu(+), ton-m:	12.35	8.16	9.98	11.40	11.54	10.48	12.15	12.18	10.78	9.02	12.32
As(-), cm2:	23.71	14.31	7.18	6.93	6.93	6.93	6.93	6.93	7.29	14.33	23.64
As(+), cm2:	7.33	6.93	6.93	6.93	6.93	6.93	7.21	7.22	6.93	6.93	7.31
Vu, ton:	21.99	21.04	17.89	14.74	11.59	8.44	11.40	14.55	17.70	20.85	21.80
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-4 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 I-4

BEAM: 5(A-B) FLOOR: 4

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 7.20 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.48	7.20
Mu(-), ton-m:	-58.32	-32.49	-11.67	-11.66	-11.66	-11.66	-11.66	-11.66	-11.66	-30.60	-56.06
Mu(+), ton-m:	19.44	11.66	11.66	17.18	21.72	23.29	21.63	17.45	11.66	11.66	18.69
As(-), cm2:	39.70	20.47	6.93	6.93	6.93	6.93	6.93	6.93	6.93	19.16	38.28
As(+), cm2:	11.77	6.93	6.93	10.34	13.24	14.26	13.18	10.51	6.93	6.93	11.29
Vu, ton:	39.52	37.01	30.07	23.12	16.18	9.23	15.68	22.62	29.57	36.51	39.02
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	22.50	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

A-5 11 #3+1r @ 10 14 #3 @ 7.5 13 #3 @ 22.5 10 #3 @ 10 11 #3+1r @ 10 B-5

BEAM: 5(B-C) FLOOR: 4

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.90 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.69	1.38	2.07	2.76	3.45	4.14	4.83	5.52	6.21	6.90
Mu(-), ton-m:	-58.45	-33.45	-13.21	-11.69	-11.69	-11.69	-11.69	-11.69	-12.71	-31.51	-55.69
Mu(+), ton-m:	19.48	11.69	11.69	15.98	19.87	21.33	20.64	16.80	11.69	11.69	18.56
As(-), cm2:	39.78	21.15	7.86	6.93	6.93	6.93	6.93	6.93	7.55	19.79	38.04
As(+), cm2:	11.80	6.93	6.93	9.58	12.05	12.98	12.54	10.10	6.93	6.93	11.21
Vu, ton:	41.26	38.95	32.05	25.14	18.24	11.66	17.06	23.68	30.30	36.91	39.12
Tu, ton-m:	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	17.50	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

B-5 11 #3+1r @ 10 17 #3 @ 7.5 10 #3 @ 22.5 11 #3 @ 10 11 #3+1r @ 10 C-5

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:42 p. m. 5/01/2020

BEAM: 5(C-D) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-53.95	-31.60	-13.75	-10.79	-10.79	-10.79	-10.79	-10.79	-12.83	-30.26	-52.25
Mu(+), ton-m:	17.98	10.79	10.79	14.84	18.37	19.35	18.76	15.58	10.79	10.79	17.42
As(-), cm2:	36.80	19.86	8.20	6.93	6.93	6.93	6.93	6.93	7.63	18.93	35.39
As(+), cm2:	10.84	6.93	6.93	8.87	11.09	11.71	11.34	9.33	6.93	6.93	10.49
Vu, ton:	37.47	35.70	29.84	23.64	17.25	10.86	16.72	23.11	29.32	35.17	36.95
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

C-5 11 #3+1r @ 10 10 #3 @ 10 11 #3 @ 22.5 9 #3 @ 10 11 #3+1r @ 10 D-5

BEAM: 5(D-E) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.99	1.68	2.37	3.06	3.75	4.44	5.13	5.82	6.51	7.20
Mu(-), ton-m:	-57.20	-32.74	-13.61	-11.44	-11.44	-11.44	-11.44	-11.44	-11.44	-28.23	-52.51
Mu(+), ton-m:	19.07	11.44	11.44	16.41	21.08	21.71	19.82	15.10	11.44	11.44	17.50
As(-), cm2:	39.00	20.65	8.11	6.93	6.93	6.93	6.93	6.93	6.93	17.55	35.60
As(+), cm2:	11.53	6.93	6.93	9.85	12.82	13.23	12.02	9.03	6.93	6.93	10.54
Vu, ton:	39.83	37.60	30.89	24.19	17.33	10.49	16.91	23.91	30.91	37.90	40.23
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	20.00	22.50	22.50	22.50	20.00	10.00	10.00	10.00

DESIGN

D-5 11 #3+1r @ 10 11 #3 @ 10 11 #3 @ 22.5 11 #3 @ 10 11 #3+1r @ 10 E-5

BEAM: 5(E-Ea) FLOOR: 4

Length: L = 1.80 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-10.79	-8.63	-6.49	-4.37	-2.27	-2.16	-2.16	-3.89	-5.78	-7.70	-9.63
Mu(+), ton-m:	8.96	7.17	5.37	3.55	2.16	2.16	2.16	3.90	5.91	7.90	9.88
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	13.78	13.78	13.78	13.72	13.61	13.49	13.37	13.26	13.21	13.21	13.21
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

E-5 18 #3+1r @ 10 5:Ea

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:42 p. m. 5/01/2020

BEAM: 5(Ea-F) FLOOR: 4

Length: L = 5.40 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 5.10 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.51	1.02	1.53	2.04	2.55	3.06	3.57	4.08	4.59	5.10
Mu(-), ton-m:	-41.09	-25.65	-12.70	-8.36	-8.36	-8.36	-8.36	-8.36	-14.99	-26.92	-41.78
Mu(+), ton-m:	13.70	8.36	9.06	10.72	10.62	12.01	14.14	14.61	13.48	11.67	13.93
As(-), cm2:	26.66	15.82	7.55	6.93	6.93	6.93	6.93	6.93	8.96	16.67	27.17
As(+), cm2:	8.16	6.93	6.93	6.93	6.93	7.13	8.44	8.73	8.03	6.93	8.30
Vu, ton:	33.08	32.63	27.98	23.32	18.67	14.02	14.80	19.45	24.10	28.75	29.21
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	12.50	20.00	22.50	22.50	22.50	22.50	20.00	10.00	10.00

DESIGN

5:Ea 11 #3+1r @ 10 4 #3 @ 12.5 11 #3 @ 22.5 11 #3+1r @ 10 F-5

BEAM: 5(F-G) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-54.87	-31.72	-13.32	-10.97	-10.97	-10.97	-10.97	-10.97	-12.83	-30.97	-53.91
Mu(+), ton-m:	18.29	10.97	10.97	15.64	19.45	20.64	19.75	16.16	10.97	10.97	17.97
As(-), cm2:	37.53	19.93	7.93	6.93	6.93	6.93	6.93	6.93	7.63	19.42	36.77
As(+), cm2:	11.04	6.93	6.93	9.37	11.78	12.54	11.97	9.69	6.93	6.93	10.84
Vu, ton:	38.82	36.96	30.67	23.98	17.28	10.59	16.97	23.66	30.35	36.64	38.50
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	20.00	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

F-5 11 #3+1r @ 10 10 #3 @ 10 11 #3 @ 22.5 10 #3 @ 10 11 #3+1r @ 10 G-5

BEAM: 5(G-H) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-55.11	-32.13	-13.80	-11.02	-11.02	-11.02	-11.02	-11.02	-12.78	-30.66	-53.28
Mu(+), ton-m:	18.37	11.02	11.02	15.21	18.99	20.12	19.36	15.95	11.02	11.02	17.76
As(-), cm2:	37.68	20.22	8.22	6.93	6.93	6.93	6.93	6.93	7.59	19.21	36.24
As(+), cm2:	11.09	6.93	6.93	9.10	11.49	12.21	11.72	9.56	6.93	6.93	10.70
Vu, ton:	38.60	36.76	30.69	24.08	17.48	10.87	16.92	23.53	30.13	36.21	38.04
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	20.00	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

G-5 11 #3+1r @ 10 10 #3 @ 10 11 #3 @ 22.5 9 #3 @ 10 11 #3+1r @ 10 H-5

BEAM: 5(H-I) FLOOR: 4

Length:	L = 7.17 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.57 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.27	2.93	3.59	4.24	4.90	5.56	6.22	6.87
Mu(-), ton-m:	-55.57	-32.28	-13.71	-11.11	-11.11	-11.11	-11.11	-11.11	-12.51	-30.41	-53.14
Mu(+), ton-m:	18.52	11.11	11.11	15.63	19.46	20.83	20.37	17.12	11.11	11.11	17.71
As(-), cm2:	37.97	20.32	8.17	6.93	6.93	6.93	6.93	6.93	7.43	19.03	36.12
As(+), cm2:	11.19	6.93	6.93	9.36	11.79	12.67	12.37	10.30	6.93	6.93	10.67
Vu, ton:	39.08	37.25	31.14	24.84	18.18	11.51	17.32	23.99	30.28	36.39	38.23
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	17.50	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

H-5 11 #3+1r @ 10 10 #3 @ 10 10 #3 @ 22.5 10 #3 @ 10 11 #3+1r @ 10 I-5

BEAM: 6(A-B) FLOOR: 4

Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.90 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.69	1.38	2.07	2.76	3.45	4.14	4.83	5.52	6.21	6.90
Mu(-), ton-m:	-46.48	-28.09	-12.95	-9.30	-9.30	-9.30	-9.30	-9.30	-11.87	-25.92	-43.68
Mu(+), ton-m:	15.49	9.30	9.66	13.70	15.19	14.98	15.25	13.86	10.46	9.30	14.56
As(-), cm2:	30.77	17.45	7.70	6.93	6.93	6.93	6.93	6.93	7.04	16.00	28.61
As(+), cm2:	9.28	6.93	6.93	8.16	9.09	8.96	9.12	8.26	6.93	6.93	8.70
Vu, ton:	30.90	29.39	24.85	20.31	15.76	11.22	12.97	17.52	22.06	26.60	28.11
Tu, ton-m:	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	17.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A-6 11 #3+1r @ 10 4 #3 @ 15 18 #3 @ 22.5 11 #3+1r @ 10 B-6

BEAM: 6(B-C) FLOOR: 4

Length:	L = 7.20 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-45.76	-28.07	-13.69	-9.15	-9.15	-9.15	-9.15	-9.15	-12.70	-26.66	-44.00
Mu(+), ton-m:	15.25	9.15	10.16	13.29	14.78	14.34	15.10	13.96	10.84	9.15	14.67
As(-), cm2:	30.21	17.44	8.16	6.93	6.93	6.93	6.93	6.93	7.55	16.49	28.85
As(+), cm2:	9.13	6.93	6.93	7.91	8.83	8.56	9.03	8.32	6.93	6.93	8.76
Vu, ton:	29.02	27.72	23.40	19.08	14.76	10.44	14.23	18.55	22.87	27.19	28.50
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	20.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

B-6 11 #3+1r @ 10 2 #3 @ 17.5 18 #3 @ 22.5 11 #3+1r @ 10 C-6

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:42 p. m. 5/01/2020

BEAM: 6(C-D) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-44.71	-27.55	-13.58	-8.94	-8.94	-8.94	-8.94	-8.94	-12.81	-26.43	-43.29
Mu(+), ton-m:	14.90	8.94	10.16	13.01	14.29	13.72	14.62	13.64	10.80	8.94	14.43
As(-), cm2:	29.40	17.09	8.09	6.93	6.93	6.93	6.93	6.93	7.62	16.34	28.31
As(+), cm2:	8.91	6.93	6.93	7.74	8.53	8.18	8.73	8.13	6.93	6.93	8.62
Vu, ton:	28.08	26.82	22.66	18.50	14.34	10.18	13.89	18.06	22.22	26.38	27.64
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-6 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 D-6

BEAM: 6(D-E) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.99	1.68	2.37	3.06	3.75	4.44	5.13	5.82	6.51	7.20
Mu(-), ton-m:	-47.85	-29.13	-14.05	-9.57	-9.57	-9.57	-9.57	-9.57	-9.57	-24.80	-46.38
Mu(+), ton-m:	15.95	9.57	9.57	13.84	16.59	16.72	16.21	14.42	9.57	9.57	15.46
As(-), cm2:	31.84	18.16	8.38	6.93	6.93	6.93	6.93	6.93	6.93	15.25	30.69
As(+), cm2:	9.56	6.93	6.93	8.25	9.97	10.05	9.72	8.61	6.93	6.93	9.26
Vu, ton:	30.43	28.92	24.42	19.92	15.41	10.91	13.99	20.07	26.89	33.71	35.98
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	17.50	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

D-6 11 #3+1r @ 10 4 #3 @ 15 15 #3 @ 22.5 5 #3 @ 12.5 11 #3+1r @ 10 E-6

BEAM: 6(E-Ea) FLOOR: 4

Length: L = 1.80 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-10.69	-8.54	-6.42	-4.31	-2.22	-2.21	-2.33	-4.47	-6.64	-8.82	-11.03
Mu(+), ton-m:	10.14	8.12	6.08	4.03	2.21	2.21	2.21	4.05	6.09	8.11	10.12
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	13.19	13.19	13.19	13.14	13.11	13.23	13.34	13.46	13.51	13.51	13.51
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

E-6 18 #3+1r @ 10 6:Ea

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:42 p. m. 5/01/2020

BEAM: 6(Ea-F) FLOOR: 4

Length: L = 5.40 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 5.10 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.51	1.02	1.53	2.04	2.55	3.06	3.57	4.08	4.59	5.10
Mu(-), ton-m:	-46.39	-29.23	-13.55	-9.28	-9.28	-9.28	-9.28	-9.28	-16.12	-29.36	-45.56
Mu(+), ton-m:	15.46	9.28	9.81	14.95	15.21	15.40	16.25	15.63	13.97	11.89	15.19
As(-), cm2:	32.43	19.96	9.81	8.67	6.93	6.93	6.93	6.93	9.67	18.31	30.05
As(+), cm2:	11.00	8.67	8.67	10.68	9.10	9.22	9.75	9.36	8.33	7.05	9.09
Vu, ton:	37.79	37.54	34.98	32.43	16.65	14.65	19.08	23.53	27.98	32.43	32.87
Tu, ton-m:	1.80	1.80	1.80	1.80	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	7.50	7.50	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

6:Ea 11 #3+1r @ 10 9 #3 @ 7.5 8 #3 @ 22.5 4 #3 @ 12.5 11 #3+1r @ 10 F-6

BEAM: 6(F-G) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-45.11	-27.52	-13.25	-9.02	-9.02	-9.02	-9.02	-9.02	-12.79	-26.73	-44.04
Mu(+), ton-m:	15.04	9.02	9.88	13.05	14.58	14.34	15.13	13.89	10.71	9.02	14.68
As(-), cm2:	29.71	17.07	7.88	6.93	6.93	6.93	6.93	6.93	7.60	16.54	28.88
As(+), cm2:	8.99	6.93	6.93	7.76	8.71	8.56	9.05	8.28	6.93	6.93	8.77
Vu, ton:	28.86	27.55	23.23	18.91	14.59	10.27	14.18	18.50	22.82	27.14	28.45
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	20.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-6 11 #3+1r @ 10 2 #3 @ 17.5 18 #3 @ 22.5 11 #3+1r @ 10 G-6

BEAM: 6(G-H) FLOOR: 4

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-45.64	-28.01	-13.68	-9.13	-9.13	-9.13	-9.13	-9.13	-12.70	-26.61	-43.89
Mu(+), ton-m:	15.21	9.13	10.18	13.28	14.74	14.28	15.06	13.94	10.86	9.13	14.63
As(-), cm2:	30.11	17.40	8.15	6.93	6.93	6.93	6.93	6.93	7.54	16.46	28.77
As(+), cm2:	9.10	6.93	6.93	7.90	8.81	8.52	9.01	8.31	6.93	6.93	8.74
Vu, ton:	28.91	27.61	23.31	19.01	14.71	10.41	14.18	18.48	22.78	27.08	28.39
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	20.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-6 11 #3+1r @ 10 2 #3 @ 17.5 18 #3 @ 22.5 11 #3+1r @ 10 H-6

BEAM: 6(H-I) FLOOR: 4

Length: L = 7.17 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.57 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.27	2.93	3.59	4.24	4.90	5.56	6.22	6.87
Mu(-), ton-m:	-44.68	-27.36	-13.30	-8.94	-8.94	-8.94	-8.94	-8.94	-13.08	-26.88	-43.97
Mu(+), ton-m:	14.89	8.94	10.63	13.54	14.72	14.23	15.32	14.39	11.53	8.94	14.66
As(-), cm2:	29.37	16.96	7.91	6.93	6.93	6.93	6.93	6.93	7.78	16.64	28.83
As(+), cm2:	8.90	6.93	6.93	8.06	8.80	8.49	9.17	8.59	6.93	6.93	8.76
Vu, ton:	28.27	27.01	22.80	18.60	14.40	10.20	14.06	18.26	22.47	26.67	27.93
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-6 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 I-6

BEAM: 6'(E-E') FLOOR: 4

Length: L = 3.54 m a = 0.20 m Section: b = 15.0 cm Sec: VT15X50
Lu = 3.34 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.20	0.53	0.87	1.20	1.54	1.87	2.20	2.54	2.87	3.21	3.54
Mu(-), ton-m:	-1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	-0.84
Mu(+), ton-m:	1.56	5.05	8.72	11.32	12.83	13.26	12.61	10.87	8.06	4.21	0.00
As(-), cm2:	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31
As(+), cm2:	2.31	3.02	5.39	7.16	8.25	8.56	8.09	6.86	4.95	2.50	2.31
Vu, ton:	11.41	11.41	9.38	6.12	2.85	0.42	3.68	6.94	10.20	13.46	16.72
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00

DESIGN

E-6' 34 #3 @ 10 E'-6'

BEAM: 7(Da-E) FLOOR: 4

Length: L = 2.54 m a = 0.00 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 2.24 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.22	0.45	0.67	0.90	1.12	1.34	1.57	1.79	2.02	2.24
Mu(-), ton-m:	0.00	-0.14	-0.51	-1.11	-1.93	-2.97	-4.24	-5.73	-7.45	-9.43	-11.67
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	6.96
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	0.00	1.04	2.08	3.11	4.15	5.19	6.23	7.27	8.25	8.25	8.25
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

7:Da 11 #3 @ 22.5 E-7

BEAM: 7(E-F) FLOOR: 4

Length:	L = 7.20 m	a = 0.30 m	Section:	b = 37.5 cm	Sec:	VG37.5X50				
	Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-27.62	-19.98	-12.62	-6.03	-6.03	-6.03	-6.03	-6.03	-9.94	-18.93	-30.14
Mu(+), ton-m:	9.93	9.29	8.53	7.98	8.30	8.91	10.76	11.66	11.04	10.32	10.05
As(-), cm2:	17.44	12.26	7.55	5.78	5.78	5.78	5.78	5.78	5.89	11.57	19.22
As(+), cm2:	5.89	5.78	5.78	5.78	5.78	5.78	6.40	6.95	6.57	6.13	5.96
Vu, ton:	13.07	12.97	12.65	12.32	11.99	7.41	8.64	11.19	13.74	16.29	17.06
Tu, ton-m:	0.58	0.58	0.58	0.58	0.58	0.54	0.54	0.54	0.54	0.54	0.54
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-7 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-7

BEAM: 4(A-B) FLOOR: CUB

Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.90 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.69	1.38	2.07	2.76	3.45	4.14	4.83	5.52	6.21	6.90
Mu(-), ton-m:	-28.52	-17.83	-8.91	-5.70	-5.70	-5.70	-5.70	-5.70	-8.27	-16.54	-26.89
Mu(+), ton-m:	9.51	6.57	7.59	9.21	9.33	8.80	9.28	9.18	8.04	6.71	8.96
As(-), cm2:	17.75	10.75	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.93	16.65
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	17.48	16.66	14.19	11.72	9.26	6.79	7.75	10.21	12.68	15.15	15.97
Tu, ton-m:	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A-4 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 B-4

BEAM: 4(B-C) FLOOR: CUB

Length:	L = 7.20 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-28.35	-17.94	-9.39	-5.67	-5.67	-5.67	-5.67	-5.67	-8.41	-16.54	-26.59
Mu(+), ton-m:	9.45	5.74	7.08	8.23	8.64	8.19	9.01	8.95	7.81	6.61	8.86
As(-), cm2:	17.63	10.82	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.93	16.45
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	16.84	16.11	13.72	11.32	8.93	6.53	8.39	10.79	13.18	15.58	16.30
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

B-4 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 C-4

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:43 p. m. 5/01/2020

BEAM: 4(C-D) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-27.88	-17.75	-9.39	-5.58	-5.58	-5.58	-5.58	-5.58	-8.47	-16.41	-26.20
Mu(+), ton-m:	9.29	5.82	7.03	8.03	8.34	7.80	8.69	8.72	7.74	6.67	8.73
As(-), cm2:	17.31	10.69	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.85	16.19
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	16.37	15.67	13.35	11.04	8.73	6.42	8.22	10.53	12.84	15.16	15.86
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-4 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 D-4

BEAM: 4(D-E) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.99	1.68	2.37	3.06	3.75	4.44	5.13	5.82	6.51	7.20
Mu(-), ton-m:	-28.99	-18.13	-9.38	-5.80	-5.80	-5.80	-5.80	-5.80	-6.46	-14.98	-25.54
Mu(+), ton-m:	9.66	5.80	7.30	8.98	9.68	9.01	8.66	8.38	6.44	5.80	8.51
As(-), cm2:	18.06	10.94	6.93	6.93	6.93	6.93	6.93	6.93	6.93	8.96	15.75
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	17.05	16.18	13.56	10.95	8.33	6.45	8.99	11.61	14.22	16.84	17.71
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-4 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 E-4

BEAM: 4(E-Ea) FLOOR: CUB

Length: L = 1.80 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-9.46	-7.55	-5.66	-3.79	-1.94	-1.89	-1.89	-3.62	-5.38	-7.16	-8.97
Mu(+), ton-m:	8.38	6.72	5.04	3.35	1.89	1.89	1.89	3.51	5.27	7.01	8.73
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	11.81	11.81	11.81	11.76	11.64	11.52	11.41	11.29	11.24	11.24	11.24
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

E-4 18 #3+1r @ 10 4:Ea

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:43 p. m. 5/01/2020

BEAM: 4(Ea-F) FLOOR: CUB

Length: L = 5.40 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 5.10 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.51	1.02	1.53	2.04	2.55	3.06	3.57	4.08	4.59	5.10
Mu(-), ton-m:	-24.53	-16.80	-10.03	-4.91	-4.91	-4.91	-4.91	-5.87	-10.57	-16.59	-23.79
Mu(+), ton-m:	9.17	8.70	7.67	6.67	5.15	5.31	7.35	9.27	10.55	11.62	12.42
As(-), cm2:	15.07	10.09	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.96	14.59
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	7.37
Vu, ton:	16.49	16.31	14.51	12.71	10.90	9.10	8.80	10.61	12.41	14.21	14.39
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

4:Ea 11 #3+1r @ 10 13 #3 @ 22.5 11 #3+1r @ 10 F-4

BEAM: 4(F-G) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-27.48	-17.19	-8.79	-5.50	-5.50	-5.50	-5.50	-5.50	-8.40	-16.55	-26.62
Mu(+), ton-m:	9.16	5.70	7.09	8.35	8.75	8.40	9.17	9.01	7.77	6.48	8.87
As(-), cm2:	17.04	10.34	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.94	16.47
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	16.59	15.87	13.47	11.07	8.68	6.28	8.35	10.75	13.14	15.54	16.26
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-4 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 G-4

BEAM: 4(G-H) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-28.12	-17.85	-9.39	-5.62	-5.62	-5.62	-5.62	-5.62	-8.30	-16.31	-26.21
Mu(+), ton-m:	9.37	5.78	7.07	8.16	8.54	8.04	8.87	8.86	7.77	6.62	8.74
As(-), cm2:	17.48	10.76	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.79	16.19
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	16.62	15.90	13.55	11.20	8.84	6.49	8.28	10.63	12.98	15.34	16.05
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-4 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 H-4

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:43 p. m. 5/01/2020

BEAM: 4(H-I) FLOOR: CUB

Length: L = 7.17 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.57 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.27	2.93	3.59	4.24	4.90	5.56	6.22	6.87
Mu(-), ton-m:	-27.94	-17.64	-9.15	-5.59	-5.59	-5.59	-5.59	-5.59	-9.35	-17.50	-27.52
Mu(+), ton-m:	9.31	6.54	7.53	8.41	8.51	8.20	9.66	9.92	9.02	8.10	9.17
As(-), cm2:	17.35	10.62	6.93	6.93	6.93	6.93	6.93	6.93	6.93	10.53	17.07
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	16.44	15.75	13.43	11.11	8.80	6.48	8.38	10.69	13.01	15.33	16.02
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-4 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 I-4

BEAM: 5(A-B) FLOOR: CUB

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 7.20 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.72	1.44	2.16	2.88	3.60	4.32	5.04	5.76	6.48	7.20
Mu(-), ton-m:	-42.31	-23.69	-8.65	-8.46	-8.46	-8.46	-8.46	-8.46	-8.46	-22.26	-40.73
Mu(+), ton-m:	14.10	8.46	8.46	13.17	16.24	17.64	15.65	12.67	8.46	8.46	13.58
As(-), cm2:	27.58	14.52	6.93	6.93	6.93	6.93	6.93	6.93	6.93	13.59	26.39
As(+), cm2:	8.41	6.93	6.93	7.84	9.75	10.63	9.38	7.53	6.93	6.93	8.09
Vu, ton:	28.63	26.81	21.82	16.83	11.85	6.86	11.63	16.62	21.60	26.59	28.42
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A-5 11 #3+1r @ 10 2 #3 @ 17.5 21 #3 @ 22.5 11 #3+1r @ 10 B-5

BEAM: 5(B-C) FLOOR: CUB

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.90 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.69	1.38	2.07	2.76	3.45	4.14	4.83	5.52	6.21	6.90
Mu(-), ton-m:	-42.62	-24.53	-9.85	-8.52	-8.52	-8.52	-8.52	-8.52	-9.14	-22.44	-39.72
Mu(+), ton-m:	14.21	8.52	8.52	11.30	14.13	15.79	15.21	12.49	8.52	8.52	13.24
As(-), cm2:	27.81	15.08	6.93	6.93	6.93	6.93	6.93	6.93	6.93	13.70	25.65
As(+), cm2:	8.48	6.93	6.93	6.93	8.43	9.46	9.10	7.42	6.93	6.93	7.88
Vu, ton:	29.74	28.09	23.14	18.19	13.23	8.46	12.17	16.93	21.67	26.42	28.00
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

B-5 11 #3+1r @ 10 2 #3 @ 17.5 19 #3 @ 22.5 11 #3+1r @ 10 C-5

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:43 p. m. 5/01/2020

BEAM: 5(C-D) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-39.11	-23.01	-10.20	-7.82	-7.82	-7.82	-7.82	-7.82	-9.38	-21.84	-37.65
Mu(+), ton-m:	13.04	7.82	7.82	10.66	13.23	14.35	13.50	11.23	7.82	7.82	12.55
As(-), cm2:	25.20	14.08	6.93	6.93	6.93	6.93	6.93	6.93	6.93	13.32	24.14
As(+), cm2:	7.75	6.93	6.93	6.93	7.87	8.56	8.04	6.93	6.93	6.93	7.45
Vu, ton:	27.01	25.73	21.53	17.15	12.56	7.97	12.12	16.70	21.09	25.29	26.57
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-5 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 D-5

BEAM: 5(D-E) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.90 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.99	1.68	2.37	3.06	3.75	4.44	5.13	5.82	6.51	7.20
Mu(-), ton-m:	-41.75	-24.00	-10.19	-8.35	-8.35	-8.35	-8.35	-8.35	-8.35	-20.89	-38.47
Mu(+), ton-m:	13.92	8.35	8.35	12.13	15.49	16.35	14.97	11.55	8.35	8.35	12.82
As(-), cm2:	27.16	14.73	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.70	24.73
As(+), cm2:	8.30	6.93	6.93	7.20	9.28	9.82	8.95	6.93	6.93	6.93	7.62
Vu, ton:	28.76	27.15	22.34	17.54	12.73	8.06	12.67	17.69	22.71	27.72	29.45
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-5 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 E-5

BEAM: 5(E-Ea) FLOOR: CUB

Length: L = 1.80 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 1.80 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

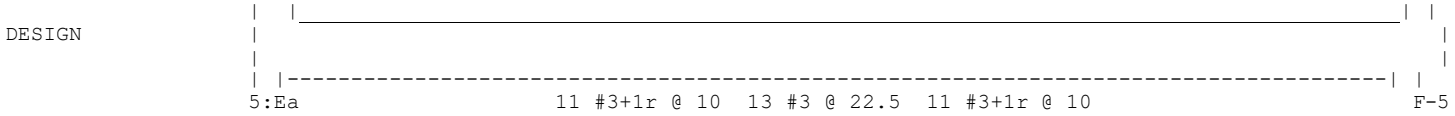
X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-9.81	-7.85	-5.92	-4.00	-2.11	-1.96	-1.96	-3.49	-5.16	-6.86	-8.57
Mu(+), ton-m:	7.86	6.28	4.70	3.09	1.96	1.96	1.96	3.46	5.26	7.05	8.82
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	12.56	12.56	12.56	12.51	12.39	12.27	12.16	12.04	11.99	11.99	11.99
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

E-5 18 #3+1r @ 10 5:Ea

BEAM: 5(Ea-F) FLOOR: CUB

Length:	L = 5.40 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 5.10 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.51	1.02	1.53	2.04	2.55	3.06	3.57	4.08	4.59	5.10
Mu(-), ton-m:	-31.23	-19.89	-10.35	-6.25	-6.25	-6.25	-6.25	-6.25	-11.15	-19.86	-30.66
Mu(+), ton-m:	10.41	6.53	7.14	8.03	7.80	8.37	9.91	10.50	10.10	9.37	10.22
As(-), cm2:	19.60	12.06	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.04	19.21
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	24.21	23.89	20.55	17.21	13.87	10.53	10.87	14.21	17.55	20.89	21.22
Tu, ton-m:	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

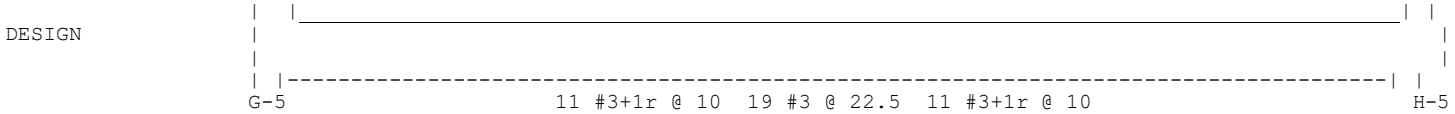


BEAM: 5(F-G) FLOOR: CUB

Length:	L = 7.20 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-39.04	-22.46	-9.39	-7.81	-7.81	-7.81	-7.81	-7.81	-9.33	-22.30	-38.80
Mu(+), ton-m:	13.01	7.81	7.81	11.38	14.13	15.56	14.42	11.78	7.81	7.81	12.93
As(-), cm2:	25.15	13.72	6.93	6.93	6.93	6.93	6.93	6.93	6.93	13.62	24.97
As(+), cm2:	7.74	6.93	6.93	6.93	8.43	9.32	8.61	6.99	6.93	6.93	7.69
Vu, ton:	27.75	26.41	21.95	17.15	12.35	7.55	12.21	17.01	21.81	26.28	27.61
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

BEAM: 5(G-H) FLOOR: CUB

Length:	L = 7.20 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-39.94	-23.38	-10.22	-7.99	-7.99	-7.99	-7.99	-7.99	-9.28	-22.04	-38.28
Mu(+), ton-m:	13.31	7.99	7.99	10.93	13.67	14.96	13.96	11.54	7.99	7.99	12.76
As(-), cm2:	25.81	14.32	6.93	6.93	6.93	6.93	6.93	6.93	6.93	13.45	24.59
As(+), cm2:	7.92	6.93	6.93	6.93	8.15	8.94	8.32	6.93	6.93	6.93	7.58
Vu, ton:	27.81	26.49	22.15	17.49	12.75	8.01	12.26	17.00	21.66	26.00	27.31
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:43 p. m. 5/01/2020

BEAM: 5(H-I) FLOOR: CUB

Length: L = 7.17 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.57 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.27	2.93	3.59	4.24	4.90	5.56	6.22	6.87
Mu(-), ton-m:	-40.81	-23.80	-10.24	-8.16	-8.16	-8.16	-8.16	-8.16	-8.81	-21.41	-37.67
Mu(+), ton-m:	13.60	8.16	8.16	11.34	14.20	16.00	15.55	13.49	9.12	8.16	12.56
As(-), cm2:	26.45	14.59	6.93	6.93	6.93	6.93	6.93	6.93	6.93	13.04	24.15
As(+), cm2:	8.10	6.93	6.93	6.93	8.48	9.60	9.31	8.03	6.93	6.93	7.46
Vu, ton:	28.43	27.12	22.73	18.35	13.95	9.20	12.80	17.20	21.59	25.97	27.28
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-5 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 I-5

BEAM: 6(A-B) FLOOR: CUB

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.90 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.69	1.38	2.07	2.76	3.45	4.14	4.83	5.52	6.21	6.90
Mu(-), ton-m:	-34.66	-21.13	-9.97	-6.93	-6.93	-6.93	-6.93	-6.93	-8.70	-18.93	-31.94
Mu(+), ton-m:	11.55	6.93	7.66	10.50	11.48	11.42	11.33	10.35	8.11	6.93	10.65
As(-), cm2:	21.99	12.86	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.45	20.09
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	22.64	21.54	18.24	14.95	11.65	8.35	9.54	12.84	16.13	19.43	20.53
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

A-6 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 B-6

BEAM: 6(B-C) FLOOR: CUB

Length: L = 7.20 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.60 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-33.54	-20.64	-10.18	-6.71	-6.71	-6.71	-6.71	-6.71	-9.26	-19.33	-31.90
Mu(+), ton-m:	11.18	6.71	7.52	9.64	10.75	10.78	11.07	10.28	8.16	6.71	10.63
As(-), cm2:	21.20	12.54	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.70	20.06
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	21.16	20.21	17.08	13.95	10.81	7.68	10.32	13.46	16.59	19.72	20.67
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

B-6 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 C-6

BEAM: 6(C-D) FLOOR: CUB

Length:	L = 7.20 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-32.74	-20.24	-10.09	-6.55	-6.55	-6.55	-6.55	-6.55	-9.43	-19.29	-31.56
Mu(+), ton-m:	10.91	6.55	7.51	9.44	10.38	10.26	10.63	9.92	8.02	6.55	10.52
As(-), cm2:	20.64	12.28	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.68	19.82
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	20.46	19.55	16.53	13.51	10.48	7.46	10.12	13.14	16.17	19.19	20.10
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

C-6 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 D-6

BEAM: 6(D-E) FLOOR: CUB

Length:	L = 7.20 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.90 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.30	0.99	1.68	2.37	3.06	3.75	4.44	5.13	5.82	6.51	7.20
Mu(-), ton-m:	-35.64	-21.83	-10.71	-7.13	-7.13	-7.13	-7.13	-7.13	-7.13	-18.54	-34.24
Mu(+), ton-m:	11.88	7.13	7.46	10.27	12.23	12.56	12.32	11.14	7.53	7.13	11.41
As(-), cm2:	22.69	13.31	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.20	21.70
As(+), cm2:	7.04	6.93	6.93	6.93	7.26	7.46	7.31	6.93	6.93	6.93	6.93
Vu, ton:	22.31	21.22	17.96	14.69	11.42	8.15	10.28	14.65	19.55	24.44	26.07
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

D-6 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 E-6

BEAM: 6(E-Ea) FLOOR: CUB

Length:	L = 1.80 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 1.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-9.33	-7.44	-5.57	-3.74	-1.99	-1.99	-2.11	-4.04	-5.99	-7.96	-9.95
Mu(+), ton-m:	9.02	7.22	5.40	3.57	1.99	1.99	1.99	3.55	5.33	7.09	8.84
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	11.75	11.75	11.75	11.81	11.92	12.04	12.16	12.27	12.32	12.32	12.32
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

E-6 18 #3+1r @ 10 6:Ea

BEAM: 6(Ea-F) FLOOR: CUB

	Length:	L = 5.40 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.10 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.51	1.02	1.53	2.04	2.55	3.06	3.57	4.08	4.59	5.10
Mu(-), ton-m:	-38.97	-24.64	-11.43	-7.79	-7.79	-7.79	-7.79	-7.79	-13.74	-24.11	-36.66
Mu(+), ton-m:	12.99	7.79	8.26	12.60	12.53	12.46	13.09	12.79	11.98	11.13	12.22
As(-), cm2:	26.86	16.91	8.70	8.70	6.93	6.93	6.93	6.93	8.19	14.80	23.42
As(+), cm2:	9.49	8.70	8.70	9.25	7.44	7.40	7.79	7.60	7.11	6.93	7.25
Vu, ton:	31.48	31.30	29.41	27.53	12.76	12.74	15.93	19.13	22.33	25.53	25.84
Tu, ton-m:	1.83	1.83	1.83	1.83	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	7.50	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

6:Ea 11 #3+1r @ 10 8 #3 @ 7.5 10 #3 @ 22.5 11 #3+1r @ 10 F-6

BEAM: 6(F-G) FLOOR: CUB

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-34.27	-21.27	-10.73	-6.85	-6.85	-6.85	-6.85	-6.85	-9.71	-20.05	-32.88
Mu(+), ton-m:	11.42	6.85	8.50	10.44	11.29	10.86	10.95	10.23	8.28	6.85	10.96
As(-), cm2:	21.72	12.95	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.16	20.74
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	21.22	20.27	17.14	14.01	10.88	7.74	10.62	13.75	16.88	20.02	20.97
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

F-6 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 G-6

BEAM: 6(G-H) FLOOR: CUB

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-33.34	-20.51	-10.10	-6.67	-6.67	-6.67	-6.67	-6.67	-9.21	-19.22	-31.73
Mu(+), ton-m:	11.11	6.67	7.43	9.56	10.67	10.72	11.01	10.21	8.10	6.67	10.58
As(-), cm2:	21.07	12.45	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.63	19.95
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	21.06	20.11	17.00	13.88	10.76	7.64	10.27	13.39	16.50	19.62	20.57
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G-6 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 H-6

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:43 p. m. 5/01/2020

BEAM: 6(H-I) FLOOR: CUB

Length: L = 7.17 m a = 0.30 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.57 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.30	0.96	1.62	2.27	2.93	3.59	4.24	4.90	5.56	6.22	6.87
Mu(-), ton-m:	-33.26	-20.42	-9.99	-6.65	-6.65	-6.65	-6.65	-6.65	-9.52	-19.41	-31.82
Mu(+), ton-m:	11.09	6.65	8.02	9.96	10.86	11.08	11.94	11.52	9.51	7.58	10.61
As(-), cm2:	21.01	12.40	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.75	20.01
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	7.08	6.93	6.93	6.93	6.93
Vu, ton:	20.86	19.94	16.89	13.84	10.79	7.74	10.14	13.19	16.24	19.29	20.21
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

H-6 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 I-6

BEAM: 6'(E-E') FLOOR: CUB

Length: L = 3.54 m a = 0.20 m Section: b = 15.0 cm Sec: VT15X50
Lu = 3.34 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.20	0.53	0.87	1.20	1.54	1.87	2.20	2.54	2.87	3.21	3.54
Mu(-), ton-m:	-1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	-0.83
Mu(+), ton-m:	1.59	5.08	8.76	11.35	12.86	13.28	12.63	10.89	8.07	4.22	0.00
As(-), cm2:	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31
As(+), cm2:	2.31	3.04	5.41	7.19	8.27	8.58	8.10	6.87	4.96	2.51	2.31
Vu, ton:	11.40	11.40	9.37	6.11	2.85	0.43	3.69	6.95	10.21	13.47	16.73
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00

DESIGN

E-6' 34 #3 @ 10 E'-6'

BEAM: 7(Da-E) FLOOR: CUB

Length: L = 2.54 m a = 0.00 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 2.24 m c = 0.30 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.22	0.45	0.67	0.90	1.12	1.34	1.57	1.79	2.02	2.24
Mu(-), ton-m:	0.00	-0.11	-0.39	-0.84	-1.46	-2.26	-3.23	-4.36	-5.67	-7.18	-8.88
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	0.00	0.79	1.58	2.37	3.16	3.95	4.74	5.53	6.27	6.27	6.27
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

7:Da 11 #3 @ 22.5 E-7

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:34:43 p. m. 5/01/2020

BEAM: 7(E-F) FLOOR: CUB

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-25.18	-18.30	-11.68	-5.63	-5.25	-5.25	-5.25	-5.25	-9.42	-16.99	-26.23
Mu(+), ton-m:	9.73	8.96	8.05	7.27	7.33	7.58	8.95	9.87	9.79	9.80	9.39
As(-), cm2:	15.75	11.16	6.97	5.78	5.78	5.78	5.78	5.78	5.78	10.32	16.47
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.85	5.80	5.81	5.78
Vu, ton:	11.61	11.52	11.19	10.86	10.54	6.19	7.98	9.85	11.73	13.61	14.18
Tu, ton-m:	0.59	0.59	0.59	0.59	0.59	0.54	0.54	0.54	0.54	0.54	0.54
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

E-7 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F-7

BEAM: 6(Da-E) FLOOR: MAQ

	Length:	L = 2.54 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 2.54 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.25	0.51	0.76	1.02	1.27	1.52	1.78	2.03	2.29	2.54
Mu(-), ton-m:	0.00	-0.13	-0.52	-1.18	-2.10	-3.27	-4.71	-6.42	-8.38	-10.61	-13.10
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	7.79
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	0.00	1.03	2.06	3.09	4.12	5.16	6.19	7.22	8.25	8.44	8.44
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

6:Da 12 #3 @ 22.5 E-6

BEAM: 6(E-Ea) FLOOR: MAQ

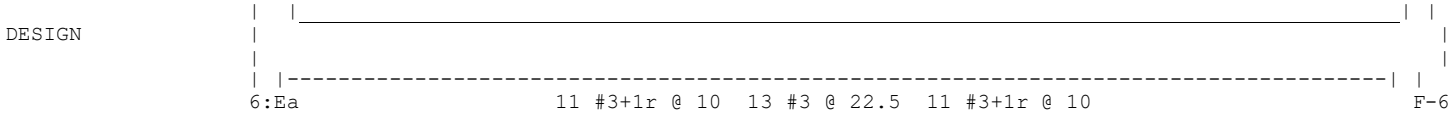
	Length:	L = 1.80 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 1.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-8.75	-6.98	-5.22	-3.48	-1.93	-1.93	-2.06	-3.92	-5.80	-7.71	-9.63
Mu(+), ton-m:	8.68	6.94	5.18	3.41	1.93	1.93	1.93	3.34	5.00	6.65	8.29
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	11.51	11.51	11.51	11.56	11.67	11.79	11.91	12.02	12.08	12.08	12.08
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup:	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

E-6 18 #3+1r @ 10 6:Ea

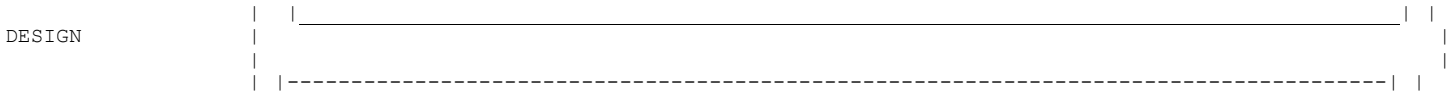
BEAM: 6(Ea-F) FLOOR: MAQ

	Length:	L = 5.40 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.10 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.51	1.02	1.53	2.04	2.55	3.06	3.57	4.08	4.59	5.10
Mu(-), ton-m:	-25.77	-17.64	-10.44	-5.15	-5.15	-5.15	-5.15	-5.47	-9.64	-14.81	-21.28
Mu(+), ton-m:	8.68	8.29	7.35	6.49	5.37	6.25	8.96	11.49	13.13	14.30	15.34
As(-), cm2:	15.90	10.62	6.93	6.93	6.93	6.93	6.93	6.93	6.93	8.85	12.95
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	7.81	8.53	9.18
Vu, ton:	17.86	17.68	15.83	13.99	12.24	10.57	9.18	10.69	12.36	14.04	14.20
Tu, ton-m:	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Stirrup:	#3+1r	#3+1r	#3	#3	#3	#3	#3	#3	#3	#3+1r	#3+1r
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



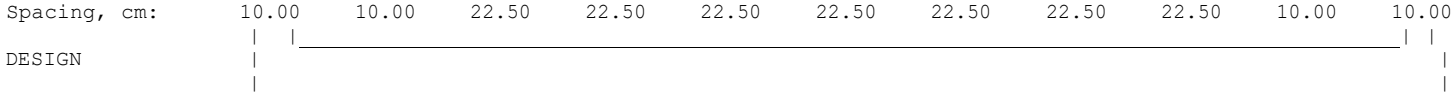
BEAM: 7(Da-E) FLOOR: MAQ

	Length:	L = 2.54 m	a = 0.00 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 2.24 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.22	0.45	0.67	0.90	1.12	1.34	1.57	1.79	2.02	2.24
Mu(-), ton-m:	0.00	-0.11	-0.39	-0.84	-1.46	-2.26	-3.23	-4.36	-5.67	-7.18	-8.88
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	0.00	0.79	1.58	2.37	3.16	3.95	4.74	5.53	6.27	6.27	6.27
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50



BEAM: 7(E-F) FLOOR: MAQ

	Length:	L = 7.20 m	a = 0.30 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 6.60 m	c = 0.30 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.30	0.96	1.62	2.28	2.94	3.60	4.26	4.92	5.58	6.24	6.90
Mu(-), ton-m:	-27.91	-18.44	-10.51	-5.58	-5.58	-5.58	-5.58	-5.58	-8.15	-14.89	-23.38
Mu(+), ton-m:	9.30	7.87	8.14	8.25	7.93	7.07	8.86	10.10	10.12	10.10	9.74
As(-), cm2:	17.64	11.26	6.24	5.78	5.78	5.78	5.78	5.78	5.78	8.98	14.52
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.99	6.01	5.99	5.78
Vu, ton:	15.10	14.53	12.66	10.79	8.92	7.04	7.51	9.39	11.27	13.14	13.71
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00



Nit. **901.134.339-5**
D: Calle 45 No.45 - 16 of 3801 **T:** 318 735 1464
C: ingenieriaipc@hotmail.com

- Ampliación estructura metálica

A continuación, mostramos el resultado de diseño de la ampliación en estructura metálica donde se evidencia la revisión y el cumplimiento de la NSR-10.

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:36:43 p. m. 5/01/2020
File: C:\Users\Laura\Documents\LAURA\IPC\IP\CALLE 80\PL DWG\ING\MODELO RCB BLOQUE B.rcb

LOAD COMBINATIONS

No	Load combination
1	1.4D0 + 1.4DL + 1.4DL1
2	1.2D0 + 1.2DL + 1.2DL1 + 1.6LL + 1.6LL1
3	1.2D0 + 1.2DL + 1.2DL1 + 1.6LL
4	1.2D0 + 1.2DL + 1.2DL1 + 1.6LL1
5	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + EQX + .3EQY
6	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - EQX - .3EQY
7	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + EQX - .3EQY
8	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - EQX + .3EQY
9	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + .3EQX + EQY
10	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - .3EQX - EQY
11	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 - .3EQX + EQY
12	1.2D0 + 1.2DL + 1.2DL1 + LL + LL1 + .3EQX - EQY
13	.9D0 + .9DL + .9DL1 + EQX + .3EQY
14	.9D0 + .9DL + .9DL1 - EQX - .3EQY
15	.9D0 + .9DL + .9DL1 + EQX - .3EQY
16	.9D0 + .9DL + .9DL1 - EQX + .3EQY
17	.9D0 + .9DL + .9DL1 + .3EQX + EQY
18	.9D0 + .9DL + .9DL1 - .3EQX - EQY
19	.9D0 + .9DL + .9DL1 - .3EQX + EQY
20	.9D0 + .9DL + .9DL1 + .3EQX - EQY

STEEL DESIGN CHECK

COLUMN CAPACITY RATIOS

Column	Story	Sec	Lb2	Lb3	rBA	rV3	rV2
D-1	2	W16x50	420	420	0.377	0.020	0.006
E-1	2	W16x50	420	420	0.558	0.018	0.011
F-1	2	W16x50	420	420	0.561	0.018	0.011
G-1	2	W16x50	420	420	0.561	0.018	0.011
H-1	2	W16x50	420	420	0.563	0.019	0.011
I-1	2	W16x50	420	420	0.379	0.021	0.006

BEAM CAPACITY RATIOS

Beam	Floor	Sec	LbTop	LbBot	rMn	rMp	rV3
D(1-1')	3	W16x36	353	353	0.007	0.058	0.032
E(1-1')	3	W16x36	353	353	0.013	0.112	0.063
F(1-1')	3	W16x36	353	353	0.013	0.112	0.063
G(1-1')	3	W16x36	353	353	0.013	0.112	0.063
H(1-1')	3	W16x36	353	353	0.013	0.112	0.063
I(1-1')	3	W16x36	353	353	0.007	0.057	0.032
1(D-C')	3	W16x36	720	720	0.053	0.041	0.006
1(D-C')	3	W16x36	720	720	0.053	0.041	0.006
1(D-C')	3	W16x36	720	720	0.053	0.041	0.006
1(D-C')	3	W16x36	720	720	0.053	0.041	0.006
1(E-D'')	3	W16x36	720	720	0.045	0.014	0.005
1(E-D'')	3	W16x36	720	720	0.045	0.014	0.005
1(E-D'')	3	W16x36	720	720	0.045	0.014	0.005
1(E-D'')	3	W16x36	720	720	0.045	0.014	0.005
1(F-F'')	3	W16x36	720	720	0.045	0.016	0.005
1(F-F'')	3	W16x36	720	720	0.045	0.016	0.005
1(F-F'')	3	W16x36	720	720	0.045	0.016	0.005
1(F-F'')	3	W16x36	720	720	0.045	0.016	0.005
1(G-H')	3	W16x36	720	720	0.044	0.014	0.005
1(G-H')	3	W16x36	720	720	0.044	0.014	0.005
1(G-H')	3	W16x36	720	720	0.044	0.014	0.005
1(G-H')	3	W16x36	720	720	0.044	0.014	0.005
1(H-I'')	3	W16x36	717	717	0.050	0.031	0.006
1(H-I'')	3	W16x36	717	717	0.050	0.031	0.006
1(H-I'')	3	W16x36	717	717	0.050	0.031	0.006
1(H-I'')	3	W16x36	717	717	0.050	0.031	0.006
1'(D-C')	3	W16x36	720	720	0.974	0.750	0.152
1'(D-C')	3	W16x36	720	720	0.974	0.750	0.152
1'(D-C')	3	W16x36	720	720	0.974	0.750	0.152
1'(D-C')	3	W16x36	720	720	0.974	0.750	0.152
1'(E-D'')							

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:36:43 p. m. 5/01/2020

Beam	Floor	Sec	LbTop	LbBot	rMn	rMp	rV3
	3	W16x36	720	720	0.977	0.314	0.132
1'(E-D'')							
	3	W16x36	720	720	0.977	0.314	0.132
1'(E-D'')							
	3	W16x36	720	720	0.977	0.314	0.132
1'(E-D'')							
	3	W16x36	720	720	0.977	0.314	0.132
1'(F-F'')							
	3	W16x36	720	720	0.756	0.425	0.126
1'(F-F'')							
	3	W16x36	720	720	0.756	0.425	0.126
1'(F-F'')							
	3	W16x36	720	720	0.756	0.425	0.126
1'(F-F'')							
	3	W16x36	720	720	0.756	0.425	0.126
1'(G-H')	3	W16x36	720	720	0.975	0.315	0.131
1'(G-H')	3	W16x36	720	720	0.975	0.315	0.131
1'(G-H')	3	W16x36	720	720	0.975	0.315	0.131
1'(G-H')	3	W16x36	720	720	0.975	0.315	0.131
1'(H-I'')							
	3	W16x36	717	717	0.969	0.747	0.152
1'(H-I'')							
	3	W16x36	717	717	0.969	0.747	0.152
1'(H-I'')							
	3	W16x36	717	717	0.969	0.747	0.152
1'(H-I'')							
	3	W16x36	717	717	0.969	0.747	0.152

Nit. **901.134.339-5**
D: Calle 45 No.45 - 16 of 3801 **T:** 318 735 1464
C: ingenieriaipc@hotmail.com

10. REACCIONES

A continuación, mostramos las reacciones para el Bloque B.

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:36:09 p. m. 5/01/2020
File: C:\Users\Laura\Documents\LAURA\IPC\IP\CALLE 80\PL DWG\ING\MODELO RCB BLOQUE B.rcb

P-Delta Analysis- Support Reactions

Support		Load	Force (ton)			Moment (ton-m)		
Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
A-1	CIM	D0	0.82	0.94	6.58	-1.08	0.89	0.00
		DL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		DL1	-0.11	3.45	6.81	-3.97	-0.28	0.00
		LL	-0.01	0.00	0.00	-0.01	-0.01	0.00
		LL1	-0.03	1.56	3.14	-1.77	-0.07	0.00
		EQX	9.44	-2.28	2.03	5.43	23.04	0.01
		EQY	1.64	8.28	2.62	-19.78	4.01	0.01
B-1	CIM	D0	0.82	-0.01	8.66	-0.04	0.89	0.00
		DL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		DL1	0.34	-0.22	14.60	0.04	0.23	0.00
		LL	-0.01	0.00	0.00	-0.01	-0.01	0.00
		LL1	0.18	-0.14	6.72	0.09	0.15	0.00
		EQX	8.77	-3.12	2.59	6.36	21.43	0.01
		EQY	1.28	11.38	-0.22	-23.16	3.12	0.01
C-1	CIM	D0	0.82	0.06	8.58	-0.12	0.89	0.00
		DL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		DL1	0.45	0.31	14.21	-0.54	0.37	0.00
		LL	-0.01	0.00	0.00	-0.01	-0.01	0.00
		LL1	0.22	0.16	6.61	-0.23	0.21	0.00
		EQX	8.12	-3.10	2.29	6.33	19.83	0.01
		EQY	0.92	11.26	0.37	-23.03	2.24	0.01
D-1	CIM	D0	1.35	0.03	9.91	-0.08	1.47	0.00
		DL	-0.01	0.01	-0.01	-0.01	-0.03	0.00
		DL1	0.91	1.84	21.01	-2.21	0.89	0.00
		LL	-0.01	0.00	0.00	-0.01	-0.02	0.00
		LL1	0.44	0.08	7.67	-0.15	0.45	0.00
		EQX	9.47	-2.53	4.56	5.71	20.42	0.01
		EQY	0.73	9.91	0.54	-21.57	1.54	0.01
E-1	CIM	D0	1.44	0.05	10.32	-0.10	1.57	0.00
		DL	-0.01	0.01	-0.01	-0.01	-0.03	0.00
		DL1	2.48	0.08	28.99	-0.30	2.62	0.00
		LL	-0.01	0.00	0.00	-0.01	-0.02	0.00
		LL1	1.16	0.06	9.27	-0.12	1.25	0.00
		EQX	8.61	-2.57	4.23	5.75	18.60	0.01
		EQY	0.25	9.98	0.08	-21.65	0.53	0.01
F-1	CIM	D0	1.42	0.04	10.24	-0.10	1.55	0.00
		DL	-0.01	0.01	-0.01	-0.01	-0.03	0.00
		DL1	2.17	0.18	28.43	-0.41	2.31	0.00
		LL	-0.01	0.00	0.00	-0.01	-0.02	0.00
		LL1	1.02	0.05	9.07	-0.12	1.09	0.00
		EQX	7.97	-2.57	3.85	5.75	17.28	0.01
		EQY	-0.19	9.98	-0.06	-21.65	-0.44	0.01
G-1	CIM	D0	1.42	0.04	10.24	-0.10	1.55	0.00
		DL	-0.01	0.01	-0.01	-0.01	-0.03	0.00
		DL1	2.19	0.16	28.43	-0.38	2.35	0.00
		LL	-0.01	0.00	0.00	-0.01	-0.02	0.00
		LL1	1.02	0.05	9.07	-0.12	1.11	0.00
		EQX	7.65	-2.56	3.68	5.75	16.62	0.01
		EQY	-0.64	9.97	-0.31	-21.64	-1.43	0.01
H-1	CIM	D0	1.44	0.08	10.39	-0.14	1.58	0.00
		DL	-0.01	0.01	-0.01	-0.01	-0.03	0.00
		DL1	2.54	0.45	29.25	-0.70	2.75	0.00
		LL	-0.01	0.00	0.00	-0.01	-0.02	0.00
		LL1	1.18	0.13	9.38	-0.21	1.29	0.00
		EQX	7.32	-2.62	3.45	5.81	15.95	0.01
		EQY	-1.09	10.18	0.28	-21.86	-2.40	0.01

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
I-1	CIM	D0	1.26	-0.79	7.68	0.81	1.38	0.00
		DL	-0.01	0.00	-0.01	-0.01	-0.03	0.00
		DL1	0.92	-4.68	13.48	4.89	1.00	0.00
		LL	-0.01	0.00	-0.01	-0.01	-0.02	0.00
		LL1	0.43	-1.35	4.28	1.40	0.47	0.00
		EQX	6.62	-1.74	3.26	4.85	14.87	0.01
		EQY	-1.48	7.09	-3.07	-18.48	-3.31	0.01
A-2	CIM	D0	-0.05	0.94	8.42	-1.08	-0.06	0.00
		DL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		DL1	-0.15	6.68	13.59	-7.47	-0.33	0.00
		LL	-0.01	0.00	0.00	-0.01	-0.02	0.00
		LL1	-0.04	3.05	6.25	-3.39	-0.08	0.00
		EQX	12.84	-1.59	-0.76	3.79	26.75	0.01
		EQY	2.23	8.32	2.50	-19.87	4.65	0.01
B-2	CIM	D0	-0.05	-0.01	10.50	-0.04	-0.05	0.00
		DL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		DL1	-0.37	-0.27	29.70	0.11	-0.55	0.00
		LL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		LL1	-0.14	-0.16	13.67	0.11	-0.19	0.00
		EQX	11.91	-2.17	-0.22	4.43	24.87	0.01
		EQY	1.73	11.38	-0.32	-23.22	3.62	0.01
C-2	CIM	D0	-0.05	0.05	10.42	-0.11	-0.05	0.00
		DL	-0.01	0.01	0.00	-0.02	-0.02	0.00
		DL1	-0.38	-0.04	28.83	-0.14	-0.54	0.00
		LL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		LL1	-0.15	-0.02	13.31	-0.04	-0.20	0.00
		EQX	11.00	-2.30	-0.47	4.57	22.99	0.01
		EQY	1.24	11.86	0.83	-23.75	2.59	0.01
D-2	CIM	D0	-0.51	-0.33	24.63	0.19	-0.53	0.00
		DL	0.00	0.00	0.00	-0.02	-0.04	0.00
		DL1	-0.80	1.53	50.59	-2.20	-1.16	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	-0.36	-0.76	19.22	0.62	-0.46	0.00
		EQX	5.04	0.47	2.49	6.92	37.21	0.05
		EQY	0.34	10.59	6.43	-45.32	2.72	0.02
E-2	CIM	D0	-0.58	0.01	26.75	-0.17	-0.60	0.00
		DL	0.00	0.00	-0.01	-0.02	-0.04	0.00
		DL1	-2.03	-0.09	74.41	-0.50	-2.40	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	-0.94	0.02	26.15	-0.21	-1.05	0.00
		EQX	5.05	0.68	3.35	6.44	34.32	0.05
		EQY	-0.02	8.91	-0.33	-43.57	0.79	0.02
F-2	CIM	D0	-0.57	-0.01	26.68	-0.14	-0.59	0.00
		DL	0.00	0.00	-0.01	-0.02	-0.04	0.00
		DL1	-1.87	0.07	73.05	-0.67	-2.16	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	-0.86	0.01	25.59	-0.19	-0.94	0.00
		EQX	5.30	0.66	2.91	6.49	32.72	0.05
		EQY	-0.42	9.07	0.03	-43.73	-1.18	0.02
G-2	CIM	D0	-0.58	-0.01	26.68	-0.15	-0.60	0.00
		DL	0.00	0.00	-0.01	-0.02	-0.04	0.00
		DL1	-1.88	-0.11	73.46	-0.47	-2.11	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	-0.86	-0.05	25.73	-0.13	-0.93	0.00
		EQX	5.54	0.66	2.74	6.49	31.99	0.05
		EQY	-0.80	9.06	-0.20	-43.73	-3.13	0.02
H-2	CIM	D0	-0.59	-0.02	26.75	-0.14	-0.61	0.00
		DL	0.00	0.00	-0.01	-0.02	-0.04	0.00
		DL1	-2.15	0.10	73.78	-0.70	-2.34	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	-0.98	0.73	27.92	-0.96	-1.04	0.00
		EQX	5.78	0.67	2.51	6.46	31.27	0.05
		EQY	-1.19	9.02	0.43	-43.68	-5.09	0.02

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:36:09 p. m. 5/01/2020

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
I-2	CIM	D0	-0.52	-0.44	21.68	0.30	-0.53	0.00
		DL	0.00	0.00	-0.01	-0.02	-0.04	0.00
		DL1	-0.86	-6.95	35.62	6.73	-0.91	0.00
		LL	0.00	0.00	-0.01	-0.01	-0.03	0.00
		LL1	-0.39	-2.46	14.41	2.41	-0.40	0.00
		EQX	5.82	0.73	3.87	6.17	30.30	0.05
		EQY	-1.51	7.21	-9.58	-41.74	-6.97	0.02
A-3	CIM	D0	0.08	0.94	8.45	-1.07	0.09	0.00
		DL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		DL1	-0.15	6.63	13.57	-7.40	-0.33	0.00
		LL	-0.01	0.00	0.00	-0.01	-0.02	0.00
		LL1	-0.04	3.03	6.24	-3.36	-0.09	0.00
		EQX	13.05	-0.90	0.11	2.16	26.98	0.01
		EQY	2.27	8.35	2.53	-19.95	4.70	0.01
B-3	CIM	D0	0.01	-0.01	10.44	-0.04	0.02	0.00
		DL	-0.01	0.01	0.00	-0.02	-0.02	0.00
		DL1	-0.10	0.08	29.83	-0.25	-0.25	0.00
		LL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		LL1	-0.02	0.01	13.72	-0.06	-0.06	0.00
		EQX	12.43	-1.23	0.86	2.52	25.43	0.01
		EQY	1.81	11.42	-0.30	-23.32	3.70	0.01
C-3	CIM	D0	0.01	0.05	10.35	-0.11	0.01	0.00
		DL	-0.01	0.01	0.00	-0.02	-0.03	0.00
		DL1	-0.26	-2.99	21.46	3.09	-0.41	0.00
		LL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		LL1	-0.11	-1.38	9.90	1.45	-0.15	0.00
		EQX	11.48	-1.32	0.63	2.61	23.51	0.01
		EQY	1.29	11.91	0.86	-23.85	2.65	0.01
D-3	CIM	D0	0.00	-0.32	23.85	0.18	0.00	0.00
		DL	0.00	0.00	0.01	-0.02	-0.04	0.00
		DL1	-0.06	3.12	48.41	-3.82	-0.38	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	-0.03	0.29	16.32	-0.47	-0.11	0.00
		EQX	6.12	0.37	-0.88	3.74	38.34	0.05
		EQY	0.43	10.71	6.38	-45.60	2.82	0.02
E-3	CIM	D0	0.03	0.01	25.98	-0.17	0.05	0.00
		DL	0.00	0.00	0.00	-0.02	-0.04	0.00
		DL1	0.03	-0.17	83.92	-0.36	-0.22	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	0.02	-0.02	26.64	-0.15	-0.04	0.00
		EQX	5.87	0.50	-0.95	3.44	35.24	0.05
		EQY	0.20	9.02	0.74	-43.85	1.02	0.02
F-3	CIM	D0	-0.01	-0.01	25.76	-0.15	0.00	0.00
		DL	0.00	0.00	0.00	-0.02	-0.04	0.00
		DL1	0.02	0.17	82.91	-0.71	-0.17	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	0.01	0.04	26.32	-0.21	-0.03	0.00
		EQX	6.16	0.49	0.13	3.47	33.64	0.05
		EQY	-0.43	9.17	-0.01	-44.01	-1.19	0.02
G-3	CIM	D0	-0.02	-0.01	25.77	-0.15	-0.01	0.00
		DL	0.00	0.00	0.00	-0.02	-0.04	0.00
		DL1	-0.04	-0.08	83.51	-0.44	-0.17	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	0.00	-0.06	26.50	-0.10	-0.03	0.00
		EQX	6.35	0.49	0.13	3.47	32.85	0.05
		EQY	-0.86	9.17	-0.02	-44.00	-3.19	0.02
H-3	CIM	D0	-0.02	-0.02	25.80	-0.14	-0.01	0.00
		DL	0.00	0.00	0.00	-0.02	-0.04	0.00
		DL1	0.00	0.01	83.56	-0.54	-0.07	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	0.00	1.46	30.50	-1.71	0.00	0.00
		EQX	6.54	0.49	0.10	3.45	32.07	0.05
		EQY	-1.29	9.12	0.43	-43.95	-5.20	0.02

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
I-3	CIM	D0	-0.03	-0.43	20.90	0.30	-0.01	0.00
		DL	0.00	0.00	-0.01	-0.02	-0.05	0.00
		DL1	-0.02	-5.68	40.80	5.46	-0.02	0.00
		LL	0.00	0.00	-0.01	-0.02	-0.03	0.00
		LL1	-0.01	-2.98	16.89	2.97	0.00	0.00
		EQX	6.44	0.52	1.71	3.30	30.96	0.05
		EQY	-1.65	7.31	-9.59	-42.00	-7.12	0.02
A-4	CIM	D0	-8.84	0.01	26.44	-0.35	-0.26	-0.15
		DL	0.00	0.00	-0.19	-0.01	0.00	0.00
		DL1	-6.83	0.55	18.47	-3.58	-0.19	-0.99
		LL	0.00	0.00	-0.13	-0.01	0.00	0.00
		LL1	-2.33	0.21	6.40	-1.30	-0.06	-0.34
		EQX	26.63	-0.26	253.85	0.46	-0.21	0.12
		EQY	3.86	2.03	53.63	-13.37	-0.10	-3.97
B-4	CIM	D0	-0.32	-0.05	39.65	-0.10	-0.34	0.00
		DL	0.00	0.00	-0.05	-0.03	-0.04	0.00
		DL1	0.07	-0.35	99.79	-0.10	-0.37	0.00
		LL	0.00	0.00	-0.04	-0.02	-0.03	0.00
		LL1	0.00	-0.14	33.82	-0.01	-0.11	0.00
		EQX	10.40	-0.12	34.84	1.02	48.53	0.05
		EQY	1.76	10.66	6.16	-45.75	7.33	0.02
C-4	CIM	D0	-0.18	0.02	40.62	-0.17	-0.19	0.00
		DL	0.00	0.00	-0.03	-0.03	-0.04	0.00
		DL1	0.24	-2.68	91.19	2.35	-0.13	0.00
		LL	0.00	0.00	-0.02	-0.02	-0.03	0.00
		LL1	0.07	-1.21	29.99	1.13	-0.02	0.00
		EQX	9.26	0.24	17.81	0.65	44.50	0.05
		EQY	1.12	10.85	1.75	-45.95	5.10	0.02
D-4	CIM	D0	0.02	0.07	42.68	-0.23	0.03	0.00
		DL	0.00	0.00	-0.03	-0.03	-0.04	0.00
		DL1	0.13	3.76	109.18	-4.43	-0.18	0.00
		LL	0.00	0.00	-0.02	-0.02	-0.03	0.00
		LL1	0.04	1.09	33.94	-1.30	-0.04	0.00
		EQX	7.75	0.25	10.45	0.64	40.12	0.05
		EQY	0.52	10.59	-3.22	-45.70	2.92	0.02
E-4	CIM	D0	0.00	-9.40	30.95	0.27	0.04	0.02
		DL	0.00	0.01	0.15	0.00	-0.01	-0.01
		DL1	-0.02	-5.78	62.39	0.27	-0.08	-0.02
		LL	0.00	0.01	0.10	0.00	-0.01	0.00
		LL1	-0.01	-2.09	19.30	0.09	-0.02	0.00
		EQX	1.54	0.30	3.73	0.03	11.63	3.91
		EQY	0.10	34.52	232.54	0.25	0.42	0.18
4:Ea	CIM	D0	0.04	8.75	32.22	-0.30	0.03	0.04
		DL	0.00	0.01	-0.15	0.00	-0.01	0.00
		DL1	0.00	3.52	78.29	-0.56	-0.07	0.03
		LL	0.00	0.01	-0.10	0.00	-0.01	0.00
		LL1	0.00	1.49	23.94	-0.18	-0.02	0.01
		EQX	3.98	2.69	5.95	-0.05	10.38	-0.40
		EQY	0.20	33.89	-220.16	0.20	0.10	0.19
F-4	CIM	D0	0.01	0.19	40.67	-0.35	0.02	0.00
		DL	-0.01	0.00	-0.04	-0.03	-0.05	0.00
		DL1	-0.01	2.25	114.29	-2.84	-0.20	0.00
		LL	0.00	0.00	-0.03	-0.02	-0.03	0.00
		LL1	0.00	0.65	35.07	-0.83	-0.05	0.00
		EQX	7.53	0.25	8.79	0.65	35.11	0.05
		EQY	-0.43	11.65	-10.09	-46.82	-1.19	0.02
G-4	CIM	D0	0.01	0.01	42.35	-0.17	0.02	0.00
		DL	-0.01	0.00	-0.03	-0.03	-0.05	0.00
		DL1	0.05	-0.04	129.45	-0.42	-0.07	0.00
		LL	0.00	0.00	-0.02	-0.02	-0.03	0.00
		LL1	0.01	-0.04	39.74	-0.10	-0.01	0.00
		EQX	7.64	0.24	7.88	0.64	34.26	0.05
		EQY	-0.91	10.81	-0.31	-45.94	-3.25	0.02

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
H-4	CIM	D0	0.00	0.01	42.28	-0.16	0.02	0.00
		DL	-0.01	0.00	-0.03	-0.03	-0.05	0.00
		DL1	0.01	-0.03	127.11	-0.44	-0.06	0.00
		LL	0.00	0.00	-0.02	-0.02	-0.03	0.00
		LL1	0.00	1.41	42.92	-1.64	-0.01	0.00
		EQX	7.77	0.38	8.68	0.54	33.40	0.05
		EQY	-1.38	10.84	1.08	-45.97	-5.30	0.02
I-4	CIM	D0	-0.39	-0.51	28.46	0.39	-0.39	0.00
		DL	-0.01	0.00	-0.55	-0.03	-0.06	0.00
		DL1	-0.25	-5.84	34.04	5.69	-0.27	0.00
		LL	-0.01	0.00	-0.38	-0.02	-0.04	0.00
		LL1	-0.11	-3.14	13.06	3.16	-0.11	0.00
		EQX	11.66	0.37	236.19	0.51	36.46	0.05
		EQY	-2.76	8.28	-59.23	-43.19	-8.29	0.02
I:4a	CIM	D0	-8.35	-0.01	23.75	-0.03	-0.26	-0.02
		DL	-0.09	0.00	-0.02	-0.01	0.00	0.00
		DL1	-3.52	-0.04	14.80	-0.05	-0.13	-0.07
		LL	-0.07	0.00	-0.01	-0.01	0.00	0.00
		LL1	-1.33	-0.01	5.12	-0.02	-0.04	-0.02
		EQX	66.94	-0.29	77.56	0.17	1.14	-0.08
		EQY	-13.76	2.41	-24.05	-13.02	-0.19	-2.93
A:4a	CIM	D0	8.01	0.35	26.90	-0.25	0.24	-0.29
		DL	0.01	0.00	0.16	-0.01	0.00	0.00
		DL1	3.86	3.61	27.39	-2.69	0.18	-2.96
		LL	0.00	0.00	0.11	-0.01	0.00	0.00
		LL1	1.29	1.30	9.12	-0.98	0.06	-1.06
		EQX	21.63	0.18	-213.38	-0.09	-0.08	0.09
		EQY	7.34	4.29	-31.53	-12.81	0.07	1.27
I:4b	CIM	D0	7.80	-0.01	22.94	-0.03	0.23	0.02
		DL	0.02	0.00	0.48	-0.01	0.00	0.00
		DL1	1.70	-0.07	17.34	-0.05	0.13	0.10
		LL	0.01	0.00	0.33	-0.01	0.00	0.00
		LL1	0.43	-0.02	6.21	-0.02	0.05	0.03
		EQX	26.42	0.50	-295.15	-0.25	-0.68	-0.28
		EQY	-7.47	2.68	60.89	-13.09	0.11	2.84
B:4a	CIM	D0	-9.59	-0.03	34.52	-0.02	-0.32	-0.04
		DL	0.00	0.00	-0.19	-0.01	0.00	0.00
		DL1	-17.36	-0.27	86.14	0.10	-0.69	-0.27
		LL	0.00	0.00	-0.13	-0.01	0.00	0.00
		LL1	-6.00	-0.07	27.31	0.01	-0.23	-0.07
		EQX	22.81	-0.10	222.63	-0.41	-0.27	-0.12
		EQY	3.91	5.87	33.90	-13.96	-0.04	0.31
A:4b	CIM	D0	2.51	0.16	28.79	-0.28	-0.05	0.06
		DL	0.01	0.00	-0.14	-0.01	0.00	0.00
		DL1	2.28	2.29	38.36	-3.56	-0.08	1.04
		LL	0.01	0.00	-0.10	0.00	0.00	0.00
		LL1	0.72	0.54	12.36	-0.85	-0.03	0.25
		EQX	17.85	-0.52	212.87	-0.12	-0.05	-0.48
		EQY	5.36	2.56	47.20	-12.01	-0.02	-2.89
B-5	CIM	D0	10.08	-0.01	32.01	-0.01	0.29	0.01
		DL	0.00	0.00	0.21	-0.01	0.00	0.00
		DL1	24.02	-0.06	80.76	0.17	0.70	-0.01
		LL	0.00	0.00	0.14	-0.01	0.00	0.00
		LL1	7.86	-0.01	25.76	0.03	0.23	0.00
		EQX	24.47	0.48	-233.22	-0.92	-0.30	0.07
		EQY	4.44	2.23	-34.00	-15.37	-0.03	4.76
C-5	CIM	D0	-0.01	-0.04	46.27	-0.11	0.00	0.00
		DL	0.00	0.00	0.01	-0.03	-0.04	0.00
		DL1	-0.01	-0.85	169.24	0.49	-0.39	0.00
		LL	0.00	0.00	0.01	-0.02	-0.03	0.00
		LL1	0.00	-0.24	53.71	0.12	-0.09	0.00
		EQX	8.09	0.97	-2.97	-2.94	43.35	0.05
		EQY	1.00	11.08	2.42	-47.32	4.98	0.02

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
D-5	CIM	D0	-0.02	0.08	46.31	-0.24	-0.02	0.00
		DL	0.00	0.00	0.00	-0.03	-0.04	0.00
		DL1	-0.02	1.07	168.42	-1.53	-0.34	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	0.00	0.31	53.46	-0.46	-0.08	0.00
		EQX	7.84	0.62	0.13	-2.58	40.26	0.05
		EQY	0.53	11.01	-3.39	-47.24	2.93	0.02
E-5	CIM	D0	-0.02	-10.08	32.92	0.29	-0.02	0.01
		DL	0.00	0.02	0.15	0.00	-0.02	-0.01
		DL1	-0.02	-11.87	79.98	0.42	-0.11	-0.03
		LL	0.00	0.02	0.10	0.00	-0.02	-0.01
		LL1	-0.01	-4.27	25.58	0.14	-0.03	0.00
		EQX	1.67	1.22	11.52	0.01	11.71	3.79
		EQY	0.14	35.85	240.50	0.26	0.28	0.07
5:Ea	CIM	D0	-0.01	9.46	34.16	-0.32	-0.02	0.00
		DL	-0.02	0.01	-0.19	0.00	-0.02	-0.01
		DL1	-0.03	9.55	101.16	-0.78	-0.09	0.01
		LL	-0.01	0.01	-0.13	0.00	-0.01	-0.01
		LL1	-0.01	3.70	31.98	-0.25	-0.03	0.00
		EQX	3.97	1.17	-11.01	0.01	10.49	-0.45
		EQY	-0.17	35.40	-226.82	0.20	0.02	-0.09
F-5	CIM	D0	-0.03	0.19	44.31	-0.35	-0.01	0.00
		DL	0.00	0.00	0.02	-0.03	-0.04	0.00
		DL1	-0.03	2.35	147.07	-2.88	-0.22	0.00
		LL	0.00	0.00	0.02	-0.02	-0.03	0.00
		LL1	-0.01	0.67	46.66	-0.84	-0.05	0.00
		EQX	7.68	0.69	-0.47	-2.65	35.29	0.05
		EQY	-0.43	12.13	-10.41	-48.41	-1.19	0.02
G-5	CIM	D0	-0.03	0.02	45.96	-0.17	-0.02	0.00
		DL	-0.01	0.00	0.00	-0.03	-0.05	0.00
		DL1	-0.04	-0.09	166.96	-0.31	-0.17	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	-0.01	-0.05	52.98	-0.07	-0.04	0.00
		EQX	7.80	0.63	-0.02	-2.59	34.45	0.05
		EQY	-0.92	11.25	0.13	-47.50	-3.26	0.02
H-5	CIM	D0	-0.04	0.02	45.93	-0.17	-0.02	0.00
		DL	-0.01	0.00	0.00	-0.03	-0.05	0.00
		DL1	-0.04	0.16	165.40	-0.58	-0.11	0.00
		LL	0.00	0.00	0.00	-0.02	-0.03	0.00
		LL1	-0.02	1.49	56.51	-1.70	-0.02	0.00
		EQX	7.91	0.63	-0.02	-2.59	33.58	0.05
		EQY	-1.40	11.27	0.76	-47.52	-5.32	0.02
I-5	CIM	D0	-0.04	-0.52	32.75	0.40	-0.02	0.00
		DL	-0.01	0.00	-0.02	-0.03	-0.05	0.00
		DL1	-0.05	-6.32	79.83	6.26	-0.05	0.00
		LL	-0.01	0.00	-0.02	-0.02	-0.04	0.00
		LL1	-0.02	-3.29	29.18	3.34	-0.01	0.00
		EQX	9.45	0.49	-1.16	-2.43	34.16	0.05
		EQY	-2.22	8.78	-18.82	-44.80	-7.72	0.02
A:5a	CIM	D0	-2.60	0.16	28.16	-0.28	0.03	-0.06
		DL	-0.01	0.00	0.18	-0.01	0.00	0.00
		DL1	-2.16	2.27	42.50	-3.54	0.07	-1.03
		LL	0.00	0.00	0.13	0.00	0.00	0.00
		LL1	-0.62	0.54	13.32	-0.85	0.02	-0.25
		EQX	29.70	0.47	-229.70	-0.70	0.08	0.02
		EQY	6.10	2.90	-34.59	-12.34	0.02	2.70
I:5a	CIM	D0	-8.79	0.00	22.90	-0.05	-0.24	-0.02
		DL	0.05	0.00	-0.58	-0.01	0.00	0.00
		DL1	-4.40	0.00	19.33	-0.11	-0.18	-0.05
		LL	0.03	0.00	-0.41	-0.01	0.00	0.00
		LL1	-1.52	0.00	7.09	-0.03	-0.06	-0.02
		EQX	23.66	-0.33	315.97	-1.04	-1.04	-0.66
		EQY	-5.28	2.42	-75.16	-13.70	0.26	-3.12

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
A:5b	CIM	D0	2.03	0.15	26.35	-0.26	-0.03	0.06
		DL	0.03	0.00	-0.10	-0.01	0.00	0.00
		DL1	2.46	1.78	27.03	-2.76	-0.05	0.80
		LL	0.02	0.00	-0.07	-0.01	0.00	0.00
		LL1	0.84	0.61	9.28	-0.95	-0.02	0.28
		EQX	4.69	-0.57	191.63	-0.68	0.09	-0.80
		EQY	3.64	2.61	45.53	-12.58	-0.01	-2.98
I:5b	CIM	D0	7.76	0.00	25.22	-0.05	0.26	0.02
		DL	-0.14	0.00	0.03	-0.01	0.00	0.00
		DL1	4.28	0.00	18.12	-0.09	0.16	0.04
		LL	-0.10	0.00	0.02	-0.01	0.00	0.00
		LL1	1.51	0.00	6.47	-0.03	0.06	0.01
		EQX	72.33	0.46	-90.03	-1.47	0.94	0.30
		EQY	-16.56	2.76	16.52	-13.97	-0.23	3.03
B-6	CIM	D0	-0.09	-0.04	43.05	-0.11	-0.09	0.00
		DL	0.00	0.01	0.03	-0.03	-0.04	0.00
		DL1	-0.32	-0.38	120.45	0.06	-0.79	0.00
		LL	0.00	0.00	0.02	-0.02	-0.03	0.00
		LL1	-0.08	-0.13	40.33	0.03	-0.21	0.00
		EQX	10.48	1.01	-13.55	-5.80	48.64	0.05
		EQY	1.76	11.65	1.43	-49.44	7.33	0.02
C-6	CIM	D0	-0.04	0.02	42.30	-0.17	-0.04	0.00
		DL	-0.01	0.01	0.03	-0.03	-0.04	0.00
		DL1	-0.38	-0.17	119.01	-0.16	-0.78	0.00
		LL	0.00	0.00	0.02	-0.02	-0.03	0.00
		LL1	-0.10	-0.03	39.85	-0.08	-0.21	0.00
		EQX	10.20	1.02	-16.14	-5.82	45.52	0.05
		EQY	1.23	11.81	-1.54	-49.60	5.22	0.02
D-6	CIM	D0	-0.05	0.09	42.78	-0.24	-0.04	0.00
		DL	-0.01	0.01	0.10	-0.04	-0.04	0.00
		DL1	-0.08	1.72	123.87	-2.15	-0.41	0.00
		LL	0.00	0.01	0.07	-0.03	-0.03	0.00
		LL1	-0.02	0.11	40.22	-0.22	-0.10	0.00
		EQX	9.67	1.01	-14.91	-5.80	42.15	0.05
		EQY	0.67	11.56	-4.47	-49.34	3.08	0.02
E-6	CIM	D0	0.02	-13.81	42.89	0.40	-0.06	-0.05
		DL	0.15	-4.52	25.51	0.24	0.88	0.23
		DL1	0.00	-11.00	61.66	0.33	-0.18	-0.09
		LL	0.10	-3.14	17.73	0.17	0.61	0.16
		LL1	0.00	-4.30	20.72	0.12	-0.05	-0.02
		EQX	1.97	-4.73	34.71	0.13	12.40	3.76
		EQY	0.20	36.44	251.88	0.28	-0.19	-0.15
6:Ea	CIM	D0	-0.09	13.55	41.70	-0.40	-0.03	-0.09
		DL	0.93	4.73	15.80	-0.09	0.66	0.78
		DL1	-0.13	8.15	81.44	-0.64	-0.13	-0.09
		LL	0.65	3.29	10.98	-0.06	0.46	0.54
		LL1	-0.04	3.63	26.54	-0.22	-0.03	-0.03
		EQX	4.56	3.71	-16.09	-0.06	11.07	0.12
		EQY	-0.48	37.74	-234.57	0.18	-0.14	-0.39
F-6	CIM	D0	-0.14	0.06	50.07	-0.21	-0.14	0.00
		DL	0.05	-0.59	6.40	0.59	0.02	0.00
		DL1	-0.17	2.18	131.62	-2.64	-0.37	0.00
		LL	0.04	-0.41	4.45	0.41	0.01	0.00
		LL1	-0.05	0.63	42.00	-0.78	-0.10	0.00
		EQX	8.30	1.13	13.10	-5.93	35.94	0.05
		EQY	-0.45	12.78	-17.25	-50.64	-1.21	0.02
G-6	CIM	D0	-0.18	0.02	43.23	-0.17	-0.17	0.00
		DL	-0.01	0.01	-0.04	-0.04	-0.05	0.00
		DL1	-0.15	-0.04	138.47	-0.30	-0.29	0.00
		LL	0.00	0.01	-0.03	-0.03	-0.03	0.00
		LL1	-0.05	-0.03	43.27	-0.08	-0.08	0.00
		EQX	8.03	1.01	-4.86	-5.81	34.67	0.05
		EQY	-0.94	11.77	-0.30	-49.57	-3.28	0.02

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
H-6	CIM	D0	-0.18	0.02	43.11	-0.17	-0.18	0.00
		DL	-0.01	0.01	0.03	-0.03	-0.05	0.00
		DL1	-0.11	-0.01	136.10	-0.33	-0.18	0.00
		LL	-0.01	0.00	0.02	-0.02	-0.03	0.00
		LL1	-0.04	1.33	46.20	-1.52	-0.05	0.00
		EQX	8.14	0.93	-6.26	-5.72	33.80	0.05
		EQY	-1.44	11.84	1.62	-49.65	-5.36	0.02
I-6	CIM	D0	0.22	-0.52	27.16	0.39	0.25	0.00
		DL	-0.01	0.00	0.57	-0.03	-0.06	0.00
		DL1	0.18	-5.68	33.28	5.65	0.19	0.00
		LL	-0.01	0.00	0.40	-0.02	-0.04	0.00
		LL1	0.08	-2.99	12.36	3.04	0.10	0.00
		EQX	11.56	0.59	-241.86	-5.35	36.36	0.05
		EQY	-2.86	9.20	40.56	-46.76	-8.39	0.02
A:6a	CIM	D0	-2.08	0.15	27.92	-0.26	0.06	-0.05
		DL	-0.03	0.00	0.17	-0.01	0.00	0.00
		DL1	-2.47	1.75	31.15	-2.75	0.04	-0.78
		LL	-0.02	0.00	0.12	-0.01	0.00	0.00
		LL1	-0.77	0.61	10.22	-0.95	0.01	-0.27
		EQX	45.44	0.42	-215.44	-1.26	0.62	0.31
		EQY	8.17	3.05	-31.22	-12.92	0.10	2.78
A-7	CIM	D0	-0.51	0.80	5.90	-0.92	-0.55	0.00
		DL	-0.01	0.01	0.01	-0.02	-0.02	0.00
		DL1	-0.24	2.70	5.56	-3.03	-0.43	0.00
		LL	-0.01	0.00	0.01	-0.01	-0.02	0.00
		LL1	-0.07	1.23	2.53	-1.38	-0.12	0.00
		EQX	12.37	1.62	-5.99	-3.99	26.23	0.01
		EQY	2.11	8.76	2.15	-21.67	4.52	0.01
B-7	CIM	D0	-0.57	0.00	7.70	-0.05	-0.62	0.00
		DL	-0.01	0.01	0.00	-0.02	-0.02	0.00
		DL1	-0.28	-0.06	11.48	-0.03	-0.45	0.00
		LL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		LL1	-0.08	-0.04	5.25	0.01	-0.13	0.00
		EQX	10.61	2.20	-4.97	-4.62	23.43	0.01
		EQY	1.53	11.91	-0.92	-25.11	3.40	0.01
C-7	CIM	D0	-0.57	0.05	7.64	-0.10	-0.62	0.00
		DL	-0.01	0.01	0.01	-0.02	-0.02	0.00
		DL1	-0.26	0.01	11.16	-0.10	-0.41	0.00
		LL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		LL1	-0.08	0.03	5.15	-0.07	-0.11	0.00
		EQX	9.80	2.15	-4.55	-4.58	21.66	0.01
		EQY	1.10	11.68	-0.54	-24.87	2.44	0.01
D-7	CIM	D0	-0.57	0.05	7.64	-0.10	-0.62	0.00
		DL	-0.01	0.01	0.00	-0.02	-0.02	0.00
		DL1	-0.52	1.58	15.58	-1.82	-0.67	0.00
		LL	-0.01	0.01	0.00	-0.01	-0.02	0.00
		LL1	-0.15	0.06	5.45	-0.09	-0.19	0.00
		EQX	8.99	2.27	-4.03	-4.70	19.89	0.01
		EQY	0.68	12.32	0.60	-25.56	1.48	0.01
E-7	CIM	D0	-0.44	0.22	43.90	-0.37	-0.46	0.00
		DL	-0.56	0.37	7.88	-0.42	-0.63	0.00
		DL1	-0.05	-2.10	42.51	1.92	-0.31	0.00
		LL	-0.39	0.26	5.47	-0.29	-0.44	0.00
		LL1	-0.01	-0.56	14.78	0.50	-0.08	0.00
		EQX	6.21	1.42	-25.36	-8.56	35.57	0.05
		EQY	-0.44	12.36	21.96	-51.40	0.35	0.02
F-7	CIM	D0	-0.38	-0.22	39.92	0.08	-0.39	0.00
		DL	-0.04	-0.29	3.01	0.28	-0.08	0.00
		DL1	-0.09	0.54	51.46	-0.85	-0.28	0.00
		LL	-0.03	-0.20	2.09	0.20	-0.06	0.00
		LL1	-0.03	0.17	16.56	-0.27	-0.07	0.00
		EQX	6.62	1.22	-32.48	-8.34	34.11	0.05
		EQY	-0.40	11.16	-13.67	-50.13	-1.16	0.02

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 6:36:09 p. m. 5/01/2020

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
G-7	CIM	D0	-0.24	0.02	15.89	-0.07	-0.25	0.00
		DL	0.00	0.00	0.01	-0.01	-0.01	0.00
		DL1	-0.01	0.11	35.58	-0.21	-0.05	0.00
		LL	0.00	0.00	0.00	-0.01	-0.01	0.00
		LL1	0.00	0.01	10.24	-0.04	-0.01	0.00
		EQX	2.17	0.46	-9.45	-2.74	10.65	0.01
		EQY	-0.32	4.57	-0.92	-17.14	-1.07	0.01
H-7	CIM	D0	-0.24	0.00	15.96	-0.05	-0.25	0.00
		DL	0.00	0.00	0.02	-0.01	-0.01	0.00
		DL1	-0.02	-0.01	36.17	-0.08	-0.04	0.00
		LL	0.00	0.00	0.01	-0.01	-0.01	0.00
		LL1	-0.01	0.50	11.97	-0.57	-0.01	0.00
		EQX	2.25	0.48	-8.75	-2.76	10.44	0.01
		EQY	-0.47	4.60	1.79	-17.18	-1.72	0.01
I-7	CIM	D0	-0.21	-0.32	12.20	0.30	-0.23	0.00
		DL	0.00	0.00	0.01	-0.01	-0.01	0.00
		DL1	-0.01	-1.74	17.29	1.80	-0.01	0.00
		LL	0.00	0.00	0.01	-0.01	-0.01	0.00
		LL1	0.00	-1.04	6.50	1.10	0.00	0.00
		EQX	2.21	0.19	-8.64	-2.44	10.07	0.01
		EQY	-0.59	3.00	-6.81	-15.41	-2.35	0.01