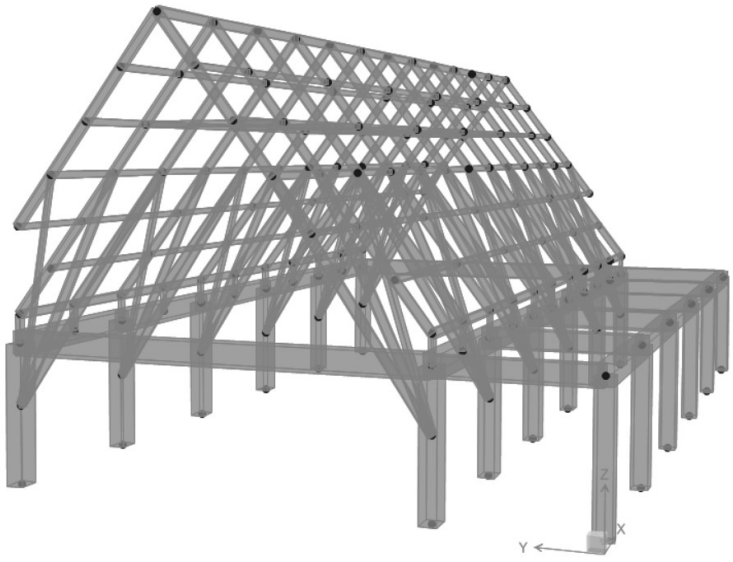
Proyecto estructural
Casa Cultural Atanquez

Departamento: Cesar
Municipio: Valledupar



Grupo de infraestructura cultural
Ministerio de cultura

Por: Ing. Juan David Hurtado

Memoria de diseño estructural
V1. Mayo 2025

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1. Descripción del proyecto

El proyecto arquitectónico contempla la implantación de una casa cultural en Atanquez en el municipio de Cesar del departamento de Valledupar. Que se proyecta como la construcción de una estructura de un nivel de altura y un área cubierta de 194 m^2 por unidad, su altura a cumbre es de 7.90m.

El diseño estructural contempla la definición del sistema sismo-resistente en armonía con la arquitectura y el entorno en el que se desarrolla, donde se contempla la construcción de un módulo estructural, a partir de un sistema estructural de pórticos de concreto con disipación DES en el sentido X y las columnas funcionan como un voladizo en el sentido Y, por eso el sistema estructural es péndulo invertido con disipación DES

Nivel de Amenaza Sísmica: BAJA

2. Descripción del sistema estructural

El sistema principal de resistencia sísmica de la estructura se define en pórticos resistentes de momento en concreto reforzado DES en el sentido X y con Péndulo invertido con disipación DES en el sentido Y. El sistema de cubierta se diseña como un sistema de cerchas en secciones de madera del grupo estructural ES3, del tipo CHANUL que dan soporte a las correas de cubierta y a su vez al acabado definido por arquitectura

Los principios de diseño de la estructura son los siguientes:

- Todos los elementos verticales muros y pórticos se vinculan entre sí mediante vigas en las dos direcciones ortogonales.
- La estructura cuenta con un diafragma Semi rígido en el nivel de cubierta lo cual se evidencia en los desplazamientos libres de las columnas, por lo cual no se considera diafragmas en el modelo analítico
- El sistema estructural está diseñado y detallado para una capacidad de disipación Especial de energía (DES), de acuerdo con los requisitos de la NSR10

Estudio de Suelos: INGEOVINF SAS

Número de pisos
La estructura cuenta con un nivel en altura donde se desarrolla la plataforma y los usos principales en el nivel NE+0.00 y el nivel de vigas de coronación NE+2.50m y el punto cumbrera a NE+7.90m

3. CAPACIDAD DE DISIPACIÓN DE ENERGÍA:

De acuerdo con el material de la estructura y las características del sistema de resistencia sísmica descrito, se establece el grado de disipación de energía para el proyecto como **Disipación Especial de Energía (DES).**

Irregularidades estructura
Se realizó el correspondiente chequeo de irregularidades conforme a lo establecido en las tablas A.3-5, A.3-6 y A.3-7 de la NSR-10, y a partir de este se obtuvieron los siguientes coeficientes de reducción de la capacidad de disipación de energía para el edificio:

- Irregularidad en planta en X: ϕpX = 1.00
- Irregularidad en planta en Y: ϕpY = 1.00
- Irregularidad en altura: ϕaA = 1.00
- Irregularidad por ausencia de redundancia: ϕrx = 1.00
- Irregularidad por ausencia de redundancia: ϕry = 1.00

Nota: Se anexa chequeo de irregularidades

4. CARGAS

1.1 Cargas muertas y Vivas de diseño

El peso propio de los elementos estructurales se determina con base en la densidad de los materiales de construcción. Adicionalmente, se consideraron las siguientes cargas muertas para el edificio:

Cubierta

- Teja termoacustica:	15 kg/m^2
- accesorios:	15 kg/m^2
- cielo raso:	10 kg/m^2

De acuerdo con el uso que tendrán las diferentes áreas del edificio, las cargas vivas utilizadas en el análisis corresponden a:

-	Plataforma con uso de zonas de estudio	200 kg/m^2
-	Cubierta liviana pendiente mayor a 15%	50 kg/m^2

Nota: Se anexa avaluó de cargas

1.2 Movimiento sísmico de diseño

De acuerdo con la información de la NSR-10 (Norma sismo resistente de Colombia 2010), el proyecto se ubica en la zona de amenaza Alta de la zonificación sísmica de Colombia. Los parámetros de cálculo de la fuerza sísmica para la estructura son los siguientes:

- Perfil de suelo: E Según estudio de suelos por **INGEOVIF SAS**
- Aceleración horizontal pico efectiva de diseño. Aa= 0.10 g
- Aceleración que representa la velocidad horizontal pico efectiva de diseño, Av=0.10g
- Coeficiente de amplificación que afecta la aceleración en la zona de períodos cortos Fa=2.50
- Coeficiente de amplificación que afecta la aceleración en la zona de períodos intermedios Fv=3.50
- Coeficiente de Importancia I =1.10 (Grupo II)

1.3 Fuerzas sísmicas

Las fuerzas sísmicas se calculan por el Método de análisis de fuerza horizontal equivalente, como se establece en el Capítulo A.4 de la NSR-10. Se hace el análisis espectral para los primeros modos de vibración de acuerdo con el espectro de Pseudoaceleración y con el análisis modal de la edificación se verifica el periodo de vibración natural y las fuerzas sísmicas, el cortante basal considera una posible excentricidad del 5% de la longitud en planta lo que produce una torsional accidental.

1.4 Fuerzas de granizo

Para esta cubierta NO se consideran fuerzas de granizo dado que se encuentra en un municipio con altitud menor a 2000msnm, con baja probabilidad de granizo

Cubierta con pendiente >15°

5. Metodología de diseño estructural

El proyecto estructural se configura a partir de la geometría y su lugar de implantación, donde se definen las solicitudes por el uso, riesgo sísmico y riesgo eólico, el sistema se pre dimensiona acorde con los requisitos para estructuras en concreto del titulo C con capacidad de disipación DES.

El software de análisis SAP 2000, se utilizó para el análisis estructural de la unidad proyectada, programa desarrollado por “Computer and structures”, donde se simula un modelo matemático con datos de entrada como las propiedades de los materiales, secciones de elementos y solicitudes para las diferentes cargas a las que se ve sometida la estructura (Ver anexo de de datos de entrada - imput). El programa distribuye las fuerzas en los elementos, esfuerzos y desplazamientos de acuerdo con la distribución geométrica y su respectiva matriz de rigidez.

Principios de diseño y modelación numérica

- Para el diseño de elementos en concreto, se guía en los parámetros del Titulo C con la metodología y los factores de reducción acordes con el Reglamento colombiana NSR-10.
- Para el modelado de elementos de cubierta en madera, se asignan liberación de momento para que no asuman cargas sísmicas

6. Documentos referencia de diseño estructural

- Reglamento colombiano de construcción sismorresistente NSR-10
- Ley 400 de 1997 de la constitución política de Colombia
-

7. Cimentación

El diseño de la cimentación se basa en las recomendaciones del estudio de Suelos realizado por la por la oficina **GEOMATD Ingeniería.** La cimentación consiste en zapatas aisladas y con un desplante de 170cm que se apoya sobre una base de concreto ciclópeo de 30cm. El suelo portante tiene una capacidad admisible de 27.92 ton/m^2 con vigas de amarre que conecten todos los elementos estructurales y que confine el recebo. La placa se apoya sobre un mejoramiento de suelo compactado al 95% según lo indica el informe.

8. Requerimientos de sismo resistencia

El sistema estructural se define en pórticos de concreto resistente a momento y cumple con los requerimientos del título C.21 de la NSR-10 en sus armados de refuerzo y en los chequeos necesarios de:

- Relación viga – columna
- Diseño por cortante plástico y elástico: se evalúa el comportamiento de los elementos estructurales en el estado plástico, analizando la resistencia o capacidad de cada elemento ante el cortante elástico y plástico. Siendo el principal punto de fragilidad al desarrollarse posibles rotulas plásticas

9. Combinaciones de diseño

Acorde con el título B.2.4.2 de la NSR-10 se consideran las siguientes combinaciones de diseño por resistencia ultima para elementos de concreto reforzado

$1.4(D+F)$ (B.2.4-1)

$1.2(D+F+T)+1.6(L+H)+0.5(L_r \text{ ó } G \text{ ó } L_e)$ (B.2.4-2)

$1.2D+1.6(L_r \text{ ó } G \text{ ó } L_e)+(L \text{ ó } 0.8W)$ (B.2.4-3)

$1.2D+1.6W+1.0L+0.5(L_r \text{ ó } G \text{ ó } L_e)$ (B.2.4-4)

$1.2D+1.0E+1.0L$ (B.2.4-5)

$0.9D+1.6W+1.6H$ (B.2.4-6)

$0.9D+1.0E+1.6H$ (B.2.4-7)

Para el diseño de elementos de madera las combinaciones de diseño consideras son las siguientes

$D+F$ (B.2.3-1)

$D+H+F+L+T$ (B.2.3-2)

$D+H+F+(L_r \text{ ó } G \text{ ó } L_e)$ (B.2.3-3)

$D+H+F+0.75(L+T)+0.75(L_r \text{ ó } G \text{ ó } L_e)$ (B.2.3-4)

$D+H+F+W$ (B.2.3-5)

$D+H+F+0.7E$ (B.2.3-6)

$D+H+F+0.75W+0.75L+0.75(L_r \text{ ó } G \text{ ó } L_e)$ (B.2.3-7)

$D+H+F+0.75(0.7E)+0.75L+0.75(L_r \text{ ó } G \text{ ó } L_e)$ (B.2.3-8)

$0.6D+W+H$ (B.2.3-9)

$0.6D+0.7E+H$ (B.2.3-10)

10. Materiales de construcción

Las especificaciones de los materiales utilizados en el análisis estructural del proyecto son:

- Vigas de cimentación y zapatas: f'_c = 210 kg/cm^2 (21.0 MPa)
- Losa de contrapiso: f'_c = 210 kg/cm^2 (21.0 MPa)
- Vigas y columnas: f'_c = 280 kg/cm^2 (28.0 MPa)
- Acero de refuerzo 3/8" y mayores fy = 4200 kg/cm2 (420 MPa)
- Madera: Grupo estructural 3 (ES3), Madera: Chanul, Contenido Humedad CH=12%

11. Protección contra fuego

La estructura se define como un centro cultural para la comunidad de Atanquez en el municipio de Cesar, Valledupar, se evalúa su resistencia a Fuego acorde con el titulo J de la NSR-10,
Área= 194 m²
Categoría: La estructura se clasifica como: Lugar de reunión culturales (L-2)

Grupos y Subgrupos de ocupación	Clasificación	Sección del Reglamento
L	LUGARES DE REUNION	K.2.7
L-1	Deportivos	
L-2	Culturales y teatros	
L-3	Sociales y recreativos	
L-4	Religiosos	
L-5	De transporte	

- Categoría de riesgo grupo L, es **categoría II**
- Resistencia a fuego de acuerdo según Tabla **J.3.4.3,**

Tabla J.3.4-3
Resistencia requerida al fuego normalizado NTC 1480 (ISO 834), en horas, de elementos de una edificación.

Elementos de la construcción	Categoría según la clasificación dada en J.3.3.1		
	I	II	III
Muros Cortafuego	3	2 ½	2
Muros de cerramiento de escaleras, ascensores, buitrones, ductos para basuras y corredores de evacuación	2	2	1 ½
Muros divisorios entre unidades	2	1 ½	1
Muros interiores no portantes	½	¼	-
Columnas, vigas, viguetas, losas, y muros portantes de cualquier material, y estructuras metálicas en celosía	2	1 ½	1
Cubiertas	1	1	½
Escaleras interiores no encerradas con muros	2	1½	1

Para categoría II, se requieren los siguientes tiempos de resistencia

- Cubierta en madera, resistencia requerida =1 Hora
- Estructura, columnas, vigas y losas de concreto= 1 ½ horas

Resistencia a fuego requerida para estructura de concreto

Resistencia para un periodo de 1 ½" horas

- Según J. 3.5.2.1, la dimensión mínima de columna = 230mm < dimensión columna Atanquez 250mm; **Cumple**
- **Según J.3.5.2.3, se verifican los recubrimientos para:**
  - Losas de concreto recubrimiento mínimo de= 20mm, recubrimiento usado = 40mm, **Cumple**
  - recubrimiento mínimo de vigas con b= 250mm, r= 20mm; recubrimiento usado=40mm, **Cumple**

Resistencia a fuego requerida para estructura de cubierta

- Se verifica la capacidad de combustión para la cubierta acorde con la tabla J.3.4-2, donde se define el potencial combustible para madera, con un potencial de 1.1 MJ/ kg de madera. La cubierta se configura a partir de una estructura de madera que se apoya sobre el sistema estructural. No hace parte fundamental del sistema portante.
  - Se define la carga de combustión que va a tener la casa cultural acorde con que se van a usar 860m lineales de madera con una sección de 3x6", el tipo de madera es Chanul con una densidad de 690kg/m3. Es decir que se tienen en total un peso de 4022 kg de madera
  - Para 7934 kg de madera se calcula una carga de combustión total de = 4424 MJ, en el área de cubierta de una unidad
  - El área de cubierta de una unidad es de 195m²; acorde con esto cada unidad tiene una capacidad de combustión de= 8727MJ/ 195m²= 22.7MJ/m²
  - Como se evidencia en el calculo anterior, el potencial de combustión de este sistema es de 22.2 MJ/m², que es un potencial muy bajo. Citando el reglamento en su literal J.3.3.3.8, se puede eximir del calculo de resistencia a fuego edificaciones con estructuras que tienen una densidad de carga combustible de 250 MJ/² o menos. **Por ende, no se requiere de calculo de resistencia a fuego para estructuras, igualmente ya se justificó la resistencia del sistema en pórticos en concreto**

12. Parámetros de diseño mampostería confinada

El diseño de la unidad de mampostería se desarrolla de acuerdo con los requisitos del titulo D puntualmente en el literal D.10 para unidades de un piso, en donde se verifica la rigidez necesaria para el área a construir y la distribución simétrica de muros de rigidez, estos se coinciben en muros de mampostería confinada por vigas de cimentación, columnetas y vigas dinteles las cuales soportan la placa de cubierta en losa colaborante

Para la concepción de este proyecto se proyecta usar Ladrillo tolete de arcilla de 100mm de ancho con un f'cu=15MPa

El muro tiene una altura libre de 2.20m, se hace la verificación de esbeltez de acuerdo con D.10.3.3, la esbeltez del muro es igual 22, cumpliendo con el requisito de esbeltez no mayor a 25.

$$\lambda muro = \frac{2.20}{0.10} = 22 < 25$$

Área mínima de muros

Se verifica el área mínima de muros de acuerdo con el titulo D.10.3.4

$$A_m \geq \frac{N\, A_a\, A_p}{20} \qquad \textbf{(D.10.3-1)}$$

$$A_{min} = 0.21\ m^2$$

Área de muros en sentido x = $1.13\ m^2 > 0.21\ m^2$

Área de muros en sentido y = $0.86\ m^2 > 0.21\ m^2$

De acuerdo con el titulo D.10.7.6, este sistema se diseña a flexocompresión y cortante despreciando el aporte de la mampostería, asumiendo que los marcos de confinamiento asumen los esfuerzos actuantes.

13. Tabla de anexos

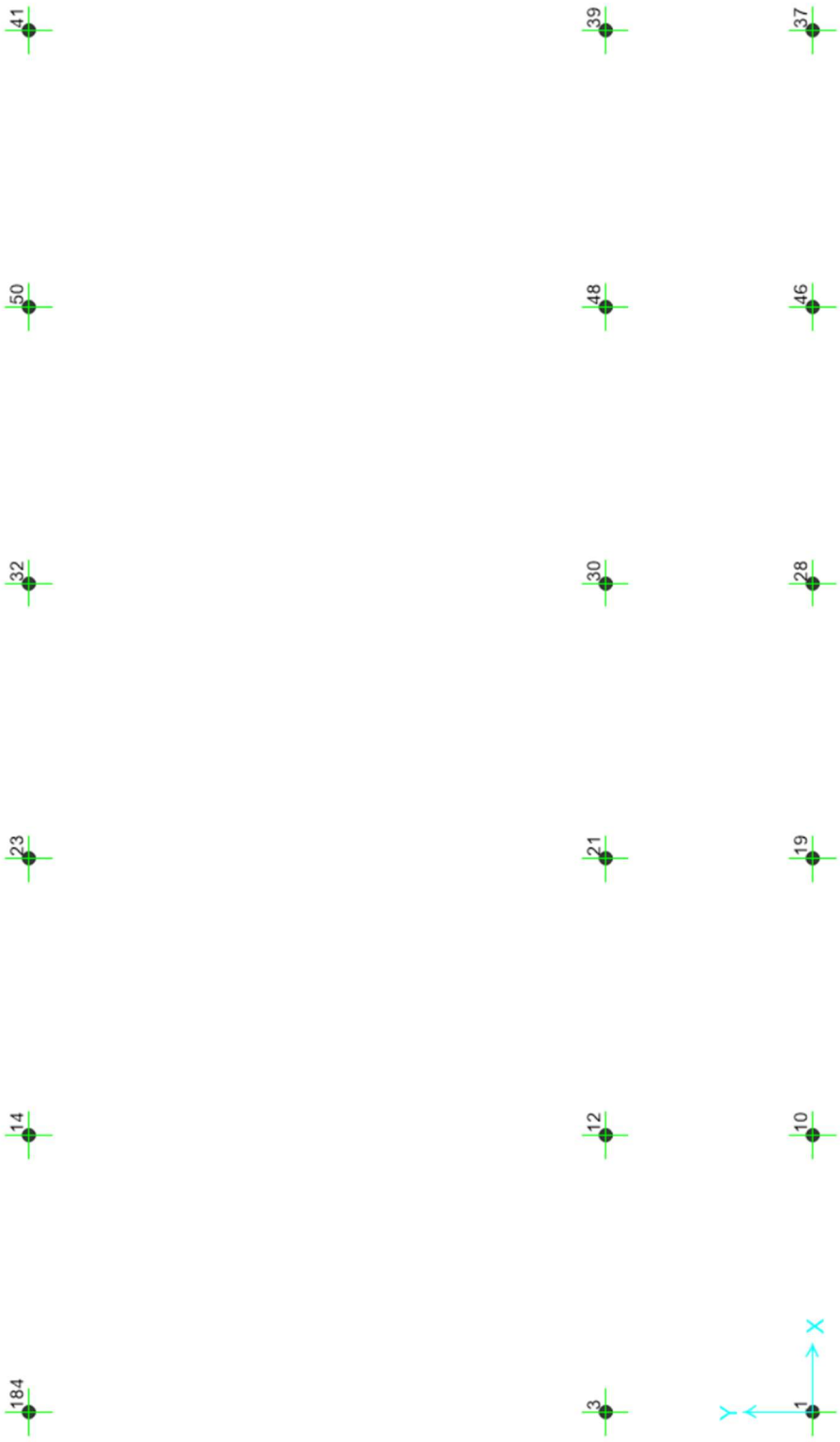
a) Geometría modelo analítico
b) Liberación de elementos a momento
c) Análisis de cargas
d) Asignación de cargas muerta y viva
e) Espectro de diseño
f) Fuerza horizontal equivalente
g) Datos de entrada
h) Chequeo de deriva
i) Verificación de irregularidades
j) Diseño de elementos en concreto
k) Diseño de vigas
l) Diseño de columnas
m) Relación viga – columna
n) Reacciones
o) Diseño de cimentación
p) Diseño de vigas de amarre
q) Diseño de cubierta en madera
r) Diseño de conexiones de madera
s) Revisión de simetría muros de bahareque encementado
t) Datos de salida

Cordialmente

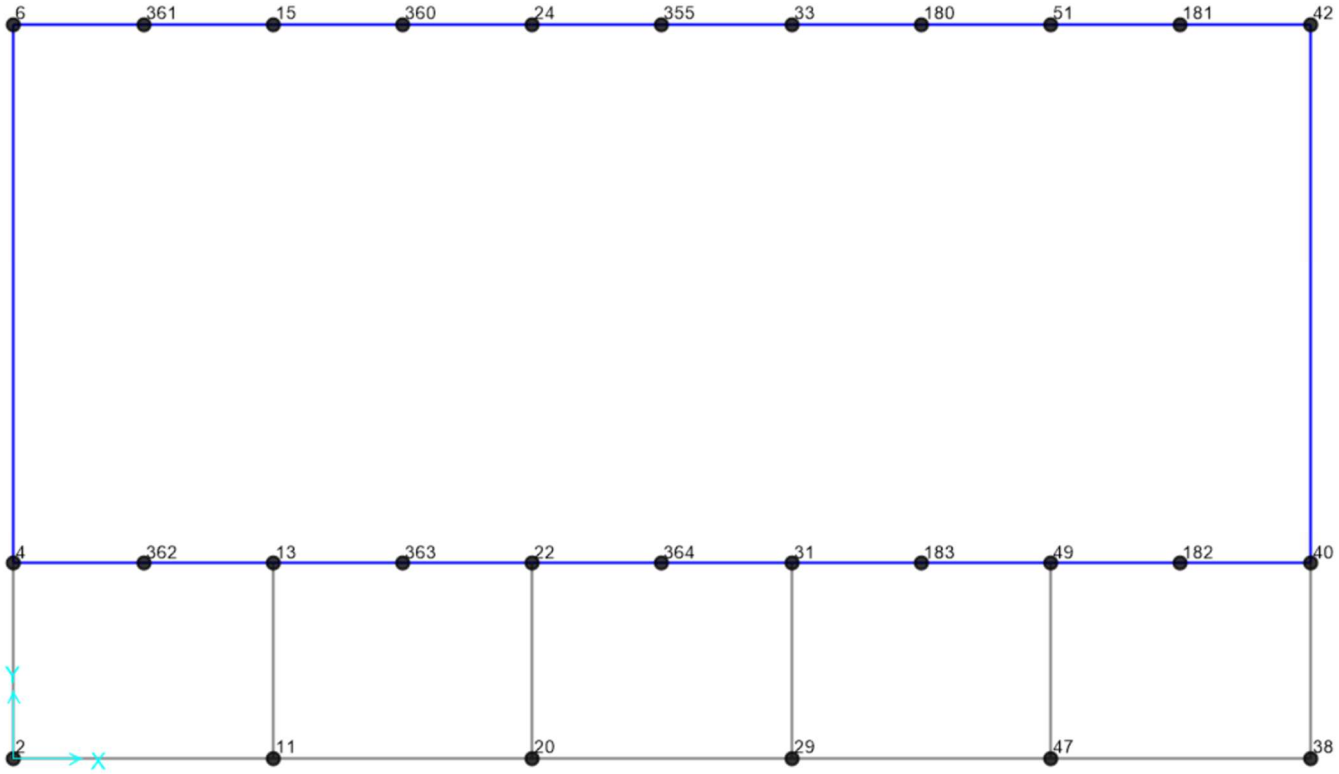
Juan David Hurtado
Ingeniero Civil – Mag. Estructuras
Mat.25202-343770 CND

a. Geometría del modelo estructural

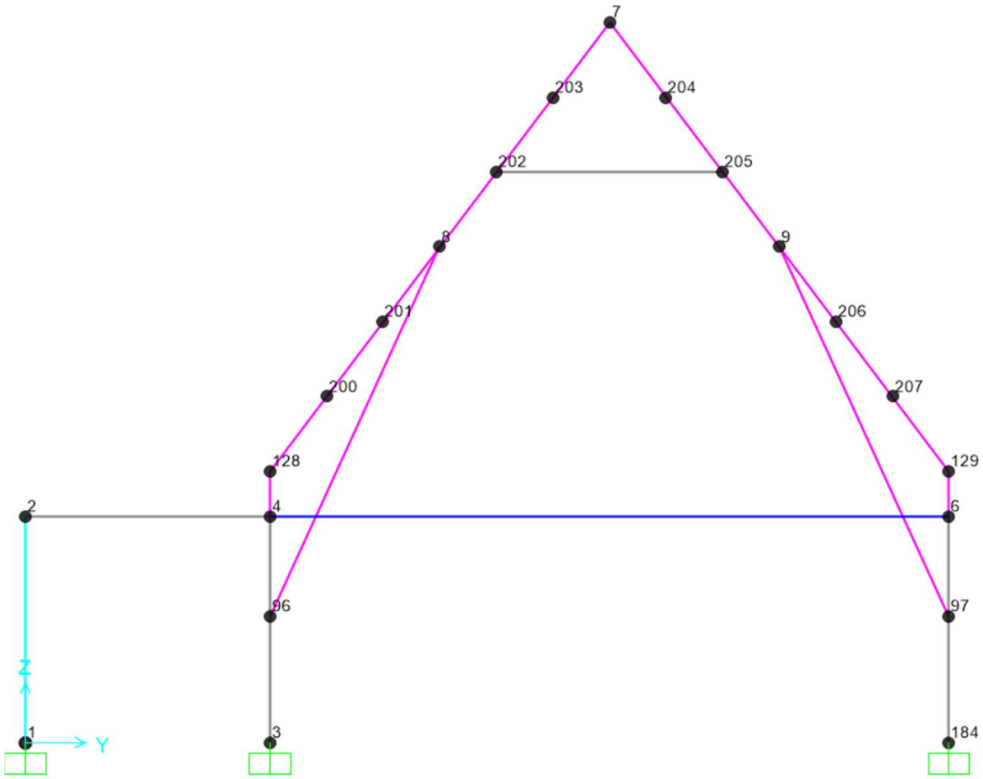
Localización restricciones Ne+0.00



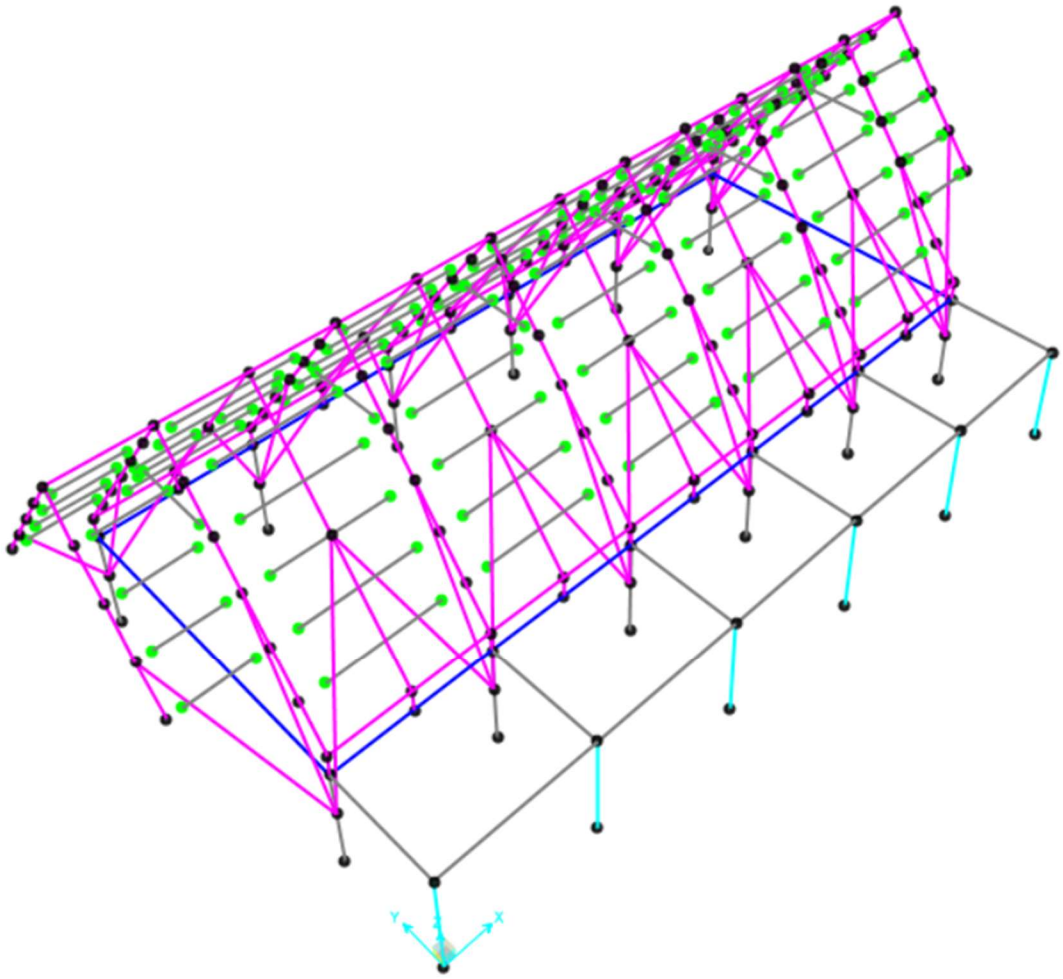
Nivel cubierta (NE+2.60)



Corte estructural transversal



b. Liberación a momento en cubierta de madera

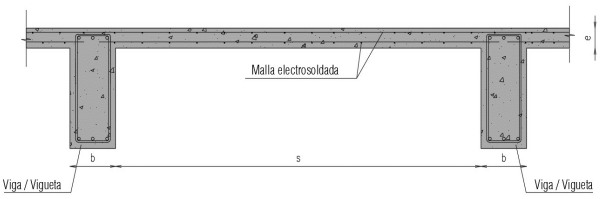


i. Diseño de elementos en concreto

Proyecto: Atanquez, Cesar-Valledupar Fecha= 20/05/2025

Nivel: plataforma

Losa maciza en una dirección



Peso de muros divisorios **tipo=** (Muro en mampostería)

h. piso=	2.55 m	h. viga=	0.35 m	Q.muro=	0.16 Ton/m/m
H. libre=	2.20 m	e muro=	0.15 m	**Wmuro=**	0.35 Ton/m
A muros=	0.3795 m^2			**Pmuro=**	890.56 kg
A modulo=	9.36 m^2			C. muros=	96.00 kg/m^2

CARGAS PERMANENTES

			[KN/m^2]	[Kgf/m^2]
- Acabados	e= 0.05 m	Wa= 22.00 KN/m^2	1.10	110.00
- Placa	e= 0.10 m	Wconcret= 24.00 KN/m^2	2.40	240.00
- Muros divisorios			0.96	96.00

Nota: el peso propio de los elementos los considera el programa **C. MUERTA.** 3.50 350.00

CARGAS VARIABLES

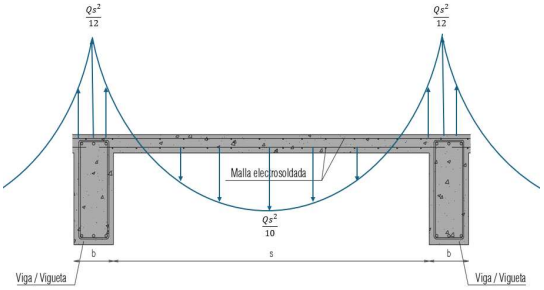
		[KN/m^2]	[Kgf/m^2]
C. VIVA	cuartos de estudio	2.00	200
		3.00	500
C. TOTAL =		550	Kg/m^2
C. ULTIMA = 1.2 CM + 1.6 CV =		740	Kg/m^2

CARGA A VIGUETAS:

C. Muerta	q_u / Vigueta =	3.50	x	1.75	=	**6.1**	**KN/m**
C. Viva	q_u / Vigueta =	2.00	x	1.75	=	**3.5**	**KN/m**

Materiales	(kg/cm^2)		
f'c =	210	b (cm) =	100
fy =	4200	d (cm) =	7

Diseño a Flexión Losa maciza



	M_u (kg-m/m)	R (kg/cm^2)	k	ρ	A_s (cm^2/m)	
M-	157.87	0.036	0.05	0.0010	0.90	5.0c/150mm
M+	189.44	0.043	0.05	0.0012	1.80	6.0c/150mm

Chequeo Cortante

v_u (kg/m)	ϕV_c (kg/m)	Check
592.00	4032.23	Ok

Asignación de cargas kg/m

L. Aferente	CM	C. muros	C. Muerta		C. Viva (biblioteca)	C. Viva (salas)
1.80	630.00	352	982	900	360	
1.00	350.00		350	500	200	

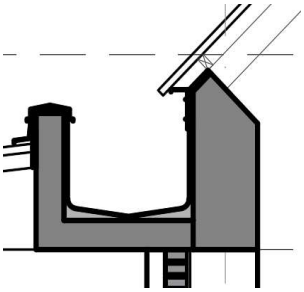
Carga muerta

Carga Viva

Proyecto: Atanquez, Cesar-Valledupar Fecha= 20/05/2025

Nivel: viga canal

Cargas lineales por viga canal



CARGAS PERMANENTES

			[KN/m]	[Kgf/m]
- Acabados o pendientado	e= 0.05 m	Wa= 22.00 KN/m²	0.83	83
- Estancamiento de agua	e= 0.10 m	Wa= 10.00 KN/m²	0.75	75
- Viga canal	e= 0.10 m	Wconcret= 24.00 KN/m²	2.40	240
- Viga borde lateral 15x40	e= 0.06 m	Wconcret= 24.00 KN/m²	1.44	144
- impermeabilización y otros			0.05	5

Nota: el peso propio de los elementos los considera el programa

C. MUERTA. 5.47 547

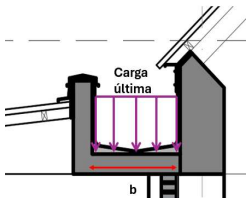
CARGAS VARIABLES

		[KN/m²]	[KN/m]	[Kgf/m]
C. VIVA	mantenimiento CV:	1.80	1.35	135

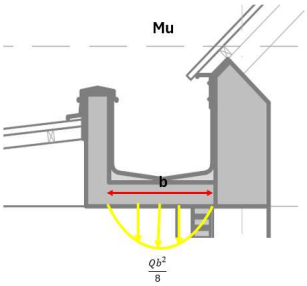
C. TOTAL = 682 Kg/m

C. ULTIMA = 1.2 CM + 1.6 CV = 872 Kg/m

Materiales	(kg/cm²)		
f'c =	280	b (cm) =	100
fy =	4200	d (cm) =	7

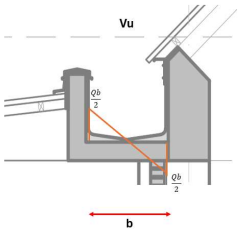


Diseño a Flexión



	M_u (kg-m/m)	R (kg/cm²)	k	ρ	A_s (cm²/m)	
M+	61.30	0.014	0.07	0.0004	1.80	3/8" @0.15m
	0.00	0.000	0.07	0.0000	1.80	

Chequeo Cortante

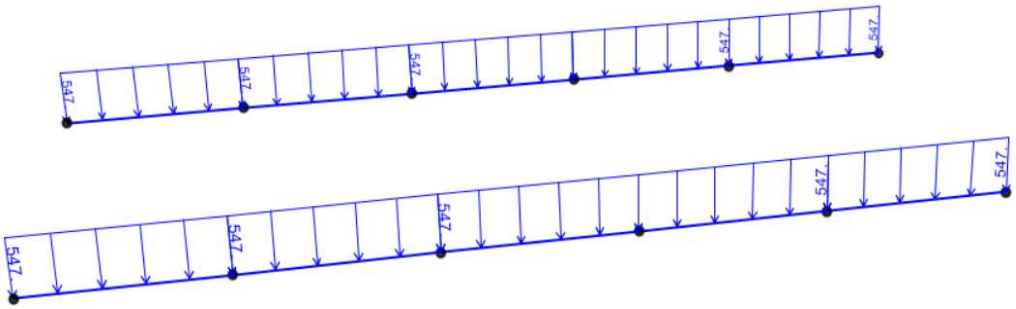


$_{Vu}$ (kg/m)	ϕV_c (kg/m)	Check
326.93	4656.01	Ok

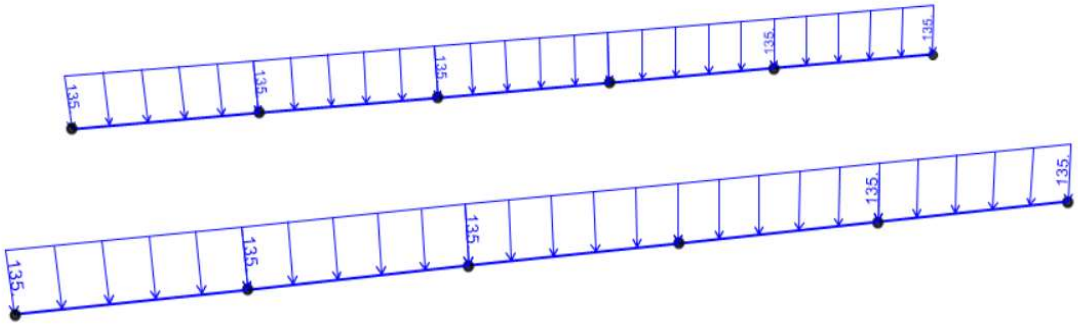
Asignación de cargas

W. C.Muerta= 547 Kg/m C. Viva= 135 kg/m

Carga muerta

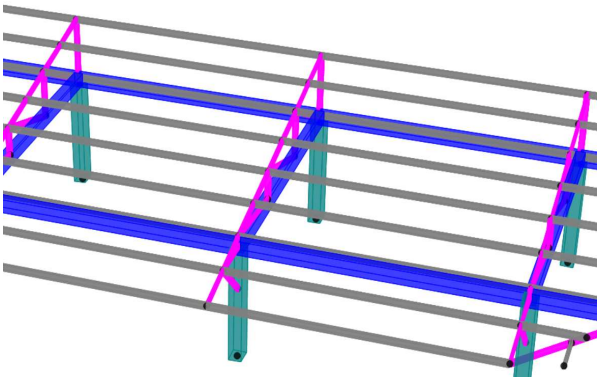


Carga Viva



Proyecto: Atanquez, Cesar-Valledupar Fecha= 20/05/2025

Nivel: Cubierta liviana biblioteca



S correas= 1.00

CARGAS PERMANENTES	[KN/m²]	[Kgf/m²]
- Teja arquitectonica	0.15	15.00
- Cielo raso	0.10	10.00
- Accesorios	0.15	15.00

Nota: el peso propio de los elementos los considera el programa

Carga para Sap=

C. MUERTA.	0.40	40.00
C. SOBREIMP.	0.40	40.00

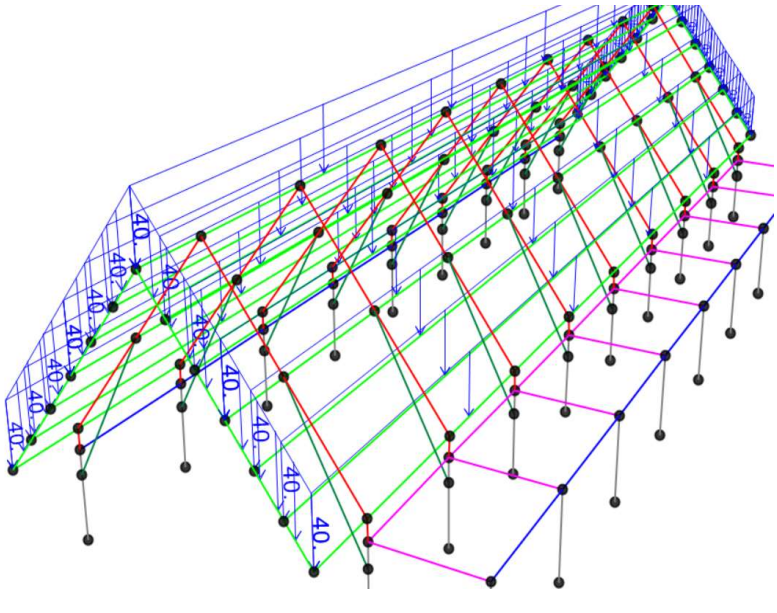
CARGAS VARIABLES		[KN/m²]	[Kgf/m²]
C. GRANIZO	NO APLICA	0.00	0
C. VIVA	Cubierta inclinada >15°	0.50	50
C. TOTAL =			90 Kg/m^2

Carga a correas de cubierta

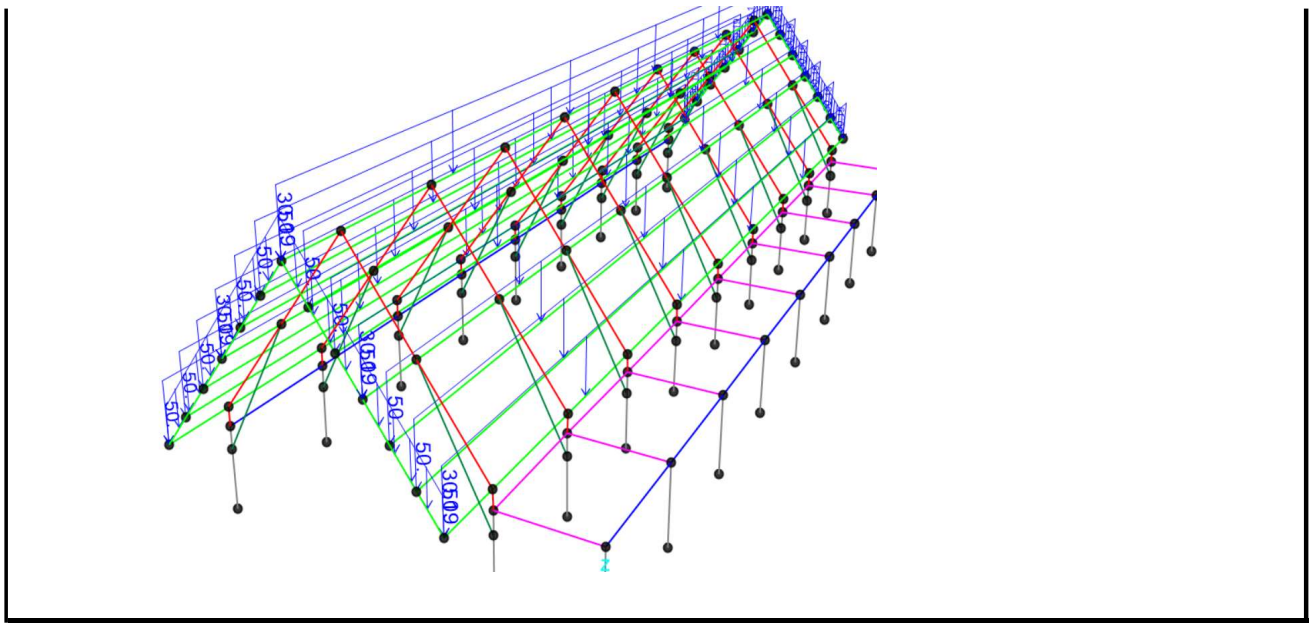
qmuerta / Vta	40	x	1.00	=	**40.0**	**Kg/m**
qViva / Vta =	50	x	1.00	=	**50.0**	**Kg/m**

Asignación de cargas

Carga muerta

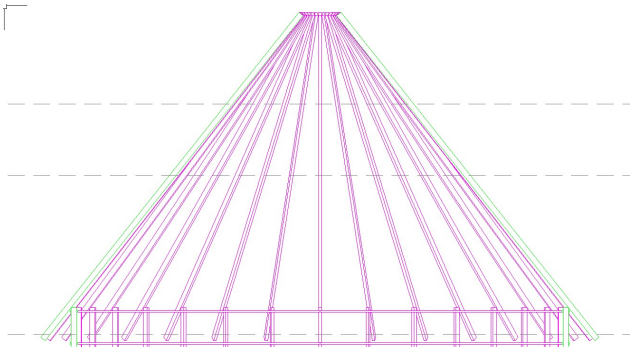


Carga viva



Proyecto: Atanquez, Cesar-Valledupar Fecha= 20/05/2025

Nivel: Cubierta liviana Ludoteca



S correas= 0.50

CARGAS PERMANENTES	[KN/m²]	[Kgf/m²]
- Acabado natural en paja	0.20	20.00
- Durmientes	0.05	5.00
- Otros	0.05	5.00

Nota: el peso propio de los elementos los considera el programa

Carga para Sap=

C. MUERTA.	0.30	30.00
C. SOBREIMP.	0.30	30.00

CARGAS VARIABLES		[KN/m²]	[Kgf/m²]
C. GRANIZO	NO APLICA	0.00	0
C. VIVA	Cubierta inclinada >15°	0.35	35
C. TOTAL =			65 Kg/m^2

Carga a correas de cubierta

qmuerta / Vta	30	x	0.50	=	**15.0**	**Kg/m**
qViva / Vta =	35	x	0.50	=	**17.5**	**Kg/m**
qtotal / Vta =	65	x	0.50	=	**32.5**	**Kg/m**

Calculo de fuerzas de viento (Metodo analitico)

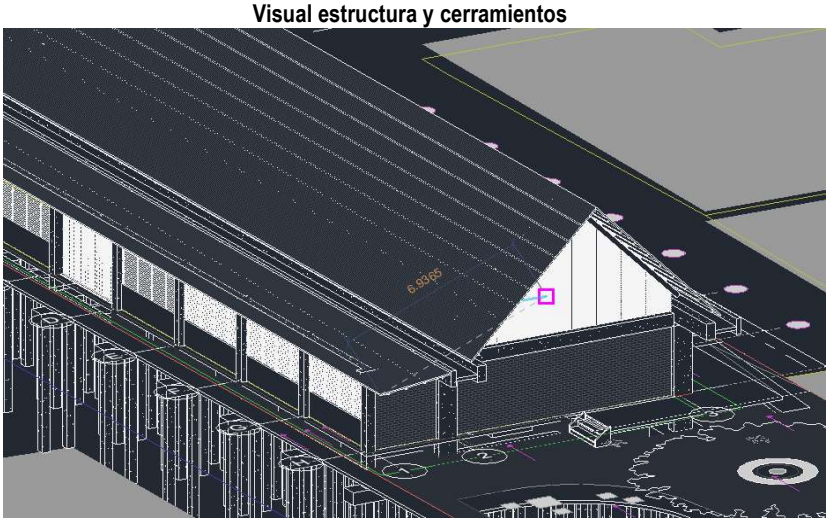
Proyecto: Atanquez **Calculó:** Ing. Juan Hurtado

Sistema principal de resistencia al viento SPRV

Tipo de estructura=	parcialmente cerrada	Altura media cubierta=	6 m
Sistema estructural	Porticos en concreto		
Comportamiento=	Flexible		
Región eolica	3		
Velocidad viento=	28 m/s		
Región con Huracanes=	No		
Categoría de riesgo=	I		

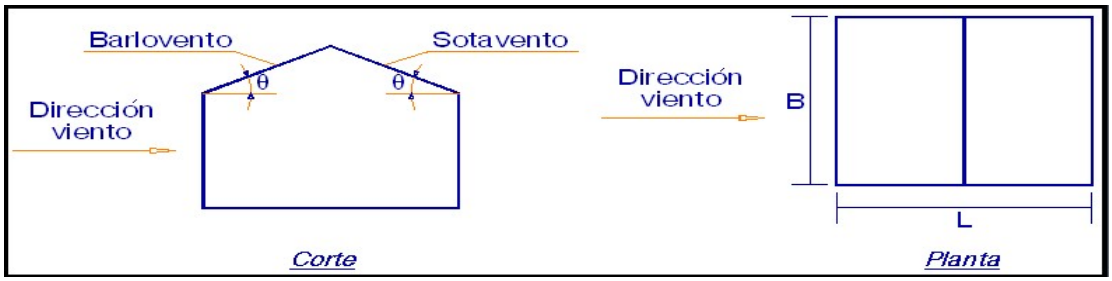
Región	Velocidad del Viento
1	17 m/s (60 km/h)
2	22 m/s (80 km/h)
3	28 m/s (100 km/h)
4	33 m/s (120 km/h)
5	36 m/s (130 km/h)

Visual estructura y cerramientos



Coeficiente importancia=	0.87	Estructura	Baja
Guss Factor=	0.85	Factor direccional Kd=	0.85
Factor topografico Kzt=	1.00	Categoria de exposición=	D
Rugosidad del terreno=	D	Coeficientes dinamico Kz=	1.08
GCpi=	0.55	Coeficientes dinamico Kh=	1.08

Geometría



Longitud en el sentido B=	11.00 m	Longitud L=	18.30 m
Pendiente de cubierta=	15	B/L=	1.66

Calculo de presiones externas

Presión por velocidad del viento

Qz=Qh 441 Qh= 441

Coeficientes de presión externa

Separación correas Cub L= 1.00 m

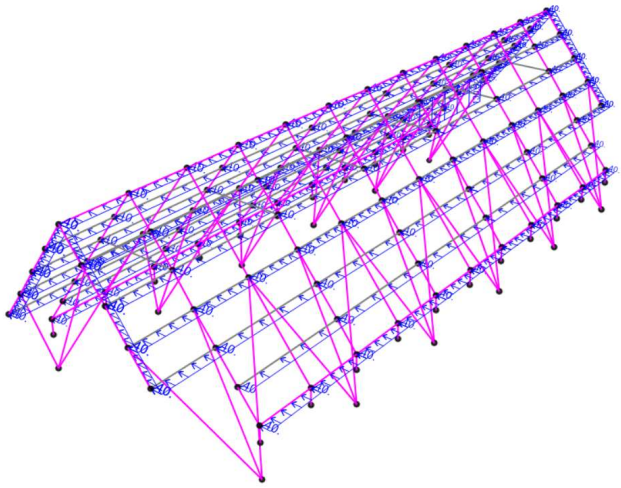
cubierta a sotavento	Cp= -0.30	P=	-355.17	-35.52	kg/m^2
Muros laterales	Cp= -0.70	P=	-505.18	-50.52	kg/m^2
cubierta a barlovento	Cp= 0.80	P=	57.36	5.74	kg/m^2
		Pmín=	400	40	kg/m^2
Altura muros laterales=	2.20 m	W muros =	-56	kg/m	

Cargas de viento por barlovento

W correa cub= 40 kg/m

Cargas de viento por sotavento

W correa cub= 40 kg/m



Análisis Fuerza horizontal

Ing. Juan David Hurtado **Fecha=** **20/05/2025**

Proyecto: Casa cultural Santa Rosa del **Modulo A**

Método de análisis por fuerza horizontal, según capitulo A.4 de la NSR-10

Ta= **0.11**

Tc= **0.67**

Verificación de periodo natural

OutputCase	StepType Text	StepNum Unitless	Period Sec	Frequency Cyc/sec	CircFreq rad/sec	Eigenvalue rad2/sec2
MODAL	Mode	1	0.280729	3.56215210...	22.3816617...	500.938782...
MODAL	Mode	2	0.28016	3.56938421...	22.4271024...	502.974924...
MODAL	Mode	3	0.241281	4.14454777...	26.0409616...	678.131684...
MODAL	Mode	4	0.224122	4.46185061...	28.0346342...	785.940717...

Tx= **0.28** **-161.16%**

Ty= **0.28** **-161.16%**

La diferencia entre el periodo modal es y el periodo aproximado es menor al 10%, cumpliendo con la verificación del Titulo A.4

Aceleración espectral

si T<Tc	Sa=	2.5*Aa*Fa*I	Sax=	0.688	Say=	0.688
si Tc<T<Tl	Sa=	1.2*Av*Fv*I/T	Sax=		Say=	
si Tl<T	Sa=	1.2*Av*Fv*Tl*I/T^2	Sax=		Say=	

Sa= 0.69 Lx= 12.00 m

Vs= 55.00 Ly= 18.00 m

Kx= 1.00

Ky= 1.00

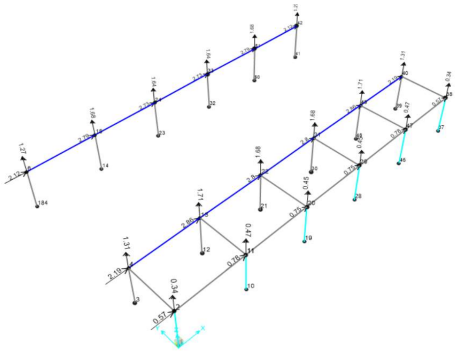
NIVEL	PESO (ton)	h (M)	hi ^k (M)	PESO*(hi^k) (Ton-m)	Cvx	Fx=Fy (ton)	Mx (ton-m)	My (ton-m)
N+ 2.50m	80.00	2.50	2.50	200.00	1.000	55.000	33.00	49.50
	80.00		2.50	200.00	1.00	55.00		

El Nivel Ne+0.50, tiene un diafragma Rigido, las fuerzas se asignan al centro de rigidez del diafragma

cubierta

Node cub		%Fx=%Fy	Fx	Mx	My
1	2	2%	0.90	0.54	0.81
3	4	6%	3.42	2.05	3.08
10	11	2%	1.22	0.73	1.10
12	13	8%	4.46	2.68	4.02
14	15	8%	4.36	2.62	3.93
19	20	2%	1.18	0.71	1.06
21	22	8%	4.37	2.62	3.94
23	24	8%	4.27	2.56	3.84
28	29	2%	1.18	0.71	1.06
30	31	8%	4.37	2.62	3.94
32	33	8%	4.27	2.56	3.84
37	38	2%	0.90	0.54	0.81
39	40	6%	3.42	2.05	3.08
41	42	6%	3.31	1.99	2.98
46	47	2%	1.22	0.73	1.10
48	49	8%	4.46	2.68	4.02
50	51	8%	4.36	2.62	3.93
184	6	6%	3.31	1.99	2.98

SISMO X



SISMO Y

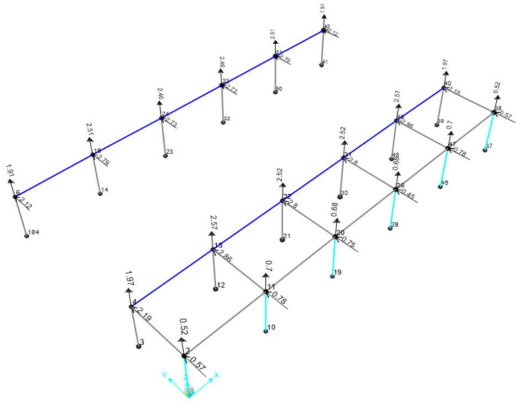


Table: Material Properties 02 - Basic Mechanical Properties, Part 1 of 4

Table: Material Properties 02 - Basic Mechanical Properties, Part 1 of 4

Material	Temp	UnitWeight	UnitMass	E1	E2	E3	G12	G13
	C	Tonf/m3	Tonf-s2/m4	Tonf/m2	Tonf/m2	Tonf/m2	Tonf/m2	Tonf/m2
3500Psi		2.4028E+00	2.4501E-01	1514355.8			630981.58	
4000Psi		2.4028E+00	2.4501E-01	2104286.33			876785.97	
A416Gr270		7.8490E+00	8.0038E-01	20037484.34				
A500GrC		7.8490E+00	8.0038E-01	20389019.16			7841930.45	
A572Gr50		7.8490E+00	8.0038E-01	20389019.16			7841930.45	
A615Gr60		7.8490E+00	8.0038E-01	20389019.16				
A992Fy50		7.8490E+00	8.0038E-01	20389019.16			7841930.45	
Mampuesto		1.9000E+00	1.9375E-01	1059383.15			407455.06	
mampuesto roca		1.7000E+00	1.7335E-01	1019.72			392.2	
pinoPatula		4.3848E-01	4.4712E-02	962408.14			370156.98	
Sapan ES2		8.3617E-01	8.5265E-02	1351123.95			519663.06	

Table: Material Properties 02 - Basic Mechanical Properties, Part 2 of 4

Table: Material Properties 02 - Basic Mechanical Properties, Part 2 of 4

Material	G23	U12	U13	U23	U14	U24	U34	U15
	Tonf/m2							
3500Psi		0.2						
4000Psi		0.2						
A416Gr270								
A500GrC		0.3						
A572Gr50		0.3						
A615Gr60								
A992Fy50		0.3						
Mampuesto		0.3						
mampuesto roca		0.3						
pinoPatula		0.3						
Sapan ES2		0.3						

Table: Material Properties 02 - Basic Mechanical Properties, Part 3 of 4

Table: Material Properties 02 - Basic Mechanical Properties, Part 3 of 4

Material	U25	U35	U45	U16	U26	U36	U46	U56
3500Psi								
4000Psi								
A416Gr270								
A500GrC								
A572Gr50								
A615Gr60								
A992Fy50								
Mampuesto								
mampuesto roca								
pinoPatula								
Sapan ES2								

Table: Material Properties 02 - Basic Mechanical Properties, Part 4 of 4

Table: Material Properties 02 - Basic Mechanical Properties, Part 4 of 4

Material	A1	A2	A3	A12	A13	A23
	1/C	1/C	1/C	1/C	1/C	1/C
3500Psi	9.9000E-06					
4000Psi	9.9000E-06					
A416Gr270	1.1700E-05					
A500GrC	1.1700E-05					
A572Gr50	1.1700E-05					
A615Gr60	1.1700E-05					
A992Fy50	1.1700E-05					
Mampuesto	1.1700E-05					
mampuesto roca	1.1700E-05					
pinoPatula	1.1700E-05					
Sapan ES2	1.1700E-05					

Table: Frame Section Properties 01 - General, Part 1 of 8

Table: Frame Section Properties 01 - General, Part 1 of 8

SectionName	Material	Shape	AutoType	t3	t2	SngAngWid
				m	m	m
C30x30	4000Psi	Rectangular		0.3	0.3	
C30x45	4000Psi	Rectangular		0.45	0.3	
ES2 1X2"	Sapan ES2	Rectangular		0.1016	0.0508	
ES2 2X4"	Sapan ES2	Rectangular		0.1016	0.0508	
ES2 3X6"	Sapan ES2	Rectangular		0.1524	0.0762	
PERLIN 2P-154-64-3.0	A572Gr50	Box/Tube		0.154	0.128	
PTEC100X200X4	A572Gr50	Box/Tube		0.2	0.1	
tube 100x150x3	A500GrC	Box/Tube		0.15	0.1	
V25X30	4000Psi	Rectangular		0.3	0.25	
v25x35	4000Psi	Rectangular		0.35	0.25	
V30X40	4000Psi	Rectangular		0.4	0.3	
v30x45	4000Psi	Rectangular		0.45	0.3	
VT15x30	4000Psi	Rectangular		0.3	0.15	

Table: Frame Section Properties 01 - General, Part 2 of 8

Table: Frame Section Properties 01 - General, Part 2 of 8

SectionName	SngChnWid	tf	tw	t2b	tfb	dis	FilletRadius
	m	m	m	m	m	m	m
C30x30							
C30x45							
ES2 1X2"							
ES2 2X4"							
ES2 3X6"							
PERLIN 2P-154-64-3.0		0.003	0.003				0.
PTEC100X200X4		0.004	0.004				0.
tube 100x150x3		0.003	0.003				0.
V25X30							
v25x35							

Table: Frame Section Properties 01 - General, Part 2 of 8

SectionName	SngChnWid	tf	tw	t2b	tfb	dis	FilletRadius
	m	m	m	m	m	m	m
V30X40							
v30x45							
VT15x30							

Table: Frame Section Properties 01 - General, Part 3 of 8

Table: Frame Section Properties 01 - General, Part 3 of 8

SectionName	Radius	LipDepth	LipAngle	Area	TorsConst	I33	I22
	m	m	Degrees	m2	m4	m4	m4
C30x30				0.09	0.001141	0.000675	0.000675
C30x45				0.135	0.002377	0.002278	0.001013
ES2 1X2"				0.005161	3.049E-06	4.440E-06	1.110E-06
ES2 2X4"				0.005161	3.049E-06	4.440E-06	1.110E-06
ES2 3X6"				0.011613	0.000015	0.000022	5.619E-06
PERLIN 2P-154-64-3.0				0.001656	7.745E-06	5.999E-06	4.518E-06
PTEC100X200X4				0.002336	9.700E-06	0.000012	4.208E-06
tube 100x150x3				0.001464	5.000E-06	4.735E-06	2.533E-06
V25X30				0.075	0.000775	0.000563	0.000391
v25x35				0.0875	0.00102	0.000893	0.000456
V30X40				0.12	0.001944	0.0016	0.0009
v30x45				0.135	0.002377	0.002278	0.001013
VT15x30				0.045	0.000232	0.000338	0.000084

Table: Frame Section Properties 01 - General, Part 4 of 8

Table: Frame Section Properties 01 - General, Part 4 of 8

SectionName	I23	AS2	AS3	S33	S22	Z33	Z22
	m4	m2	m2	m3	m3	m3	m3
C30x30	0.	0.075	0.075	0.0045	0.0045	0.00675	0.00675
C30x45	0.	0.1125	0.1125	0.010125	0.00675	0.015188	0.010125
ES2 1X2"	0.	0.004301	0.004301	0.000087	0.000044	0.000131	0.000066
ES2 2X4"	0.	0.004301	0.004301	0.000087	0.000044	0.000131	0.000066
ES2 3X6"	0.	0.009677	0.009677	0.000295	0.000147	0.000442	0.000221
PERLIN 2P-154-64-3.0	0.	0.000924	0.000768	0.000078	0.000071	0.000091	0.00008
PTEC100X200X4	0.	0.0016	0.0008	0.000124	0.000084	0.000152	0.000094
tube 100x150x3	0.	0.0009	0.0006	0.000063	0.000051	0.000075	0.000057
V25X30	0.	0.0625	0.0625	0.00375	0.003125	0.005625	0.004688
v25x35	0.	0.072917	0.072917	0.005104	0.003646	0.007656	0.005469
V30X40	0.	0.1	0.1	0.008	0.006	0.012	0.009
v30x45	0.	0.1125	0.1125	0.010125	0.00675	0.015188	0.010125
VT15x30	0.	0.0375	0.0375	0.00225	0.001125	0.003375	0.001688

Table: Frame Section Properties 01 - General, Part 5 of 8

Table: Frame Section Properties 01 - General, Part 5 of 8

SectionName	R33	R22	EccV2	ConcCol	ConcBeam	Color	TotalWt
	m	m	m				Tonf
C30x30	0.086603	0.086603		Yes	No	Cyan	3.2437
C30x45	0.129904	0.086603		Yes	No	Gray8Dark	9.7312
ES2 1X2"	0.029329	0.014665		No	No	Cyan	0.

Table: Frame Section Properties 01 - General, Part 5 of 8

SectionName	R33	R22	EccV2	ConcCol	ConcBeam	Color	TotalWt
	m	m	m				Tonf
ES2 2X4"	0.029329	0.014665		No	No	Gray8Dark	0.9762
ES2 3X6"	0.043994	0.021997		No	No	Magenta	3.8078
PERLIN 2P-154-64-3.0	0.060189	0.052233		No	No	Green	0.
PTEC100X200X4	0.072866	0.042441		No	No	Red	0.
tube 100x150x3	0.05687	0.041596		No	No	4227072	0.
V25X30	0.086603	0.072169		No	Yes	Magenta	0.
v25x35	0.101036	0.072169		No	Yes	Gray8Dark	7.1903
V30X40	0.11547	0.086603		No	Yes	Blue	14.705
v30x45	0.129904	0.086603		No	Yes	Green	0.
VT15x30	0.086603	0.043301		No	Yes	Green	0.

Table: Frame Section Properties 01 - General, Part 6 of 8

Table: Frame Section Properties 01 - General, Part 6 of 8

SectionName	TotalMass	FromFile	AMod	A2Mod	A3Mod	JMod	I2Mod
	Tonf-s2/m						
C30x30	0.33	No	1.	1.	1.	1.	1.
C30x45	0.99	No	1.	1.	1.	1.	1.
ES2 1X2"	0.	No	1.	1.	1.	1.	1.
ES2 2X4"	9.955E-02	No	1.	1.	1.	1.	1.
ES2 3X6"	0.39	No	1.	1.	1.	1.	1.
PERLIN 2P-154-64-3.0	0.	No	1.	1.	1.	1.	1.
PTEC100X200X4	0.	No	1.	1.	1.	1.	1.
tube 100x150x3	0.	No	1.	1.	1.	1.	1.
V25X30	0.	No	1.	1.	1.	1.	1.
v25x35	0.73	No	1.	1.	1.	1.	1.
V30X40	1.5	No	1.	1.	1.	1.	1.
v30x45	0.	No	1.	1.	1.	1.	1.
VT15x30	0.	No	1.	1.	1.	1.	1.

Table: Frame Section Properties 01 - General, Part 7 of 8

Table: Frame Section Properties 01 - General, Part 7 of 8

SectionName	I3Mod	MMod	WMod	SectInFile	FileName
C30x30	1.	1.	1.		
C30x45	1.	1.	1.		
ES2 1X2"	1.	1.	1.		
ES2 2X4"	1.	1.	1.		
ES2 3X6"	1.	1.	1.		
PERLIN 2P-154-64-3.0	1.	1.	1.		
PTEC100X200X4	1.	1.	1.		
tube 100x150x3	1.	1.	1.		
V25X30	1.	1.	1.		
v25x35	1.	1.	1.		
V30X40	1.	1.	1.		
v30x45	1.	1.	1.		
VT15x30	1.	1.	1.		

Table: Frame Section Properties 01 - General, Part 8 of 8

Table: Frame Section Properties 01 - General, Part 8 of 8

SectionName	GUID	Notes
C30x30		Added 04/11/2020 5:03:00 p. m.
C30x45		Added 7/22/2024 3:21:29 PM
ES2 1X2"		Added 11/18/2024 10:30:20 AM
ES2 2X4"		Added 9/6/2024 11:52:39 AM
ES2 3X6"		Added 9/6/2024 11:51:53 AM
PERLIN 2P-154-64-3.0		Added 7/23/2024 8:52:27 AM
PTEC100X200X4		Added 7/23/2024 4:55:37 PM
tube 100x150x3		Added 4/15/2024 6:07:02 AM
V25X30		Added 4/14/2024 2:59:35 PM
v25x35		Added 2/24/2025 11:15:54 PM
V30X40		Added 04/11/2020 5:02:17 p. m.
v30x45		Added 2/24/2025 11:16:37 PM
VT15x30		Added 4/15/2024 5:53:16 AM

Table: Load Pattern Definitions, Part 1 of 2

Table: Load Pattern Definitions, Part 1 of 2

LoadPat	DesignType	SelfWtMult	AutoLoad	NotBasePat	NotRatio	NotDir	GUID
DEAD	Dead	1.					244f4045-bec8-43b9-940f-a18b3e73aa2c
live	Live	0.					39527e46-7d02-4345-a236-aa27d43e0055

Table: Load Pattern Definitions, Part 2 of 2

Table: Load Pattern Definitions, Part 2 of 2

LoadPat	Notes
DEAD	
live	Added 05/11/2020 12:36:44 p. m.

Table: Combination Definitions, Part 1 of 3

Table: Combination Definitions, Part 1 of 3

ComboName	ComboType	AutoDesign	CaseType	CaseName	ModeNumber	ScaleFactor
DIS1.2CM+CV-SX+0.3SY	Linear Add	No	Linear Static	DEAD		1.2
DIS1.2CM+CV-SX+0.3SY			Linear Static	live		1.
DIS1.2CM+CV-SX+0.3SY			Linear Static	SX		-0.142857
DIS1.2CM+CV-SX+0.3SY			Linear Static	SY		0.12
DIS1.2CM+CV+SY+0.3SX	Linear Add	No	Linear Static	DEAD		1.2
DIS1.2CM+CV+SY+0.3SX			Linear Static	live		1.

Table: Combination Definitions, Part 1 of 3

ComboName	ComboType	AutoDesign	CaseType	CaseName	ModeNumber	ScaleFactor
DIS1.2CM+CV+SY+0.3SX			Linear Static	SY		0.4
DIS1.2CM+CV+SY+0.3SX			Linear Static	SX		0.042857
DIS1.2CM+CV-SY-0.3SX	Linear Add	No	Linear Static	DEAD		1.2
DIS1.2CM+CV-SY-0.3SX			Linear Static	live		1.
DIS1.2CM+CV-SY-0.3SX			Linear Static	SY		-0.4
DIS1.2CM+CV-SY-0.3SX			Linear Static	SX		-0.042857
DIS1.2CM+CV+SY-0.3SX	Linear Add	No	Linear Static	DEAD		1.2
DIS1.2CM+CV+SY-0.3SX			Linear Static	live		1.
DIS1.2CM+CV+SY-0.3SX			Linear Static	SY		0.4
DIS1.2CM+CV+SY-0.3SX			Linear Static	SX		-0.042857
DIS1.2CM+CV-SY+0.3SX	Linear Add	No	Linear Static	DEAD		1.2
DIS1.2CM+CV-SY+0.3SX			Linear Static	live		1.
DIS1.2CM+CV-SY+0.3SX			Linear Static	SY		-0.4
DIS1.2CM+CV-SY+0.3SX			Linear Static	SX		0.042857
DIS0.9CM+SX+0.3SY	Linear Add	No	Linear Static	DEAD		0.9
DIS0.9CM+SX+0.3SY			Linear Static	SX		0.142857
DIS0.9CM+SX+0.3SY			Linear Static	SY		0.12
DIS0.9CM-SX-0.3SY	Linear Add	No	Linear Static	DEAD		0.9
DIS0.9CM-SX-0.3SY			Linear Static	SX		-0.142857
DIS0.9CM-SX-0.3SY			Linear Static	SY		-0.12
DIS0.9CM+SX-0.3SY	Linear Add	No	Linear Static	DEAD		0.9
DIS0.9CM+SX-0.3SY			Linear Static	SX		0.142857
DIS0.9CM+SX-0.3SY			Linear Static	SY		-0.12
DIS0.9CM-SX+0.3SY	Linear Add	No	Linear Static	DEAD		0.9
DIS0.9CM-SX+0.3SY			Linear Static	SX		-0.142857
DIS0.9CM-SX+0.3SY			Linear Static	SY		0.12
DIS0.9CM+SY+0.3SX	Linear Add	No	Linear Static	DEAD		0.9
DIS0.9CM+SY+0.3SX			Linear Static	SY		0.4
DIS0.9CM+SY+0.3SX			Linear Static	SX		0.042857
DIS0.9CM-SY-0.3SX	Linear Add	No	Linear Static	DEAD		0.9
DIS0.9CM-SY-0.3SX			Linear Static	SY		-0.4
DIS0.9CM-SY-0.3SX			Linear Static	SX		-0.042857

Table: Combination Definitions, Part 1 of 3

ComboName	ComboType	AutoDesign	CaseType	CaseName	ModeNumber	ScaleFactor
DIS0.9CM+SY-0.3SX	Linear Add	No	Linear Static	DEAD		0.9
DIS0.9CM+SY-0.3SX			Linear Static	SY		0.4
DIS0.9CM+SY-0.3SX			Linear Static	SX		-0.042857
DIS0.9CM-SY+0.3SX	Linear Add	No	Linear Static	DEAD		0.9
DIS0.9CM-SY+0.3SX			Linear Static	SY		-0.4
DIS0.9CM-SY+0.3SX			Linear Static	SX		0.042857
CIM CM+CV+0.7SY	Linear Add	No	Linear Static	DEAD		1.
CIM CM+CV+0.7SY			Linear Static	live		1.
CIM CM+CV+0.7SY			Linear Static	SY		0.28
CIM CM+CV-0.7SY	Linear Add	No	Linear Static	DEAD		1.
CIM CM+CV-0.7SY			Linear Static	live		1.
CIM CM+CV-0.7SY			Linear Static	SY		-0.28
CIM 0.6CM+0.7SY	Linear Add	No	Linear Static	DEAD		0.6
CIM 0.6CM+0.7SY			Linear Static	SY		0.28
CIM 0.6CM-0.7SY	Linear Add	No	Linear Static	DEAD		0.6
CIM 0.6CM-0.7SY			Linear Static	SY		-0.28
CIM CM+CV+0.7SX	Linear Add	No	Linear Static	DEAD		1.
CIM CM+CV+0.7SX			Linear Static	live		1.
CIM CM+CV+0.7SX			Linear Static	SX		0.1
CIM CM+CV-0.7SX	Linear Add	No	Linear Static	DEAD		1.
CIM CM+CV-0.7SX			Linear Static	live		1.
CIM CM+CV-0.7SX			Linear Static	SX		-0.1
CIM 0.6CM+0.7SX	Linear Add	No	Linear Static	DEAD		0.6
CIM 0.6CM+0.7SX			Linear Static	SX		0.1
CIM 0.6CM-0.7SX	Linear Add	No	Linear Static	DEAD		0.6
CIM 0.6CM-0.7SX			Linear Static	SX		-0.1
CIM CM+CV	Linear Add	No	Linear Static	DEAD		1.
CIM CM+CV			Linear Static	live		1.
DIS 1.2CM+1.6W1	Linear Add	No	Linear Static	DEAD		1.2
DIS 1.2CM+1.6W1			Linear Static	w1		1.6
DIS1.2CM+1.6W2	Linear Add	No	Linear Static	DEAD		1.2
DIS1.2CM+1.6W2			Linear Static	w2		1.6
DER_D+0.70SX	Linear Add	No	Linear Static	DEAD		1.
DER_D+0.70SX			Linear Static	SX		0.7
DER_D+0.75L+0.75(0.7)SX	Linear Add	No	Linear Static	DEAD		1.
DER_D+0.75L+0.75(0.7)SX			Linear Static	live		0.75
DER_D+0.75L+0.75(0.7)SX			Linear Static	SX		0.525
DER_0.6D+07SX	Linear Add	No	Linear Static	DEAD		0.6
DER_0.6D+07SX			Linear Static	SX		0.7
DER_D+0.70SY	Linear Add	No	Linear Static	DEAD		1.
DER_D+0.70SY			Linear Static	SY		0.7
DER_D+0.75L+0.75(0.7)SY	Linear Add	No	Linear Static	DEAD		1.
DER_D+0.75L+0.75(0.7)SY			Linear Static	live		0.75
DER_D+0.75L+0.75(0.7)SY			Linear Static	SY		0.525

Table: Combination Definitions, Part 1 of 3

ComboName	ComboType	AutoDesign	CaseType	CaseName	ModeNumber	ScaleFactor
DER_0.6D+07SY	Linear Add	No	Linear Static	DEAD		0.6
DER_0.6D+07SY			Linear Static	SY		0.7
1.4CM	Linear Add	No	Linear Static	DEAD		1.4
1.2CM+1.6L	Linear Add	No	Linear Static	DEAD		1.2
1.2CM+1.6L			Linear Static	live		1.6

Table: Combination Definitions, Part 2 of 3

Table: Combination Definitions, Part 2 of 3

ComboName	CaseName	SteelDesign	ConcDesign	AlumDesign	ColdDesign
DIS1.2CM+CV-SX+0.3SY	DEAD	None	None	None	None
DIS1.2CM+CV-SX+0.3SY	live				
DIS1.2CM+CV-SX+0.3SY	SX				
DIS1.2CM+CV-SX+0.3SY	SY				
DIS1.2CM+CV+SY+0.3SX	DEAD	None	None	None	None
DIS1.2CM+CV+SY+0.3SX	live				
DIS1.2CM+CV+SY+0.3SX	SY				
DIS1.2CM+CV+SY+0.3SX	SX				
DIS1.2CM+CV-SY-0.3SX	DEAD	None	None	None	None
DIS1.2CM+CV-SY-0.3SX	live				
DIS1.2CM+CV-SY-0.3SX	SY				
DIS1.2CM+CV-SY-0.3SX	SX				
DIS1.2CM+CV+SY-0.3SX	DEAD	None	None	None	None
DIS1.2CM+CV+SY-0.3SX	live				
DIS1.2CM+CV+SY-0.3SX	SY				
DIS1.2CM+CV+SY-0.3SX	SX				
DIS1.2CM+CV-SY+0.3SX	DEAD	None	None	None	None
DIS1.2CM+CV-SY+0.3SX	live				
DIS1.2CM+CV-SY+0.3SX	SY				
DIS1.2CM+CV-SY+0.3SX	SX				
DIS0.9CM+SX+0.3SY	DEAD	None	None	None	None
DIS0.9CM+SX+0.3SY	SX				
DIS0.9CM+SX+0.3SY	SY				

Table: Combination Definitions, Part 2 of 3

ComboName	CaseName	SteelDesign	ConcDesign	AlumDesign	ColdDesign
DIS0.9CM-SX-0.3SY	DEAD	None	None	None	None
DIS0.9CM-SX-0.3SY	SX				
DIS0.9CM-SX-0.3SY	SY				
DIS0.9CM+SX-0.3SY	DEAD	None	None	None	None
DIS0.9CM+SX-0.3SY	SX				
DIS0.9CM+SX-0.3SY	SY				
DIS0.9CM-SX+0.3SY	DEAD	None	None	None	None
DIS0.9CM-SX+0.3SY	SX				
DIS0.9CM-SX+0.3SY	SY				
DIS0.9CM+SY+0.3SX	DEAD	None	None	None	None
DIS0.9CM+SY+0.3SX	SY				
DIS0.9CM+SY+0.3SX	SX				
DIS0.9CM-SY-0.3SX	DEAD	None	None	None	None
DIS0.9CM-SY-0.3SX	SY				
DIS0.9CM-SY-0.3SX	SX				
DIS0.9CM+SY-0.3SX	DEAD	None	None	None	None
DIS0.9CM+SY-0.3SX	SY				
DIS0.9CM+SY-0.3SX	SX				
DIS0.9CM-SY+0.3SX	DEAD	None	None	None	None
DIS0.9CM-SY+0.3SX	SY				
DIS0.9CM-SY+0.3SX	SX				
CIM CM+CV+0.7SY	DEAD	None	None	None	None
CIM CM+CV+0.7SY	live				
CIM CM+CV+0.7SY	SY				
CIM CM+CV-0.7SY	DEAD	None	None	None	None
CIM CM+CV-0.7SY	live				
CIM CM+CV-0.7SY	SY				
CIM 0.6CM+0.7SY	DEAD	None	None	None	None
CIM 0.6CM+0.7SY	SY				
CIM 0.6CM-0.7SY	DEAD	None	None	None	None
CIM 0.6CM-0.7SY	SY				
CIM CM+CV+0.7SX	DEAD	None	None	None	None
CIM CM+CV+0.7SX	live				
CIM CM+CV+0.7SX	SX				
CIM CM+CV-0.7SX	DEAD	None	None	None	None
CIM CM+CV-0.7SX	live				
CIM CM+CV-0.7SX	SX				
CIM 0.6CM+0.7SX	DEAD	None	None	None	None
CIM 0.6CM+0.7SX	SX				
CIM 0.6CM-0.7SX	DEAD	None	None	None	None
CIM 0.6CM-0.7SX	SX				
CIM CM+CV	DEAD	None	None	None	None

Table: Combination Definitions, Part 2 of 3

ComboName	CaseName	SteelDesign	ConcDesign	AlumDesign	ColdDesign
CIM CM+CV	live				
DIS 1.2CM+1.6W1	DEAD	Strength	None	None	None
DIS 1.2CM+1.6W1	w1				
DIS1.2CM+1.6W2	DEAD	Strength	None	None	None
DIS1.2CM+1.6W2	w2				
DER_D+0.70SX	DEAD	None	None	None	None
DER_D+0.70SX	SX				
DER_D+0.75L+0.75(0.7)SX	DEAD	None	None	None	None
DER_D+0.75L+0.75(0.7)SX	live				
DER_D+0.75L+0.75(0.7)SX	SX				
DER_0.6D+07SX	DEAD	None	None	None	None
DER_0.6D+07SX	SX				
DER_D+0.70SY	DEAD	None	None	None	None
DER_D+0.70SY	SY				
DER_D+0.75L+0.75(0.7)SY	DEAD	None	None	None	None
DER_D+0.75L+0.75(0.7)SY	live				
DER_D+0.75L+0.75(0.7)SY	SY				
DER_0.6D+07SY	DEAD	None	None	None	None
DER_0.6D+07SY	SY				
1.4CM	DEAD	None	Strength	None	None
1.2CM+1.6L	DEAD	None	None	None	None
1.2CM+1.6L	live				

Table: Combination Definitions, Part 3 of 3

Table: Combination Definitions, Part 3 of 3

ComboName	CaseName	GUID	Notes
DIS1.2CM+CV-SX+0.3SY	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
DIS1.2CM+CV-SX+0.3SY	live		
DIS1.2CM+CV-SX+0.3SY	SX		
DIS1.2CM+CV-SX+0.3SY	SY		
DIS1.2CM+CV+SY+0.3SX	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
DIS1.2CM+CV+SY+0.3SX	live		
DIS1.2CM+CV+SY+0.3SX	SY		
DIS1.2CM+CV+SY+0.3SX	SX		
DIS1.2CM+CV-SY-0.3SX	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
DIS1.2CM+CV-SY-0.3SX	live		
DIS1.2CM+CV-SY-0.3SX	SY		

Table: Combination Definitions, Part 3 of 3

ComboName	CaseName	GUID	Notes
DIS1.2CM+CV-SY-0.3SX	SX		
DIS1.2CM+CV+SY-0.3SX	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
DIS1.2CM+CV+SY-0.3SX	live		
DIS1.2CM+CV+SY-0.3SX	SY		
DIS1.2CM+CV+SY-0.3SX	SX		
DIS1.2CM+CV-SY+0.3SX	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
DIS1.2CM+CV-SY+0.3SX	live		
DIS1.2CM+CV-SY+0.3SX	SY		
DIS1.2CM+CV-SY+0.3SX	SX		
DIS0.9CM+SX+0.3SY	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
DIS0.9CM+SX+0.3SY	SX		
DIS0.9CM+SX+0.3SY	SY		
DIS0.9CM-SX-0.3SY	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	Dead + Live; Strength
DIS0.9CM-SX-0.3SY	SX		
DIS0.9CM-SX-0.3SY	SY		
DIS0.9CM+SX-0.3SY	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
DIS0.9CM+SX-0.3SY	SX		
DIS0.9CM+SX-0.3SY	SY		
DIS0.9CM-SX+0.3SY	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
DIS0.9CM-SX+0.3SY	SX		
DIS0.9CM-SX+0.3SY	SY		
DIS0.9CM+SY+0.3SX	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
DIS0.9CM+SY+0.3SX	SY		
DIS0.9CM+SY+0.3SX	SX		
DIS0.9CM-SY-0.3SX	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
DIS0.9CM-SY-0.3SX	SY		
DIS0.9CM-SY-0.3SX	SX		
DIS0.9CM+SY-0.3SX	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
DIS0.9CM+SY-0.3SX	SY		
DIS0.9CM+SY-0.3SX	SX		
DIS0.9CM-SY+0.3SX	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	Dead + Live; Strength

Table: Combination Definitions, Part 3 of 3

ComboName	CaseName	GUID	Notes
DIS0.9CM-SY+0.3SX	SY		
DIS0.9CM-SY+0.3SX	SX		
CIM CM+CV+0.7SY	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
CIM CM+CV+0.7SY	live		
CIM CM+CV+0.7SY	SY		
CIM CM+CV-0.7SY	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
CIM CM+CV-0.7SY	live		
CIM CM+CV-0.7SY	SY		
CIM 0.6CM+0.7SY	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
CIM 0.6CM+0.7SY	SY		
CIM 0.6CM-0.7SY	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
CIM 0.6CM-0.7SY	SY		
CIM CM+CV+0.7SX	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
CIM CM+CV+0.7SX	live		
CIM CM+CV+0.7SX	SX		
CIM CM+CV-0.7SX	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
CIM CM+CV-0.7SX	live		
CIM CM+CV-0.7SX	SX		
CIM 0.6CM+0.7SX	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
CIM 0.6CM+0.7SX	SX		
CIM 0.6CM-0.7SX	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
CIM 0.6CM-0.7SX	SX		
CIM CM+CV	DEAD	13de4b50-2091-44c2-9d2a-38d7e32c810c	
CIM CM+CV	live		
DIS 1.2CM+1.6W1	DEAD	5bc1b006-021b-4347-907f-f31470ca402e	
DIS 1.2CM+1.6W1	w1		
DIS1.2CM+1.6W2	DEAD	5bc1b006-021b-4347-907f-f31470ca402e	
DIS1.2CM+1.6W2	w2		
DER_D+0.70SX	DEAD	85c81306-e6d2-46c3-b3a1-1acd2fca82e7	
DER_D+0.70SX	SX		
DER_D+0.75L+0.75(0.7)SX	DEAD	df93a2f7-41a1-4d12-a677-23514d8907b3	
DER_D+0.75L+0.75(0.7)SX	live		
DER_D+0.75L+0.75(0.7)SX	SX		
DER_0.6D+07SX	DEAD	85c81306-e6d2-46c3-b3a1-1acd2fca82e7	
DER_0.6D+07SX	SX		
DER_D+0.70SY	DEAD	85c81306-e6d2-46c3-b3a1-1acd2fca82e7	
DER_D+0.70SY	SY		
DER_D+0.75L+0.75(0.7)SY	DEAD	df93a2f7-41a1-4d12-a677-23514d8907b3	

Table: Combination Definitions, Part 3 of 3

ComboName	CaseName	GUID	Notes
DER_D+0.75L+0.75(0.7)SY	live		
DER_D+0.75L+0.75(0.7)SY	SY		
DER_0.6D+07SY	DEAD	85c81306-e6d2-46c3-b3a1-1acd2fca82e7	
DER_0.6D+07SY	SY		
1.4CM	DEAD	acd4822a-9cd4-491c-8765-63a02d6fd46a	
1.2CM+1.6L	DEAD	7424f3cd-7d1f-4344-bfc8-86bf6a96feb1	
1.2CM+1.6L	live		

Table: Joint Coordinates, Part 1 of 4

Table: Joint Coordinates, Part 1 of 4

Joint	CoordSys	CoordType	XorR	Y	T	Z	SpecialJt
			m	m	Degrees	m	
1	GLOBAL	Cartesian	0.	0.		0.	No
2	GLOBAL	Cartesian	0.	0.		2.5	Yes
3	GLOBAL	Cartesian	0.	2.7		0.	No
4	GLOBAL	Cartesian	0.	2.7		2.5	Yes
6	GLOBAL	Cartesian	0.	10.2		2.5	Yes
7	GLOBAL	Cartesian	0.	6.45		7.95	Yes
8	GLOBAL	Cartesian	0.	4.575		5.475	Yes
9	GLOBAL	Cartesian	0.	8.325		5.475	Yes
10	GLOBAL	Cartesian	3.6	0.		0.	No
11	GLOBAL	Cartesian	3.6	0.		2.5	Yes
12	GLOBAL	Cartesian	3.6	2.7		0.	No
13	GLOBAL	Cartesian	3.6	2.7		2.5	Yes
14	GLOBAL	Cartesian	3.6	10.2		0.	No
15	GLOBAL	Cartesian	3.6	10.2		2.5	Yes
16	GLOBAL	Cartesian	3.6	6.45		7.95	Yes
17	GLOBAL	Cartesian	3.6	4.575		5.475	Yes
18	GLOBAL	Cartesian	3.6	8.325		5.475	Yes
19	GLOBAL	Cartesian	7.2	0.		0.	No
20	GLOBAL	Cartesian	7.2	0.		2.5	Yes
21	GLOBAL	Cartesian	7.2	2.7		0.	No
22	GLOBAL	Cartesian	7.2	2.7		2.5	Yes
23	GLOBAL	Cartesian	7.2	10.2		0.	No
24	GLOBAL	Cartesian	7.2	10.2		2.5	Yes
25	GLOBAL	Cartesian	7.2	6.45		7.95	Yes
26	GLOBAL	Cartesian	7.2	4.575		5.475	Yes
27	GLOBAL	Cartesian	7.2	8.325		5.475	Yes
28	GLOBAL	Cartesian	10.8	0.		0.	No
29	GLOBAL	Cartesian	10.8	0.		2.5	Yes
30	GLOBAL	Cartesian	10.8	2.7		0.	No
31	GLOBAL	Cartesian	10.8	2.7		2.5	Yes
32	GLOBAL	Cartesian	10.8	10.2		0.	No
33	GLOBAL	Cartesian	10.8	10.2		2.5	Yes
34	GLOBAL	Cartesian	10.8	6.45		7.95	Yes
35	GLOBAL	Cartesian	10.8	4.575		5.475	Yes
36	GLOBAL	Cartesian	10.8	8.325		5.475	Yes
37	GLOBAL	Cartesian	18.	0.		0.	No

Table: Joint Coordinates, Part 1 of 4

Joint	CoordSys	CoordType	XorR	Y	T	Z	SpecialJt
			m	m	Degrees	m	
38	GLOBAL	Cartesian	18.	0.		2.5	Yes
39	GLOBAL	Cartesian	18.	2.7		0.	No
40	GLOBAL	Cartesian	18.	2.7		2.5	Yes
41	GLOBAL	Cartesian	18.	10.2		0.	No
42	GLOBAL	Cartesian	18.	10.2		2.5	Yes
43	GLOBAL	Cartesian	18.	6.45		7.95	Yes
44	GLOBAL	Cartesian	18.	4.575		5.475	Yes
45	GLOBAL	Cartesian	18.	8.325		5.475	Yes
46	GLOBAL	Cartesian	14.4	0.		0.	No
47	GLOBAL	Cartesian	14.4	0.		2.5	Yes
48	GLOBAL	Cartesian	14.4	2.7		0.	No
49	GLOBAL	Cartesian	14.4	2.7		2.5	Yes
50	GLOBAL	Cartesian	14.4	10.2		0.	No
51	GLOBAL	Cartesian	14.4	10.2		2.5	Yes
52	GLOBAL	Cartesian	14.4	6.45		7.95	Yes
53	GLOBAL	Cartesian	14.4	4.575		5.475	Yes
54	GLOBAL	Cartesian	14.4	8.325		5.475	Yes
55	GLOBAL	Cartesian	19.95	4.575		5.475	Yes
56	GLOBAL	Cartesian	19.95	6.45		7.95	Yes
57	GLOBAL	Cartesian	19.95	8.325		5.475	Yes
58	GLOBAL	Cartesian	18.	2.7		1.4	No
59	GLOBAL	Cartesian	18.	10.2		1.4	No
60	GLOBAL	Cartesian	14.4	2.7		3.	Yes
61	GLOBAL	Cartesian	14.4	10.2		3.	Yes
62	GLOBAL	Cartesian	14.4	2.7		1.4	No
63	GLOBAL	Cartesian	14.4	10.2		1.4	No
64	GLOBAL	Cartesian	18.	2.7		3.	Yes
65	GLOBAL	Cartesian	18.	10.2		3.	Yes
66	GLOBAL	Cartesian	19.95	3.95		4.65	Yes
67	GLOBAL	Cartesian	19.95	5.2		6.3	Yes
68	GLOBAL	Cartesian	19.95	5.825		7.125	Yes
69	GLOBAL	Cartesian	19.95	8.95		4.65	Yes
70	GLOBAL	Cartesian	19.95	7.7		6.3	Yes
71	GLOBAL	Cartesian	19.95	7.075		7.125	Yes
72	GLOBAL	Cartesian	14.4	3.325		3.825	Yes
82	GLOBAL	Cartesian	-1.95	4.575		5.475	Yes
83	GLOBAL	Cartesian	-1.95	6.45		7.95	Yes
84	GLOBAL	Cartesian	-1.95	8.325		5.475	Yes
85	GLOBAL	Cartesian	14.4	3.95		4.65	Yes
86	GLOBAL	Cartesian	14.4	5.2		6.3	Yes
87	GLOBAL	Cartesian	14.4	5.825		7.125	Yes
88	GLOBAL	Cartesian	14.4	7.075		7.125	Yes
89	GLOBAL	Cartesian	14.4	7.7		6.3	Yes
90	GLOBAL	Cartesian	14.4	8.95		4.65	Yes
91	GLOBAL	Cartesian	14.4	9.575		3.825	Yes
92	GLOBAL	Cartesian	18.	3.325		3.825	Yes
93	GLOBAL	Cartesian	18.	3.95		4.65	Yes
94	GLOBAL	Cartesian	18.	5.2		6.3	Yes
95	GLOBAL	Cartesian	18.	5.825		7.125	Yes
96	GLOBAL	Cartesian	0.	2.7		1.4	No
97	GLOBAL	Cartesian	0.	10.2		1.4	No
98	GLOBAL	Cartesian	3.6	2.7		3.	Yes
99	GLOBAL	Cartesian	3.6	10.2		3.	Yes
100	GLOBAL	Cartesian	3.6	2.7		1.4	No

Table: Joint Coordinates, Part 1 of 4

Joint	CoordSys	CoordType	XorR	Y	T	Z	SpecialJt
			m	m	Degrees	m	
101	GLOBAL	Cartesian	3.6	10.2		1.4	No
102	GLOBAL	Cartesian	7.2	2.7		3.	Yes
103	GLOBAL	Cartesian	7.2	10.2		3.	Yes
104	GLOBAL	Cartesian	7.2	2.7		1.4	No
105	GLOBAL	Cartesian	7.2	10.2		1.4	No
106	GLOBAL	Cartesian	10.8	2.7		3.	Yes
107	GLOBAL	Cartesian	10.8	10.2		3.	Yes
108	GLOBAL	Cartesian	10.8	2.7		1.4	No
109	GLOBAL	Cartesian	10.8	10.2		1.4	No
110	GLOBAL	Cartesian	18.	7.075		7.125	Yes
111	GLOBAL	Cartesian	18.	7.7		6.3	Yes
112	GLOBAL	Cartesian	18.	8.95		4.65	Yes
113	GLOBAL	Cartesian	18.	9.575		3.825	Yes
128	GLOBAL	Cartesian	0.	2.7		3.	Yes
129	GLOBAL	Cartesian	0.	10.2		3.	Yes
137	GLOBAL	Cartesian	-1.95	3.95		4.65	Yes
138	GLOBAL	Cartesian	-1.95	5.2		6.3	Yes
139	GLOBAL	Cartesian	-1.95	5.825		7.125	Yes
141	GLOBAL	Cartesian	-1.95	8.95		4.65	Yes
142	GLOBAL	Cartesian	-1.95	7.7		6.3	Yes
143	GLOBAL	Cartesian	-1.95	7.075		7.125	Yes
144	GLOBAL	Cartesian	3.6	3.325		3.825	Yes
145	GLOBAL	Cartesian	3.6	3.95		4.65	Yes
146	GLOBAL	Cartesian	3.6	5.2		6.3	Yes
147	GLOBAL	Cartesian	3.6	5.825		7.125	Yes
148	GLOBAL	Cartesian	3.6	7.075		7.125	Yes
149	GLOBAL	Cartesian	3.6	7.7		6.3	Yes
150	GLOBAL	Cartesian	3.6	8.95		4.65	Yes
151	GLOBAL	Cartesian	3.6	9.575		3.825	Yes
152	GLOBAL	Cartesian	7.2	3.325		3.825	Yes
153	GLOBAL	Cartesian	7.2	3.95		4.65	Yes
154	GLOBAL	Cartesian	7.2	5.2		6.3	Yes
155	GLOBAL	Cartesian	7.2	5.825		7.125	Yes
156	GLOBAL	Cartesian	7.2	7.075		7.125	Yes
157	GLOBAL	Cartesian	7.2	7.7		6.3	Yes
158	GLOBAL	Cartesian	7.2	8.95		4.65	Yes
159	GLOBAL	Cartesian	7.2	9.575		3.825	Yes
160	GLOBAL	Cartesian	10.8	3.325		3.825	Yes
161	GLOBAL	Cartesian	10.8	3.95		4.65	Yes
162	GLOBAL	Cartesian	10.8	5.2		6.3	Yes
163	GLOBAL	Cartesian	10.8	5.825		7.125	Yes
164	GLOBAL	Cartesian	10.8	7.075		7.125	Yes
165	GLOBAL	Cartesian	10.8	7.7		6.3	Yes
166	GLOBAL	Cartesian	10.8	8.95		4.65	Yes
167	GLOBAL	Cartesian	10.8	9.575		3.825	Yes
170	GLOBAL	Cartesian	16.2	2.7		3.	Yes
171	GLOBAL	Cartesian	16.2	6.45		7.95	Yes
172	GLOBAL	Cartesian	16.2	10.2		3.	Yes
173	GLOBAL	Cartesian	12.6	2.7		3.	Yes
174	GLOBAL	Cartesian	12.6	6.45		7.95	Yes
175	GLOBAL	Cartesian	12.6	10.2		3.	Yes
176	GLOBAL	Cartesian	16.2	8.325		5.475	Yes
177	GLOBAL	Cartesian	12.6	8.325		5.475	Yes
178	GLOBAL	Cartesian	16.2	4.575		5.475	Yes

Table: Joint Coordinates, Part 1 of 4

Joint	CoordSys	CoordType	XorR	Y	T	Z	SpecialJt
			m	m	Degrees	m	
179	GLOBAL	Cartesian	12.6	4.575		5.475	Yes
180	GLOBAL	Cartesian	12.6	10.2		2.5	Yes
181	GLOBAL	Cartesian	16.2	10.2		2.5	Yes
182	GLOBAL	Cartesian	16.2	2.7		2.5	Yes
183	GLOBAL	Cartesian	12.6	2.7		2.5	Yes
184	GLOBAL	Cartesian	0.	10.2		0.	No
200	GLOBAL	Cartesian	0.	3.325		3.825	Yes
201	GLOBAL	Cartesian	0.	3.95		4.65	Yes
202	GLOBAL	Cartesian	0.	5.2		6.3	Yes
203	GLOBAL	Cartesian	0.	5.825		7.125	Yes
204	GLOBAL	Cartesian	0.	7.075		7.125	Yes
205	GLOBAL	Cartesian	0.	7.7		6.3	Yes
206	GLOBAL	Cartesian	0.	8.95		4.65	Yes
207	GLOBAL	Cartesian	0.	9.575		3.825	Yes
298	GLOBAL	Cartesian	1.8	2.7		3.	Yes
299	GLOBAL	Cartesian	1.8	6.45		7.95	Yes
300	GLOBAL	Cartesian	1.8	10.2		3.	Yes
301	GLOBAL	Cartesian	5.4	2.7		3.	Yes
302	GLOBAL	Cartesian	5.4	6.45		7.95	Yes
303	GLOBAL	Cartesian	5.4	10.2		3.	Yes
304	GLOBAL	Cartesian	9.	2.7		3.	Yes
305	GLOBAL	Cartesian	9.	6.45		7.95	Yes
306	GLOBAL	Cartesian	9.	10.2		3.	Yes
322	GLOBAL	Cartesian	1.8	8.325		5.475	Yes
323	GLOBAL	Cartesian	5.4	8.325		5.475	Yes
324	GLOBAL	Cartesian	9.	8.325		5.475	Yes
348	GLOBAL	Cartesian	1.8	4.575		5.475	Yes
349	GLOBAL	Cartesian	5.4	4.575		5.475	Yes
350	GLOBAL	Cartesian	9.	4.575		5.475	Yes
355	GLOBAL	Cartesian	9.	10.2		2.5	Yes
360	GLOBAL	Cartesian	5.4	10.2		2.5	Yes
361	GLOBAL	Cartesian	1.8	10.2		2.5	Yes
362	GLOBAL	Cartesian	1.8	2.7		2.5	Yes
363	GLOBAL	Cartesian	5.4	2.7		2.5	Yes
364	GLOBAL	Cartesian	9.	2.7		2.5	Yes

Table: Joint Coordinates, Part 2 of 4

Table: Joint Coordinates, Part 2 of 4

Joint	GlobalX	GlobalY	GlobalZ	TargetGX	TargetGY	TargetGZ	TargetCase	TargetStage
	m	m	m	m	m	m		
1	0.	0.	0.					
2	0.	0.	2.5					
3	0.	2.7	0.					
4	0.	2.7	2.5					
6	0.	10.2	2.5					
7	0.	6.45	7.95					
8	0.	4.575	5.475					
9	0.	8.325	5.475					
10	3.6	0.	0.					
11	3.6	0.	2.5					
12	3.6	2.7	0.					
13	3.6	2.7	2.5					

Table: Joint Coordinates, Part 2 of 4

Joint	GlobalX	GlobalY	GlobalZ	TargetGX	TargetGY	TargetGZ	TargetCase	TargetStage
	m	m	m	m	m	m		
14	3.6	10.2	0.					
15	3.6	10.2	2.5					
16	3.6	6.45	7.95					
17	3.6	4.575	5.475					
18	3.6	8.325	5.475					
19	7.2	0.	0.					
20	7.2	0.	2.5					
21	7.2	2.7	0.					
22	7.2	2.7	2.5					
23	7.2	10.2	0.					
24	7.2	10.2	2.5					
25	7.2	6.45	7.95					
26	7.2	4.575	5.475					
27	7.2	8.325	5.475					
28	10.8	0.	0.					
29	10.8	0.	2.5					
30	10.8	2.7	0.					
31	10.8	2.7	2.5					
32	10.8	10.2	0.					
33	10.8	10.2	2.5					
34	10.8	6.45	7.95					
35	10.8	4.575	5.475					
36	10.8	8.325	5.475					
37	18.	0.	0.					
38	18.	0.	2.5					
39	18.	2.7	0.					
40	18.	2.7	2.5					
41	18.	10.2	0.					
42	18.	10.2	2.5					
43	18.	6.45	7.95					
44	18.	4.575	5.475					
45	18.	8.325	5.475					
46	14.4	0.	0.					
47	14.4	0.	2.5					
48	14.4	2.7	0.					
49	14.4	2.7	2.5					
50	14.4	10.2	0.					
51	14.4	10.2	2.5					
52	14.4	6.45	7.95					
53	14.4	4.575	5.475					
54	14.4	8.325	5.475					
55	19.95	4.575	5.475					
56	19.95	6.45	7.95					
57	19.95	8.325	5.475					
58	18.	2.7	1.4					
59	18.	10.2	1.4					
60	14.4	2.7	3.					
61	14.4	10.2	3.					
62	14.4	2.7	1.4					
63	14.4	10.2	1.4					
64	18.	2.7	3.					
65	18.	10.2	3.					
66	19.95	3.95	4.65					
67	19.95	5.2	6.3					

Table: Joint Coordinates, Part 2 of 4

Joint	GlobalX	GlobalY	GlobalZ	TargetGX	TargetGY	TargetGZ	TargetCase	TargetStage
	m	m	m	m	m	m		
68	19.95	5.825	7.125					
69	19.95	8.95	4.65					
70	19.95	7.7	6.3					
71	19.95	7.075	7.125					
72	14.4	3.325	3.825					
82	-1.95	4.575	5.475					
83	-1.95	6.45	7.95					
84	-1.95	8.325	5.475					
85	14.4	3.95	4.65					
86	14.4	5.2	6.3					
87	14.4	5.825	7.125					
88	14.4	7.075	7.125					
89	14.4	7.7	6.3					
90	14.4	8.95	4.65					
91	14.4	9.575	3.825					
92	18.	3.325	3.825					
93	18.	3.95	4.65					
94	18.	5.2	6.3					
95	18.	5.825	7.125					
96	0.	2.7	1.4					
97	0.	10.2	1.4					
98	3.6	2.7	3.					
99	3.6	10.2	3.					
100	3.6	2.7	1.4					
101	3.6	10.2	1.4					
102	7.2	2.7	3.					
103	7.2	10.2	3.					
104	7.2	2.7	1.4					
105	7.2	10.2	1.4					
106	10.8	2.7	3.					
107	10.8	10.2	3.					
108	10.8	2.7	1.4					
109	10.8	10.2	1.4					
110	18.	7.075	7.125					
111	18.	7.7	6.3					
112	18.	8.95	4.65					
113	18.	9.575	3.825					
128	0.	2.7	3.					
129	0.	10.2	3.					
137	-1.95	3.95	4.65					
138	-1.95	5.2	6.3					
139	-1.95	5.825	7.125					
141	-1.95	8.95	4.65					
142	-1.95	7.7	6.3					
143	-1.95	7.075	7.125					
144	3.6	3.325	3.825					
145	3.6	3.95	4.65					
146	3.6	5.2	6.3					
147	3.6	5.825	7.125					
148	3.6	7.075	7.125					
149	3.6	7.7	6.3					
150	3.6	8.95	4.65					
151	3.6	9.575	3.825					
152	7.2	3.325	3.825					

Table: Joint Coordinates, Part 2 of 4

Joint	GlobalX	GlobalY	GlobalZ	TargetGX	TargetGY	TargetGZ	TargetCase	TargetStage
	m	m	m	m	m	m		
153	7.2	3.95	4.65					
154	7.2	5.2	6.3					
155	7.2	5.825	7.125					
156	7.2	7.075	7.125					
157	7.2	7.7	6.3					
158	7.2	8.95	4.65					
159	7.2	9.575	3.825					
160	10.8	3.325	3.825					
161	10.8	3.95	4.65					
162	10.8	5.2	6.3					
163	10.8	5.825	7.125					
164	10.8	7.075	7.125					
165	10.8	7.7	6.3					
166	10.8	8.95	4.65					
167	10.8	9.575	3.825					
170	16.2	2.7	3.					
171	16.2	6.45	7.95					
172	16.2	10.2	3.					
173	12.6	2.7	3.					
174	12.6	6.45	7.95					
175	12.6	10.2	3.					
176	16.2	8.325	5.475					
177	12.6	8.325	5.475					
178	16.2	4.575	5.475					
179	12.6	4.575	5.475					
180	12.6	10.2	2.5					
181	16.2	10.2	2.5					
182	16.2	2.7	2.5					
183	12.6	2.7	2.5					
184	0.	10.2	0.					
200	0.	3.325	3.825					
201	0.	3.95	4.65					
202	0.	5.2	6.3					
203	0.	5.825	7.125					
204	0.	7.075	7.125					
205	0.	7.7	6.3					
206	0.	8.95	4.65					
207	0.	9.575	3.825					
298	1.8	2.7	3.					
299	1.8	6.45	7.95					
300	1.8	10.2	3.					
301	5.4	2.7	3.					
302	5.4	6.45	7.95					
303	5.4	10.2	3.					
304	9.	2.7	3.					
305	9.	6.45	7.95					
306	9.	10.2	3.					
322	1.8	8.325	5.475					
323	5.4	8.325	5.475					
324	9.	8.325	5.475					
348	1.8	4.575	5.475					
349	5.4	4.575	5.475					
350	9.	4.575	5.475					
355	9.	10.2	2.5					

Table: Joint Coordinates, Part 2 of 4

Joint	GlobalX	GlobalY	GlobalZ	TargetGX	TargetGY	TargetGZ	TargetCase	TargetStage
	m	m	m	m	m	m		
360	5.4	10.2	2.5					
361	1.8	10.2	2.5					
362	1.8	2.7	2.5					
363	5.4	2.7	2.5					
364	9.	2.7	2.5					

Table: Joint Coordinates, Part 3 of 4

Table: Joint Coordinates, Part 3 of 4

Joint	TargetSF	OriginalGX	OriginalGY	OriginalGZ	SModeCase	SModeNumber	SModeDispl	ModCSys
		m	m	m			m	
1								
2								
3								
4								
6								
7								
8								
9								
10								
11								
12								
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43								

Table: Joint Coordinates, Part 3 of 4

Joint	TargetSF	OriginalGX	OriginalGY	OriginalGZ	SModeCase	SModeNumber	SModeDispl	ModCSys
		m	m	m			m	
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								
54								
55								
56								
57								
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101								
102								
103								
104								
105								

Table: Joint Coordinates, Part 3 of 4

Joint	TargetSF	OriginalGX	OriginalGY	OriginalGZ	SModeCase	SModeNumber	SModeDispl	ModCSys
		m	m	m			m	
106								
107								
108								
109								
110								
111								
112								
113								
128								
129								
137								
138								
139								
141								
142								
143								
144								
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180								
181								
182								

Table: Joint Coordinates, Part 3 of 4

Joint	TargetSF	OriginalGX	OriginalGY	OriginalGZ	SModeCase	SModeNumber	SModeDispl	ModCSys
		m	m	m			m	
183								
184								
200								
201								
202								
203								
204								
205								
206								
207								
298								
299								
300								
301								
302								
303								
304								
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324								
348								
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355								
360								
361								
362								
363								
364								

Table: Joint Coordinates, Part 4 of 4

Table: Joint Coordinates, Part 4 of 4

Joint	ModDirX	ModDirY	ModDirZ	GUID
1				aa95efb4-0b8e-43de-b996-6759f59715c2
2				9e743818-0ad4-46b5-8b62-80e50e811838
3				76fe2563-1610-4a9e-93eb-776db4ad3047
4				6d212ecf-2962-4050-ad94-6e29c4d83158
6				bb023058-380d-4823-8d90-4a193515fa46
7				f4d88a25-8c99-4e0e-9b20-d93aadfc636b
8				1c612bd6-0212-4375-b798-1d7cfd740678
9				470252a8-6417-4454-8f3f-d3e0619eb4de

Table: Joint Coordinates, Part 4 of 4

Joint	ModDirX	ModDirY	ModDirZ	GUID
10				2c992dfd-19e1-4e21-8c8a-f21879bc9874
11				0aefc1c9-7faf-4381-bbaa-4a813ac0c87b
12				8b747ec3-9210-4088-b701-e6042bf166c3
13				70450098-8877-4899-aa9c-b65dc36d39c2
14				8825e5b6-45cc-42ae-8417-0cffbb2f5278
15				ef4d457a-74dc-42d5-b6f6-4be6fb3696bc
16				d39a2197-8f1f-4e93-bf32-594c9387843d
17				0ea17e0a-9528-4b1b-b1fc-2fa1b13d404d
18				e9eed6a9-3919-4f99-8e41-1836ee411adf
19				3703e06e-c6c6-40a2-9e2f-8069ee958bcd
20				ae69c7f4-afe2-419e-8fdd-27b8d13ec3f9
21				2f7b1471-f8b6-4342-b469-c3612e19ff29
22				9ca17304-af7f-4285-ae66-8546a44fb28f
23				799a0eaf-1eb1-4edf-af58-73ac33cb40c5
24				24ea1bdd-1747-4320-be16-7f253a2f7f8c
25				a1e80601-b7b2-485d-bfa7-4e45beb0bf64
26				12d00f98-3faf-47fd-83b3-f0f986a3d6eb
27				8fed1553-56e2-4c38-bfff-5796f1c79965
28				219ca5ef-73f0-4d3e-8e1b-9a7a26edb87f
29				be7b15cf-48f8-4bfd-beb6-8d9561f249ba
30				cb7ae96b-b182-4f24-b09e-5ae9eeb7ed42
31				6aa28a10-61ec-4345-a3e3-32ea489d35d5
32				41066d3d-4939-4795-a10a-6d5699684449
33				ad3cf39d-f8ed-466b-801b-b19d04c20c36
34				7babfdbe-2bc7-4e1a-8798-b3b7089c84c4
35				3936147b-6737-47b1-bcf1-d88b60a7c77a
36				576a1965-40c0-43fb-a9dd-cf9694650b72
37				031b0851-8a2b-4228-b634-8c0300ed50ce
38				81e68f94-0242-46b5-8835-70cdcec0fece
39				57e203e2-9125-432c-af03-5c57d8831cb1

Table: Joint Coordinates, Part 4 of 4

Joint	ModDirX	ModDirY	ModDirZ	GUID
40				0ab00f53-0c0d-495a-ae95-80649a04231d
41				52c1dc32-ae10-4577-8923-ee54ee474502
42				db696f25-7dde-4a00-ba09-78b747696f7a
43				6b92646e-0617-4080-8274-e7df2c61931e
44				9d913dc9-8c9e-48cf-ab44-cea0adcee798
45				697c98cf-27da-4421-9f41-e155838599b3
46				9d7b0412-0cab-4b5d-8864-a19d2cd42218
47				a1a20e08-620b-4b60-9114-97ec671be36b
48				29a2f003-eeba-4bfb-ab08-6263150b7234
49				87f9b429-bbf1-4827-9f2d-823a7318b2f5
50				e859097c-1ee9-47ce-8a0f-4dc6e8fabd63
51				f8744823-cfd5-401b-aee0-8ccec8920d9b
52				8031994c-b0de-48bb-ab00-f4d52dae8d49
53				f24fa305-351d-4d1b-9694-1b9e8b088155
54				af9ff916-39d8-4923-b92b-541399c9562c
55				823cfbfd-4a9a-435c-89d4-83f3cc893ff1
56				a9764d11-77d9-4f23-839d-a471abdb5d30
57				b2cc2c48-41d0-4dbd-9c03-5079ea7cb222
58				6e9eb247-0baa-4431-ae65-c88b3965aa05
59				950d45c9-05e8-42e7-a891-f21d897b600b
60				ffdab40a-2657-40a1-989d-9a7731d22839
61				44654e76-c3f6-415e-a102-d5558551da81
62				59b3d696-972a-4cab-a25e-6a54b2540eba
63				342111b3-3c08-4032-841c-7dc21b056d65
64				55251e92-8e15-409e-b06b-2cb49353f3aa
65				20ce1f11-f38a-4816-b10c-bab5242820ce
66				7ab46b8a-0d94-4e4d-b7aa-07c0c7990324
67				5a201e5a-ed75-4c7f-931d-0d0b5e91b932
68				ea687da2-4304-4e35-b602-c2dec3906d68
69				bad95d26-48fe-4354-9f9b-8e41e962a284

Table: Joint Coordinates, Part 4 of 4

Joint	ModDirX	ModDirY	ModDirZ	GUID
70				03e60b3f-3a76-40da-af3d-113213217cbe
71				81bd6fce-7aaa-4470-b248-e88d816f663d
72				615ea9ef-24dd-42a8-a19b-181c298a8ad2
82				e542d524-04b0-4d72-b6d7-9942ac6f1d60
83				3429ef67-4427-4358-aa4c-1417a892b02d
84				f93f77fe-947b-43ad-bd1c-6a0ce5269386
85				35bf8460-5996-4e9e-b0dd-e192a92e5879
86				d4c5ae03-efae-485b-bb75-b6dccd994c69
87				49fbab68-9986-4563-87a3-f533c441c8eb
88				ca10d196-e506-48d8-b7e4-d8ddb3140fed
89				471d7352-f249-4a5e-836e-dbf789b7655a
90				21f5c8a3-e874-4ed7-a59b-7a9a0203a265
91				3e59d015-1a22-4d04-b314-bd7c37f079c1
92				c18550b5-c340-4154-ab6e-0119b6a104a9
93				03303016-1299-4c62-b8e1-f78db5056cfb
94				777d3c9b-e78e-4d82-90f4-9111da3db501
95				c3eb2383-6218-4975-991c-65fd7cb3d4ea
96				387e8be3-9340-4723-8120-a9c1194873da
97				22775384-e3c0-485f-a49d-c58ec2d4fe68
98				208516b7-6483-423c-ade0-9417cd82b8f1
99				b558b3ad-befe-47fb-9b2b-6e7948321dda
100				d7a9454e-079c-4eba-b460-7c53106ebed9
101				85874641-2ec5-4282-87ab-b56b252ccd00
102				b8155c91-3633-40f3-8e8a-a9b04770b078
103				c6c6c126-6a6e-478d-ad83-23752d5def24
104				6a759445-65bb-491a-9133-207d4abe28dd
105				e4467366-f583-40dc-86aa-b7d6c453f404
106				ebaf167d-6b2b-44c9-aa31-ae75052c78c8
107				ecf7f2de-caf2-4e42-a02f-3277e99e1c8d
108				662eff16-f9eb-4d2e-9cd9-be03700c4334

Table: Joint Coordinates, Part 4 of 4

Joint	ModDirX	ModDirY	ModDirZ	GUID
109				4e81f230-6f74-4f25-874d-b036b8908cf5
110				d32bda32-e9d8-47dd-8038-90c8d0dc28c6
111				f938be09-d5a7-417f-9a5a-04d231424fdc
112				8778007b-45d2-4855-8eae-7863fea8eea7
113				4a3fa8d8-76bf-4122-9601-c0b32a28c380
128				f4a90da7-e6db-4bc3-b5f9-bb440e90778c
129				2af8602e-f07f-4fe1-a1c9-9b0b11f3e005
137				dbf5f03d-63d5-4fb5-8306-20c1395c4ae4
138				5ac8e97f-56f0-4bd9-b59e-8d865db0ff69
139				7202df18-7f82-40e6-80c3-0116d3521ef5
141				2bf400a1-a12a-4739-ac33-7a013495a245
142				cdc2956b-009b-429e-be92-61b6e9be68ae
143				d501322b-fba3-461a-a408-76b78f3d037a
144				f6baf1eb-97f0-40ff-9243-097985742437
145				8fd2dd23-7e49-498e-9ded-7190155d3a63
146				40266b80-ee7c-45e3-9ab6-5585011ee296
147				fcb31c3a-1f04-4a80-8e5c-587cac9fc280
148				4ff3bb40-36e1-4d7b-b4bb-aae2664539b5
149				e412652f-1bcc-4169-abde-01676f4180de
150				7564ef8a-431d-4728-aae4-ed5400e3d656
151				9e355876-a194-44bc-a26c-a769c386c08d
152				c18904a1-5219-450b-acf1-ad7a15842e8c
153				7142c41c-70de-4389-afed-84abfa2600c9
154				c5408ecc-b78d-40f8-bfff-09fa1735598e
155				a149078f-857f-40ef-a0cd-d0c83dc6cb65
156				cf4f7b28-8de4-408f-a655-d092f2d2198e
157				f37c707e-8ea4-44a3-b85e-dcf3c65dc392
158				b897600a-226f-4158-9f60-e27fdf29fb45
159				dba25c35-e0ef-4288-9b8f-9bf338a85a44
160				c14c0756-2375-4678-8908-ca442000178b

Table: Joint Coordinates, Part 4 of 4

Joint	ModDirX	ModDirY	ModDirZ	GUID
161				86f2b455-796f-4ff0-b8a9-92e47d3de547
162				a03287c6-8628-4cde-a728-64d0712674ca
163				bcbebecb-9212-482f-8fa5-d52e0b245597
164				69750476-8a51-437e-bdcf-47227b81e341
165				b21d8601-7bd6-4812-9d9b-c4a24e2e6d31
166				0e1ec689-c25d-466f-8f99-0af5428fe1a9
167				a2b90172-aa79-4e1f-9b48-3f774f5fe8cb
170				ca4aa129-e347-4c30-a32d-876f866f335a
171				887e0468-4c23-478f-91ff-861479a78cdc
172				54267fc1-2556-4ed6-9f30-720fe68dda3d
173				1c7c24e6-e5cf-4013-ba83-14e38f2ad697
174				8d5fac45-7fe7-43a4-9814-8f23a0054e0d
175				eb7d227f-cc40-4bf1-833e-6f9d722d2d75
176				d6d7f097-f703-4862-be89-9cafb3d0307d
177				d0a297bc-3154-483d-98ec-83d2682dd746
178				370ac2d5-9961-40f4-b560-1cf2984e4165
179				b1629921-826d-4030-a64a-56b6394d5098
180				b9082c6d-8b88-4e74-a701-5e7f4e63356a
181				c25302f5-6327-4dd7-8702-bae4e1bebed1
182				fbf19174-302b-4cfa-97c9-419659872930
183				214464a3-e1e9-4af0-91c0-a8b7324d5377
184				d62105a6-c2cd-45fe-a93c-7657939dc4a9
200				5f8dfdd5-9301-4628-a4c6-e9368b8905af
201				ad198fff-5b21-4bca-8c36-932e55fb5581
202				1f2fcf8d-5ca2-4b75-a1df-6ce0a101732f
203				5bceff20-c253-4ed6-a30b-8b742119870f
204				492e6b5c-ea1d-4443-a876-0cd1f7a054e0
205				54b330da-6415-41bb-820d-a77fa68e9b30
206				61105806-c001-4e79-a2ce-352ab51cc8e4
207				e5aa9a79-8893-433e-9dbb-c68bfa548c73

Table: Joint Coordinates, Part 4 of 4

Joint	ModDirX	ModDirY	ModDirZ	GUID
298				1d7fc08a-d57d-4e2f-b537-a13b9a6304ee
299				3fc69368-88e1-4a74-b1bd-8002953730f8
300				006541e2-b49a-4b68-8aa9-7bc1413528b9
301				658e7975-aadf-49c0-a3db-6cb624c4f4ae
302				4d992c9b-baa1-43af-befd-b937db9eb95e
303				e426e1a3-e07c-47ed-b53c-84be17b36dd5
304				efd627ea-fa2b-4cfc-84a8-4375d70ed789
305				4cb51fdc-dd8d-4ada-be2f-ff7d3e52fb82
306				b6b302e0-8c5c-48c1-a158-1402d1188b18
322				affeea7a-61fe-4577-9aac-a7973d156899
323				5e106e2d-0ab0-4649-a62e-a637ec811c64
324				70d177fe-a901-4a41-99b4-d119f7f777ad
348				aa1588a8-9348-4aea-82d3-53bdea607685
349				b620e985-f128-47dd-b234-48726c7da624
350				f846442f-801d-4775-b42b-87d89a03f04a
355				56a4e861-d202-49f3-8450-13ab7ee7af86
360				619c3efd-4dd6-4af8-aac4-5396e719b333
361				ee651a85-4a51-4a3c-94e7-c9c8e0126e3d
362				7fe0c48c-8c3b-4676-97c3-04762c1e9010
363				1f64335d-3b2f-46d4-858b-497af82c614f
364				e8c5853e-fc89-475a-8b5a-e30ca592ef09

Table: Joint Restraint Assignments

Table: Joint Restraint Assignments

Joint	U1	U2	U3	R1	R2	R3
1	Yes	Yes	Yes	Yes	Yes	Yes
3	Yes	Yes	Yes	Yes	Yes	Yes
10	Yes	Yes	Yes	Yes	Yes	Yes
12	Yes	Yes	Yes	Yes	Yes	Yes
14	Yes	Yes	Yes	Yes	Yes	Yes
19	Yes	Yes	Yes	Yes	Yes	Yes
21	Yes	Yes	Yes	Yes	Yes	Yes
23	Yes	Yes	Yes	Yes	Yes	Yes
28	Yes	Yes	Yes	Yes	Yes	Yes

Table: Joint Restraint Assignments

Joint	U1	U2	U3	R1	R2	R3
30	Yes	Yes	Yes	Yes	Yes	Yes
32	Yes	Yes	Yes	Yes	Yes	Yes
37	Yes	Yes	Yes	Yes	Yes	Yes
39	Yes	Yes	Yes	Yes	Yes	Yes
41	Yes	Yes	Yes	Yes	Yes	Yes
46	Yes	Yes	Yes	Yes	Yes	Yes
48	Yes	Yes	Yes	Yes	Yes	Yes
50	Yes	Yes	Yes	Yes	Yes	Yes
184	Yes	Yes	Yes	Yes	Yes	Yes

Table: Frame Section Assignments, Part 1 of 2

Table: Frame Section Assignments, Part 1 of 2

Frame	SectionType	AutoSelect	AnalSect	DesignSect	MatProp
1	Rectangular	N.A.	C30x30	C30x30	Default
2	Rectangular	N.A.	C30x45	C30x45	Default
3	Rectangular	N.A.	C30x45	C30x45	Default
4	Rectangular	N.A.	v25x35	v25x35	Default
5	Rectangular	N.A.	ES2 3X6"	N.A.	Default
6	Rectangular	N.A.	ES2 3X6"	N.A.	Default
7	Rectangular	N.A.	C30x30	C30x30	Default
8	Rectangular	N.A.	C30x45	C30x45	Default
9	Rectangular	N.A.	C30x45	C30x45	Default
10	Rectangular	N.A.	v25x35	v25x35	Default
12	Rectangular	N.A.	ES2 2X4"	N.A.	Default
13	Rectangular	N.A.	ES2 3X6"	N.A.	Default
14	Rectangular	N.A.	ES2 3X6"	N.A.	Default
15	Rectangular	N.A.	C30x30	C30x30	Default
16	Rectangular	N.A.	C30x45	C30x45	Default
17	Rectangular	N.A.	C30x45	C30x45	Default
18	Rectangular	N.A.	v25x35	v25x35	Default
19	Rectangular	N.A.	ES2 2X4"	N.A.	Default
20	Rectangular	N.A.	ES2 2X4"	N.A.	Default
21	Rectangular	N.A.	ES2 3X6"	N.A.	Default
22	Rectangular	N.A.	ES2 3X6"	N.A.	Default
23	Rectangular	N.A.	C30x30	C30x30	Default
24	Rectangular	N.A.	C30x45	C30x45	Default
25	Rectangular	N.A.	C30x45	C30x45	Default
26	Rectangular	N.A.	v25x35	v25x35	Default
27	Rectangular	N.A.	C30x30	C30x30	Default
28	Rectangular	N.A.	C30x45	C30x45	Default
29	Rectangular	N.A.	ES2 3X6"	N.A.	Default
30	Rectangular	N.A.	ES2 3X6"	N.A.	Default
31	Rectangular	N.A.	C30x45	C30x45	Default
32	Rectangular	N.A.	v25x35	v25x35	Default
33	Rectangular	N.A.	ES2 3X6"	N.A.	Default
34	Rectangular	N.A.	ES2 3X6"	N.A.	Default
35	Rectangular	N.A.	V30X40	V30X40	Default
36	Rectangular	N.A.	ES2 2X4"	N.A.	Default
37	Rectangular	N.A.	C30x30	C30x30	Default
38	Rectangular	N.A.	C30x45	C30x45	Default
39	Rectangular	N.A.	C30x45	C30x45	Default

Table: Frame Section Assignments, Part 1 of 2

Frame	SectionType	AutoSelect	AnalSect	DesignSect	MatProp
40	Rectangular	N.A.	v25x35	v25x35	Default
41	Rectangular	N.A.	ES2 3X6"	N.A.	Default
42	Rectangular	N.A.	ES2 3X6"	N.A.	Default
43	Rectangular	N.A.	V30X40	V30X40	Default
49	Rectangular	N.A.	v25x35	v25x35	Default
50	Rectangular	N.A.	v25x35	v25x35	Default
54	Rectangular	N.A.	V30X40	V30X40	Default
55	Rectangular	N.A.	V30X40	V30X40	Default
57	Rectangular	N.A.	V30X40	V30X40	Default
58	Rectangular	N.A.	V30X40	V30X40	Default
63	Rectangular	N.A.	ES2 3X6"	N.A.	Default
64	Rectangular	N.A.	ES2 3X6"	N.A.	Default
65	Rectangular	N.A.	ES2 3X6"	N.A.	Default
66	Rectangular	N.A.	ES2 3X6"	N.A.	Default
67	Rectangular	N.A.	ES2 3X6"	N.A.	Default
69	Rectangular	N.A.	v25x35	v25x35	Default
70	Rectangular	N.A.	v25x35	v25x35	Default
71	Rectangular	N.A.	v25x35	v25x35	Default
72	Rectangular	N.A.	ES2 3X6"	N.A.	Default
75	Rectangular	N.A.	ES2 3X6"	N.A.	Default
77	Rectangular	N.A.	V30X40	V30X40	Default
78	Rectangular	N.A.	V30X40	V30X40	Default
79	Rectangular	N.A.	V30X40	V30X40	Default
80	Rectangular	N.A.	ES2 3X6"	N.A.	Default
81	Rectangular	N.A.	ES2 3X6"	N.A.	Default
82	Rectangular	N.A.	ES2 3X6"	N.A.	Default
83	Rectangular	N.A.	ES2 3X6"	N.A.	Default
85	Rectangular	N.A.	V30X40	V30X40	Default
86	Rectangular	N.A.	V30X40	V30X40	Default
87	Rectangular	N.A.	V30X40	V30X40	Default
88	Rectangular	N.A.	ES2 3X6"	N.A.	Default
89	Rectangular	N.A.	ES2 3X6"	N.A.	Default
90	Rectangular	N.A.	ES2 3X6"	N.A.	Default
91	Rectangular	N.A.	ES2 3X6"	N.A.	Default
95	Rectangular	N.A.	ES2 3X6"	N.A.	Default
96	Rectangular	N.A.	ES2 3X6"	N.A.	Default
97	Rectangular	N.A.	ES2 3X6"	N.A.	Default
99	Rectangular	N.A.	ES2 2X4"	N.A.	Default
100	Rectangular	N.A.	ES2 2X4"	N.A.	Default
105	Rectangular	N.A.	ES2 2X4"	N.A.	Default
106	Rectangular	N.A.	ES2 2X4"	N.A.	Default
107	Rectangular	N.A.	ES2 2X4"	N.A.	Default
109	Rectangular	N.A.	ES2 2X4"	N.A.	Default
110	Rectangular	N.A.	ES2 2X4"	N.A.	Default
111	Rectangular	N.A.	ES2 2X4"	N.A.	Default
113	Rectangular	N.A.	ES2 2X4"	N.A.	Default
114	Rectangular	N.A.	ES2 2X4"	N.A.	Default
115	Rectangular	N.A.	ES2 2X4"	N.A.	Default
117	Rectangular	N.A.	ES2 2X4"	N.A.	Default
118	Rectangular	N.A.	ES2 2X4"	N.A.	Default
119	Rectangular	N.A.	ES2 2X4"	N.A.	Default
121	Rectangular	N.A.	ES2 3X6"	N.A.	Default
122	Rectangular	N.A.	ES2 3X6"	N.A.	Default
124	Rectangular	N.A.	ES2 2X4"	N.A.	Default

Table: Frame Section Assignments, Part 1 of 2

Frame	SectionType	AutoSelect	AnalSect	DesignSect	MatProp
125	Rectangular	N.A.	ES2 2X4"	N.A.	Default
127	Rectangular	N.A.	ES2 3X6"	N.A.	Default
128	Rectangular	N.A.	ES2 3X6"	N.A.	Default
129	Rectangular	N.A.	ES2 3X6"	N.A.	Default
130	Rectangular	N.A.	ES2 3X6"	N.A.	Default
131	Rectangular	N.A.	ES2 3X6"	N.A.	Default
132	Rectangular	N.A.	ES2 3X6"	N.A.	Default
133	Rectangular	N.A.	ES2 3X6"	N.A.	Default
134	Rectangular	N.A.	ES2 3X6"	N.A.	Default
135	Rectangular	N.A.	ES2 2X4"	N.A.	Default
139	Rectangular	N.A.	ES2 2X4"	N.A.	Default
140	Rectangular	N.A.	ES2 2X4"	N.A.	Default
142	Rectangular	N.A.	ES2 2X4"	N.A.	Default
148	Rectangular	N.A.	ES2 3X6"	N.A.	Default
150	Rectangular	N.A.	ES2 2X4"	N.A.	Default
152	Rectangular	N.A.	ES2 2X4"	N.A.	Default
153	Rectangular	N.A.	ES2 2X4"	N.A.	Default
154	Rectangular	N.A.	ES2 3X6"	N.A.	Default
155	Rectangular	N.A.	ES2 2X4"	N.A.	Default
157	Rectangular	N.A.	ES2 2X4"	N.A.	Default
158	Rectangular	N.A.	ES2 2X4"	N.A.	Default
160	Rectangular	N.A.	ES2 3X6"	N.A.	Default
166	Rectangular	N.A.	ES2 3X6"	N.A.	Default
169	Rectangular	N.A.	ES2 2X4"	N.A.	Default
171	Rectangular	N.A.	ES2 3X6"	N.A.	Default
172	Rectangular	N.A.	ES2 3X6"	N.A.	Default
173	Rectangular	N.A.	ES2 3X6"	N.A.	Default
174	Rectangular	N.A.	ES2 3X6"	N.A.	Default
176	Rectangular	N.A.	ES2 2X4"	N.A.	Default
178	Rectangular	N.A.	ES2 3X6"	N.A.	Default
183	Rectangular	N.A.	ES2 2X4"	N.A.	Default
232	Rectangular	N.A.	ES2 3X6"	N.A.	Default
238	Rectangular	N.A.	ES2 3X6"	N.A.	Default
246	Rectangular	N.A.	ES2 3X6"	N.A.	Default
247	Rectangular	N.A.	ES2 3X6"	N.A.	Default
248	Rectangular	N.A.	ES2 3X6"	N.A.	Default
249	Rectangular	N.A.	ES2 3X6"	N.A.	Default
250	Rectangular	N.A.	ES2 3X6"	N.A.	Default
251	Rectangular	N.A.	ES2 3X6"	N.A.	Default
252	Rectangular	N.A.	ES2 3X6"	N.A.	Default
253	Rectangular	N.A.	ES2 3X6"	N.A.	Default
269	Rectangular	N.A.	ES2 3X6"	N.A.	Default
270	Rectangular	N.A.	ES2 3X6"	N.A.	Default
271	Rectangular	N.A.	ES2 3X6"	N.A.	Default
275	Rectangular	N.A.	ES2 3X6"	N.A.	Default
276	Rectangular	N.A.	ES2 3X6"	N.A.	Default
277	Rectangular	N.A.	ES2 3X6"	N.A.	Default
278	Rectangular	N.A.	ES2 3X6"	N.A.	Default
279	Rectangular	N.A.	ES2 2X4"	N.A.	Default
280	Rectangular	N.A.	ES2 2X4"	N.A.	Default
281	Rectangular	N.A.	ES2 2X4"	N.A.	Default
282	Rectangular	N.A.	ES2 2X4"	N.A.	Default
283	Rectangular	N.A.	ES2 2X4"	N.A.	Default
284	Rectangular	N.A.	ES2 3X6"	N.A.	Default

Table: Frame Section Assignments, Part 1 of 2

Frame	SectionType	AutoSelect	AnalSect	DesignSect	MatProp
285	Rectangular	N.A.	ES2 3X6"	N.A.	Default
286	Rectangular	N.A.	ES2 3X6"	N.A.	Default
287	Rectangular	N.A.	ES2 3X6"	N.A.	Default
288	Rectangular	N.A.	ES2 2X4"	N.A.	Default
289	Rectangular	N.A.	ES2 2X4"	N.A.	Default
290	Rectangular	N.A.	ES2 2X4"	N.A.	Default
291	Rectangular	N.A.	ES2 2X4"	N.A.	Default
292	Rectangular	N.A.	ES2 3X6"	N.A.	Default
293	Rectangular	N.A.	ES2 3X6"	N.A.	Default
294	Rectangular	N.A.	ES2 3X6"	N.A.	Default
296	Rectangular	N.A.	ES2 3X6"	N.A.	Default
297	Rectangular	N.A.	ES2 3X6"	N.A.	Default
298	Rectangular	N.A.	ES2 2X4"	N.A.	Default
299	Rectangular	N.A.	ES2 2X4"	N.A.	Default
300	Rectangular	N.A.	ES2 2X4"	N.A.	Default
301	Rectangular	N.A.	ES2 2X4"	N.A.	Default
302	Rectangular	N.A.	ES2 3X6"	N.A.	Default
303	Rectangular	N.A.	ES2 3X6"	N.A.	Default
304	Rectangular	N.A.	ES2 3X6"	N.A.	Default
305	Rectangular	N.A.	ES2 3X6"	N.A.	Default
306	Rectangular	N.A.	ES2 3X6"	N.A.	Default
307	Rectangular	N.A.	ES2 3X6"	N.A.	Default
308	Rectangular	N.A.	ES2 2X4"	N.A.	Default
309	Rectangular	N.A.	ES2 2X4"	N.A.	Default
310	Rectangular	N.A.	ES2 2X4"	N.A.	Default
311	Rectangular	N.A.	ES2 2X4"	N.A.	Default
312	Rectangular	N.A.	ES2 3X6"	N.A.	Default
313	Rectangular	N.A.	ES2 3X6"	N.A.	Default
318	Rectangular	N.A.	ES2 2X4"	N.A.	Default
319	Rectangular	N.A.	ES2 2X4"	N.A.	Default
320	Rectangular	N.A.	ES2 2X4"	N.A.	Default
321	Rectangular	N.A.	ES2 2X4"	N.A.	Default
329	Rectangular	N.A.	ES2 3X6"	N.A.	Default
330	Rectangular	N.A.	ES2 3X6"	N.A.	Default
331	Rectangular	N.A.	ES2 3X6"	N.A.	Default
339	Rectangular	N.A.	ES2 2X4"	N.A.	Default
340	Rectangular	N.A.	ES2 2X4"	N.A.	Default
341	Rectangular	N.A.	ES2 2X4"	N.A.	Default
348	Rectangular	N.A.	ES2 2X4"	N.A.	Default
349	Rectangular	N.A.	ES2 2X4"	N.A.	Default
350	Rectangular	N.A.	ES2 2X4"	N.A.	Default
351	Rectangular	N.A.	ES2 2X4"	N.A.	Default
358	Rectangular	N.A.	ES2 2X4"	N.A.	Default
360	Rectangular	N.A.	ES2 2X4"	N.A.	Default
361	Rectangular	N.A.	ES2 2X4"	N.A.	Default
368	Rectangular	N.A.	ES2 2X4"	N.A.	Default
369	Rectangular	N.A.	ES2 2X4"	N.A.	Default
370	Rectangular	N.A.	ES2 2X4"	N.A.	Default
371	Rectangular	N.A.	ES2 2X4"	N.A.	Default
378	Rectangular	N.A.	ES2 2X4"	N.A.	Default
379	Rectangular	N.A.	ES2 2X4"	N.A.	Default
380	Rectangular	N.A.	ES2 2X4"	N.A.	Default
381	Rectangular	N.A.	ES2 2X4"	N.A.	Default
388	Rectangular	N.A.	ES2 3X6"	N.A.	Default

Table: Frame Section Assignments, Part 1 of 2

Frame	SectionType	AutoSelect	AnalSect	DesignSect	MatProp
389	Rectangular	N.A.	ES2 3X6"	N.A.	Default
390	Rectangular	N.A.	ES2 3X6"	N.A.	Default
391	Rectangular	N.A.	ES2 3X6"	N.A.	Default
403	Rectangular	N.A.	ES2 3X6"	N.A.	Default
405	Rectangular	N.A.	ES2 3X6"	N.A.	Default
406	Rectangular	N.A.	ES2 3X6"	N.A.	Default
407	Rectangular	N.A.	ES2 3X6"	N.A.	Default
408	Rectangular	N.A.	ES2 3X6"	N.A.	Default
419	Rectangular	N.A.	ES2 2X4"	N.A.	Default
420	Rectangular	N.A.	ES2 2X4"	N.A.	Default
421	Rectangular	N.A.	ES2 3X6"	N.A.	Default
422	Rectangular	N.A.	ES2 3X6"	N.A.	Default
423	Rectangular	N.A.	ES2 3X6"	N.A.	Default
424	Rectangular	N.A.	ES2 3X6"	N.A.	Default
425	Rectangular	N.A.	ES2 3X6"	N.A.	Default
426	Rectangular	N.A.	ES2 3X6"	N.A.	Default
427	Rectangular	N.A.	ES2 3X6"	N.A.	Default
428	Rectangular	N.A.	ES2 3X6"	N.A.	Default
454	Rectangular	N.A.	ES2 3X6"	N.A.	Default
455	Rectangular	N.A.	ES2 3X6"	N.A.	Default
456	Rectangular	N.A.	ES2 3X6"	N.A.	Default
457	Rectangular	N.A.	ES2 3X6"	N.A.	Default
458	Rectangular	N.A.	ES2 3X6"	N.A.	Default
459	Rectangular	N.A.	ES2 3X6"	N.A.	Default
469	Rectangular	N.A.	ES2 3X6"	N.A.	Default
474	Rectangular	N.A.	ES2 3X6"	N.A.	Default
475	Rectangular	N.A.	ES2 3X6"	N.A.	Default
476	Rectangular	N.A.	ES2 3X6"	N.A.	Default
477	Rectangular	N.A.	ES2 3X6"	N.A.	Default
478	Rectangular	N.A.	ES2 3X6"	N.A.	Default

Table: Frame Section Assignments, Part 2 of 2

Table: Frame Section Assignments, Part 2 of 2

Frame	NPSectType	NPSectLen	NPSectRD
		m	
1			
2			
3			
4			
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14			
15			
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Table: Frame Section Assignments, Part 2 of 2

Frame	NPSectType	NPSectLen	NPSectRD
		m	
19			
20			
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25			
26			
27			
28			
29			
30			
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Table: Frame Section Assignments, Part 2 of 2

Frame	NPSectType	NPSectLen	NPSectRD
		m	
91			
95			
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105			
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169			
171			
172			
173			
174			
176			
178			
183			
232			
238			

Table: Frame Section Assignments, Part 2 of 2

Frame	NPSectType	NPSectLen	NPSectRD
		m	
246			
247			
248			
249			
250			
251			
252			
253			
269			
270			
271			
275			
276			
277			
278			
279			
280			
281			
282			
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312			
313			
318			
319			
320			
321			
329			

Table: Frame Section Assignments, Part 2 of 2

Frame	NPSectType	NPSectLen	NPSectRD
		m	
330			
331			
339			
340			
341			
348			
349			
350			
351			
358			
360			
361			
368			
369			
370			
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469			
474			
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476			
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478			

Table: Frame Loads - Distributed, Part 1 of 3

Table: Frame Loads - Distributed, Part 1 of 3

Frame	LoadPat	CoordSys	Type	Dir	DistType	RelDistA
77	DEAD	GLOBAL	Force	Gravity	RelDist	0.
77	live	GLOBAL	Force	Gravity	RelDist	0.
78	DEAD	GLOBAL	Force	Gravity	RelDist	0.
78	live	GLOBAL	Force	Gravity	RelDist	0.
79	DEAD	GLOBAL	Force	Gravity	RelDist	0.
79	live	GLOBAL	Force	Gravity	RelDist	0.
85	DEAD	GLOBAL	Force	Gravity	RelDist	0.
85	live	GLOBAL	Force	Gravity	RelDist	0.
86	DEAD	GLOBAL	Force	Gravity	RelDist	0.
86	live	GLOBAL	Force	Gravity	RelDist	0.
87	DEAD	GLOBAL	Force	Gravity	RelDist	0.
87	live	GLOBAL	Force	Gravity	RelDist	0.
246	DEAD	GLOBAL	Force	Gravity	RelDist	0.
246	live	GLOBAL	Force	Gravity	RelDist	0.
246	DEAD	GLOBAL	Force	Gravity	RelDist	0.
246	live	GLOBAL	Force	Gravity	RelDist	0.
247	DEAD	GLOBAL	Force	Gravity	RelDist	0.
247	live	GLOBAL	Force	Gravity	RelDist	0.
247	DEAD	GLOBAL	Force	Gravity	RelDist	0.
247	live	GLOBAL	Force	Gravity	RelDist	0.
248	DEAD	GLOBAL	Force	Gravity	RelDist	0.
248	live	GLOBAL	Force	Gravity	RelDist	0.
248	DEAD	GLOBAL	Force	Gravity	RelDist	0.
248	live	GLOBAL	Force	Gravity	RelDist	0.
249	DEAD	GLOBAL	Force	Gravity	RelDist	0.
249	live	GLOBAL	Force	Gravity	RelDist	0.
249	DEAD	GLOBAL	Force	Gravity	RelDist	0.
249	live	GLOBAL	Force	Gravity	RelDist	0.
250	DEAD	GLOBAL	Force	Gravity	RelDist	0.
250	live	GLOBAL	Force	Gravity	RelDist	0.
250	DEAD	GLOBAL	Force	Gravity	RelDist	0.
250	live	GLOBAL	Force	Gravity	RelDist	0.
251	DEAD	GLOBAL	Force	Gravity	RelDist	0.
251	live	GLOBAL	Force	Gravity	RelDist	0.
251	DEAD	GLOBAL	Force	Gravity	RelDist	0.
251	live	GLOBAL	Force	Gravity	RelDist	0.
252	DEAD	GLOBAL	Force	Gravity	RelDist	0.
252	live	GLOBAL	Force	Gravity	RelDist	0.
252	DEAD	GLOBAL	Force	Gravity	RelDist	0.
252	live	GLOBAL	Force	Gravity	RelDist	0.
253	DEAD	GLOBAL	Force	Gravity	RelDist	0.
253	live	GLOBAL	Force	Gravity	RelDist	0.
253	DEAD	GLOBAL	Force	Gravity	RelDist	0.
253	live	GLOBAL	Force	Gravity	RelDist	0.
269	DEAD	GLOBAL	Force	Gravity	RelDist	0.
269	live	GLOBAL	Force	Gravity	RelDist	0.
269	DEAD	GLOBAL	Force	Gravity	RelDist	0.
269	live	GLOBAL	Force	Gravity	RelDist	0.
270	DEAD	GLOBAL	Force	Gravity	RelDist	0.
270	live	GLOBAL	Force	Gravity	RelDist	0.
270	DEAD	GLOBAL	Force	Gravity	RelDist	0.
270	live	GLOBAL	Force	Gravity	RelDist	0.
271	DEAD	GLOBAL	Force	Gravity	RelDist	0.

Table: Frame Loads - Distributed, Part 1 of 3

Frame	LoadPat	CoordSys	Type	Dir	DistType	RelDistA
271	live	GLOBAL	Force	Gravity	RelDist	0.
271	DEAD	GLOBAL	Force	Gravity	RelDist	0.
271	live	GLOBAL	Force	Gravity	RelDist	0.
279	DEAD	GLOBAL	Force	Gravity	RelDist	0.
279	live	GLOBAL	Force	Gravity	RelDist	0.
280	DEAD	GLOBAL	Force	Gravity	RelDist	0.
280	live	GLOBAL	Force	Gravity	RelDist	0.
281	DEAD	GLOBAL	Force	Gravity	RelDist	0.
281	live	GLOBAL	Force	Gravity	RelDist	0.
288	DEAD	GLOBAL	Force	Gravity	RelDist	0.
288	live	GLOBAL	Force	Gravity	RelDist	0.
289	DEAD	GLOBAL	Force	Gravity	RelDist	0.
289	live	GLOBAL	Force	Gravity	RelDist	0.
290	DEAD	GLOBAL	Force	Gravity	RelDist	0.
290	live	GLOBAL	Force	Gravity	RelDist	0.
291	DEAD	GLOBAL	Force	Gravity	RelDist	0.
291	live	GLOBAL	Force	Gravity	RelDist	0.
298	DEAD	GLOBAL	Force	Gravity	RelDist	0.
298	live	GLOBAL	Force	Gravity	RelDist	0.
299	DEAD	GLOBAL	Force	Gravity	RelDist	0.
299	live	GLOBAL	Force	Gravity	RelDist	0.
300	DEAD	GLOBAL	Force	Gravity	RelDist	0.
300	live	GLOBAL	Force	Gravity	RelDist	0.
301	DEAD	GLOBAL	Force	Gravity	RelDist	0.
301	live	GLOBAL	Force	Gravity	RelDist	0.
308	DEAD	GLOBAL	Force	Gravity	RelDist	0.
308	live	GLOBAL	Force	Gravity	RelDist	0.
309	DEAD	GLOBAL	Force	Gravity	RelDist	0.
309	live	GLOBAL	Force	Gravity	RelDist	0.
310	DEAD	GLOBAL	Force	Gravity	RelDist	0.
310	live	GLOBAL	Force	Gravity	RelDist	0.
311	DEAD	GLOBAL	Force	Gravity	RelDist	0.
311	live	GLOBAL	Force	Gravity	RelDist	0.
318	DEAD	GLOBAL	Force	Gravity	RelDist	0.
318	live	GLOBAL	Force	Gravity	RelDist	0.
319	DEAD	GLOBAL	Force	Gravity	RelDist	0.
319	live	GLOBAL	Force	Gravity	RelDist	0.
320	DEAD	GLOBAL	Force	Gravity	RelDist	0.
320	live	GLOBAL	Force	Gravity	RelDist	0.
321	DEAD	GLOBAL	Force	Gravity	RelDist	0.
321	live	GLOBAL	Force	Gravity	RelDist	0.
329	DEAD	GLOBAL	Force	Gravity	RelDist	0.
329	live	GLOBAL	Force	Gravity	RelDist	0.
329	DEAD	GLOBAL	Force	Gravity	RelDist	0.
329	live	GLOBAL	Force	Gravity	RelDist	0.
330	DEAD	GLOBAL	Force	Gravity	RelDist	0.
330	live	GLOBAL	Force	Gravity	RelDist	0.
330	DEAD	GLOBAL	Force	Gravity	RelDist	0.
330	live	GLOBAL	Force	Gravity	RelDist	0.
331	DEAD	GLOBAL	Force	Gravity	RelDist	0.
331	live	GLOBAL	Force	Gravity	RelDist	0.
331	DEAD	GLOBAL	Force	Gravity	RelDist	0.
331	live	GLOBAL	Force	Gravity	RelDist	0.
339	DEAD	GLOBAL	Force	Gravity	RelDist	0.

Table: Frame Loads - Distributed, Part 1 of 3

Frame	LoadPat	CoordSys	Type	Dir	DistType	RelDistA
339	live	GLOBAL	Force	Gravity	RelDist	0.
340	DEAD	GLOBAL	Force	Gravity	RelDist	0.
340	live	GLOBAL	Force	Gravity	RelDist	0.
341	DEAD	GLOBAL	Force	Gravity	RelDist	0.
341	live	GLOBAL	Force	Gravity	RelDist	0.
348	DEAD	GLOBAL	Force	Gravity	RelDist	0.
348	live	GLOBAL	Force	Gravity	RelDist	0.
349	DEAD	GLOBAL	Force	Gravity	RelDist	0.
349	live	GLOBAL	Force	Gravity	RelDist	0.
350	DEAD	GLOBAL	Force	Gravity	RelDist	0.
350	live	GLOBAL	Force	Gravity	RelDist	0.
351	DEAD	GLOBAL	Force	Gravity	RelDist	0.
351	live	GLOBAL	Force	Gravity	RelDist	0.
358	DEAD	GLOBAL	Force	Gravity	RelDist	0.
358	live	GLOBAL	Force	Gravity	RelDist	0.
360	DEAD	GLOBAL	Force	Gravity	RelDist	0.
360	live	GLOBAL	Force	Gravity	RelDist	0.
361	DEAD	GLOBAL	Force	Gravity	RelDist	0.
361	live	GLOBAL	Force	Gravity	RelDist	0.
368	DEAD	GLOBAL	Force	Gravity	RelDist	0.
368	live	GLOBAL	Force	Gravity	RelDist	0.
369	DEAD	GLOBAL	Force	Gravity	RelDist	0.
369	live	GLOBAL	Force	Gravity	RelDist	0.
370	DEAD	GLOBAL	Force	Gravity	RelDist	0.
370	live	GLOBAL	Force	Gravity	RelDist	0.
371	DEAD	GLOBAL	Force	Gravity	RelDist	0.
371	live	GLOBAL	Force	Gravity	RelDist	0.
378	DEAD	GLOBAL	Force	Gravity	RelDist	0.
378	live	GLOBAL	Force	Gravity	RelDist	0.
379	DEAD	GLOBAL	Force	Gravity	RelDist	0.
379	live	GLOBAL	Force	Gravity	RelDist	0.
380	DEAD	GLOBAL	Force	Gravity	RelDist	0.
380	live	GLOBAL	Force	Gravity	RelDist	0.
381	DEAD	GLOBAL	Force	Gravity	RelDist	0.
381	live	GLOBAL	Force	Gravity	RelDist	0.
388	DEAD	GLOBAL	Force	Gravity	RelDist	0.
388	live	GLOBAL	Force	Gravity	RelDist	0.
388	DEAD	GLOBAL	Force	Gravity	RelDist	0.
388	live	GLOBAL	Force	Gravity	RelDist	0.
389	DEAD	GLOBAL	Force	Gravity	RelDist	0.
389	live	GLOBAL	Force	Gravity	RelDist	0.
389	DEAD	GLOBAL	Force	Gravity	RelDist	0.
389	live	GLOBAL	Force	Gravity	RelDist	0.
390	DEAD	GLOBAL	Force	Gravity	RelDist	0.
390	live	GLOBAL	Force	Gravity	RelDist	0.
390	DEAD	GLOBAL	Force	Gravity	RelDist	0.
390	live	GLOBAL	Force	Gravity	RelDist	0.
391	DEAD	GLOBAL	Force	Gravity	RelDist	0.
391	live	GLOBAL	Force	Gravity	RelDist	0.
391	DEAD	GLOBAL	Force	Gravity	RelDist	0.
391	live	GLOBAL	Force	Gravity	RelDist	0.
19	DEAD	GLOBAL	Force	Gravity	RelDist	0.
20	DEAD	GLOBAL	Force	Gravity	RelDist	0.
12	DEAD	GLOBAL	Force	Gravity	RelDist	0.

Table: Frame Loads - Distributed, Part 1 of 3

Frame	LoadPat	CoordSys	Type	Dir	DistType	RelDistA
36	DEAD	GLOBAL	Force	Gravity	RelDist	0.
419	DEAD	GLOBAL	Force	Gravity	RelDist	0.
419	live	GLOBAL	Force	Gravity	RelDist	0.
420	DEAD	GLOBAL	Force	Gravity	RelDist	0.
420	live	GLOBAL	Force	Gravity	RelDist	0.
54	DEAD	GLOBAL	Force	Gravity	RelDist	0.
54	live	GLOBAL	Force	Gravity	RelDist	0.
55	DEAD	GLOBAL	Force	Gravity	RelDist	0.
55	live	GLOBAL	Force	Gravity	RelDist	0.
57	DEAD	GLOBAL	Force	Gravity	RelDist	0.
57	live	GLOBAL	Force	Gravity	RelDist	0.
58	DEAD	GLOBAL	Force	Gravity	RelDist	0.
58	live	GLOBAL	Force	Gravity	RelDist	0.
81	DEAD	GLOBAL	Force	Gravity	RelDist	0.
81	live	GLOBAL	Force	Gravity	RelDist	0.
81	DEAD	GLOBAL	Force	Gravity	RelDist	0.
81	live	GLOBAL	Force	Gravity	RelDist	0.
82	DEAD	GLOBAL	Force	Gravity	RelDist	0.
82	live	GLOBAL	Force	Gravity	RelDist	0.
82	DEAD	GLOBAL	Force	Gravity	RelDist	0.
82	live	GLOBAL	Force	Gravity	RelDist	0.
83	DEAD	GLOBAL	Force	Gravity	RelDist	0.
83	live	GLOBAL	Force	Gravity	RelDist	0.
83	DEAD	GLOBAL	Force	Gravity	RelDist	0.
83	live	GLOBAL	Force	Gravity	RelDist	0.
88	DEAD	GLOBAL	Force	Gravity	RelDist	0.
88	live	GLOBAL	Force	Gravity	RelDist	0.
88	DEAD	GLOBAL	Force	Gravity	RelDist	0.
88	live	GLOBAL	Force	Gravity	RelDist	0.
89	DEAD	GLOBAL	Force	Gravity	RelDist	0.
89	live	GLOBAL	Force	Gravity	RelDist	0.
89	DEAD	GLOBAL	Force	Gravity	RelDist	0.
89	live	GLOBAL	Force	Gravity	RelDist	0.
90	DEAD	GLOBAL	Force	Gravity	RelDist	0.
90	live	GLOBAL	Force	Gravity	RelDist	0.
90	DEAD	GLOBAL	Force	Gravity	RelDist	0.
90	live	GLOBAL	Force	Gravity	RelDist	0.
91	DEAD	GLOBAL	Force	Gravity	RelDist	0.
91	live	GLOBAL	Force	Gravity	RelDist	0.
91	DEAD	GLOBAL	Force	Gravity	RelDist	0.
91	live	GLOBAL	Force	Gravity	RelDist	0.
95	DEAD	GLOBAL	Force	Gravity	RelDist	0.
95	live	GLOBAL	Force	Gravity	RelDist	0.
95	DEAD	GLOBAL	Force	Gravity	RelDist	0.
95	live	GLOBAL	Force	Gravity	RelDist	0.
96	DEAD	GLOBAL	Force	Gravity	RelDist	0.
96	live	GLOBAL	Force	Gravity	RelDist	0.
96	DEAD	GLOBAL	Force	Gravity	RelDist	0.
96	live	GLOBAL	Force	Gravity	RelDist	0.
97	DEAD	GLOBAL	Force	Gravity	RelDist	0.
97	live	GLOBAL	Force	Gravity	RelDist	0.
97	DEAD	GLOBAL	Force	Gravity	RelDist	0.
97	live	GLOBAL	Force	Gravity	RelDist	0.
99	DEAD	GLOBAL	Force	Gravity	RelDist	0.

Table: Frame Loads - Distributed, Part 1 of 3

Frame	LoadPat	CoordSys	Type	Dir	DistType	RelDistA
99	live	GLOBAL	Force	Gravity	RelDist	0.
100	DEAD	GLOBAL	Force	Gravity	RelDist	0.
100	live	GLOBAL	Force	Gravity	RelDist	0.
105	DEAD	GLOBAL	Force	Gravity	RelDist	0.
105	live	GLOBAL	Force	Gravity	RelDist	0.
106	DEAD	GLOBAL	Force	Gravity	RelDist	0.
106	live	GLOBAL	Force	Gravity	RelDist	0.
107	DEAD	GLOBAL	Force	Gravity	RelDist	0.
107	live	GLOBAL	Force	Gravity	RelDist	0.
109	DEAD	GLOBAL	Force	Gravity	RelDist	0.
109	live	GLOBAL	Force	Gravity	RelDist	0.
110	DEAD	GLOBAL	Force	Gravity	RelDist	0.
110	live	GLOBAL	Force	Gravity	RelDist	0.
111	DEAD	GLOBAL	Force	Gravity	RelDist	0.
111	live	GLOBAL	Force	Gravity	RelDist	0.
113	DEAD	GLOBAL	Force	Gravity	RelDist	0.
113	live	GLOBAL	Force	Gravity	RelDist	0.
114	DEAD	GLOBAL	Force	Gravity	RelDist	0.
114	live	GLOBAL	Force	Gravity	RelDist	0.
115	DEAD	GLOBAL	Force	Gravity	RelDist	0.
115	live	GLOBAL	Force	Gravity	RelDist	0.
117	DEAD	GLOBAL	Force	Gravity	RelDist	0.
117	live	GLOBAL	Force	Gravity	RelDist	0.
118	DEAD	GLOBAL	Force	Gravity	RelDist	0.
118	live	GLOBAL	Force	Gravity	RelDist	0.
119	DEAD	GLOBAL	Force	Gravity	RelDist	0.
119	live	GLOBAL	Force	Gravity	RelDist	0.
121	DEAD	GLOBAL	Force	Gravity	RelDist	0.
121	live	GLOBAL	Force	Gravity	RelDist	0.
121	DEAD	GLOBAL	Force	Gravity	RelDist	0.
121	live	GLOBAL	Force	Gravity	RelDist	0.
122	DEAD	GLOBAL	Force	Gravity	RelDist	0.
122	live	GLOBAL	Force	Gravity	RelDist	0.
122	DEAD	GLOBAL	Force	Gravity	RelDist	0.
122	live	GLOBAL	Force	Gravity	RelDist	0.
124	DEAD	GLOBAL	Force	Gravity	RelDist	0.
124	live	GLOBAL	Force	Gravity	RelDist	0.
125	DEAD	GLOBAL	Force	Gravity	RelDist	0.
125	live	GLOBAL	Force	Gravity	RelDist	0.
135	DEAD	GLOBAL	Force	Gravity	RelDist	0.
135	live	GLOBAL	Force	Gravity	RelDist	0.
139	DEAD	GLOBAL	Force	Gravity	RelDist	0.
139	live	GLOBAL	Force	Gravity	RelDist	0.
140	DEAD	GLOBAL	Force	Gravity	RelDist	0.
140	live	GLOBAL	Force	Gravity	RelDist	0.
142	DEAD	GLOBAL	Force	Gravity	RelDist	0.
142	live	GLOBAL	Force	Gravity	RelDist	0.
150	DEAD	GLOBAL	Force	Gravity	RelDist	0.
150	live	GLOBAL	Force	Gravity	RelDist	0.
152	DEAD	GLOBAL	Force	Gravity	RelDist	0.
152	live	GLOBAL	Force	Gravity	RelDist	0.
153	DEAD	GLOBAL	Force	Gravity	RelDist	0.
153	live	GLOBAL	Force	Gravity	RelDist	0.
155	DEAD	GLOBAL	Force	Gravity	RelDist	0.

Table: Frame Loads - Distributed, Part 1 of 3

Frame	LoadPat	CoordSys	Type	Dir	DistType	RelDistA
155	live	GLOBAL	Force	Gravity	RelDist	0.
157	DEAD	GLOBAL	Force	Gravity	RelDist	0.
157	live	GLOBAL	Force	Gravity	RelDist	0.
158	DEAD	GLOBAL	Force	Gravity	RelDist	0.
158	live	GLOBAL	Force	Gravity	RelDist	0.
169	DEAD	GLOBAL	Force	Gravity	RelDist	0.
169	live	GLOBAL	Force	Gravity	RelDist	0.
171	DEAD	GLOBAL	Force	Gravity	RelDist	0.
171	live	GLOBAL	Force	Gravity	RelDist	0.
171	DEAD	GLOBAL	Force	Gravity	RelDist	0.
171	live	GLOBAL	Force	Gravity	RelDist	0.
173	DEAD	GLOBAL	Force	Gravity	RelDist	0.
173	live	GLOBAL	Force	Gravity	RelDist	0.
173	DEAD	GLOBAL	Force	Gravity	RelDist	0.
173	live	GLOBAL	Force	Gravity	RelDist	0.
174	DEAD	GLOBAL	Force	Gravity	RelDist	0.
174	live	GLOBAL	Force	Gravity	RelDist	0.
174	DEAD	GLOBAL	Force	Gravity	RelDist	0.
174	live	GLOBAL	Force	Gravity	RelDist	0.
176	DEAD	GLOBAL	Force	Gravity	RelDist	0.
183	DEAD	GLOBAL	Force	Gravity	RelDist	0.
282	live	GLOBAL	Force	Gravity	RelDist	0.
282	live	GLOBAL	Force	Gravity	RelDist	0.
283	DEAD	GLOBAL	Force	Gravity	RelDist	0.
283	live	GLOBAL	Force	Gravity	RelDist	0.

Table: Frame Loads - Distributed, Part 2 of 3

Table: Frame Loads - Distributed, Part 2 of 3

Frame	LoadPat	RelDistB	AbsDistA	AbsDistB	FOverLA	FOverLB	MOverLA
			m	m	Tonf/m	Tonf/m	Tonf-m/m
77	DEAD	1.	0.	3.6	0.547	0.547	
77	live	1.	0.	3.6	0.135	0.135	
78	DEAD	1.	0.	3.6	0.547	0.547	
78	live	1.	0.	3.6	0.135	0.135	
79	DEAD	1.	0.	3.6	0.547	0.547	
79	live	1.	0.	3.6	0.135	0.135	
85	DEAD	1.	0.	3.6	0.547	0.547	
85	live	1.	0.	3.6	0.135	0.135	
86	DEAD	1.	0.	3.6	0.547	0.547	
86	live	1.	0.	3.6	0.135	0.135	
87	DEAD	1.	0.	3.6	0.547	0.547	
87	live	1.	0.	3.6	0.135	0.135	
246	DEAD	1.	0.	1.03501	0.04	0.04	
246	live	1.	0.	1.03501	0.05	0.05	
246	DEAD	1.	0.	1.03501	0.	0.	
246	live	1.	0.	1.03501	0.	0.	
247	DEAD	1.	0.	1.03501	0.04	0.04	
247	live	1.	0.	1.03501	0.05	0.05	
247	DEAD	1.	0.	1.03501	0.	0.	
247	live	1.	0.	1.03501	0.	0.	
248	DEAD	1.	0.	1.03501	0.04	0.04	
248	live	1.	0.	1.03501	0.05	0.05	

Table: Frame Loads - Distributed, Part 2 of 3

Frame	LoadPat	RelDistB	AbsDistA	AbsDistB	FOverLA	FOverLB	MOverLA
			m	m	Tonf/m	Tonf/m	Tonf-m/m
248	DEAD	1.	0.	1.03501	0.	0.	
248	live	1.	0.	1.03501	0.	0.	
249	DEAD	1.	0.	1.03501	0.04	0.04	
249	live	1.	0.	1.03501	0.05	0.05	
249	DEAD	1.	0.	1.03501	0.	0.	
249	live	1.	0.	1.03501	0.	0.	
250	DEAD	1.	0.	1.03501	0.04	0.04	
250	live	1.	0.	1.03501	0.05	0.05	
250	DEAD	1.	0.	1.03501	0.	0.	
250	live	1.	0.	1.03501	0.	0.	
251	DEAD	1.	0.	1.03501	0.04	0.04	
251	live	1.	0.	1.03501	0.05	0.05	
251	DEAD	1.	0.	1.03501	0.	0.	
251	live	1.	0.	1.03501	0.	0.	
252	DEAD	1.	0.	1.03501	0.04	0.04	
252	live	1.	0.	1.03501	0.05	0.05	
252	DEAD	1.	0.	1.03501	0.	0.	
252	live	1.	0.	1.03501	0.	0.	
253	DEAD	1.	0.	1.03501	0.04	0.04	
253	live	1.	0.	1.03501	0.05	0.05	
253	DEAD	1.	0.	1.03501	0.	0.	
253	live	1.	0.	1.03501	0.	0.	
269	DEAD	1.	0.	3.6	0.04	0.04	
269	live	1.	0.	3.6	0.05	0.05	
269	DEAD	1.	0.	3.6	0.	0.	
269	live	1.	0.	3.6	0.	0.	
270	DEAD	1.	0.	3.6	0.04	0.04	
270	live	1.	0.	3.6	0.05	0.05	
270	DEAD	1.	0.	3.6	0.	0.	
270	live	1.	0.	3.6	0.	0.	
271	DEAD	1.	0.	3.6	0.04	0.04	
271	live	1.	0.	3.6	0.05	0.05	
271	DEAD	1.	0.	3.6	0.	0.	
271	live	1.	0.	3.6	0.	0.	
279	DEAD	1.	0.	3.6	0.04	0.04	
279	live	1.	0.	3.6	0.05	0.05	
280	DEAD	1.	0.	3.6	0.04	0.04	
280	live	1.	0.	3.6	0.05	0.05	
281	DEAD	1.	0.	3.6	0.04	0.04	
281	live	1.	0.	3.6	0.05	0.05	
288	DEAD	1.	0.	1.95	0.04	0.04	
288	live	1.	0.	1.95	0.05	0.05	
289	DEAD	1.	0.	3.6	0.04	0.04	
289	live	1.	0.	3.6	0.05	0.05	
290	DEAD	1.	0.	3.6	0.04	0.04	
290	live	1.	0.	3.6	0.05	0.05	
291	DEAD	1.	0.	3.6	0.04	0.04	
291	live	1.	0.	3.6	0.05	0.05	
298	DEAD	1.	0.	1.95	0.04	0.04	
298	live	1.	0.	1.95	0.05	0.05	
299	DEAD	1.	0.	3.6	0.04	0.04	
299	live	1.	0.	3.6	0.05	0.05	
300	DEAD	1.	0.	3.6	0.04	0.04	
300	live	1.	0.	3.6	0.05	0.05	

Table: Frame Loads - Distributed, Part 2 of 3

Frame	LoadPat	RelDistB	AbsDistA	AbsDistB	FOverLA	FOverLB	MOverLA
			m	m	Tonf/m	Tonf/m	Tonf-m/m
301	DEAD	1.	0.	3.6	0.04	0.04	
301	live	1.	0.	3.6	0.05	0.05	
308	DEAD	1.	0.	1.95	0.04	0.04	
308	live	1.	0.	1.95	0.05	0.05	
309	DEAD	1.	0.	3.6	0.04	0.04	
309	live	1.	0.	3.6	0.05	0.05	
310	DEAD	1.	0.	3.6	0.04	0.04	
310	live	1.	0.	3.6	0.05	0.05	
311	DEAD	1.	0.	3.6	0.04	0.04	
311	live	1.	0.	3.6	0.05	0.05	
318	DEAD	1.	0.	1.95	0.04	0.04	
318	live	1.	0.	1.95	0.05	0.05	
319	DEAD	1.	0.	3.6	0.04	0.04	
319	live	1.	0.	3.6	0.05	0.05	
320	DEAD	1.	0.	3.6	0.04	0.04	
320	live	1.	0.	3.6	0.05	0.05	
321	DEAD	1.	0.	3.6	0.04	0.04	
321	live	1.	0.	3.6	0.05	0.05	
329	DEAD	1.	0.	3.6	0.04	0.04	
329	live	1.	0.	3.6	0.05	0.05	
329	DEAD	1.	0.	3.6	0.	0.	
329	live	1.	0.	3.6	0.	0.	
330	DEAD	1.	0.	3.6	0.04	0.04	
330	live	1.	0.	3.6	0.05	0.05	
330	DEAD	1.	0.	3.6	0.	0.	
330	live	1.	0.	3.6	0.	0.	
331	DEAD	1.	0.	3.6	0.04	0.04	
331	live	1.	0.	3.6	0.05	0.05	
331	DEAD	1.	0.	3.6	0.	0.	
331	live	1.	0.	3.6	0.	0.	
339	DEAD	1.	0.	3.6	0.04	0.04	
339	live	1.	0.	3.6	0.05	0.05	
340	DEAD	1.	0.	3.6	0.04	0.04	
340	live	1.	0.	3.6	0.05	0.05	
341	DEAD	1.	0.	3.6	0.04	0.04	
341	live	1.	0.	3.6	0.05	0.05	
348	DEAD	1.	0.	1.95	0.04	0.04	
348	live	1.	0.	1.95	0.05	0.05	
349	DEAD	1.	0.	3.6	0.04	0.04	
349	live	1.	0.	3.6	0.05	0.05	
350	DEAD	1.	0.	3.6	0.04	0.04	
350	live	1.	0.	3.6	0.05	0.05	
351	DEAD	1.	0.	3.6	0.04	0.04	
351	live	1.	0.	3.6	0.05	0.05	
358	DEAD	1.	0.	1.95	0.04	0.04	
358	live	1.	0.	1.95	0.05	0.05	
360	DEAD	1.	0.	3.6	0.04	0.04	
360	live	1.	0.	3.6	0.05	0.05	
361	DEAD	1.	0.	3.6	0.04	0.04	
361	live	1.	0.	3.6	0.05	0.05	
368	DEAD	1.	0.	1.95	0.04	0.04	
368	live	1.	0.	1.95	0.05	0.05	
369	DEAD	1.	0.	3.6	0.04	0.04	
369	live	1.	0.	3.6	0.05	0.05	

Table: Frame Loads - Distributed, Part 2 of 3

Frame	LoadPat	RelDistB	AbsDistA	AbsDistB	FOverLA	FOverLB	MOverLA
			m	m	Tonf/m	Tonf/m	Tonf-m/m
370	DEAD	1.	0.	3.6	0.04	0.04	
370	live	1.	0.	3.6	0.05	0.05	
371	DEAD	1.	0.	3.6	0.04	0.04	
371	live	1.	0.	3.6	0.05	0.05	
378	DEAD	1.	0.	1.95	0.04	0.04	
378	live	1.	0.	1.95	0.05	0.05	
379	DEAD	1.	0.	3.6	0.04	0.04	
379	live	1.	0.	3.6	0.05	0.05	
380	DEAD	1.	0.	3.6	0.04	0.04	
380	live	1.	0.	3.6	0.05	0.05	
381	DEAD	1.	0.	3.6	0.04	0.04	
381	live	1.	0.	3.6	0.05	0.05	
388	DEAD	1.	0.	1.95	0.04	0.04	
388	live	1.	0.	1.95	0.05	0.05	
388	DEAD	1.	0.	1.95	0.	0.	
388	live	1.	0.	1.95	0.	0.	
389	DEAD	1.	0.	3.6	0.04	0.04	
389	live	1.	0.	3.6	0.05	0.05	
389	DEAD	1.	0.	3.6	0.	0.	
389	live	1.	0.	3.6	0.	0.	
390	DEAD	1.	0.	3.6	0.04	0.04	
390	live	1.	0.	3.6	0.05	0.05	
390	DEAD	1.	0.	3.6	0.	0.	
390	live	1.	0.	3.6	0.	0.	
391	DEAD	1.	0.	3.6	0.04	0.04	
391	live	1.	0.	3.6	0.05	0.05	
391	DEAD	1.	0.	3.6	0.	0.	
391	live	1.	0.	3.6	0.	0.	
19	DEAD	1.	0.	2.5	0.04	0.04	
20	DEAD	1.	0.	2.5	0.04	0.04	
12	DEAD	1.	0.	2.5	0.04	0.04	
36	DEAD	1.	0.	2.5	0.04	0.04	
419	DEAD	1.	0.	1.8	0.04	0.04	
419	live	1.	0.	1.8	0.05	0.05	
420	DEAD	1.	0.	1.8	0.04	0.04	
420	live	1.	0.	1.8	0.05	0.05	
54	DEAD	1.	0.	3.6	0.547	0.547	
54	live	1.	0.	3.6	0.135	0.135	
55	DEAD	1.	0.	3.6	0.547	0.547	
55	live	1.	0.	3.6	0.135	0.135	
57	DEAD	1.	0.	3.6	0.547	0.547	
57	live	1.	0.	3.6	0.135	0.135	
58	DEAD	1.	0.	3.6	0.547	0.547	
58	live	1.	0.	3.6	0.135	0.135	
81	DEAD	1.	0.	1.03501	0.04	0.04	
81	live	1.	0.	1.03501	0.05	0.05	
81	DEAD	1.	0.	1.03501	0.	0.	
81	live	1.	0.	1.03501	0.	0.	
82	DEAD	1.	0.	1.03501	0.04	0.04	
82	live	1.	0.	1.03501	0.05	0.05	
82	DEAD	1.	0.	1.03501	0.	0.	
82	live	1.	0.	1.03501	0.	0.	
83	DEAD	1.	0.	1.03501	0.04	0.04	
83	live	1.	0.	1.03501	0.05	0.05	

Table: Frame Loads - Distributed, Part 2 of 3

Frame	LoadPat	RelDistB	AbsDistA	AbsDistB	FOverLA	FOverLB	MOverLA
			m	m	Tonf/m	Tonf/m	Tonf-m/m
83	DEAD	1.	0.	1.03501	0.	0.	
83	live	1.	0.	1.03501	0.	0.	
88	DEAD	1.	0.	1.03501	0.04	0.04	
88	live	1.	0.	1.03501	0.05	0.05	
88	DEAD	1.	0.	1.03501	0.	0.	
88	live	1.	0.	1.03501	0.	0.	
89	DEAD	1.	0.	1.03501	0.04	0.04	
89	live	1.	0.	1.03501	0.05	0.05	
89	DEAD	1.	0.	1.03501	0.	0.	
89	live	1.	0.	1.03501	0.	0.	
90	DEAD	1.	0.	1.03501	0.04	0.04	
90	live	1.	0.	1.03501	0.05	0.05	
90	DEAD	1.	0.	1.03501	0.	0.	
90	live	1.	0.	1.03501	0.	0.	
91	DEAD	1.	0.	1.03501	0.04	0.04	
91	live	1.	0.	1.03501	0.05	0.05	
91	DEAD	1.	0.	1.03501	0.	0.	
91	live	1.	0.	1.03501	0.	0.	
95	DEAD	1.	0.	1.03501	0.04	0.04	
95	live	1.	0.	1.03501	0.05	0.05	
95	DEAD	1.	0.	1.03501	0.	0.	
95	live	1.	0.	1.03501	0.	0.	
96	DEAD	1.	0.	3.6	0.04	0.04	
96	live	1.	0.	3.6	0.05	0.05	
96	DEAD	1.	0.	3.6	0.	0.	
96	live	1.	0.	3.6	0.	0.	
97	DEAD	1.	0.	3.6	0.04	0.04	
97	live	1.	0.	3.6	0.05	0.05	
97	DEAD	1.	0.	3.6	0.	0.	
97	live	1.	0.	3.6	0.	0.	
99	DEAD	1.	0.	3.6	0.04	0.04	
99	live	1.	0.	3.6	0.05	0.05	
100	DEAD	1.	0.	3.6	0.04	0.04	
100	live	1.	0.	3.6	0.05	0.05	
105	DEAD	1.	0.	1.95	0.04	0.04	
105	live	1.	0.	1.95	0.05	0.05	
106	DEAD	1.	0.	3.6	0.04	0.04	
106	live	1.	0.	3.6	0.05	0.05	
107	DEAD	1.	0.	3.6	0.04	0.04	
107	live	1.	0.	3.6	0.05	0.05	
109	DEAD	1.	0.	1.95	0.04	0.04	
109	live	1.	0.	1.95	0.05	0.05	
110	DEAD	1.	0.	3.6	0.04	0.04	
110	live	1.	0.	3.6	0.05	0.05	
111	DEAD	1.	0.	3.6	0.04	0.04	
111	live	1.	0.	3.6	0.05	0.05	
113	DEAD	1.	0.	1.95	0.04	0.04	
113	live	1.	0.	1.95	0.05	0.05	
114	DEAD	1.	0.	3.6	0.04	0.04	
114	live	1.	0.	3.6	0.05	0.05	
115	DEAD	1.	0.	3.6	0.04	0.04	
115	live	1.	0.	3.6	0.05	0.05	
117	DEAD	1.	0.	1.95	0.04	0.04	
117	live	1.	0.	1.95	0.05	0.05	

Table: Frame Loads - Distributed, Part 2 of 3

Frame	LoadPat	RelDistB	AbsDistA	AbsDistB	FOverLA	FOverLB	MOverLA
			m	m	Tonf/m	Tonf/m	Tonf-m/m
118	DEAD	1.	0.	3.6	0.04	0.04	
118	live	1.	0.	3.6	0.05	0.05	
119	DEAD	1.	0.	3.6	0.04	0.04	
119	live	1.	0.	3.6	0.05	0.05	
121	DEAD	1.	0.	3.6	0.04	0.04	
121	live	1.	0.	3.6	0.05	0.05	
121	DEAD	1.	0.	3.6	0.	0.	
121	live	1.	0.	3.6	0.	0.	
122	DEAD	1.	0.	3.6	0.04	0.04	
122	live	1.	0.	3.6	0.05	0.05	
122	DEAD	1.	0.	3.6	0.	0.	
122	live	1.	0.	3.6	0.	0.	
124	DEAD	1.	0.	3.6	0.04	0.04	
124	live	1.	0.	3.6	0.05	0.05	
125	DEAD	1.	0.	3.6	0.04	0.04	
125	live	1.	0.	3.6	0.05	0.05	
135	DEAD	1.	0.	1.95	0.04	0.04	
135	live	1.	0.	1.95	0.05	0.05	
139	DEAD	1.	0.	3.6	0.04	0.04	
139	live	1.	0.	3.6	0.05	0.05	
140	DEAD	1.	0.	3.6	0.04	0.04	
140	live	1.	0.	3.6	0.05	0.05	
142	DEAD	1.	0.	1.95	0.04	0.04	
142	live	1.	0.	1.95	0.05	0.05	
150	DEAD	1.	0.	3.6	0.04	0.04	
150	live	1.	0.	3.6	0.05	0.05	
152	DEAD	1.	0.	1.95	0.04	0.04	
152	live	1.	0.	1.95	0.05	0.05	
153	DEAD	1.	0.	3.6	0.04	0.04	
153	live	1.	0.	3.6	0.05	0.05	
155	DEAD	1.	0.	3.6	0.04	0.04	
155	live	1.	0.	3.6	0.05	0.05	
157	DEAD	1.	0.	1.95	0.04	0.04	
157	live	1.	0.	1.95	0.05	0.05	
158	DEAD	1.	0.	3.6	0.04	0.04	
158	live	1.	0.	3.6	0.05	0.05	
169	DEAD	1.	0.	3.6	0.04	0.04	
169	live	1.	0.	3.6	0.05	0.05	
171	DEAD	1.	0.	1.95	0.04	0.04	
171	live	1.	0.	1.95	0.05	0.05	
171	DEAD	1.	0.	1.95	0.	0.	
171	live	1.	0.	1.95	0.	0.	
173	DEAD	1.	0.	3.6	0.04	0.04	
173	live	1.	0.	3.6	0.05	0.05	
173	DEAD	1.	0.	3.6	0.	0.	
173	live	1.	0.	3.6	0.	0.	
174	DEAD	1.	0.	3.6	0.04	0.04	
174	live	1.	0.	3.6	0.05	0.05	
174	DEAD	1.	0.	3.6	0.	0.	
174	live	1.	0.	3.6	0.	0.	
176	DEAD	1.	0.	2.5	0.04	0.04	
183	DEAD	1.	0.	2.5	0.04	0.04	
282	live	1.	0.	1.8	0.05	0.05	
282	live	1.	0.	1.8	0.05	0.05	

Table: Frame Loads - Distributed, Part 2 of 3

Frame	LoadPat	RelDistB	AbsDistA	AbsDistB	FOverLA	FOverLB	MOverLA
			m	m	Tonf/m	Tonf/m	Tonf-m/m
283	DEAD	1.	0.	1.8	0.04	0.04	
283	live	1.	0.	1.8	0.05	0.05	

Table: Frame Loads - Distributed, Part 3 of 3

Table: Frame Loads - Distributed, Part 3 of 3

Frame	LoadPat	MOverLB	GUID
		Tonf-m/m	
77	DEAD		4b529af1-ef34-45aa-b5bd-968bd07bc87a
77	live		2b2efe7e-a310-4b48-802f-69a7c6a5f0fc
78	DEAD		59140aac-bd3a-4042-98fa-23fe84937228
78	live		75c4f276-1863-4609-9528-10a1af6967cd
79	DEAD		f0417cbd-8907-4145-81c4-36c04d311fa3
79	live		a60bdf87-aa7c-4517-9952-95ed842e1b06
85	DEAD		9f03a5bd-a697-4ef9-b8ea-66ceaf3dcaeb
85	live		3715ddb4-08bb-4b3c-9d66-71b43eaae24a
86	DEAD		76fa3a16-120b-4cca-b313-391a12c1d759
86	live		9d75a2a7-fd6b-47d4-a234-c4f653cf9e90
87	DEAD		1a93cbf4-eb43-4e79-a4fd-3e6ae38c1ccc
87	live		89adbd90-2477-4dc8-9fd0-e4aeb77a6fc5
246	DEAD		ad820c1c-14ff-41dc-9784-d5339dbc91c2
246	live		b5e95c8c-7f21-4a36-aea3-8e2a0d4737cd
246	DEAD		ad820c1c-14ff-41dc-9784-d5339dbc91c2
246	live		b5e95c8c-7f21-4a36-aea3-8e2a0d4737cd
247	DEAD		51178ba5-605b-4011-b443-5947245779e7
247	live		34db8aff-b884-4fa8-b4b8-88b4b9a910d6
247	DEAD		51178ba5-605b-4011-b443-5947245779e7
247	live		34db8aff-b884-4fa8-b4b8-88b4b9a910d6
248	DEAD		b8739816-397f-476a-aae6-f266ff1a0b85
248	live		e11eab07-42ee-46c3-9d00-0a8796ad540c
248	DEAD		b8739816-397f-476a-aae6-f266ff1a0b85
248	live		e11eab07-42ee-46c3-9d00-0a8796ad540c
249	DEAD		51336727-5d9c-4be3-bbe5-5217afe6745e

Table: Frame Loads - Distributed, Part 3 of 3

Frame	LoadPat	MOverLB	GUID
		Tonf-m/m	
249	live		00ca64cf-637d-4c02-bf61-f10c871e0591
249	DEAD		51336727-5d9c-4be3-bbe5-5217afe6745e
249	live		00ca64cf-637d-4c02-bf61-f10c871e0591
250	DEAD		7021f983-89e9-4e17-8e44-313fcfbbe3a5
250	live		814e135c-9167-407a-8ae9-d2c2b6042765
250	DEAD		7021f983-89e9-4e17-8e44-313fcfbbe3a5
250	live		814e135c-9167-407a-8ae9-d2c2b6042765
251	DEAD		54a06000-10a6-4eb0-8721-88d73b12b93c
251	live		6b80ee20-1932-4dbd-85a6-ac0d617ca7ce
251	DEAD		54a06000-10a6-4eb0-8721-88d73b12b93c
251	live		6b80ee20-1932-4dbd-85a6-ac0d617ca7ce
252	DEAD		3cf3a0ac-7b97-44c2-a523-0c60a0e015cc
252	live		ddf80367-c8ae-4acf-84d2-205e8431a848
252	DEAD		3cf3a0ac-7b97-44c2-a523-0c60a0e015cc
252	live		ddf80367-c8ae-4acf-84d2-205e8431a848
253	DEAD		292a6b07-b21f-43e7-9ada-1fc9895c40be
253	live		e6792f43-26a3-4bfb-85ec-73bcfae30a27
253	DEAD		292a6b07-b21f-43e7-9ada-1fc9895c40be
253	live		e6792f43-26a3-4bfb-85ec-73bcfae30a27
269	DEAD		1021dc4e-24bf-472a-a585-fedd7f6f5d28
269	live		1572a7d7-a417-4b23-ac79-0250796e14e6
269	DEAD		1021dc4e-24bf-472a-a585-fedd7f6f5d28
269	live		1572a7d7-a417-4b23-ac79-0250796e14e6
270	DEAD		ff62ebec-59c7-4273-a370-fcf51db3cca9
270	live		3c1529dc-0c3f-4714-b2d2-4bc825e885d2
270	DEAD		ff62ebec-59c7-4273-a370-fcf51db3cca9
270	live		3c1529dc-0c3f-4714-b2d2-4bc825e885d2
271	DEAD		2adbe610-de26-492f-bda6-5cb64283cd3a
271	live		a22a22b4-e9e9-47a0-9e91-d4b3547a86be
271	DEAD		2adbe610-de26-492f-bda6-5cb64283cd3a

Table: Frame Loads - Distributed, Part 3 of 3

Frame	LoadPat	MOverLB	GUID
		Tonf-m/m	
271	live		a22a22b4-e9e9-47a0-9e91-d4b3547a86be
279	DEAD		01f7cfca-6c94-4d89-9eaf-85bd3f392580
279	live		2b2bf539-48d0-4979-9bde-832b90aaef70
280	DEAD		73a38a5f-7f6d-40d5-9423-8b2ead7f2f7c
280	live		b1a8a457-58d3-493d-b878-2bd59488186a
281	DEAD		b2648276-49e6-46a7-b740-f3edafbe3e32
281	live		fcc6db6e-c8ae-4b49-a9f4-886365117609
288	DEAD		49d8297e-259a-4a8d-be88-5e0f563ef6eb
288	live		4d3b442f-fcd9-4a03-8df9-b59342c88b18
289	DEAD		e879a3e1-40a5-46ae-b059-6a7a136f9ed8
289	live		42157968-4776-4b6c-ac84-0dfa950572e5
290	DEAD		1135ee14-3e7c-462c-80f2-21101ccb976b
290	live		1a0db162-a28e-4fe2-a7ab-aabe296e520c
291	DEAD		6af4faa2-a80c-423b-87fb-cb004d12715f
291	live		982dd322-fab1-4ccd-ad81-7587261471ef
298	DEAD		b40ea411-5b83-4788-b2bc-cd45eebe5df6
298	live		843a5fd3-8b72-403b-90ab-bbe7a6cfd9ac
299	DEAD		a16b41e2-ed34-449b-8c8a-102125f85409
299	live		04e8b3e6-caea-46eb-9dcc-639ad84f0392
300	DEAD		2c3d8398-b60d-424e-be16-93360d9da7b3
300	live		a77cd1c0-e326-4da0-a3b0-47ede331748e
301	DEAD		7c0c94ee-598d-47a6-8758-75fdcc653b0d
301	live		5f16e8fa-34c6-4039-aaef-e8d64b7a8553
308	DEAD		87251d2b-c04e-46cc-a9e7-130519586ef1
308	live		5fdb7e22-221e-4fd6-a9c7-766cf121ceff
309	DEAD		a0d9bf23-b8dd-4aa6-9ed0-cd2acf3fbf4a
309	live		ffeb8058-72ab-475a-9cc1-c2e8cac9bbdc
310	DEAD		7b415486-8ad2-44d7-85b0-e295320ae3e6
310	live		3b7b1775-cf0b-412f-9475-2cb93612ca98
311	DEAD		6961c97a-8c96-432e-bede-9ef531e26024

Table: Frame Loads - Distributed, Part 3 of 3

Frame	LoadPat	MOverLB	GUID
		Tonf-m/m	
311	live		e0fac7b7-144b-47e2-a8e0-922eeed67855
318	DEAD		4f5f1aac-e025-433b-80e7-0b47c1897ff2
318	live		3a0aff88-95f7-4b3a-a7ad-18b0bf757b68
319	DEAD		789a0d53-e2c7-42c0-8524-b83bf5845fd1
319	live		9227694d-208b-4a94-a656-263432fd0e36
320	DEAD		cd448a73-f40d-4ef7-a5db-51c6fd3a9d96
320	live		5dc61871-8ff6-48c5-99b8-1b4ea717bfbb
321	DEAD		41d74ec7-329a-494c-8323-017b418e8971
321	live		3dd4d16a-32dd-4ed6-afa0-5484de80adc5
329	DEAD		93815846-ee0f-4d2d-8e35-6b0e1157ab52
329	live		2a7fce96-5c61-42d7-81fb-fdd49c8d6f8e
329	DEAD		93815846-ee0f-4d2d-8e35-6b0e1157ab52
329	live		2a7fce96-5c61-42d7-81fb-fdd49c8d6f8e
330	DEAD		a8049ee4-f851-4a64-a95a-9a14def850f6
330	live		50119f8f-a96f-4b03-82b2-e5d1fe65a3a5
330	DEAD		a8049ee4-f851-4a64-a95a-9a14def850f6
330	live		50119f8f-a96f-4b03-82b2-e5d1fe65a3a5
331	DEAD		2da4fb2c-9263-4099-8a4c-77def8bcb5e5
331	live		ff0dd852-9b8d-4052-80fa-912a6479df39
331	DEAD		2da4fb2c-9263-4099-8a4c-77def8bcb5e5
331	live		ff0dd852-9b8d-4052-80fa-912a6479df39
339	DEAD		560140bc-175a-48dc-98d8-29e9217d2b6e
339	live		d386167e-534e-42e0-9f34-f83637c8f41f
340	DEAD		aeee0960-6780-4961-8792-2f3e659b6adb
340	live		938321b9-fb67-4bc7-b30b-6a7afc895f73
341	DEAD		84f1e372-613b-4e9a-95b3-527c38743e49
341	live		ae83504f-69b0-481e-99ce-bd5f2284d835
348	DEAD		5a97004d-7792-4dd6-84d0-5891a1fa5f6b
348	live		54f0c42d-fcd8-4560-9c92-f064be792148
349	DEAD		0dc25871-8a2e-4dc1-8bf5-f655eb3c9289

Table: Frame Loads - Distributed, Part 3 of 3

Frame	LoadPat	MOverLB	GUID
		Tonf-m/m	
349	live		ed624f33-fb27-4304-8bac-3849a1ecc62e
350	DEAD		1f55f3dd-ee01-4bc3-adce-69f4dcd08cae
350	live		ec830708-2b1e-43a4-ad28-57e0a70a1135
351	DEAD		77846907-b128-4e39-93eb-751be9e25b2f
351	live		d7de8cb1-18a2-4f86-b25d-d59bcf6dbe79
358	DEAD		fa08e0a0-4bf3-4f77-87ff-95780d851efa
358	live		5d4a9b40-a53b-4bd4-8459-7f0ac73e959d
360	DEAD		ccda4346-5b64-4ead-938d-b938a42d86e0
360	live		6abf0fba-e43a-46a0-9903-ca1737881c76
361	DEAD		9b67960b-30f3-41fc-8a7d-1d1c9ad9f1aa
361	live		6b2cddcc-e809-4493-bc71-332497514ccf
368	DEAD		76e7f5bc-4a0c-4f58-bab6-64b55b72ac3a
368	live		053280ea-abc5-4ecf-b86c-53530b3d0191
369	DEAD		b93c72d0-aa86-453a-89a4-b0016ac5b465
369	live		b2c46bfd-41ef-47f6-862d-e4fd18038a80
370	DEAD		1a324a99-c845-439e-8fad-5e79eee45110
370	live		44e7edaa-3240-4732-accd-86bd76e35dd9
371	DEAD		66ebf4a3-b0bf-4874-a8a8-f5af873cae9a
371	live		30f1973e-b1f4-40bb-a095-73bf27b1b3a6
378	DEAD		07b82a51-4d7f-4b56-a81d-c68be79098ff
378	live		dbf031ec-ad0e-4924-90bc-8a3d57506003
379	DEAD		02b46d6f-d242-4b21-af55-395fe35d6f4f
379	live		520fb108-b497-4fc0-89e8-97f6c721e841
380	DEAD		5f4efb6d-6914-44c6-a25d-66d9cca45682
380	live		a871684f-0d4b-4ec6-9c36-1ae6c7edeb3b
381	DEAD		4cffbb68-883f-48ea-82af-ebc9c7744287
381	live		ba53ada5-a718-48a8-83c8-4543f083b3c3
388	DEAD		3d04fbcc-cbeb-4691-80e4-4546ef8eec7d
388	live		df0f9502-20c3-40b0-8352-c29b49b64575
388	DEAD		3d04fbcc-cbeb-4691-80e4-4546ef8eec7d

Table: Frame Loads - Distributed, Part 3 of 3

Frame	LoadPat	MOverLB	GUID
		Tonf-m/m	
388	live		df0f9502-20c3-40b0-8352-c29b49b64575
389	DEAD		4755a796-5679-49e8-8fca-b9bd45bb67d5
389	live		8413b5e9-f9dd-4caa-945e-539e38841a13
389	DEAD		4755a796-5679-49e8-8fca-b9bd45bb67d5
389	live		8413b5e9-f9dd-4caa-945e-539e38841a13
390	DEAD		959a064c-5f7a-4480-89d9-89d980c87320
390	live		a3bb3ddd-5e35-4cbb-b3d2-6e4bca76fea6
390	DEAD		959a064c-5f7a-4480-89d9-89d980c87320
390	live		a3bb3ddd-5e35-4cbb-b3d2-6e4bca76fea6
391	DEAD		3a2057ac-760c-44a0-ac21-a3627a34a38f
391	live		df22f028-2577-471b-af78-2eb80cc0e3b5
391	DEAD		3a2057ac-760c-44a0-ac21-a3627a34a38f
391	live		df22f028-2577-471b-af78-2eb80cc0e3b5
19	DEAD		53bc80ba-b51b-4b2e-a538-19fcba5ca72d
20	DEAD		f2a124da-f219-4394-a224-383fa636a08b
12	DEAD		11d4645a-432f-49a1-8066-78bdfb1942ae
36	DEAD		fe12581e-209c-4e3e-9472-8ebeab2534dd
419	DEAD		2eda23bc-f41d-40f5-b01a-be03a2a3919d
419	live		b05e2da9-796b-4717-a1ef-b337b849ab82
420	DEAD		18b0f31f-d231-4a73-ad0c-b90361fa40e9
420	live		cb3657f0-c8d2-494d-8b7d-1ded006b3a38
54	DEAD		5c997700-1b08-4c89-a158-d9edf374d536
54	live		ab2defba-7fe4-4afb-b9c5-e531e4572846
55	DEAD		9168597a-2f75-4e2b-8232-f9124084d3af
55	live		b41dc3f3-f423-4fca-bcd2-5f5804a45423
57	DEAD		198433ef-fa88-41f7-a3df-3079fc133bc5
57	live		ef878b34-6a18-47eb-a785-9494995dc3b2
58	DEAD		0a18df32-c6c7-4eeb-9406-c89effdd8e41
58	live		6323eab0-38b4-4db2-a0d7-ca425f92d25e
81	DEAD		83b738fc-6453-4f5e-b2a9-b4110090c49f

Table: Frame Loads - Distributed, Part 3 of 3

Frame	LoadPat	MOverLB	GUID
		Tonf-m/m	
81	live		2e5510d2-9a92-4d56-8386-7640284a0365
81	DEAD		83b738fc-6453-4f5e-b2a9-b4110090c49f
81	live		2e5510d2-9a92-4d56-8386-7640284a0365
82	DEAD		5816e1e6-c739-498d-b1d2-d16fa01f46b5
82	live		bc3d4cc8-b09e-4796-8253-19ddb32d7bf3
82	DEAD		5816e1e6-c739-498d-b1d2-d16fa01f46b5
82	live		bc3d4cc8-b09e-4796-8253-19ddb32d7bf3
83	DEAD		4fa38c47-4cc5-4703-bea3-02d31054d757
83	live		004df18f-8cc1-43e5-8789-b0a9de20b4f3
83	DEAD		4fa38c47-4cc5-4703-bea3-02d31054d757
83	live		004df18f-8cc1-43e5-8789-b0a9de20b4f3
88	DEAD		903df205-651f-4206-8d80-d2808710459e
88	live		51965d03-7f8c-48b2-88eb-bb646ee05fbc
88	DEAD		903df205-651f-4206-8d80-d2808710459e
88	live		51965d03-7f8c-48b2-88eb-bb646ee05fbc
89	DEAD		9ec0dd10-f248-46ff-a180-10399cad8716
89	live		415793d5-6bd2-4db6-92af-b5a24c215444
89	DEAD		9ec0dd10-f248-46ff-a180-10399cad8716
89	live		415793d5-6bd2-4db6-92af-b5a24c215444
90	DEAD		8985a565-f598-4b21-a9b7-3d58e99e385c
90	live		41560466-3ea0-424d-aadc-17bd9cd0caca
90	DEAD		8985a565-f598-4b21-a9b7-3d58e99e385c
90	live		41560466-3ea0-424d-aadc-17bd9cd0caca
91	DEAD		ff3f0719-b94b-49e6-8f3f-96a43c34653b
91	live		cb4ac79d-3080-4914-b50c-3b682d55a88b
91	DEAD		ff3f0719-b94b-49e6-8f3f-96a43c34653b
91	live		cb4ac79d-3080-4914-b50c-3b682d55a88b
95	DEAD		037f7f1a-fa13-478e-a12f-67087d2bb328
95	live		33a3e1cb-f200-48cb-8f54-deebfe6bdaa1
95	DEAD		037f7f1a-fa13-478e-a12f-67087d2bb328

Table: Frame Loads - Distributed, Part 3 of 3

Frame	LoadPat	MOverLB Tonf-m/m	GUID
95	live		33a3e1cb-f200-48cb-8f54-deebfe6bdaa1
96	DEAD		c5192ec1-11cc-438d-95e2-70ed1639db70
96	live		6ed55146-f872-40cb-8630-60922e417883
96	DEAD		c5192ec1-11cc-438d-95e2-70ed1639db70
96	live		6ed55146-f872-40cb-8630-60922e417883
97	DEAD		dd99fa01-9993-4be0-bf98-52c88f4f0e13
97	live		531b4e84-b34c-449c-82e1-a6eb2caa79bb
97	DEAD		dd99fa01-9993-4be0-bf98-52c88f4f0e13
97	live		531b4e84-b34c-449c-82e1-a6eb2caa79bb
99	DEAD		92d3d181-9f62-443a-85a7-b4c009368623
99	live		f0c3443a-628d-41ff-9e5d-7f804d49cc9d
100	DEAD		a7c74e60-5cc4-414c-a1dd-96b79107d40e
100	live		2486f458-2a6f-4838-9025-c3763fda987f
105	DEAD		0f569c67-fbdb-4e66-b54b-40f990cc9fb8
105	live		f85168df-c309-4d19-86ed-3bc6075a531b
106	DEAD		eec9cc06-e221-4cee-aaa7-42f28611acc8
106	live		698eed6f-1809-41ca-b278-52d14adc9150
107	DEAD		49fb5999-1cec-4511-80be-595bd4cb9346
107	live		d0c17f7e-ff63-4fa1-9eb7-178f7a3df676
109	DEAD		39152350-564c-44c9-9354-501e8365ba3a
109	live		833599c4-6bc9-4086-9843-9a10af7c54d9
110	DEAD		0441c1b9-5213-43a4-bb26-79e97473d2c4
110	live		4f067157-9cd9-427f-a0db-c47fae096307
111	DEAD		65844524-7487-4465-8a6c-f72a90e3a08f
111	live		a1ab6681-8923-4d2a-97ee-f0c07515053f
113	DEAD		1726e2eb-af53-4b35-86a1-1eec4f83f03b
113	live		c862116c-41ea-4c4a-8517-74108c225c56
114	DEAD		1bcc7095-5a67-4537-ac55-dc39fbb28405
114	live		c00babf4-77cd-4a14-be38-1b416a6aab6f
115	DEAD		8df014df-194f-412a-a938-ea2291dde792

Table: Frame Loads - Distributed, Part 3 of 3

Frame	LoadPat	MOverLB	GUID
		Tonf-m/m	
115	live		c7f02cfc-d1a8-43d0-a9ac-0c058d52d1d5
117	DEAD		61fda8d1-dd10-4245-8482-fb3553f60f51
117	live		a8d06045-a5f7-4b64-9d41-0c7edb8b88fb
118	DEAD		4416ab57-c533-4660-8593-17b205e4dd2e
118	live		6518f443-eead-410e-8159-554427529c92
119	DEAD		b23ed412-f871-4ed5-887e-ed5384cbfdbe
119	live		1b7479b4-a764-408c-bd87-2283bde67ea8
121	DEAD		5bb14a95-9fb2-4b99-a9e5-6447abc110a5
121	live		beef1188-dcaa-4643-9c11-13438e5f50a1
121	DEAD		5bb14a95-9fb2-4b99-a9e5-6447abc110a5
121	live		beef1188-dcaa-4643-9c11-13438e5f50a1
122	DEAD		20e0561d-e3da-495b-a084-54ad2f594aa3
122	live		11e898d6-fcf8-44e6-9bcd-fdec9c1ecca1
122	DEAD		20e0561d-e3da-495b-a084-54ad2f594aa3
122	live		11e898d6-fcf8-44e6-9bcd-fdec9c1ecca1
124	DEAD		e2515a39-3fc2-418b-bd2c-974fc2151c24
124	live		df0d677e-c944-408c-baca-c8fb10c4315b
125	DEAD		b4f5ab09-7891-4db3-bce5-b6792fb2d580
125	live		91ea3204-bc0a-4878-97fe-9e816f3f065e
135	DEAD		8357622a-e4df-48e3-8109-7ebd02168fcf
135	live		6351e974-4432-41dc-94ab-2fb6bb8efb46
139	DEAD		26d86b1f-a0fe-4bed-a72b-fcd4df786eff
139	live		fc19ea06-bd13-49e6-8d7d-9e1616a3d132
140	DEAD		70b1f25d-e728-477a-b392-9aed1363b11d
140	live		24632362-e65b-4af9-8510-07e74f85a076
142	DEAD		2b70aca9-746d-4afd-9578-0e1bec979742
142	live		cbeb6621-062c-4154-b5aa-e35166aa0e19
150	DEAD		a594767f-5b91-4af5-a538-7830ba91d033
150	live		195c7ffe-58ef-4975-a10e-968cefe1437b
152	DEAD		81bf5d1d-d682-4923-8a00-61287fd5ad55

Table: Frame Loads - Distributed, Part 3 of 3

Frame	LoadPat	MOverLB	GUID
		Tonf-m/m	
152	live		35702b55-afc3-4a94-84a3-a6cb92085537
153	DEAD		d121d6f4-75bd-4eda-90e4-330035016788
153	live		8df27300-a8ba-49cb-9b25-d0fc787ce49a
155	DEAD		caf5eebc-282b-47dd-b74c-95b7b1cde568
155	live		5d246179-56c0-4e23-91da-bbdd27d2a18d
157	DEAD		ba78c010-0488-4140-a154-cf634bd09a7d
157	live		b1f4ae16-f6a6-4997-8548-3d133ab8a350
158	DEAD		7dd8baf3-123c-4f2c-819d-f90540a9bdbb
158	live		78f892ed-5d36-4335-baa8-ae8a90cf6e91
169	DEAD		8f9d95be-1aeb-4b53-8451-f668f91af0ba
169	live		01adaaee-1be4-4f59-9a9d-87cfc11d30a9
171	DEAD		0bc2a55f-dc93-4754-b456-677c2241d699
171	live		235ad889-3d7a-41d7-8581-e842de86d881
171	DEAD		0bc2a55f-dc93-4754-b456-677c2241d699
171	live		235ad889-3d7a-41d7-8581-e842de86d881
173	DEAD		77a503f5-99f7-4039-9ce3-cdd39fc1c817
173	live		f6e04dda-e743-48b9-9cbb-be721c4833f3
173	DEAD		77a503f5-99f7-4039-9ce3-cdd39fc1c817
173	live		f6e04dda-e743-48b9-9cbb-be721c4833f3
174	DEAD		0b365e8e-c49a-4e6d-9735-b8bec441c02e
174	live		d74f3dd7-ff4d-4865-b953-98e24b91ccc3
174	DEAD		0b365e8e-c49a-4e6d-9735-b8bec441c02e
174	live		d74f3dd7-ff4d-4865-b953-98e24b91ccc3
176	DEAD		36d6f2c1-9d75-40ca-89d6-721f52bddc99
183	DEAD		e570cc11-0be5-435c-96e8-bd16c9771ff9
282	live		eed43017-8408-462c-8418-88cbe3227614
282	live		eed43017-8408-462c-8418-88cbe3227614
283	DEAD		996808ea-2261-4398-a5eb-195715410c0f
283	live		55dc7f5d-26ef-4273-ac58-0e6241af3639

Chequeo de derivas

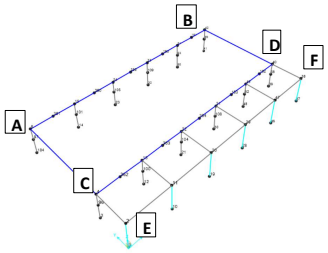
Fecha: 16/05/2025

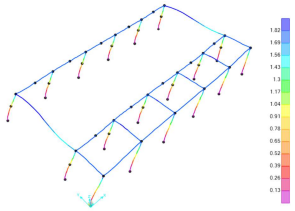
Calculo: **Elyn Sofía Montoya** Proyecto: **Atanquez**

Según capitulo A-6 de la NSR-10

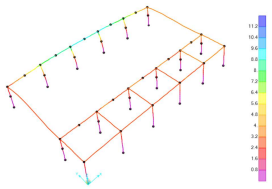
Pórtico en concreto

Sismo X





Sismo Y



Punto A

DERX_1 COMBO DERY_1

Piso	Nudo	nivel modelo	Dx (mm)	Deriva X	Deriva X %	DY (mm)	Deriva Y	Deriva Y %	Deriva Total (m)	Check
N+2.50	6	2.50	1.24	1.24	0.05%	1.71	1.71	0.07%	0.002114	Cumple
N+0.00	184	0.00	0.00			0.00				

DERX_2 COMBO DERY_2

Piso	Nudo	nivel modelo	Dx (mm)	Deriva X	Deriva X %	DY (mm)	Deriva Y	Deriva Y %	Deriva Total (m)	Check
N+2.50	6	2.5	0.93	0.93	0.04%	1.29	1.29	0.05%	0.001590	Cumple
N+0.00	184	0	0.00			0.00				

DERX_3 COMBO DERY_3

Piso	Nudo	nivel modelo	Dx (mm)	Deriva X	Deriva X %	DY (mm)	Deriva Y	Deriva Y %	Deriva Total (m)	Check
N+2.50	6	2.5	1.23	1.23	0.05%	1.74	1.74	0.07%	0.002129	Cumple
N+0.00	184	0	0.00			0.00				

Punto B

DERX_1 COMBO DERY_1

Piso	Nudo	nivel modelo	Dx (mm)	Deriva X	Deriva X %	DY (mm)	Deriva Y	Deriva Y %	Deriva Total (m)	Check
N+2.50	42	2.50	1.22	1.22	0.05%	2.55	2.55	0.10%	0.002828	Cumple
N+0.00	41	0.00	0.00			0.00				

DERX_2 COMBO DERY_2

Piso	Nudo	nivel modelo	Dx (mm)	Deriva X	Deriva X %	DY (mm)	Deriva Y	Deriva Y %	Deriva Total (m)	Check
N+2.50	42	2.5	0.91	0.91	0.04%	1.92	1.92	0.08%	0.002121	Cumple
N+0.00	41	0	0.00			0.00				

DERX_3 COMBO DERY_3

Piso	Nudo	nivel modelo	Dx (mm)	Deriva X	Deriva X %	DY (mm)	Deriva Y	Deriva Y %	Deriva Total (m)	Check
N+2.50	42	2.5	1.22	1.22	0.05%	2.57	2.57	0.10%	0.002849	Cumple
N+0.00	41	0	0.00			0.00				

Punto C

DERX_1 COMBO DERY_1

Piso	Nudo	nivel modelo	Dx (mm)	Deriva X	Deriva X %	DY (mm)	Deriva Y	Deriva Y %	Deriva Total (m)	Check
N+2.50	4	2.50	1.20	1.20	0.05%	1.68	1.68	0.07%	0.002068	Cumple
N+0.00	3	0.00	0.00			0.00				

DERX_2 COMBO DERY_2

Piso	Nudo	nivel modelo	Dx (mm)	Deriva X	Deriva X %	DY (mm)	Deriva Y	Deriva Y %	Deriva Total (m)	Check
N+2.50	4	2.5	0.91	0.91	0.04%	1.25	1.25	0.05%	0.001545	Cumple

N+0.00	3	0	0.00			0.00				

	DERX_3				COMBO	DERY_3				
Piso	**Nudo**	**nivel modelo**	**Dx (mm)**	**Deriva X**	**Deriva X %**	**DY (mm)**	**Deriva Y**	**Deriva Y %**	**Deriva Total (m)**	**Check**
N+2.50	4	2.5	1.20	1.20	0.05%	1.71	1.71	0.07%	0.002084	Cumple
N+0.00	3	0	0.00			0.00				

Punto D

	DERX_1				COMBO	DERY_1				
Piso	**Nudo**	**nivel modelo**	**Dx (mm)**	**Deriva X**	**Deriva X %**	**DY (mm)**	**Deriva Y**	**Deriva Y %**	**Deriva Total (m)**	**Check**
N+2.50	40	2.50	1.18	1.18	0.05%	2.51	2.51	0.10%	0.002770	Cumple
N+0.00	39	0.00	0.00			0.00				

	DERX_2				COMBO	DERY_2				
Piso	**Nudo**	**nivel modelo**	**Dx (mm)**	**Deriva X**	**Deriva X %**	**DY (mm)**	**Deriva Y**	**Deriva Y %**	**Deriva Total (m)**	**Check**
N+2.50	40	2.5	0.88	0.88	0.04%	1.87	1.87	0.07%	0.002063	Cumple
N+0.00	39	0	0.00			0.00				

	DERX_3				COMBO	DERY_3				
Piso	**Nudo**	**nivel modelo**	**Dx (mm)**	**Deriva X**	**Deriva X %**	**DY (mm)**	**Deriva Y**	**Deriva Y %**	**Deriva Total (m)**	**Check**
N+2.50	40	2.5	1.18	1.18	0.05%	2.53	2.53	0.10%	0.002793	Cumple
N+0.00	39	0	0.00			0.00				

Punto E

	DERX_1				COMBO	DERY_1				
Piso	**Nudo**	**nivel modelo**	**Dx (mm)**	**Deriva X**	**Deriva X %**	**DY (mm)**	**Deriva Y**	**Deriva Y %**	**Deriva Total (m)**	**Check**
N+2.50	2	2.50	1.25	1.25	0.05%	1.67	1.67	0.07%	0.002087	Cumple
N+0.00	1	0.00	0.00			0.00				

	DERX_2				COMBO	DERY_2				
Piso	**Nudo**	**nivel modelo**	**Dx (mm)**	**Deriva X**	**Deriva X %**	**DY (mm)**	**Deriva Y**	**Deriva Y %**	**Deriva Total (m)**	**Check**
N+2.50	2	2.5	0.94	0.94	0.04%	1.24	1.24	0.05%	0.001554	Cumple
N+0.00	1	0	0.00			0.00				

	DERX_3				COMBO	DERY_3				
Piso	**Nudo**	**nivel modelo**	**Dx (mm)**	**Deriva X**	**Deriva X %**	**DY (mm)**	**Deriva Y**	**Deriva Y %**	**Deriva Total (m)**	**Check**
N+2.50	2	2.5	1.25	1.25	0.05%	1.69	1.69	0.07%	0.002105	Cumple
N+0.00	1	0	0.00			0.00				

Punto F

	DERX_1				COMBO	DERY_1				
Piso	**Nudo**	**nivel modelo**	**Dx (mm)**	**Deriva X**	**Deriva X %**	**DY (mm)**	**Deriva Y**	**Deriva Y %**	**Deriva Total (m)**	**Check**
N+2.50	38	2.50	1.25	1.25	0.05%	2.49	2.49	0.10%	0.002784	Cumple
N+0.00	37	0.00	0.00			0.00				

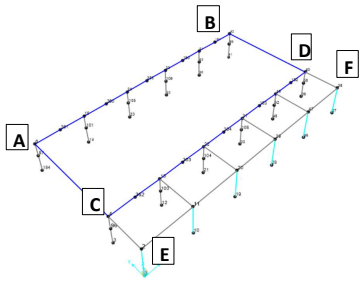
	DERX_2				COMBO	DERY_2				
Piso	**Nudo**	**nivel modelo**	**Dx (mm)**	**Deriva X**	**Deriva X %**	**DY (mm)**	**Deriva Y**	**Deriva Y %**	**Deriva Total (m)**	**Check**
N+2.50	38	2.5	0.94	0.94	0.04%	1.85	1.85	0.07%	0.002076	Cumple
N+0.00	37	0	0.00			0.00				

	DERX_3				COMBO	DERY_3				
Piso	**Nudo**	**nivel modelo**	**Dx (mm)**	**Deriva X**	**Deriva X %**	**DY (mm)**	**Deriva Y**	**Deriva Y %**	**Deriva Total (m)**	**Check**
N+2.50	38	2.5	1.25	1.25	0.05%	2.51	2.51	0.10%	0.002805	Cumple
N+0.00	37	0	0.00			0.00				

IRREGULARIDAD TORSIONAL

Proyecto: **Atanquez**

Según Tabla A.3-6 de la NSR-10



Calculo: Elyn Sofia Montoya

No presenta irregularidad torsional

COMBO DERX_1 COMBO DERY_1

	EJE: A			EJE: B				
Piso	**Nudo**	**Dx (mm)**	**DY (mm)**	**Nudo**	**Dx (mm)**	**DY (mm)**	**CHEQUEO DX**	**CHEQUEO DY**
N+2.50	6	1.24	1.715	42	1.22	2.55	Regular	Regular
N+0.00	184	0.00	0.00	41	0.00	0.00	Regular	Regular

COMBO DERX_2 COMBO DERY_2

	EJE: A			EJE: B				
Piso	**Nudo**	**Dx (mm)**	**DY (mm)**	**Nudo**	**Dx (mm)**	**DY (mm)**	**CHEQUEO DX**	**CHEQUEO DY**
N+2.50	6	0.93	1.289	42	0.91	1.9176	Regular	Regular
N+0.00	184	0.00	0.00	41	0.00	0.00	Regular	Regular

COMBO DERX_3 COMBO DERY_3

	EJE: A			EJE: B				
Piso	**Nudo**	**Dx (mm)**	**DY (mm)**	**Nudo**	**Dx (mm)**	**DY (mm)**	**CHEQUEO DX**	**CHEQUEO DY**
N+2.50	6	1.23	1.737	42	1.22	2.5747	Regular	Regular
N+0.00	184	0.00	0.00	41	0.00	0.00	Regular	Regular

COMBO DERX_1 COMBO DERY_1

	EJE: A			EJE: E				
Piso	**Nudo**	**Dx (mm)**	**DY (mm)**	**Nudo**	**Dx (mm)**	**DY (mm)**	**CHEQUEO DX**	**CHEQUEO DY**
N+2.50	6	1.24	1.715	2	1.25	1.67	Regular	Regular
N+0.00	184	0.00	0.00	1	0.00	0.00	Regular	Regular

COMBO DERX_2 COMBO DERY_2

	EJE: A			EJE: E				
Piso	**Nudo**	**Dx (mm)**	**DY (mm)**	**Nudo**	**Dx (mm)**	**DY (mm)**	**CHEQUEO DX**	**CHEQUEO DY**
N+2.50	6	0.93	1.289	2	0.94	1.2399	Regular	Regular
N+0.00	184	0.00	0.00	1	0.00	0.00	Regular	Regular

COMBO DERX_3 COMBO DERY_3

	EJE: A			EJE: E				
Piso	**Nudo**	**Dx (mm)**	**DY (mm)**	**Nudo**	**Dx (mm)**	**DY (mm)**	**CHEQUEO DX**	**CHEQUEO DY**
N+2.50	6	1.23	1.737	2	1.25	1.6943	Regular	Regular
N+0.00	184	0.00	0.00	1	0.00	0.00	Regular	Regular

COMBO DERX_1 COMBO DERY_1

	EJE: F			EJE: B				
Piso	**Nudo**	**Dx (mm)**	**DY (mm)**	**Nudo**	**Dx (mm)**	**DY (mm)**	**CHEQUEO DX**	**CHEQUEO DY**
N+2.50	38	1.25	2.489	42	1.22	2.55	Regular	Regular
N+0.00	37	0.00	0.00	41	0.00	0.00	Regular	Regular

COMBO DERX_2 COMBO DERY_2

	EJE: F			EJE: B				
Piso	**Nudo**	**Dx (mm)**	**DY (mm)**	**Nudo**	**Dx (mm)**	**DY (mm)**	**CHEQUEO DX**	**CHEQUEO DY**
N+2.50	38	0.94	1.853	42	0.91	1.9176	Regular	Regular
N+0.00	37	0.00	0.00	41	0.00	0.00	Regular	Regular

COMBO DERX_3 COMBO DERY_3

	EJE: F			EJE: B				
Piso	**Nudo**	**Dx (mm)**	**DY (mm)**	**Nudo**	**Dx (mm)**	**DY (mm)**	**CHEQUEO DX**	**CHEQUEO DY**
N+2.50	38	1.25	2.512	42	1.22	2.5747	Regular	Regular
N+0.00	37	0.00	0.00	41	0.00	0.00	Regular	Regular

COMBO DERX_1 COMBO DERY_1

	EJE: E			EJE: F				
Piso	**Nudo**	**Dx (mm)**	**DY (mm)**	**Nudo**	**Dx (mm)**	**DY (mm)**	**CHEQUEO DX**	**CHEQUEO DY**

N+2.50	2	1.25	1.671	38	1.25	2.49	Regular	Regular
N+0.00	1	0.00	0.00	37	0.00	0.00	Regular	Regular

COMBO DERX_2 COMBO DERY_2

	EJE:	E		EJE:	F			
Piso	**Nudo**	**Dx (mm)**	**DY (mm)**	**Nudo**	**Dx (mm)**	**DY (mm)**	**CHEQUEO DX**	**CHEQUEO DY**
N+2.50	2	0.94	1.240	38	0.94	1.8534	Regular	Regular
N+0.00	1	0.00	0.00	37	0.00	0.00	Regular	Regular

COMBO DERX_3 COMBO DERY_3

	EJE:	E		EJE:	F			
Piso	**Nudo**	**Dx (mm)**	**DY (mm)**	**Nudo**	**Dx (mm)**	**DY (mm)**	**CHEQUEO DX**	**CHEQUEO DY**
N+2.50	2	1.25	1.694	38	1.25	2.5123	Regular	Regular
N+0.00	1	0.00	0.00	37	0.00	0.00	Regular	Regular

Chequeo de irregularidad en vivienda

Proyecto: **Atanquez**

Calculó: Ing. Juan Hurtado Fecha: 16/05/2025

Sistema Estructural: Porticos en concreto DES
Pendulo invertido en concreto DES

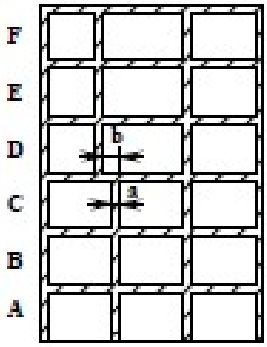
Rox=	7.00
Roy=	2.50

Resumen							
		ϕpX=	1.00	ϕrX=	1.00	**Rx=**	**7.00**
ϕa=	1.00	ϕpY=	1.00	ϕrY=	1.00	**Ry=**	**2.50**

Chequeo de irregularidad en Altura

Tabla A.3-6 de NSR-10

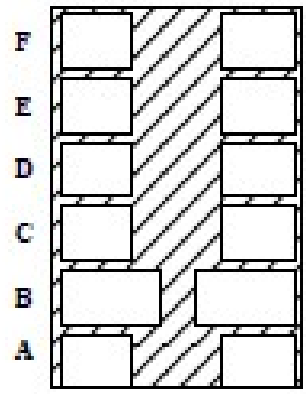
1. Tipo 4A-Desplazamiento dentro del plano de acción



Hay tipo 4A? NO

ϕa= 1.00

2. Tipo 5aA-Piso debil y piso extremo debil



Hay piso débil? NO Extremo? NO

ϕa= 1.00

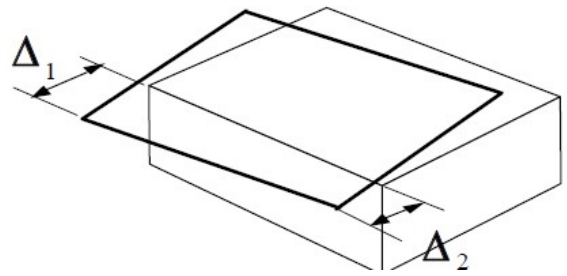
Factor de reducción en planta

ϕa= **1.00**

Chequeo de irregularidad en Altura
Tabla A.3-6 de NSR-10

Chequeo de irregularidad en Altura
Tabla A.3-6 de NSR-10

1. Tipo 1P- Irregularidad Torsional tipo 1P

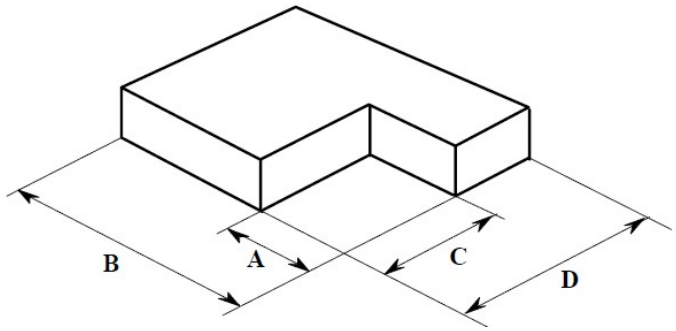


Según análisis de derivas

En X? NO Extrema? NO
En Y? NO Extrema? NO

ϕ_{pX}= 1.00
ϕ_{pY}= 1.00

2. Tipo 2P-Retrocesos en las esquinas



A= 0.00 m
B= 0.00 m
C= 0.00 m
D= 0.00 m

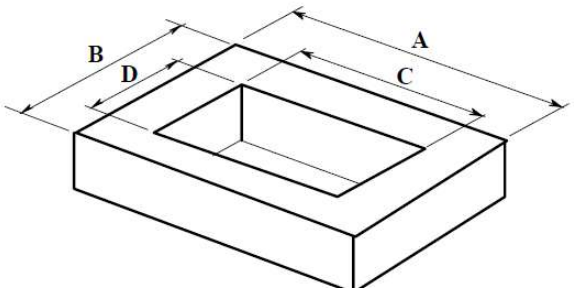
$A > 0.15B$? NO

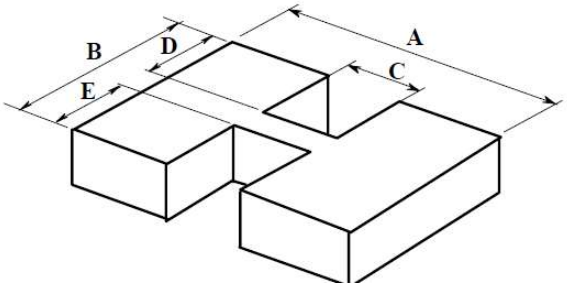
Y

$C > 0.15D$? NO

ϕ_p= 1

3. Tipo 3P-Irregularidad en el diafragma





A= 0.00 m
B= 0.00 m
C= 0.00 m
D= 0.00 m
E= 0.00 m

$Caso\ 1\ C\ x\ D > 0.5\ A\ x\ B$? NO

O

Caso 2 (C x D + C x E) $> 0.5\ A\ x\ B$?

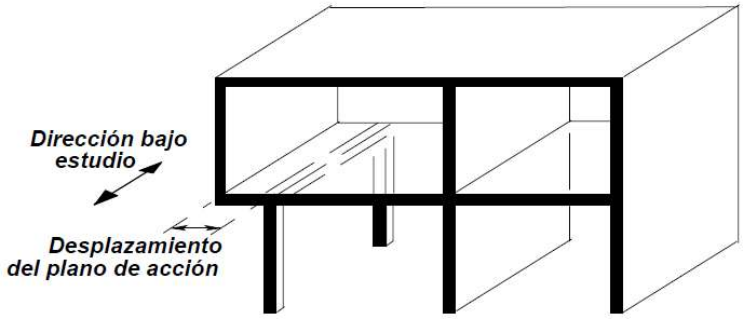
Caso **1**

ϕ_p= 1.0

Chequeo de irregularidad en Altura

Tabla A.3-6 de NSR-10

4. Tipo 4P-Desplazamiento en los planos de acción

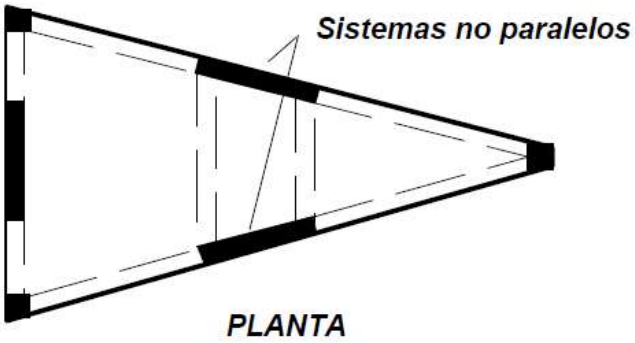


En X? NO

En Z? NO

ϕ_{pX}= 1.00
ϕ_{pY}= 1.00

5. Tipo 5P-Sistemas no paraleros



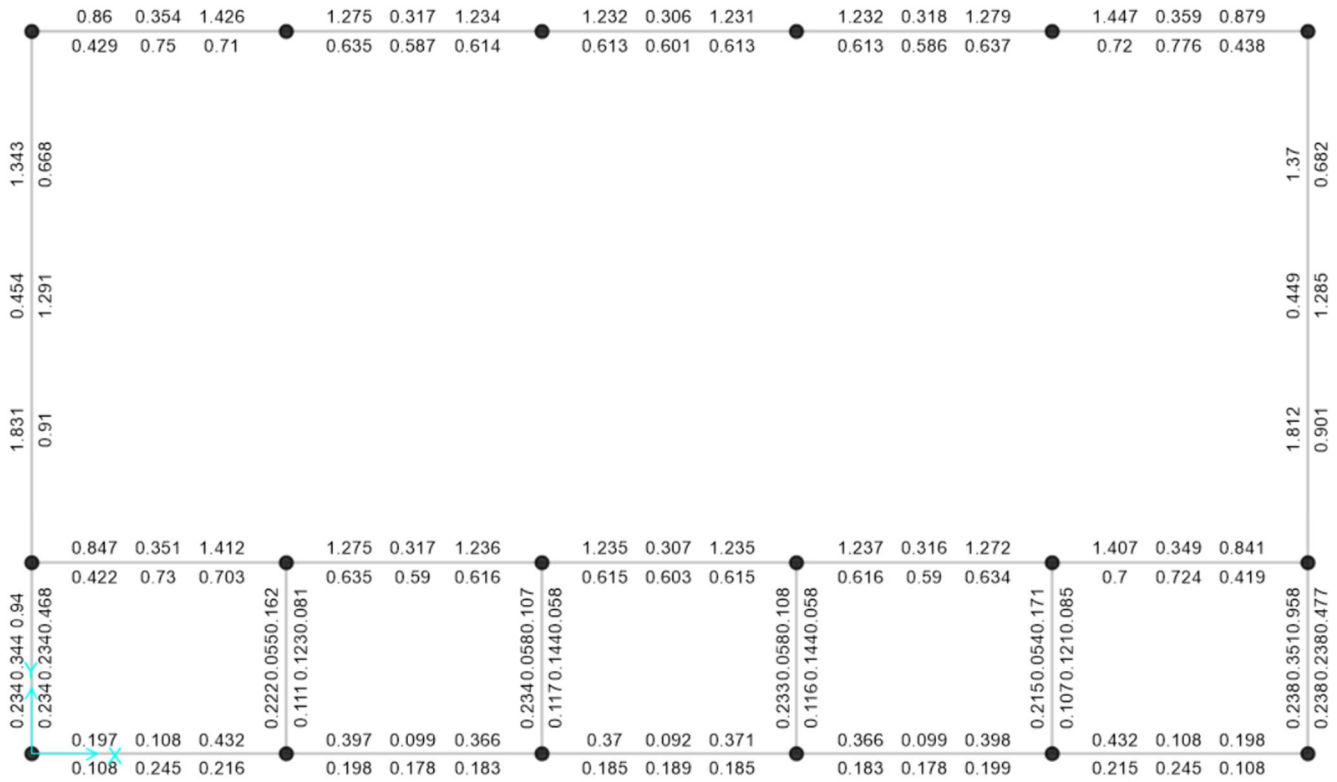
Sistemas no paralelos? NO

ϕ_{p}= 1.00

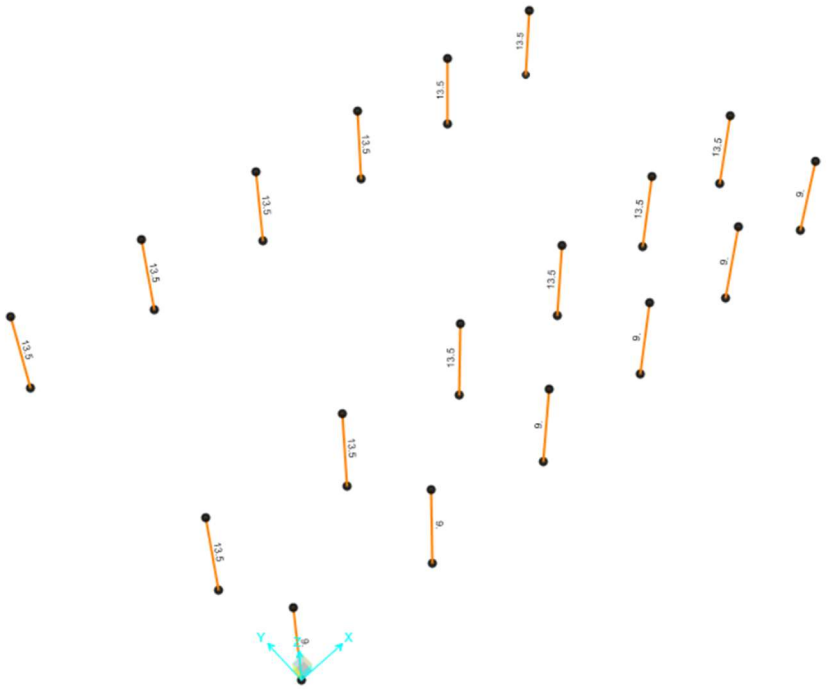
FACTOR DE REDUCCIÓN EN PLANTA

ϕ_{pX}= 1.00
ϕ_{pY}= 1.00

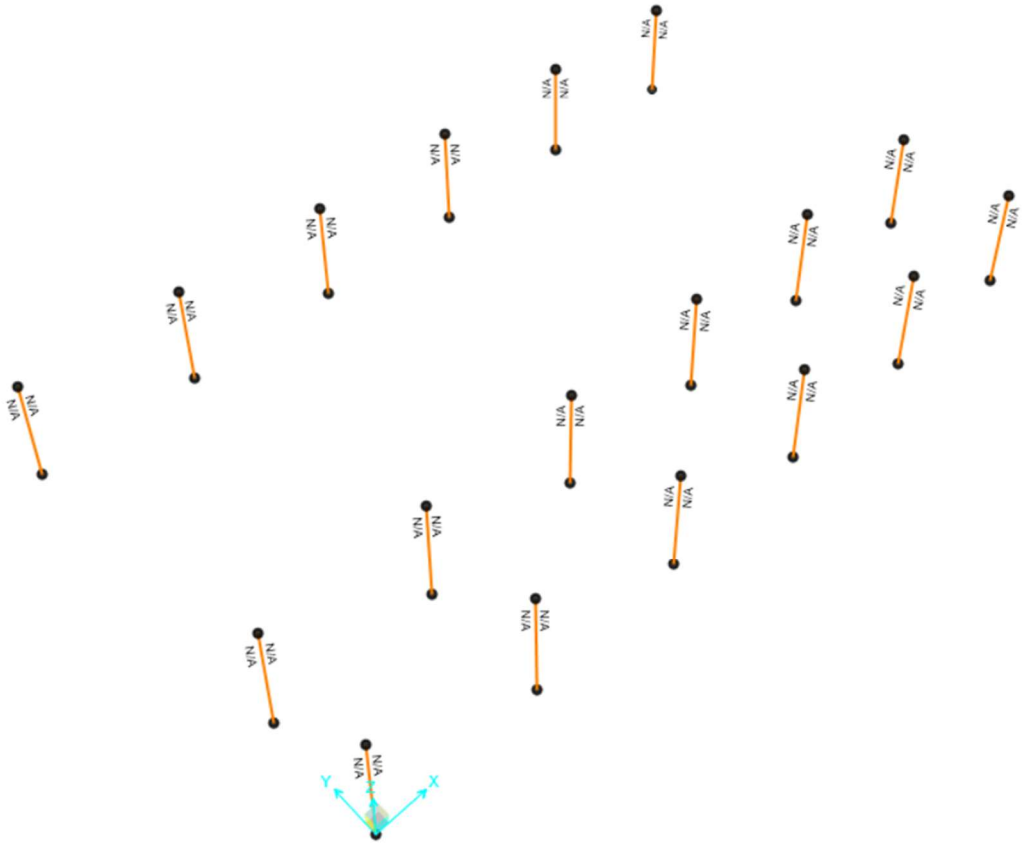
vigas a flexión Cubierta (cm²)



Diseño de columnas a flexocompresión columnas (cm²)



Relación columna fuerte / viga débil



Dado que la estructura solo tiene un nivel en altura el cual da soporte a una cubierta liviana, de acuerdo con lo anterior, no se tiene una masa dinámica concentrada en el nivel de vigas de cubierta. Se presenta el chequeo de relación viga – columna, pero como se evidencia al ser una cubierta liviana con cargas tan bajas y momentos en vigas mínimos, las columnas son satisfactorias para dicha revisión por su rigidez y resistencia. **Se verifica la máxima carga axial de 10Tonleadas y es menor al 10% de la capacidad de la columna. Cabe mencionar que las columnas solo tienen un nivel y no tienen continuidad en cubierta**

Frame Text	Station m	OutputCase	CaseType Text	P Tonf	V2 Tonf	V3 Tonf
8	0	1.2CM+1.6L	Combination	-9.2153	0.0058	-0.7848
38	0	1.2CM+1.6L	Combination	-9.2143	-0.0054	-0.7862
38	0	DIS1.2CM+C...	Combination	-9.1514	-0.3024	0.7007
8	0	DIS1.2CM+C...	Combination	-9.127	0.091	0.59
38	0	DIS1.2CM+C...	Combination	-9.1267	0.0553	0.7089
8	0	DIS1.2CM+C...	Combination	-9.1022	-0.2667	0.5985
16	0	1.2CM+1.6L	Combination	-9.0105	-0.022	-0.8036
24	0	1.2CM+1.6L	Combination	-9.0101	0.0231	-0.8038
16	0	DIS1.2CM+C...	Combination	-8.9741	-0.303	0.6264
16	0	DIS1.2CM+C...	Combination	-8.9717	0.0445	0.6263
24	0	DIS1.2CM+C...	Combination	-8.9628	0.0789	0.6291
24	0	DIS1.2CM+C...	Combination	-8.9603	-0.2686	0.629
39	0	1.2CM+1.6L	Combination	-8.9471	0.0126	0.9538
9	0	1.2CM+1.6L	Combination	-8.9327	-0.0152	0.9502
2	0	1.2CM+1.6L	Combination	-8.8583	-0.2927	-1.2732

Acorde con esto se evidencia que las columnas tienen una carga axial máxima de 9.21Toneladas, siendo esto menor a la capacidad de la columna de C30X30

10%f'c *Acol=0.10*(280kg/cm²)*30*30=25.2Ton > 9.21Ton,
Acorde con esto y de acuerdo con el titulo C.21.3.2, cita textual NSR-10
" C.21.3.2 – Los detalles del refuerzo en un elemento de un pórtico deben satisfacer C.21.3.4 cuando la carga axial mayorada de compresión del elemento, **Pu** , no exceda **Ag*fc′ 10** . Cuando **Pu** es mayor, los detalles de refuerzo del pórtico deben cumplir con C.21.3.5.

De acuerdo con este literal, todos los elementos sometidos a fuerza axial del proyecto no superan el 10% f'c y se refuerzan acorde con C.21.3.4, como un elemento tipo viga con capacidad de disipación moderada, de acuerdo con esto, no aplicaría el chequeo de relación viga columna, Se complementa este chequeo en memorias de calculo

Table: Joint Reactions

Joint Reactions, Part 1 of 2

Joint	OutputCase	CaseType	F1	F2	F3	M1	M2
			Tonf	Tonf	Tonf	Tonf-m	Tonf-m
1	CIM CM+CV+0.7SY	Combination	-0.0055	-0.4912	0.5031	0.68092	-0.05734
1	CIM CM+CV-0.7SY	Combination	0.1592	0.5317	1.3721	-0.77095	0.18054
1	CIM 0.6CM+0.7SY	Combination	-0.0375	-0.4974	0.1372	0.69783	-0.08343
1	CIM 0.6CM-0.7SY	Combination	0.1271	0.5255	1.0062	-0.75404	0.15445
1	CIM CM+CV+0.7SX	Combination	-0.0445	0.0482	0.8951	-0.08449	-0.11831
1	CIM CM+CV-0.7SX	Combination	0.1982	-0.0076	0.9802	-0.00554	0.24151
1	CIM 0.6CM+0.7SX	Combination	-0.0765	0.042	0.5292	-0.06758	-0.1444
1	CIM 0.6CM-0.7SX	Combination	0.1661	-0.0138	0.6143	0.01137	0.21542
1	CIM CM+CV	Combination	0.0768	0.0203	0.9376	-0.04501	0.0616
3	CIM CM+CV+0.7SY	Combination	0.308	0.1356	7.1134	0.39505	0.29
3	CIM CM+CV-0.7SY	Combination	0.1905	1.8154	6.6096	-1.9044	0.1078
3	CIM 0.6CM+0.7SY	Combination	0.218	-0.4085	3.4321	0.80019	0.2146
3	CIM 0.6CM-0.7SY	Combination	0.1005	1.2713	2.9283	-1.49927	0.0324
3	CIM CM+CV+0.7SX	Combination	-0.0748	1.0206	6.698	-0.81677	-0.31756
3	CIM CM+CV-0.7SX	Combination	0.5733	0.9304	7.025	-0.69258	0.71536
3	CIM 0.6CM+0.7SX	Combination	-0.1648	0.4764	3.0168	-0.41164	-0.39296
3	CIM 0.6CM-0.7SX	Combination	0.4833	0.3863	3.3437	-0.28745	0.63996
3	CIM CM+CV	Combination	0.2493	0.9755	6.8615	-0.75468	0.1989
10	CIM CM+CV+0.7SY	Combination	-0.1116	-0.5354	1.0784	0.7624	-0.1432
10	CIM CM+CV-0.7SY	Combination	0.0873	0.8385	2.2709	-1.14653	0.12236
10	CIM 0.6CM+0.7SY	Combination	-0.1073	-0.6301	0.3875	0.88753	-0.1398
10	CIM 0.6CM-0.7SY	Combination	0.0916	0.7437	1.58	-1.02139	0.12576
10	CIM CM+CV+0.7SX	Combination	-0.1656	0.1577	1.6977	-0.20077	-0.2166
10	CIM CM+CV-0.7SX	Combination	0.1414	0.1454	1.6516	-0.18336	0.19576
10	CIM 0.6CM+0.7SX	Combination	-0.1614	0.063	1.0068	-0.07563	-0.2132
10	CIM 0.6CM-0.7SX	Combination	0.1457	0.0507	0.9607	-0.05822	0.19916
10	CIM CM+CV	Combination	-0.0121	0.1516	1.6747	-0.19206	-0.01042
12	CIM CM+CV+0.7SY	Combination	0.0624	-0.2888	7.7457	0.79042	0.07932
12	CIM CM+CV-0.7SY	Combination	-0.0848	1.4231	6.5608	-1.80273	-0.12839
12	CIM 0.6CM+0.7SY	Combination	0.0554	-0.6719	3.9374	1.13659	0.08331

Joint Reactions, Part 1 of 2

Joint	OutputCase	CaseType	F1	F2	F3	M1	M2
			Tonf	Tonf	Tonf	Tonf-m	Tonf-m
12	CIM 0.6CM-0.7SY	Combination	-0.0918	1.04	2.7525	-1.45656	-0.1244
12	CIM CM+CV+0.7SX	Combination	-0.4285	0.577	7.1823	-0.51957	-0.61508
12	CIM CM+CV-0.7SX	Combination	0.4061	0.5573	7.1243	-0.49274	0.56602
12	CIM 0.6CM+0.7SX	Combination	-0.4354	0.1939	3.3739	-0.1734	-0.61109
12	CIM 0.6CM-0.7SX	Combination	0.3991	0.1742	3.316	-0.14657	0.57001
12	CIM CM+CV	Combination	-0.0112	0.5672	7.1533	-0.50615	-0.02453
14	CIM CM+CV+0.7SY	Combination	0.0585	-1.6337	6.8434	2.66334	0.04523
14	CIM CM+CV-0.7SY	Combination	-0.0512	0.2553	6.9718	-1.254	-0.07207
14	CIM 0.6CM+0.7SY	Combination	0.0408	-1.1732	3.115	2.16137	0.04078
14	CIM 0.6CM-0.7SY	Combination	-0.069	0.7157	3.2434	-1.75596	-0.07653
14	CIM CM+CV+0.7SX	Combination	-0.4248	-0.6841	6.9351	0.6931	-0.62083
14	CIM CM+CV-0.7SX	Combination	0.4321	-0.6943	6.88	0.71624	0.594
14	CIM 0.6CM+0.7SX	Combination	-0.4426	-0.2237	3.2067	0.19114	-0.62529
14	CIM 0.6CM-0.7SX	Combination	0.4144	-0.2339	3.1516	0.21427	0.58954
14	CIM CM+CV	Combination	0.0036	-0.6892	6.9076	0.70467	-0.01342
19	CIM CM+CV+0.7SY	Combination	-0.0941	-0.56	0.9914	0.79801	-0.12823
19	CIM CM+CV-0.7SY	Combination	0.0978	0.908	2.3069	-1.23776	0.13095
19	CIM 0.6CM+0.7SY	Combination	-0.0953	-0.6706	0.3049	0.94406	-0.12933
19	CIM 0.6CM-0.7SY	Combination	0.0966	0.7974	1.6205	-1.09172	0.12986
19	CIM CM+CV+0.7SX	Combination	-0.1467	0.1741	1.6465	-0.22005	-0.20077
19	CIM CM+CV-0.7SX	Combination	0.1504	0.1739	1.6517	-0.21969	0.20349
19	CIM 0.6CM+0.7SX	Combination	-0.1479	0.0635	0.9601	-0.07401	-0.20187
19	CIM 0.6CM-0.7SX	Combination	0.1493	0.0633	0.9653	-0.07365	0.2024
19	CIM CM+CV	Combination	0.0018	0.174	1.6491	-0.21987	0.00136
21	CIM CM+CV+0.7SY	Combination	0.0939	-0.3064	7.6189	0.83222	0.11493
21	CIM CM+CV-0.7SY	Combination	-0.0614	1.4545	6.3486	-1.881	-0.0994
21	CIM 0.6CM+0.7SY	Combination	0.0837	-0.7082	3.8804	1.20404	0.10994
21	CIM 0.6CM-0.7SY	Combination	-0.0716	1.0528	2.6101	-1.50917	-0.10439
21	CIM CM+CV+0.7SX	Combination	-0.3891	0.5742	6.981	-0.52465	-0.57363
21	CIM CM+CV-0.7SX	Combination	0.4217	0.5738	6.9865	-0.52413	0.58915
21	CIM 0.6CM+0.7SX	Combination	-0.3993	0.1725	3.2425	-0.15283	-0.57861
21	CIM 0.6CM-0.7SX	Combination	0.4114	0.1721	3.248	-0.1523	0.58417

Joint Reactions, Part 1 of 2

Joint	OutputCase	CaseType	F1	F2	F3	M1	M2
			Tonf	Tonf	Tonf	Tonf-m	Tonf-m
21	CIM CM+CV	Combination	0.0163	0.574	6.9837	-0.52439	0.00776
23	CIM CM+CV+0.7SY	Combination	0.047	-1.8674	6.7589	3.23981	0.04775
23	CIM CM+CV-0.7SY	Combination	-0.0056	0.3921	6.77	-1.53093	-0.02453
23	CIM 0.6CM+0.7SY	Combination	0.0334	-1.3604	3.0826	2.62717	0.0396
23	CIM 0.6CM-0.7SY	Combination	-0.0192	0.899	3.0937	-2.14357	-0.03269
23	CIM CM+CV+0.7SX	Combination	-0.3981	-0.7382	6.76	0.85509	-0.58833
23	CIM CM+CV-0.7SX	Combination	0.4395	-0.7371	6.7689	0.85379	0.61155
23	CIM 0.6CM+0.7SX	Combination	-0.4118	-0.2313	3.0837	0.24245	-0.59649
23	CIM 0.6CM-0.7SX	Combination	0.4259	-0.2301	3.0926	0.24115	0.6034
23	CIM CM+CV	Combination	0.0207	-0.7376	6.7644	0.85444	0.01161
28	CIM CM+CV+0.7SY	Combination	-0.0973	-0.5611	0.9909	0.79977	-0.13029
28	CIM CM+CV-0.7SY	Combination	0.094	0.9092	2.3076	-1.23981	0.12809
28	CIM 0.6CM+0.7SY	Combination	-0.0968	-0.672	0.304	0.9463	-0.13007
28	CIM 0.6CM-0.7SY	Combination	0.0945	0.7983	1.6208	-1.09328	0.12832
28	CIM CM+CV+0.7SX	Combination	-0.1502	0.1738	1.6516	-0.21956	-0.20323
28	CIM CM+CV-0.7SX	Combination	0.1469	0.1744	1.6469	-0.22048	0.20103
28	CIM 0.6CM+0.7SX	Combination	-0.1497	0.0629	0.9648	-0.07303	-0.203
28	CIM 0.6CM-0.7SX	Combination	0.1474	0.0635	0.96	-0.07395	0.20125
28	CIM CM+CV	Combination	-0.0016	0.1741	1.6493	-0.22002	-0.0011
30	CIM CM+CV+0.7SY	Combination	0.0626	-0.3083	7.6109	0.83478	0.10043
30	CIM CM+CV-0.7SY	Combination	-0.0959	1.4564	6.3563	-1.88385	-0.11677
30	CIM 0.6CM+0.7SY	Combination	0.074	-0.7102	3.8728	1.2071	0.10678
30	CIM 0.6CM-0.7SY	Combination	-0.0845	1.0545	2.6183	-1.51153	-0.11043
30	CIM CM+CV+0.7SX	Combination	-0.422	0.5739	6.9865	-0.52409	-0.58958
30	CIM CM+CV-0.7SX	Combination	0.3888	0.5743	6.9807	-0.52498	0.57324
30	CIM 0.6CM+0.7SX	Combination	-0.4106	0.172	3.2485	-0.15177	-0.58324
30	CIM 0.6CM-0.7SX	Combination	0.4001	0.1723	3.2426	-0.15266	0.57959
30	CIM CM+CV	Combination	-0.0166	0.5741	6.9836	-0.52454	-0.00817
32	CIM CM+CV+0.7SY	Combination	-0.0099	-1.8654	6.7713	3.24219	0.01101
32	CIM CM+CV-0.7SY	Combination	-0.0315	0.3904	6.758	-1.53455	-0.03425
32	CIM 0.6CM+0.7SY	Combination	0.0037	-1.359	3.0944	2.63163	0.01921
32	CIM 0.6CM-0.7SY	Combination	-0.0178	0.8969	3.081	-2.14512	-0.02605

Joint Reactions, Part 1 of 2

Joint	OutputCase	CaseType	F1	F2	F3	M1	M2
			Tonf	Tonf	Tonf	Tonf-m	Tonf-m
32	CIM CM+CV+0.7SX	Combination	-0.4397	-0.7401	6.7686	0.85933	-0.6117
32	CIM CM+CV-0.7SX	Combination	0.3983	-0.7349	6.7607	0.84831	0.58845
32	CIM 0.6CM+0.7SX	Combination	-0.4261	-0.2336	3.0916	0.24877	-0.60349
32	CIM 0.6CM-0.7SX	Combination	0.4119	-0.2285	3.0838	0.23774	0.59665
32	CIM CM+CV	Combination	-0.0207	-0.7375	6.7646	0.85382	-0.01162
37	CIM CM+CV+0.7SY	Combination	-0.1577	-0.7386	0.394	1.02968	-0.1788
37	CIM CM+CV-0.7SY	Combination	0.0043	0.7839	1.485	-1.12636	0.05608
37	CIM 0.6CM+0.7SY	Combination	-0.1261	-0.7528	0.0218	1.0577	-0.15351
37	CIM 0.6CM-0.7SY	Combination	0.0358	0.7697	1.1128	-1.09835	0.08138
37	CIM CM+CV+0.7SX	Combination	-0.198	-0.0044	0.9827	-0.01011	-0.24125
37	CIM CM+CV-0.7SX	Combination	0.0446	0.0497	0.8963	-0.08657	0.11853
37	CIM 0.6CM+0.7SX	Combination	-0.1665	-0.0186	0.6105	0.01791	-0.21595
37	CIM 0.6CM-0.7SX	Combination	0.0761	0.0355	0.5241	-0.05856	0.14383
37	CIM CM+CV	Combination	-0.0767	0.0227	0.9395	-0.04834	-0.06136
39	CIM CM+CV+0.7SY	Combination	-0.1914	-0.2662	7.2127	0.94447	-0.10651
39	CIM CM+CV-0.7SY	Combination	-0.3078	2.221	6.5096	-2.46163	-0.29217
39	CIM 0.6CM+0.7SY	Combination	-0.1003	-0.8166	3.5327	1.36264	-0.02964
39	CIM 0.6CM-0.7SY	Combination	-0.2167	1.6705	2.8296	-2.04346	-0.2153
39	CIM CM+CV+0.7SX	Combination	-0.5737	0.9337	7.024	-0.69841	-0.71584
39	CIM CM+CV-0.7SX	Combination	0.0745	1.0211	6.6982	-0.81874	0.31717
39	CIM 0.6CM+0.7SX	Combination	-0.4826	0.3833	3.344	-0.28025	-0.63897
39	CIM 0.6CM-0.7SX	Combination	0.1656	0.4706	3.0182	-0.40058	0.39404
39	CIM CM+CV	Combination	-0.2496	0.9774	6.8611	-0.75858	-0.19934
41	CIM CM+CV+0.7SY	Combination	-0.2623	-1.8887	6.6011	2.10725	-0.19826
41	CIM CM+CV-0.7SY	Combination	-0.261	-0.1921	5.9947	-0.6662	-0.22373
41	CIM 0.6CM+0.7SY	Combination	-0.1623	-1.3	3.1109	1.70742	-0.11331
41	CIM 0.6CM-0.7SY	Combination	-0.161	0.3967	2.5045	-1.06603	-0.13878
41	CIM CM+CV+0.7SX	Combination	-0.5931	-1.0739	6.4552	0.77269	-0.74094
41	CIM CM+CV-0.7SX	Combination	0.0699	-1.0068	6.1407	0.66837	0.31896
41	CIM 0.6CM+0.7SX	Combination	-0.4931	-0.4852	2.9649	0.37286	-0.656
41	CIM 0.6CM-0.7SX	Combination	0.1699	-0.4181	2.6504	0.26854	0.40391
41	CIM CM+CV	Combination	-0.2616	-1.0404	6.2979	0.72053	-0.21099

Joint Reactions, Part 1 of 2

Joint	OutputCase	CaseType	F1	F2	F3	M1	M2
			Tonf	Tonf	Tonf	Tonf-m	Tonf-m
46	CIM CM+CV+0.7SY	Combination	-0.0857	-0.5865	1.0089	0.83512	-0.12051
46	CIM CM+CV-0.7SY	Combination	0.1104	0.8914	2.3422	-1.22157	0.1419
46	CIM 0.6CM+0.7SY	Combination	-0.0907	-0.6841	0.3149	0.96414	-0.12483
46	CIM 0.6CM-0.7SY	Combination	0.1054	0.7938	1.6483	-1.09255	0.13757
46	CIM CM+CV+0.7SX	Combination	-0.1411	0.1463	1.6526	-0.18462	-0.19547
46	CIM CM+CV-0.7SX	Combination	0.1658	0.1585	1.6985	-0.20183	0.21686
46	CIM 0.6CM+0.7SX	Combination	-0.1461	0.0488	0.9586	-0.0556	-0.1998
46	CIM 0.6CM-0.7SX	Combination	0.1608	0.0609	1.0046	-0.07281	0.21254
46	CIM CM+CV	Combination	0.0124	0.1524	1.6756	-0.19323	0.0107
48	CIM CM+CV+0.7SY	Combination	0.0855	-0.3658	7.7626	0.89876	0.1301
48	CIM CM+CV-0.7SY	Combination	-0.0633	1.5011	6.5434	-1.91336	-0.08148
48	CIM 0.6CM+0.7SY	Combination	0.0929	-0.7504	3.9553	1.24877	0.12685
48	CIM 0.6CM-0.7SY	Combination	-0.056	1.1164	2.7361	-1.56335	-0.08473
48	CIM CM+CV+0.7SX	Combination	-0.4061	0.558	7.1241	-0.49412	-0.56624
48	CIM CM+CV-0.7SX	Combination	0.4283	0.5773	7.1819	-0.52049	0.61486
48	CIM 0.6CM+0.7SX	Combination	-0.3988	0.1734	3.3168	-0.14411	-0.56949
48	CIM 0.6CM-0.7SX	Combination	0.4357	0.1926	3.3746	-0.17047	0.61161
48	CIM CM+CV	Combination	0.0111	0.5677	7.153	-0.5073	0.02431
50	CIM CM+CV+0.7SY	Combination	-0.008	-1.6883	6.8851	2.77069	0.02391
50	CIM CM+CV-0.7SY	Combination	0.0024	0.3076	6.9392	-1.3655	0.00361
50	CIM 0.6CM+0.7SY	Combination	0.007	-1.224	3.1415	2.27566	0.02722
50	CIM 0.6CM-0.7SY	Combination	0.0174	0.7718	3.1956	-1.86053	0.00692
50	CIM CM+CV+0.7SX	Combination	-0.4314	-0.696	6.885	0.71541	-0.59372
50	CIM CM+CV-0.7SX	Combination	0.4258	-0.6847	6.9393	0.68977	0.62125
50	CIM 0.6CM+0.7SX	Combination	-0.4164	-0.2318	3.1414	0.22038	-0.59042
50	CIM 0.6CM-0.7SX	Combination	0.4408	-0.2205	3.1957	0.19475	0.62455
50	CIM CM+CV	Combination	-0.0028	-0.6903	6.9122	0.70259	0.01376
184	CIM CM+CV+0.7SY	Combination	0.3054	-1.5785	6.5641	1.62998	0.26393
184	CIM CM+CV-0.7SY	Combination	0.2166	-0.4931	6.0081	-0.19032	0.15746
184	CIM 0.6CM+0.7SY	Combination	0.2074	-1.0051	3.1134	1.23248	0.17998
184	CIM 0.6CM-0.7SY	Combination	0.1187	0.0803	2.5574	-0.58781	0.07351
184	CIM CM+CV+0.7SX	Combination	-0.0704	-1.0009	6.1288	0.66572	-0.31918

Joint Reactions, Part 1 of 2

Joint	OutputCase	CaseType	F1 Tonf	F2 Tonf	F3 Tonf	M1 Tonf-m	M2 Tonf-m
184	CIM CM+CV-0.7SX	Combination	0.5924	-1.0707	6.4433	0.77393	0.74057
184	CIM 0.6CM+0.7SX	Combination	-0.1684	-0.4275	2.6782	0.26823	-0.40313
184	CIM 0.6CM-0.7SX	Combination	0.4945	-0.4973	2.9926	0.37644	0.65662
184	CIM CM+CV	Combination	0.261	-1.0358	6.2861	0.71983	0.2107

Table: Joint Reactions

Joint Reactions, Part 2 of 2

Joint	OutputCase	M3 Tonf-m
1	CIM CM+CV+0.7SY	-0.03459
1	CIM CM+CV-0.7SY	0.04491
1	CIM 0.6CM+0.7SY	-0.03874
1	CIM 0.6CM-0.7SY	0.04076
1	CIM CM+CV+0.7SX	-0.00102
1	CIM CM+CV-0.7SX	0.01134
1	CIM 0.6CM+0.7SX	-0.00517
1	CIM 0.6CM-0.7SX	0.00719
1	CIM CM+CV	0.00516
3	CIM CM+CV+0.7SY	-0.09719
3	CIM CM+CV-0.7SY	0.13011
3	CIM 0.6CM+0.7SY	-0.11198
3	CIM 0.6CM-0.7SY	0.11532
3	CIM CM+CV+0.7SX	-0.01012
3	CIM CM+CV-0.7SX	0.04304
3	CIM 0.6CM+0.7SX	-0.02491
3	CIM 0.6CM-0.7SX	0.02825
3	CIM CM+CV	0.01646
10	CIM CM+CV+0.7SY	-0.02898
10	CIM CM+CV-0.7SY	0.0363
10	CIM 0.6CM+0.7SY	-0.03225
10	CIM 0.6CM-0.7SY	0.03303
10	CIM CM+CV+0.7SX	-0.00215

Joint Reactions, Part 2 of 2

Joint	OutputCase	M3 Tonf-m
10	CIM CM+CV-0.7SX	0.00947
10	CIM 0.6CM+0.7SX	-0.00542
10	CIM 0.6CM-0.7SX	0.0062
10	CIM CM+CV	0.00366
12	CIM CM+CV+0.7SY	-0.13535
12	CIM CM+CV-0.7SY	0.15593
12	CIM 0.6CM+0.7SY	-0.14418
12	CIM 0.6CM-0.7SY	0.1471
12	CIM CM+CV+0.7SX	-0.02001
12	CIM CM+CV-0.7SX	0.04059
12	CIM 0.6CM+0.7SX	-0.02884
12	CIM 0.6CM-0.7SX	0.03176
12	CIM CM+CV	0.01029
14	CIM CM+CV+0.7SY	-0.36273
14	CIM CM+CV-0.7SY	0.24459
14	CIM 0.6CM+0.7SY	-0.32114
14	CIM 0.6CM-0.7SY	0.28618
14	CIM CM+CV+0.7SX	-0.09477
14	CIM CM+CV-0.7SX	-0.02338
14	CIM 0.6CM+0.7SX	-0.05317
14	CIM 0.6CM-0.7SX	0.01822
14	CIM CM+CV	-0.05907
19	CIM CM+CV+0.7SY	-0.02599
19	CIM CM+CV-0.7SY	0.02727
19	CIM 0.6CM+0.7SY	-0.02649
19	CIM 0.6CM-0.7SY	0.02677
19	CIM CM+CV+0.7SX	-0.0041
19	CIM CM+CV-0.7SX	0.00539
19	CIM 0.6CM+0.7SX	-0.0046
19	CIM 0.6CM-0.7SX	0.00489
19	CIM CM+CV	0.00064
21	CIM CM+CV+0.7SY	-0.11685

Joint Reactions, Part 2 of 2

Joint	OutputCase	M3 Tonf-m
21	CIM CM+CV-0.7SY	0.11776
21	CIM 0.6CM+0.7SY	-0.11732
21	CIM 0.6CM-0.7SY	0.11729
21	CIM CM+CV+0.7SX	-0.02567
21	CIM CM+CV-0.7SX	0.02659
21	CIM 0.6CM+0.7SX	-0.02614
21	CIM 0.6CM-0.7SX	0.02611
21	CIM CM+CV	0.00046
23	CIM CM+CV+0.7SY	-0.16953
23	CIM CM+CV-0.7SY	0.14148
23	CIM 0.6CM+0.7SY	-0.16088
23	CIM 0.6CM-0.7SY	0.15013
23	CIM CM+CV+0.7SX	-0.04492
23	CIM CM+CV-0.7SX	0.01687
23	CIM 0.6CM+0.7SX	-0.03627
23	CIM 0.6CM-0.7SX	0.02552
23	CIM CM+CV	-0.01403
28	CIM CM+CV+0.7SY	-0.02583
28	CIM CM+CV-0.7SY	0.02465
28	CIM 0.6CM+0.7SY	-0.0255
28	CIM 0.6CM-0.7SY	0.02498
28	CIM CM+CV+0.7SX	-0.00533
28	CIM CM+CV-0.7SX	0.00415
28	CIM 0.6CM+0.7SX	-0.005
28	CIM 0.6CM-0.7SX	0.00448
28	CIM CM+CV	-0.00059
30	CIM CM+CV+0.7SY	-0.11539
30	CIM CM+CV-0.7SY	0.11464
30	CIM 0.6CM+0.7SY	-0.1152
30	CIM 0.6CM-0.7SY	0.11483
30	CIM CM+CV+0.7SX	-0.02649
30	CIM CM+CV-0.7SX	0.02574

Joint Reactions, Part 2 of 2

Joint	OutputCase	M3 Tonf-m
30	CIM 0.6CM+0.7SX	-0.0263
30	CIM 0.6CM-0.7SX	0.02593
30	CIM CM+CV	-0.00037
32	CIM CM+CV+0.7SY	-0.0889
32	CIM CM+CV-0.7SY	0.1177
32	CIM 0.6CM+0.7SY	-0.09879
32	CIM 0.6CM-0.7SY	0.10781
32	CIM CM+CV+0.7SX	-0.01735
32	CIM CM+CV-0.7SX	0.04614
32	CIM 0.6CM+0.7SX	-0.02724
32	CIM 0.6CM-0.7SX	0.03625
32	CIM CM+CV	0.0144
37	CIM CM+CV+0.7SY	-0.03675
37	CIM CM+CV-0.7SY	0.02666
37	CIM 0.6CM+0.7SY	-0.03299
37	CIM 0.6CM-0.7SY	0.03042
37	CIM CM+CV+0.7SX	-0.01119
37	CIM CM+CV-0.7SX	0.0011
37	CIM 0.6CM+0.7SX	-0.00743
37	CIM 0.6CM-0.7SX	0.00486
37	CIM CM+CV	-0.00504
39	CIM CM+CV+0.7SY	-0.14315
39	CIM CM+CV-0.7SY	0.11061
39	CIM 0.6CM+0.7SY	-0.129
39	CIM 0.6CM-0.7SY	0.12476
39	CIM CM+CV+0.7SX	-0.04263
39	CIM CM+CV-0.7SX	0.01009
39	CIM 0.6CM+0.7SX	-0.02848
39	CIM 0.6CM-0.7SX	0.02424
39	CIM CM+CV	-0.01627
41	CIM CM+CV+0.7SY	0.03838
41	CIM CM+CV-0.7SY	0.06756

Joint Reactions, Part 2 of 2

Joint	OutputCase	M3 Tonf-m
41	CIM 0.6CM+0.7SY	0.0003
41	CIM 0.6CM-0.7SY	0.02948
41	CIM CM+CV+0.7SX	0.01786
41	CIM CM+CV-0.7SX	0.08808
41	CIM 0.6CM+0.7SX	-0.02022
41	CIM 0.6CM-0.7SX	0.05001
41	CIM CM+CV	0.05297
46	CIM CM+CV+0.7SY	-0.032
46	CIM CM+CV-0.7SY	0.02489
46	CIM 0.6CM+0.7SY	-0.02907
46	CIM 0.6CM-0.7SY	0.02782
46	CIM CM+CV+0.7SX	-0.00932
46	CIM CM+CV-0.7SX	0.0022
46	CIM 0.6CM+0.7SX	-0.00638
46	CIM 0.6CM-0.7SX	0.00514
46	CIM CM+CV	-0.00356
48	CIM CM+CV+0.7SY	-0.13338
48	CIM CM+CV-0.7SY	0.11361
48	CIM 0.6CM+0.7SY	-0.1259
48	CIM 0.6CM-0.7SY	0.12109
48	CIM CM+CV+0.7SX	-0.04005
48	CIM CM+CV-0.7SX	0.02028
48	CIM 0.6CM+0.7SX	-0.03257
48	CIM 0.6CM-0.7SX	0.02776
48	CIM CM+CV	-0.00989
50	CIM CM+CV+0.7SY	0.06212
50	CIM CM+CV-0.7SY	0.05813
50	CIM 0.6CM+0.7SY	0.01701
50	CIM 0.6CM-0.7SY	0.01302
50	CIM CM+CV+0.7SX	0.03071
50	CIM CM+CV-0.7SX	0.08953
50	CIM 0.6CM+0.7SX	-0.01439

Joint Reactions, Part 2 of 2

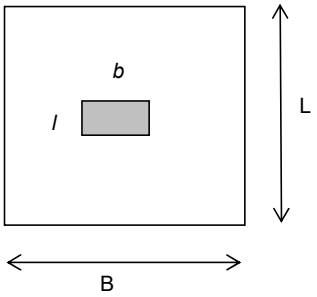
Joint	OutputCase	M3 Tonf-m
50	CIM 0.6CM-0.7SX	0.04442
50	CIM CM+CV	0.06012
184	CIM CM+CV+0.7SY	-0.32642
184	CIM CM+CV-0.7SY	0.21828
184	CIM 0.6CM+0.7SY	-0.28467
184	CIM 0.6CM-0.7SY	0.26003
184	CIM CM+CV+0.7SX	-0.088
184	CIM CM+CV-0.7SX	-0.02014
184	CIM 0.6CM+0.7SX	-0.04625
184	CIM 0.6CM-0.7SX	0.02162
184	CIM CM+CV	-0.05407

ZAPATA TIPO Z-1 **Casa cultural Atanquez**

P (t)	FC	P_u (t)	s_{adm} (t/m^2)	b_{col} (cm)	l_{col} (cm)	h_{zap} (cm)
10.16	1.3	13.21	5.2	30	30	40

Materiales

f'$_c$ (MPa)	λ	f_y (MPa)	Relación de rigidez
21	1	420	1.50



1. Dimension del cimiento

A_{req} (m^2)	B (m)	L (m)	Check	Voladizo (m)
2.15	1.50	1.50	CUMPLE	0.6

2. Chequeo Esfuerzos de contacto

A_1 (mm^2) = 90000

0.65 x 0.85 x f 'c x A_1 = 1044.225 kN > Pu **CUMPLE**

3. Cortante como Viga

s_u (t/m^2)	V_u (kN)	ϕ
5.87	14.68	0.75

ϕVc = ϕ 0.17 λ $\sqrt{f'c}$ x 350 = 204.50 kN > Vu **CUMPLE**

4. Cortante como placa

b_0 (mm)	b	a_s	V_u (kN)	Check
2600	1.00	40	132.08	**CUMPLE**

ϕVc = ϕ 0.33 λ $\sqrt{f'c}$ x 2600 x 3[illegible] = 1032.11 kN

ϕVc = ϕ 0.17 λ x (1 + 2 / b) x $\sqrt{f'c}$ x bo x 3[illegible] = 1595.08 kN

$$\phi Vc = \phi\ 0.083\ \lambda \left(\frac{a_s * d}{bo} + 2 \right) \sqrt{f'c}\ x\ bo \quad x \quad 3[illegible] = 1916.98 \text{ kN}$$

5. Diseño a flexion

M_u (t-m)	R (kg/cm^2)	k	ρ	A_s (cm^2)
1.06	0.96	0.050	0.0003	7.20

Colocar # 4 *cada* *0.24* *m* Asb = 1.27 cm2

Son 7 barras en c/direccion L= 1.75 m **Sentido largo** 8.89

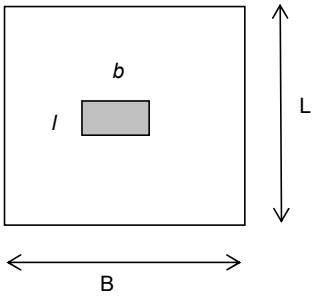
Son 7 barras en c/direccion L= 1.75 m **Sentido corto**

ZAPATA TIPO Z-2 **Casa cultural Atanquez**

P (t)	FC	P_u (t)	s_{adm} (t/m^2)	b_{col} (cm)	l_{col} (cm)	h_{zap} (cm)
10.16	1.3	13.21	5.2	60	30	40

Materiales

f'$_c$ (MPa)	λ	f_y (MPa)	Relación de rigidez
21	1	420	1.50



1. Dimension del cimiento

A_{req} (m^2)	B (m)	L (m)	Check	Voladizo (m)
2.15	1.50	1.50	CUMPLE	0.6

2. Chequeo Esfuerzos de contacto

A_1 (mm^2) = 180000

0.65 x 0.85 x f 'c x A_1 = 2088.45 kN > Pu **CUMPLE**

3. Cortante como Viga

s_u (t/m^2)	V_u (kN)	ϕ
5.87	14.68	0.75

ϕVc = ϕ 0.17 λ $\sqrt{f'c}$ x 350 = 204.50 kN > Vu **CUMPLE**

4. Cortante como placa

b_0 (mm)	b	a_s	V_u (kN)	Check
3200	0.50	40	132.08	**CUMPLE**

ϕVc = ϕ 0.33 λ $\sqrt{f'c}$ x 3200 x 3[illegible] = 1270.29 kN

ϕVc = ϕ 0.17 λ x (1 + 2 / b) x $\sqrt{f'c}$ x bo x 3[illegible] = 3271.96 kN

$$\phi Vc = \phi\ 0.083\ \lambda \left(\frac{a_s * d}{bo} + 2 \right) \sqrt{f'c} \times bo \times 3[illegible] = 2036.79 \text{ kN}$$

5. Diseño a flexion

M_u (t-m)	R (kg/cm^2)	k	ρ	A_s (cm^2)
1.06	0.96	0.050	0.0003	7.20

Colocar # 4 *cada* *0.24* *m* Asb = 1.27 cm2

Son 7 barras en c/direccion L= 1.75 m **Sentido largo** 8.89

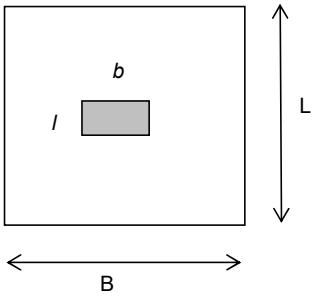
Son 7 barras en c/direccion L= 1.75 m **Sentido corto**

ZAPATA TIPO Z-3 **Casa cultural Atanquez**

P (t)	FC	P_u (t)	s_{adm} (t/m^2)	b_{col} (cm)	l_{col} (cm)	h_{zap} (cm)
3.40	1.3	4.42	5.2	30	30	40

Materiales

f'$_c$ (MPa)	λ	f_y (MPa)	Relación de rigidez
21	1	420	0.88



1. Dimension del cimiento

A_{req} (m^2)	B (m)	L (m)	Check	Voladizo (m)
0.72	1.00	1.00	CUMPLE	0.35

2. Chequeo Esfuerzos de contacto

A_1 (mm^2) = 90000

0.65 x 0.85 x f 'c x A_1 = 1044.225 kN > Pu **CUMPLE**

3. Cortante como Viga

s_u (t/m^2)	V_u (kN)	ϕ
4.42	0.00	0.75

ϕVc = ϕ 0.17 λ $\sqrt{f'c}$ x 350 = 204.50 kN > Vu **CUMPLE**

4. Cortante como placa

b_0 (mm)	b	a_s	V_u (kN)	Check
2600	1.00	40	44.2	**CUMPLE**

ϕVc = ϕ 0.33 λ $\sqrt{f'c}$ x 2600 x 3[illegible] = 958.39 kN

ϕVc = ϕ 0.17 λ x (1 + 2 / b) x $\sqrt{f'c}$ x bo x 3[illegible] = 1481.15 kN

$$\phi Vc = \phi\ 0.083\ \lambda \left(\frac{a_s * d}{bo} + 2 \right) \sqrt{f'c}\ x\ bo \quad x \quad 3[illegible] = 1687.34 \text{ kN}$$

5. Diseño a flexion

M_u (t-m)	R (kg/cm^2)	k	ρ	A_s (cm^2)
0.27	0.25	0.050	0.0001	7.20

Colocar # 4 *cada* *0.24* *m* Asb = 1.27 cm2

Son 5 barras en c/direccion L= 1.25 m **Sentido largo** 6.35

Son 5 barras en c/direccion L= 1.25 m **Sentido corto**

Diseño de vigas de cimentación

Proyecto: Atanquez

Fecha= 20/05/2025

Por: Ing. Juan Hurtado

1. Bases del diseño

Sección Viga de amarre

b=	250	mm
h min=	90	mm
h adop=	300	mm
I=	562500000	mm^4

Riesgo sismico	Bajo	
Luz =	3.60	m
A_a =	0.1	m/s^2
0.25 A_a =	0.025	m/s^2
C.F=	1.30	

2. Materiales

Concreto	21	MPa
Acero de refuerzo	420	MPa
E concrete	17872	MPa
ϕ shear	0.75	
ϕ beinding	0.9	
k	0.0500	

3. Solicitudes

Fz columna=	76 kN
Δ Diferencial=	5 mm
M empotramiento=	1 kN-m
0.25 Ao*Fz=	2 kN

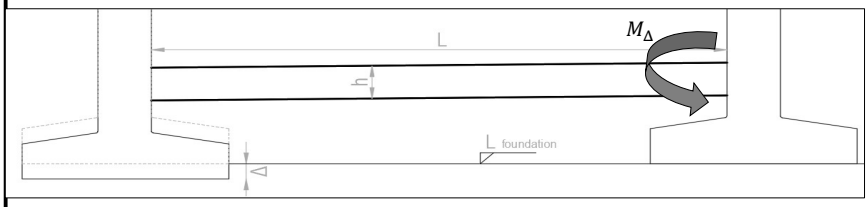
4. Compression check

Cu=	2.47	kN
Areq =	181	mm^2
A viga=	75000	mm^2
Check	ok	

5. tension check

Tu=	2.47	kN
As=	0.05	cm^2
As mín=	4.125	cm^2
Check=	ok	

6. Beinding Check



$$M_\Delta = \frac{6 \times E \times I \times \Delta}{L^2}$$

M Δ=	23.27	kN-m
Mu Δ=	30.25	kN-m
d viga=	250	mm
V Δ=	12.9	kN
Vu Δ=	16.8	kN

Empotramiento en la base

Mu fundación=	2 kN-m
Vu Fundación=	1 kN

Solicitudes de diseño

Mu Vcim=	30 kN-m
Vu Vcim=	17 kN

ϕRn	0.22	As=	3.83	cm^2	As utilizado= 7.62 cm^2
ρ req	0.0061	As min=	2.06	cm^2	Verificación= **cumple**

ϕVc=	37 kN	**Ramas**	**Ganchos**	**#estribo**	**Av (cm^2)**	**Separacion (cm)**
ΔV=	-20 kN	2	0	#3	2.84	25
ϕVs =	895 kN					
ϕVn=	**931 kN**	**cumple**				

S diseño= 25 cm

S mínimo = 6 cm

Diseño de elementos en madera estructural

Ing.= Juan Hurtado **Fecha=** 27/05/2025

Proyecto: **Atanquez**

Geometria **Correas de cubierta biblioteca**

Grupo	ES.2	Madera=	GUAYACANPOLVILLO	Luz=	3.60 m
b=	76 mm	h=	152 mm		

Propiedades basicas

Densidad (DB)=	9.20	kN/m³	$E_{0.5}$=	22100	MPa	E_{min}=	7130 MPa
Fb=	29.60	MPa	Fv=	2.30	MPa	$E_{0.05}$=	13250 MPa
I=	22476497	mm^4	Fp=	5.40	MPa	Fc=	25.10 MPa
Ft=	2.30	MPa					

Coeficientes de modificación

(Los esfuerzos admisibles se veran afectados por sus condiciones geometricas y de factores bioticos de acuerdo a G.2.2.3)

$$f_i' = f_i \times C_D \times C_m \times C_t \times C_L \times C_F \times C_{fu}$$

Humedad= 18%

Para F_b; C_m= **0.85** Para F_v; C_m= **0.89** Para E; C_m= **0.89**

Para F_p; C_m= **0.70**

Duración carga= Permanente Tipo de carga= Muerta

Para F_b; C_D= **0.90** Para F_v; C_D= **0.90**

Temperatura= T ≤ 37.8°C Condición= Humedo

Para F_b,F_v,F_p;C_t= 1.00 Para E ;C_t= 1.00

Para F_t= 1.00

Incisiones paralelas al grano= NO

Para F_b,F_v ;C_{in}= 1.00

Para E ;C_{in}= 1.00 Cuando se tengan incisiones en la madera, en forma paralela al grano a una profundidad max 100 mm y Long de 3/8".

Por acción conjunta		**Por rigidez al pandeo**		**Por desviación del grano**	
Para F_b,F_v ;C_r=	1.00	Para E_{min} ;C_T=	1.00	Para F_b,F_t ;C_{Dg}=	1.00

Coeficientes de modificación para Flexión

Coeficiente de forma Para F_b,F_t ;C_d= 1.10

Coeficiente por flexión en el eje debil Cargas sobre b= NO

Para F_b ;C_{fu}= 1.00



Coeficiente de modificación por estabilidad lateral de COLUMNAS (C_L)

Numero de Luces de la Viga	luz.simple		Lu=	3.60 m
Tipo de Carga	C) Carga uniforme repartida		Lu/d=	2.36
	(Ver figura G.3.3.2)		Le=	3.60 m

d/b= 2.00 **No requiere soporte lateral**

RB= 9.72050 F_{bE}= 80 MPa F_b^*= 25 MPa

C_L= 1.00

Propiedades modificadas

F'b=	24.91 MPa	F'v=	1.84 MPa	E'0.5=	19613.75 MPa
F'c=	19.20 MPa	F't=	1.76 MPa		

Coeficiente de longitud de columna K_e

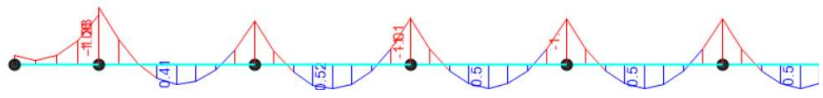
Condición apoyo= articulado en ambos extremos

ke=	1	le=	3.60 m	
λb=	47.24	λl=	23.62	**Cumple**
C=	0.80	FCE=	2.33 MPa	

Coeficiente de estabilidad de columnas CP

Cp= 0.12 Cp*Fc'= 2.27 MPa

Diseño de elementos en Madera



Compresión (+) Tracción (-)

C. Muerta + C. Viva

Flexión	M1=	0.67 kN-m	<	Mr=	7.35 kN-m	**Ok**
	M2=	0.01 kN-m	<	Mr=	3.67 kN-m	**Ok**
Cortante	V=	1.63 kN				
	fv=	0.21 MPa	<	f'v=	1.84 MPa	**Ok**
Axial - compresion	P=		<	Padm=	26.36 kN	**Ok**
Axial - traccion	T=	8.36 kN	<	Tadm=	20.43 kN	**Ok**

Esfuerzos de flexo compresión = 0.09 < 1 Cumple

Esfuerzos de flexo tracciòn = 0.50 < 1 Cumple

Diseño de elementos en madera estructural

Ing.= Juan Hurtado **Fecha=** 27/05/2025

Proyecto: **Atanquez**

Geometria **Vigas cubierta Ludoteca**

Grupo ES.3 Madera= CHANUL Luz= 2.60 m

b= 51 mm h= 102 mm

Propiedades basicas

Densidad (DB)=	6.90	kN/m³	$E_{0.5}$=	18300	MPa	E_{min}=	5500 MPa
Fb=	24.40	MPa	Fv=	1.80	MPa	$E_{0.05}$=	11000 MPa
I=	4439802	mm^4	Fp=	3.40	MPa	Fc=	21.00 MPa
Ft=	1.80	MPa					

Coeficientes de modificación

(Los esfuerzos admisibles se veran afectados por sus condiciones geometricas y de factores bioticos de acuerdo a G.2.2.3)

$$f_i' = f_i \times C_D \times C_m \times C_t \times C_L \times C_F \times C_{fu}$$

Humedad= 18%

Para F_b; C_m= **0.85** Para F_v; C_m= **0.89** Para E; C_m= **0.89**

Para F_p; C_m= **0.70**

Duración carga= Permanente Tipo de carga= Muerta

Para F_b; C_D= **0.90** Para F_v; C_D= **0.90**

Temperatura= T ≤ 37.8°C Condición= Humedo

Para F_b,F_v,F_p,C_t= 1.00 Para E ;C_t= 1.00

Para F_t= 1.00

Incisiones paralelas al grano= NO

Para F_b,F_v ;C_{in}= 1.00

Para E ;C_{in}= 1.00 Cuando se tengan incisiones en la madera, en forma paralela al grano a una profundidad max 100 mm y Long de 3/8".

Por acción conjunta **Por rigidez al pandeo** **Por desviación del grano**

Para F_b,F_v ;C_r= 1.00 Para E_{min} ;C_T= 1.00 Para F_b,F_t ;C_{Dg}= 1.00

Coeficientes de modificación para Flexión

Coeficiente de forma Para F_b,F_t ;C_d= 1.10

Coeficiente por flexión en el eje debil Cargas sobre b= NO

Para F_b ;C_{fu}= 1.00



Coeficiente de modificación por estabilidad lateral de COLUMNAS (C_L)

Numero de Luces de la Viga luz.simple Lu= 2.60 m

Tipo de Carga C) Carga uniforme repartida Lu/d= 2.56

(Ver figura G.3.3.2) Le= 2.60 m

d/b= 2.00 **No requiere soporte lateral**

RB= 10.11836 F_{bE}= 57 MPa F_b^*= 21 MPa

C_L= 1.00

Propiedades modificadas

F'b=	20.53 MPa	F'v=	1.44 MPa	E'0.5=	16241.25 MPa
F'c=	16.07 MPa	F't=	1.38 MPa		

Coeficiente de longitud de columna K_e

Condición apoyo= articulado en ambos extremos

ke= 1 le= 2.60 m

λb= 51.19 λI= 25.60 **Cumple**

C= 0.80 FCE= 1.53 MPa

Coeficiente de estabilidad de columnas CP

Cp= 0.09 Cp*Fc'= 1.50 MPa

Deflexión

Tipo estructura= sin cielo raso

Deflexión por C.Viva=	0.427 mm	Deflexión admisible=	8.67 mm	**Cumple**
Deflexión por C.Total=	0.793 mm	Deflexión admisible=	10.84 mm	**Cumple**

C. Muerta + C. Viva

Flexión	M1=	1.36 kN-m	<	Mr=	1.79 kN-m	**Ok**
	M2=	0.00 kN-m	<	Mr=	0.90 kN-m	**Ok**
Cortante	V=	0.94 kN				
	fv=	0.27 MPa	<	f'v=	1.44 MPa	**Ok**
Axial - compresion	P=	0.00 kN	<	Padm=	7.74 kN	**Ok**
Axial - traccion	T=	0.00 kN	<	Tadm=	7.11 kN	**Ok**

Esfuerzos de flexo compresión = 0.76 < 1 Cumple

Esfuerzos de flexo tracciòn = 0.76 < 1 Cumple

Diseño de columnas en madera estructural

Ing.= Juan Hurtado **Fecha=** 27/05/2025

Proyecto: **Atanquez**

Geometria

Grupo	ES.3	Madera=	CHANUL	Luz=	4.50 m
b=	76 mm	h=	152 mm		

Propiedades basicas

Densidad (DB)=	6.90 kN/m³	$E_{0.5}$=	18300 MPa	E_{min}=	5500 MPa
Fb=	24.40 MPa	Fv=	1.80 MPa	$E_{0.05}$=	11000 MPa
I=	22476497 mm^4	Fp=	3.40 MPa	Fc=	21.00 MPa
Ft=	1.80 MPa				

Coeficientes de modificación

(Los esfuerzos admisibles se veran afectados por sus condiciones geometricas y de factores bioticos de acuerdo a G.2.2.3)

$$f_i' = f_i \times C_D \times C_m \times C_t \times C_L \times C_F \times C_{fu}$$

Humedad= 12%

Para F_b; C_m=	**1.00**	Para F_v; C_m=	**1.00**	Para E; C_m=	**1.00**
Para F_p; C_m=	**1.00**				

Duración carga= Permanente Tipo de carga= Muerta

Para F_b; C_D= **0.90** Para F_v; C_D= **0.90**

Temperatura= T ≤ 37.8°C Condición= Humedo

Para F_b,F_v,F_p;C_t= 1.00 Para E ;C_t= 1.00

Para F_t= 1.00

Incisiones paralelas al grano= NO

Para F_b,F_v ;C_{in}= 1.00

Para E ;C_{in}= 1.00 Cuando se tengan incisiones en la madera, en forma paralela al grano a una profundidad max 100 mm y Long de 3/8".

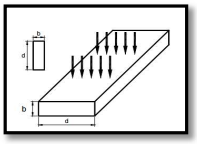
Por acción conjunta		**Por rigidez al pandeo**		**Por desviación del grano**	
Para F_b,F_v ;C_r=	1.00	Para E_{min} ;C_T=	1.00	Para F_b,F_t ;C_{Dg}=	1.00

Coeficientes de modificación para Flexión

Coeficiente de forma Para F_b,F_t ;C_d= 1.10

Coeficiente por flexión en el eje debil Cargas sobre b= NO

Para F_b ;C_{fu}= 1.00



Coeficiente de modificación por estabilidad lateral de COLUMNAS (C_L)

Numero de Luces de la Viga	luz.simple	Lu=	4.50 m
Tipo de Carga	C) Carga uniforme repartida	Lu/d=	2.95
	(Ver figura G.3.3.2)	Le=	4.50 m

d/b= 2.00 **No requiere soporte lateral**

RB= 10.86785 F_{bE}= 56 MPa F_b^*= 24 MPa

C_L= 1.00

Propiedades modificadas

F'b=	24.16 MPa	F'v=	1.62 MPa	E'0.5=	18300.00 MPa
F'c=	18.90 MPa	F't=	1.62 MPa		

Coeficiente de longitud de columna K_e

Condición apoyo= articulado en ambos extremos

ke=	1	le=	4.50 m	
λb=	59.06	λl=	29.53	**No cumple**
C=	0.80	FCE=	1.30 MPa	

Coeficiente de estabilidad de columnas CP

Cp= 0.07 Cp*Fc'= 1.28 MPa

Diseño de elementos en Madera

Diagrama de axial (compresión)

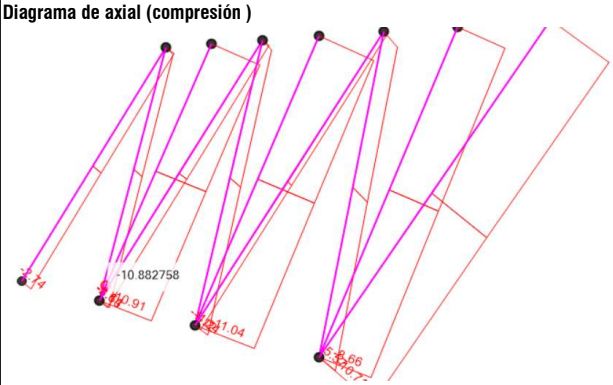
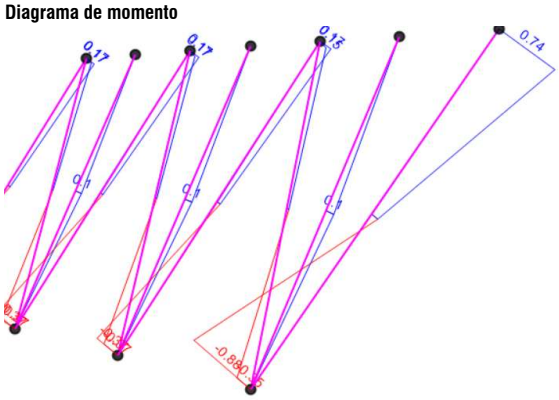


Diagrama de momento



Compresión (+) Tracción (-)

C. Muerta + C. Viva

Flexión	M1=	0.20 kN-m	<	Mr=	7.13 kN-m	**Ok**
	M2=	0.10 kN-m	<	Mr=	3.56 kN-m	**Ok**
Cortante	V=	0.11 kN				
	fv=	0.01 MPa	<	f'v=	1.62 MPa	**Ok**
Axial - compresion	P=		<	Padm=	14.84 kN	**Ok**
Axial - traccion	T=	17.20 kN	<	Tadm=	18.81 kN	**Ok**

Esfuerzos de flexo compresión =	0.06	< 1	Cumple
Esfuerzos de flexo tracciòn =	0.97	< 1	Cumple

DISEÑO DE UNIONES EMPERNADAS - CARGAS ADMISIBLES

Proyecto: Atanquez,, Cesar-Valledupar
Fecha: martes, 20 de mayo de 2025

Elaboró: Ing. Juán Hurtado Versión: **0**

ELEMENTO DE CONEXIÓN A:

Madera: GUAYACAN POLVILLO
Grupo: ES2
b = 76 mm
h = 152 mm

VIGA

$E_{0,5}$ [Mpa]:	22100
$E_{0,05}$ [Mpa]:	13250
E_{min} [Mpa]:	7131
F_b [MPa]:	29.6
F_C [MPa]:	25.1
F_P [MPa]:	5.4
F_v [MPa]:	2.3
F_t [MPa]:	22.2
DB [Ton/m^3]:	0.92

ELEMENTO DE CONEXIÓN B:

Madera: GUAYACAN POLVILLO
Grupo: ES2
b = 76 mm
h = 152 mm

COLUMNA

$E_{0,5}$ [Mpa]:	22100
$E_{0,05}$ [Mpa]:	13250
E_{min} [Mpa]:	7131
F_b [MPa]:	29.6
F_C [MPa]:	25.1
F_P [MPa]:	5.4
F_v [MPa]:	2.3
F_t [MPa]:	22.2
DB [Ton/m^3]:	0.92

CAPACIDAD ADMISIBLES PARA UNIONES EMPERNADAS

Carga Paralela a la Fibra:

$$P' = PC_DC_mC_tC_{pL}C_g$$

Carga Perpendicular a la Fibra:

$$Q' = QC_DC_mC_tC_{pL}C_g$$

Carga Diagonla (α) a la Fibra:

$$N' = \frac{P'Q'}{P'sen^2\alpha + Q'cos^2\alpha}$$

C_D: Coeficiente de modificación de carga:

Duración de la carga:	Permanente (G)	Diez Minutos (W ó E)
C_D:	0.9	1.6

C_m: Coeficiente de contenido de humedad:

%W Tiempo de fabricación: 14%

	Cargas Laterales	Cargas de Extracción
C_m:	1	1

C_t: Coeficiente de teperatura:

T (°C) Periodos prolongados de Uso: 37.0 °C
Temperatura aceptable C_t: 1

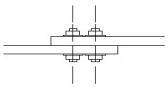
C_{pl}: Coeficiente por utilización de platina:

Sin platinas
C_{pl}: 1

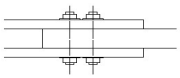
C_g: Coeficiente de acción de grupo:

Clase de unión: Uniones con elementos de madera
Número de pernos por línea P: 2 C_g: 1
Número de pernos por línea Q: 2 C_g: 1

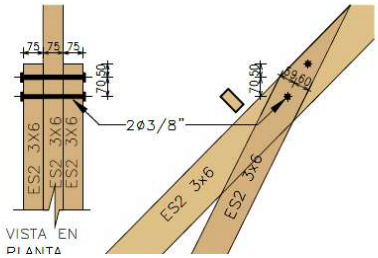
Contenido de Humedad:	18%
Cizallamiento:	Doble



Simple cizallamiento



Doble cizallamiento



0	ActuantePermanente (G)	ActuanteDiez Minutos (W ó E)	Diémetro de perno (In)	Diémetro de perno (mm)
Actuante P [kN]:	11.24 kN	12.52 kN		
Actuante Q [kN]:	0.34 kN	0.36 kN	1/2"	12.7
Angulo en unión °	60.0 °			
Actuante N [kN]:	11.25 kN	12.53 kN		

Longitud de perno L(mm)	DB	# Pernos en conexión	# Pernos por línea P	# Pernos por línea Q
100	0.92 7	2	2	2

Carga Admisible Paralela a la fibra:

P
11180 N
11.18 kN

	Carga admisible modificada P'	
	Permanente (G)	Diez Minutos (W ó E)
P':	20.12 kN	35.78 kN
% Demanda:	56%	35%
Cumplimiento:	SI	SI

Carga Admisible Perpendicular a la fibra:

Q
4330 N
4.33 kN

	Carga admisible modificada Q'	
	Permanente (G)	Diez Minutos (W ó E)
Q':	7.79 kN	13.86 kN
% Demanda:	4%	3%
Cumplimiento:	SI	SI

	Esfuerzos combinados	
	Carga admisible modificada N'	
	Permanente (G)	Diez Minutos (W ó E)
N':	12.34 kN	21.94 kN
% Demanda:	91%	57%
Cumplimiento:	SI	SI

DISEÑO DE UNIONES EMPERNADAS - CARGAS ADMISIBLES

Proyecto: Atanquez,, Cesar-Valledupar
Fecha: martes, 20 de mayo de 2025

Elaboró: Ing. Juán Hurtado Versión: **0**

ELEMENTO DE CONEXIÓN A:

Madera: GUAYACAN POLVILLO
Grupo: ES2
b = 76 mm
h = 152 mm

VIGA

$E_{0,5}$ [Mpa]:	22100
$E_{0,05}$ [Mpa]:	13250
E_{min} [Mpa]:	7131
F_b [MPa]:	29.6
F_C [MPa]:	25.1
F_P [MPa]:	5.4
F_v [MPa]:	2.3
F_t [MPa]:	22.2
DB [Ton/m^3]:	0.92

ELEMENTO DE CONEXIÓN B:

Madera: GUAYACAN POLVILLO
Grupo: ES2
b = 76 mm
h = 152 mm

COLUMNA

$E_{0,5}$ [Mpa]:	22100
$E_{0,05}$ [Mpa]:	13250
E_{min} [Mpa]:	7131
F_b [MPa]:	29.6
F_C [MPa]:	25.1
F_P [MPa]:	5.4
F_v [MPa]:	2.3
F_t [MPa]:	22.2
DB [Ton/m^3]:	0.92

CAPACIDAD ADMISIBLES PARA UNIONES EMPERNADAS

Carga Paralela a la Fibra:

$$P' = PC_DC_mC_tC_{pL}C_g$$

Carga Perpendicular a la Fibra:

$$Q' = QC_DC_mC_tC_{pL}C_g$$

Carga Diagonla (α) a la Fibra:

$$N' = \frac{P'Q'}{P'sen^2\alpha + Q'cos^2\alpha}$$

C_D: Coeficiente de modificación de carga:

Duración de la carga:	Permanente (G)	Diez Minutos (W ó E)
C_D:	0.9	1.6

C_m: Coeficiente de contenido de humedad:

%W Tiempo de fabricación: 14%

	Cargas Laterales	Cargas de Extracción
C_m:	1	1

C_t: Coeficiente de teperatura:

T (°C) Periodos prolongados de Uso: 37.0 °C
Temperatura aceptable C_t: 1

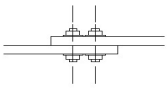
C_{pl}: Coeficiente por utilización de platina:

Sin platinas
C_{pl}: 1

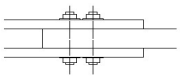
C_g: Coeficiente de acción de grupo:

Clase de unión: Uniones con elementos de madera
Número de pernos por línea P: 2 C_g: 1
Número de pernos por línea Q: 2 C_g: 1

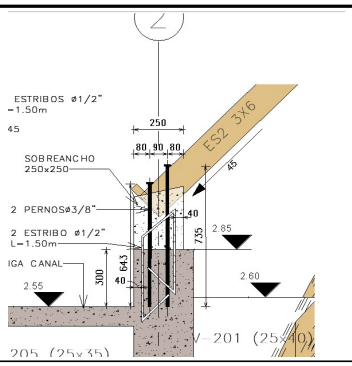
Contenido de Humedad:	18%
Cizallamiento:	Doble



Simple cizallamiento



Doble cizallamiento



0	ActuantePermanente (G)	ActuanteDiez Minutos (W ó E)	Diémetro de perno (In)	Diémetro de perno (mm)
Actuante P [kN]:	6.78 kN	10.70 kN		
Actuante Q [kN]:	1.40 kN	0.61 kN	3/8"	9.5
Angulo en unión °	60.0 °			
Actuante N [kN]:	6.92 kN	10.72 kN		

Longitud de perno L(mm)	DB	# Pernos en conexión	# Pernos por línea P	# Pernos por línea Q
100	0.92 7	2	2	2

Carga Admisible Paralela a la fibra:

P
7040 N
7.04 kN

	Carga admisible modificada P'	
	Permanente (G)	Diez Minutos (W ó E)
P':	12.67 kN	22.53 kN
% Demanda:	54%	47%
Cumplimiento:	SI	SI

Carga Admisible Perpendicular a la fibra:

Q
3250 N
3.25 kN

	Carga admisible modificada Q'	
	Permanente (G)	Diez Minutos (W ó E)
Q':	5.85 kN	10.40 kN
% Demanda:	24%	6%
Cumplimiento:	SI	SI

	Esfuerzos combinados	
	Carga admisible modificada N'	
	Permanente (G)	Diez Minutos (W ó E)
N':	9.26 kN	16.47 kN
% Demanda:	75%	65%
Cumplimiento:	SI	SI

Ing. Juan David Hurtado

Proyecto: Ludoteca Atanquez

Verificación de simetria

PISO	AREA(m2)	Aa	Mo	L min en cada sentido (m)		A min (m2)
1	41.8	0.1	8	X	3.34	0.209
				Y	3.34	
MUROS e=	10 cm	**Zona de amenaza sísmica**		BAJA		

Tabla E.3.6-1
Coeficiente M_o para longitud mínima de muros estructurales confinados

Zona de Amenaza Sísmica	Valores A_a	Valores M_o
Alta	0.40	33.0
	0.35	30.0
	0.30	26.0
	0.25	21.0
Intermedia	0.20	17.0
	0.15	13.0
Baja	0.10	8.0
	0.05	4.0

SIMETRIA EN X			
MURO	L (m)	b (m)	Lb (m2)
1	2.822	0.334	0.94
2	2.821	0.334	0.94
3	2.829	6.986	19.76
4	2.838	6.987	19.83
	11.31		41.48
By (m) =	7.35	**A (m2)**	1.131 **OK**

L=longitud muro
b=distancia del muro al eje
Bx= longitud en el sentido Y

$$SIMETRIA\ EN\ X = \frac{Lb - \frac{Bx}{2}}{Bx}$$

SIMETRIA EN X= $\dfrac{\frac{41.48}{11.31} - \frac{7.35}{2}}{7.35}$

SIMETRIA EN X= $\dfrac{3.67 - 3.675}{7.35}$

SIMETRIA EN X= $\dfrac{-0.01}{7.35} = 0.00$ **OK**

SIMETRIA EN Y			
MURO	LONGITUD (m)	b (m)	Lb (m2)
5	2.153	0.448	
6	2.123	0.46	0.97
7	2.158	6.81	14.70
8	2.128	6.81	
	8.56		15.67
By (m) =	7.35	**A (m2)**	0.8562 **OK**

L=longitud muro
b=distancia del muro al eje
By= longitud en el sentido y

$$SIMETRIA\ EN\ Y = \frac{Lb - \frac{By}{2}}{By}$$

SIMETRIA EN Y= $\dfrac{\frac{15.67}{8.56} - \frac{7.35}{2}}{7.35}$

SIMETRIA EN Y= $\dfrac{1.83 - 3.675}{7.35}$

SIMETRIA EN Y= $\dfrac{1.84}{7.35} = 0.25$ **OK**

Table: Concrete Design 1 - Column Summary Data - ACI 318-14

Concrete Design 1 - Column Summary Data - ACI 318-14, Part 1 of 4

Frame	DesignSect	DesignType	DesignOpt	Status	Location m
1	C30x30	Column	Design	No Messages	0
1	C30x30	Column	Design	No Messages	1.25
1	C30x30	Column	Design	No Messages	2.5
2	C30x45	Column	Design	No Messages	0
2	C30x45	Column	Design	No Messages	1.25
2	C30x45	Column	Design	No Messages	1.4
2	C30x45	Column	Design	No Messages	1.4
2	C30x45	Column	Design	No Messages	2.5
3	C30x45	Column	Design	No Messages	0
3	C30x45	Column	Design	No Messages	1.25
3	C30x45	Column	Design	No Messages	1.4
3	C30x45	Column	Design	No Messages	1.4
3	C30x45	Column	Design	No Messages	2.5
7	C30x30	Column	Design	No Messages	0
7	C30x30	Column	Design	No Messages	1.25
7	C30x30	Column	Design	No Messages	2.5
8	C30x45	Column	Design	No Messages	0
8	C30x45	Column	Design	No Messages	1.25
8	C30x45	Column	Design	No Messages	1.4
8	C30x45	Column	Design	No Messages	1.4
8	C30x45	Column	Design	No Messages	2.5
9	C30x45	Column	Design	No Messages	0
9	C30x45	Column	Design	No Messages	1.25
9	C30x45	Column	Design	No Messages	1.4
9	C30x45	Column	Design	No Messages	1.4
9	C30x45	Column	Design	No Messages	2.5
15	C30x30	Column	Design	No Messages	0
15	C30x30	Column	Design	No Messages	1.25
15	C30x30	Column	Design	No Messages	2.5
16	C30x45	Column	Design	No Messages	0
16	C30x45	Column	Design	No Messages	1.25
16	C30x45	Column	Design	No Messages	1.4
16	C30x45	Column	Design	No Messages	1.4
16	C30x45	Column	Design	No Messages	2.5
17	C30x45	Column	Design	No Messages	0
17	C30x45	Column	Design	No Messages	1.25
17	C30x45	Column	Design	No Messages	1.4
17	C30x45	Column	Design	No Messages	1.4
17	C30x45	Column	Design	No Messages	2.5
23	C30x30	Column	Design	No Messages	0
23	C30x30	Column	Design	No Messages	1.25
23	C30x30	Column	Design	No Messages	2.5
24	C30x45	Column	Design	No Messages	0
24	C30x45	Column	Design	No Messages	1.25
24	C30x45	Column	Design	No Messages	1.4
24	C30x45	Column	Design	No Messages	1.4
24	C30x45	Column	Design	No Messages	2.5
25	C30x45	Column	Design	No Messages	0
25	C30x45	Column	Design	No Messages	1.25
25	C30x45	Column	Design	No Messages	1.4
25	C30x45	Column	Design	No Messages	1.4
25	C30x45	Column	Design	No Messages	2.5
27	C30x30	Column	Design	No Messages	0
27	C30x30	Column	Design	No Messages	1.25
27	C30x30	Column	Design	No Messages	2.5
28	C30x45	Column	Design	No Messages	0
28	C30x45	Column	Design	No Messages	1.25
28	C30x45	Column	Design	No Messages	1.4
28	C30x45	Column	Design	No Messages	1.4
28	C30x45	Column	Design	No Messages	2.5
31	C30x45	Column	Design	No Messages	0
31	C30x45	Column	Design	No Messages	1.25
31	C30x45	Column	Design	No Messages	1.4
31	C30x45	Column	Design	No Messages	1.4

Concrete Design 1 - Column Summary Data - ACI 318-14, Part 1 of 4

Frame	DesignSect	DesignType	DesignOpt	Status	Location m
31	C30x45	Column	Design	No Messages	2.5
37	C30x30	Column	Design	No Messages	0
37	C30x30	Column	Design	No Messages	1.25
37	C30x30	Column	Design	No Messages	2.5
38	C30x45	Column	Design	No Messages	0
38	C30x45	Column	Design	No Messages	1.25
38	C30x45	Column	Design	No Messages	1.4
38	C30x45	Column	Design	No Messages	1.4
38	C30x45	Column	Design	No Messages	2.5
39	C30x45	Column	Design	No Messages	0
39	C30x45	Column	Design	No Messages	1.25
39	C30x45	Column	Design	No Messages	1.4
39	C30x45	Column	Design	No Messages	1.4
39	C30x45	Column	Design	No Messages	2.5

Table: Concrete Design 1 - Column Summary Data - ACI 318-14

Concrete Design 1 - Column Summary Data - ACI 318-14, Part 2 of 4

Frame	PMMCombo	PMMArea m2	PMMRatio	VMajCombo	VMajRebar m2/m
1	1.4CM	0.0009		1.4CM	0
1	1.4CM	0.0009		1.4CM	0
1	1.4CM	0.0009		1.4CM	0
2	1.4CM	0.00135		1.4CM	0
2	1.4CM	0.00135		1.4CM	0
2	1.4CM	0.00135		1.4CM	0
2	1.4CM	0.00135		1.4CM	0
2	1.4CM	0.00135		1.4CM	0
3	1.4CM	0.00135		1.4CM	0
3	1.4CM	0.00135		1.4CM	0
3	1.4CM	0.00135		1.4CM	0
3	1.4CM	0.00135		1.4CM	0
3	1.4CM	0.00135		1.4CM	0
7	1.4CM	0.0009		1.4CM	0
7	1.4CM	0.0009		1.4CM	0
7	1.4CM	0.0009		1.4CM	0
8	1.4CM	0.00135		1.4CM	0
8	1.4CM	0.00135		1.4CM	0
8	1.4CM	0.00135		1.4CM	0
8	1.4CM	0.00135		1.4CM	0
8	1.4CM	0.00135		1.4CM	0
9	1.4CM	0.00135		1.4CM	0
9	1.4CM	0.00135		1.4CM	0
9	1.4CM	0.00135		1.4CM	0
9	1.4CM	0.00135		1.4CM	0
9	1.4CM	0.00135		1.4CM	0
15	1.4CM	0.0009		1.4CM	0
15	1.4CM	0.0009		1.4CM	0
15	1.4CM	0.0009		1.4CM	0
16	1.4CM	0.00135		1.4CM	0
16	1.4CM	0.00135		1.4CM	0
16	1.4CM	0.00135		1.4CM	0
16	1.4CM	0.00135		1.4CM	0
16	1.4CM	0.00135		1.4CM	0
17	1.4CM	0.00135		1.4CM	0
17	1.4CM	0.00135		1.4CM	0
17	1.4CM	0.00135		1.4CM	0
17	1.4CM	0.00135		1.4CM	0
17	1.4CM	0.00135		1.4CM	0
23	1.4CM	0.0009		1.4CM	0
23	1.4CM	0.0009		1.4CM	0
23	1.4CM	0.0009		1.4CM	0
24	1.4CM	0.00135		1.4CM	0

Concrete Design 1 - Column Summary Data - ACI 318-14, Part 2 of 4

Frame	PMMCombo	PMMArea	PMMRatio	VMajCombo	VMajRebar
		m2			m2/m
24	1.4CM	0.00135		1.4CM	0
24	1.4CM	0.00135		1.4CM	0
24	1.4CM	0.00135		1.4CM	0
24	1.4CM	0.00135		1.4CM	0
25	1.4CM	0.00135		1.4CM	0
25	1.4CM	0.00135		1.4CM	0
25	1.4CM	0.00135		1.4CM	0
25	1.4CM	0.00135		1.4CM	0
25	1.4CM	0.00135		1.4CM	0
27	1.4CM	0.0009		1.4CM	0
27	1.4CM	0.0009		1.4CM	0
27	1.4CM	0.0009		1.4CM	0
28	1.4CM	0.00135		1.4CM	0
28	1.4CM	0.00135		1.4CM	0
28	1.4CM	0.00135		1.4CM	0
28	1.4CM	0.00135		1.4CM	0
28	1.4CM	0.00135		1.4CM	0
31	1.4CM	0.00135		1.4CM	0
31	1.4CM	0.00135		1.4CM	0
31	1.4CM	0.00135		1.4CM	0
31	1.4CM	0.00135		1.4CM	0
31	1.4CM	0.00135		1.4CM	0
37	1.4CM	0.0009		1.4CM	0
37	1.4CM	0.0009		1.4CM	0
37	1.4CM	0.0009		1.4CM	0
38	1.4CM	0.00135		1.4CM	0
38	1.4CM	0.00135		1.4CM	0
38	1.4CM	0.00135		1.4CM	0
38	1.4CM	0.00135		1.4CM	0
38	1.4CM	0.00135		1.4CM	0
39	1.4CM	0.00135		1.4CM	0
39	1.4CM	0.00135		1.4CM	0
39	1.4CM	0.00135		1.4CM	0
39	1.4CM	0.00135		1.4CM	0
39	1.4CM	0.00135		1.4CM	0

Table: Concrete Design 1 - Column Summary Data - ACI 318-14

Concrete Design 1 - Column Summary Data - ACI 318-14, Part 3 of 4

Frame	VMinCombo	VMinRebar	ErrMsg
		m2/m	
1	1.4CM	0	No Messages
1	1.4CM	0	No Messages
1	1.4CM	0	No Messages
2	1.4CM	0	No Messages
2	1.4CM	0	No Messages
2	1.4CM	0	No Messages
2	1.4CM	0	No Messages
2	1.4CM	0	No Messages
3	1.4CM	0	No Messages
3	1.4CM	0	No Messages
3	1.4CM	0	No Messages
3	1.4CM	0	No Messages
3	1.4CM	0	No Messages
7	1.4CM	0	No Messages
7	1.4CM	0	No Messages
7	1.4CM	0	No Messages
8	1.4CM	0	No Messages
8	1.4CM	0	No Messages
8	1.4CM	0	No Messages
8	1.4CM	0	No Messages
8	1.4CM	0	No Messages
9	1.4CM	0	No Messages

Concrete Design 1 - Column Summary Data - ACI 318-14, Part 3 of 4

Frame	VMinCombo	VMinRebar m2/m	ErrMsg
9	1.4CM	0	No Messages
9	1.4CM	0	No Messages
9	1.4CM	0	No Messages
9	1.4CM	0	No Messages
15	1.4CM	0	No Messages
15	1.4CM	0	No Messages
15	1.4CM	0	No Messages
16	1.4CM	0	No Messages
16	1.4CM	0	No Messages
16	1.4CM	0	No Messages
16	1.4CM	0	No Messages
16	1.4CM	0	No Messages
17	1.4CM	0	No Messages
17	1.4CM	0	No Messages
17	1.4CM	0	No Messages
17	1.4CM	0	No Messages
17	1.4CM	0	No Messages
23	1.4CM	0	No Messages
23	1.4CM	0	No Messages
23	1.4CM	0	No Messages
24	1.4CM	0	No Messages
24	1.4CM	0	No Messages
24	1.4CM	0	No Messages
24	1.4CM	0	No Messages
24	1.4CM	0	No Messages
25	1.4CM	0	No Messages
25	1.4CM	0	No Messages
25	1.4CM	0	No Messages
25	1.4CM	0	No Messages
25	1.4CM	0	No Messages
27	1.4CM	0	No Messages
27	1.4CM	0	No Messages
27	1.4CM	0	No Messages
28	1.4CM	0	No Messages
28	1.4CM	0	No Messages
28	1.4CM	0	No Messages
28	1.4CM	0	No Messages
28	1.4CM	0	No Messages
31	1.4CM	0	No Messages
31	1.4CM	0	No Messages
31	1.4CM	0	No Messages
31	1.4CM	0	No Messages
31	1.4CM	0	No Messages
37	1.4CM	0	No Messages
37	1.4CM	0	No Messages
37	1.4CM	0	No Messages
38	1.4CM	0	No Messages
38	1.4CM	0	No Messages
38	1.4CM	0	No Messages
38	1.4CM	0	No Messages
38	1.4CM	0	No Messages
39	1.4CM	0	No Messages
39	1.4CM	0	No Messages
39	1.4CM	0	No Messages
39	1.4CM	0	No Messages
39	1.4CM	0	No Messages

Table: Concrete Design 1 - Column Summary Data - ACI 318-14

Concrete Design 1 - Column Summary Data - ACI 318-14, Part 4 of 4

Frame	WarnMsg
1	No Messages

Concrete Design 1 - Column Summary Data - ACI 318-14, Part 4 of 4

Frame	WarnMsg
1	No Messages
1	No Messages
2	No Messages
2	No Messages
2	No Messages
2	No Messages
2	No Messages
3	No Messages
3	No Messages
3	No Messages
3	No Messages
3	No Messages
7	No Messages
7	No Messages
7	No Messages
8	No Messages
8	No Messages
8	No Messages
8	No Messages
8	No Messages
9	No Messages
9	No Messages
9	No Messages
9	No Messages
9	No Messages
15	No Messages
15	No Messages
15	No Messages
16	No Messages
16	No Messages
16	No Messages
16	No Messages
16	No Messages
17	No Messages
17	No Messages
17	No Messages
17	No Messages
17	No Messages
23	No Messages
23	No Messages
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25	No Messages
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25	No Messages
27	No Messages
27	No Messages
27	No Messages
28	No Messages
28	No Messages
28	No Messages
28	No Messages
28	No Messages
31	No Messages
31	No Messages
31	No Messages
31	No Messages
31	No Messages
37	No Messages
37	No Messages
37	No Messages

Concrete Design 1 - Column Summary Data - ACI 318-14, Part 4 of 4

Frame	WarnMsg
38	No Messages
38	No Messages
38	No Messages
38	No Messages
38	No Messages
39	No Messages
39	No Messages
39	No Messages
39	No Messages
39	No Messages

Table: Concrete Design 2 - Beam Summary Data - ACI 318-14

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 1 of 4

Frame	DesignSect	DesignType	Status	Location	FTopCombo
				m	
4	v25x35	Beam	No Messages	0	1.4CM
4	v25x35	Beam	No Messages	0.45	1.4CM (Sp)
4	v25x35	Beam	No Messages	0.9	1.4CM (Sp)
4	v25x35	Beam	No Messages	1.35	1.4CM (Sp)
4	v25x35	Beam	No Messages	1.8	1.4CM
4	v25x35	Beam	No Messages	2.25	1.4CM
4	v25x35	Beam	No Messages	2.7	1.4CM
10	v25x35	Beam	No Messages	0	1.4CM
10	v25x35	Beam	No Messages	0.45	1.4CM (Sp)
10	v25x35	Beam	No Messages	0.9	1.4CM (Sp)
10	v25x35	Beam	No Messages	1.35	1.4CM (Sp)
10	v25x35	Beam	No Messages	1.8	1.4CM (Sp)
10	v25x35	Beam	No Messages	2.25	1.4CM (Sp)
10	v25x35	Beam	No Messages	2.7	1.4CM
18	v25x35	Beam	No Messages	0	1.4CM
18	v25x35	Beam	No Messages	0.45	1.4CM (Sp)
18	v25x35	Beam	No Messages	0.9	1.4CM (Sp)
18	v25x35	Beam	No Messages	1.35	1.4CM (Sp)
18	v25x35	Beam	No Messages	1.8	1.4CM (Sp)
18	v25x35	Beam	No Messages	2.25	1.4CM (Sp)
18	v25x35	Beam	No Messages	2.7	1.4CM
26	v25x35	Beam	No Messages	0	1.4CM
26	v25x35	Beam	No Messages	0.45	1.4CM (Sp)
26	v25x35	Beam	No Messages	0.9	1.4CM (Sp)
26	v25x35	Beam	No Messages	1.35	1.4CM (Sp)
26	v25x35	Beam	No Messages	1.8	1.4CM (Sp)
26	v25x35	Beam	No Messages	2.25	1.4CM (Sp)
26	v25x35	Beam	No Messages	2.7	1.4CM
69	v25x35	Beam	No Messages	0	1.4CM
69	v25x35	Beam	No Messages	0.45	1.4CM (Sp)
69	v25x35	Beam	No Messages	0.9	1.4CM (Sp)
69	v25x35	Beam	No Messages	1.35	1.4CM (Sp)
69	v25x35	Beam	No Messages	1.8	1.4CM (Sp)
69	v25x35	Beam	No Messages	2.25	1.4CM (Sp)
69	v25x35	Beam	No Messages	2.7	1.4CM (Sp)
69	v25x35	Beam	No Messages	3.15	1.4CM
69	v25x35	Beam	No Messages	3.6	1.4CM
70	v25x35	Beam	No Messages	0	1.4CM
70	v25x35	Beam	No Messages	0.45	1.4CM
70	v25x35	Beam	No Messages	0.9	1.4CM (Sp)
70	v25x35	Beam	No Messages	1.35	1.4CM (Sp)
70	v25x35	Beam	No Messages	1.8	1.4CM (Sp)
70	v25x35	Beam	No Messages	2.25	1.4CM (Sp)
70	v25x35	Beam	No Messages	2.7	1.4CM (Sp)
70	v25x35	Beam	No Messages	3.15	1.4CM
70	v25x35	Beam	No Messages	3.6	1.4CM
71	v25x35	Beam	No Messages	0	1.4CM

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 1 of 4

Frame	DesignSect	DesignType	Status	Location	FTopCombo
				m	
71	v25x35	Beam	No Messages	0.45	1.4CM
71	v25x35	Beam	No Messages	0.9	1.4CM (Sp)
71	v25x35	Beam	No Messages	1.35	1.4CM (Sp)
71	v25x35	Beam	No Messages	1.8	1.4CM (Sp)
71	v25x35	Beam	No Messages	2.25	1.4CM (Sp)
71	v25x35	Beam	No Messages	2.7	1.4CM (Sp)
71	v25x35	Beam	No Messages	3.15	1.4CM
71	v25x35	Beam	No Messages	3.6	1.4CM
77	V30X40	Beam	No Messages	0	1.4CM
77	V30X40	Beam	No Messages	0.45	1.4CM (Sp)
77	V30X40	Beam	No Messages	0.9	1.4CM (Sp)
77	V30X40	Beam	No Messages	1.35	1.4CM (Sp)
77	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
77	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
77	V30X40	Beam	No Messages	2.25	1.4CM (Sp)
77	V30X40	Beam	No Messages	2.7	1.4CM (Sp)
77	V30X40	Beam	No Messages	3.15	1.4CM
77	V30X40	Beam	No Messages	3.6	1.4CM
78	V30X40	Beam	No Messages	0	1.4CM
78	V30X40	Beam	No Messages	0.45	1.4CM
78	V30X40	Beam	No Messages	0.9	1.4CM (Sp)
78	V30X40	Beam	No Messages	1.35	1.4CM (Sp)
78	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
78	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
78	V30X40	Beam	No Messages	2.25	1.4CM (Sp)
78	V30X40	Beam	No Messages	2.7	1.4CM (Sp)
78	V30X40	Beam	No Messages	3.15	1.4CM
78	V30X40	Beam	No Messages	3.6	1.4CM
79	V30X40	Beam	No Messages	0	1.4CM
79	V30X40	Beam	No Messages	0.45	1.4CM
79	V30X40	Beam	No Messages	0.9	1.4CM (Sp)
79	V30X40	Beam	No Messages	1.35	1.4CM (Sp)
79	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
79	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
79	V30X40	Beam	No Messages	2.25	1.4CM (Sp)
79	V30X40	Beam	No Messages	2.7	1.4CM (Sp)
79	V30X40	Beam	No Messages	3.15	1.4CM
79	V30X40	Beam	No Messages	3.6	1.4CM
85	V30X40	Beam	No Messages	0	1.4CM
85	V30X40	Beam	No Messages	0.45	1.4CM (Sp)
85	V30X40	Beam	No Messages	0.9	1.4CM (Sp)
85	V30X40	Beam	No Messages	1.35	1.4CM (Sp)
85	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
85	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
85	V30X40	Beam	No Messages	2.25	1.4CM (Sp)
85	V30X40	Beam	No Messages	2.7	1.4CM (Sp)
85	V30X40	Beam	No Messages	3.15	1.4CM
85	V30X40	Beam	No Messages	3.6	1.4CM
86	V30X40	Beam	No Messages	0	1.4CM
86	V30X40	Beam	No Messages	0.45	1.4CM
86	V30X40	Beam	No Messages	0.9	1.4CM (Sp)
86	V30X40	Beam	No Messages	1.35	1.4CM (Sp)
86	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
86	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
86	V30X40	Beam	No Messages	2.25	1.4CM (Sp)
86	V30X40	Beam	No Messages	2.7	1.4CM (Sp)
86	V30X40	Beam	No Messages	3.15	1.4CM
86	V30X40	Beam	No Messages	3.6	1.4CM
87	V30X40	Beam	No Messages	0	1.4CM
87	V30X40	Beam	No Messages	0.45	1.4CM
87	V30X40	Beam	No Messages	0.9	1.4CM (Sp)
87	V30X40	Beam	No Messages	1.35	1.4CM (Sp)
87	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
87	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
87	V30X40	Beam	No Messages	2.25	1.4CM (Sp)
87	V30X40	Beam	No Messages	2.7	1.4CM (Sp)
87	V30X40	Beam	No Messages	3.15	1.4CM

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 1 of 4

Frame	DesignSect	DesignType	Status	Location	FTopCombo
				m	
87	V30X40	Beam	No Messages	3.6	1.4CM
32	v25x35	Beam	No Messages	0	1.4CM
32	v25x35	Beam	No Messages	0.45	1.4CM (Sp)
32	v25x35	Beam	No Messages	0.9	1.4CM (Sp)
32	v25x35	Beam	No Messages	1.35	1.4CM (Sp)
32	v25x35	Beam	No Messages	1.8	1.4CM
32	v25x35	Beam	No Messages	2.25	1.4CM
32	v25x35	Beam	No Messages	2.7	1.4CM
40	v25x35	Beam	No Messages	0	1.4CM
40	v25x35	Beam	No Messages	0.45	1.4CM (Sp)
40	v25x35	Beam	No Messages	0.9	1.4CM (Sp)
40	v25x35	Beam	No Messages	1.35	1.4CM (Sp)
40	v25x35	Beam	No Messages	1.8	1.4CM (Sp)
40	v25x35	Beam	No Messages	2.25	1.4CM (Sp)
40	v25x35	Beam	No Messages	2.7	1.4CM
49	v25x35	Beam	No Messages	0	1.4CM
49	v25x35	Beam	No Messages	0.45	1.4CM (Sp)
49	v25x35	Beam	No Messages	0.9	1.4CM (Sp)
49	v25x35	Beam	No Messages	1.35	1.4CM (Sp)
49	v25x35	Beam	No Messages	1.8	1.4CM (Sp)
49	v25x35	Beam	No Messages	2.25	1.4CM (Sp)
49	v25x35	Beam	No Messages	2.7	1.4CM (Sp)
49	v25x35	Beam	No Messages	3.15	1.4CM
49	v25x35	Beam	No Messages	3.6	1.4CM
50	v25x35	Beam	No Messages	0	1.4CM
50	v25x35	Beam	No Messages	0.45	1.4CM
50	v25x35	Beam	No Messages	0.9	1.4CM (Sp)
50	v25x35	Beam	No Messages	1.35	1.4CM (Sp)
50	v25x35	Beam	No Messages	1.8	1.4CM (Sp)
50	v25x35	Beam	No Messages	2.25	1.4CM (Sp)
50	v25x35	Beam	No Messages	2.7	1.4CM (Sp)
50	v25x35	Beam	No Messages	3.15	1.4CM
50	v25x35	Beam	No Messages	3.6	1.4CM
54	V30X40	Beam	No Messages	0	1.4CM
54	V30X40	Beam	No Messages	0.45	1.4CM (Sp)
54	V30X40	Beam	No Messages	0.9	1.4CM (Sp)
54	V30X40	Beam	No Messages	1.35	1.4CM (Sp)
54	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
54	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
54	V30X40	Beam	No Messages	2.25	1.4CM (Sp)
54	V30X40	Beam	No Messages	2.7	1.4CM (Sp)
54	V30X40	Beam	No Messages	3.15	1.4CM
54	V30X40	Beam	No Messages	3.6	1.4CM
55	V30X40	Beam	No Messages	0	1.4CM
55	V30X40	Beam	No Messages	0.45	1.4CM
55	V30X40	Beam	No Messages	0.9	1.4CM (Sp)
55	V30X40	Beam	No Messages	1.35	1.4CM (Sp)
55	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
55	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
55	V30X40	Beam	No Messages	2.25	1.4CM (Sp)
55	V30X40	Beam	No Messages	2.7	1.4CM (Sp)
55	V30X40	Beam	No Messages	3.15	1.4CM
55	V30X40	Beam	No Messages	3.6	1.4CM
57	V30X40	Beam	No Messages	0	1.4CM
57	V30X40	Beam	No Messages	0.45	1.4CM (Sp)
57	V30X40	Beam	No Messages	0.9	1.4CM (Sp)
57	V30X40	Beam	No Messages	1.35	1.4CM (Sp)
57	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
57	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
57	V30X40	Beam	No Messages	2.25	1.4CM (Sp)
57	V30X40	Beam	No Messages	2.7	1.4CM (Sp)
57	V30X40	Beam	No Messages	3.15	1.4CM
57	V30X40	Beam	No Messages	3.6	1.4CM
58	V30X40	Beam	No Messages	0	1.4CM
58	V30X40	Beam	No Messages	0.45	1.4CM
58	V30X40	Beam	No Messages	0.9	1.4CM (Sp)
58	V30X40	Beam	No Messages	1.35	1.4CM (Sp)

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 1 of 4

Frame	DesignSect	DesignType	Status	Location	FTopCombo
				m	
58	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
58	V30X40	Beam	No Messages	1.8	1.4CM (Sp)
58	V30X40	Beam	No Messages	2.25	1.4CM (Sp)
58	V30X40	Beam	No Messages	2.7	1.4CM (Sp)
58	V30X40	Beam	No Messages	3.15	1.4CM
58	V30X40	Beam	No Messages	3.6	1.4CM
35	V30X40	Beam	No Messages	0	1.4CM
35	V30X40	Beam	No Messages	0.5	1.4CM
35	V30X40	Beam	No Messages	1	1.4CM (Sp)
35	V30X40	Beam	No Messages	1.5	1.4CM (Sp)
35	V30X40	Beam	No Messages	2	1.4CM (Sp)
35	V30X40	Beam	No Messages	2.5	1.4CM (Sp)
35	V30X40	Beam	No Messages	3	1.4CM (Sp)
35	V30X40	Beam	No Messages	3.5	1.4CM (Sp)
35	V30X40	Beam	No Messages	4	1.4CM (Sp)
35	V30X40	Beam	No Messages	4.5	1.4CM (Sp)
35	V30X40	Beam	No Messages	5	1.4CM (Sp)
35	V30X40	Beam	No Messages	5.5	1.4CM (Sp)
35	V30X40	Beam	No Messages	6	1.4CM (Sp)
35	V30X40	Beam	No Messages	6.5	1.4CM (Sp)
35	V30X40	Beam	No Messages	7	1.4CM
35	V30X40	Beam	No Messages	7.5	1.4CM
43	V30X40	Beam	No Messages	0	1.4CM
43	V30X40	Beam	No Messages	0.5	1.4CM
43	V30X40	Beam	No Messages	1	1.4CM (Sp)
43	V30X40	Beam	No Messages	1.5	1.4CM (Sp)
43	V30X40	Beam	No Messages	2	1.4CM (Sp)
43	V30X40	Beam	No Messages	2.5	1.4CM (Sp)
43	V30X40	Beam	No Messages	3	1.4CM (Sp)
43	V30X40	Beam	No Messages	3.5	1.4CM (Sp)
43	V30X40	Beam	No Messages	4	1.4CM (Sp)
43	V30X40	Beam	No Messages	4.5	1.4CM (Sp)
43	V30X40	Beam	No Messages	5	1.4CM (Sp)
43	V30X40	Beam	No Messages	5.5	1.4CM (Sp)
43	V30X40	Beam	No Messages	6	1.4CM (Sp)
43	V30X40	Beam	No Messages	6.5	1.4CM (Sp)
43	V30X40	Beam	No Messages	7	1.4CM
43	V30X40	Beam	No Messages	7.5	1.4CM

Table: Concrete Design 2 - Beam Summary Data - ACI 318-14

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 2 of 4

Frame	FTopArea	FBotCombo	FBotArea	VCombo	VRebar
	m2		m2		m2/m
4	1.899E-07	1.4CM (Sp)	9.495E-08	1.4CM	0
4	2.3E-05	1.4CM (Sp)	2.3E-05	1.4CM	0
4	2.3E-05	1.4CM (Sp)	2.3E-05	1.4CM	0
4	2.3E-05	1.4CM (Sp)	2.3E-05	1.4CM	0
4	3.4E-05	1.4CM (Sp)	2.3E-05	1.4CM	0
4	6.1E-05	1.4CM (Sp)	2.3E-05	1.4CM	0
4	9.4E-05	1.4CM (Sp)	4.7E-05	1.4CM	0
10	2.2E-05	1.4CM (Sp)	1.1E-05	1.4CM	0
10	5.53E-06	1.4CM (Sp)	5.53E-06	1.4CM	0
10	5.53E-06	1.4CM	7.774E-06	1.4CM	0
10	5.53E-06	1.4CM	1.2E-05	1.4CM	0
10	5.53E-06	1.4CM	9.744E-06	1.4CM	0
10	5.53E-06	1.4CM (Sp)	5.53E-06	1.4CM	0
10	1.6E-05	1.4CM (Sp)	8.11E-06	1.4CM	0
18	2.3E-05	1.4CM (Sp)	1.2E-05	1.4CM	0
18	5.83E-06	1.4CM (Sp)	5.83E-06	1.4CM	0
18	5.83E-06	1.4CM	8.822E-06	1.4CM	0
18	5.83E-06	1.4CM	1.4E-05	1.4CM	0
18	5.83E-06	1.4CM	1.3E-05	1.4CM	0

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 2 of 4

Frame	FTopArea	FBotCombo	FBotArea	VCombo	VRebar
	m2		m2		m2/m
18	5.83E-06	1.4CM (Sp)	5.83E-06	1.4CM	0
18	1.1E-05	1.4CM (Sp)	5.338E-06	1.4CM	0
26	2.3E-05	1.4CM (Sp)	1.2E-05	1.4CM	0
26	5.807E-06	1.4CM (Sp)	5.807E-06	1.4CM	0
26	5.807E-06	1.4CM	8.841E-06	1.4CM	0
26	5.807E-06	1.4CM	1.4E-05	1.4CM	0
26	5.807E-06	1.4CM	1.3E-05	1.4CM	0
26	5.807E-06	1.4CM (Sp)	5.807E-06	1.4CM	0
26	1.1E-05	1.4CM (Sp)	5.402E-06	1.4CM	0
69	2E-05	1.4CM (Sp)	9.848E-06	1.4CM	0
69	1.1E-05	1.4CM (Sp)	1.1E-05	1.4CM	0
69	1.1E-05	1.4CM	1.6E-05	1.4CM	0
69	1.1E-05	1.4CM	2.4E-05	1.4CM	0
69	1.1E-05	1.4CM	2.4E-05	1.4CM	0
69	1.1E-05	1.4CM	1.8E-05	1.4CM	0
69	1.1E-05	1.4CM (Sp)	1.1E-05	1.4CM	0
69	1.6E-05	1.4CM (Sp)	1.1E-05	1.4CM	0
69	4.3E-05	1.4CM (Sp)	2.2E-05	1.4CM	0
70	4E-05	1.4CM (Sp)	2E-05	1.4CM	0
70	1.5E-05	1.4CM (Sp)	9.911E-06	1.4CM	0
70	9.911E-06	1.4CM (Sp)	9.911E-06	1.4CM	0
70	9.911E-06	1.4CM	1.4E-05	1.4CM	0
70	9.911E-06	1.4CM	1.8E-05	1.4CM	0
70	9.911E-06	1.4CM	1.5E-05	1.4CM	0
70	9.911E-06	1.4CM (Sp)	9.911E-06	1.4CM	0
70	1.2E-05	1.4CM (Sp)	9.911E-06	1.4CM	0
70	3.7E-05	1.4CM (Sp)	1.8E-05	1.4CM	0
71	3.7E-05	1.4CM (Sp)	1.8E-05	1.4CM	0
71	1.2E-05	1.4CM (Sp)	9.249E-06	1.4CM	0
71	9.249E-06	1.4CM (Sp)	9.249E-06	1.4CM	0
71	9.249E-06	1.4CM	1.5E-05	1.4CM	0
71	9.249E-06	1.4CM	1.9E-05	1.4CM	0
71	9.249E-06	1.4CM	1.5E-05	1.4CM	0
71	9.249E-06	1.4CM (Sp)	9.249E-06	1.4CM	0
71	1.3E-05	1.4CM (Sp)	9.249E-06	1.4CM	0
71	3.7E-05	1.4CM (Sp)	1.9E-05	1.4CM	0
77	8.5E-05	1.4CM (Sp)	4.2E-05	1.4CM	0
77	3.5E-05	1.4CM (Sp)	3.5E-05	1.4CM	0
77	3.5E-05	1.4CM	4.1E-05	1.4CM	0
77	3.5E-05	1.4CM	6.9E-05	1.4CM	0
77	3.5E-05	1.4CM	7.2E-05	1.4CM	0
77	3.5E-05	1.4CM	7.3E-05	1.4CM	0
77	3.5E-05	1.4CM	5.5E-05	1.4CM	0
77	3.5E-05	1.4CM (Sp)	3.5E-05	1.4CM	0
77	5.1E-05	1.4CM (Sp)	3.5E-05	1.4CM	0
77	0.000141	1.4CM (Sp)	7E-05	1.4CM	0
78	0.000127	1.4CM (Sp)	6.3E-05	1.4CM	0
78	4.5E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
78	3.2E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
78	3.2E-05	1.4CM	4.8E-05	1.4CM	0
78	3.2E-05	1.4CM	5.9E-05	1.4CM	0
78	3.2E-05	1.4CM	5.9E-05	1.4CM	0
78	3.2E-05	1.4CM	4.9E-05	1.4CM	0
78	3.2E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
78	4.2E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
78	0.000124	1.4CM (Sp)	6.2E-05	1.4CM	0
79	0.000124	1.4CM (Sp)	6.2E-05	1.4CM	0
79	4.1E-05	1.4CM (Sp)	3.1E-05	1.4CM	0
79	3.1E-05	1.4CM (Sp)	3.1E-05	1.4CM	0
79	3.1E-05	1.4CM	5E-05	1.4CM	0
79	3.1E-05	1.4CM	6E-05	1.4CM	0
79	3.1E-05	1.4CM	6E-05	1.4CM	0
79	3.1E-05	1.4CM	5E-05	1.4CM	0
79	3.1E-05	1.4CM (Sp)	3.1E-05	1.4CM	0
79	4.1E-05	1.4CM (Sp)	3.1E-05	1.4CM	0
79	0.000123	1.4CM (Sp)	6.1E-05	1.4CM	0
85	8.6E-05	1.4CM (Sp)	4.3E-05	1.4CM	0

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 2 of 4

Frame	FTopArea	FBotCombo	FBotArea	VCombo	VRebar
	m2		m2		m2/m
85	3.5E-05	1.4CM (Sp)	3.5E-05	1.4CM	0
85	3.5E-05	1.4CM	4.2E-05	1.4CM	0
85	3.5E-05	1.4CM	7E-05	1.4CM	0
85	3.5E-05	1.4CM	7.4E-05	1.4CM	0
85	3.5E-05	1.4CM	7.5E-05	1.4CM	0
85	3.5E-05	1.4CM	5.7E-05	1.4CM	0
85	3.5E-05	1.4CM (Sp)	3.5E-05	1.4CM	0
85	5.2E-05	1.4CM (Sp)	3.5E-05	1.4CM	0
85	0.000143	1.4CM (Sp)	7.1E-05	1.4CM	0
86	0.000127	1.4CM (Sp)	6.3E-05	1.4CM	0
86	4.5E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
86	3.2E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
86	3.2E-05	1.4CM	4.8E-05	1.4CM	0
86	3.2E-05	1.4CM	5.9E-05	1.4CM	0
86	3.2E-05	1.4CM	5.9E-05	1.4CM	0
86	3.2E-05	1.4CM	4.9E-05	1.4CM	0
86	3.2E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
86	4.2E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
86	0.000123	1.4CM (Sp)	6.1E-05	1.4CM	0
87	0.000123	1.4CM (Sp)	6.1E-05	1.4CM	0
87	4.1E-05	1.4CM (Sp)	3.1E-05	1.4CM	0
87	3.1E-05	1.4CM (Sp)	3.1E-05	1.4CM	0
87	3.1E-05	1.4CM	5E-05	1.4CM	0
87	3.1E-05	1.4CM	6E-05	1.4CM	0
87	3.1E-05	1.4CM	6E-05	1.4CM	0
87	3.1E-05	1.4CM	5E-05	1.4CM	0
87	3.1E-05	1.4CM (Sp)	3.1E-05	1.4CM	0
87	4.1E-05	1.4CM (Sp)	3.1E-05	1.4CM	0
87	0.000123	1.4CM (Sp)	6.1E-05	1.4CM	0
32	0	1.4CM	1.44E-06	1.4CM	0
32	2.4E-05	1.4CM (Sp)	2.4E-05	1.4CM	0
32	2.4E-05	1.4CM (Sp)	2.4E-05	1.4CM	0
32	2.4E-05	1.4CM (Sp)	2.4E-05	1.4CM	0
32	3.5E-05	1.4CM (Sp)	2.4E-05	1.4CM	0
32	6.2E-05	1.4CM (Sp)	2.4E-05	1.4CM	0
32	9.6E-05	1.4CM (Sp)	4.8E-05	1.4CM	0
40	2.1E-05	1.4CM (Sp)	1.1E-05	1.4CM	0
40	5.366E-06	1.4CM (Sp)	5.366E-06	1.4CM	0
40	5.366E-06	1.4CM	7.919E-06	1.4CM	0
40	5.366E-06	1.4CM	1.2E-05	1.4CM	0
40	5.366E-06	1.4CM	9.379E-06	1.4CM	0
40	5.366E-06	1.4CM (Sp)	5.366E-06	1.4CM	0
40	1.7E-05	1.4CM (Sp)	8.547E-06	1.4CM	0
49	2E-05	1.4CM (Sp)	9.9E-06	1.4CM	0
49	1.1E-05	1.4CM (Sp)	1.1E-05	1.4CM	0
49	1.1E-05	1.4CM	1.6E-05	1.4CM	0
49	1.1E-05	1.4CM	2.4E-05	1.4CM	0
49	1.1E-05	1.4CM	2.4E-05	1.4CM	0
49	1.1E-05	1.4CM	1.8E-05	1.4CM	0
49	1.1E-05	1.4CM (Sp)	1.1E-05	1.4CM	0
49	1.6E-05	1.4CM (Sp)	1.1E-05	1.4CM	0
49	4.3E-05	1.4CM (Sp)	2.2E-05	1.4CM	0
50	4E-05	1.4CM (Sp)	2E-05	1.4CM	0
50	1.5E-05	1.4CM (Sp)	9.925E-06	1.4CM	0
50	9.925E-06	1.4CM (Sp)	9.925E-06	1.4CM	0
50	9.925E-06	1.4CM	1.4E-05	1.4CM	0
50	9.925E-06	1.4CM	1.8E-05	1.4CM	0
50	9.925E-06	1.4CM	1.5E-05	1.4CM	0
50	9.925E-06	1.4CM (Sp)	9.925E-06	1.4CM	0
50	1.2E-05	1.4CM (Sp)	9.925E-06	1.4CM	0
50	3.7E-05	1.4CM (Sp)	1.8E-05	1.4CM	0
54	8.4E-05	1.4CM (Sp)	4.2E-05	1.4CM	0
54	3.5E-05	1.4CM (Sp)	3.5E-05	1.4CM	0
54	3.5E-05	1.4CM	4.1E-05	1.4CM	0
54	3.5E-05	1.4CM	6.8E-05	1.4CM	0
54	3.5E-05	1.4CM	7.1E-05	1.4CM	0
54	3.5E-05	1.4CM	7.2E-05	1.4CM	0

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 2 of 4

Frame	FTopArea	FBotCombo	FBotArea	VCombo	VRebar
	m2		m2		m2/m
54	3.5E-05	1.4CM	5.5E-05	1.4CM	0
54	3.5E-05	1.4CM (Sp)	3.5E-05	1.4CM	0
54	5.1E-05	1.4CM (Sp)	3.5E-05	1.4CM	0
54	0.000141	1.4CM (Sp)	7E-05	1.4CM	0
55	0.000127	1.4CM (Sp)	6.3E-05	1.4CM	0
55	4.4E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
55	3.2E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
55	3.2E-05	1.4CM	4.8E-05	1.4CM	0
55	3.2E-05	1.4CM	5.9E-05	1.4CM	0
55	3.2E-05	1.4CM	5.9E-05	1.4CM	0
55	3.2E-05	1.4CM	4.9E-05	1.4CM	0
55	3.2E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
55	4.2E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
55	0.000124	1.4CM (Sp)	6.2E-05	1.4CM	0
57	8.8E-05	1.4CM (Sp)	4.4E-05	1.4CM	0
57	3.6E-05	1.4CM (Sp)	3.6E-05	1.4CM	0
57	3.6E-05	1.4CM	4.2E-05	1.4CM	0
57	3.6E-05	1.4CM	7.1E-05	1.4CM	0
57	3.6E-05	1.4CM	7.7E-05	1.4CM	0
57	3.6E-05	1.4CM	7.8E-05	1.4CM	0
57	3.6E-05	1.4CM	5.8E-05	1.4CM	0
57	3.6E-05	1.4CM (Sp)	3.6E-05	1.4CM	0
57	5.3E-05	1.4CM (Sp)	3.6E-05	1.4CM	0
57	0.000145	1.4CM (Sp)	7.2E-05	1.4CM	0
58	0.000128	1.4CM (Sp)	6.4E-05	1.4CM	0
58	4.5E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
58	3.2E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
58	3.2E-05	1.4CM	4.8E-05	1.4CM	0
58	3.2E-05	1.4CM	5.8E-05	1.4CM	0
58	3.2E-05	1.4CM	5.9E-05	1.4CM	0
58	3.2E-05	1.4CM	4.9E-05	1.4CM	0
58	3.2E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
58	4.2E-05	1.4CM (Sp)	3.2E-05	1.4CM	0
58	0.000123	1.4CM (Sp)	6.1E-05	1.4CM	0
35	0.000183	1.4CM (Sp)	9.1E-05	1.4CM	0
35	0.000108	1.4CM (Sp)	4.5E-05	1.4CM	0
35	4.5E-05	1.4CM (Sp)	4.5E-05	1.4CM	0
35	4.5E-05	1.4CM (Sp)	4.5E-05	1.4CM	0
35	4.5E-05	1.4CM	5.5E-05	1.4CM	0
35	4.5E-05	1.4CM	8.9E-05	1.4CM	0
35	4.5E-05	1.4CM	0.000112	1.4CM	0
35	4.5E-05	1.4CM	0.000126	1.4CM	0
35	4.5E-05	1.4CM	0.000129	1.4CM	0
35	4.5E-05	1.4CM	0.000122	1.4CM	0
35	4.5E-05	1.4CM	0.000105	1.4CM	0
35	4.5E-05	1.4CM	7.7E-05	1.4CM	0
35	4.5E-05	1.4CM (Sp)	4.5E-05	1.4CM	0
35	4.5E-05	1.4CM (Sp)	4.5E-05	1.4CM	0
35	6.6E-05	1.4CM (Sp)	4.5E-05	1.4CM	0
35	0.000134	1.4CM (Sp)	6.7E-05	1.4CM	0
43	0.000181	1.4CM (Sp)	9E-05	1.4CM	0
43	0.000106	1.4CM (Sp)	4.5E-05	1.4CM	0
43	4.5E-05	1.4CM (Sp)	4.5E-05	1.4CM	0
43	4.5E-05	1.4CM (Sp)	4.5E-05	1.4CM	0
43	4.5E-05	1.4CM	5.5E-05	1.4CM	0
43	4.5E-05	1.4CM	8.9E-05	1.4CM	0
43	4.5E-05	1.4CM	0.000112	1.4CM	0
43	4.5E-05	1.4CM	0.000126	1.4CM	0
43	4.5E-05	1.4CM	0.000129	1.4CM	0
43	4.5E-05	1.4CM	0.000121	1.4CM	0
43	4.5E-05	1.4CM	0.000104	1.4CM	0
43	4.5E-05	1.4CM	7.6E-05	1.4CM	0
43	4.5E-05	1.4CM (Sp)	4.5E-05	1.4CM	0
43	4.5E-05	1.4CM (Sp)	4.5E-05	1.4CM	0
43	6.8E-05	1.4CM (Sp)	4.5E-05	1.4CM	0
43	0.000137	1.4CM (Sp)	6.8E-05	1.4CM	0

Table: Concrete Design 2 - Beam Summary Data - ACI 318-14

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 3 of 4

Frame	TLngCombo	TLngArea	TTrnCombo	TTrnRebar
		m2		m2/m

Table: Concrete Design 2 - Beam Summary Data - ACI 318-14

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 3 of 4

Frame	TLngCombo	TLngArea m2	TTrnCombo	TTrnRebar m2/m
4	1.4CM	0	1.4CM	0
4	1.4CM	0	1.4CM	0
4	1.4CM	0	1.4CM	0
4	1.4CM	0	1.4CM	0
4	1.4CM	0	1.4CM	0
4	1.4CM	0	1.4CM	0
4	1.4CM	0	1.4CM	0
10	1.4CM	0	1.4CM	0
10	1.4CM	0	1.4CM	0
10	1.4CM	0	1.4CM	0
10	1.4CM	0	1.4CM	0
10	1.4CM	0	1.4CM	0
10	1.4CM	0	1.4CM	0
10	1.4CM	0	1.4CM	0
10	1.4CM	0	1.4CM	0
18	1.4CM	0	1.4CM	0
18	1.4CM	0	1.4CM	0
18	1.4CM	0	1.4CM	0
18	1.4CM	0	1.4CM	0
18	1.4CM	0	1.4CM	0
18	1.4CM	0	1.4CM	0
18	1.4CM	0	1.4CM	0
26	1.4CM	0	1.4CM	0
26	1.4CM	0	1.4CM	0
26	1.4CM	0	1.4CM	0
26	1.4CM	0	1.4CM	0
26	1.4CM	0	1.4CM	0
26	1.4CM	0	1.4CM	0
26	1.4CM	0	1.4CM	0
69	1.4CM	0	1.4CM	0
69	1.4CM	0	1.4CM	0
69	1.4CM	0	1.4CM	0
69	1.4CM	0	1.4CM	0
69	1.4CM	0	1.4CM	0
69	1.4CM	0	1.4CM	0
69	1.4CM	0	1.4CM	0
69	1.4CM	0	1.4CM	0
69	1.4CM	0	1.4CM	0
70	1.4CM	0	1.4CM	0
70	1.4CM	0	1.4CM	0
70	1.4CM	0	1.4CM	0
70	1.4CM	0	1.4CM	0
70	1.4CM	0	1.4CM	0
70	1.4CM	0	1.4CM	0
70	1.4CM	0	1.4CM	0
70	1.4CM	0	1.4CM	0
71	1.4CM	0	1.4CM	0
71	1.4CM	0	1.4CM	0
71	1.4CM	0	1.4CM	0
71	1.4CM	0	1.4CM	0
71	1.4CM	0	1.4CM	0
71	1.4CM	0	1.4CM	0
71	1.4CM	0	1.4CM	0
71	1.4CM	0	1.4CM	0
71	1.4CM	0	1.4CM	0
77	1.4CM	0	1.4CM	0
77	1.4CM	0	1.4CM	0
77	1.4CM	0	1.4CM	0
77	1.4CM	0	1.4CM	0
77	1.4CM	0	1.4CM	0
77	1.4CM	0	1.4CM	0
77	1.4CM	0	1.4CM	0
77	1.4CM	0	1.4CM	0
77	1.4CM	0	1.4CM	0

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 3 of 4

Frame	TLngCombo	TLngArea m2	TTrnCombo	TTrnRebar m2/m
77	1.4CM	0	1.4CM	0
78	1.4CM	0	1.4CM	0
78	1.4CM	0	1.4CM	0
78	1.4CM	0	1.4CM	0
78	1.4CM	0	1.4CM	0
78	1.4CM	0	1.4CM	0
78	1.4CM	0	1.4CM	0
78	1.4CM	0	1.4CM	0
78	1.4CM	0	1.4CM	0
78	1.4CM	0	1.4CM	0
78	1.4CM	0	1.4CM	0
78	1.4CM	0	1.4CM	0
79	1.4CM	0	1.4CM	0
79	1.4CM	0	1.4CM	0
79	1.4CM	0	1.4CM	0
79	1.4CM	0	1.4CM	0
79	1.4CM	0	1.4CM	0
79	1.4CM	0	1.4CM	0
79	1.4CM	0	1.4CM	0
79	1.4CM	0	1.4CM	0
79	1.4CM	0	1.4CM	0
79	1.4CM	0	1.4CM	0
85	1.4CM	0	1.4CM	0
85	1.4CM	0	1.4CM	0
85	1.4CM	0	1.4CM	0
85	1.4CM	0	1.4CM	0
85	1.4CM	0	1.4CM	0
85	1.4CM	0	1.4CM	0
85	1.4CM	0	1.4CM	0
85	1.4CM	0	1.4CM	0
85	1.4CM	0	1.4CM	0
85	1.4CM	0	1.4CM	0
86	1.4CM	0	1.4CM	0
86	1.4CM	0	1.4CM	0
86	1.4CM	0	1.4CM	0
86	1.4CM	0	1.4CM	0
86	1.4CM	0	1.4CM	0
86	1.4CM	0	1.4CM	0
86	1.4CM	0	1.4CM	0
86	1.4CM	0	1.4CM	0
86	1.4CM	0	1.4CM	0
86	1.4CM	0	1.4CM	0
87	1.4CM	0	1.4CM	0
87	1.4CM	0	1.4CM	0
87	1.4CM	0	1.4CM	0
87	1.4CM	0	1.4CM	0
87	1.4CM	0	1.4CM	0
87	1.4CM	0	1.4CM	0
87	1.4CM	0	1.4CM	0
87	1.4CM	0	1.4CM	0
87	1.4CM	0	1.4CM	0
32	1.4CM	0	1.4CM	0
32	1.4CM	0	1.4CM	0
32	1.4CM	0	1.4CM	0
32	1.4CM	0	1.4CM	0
32	1.4CM	0	1.4CM	0
32	1.4CM	0	1.4CM	0
32	1.4CM	0	1.4CM	0
40	1.4CM	0	1.4CM	0
40	1.4CM	0	1.4CM	0
40	1.4CM	0	1.4CM	0
40	1.4CM	0	1.4CM	0
40	1.4CM	0	1.4CM	0
40	1.4CM	0	1.4CM	0
40	1.4CM	0	1.4CM	0
49	1.4CM	0	1.4CM	0
49	1.4CM	0	1.4CM	0

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 3 of 4

Frame	TLngCombo	TLngArea m2	TTrnCombo	TTrnRebar m2/m
49	1.4CM	0	1.4CM	0
49	1.4CM	0	1.4CM	0
49	1.4CM	0	1.4CM	0
49	1.4CM	0	1.4CM	0
49	1.4CM	0	1.4CM	0
49	1.4CM	0	1.4CM	0
49	1.4CM	0	1.4CM	0
50	1.4CM	0	1.4CM	0
50	1.4CM	0	1.4CM	0
50	1.4CM	0	1.4CM	0
50	1.4CM	0	1.4CM	0
50	1.4CM	0	1.4CM	0
50	1.4CM	0	1.4CM	0
50	1.4CM	0	1.4CM	0
50	1.4CM	0	1.4CM	0
50	1.4CM	0	1.4CM	0
54	1.4CM	0	1.4CM	0
54	1.4CM	0	1.4CM	0
54	1.4CM	0	1.4CM	0
54	1.4CM	0	1.4CM	0
54	1.4CM	0	1.4CM	0
54	1.4CM	0	1.4CM	0
54	1.4CM	0	1.4CM	0
54	1.4CM	0	1.4CM	0
54	1.4CM	0	1.4CM	0
54	1.4CM	0	1.4CM	0
54	1.4CM	0	1.4CM	0
55	1.4CM	0	1.4CM	0
55	1.4CM	0	1.4CM	0
55	1.4CM	0	1.4CM	0
55	1.4CM	0	1.4CM	0
55	1.4CM	0	1.4CM	0
55	1.4CM	0	1.4CM	0
55	1.4CM	0	1.4CM	0
55	1.4CM	0	1.4CM	0
55	1.4CM	0	1.4CM	0
55	1.4CM	0	1.4CM	0
57	1.4CM	0	1.4CM	0
57	1.4CM	0	1.4CM	0
57	1.4CM	0	1.4CM	0
57	1.4CM	0	1.4CM	0
57	1.4CM	0	1.4CM	0
57	1.4CM	0	1.4CM	0
57	1.4CM	0	1.4CM	0
57	1.4CM	0	1.4CM	0
57	1.4CM	0	1.4CM	0
57	1.4CM	0	1.4CM	0
58	1.4CM	0	1.4CM	0
58	1.4CM	0	1.4CM	0
58	1.4CM	0	1.4CM	0
58	1.4CM	0	1.4CM	0
58	1.4CM	0	1.4CM	0
58	1.4CM	0	1.4CM	0
58	1.4CM	0	1.4CM	0
58	1.4CM	0	1.4CM	0
58	1.4CM	0	1.4CM	0
58	1.4CM	0	1.4CM	0
58	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 3 of 4

Frame	TLngCombo	TLngArea m2	TTrnCombo	TTrnRebar m2/m
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
35	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0
43	1.4CM	0	1.4CM	0

Table: Concrete Design 2 - Beam Summary Data - ACI 318-14

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 4 of 4

Frame	ErrMsg	WarnMsg
4	No Messages	No Messages
4	No Messages	No Messages
4	No Messages	No Messages
4	No Messages	No Messages
4	No Messages	No Messages
4	No Messages	No Messages
4	No Messages	No Messages
10	No Messages	No Messages
10	No Messages	No Messages
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69	No Messages	No Messages
69	No Messages	No Messages
69	No Messages	No Messages

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 4 of 4

Frame	ErrMsg	WarnMsg
70	No Messages	No Messages
70	No Messages	No Messages
70	No Messages	No Messages
70	No Messages	No Messages
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86	No Messages	No Messages
86	No Messages	No Messages

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 4 of 4

Frame	ErrMsg	WarnMsg
87	No Messages	No Messages
87	No Messages	No Messages
87	No Messages	No Messages
87	No Messages	No Messages
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57	No Messages	No Messages
57	No Messages	No Messages

Concrete Design 2 - Beam Summary Data - ACI 318-14, Part 4 of 4

Frame	ErrMsg	WarnMsg
57	No Messages	No Messages
57	No Messages	No Messages
57	No Messages	No Messages
57	No Messages	No Messages
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43	No Messages	No Messages
43	No Messages	No Messages
43	No Messages	No Messages
43	No Messages	No Messages
43	No Messages	No Messages
43	No Messages	No Messages

Table: Design Forces For Beams

Design Forces For Beams, Part 1 of 2

Frame	Combo	Station	P	V2	V3	T	M2
		m	Tonf	Tonf	Tonf	Tonf-m	Tonf-m
4	1.4CM	0	-0.0315	-0.1028	0.0034	0.01023	0.00089
4	1.4CM	0.45	-0.0315	0.0296	0.0034	0.01023	-0.00064
4	1.4CM	0.9	-0.0315	0.1621	0.0034	0.01023	-0.00217
4	1.4CM	1.35	-0.0315	0.2945	0.0034	0.01023	-0.0037
4	1.4CM	1.8	-0.0315	0.427	0.0034	0.01023	-0.00524
4	1.4CM	2.25	-0.0315	0.5594	0.0034	0.01023	-0.00677
4	1.4CM	2.7	-0.0315	0.6919	0.0034	0.01023	-0.0083
10	1.4CM	0	-0.1334	-0.416	-0.0028	0.00025	-0.00307
10	1.4CM	0.45	-0.1334	-0.2836	-0.0028	0.00025	-0.00181
10	1.4CM	0.9	-0.1334	-0.1511	-0.0028	0.00025	-0.00054
10	1.4CM	1.35	-0.1334	-0.0187	-0.0028	0.00025	0.00072
10	1.4CM	1.8	-0.1334	0.1138	-0.0028	0.00025	0.00199

Design Forces For Beams, Part 1 of 2

Frame	Combo	Station	P	V2	V3	T	M2
		m	Tonf	Tonf	Tonf	Tonf-m	Tonf-m
10	1.4CM	2.25	-0.1334	0.2462	-0.0028	0.00025	0.00325
10	1.4CM	2.7	-0.1334	0.3787	-0.0028	0.00025	0.00451
18	1.4CM	0	-0.1484	-0.4373	-0.0002595	1.147E-05	-0.00064
18	1.4CM	0.45	-0.1484	-0.3049	-0.0002595	1.147E-05	-0.00052
18	1.4CM	0.9	-0.1484	-0.1724	-0.0002595	1.147E-05	-0.00041
18	1.4CM	1.35	-0.1484	-0.04	-0.0002595	1.147E-05	-0.00029
18	1.4CM	1.8	-0.1484	0.0925	-0.0002595	1.147E-05	-0.00017
18	1.4CM	2.25	-0.1484	0.2249	-0.0002595	1.147E-05	-5.489E-05
18	1.4CM	2.7	-0.1484	0.3574	-0.0002595	1.147E-05	6.19E-05
26	1.4CM	0	-0.1484	-0.4366	0.0001965	-0.0001	0.00061
26	1.4CM	0.45	-0.1484	-0.3042	0.0001965	-0.0001	0.00052
26	1.4CM	0.9	-0.1484	-0.1717	0.0001965	-0.0001	0.00043
26	1.4CM	1.35	-0.1484	-0.0393	0.0001965	-0.0001	0.00034
26	1.4CM	1.8	-0.1484	0.0932	0.0001965	-0.0001	0.00025
26	1.4CM	2.25	-0.1484	0.2256	0.0001965	-0.0001	0.00016
26	1.4CM	2.7	-0.1484	0.3581	0.0001965	-0.0001	7.622E-05
32	1.4CM	0	-0.0171	-0.0921	-0.0022	-0.01024	0.0008
32	1.4CM	0.45	-0.0171	0.0403	-0.0022	-0.01024	0.00182
32	1.4CM	0.9	-0.0171	0.1728	-0.0022	-0.01024	0.00283
32	1.4CM	1.35	-0.0171	0.3052	-0.0022	-0.01024	0.00384
32	1.4CM	1.8	-0.0171	0.4377	-0.0022	-0.01024	0.00485
32	1.4CM	2.25	-0.0171	0.5701	-0.0022	-0.01024	0.00586
32	1.4CM	2.7	-0.0171	0.7026	-0.0022	-0.01024	0.00688
35	1.4CM	0	-0.2675	-1.5774	0.006	0.00062	0.01713
35	1.4CM	0.5	-0.2675	-1.3756	0.006	0.00062	0.01416
35	1.4CM	1	-0.2675	-1.1737	0.006	0.00062	0.01118
35	1.4CM	1.5	-0.2675	-0.9719	0.006	0.00062	0.00821
35	1.4CM	2	-0.2675	-0.7701	0.006	0.00062	0.00523
35	1.4CM	2.5	-0.2675	-0.5683	0.006	0.00062	0.00226
35	1.4CM	3	-0.2675	-0.3664	0.006	0.00062	-0.00072
35	1.4CM	3.5	-0.2675	-0.1646	0.006	0.00062	-0.0037
35	1.4CM	4	-0.2675	0.0372	0.006	0.00062	-0.00667
35	1.4CM	4.5	-0.2675	0.2391	0.006	0.00062	-0.00965
35	1.4CM	5	-0.2675	0.4409	0.006	0.00062	-0.01262
35	1.4CM	5.5	-0.2675	0.6427	0.006	0.00062	-0.0156
35	1.4CM	6	-0.2675	0.8446	0.006	0.00062	-0.01858
35	1.4CM	6.5	-0.2675	1.0464	0.006	0.00062	-0.02155
35	1.4CM	7	-0.2675	1.2482	0.006	0.00062	-0.02453
35	1.4CM	7.5	-0.2675	1.4501	0.006	0.00062	-0.0275
40	1.4CM	0	-0.1298	-0.4112	0.0048	-0.00047	0.00535
40	1.4CM	0.45	-0.1298	-0.2787	0.0048	-0.00047	0.00318
40	1.4CM	0.9	-0.1298	-0.1463	0.0048	-0.00047	0.00101
40	1.4CM	1.35	-0.1298	-0.0138	0.0048	-0.00047	-0.00116
40	1.4CM	1.8	-0.1298	0.1186	0.0048	-0.00047	-0.00332
40	1.4CM	2.25	-0.1298	0.2511	0.0048	-0.00047	-0.00549
40	1.4CM	2.7	-0.1298	0.3835	0.0048	-0.00047	-0.00766
43	1.4CM	0	-0.2522	-1.5714	-0.0071	-0.00107	-0.0194
43	1.4CM	0.5	-0.2522	-1.3696	-0.0071	-0.00107	-0.01584
43	1.4CM	1	-0.2522	-1.1677	-0.0071	-0.00107	-0.01228
43	1.4CM	1.5	-0.2522	-0.9659	-0.0071	-0.00107	-0.00873
43	1.4CM	2	-0.2522	-0.7641	-0.0071	-0.00107	-0.00517
43	1.4CM	2.5	-0.2522	-0.5622	-0.0071	-0.00107	-0.00161
43	1.4CM	3	-0.2522	-0.3604	-0.0071	-0.00107	0.00194
43	1.4CM	3.5	-0.2522	-0.1586	-0.0071	-0.00107	0.0055
43	1.4CM	4	-0.2522	0.0433	-0.0071	-0.00107	0.00906
43	1.4CM	4.5	-0.2522	0.2451	-0.0071	-0.00107	0.01261
43	1.4CM	5	-0.2522	0.4469	-0.0071	-0.00107	0.01617
43	1.4CM	5.5	-0.2522	0.6488	-0.0071	-0.00107	0.01972
43	1.4CM	6	-0.2522	0.8506	-0.0071	-0.00107	0.02328
43	1.4CM	6.5	-0.2522	1.0524	-0.0071	-0.00107	0.02684
43	1.4CM	7	-0.2522	1.2543	-0.0071	-0.00107	0.03039
43	1.4CM	7.5	-0.2522	1.4561	-0.0071	-0.00107	0.03395
49	1.4CM	0	-0.1076	-0.4747	-0.0027	0.01436	-0.0038
49	1.4CM	0.45	-0.1076	-0.3423	-0.0027	0.01436	-0.00259
49	1.4CM	0.9	-0.1076	-0.2098	-0.0027	0.01436	-0.00139
49	1.4CM	1.35	-0.1076	-0.0774	-0.0027	0.01436	-0.00018
49	1.4CM	1.8	-0.1076	0.0551	-0.0027	0.01436	0.00103

Design Forces For Beams, Part 1 of 2

Frame	Combo	Station	P	V2	V3	T	M2
		m	Tonf	Tonf	Tonf	Tonf-m	Tonf-m
49	1.4CM	2.25	-0.1076	0.1875	-0.0027	0.01436	0.00224
49	1.4CM	2.7	-0.1076	0.32	-0.0027	0.01436	0.00344
49	1.4CM	3.15	-0.1076	0.4524	-0.0027	0.01436	0.00465
49	1.4CM	3.6	-0.1076	0.5849	-0.0027	0.01436	0.00586
50	1.4CM	0	-0.0856	-0.5375	-0.0008354	0.00117	-0.00094
50	1.4CM	0.45	-0.0856	-0.405	-0.0008354	0.00117	-0.00056
50	1.4CM	0.9	-0.0856	-0.2726	-0.0008354	0.00117	-0.00019
50	1.4CM	1.35	-0.0856	-0.1401	-0.0008354	0.00117	0.00019
50	1.4CM	1.8	-0.0856	-0.0076	-0.0008354	0.00117	0.00056
50	1.4CM	2.25	-0.0856	0.1248	-0.0008354	0.00117	0.00094
50	1.4CM	2.7	-0.0856	0.2573	-0.0008354	0.00117	0.00132
50	1.4CM	3.15	-0.0856	0.3897	-0.0008354	0.00117	0.00169
50	1.4CM	3.6	-0.0856	0.5222	-0.0008354	0.00117	0.00207
54	1.4CM	0	-0.4025	-1.9095	0.0583	-0.10606	0.03579
54	1.4CM	0.45	-0.4025	-1.3832	0.0583	-0.10606	0.00956
54	1.4CM	0.9	-0.4025	-0.857	0.0583	-0.10606	-0.01667
54	1.4CM	1.35	-0.4025	-0.3307	0.0583	-0.10606	-0.0429
54	1.4CM	1.8	-0.4025	0.1956	0.0583	-0.10606	-0.06913
54	1.4CM	1.8	-0.4301	0.1183	-0.0834	-0.15913	-0.0691
54	1.4CM	2.25	-0.4301	0.6446	-0.0834	-0.15913	-0.03158
54	1.4CM	2.7	-0.4301	1.1708	-0.0834	-0.15913	0.00594
54	1.4CM	3.15	-0.4301	1.6971	-0.0834	-0.15913	0.04345
54	1.4CM	3.6	-0.4301	2.2234	-0.0834	-0.15913	0.08097
55	1.4CM	0	-0.3472	-2.0763	0.0711	0.01703	0.06751
55	1.4CM	0.45	-0.3472	-1.55	0.0711	0.01703	0.03552
55	1.4CM	0.9	-0.3472	-1.0238	0.0711	0.01703	0.00354
55	1.4CM	1.35	-0.3472	-0.4975	0.0711	0.01703	-0.02844
55	1.4CM	1.8	-0.3472	0.0287	0.0711	0.01703	-0.06043
55	1.4CM	1.8	-0.3519	-0.0472	-0.0709	-0.03884	-0.06065
55	1.4CM	2.25	-0.3519	0.479	-0.0709	-0.03884	-0.02876
55	1.4CM	2.7	-0.3519	1.0053	-0.0709	-0.03884	0.00312
55	1.4CM	3.15	-0.3519	1.5316	-0.0709	-0.03884	0.03501
55	1.4CM	3.6	-0.3519	2.0578	-0.0709	-0.03884	0.06689
57	1.4CM	0	-0.4252	-1.959	0.0089	0.18706	0.053
57	1.4CM	0.45	-0.4252	-1.4327	0.0089	0.18706	0.04902
57	1.4CM	0.9	-0.4252	-0.9065	0.0089	0.18706	0.04503
57	1.4CM	1.35	-0.4252	-0.3802	0.0089	0.18706	0.04105
57	1.4CM	1.8	-0.4252	0.146	0.0089	0.18706	0.03706
57	1.4CM	1.8	-0.4524	0.1687	0.0798	0.21439	0.03751
57	1.4CM	2.25	-0.4524	0.6949	0.0798	0.21439	0.00162
57	1.4CM	2.7	-0.4524	1.2212	0.0798	0.21439	-0.03427
57	1.4CM	3.15	-0.4524	1.7475	0.0798	0.21439	-0.07016
57	1.4CM	3.6	-0.4524	2.2737	0.0798	0.21439	-0.10605
58	1.4CM	0	-0.3298	-2.0773	-0.0664	0.01493	-0.06969
58	1.4CM	0.45	-0.3298	-1.551	-0.0664	0.01493	-0.03982
58	1.4CM	0.9	-0.3298	-1.0248	-0.0664	0.01493	-0.00994
58	1.4CM	1.35	-0.3298	-0.4985	-0.0664	0.01493	0.01993
58	1.4CM	1.8	-0.3298	0.0278	-0.0664	0.01493	0.04981
58	1.4CM	1.8	-0.3344	-0.0528	0.079	0.07166	0.04977
58	1.4CM	2.25	-0.3344	0.4735	0.079	0.07166	0.01419
58	1.4CM	2.7	-0.3344	0.9998	0.079	0.07166	-0.02138
58	1.4CM	3.15	-0.3344	1.526	0.079	0.07166	-0.05695
58	1.4CM	3.6	-0.3344	2.0523	0.079	0.07166	-0.09252
69	1.4CM	0	-0.1079	-0.4743	0.0013	-0.01491	0.00146
69	1.4CM	0.45	-0.1079	-0.3418	0.0013	-0.01491	0.00085
69	1.4CM	0.9	-0.1079	-0.2094	0.0013	-0.01491	0.00025
69	1.4CM	1.35	-0.1079	-0.0769	0.0013	-0.01491	-0.00036
69	1.4CM	1.8	-0.1079	0.0555	0.0013	-0.01491	-0.00097
69	1.4CM	2.25	-0.1079	0.188	0.0013	-0.01491	-0.00157
69	1.4CM	2.7	-0.1079	0.3204	0.0013	-0.01491	-0.00218
69	1.4CM	3.15	-0.1079	0.4529	0.0013	-0.01491	-0.00278
69	1.4CM	3.6	-0.1079	0.5853	0.0013	-0.01491	-0.00339
70	1.4CM	0	-0.0868	-0.5372	0.0005389	-0.00138	0.00059
70	1.4CM	0.45	-0.0868	-0.4047	0.0005389	-0.00138	0.00034
70	1.4CM	0.9	-0.0868	-0.2723	0.0005389	-0.00138	0.0001
70	1.4CM	1.35	-0.0868	-0.1398	0.0005389	-0.00138	-0.00014
70	1.4CM	1.8	-0.0868	-0.0074	0.0005389	-0.00138	-0.00038

Design Forces For Beams, Part 1 of 2

Frame	Combo	Station	P	V2	V3	T	M2
		m	Tonf	Tonf	Tonf	Tonf-m	Tonf-m
70	1.4CM	2.25	-0.0868	0.1251	0.0005389	-0.00138	-0.00063
70	1.4CM	2.7	-0.0868	0.2575	0.0005389	-0.00138	-0.00087
70	1.4CM	3.15	-0.0868	0.39	0.0005389	-0.00138	-0.00111
70	1.4CM	3.6	-0.0868	0.5225	0.0005389	-0.00138	-0.00135
71	1.4CM	0	-0.0881	-0.5297	0.0001296	-3.32E-05	-0.00039
71	1.4CM	0.45	-0.0881	-0.3972	0.0001296	-3.32E-05	-0.00045
71	1.4CM	0.9	-0.0881	-0.2647	0.0001296	-3.32E-05	-0.00051
71	1.4CM	1.35	-0.0881	-0.1323	0.0001296	-3.32E-05	-0.00056
71	1.4CM	1.8	-0.0881	0.0001605	0.0001296	-3.32E-05	-0.00062
71	1.4CM	2.25	-0.0881	0.1326	0.0001296	-3.32E-05	-0.00068
71	1.4CM	2.7	-0.0881	0.2651	0.0001296	-3.32E-05	-0.00074
71	1.4CM	3.15	-0.0881	0.3975	0.0001296	-3.32E-05	-0.0008
71	1.4CM	3.6	-0.0881	0.53	0.0001296	-3.32E-05	-0.00086
77	1.4CM	0	-0.4045	-1.9164	-0.0554	0.10694	-0.03575
77	1.4CM	0.45	-0.4045	-1.3902	-0.0554	0.10694	-0.01081
77	1.4CM	0.9	-0.4045	-0.8639	-0.0554	0.10694	0.01414
77	1.4CM	1.35	-0.4045	-0.3377	-0.0554	0.10694	0.03909
77	1.4CM	1.8	-0.4045	0.1886	-0.0554	0.10694	0.06403
77	1.4CM	1.8	-0.4322	0.1248	0.0768	0.15663	0.06424
77	1.4CM	2.25	-0.4322	0.651	0.0768	0.15663	0.0297
77	1.4CM	2.7	-0.4322	1.1773	0.0768	0.15663	-0.00484
77	1.4CM	3.15	-0.4322	1.7036	0.0768	0.15663	-0.03938
77	1.4CM	3.6	-0.4322	2.2298	0.0768	0.15663	-0.07392
78	1.4CM	0	-0.3462	-2.0776	-0.0705	-0.01787	-0.06562
78	1.4CM	0.45	-0.3462	-1.5513	-0.0705	-0.01787	-0.0339
78	1.4CM	0.9	-0.3462	-1.0251	-0.0705	-0.01787	-0.00218
78	1.4CM	1.35	-0.3462	-0.4988	-0.0705	-0.01787	0.02953
78	1.4CM	1.8	-0.3462	0.0274	-0.0705	-0.01787	0.06125
78	1.4CM	1.8	-0.3507	-0.0477	0.0709	0.0378	0.06149
78	1.4CM	2.25	-0.3507	0.4785	0.0709	0.0378	0.02958
78	1.4CM	2.7	-0.3507	1.0048	0.0709	0.0378	-0.00233
78	1.4CM	3.15	-0.3507	1.531	0.0709	0.0378	-0.03424
78	1.4CM	3.6	-0.3507	2.0573	0.0709	0.0378	-0.06614
79	1.4CM	0	-0.3388	-2.0638	-0.0731	-0.02889	-0.06599
79	1.4CM	0.45	-0.3388	-1.5375	-0.0731	-0.02889	-0.03309
79	1.4CM	0.9	-0.3388	-1.0113	-0.0731	-0.02889	-0.00018
79	1.4CM	1.35	-0.3388	-0.485	-0.0731	-0.02889	0.03272
79	1.4CM	1.8	-0.3388	0.0413	-0.0731	-0.02889	0.06563
79	1.4CM	1.8	-0.3388	-0.0415	0.0734	0.02856	0.06563
79	1.4CM	2.25	-0.3388	0.4847	0.0734	0.02856	0.03261
79	1.4CM	2.7	-0.3388	1.011	0.0734	0.02856	-0.00041
79	1.4CM	3.15	-0.3388	1.5373	0.0734	0.02856	-0.03343
79	1.4CM	3.6	-0.3388	2.0635	0.0734	0.02856	-0.06645
85	1.4CM	0	-0.41	-1.9347	0.011	-0.17945	-0.04102
85	1.4CM	0.45	-0.41	-1.4085	0.011	-0.17945	-0.04595
85	1.4CM	0.9	-0.41	-0.8822	0.011	-0.17945	-0.05088
85	1.4CM	1.35	-0.41	-0.3559	0.011	-0.17945	-0.05581
85	1.4CM	1.8	-0.41	0.1703	0.011	-0.17945	-0.06074
85	1.4CM	1.8	-0.4371	0.1431	-0.0961	-0.22022	-0.06084
85	1.4CM	2.25	-0.4371	0.6694	-0.0961	-0.22022	-0.01759
85	1.4CM	2.7	-0.4371	1.1957	-0.0961	-0.22022	0.02565
85	1.4CM	3.15	-0.4371	1.7219	-0.0961	-0.22022	0.06889
85	1.4CM	3.6	-0.4371	2.2482	-0.0961	-0.22022	0.11213
86	1.4CM	0	-0.3308	-2.0761	0.0656	-0.02062	0.07088
86	1.4CM	0.45	-0.3308	-1.5498	0.0656	-0.02062	0.04138
86	1.4CM	0.9	-0.3308	-1.0235	0.0656	-0.02062	0.01187
86	1.4CM	1.35	-0.3308	-0.4973	0.0656	-0.02062	-0.01763
86	1.4CM	1.8	-0.3308	0.029	0.0656	-0.02062	-0.04713
86	1.4CM	1.8	-0.3355	-0.0507	-0.079	-0.07706	-0.04712
86	1.4CM	2.25	-0.3355	0.4756	-0.079	-0.07706	-0.01159
86	1.4CM	2.7	-0.3355	1.0019	-0.079	-0.07706	0.02394
86	1.4CM	3.15	-0.3355	1.5281	-0.079	-0.07706	0.05947
86	1.4CM	3.6	-0.3355	2.0544	-0.079	-0.07706	0.095
87	1.4CM	0	-0.3206	-2.0605	0.0754	0.02779	0.08251
87	1.4CM	0.45	-0.3206	-1.5342	0.0754	0.02779	0.04858
87	1.4CM	0.9	-0.3206	-1.008	0.0754	0.02779	0.01465
87	1.4CM	1.35	-0.3206	-0.4817	0.0754	0.02779	-0.01928

Design Forces For Beams, Part 1 of 2

Frame	Combo	Station	P	V2	V3	T	M2
		m	Tonf	Tonf	Tonf	Tonf-m	Tonf-m
87	1.4CM	1.8	-0.3206	0.0445	0.0754	0.02779	-0.05321
87	1.4CM	1.8	-0.3205	-0.045	-0.0751	-0.03065	-0.05322
87	1.4CM	2.25	-0.3205	0.4812	-0.0751	-0.03065	-0.01941
87	1.4CM	2.7	-0.3205	1.0075	-0.0751	-0.03065	0.0144
87	1.4CM	3.15	-0.3205	1.5338	-0.0751	-0.03065	0.0482
87	1.4CM	3.6	-0.3205	2.06	-0.0751	-0.03065	0.08201

Table: Design Forces For Beams

Design Forces For Beams, Part 2 of 2

Frame	Station	M3
	m	Tonf-m
4	0	-0.00162
4	0.45	0.01486
4	0.9	-0.02827
4	1.35	-0.131
4	1.8	-0.29333
4	2.25	-0.51527
4	2.7	-0.79681
10	0	-0.18885
10	0.45	-0.03144
10	0.9	0.06636
10	1.35	0.10456
10	1.8	0.08316
10	2.25	0.00216
10	2.7	-0.13845
18	0	-0.19909
18	0.45	-0.0321
18	0.9	0.0753
18	1.35	0.12309
18	1.8	0.11128
18	2.25	0.03986
18	2.7	-0.09116
26	0	-0.1983
26	0.45	-0.03162
26	0.9	0.07546
26	1.35	0.12294
26	1.8	0.11081
26	2.25	0.03908
26	2.7	-0.09225
32	0	0.0123
32	0.45	0.02395
32	0.9	-0.02401
32	1.35	-0.13156
32	1.8	-0.29873
32	2.25	-0.52549
32	2.7	-0.81186
35	0	-1.80436
35	0.5	-1.06611
35	1	-0.42877
35	1.5	0.10764
35	2	0.54314
35	2.5	0.87773
35	3	1.1114
35	3.5	1.24415
35	4	1.27598
35	4.5	1.2069
35	5	1.0369
35	5.5	0.76599
35	6	0.39416
35	6.5	-0.07859
35	7	-0.65225
35	7.5	-1.32683

Design Forces For Beams, Part 2 of 2

Frame	Station	M3
	m	Tonf-m
40	0	-0.18327
40	0.45	-0.02803
40	0.9	0.0676
40	1.35	0.10363
40	1.8	0.08005
40	2.25	-0.00313
40	2.7	-0.14592
43	0	-1.78575
43	0.5	-1.05051
43	1	-0.41619
43	1.5	0.11722
43	2	0.54972
43	2.5	0.88129
43	3	1.11195
43	3.5	1.2417
43	4	1.27053
43	4.5	1.19844
43	5	1.02543
43	5.5	0.75151
43	6	0.37667
43	6.5	-0.09908
43	7	-0.67575
43	7.5	-1.35334
49	0	-0.169
49	0.45	0.01483
49	0.9	0.13905
49	1.35	0.20366
49	1.8	0.20867
49	2.25	0.15408
49	2.7	0.03989
49	3.15	-0.13391
49	3.6	-0.36731
50	0	-0.33884
50	0.45	-0.12679
50	0.9	0.02566
50	1.35	0.11851
50	1.8	0.15175
50	2.25	0.12539
50	2.7	0.03943
50	3.15	-0.10614
50	3.6	-0.31131
54	0	-0.83349
54	0.45	-0.09264
54	0.9	0.4114
54	1.35	0.67862
54	1.8	0.70902
54	1.8	0.71781
54	2.25	0.54616
54	2.7	0.13769
54	3.15	-0.5076
54	3.6	-1.38971
55	0	-1.258
55	0.45	-0.44207
55	0.9	0.13704
55	1.35	0.47934
55	1.8	0.58482
55	1.8	0.58617
55	2.25	0.48901
55	2.7	0.15503
55	3.15	-0.41576
55	3.6	-1.22337
57	0	-0.87099
57	0.45	-0.10785
57	0.9	0.41848
57	1.35	0.70799
57	1.8	0.76069
57	1.8	0.7693

Design Forces For Beams, Part 2 of 2

Frame	Station	M3
	m	Tonf-m
57	2.25	0.57498
57	2.7	0.14385
57	3.15	-0.5241
57	3.6	-1.42886
58	0	-1.26425
58	0.45	-0.44788
58	0.9	0.13167
58	1.35	0.4744
58	1.8	0.58031
58	1.8	0.58161
58	2.25	0.48694
58	2.7	0.15546
58	3.15	-0.41284
58	3.6	-1.21796
69	0	-0.16811
69	0.45	0.01552
69	0.9	0.13955
69	1.35	0.20397
69	1.8	0.20879
69	2.25	0.154
69	2.7	0.03961
69	3.15	-0.13438
69	3.6	-0.36798
70	0	-0.33835
70	0.45	-0.12642
70	0.9	0.02589
70	1.35	0.11861
70	1.8	0.15172
70	2.25	0.12523
70	2.7	0.03913
70	3.15	-0.10656
70	3.6	-0.31187
71	0	-0.31519
71	0.45	-0.10665
71	0.9	0.04228
71	1.35	0.13162
71	1.8	0.16135
71	2.25	0.13147
71	2.7	0.042
71	3.15	-0.10709
71	3.6	-0.31577
77	0	-0.83924
77	0.45	-0.09525
77	0.9	0.41192
77	1.35	0.68228
77	1.8	0.71582
77	1.8	0.72462
77	2.25	0.55006
77	2.7	0.13868
77	3.15	-0.50951
77	3.6	-1.39452
78	0	-1.26038
78	0.45	-0.44387
78	0.9	0.13583
78	1.35	0.47871
78	1.8	0.58477
78	1.8	0.5861
78	2.25	0.48917
78	2.7	0.15542
78	3.15	-0.41514
78	3.6	-1.22252
79	0	-1.22139
79	0.45	-0.4111
79	0.9	0.16238
79	1.35	0.49904
79	1.8	0.59889
79	1.8	0.59888

Design Forces For Beams, Part 2 of 2

Frame	Station	M3
	m	Tonf-m
79	2.25	0.49916
79	2.7	0.16261
79	3.15	-0.41074
79	3.6	-1.22092
85	0	-0.85244
85	0.45	-0.10023
85	0.9	0.41517
85	1.35	0.69375
85	1.8	0.73551
85	1.8	0.74409
85	2.25	0.56127
85	2.7	0.14163
85	3.15	-0.51483
85	3.6	-1.4081
86	0	-1.26032
86	0.45	-0.44451
86	0.9	0.13449
86	1.35	0.47668
86	1.8	0.58204
86	1.8	0.58335
86	2.25	0.48773
86	2.7	0.1553
86	3.15	-0.41394
86	3.6	-1.22001
87	0	-1.21809
87	0.45	-0.40927
87	0.9	0.16273
87	1.35	0.49792
87	1.8	0.59629
87	1.8	0.59627
87	2.25	0.49812
87	2.7	0.16315
87	3.15	-0.40863
87	3.6	-1.21724

Table: Design Forces For Columns

Design Forces For Columns, Part 1 of 2

Frame	Combo	Station	P	V2	V3	T	M2
		m	Tonf	Tonf	Tonf	Tonf-m	Tonf-m
1	1.4CM	0	-1.334	-0.1045	-0.0328	-0.00236	-0.06558
1	1.4CM	1.25	-0.9556	-0.1045	-0.0328	-0.00236	-0.02452
1	1.4CM	2.5	-0.5771	-0.1045	-0.0328	-0.00236	0.01654
2	1.4CM	0	-7.4205	-0.3716	-1.0065	-0.00389	-0.8156
2	1.4CM	1.25	-6.8529	-0.3716	-1.0065	-0.00389	0.44258
2	1.4CM	1.4	-6.7848	-0.3716	-1.0065	-0.00389	0.59356
2	1.4CM	1.4	-5.1677	-0.4919	-0.3586	0.01355	0.47371
2	1.4CM	2.5	-4.6681	-0.4919	-0.3586	0.01355	0.86814
3	1.4CM	0	-6.6159	-0.3805	1.0789	0.02874	0.75212
3	1.4CM	1.25	-6.0483	-0.3805	1.0789	0.02874	-0.59657
3	1.4CM	1.4	-5.9802	-0.3805	1.0789	0.02874	-0.75841
3	1.4CM	1.4	-4.3683	-0.5067	0.4349	0.01092	-0.63629
3	1.4CM	2.5	-3.8688	-0.5067	0.4349	0.01092	-1.11466
7	1.4CM	0	-2.2954	0.0183	-0.1326	-0.00091	-0.15617
7	1.4CM	1.25	-1.917	0.0183	-0.1326	-0.00091	0.00958
7	1.4CM	2.5	-1.5385	0.0183	-0.1326	-0.00091	0.17532
8	1.4CM	0	-7.8049	0.0424	-0.4295	-0.00341	-0.37329
8	1.4CM	1.25	-7.2373	0.0424	-0.4295	-0.00341	0.16361
8	1.4CM	1.4	-7.1691	0.0424	-0.4295	-0.00341	0.22804
8	1.4CM	1.4	-5.8262	0.1078	0.1119	-0.0038	0.14446
8	1.4CM	2.5	-5.3267	0.1078	0.1119	-0.0038	0.02135
9	1.4CM	0	-7.4181	0.0329	0.5338	0.04078	0.47298
9	1.4CM	1.25	-6.8505	0.0329	0.5338	0.04078	-0.19432

Design Forces For Columns, Part 1 of 2

Frame	Combo	Station	P	V2	V3	T	M2
		m	Tonf	Tonf	Tonf	Tonf-m	Tonf-m
9	1.4CM	1.4	-6.7823	0.0329	0.5338	0.04078	-0.27439
9	1.4CM	1.4	-5.4517	0.1262	-0.0013	0.04104	-0.18901
9	1.4CM	2.5	-4.9521	0.1262	-0.0013	0.04104	-0.18758
15	1.4CM	0	-2.2463	-0.0016	-0.148	-0.00033	-0.17228
15	1.4CM	1.25	-1.8679	-0.0016	-0.148	-0.00033	0.01273
15	1.4CM	2.5	-1.4894	-0.0016	-0.148	-0.00033	0.19775
16	1.4CM	0	-7.5722	-0.0141	-0.402	3.166E-05	-0.35599
16	1.4CM	1.25	-7.0046	-0.0141	-0.402	3.166E-05	0.14656
16	1.4CM	1.4	-6.9365	-0.0141	-0.402	3.166E-05	0.20686
16	1.4CM	1.4	-5.5893	0.0131	0.1411	-5.365E-05	0.12219
16	1.4CM	2.5	-5.0897	0.0131	0.1411	-5.365E-05	-0.03301
17	1.4CM	0	-7.2057	-0.0165	0.5382	0.01254	0.56421
17	1.4CM	1.25	-6.6381	-0.0165	0.5382	0.01254	-0.1086
17	1.4CM	1.4	-6.5699	-0.0165	0.5382	0.01254	-0.18933
17	1.4CM	1.4	-5.22	0.0158	-0.0063	0.01249	-0.10416
17	1.4CM	2.5	-4.7205	0.0158	-0.0063	0.01249	-0.09718
23	1.4CM	0	-2.2456	0.0026	-0.1474	0.00061	-0.17148
23	1.4CM	1.25	-1.8672	0.0026	-0.1474	0.00061	0.01281
23	1.4CM	2.5	-1.4888	0.0026	-0.1474	0.00061	0.1971
24	1.4CM	0	-7.573	0.0123	-0.4016	0.00043	-0.35517
24	1.4CM	1.25	-7.0053	0.0123	-0.4016	0.00043	0.14689
24	1.4CM	1.4	-6.9372	0.0123	-0.4016	0.00043	0.20714
24	1.4CM	1.4	-5.5898	-0.0141	0.1416	0.0005	0.12242
24	1.4CM	2.5	-5.0903	-0.0141	0.1416	0.0005	-0.03328
25	1.4CM	0	-7.2047	0.0165	0.5391	-0.01051	0.56759
25	1.4CM	1.25	-6.637	0.0165	0.5391	-0.01051	-0.10626
25	1.4CM	1.4	-6.5689	0.0165	0.5391	-0.01051	-0.18712
25	1.4CM	1.4	-5.2168	-0.0148	-0.0065	-0.01049	-0.10198
25	1.4CM	2.5	-4.7172	-0.0148	-0.0065	-0.01049	-0.09478
27	1.4CM	0	-1.3237	0.1054	-0.0198	0.003	-0.04743
27	1.4CM	1.25	-0.9453	0.1054	-0.0198	0.003	-0.02269
27	1.4CM	2.5	-0.5668	0.1054	-0.0198	0.003	0.00206
28	1.4CM	0	-7.4227	0.3698	-0.9962	0.00494	-0.7943
28	1.4CM	1.25	-6.855	0.3698	-0.9962	0.00494	0.45095
28	1.4CM	1.4	-6.7869	0.3698	-0.9962	0.00494	0.60038
28	1.4CM	1.4	-5.1326	0.4873	-0.3319	-0.01257	0.47831
28	1.4CM	2.5	-4.633	0.4873	-0.3319	-0.01257	0.84343
31	1.4CM	0	-6.5512	0.3771	1.0538	-0.03475	0.74829
31	1.4CM	1.25	-5.9835	0.3771	1.0538	-0.03475	-0.56901
31	1.4CM	1.4	-5.9154	0.3771	1.0538	-0.03475	-0.72709
31	1.4CM	1.4	-4.4306	0.5239	0.4643	-0.01666	-0.61272
31	1.4CM	2.5	-3.931	0.5239	0.4643	-0.01666	-1.12345
37	1.4CM	0	-2.2904	-0.0171	-0.128	0.00145	-0.14982
37	1.4CM	1.25	-1.912	-0.0171	-0.128	0.00145	0.01013
37	1.4CM	2.5	-1.5335	-0.0171	-0.128	0.00145	0.17008
38	1.4CM	0	-7.8066	-0.043	-0.427	0.00561	-0.36701
38	1.4CM	1.25	-7.2389	-0.043	-0.427	0.00561	0.16675
38	1.4CM	1.4	-7.1708	-0.043	-0.427	0.00561	0.2308
38	1.4CM	1.4	-5.8193	-0.1064	0.1183	0.00591	0.14672
38	1.4CM	2.5	-5.3197	-0.1064	0.1183	0.00591	0.01659
39	1.4CM	0	-7.3932	-0.0285	0.5276	-0.03504	0.48432
39	1.4CM	1.25	-6.8256	-0.0285	0.5276	-0.03504	-0.17522
39	1.4CM	1.4	-6.7574	-0.0285	0.5276	-0.03504	-0.25436
39	1.4CM	1.4	-5.4763	-0.1434	0.0136	-0.03568	-0.17222
39	1.4CM	2.5	-4.9768	-0.1434	0.0136	-0.03568	-0.18723

Table: Design Forces For Columns

Design Forces For Columns, Part 2 of 2

Frame	Station	M3
	m	Tonf-m
1	0	-0.08285
1	1.25	0.04774

Design Forces For Columns, Part 2 of 2

Frame	Station	M3
	m	Tonf-m
1	2.5	0.17833
2	0	-0.28816
2	1.25	0.17628
2	1.4	0.23201
2	1.4	0.26585
2	2.5	0.80696
3	0	-0.29573
3	1.25	0.17985
3	1.4	0.23692
3	1.4	0.27131
3	2.5	0.82867
7	0	0.01638
7	1.25	-0.0065
7	2.5	-0.02938
8	0	0.04793
8	1.25	-0.0051
8	1.4	-0.01146
8	1.4	-0.01041
8	2.5	-0.12903
9	0	0.04171
9	1.25	0.00056
9	1.4	-0.00437
9	1.4	-0.00337
9	2.5	-0.14223
15	0	-0.00062
15	1.25	0.00136
15	2.5	0.00334
16	0	-0.00648
16	1.25	0.01111
16	1.4	0.01322
16	1.4	0.01351
16	2.5	-0.00091
17	0	-0.00806
17	1.25	0.01258
17	1.4	0.01506
17	1.4	0.01569
17	2.5	-0.00172
23	0	0.00205
23	1.25	-0.00126
23	2.5	-0.00456
24	0	0.00425
24	1.25	-0.01107
24	1.4	-0.01291
24	1.4	-0.01321
24	2.5	0.00233
25	0	0.00798
25	1.25	-0.01267
25	1.4	-0.01515
25	1.4	-0.01573
25	2.5	0.00053
27	0	0.08415
27	1.25	-0.04755
27	2.5	-0.17924
28	0	0.28576
28	1.25	-0.17646
28	1.4	-0.23193
28	1.4	-0.26563
28	2.5	-0.80169
31	0	0.2941
31	1.25	-0.17729
31	1.4	-0.23386
31	1.4	-0.27015
31	2.5	-0.84644
37	0	-0.01486
37	1.25	0.00657
37	2.5	0.028
38	0	-0.04914

Design Forces For Columns, Part 2 of 2

Frame	Station	M3
	m	Tonf-m
38	1.25	0.00466
38	1.4	0.01112
38	1.4	0.00991
38	2.5	0.12693
39	0	-0.03983
39	1.25	-0.00425
39	1.4	1.41E-05
39	1.4	0.001
39	2.5	0.15876

Ing. Juan David Hurtado		Fecha=	27/05/2025
Proyecto:	Atanquez		

Diseño de elementos no estructurales

Muros de patio (muro de cerramiento)

Fuerzas Horizontales en cada nivel

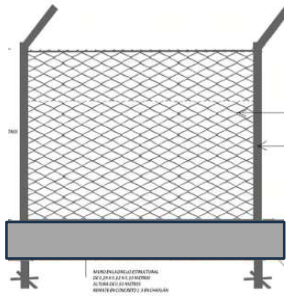
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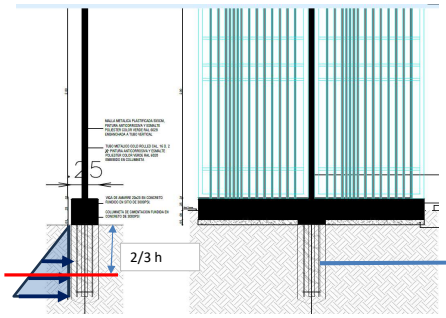
Acero estructural ASTM A500 Gr. C 350 MPa

Diseño de muros de cerramiento tipo malla eslabonada

Peso muro de cerramiento	kg/m²	
Malla eslabonada	3.29	
perfiles tubulares	4.29	
relleno tubulares	0.75	
Peso propio	8.34	kg/m²

Desempeño:	Bajo	As =	0.625	ap=	2.50
hn (m) =	2.20	heq (m) =	1.65	Rp=	1.50





E. pasivo kp * γ * h

Pilotes d=25cm c/2.50m

NIVEL	hx (m)	ax	L Vano (m)	Fp (kN)	Hmuro (m)	M (t-m)
Muro de cerramiento	0.00	0.63	2.50	0.44	2.00	2.19

Empuje pasivo

∅=	38.00	°
Kp =1 + sin(Ø) / 1 - sin(Ø)=	1.42	
Densidad suelo	1.58	Ton/m3
H pilote=	0.80	m
Ep=Empuje pasivo= kp * γ * h =	1.80	Ton/m/m
F. pasiva= Ep*h/2=	0.72	Ton/m

Chequeo por volcamiento

M. actuante (Fp*Hmuro)=	4.75	5.42
M volcante=	0.88	

Chequeo de volcamiento		Momento en A	
Elemento	*Peso (kN)*	*X (m)*	*Mx (KN - m)*
Muro	0.42	0.15	0.06
Viga cim	3.00	0.15	0.45
Pilote	2.7	0.15	0.41
Fuerza pasiva	7.19	0.53	3.83
kp=	1.42		
W Total =	6	M actuante=	4.75