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| LAUDO ESTRUTURAL | |  |
| VERIFICAÇÃO TORRE EXISTENTE PRODAGO | | |
| SITE: PRODAGO | REV: 00 | DATA: 23/06/2022 |
| | | Eng° Newton Gomes Faria |

LAUDO ESTRUTURA VERTICAL

TIPO DE ESTRUTURA: Auto suportada treliçada.

Altura: 75 metros

SEÇÃO TRANSVERSAL: Quadrada


MATERIAL: Cantoneiras Aço – A-36

| | | | |
|------------------|---------------------------------------|-------------------|------------------|
| SITE - ID | PRODAGO | | |
| ENDEREÇO | RUA Sc-01 - NR. 299 PARQUE SANTA CRUZ | LOCALIDADE | GOIÂNIA-GO |
| GEOGRAFIA | CENTRO OESTE | LATITUDE | 16° 43' 48.60" S |
| DATA | 23/06/2022 | LONGITUDE | 49° 13' 32.40" W |

CONTEL OBRAS E SERVIÇOS LTDA

ENG: Newton Gomes Faria Crea: 2974/D-GO

APARECIDA DE GOIÂNIA, 23 DE JUNHO DE 2022

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| SITE: PRODAGO | REV: 00 | DATA: 23/06/2022 |
| | | Eng° Newton Gomes Faria |

Aparecida de Goiânia, 23 de Junho de 2022.

**REF. LAUDO TORRE AUTO-SUORTADA
75 METROS**


Prezado Senhor,

Conforme solicitado realizamos a verificação estrutural da torre auto- suportada 75 metros através de levantamento em campo.


A torre possui montantes e treliças em cantoneiras , ligações através de parafusos, com seção quadrada , 12.55 m de base, 2.8 m de topo, 62.5 m inclinada e 12.5 m parte reta. O carregamento atual da torre é de 46.58 m².(C/ CA).

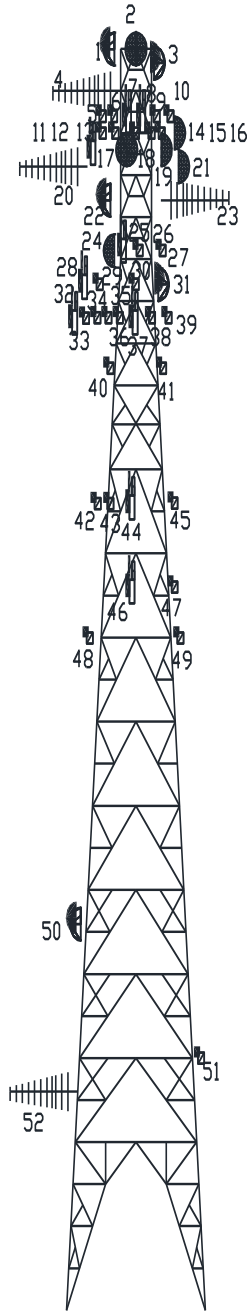
Para efeito de verificação consideramos carregamento conforme tabelas e silhueta abaixo.


| CARREGAMENTO DA TORRE POR OPERADORA | | |
|--|--------------|---------------------------------|
| OPERADORA | | AEV(m²) C/ CA |
| VIVO | | 12,64 |
| CLARO | | 5,59 |
| ABC | | 17,13 |
| OI | | 3,33 |
| DESATIVADAS | | 7,46 |
| SEM IDENT. | | 0,43 |
| | TOTAL | 46,58 |

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| Controle de Antenas/Carga na Torre | | | | | | | | | |
|------------------------------------|-----------|------------|---------|-----------------------------|------------------|-----|---------------|-------|---------|
| ANTENA | OPERADORA | STATUS | Quant. | Comp./D. M | A E V S/ Ca (m2) | Ca | AEV(m2) C/ CA | seção | ALTURAS |
| | | | Antenas | | | | | | |
| 1 | ABC | DESATIVADA | 1 | P. CHEIA D. 1.2 M | 1,13 | 1,6 | 1,81 | 1 | 75 |
| 2 | ABC | ATIVA | 1 | P. VAZADA (1190x600) | 0,38 | 1,6 | 0,61 | 1 | 75 |
| 3 | ABC | ATIVA | 1 | P. CHEIA D 1.2 M | 1,13 | 1,6 | 1,81 | 1 | 74 |
| 4 | ABC | ATIVA | 1 | YAGI | 0,31 | 1,2 | 0,37 | 2 | 72,5 |
| 5 | VIVO | ATIVA | 2 | DIPLEX-(145x150) | 0,0435 | 1,2 | 0,05 | 2 | 71 |
| 6 | VIVO | ATIVA | 1 | DIPLEX-(175x135) | 0,024 | 1,2 | 0,03 | 2 | 71 |
| 7 | VIVO | ATIVA | 1 | RF- SD- (2020x280) | 0,57 | 1,2 | 0,68 | 2 | 71 |
| 8 | VIVO | ATIVA | 1 | RF- SD- (1800x570) | 1,03 | 1,2 | 1,24 | 2 | 71 |
| 9 | VIVO | ATIVA | 1 | DIPLEX-(200x130) | 0,026 | 1,2 | 0,03 | 2 | 71 |
| 10 | VIVO | ATIVA | 1 | DIPLEX-(185x185) | 0,034 | 1,2 | 0,04 | 2 | 71 |
| 11 | VIVO | ATIVA | 4 | DIPLEX-(200x130) | 0,104 | 1,2 | 0,12 | 3 | 70 |
| 12 | VIVO | ATIVA | 2 | RRU-(420x300) | 0,252 | 1,2 | 0,30 | 3 | 70 |
| 13 | VIVO | ATIVA | 1 | RRU-(500x355) | 0,355 | 1,2 | 0,43 | 3 | 70 |
| 14 | VIVO | ATIVA | 1 | RRU-(630x370) | 0,233 | 1,2 | 0,28 | 3 | 70 |
| 15 | VIVO | ATIVA | 1 | RRU-(550x355) | 0,195 | 1,2 | 0,23 | 3 | 70 |
| 16 | ABC | ATIVA | 1 | P. VAZADA (1220x600) | 0,37 | 1,6 | 0,59 | 3 | 70 |
| 17 | VIVO | ATIVA | 1 | RF-DB858DG65ESX-(2440x310) | 0,76 | 1,2 | 0,91 | 3 | 69 |
| 18 | ABC | ATIVA | 1 | P. VAZADA (1720x890) | 0,76 | 1,6 | 1,22 | 3 | 69 |
| 19 | ABC | ATIVA | 1 | P. VAZADA D. 2.0 M | 1,57 | 1,6 | 2,51 | 3 | 69 |
| 20 | ABC | ATIVA | 1 | YAGI | 0,31 | 1,2 | 0,37 | 3 | 68 |
| 21 | ABC | ATIVA | 1 | P. VAZADA D. 3.0 M | 3,53 | 1,6 | 5,65 | 3 | 68 |
| 22 | | DESATIVADA | 1 | P. CHEIA D. 1,2 M | 1,13 | 1,6 | 1,81 | 4 | 66 |
| 23 | ABC | ATIVA | 1 | YAGI | 0,31 | 1,2 | 0,37 | 4 | 66 |
| 24 | | DESATIVADA | 1 | P. VAZADA D. 3.0 M | 3,53 | 1,6 | 5,65 | 5 | 63 |
| 25 | OI | ATIVA | 2 | ATR4518R14V06DXX-(1445x449) | 1,3 | 1,2 | 1,56 | 5 | 63 |
| 26 | OI | ATIVA | 3 | RRU-(420x300) | 0,378 | 1,2 | 0,45 | 5 | 63 |
| 27 | OI | ATIVA | 2 | DIPLEX-(120x100) | 0,036 | 1,2 | 0,04 | 5 | 63 |
| 28 | OI | ATIVA | 1 | ATR4518R14V06DXX-(1445x449) | 0,65 | 1,2 | 0,78 | 6 | 61 |
| 29 | OI | ATIVA | 3 | RRU-(420x300) | 0,378 | 1,2 | 0,45 | 6 | 61 |
| 30 | OI | ATIVA | 2 | DIPLEX-(120x100) | 0,036 | 1,2 | 0,04 | 6 | 61 |
| 31 | ABC | ATIVA | 1 | P. CHEIA D. 1.2 | 1,13 | 1,6 | 1,81 | 6 | 61 |
| 32 | VIVO | ATIVA | 2 | RF- SD- (1800x570) | 2,052 | 1,2 | 2,46 | 7 | 59 |
| 33 | VIVO | ATIVA | 2 | DIPLEX-(185x185) | 0,068 | 1,2 | 0,08 | 7 | 59 |
| 34 | VIVO | ATIVA | 2 | DIPLEX-(150x145) | 0,043 | 1,2 | 0,05 | 7 | 59 |
| 35 | VIVO | ATIVA | 1 | DIPLEX-(110x65) | 0,0065 | 1,2 | 0,01 | 7 | 59 |
| 36 | VIVO | ATIVA | 1 | DIPLEX-(175x115) | 0,02 | 1,2 | 0,02 | 7 | 59 |
| 37 | VIVO | ATIVA | 3 | RF-SD-(2020x280) | 1,7 | 1,2 | 2,04 | 7 | 59 |
| 38 | VIVO | ATIVA | 7 | RRU-(550x330) | 1,27 | 1,2 | 1,52 | 7 | 59 |
| 39 | VIVO | ATIVA | 5 | RRU-(630x380) | 1,2 | 1,2 | 1,44 | 7 | 59 |
| 40 | VIVO | ATIVA | 2 | DIPLEX-(185x185) | 0,07 | 1,2 | 0,08 | 8 | 56 |
| 41 | VIVO | ATIVA | 4 | DIPLEX-(200x130) | 0,104 | 1,2 | 0,12 | 8 | 56 |
| 42 | CLARO | ATIVA | 1 | DIPLEX-(125x100) | 0,0125 | 1,2 | 0,02 | 10 | 48 |
| 43 | CLARO | ATIVA | 3 | DIPLEX-ACOMD2H16-(120x100) | 0,036 | 1,2 | 0,04 | 10 | 48 |
| 44 | CLARO | ATIVA | 1 | RF-ADU4518Y6V06-(1360x270) | 0,37 | 1,2 | 0,44 | 10 | 48 |
| 45 | CLARO | ATIVA | 4 | RRU-(420x300) | 0,504 | 1,2 | 0,60 | 10 | 48 |
| 46 | CLARO | ATIVA | 3 | RF-ASI4517Y3Y06-(2000x430) | 2,58 | 1,2 | 3,10 | 11 | 43 |
| 47 | CLARO | ATIVA | 3 | RRU-(420x300) | 0,378 | 1,2 | 0,45 | 11 | 43 |
| 48 | CLARO | ATIVA | 3 | RRU-(480x280) | 0,403 | 1,2 | 0,48 | 12 | 40 |
| 49 | CLARO | ATIVA | 3 | RRU-(420x300) | 0,378 | 1,2 | 0,45 | 12 | 40 |
| 50 | VIVO | ATIVA | 1 | P. CHEIA D. 0,60 M | 0,283 | 1,6 | 0,45 | 15 | 23 |
| 51 | SEM ID. | ATIVA | 1 | GPS | 0,05 | 1,2 | 0,06 | 17 | 15 |
| 52 | SEM ID. | ATIVA | 1 | YAGI | 0,31 | 1,2 | 0,37 | 17 | 13 |
| AREA FINAL | | | | | | | 46,58 | | |

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A análise estrutural foi feita utilizando o software SAP 2000, obtendo os esforços nas barras, deslocamentos e reações nos nós, sendo a mesma verificada pela norma AISC.

Foi considerado o vento atuando na direção perpendicular a face e na diagonal da estrutura, com a utilização dos seguintes parâmetros de acordo com a NBR-6123/88:

$$V0 = 35 \text{ m/s}$$

$$S1 = 1,0$$

$$S2 = \text{Categoria III C}$$

$$S3 = 1,1$$

$$Vk = S1 * S2 * S3 * V0$$

$$q = 0,613(Vk)^2$$

Utilizamos também as seguintes normas:

NBR 6122/2019 – Projeto e Execução de Fundações

NBR 6118/2014 - Projetos de Estruturas Concreto Armado

Manual of Steel Construction - Allowable Stress Design, Ninth Edition, AISC

Manual of Steel Construction - Volume II Connections - ASD/LRFD, AISC

Prática Telebrás Nr. 240 - 410 - 600

Os materiais considerados no dimensionamento estão de acordo com as normas abaixo:

Montantes e demais perfis - ASTM – A-36

Parafusos, porcas e contra-porcas - ASTM – A-394

Chumbadores Aço SAE 1020

Solda Eletrodo (AWS) E 70 18

Galvanização ASTM A - 123


Conforme memória de cálculo abaixo verificamos que a torre para suportar o carregamento atual de 46.58 m² necessita de reforço.

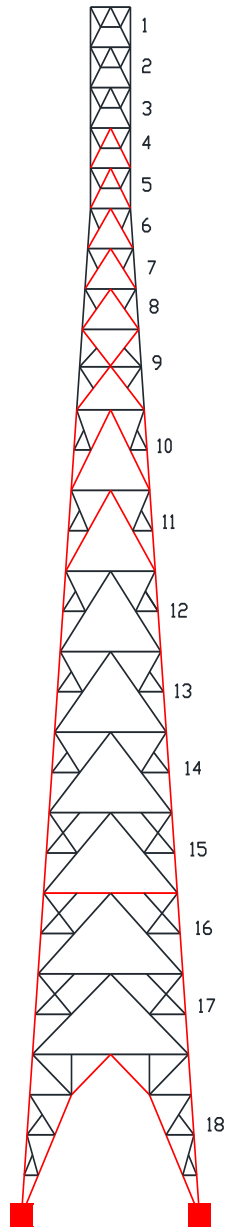
- Reforço montantes seções: 10 a 18.
- Reforço diagonais seções: 4 a 11 e 18.
- Reforço horizontais seção: 16
- Reforço parafusos diagonais seções: 10 a 15 e 18.
- Reforço parafuso horizontal seção: 18.
- Reforço chumbadores e chapas de base

Fundação necessita de reforço. Item 05 memória


| CARREGAMENTOS PREVISTOS | AEV (Ca incluso) | SITUAÇÃO | SITUAÇÃO da |
|--|----------------------|------------|-------------|
| | Antenas / Suportes | da TORRE | FUNDAÇÃO |
| ATUAL (antenas instaladas) | 46.58 m ² | Não Atende | Não Atende |
| A Retirar | 0,0 m ² | | |
| A Instalar () | 0.0 m ² | | |
| PRETENDIDO: Atual + A Instalar- A Retirar | 46.58 m ² | Não Atende | Não Atende |

Capacidade de Carga situação atual : 15.0 m²

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| | | Eng ^o Newton Gomes Faria |



SILHUETA REFORÇO

| | | | | |
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Atenciosamente,


Newton Gomes Faria

Eng. Newton Gomes Faria
Crea-2974/D-GO

ANEXOS: I - MEMORIA DE CALCULO

II – RELATORIO FOTOGRAFICO

III- RELATORIO SAP2000

| | | | | |
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ANEXO I

MEMORIA DE CÁLCULO

TIPO DE ESTRUTURA: Auto suportada

Altura: 75 metros

SEÇÃO TRANSVERSAL: Quadrada


MATERIAL: Cantoneiras Aço A-36

| | | | |
|-----------|---------------------------------------|------------|------------------|
| SITE - ID | PRODAGO | | |
| ENDEREÇO | RUA Sc-01 - NR. 299 PARQUE SANTA CRUZ | LOCALIDADE | GOIÂNIA-GO |
| GEOGRAFIA | CENTRO OESTE | LATITUDE | 16° 43' 48.60" S |
| DATA | 23/06/2022 | LONGITUDE | 49° 13' 32.40" W |

CONTEL OBRAS E SERVIÇOS LTDA

ENG: Newton Gomes Faria Crea: 2974/D-GO

APARECIDA DE GOIÂNIA, 23 DE JUNHO DE 2022

| | | |
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| | | Engº Newton Gomes Faria |

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1.0-NORMAS:

AISC/LRFD 99- American Institute of Steel Construction
NBR 8800 - Projeto e execução de estruturas de aços de edifícios
NBR 6122/2019 - Projeto e Execução de Fundações
NBR 6118/2014 - Projetos de Estruturas Concreto Armado
NBR 6123 - Forças Devido Vento em Edificações

2.0-MATERIAIS:

Perfis Laminados - ASTM – A-36
Chapas e tubos – ASTM-A-36
Parafusos, porcas e contra-porcas - ASTM – A-394
Chumbadores Aço SAE 1020

| AÇO | Fv(Kgf/cm²) | Fu(Kgf/cm²) |
|------------------|-------------------------------|-------------------------------|
| ASTM-A36 | 2531 | 4077 |
| ASTM-A572 | 3450 | 4500 |
| ASTM-A394 | 1516 | 4769 |
| SAE 1020 | 2140 | 3875 |

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3.0 – DADOS DA ESTRUTURA:

3.1- DESCRIÇÃO DA GEOMETRIA:

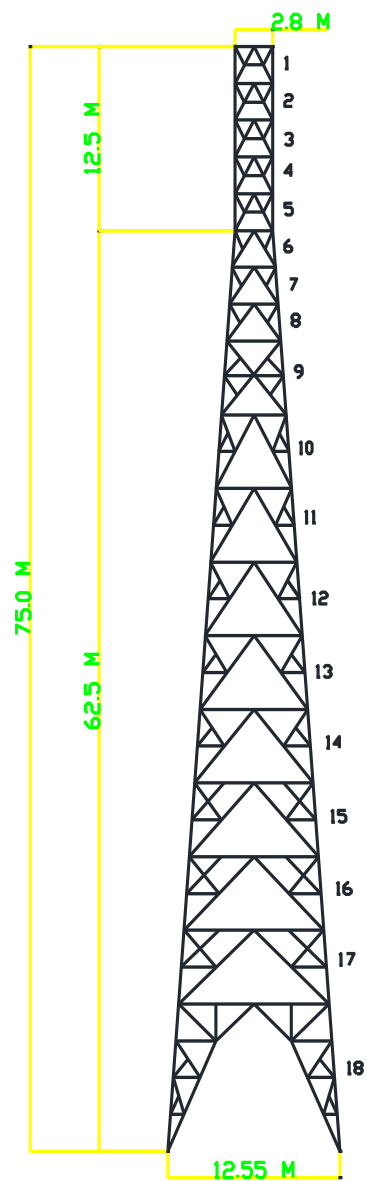
ALTURA TOTAL = 75,0 M
 LARGURA BASE = 12.55 M
 LARGURA TOPO = 2.8 M
 PARTE INCLINADA = 62.5 M
 PARTE RETA = 12.5 M
 SECCÃO TRANSVERSAL = Quadrada
 PERFIS = – AÇO A-36
 PARAFUSOS= ASTM - A-394


3.2 – PLACA: SEM PLACA-Localização-



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3.3- SILHUETA DA ESTRUTURA:




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3.4- PATOLOGIAS IDENTIFICADAS:


De acordo com vistoria realizada na torre não foram identificadas peças com deformação ou corrosão. Sendo necessário apenas a pintura da estrutura e acessórios.



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- Identificamos também a ausência de trava-quadras ao longo da escada, sendo necessário a instalação do sistema em toda sua extensão.



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- Será necessário a instalação de corrimão na parte interna das plataformas da parte reta nos níveis, 62.5 / 65.0 / 67.5 / 70 e 72.5 m.



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- Plataforma instalada aos 20,0 metros não possui corrimão na sua parte final, o mesmo deverá ser providenciado. Peças com corrosão deverão ser tratadas, caso necessário substituídas.



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| | | Eng° Newton Gomes Faria |

4.0- VERIFICAÇÃO ESTRUTURA:


4.1- CONSIDERAÇÕES GERAIS:

A análise estrutural foi feita utilizando o software SAP 2000, obtendo os esforços nas barras, deslocamentos e reações nos nós, sendo a mesma verificada pela norma AISC. -LFRD 99

Em anexo relatório da verificação estrutural com parâmetros adotados pelo software


Foi considerado o vento atuando na direção perpendicular a face e na diagonal da estrutura, com a utilização dos seguintes parâmetros de acordo com a NBR-6123/88:

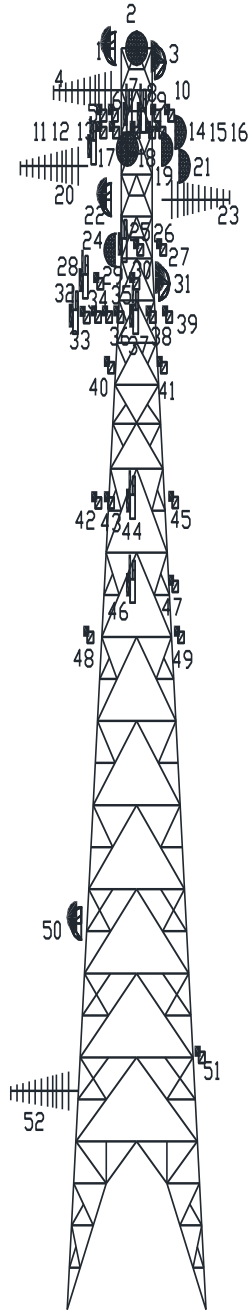
| | |
|------------------------------|--------------------------------|
| Velocidade Básica do vento : | $V_0 = 35 \text{ m/s}$ |
| Fator Topográfico : | $S_1 = 1,0$ |
| Fator Rugosidade e Dimensão: | $S_2 = \text{Categoria III C}$ |
| Fator Estatístico: | $S_3 = 1,1$ |
| Velocidade Característica: | $V_k = S_1 * S_2 * S_3 * V_0$ |
| Pressão do Vento: | $q = 0,613(V_k)^2$ |
| Velocidade Operacional: | $V_{op} = 0,55 * V_k$ |


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| | | Engº Newton Gomes Faria |

4.2- ANTENAS:

| Controle de Antenas/Carga na Torre | | | | | | | | | |
|------------------------------------|-----------|------------|---------|-----------------------------|------------------|-----|---------------|-------|---------|
| ANTENA | OPERADORA | STATUS | Quant. | Comp./D. M | A E V S/ Ca (m2) | Ca | AEV(m2) C/ CA | seção | ALTURAS |
| | | | Antenas | | | | | | |
| 1 | ABC | DESATIVADA | 1 | P. CHEIA D. 1.2 M | 1,13 | 1,6 | 1,81 | 1 | 75 |
| 2 | ABC | ATIVA | 1 | P. VAZADA (1190x600) | 0,38 | 1,6 | 0,61 | 1 | 75 |
| 3 | ABC | ATIVA | 1 | P. CHEIA D 1.2 M | 1,13 | 1,6 | 1,81 | 1 | 74 |
| 4 | ABC | ATIVA | 1 | YAGI | 0,31 | 1,2 | 0,37 | 2 | 72,5 |
| 5 | VIVO | ATIVA | 2 | DIPLEX-(145x150) | 0,0435 | 1,2 | 0,05 | 2 | 71 |
| 6 | VIVO | ATIVA | 1 | DIPLEX-(175x135) | 0,024 | 1,2 | 0,03 | 2 | 71 |
| 7 | VIVO | ATIVA | 1 | RF- SD- (2020x280) | 0,57 | 1,2 | 0,68 | 2 | 71 |
| 8 | VIVO | ATIVA | 1 | RF- SD- (1800x570) | 1,03 | 1,2 | 1,24 | 2 | 71 |
| 9 | VIVO | ATIVA | 1 | DIPLEX-(200x130) | 0,026 | 1,2 | 0,03 | 2 | 71 |
| 10 | VIVO | ATIVA | 1 | DIPLEX-(185x185) | 0,034 | 1,2 | 0,04 | 2 | 71 |
| 11 | VIVO | ATIVA | 4 | DIPLEX-(200x130) | 0,104 | 1,2 | 0,12 | 3 | 70 |
| 12 | VIVO | ATIVA | 2 | RRU-(420x300) | 0,252 | 1,2 | 0,30 | 3 | 70 |
| 13 | VIVO | ATIVA | 1 | RRU-(500x355) | 0,355 | 1,2 | 0,43 | 3 | 70 |
| 14 | VIVO | ATIVA | 1 | RRU-(630x370) | 0,233 | 1,2 | 0,28 | 3 | 70 |
| 15 | VIVO | ATIVA | 1 | RRU-(550x355) | 0,195 | 1,2 | 0,23 | 3 | 70 |
| 16 | ABC | ATIVA | 1 | P. VAZADA (1220x600) | 0,37 | 1,6 | 0,59 | 3 | 70 |
| 17 | VIVO | ATIVA | 1 | RF-DB858DG65ESX-(2440x310) | 0,76 | 1,2 | 0,91 | 3 | 69 |
| 18 | ABC | ATIVA | 1 | P. VAZADA (1720x890) | 0,76 | 1,6 | 1,22 | 3 | 69 |
| 19 | ABC | ATIVA | 1 | P. VAZADA D. 2.0 M | 1,57 | 1,6 | 2,51 | 3 | 69 |
| 20 | ABC | ATIVA | 1 | YAGI | 0,31 | 1,2 | 0,37 | 3 | 68 |
| 21 | ABC | ATIVA | 1 | P. VAZADA D. 3.0 M | 3,53 | 1,6 | 5,65 | 3 | 68 |
| 22 | | DESATIVADA | 1 | P. CHEIA D. 1,2 M | 1,13 | 1,6 | 1,81 | 4 | 66 |
| 23 | ABC | ATIVA | 1 | YAGI | 0,31 | 1,2 | 0,37 | 4 | 66 |
| 24 | | DESATIVADA | 1 | P. VAZADA D. 3.0 M | 3,53 | 1,6 | 5,65 | 5 | 63 |
| 25 | OI | ATIVA | 2 | ATR4518R14V06DXX-(1445x449) | 1,3 | 1,2 | 1,56 | 5 | 63 |
| 26 | OI | ATIVA | 3 | RRU-(420x300) | 0,378 | 1,2 | 0,45 | 5 | 63 |
| 27 | OI | ATIVA | 2 | DIPLEX-(120x100) | 0,036 | 1,2 | 0,04 | 5 | 63 |
| 28 | OI | ATIVA | 1 | ATR4518R14V06DXX-(1445x449) | 0,65 | 1,2 | 0,78 | 6 | 61 |
| 29 | OI | ATIVA | 3 | RRU-(420x300) | 0,378 | 1,2 | 0,45 | 6 | 61 |
| 30 | OI | ATIVA | 2 | DIPLEX-(120x100) | 0,036 | 1,2 | 0,04 | 6 | 61 |
| 31 | ABC | ATIVA | 1 | P. CHEIA D. 1.2 | 1,13 | 1,6 | 1,81 | 6 | 61 |
| 32 | VIVO | ATIVA | 2 | RF- SD- (1800x570) | 2,052 | 1,2 | 2,46 | 7 | 59 |
| 33 | VIVO | ATIVA | 2 | DIPLEX-(185x185) | 0,068 | 1,2 | 0,08 | 7 | 59 |
| 34 | VIVO | ATIVA | 2 | DIPLEX-(150x145) | 0,043 | 1,2 | 0,05 | 7 | 59 |
| 35 | VIVO | ATIVA | 1 | DIPLEX-(110x65) | 0,0065 | 1,2 | 0,01 | 7 | 59 |
| 36 | VIVO | ATIVA | 1 | DIPLEX-(175x115) | 0,02 | 1,2 | 0,02 | 7 | 59 |
| 37 | VIVO | ATIVA | 3 | RF-SD-(2020x280) | 1,7 | 1,2 | 2,04 | 7 | 59 |
| 38 | VIVO | ATIVA | 7 | RRU-(550x330) | 1,27 | 1,2 | 1,52 | 7 | 59 |
| 39 | VIVO | ATIVA | 5 | RRU-(630x380) | 1,2 | 1,2 | 1,44 | 7 | 59 |
| 40 | VIVO | ATIVA | 2 | DIPLEX-(185x185) | 0,07 | 1,2 | 0,08 | 8 | 56 |
| 41 | VIVO | ATIVA | 4 | DIPLEX-(200x130) | 0,104 | 1,2 | 0,12 | 8 | 56 |
| 42 | CLARO | ATIVA | 1 | DIPLEX--(125x100) | 0,0125 | 1,2 | 0,02 | 10 | 48 |
| 43 | CLARO | ATIVA | 3 | DIPLEX-ACOMD2H16-(120x100) | 0,036 | 1,2 | 0,04 | 10 | 48 |
| 44 | CLARO | ATIVA | 1 | RF-ADU4518Y6V06-(1360x270) | 0,37 | 1,2 | 0,44 | 10 | 48 |
| 45 | CLARO | ATIVA | 4 | RRU-(420x300) | 0,504 | 1,2 | 0,60 | 10 | 48 |
| 46 | CLARO | ATIVA | 3 | RF-AS4517Y3Y06-(2000x430) | 2,58 | 1,2 | 3,10 | 11 | 43 |
| 47 | CLARO | ATIVA | 3 | RRU-(420x300) | 0,378 | 1,2 | 0,45 | 11 | 43 |
| 48 | CLARO | ATIVA | 3 | RRU-(480x280) | 0,403 | 1,2 | 0,48 | 12 | 40 |
| 49 | CLARO | ATIVA | 3 | RRU-(420x300) | 0,378 | 1,2 | 0,45 | 12 | 40 |
| 50 | VIVO | ATIVA | 1 | P. CHEIA D. 0,60 M | 0,283 | 1,6 | 0,45 | 15 | 23 |
| 51 | SEM ID. | ATIVA | 1 | GPS | 0,05 | 1,2 | 0,06 | 17 | 15 |
| 52 | SEM ID. | ATIVA | 1 | YAGI | 0,31 | 1,2 | 0,37 | 17 | 13 |
| | | | | AREA FINAL | | | 46,58 | | |

| | | |
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| LAUDO ESTRUTURAL | |  |
| VERIFICAÇÃO TORRE EXISTENTE PRODAGO | | |
| SITE: PRODAGO | REV: 00 | DATA: 23/06/2022 |
| | | Eng° Newton Gomes Faria |



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| Engº Newton Gomes Faria | | |

4.4-CALCULO DA AREA EFETIVA DAS SEÇÕES:

| Ae | | | | | | | | | | | | | | | | | | | | | |
|-----------|-----------|---|---------|------|----|--------------|---|---------|------|----|--------------|-----|---------|------|----|--------------|------|--------|------|----|----------|
| S | MONTANTE | | | | S | DIAGONAL | | | | S | HORIZONTAL | | | | S | SECUNDÁRIA | | | | S | Ae total |
| | BIT.(mm.) | | L unit. | A | | BIT.(pol.) | | L unit. | A | | BIT.(pol.) | | L unit. | A | | BIT.(pol.) | | L tot. | A | | (m²) |
| | adotada | a | (m) | (m²) | | adotada | a | (m) | (m²) | | adotada | a | (m) | (m²) | | adotada | a | (m) | (m²) | | |
| 1 | L4x1/4 | 4 | 2,5 | 0,51 | 1 | L3x3/16" | 3 | 2,86 | 0,44 | 1 | L2.1/2x3/16" | 2,5 | 2,8 | 0,18 | 1 | L1.3/4x1/8" | 1,75 | 1,43 | 0,13 | 1 | 1,249 |
| 2 | L4x1/4 | 4 | 2,5 | 0,51 | 2 | L3x3/16" | 3 | 2,86 | 0,44 | 2 | L2.1/2x3/16" | 2,5 | 2,8 | 0,18 | 2 | L1.3/4x1/8" | 1,75 | 1,43 | 0,13 | 2 | 1,249 |
| 3 | L4x1/4 | 4 | 2,5 | 0,51 | 3 | L3x3/16" | 3 | 2,86 | 0,44 | 3 | L2.1/2x3/16" | 2,5 | 2,8 | 0,18 | 3 | L1.3/4x1/8" | 1,75 | 1,43 | 0,13 | 3 | 1,249 |
| 4 | L4x1/4 | 4 | 2,5 | 0,51 | 4 | L3x3/16" | 3 | 2,86 | 0,44 | 4 | L2.1/2x3/16" | 2,5 | 2,8 | 0,18 | 4 | L1.3/4x1/8" | 1,75 | 1,43 | 0,13 | 4 | 1,249 |
| 5 | L5x3/8 | 5 | 2,5 | 0,64 | 5 | L3x3/16" | 3 | 2,86 | 0,44 | 5 | L2.1/2x3/16" | 2,5 | 2,8 | 0,18 | 5 | L1.3/4x1/8" | 1,75 | 1,43 | 0,13 | 5 | 1,376 |
| 6 | L5x3/8 | 5 | 2,5 | 0,64 | 6 | L3x3/16" | 3 | 2,96 | 0,45 | 6 | L2.1/2x3/16" | 2,5 | 2,8 | 0,18 | 6 | L1.3/4x3/16" | 1,75 | 1,39 | 0,12 | 6 | 1,387 |
| 7 | L5x3/8 | 5 | 2,5 | 0,64 | 7 | L3x3/16" | 3 | 3,07 | 0,47 | 7 | L2.1/2x3/16" | 2,5 | 3,19 | 0,20 | 7 | L1.3/4x3/16" | 1,75 | 1,39 | 0,12 | 7 | 1,429 |
| 8 | L6x3/8 | 6 | 2,5 | 0,76 | 8 | L3x3/16" | 3 | 3,19 | 0,49 | 8 | L2.1/2x3/16" | 2,5 | 3,58 | 0,23 | 8 | L1.3/4x3/16" | 1,75 | 1,48 | 0,13 | 8 | 1,607 |
| 9 | L6x3/8 | 6 | 5 | 1,52 | 9 | L3x3/16" | 3 | 6,63 | 1,01 | 9 | L2.1/2x3/16" | 2,5 | 4,33 | 0,27 | 9 | L1.3/4x3/16" | 1,75 | 3,32 | 0,30 | 9 | 3,105 |
| 10 | L6x3/8 | 6 | 5 | 1,52 | 10 | 2*(L3x3/16") | 3 | 5,71 | 0,87 | 10 | L3x3/16" | 3 | 4,75 | 0,36 | 10 | L2x3/16" | 2 | 5,31 | 0,54 | 10 | 3,296 |
| 11 | L6x3/8 | 6 | 5 | 1,52 | 11 | 2*(L3x3/16") | 3 | 5,91 | 0,90 | 11 | L3x3/16" | 3 | 5,53 | 0,42 | 11 | L2x3/16" | 2 | 5,63 | 0,57 | 11 | 3,418 |
| 12 | L6x3/8 | 6 | 5 | 1,52 | 12 | 2*(L3x3/16") | 3 | 6,13 | 0,93 | 12 | L3x3/16" | 3 | 6,31 | 0,48 | 12 | L2x3/16" | 2 | 5,96 | 0,61 | 12 | 3,545 |
| 13 | L6x3/8 | 6 | 5 | 1,52 | 13 | 2*(L3x3/16") | 3 | 6,36 | 0,97 | 13 | L3x3/16" | 3 | 7,09 | 0,54 | 13 | L2x3/16" | 2 | 6,31 | 0,64 | 13 | 3,675 |
| 14 | L6x1/2 | 6 | 5 | 1,52 | 14 | 2*(L3x3/16") | 3 | 6,61 | 1,01 | 14 | L3x3/16" | 3 | 7,87 | 0,60 | 14 | L2.1/2x3/16" | 2,5 | 6,67 | 0,85 | 14 | 3,978 |
| 15 | L6x1/2 | 6 | 5 | 1,52 | 15 | 2*(L3x1/4") | 3 | 6,87 | 1,05 | 15 | L3x3/16" | 3 | 8,65 | 0,66 | 15 | L2.1/2x3/16" | 2,5 | 8,77 | 1,11 | 15 | 4,344 |
| 16 | L6x1/2 | 6 | 5 | 1,52 | 16 | 2*(L3x1/4") | 3 | 7,14 | 1,09 | 16 | L3x3/16" | 3 | 9,43 | 0,72 | 16 | L2.1/2x3/16" | 2,5 | 9,17 | 1,16 | 16 | 4,495 |
| 17 | L6x5/8 | 6 | 5 | 1,52 | 17 | 2*(L3x1/4") | 3 | 7,43 | 1,13 | 17 | L4x1/4" | 4 | 10,21 | 1,04 | 17 | L2.1/2x3/16" | 2,5 | 9,58 | 1,22 | 17 | 4,910 |
| 18 | L6x5/8 | 6 | 10 | 3,05 | 18 | 2*(L3x3/16") | 3 | 12 | 1,83 | 18 | L4x1/4" | 4 | 10,99 | 1,12 | 18 | L2.1/2x3/16" | 2,5 | 20,79 | 2,64 | 18 | 8,634 |


4.5- CARREGAMENTO:

4.5.1- PESO PROPRIO:

O peso próprio é calculado automaticamente pelo software SAP2000.

4.5.2- PESO ACESSÓRIOS

| | |
|-----------------------|-----------------------------|
| Escada/Esteiras/..... | 1200 Kg |
| Cabos Coaxiais..... | 1363 Kg |
| Sobrecarga | 240 Kg |
| Descanços/Plataf..... | 775 Kg |
| Acessórios | 450 Kg |
| Total..... | 4028 Kg/72 nós= 55.94 kg/nó |

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| LAUDO ESTRUTURAL | |  |
| VERIFICAÇÃO TORRE EXISTENTE PRODAGO | | |
| SITE: PRODAGO | REV: 00 | DATA: 23/06/2022 |
| | | Eng° Newton Gomes Faria |

4.5.3-- VENTO ESTRUTURA E ACESSÓRIOS:

A ação do vento sobre o treliçamento da torre, cabos de RF e acessórios foi considerada conforme norma brasileira ABNT- NBR-6123(Forças devido ao vento nas Edificações).

| L-esteira (m) = 0,8 | | | | | | | | | | | |
|---------------------|-------|--------|---------|-------|---------|--------|-------------|------|-----------|---------|-----------|
| S | H | L | q | Ae | (m2) | A.proj | @ | CA | F1 (Kg) | F2 (Kg) | Ft (Kg) |
| | (m) | (m) | (Kg/m2) | real | frontal | (m2) | > Ae/A.proj | | > q.Ae.CA | >E.q.L | > F1 + F2 |
| 1 | 75,00 | 2,500 | 114,94 | 1,249 | 1,247 | 7,00 | 0,18 | 3,01 | 432,00 | 117,24 | 549,24 |
| 2 | 72,50 | 2,500 | 114,05 | 1,249 | 1,247 | 7,00 | 0,18 | 3,01 | 428,64 | 116,33 | 544,97 |
| 3 | 70,00 | 2,500 | 113,13 | 1,249 | 1,247 | 7,00 | 0,18 | 3,01 | 425,19 | 115,40 | 540,59 |
| 4 | 67,50 | 2,500 | 112,19 | 1,249 | 1,247 | 7,00 | 0,18 | 3,01 | 421,65 | 114,43 | 536,09 |
| 5 | 65,00 | 2,500 | 111,22 | 1,376 | 1,373 | 7,00 | 0,20 | 2,92 | 446,66 | 113,44 | 560,11 |
| 6 | 62,50 | 2,500 | 110,22 | 1,387 | 1,385 | 7,49 | 0,18 | 2,98 | 454,99 | 214,93 | 669,92 |
| 7 | 60,00 | 2,500 | 109,19 | 1,429 | 1,426 | 8,46 | 0,17 | 3,06 | 477,03 | 212,92 | 689,96 |
| 8 | 57,50 | 2,500 | 108,13 | 1,607 | 1,604 | 9,44 | 0,17 | 3,05 | 530,01 | 210,85 | 740,86 |
| 9 | 55,00 | 5,000 | 107,03 | 3,105 | 3,099 | 21,80 | 0,14 | 3,19 | 1059,69 | 417,41 | 1477,10 |
| 10 | 50,00 | 5,000 | 104,71 | 3,296 | 3,290 | 25,70 | 0,13 | 3,26 | 1124,95 | 502,60 | 1627,55 |
| 11 | 45,00 | 5,000 | 102,20 | 3,418 | 3,412 | 29,60 | 0,12 | 3,32 | 1161,05 | 490,56 | 1651,62 |
| 12 | 40,00 | 5,000 | 99,47 | 3,545 | 3,538 | 33,50 | 0,11 | 3,37 | 1188,85 | 477,45 | 1666,31 |
| 13 | 35,00 | 5,000 | 96,46 | 3,675 | 3,668 | 37,40 | 0,10 | 3,40 | 1205,15 | 463,01 | 1668,16 |
| 14 | 30,00 | 5,000 | 93,10 | 3,978 | 3,971 | 41,30 | 0,10 | 3,40 | 1259,25 | 446,88 | 1706,13 |
| 15 | 25,00 | 5,000 | 89,28 | 4,344 | 4,336 | 45,20 | 0,10 | 3,40 | 1318,56 | 428,53 | 1747,09 |
| 16 | 20,00 | 5,000 | 84,81 | 4,495 | 4,487 | 49,10 | 0,09 | 3,45 | 1315,31 | 407,09 | 1722,40 |
| 17 | 15,00 | 5,000 | 79,38 | 4,910 | 4,901 | 53,00 | 0,09 | 3,45 | 1344,76 | 381,03 | 1725,79 |
| 18 | 10,00 | 10,000 | 72,31 | 8,634 | 8,618 | 117,70 | 0,07 | 3,48 | 2172,66 | 694,20 | 2866,86 |

LAUDO ESTRUTURAL

VERIFICAÇÃO TORRE EXISTENTE PRODAGO




SITE: PRODAGO

REV:
00

DATA:
23/06/2022

Engº
Newton Gomes Faria


| ANTENA | Área Cabos | | Comp./D. M | Quant. | Diâm. Mm | NIVEL | | | AEV(m 2/m) S/ CA |
|--------------|----------------|----------------|-----------------------------|--------|----------|-------|---------|-------|------------------|
| | Quant. Antenas | Altura Antenas | | | | NIVEL | NIVEL 0 | NIVEL | |
| | | | | | | | | | |
| 1 | 1 | 75 | P. CHEIA D. 1.2 M | 1 | 10 | 1 | | | 0,010 |
| 2 | 1 | 75 | P. VAZADA (1190x600) | 1 | 28 | 1 | | | 0,028 |
| 3 | 1 | 74 | P. CHEIA D 1.2 M | 1 | 10 | 1 | | | 0,010 |
| 4 | 1 | 72,5 | YAGI | 1 | 10 | 1 | | | 0,010 |
| 5 | 2 | 71 | DIPLEX-(145x150) | 4 | 6 | 2 | 2 | | 0,012 |
| 6 | 1 | 71 | DIPLEX-(175x135) | 2 | 6 | 2 | | | 0,012 |
| 7 | 1 | 71 | RF- SD- (2020x280) | 2 | 28 | 1 | 1 | | 0,028 |
| 8 | 1 | 71 | RF- SD- (1800x570) | 2 | 28 | 1 | 1 | | 0,028 |
| 9 | 1 | 71 | DIPLEX-(200x130) | 2 | 6 | 2 | | | 0,012 |
| 10 | 1 | 71 | DIPLEX-(185x185) | 2 | 6 | 2 | | | 0,012 |
| 11 | 4 | 70 | DIPLEX-(200x130) | 2 | 6 | 2 | | | 0,012 |
| 12 | 2 | 70 | RRU-(420x300) | 4 | 6 | 2 | 2 | | 0,012 |
| 13 | 1 | 70 | RRU-(500x355) | 2 | 6 | 2 | | | 0,012 |
| 14 | 1 | 70 | RRU-(630x370) | 2 | 6 | 2 | | | 0,012 |
| 15 | 1 | 70 | RRU-(550x355) | 2 | 6 | 2 | | | 0,012 |
| 16 | 1 | 70 | P. VAZADA (1220x600) | 1 | 28 | 1 | | | 0,028 |
| 17 | 1 | 69 | RF-DB858DG65ESX-(2440x310) | 2 | 28 | 1 | 1 | | 0,028 |
| 18 | 1 | 69 | P. VAZADA (1720x890) | 1 | 10 | 1 | | | 0,010 |
| 19 | 1 | 69 | P. VAZADA D. 2.0 M | 1 | 10 | 1 | | | 0,010 |
| 20 | 1 | 68 | YAGI | 1 | 10 | 1 | | | 0,010 |
| 21 | 1 | 68 | P. VAZADA D. 3.0 M | 1 | 28 | 1 | | | 0,028 |
| 22 | 1 | 66 | P. CHEIA D. 1,2 M | 1 | 10 | 1 | | | 0,010 |
| 23 | 1 | 66 | YAGI | 1 | 10 | 1 | | | 0,010 |
| 24 | 1 | 63 | P. VAZADA D. 3.0 M | 1 | 28 | 1 | | | 0,028 |
| 25 | 2 | 63 | ATR4518R14V06DXX-(1445x449) | 2 | 28 | | 1 | 1 | 0,000 |
| 26 | 3 | 63 | RRU-(420x300) | 6 | 6 | | 3 | 3 | 0,000 |
| 27 | 2 | 63 | DIPLEX-(120x100) | 2 | 6 | | 2 | | 0,000 |
| 28 | 1 | 61 | ATR4518R14V06DXX-(1445x449) | 1 | 28 | | 1 | | 0,000 |
| 29 | 3 | 61 | RRU-(420x300) | 6 | 6 | | 3 | 3 | 0,000 |
| 30 | 2 | 61 | DIPLEX-(120x100) | 2 | 6 | | 2 | | 0,000 |
| 31 | 1 | 61 | P. CHEIA D. 1.2 | 1 | 10 | 1 | | | 0,010 |
| 32 | 2 | 59 | RF- SD- (1800x570) | 2 | 50 | 1 | 1 | | 0,050 |
| 33 | 2 | 59 | DIPLEX-(185x185) | 4 | 6 | 2 | 2 | | 0,012 |
| 34 | 2 | 59 | DIPLEX-(150x145) | 4 | 6 | 2 | 2 | | 0,012 |
| 35 | 1 | 59 | DIPLEX-(110x65) | 2 | 6 | 1 | 1 | | 0,006 |
| 36 | 1 | 59 | DIPLEX-(175x115) | 2 | 6 | 1 | 1 | | 0,006 |
| 37 | 3 | 59 | RF-SD-(2020x280) | 2 | 50 | 1 | 1 | | 0,050 |
| 38 | 7 | 59 | RRU-(550x330) | 2 | 6 | 2 | | | 0,012 |
| 39 | 5 | 59 | RRU-(630x380) | 2 | 6 | 2 | | | 0,012 |
| 40 | 2 | 56 | DIPLEX-(185x185) | 2 | 50 | 1 | 1 | | 0,050 |
| 41 | 4 | 56 | DIPLEX-(200x130) | 4 | 6 | 2 | 2 | | 0,012 |
| 42 | 1 | 48 | DIPLEX--(125x100) | 2 | 6 | 2 | | | 0,012 |
| 43 | 3 | 48 | DIPLEX-ACOMD2H16-(120x100) | 6 | 6 | 2 | 2 | 2 | 0,012 |
| 44 | 1 | 48 | RF-ADU4518Y6V06-(1360x270) | 4 | 10 | 2 | 2 | | 0,020 |
| 45 | 4 | 48 | RRU-(420x300) | 8 | 10 | 4 | 4 | | 0,040 |
| 46 | 3 | 43 | RF-ASI4517Y3Y06-(2000x430) | 6 | 10 | 2 | 2 | 2 | 0,020 |
| 47 | 3 | 43 | RRU-(420x300) | 6 | 6 | 2 | 2 | 2 | 0,012 |
| 48 | 3 | 40 | RRU-(480x280) | 6 | 6 | 2 | 2 | 2 | 0,012 |
| 49 | 3 | 40 | RRU-(420x300) | 6 | 6 | 2 | 2 | 2 | 0,012 |
| 50 | 1 | 23 | P. CHEIA D. 0.60 M | 1 | 10 | | 1 | | 0,000 |
| 51 | 1 | 15 | GPS | 1 | 6 | | | 1 | 0,000 |
| 52 | 1 | 13 | YAGI | 1 | 10 | | | 1 | 0,000 |
| TOTAL | | | | | | | | | 0,756 |

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| LAUDO ESTRUTURAL | |  |
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| Engº Newton Gomes Faria | | |

4.5.4-VENTO ANTENAS-PLATAFORMAS-SUPORTES:

A ação do vento sobre as antenas, suportes e plataformas considerada conforme norma brasileira ABNT- NBR-6123(Forças devido ao vento nas Edificações).

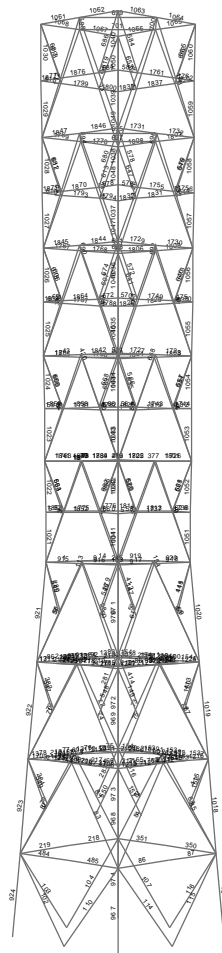
| ANTENAS/SUPORTES | | | | | | | |
|------------------|-----------------------------|----------|---------------------------|-------------------------|--------------|---------------|---------------------|
| S | | H (m) | q (Kg/m ²) | Ae (m ²) | Peso (Kg) | F.lateral | |
| | | | | | | ka 1,6/1,2 | Flat(Kg) q.Ae.ka |
| 1 | PARA RAI0 | 75 | 114,94 | 0,20 | 15 | 1,2 | 27,6 |
| 1 | P. CHEIA D. 1.2 M | 75 | 114,94 | 1,13 | 140 | 1,6 | 207,8 |
| 1 | P. VAZADA (1190x600) | 75 | 114,94 | 0,38 | 120 | 1,6 | 69,9 |
| 1 | P. CHEIA D 1.2 M | 74 | 114,59 | 1,13 | 140 | 1,6 | 207,2 |
| 2 | YAGI | 72,5 | 114,05 | 0,31 | 10 | 1,2 | 42,4 |
| 2 | DIPLEX-(145x150) | 71 | 113,50 | 0,0435 | 30 | 1,2 | 5,9 |
| 2 | DIPLEX-(175x135) | 71 | 113,50 | 0,024 | 15 | 1,2 | 3,3 |
| 2 | RF- SD- (2020x280) | 71 | 113,50 | 0,57 | 60 | 1,2 | 77,6 |
| 2 | RF- SD- (1800x570) | 71 | 113,50 | 1,03 | 60 | 1,2 | 140,3 |
| 2 | DIPLEX-(200x130) | 71 | 113,50 | 0,026 | 15 | 1,2 | 3,5 |
| 2 | DIPLEX-(185x185) | 71 | 113,50 | 0,034 | 15 | 1,2 | 4,6 |
| 3 | DIPLEX-(200x130) | 70 | 113,13 | 0,104 | 60 | 1,2 | 14,1 |
| 3 | RRU-(420x300) | 70 | 113,13 | 0,252 | 40 | 1,2 | 34,2 |
| 3 | RRU-(500x355) | 70 | 113,13 | 0,355 | 20 | 1,2 | 48,2 |
| 3 | RRU-(630x370) | 70 | 113,13 | 0,233 | 20 | 1,2 | 31,6 |
| 3 | RRU-(550x355) | 70 | 113,13 | 0,195 | 20 | 1,2 | 26,5 |
| 3 | P. VAZADA (1220x600) | 70 | 113,13 | 0,37 | 80 | 1,6 | 67,0 |
| 3 | RF-DB858DG65ESX-(2440x310) | 69 | 112,76 | 0,76 | 60 | 1,2 | 102,8 |
| 3 | P. VAZADA (1720x890) | 69 | 112,76 | 0,76 | 150 | 1,6 | 137,1 |
| 3 | P. VAZADA D. 2.0 M | 69 | 112,76 | 1,57 | 140 | 1,6 | 283,2 |
| 3 | YAGI | 68 | 112,38 | 0,31 | 10 | 1,2 | 41,8 |
| 3 | P. VAZADA D. 3.0 M | 68 | 112,38 | 3,53 | 180 | 1,6 | 634,7 |
| 4 | P. CHEIA D. 1,2 M | 66 | 111,61 | 1,13 | 140 | 1,6 | 201,8 |
| 4 | YAGI | 66 | 111,61 | 0,31 | 10 | 1,2 | 41,5 |
| 5 | P. VAZADA D. 3.0 M | 63 | 110,42 | 3,53 | 180 | 1,6 | 623,7 |
| 5 | ATR4518R14V06DXX-(1445x449) | 63 | 110,42 | 1,3 | 120 | 1,2 | 172,3 |
| 5 | RRU-(420x300) | 63 | 110,42 | 0,378 | 60 | 1,2 | 50,1 |
| 5 | DIPLEX-(120x100) | 63 | 110,42 | 0,036 | 30 | 1,2 | 4,8 |
| 6 | ATR4518R14V06DXX-(1445x449) | 61 | 109,61 | 0,65 | 60 | 1,2 | 85,5 |
| 6 | RRU-(420x300) | 61 | 109,61 | 0,378 | 60 | 1,2 | 49,7 |
| 6 | DIPLEX-(120x100) | 61 | 109,61 | 0,036 | 30 | 1,2 | 4,7 |
| 6 | P. CHEIA D. 1.2 | 61 | 109,61 | 1,13 | 140 | 1,6 | 198,2 |
| 7 | RF- SD- (1800x570) | 59 | 108,77 | 2,052 | 60 | 1,2 | 267,8 |
| 7 | DIPLEX-(185x185) | 59 | 108,77 | 0,068 | 30 | 1,2 | 8,9 |
| 7 | DIPLEX-(150x145) | 59 | 108,77 | 0,043 | 30 | 1,2 | 5,6 |
| 7 | DIPLEX-(110x65) | 59 | 108,77 | 0,0065 | 15 | 1,2 | 0,8 |
| 7 | DIPLEX-(175x115) | 59 | 108,77 | 0,02 | 15 | 1,2 | 2,6 |
| 7 | RF-SD-(2020x280) | 59 | 108,77 | 1,7 | 60 | 1,2 | 221,9 |
| 7 | RRU-(550x330) | 59 | 108,77 | 1,27 | 20 | 1,2 | 165,8 |
| 7 | RRU-(630x380) | 59 | 108,77 | 1,2 | 20 | 1,2 | 156,6 |
| 8 | DIPLEX-(185x185) | 56 | 107,47 | 0,07 | 30 | 1,2 | 9,0 |
| 8 | DIPLEX-(200x130) | 56 | 107,47 | 0,104 | 60 | 1,2 | 13,4 |
| 10 | DIPLEX--(125x100) | 48 | 103,73 | 0,0125 | 15 | 1,2 | 1,6 |
| 10 | DIPLEX-ACOMD2H16-(120x100) | 48 | 103,73 | 0,036 | 45 | 1,2 | 4,5 |
| 10 | RF-ADU4518Y6V06-(1360x270) | 48 | 103,73 | 0,37 | 120 | 1,2 | 46,1 |
| 10 | RRU-(420x300) | 48 | 103,73 | 0,504 | 80 | 1,2 | 62,7 |
| 11 | RF-ASI4517Y3Y06-(2000x430) | 43 | 101,14 | 2,58 | 180 | 1,2 | 313,1 |
| 11 | RRU-(420x300) | 43 | 101,14 | 0,378 | 60 | 1,2 | 45,9 |
| 12 | RRU-(480x280) | 40 | 99,47 | 0,403 | 60 | 1,2 | 48,1 |
| 12 | RRU-(420x300) | 40 | 99,47 | 0,378 | 60 | 1,2 | 45,1 |
| 15 | P. CHEIA D. 0,60 M | 23 | 87,58 | 0,283 | 60 | 1,6 | 39,7 |
| 17 | GPS | 15 | 79,38 | 0,05 | 15 | 1,2 | 4,8 |
| 17 | YAGI | 13 | 76,81 | 0,31 | 10 | 1,2 | 28,6 |
| | TOTAL S/CA | | | 34,03 | | | |


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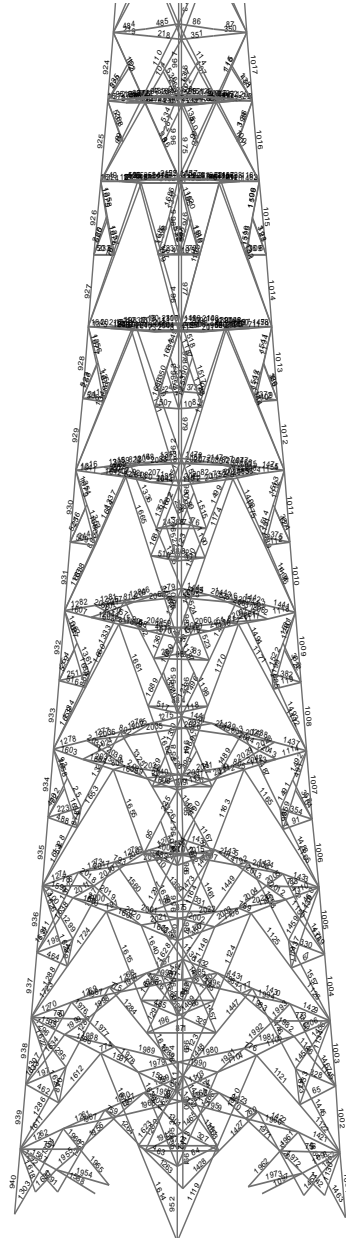
4.5.5- DIMENSIONAMENTO PERFIS:


EM ANEXO RELATORIO SAP2000

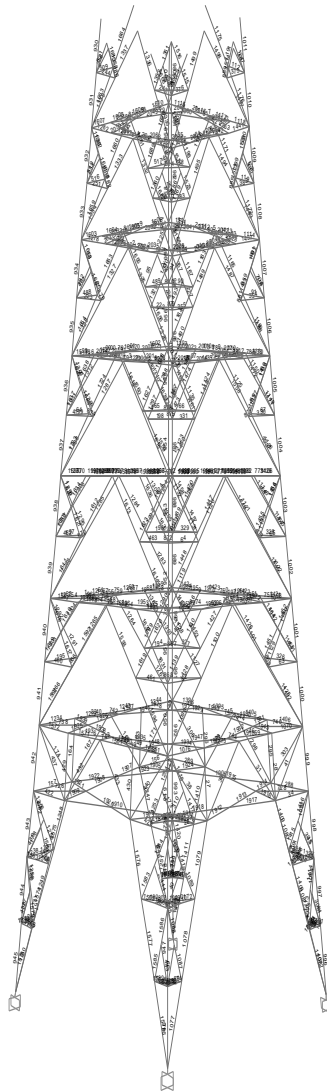
4.5.6- SILHUETA COM BARRAS




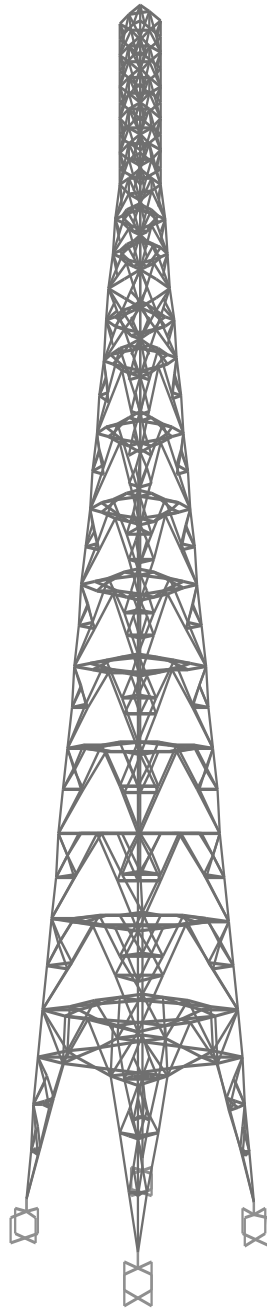
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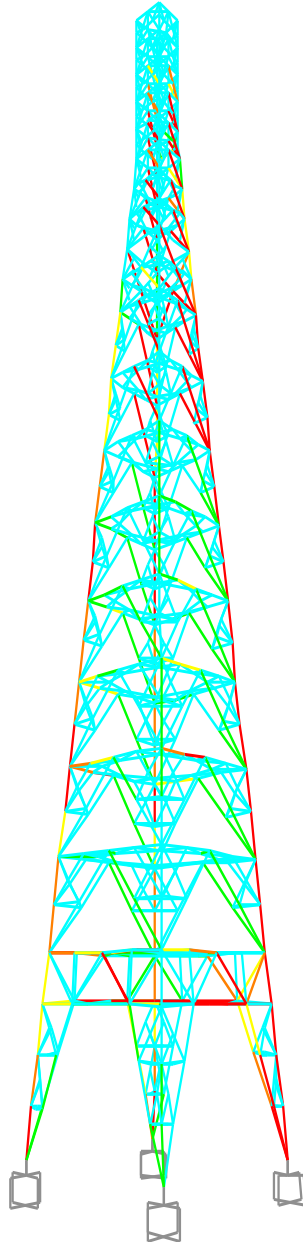
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4.5.7- VERIFICAÇÃO DOS PARAFUSOS:

4.5.7.1- PARAFUSOS MONTANTES:

| CÁLCULO DOS PARAFUSOS - MONTANTES | | | | | | | | | | | | | |
|-----------------------------------|---------|--------|-----------|-----------|-----------|-----|----------|--------------------|------------------------|-----------|------------------------|--------------------------------------|------------|
| Seção | Ligação | Bitola | Espessura | Esf. Max. | Cizalham. | O | Qtd Adot | Área | f _v | v c/ 0,85 | F _v | f _v < 1,33.F _v | |
| 2 | M0-M1 | 4 | 1/4 | 7364,7957 | SIMPLES | 3/4 | 8 | 2,85 | 32 | 38 | 880 | OK | ASTM A-394 |
| 4 | M1-M2 | 4 | 1/4 | 36000,22 | SIMPLES | 3/4 | 8 | 2,85 | 158 | 186 | 880 | OK | ASTM A-394 |
| 6 | M2-M3 | 5 | 5/8 | 137148,19 | SIMPLES | 3/4 | 10 | 2,85 | 481 | 566 | 880 | OK | ASTM A-394 |
| 8 | M3-M4 | 5 | 5/8 | 195764,51 | SIMPLES | 3/4 | 10 | 2,85 | 687 | 808 | 880 | OK | ASTM A-394 |
| 9 | M4-M5 | 6 | 3/8 | 229493,9 | SIMPLES | 3/4 | 14 | 2,85 | 575 | 677 | 880 | OK | ASTM A-394 |
| 10 | M5-M6 | 6 | 3/8 | 277157,17 | SIMPLES | 3/4 | 14 | 2,85 | 695 | 817 | 880 | OK | ASTM A-394 |
| 11 | M6-M7 | 6 | 3/8 | 338624,28 | SIMPLES | 3/4 | 14 | 2,85 | 849 | 998 | 880 | OK | ASTM A-394 |
| 12 | M7-M8 | 6 | 3/8 | 398681,01 | SIMPLES | 3/4 | 20 | 2,85 | 699 | 823 | 880 | OK | ASTM A-394 |
| 13 | M8-M9 | 6 | 3/8 | 456637,14 | SIMPLES | 3/4 | 20 | 2,85 | 801 | 942 | 880 | OK | ASTM A-394 |
| 14 | M9-M10 | 6 | 1/2 | 513663,02 | SIMPLES | 3/4 | 24 | 2,85 | 751 | 883 | 880 | OK | ASTM A-394 |
| 15 | M10-M11 | 6 | 1/2 | 569918,68 | SIMPLES | 3/4 | 24 | 2,85 | 833 | 980 | 880 | OK | ASTM A-394 |
| 16 | M11-M12 | 6 | 1/2 | 626274,37 | SIMPLES | 3/4 | 24 | 2,85 | 916 | 1077 | 880 | OK | ASTM A-394 |
| 17 | M12-M13 | 6 | 5/8 | 682590,05 | SIMPLES | 3/4 | 28 | 2,85 | 855 | 1006 | 880 | OK | ASTM A-394 |
| 18 | M13-M14 | 6 | 5/8 | 657333,02 | SIMPLES | 3/4 | 28 | 2,85 | 824 | 969 | 880 | OK | ASTM A-394 |
| | | | | (N) | | | | (cm ²) | (kgf/cm ²) | | (kgf/cm ²) | | |

4.5.7.2-PARAFUSOS DIAGONAIS:

| CÁLCULO DOS PARAFUSOS - DIAGONAIS | | | | | | | | | | | | | |
|-----------------------------------|------|--------|-----------|-------------|-----------|-----|----------|--------------------|------------------------|-----------|------------------------|--------------------------------------|------------|
| Seção | Peça | Bitola | Espessura | Esf. Max. | Cizalham. | O | Qtd Adot | Área | f _v | v c/ 0,85 | F _v | f _v < 1,33.F _v | |
| 1 | D1 | 3 | 3/16 | 5903,697166 | SIMPLES | 5/8 | 2 | 1,98 | 149 | 175 | 880 | OK | ASTM A-394 |
| 2 | D2 | 3 | 3/16 | 10287,33941 | SIMPLES | 5/8 | 2 | 1,98 | 260 | 306 | 880 | OK | ASTM A-394 |
| 3 | D3 | 3 | 3/16 | 20515,83799 | SIMPLES | 5/8 | 2 | 1,98 | 518 | 610 | 880 | OK | ASTM A-394 |
| 4 | D4 | 3 | 3/16 | 20800,23536 | SIMPLES | 5/8 | 2 | 1,98 | 525 | 618 | 880 | OK | ASTM A-394 |
| 5 | D5 | 3 | 3/16 | 29474,74747 | SIMPLES | 5/8 | 2 | 1,98 | 745 | 876 | 880 | OK | ASTM A-394 |
| 6 | D6 | 3 | 3/16 | 20090,90909 | SIMPLES | 5/8 | 2 | 1,98 | 508 | 597 | 880 | OK | ASTM A-394 |
| 7 | D7 | 3 | 3/16 | 20565,65657 | SIMPLES | 5/8 | 2 | 1,98 | 520 | 611 | 880 | OK | ASTM A-394 |
| 8 | D8 | 3 | 3/16 | 20636,36364 | SIMPLES | 5/8 | 2 | 1,98 | 521 | 613 | 880 | OK | ASTM A-394 |
| 9 | D9 | 3 | 3/16 | 35808,08081 | SIMPLES | 5/8 | 2 | 1,98 | 905 | 1064 | 880 | OK | ASTM A-394 |
| 10 | D10 | 3 | 3/16 | 39858,58586 | SIMPLES | 5/8 | 2 | 1,98 | 1007 | 1185 | 880 | NÃO OK | ASTM A-394 |
| 11 | D11 | 3 | 3/16 | 40383,83838 | SIMPLES | 5/8 | 2 | 1,98 | 1020 | 1200 | 880 | NÃO OK | ASTM A-394 |
| 12 | D12 | 3 | 3/16 | 40262,62626 | SIMPLES | 5/8 | 2 | 1,98 | 1017 | 1197 | 880 | NÃO OK | ASTM A-394 |
| 13 | D13 | 3 | 3/16 | 40292,92929 | SIMPLES | 5/8 | 2 | 1,98 | 1018 | 1197 | 880 | NÃO OK | ASTM A-394 |
| 14 | D14 | 3 | 3/16 | 40525,25253 | SIMPLES | 5/8 | 2 | 1,98 | 1024 | 1204 | 880 | NÃO OK | ASTM A-394 |
| 15 | D15 | 3 | 1/4 | 41434,34343 | SIMPLES | 5/8 | 2 | 1,98 | 1047 | 1231 | 880 | NÃO OK | ASTM A-394 |
| 16 | D16 | 3 | 1/4 | 42303,0303 | SIMPLES | 3/4 | 2 | 2,85 | 742 | 873 | 880 | OK | ASTM A-394 |
| 17 | D17 | 3 | 1/4 | 44969,69697 | SIMPLES | 3/4 | 2 | 2,85 | 789 | 928 | 880 | OK | ASTM A-394 |
| 18 | D18 | 3 | 1/4 | 117888,8889 | SIMPLES | 3/4 | 3 | 2,85 | 1379 | 1622 | 880 | NÃO OK | ASTM A-394 |
| | | | | (N) | | | | (cm ²) | (kgf/cm ²) | | (kgf/cm ²) | | |

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4.5.7.3-PARAFUSOS HORIZONTAIS:

CÁLCULO DOS PARAFUSOS - HORIZONTAIS


| Seção | Peça | Bitola | Espessura | Esf. Max. | Cizalham. | O | Qty Adot | Área | fv | fv c/ 0,85 | Fv | fv < 1,33.Fv | |
|-------|------|--------|-----------|------------|-----------|-----|----------|-------|-----------|------------|-----------|--------------|------------|
| 1 | H1 | 2,5 | 3/16 | 3295,08679 | SIMPLES | 5/8 | 1 | 1,98 | 166 | 196 | 880 | OK | ASTM A-394 |
| 2 | H2 | 2,5 | 3/16 | 4677,84643 | SIMPLES | 5/8 | 1 | 1,98 | 236 | 278 | 880 | OK | ASTM A-394 |
| 3 | H3 | 2,5 | 3/16 | 10012,7488 | SIMPLES | 5/8 | 1 | 1,98 | 506 | 595 | 880 | OK | ASTM A-394 |
| 4 | H4 | 2,5 | 3/16 | 10797,2933 | SIMPLES | 5/8 | 1 | 1,98 | 546 | 642 | 880 | OK | ASTM A-394 |
| 5 | H5 | 2,5 | 3/16 | 13686,8687 | SIMPLES | 5/8 | 1 | 1,98 | 691 | 814 | 880 | OK | ASTM A-394 |
| 6 | H6 | 2,5 | 3/16 | 14383,8384 | SIMPLES | 5/8 | 1 | 1,98 | 727 | 855 | 880 | OK | ASTM A-394 |
| 7 | H7 | 2,5 | 3/16 | 10696,9697 | SIMPLES | 5/8 | 1 | 1,98 | 540 | 636 | 880 | OK | ASTM A-394 |
| 8 | H8 | 2,5 | 3/16 | 11383,8384 | SIMPLES | 5/8 | 1 | 1,98 | 575 | 677 | 880 | OK | ASTM A-394 |
| 9 | H9 | 2,5 | 3/16 | 4595,9596 | SIMPLES | 1/2 | 2 | 1,27 | 181 | 213 | 880 | OK | ASTM A-394 |
| 10 | H10 | 3 | 3/16 | 24929,2929 | SIMPLES | 5/8 | 2 | 1,98 | 630 | 741 | 880 | OK | ASTM A-394 |
| 11 | H11 | 3 | 3/16 | 18434,3434 | SIMPLES | 5/8 | 2 | 1,98 | 466 | 548 | 880 | OK | ASTM A-394 |
| 12 | H12 | 3 | 3/16 | 20383,8384 | SIMPLES | 5/8 | 2 | 1,98 | 515 | 606 | 880 | OK | ASTM A-394 |
| 13 | H13 | 3 | 3/16 | 22333,3333 | SIMPLES | 5/8 | 2 | 1,98 | 564 | 664 | 880 | OK | ASTM A-394 |
| 14 | H14 | 3 | 3/16 | 27020,202 | SIMPLES | 5/8 | 2 | 1,98 | 683 | 803 | 880 | OK | ASTM A-394 |
| 15 | H15 | 3 | 3/16 | 28646,4646 | SIMPLES | 5/8 | 2 | 1,98 | 724 | 851 | 880 | OK | ASTM A-394 |
| 16 | H16 | 3 | 3/16 | 30737,3737 | SIMPLES | 5/8 | 2 | 1,98 | 776 | 913 | 880 | OK | ASTM A-394 |
| 17 | H17 | 4 | 1/4 | 33212,1212 | SIMPLES | 3/4 | 2 | 2,85 | 583 | 685 | 880 | OK | ASTM A-394 |
| 18 | H18 | 4 | 1/4 | 66181,8182 | SIMPLES | 3/4 | 2 | 2,85 | 1161 | 1366 | 880 | NÃO OK | ASTM A-394 |
| | | | | (M) | | | | (cm2) | (kgf/cm2) | | (kgf/cm2) | | |

4.5.8- CHUMBADORES E CHAPAS DE BASE:

| | | | | | |
|--------------------------|--------|--|----------------------------------|----------------------------|--|
| OBRA : | | | Escolha um tipo de Chumbador | | |
| COMPRESSÃO (kg) : | 87.817 | | <input type="radio"/> | Chumbador com Gancho | |
| TRACÃO (kg) : | 72.088 | | <input checked="" type="radio"/> | Chumbador C/ Chapa Engaste | |
| MONTANTE (") : | 6X5/8 | | <input type="radio"/> | Chumbador S/ Chapa Engaste | |

| Chumbador | | | Placa Base | | |
|---------------------|-----------|---------|------------------------|-----------|---------|
| Dados | Calculado | Adotado | Dados | Calculado | Adotado |
| Diâmetro | 2" | 1.1/2" | Larg. Placa (cm) | 32,4 | 40,0 |
| Comp. Tot. (cm) | 120 | 262 | Diâm. Furo (cm) | 4,3 | 4,3 |
| Comp. Rosca (cm) | 13 | 13 | Espessura (cm) (") | 4,19 | 1.3/4" |
| Z (kg) | 31.865,7 | 36.480 | Dist. Furo a Furo (cm) | 17,1 | 17,1 |
| Rc (kg) | 41.005,3 | 23.065 | | | |
| Fs | 1,29 | 0,63 | | | |
| Larg. Ch. Eng. (cm) | 15 | 10 | | | |

* Necessita de reforço.

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4.5.9- DEFLEXÃO MAXIMA NO TOPO PARA VENTOS OPERACIONAIS:

- Vento Operacional

$$\Delta = \Delta_1 - \Delta_2$$

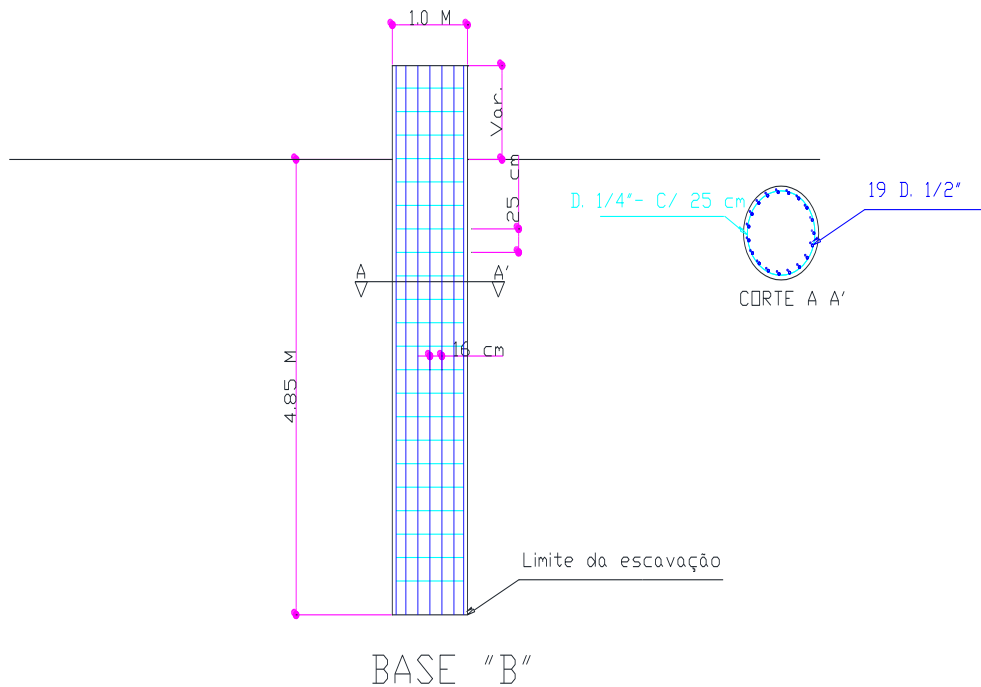
$$\Delta = 26.56 - 24.92 = 1.64 \text{ cm} \quad l = 250 \text{ cm}$$

$$\theta = 0^\circ 23' 36'' < 30' \text{ OK.}$$


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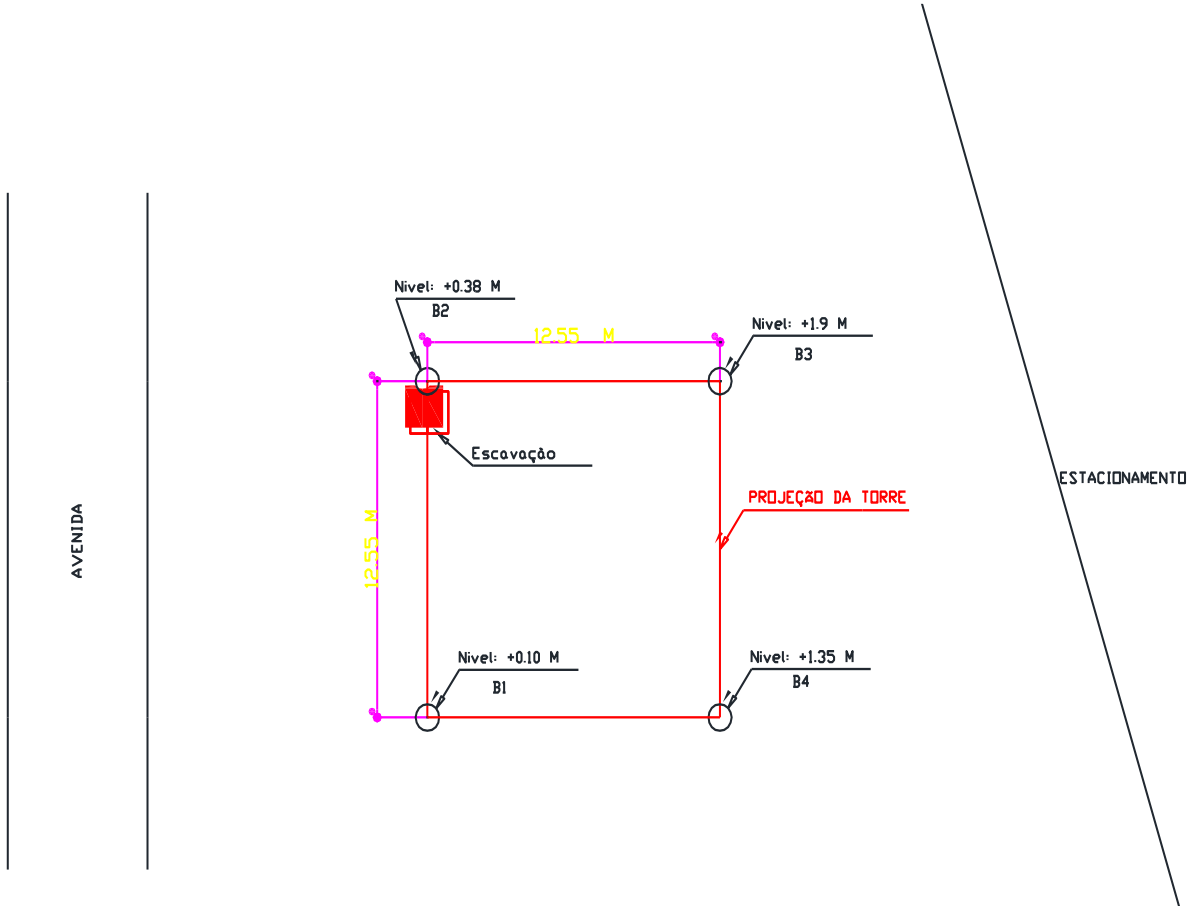
5. – FUNDAÇÃO:


5.1 – Prospecção:




- Escavação manual interrompida aos 4.85 m devido a presença de água.

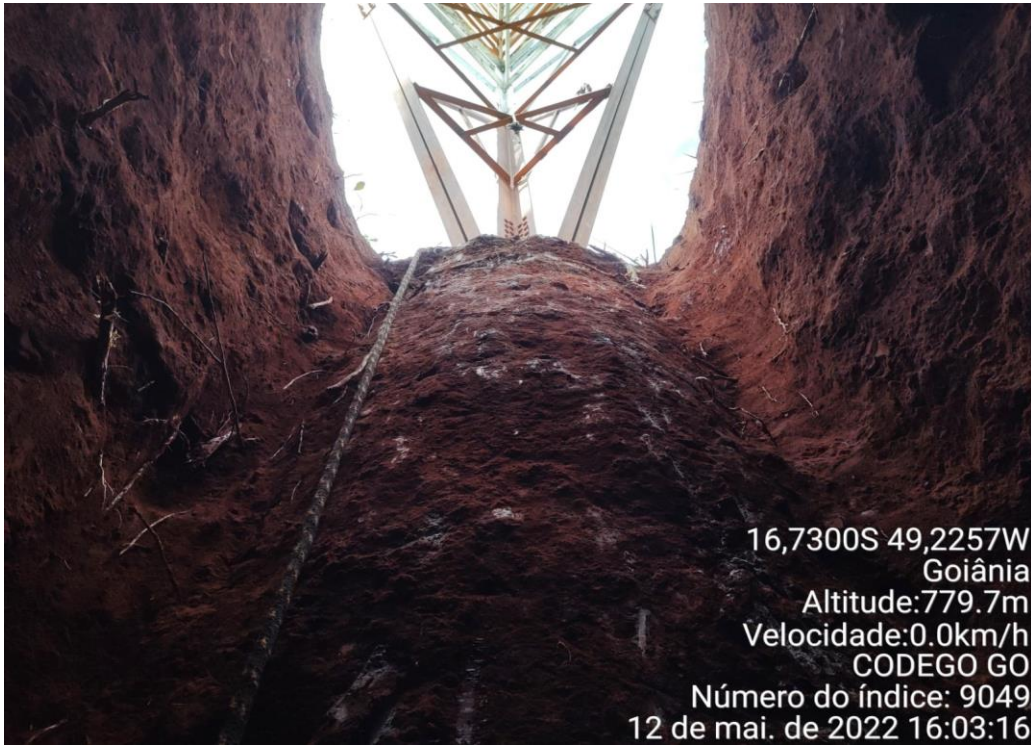
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5.2 – Verificação:

| | |
|--------------------------------|----------------------|
| Taxa do Terreno (σ) = | 1 kg/cm ² |
| Compressão Máxima (C)= | 87818 kg |
| Tração Máxima (T) = | 72088 kg |
| Horizontal (H)= | 14485 kg |

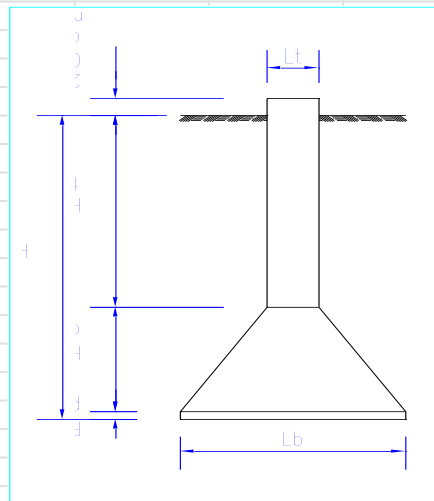
5.1 - Determinação do volume e peso do concreto

Vc (m³) = volume de concreto

Pc (kg) = peso do concreto

$\phi_c = 2,4$ t/m³ (peso específico do concreto)

| | |
|-----------|-----|
| Lb (cm) = | 100 |
| Lt (cm) = | 100 |
| Rp (cm) = | 0 |
| Hc (cm) = | 0 |
| Hf (cm) = | 485 |
| H (cm) = | 485 |



$$V_c = ((0,78 * R_p * L_b^2) + (0,26 * H_c * (L_b^2 + L_t^2 + L_b * L_t)) + 0,78 * H_f * L_t^2)$$

$$V_c \text{ (m}^3\text{)} = 3,78$$

$$P_c = \phi_c * V_c$$

$$P_c \text{ (kg)} = 9.079$$

5.2 - Determinação do volume e peso do solo

β (âng.solo)= 18

$\phi_s = 1,6$ t/m³ (peso específico do solo)

Vs (m³) = volume do solo

Ps (kg) = peso do solo

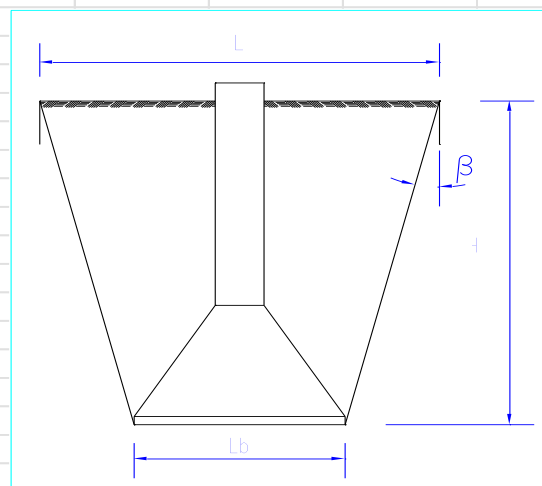
$$L = 2 * (H * \text{Tg } \beta) + L_b$$


$$L \text{ (cm)} = 415,2$$

$$V_s = (0,26 * H * (L_b^2 + L^2 + L_b * L)) - V_c$$

$$V_s \text{ (m}^3\text{)} = 24,4$$

$$P_s \text{ (kg)} = 39.118$$



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5.3 - Verificação Esforço Vertical

$$P_c \text{ (kg)} = 9.079$$

$$P_s \text{ (kg)} = 39.118$$

$$T \text{ (kg)} = 72088$$

$$E_v = P_c + P_s$$

$$E_v \text{ (kg)} = 48.197$$

$$E_v \geq T \times 1,4$$

$$48.197 \geq 100923,2$$

Instavel

5.4 - Verificação Tensão de Compressão no Solo

$$\text{Taxa do Terreno } (\sigma) = 1 \text{ kg/cm}^2$$

$$P_s = 4 * (C + T) / L_b^2 * \pi$$

$$P_s \text{ (kg/cm}^2) = 12,34$$

$$\sigma \geq P_s$$

$$1 \geq 12,34$$

Instavel

5.5 - Determinação da Ferragem

5.5.1 - Ferragem vertical:

$$A_{sp} \text{ (cm}^2) = \text{Ferragem pilar}$$

$$A_c \text{ (cm}^2) = 7.854$$

$$T \text{ (kg)} = 72.088$$

$$A_{sp} = T / 3.030 \quad \text{ou} \quad A_{sp} = 0,5\% \times A_c$$

$$A_{sp} \text{ (cm}^2) = 23,8$$

$$A_{sp} \text{ (cm}^2) = 39,3$$

| | | |
|------------|--------|-------------------------|
| Usaremos: | | |
| quantidade | Φ | Area (cm ²) |
| 19 | 1\2 | 24,13 |

$$A_{sp} \leq \text{Area}$$

5.5.2 - Ferragem horizontal:

$$\Phi_e = \text{diâmetro estribo}$$

$$\Phi_l = \text{diâmetro armadura vertical}$$

$$\Phi_e = 1/4 * \Phi_l$$


$$\Phi_e = 0,3175$$

| | |
|--------------|---------------|
| Usaremos: | |
| Φ_e (") | Φ_e (cm) |
| 1/4 | 0,635 |

Espaçamento entre estribos:

$$25 \text{ cm} \quad \text{ou} \quad 12 \times \Phi_l = 15,2$$

Adotaremos espaçamento = 15cm

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5.3 – Conclusão:

Verificamos que a fundação encontra-se segura do ponto de vista estrutural, porém como não temos o projeto original, e não foi possível a escavação para se determinar as dimensões corretas, e com base de que a torre está acima da sua capacidade de carga com necessidade de reforço dos montantes, chumbadores e chapas de base, concluímos que a fundação deverá ser reforçada considerando que a capacidade de carga da mesma seria os esforços provenientes em uma situação em que a torre não necessite de reforço.

6.0-CONCLUSÕES:


6.1- ESTRUTURA VERTICAL TORRE:

Conforme memória de cálculo verificamos que a torre para suportar o carregamento atual de 46.58 m² necessita de reforço.

- Reforço montantes seções: 10 a 18.
- Reforço diagonais seções: 4 a 11 e 18.
- Reforço horizontais seção: 16
- Reforço parafusos diagonais seções: 10 a 15 e 18.
- Reforço parafuso horizontal seção: 18.
- Reforço chumbadores e chapas de base

6.2- FUNDAÇÃO:

Fundação necessita de reforço.

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6.3- TABELA SITUAÇÕES DE CARREGAMENTO:


| CARREGAMENTOS PREVISTOS | AEV (Ca incluso) | SITUAÇÃO | SITUAÇÃO da |
|--|----------------------|------------|-------------|
| | Antenas / Suportes | da TORRE | FUNDAÇÃO |
| ATUAL (antenas instaladas) | 46.58 m ² | Não Atende | Não Atende |
| A Retirar | 0,0 m ² | | |
| A Instalar () | 0.0 m ² | | |
| PRETENDIDO: Atual + A Instalar- A Retirar | 46.58 m ² | Não Atende | Não Atende |

Capacidade de Carga situação atual: 15.0 m²

7.0- ASSINATURA:

Newton Gomes Faria

Eng.Newton Gomes Faria
Crea-2974/D-GO

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ANEXO II

RELATORIO FOTOGRAFICO

TIPO DE ESTRUTURA: Auto suportada

Altura: 75 metros

SEÇÃO TRANSVERSAL: Quadrada


MATERIAL: Cantoneiras Aço A -36

| | | | |
|------------------|---------------------------------------|-------------------|------------------|
| SITE - ID | PRODAGO | | |
| ENDEREÇO | RUA Sc-01 - NR. 299 PARQUE SANTA CRUZ | LOCALIDADE | GOIÂNIA-GO |
| GEOGRAFIA | CENTRO OESTE | LATITUDE | 16° 43' 48.60" S |
| DATA | 23/06/2022 | LONGITUDE | 49° 13' 32.40" W |


CONTEL OBRAS E SERVIÇOS LTDA

ENG: Newton Gomes Faria Crea: 2974/D-GO

APARECIDA DE GOIÂNIA, 23 DE JUNHO DE 2022


| | | |
|--|-------------------|---|
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- Plataformas da parte reta sem corrimão na parte interna

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| SITE: PRODAGO | REV: 00 | DATA: 23/06/2022 |
| | | Eng° Newton Gomes Faria |




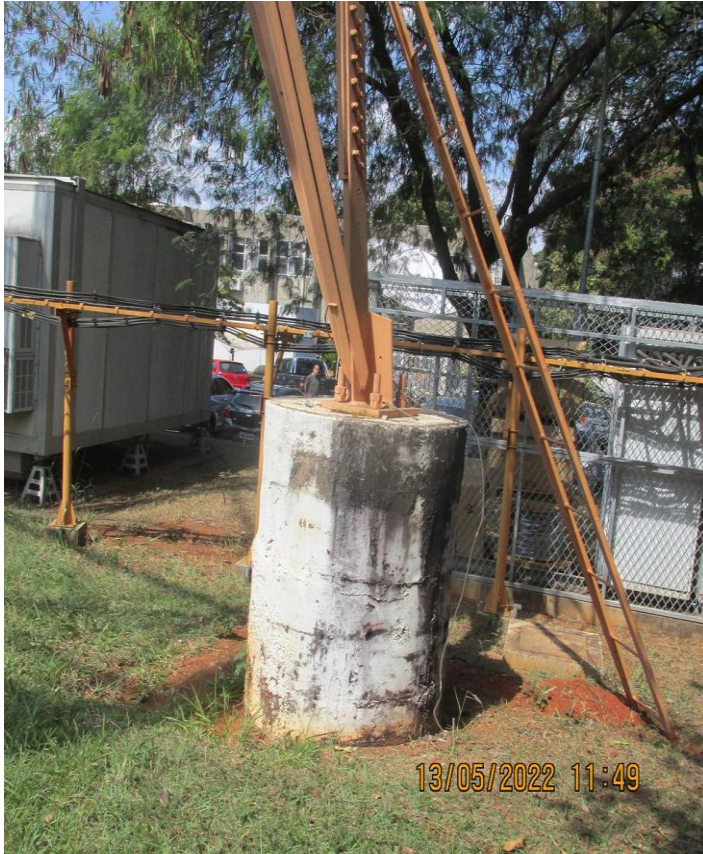
- Plataforma aos 20 metros sem corrimão na extremidade.




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| | | Eng° Newton Gomes Faria |

ANEXO III

RELATORIO SAP2000

TIPO DE ESTRUTURA: Auto suportada

Altura: 75 metros

SEÇÃO TRANSVERSAL: Quadrada

MATERIAL: Cantoneiras Aço A -36

| | | | |
|------------------|---------------------------------------|-------------------|------------------|
| SITE - ID | PRODAGO | | |
| ENDEREÇO | RUA Sc-01 - NR. 299 PARQUE SANTA CRUZ | LOCALIDADE | GOIÂNIA-GO |
| GEOGRAFIA | CENTRO OESTE | LATITUDE | 16° 43' 48.60" S |
| DATA | 23/06/2022 | LONGITUDE | 49° 13' 32.40" W |

CONTEL OBRAS E SERVIÇOS LTDA

ENG: Newton Gomes Faria Crea: 2974/D-GO

APARECIDA DE GOIÂNIA, 23 DE JUNHO DE 2022


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Table: Combination Definitions, Part 1 of 3

Table: Combination Definitions, Part 1 of 3

| ComboName | ComboType | AutoDesign | CaseType | CaseName | ScaleFactor | SteelDesign |
|-----------|------------|------------|---------------|-----------------|-------------|-------------|
| DSTL12 | Linear Add | No | Linear Static | ACESSORIOS | 1.200000 | Strength |
| DSTL12 | | | Linear Static | PESO ANTENAS | 1.200000 | |
| DSTL12 | | | Linear Static | VENTO FACE | 1.400000 | |
| DSTL12 | | | Linear Static | DEAD | 1.200000 | |
| DSTL13 | Linear Add | No | Linear Static | ACESSORIOS | 1.200000 | Strength |
| DSTL13 | | | Linear Static | PESO ANTENAS | 1.200000 | |
| DSTL13 | | | Linear Static | DEAD | 1.200000 | |
| DSTL13 | | | Linear Static | VENTO DIAGONAL_ | 1.400000 | |

Table: Frame Section Properties 01 - General, Part 1 of 6

Table: Frame Section Properties 01 - General, Part 1 of 6

| SectionName | Material | Shape | t3 m | t2 m | tf m | tw m |
|-------------------|----------|------------|---------|---------|---------|---------|
| CD 155x40x3.18 | A36 | SD Section | | | | |
| CD 185x50x7.94 | A36 | SD Section | | | | |
| CD 220x60x9.53 | A36 | SD Section | | | | |
| CD 260x85x12.7 | A36 | SD Section | | | | |
| CD 270x85x15.88 | A36 | SD Section | | | | |
| CD 295x90x15.88 | A36 | SD Section | | | | |
| CD 330Xx100x19.05 | A36 | SD Section | | | | |
| CD 345x110x19.05 | A36 | SD Section | | | | |
| CD 345x125x15.88 | A36 | SD Section | | | | |
| CD 370x125x19.05 | A36 | SD Section | | | | |
| D 73 MM | A36 | SD Section | | | | |
| D 12.7 | A36 | SD Section | | | | |
| D 15.8 | A36 | SD Section | | | | |
| D 34 x 4 | A36 | SD Section | | | | |
| D 42 x 4 | A36 | SD Section | | | | |
| D 48.3 x 3.8 | A36 | SD Section | | | | |
| D 50 MM | A36 | SD Section | | | | |
| D 57 MM | A36 | SD Section | | | | |
| D 60.5 x 4.5 | A36 | SD Section | | | | |
| D 63 MM | A36 | SD Section | | | | |
| D 69 MM | A36 | SD Section | | | | |
| D 76 MM | A36 | SD Section | | | | |
| D 76 x 5.2 | A36 | SD Section | | | | |
| D 82 MM | A36 | SD Section | | | | |
| D 89 x 5.8 | A36 | SD Section | | | | |
| D 9.5 | A36 | SD Section | | | | |
| D 95 MM | A36 | SD Section | | | | |


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Table: Frame Section Properties 01 - General, Part 1 of 6

| SectionName | Material | Shape | t3 m | t2 m | tf m | tw m |
|-----------------------------|------------|------------|----------|----------|----------|----------|
| FSEC1 | A992Fy50 | Angle | 0.127000 | 0.127000 | 0.007938 | 0.007938 |
| FSEC2 | A572Gr50 | Angle | 0.076200 | 0.076200 | 0.004763 | 0.004763 |
| FSEC3 | A572Gr50 | Angle | 0.076200 | 0.076200 | 0.004763 | 0.004763 |
| FSEC4 | A36 | SD Section | | | | |
| FSEC5 | A36 | SD Section | | | | |
| FSEC6 | A36 | SD Section | | | | |
| FSEC7 | A992Fy50 | Angle | 0.127000 | 0.127000 | 0.007938 | 0.007938 |
| L 1.1/2 x 3/16 | A36 | Angle | 0.038100 | 0.038100 | 0.004760 | 0.004760 |
| L 1.1/4x1/8" | A36 | Angle | 0.031750 | 0.031750 | 0.003175 | 0.003175 |
| L 2x 1/8" | A36 | Angle | 0.050800 | 0.050800 | 0.003150 | 0.003150 |
| L 1.1/2 x 1/8" | A36 | Angle | 0.038100 | 0.038100 | 0.003170 | 0.003170 |
| L 1.3/4 x 1/8" | A36 | Angle | 0.044400 | 0.044400 | 0.003175 | 0.003175 |
| L 1.3/4 x 3/16" | A36 | Angle | 0.044400 | 0.044400 | 0.004760 | 0.004760 |
| L 1x1/8" | A36 | Angle | 0.025400 | 0.025400 | 0.003175 | 0.003175 |
| L 2 x 3/16" | A36 | Angle | 0.050800 | 0.050800 | 0.004700 | 0.004700 |
| L 2.1/2 x 1/4" | A36 | Angle | 0.063500 | 0.063500 | 0.006350 | 0.006350 |
| L 2.1/2 x 5/16" | A36 | Angle | 0.063500 | 0.063500 | 0.007930 | 0.007930 |
| L 2.1/2"x 4 mm | A572 GR 60 | Angle | 0.063500 | 0.063500 | 0.004000 | 0.004000 |
| L 2.1/2x1/4 + L2.1/2X1/4 | A36 | SD Section | | | | |
| L 2.1/2x3/16 | A36 | Angle | 0.063500 | 0.063500 | 0.004750 | 0.004700 |
| L | A36 | SD Section | | | | |
| 2.1/2x3/16+L2.1/2X3/ 16 | | | | | | |
| L 2x1/8 + L 2x1/8" | A36 | SD Section | | | | |
| L 2X3/16 + L 2.1/2x3/16 | A36 | SD Section | | | | |
| L 2x3/16 + L 2x3/16 | A36 | SD Section | | | | |
| L 2x3/16+L1.1/2x1/8" | A36 | SD Section | | | | |
| L 3 x 1/4 + L 3x1/4" | A36 | SD Section | | | | |
| L 3 x 3/16" H | A572Gr50 | Angle | 0.076200 | 0.076200 | 0.004750 | 0.004700 |
| L 3 x1/4 + L 3Xx/16 | A36 | SD Section | | | | |
| L 3x3/16 + L 3x3/16 | A36 | SD Section | | | | |
| L 3x5/16+L3x5/16" | A36 | SD Section | | | | |
| L 4 * (L 5 x 1/2") X | A36 | SD Section | | | | |
| L 4 x 5/16" | A572 GR 60 | Angle | 0.101600 | 0.101600 | 0.007930 | 0.007930 |
| L 4* (L 6x1/2) X | A36 | SD Section | | | | |
| L 4x1/4+ L 4x1/4 | A36 | SD Section | | | | |
| L 4x3/8+L4x3/8" X | A36 | SD Section | | | | |
| L 5 x 5 x 1/4" | A36 | Angle | 0.127000 | 0.127000 | 0.006350 | 0.006350 |
| L 5x1/2" + L 4 x 1/4" X | A572 GR 60 | SD Section | | | | |
| L 5x1/2+L5x1/2" | A36 | SD Section | | | | |
| L 5x3/8" + 4 x 5/16" X | A572Gr50 | SD Section | | | | |
| L 60 x 4 mm | A572 GR 60 | Angle | 0.060000 | 0.060000 | 0.004000 | 0.004000 |
| L 6x1/2 x 4x3/8" X | A572 GR 60 | SD Section | | | | |
| L 6x1/2+L6x1/2 | A36 | SD Section | | | | |
| L 6x1/2+L6x3/8" X | A36 | SD Section | | | | |
| L 6x3/4 + L 6x3/4 X | A36 | SD Section | | | | |
| L 6x3/4+L6x3/4 X R | A36 | SD Section | | | | |
| L 6x3/8 + 6x3/8 X | A36 | SD Section | | | | |
| L 6x3/8+L6x3/8 X R | A36 | SD Section | | | | |
| L 6x5/8+6x5/8 X | A36 | SD Section | | | | |


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Table: Frame Section Properties 01 - General, Part 1 of 6

| SectionName | Material | Shape | t3 m | t2 m | tf m | tw m |
|----------------------------|------------|------------|----------|----------|----------|----------|
| L 6X5/8+L4x3/8" X | A572 GR 60 | SD Section | | | | |
| L 6x5/8+L6x3/8" X | A36 | SD Section | | | | |
| L1.3/4X1/8+ L 1.3/4x1/8 | A36 | SD Section | | | | |
| L2-1/2X2-1/2X1/2 | A992Fy50 | Angle | 0.063500 | 0.063500 | 0.012700 | 0.012700 |
| L2-1/2X2-1/2X1/4 | A992Fy50 | Angle | 0.063500 | 0.063500 | 0.006350 | 0.006350 |
| L2-1/2X2-1/2X3/16 | A992Fy50 | Angle | 0.063500 | 0.063500 | 0.004763 | 0.004763 |
| L2-1/2X2-1/2X3/8 | A992Fy50 | Angle | 0.063500 | 0.063500 | 0.009525 | 0.009525 |
| L2-1/2X2-1/2X5/16 | A992Fy50 | Angle | 0.063500 | 0.063500 | 0.007938 | 0.007938 |
| L2-1/2X2X1/4 | A992Fy50 | Angle | 0.063500 | 0.050800 | 0.006350 | 0.006350 |
| L2-1/2X2X3/16 | A992Fy50 | Angle | 0.063500 | 0.050800 | 0.004763 | 0.004763 |
| L2-1/2X2X3/8 | A992Fy50 | Angle | 0.063500 | 0.050800 | 0.009525 | 0.009525 |
| L2-1/2X2X5/16 | A992Fy50 | Angle | 0.063500 | 0.050800 | 0.007938 | 0.007938 |
| L2X2X1/4 | A36 | Angle | 0.050800 | 0.050800 | 0.006350 | 0.006350 |
| L2X2X1/8 | A992Fy50 | Angle | 0.050800 | 0.050800 | 0.003175 | 0.003175 |
| L2X2X3/16 | A992Fy50 | Angle | 0.050800 | 0.050800 | 0.004763 | 0.004763 |
| L2X2X3/8 | A36 | Angle | 0.050800 | 0.050800 | 0.009525 | 0.009525 |
| L2X2X5/16 | A992Fy50 | Angle | 0.050800 | 0.050800 | 0.007938 | 0.007938 |
| L2x3/16+1.3/4x1/8 | A36 | SD Section | | | | |
| L2x3/16+L2x1/8" | A36 | SD Section | | | | |
| L3-1/2X2-1/2X1/2 | A992Fy50 | Angle | 0.088900 | 0.063500 | 0.012700 | 0.012700 |
| L3-1/2X2-1/2X1/4 | A992Fy50 | Angle | 0.088900 | 0.063500 | 0.006350 | 0.006350 |
| L3-1/2X2-1/2X3/8 | A992Fy50 | Angle | 0.088900 | 0.063500 | 0.009525 | 0.009525 |
| L3-1/2X2-1/2X5/16 | A992Fy50 | Angle | 0.088900 | 0.063500 | 0.007938 | 0.007938 |
| L3-1/2X3-1/2X1/2 | A992Fy50 | Angle | 0.088900 | 0.088900 | 0.012700 | 0.012700 |
| L3-1/2X3-1/2X1/4 | A992Fy50 | Angle | 0.088900 | 0.088900 | 0.006350 | 0.006350 |
| L3-1/2X3-1/2X3/8 | A992Fy50 | Angle | 0.088900 | 0.088900 | 0.009525 | 0.009525 |
| L3-1/2X3-1/2X5/16 | A992Fy50 | Angle | 0.088900 | 0.088900 | 0.007938 | 0.007938 |
| L3-1/2X3-1/2X7/16 | A992Fy50 | Angle | 0.088900 | 0.088900 | 0.011113 | 0.011113 |
| L3-1/2X3X1/2 | A992Fy50 | Angle | 0.088900 | 0.076200 | 0.012700 | 0.012700 |
| L3-1/2X3X1/4 | A992Fy50 | Angle | 0.088900 | 0.076200 | 0.006350 | 0.006350 |
| L3-1/2X3X3/8 | A992Fy50 | Angle | 0.088900 | 0.076200 | 0.009525 | 0.009525 |
| L3-1/2X3X5/16 | A992Fy50 | Angle | 0.088900 | 0.076200 | 0.007938 | 0.007938 |
| L3-1/2X3X7/16 | A992Fy50 | Angle | 0.088900 | 0.076200 | 0.011113 | 0.011113 |
| L3X2-1/2X1/2 | A992Fy50 | Angle | 0.076200 | 0.063500 | 0.012700 | 0.012700 |
| L3X2-1/2X1/4 | A992Fy50 | Angle | 0.076200 | 0.063500 | 0.006350 | 0.006350 |
| L3X2-1/2X3/16 | A992Fy50 | Angle | 0.076200 | 0.063500 | 0.004763 | 0.004763 |
| L3X2-1/2X3/8 | A992Fy50 | Angle | 0.076200 | 0.063500 | 0.009525 | 0.009525 |
| L3X2-1/2X5/16 | A992Fy50 | Angle | 0.076200 | 0.063500 | 0.007938 | 0.007938 |
| L3X2-1/2X7/16 | A992Fy50 | Angle | 0.076200 | 0.063500 | 0.011113 | 0.011113 |
| L3X2X1/2 | A992Fy50 | Angle | 0.076200 | 0.050800 | 0.012700 | 0.012700 |
| L3X2X1/4 | A992Fy50 | Angle | 0.076200 | 0.050800 | 0.006350 | 0.006350 |
| L3X2X3/16 | A992Fy50 | Angle | 0.076200 | 0.050800 | 0.004763 | 0.004763 |
| L3X2X3/8 | A992Fy50 | Angle | 0.076200 | 0.050800 | 0.009525 | 0.009525 |
| L3X2X5/16 | A992Fy50 | Angle | 0.076200 | 0.050800 | 0.007938 | 0.007938 |
| L3X3X1/2 | A992Fy50 | Angle | 0.076200 | 0.076200 | 0.012700 | 0.012700 |
| L3X3X1/4 | A36 | Angle | 0.076200 | 0.076200 | 0.006350 | 0.006350 |
| L3X3X3/16 | A36 | Angle | 0.076200 | 0.076200 | 0.004763 | 0.004763 |
| L3X3X3/8 | A992Fy50 | Angle | 0.076200 | 0.076200 | 0.009525 | 0.009525 |
| L3X3X5/16 | A36 | Angle | 0.076200 | 0.076200 | 0.007938 | 0.007938 |
| L3X3X7/16 | A992Fy50 | Angle | 0.076200 | 0.076200 | 0.011113 | 0.011113 |
| L3x5/16+L3x1/4" | A36 | SD Section | | | | |
| L4X3-1/2X1/2 | A992Fy50 | Angle | 0.101600 | 0.088900 | 0.012700 | 0.012700 |


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| | | Eng° Newton Gomes Faria |

Table: Frame Section Properties 01 - General, Part 1 of 6

| SectionName | Material | Shape | t3 m | t2 m | tf m | tw m |
|------------------|------------|------------|----------|----------|----------|----------|
| L4X3-1/2X1/4 | A992Fy50 | Angle | 0.101600 | 0.088900 | 0.006350 | 0.006350 |
| L4X3-1/2X3/8 | A992Fy50 | Angle | 0.101600 | 0.088900 | 0.009525 | 0.009525 |
| L4X3-1/2X5/16 | A992Fy50 | Angle | 0.101600 | 0.088900 | 0.007938 | 0.007938 |
| L4X3X1/2 | A992Fy50 | Angle | 0.101600 | 0.076200 | 0.012700 | 0.012700 |
| L4X3X1/4 | A992Fy50 | Angle | 0.101600 | 0.076200 | 0.006350 | 0.006350 |
| L4X3X3/8 | A36 | Angle | 0.101600 | 0.076200 | 0.009525 | 0.009525 |
| L4X3X5/16 | A992Fy50 | Angle | 0.101600 | 0.076200 | 0.007938 | 0.007938 |
| L4X3X5/8 | A992Fy50 | Angle | 0.101600 | 0.076200 | 0.015875 | 0.015875 |
| L4X4X1/2 | A992Fy50 | Angle | 0.101600 | 0.101600 | 0.012700 | 0.012700 |
| L4X4X1/4 | A36 | Angle | 0.101600 | 0.101600 | 0.006350 | 0.006350 |
| L4X4X3/4 | A992Fy50 | Angle | 0.101600 | 0.101600 | 0.019050 | 0.019050 |
| L4X4X3/8 | A572 GR 60 | Angle | 0.101600 | 0.101600 | 0.009525 | 0.009525 |
| L4X4X5/16 | A572 GR 60 | Angle | 0.101600 | 0.101600 | 0.007938 | 0.007938 |
| L4X4X5/8 | A992Fy50 | Angle | 0.101600 | 0.101600 | 0.015875 | 0.015875 |
| L4X4X7/16 | A992Fy50 | Angle | 0.101600 | 0.101600 | 0.011113 | 0.011113 |
| L5X3-1/2X1/2 | A992Fy50 | Angle | 0.127000 | 0.088900 | 0.012700 | 0.012700 |
| L5X3-1/2X1/4 | A992Fy50 | Angle | 0.127000 | 0.088900 | 0.006350 | 0.006350 |
| L5X3-1/2X3/4 | A992Fy50 | Angle | 0.127000 | 0.088900 | 0.019050 | 0.019050 |
| L5X3-1/2X3/8 | A992Fy50 | Angle | 0.127000 | 0.088900 | 0.009525 | 0.009525 |
| L5X3-1/2X5/16 | A992Fy50 | Angle | 0.127000 | 0.088900 | 0.007938 | 0.007938 |
| L5X3-1/2X5/8 | A992Fy50 | Angle | 0.127000 | 0.088900 | 0.015875 | 0.015875 |
| L5X3X1/2 | A992Fy50 | Angle | 0.127000 | 0.076200 | 0.012700 | 0.012700 |
| L5X3X1/4 | A992Fy50 | Angle | 0.127000 | 0.076200 | 0.006350 | 0.006350 |
| L5X3X3/8 | A992Fy50 | Angle | 0.127000 | 0.076200 | 0.009525 | 0.009525 |
| L5X3X5/16 | A992Fy50 | Angle | 0.127000 | 0.076200 | 0.007938 | 0.007938 |
| L5X3X7/16 | A992Fy50 | Angle | 0.127000 | 0.076200 | 0.011113 | 0.011113 |
| L5X5X1/2 | A36 | Angle | 0.127000 | 0.127000 | 0.012700 | 0.012700 |
| L5X5X3/4 | A992Fy50 | Angle | 0.127000 | 0.127000 | 0.019050 | 0.019050 |
| L5X5X3/8 | A36 | Angle | 0.127000 | 0.127000 | 0.009525 | 0.009525 |
| L5X5X5/16 | A992Fy50 | Angle | 0.127000 | 0.127000 | 0.007938 | 0.007938 |
| L5X5X5/8 | A992Fy50 | Angle | 0.127000 | 0.127000 | 0.015875 | 0.015875 |
| L5X5X7/16 | A992Fy50 | Angle | 0.127000 | 0.127000 | 0.011113 | 0.011113 |
| L5X5X7/8 | A992Fy50 | Angle | 0.127000 | 0.127000 | 0.022225 | 0.022225 |
| L6X3-1/2X1/2 | A992Fy50 | Angle | 0.152400 | 0.088900 | 0.012700 | 0.012700 |
| L6X3-1/2X3/8 | A992Fy50 | Angle | 0.152400 | 0.088900 | 0.009525 | 0.009525 |
| L6X3-1/2X5/16 | A992Fy50 | Angle | 0.152400 | 0.088900 | 0.007938 | 0.007938 |
| L6x3/4+4X3/8" X | A572 GR 60 | SD Section | | | | |
| L6X4X1/2 | A992Fy50 | Angle | 0.152400 | 0.101600 | 0.012700 | 0.012700 |
| L6X4X3/4 | A992Fy50 | Angle | 0.152400 | 0.101600 | 0.019050 | 0.019050 |
| L6X4X3/8 | A992Fy50 | Angle | 0.152400 | 0.101600 | 0.009525 | 0.009525 |
| L6X4X5/16 | A992Fy50 | Angle | 0.152400 | 0.101600 | 0.007938 | 0.007938 |
| L6X4X5/8 | A992Fy50 | Angle | 0.152400 | 0.101600 | 0.015875 | 0.015875 |
| L6X4X7/16 | A992Fy50 | Angle | 0.152400 | 0.101600 | 0.011113 | 0.011113 |
| L6X4X7/8 | A992Fy50 | Angle | 0.152400 | 0.101600 | 0.022225 | 0.022225 |
| L6X4X9/16 | A992Fy50 | Angle | 0.152400 | 0.101600 | 0.014288 | 0.014288 |
| L6x5/8+6x5/8 X R | A36 | SD Section | | | | |
| L6X6X1 | A992Fy50 | Angle | 0.152400 | 0.152400 | 0.025400 | 0.025400 |
| L6X6X1/2 | A36 | Angle | 0.152400 | 0.152400 | 0.012700 | 0.012700 |
| L6X6X3/4 | A992Fy50 | Angle | 0.152400 | 0.152400 | 0.019050 | 0.019050 |
| L6X6X3/8 | A36 | Angle | 0.152400 | 0.152400 | 0.009525 | 0.009525 |
| L6X6X5/16 | A992Fy50 | Angle | 0.152400 | 0.152400 | 0.007938 | 0.007938 |
| L6X6X5/8 | A36 | Angle | 0.152400 | 0.152400 | 0.015875 | 0.015875 |
| L6X6X7/16 | A992Fy50 | Angle | 0.152400 | 0.152400 | 0.011113 | 0.011113 |


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Table: Frame Section Properties 01 - General, Part 1 of 6

| SectionName | Material | Shape | t3 m | t2 m | tf m | tw m |
|------------------------------|----------|------------|----------|----------|----------|----------|
| L6X6X7/8 | A992Fy50 | Angle | 0.152400 | 0.152400 | 0.022225 | 0.022225 |
| L6X6X9/16 | A992Fy50 | Angle | 0.152400 | 0.152400 | 0.014288 | 0.014288 |
| L7X4X1/2 | A992Fy50 | Angle | 0.177800 | 0.101600 | 0.012700 | 0.012700 |
| L7X4X3/4 | A992Fy50 | Angle | 0.177800 | 0.101600 | 0.019050 | 0.019050 |
| L7X4X3/8 | A992Fy50 | Angle | 0.177800 | 0.101600 | 0.009525 | 0.009525 |
| L7X4X5/8 | A992Fy50 | Angle | 0.177800 | 0.101600 | 0.015875 | 0.015875 |
| L7X4X7/16 | A992Fy50 | Angle | 0.177800 | 0.101600 | 0.011113 | 0.011113 |
| L8X4X1 | A992Fy50 | Angle | 0.203200 | 0.101600 | 0.025400 | 0.025400 |
| L8X4X1/2 | A992Fy50 | Angle | 0.203200 | 0.101600 | 0.012700 | 0.012700 |
| L8X4X3/4 | A992Fy50 | Angle | 0.203200 | 0.101600 | 0.019050 | 0.019050 |
| L8X4X5/8 | A992Fy50 | Angle | 0.203200 | 0.101600 | 0.015875 | 0.015875 |
| L8X4X7/16 | A992Fy50 | Angle | 0.203200 | 0.101600 | 0.011113 | 0.011113 |
| L8X4X7/8 | A992Fy50 | Angle | 0.203200 | 0.101600 | 0.022225 | 0.022225 |
| L8X4X9/16 | A992Fy50 | Angle | 0.203200 | 0.101600 | 0.014288 | 0.014288 |
| L8X6X1 | A992Fy50 | Angle | 0.203200 | 0.152400 | 0.025400 | 0.025400 |
| L8X6X1/2 | A992Fy50 | Angle | 0.203200 | 0.152400 | 0.012700 | 0.012700 |
| L8X6X3/4 | A992Fy50 | Angle | 0.203200 | 0.152400 | 0.019050 | 0.019050 |
| L8X6X5/8 | A992Fy50 | Angle | 0.203200 | 0.152400 | 0.015875 | 0.015875 |
| L8X6X7/16 | A992Fy50 | Angle | 0.203200 | 0.152400 | 0.011113 | 0.011113 |
| L8X6X7/8 | A992Fy50 | Angle | 0.203200 | 0.152400 | 0.022225 | 0.022225 |
| L8X6X9/16 | A992Fy50 | Angle | 0.203200 | 0.152400 | 0.014288 | 0.014288 |
| L8X8X1 | A992Fy50 | Angle | 0.203200 | 0.203200 | 0.025400 | 0.025400 |
| L8X8X1-1/8 | A992Fy50 | Angle | 0.203200 | 0.203200 | 0.028575 | 0.028575 |
| L8X8X1/2 | A992Fy50 | Angle | 0.203200 | 0.203200 | 0.012700 | 0.012700 |
| L8X8X3/4 | A992Fy50 | Angle | 0.203200 | 0.203200 | 0.019050 | 0.019050 |
| L8X8X5/8 | A992Fy50 | Angle | 0.203200 | 0.203200 | 0.015875 | 0.015875 |
| L8X8X7/8 | A992Fy50 | Angle | 0.203200 | 0.203200 | 0.022225 | 0.022225 |
| L8X8X9/16 | A992Fy50 | Angle | 0.203200 | 0.203200 | 0.014288 | 0.014288 |
| U 100x100x4.76 | A36 | Channel | 0.100000 | 0.100000 | 0.004760 | 0.004760 |
| U 40x40x3.2 | A992Fy50 | Channel | 0.040000 | 0.040000 | 0.003200 | 0.003200 |
| U 50 x 80 x 3.2 | A36 | Channel | 0.080000 | 0.050000 | 0.003200 | 0.003200 |
| U 50x50x3.18 | A36 | Channel | 0.050000 | 0.050000 | 0.003200 | 0.003200 |
| U 72x100x72#6.35 | A36 | SD Section | | | | |
| U 78x100x78#7.93 | A36 | SD Section | | | | |
| U 80 x60 x3.18 | A36 | Channel | 0.080000 | 0.060000 | 0.003200 | 0.003200 |
| U 90x90x3.18 | A36 | Channel | 0.090000 | 0.090000 | 0.003180 | 0.003180 |
| U 97x100x97#7.93 | A36 | SD Section | | | | |
| W 100 x 50 # 12.7 | A36 | SD Section | | | | |
| W 100 x 50 # 9.5 | A36 | SD Section | | | | |
| W 100x80x100x7.9 | A36 | SD Section | | | | |
| W 110 x 50 # 12.7 | A36 | SD Section | | | | |
| W 125 x 50 # 15.9 | A36 | SD Section | | | | |
| W 50 x 50 #4.8 | A36 | SD Section | | | | |
| W 60 x 50 # 7.9 | A36 | SD Section | | | | |
| W 75 x 50 # 9.5 | A36 | SD Section | | | | |
| W(110x100x9.53)+R 290x7.9 | A36 | SD Section | | | | |
| W(110x110x12.7)+R 290x7.9 | A36 | SD Section | | | | |
| W(110x115x12.7)+2 90x7.9 | A36 | SD Section | | | | |
| W(110x80x9.53)+R2 90x6.35 | A36 | SD Section | | | | |


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Table: Frame Section Properties 01 - General, Part 1 of 6

| SectionName | Material | Shape | t3 m | t2 m | tf m | tw m |
|-------------------------------|----------|------------|---------|---------|---------|---------|
| W(110x95x9.53)+R2 90x6.35 | A36 | SD Section | | | | |
| W100x50x12.7+W11 0x50x9.5 | A36 | SD Section | | | | |
| W100x50x9.5+W110 x50x9.5 | A36 | SD Section | | | | |
| W110x100x9.53 | A36 | SD Section | | | | |
| W110x110x12.7 | A36 | SD Section | | | | |
| W110x115x12.7 | A36 | SD Section | | | | |
| W110x50x12.7+W11 0x50x12.7 | A36 | SD Section | | | | |
| W110x55x7.9 | A36 | SD Section | | | | |
| W110x55x9.53 | A36 | SD Section | | | | |
| W110x80x9.53 | A36 | SD Section | | | | |
| W110x95x9.53 | A36 | SD Section | | | | |
| W125X50X15.9+ W110X50X15.9 | A36 | SD Section | | | | |
| W135 x 50 #12.7 | A36 | SD Section | | | | |
| W135x50x12.7+W11 0X50x15.9 | A36 | SD Section | | | | |
| W2*(100x80x7.9x 130x9.52) | A36 | SD Section | | | | |
| W2*(60x80x60x3.2)x 80x4.8 | A36 | SD Section | | | | |
| W2*(70X80x70x6.4)x 80x7.9) | A36 | SD Section | | | | |
| W2*80x80x6.4x120x 7.9 | A36 | SD Section | | | | |
| W2*80x80x6.4x130x 9.52 | A36 | SD Section | | | | |
| W60x50x7.9+W70x5 0x9.5 | A36 | SD Section | | | | |
| W60x80x60x3.2 | A36 | SD Section | | | | |
| W70x80x70x4.8 | A36 | SD Section | | | | |
| W75x50x9.5+110x50 x9.5 | A36 | SD Section | | | | |
| W80x80x80x4.8 | A36 | SD Section | | | | |
| W80x80x80x6.4 | A36 | SD Section | | | | |
| W90x80x90x7.9 | A36 | SD Section | | | | |
| W9110x55x9.53)+R2 20x6.35 | A36 | SD Section | | | | |


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Table: Joint Loads - Force, Part 1 of 2

| Table: Joint Loads - Force, Part 1 of 2 | | | | | | | |
|---|-----------------|----------|--------|--------|---------|---------|---------|
| Joint | LoadPat | CoordSys | F1 | F2 | F3 | M1 | M2 |
| | | | Tonf | Tonf | Tonf | Tonf-m | Tonf-m |
| 5 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0420 | 0.00000 | 0.00000 |
| 5 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0350 | 0.00000 | 0.00000 |
| 5 | VENTO FACE | GLOBAL | 0.0000 | 0.2890 | 0.0000 | 0.00000 | 0.00000 |
| 5 | VENTO DIAGONAL_ | GLOBAL | 0.1760 | 0.1760 | 0.0000 | 0.00000 | 0.00000 |
| 6 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0420 | 0.00000 | 0.00000 |
| 6 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0350 | 0.00000 | 0.00000 |
| 6 | VENTO FACE | GLOBAL | 0.0000 | 0.1450 | 0.0000 | 0.00000 | 0.00000 |
| 6 | VENTO DIAGONAL_ | GLOBAL | 0.1510 | 0.1510 | 0.0000 | 0.00000 | 0.00000 |
| 7 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0420 | 0.00000 | 0.00000 |
| 7 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0350 | 0.00000 | 0.00000 |
| 7 | VENTO FACE | GLOBAL | 0.0000 | 0.2890 | 0.0000 | 0.00000 | 0.00000 |
| 7 | VENTO DIAGONAL_ | GLOBAL | 0.2010 | 0.2010 | 0.0000 | 0.00000 | 0.00000 |
| 8 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0420 | 0.00000 | 0.00000 |
| 8 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0350 | 0.00000 | 0.00000 |
| 8 | VENTO FACE | GLOBAL | 0.0000 | 0.1450 | 0.0000 | 0.00000 | 0.00000 |
| 8 | VENTO DIAGONAL_ | GLOBAL | 0.1760 | 0.1760 | 0.0000 | 0.00000 | 0.00000 |
| 9 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0740 | 0.00000 | 0.00000 |
| 9 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.1040 | 0.00000 | 0.00000 |
| 9 | VENTO FACE | GLOBAL | 0.0000 | 0.3540 | 0.0000 | 0.00000 | 0.00000 |
| 9 | VENTO DIAGONAL_ | GLOBAL | 0.2160 | 0.2160 | 0.0000 | 0.00000 | 0.00000 |
| 10 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0740 | 0.00000 | 0.00000 |
| 10 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.1040 | 0.00000 | 0.00000 |
| 10 | VENTO FACE | GLOBAL | 0.0000 | 0.3540 | 0.0000 | 0.00000 | 0.00000 |
| 10 | VENTO DIAGONAL_ | GLOBAL | 0.2460 | 0.2460 | 0.0000 | 0.00000 | 0.00000 |
| 11 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0740 | 0.00000 | 0.00000 |
| 11 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.1040 | 0.00000 | 0.00000 |
| 11 | VENTO FACE | GLOBAL | 0.0000 | 0.1770 | 0.0000 | 0.00000 | 0.00000 |
| 11 | VENTO DIAGONAL_ | GLOBAL | 0.1850 | 0.1850 | 0.0000 | 0.00000 | 0.00000 |
| 12 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0740 | 0.00000 | 0.00000 |
| 12 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.1040 | 0.00000 | 0.00000 |
| 12 | VENTO FACE | GLOBAL | 0.0000 | 0.1770 | 0.0000 | 0.00000 | 0.00000 |
| 12 | VENTO DIAGONAL_ | GLOBAL | 0.2160 | 0.2160 | 0.0000 | 0.00000 | 0.00000 |
| 14 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.1190 | 0.00000 | 0.00000 |
| 14 | VENTO FACE | GLOBAL | 0.0000 | 0.4770 | 0.0000 | 0.00000 | 0.00000 |
| 23 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.1190 | 0.00000 | 0.00000 |
| 23 | VENTO FACE | GLOBAL | 0.0000 | 0.9550 | 0.0000 | 0.00000 | 0.00000 |
| 23 | VENTO DIAGONAL_ | GLOBAL | 0.6650 | 0.6650 | 0.0000 | 0.00000 | 0.00000 |
| 36 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 36 | VENTO FACE | GLOBAL | 0.0000 | 0.5750 | 0.0000 | 0.00000 | 0.00000 |
| 36 | VENTO DIAGONAL_ | GLOBAL | 0.4000 | 0.4000 | 0.0000 | 0.00000 | 0.00000 |
| 38 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 38 | VENTO FACE | GLOBAL | 0.0000 | 0.2870 | 0.0000 | 0.00000 | 0.00000 |
| 38 | VENTO DIAGONAL_ | GLOBAL | 0.5820 | 0.5820 | 0.0000 | 0.00000 | 0.00000 |
| 39 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0860 | 0.00000 | 0.00000 |
| 39 | VENTO FACE | GLOBAL | 0.0000 | 0.5740 | 0.0000 | 0.00000 | 0.00000 |
| 39 | VENTO DIAGONAL_ | GLOBAL | 0.4050 | 0.4050 | 0.0000 | 0.00000 | 0.00000 |
| 41 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0860 | 0.00000 | 0.00000 |
| 41 | VENTO FACE | GLOBAL | 0.0000 | 0.2870 | 0.0000 | 0.00000 | 0.00000 |
| 41 | VENTO DIAGONAL_ | GLOBAL | 0.3500 | 0.3500 | 0.0000 | 0.00000 | 0.00000 |


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Table: Joint Loads - Force, Part 1 of 2

| Joint | LoadPat | CoordSys | F1 | F2 | F3 | M1 | M2 |
|-------|-----------------|----------|--------|--------|---------|---------|---------|
| | | | Tonf | Tonf | Tonf | Tonf-m | Tonf-m |
| 42 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 42 | VENTO FACE | GLOBAL | 0.0000 | 0.5820 | 0.0000 | 0.00000 | 0.00000 |
| 42 | VENTO DIAGONAL_ | GLOBAL | 0.3960 | 0.3960 | 0.0000 | 0.00000 | 0.00000 |
| 44 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 44 | VENTO FACE | GLOBAL | 0.0000 | 0.2910 | 0.0000 | 0.00000 | 0.00000 |
| 44 | VENTO DIAGONAL_ | GLOBAL | 0.3500 | 0.3500 | 0.0000 | 0.00000 | 0.00000 |
| 45 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 45 | VENTO FACE | GLOBAL | 0.0000 | 0.5680 | 0.0000 | 0.00000 | 0.00000 |
| 45 | VENTO DIAGONAL_ | GLOBAL | 0.3870 | 0.3870 | 0.0000 | 0.00000 | 0.00000 |
| 47 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 47 | VENTO FACE | GLOBAL | 0.0000 | 0.2840 | 0.0000 | 0.00000 | 0.00000 |
| 47 | VENTO DIAGONAL_ | GLOBAL | 0.3550 | 0.3550 | 0.0000 | 0.00000 | 0.00000 |
| 48 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 48 | VENTO FACE | GLOBAL | 0.0000 | 0.5550 | 0.0000 | 0.00000 | 0.00000 |
| 48 | VENTO DIAGONAL_ | GLOBAL | 0.3870 | 0.3870 | 0.0000 | 0.00000 | 0.00000 |
| 50 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 50 | VENTO FACE | GLOBAL | 0.0000 | 0.2780 | 0.0000 | 0.00000 | 0.00000 |
| 50 | VENTO DIAGONAL_ | GLOBAL | 0.3460 | 0.3460 | 0.0000 | 0.00000 | 0.00000 |
| 69 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 69 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0300 | 0.00000 | 0.00000 |
| 69 | VENTO FACE | GLOBAL | 0.0000 | 0.5860 | 0.0000 | 0.00000 | 0.00000 |
| 69 | VENTO DIAGONAL_ | GLOBAL | 0.4080 | 0.4080 | 0.0000 | 0.00000 | 0.00000 |
| 71 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 71 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0300 | 0.00000 | 0.00000 |
| 71 | VENTO FACE | GLOBAL | 0.0000 | 0.2930 | 0.0000 | 0.00000 | 0.00000 |
| 71 | VENTO DIAGONAL_ | GLOBAL | 0.3390 | 0.3390 | 0.0000 | 0.00000 | 0.00000 |
| 72 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 72 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0750 | 0.00000 | 0.00000 |
| 72 | VENTO FACE | GLOBAL | 0.0000 | 0.6850 | 0.0000 | 0.00000 | 0.00000 |
| 72 | VENTO DIAGONAL_ | GLOBAL | 0.4770 | 0.4770 | 0.0000 | 0.00000 | 0.00000 |
| 74 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 74 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0750 | 0.00000 | 0.00000 |
| 74 | VENTO FACE | GLOBAL | 0.0000 | 0.3420 | 0.0000 | 0.00000 | 0.00000 |
| 74 | VENTO DIAGONAL_ | GLOBAL | 0.3570 | 0.3570 | 0.0000 | 0.00000 | 0.00000 |
| 75 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 75 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0650 | 0.00000 | 0.00000 |
| 75 | VENTO FACE | GLOBAL | 0.0000 | 0.5950 | 0.0000 | 0.00000 | 0.00000 |
| 75 | VENTO DIAGONAL_ | GLOBAL | 0.4150 | 0.4150 | 0.0000 | 0.00000 | 0.00000 |
| 77 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 77 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0650 | 0.00000 | 0.00000 |
| 77 | VENTO FACE | GLOBAL | 0.0000 | 0.2980 | 0.0000 | 0.00000 | 0.00000 |
| 77 | VENTO DIAGONAL_ | GLOBAL | 0.4170 | 0.4170 | 0.0000 | 0.00000 | 0.00000 |
| 78 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0510 | 0.00000 | 0.00000 |
| 78 | VENTO FACE | GLOBAL | 0.0000 | 0.4920 | 0.0000 | 0.00000 | 0.00000 |
| 78 | VENTO DIAGONAL_ | GLOBAL | 0.3430 | 0.3430 | 0.0000 | 0.00000 | 0.00000 |
| 80 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0510 | 0.00000 | 0.00000 |
| 80 | VENTO FACE | GLOBAL | 0.0000 | 0.2460 | 0.0000 | 0.00000 | 0.00000 |
| 80 | VENTO DIAGONAL_ | GLOBAL | 0.3000 | 0.3000 | 0.0000 | 0.00000 | 0.00000 |
| 114 | VENTO DIAGONAL_ | GLOBAL | 0.3630 | 0.3630 | 0.0000 | 0.00000 | 0.00000 |
| 119 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0280 | 0.00000 | 0.00000 |
| 119 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0230 | 0.00000 | 0.00000 |
| 119 | VENTO FACE | GLOBAL | 0.0000 | 0.2540 | 0.0000 | 0.00000 | 0.00000 |
| 119 | VENTO DIAGONAL_ | GLOBAL | 0.1770 | 0.1770 | 0.0000 | 0.00000 | 0.00000 |


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Table: Joint Loads - Force, Part 1 of 2

| Joint | LoadPat | CoordSys | F1 | F2 | F3 | M1 | M2 |
|-------|-----------------|----------|--------|--------|---------|---------|---------|
| | | | Tonf | Tonf | Tonf | Tonf-m | Tonf-m |
| 120 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0280 | 0.00000 | 0.00000 |
| 120 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0230 | 0.00000 | 0.00000 |
| 120 | VENTO FACE | GLOBAL | 0.0000 | 0.1270 | 0.0000 | 0.00000 | 0.00000 |
| 120 | VENTO DIAGONAL_ | GLOBAL | 0.1550 | 0.1550 | 0.0000 | 0.00000 | 0.00000 |
| 122 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0220 | 0.00000 | 0.00000 |
| 122 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0630 | 0.00000 | 0.00000 |
| 122 | VENTO FACE | GLOBAL | 0.0000 | 0.3240 | 0.0000 | 0.00000 | 0.00000 |
| 122 | VENTO DIAGONAL_ | GLOBAL | 0.2250 | 0.2250 | 0.0000 | 0.00000 | 0.00000 |
| 123 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0220 | 0.00000 | 0.00000 |
| 123 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0630 | 0.00000 | 0.00000 |
| 123 | VENTO FACE | GLOBAL | 0.0000 | 0.1620 | 0.0000 | 0.00000 | 0.00000 |
| 123 | VENTO DIAGONAL_ | GLOBAL | 0.1970 | 0.1970 | 0.0000 | 0.00000 | 0.00000 |
| 132 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.1190 | 0.00000 | 0.00000 |
| 132 | VENTO FACE | GLOBAL | 0.0000 | 0.9550 | 0.0000 | 0.00000 | 0.00000 |
| 145 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.1190 | 0.00000 | 0.00000 |
| 145 | VENTO FACE | GLOBAL | 0.0000 | 0.4770 | 0.0000 | 0.00000 | 0.00000 |
| 145 | VENTO DIAGONAL_ | GLOBAL | 0.4990 | 0.4990 | 0.0000 | 0.00000 | 0.00000 |
| 152 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 152 | VENTO FACE | GLOBAL | 0.0000 | 0.2870 | 0.0000 | 0.00000 | 0.00000 |
| 152 | VENTO DIAGONAL_ | GLOBAL | 0.3000 | 0.3000 | 0.0000 | 0.00000 | 0.00000 |
| 154 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 154 | VENTO FACE | GLOBAL | 0.0000 | 0.5750 | 0.0000 | 0.00000 | 0.00000 |
| 154 | VENTO DIAGONAL_ | GLOBAL | 0.5820 | 0.5820 | 0.0000 | 0.00000 | 0.00000 |
| 155 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0860 | 0.00000 | 0.00000 |
| 155 | VENTO FACE | GLOBAL | 0.0000 | 0.2870 | 0.0000 | 0.00000 | 0.00000 |
| 155 | VENTO DIAGONAL_ | GLOBAL | 0.3000 | 0.3000 | 0.0000 | 0.00000 | 0.00000 |
| 157 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0860 | 0.00000 | 0.00000 |
| 157 | VENTO FACE | GLOBAL | 0.0000 | 0.5740 | 0.0000 | 0.00000 | 0.00000 |
| 157 | VENTO DIAGONAL_ | GLOBAL | 0.3500 | 0.3500 | 0.0000 | 0.00000 | 0.00000 |
| 158 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 158 | VENTO FACE | GLOBAL | 0.0000 | 0.2910 | 0.0000 | 0.00000 | 0.00000 |
| 158 | VENTO DIAGONAL_ | GLOBAL | 0.3040 | 0.3040 | 0.0000 | 0.00000 | 0.00000 |
| 160 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 160 | VENTO FACE | GLOBAL | 0.0000 | 0.5820 | 0.0000 | 0.00000 | 0.00000 |
| 160 | VENTO DIAGONAL_ | GLOBAL | 0.3500 | 0.3500 | 0.0000 | 0.00000 | 0.00000 |
| 161 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 161 | VENTO FACE | GLOBAL | 0.0000 | 0.2840 | 0.0000 | 0.00000 | 0.00000 |
| 161 | VENTO DIAGONAL_ | GLOBAL | 0.2970 | 0.2970 | 0.0000 | 0.00000 | 0.00000 |
| 163 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 163 | VENTO FACE | GLOBAL | 0.0000 | 0.5680 | 0.0000 | 0.00000 | 0.00000 |
| 163 | VENTO DIAGONAL_ | GLOBAL | 0.3550 | 0.3550 | 0.0000 | 0.00000 | 0.00000 |
| 164 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 164 | VENTO FACE | GLOBAL | 0.0000 | 0.2780 | 0.0000 | 0.00000 | 0.00000 |
| 164 | VENTO DIAGONAL_ | GLOBAL | 0.2900 | 0.2900 | 0.0000 | 0.00000 | 0.00000 |
| 166 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 166 | VENTO FACE | GLOBAL | 0.0000 | 0.5550 | 0.0000 | 0.00000 | 0.00000 |
| 166 | VENTO DIAGONAL_ | GLOBAL | 0.3460 | 0.3460 | 0.0000 | 0.00000 | 0.00000 |
| 185 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 185 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0300 | 0.00000 | 0.00000 |
| 185 | VENTO FACE | GLOBAL | 0.0000 | 0.2930 | 0.0000 | 0.00000 | 0.00000 |
| 185 | VENTO DIAGONAL_ | GLOBAL | 0.3060 | 0.3060 | 0.0000 | 0.00000 | 0.00000 |
| 187 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 187 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0300 | 0.00000 | 0.00000 |


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Table: Joint Loads - Force, Part 1 of 2

| Joint | LoadPat | CoordSys | F1 | F2 | F3 | M1 | M2 |
|-------|-----------------|----------|--------|--------|---------|---------|---------|
| | | | Tonf | Tonf | Tonf | Tonf-m | Tonf-m |
| 187 | VENTO FACE | GLOBAL | 0.0000 | 0.5860 | 0.0000 | 0.00000 | 0.00000 |
| 187 | VENTO DIAGONAL_ | GLOBAL | 0.3390 | 0.3390 | 0.0000 | 0.00000 | 0.00000 |
| 188 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 188 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0750 | 0.00000 | 0.00000 |
| 188 | VENTO FACE | GLOBAL | 0.0000 | 0.3420 | 0.0000 | 0.00000 | 0.00000 |
| 188 | VENTO DIAGONAL_ | GLOBAL | 0.3580 | 0.3580 | 0.0000 | 0.00000 | 0.00000 |
| 190 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 190 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0750 | 0.00000 | 0.00000 |
| 190 | VENTO FACE | GLOBAL | 0.0000 | 0.6850 | 0.0000 | 0.00000 | 0.00000 |
| 190 | VENTO DIAGONAL_ | GLOBAL | 0.3570 | 0.3570 | 0.0000 | 0.00000 | 0.00000 |
| 191 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 191 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0650 | 0.00000 | 0.00000 |
| 191 | VENTO FACE | GLOBAL | 0.0000 | 0.2980 | 0.0000 | 0.00000 | 0.00000 |
| 191 | VENTO DIAGONAL_ | GLOBAL | 0.3110 | 0.3110 | 0.0000 | 0.00000 | 0.00000 |
| 193 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0620 | 0.00000 | 0.00000 |
| 193 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0650 | 0.00000 | 0.00000 |
| 193 | VENTO FACE | GLOBAL | 0.0000 | 0.5950 | 0.0000 | 0.00000 | 0.00000 |
| 193 | VENTO DIAGONAL_ | GLOBAL | 0.4170 | 0.4170 | 0.0000 | 0.00000 | 0.00000 |
| 194 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0510 | 0.00000 | 0.00000 |
| 194 | VENTO FACE | GLOBAL | 0.0000 | 0.2460 | 0.0000 | 0.00000 | 0.00000 |
| 194 | VENTO DIAGONAL_ | GLOBAL | 0.2570 | 0.2570 | 0.0000 | 0.00000 | 0.00000 |
| 196 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0510 | 0.00000 | 0.00000 |
| 196 | VENTO FACE | GLOBAL | 0.0000 | 0.4920 | 0.0000 | 0.00000 | 0.00000 |
| 196 | VENTO DIAGONAL_ | GLOBAL | 0.3000 | 0.3000 | 0.0000 | 0.00000 | 0.00000 |
| 230 | VENTO DIAGONAL_ | GLOBAL | 0.3630 | 0.3630 | 0.0000 | 0.00000 | 0.00000 |
| 235 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0280 | 0.00000 | 0.00000 |
| 235 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0230 | 0.00000 | 0.00000 |
| 235 | VENTO FACE | GLOBAL | 0.0000 | 0.1270 | 0.0000 | 0.00000 | 0.00000 |
| 235 | VENTO DIAGONAL_ | GLOBAL | 0.1330 | 0.1330 | 0.0000 | 0.00000 | 0.00000 |
| 236 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0280 | 0.00000 | 0.00000 |
| 236 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0230 | 0.00000 | 0.00000 |
| 236 | VENTO FACE | GLOBAL | 0.0000 | 0.2540 | 0.0000 | 0.00000 | 0.00000 |
| 236 | VENTO DIAGONAL_ | GLOBAL | 0.1550 | 0.1550 | 0.0000 | 0.00000 | 0.00000 |
| 238 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0220 | 0.00000 | 0.00000 |
| 238 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0630 | 0.00000 | 0.00000 |
| 238 | VENTO FACE | GLOBAL | 0.0000 | 0.1620 | 0.0000 | 0.00000 | 0.00000 |
| 238 | VENTO DIAGONAL_ | GLOBAL | 0.1690 | 0.1690 | 0.0000 | 0.00000 | 0.00000 |
| 239 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0220 | 0.00000 | 0.00000 |
| 239 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0630 | 0.00000 | 0.00000 |
| 239 | VENTO FACE | GLOBAL | 0.0000 | 0.3240 | 0.0000 | 0.00000 | 0.00000 |
| 239 | VENTO DIAGONAL_ | GLOBAL | 0.1970 | 0.1970 | 0.0000 | 0.00000 | 0.00000 |
| 386 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0390 | 0.00000 | 0.00000 |
| 386 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0450 | 0.00000 | 0.00000 |
| 386 | VENTO FACE | GLOBAL | 0.0000 | 0.3940 | 0.0000 | 0.00000 | 0.00000 |
| 386 | VENTO DIAGONAL_ | GLOBAL | 0.2750 | 0.2750 | 0.0000 | 0.00000 | 0.00000 |
| 387 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0390 | 0.00000 | 0.00000 |
| 387 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0450 | 0.00000 | 0.00000 |
| 387 | VENTO FACE | GLOBAL | 0.0000 | 0.1970 | 0.0000 | 0.00000 | 0.00000 |
| 387 | VENTO DIAGONAL_ | GLOBAL | 0.2400 | 0.2400 | 0.0000 | 0.00000 | 0.00000 |
| 388 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0390 | 0.00000 | 0.00000 |
| 388 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0380 | 0.00000 | 0.00000 |
| 388 | VENTO FACE | GLOBAL | 0.0000 | 0.2600 | 0.0000 | 0.00000 | 0.00000 |
| 388 | VENTO DIAGONAL_ | GLOBAL | 0.1810 | 0.1810 | 0.0000 | 0.00000 | 0.00000 |


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Table: Joint Loads - Force, Part 1 of 2

| Joint | LoadPat | CoordSys | F1 | F2 | F3 | M1 | M2 |
|-------|-----------------|----------|--------|--------|---------|---------|---------|
| | | | Tonf | Tonf | Tonf | Tonf-m | Tonf-m |
| 389 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0390 | 0.00000 | 0.00000 |
| 389 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0380 | 0.00000 | 0.00000 |
| 389 | VENTO FACE | GLOBAL | 0.0000 | 0.1300 | 0.0000 | 0.00000 | 0.00000 |
| 389 | VENTO DIAGONAL_ | GLOBAL | 0.1580 | 0.1580 | 0.0000 | 0.00000 | 0.00000 |
| 390 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0390 | 0.00000 | 0.00000 |
| 390 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.1950 | 0.00000 | 0.00000 |
| 390 | VENTO FACE | GLOBAL | 0.0000 | 0.6530 | 0.0000 | 0.00000 | 0.00000 |
| 390 | VENTO DIAGONAL_ | GLOBAL | 0.4550 | 0.4550 | 0.0000 | 0.00000 | 0.00000 |
| 391 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0390 | 0.00000 | 0.00000 |
| 391 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.1950 | 0.00000 | 0.00000 |
| 391 | VENTO FACE | GLOBAL | 0.0000 | 0.3270 | 0.0000 | 0.00000 | 0.00000 |
| 391 | VENTO DIAGONAL_ | GLOBAL | 0.3980 | 0.3980 | 0.0000 | 0.00000 | 0.00000 |
| 392 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0380 | 0.00000 | 0.00000 |
| 392 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0510 | 0.00000 | 0.00000 |
| 392 | VENTO FACE | GLOBAL | 0.0000 | 0.2740 | 0.0000 | 0.00000 | 0.00000 |
| 392 | VENTO DIAGONAL_ | GLOBAL | 0.1910 | 0.1910 | 0.0000 | 0.00000 | 0.00000 |
| 393 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0380 | 0.00000 | 0.00000 |
| 393 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0510 | 0.00000 | 0.00000 |
| 393 | VENTO FACE | GLOBAL | 0.0000 | 0.1370 | 0.0000 | 0.00000 | 0.00000 |
| 393 | VENTO DIAGONAL_ | GLOBAL | 0.1670 | 0.1670 | 0.0000 | 0.00000 | 0.00000 |
| 419 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0390 | 0.00000 | 0.00000 |
| 419 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0450 | 0.00000 | 0.00000 |
| 419 | VENTO FACE | GLOBAL | 0.0000 | 0.3940 | 0.0000 | 0.00000 | 0.00000 |
| 419 | VENTO DIAGONAL_ | GLOBAL | 0.2400 | 0.2400 | 0.0000 | 0.00000 | 0.00000 |
| 420 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0390 | 0.00000 | 0.00000 |
| 420 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0450 | 0.00000 | 0.00000 |
| 420 | VENTO FACE | GLOBAL | 0.0000 | 0.1970 | 0.0000 | 0.00000 | 0.00000 |
| 420 | VENTO DIAGONAL_ | GLOBAL | 0.2060 | 0.2060 | 0.0000 | 0.00000 | 0.00000 |
| 421 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0390 | 0.00000 | 0.00000 |
| 421 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0380 | 0.00000 | 0.00000 |
| 421 | VENTO FACE | GLOBAL | 0.0000 | 0.2600 | 0.0000 | 0.00000 | 0.00000 |
| 421 | VENTO DIAGONAL_ | GLOBAL | 0.1580 | 0.1580 | 0.0000 | 0.00000 | 0.00000 |
| 422 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0390 | 0.00000 | 0.00000 |
| 422 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0380 | 0.00000 | 0.00000 |
| 422 | VENTO FACE | GLOBAL | 0.0000 | 0.1300 | 0.0000 | 0.00000 | 0.00000 |
| 422 | VENTO DIAGONAL_ | GLOBAL | 0.1360 | 0.1360 | 0.0000 | 0.00000 | 0.00000 |
| 423 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0390 | 0.00000 | 0.00000 |
| 423 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.1950 | 0.00000 | 0.00000 |
| 423 | VENTO FACE | GLOBAL | 0.0000 | 0.6530 | 0.0000 | 0.00000 | 0.00000 |
| 423 | VENTO DIAGONAL_ | GLOBAL | 0.3980 | 0.3980 | 0.0000 | 0.00000 | 0.00000 |
| 424 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0390 | 0.00000 | 0.00000 |
| 424 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.1950 | 0.00000 | 0.00000 |
| 424 | VENTO FACE | GLOBAL | 0.0000 | 0.3270 | 0.0000 | 0.00000 | 0.00000 |
| 424 | VENTO DIAGONAL_ | GLOBAL | 0.3410 | 0.3410 | 0.0000 | 0.00000 | 0.00000 |
| 425 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0380 | 0.00000 | 0.00000 |
| 425 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0510 | 0.00000 | 0.00000 |
| 425 | VENTO FACE | GLOBAL | 0.0000 | 0.2740 | 0.0000 | 0.00000 | 0.00000 |
| 425 | VENTO DIAGONAL_ | GLOBAL | 0.1670 | 0.1670 | 0.0000 | 0.00000 | 0.00000 |
| 426 | ACESSORIOS | GLOBAL | 0.0000 | 0.0000 | -0.0380 | 0.00000 | 0.00000 |
| 426 | PESO ANTENAS | GLOBAL | 0.0000 | 0.0000 | -0.0510 | 0.00000 | 0.00000 |
| 426 | VENTO FACE | GLOBAL | 0.0000 | 0.1370 | 0.0000 | 0.00000 | 0.00000 |
| 426 | VENTO DIAGONAL_ | GLOBAL | 0.1430 | 0.1430 | 0.0000 | 0.00000 | 0.00000 |


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| Eng° Newton Gomes Faria | | |

Table: Joint Reactions

| Table: Joint Reactions | | | | | | | | |
|------------------------|------------|-------------|------------|------------|------------|--------------|--------------|--------------|
| Joint | OutputCase | CaseType | F1 Tonf | F2 Tonf | F3 Tonf | M1 Tonf-m | M2 Tonf-m | M3 Tonf-m |
| 1 | DSTL12 | Combination | -3.7246 | -6.0986 | -39.7414 | -0.06122 | 0.46153 | -0.0331 |
| 1 | DSTL13 | Combination | -8.8558 | -8.4676 | -72.0887 | -0.59108 | 0.52411 | 0.0059 |
| 2 | DSTL12 | Combination | 3.7023 | -6.0602 | -39.7141 | -0.06724 | -0.47048 | 0.0337 |
| 2 | DSTL13 | Combination | -2.8275 | -1.1041 | 7.8607 | 0.43171 | -0.23703 | 0.0558 |
| 3 | DSTL12 | Combination | 5.4768 | -7.8346 | 55.4616 | -0.25432 | -0.65337 | -0.0337 |
| 3 | DSTL13 | Combination | -0.7141 | -2.4367 | 7.8542 | 0.16868 | -0.36297 | -0.0432 |
| 4 | DSTL12 | Combination | -5.4545 | -7.8286 | 55.4379 | -0.25811 | 0.65781 | 0.0337 |
| 4 | DSTL13 | Combination | -10.1996 | -10.5885 | 87.8178 | -0.71787 | 0.78565 | 0.0060 |

Table: Load Case Definitions, Part 1 of 2

| Table: Load Case Definitions, Part 1 of 2 | | | | | | | |
|---|-----------|-------------|-----------|----------|------------|------------|----------|
| Case | Type | InitialCond | ModalCase | BaseCase | DesTypeOpt | DesignType | AutoType |
| DEAD | LinStatic | Zero | | | Prog Det | DEAD | None |
| ACESSORIOS | LinStatic | Zero | | | Prog Det | DEAD | None |
| PESO ANTENAS | LinStatic | Zero | | | Prog Det | DEAD | None |
| VENTO FACE | LinStatic | Zero | | | Prog Det | WIND | None |
| VENTO DIAGONAL_ | LinStatic | Zero | | | Prog Det | WIND | None |

Table: Material Properties 01 - General, Part 1 of 2

| Table: Material Properties 01 - General, Part 1 of 2 | | | | | |
|--|-------|-----------|------------|-------|------|
| Material | Type | SymType | TempDepend | Color | GUID |
| A36 | Steel | Isotropic | No | Blue | |

Table: Program Control, Part 1 of 3

| Table: Program Control, Part 1 of 3 | | | | | | | | |
|-------------------------------------|---------|-----------|------------|-----------|-----------|-----------|-----------|------------|
| ProgramName | Version | ProgLevel | LicenseNum | LicenseOS | LicenseSC | LicenseBR | LicenseHT | CurrUnits |
| SAP2000 | 14.2.4 | Basic | 2A99A | No | No | No | No | Tonf, m, C |


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Table: Program Control, Part 2 of 3

Table: Program Control, Part 2 of 3

| SteelCode | ConcCode | AlumCode | ColdCode | BridgeCode |
|-------------|--------------------|-------------|------------|------------------|
| AISC-LRFD99 | ACI 318-05/IBC2003 | AA-ASD 2000 | AISI-ASD96 | AASHTO LRFD 2007 |

Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|--------------|----------|-----------|
| 22 | L3X3X1/4 | Beam | No Messages | 0.361584 | PMM |
| 27 | L 2 x 3/16" | Column | See WarnMsg | 0.276507 | PMM |
| 28 | L 2 x 3/16" | Column | See WarnMsg | 0.300672 | PMM |
| 30 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.368222 | PMM |
| 31 | L 3 x 1/4 + L 3x1/4" | Brace | Overstressed | 1.295809 | PMM |
| 34 | L3X3X1/4 | Beam | No Messages | 0.151294 | PMM |
| 38 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.119352 | PMM |
| 39 | L 1.3/4 x 3/16" | Brace | No Messages | 0.116028 | PMM |
| 40 | L 1.3/4 x 3/16" | Brace | No Messages | 0.079588 | PMM |
| 41 | L 3 x 1/4 + L 3x1/4" | Brace | Overstressed | 0.950184 | PMM |
| 44 | L 1.3/4 x 3/16" | Brace | No Messages | 0.202014 | PMM |
| 45 | L 1.3/4 x 3/16" | Brace | No Messages | 0.175332 | PMM |
| 62 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.057499 | PMM |
| 63 | L 2.1/2x3/16 | Beam | No Messages | 0.056350 | PMM |
| 64 | L 2.1/2x3/16 | Beam | No Messages | 0.054814 | PMM |
| 65 | L 2.1/2x3/16 | Beam | No Messages | 0.052796 | PMM |
| 66 | L 2.1/2x3/16 | Beam | No Messages | 0.053570 | PMM |
| 67 | L 2.1/2x3/16 | Beam | No Messages | 0.048280 | PMM |
| 86 | L3X3X3/16 | Beam | No Messages | 0.069944 | PMM |
| 87 | L3X3X3/16 | Beam | No Messages | 0.124525 | PMM |
| 90 | L 2 x 3/16" | Beam | No Messages | 0.072248 | PMM |
| 91 | L 2 x 3/16" | Beam | No Messages | 0.054151 | PMM |
| 94 | L 1.3/4 x 3/16" | Brace | No Messages | 0.069674 | PMM |
| 105 | L 2 x 3/16" | Beam | No Messages | 0.093121 | PMM |
| 106 | L 2 x 3/16" | Beam | No Messages | 0.160366 | PMM |
| 108 | L 2 x 3/16" | Beam | No Messages | 0.089905 | PMM |
| 109 | L 2 x 3/16" | Beam | No Messages | 0.160496 | PMM |
| 111 | L 2 x 3/16" | Beam | No Messages | 0.054220 | PMM |
| 112 | L 2 x 3/16" | Beam | No Messages | 0.041918 | PMM |
| 118 | L 2 x 3/16" | Beam | No Messages | 0.066676 | PMM |
| 119 | L 2 x 3/16" | Beam | No Messages | 0.048454 | PMM |
| 121 | L 2 x 3/16" | Brace | No Messages | 0.071886 | PMM |
| 122 | L 2 x 3/16" | Brace | No Messages | 0.130355 | PMM |
| 123 | L 2 x 3/16" | Brace | No Messages | 0.070467 | PMM |
| 124 | L 2 x 3/16" | Brace | No Messages | 0.128688 | PMM |
| 125 | L 2 x 3/16" | Brace | No Messages | 0.069112 | PMM |
| 126 | L 2 x 3/16" | Brace | No Messages | 0.125340 | PMM |
| 127 | L 2 x 3/16" | Brace | No Messages | 0.063042 | PMM |
| 128 | L 2 x 3/16" | Brace | No Messages | 0.106537 | PMM |
| 135 | L 1.3/4 x 3/16" | Brace | No Messages | 0.040575 | PMM |
| 136 | L 1.3/4 x 3/16" | Brace | No Messages | 0.076497 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|--------------|----------|-----------|
| 137 | L 1.3/4 x 3/16" | Brace | No Messages | 0.041688 | PMM |
| 138 | L 1.3/4 x 3/16" | Brace | No Messages | 0.066569 | PMM |
| 147 | L 1.3/4 x 3/16" | Brace | No Messages | 0.062041 | PMM |
| 148 | L 1.3/4 x 3/16" | Brace | No Messages | 0.062657 | PMM |
| 149 | L 1.3/4 x 3/16" | Brace | No Messages | 0.028743 | PMM |
| 150 | L 1.3/4 x 3/16" | Brace | No Messages | 0.086908 | PMM |
| 151 | L 1.3/4 x 3/16" | Brace | No Messages | 0.031939 | PMM |
| 152 | L 1.3/4 x 3/16" | Brace | No Messages | 0.099642 | PMM |
| 156 | L3X3X1/4 | Beam | No Messages | 0.096474 | PMM |
| 157 | L3X3X1/4 | Beam | No Messages | 0.771833 | PMM |
| 163 | L 2 x 3/16" | Column | See WarnMsg | 0.288665 | PMM |
| 164 | L 2 x 3/16" | Column | See WarnMsg | 0.260054 | PMM |
| 166 | L 3 x 1/4 + L 3x1/4" | Brace | Overstressed | 1.315063 | PMM |
| 167 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.366163 | PMM |
| 171 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.611859 | PMM |
| 172 | L 1.3/4 x 3/16" | Brace | No Messages | 0.153668 | PMM |
| 173 | L 1.3/4 x 3/16" | Brace | No Messages | 0.120859 | PMM |
| 174 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.184366 | PMM |
| 177 | L 1.3/4 x 3/16" | Brace | No Messages | 0.156340 | PMM |
| 178 | L 1.3/4 x 3/16" | Brace | No Messages | 0.121166 | PMM |
| 194 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.061733 | PMM |
| 195 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.235081 | PMM |
| 196 | L 2.1/2x3/16 | Beam | No Messages | 0.049162 | PMM |
| 197 | L 2.1/2x3/16 | Beam | No Messages | 0.118830 | PMM |
| 198 | L 2.1/2x3/16 | Beam | No Messages | 0.041403 | PMM |
| 199 | L 2.1/2x3/16 | Beam | No Messages | 0.105786 | PMM |
| 218 | L3X3X3/16 | Beam | No Messages | 0.161313 | PMM |
| 219 | L3X3X3/16 | Beam | No Messages | 0.111160 | PMM |
| 222 | L 2 x 3/16" | Beam | No Messages | 0.062249 | PMM |
| 223 | L 2 x 3/16" | Beam | No Messages | 0.280940 | PMM |
| 226 | L 1.3/4 x 3/16" | Brace | No Messages | 0.076797 | PMM |
| 237 | L 2 x 3/16" | Beam | No Messages | 0.101726 | PMM |
| 238 | L 2 x 3/16" | Beam | No Messages | 0.154500 | PMM |
| 240 | L 2 x 3/16" | Beam | No Messages | 0.094104 | PMM |
| 241 | L 2 x 3/16" | Beam | No Messages | 0.166734 | PMM |
| 243 | L 2 x 3/16" | Beam | No Messages | 0.043840 | PMM |
| 244 | L 2 x 3/16" | Beam | No Messages | 0.104991 | PMM |
| 250 | L 2 x 3/16" | Beam | No Messages | 0.050113 | PMM |
| 251 | L 2 x 3/16" | Beam | No Messages | 0.231610 | PMM |
| 253 | L 2 x 3/16" | Brace | No Messages | 0.083647 | PMM |
| 254 | L 2 x 3/16" | Brace | No Messages | 0.116249 | PMM |
| 255 | L 2 x 3/16" | Brace | No Messages | 0.091706 | PMM |
| 256 | L 2 x 3/16" | Brace | No Messages | 0.113726 | PMM |
| 257 | L 2 x 3/16" | Brace | No Messages | 0.083323 | PMM |
| 258 | L 2 x 3/16" | Brace | No Messages | 0.109039 | PMM |
| 259 | L 2 x 3/16" | Brace | No Messages | 0.074601 | PMM |
| 260 | L 2 x 3/16" | Brace | No Messages | 0.093322 | PMM |
| 267 | L 1.3/4 x 3/16" | Brace | No Messages | 0.038658 | PMM |
| 268 | L 1.3/4 x 3/16" | Brace | No Messages | 0.053090 | PMM |
| 269 | L 1.3/4 x 3/16" | Brace | No Messages | 0.047404 | PMM |
| 270 | L 1.3/4 x 3/16" | Brace | No Messages | 0.065311 | PMM |
| 279 | L 1.3/4 x 3/16" | Brace | No Messages | 0.039560 | PMM |
| 280 | L 1.3/4 x 3/16" | Brace | No Messages | 0.039972 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|-------------|----------|-----------|
| 281 | L 1.3/4 x 3/16" | Brace | No Messages | 0.042443 | PMM |
| 282 | L 1.3/4 x 3/16" | Brace | No Messages | 0.064502 | PMM |
| 283 | L 1.3/4 x 3/16" | Brace | No Messages | 0.055335 | PMM |
| 284 | L 1.3/4 x 3/16" | Brace | No Messages | 0.070299 | PMM |
| 288 | L3X3X1/4 | Beam | No Messages | 0.153264 | PMM |
| 289 | L3X3X1/4 | Beam | No Messages | 0.114867 | PMM |
| 295 | L 2 x 3/16" | Column | See WarnMsg | 0.307365 | PMM |
| 296 | L 2 x 3/16" | Column | See WarnMsg | 0.289628 | PMM |
| 298 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.939284 | PMM |
| 299 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.312984 | PMM |
| 303 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.896168 | PMM |
| 304 | L 1.3/4 x 3/16" | Brace | No Messages | 0.216566 | PMM |
| 305 | L 1.3/4 x 3/16" | Brace | No Messages | 0.176921 | PMM |
| 306 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.604050 | PMM |
| 309 | L 1.3/4 x 3/16" | Brace | No Messages | 0.108344 | PMM |
| 310 | L 1.3/4 x 3/16" | Brace | No Messages | 0.105726 | PMM |
| 326 | L 2.1/2x3/16 | Beam | No Messages | 0.061932 | PMM |
| 327 | L 2.1/2x3/16 | Beam | No Messages | 0.049608 | PMM |
| 328 | L 2.1/2x3/16 | Beam | No Messages | 0.050600 | PMM |
| 329 | L 2.1/2x3/16 | Beam | No Messages | 0.044262 | PMM |
| 330 | L 2.1/2x3/16 | Beam | No Messages | 0.058227 | PMM |
| 331 | L 2.1/2x3/16 | Beam | No Messages | 0.037078 | PMM |
| 350 | L3X3X3/16 | Beam | No Messages | 0.120762 | PMM |
| 351 | L3X3X3/16 | Beam | No Messages | 0.103973 | PMM |
| 354 | L 2 x 3/16" | Beam | No Messages | 0.061331 | PMM |
| 355 | L 2 x 3/16" | Beam | No Messages | 0.042503 | PMM |
| 358 | L 1.3/4 x 3/16" | Brace | No Messages | 0.126654 | PMM |
| 369 | L 2 x 3/16" | Beam | No Messages | 0.171075 | PMM |
| 370 | L 2 x 3/16" | Beam | No Messages | 0.098746 | PMM |
| 372 | L 2 x 3/16" | Beam | No Messages | 0.161272 | PMM |
| 373 | L 2 x 3/16" | Beam | No Messages | 0.102123 | PMM |
| 375 | L 2 x 3/16" | Beam | No Messages | 0.053796 | PMM |
| 376 | L 2 x 3/16" | Beam | No Messages | 0.033576 | PMM |
| 382 | L 2 x 3/16" | Beam | No Messages | 0.061094 | PMM |
| 383 | L 2 x 3/16" | Beam | No Messages | 0.036866 | PMM |
| 385 | L 2 x 3/16" | Brace | No Messages | 0.151769 | PMM |
| 386 | L 2 x 3/16" | Brace | No Messages | 0.079284 | PMM |
| 387 | L 2 x 3/16" | Brace | No Messages | 0.138145 | PMM |
| 388 | L 2 x 3/16" | Brace | No Messages | 0.078844 | PMM |
| 389 | L 2 x 3/16" | Brace | No Messages | 0.135856 | PMM |
| 390 | L 2 x 3/16" | Brace | No Messages | 0.077499 | PMM |
| 391 | L 2 x 3/16" | Brace | No Messages | 0.115730 | PMM |
| 392 | L 2 x 3/16" | Brace | No Messages | 0.064054 | PMM |
| 399 | L 1.3/4 x 3/16" | Brace | No Messages | 0.084277 | PMM |
| 400 | L 1.3/4 x 3/16" | Brace | No Messages | 0.064913 | PMM |
| 401 | L 1.3/4 x 3/16" | Brace | No Messages | 0.056894 | PMM |
| 402 | L 1.3/4 x 3/16" | Brace | No Messages | 0.034996 | PMM |
| 411 | L 1.3/4 x 3/16" | Brace | No Messages | 0.061295 | PMM |
| 412 | L 1.3/4 x 3/16" | Brace | No Messages | 0.064738 | PMM |
| 413 | L 1.3/4 x 3/16" | Brace | No Messages | 0.081969 | PMM |
| 414 | L 1.3/4 x 3/16" | Brace | No Messages | 0.065324 | PMM |
| 415 | L 1.3/4 x 3/16" | Brace | No Messages | 0.094472 | PMM |
| 416 | L 1.3/4 x 3/16" | Brace | No Messages | 0.074018 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|--------------|----------|-----------|
| 422 | L3X3X1/4 | Beam | No Messages | 0.766480 | PMM |
| 423 | L3X3X1/4 | Beam | No Messages | 0.427267 | PMM |
| 429 | L 2 x 3/16" | Column | See WarnMsg | 0.241887 | PMM |
| 430 | L 2 x 3/16" | Column | See WarnMsg | 0.282129 | PMM |
| 432 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.299858 | PMM |
| 433 | L 3 x 1/4 + L 3x1/4" | Brace | Overstressed | 1.037647 | PMM |
| 437 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.195005 | PMM |
| 438 | L 1.3/4 x 3/16" | Brace | No Messages | 0.178773 | PMM |
| 439 | L 1.3/4 x 3/16" | Brace | No Messages | 0.130547 | PMM |
| 440 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.134677 | PMM |
| 443 | L 1.3/4 x 3/16" | Brace | No Messages | 0.076304 | PMM |
| 444 | L 1.3/4 x 3/16" | Brace | No Messages | 0.067633 | PMM |
| 460 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.138860 | PMM |
| 461 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.117034 | PMM |
| 462 | L 2.1/2x3/16 | Beam | No Messages | 0.119170 | PMM |
| 463 | L 2.1/2x3/16 | Beam | No Messages | 0.095159 | PMM |
| 464 | L 2.1/2x3/16 | Beam | No Messages | 0.108180 | PMM |
| 465 | L 2.1/2x3/16 | Beam | No Messages | 0.082633 | PMM |
| 484 | L3X3X3/16 | Beam | No Messages | 0.256208 | PMM |
| 485 | L3X3X3/16 | Beam | No Messages | 0.256493 | PMM |
| 488 | L 2 x 3/16" | Beam | No Messages | 0.274928 | PMM |
| 489 | L 2 x 3/16" | Beam | No Messages | 0.121777 | PMM |
| 492 | L 1.3/4 x 3/16" | Brace | No Messages | 0.115825 | PMM |
| 503 | L 2 x 3/16" | Beam | No Messages | 0.172825 | PMM |
| 504 | L 2 x 3/16" | Beam | No Messages | 0.090348 | PMM |
| 506 | L 2 x 3/16" | Beam | No Messages | 0.178313 | PMM |
| 507 | L 2 x 3/16" | Beam | No Messages | 0.100100 | PMM |
| 509 | L 2 x 3/16" | Beam | No Messages | 0.107840 | PMM |
| 510 | L 2 x 3/16" | Beam | No Messages | 0.077809 | PMM |
| 516 | L 2 x 3/16" | Beam | No Messages | 0.135878 | PMM |
| 517 | L 2 x 3/16" | Beam | No Messages | 0.098296 | PMM |
| 519 | L 2 x 3/16" | Brace | No Messages | 0.125592 | PMM |
| 520 | L 2 x 3/16" | Brace | No Messages | 0.067273 | PMM |
| 521 | L 2 x 3/16" | Brace | No Messages | 0.123294 | PMM |
| 522 | L 2 x 3/16" | Brace | No Messages | 0.065717 | PMM |
| 523 | L 2 x 3/16" | Brace | No Messages | 0.119290 | PMM |
| 524 | L 2 x 3/16" | Brace | No Messages | 0.063161 | PMM |
| 525 | L 2 x 3/16" | Brace | No Messages | 0.103253 | PMM |
| 526 | L 2 x 3/16" | Brace | No Messages | 0.052854 | PMM |
| 533 | L 1.3/4 x 3/16" | Brace | No Messages | 0.048754 | PMM |
| 534 | L 1.3/4 x 3/16" | Brace | No Messages | 0.051096 | PMM |
| 535 | L 1.3/4 x 3/16" | Brace | No Messages | 0.063042 | PMM |
| 536 | L 1.3/4 x 3/16" | Brace | No Messages | 0.036557 | PMM |
| 545 | L 1.3/4 x 3/16" | Brace | No Messages | 0.052305 | PMM |
| 546 | L 1.3/4 x 3/16" | Brace | No Messages | 0.047498 | PMM |
| 547 | L 1.3/4 x 3/16" | Brace | No Messages | 0.056425 | PMM |
| 548 | L 1.3/4 x 3/16" | Brace | No Messages | 0.053486 | PMM |
| 549 | L 1.3/4 x 3/16" | Brace | No Messages | 0.065245 | PMM |
| 550 | L 1.3/4 x 3/16" | Brace | No Messages | 0.057085 | PMM |
| 558 | L 1.1/2 x 1/8" | Beam | No Messages | 0.071004 | PMM |
| 560 | L 1.3/4 x 1/8" | Brace | No Messages | 0.442106 | PMM |
| 561 | L 1.3/4 x 1/8" | Brace | No Messages | 0.344098 | PMM |
| 564 | L 1.1/2 x 1/8" | Beam | No Messages | 0.067556 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------|------------|-------------|----------|-----------|
| 566 | L 1.3/4 x 1/8" | Brace | No Messages | 0.321527 | PMM |
| 567 | L 1.3/4 x 1/8" | Brace | No Messages | 0.273696 | PMM |
| 570 | L 1.1/2 x 1/8" | Beam | No Messages | 0.047167 | PMM |
| 572 | L 1.3/4 x 1/8" | Brace | No Messages | 0.112017 | PMM |
| 573 | L 1.3/4 x 1/8" | Brace | No Messages | 0.101171 | PMM |
| 576 | L 1.1/2 x 1/8" | Beam | No Messages | 0.019792 | PMM |
| 578 | L 1.3/4 x 1/8" | Brace | No Messages | 0.052039 | PMM |
| 579 | L 1.3/4 x 1/8" | Brace | No Messages | 0.042922 | PMM |
| 582 | L 1.1/2 x 1/8" | Beam | No Messages | 0.013335 | PMM |
| 584 | L 1.3/4 x 1/8" | Brace | No Messages | 0.023357 | PMM |
| 585 | L 1.3/4 x 1/8" | Brace | No Messages | 0.015584 | PMM |
| 592 | L 1.1/2 x 1/8" | Beam | No Messages | 0.065467 | PMM |
| 594 | L 1.3/4 x 1/8" | Brace | No Messages | 0.256758 | PMM |
| 595 | L 1.3/4 x 1/8" | Brace | No Messages | 0.117487 | PMM |
| 598 | L 1.1/2 x 1/8" | Beam | No Messages | 0.059215 | PMM |
| 600 | L 1.3/4 x 1/8" | Brace | No Messages | 0.053257 | PMM |
| 601 | L 1.3/4 x 1/8" | Brace | No Messages | 0.038023 | PMM |
| 604 | L 1.1/2 x 1/8" | Beam | No Messages | 0.036101 | PMM |
| 606 | L 1.3/4 x 1/8" | Brace | No Messages | 0.054652 | PMM |
| 607 | L 1.3/4 x 1/8" | Brace | No Messages | 0.039076 | PMM |
| 610 | L 1.1/2 x 1/8" | Beam | No Messages | 0.016516 | PMM |
| 612 | L 1.3/4 x 1/8" | Brace | No Messages | 0.034072 | PMM |
| 613 | L 1.3/4 x 1/8" | Brace | No Messages | 0.024784 | PMM |
| 616 | L 1.1/2 x 1/8" | Beam | No Messages | 0.012005 | PMM |
| 618 | L 1.3/4 x 1/8" | Brace | No Messages | 0.023287 | PMM |
| 619 | L 1.3/4 x 1/8" | Brace | No Messages | 0.016036 | PMM |
| 626 | L 1.1/2 x 1/8" | Beam | No Messages | 0.040590 | PMM |
| 628 | L 1.3/4 x 1/8" | Brace | No Messages | 0.594164 | PMM |
| 629 | L 1.3/4 x 1/8" | Brace | No Messages | 0.631063 | PMM |
| 632 | L 1.1/2 x 1/8" | Beam | No Messages | 0.040072 | PMM |
| 634 | L 1.3/4 x 1/8" | Brace | No Messages | 0.344390 | PMM |
| 635 | L 1.3/4 x 1/8" | Brace | No Messages | 0.337424 | PMM |
| 638 | L 1.1/2 x 1/8" | Beam | No Messages | 0.024792 | PMM |
| 640 | L 1.3/4 x 1/8" | Brace | No Messages | 0.219975 | PMM |
| 641 | L 1.3/4 x 1/8" | Brace | No Messages | 0.217721 | PMM |
| 644 | L 1.1/2 x 1/8" | Beam | No Messages | 0.012203 | PMM |
| 646 | L 1.3/4 x 1/8" | Brace | No Messages | 0.051195 | PMM |
| 647 | L 1.3/4 x 1/8" | Brace | No Messages | 0.049920 | PMM |
| 650 | L 1.1/2 x 1/8" | Beam | No Messages | 0.012905 | PMM |
| 652 | L 1.3/4 x 1/8" | Brace | No Messages | 0.013818 | PMM |
| 653 | L 1.3/4 x 1/8" | Brace | No Messages | 0.015586 | PMM |
| 660 | L 1.1/2 x 1/8" | Beam | No Messages | 0.080954 | PMM |
| 662 | L 1.3/4 x 1/8" | Brace | No Messages | 0.065014 | PMM |
| 663 | L 1.3/4 x 1/8" | Brace | No Messages | 0.064551 | PMM |
| 666 | L 1.1/2 x 1/8" | Beam | No Messages | 0.075503 | PMM |
| 668 | L 1.3/4 x 1/8" | Brace | No Messages | 0.042164 | PMM |
| 669 | L 1.1/2 x 1/8" | Beam | No Messages | 0.047364 | PMM |
| 672 | L 1.1/2 x 1/8" | Beam | No Messages | 0.050602 | PMM |
| 674 | L 1.3/4 x 1/8" | Brace | No Messages | 0.023391 | PMM |
| 675 | L 1.3/4 x 1/8" | Brace | No Messages | 0.020574 | PMM |
| 678 | L 1.1/2 x 1/8" | Beam | No Messages | 0.024507 | PMM |
| 680 | L 1.3/4 x 1/8" | Brace | No Messages | 0.011468 | PMM |
| 681 | L 1.3/4 x 1/8" | Brace | No Messages | 0.009461 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|-----------------|------------|---------------------------------|------------|-----------|
| 684 | L 1.1/2 x 1/8" | Beam | No Messages | 0.016375 | PMM |
| 686 | L 1.3/4 x 1/8" | Brace | No Messages | 0.014262 | PMM |
| 687 | L 1.3/4 x 1/8" | Brace | No Messages | 0.015865 | PMM |
| 113 | L 1.3/4 x 3/16" | Beam | No Messages | 0.048323 | PMM |
| 153 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.066090 | PMM |
| 154 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.051515 | PMM |
| 245 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.068308 | PMM |
| 286 | L 1.3/4 x 3/16" | Beam | No Messages | 0.059690 | PMM |
| 377 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.091520 | PMM |
| 419 | L 1.3/4 x 3/16" | Beam | No Messages | 0.056380 | PMM |
| 420 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.035382 | PMM |
| 511 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.048105 | PMM |
| 688 | L 1.3/4 x 3/16" | Beam | No Messages | 0.042724 | PMM |
| 689 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.048498 | PMM |
| 690 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.031742 | PMM |
| 691 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.042200 | PMM |
| 692 | L 1.3/4 x 3/16" | Beam | No Messages | 0.038576 | PMM |
| 693 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.044098 | PMM |
| 694 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.026358 | PMM |
| 695 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.031141 | PMM |
| 696 | L 1.3/4 x 3/16" | Beam | No Messages | 0.029672 | PMM |
| 697 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.032899 | PMM |
| 698 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.024261 | PMM |
| 699 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.029183 | PMM |
| 700 | L 1.3/4 x 3/16" | Beam | No Messages | 0.026388 | PMM |
| 701 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.030578 | PMM |
| 25 | L 2.1/2x3/16 | Brace | No Messages | 0.122978 | PMM |
| 93 | L 2.1/2x3/16 | Brace | No Messages | 0.247522 | PMM |
| 95 | L 2.1/2x3/16 | Brace | No Messages | 0.072310 | PMM |
| 225 | L 2.1/2x3/16 | Brace | No Messages | 0.157878 | PMM |
| 227 | L 2.1/2x3/16 | Brace | No Messages | 0.132137 | PMM |
| 357 | L 2.1/2x3/16 | Brace | No Messages | 0.216015 | PMM |
| 359 | L 2.1/2x3/16 | Brace | No Messages | 0.186244 | PMM |
| 491 | L 2.1/2x3/16 | Brace | No Messages | 0.309107 | PMM |
| 493 | L 1.3/4 x 3/16" | Brace | No Messages | 0.070366 | PMM |
| 702 | L 1.3/4 x 3/16" | Brace | No Messages | 0.107349 | PMM |
| 703 | L 1.3/4 x 3/16" | Brace | No Messages | 0.062611 | PMM |
| 704 | L 1.3/4 x 3/16" | Brace | No Messages | 0.119272 | PMM |
| 708 | L 1.3/4 x 3/16" | Beam | No Messages | 0.042775 | PMM |
| 709 | L 1.3/4 x 3/16" | Beam | No Messages | 0.031253 | PMM |
| 714 | L 1.3/4 x 3/16" | Beam | No Messages | 0.057240 | PMM |
| 715 | L 1.3/4 x 3/16" | Beam | No Messages | 0.043661 | PMM |
| 726 | L 2.1/2x3/16 | Beam | No Messages | 0.431625 | PMM |
| 727 | L 2.1/2x3/16 | Beam | See ErrMsg and WarnMsg | | |
| 728 | L 2.1/2x3/16 | Beam | See ErrMsg | | |
| 729 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.555978 | PMM |
| 738 | L 2 x 3/16" | Beam | Overstressed and See WarnMsg | 251.366019 | PMM |
| 739 | L 2 x 3/16" | Beam | No Messages | 0.179999 | PMM |
| 740 | L 2 x 3/16" | Beam | No Messages | 0.222348 | PMM |
| 742 | L 2 x 3/16" | Beam | No Messages | 0.649261 | PMM |
| 744 | L 2 x 3/16" | Beam | No Messages | 0.583693 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|-----------------|------------|-------------|----------|-----------|
| 745 | L 2 x 3/16" | Beam | No Messages | 0.662933 | PMM |
| 754 | L 2 x 3/16" | Beam | See WarnMsg | 0.532099 | PMM |
| 755 | L 2 x 3/16" | Beam | See WarnMsg | 0.371810 | PMM |
| 756 | L 2 x 3/16" | Beam | No Messages | 0.139765 | PMM |
| 757 | L 2 x 3/16" | Beam | No Messages | 0.147039 | PMM |
| 758 | L 2 x 3/16" | Beam | No Messages | 0.548913 | PMM |
| 759 | L 2 x 3/16" | Beam | No Messages | 0.582483 | PMM |
| 760 | L 2 x 3/16" | Beam | No Messages | 0.578841 | PMM |
| 761 | L 2 x 3/16" | Beam | No Messages | 0.517726 | PMM |
| 770 | L 2.1/2x3/16 | Beam | No Messages | 0.302825 | PMM |
| 771 | L 2.1/2x3/16 | Beam | No Messages | 0.240646 | PMM |
| 772 | L 2.1/2x3/16 | Beam | No Messages | 0.122689 | PMM |
| 773 | L 2.1/2x3/16 | Beam | No Messages | 0.109601 | PMM |
| 774 | L 2.1/2x3/16 | Beam | No Messages | 0.374633 | PMM |
| 775 | L 2.1/2x3/16 | Beam | No Messages | 0.270787 | PMM |
| 776 | L 2.1/2x3/16 | Beam | No Messages | 0.384585 | PMM |
| 777 | L 2.1/2x3/16 | Beam | No Messages | 0.326521 | PMM |
| 786 | L 2.1/2x3/16 | Beam | No Messages | 0.265409 | PMM |
| 787 | L 2.1/2x3/16 | Beam | No Messages | 0.103105 | PMM |
| 788 | L 1.3/4 x 3/16" | Beam | No Messages | 0.140812 | PMM |
| 789 | L 2.1/2x3/16 | Beam | No Messages | 0.337733 | PMM |
| 790 | L 2.1/2x3/16 | Beam | No Messages | 0.203872 | PMM |
| 791 | L 2.1/2x3/16 | Beam | No Messages | 0.320624 | PMM |
| 792 | L 2.1/2x3/16 | Beam | No Messages | 0.332439 | PMM |
| 793 | L 2.1/2x3/16 | Beam | No Messages | 0.210402 | PMM |
| 802 | L 2.1/2x3/16 | Beam | No Messages | 0.210008 | PMM |
| 803 | L 2.1/2x3/16 | Beam | No Messages | 0.317848 | PMM |
| 804 | L 2.1/2x3/16 | Beam | No Messages | 0.284575 | PMM |
| 805 | L 2.1/2x3/16 | Beam | No Messages | 0.256968 | PMM |
| 814 | L 2 x 3/16" | Beam | No Messages | 0.209129 | PMM |
| 815 | L 2 x 3/16" | Beam | No Messages | 0.309605 | PMM |
| 816 | L 2 x 3/16" | Beam | No Messages | 0.336210 | PMM |
| 817 | L 2 x 3/16" | Beam | No Messages | 0.389348 | PMM |
| 826 | L 2 x 3/16" | Beam | No Messages | 0.143645 | PMM |
| 827 | L 2 x 3/16" | Beam | No Messages | 0.332153 | PMM |
| 828 | L 2 x 3/16" | Beam | No Messages | 0.337777 | PMM |
| 829 | L 2 x 3/16" | Beam | No Messages | 0.170463 | PMM |
| 838 | L 2 x 3/16" | Beam | No Messages | 0.218847 | PMM |
| 839 | L 2 x 3/16" | Beam | No Messages | 0.207411 | PMM |
| 840 | L 2 x 3/16" | Beam | No Messages | 0.248085 | PMM |
| 841 | L 2 x 3/16" | Beam | No Messages | 0.184448 | PMM |
| 850 | L 2 x 3/16" | Beam | No Messages | 0.106676 | PMM |
| 851 | L 2 x 3/16" | Beam | No Messages | 0.210460 | PMM |
| 852 | L 2 x 3/16" | Beam | No Messages | 0.215130 | PMM |
| 853 | L 2 x 3/16" | Beam | No Messages | 0.169299 | PMM |
| 862 | L 1.3/4 x 3/16" | Beam | No Messages | 0.114449 | PMM |
| 863 | L 1.3/4 x 3/16" | Beam | No Messages | 0.129676 | PMM |
| 864 | L 1.3/4 x 3/16" | Beam | No Messages | 0.132052 | PMM |
| 865 | L 1.3/4 x 3/16" | Beam | No Messages | 0.105640 | PMM |
| 866 | L3X3X3/16 | Beam | See WarnMsg | 0.055486 | PMM |
| 867 | L3X3X3/16 | Beam | No Messages | 0.067305 | PMM |
| 868 | L3X3X3/16 | Beam | See WarnMsg | 0.069510 | PMM |
| 869 | L3X3X3/16 | Beam | No Messages | 0.067401 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|-----------------|------------|--------------|----------|-----------|
| 870 | L3X3X3/16 | Beam | See WarnMsg | 0.042619 | PMM |
| 871 | L3X3X3/16 | Beam | No Messages | 0.054607 | PMM |
| 872 | L3X3X3/16 | Beam | See WarnMsg | 0.051028 | PMM |
| 873 | L3X3X3/16 | Beam | No Messages | 0.056152 | PMM |
| 874 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.049010 | PMM |
| 875 | L 2.1/2x3/16 | Beam | No Messages | 0.056242 | PMM |
| 876 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.054395 | PMM |
| 877 | L 2.1/2x3/16 | Beam | No Messages | 0.056192 | PMM |
| 878 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.038433 | PMM |
| 879 | L 2.1/2x3/16 | Beam | No Messages | 0.048650 | PMM |
| 880 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.048354 | PMM |
| 881 | L 2.1/2x3/16 | Beam | No Messages | 0.050715 | PMM |
| 882 | L 2 x 3/16" | Beam | See WarnMsg | 0.049837 | PMM |
| 883 | L 2 x 3/16" | Beam | No Messages | 0.047280 | PMM |
| 884 | L 2 x 3/16" | Beam | See WarnMsg | 0.049833 | PMM |
| 885 | L 2 x 3/16" | Beam | No Messages | 0.051014 | PMM |
| 886 | L 2 x 3/16" | Beam | See WarnMsg | 0.045693 | PMM |
| 887 | L 2 x 3/16" | Beam | No Messages | 0.041662 | PMM |
| 888 | L 2 x 3/16" | Beam | See WarnMsg | 0.049781 | PMM |
| 889 | L 2 x 3/16" | Beam | No Messages | 0.043469 | PMM |
| 898 | L 1.3/4 x 3/16" | Beam | No Messages | 0.141730 | PMM |
| 899 | L 1.3/4 x 3/16" | Beam | No Messages | 0.123157 | PMM |
| 900 | L 1.3/4 x 3/16" | Beam | No Messages | 0.100107 | PMM |
| 901 | L 1.3/4 x 3/16" | Beam | No Messages | 0.129085 | PMM |
| 910 | L 1.3/4 x 3/16" | Beam | No Messages | 0.098583 | PMM |
| 911 | L 1.3/4 x 3/16" | Beam | No Messages | 0.120004 | PMM |
| 912 | L 1.3/4 x 3/16" | Beam | No Messages | 0.104331 | PMM |
| 913 | L 1.3/4 x 3/16" | Beam | No Messages | 0.093305 | PMM |
| 743 | L 2 x 3/16" | Beam | No Messages | 0.651955 | PMM |
| 1 | L 2.1/2x3/16 | Beam | No Messages | 0.298176 | PMM |
| 914 | L 2.1/2x3/16 | Beam | No Messages | 0.146527 | PMM |
| 915 | L 2.1/2x3/16 | Beam | No Messages | 0.097462 | PMM |
| 916 | L 2.1/2x3/16 | Beam | No Messages | 0.179299 | PMM |
| 917 | L 2.1/2x3/16 | Beam | No Messages | 0.376976 | PMM |
| 918 | L 2.1/2x3/16 | Beam | No Messages | 0.109546 | PMM |
| 919 | L 2.1/2x3/16 | Beam | No Messages | 0.311319 | PMM |
| 920 | L 2.1/2x3/16 | Beam | No Messages | 0.118859 | PMM |
| 921 | L5X5X3/8 | Column | No Messages | 0.346303 | PMM |
| 922 | L5X5X3/8 | Column | No Messages | 0.394774 | PMM |
| 923 | L5X5X3/8 | Column | No Messages | 0.462185 | PMM |
| 924 | L6X6X3/8 | Column | No Messages | 0.496133 | PMM |
| 925 | L6X6X3/8 | Column | No Messages | 0.523720 | PMM |
| 926 | L6X6X3/8 | Column | No Messages | 0.713334 | PMM |
| 927 | L6X6X3/8 | Column | No Messages | 0.716215 | PMM |
| 928 | L6X6X3/8 | Column | No Messages | 0.868791 | PMM |
| 929 | L6X6X3/8 | Column | No Messages | 0.870290 | PMM |
| 930 | L6X6X3/8 | Column | Overstressed | 0.995478 | PMM |
| 931 | L6X6X3/8 | Column | Overstressed | 0.995554 | PMM |
| 932 | L6X6X3/8 | Column | Overstressed | 1.116907 | PMM |
| 933 | L6X6X3/8 | Column | Overstressed | 1.117067 | PMM |
| 934 | L6X6X1/2 | Column | No Messages | 0.922379 | PMM |
| 935 | L6X6X1/2 | Column | No Messages | 0.922692 | PMM |
| 936 | L6X6X1/2 | Column | Overstressed | 0.998758 | PMM |


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| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|------------|------------|--------------|----------|-----------|
| 937 | L6X6X1/2 | Column | Overstressed | 1.000409 | PMM |
| 938 | L6X6X1/2 | Column | Overstressed | 1.069331 | PMM |
| 939 | L6X6X5/8 | Column | No Messages | 0.869631 | PMM |
| 940 | L6X6X5/8 | Column | No Messages | 0.916134 | PMM |
| 941 | L6X6X5/8 | Column | No Messages | 0.918265 | PMM |
| 942 | L6X6X5/8 | Column | No Messages | 0.832087 | PMM |
| 943 | L6X6X5/8 | Column | No Messages | 0.761372 | PMM |
| 944 | L6X6X5/8 | Column | Overstressed | 0.983170 | PMM |
| 945 | L6X6X5/8 | Column | Overstressed | 1.060389 | PMM |
| 946 | L6X6X5/8 | Column | No Messages | 0.509773 | PMM |
| 947 | L6X6X5/8 | Column | No Messages | 0.510105 | PMM |
| 948 | L6X6X5/8 | Column | No Messages | 0.416555 | PMM |
| 949 | L6X6X5/8 | Column | No Messages | 0.437321 | PMM |
| 950 | L6X6X5/8 | Column | No Messages | 0.495537 | PMM |
| 951 | L6X6X5/8 | Column | No Messages | 0.493837 | PMM |
| 952 | L6X6X5/8 | Column | No Messages | 0.469591 | PMM |
| 953 | L6X6X1/2 | Column | No Messages | 0.578218 | PMM |
| 954 | L6X6X1/2 | Column | No Messages | 0.542735 | PMM |
| 955 | L6X6X1/2 | Column | No Messages | 0.541342 | PMM |
| 956 | L6X6X1/2 | Column | No Messages | 0.498652 | PMM |
| 957 | L6X6X1/2 | Column | No Messages | 0.498032 | PMM |
| 958 | L6X6X3/8 | Column | No Messages | 0.607649 | PMM |
| 959 | L6X6X3/8 | Column | No Messages | 0.607019 | PMM |
| 960 | L6X6X3/8 | Column | No Messages | 0.540748 | PMM |
| 961 | L6X6X3/8 | Column | No Messages | 0.540386 | PMM |
| 962 | L6X6X3/8 | Column | No Messages | 0.475762 | PMM |
| 963 | L6X6X3/8 | Column | No Messages | 0.474879 | PMM |
| 964 | L6X6X3/8 | Column | No Messages | 0.401109 | PMM |
| 965 | L6X6X3/8 | Column | No Messages | 0.399600 | PMM |
| 966 | L6X6X3/8 | Column | No Messages | 0.303923 | PMM |
| 967 | L6X6X3/8 | Column | No Messages | 0.301561 | PMM |
| 968 | L5X5X3/8 | Column | No Messages | 0.276693 | PMM |
| 969 | L5X5X3/8 | Column | No Messages | 0.235887 | PMM |
| 970 | L5X5X3/8 | Column | No Messages | 0.130464 | PMM |
| 971 | L5X5X3/8 | Column | No Messages | 0.395427 | PMM |
| 972 | L5X5X3/8 | Column | No Messages | 0.489282 | PMM |
| 973 | L5X5X3/8 | Column | No Messages | 0.570404 | PMM |
| 974 | L6X6X3/8 | Column | No Messages | 0.518396 | PMM |
| 975 | L6X6X3/8 | Column | No Messages | 0.601108 | PMM |
| 976 | L6X6X3/8 | Column | No Messages | 0.742587 | PMM |
| 977 | L6X6X3/8 | Column | No Messages | 0.747571 | PMM |
| 978 | L6X6X3/8 | Column | No Messages | 0.887558 | PMM |
| 979 | L6X6X3/8 | Column | No Messages | 0.887539 | PMM |
| 980 | L6X6X3/8 | Column | Overstressed | 1.013588 | PMM |
| 981 | L6X6X3/8 | Column | Overstressed | 1.011756 | PMM |
| 982 | L6X6X3/8 | Column | Overstressed | 1.137835 | PMM |
| 983 | L6X6X3/8 | Column | Overstressed | 1.135208 | PMM |
| 984 | L6X6X1/2 | Column | No Messages | 0.914745 | PMM |
| 985 | L6X6X1/2 | Column | No Messages | 0.906655 | PMM |
| 986 | L6X6X1/2 | Column | Overstressed | 0.987806 | PMM |
| 987 | L6X6X1/2 | Column | Overstressed | 0.987691 | PMM |
| 988 | L6X6X1/2 | Column | Overstressed | 1.071763 | PMM |
| 989 | L6X6X5/8 | Column | No Messages | 0.874081 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|------------|------------|--------------|----------|-----------|
| 990 | L6X6X5/8 | Column | No Messages | 0.939451 | PMM |
| 991 | L6X6X5/8 | Column | No Messages | 0.945682 | PMM |
| 992 | L6X6X5/8 | Column | No Messages | 0.901030 | PMM |
| 993 | L6X6X5/8 | Column | No Messages | 0.807622 | PMM |
| 994 | L6X6X5/8 | Column | Overstressed | 0.987350 | PMM |
| 995 | L6X6X5/8 | Column | Overstressed | 1.084048 | PMM |
| 996 | L6X6X5/8 | Column | Overstressed | 1.691599 | PMM |
| 997 | L6X6X5/8 | Column | Overstressed | 1.589250 | PMM |
| 998 | L6X6X5/8 | Column | Overstressed | 1.307075 | PMM |
| 999 | L6X6X5/8 | Column | Overstressed | 1.428883 | PMM |
| 1000 | L6X6X5/8 | Column | Overstressed | 1.494376 | PMM |
| 1001 | L6X6X5/8 | Column | Overstressed | 1.493778 | PMM |
| 1002 | L6X6X5/8 | Column | Overstressed | 1.396863 | PMM |
| 1003 | L6X6X1/2 | Column | Overstressed | 1.717029 | PMM |
| 1004 | L6X6X1/2 | Column | Overstressed | 1.582769 | PMM |
| 1005 | L6X6X1/2 | Column | Overstressed | 1.582710 | PMM |
| 1006 | L6X6X1/2 | Column | Overstressed | 1.450769 | PMM |
| 1007 | L6X6X1/2 | Column | Overstressed | 1.453447 | PMM |
| 1008 | L6X6X3/8 | Column | Overstressed | 1.822419 | PMM |
| 1009 | L6X6X3/8 | Column | Overstressed | 1.824667 | PMM |
| 1010 | L6X6X3/8 | Column | Overstressed | 1.614706 | PMM |
| 1011 | L6X6X3/8 | Column | Overstressed | 1.617453 | PMM |
| 1012 | L6X6X3/8 | Column | Overstressed | 1.402820 | PMM |
| 1013 | L6X6X3/8 | Column | Overstressed | 1.402910 | PMM |
| 1014 | L6X6X3/8 | Column | Overstressed | 1.153129 | PMM |
| 1015 | L6X6X3/8 | Column | Overstressed | 1.150747 | PMM |
| 1016 | L6X6X3/8 | Column | No Messages | 0.917061 | PMM |
| 1017 | L6X6X3/8 | Column | No Messages | 0.809685 | PMM |
| 1018 | L5X5X3/8 | Column | No Messages | 0.886652 | PMM |
| 1019 | L5X5X3/8 | Column | No Messages | 0.773064 | PMM |
| 1020 | L5X5X3/8 | Column | No Messages | 0.651305 | PMM |
| 1021 | L5X5X3/8 | Column | No Messages | 0.114806 | PMM |
| 1022 | L5X5X3/8 | Column | No Messages | 0.102768 | PMM |
| 1023 | L5X5X3/8 | Column | No Messages | 0.065201 | PMM |
| 1024 | L4X4X1/4 | Column | No Messages | 0.110051 | PMM |
| 1025 | L4X4X1/4 | Column | No Messages | 0.056587 | PMM |
| 1026 | L4X4X1/4 | Column | No Messages | 0.048056 | PMM |
| 1027 | L4X4X1/4 | Column | No Messages | 0.019970 | PMM |
| 1028 | L4X4X1/4 | Column | No Messages | 0.019504 | PMM |
| 1029 | L4X4X1/4 | Column | No Messages | 0.015478 | PMM |
| 1030 | L4X4X1/4 | Column | No Messages | 0.014685 | PMM |
| 1031 | L5X5X3/8 | Column | No Messages | 0.098232 | PMM |
| 1032 | L5X5X3/8 | Column | No Messages | 0.075406 | PMM |
| 1033 | L5X5X3/8 | Column | No Messages | 0.052736 | PMM |
| 1034 | L4X4X1/4 | Column | No Messages | 0.085178 | PMM |
| 1035 | L4X4X1/4 | Column | No Messages | 0.053369 | PMM |
| 1036 | L4X4X1/4 | Column | No Messages | 0.044390 | PMM |
| 1037 | L4X4X1/4 | Column | No Messages | 0.025465 | PMM |
| 1038 | L4X4X1/4 | Column | No Messages | 0.024351 | PMM |
| 1039 | L4X4X1/4 | Column | No Messages | 0.016185 | PMM |
| 1040 | L4X4X1/4 | Column | No Messages | 0.015656 | PMM |
| 1041 | L4X4X1/4 | Column | No Messages | 0.400469 | PMM |
| 1042 | L4X4X1/4 | Column | No Messages | 0.400469 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|--------------|----------|-----------|
| 1043 | L5X5X3/8 | Column | No Messages | 0.073475 | PMM |
| 1044 | L4X4X1/4 | Column | No Messages | 0.264730 | PMM |
| 1045 | L4X4X1/4 | Column | No Messages | 0.080058 | PMM |
| 1046 | L4X4X1/4 | Column | No Messages | 0.071801 | PMM |
| 1047 | L4X4X1/4 | Column | No Messages | 0.035060 | PMM |
| 1048 | L4X4X1/4 | Column | No Messages | 0.033773 | PMM |
| 1049 | L4X4X1/4 | Column | No Messages | 0.015130 | PMM |
| 1050 | L4X4X1/4 | Column | No Messages | 0.014039 | PMM |
| 1051 | L5X5X3/8 | Column | No Messages | 0.301109 | PMM |
| 1052 | L5X5X3/8 | Column | No Messages | 0.286405 | PMM |
| 1053 | L5X5X3/8 | Column | No Messages | 0.097459 | PMM |
| 1054 | L4X4X1/4 | Column | No Messages | 0.386887 | PMM |
| 1055 | L4X4X1/4 | Column | No Messages | 0.100908 | PMM |
| 1056 | L4X4X1/4 | Column | No Messages | 0.093653 | PMM |
| 1057 | L4X4X1/4 | Column | No Messages | 0.042542 | PMM |
| 1058 | L4X4X1/4 | Column | No Messages | 0.041127 | PMM |
| 1059 | L4X4X1/4 | Column | No Messages | 0.017594 | PMM |
| 1060 | L4X4X1/4 | Column | No Messages | 0.016117 | PMM |
| 1061 | L 2.1/2x3/16 | Beam | No Messages | 0.030125 | PMM |
| 1062 | L 2.1/2x3/16 | Beam | No Messages | 0.022625 | PMM |
| 1063 | L 2.1/2x3/16 | Beam | No Messages | 0.044958 | PMM |
| 1064 | L 2.1/2x3/16 | Beam | No Messages | 0.021593 | PMM |
| 1065 | L 2.1/2x3/16 | Beam | No Messages | 0.021265 | PMM |
| 1066 | L 2.1/2x3/16 | Beam | No Messages | 0.028392 | PMM |
| 1067 | L 2.1/2x3/16 | Beam | No Messages | 0.019598 | PMM |
| 1068 | L 2.1/2x3/16 | Beam | No Messages | 0.044827 | PMM |
| 1069 | L4X4X1/4 | Beam | No Messages | 0.433542 | PMM |
| 1070 | L4X4X1/4 | Beam | No Messages | 0.499941 | PMM |
| 1071 | L 2 x 3/16" | Beam | No Messages | 0.035405 | PMM |
| 1072 | L 2 x 3/16" | Beam | No Messages | 0.074975 | PMM |
| 1073 | L 2 x 3/16" | Beam | No Messages | 0.154987 | PMM |
| 1074 | L 2 x 3/16" | Beam | No Messages | 0.125699 | PMM |
| 1075 | L4X4X1/4 | Beam | No Messages | 0.946700 | PMM |
| 1076 | L4X4X1/4 | Beam | No Messages | 0.886714 | PMM |
| 1077 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.377540 | PMM |
| 1078 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.380596 | PMM |
| 1079 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.300696 | PMM |
| 1080 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.834973 | PMM |
| 1081 | L 3 x 1/4 + L 3x1/4" | Brace | Overstressed | 1.002737 | PMM |
| 1082 | L 3 x 1/4 + L 3x1/4" | Brace | Overstressed | 1.214082 | PMM |
| 1083 | L 2 x 3/16" | Beam | No Messages | 0.080139 | PMM |
| 1084 | L 2 x 3/16" | Beam | No Messages | 0.152454 | PMM |
| 1085 | L 2 x 3/16" | Beam | No Messages | 0.056693 | PMM |
| 1086 | L 2 x 3/16" | Beam | No Messages | 0.151328 | PMM |
| 1087 | L 2.1/2x3/16 | Brace | No Messages | 0.108479 | PMM |
| 1088 | L 2.1/2x3/16 | Brace | No Messages | 0.166779 | PMM |
| 1089 | L3X3X3/16 | Brace | No Messages | 0.079174 | PMM |
| 1090 | L3X3X3/16 | Brace | No Messages | 0.129169 | PMM |
| 1091 | L3X3X3/16 | Brace | No Messages | 0.206419 | PMM |
| 1092 | L3X3X3/16 | Brace | No Messages | 0.248314 | PMM |
| 1093 | L 2.1/2x3/16 | Brace | No Messages | 0.355281 | PMM |
| 1094 | L 2.1/2x3/16 | Brace | No Messages | 0.452707 | PMM |
| 1095 | L4X4X1/4 | Beam | No Messages | 0.442700 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|--------------|----------|-----------|
| 1096 | L4X4X1/4 | Beam | No Messages | 0.439720 | PMM |
| 1097 | L4X4X1/4 | Beam | No Messages | 0.217732 | PMM |
| 1098 | L4X4X1/4 | Beam | No Messages | 0.232541 | PMM |
| 1099 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.126453 | PMM |
| 1100 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.145251 | PMM |
| 1101 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.674019 | PMM |
| 1102 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.692297 | PMM |
| 1103 | L3X3X3/16 | Beam | Overstressed | 0.996687 | PMM |
| 1104 | L3X3X3/16 | Beam | Overstressed | 1.049743 | PMM |
| 1105 | L3X3X3/16 | Beam | No Messages | 0.347576 | PMM |
| 1106 | L3X3X3/16 | Beam | No Messages | 0.375861 | PMM |
| 1107 | L3X3X3/16 | Beam | No Messages | 0.800005 | PMM |
| 1108 | L3X3X3/16 | Beam | No Messages | 0.829367 | PMM |
| 1109 | L3X3X3/16 | Beam | No Messages | 0.330084 | PMM |
| 1110 | L3X3X3/16 | Beam | No Messages | 0.370972 | PMM |
| 1111 | L3X3X3/16 | Beam | No Messages | 0.687653 | PMM |
| 1112 | L3X3X3/16 | Beam | No Messages | 0.700279 | PMM |
| 1113 | L3X3X3/16 | Beam | No Messages | 0.277889 | PMM |
| 1114 | L3X3X3/16 | Beam | No Messages | 0.280919 | PMM |
| 1115 | L3X3X3/16 | Beam | No Messages | 0.525453 | PMM |
| 1116 | L3X3X3/16 | Beam | No Messages | 0.550462 | PMM |
| 1117 | L3X3X3/16 | Beam | No Messages | 0.211068 | PMM |
| 1118 | L3X3X3/16 | Beam | No Messages | 0.154582 | PMM |
| 1119 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.125569 | PMM |
| 1120 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.141577 | PMM |
| 1121 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.608283 | PMM |
| 1122 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.614970 | PMM |
| 1123 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.124402 | PMM |
| 1124 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.128953 | PMM |
| 1125 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.551060 | PMM |
| 1126 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.581789 | PMM |
| 1127 | L3X3X3/16 | Brace | No Messages | 0.048552 | PMM |
| 1128 | L3X3X3/16 | Brace | No Messages | 0.063246 | PMM |
| 1129 | L3X3X3/16 | Brace | No Messages | 0.156345 | PMM |
| 1130 | L3X3X3/16 | Brace | No Messages | 0.230357 | PMM |
| 1131 | L 2.1/2x3/16 | Brace | No Messages | 0.058336 | PMM |
| 1132 | L 2.1/2x3/16 | Brace | No Messages | 0.082321 | PMM |
| 1133 | L 2.1/2x3/16 | Brace | No Messages | 0.180111 | PMM |
| 1134 | L 2.1/2x3/16 | Brace | No Messages | 0.278682 | PMM |
| 1135 | L 2.1/2x3/16 | Brace | No Messages | 0.055023 | PMM |
| 1136 | L 2.1/2x3/16 | Brace | No Messages | 0.075160 | PMM |
| 1137 | L 2.1/2x3/16 | Brace | No Messages | 0.181653 | PMM |
| 1138 | L 2.1/2x3/16 | Brace | No Messages | 0.276265 | PMM |
| 1139 | L 2 x 3/16" | Brace | No Messages | 0.082733 | PMM |
| 1140 | L 2 x 3/16" | Brace | No Messages | 0.210379 | PMM |
| 1141 | L 2 x 3/16" | Brace | No Messages | 0.163927 | PMM |
| 1142 | L 2 x 3/16" | Brace | No Messages | 0.285131 | PMM |
| 1143 | L 2 x 3/16" | Brace | No Messages | 0.079033 | PMM |
| 1144 | L 2 x 3/16" | Brace | No Messages | 0.142178 | PMM |
| 1145 | L 2 x 3/16" | Brace | No Messages | 0.155555 | PMM |
| 1146 | L 2 x 3/16" | Brace | No Messages | 0.224137 | PMM |
| 1147 | L 2 x 3/16" | Brace | No Messages | 0.073621 | PMM |
| 1148 | L 2 x 3/16" | Brace | No Messages | 0.121597 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|---------------------|------------|-------------|----------|-----------|
| 1149 | L 2 x 3/16" | Brace | No Messages | 0.153061 | PMM |
| 1150 | L 2 x 3/16" | Brace | No Messages | 0.191161 | PMM |
| 1151 | L3X3X3/16 | Beam | No Messages | 0.420679 | PMM |
| 1152 | L3X3X3/16 | Beam | No Messages | 0.449708 | PMM |
| 1153 | L3X3X3/16 | Beam | No Messages | 0.191495 | PMM |
| 1154 | L3X3X3/16 | Beam | No Messages | 0.137491 | PMM |
| 1155 | L3X3X3/16 | Beam | No Messages | 0.342456 | PMM |
| 1156 | L3X3X3/16 | Beam | No Messages | 0.399182 | PMM |
| 1157 | L3X3X3/16 | Beam | No Messages | 0.168904 | PMM |
| 1158 | L3X3X3/16 | Beam | No Messages | 0.117506 | PMM |
| 1159 | L3X3X3/16 | Beam | No Messages | 0.271924 | PMM |
| 1160 | L3X3X3/16 | Beam | No Messages | 0.288931 | PMM |
| 1161 | L3X3X3/16 | Beam | No Messages | 0.255460 | PMM |
| 1162 | L3X3X3/16 | Beam | No Messages | 0.293828 | PMM |
| 1163 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.177575 | PMM |
| 1164 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.135694 | PMM |
| 1165 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.616368 | PMM |
| 1166 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.663567 | PMM |
| 1167 | L 2.1/2x3/16 | Brace | No Messages | 0.051025 | PMM |
| 1168 | L 2.1/2x3/16 | Brace | No Messages | 0.098765 | PMM |
| 1169 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.159424 | PMM |
| 1170 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.167524 | PMM |
| 1171 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.573160 | PMM |
| 1172 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.658975 | PMM |
| 1173 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.160153 | PMM |
| 1174 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.171886 | PMM |
| 1175 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.551014 | PMM |
| 1176 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.625224 | PMM |
| 1185 | L 2 x 3/16" | Brace | No Messages | 0.117007 | PMM |
| 1186 | L 2 x 3/16" | Brace | No Messages | 0.054087 | PMM |
| 1187 | L 2 x 3/16" | Brace | No Messages | 0.130136 | PMM |
| 1188 | L 2 x 3/16" | Brace | No Messages | 0.053460 | PMM |
| 1189 | L 2 x 3/16" | Brace | No Messages | 0.132086 | PMM |
| 1190 | L 2 x 3/16" | Brace | No Messages | 0.054902 | PMM |
| 1191 | L 2 x 3/16" | Brace | No Messages | 0.201282 | PMM |
| 1192 | L 2 x 3/16" | Brace | No Messages | 0.377464 | PMM |
| 1193 | L 2 x 3/16" | Brace | No Messages | 0.196816 | PMM |
| 1194 | L 2 x 3/16" | Brace | No Messages | 0.360686 | PMM |
| 1195 | L 2 x 3/16" | Brace | No Messages | 0.175035 | PMM |
| 1196 | L 2 x 3/16" | Brace | No Messages | 0.289589 | PMM |
| 1197 | L 2 x 3/16" | Brace | No Messages | 0.135595 | PMM |
| 1198 | L 2 x 3/16" | Brace | No Messages | 0.056272 | PMM |
| 1199 | L 2 x 3/16" | Brace | No Messages | 0.203458 | PMM |
| 1200 | L 2 x 3/16" | Brace | No Messages | 0.386214 | PMM |
| 1205 | L 2.1/2x3/16 | Beam | No Messages | 0.036513 | PMM |
| 1206 | L 2.1/2x3/16 | Beam | No Messages | 0.040390 | PMM |
| 1207 | L 2.1/2x3/16 | Beam | No Messages | 0.041490 | PMM |
| 1208 | L 2.1/2x3/16 | Beam | No Messages | 0.054779 | PMM |
| 1213 | L 2.1/2x3/16 | Beam | No Messages | 0.139054 | PMM |
| 1214 | L 2.1/2x3/16 | Beam | No Messages | 0.156415 | PMM |
| 1215 | L 2.1/2x3/16 | Beam | No Messages | 0.106546 | PMM |
| 1216 | L 2.1/2x3/16 | Beam | No Messages | 0.094489 | PMM |
| 1221 | L 2.1/2x3/16 | Beam | No Messages | 0.149955 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|--------------|----------|-----------|
| 1222 | L 2.1/2x3/16 | Beam | No Messages | 0.159275 | PMM |
| 1223 | L 2.1/2x3/16 | Beam | No Messages | 0.106981 | PMM |
| 1224 | L 2.1/2x3/16 | Beam | No Messages | 0.093847 | PMM |
| 1233 | L4X4X1/4 | Beam | No Messages | 0.907467 | PMM |
| 1234 | L4X4X1/4 | Beam | No Messages | 0.900301 | PMM |
| 1235 | L 2 x 3/16" | Beam | No Messages | 0.107549 | PMM |
| 1236 | L 2 x 3/16" | Beam | No Messages | 0.031643 | PMM |
| 1237 | L 2 x 3/16" | Beam | No Messages | 0.098844 | PMM |
| 1238 | L 2 x 3/16" | Beam | No Messages | 0.079252 | PMM |
| 1239 | L 2 x 3/16" | Beam | No Messages | 0.109892 | PMM |
| 1240 | L 2 x 3/16" | Beam | No Messages | 0.071040 | PMM |
| 1241 | L 2 x 3/16" | Beam | No Messages | 0.194288 | PMM |
| 1242 | L 2 x 3/16" | Beam | No Messages | 0.189554 | PMM |
| 1243 | L4X4X1/4 | Beam | No Messages | 0.411487 | PMM |
| 1244 | L4X4X1/4 | Beam | No Messages | 0.408030 | PMM |
| 1245 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.943584 | PMM |
| 1246 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.837100 | PMM |
| 1247 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.785274 | PMM |
| 1248 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.301577 | PMM |
| 1249 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.477539 | PMM |
| 1250 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.548274 | PMM |
| 1251 | L 2.1/2x3/16 | Brace | No Messages | 0.163696 | PMM |
| 1252 | L 2.1/2x3/16 | Brace | No Messages | 0.222014 | PMM |
| 1253 | L3X3X3/16 | Brace | No Messages | 0.120633 | PMM |
| 1254 | L3X3X3/16 | Brace | No Messages | 0.152808 | PMM |
| 1255 | L3X3X3/16 | Brace | No Messages | 0.155120 | PMM |
| 1256 | L3X3X3/16 | Brace | No Messages | 0.202991 | PMM |
| 1257 | L 2.1/2x3/16 | Brace | No Messages | 0.260575 | PMM |
| 1258 | L 2.1/2x3/16 | Brace | No Messages | 0.341528 | PMM |
| 1259 | L4X4X1/4 | Beam | No Messages | 0.181518 | PMM |
| 1260 | L4X4X1/4 | Beam | No Messages | 0.173572 | PMM |
| 1261 | L4X4X1/4 | Beam | No Messages | 0.433892 | PMM |
| 1262 | L4X4X1/4 | Beam | No Messages | 0.444454 | PMM |
| 1263 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.667879 | PMM |
| 1264 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.666355 | PMM |
| 1265 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.159078 | PMM |
| 1266 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.154868 | PMM |
| 1267 | L3X3X3/16 | Beam | No Messages | 0.348427 | PMM |
| 1268 | L3X3X3/16 | Beam | No Messages | 0.345783 | PMM |
| 1269 | L3X3X3/16 | Beam | Overstressed | 1.044570 | PMM |
| 1270 | L3X3X3/16 | Beam | Overstressed | 0.998637 | PMM |
| 1271 | L3X3X3/16 | Beam | No Messages | 0.331748 | PMM |
| 1272 | L3X3X3/16 | Beam | No Messages | 0.330193 | PMM |
| 1273 | L3X3X3/16 | Beam | No Messages | 0.830080 | PMM |
| 1274 | L3X3X3/16 | Beam | No Messages | 0.801653 | PMM |
| 1275 | L3X3X3/16 | Beam | No Messages | 0.281204 | PMM |
| 1276 | L3X3X3/16 | Beam | No Messages | 0.278068 | PMM |
| 1277 | L3X3X3/16 | Beam | No Messages | 0.700781 | PMM |
| 1278 | L3X3X3/16 | Beam | No Messages | 0.688152 | PMM |
| 1279 | L3X3X3/16 | Beam | No Messages | 0.209348 | PMM |
| 1280 | L3X3X3/16 | Beam | No Messages | 0.161808 | PMM |
| 1281 | L3X3X3/16 | Beam | No Messages | 0.550644 | PMM |
| 1282 | L3X3X3/16 | Beam | No Messages | 0.524269 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|-------------|----------|-----------|
| 1283 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.596778 | PMM |
| 1284 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.605420 | PMM |
| 1285 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.163637 | PMM |
| 1286 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.161047 | PMM |
| 1287 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.180361 | PMM |
| 1288 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.181605 | PMM |
| 1289 | L3X3X3/16 | Brace | No Messages | 0.098993 | PMM |
| 1290 | L3X3X3/16 | Brace | No Messages | 0.116471 | PMM |
| 1291 | L3X3X3/16 | Brace | No Messages | 0.110981 | PMM |
| 1292 | L3X3X3/16 | Brace | No Messages | 0.192768 | PMM |
| 1293 | L 2.1/2x3/16 | Brace | No Messages | 0.106109 | PMM |
| 1294 | L 2.1/2x3/16 | Brace | No Messages | 0.137880 | PMM |
| 1295 | L 2.1/2x3/16 | Brace | No Messages | 0.121983 | PMM |
| 1296 | L 2.1/2x3/16 | Brace | No Messages | 0.224381 | PMM |
| 1297 | L 2.1/2x3/16 | Brace | No Messages | 0.103861 | PMM |
| 1298 | L 2.1/2x3/16 | Brace | No Messages | 0.131358 | PMM |
| 1299 | L 2.1/2x3/16 | Brace | No Messages | 0.126480 | PMM |
| 1300 | L 2.1/2x3/16 | Brace | No Messages | 0.222631 | PMM |
| 1301 | L 2 x 3/16" | Brace | No Messages | 0.103541 | PMM |
| 1302 | L 2 x 3/16" | Brace | No Messages | 0.219958 | PMM |
| 1303 | L 2 x 3/16" | Brace | No Messages | 0.084328 | PMM |
| 1304 | L 2 x 3/16" | Brace | No Messages | 0.183238 | PMM |
| 1305 | L 2 x 3/16" | Brace | No Messages | 0.095320 | PMM |
| 1306 | L 2 x 3/16" | Brace | No Messages | 0.154813 | PMM |
| 1307 | L 2 x 3/16" | Brace | No Messages | 0.106271 | PMM |
| 1308 | L 2 x 3/16" | Brace | No Messages | 0.109643 | PMM |
| 1309 | L 2 x 3/16" | Brace | No Messages | 0.090175 | PMM |
| 1310 | L 2 x 3/16" | Brace | No Messages | 0.127465 | PMM |
| 1311 | L 2 x 3/16" | Brace | No Messages | 0.108835 | PMM |
| 1312 | L 2 x 3/16" | Brace | No Messages | 0.082525 | PMM |
| 1313 | L2X2X1/4 | Beam | No Messages | 0.283457 | PMM |
| 1314 | L2X2X1/4 | Beam | No Messages | 0.181023 | PMM |
| 1315 | L3X3X3/16 | Beam | No Messages | 0.442155 | PMM |
| 1316 | L3X3X3/16 | Beam | No Messages | 0.423512 | PMM |
| 1317 | L3X3X3/16 | Beam | No Messages | 0.188768 | PMM |
| 1318 | L3X3X3/16 | Beam | No Messages | 0.110120 | PMM |
| 1319 | L3X3X3/16 | Beam | No Messages | 0.374826 | PMM |
| 1320 | L3X3X3/16 | Beam | No Messages | 0.342272 | PMM |
| 1321 | L3X3X3/16 | Beam | No Messages | 0.134872 | PMM |
| 1322 | L3X3X3/16 | Beam | No Messages | 0.091517 | PMM |
| 1323 | L2X2X1/4 | Beam | No Messages | 0.516331 | PMM |
| 1324 | L2X2X1/4 | Beam | No Messages | 0.555668 | PMM |
| 1325 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.616708 | PMM |
| 1326 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.626827 | PMM |
| 1327 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.187903 | PMM |
| 1328 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.192975 | PMM |
| 1329 | L 2.1/2x3/16 | Brace | No Messages | 0.097919 | PMM |
| 1330 | L 2.1/2x3/16 | Brace | No Messages | 0.132568 | PMM |
| 1331 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.592999 | PMM |
| 1332 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.555279 | PMM |
| 1333 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.235542 | PMM |
| 1334 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.244338 | PMM |
| 1335 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.550140 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|--------------|----------|-----------|
| 1336 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.513698 | PMM |
| 1337 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.237226 | PMM |
| 1338 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.246903 | PMM |
| 1347 | L 2 x 3/16" | Brace | No Messages | 0.171603 | PMM |
| 1348 | L 2 x 3/16" | Brace | No Messages | 0.098422 | PMM |
| 1349 | L 2 x 3/16" | Brace | No Messages | 0.193152 | PMM |
| 1350 | L 2 x 3/16" | Brace | No Messages | 0.107659 | PMM |
| 1351 | L2X2X1/4 | Brace | No Messages | 0.200171 | PMM |
| 1352 | L2X2X1/4 | Brace | No Messages | 0.116191 | PMM |
| 1353 | L 2 x 3/16" | Brace | No Messages | 0.115106 | PMM |
| 1354 | L 2 x 3/16" | Brace | No Messages | 0.284021 | PMM |
| 1355 | L 2 x 3/16" | Brace | No Messages | 0.119308 | PMM |
| 1356 | L 2 x 3/16" | Brace | No Messages | 0.272735 | PMM |
| 1357 | L 2 x 3/16" | Brace | No Messages | 0.110444 | PMM |
| 1358 | L 2 x 3/16" | Brace | No Messages | 0.212837 | PMM |
| 1359 | L 2 x 3/16" | Brace | No Messages | 0.203295 | PMM |
| 1360 | L 2 x 3/16" | Brace | No Messages | 0.110128 | PMM |
| 1361 | L 2 x 3/16" | Brace | No Messages | 0.111645 | PMM |
| 1362 | L 2 x 3/16" | Brace | No Messages | 0.290070 | PMM |
| 1367 | L 2.1/2x3/16 | Beam | No Messages | 0.059148 | PMM |
| 1368 | L 2.1/2x3/16 | Beam | No Messages | 0.022952 | PMM |
| 1369 | L 2.1/2x3/16 | Beam | No Messages | 0.072090 | PMM |
| 1370 | L 2.1/2x3/16 | Beam | No Messages | 0.074635 | PMM |
| 1375 | L 2.1/2x3/16 | Beam | No Messages | 0.126015 | PMM |
| 1376 | L 2.1/2x3/16 | Beam | No Messages | 0.079719 | PMM |
| 1377 | L 2.1/2x3/16 | Beam | No Messages | 0.137159 | PMM |
| 1378 | L 2.1/2x3/16 | Beam | No Messages | 0.123823 | PMM |
| 1383 | L 2.1/2x3/16 | Beam | No Messages | 0.125823 | PMM |
| 1384 | L 2.1/2x3/16 | Beam | No Messages | 0.080969 | PMM |
| 1385 | L 2.1/2x3/16 | Beam | No Messages | 0.130236 | PMM |
| 1386 | L 2.1/2x3/16 | Beam | No Messages | 0.118949 | PMM |
| 1395 | L4X4X1/4 | Beam | No Messages | 0.513842 | PMM |
| 1396 | L4X4X1/4 | Beam | No Messages | 0.338113 | PMM |
| 1397 | L 2 x 3/16" | Beam | No Messages | 0.150969 | PMM |
| 1398 | L 2 x 3/16" | Beam | No Messages | 0.054780 | PMM |
| 1399 | L 2 x 3/16" | Beam | No Messages | 0.039948 | PMM |
| 1400 | L 2 x 3/16" | Beam | No Messages | 0.101842 | PMM |
| 1401 | L 2 x 3/16" | Beam | No Messages | 0.162863 | PMM |
| 1402 | L 2 x 3/16" | Beam | No Messages | 0.118146 | PMM |
| 1403 | L 2 x 3/16" | Beam | No Messages | 0.116900 | PMM |
| 1404 | L 2 x 3/16" | Beam | No Messages | 0.158041 | PMM |
| 1405 | L4X4X1/4 | Beam | No Messages | 0.384556 | PMM |
| 1406 | L4X4X1/4 | Beam | No Messages | 0.452995 | PMM |
| 1407 | L 3 x 1/4 + L 3x1/4" | Brace | Overstressed | 1.143908 | PMM |
| 1408 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.930766 | PMM |
| 1409 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.756778 | PMM |
| 1410 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.275844 | PMM |
| 1411 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.396274 | PMM |
| 1412 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.542799 | PMM |
| 1413 | L 2.1/2x3/16 | Brace | No Messages | 0.287888 | PMM |
| 1414 | L 2.1/2x3/16 | Brace | No Messages | 0.370101 | PMM |
| 1415 | L3X3X3/16 | Brace | No Messages | 0.192928 | PMM |
| 1416 | L3X3X3/16 | Brace | No Messages | 0.231534 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|-------------|----------|-----------|
| 1417 | L3X3X3/16 | Brace | No Messages | 0.124989 | PMM |
| 1418 | L3X3X3/16 | Brace | No Messages | 0.148295 | PMM |
| 1419 | L 2.1/2x3/16 | Brace | No Messages | 0.224502 | PMM |
| 1420 | L 2.1/2x3/16 | Brace | No Messages | 0.276601 | PMM |
| 1421 | L4X4X1/4 | Beam | No Messages | 0.225053 | PMM |
| 1422 | L4X4X1/4 | Beam | No Messages | 0.208712 | PMM |
| 1423 | L4X4X1/4 | Beam | No Messages | 0.334121 | PMM |
| 1424 | L4X4X1/4 | Beam | No Messages | 0.312553 | PMM |
| 1425 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.625273 | PMM |
| 1426 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.581266 | PMM |
| 1427 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.135295 | PMM |
| 1428 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.137580 | PMM |
| 1429 | L3X3X3/16 | Beam | No Messages | 0.272843 | PMM |
| 1430 | L3X3X3/16 | Beam | No Messages | 0.251613 | PMM |
| 1431 | L3X3X3/16 | Beam | No Messages | 0.842541 | PMM |
| 1432 | L3X3X3/16 | Beam | No Messages | 0.738223 | PMM |
| 1433 | L3X3X3/16 | Beam | No Messages | 0.279113 | PMM |
| 1434 | L3X3X3/16 | Beam | No Messages | 0.248677 | PMM |
| 1435 | L3X3X3/16 | Beam | No Messages | 0.669630 | PMM |
| 1436 | L3X3X3/16 | Beam | No Messages | 0.596145 | PMM |
| 1437 | L3X3X3/16 | Beam | No Messages | 0.140788 | PMM |
| 1438 | L3X3X3/16 | Beam | No Messages | 0.202217 | PMM |
| 1439 | L3X3X3/16 | Beam | No Messages | 0.560016 | PMM |
| 1440 | L3X3X3/16 | Beam | No Messages | 0.496487 | PMM |
| 1441 | L3X3X3/16 | Beam | No Messages | 0.127944 | PMM |
| 1442 | L3X3X3/16 | Beam | No Messages | 0.199292 | PMM |
| 1443 | L3X3X3/16 | Beam | No Messages | 0.466640 | PMM |
| 1444 | L3X3X3/16 | Beam | No Messages | 0.387947 | PMM |
| 1445 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.557307 | PMM |
| 1446 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.523007 | PMM |
| 1447 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.132624 | PMM |
| 1448 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.135878 | PMM |
| 1449 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.125327 | PMM |
| 1450 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.142557 | PMM |
| 1451 | L3X3X3/16 | Brace | No Messages | 0.165573 | PMM |
| 1452 | L3X3X3/16 | Brace | No Messages | 0.218773 | PMM |
| 1453 | L3X3X3/16 | Brace | No Messages | 0.108797 | PMM |
| 1454 | L3X3X3/16 | Brace | No Messages | 0.160611 | PMM |
| 1455 | L 2.1/2x3/16 | Brace | No Messages | 0.188494 | PMM |
| 1456 | L 2.1/2x3/16 | Brace | No Messages | 0.258015 | PMM |
| 1457 | L 2.1/2x3/16 | Brace | No Messages | 0.129160 | PMM |
| 1458 | L 2.1/2x3/16 | Brace | No Messages | 0.192319 | PMM |
| 1459 | L 2.1/2x3/16 | Brace | No Messages | 0.185598 | PMM |
| 1460 | L 2.1/2x3/16 | Brace | No Messages | 0.252575 | PMM |
| 1461 | L 2.1/2x3/16 | Brace | No Messages | 0.128774 | PMM |
| 1462 | L 2.1/2x3/16 | Brace | No Messages | 0.197371 | PMM |
| 1463 | L 2 x 3/16" | Brace | No Messages | 0.146762 | PMM |
| 1464 | L 2 x 3/16" | Brace | No Messages | 0.242907 | PMM |
| 1465 | L 2 x 3/16" | Brace | No Messages | 0.115183 | PMM |
| 1466 | L 2 x 3/16" | Brace | No Messages | 0.262260 | PMM |
| 1467 | L 2 x 3/16" | Brace | No Messages | 0.147674 | PMM |
| 1468 | L 2 x 3/16" | Brace | No Messages | 0.175100 | PMM |
| 1469 | L 2 x 3/16" | Brace | No Messages | 0.105186 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|---------------------|------------|-------------|----------|-----------|
| 1470 | L 2 x 3/16" | Brace | No Messages | 0.197281 | PMM |
| 1471 | L 2 x 3/16" | Brace | No Messages | 0.148994 | PMM |
| 1472 | L 2 x 3/16" | Brace | No Messages | 0.139459 | PMM |
| 1473 | L 2 x 3/16" | Brace | No Messages | 0.104890 | PMM |
| 1474 | L 2 x 3/16" | Brace | No Messages | 0.172930 | PMM |
| 1475 | L3X3X3/16 | Beam | No Messages | 0.117766 | PMM |
| 1476 | L3X3X3/16 | Beam | No Messages | 0.181754 | PMM |
| 1477 | L3X3X3/16 | Beam | No Messages | 0.391943 | PMM |
| 1478 | L3X3X3/16 | Beam | No Messages | 0.325216 | PMM |
| 1479 | L3X3X3/16 | Beam | No Messages | 0.111076 | PMM |
| 1480 | L3X3X3/16 | Beam | No Messages | 0.161027 | PMM |
| 1481 | L3X3X3/16 | Beam | No Messages | 0.349656 | PMM |
| 1482 | L3X3X3/16 | Beam | No Messages | 0.291767 | PMM |
| 1483 | L3X3X3/16 | Beam | No Messages | 0.188315 | PMM |
| 1484 | L3X3X3/16 | Beam | No Messages | 0.148605 | PMM |
| 1485 | L3X3X3/16 | Beam | No Messages | 0.150769 | PMM |
| 1486 | L3X3X3/16 | Beam | No Messages | 0.101416 | PMM |
| 1487 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.548694 | PMM |
| 1488 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.602518 | PMM |
| 1489 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.166264 | PMM |
| 1490 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.150307 | PMM |
| 1491 | L 2.1/2x3/16 | Brace | No Messages | 0.176263 | PMM |
| 1492 | L 2.1/2x3/16 | Brace | No Messages | 0.261429 | PMM |
| 1493 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.603174 | PMM |
| 1494 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.518959 | PMM |
| 1495 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.156733 | PMM |
| 1496 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.177736 | PMM |
| 1497 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.572844 | PMM |
| 1498 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.498793 | PMM |
| 1499 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.161849 | PMM |
| 1500 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.175373 | PMM |
| 1509 | L 2 x 3/16" | Brace | No Messages | 0.290007 | PMM |
| 1510 | L 2 x 3/16" | Brace | No Messages | 0.176479 | PMM |
| 1511 | L 2 x 3/16" | Brace | No Messages | 0.363687 | PMM |
| 1512 | L 2 x 3/16" | Brace | No Messages | 0.198764 | PMM |
| 1513 | L 2 x 3/16" | Brace | No Messages | 0.380422 | PMM |
| 1514 | L 2 x 3/16" | Brace | No Messages | 0.203462 | PMM |
| 1515 | L 2 x 3/16" | Brace | No Messages | 0.147370 | PMM |
| 1516 | L 2 x 3/16" | Brace | No Messages | 0.269680 | PMM |
| 1517 | L 2 x 3/16" | Brace | No Messages | 0.144607 | PMM |
| 1518 | L 2 x 3/16" | Brace | No Messages | 0.261257 | PMM |
| 1519 | L 2 x 3/16" | Brace | No Messages | 0.128409 | PMM |
| 1520 | L 2 x 3/16" | Brace | No Messages | 0.199487 | PMM |
| 1521 | L2X2X1/4 | Brace | No Messages | 0.389624 | PMM |
| 1522 | L2X2X1/4 | Brace | No Messages | 0.213304 | PMM |
| 1523 | L 2 x 3/16" | Brace | No Messages | 0.148975 | PMM |
| 1524 | L 2 x 3/16" | Brace | No Messages | 0.272484 | PMM |
| 1529 | L 2.1/2x3/16 | Beam | No Messages | 0.050887 | PMM |
| 1530 | L 2.1/2x3/16 | Beam | No Messages | 0.042666 | PMM |
| 1531 | L 2.1/2x3/16 | Beam | No Messages | 0.035320 | PMM |
| 1532 | L 2.1/2x3/16 | Beam | No Messages | 0.029737 | PMM |
| 1537 | L 2.1/2x3/16 | Beam | No Messages | 0.086136 | PMM |
| 1538 | L 2.1/2x3/16 | Beam | No Messages | 0.098228 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|--------------|----------|-----------|
| 1539 | L 2.1/2x3/16 | Beam | No Messages | 0.138674 | PMM |
| 1540 | L 2.1/2x3/16 | Beam | No Messages | 0.116355 | PMM |
| 1545 | L 2.1/2x3/16 | Beam | No Messages | 0.091410 | PMM |
| 1546 | L 2.1/2x3/16 | Beam | No Messages | 0.099873 | PMM |
| 1547 | L 2.1/2x3/16 | Beam | No Messages | 0.141137 | PMM |
| 1548 | L 2.1/2x3/16 | Beam | No Messages | 0.126184 | PMM |
| 1557 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.530256 | PMM |
| 1558 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.485007 | PMM |
| 1559 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.551934 | PMM |
| 1560 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.550248 | PMM |
| 1561 | L4X4X1/4 | Beam | No Messages | 0.297231 | PMM |
| 1562 | L4X4X1/4 | Beam | No Messages | 0.306576 | PMM |
| 1563 | L 2 x 3/16" | Beam | No Messages | 0.078729 | PMM |
| 1564 | L 2 x 3/16" | Beam | No Messages | 0.099951 | PMM |
| 1565 | L 2 x 3/16" | Beam | No Messages | 0.065429 | PMM |
| 1566 | L 2 x 3/16" | Beam | No Messages | 0.052691 | PMM |
| 1567 | L 2 x 3/16" | Beam | No Messages | 0.177606 | PMM |
| 1568 | L 2 x 3/16" | Beam | No Messages | 0.193947 | PMM |
| 1569 | L 2 x 3/16" | Beam | No Messages | 0.089493 | PMM |
| 1570 | L 2 x 3/16" | Beam | No Messages | 0.149147 | PMM |
| 1571 | L4X4X1/4 | Beam | No Messages | 0.878192 | PMM |
| 1572 | L4X4X1/4 | Beam | Overstressed | 0.991949 | PMM |
| 1573 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.573160 | PMM |
| 1574 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.508173 | PMM |
| 1575 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.337689 | PMM |
| 1576 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.504759 | PMM |
| 1577 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.457474 | PMM |
| 1578 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.512470 | PMM |
| 1579 | L 2.1/2x3/16 | Brace | No Messages | 0.202749 | PMM |
| 1580 | L 2.1/2x3/16 | Brace | No Messages | 0.274482 | PMM |
| 1581 | L3X3X3/16 | Brace | No Messages | 0.149335 | PMM |
| 1582 | L3X3X3/16 | Brace | No Messages | 0.197936 | PMM |
| 1583 | L3X3X3/16 | Brace | No Messages | 0.075838 | PMM |
| 1584 | L3X3X3/16 | Brace | No Messages | 0.099612 | PMM |
| 1585 | L 2.1/2x3/16 | Brace | No Messages | 0.139226 | PMM |
| 1586 | L 2.1/2x3/16 | Brace | No Messages | 0.178702 | PMM |
| 1587 | L4X4X1/4 | Beam | No Messages | 0.481612 | PMM |
| 1588 | L4X4X1/4 | Beam | No Messages | 0.423522 | PMM |
| 1589 | L4X4X1/4 | Beam | No Messages | 0.104537 | PMM |
| 1590 | L4X4X1/4 | Beam | No Messages | 0.113961 | PMM |
| 1591 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.162851 | PMM |
| 1592 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.166591 | PMM |
| 1593 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.599903 | PMM |
| 1594 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.558358 | PMM |
| 1595 | L3X3X3/16 | Beam | No Messages | 0.924092 | PMM |
| 1596 | L3X3X3/16 | Beam | No Messages | 0.831304 | PMM |
| 1597 | L3X3X3/16 | Beam | No Messages | 0.288409 | PMM |
| 1598 | L3X3X3/16 | Beam | No Messages | 0.268423 | PMM |
| 1599 | L3X3X3/16 | Beam | No Messages | 0.768130 | PMM |
| 1600 | L3X3X3/16 | Beam | No Messages | 0.675602 | PMM |
| 1601 | L3X3X3/16 | Beam | No Messages | 0.270070 | PMM |
| 1602 | L3X3X3/16 | Beam | No Messages | 0.256034 | PMM |
| 1603 | L3X3X3/16 | Beam | No Messages | 0.649695 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|-------------|----------|-----------|
| 1604 | L3X3X3/16 | Beam | No Messages | 0.574773 | PMM |
| 1605 | L3X3X3/16 | Beam | No Messages | 0.152626 | PMM |
| 1606 | L3X3X3/16 | Beam | No Messages | 0.327141 | PMM |
| 1607 | L3X3X3/16 | Beam | No Messages | 0.520177 | PMM |
| 1608 | L3X3X3/16 | Beam | No Messages | 0.445272 | PMM |
| 1609 | L2X2X1/4 | Beam | No Messages | 0.273002 | PMM |
| 1610 | L2X2X1/4 | Beam | No Messages | 0.372285 | PMM |
| 1611 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.167730 | PMM |
| 1612 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.169848 | PMM |
| 1613 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.514527 | PMM |
| 1614 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.485195 | PMM |
| 1615 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.458783 | PMM |
| 1616 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.434719 | PMM |
| 1617 | L3X3X3/16 | Brace | No Messages | 0.092246 | PMM |
| 1618 | L3X3X3/16 | Brace | No Messages | 0.158558 | PMM |
| 1619 | L3X3X3/16 | Brace | No Messages | 0.065088 | PMM |
| 1620 | L3X3X3/16 | Brace | No Messages | 0.124261 | PMM |
| 1621 | L 2.1/2x3/16 | Brace | No Messages | 0.104976 | PMM |
| 1622 | L 2.1/2x3/16 | Brace | No Messages | 0.188090 | PMM |
| 1623 | L 2.1/2x3/16 | Brace | No Messages | 0.075116 | PMM |
| 1624 | L 2.1/2x3/16 | Brace | No Messages | 0.142994 | PMM |
| 1625 | L 2.1/2x3/16 | Brace | No Messages | 0.110257 | PMM |
| 1626 | L 2.1/2x3/16 | Brace | No Messages | 0.185984 | PMM |
| 1627 | L 2.1/2x3/16 | Brace | No Messages | 0.077955 | PMM |
| 1628 | L 2.1/2x3/16 | Brace | No Messages | 0.147664 | PMM |
| 1629 | L 2 x 3/16" | Brace | No Messages | 0.109604 | PMM |
| 1630 | L 2 x 3/16" | Brace | No Messages | 0.170227 | PMM |
| 1631 | L 2 x 3/16" | Brace | No Messages | 0.053909 | PMM |
| 1632 | L 2 x 3/16" | Brace | No Messages | 0.210545 | PMM |
| 1633 | L 2 x 3/16" | Brace | No Messages | 0.123972 | PMM |
| 1634 | L 2 x 3/16" | Brace | No Messages | 0.107947 | PMM |
| 1635 | L 2 x 3/16" | Brace | No Messages | 0.065659 | PMM |
| 1636 | L 2 x 3/16" | Brace | No Messages | 0.142680 | PMM |
| 1637 | L 2 x 3/16" | Brace | No Messages | 0.124061 | PMM |
| 1638 | L 2 x 3/16" | Brace | No Messages | 0.082227 | PMM |
| 1639 | L 2 x 3/16" | Brace | No Messages | 0.065841 | PMM |
| 1640 | L 2 x 3/16" | Brace | No Messages | 0.117048 | PMM |
| 1641 | L3X3X3/16 | Beam | No Messages | 0.425773 | PMM |
| 1642 | L3X3X3/16 | Beam | No Messages | 0.360476 | PMM |
| 1643 | L3X3X3/16 | Beam | No Messages | 0.128437 | PMM |
| 1644 | L3X3X3/16 | Beam | No Messages | 0.217901 | PMM |
| 1645 | L3X3X3/16 | Beam | No Messages | 0.345620 | PMM |
| 1646 | L3X3X3/16 | Beam | No Messages | 0.290182 | PMM |
| 1647 | L3X3X3/16 | Beam | No Messages | 0.124699 | PMM |
| 1648 | L3X3X3/16 | Beam | No Messages | 0.206552 | PMM |
| 1649 | L3X3X3/16 | Beam | No Messages | 0.378708 | PMM |
| 1650 | L3X3X3/16 | Beam | No Messages | 0.356561 | PMM |
| 1651 | L3X3X3/16 | Beam | No Messages | 0.092602 | PMM |
| 1652 | L3X3X3/16 | Beam | No Messages | 0.150643 | PMM |
| 1653 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.196821 | PMM |
| 1654 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.202044 | PMM |
| 1655 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.527297 | PMM |
| 1656 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.504620 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------------|------------|-------------|----------|-----------|
| 1657 | L 2.1/2x3/16 | Brace | No Messages | 0.116605 | PMM |
| 1658 | L 2.1/2x3/16 | Brace | No Messages | 0.212160 | PMM |
| 1659 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.252930 | PMM |
| 1660 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.243761 | PMM |
| 1661 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.491372 | PMM |
| 1662 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.460330 | PMM |
| 1663 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.257205 | PMM |
| 1664 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.248568 | PMM |
| 1665 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.455023 | PMM |
| 1666 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.425475 | PMM |
| 1675 | L 2 x 3/16" | Brace | No Messages | 0.213050 | PMM |
| 1676 | L 2 x 3/16" | Brace | No Messages | 0.110103 | PMM |
| 1677 | L 2 x 3/16" | Brace | No Messages | 0.270756 | PMM |
| 1678 | L 2 x 3/16" | Brace | No Messages | 0.118438 | PMM |
| 1679 | L 2 x 3/16" | Brace | No Messages | 0.283018 | PMM |
| 1680 | L 2 x 3/16" | Brace | No Messages | 0.114898 | PMM |
| 1681 | L 2 x 3/16" | Brace | No Messages | 0.070753 | PMM |
| 1682 | L 2 x 3/16" | Brace | No Messages | 0.185619 | PMM |
| 1683 | L 2 x 3/16" | Brace | No Messages | 0.073880 | PMM |
| 1684 | L 2 x 3/16" | Brace | No Messages | 0.180215 | PMM |
| 1685 | L 2 x 3/16" | Brace | No Messages | 0.068526 | PMM |
| 1686 | L 2 x 3/16" | Brace | No Messages | 0.138989 | PMM |
| 1687 | L 2 x 3/16" | Brace | No Messages | 0.288350 | PMM |
| 1688 | L 2 x 3/16" | Brace | No Messages | 0.110163 | PMM |
| 1689 | L 2 x 3/16" | Brace | No Messages | 0.068346 | PMM |
| 1690 | L 2 x 3/16" | Brace | No Messages | 0.188919 | PMM |
| 1695 | L 2.1/2x3/16 | Beam | No Messages | 0.073996 | PMM |
| 1696 | L 2.1/2x3/16 | Beam | No Messages | 0.071957 | PMM |
| 1697 | L 2.1/2x3/16 | Beam | No Messages | 0.030523 | PMM |
| 1698 | L 2.1/2x3/16 | Beam | No Messages | 0.063533 | PMM |
| 1703 | L 2.1/2x3/16 | Beam | No Messages | 0.130106 | PMM |
| 1704 | L 2.1/2x3/16 | Beam | No Messages | 0.104834 | PMM |
| 1705 | L 2.1/2x3/16 | Beam | No Messages | 0.087176 | PMM |
| 1706 | L 2.1/2x3/16 | Beam | No Messages | 0.144643 | PMM |
| 1711 | L 2.1/2x3/16 | Beam | No Messages | 0.124297 | PMM |
| 1712 | L 2.1/2x3/16 | Beam | No Messages | 0.094113 | PMM |
| 1713 | L 2.1/2x3/16 | Beam | No Messages | 0.095167 | PMM |
| 1714 | L 2.1/2x3/16 | Beam | No Messages | 0.145154 | PMM |
| 1723 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.188247 | PMM |
| 1724 | L 3 x 1/4 + L 3x1/4" | Brace | No Messages | 0.186571 | PMM |
| 1725 | L 2.1/2x3/16 | Beam | No Messages | 0.350348 | PMM |
| 1726 | L 2.1/2x3/16 | Beam | No Messages | 0.130777 | PMM |
| 1727 | L 2.1/2x3/16 | Beam | No Messages | 0.277600 | PMM |
| 1728 | L 2.1/2x3/16 | Beam | No Messages | 0.110957 | PMM |
| 1729 | L 2.1/2x3/16 | Beam | No Messages | 0.237955 | PMM |
| 1730 | L 2.1/2x3/16 | Beam | No Messages | 0.075180 | PMM |
| 1731 | L 2.1/2x3/16 | Beam | No Messages | 0.067535 | PMM |
| 1732 | L 2.1/2x3/16 | Beam | No Messages | 0.043427 | PMM |
| 1737 | L 1.1/2 x 1/8" | Beam | No Messages | 0.585808 | PMM |
| 1738 | L 1.1/2 x 1/8" | Beam | No Messages | 0.067673 | PMM |
| 1743 | L 1.1/2 x 1/8" | Beam | No Messages | 0.423063 | PMM |
| 1744 | L 1.1/2 x 1/8" | Beam | No Messages | 0.072287 | PMM |
| 1749 | L 1.1/2 x 1/8" | Beam | No Messages | 0.303385 | PMM |


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| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|----------------|------------|-------------|----------|-----------|
| 1750 | L 1.1/2 x 1/8" | Beam | No Messages | 0.043980 | PMM |
| 1755 | L 1.1/2 x 1/8" | Beam | No Messages | 0.088940 | PMM |
| 1756 | L 1.1/2 x 1/8" | Beam | No Messages | 0.022039 | PMM |
| 1761 | L 1.1/2 x 1/8" | Beam | No Messages | 0.052673 | PMM |
| 1762 | L 1.1/2 x 1/8" | Beam | No Messages | 0.016245 | PMM |
| 1763 | L 2.1/2x3/16 | Beam | No Messages | 0.342412 | PMM |
| 1764 | L 2.1/2x3/16 | Beam | No Messages | 0.131176 | PMM |
| 1765 | L 2.1/2x3/16 | Beam | No Messages | 0.271258 | PMM |
| 1766 | L 2.1/2x3/16 | Beam | No Messages | 0.112757 | PMM |
| 1767 | L 2.1/2x3/16 | Beam | No Messages | 0.236096 | PMM |
| 1768 | L 2.1/2x3/16 | Beam | No Messages | 0.076737 | PMM |
| 1769 | L 2.1/2x3/16 | Beam | No Messages | 0.065670 | PMM |
| 1770 | L 2.1/2x3/16 | Beam | No Messages | 0.044038 | PMM |
| 1775 | L 1.1/2 x 1/8" | Beam | No Messages | 0.372245 | PMM |
| 1776 | L 1.1/2 x 1/8" | Beam | No Messages | 0.059931 | PMM |
| 1781 | L 1.1/2 x 1/8" | Beam | No Messages | 0.112298 | PMM |
| 1782 | L 1.1/2 x 1/8" | Beam | No Messages | 0.058995 | PMM |
| 1787 | L 1.1/2 x 1/8" | Beam | No Messages | 0.124608 | PMM |
| 1788 | L 1.1/2 x 1/8" | Beam | No Messages | 0.042571 | PMM |
| 1793 | L 1.1/2 x 1/8" | Beam | No Messages | 0.077631 | PMM |
| 1794 | L 1.1/2 x 1/8" | Beam | No Messages | 0.020534 | PMM |
| 1799 | L 1.1/2 x 1/8" | Beam | No Messages | 0.053525 | PMM |
| 1800 | L 1.1/2 x 1/8" | Beam | No Messages | 0.015767 | PMM |
| 1801 | L 2.1/2x3/16 | Beam | No Messages | 0.117038 | PMM |
| 1802 | L 2.1/2x3/16 | Beam | No Messages | 0.154912 | PMM |
| 1803 | L 2.1/2x3/16 | Beam | No Messages | 0.084796 | PMM |
| 1804 | L 2.1/2x3/16 | Beam | No Messages | 0.119085 | PMM |
| 1805 | L 2.1/2x3/16 | Beam | No Messages | 0.068995 | PMM |
| 1806 | L 2.1/2x3/16 | Beam | No Messages | 0.091102 | PMM |
| 1807 | L 2.1/2x3/16 | Beam | No Messages | 0.034420 | PMM |
| 1808 | L 2.1/2x3/16 | Beam | No Messages | 0.049641 | PMM |
| 1813 | L 1.1/2 x 1/8" | Beam | No Messages | 0.850117 | PMM |
| 1814 | L 1.1/2 x 1/8" | Beam | No Messages | 0.060510 | PMM |
| 1819 | L 1.1/2 x 1/8" | Beam | No Messages | 0.432748 | PMM |
| 1820 | L 1.1/2 x 1/8" | Beam | No Messages | 0.050192 | PMM |
| 1825 | L 1.1/2 x 1/8" | Beam | No Messages | 0.292749 | PMM |
| 1826 | L 1.1/2 x 1/8" | Beam | No Messages | 0.039151 | PMM |
| 1831 | L 1.1/2 x 1/8" | Beam | No Messages | 0.080013 | PMM |
| 1832 | L 1.1/2 x 1/8" | Beam | No Messages | 0.019191 | PMM |
| 1837 | L 1.1/2 x 1/8" | Beam | No Messages | 0.036198 | PMM |
| 1838 | L 1.1/2 x 1/8" | Beam | No Messages | 0.011313 | PMM |
| 1839 | L 2.1/2x3/16 | Beam | No Messages | 0.134397 | PMM |
| 1840 | L 2.1/2x3/16 | Beam | No Messages | 0.088672 | PMM |
| 1841 | L 2.1/2x3/16 | Beam | No Messages | 0.321133 | PMM |
| 1842 | L 2.1/2x3/16 | Beam | No Messages | 0.107766 | PMM |
| 1843 | L 2.1/2x3/16 | Beam | No Messages | 0.248746 | PMM |
| 1844 | L 2.1/2x3/16 | Beam | No Messages | 0.078894 | PMM |
| 1845 | L 2.1/2x3/16 | Beam | No Messages | 0.103694 | PMM |
| 1846 | L 2.1/2x3/16 | Beam | No Messages | 0.044147 | PMM |
| 1847 | L 2.1/2x3/16 | Beam | No Messages | 0.052427 | PMM |
| 1852 | L 1.1/2 x 1/8" | Beam | No Messages | 0.115850 | PMM |
| 1853 | L 1.1/2 x 1/8" | Beam | No Messages | 0.049027 | PMM |
| 1858 | L 1.1/2 x 1/8" | Beam | No Messages | 0.089065 | PMM |


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| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|-----------------|------------|------------------------------|----------|-----------|
| 1859 | L 1.1/2 x 1/8" | Beam | No Messages | 0.046724 | PMM |
| 1864 | L 1.1/2 x 1/8" | Beam | No Messages | 0.074153 | PMM |
| 1865 | L 1.1/2 x 1/8" | Beam | No Messages | 0.033695 | PMM |
| 1870 | L 1.1/2 x 1/8" | Beam | No Messages | 0.041999 | PMM |
| 1871 | L 1.1/2 x 1/8" | Beam | No Messages | 0.017159 | PMM |
| 1876 | L 1.1/2 x 1/8" | Beam | No Messages | 0.042058 | PMM |
| 1877 | L 1.1/2 x 1/8" | Beam | No Messages | 0.015838 | PMM |
| 1878 | L 1.3/4 x 3/16" | Beam | No Messages | 0.049010 | PMM |
| 1879 | L 1.3/4 x 3/16" | Beam | See WarnMsg | 0.081896 | PMM |
| 1880 | L 1.3/4 x 3/16" | Beam | No Messages | 0.014400 | PMM |
| 1881 | L 1.3/4 x 3/16" | Beam | No Messages | 0.088602 | PMM |
| 1882 | L 1.3/4 x 3/16" | Beam | No Messages | 0.126047 | PMM |
| 1883 | L 1.3/4 x 3/16" | Beam | No Messages | 0.068190 | PMM |
| 1884 | L 1.3/4 x 3/16" | Beam | No Messages | 0.128405 | PMM |
| 1885 | L 1.3/4 x 3/16" | Beam | No Messages | 0.087945 | PMM |
| 1886 | L 1.3/4 x 3/16" | Beam | No Messages | 0.056006 | PMM |
| 1887 | L 1.3/4 x 3/16" | Beam | No Messages | 0.052408 | PMM |
| 1888 | L 1.3/4 x 3/16" | Beam | No Messages | 0.072528 | PMM |
| 1889 | L 1.3/4 x 3/16" | Beam | No Messages | 0.096364 | PMM |
| 1890 | L 1.3/4 x 3/16" | Beam | No Messages | 0.057446 | PMM |
| 1891 | L 1.3/4 x 3/16" | Beam | No Messages | 0.085236 | PMM |
| 1892 | L 1.3/4 x 3/16" | Beam | No Messages | 0.047824 | PMM |
| 1893 | L 1.3/4 x 3/16" | Beam | No Messages | 0.053784 | PMM |
| 1894 | L 1.3/4 x 3/16" | Beam | No Messages | 0.022881 | PMM |
| 1895 | L 1.3/4 x 3/16" | Beam | No Messages | 0.053297 | PMM |
| 1896 | L 1.3/4 x 3/16" | Beam | No Messages | 0.030757 | PMM |
| 1897 | L 1.3/4 x 3/16" | Beam | No Messages | 0.071366 | PMM |
| 1898 | L 1.3/4 x 3/16" | Beam | No Messages | 0.031409 | PMM |
| 1899 | L 1.3/4 x 3/16" | Beam | No Messages | 0.029274 | PMM |
| 1900 | L 1.3/4 x 3/16" | Beam | No Messages | 0.020816 | PMM |
| 1901 | L 1.3/4 x 3/16" | Beam | No Messages | 0.063267 | PMM |
| 1902 | L 1.3/4 x 3/16" | Beam | No Messages | 0.038367 | PMM |
| 1903 | L 1.3/4 x 3/16" | Beam | No Messages | 0.022693 | PMM |
| 1904 | L 1.3/4 x 3/16" | Beam | No Messages | 0.027644 | PMM |
| 1905 | L 2.1/2x3/16 | Beam | No Messages | 0.795285 | PMM |
| 1906 | L 2.1/2x3/16 | Beam | See ErrMsg | | |
| 1907 | L 2.1/2x3/16 | Beam | No Messages | 0.559544 | PMM |
| 1908 | L 2.1/2x3/16 | Beam | No Messages | 0.405655 | PMM |
| 1909 | L 2.1/2x3/16 | Beam | No Messages | 0.639442 | PMM |
| 1910 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.476338 | PMM |
| 1911 | L 2.1/2x3/16 | Beam | No Messages | 0.471610 | PMM |
| 1912 | L 2.1/2x3/16 | Beam | See ErrMsg and WarnMsg | | |
| 1913 | L 2.1/2x3/16 | Beam | See ErrMsg | | |
| 1914 | L 2.1/2x3/16 | Beam | No Messages | 0.455318 | PMM |
| 1915 | L 2.1/2x3/16 | Beam | See ErrMsg | | |
| 1916 | L 2.1/2x3/16 | Beam | No Messages | 0.403524 | PMM |
| 1917 | L 2.1/2x3/16 | Beam | Overstressed and See WarnMsg | 2.177933 | PMM |
| 1918 | L 2.1/2x3/16 | Beam | See ErrMsg | | |
| 1919 | L 2.1/2x3/16 | Beam | No Messages | 0.805755 | PMM |
| 1920 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.644421 | PMM |
| 1921 | L 2.1/2x3/16 | Beam | No Messages | 0.409775 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|-----------------|------------|---------------------------------|----------|-----------|
| 1922 | L 2.1/2x3/16 | Beam | Overstressed and See WarnMsg | 2.747379 | PMM |
| 1923 | L 2.1/2x3/16 | Beam | See ErrMsg | | |
| 1924 | L 2.1/2x3/16 | Beam | No Messages | 0.442865 | PMM |
| 1925 | L 2.1/2x3/16 | Beam | No Messages | 0.162665 | PMM |
| 1926 | L 2.1/2x3/16 | Beam | Overstressed and See WarnMsg | 1.302448 | PMM |
| 1927 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.691888 | PMM |
| 1928 | L 2.1/2x3/16 | Beam | No Messages | 0.181053 | PMM |
| 1929 | L 2.1/2x3/16 | Beam | No Messages | 0.162978 | PMM |
| 1930 | L 2.1/2x3/16 | Beam | No Messages | 0.142341 | PMM |
| 1931 | L 2.1/2x3/16 | Beam | No Messages | 0.217756 | PMM |
| 1932 | L 2.1/2x3/16 | Beam | No Messages | 0.154405 | PMM |
| 1933 | L 2.1/2x3/16 | Beam | No Messages | 0.140572 | PMM |
| 1934 | L 2.1/2x3/16 | Beam | No Messages | 0.234706 | PMM |
| 1935 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.564480 | PMM |
| 1936 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.333696 | PMM |
| 1937 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.838479 | PMM |
| 1938 | L 2.1/2x3/16 | Beam | Overstressed and See WarnMsg | 1.360471 | PMM |
| 1939 | L 2.1/2x3/16 | Beam | No Messages | 0.200989 | PMM |
| 1940 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.113358 | PMM |
| 1941 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.374145 | PMM |
| 1942 | L 2.1/2x3/16 | Beam | No Messages | 0.244794 | PMM |
| 1943 | L 2.1/2x3/16 | Beam | No Messages | 0.144131 | PMM |
| 1944 | L 2.1/2x3/16 | Beam | No Messages | 0.163026 | PMM |
| 1945 | L 2.1/2x3/16 | Beam | No Messages | 0.197665 | PMM |
| 1946 | L 2.1/2x3/16 | Beam | No Messages | 0.127147 | PMM |
| 1947 | L 2.1/2x3/16 | Beam | No Messages | 0.169376 | PMM |
| 1948 | L 2.1/2x3/16 | Beam | No Messages | 0.151293 | PMM |
| 1949 | L 2.1/2x3/16 | Beam | No Messages | 0.184567 | PMM |
| 1950 | L 1.3/4 x 3/16" | Beam | See ErrMsg and WarnMsg | | |
| 1951 | L 1.3/4 x 3/16" | Beam | Overstressed and See WarnMsg | 1.789658 | PMM |
| 1952 | L 2.1/2x3/16 | Beam | No Messages | 0.145227 | PMM |
| 1953 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.327477 | PMM |
| 1954 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.139096 | PMM |
| 1955 | L 2.1/2x3/16 | Beam | No Messages | 0.134594 | PMM |
| 1956 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.389192 | PMM |
| 1957 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.148277 | PMM |
| 1958 | L 2.1/2x3/16 | Beam | No Messages | 0.155773 | PMM |
| 1959 | L 2.1/2x3/16 | Beam | No Messages | 0.128440 | PMM |
| 1960 | L 2.1/2x3/16 | Beam | No Messages | 0.093643 | PMM |
| 1961 | L 2.1/2x3/16 | Beam | No Messages | 0.167573 | PMM |
| 1962 | L 2.1/2x3/16 | Beam | No Messages | 0.112912 | PMM |
| 1963 | L 2.1/2x3/16 | Beam | No Messages | 0.075130 | PMM |
| 1964 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.147730 | PMM |
| 1965 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.389799 | PMM |
| 1966 | L 2.1/2x3/16 | Beam | No Messages | 0.125204 | PMM |
| 1967 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.100976 | PMM |
| 1968 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.156600 | PMM |
| 1969 | L 2.1/2x3/16 | Beam | No Messages | 0.157732 | PMM |
| 1970 | L 2.1/2x3/16 | Beam | No Messages | 0.071658 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|--------------|------------|-------------|----------|-----------|
| 1971 | L 2.1/2x3/16 | Beam | No Messages | 0.120342 | PMM |
| 1972 | L 2.1/2x3/16 | Beam | No Messages | 0.167994 | PMM |
| 1973 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.102376 | PMM |
| 1974 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.197388 | PMM |
| 1975 | L 2.1/2x3/16 | Beam | No Messages | 0.151492 | PMM |
| 1976 | L 2.1/2x3/16 | Beam | No Messages | 0.067519 | PMM |
| 1977 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.359519 | PMM |
| 1978 | L 2.1/2x3/16 | Beam | No Messages | 0.127261 | PMM |
| 1979 | L 2.1/2x3/16 | Beam | No Messages | 0.133679 | PMM |
| 1980 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.178090 | PMM |
| 1981 | L 2.1/2x3/16 | Beam | No Messages | 0.093375 | PMM |
| 1982 | L 2.1/2x3/16 | Beam | No Messages | 0.175121 | PMM |
| 1983 | L 2.1/2x3/16 | Beam | No Messages | 0.124202 | PMM |
| 1984 | L 2.1/2x3/16 | Beam | No Messages | 0.068386 | PMM |
| 1985 | L 2.1/2x3/16 | Beam | No Messages | 0.144017 | PMM |
| 1986 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.123946 | PMM |
| 1987 | L 2.1/2x3/16 | Beam | No Messages | 0.099338 | PMM |
| 1988 | L 2.1/2x3/16 | Beam | No Messages | 0.132989 | PMM |
| 1989 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.324620 | PMM |
| 1990 | L 2.1/2x3/16 | Beam | No Messages | 0.103964 | PMM |
| 1991 | L 2.1/2x3/16 | Beam | No Messages | 0.072992 | PMM |
| 1992 | L 2.1/2x3/16 | Beam | No Messages | 0.124068 | PMM |
| 1993 | L 2.1/2x3/16 | Beam | No Messages | 0.174032 | PMM |
| 1994 | L 2.1/2x3/16 | Beam | No Messages | 0.091077 | PMM |
| 1995 | L 2.1/2x3/16 | Beam | No Messages | 0.122475 | PMM |
| 1996 | L 2.1/2x3/16 | Beam | No Messages | 0.155730 | PMM |
| 1997 | L 2.1/2x3/16 | Beam | No Messages | 0.123313 | PMM |
| 1998 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.358918 | PMM |
| 1999 | L 2.1/2x3/16 | Beam | No Messages | 0.090871 | PMM |
| 2000 | L 2.1/2x3/16 | Beam | No Messages | 0.106210 | PMM |
| 2001 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.170327 | PMM |
| 2002 | L 2.1/2x3/16 | Beam | No Messages | 0.078879 | PMM |
| 2003 | L 2.1/2x3/16 | Beam | No Messages | 0.069614 | PMM |
| 2004 | L 2.1/2x3/16 | Beam | No Messages | 0.113163 | PMM |
| 2005 | L 2.1/2x3/16 | Beam | No Messages | 0.127102 | PMM |
| 2006 | L 2.1/2x3/16 | Beam | No Messages | 0.096221 | PMM |
| 2007 | L 2.1/2x3/16 | Beam | No Messages | 0.112520 | PMM |
| 2008 | L 2.1/2x3/16 | Beam | No Messages | 0.141267 | PMM |
| 2009 | L 2.1/2x3/16 | Beam | No Messages | 0.097434 | PMM |
| 2010 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.290246 | PMM |
| 2011 | L 2.1/2x3/16 | Beam | No Messages | 0.074102 | PMM |
| 2012 | L 2.1/2x3/16 | Beam | No Messages | 0.128118 | PMM |
| 2013 | L 2.1/2x3/16 | Beam | No Messages | 0.115575 | PMM |
| 2014 | L 2.1/2x3/16 | Beam | No Messages | 0.065120 | PMM |
| 2015 | L 2.1/2x3/16 | Beam | No Messages | 0.122347 | PMM |
| 2016 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.098312 | PMM |
| 2017 | L 2.1/2x3/16 | Beam | No Messages | 0.082904 | PMM |
| 2018 | L 2.1/2x3/16 | Beam | No Messages | 0.047863 | PMM |
| 2019 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.290857 | PMM |
| 2020 | L 2.1/2x3/16 | Beam | No Messages | 0.104085 | PMM |
| 2021 | L 2.1/2x3/16 | Beam | No Messages | 0.119486 | PMM |
| 2022 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.148772 | PMM |
| 2023 | L 2.1/2x3/16 | Beam | No Messages | 0.096695 | PMM |


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| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|--------------|------------|-------------|----------|-----------|
| 2024 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.105739 | PMM |
| 2025 | L 2.1/2x3/16 | Beam | No Messages | 0.112725 | PMM |
| 2026 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.144989 | PMM |
| 2027 | L 2.1/2x3/16 | Beam | No Messages | 0.142772 | PMM |
| 2028 | L 2.1/2x3/16 | Beam | No Messages | 0.060102 | PMM |
| 2029 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.104124 | PMM |
| 2030 | L 2.1/2x3/16 | Beam | No Messages | 0.099310 | PMM |
| 2031 | L 2.1/2x3/16 | Beam | No Messages | 0.057764 | PMM |
| 2032 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.072110 | PMM |
| 2033 | L 2.1/2x3/16 | Beam | No Messages | 0.048380 | PMM |
| 2034 | L 2.1/2x3/16 | Beam | No Messages | 0.049021 | PMM |
| 2035 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.066239 | PMM |
| 2036 | L 2.1/2x3/16 | Beam | No Messages | 0.081601 | PMM |
| 2037 | L 2.1/2x3/16 | Beam | No Messages | 0.073973 | PMM |
| 2038 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.084094 | PMM |
| 2039 | L 2.1/2x3/16 | Beam | No Messages | 0.062397 | PMM |
| 2040 | L 2.1/2x3/16 | Beam | No Messages | 0.090717 | PMM |
| 2041 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.130770 | PMM |
| 2042 | L 2.1/2x3/16 | Beam | No Messages | 0.127040 | PMM |
| 2043 | L 2.1/2x3/16 | Beam | No Messages | 0.076861 | PMM |
| 2044 | L 2.1/2x3/16 | Beam | See WarnMsg | 0.119337 | PMM |
| 2045 | L 2.1/2x3/16 | Beam | No Messages | 0.126196 | PMM |
| 2046 | L 2 x 3/16" | Beam | No Messages | 0.089119 | PMM |
| 2047 | L 2 x 3/16" | Beam | See WarnMsg | 0.117301 | PMM |
| 2048 | L 2 x 3/16" | Beam | No Messages | 0.048548 | PMM |
| 2049 | L 2 x 3/16" | Beam | See WarnMsg | 0.078388 | PMM |
| 2050 | L 2 x 3/16" | Beam | No Messages | 0.062684 | PMM |
| 2051 | L 2 x 3/16" | Beam | No Messages | 0.110806 | PMM |
| 2052 | L 2 x 3/16" | Beam | See WarnMsg | 0.103555 | PMM |
| 2053 | L 2 x 3/16" | Beam | No Messages | 0.058809 | PMM |
| 2054 | L 2 x 3/16" | Beam | No Messages | 0.126868 | PMM |
| 2055 | L 2 x 3/16" | Beam | See WarnMsg | 0.162123 | PMM |
| 2056 | L 2 x 3/16" | Beam | No Messages | 0.075201 | PMM |
| 2057 | L 2 x 3/16" | Beam | See WarnMsg | 0.081341 | PMM |
| 2058 | L 2 x 3/16" | Beam | No Messages | 0.066787 | PMM |
| 2059 | L 2 x 3/16" | Beam | No Messages | 0.085325 | PMM |
| 2060 | L 2 x 3/16" | Beam | See WarnMsg | 0.143265 | PMM |
| 2061 | L 2 x 3/16" | Beam | No Messages | 0.126362 | PMM |
| 2062 | L 2 x 3/16" | Beam | No Messages | 0.078549 | PMM |
| 2063 | L 2 x 3/16" | Beam | See WarnMsg | 0.131946 | PMM |
| 2064 | L 2 x 3/16" | Beam | No Messages | 0.124412 | PMM |
| 2065 | L 2 x 3/16" | Beam | No Messages | 0.047775 | PMM |
| 2066 | L 2 x 3/16" | Beam | See WarnMsg | 0.065528 | PMM |
| 2067 | L 2 x 3/16" | Beam | No Messages | 0.070634 | PMM |
| 2068 | L 2 x 3/16" | Beam | No Messages | 0.082324 | PMM |
| 2069 | L 2 x 3/16" | Beam | See WarnMsg | 0.084675 | PMM |
| 2070 | L 2 x 3/16" | Beam | No Messages | 0.045302 | PMM |
| 2071 | L 2 x 3/16" | Beam | See WarnMsg | 0.056655 | PMM |
| 2072 | L 2 x 3/16" | Beam | No Messages | 0.041671 | PMM |
| 2073 | L 2 x 3/16" | Beam | No Messages | 0.095598 | PMM |
| 2074 | L 2 x 3/16" | Beam | See WarnMsg | 0.086546 | PMM |
| 2075 | L 2 x 3/16" | Beam | No Messages | 0.042793 | PMM |
| 2076 | L 2 x 3/16" | Beam | No Messages | 0.114907 | PMM |


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| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|-------------|------------|-------------|----------|-----------|
| 2077 | L 2 x 3/16" | Beam | See WarnMsg | 0.131533 | PMM |
| 2078 | L 2 x 3/16" | Beam | No Messages | 0.073607 | PMM |
| 2079 | L 2 x 3/16" | Beam | See WarnMsg | 0.073559 | PMM |
| 2080 | L 2 x 3/16" | Beam | No Messages | 0.031494 | PMM |
| 2081 | L 2 x 3/16" | Beam | No Messages | 0.082752 | PMM |
| 2082 | L 2 x 3/16" | Beam | See WarnMsg | 0.133626 | PMM |
| 2083 | L 2 x 3/16" | Beam | No Messages | 0.113640 | PMM |
| 2084 | L 2 x 3/16" | Beam | No Messages | 0.064770 | PMM |
| 2085 | L 2 x 3/16" | Beam | See WarnMsg | 0.118412 | PMM |
| 2086 | L 2 x 3/16" | Beam | No Messages | 0.112983 | PMM |
| 2087 | L 2 x 3/16" | Beam | No Messages | 0.034205 | PMM |
| 2088 | L 2 x 3/16" | Beam | See WarnMsg | 0.055698 | PMM |
| 2089 | L 2 x 3/16" | Beam | No Messages | 0.071229 | PMM |
| 2090 | L 2 x 3/16" | Beam | No Messages | 0.058178 | PMM |
| 2091 | L 2 x 3/16" | Beam | See WarnMsg | 0.079006 | PMM |
| 2092 | L 2 x 3/16" | Beam | No Messages | 0.036085 | PMM |
| 2093 | L 2 x 3/16" | Beam | No Messages | 0.045480 | PMM |
| 2094 | L 2 x 3/16" | Beam | No Messages | 0.032593 | PMM |
| 2095 | L 2 x 3/16" | Beam | No Messages | 0.080249 | PMM |
| 2096 | L 2 x 3/16" | Beam | No Messages | 0.059035 | PMM |
| 2097 | L 2 x 3/16" | Beam | No Messages | 0.035877 | PMM |
| 2098 | L 2 x 3/16" | Beam | No Messages | 0.093676 | PMM |
| 2099 | L 2 x 3/16" | Beam | No Messages | 0.100467 | PMM |
| 2100 | L 2 x 3/16" | Beam | No Messages | 0.060764 | PMM |
| 2101 | L 2 x 3/16" | Beam | No Messages | 0.045188 | PMM |
| 2102 | L 2 x 3/16" | Beam | No Messages | 0.051004 | PMM |
| 2103 | L 2 x 3/16" | Beam | No Messages | 0.033463 | PMM |
| 2104 | L 2 x 3/16" | Beam | No Messages | 0.062129 | PMM |
| 2105 | L 2 x 3/16" | Beam | No Messages | 0.100984 | PMM |
| 2106 | L 2 x 3/16" | Beam | No Messages | 0.092686 | PMM |
| 2107 | L 2 x 3/16" | Beam | No Messages | 0.050231 | PMM |
| 2108 | L 2 x 3/16" | Beam | No Messages | 0.085675 | PMM |
| 2109 | L 2 x 3/16" | Beam | No Messages | 0.093471 | PMM |
| 2110 | L 2 x 3/16" | Beam | No Messages | 0.027553 | PMM |
| 2111 | L 2 x 3/16" | Beam | No Messages | 0.040977 | PMM |
| 2112 | L 2 x 3/16" | Beam | No Messages | 0.046420 | PMM |
| 2113 | L 2 x 3/16" | Beam | No Messages | 0.046681 | PMM |
| 2114 | L 2 x 3/16" | Beam | See WarnMsg | 0.048879 | PMM |
| 2115 | L 2 x 3/16" | Beam | No Messages | 0.063955 | PMM |
| 2116 | L 2 x 3/16" | Beam | No Messages | 0.040646 | PMM |
| 2117 | L 2 x 3/16" | Beam | No Messages | 0.033346 | PMM |
| 2118 | L 2 x 3/16" | Beam | No Messages | 0.061318 | PMM |
| 2119 | L 2 x 3/16" | Beam | No Messages | 0.042780 | PMM |
| 2120 | L 2 x 3/16" | Beam | No Messages | 0.044147 | PMM |
| 2121 | L 2 x 3/16" | Beam | No Messages | 0.072515 | PMM |
| 2122 | L 2 x 3/16" | Beam | No Messages | 0.091839 | PMM |
| 2123 | L 2 x 3/16" | Beam | See WarnMsg | 0.049146 | PMM |
| 2124 | L 2 x 3/16" | Beam | No Messages | 0.035210 | PMM |
| 2125 | L 2 x 3/16" | Beam | No Messages | 0.052333 | PMM |
| 2126 | L 2 x 3/16" | Beam | No Messages | 0.087357 | PMM |
| 2127 | L 2 x 3/16" | Beam | No Messages | 0.071750 | PMM |
| 2128 | L 2 x 3/16" | Beam | No Messages | 0.042404 | PMM |
| 2129 | L 2 x 3/16" | Beam | No Messages | 0.071116 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|-----------------|------------|-------------|----------|-----------|
| 2130 | L 2 x 3/16" | Beam | No Messages | 0.073696 | PMM |
| 2131 | L 2 x 3/16" | Beam | No Messages | 0.021938 | PMM |
| 2132 | L 2 x 3/16" | Beam | No Messages | 0.034468 | PMM |
| 2133 | L 2 x 3/16" | Beam | No Messages | 0.067556 | PMM |
| 2134 | L 1.3/4 x 3/16" | Beam | No Messages | 0.031479 | PMM |
| 2135 | L 1.3/4 x 3/16" | Beam | No Messages | 0.039346 | PMM |
| 2136 | L 1.3/4 x 3/16" | Beam | No Messages | 0.038121 | PMM |
| 2137 | L 1.3/4 x 3/16" | Beam | No Messages | 0.030908 | PMM |
| 2138 | L 1.3/4 x 3/16" | Beam | No Messages | 0.029033 | PMM |
| 2139 | L 1.3/4 x 3/16" | Beam | No Messages | 0.027933 | PMM |
| 2140 | L 1.3/4 x 3/16" | Beam | No Messages | 0.033651 | PMM |
| 2141 | L 1.3/4 x 3/16" | Beam | No Messages | 0.032256 | PMM |
| 2142 | L 1.3/4 x 3/16" | Beam | No Messages | 0.020399 | PMM |
| 2143 | L 1.3/4 x 3/16" | Beam | No Messages | 0.034146 | PMM |
| 2144 | L 1.3/4 x 3/16" | Beam | No Messages | 0.039401 | PMM |
| 2145 | L 1.3/4 x 3/16" | Beam | No Messages | 0.037956 | PMM |
| 2146 | L 1.3/4 x 3/16" | Beam | No Messages | 0.038395 | PMM |
| 2147 | L 1.3/4 x 3/16" | Beam | No Messages | 0.039742 | PMM |
| 2148 | L 1.3/4 x 3/16" | Beam | No Messages | 0.029194 | PMM |
| 2149 | L 1.3/4 x 3/16" | Beam | No Messages | 0.039140 | PMM |
| 2150 | L 1.3/4 x 3/16" | Beam | No Messages | 0.040636 | PMM |
| 2151 | L 1.3/4 x 3/16" | Beam | No Messages | 0.031732 | PMM |
| 2152 | L 1.3/4 x 3/16" | Beam | No Messages | 0.030902 | PMM |
| 2153 | L 1.3/4 x 3/16" | Beam | No Messages | 0.035882 | PMM |
| 2154 | L 1.3/4 x 3/16" | Beam | No Messages | 0.034745 | PMM |
| 2155 | L 1.3/4 x 3/16" | Beam | No Messages | 0.022800 | PMM |
| 2156 | L 1.3/4 x 3/16" | Beam | No Messages | 0.029437 | PMM |
| 2157 | L 1.3/4 x 3/16" | Beam | No Messages | 0.030827 | PMM |
| 2158 | L 1.3/4 x 3/16" | Beam | No Messages | 0.029449 | PMM |
| 2159 | L 1.3/4 x 3/16" | Beam | No Messages | 0.024437 | PMM |
| 2160 | L 1.3/4 x 3/16" | Beam | No Messages | 0.013430 | PMM |
| 2161 | L 1.3/4 x 3/16" | Beam | No Messages | 0.052652 | PMM |
| 2162 | L 1.3/4 x 3/16" | Beam | No Messages | 0.040671 | PMM |
| 2163 | L 1.3/4 x 3/16" | Beam | No Messages | 0.027844 | PMM |
| 2164 | L 1.3/4 x 3/16" | Beam | No Messages | 0.062193 | PMM |
| 2165 | L 1.3/4 x 3/16" | Beam | No Messages | 0.035223 | PMM |
| 2166 | L 1.3/4 x 3/16" | Beam | No Messages | 0.030818 | PMM |
| 2167 | L 1.3/4 x 3/16" | Beam | No Messages | 0.023229 | PMM |
| 2168 | L 1.3/4 x 3/16" | Beam | No Messages | 0.025995 | PMM |
| 2169 | L 1.3/4 x 3/16" | Beam | No Messages | 0.022820 | PMM |
| 2170 | L 1.3/4 x 3/16" | Beam | No Messages | 0.023052 | PMM |
| 2171 | L 1.3/4 x 3/16" | Beam | No Messages | 0.035444 | PMM |
| 2172 | L 1.3/4 x 3/16" | Beam | No Messages | 0.031164 | PMM |
| 2173 | L 1.3/4 x 3/16" | Beam | No Messages | 0.027964 | PMM |
| 2174 | L 1.3/4 x 3/16" | Beam | No Messages | 0.024213 | PMM |
| 2175 | L 1.3/4 x 3/16" | Beam | No Messages | 0.016083 | PMM |
| 2176 | L 1.3/4 x 3/16" | Beam | No Messages | 0.046714 | PMM |
| 2177 | L 1.3/4 x 3/16" | Beam | No Messages | 0.023617 | PMM |
| 2178 | L 1.3/4 x 3/16" | Beam | No Messages | 0.017153 | PMM |
| 2179 | L 1.3/4 x 3/16" | Beam | No Messages | 0.050229 | PMM |
| 2180 | L 1.3/4 x 3/16" | Beam | No Messages | 0.049233 | PMM |
| 2181 | L 1.3/4 x 3/16" | Beam | No Messages | 0.035979 | PMM |
| 2182 | L 1.3/4 x 3/16" | Beam | No Messages | 0.022117 | PMM |


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Table: Steel Design 1 - Summary Data - AISC-LRFD99, Part 1 of 2

| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|-----------------|------------|--------------|----------|-----------|
| 2183 | L 1.3/4 x 3/16" | Beam | No Messages | 0.025931 | PMM |
| 2184 | L 1.3/4 x 3/16" | Beam | No Messages | 0.023339 | PMM |
| 2185 | L 1.3/4 x 3/16" | Beam | No Messages | 0.038257 | PMM |
| 2186 | L 1.3/4 x 3/16" | Beam | No Messages | 0.058350 | PMM |
| 2187 | L 1.3/4 x 3/16" | Beam | No Messages | 0.050109 | PMM |
| 2188 | L 1.3/4 x 3/16" | Beam | No Messages | 0.049886 | PMM |
| 2189 | L 1.3/4 x 3/16" | Beam | No Messages | 0.062061 | PMM |
| 2190 | L 1.3/4 x 3/16" | Beam | No Messages | 0.027966 | PMM |
| 2191 | L 1.3/4 x 3/16" | Beam | No Messages | 0.039799 | PMM |
| 2192 | L 1.3/4 x 3/16" | Beam | No Messages | 0.022107 | PMM |
| 2193 | L 1.3/4 x 3/16" | Beam | No Messages | 0.037189 | PMM |
| 2194 | L 1.3/4 x 3/16" | Beam | No Messages | 0.029853 | PMM |
| 2195 | L 1.3/4 x 3/16" | Beam | No Messages | 0.023992 | PMM |
| 2196 | L 1.3/4 x 3/16" | Beam | No Messages | 0.029513 | PMM |
| 2197 | L 1.3/4 x 3/16" | Beam | No Messages | 0.015990 | PMM |
| 2198 | L 1.3/4 x 3/16" | Beam | No Messages | 0.047617 | PMM |
| 2199 | L 1.3/4 x 3/16" | Beam | No Messages | 0.024839 | PMM |
| 2200 | L 1.3/4 x 3/16" | Beam | No Messages | 0.014383 | PMM |
| 2201 | L 1.3/4 x 3/16" | Beam | No Messages | 0.052034 | PMM |
| 2202 | L 1.3/4 x 3/16" | Beam | No Messages | 0.041668 | PMM |
| 2 | L3X3X3/16 | Brace | No Messages | 0.270546 | PMM |
| 3 | L3X3X3/16 | Brace | No Messages | 0.255083 | PMM |
| 4 | L3X3X3/16 | Brace | Overstressed | 1.267591 | PMM |
| 5 | L3X3X3/16 | Brace | No Messages | 0.265461 | PMM |
| 7 | L3X3X3/16 | Brace | See ErrMsg | | |
| 8 | L3X3X3/16 | Brace | No Messages | 0.386163 | PMM |
| 9 | L3X3X3/16 | Brace | See ErrMsg | | |
| 10 | L3X3X3/16 | Brace | Overstressed | 1.371280 | PMM |
| 11 | L3X3X3/16 | Brace | No Messages | 0.030352 | PMM |
| 12 | L3X3X3/16 | Brace | No Messages | 0.027923 | PMM |
| 13 | L3X3X3/16 | Brace | No Messages | 0.275593 | PMM |
| 14 | L3X3X3/16 | Brace | No Messages | 0.026494 | PMM |
| 15 | L3X3X3/16 | Brace | No Messages | 0.240561 | PMM |
| 16 | L3X3X3/16 | Brace | No Messages | 0.033022 | PMM |
| 17 | L3X3X3/16 | Brace | No Messages | 0.287980 | PMM |
| 18 | L3X3X3/16 | Brace | No Messages | 0.210397 | PMM |
| 19 | L3X3X3/16 | Brace | No Messages | 0.048603 | PMM |
| 20 | L3X3X3/16 | Brace | No Messages | 0.042909 | PMM |
| 21 | L3X3X3/16 | Brace | No Messages | 0.476716 | PMM |
| 23 | L3X3X3/16 | Brace | No Messages | 0.042022 | PMM |
| 24 | L3X3X3/16 | Brace | No Messages | 0.403933 | PMM |
| 26 | L3X3X3/16 | Brace | No Messages | 0.050768 | PMM |
| 29 | L3X3X3/16 | Brace | No Messages | 0.499251 | PMM |
| 32 | L3X3X3/16 | Brace | No Messages | 0.391222 | PMM |
| 33 | L3X3X3/16 | Brace | No Messages | 0.105415 | PMM |
| 35 | L3X3X3/16 | Brace | No Messages | 0.089943 | PMM |
| 36 | L3X3X3/16 | Brace | No Messages | 0.948845 | PMM |
| 37 | L3X3X3/16 | Brace | No Messages | 0.085658 | PMM |
| 42 | L3X3X3/16 | Brace | No Messages | 0.813803 | PMM |
| 43 | L3X3X3/16 | Brace | No Messages | 0.108737 | PMM |
| 46 | L3X3X3/16 | Brace | Overstressed | 0.989380 | PMM |
| 47 | L3X3X3/16 | Brace | No Messages | 0.801660 | PMM |
| 48 | L3X3X3/16 | Brace | No Messages | 0.206744 | PMM |


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| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|------------|------------|---------------------------------|----------|-----------|
| 49 | L3X3X3/16 | Brace | No Messages | 0.105759 | PMM |
| 50 | L3X3X3/16 | Brace | Overstressed | 1.128405 | PMM |
| 51 | L3X3X3/16 | Brace | No Messages | 0.104784 | PMM |
| 52 | L3X3X3/16 | Brace | Overstressed | 0.974355 | PMM |
| 53 | L3X3X3/16 | Brace | No Messages | 0.219280 | PMM |
| 54 | L3X3X3/16 | Brace | Overstressed | 1.186070 | PMM |
| 55 | L3X3X3/16 | Brace | Overstressed | 1.011907 | PMM |
| 56 | L3X3X3/16 | Brace | No Messages | 0.151290 | PMM |
| 57 | L3X3X3/16 | Brace | No Messages | 0.162476 | PMM |
| 58 | L3X3X3/16 | Brace | Overstressed | 1.095918 | PMM |
| 59 | L3X3X3/16 | Brace | No Messages | 0.130005 | PMM |
| 60 | L3X3X3/16 | Brace | Overstressed | 0.951572 | PMM |
| 61 | L3X3X3/16 | Brace | No Messages | 0.161517 | PMM |
| 68 | L3X3X3/16 | Brace | No Messages | 0.851802 | PMM |
| 69 | L3X3X3/16 | Brace | Overstressed | 1.063811 | PMM |
| 70 | L3X3X3/16 | Brace | No Messages | 0.155249 | PMM |
| 71 | L3X3X3/16 | Brace | No Messages | 0.166062 | PMM |
| 72 | L3X3X3/16 | Brace | Overstressed and See WarnMsg | 1.214731 | PMM |
| 73 | L3X3X3/16 | Brace | See WarnMsg | 0.141035 | PMM |
| 74 | L3X3X3/16 | Brace | Overstressed and See WarnMsg | 1.029203 | PMM |
| 75 | L3X3X3/16 | Brace | No Messages | 0.155091 | PMM |
| 77 | L3X3X3/16 | Brace | Overstressed and See WarnMsg | 1.183428 | PMM |
| 78 | L3X3X3/16 | Brace | See WarnMsg | 0.926918 | PMM |
| 79 | L3X3X3/16 | Brace | No Messages | 0.177392 | PMM |
| 80 | L3X3X3/16 | Brace | No Messages | 0.186484 | PMM |
| 81 | L3X3X3/16 | Brace | Overstressed and See WarnMsg | 1.434050 | PMM |
| 82 | L3X3X3/16 | Brace | See WarnMsg | 0.142326 | PMM |
| 83 | L3X3X3/16 | Brace | Overstressed and See WarnMsg | 1.125276 | PMM |
| 84 | L3X3X3/16 | Brace | No Messages | 0.150459 | PMM |
| 85 | L3X3X3/16 | Brace | Overstressed and See WarnMsg | 1.373135 | PMM |
| 88 | L3X3X3/16 | Brace | Overstressed and See WarnMsg | 1.040978 | PMM |
| 89 | L3X3X3/16 | Brace | No Messages | 0.380957 | PMM |
| 92 | L3X3X3/16 | Brace | No Messages | 0.360721 | PMM |
| 96 | L3X3X3/16 | Brace | See ErrMsg and WarnMsg | | |
| 97 | L3X3X3/16 | Brace | Overstressed and See WarnMsg | 1.722712 | PMM |
| 98 | L3X3X3/16 | Brace | See WarnMsg | 0.877170 | PMM |
| 99 | L3X3X3/16 | Brace | No Messages | 0.125753 | PMM |
| 100 | L3X3X3/16 | Brace | See ErrMsg | | |
| 101 | L3X3X3/16 | Brace | See ErrMsg and WarnMsg | | |
| 102 | L3X3X3/16 | Brace | See WarnMsg | 0.484877 | PMM |
| 103 | L3X3X3/16 | Brace | Overstressed and See WarnMsg | 1.286262 | PMM |
| 104 | L3X3X3/16 | Brace | No Messages | 0.256431 | PMM |
| 107 | L3X3X3/16 | Brace | See ErrMsg and WarnMsg | | |


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| Frame | DesignSect | DesignType | Status | Ratio | RatioType |
|-------|---------------------|------------|------------------------------|----------|-----------|
| 110 | L3X3X3/16 | Brace | No Messages | 0.288960 | PMM |
| 114 | L3X3X3/16 | Brace | See ErrMsg and WarnMsg | | |
| 115 | L3X3X3/16 | Brace | No Messages | 0.169177 | PMM |
| 116 | L3X3X3/16 | Brace | See WarnMsg | 0.906173 | PMM |
| 6 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.174093 | PMM |
| 76 | L 3x3/16 + L 3x3/16 | Brace | See WarnMsg | 0.184677 | PMM |
| 117 | L 3x3/16 + L 3x3/16 | Brace | See ErrMsg and WarnMsg | | |
| 120 | L 3x3/16 + L 3x3/16 | Brace | See WarnMsg | 0.172864 | PMM |
| 129 | L 3x3/16 + L 3x3/16 | Brace | See ErrMsg and WarnMsg | | |
| 130 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.146353 | PMM |
| 131 | L 3x3/16 + L 3x3/16 | Brace | Overstressed and See WarnMsg | 2.410825 | PMM |
| 132 | L 3x3/16 + L 3x3/16 | Brace | See ErrMsg | | |
| 133 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.177836 | PMM |
| 134 | L 3x3/16 + L 3x3/16 | Brace | See WarnMsg | 0.187379 | PMM |
| 139 | L 3x3/16 + L 3x3/16 | Brace | See ErrMsg and WarnMsg | | |
| 140 | L 3x3/16 + L 3x3/16 | Brace | See WarnMsg | 0.188591 | PMM |
| 141 | L 3x3/16 + L 3x3/16 | Brace | See ErrMsg and WarnMsg | | |
| 142 | L 3x3/16 + L 3x3/16 | Brace | No Messages | 0.161795 | PMM |
| 143 | L 3x3/16 + L 3x3/16 | Brace | See ErrMsg and WarnMsg | | |
| 144 | L 3x3/16 + L 3x3/16 | Brace | See ErrMsg | | |