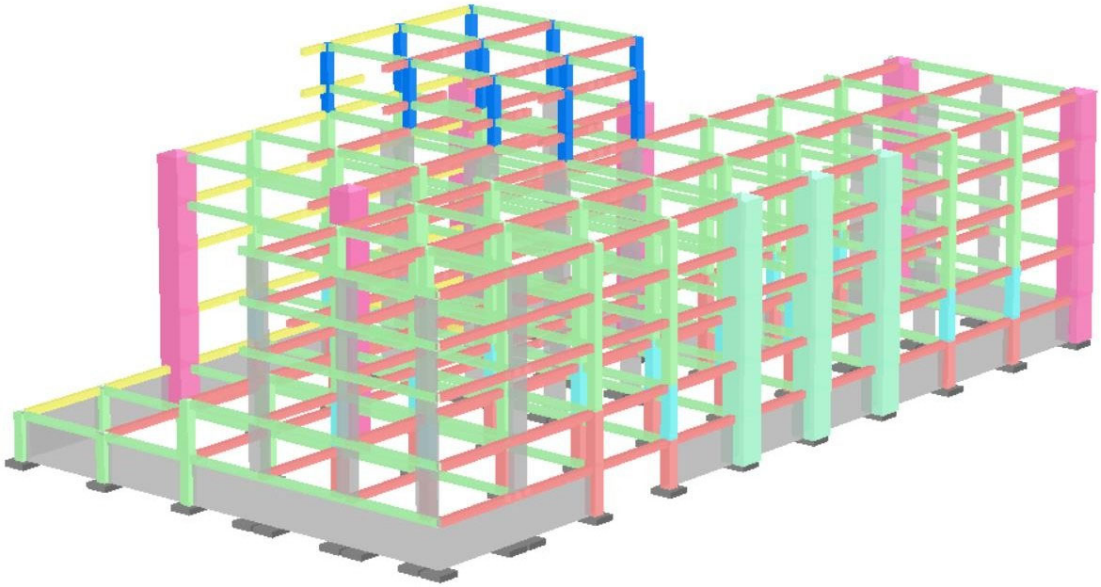
INFORME REVISION ESTRUCTURAL

HOSPITAL DE ENGATIVA BLOQUE C.

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 C,”, 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 C- ESQUEMAS DE COLUMNAS POR LEVANTAMIENTO IN SITU EXISTENTE.
- BLOQUE C-ESQUEMAS DE COLUMNAS POR LEVANTAMIENTO IN SITU EXISTENTE.
- BLOQUE C-PLANTA ESTRUCTURAL DE PRIMER PISO EXISTENTE.
- BLOQUE C-PLANTA ESTRUCTURAL DE SEGUNDO PISO EXISTENTE.
- -BLOQUE C-PLANTA ESTRUCTURAL DE TERCER PISO EXISTENTE.
- BLOQUE C-PLANTA ESTRUCTURAL DE CUARTO PISO EXISTENTE.
- BLOQUE C-PLANTAS ESTRUCTURALES DE CUBIERTA EXISTENTE.
- BLOQUE C- REFUERZO DE VIGAS AEREAS.

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 C” 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 C

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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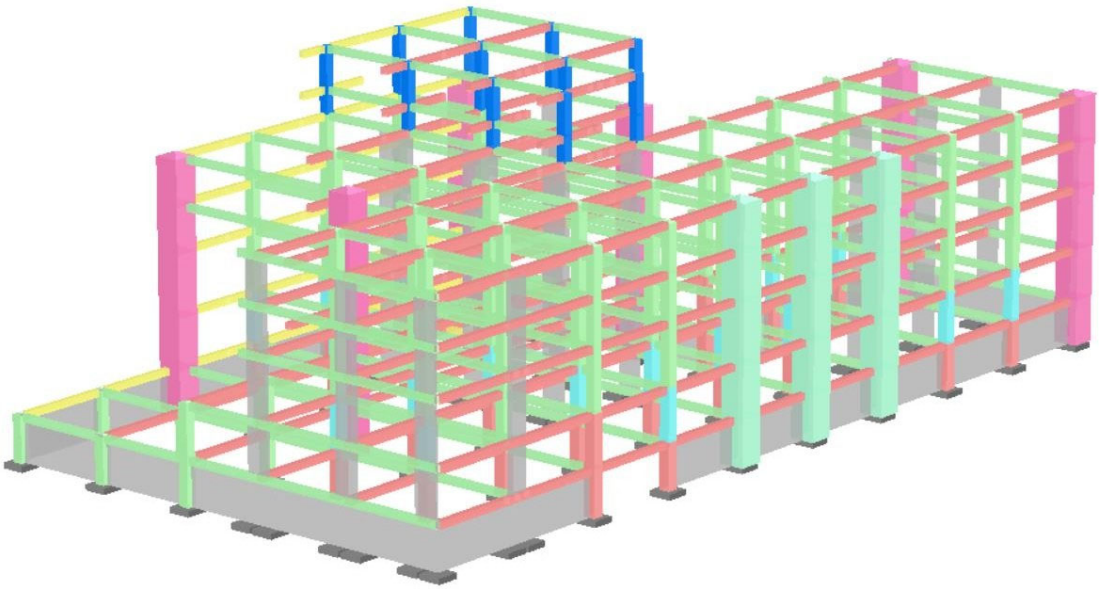
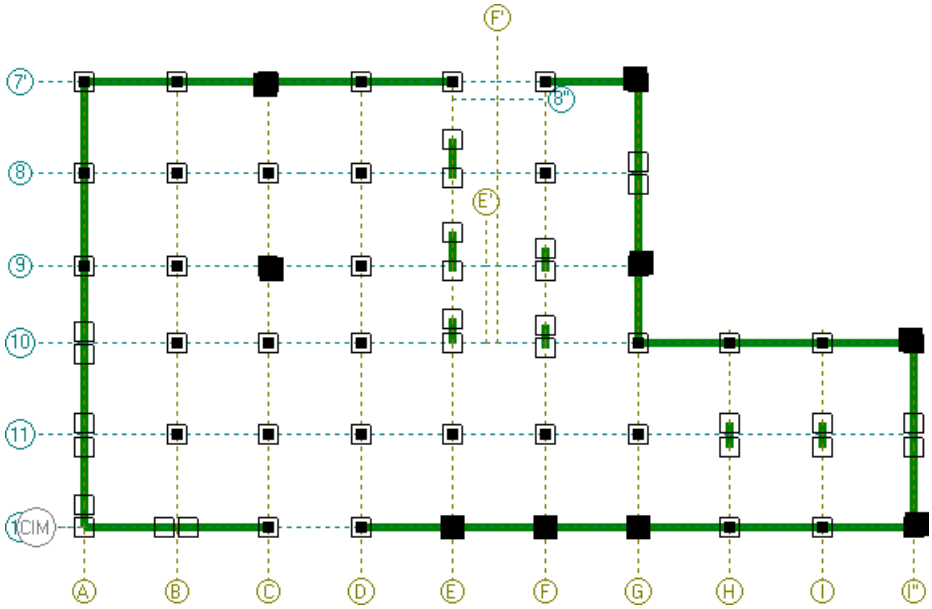
6. IMÁGENES MODELO





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 10:31:35 p. m. 4/01/2020
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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 ... = 30

	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 ..... = 1.5

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
2: PIEDEMONTE A
3: PIEDEMONTE B
4: PIEDEMONTE C
5: LACUSTRE-50
6: LACUSTRE-100
7: LACUSTRE-200
8: LACUSTRE-300
9: LACUSTRE-500
10: LACUSTRE ALUVIAL-200
11: LACUSTRE ALUVIAL-300
12: ALUVIAL-50
13: ALUVIAL-100
14: ALUVIAL-200
15: ALUVIAL-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 = 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	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) = 9869.01

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	=	0.595	0.525
Ta = Ct (H)^x	=	0.049 H ¾	0.049 H ¾
	=	0.493	0.493
Tmax = Cu Ta	=	0.591	0.591
Fundamental Period	=	0.591	0.525
Energ-Disspst coeff, R	=	4.05	4.05
1.2 Av Fv I / T	=	1.644	1.851
2.5 Aa Fa I	=	.525	.525
Sa	=	.525	.525
Base Shear, Vo	=	5181.23	5181.23
Static Shear, .9Vo (ton)	=	4663.11	4663.11

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	.595	.525	.05
2	.525	.525	.05
3	.309	.525	.05
4	.197	.525	.05
5	.181	.525	.05
6	.173	.525	.05
7	.154	.525	.05
8	.141	.525	.05
9	.117	.525	.05
10	.105	.525	.05
11	.098	.525	.05
12	.056	.525	.05
13	.055	.525	.05
14	.045	.525	.05
15	.042	.525	.05
16	.04	.525	.05
17	.035	.525	.05
18	.033	.525	.05
19	.029	.525	.05
20	.026	.525	.05
21	.024	.525	.05
22	.024	.525	.05
23	.022	.525	.05
24	.022	.525	.05
25	.021	.525	.05
26	.02	.525	.05
27	.019	.525	.05
28	.019	.525	.05
29	.016	.525	.05
30	.016	.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	4980.99	2615.02	.525	0	0
2	.525	0	0	.525	5500.99	2888.02
3	.525	220.71	115.87	.525	.78	.41
4	.525	360.93	189.49	.525	75.55	39.66
5	.525	251.46	132.02	.525	319.12	167.54
6	.525	223.47	117.32	.525	22.86	12
7	.525	8.43	4.42	.525	8.24	4.33
8	.525	1.3	.68	.525	0	0
9	.525	901.65	473.37	.525	3.78	1.98
10	.525	.19	.1	.525	1.09	.57
11	.525	17.79	9.34	.525	1387.47	728.42
12	.525	694.72	364.73	.525	4.04	2.12
13	.525	18.67	9.8	.525	9.28	4.87
14	.525	0	0	.525	975.07	511.91
15	.525	0	0	.525	135.15	70.95
16	.525	39.66	20.82	.525	10.26	5.39
17	.525	.04	.02	.525	73.07	38.36
18	.525	239.64	125.81	.525	0	0
19	.525	14.77	7.76	.525	74.08	38.89
20	.525	5.14	2.7	.525	865.58	454.43
21	.525	86.41	45.37	.525	31.75	16.67
22	.525	1667.77	875.58	.525	3.8	1.99
23	.525	40.74	21.39	.525	6.82	3.58
24	.525	16.19	8.5	.525	.14	.07
25	.525	.02	.01	.525	4.63	2.43
26	.525	74.94	39.34	.525	333.08	174.87
27	.525	2.77	1.45	.525	.47	.25
28	.525	.3	.16	.525	.34	.18
29	.525	.3	.16	.525	0	0
30	.525	0	0	.525	6.33	3.32
ELASTIC Ve (combined):		2839.59				3067.34
STATIC(IREG) 0.9Sa(T1)		4663.11				4663.11
Design Base Shear:		4663.11				4663.11

Total Building Weight, W = 9869.01 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 - DIRECTION (EQY) δεxo (m)	Ax -	δεx (m)	Y - DIRECTION (EQX) δεyo (m)	Ax -	δεy (m)
CBM	0.84	1.00	0.84	1.02	1.00	1.02
PM	0.84	1.00	0.84	1.02	1.00	1.02
6	3.24	1.00	3.24	1.74	1.14	1.99
5	3.24	1.00	3.24	1.74	1.14	1.99
4	3.24	1.00	3.24	1.74	1.13	1.97
3	3.24	1.00	3.24	1.74	1.04	1.80
2	3.24	1.00	3.24	1.74	1.06	1.85

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 - DIRECTION (EQY) Center Mass CMx	Inherent Eccent. εx*	Accident Eccent. δεx	Design Eccent. Ex	Y - DIRECTION (EQX) Center Mass CMy	Inherent Eccent. εy*	Accident Eccent. δεy	Design Eccent. Ey
CBM	34.37	-0.97	0.84	-1.811	25.48	0.29	1.02	1.3131
PM	30.33	-5.02	0.84	-5.866	24.62	-0.57	1.02	-1.599
6	32.13	0.89	3.24	4.1313	13.04	-2.13	1.99	-4.122
5	32.13	1.00	3.24	4.2424	12.89	-2.00	1.99	-3.999
4	32.18	1.25	3.24	4.4949	12.97	-1.83	1.97	-3.800
3	30.92	0.05	3.24	3.2929	13.38	-1.36	1.80	-3.166
2	28.60	-2.45	3.24	-5.699	15.16	0.16	1.85	2.0101

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 - DIRECTION (EQY) Center Mass CMx	Inherent Eccent. εx*	Accident Eccent. δεx	Design Eccent. Ex	Y - DIRECTION (EQX) Center Mass CMy	Inherent Eccent. εy*	Accident Eccent. δεy	Design Eccent. Ey
CBM	34.37	-0.97	0.84	-0.133	25.48	0.29	1.02	-0.733
PM	30.33	-5.02	0.84	-4.188	24.62	-0.57	1.02	0.4545
6	32.13	0.89	3.24	-2.355	13.04	-2.13	1.99	-0.144
5	32.13	1.00	3.24	-2.244	12.89	-2.00	1.99	-0.011
4	32.18	1.25	3.24	-1.999	12.97	-1.83	1.97	0.1414
3	30.92	0.05	3.24	-3.199	13.38	-1.36	1.80	0.4444
2	28.60	-2.45	3.24	0.7979	15.16	0.16	1.85	-1.699

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)
CBM	249.6	466.3	466.3	475.7
PM	105.9	112.9	579.3	115.6
6	1290	1295	1875	2584
5	1738	1242	3116	2476
4	1841	886.1	4002	1747
3	1948	384.0	4386	692.2
2	2697	276.6	4663	513.2

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)
CBM	249.6	394.1	394.1	331.8
PM	105.9	114.6	508.8	96.44
6	1290	1405	1914	4558
5	1738	1265	3179	4100
4	1841	873.9	4053	2834
3	1948	419.6	4473	1361
2	2697	190.3	4663	616.9

A C C E L E R A T I O N S O N N O N-S T R U C T U R A L E L E M E N T S - M Z S B O G O T A - 2010

F L O O R Level	A C C E L E R A T I O N S hx	hx/heq	ax
CBM	21.70	1.33	0.630
PM	18.89	1.15	0.549
6	17.14	1.04	0.498
5	14.00	0.86	0.436
4	10.85	0.67	0.385
3	6.65	0.41	0.317
2	3.15	0.19	0.261

Seismic base level . . . . . = CIM
Height above seismic base, hn . . . . . = 21.70 m
Equivalent height, heq = 0.75 hn . . . . . = 16.28 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

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:59:21 p. m. 4/01/2020
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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 ... = 30

	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 ..... = 1.5

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
2: PIEDEMONTE A
3: PIEDEMONTE B
4: PIEDEMONTE C
5: LACUSTRE-50
6: LACUSTRE-100
7: LACUSTRE-200
8: LACUSTRE-300
9: LACUSTRE-500
10: LACUSTRE ALUVIAL-200
11: LACUSTRE ALUVIAL-300
12: ALUVIAL-50
13: ALUVIAL-100
14: ALUVIAL-200
15: ALUVIAL-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) = 9869.01

Peak Acceleration Coeffi., Aa Fa = .165
Peak Velocity Coefficient, Av Fv = .75
Importance factor, I . . . . . = 1.5
Seizmic zone . . . . . = LACUSTRE-500
Coeff. for upper limit period, Cu = 1.2

		X-direction	Y-direction
Computed Period	=	0.595	0.525
Ta = Ct (H)^x	=	0.049 H ¾	0.049 H ¾
	=	0.493	0.493
Tmax = Cu Ta	=	0.591	0.591
Fundamental Period	=	0.591	0.525
Energ-Disspst coeff, R	=	4.05	4.05
1.2 Av Fv I / T	=	2.284	2.571
2.5 Aa Fa I	=	.619	.619
Sa	=	.619	.619
Base Shear, Vo	=	6106.45	6106.45
Static Shear, .9Vo (ton)	=	1758.7	1758.7

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	.595	.198	.05
2	.525	.198	.05
3	.309	.187	.05
4	.197	.148	.05
5	.181	.143	.05
6	.173	.14	.05
7	.154	.133	.05
8	.141	.129	.05
9	.117	.121	.05
10	.105	.116	.05
11	.098	.114	.05
12	.056	.099	.05
13	.055	.099	.05
14	.045	.096	.05
15	.042	.095	.05
16	.04	.094	.05
17	.035	.092	.05
18	.033	.091	.05
19	.029	.09	.05
20	.026	.089	.05
21	.024	.088	.05
22	.024	.088	.05
23	.022	.088	.05
24	.022	.088	.05
25	.021	.087	.05
26	.02	.087	.05
27	.019	.087	.05
28	.019	.087	.05
29	.016	.086	.05
30	.016	.086	.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	4980.99	986.24	.198	0	0
2	.198	0	0	.198	5500.99	1089.2
3	.187	220.71	41.27	.187	.78	.15
4	.148	360.93	53.42	.148	75.55	11.18
5	.143	251.46	35.96	.143	319.12	45.63
6	.14	223.47	31.29	.14	22.86	3.2
7	.133	8.43	1.12	.133	8.24	1.1
8	.129	1.3	.17	.129	0	0
9	.121	901.65	109.1	.121	3.78	.46
10	.116	.19	.02	.116	1.09	.13
11	.114	17.79	2.03	.114	1387.47	158.17
12	.099	694.72	68.78	.099	4.04	.4
13	.099	18.67	1.85	.099	9.28	.92
14	.096	0	0	.096	975.07	93.61
15	.095	0	0	.095	135.15	12.84
16	.094	39.66	3.73	.094	10.26	.96
17	.092	.04	0	.092	73.07	6.72
18	.091	239.64	21.81	.091	0	0
19	.09	14.77	1.33	.09	74.08	6.67
20	.089	5.14	.46	.089	865.58	77.04
21	.088	86.41	7.6	.088	31.75	2.79
22	.088	1667.77	146.76	.088	3.8	.33
23	.088	40.74	3.59	.088	6.82	.6
24	.088	16.19	1.42	.088	.14	.01
25	.087	.02	0	.087	4.63	.4
26	.087	74.94	6.52	.087	333.08	28.98
27	.087	2.77	.24	.087	.47	.04
28	.087	.3	.03	.087	.34	.03
29	.086	.3	.03	.086	0	0
30	.086	0	0	.086	6.33	.54
ELASTIC Ve (combined):			1009.1			1108.78
STATIC(IREG) 0.9Sa(T1)W			1758.7			1758.7
Design Base Shear:			1758.7			1758.7

Total Building Weight, W = 9869.01 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)
CBM	249.6	170.0	170.0	0.0
PM	105.9	48.36	218.4	0.0
6	1290	506.9	725.3	0.0
5	1738	511.5	1237	0.0
4	1841	357.9	1595	0.0
3	1948	133.8	1729	0.0
2	2697	29.97	1759	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)
CBM	249.6	144.6	144.6	0.0
PM	105.9	46.86	191.5	0.0
6	1290	530.7	722.2	0.0
5	1738	514.1	1236	0.0
4	1841	350.5	1587	0.0
3	1948	139.4	1726	0.0
2	2697	32.29	1759	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
CBM	21.70	1.33	0.238	0.743	0.990	0.866	0.743
PM	18.89	1.15	0.207	0.679	0.894	0.786	0.743
6	17.14	1.04	0.188	0.639	0.834	0.737	0.743
5	14.00	0.86	0.188	0.567	0.727	0.647	0.743
4	10.85	0.67	0.201	0.495	0.619	0.557	0.743
3	6.65	0.41	0.219	0.399	0.475	0.437	0.743
2	3.15	0.19	0.234	0.319	0.355	0.337	0.607

Seismic base level . . . . . = CIM
Height above seismic base, hn . . . . . = 21.70 m
Equivalent height, heq = 0.75 hn . . . . . = 16.28 m
Ground acceleration, As = Aa Fa I . . . . . = 0.248
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

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:28:43 p. m. 5/01/2020
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MODE - FREQUENCY ANALYSIS

Mass Matrix Combination (Weight / g)

M = (D0 + DL) / g

Total Building Weight: 9869.00 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	1.68	0.5950	-2.34	1.00	-0.07	0.01	0.00	0.00
2	1.91	0.5250	0.08	0.00	-2.37	1.00	0.00	0.00
3	3.24	0.3090	0.46	0.86	0.03	1.32	0.00	0.00
4	5.07	0.1970	-0.53	0.70	-0.22	0.64	0.00	0.00
5	5.54	0.1810	-0.23	0.18	0.58	1.03	0.00	0.00
6	5.77	0.1730	-0.14	0.08	-0.16	1.03	0.00	0.00
7	6.50	0.1540	-0.10	1.00	0.01	0.02	0.00	0.00
8	7.08	0.1410	0.04	1.00	0.00	0.00	0.00	0.00
9	8.55	0.1170	1.00	1.00	-0.01	0.02	0.00	0.00
10	9.49	0.1050	0.02	1.70	0.04	1.21	0.00	0.00
11	10.26	0.0980	0.02	0.01	1.19	1.01	0.00	0.00
12	17.73	0.0560	-0.87	0.99	0.02	0.11	0.00	0.00
13	18.34	0.0550	-0.13	0.80	-0.13	1.84	0.00	0.00
14	22.21	0.0450	0.01	0.01	-1.00	1.01	0.00	0.00
15	23.74	0.0420	-0.01	0.01	-0.37	1.00	0.00	0.00
16	24.80	0.0400	0.21	0.98	0.05	0.22	0.00	0.00
17	28.53	0.0350	0.00	0.08	-0.27	1.00	0.00	0.00
18	30.56	0.0330	-0.51	1.00	0.02	0.01	0.00	0.00
19	34.23	0.0290	-0.02	0.02	-0.28	1.02	0.00	0.00
20	38.75	0.0260	0.01	0.04	0.96	1.04	0.00	0.00
21	41.32	0.0240	-0.03	0.01	-0.18	1.01	0.00	0.00
22	42.30	0.0240	-1.35	0.99	-0.02	0.10	0.00	0.00
23	44.50	0.0220	0.28	1.74	-0.09	1.08	0.00	0.00
24	45.88	0.0220	0.17	1.61	0.01	1.07	0.00	0.00
25	46.81	0.0210	0.00	1.05	0.03	0.18	0.00	0.00
26	49.34	0.0200	0.05	0.03	-0.59	1.02	0.00	0.00
27	51.29	0.0190	-0.06	1.00	-0.01	0.07	0.00	0.00
28	53.62	0.0190	0.02	1.00	0.00	0.02	0.00	0.00
29	61.45	0.0160	-0.02	1.00	0.00	0.01	0.00	0.00
30	61.74	0.0160	0.01	0.00	0.08	1.01	0.00	0.00

* : ton-sec²/m

Effective Weight and Participating Mass

Mode No	X - Direction Weff*	%Mass	[%-Sum]	Y - Direction Weff*	%Mass	[%-Sum]	Z - Direction Weff*	%Mass	[%-Sum]
1	4980.99	50.47	[50.5]	0.00	0.00	[0.0]	0.00	0.00	[0.0]
2	0.00	0.00	[50.5]	5500.99	55.74	[55.7]	0.00	0.00	[0.0]
3	220.71	2.24	[52.7]	0.78	0.01	[55.7]	0.00	0.00	[0.0]
4	360.93	3.66	[56.4]	75.55	0.77	[56.5]	0.00	0.00	[0.0]
5	251.46	2.55	[58.9]	319.12	3.23	[59.7]	0.00	0.00	[0.0]
6	223.47	2.26	[61.2]	22.86	0.23	[60.0]	0.00	0.00	[0.0]
7	8.43	0.09	[61.3]	8.24	0.08	[60.1]	0.00	0.00	[0.0]
8	1.30	0.01	[61.3]	0.00	0.00	[60.1]	0.00	0.00	[0.0]
9	901.65	9.14	[70.4]	3.78	0.04	[60.1]	0.00	0.00	[0.0]
10	0.19	0.00	[70.4]	1.09	0.01	[60.1]	0.00	0.00	[0.0]
11	17.79	0.18	[70.6]	1387.47	14.06	[74.2]	0.00	0.00	[0.0]
12	694.72	7.04	[77.6]	4.04	0.04	[74.2]	0.00	0.00	[0.0]
13	18.67	0.19	[77.8]	9.28	0.09	[74.3]	0.00	0.00	[0.0]
14	0.00	0.00	[77.8]	975.07	9.88	[84.2]	0.00	0.00	[0.0]
15	0.00	0.00	[77.8]	135.15	1.37	[85.6]	0.00	0.00	[0.0]
16	39.66	0.40	[78.2]	10.26	0.10	[85.7]	0.00	0.00	[0.0]
17	0.04	0.00	[78.2]	73.07	0.74	[86.4]	0.00	0.00	[0.0]
18	239.64	2.43	[80.7]	0.00	0.00	[86.4]	0.00	0.00	[0.0]
19	14.77	0.15	[80.8]	74.08	0.75	[87.2]	0.00	0.00	[0.0]

Mode	X - Direction			Y - Direction			Z - Direction		
20	5.14	0.05	[80.9]	865.58	8.77	[95.9]	0.00	0.00	[0.0]
21	86.41	0.88	[81.7]	31.75	0.32	[96.2]	0.00	0.00	[0.0]
22	1667.77	16.90	[98.6]	3.80	0.04	[96.3]	0.00	0.00	[0.0]
23	40.74	0.41	[99.0]	6.82	0.07	[96.4]	0.00	0.00	[0.0]
24	16.19	0.16	[99.2]	0.14	0.00	[96.4]	0.00	0.00	[0.0]
25	0.02	0.00	[99.2]	4.63	0.05	[96.4]	0.00	0.00	[0.0]
26	74.94	0.76	[100.0]	333.08	3.38	[99.8]	0.00	0.00	[0.0]
27	2.77	0.03	[100.0]	0.47	0.00	[99.8]	0.00	0.00	[0.0]
28	0.30	0.00	[100.0]	0.34	0.00	[99.8]	0.00	0.00	[0.0]
29	0.30	0.00	[100.0]	0.00	0.00	[99.8]	0.00	0.00	[0.0]
30	0.00	0.00	[100.0]	6.33	0.06	[99.8]	0.00	0.00	[0.0]

* : ton

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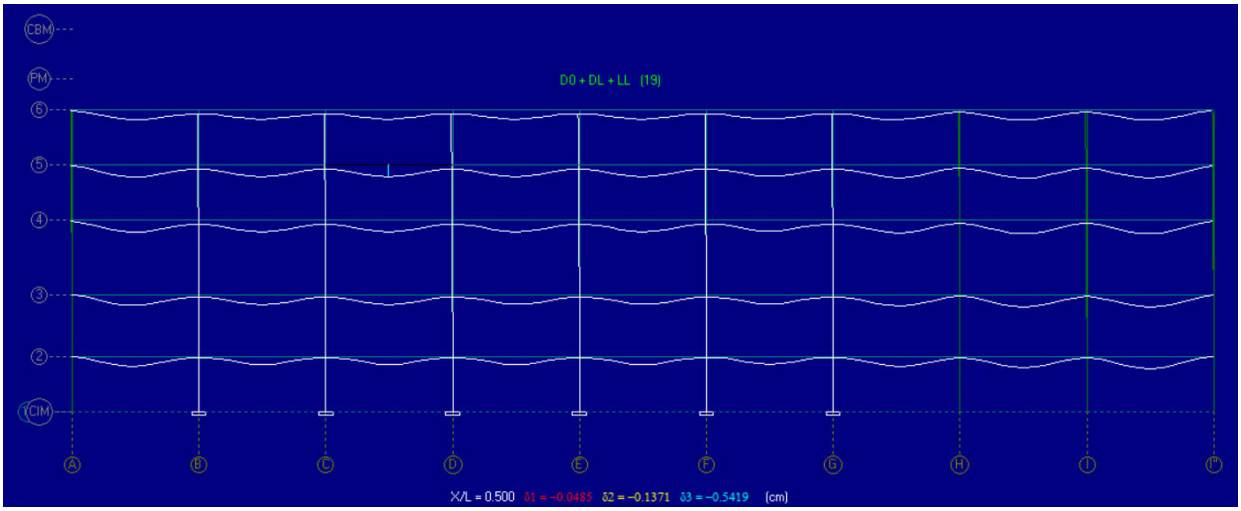
8. DEFLEXIONES VERTICALES Y DERIVAS.

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: 0.54.cm.

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

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:27:51 p. m. 5/01/2020
File: C:\Users\Laura\Documents\LAURA\IPC\IP\CALLE 80\PL DWG\ING\MODELO RCB BLOQUE C_UMBRAL DE DAÑO.rcb

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
PM	0.0033	0.0019	0.0033	0.0035	0.0022	0.0035	7'-G
6	0.0035	0.0019	0.0035	0.0037	0.0024	0.0037	7'-F
5	0.0028	0.0024	0.0028	0.0033	0.0026	0.0033	7'-C
4	0.0030	0.0024	0.0030	0.0034	0.0027	0.0034	7'-C
3	0.0028	0.0021	0.0028	0.0031	0.0024	0.0031	7'-D
2	0.0015	0.0012	0.0015	0.0017	0.0012	0.0017	7'-D
CIM	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	7':Ca
Maxima	0.0035	0.0024	0.0035	0.0037	0.0027	0.0037	

DriftX = $(\Delta x/h)max$
DriftY = $(\Delta y/h)max$
DriftR = $([(\Delta x/h)^2 + (\Delta y/h)^2]^{1/2})max$

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

Story	ColAxis	$(\delta x/h)max$	$(\delta y/h)max$	$([(\delta x/h)^2 + (\delta y/h)^2]^{1/2})max$
PM	10-E	0.0032	0.0021	0.0032
	9-E	0.0033	0.0021	0.0033
	8-E	0.0034	0.0021	0.0034
	7'-E	0.0035	0.0021	0.0035
	10-F	0.0033	0.0022	0.0033
	9-F	0.0032	0.0021	0.0032
	8-F	0.0033	0.0019	0.0033
	7'-F	0.0035	0.0020	0.0035
	9-G	0.0033	0.0020	0.0033
	8-G	0.0034	0.0022	0.0034
	7'-G	0.0035	0.0020	0.0035
6	10-E	0.0033	0.0019	0.0033
	9-E	0.0034	0.0019	0.0034
	8-E	0.0035	0.0019	0.0035
	7'-E	0.0036	0.0019	0.0036
	10-F	0.0032	0.0019	0.0032
	9-F	0.0035	0.0020	0.0035
	8-F	0.0036	0.0023	0.0036
	7'-F	0.0037	0.0023	0.0037
	9-G	0.0034	0.0023	0.0034
	8-G	0.0035	0.0020	0.0035
	7'-G	0.0036	0.0024	0.0036
5	12-A	0.0025	0.0026	0.0026
	A:12a	0.0025	0.0026	0.0026
	A:12b	0.0026	0.0026	0.0027
	11-A	0.0027	0.0026	0.0027
	A:11a	0.0027	0.0026	0.0027
	A:11b	0.0028	0.0026	0.0029
	10-A	0.0028	0.0026	0.0029
	A:10a	0.0028	0.0026	0.0029
	12:Aa	0.0025	0.0026	0.0026
	12-B	0.0025	0.0026	0.0026
	11-B	0.0027	0.0026	0.0027
	10-B	0.0028	0.0026	0.0028
	12:Ba	0.0025	0.0026	0.0026
	12-C	0.0025	0.0025	0.0025
	11-C	0.0027	0.0025	0.0027
	10-C	0.0028	0.0025	0.0028
	9-C	0.0030	0.0020	0.0030
	7'-C	0.0033	0.0021	0.0033
	12-D	0.0025	0.0025	0.0025
	11-D	0.0027	0.0025	0.0027
	10-D	0.0028	0.0025	0.0028
	9-D	0.0029	0.0025	0.0029
	8-D	0.0031	0.0025	0.0031

	7'-D	0.0032	0.0025	0.0032
	12-E	0.0025	0.0024	0.0025
	11-E	0.0027	0.0024	0.0027
	10-E	0.0028	0.0024	0.0028
	E:10a	0.0028	0.0024	0.0028
	E:10b	0.0029	0.0024	0.0029
	9-E	0.0029	0.0024	0.0029
	E:9a	0.0030	0.0024	0.0030
	E:9b	0.0031	0.0024	0.0031
	8-E	0.0031	0.0024	0.0031
	E:8a	0.0031	0.0024	0.0031
	7'-E	0.0032	0.0024	0.0032
	12-F	0.0025	0.0023	0.0025
	11-F	0.0027	0.0023	0.0027
	F:11a	0.0028	0.0023	0.0028
	10-F	0.0028	0.0023	0.0028
	F:10a	0.0028	0.0023	0.0028
	F:10b	0.0029	0.0023	0.0029
	9-F	0.0029	0.0023	0.0029
	F:9a	0.0029	0.0023	0.0029
	8-F	0.0031	0.0023	0.0031
	7'-F	0.0032	0.0023	0.0032
	12-G	0.0025	0.0023	0.0025
	11-G	0.0027	0.0023	0.0027
	10-G	0.0028	0.0023	0.0028
	9-G	0.0029	0.0023	0.0029
	G:9a	0.0030	0.0023	0.0030
	8-G	0.0031	0.0023	0.0031
	G:8a	0.0031	0.0023	0.0031
	7'-G	0.0032	0.0023	0.0032
	12-H	0.0025	0.0022	0.0025
	H:12a	0.0026	0.0022	0.0027
	11-H	0.0027	0.0022	0.0027
	H:11a	0.0027	0.0022	0.0027
	10-H	0.0028	0.0022	0.0028
	12-I	0.0025	0.0022	0.0025
	I:12a	0.0026	0.0022	0.0027
	11-I	0.0027	0.0022	0.0027
	I:11a	0.0027	0.0022	0.0027
	10-I	0.0028	0.0022	0.0028
	12-I''	0.0025	0.0021	0.0026
	I'':12a	0.0026	0.0021	0.0027
	11-I''	0.0027	0.0021	0.0027
	I'':11a	0.0027	0.0021	0.0027
	10-I''	0.0028	0.0021	0.0029
4	12-A	0.0028	0.0027	0.0028
	A:12a	0.0028	0.0027	0.0029
	A:12b	0.0029	0.0027	0.0029
	11-A	0.0029	0.0027	0.0029
	A:11a	0.0029	0.0027	0.0030
	A:11b	0.0030	0.0027	0.0031
	10-A	0.0030	0.0027	0.0031
	A:10a	0.0030	0.0027	0.0031
	12:Aa	0.0028	0.0027	0.0028
	12-B	0.0028	0.0026	0.0028
	11-B	0.0029	0.0026	0.0029
	10-B	0.0030	0.0026	0.0031
	12:Ba	0.0028	0.0026	0.0028
	12-C	0.0028	0.0026	0.0028
	11-C	0.0029	0.0026	0.0029
	10-C	0.0030	0.0026	0.0030
	9-C	0.0031	0.0020	0.0031
	7'-C	0.0034	0.0021	0.0034
	12-D	0.0028	0.0025	0.0028
	11-D	0.0029	0.0025	0.0029
	10-D	0.0030	0.0025	0.0030
	9-D	0.0031	0.0025	0.0031
	8-D	0.0033	0.0025	0.0033
	7'-D	0.0034	0.0025	0.0034
	12-E	0.0028	0.0024	0.0028
	11-E	0.0029	0.0024	0.0029
	10-E	0.0030	0.0024	0.0030
	E:10a	0.0031	0.0024	0.0031
	E:10b	0.0031	0.0024	0.0031
	9-E	0.0031	0.0024	0.0031
	E:9a	0.0032	0.0024	0.0032

	E:9b	0.0032	0.0024	0.0032
	8-E	0.0033	0.0024	0.0033
	E:8a	0.0033	0.0024	0.0033
	7'-E	0.0034	0.0024	0.0034
	12-F	0.0028	0.0024	0.0028
	11-F	0.0029	0.0024	0.0029
	F:11a	0.0030	0.0024	0.0030
	10-F	0.0030	0.0024	0.0030
	F:10a	0.0030	0.0024	0.0030
	F:10b	0.0031	0.0024	0.0031
	9-F	0.0031	0.0024	0.0031
	F:9a	0.0032	0.0024	0.0032
	8-F	0.0033	0.0024	0.0033
	7'-F	0.0034	0.0024	0.0034
	12-G	0.0028	0.0023	0.0028
	11-G	0.0029	0.0023	0.0029
	10-G	0.0030	0.0023	0.0030
	9-G	0.0031	0.0023	0.0031
	G:9a	0.0032	0.0023	0.0032
	8-G	0.0033	0.0023	0.0033
	G:8a	0.0033	0.0023	0.0033
	7'-G	0.0034	0.0023	0.0034
	12-H	0.0028	0.0022	0.0028
	H:12a	0.0029	0.0022	0.0029
	11-H	0.0029	0.0022	0.0029
	H:11a	0.0029	0.0022	0.0029
	10-H	0.0030	0.0022	0.0030
	12-I	0.0028	0.0022	0.0028
	I:12a	0.0029	0.0022	0.0029
	11-I	0.0029	0.0022	0.0029
	I:11a	0.0029	0.0022	0.0029
	10-I	0.0030	0.0022	0.0030
	12-I''	0.0028	0.0021	0.0028
	I'':12a	0.0029	0.0021	0.0029
	11-I''	0.0029	0.0021	0.0029
	I'':11a	0.0029	0.0021	0.0030
	10-I''	0.0030	0.0021	0.0031
3	12-A	0.0026	0.0024	0.0027
	A:12a	0.0027	0.0024	0.0027
	A:12b	0.0027	0.0024	0.0028
	11-A	0.0027	0.0024	0.0028
	A:11a	0.0028	0.0024	0.0028
	A:11b	0.0028	0.0024	0.0029
	10-A	0.0028	0.0024	0.0029
	A:10a	0.0028	0.0024	0.0029
	12:Aa	0.0026	0.0023	0.0027
	12-B	0.0026	0.0023	0.0027
	11-B	0.0027	0.0023	0.0028
	10-B	0.0028	0.0023	0.0029
	12:Ba	0.0026	0.0023	0.0027
	12-C	0.0026	0.0023	0.0027
	11-C	0.0027	0.0023	0.0027
	10-C	0.0028	0.0023	0.0028
	9-C	0.0028	0.0017	0.0028
	7'-C	0.0031	0.0018	0.0031
	12-D	0.0026	0.0022	0.0026
	11-D	0.0027	0.0022	0.0027
	10-D	0.0028	0.0022	0.0028
	9-D	0.0029	0.0022	0.0029
	8-D	0.0030	0.0022	0.0030
	7'-D	0.0031	0.0022	0.0031
	12-E	0.0026	0.0021	0.0026
	11-E	0.0027	0.0021	0.0027
	10-E	0.0028	0.0021	0.0028
	E:10a	0.0029	0.0021	0.0029
	E:10b	0.0029	0.0021	0.0029
	9-E	0.0029	0.0021	0.0029
	E:9a	0.0029	0.0021	0.0029
	E:9b	0.0030	0.0021	0.0030
	8-E	0.0030	0.0021	0.0030
	E:8a	0.0030	0.0021	0.0030
	7'-E	0.0031	0.0021	0.0031
	12-F	0.0026	0.0021	0.0026
	11-F	0.0027	0.0021	0.0027
	F:11a	0.0028	0.0021	0.0028
	10-F	0.0028	0.0021	0.0028

	F:10a	0.0029	0.0021	0.0029
	F:10b	0.0029	0.0021	0.0029
	9-F	0.0029	0.0021	0.0029
	F:9a	0.0029	0.0021	0.0029
	8-F	0.0030	0.0021	0.0030
	7'-F	0.0031	0.0021	0.0031
	12-G	0.0026	0.0020	0.0026
	11-G	0.0027	0.0020	0.0027
	10-G	0.0028	0.0020	0.0028
	9-G	0.0029	0.0020	0.0029
	G:9a	0.0030	0.0020	0.0030
	8-G	0.0030	0.0020	0.0030
	G:8a	0.0030	0.0020	0.0030
	7'-G	0.0031	0.0020	0.0031
	12-H	0.0026	0.0020	0.0027
	H:12a	0.0027	0.0020	0.0027
	11-H	0.0027	0.0020	0.0027
	H:11a	0.0028	0.0020	0.0028
	10-H	0.0028	0.0020	0.0028
	12-I	0.0026	0.0019	0.0027
	I:12a	0.0027	0.0019	0.0027
	11-I	0.0027	0.0019	0.0028
	I:11a	0.0028	0.0019	0.0028
	10-I	0.0028	0.0019	0.0028
	12-I''	0.0026	0.0018	0.0027
	I'':12a	0.0027	0.0018	0.0028
	11-I''	0.0027	0.0018	0.0028
	I'':11a	0.0028	0.0018	0.0028
	10-I''	0.0028	0.0018	0.0029
2	12-A	0.0014	0.0012	0.0015
	A:12a	0.0014	0.0012	0.0015
	A:12b	0.0015	0.0012	0.0015
	11-A	0.0015	0.0012	0.0015
	A:11a	0.0015	0.0012	0.0015
	A:11b	0.0015	0.0012	0.0015
	10-A	0.0015	0.0012	0.0015
	A:10a	0.0015	0.0012	0.0015
	9-A	0.0016	0.0012	0.0016
	12:Aa	0.0014	0.0012	0.0014
	12-B	0.0014	0.0012	0.0014
	11-B	0.0015	0.0012	0.0015
	10-B	0.0015	0.0012	0.0015
	9-B	0.0016	0.0012	0.0016
	12:Ba	0.0014	0.0012	0.0014
	12-C	0.0014	0.0012	0.0014
	11-C	0.0015	0.0012	0.0015
	10-C	0.0015	0.0012	0.0015
	9-C	0.0016	0.0012	0.0016
	7'-C	0.0016	0.0010	0.0016
	12-D	0.0014	0.0012	0.0014
	11-D	0.0015	0.0012	0.0015
	10-D	0.0015	0.0012	0.0015
	9-D	0.0016	0.0012	0.0016
	8-D	0.0016	0.0012	0.0016
	7'-D	0.0017	0.0012	0.0017
	12-E	0.0014	0.0012	0.0014
	11-E	0.0015	0.0012	0.0015
	10-E	0.0015	0.0012	0.0015
	E:10a	0.0015	0.0012	0.0015
	E:10b	0.0016	0.0012	0.0016
	9-E	0.0016	0.0012	0.0016
	E:9a	0.0016	0.0012	0.0016
	E:9b	0.0016	0.0012	0.0016
	8-E	0.0016	0.0012	0.0016
	E:8a	0.0016	0.0012	0.0016
	7'-E	0.0017	0.0012	0.0017
	12-F	0.0014	0.0011	0.0014
	11-F	0.0015	0.0011	0.0015
	F:11a	0.0015	0.0011	0.0015
	10-F	0.0015	0.0011	0.0015
	F:10a	0.0015	0.0011	0.0015
	F:10b	0.0016	0.0011	0.0016
	9-F	0.0016	0.0011	0.0016
	F:9a	0.0016	0.0011	0.0016
	8-F	0.0016	0.0011	0.0016
	7'-F	0.0017	0.0011	0.0017

	12-G	0.0014	0.0011	0.0014
	11-G	0.0015	0.0011	0.0015
	10-G	0.0015	0.0011	0.0015
	9-G	0.0016	0.0011	0.0016
	G:9a	0.0016	0.0011	0.0016
	8-G	0.0016	0.0011	0.0016
	G:8a	0.0016	0.0011	0.0016
	7'-G	0.0017	0.0011	0.0017
	12-H	0.0014	0.0011	0.0014
	H:12a	0.0015	0.0011	0.0015
	11-H	0.0015	0.0011	0.0015
	H:11a	0.0015	0.0011	0.0015
	10-H	0.0015	0.0011	0.0015
	12-I	0.0014	0.0011	0.0014
	I:12a	0.0015	0.0011	0.0015
	11-I	0.0015	0.0011	0.0015
	I:11a	0.0015	0.0011	0.0015
	10-I	0.0015	0.0011	0.0015
	12-I''	0.0014	0.0011	0.0014
	I'':12a	0.0015	0.0011	0.0015
	11-I''	0.0015	0.0011	0.0015
	I'':11a	0.0015	0.0011	0.0015
	10-I''	0.0015	0.0011	0.0015
CIM	12-A	0.0001	0.0001	0.0001
	A:12a	0.0001	0.0001	0.0001
	A:12b	0.0001	0.0001	0.0001
	11-A	0.0001	0.0001	0.0001
	A:11a	0.0001	0.0001	0.0001
	A:11b	0.0001	0.0001	0.0001
	10-A	0.0001	0.0001	0.0001
	A:10a	0.0001	0.0001	0.0001
	A:10b	0.0001	0.0001	0.0001
	9-A	0.0001	0.0001	0.0001
	8-A	0.0001	0.0001	0.0001
	7'-A	0.0001	0.0001	0.0001
	12:Aa	0.0001	0.0001	0.0001
	12-B	0.0001	0.0001	0.0001
	11-B	0.0001	0.0001	0.0001
	10-B	0.0001	0.0001	0.0001
	9-B	0.0001	0.0001	0.0001
	8-B	0.0001	0.0001	0.0001
	7'-B	0.0001	0.0001	0.0001
	12:Ba	0.0001	0.0001	0.0001
	12-C	0.0001	0.0001	0.0001
	11-C	0.0001	0.0001	0.0001
	10-C	0.0001	0.0001	0.0001
	9-C	0.0001	0.0001	0.0001
	8-C	0.0001	0.0001	0.0001
	7'-C	0.0001	0.0001	0.0001
	7':Ca	0.0000	0.0002	0.0002
	12-D	0.0001	0.0001	0.0001
	11-D	0.0001	0.0001	0.0001
	10-D	0.0001	0.0001	0.0001
	9-D	0.0001	0.0001	0.0001
	8-D	0.0001	0.0001	0.0001
	7'-D	0.0001	0.0001	0.0001
	7':Da	0.0000	0.0002	0.0002
	12-E	0.0001	0.0001	0.0001
	11-E	0.0001	0.0001	0.0001
	10-E	0.0001	0.0001	0.0001
	E:10a	0.0001	0.0001	0.0001
	E:10b	0.0001	0.0001	0.0001
	9-E	0.0001	0.0002	0.0002
	E:9a	0.0001	0.0001	0.0001
	E:9b	0.0001	0.0001	0.0001
	8-E	0.0001	0.0002	0.0002
	E:8a	0.0001	0.0001	0.0001
	7'-E	0.0001	0.0001	0.0001
	12-F	0.0001	0.0001	0.0002
	11-F	0.0001	0.0001	0.0001
	F:11a	0.0001	0.0001	0.0001
	10-F	0.0001	0.0002	0.0002
	F:10a	0.0001	0.0001	0.0001
	F:10b	0.0001	0.0001	0.0001
	9-F	0.0001	0.0002	0.0002
	F:9a	0.0001	0.0001	0.0001

8-F	0.0001	0.0001	0.0001
7'-F	0.0001	0.0001	0.0002
12-G	0.0001	0.0002	0.0002
11-G	0.0001	0.0002	0.0002
10-G	0.0001	0.0002	0.0002
G:10a	0.0001	0.0001	0.0001
9-G	0.0001	0.0002	0.0002
G:9a	0.0001	0.0002	0.0002
8-G	0.0001	0.0002	0.0002
G:8a	0.0001	0.0002	0.0002
7'-G	0.0001	0.0002	0.0002
12-H	0.0001	0.0002	0.0002
H:12a	0.0001	0.0002	0.0002
11-H	0.0001	0.0002	0.0002
H:11a	0.0001	0.0002	0.0002
10-H	0.0001	0.0002	0.0002
12-I	0.0001	0.0002	0.0002
I:12a	0.0001	0.0002	0.0002
11-I	0.0001	0.0002	0.0002
I:11a	0.0001	0.0002	0.0002
10-I	0.0001	0.0002	0.0002
12-I''	0.0001	0.0002	0.0002
I'':12a	0.0001	0.0002	0.0002
11-I''	0.0001	0.0002	0.0002
I'':11a	0.0001	0.0002	0.0002
10-I''	0.0001	0.0002	0.0002

Note: Drift amplification factor, D: 1 in X; 1 in Y
MAXIMA DRIFT: $(\delta/h)x = 0.0037$; $(\delta/h)y = 0.0027$; $(\delta/h)r = 0.0037$

Nit. 901.134.339-5
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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 10:18:25 p. m. 5/01/2020
File: C:\Users\Laura\Documents\LAURA\IPC\IP\CALLE 80\PL DWG\ING\MODELO RCB BLOQUE C.rcb

LOAD COMBINATIONS

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

MATERIALS

Number of materials = 2

REINFORCED CONCRETE

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

f'c: Compressive strength of concrete
fy: Yield strength of longitudinal reinforcement
fys1: Yiel strength of shear reinforcement, bar sizes <= 3/8"
fys2: Yiel strength of shear reinforcement, bar sizes > 3/8"

COLUMN SECTIONS

Number of prismatic sections = 7

Sec	Name	Shape	b (cm)	h (cm)	tw (cm)	tf (cm)	P1 (cm)	P2 (cm)	A (cm2)	I2 (cm4)	I3 (cm4)	J (cm4)
1	C80X80	Rectang	80.00	80.00	-	-	-	-	6400.0	3413333	3413333	5051734
2	C60X180	Rectang	60.00	180.00	-	-	-	-	10800.0	29160000	3240000	10238400
3	C70X70	Rectang	70.00	70.00	-	-	-	-	4900.0	2000833	2000833	2961233
4	T175X175	Rectang	175.00	175.00	-	-	-	-	16225.0	40322470	26227550	14852140
5	C75X75	Rectang	75.00	75.00	-	-	-	-	5625.0	2636719	2636719	3902344
6	C65X65	Rectang	65.00	65.00	-	-	-	-	4225.0	1487552	1487552	2201577
7	L175X175	Rectang	175.00	175.00	-	-	-	-	16225.0	40322470	40322470	115673200

Design Results - Columns (DMO)

Column	Story	L (m)	Lu (m)	Sec Mat	bxh (cm)	TRANSVERSE REINFORCEMENT TIES	XTIES	Sec	LdCmb critc	Pu (ton)	Mu2 (ton-m)	Mu3 (ton-m)	RHO -	As (cm2)
10-I''	5	3.15	2.65	7	175x175	24 #3 @ 11 cm	8 (b)	Top	1	36.37	23.16	3.04	0.0100	162.25
				2		---	8 (h)	Bot	1	36.37	20.60	4.73	0.0100	162.25
10-I''	4	3.15	2.65	7	175x175	24 #3 @ 11 cm	8 (b)	Top	1	81.98	18.08	6.97	0.0100	162.25
				2		---	8 (h)	Bot	1	81.98	13.57	5.55	0.0100	162.25
10-I''	3	4.20	3.70	7	175x175	34 #3 @ 11 cm	8 (b)	Top	1	133.23	25.96	9.02	0.0100	162.25
				2		---	8 (h)	Bot	13	66.96	314.96	154.41	0.0100	162.25
10-I''	2	3.50	3.00	7	175x175	27 #3 @ 11 cm	8 (b)	Top	5	150.96	375.54	153.29	0.0100	162.25
				2		---	8 (h)	Bot	5	150.96	648.98	230.65	0.0142	230.70
10-I''	CIM	3.15	2.73	7	175x175	25 #3 @ 11 cm	8 (b)	Top	11	-51.87	170.81	9.97	0.0100	162.25
				2		---	8 (h)	Bot	1	119.64	8.10	10.62	0.0100	162.25
12-I''	5	3.15	2.65	7	175x175	24 #3 @ 11 cm	8 (b)	Top	1	31.19	4.26	14.93	0.0100	162.25
				2		---	8 (h)	Bot	1	31.19	8.92	15.77	0.0100	162.25
12-I''	4	3.15	2.65	7	175x175	24 #3 @ 11 cm	8 (b)	Top	1	68.57	4.64	8.94	0.0100	162.25
				2		---	8 (h)	Bot	1	68.57	5.81	10.34	0.0100	162.25
12-I''	3	4.20	3.70	7	175x175	34 #3 @ 11 cm	8 (b)	Top	1	111.45	7.55	14.64	0.0100	162.25
				2		---	8 (h)	Bot	13	37.65	152.38	315.33	0.0100	162.25
12-I''	2	3.50	3.00	7	175x175	27 #3 @ 11 cm	8 (b)	Top	13	54.21	155.99	353.50	0.0100	162.25
				2		---	8 (h)	Bot	5	100.71	255.07	622.10	0.0142	230.70
12-I''	CIM	3.15	2.73	7	175x175	25 #3 @ 11 cm	8 (b)	Top	13	-69.65	86.48	182.19	0.0100	162.25
				2		---	8 (h)	Bot	1	108.91	7.38	7.98	0.0100	162.25
10-I	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	12	21.78	1.90	43.60	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	14	18.75	6.25	26.82	0.0100	49.00
10-I	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	14	47.52	2.58	27.91	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	14	47.52	7.13	30.72	0.0100	49.00
10-I	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	148.76	5.39	5.39	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	14	77.52	9.85	37.42	0.0100	49.00
10-I	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	204.79	7.73	7.73	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	14	109.28	17.10	59.15	0.0100	56.25
10-I	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	79.47	3.12	3.12	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	79.47	3.12	3.12	0.0100	64.00
12-I	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	14	21.18	13.13	37.43	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	14	21.18	9.71	21.69	0.0100	49.00
12-I	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	75.37	2.73	2.73	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	14	50.24	10.35	26.00	0.0100	49.00
12-I	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	120.59	4.37	4.37	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	13	75.13	8.78	35.17	0.0100	49.00
12-I	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	165.54	6.25	6.25	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	13	103.51	15.82	59.21	0.0100	56.25
12-I	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	58.30	2.29	3.06	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	58.30	2.29	2.29	0.0100	64.00
10-H	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	25.71	0.93	36.38	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	40.80	1.48	1.48	0.0100	49.00
10-H	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	98.30	3.56	3.56	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	98.30	3.56	3.56	0.0100	49.00
10-H	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	157.62	5.71	5.71	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	13	108.79	9.78	34.35	0.0100	49.00
10-H	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	216.54	8.17	8.17	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	14	130.12	14.84	62.26	0.0100	56.25
10-H	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	94.20	3.70	6.19	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	94.20	3.70	3.70	0.0100	64.00
12-H	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	13	16.07	4.79	40.23	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	13	16.07	2.90	23.52	0.0100	49.00
12-H	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	13	39.54	2.08	27.44	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	13	39.54	4.33	28.70	0.0100	49.00
12-H	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	119.69	4.34	4.34	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	13	64.03	7.03	37.12	0.0100	49.00
12-H	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	164.25	6.20	6.20	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	13	89.54	13.28	60.51	0.0100	56.25
12-H	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	54.10	2.12	2.12	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	54.10	2.12	2.12	0.0100	64.00
7'-G	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	6	22.60	37.78	4.21	0.0100	42.25
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	4	26.76	31.26	11.70	0.0100	42.25
7'-G	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	6	22.60	37.78	4.21	0.0100	42.25
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	4	26.76	31.26	11.70	0.0100	42.25

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Project: Untitled 10:18:25 p. m. 5/01/2020

Column	Story	L	Lu	Sec	bxh	TIES	XTIES	Sec	LdCmb	Pu	Mu2	Mu3	RHO	As
7'-G	5	3.15	2.65	7	175x175	24 #3 @ 11 cm	8 (b)	Top	1	50.33	9.97	3.41	0.0100	162.25
				2		---	8 (h)	Bot	1	50.33	11.13	8.29	0.0100	162.25
7'-G	4	3.15	2.65	7	175x175	24 #3 @ 11 cm	8 (b)	Top	1	87.12	16.59	10.82	0.0100	162.25
				2		---	8 (h)	Bot	1	87.12	5.90	8.85	0.0100	162.25
7'-G	3	4.20	3.70	7	175x175	34 #3 @ 11 cm	8 (b)	Top	1	129.63	25.70	11.07	0.0100	162.25
				2		---	8 (h)	Bot	3	87.25	416.10	54.83	0.0100	162.25
7'-G	2	3.50	3.00	7	175x175	27 #3 @ 11 cm	8 (b)	Top	3	116.46	461.14	63.30	0.0100	162.25
				2		---	8 (h)	Bot	3	116.46	687.83	125.83	0.0136	221.19
7'-G	CIM	3.15	2.73	7	175x175	25 #3 @ 11 cm	8 (b)	Top	11	-41.11	289.25	34.83	0.0100	162.25
				2		---	8 (h)	Bot	1	124.44	8.43	10.18	0.0100	162.25
8-G	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	6	38.41	12.55	54.14	0.0119	50.17
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	9	35.84	35.10	25.93	0.0100	42.25
8-G	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	6	38.41	12.55	54.14	0.0119	50.17
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	9	35.84	35.10	25.93	0.0100	42.25
9-G	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	6	26.13	10.62	38.32	0.0100	42.25
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	4	25.99	8.06	36.73	0.0100	42.25
9-G	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	6	26.13	10.62	38.32	0.0100	42.25
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	4	25.99	8.06	36.73	0.0100	42.25
9-G	5	3.15	2.65	7	175x175	24 #3 @ 11 cm	8 (b)	Top	1	52.36	5.51	10.11	0.0100	162.25
				2		---	8 (h)	Bot	1	52.36	12.88	12.80	0.0100	162.25
9-G	4	3.15	2.65	7	175x175	24 #3 @ 11 cm	8 (b)	Top	1	90.46	6.51	13.48	0.0100	162.25
				2		---	8 (h)	Bot	1	90.46	12.58	6.13	0.0100	162.25
9-G	3	4.20	3.70	7	175x175	34 #3 @ 11 cm	8 (b)	Top	1	133.97	9.08	21.18	0.0100	162.25
				2		---	8 (h)	Bot	11	65.38	55.30	360.55	0.0100	162.25
9-G	2	3.50	3.00	7	175x175	27 #3 @ 11 cm	8 (b)	Top	11	95.85	52.02	391.61	0.0100	162.25
				2		---	8 (h)	Bot	13	78.87	177.73	451.86	0.0100	162.25
9-G	CIM	3.15	2.73	7	175x175	25 #3 @ 11 cm	8 (b)	Top	3	143.64	34.67	430.55	0.0100	162.25
				2		---	8 (h)	Bot	1	160.48	10.87	10.87	0.0100	162.25
10-G	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	13	28.54	7.86	35.82	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	41.27	1.50	1.50	0.0100	49.00
10-G	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	99.19	3.59	3.59	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	99.19	3.59	3.59	0.0100	49.00
10-G	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	158.90	5.76	5.76	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	14	95.08	8.52	32.71	0.0100	49.00
10-G	2	3.50	3.00	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	228.99	8.99	9.41	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	14	140.96	22.59	88.76	0.0100	64.00
10-G	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	153.04	9.09	18.96	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	153.04	6.01	9.69	0.0100	64.00
11-G	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	13	34.26	10.03	35.39	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	17	33.14	24.83	4.69	0.0100	49.00
11-G	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	131.42	4.76	4.76	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	131.42	4.76	4.76	0.0100	49.00
11-G	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	211.31	7.66	7.66	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	1	211.31	7.66	7.66	0.0100	49.00
11-G	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	291.33	10.99	10.99	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	1	291.33	10.99	10.99	0.0100	56.25
11-G	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	372.27	14.61	14.61	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	372.27	14.61	14.61	0.0100	64.00
12-G	5	3.15	2.65	4	175x175	24 #3 @ 11 cm	8 (b)	Top	1	45.20	7.10	4.93	0.0100	162.25
				2		---	8 (h)	Bot	1	45.20	14.14	3.06	0.0100	162.25
12-G	4	3.15	2.65	4	175x175	24 #3 @ 11 cm	8 (b)	Top	1	102.79	6.96	6.96	0.0100	162.25
				2		---	8 (h)	Bot	1	102.79	13.80	6.96	0.0100	162.25
12-G	3	4.20	3.70	4	175x175	34 #3 @ 11 cm	8 (b)	Top	1	165.77	11.23	11.23	0.0100	162.25
				2		---	8 (h)	Bot	13	91.29	86.67	232.08	0.0100	162.25
12-G	2	3.50	3.00	4	175x175	27 #3 @ 11 cm	8 (b)	Top	18	118.62	238.31	85.46	0.0100	162.25
				2		---	8 (h)	Bot	13	125.33	113.62	446.75	0.0100	162.25
12-G	CIM	3.15	2.73	4	175x175	25 #3 @ 11 cm	8 (b)	Top	17	86.77	278.81	47.01	0.0100	162.25
				2		---	8 (h)	Bot	1	127.59	8.64	8.64	0.0100	162.25
7'-F	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	5	34.13	8.10	43.56	0.0100	42.25
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	13	22.24	4.56	38.19	0.0100	42.25
7'-F	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	5	34.13	8.10	43.56	0.0100	42.25
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	13	22.24	4.56	38.19	0.0100	42.25
7'-F	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	62.07	2.25	2.25	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	62.07	2.25	2.25	0.0100	49.00
7'-F	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	12	63.18	4.62	33.82	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	11	67.25	2.44	34.39	0.0100	49.00

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Project: Untitled 10:18:25 p. m. 5/01/2020

Column	Story	L	Lu	Sec	bxh	TIES	XTIES	Sec	LdCmb	Pu	Mu2	Mu3	RHO	As
7'-F	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	142.67	5.17	5.17	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	11	95.44	4.80	43.85	0.0100	49.00
7'-F	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	183.55	6.93	6.93	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	12	113.26	8.80	63.52	0.0100	56.25
7'-F	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	135.31	5.31	10.63	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	135.31	5.31	5.41	0.0100	64.00
8-F	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	13	33.40	7.04	46.88	0.0100	42.25
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	13	34.93	5.91	38.73	0.0100	42.25
8-F	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	13	33.40	7.04	46.88	0.0100	42.25
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	13	34.93	5.91	38.73	0.0100	42.25
8-F	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	104.51	4.29	5.54	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	104.51	3.79	5.97	0.0100	49.00
8-F	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	177.50	6.43	6.85	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	177.50	6.43	7.81	0.0100	49.00
8-F	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	252.56	9.15	9.15	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	11	162.63	8.80	44.95	0.0100	49.00
8-F	2	3.50	3.00	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	329.34	12.92	12.92	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	11	212.05	12.87	69.52	0.0100	64.00
8-F	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	409.21	16.06	16.06	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	409.21	16.06	16.06	0.0100	64.00
9-F	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	6	44.84	12.13	50.48	0.0107	45.22
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	6	46.88	13.06	40.36	0.0100	42.25
9-F	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	6	44.84	12.13	50.48	0.0107	45.22
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	6	46.88	13.06	40.36	0.0100	42.25
10-F	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	4	21.53	1.89	38.10	0.0100	42.25
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	4	23.57	5.57	38.39	0.0100	42.25
10-F	6-PM	4.55	4.05	6	65x65	7 #3 @ 12 cm (end)	2 (b)	Top	4	21.53	1.89	38.10	0.0100	42.25
				2		10 #3 @ 24 cm (ctr)	2 (h)	Bot	4	23.57	5.57	38.39	0.0100	42.25
11-F	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	33.94	12.31	33.87	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	17	32.69	23.87	7.07	0.0100	49.00
11-F	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	131.23	4.76	4.76	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	131.23	4.76	4.76	0.0100	49.00
11-F	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	210.83	7.64	7.64	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	1	210.83	7.64	7.64	0.0100	49.00
11-F	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	290.47	10.96	10.96	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	1	290.47	10.96	10.96	0.0100	56.25
11-F	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	370.71	14.55	14.55	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	370.71	14.55	14.55	0.0100	64.00
12-F	5	3.15	2.65	4	175x175	24 #3 @ 11 cm	8 (b)	Top	1	44.29	7.54	3.00	0.0100	162.25
				2		---	8 (h)	Bot	1	44.29	15.62	3.00	0.0100	162.25
12-F	4	3.15	2.65	4	175x175	24 #3 @ 11 cm	8 (b)	Top	1	100.65	6.82	6.82	0.0100	162.25
				2		---	8 (h)	Bot	1	100.65	16.10	6.82	0.0100	162.25
12-F	3	4.20	3.70	4	175x175	34 #3 @ 11 cm	8 (b)	Top	1	162.45	11.00	11.00	0.0100	162.25
				2		---	8 (h)	Bot	17	122.21	257.95	93.07	0.0100	162.25
12-F	2	3.50	3.00	4	175x175	27 #3 @ 11 cm	8 (b)	Top	18	119.51	229.53	86.72	0.0100	162.25
				2		---	8 (h)	Bot	13	134.33	87.68	436.13	0.0100	162.25
12-F	CIM	3.15	2.73	4	175x175	25 #3 @ 11 cm	8 (b)	Top	15	94.72	266.32	28.89	0.0100	162.25
				2		---	8 (h)	Bot	1	130.49	8.84	8.84	0.0100	162.25
7'-E	PM	2.80	2.30	6	65x65	6 #3 @ 12 cm (end)	2 (b)	Top	3	33.23	2.53	29.79	0.0100	42.25
				2		4 #3 @ 24 cm (ctr)	2 (h)	Bot	1	26.75	1.11	3.66	0.0100	42.25
7'-E	6	1.75	1.25	6	65x65	11 #3 @ 12 cm	2 (b)	Top	1	51.48	1.79	5.47	0.0100	42.25
				2		---	2 (h)	Bot	13	40.36	4.69	36.36	0.0100	42.25
7'-E	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	15	33.23	33.97	9.38	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	75.54	2.94	2.74	0.0100	49.00
7'-E	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	12	73.42	5.37	32.31	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	11	66.22	7.90	29.52	0.0100	49.00
7'-E	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	143.96	5.22	5.22	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	12	99.76	7.89	37.83	0.0100	49.00
7'-E	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	179.59	6.78	6.78	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	11	105.57	12.03	80.62	0.0100	56.25
7'-E	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	158.68	6.23	11.04	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	158.68	6.23	6.23	0.0100	64.00
8-E	PM	2.80	2.30	6	65x65	6 #3 @ 12 cm (end)	2 (b)	Top	3	56.78	9.32	35.46	0.0100	42.25
				2		4 #3 @ 24 cm (ctr)	2 (h)	Bot	10	54.02	19.90	12.08	0.0100	42.25
8-E	6	1.75	1.25	6	65x65	11 #3 @ 12 cm	2 (b)	Top	1	89.93	3.12	7.60	0.0100	42.25
				2		---	2 (h)	Bot	17	53.86	40.97	10.65	0.0100	42.25

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:18:25 p. m. 5/01/2020

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9-E	PM	2.80	2.30	6	65x65	6 #3 @ 12 cm (end)	2 (b)	Top	15	28.06	29.91	12.59	0.0100	42.25
				2		4 #3 @ 24 cm (ctr)	2 (h)	Bot	15	28.06	20.81	7.13	0.0100	42.25
9-E	6	1.75	1.25	6	65x65	11 #3 @ 12 cm	2 (b)	Top	1	85.58	2.97	7.04	0.0100	42.25
				2		---	2 (h)	Bot	15	52.43	44.29	15.88	0.0100	42.25
10-E	PM	2.80	2.30	6	65x65	6 #3 @ 12 cm (end)	2 (b)	Top	3	34.15	9.35	32.23	0.0100	42.25
				2		4 #3 @ 24 cm (ctr)	2 (h)	Bot	1	24.52	2.38	4.00	0.0100	42.25
10-E	6	1.75	1.25	6	65x65	11 #3 @ 12 cm	2 (b)	Top	1	46.64	2.12	3.32	0.0100	42.25
				2		---	2 (h)	Bot	16	15.64	45.42	16.23	0.0113	47.70
11-E	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	33.55	15.56	34.51	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	15	32.05	23.95	5.55	0.0100	49.00
11-E	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	130.79	4.74	4.74	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	130.79	4.74	4.74	0.0100	49.00
11-E	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	210.14	7.62	7.62	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	1	210.14	7.62	7.62	0.0100	49.00
11-E	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	289.52	10.93	10.93	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	1	289.52	10.93	10.93	0.0100	56.25
11-E	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	369.52	14.50	14.50	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	369.52	14.50	14.50	0.0100	64.00
12-E	5	3.15	2.65	4	175x175	24 #3 @ 11 cm	8 (b)	Top	1	45.65	6.86	3.09	0.0100	162.25
				2		---	8 (h)	Bot	1	45.65	16.13	4.44	0.0100	162.25
12-E	4	3.15	2.65	4	175x175	24 #3 @ 11 cm	8 (b)	Top	1	103.77	7.91	7.03	0.0100	162.25
				2		---	8 (h)	Bot	1	103.77	17.40	7.03	0.0100	162.25
12-E	3	4.20	3.70	4	175x175	34 #3 @ 11 cm	8 (b)	Top	1	167.24	11.33	11.33	0.0100	162.25
				2		---	8 (h)	Bot	15	128.00	278.91	39.61	0.0100	162.25
12-E	2	3.50	3.00	4	175x175	27 #3 @ 11 cm	8 (b)	Top	17	163.85	259.80	78.02	0.0100	162.25
				2		---	8 (h)	Bot	12	127.41	94.56	424.05	0.0100	162.25
12-E	CIM	3.15	2.73	4	175x175	25 #3 @ 11 cm	8 (b)	Top	15	113.06	283.80	42.43	0.0100	162.25
				2		---	8 (h)	Bot	1	157.41	10.66	10.66	0.0100	162.25
7'-D	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	3	25.51	4.81	56.00	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	3	25.51	4.20	35.68	0.0100	49.00
7'-D	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	34.59	2.06	29.85	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	3	58.90	5.36	40.52	0.0100	49.00
7'-D	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	102.81	3.73	5.76	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	3	94.16	9.20	46.29	0.0100	49.00
7'-D	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	141.38	5.34	5.34	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	11	78.96	14.30	82.71	0.0107	60.21
7'-D	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	89.18	3.50	3.50	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	89.18	3.50	3.50	0.0100	64.00
8-D	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	7	55.23	36.60	24.60	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	7	55.23	24.89	20.94	0.0100	49.00
8-D	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	116.25	4.21	6.50	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	116.25	4.21	4.21	0.0100	49.00
8-D	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	196.96	7.14	9.43	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	12	107.61	10.40	34.98	0.0100	49.00
8-D	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	277.40	10.47	10.47	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	12	154.31	13.12	49.54	0.0100	56.25
8-D	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	359.26	14.10	14.10	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	359.26	14.10	14.10	0.0100	64.00
9-D	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	3	29.53	13.37	61.28	0.0107	52.45
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	3	29.53	10.09	40.18	0.0100	49.00
9-D	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	3	67.28	5.04	37.46	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	3	67.28	9.81	43.26	0.0100	49.00
9-D	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	65.71	3.53	31.40	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	3	106.55	14.35	52.82	0.0100	49.00
9-D	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	178.03	6.72	10.05	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	11	106.14	17.38	59.78	0.0100	56.25
9-D	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	250.41	9.83	9.83	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	250.41	9.83	9.83	0.0100	64.00
10-D	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	24.84	6.47	38.95	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	11	24.84	5.11	23.12	0.0100	49.00
10-D	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	101.00	3.66	3.66	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	101.00	3.66	3.66	0.0100	49.00
10-D	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	161.97	5.87	5.87	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	11	96.23	12.08	37.42	0.0100	49.00
10-D	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	239.34	9.03	9.03	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	11	146.25	17.34	50.25	0.0100	56.25

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:18:25 p. m. 5/01/2020

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10-D	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	316.95	12.44	12.44	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	316.95	12.44	12.44	0.0100	64.00
11-D	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	34.92	16.75	34.44	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	54.28	3.61	1.97	0.0100	49.00
11-D	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	132.53	4.80	4.80	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	132.53	4.80	4.80	0.0100	49.00
11-D	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	212.65	7.71	7.71	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	1	212.65	7.71	7.71	0.0100	49.00
11-D	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	292.59	11.04	11.04	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	1	292.59	11.04	11.04	0.0100	56.25
11-D	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	372.74	14.63	14.63	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	372.74	14.63	14.63	0.0100	64.00
12-D	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	6	33.01	9.10	41.11	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	14	19.61	4.31	23.77	0.0100	49.00
12-D	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	75.69	2.74	2.74	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	14	46.90	4.82	28.62	0.0100	49.00
12-D	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	120.94	4.38	4.38	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	11	88.95	11.44	34.43	0.0100	49.00
12-D	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	165.46	6.24	6.24	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	12	92.57	11.00	58.72	0.0100	56.25
12-D	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	125.78	4.94	13.59	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	125.78	4.94	6.92	0.0100	64.00
7'-C	5	3.15	2.65	7	175x175	24 #3 @ 11 cm	8 (b)	Top	1	23.00	11.62	6.06	0.0100	162.25
				2		---	8 (h)	Bot	1	23.00	2.07	4.70	0.0100	162.25
7'-C	4	3.15	2.65	7	175x175	24 #3 @ 11 cm	8 (b)	Top	1	46.41	14.88	3.14	0.0100	162.25
				2		---	8 (h)	Bot	1	46.41	14.10	12.70	0.0100	162.25
7'-C	3	4.20	3.70	7	175x175	34 #3 @ 11 cm	8 (b)	Top	1	70.51	14.02	6.90	0.0100	162.25
				2		---	8 (h)	Bot	3	81.83	117.92	423.40	0.0100	162.25
7'-C	2	3.50	3.00	7	175x175	27 #3 @ 11 cm	8 (b)	Top	3	104.49	125.93	444.30	0.0100	162.25
				2		---	8 (h)	Bot	3	104.49	174.55	778.12	0.0166	268.73
7'-C	CIM	3.15	2.73	7	175x175	25 #3 @ 11 cm	8 (b)	Top	7	79.54	326.38	72.33	0.0100	162.25
				2		---	8 (h)	Bot	1	90.48	6.13	6.13	0.0100	162.25
8-C	CIM	3.15	2.73	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	73.37	2.66	3.41	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	73.37	2.66	2.66	0.0100	49.00
9-C	5	3.15	2.65	7	175x175	24 #3 @ 11 cm	8 (b)	Top	1	23.90	8.99	10.27	0.0100	162.25
				2		---	8 (h)	Bot	1	23.90	3.70	3.29	0.0100	162.25
9-C	4	3.15	2.65	7	175x175	24 #3 @ 11 cm	8 (b)	Top	1	48.30	5.86	7.73	0.0100	162.25
				2		---	8 (h)	Bot	1	48.30	10.17	3.27	0.0100	162.25
9-C	3	4.20	3.70	7	175x175	34 #3 @ 11 cm	8 (b)	Top	1	73.46	4.98	4.98	0.0100	162.25
				2		---	8 (h)	Bot	3	94.76	378.68	99.29	0.0100	162.25
9-C	2	3.50	3.00	7	175x175	27 #3 @ 11 cm	8 (b)	Top	11	109.81	331.41	97.74	0.0100	162.25
				2		---	8 (h)	Bot	3	144.13	499.57	210.37	0.0107	173.66
9-C	CIM	3.15	2.73	7	175x175	25 #3 @ 11 cm	8 (b)	Top	12	110.02	390.94	131.01	0.0100	162.25
				2		---	8 (h)	Bot	1	214.48	14.53	14.53	0.0100	162.25
10-C	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	23.45	8.13	37.01	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	11	23.45	6.50	22.35	0.0100	49.00
10-C	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	97.52	3.53	3.53	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	97.52	3.53	3.53	0.0100	49.00
10-C	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	156.40	5.67	5.67	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	11	92.63	15.08	36.98	0.0100	49.00
10-C	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	232.17	8.76	8.76	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	11	143.63	20.93	49.70	0.0100	56.25
10-C	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	308.24	12.10	12.10	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	308.24	12.10	12.10	0.0100	64.00
11-C	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	34.78	20.44	34.61	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	11	34.78	14.85	20.30	0.0100	49.00
11-C	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	132.28	4.79	4.79	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	132.28	4.79	4.79	0.0100	49.00
11-C	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	212.28	7.69	7.69	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	11	136.39	16.36	34.60	0.0100	49.00
11-C	2	3.50	3.00	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	291.01	10.55	10.55	0.0100	49.00
				2		5 #3 @ 28 cm (ctr)	3 (h)	Bot	1	291.01	10.55	10.55	0.0100	49.00
11-C	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	371.25	14.57	14.57	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	371.25	14.57	14.57	0.0100	64.00

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Project: Untitled 10:18:25 p. m. 5/01/2020

Column	Story	L	Lu	Sec	bxh	TIES	XTIES	Sec	LdCmb	Pu	Mu2	Mu3	RHO	As
12-C	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	3	36.80	15.49	36.67	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	11	23.08	9.64	20.29	0.0100	49.00
12-C	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	77.28	2.80	2.80	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	77.28	4.02	2.80	0.0100	49.00
12-C	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	123.28	4.47	4.47	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	11	85.86	14.44	31.72	0.0100	49.00
12-C	2	3.50	3.00	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	169.50	6.65	6.65	0.0100	64.00
				2		5 #3 @ 24 cm (ctr)	3 (h)	Bot	3	179.78	26.56	87.27	0.0100	64.00
12-C	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	129.93	5.10	13.03	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	129.93	5.10	6.80	0.0100	64.00
7'-B	CIM	3.15	2.73	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	8.66	2.61	1.04	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	8.66	1.03	0.51	0.0100	49.00
8-B	CIM	3.15	2.73	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	69.56	2.52	2.52	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	69.56	2.52	2.52	0.0100	49.00
9-B	2	3.50	3.00	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	22.54	4.31	24.98	0.0100	49.00
				2		5 #3 @ 28 cm (ctr)	3 (h)	Bot	11	22.54	19.77	48.35	0.0100	49.00
9-B	CIM	3.15	2.73	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	67.40	12.67	33.28	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	106.02	3.84	3.84	0.0100	49.00
10-B	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	23.60	10.04	35.65	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	11	23.60	7.94	21.03	0.0100	49.00
10-B	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	97.69	3.54	3.54	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	97.69	3.54	3.54	0.0100	49.00
10-B	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	156.80	5.68	5.68	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	11	93.55	16.98	36.01	0.0100	49.00
10-B	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	233.96	8.83	8.83	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	11	144.17	23.61	48.20	0.0100	56.25
10-B	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	311.69	12.23	12.23	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	311.69	12.23	12.23	0.0100	64.00
11-B	5	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	11	36.14	22.82	33.05	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	11	36.14	16.73	18.89	0.0100	49.00
11-B	4	3.15	2.65	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	133.84	4.85	4.85	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	133.84	4.85	4.85	0.0100	49.00
11-B	3	4.20	3.70	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	214.86	7.79	7.79	0.0100	49.00
				2		8 #3 @ 28 cm (ctr)	3 (h)	Bot	11	141.17	19.31	34.25	0.0100	49.00
11-B	2	3.50	3.00	5	75x75	7 #3 @ 13 cm (end)	3 (b)	Top	1	295.91	11.17	11.17	0.0100	56.25
				2		5 #3 @ 26 cm (ctr)	3 (h)	Bot	11	193.57	23.09	46.24	0.0100	56.25
11-B	CIM	3.15	2.73	1	80x80	8 #3 @ 12 cm (end)	3 (b)	Top	1	377.60	14.82	14.82	0.0100	64.00
				2		4 #3 @ 24 cm (ctr)	3 (h)	Bot	1	377.60	14.82	14.82	0.0100	64.00
7'-A	CIM	3.15	2.73	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	1	6.97	1.91	0.80	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	6.97	1.38	0.39	0.0100	49.00
8-A	CIM	3.15	2.73	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	3	15.85	5.35	26.24	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	13.93	1.24	10.11	0.0100	49.00
9-A	2	3.50	3.00	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	3	21.99	7.14	28.23	0.0100	49.00
				2		5 #3 @ 28 cm (ctr)	3 (h)	Bot	7	14.63	67.87	36.29	0.0154	75.41
9-A	CIM	3.15	2.73	3	70x70	6 #3 @ 14 cm (end)	3 (b)	Top	4	21.78	1.96	38.66	0.0100	49.00
				2		4 #3 @ 28 cm (ctr)	3 (h)	Bot	1	24.81	0.90	6.27	0.0100	49.00

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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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Project: Untitled 10:20:45 p. m. 5/01/2020
File: C:\Users\Laura\Documents\LAURA\IPC\IP\CALLE 80\PL DWG\ING\MODELO RCB BLOQUE C.rcb

LOAD COMBINATIONS

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

M A T E R I A L S

Number of materials = 2

REINFORCED CONCRETE

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

f'c: Compressive strength of concrete
fy: Yield strength of longitudinal reinforcement
fys1: Yiel strength of shear reinforcement, bar sizes <= 3/8"
fys2: Yiel strength of shear reinforcement, bar sizes > 3/8"

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
I''(12a-11a)	5	1.80	3.15	60.0	2	9	28.78	2Ly#4@16	.0025 ¤	6	41.97	35.24	36.43	-	-	-
I''(12a-11a)	4	1.80	3.15	60.0	2	10	32.86	2Ly#4@16	.0025	10	88.97	70.86	27.00	-	-	-
I''(12a-11a)	3	1.80	4.20	60.0	2	10	23.25	2Ly#3@11	.0020	17	90.98	116.33	24.31	-	-	-
I''(12a-11a)																

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Project: Untitled 10:20:45 p. m. 5/01/2020

Wall	Story	B	H	t	Mat	LCmb	Vu	Reinforcement	LCmb	Pu	Mu2	As tot	As ctr	As end	Ends
	2	1.80	3.50	60.0	2	9	84.51	2Ly#4@16	.0025 17	124.83	368.72	122.34	21.60	50.38	60x60
									Est #3 @15 cm			XTies:	T: 2	X: 2 @18 cm	
I''(12a-11a)	CIM	1.80	3.15	60.0	2	7	23.04	2Ly#3@11	.0020 ¤13	71.61	55.27	19.47	-	-	-
I(12a-11a)	5	1.80	3.15	60.0	2	9	24.14	2Ly#3@11	.0020 ¤13	39.65	17.31	19.47	-	-	-
I(12a-11a)	4	1.80	3.15	60.0	2	10	22.02	2Ly#3@11	.0020 10	151.96	46.90	12.96	-	-	-
I(12a-11a)	3	1.80	4.20	60.0	2	9	36.47	2Ly#4@16	.0025 9	241.33	168.02	27.00	-	-	-
I(12a-11a)	2	1.80	3.50	60.0	2	9	27.84	2Ly#3@11	.0020 17	207.22	233.38	35.58	-	-	-
I(12a-11a)	CIM	1.80	3.15	60.0	2	9	80.18	2Ly#4@16	.0025 9	415.19	37.36	27.00	-	-	-
H(12a-11a)	5	1.80	3.15	60.0	2	9	23.48	2Ly#3@11	.0020 ¤13	38.75	16.35	19.47	-	-	-
H(12a-11a)	4	1.80	3.15	60.0	2	17	21.12	2Ly#3@11	.0020 17	94.11	51.29	12.96	-	-	-
H(12a-11a)	3	1.80	4.20	60.0	2	9	36.79	2Ly#4@16	.0025 9	240.33	167.52	27.00	-	-	-
H(12a-11a)	2	1.80	3.50	60.0	2	9	26.46	2Ly#3@11	.0020 17	206.39	227.28	33.16	-	-	-
H(12a-11a)	CIM	1.80	3.15	60.0	2	9	79.01	2Ly#4@16	.0025 9	412.10	37.09	27.00	-	-	-
G(9a-8a)	5	1.80	3.15	60.0	2	9	19.84	2Ly#3@11	.0020 9	74.68	35.09	12.96	-	-	-
G(9a-8a)	4	1.80	3.15	60.0	2	9	32.90	2Ly#4@16	.0025 9	122.58	83.48	27.00	-	-	-
G(9a-8a)	3	1.80	4.20	60.0	2	9	21.86	2Ly#3@11	.0020 17	113.11	121.51	16.22	-	-	-
G(9a-8a)	2	1.80	3.50	60.0	2	9	78.33	2Ly#4@16	.0025 17	144.66	353.98	110.36	21.60	44.38	60x60
G(9a-8a)	CIM	1.80	3.15	60.0	2	10	6.30	2Ly#3@11	.0020 ¤13	74.76	27.25	13.77	-	-	-
F(10b-9a)	5	1.80	3.15	60.0	2	10	26.18	2Ly#3@11	.0020 10	99.05	27.59	12.96	-	-	-
F(10b-9a)	4	1.80	3.15	60.0	2	10	24.92	2Ly#3@11	.0020 10	160.47	44.09	12.96	-	-	-
F(10b-9a)	3	1.80	4.20	60.0	2	10	40.06	2Ly#4@16	.0025 10	225.69	150.19	27.00	-	-	-
F(10b-9a)	2	1.80	3.50	60.0	2	10	31.37	2Ly#4@16	.0025 15	167.02	201.83	34.11	-	-	-
F(10b-9a)	CIM	1.80	3.15	60.0	2	9	88.41	2Ly#4@16	.0025 9	335.22	58.11	27.00	-	-	-
F(11a-10a)	5	1.78	3.15	60.0	2	8	22.87	2Ly#3@11	.0020 8	63.70	25.29	12.77	-	-	-
F(11a-10a)	4	1.78	3.15	60.0	2	10	28.51	2Ly#4@16	.0025 10	124.06	45.43	26.62	-	-	-
F(11a-10a)	3	1.78	4.20	60.0	2	10	39.72	2Ly#4@16	.0025 10	190.55	143.44	26.62	-	-	-
F(11a-10a)	2	1.78	3.50	60.0	2	10	32.68	2Ly#4@16	.0025 18	159.60	197.88	34.38	-	-	-
F(11a-10a)															

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Project: Untitled 10:20:45 p. m. 5/01/2020

Wall	Story	B	H	t	Mat	LCmb	Vu	Reinforcement	LCmb	Pu	Mu2	As tot	As ctr	As end	Ends
	CIM	1.78	3.15	60.0	2	9	87.72	2Ly#4@16 .0025	9	393.63	49.86	26.62	-	-	-
E(9b-8a)	5	3.00	3.15	60.0	2	8	58.93	2Ly#4@16 .0025	8	153.77	23.06	45.00	-	-	-
E(9b-8a)	4	3.00	3.15	60.0	2	8	83.00	2Ly#4@16 .0025	8	219.74	127.91	45.00	-	-	-
E(9b-8a)	3	3.00	4.20	60.0	2	8	146.30	2Ly#4@16 .0025	15	171.11	686.15	105.69	-	-	-
E(9b-8a)	2	3.00	3.50	60.0	2	10	46.77	2Ly#3@11 .0020	15	211.91	724.04	105.62	-	-	-
E(9b-8a)	CIM	3.00	3.15	60.0	2	7	221.08	2Ly#4@15 .0028	15	254.47	731.55	103.26	-	-	-
E(10b-9a)	5	3.00	3.15	60.0	2	8	59.47	2Ly#4@16 .0025	8	150.05	22.51	45.00	-	-	-
E(10b-9a)	4	3.00	3.15	60.0	2	8	83.94	2Ly#4@16 .0025	8	216.63	127.97	45.00	-	-	-
E(10b-9a)	3	3.00	4.20	60.0	2	8	147.75	2Ly#4@16 .0025	15	169.00	684.83	105.73	-	-	-
E(10b-9a)	2	3.00	3.50	60.0	2	10	48.27	2Ly#4@16 .0025	15	213.85	721.20	104.37	-	-	-
E(10b-9a)	CIM	3.00	3.15	60.0	2	7	221.88	2Ly#4@15 .0028	15	259.92	729.09	99.33	-	-	-
E(10-10a)	5	1.80	3.15	60.0	2	10	38.36	2Ly#4@16 .0025	10	87.68	44.33	27.00	-	-	-
E(10-10a)	4	1.80	3.15	60.0	2	8	35.13	2Ly#4@16 .0025	8	150.25	51.20	27.00	-	-	-
E(10-10a)	3	1.80	4.20	60.0	2	8	51.00	2Ly#4@16 .0025	8	217.94	163.75	27.00	-	-	-
E(10-10a)	2	1.80	3.50	60.0	2	8	40.45	2Ly#4@16 .0025	16	164.83	208.33	34.11	-	-	-
E(10-10a)	CIM	1.80	3.15	60.0	2	7	99.04	2Ly#4@16 .0025	7	466.01	87.23	27.00	-	-	-
A(11b-10a)	5	1.80	3.15	60.0	2	3	18.12	2Ly#3@11 .0020 ¤	3	31.34	40.49	34.06	-	-	-
A(11b-10a)	4	1.80	3.15	60.0	2	7	36.45	2Ly#4@16 .0025	7	56.22	107.37	27.00	-	-	-
A(11b-10a)	3	1.80	4.20	60.0	2	7	38.04	2Ly#4@16 .0025	7	91.01	239.33	72.56	21.60	25.47	60x60
									Est #3 @15 cm			XTies:	T: 2	X: 2 @18 cm	
A(11b-10a)	2	1.80	3.50	60.0	2	7	102.00	2Ly#4@16 .0025	7	143.17	547.67	207.22	21.60	92.80	60x60
									Est #3 @15 cm			XTies:	T: 2	X: 2 @18 cm	
A(11b-10a)	CIM	1.80	3.15	60.0	2	8	32.74	2Ly#4@16 .0025	8	134.28	20.65	27.00	-	-	- A(12b-
11a)	5	1.80	3.15	60.0	2	7	35.13	2Ly#4@16 .0025 ¤	3	41.11	45.27	39.65	-	-	-
A(12b-11a)	4	1.80	3.15	60.0	2	7	44.81	2Ly#4@16 .0025	7	84.38	99.90	27.00	-	-	-
A(12b-11a)	3	1.80	4.20	60.0	2	7	45.13	2Ly#4@16 .0025	15	84.95	208.72	57.45	-	-	-
A(12b-11a)	2	1.80	3.50	60.0	2	7	94.76	2Ly#4@16 .0025	7	183.44	496.89	180.38	21.60	79.38	60x60
									Est #3 @15 cm			XTies:	T: 2	X: 2 @18 cm	
A(12b-11a)	CIM	1.80	3.15	60.0	2	7	33.22	2Ly#4@16 .0025	7	123.20	26.29	27.00	-	-	-
A(12-12a)	5	1.80	3.15	60.0	2	3	10.93	2Ly#3@11 .0020 ¤	5	31.04	27.17	22.72	-	-	-
A(12-12a)	4	1.80	3.15	60.0	2	8	33.56	2Ly#4@16 .0025	8	36.90	45.43	27.00	-	-	-

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:45 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(12-12a)	3	1.80	4.20	60.0	2	8	38.93	2Ly#4@16 .0025	16	29.20	171.03	50.31	-	-	-
A(12-12a)	2	1.80	3.50	60.0	2	8	72.34	2Ly#4@16 .0025	16	42.22	396.41	137.64	21.60	58.02	60x60
A(12-12a)	CIM	1.80	3.15	60.0	2	7	60.09	2Ly#4@16 .0025	16	-4.36	91.44	30.95	-	-	-
12(Aa-Ba)	5	1.80	3.15	60.0	2	6	8.26	2Ly#3@11 .0020	6	43.45	15.18	12.96	-	-	-
12(Aa-Ba)	4	1.80	3.15	60.0	2	5	29.23	2Ly#4@16 .0025	5	100.01	23.27	27.00	-	-	-
12(Aa-Ba)	3	1.80	4.20	60.0	2	5	50.20	2Ly#4@16 .0025	13	101.38	188.11	38.00	-	-	-
12(Aa-Ba)	2	1.80	3.50	60.0	2	3	87.94	2Ly#4@16 .0025	13	137.27	460.54	152.66	21.60	65.52	60x60
									Est #3 @15 cm			XTies:	T: 2	X: 2 @17 cm	
12(Aa-Ba)	CIM	1.80	3.15	60.0	2	6	60.75	2Ly#4@16 .0025	6	125.43	81.54	27.00	-	-	-
I''(11a-10)															
	CIM	7.41	3.15	40.0	2	9	351.14	2Ly#3@10 .0034	9	131.82	363.94	665.92	53.43	306.25	175x175
						* 9	Confine 0	cm each end	Est #3 @10.5 cm			XTies:	T: 8	X: 8 @19 cm	
I''(12-12a)															
	CIM	6.94	3.15	40.0	2	9	365.20	2Ly#4@17 .0036	9	390.82	1175.2	662.53	50.02	306.25	175x175
						* 9	Confine 0	cm each end	Est #3 @10.5 cm			XTies:	T: 8	X: 8 @19 cm	
G(8a-7')	CIM	7.37	3.15	40.0	2	9	305.64	2Ly#3@13 .0027	9	148.07	263.08	654.77	42.27	306.25	175x175
						* 9	Confine 0	cm each end	Est #3 @10.5 cm			XTies:	T: 8	X: 8 @19 cm	
G(10-9a)	CIM	12.70	3.15	40.0	2	9	520.80	2Ly#3@14 .0025	9	501.92	1698.8	239.00	111.00	64.00	80x80
						* 9	Confine 0	cm each end	Est #3 @11.5 cm			XTies:	T: 3	X: 3 @18 cm	
A(10a-7')	CIM	19.81	3.15	40.0	2	7	773.65	2Ly#3@14 .0025	7	51.90	1202.1	282.13	184.13	49.00	70x70
						* 7	Confine 0	cm each end	Est #3 @13.5 cm			XTies:	T: 3	X: 3 @16 cm	
A(11a-11b)															
	CIM	5.40	3.15	40.0	2	7	298.60	2Ly#3@10 .0034	7	120.54	195.94	72.83	-	-	-
A(12a-12b)															
	CIM	4.50	3.15	40.0	2	7	270.02	2Ly#4@16 .0038	7	118.05	228.11	69.11	-	-	-
7'(F-G)	CIM	8.24	3.15	40.0	2	6	187.94	2Ly#3@14 .0025	6	343.07	447.10	382.01	56.88	162.55	128x128
						* 6	Confine 0	cm each end	Est #3 @11.5 cm			XTies:	T: 6	X: 6 @17 cm	
7'(A-E)	CIM	29.55	3.15	40.0	2	5	666.92	2Ly#3@14 .0025	5	582.05	1029.6	393.00	280.50	56.25	75x75
						* 5	Confine 0	cm each end	Est #3 @12.5 cm			XTies:	T: 3	X: 3 @17 cm	
10(G-I'')	CIM	22.64	3.15	40.0	2	6	457.08	2Ly#3@14 .0025	6	756.34	150.16	526.01	200.88	162.55	128x128
						* 6	Confine 0	cm each end	Est #3 @11.5 cm			XTies:	T: 6	X: 6 @17 cm	
12(D-I'')	CIM	44.71	3.15	40.0	2	4	879.61	2Ly#3@14 .0025	4	1196.4	3759.9	746.72	421.60	162.55	128x128
						* 4	Confine 0	cm each end	Est #3 @11.5 cm			XTies:	T: 6	X: 6 @17 cm	
12(Ba-C)	CIM	6.70	3.15	40.0	2	3	172.71	2Ly#3@14 .0025	3	199.61	254.47	179.00	51.00	64.00	80x80
						* 3	Confine 0	cm each end	Est #3 @11.5 cm			XTies:	T: 3	X: 3 @18 cm	
12(A-Aa)	CIM	6.30	3.15	40.0	2	5	167.61	2Ly#3@14 .0025	5	223.22	70.30	63.00	-	-	-

¤ : Design of wall element is controlled by Out-of-plane bending.

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:46 p. m. 5/01/2020

Wall	Story	B	H	t	Mat	LCmb	Vu	Reinforcement	LCmb	Pu	Mu2	As tot	As ctr	As end	Ends

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 10:20:03 p. m. 5/01/2020
File: C:\Users\Laura\Documents\LAURA\IPC\IP\CALLE 80\PL DWG\ING\MODELO RCB BLOQUE C.rcb

LOAD COMBINATIONS

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

M A T E R I A L S

Number of materials = 2

REINFORCED CONCRETE

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

f'c: Compressive strength of concrete
fy: Yield strength of longitudinal reinforcement
fys1: Yiel strength of shear reinforcement, bar sizes <= 3/8"
fys2: Yiel strength of shear reinforcement, bar sizes > 3/8"

B E A M S E C T I O N S

Number of prismatic sections = 5

Sec	Name	Shape	b (cm)	h (cm)	tw (cm)	tf (cm)	P1 (cm)	P2 (cm)	A (cm2)	I2 (cm4)	I3 (cm4)	J (cm4)
1	VG45X50	Rectang	45.00	50.00	-	-	-	-	2250.0	468750	379687	657619
2	VG37.5X50	Rectang	37.50	50.00	-	-	-	-	1875.0	390625	219726	463623
3	VG40X50	Rectang	40.00	50.00	-	-	-	-	2000.0	416667	266667	529067
4	VG42X50	Rectang	42.00	50.00	-	-	-	-	2100.0	437500	308700	581344
5	VG15X50	Rectang	15.00	50.00	-	-	-	-	750.0	156250	14062	45619

Design Results - Beams (DMO)

BEAM: 12(A-Aa) FLOOR: 2

Length: L = 6.30 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.30 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.63	1.26	1.89	2.52	3.15	3.78	4.41	5.04	5.67	6.30
Mu(-), ton-m:	-2.77	-1.51	-0.55	-0.55	-0.55	-0.55	-0.55	-0.55	-0.55	-1.14	-2.37
Mu(+), ton-m:	0.92	0.55	0.55	0.65	1.02	1.21	1.09	0.70	0.55	0.55	0.79
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
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:	2.25	2.12	1.65	1.17	0.74	0.33	0.63	1.06	1.54	2.01	2.14
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+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

12-A 11 #3+1r @ 10 18 #3 @ 22.5 11 #3+1r @ 10 12:Aa

BEAM: 12(Aa-B) FLOOR: 2

Length: L = 0.90 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
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:	-2.45	-2.08	-1.71	-1.35	-0.99	-0.63	-0.49	-0.49	-0.49	-0.49	-0.63
Mu(+), ton-m:	1.80	1.57	1.34	1.11	0.87	0.63	0.49	0.49	0.49	0.73	1.06
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
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:	5.07	5.07	5.07	5.07	5.07	5.07	5.07	5.07	5.07	5.07	5.07
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+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

12:Aa 9 #3+1r @ 10 12-B

BEAM: 12(B-Ba) FLOOR: 2

Length: L = 0.90 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
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:	-0.71	-0.48	-0.48	-0.48	-0.48	-0.63	-0.97	-1.32	-1.68	-2.04	-2.41
Mu(+), ton-m:	1.02	0.70	0.48	0.48	0.48	0.58	0.83	1.07	1.31	1.55	1.78
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:	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88
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+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

12-B 9 #3+1r @ 10 12:Ba

BEAM: 12(Ba-C) FLOOR: 2

Length:	L = 6.30 m		a = 0.00 m	Section:	b = 45.0 cm		Sec:	VG45X50		
	Lu = 5.90 m		c = 0.40 m		h = 50.0 cm		Mat:	RConcrete2		
X, m:	0.00	0.59	1.18	1.77	2.36	2.95	3.54	4.13	4.72	5.31	5.90
Mu(-), ton-m:	-2.16	-1.10	-0.54	-0.54	-0.54	-0.54	-0.54	-0.54	-0.66	-1.58	-2.71
Mu(+), ton-m:	0.72	0.54	0.54	0.60	0.89	0.97	0.84	0.54	0.54	0.54	0.90
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:	2.17	2.07	1.63	1.21	0.83	0.59	0.95	1.31	1.67	2.02	2.10
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+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

12:Ba — 11 #3+1r @ 10 | 16 #3 @ 22.5 | 11 #3+1r @ 10 — 12-C

BEAM: 12(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:	-20.67	-10.28	-4.15	-4.15	-4.15	-4.15	-4.15	-4.15	-4.15	-10.49	-20.76
Mu(+), ton-m:	6.89	4.15	4.15	5.56	9.06	10.55	9.07	5.78	4.15	4.15	6.92
As(-), cm2:	12.56	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.62
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:	16.93	15.86	12.06	8.26	4.74	1.30	4.73	8.24	12.04	15.85	16.92
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+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

12-C — 11 #3+1r @ 10 | 19 #3 @ 22.5 | 11 #3+1r @ 10 — 12-D

BEAM: 12(D-E) FLOOR: 2

Length:	L = 7.20 m		a = 0.40 m	Section:	b = 45.0 cm		Sec:	VG45X50		
	Lu = 5.92 m		c = 0.88 m		h = 50.0 cm		Mat:	RConcrete2		
X, m:	0.40	0.99	1.58	2.18	2.77	3.36	3.95	4.55	5.14	5.73	6.32
Mu(-), ton-m:	-3.18	-1.93	-0.89	-0.64	-0.64	-0.64	-0.64	-0.64	-0.64	-1.46	-2.65
Mu(+), ton-m:	1.06	0.64	0.64	0.70	0.88	0.99	0.99	0.85	0.64	0.64	0.88
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:	2.31	2.24	1.92	1.54	1.15	0.77	0.86	1.18	1.50	1.81	1.88
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+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

12-D — 11 #3+1r @ 10 | 16 #3 @ 22.5 | 11 #3+1r @ 10 — 12-E

BEAM: 12(E-F) FLOOR: 2

Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 5.45 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.88	1.42	1.97	2.51	3.06	3.60	4.15	4.69	5.24	5.78	6.33
Mu(-), ton-m:	-2.92	-1.76	-0.88	-0.58	-0.58	-0.58	-0.58	-0.58	-0.76	-1.56	-2.67
Mu(+), ton-m:	0.97	0.58	0.58	0.74	0.87	0.92	0.93	0.84	0.66	0.58	0.89
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:	1.94	1.89	1.63	1.36	1.09	0.82	1.00	1.27	1.53	1.80	1.84
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+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

12-E 11 #3+1r @ 10 14 #3 @ 22.5 11 #3+1r @ 10 12-F

BEAM: 12(F-G) FLOOR: 2

Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 5.45 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.88	1.42	1.96	2.51	3.05	3.60	4.14	4.69	5.23	5.78	6.32
Mu(-), ton-m:	-2.83	-1.69	-0.83	-0.57	-0.57	-0.57	-0.57	-0.57	-0.77	-1.58	-2.71
Mu(+), ton-m:	0.94	0.57	0.57	0.77	0.90	0.93	0.91	0.80	0.61	0.57	0.90
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:	1.90	1.85	1.58	1.32	1.05	0.78	1.01	1.28	1.54	1.81	1.86
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+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

12-F 11 #3+1r @ 10 14 #3 @ 22.5 11 #3+1r @ 10 12-G

BEAM: 12(G-H) FLOOR: 2

Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 5.93 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.88	1.47	2.06	2.65	3.25	3.84	4.43	5.02	5.62	6.21	6.80
Mu(-), ton-m:	-2.83	-1.59	-0.65	-0.57	-0.57	-0.57	-0.57	-0.57	-0.64	-1.60	-2.78
Mu(+), ton-m:	0.94	0.57	0.57	0.78	0.98	1.03	0.96	0.80	0.57	0.57	0.93
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
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:	1.92	1.84	1.53	1.21	0.90	0.78	1.11	1.46	1.78	2.09	2.16
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+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

12-G 11 #3+1r @ 10 16 #3 @ 22.5 11 #3+1r @ 10 12-H

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:03 p. m. 5/01/2020

BEAM: 12(H-I) 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:	-2.90	-1.59	-0.61	-0.61	-0.61	-0.61	-0.61	-0.61	-0.64	-1.70	-3.03
Mu(+), ton-m:	0.97	0.61	0.61	0.80	1.10	1.28	1.09	0.77	0.61	0.61	1.01
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:	2.25	2.14	1.67	1.25	0.84	0.46	0.87	1.29	1.70	2.18	2.29
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+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

12-H 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 12-I

BEAM: 12(I-I'') FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.16 m c = 0.64 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.02	1.63	2.25	2.86	3.48	4.10	4.71	5.33	5.94	6.56
Mu(-), ton-m:	-2.85	-1.60	-0.64	-0.64	-0.64	-0.64	-0.64	-0.64	-0.88	-1.93	-3.22
Mu(+), ton-m:	0.95	0.64	0.64	0.90	1.08	1.14	1.07	0.82	0.64	0.64	1.07
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:	2.22	2.13	1.79	1.45	1.07	0.76	1.08	1.42	1.76	2.10	2.19
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+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

12-I 11 #3+1r @ 10 18 #3 @ 22.5 11 #3+1r @ 10 12-I''

BEAM: 11(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:	-42.39	-19.97	-8.67	-8.67	-8.67	-8.67	-8.67	-8.67	-8.67	-21.14	-43.37
Mu(+), ton-m:	14.13	8.67	8.67	10.96	18.21	20.63	17.96	10.71	8.67	8.67	14.46
As(-), cm2:	27.64	12.11	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.86	28.37
As(+), cm2:	8.43	6.93	6.93	6.93	10.99	12.54	10.83	6.93	6.93	6.93	8.63
Vu, ton:	35.43	32.99	25.45	17.91	10.47	4.00	10.44	17.88	25.42	32.96	35.26
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

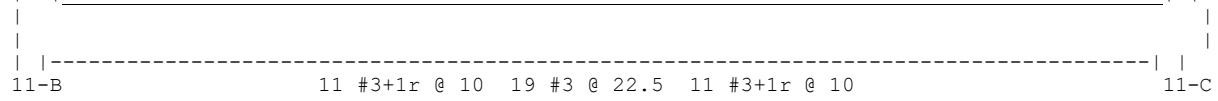
DESIGN

11-A 11 #3+1r @ 10 4 #3 @ 12.5 16 #3 @ 22.5 4 #3 @ 12.5 11 #3+1r @ 10 11-B

BEAM: 11(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:	-39.54	-19.76	-7.91	-7.91	-7.91	-7.91	-7.91	-7.91	-7.91	-19.36	-39.14
Mu(+), ton-m:	13.18	7.91	7.91	9.58	16.23	19.07	16.30	9.57	7.91	7.91	13.05
As(-), cm2:	25.52	11.97	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.72	25.22
As(+), cm2:	7.84	6.93	6.93	6.93	9.74	11.53	9.78	6.93	6.93	6.93	7.76
Vu, ton:	31.76	29.74	22.58	15.41	8.52	2.06	8.43	15.31	22.47	29.64	31.65
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

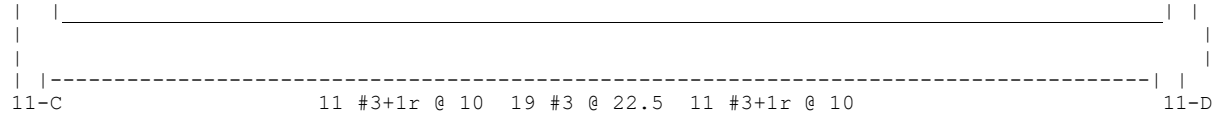
DESIGN



BEAM: 11(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:	-39.46	-19.55	-7.89	-7.89	-7.89	-7.89	-7.89	-7.89	-7.89	-19.60	-39.39
Mu(+), ton-m:	13.15	7.89	7.89	9.55	16.34	19.17	16.38	9.73	7.89	7.89	13.13
As(-), cm2:	25.45	11.84	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.87	25.40
As(+), cm2:	7.82	6.93	6.93	6.93	9.81	11.60	9.83	6.93	6.93	6.93	7.81
Vu, ton:	31.81	29.78	22.60	15.41	8.50	2.01	8.45	15.36	22.55	29.73	31.76
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+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

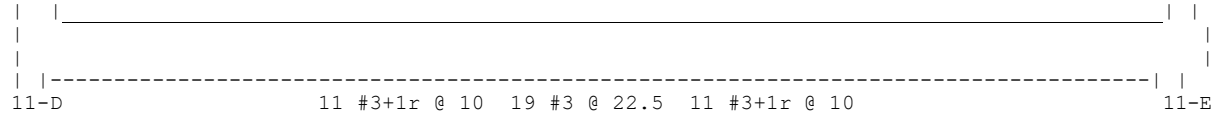
DESIGN



BEAM: 11(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:	-39.62	-19.83	-7.92	-7.92	-7.92	-7.92	-7.92	-7.92	-7.92	-19.72	-39.47
Mu(+), ton-m:	13.21	7.92	7.92	9.70	16.34	19.17	16.37	9.75	7.92	7.92	13.16
As(-), cm2:	25.58	12.02	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.95	25.47
As(+), cm2:	7.86	6.93	6.93	6.93	9.81	11.60	9.83	6.93	6.93	6.93	7.83
Vu, ton:	31.88	29.86	22.67	15.48	8.65	2.17	8.61	15.44	22.62	29.81	31.83
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+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



BEAM: 11(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:	-39.67	-19.87	-7.93	-7.93	-7.93	-7.93	-7.93	-7.93	-7.93	-19.66	-39.40
Mu(+), ton-m:	13.22	7.93	7.93	9.68	16.34	19.18	16.40	9.79	7.93	7.93	13.13
As(-), cm2:	25.61	12.04	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.91	25.41
As(+), cm2:	7.87	6.93	6.93	6.93	9.81	11.61	9.85	6.93	6.93	6.93	7.81
Vu, ton:	31.92	29.90	22.71	15.52	8.69	2.20	8.61	15.43	22.62	29.81	31.83
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+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

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

BEAM: 11(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:	-37.88	-19.05	-7.58	-7.58	-7.58	-7.58	-7.58	-7.58	-7.58	-19.05	-37.87
Mu(+), ton-m:	12.63	7.58	7.58	9.28	15.55	18.23	15.55	9.28	7.58	7.58	12.62
As(-), cm2:	24.30	11.52	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.52	24.30
As(+), cm2:	7.50	6.93	6.93	6.93	9.31	11.00	9.31	6.93	6.93	6.93	7.50
Vu, ton:	30.43	28.50	21.64	14.78	8.31	2.13	8.31	14.78	21.64	28.50	30.43
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+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

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

BEAM: 11(G-H) 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:	-43.48	-21.32	-8.70	-8.70	-8.70	-8.70	-8.70	-8.70	-8.70	-20.56	-42.97
Mu(+), ton-m:	14.49	8.70	8.70	10.48	17.67	20.29	17.83	10.57	8.70	8.70	14.32
As(-), cm2:	28.46	12.98	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.49	28.07
As(+), cm2:	8.66	6.93	6.93	6.93	10.64	12.32	10.74	6.93	6.93	6.93	8.55
Vu, ton:	35.24	32.87	25.33	17.79	10.40	3.97	10.54	17.95	25.49	33.03	35.47
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+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

11-G 11 #3+1r @ 10 4 #3 @ 12.5 16 #3 @ 22.5 4 #3 @ 12.5 11 #3+1r @ 10 11-H

BEAM: 11(H-I) 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:	-45.01	-20.73	-9.01	-9.01	-9.01	-9.01	-9.01	-9.01	-9.01	-20.78	-45.06
Mu(+), ton-m:	15.00	9.01	9.01	11.71	19.81	22.51	19.80	11.69	9.01	9.01	15.02
As(-), cm2:	29.63	12.60	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.63	29.67
As(+), cm2:	8.97	6.93	6.93	6.94	12.01	13.75	12.00	6.93	6.93	6.93	8.98
Vu, ton:	33.45	30.74	23.23	15.73	8.22	1.45	8.24	15.74	23.25	30.75	33.46
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+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

11-H 11 #3+1r @ 10 3 #3 @ 12.5 19 #3 @ 22.5 3 #3 @ 12.5 11 #3+1r @ 10 11-I

BEAM: 11(I-I'') 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:	-47.32	-21.71	-9.46	-9.46	-9.46	-9.46	-9.46	-9.46	-9.46	-21.03	-46.46
Mu(+), ton-m:	15.77	9.46	9.46	12.48	21.07	23.99	21.24	12.82	9.46	9.46	15.49
As(-), cm2:	31.42	13.24	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.79	30.75
As(+), cm2:	9.45	6.93	6.93	7.41	12.82	14.72	12.93	7.62	6.93	6.93	9.27
Vu, ton:	35.25	32.40	24.53	16.65	8.78	1.57	8.54	16.42	24.29	32.17	35.01
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+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

11-I 11 #3+1r @ 10 5 #3 @ 12.5 18 #3 @ 22.5 3 #3 @ 12.5 11 #3+1r @ 10 11-I''

BEAM: 10(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:	-40.05	-19.01	-8.22	-8.22	-8.22	-8.22	-8.22	-8.22	-8.22	-20.14	-41.09
Mu(+), ton-m:	13.35	8.22	8.22	10.38	17.21	19.48	16.95	10.14	8.22	8.22	13.70
As(-), cm2:	25.89	11.50	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.22	26.66
As(+), cm2:	7.95	6.93	6.93	6.93	10.35	11.80	10.19	6.93	6.93	6.93	8.16
Vu, ton:	33.55	31.25	24.12	16.99	10.02	3.93	10.03	17.00	24.13	31.26	33.37
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	20.00	22.50	22.50	22.50	22.50	22.50	20.00	10.00	10.00

DESIGN

10-A 11 #3+1r @ 10 2 #3 @ 15 18 #3 @ 22.5 2 #3 @ 15 11 #3+1r @ 10 10-B

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:04 p. m. 5/01/2020

BEAM: 10(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:	-37.94	-19.17	-7.59	-7.59	-7.59	-7.59	-7.59	-7.59	-7.59	-18.88	-37.57
Mu(+), ton-m:	12.65	7.59	7.59	9.24	15.49	18.20	15.57	9.37	7.59	7.59	12.52
As(-), cm2:	24.35	11.60	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.42	24.08
As(+), cm2:	7.51	6.93	6.93	6.93	9.28	10.98	9.32	6.93	6.93	6.93	7.44
Vu, ton:	30.46	28.54	21.71	14.87	8.44	2.28	8.34	14.75	21.58	28.42	30.34
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+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

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

BEAM: 10(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:	-37.82	-19.06	-7.56	-7.56	-7.56	-7.56	-7.56	-7.56	-7.56	-18.94	-37.66
Mu(+), ton-m:	12.61	7.56	7.56	9.27	15.52	18.21	15.55	9.33	7.56	7.56	12.55
As(-), cm2:	24.26	11.53	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.45	24.14
As(+), cm2:	7.49	6.93	6.93	6.93	9.29	10.99	9.31	6.93	6.93	6.93	7.46
Vu, ton:	30.39	28.47	21.63	14.80	8.37	2.20	8.32	14.74	21.58	28.42	30.34
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+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

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

BEAM: 10(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:	-40.36	-19.89	-8.07	-8.07	-8.07	-8.07	-8.07	-8.07	-8.07	-19.10	-38.46
Mu(+), ton-m:	13.45	8.07	8.07	9.92	16.42	18.69	16.54	10.00	8.07	8.07	12.82
As(-), cm2:	26.12	12.06	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.55	24.72
As(+), cm2:	8.01	6.93	6.93	6.93	9.86	11.29	9.93	6.93	6.93	6.93	7.62
Vu, ton:	32.71	30.49	23.49	16.49	9.82	4.22	10.18	16.60	23.11	29.63	31.74
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+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

10-D 11 #3+1r @ 10 2 #3 @ 15 18 #3 @ 22.5 2 #3 @ 15 11 #3+1r @ 10 10-E

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:04 p. m. 5/01/2020

BEAM: 10(E-F) 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:	-38.02	-17.60	-7.60	-7.60	-7.60	-7.60	-7.60	-7.60	-7.60	-16.91	-36.09
Mu(+), ton-m:	12.67	7.60	7.60	10.79	15.96	16.92	14.72	9.36	7.60	7.60	12.03
As(-), cm2:	24.41	10.60	6.93	6.93	6.93	6.93	6.93	6.93	6.93	10.16	23.01
As(+), cm2:	7.53	6.93	6.93	6.93	9.57	10.17	8.79	6.93	6.93	6.93	7.13
Vu, ton:	30.19	27.63	20.54	13.45	5.46	3.15	7.25	12.30	19.11	25.93	28.39
Tu, ton-m:	0.15	0.15	0.15	0.15	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

10-E 11 #3+1r @ 10 22 #3 @ 22.5 11 #3+1r @ 10 10-F

BEAM: 10(F-G) 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:	-39.62	-18.87	-7.92	-7.92	-7.92	-7.92	-7.92	-7.92	-7.92	-18.88	-39.54
Mu(+), ton-m:	13.21	7.92	7.92	9.89	16.64	18.97	16.60	9.70	7.92	7.92	13.18
As(-), cm2:	25.58	11.41	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.41	25.51
As(+), cm2:	7.86	6.93	6.93	6.93	9.99	11.47	9.97	6.93	6.93	6.93	7.84
Vu, ton:	32.57	30.32	23.37	16.42	9.49	3.25	9.20	16.11	23.06	30.01	32.23
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	22.50	10.00	10.00

DESIGN

10-F 11 #3+1r @ 10 2 #3 @ 15 18 #3 @ 22.5 2 #3 @ 15 11 #3+1r @ 10 10-G

BEAM: 10(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:	-3.21	-1.86	-0.75	-0.64	-0.64	-0.64	-0.64	-0.64	-0.64	-1.27	-2.48
Mu(+), ton-m:	1.07	0.64	0.64	0.64	0.97	1.23	1.11	0.82	0.64	0.64	0.83
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:	2.39	2.29	1.84	1.38	0.96	0.55	0.73	1.15	1.61	2.06	2.16
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

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

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:04 p. m. 5/01/2020

BEAM: 10(H-I) 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:	-2.95	-1.64	-0.60	-0.59	-0.59	-0.59	-0.59	-0.59	-0.59	-1.54	-2.82
Mu(+), ton-m:	0.98	0.59	0.59	0.68	1.05	1.26	1.08	0.78	0.59	0.59	0.94
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:	2.28	2.17	1.69	1.24	0.83	0.42	0.78	1.19	1.63	2.11	2.23
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+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

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

BEAM: 10(I-I'') FLOOR: 2

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 5.69 m c = 1.11 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	0.97	1.54	2.11	2.68	3.24	3.81	4.38	4.95	5.52	6.09
Mu(-), ton-m:	-2.67	-1.55	-0.64	-0.62	-0.62	-0.62	-0.62	-0.62	-0.89	-1.88	-3.10
Mu(+), ton-m:	0.89	0.62	0.62	0.84	0.92	0.94	0.92	0.82	0.62	0.62	1.03
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:	2.13	2.07	1.78	1.49	1.20	0.91	0.94	1.23	1.53	1.89	1.96
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+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

10-I 11 #3+1r @ 10 15 #3 @ 22.5 11 #3+1r @ 10 10-I''

BEAM: 9(A-B) FLOOR: 2

Length: L = 7.20 m a = 0.35 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.50 m c = 0.35 m h = 50.0 cm Mat: RConcrete2

X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-36.03	-18.25	-7.41	-7.41	-7.41	-7.41	-7.41	-7.41	-7.41	-19.12	-37.05
Mu(+), ton-m:	12.01	7.41	7.41	9.80	15.58	18.02	15.41	9.72	7.41	7.41	12.35
As(-), cm2:	22.97	11.01	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.57	23.70
As(+), cm2:	7.12	6.93	6.93	6.93	9.33	10.87	9.23	6.93	6.93	6.93	7.33
Vu, ton:	29.24	27.34	20.83	14.38	8.48	2.83	8.71	14.62	21.08	27.59	29.50
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

9-A 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 9-B

BEAM: 9(B-C) FLOOR: 2

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.21 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.97	1.59	2.21	2.83	3.46	4.08	4.70	5.32	5.94	6.56
Mu(-), ton-m:	-34.53	-18.28	-6.91	-6.91	-6.91	-6.91	-6.91	-6.91	-6.91	-17.98	-33.96
Mu(+), ton-m:	11.51	6.91	6.91	9.08	13.53	14.93	13.05	8.52	6.91	6.91	11.32
As(-), cm2:	21.90	11.03	6.93	6.93	6.93	6.93	6.93	6.93	6.93	10.84	21.50
As(+), cm2:	6.93	6.93	6.93	6.93	8.06	8.92	7.76	6.93	6.93	6.93	6.93
Vu, ton:	28.80	27.22	21.16	15.62	10.15	5.16	10.06	15.54	21.07	25.94	27.17
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

9-B 11 #3+1r @ 10 18 #3 @ 22.5 11 #3+1r @ 10 9-C

BEAM: 9(C-D) FLOOR: 2

	Length:	L = 7.20 m	a = 1.11 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.69 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.68	2.25	2.82	3.39	3.96	4.52	5.09	5.66	6.23	6.80
Mu(-), ton-m:	-30.99	-16.63	-6.20	-6.20	-6.20	-6.20	-6.20	-6.20	-6.20	-15.13	-28.79
Mu(+), ton-m:	10.33	6.20	6.20	8.01	11.02	12.10	11.11	8.00	6.20	6.20	9.60
As(-), cm2:	19.43	9.99	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.05	17.92
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	7.18	6.93	6.93	6.93	6.93	6.93
Vu, ton:	23.23	22.17	17.90	14.10	10.30	7.65	11.89	16.84	21.28	25.41	26.20
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

9-C 11 #3+1r @ 10 15 #3 @ 22.5 11 #3+1r @ 10 9-D

BEAM: 9(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:	-39.82	-19.72	-7.96	-7.96	-7.96	-7.96	-7.96	-7.96	-7.96	-18.62	-37.36
Mu(+), ton-m:	13.27	7.96	7.96	9.85	16.22	18.50	16.43	10.10	7.96	7.96	12.45
As(-), cm2:	25.72	11.95	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.24	23.92
As(+), cm2:	7.90	6.93	6.93	6.93	9.73	11.17	9.87	6.93	6.93	6.93	7.39
Vu, ton:	32.29	30.16	23.28	16.39	9.89	4.29	10.13	16.36	22.73	29.11	31.18
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

9-D 11 #3+1r @ 10 2 #3 @ 15 19 #3 @ 22.5 11 #3+1r @ 10 9-E

BEAM: 9(E-F) FLOOR: 2

	Length:	L = 7.20 m Lu = 7.20 m	a = 0.00 m c = 0.00 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 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:	-26.03	-14.04	-6.29	-6.29	-6.29	-6.29	-6.29	-6.29	-6.29	-14.06	-31.43
Mu(+), ton-m:	8.68	6.29	6.29	6.33	10.38	13.26	12.95	9.49	6.29	6.29	10.48
As(-), cm2:	16.07	8.37	6.93	6.93	6.93	6.93	6.93	6.93	6.93	8.39	19.74
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	7.89	7.70	6.93	6.93	6.93	6.93
Vu, ton:	19.15	18.02	14.89	11.95	7.37	4.82	5.89	10.89	17.62	24.55	27.05
Tu, ton-m:	0.29	0.29	0.29	0.29	0.75	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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

9-E 11 #3+1r @ 10 22 #3 @ 22.5 11 #3+1r @ 10 9-F

BEAM: 9(F-G) FLOOR: 2

	Length:	L = 7.20 m Lu = 6.56 m	a = 0.00 m c = 0.64 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.00	0.66	1.31	1.97	2.62	3.28	3.94	4.59	5.25	5.90	6.56
Mu(-), ton-m:	-34.85	-17.52	-7.27	-7.27	-7.27	-7.27	-7.27	-7.27	-7.27	-18.77	-36.35
Mu(+), ton-m:	11.62	7.27	7.27	8.95	14.38	16.26	14.28	8.93	7.27	7.27	12.12
As(-), cm2:	22.13	10.55	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.34	23.20
As(+), cm2:	6.93	6.93	6.93	6.93	8.58	9.76	8.52	6.93	6.93	6.93	7.19
Vu, ton:	31.29	29.40	23.05	16.75	11.02	5.89	10.90	16.12	21.33	26.55	28.11
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

9-F 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 9-G

BEAM: 8(A-B) FLOOR: 2

	Length:	L = 7.20 m Lu = 6.50 m	a = 0.35 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-32.81	-15.00	-7.15	-7.15	-7.15	-7.15	-7.15	-7.15	-7.15	-17.34	-35.75
Mu(+), ton-m:	10.94	7.15	7.15	9.22	15.34	17.48	14.75	8.04	7.15	7.15	11.92
As(-), cm2:	20.69	8.97	6.93	6.93	6.93	6.93	6.93	6.93	6.93	10.44	22.77
As(+), cm2:	6.93	6.93	6.93	6.93	9.18	10.52	8.82	6.93	6.93	6.93	7.07
Vu, ton:	27.07	25.24	18.97	12.71	6.45	1.27	7.35	13.61	19.88	26.14	27.97
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+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

8-A 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 8-B

BEAM: 8(B-C) FLOOR: 2

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-35.94	-17.19	-7.26	-7.26	-7.26	-7.26	-7.26	-7.26	-7.26	-17.50	-36.32
Mu(+), ton-m:	11.98	7.26	7.26	8.44	15.06	17.54	14.98	8.29	7.26	7.26	12.11
As(-), cm2:	22.91	10.34	6.93	6.93	6.93	6.93	6.93	6.93	6.93	10.54	23.18
As(+), cm2:	7.11	6.93	6.93	6.93	9.00	10.56	8.96	6.93	6.93	6.93	7.18
Vu, ton:	28.10	26.20	19.71	13.21	6.72	0.56	6.84	13.33	19.83	26.32	28.22
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+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

8-B 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 8-C

BEAM: 8(C-D) FLOOR: 2

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.45 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.99	1.64	2.28	2.93	3.57	4.22	4.86	5.51	6.15	6.80
Mu(-), ton-m:	-38.69	-18.77	-7.74	-7.74	-7.74	-7.74	-7.74	-7.74	-7.74	-18.51	-38.40
Mu(+), ton-m:	12.90	7.74	7.74	8.94	16.40	19.04	16.70	10.17	7.74	7.74	12.80
As(-), cm2:	24.89	11.34	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.18	24.68
As(+), cm2:	7.67	6.93	6.93	6.93	9.85	11.52	10.03	6.93	6.93	6.93	7.61
Vu, ton:	30.65	28.75	22.12	15.50	8.57	2.10	7.94	15.13	22.17	29.20	31.22
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

8-C 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 8-D

BEAM: 8(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:	-43.07	-21.13	-8.61	-8.61	-8.61	-8.61	-8.61	-8.61	-8.61	-20.01	-40.45
Mu(+), ton-m:	14.36	8.61	8.61	10.72	17.72	20.15	17.83	10.82	8.61	8.61	13.48
As(-), cm2:	28.15	12.86	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.14	26.18
As(+), cm2:	8.57	6.93	6.93	6.93	10.67	12.22	10.75	6.93	6.93	6.93	8.03
Vu, ton:	35.00	32.64	25.14	17.64	10.48	4.48	10.87	17.67	24.51	31.35	33.56
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+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

8-D 11 #3+1r @ 10 4 #3 @ 12.5 16 #3 @ 22.5 3 #3 @ 15 11 #3+1r @ 10 8-E

BEAM: 8(E-F) 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:	-22.13	-14.42	-7.01	-6.95	-6.95	-6.95	-6.95	-6.95	-6.95	-16.09	-34.74
Mu(+), ton-m:	7.38	6.95	6.95	6.95	8.51	13.80	14.66	10.88	6.95	6.95	11.58
As(-), cm2:	13.51	8.61	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.65	22.05
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	8.23	8.76	6.93	6.93	6.93	6.93
Vu, ton:	14.39	14.24	13.80	13.36	12.92	12.48	7.09	13.83	20.83	27.10	29.05
Tu, ton-m:	0.06	0.06	0.06	0.06	0.06	0.06	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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

8-E 11 #3+1r @ 10 20 #3 @ 22.5 11 #3+1r @ 10 8-F

BEAM: 8(F-G) 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:	-43.44	-21.52	-8.69	-8.69	-8.69	-8.69	-8.69	-8.69	-8.69	-20.29	-42.29
Mu(+), ton-m:	14.48	8.69	8.69	10.90	17.90	20.57	18.15	10.97	8.69	8.69	14.10
As(-), cm2:	28.42	13.11	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.31	27.56
As(+), cm2:	8.65	6.93	6.93	6.93	10.79	12.49	10.95	6.93	6.93	6.93	8.41
Vu, ton:	35.21	33.08	25.56	18.04	10.81	4.38	10.82	18.06	25.58	33.10	35.53
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

8-F 11 #3+1r @ 10 4 #3 @ 12.5 16 #3 @ 22.5 4 #3 @ 12.5 11 #3+1r @ 10 8-G

BEAM: 8''(E-F') FLOOR: 2

	Length:	L = 3.49 m	a = 0.20 m	Section:	b = 15.0 cm	Sec:	VG15X50			
		Lu = 3.29 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.20	0.53	0.86	1.19	1.52	1.84	2.17	2.50	2.83	3.16	3.49
Mu(-), ton-m:	-0.47	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mu(+), ton-m:	0.00	0.25	0.71	1.10	1.36	1.49	1.48	1.34	1.07	0.67	0.15
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	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31
Vu, ton:	1.63	1.63	1.39	0.98	0.58	0.18	0.23	0.64	1.04	1.45	1.85
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:	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50

DESIGN

8''-E 16 #3 @ 22.5 8''-F'

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:04 p. m. 5/01/2020

BEAM: 7'(A-B) FLOOR: 2

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-2.37	-1.26	-0.47	-0.47	-0.47	-0.47	-0.47	-0.47	-0.47	-1.21	-2.30
Mu(+), ton-m:	0.79	0.47	0.47	0.59	0.94	1.11	0.96	0.64	0.47	0.47	0.77
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:	1.90	1.78	1.37	0.96	0.61	0.26	0.58	0.94	1.34	1.75	1.87
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

7'-A 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-B

BEAM: 7'(B-C) FLOOR: 2

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 5.74 m	c = 1.11 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.92	1.50	2.07	2.65	3.22	3.79	4.37	4.94	5.52	6.09
Mu(-), ton-m:	-2.30	-1.34	-0.54	-0.46	-0.46	-0.46	-0.46	-0.46	-0.54	-1.30	-2.26
Mu(+), ton-m:	0.77	0.46	0.46	0.59	0.74	0.80	0.80	0.72	0.46	0.46	0.75
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:	1.82	1.77	1.52	1.27	1.02	0.72	0.65	0.90	1.16	1.47	1.53
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

7'-B 11 #3 @ 10 16 #3 @ 22.5 11 #3 @ 10 7'-C

BEAM: 7'(C-Ca) FLOOR: 2

	Length:	L = 4.73 m	a = 0.64 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 4.10 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.64	1.05	1.46	1.87	2.28	2.69	3.10	3.51	3.92	4.33	4.73
Mu(-), ton-m:	-1.83	-1.21	-0.69	-0.37	-0.37	-0.37	-0.37	-0.37	-0.47	-0.91	-1.46
Mu(+), ton-m:	0.61	0.44	0.53	0.57	0.54	0.47	0.47	0.51	0.50	0.43	0.49
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:	1.34	1.34	1.15	0.92	0.72	0.72	0.91	1.11	1.30	1.47	1.47
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	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

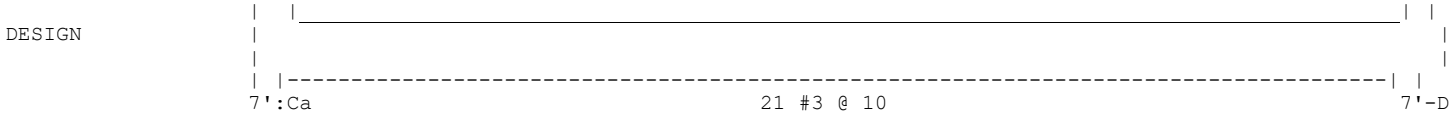
7'-C 11 #3 @ 10 8 #3 @ 22.5 11 #3 @ 10 7':Ca

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:04 p. m. 5/01/2020

BEAM: 7'(Ca-D) FLOOR: 2

Length: L = 2.46 m a = 0.00 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 2.06 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

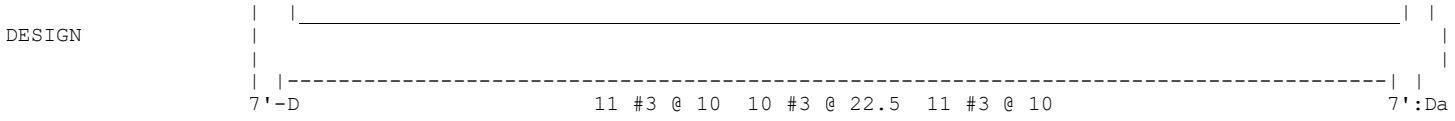
X, m:	0.00	0.21	0.41	0.62	0.83	1.03	1.24	1.45	1.65	1.86	2.06
Mu(-), ton-m:	-1.24	-0.96	-0.69	-0.45	-0.25	-0.25	-0.25	-0.25	-0.25	-0.33	-0.49
Mu(+), ton-m:	0.41	0.35	0.33	0.29	0.25	0.25	0.25	0.32	0.44	0.54	0.61
As(-), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	1.65	1.65	1.65	1.58	1.49	1.39	1.30	1.21	1.13	1.13	1.13
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	22.50	10.00	10.00	10.00	10.00	10.00



BEAM: 7'(D-Da) FLOOR: 2

Length: L = 4.76 m a = 0.40 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 4.36 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

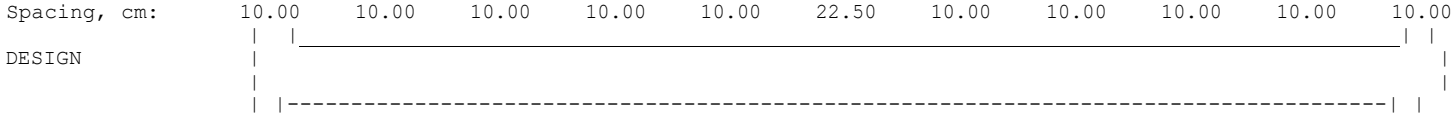
X, m:	0.40	0.84	1.27	1.71	2.14	2.58	3.02	3.45	3.89	4.32	4.76
Mu(-), ton-m:	-1.09	-0.59	-0.23	-0.23	-0.23	-0.23	-0.23	-0.23	-0.23	-0.63	-1.14
Mu(+), ton-m:	0.36	0.23	0.23	0.30	0.42	0.45	0.40	0.26	0.23	0.23	0.38
As(-), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Vu, ton:	1.12	1.12	0.91	0.70	0.48	0.34	0.56	0.80	1.04	1.30	1.30
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	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00



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

Length: L = 2.44 m a = 0.00 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 2.04 m c = 0.40 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.20	0.41	0.61	0.82	1.02	1.22	1.43	1.63	1.84	2.04
Mu(-), ton-m:	-0.73	-0.54	-0.38	-0.23	-0.18	-0.18	-0.22	-0.36	-0.52	-0.70	-0.90
Mu(+), ton-m:	0.25	0.22	0.18	0.18	0.18	0.18	0.18	0.23	0.28	0.31	0.33
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:	0.95	0.95	0.95	0.88	0.79	0.70	0.65	0.74	0.81	0.81	0.81
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	22.50	10.00	10.00	10.00	10.00	10.00



Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:04 p. m. 5/01/2020

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

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		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:	-13.08	-7.53	-3.72	-3.72	-3.72	-3.72	-3.72	-3.72	-3.72	-9.16	-18.61
Mu(+), ton-m:	4.36	3.72	3.72	3.72	6.17	8.98	8.23	5.74	3.72	3.72	6.20
As(-), cm2:	7.83	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	11.36
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:	9.79	9.52	8.59	7.66	6.74	2.60	4.58	7.88	11.40	15.01	15.87
Tu, ton-m:	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16
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	7'-E			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					7'-F

BEAM: 7'(F-G) FLOOR: 2

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 5.69 m	c = 1.11 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.97	1.54	2.11	2.68	3.24	3.81	4.38	4.95	5.52	6.09
Mu(-), ton-m:	-2.91	-1.86	-0.97	-0.58	-0.58	-0.58	-0.58	-0.58	-0.90	-1.75	-2.80
Mu(+), ton-m:	0.97	0.58	0.65	0.81	0.82	0.84	0.88	0.92	0.77	0.58	0.93
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:	1.95	1.91	1.67	1.42	1.18	0.94	0.81	1.05	1.33	1.63	1.69
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	7'-F			11 #3 @ 10	15 #3 @ 22.5	11 #3 @ 10					7'-G

BEAM: 12(A-Aa) FLOOR: 3

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.30 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.63	1.26	1.89	2.52	3.15	3.78	4.41	5.04	5.67	6.30
Mu(-), ton-m:	-33.52	-21.16	-10.86	-6.70	-6.70	-6.70	-6.70	-6.70	-8.41	-18.76	-31.17
Mu(+), ton-m:	11.17	9.06	10.45	12.38	12.35	10.26	9.70	9.68	7.74	6.70	10.39
As(-), cm2:	21.19	12.87	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.33	19.56
As(+), cm2:	6.93	6.93	6.93	7.35	7.33	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	21.70	20.81	17.54	14.26	10.98	7.78	11.06	14.34	17.61	20.89	21.77
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	12-A			11 #3+1r @ 10	18 #3 @ 22.5	11 #3+1r @ 10					12:Aa

BEAM: 12(Aa-B) FLOOR: 3

	Length:	L = 0.90 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		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:	-10.99	-8.89	-6.79	-4.70	-2.62	-2.20	-2.20	-3.97	-6.03	-8.09	-10.16
Mu(+), ton-m:	10.42	8.38	6.35	4.31	2.26	2.20	2.20	3.67	5.74	7.79	9.85
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:	25.90	25.90	25.90	25.90	25.90	25.90	25.90	25.90	25.90	25.90	25.90
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+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

12:Aa 9 #3+1r @ 10 12-B

BEAM: 12(B-Ba) FLOOR: 3

	Length:	L = 0.90 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		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:	-9.90	-7.87	-5.86	-3.87	-2.24	-2.24	-2.66	-4.79	-6.93	-9.07	-11.22
Mu(+), ton-m:	10.03	7.93	5.82	3.74	2.24	2.24	2.24	4.19	6.19	8.18	10.17
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:	27.04	27.04	27.04	27.04	27.04	27.04	27.04	27.04	27.04	27.04	27.04
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

12-B 9 #3+1r @ 10 12:Ba

BEAM: 12(Ba-C) FLOOR: 3

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.90 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.59	1.18	1.77	2.36	2.95	3.54	4.13	4.72	5.31	5.90
Mu(-), ton-m:	-30.88	-19.25	-9.48	-6.51	-6.51	-6.51	-6.51	-6.51	-11.73	-21.02	-32.53
Mu(+), ton-m:	10.29	7.08	7.99	9.16	8.81	9.42	10.85	11.25	10.48	9.18	10.84
As(-), cm2:	19.36	11.65	6.93	6.93	6.93	6.93	6.93	6.93	6.95	12.78	20.50
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:	21.86	21.20	18.20	15.20	12.20	9.20	9.92	12.92	15.92	18.92	19.58
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

12:Ba 11 #3+1r @ 10 16 #3 @ 22.5 11 #3+1r @ 10 12-C

BEAM: 12(C-D) FLOOR: 3

	Length:	L = 7.20 m	a = 0.40 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.42 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.33	2.97	3.61	4.25	4.90	5.54	6.18	6.82
Mu(-), ton-m:	-35.21	-22.11	-11.46	-7.04	-7.04	-7.04	-7.04	-7.04	-10.88	-21.37	-34.33
Mu(+), ton-m:	11.74	7.04	8.88	10.49	11.04	10.14	11.13	10.72	9.08	7.04	11.44
As(-), cm2:	22.39	13.49	6.93	6.93	6.93	6.93	6.93	6.93	6.93	13.01	21.76
As(+), cm2:	6.96	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	21.36	20.49	17.40	14.31	11.22	8.23	11.10	14.19	17.28	20.37	21.25
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+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

12-C 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 12-D

BEAM: 12(D-E) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.95 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.97	1.56	2.16	2.75	3.35	3.94	4.54	5.13	5.73	6.32
Mu(-), ton-m:	-34.30	-22.15	-11.94	-7.11	-7.11	-7.11	-7.11	-7.11	-12.57	-22.85	-35.56
Mu(+), ton-m:	11.43	10.03	10.78	11.48	10.19	9.54	10.34	11.25	10.79	10.46	11.85
As(-), cm2:	21.74	13.52	7.08	6.93	6.93	6.93	6.93	6.93	7.47	13.97	22.63
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	7.03
Vu, ton:	20.90	20.30	17.66	15.03	12.40	9.76	10.42	13.06	15.96	19.15	19.87
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+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

12-D 11 #3+1r @ 10 17 #3 @ 22.5 11 #3+1r @ 10 12-E

BEAM: 12(E-F) FLOOR: 3

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.45 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.42	1.97	2.51	3.06	3.60	4.15	4.69	5.24	5.78	6.33
Mu(-), ton-m:	-36.98	-24.92	-15.30	-7.65	-7.40	-7.40	-7.40	-7.47	-14.98	-24.34	-36.26
Mu(+), ton-m:	14.83	14.77	13.49	12.03	10.04	7.40	10.17	12.29	13.83	15.08	15.22
As(-), cm2:	23.65	15.33	9.16	6.93	6.93	6.93	6.93	6.93	8.95	14.95	23.13
As(+), cm2:	8.86	8.83	8.03	7.14	6.93	6.93	6.93	7.30	8.24	9.02	9.11
Vu, ton:	20.44	20.00	17.21	15.06	12.91	10.77	12.66	14.80	16.95	19.74	20.19
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

12-E 11 #3+1r @ 10 14 #3 @ 22.5 11 #3+1r @ 10 12-F

BEAM: 12(F-G) FLOOR: 3

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.45 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.42	1.96	2.51	3.05	3.60	4.14	4.69	5.23	5.78	6.32
Mu(-), ton-m:	-36.71	-24.82	-15.30	-7.70	-7.34	-7.34	-7.34	-7.53	-14.96	-24.18	-35.91
Mu(+), ton-m:	14.99	14.82	13.45	11.91	9.87	7.34	10.05	12.27	13.89	15.24	15.50
As(-), cm2:	23.46	15.27	9.16	6.93	6.93	6.93	6.93	6.93	8.94	14.85	22.88
As(+), cm2:	8.96	8.86	8.01	7.06	6.93	6.93	6.93	7.28	8.28	9.12	9.28
Vu, ton:	20.17	19.74	17.07	14.97	12.88	10.80	12.58	14.67	16.77	19.44	19.87
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+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

12-F 11 #3+1r @ 10 14 #3 @ 22.5 11 #3+1r @ 10 12-G

BEAM: 12(G-H) FLOOR: 3

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.95 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.66	3.26	3.85	4.45	5.04	5.64	6.23	6.83
Mu(-), ton-m:	-36.05	-23.24	-12.87	-7.21	-7.21	-7.21	-7.21	-7.21	-11.90	-22.07	-34.18
Mu(+), ton-m:	12.02	10.38	10.73	11.15	10.25	9.51	10.26	11.64	10.97	10.28	11.39
As(-), cm2:	22.98	14.23	7.65	6.93	6.93	6.93	6.93	6.93	7.05	13.46	21.65
As(+), cm2:	7.13	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	20.03	19.30	16.12	13.25	10.61	9.74	12.37	15.00	17.64	20.27	20.87
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

12-G 11 #3+1r @ 10 17 #3 @ 22.5 11 #3+1r @ 10 12-H

BEAM: 12(H-I) 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	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-33.57	-21.08	-10.91	-6.71	-6.71	-6.71	-6.71	-6.71	-10.57	-20.58	-32.93
Mu(+), ton-m:	11.19	6.71	8.69	10.18	10.61	9.70	10.75	10.46	8.98	7.02	10.98
As(-), cm2:	21.23	12.83	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.50	20.78
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:	20.31	19.47	16.55	13.62	10.70	7.77	10.50	13.42	16.34	19.27	20.11
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+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

12-H 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 12-I

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:04 p. m. 5/01/2020

BEAM: 12(I-I'') FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.19 m c = 0.64 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	0.99	1.61	2.23	2.85	3.47	4.09	4.71	5.32	5.94	6.56
Mu(-), ton-m:	-34.54	-21.97	-11.58	-6.92	-6.92	-6.92	-6.92	-6.92	-12.07	-22.17	-34.61
Mu(+), ton-m:	11.51	8.31	9.77	10.92	10.68	9.51	10.63	10.92	10.11	8.76	11.54
As(-), cm2:	21.91	13.40	6.93	6.93	6.93	6.93	6.93	6.93	7.16	13.53	21.96
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:	21.02	20.29	17.44	14.59	11.75	8.90	10.51	13.36	16.21	19.05	19.78
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+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

12-I 11 #3+1r @ 10 18 #3 @ 22.5 11 #3+1r @ 10 12-I''

BEAM: 11(A-B) 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	1.36	2.05	2.73	3.41	4.09	4.78	5.46	6.14	6.82
Mu(-), ton-m:	-55.61	-31.61	-12.25	-11.12	-11.12	-11.12	-11.12	-11.12	-11.20	-29.19	-52.57
Mu(+), ton-m:	18.54	11.12	11.12	15.56	19.63	20.86	19.46	15.11	11.12	11.12	17.52
As(-), cm2:	37.99	19.86	7.27	6.93	6.93	6.93	6.93	6.93	6.93	18.20	35.65
As(+), cm2:	11.19	6.93	6.93	9.32	11.89	12.68	11.78	9.04	6.93	6.93	10.55
Vu, ton:	40.15	37.93	31.10	24.28	17.45	10.63	16.17	22.64	29.11	35.57	37.68
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	10.00	20.00	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

11-A 11 #3+1r @ 10 11 #3 @ 10 12 #3 @ 22.5 9 #3 @ 10 11 #3+1r @ 10 11-B

BEAM: 11(B-C) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.48 m c = 0.35 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	1.02	1.67	2.32	2.97	3.61	4.26	4.91	5.56	6.20	6.85
Mu(-), ton-m:	-51.73	-29.79	-12.53	-10.35	-10.35	-10.35	-10.35	-10.35	-11.81	-28.85	-50.56
Mu(+), ton-m:	17.24	10.35	10.35	14.07	18.09	19.47	18.43	14.68	10.35	10.35	16.85
As(-), cm2:	34.96	18.61	7.44	6.93	6.93	6.93	6.93	6.93	7.00	17.97	34.01
As(+), cm2:	10.38	6.93	6.93	8.39	10.91	11.79	11.13	8.77	6.93	6.93	10.13
Vu, ton:	37.06	35.36	29.33	22.80	16.26	9.93	15.89	22.43	28.97	35.22	36.92
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+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

11-B 11 #3+1r @ 10 8 #3 @ 10 12 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 11-C

BEAM: 11(C-D) FLOOR: 3

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.47 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.64	2.29	2.94	3.59	4.23	4.88	5.53	6.18	6.82
Mu(-), ton-m:	-51.56	-29.61	-12.30	-10.31	-10.31	-10.31	-10.31	-10.31	-12.04	-29.12	-50.94
Mu(+), ton-m:	17.19	10.31	10.31	14.38	18.33	19.56	18.33	14.47	10.31	10.31	16.98
As(-), cm2:	34.82	18.48	7.30	6.93	6.93	6.93	6.93	6.93	7.14	18.15	34.32
As(+), cm2:	10.34	6.93	6.93	8.58	11.06	11.85	11.07	8.64	6.93	6.93	10.21
Vu, ton:	37.27	35.53	29.03	22.48	15.92	9.42	15.73	22.29	28.85	35.15	36.86
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	12.50	22.50	22.50	22.50	22.50	22.50	12.50	10.00	10.00

DESIGN

11-C 11 #3+1r @ 10 8 #3 @ 10 12 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 11-D

BEAM: 11(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	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-51.47	-29.63	-12.45	-10.29	-10.29	-10.29	-10.29	-10.29	-11.99	-28.96	-50.62
Mu(+), ton-m:	17.16	10.29	10.29	14.18	18.12	19.46	18.29	14.52	10.29	10.29	16.87
As(-), cm2:	34.75	18.50	7.39	6.93	6.93	6.93	6.93	6.93	7.11	18.04	34.06
As(+), cm2:	10.32	6.93	6.93	8.46	10.93	11.79	11.04	8.67	6.93	6.93	10.14
Vu, ton:	37.00	35.32	29.16	22.63	16.09	9.56	15.83	22.36	28.90	35.06	36.73
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

11-D 11 #3+1r @ 10 8 #3 @ 10 12 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 11-E

BEAM: 11(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:	-51.49	-29.65	-12.45	-10.30	-10.30	-10.30	-10.30	-10.30	-11.93	-28.87	-50.52
Mu(+), ton-m:	17.16	10.30	10.30	14.17	18.13	19.49	18.32	14.55	10.30	10.30	16.84
As(-), cm2:	34.76	18.51	7.40	6.93	6.93	6.93	6.93	6.93	7.07	17.98	33.98
As(+), cm2:	10.33	6.93	6.93	8.45	10.93	11.80	11.06	8.69	6.93	6.93	10.12
Vu, ton:	37.01	35.34	29.19	22.65	16.12	9.59	15.82	22.35	28.89	35.03	36.71
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

11-E 11 #3+1r @ 10 8 #3 @ 10 12 #3 @ 22.5 8 #3 @ 10 11 #3+1r @ 10 11-F

BEAM: 11(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	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-49.79	-28.83	-12.30	-9.96	-9.96	-9.96	-9.96	-9.96	-11.92	-28.27	-49.09
Mu(+), ton-m:	16.60	9.96	9.96	13.76	17.38	18.52	17.53	14.06	9.96	9.96	16.36
As(-), cm2:	33.38	17.95	7.30	6.93	6.93	6.93	6.93	6.93	7.07	17.57	32.82
As(+), cm2:	9.97	6.93	6.93	8.20	10.46	11.18	10.56	8.38	6.93	6.93	9.82
Vu, ton:	35.46	33.85	28.22	21.98	15.74	9.51	15.52	21.76	28.00	33.63	35.24
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

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

BEAM: 11(G-H) FLOOR: 3

Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50				
	Lu = 6.83 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	5.84	6.52	7.20
Mu(-), ton-m:	-53.78	-30.20	-11.90	-10.80	-10.80	-10.80	-10.80	-10.80	-11.29	-30.34	-54.02
Mu(+), ton-m:	17.93	10.80	10.80	14.52	19.13	20.72	19.62	15.72	10.80	10.80	18.01
As(-), cm2:	36.66	18.89	7.05	6.93	6.93	6.93	6.93	6.93	6.93	18.98	36.86
As(+), cm2:	10.81	6.93	6.93	8.67	11.58	12.59	11.89	9.42	6.93	6.93	10.86
Vu, ton:	37.87	35.76	29.29	22.82	16.35	10.51	17.29	24.11	30.94	37.76	39.99
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+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	20.00	10.00	10.00	10.00

DESIGN

11-G 11 #3+1r @ 10 9 #3 @ 10 12 #3 @ 22.5 11 #3 @ 10 11 #3+1r @ 10 11-H

BEAM: 11(H-I) 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:	-55.47	-30.56	-11.09	-11.09	-11.09	-11.09	-11.09	-11.09	-11.09	-29.91	-54.66
Mu(+), ton-m:	18.49	11.09	11.09	16.18	20.69	22.52	20.85	16.50	11.09	11.09	18.22
As(-), cm2:	37.90	19.13	6.93	6.93	6.93	6.93	6.93	6.93	6.93	18.69	37.39
As(+), cm2:	11.16	6.93	6.93	9.71	12.57	13.76	12.68	9.91	6.93	6.93	10.99
Vu, ton:	37.78	35.33	28.56	21.79	15.01	8.24	14.79	21.56	28.33	35.11	37.55
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	#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

11-H 11 #3+1r @ 10 9 #3 @ 10 14 #3 @ 22.5 9 #3 @ 10 11 #3+1r @ 10 11-I

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:04 p. m. 5/01/2020

BEAM: 11(I-I'') 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:	-57.10	-31.13	-11.46	-11.46	-11.46	-11.46	-11.46	-11.46	-11.46	-31.35	-57.31
Mu(+), ton-m:	19.03	11.46	11.46	17.00	21.72	23.78	21.96	17.23	11.46	11.46	19.10
As(-), cm2:	38.93	19.53	6.93	6.93	6.93	6.93	6.93	6.93	6.93	19.68	39.07
As(+), cm2:	11.51	6.93	6.93	10.22	13.24	14.58	13.39	10.37	6.93	6.93	11.56
Vu, ton:	39.16	36.60	29.50	22.39	15.29	8.18	15.28	22.39	29.49	36.60	39.16
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	11-I	11 #3+1r @ 10	10 #3 @ 10	13 #3 @ 22.5	10 #3 @ 10	11 #3+1r @ 10	11-I''				

BEAM: 10(A-B) 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	1.36	2.05	2.73	3.41	4.09	4.78	5.46	6.14	6.82
Mu(-), ton-m:	-53.40	-30.54	-12.06	-10.68	-10.68	-10.68	-10.68	-10.68	-11.19	-28.44	-50.77
Mu(+), ton-m:	17.80	10.68	10.68	15.22	18.85	19.81	18.56	14.62	10.68	10.68	16.92
As(-), cm2:	36.34	19.12	7.16	6.93	6.93	6.93	6.93	6.93	6.93	17.69	34.18
As(+), cm2:	10.73	6.93	6.93	9.11	11.40	12.01	11.21	8.73	6.93	6.93	10.18
Vu, ton:	38.54	36.43	29.98	23.52	17.07	10.61	15.53	21.65	27.76	33.88	35.88
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	15.00	10.00	10.00
DESIGN	10-A	11 #3+1r @ 10	11 #3 @ 10	12 #3 @ 22.5	6 #3 @ 12.5	11 #3+1r @ 10	10-B				

BEAM: 10(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	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-50.07	-29.08	-12.50	-10.01	-10.01	-10.01	-10.01	-10.01	-11.82	-28.09	-48.83
Mu(+), ton-m:	16.69	10.01	10.01	13.74	17.35	18.49	17.60	14.23	10.01	10.01	16.28
As(-), cm2:	33.61	18.13	7.43	6.93	6.93	6.93	6.93	6.93	7.01	17.45	32.62
As(+), cm2:	10.03	6.93	6.93	8.18	10.45	11.17	10.60	8.49	6.93	6.93	9.77
Vu, ton:	35.49	33.89	28.31	22.20	15.99	9.77	15.60	21.82	27.93	33.51	35.11
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+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	10-B	11 #3+1r @ 10	7 #3 @ 10	12 #3 @ 22.5	6 #3 @ 12.5	11 #3+1r @ 10	10-C				

BEAM: 10(C-D) FLOOR: 3

	Length:	L = 7.20 m Lu = 6.45 m	a = 0.38 m c = 0.38 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 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:	-50.01	-29.03	-12.46	-10.00	-10.00	-10.00	-10.00	-10.00	-11.84	-28.12	-48.86
Mu(+), ton-m:	16.67	10.00	10.00	13.75	17.36	18.50	17.61	14.23	10.00	10.00	16.29
As(-), cm2:	33.56	18.09	7.40	6.93	6.93	6.93	6.93	6.93	7.02	17.47	32.64
As(+), cm2:	10.01	6.93	6.93	8.19	10.45	11.17	10.61	8.49	6.93	6.93	9.77
Vu, ton:	35.47	33.87	28.29	22.18	15.96	9.75	15.60	21.82	27.93	33.51	35.11
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+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	10-C	11 #3+1r @ 10	7 #3 @ 10	12 #3 @ 22.5	6 #3 @ 12.5	11 #3+1r @ 10					10-D

BEAM: 10(D-E) FLOOR: 3

	Length:	L = 7.20 m Lu = 6.82 m	a = 0.38 m c = 0.00 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 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:	-51.47	-29.21	-11.95	-10.29	-10.29	-10.29	-10.29	-10.29	-10.55	-27.76	-49.13
Mu(+), ton-m:	17.16	10.29	10.29	14.00	18.07	19.09	18.24	14.91	10.29	10.29	16.38
As(-), cm2:	34.75	18.21	7.09	6.93	6.93	6.93	6.93	6.93	6.93	17.23	32.86
As(+), cm2:	10.32	6.93	6.93	8.35	10.90	11.55	11.00	8.91	6.93	6.93	9.83
Vu, ton:	35.59	33.68	27.84	22.00	16.16	10.70	16.64	22.74	28.64	34.55	36.48
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	22.50	22.50	22.50	22.50	22.50	12.50	10.00	10.00
DESIGN	10-D	11 #3+1r @ 10	6 #3 @ 12.5	13 #3 @ 22.5	9 #3 @ 10	11 #3+1r @ 10					10-E

BEAM: 10(E-F) FLOOR: 3

	Length:	L = 7.20 m Lu = 7.20 m	a = 0.00 m c = 0.00 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 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:	-46.47	-25.19	-9.29	-9.29	-9.29	-9.29	-9.29	-9.29	-9.29	-24.68	-44.96
Mu(+), ton-m:	15.49	9.29	9.29	13.63	15.43	15.81	15.79	13.96	9.29	9.29	14.99
As(-), cm2:	30.75	15.51	6.93	6.93	6.93	6.93	6.93	6.93	6.93	15.18	29.59
As(+), cm2:	9.27	6.93	6.93	8.12	9.24	9.48	9.46	8.33	6.93	6.93	8.96
Vu, ton:	32.59	30.20	23.57	16.95	11.53	7.78	11.79	16.68	22.83	28.99	31.21
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	20.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	10-E	11 #3+1r @ 10	3 #3 @ 12.5	18 #3 @ 22.5	3 #3 @ 15	11 #3+1r @ 10					10-F

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:04 p. m. 5/01/2020

BEAM: 10(F-G) FLOOR: 3

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:	-51.32	-29.26	-11.43	-10.26	-10.26	-10.26	-10.26	-10.26	-12.11	-29.20	-51.17
Mu(+), ton-m:	17.11	10.26	10.26	15.02	18.23	19.00	17.94	14.16	10.26	10.26	17.06
As(-), cm2:	34.63	18.24	6.93	6.93	6.93	6.93	6.93	6.93	7.18	18.21	34.50
As(+), cm2:	10.29	6.93	6.93	8.98	11.00	11.49	10.81	8.45	6.93	6.93	10.26
Vu, ton:	37.98	35.95	29.68	23.40	17.13	11.07	15.29	21.21	27.13	33.05	34.97
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	15.00	10.00	10.00

DESIGN

10-F 11 #3+1r @ 10 9 #3 @ 10 13 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 10-G

BEAM: 10(G-H) FLOOR: 3

Length: L = 7.20 m a = 0.40 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.43 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

X, m:	0.40	1.04	1.69	2.33	2.97	3.61	4.26	4.90	5.54	6.18	6.83
Mu(-), ton-m:	-41.78	-25.31	-12.11	-8.36	-8.36	-8.36	-8.36	-8.36	-11.43	-24.39	-40.65
Mu(+), ton-m:	13.93	8.36	8.68	11.86	13.67	13.60	13.93	12.35	9.11	8.36	13.55
As(-), cm2:	27.18	15.59	7.19	6.93	6.93	6.93	6.93	6.93	6.93	14.98	26.33
As(+), cm2:	8.30	6.93	6.93	7.03	8.14	8.10	8.30	7.33	6.93	6.93	8.07
Vu, ton:	27.34	26.17	22.04	17.92	13.79	9.80	13.60	17.73	21.86	25.99	27.16
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

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

BEAM: 10(H-I) 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

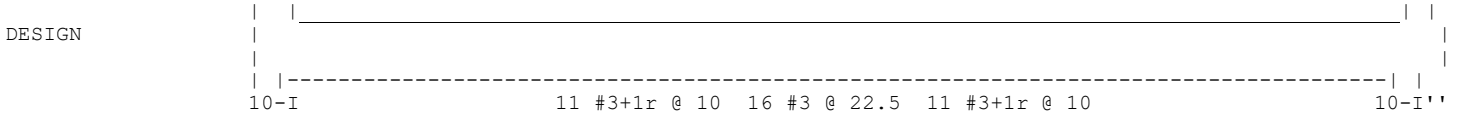
X, m:	0.38	1.02	1.66	2.31	2.95	3.60	4.24	4.89	5.53	6.18	6.82
Mu(-), ton-m:	-40.89	-24.77	-11.83	-8.18	-8.18	-8.18	-8.18	-8.18	-11.05	-23.67	-39.55
Mu(+), ton-m:	13.63	8.18	8.67	11.83	13.56	13.43	13.70	12.20	9.06	8.18	13.18
As(-), cm2:	26.51	15.23	7.01	6.93	6.93	6.93	6.93	6.93	6.93	14.51	25.52
As(+), cm2:	8.12	6.93	6.93	7.01	8.08	8.00	8.16	7.24	6.93	6.93	7.84
Vu, ton:	26.77	25.61	21.58	17.56	13.53	9.50	13.15	17.18	21.21	25.23	26.39
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

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

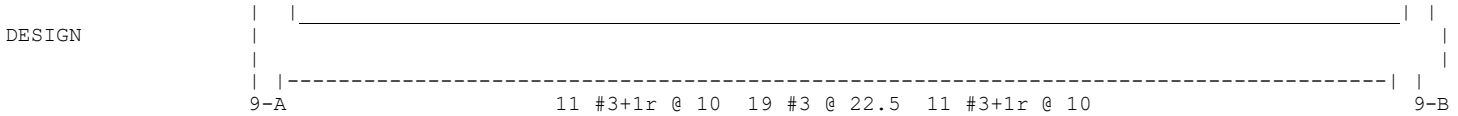
BEAM: 10(I-I'') FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.71 m	c = 1.11 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.95	1.52	2.09	2.66	3.23	3.80	4.37	4.95	5.52	6.09
Mu(-), ton-m:	-40.31	-25.76	-13.41	-8.07	-8.07	-8.07	-8.07	-8.07	-13.43	-25.53	-40.36
Mu(+), ton-m:	13.44	9.77	11.25	12.51	11.65	11.50	12.26	13.29	12.01	10.59	13.45
As(-), cm2:	26.09	15.89	7.98	6.93	6.93	6.93	6.93	6.93	8.00	15.74	26.12
As(+), cm2:	8.00	6.93	6.93	7.43	6.93	6.93	7.28	7.91	7.12	6.93	8.01
Vu, ton:	26.25	25.62	22.39	19.16	15.92	12.69	11.47	15.04	19.11	23.19	23.98
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



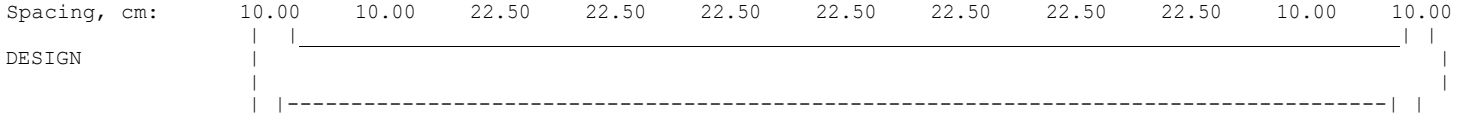
BEAM: 9(A-B) FLOOR: 3

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-28.47	-17.81	-9.17	-5.69	-5.69	-5.69	-5.69	-5.69	-8.29	-16.88	-27.49
Mu(+), ton-m:	9.49	6.03	7.86	9.33	9.71	8.62	9.05	8.63	7.16	5.69	9.16
As(-), cm2:	17.71	10.74	6.93	6.93	6.93	6.93	6.93	6.93	6.93	10.15	17.05
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:	17.30	16.56	14.04	11.51	8.99	6.46	8.93	11.45	13.98	16.50	17.24
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: 9(B-C) FLOOR: 3

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.21 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.97	1.59	2.21	2.83	3.46	4.08	4.70	5.32	5.94	6.56
Mu(-), ton-m:	-29.09	-18.65	-9.89	-5.89	-5.89	-5.89	-5.89	-5.89	-11.12	-19.33	-29.46
Mu(+), ton-m:	9.70	7.16	7.99	8.56	8.02	8.10	9.55	10.28	10.06	9.38	9.82
As(-), cm2:	18.13	11.27	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.70	18.38
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:	17.29	16.71	14.45	12.20	9.95	7.70	8.56	10.81	13.06	15.31	15.94
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



BEAM: 9(C-D) FLOOR: 3

	Length:	L = 7.20 m Lu = 5.71 m	a = 1.11 m c = 0.38 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	1.11	1.68	2.25	2.83	3.40	3.97	4.54	5.11	5.68	6.25	6.82
Mu(-), ton-m:	-36.19	-24.79	-15.04	-7.39	-7.39	-7.39	-7.39	-7.39	-11.73	-22.87	-36.97
Mu(+), ton-m:	12.06	11.53	11.13	10.50	9.06	8.90	10.48	13.22	13.14	12.28	12.32
As(-), cm2:	23.09	15.25	9.00	6.93	6.93	6.93	6.93	6.93	6.95	13.98	23.64
As(+), cm2:	7.16	6.93	6.93	6.93	6.93	6.93	6.93	7.87	7.82	7.29	7.32
Vu, ton:	18.83	18.36	15.96	14.02	12.19	10.35	10.55	13.99	18.26	22.53	23.37
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

9-C 11 #3+1r @ 10 16 #3 @ 22.5 11 #3+1r @ 10 9-D

BEAM: 9(D-E) FLOOR: 3

	Length:	L = 7.20 m Lu = 6.82 m	a = 0.38 m c = 0.00 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 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:	-51.77	-29.46	-12.16	-10.35	-10.35	-10.35	-10.35	-10.35	-11.42	-28.65	-50.00
Mu(+), ton-m:	17.26	10.35	10.35	14.45	18.24	19.25	18.75	15.69	10.35	10.35	16.67
As(-), cm2:	35.00	18.38	7.22	6.93	6.93	6.93	6.93	6.93	6.93	17.83	33.56
As(+), cm2:	10.38	6.93	6.93	8.63	11.01	11.65	11.33	9.40	6.93	6.93	10.01
Vu, ton:	35.43	33.54	27.74	21.95	16.15	11.38	17.30	23.30	29.08	34.86	36.75
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	15.00	22.50	22.50	22.50	22.50	20.00	12.50	10.00	10.00

DESIGN

9-D 11 #3+1r @ 10 6 #3 @ 12.5 13 #3 @ 22.5 9 #3 @ 10 11 #3+1r @ 10 9-E

BEAM: 9(E-F) FLOOR: 3

	Length:	L = 7.20 m Lu = 7.20 m	a = 0.00 m c = 0.00 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 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:	-34.67	-21.75	-11.03	-8.03	-8.03	-8.03	-8.03	-8.03	-8.12	-21.54	-40.13
Mu(+), ton-m:	11.56	8.03	8.03	9.30	9.86	10.71	13.50	14.08	10.50	8.03	13.38
As(-), cm2:	22.01	13.26	6.93	6.93	6.93	6.93	6.93	6.93	6.93	13.12	25.95
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	8.04	8.40	6.93	6.93	7.96
Vu, ton:	21.40	20.29	17.21	14.13	12.17	11.14	9.02	14.03	20.29	26.55	28.81
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

9-E 11 #3+1r @ 10 22 #3 @ 22.5 11 #3+1r @ 10 9-F

BEAM: 9(F-G) FLOOR: 3

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.56 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.66	1.31	1.97	2.62	3.28	3.94	4.59	5.25	5.90	6.56
Mu(-), ton-m:	-48.26	-28.32	-12.33	-9.79	-9.79	-9.79	-9.79	-9.79	-12.77	-28.78	-48.93
Mu(+), ton-m:	16.09	9.79	9.84	14.65	16.64	16.64	16.08	13.80	9.79	9.79	16.31
As(-), cm2:	32.16	17.61	7.32	6.93	6.93	6.93	6.93	6.93	7.59	17.92	32.70
As(+), cm2:	9.65	6.93	6.93	8.75	10.00	10.00	9.64	8.23	6.93	6.93	9.79
Vu, ton:	35.88	34.32	29.10	23.88	18.67	13.33	13.79	19.01	24.23	29.44	31.00
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	12.50	20.00	22.50	22.50	22.50	22.50	20.00	10.00	10.00

DESIGN

9-F 11 #3+1r @ 10 10 #3 @ 10 13 #3 @ 22.5 3 #3 @ 15 11 #3+1r @ 10 9-G

BEAM: 8(Ca-D) FLOOR: 3

	Length:	L = 4.58 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 4.21 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.26	1.68	2.10	2.53	2.95	3.37	3.79	4.21
Mu(-), ton-m:	0.00	-0.54	-2.01	-4.43	-7.79	-12.19	-18.05	-25.69	-35.23	-46.69	-60.07
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	7.23	10.88	15.85	22.40	30.93	40.83
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	2.27	4.54	6.80	9.07	11.46	15.85	20.45	25.04	29.21	29.21
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	17.50	12.50	12.50

DESIGN

8:Ca 16 #3 @ 22.5 2 #3 @ 15 7 #3 @ 12.5 8-D

BEAM: 8(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	3.10	3.79	4.47	5.15	5.83	6.52	7.20
Mu(-), ton-m:	-57.52	-33.02	-13.95	-11.50	-11.50	-11.50	-11.50	-11.50	-12.28	-30.93	-53.95
Mu(+), ton-m:	19.17	11.50	11.50	15.49	19.68	20.68	20.01	16.71	11.50	11.50	17.98
As(-), cm2:	39.20	20.84	8.32	6.93	6.93	6.93	6.93	6.93	7.29	19.39	36.80
As(+), cm2:	11.60	6.93	6.93	9.28	11.92	12.57	12.13	10.04	6.93	6.93	10.84
Vu, ton:	39.01	36.93	30.58	24.23	17.87	12.45	18.90	25.39	31.58	37.77	39.79
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	12.50	20.00	22.50	22.50	22.50	17.50	10.00	10.00	10.00

DESIGN

8-D 11 #3+1r @ 10 11 #3 @ 10 10 #3 @ 22.5 12 #3 @ 10 11 #3+1r @ 10 8-E

BEAM: 8(E-F) FLOOR: 3

	Length:	L = 7.20 m Lu = 6.80 m	a = 0.00 m c = 0.40 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 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:	-31.59	-22.91	-14.52	-8.27	-8.27	-8.27	-8.27	-8.27	-8.87	-22.24	-41.37
Mu(+), ton-m:	10.53	8.27	8.27	8.27	8.62	10.76	13.90	14.65	11.59	8.27	13.79
As(-), cm2:	19.84	14.01	8.67	6.93	6.93	6.93	6.93	6.93	6.93	13.58	26.87
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	8.29	8.75	6.93	6.93	8.22
Vu, ton:	16.39	16.25	15.81	15.37	14.93	14.49	9.22	13.76	19.77	25.78	27.73
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

8-E 11 #3+1r @ 10 20 #3 @ 22.5 11 #3+1r @ 10 8-F

BEAM: 8(F-G) FLOOR: 3

	Length:	L = 7.20 m Lu = 6.80 m	a = 0.40 m c = 0.00 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 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:	-54.99	-31.20	-12.72	-11.19	-11.19	-11.19	-11.19	-11.19	-12.65	-32.01	-55.95
Mu(+), ton-m:	18.33	11.19	11.19	15.41	19.52	20.89	20.26	16.81	11.19	11.19	18.65
As(-), cm2:	37.60	19.58	7.56	6.93	6.93	6.93	6.93	6.93	7.52	20.14	38.21
As(+), cm2:	11.06	6.93	6.93	9.23	11.82	12.70	12.30	10.10	6.93	6.93	11.27
Vu, ton:	37.84	35.77	29.36	22.96	16.55	12.07	18.69	25.47	32.26	39.04	41.23
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	17.50	10.00	10.00	10.00

DESIGN

8-F 11 #3+1r @ 10 9 #3 @ 10 11 #3 @ 22.5 16 #3 @ 7.5 11 #3+1r @ 10 8-G

BEAM: 7'(C-D) FLOOR: 3

	Length:	L = 7.20 m Lu = 6.19 m	a = 0.64 m c = 0.38 m	Section:	b = 37.5 cm h = 50.0 cm	Sec: Mat:	VG37.5X50 RConcrete2			
X, m:	0.64	1.26	1.88	2.49	3.11	3.73	4.35	4.97	5.59	6.21	6.82
Mu(-), ton-m:	-22.10	-16.90	-11.92	-7.20	-4.89	-4.89	-4.89	-5.18	-9.59	-15.96	-24.47
Mu(+), ton-m:	14.27	11.98	9.52	6.97	4.89	4.89	6.01	9.74	11.79	12.77	12.83
As(-), cm2:	13.67	10.26	7.11	5.78	5.78	5.78	5.78	5.78	5.78	9.65	15.26
As(+), cm2:	8.59	7.15	5.78	5.78	5.78	5.78	5.78	5.78	7.04	7.64	7.68
Vu, ton:	9.40	9.32	9.04	8.75	8.46	8.17	7.88	7.39	9.92	12.61	13.31
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	#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

7'-C 11 #3 @ 10 18 #3 @ 22.5 11 #3 @ 10 7'-D

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

	Length:	L = 7.20 m Lu = 6.45 m	a = 0.38 m c = 0.38 m	Section:	b = 37.5 cm h = 50.0 cm	Sec: Mat:	VG37.5X50 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:	-35.55	-22.37	-11.62	-7.11	-7.11	-7.11	-7.11	-7.11	-10.24	-20.29	-32.95
Mu(+), ton-m:	11.85	7.11	8.91	10.40	11.02	10.22	11.49	11.45	9.94	8.04	10.98
As(-), cm2:	23.20	13.85	6.93	5.78	5.78	5.78	5.78	5.78	6.08	12.47	21.26
As(+), cm2:	7.07	5.78	5.78	6.17	6.56	6.06	6.85	6.82	5.90	5.78	6.54
Vu, ton:	21.26	20.37	17.24	14.12	11.00	8.16	11.28	14.34	17.14	19.94	20.74
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

7'-D 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-E

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

	Length:	L = 7.20 m Lu = 6.45 m	a = 0.38 m c = 0.38 m	Section:	b = 37.5 cm h = 50.0 cm	Sec: Mat:	VG37.5X50 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:	-28.88	-19.86	-11.92	-6.08	-6.08	-6.08	-6.08	-6.08	-9.58	-18.67	-30.38
Mu(+), ton-m:	9.63	8.30	8.33	8.14	8.03	7.44	9.76	10.68	9.93	8.63	10.13
As(-), cm2:	18.33	12.18	7.12	5.78	5.78	5.78	5.78	5.78	5.78	11.40	19.40
As(+), cm2:	5.78	5.78	5.78	5.78	5.78	5.78	5.78	6.35	5.89	5.78	6.01
Vu, ton:	15.00	14.61	13.25	11.89	10.54	8.89	7.94	10.99	14.04	17.09	17.96
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

7'-E 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-F

BEAM: 7'(F-G) FLOOR: 3

	Length:	L = 7.20 m Lu = 5.71 m	a = 0.38 m c = 1.11 m	Section:	b = 37.5 cm h = 50.0 cm	Sec: Mat:	VG37.5X50 RConcrete2			
X, m:	0.38	0.95	1.52	2.09	2.66	3.23	3.80	4.37	4.95	5.52	6.09
Mu(-), ton-m:	-34.25	-22.71	-12.75	-6.85	-6.85	-6.85	-6.85	-6.85	-12.81	-22.55	-34.26
Mu(+), ton-m:	11.42	11.21	11.23	11.09	9.42	9.00	10.02	11.83	11.95	11.98	11.42
As(-), cm2:	22.22	14.07	7.63	5.78	5.78	5.78	5.78	5.78	7.67	13.97	22.23
As(+), cm2:	6.80	6.67	6.69	6.60	5.78	5.78	5.94	7.06	7.13	7.15	6.81
Vu, ton:	20.26	19.81	17.48	15.16	12.83	10.51	9.72	12.65	15.58	18.51	19.08
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

7'-F 11 #3 @ 10 16 #3 @ 22.5 11 #3 @ 10 7'-G

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:05 p. m. 5/01/2020

BEAM: 12(A-Aa) FLOOR: 4

Length: L = 6.30 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.30 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.63	1.26	1.89	2.52	3.15	3.78	4.41	5.04	5.67	6.30
Mu(-), ton-m:	-37.67	-24.52	-13.43	-7.53	-7.53	-7.53	-7.53	-7.53	-10.03	-20.94	-33.92
Mu(+), ton-m:	12.56	11.56	12.34	13.57	12.98	10.32	10.29	11.06	9.82	9.15	11.31
As(-), cm2:	24.15	15.07	8.00	6.93	6.93	6.93	6.93	6.93	6.93	12.74	21.47
As(+), cm2:	7.46	6.93	7.33	8.08	7.72	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	22.77	21.89	18.61	15.33	12.06	8.78	11.77	15.05	18.33	21.60	22.49
Tu, ton-m:	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
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

12-A 11 #3+1r @ 10 18 #3 @ 22.5 11 #3+1r @ 10 12:Aa

BEAM: 12(Aa-B) FLOOR: 4

Length: L = 0.90 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
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:	-13.43	-10.85	-8.28	-5.71	-3.15	-2.69	-2.69	-4.93	-7.40	-9.87	-12.35
Mu(+), ton-m:	12.40	9.95	7.49	5.03	2.69	2.69	2.69	4.59	7.12	9.64	12.16
As(-), cm2:	7.99	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	7.33
As(+), cm2:	7.36	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	7.22
Vu, ton:	32.16	32.16	32.16	32.16	32.16	32.16	32.16	32.16	32.16	32.16	32.16
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+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

12:Aa 9 #3+1r @ 10 12-B

BEAM: 12(B-Ba) FLOOR: 4

Length: L = 0.90 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
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:	-12.04	-9.61	-7.18	-4.77	-2.76	-2.76	-3.22	-5.86	-8.51	-11.16	-13.82
Mu(+), ton-m:	12.53	9.92	7.31	4.70	2.76	2.76	2.76	4.90	7.30	9.70	12.10
As(-), cm2:	7.14	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	8.24
As(+), cm2:	7.44	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	7.18
Vu, ton:	34.06	34.06	34.06	34.06	34.06	34.06	34.06	34.06	34.06	34.06	34.06
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+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

12-B 9 #3+1r @ 10 12:Ba

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:05 p. m. 5/01/2020

BEAM: 12(Ba-C) FLOOR: 4

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.95 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.60	1.19	1.79	2.38	2.98	3.57	4.17	4.76	5.36	5.95
Mu(-), ton-m:	-34.91	-22.30	-11.61	-7.44	-7.44	-7.44	-7.44	-7.44	-14.53	-24.76	-37.21
Mu(+), ton-m:	11.64	9.90	10.07	10.52	9.40	9.99	12.09	13.24	13.20	12.62	12.40
As(-), cm2:	22.17	13.62	6.93	6.93	6.93	6.93	6.93	6.93	8.68	15.23	23.82
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	7.17	7.88	7.85	7.50	7.36
Vu, ton:	23.03	22.34	19.29	16.24	13.19	10.14	11.15	14.20	17.25	20.30	20.99
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+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

12:Ba — 11 #3+1r @ 10 | 17 #3 @ 22.5 | 11 #3+1r @ 10 — 12-C

BEAM: 12(C-D) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-39.89	-25.66	-13.90	-7.98	-7.98	-7.98	-7.98	-7.98	-13.28	-24.77	-38.79
Mu(+), ton-m:	13.30	10.02	11.48	12.45	12.24	10.57	12.40	12.82	11.87	10.47	12.93
As(-), cm2:	25.77	15.82	8.29	6.93	6.93	6.93	6.93	6.93	7.90	15.24	24.97
As(+), cm2:	7.91	6.93	6.93	7.39	7.26	6.93	7.36	7.62	7.04	6.93	7.69
Vu, ton:	22.76	21.84	18.68	15.51	12.35	9.19	12.03	15.19	18.36	21.52	22.44
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

12-C — 11 #3+1r @ 10 | 19 #3 @ 22.5 | 11 #3+1r @ 10 — 12-D

BEAM: 12(D-E) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.97 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.95	1.54	2.14	2.74	3.34	3.93	4.53	5.13	5.73	6.32
Mu(-), ton-m:	-40.48	-27.02	-15.47	-8.35	-8.35	-8.35	-8.35	-8.35	-16.29	-27.81	-41.76
Mu(+), ton-m:	14.17	14.54	14.10	13.59	11.17	10.26	11.71	13.83	14.55	15.39	14.71
As(-), cm2:	26.21	16.74	9.26	6.93	6.93	6.93	6.93	6.93	9.78	17.26	27.16
As(+), cm2:	8.45	8.68	8.41	8.10	6.93	6.93	6.94	8.24	8.69	9.21	8.79
Vu, ton:	22.73	22.12	19.46	16.81	14.15	11.50	11.96	14.73	17.93	21.13	21.87
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+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

12-D — 11 #3+1r @ 10 | 17 #3 @ 22.5 | 11 #3+1r @ 10 — 12-E

BEAM: 12(E-F) FLOOR: 4

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.45 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.42	1.97	2.51	3.06	3.60	4.15	4.69	5.24	5.78	6.33
Mu(-), ton-m:	-45.26	-31.55	-20.22	-10.91	-9.05	-9.05	-9.05	-10.55	-19.57	-30.39	-43.82
Mu(+), ton-m:	22.51	20.91	18.04	15.04	11.54	9.05	11.81	15.59	18.75	21.58	23.34
As(-), cm2:	29.82	19.82	12.27	6.93	6.93	6.93	6.93	6.93	11.85	19.02	28.72
As(+), cm2:	13.75	12.72	10.88	8.99	6.93	6.93	7.00	9.34	11.33	13.15	14.30
Vu, ton:	23.48	23.04	20.67	18.53	16.39	14.25	15.87	18.01	20.15	22.51	22.96
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

12-E 11 #3+1r @ 10 14 #3 @ 22.5 11 #3+1r @ 10 12-F

BEAM: 12(F-G) FLOOR: 4

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.45 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.42	1.96	2.51	3.05	3.60	4.14	4.69	5.23	5.78	6.32
Mu(-), ton-m:	-44.92	-31.39	-20.18	-10.94	-8.98	-8.98	-8.98	-10.61	-19.55	-30.25	-43.50
Mu(+), ton-m:	22.69	20.98	18.02	14.94	11.38	8.98	11.69	15.54	18.78	21.70	23.58
As(-), cm2:	29.56	19.71	12.24	6.93	6.93	6.93	6.93	6.93	11.84	18.92	28.47
As(+), cm2:	13.87	12.76	10.87	8.93	6.93	6.93	6.93	9.31	11.35	13.23	14.45
Vu, ton:	23.19	22.76	20.49	18.41	16.32	14.23	15.79	17.88	19.96	22.22	22.66
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

12-F 11 #3+1r @ 10 14 #3 @ 22.5 11 #3+1r @ 10 12-G

BEAM: 12(G-H) FLOOR: 4

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.98 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.67	3.27	3.86	4.46	5.06	5.66	6.25	6.85
Mu(-), ton-m:	-42.83	-28.66	-16.93	-8.57	-8.57	-8.57	-8.57	-8.57	-14.86	-26.18	-39.42
Mu(+), ton-m:	14.28	14.90	14.19	13.49	11.51	10.27	11.39	14.03	14.52	15.06	14.83
As(-), cm2:	27.96	17.84	10.18	6.93	6.93	6.93	6.93	6.93	8.88	16.17	25.43
As(+), cm2:	8.52	8.91	8.46	8.04	6.93	6.93	6.93	8.36	8.67	9.01	8.86
Vu, ton:	22.23	21.49	18.29	15.29	12.64	11.46	14.12	16.77	19.43	22.09	22.70
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

12-G 11 #3+1r @ 10 17 #3 @ 22.5 11 #3+1r @ 10 12-H

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:05 p. m. 5/01/2020

BEAM: 12(H-I) FLOOR: 4

Length: L = 7.20 m a = 0.35 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.50 m c = 0.35 m h = 50.0 cm Mat: RConcrete2

X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-38.38	-24.83	-13.61	-7.68	-7.68	-7.68	-7.68	-7.68	-13.17	-24.18	-37.55
Mu(+), ton-m:	12.79	10.12	11.30	12.00	11.60	9.85	11.81	12.39	11.70	10.59	12.52
As(-), cm2:	24.67	15.28	8.11	6.93	6.93	6.93	6.93	6.93	7.84	14.85	24.06
As(+), cm2:	7.60	6.93	6.93	7.12	6.93	6.93	7.00	7.36	6.94	6.93	7.43
Vu, ton:	21.58	20.71	17.74	14.77	11.80	8.83	11.54	14.50	17.47	20.44	21.31
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

DESIGN

12-H 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 12-I

BEAM: 12(I-I'') FLOOR: 4

Length: L = 7.20 m a = 0.35 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.21 m c = 0.64 m h = 50.0 cm Mat: RConcrete2

X, m:	0.35	0.97	1.59	2.21	2.83	3.46	4.08	4.70	5.32	5.94	6.56
Mu(-), ton-m:	-39.82	-26.09	-14.54	-8.21	-8.21	-8.21	-8.21	-8.21	-15.91	-27.32	-41.05
Mu(+), ton-m:	13.27	12.82	13.13	13.21	11.69	10.18	11.96	13.31	13.57	13.34	13.68
As(-), cm2:	25.72	16.11	8.68	6.93	6.93	6.93	6.93	6.93	9.54	16.93	26.64
As(+), cm2:	7.90	7.62	7.81	7.86	6.93	6.93	7.10	7.92	8.08	7.94	8.15
Vu, ton:	22.50	21.76	18.89	16.02	13.15	10.32	12.03	14.90	17.77	20.78	21.65
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

12-I 11 #3+1r @ 10 18 #3 @ 22.5 11 #3+1r @ 10 12-I''

BEAM: 11(A-B) FLOOR: 4

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.85 m c = 0.35 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.68	1.37	2.05	2.74	3.42	4.11	4.79	5.48	6.16	6.85
Mu(-), ton-m:	-59.96	-34.90	-14.51	-11.99	-11.99	-11.99	-11.99	-11.99	-13.38	-32.13	-56.33
Mu(+), ton-m:	19.99	11.99	11.99	16.91	20.35	21.31	20.78	17.41	11.99	11.99	18.78
As(-), cm2:	40.75	22.17	8.67	7.11	7.11	7.11	7.11	7.11	7.97	20.22	38.45
As(+), cm2:	12.12	7.11	7.11	10.16	12.35	12.97	12.63	10.48	7.11	7.11	11.35
Vu, ton:	42.41	40.16	33.31	26.46	19.61	12.83	17.04	23.55	30.07	36.58	38.72
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

11-A 11 #3+1r @ 10 16 #3 @ 7.5 10 #3 @ 22.5 11 #3 @ 10 11 #3+1r @ 10 11-B

BEAM: 11(B-C) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-57.42	-34.26	-15.73	-11.48	-11.48	-11.48	-11.48	-11.48	-14.71	-32.79	-55.60
Mu(+), ton-m:	19.14	11.48	11.48	16.16	19.24	19.68	19.56	16.83	11.66	11.48	18.53
As(-), cm2:	39.13	21.71	9.42	6.93	6.93	6.93	6.93	6.93	8.79	20.68	37.99
As(+), cm2:	11.58	6.93	6.93	9.69	11.64	11.93	11.85	10.11	6.93	6.93	11.19
Vu, ton:	38.69	36.96	31.03	25.11	19.18	12.87	18.64	24.56	30.49	36.41	38.14
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	17.50	12.50	10.00	10.00

DESIGN

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

BEAM: 11(C-D) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-57.14	-33.98	-15.50	-11.43	-11.43	-11.43	-11.43	-11.43	-14.88	-33.08	-56.01
Mu(+), ton-m:	19.05	11.43	11.43	16.30	19.35	19.78	19.59	16.77	11.55	11.43	18.67
As(-), cm2:	38.96	21.52	9.28	6.93	6.93	6.93	6.93	6.93	8.89	20.88	38.24
As(+), cm2:	11.52	6.93	6.93	9.78	11.71	11.99	11.87	10.08	6.93	6.93	11.28
Vu, ton:	38.65	36.91	30.97	25.02	19.08	12.66	18.73	24.67	30.62	36.56	38.30
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	17.50	12.50	10.00	10.00

DESIGN

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

BEAM: 11(D-E) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-57.31	-34.12	-15.59	-11.46	-11.46	-11.46	-11.46	-11.46	-14.84	-33.02	-55.93
Mu(+), ton-m:	19.10	11.46	11.46	16.27	19.33	19.77	19.61	16.82	11.61	11.46	18.64
As(-), cm2:	39.06	21.61	9.34	6.93	6.93	6.93	6.93	6.93	8.87	20.84	38.20
As(+), cm2:	11.55	6.93	6.93	9.76	11.70	11.98	11.88	10.11	6.93	6.93	11.26
Vu, ton:	38.71	36.97	31.03	25.08	19.14	12.75	18.72	24.66	30.60	36.55	38.29
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+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	17.50	12.50	10.00	10.00

DESIGN

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

BEAM: 11(E-F) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-57.36	-34.16	-15.61	-11.47	-11.47	-11.47	-11.47	-11.47	-14.74	-32.89	-55.78
Mu(+), ton-m:	19.12	11.47	11.47	16.24	19.33	19.80	19.65	16.87	11.66	11.47	18.59
As(-), cm2:	39.10	21.64	9.35	6.93	6.93	6.93	6.93	6.93	8.81	20.75	38.10
As(+), cm2:	11.57	6.93	6.93	9.74	11.70	12.00	11.90	10.14	6.93	6.93	11.23
Vu, ton:	38.74	37.01	31.06	25.12	19.17	12.80	18.68	24.63	30.57	36.52	38.26
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	10.00	17.50	22.50	22.50	22.50	17.50	12.50	10.00	10.00

DESIGN

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

BEAM: 11(F-G) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-55.66	-33.34	-15.47	-11.13	-11.13	-11.13	-11.13	-11.13	-14.78	-32.32	-54.38
Mu(+), ton-m:	18.55	11.13	11.13	15.82	18.56	18.80	18.85	16.38	11.61	11.13	18.13
As(-), cm2:	38.02	21.06	9.26	6.93	6.93	6.93	6.93	6.93	8.83	20.36	37.16
As(+), cm2:	11.20	6.93	6.93	9.48	11.21	11.36	11.40	9.83	6.93	6.93	10.93
Vu, ton:	37.17	35.51	29.84	24.16	18.49	12.74	18.08	23.76	29.43	35.11	36.77
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

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

BEAM: 11(G-H) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.04	1.72	2.41	3.09	3.78	4.46	5.15	5.83	6.52	7.20
Mu(-), ton-m:	-58.14	-33.64	-14.44	-11.66	-11.66	-11.66	-11.66	-11.66	-13.58	-33.61	-58.30
Mu(+), ton-m:	19.38	11.66	11.66	16.54	20.24	21.02	20.34	17.16	11.66	11.66	19.43
As(-), cm2:	39.59	21.28	8.62	6.93	6.93	6.93	6.93	6.93	8.09	21.25	39.69
As(+), cm2:	11.73	6.93	6.93	9.93	12.28	12.79	12.34	10.32	6.93	6.93	11.77
Vu, ton:	39.04	36.90	30.38	23.86	17.35	12.72	19.52	26.37	33.22	40.07	42.32
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	15.00	10.00	10.00	10.00

DESIGN

11-G 11 #3+1r @ 10 11 #3 @ 10 10 #3 @ 22.5 16 #3 @ 7.5 11 #3+1r @ 10 11-H

BEAM: 11(H-I) 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:	-58.80	-33.23	-12.53	-11.76	-11.76	-11.76	-11.76	-11.76	-11.81	-32.26	-57.59
Mu(+), ton-m:	19.60	11.76	11.76	17.32	21.25	22.50	21.51	17.83	11.76	11.76	19.20
As(-), cm2:	40.00	20.99	7.44	6.97	6.97	6.97	6.97	6.97	7.00	20.31	39.24
As(+), cm2:	11.87	6.97	6.97	10.43	12.93	13.75	13.10	10.75	6.97	6.97	11.62
Vu, ton:	39.63	37.18	30.41	23.64	16.87	10.09	16.52	23.30	30.07	36.84	39.29
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+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

11-H 11 #3+1r @ 10 16 #3 @ 7.5 12 #3 @ 22.5 14 #3 @ 7.5 11 #3+1r @ 10 11-I

BEAM: 11(I-I'') 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:	-60.40	-33.75	-12.22	-12.08	-12.08	-12.08	-12.08	-12.08	-12.08	-33.24	-59.72
Mu(+), ton-m:	20.13	12.08	12.08	18.22	22.43	23.95	22.74	18.70	12.08	12.08	19.91
As(-), cm2:	41.06	21.36	7.25	7.17	7.17	7.17	7.17	7.17	7.17	21.00	40.59
As(+), cm2:	12.21	7.17	7.17	10.99	13.70	14.69	13.90	11.30	7.17	7.17	12.07
Vu, ton:	41.06	38.49	31.39	24.28	17.18	10.07	16.95	24.05	31.16	38.26	40.83
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+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

11-I 11 #3+1r @ 10 16 #3 @ 7.5 11 #3 @ 22.5 16 #3 @ 7.5 11 #3+1r @ 10 11-I''

BEAM: 10(A-B) FLOOR: 4

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.68	1.37	2.05	2.74	3.42	4.11	4.79	5.48	6.16	6.85
Mu(-), ton-m:	-48.70	-29.81	-14.20	-9.74	-9.74	-9.74	-9.74	-9.74	-12.59	-26.80	-44.86
Mu(+), ton-m:	16.23	9.74	10.27	14.08	15.40	15.14	15.69	14.70	11.64	9.74	14.95
As(-), cm2:	32.52	18.62	8.47	6.93	6.93	6.93	6.93	6.93	7.48	16.58	29.51
As(+), cm2:	9.74	6.93	6.93	8.40	9.22	9.06	9.40	8.78	6.93	6.93	8.94
Vu, ton:	31.88	30.37	25.80	21.22	16.65	12.07	13.16	17.73	22.31	26.88	28.39
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	17.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

10-A 11 #3+1r @ 10 5 #3 @ 12.5 18 #3 @ 22.5 11 #3+1r @ 10 10-B

BEAM: 10(B-C) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-47.37	-29.56	-15.04	-9.47	-9.47	-9.47	-9.47	-9.47	-13.94	-27.97	-45.39
Mu(+), ton-m:	15.79	9.47	11.33	13.83	14.88	14.01	15.24	14.58	12.10	9.47	15.13
As(-), cm2:	31.46	18.45	9.00	6.93	6.93	6.93	6.93	6.93	8.31	17.38	29.92
As(+), cm2:	9.46	6.93	6.93	8.25	8.89	8.35	9.12	8.71	7.18	6.93	9.05
Vu, ton:	29.12	27.88	23.66	19.43	15.21	10.98	14.61	18.83	23.06	27.28	28.52
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	20.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

10-B 11 #3+1r @ 10 2 #3 @ 17.5 17 #3 @ 22.5 11 #3+1r @ 10 10-C

BEAM: 10(C-D) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-47.27	-29.48	-14.99	-9.45	-9.45	-9.45	-9.45	-9.45	-14.01	-28.05	-45.47
Mu(+), ton-m:	15.76	9.45	11.28	13.78	14.82	13.96	15.19	14.51	12.04	9.45	15.16
As(-), cm2:	31.38	18.40	8.96	6.93	6.93	6.93	6.93	6.93	8.35	17.43	29.99
As(+), cm2:	9.44	6.93	6.93	8.21	8.86	8.33	9.09	8.67	7.14	6.93	9.07
Vu, ton:	29.08	27.85	23.62	19.40	15.17	10.95	14.62	18.84	23.07	27.29	28.53
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	20.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

10-C 11 #3+1r @ 10 2 #3 @ 17.5 17 #3 @ 22.5 11 #3+1r @ 10 10-D

BEAM: 10(D-E) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.03	1.72	2.40	3.09	3.77	4.46	5.14	5.83	6.51	7.20
Mu(-), ton-m:	-50.10	-30.39	-14.62	-10.03	-10.03	-10.03	-10.03	-10.03	-12.76	-29.26	-50.15
Mu(+), ton-m:	16.70	10.03	10.80	14.33	16.38	16.56	17.07	16.10	11.67	10.03	16.72
As(-), cm2:	33.64	19.02	8.73	6.93	6.93	6.93	6.93	6.93	7.58	18.25	33.68
As(+), cm2:	10.03	6.93	6.93	8.55	9.83	9.95	10.27	9.66	6.93	6.93	10.04
Vu, ton:	31.07	29.53	24.84	20.15	15.46	11.21	15.60	20.99	26.92	32.85	34.79
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	17.50	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

10-D 11 #3+1r @ 10 3 #3 @ 15 15 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 10-E

BEAM: 10(E-F) 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:	-50.53	-28.42	-11.29	-10.11	-10.11	-10.11	-10.11	-10.11	-11.02	-27.53	-48.55
Mu(+), ton-m:	16.84	10.11	10.20	15.29	16.35	15.96	16.73	15.75	10.77	10.11	16.18
As(-), cm2:	33.98	17.67	6.93	6.93	6.93	6.93	6.93	6.93	6.93	17.07	32.39
As(+), cm2:	10.12	6.93	6.93	9.15	9.81	9.57	10.05	9.43	6.93	6.93	9.71
Vu, ton:	34.86	32.47	25.84	19.22	13.80	10.01	13.95	18.84	24.99	31.14	33.36
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+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

10-E 11 #3+1r @ 10 6 #3 @ 12.5 16 #3 @ 22.5 5 #3 @ 12.5 11 #3+1r @ 10 10-F

BEAM: 10(F-G) FLOOR: 4

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.68	1.37	2.05	2.74	3.42	4.11	4.79	5.48	6.16	6.85
Mu(-), ton-m:	-47.25	-29.00	-13.91	-9.45	-9.45	-9.45	-9.45	-9.45	-13.46	-27.69	-45.55
Mu(+), ton-m:	15.75	9.45	10.80	14.21	15.11	14.45	14.92	13.97	11.22	9.45	15.18
As(-), cm2:	31.37	18.07	8.30	6.93	6.93	6.93	6.93	6.93	8.01	17.19	30.05
As(+), cm2:	9.44	6.93	6.93	8.48	9.04	8.63	8.92	8.33	6.93	6.93	9.08
Vu, ton:	30.66	29.20	24.78	20.36	15.94	11.51	13.16	17.58	22.01	26.43	27.88
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	17.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

10-F 11 #3+1r @ 10 3 #3 @ 15 19 #3 @ 22.5 11 #3+1r @ 10 10-G

BEAM: 10(G-H) FLOOR: 4

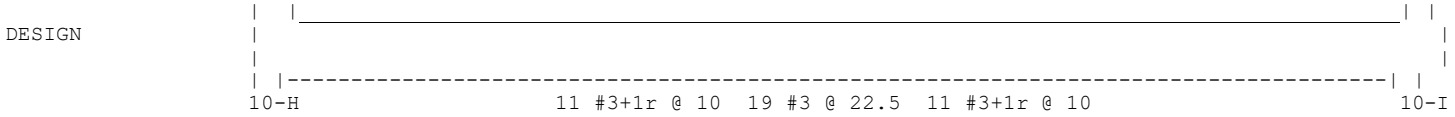
	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-47.05	-29.30	-14.85	-9.41	-9.41	-9.41	-9.41	-9.41	-13.82	-27.82	-45.20
Mu(+), ton-m:	15.68	9.41	11.22	13.78	14.86	14.03	15.20	14.48	11.95	9.41	15.07
As(-), cm2:	31.21	18.27	8.87	6.93	6.93	6.93	6.93	6.93	8.24	17.27	29.77
As(+), cm2:	9.40	6.93	6.93	8.21	8.88	8.37	9.09	8.65	7.09	6.93	9.01
Vu, ton:	29.03	27.80	23.57	19.35	15.12	10.90	14.56	18.79	23.01	27.24	28.47
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

10-G 11 #3+1r @ 10 2 #3 @ 17.5 17 #3 @ 22.5 11 #3+1r @ 10 10-H

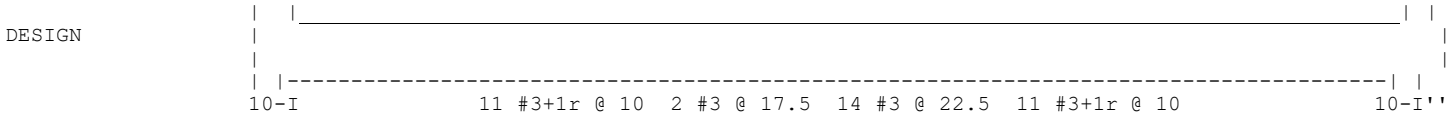
BEAM: 10(H-I) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-46.31	-28.98	-14.84	-9.26	-9.26	-9.26	-9.26	-9.26	-13.52	-27.12	-44.02
Mu(+), ton-m:	15.44	9.26	11.19	13.57	14.54	13.61	14.84	14.28	11.94	9.26	14.67
As(-), cm2:	30.63	18.06	8.87	6.93	6.93	6.93	6.93	6.93	8.05	16.80	28.87
As(+), cm2:	9.24	6.93	6.93	8.08	8.68	8.11	8.87	8.52	7.08	6.93	8.77
Vu, ton:	28.31	27.11	23.02	18.93	14.84	10.75	14.18	18.27	22.36	26.45	27.65
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



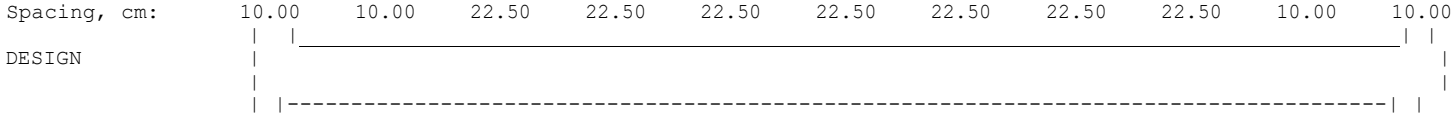
BEAM: 10(I-I'') FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.74 m	c = 1.11 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.92	1.50	2.07	2.65	3.22	3.79	4.37	4.94	5.52	6.09
Mu(-), ton-m:	-46.78	-30.80	-16.98	-9.57	-9.57	-9.57	-9.57	-9.57	-17.97	-31.53	-47.86
Mu(+), ton-m:	15.59	15.03	15.14	15.03	12.83	12.38	13.92	16.24	16.26	16.12	15.95
As(-), cm2:	31.00	19.30	10.21	6.93	6.93	6.93	6.93	6.93	10.83	19.81	31.85
As(+), cm2:	9.34	8.99	9.05	8.99	7.62	7.35	8.30	9.75	9.76	9.67	9.56
Vu, ton:	28.20	27.56	24.29	21.03	17.77	14.51	13.41	17.50	21.59	25.68	26.50
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



BEAM: 9(C-D) FLOOR: 4

	Length:	L = 7.20 m	a = 1.11 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.74 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.68	2.26	2.83	3.41	3.98	4.55	5.13	5.70	6.28	6.85
Mu(-), ton-m:	-35.82	-27.90	-20.22	-12.75	-7.16	-7.16	-7.16	-8.87	-15.35	-23.54	-33.79
Mu(+), ton-m:	24.68	20.43	16.01	11.43	7.16	7.16	8.24	14.41	19.00	22.06	24.51
As(-), cm2:	22.82	17.32	12.27	7.58	6.93	6.93	6.93	6.93	9.19	14.42	21.38
As(+), cm2:	15.17	12.41	9.60	6.93	6.93	6.93	6.93	8.60	11.49	13.46	15.07
Vu, ton:	14.85	14.80	14.51	14.23	13.94	13.66	13.37	12.09	14.55	17.20	17.73
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



Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:05 p. m. 5/01/2020

BEAM: 9(D-E) FLOOR: 4

Length: L = 7.20 m a = 0.35 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.85 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.35	1.03	1.72	2.40	3.09	3.77	4.46	5.14	5.83	6.51	7.20
Mu(-), ton-m:	-44.44	-28.23	-14.87	-9.41	-9.41	-9.41	-9.41	-9.41	-13.16	-27.81	-47.04
Mu(+), ton-m:	14.81	9.41	11.42	12.93	13.57	13.58	15.52	16.42	13.96	10.72	15.68
As(-), cm2:	29.19	17.55	8.89	6.93	6.93	6.93	6.93	6.93	7.83	17.26	31.21
As(+), cm2:	8.85	6.93	6.93	7.69	8.08	8.09	9.29	9.86	8.32	6.93	9.39
Vu, ton:	25.44	24.32	20.90	17.48	14.06	10.64	12.85	17.61	23.41	29.21	31.12
Tu, ton-m:	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
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	20.00	10.00	10.00

DESIGN

9-D 11 #3+1r @ 10 19 #3 @ 22.5 2 #3 @ 15 11 #3+1r @ 10 9-E

BEAM: 9(E-F) 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:	-39.56	-25.62	-13.90	-8.74	-8.74	-8.74	-8.74	-8.74	-10.36	-24.36	-43.71
Mu(+), ton-m:	13.19	9.09	10.16	11.07	10.86	10.92	14.66	16.24	13.65	9.85	14.57
As(-), cm2:	25.53	15.80	8.29	6.93	6.93	6.93	6.93	6.93	6.93	14.96	28.63
As(+), cm2:	7.85	6.93	6.93	6.93	6.93	6.93	8.76	9.75	8.13	6.93	8.70
Vu, ton:	22.38	21.26	18.18	15.10	13.15	12.11	9.66	14.66	20.92	27.18	29.44
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

9-E 11 #3+1r @ 10 22 #3 @ 22.5 11 #3+1r @ 10 9-F

BEAM: 9(F-G) FLOOR: 4

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.56 m c = 0.64 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.66	1.31	1.97	2.62	3.28	3.94	4.59	5.25	5.90	6.56
Mu(-), ton-m:	-42.13	-27.53	-15.19	-8.45	-8.45	-8.45	-8.45	-8.45	-15.55	-27.64	-42.23
Mu(+), ton-m:	14.04	12.96	13.18	13.52	12.19	11.24	12.33	13.67	13.55	13.09	14.08
As(-), cm2:	27.44	17.07	9.09	6.93	6.93	6.93	6.93	6.93	9.31	17.15	27.51
As(+), cm2:	8.38	7.71	7.85	8.05	7.23	6.93	7.32	8.15	8.07	7.78	8.40
Vu, ton:	24.52	23.59	20.46	17.34	14.22	11.09	11.09	14.21	17.35	20.76	21.79
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

9-F 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 9-G

BEAM: 8(Ca-D) FLOOR: 4

	Length:	L = 4.58 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 4.23 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.85	1.27	1.69	2.12	2.54	2.96	3.39	3.81	4.23
Mu(-), ton-m:	0.00	-0.54	-2.03	-4.48	-7.88	-12.34	-18.32	-26.18	-35.99	-47.80	-61.62
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	7.32	11.06	16.17	22.94	31.80	41.91
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	2.28	4.56	6.84	9.13	11.57	16.14	20.88	25.63	29.96	29.96
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	17.50	12.50	12.50

DESIGN

8:Ca 15 #3 @ 22.5 2 #3 @ 17.5 8 #3 @ 12.5 8-D

BEAM: 8(D-E) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.03	1.72	2.40	3.09	3.77	4.46	5.14	5.83	6.51	7.20
Mu(-), ton-m:	-64.67	-38.71	-18.10	-12.93	-12.93	-12.93	-12.93	-12.93	-15.63	-35.45	-59.74
Mu(+), ton-m:	21.56	12.93	12.93	17.80	20.93	21.22	21.23	19.19	13.43	12.93	19.91
As(-), cm2:	44.04	24.91	10.91	7.69	7.69	7.69	7.69	7.69	9.36	22.56	40.60
As(+), cm2:	13.13	7.69	7.69	10.73	12.72	12.92	12.92	11.61	7.99	7.69	12.07
Vu, ton:	40.91	38.80	32.39	25.98	19.56	14.46	20.70	27.01	33.22	39.44	41.48
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	10.00	15.00	22.50	22.50	22.50	15.00	10.00	10.00	10.00

DESIGN

8-D 11 #3+1r @ 10 16 #3 @ 7.5 9 #3 @ 22.5 18 #3 @ 7.5 11 #3+1r @ 10 8-E

BEAM: 8(E-F) FLOOR: 4

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.69	1.37	2.06	2.74	3.43	4.11	4.80	5.48	6.17	6.85
Mu(-), ton-m:	-39.04	-28.73	-18.72	-9.45	-9.45	-9.45	-9.45	-9.45	-11.75	-26.54	-47.23
Mu(+), ton-m:	13.01	11.13	10.26	9.45	9.66	11.59	15.93	17.95	15.66	11.69	15.74
As(-), cm2:	25.15	17.89	11.31	6.93	6.93	6.93	6.93	6.93	6.97	16.41	31.35
As(+), cm2:	7.74	6.93	6.93	6.93	6.93	6.93	9.55	10.82	9.38	6.93	9.43
Vu, ton:	18.33	18.18	17.74	17.30	16.85	16.38	10.69	15.12	21.39	27.66	29.72
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

8-E 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 8-F

BEAM: 8(F-G) FLOOR: 4

	Length:	L = 7.20 m Lu = 6.85 m	a = 0.35 m c = 0.00 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2				
X, m:	0.35	1.03	1.72	2.40	3.09	3.77	4.46	5.14	5.83	6.51	7.20
Mu(-), ton-m:	-61.04	-35.91	-16.13	-12.37	-12.37	-12.37	-12.37	-12.37	-15.69	-36.44	-61.84
Mu(+), ton-m:	20.35	12.37	12.76	18.18	21.09	21.45	21.38	18.89	12.48	12.37	20.61
As(-), cm2:	41.51	22.89	9.67	7.34	7.34	7.34	7.34	7.34	9.40	23.26	42.06
As(+), cm2:	12.35	7.34	7.58	10.97	12.83	13.06	13.02	11.42	7.41	7.34	12.52
Vu, ton:	39.65	37.51	31.01	24.51	18.01	14.78	21.60	28.15	34.65	41.15	43.29
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	10.00	17.50	22.50	22.50	22.50	12.50	10.00	10.00	10.00
DESIGN	8-F	11 #3+1r @ 10	11 #3 @ 10	9 #3 @ 22.5	20 #3 @ 7.5	11 #3+1r @ 10					8-G

BEAM: 7'(C-D) FLOOR: 4

	Length:	L = 7.20 m Lu = 6.21 m	a = 0.64 m c = 0.35 m	Section:	b = 37.5 cm h = 50.0 cm	Sec: Mat:	VG37.5X50 RConcrete2				
X, m:	0.64	1.26	1.88	2.50	3.12	3.74	4.37	4.99	5.61	6.23	6.85
Mu(-), ton-m:	-30.00	-23.27	-16.76	-10.46	-6.00	-6.00	-6.00	-7.08	-12.70	-20.13	-29.85
Mu(+), ton-m:	20.33	16.90	13.31	9.58	6.00	6.00	7.25	12.51	15.97	18.09	19.33
As(-), cm2:	19.12	14.45	10.17	6.22	5.78	5.78	5.78	5.78	7.60	12.36	19.01
As(+), cm2:	12.49	10.26	7.98	5.78	5.78	5.78	5.78	7.48	9.66	11.03	11.84
Vu, ton:	11.80	11.73	11.44	11.15	10.86	10.57	10.28	9.32	11.79	14.59	15.31
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	#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	7'-C		11 #3 @ 10	18 #3 @ 22.5	11 #3 @ 10						7'-D

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

	Length:	L = 7.20 m Lu = 6.50 m	a = 0.35 m c = 0.35 m	Section:	b = 37.5 cm h = 50.0 cm	Sec: Mat:	VG37.5X50 RConcrete2				
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-41.41	-26.96	-14.90	-8.28	-8.28	-8.28	-8.28	-8.28	-13.01	-24.13	-37.96
Mu(+), ton-m:	13.80	10.32	11.53	12.12	11.96	10.70	12.83	13.84	13.21	12.25	12.65
As(-), cm2:	27.76	16.98	8.98	5.78	5.78	5.78	5.78	5.78	7.79	15.03	25.04
As(+), cm2:	8.29	6.13	6.88	7.24	7.14	6.36	7.68	8.31	7.92	7.32	7.57
Vu, ton:	22.91	21.99	18.82	15.66	12.49	9.50	12.32	15.44	18.36	21.29	22.14
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	7'-D		11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10						7'-E

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

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-35.00	-24.67	-15.41	-7.54	-7.12	-7.12	-7.12	-7.12	-12.58	-22.76	-35.61
Mu(+), ton-m:	12.86	12.41	11.42	10.21	9.16	7.88	11.29	13.40	13.65	13.44	12.37
As(-), cm2:	22.78	15.40	9.31	5.78	5.78	5.78	5.78	5.78	7.52	14.11	23.24
As(+), cm2:	7.70	7.42	6.81	6.06	5.78	5.78	6.73	8.04	8.20	8.06	7.40
Vu, ton:	16.68	16.27	14.89	13.51	12.13	10.46	9.20	12.30	15.39	18.49	19.39
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	#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

7'-E 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-F

BEAM: 7'(F-G) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 5.74 m	c = 1.11 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.92	1.50	2.07	2.65	3.22	3.79	4.37	4.94	5.52	6.09
Mu(-), ton-m:	-42.71	-29.40	-17.64	-8.91	-8.54	-8.54	-8.54	-9.14	-17.62	-28.92	-42.22
Mu(+), ton-m:	18.01	17.25	15.72	13.96	10.79	9.98	11.87	15.35	17.05	18.70	19.46
As(-), cm2:	28.81	18.70	10.73	5.78	5.78	5.78	5.78	5.78	10.72	18.36	28.41
As(+), cm2:	10.98	10.48	9.50	8.39	6.42	5.92	7.08	9.27	10.35	11.42	11.92
Vu, ton:	23.71	23.24	20.90	18.55	16.21	13.86	12.56	15.31	18.25	21.19	21.77
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	20.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

7'-F 11 #3 @ 10 16 #3 @ 22.5 11 #3 @ 10 7'-G

BEAM: 12(A-Aa) FLOOR: 5

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.30 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.63	1.26	1.89	2.52	3.15	3.78	4.41	5.04	5.67	6.30
Mu(-), ton-m:	-36.62	-23.66	-12.76	-7.32	-7.32	-7.32	-7.32	-7.32	-9.38	-20.09	-32.86
Mu(+), ton-m:	12.21	10.80	11.78	13.20	12.81	10.36	10.19	10.77	9.30	8.43	10.95
As(-), cm2:	23.40	14.50	7.58	6.93	6.93	6.93	6.93	6.93	6.93	12.19	20.73
As(+), cm2:	7.24	6.93	6.98	7.85	7.62	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	22.53	21.65	18.37	15.10	11.82	8.54	11.52	14.79	18.07	21.35	22.23
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

DESIGN

12-A 11 #3+1r @ 10 18 #3 @ 22.5 11 #3+1r @ 10 12:Aa

BEAM: 12(Aa-B) FLOOR: 5

	Length:	L = 0.90 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		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:	-12.53	-10.16	-7.79	-5.43	-3.08	-2.51	-2.51	-4.44	-6.63	-8.83	-11.03
Mu(+), ton-m:	11.09	8.90	6.70	4.50	2.51	2.51	2.51	4.05	6.35	8.65	10.95
As(-), cm2:	7.44	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:	29.92	29.92	29.92	29.92	29.92	29.92	29.92	29.92	29.92	29.92	29.92
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+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

12:Aa 9 #3+1r @ 10 12-B

BEAM: 12(B-Ba) FLOOR: 5

	Length:	L = 0.90 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		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:	-10.80	-8.62	-6.44	-4.31	-2.57	-2.57	-3.14	-5.56	-7.98	-10.41	-12.85
Mu(+), ton-m:	11.26	8.87	6.48	4.12	2.57	2.57	2.57	4.40	6.55	8.70	10.85
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	7.64
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:	31.44	31.44	31.44	31.44	31.44	31.44	31.44	31.44	31.44	31.44	31.44
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+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

12-B 9 #3+1r @ 10 12:Ba

BEAM: 12(Ba-C) FLOOR: 5

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.95 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.60	1.19	1.79	2.38	2.98	3.57	4.17	4.76	5.36	5.95
Mu(-), ton-m:	-34.31	-21.78	-11.16	-7.35	-7.35	-7.35	-7.35	-7.35	-14.29	-24.39	-36.74
Mu(+), ton-m:	11.44	9.41	9.68	10.24	9.23	10.09	12.23	13.31	13.16	12.49	12.25
As(-), cm2:	21.75	13.28	6.93	6.93	6.93	6.93	6.93	6.93	8.53	14.98	23.48
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	7.26	7.92	7.83	7.41	7.27
Vu, ton:	22.94	22.24	19.19	16.14	13.09	10.04	11.00	14.05	17.10	20.15	20.84
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

12:Ba 11 #3+1r @ 10 17 #3 @ 22.5 11 #3+1r @ 10 12-C

BEAM: 12(C-D) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-40.18	-25.90	-14.09	-8.04	-8.04	-8.04	-8.04	-8.04	-13.49	-25.05	-39.12
Mu(+), ton-m:	13.39	10.17	11.58	12.48	12.21	10.49	12.39	12.85	11.97	10.63	13.04
As(-), cm2:	25.99	15.99	8.41	6.93	6.93	6.93	6.93	6.93	8.04	15.42	25.21
As(+), cm2:	7.97	6.93	6.93	7.41	7.25	6.93	7.36	7.64	7.10	6.93	7.76
Vu, ton:	22.83	21.91	18.74	15.58	12.42	9.26	12.10	15.26	18.43	21.59	22.51
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

12-C 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 12-D

BEAM: 12(D-E) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.97 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.95	1.54	2.14	2.74	3.34	3.93	4.53	5.13	5.73	6.32
Mu(-), ton-m:	-39.77	-26.50	-15.13	-8.26	-8.26	-8.26	-8.26	-8.26	-15.91	-27.38	-41.29
Mu(+), ton-m:	14.06	14.50	14.14	13.76	11.38	10.16	11.33	13.29	13.88	14.56	13.76
As(-), cm2:	25.68	16.38	9.05	6.93	6.93	6.93	6.93	6.93	9.54	16.98	26.81
As(+), cm2:	8.39	8.66	8.44	8.20	6.93	6.93	6.93	7.91	8.27	8.69	8.20
Vu, ton:	22.51	21.90	19.24	16.59	13.93	11.27	11.97	14.66	17.86	21.06	21.80
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

12-D 11 #3+1r @ 10 17 #3 @ 22.5 11 #3+1r @ 10 12-E

BEAM: 12(E-F) FLOOR: 5

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.45 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.42	1.97	2.51	3.06	3.60	4.15	4.69	5.24	5.78	6.33
Mu(-), ton-m:	-43.65	-30.25	-19.26	-10.27	-8.73	-8.73	-8.73	-9.95	-18.67	-29.21	-42.35
Mu(+), ton-m:	21.01	19.71	17.15	14.45	11.24	8.73	11.50	14.95	17.80	20.32	21.77
As(-), cm2:	28.58	18.92	11.65	6.93	6.93	6.93	6.93	6.93	11.28	18.21	27.60
As(+), cm2:	12.78	11.95	10.31	8.63	6.93	6.93	6.93	8.94	10.73	12.33	13.27
Vu, ton:	22.89	22.45	20.00	17.86	15.71	13.57	15.24	17.38	19.52	21.97	22.41
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

12-E 11 #3+1r @ 10 14 #3 @ 22.5 11 #3+1r @ 10 12-F

BEAM: 12(F-G) FLOOR: 5

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.45 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.42	1.96	2.51	3.05	3.60	4.14	4.69	5.23	5.78	6.32
Mu(-), ton-m:	-43.35	-30.13	-19.24	-10.32	-8.67	-8.67	-8.67	-10.00	-18.64	-29.04	-41.98
Mu(+), ton-m:	21.18	19.78	17.12	14.35	11.09	8.67	11.37	14.91	17.84	20.45	22.01
As(-), cm2:	28.36	18.84	11.65	6.93	6.93	6.93	6.93	6.93	11.26	18.10	27.33
As(+), cm2:	12.89	11.99	10.30	8.57	6.93	6.93	6.93	8.91	10.75	12.42	13.43
Vu, ton:	22.61	22.18	19.84	17.75	15.67	13.58	15.16	17.25	19.34	21.67	22.10
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

12-F 11 #3+1r @ 10 14 #3 @ 22.5 11 #3+1r @ 10 12-G

BEAM: 12(G-H) FLOOR: 5

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.98 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.67	3.27	3.86	4.46	5.06	5.66	6.25	6.85
Mu(-), ton-m:	-42.25	-28.15	-16.48	-8.45	-8.45	-8.45	-8.45	-8.45	-14.61	-25.76	-38.85
Mu(+), ton-m:	14.08	14.13	13.55	12.98	11.14	10.16	11.57	14.14	14.51	14.96	14.64
As(-), cm2:	27.53	17.49	9.90	6.93	6.93	6.93	6.93	6.93	8.72	15.89	25.01
As(+), cm2:	8.40	8.43	8.07	7.72	6.93	6.93	6.93	8.43	8.67	8.95	8.75
Vu, ton:	22.12	21.38	18.18	15.23	12.57	11.24	13.90	16.56	19.21	21.87	22.48
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

12-G 11 #3+1r @ 10 17 #3 @ 22.5 11 #3+1r @ 10 12-H

BEAM: 12(H-I) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-38.70	-25.10	-13.81	-7.74	-7.74	-7.74	-7.74	-7.74	-13.31	-24.37	-37.79
Mu(+), ton-m:	12.90	10.32	11.45	12.09	11.64	9.83	11.84	12.48	11.85	10.79	12.60
As(-), cm2:	24.90	15.45	8.23	6.93	6.93	6.93	6.93	6.93	7.93	14.97	24.23
As(+), cm2:	7.67	6.93	6.93	7.17	6.93	6.93	7.02	7.41	7.03	6.93	7.48
Vu, ton:	21.66	20.79	17.82	14.85	11.88	8.91	11.59	14.56	17.53	20.50	21.37
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

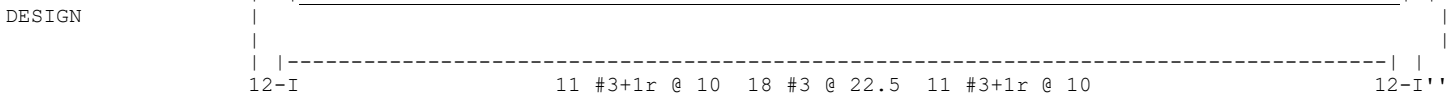
12-H 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 12-I

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:05 p. m. 5/01/2020

BEAM: 12(I-I'') FLOOR: 5

Length: L = 7.20 m a = 0.35 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.21 m c = 0.64 m h = 50.0 cm Mat: RConcrete2

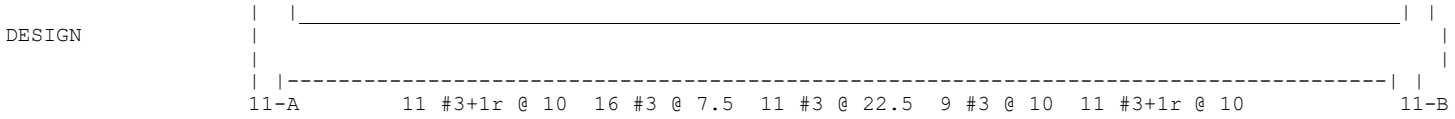
X, m:	0.35	0.97	1.59	2.21	2.83	3.46	4.08	4.70	5.32	5.94	6.56
Mu(-), ton-m:	-39.26	-25.68	-14.29	-8.12	-8.12	-8.12	-8.12	-8.12	-15.52	-26.91	-40.59
Mu(+), ton-m:	13.09	12.74	13.12	13.31	11.84	10.03	11.61	12.81	12.95	12.61	13.53
As(-), cm2:	25.31	15.84	8.53	6.93	6.93	6.93	6.93	6.93	9.29	16.66	26.29
As(+), cm2:	7.79	7.57	7.81	7.92	7.02	6.93	6.93	7.61	7.70	7.49	8.06
Vu, ton:	22.31	21.56	18.69	15.82	12.95	10.16	11.99	14.86	17.73	20.70	21.56
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: 11(A-B) FLOOR: 5

Length: L = 7.20 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.85 m c = 0.35 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.68	1.37	2.05	2.74	3.42	4.11	4.79	5.48	6.16	6.85
Mu(-), ton-m:	-60.16	-35.06	-14.62	-12.03	-12.03	-12.03	-12.03	-12.03	-13.07	-31.59	-55.59
Mu(+), ton-m:	20.05	12.03	12.03	16.27	19.88	21.12	20.81	17.54	12.03	12.03	18.53
As(-), cm2:	40.90	22.28	8.73	7.14	7.14	7.14	7.14	7.14	7.78	19.85	37.98
As(+), cm2:	12.16	7.14	7.14	9.76	12.05	12.85	12.65	10.57	7.14	7.14	11.19
Vu, ton:	42.18	39.93	33.09	26.24	19.39	12.59	16.85	23.36	29.88	36.40	38.54
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	15.00	22.50	22.50	22.50	20.00	12.50	10.00	10.00



BEAM: 11(B-C) FLOOR: 5

Length: L = 7.20 m a = 0.35 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.50 m c = 0.35 m h = 50.0 cm Mat: RConcrete2

X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-57.54	-34.34	-15.79	-11.51	-11.51	-11.51	-11.51	-11.51	-14.77	-32.87	-55.70
Mu(+), ton-m:	19.18	11.51	11.51	16.20	19.26	19.70	19.61	16.91	11.76	11.51	18.57
As(-), cm2:	39.21	21.77	9.46	6.93	6.93	6.93	6.93	6.93	8.83	20.73	38.05
As(+), cm2:	11.60	6.93	6.93	9.72	11.66	11.94	11.88	10.16	6.97	6.93	11.21
Vu, ton:	38.72	36.99	31.07	25.14	19.21	12.96	18.65	24.58	30.51	36.43	38.16
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	10.00	17.50	22.50	22.50	22.50	17.50	12.50	10.00	10.00

BEAM: 11(C-D) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-57.36	-34.16	-15.62	-11.47	-11.47	-11.47	-11.47	-11.47	-14.92	-33.13	-56.07
Mu(+), ton-m:	19.12	11.47	11.47	16.33	19.37	19.77	19.62	16.84	11.65	11.47	18.69
As(-), cm2:	39.09	21.64	9.36	6.93	6.93	6.93	6.93	6.93	8.92	20.92	38.28
As(+), cm2:	11.57	6.93	6.93	9.80	11.72	11.98	11.89	10.12	6.93	6.93	11.29
Vu, ton:	38.71	36.97	31.03	25.09	19.14	12.79	18.75	24.69	30.64	36.58	38.32
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	17.50	10.00	10.00	10.00

DESIGN

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

BEAM: 11(D-E) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-57.48	-34.26	-15.69	-11.50	-11.50	-11.50	-11.50	-11.50	-14.87	-33.06	-55.99
Mu(+), ton-m:	19.16	11.50	11.50	16.29	19.35	19.77	19.65	16.89	11.71	11.50	18.66
As(-), cm2:	39.17	21.71	9.40	6.93	6.93	6.93	6.93	6.93	8.89	20.87	38.23
As(+), cm2:	11.59	6.93	6.93	9.78	11.71	11.98	11.90	10.15	6.94	6.93	11.27
Vu, ton:	38.76	37.02	31.08	25.13	19.19	12.86	18.73	24.68	30.62	36.56	38.30
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	17.50	12.50	10.00	10.00

DESIGN

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

BEAM: 11(E-F) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-57.52	-34.29	-15.71	-11.50	-11.50	-11.50	-11.50	-11.50	-14.80	-32.95	-55.86
Mu(+), ton-m:	19.17	11.50	11.50	16.26	19.33	19.79	19.67	16.93	11.73	11.50	18.62
As(-), cm2:	39.20	21.73	9.41	6.93	6.93	6.93	6.93	6.93	8.84	20.79	38.15
As(+), cm2:	11.60	6.93	6.93	9.76	11.70	11.99	11.92	10.18	6.95	6.93	11.25
Vu, ton:	38.79	37.05	31.11	25.16	19.22	12.90	18.70	24.65	30.59	36.54	38.28
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+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	17.50	12.50	10.00	10.00

DESIGN

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

BEAM: 11(F-G) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-55.82	-33.46	-15.55	-11.16	-11.16	-11.16	-11.16	-11.16	-14.76	-32.29	-54.35
Mu(+), ton-m:	18.61	11.16	11.16	15.85	18.59	18.83	18.91	16.47	11.70	11.16	18.12
As(-), cm2:	38.12	21.15	9.32	6.93	6.93	6.93	6.93	6.93	8.82	20.34	37.14
As(+), cm2:	11.24	6.93	6.93	9.50	11.23	11.38	11.43	9.89	6.94	6.93	10.93
Vu, ton:	37.22	35.56	29.89	24.22	18.54	12.85	18.08	23.76	29.43	35.11	36.76
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+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

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

BEAM: 11(G-H) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.04	1.72	2.41	3.09	3.78	4.46	5.15	5.83	6.52	7.20
Mu(-), ton-m:	-57.85	-33.44	-14.33	-11.59	-11.59	-11.59	-11.59	-11.59	-13.31	-33.29	-57.94
Mu(+), ton-m:	19.28	11.59	11.59	16.56	20.27	20.95	20.08	16.81	11.59	11.59	19.31
As(-), cm2:	39.40	21.14	8.55	6.93	6.93	6.93	6.93	6.93	7.92	21.03	39.46
As(+), cm2:	11.67	6.93	6.93	9.95	12.30	12.74	12.18	10.10	6.93	6.93	11.69
Vu, ton:	38.93	36.79	30.27	23.76	17.24	12.52	19.32	26.16	33.01	39.86	42.11
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	12.50	20.00	22.50	22.50	22.50	15.00	10.00	10.00	10.00

DESIGN

11-G 11 #3+1r @ 10 11 #3 @ 10 10 #3 @ 22.5 16 #3 @ 7.5 11 #3+1r @ 10 11-H

BEAM: 11(H-I) FLOOR: 5

	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:	-58.09	-32.65	-12.09	-11.62	-11.62	-11.62	-11.62	-11.62	-11.62	-31.61	-56.79
Mu(+), ton-m:	19.36	11.62	11.62	17.02	21.11	22.52	21.38	17.56	11.62	11.62	18.93
As(-), cm2:	39.55	20.58	7.17	6.93	6.93	6.93	6.93	6.93	6.93	19.86	38.73
As(+), cm2:	11.72	6.93	6.93	10.24	12.84	13.76	13.02	10.57	6.93	6.93	11.44
Vu, ton:	39.24	36.79	30.02	23.25	16.47	9.70	16.11	22.88	29.65	36.43	38.87
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+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

11-H 11 #3+1r @ 10 10 #3 @ 10 13 #3 @ 22.5 10 #3 @ 10 11 #3+1r @ 10 11-I

BEAM: 11(I-I'') FLOOR: 5

	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:	-59.37	-32.95	-11.89	-11.89	-11.89	-11.89	-11.89	-11.89	-11.89	-33.04	-59.43
Mu(+), ton-m:	19.79	11.89	11.89	17.94	22.23	23.80	22.39	18.11	11.89	11.89	19.81
As(-), cm2:	40.36	20.79	7.05	7.05	7.05	7.05	7.05	7.05	7.05	20.85	40.40
As(+), cm2:	11.99	7.05	7.05	10.82	13.57	14.59	13.67	10.92	7.05	7.05	12.01
Vu, ton:	40.42	37.85	30.75	23.64	16.54	9.44	16.52	23.62	30.73	37.83	40.40
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	10.00	20.00	22.50	22.50	22.50	20.00	10.00	10.00	10.00
DESIGN	11-I	11 #3+1r @ 10	16 #3 @ 7.5	11 #3 @ 22.5	16 #3 @ 7.5	11 #3+1r @ 10	11-I''				

BEAM: 10(A-B) FLOOR: 5

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.68	1.37	2.05	2.74	3.42	4.11	4.79	5.48	6.16	6.85
Mu(-), ton-m:	-48.83	-29.89	-14.23	-9.77	-9.77	-9.77	-9.77	-9.77	-12.45	-26.51	-44.46
Mu(+), ton-m:	16.28	9.77	9.89	13.69	15.11	15.06	15.81	14.91	11.83	9.77	14.82
As(-), cm2:	32.62	18.68	8.49	6.93	6.93	6.93	6.93	6.93	7.39	16.39	29.21
As(+), cm2:	9.77	6.93	6.93	8.16	9.04	9.01	9.47	8.91	7.02	6.93	8.86
Vu, ton:	32.00	30.49	25.92	21.34	16.77	12.19	13.03	17.61	22.19	26.76	28.26
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	15.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	10-A	11 #3+1r @ 10	5 #3 @ 12.5	18 #3 @ 22.5	11 #3+1r @ 10	10-B					

BEAM: 10(B-C) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-47.80	-29.91	-15.30	-9.56	-9.56	-9.56	-9.56	-9.56	-14.07	-28.14	-45.59
Mu(+), ton-m:	15.93	9.56	11.47	13.91	14.92	14.01	15.33	14.76	12.35	9.56	15.20
As(-), cm2:	31.80	18.69	9.15	6.93	6.93	6.93	6.93	6.93	8.39	17.49	30.08
As(+), cm2:	9.55	6.93	6.93	8.29	8.92	8.35	9.17	8.82	7.33	6.93	9.09
Vu, ton:	29.24	28.01	23.78	19.56	15.33	11.11	14.66	18.88	23.11	27.33	28.57
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	20.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	10-B	11 #3+1r @ 10	2 #3 @ 17.5	17 #3 @ 22.5	11 #3+1r @ 10	10-C					

BEAM: 10(C-D) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-47.83	-29.93	-15.30	-9.57	-9.57	-9.57	-9.57	-9.57	-14.11	-28.18	-45.63
Mu(+), ton-m:	15.94	9.57	11.42	13.86	14.87	13.99	15.35	14.80	12.39	9.57	15.21
As(-), cm2:	31.82	18.70	9.16	6.93	6.93	6.93	6.93	6.93	8.42	17.51	30.11
As(+), cm2:	9.56	6.93	6.93	8.26	8.89	8.34	9.19	8.84	7.35	6.93	9.10
Vu, ton:	29.26	28.02	23.80	19.57	15.35	11.12	14.66	18.88	23.11	27.33	28.57
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	20.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

10-C 11 #3+1r @ 10 2 #3 @ 17.5 17 #3 @ 22.5 11 #3+1r @ 10 10-D

BEAM: 10(D-E) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.03	1.72	2.40	3.09	3.77	4.46	5.14	5.83	6.51	7.20
Mu(-), ton-m:	-49.94	-30.35	-14.68	-9.99	-9.99	-9.99	-9.99	-9.99	-11.89	-28.21	-48.92
Mu(+), ton-m:	16.65	9.99	10.67	14.35	16.50	16.49	16.51	15.43	10.87	9.99	16.31
As(-), cm2:	33.51	18.99	8.77	6.93	6.93	6.93	6.93	6.93	7.05	17.54	32.69
As(+), cm2:	10.00	6.93	6.93	8.56	9.91	9.90	9.92	9.23	6.93	6.93	9.79
Vu, ton:	31.01	29.47	24.78	20.09	15.41	11.10	15.47	20.85	26.78	32.71	34.66
Tu, ton-m:	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
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

10-D 11 #3+1r @ 10 3 #3 @ 15 16 #3 @ 22.5 5 #3 @ 12.5 11 #3+1r @ 10 10-E

BEAM: 10(E-F) FLOOR: 5

	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:	-48.74	-26.98	-10.20	-9.75	-9.75	-9.75	-9.75	-9.75	-9.98	-26.13	-46.80
Mu(+), ton-m:	16.25	9.75	9.75	14.57	15.98	15.98	16.41	15.07	9.75	9.75	15.60
As(-), cm2:	32.54	16.70	6.93	6.93	6.93	6.93	6.93	6.93	6.93	16.14	31.02
As(+), cm2:	9.75	6.93	6.93	8.71	9.58	9.58	9.85	9.01	6.93	6.93	9.34
Vu, ton:	33.88	31.48	24.86	18.23	12.82	9.01	12.96	17.85	24.00	30.16	32.38
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	17.50	22.50	22.50	22.50	22.50	22.50	20.00	10.00	10.00

DESIGN

10-E 11 #3+1r @ 10 5 #3 @ 12.5 18 #3 @ 22.5 3 #3 @ 12.5 11 #3+1r @ 10 10-F

BEAM: 10(F-G) FLOOR: 5

	Length:	L = 7.20 m Lu = 6.85 m	a = 0.00 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.00	0.68	1.37	2.05	2.74	3.42	4.11	4.79	5.48	6.16	6.85
Mu(-), ton-m:	-46.50	-28.32	-13.32	-9.30	-9.30	-9.30	-9.30	-9.30	-13.39	-27.47	-45.19
Mu(+), ton-m:	15.50	9.30	10.05	13.57	14.61	14.35	15.12	14.20	11.33	9.30	15.06
As(-), cm2:	30.78	17.61	7.93	6.93	6.93	6.93	6.93	6.93	7.97	17.04	29.76
As(+), cm2:	9.28	6.93	6.93	8.08	8.72	8.57	9.04	8.47	6.93	6.93	9.01
Vu, ton:	30.57	29.11	24.69	20.27	15.85	11.42	12.97	17.39	21.81	26.24	27.69
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	17.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	10-F	11 #3+1r @ 10		3 #3 @ 15		19 #3 @ 22.5		11 #3+1r @ 10			10-G

BEAM: 10(G-H) FLOOR: 5

	Length:	L = 7.20 m Lu = 6.50 m	a = 0.35 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-47.67	-29.81	-15.22	-9.53	-9.53	-9.53	-9.53	-9.53	-14.06	-28.13	-45.59
Mu(+), ton-m:	15.89	9.53	11.47	13.93	14.93	14.01	15.30	14.70	12.27	9.53	15.20
As(-), cm2:	31.70	18.62	9.11	6.93	6.93	6.93	6.93	6.93	8.39	17.48	30.07
As(+), cm2:	9.53	6.93	6.93	8.30	8.93	8.36	9.15	8.78	7.28	6.93	9.09
Vu, ton:	29.20	27.96	23.74	19.51	15.29	11.06	14.66	18.88	23.11	27.33	28.57
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	20.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	10-G	11 #3+1r @ 10		2 #3 @ 17.5		17 #3 @ 22.5		11 #3+1r @ 10			10-H

BEAM: 10(H-I) FLOOR: 5

	Length:	L = 7.20 m Lu = 6.50 m	a = 0.35 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-46.92	-29.46	-15.19	-9.38	-9.38	-9.38	-9.38	-9.38	-13.94	-27.68	-44.70
Mu(+), ton-m:	15.64	9.38	11.51	13.76	14.61	13.60	15.00	14.58	12.37	9.61	14.90
As(-), cm2:	31.11	18.39	9.09	6.93	6.93	6.93	6.93	6.93	8.31	17.17	29.39
As(+), cm2:	9.37	6.93	6.93	8.20	8.73	8.10	8.97	8.71	7.34	6.93	8.91
Vu, ton:	28.46	27.26	23.17	19.08	14.99	10.90	14.32	18.41	22.50	26.59	27.79
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+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	10-H	11 #3+1r @ 10		2 #3 @ 17.5		17 #3 @ 22.5		11 #3+1r @ 10			10-I

BEAM: 10(I-I'') FLOOR: 5

	Length:	L = 7.20 m Lu = 5.74 m	a = 0.35 m c = 1.11 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	0.92	1.50	2.07	2.65	3.22	3.79	4.37	4.94	5.52	6.09
Mu(-), ton-m:	-46.66	-30.75	-17.01	-9.55	-9.55	-9.55	-9.55	-9.55	-17.81	-31.41	-47.77
Mu(+), ton-m:	15.55	15.34	15.44	15.36	13.12	12.40	13.61	15.87	15.86	15.67	15.92
As(-), cm2:	30.90	19.27	10.23	6.93	6.93	6.93	6.93	6.93	10.73	19.72	31.78
As(+), cm2:	9.31	9.18	9.24	9.19	7.81	7.36	8.11	9.51	9.50	9.39	9.55
Vu, ton:	28.08	27.44	24.18	20.91	17.65	14.39	13.47	17.56	21.65	25.74	26.56
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

10-I 11 #3+1r @ 10 2 #3 @ 17.5 14 #3 @ 22.5 11 #3+1r @ 10 10-I''

BEAM: 9(C-D) FLOOR: 5

	Length:	L = 7.20 m Lu = 5.74 m	a = 1.11 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	1.11	1.68	2.26	2.83	3.41	3.98	4.55	5.13	5.70	6.28	6.85
Mu(-), ton-m:	-36.77	-28.61	-20.70	-12.99	-7.35	-7.35	-7.35	-9.06	-15.58	-23.62	-33.81
Mu(+), ton-m:	24.77	20.48	16.02	11.40	7.35	7.35	8.71	15.12	19.94	23.05	25.63
As(-), cm2:	23.50	17.81	12.58	7.72	6.93	6.93	6.93	6.93	9.33	14.48	21.40
As(+), cm2:	15.23	12.44	9.60	6.93	6.93	6.93	6.93	9.04	12.09	14.11	15.81
Vu, ton:	15.47	15.42	15.13	14.85	14.56	14.28	13.99	12.50	14.73	17.38	17.91
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

9-C 11 #3+1r @ 10 16 #3 @ 22.5 11 #3+1r @ 10 9-D

BEAM: 9(D-E) FLOOR: 5

	Length:	L = 7.20 m Lu = 6.85 m	a = 0.35 m c = 0.00 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	1.03	1.72	2.40	3.09	3.77	4.46	5.14	5.83	6.51	7.20
Mu(-), ton-m:	-44.88	-28.69	-15.30	-9.16	-9.16	-9.16	-9.16	-9.16	-12.31	-26.75	-45.82
Mu(+), ton-m:	14.96	9.19	11.42	13.02	13.74	13.52	14.99	15.87	13.38	10.05	15.27
As(-), cm2:	29.53	17.86	9.16	6.93	6.93	6.93	6.93	6.93	7.31	16.55	30.25
As(+), cm2:	8.95	6.93	6.93	7.74	8.19	8.05	8.96	9.51	7.96	6.93	9.14
Vu, ton:	25.38	24.25	20.83	17.41	13.99	10.57	12.57	17.32	23.13	28.93	30.84
Tu, ton-m:	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
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

9-D 11 #3+1r @ 10 19 #3 @ 22.5 2 #3 @ 17.5 11 #3+1r @ 10 9-E

BEAM: 9(E-F) FLOOR: 5

	Length:	L = 7.20 m Lu = 7.20 m	a = 0.00 m c = 0.00 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 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:	-37.84	-24.26	-12.89	-8.39	-8.39	-8.39	-8.39	-8.39	-9.29	-22.94	-41.93
Mu(+), ton-m:	12.61	8.39	9.06	10.32	10.47	10.88	14.25	15.47	12.52	8.39	13.98
As(-), cm2:	24.27	14.90	7.66	6.93	6.93	6.93	6.93	6.93	6.93	14.03	27.29
As(+), cm2:	7.49	6.93	6.93	6.93	6.93	6.93	8.50	9.26	7.44	6.93	8.33
Vu, ton:	22.02	20.90	17.82	14.74	12.79	11.75	9.29	14.30	20.56	26.82	29.08
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+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

9-E 11 #3+1r @ 10 22 #3 @ 22.5 11 #3+1r @ 10 9-F

BEAM: 9(F-G) FLOOR: 5

	Length:	L = 7.20 m Lu = 6.56 m	a = 0.00 m c = 0.64 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.00	0.66	1.31	1.97	2.62	3.28	3.94	4.59	5.25	5.90	6.56
Mu(-), ton-m:	-40.28	-25.99	-14.01	-8.26	-8.26	-8.26	-8.26	-8.26	-15.05	-26.93	-41.29
Mu(+), ton-m:	13.43	11.76	12.27	12.85	11.75	11.16	12.32	13.35	12.92	12.18	13.76
As(-), cm2:	26.06	16.04	8.35	6.93	6.93	6.93	6.93	6.93	9.00	16.67	26.81
As(+), cm2:	7.99	6.97	7.28	7.64	6.96	6.93	7.31	7.94	7.68	7.23	8.20
Vu, ton:	24.20	23.26	20.14	17.02	13.89	10.77	10.89	14.01	17.13	20.41	21.43
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

9-F 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 9-G

BEAM: 8(Cb-D) FLOOR: 5

	Length:	L = 2.46 m Lu = 2.11 m	a = 0.00 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.90	2.11
Mu(-), ton-m:	0.00	-0.32	-1.12	-2.40	-4.15	-6.39	-9.09	-12.28	-16.11	-20.42	-25.25
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	7.29	9.66	12.40	15.55
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	2.37	4.74	7.11	9.48	11.85	14.22	16.59	18.54	18.54	18.54
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

8:Cb 10 #3 @ 22.5 8-D

BEAM: 8(D-E) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.03	1.72	2.40	3.09	3.77	4.46	5.14	5.83	6.51	7.20
Mu(-), ton-m:	-62.36	-36.84	-16.82	-12.47	-12.47	-12.47	-12.47	-12.47	-15.08	-35.15	-59.55
Mu(+), ton-m:	20.79	12.47	13.44	18.80	21.76	21.64	20.92	18.44	12.47	12.47	19.85
As(-), cm2:	42.43	23.55	10.11	7.41	7.41	7.41	7.41	7.41	9.02	22.34	40.47
As(+), cm2:	12.64	7.41	8.00	11.37	13.27	13.19	12.72	11.13	7.41	7.41	12.03
Vu, ton:	40.12	38.01	31.60	25.19	18.77	14.35	20.72	27.02	33.24	39.45	41.50
Tu, ton-m:	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
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	15.00	10.00	10.00	10.00

DESIGN

8-D 11 #3+1r @ 10 12 #3 @ 10 9 #3 @ 22.5 18 #3 @ 7.5 11 #3+1r @ 10 8-E

BEAM: 8(E-F) FLOOR: 5

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.69	1.37	2.06	2.74	3.43	4.11	4.80	5.48	6.17	6.85
Mu(-), ton-m:	-38.32	-28.10	-18.18	-9.16	-9.16	-9.16	-9.16	-9.16	-11.11	-25.50	-45.82
Mu(+), ton-m:	12.77	9.77	9.18	9.16	9.16	11.55	16.06	18.03	15.61	11.44	15.27
As(-), cm2:	24.62	17.46	10.97	6.93	6.93	6.93	6.93	6.93	6.93	15.72	30.25
As(+), cm2:	7.59	6.93	6.93	6.93	6.93	6.93	9.63	10.87	9.35	6.93	9.14
Vu, ton:	18.23	18.09	17.64	17.20	16.75	16.28	10.59	14.68	20.95	27.22	29.28
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

8-E 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 8-F

BEAM: 8(F-G) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.03	1.72	2.40	3.09	3.77	4.46	5.14	5.83	6.51	7.20
Mu(-), ton-m:	-60.33	-35.37	-15.75	-12.10	-12.10	-12.10	-12.10	-12.10	-14.77	-35.30	-60.48
Mu(+), ton-m:	20.11	12.10	12.36	18.00	21.09	21.43	21.08	18.42	12.10	12.10	20.16
As(-), cm2:	41.01	22.50	9.44	7.18	7.18	7.18	7.18	7.18	8.83	22.45	41.11
As(+), cm2:	12.20	7.18	7.34	10.86	12.83	13.05	12.83	11.12	7.18	7.18	12.23
Vu, ton:	39.42	37.29	30.79	24.29	17.79	14.22	21.03	27.84	34.36	40.86	42.99
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+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	12.50	10.00	10.00	10.00

DESIGN

8-F 11 #3+1r @ 10 11 #3 @ 10 10 #3 @ 22.5 18 #3 @ 7.5 11 #3+1r @ 10 8-G

BEAM: 7'(C-D) FLOOR: 5

Length: L = 7.20 m a = 0.64 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 6.21 m c = 0.35 m h = 50.0 cm Mat: RConcrete2

X, m:	0.64	1.26	1.88	2.50	3.12	3.74	4.37	4.99	5.61	6.23	6.85
Mu(-), ton-m:	-31.16	-24.16	-17.38	-10.82	-6.23	-6.23	-6.23	-7.37	-13.09	-20.47	-30.19
Mu(+), ton-m:	20.74	17.21	13.52	9.69	6.23	6.23	7.69	13.22	16.95	19.19	20.60
As(-), cm2:	19.96	15.06	10.57	6.44	5.78	5.78	5.78	5.78	7.85	12.58	19.26
As(+), cm2:	12.76	10.46	8.11	5.78	5.78	5.78	5.78	7.92	10.29	11.74	12.67
Vu, ton:	12.26	12.18	11.89	11.60	11.31	11.02	10.73	9.54	11.90	14.70	15.43
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

7'-C 11 #3 @ 10 18 #3 @ 22.5 11 #3 @ 10 7'-D

BEAM: 7'(D-E) FLOOR: 5

Length: L = 7.20 m a = 0.35 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 6.50 m c = 0.35 m h = 50.0 cm Mat: RConcrete2

X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-42.69	-28.03	-15.73	-8.54	-8.54	-8.54	-8.54	-8.54	-12.96	-24.08	-37.94
Mu(+), ton-m:	14.23	10.71	11.83	12.29	12.09	10.66	12.82	14.02	13.53	12.72	12.65
As(-), cm2:	28.79	17.73	9.51	5.78	5.78	5.78	5.78	5.78	7.76	15.00	25.02
As(+), cm2:	8.56	6.37	7.06	7.34	7.22	6.34	7.67	8.43	8.12	7.61	7.57
Vu, ton:	23.28	22.35	19.19	16.02	12.86	9.79	12.39	15.51	18.44	21.36	22.22
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

7'-D 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-E

BEAM: 7'(E-F) FLOOR: 5

Length: L = 7.20 m a = 0.35 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 6.50 m c = 0.35 m h = 50.0 cm Mat: RConcrete2

X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-35.13	-24.77	-15.48	-7.58	-7.10	-7.10	-7.10	-7.10	-12.53	-22.68	-35.51
Mu(+), ton-m:	12.79	12.35	11.37	10.16	9.13	7.87	11.32	13.46	13.72	13.52	12.47
As(-), cm2:	22.88	15.47	9.35	5.78	5.78	5.78	5.78	5.78	7.49	14.06	23.17
As(+), cm2:	7.66	7.38	6.77	6.03	5.78	5.78	6.75	8.08	8.24	8.11	7.45
Vu, ton:	16.69	16.28	14.90	13.52	12.14	10.47	9.14	12.23	15.33	18.42	19.33
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	#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

7'-E 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-F

BEAM: 7'(F-G) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 5.74 m	c = 1.11 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.92	1.50	2.07	2.65	3.22	3.79	4.37	4.94	5.52	6.09
Mu(-), ton-m:	-42.50	-29.23	-17.52	-8.85	-8.50	-8.50	-8.50	-9.06	-17.53	-28.82	-42.11
Mu(+), ton-m:	17.96	17.21	15.70	13.97	10.82	9.97	11.80	15.23	16.89	18.50	19.22
As(-), cm2:	28.64	18.58	10.65	5.78	5.78	5.78	5.78	5.78	10.66	18.29	28.32
As(+), cm2:	10.94	10.46	9.49	8.40	6.43	5.92	7.04	9.19	10.25	11.29	11.76
Vu, ton:	23.59	23.12	20.78	18.43	16.09	13.75	12.50	15.28	18.22	21.17	21.75
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

7'-F 11 #3 @ 10 16 #3 @ 22.5 11 #3 @ 10 7'-G

BEAM: 12(A-Aa) FLOOR: 6

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.30 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.63	1.26	1.89	2.52	3.15	3.78	4.41	5.04	5.67	6.30
Mu(-), ton-m:	-28.25	-18.36	-10.05	-5.65	-5.65	-5.65	-5.65	-5.65	-8.24	-16.62	-26.51
Mu(+), ton-m:	9.42	10.04	10.12	10.86	10.08	7.83	8.28	9.05	8.32	8.31	8.84
As(-), cm2:	17.56	11.08	6.93	6.93	6.93	6.93	6.93	6.93	6.93	9.98	16.39
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:	16.83	16.18	13.77	11.36	8.94	6.55	8.96	11.37	13.78	16.20	16.85
Tu, ton-m:	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
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

12-A 11 #3+1r @ 10 18 #3 @ 22.5 11 #3+1r @ 10 12:Aa

BEAM: 12(Aa-B) FLOOR: 6

	Length:	L = 0.90 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		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:	-11.51	-9.36	-7.22	-5.08	-2.95	-2.30	-2.30	-3.94	-5.89	-7.84	-9.80
Mu(+), ton-m:	9.90	7.95	6.00	4.04	2.30	2.30	2.30	3.52	5.60	7.68	9.75
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
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:	27.30	27.30	27.30	27.30	27.30	27.30	27.30	27.30	27.30	27.30	27.30
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+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

12:Aa 9 #3+1r @ 10 12-B

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:06 p. m. 5/01/2020

BEAM: 12(B-Ba) FLOOR: 6

	Length:	L = 0.90 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		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:	-9.63	-7.68	-5.75	-3.85	-2.35	-2.35	-3.00	-5.17	-7.35	-9.54	-11.73
Mu(+), ton-m:	9.93	7.79	5.67	3.56	2.35	2.35	2.35	3.96	5.89	7.81	9.73
As(-), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.95
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:	28.31	28.31	28.31	28.31	28.31	28.31	28.31	28.31	28.31	28.31	28.31
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

12-B 9 #3+1r @ 10 12:Ba

BEAM: 12(Ba-C) FLOOR: 6

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.95 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.60	1.19	1.79	2.38	2.98	3.57	4.17	4.76	5.36	5.95
Mu(-), ton-m:	-27.52	-17.87	-9.63	-5.84	-5.84	-5.84	-5.84	-5.86	-11.78	-19.64	-29.18
Mu(+), ton-m:	9.17	9.19	8.70	8.63	7.42	7.57	9.31	10.54	10.95	11.10	10.84
As(-), cm2:	17.07	10.77	6.93	6.93	6.93	6.93	6.93	6.93	6.98	11.90	18.19
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:	17.37	16.86	14.62	12.38	10.14	7.91	8.66	10.90	13.14	15.38	15.89
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+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

12:Ba 11 #3+1r @ 10 17 #3 @ 22.5 11 #3+1r @ 10 12-C

BEAM: 12(C-D) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-30.79	-20.04	-11.15	-6.16	-6.16	-6.16	-6.16	-6.16	-10.60	-19.29	-29.87
Mu(+), ton-m:	10.26	8.85	9.41	9.76	9.34	8.05	9.43	10.00	9.67	9.17	9.96
As(-), cm2:	19.30	12.16	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.67	18.66
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:	17.07	16.39	14.06	11.74	9.42	7.09	9.16	11.48	13.81	16.13	16.81
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

12-C 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 12-D

BEAM: 12(D-E) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.97 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.95	1.54	2.14	2.74	3.34	3.93	4.53	5.13	5.73	6.32
Mu(-), ton-m:	-31.54	-21.24	-12.37	-6.79	-6.79	-6.79	-6.79	-7.52	-14.06	-23.12	-33.97
Mu(+), ton-m:	13.52	12.93	11.84	10.90	8.52	7.89	9.29	11.29	12.34	13.63	13.88
As(-), cm2:	19.82	12.93	7.34	6.93	6.93	6.93	6.93	6.93	8.39	14.15	21.51
As(+), cm2:	8.05	7.69	7.02	6.93	6.93	6.93	6.93	6.93	7.33	8.12	8.27
Vu, ton:	17.74	17.29	15.34	13.38	11.43	9.48	10.13	12.09	14.18	16.53	17.07
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

12-D 11 #3+1r @ 10 17 #3 @ 22.5 11 #3+1r @ 10 12-E

BEAM: 12(E-F) FLOOR: 6

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.45 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.42	1.97	2.51	3.06	3.60	4.15	4.69	5.24	5.78	6.33
Mu(-), ton-m:	-37.43	-26.52	-17.37	-9.77	-7.49	-7.49	-7.49	-9.48	-16.85	-25.60	-36.29
Mu(+), ton-m:	21.09	18.86	15.77	12.70	9.35	7.49	9.54	13.10	16.30	19.34	21.70
As(-), cm2:	23.98	16.40	10.46	6.93	6.93	6.93	6.93	6.93	10.13	15.78	23.16
As(+), cm2:	12.83	11.40	9.45	7.54	6.93	6.93	6.93	7.79	9.78	11.71	13.23
Vu, ton:	18.84	18.57	16.99	15.41	13.84	12.26	13.43	15.01	16.58	18.16	18.43
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

12-E 11 #3+1r @ 10 14 #3 @ 22.5 11 #3+1r @ 10 12-F

BEAM: 12(F-G) FLOOR: 6

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.45 m	c = 0.88 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.42	1.96	2.51	3.05	3.60	4.14	4.69	5.23	5.78	6.32
Mu(-), ton-m:	-37.18	-26.39	-17.33	-9.77	-7.44	-7.44	-7.44	-9.54	-16.86	-25.52	-36.09
Mu(+), ton-m:	21.18	18.88	15.73	12.61	9.22	7.44	9.47	13.09	16.35	19.45	21.88
As(-), cm2:	23.80	16.31	10.43	6.93	6.93	6.93	6.93	6.93	10.14	15.73	23.01
As(+), cm2:	12.89	11.41	9.43	7.49	6.93	6.93	6.93	7.79	9.81	11.78	13.34
Vu, ton:	18.65	18.40	16.86	15.33	13.79	12.25	13.37	14.91	16.45	17.99	18.24
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

12-F 11 #3+1r @ 10 14 #3 @ 22.5 11 #3+1r @ 10 12-G

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:06 p. m. 5/01/2020

BEAM: 12(G-H) FLOOR: 6

Length: L = 7.20 m a = 0.88 m Section: b = 45.0 cm Sec: VG45X50
Lu = 5.98 m c = 0.35 m h = 50.0 cm Mat: RConcrete2

X, m:	0.88	1.47	2.07	2.67	3.27	3.86	4.46	5.06	5.66	6.25	6.85
Mu(-), ton-m:	-34.74	-23.73	-14.52	-7.75	-6.95	-6.95	-6.95	-6.95	-11.96	-20.67	-30.83
Mu(+), ton-m:	13.46	13.29	12.09	11.04	9.13	7.89	8.67	11.20	12.12	13.29	13.96
As(-), cm2:	22.05	14.55	8.67	6.93	6.93	6.93	6.93	6.93	7.09	12.56	19.32
As(+), cm2:	8.01	7.91	7.17	6.93	6.93	6.93	6.93	6.93	7.19	7.91	8.32
Vu, ton:	17.33	16.79	14.51	12.56	10.61	9.46	11.41	13.36	15.31	17.26	17.71
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

12-G 11 #3+1r @ 10 17 #3 @ 22.5 11 #3+1r @ 10 12-H

BEAM: 12(H-I) FLOOR: 6

Length: L = 7.20 m a = 0.35 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.50 m c = 0.35 m h = 50.0 cm Mat: RConcrete2

X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-29.57	-19.32	-10.82	-5.91	-5.91	-5.91	-5.91	-5.91	-10.51	-18.85	-28.97
Mu(+), ton-m:	9.86	8.82	9.22	9.40	8.86	7.54	9.03	9.70	9.52	9.18	9.66
As(-), cm2:	18.46	11.70	6.93	6.93	6.93	6.93	6.93	6.93	6.93	11.40	18.05
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:	16.20	15.56	13.37	11.18	8.99	6.80	8.80	10.98	13.17	15.36	16.00
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

12-H 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 12-I

BEAM: 12(I-I'') FLOOR: 6

Length: L = 7.20 m a = 0.35 m Section: b = 45.0 cm Sec: VG45X50
Lu = 6.21 m c = 0.64 m h = 50.0 cm Mat: RConcrete2

X, m:	0.35	0.97	1.59	2.21	2.83	3.46	4.08	4.70	5.32	5.94	6.56
Mu(-), ton-m:	-31.10	-20.57	-11.69	-6.71	-6.71	-6.71	-6.71	-6.93	-13.85	-22.86	-33.57
Mu(+), ton-m:	11.75	11.69	11.13	10.60	8.87	7.89	9.58	11.01	11.76	12.31	12.26
As(-), cm2:	19.51	12.49	6.93	6.93	6.93	6.93	6.93	6.93	8.25	13.98	21.22
As(+), cm2:	6.97	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.97	7.31	7.28
Vu, ton:	17.36	16.81	14.71	12.60	10.49	8.47	9.95	12.05	14.16	16.27	16.89
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

12-I 11 #3+1r @ 10 18 #3 @ 22.5 11 #3+1r @ 10 12-I''

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:06 p. m. 5/01/2020

BEAM: 11(A-B) FLOOR: 6

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.68	1.37	2.05	2.74	3.42	4.11	4.79	5.48	6.16	6.85
Mu(-), ton-m:	-45.10	-26.66	-11.56	-9.02	-9.02	-9.02	-9.02	-9.02	-10.40	-24.00	-41.67
Mu(+), ton-m:	15.03	9.02	9.02	13.00	15.17	16.10	15.75	13.63	9.81	9.02	13.89
As(-), cm2:	29.70	16.49	6.93	6.93	6.93	6.93	6.93	6.93	6.93	14.73	27.10
As(+), cm2:	8.99	6.93	6.93	7.73	9.08	9.65	9.44	8.12	6.93	6.93	8.28
Vu, ton:	31.53	29.93	25.02	20.10	15.18	10.29	12.52	17.20	21.87	26.55	28.09
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

11-A 11 #3+1r @ 10 3 #3 @ 15 19 #3 @ 22.5 11 #3+1r @ 10 11-B

BEAM: 11(B-C) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-43.41	-26.34	-12.67	-8.68	-8.68	-8.68	-8.68	-8.68	-11.79	-25.06	-41.82
Mu(+), ton-m:	14.47	8.68	9.23	12.37	14.25	14.67	14.53	12.95	9.82	8.68	13.94
As(-), cm2:	28.40	16.28	7.53	6.93	6.93	6.93	6.93	6.93	6.99	15.43	27.20
As(+), cm2:	8.64	6.93	6.93	7.34	8.50	8.77	8.68	7.70	6.93	6.93	8.31
Vu, ton:	28.30	27.05	22.80	18.55	14.29	10.04	13.82	18.07	22.32	26.58	27.82
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

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

BEAM: 11(C-D) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-43.14	-26.10	-12.48	-8.63	-8.63	-8.63	-8.63	-8.63	-11.93	-25.30	-42.15
Mu(+), ton-m:	14.38	8.63	9.31	12.49	14.34	14.74	14.54	12.89	9.72	8.63	14.05
As(-), cm2:	28.20	16.11	7.41	6.93	6.93	6.93	6.93	6.93	7.07	15.58	27.45
As(+), cm2:	8.58	6.93	6.93	7.42	8.56	8.81	8.68	7.66	6.93	6.93	8.38
Vu, ton:	28.24	27.00	22.73	18.46	14.20	9.93	13.89	18.16	22.42	26.69	27.94
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

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

BEAM: 11(D-E) FLOOR: 6

	Length:	L = 7.20 m Lu = 6.50 m	a = 0.35 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-43.28	-26.21	-12.56	-8.66	-8.66	-8.66	-8.66	-8.66	-11.90	-25.25	-42.08
Mu(+), ton-m:	14.43	8.66	9.28	12.45	14.31	14.73	14.56	12.93	9.78	8.66	14.03
As(-), cm2:	28.31	16.19	7.46	6.93	6.93	6.93	6.93	6.93	7.06	15.55	27.40
As(+), cm2:	8.61	6.93	6.93	7.39	8.54	8.80	8.69	7.69	6.93	6.93	8.37
Vu, ton:	28.29	27.05	22.78	18.52	14.25	9.98	13.88	18.14	22.41	26.68	27.92
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	#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

BEAM: 11(E-F) FLOOR: 6

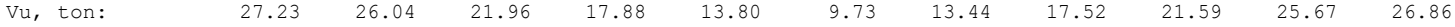
	Length:	L = 7.20 m Lu = 6.50 m	a = 0.35 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-43.34	-26.25	-12.58	-8.67	-8.67	-8.67	-8.67	-8.67	-11.80	-25.11	-41.91
Mu(+), ton-m:	14.45	8.67	9.23	12.42	14.31	14.76	14.60	12.99	9.81	8.67	13.97
As(-), cm2:	28.35	16.22	7.47	6.93	6.93	6.93	6.93	6.93	6.99	15.46	27.28
As(+), cm2:	8.63	6.93	6.93	7.37	8.54	8.82	8.72	7.72	6.93	6.93	8.33
Vu, ton:	28.33	27.08	22.82	18.55	14.28	10.02	13.84	18.11	22.38	26.64	27.89
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

BEAM: 11(F-G) FLOOR: 6

	Length:	L = 7.20 m Lu = 6.50 m	a = 0.35 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-42.16	-25.69	-12.48	-8.43	-8.43	-8.43	-8.43	-8.43	-11.87	-24.78	-41.01
Mu(+), ton-m:	14.05	8.43	9.24	12.11	13.75	14.01	14.03	12.63	9.78	8.43	13.67
As(-), cm2:	27.46	15.84	7.41	6.93	6.93	6.93	6.93	6.93	7.04	15.24	26.60
As(+), cm2:	8.38	6.93	6.93	7.18	8.19	8.36	8.37	7.51	6.93	6.93	8.15
Vu, ton:	27.23	26.04	21.96	17.88	13.80	9.73	13.44	17.52	21.59	25.67	26.86
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



Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:06 p. m. 5/01/2020

BEAM: 11(G-H) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.04	1.72	2.41	3.09	3.78	4.46	5.15	5.83	6.52	7.20
Mu(-), ton-m:	-42.98	-25.17	-11.28	-8.74	-8.74	-8.74	-8.74	-8.74	-10.81	-25.59	-43.72
Mu(+), ton-m:	14.33	8.74	8.92	12.79	15.16	15.58	14.72	12.68	8.74	8.74	14.57
As(-), cm2:	28.08	15.50	6.93	6.93	6.93	6.93	6.93	6.93	6.93	15.78	28.64
As(+), cm2:	8.55	6.93	6.93	7.60	9.07	9.33	8.79	7.53	6.93	6.93	8.70
Vu, ton:	28.27	26.73	22.06	17.38	12.70	10.03	14.92	19.84	24.76	29.52	31.06
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	17.50	10.00	10.00

DESIGN

11-G 11 #3+1r @ 10 19 #3 @ 22.5 3 #3 @ 15 11 #3+1r @ 10 11-H

BEAM: 11(H-I) FLOOR: 6

	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:	-43.44	-24.81	-9.70	-8.69	-8.69	-8.69	-8.69	-8.69	-9.12	-24.03	-42.45
Mu(+), ton-m:	14.48	8.69	8.69	12.84	15.46	16.78	15.69	13.27	8.69	8.69	14.15
As(-), cm2:	28.43	15.26	6.93	6.93	6.93	6.93	6.93	6.93	6.93	14.75	27.68
As(+), cm2:	8.65	6.93	6.93	7.64	9.26	10.09	9.40	7.90	6.93	6.93	8.44
Vu, ton:	29.13	27.38	22.50	17.63	12.76	7.89	12.48	17.35	22.22	27.09	28.85
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

11-H 11 #3+1r @ 10 2 #3 @ 15 19 #3 @ 22.5 2 #3 @ 17.5 11 #3+1r @ 10 11-I

BEAM: 11(I-I'') FLOOR: 6

	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:	-44.80	-25.30	-9.48	-8.96	-8.96	-8.96	-8.96	-8.96	-9.09	-24.66	-43.90
Mu(+), ton-m:	14.93	8.96	8.96	13.65	16.45	18.15	17.08	14.53	8.96	8.96	14.63
As(-), cm2:	29.47	15.59	6.93	6.93	6.93	6.93	6.93	6.93	6.93	15.16	28.78
As(+), cm2:	8.93	6.93	6.93	8.13	9.88	10.95	10.27	8.68	6.93	6.93	8.74
Vu, ton:	30.49	28.65	23.54	18.44	13.34	8.24	12.99	18.09	23.19	28.29	30.14
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+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

11-I 11 #3+1r @ 10 3 #3 @ 15 18 #3 @ 22.5 3 #3 @ 15 11 #3+1r @ 10 11-I''

BEAM: 10(A-B) FLOOR: 6

	Length:	L = 7.20 m Lu = 6.85 m	a = 0.00 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.00	0.68	1.37	2.05	2.74	3.42	4.11	4.79	5.48	6.16	6.85
Mu(-), ton-m:	-37.67	-23.46	-11.63	-7.53	-7.53	-7.53	-7.53	-7.53	-10.04	-20.58	-34.03
Mu(+), ton-m:	12.56	7.53	8.69	11.09	11.72	11.58	12.13	11.80	10.09	8.06	11.34
As(-), cm2:	24.15	14.37	6.93	6.93	6.93	6.93	6.93	6.93	6.93	12.50	21.55
As(+), cm2:	7.46	6.93	6.93	6.93	6.95	6.93	7.20	7.00	6.93	6.93	6.93
Vu, ton:	23.72	22.63	19.30	15.98	12.66	9.33	9.89	13.21	16.53	19.86	20.95
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

10-A 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 10-B

BEAM: 10(B-C) FLOOR: 6

	Length:	L = 7.20 m Lu = 6.50 m	a = 0.35 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-36.82	-23.41	-12.42	-7.36	-7.36	-7.36	-7.36	-7.36	-11.37	-21.89	-34.92
Mu(+), ton-m:	12.27	8.04	9.59	10.84	11.23	10.53	11.57	11.55	10.31	8.89	11.64
As(-), cm2:	23.53	14.34	7.38	6.93	6.93	6.93	6.93	6.93	6.93	13.35	22.18
As(+), cm2:	7.28	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	21.73	20.83	17.77	14.70	11.63	8.57	11.06	14.13	17.19	20.26	21.16
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

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

BEAM: 10(C-D) FLOOR: 6

	Length:	L = 7.20 m Lu = 6.50 m	a = 0.35 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-36.69	-23.33	-12.38	-7.34	-7.34	-7.34	-7.34	-7.34	-11.42	-21.92	-34.93
Mu(+), ton-m:	12.23	7.95	9.52	10.80	11.21	10.48	11.56	11.50	10.24	8.80	11.64
As(-), cm2:	23.45	14.28	7.35	6.93	6.93	6.93	6.93	6.93	6.93	13.37	22.19
As(+), cm2:	7.26	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	21.69	20.79	17.73	14.66	11.60	8.53	11.06	14.12	17.19	20.26	21.15
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

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

BEAM: 10(D-E) FLOOR: 6

	Length:	L = 7.20 m Lu = 6.85 m	a = 0.35 m c = 0.00 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	1.03	1.72	2.40	3.09	3.77	4.46	5.14	5.83	6.51	7.20
Mu(-), ton-m:	-39.93	-24.77	-12.50	-8.07	-8.07	-8.07	-8.07	-8.07	-12.08	-24.56	-40.35
Mu(+), ton-m:	13.31	8.07	9.49	11.16	12.14	12.53	14.03	14.21	11.91	9.92	13.45
As(-), cm2:	25.80	15.23	7.42	6.93	6.93	6.93	6.93	6.93	7.17	15.10	26.11
As(+), cm2:	7.92	6.93	6.93	6.93	7.20	7.44	8.37	8.48	7.06	6.93	8.01
Vu, ton:	23.50	22.38	18.98	15.58	12.19	8.91	12.02	15.91	20.19	24.46	25.87
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

10-D 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 10-E

BEAM: 10(E-F) FLOOR: 6

	Length:	L = 7.20 m Lu = 7.20 m	a = 0.00 m c = 0.00 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 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:	-41.46	-24.58	-11.28	-8.29	-8.29	-8.29	-8.29	-8.29	-10.48	-23.41	-39.54
Mu(+), ton-m:	13.82	8.29	10.28	13.03	12.93	11.88	12.62	12.76	10.04	8.29	13.18
As(-), cm2:	26.94	15.11	6.93	6.93	6.93	6.93	6.93	6.93	6.93	14.34	25.51
As(+), cm2:	8.24	6.93	6.93	7.75	7.69	7.04	7.50	7.58	6.93	6.93	7.84
Vu, ton:	26.48	24.75	19.99	15.22	11.30	8.50	11.40	14.96	19.40	23.83	25.44
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

10-E 11 #3+1r @ 10 22 #3 @ 22.5 11 #3+1r @ 10 10-F

BEAM: 10(F-G) FLOOR: 6

	Length:	L = 7.20 m Lu = 6.85 m	a = 0.00 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.00	0.68	1.37	2.05	2.74	3.42	4.11	4.79	5.48	6.16	6.85
Mu(-), ton-m:	-37.56	-23.69	-12.14	-7.51	-7.51	-7.51	-7.51	-7.51	-11.16	-22.01	-35.56
Mu(+), ton-m:	12.52	8.79	10.01	11.87	11.96	11.06	11.35	11.10	9.77	8.08	11.85
As(-), cm2:	24.07	14.53	7.20	6.93	6.93	6.93	6.93	6.93	6.93	13.42	22.64
As(+), cm2:	7.44	6.93	6.93	7.04	7.09	6.93	6.93	6.93	6.93	6.93	7.03
Vu, ton:	22.96	21.90	18.69	15.47	12.26	9.04	10.21	13.42	16.64	19.85	20.91
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

10-F 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 10-G

BEAM: 10(G-H) FLOOR: 6

	Length:	L = 7.20 m Lu = 6.50 m	a = 0.35 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-36.63	-23.26	-12.31	-7.33	-7.33	-7.33	-7.33	-7.33	-11.32	-21.81	-34.83
Mu(+), ton-m:	12.21	7.93	9.50	10.79	11.20	10.53	11.55	11.49	10.22	8.77	11.61
As(-), cm2:	23.40	14.24	7.31	6.93	6.93	6.93	6.93	6.93	6.93	13.30	22.11
As(+), cm2:	7.25	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	21.68	20.78	17.72	14.65	11.59	8.52	11.04	14.10	17.17	20.23	21.13
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

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

BEAM: 10(H-I) FLOOR: 6

	Length:	L = 7.20 m Lu = 6.50 m	a = 0.35 m c = 0.35 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-36.07	-23.00	-12.28	-7.21	-7.21	-7.21	-7.21	-7.21	-10.92	-21.11	-33.76
Mu(+), ton-m:	12.02	8.03	9.50	10.70	11.05	10.28	11.28	11.31	10.13	8.79	11.25
As(-), cm2:	23.00	14.07	7.29	6.93	6.93	6.93	6.93	6.93	6.93	12.84	21.36
As(+), cm2:	7.13	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Vu, ton:	21.16	20.29	17.32	14.35	11.38	8.41	10.74	13.71	16.68	19.65	20.52
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

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

BEAM: 10(I-I'') FLOOR: 6

	Length:	L = 7.20 m Lu = 5.74 m	a = 0.35 m c = 1.11 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.35	0.92	1.50	2.07	2.65	3.22	3.79	4.37	4.94	5.52	6.09
Mu(-), ton-m:	-37.24	-24.90	-14.15	-7.87	-7.87	-7.87	-7.87	-8.24	-16.01	-26.68	-39.37
Mu(+), ton-m:	14.55	14.18	13.13	12.20	9.75	9.47	11.27	13.71	14.56	15.50	15.66
As(-), cm2:	23.84	15.32	8.44	6.93	6.93	6.93	6.93	6.93	9.60	16.50	25.39
As(+), cm2:	8.69	8.46	7.81	7.24	6.93	6.93	6.93	8.17	8.70	9.28	9.38
Vu, ton:	21.90	21.43	19.07	16.70	14.33	11.96	11.29	14.18	17.15	20.12	20.71
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

10-I 11 #3+1r @ 10 16 #3 @ 22.5 11 #3+1r @ 10 10-I''

BEAM: 9(C-D) FLOOR: 6

	Length:	L = 7.20 m	a = 1.11 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 5.74 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.68	2.26	2.83	3.41	3.98	4.55	5.13	5.70	6.28	6.85
Mu(-), ton-m:	-33.29	-26.06	-19.08	-12.30	-6.66	-6.66	-6.66	-7.69	-13.33	-20.10	-28.46
Mu(+), ton-m:	22.72	18.91	14.91	10.77	6.66	6.66	6.66	12.23	16.67	19.93	22.87
As(-), cm2:	21.03	16.09	11.54	7.30	6.93	6.93	6.93	6.93	7.93	12.19	17.71
As(+), cm2:	13.89	11.43	8.91	6.93	6.93	6.93	6.93	7.26	10.01	12.08	13.99
Vu, ton:	13.78	13.73	13.44	13.16	12.87	12.59	12.30	11.18	12.82	14.77	15.15
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

9-C 11 #3+1r @ 10 16 #3 @ 22.5 11 #3+1r @ 10 9-D

BEAM: 9(D-E) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.03	1.72	2.40	3.09	3.77	4.46	5.14	5.83	6.51	7.20
Mu(-), ton-m:	-35.70	-23.08	-12.59	-7.45	-7.45	-7.45	-7.45	-7.45	-11.69	-22.70	-37.23
Mu(+), ton-m:	11.90	9.22	9.92	10.35	10.39	10.48	12.62	14.00	12.96	11.53	12.41
As(-), cm2:	22.74	14.13	7.48	6.93	6.93	6.93	6.93	6.93	6.93	13.88	23.83
As(+), cm2:	7.06	6.93	6.93	6.93	6.93	6.93	7.50	8.35	7.71	6.93	7.37
Vu, ton:	19.41	18.58	16.07	13.56	11.05	8.53	9.92	13.37	17.56	21.74	23.12
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

9-D 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 9-E

BEAM: 9(E-F) FLOOR: 6

	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:	-33.43	-22.27	-12.75	-7.09	-7.09	-7.09	-7.09	-7.09	-9.89	-20.69	-35.45
Mu(+), ton-m:	11.14	9.65	9.56	9.41	8.63	8.22	11.49	13.41	12.32	10.66	11.82
As(-), cm2:	21.13	13.60	7.58	6.93	6.93	6.93	6.93	6.93	6.93	12.57	22.56
As(+), cm2:	6.93	6.93	6.93	6.93	6.93	6.93	6.93	7.99	7.31	6.93	7.01
Vu, ton:	17.43	16.60	14.31	12.01	10.51	9.64	7.82	11.46	15.97	20.48	22.11
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+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

9-E 11 #3+1r @ 10 22 #3 @ 22.5 11 #3+1r @ 10 9-F

BEAM: 9(F-G) FLOOR: 6

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.56 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.66	1.31	1.97	2.62	3.28	3.94	4.59	5.25	5.90	6.56
Mu(-), ton-m:	-35.00	-23.43	-13.64	-7.21	-7.21	-7.21	-7.21	-7.21	-14.39	-24.30	-36.04
Mu(+), ton-m:	13.86	13.69	12.73	11.96	9.98	8.83	9.99	11.80	12.62	13.41	13.46
As(-), cm2:	22.23	14.35	8.13	6.93	6.93	6.93	6.93	6.93	8.59	14.93	22.98
As(+), cm2:	8.26	8.16	7.57	7.09	6.93	6.93	6.93	6.99	7.50	7.98	8.02
Vu, ton:	19.35	18.66	16.36	14.06	11.76	9.47	9.73	12.03	14.33	16.79	17.55
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

9-F 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 9-G

BEAM: 8(Cb-D) FLOOR: 6

	Length:	L = 2.46 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 2.11 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.90	2.11
Mu(-), ton-m:	0.00	-0.24	-0.84	-1.79	-3.10	-4.76	-6.78	-9.16	-12.01	-15.22	-18.82
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	7.12	9.11	11.38
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	1.77	3.53	5.30	7.07	8.83	10.60	12.37	13.82	13.82	13.82
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

8:Cb 10 #3 @ 22.5 8-D

BEAM: 8(D-E) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.03	1.72	2.40	3.09	3.77	4.46	5.14	5.83	6.51	7.20
Mu(-), ton-m:	-49.78	-30.37	-14.98	-9.96	-9.96	-9.96	-9.96	-9.96	-14.09	-29.29	-47.74
Mu(+), ton-m:	16.59	9.96	12.27	14.97	16.36	16.24	16.61	15.94	12.65	10.42	15.91
As(-), cm2:	33.38	19.00	8.95	6.93	6.93	6.93	6.93	6.93	8.40	18.26	31.76
As(+), cm2:	9.97	6.93	7.28	8.95	9.82	9.75	9.98	9.55	7.52	6.93	9.54
Vu, ton:	30.02	28.51	23.90	19.30	14.70	11.26	15.82	20.35	24.83	29.30	30.77
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	20.00	22.50	22.50	22.50	22.50	22.50	17.50	10.00	10.00

DESIGN

8-D 11 #3+1r @ 10 2 #3 @ 15 17 #3 @ 22.5 3 #3 @ 15 11 #3+1r @ 10 8-E

BEAM: 8(E-F) FLOOR: 6

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.69	1.37	2.06	2.74	3.43	4.11	4.80	5.48	6.17	6.85
Mu(-), ton-m:	-35.59	-26.46	-17.62	-9.20	-7.67	-7.67	-7.67	-7.67	-11.46	-22.71	-38.33
Mu(+), ton-m:	13.01	11.69	10.14	8.46	7.76	8.95	13.05	15.84	15.52	14.11	12.78
As(-), cm2:	22.66	16.35	10.61	6.93	6.93	6.93	6.93	6.93	6.93	13.88	24.63
As(+), cm2:	7.74	6.93	6.93	6.93	6.93	6.93	7.76	9.49	9.29	8.42	7.59
Vu, ton:	15.36	15.22	14.77	14.33	13.89	13.42	9.33	11.83	16.33	20.83	22.31
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

8-E 11 #3+1r @ 10 21 #3 @ 22.5 11 #3+1r @ 10 8-F

BEAM: 8(F-G) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.03	1.72	2.40	3.09	3.77	4.46	5.14	5.83	6.51	7.20
Mu(-), ton-m:	-48.65	-29.67	-14.68	-10.15	-10.15	-10.15	-10.15	-10.15	-15.06	-31.23	-50.75
Mu(+), ton-m:	16.22	10.15	13.08	15.64	16.52	15.97	16.13	15.30	11.88	10.15	16.92
As(-), cm2:	32.47	18.53	8.77	6.93	6.93	6.93	6.93	6.93	9.01	19.60	34.16
As(+), cm2:	9.73	6.93	7.78	9.37	9.92	9.58	9.67	9.16	7.04	6.93	10.17
Vu, ton:	29.51	27.97	23.31	18.64	13.97	12.42	17.09	21.75	26.42	31.09	32.62
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	20.00	22.50	22.50	22.50	22.50	22.50	15.00	10.00	10.00

DESIGN

8-F 11 #3+1r @ 10 2 #3 @ 17.5 16 #3 @ 22.5 6 #3 @ 12.5 11 #3+1r @ 10 8-G

BEAM: 7'(C-D) FLOOR: 6

	Length:	L = 7.20 m	a = 0.64 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 6.21 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.64	1.26	1.88	2.50	3.12	3.74	4.37	4.99	5.61	6.23	6.85
Mu(-), ton-m:	-28.67	-22.36	-16.28	-10.41	-5.73	-5.73	-5.73	-6.49	-11.50	-17.70	-25.65
Mu(+), ton-m:	19.42	16.20	12.81	9.29	5.75	5.73	6.03	10.92	14.50	17.05	19.09
As(-), cm2:	18.18	13.84	9.86	6.18	5.78	5.78	5.78	5.78	6.85	10.78	16.07
As(+), cm2:	11.89	9.81	7.67	5.78	5.78	5.78	5.78	6.50	8.73	10.35	11.67
Vu, ton:	11.17	11.10	10.81	10.51	10.22	9.93	9.64	8.76	10.48	12.53	13.06
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	#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

7'-C 11 #3 @ 10 18 #3 @ 22.5 11 #3 @ 10 7'-D

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

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-34.92	-23.33	-13.49	-6.98	-6.98	-6.98	-6.98	-6.98	-12.02	-20.72	-31.51
Mu(+), ton-m:	11.64	10.53	10.37	9.90	9.16	8.27	10.93	12.72	13.18	13.63	13.65
As(-), cm2:	22.72	14.49	8.09	5.78	5.78	5.78	5.78	5.78	7.17	12.75	20.21
As(+), cm2:	6.94	6.26	6.16	5.87	5.78	5.78	6.50	7.61	7.90	8.18	8.19
Vu, ton:	18.54	17.87	15.56	13.25	10.94	8.63	10.28	12.55	14.68	16.82	17.44
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

7'-D 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-E

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

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-32.16	-23.22	-15.08	-7.99	-6.43	-6.43	-6.43	-6.43	-12.38	-20.81	-31.25
Mu(+), ton-m:	15.08	13.57	11.66	9.59	7.83	6.43	9.52	12.26	13.62	14.83	15.55
As(-), cm2:	20.68	14.42	9.10	5.78	5.78	5.78	5.78	5.78	7.40	12.80	20.02
As(+), cm2:	9.10	8.15	6.95	5.78	5.78	5.78	5.78	7.33	8.18	8.94	9.39
Vu, ton:	14.62	14.31	13.25	12.19	11.13	9.87	8.69	10.95	13.21	15.47	16.13
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

7'-E 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-F

BEAM: 7'(F-G) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 5.74 m	c = 1.11 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.92	1.50	2.07	2.65	3.22	3.79	4.37	4.94	5.52	6.09
Mu(-), ton-m:	-37.89	-26.83	-16.92	-9.33	-7.58	-7.58	-7.58	-9.46	-16.89	-26.48	-37.55
Mu(+), ton-m:	20.51	18.33	15.64	12.98	9.30	8.15	9.97	13.85	16.46	19.19	21.36
As(-), cm2:	24.98	16.89	10.27	5.78	5.78	5.78	5.78	5.78	10.25	16.65	24.72
As(+), cm2:	12.61	11.18	9.45	7.77	5.78	5.78	5.91	8.32	9.97	11.74	13.17
Vu, ton:	19.97	19.63	17.92	16.21	14.49	12.78	11.87	13.60	15.69	17.84	18.26
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

7'-F 11 #3 @ 10 16 #3 @ 22.5 11 #3 @ 10 7'-G

BEAM: 10(Da-E) FLOOR: PM

	Length:	L = 2.44 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 2.11 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.90	2.11
Mu(-), ton-m:	0.00	-0.10	-0.36	-0.78	-1.35	-2.07	-2.96	-3.99	-5.21	-6.61	-8.18
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	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:	0.00	0.77	1.54	2.31	3.07	3.84	4.61	5.38	6.01	6.01	6.01
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

10:Da 10 #3 @ 22.5 10-E

BEAM: 10(E-F') FLOOR: PM

	Length:	L = 3.49 m	a = 0.33 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 3.16 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.64	0.96	1.27	1.59	1.91	2.22	2.54	2.86	3.17	3.49
Mu(-), ton-m:	-18.79	-15.28	-12.13	-9.37	-6.95	-4.88	-3.17	-1.82	-0.81	-0.22	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:	11.36	9.14	7.20	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:	10.01	10.01	9.38	8.24	7.10	5.95	4.81	3.66	2.45	1.22	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

10-E 15 #3 @ 22.5 10-F'

BEAM: 9(Da-E) FLOOR: PM

	Length:	L = 2.44 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 2.11 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.90	2.11
Mu(-), ton-m:	0.00	-0.21	-0.75	-1.60	-2.78	-4.28	-6.10	-8.25	-10.77	-13.66	-16.89
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	8.14	10.16
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	1.59	3.17	4.76	6.35	7.94	9.52	11.11	12.42	12.42	12.42
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

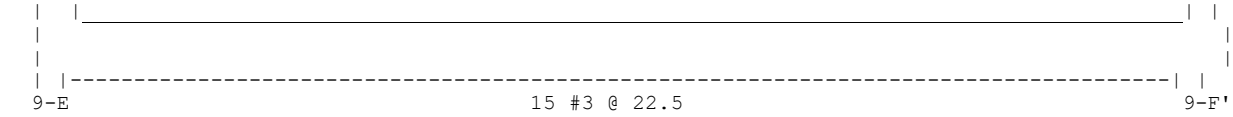
DESIGN

9:Da 10 #3 @ 22.5 9-E

BEAM: 9(E-F') FLOOR: PM

	Length:	L = 3.49 m	a = 0.33 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 3.16 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.64	0.96	1.27	1.59	1.91	2.22	2.54	2.86	3.17	3.49
Mu(-), ton-m:	-37.57	-30.61	-24.36	-18.86	-14.04	-9.89	-6.45	-3.71	-1.66	-0.44	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:	24.08	19.17	14.96	11.40	8.37	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:	19.87	19.87	18.64	16.41	14.18	11.95	9.71	7.47	5.00	2.50	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

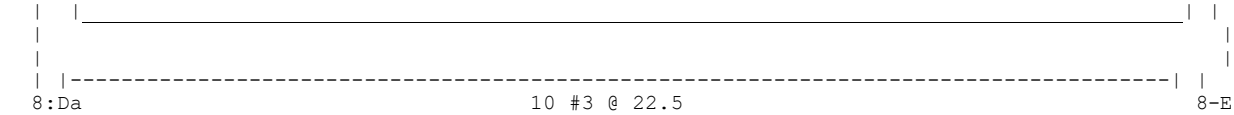
DESIGN



BEAM: 8(Da-E) FLOOR: PM

	Length:	L = 2.44 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 2.11 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.90	2.11
Mu(-), ton-m:	0.00	-0.23	-0.80	-1.71	-2.97	-4.57	-6.51	-8.80	-11.48	-14.56	-18.02
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	8.70	10.86
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	1.69	3.39	5.08	6.77	8.46	10.16	11.85	13.25	13.25	13.25
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

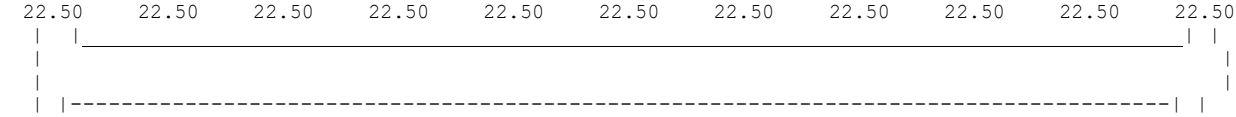
DESIGN



BEAM: 8(E-F') FLOOR: PM

	Length:	L = 3.49 m	a = 0.33 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 3.16 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.64	0.96	1.27	1.59	1.91	2.22	2.54	2.86	3.17	3.49
Mu(-), ton-m:	-39.34	-31.94	-25.31	-19.45	-14.36	-10.04	-6.49	-3.71	-1.70	-0.47	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:	25.37	20.09	15.59	11.78	8.57	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:	21.22	21.22	19.86	17.38	14.90	12.41	9.93	7.45	4.97	2.48	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



Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:07 p. m. 5/01/2020

BEAM: 7'(Da-E) FLOOR: PM

Length: L = 2.44 m a = 0.00 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 2.11 m c = 0.33 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.90	2.11
Mu(-), ton-m:	0.00	-0.12	-0.44	-0.94	-1.62	-2.50	-3.56	-4.82	-6.29	-7.97	-9.86
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	5.85
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	0.93	1.85	2.78	3.71	4.63	5.56	6.49	7.25	7.25	7.25
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 10 #3 @ 22.5 7'-E

BEAM: 7'(E-F') FLOOR: PM

Length: L = 3.49 m a = 0.33 m Section: b = 37.5 cm Sec: VG37.5X50
Lu = 3.16 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.33	0.64	0.96	1.27	1.59	1.91	2.22	2.54	2.86	3.17	3.49
Mu(-), ton-m:	-23.11	-18.76	-14.86	-11.42	-8.43	-5.90	-3.81	-2.18	-1.00	-0.27	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:	14.34	11.46	8.96	6.81	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:	12.46	12.46	11.66	10.21	8.75	7.29	5.83	4.37	2.92	1.46	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

7'-E 15 #3 @ 22.5 7'-F'

BEAM: 10(Da-E) FLOOR: CBM

Length: L = 2.44 m a = 0.00 m Section: b = 45.0 cm Sec: VG45X50
Lu = 2.11 m c = 0.33 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.90	2.11
Mu(-), ton-m:	0.00	-0.10	-0.36	-0.78	-1.35	-2.07	-2.96	-3.99	-5.21	-6.61	-8.18
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	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:	0.00	0.77	1.54	2.31	3.07	3.84	4.61	5.38	6.01	6.01	6.01
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

10:Da 10 #3 @ 22.5 10-E

BEAM: 10(E-F) FLOOR: CBM

	Length:	L = 7.20 m	a = 0.33 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.55 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.64	2.29	2.95	3.60	4.26	4.91	5.57	6.22	6.88
Mu(-), ton-m:	-36.69	-25.27	-15.43	-7.57	-7.34	-7.34	-7.34	-7.34	-13.42	-22.16	-32.79
Mu(+), ton-m:	15.16	14.45	13.19	11.80	9.97	7.58	11.25	14.05	15.54	16.98	18.08
As(-), cm2:	23.45	15.56	9.24	6.93	6.93	6.93	6.93	6.93	7.99	13.53	20.68
As(+), cm2:	9.07	8.63	7.85	6.99	6.93	6.93	6.93	8.38	9.30	10.21	10.90
Vu, ton:	18.49	17.95	16.12	14.29	12.24	10.00	10.81	12.96	14.86	16.75	17.31
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

DESIGN

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

BEAM: 9(Da-E) FLOOR: CBM

	Length:	L = 2.44 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 2.11 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.90	2.11
Mu(-), ton-m:	0.00	-0.21	-0.75	-1.60	-2.78	-4.28	-6.10	-8.25	-10.77	-13.66	-16.89
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	8.14	10.16
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	1.59	3.17	4.76	6.35	7.94	9.52	11.11	12.42	12.42	12.42
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

9:Da 10 #3 @ 22.5 9-E

BEAM: 9(E-F) FLOOR: CBM

	Length:	L = 7.20 m	a = 0.33 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.55 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.64	2.29	2.95	3.60	4.26	4.91	5.57	6.22	6.88
Mu(-), ton-m:	-45.84	-29.02	-15.32	-9.17	-9.17	-9.17	-9.17	-9.17	-11.85	-24.81	-41.27
Mu(+), ton-m:	15.28	9.61	11.90	14.09	15.24	14.51	15.02	14.60	12.26	10.05	13.76
As(-), cm2:	30.26	18.08	9.17	6.93	6.93	6.93	6.93	6.93	7.03	15.26	26.80
As(+), cm2:	9.14	6.93	7.05	8.41	9.12	8.67	8.98	8.72	7.28	6.93	8.20
Vu, ton:	27.50	26.46	22.94	19.43	15.35	10.83	13.99	18.39	22.07	25.74	26.84
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

9-E 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 9-F

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:07 p. m. 5/01/2020

BEAM: 9(F-G) FLOOR: CBM

	Length:	L = 7.20 m	a = 0.33 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.55 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.63	2.29	2.94	3.60	4.25	4.91	5.56	6.22	6.87
Mu(-), ton-m:	-36.34	-24.20	-13.83	-7.27	-7.27	-7.27	-7.27	-7.27	-12.66	-21.76	-32.90
Mu(+), ton-m:	12.11	10.66	10.53	10.08	9.33	8.38	11.75	13.64	13.97	14.37	14.37
As(-), cm2:	23.19	14.86	8.24	6.93	6.93	6.93	6.93	6.93	7.52	13.26	20.76
As(+), cm2:	7.19	6.93	6.93	6.93	6.93	6.93	6.96	8.13	8.33	8.58	8.57
Vu, ton:	19.50	18.80	16.44	14.08	11.72	9.36	10.20	12.56	14.92	17.28	17.98
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+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

9-F 11 #3+1r @ 10 19 #3 @ 22.5 11 #3+1r @ 10 9-G

BEAM: 8(Da-E) FLOOR: CBM

	Length:	L = 2.44 m	a = 0.00 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 2.11 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.90	2.11
Mu(-), ton-m:	0.00	-0.23	-0.80	-1.71	-2.97	-4.57	-6.51	-8.80	-11.48	-14.56	-18.02
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	8.70	10.86
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	1.69	3.39	5.08	6.77	8.46	10.16	11.85	13.25	13.25	13.25
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

8:Da 10 #3 @ 22.5 8-E

BEAM: 8(E-F) FLOOR: CBM

	Length:	L = 7.20 m	a = 0.33 m	Section:	b = 45.0 cm	Sec:	VG45X50			
		Lu = 6.55 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.64	2.29	2.95	3.60	4.26	4.91	5.57	6.22	6.88
Mu(-), ton-m:	-49.48	-31.44	-16.76	-9.90	-9.90	-9.90	-9.90	-9.90	-12.47	-26.15	-43.65
Mu(+), ton-m:	16.49	9.90	12.03	14.17	15.30	14.55	15.33	15.17	12.90	10.61	14.55
As(-), cm2:	33.14	19.74	10.07	6.93	6.93	6.93	6.93	6.93	7.41	16.15	28.59
As(+), cm2:	9.90	6.93	7.13	8.46	9.16	8.69	9.18	9.07	7.67	6.93	8.69
Vu, ton:	29.41	28.20	24.15	20.10	16.05	11.96	14.10	18.44	22.77	27.11	28.40
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	20.00	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

8-E 11 #3+1r @ 10 3 #3 @ 15 17 #3 @ 22.5 11 #3+1r @ 10 8-F

BEAM: 8(F-G) FLOOR: CBM

	Length:	L = 7.20 m Lu = 6.55 m	a = 0.33 m c = 0.33 m	Section:	b = 45.0 cm h = 50.0 cm	Sec: Mat:	VG45X50 RConcrete2			
X, m:	0.33	0.98	1.63	2.29	2.94	3.60	4.25	4.91	5.56	6.22	6.87
Mu(-), ton-m:	-47.25	-28.88	-14.01	-9.45	-9.45	-9.45	-9.45	-9.45	-13.43	-27.37	-45.01
Mu(+), ton-m:	15.75	9.45	11.64	14.39	15.74	16.37	17.74	17.24	14.38	11.70	15.00
As(-), cm2:	31.37	17.99	8.35	6.93	6.93	6.93	6.93	6.93	7.99	16.97	29.63
As(+), cm2:	9.44	6.93	6.93	8.59	9.43	9.82	10.69	10.37	8.58	6.93	8.97
Vu, ton:	29.69	28.40	24.08	19.76	15.44	11.12	14.33	18.65	22.97	27.29	28.58
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+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

8-F 11 #3+1r @ 10 3 #3 @ 15 17 #3 @ 22.5 11 #3+1r @ 10 8-G

BEAM: 7'(Da-E) FLOOR: CBM

	Length:	L = 2.44 m Lu = 2.11 m	a = 0.00 m c = 0.33 m	Section:	b = 37.5 cm h = 50.0 cm	Sec: Mat:	VG37.5X50 RConcrete2			
X, m:	0.00	0.21	0.42	0.63	0.85	1.06	1.27	1.48	1.69	1.90	2.11
Mu(-), ton-m:	0.00	-0.12	-0.44	-0.94	-1.62	-2.50	-3.56	-4.82	-6.29	-7.97	-9.86
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	5.85
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	0.93	1.85	2.78	3.71	4.63	5.56	6.49	7.25	7.25	7.25
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 10 #3 @ 22.5 7'-E

BEAM: 7'(E-F) FLOOR: CBM

	Length:	L = 7.20 m Lu = 6.55 m	a = 0.33 m c = 0.33 m	Section:	b = 37.5 cm h = 50.0 cm	Sec: Mat:	VG37.5X50 RConcrete2			
X, m:	0.33	0.98	1.64	2.29	2.95	3.60	4.26	4.91	5.57	6.22	6.88
Mu(-), ton-m:	-35.31	-23.54	-13.79	-7.06	-7.06	-7.06	-7.06	-7.06	-12.10	-21.36	-32.61
Mu(+), ton-m:	11.77	12.08	11.95	11.63	10.48	8.16	9.81	11.15	11.55	11.89	11.67
As(-), cm2:	23.02	14.64	8.28	5.78	5.78	5.78	5.78	5.78	7.22	13.17	21.01
As(+), cm2:	7.02	7.22	7.13	6.94	6.23	5.78	5.81	6.64	6.89	7.09	6.96
Vu, ton:	18.39	17.68	15.29	12.89	10.50	8.17	10.10	12.40	14.69	16.98	17.66
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

7'-E 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-F

BEAM: 7'(F-G) FLOOR: CBM

	Length:	L = 7.20 m	a = 0.33 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 6.55 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.63	2.29	2.94	3.60	4.25	4.91	5.56	6.22	6.87
Mu(-), ton-m:	-33.67	-22.26	-12.63	-6.73	-6.73	-6.73	-6.73	-6.73	-12.23	-21.15	-32.00
Mu(+), ton-m:	11.22	10.93	10.77	10.47	9.55	8.35	11.14	12.72	12.97	13.28	13.20
As(-), cm2:	21.79	13.77	7.56	5.78	5.78	5.78	5.78	5.78	7.31	13.03	20.57
As(+), cm2:	6.68	6.50	6.41	6.22	5.78	5.78	6.63	7.61	7.77	7.96	7.91
Vu, ton:	18.08	17.41	15.15	12.89	10.64	8.38	9.78	12.04	14.30	16.55	17.22
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

7'-F 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-G

BEAM: A(12-12a) 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:	-2.01	-1.54	-1.10	-0.67	-0.44	-0.44	-0.44	-0.81	-1.24	-1.71	-2.19
Mu(+), ton-m:	1.80	1.47	1.14	0.79	0.44	0.44	0.55	0.92	1.26	1.61	1.94
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:	2.70	2.70	2.70	2.65	2.55	2.48	2.59	2.69	2.74	2.74	2.74
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

12-A 18 #3 @ 10 A:12a

BEAM: A(12a-12b) 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:	-1.80	-1.12	-0.56	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36	-0.82	-1.44
Mu(+), ton-m:	0.60	0.36	0.36	0.41	0.50	0.53	0.53	0.51	0.38	0.36	0.48
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:	1.67	1.67	1.42	1.16	0.90	0.64	0.75	1.01	1.27	1.52	1.52
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	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

A:12a 11 #3 @ 10 10 #3 @ 22.5 11 #3 @ 10 A:12b

BEAM: A(12b-11) 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:	-2.23	-1.87	-1.53	-1.19	-0.86	-0.53	-0.45	-0.45	-0.45	-0.45	-0.74
Mu(+), ton-m:	2.11	1.84	1.58	1.32	1.06	0.79	0.51	0.45	0.55	0.86	1.18
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	A:12b				9 #3 @ 10						11-A

BEAM: A(11-11a) 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:	-0.73	-0.48	-0.48	-0.48	-0.48	-0.61	-0.96	-1.31	-1.67	-2.03	-2.40
Mu(+), ton-m:	1.06	0.73	0.48	0.48	0.48	0.64	0.90	1.15	1.41	1.66	1.91
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:	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83
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	11-A				9 #3 @ 10						A:11a

BEAM: A(11a-11b) 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:	-1.91	-1.06	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-1.03	-1.87
Mu(+), ton-m:	0.64	0.38	0.38	0.50	0.68	0.78	0.69	0.53	0.38	0.38	0.62
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:	1.69	1.64	1.29	0.98	0.67	0.36	0.65	0.96	1.27	1.62	1.67
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	A:11a			11 #3 @ 10	14 #3 @ 22.5		11 #3 @ 10				A:11b

BEAM: A(11b-10) 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:	-2.00	-1.70	-1.40	-1.11	-0.82	-0.53	-0.40	-0.40	-0.40	-0.44	-0.71
Mu(+), ton-m:	2.05	1.81	1.55	1.30	1.04	0.77	0.50	0.40	0.43	0.69	0.94
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:	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.74
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:11b				9 #3 @ 10						10-A

BEAM: A(10-10a) 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:	-0.72	-0.48	-0.48	-0.48	-0.48	-0.63	-0.97	-1.32	-1.67	-2.03	-2.39
Mu(+), ton-m:	1.02	0.70	0.48	0.48	0.48	0.61	0.87	1.13	1.38	1.62	1.87
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77
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	10-A				9 #3 @ 10						A:10a

BEAM: A(10a-10b) FLOOR: 2

	Length:	L = 0.48 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.48 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.05	0.10	0.14	0.19	0.24	0.29	0.33	0.38	0.43	0.48
Mu(-), ton-m:	-2.08	-1.67	-1.27	-0.86	-0.69	-0.69	-0.69	-1.34	-2.04	-2.74	-3.44
Mu(+), ton-m:	3.52	2.83	2.14	1.45	0.75	0.69	0.69	0.75	1.15	1.55	1.95
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	20.01	20.01	20.01	20.01	20.01	20.01	20.01	20.01	20.01	20.01	20.01
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	A:10a				5 #3 @ 10						A:10b

BEAM: A(10b-9) FLOOR: 2

Length:	L = 4.63 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 4.28 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.43	0.86	1.28	1.71	2.14	2.57	2.99	3.42	3.85	4.28
Mu(-), ton-m:	-1.25	-0.71	-0.28	-0.27	-0.27	-0.27	-0.27	-0.27	-0.34	-0.78	-1.33
Mu(+), ton-m:	0.42	0.27	0.27	0.37	0.46	0.48	0.46	0.36	0.27	0.27	0.44
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	1.43	1.43	1.22	0.97	0.73	0.51	0.60	0.83	1.05	1.26	1.26
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:10b 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 9-A

BEAM: A(9-8) FLOOR: 2

Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-2.40	-1.17	-0.49	-0.49	-0.49	-0.49	-0.49	-0.49	-0.49	-1.21	-2.46
Mu(+), ton-m:	0.80	0.49	0.49	0.58	1.01	1.18	1.00	0.55	0.49	0.49	0.82
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:	1.92	1.80	1.36	0.92	0.48	0.11	0.50	0.94	1.38	1.81	1.94
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

9-A 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 8-A

BEAM: A(8-7') FLOOR: 2

Length:	L = 7.16 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50				
	Lu = 6.46 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.35	1.00	1.64	2.29	2.94	3.58	4.23	4.87	5.52	6.17	6.81
Mu(-), ton-m:	-2.35	-1.12	-0.49	-0.49	-0.49	-0.49	-0.49	-0.49	-0.49	-1.21	-2.46
Mu(+), ton-m:	0.78	0.49	0.49	0.58	1.01	1.17	0.99	0.54	0.49	0.49	0.82
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:	1.90	1.78	1.34	0.91	0.47	0.11	0.51	0.94	1.38	1.81	1.94
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

8-A 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-A

BEAM: B(12-11) 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:	-5.90	-3.97	-2.30	-1.18	-1.18	-1.18	-1.18	-1.18	-1.59	-2.82	-4.37
Mu(+), ton-m:	1.97	1.18	1.33	1.38	1.32	1.35	1.74	2.08	2.17	2.04	1.78
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:	3.21	3.09	2.72	2.35	1.98	1.61	1.30	1.64	2.01	2.38	2.50
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	12-B			11 #3 @ 10	20 #3 @ 22.5	11 #3 @ 10					11-B

BEAM: B(11-10) 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:	-5.57	-3.80	-2.28	-1.11	-1.11	-1.11	-1.11	-1.11	-2.14	-3.59	-5.30
Mu(+), ton-m:	1.86	1.94	1.92	1.78	1.52	1.16	1.58	1.90	2.05	2.09	2.00
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:	2.76	2.67	2.34	2.01	1.68	1.36	1.60	1.93	2.25	2.58	2.67
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	11-B			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					10-B

BEAM: B(10-9) FLOOR: 2

	Length:	L = 6.00 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.25 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.93	1.45	1.98	2.50	3.03	3.55	4.08	4.60	5.13	5.65
Mu(-), ton-m:	-5.65	-4.06	-2.66	-1.47	-1.30	-1.30	-1.30	-1.88	-3.26	-4.82	-6.52
Mu(+), ton-m:	3.76	3.32	2.79	2.18	1.49	1.30	1.58	2.20	2.76	3.24	3.62
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:	3.22	3.20	2.97	2.69	2.41	2.22	2.50	2.78	3.06	3.34	3.37
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	10-B			11 #3 @ 10	13 #3 @ 22.5	11 #3 @ 10					9-B

BEAM: B(9-8) FLOOR: 2

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-5.13	-3.54	-2.19	-1.14	-1.03	-1.03	-1.03	-1.03	-1.27	-2.62	-4.21
Mu(+), ton-m:	1.71	1.74	1.90	1.92	1.80	1.43	1.03	1.03	1.03	1.03	1.40
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:	2.56	2.47	2.13	1.79	1.45	1.12	1.46	1.80	2.13	2.47	2.57
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	9-B			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			8-B

BEAM: B(8-7') FLOOR: 2

	Length:	L = 7.16 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.46 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.64	2.29	2.94	3.58	4.23	4.87	5.52	6.17	6.81
Mu(-), ton-m:	-4.35	-2.37	-0.89	-0.89	-0.89	-0.89	-0.89	-0.89	-0.91	-2.47	-4.45
Mu(+), ton-m:	1.45	0.89	0.89	1.27	1.69	1.84	1.75	1.33	0.89	0.89	1.48
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:	3.31	3.13	2.51	1.90	1.29	0.68	1.30	1.91	2.53	3.14	3.32
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	8-B			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			7'-B

BEAM: C(12-11) 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:	-6.17	-4.31	-2.66	-1.28	-1.23	-1.23	-1.23	-1.23	-1.61	-2.80	-4.26
Mu(+), ton-m:	2.06	1.51	1.60	1.55	1.41	1.23	1.59	1.99	2.20	2.21	2.11
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:	3.11	3.01	2.69	2.36	2.03	1.70	1.50	1.82	2.15	2.48	2.57
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	12-C			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			11-C

BEAM: C(11-10) 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:	-5.12	-3.44	-1.99	-1.02	-1.02	-1.02	-1.02	-1.02	-2.00	-3.39	-5.03
Mu(+), ton-m:	1.71	1.62	1.67	1.60	1.41	1.17	1.57	1.83	1.90	1.87	1.71
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:	2.62	2.53	2.20	1.88	1.55	1.22	1.48	1.81	2.14	2.46	2.56
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

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

BEAM: C(10-9) FLOOR: 2

	Length:	L = 6.00 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.49 m	c = 1.11 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.85	1.30	1.75	2.20	2.64	3.09	3.54	3.99	4.44	4.89
Mu(-), ton-m:	-6.75	-5.09	-3.53	-2.08	-1.68	-1.68	-1.68	-2.88	-4.60	-6.45	-8.42
Mu(+), ton-m:	5.99	5.04	4.02	2.88	1.76	1.68	1.83	2.89	3.90	4.83	5.67
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:	4.24	4.24	4.06	3.87	3.67	3.66	3.86	4.05	4.25	4.44	4.44
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	#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

10-C 11 #3 @ 10 10 #3 @ 22.5 11 #3 @ 10 9-C

BEAM: C(9-8) FLOOR: 2

	Length:	L = 7.20 m	a = 0.64 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.21 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.64	1.26	1.88	2.50	3.12	3.74	4.37	4.99	5.61	6.23	6.85
Mu(-), ton-m:	-6.54	-4.46	-2.69	-1.35	-1.31	-1.31	-1.31	-1.31	-1.31	-2.83	-4.80
Mu(+), ton-m:	2.18	1.70	1.98	2.14	2.15	1.85	1.36	1.37	1.31	1.31	1.60
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:	3.41	3.29	2.83	2.37	1.91	1.50	1.92	2.37	2.83	3.29	3.41
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

9-C 11 #3 @ 10 18 #3 @ 22.5 11 #3 @ 10 8-C

BEAM: C(8-7') FLOOR: 2

	Length:	L = 7.16 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.70 m	c = 1.11 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.92	1.49	2.06	2.63	3.20	3.77	4.34	4.91	5.48	6.05
Mu(-), ton-m:	-5.02	-3.16	-1.54	-1.21	-1.21	-1.21	-1.21	-1.42	-2.58	-4.15	-6.03
Mu(+), ton-m:	1.67	1.24	1.31	1.29	1.24	1.60	2.14	2.45	2.46	2.41	2.18
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	3.34	3.26	2.89	2.52	2.15	1.77	1.60	2.05	2.51	2.98	3.07
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	8-C			11 #3 @ 10		15 #3 @ 22.5		11 #3 @ 10			7'-C

BEAM: D(12-11) 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:	-5.80	-3.99	-2.39	-1.16	-1.16	-1.16	-1.16	-1.16	-1.61	-2.76	-4.18
Mu(+), ton-m:	1.93	1.23	1.36	1.35	1.27	1.16	1.67	2.04	2.21	2.17	2.03
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:	3.03	2.93	2.61	2.28	1.95	1.62	1.42	1.75	2.08	2.41	2.50
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	12-D			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			11-D

BEAM: D(11-10) 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:	-5.24	-3.55	-2.09	-1.05	-1.05	-1.05	-1.05	-1.05	-2.00	-3.40	-5.06
Mu(+), ton-m:	1.75	1.73	1.76	1.68	1.46	1.15	1.51	1.77	1.86	1.84	1.70
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:	2.64	2.55	2.22	1.89	1.56	1.24	1.50	1.83	2.16	2.48	2.58
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	11-D			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			10-D

BEAM: D(10-9) FLOOR: 2

	Length:	L = 6.00 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.20 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.92	1.44	1.96	2.48	3.00	3.52	4.04	4.56	5.08	5.60
Mu(-), ton-m:	-6.15	-4.30	-2.67	-1.33	-1.24	-1.24	-1.24	-1.29	-2.61	-4.25	-6.18
Mu(+), ton-m:	2.61	2.52	2.35	2.08	1.72	1.37	1.75	2.14	2.40	2.55	2.59
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:	3.66	3.64	3.39	2.94	2.49	2.04	2.16	2.61	3.06	3.51	3.56
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	10-D			11 #3 @ 10	13 #3 @ 22.5	11 #3 @ 10					9-D

BEAM: D(9-8) 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:	-5.75	-3.96	-2.38	-1.15	-1.15	-1.15	-1.15	-1.15	-1.79	-3.07	-4.62
Mu(+), ton-m:	1.92	1.55	1.60	1.52	1.39	1.15	1.60	1.95	2.09	2.09	1.98
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:	2.92	2.83	2.50	2.17	1.84	1.52	1.50	1.82	2.15	2.48	2.57
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	9-D			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					8-D

BEAM: D(8-7') FLOOR: 2

	Length:	L = 7.16 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.36 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.67	2.31	2.95	3.58	4.22	4.85	5.49	6.13	6.76
Mu(-), ton-m:	-4.61	-3.06	-1.78	-1.08	-1.08	-1.08	-1.08	-1.08	-2.18	-3.68	-5.41
Mu(+), ton-m:	1.81	1.94	1.97	1.87	1.57	1.15	1.36	1.49	1.55	1.49	1.80
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	2.52	2.43	2.11	1.78	1.45	1.39	1.72	2.04	2.37	2.70	2.79
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	8-D			11 #3 @ 10	18 #3 @ 22.5	11 #3 @ 10					7'-D

BEAM: E(12-11) FLOOR: 2

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.93 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.06	2.65	3.25	3.84	4.43	5.02	5.62	6.21	6.80
Mu(-), ton-m:	-6.98	-5.01	-3.30	-1.79	-1.40	-1.40	-1.40	-1.40	-1.85	-3.02	-4.36
Mu(+), ton-m:	2.33	2.04	1.92	1.66	1.40	1.40	1.59	2.33	2.82	3.11	3.26
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	3.41	3.34	3.06	2.78	2.50	2.22	1.96	2.18	2.46	2.74	2.81
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

12-E 11 #3 @ 10 16 #3 @ 22.5 11 #3 @ 10 11-E

BEAM: E(11-10) 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:	-5.07	-3.36	-1.94	-1.01	-1.01	-1.01	-1.01	-1.01	-1.37	-2.76	-4.44
Mu(+), ton-m:	1.69	1.39	1.63	1.73	1.64	1.39	1.28	1.42	1.31	1.12	1.48
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:	2.59	2.47	2.10	1.73	1.36	1.15	1.52	1.89	2.26	2.63	2.75
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

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

BEAM: E(10-10a) 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:	-1.97	-1.54	-1.13	-0.73	-0.50	-0.50	-0.50	-0.95	-1.44	-1.96	-2.49
Mu(+), ton-m:	1.99	1.63	1.24	0.84	0.50	0.50	0.50	0.73	1.06	1.38	1.68
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:	2.80	2.80	2.80	2.85	2.95	3.06	3.16	3.27	3.31	3.31	3.31
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

10-E 18 #3 @ 10 E:10a

BEAM: E(10a-10b) FLOOR: 2

	Length:	L = 3.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 3.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.38	0.76	1.14	1.52	1.90	2.28	2.66	3.04	3.42	3.80
Mu(-), ton-m:	-8.09	-5.93	-3.94	-2.13	-1.62	-1.62	-1.62	-1.71	-2.98	-4.35	-5.84
Mu(+), ton-m:	4.16	3.64	3.02	2.32	1.65	1.62	2.45	3.66	4.70	5.59	6.31
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:	6.49	6.49	6.16	5.75	5.33	4.91	4.50	4.34	4.76	5.09	5.09
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

E:10a 11 #3 @ 10 7 #3 @ 22.5 11 #3 @ 10 E:10b

BEAM: E(10b-9) FLOOR: 2

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-3.15	-3.09	-3.03	-2.96	-2.90	-2.84	-2.79	-2.74	-2.97	-3.33	-3.85
Mu(+), ton-m:	1.64	1.21	0.78	0.77	0.77	0.77	0.77	0.77	0.77	0.77	1.28
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	20.97	20.97	20.97	20.97	20.97	20.97	20.97	20.97	20.97	20.97	20.97
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

E:10b 4 #3 @ 10 9-E

BEAM: E(9-9a) FLOOR: 2

	Length:	L = 2.60 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 2.60 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.26	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60
Mu(-), ton-m:	-0.69	-0.52	-0.52	-0.52	-0.52	-0.52	-0.52	-0.84	-1.38	-1.96	-2.58
Mu(+), ton-m:	1.87	1.60	1.29	0.94	0.56	0.52	0.52	0.52	0.52	0.52	0.86
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	2.22	2.22	2.25	2.40	2.55	2.70	2.85	3.00	3.15	3.19	3.19
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	#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

9-E 26 #3 @ 10 E:9a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:07 p. m. 5/01/2020

BEAM: E(9a-9b) FLOOR: 2

Length: L = 4.20 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 4.20 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.42	0.84	1.26	1.68	2.10	2.52	2.94	3.36	3.78	4.20
Mu(-), ton-m:	-8.31	-6.19	-4.26	-2.55	-1.66	-1.66	-1.66	-2.06	-3.65	-5.35	-7.13
Mu(+), ton-m:	6.45	5.52	4.55	3.56	2.44	1.66	2.39	3.70	4.88	5.93	6.84
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:	5.48	5.48	5.19	4.88	4.56	4.24	4.09	4.41	4.73	5.02	5.02
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	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

E:9a 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 E:9b

BEAM: E(9b-8) FLOOR: 2

Length: L = 0.40 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.40 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-3.14	-3.08	-3.03	-2.97	-2.92	-2.87	-2.83	-2.79	-2.89	-3.14	-3.62
Mu(+), ton-m:	1.70	1.28	0.86	0.72	0.72	0.72	0.72	0.72	0.72	0.72	1.21
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:	20.40	20.40	20.40	20.40	20.40	20.40	20.40	20.40	20.40	20.40	20.40
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

E:9b 4 #3 @ 10 8-E

BEAM: E(8-8a) FLOOR: 2

Length: L = 2.60 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 2.60 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.26	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60
Mu(-), ton-m:	-0.64	-0.49	-0.49	-0.49	-0.49	-0.49	-0.49	-0.79	-1.31	-1.87	-2.47
Mu(+), ton-m:	1.76	1.51	1.23	0.90	0.54	0.49	0.49	0.49	0.49	0.49	0.82
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:	2.10	2.10	2.14	2.29	2.43	2.58	2.73	2.88	3.03	3.07	3.07
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	#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

8-E 26 #3 @ 10 E:8a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:07 p. m. 5/01/2020

BEAM: E(8a-7') FLOOR: 2

	Length:	L = 4.56 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.16 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.83	1.25	1.67	2.08	2.50	2.91	3.33	3.75	4.16
Mu(-), ton-m:	-6.14	-4.62	-3.17	-1.80	-1.73	-1.73	-1.73	-1.98	-3.67	-6.03	-8.63
Mu(+), ton-m:	5.82	5.03	4.16	3.18	2.10	1.73	2.17	3.20	3.89	4.08	4.34
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:	4.75	4.75	4.53	4.30	4.06	3.90	4.14	4.38	6.84	6.99	6.99
Tu, ton-m:	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.68	0.68	0.68
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	E:8a			11 #3 @ 10	9 #3 @ 22.5	11 #3 @ 10					7'-E

BEAM: F(12-11) FLOOR: 2

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.93 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.06	2.65	3.25	3.84	4.43	5.02	5.62	6.21	6.80
Mu(-), ton-m:	-7.86	-5.40	-3.34	-1.65	-1.57	-1.57	-1.57	-1.57	-1.88	-3.36	-5.19
Mu(+), ton-m:	2.62	1.79	1.89	1.84	1.67	1.64	1.97	2.57	2.77	2.77	2.66
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:	4.01	3.92	3.49	3.06	2.64	2.21	2.16	2.58	3.01	3.43	3.53
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	12-F			11 #3 @ 10	16 #3 @ 22.5	11 #3 @ 10					11-F

BEAM: F(11-11a) FLOOR: 2

	Length:	L = 6.80 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.40 m	c = 0.00 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:	-6.31	-4.09	-2.25	-1.26	-1.26	-1.26	-1.26	-1.26	-1.49	-3.09	-5.14
Mu(+), ton-m:	2.10	1.33	1.71	1.95	1.98	1.83	1.87	2.02	1.85	1.53	1.71
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:	3.56	3.42	2.90	2.39	1.87	1.43	1.94	2.46	2.97	3.49	3.63
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	11-F			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					F:11a

BEAM: F(11a-10) FLOOR: 2

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-2.50	-2.45	-2.39	-2.33	-2.28	-2.22	-2.17	-2.12	-2.19	-2.36	-2.69
Mu(+), ton-m:	1.15	0.85	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.90
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:	14.45	14.45	14.45	14.45	14.45	14.45	14.45	14.45	14.45	14.45	14.45
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	#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

F:11a 4 #3 @ 10 10-F

BEAM: F(10-10a) FLOOR: 2

	Length:	L = 1.38 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.38 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.14	0.28	0.41	0.55	0.69	0.83	0.96	1.10	1.24	1.38
Mu(-), ton-m:	-0.58	-0.48	-0.48	-0.48	-0.48	-0.48	-0.49	-0.95	-1.43	-1.92	-2.42
Mu(+), ton-m:	2.08	1.68	1.27	0.85	0.48	0.48	0.48	0.54	0.66	0.78	0.89
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	4.85	4.85	4.85	4.85	4.90	4.98	5.06	5.11	5.11	5.11	5.11
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

10-F 14 #3 @ 10 F:10a

BEAM: F(10a-10b) FLOOR: 2

	Length:	L = 4.22 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.22 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.27	1.69	2.11	2.53	2.96	3.38	3.80	4.22
Mu(-), ton-m:	-5.40	-3.99	-2.69	-1.58	-1.08	-1.08	-1.08	-1.23	-2.26	-3.36	-4.54
Mu(+), ton-m:	3.78	3.30	2.75	2.20	1.55	1.08	1.52	2.32	3.01	3.60	4.08
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:	3.62	3.62	3.39	3.15	2.91	2.66	2.57	2.81	3.05	3.28	3.28
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	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

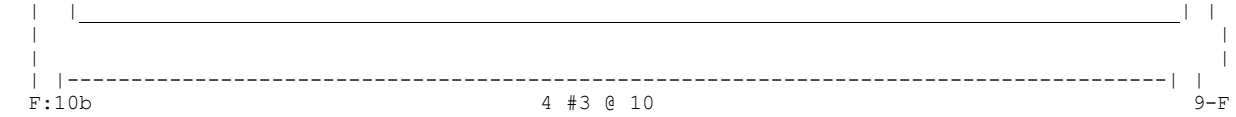
DESIGN

F:10a 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 F:10b

BEAM: F(10b-9) FLOOR: 2

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-2.65	-2.63	-2.62	-2.60	-2.59	-2.58	-2.57	-2.56	-2.55	-2.54	-2.53
Mu(+), ton-m:	1.67	1.38	1.08	0.79	0.53	0.53	0.53	0.53	0.53	0.53	0.84
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:	16.03	16.03	16.03	16.03	16.03	16.03	16.03	16.03	16.03	16.03	16.03
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

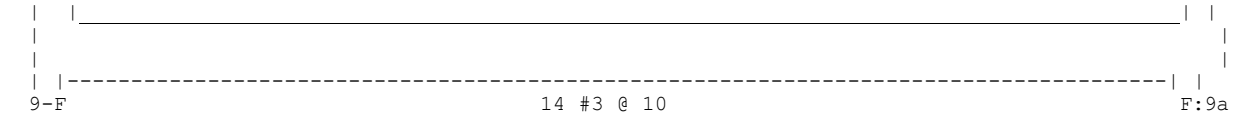
DESIGN



BEAM: F(9-9a) FLOOR: 2

	Length:	L = 1.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.98	1.12	1.26	1.40
Mu(-), ton-m:	-0.47	-0.47	-0.47	-0.47	-0.47	-0.47	-0.51	-0.96	-1.42	-1.89	-2.37
Mu(+), ton-m:	1.96	1.57	1.18	0.78	0.47	0.47	0.47	0.47	0.53	0.59	0.79
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:	4.78	4.78	4.78	4.78	4.84	4.92	5.00	5.06	5.06	5.06	5.06
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

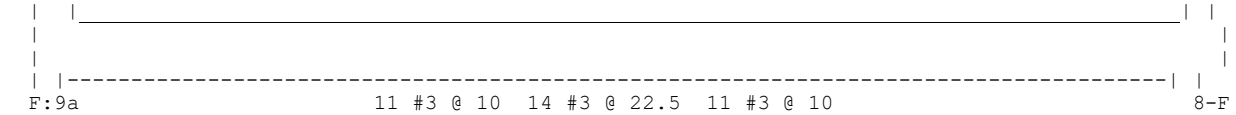
DESIGN



BEAM: F(9a-8) FLOOR: 2

	Length:	L = 5.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.40 m	c = 0.40 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:	-5.36	-3.75	-2.32	-1.12	-1.07	-1.07	-1.07	-1.35	-2.41	-3.62	-5.03
Mu(+), ton-m:	2.58	2.39	2.08	1.72	1.25	1.24	1.76	2.37	2.81	3.11	3.33
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:	3.23	3.19	2.90	2.61	2.32	2.03	1.83	2.12	2.41	2.70	2.74
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: F(8-7') FLOOR: 2

	Length:	L = 7.16 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.36 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.67	2.31	2.95	3.58	4.22	4.85	5.49	6.13	6.76
Mu(-), ton-m:	-4.66	-3.12	-1.84	-1.09	-1.09	-1.09	-1.09	-1.09	-2.17	-3.70	-5.44
Mu(+), ton-m:	1.93	2.05	2.07	1.96	1.63	1.15	1.32	1.45	1.52	1.46	1.81
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:	2.54	2.45	2.12	1.79	1.47	1.43	1.76	2.08	2.41	2.73	2.82
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	8-F			11 #3 @ 10		18 #3 @ 22.5		11 #3 @ 10			7'-F

BEAM: G(12-11) FLOOR: 2

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.93 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.06	2.65	3.25	3.84	4.43	5.02	5.62	6.21	6.80
Mu(-), ton-m:	-7.74	-5.41	-3.43	-1.76	-1.55	-1.55	-1.55	-1.55	-2.00	-3.39	-5.10
Mu(+), ton-m:	2.58	2.03	2.02	1.86	1.60	1.55	1.89	2.57	2.91	3.02	3.04
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	3.87	3.79	3.41	3.03	2.66	2.28	2.14	2.52	2.90	3.27	3.36
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	#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	12-G			11 #3 @ 10		16 #3 @ 22.5		11 #3 @ 10			11-G

BEAM: G(11-10) 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:	-5.07	-3.23	-1.75	-1.01	-1.01	-1.01	-1.01	-1.01	-1.24	-2.76	-4.62
Mu(+), ton-m:	1.69	1.26	1.68	1.97	2.02	1.75	1.47	1.33	1.04	1.01	1.54
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:	3.01	2.89	2.45	2.01	1.57	1.17	1.61	2.05	2.49	2.93	3.05
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	11-G			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			10-G

BEAM: G(10-10a) FLOOR: 2

	Length:	L = 1.38 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.98 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.50	0.60	0.69	0.79	0.89	0.98	1.08	1.18	1.28	1.38
Mu(-), ton-m:	-1.02	-0.80	-0.59	-0.49	-0.49	-0.49	-0.70	-1.13	-1.57	-2.01	-2.46
Mu(+), ton-m:	1.78	1.38	0.98	0.57	0.49	0.49	0.49	0.49	0.61	0.80	0.98
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:	6.34	6.34	6.34	6.34	6.34	6.35	6.36	6.36	6.36	6.36	6.36
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	10-G				10 #3 @ 10						G:10a

BEAM: G(10a-9) FLOOR: 2

	Length:	L = 4.63 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 3.99 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.40	0.80	1.20	1.59	1.99	2.39	2.79	3.19	3.59	3.99
Mu(-), ton-m:	-1.95	-1.30	-0.75	-0.39	-0.39	-0.39	-0.39	-0.39	-0.64	-1.12	-1.72
Mu(+), ton-m:	0.65	0.43	0.48	0.48	0.45	0.46	0.60	0.72	0.73	0.69	0.60
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:	1.72	1.72	1.55	1.35	1.15	0.96	0.76	0.90	1.13	1.32	1.32
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	G:10a			11 #3 @ 10	8 #3 @ 22.5	11 #3 @ 10					9-G

BEAM: G(9-9a) FLOOR: 2

	Length:	L = 6.30 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.19 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.63	2.15	2.67	3.19	3.71	4.22	4.74	5.26	5.78	6.30
Mu(-), ton-m:	-2.41	-1.51	-0.79	-0.48	-0.48	-0.48	-0.48	-0.48	-0.59	-1.26	-2.10
Mu(+), ton-m:	0.80	0.48	0.49	0.65	0.75	0.71	0.67	0.58	0.48	0.48	0.70
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:	1.60	1.57	1.27	0.97	0.70	0.90	1.15	1.39	1.64	1.89	1.91
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	9-G			11 #3 @ 10	13 #3 @ 22.5	11 #3 @ 10					G:9a

BEAM: G(9a-8) 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:	-1.13	-0.97	-0.83	-0.70	-0.57	-0.44	-0.31	-0.23	-0.23	-0.23	-0.23
Mu(+), ton-m:	1.05	0.98	0.91	0.84	0.76	0.68	0.59	0.50	0.41	0.34	0.35
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:	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13
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	G:9a				9 #3 @ 10						8-G

BEAM: G(8-8a) 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:	-0.24	-0.24	-0.24	-0.24	-0.25	-0.39	-0.53	-0.69	-0.86	-1.04	-1.22
Mu(+), ton-m:	0.40	0.35	0.40	0.45	0.49	0.53	0.56	0.61	0.66	0.70	0.74
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	2.69	2.69	2.69	2.69	2.69	2.69	2.69	2.69	2.69	2.69	2.69
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	8-G				9 #3 @ 10						G:8a

BEAM: G(8a-7') FLOOR: 2

	Length:	L = 6.26 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.62 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.56	1.12	1.69	2.25	2.81	3.37	3.94	4.50	5.06	5.62
Mu(-), ton-m:	-2.37	-1.39	-0.59	-0.51	-0.51	-0.51	-0.51	-0.51	-0.75	-1.56	-2.56
Mu(+), ton-m:	0.79	0.51	0.51	0.63	0.76	0.83	0.85	0.76	0.53	0.51	0.85
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:	2.04	1.98	1.69	1.40	1.11	0.82	0.79	1.08	1.38	1.67	1.72
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	G:8a			11 #3 @ 10	15 #3 @ 22.5		11 #3 @ 10				7'-G

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:08 p. m. 5/01/2020

BEAM: H(12-12a) FLOOR: 2

	Length:	L = 6.30 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.90 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.99	1.58	2.17	2.76	3.35	3.94	4.53	5.12	5.71	6.30
Mu(-), ton-m:	-7.23	-4.94	-2.94	-1.45	-1.45	-1.45	-1.45	-1.45	-1.52	-2.80	-4.50
Mu(+), ton-m:	2.41	1.45	1.58	1.68	1.65	1.66	2.05	2.54	2.72	2.62	2.43
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:	4.13	4.03	3.54	3.06	2.57	2.09	2.04	2.52	3.01	3.49	3.60
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

12-H 11 #3 @ 10 16 #3 @ 22.5 11 #3 @ 10 H:12a

BEAM: H(12a-11) 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:	-1.73	-1.49	-1.26	-1.04	-0.82	-0.60	-0.39	-0.35	-0.61	-0.87	-1.14
Mu(+), ton-m:	1.48	1.24	1.01	0.77	0.53	0.35	0.35	0.35	0.35	0.35	0.54
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:	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

H:12a 9 #3 @ 10 11-H

BEAM: H(11-11a) 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:	-1.03	-0.79	-0.56	-0.39	-0.41	-0.65	-0.90	-1.15	-1.40	-1.66	-1.93
Mu(+), ton-m:	0.61	0.39	0.39	0.39	0.39	0.39	0.48	0.70	0.92	1.14	1.35
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:	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24
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

11-H 9 #3 @ 10 H:11a

BEAM: H(11a-10) FLOOR: 2

	Length:	L = 6.30 m Lu = 5.90 m	a = 0.00 m c = 0.40 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 RConcrete2			
X, m:	0.00	0.59	1.18	1.77	2.36	2.95	3.54	4.13	4.72	5.31	5.90
Mu(-), ton-m:	-5.09	-3.15	-1.71	-1.39	-1.39	-1.39	-1.39	-1.39	-2.69	-4.66	-6.93
Mu(+), ton-m:	2.12	2.31	2.47	2.39	2.01	1.73	1.83	1.88	1.80	1.61	2.31
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:	3.74	3.62	3.12	2.61	2.11	1.81	2.31	2.82	3.32	3.83	3.94
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00
DESIGN	H:11a			11 #3 @ 10	16 #3 @ 22.5		11 #3 @ 10				10-H

BEAM: I(12-12a) FLOOR: 2

	Length:	L = 6.30 m Lu = 5.90 m	a = 0.40 m c = 0.00 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 RConcrete2			
X, m:	0.40	0.99	1.58	2.17	2.76	3.35	3.94	4.53	5.12	5.71	6.30
Mu(-), ton-m:	-7.36	-5.04	-3.02	-1.47	-1.47	-1.47	-1.47	-1.47	-1.60	-2.91	-4.64
Mu(+), ton-m:	2.45	1.49	1.68	1.75	1.70	1.68	2.06	2.58	2.79	2.71	2.55
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:	4.17	4.06	3.58	3.10	2.61	2.13	2.09	2.58	3.06	3.54	3.65
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	12-I			11 #3 @ 10	16 #3 @ 22.5		11 #3 @ 10				I:12a

BEAM: I(12a-11) FLOOR: 2

	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: Mat:	VG40X50 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:	-1.81	-1.57	-1.32	-1.09	-0.85	-0.62	-0.40	-0.37	-0.64	-0.91	-1.18
Mu(+), ton-m:	1.53	1.29	1.05	0.80	0.55	0.36	0.36	0.36	0.36	0.38	0.59
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:	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56	3.56
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	I:12a				9 #3 @ 10						11-I

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:08 p. m. 5/01/2020

BEAM: I(11-11a) 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:	-1.08	-0.83	-0.59	-0.40	-0.41	-0.66	-0.91	-1.17	-1.44	-1.71	-1.98
Mu(+), ton-m:	0.65	0.43	0.40	0.40	0.40	0.40	0.51	0.75	0.98	1.21	1.43
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:	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34	3.34
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

11-I 9 #3 @ 10 I:11a

BEAM: I(11a-10) FLOOR: 2

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.90 m	c = 0.40 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.59	1.18	1.77	2.36	2.95	3.54	4.13	4.72	5.31	5.90
Mu(-), ton-m:	-4.95	-3.11	-1.75	-1.38	-1.38	-1.38	-1.38	-1.38	-2.78	-4.69	-6.88
Mu(+), ton-m:	2.42	2.51	2.59	2.42	1.96	1.65	1.75	1.87	1.86	1.75	2.29
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:	3.57	3.47	3.01	2.54	2.08	1.88	2.35	2.81	3.28	3.74	3.84
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

I:11a 11 #3 @ 10 16 #3 @ 22.5 11 #3 @ 10 10-I

BEAM: I''(12-12a) FLOOR: 2

	Length:	L = 6.30 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.19 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.63	2.15	2.67	3.19	3.71	4.22	4.74	5.26	5.78	6.30
Mu(-), ton-m:	-2.80	-1.83	-1.03	-0.56	-0.56	-0.56	-0.56	-0.56	-0.71	-1.43	-2.32
Mu(+), ton-m:	0.93	0.56	0.69	0.80	0.84	0.73	0.72	0.70	0.62	0.56	0.77
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:	1.74	1.71	1.41	1.11	0.82	0.98	1.23	1.48	1.72	1.97	2.00
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:	10.00	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

12-I'' 11 #3 @ 10 13 #3 @ 22.5 11 #3 @ 10 I'':12a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:08 p. m. 5/01/2020

BEAM: I''(12a-11) 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:	-1.33	-1.13	-0.93	-0.74	-0.57	-0.40	-0.27	-0.27	-0.27	-0.27	-0.27
Mu(+), ton-m:	1.07	0.97	0.86	0.76	0.66	0.56	0.45	0.34	0.31	0.39	0.54
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:	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76
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	I'':12a				9 #3 @ 10						11-I''

BEAM: I''(11-11a) 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:	-0.27	-0.27	-0.27	-0.27	-0.27	-0.38	-0.55	-0.74	-0.94	-1.14	-1.34
Mu(+), ton-m:	0.55	0.39	0.29	0.33	0.42	0.51	0.60	0.69	0.79	0.88	0.97
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:	2.89	2.89	2.89	2.89	2.89	2.89	2.89	2.89	2.89	2.89	2.89
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	11-I''				9 #3 @ 10						I'':11a

BEAM: I''(11a-10) FLOOR: 2

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.66 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.57	1.13	1.70	2.26	2.83	3.40	3.96	4.53	5.09	5.66
Mu(-), ton-m:	-2.49	-1.47	-0.65	-0.54	-0.54	-0.54	-0.54	-0.54	-0.83	-1.67	-2.70
Mu(+), ton-m:	0.83	0.54	0.54	0.67	0.78	0.85	0.88	0.81	0.60	0.54	0.90
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:	2.08	2.02	1.73	1.43	1.14	0.85	0.83	1.12	1.41	1.71	1.76
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	I'':11a			11 #3 @ 10	15 #3 @ 22.5		11 #3 @ 10				10-I''

BEAM: A(12-12a) 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:	-8.05	-6.39	-4.74	-3.11	-1.85	-1.85	-1.85	-3.66	-5.51	-7.38	-9.27
Mu(+), ton-m:	8.78	7.06	5.32	3.56	1.85	1.85	1.85	3.28	4.84	6.39	7.92
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	11.61	11.61	11.61	11.65	11.76	11.86	11.97	12.07	12.12	12.12	12.12
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	#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

12-A 18 #3 @ 10 A:12a

BEAM: A(12a-12b) 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:	-22.24	-17.45	-12.77	-8.21	-4.45	-4.45	-4.45	-6.91	-10.65	-14.47	-18.38
Mu(+), ton-m:	16.80	13.67	10.46	7.16	4.45	4.45	4.77	8.87	12.85	16.71	20.45
As(-), cm2:	13.69	10.57	7.62	6.16	6.16	6.16	6.16	6.16	6.31	8.68	11.17
As(+), cm2:	10.15	8.18	6.20	6.16	6.16	6.16	6.16	6.16	7.67	10.10	12.51
Vu, ton:	12.61	12.61	12.36	12.10	11.84	11.58	11.32	11.06	10.80	10.55	10.55
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:12a 11 #3 @ 10 10 #3 @ 22.5 11 #3 @ 10 A:12b

BEAM: A(12b-11) 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:	-9.97	-8.04	-6.11	-4.19	-2.27	-2.12	-2.12	-3.97	-6.17	-8.37	-10.58
Mu(+), ton-m:	11.28	9.12	6.95	4.77	2.59	2.12	2.12	3.48	5.38	7.29	9.19
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.27
As(+), cm2:	6.70	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	28.86	28.86	28.86	28.86	28.86	28.86	28.86	28.86	28.86	28.86	28.86
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:12b 9 #3 @ 10 11-A

BEAM: A(11-11a) 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:	-9.26	-7.34	-5.43	-3.52	-2.28	-2.28	-2.60	-4.80	-7.00	-9.21	-11.42
Mu(+), ton-m:	10.50	8.33	6.15	3.97	2.28	2.28	2.28	4.10	5.99	7.88	9.77
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.79
As(+), cm2:	6.22	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	29.06	29.06	29.06	29.06	29.06	29.06	29.06	29.06	29.06	29.06	29.06
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

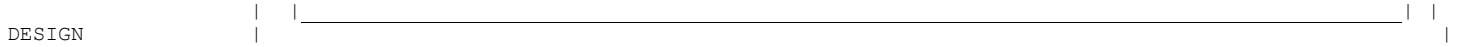
DESIGN

BEAM: A(11a-11b) 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:	-18.27	-14.11	-10.13	-6.31	-3.65	-3.65	-3.65	-5.67	-8.93	-12.32	-15.83
Mu(+), ton-m:	13.63	11.25	8.75	6.11	3.65	3.65	4.13	7.27	10.25	13.06	15.70
As(-), cm2:	11.09	8.46	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.34	9.54
As(+), cm2:	8.16	6.69	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.80	9.46
Vu, ton:	8.80	8.75	8.44	8.13	7.82	7.51	7.19	7.09	7.40	7.72	7.76
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	#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

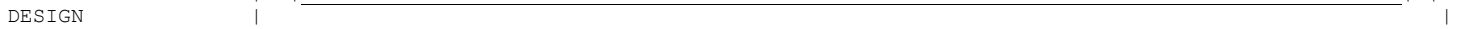


BEAM: A(11b-10) FLOOR: 3

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:	-9.34	-7.53	-5.73	-3.93	-2.14	-2.00	-2.00	-3.73	-5.81	-7.89	-9.98
Mu(+), ton-m:	10.67	8.62	6.57	4.52	2.46	2.00	2.00	3.23	5.01	6.79	8.56
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:	6.33	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	27.38	27.38	27.38	27.38	27.38	27.38	27.38	27.38	27.38	27.38	27.38
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



Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:08 p. m. 5/01/2020

BEAM: A(10-10a) 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:	-8.54	-6.78	-5.02	-3.26	-2.13	-2.13	-2.38	-4.44	-6.50	-8.56	-10.63
Mu(+), ton-m:	9.85	7.82	5.79	3.75	2.13	2.13	2.13	3.74	5.48	7.21	8.95
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.30
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34
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	10-A				9 #3 @ 10						A:10a

BEAM: A(10a-9) FLOOR: 3

	Length:	L = 5.10 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.75 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.48	0.95	1.43	1.90	2.38	2.85	3.33	3.80	4.28	4.75
Mu(-), ton-m:	-20.13	-15.56	-11.13	-6.83	-4.03	-4.03	-4.03	-7.71	-11.55	-15.49	-19.51
Mu(+), ton-m:	16.48	13.32	10.05	6.70	4.03	4.03	5.34	9.14	12.81	16.35	19.77
As(-), cm2:	12.30	9.37	6.61	6.16	6.16	6.16	6.16	6.16	6.87	9.32	11.90
As(+), cm2:	9.95	7.96	6.16	6.16	6.16	6.16	6.16	6.16	7.65	9.87	12.07
Vu, ton:	10.96	10.95	10.70	10.44	10.19	9.94	9.68	9.43	9.49	9.74	9.75
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	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00
DESIGN	A:10a			11 #3 @ 10	11 #3 @ 22.5		11 #3 @ 10				9-A

BEAM: B(12-11) 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:	-18.27	-13.96	-9.92	-6.14	-3.65	-3.65	-3.65	-3.95	-6.82	-9.90	-13.16
Mu(+), ton-m:	10.56	9.09	7.41	5.54	3.65	3.65	3.65	6.30	8.74	10.92	12.85
As(-), cm2:	11.10	8.37	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.86
As(+), cm2:	6.26	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.48	7.67
Vu, ton:	7.46	7.34	6.97	6.60	6.22	5.85	5.48	5.11	5.40	5.77	5.89
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	12-B			11 #3 @ 10	20 #3 @ 22.5		11 #3 @ 10				11-B

BEAM: B(11-10) FLOOR: 3

	Length:	L = 7.20 m Lu = 6.45 m	a = 0.38 m c = 0.38 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 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:	-16.13	-12.26	-8.61	-5.22	-3.23	-3.23	-3.23	-4.61	-7.59	-10.78	-14.24
Mu(+), ton-m:	11.16	9.44	7.55	5.51	3.41	3.23	3.62	6.02	8.21	10.20	12.08
As(-), cm2:	9.73	7.30	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.39	8.54
As(+), cm2:	6.63	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.20
Vu, ton:	6.55	6.46	6.13	5.79	5.46	5.13	4.92	5.25	5.59	5.92	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	11-B			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			10-B

BEAM: B(10-9) FLOOR: 3

	Length:	L = 6.00 m Lu = 5.28 m	a = 0.38 m c = 0.35 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 RConcrete2			
X, m:	0.38	0.90	1.43	1.96	2.49	3.01	3.54	4.07	4.60	5.12	5.65
Mu(-), ton-m:	-16.76	-13.03	-9.47	-6.11	-3.35	-3.35	-3.35	-5.37	-8.70	-12.22	-15.91
Mu(+), ton-m:	14.28	11.83	9.29	6.65	4.03	3.35	3.42	6.01	8.65	11.21	13.69
As(-), cm2:	10.13	7.78	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.28	9.59
As(+), cm2:	8.56	7.04	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.66	8.19
Vu, ton:	7.62	7.59	7.36	7.08	6.80	6.52	6.59	6.87	7.15	7.43	7.47
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	10-B			11 #3 @ 10		14 #3 @ 22.5		11 #3 @ 10			9-B

BEAM: C(12-11) FLOOR: 3

	Length:	L = 7.20 m Lu = 6.45 m	a = 0.40 m c = 0.35 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 RConcrete2			
X, m:	0.40	1.05	1.69	2.34	2.98	3.63	4.27	4.92	5.56	6.21	6.85
Mu(-), ton-m:	-17.11	-13.04	-9.19	-5.57	-3.42	-3.42	-3.42	-4.14	-6.87	-9.78	-12.86
Mu(+), ton-m:	9.88	8.40	6.76	4.95	3.42	3.42	3.86	6.47	8.86	11.02	12.96
As(-), cm2:	10.35	7.79	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.68
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.54	7.74
Vu, ton:	7.30	7.21	6.87	6.54	6.21	5.88	5.54	5.23	5.48	5.82	5.91
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	12-C			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			11-C

BEAM: C(11-10) FLOOR: 3

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.48 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.29	2.94	3.59	4.24	4.88	5.53	6.18	6.83
Mu(-), ton-m:	-14.86	-11.25	-7.87	-4.75	-2.97	-2.97	-2.97	-4.11	-6.90	-9.94	-13.25
Mu(+), ton-m:	10.25	8.73	7.04	5.22	3.33	2.97	3.29	5.41	7.33	9.08	10.72
As(-), cm2:	8.93	6.69	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.92
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.36
Vu, ton:	6.03	5.94	5.60	5.27	4.93	4.60	4.52	4.85	5.19	5.52	5.62
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	11-C			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					10-C

BEAM: C(10-9) FLOOR: 3

	Length:	L = 6.00 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.51 m	c = 1.11 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.83	1.28	1.73	2.18	2.63	3.08	3.53	3.99	4.44	4.89
Mu(-), ton-m:	-20.54	-16.13	-11.84	-7.66	-4.38	-4.38	-4.38	-8.24	-12.67	-17.23	-21.91
Mu(+), ton-m:	19.58	15.92	12.20	8.34	4.71	4.38	4.42	8.22	11.95	15.61	19.17
As(-), cm2:	12.57	9.73	7.05	6.16	6.16	6.16	6.16	6.16	7.56	10.43	13.47
As(+), cm2:	11.95	9.60	7.27	6.16	6.16	6.16	6.16	6.16	7.12	9.40	11.68
Vu, ton:	10.92	10.92	10.74	10.54	10.35	10.28	10.48	10.67	10.87	11.07	11.07
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	10-C			11 #3 @ 10	10 #3 @ 22.5	11 #3 @ 10					9-C

BEAM: D(12-11) 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:	-15.91	-12.09	-8.49	-5.13	-3.18	-3.18	-3.18	-3.77	-6.35	-9.10	-12.02
Mu(+), ton-m:	9.16	7.84	6.36	4.71	3.18	3.18	3.55	5.90	8.04	9.95	11.63
As(-), cm2:	9.59	7.20	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.16
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.92
Vu, ton:	6.79	6.69	6.36	6.02	5.69	5.36	5.03	4.80	5.13	5.46	5.56
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	12-D			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					11-D

BEAM: D(11-10) 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:	-14.02	-10.57	-7.35	-4.39	-2.80	-2.80	-2.80	-3.93	-6.57	-9.47	-12.64
Mu(+), ton-m:	9.44	8.06	6.51	4.82	3.07	2.80	3.19	5.17	6.93	8.55	10.05
As(-), cm2:	8.40	6.27	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.54
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:	5.77	5.67	5.34	5.00	4.67	4.34	4.29	4.62	4.95	5.29	5.38
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	11-D			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					10-D

BEAM: D(10-9) FLOOR: 3

	Length:	L = 6.00 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.25 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.90	1.43	1.95	2.48	3.00	3.53	4.05	4.58	5.10	5.63
Mu(-), ton-m:	-16.73	-12.76	-8.97	-5.44	-3.35	-3.35	-3.35	-5.10	-8.31	-11.81	-15.60
Mu(+), ton-m:	12.21	10.21	8.09	5.87	3.73	3.35	4.00	6.38	8.68	10.84	12.90
As(-), cm2:	10.11	7.62	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.03	9.40
As(+), cm2:	7.28	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.43	7.70
Vu, ton:	8.29	8.26	8.02	7.57	7.11	6.65	6.35	6.80	7.26	7.72	7.77
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	10-D			11 #3 @ 10	13 #3 @ 22.5	11 #3 @ 10					9-D

BEAM: D(9-8) FLOOR: 3

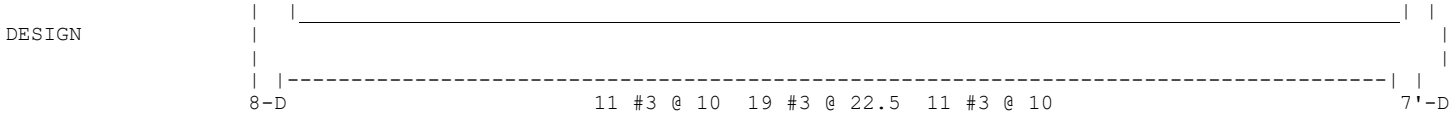
	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	1.02	1.67	2.31	2.96	3.60	4.25	4.89	5.54	6.18	6.83
Mu(-), ton-m:	-14.96	-11.30	-7.86	-4.66	-2.99	-2.99	-2.99	-3.86	-6.39	-9.10	-11.98
Mu(+), ton-m:	8.76	7.49	6.05	4.45	2.99	2.99	3.53	5.73	7.72	9.47	11.00
As(-), cm2:	8.99	6.71	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.13
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.53
Vu, ton:	6.40	6.31	5.97	5.64	5.31	4.98	4.64	4.63	4.97	5.30	5.39
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	9-D			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					8-D

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:08 p. m. 5/01/2020

BEAM: D(8-7') FLOOR: 3

Length: L = 7.16 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.41 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

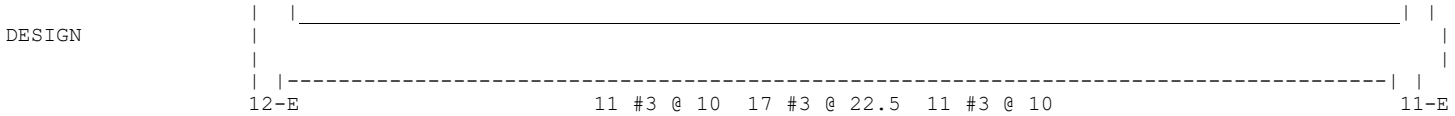
X, m:	0.38	1.02	1.66	2.30	2.94	3.58	4.22	4.86	5.51	6.15	6.79
Mu(-), ton-m:	-13.63	-10.23	-7.08	-4.23	-2.79	-2.79	-2.79	-4.46	-7.36	-10.54	-13.97
Mu(+), ton-m:	10.25	8.67	6.96	5.15	3.18	2.79	3.32	5.29	7.10	8.79	10.35
As(-), cm2:	8.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.25	8.37
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	5.59	5.50	5.16	4.83	4.50	4.22	4.55	4.88	5.21	5.54	5.63
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



BEAM: E(12-11) FLOOR: 3

Length: L = 7.20 m a = 0.88 m Section: b = 40.0 cm Sec: VG40X50
Lu = 5.95 m c = 0.38 m h = 50.0 cm Mat: RConcrete2

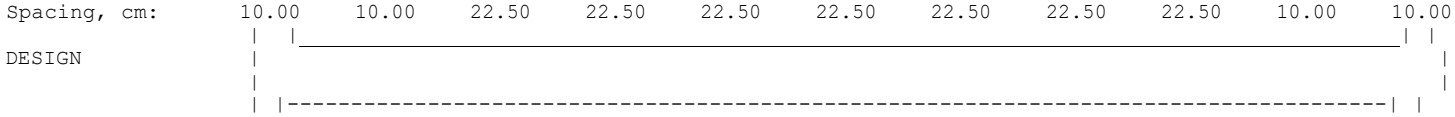
X, m:	0.88	1.47	2.07	2.66	3.26	3.85	4.45	5.04	5.64	6.23	6.83
Mu(-), ton-m:	-17.45	-13.39	-9.58	-5.99	-3.49	-3.49	-3.49	-4.00	-6.63	-9.41	-12.32
Mu(+), ton-m:	9.93	8.43	6.72	4.86	3.49	3.49	3.66	6.50	9.06	11.44	13.64
As(-), cm2:	10.57	8.01	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.34
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.80	8.16
Vu, ton:	7.81	7.74	7.46	7.18	6.89	6.61	6.33	6.04	5.85	6.13	6.20
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	#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: E(11-10) FLOOR: 3

Length: L = 7.20 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.83 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	5.84	6.52	7.20
Mu(-), ton-m:	-12.32	-9.26	-6.46	-3.98	-2.46	-2.46	-2.46	-2.46	-4.74	-7.36	-10.31
Mu(+), ton-m:	7.83	6.95	5.89	4.70	3.36	2.46	2.46	3.62	4.85	5.96	6.91
As(-), cm2:	7.35	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:	4.73	4.61	4.24	3.86	3.49	3.14	3.52	3.89	4.26	4.64	4.76
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



BEAM: E(10-10a) 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:	-5.98	-4.76	-3.54	-2.34	-1.40	-1.40	-1.44	-2.80	-4.19	-5.60	-7.02
Mu(+), ton-m:	6.38	5.12	3.85	2.56	1.40	1.40	1.40	2.32	3.45	4.56	5.66
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:	8.63	8.63	8.63	8.68	8.78	8.89	8.99	9.09	9.14	9.14	9.14
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

10-E 18 #3 @ 10 E:10a

BEAM: E(10a-10b) FLOOR: 3

	Length:	L = 3.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 3.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.38	0.76	1.14	1.52	1.90	2.28	2.66	3.04	3.42	3.80
Mu(-), ton-m:	-21.41	-16.59	-11.94	-7.46	-4.28	-4.28	-4.28	-6.70	-10.55	-14.50	-18.57
Mu(+), ton-m:	17.22	14.12	10.92	7.63	4.41	4.28	5.11	8.98	12.68	16.23	19.62
As(-), cm2:	13.14	10.03	7.11	6.16	6.16	6.16	6.16	6.16	6.25	8.70	11.29
As(+), cm2:	10.42	8.47	6.48	6.16	6.16	6.16	6.16	6.16	7.57	9.80	11.97
Vu, ton:	14.42	14.42	14.10	13.68	13.26	12.85	12.43	12.01	12.40	12.73	12.73
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

E:10a 11 #3 @ 10 7 #3 @ 22.5 11 #3 @ 10 E:10b

BEAM: E(10b-9) FLOOR: 3

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-7.91	-6.87	-5.82	-4.78	-3.74	-2.70	-2.69	-3.83	-4.96	-6.10	-7.24
Mu(+), ton-m:	4.78	3.66	2.55	1.58	1.58	1.58	1.58	1.58	1.58	2.29	3.34
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:	34.60	34.60	34.60	34.60	34.60	34.60	34.60	34.60	34.60	34.60	34.60
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

E:10b 5 #3 @ 7.5 9-E

BEAM: E(9-9a) FLOOR: 3

	Length:	L = 2.60 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 2.60 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.26	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60
Mu(-), ton-m:	-3.17	-2.46	-1.77	-1.12	-1.09	-1.09	-1.09	-1.96	-3.08	-4.23	-5.43
Mu(+), ton-m:	4.78	3.93	3.05	2.13	1.16	1.09	1.09	1.20	1.71	2.19	2.63
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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	4.92	4.95	5.10	5.25	5.40	5.55	5.70	5.85	5.88	5.88
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	22.50	22.50	22.50	10.00	10.00	10.00	10.00
DESIGN	9-E				26 #3 @ 10						E:9a

BEAM: E(9a-9b) FLOOR: 3

	Length:	L = 4.20 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.20 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.26	1.68	2.10	2.52	2.94	3.36	3.78	4.20
Mu(-), ton-m:	-21.73	-16.92	-12.25	-7.77	-4.35	-4.35	-4.35	-6.75	-10.74	-14.83	-19.02
Mu(+), ton-m:	18.54	15.22	11.80	8.35	4.90	4.35	5.12	9.12	13.00	16.74	20.34
As(-), cm2:	13.35	10.23	7.30	6.16	6.16	6.16	6.16	6.16	6.37	8.91	11.58
As(+), cm2:	11.27	9.15	7.02	6.16	6.16	6.16	6.16	6.16	7.76	10.12	12.44
Vu, ton:	13.04	13.04	12.76	12.44	12.12	11.80	11.48	11.16	11.42	11.70	11.70
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	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00
DESIGN	E:9a				11 #3 @ 10	9 #3 @ 22.5		11 #3 @ 10			E:9b

BEAM: E(9b-8) FLOOR: 3

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-7.86	-6.83	-5.80	-4.78	-3.76	-2.73	-2.51	-3.63	-4.76	-5.89	-7.02
Mu(+), ton-m:	4.85	3.75	2.65	1.57	1.57	1.57	1.57	1.57	1.57	2.17	3.21
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:	34.23	34.23	34.23	34.23	34.23	34.23	34.23	34.23	34.23	34.23	34.23
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:	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
DESIGN	E:9b				5 #3 @ 7.5						8-E

BEAM: E(8-8a) FLOOR: 3

	Length:	L = 2.60 m Lu = 2.60 m	a = 0.00 m c = 0.00 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 RConcrete2				
X, m:	0.00	0.26	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60
Mu(-), ton-m:	-3.09	-2.39	-1.73	-1.09	-1.06	-1.06	-1.06	-1.90	-2.99	-4.12	-5.28
Mu(+), ton-m:	4.64	3.83	2.97	2.07	1.14	1.06	1.06	1.17	1.66	2.12	2.55
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:	4.77	4.77	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.74	5.74
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	22.50	22.50	22.50	10.00	10.00	10.00	10.00

DESIGN

8-E 26 #3 @ 10 E:8a

BEAM: E(8a-7') FLOOR: 3

	Length:	L = 4.56 m Lu = 4.19 m	a = 0.00 m c = 0.38 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 RConcrete2				
X, m:	0.00	0.42	0.84	1.26	1.68	2.09	2.51	2.93	3.35	3.77	4.19
Mu(-), ton-m:	-18.27	-14.07	-9.98	-6.06	-3.87	-3.87	-4.02	-7.74	-11.54	-15.42	-19.37
Mu(+), ton-m:	16.75	13.47	10.15	6.81	3.87	3.87	5.46	9.07	12.58	15.98	19.29
As(-), cm2:	11.10	8.43	6.16	6.16	6.16	6.16	6.16	6.16	6.86	9.28	11.81
As(+), cm2:	10.13	8.06	6.16	6.16	6.16	6.16	6.16	6.16	7.50	9.64	11.75
Vu, ton:	11.14	11.14	10.92	10.68	10.44	10.20	9.99	10.21	10.43	10.59	10.59
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

E:8a 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 7'-E

BEAM: F(12-11) FLOOR: 3

	Length:	L = 7.20 m Lu = 5.95 m	a = 0.88 m c = 0.38 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 RConcrete2				
X, m:	0.88	1.47	2.07	2.66	3.26	3.85	4.45	5.04	5.64	6.23	6.83
Mu(-), ton-m:	-17.75	-13.31	-9.27	-5.54	-3.55	-3.55	-3.55	-3.69	-6.41	-9.33	-12.44
Mu(+), ton-m:	8.97	7.85	6.45	4.82	3.55	3.55	3.91	6.49	8.65	10.53	12.14
As(-), cm2:	10.76	7.96	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.42
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.24	7.23
Vu, ton:	8.10	8.00	7.57	7.14	6.71	6.29	5.86	5.73	6.16	6.59	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

12-F 11 #3 @ 10 17 #3 @ 22.5 11 #3 @ 10 11-F

BEAM: F(11-11a) FLOOR: 3

Length: L = 6.80 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.42 m c = 0.00 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:	-13.60	-9.99	-6.75	-3.97	-2.72	-2.72	-2.72	-2.72	-4.95	-7.81	-11.17
Mu(+), ton-m:	7.73	7.00	6.07	5.00	3.74	2.72	2.86	4.38	5.57	6.55	7.45
As(-), cm2:	8.14	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.63
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:	5.90	5.75	5.23	4.72	4.20	3.69	4.12	4.64	5.16	5.68	5.82
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

11-F 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F:11a

BEAM: F(11a-10) FLOOR: 3

Length: L = 0.40 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.40 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-7.08	-6.09	-5.11	-4.13	-3.15	-2.17	-2.18	-3.13	-4.08	-5.03	-5.98
Mu(+), ton-m:	4.13	3.18	2.23	1.42	1.42	1.42	1.42	1.42	1.42	2.34	3.31
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:	29.23	29.23	29.23	29.23	29.23	29.23	29.23	29.23	29.23	29.23	29.23
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

F:11a 4 #3 @ 10 10-F

BEAM: F(10-10a) FLOOR: 3

Length: L = 1.38 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 1.38 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.14	0.28	0.41	0.55	0.69	0.83	0.96	1.10	1.24	1.38
Mu(-), ton-m:	-4.63	-3.67	-2.71	-1.76	-1.42	-1.42	-1.48	-2.87	-4.27	-5.68	-7.10
Mu(+), ton-m:	6.64	5.31	3.98	2.63	1.42	1.42	1.42	1.95	2.86	3.76	4.65
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:	12.97	12.97	12.97	12.97	13.02	13.10	13.18	13.23	13.23	13.23	13.23
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	#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

10-F 14 #3 @ 10 F:10a

BEAM: F(10a-10b) FLOOR: 3

	Length:	L = 4.22 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.22 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.27	1.69	2.11	2.53	2.96	3.38	3.80	4.22
Mu(-), ton-m:	-16.19	-12.60	-9.12	-5.80	-3.24	-3.24	-3.24	-5.06	-8.07	-11.15	-14.31
Mu(+), ton-m:	13.82	11.35	8.81	6.24	3.66	3.24	3.77	6.73	9.60	12.36	15.01
As(-), cm2:	9.77	7.52	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.62	8.58
As(+), cm2:	8.28	6.75	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.37	9.03
Vu, ton:	9.61	9.61	9.39	9.15	8.90	8.66	8.42	8.24	8.48	8.70	8.70
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	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

F:10a 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 F:10b

BEAM: F(10b-9) FLOOR: 3

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-7.30	-6.35	-5.40	-4.45	-3.50	-2.56	-1.75	-2.64	-3.67	-4.70	-5.74
Mu(+), ton-m:	5.04	4.03	3.02	2.01	1.46	1.46	1.46	1.46	1.46	1.85	2.82
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:	30.95	30.95	30.95	30.95	30.95	30.95	30.95	30.95	30.95	30.95	30.95
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	#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

F:10b 4 #3 @ 10 9-F

BEAM: F(9-9a) FLOOR: 3

	Length:	L = 1.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.98	1.12	1.26	1.40
Mu(-), ton-m:	-4.25	-3.36	-2.48	-1.61	-1.41	-1.41	-1.46	-2.84	-4.24	-5.65	-7.07
Mu(+), ton-m:	6.62	5.30	3.97	2.63	1.41	1.41	1.41	1.79	2.62	3.44	4.25
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:	13.00	13.00	13.00	13.00	13.06	13.14	13.22	13.28	13.28	13.28	13.28
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

9-F 14 #3 @ 10 F:9a

BEAM: F(9a-8) FLOOR: 3

	Length:	L = 5.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.40 m	c = 0.40 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:	-13.78	-10.39	-7.17	-4.12	-2.76	-2.76	-2.76	-4.65	-7.20	-9.86	-12.65
Mu(+), ton-m:	9.67	7.99	6.20	4.28	2.76	2.76	4.05	6.43	8.66	10.71	12.61
As(-), cm2:	8.25	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.55
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.36	7.52
Vu, ton:	7.22	7.18	6.89	6.60	6.31	6.02	5.73	5.45	5.71	5.99	6.04
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	#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:9a			11 #3 @ 10	14 #3 @ 22.5		11 #3 @ 10				8-F

BEAM: F(8-7') FLOOR: 3

	Length:	L = 7.16 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.39 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	1.04	1.68	2.32	2.96	3.59	4.23	4.87	5.51	6.15	6.79
Mu(-), ton-m:	-11.96	-8.89	-6.09	-3.59	-2.55	-2.55	-2.55	-3.97	-6.64	-9.59	-12.77
Mu(+), ton-m:	8.94	7.61	6.18	4.64	2.90	2.55	3.03	4.67	6.20	7.60	8.86
As(-), cm2:	7.12	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.62
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	4.99	4.67	4.34	4.01	3.87	4.20	4.53	4.85	5.18	5.27
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	8-F			11 #3 @ 10	19 #3 @ 22.5		11 #3 @ 10				7'-F

BEAM: G(12-11) FLOOR: 3

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.95 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.66	3.26	3.85	4.45	5.04	5.64	6.23	6.83
Mu(-), ton-m:	-17.76	-13.42	-9.44	-5.73	-3.55	-3.55	-3.55	-3.93	-6.69	-9.64	-12.75
Mu(+), ton-m:	9.68	8.35	6.77	5.00	3.55	3.55	3.85	6.53	8.85	10.92	12.74
As(-), cm2:	10.77	8.03	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.61
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.48	7.60
Vu, ton:	7.99	7.90	7.52	7.14	6.76	6.38	6.00	5.77	6.15	6.53	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	12-G			11 #3 @ 10	17 #3 @ 22.5		11 #3 @ 10				11-G

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:08 p. m. 5/01/2020

BEAM: G(11-10) FLOOR: 3

	Length:	L = 7.20 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.43 m	c = 0.40 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	5.52	6.16	6.80
Mu(-), ton-m:	-13.10	-9.60	-6.45	-3.72	-2.77	-2.77	-2.77	-3.98	-6.91	-10.23	-13.87
Mu(+), ton-m:	8.98	7.80	6.47	5.03	3.34	2.77	3.26	4.83	6.25	7.53	8.62
As(-), cm2:	7.83	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	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
Vu, ton:	5.75	5.63	5.18	4.74	4.30	4.05	4.49	4.94	5.38	5.82	5.95
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	11-G			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					10-G

BEAM: G(10-9) FLOOR: 3

	Length:	L = 6.00 m	a = 0.40 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.96 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.40	0.90	1.39	1.89	2.38	2.88	3.38	3.87	4.37	4.86	5.36
Mu(-), ton-m:	-16.22	-12.56	-9.08	-5.75	-3.44	-3.44	-3.44	-6.23	-9.71	-13.37	-17.19
Mu(+), ton-m:	14.69	12.04	9.31	6.50	3.55	3.44	3.89	6.52	9.27	11.96	14.53
As(-), cm2:	9.79	7.50	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.00	10.40
As(+), cm2:	8.82	7.17	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.12	8.72
Vu, ton:	8.08	8.07	7.86	7.62	7.37	7.17	7.40	7.65	7.90	8.14	8.16
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	#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	10-G			11 #3 @ 10	12 #3 @ 22.5	11 #3 @ 10					9-G

BEAM: G(9-9a) FLOOR: 3

	Length:	L = 6.30 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.19 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.63	2.15	2.67	3.19	3.71	4.22	4.74	5.26	5.78	6.30
Mu(-), ton-m:	-18.70	-14.70	-10.87	-7.19	-3.74	-3.74	-3.74	-4.68	-7.83	-11.10	-14.47
Mu(+), ton-m:	14.16	11.82	9.36	6.80	4.14	3.74	3.74	5.95	8.86	11.62	14.24
As(-), cm2:	11.37	8.83	6.45	6.16	6.16	6.16	6.16	6.16	6.16	6.59	8.68
As(+), cm2:	8.49	7.04	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.91	8.54
Vu, ton:	8.31	8.28	8.03	7.79	7.54	7.29	7.08	7.30	7.55	7.79	7.82
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	9-G			11 #3 @ 10	13 #3 @ 22.5	11 #3 @ 10					G:9a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:08 p. m. 5/01/2020

BEAM: G(9a-8) 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:	-6.62	-5.36	-4.10	-2.85	-1.61	-1.32	-1.32	-2.38	-3.78	-5.18	-6.59
Mu(+), ton-m:	7.27	5.91	4.54	3.16	1.78	1.32	1.32	2.11	3.35	4.58	5.80
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	18.11	18.11	18.11	18.11	18.11	18.11	18.11	18.11	18.11	18.11	18.11
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	G:9a				9 #3 @ 10						8-G

BEAM: G(8-8a) 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:	-5.84	-4.61	-3.39	-2.16	-1.43	-1.43	-1.67	-3.03	-4.39	-5.76	-7.14
Mu(+), ton-m:	6.40	5.06	3.73	2.39	1.43	1.43	1.49	2.69	3.90	5.10	6.30
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:	17.67	17.67	17.67	17.67	17.67	17.67	17.67	17.67	17.67	17.67	17.67
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	#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	8-G				9 #3 @ 10						G:8a

BEAM: G(8a-7') FLOOR: 3

	Length:	L = 6.26 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.62 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.56	1.12	1.69	2.25	2.81	3.37	3.94	4.50	5.06	5.62
Mu(-), ton-m:	-13.76	-10.34	-7.10	-4.12	-2.96	-2.96	-2.96	-5.54	-8.42	-11.49	-14.82
Mu(+), ton-m:	10.86	8.92	6.84	4.71	2.96	2.96	4.08	6.43	8.62	10.67	12.66
As(-), cm2:	8.24	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.83	8.90
As(+), cm2:	6.44	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.33	7.55
Vu, ton:	6.69	6.63	6.34	6.05	5.76	5.47	5.26	5.55	5.84	6.13	6.18
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:8a			11 #3 @ 10	15 #3 @ 22.5		11 #3 @ 10				7'-G

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:08 p. m. 5/01/2020

BEAM: H(12-12a) FLOOR: 3

Length: L = 6.30 m a = 0.38 m Section: b = 40.0 cm Sec: VG40X50
Lu = 5.93 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.38	0.97	1.56	2.15	2.75	3.34	3.93	4.52	5.12	5.71	6.30
Mu(-), ton-m:	-16.59	-12.54	-8.78	-5.40	-3.32	-3.32	-3.32	-3.32	-5.63	-8.49	-11.60
Mu(+), ton-m:	9.54	8.38	7.02	5.51	3.90	3.32	3.32	5.42	7.35	8.97	10.33
As(-), cm2:	10.02	7.48	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.90
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:	7.55	7.44	6.95	6.46	5.97	5.48	5.11	5.59	6.08	6.57	6.68
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

12-H 11 #3 @ 10 16 #3 @ 22.5 11 #3 @ 10 H:12a

BEAM: H(12a-11) 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:	-7.15	-5.82	-4.50	-3.18	-1.87	-1.43	-1.43	-2.33	-3.47	-4.61	-5.79
Mu(+), ton-m:	5.79	4.65	3.50	2.36	1.43	1.43	1.43	2.10	3.37	4.63	5.92
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	17.14	17.14	17.14	17.14	17.14	17.14	17.14	17.14	17.14	17.14	17.14
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

H:12a 9 #3 @ 10 11-H

BEAM: H(11-11a) 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:	-5.48	-4.37	-3.27	-2.17	-1.55	-1.55	-2.02	-3.44	-4.87	-6.31	-7.75
Mu(+), ton-m:	6.44	5.04	3.64	2.23	1.55	1.55	1.55	2.20	3.29	4.37	5.44
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	19.74	19.74	19.74	19.74	19.74	19.74	19.74	19.74	19.74	19.74	19.74
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

11-H 9 #3 @ 10 H:11a

BEAM: H(11a-10) FLOOR: 3

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.93 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.59	1.19	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.93
Mu(-), ton-m:	-12.83	-9.22	-6.07	-3.26	-3.04	-3.04	-3.04	-4.94	-7.98	-11.43	-15.22
Mu(+), ton-m:	9.58	8.15	6.65	4.97	3.04	3.04	4.21	5.98	7.56	9.03	10.33
As(-), cm2:	7.66	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.79	9.15
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:	6.72	6.61	6.12	5.63	5.14	4.69	5.14	5.63	6.12	6.60	6.71
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:11a 11 #3 @ 10 16 #3 @ 22.5 11 #3 @ 10 10-H

BEAM: H(10-10a) FLOOR: 3

	Length:	L = 1.38 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.00 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.48	0.58	0.68	0.78	0.88	0.98	1.08	1.18	1.28	1.38
Mu(-), ton-m:	-0.34	-0.27	-0.22	-0.17	-0.12	-0.09	-0.05	-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:	0.36	0.36	0.36	0.36	0.36	0.34	0.27	0.20	0.13	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

10-H 5 #3 @ 22.5 H:10a

BEAM: I(12-12a) FLOOR: 3

	Length:	L = 6.30 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.93 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.97	1.56	2.15	2.75	3.34	3.93	4.52	5.12	5.71	6.30
Mu(-), ton-m:	-16.83	-12.74	-8.93	-5.51	-3.37	-3.37	-3.37	-3.37	-5.86	-8.81	-12.05
Mu(+), ton-m:	10.00	8.76	7.31	5.72	4.03	3.37	3.37	5.50	7.47	9.14	10.59
As(-), cm2:	10.18	7.60	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.18
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.28
Vu, ton:	7.60	7.49	7.00	6.51	6.02	5.54	5.24	5.73	6.21	6.70	6.81
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

12-I 11 #3 @ 10 16 #3 @ 22.5 11 #3 @ 10 I:12a

BEAM: I(12a-11) 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:	-7.46	-6.07	-4.69	-3.31	-1.94	-1.49	-1.49	-2.37	-3.53	-4.72	-5.92
Mu(+), ton-m:	5.93	4.77	3.59	2.42	1.49	1.49	1.49	2.19	3.51	4.85	6.19
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	18.06	18.06	18.06	18.06	18.06	18.06	18.06	18.06	18.06	18.06	18.06
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	#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:12a				9 #3 @ 10						11-I

BEAM: I(11-11a) 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:	-5.71	-4.56	-3.40	-2.25	-1.57	-1.57	-2.04	-3.49	-4.94	-6.39	-7.85
Mu(+), ton-m:	6.54	5.12	3.70	2.27	1.57	1.57	1.57	2.31	3.44	4.57	5.70
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:	19.81	19.81	19.81	19.81	19.81	19.81	19.81	19.81	19.81	19.81	19.81
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	11-I				9 #3 @ 10						I:11a

BEAM: I(11a-10) FLOOR: 3

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.93 m	c = 0.38 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.59	1.19	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.93
Mu(-), ton-m:	-12.74	-9.22	-6.17	-3.37	-3.13	-3.13	-3.13	-5.22	-8.36	-11.87	-15.66
Mu(+), ton-m:	10.22	8.61	6.99	5.13	3.13	3.13	4.16	6.00	7.71	9.30	10.73
As(-), cm2:	7.60	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.06	9.43
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.36
Vu, ton:	6.65	6.55	6.10	5.65	5.21	4.95	5.40	5.84	6.29	6.74	6.84
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:11a			11 #3 @ 10	16 #3 @ 22.5		11 #3 @ 10				10-I

BEAM: I(10-10a) FLOOR: 3

	Length:	L = 1.38 m	a = 0.38 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.00 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.38	0.48	0.58	0.68	0.78	0.88	0.98	1.08	1.18	1.28	1.38
Mu(-), ton-m:	-0.34	-0.27	-0.22	-0.17	-0.12	-0.09	-0.05	-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:	0.36	0.36	0.36	0.36	0.36	0.34	0.27	0.20	0.13	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	10-I				5 #3 @ 22.5						I:10a

BEAM: I''(12-12a) FLOOR: 3

	Length:	L = 6.30 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.19 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.63	2.15	2.67	3.19	3.71	4.22	4.74	5.26	5.78	6.30
Mu(-), ton-m:	-19.63	-15.46	-11.45	-7.60	-3.94	-3.93	-3.93	-5.22	-8.71	-12.31	-16.02
Mu(+), ton-m:	15.98	13.30	10.51	7.62	4.66	3.93	3.93	6.26	9.35	12.29	15.08
As(-), cm2:	11.98	9.31	6.81	6.16	6.16	6.16	6.16	6.16	6.16	7.34	9.66
As(+), cm2:	9.63	7.95	6.23	6.16	6.16	6.16	6.16	6.16	6.16	7.32	9.07
Vu, ton:	8.50	8.47	8.22	7.98	7.73	7.49	7.63	7.87	8.12	8.37	8.40
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	12-I''				11 #3 @ 10	13 #3 @ 22.5	11 #3 @ 10				I'':12a

BEAM: I''(12a-11) 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:	-7.58	-6.11	-4.65	-3.19	-1.73	-1.52	-1.52	-2.71	-4.21	-5.72	-7.23
Mu(+), ton-m:	7.66	6.19	4.72	3.24	1.76	1.52	1.52	2.61	4.05	5.49	6.93
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:	18.65	18.65	18.65	18.65	18.65	18.65	18.65	18.65	18.65	18.65	18.65
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	I'':12a				9 #3 @ 10						11-I''

BEAM: I''(11-11a) 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:	-6.99	-5.54	-4.09	-2.65	-1.55	-1.55	-1.76	-3.25	-4.75	-6.26	-7.77
Mu(+), ton-m:	7.13	5.66	4.18	2.71	1.55	1.55	1.66	3.10	4.52	5.95	7.37
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:	18.76	18.76	18.76	18.76	18.76	18.76	18.76	18.76	18.76	18.76	18.76
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	11-I''				9 #3 @ 10						I'':11a

BEAM: I''(11a-10) FLOOR: 3

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.66 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.57	1.13	1.70	2.26	2.83	3.40	3.96	4.53	5.09	5.66
Mu(-), ton-m:	-14.44	-10.87	-7.50	-4.37	-3.28	-3.28	-3.28	-6.18	-9.35	-12.77	-16.39
Mu(+), ton-m:	12.00	9.81	7.51	5.14	3.28	3.28	4.31	6.80	9.14	11.43	13.59
As(-), cm2:	8.67	6.45	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.62	9.90
As(+), cm2:	7.15	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.79	8.13
Vu, ton:	6.93	6.87	6.58	6.29	6.00	5.70	5.74	6.03	6.32	6.62	6.67
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	#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'':11a			11 #3 @ 10	15 #3 @ 22.5		11 #3 @ 10				10-I''

BEAM: I''(10-10a) FLOOR: 3

	Length:	L = 1.38 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.26 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.14	1.16	1.19	1.22	1.24	1.27	1.30	1.32	1.35	1.38
Mu(-), ton-m:	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01	0.00	0.00	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:	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
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	10-I''				2 #3 @ 22.5						I'':10a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:09 p. m. 5/01/2020

BEAM: A(12-12a) 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:	-10.57	-8.41	-6.26	-4.12	-2.53	-2.53	-2.53	-5.03	-7.55	-10.09	-12.65
Mu(+), ton-m:	12.09	9.70	7.29	4.86	2.53	2.53	2.53	4.28	6.34	8.39	10.43
As(-), cm2:	6.27	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.55
As(+), cm2:	7.20	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.18
Vu, ton:	16.32	16.32	16.32	16.36	16.47	16.57	16.67	16.78	16.82	16.82	16.82
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

12-A 18 #3 @ 10 A:12a

BEAM: A(12a-12b) 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:	-30.48	-24.03	-17.69	-11.47	-6.10	-6.10	-6.10	-9.31	-14.26	-19.29	-24.42
Mu(+), ton-m:	22.88	18.55	14.12	9.61	6.10	6.10	6.49	12.24	17.87	23.39	28.80
As(-), cm2:	19.32	14.88	10.73	6.82	6.16	6.16	6.16	6.16	8.55	11.76	15.14
As(+), cm2:	14.12	11.28	8.47	6.16	6.16	6.16	6.16	7.29	10.84	14.46	18.14
Vu, ton:	17.32	17.32	17.07	16.81	16.55	16.29	16.03	15.77	15.51	15.26	15.26
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	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

A:12a 11 #3 @ 10 10 #3 @ 22.5 11 #3 @ 10 A:12b

BEAM: A(12b-11) 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:	-13.06	-10.51	-7.96	-5.41	-2.90	-2.90	-2.90	-5.61	-8.56	-11.52	-14.49
Mu(+), ton-m:	14.96	12.03	9.10	6.17	3.23	2.90	2.90	4.73	7.26	9.78	12.30
As(-), cm2:	7.80	6.23	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.85	8.70
As(+), cm2:	8.99	7.17	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.33
Vu, ton:	39.19	39.19	39.19	39.19	39.19	39.19	39.19	39.19	39.19	39.19	39.19
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:12b 12 #3 @ 7.5 11-A

BEAM: A(11-11a) 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:	-12.22	-9.73	-7.24	-4.76	-3.09	-3.09	-3.38	-6.40	-9.42	-12.44	-15.47
Mu(+), ton-m:	14.60	11.61	8.62	5.63	3.09	3.09	3.09	5.14	7.61	10.07	12.53
As(-), cm2:	7.28	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.42	9.31
As(+), cm2:	8.77	6.91	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.47
Vu, ton:	40.80	40.80	40.80	40.80	40.80	40.80	40.80	40.80	40.80	40.80	40.80
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	11-A				9 #4 @ 10						A:11a

BEAM: A(11a-11b) FLOOR: 4

	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:	-24.68	-19.22	-13.92	-8.80	-4.94	-4.94	-4.94	-7.81	-12.12	-16.56	-21.12
Mu(+), ton-m:	18.85	15.42	11.86	8.18	4.94	4.94	5.57	10.02	14.31	18.43	22.37
As(-), cm2:	15.32	11.71	8.34	6.16	6.16	6.16	6.16	6.16	7.22	10.00	12.95
As(+), cm2:	11.47	9.28	7.06	6.16	6.16	6.16	6.16	6.16	8.58	11.20	13.78
Vu, ton:	11.79	11.74	11.43	11.12	10.81	10.50	10.19	9.88	9.80	10.11	10.15
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	#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:11a			11 #3 @ 10		14 #3 @ 22.5		11 #3 @ 10			A:11b

BEAM: A(11b-10) 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:	-12.09	-9.73	-7.38	-5.02	-2.68	-2.67	-2.67	-5.14	-7.87	-10.61	-13.35
Mu(+), ton-m:	13.84	11.14	8.44	5.73	3.02	2.67	2.67	4.35	6.68	9.01	11.34
As(-), cm2:	7.20	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.29	7.98
As(+), cm2:	8.29	6.62	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.74
Vu, ton:	36.18	36.18	36.18	36.18	36.18	36.18	36.18	36.18	36.18	36.18	36.18
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:11b				12 #3 @ 7.5						10-A

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:09 p. m. 5/01/2020

BEAM: A(10-10a) 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:	-11.26	-8.98	-6.70	-4.42	-2.80	-2.80	-2.99	-5.73	-8.47	-11.23	-13.98
Mu(+), ton-m:	13.37	10.66	7.94	5.21	2.80	2.80	2.80	4.64	6.90	9.16	11.41
As(-), cm2:	6.69	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.67	8.38
As(+), cm2:	8.00	6.32	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.78
Vu, ton:	37.01	37.01	37.01	37.01	37.01	37.01	37.01	37.01	37.01	37.01	37.01
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	10-A				12 #3 @ 7.5						A:10a

BEAM: A(10a-10b) FLOOR: 4

	Length:	L = 0.48 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.48 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.05	0.10	0.14	0.19	0.24	0.29	0.33	0.38	0.43	0.48
Mu(-), ton-m:	-0.08	-0.06	-0.05	-0.04	-0.03	-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:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	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	A:10a				3 #3 @ 22.5						A:10b

BEAM: B(12-11) FLOOR: 4

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.85 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.69	1.37	2.06	2.74	3.43	4.11	4.80	5.48	6.17	6.85
Mu(-), ton-m:	-24.21	-18.66	-13.39	-8.38	-4.84	-4.84	-4.84	-5.76	-9.47	-13.37	-17.47
Mu(+), ton-m:	14.55	12.26	9.76	7.06	4.84	4.84	5.02	8.95	12.61	16.00	19.14
As(-), cm2:	15.00	11.35	8.01	6.16	6.16	6.16	6.16	6.16	6.16	8.00	10.59
As(+), cm2:	8.74	7.30	6.16	6.16	6.16	6.16	6.16	6.16	7.52	9.65	11.66
Vu, ton:	9.79	9.67	9.29	8.92	8.54	8.17	7.79	7.42	7.08	7.40	7.52
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	12-B			11 #3 @ 10		21 #3 @ 22.5		11 #3 @ 10			11-B

BEAM: B(11-10) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-23.28	-17.90	-12.75	-7.85	-4.66	-4.66	-4.66	-7.39	-11.65	-16.08	-20.68
Mu(+), ton-m:	17.20	14.23	11.08	7.78	4.66	4.66	5.43	9.34	13.01	16.45	19.66
As(-), cm2:	14.38	10.86	7.61	6.16	6.16	6.16	6.16	6.16	6.93	9.70	12.66
As(+), cm2:	10.41	8.53	6.58	6.16	6.16	6.16	6.16	6.16	7.77	9.93	12.00
Vu, ton:	9.27	9.17	8.84	8.50	8.16	7.82	7.48	7.53	7.87	8.21	8.31
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

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

BEAM: B(10-10a) FLOOR: 4

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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

10-B 6 #3 @ 22.5 B:10a

BEAM: C(12-11) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-23.94	-18.52	-13.33	-8.37	-4.79	-4.79	-4.79	-5.92	-9.63	-13.51	-17.57
Mu(+), ton-m:	14.85	12.42	9.83	7.05	4.79	4.79	5.06	8.98	12.69	16.17	19.42
As(-), cm2:	14.82	11.26	7.97	6.16	6.16	6.16	6.16	6.16	6.16	8.08	10.65
As(+), cm2:	8.92	7.41	6.16	6.16	6.16	6.16	6.16	6.16	7.58	9.76	11.84
Vu, ton:	9.92	9.82	9.48	9.14	8.80	8.46	8.13	7.79	7.45	7.71	7.81
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

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

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:09 p. m. 5/01/2020

BEAM: C(11-10) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-21.43	-16.42	-11.63	-7.10	-4.29	-4.29	-4.29	-6.92	-10.92	-15.10	-19.52
Mu(+), ton-m:	15.92	13.19	10.30	7.26	4.29	4.29	5.09	8.63	11.94	15.01	17.93
As(-), cm2:	13.15	9.91	6.92	6.16	6.16	6.16	6.16	6.16	6.48	9.08	11.91
As(+), cm2:	9.60	7.89	6.16	6.16	6.16	6.16	6.16	6.16	7.11	9.02	10.88
Vu, ton:	8.55	8.45	8.11	7.78	7.44	7.10	6.76	7.03	7.37	7.71	7.80
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

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

BEAM: C(10-10a) FLOOR: 4

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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

10-C 6 #3 @ 22.5 C:10a

BEAM: D(12-11) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-21.96	-16.93	-12.13	-7.56	-4.39	-4.39	-4.39	-5.42	-8.86	-12.49	-16.27
Mu(+), ton-m:	13.50	11.33	9.00	6.49	4.39	4.39	4.70	8.23	11.56	14.65	17.51
As(-), cm2:	13.51	10.24	7.22	6.16	6.16	6.16	6.16	6.16	6.16	7.45	9.82
As(+), cm2:	8.07	6.73	6.16	6.16	6.16	6.16	6.16	6.16	6.87	8.79	10.61
Vu, ton:	9.13	9.03	8.69	8.36	8.02	7.68	7.34	7.00	6.83	7.17	7.27
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

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

BEAM: D(11-10) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-19.92	-15.22	-10.74	-6.52	-3.98	-3.98	-3.98	-6.27	-9.97	-13.84	-17.96
Mu(+), ton-m:	14.44	12.02	9.43	6.69	3.98	3.98	4.74	7.98	10.98	13.73	16.35
As(-), cm2:	12.17	9.15	6.37	6.16	6.16	6.16	6.16	6.16	6.16	8.29	10.90
As(+), cm2:	8.67	7.16	6.16	6.16	6.16	6.16	6.16	6.16	6.52	8.22	9.87
Vu, ton:	8.02	7.92	7.58	7.24	6.91	6.57	6.24	6.51	6.84	7.18	7.28
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	11-D			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					10-D

BEAM: D(10-10a) FLOOR: 4

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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	10-D				6 #3 @ 22.5						D:10a

BEAM: D(9-8) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-21.86	-16.86	-12.08	-7.53	-4.37	-4.37	-4.37	-5.60	-9.15	-12.89	-16.79
Mu(+), ton-m:	14.11	11.83	9.39	6.77	4.37	4.37	4.66	8.16	11.45	14.52	17.36
As(-), cm2:	13.44	10.19	7.19	6.16	6.16	6.16	6.16	6.16	6.16	7.70	10.15
As(+), cm2:	8.46	7.04	6.16	6.16	6.16	6.16	6.16	6.16	6.81	8.71	10.51
Vu, ton:	8.96	8.86	8.52	8.18	7.84	7.50	7.17	6.83	6.92	7.26	7.35
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	9-D			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					8-D

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:09 p. m. 5/01/2020

BEAM: D(8-7') FLOOR: 4

	Length:	L = 7.16 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.46 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.64	2.29	2.94	3.58	4.23	4.87	5.52	6.17	6.81
Mu(-), ton-m:	-18.79	-14.33	-10.11	-6.19	-3.76	-3.76	-3.76	-6.40	-10.18	-14.28	-18.64
Mu(+), ton-m:	14.90	12.39	9.73	6.95	4.07	3.76	4.46	7.47	10.25	12.94	15.51
As(-), cm2:	11.43	8.60	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.56	11.34
As(+), cm2:	8.95	7.38	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.73	9.33
Vu, ton:	7.41	7.31	6.98	6.64	6.31	5.97	6.16	6.50	6.83	7.17	7.26
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	8-D			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					7'-D

BEAM: E(12-11) FLOOR: 4

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.98 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.67	3.27	3.86	4.46	5.06	5.66	6.25	6.85
Mu(-), ton-m:	-24.72	-19.23	-14.00	-8.98	-4.94	-4.94	-4.94	-5.72	-9.28	-12.98	-16.82
Mu(+), ton-m:	14.66	12.24	9.62	6.84	4.94	4.94	4.94	9.17	13.16	16.94	20.55
As(-), cm2:	15.35	11.72	8.39	6.16	6.16	6.16	6.16	6.16	6.16	7.75	10.17
As(+), cm2:	8.80	7.29	6.16	6.16	6.16	6.16	6.16	6.16	7.86	10.25	12.58
Vu, ton:	10.94	10.87	10.59	10.30	10.02	9.73	9.44	9.16	8.87	8.59	8.52
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	#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	12-E			11 #3 @ 10	17 #3 @ 22.5	11 #3 @ 10					11-E

BEAM: E(11-10) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.04	1.72	2.41	3.09	3.78	4.46	5.15	5.83	6.52	7.20
Mu(-), ton-m:	-16.46	-12.62	-9.04	-5.78	-3.29	-3.29	-3.29	-3.56	-6.55	-9.85	-13.50
Mu(+), ton-m:	11.66	10.08	8.31	6.39	4.36	3.29	3.29	4.85	6.83	8.65	10.34
As(-), cm2:	9.94	7.53	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.07
As(+), cm2:	6.94	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	6.02	5.89	5.52	5.14	4.77	4.39	4.68	5.05	5.43	5.81	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	11-E			11 #3 @ 10	21 #3 @ 22.5	11 #3 @ 10					10-E

BEAM: E(10-10a) 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:	-8.08	-6.44	-4.80	-3.19	-1.95	-1.95	-2.04	-3.94	-5.86	-7.80	-9.76
Mu(+), ton-m:	8.99	7.20	5.39	3.56	1.95	1.95	1.95	3.14	4.68	6.21	7.73
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:	12.35	12.35	12.35	12.40	12.50	12.60	12.71	12.81	12.86	12.86	12.86
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

10-E 18 #3 @ 10 E:10a

BEAM: E(10a-10b) FLOOR: 4

	Length:	L = 3.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 3.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.38	0.76	1.14	1.52	1.90	2.28	2.66	3.04	3.42	3.80
Mu(-), ton-m:	-29.73	-23.22	-16.87	-10.67	-5.95	-5.95	-5.95	-9.65	-14.96	-20.38	-25.92
Mu(+), ton-m:	24.53	19.97	15.31	10.53	5.95	5.95	6.96	12.53	17.93	23.18	28.26
As(-), cm2:	18.79	14.34	10.20	6.33	6.16	6.16	6.16	6.16	8.99	12.47	16.16
As(+), cm2:	15.22	12.20	9.21	6.24	6.16	6.16	6.16	7.47	10.88	14.31	17.77
Vu, ton:	19.76	19.76	19.43	19.02	18.60	18.18	17.77	17.35	16.98	17.31	17.31
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	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

E:10a 11 #3 @ 10 7 #3 @ 22.5 11 #3 @ 10 E:10b

BEAM: E(10b-9) FLOOR: 4

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-9.68	-8.27	-6.87	-5.47	-4.07	-2.67	-3.41	-5.09	-6.77	-8.44	-10.12
Mu(+), ton-m:	7.14	5.52	3.90	2.28	2.02	2.02	2.02	2.02	2.48	3.93	5.38
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	51.38	51.38	51.38	51.38	51.38	51.38	51.38	51.38	51.38	51.38	51.38
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:	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4
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

E:10b 5 #4 @ 7.5 9-E

BEAM: E(9-9a) FLOOR: 4

	Length:	L = 2.60 m Lu = 2.60 m	a = 0.00 m c = 0.00 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 RConcrete2				
X, m:	0.00	0.26	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60
Mu(-), ton-m:	-4.88	-3.83	-2.81	-1.83	-1.49	-1.49	-1.49	-2.78	-4.30	-5.86	-7.46
Mu(+), ton-m:	6.78	5.53	4.24	2.92	1.55	1.49	1.49	1.83	2.67	3.49	4.27
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	6.80	6.80	6.84	6.99	7.14	7.29	7.44	7.59	7.74	7.77	7.77
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	22.50	22.50	22.50	10.00	10.00	10.00	10.00

DESIGN

9-E 26 #3 @ 10 E:9a

BEAM: E(9a-9b) FLOOR: 4

	Length:	L = 4.20 m Lu = 4.20 m	a = 0.00 m c = 0.00 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 RConcrete2				
X, m:	0.00	0.42	0.84	1.26	1.68	2.10	2.52	2.94	3.36	3.78	4.20
Mu(-), ton-m:	-31.09	-24.40	-17.83	-11.40	-6.22	-6.22	-6.22	-9.69	-15.17	-20.76	-26.43
Mu(+), ton-m:	26.04	21.23	16.31	11.30	6.37	6.22	7.08	12.98	18.74	24.37	29.86
As(-), cm2:	19.75	15.13	10.82	6.78	6.16	6.16	6.16	6.16	9.13	12.71	16.51
As(+), cm2:	16.24	13.02	9.85	6.72	6.16	6.16	6.16	7.75	11.40	15.11	18.88
Vu, ton:	18.63	18.63	18.34	18.02	17.70	17.39	17.07	16.75	16.43	16.16	16.16
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	#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

E:9a 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 E:9b

BEAM: E(9b-8) FLOOR: 4

	Length:	L = 0.40 m Lu = 0.40 m	a = 0.00 m c = 0.00 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 RConcrete2				
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-9.61	-8.23	-6.84	-5.46	-4.08	-2.70	-3.23	-4.88	-6.54	-8.21	-9.87
Mu(+), ton-m:	7.19	5.59	3.99	2.39	1.97	1.97	1.97	1.97	2.36	3.80	5.23
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:	50.85	50.85	50.85	50.85	50.85	50.85	50.85	50.85	50.85	50.85	50.85
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:	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4
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

E:9b 5 #4 @ 7.5 8-E

BEAM: E(8-8a) FLOOR: 4

	Length:	L = 2.60 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 2.60 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.26	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60
Mu(-), ton-m:	-4.78	-3.75	-2.75	-1.79	-1.46	-1.46	-1.46	-2.71	-4.20	-5.73	-7.30
Mu(+), ton-m:	6.64	5.42	4.16	2.86	1.53	1.46	1.46	1.79	2.61	3.40	4.17
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:	6.66	6.66	6.69	6.84	6.99	7.14	7.29	7.44	7.59	7.62	7.62
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	22.50	22.50	22.50	10.00	10.00	10.00	10.00
DESIGN	8-E				26 #3 @ 10						E:8a

BEAM: E(8a-7') FLOOR: 4

	Length:	L = 4.56 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.21 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.26	1.69	2.11	2.53	2.95	3.37	3.79	4.21
Mu(-), ton-m:	-26.36	-20.43	-14.60	-8.88	-5.27	-5.27	-5.65	-10.60	-15.63	-20.74	-25.92
Mu(+), ton-m:	22.47	17.97	13.40	8.76	5.27	5.27	7.71	13.03	18.26	23.38	28.40
As(-), cm2:	16.46	12.50	8.76	6.16	6.16	6.16	6.16	6.29	9.42	12.70	16.16
As(+), cm2:	13.84	10.91	8.01	6.16	6.16	6.16	6.16	7.79	11.09	14.44	17.86
Vu, ton:	16.35	16.35	16.13	15.89	15.65	15.40	15.16	14.92	14.70	14.54	14.54
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	E:8a			11 #3 @ 10	9 #3 @ 22.5		11 #3 @ 10				7'-E

BEAM: F(12-11) FLOOR: 4

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.98 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.67	3.27	3.86	4.46	5.06	5.66	6.25	6.85
Mu(-), ton-m:	-24.54	-18.77	-13.40	-8.34	-4.91	-4.91	-4.91	-5.29	-8.87	-12.66	-16.64
Mu(+), ton-m:	13.39	11.41	9.15	6.67	4.91	4.91	5.07	8.96	12.46	15.64	18.56
As(-), cm2:	15.23	11.42	8.01	6.16	6.16	6.16	6.16	6.16	6.16	7.55	10.05
As(+), cm2:	8.01	6.78	6.16	6.16	6.16	6.16	6.16	6.16	7.43	9.42	11.28
Vu, ton:	11.02	10.92	10.48	10.05	9.62	9.19	8.75	8.32	8.14	8.57	8.67
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	12-F			11 #3 @ 10	17 #3 @ 22.5		11 #3 @ 10				11-F

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:09 p. m. 5/01/2020

BEAM: F(11-11a) FLOOR: 4

Length: L = 6.80 m a = 0.35 m Section: b = 40.0 cm Sec: VG40X50
Lu = 6.45 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.35	0.99	1.64	2.29	2.93	3.58	4.22	4.87	5.51	6.16	6.80
Mu(-), ton-m:	-17.57	-13.21	-9.22	-5.69	-3.51	-3.51	-3.51	-3.64	-6.83	-10.39	-14.48
Mu(+), ton-m:	11.60	10.16	8.51	6.73	4.76	3.51	3.51	5.64	7.56	9.25	10.87
As(-), cm2:	10.65	7.90	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.69
As(+), cm2:	6.90	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.45
Vu, ton:	7.21	7.06	6.53	6.01	5.49	4.97	5.36	5.88	6.40	6.92	7.07
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

11-F 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F:11a

BEAM: F(11a-10) FLOOR: 4

Length: L = 0.40 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 0.40 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-8.66	-7.37	-6.07	-4.78	-3.49	-2.19	-2.75	-4.11	-5.47	-6.83	-8.19
Mu(+), ton-m:	5.94	4.61	3.27	1.93	1.73	1.73	1.73	1.73	2.37	3.67	4.98
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:	40.09	40.09	40.09	40.09	40.09	40.09	40.09	40.09	40.09	40.09	40.09
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

F:11a 5 #3 @ 7.5 10-F

BEAM: F(10-10a) FLOOR: 4

Length: L = 1.38 m a = 0.00 m Section: b = 40.0 cm Sec: VG40X50
Lu = 1.38 m c = 0.00 m h = 50.0 cm Mat: RConcrete2

X, m:	0.00	0.14	0.28	0.41	0.55	0.69	0.83	0.96	1.10	1.24	1.38
Mu(-), ton-m:	-6.86	-5.46	-4.07	-2.69	-1.94	-1.94	-2.04	-3.94	-5.84	-7.76	-9.68
Mu(+), ton-m:	9.09	7.26	5.42	3.57	1.94	1.94	1.94	2.76	4.10	5.43	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
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:	17.35	17.35	17.35	17.35	17.40	17.48	17.56	17.61	17.61	17.61	17.61
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

10-F 14 #3 @ 10 F:10a

BEAM: F(10a-10b) FLOOR: 4

	Length:	L = 4.22 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.22 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.27	1.69	2.11	2.53	2.96	3.38	3.80	4.22
Mu(-), ton-m:	-22.27	-17.46	-12.75	-8.14	-4.45	-4.45	-4.45	-6.97	-10.97	-15.04	-19.18
Mu(+), ton-m:	18.81	15.36	11.83	8.22	4.67	4.45	5.06	9.25	13.34	17.33	21.22
As(-), cm2:	13.71	10.58	7.61	6.16	6.16	6.16	6.16	6.16	6.51	9.04	11.69
As(+), cm2:	11.45	9.24	7.04	6.16	6.16	6.16	6.16	6.16	7.98	10.49	13.01
Vu, ton:	13.20	13.20	12.98	12.73	12.49	12.25	12.00	11.76	11.52	11.58	11.58
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

F:10a 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 F:10b

BEAM: F(10b-9) FLOOR: 4

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-8.88	-7.62	-6.37	-5.11	-3.86	-2.60	-2.17	-3.62	-5.08	-6.54	-8.01
Mu(+), ton-m:	6.97	5.56	4.14	2.72	1.78	1.78	1.78	1.78	1.87	3.16	4.45
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	44.20	44.20	44.20	44.20	44.20	44.20	44.20	44.20	44.20	44.20	44.20
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

F:10b 4 #4 @ 10 9-F

BEAM: F(9-9a) FLOOR: 4

	Length:	L = 1.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.98	1.12	1.26	1.40
Mu(-), ton-m:	-6.45	-5.14	-3.83	-2.54	-1.94	-1.94	-2.01	-3.92	-5.83	-7.76	-9.70
Mu(+), ton-m:	9.18	7.34	5.49	3.63	1.94	1.94	1.94	2.55	3.81	5.05	6.29
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:	17.55	17.55	17.55	17.55	17.60	17.68	17.76	17.82	17.82	17.82	17.82
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

9-F 14 #3 @ 10 F:9a

BEAM: F(9a-8) FLOOR: 4

	Length:	L = 5.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.45 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.55	1.09	1.64	2.18	2.73	3.27	3.82	4.36	4.91	5.45
Mu(-), ton-m:	-19.19	-14.63	-10.23	-6.01	-3.84	-3.84	-3.84	-6.43	-9.72	-13.13	-16.66
Mu(+), ton-m:	12.98	10.59	8.07	5.42	3.84	3.84	5.64	9.18	12.55	15.76	18.80
As(-), cm2:	11.69	8.78	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.84	10.07
As(+), cm2:	7.75	6.28	6.16	6.16	6.16	6.16	6.16	6.16	7.49	9.49	11.44
Vu, ton:	10.04	9.99	9.70	9.40	9.11	8.81	8.52	8.22	7.93	7.85	7.90
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:9a 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 8-F

BEAM: F(8-7') FLOOR: 4

	Length:	L = 7.16 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.46 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.64	2.29	2.94	3.58	4.23	4.87	5.52	6.17	6.81
Mu(-), ton-m:	-16.08	-12.17	-8.52	-5.19	-3.40	-3.40	-3.40	-5.64	-9.15	-12.95	-16.99
Mu(+), ton-m:	13.05	10.91	8.66	6.31	3.76	3.40	3.92	6.38	8.72	10.94	13.01
As(-), cm2:	9.70	7.25	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.74	10.28
As(+), cm2:	7.80	6.48	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.49	7.77
Vu, ton:	6.51	6.42	6.08	5.74	5.41	5.26	5.59	5.93	6.26	6.60	6.70
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	#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

8-F 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-F

BEAM: G(12-11) FLOOR: 4

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.98 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.67	3.27	3.86	4.46	5.06	5.66	6.25	6.85
Mu(-), ton-m:	-24.59	-18.92	-13.59	-8.56	-4.92	-4.92	-4.92	-5.63	-9.30	-13.17	-17.21
Mu(+), ton-m:	14.36	12.13	9.65	6.96	4.92	4.92	5.01	9.02	12.67	16.06	19.20
As(-), cm2:	15.26	11.52	8.14	6.16	6.16	6.16	6.16	6.16	6.16	7.87	10.42
As(+), cm2:	8.62	7.23	6.16	6.16	6.16	6.16	6.16	6.16	7.56	9.68	11.70
Vu, ton:	10.87	10.78	10.40	10.02	9.63	9.25	8.86	8.48	8.19	8.57	8.66
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

12-G 11 #3 @ 10 17 #3 @ 22.5 11 #3 @ 10 11-G

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:09 p. m. 5/01/2020

BEAM: G(11-10) FLOOR: 4

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-17.63	-13.16	-9.03	-5.34	-3.61	-3.61	-3.61	-5.74	-9.45	-13.59	-18.07
Mu(+), ton-m:	13.03	11.04	8.88	6.61	4.13	3.61	4.46	6.96	9.23	11.38	13.36
As(-), cm2:	10.69	7.86	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.13	10.97
As(+), cm2:	7.79	6.55	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.76	7.99
Vu, ton:	7.26	7.12	6.67	6.22	5.76	5.33	5.78	6.24	6.69	7.14	7.28
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	11-G			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					10-G

BEAM: G(10-10a) FLOOR: 4

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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	10-G				6 #3 @ 22.5						G:10a

BEAM: G(9-9a) FLOOR: 4

	Length:	L = 6.30 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.19 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.63	2.15	2.67	3.19	3.71	4.22	4.74	5.26	5.78	6.30
Mu(-), ton-m:	-25.96	-20.63	-15.45	-10.42	-5.55	-5.19	-5.19	-6.22	-10.41	-14.71	-19.12
Mu(+), ton-m:	19.88	16.51	13.01	9.40	5.70	5.19	5.19	8.08	12.33	16.43	20.39
As(-), cm2:	16.19	12.63	9.30	6.18	6.16	6.16	6.16	6.16	6.17	8.84	11.65
As(+), cm2:	12.14	9.97	7.77	6.16	6.16	6.16	6.16	6.16	7.35	9.92	12.47
Vu, ton:	11.54	11.52	11.27	11.02	10.78	10.53	10.29	10.04	10.06	10.30	10.33
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	9-G			11 #3 @ 10	13 #3 @ 22.5	11 #3 @ 10					G:9a

BEAM: G(9a-8) 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:	-8.69	-7.02	-5.36	-3.69	-2.03	-1.75	-1.75	-3.31	-5.12	-6.94	-8.76
Mu(+), ton-m:	9.23	7.45	5.67	3.88	2.09	1.75	1.75	2.93	4.58	6.22	7.86
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	23.21	23.21	23.21	23.21	23.21	23.21	23.21	23.21	23.21	23.21	23.21
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

G:9a 9 #3 @ 10 8-G

BEAM: G(8-8a) 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:	-7.74	-6.15	-4.56	-2.97	-1.93	-1.93	-2.20	-4.06	-5.92	-7.79	-9.67
Mu(+), ton-m:	8.87	7.04	5.20	3.36	1.93	1.93	1.93	3.35	4.92	6.49	8.05
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:	24.79	24.79	24.79	24.79	24.79	24.79	24.79	24.79	24.79	24.79	24.79
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

8-G 9 #3 @ 10 G:8a

BEAM: G(8a-7') FLOOR: 4

	Length:	L = 6.26 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.62 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.56	1.12	1.69	2.25	2.81	3.37	3.94	4.50	5.06	5.62
Mu(-), ton-m:	-18.02	-13.64	-9.43	-5.50	-4.00	-4.00	-4.21	-7.91	-11.75	-15.73	-20.01
Mu(+), ton-m:	15.20	12.30	9.26	6.19	4.00	4.00	5.60	8.92	12.06	15.03	17.98
As(-), cm2:	10.94	8.16	6.16	6.16	6.16	6.16	6.16	6.16	6.99	9.48	12.23
As(+), cm2:	9.14	7.33	6.16	6.16	6.16	6.16	6.16	6.16	7.18	9.04	10.91
Vu, ton:	8.59	8.54	8.24	7.95	7.66	7.37	7.16	7.43	7.73	8.02	8.07
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	#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:8a 11 #3 @ 10 15 #3 @ 22.5 11 #3 @ 10 7'-G

BEAM: H(12-12a) FLOOR: 4

	Length:	L = 6.30 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.95 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.95	1.54	2.14	2.73	3.33	3.92	4.52	5.11	5.71	6.30
Mu(-), ton-m:	-21.59	-16.60	-11.90	-7.56	-4.32	-4.32	-4.32	-4.32	-7.71	-11.40	-15.29
Mu(+), ton-m:	13.98	12.01	9.84	7.51	5.07	4.32	4.32	6.96	9.81	12.35	14.58
As(-), cm2:	13.26	10.03	7.09	6.16	6.16	6.16	6.16	6.16	6.16	6.77	9.20
As(+), cm2:	8.37	7.15	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.36	8.75
Vu, ton:	9.40	9.29	8.79	8.30	7.81	7.32	6.82	7.18	7.67	8.16	8.27
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

12-H 11 #3 @ 10 17 #3 @ 22.5 11 #3 @ 10 H:12a

BEAM: H(12a-11) 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:	-9.65	-7.83	-6.01	-4.20	-2.39	-1.93	-1.93	-3.61	-5.32	-7.04	-8.76
Mu(+), ton-m:	8.47	6.77	5.07	3.36	1.93	1.93	1.93	3.12	4.89	6.67	8.43
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:	22.88	22.88	22.88	22.88	22.88	22.88	22.88	22.88	22.88	22.88	22.88
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	#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

H:12a 9 #3 @ 10 11-H

BEAM: H(11-11a) 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:	-8.15	-6.52	-4.91	-3.29	-2.12	-2.12	-2.61	-4.60	-6.60	-8.60	-10.60
Mu(+), ton-m:	9.24	7.28	5.31	3.34	2.12	2.12	2.12	3.13	4.72	6.32	7.91
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.29
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:	27.10	27.10	27.10	27.10	27.10	27.10	27.10	27.10	27.10	27.10	27.10
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

11-H 9 #3 @ 10 H:11a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:09 p. m. 5/01/2020

BEAM: H(11a-10) FLOOR: 4

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.95 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.60	1.19	1.79	2.38	2.98	3.57	4.17	4.76	5.36	5.95
Mu(-), ton-m:	-17.15	-12.59	-8.42	-4.68	-3.89	-3.89	-3.89	-6.88	-10.67	-14.86	-19.45
Mu(+), ton-m:	13.33	11.09	8.71	6.25	3.89	3.89	5.59	8.30	10.74	13.06	15.27
As(-), cm2:	10.38	7.51	6.16	6.16	6.16	6.16	6.16	6.16	6.33	8.93	11.86
As(+), cm2:	7.97	6.59	6.16	6.16	6.16	6.16	6.16	6.16	6.37	7.80	9.19
Vu, ton:	8.33	8.22	7.73	7.23	6.74	6.25	6.49	6.98	7.47	7.96	8.08
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:11a 11 #3 @ 10 17 #3 @ 22.5 11 #3 @ 10 10-H

BEAM: H(10-10a) FLOOR: 4

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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

10-H 6 #3 @ 22.5 H:10a

BEAM: I(12-12a) FLOOR: 4

	Length:	L = 6.30 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.95 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.95	1.54	2.14	2.73	3.33	3.92	4.52	5.11	5.71	6.30
Mu(-), ton-m:	-21.89	-16.84	-12.09	-7.70	-4.38	-4.38	-4.38	-4.46	-8.05	-11.87	-15.89
Mu(+), ton-m:	14.67	12.58	10.28	7.83	5.27	4.38	4.38	7.06	9.96	12.56	14.84
As(-), cm2:	13.45	10.18	7.20	6.16	6.16	6.16	6.16	6.16	6.16	7.06	9.58
As(+), cm2:	8.81	7.50	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.49	8.92
Vu, ton:	9.43	9.32	8.82	8.33	7.84	7.34	6.89	7.36	7.85	8.34	8.46
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

12-I 11 #3 @ 10 17 #3 @ 22.5 11 #3 @ 10 I:12a

BEAM: I(12a-11) 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:	-10.10	-8.19	-6.29	-4.39	-2.49	-2.02	-2.02	-3.66	-5.39	-7.13	-8.87
Mu(+), ton-m:	8.65	6.92	5.18	3.44	2.02	2.02	2.02	3.26	5.11	6.96	8.80
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	24.25	24.25	24.25	24.25	24.25	24.25	24.25	24.25	24.25	24.25	24.25
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	#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:12a				9 #3 @ 10						11-I

BEAM: I(11-11a) 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:	-8.51	-6.81	-5.12	-3.44	-2.15	-2.15	-2.64	-4.65	-6.67	-8.70	-10.73
Mu(+), ton-m:	9.36	7.37	5.38	3.39	2.15	2.15	2.15	3.28	4.95	6.62	8.28
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.36
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:	27.07	27.07	27.07	27.07	27.07	27.07	27.07	27.07	27.07	27.07	27.07
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	11-I				9 #3 @ 10						I:11a

BEAM: I(11a-10) FLOOR: 4

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.95 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.60	1.19	1.79	2.38	2.98	3.57	4.17	4.76	5.36	5.95
Mu(-), ton-m:	-17.03	-12.56	-8.53	-4.79	-4.03	-4.03	-4.03	-7.25	-11.20	-15.52	-20.16
Mu(+), ton-m:	14.15	11.69	9.19	6.49	4.03	4.03	5.53	8.31	10.89	13.36	15.70
As(-), cm2:	10.30	7.50	6.16	6.16	6.16	6.16	6.16	6.16	6.65	9.34	12.32
As(+), cm2:	8.48	6.96	6.16	6.16	6.16	6.16	6.16	6.16	6.46	7.99	9.46
Vu, ton:	8.30	8.19	7.74	7.29	6.84	6.44	6.87	7.32	7.77	8.22	8.33
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:11a			11 #3 @ 10		17 #3 @ 22.5		11 #3 @ 10			10-I

BEAM: I(10-10a) FLOOR: 4

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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	10-I				6 #3 @ 22.5						I:10a

BEAM: I''(12-12a) FLOOR: 4

	Length:	L = 6.30 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.19 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.63	2.15	2.67	3.19	3.71	4.22	4.74	5.26	5.78	6.30
Mu(-), ton-m:	-26.95	-21.44	-16.09	-10.89	-5.86	-5.39	-5.39	-6.97	-11.64	-16.43	-21.32
Mu(+), ton-m:	22.52	18.66	14.68	10.60	6.44	5.39	5.39	8.33	12.75	17.03	21.17
As(-), cm2:	16.86	13.16	9.70	6.46	6.16	6.16	6.16	6.16	6.93	9.92	13.08
As(+), cm2:	13.88	11.35	8.82	6.29	6.16	6.16	6.16	6.16	7.61	10.30	12.98
Vu, ton:	11.55	11.53	11.28	11.03	10.79	10.54	10.33	10.56	10.80	11.05	11.08
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	12-I''				11 #3 @ 10	13 #3 @ 22.5	11 #3 @ 10				I'':12a

BEAM: I''(12a-11) 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:	-10.16	-8.18	-6.20	-4.23	-2.27	-2.03	-2.03	-3.74	-5.71	-7.69	-9.67
Mu(+), ton-m:	9.94	8.00	6.06	4.11	2.16	2.03	2.03	3.63	5.59	7.54	9.48
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:	24.30	24.30	24.30	24.30	24.30	24.30	24.30	24.30	24.30	24.30	24.30
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:	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	I'':12a				9 #3 @ 10						11-I''

BEAM: I''(11-11a) 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:	-9.39	-7.48	-5.57	-3.66	-2.09	-2.09	-2.30	-4.33	-6.36	-8.40	-10.45
Mu(+), ton-m:	9.78	7.78	5.77	3.76	2.09	2.09	2.09	3.94	5.84	7.72	9.61
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.19
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:	25.82	25.82	25.82	25.82	25.82	25.82	25.82	25.82	25.82	25.82	25.82
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	11-I''				9 #3 @ 10						I'':11a

BEAM: I''(11a-10) FLOOR: 4

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.66 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.57	1.13	1.70	2.26	2.83	3.40	3.96	4.53	5.09	5.66
Mu(-), ton-m:	-18.82	-14.25	-9.93	-5.80	-4.46	-4.46	-4.78	-8.85	-13.09	-17.60	-22.30
Mu(+), ton-m:	16.77	13.51	10.19	6.75	4.46	4.46	5.90	9.39	12.74	16.04	19.20
As(-), cm2:	11.45	8.54	6.16	6.16	6.16	6.16	6.16	6.16	7.82	10.67	13.73
As(+), cm2:	10.14	8.09	6.16	6.16	6.16	6.16	6.16	6.16	7.60	9.67	11.70
Vu, ton:	8.95	8.90	8.61	8.31	8.02	7.73	7.90	8.20	8.49	8.78	8.84
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	I'':11a			11 #3 @ 10	15 #3 @ 22.5		11 #3 @ 10				10-I''

BEAM: I''(10-10a) FLOOR: 4

	Length:	L = 1.38 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.26 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.14	1.16	1.19	1.22	1.24	1.27	1.30	1.32	1.35	1.38
Mu(-), ton-m:	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01	0.00	0.00	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:	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
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	10-I''				2 #3 @ 22.5						I'':10a

BEAM: A(12-12a) FLOOR: 5

	Length:	L = 1.80 m Lu = 1.80 m	a = 0.00 m c = 0.00 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 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:	-10.56	-8.40	-6.25	-4.12	-2.63	-2.63	-2.64	-5.24	-7.86	-10.49	-13.14
Mu(+), ton-m:	12.54	10.06	7.55	5.03	2.63	2.63	2.63	4.27	6.33	8.38	10.42
As(-), cm2:	6.26	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.22	7.85
As(+), cm2:	7.48	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.17
Vu, ton:	17.23	17.23	17.23	17.28	17.38	17.49	17.59	17.69	17.74	17.74	17.74
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

12-A 18 #3 @ 10 A:12a

BEAM: A(12a-12b) FLOOR: 5

	Length:	L = 4.50 m Lu = 4.50 m	a = 0.00 m c = 0.00 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 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:	-31.51	-24.84	-18.28	-11.83	-6.30	-6.30	-6.30	-9.25	-14.16	-19.16	-24.25
Mu(+), ton-m:	22.67	18.38	13.99	9.52	6.30	6.30	6.80	12.78	18.64	24.39	30.02
As(-), cm2:	20.05	15.42	11.10	7.04	6.16	6.16	6.16	6.16	8.49	11.67	15.03
As(+), cm2:	13.98	11.17	8.38	6.16	6.16	6.16	6.16	7.63	11.34	15.12	18.99
Vu, ton:	18.25	18.25	18.00	17.74	17.48	17.22	16.96	16.70	16.44	16.19	16.19
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	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

A:12a 11 #3 @ 10 10 #3 @ 22.5 11 #3 @ 10 A:12b

BEAM: A(12b-11) FLOOR: 5

	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: Mat:	VG40X50 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:	-13.06	-10.52	-7.98	-5.45	-2.99	-2.99	-2.99	-5.82	-8.86	-11.91	-14.97
Mu(+), ton-m:	15.37	12.36	9.34	6.32	3.29	2.99	2.99	4.65	7.17	9.68	12.19
As(-), cm2:	7.80	6.23	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.09	8.99
As(+), cm2:	9.25	7.37	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.26
Vu, ton:	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00
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

A:12b 9 #4 @ 10 11-A

BEAM: A(11-11a) FLOOR: 5

	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:	-12.08	-9.62	-7.17	-4.71	-3.20	-3.20	-3.52	-6.64	-9.77	-12.89	-16.02
Mu(+), ton-m:	15.09	12.00	8.90	5.80	3.20	3.20	3.20	5.06	7.50	9.93	12.36
As(-), cm2:	7.20	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.70	9.66
As(+), cm2:	9.07	7.14	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.37
Vu, ton:	43.02	43.02	43.02	43.02	43.02	43.02	43.02	43.02	43.02	43.02	43.02
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:	#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	11-A				9 #4 @ 10						A:11a

BEAM: A(11a-11b) FLOOR: 5

	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:	-25.72	-20.03	-14.51	-9.16	-5.14	-5.14	-5.14	-7.91	-12.27	-16.75	-21.36
Mu(+), ton-m:	19.08	15.61	12.00	8.27	5.14	5.14	5.89	10.57	15.08	19.42	23.60
As(-), cm2:	16.02	12.24	8.71	6.16	6.16	6.16	6.16	6.16	7.31	10.13	13.11
As(+), cm2:	11.62	9.40	7.15	6.16	6.16	6.16	6.16	6.27	9.07	11.84	14.59
Vu, ton:	12.46	12.42	12.11	11.80	11.48	11.17	10.86	10.55	10.24	10.37	10.41
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	#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:11a			11 #3 @ 10		14 #3 @ 22.5		11 #3 @ 10			A:11b

BEAM: A(11b-10) FLOOR: 5

	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:	-11.74	-9.46	-7.19	-4.92	-2.66	-2.66	-2.66	-5.12	-7.84	-10.56	-13.28
Mu(+), ton-m:	13.77	11.08	8.39	5.70	3.00	2.66	2.66	4.11	6.36	8.61	10.86
As(-), cm2:	6.99	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.26	7.94
As(+), cm2:	8.24	6.58	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.44
Vu, ton:	36.52	36.52	36.52	36.52	36.52	36.52	36.52	36.52	36.52	36.52	36.52
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:11b				12 #3 @ 7.5						10-A

BEAM: A(10-10a) FLOOR: 5

	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:	-10.71	-8.55	-6.39	-4.24	-2.76	-2.76	-2.92	-5.64	-8.36	-11.08	-13.81
Mu(+), ton-m:	13.27	10.58	7.89	5.20	2.76	2.76	2.76	4.34	6.47	8.60	10.73
As(-), cm2:	6.35	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.58	8.27
As(+), cm2:	7.93	6.28	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.37
Vu, ton:	37.35	37.35	37.35	37.35	37.35	37.35	37.35	37.35	37.35	37.35	37.35
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

10-A 12 #3 @ 7.5 A:10a

BEAM: A(10a-10b) FLOOR: 5

	Length:	L = 0.48 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.48 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.05	0.10	0.14	0.19	0.24	0.29	0.33	0.38	0.43	0.48
Mu(-), ton-m:	-0.08	-0.06	-0.05	-0.04	-0.03	-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:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	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

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

BEAM: B(12-11) FLOOR: 5

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.85 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.69	1.37	2.06	2.74	3.43	4.11	4.80	5.48	6.17	6.85
Mu(-), ton-m:	-26.05	-20.12	-14.46	-9.06	-5.21	-5.21	-5.21	-6.10	-9.91	-13.92	-18.12
Mu(+), ton-m:	14.94	12.54	9.94	7.14	5.21	5.21	5.51	9.83	13.88	17.66	21.19
As(-), cm2:	16.25	12.30	8.67	6.16	6.16	6.16	6.16	6.16	6.16	8.34	11.00
As(+), cm2:	8.98	7.48	6.16	6.16	6.16	6.16	6.16	6.16	8.31	10.71	13.00
Vu, ton:	10.69	10.56	10.19	9.81	9.44	9.06	8.69	8.31	7.93	7.77	7.89
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

12-B 11 #3 @ 10 21 #3 @ 22.5 11 #3 @ 10 11-B

BEAM: B(11-10) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-24.95	-19.28	-13.82	-8.62	-4.99	-4.99	-4.99	-7.59	-12.00	-16.60	-21.36
Mu(+), ton-m:	18.13	14.99	11.69	8.22	4.99	4.99	5.56	9.76	13.73	17.47	20.98
As(-), cm2:	15.50	11.75	8.28	6.16	6.16	6.16	6.16	6.16	7.15	10.03	13.11
As(+), cm2:	11.01	9.01	6.96	6.16	6.16	6.16	6.16	6.16	8.22	10.58	12.86
Vu, ton:	9.92	9.82	9.48	9.15	8.81	8.47	8.13	7.91	8.25	8.58	8.68
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

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

BEAM: B(10-10a) FLOOR: 5

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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

10-B 6 #3 @ 22.5 B:10a

BEAM: C(12-11) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-25.87	-20.04	-14.44	-9.08	-5.17	-5.17	-5.17	-6.31	-10.16	-14.18	-18.37
Mu(+), ton-m:	15.42	12.85	10.11	7.20	5.17	5.17	5.56	9.89	14.01	17.90	21.56
As(-), cm2:	16.12	12.25	8.67	6.16	6.16	6.16	6.16	6.16	6.16	8.50	11.17
As(+), cm2:	9.28	7.67	6.16	6.16	6.16	6.16	6.16	6.16	8.40	10.86	13.24
Vu, ton:	10.87	10.77	10.43	10.09	9.75	9.42	9.08	8.74	8.40	8.15	8.25
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	#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

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

BEAM: C(11-10) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-23.02	-17.73	-12.67	-7.85	-4.60	-4.60	-4.60	-7.06	-11.21	-15.55	-20.05
Mu(+), ton-m:	16.83	13.95	10.91	7.71	4.60	4.60	5.17	8.98	12.57	15.91	19.04
As(-), cm2:	14.21	10.75	7.56	6.16	6.16	6.16	6.16	6.16	6.66	9.36	12.25
As(+), cm2:	10.18	8.36	6.48	6.16	6.16	6.16	6.16	6.16	7.50	9.59	11.59
Vu, ton:	9.14	9.04	8.70	8.36	8.02	7.69	7.35	7.37	7.70	8.04	8.14
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	11-C			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					10-C

BEAM: C(10-10a) FLOOR: 5

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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	10-C				6 #3 @ 22.5						C:10a

BEAM: C(9-7') FLOOR: 5

	Length:	L = 14.36 m	a = 0.64 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 12.61 m	c = 1.11 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.64	1.90	3.16	4.42	5.68	6.95	8.21	9.47	10.73	11.99	13.25
Mu(-), ton-m:	-18.27	-12.04	-6.76	-3.65	-3.65	-3.65	-3.65	-3.65	-6.14	-10.95	-16.87
Mu(+), ton-m:	6.09	4.78	5.39	5.58	5.16	4.61	5.46	6.09	6.07	5.51	5.62
As(-), cm2:	11.10	7.17	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.50	10.20
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:	5.27	4.85	4.19	3.53	2.87	2.22	2.63	3.24	3.86	4.47	4.86
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	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00
DESIGN	9-C			11 #3 @ 10	46 #3 @ 22.5	11 #3 @ 10					7'-C

BEAM: D(12-11) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-23.81	-18.39	-13.20	-8.25	-4.76	-4.76	-4.76	-5.77	-9.35	-13.10	-17.02
Mu(+), ton-m:	14.06	11.77	9.30	6.66	4.76	4.76	5.15	9.07	12.78	16.25	19.50
As(-), cm2:	14.73	11.18	7.89	6.16	6.16	6.16	6.16	6.16	6.16	7.83	10.30
As(+), cm2:	8.43	7.00	6.16	6.16	6.16	6.16	6.16	6.16	7.63	9.81	11.89
Vu, ton:	10.03	9.93	9.59	9.25	8.92	8.58	8.24	7.90	7.56	7.58	7.68
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	#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	12-D			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			11-D

BEAM: D(11-10) FLOOR: 5

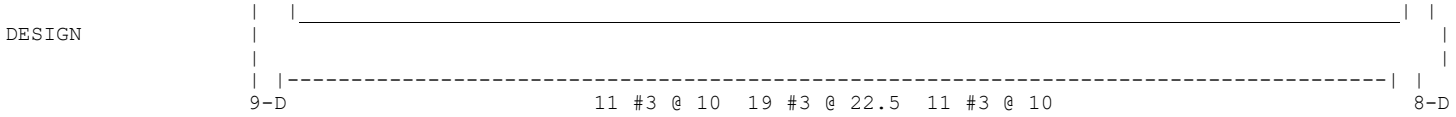
	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-21.39	-16.43	-11.69	-7.20	-4.28	-4.28	-4.28	-6.46	-10.31	-14.35	-18.55
Mu(+), ton-m:	15.32	12.75	10.01	7.10	4.28	4.28	4.84	8.33	11.58	14.60	17.40
As(-), cm2:	13.13	9.92	6.95	6.16	6.16	6.16	6.16	6.16	6.16	8.61	11.28
As(+), cm2:	9.22	7.61	6.16	6.16	6.16	6.16	6.16	6.16	6.89	8.77	10.54
Vu, ton:	8.55	8.45	8.12	7.78	7.44	7.10	6.76	6.83	7.17	7.51	7.61
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	#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	11-D			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			10-D

BEAM: D(10-10a) FLOOR: 5

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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	10-D				6 #3 @ 22.5						D:10a

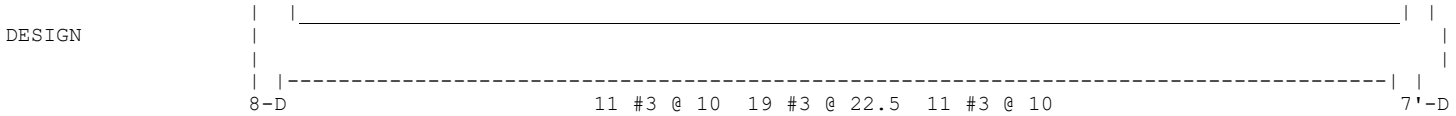
BEAM: D(9-8) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-23.48	-18.13	-13.00	-8.11	-4.70	-4.70	-4.70	-5.96	-9.63	-13.47	-17.48
Mu(+), ton-m:	14.50	12.11	9.56	6.83	4.70	4.70	5.10	8.96	12.61	16.01	19.20
As(-), cm2:	14.51	11.01	7.76	6.16	6.16	6.16	6.16	6.16	6.16	8.06	10.59
As(+), cm2:	8.70	7.22	6.16	6.16	6.16	6.16	6.16	6.16	7.52	9.66	11.70
Vu, ton:	9.77	9.68	9.34	9.00	8.66	8.32	7.99	7.65	7.31	7.62	7.72
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



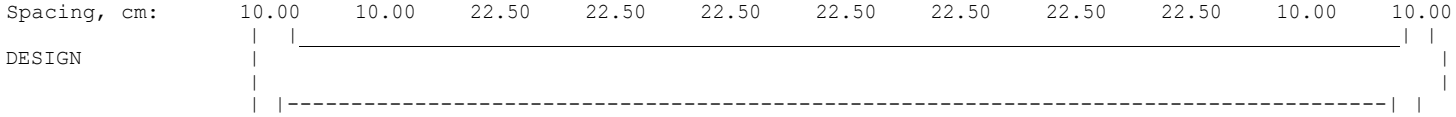
BEAM: D(8-7') FLOOR: 5

	Length:	L = 7.16 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.46 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.64	2.29	2.94	3.58	4.23	4.87	5.52	6.17	6.81
Mu(-), ton-m:	-20.26	-15.53	-11.02	-6.79	-4.05	-4.05	-4.05	-6.72	-10.69	-14.93	-19.45
Mu(+), ton-m:	15.94	13.23	10.37	7.36	4.29	4.05	4.63	7.90	10.95	13.86	16.65
As(-), cm2:	12.39	9.35	6.54	6.16	6.16	6.16	6.16	6.16	6.34	8.97	11.86
As(+), cm2:	9.61	7.91	6.16	6.16	6.16	6.16	6.16	6.16	6.50	8.30	10.06
Vu, ton:	7.94	7.84	7.50	7.17	6.83	6.50	6.53	6.87	7.20	7.54	7.64
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: E(12-11) FLOOR: 5

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.98 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.67	3.27	3.86	4.46	5.06	5.66	6.25	6.85
Mu(-), ton-m:	-26.57	-20.67	-15.03	-9.61	-5.31	-5.31	-5.31	-6.06	-9.71	-13.52	-17.46
Mu(+), ton-m:	15.04	12.51	9.79	6.91	5.31	5.31	5.51	10.16	14.55	18.74	22.76
As(-), cm2:	16.60	12.65	9.04	6.16	6.16	6.16	6.16	6.16	6.16	8.09	10.58
As(+), cm2:	9.04	7.46	6.16	6.16	6.16	6.16	6.16	6.16	8.74	11.40	14.03
Vu, ton:	12.01	11.94	11.66	11.37	11.09	10.80	10.52	10.23	9.94	9.66	9.59
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: E(11-10) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.04	1.72	2.41	3.09	3.78	4.46	5.15	5.83	6.52	7.20
Mu(-), ton-m:	-17.68	-13.66	-9.88	-6.42	-3.54	-3.54	-3.54	-3.65	-6.76	-10.14	-13.90
Mu(+), ton-m:	12.44	10.74	8.84	6.79	4.60	3.54	3.54	4.95	7.12	9.09	10.96
As(-), cm2:	10.72	8.17	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.33
As(+), cm2:	7.42	6.37	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.51
Vu, ton:	6.37	6.25	5.87	5.50	5.12	4.75	4.92	5.29	5.67	6.04	6.17
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

11-E 11 #3 @ 10 21 #3 @ 22.5 11 #3 @ 10 10-E

BEAM: E(10-10a) FLOOR: 5

	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:	-8.02	-6.39	-4.76	-3.16	-2.00	-2.00	-2.12	-4.06	-6.01	-7.99	-9.98
Mu(+), ton-m:	9.11	7.29	5.44	3.58	2.00	2.00	2.00	3.14	4.67	6.20	7.71
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:	12.71	12.71	12.71	12.75	12.86	12.96	13.06	13.17	13.21	13.21	13.21
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

10-E 18 #3 @ 10 E:10a

BEAM: E(10a-10b) FLOOR: 5

	Length:	L = 3.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 3.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.38	0.76	1.14	1.52	1.90	2.28	2.66	3.04	3.42	3.80
Mu(-), ton-m:	-29.78	-23.23	-16.84	-10.60	-5.96	-5.96	-5.96	-9.59	-14.87	-20.26	-25.76
Mu(+), ton-m:	24.36	19.83	15.20	10.45	5.96	5.96	7.15	12.75	18.19	23.48	28.61
As(-), cm2:	18.83	14.35	10.18	6.29	6.16	6.16	6.16	6.16	8.93	12.39	16.05
As(+), cm2:	15.10	12.11	9.14	6.20	6.16	6.16	6.16	7.61	11.05	14.51	18.01
Vu, ton:	20.00	20.00	19.67	19.26	18.84	18.42	18.01	17.59	17.17	17.30	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	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

E:10a 11 #3 @ 10 7 #3 @ 22.5 11 #3 @ 10 E:10b

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:10 p. m. 5/01/2020

BEAM: E(10b-9) FLOOR: 5

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-9.75	-8.35	-6.96	-5.57	-4.18	-2.79	-3.38	-5.02	-6.66	-8.31	-9.95
Mu(+), ton-m:	7.01	5.42	3.83	2.25	1.99	1.99	1.99	1.99	2.34	3.78	5.22
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	50.23	50.23	50.23	50.23	50.23	50.23	50.23	50.23	50.23	50.23	50.23
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:	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4
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

E:10b 5 #4 @ 7.5 9-E

BEAM: E(9-9a) FLOOR: 5

	Length:	L = 2.60 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 2.60 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.26	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60
Mu(-), ton-m:	-5.02	-3.94	-2.89	-1.87	-1.58	-1.58	-1.58	-2.98	-4.57	-6.21	-7.88
Mu(+), ton-m:	7.11	5.79	4.43	3.02	1.58	1.58	1.58	1.92	2.80	3.64	4.46
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:	7.23	7.23	7.27	7.42	7.57	7.72	7.87	8.02	8.17	8.20	8.20
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	22.50	22.50	22.50	10.00	10.00	10.00	10.00

DESIGN

9-E 26 #3 @ 10 E:9a

BEAM: E(9a-9b) FLOOR: 5

	Length:	L = 4.20 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.20 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.26	1.68	2.10	2.52	2.94	3.36	3.78	4.20
Mu(-), ton-m:	-31.98	-25.09	-18.33	-11.71	-6.40	-6.40	-6.40	-9.68	-15.15	-20.72	-26.39
Mu(+), ton-m:	25.96	21.16	16.26	11.26	6.40	6.40	7.36	13.45	19.40	25.22	30.91
As(-), cm2:	20.38	15.59	11.14	6.97	6.16	6.16	6.16	6.16	9.11	12.69	16.48
As(+), cm2:	16.19	12.98	9.81	6.69	6.16	6.16	6.16	8.04	11.83	15.69	19.62
Vu, ton:	19.45	19.45	19.16	18.84	18.52	18.21	17.89	17.57	17.25	16.96	16.96
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	#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

E:9a 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 E:9b

BEAM: E(9b-8) FLOOR: 5

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-9.68	-8.30	-6.93	-5.56	-4.19	-2.82	-3.18	-4.80	-6.43	-8.05	-9.68
Mu(+), ton-m:	7.06	5.49	3.92	2.36	1.94	1.94	1.94	1.94	2.22	3.64	5.06
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:	49.65	49.65	49.65	49.65	49.65	49.65	49.65	49.65	49.65	49.65	49.65
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:	#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

E:9b 4 #4 @ 10 8-E

BEAM: E(8-8a) FLOOR: 5

	Length:	L = 2.60 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 2.60 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.26	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60
Mu(-), ton-m:	-4.90	-3.85	-2.82	-1.83	-1.54	-1.54	-1.54	-2.91	-4.47	-6.08	-7.72
Mu(+), ton-m:	6.96	5.67	4.34	2.97	1.56	1.54	1.54	1.87	2.72	3.54	4.34
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:	7.08	7.08	7.12	7.27	7.42	7.57	7.72	7.87	8.02	8.05	8.05
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	10.00	10.00	22.50	22.50	22.50	10.00	10.00	10.00	10.00

DESIGN

8-E 26 #3 @ 10 E:8a

BEAM: E(8a-7') FLOOR: 5

	Length:	L = 4.56 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.21 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.26	1.69	2.11	2.53	2.95	3.37	3.79	4.21
Mu(-), ton-m:	-27.97	-21.63	-15.38	-9.24	-5.59	-5.59	-6.02	-11.06	-16.16	-21.35	-26.61
Mu(+), ton-m:	22.59	18.01	13.36	8.63	5.59	5.59	8.58	14.32	19.96	25.50	30.93
As(-), cm2:	17.56	13.29	9.26	6.16	6.16	6.16	6.16	6.56	9.75	13.10	16.63
As(+), cm2:	13.92	10.93	7.99	6.16	6.16	6.16	6.16	8.59	12.19	15.87	19.64
Vu, ton:	17.94	17.94	17.72	17.48	17.24	16.99	16.75	16.51	16.29	16.13	16.13
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

E:8a 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 7'-E

BEAM: F(12-11) FLOOR: 5

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.98 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.67	3.27	3.86	4.46	5.06	5.66	6.25	6.85
Mu(-), ton-m:	-26.38	-20.20	-14.43	-8.97	-5.28	-5.28	-5.28	-5.67	-9.36	-13.27	-17.37
Mu(+), ton-m:	13.86	11.76	9.38	6.78	5.28	5.28	5.65	9.95	13.84	17.43	20.75
As(-), cm2:	16.47	12.35	8.66	6.16	6.16	6.16	6.16	6.16	6.16	7.93	10.52
As(+), cm2:	8.30	7.00	6.16	6.16	6.16	6.16	6.16	6.16	8.29	10.56	12.71
Vu, ton:	12.06	11.96	11.53	11.10	10.67	10.23	9.80	9.37	8.94	9.02	9.12
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

12-F 11 #3 @ 10 17 #3 @ 22.5 11 #3 @ 10 11-F

BEAM: F(11-11a) FLOOR: 5

	Length:	L = 6.80 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.99	1.64	2.29	2.93	3.58	4.22	4.87	5.51	6.16	6.80
Mu(-), ton-m:	-18.94	-14.35	-10.10	-6.32	-3.79	-3.79	-3.79	-3.79	-7.09	-10.74	-14.96
Mu(+), ton-m:	12.53	10.93	9.12	7.16	5.06	3.79	3.79	5.89	8.04	9.91	11.74
As(-), cm2:	11.53	8.61	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.37	8.99
As(+), cm2:	7.47	6.49	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.99
Vu, ton:	7.67	7.52	7.00	6.48	5.96	5.43	5.66	6.18	6.71	7.23	7.38
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

11-F 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F:11a

BEAM: F(11a-10) FLOOR: 5

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-8.75	-7.45	-6.16	-4.87	-3.58	-2.29	-2.77	-4.09	-5.41	-6.73	-8.05
Mu(+), ton-m:	5.73	4.43	3.13	1.82	1.75	1.75	1.75	1.75	2.29	3.58	4.88
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	38.61	38.61	38.61	38.61	38.61	38.61	38.61	38.61	38.61	38.61	38.61
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

F:11a 5 #3 @ 7.5 10-F

BEAM: F(10-10a) FLOOR: 5

	Length:	L = 1.38 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.38 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.14	0.28	0.41	0.55	0.69	0.83	0.96	1.10	1.24	1.38
Mu(-), ton-m:	-6.76	-5.38	-4.01	-2.65	-1.98	-1.98	-2.15	-4.07	-6.00	-7.94	-9.89
Mu(+), ton-m:	9.12	7.27	5.40	3.53	1.98	1.98	1.98	2.71	4.03	5.34	6.65
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:	17.75	17.75	17.75	17.75	17.80	17.88	17.96	18.01	18.01	18.01	18.01
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

10-F 14 #3 @ 10 F:10a

BEAM: F(10a-10b) FLOOR: 5

	Length:	L = 4.22 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.22 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.27	1.69	2.11	2.53	2.96	3.38	3.80	4.22
Mu(-), ton-m:	-22.80	-17.87	-13.05	-8.32	-4.56	-4.56	-4.56	-6.92	-10.90	-14.96	-19.09
Mu(+), ton-m:	18.77	15.33	11.82	8.22	4.67	4.56	5.23	9.54	13.75	17.86	21.86
As(-), cm2:	14.06	10.84	7.79	6.16	6.16	6.16	6.16	6.16	6.47	8.99	11.63
As(+), cm2:	11.42	9.23	7.03	6.16	6.16	6.16	6.16	6.16	8.24	10.83	13.44
Vu, ton:	13.71	13.71	13.49	13.24	13.00	12.76	12.51	12.27	12.02	11.80	11.80
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

F:10a 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 F:10b

BEAM: F(10b-9) FLOOR: 5

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-9.00	-7.74	-6.49	-5.23	-3.98	-2.72	-2.17	-3.61	-5.05	-6.50	-7.95
Mu(+), ton-m:	6.91	5.51	4.11	2.71	1.80	1.80	1.80	1.80	1.80	3.06	4.35
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:	43.72	43.72	43.72	43.72	43.72	43.72	43.72	43.72	43.72	43.72	43.72
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

F:10b 4 #4 @ 10 9-F

BEAM: F(9-9a) FLOOR: 5

	Length:	L = 1.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.98	1.12	1.26	1.40
Mu(-), ton-m:	-6.36	-5.07	-3.79	-2.52	-1.99	-1.99	-2.11	-4.05	-6.00	-7.96	-9.93
Mu(+), ton-m:	9.27	7.40	5.52	3.63	1.99	1.99	1.99	2.47	3.70	4.92	6.13
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:	18.07	18.07	18.07	18.07	18.12	18.20	18.29	18.34	18.34	18.34	18.34
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

DESIGN

9-F 14 #3 @ 10 F:9a

BEAM: F(9a-8) FLOOR: 5

	Length:	L = 5.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.45 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.55	1.09	1.64	2.18	2.73	3.27	3.82	4.36	4.91	5.45
Mu(-), ton-m:	-20.48	-15.61	-10.91	-6.38	-4.10	-4.10	-4.10	-6.63	-9.97	-13.44	-17.03
Mu(+), ton-m:	13.18	10.73	8.16	5.45	4.10	4.10	6.19	10.04	13.72	17.23	20.58
As(-), cm2:	12.53	9.40	6.48	6.16	6.16	6.16	6.16	6.16	6.16	8.04	10.30
As(+), cm2:	7.88	6.37	6.16	6.16	6.16	6.16	6.16	6.16	8.21	10.43	12.59
Vu, ton:	10.96	10.91	10.61	10.32	10.02	9.73	9.43	9.14	8.84	8.55	8.50
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

F:9a 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 8-F

BEAM: F(8-7') FLOOR: 5

	Length:	L = 7.16 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.46 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.64	2.29	2.94	3.58	4.23	4.87	5.52	6.17	6.81
Mu(-), ton-m:	-17.12	-13.01	-9.15	-5.61	-3.51	-3.51	-3.51	-5.88	-9.50	-13.41	-17.57
Mu(+), ton-m:	13.78	11.50	9.10	6.59	3.91	3.51	4.06	6.72	9.22	11.60	13.85
As(-), cm2:	10.36	7.77	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.02	10.65
As(+), cm2:	8.25	6.84	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.90	8.30
Vu, ton:	6.79	6.70	6.36	6.03	5.69	5.42	5.76	6.10	6.43	6.77	6.87
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	#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

8-F 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-F

BEAM: G(12-11) FLOOR: 5

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.98 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.67	3.27	3.86	4.46	5.06	5.66	6.25	6.85
Mu(-), ton-m:	-26.49	-20.40	-14.66	-9.21	-5.30	-5.30	-5.30	-6.07	-9.90	-13.92	-18.11
Mu(+), ton-m:	14.99	12.60	9.97	7.13	5.30	5.30	5.61	10.03	14.10	17.90	21.45
As(-), cm2:	16.55	12.48	8.80	6.16	6.16	6.16	6.16	6.16	6.16	8.34	11.00
As(+), cm2:	9.01	7.52	6.16	6.16	6.16	6.16	6.16	6.16	8.45	10.86	13.17
Vu, ton:	11.92	11.83	11.45	11.06	10.68	10.30	9.91	9.53	9.14	9.07	9.16
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	12-G			11 #3 @ 10	17 #3 @ 22.5	11 #3 @ 10					11-G

BEAM: G(11-10) FLOOR: 5

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-19.15	-14.41	-10.00	-6.00	-3.83	-3.83	-3.83	-6.11	-10.02	-14.36	-19.06
Mu(+), ton-m:	14.23	12.01	9.62	7.09	4.38	3.83	4.57	7.34	9.86	12.26	14.50
As(-), cm2:	11.67	8.64	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.61	11.61
As(+), cm2:	8.53	7.15	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.31	8.70
Vu, ton:	7.74	7.61	7.15	6.70	6.25	5.79	6.17	6.62	7.08	7.53	7.66
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	11-G			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					10-G

BEAM: G(10-10a) FLOOR: 5

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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	10-G				6 #3 @ 22.5						G:10a

BEAM: G(9-9a) FLOOR: 5

	Length:	L = 6.30 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.19 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.63	2.15	2.67	3.19	3.71	4.22	4.74	5.26	5.78	6.30
Mu(-), ton-m:	-27.56	-21.91	-16.42	-11.08	-5.89	-5.51	-5.51	-6.37	-10.66	-15.05	-19.55
Mu(+), ton-m:	20.40	16.93	13.34	9.64	5.84	5.51	5.51	8.68	13.24	17.66	21.93
As(-), cm2:	17.28	13.47	9.92	6.58	6.16	6.16	6.16	6.16	6.32	9.05	11.93
As(+), cm2:	12.48	10.24	7.98	6.16	6.16	6.16	6.16	6.16	7.92	10.70	13.48
Vu, ton:	12.48	12.45	12.20	11.96	11.71	11.47	11.22	10.97	10.73	10.71	10.74
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

9-G 11 #3 @ 10 13 #3 @ 22.5 11 #3 @ 10 G:9a

BEAM: G(9a-8) FLOOR: 5

	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:	-8.75	-7.08	-5.41	-3.75	-2.09	-1.81	-1.81	-3.47	-5.33	-7.19	-9.06
Mu(+), ton-m:	9.43	7.60	5.77	3.93	2.09	1.81	1.81	2.87	4.52	6.16	7.80
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	24.20	24.20	24.20	24.20	24.20	24.20	24.20	24.20	24.20	24.20	24.20
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

G:9a 9 #3 @ 10 8-G

BEAM: G(8-8a) FLOOR: 5

	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:	-7.70	-6.12	-4.54	-2.96	-2.01	-2.01	-2.33	-4.25	-6.17	-8.10	-10.04
Mu(+), ton-m:	9.10	7.21	5.31	3.41	2.01	2.01	2.01	3.30	4.85	6.41	7.96
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:	26.04	26.04	26.04	26.04	26.04	26.04	26.04	26.04	26.04	26.04	26.04
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

8-G 9 #3 @ 10 G:8a

BEAM: G(8a-7') FLOOR: 5

	Length:	L = 6.26 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.62 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.56	1.12	1.69	2.25	2.81	3.37	3.94	4.50	5.06	5.62
Mu(-), ton-m:	-18.78	-14.23	-9.86	-5.76	-4.14	-4.14	-4.36	-8.20	-12.18	-16.31	-20.68
Mu(+), ton-m:	15.92	12.87	9.70	6.48	4.14	4.14	5.86	9.34	12.65	15.78	18.84
As(-), cm2:	11.43	8.53	6.16	6.16	6.16	6.16	6.16	6.16	7.26	9.84	12.66
As(+), cm2:	9.60	7.69	6.16	6.16	6.16	6.16	6.16	6.16	7.55	9.51	11.47
Vu, ton:	8.94	8.89	8.60	8.30	8.01	7.72	7.47	7.73	8.02	8.31	8.36
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

G:8a — 11 #3 @ 10 | 15 #3 @ 22.5 | 11 #3 @ 10 — 7'-G

BEAM: H(12-12a) FLOOR: 5

	Length:	L = 6.30 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.95 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.95	1.54	2.14	2.73	3.33	3.92	4.52	5.11	5.71	6.30
Mu(-), ton-m:	-23.03	-17.79	-12.84	-8.23	-4.61	-4.61	-4.61	-4.61	-7.92	-11.72	-15.74
Mu(+), ton-m:	14.71	12.62	10.34	7.86	5.29	4.61	4.61	7.28	10.38	13.17	15.65
As(-), cm2:	14.21	10.79	7.67	6.16	6.16	6.16	6.16	6.16	6.16	6.98	9.48
As(+), cm2:	8.83	7.53	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.87	9.43
Vu, ton:	10.01	9.90	9.40	8.91	8.42	7.93	7.43	7.51	8.00	8.49	8.60
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

12-H — 11 #3 @ 10 | 17 #3 @ 22.5 | 11 #3 @ 10 — H:12a

BEAM: H(12a-11) FLOOR: 5

	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:	-9.83	-7.98	-6.14	-4.31	-2.48	-1.97	-1.99	-3.73	-5.47	-7.22	-8.97
Mu(+), ton-m:	8.58	6.85	5.12	3.39	1.97	1.97	1.97	3.13	4.94	6.73	8.53
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18
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

H:12a — 9 #3 @ 10 — 11-H

BEAM: H(11-11a) FLOOR: 5

	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: Mat:	VG40X50 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:	-8.13	-6.52	-4.91	-3.30	-2.22	-2.22	-2.75	-4.83	-6.91	-9.00	-11.09
Mu(+), ton-m:	9.62	7.57	5.51	3.46	2.22	2.22	2.22	3.09	4.67	6.26	7.84
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.58
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:	28.82	28.82	28.82	28.82	28.82	28.82	28.82	28.82	28.82	28.82	28.82
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	11-H				9 #3 @ 10						H:11a

BEAM: H(11a-10) FLOOR: 5

	Length:	L = 6.30 m Lu = 5.95 m	a = 0.00 m c = 0.35 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 RConcrete2				
X, m:	0.00	0.60	1.19	1.79	2.38	2.98	3.57	4.17	4.76	5.36	5.95
Mu(-), ton-m:	-18.02	-13.25	-8.83	-4.89	-4.04	-4.04	-4.04	-7.31	-11.20	-15.49	-20.19
Mu(+), ton-m:	13.90	11.52	8.96	6.37	4.04	4.04	5.98	8.91	11.52	14.00	16.40
As(-), cm2:	10.94	7.92	6.16	6.16	6.16	6.16	6.16	6.16	6.65	9.33	12.34
As(+), cm2:	8.33	6.85	6.16	6.16	6.16	6.16	6.16	6.16	6.85	8.39	9.90
Vu, ton:	8.71	8.60	8.11	7.62	7.12	6.63	6.72	7.21	7.71	8.20	8.31
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:11a				11 #3 @ 10 17 #3 @ 22.5 11 #3 @ 10						10-H

BEAM: H(10-10a) FLOOR: 5

	Length:	L = 1.38 m Lu = 1.03 m	a = 0.35 m c = 0.00 m	Section:	b = 40.0 cm h = 50.0 cm	Sec: Mat:	VG40X50 RConcrete2				
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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	10-H				6 #3 @ 22.5						H:10a

BEAM: I(12-12a) FLOOR: 5

	Length:	L = 6.30 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.95 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.95	1.54	2.14	2.73	3.33	3.92	4.52	5.11	5.71	6.30
Mu(-), ton-m:	-23.39	-18.08	-13.06	-8.40	-4.68	-4.68	-4.68	-4.68	-8.34	-12.29	-16.46
Mu(+), ton-m:	15.55	13.31	10.87	8.25	5.54	4.68	4.68	7.40	10.57	13.42	15.98
As(-), cm2:	14.45	10.98	7.80	6.16	6.16	6.16	6.16	6.16	6.16	7.33	9.94
As(+), cm2:	9.36	7.96	6.45	6.16	6.16	6.16	6.16	6.16	6.26	8.03	9.63
Vu, ton:	10.04	9.93	9.44	8.95	8.45	7.96	7.47	7.73	8.22	8.71	8.82
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

12-I 11 #3 @ 10 17 #3 @ 22.5 11 #3 @ 10 I:12a

BEAM: I(12a-11) FLOOR: 5

	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:	-10.36	-8.41	-6.47	-4.53	-2.59	-2.07	-2.07	-3.79	-5.56	-7.33	-9.11
Mu(+), ton-m:	8.80	7.03	5.26	3.48	2.07	2.07	2.07	3.30	5.20	7.09	8.97
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:	24.81	24.81	24.81	24.81	24.81	24.81	24.81	24.81	24.81	24.81	24.81
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

I:12a 9 #3 @ 10 11-I

BEAM: I(11-11a) FLOOR: 5

	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:	-8.57	-6.87	-5.17	-3.47	-2.25	-2.25	-2.78	-4.89	-7.00	-9.12	-11.24
Mu(+), ton-m:	9.77	7.69	5.60	3.51	2.25	2.25	2.25	3.27	4.95	6.62	8.29
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.68
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:	28.78	28.78	28.78	28.78	28.78	28.78	28.78	28.78	28.78	28.78	28.78
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

11-I 9 #3 @ 10 I:11a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:10 p. m. 5/01/2020

BEAM: I(11a-10) FLOOR: 5

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.95 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.60	1.19	1.79	2.38	2.98	3.57	4.17	4.76	5.36	5.95
Mu(-), ton-m:	-17.93	-13.25	-8.97	-5.02	-4.22	-4.22	-4.22	-7.75	-11.84	-16.30	-21.10
Mu(+), ton-m:	14.86	12.23	9.52	6.67	4.22	4.22	5.94	8.93	11.70	14.35	16.89
As(-), cm2:	10.88	7.92	6.16	6.16	6.16	6.16	6.16	6.16	7.05	9.84	12.93
As(+), cm2:	8.93	7.29	6.16	6.16	6.16	6.16	6.16	6.16	6.96	8.61	10.22
Vu, ton:	8.65	8.55	8.10	7.65	7.20	6.75	7.13	7.58	8.03	8.48	8.58
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:11a 11 #3 @ 10 17 #3 @ 22.5 11 #3 @ 10 10-I

BEAM: I(10-10a) FLOOR: 5

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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

10-I 6 #3 @ 22.5 I:10a

BEAM: I''(12-12a) FLOOR: 5

	Length:	L = 6.30 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.19 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.63	2.15	2.67	3.19	3.71	4.22	4.74	5.26	5.78	6.30
Mu(-), ton-m:	-28.64	-22.80	-17.13	-11.61	-6.23	-5.73	-5.73	-7.25	-12.11	-17.09	-22.17
Mu(+), ton-m:	23.58	19.53	15.36	11.08	6.70	5.73	5.73	8.89	13.63	18.23	22.69
As(-), cm2:	18.03	14.06	10.37	6.90	6.16	6.16	6.16	6.16	7.22	10.34	13.64
As(+), cm2:	14.58	11.91	9.24	6.58	6.16	6.16	6.16	6.16	8.16	11.08	13.99
Vu, ton:	12.40	12.37	12.12	11.88	11.63	11.38	11.14	11.09	11.34	11.58	11.61
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

12-I'' 11 #3 @ 10 13 #3 @ 22.5 11 #3 @ 10 I'':12a

BEAM: I''(12a-11) FLOOR: 5

	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:	-10.72	-8.64	-6.56	-4.49	-2.42	-2.14	-2.14	-4.04	-6.14	-8.25	-10.35
Mu(+), ton-m:	10.53	8.47	6.40	4.33	2.26	2.14	2.14	3.82	5.88	7.94	9.99
As(-), cm2:	6.36	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
As(+), cm2:	6.24	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	25.93	25.93	25.93	25.93	25.93	25.93	25.93	25.93	25.93	25.93	25.93
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	I'':12a				9 #3 @ 10						11-I''

BEAM: I''(11-11a) FLOOR: 5

	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:	-9.88	-7.88	-5.87	-3.87	-2.24	-2.24	-2.48	-4.66	-6.84	-9.02	-11.21
Mu(+), ton-m:	10.48	8.33	6.18	4.02	2.24	2.24	2.24	4.09	6.07	8.05	10.03
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.66
As(+), cm2:	6.21	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00
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	11-I''				9 #3 @ 10						I'':11a

BEAM: I''(11a-10) FLOOR: 5

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.66 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.57	1.13	1.70	2.26	2.83	3.40	3.96	4.53	5.09	5.66
Mu(-), ton-m:	-19.76	-14.98	-10.45	-6.11	-4.67	-4.67	-5.05	-9.32	-13.76	-18.47	-23.37
Mu(+), ton-m:	17.74	14.28	10.75	7.11	4.67	4.67	6.22	9.91	13.47	16.97	20.34
As(-), cm2:	12.06	9.00	6.19	6.16	6.16	6.16	6.16	6.16	8.24	11.22	14.44
As(+), cm2:	10.76	8.56	6.38	6.16	6.16	6.16	6.16	6.16	8.06	10.26	12.44
Vu, ton:	9.36	9.30	9.01	8.72	8.42	8.13	8.30	8.59	8.88	9.18	9.23
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	#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'':11a			11 #3 @ 10		15 #3 @ 22.5		11 #3 @ 10			10-I''

BEAM: I''(10-10a) FLOOR: 5

	Length:	L = 1.38 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.26 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.14	1.16	1.19	1.22	1.24	1.27	1.30	1.32	1.35	1.38
Mu(-), ton-m:	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01	0.00	0.00	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:	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
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	10-I''				2 #3 @ 22.5						I'':10a

BEAM: A(12-12a) FLOOR: 6

	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:	-10.09	-8.02	-5.97	-3.93	-2.58	-2.58	-2.62	-5.17	-7.73	-10.32	-12.92
Mu(+), ton-m:	12.27	9.83	7.38	4.91	2.58	2.58	2.58	4.09	6.06	8.02	9.96
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.72
As(+), cm2:	7.31	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	17.08	17.08	17.08	17.13	17.23	17.34	17.44	17.54	17.59	17.59	17.59
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	12-A				18 #3 @ 10						A:12a

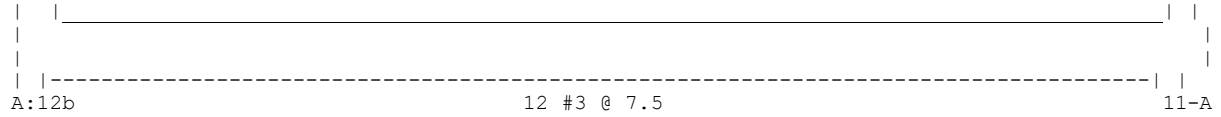
BEAM: A(12a-12b) FLOOR: 6

	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:	-30.41	-23.95	-17.61	-11.39	-6.08	-6.08	-6.08	-8.60	-13.20	-17.88	-22.66
Mu(+), ton-m:	21.13	17.14	13.07	8.91	6.08	6.08	6.58	12.33	17.97	23.49	28.90
As(-), cm2:	19.27	14.83	10.68	6.77	6.16	6.16	6.16	6.16	7.89	10.85	13.96
As(+), cm2:	12.96	10.38	7.81	6.16	6.16	6.16	6.16	7.35	10.90	14.52	18.21
Vu, ton:	17.83	17.83	17.58	17.32	17.06	16.80	16.54	16.28	16.02	15.77	15.77
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	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00
DESIGN	A:12a			11 #3 @ 10	10 #3 @ 22.5		11 #3 @ 10				A:12b

BEAM: A(12b-11) FLOOR: 6

	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:	-12.28	-9.91	-7.54	-5.17	-2.84	-2.84	-2.84	-5.48	-8.38	-11.28	-14.19
Mu(+), ton-m:	14.66	11.79	8.93	6.05	3.18	2.84	2.84	4.25	6.60	8.95	11.29
As(-), cm2:	7.32	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.70	8.51
As(+), cm2:	8.80	7.02	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.71
Vu, ton:	39.28	39.28	39.28	39.28	39.28	39.28	39.28	39.28	39.28	39.28	39.28
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

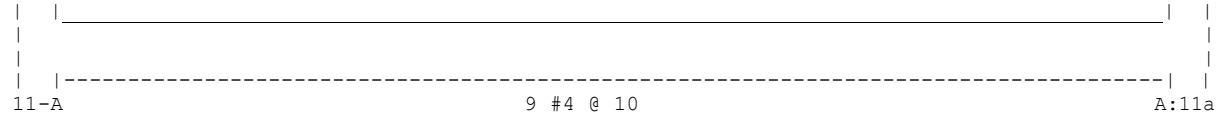
DESIGN



BEAM: A(11-11a) FLOOR: 6

	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:	-11.18	-8.89	-6.61	-4.33	-3.09	-3.09	-3.46	-6.45	-9.45	-12.46	-15.47
Mu(+), ton-m:	14.41	11.45	8.47	5.50	3.09	3.09	3.09	4.74	7.00	9.26	11.51
As(-), cm2:	6.64	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.43	9.31
As(+), cm2:	8.65	6.80	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.84
Vu, ton:	41.88	41.88	41.88	41.88	41.88	41.88	41.88	41.88	41.88	41.88	41.88
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:	#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

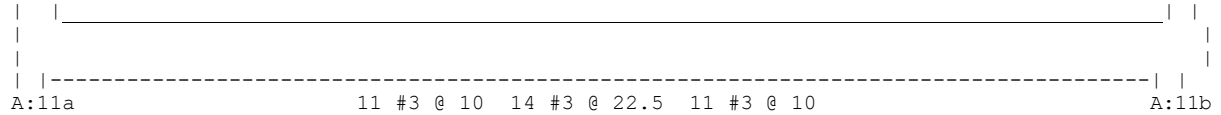
DESIGN



BEAM: A(11a-11b) FLOOR: 6

	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:	-24.85	-19.32	-13.96	-8.77	-4.97	-4.97	-4.97	-7.49	-11.63	-15.90	-20.30
Mu(+), ton-m:	17.98	14.71	11.33	7.82	4.97	4.97	5.80	10.32	14.67	18.86	22.87
As(-), cm2:	15.43	11.78	8.37	6.16	6.16	6.16	6.16	6.16	6.92	9.59	12.41
As(+), cm2:	10.91	8.84	6.73	6.16	6.16	6.16	6.16	6.16	8.81	11.48	14.11
Vu, ton:	12.20	12.16	11.85	11.54	11.23	10.91	10.60	10.29	9.98	9.97	10.02
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	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 10:20:10 p. m. 5/01/2020

BEAM: A(11b-10) FLOOR: 6

	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:	-10.90	-8.81	-6.72	-4.63	-2.54	-2.48	-2.48	-4.75	-7.29	-9.85	-12.40
Mu(+), ton-m:	12.96	10.44	7.92	5.40	2.87	2.48	2.48	3.69	5.76	7.82	9.89
As(-), cm2:	6.47	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.39
As(+), cm2:	7.74	6.19	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	34.51	34.51	34.51	34.51	34.51	34.51	34.51	34.51	34.51	34.51	34.51
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:	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
DESIGN	A:11b				12 #3 @ 7.5						10-A

BEAM: A(10-10a) FLOOR: 6

	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:	-9.77	-7.80	-5.83	-3.86	-2.61	-2.61	-2.79	-5.35	-7.92	-10.50	-13.07
Mu(+), ton-m:	12.51	9.97	7.43	4.88	2.61	2.61	2.61	3.97	5.92	7.86	9.80
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.22	7.81
As(+), cm2:	7.46	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
Vu, ton:	35.77	35.77	35.77	35.77	35.77	35.77	35.77	35.77	35.77	35.77	35.77
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	10-A				12 #3 @ 7.5						A:10a

BEAM: A(10a-10b) FLOOR: 6

	Length:	L = 0.48 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.48 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.05	0.10	0.14	0.19	0.24	0.29	0.33	0.38	0.43	0.48
Mu(-), ton-m:	-0.08	-0.06	-0.05	-0.04	-0.03	-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:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	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	A:10a				3 #3 @ 22.5						A:10b

BEAM: B(12-11) FLOOR: 6

	Length:	L = 7.20 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.85 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.69	1.37	2.06	2.74	3.43	4.11	4.80	5.48	6.17	6.85
Mu(-), ton-m:	-23.53	-18.11	-12.97	-8.09	-4.71	-4.71	-4.71	-5.03	-8.36	-11.90	-15.63
Mu(+), ton-m:	12.68	10.76	8.63	6.30	4.71	4.71	4.92	8.72	12.25	15.52	18.53
As(-), cm2:	14.54	11.00	7.75	6.16	6.16	6.16	6.16	6.16	6.16	7.09	9.41
As(+), cm2:	7.57	6.38	6.16	6.16	6.16	6.16	6.16	6.16	7.30	9.34	11.26
Vu, ton:	9.81	9.68	9.31	8.93	8.56	8.18	7.81	7.43	7.06	6.96	7.08
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

12-B 11 #3 @ 10 21 #3 @ 22.5 11 #3 @ 10 11-B

BEAM: B(11-10) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-22.24	-17.05	-12.09	-7.39	-4.45	-4.45	-4.45	-6.73	-10.64	-14.74	-19.00
Mu(+), ton-m:	15.50	12.86	10.06	7.09	4.45	4.45	5.31	9.03	12.51	15.75	18.76
As(-), cm2:	13.69	10.32	7.20	6.16	6.16	6.16	6.16	6.16	6.31	8.85	11.57
As(+), cm2:	9.33	7.68	6.16	6.16	6.16	6.16	6.16	6.16	7.46	9.49	11.42
Vu, ton:	9.08	8.98	8.65	8.31	7.97	7.63	7.29	7.06	7.40	7.74	7.84
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

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

BEAM: B(10-10a) FLOOR: 6

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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

10-B 6 #3 @ 22.5 B:10a

BEAM: C(12-11) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-23.53	-18.21	-13.10	-8.24	-4.71	-4.71	-4.71	-5.22	-8.61	-12.17	-15.91
Mu(+), ton-m:	13.33	11.22	8.94	6.48	4.71	4.71	4.92	8.73	12.35	15.74	18.90
As(-), cm2:	14.55	11.06	7.83	6.16	6.16	6.16	6.16	6.16	6.16	7.25	9.59
As(+), cm2:	7.97	6.66	6.16	6.16	6.16	6.16	6.16	6.16	7.36	9.48	11.50
Vu, ton:	9.98	9.88	9.54	9.20	8.86	8.52	8.19	7.85	7.51	7.33	7.43
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

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

BEAM: C(11-10) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-20.46	-15.63	-11.03	-6.68	-4.09	-4.09	-4.09	-6.28	-9.97	-13.84	-17.87
Mu(+), ton-m:	14.35	11.94	9.36	6.63	4.09	4.09	4.97	8.33	11.46	14.35	17.01
As(-), cm2:	12.52	9.42	6.55	6.16	6.16	6.16	6.16	6.16	6.16	8.29	10.84
As(+), cm2:	8.61	7.11	6.16	6.16	6.16	6.16	6.16	6.16	6.81	8.61	10.29
Vu, ton:	8.36	8.26	7.92	7.59	7.25	6.91	6.57	6.58	6.92	7.25	7.35
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	#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

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

BEAM: C(10-10a) FLOOR: 6

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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

10-C 6 #3 @ 22.5 C:10a

BEAM: C(9-7') FLOOR: 6

	Length:	L = 14.36 m	a = 0.64 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 12.61 m	c = 1.11 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.64	1.90	3.16	4.42	5.68	6.95	8.21	9.47	10.73	11.99	13.25
Mu(-), ton-m:	-18.41	-12.14	-6.84	-3.68	-3.68	-3.68	-3.68	-3.68	-6.18	-11.00	-16.94
Mu(+), ton-m:	6.14	4.89	5.48	5.65	5.20	4.63	5.50	6.16	6.16	5.63	5.65
As(-), cm2:	11.19	7.24	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.53	10.25
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:	5.29	4.87	4.21	3.55	2.88	2.24	2.64	3.25	3.87	4.48	4.87
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	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	10.00	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00
DESIGN	9-C			11 #3 @ 10	46 #3 @ 22.5	11 #3 @ 10					7'-C

BEAM: D(12-11) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-21.67	-16.72	-11.98	-7.48	-4.33	-4.33	-4.33	-4.77	-7.93	-11.27	-14.78
Mu(+), ton-m:	12.15	10.27	8.22	6.00	4.33	4.33	4.57	8.02	11.27	14.29	17.08
As(-), cm2:	13.32	10.10	7.13	6.16	6.16	6.16	6.16	6.16	6.16	6.70	8.88
As(+), cm2:	7.24	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.70	8.57	10.34
Vu, ton:	9.22	9.12	8.78	8.44	8.11	7.77	7.43	7.09	6.75	6.84	6.93
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	12-D			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					11-D

BEAM: D(11-10) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-19.07	-14.52	-10.20	-6.14	-3.81	-3.81	-3.81	-5.73	-9.16	-12.76	-16.53
Mu(+), ton-m:	13.06	10.91	8.60	6.13	3.81	3.81	4.65	7.73	10.57	13.18	15.56
As(-), cm2:	11.61	8.72	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.62	9.99
As(+), cm2:	7.80	6.48	6.16	6.16	6.16	6.16	6.16	6.16	6.27	7.87	9.37
Vu, ton:	7.85	7.75	7.42	7.08	6.74	6.40	6.06	6.11	6.45	6.79	6.89
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	11-D			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					10-D

BEAM: D(10-10a) FLOOR: 6

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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	10-D				6 #3 @ 22.5						D:10a

BEAM: D(9-8) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-21.45	-16.53	-11.84	-7.38	-4.29	-4.29	-4.29	-4.95	-8.21	-11.64	-15.24
Mu(+), ton-m:	12.64	10.66	8.52	6.20	4.29	4.29	4.54	7.95	11.16	14.13	16.88
As(-), cm2:	13.17	9.99	7.05	6.16	6.16	6.16	6.16	6.16	6.16	6.92	9.17
As(+), cm2:	7.54	6.32	6.16	6.16	6.16	6.16	6.16	6.16	6.63	8.47	10.21
Vu, ton:	9.01	8.92	8.58	8.24	7.90	7.56	7.23	6.89	6.58	6.89	6.99
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
DESIGN	9-D			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			8-D

BEAM: D(8-7') FLOOR: 6

	Length:	L = 7.16 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.46 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.64	2.29	2.94	3.58	4.23	4.87	5.52	6.17	6.81
Mu(-), ton-m:	-17.95	-13.63	-9.55	-5.74	-3.59	-3.59	-3.59	-5.93	-9.45	-13.21	-17.25
Mu(+), ton-m:	13.56	11.31	8.90	6.35	3.77	3.59	4.42	7.29	9.92	12.37	14.73
As(-), cm2:	10.89	8.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.89	10.44
As(+), cm2:	8.12	6.72	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.38	8.85
Vu, ton:	7.24	7.14	6.81	6.47	6.13	5.80	5.77	6.11	6.44	6.78	6.88
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	8-D			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			7'-D

BEAM: E(12-11) FLOOR: 6

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.98 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.67	3.27	3.86	4.46	5.06	5.66	6.25	6.85
Mu(-), ton-m:	-25.40	-19.83	-14.52	-9.42	-5.08	-5.08	-5.08	-5.08	-8.34	-11.80	-15.39
Mu(+), ton-m:	13.62	11.45	9.07	6.54	5.08	5.08	5.08	9.07	13.14	17.01	20.70
As(-), cm2:	15.81	12.11	8.71	6.16	6.16	6.16	6.16	6.16	6.16	7.02	9.26
As(+), cm2:	8.15	6.81	6.16	6.16	6.16	6.16	6.16	6.16	7.85	10.29	12.67
Vu, ton:	11.44	11.38	11.09	10.80	10.52	10.23	9.95	9.66	9.38	9.09	9.02
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

12-E 11 #3 @ 10 17 #3 @ 22.5 11 #3 @ 10 11-E

BEAM: E(11-10) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.85 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.04	1.72	2.41	3.09	3.78	4.46	5.15	5.83	6.52	7.20
Mu(-), ton-m:	-16.25	-12.40	-8.80	-5.53	-3.25	-3.25	-3.25	-3.49	-6.34	-9.41	-12.84
Mu(+), ton-m:	10.87	9.41	7.77	5.97	4.05	3.25	3.25	5.14	7.12	8.84	10.46
As(-), cm2:	9.80	7.39	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.67
As(+), cm2:	6.45	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.20
Vu, ton:	6.12	6.00	5.63	5.25	4.88	4.50	4.54	4.91	5.29	5.67	5.79
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

11-E 11 #3 @ 10 21 #3 @ 22.5 11 #3 @ 10 10-E

BEAM: E(10-10a) FLOOR: 6

	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:	-7.48	-5.95	-4.43	-2.93	-2.07	-2.07	-2.28	-4.26	-6.26	-8.29	-10.33
Mu(+), ton-m:	9.24	7.37	5.47	3.57	2.07	2.07	2.07	2.95	4.39	5.81	7.22
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	13.53	13.53	13.53	13.58	13.68	13.78	13.89	13.99	14.04	14.04	14.04
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	#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

10-E 18 #3 @ 10 E:10a

BEAM: E(10a-10b) FLOOR: 6

	Length:	L = 3.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 3.80 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.38	0.76	1.14	1.52	1.90	2.28	2.66	3.04	3.42	3.80
Mu(-), ton-m:	-30.24	-23.65	-17.19	-10.88	-6.05	-6.05	-6.05	-9.05	-14.02	-19.09	-24.25
Mu(+), ton-m:	23.25	18.91	14.47	9.95	6.05	6.05	7.27	13.04	18.68	24.19	29.56
As(-), cm2:	19.15	14.63	10.41	6.45	6.16	6.16	6.16	6.16	8.40	11.63	15.03
As(+), cm2:	14.36	11.51	8.69	6.16	6.16	6.16	6.16	7.79	11.36	14.99	18.67
Vu, ton:	20.86	20.86	20.58	20.22	19.86	19.51	19.15	18.79	18.44	18.15	18.15
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	#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

E:10a 11 #3 @ 10 7 #3 @ 22.5 11 #3 @ 10 E:10b

BEAM: E(10b-9) FLOOR: 6

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-9.49	-8.18	-6.86	-5.55	-4.23	-2.92	-3.21	-4.68	-6.15	-7.62	-9.09
Mu(+), ton-m:	6.27	4.83	3.40	1.97	1.90	1.90	1.90	1.90	1.94	3.28	4.62
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:	44.59	44.59	44.59	44.59	44.59	44.59	44.59	44.59	44.59	44.59	44.59
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:	#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

E:10b 4 #4 @ 10 9-E

BEAM: E(9-9a) FLOOR: 6

	Length:	L = 2.60 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 2.60 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.26	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60
Mu(-), ton-m:	-4.78	-3.75	-2.74	-1.77	-1.62	-1.62	-1.62	-3.12	-4.75	-6.42	-8.12
Mu(+), ton-m:	7.18	5.83	4.43	3.00	1.62	1.62	1.62	1.83	2.66	3.46	4.23
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:	7.56	7.56	7.59	7.74	7.89	8.04	8.19	8.34	8.49	8.52	8.52
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	10.00	10.00	22.50	22.50	22.50	10.00	10.00	10.00	10.00

DESIGN

9-E 26 #3 @ 10 E:9a

BEAM: E(9a-9b) FLOOR: 6

	Length:	L = 4.20 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.20 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.26	1.68	2.10	2.52	2.94	3.36	3.78	4.20
Mu(-), ton-m:	-32.22	-25.28	-18.46	-11.76	-6.44	-6.44	-6.44	-9.16	-14.37	-19.66	-25.03
Mu(+), ton-m:	24.77	20.19	15.52	10.76	6.44	6.44	7.58	13.78	19.85	25.81	31.63
As(-), cm2:	20.56	15.72	11.22	7.00	6.16	6.16	6.16	6.16	8.62	11.99	15.56
As(+), cm2:	15.38	12.34	9.34	6.38	6.16	6.16	6.16	8.25	12.12	16.08	20.14
Vu, ton:	20.15	20.15	19.88	19.58	19.29	18.99	18.70	18.40	18.11	17.84	17.84
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

E:9a 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 E:9b

BEAM: E(9b-8) FLOOR: 6

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-9.44	-8.14	-6.84	-5.55	-4.25	-2.96	-3.01	-4.45	-5.90	-7.35	-8.80
Mu(+), ton-m:	6.31	4.90	3.49	2.07	1.89	1.89	1.89	1.89	1.89	3.14	4.46
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:	43.89	43.89	43.89	43.89	43.89	43.89	43.89	43.89	43.89	43.89	43.89
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:	#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

E:9b 4 #4 @ 10 8-E

BEAM: E(8-8a) FLOOR: 6

	Length:	L = 2.60 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 2.60 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.26	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60
Mu(-), ton-m:	-4.66	-3.66	-2.68	-1.73	-1.60	-1.60	-1.60	-3.06	-4.66	-6.30	-7.98
Mu(+), ton-m:	7.05	5.72	4.36	2.95	1.60	1.60	1.60	1.78	2.58	3.35	4.10
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	7.44	7.44	7.47	7.62	7.77	7.92	8.07	8.22	8.37	8.40	8.40
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	22.50	22.50	22.50	10.00	10.00	10.00	10.00

DESIGN

8-E 26 #3 @ 10 E:8a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:11 p. m. 5/01/2020

BEAM: E(8a-7') FLOOR: 6

	Length:	L = 4.56 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.21 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.26	1.69	2.11	2.53	2.95	3.37	3.79	4.21
Mu(-), ton-m:	-26.29	-20.43	-14.66	-9.00	-5.26	-5.26	-5.26	-9.52	-14.10	-18.76	-23.49
Mu(+), ton-m:	20.40	16.35	12.23	8.03	5.26	5.26	7.37	12.62	17.78	22.83	27.78
As(-), cm2:	16.41	12.50	8.81	6.16	6.16	6.16	6.16	6.16	8.45	11.41	14.52
As(+), cm2:	12.48	9.87	7.29	6.16	6.16	6.16	6.16	7.53	10.78	14.08	17.44
Vu, ton:	16.74	16.74	16.52	16.28	16.04	15.80	15.55	15.31	15.10	14.93	14.93
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

E:8a 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 7'-E

BEAM: F(12-11) FLOOR: 6

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.98 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.67	3.27	3.86	4.46	5.06	5.66	6.25	6.85
Mu(-), ton-m:	-25.05	-19.32	-13.95	-8.87	-5.01	-5.01	-5.01	-5.01	-8.04	-11.53	-15.20
Mu(+), ton-m:	12.75	10.86	8.73	6.40	5.01	5.01	5.01	8.86	12.54	15.95	19.11
As(-), cm2:	15.57	11.78	8.36	6.16	6.16	6.16	6.16	6.16	6.16	6.86	9.14
As(+), cm2:	7.61	6.45	6.16	6.16	6.16	6.16	6.16	6.16	7.48	9.61	11.64
Vu, ton:	11.38	11.29	10.90	10.51	10.12	9.74	9.35	8.96	8.57	8.27	8.33
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

12-F 11 #3 @ 10 17 #3 @ 22.5 11 #3 @ 10 11-F

BEAM: F(11-11a) FLOOR: 6

	Length:	L = 6.80 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.45 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.99	1.64	2.29	2.93	3.58	4.22	4.87	5.51	6.16	6.80
Mu(-), ton-m:	-16.87	-12.70	-8.84	-5.41	-3.37	-3.37	-3.37	-3.62	-6.62	-9.85	-13.66
Mu(+), ton-m:	11.12	9.67	8.03	6.28	4.38	3.37	3.50	5.78	7.75	9.41	11.10
As(-), cm2:	10.20	7.58	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.18
As(+), cm2:	6.61	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.59
Vu, ton:	7.00	6.87	6.40	5.92	5.45	4.98	5.13	5.60	6.07	6.54	6.68
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

11-F 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 F:11a

BEAM: F(11a-10) FLOOR: 6

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-8.27	-7.09	-5.90	-4.72	-3.54	-2.36	-2.68	-3.88	-5.08	-6.29	-7.49
Mu(+), ton-m:	5.16	3.97	2.78	1.65	1.65	1.65	1.65	1.65	1.90	3.09	4.28
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	35.41	35.41	35.41	35.41	35.41	35.41	35.41	35.41	35.41	35.41	35.41
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

F:11a 5 #3 @ 7.5 10-F

BEAM: F(10-10a) FLOOR: 6

	Length:	L = 1.38 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.38 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.14	0.28	0.41	0.55	0.69	0.83	0.96	1.10	1.24	1.38
Mu(-), ton-m:	-6.31	-5.02	-3.73	-2.46	-1.97	-1.97	-2.21	-4.10	-6.01	-7.93	-9.86
Mu(+), ton-m:	8.95	7.12	5.28	3.42	1.97	1.97	1.97	2.55	3.78	5.01	6.22
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	17.91	17.91	17.91	17.91	17.97	18.05	18.12	18.18	18.18	18.18	18.18
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

10-F 14 #3 @ 10 F:10a

BEAM: F(10a-10b) FLOOR: 6

	Length:	L = 4.22 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 4.22 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.27	1.69	2.11	2.53	2.96	3.38	3.80	4.22
Mu(-), ton-m:	-22.96	-17.98	-13.11	-8.34	-4.59	-4.59	-4.59	-6.54	-10.35	-14.23	-18.18
Mu(+), ton-m:	17.92	14.65	11.31	7.90	4.59	4.59	5.35	9.71	13.97	18.12	22.17
As(-), cm2:	14.16	10.91	7.83	6.16	6.16	6.16	6.16	6.16	6.16	8.53	11.04
As(+), cm2:	10.87	8.80	6.72	6.16	6.16	6.16	6.16	6.16	8.37	11.00	13.64
Vu, ton:	14.16	14.16	13.94	13.70	13.45	13.21	12.97	12.72	12.48	12.26	12.26
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	10.00	22.50	22.50	22.50	22.50	22.50	10.00	10.00	10.00

DESIGN

F:10a 11 #3 @ 10 9 #3 @ 22.5 11 #3 @ 10 F:10b

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:11 p. m. 5/01/2020

BEAM: F(10b-9) FLOOR: 6

	Length:	L = 0.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40
Mu(-), ton-m:	-8.65	-7.48	-6.32	-5.15	-3.99	-2.83	-2.04	-3.33	-4.65	-5.96	-7.27
Mu(+), ton-m:	6.30	5.02	3.75	2.47	1.73	1.73	1.73	1.73	1.73	2.57	3.76
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	39.53	39.53	39.53	39.53	39.53	39.53	39.53	39.53	39.53	39.53	39.53
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	#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	F:10b				5 #3 @ 7.5						9-F

BEAM: F(9-9a) FLOOR: 6

	Length:	L = 1.40 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.40 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.98	1.12	1.26	1.40
Mu(-), ton-m:	-5.77	-4.60	-3.44	-2.29	-2.00	-2.00	-2.19	-4.13	-6.08	-8.05	-10.02
Mu(+), ton-m:	9.23	7.35	5.47	3.57	2.00	2.00	2.00	2.23	3.34	4.44	5.53
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	18.66	18.66	18.66	18.66	18.72	18.80	18.88	18.94	18.94	18.94	18.94
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	9-F				14 #3 @ 10						F:9a

BEAM: F(9a-8) FLOOR: 6

	Length:	L = 5.80 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.45 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.55	1.09	1.64	2.18	2.73	3.27	3.82	4.36	4.91	5.45
Mu(-), ton-m:	-20.34	-15.55	-10.92	-6.46	-4.07	-4.07	-4.07	-6.21	-9.39	-12.69	-16.12
Mu(+), ton-m:	12.45	10.17	7.76	5.22	4.07	4.07	5.89	9.67	13.27	16.71	19.99
As(-), cm2:	12.44	9.36	6.48	6.16	6.16	6.16	6.16	6.16	6.16	7.57	9.72
As(+), cm2:	7.43	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.94	10.10	12.21
Vu, ton:	10.92	10.87	10.58	10.28	9.99	9.69	9.40	9.10	8.81	8.51	8.46
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	F:9a			11 #3 @ 10	14 #3 @ 22.5		11 #3 @ 10				8-F

BEAM: F(8-7') FLOOR: 6

	Length:	L = 7.16 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.46 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.64	2.29	2.94	3.58	4.23	4.87	5.52	6.17	6.81
Mu(-), ton-m:	-15.86	-12.01	-8.45	-5.14	-3.44	-3.44	-3.44	-5.68	-9.25	-13.10	-17.18
Mu(+), ton-m:	13.18	11.04	8.80	6.40	3.81	3.44	3.86	6.28	8.61	10.81	12.85
As(-), cm2:	9.56	7.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.83	10.40
As(+), cm2:	7.88	6.56	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.41	7.67
Vu, ton:	6.50	6.40	6.07	5.73	5.40	5.38	5.72	6.05	6.39	6.72	6.82
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	8-F			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			7'-F

BEAM: G(12-11) FLOOR: 6

	Length:	L = 7.20 m	a = 0.88 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.98 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.88	1.47	2.07	2.67	3.27	3.86	4.46	5.06	5.66	6.25	6.85
Mu(-), ton-m:	-25.28	-19.58	-14.20	-9.09	-5.06	-5.06	-5.06	-5.11	-8.57	-12.20	-15.99
Mu(+), ton-m:	13.83	11.70	9.33	6.78	5.06	5.06	5.06	8.97	12.80	16.38	19.74
As(-), cm2:	15.72	11.94	8.52	6.16	6.16	6.16	6.16	6.16	6.16	7.27	9.64
As(+), cm2:	8.28	6.96	6.16	6.16	6.16	6.16	6.16	6.16	7.64	9.89	12.05
Vu, ton:	11.30	11.22	10.87	10.51	10.16	9.80	9.45	9.10	8.74	8.41	8.44
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	#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	12-G			11 #3 @ 10		17 #3 @ 22.5		11 #3 @ 10			11-G

BEAM: G(11-10) FLOOR: 6

	Length:	L = 7.20 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.50 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	1.00	1.65	2.30	2.95	3.60	4.25	4.90	5.55	6.20	6.85
Mu(-), ton-m:	-16.76	-12.50	-8.57	-5.03	-3.39	-3.39	-3.39	-5.49	-8.92	-12.77	-16.96
Mu(+), ton-m:	12.29	10.38	8.32	6.15	3.83	3.39	4.37	6.81	8.98	11.05	13.00
As(-), cm2:	10.13	7.46	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.62	10.26
As(+), cm2:	7.33	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.56	7.77
Vu, ton:	6.93	6.81	6.39	5.97	5.55	5.14	5.46	5.88	6.29	6.71	6.84
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	11-G			11 #3 @ 10		19 #3 @ 22.5		11 #3 @ 10			10-G

BEAM: G(10-10a) FLOOR: 6

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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	10-G				6 #3 @ 22.5						G:10a

BEAM: G(9-9a) FLOOR: 6

	Length:	L = 6.30 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.19 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.63	2.15	2.67	3.19	3.71	4.22	4.74	5.26	5.78	6.30
Mu(-), ton-m:	-27.45	-21.82	-16.34	-11.01	-5.84	-5.49	-5.49	-6.18	-10.36	-14.65	-19.05
Mu(+), ton-m:	19.84	16.48	12.99	9.40	5.71	5.49	5.49	8.69	13.24	17.64	21.90
As(-), cm2:	17.21	13.41	9.87	6.54	6.16	6.16	6.16	6.16	6.16	8.80	11.60
As(+), cm2:	12.11	9.95	7.76	6.16	6.16	6.16	6.16	6.16	7.92	10.70	13.47
Vu, ton:	12.56	12.54	12.29	12.04	11.80	11.55	11.31	11.06	10.81	10.60	10.60
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	9-G				11 #3 @ 10	13 #3 @ 22.5	11 #3 @ 10				G:9a

BEAM: G(9a-8) FLOOR: 6

	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:	-8.31	-6.74	-5.17	-3.61	-2.07	-1.66	-1.66	-3.13	-4.82	-6.52	-8.23
Mu(+), ton-m:	8.60	6.94	5.27	3.60	1.95	1.66	1.66	2.61	4.15	5.69	7.23
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:	21.69	21.69	21.69	21.69	21.69	21.69	21.69	21.69	21.69	21.69	21.69
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	G:9a				9 #3 @ 10						8-G

BEAM: G(8-8a) FLOOR: 6

	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:	-6.90	-5.48	-4.06	-2.64	-1.98	-1.98	-2.35	-4.23	-6.11	-8.00	-9.89
Mu(+), ton-m:	8.81	6.96	5.11	3.25	1.98	1.98	1.98	3.00	4.41	5.80	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
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:	26.27	26.27	26.27	26.27	26.27	26.27	26.27	26.27	26.27	26.27	26.27
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

8-G 9 #3 @ 10 G:8a

BEAM: G(8a-7') FLOOR: 6

	Length:	L = 6.26 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.62 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.56	1.12	1.69	2.25	2.81	3.37	3.94	4.50	5.06	5.62
Mu(-), ton-m:	-18.52	-14.02	-9.70	-5.65	-4.07	-4.07	-4.26	-8.06	-11.98	-16.06	-20.36
Mu(+), ton-m:	15.70	12.71	9.58	6.42	4.07	4.07	5.81	9.24	12.49	15.58	18.57
As(-), cm2:	11.26	8.40	6.16	6.16	6.16	6.16	6.16	6.16	7.14	9.68	12.45
As(+), cm2:	9.46	7.58	6.16	6.16	6.16	6.16	6.16	6.16	7.45	9.38	11.29
Vu, ton:	8.83	8.78	8.49	8.20	7.91	7.62	7.37	7.62	7.91	8.20	8.25
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	#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:8a 11 #3 @ 10 15 #3 @ 22.5 11 #3 @ 10 7'-G

BEAM: H(12-12a) FLOOR: 6

	Length:	L = 6.30 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.95 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.95	1.54	2.14	2.73	3.33	3.92	4.52	5.11	5.71	6.30
Mu(-), ton-m:	-21.37	-16.50	-11.88	-7.57	-4.27	-4.27	-4.27	-4.27	-7.47	-10.97	-14.67
Mu(+), ton-m:	13.69	11.71	9.55	7.22	4.81	4.27	4.27	7.05	10.01	12.69	15.09
As(-), cm2:	13.12	9.96	7.07	6.16	6.16	6.16	6.16	6.16	6.16	6.52	8.81
As(+), cm2:	8.20	6.97	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.57	9.07
Vu, ton:	9.38	9.28	8.84	8.40	7.96	7.52	7.07	6.99	7.43	7.87	7.97
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

12-H 11 #3 @ 10 17 #3 @ 22.5 11 #3 @ 10 H:12a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:11 p. m. 5/01/2020

BEAM: H(12a-11) FLOOR: 6

	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	-7.74	-5.98	-4.21	-2.46	-1.90	-1.93	-3.59	-5.26	-6.93	-8.61
Mu(+), ton-m:	8.24	6.58	4.92	3.25	1.90	1.90	1.90	2.94	4.67	6.39	8.11
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:	22.27	22.27	22.27	22.27	22.27	22.27	22.27	22.27	22.27	22.27	22.27
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	H:12a				9 #3 @ 10						11-H

BEAM: H(11-11a) FLOOR: 6

	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:	-7.69	-6.17	-4.64	-3.12	-2.18	-2.18	-2.75	-4.78	-6.82	-8.87	-10.91
Mu(+), ton-m:	9.35	7.34	5.33	3.32	2.18	2.18	2.18	2.92	4.42	5.92	7.42
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.48
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:	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58
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	11-H				9 #3 @ 10						H:11a

BEAM: H(11a-10) FLOOR: 6

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.95 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.60	1.19	1.79	2.38	2.98	3.57	4.17	4.76	5.36	5.95
Mu(-), ton-m:	-17.05	-12.60	-8.44	-4.75	-3.68	-3.68	-3.68	-6.63	-10.22	-14.12	-18.38
Mu(+), ton-m:	13.15	10.90	8.48	6.05	3.68	3.68	5.53	8.32	10.84	13.20	15.47
As(-), cm2:	10.32	7.52	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.47	11.17
As(+), cm2:	7.86	6.47	6.16	6.16	6.16	6.16	6.16	6.16	6.43	7.89	9.31
Vu, ton:	8.19	8.09	7.65	7.21	6.77	6.33	6.26	6.70	7.15	7.59	7.69
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	H:11a			11 #3 @ 10	17 #3 @ 22.5		11 #3 @ 10				10-H

BEAM: H(10-10a) FLOOR: 6

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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	10-H				6 #3 @ 22.5						H:10a

BEAM: I(12-12a) FLOOR: 6

	Length:	L = 6.30 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.95 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.95	1.54	2.14	2.73	3.33	3.92	4.52	5.11	5.71	6.30
Mu(-), ton-m:	-21.74	-16.79	-12.11	-7.74	-4.35	-4.35	-4.35	-4.41	-7.89	-11.56	-15.42
Mu(+), ton-m:	14.54	12.40	10.08	7.61	5.06	4.35	4.35	7.17	10.20	12.95	15.42
As(-), cm2:	13.36	10.15	7.21	6.16	6.16	6.16	6.16	6.16	6.16	6.87	9.28
As(+), cm2:	8.73	7.39	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.73	9.28
Vu, ton:	9.42	9.32	8.88	8.44	8.00	7.55	7.11	7.21	7.65	8.09	8.19
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	12-I				11 #3 @ 10	17 #3 @ 22.5		11 #3 @ 10			I:12a

BEAM: I(12a-11) FLOOR: 6

	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:	-10.07	-8.19	-6.32	-4.44	-2.58	-2.01	-2.01	-3.65	-5.35	-7.06	-8.77
Mu(+), ton-m:	8.47	6.77	5.06	3.35	2.01	2.01	2.01	3.12	4.94	6.76	8.57
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:	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97
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	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
DESIGN	I:12a				9 #3 @ 10						11-I

BEAM: I(11-11a) FLOOR: 6

	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:	-8.15	-6.53	-4.91	-3.30	-2.21	-2.21	-2.78	-4.85	-6.92	-8.99	-11.07
Mu(+), ton-m:	9.51	7.47	5.43	3.38	2.21	2.21	2.21	3.11	4.71	6.30	7.89
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.57
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:	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55	28.55
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	11-I				9 #3 @ 10						I:11a

BEAM: I(11a-10) FLOOR: 6

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.95 m	c = 0.35 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.60	1.19	1.79	2.38	2.98	3.57	4.17	4.76	5.36	5.95
Mu(-), ton-m:	-17.02	-12.62	-8.58	-4.87	-3.87	-3.87	-3.87	-7.06	-10.82	-14.92	-19.36
Mu(+), ton-m:	14.07	11.60	9.05	6.38	3.87	3.87	5.51	8.36	10.97	13.48	15.91
As(-), cm2:	10.30	7.53	6.16	6.16	6.16	6.16	6.16	6.16	6.42	8.97	11.80
As(+), cm2:	8.44	6.90	6.16	6.16	6.16	6.16	6.16	6.16	6.51	8.06	9.59
Vu, ton:	8.07	7.98	7.57	7.16	6.74	6.33	6.57	6.98	7.39	7.81	7.90
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:11a				11 #3 @ 10	17 #3 @ 22.5		11 #3 @ 10			10-I

BEAM: I(10-10a) FLOOR: 6

	Length:	L = 1.38 m	a = 0.35 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 1.03 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.35	0.45	0.56	0.66	0.76	0.86	0.97	1.07	1.17	1.27	1.38
Mu(-), ton-m:	-0.36	-0.29	-0.23	-0.17	-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	10-I				6 #3 @ 22.5						I:10a

BEAM: I''(12-12a) FLOOR: 6

	Length:	L = 6.30 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.19 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.63	2.15	2.67	3.19	3.71	4.22	4.74	5.26	5.78	6.30
Mu(-), ton-m:	-28.30	-22.54	-16.95	-11.49	-6.19	-5.66	-5.66	-6.95	-11.68	-16.52	-21.47
Mu(+), ton-m:	22.96	19.04	15.00	10.85	6.61	5.66	5.66	8.71	13.38	17.91	22.30
As(-), cm2:	17.80	13.89	10.25	6.83	6.16	6.16	6.16	6.16	6.95	9.98	13.18
As(+), cm2:	14.17	11.60	9.02	6.44	6.16	6.16	6.16	6.16	8.01	10.87	13.73
Vu, ton:	12.31	12.29	12.04	11.79	11.55	11.30	11.05	10.86	11.11	11.35	11.38
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

12-I'' 11 #3 @ 10 13 #3 @ 22.5 11 #3 @ 10 I'':12a

BEAM: I''(12a-11) FLOOR: 6

	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:	-10.37	-8.37	-6.38	-4.38	-2.40	-2.07	-2.07	-3.86	-5.88	-7.90	-9.93
Mu(+), ton-m:	10.15	8.17	6.18	4.19	2.20	2.07	2.07	3.60	5.58	7.56	9.53
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
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:	24.94	24.94	24.94	24.94	24.94	24.94	24.94	24.94	24.94	24.94	24.94
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

I'':12a 9 #3 @ 10 11-I''

BEAM: I''(11-11a) FLOOR: 6

	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:	-9.41	-7.50	-5.58	-3.67	-2.19	-2.19	-2.47	-4.59	-6.71	-8.84	-10.97
Mu(+), ton-m:	10.15	8.06	5.96	3.86	2.19	2.19	2.19	3.93	5.82	7.71	9.59
As(-), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.52
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:	27.56	27.56	27.56	27.56	27.56	27.56	27.56	27.56	27.56	27.56	27.56
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

11-I'' 9 #3 @ 10 I'':11a

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:11 p. m. 5/01/2020

BEAM: I''(11a-10) FLOOR: 6

	Length:	L = 6.30 m	a = 0.00 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.66 m	c = 0.64 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.57	1.13	1.70	2.26	2.83	3.40	3.96	4.53	5.09	5.66
Mu(-), ton-m:	-19.33	-14.62	-10.16	-5.91	-4.58	-4.58	-4.98	-9.17	-13.51	-18.11	-22.92
Mu(+), ton-m:	17.27	13.90	10.46	6.91	4.58	4.58	6.20	9.82	13.29	16.70	19.99
As(-), cm2:	11.78	8.78	6.16	6.16	6.16	6.16	6.16	6.16	8.08	11.00	14.14
As(+), cm2:	10.46	8.33	6.20	6.16	6.16	6.16	6.16	6.16	7.95	10.09	12.21
Vu, ton:	9.20	9.14	8.85	8.55	8.26	7.97	8.10	8.39	8.69	8.98	9.04
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

I'':11a 11 #3 @ 10 15 #3 @ 22.5 11 #3 @ 10 10-I''

BEAM: I''(10-10a) FLOOR: 6

	Length:	L = 1.38 m	a = 1.11 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 0.26 m	c = 0.00 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	1.11	1.14	1.16	1.19	1.22	1.24	1.27	1.30	1.32	1.35	1.38
Mu(-), ton-m:	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01	0.00	0.00	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:	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
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

10-I'' 2 #3 @ 22.5 I'':10a

BEAM: E(10-9) FLOOR: PM

	Length:	L = 6.00 m	a = 0.33 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.35 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.86	1.40	1.93	2.47	3.00	3.54	4.07	4.61	5.14	5.68
Mu(-), ton-m:	-20.36	-15.57	-8.51	-4.07	-4.07	-4.07	-4.07	-6.54	-10.54	-14.92	-19.62
Mu(+), ton-m:	16.35	13.60	7.96	4.07	4.72	4.07	4.64	7.75	10.71	13.58	16.36
As(-), cm2:	12.45	9.37	6.16	6.16	6.16	6.16	6.16	6.16	6.25	8.97	11.97
As(+), cm2:	9.87	8.14	6.16	6.16	6.16	6.16	6.16	6.16	6.35	8.13	9.88
Vu, ton:	9.60	9.55	9.16	8.46	8.24	7.73	8.02	8.52	9.03	9.53	9.60
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

10-E 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 9-E

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:11 p. m. 5/01/2020

BEAM: E(9-8) FLOOR: PM

	Length:	L = 7.20 m	a = 0.33 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.55 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.64	2.29	2.95	3.60	4.26	4.91	5.57	6.22	6.88
Mu(-), ton-m:	-18.33	-13.64	-9.31	-5.39	-3.67	-3.67	-3.67	-4.95	-8.34	-12.21	-16.57
Mu(+), ton-m:	11.49	9.87	8.04	6.04	4.06	3.67	4.54	6.92	8.98	10.88	12.63
As(-), cm2:	11.13	8.17	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.28	10.01
As(+), cm2:	6.83	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.46	7.54
Vu, ton:	7.77	7.63	7.17	6.70	6.17	5.57	5.53	6.12	6.72	7.32	7.50
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

9-E 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 8-E

BEAM: E(8-7') FLOOR: PM

	Length:	L = 7.16 m	a = 0.33 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.51 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.63	2.28	2.93	3.58	4.23	4.88	5.54	6.19	6.84
Mu(-), ton-m:	-13.98	-10.54	-7.33	-4.39	-2.80	-2.80	-2.80	-3.68	-6.23	-9.01	-12.08
Mu(+), ton-m:	9.02	7.75	6.30	4.70	3.02	2.80	3.08	5.01	6.74	8.27	9.68
As(-), cm2:	8.38	6.25	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:	5.76	5.67	5.34	5.01	4.66	4.28	4.16	4.54	4.91	5.23	5.32
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

8-E 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-E

BEAM: E(10-9) FLOOR: CBM

	Length:	L = 6.00 m	a = 0.33 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.35 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.86	1.40	1.93	2.47	3.00	3.54	4.07	4.61	5.14	5.68
Mu(-), ton-m:	-18.63	-14.23	-7.78	-3.73	-3.73	-3.73	-3.73	-5.83	-9.57	-13.66	-18.06
Mu(+), ton-m:	14.80	12.38	7.27	3.73	4.44	3.73	4.05	6.75	9.38	11.90	14.31
As(-), cm2:	11.33	8.53	6.16	6.16	6.16	6.16	6.16	6.16	6.16	8.18	10.96
As(+), cm2:	8.89	7.38	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.09	8.58
Vu, ton:	8.74	8.68	8.29	7.62	7.37	6.88	7.32	7.82	8.32	8.82	8.89
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

10-E 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 9-E

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:11 p. m. 5/01/2020

BEAM: E(9-8) FLOOR: CBM

	Length:	L = 7.20 m	a = 0.33 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.55 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.64	2.29	2.95	3.60	4.26	4.91	5.57	6.22	6.88
Mu(-), ton-m:	-16.32	-12.03	-8.10	-4.60	-3.26	-3.26	-3.26	-4.49	-7.68	-11.36	-15.51
Mu(+), ton-m:	10.19	8.83	7.26	5.56	3.80	3.26	4.23	6.24	7.95	9.53	10.94
As(-), cm2:	9.85	7.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.75	9.34
As(+), cm2:	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.49
Vu, ton:	7.01	6.88	6.41	5.95	5.42	4.82	5.03	5.62	6.22	6.82	7.00
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

9-E 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 8-E

BEAM: E(8-7') FLOOR: CBM

	Length:	L = 7.16 m	a = 0.33 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.51 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.63	2.28	2.93	3.58	4.23	4.88	5.54	6.19	6.84
Mu(-), ton-m:	-13.41	-9.98	-6.78	-3.87	-2.68	-2.68	-2.68	-4.15	-6.74	-9.58	-12.73
Mu(+), ton-m:	8.82	7.51	6.03	4.41	2.75	2.68	3.57	5.53	7.25	8.80	10.23
As(-), cm2:	8.02	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.60
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:	5.71	5.61	5.29	4.96	4.61	4.23	4.21	4.59	4.96	5.28	5.36
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	22.50	22.50	22.50	22.50	22.50	22.50	22.50	10.00	10.00

DESIGN

8-E 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-E

BEAM: F(10-9) FLOOR: CBM

	Length:	L = 6.00 m	a = 0.33 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 5.35 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.86	1.40	1.93	2.47	3.00	3.54	4.07	4.61	5.14	5.68
Mu(-), ton-m:	-16.92	-13.16	-9.57	-6.15	-3.38	-3.38	-3.38	-5.17	-8.40	-11.81	-15.41
Mu(+), ton-m:	13.96	11.60	9.12	6.53	3.88	3.38	3.38	5.93	8.54	11.03	13.43
As(-), cm2:	10.24	7.87	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.03	9.27
As(+), cm2:	8.37	6.90	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.55	8.03
Vu, ton:	7.63	7.59	7.35	7.05	6.74	6.43	6.48	6.79	7.10	7.41	7.45
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

10-F 11 #3 @ 10 14 #3 @ 22.5 11 #3 @ 10 9-F

BEAM: F(9-8) FLOOR: CBM

	Length:	L = 7.20 m	a = 0.33 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.55 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.64	2.29	2.95	3.60	4.26	4.91	5.57	6.22	6.88
Mu(-), ton-m:	-13.98	-10.52	-7.31	-4.37	-2.80	-2.80	-2.80	-2.85	-5.03	-7.39	-9.92
Mu(+), ton-m:	7.18	6.30	5.24	4.00	2.80	2.80	3.12	5.01	6.72	8.20	9.45
As(-), cm2:	8.37	6.24	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:	6.13	6.04	5.73	5.37	5.01	4.66	4.30	4.02	4.36	4.71	4.82
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	9-F			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					8-F

BEAM: F(8-7') FLOOR: CBM

	Length:	L = 7.16 m	a = 0.33 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.51 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.63	2.28	2.93	3.58	4.23	4.88	5.54	6.19	6.84
Mu(-), ton-m:	-11.04	-8.26	-5.64	-3.21	-2.86	-2.86	-2.86	-4.51	-7.53	-10.81	-14.31
Mu(+), ton-m:	9.86	8.53	6.98	5.19	3.20	2.86	3.12	4.68	6.16	7.48	8.63
As(-), cm2:	6.55	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.41	8.58
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	5.05	4.71	4.37	4.22	4.56	4.91	5.25	5.59	5.93	6.03
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	8-F			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					7'-F

BEAM: G(9-8) FLOOR: CBM

	Length:	L = 7.20 m	a = 0.33 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.55 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.64	2.29	2.95	3.60	4.26	4.91	5.57	6.22	6.88
Mu(-), ton-m:	-15.83	-11.97	-8.36	-5.03	-3.17	-3.17	-3.17	-4.63	-7.66	-10.89	-14.44
Mu(+), ton-m:	11.35	9.60	7.70	5.67	3.61	3.17	3.85	6.16	8.30	10.23	12.05
As(-), cm2:	9.54	7.13	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.46	8.66
As(+), cm2:	6.75	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.18
Vu, ton:	6.39	6.28	5.93	5.57	5.21	4.85	4.97	5.32	5.68	6.04	6.12
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	9-G			11 #3 @ 10	19 #3 @ 22.5	11 #3 @ 10					8-G

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:11 p. m. 5/01/2020

BEAM: G(8-7') FLOOR: CBM

	Length:	L = 7.16 m	a = 0.33 m	Section:	b = 40.0 cm	Sec:	VG40X50			
		Lu = 6.51 m	c = 0.33 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.33	0.98	1.63	2.28	2.93	3.58	4.23	4.88	5.54	6.19	6.84
Mu(-), ton-m:	-14.97	-11.29	-7.91	-4.81	-3.12	-3.12	-3.12	-5.01	-8.27	-11.82	-15.61
Mu(+), ton-m:	11.90	10.06	8.07	5.97	3.71	3.12	3.60	5.73	7.83	9.79	11.61
As(-), cm2:	8.99	6.71	6.16	6.16	6.16	6.16	6.16	6.16	6.16	7.04	9.40
As(+), cm2:	7.09	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.91
Vu, ton:	6.19	6.11	5.75	5.39	5.04	4.71	5.06	5.42	5.77	6.13	6.23
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

8-G 11 #3 @ 10 19 #3 @ 22.5 11 #3 @ 10 7'-G

BEAM: E'(10-9) FLOOR: 2

	Length:	L = 6.00 m	a = 0.23 m	Section:	b = 42.0 cm	Sec:	VG42X50			
		Lu = 5.55 m	c = 0.23 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:	-0.15	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.61
Mu(+), ton-m:	0.47	1.59	2.56	3.24	3.63	3.73	3.49	2.95	2.13	1.01	0.23
As(-), cm2:	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47
As(+), cm2:	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47	6.47
Vu, ton:	2.09	2.00	1.47	0.99	0.54	0.29	0.79	1.24	1.73	2.26	2.35
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

10-E' 11 #3+1r @ 10 15 #3 @ 22.5 11 #3+1r @ 10 9-E'

BEAM: F'(9-8) FLOOR: 2

	Length:	L = 7.20 m	a = 0.23 m	Section:	b = 37.5 cm	Sec:	VG37.5X50			
		Lu = 6.75 m	c = 0.23 m		h = 50.0 cm	Mat:	RConcrete2			
X, m:	0.23	0.90	1.58	2.25	2.93	3.60	4.28	4.95	5.63	6.30	6.98
Mu(-), ton-m:	-0.76	-0.76	-0.76	-0.76	-0.76	-0.76	-0.76	-0.76	-0.85	-2.18	-3.79
Mu(+), ton-m:	0.76	0.76	1.18	1.58	1.69	1.52	1.02	0.76	0.76	0.76	1.26
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:	1.36	1.26	0.91	0.57	0.40	0.75	1.09	1.43	1.77	2.20	2.33
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	#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

9-F' 11 #3 @ 10 20 #3 @ 22.5 11 #3 @ 10 8-F'

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:20:11 p. m. 5/01/2020

BEAM: F'(8-7') FLOOR: 2

Length:	L = 7.16 m	a = 0.23 m	Section:	b = 37.5 cm	Sec:	VG37.5X50				
	Lu = 6.75 m	c = 0.19 m		h = 50.0 cm	Mat:	RConcrete2				
X, m:	0.23	0.90	1.58	2.25	2.93	3.60	4.28	4.95	5.63	6.30	6.98
Mu(-), ton-m:	-3.71	-1.87	-0.74	-0.74	-0.74	-0.74	-0.74	-0.74	-0.74	-0.74	-0.74
Mu(+), ton-m:	1.24	0.74	0.74	1.08	2.11	2.84	3.28	3.44	3.32	2.04	0.74
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:	2.71	2.57	2.15	1.79	1.44	1.09	0.74	0.39	0.62	2.63	2.73
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.13	0.13
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

8-F' 11 #3 @ 10 20 #3 @ 22.5 11 #3 @ 10 7'-F'

Nit. **901.134.339-5**
D: Calle 45 No.45 - 16 of 3801 **T:** 318 735 1464
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10. REACCIONES

A continuación, mostramos las reacciones para el Bloque C.

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:22:04 p. m. 5/01/2020
File: C:\Users\Laura\Documents\LAURA\IPC\IP\CALLE 80\PL DWG\ING\MODELO RCB BLOQUE C.rcb

P-Delta Analysis- Support Reactions

Support		Load	Force (ton)			Moment (ton-m)		
Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
12-A	CIM	D0	-4.74	-13.45	39.46	0.25	-0.96	-0.06
		DL	-3.03	-10.95	33.98	0.16	-1.26	0.05
		LL	-0.95	-3.49	10.61	0.05	-0.39	0.01
		EQX	58.00	-15.87	77.52	0.28	-1.87	2.59
		EQY	-38.14	-13.18	138.07	-1.47	-2.85	-1.09
A:12a	CIM	D0	-0.48	10.08	42.72	0.03	-0.36	-0.35
		DL	-0.69	12.06	33.52	0.02	-0.73	-0.53
		LL	-0.21	3.86	10.52	0.01	-0.22	-0.18
		EQX	-2.26	6.46	39.76	-0.06	-3.39	2.11
		EQY	-1.82	85.99	36.14	-0.18	-0.82	-1.64
A:12b	CIM	D0	0.24	-7.24	40.41	-0.19	0.33	-0.13
		DL	2.51	-7.28	46.49	-0.09	3.36	-1.14
		LL	0.79	-2.29	14.48	-0.03	1.05	-0.35
		EQX	-6.56	6.63	14.29	-0.11	-7.23	0.95
		EQY	0.32	102.76	14.21	-0.22	0.55	-0.14
A:11a	CIM	D0	0.28	9.39	43.78	0.28	0.35	0.08
		DL	2.70	18.15	49.70	0.17	3.45	0.87
		LL	0.85	5.72	15.42	0.05	1.08	0.26
		EQX	-6.81	22.92	9.52	0.02	-7.28	-0.54
		EQY	0.34	121.01	-26.34	-0.27	0.46	0.11
A:11b	CIM	D0	0.26	-4.38	47.30	-0.28	0.33	-0.07
		DL	2.23	-4.25	48.42	-0.21	2.86	-0.64
		LL	0.69	-1.32	14.91	-0.06	0.89	-0.19
		EQX	-6.97	11.01	13.43	-0.06	-7.39	0.66
		EQY	0.10	123.98	4.85	-0.11	0.13	0.11
A:10a	CIM	D0	0.25	9.99	29.93	-0.06	0.32	0.09
		DL	2.17	13.91	28.41	-0.08	2.67	0.64
		LL	0.67	4.39	8.69	-0.03	0.83	0.20
		EQX	-6.52	20.07	0.85	-0.24	-7.13	-1.48
		EQY	-0.05	94.67	-36.01	-0.59	-0.06	0.06
9-A	CIM	D0	0.48	-4.87	38.01	0.12	0.46	-0.21
		DL	7.04	6.06	32.21	-0.27	7.02	-2.12
		LL	2.04	2.01	9.43	-0.08	2.03	-0.69
		EQX	-13.62	30.24	-1.32	-0.90	-10.36	0.11
		EQY	-0.83	234.67	-28.97	-7.92	-0.79	0.05
8-A	CIM	D0	1.10	2.77	30.93	-0.28	1.10	0.14
		DL	10.67	11.72	19.17	-0.69	10.75	1.12
		LL	3.57	3.75	6.41	-0.21	3.60	0.32
		EQX	1.85	34.00	1.99	-0.88	5.65	-2.43
		EQY	-0.29	256.76	-5.06	-8.27	-0.79	-0.05
7'-A	CIM	D0	-1.82	2.97	26.86	-0.57	-0.55	0.02
		DL	1.63	6.48	4.77	-1.02	0.55	1.75
		LL	0.48	2.07	2.27	-0.33	0.18	0.58
		EQX	78.94	20.66	57.00	-1.86	3.29	0.83
		EQY	-10.51	125.63	-111.30	-10.70	-0.48	1.69
12:Aa	CIM	D0	-3.01	0.18	46.39	-0.27	0.45	0.10
		DL	9.12	-0.19	58.96	0.13	0.69	0.01
		LL	2.72	-0.06	18.37	0.04	0.21	0.00
		EQX	50.44	-1.04	49.60	1.14	1.26	-0.08
		EQY	-8.17	-4.23	32.62	3.17	1.16	-2.03
11-B	CIM	D0	-0.06	-0.12	56.29	0.06	-0.07	0.00
		DL	-0.96	-0.53	213.43	0.26	-0.84	0.00
		LL	-0.28	-0.17	66.45	0.08	-0.25	0.00
		EQX	-13.89	-2.45	2.84	1.80	-10.13	0.00
		EQY	0.78	-10.64	2.46	4.88	0.90	0.00

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:22:04 p. m. 5/01/2020

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
10-B	CIM	D0	-0.08	-0.28	51.86	0.20	-0.08	0.00
		DL	-0.89	-0.66	170.78	0.37	-0.78	0.00
		LL	-0.26	-0.21	52.57	0.12	-0.23	0.00
		EQX	-14.05	-2.49	-1.26	1.83	-10.19	0.00
		EQY	-0.10	-10.74	-14.68	4.98	0.07	0.00
9-B	CIM	D0	-0.05	0.30	19.02	-0.32	-0.06	0.00
		DL	-1.07	-0.56	56.71	0.40	-0.99	0.00
		LL	-0.31	-0.18	16.34	0.13	-0.29	0.00
		EQX	-13.23	-2.14	1.11	1.75	-10.80	0.00
		EQY	-0.79	-9.29	-6.22	5.89	-0.72	0.00
8-B	CIM	D0	-0.03	0.01	10.60	-0.05	-0.03	0.00
		DL	0.08	0.50	39.09	-0.61	0.10	0.00
		LL	0.08	0.20	13.26	-0.24	0.09	0.00
		EQX	1.53	0.29	-0.12	-0.55	3.27	0.00
		EQY	-0.22	2.87	-0.41	-5.62	-0.46	0.00
7'-B	CIM	D0	0.45	-0.93	32.06	0.88	-0.36	-0.05
		DL	2.19	-0.38	15.89	0.11	-0.12	-0.25
		LL	0.63	-0.17	6.47	0.08	-0.04	-0.08
		EQX	166.53	0.26	10.55	-0.86	1.40	-0.63
		EQY	-33.56	3.16	-8.26	-9.14	-1.30	-3.39
12:Ba	CIM	D0	3.09	0.22	47.29	-0.30	-0.47	-0.02
		DL	-2.99	-0.20	60.81	0.13	-0.90	-0.01
		LL	-0.83	-0.06	19.01	0.04	-0.28	0.00
		EQX	61.16	-1.18	-39.34	1.18	1.14	0.05
		EQY	20.03	-5.26	18.28	3.93	-0.19	0.17
12-C	CIM	D0	6.86	0.43	56.39	-0.48	1.96	-0.05
		DL	16.89	-0.61	100.07	0.28	4.16	0.09
		LL	5.26	-0.19	31.25	0.09	1.29	0.03
		EQX	61.00	-2.30	-74.11	1.76	0.18	0.39
		EQY	14.75	-12.86	16.40	5.87	2.01	1.96
11-C	CIM	D0	0.00	-0.03	54.84	-0.03	-0.01	0.00
		DL	-0.14	-0.30	210.34	0.05	-0.09	0.00
		LL	-0.04	-0.10	65.48	0.02	-0.02	0.00
		EQX	-10.69	-1.35	-0.17	0.93	-7.17	0.00
		EQY	0.64	-7.09	-0.15	1.52	0.76	0.00
10-C	CIM	D0	-0.02	-0.32	51.18	0.24	-0.02	0.00
		DL	-0.31	-0.63	168.99	0.35	-0.24	0.00
		LL	-0.09	-0.20	52.04	0.11	-0.07	0.00
		EQX	-13.90	-1.82	-2.02	1.36	-10.05	0.00
		EQY	-0.10	-9.84	-9.23	4.08	0.07	0.00
9-C	CIM	D0	-0.10	-0.39	84.12	-0.49	-0.14	0.00
		DL	-2.24	-5.21	69.08	-0.44	-0.50	0.00
		LL	-0.67	-1.68	20.05	-0.13	-0.15	0.00
		EQX	-127.63	-16.81	29.74	3.78	-22.43	-0.05
		EQY	-7.27	-93.34	-6.27	-22.99	-2.79	0.08
8-C	CIM	D0	0.03	-0.09	10.33	0.05	0.02	0.00
		DL	1.35	0.07	42.08	-0.20	1.31	0.00
		LL	-0.11	0.02	13.11	-0.07	-0.10	0.00
		EQX	2.03	0.33	0.49	-0.50	3.75	0.00
		EQY	-0.23	3.82	0.26	-6.57	-0.46	0.00
7'-C	CIM	D0	8.61	0.12	97.96	-0.72	0.18	0.16
		DL	8.06	-3.82	27.33	-1.05	-0.05	0.10
		LL	2.38	-1.28	9.10	-0.30	-0.02	0.04
		EQX	132.90	-14.73	2.93	3.11	28.87	0.01
		EQY	-41.07	-83.97	-0.23	-29.66	-9.86	0.11
12-D	CIM	D0	-8.56	0.53	55.72	-0.57	-2.36	0.07
		DL	-16.30	-0.35	100.17	0.03	-3.86	-0.11
		LL	-5.10	-0.11	31.22	0.01	-1.21	-0.04
		EQX	54.55	-1.18	64.17	0.92	-3.87	-0.23
		EQY	10.80	-9.12	27.42	2.00	0.62	-2.62

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:22:04 p. m. 5/01/2020

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
11-D	CIM	D0	0.00	-0.03	55.50	-0.03	-0.01	0.00
		DL	-0.21	-0.36	210.74	0.10	-0.15	0.00
		LL	-0.06	-0.12	65.61	0.03	-0.04	0.00
		EQX	-13.74	-1.13	0.23	0.89	-9.99	0.00
		EQY	0.77	-8.81	-0.17	3.05	0.88	0.00
10-D	CIM	D0	0.03	-0.23	52.13	0.15	0.02	0.00
		DL	0.09	-0.35	174.26	0.09	0.13	0.00
		LL	0.03	-0.12	53.75	0.03	0.04	0.00
		EQX	-13.89	-1.16	-4.56	0.91	-10.04	0.00
		EQY	0.11	-9.09	-9.75	3.31	0.12	0.00
9-D	CIM	D0	0.14	0.14	49.28	-0.19	0.12	0.00
		DL	1.22	-0.60	129.59	0.32	1.18	0.00
		LL	0.36	-0.19	39.56	0.10	0.34	0.00
		EQX	-14.24	-1.15	-13.46	0.90	-10.24	0.00
		EQY	-0.74	-9.09	13.93	3.31	-0.64	0.00
8-D	CIM	D0	0.26	-0.06	55.88	0.00	0.23	0.00
		DL	0.88	-0.48	200.74	0.21	0.85	0.00
		LL	0.27	-0.15	62.05	0.07	0.27	0.00
		EQX	-14.24	-1.11	22.69	0.86	-10.08	0.00
		EQY	-1.54	-8.80	5.47	3.04	-1.46	0.00
7'-D	CIM	D0	4.85	-0.63	65.13	0.54	-0.07	-0.02
		DL	10.43	-0.54	87.96	0.23	-0.03	-0.02
		LL	3.41	-0.17	27.49	0.07	0.00	-0.01
		EQX	114.09	-1.18	-7.78	0.94	7.79	-0.05
		EQY	-28.12	-9.05	-20.11	2.43	-2.08	-0.31
12-E	CIM	D0	-5.27	0.26	110.14	-0.85	-2.86	-0.06
		DL	-6.54	-3.31	118.72	-1.34	-3.43	-0.02
		LL	-2.07	-1.08	37.08	-0.42	-1.08	-0.01
		EQX	98.77	-4.16	16.58	1.91	-6.43	0.18
		EQY	32.61	-76.57	25.71	-29.66	6.69	-0.60
11-E	CIM	D0	0.00	0.12	55.05	-0.17	-0.01	0.00
		DL	-0.23	-0.25	208.89	-0.01	-0.17	0.00
		LL	-0.07	-0.08	65.02	0.00	-0.05	0.00
		EQX	-13.69	-0.45	-0.41	0.41	-9.94	0.00
		EQY	0.77	-7.82	-9.27	2.05	0.88	0.00
10-E	CIM	D0	0.11	-17.46	46.48	0.44	0.36	0.06
		DL	-0.13	-35.69	93.64	0.91	-0.34	-0.03
		LL	-0.04	-11.99	30.90	0.30	-0.10	-0.01
		EQX	-5.54	-3.36	3.08	0.04	-5.61	3.38
		EQY	-0.10	-45.52	12.75	0.41	0.06	0.12
E:10a	CIM	D0	0.35	15.89	49.09	-0.46	0.22	0.29
		DL	-0.33	25.49	101.76	-0.86	-0.22	-0.26
		LL	-0.10	8.89	33.05	-0.29	-0.07	-0.08
		EQX	-4.73	-0.92	5.26	-0.02	-6.03	-2.26
		EQY	0.02	-35.02	37.64	0.04	-0.08	0.05
E:10b	CIM	D0	0.64	18.57	59.42	0.07	0.91	-0.16
		DL	-1.69	19.47	82.05	0.12	-2.36	0.49
		LL	-0.50	6.84	28.55	0.04	-0.69	0.14
		EQX	-10.19	-6.03	2.95	0.04	-11.48	4.74
		EQY	-0.52	-116.99	53.94	0.69	-0.61	0.29
E:9a	CIM	D0	0.17	-24.94	67.83	-0.09	0.07	0.24
		DL	-0.49	-38.66	90.47	-0.13	-0.28	-0.61
		LL	-0.15	-13.08	31.51	-0.04	-0.09	-0.18
		EQX	-7.00	-4.32	1.96	0.02	-6.68	-4.79
		EQY	-0.46	-64.88	-63.79	0.08	-0.54	-0.25
E:9b	CIM	D0	0.69	18.84	59.33	0.06	0.98	-0.17
		DL	-2.77	17.36	79.25	0.14	-3.89	0.79
		LL	-0.82	6.28	27.94	0.05	-1.15	0.23
		EQX	-10.57	-6.20	3.36	0.05	-11.88	4.93
		EQY	-1.07	-121.81	51.71	0.73	-1.31	0.52

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:22:04 p. m. 5/01/2020

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
E:8a	CIM	D0	0.20	-25.35	68.60	-0.10	0.09	0.26
		DL	-0.77	-35.93	86.80	-0.13	-0.42	-0.98
		LL	-0.23	-12.37	30.71	-0.05	-0.13	-0.29
		EQX	-7.29	-4.30	3.32	-0.02	-6.95	-4.98
		EQY	-0.84	-59.95	-63.58	-0.04	-0.98	-0.49
7'-E	CIM	D0	0.51	-0.54	63.62	0.45	1.54	0.02
		DL	3.54	-0.81	97.09	0.51	2.86	0.02
		LL	1.43	-0.25	33.55	0.16	0.98	0.01
		EQX	64.50	-0.51	-49.29	0.47	5.72	0.01
		EQY	-16.83	-7.63	-49.15	1.55	-3.36	0.19
12-F	CIM	D0	-1.73	0.38	108.72	-0.90	-0.85	0.01
		DL	-0.44	-2.38	110.86	-1.80	-1.35	0.04
		LL	-0.15	-0.80	34.61	-0.56	-0.42	0.01
		EQX	100.45	1.93	0.26	0.84	-7.48	0.29
		EQY	34.20	-71.73	23.86	-32.68	7.24	0.10
11-F	CIM	D0	0.00	0.10	54.80	-0.15	-0.01	0.00
		DL	-0.58	-0.13	209.99	-0.12	-0.49	0.00
		LL	-0.17	-0.05	65.35	-0.03	-0.14	0.00
		EQX	-13.68	0.19	0.16	-0.04	-9.94	0.00
		EQY	0.78	-7.18	-6.85	1.16	0.89	0.00
F:11a	CIM	D0	-0.18	9.03	40.28	-0.01	-0.29	0.03
		DL	0.05	10.96	78.12	0.06	0.19	0.05
		LL	0.02	3.44	24.73	0.02	0.06	0.01
		EQX	-7.67	1.60	-1.59	-0.01	-9.88	2.94
		EQY	-0.14	-51.33	-10.11	0.20	-0.12	0.09
F:10a	CIM	D0	-0.12	-10.90	47.29	-0.05	-0.12	-0.08
		DL	0.02	-19.38	94.53	-0.13	-0.07	0.06
		LL	0.01	-6.04	29.78	-0.04	-0.02	0.02
		EQX	-5.79	0.57	-2.74	0.01	-6.72	-3.02
		EQY	-0.07	-20.80	35.66	-0.22	-0.09	-0.03
F:10b	CIM	D0	-0.46	8.20	42.97	0.03	-0.74	0.10
		DL	0.01	8.67	74.28	0.11	0.16	0.08
		LL	0.00	2.76	24.45	0.04	0.04	0.02
		EQX	-7.89	2.27	3.97	0.01	-10.00	3.06
		EQY	-0.48	-71.96	-27.00	0.42	-0.60	0.20
F:9a	CIM	D0	-0.31	-10.03	47.35	-0.04	-0.30	-0.21
		DL	-0.01	-16.69	85.61	-0.11	-0.13	0.06
		LL	-0.01	-5.28	27.97	-0.04	-0.04	0.02
		EQX	-5.91	-0.28	2.95	-0.01	-6.89	-3.08
		EQY	-0.32	-1.52	11.62	-0.37	-0.44	-0.12
8-F	CIM	D0	-1.29	0.05	69.04	-0.11	-1.21	0.00
		DL	1.50	-0.40	223.25	0.13	1.43	0.00
		LL	0.43	-0.13	73.58	0.05	0.41	0.00
		EQX	-18.86	0.27	0.91	-0.11	-14.36	0.00
		EQY	-2.16	-9.52	-2.42	3.32	-2.03	0.00
7'-F	CIM	D0	-9.00	-0.58	61.26	0.48	-1.90	0.04
		DL	-17.28	-0.35	103.82	0.02	-3.22	0.08
		LL	-5.76	-0.11	34.29	0.01	-1.05	0.03
		EQX	60.12	0.17	75.18	-0.01	-7.98	-0.10
		EQY	-16.68	-7.31	-40.03	-0.18	-0.82	-1.13
12-G	CIM	D0	-0.16	0.52	108.52	-0.99	0.40	0.06
		DL	1.67	-1.73	113.74	-2.15	-0.60	0.09
		LL	0.52	-0.60	35.53	-0.67	-0.18	0.03
		EQX	104.04	8.00	-13.04	-0.20	-4.54	0.10
		EQY	34.22	-71.69	24.97	-36.01	7.17	1.05
11-G	CIM	D0	0.07	0.09	54.92	-0.14	0.05	0.00
		DL	0.72	-0.09	210.98	-0.16	0.71	0.00
		LL	0.21	-0.03	65.65	-0.05	0.21	0.00
		EQX	-13.78	0.89	-2.39	-0.52	-10.03	0.00
		EQY	0.78	-7.42	-5.73	1.14	0.89	0.00

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:22:04 p. m. 5/01/2020

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
10-G	CIM	D0	-9.15	0.22	70.25	1.12	-2.60	-0.13
		DL	-22.03	-5.02	149.11	2.43	-6.86	-0.17
		LL	-6.85	-1.52	46.30	0.75	-2.13	-0.05
		EQX	64.32	-7.82	55.55	1.18	1.14	0.35
		EQY	-9.07	94.43	89.85	-14.15	-0.67	0.37
9-G	CIM	D0	-0.92	-7.20	109.31	0.48	-0.54	0.00
		DL	-9.76	-2.99	96.04	-1.32	-4.17	0.23
		LL	-2.85	-0.82	30.65	-0.41	-1.22	0.07
		EQX	-130.63	-14.58	-34.16	2.28	-26.46	1.82
		EQY	-7.51	253.08	69.63	-69.71	-3.13	0.22
G:9a	CIM	D0	-0.24	-9.37	49.99	-0.36	-0.31	0.07
		DL	-2.78	-8.93	56.68	-0.23	-3.50	0.76
		LL	-0.83	-3.04	18.59	-0.07	-1.05	0.22
		EQX	-8.25	1.87	-16.25	0.13	-8.43	-1.09
		EQY	-0.71	140.12	15.48	-1.03	-0.86	-0.01
G:8a	CIM	D0	-0.23	12.69	47.99	0.35	-0.30	-0.09
		DL	-2.71	21.68	52.63	0.12	-3.47	-0.87
		LL	-0.81	7.13	17.34	0.04	-1.04	-0.26
		EQX	-7.69	-19.00	-19.03	-0.17	-8.12	0.34
		EQY	-0.85	163.62	-26.65	-1.48	-1.06	0.34
7'-G	CIM	D0	3.76	9.24	103.76	-3.21	0.86	-0.03
		DL	-3.38	10.80	67.27	-5.40	-0.22	-0.37
		LL	-1.00	3.49	22.16	-1.74	-0.02	-0.11
		EQX	-9.57	-19.79	-88.37	4.45	2.34	-2.79
		EQY	-45.59	110.52	-161.99	-59.00	-11.55	0.82
12-H	CIM	D0	-0.27	0.59	68.59	-0.67	0.27	0.06
		DL	3.27	0.27	103.21	-0.65	0.12	0.08
		LL	1.01	0.07	32.17	-0.20	0.04	0.03
		EQX	131.55	1.60	-12.13	-0.82	-1.11	0.03
		EQY	28.16	-7.17	21.35	-3.80	1.36	1.02
H:12a	CIM	D0	0.03	3.14	40.99	0.08	0.04	-0.02
		DL	0.00	3.64	104.30	0.24	0.02	0.00
		LL	0.00	0.99	32.46	0.08	0.01	0.00
		EQX	-6.35	7.11	6.51	0.01	-7.73	2.92
		EQY	0.30	-36.47	-22.34	-0.07	0.49	-0.07
H:11a	CIM	D0	0.03	-3.02	40.31	-0.08	0.04	0.02
		DL	0.01	-4.87	103.41	-0.24	0.01	0.01
		LL	0.00	-1.42	32.24	-0.08	0.00	0.00
		EQX	-6.32	7.23	-8.73	0.02	-7.73	-2.90
		EQY	0.34	-36.48	22.26	-0.07	0.42	0.17
10-H	CIM	D0	-2.17	-0.60	72.23	0.48	-0.50	0.09
		DL	-2.95	-0.53	141.71	0.12	-1.30	0.32
		LL	-0.94	-0.17	44.27	0.03	-0.40	0.10
		EQX	140.13	1.55	4.33	-0.73	1.76	0.45
		EQY	0.60	-6.51	-14.58	-4.13	0.92	-1.82
12-I	CIM	D0	0.59	0.59	68.37	-0.67	0.35	-0.14
		DL	2.27	0.35	102.11	-0.73	0.87	-0.10
		LL	0.70	0.10	31.82	-0.22	0.28	-0.03
		EQX	129.35	2.33	3.36	-1.28	-1.87	0.30
		EQY	31.39	-6.90	27.67	-5.02	1.16	0.27
I:12a	CIM	D0	0.00	3.21	41.26	0.08	0.00	0.00
		DL	0.07	3.74	105.66	0.25	0.10	-0.03
		LL	0.03	1.01	32.88	0.08	0.04	-0.01
		EQX	-6.42	10.16	11.17	0.02	-7.83	2.96
		EQY	0.30	-36.71	-21.52	-0.07	0.49	-0.07
I:11a	CIM	D0	0.00	-2.95	40.42	-0.08	0.00	0.00
		DL	0.07	-4.32	104.25	-0.25	0.10	0.04
		LL	0.03	-1.25	32.50	-0.08	0.04	0.01
		EQX	-6.40	10.31	-11.00	0.02	-7.83	-2.93
		EQY	0.34	-36.70	21.48	-0.07	0.43	0.17

Company: IPC INGENIERIA ESTRUCTURAL SAS Engineer: YEFRY MORENO PARRA
Project: Untitled 10:22:04 p. m. 5/01/2020

Axis	Floor	LdCase	Fx	Fy	Fz	Mx	My	Mz
10-I	CIM	D0	-0.40	-0.54	70.31	0.43	0.02	0.16
		DL	-0.15	-0.31	128.25	-0.08	0.45	0.18
		LL	-0.07	-0.10	40.05	-0.03	0.15	0.06
		EQX	139.46	2.25	17.06	-1.20	-0.71	0.06
		EQY	3.20	-6.92	-26.13	-5.01	0.74	0.33
12-I''	CIM	D0	9.36	-4.57	98.89	1.07	2.93	-0.06
		DL	9.23	3.05	67.04	-1.40	4.25	0.23
		LL	2.96	0.97	21.03	-0.45	1.36	0.08
		EQX	2.56	8.00	-99.01	0.18	5.72	1.61
		EQY	39.81	130.25	178.46	-69.73	11.28	0.71
I'':12a	CIM	D0	-0.26	-6.08	44.47	-0.34	-0.36	0.21
		DL	-3.06	-3.87	49.62	-0.17	-3.94	1.22
		LL	-0.95	-1.20	15.45	-0.05	-1.23	0.37
		EQX	-6.79	-4.79	-19.55	0.51	-7.13	0.09
		EQY	0.48	178.97	16.89	-1.42	0.66	0.32
I'':11a	CIM	D0	-0.27	9.66	44.27	0.35	-0.37	-0.19
		DL	-3.06	18.48	48.77	0.14	-3.96	-1.20
		LL	-0.96	5.87	15.17	0.04	-1.23	-0.36
		EQX	-6.73	-34.28	-18.49	-0.16	-7.09	-0.15
		EQY	0.19	181.34	-19.84	-1.52	0.40	0.23
10-I''	CIM	D0	7.93	8.59	98.88	-3.03	2.34	0.01
		DL	8.26	12.00	75.08	-5.85	4.06	-0.32
		LL	2.65	3.78	23.44	-1.84	1.30	-0.10
		EQX	12.59	-18.70	-79.09	5.34	9.78	-2.70
		EQY	-16.33	129.33	-182.62	-69.26	-2.83	0.96