

FCL

FCL House
Rodney Road, Portsmouth PO4 8SY
Tel: 023 9281 4544
Fax: 023 9281 5004

Scheme:

Bedhampton Arts Centre

Title:

1st Floor Plan showing Beams

Sheet: 1

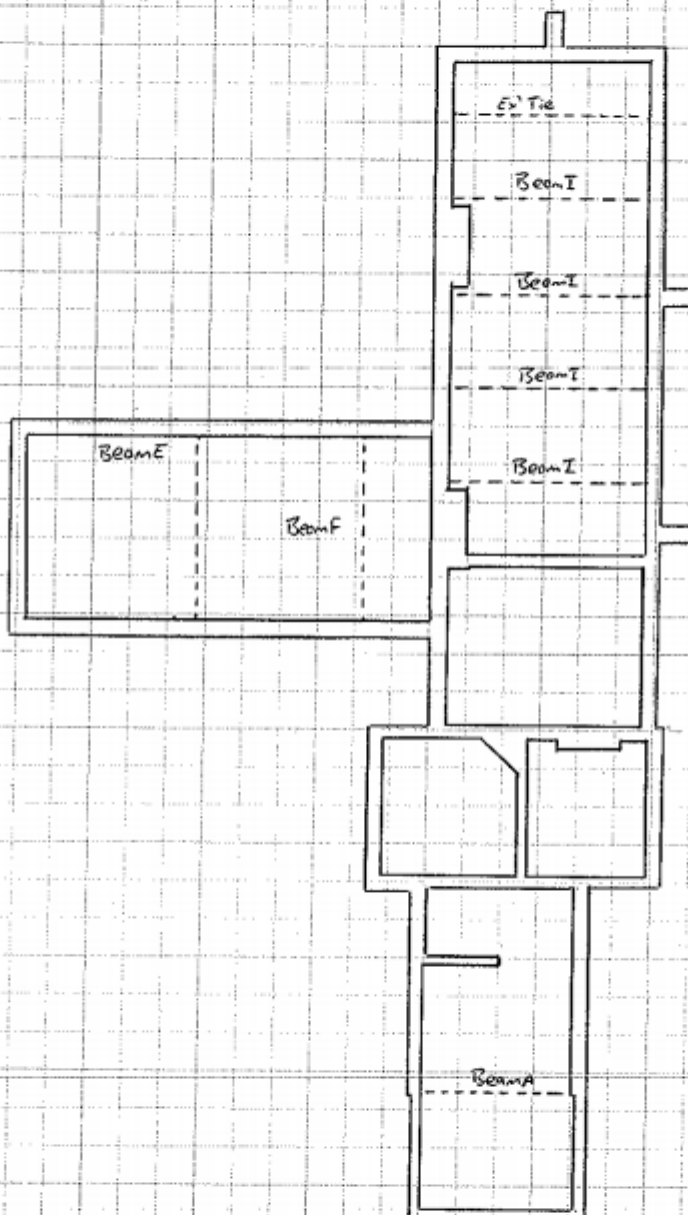
Issue: 1

Job No: 31030

Date:

By: C.C.

Ck:



Where there is significant additional load on existing structural elements, including footings, existing lintels and beams, they should be exposed, inspected and assessed for adequacy of condition and load bearing capacity.

All Structural steelwork to be hot finish, minimum S275 unless otherwise stated.

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Scheme:

Title:

Ground Floor Plan showing Beams

Sheet: 2

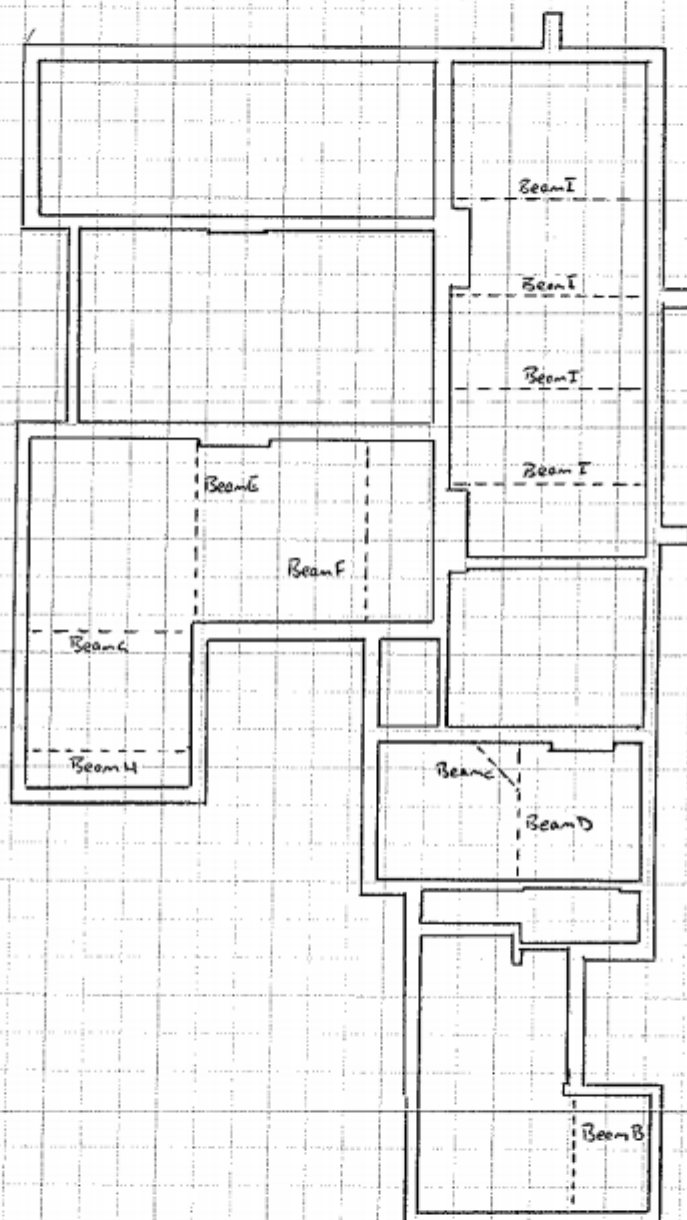
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Scheme:

Plot 3, Bed Hampton Arts Centre

Title:

1st Floor Sketch + Loadings

Sheet: 3

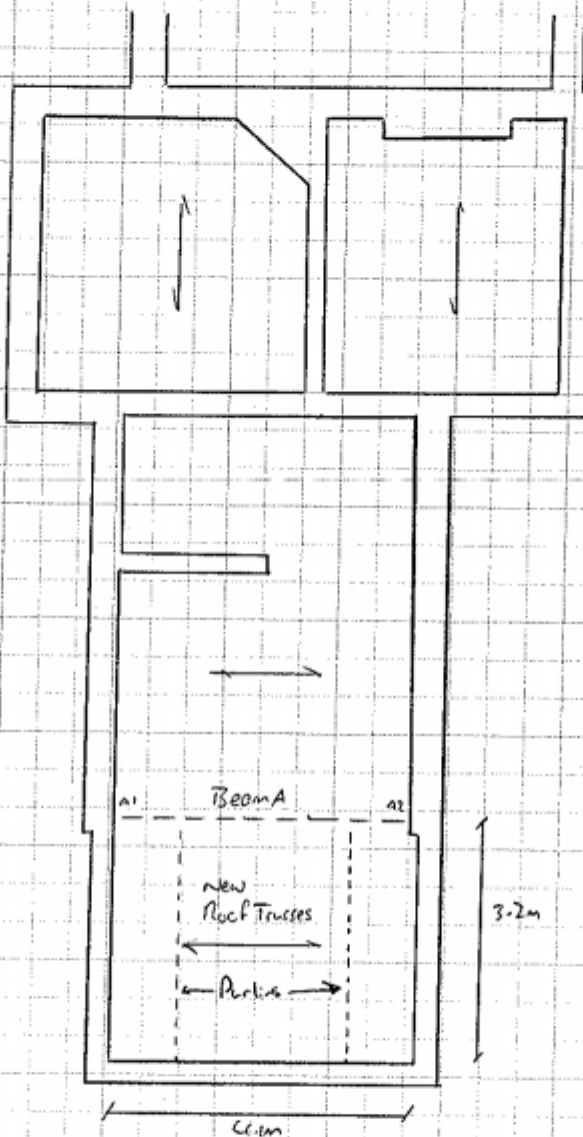
Issue: 1

Job No: 31030

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By: CC

Ck:



Loads (in kg/m^2)

	<u>DL</u>	<u>IL</u>
Pitched Roof	1.0	0.6
Ceiling	0.3	0.25
Masonry Wall	2.7	/

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Scheme:

Plot 3, Beddington Arts Centre

Title:

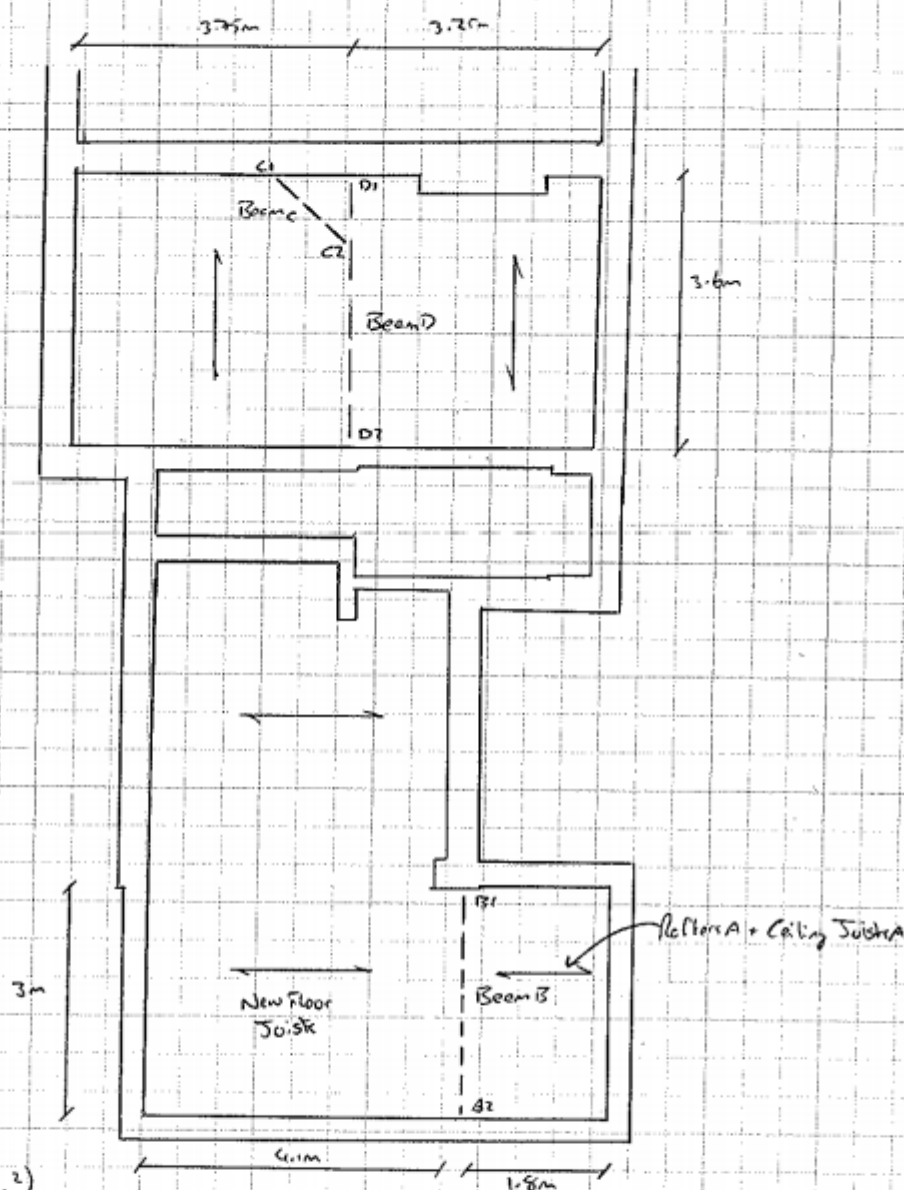
Ground Floor Sketch + Loadings

Sheet: 4 Issue: 1

Job No: 31030

Date:

By: C.C. Ck:



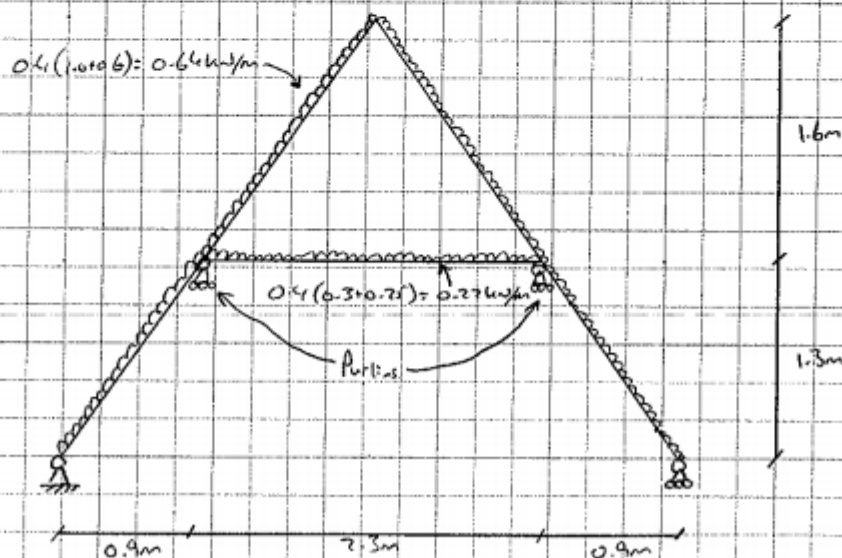
Loads (in kN/m²)

	<u>DL</u>	<u>IL</u>
Pitched Roof	1.0	0.6
Ceiling	0.3	0.75
Domestic Flooring	0.5	1.5
Masonry Wall	2.7	
Party Wall	4.6	

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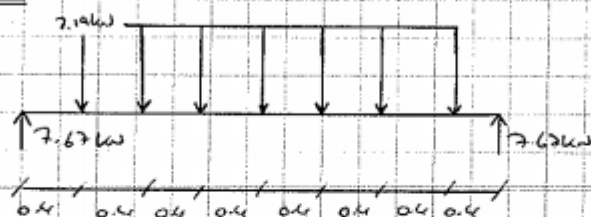
New Roof Trusses



Use 47x120 C24 Timbers at 600 Centres

See attached sheets for Calculations

Purlins - Span 3.2m



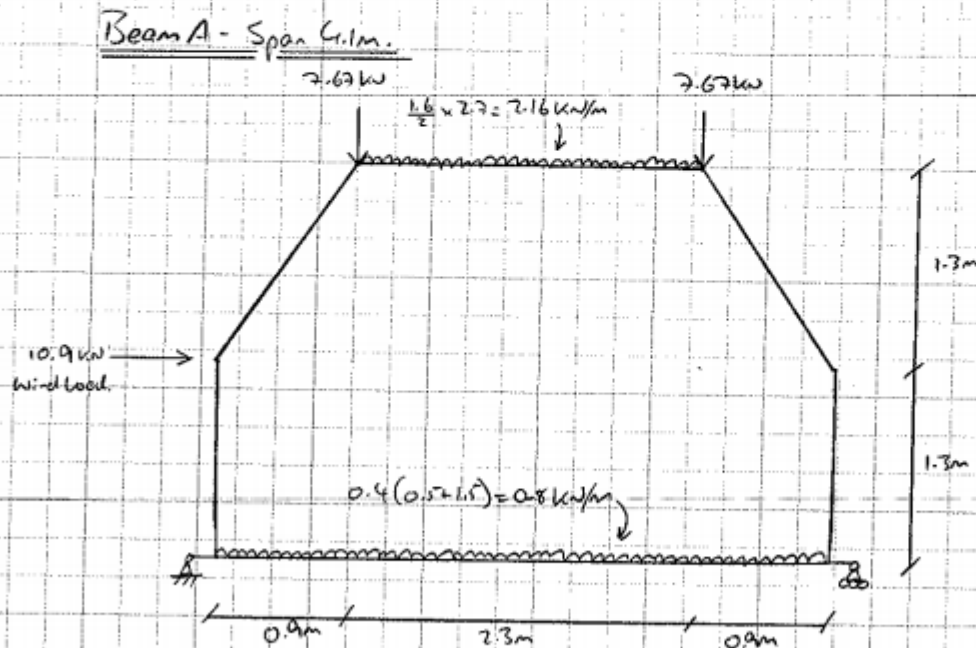
$$M_{max} = (7.67 \times 1.6) - (2.19 \times 1.2) - (2.19 \times 0.8) - (2.19 \times 0.4) = 7 \text{ kNm} \quad \text{Eqn 40C-7} \times 8 = 17.5 \text{ kN}$$

Use 3rd 47x220 C24 Timber

$$\delta = \frac{5 \times 17.5 \times 10^3 \times 3200^3 \times 12}{384 \times 7200 \times 1.2 \times 3 \times 67,270^3} = 6.9 \text{ mm} \quad \text{MC-7.5} \times 47 \times 220^2 \times 3 = 8.5 \text{ kNm}$$

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Wind load = 1kN/m²

Load on Frame = $\frac{5 \times 8.7}{2} \times 1.0 = 10.9 \text{ kN}$

Use 200x200x6.3 SHS Frame on 200x200x6.3 SHS Base Beam

See attached sheets for Celes

Beam B - Span 3m

Approx load = $3 \left(2.5 \times 4.6 + \frac{4.1}{2} (0.5+1.5) + \frac{0.34}{0.4} + \frac{1.8}{2} (1.0+0.6) + \frac{1.8}{2} (0.3+0.3) + 0.4 \right) = 56.4 \text{ kN}$

Max BM = $\frac{56.4 \times 3}{8} = 21.15 \text{ kNm}$

Use 203x203x46 UC with 6mm M/S Plate to top Flange to fit Cavity

$$\delta = \frac{5 \times 56.4 \times 10^3 \times 3000^3}{384 \times 205 \times 10^9 \times 4560 \times 10^9} = 7.1 \text{ mm}$$

$$m_b = \frac{212 \times 497}{10^3} = 105.4 \text{ kNm} \quad (> 21.15 \times 1.5)$$

$$e = 1.2 \times 300 + 2 \times 20 = 400$$

$$\lambda = \frac{400}{5.11} = 78.3$$

$$x = 13.7 \quad p_b = 212$$

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Beam C - Span 1.4m

$$\text{Approx load} = 1.4 (5 \times 2.7 + 0.3) = 19.3 \text{ kN}$$

$$\text{Max BM} = \frac{19.3 \times 1.4}{8} = 3.4 \text{ kNm}$$

Use 152 x 89 x 16 UB

$$\delta = \frac{5 \times 19.3 \times 10^3 \times 1400^3}{384 \times 2.05 \times 10^5 \times 834 \times 10^4} = 0.4 \text{ mm}$$

$$M_b = \frac{187 \times 123}{10^3} = 23 \text{ kNm} \quad (> 3.4 \times 1.5)$$

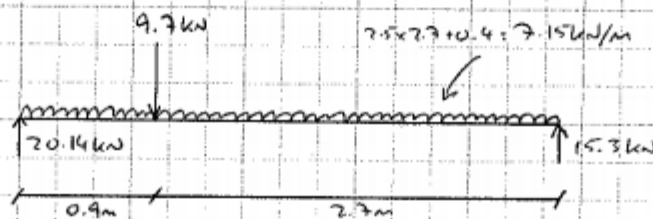
$$L_e = 1.2 \times 140 + 2 \times 15 = 198$$

$$\lambda = \frac{198}{2.10} = 94.3$$

$$x = 19.6$$

$$P_b = 187$$

Beam D - Span 3.6m



$$\text{Max BM} = (15.3 \times 2.14) - \left(\frac{7.15 \times 2.14^2}{2} \right) = 16.37 \text{ kNm}$$

$$\text{Eqv UDL} = \frac{16.37 \times 8}{3.6} = 36.4 \text{ kN}$$

Use 152 x 152 x 30 UC

$$\delta = \frac{5 \times 36.4 \times 10^3 \times 3600^3}{384 \times 2.05 \times 10^5 \times 1740 \times 10^4} = 6.2 \text{ mm}$$

$$M_b = \frac{171 \times 242}{10^3} = 47.2 \text{ kNm} \quad (> 16.37 \times 1.5)$$

$$L_e = 1.2 \times 360 + 2 \times 15 = 462$$

$$\lambda = \frac{462}{3.82} = 120.9$$

$$x = 16.0$$

$$P_b = 171$$

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Scheme:

Plot 3, Bedhampton Arts Centre

Title:

Roofers A, Ceiling Joists A + Podstones

Sheet: 8

Issue: 1

Job No: 31030

Date:

By: C.C

Ck:

Roof Roofs A - Span 1.8m

Approx load - $1.8 (0.4 (1.0 + 0.6)) = 1.15 \text{ kN}$

Max Bm - $\frac{1.15 \times 1.8}{8} = 0.26 \text{ kNm}$

Use 47 x 97 C24 Timbers at 400 Centres

S - $\frac{5 \times 1.15 \times 10^3 \times 1800^3 \times 12}{384 \times 10800 \times 47 \times 97^3} = 2.3 \text{ mm}$

M.C. $\frac{7.5 \times 47 \times 97^3}{6 \times 10^6} = 0.55 \text{ kNm}$

Ceiling Joists A - Span 1.8m

Approx load - $1.8 (0.4 (0.3 + 0.2)) = 0.4 \text{ kN}$

Max Bm - $\frac{0.4 \times 1.8}{8} = 0.09 \text{ kNm}$

Use 47 x 97 C24 Timbers at 400 Centres - 0.4 by insp.

Podstones

At A1 + A2 - Use 300 x 100 x 140 deep Dense Concrete Podstones

At B1 + B2 - Use 300 x 100 x 140 deep Dense Concrete Podstones

At C1 - Use 215 x 100 x 140 deep Dense Concrete Podstone

At D1 + D2 - Use 215 x 100 x 140 deep Dense Concrete Podstones

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Plot 6, Bedhampton Arts Centre

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1st Floor Sketch + Loading.

Sheet: 4

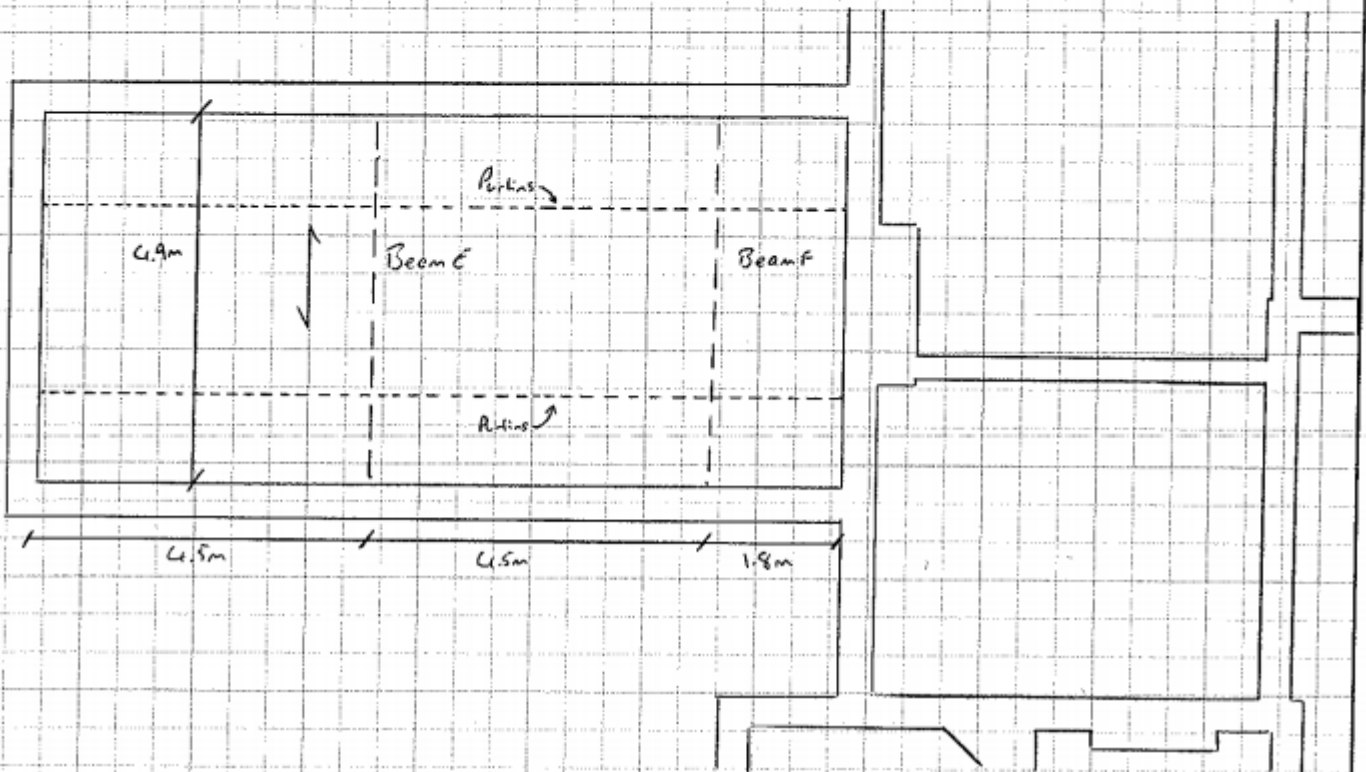
Issue: 1

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Plot G, Bedhampton Arts Centre

Title:

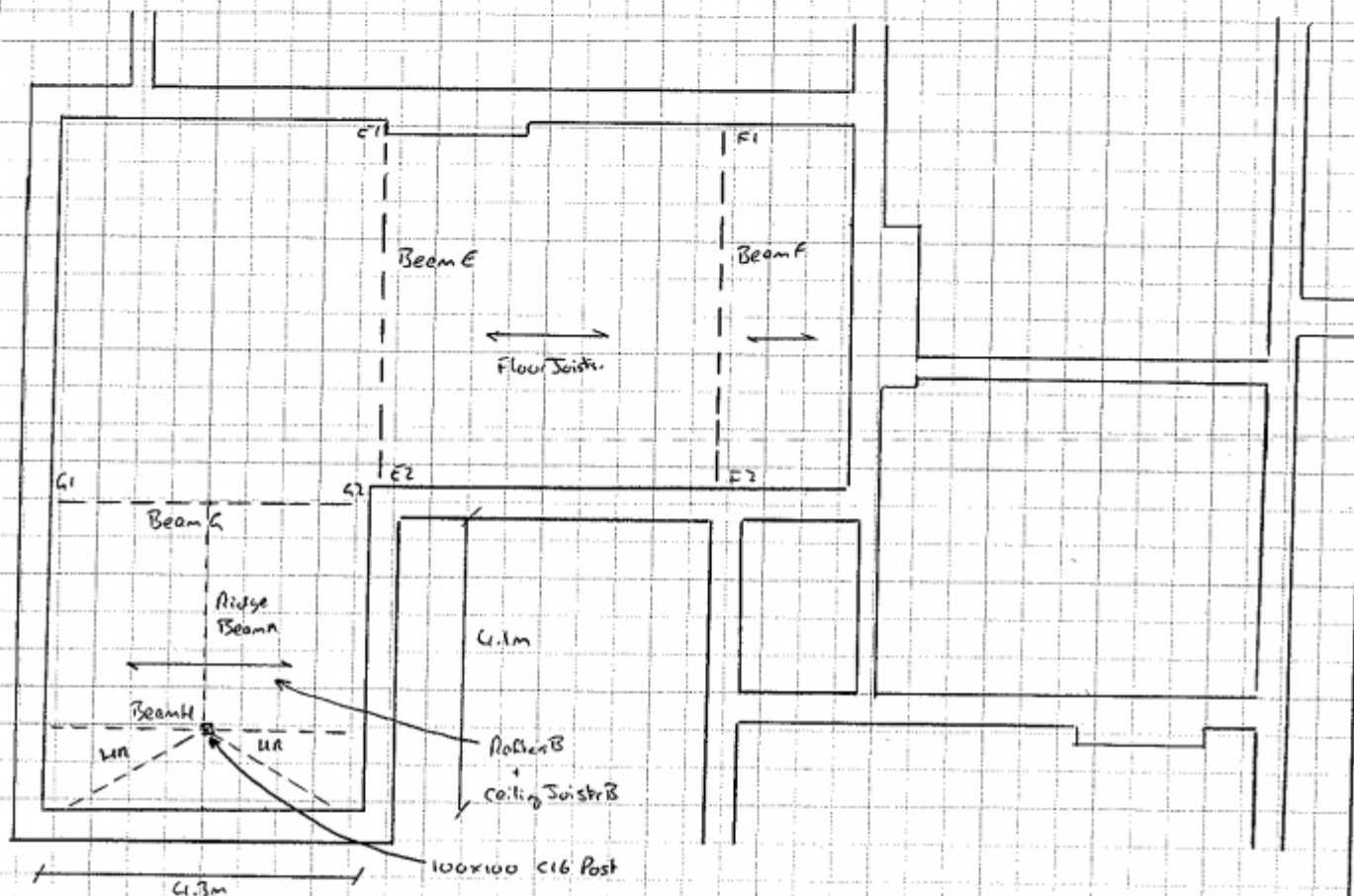
Ground Floor Sketch + Loadings

Sheet: 10 Issue: 1

Job No: 31030

Date:

By: C.C. Ck:



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Scheme:

Plot 4, Bedhampton Arts Centre

Title:

Beam E + Purlins

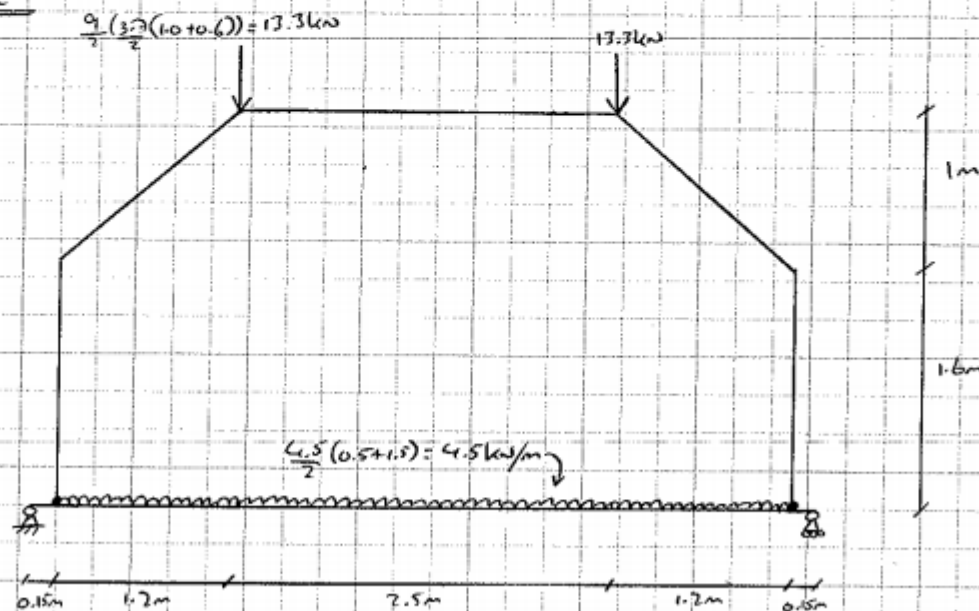
Sheet: 14 Issue: 1

Job No: 31030

Date:

By: C.C. Ck:

Beam E-



Use 150x150x6.3 S45 Frame on 203x203x46 UC Base Beam

See attached sheets for Calculations

Purlins- Max Span 4.5m

Approx load- $4.5 \left(\frac{3.7}{2} (1.0 + 0.6) \right) = 13.3 \text{ kN}$

Max BM- $\frac{13.3 \times 4.5}{8} = 7.5 \text{ kNm}$

Use 3rd 63x220 C24 Timbers

$\delta = \frac{5 \times 13.3 \times 10^3 \times 4500^3 \times 12}{384 \times 7200 \times 121 \times 63 \times 220^3} = 10.8 \text{ mm}$

MC- $\frac{7.5 \times 63 \times 220^2 \times 3}{6 \times 10^6} = 11.4 \text{ kNm}$

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Scheme:

Plot 6, Beclampton Arts Centre

Title:

Beam F

Sheet: 12 Issue: 1

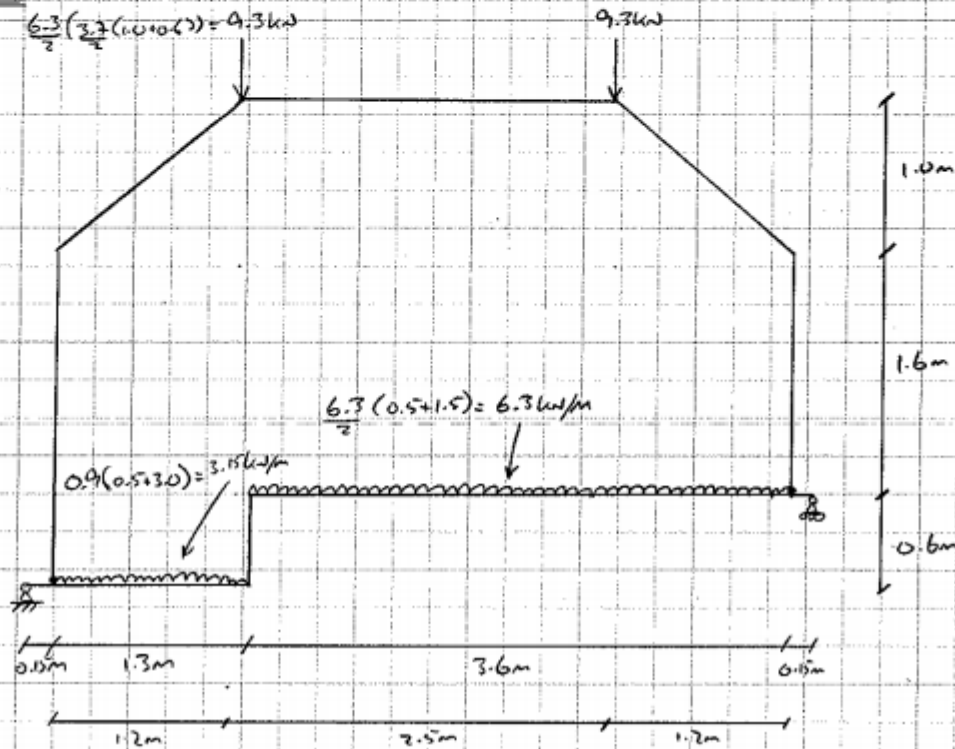
Job No: 31030

Date:

By: C.C.

Ck:

Beam F-



Use 150x150x6.3SHS Frame on 203x203x46UC Base Beam

See attached sheets for Calculations

Where there is significant additional load on existing structural elements, including footings, existing lintels and beams, they should be exposed, inspected and assessed for adequacy of condition and load bearing capacity.

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Roof Rafter B - Span 2.15m

Approx load $= 2.15(0.4(1.0+0.6)) = 1.38 \text{ kN}$

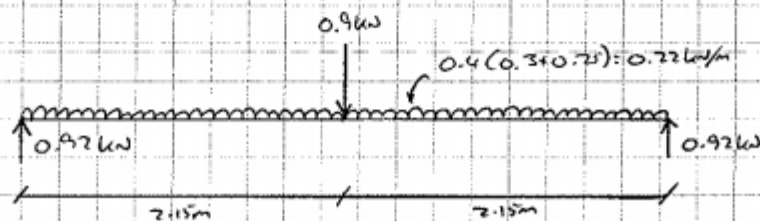
Max BM $= \frac{1.38 \times 2.15}{8} = 0.37 \text{ kNm}$

Use 47x120 C24 Timbers at 400 Centres

$\delta = \frac{5 \times 1.38 \times 10^3 \times 2150^3 \times 12}{384 \times 10800 \times 47 \times 120^3} = 2.4 \text{ mm}$

$MC = \frac{7.5 \times 47 \times 120^2}{6 \times 10^6} = 0.85 \text{ kNm}$

Ceiling Joists B - Span 4.3m



Max BM $= (0.92 \times 2.15) - (0.22 \times \frac{2.15^2}{2}) = 1.47 \text{ kNm}$

Eqv UDL $= \frac{1.47 \times 8}{4.3} = 2.7 \text{ kN}$

Use 47x145 C24 Timbers at 400 Centres

$\delta = \frac{5 \times 2.7 \times 10^3 \times 4300^3 \times 12}{384 \times 10800 \times 47 \times 145^3} = 8.9 \text{ mm}$

$MC = \frac{7.5 \times 47 \times 145^2}{6 \times 10^6} = 2.2 \text{ kNm}$

Hip Rafter - Span 2m

Approx load $= 2(0.5(1.0+0.6)) = 1.6 \text{ kN}$

Max BM $= \frac{1.6 \times 2}{8} = 0.4 \text{ kNm}$

Use 47x120 C24 Timber

$\delta = \frac{5 \times 1.6 \times 10^3 \times 2000^3 \times 12}{384 \times 10800 \times 47 \times 120^3} = 2.3 \text{ mm}$

$MC = 0.85 \text{ kNm} - \text{As Above}$

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Plot 4, Bedhampton Arts Centre

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Ridge Beam A + Beam G

Sheet: 14 Issue: 1

Job No: 31030

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Ridge Beam A - Span 3m

$$\text{Approx load} = 3 \left(\frac{4.3}{2} (1.0 + 0.6) \right) = 10.3 \text{ kN}$$

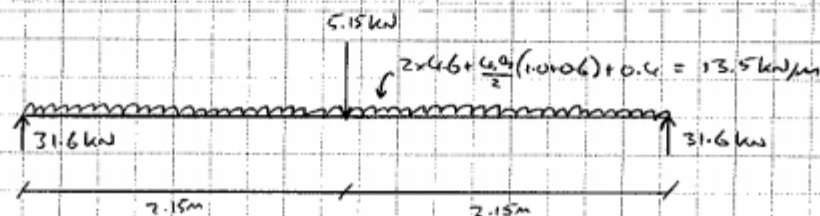
$$\text{Max Bm} = \frac{10.3 \times 3}{8} = 3.9 \text{ kNm}$$

Use 2nd 47x220 C24 Timbers

$$\delta = \frac{5 \times 10.3 \times 10^3 \times 3000^3 \times 12}{384 \times 7200 \times 1.14 \times 2 \times 47 \times 270^3} = 5.3 \text{ mm}$$

$$m_b = \frac{7.5 \times 47 \times 220^2 \times 3}{6 \times 10^6} = 8.5 \text{ kNm}$$

Beam G - Span 4.3m



$$\text{Max Bm} = (31.6 \times 2.15) - (13.5 \times \frac{2.15^2}{2}) = 36.74 \text{ kNm}$$

$$\text{Eqv UDL} = \frac{36.74 \times 8}{4.3} = 68.4 \text{ kN}$$

Use 207x207x46 UC with 6mm m/s plate to top flange to Gt. Cavity.

$$\delta = \frac{5 \times 68.4 \times 10^3 \times 4300^3}{384 \times 2.05 \times 10^5 \times 4560 \times 10^4} = 7.6 \text{ mm}$$

$$m_b = \frac{176 \times 497}{10^3} = 87.5 \text{ kNm} \quad (> 36.74 \times 1.2)$$

$$L_e = 1.2 \times 430 + 2 \times 20 = 556$$

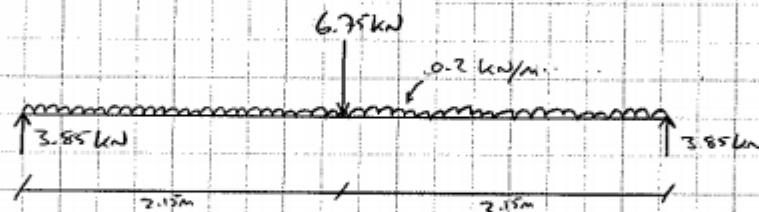
$$\lambda = \frac{556}{5.11} = 108.8$$

$$\chi = 17.7 \quad \phi_b = 17.6$$

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Beam 4 - Spc 4.3m



$$\text{Max BM} = (3.85 \times 2.15) - (0.2 \times \frac{3.15^2}{2}) = 7.8 \text{ kNm}$$

$$\text{Equiv LOK} = \frac{7.8 \times 8}{4.3} = 14.5 \text{ kN}$$

Use 178 x 102 x 19 L13

$$\delta = \frac{5 \times 14.5 \times 10^3 \times 4300^3}{384 \times 2.05 \times 10^5 \times 1360 \times 10^4} = 5.4 \text{ mm}$$

$$M_b = \frac{7.8 \times 1.1}{10^3} = 13.3 \text{ kNm} \quad (> 7.8 \times 1.5)$$

$$L_e = 1.2 \times 430 + 2 \times 18 = 552$$

$$\lambda = \frac{552}{2.37} = 232.9$$

$$z = 22.6$$

$$P_b = 78$$

Padstones

At E1 + E2 - Use 300 x 100 x 215 deep Dense Concrete Padstones

At F1 + F2 - Use 300 x 100 x 215 deep Dense Concrete Padstones

At G1 + G2 - Use 300 x 100 x 140 deep Dense Concrete Padstones

At H1 + H2 - Use 215 x 100 x 140 deep Dense Concrete Padstones

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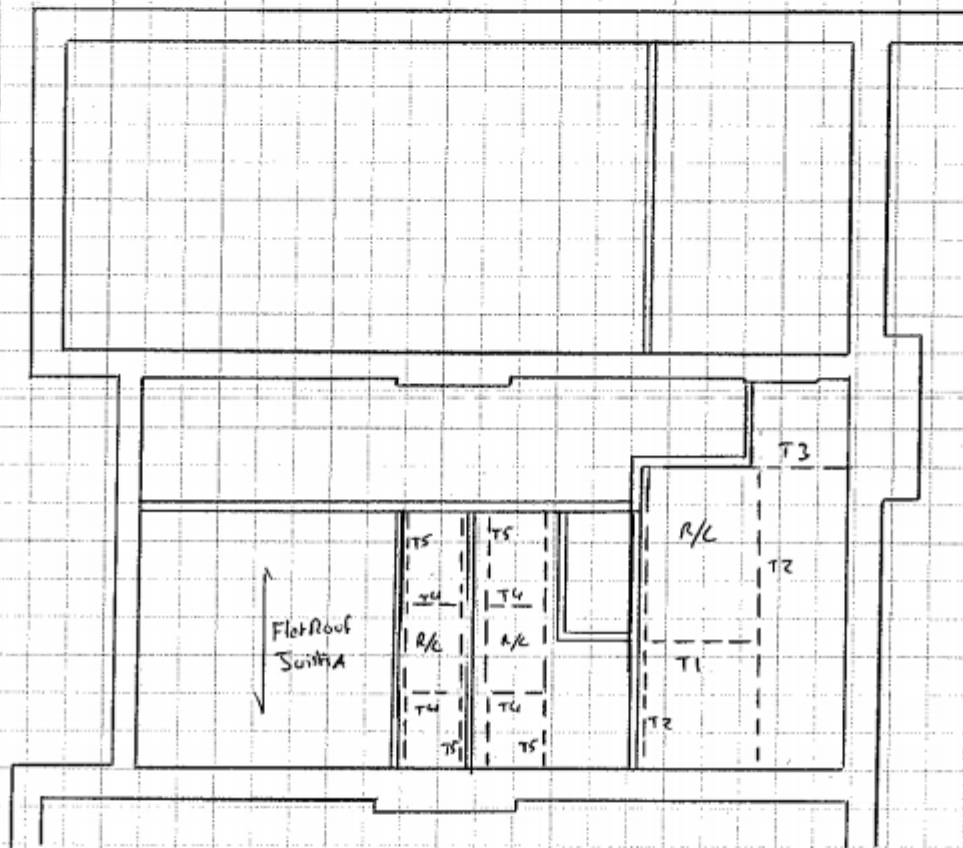
Ground Floor Sketch + Loadings

Sheet: 16 Issue: 1

Job No: 31630

Date:

By: C. C. Ck:



Loads (in kN/m^2)

	<u>DL</u>	<u>IL</u>
Flat Roof	0.7	0.6
Roof light	1.0	0.6

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Flat Roof Rofters - Max Span 4m

Approx load - $4(0.4(0.7+0.6)) = 2.1 \text{ kN}$

Max BM - $\frac{2.1 \times 4}{8} = 1.05 \text{ kNm}$

Use 4 x 170 C24 Timbers at 400 Centres

$\delta = \frac{5 \times 2.1 \times 10^3 \times 4000^3 \times 12}{384 \times 10800 \times 4 \times 170^3} = 8.4 \text{ mm}$

MC - $\frac{2.5 \times 4 \times 170^2}{6 \times 10^6} = 1.7 \text{ kNm}$

Trimmer 1 - Span 1.5m

Approx load - $1.5 \left(\frac{1.15(1.0+0.6)}{2} + \frac{1.7(0.7+0.6)}{2} \right) = 3 \text{ kN}$

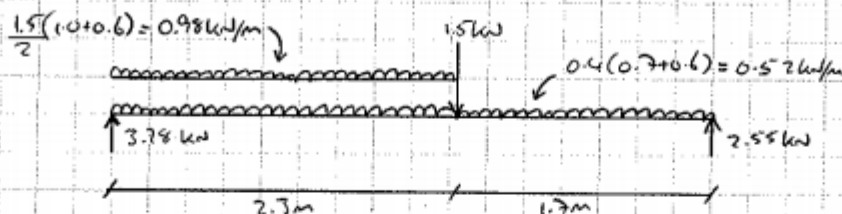
Max BM - $\frac{3 \times 1.5}{8} = 0.56 \text{ kNm}$

Use 2 x 170 C24 Timbers

$\delta = \frac{5 \times 3 \times 10^3 \times 1500^3 \times 12}{384 \times 7700 \times 2 \times 170^3} = 0.4 \text{ mm}$

MC - $\frac{2.5 \times 2 \times 170^2 \times 2}{6 \times 10^6} = 3.4 \text{ kNm}$

Trimmer 2 - Span 4m



Max BM - $(3.78 \times 2.19) - (0.98 \times \frac{2.19^2}{2}) - (0.52 \times \frac{2.19^2}{2}) = 3.59 \text{ kNm}$

Eqv UDL - $\frac{3.59 \times 8}{4} = 7.18 \text{ kN}$

Use 4 x 170 C24 Timbers

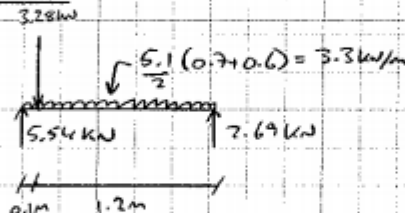
$\delta = \frac{5 \times 7.18 \times 10^3 \times 4000^3 \times 12}{384 \times 7200 \times 4 \times 170^3} = 8.7 \text{ mm}$

MC - $\frac{2.5 \times 4 \times 170^2 \times 4}{6 \times 10^6} = 6.79 \text{ kNm}$

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Trimmer 3 - Span 1.3m



$$\text{Max BM} = (2.69 \times 0.82) - (3.3 \times \frac{0.82^2}{2}) = 1.1 \text{ kNm}$$

$$\text{Eqv UDL} = \frac{1.1 \times 8}{1.5} = 5.9 \text{ kN}$$

Use 2nd 47x170 C24 Timbers

$$\delta = \frac{5 \times 5.9 \times 10^3 \times 1300^3 \times 17}{384 \times 7200 \times 114 \times 2 \times 47 \times 170^3} = 0.5 \text{ mm}$$

$$\text{MC} = \frac{7.5 \times 47 \times 170^3 \times 2}{6 \times 10^6} = 3.4 \text{ kNm}$$

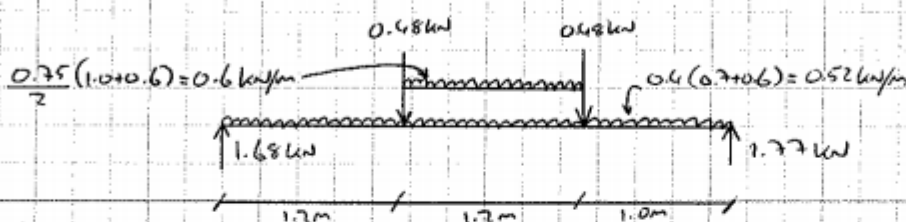
Trimmer 4 - Span 0.75m

$$\text{Approx Load} = 0.75 \left(\frac{1.2}{2} (0.7 + 0.6) + \frac{0.6}{2} (1.0 + 0.6) \right) = 0.95 \text{ kN}$$

$$\text{Max BM} = \frac{0.95 \times 0.75}{4} = 0.09 \text{ kNm}$$

Use 2nd 47x170 C24 Timbers - 0.6 by insp.

Trimmer 5 - Span 3.4m



$$\text{Max BM} = (1.68 \times 1.71) - (0.52 \times \frac{1.71^2}{2}) - (0.48 \times 0.51) - (0.6 \times \frac{0.51^2}{2}) = 1.79 \text{ kNm}$$

$$\text{Eqv UDL} = \frac{1.79 \times 8}{3.4} = 4.2 \text{ kN}$$

Use 2nd 47x170 C24 Timbers

$$\delta = \frac{5 \times 4.2 \times 10^3 \times 3400^3 \times 12}{384 \times 7200 \times 114 \times 2 \times 47 \times 170^3} = 6.8 \text{ mm}$$

$$\text{MC} = 3.4 \text{ kNm} - \text{As Above}$$

Where there is significant additional load on existing structural elements, including footings, existing lintels and beams, they should be exposed, inspected and assessed for adequacy of condition and load bearing capacity.

All Structural steelwork to be hot finish, minimum S275 unless otherwise stated.

FCL

FCL House
Rodney Road, Portsmouth PO4 8SY
Tel: 023 9281 4544
Fax: 023 9281 5004

Scheme:

Plot 7, Bedhampton Arts Centre

Title:

Sketch + Loadings

Sheet: 19

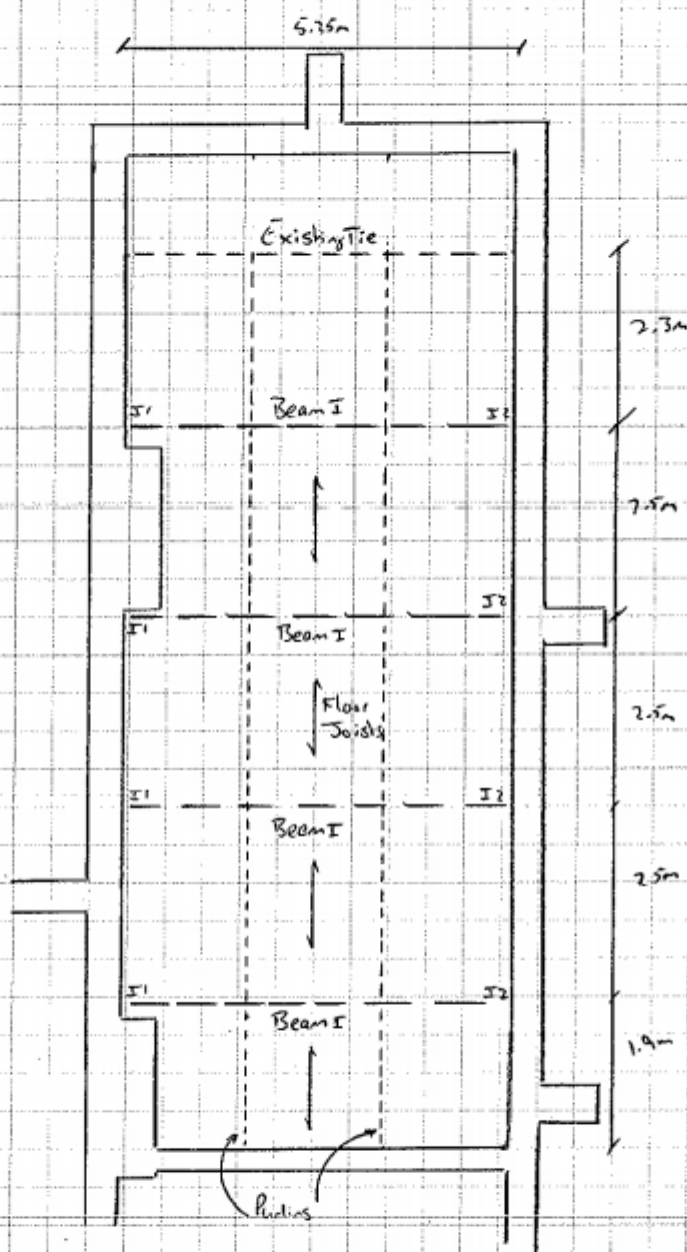
Issue: 1

Job No: 31030

Date:

By: C.C.

Ck:

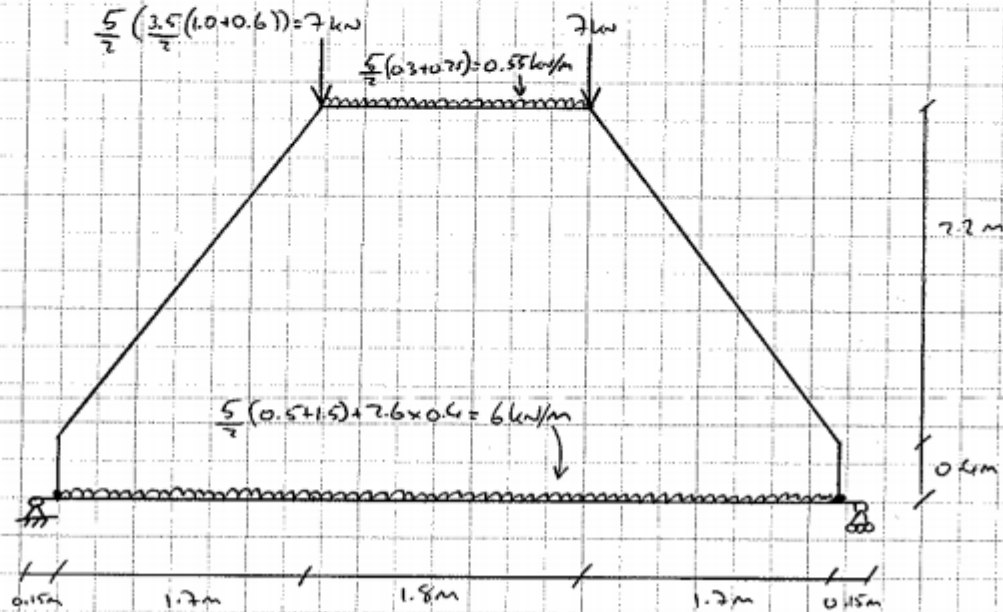


Loads (kN/m²)

Where there is significant additional load on existing structural elements, including footings, existing lintels and beams, they should be exposed, inspected and assessed for adequacy of condition and load bearing capacity.

All Structural steelwork to be hot finish, minimum S275 unless otherwise stated.

Beams I - Max Load



Use 150x150x6.3 SHS Frame on 207x203x46 UC Base Beam

See attached sheets for Calculations

Purlins - Max Span 2.5m

Approx Load: $2.5 \left(\frac{3.5}{2} (1.0+0.6) \right) = 7 \text{ kN}$

Max Bm: $\frac{7 \times 2.5^2}{8} = 2.2 \text{ kNm}$

Use 2nd 47x170 C24 Timbers

$$\delta = \frac{5 \times 7 \times 10^3 \times 2500^3 \times 12}{384 \times 7700 \times 1114 \times 2 \times 47 \times 170^3} = 4.5 \text{ mm}$$

$$MC = \frac{7.5 \times 47 \times 170^2 \times 2}{6 \times 10^6} = 3.4 \text{ kNm}$$

Where there is significant additional load on existing structural elements, including footings, existing lintels and beams, they should be exposed, inspected and assessed for adequacy of condition and load bearing capacity.

All Structural steelwork to be hot finish, minimum S275 unless otherwise stated.

FCL

FCL House
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Tel: 023 9281 4544
Fax: 023 9281 5004

Scheme:

Plot 2, Bedhampton Arts Centre

Title:

Floor Joists + Pedstones

Sheet: 21 Issue: 1

Job No: 31030

Date:

By: C.C. Ck:

Floor Joists - Span 2.5m

Approx load $2.5(0.4(0.5+1.5)) = 2 \text{ kN}$

Max Bm $\frac{2 \times 2.5}{8} = 0.625 \text{ kNm}$

Use 47x120 C24 Timbers at 600 Centres

$$S = \frac{5 \times 2 \times 10^3 \times 2500^3 \times 12}{384 \times 10800 \times 42 \times 120^3} = 5.6 \text{ mm}$$

$$MC = \frac{2.5 \times 47 \times 120^2}{6 \times 10^6} = 0.85 \text{ kNm}$$

Pedstones at I1 + I2

Use 300 x 100 x 140 deep Dense Concrete Pedstones

Where there is significant additional load on existing structural elements, including footings, existing lintels and beams, they should be exposed, inspected and assessed for adequacy of condition and load bearing capacity.

All Structural steelwork to be hot finish, minimum S275 unless otherwise stated.

FCL

FCL House
Rodney Road, Portsmouth PO4 8SY
Tel: 023 9281 4544
Fax: 023 9281 5004

Scheme:

Bedhampton Arts Centre

Title:

New Roof Trusses Connection Details

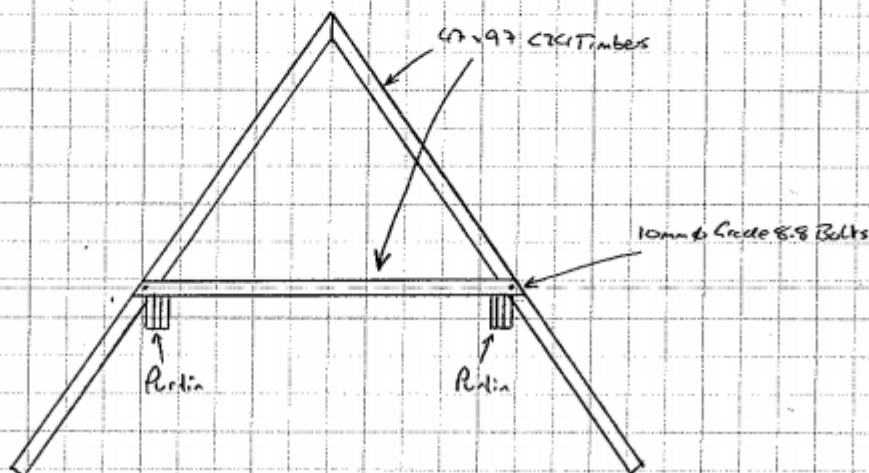
Sheet: 22 Issue: 1

Job No: 31630

Date:

By: C.C. Ck:

Trusses at 400 Centres



Where there is significant additional load on existing structural elements, including footings, existing lintels and beams, they should be exposed, inspected and assessed for adequacy of condition and load bearing capacity.

All Structural steelwork to be hot finish, minimum S275 unless otherwise stated.

FCL

FCL House
Rodney Road, Portsmouth PO4 8SY
Tel: 023 9281 4544
Fax: 023 9281 5004

Scheme:

Bedhampton Arts Centre

Title:

Beam A Connection Details

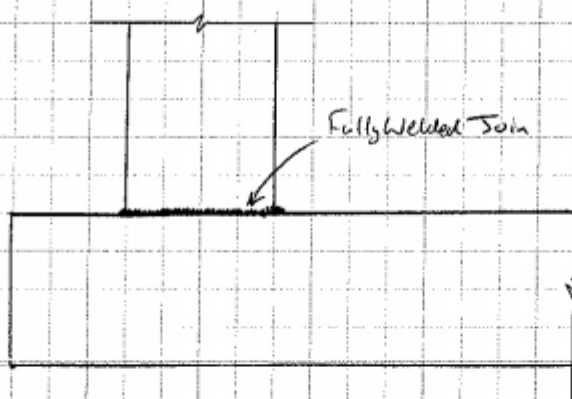
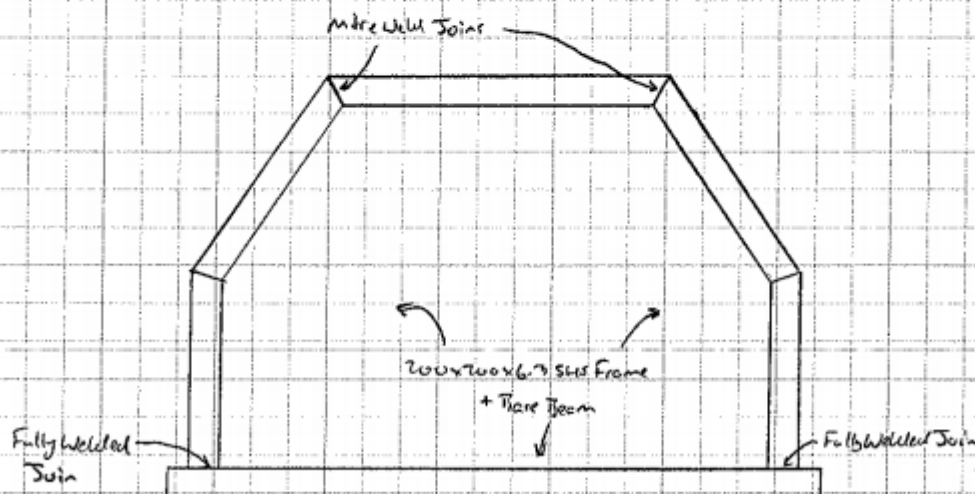
Sheet: 27 Issue: 1

Job No: 71030

Date:

By: C.C.

Ck:



Where there is significant additional load on existing structural elements, including footings, existing lintels and beams, they should be exposed, inspected and assessed for adequacy of condition and load bearing capacity.

All Structural steelwork to be hot finish, minimum S275 unless otherwise stated.

FCL

FCL House
Rodney Road, Portsmouth PO4 8SY
Tel: 023 9281 4544
Fax: 023 9281 5004

Scheme:

Bedhampton Arts Centre

Title:

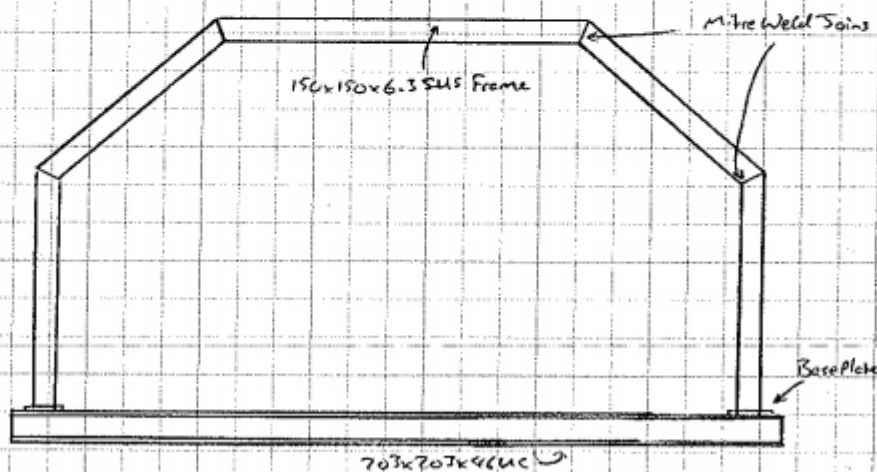
Beam Connection Details

Sheet: 24 Issue: 1

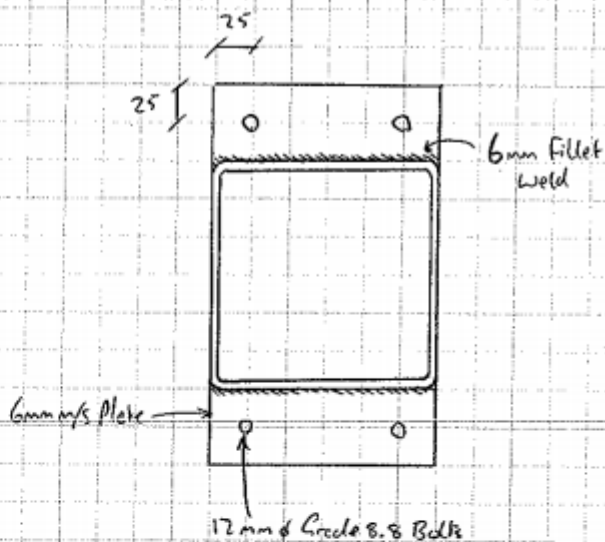
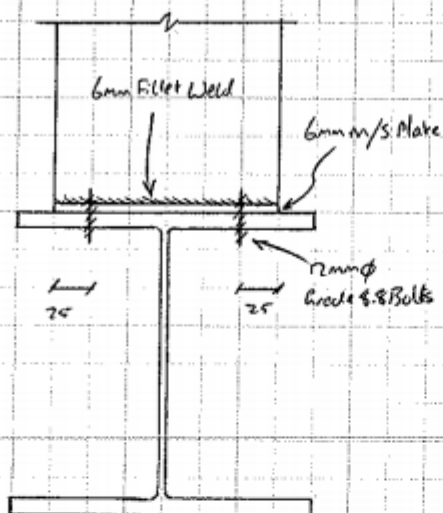
Job No: 31030

Date:

By: C.C. Ck:



Base Plate



Where there is significant additional load on existing structural elements, including footings, existing lintels and beams, they should be exposed, inspected and assessed for adequacy of condition and load bearing capacity.

All Structural steelwork to be hot finish, minimum S275 unless otherwise stated.

FCL

FCL House
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Tel: 023 9281 4544
Fax: 023 9281 5004

Scheme:

Bedhampton Arts Centre

Title:

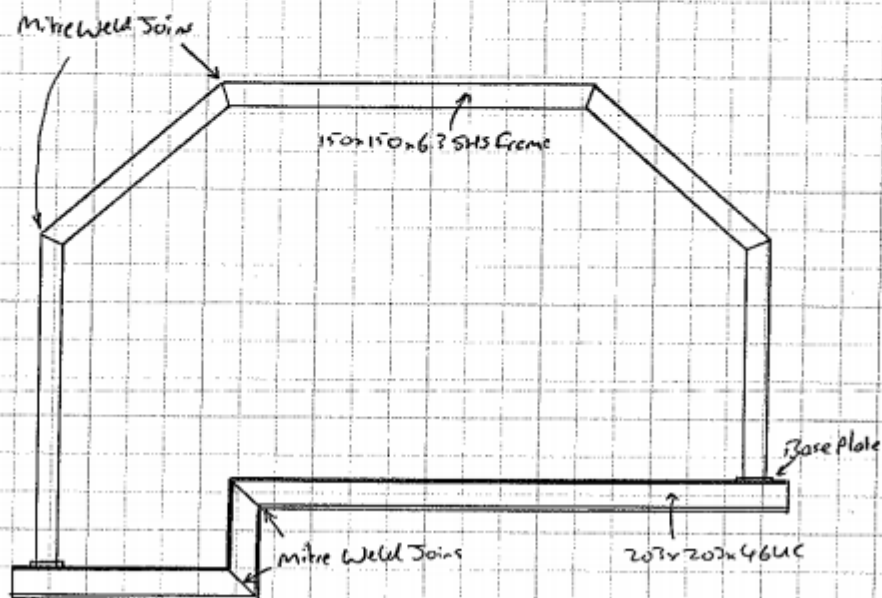
Beam F Connection Details

Sheet: 25 Issue: 1

Job No: 31030

Date:

By: CC Ck:



Base Plate - See Beam E details.

Where there is significant additional load on existing structural elements, including footings, existing lintels and beams, they should be exposed, inspected and assessed for adequacy of condition and load bearing capacity.

All Structural steelwork to be hot finish, minimum S275 unless otherwise stated.

FCL

FCL House
Rodney Road, Portsmouth PO4 8SY
Tel: 023 9281 4544
Fax: 023 9281 5004

Scheme:

Bedhampton Arts Centre

Title:

Beam I Connection Details

Sheet: 26

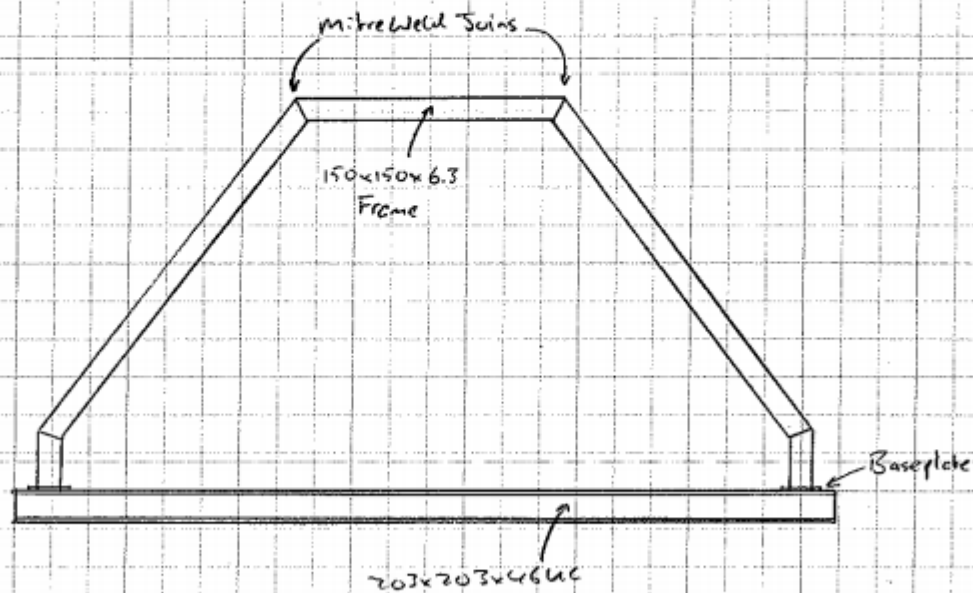
Issue: 1

Job No: 31030

Date:

By: C.C

Ck:



Base Plate - See Beam E for Details

Where there is significant additional load on existing structural elements, including footings, existing lintels and beams, they should be exposed, inspected and assessed for adequacy of condition and load bearing capacity.

All Structural steelwork to be hot finish, minimum S275 unless otherwise stated.

FCL

FCL House
Rodney Road, Portsmouth PO4 8SY
Tel: 023 9281 4544
Fax: 023 9281 5004

Scheme:

Plot 2, Bedhampton Arts Centre

Title:

Purlin Detail

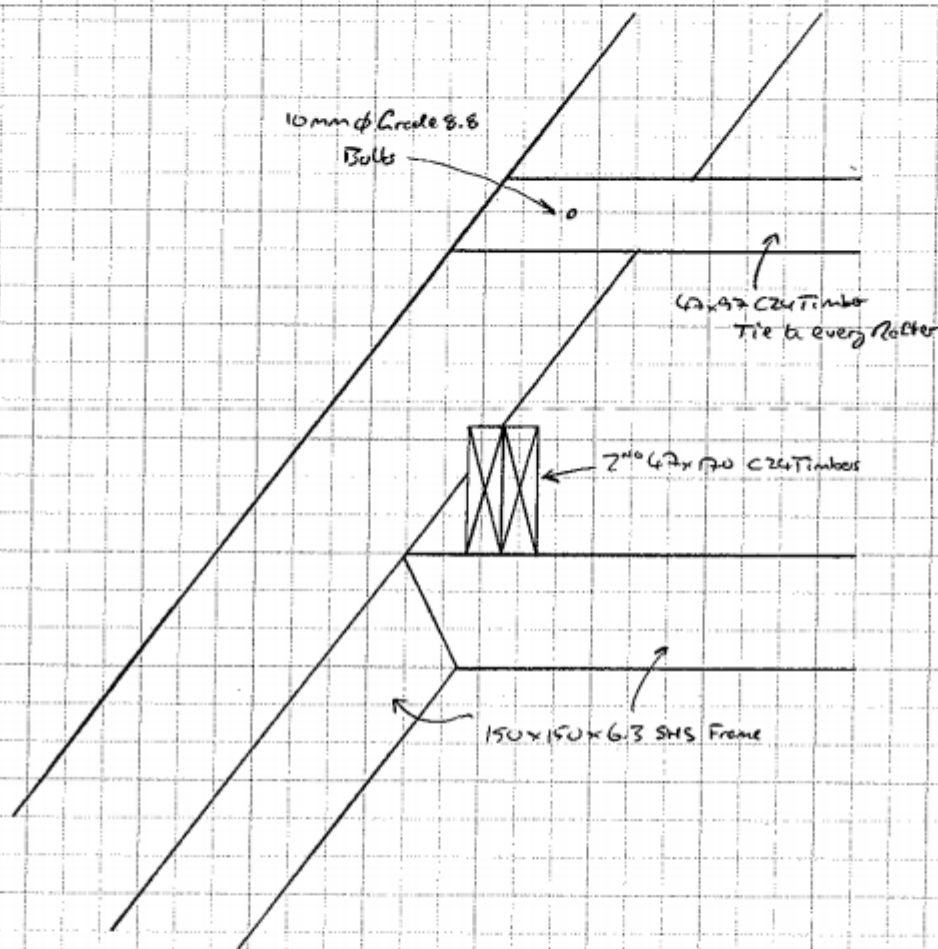
Sheet: 22 Issue: 1

Job No: 31030

Date:

By: C.C.

Ck:



Where there is significant additional load on existing structural elements, including footings, existing lintels and beams, they should be exposed, inspected and assessed for adequacy of condition and load bearing capacity.

All Structural steelwork to be hot finish, minimum S275 unless otherwise stated.

Geometry

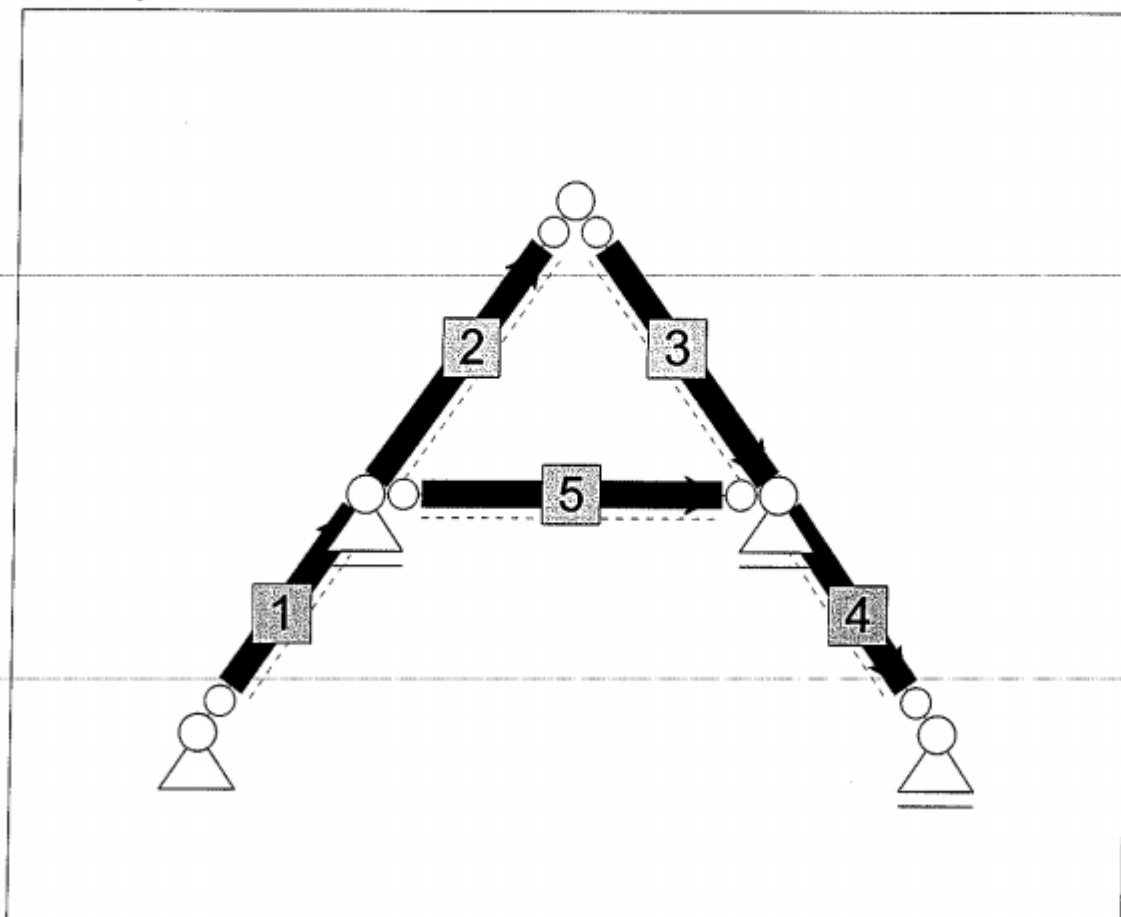


Table of Nodes

Index	X coor. [mm]	Z coor. [mm]	Supports
1:	0.00000	0.00000	UxUz
2:	900.00	-1300.0	Uz
3:	3200.0	-1300.0	Uz

Index	X coor. [mm]	Z coor. [mm]	Supports
4:	4100.0	0.00000	Uz
5:	2050.0	-2900.0	-

Table of elements

Index	Type	Node 1	Node 2	Cross-section	Material	Length [mm]	Rel. 1	Rel. 2
1:	Linear	1:	2:	1: 47x120	1: C24 Timber	1581.1	Ry	-
2:	Linear	2:	5:	1: 47x120	1: C24 Timber	1970.4	-	Ry
3:	Linear	5:	3:	1: 47x120	1: C24 Timber	1970.4	Ry	-
4:	Linear	3:	4:	1: 47x120	1: C24 Timber	1581.1	-	Ry
5:	Linear	2:	3:	1: 47x120	1: C24 Timber	2300.0	Ry	Ry

Table of Materials

Index	Elastic Modulus [MPa]	Coeff. of Thermal Exp. [1/d°C]
1: C24 Timber	10800.	0.00000

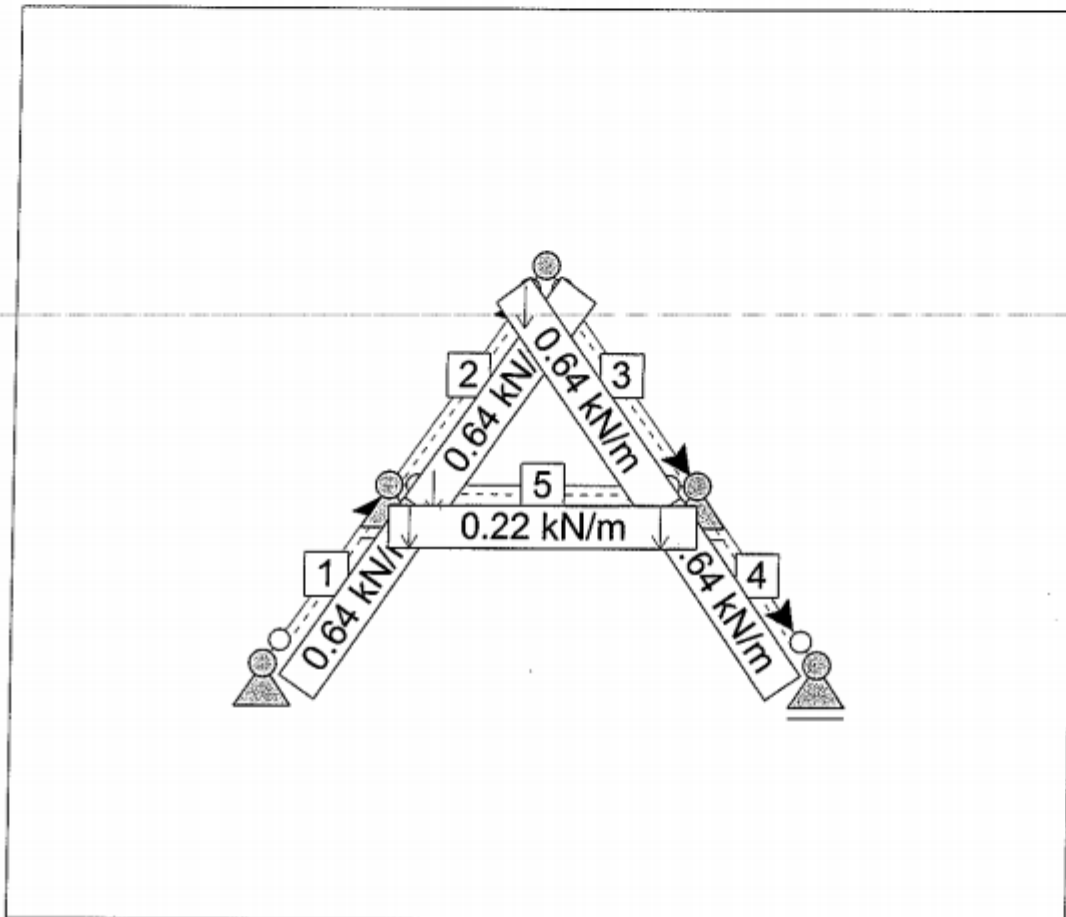
Table of Cross-sections

Index	A [mm ²]	I _y [cm ⁴]	Height [mm]
1: 47x120	5640.0	676.80	120.00

Actions & Load Cases

Load Case	Limit State	Action 1
Load case 1	Ultimate	1.00

A1 : Action 1

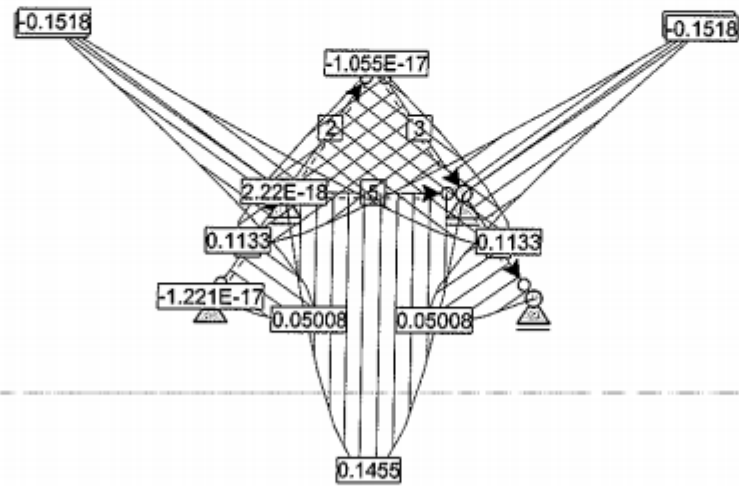


A1: Action 1: Uniform Element Loads

Element	F _x s [kN/m]	F _x e [kN/m]	F _z s [kN/m]	F _z e [kN/m]	M _{ys} [kNm/m]	M _{ye} [kNm/m]	Direction	Start	End	Position	Name
1:	0.00000	0.00000	0.64000	0.64000	0.00000	0.00000	World	0.00	1.00	Local	--
2:	0.00000	0.00000	0.64000	0.64000	0.00000	0.00000	World	0.00	1.00	Local	--
3:	0.00000	0.00000	0.64000	0.64000	0.00000	0.00000	World	0.00	1.00	Local	--
4:	0.00000	0.00000	0.64000	0.64000	0.00000	0.00000	World	0.00	1.00	Local	--
5:	0.00000	0.00000	0.22000	0.22000	0.00000	0.00000	World	0.00	1.00	Local	--

LC1: Load case 1: Bending Moments M_y

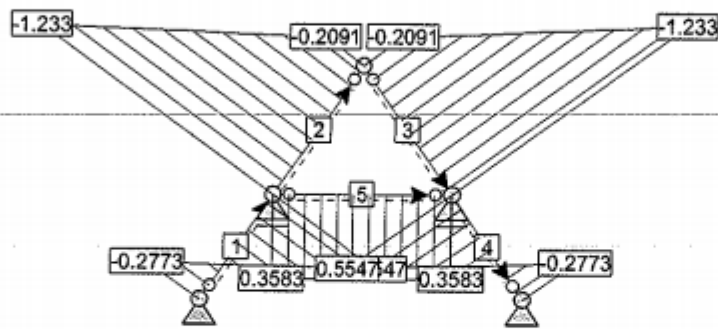
1.00 Action 1



Units: kNm

LC1: Load case 1: Axial Forces F_x

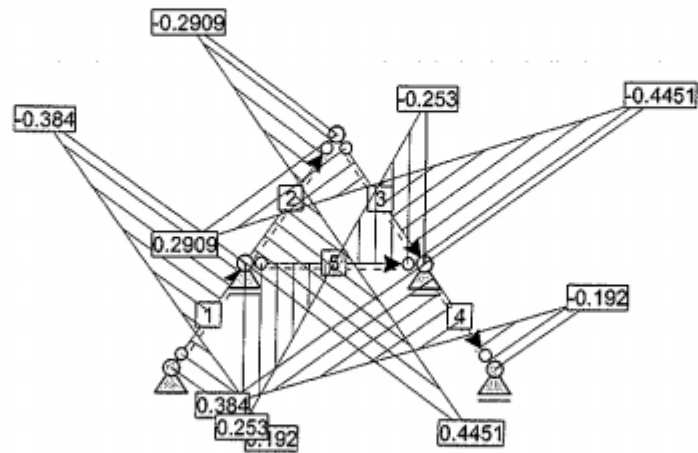
1.00 Action 1



Units: kN

LC1: Load case 1: Shear Forces Fz

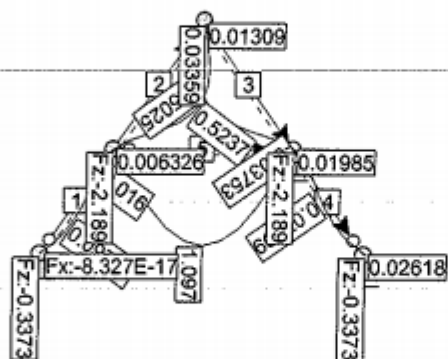
1.00 Action 1



Units: kN

LC1: Load case 1: Displacements and Reactions

1.00 Action 1



Units: mm, kN, kNm

LC1: Load case 1: Nodal Displacements

Node	ux [mm]	uz [mm]	fiy [deg]
1:	-	-	0.00000
2:	0.0063257	-	-0.015886
3:	0.019855	-	0.015886

Node	ux [mm]	uz [mm]	fiy [deg]
4:	0.026180	-	0.00000
5:	0.013090	0.033589	0.00000

LC1: Load case 1: Reactions

Node	Fx [kN]	Fz [kN]	My [kNm]
1:	-8.3267E-17	-0.33725	-
2:	-	-2.1887	-

Node	Fx [kN]	Fz [kN]	My [kNm]
3:	-	-2.1887	-
4:	-	-0.33725	-

LC1: Load case 1: Element 1:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-0.27729	0.19197	-1.2212E-17
0.10	-0.19409	0.13437	0.025799
0.20	-0.11089	0.076769	0.042491
0.30	-0.027688	0.019169	0.050076
0.40	0.055512	-0.038431	0.048553
0.50	0.13871	-0.096031	0.037923

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	0.22191	-0.15363	0.018185
0.70	0.30511	-0.21123	-0.010660
0.80	0.38831	-0.26883	-0.048612
0.90	0.47151	-0.32643	-0.095672
1.00	0.55471	-0.38403	-0.15184

LC1: Load case 1: Element 2:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-1.2331	0.44506	-0.15184
0.10	-1.1307	0.37146	-0.071395
0.20	-1.0283	0.29786	-0.0054534
0.30	-0.92591	0.22426	0.045986
0.40	-0.82351	0.15066	0.082923
0.50	-0.72111	0.077060	0.10536

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-0.61871	0.0034596	0.11329
0.70	-0.51631	-0.070140	0.10672
0.80	-0.41391	-0.14374	0.085650
0.90	-0.31151	-0.21734	0.050076
1.00	-0.20911	-0.29094	2.8422E-16

LC1: Load case 1: Element 3:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-0.20911	0.29094	-1.0547E-17
0.10	-0.31151	0.21734	0.050076
0.20	-0.41391	0.14374	0.085650
0.30	-0.51631	0.070140	0.10672
0.40	-0.61871	-0.0034596	0.11329
0.50	-0.72111	-0.077060	0.10536

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-0.82351	-0.15066	0.082923
0.70	-0.92591	-0.22426	0.045986
0.80	-1.0283	-0.29786	-0.0054534
0.90	-1.1307	-0.37146	-0.071395
1.00	-1.2331	-0.44506	-0.15184

LC1: Load case 1: Element 4:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	0.55471	0.38403	-0.15184
0.10	0.47151	0.32643	-0.095672
0.20	0.38831	0.26883	-0.048612
0.30	0.30511	0.21123	-0.010660
0.40	-0.22191	-0.15363	0.018185
0.50	0.13871	0.096031	0.037923

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	0.055512	0.038431	0.048553
0.70	-0.027688	-0.019169	0.050076
0.80	-0.11089	-0.076769	0.042491
0.90	-0.19409	-0.13437	0.025799
1.00	-0.27729	-0.19197	0.00000

LC1: Load case 1: Element 5:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	0.35829	0.25300	2.2204E-18
0.10	0.35829	0.20240	0.052371
0.20	0.35829	0.15180	0.093104
0.30	0.35829	0.10120	0.12220
0.40	0.35829	0.050600	0.13966
0.50	0.35829	0.00000	0.14547

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	0.35829	-0.050600	0.13966
0.70	0.35829	-0.10120	0.12220
0.80	0.35829	-0.15180	0.093104
0.90	0.35829	-0.20240	0.052371
1.00	0.35829	-0.25300	0.00000

Geometry

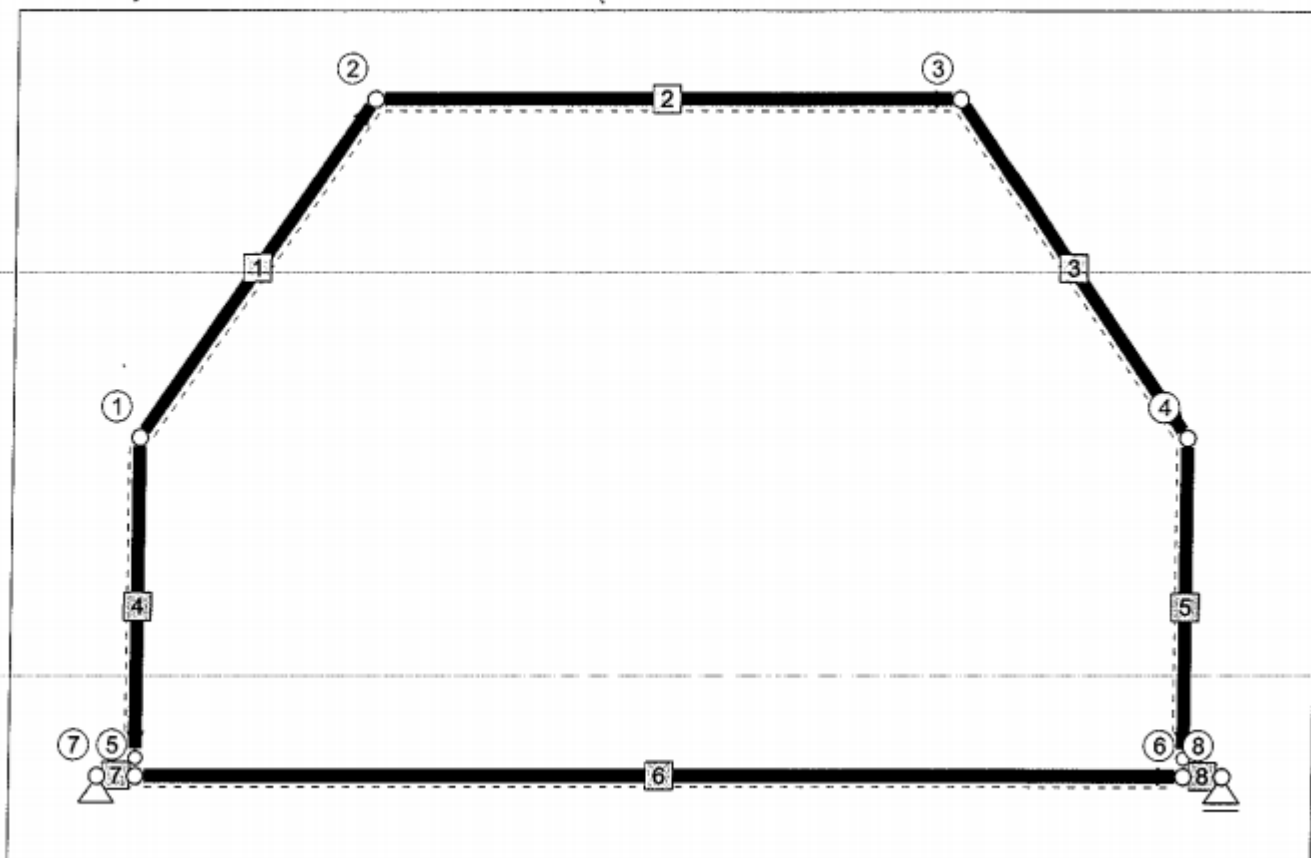


Table of Nodes

Index	X coor. [mm]	Z coor. [mm]	Supports
1:	0.00000	-1300.0	-
2:	900.00	-2600.0	-
3:	3200.0	-2600.0	-
4:	4100.0	-1300.0	-

Index	X coor. [mm]	Z coor. [mm]	Supports
5:	0.00000	0.00000	-
6:	4100.0	0.00000	-
7:	-150.00	0.00000	UxUz
8:	4250.0	0.00000	Uz

Table of elements

Index	Type	Node 1	Node 2	Cross-section	Material	Length [mm]	Rel. 1	Rel. 2
1:	Linear	1:	2:	1: 200x200 x 6.3	1: S 275	1581.1	-	-
2:	Linear	2:	3:	1: 200x200 x 6.3	1: S 275	2300.0	-	-
3:	Linear	3:	4:	1: 200x200 x 6.3	1: S 275	1581.1	-	-
4:	Linear	1:	5:	1: 200x200 x 6.3	1: S 275	1300.0	-	Ry
5:	Linear	4:	6:	1: 200x200 x 6.3	1: S 275	1300.0	-	Ry
6:	Linear	5:	6:	1: 200x200 x 6.3	1: S 275	4100.0	-	-
7:	Linear	7:	5:	1: 200x200 x 6.3	1: S 275	150.00	-	-
8:	Linear	8:	6:	1: 200x200 x 6.3	1: S 275	150.00	-	-

Table of Materials

Index	Elastic Modulus [MPa]	Coeff. of Thermal Exp. [1/d°C]
1: S 275	2.1000E+05	1.2000E-05

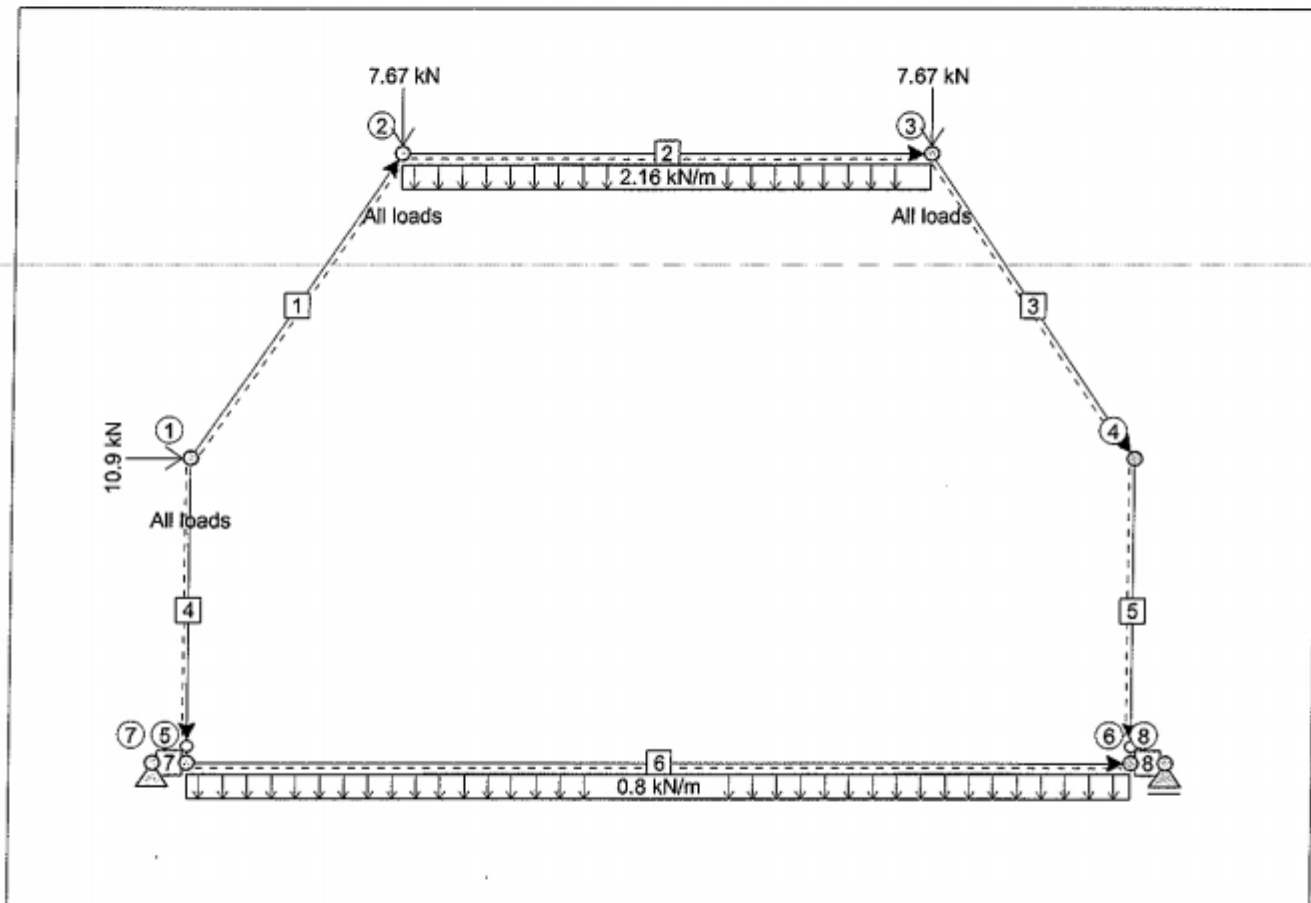
Table of Cross-sections

Index	A [mm ²]	I _y [cm ⁴]	Height [mm]
1: 200x200 x 6.3	4779.0	2955.8	200.00
2: UC 152 x 152 x 23	2920.0	1250.0	152.40

Actions & Load Cases

Load Case	Limit State	Action 1
Load case 1	Ultimate	1.00

A1 : Action 1



A1: Action 1: Nodal Loads

Node	F _x [kN]	F _z [kN]	M _y [kNm]	Name
1:	10.900	0.00000	0.00000	Windload
2:	0.00000	7.6700	0.00000	--

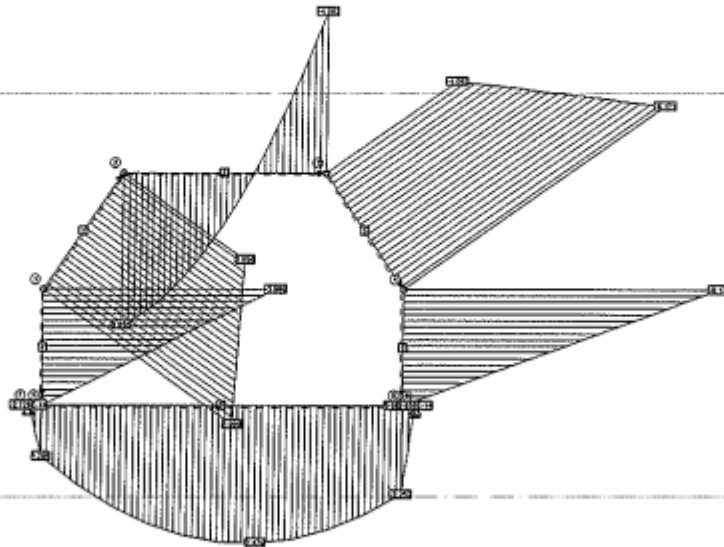
Node	F _x [kN]	F _z [kN]	M _y [kNm]	Name
3:	0.00000	7.6700	0.00000	--

A1: Action 1: Uniform Element Loads

Element	F _{x s} [kN/m]	F _{x e} [kN/m]	F _{z s} [kN/m]	F _{z e} [kN/m]	M _{y s} [kNm/m]	M _{y e} [kNm/m]	Direction	Start	End	Position	Name
2:	0.00000	0.00000	2.1600	2.1600	0.00000	0.00000	Local	0.00	1.00	Local	--
6:	0.00000	0.00000	0.80000	0.80000	0.00000	0.00000	World	0.00	1.00	Local	--

LC1: Load case 1: Bending Moments M_y

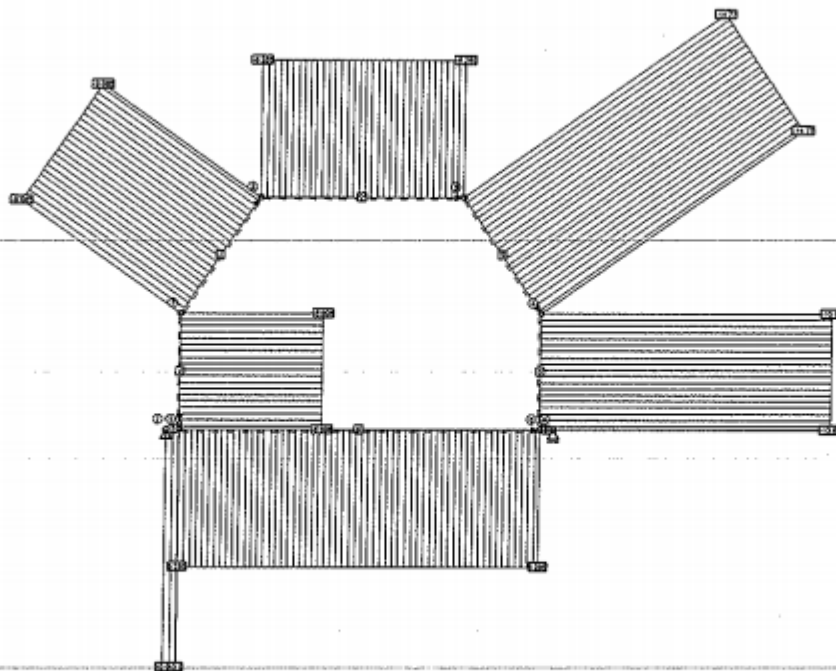
1.00 Action 1



Units: kNm

LC1: Load case 1: Axial Forces F_x

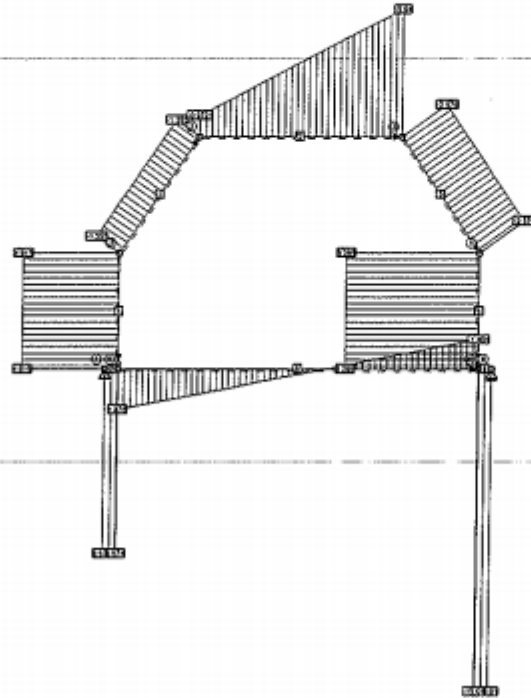
1.00 Action 1



Units: kN

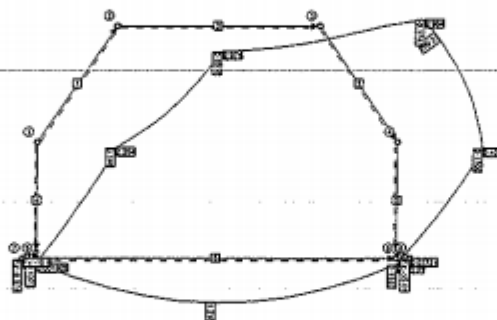
LC1: Load case 1: Shear Forces Fz

1.00 Action 1



LC1: Load case 1: Displacements and Reactions

1.00 Action 1



LC1: Load case 1: Nodal Displacements

Node	ux [mm]	uz [mm]	fy [deg]
1:	2.2036	0.14599	-0.073054
2:	2.9780	0.69951	-0.0011369
3:	2.9636	-0.17471	0.016566
4:	2.4235	0.17090	-0.072926

Node	ux [mm]	uz [mm]	fy [deg]
5:	0.0016291	0.13732	-0.051857
6:	0.027307	0.15327	0.057505
7:	-	-	-0.052748
8:	0.027307	-	0.059065

LC1: Load case 1: Reactions

Node	Fx [kN]	Fz [kN]	My [kNm]
7:	-10.900	-8.5735	-
8:	-	-15.014	-

LC1: Load case 1: Element 1:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-9.0846	-1.3553	5.9990
0.10	-9.0846	-1.3553	5.7848
0.20	-9.0846	-1.3553	5.5705
0.30	-9.0846	-1.3553	5.3562
0.40	-9.0846	-1.3553	5.1419
0.50	-9.0846	-1.3553	4.9276

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-9.0846	-1.3553	4.7133
0.70	-9.0846	-1.3553	4.4991
0.80	-9.0846	-1.3553	4.2848
0.90	-9.0846	-1.3553	4.0705
1.00	-9.0846	-1.3553	3.8562

LC1: Load case 1: Element 2:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-6.2854	-0.97210	3.8562
0.10	-6.2854	-1.4689	3.5755
0.20	-6.2854	-1.9657	3.1805
0.30	-6.2854	-2.4625	2.6713
0.40	-6.2854	-2.9593	2.0478
0.50	-6.2854	-3.4561	1.3100

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-6.2854	-3.9529	0.45795
0.70	-6.2854	-4.4497	-0.50835
0.80	-6.2854	-4.9465	-1.5889
0.90	-6.2854	-5.4433	-2.7837
1.00	-6.2854	-5.9401	-4.0928

LC1: Load case 1: Element 3:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-14.768	-2.5792	-4.0928
0.10	-14.768	-2.5792	-4.5006
0.20	-14.768	-2.5792	-4.9085
0.30	-14.768	-2.5792	-5.3163
0.40	-14.768	-2.5792	-5.7241
0.50	-14.768	-2.5792	-6.1319

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-14.768	-2.5792	-6.5397
0.70	-14.768	-2.5792	-6.9475
0.80	-14.768	-2.5792	-7.3553
0.90	-14.768	-2.5792	-7.7631
1.00	-14.768	-2.5792	-8.1710

LC1: Load case 1: Element 4:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-6.6979	4.6146	-5.9990
0.10	-6.6979	4.6146	-5.3991
0.20	-6.6979	4.6146	-4.7992
0.30	-6.6979	4.6146	-4.1993
0.40	-6.6979	4.6146	-3.5994
0.50	-6.6979	4.6146	-2.9995

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-6.6979	4.6146	-2.3996
0.70	-6.6979	4.6146	-1.7997
0.80	-6.6979	4.6146	-1.1998
0.90	-6.6979	4.6146	-0.59990
1.00	-6.6979	4.6146	0.00000

LC1: Load case 1: Element 5:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-13.610	6.2854	-8.1710
0.10	-13.610	6.2854	-7.3539
0.20	-13.610	6.2854	-6.5368
0.30	-13.610	6.2854	-5.7197
0.40	-13.610	6.2854	-4.9026
0.50	-13.610	6.2854	-4.0855

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-13.610	6.2854	-3.2684
0.70	-13.610	6.2854	-2.4513
0.80	-13.610	6.2854	-1.6342
0.90	-13.610	6.2854	-0.81710
1.00	-13.610	6.2854	5.6843E-15

LC1: Load case 1: Element 6:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	6.2854	1.8756	1.2860
0.10	6.2854	1.5476	1.9878
0.20	6.2854	1.2196	2.5551
0.30	6.2854	0.89164	2.9879
0.40	6.2854	0.56364	3.2862
0.50	6.2854	0.23564	3.4501

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	6.2854	-0.092357	3.4795
0.70	6.2854	-0.42036	3.3744
0.80	6.2854	-0.74836	3.1348
0.90	6.2854	-1.0764	2.7607
1.00	6.2854	-1.4044	2.2522

LC1: Load case 1: Element 7:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	10.900	8.5735	-2.7285E-14
0.10	10.900	8.5735	0.12860
0.20	10.900	8.5735	0.25721
0.30	10.900	8.5735	0.38581
0.40	10.900	8.5735	0.51441
0.50	10.900	8.5735	0.64302

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	10.900	8.5735	0.77162
0.70	10.900	8.5735	0.90022
0.80	10.900	8.5735	1.0288
0.90	10.900	8.5735	1.1574
1.00	10.900	8.5735	1.2860

LC1: Load case 1: Element 8:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	0.00000	-15.014	3.6380E-14
0.10	0.00000	-15.014	-0.22522
0.20	0.00000	-15.014	-0.45043
0.30	0.00000	-15.014	-0.67565

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.40	0.00000	-15.014	-0.90087
0.50	0.00000	-15.014	-1.1261
0.60	0.00000	-15.014	-1.3513
0.70	0.00000	-15.014	-1.5765

LC1: Load case 1: Element 8:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.80	0.00000	-15.014	-1.8017
0.90	0.00000	-15.014	-2.0270

Pos	Fx [kN]	Fz [kN]	My [kNm]
1.00	0.00000	-15.014	-2.2522

Geometry

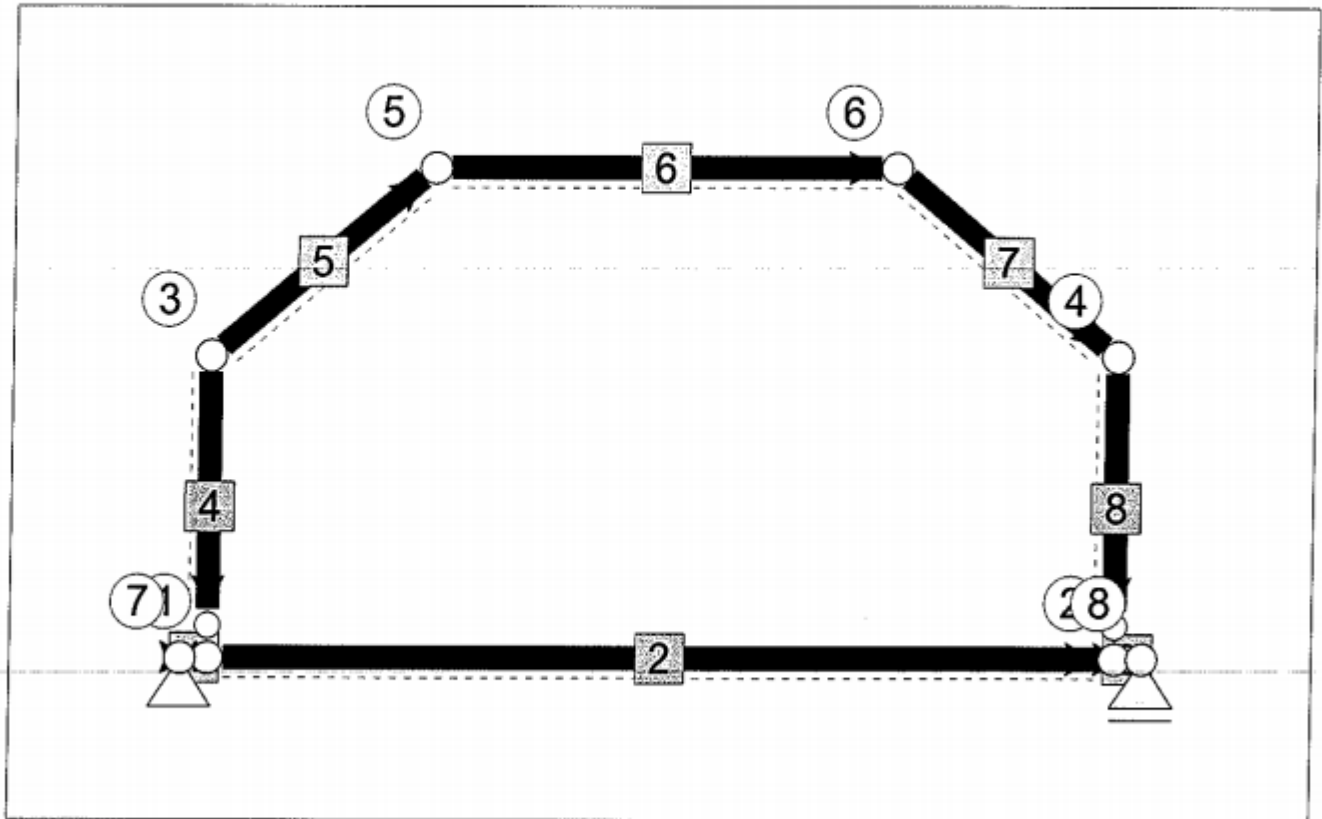


Table of Nodes

Index	X coor. [mm]	Z coor. [mm]	Supports
1:	0.00000	0.00000	-
2:	4900.0	0.00000	-
3:	0.00000	-1600.0	-
4:	4900.0	-1600.0	-

Index	X coor. [mm]	Z coor. [mm]	Supports
5:	1200.0	-2600.0	-
6:	3700.0	-2600.0	-
7:	-150.00	0.00000	UxUz
8:	5050.0	0.00000	Uz

Table of elements

Index	Type	Node 1	Node 2	Cross-section	Material	Length [mm]	Rel. 1	Rel. 2
1:	Linear	7:	1:	2: UC 203 x 203 x 46	1: S 275	150.00	-	-
2:	Linear	1:	2:	2: UC 203 x 203 x 46	1: S 275	4900.0	-	-
3:	Linear	2:	8:	2: UC 203 x 203 x 46	1: S 275	150.00	-	-
4:	Linear	3:	1:	1: 150x150 x 6.3	1: S 275	1600.0	-	Ry
5:	Linear	3:	5:	1: 150x150 x 6.3	1: S 275	1562.0	-	-
6:	Linear	5:	6:	1: 150x150 x 6.3	1: S 275	2500.0	-	-
7:	Linear	6:	4:	1: 150x150 x 6.3	1: S 275	1562.0	-	-
8:	Linear	4:	2:	1: 150x150 x 6.3	1: S 275	1600.0	-	Ry

Table of Materials

Index	Elastic Modulus [MPa]	Coeff. of Thermal Exp. [1/d°C]
1: S 275	2.1000E+05	1.2000E-05

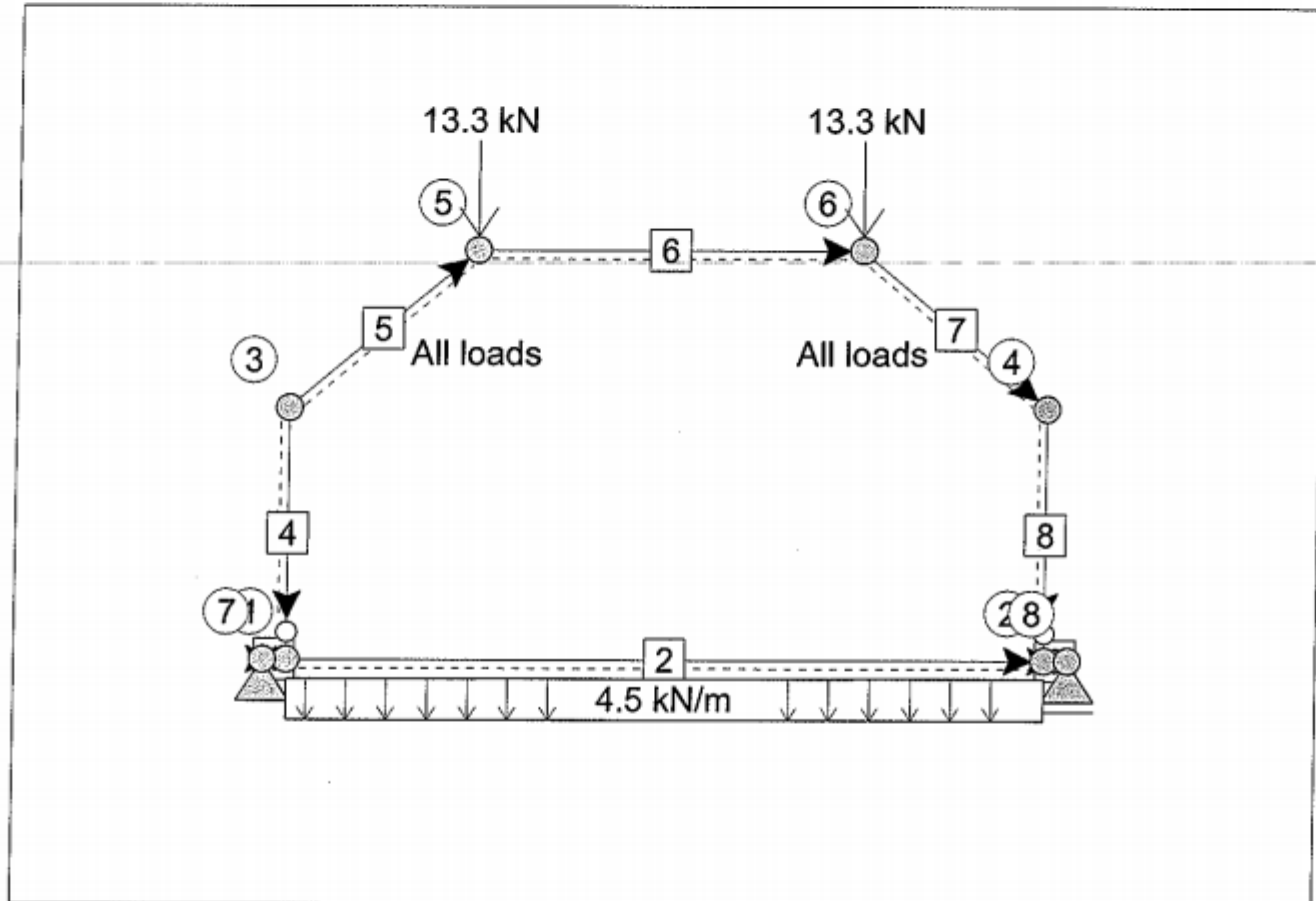
Table of Cross-sections

Index	A [mm ²]	I _y [cm ⁴]	Height [mm]
1: 150x150 x 6.3	3519.0	1193.0	150.00
2: UC 203 x 203 x 46	5870.0	4570.0	203.20

Actions & Load Cases

Load Case	Limit State	Action 1
Load case 1	Ultimate	1.00

A1 : Action 1



A1: Action 1: Nodal Loads

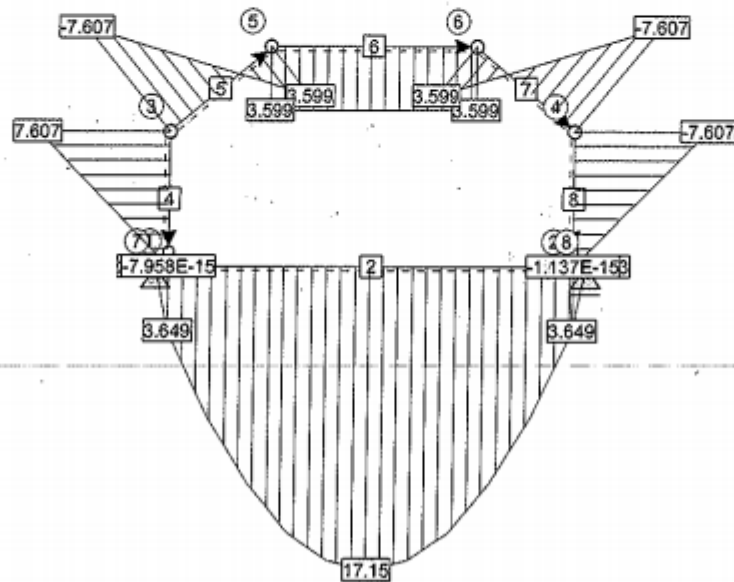
Node	F _x [kN]	F _z [kN]	M _y [kNm]	Name
5:	0.00000	13.300	0.00000	
6:	0.00000	13.300	0.00000	

A1: Action 1: Uniform Element Loads

Element	F _{x s} [kN/m]	F _{x e} [kN/m]	F _{z s} [kN/m]	F _{z e} [kN/m]	M _{y s} [kNm/m]	M _{y e} [kNm/m]	Direction	Start	End	Position	Name
2:	0.00000	0.00000	4.5000	4.5000	0.00000	0.00000	World	0.00	1.00	Local	

LC1: Load case 1: Bending Moments M_y

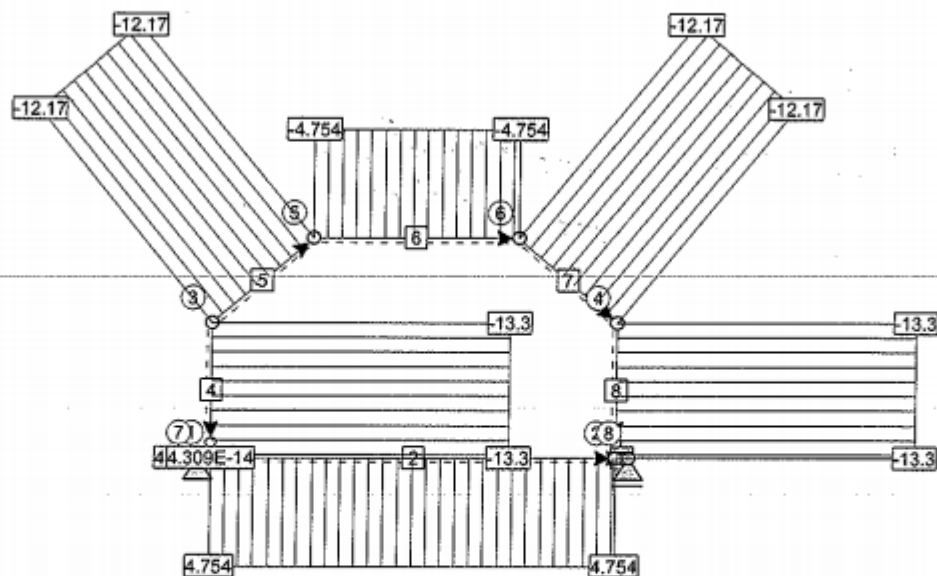
1.00 Action 1



Units: kNm

LC1: Load case 1: Axial Forces F_x

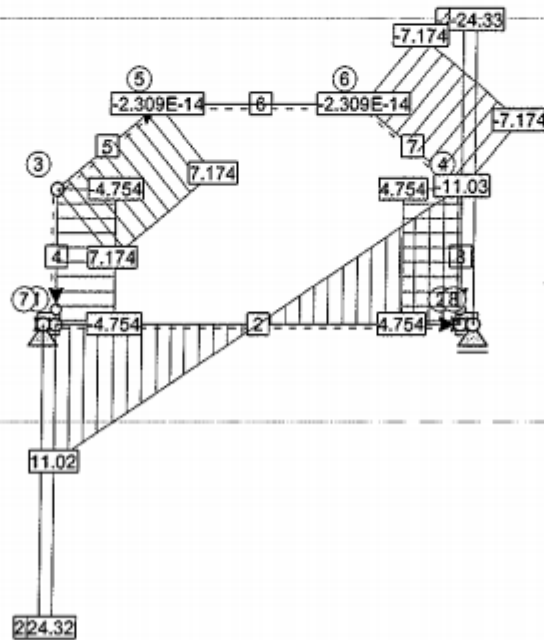
1.00 Action 1



Units: kN

LC1: Load case 1: Shear Forces F_z

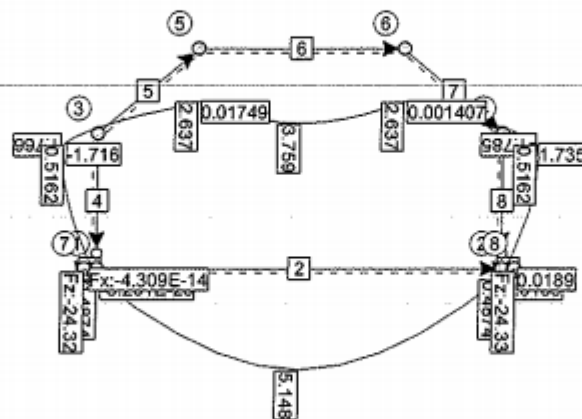
1.00 Action 1



Units: kN

LC1: Load case 1: Displacements and Reactions

1.00 Action 1



Units: mm, kN, kNm

LC1: Load case 1: Nodal Displacements

Node	ux [mm]	uz [mm]	fiy [deg]
1:	-5.2611E-20	0.48736	-0.18507
2:	0.018898	0.48736	0.18507
3:	-1.7162	0.51615	-0.031319
4:	1.7351	0.51615	0.031319

Node	ux [mm]	uz [mm]	fiy [deg]
5:	0.017490	2.6368	-0.10289
6:	0.0014073	2.6368	0.10289
7:	-	-	-0.18670
8:	0.018898	-	0.18670

LC1: Load case 1: Reactions

Node	Fx [kN]	Fz [kN]	My [kNm]
7:	-4.3088E-14	-24.325	-
8:	-	-24.325	-

LC1: Load case 1: Element 1:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	4.3088E-14	24.325	2.9104E-13
0.10	4.3088E-14	24.325	0.36488
0.20	4.3088E-14	24.325	0.72975
0.30	4.3088E-14	24.325	1.0946
0.40	4.3088E-14	24.325	1.4595
0.50	4.3088E-14	24.325	1.8244

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	4.3088E-14	24.325	2.1893
0.70	4.3088E-14	24.325	2.5541
0.80	4.3088E-14	24.325	2.9190
0.90	4.3088E-14	24.325	3.2839
1.00	4.3088E-14	24.325	3.6488

LC1: Load case 1: Element 2:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	4.7541	11.025	3.6488
0.10	4.7541	8.8200	8.5108
0.20	4.7541	6.6150	12.292
0.30	4.7541	4.4100	14.993
0.40	4.7541	2.2050	16.614
0.50	4.7541	-7.9936E-14	17.154

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	4.7541	-2.2050	16.614
0.70	4.7541	-4.4100	14.993
0.80	4.7541	-6.6150	12.292
0.90	4.7541	-8.8200	8.5108
1.00	4.7541	-11.025	3.6488

LC1: Load case 1: Element 3:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	0.00000	-24.325	3.6488
0.10	0.00000	-24.325	3.2839
0.20	0.00000	-24.325	2.9190
0.30	0.00000	-24.325	2.5541
0.40	0.00000	-24.325	2.1893
0.50	0.00000	-24.325	1.8244

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	0.00000	-24.325	1.4595
0.70	0.00000	-24.325	1.0946
0.80	0.00000	-24.325	0.72975
0.90	0.00000	-24.325	0.36488
1.00	0.00000	-24.325	3.4561E-13

LC1: Load case 1: Element 4:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-13.300	-4.7541	7.6065
0.10	-13.300	-4.7541	6.8459
0.20	-13.300	-4.7541	6.0852
0.30	-13.300	-4.7541	5.3246
0.40	-13.300	-4.7541	4.5639
0.50	-13.300	-4.7541	3.8033

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-13.300	-4.7541	3.0426
0.70	-13.300	-4.7541	2.2820
0.80	-13.300	-4.7541	1.5213
0.90	-13.300	-4.7541	0.76065
1.00	-13.300	-4.7541	-7.9581E-15

LC1: Load case 1: Element 5:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-12.167	7.1738	-7.6065
0.10	-12.167	7.1738	-6.4860
0.20	-12.167	7.1738	-5.3654
0.30	-12.167	7.1738	-4.2448
0.40	-12.167	7.1738	-3.1242
0.50	-12.167	7.1738	-2.0036

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-12.167	7.1738	-0.88300
0.70	-12.167	7.1738	0.23759
0.80	-12.167	7.1738	1.3582
0.90	-12.167	7.1738	2.4788
1.00	-12.167	7.1738	3.5994

LC1: Load case 1: Element 6:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-4.7541	-2.3093E-14	3.5994
0.10	-4.7541	-2.3093E-14	3.5994
0.20	-4.7541	-2.3093E-14	3.5994
0.30	-4.7541	-2.3093E-14	3.5994
0.40	-4.7541	-2.3093E-14	3.5994
0.50	-4.7541	-2.3093E-14	3.5994

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-4.7541	-2.3093E-14	3.5994
0.70	-4.7541	-2.3093E-14	3.5994
0.80	-4.7541	-2.3093E-14	3.5994
0.90	-4.7541	-2.3093E-14	3.5994
1.00	-4.7541	-2.3093E-14	3.5994

LC1: Load case 1: Element 7:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-12.167	-7.1738	3.5994
0.10	-12.167	-7.1738	2.4788
0.20	-12.167	-7.1738	1.3582
0.30	-12.167	-7.1738	0.23759
0.40	-12.167	-7.1738	-0.88300
0.50	-12.167	-7.1738	-2.0036

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-12.167	-7.1738	-3.1242
0.70	-12.167	-7.1738	-4.2448
0.80	-12.167	-7.1738	-5.3654
0.90	-12.167	-7.1738	-6.4860
1.00	-12.167	-7.1738	-7.6065

LC1: Load case 1: Element 8:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-13.300	4.7541	-7.6065
0.10	-13.300	4.7541	-6.8459
0.20	-13.300	4.7541	-6.0852
0.30	-13.300	4.7541	-5.3246

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.40	-13.300	4.7541	-4.5639
0.50	-13.300	4.7541	-3.8033
0.60	-13.300	4.7541	-3.0426
0.70	-13.300	4.7541	-2.2820

LC1: Load case 1: Element 8:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.80	-13.300	4.7541	-1.5213
0.90	-13.300	4.7541	-0.76065

Pos	Fx [kN]	Fz [kN]	My [kNm]
1.00	-13.300	4.7541	-1.1369E-15

Geometry

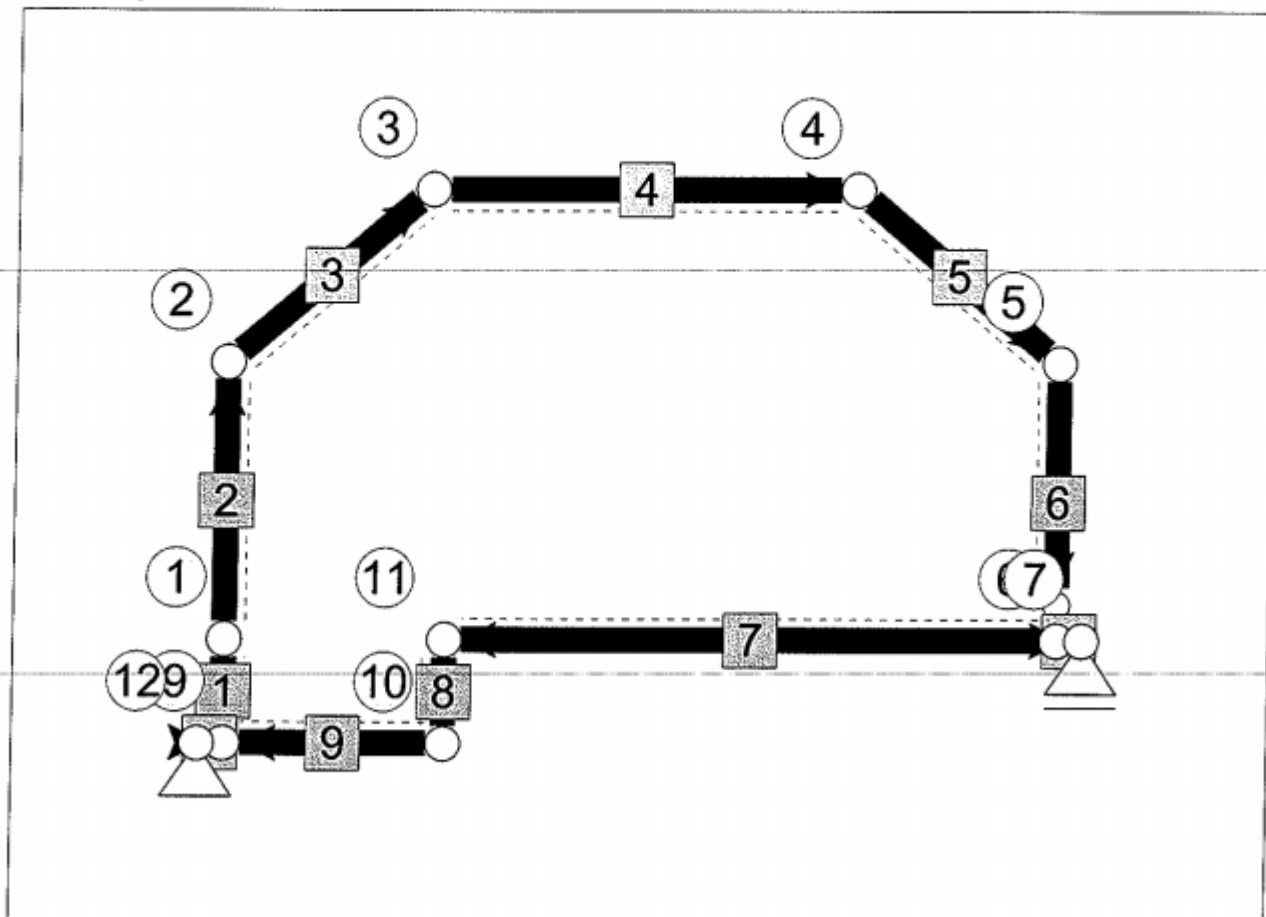


Table of Nodes

Index	X coor. [mm]	Z coor. [mm]	Supports
1:	0.00000	0.00000	-
2:	0.00000	-1600.0	-
3:	1200.0	-2600.0	-
4:	3700.0	-2600.0	-
5:	4900.0	-1600.0	-
6:	4900.0	0.00000	-

Index	X coor. [mm]	Z coor. [mm]	Supports
7:	5050.0	0.00000	Uz
9:	0.00000	600.00	-
10:	1300.0	600.00	-
11:	1300.0	0.00000	-
12:	-150.00	600.00	UxUz

Table of elements

Index	Type	Node 1	Node 2	Cross-section	Material	Length [mm]	Rel. 1	Rel. 2
1:	Linear	9:	1:	1: 150x150 x 6.3	1: S 275	600.00	Ry	-
2:	Linear	1:	2:	1: 150x150 x 6.3	1: S 275	1600.0	-	-
3:	Linear	2:	3:	1: 150x150 x 6.3	1: S 275	1562.0	-	-
4:	Linear	3:	4:	1: 150x150 x 6.3	1: S 275	2500.0	-	-
5:	Linear	4:	5:	1: 150x150 x 6.3	1: S 275	1562.0	-	-
6:	Linear	5:	6:	1: 150x150 x 6.3	1: S 275	1600.0	-	Ry
7:	Linear	6:	11:	2: UC 203 x 203 x 46	1: S 275	3600.0	-	-
8:	Linear	11:	10:	2: UC 203 x 203 x 46	1: S 275	600.00	-	-
9:	Linear	10:	9:	2: UC 203 x 203 x 46	1: S 275	1300.0	-	-

Table of elements

Index	Type	Node 1	Node 2	Cross-section	Material	Length [mm]	Rel. 1	Rel. 2
11:	Linear	6:	7:	2: UC 203 x 203 x 46	1: S 275	150.00	-	-
12:	Linear	12:	9:	2: UC 203 x 203 x 46	1: S 275	150.00	-	-

Table of Materials

Index	Elastic Modulus [MPa]	Coeff. of Thermal Exp. [1/d°C]
1: S 275	2.1000E+05	1.2000E-05

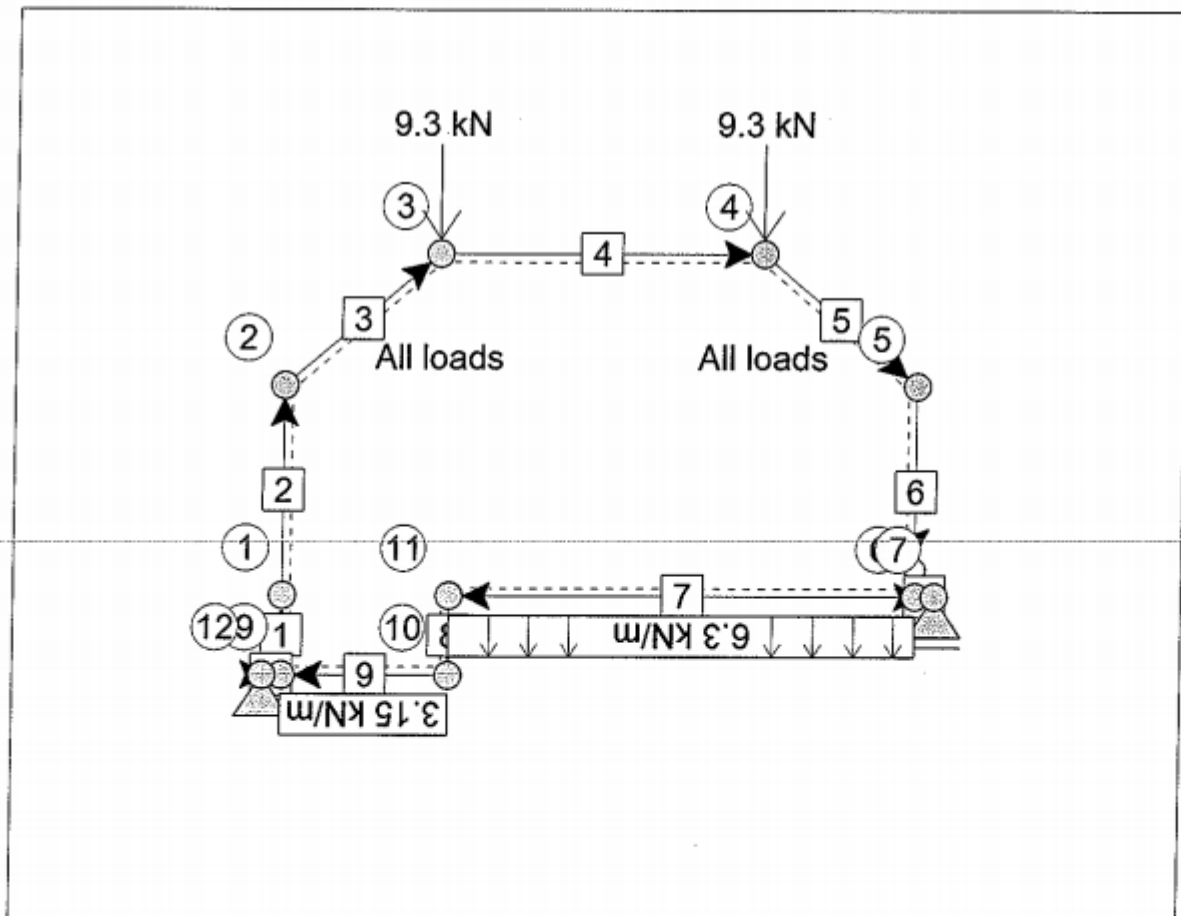
Table of Cross-sections

Index	A [mm ²]	I _y [cm ⁴]	Height [mm]
1: 150x150 x 6.3	3519.0	1193.0	150.00
2: UC 203 x 203 x 46	5870.0	4570.0	203.20

Actions & Load Cases

Load Case	Limit State	Action 1
Load case 1	Ultimate	1.00

A1 : Action 1



A1: Action 1: Nodal Loads

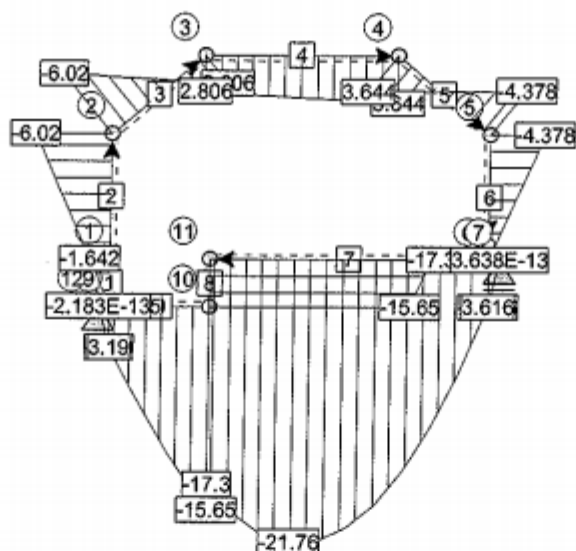
Node	Fx [kN]	Fz [kN]	My [kNm]	Name
3:	0.00000	9.3000	0.00000	
4:	0.00000	9.3000	0.00000	

A1: Action 1: Uniform Element Loads

Element	Fx-s [kN/m]	Fx-e [kN/m]	Fz-s [kN/m]	Fz-e [kN/m]	My-s [kNm/m]	My-e [kNm/m]	Direction	Start	End	Position	Name
7:	0.00000	0.00000	6.3000	6.3000	0.00000	0.00000	World	0.00	1.00	Local	
9:	0.00000	0.00000	3.1500	3.1500	0.00000	0.00000	World	0.00	1.00	Local	

LC1: Load case 1: Bending Moments My

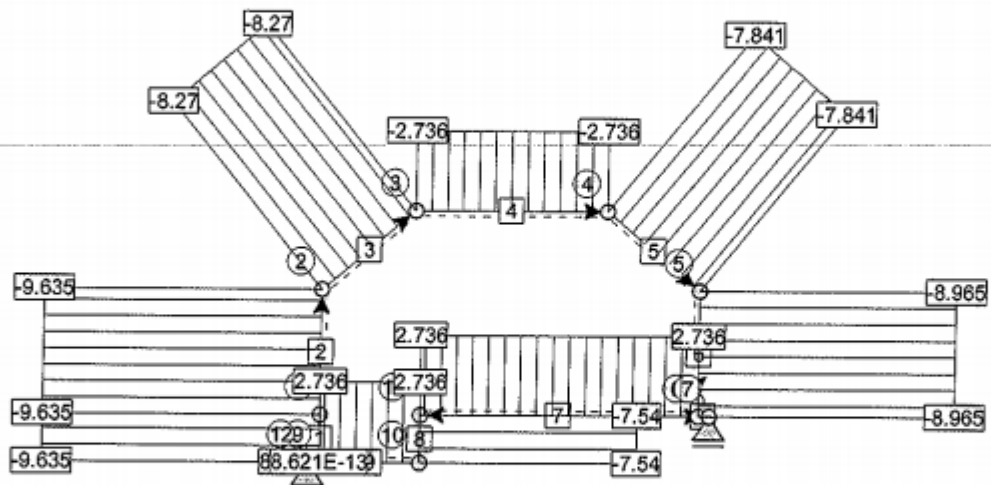
1.00 Action 1



Units: kNm

LC1: Load case 1: Axial Forces Fx

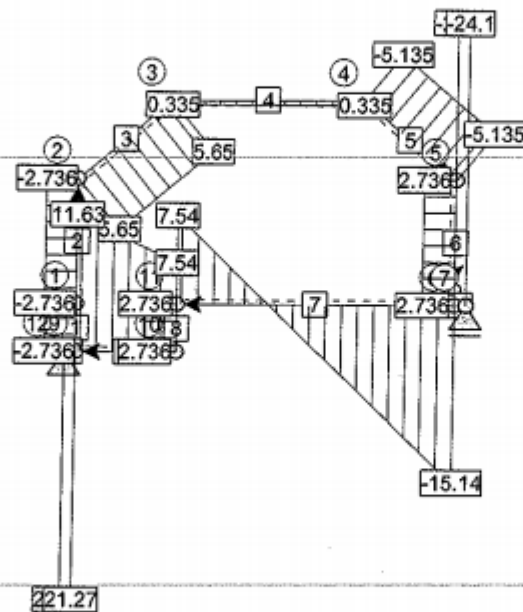
1.00 Action 1



Units: kN

LC1: Load case 1: Shear Forces Fz

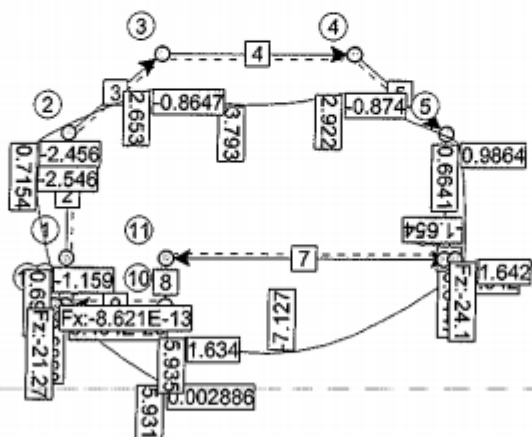
1.00 Action 1



Units: kN

LC1: Load case 1: Displacements and Reactions

1.00 Action 1



Units: mm, kN, kNm

LC1: Load case 1: Nodal Displacements

Node	ux [mm]	uz [mm]	fy [deg]
1:	-1.1592	0.69459	0.10318
2:	-2.4563	0.71545	-0.036985
3:	-0.86473	2.6526	-0.094383
4:	-0.87399	2.9224	0.089997
5:	0.98637	0.66410	0.076883
6:	1.6422	0.64469	0.24518

Node	ux [mm]	uz [mm]	fy [deg]
7:	1.6422	-	0.24679
9:	5.4039E-20	0.68676	-0.26137
10:	0.0028856	5.9313	-0.18480
11:	1.6342	5.9350	-0.12578
12:	-	-	-0.26280

LC1: Load case 1: Reactions

Node	Fx [kN]	Fz [kN]	My [kNm]
7:	-	-24.105	-
12:	-8.6215E-13	-21.270	-

LC1: Load case 1: Element 1:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-9.6350	-2.7362	-2.2737E-15
0.10	-9.6350	-2.7362	-0.16417
0.20	-9.6350	-2.7362	-0.32835
0.30	-9.6350	-2.7362	-0.49252

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.40	-9.6350	-2.7362	-0.65669
0.50	-9.6350	-2.7362	-0.82087
0.60	-9.6350	-2.7362	-0.98504
0.70	-9.6350	-2.7362	-1.1492

LC1: Load case 1: Element 1:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.80	-9.6350	-2.7362	-1.3134
0.90	-9.6350	-2.7362	-1.4776

Pos	Fx [kN]	Fz [kN]	My [kNm]
1.00	-9.6350	-2.7362	-1.6417

LC1: Load case 1: Element 2:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-9.6350	-2.7362	-1.6417
0.10	-9.6350	-2.7362	-2.0795
0.20	-9.6350	-2.7362	-2.5173
0.30	-9.6350	-2.7362	-2.9551
0.40	-9.6350	-2.7362	-3.3929
0.50	-9.6350	-2.7362	-3.8307

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-9.6350	-2.7362	-4.2685
0.70	-9.6350	-2.7362	-4.7063
0.80	-9.6350	-2.7362	-5.1441
0.90	-9.6350	-2.7362	-5.5819
1.00	-9.6350	-2.7362	-6.0197

LC1: Load case 1: Element 3:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-8.2702	5.6502	-6.0197
0.10	-8.2702	5.6502	-5.1371
0.20	-8.2702	5.6502	-4.2545
0.30	-8.2702	5.6502	-3.3719
0.40	-8.2702	5.6502	-2.4894
0.50	-8.2702	5.6502	-1.6068

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-8.2702	5.6502	-0.72419
0.70	-8.2702	5.6502	0.15839
0.80	-8.2702	5.6502	1.0410
0.90	-8.2702	5.6502	1.9236
1.00	-8.2702	5.6502	2.8061

LC1: Load case 1: Element 4:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-2.7362	0.33505	2.8061
0.10	-2.7362	0.33505	2.8899
0.20	-2.7362	0.33505	2.9737
0.30	-2.7362	0.33505	3.0574
0.40	-2.7362	0.33505	3.1412
0.50	-2.7362	0.33505	3.2250

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-2.7362	0.33505	3.3087
0.70	-2.7362	0.33505	3.3925
0.80	-2.7362	0.33505	3.4762
0.90	-2.7362	0.33505	3.5600
1.00	-2.7362	0.33505	3.6438

LC1: Load case 1: Element 5:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-7.8412	-5.1354	3.6438
0.10	-7.8412	-5.1354	2.8416
0.20	-7.8412	-5.1354	2.0394
0.30	-7.8412	-5.1354	1.2372
0.40	-7.8412	-5.1354	0.43508
0.50	-7.8412	-5.1354	-0.36710

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-7.8412	-5.1354	-1.1693
0.70	-7.8412	-5.1354	-1.9714
0.80	-7.8412	-5.1354	-2.7736
0.90	-7.8412	-5.1354	-3.5758
1.00	-7.8412	-5.1354	-4.3780

LC1: Load case 1: Element 6:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-8.9650	2.7362	-4.3780
0.10	-8.9650	2.7362	-3.9402
0.20	-8.9650	2.7362	-3.5024
0.30	-8.9650	2.7362	-3.0646
0.40	-8.9650	2.7362	-2.6268
0.50	-8.9650	2.7362	-2.1890

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-8.9650	2.7362	-1.7512
0.70	-8.9650	2.7362	-1.3134
0.80	-8.9650	2.7362	-0.87559
0.90	-8.9650	2.7362	-0.43780
1.00	-8.9650	2.7362	1.1369E-15

LC1: Load case 1: Element 7:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	2.7362	-15.140	-3.6157
0.10	2.7362	-12.872	-8.6579
0.20	2.7362	-10.604	-12.884
0.30	2.7362	-8.3360	-16.293
0.40	2.7362	-6.0680	-18.886
0.50	2.7362	-3.8000	-20.662

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	2.7362	-1.5320	-21.622
0.70	2.7362	0.73595	-21.765
0.80	2.7362	3.0040	-21.092
0.90	2.7362	5.2720	-19.602
1.00	2.7362	7.5400	-17.296

LC1: Load case 1: Element 8:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-7.5400	2.7362	-17.296
0.10	-7.5400	2.7362	-17.132
0.20	-7.5400	2.7362	-16.968
0.30	-7.5400	2.7362	-16.803
0.40	-7.5400	2.7362	-16.639
0.50	-7.5400	2.7362	-16.475

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-7.5400	2.7362	-16.311
0.70	-7.5400	2.7362	-16.147
0.80	-7.5400	2.7362	-15.983
0.90	-7.5400	2.7362	-15.818
1.00	-7.5400	2.7362	-15.654

LC1: Load case 1: Element 9:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	2.7362	7.5400	-15.654
0.10	2.7362	7.9495	-14.647
0.20	2.7362	8.3590	-13.587
0.30	2.7362	8.7685	-12.474
0.40	2.7362	9.1780	-11.308
0.50	2.7362	9.5875	-10.088

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	2.7362	9.9970	-8.8148
0.70	2.7362	10.406	-7.4886
0.80	2.7362	10.816	-6.1091
0.90	2.7362	11.225	-4.6764
1.00	2.7362	11.635	-3.1905

LC1: Load case 1: Element 11:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	0.00000	-24.105	3.6157
0.10	0.00000	-24.105	3.2542
0.20	0.00000	-24.105	2.8926
0.30	0.00000	-24.105	2.5310

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.40	0.00000	-24.105	2.1694
0.50	0.00000	-24.105	1.8079
0.60	0.00000	-24.105	1.4463
0.70	0.00000	-24.105	1.0847

LC1: Load case 1: Element 11:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.80	0.00000	-24.105	0.72315
0.90	0.00000	-24.105	0.36158

Pos	Fx [kN]	Fz [kN]	My [kNm]
1.00	0.00000	-24.105	3.6380E-13

LC1: Load case 1: Element 12:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	8.6215E-13	21.270	-2.1828E-13
0.10	8.6215E-13	21.270	0.31905
0.20	8.6215E-13	21.270	0.63810
0.30	8.6215E-13	21.270	0.95715
0.40	8.6215E-13	21.270	1.2762
0.50	8.6215E-13	21.270	1.5952

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	8.6215E-13	21.270	1.9143
0.70	8.6215E-13	21.270	2.2333
0.80	8.6215E-13	21.270	2.5524
0.90	8.6215E-13	21.270	2.8714
1.00	8.6215E-13	21.270	3.1905

Geometry

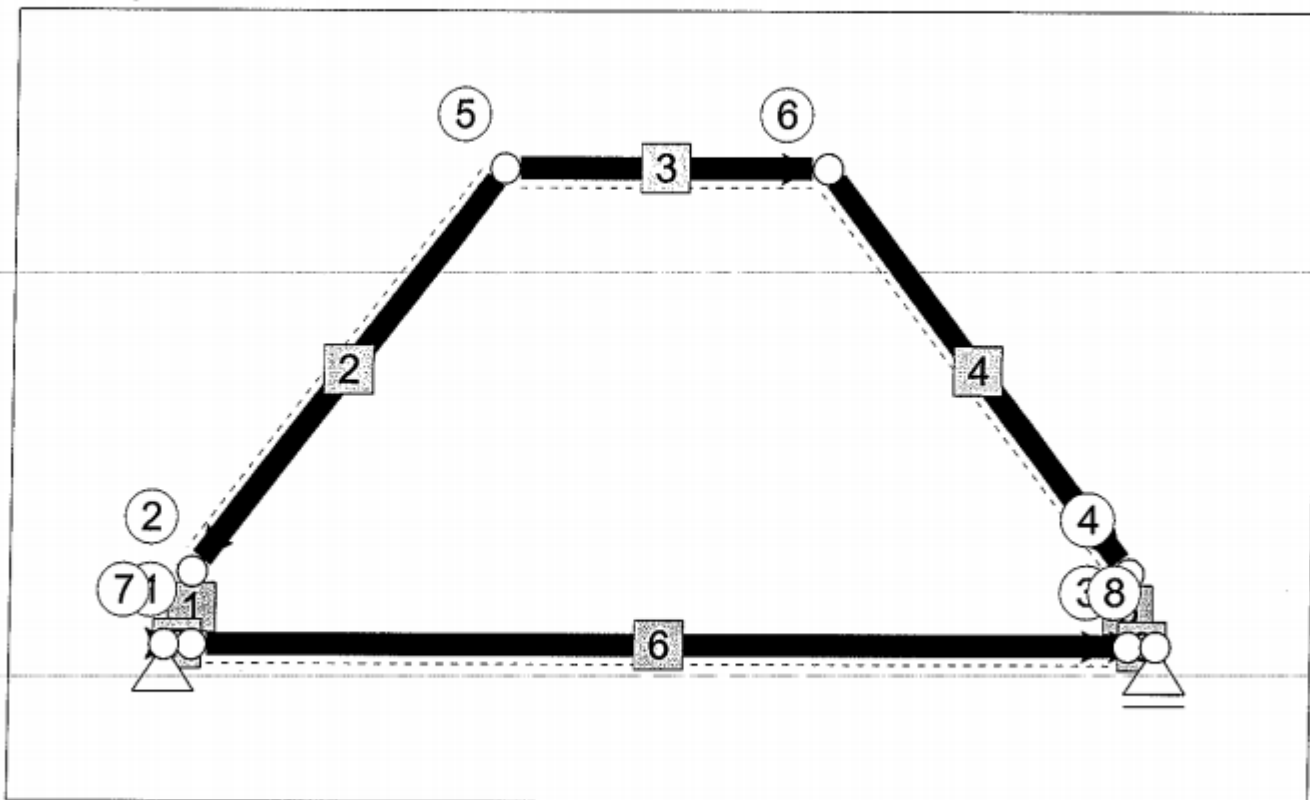


Table of Nodes

Index	X coor. [mm]	Z coor. [mm]	Supports
1:	0.00000	0.00000	-
2:	0.00000	-400.00	-
3:	5200.0	0.00000	-
4:	5200.0	-400.00	-

Index	X coor. [mm]	Z coor. [mm]	Supports
5:	1700.0	-2600.0	-
6:	3500.0	-2600.0	-
7:	-150.00	0.00000	UxUz
8:	5350.0	0.00000	Uz

Table of elements

Index	Type	Node 1	Node 2	Cross-section	Material	Length [mm]	Rel. 1	Rel. 2
1:	Linear	2:	1:	1: 150x150 x 6.3	1: S 275	400.00	-	Ry
2:	Linear	5:	2:	1: 150x150 x 6.3	1: S 275	2780.3	-	-
3:	Linear	5:	6:	1: 150x150 x 6.3	1: S 275	1800.0	-	-
4:	Linear	6:	4:	1: 150x150 x 6.3	1: S 275	2780.3	-	-
5:	Linear	4:	3:	1: 150x150 x 6.3	1: S 275	400.00	-	Ry
6:	Linear	1:	3:	2: UC 203 x 203 x 46	1: S 275	5200.0	-	-
7:	Linear	7:	1:	2: UC 203 x 203 x 46	1: S 275	150.00	-	-
8:	Linear	3:	8:	2: UC 203 x 203 x 46	1: S 275	150.00	-	-

Table of Materials

Index	Elastic Modulus [MPa]	Coeff. of Thermal Exp. [1/d°C]
1: S 275	2.1000E+05	1.2000E-05

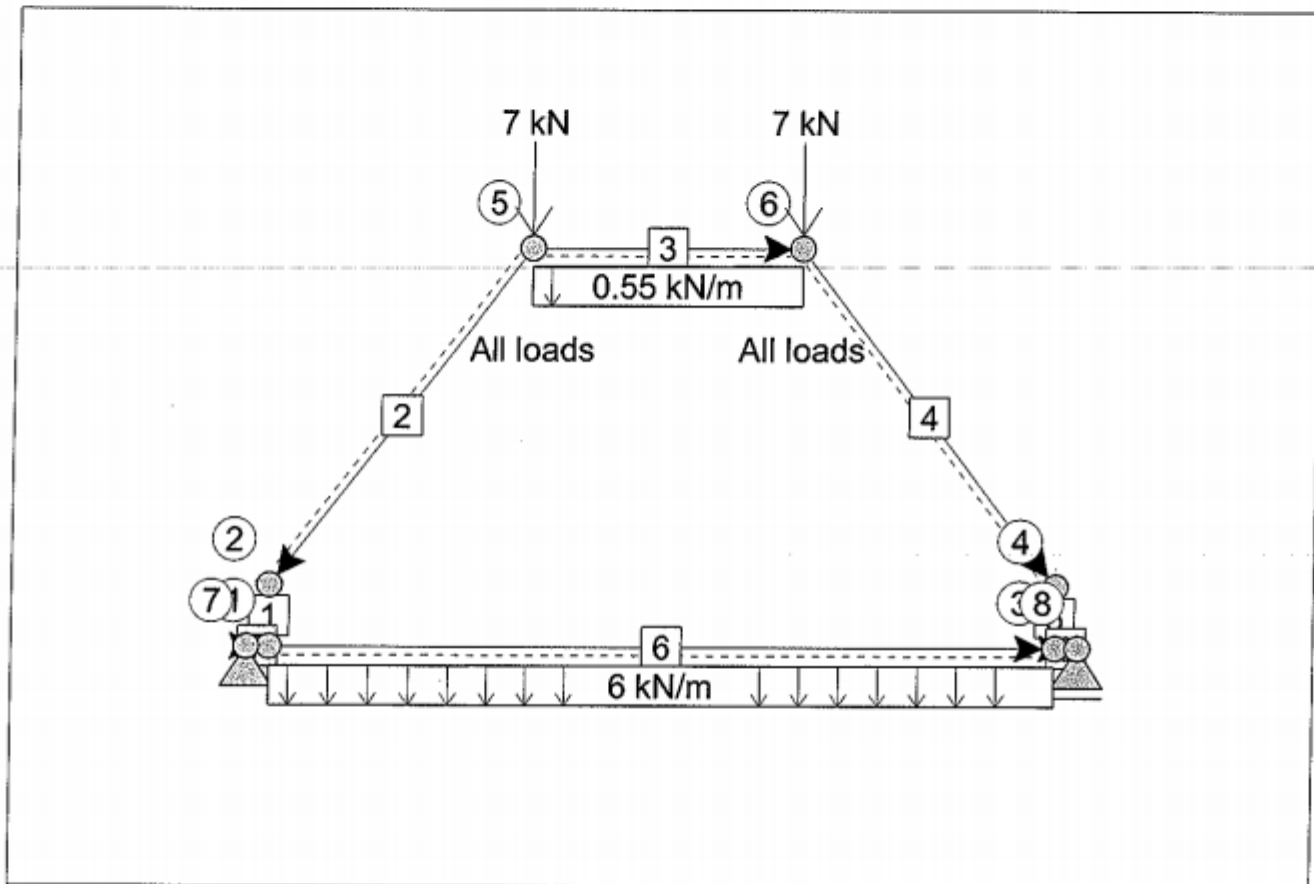
Table of Cross-sections

Index	A [mm ²]	I _y [cm ⁴]	Height [mm]
1: 150x150 x 6.3	3519.0	1193.0	150.00
2: UC 203 x 203 x 46	5870.0	4570.0	203.20

Actions & Load Cases

Load Case	Limit State	Action 1
Load case 1	Ultimate	1.00

A1 : Action 1



A1: Action 1: Nodal Loads

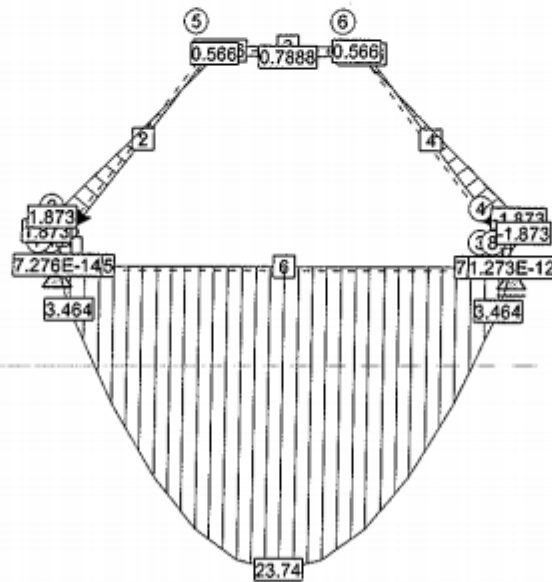
Node	F _x [kN]	F _z [kN]	M _y [kNm]	Name
5:	0.00000	7.0000	0.00000	
6:	0.00000	7.0000	0.00000	

A1: Action 1: Uniform Element Loads

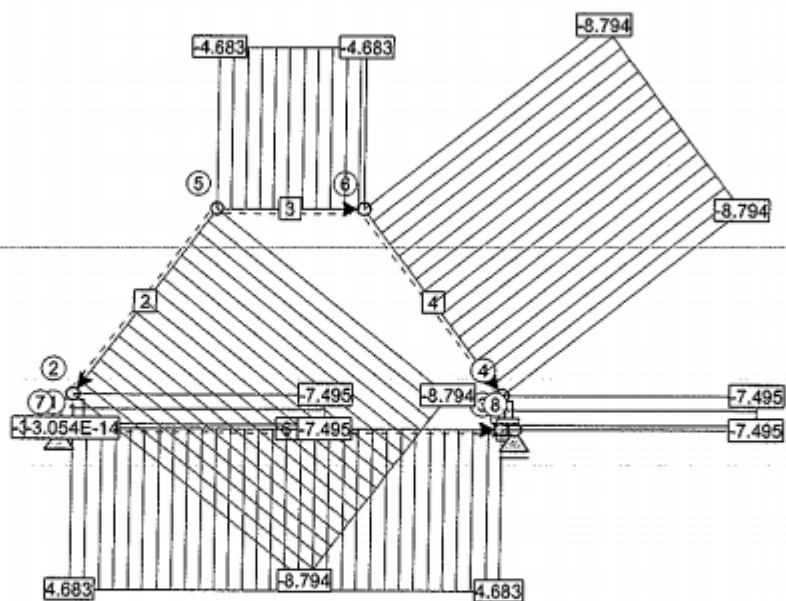
Element	F _{x s} [kN/m]	F _{x e} [kN/m]	F _{z s} [kN/m]	F _{z e} [kN/m]	M _{y s} [kNm/m]	M _{y e} [kNm/m]	Direction	Start	End	Position	Name
3:	0.00000	0.00000	0.55000	0.55000	0.00000	0.00000	World	0.00	1.00	Local	
6:	0.00000	0.00000	6.0000	6.0000	0.00000	0.00000	World	0.00	1.00	Local	

LC1: Load case 1: Bending Moments M_y

1.00 Action 1

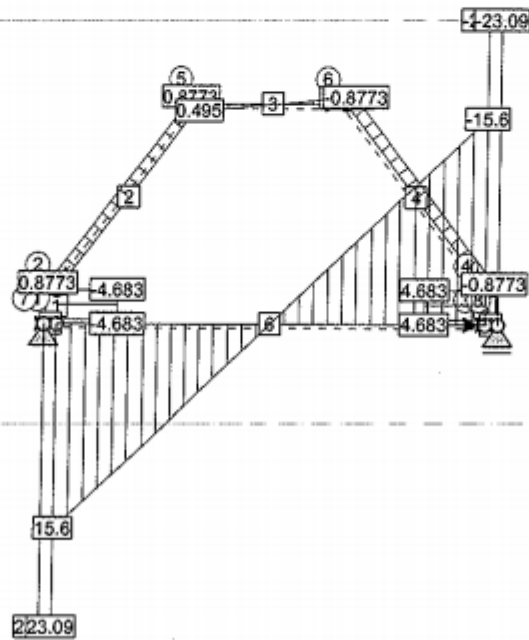
LC1: Load case 1: Axial Forces F_x

1.00 Action 1



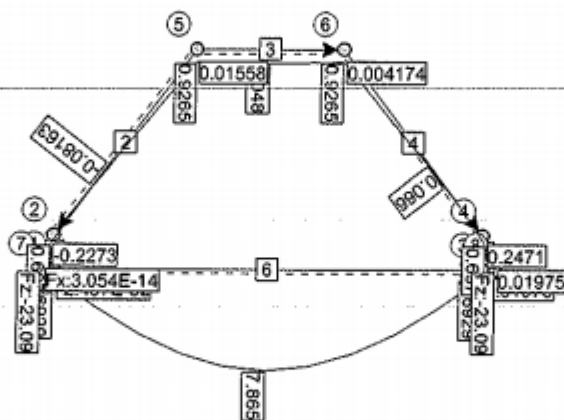
LC1: Load case 1: Shear Forces Fz

1.00 Action 1



LC1: Load case 1: Displacements and Reactions

1.00 Action 1



LC1: Load case 1: Nodal Displacements

Node	ux [mm]	uz [mm]	fy [deg]
1:	-2.4074E-32	0.69291	-0.26364
2:	-0.22732	0.69696	0.026849
3:	0.019754	0.69291	0.26364
4:	0.24707	0.69696	-0.026849

Node	ux [mm]	uz [mm]	fy [deg]
5:	0.015580	0.92647	-0.014706
6:	0.0041740	0.92647	0.014706
7:	-	-	-0.26519
8:	0.019754	-	0.26519

LC1: Load case 1: Reactions

Node	Fx [kN]	Fz [kN]	My [kNm]
7:	3.0541E-14	-23.095	-
8:	-	-23.095	-

LC1: Load case 1: Element 1:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-7.4950	-4.6829	1.8732
0.10	-7.4950	-4.6829	1.6858
0.20	-7.4950	-4.6829	1.4985
0.30	-7.4950	-4.6829	1.3112
0.40	-7.4950	-4.6829	1.1239
0.50	-7.4950	-4.6829	0.93658

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-7.4950	-4.6829	0.74926
0.70	-7.4950	-4.6829	0.56195
0.80	-7.4950	-4.6829	0.37463
0.90	-7.4950	-4.6829	0.18732
1.00	-7.4950	-4.6829	2.8422E-15

LC1: Load case 1: Element 2:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-8.7940	0.87731	-0.56602
0.10	-8.7940	0.87731	-0.32210
0.20	-8.7940	0.87731	-0.078186
0.30	-8.7940	0.87731	0.16573
0.40	-8.7940	0.87731	0.40965
0.50	-8.7940	0.87731	0.65357

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-8.7940	0.87731	0.89748
0.70	-8.7940	0.87731	1.1414
0.80	-8.7940	0.87731	1.3853
0.90	-8.7940	0.87731	1.6292
1.00	-8.7940	0.87731	1.8732

LC1: Load case 1: Element 3:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-4.6829	0.49500	0.56602
0.10	-4.6829	0.39600	0.64621
0.20	-4.6829	0.29700	0.70858
0.30	-4.6829	0.19800	0.75313
0.40	-4.6829	0.099000	0.77986
0.50	-4.6829	1.2657E-14	0.78877

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-4.6829	-0.099000	0.77986
0.70	-4.6829	-0.19800	0.75313
0.80	-4.6829	-0.29700	0.70858
0.90	-4.6829	-0.39600	0.64621
1.00	-4.6829	-0.49500	0.56602

LC1: Load case 1: Element 4:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-8.7940	-0.87731	0.56602
0.10	-8.7940	-0.87731	0.32210
0.20	-8.7940	-0.87731	0.078186
0.30	-8.7940	-0.87731	-0.16573
0.40	-8.7940	-0.87731	-0.40965
0.50	-8.7940	-0.87731	-0.65357

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-8.7940	-0.87731	-0.89748
0.70	-8.7940	-0.87731	-1.1414
0.80	-8.7940	-0.87731	-1.3853
0.90	-8.7940	-0.87731	-1.6292
1.00	-8.7940	-0.87731	-1.8732

LC1: Load case 1: Element 5:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-7.4950	4.6829	-1.8732
0.10	-7.4950	4.6829	-1.6858
0.20	-7.4950	4.6829	-1.4985
0.30	-7.4950	4.6829	-1.3112
0.40	-7.4950	4.6829	-1.1239
0.50	-7.4950	4.6829	-0.93658

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-7.4950	4.6829	-0.74926
0.70	-7.4950	4.6829	-0.56195
0.80	-7.4950	4.6829	-0.37463
0.90	-7.4950	4.6829	-0.18732
1.00	-7.4950	4.6829	7.9581E-15

LC1: Load case 1: Element 6:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	4.6829	15.600	3.4642
0.10	4.6829	12.480	10.765
0.20	4.6829	9.3600	16.443
0.30	4.6829	6.2400	20.499
0.40	4.6829	3.1200	22.933
0.50	4.6829	1.5810E-13	23.744

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	4.6829	-3.1200	22.933
0.70	4.6829	-6.2400	20.499
0.80	4.6829	-9.3600	16.443
0.90	4.6829	-12.480	10.765
1.00	4.6829	-15.600	3.4643

LC1: Load case 1: Element 7:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	-3.0541E-14	23.095	7.2760E-14
0.10	-3.0541E-14	23.095	0.34642
0.20	-3.0541E-14	23.095	0.69285
0.30	-3.0541E-14	23.095	1.0393
0.40	-3.0541E-14	23.095	1.3857
0.50	-3.0541E-14	23.095	1.7321

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.60	-3.0541E-14	23.095	2.0785
0.70	-3.0541E-14	23.095	2.4250
0.80	-3.0541E-14	23.095	2.7714
0.90	-3.0541E-14	23.095	3.1178
1.00	-3.0541E-14	23.095	3.4642

LC1: Load case 1: Element 8:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.00	0.00000	-23.095	3.4642
0.10	0.00000	-23.095	3.1178
0.20	0.00000	-23.095	2.7714
0.30	0.00000	-23.095	2.4250

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.40	0.00000	-23.095	2.0786
0.50	0.00000	-23.095	1.7321
0.60	0.00000	-23.095	1.3857
0.70	0.00000	-23.095	1.0393

LC1: Load case 1: Element 8:

Pos	Fx [kN]	Fz [kN]	My [kNm]
0.80	0.00000	-23.095	0.69285
0.90	0.00000	-23.095	0.34643

Pos	Fx [kN]	Fz [kN]	My [kNm]
1.00	0.00000	-23.095	1.2733E-12