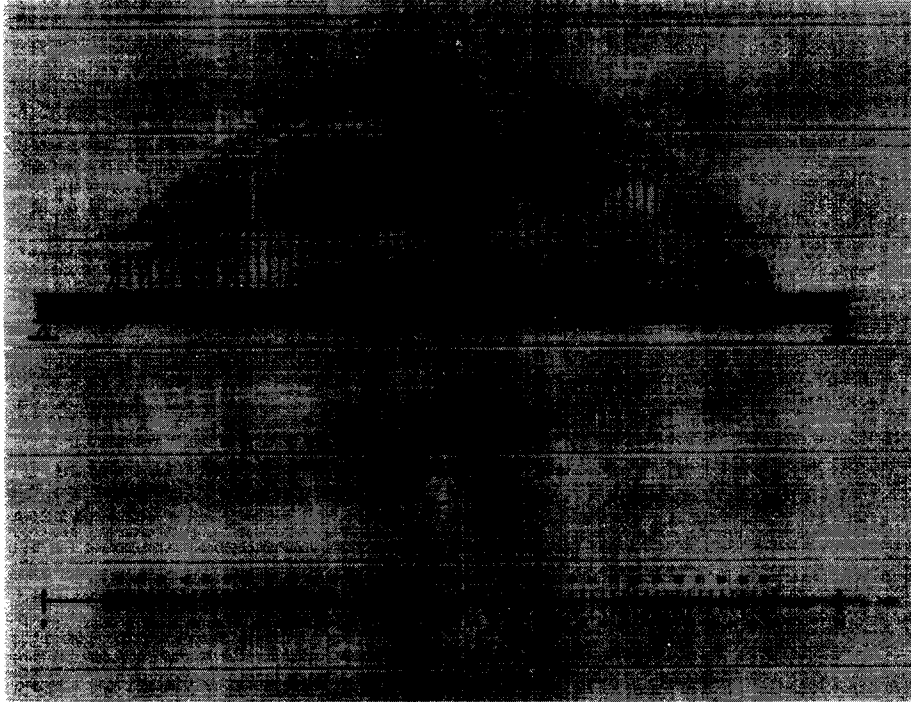


## SKYCIV BEAM ANALYSIS REPORT

Load Combination: DL



Software: SkyCiv Beam v3.2.4  
Tue Jul 09 2024 14:21:43 GMT-0400 (Eastern Daylight Time)

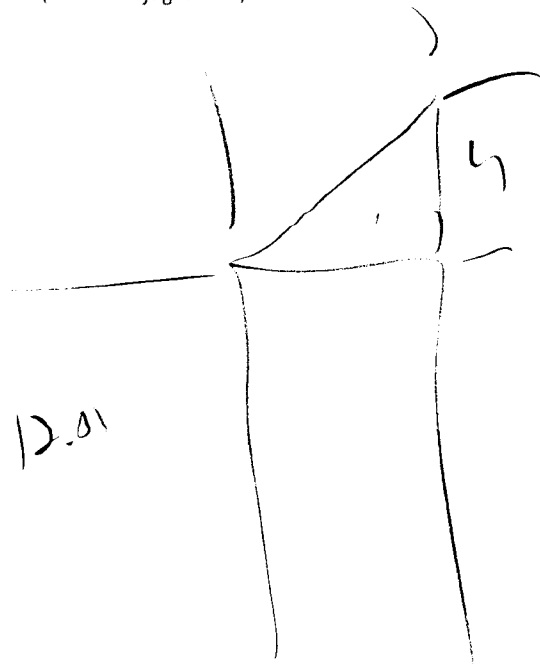
### Project Info

File Name: 74 IN Point Load Beam

Engineer: Leo Leo Roche (lroche@newfabinc.com)

### Included in this Report:

- Input Summary
- Beam Section
- Free Body Diagram (FBD)
- Analysis Summary
- Analysis Results
- Bending Moment Diagram (BMD)
- Shear Force Diagram (SFD)
- Deflection Results
- Stress Results



## INPUT SUMMARY

### General Info

Beam Length:	74 in
Section Name:	2 x 2
Self Weight:	False

### Supports

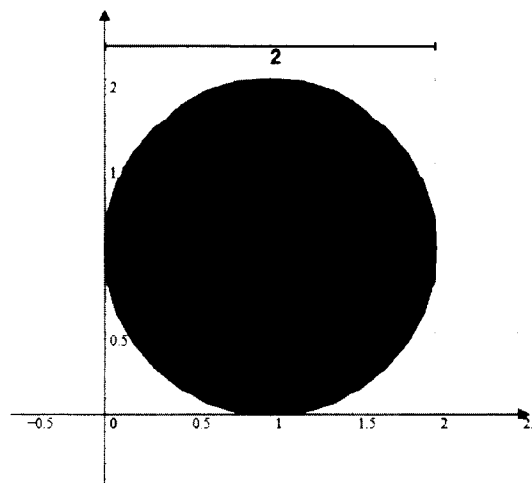
Support Type	Location
Pinned	0 in
Roller	74 in

### Loads

Load Type	Location	Magnitude	Load Case
Distributed Load	6 in to 7 in	0 lb to -4.194 lb	DL
Distributed Load	7 in to 8 in	-4.194 lb to -8.378 lb	DL
Distributed Load	8 in to 9 in	-8.378 lb to -12.54 lb	DL
Distributed Load	9 in to 10 in	-12.54 lb to -16.671 lb	DL
Distributed Load	10 in to 11 in	-16.671 lb to -20.758 lb	DL
Distributed Load	11 in to 12 in	-20.758 lb to -24.792 lb	DL
Distributed Load	12 in to 13 in	-24.792 lb to -28.762 lb	DL
Distributed Load	13 in to 14 in	-28.762 lb to -32.659 lb	DL
Distributed Load	14 in to 15 in	-32.659 lb to -36.471 lb	DL
Distributed Load	15 in to 16 in	-36.471 lb to -40.19 lb	DL
Distributed Load	16 in to 17 in	-40.19 lb to -43.806 lb	DL
Distributed Load	17 in to 18 in	-43.806 lb to -47.31 lb	DL
Distributed Load	18 in to 19 in	-47.31 lb to -50.692 lb	DL
Distributed Load	19 in to 20 in	-50.692 lb to -53.944 lb	DL
Distributed Load	20 in to 21 in	-53.944 lb to -57.057 lb	DL
Distributed Load	21 in to 22 in	-57.057 lb to -60.024 lb	DL
Distributed Load	22 in to 23 in	-60.024 lb to -62.837 lb	DL
Distributed Load	23 in to 24 in	-62.837 lb to -65.488 lb	DL
Distributed Load	24 in to 25 in	-65.488 lb to -67.972 lb	DL
Distributed Load	25 in to 26 in	-67.972 lb to -70.281 lb	DL
Distributed Load	26 in to 27 in	-70.281 lb to -72.409 lb	DL
Distributed Load	27 in to 28 in	-72.409 lb to -74.352 lb	DL
Distributed Load	28 in to 29 in	-74.352 lb to -76.104 lb	DL
Distributed Load	29 in to 30 in	-76.104 lb to -77.66 lb	DL
Distributed Load	30 in to 31 in	-77.66 lb to -79.017 lb	DL
Distributed Load	31 in to 32 in	-79.017 lb to -80.171 lb	DL
Distributed Load	32 in to 33 in	-80.171 lb to -81.12 lb	DL
Distributed Load	33 in to 34 in	-81.12 lb to -81.86 lb	DL
Distributed Load	34 in to 35 in	-81.86 lb to -82.39 lb	DL
Distributed Load	35 in to 36 in	-82.39 lb to -82.709 lb	DL
Distributed Load	36 in to 37 in	-82.709 lb to -82.815 lb	DL
Distributed Load	37 in to 38 in	-82.815 lb to -82.709 lb	DL
Distributed Load	38 in to 39 in	-82.709 lb to -82.39 lb	DL
Distributed Load	39 in to 40 in	-82.39 lb to -81.86 lb	DL
Distributed Load	40 in to 41 in	-81.86 lb to -81.12 lb	DL
Distributed Load	41 in to 42 in	-81.12 lb to -80.171 lb	DL
Distributed Load	42 in to 43 in	-80.171 lb to -79.017 lb	DL
Distributed Load	43 in to 44 in	-79.017 lb to -77.66 lb	DL
Distributed Load	44 in to 45 in	-77.66 lb to -76.104 lb	DL
Distributed Load	45 in to 46 in	-76.104 lb to -74.352 lb	DL
Distributed Load	46 in to 47 in	-74.352 lb to -72.409 lb	DL
Distributed Load	47 in to 48 in	-72.409 lb to -70.281 lb	DL
Distributed Load	48 in to 49 in	-70.281 lb to -67.972 lb	DL
Distributed Load	49 in to 50 in	-67.972 lb to -65.488 lb	DL

Load Type	Location	Magnitude	Load Case
Distributed Load	50 in to 51 in	-65.488 lb to -62.837 lb	DL
Distributed Load	51 in to 52 in	-62.837 lb to -60.024 lb	DL
Distributed Load	52 in to 53 in	-60.024 lb to -57.057 lb	DL
Distributed Load	53 in to 54 in	-57.057 lb to -53.944 lb	DL
Distributed Load	54 in to 55 in	-53.944 lb to -50.692 lb	DL
Distributed Load	55 in to 56 in	-50.692 lb to -47.31 lb	DL
Distributed Load	56 in to 57 in	-47.31 lb to -43.806 lb	DL
Distributed Load	57 in to 58 in	-43.806 lb to -40.19 lb	DL
Distributed Load	58 in to 59 in	-40.19 lb to -36.471 lb	DL
Distributed Load	59 in to 60 in	-36.471 lb to -32.659 lb	DL
Distributed Load	60 in to 61 in	-32.659 lb to -28.762 lb	DL
Distributed Load	61 in to 62 in	-28.762 lb to -24.792 lb	DL
Distributed Load	62 in to 63 in	-24.792 lb to -20.758 lb	DL
Distributed Load	63 in to 64 in	-20.758 lb to -16.671 lb	DL
Distributed Load	64 in to 65 in	-16.671 lb to -12.54 lb	DL
Distributed Load	65 in to 66 in	-12.54 lb to -8.378 lb	DL
Distributed Load	66 in to 67 in	-8.378 lb to -4.194 lb	DL
Distributed Load	67 in to 68 in	-4.194 lb to 0 lb	DL

Beam Section



Geometric Properties		
A	3.142	in <sup>2</sup>
C <sub>z</sub>	1	in
C <sub>y</sub>	1	in

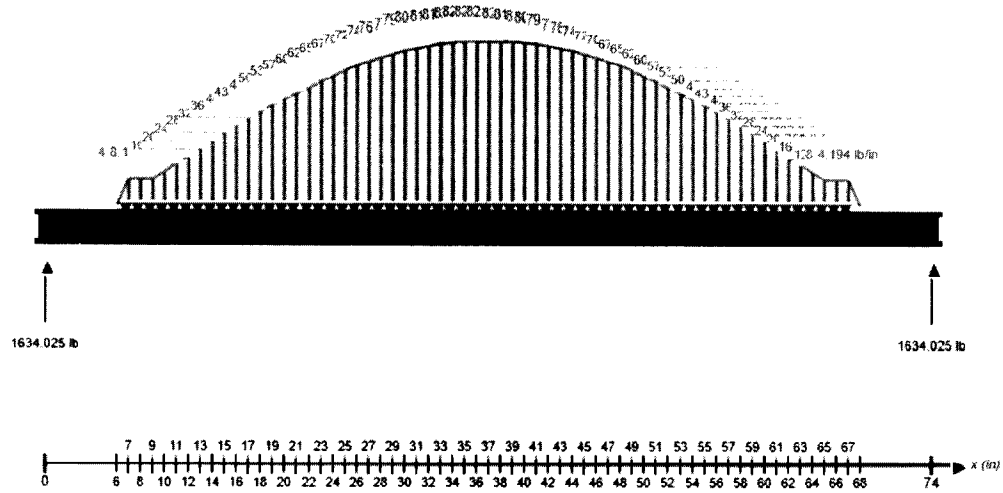
Bending Properties		
I <sub>z</sub>	0.785	in <sup>4</sup>
I <sub>y</sub>	0.785	in <sup>4</sup>

Shear Properties		
A <sub>z</sub>	2.827	in <sup>2</sup>
A <sub>y</sub>	2.827	in <sup>2</sup>

Torsion Properties		
J	1.571	in <sup>4</sup>
r	1	in

Shape	Material	E (ksi)	$\nu$	$\rho$ (lb/ft <sup>3</sup> )
Circular	Structural Steel	29000	0.27	490

### FREE BODY DIAGRAM



## ANALYSIS RESULTS

### Reactions

Support at	X	Y	Mx
0	0 lb	1634.025 lb	0 lb-in
74	0 lb	1634.025 lb	0 lb-in

### Force Extremes

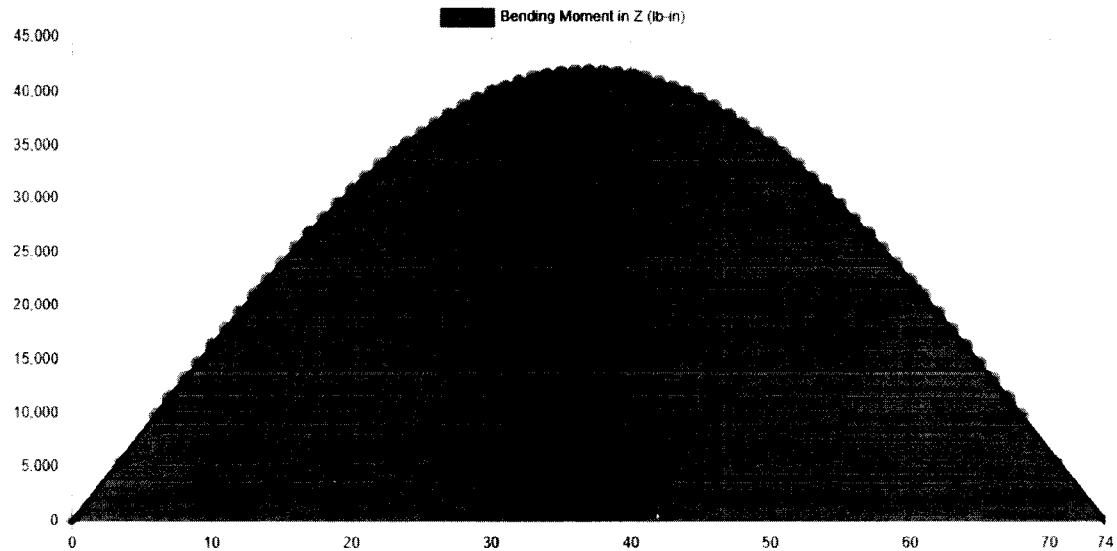
Result	Max	Min
Bending Moment	42051.997 lb-in	0 lb-in
Shear	1634.025 lb	-1634.025 lb
Displacement	0 in	-1.011 in

### Stress Extremes

Result	Max	Min
Bending Stress	53542.265 psi	-53542.265 psi
Shear Stress Total	785.597 psi	0 psi
Max Combined Normal Stress	53542.265 psi	0 psi
Min Combined Normal Stress	0 psi	-53542.265 psi

## DIAGRAMS

### Bending Moment Diagram



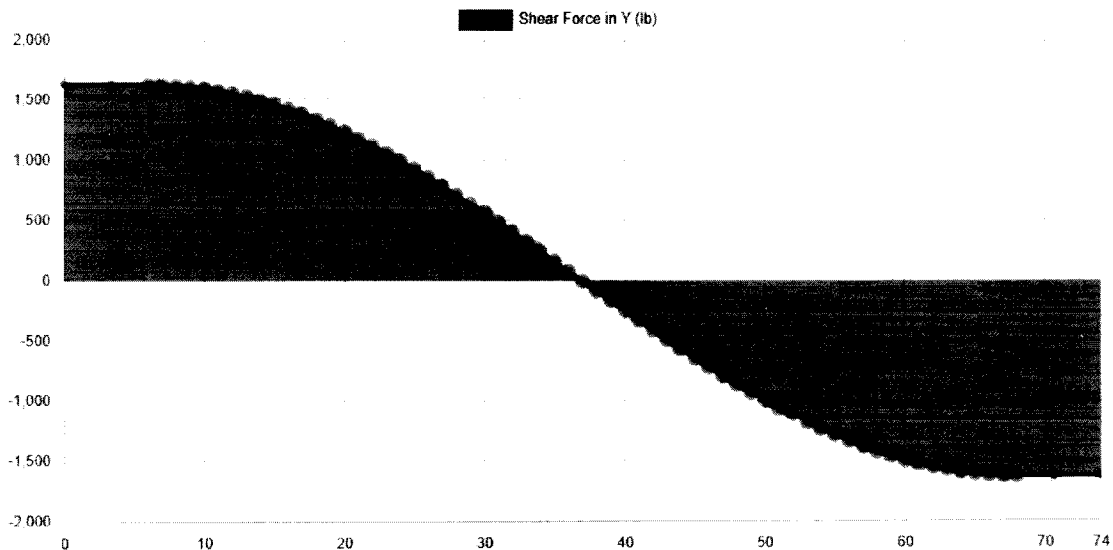
### Bending Moment Equations

- Eq. 1**  $M_1(x) = 1634.025x$  for  $0 \leq x \leq 6$
- Eq. 2**  $M_2(x) = -0.699x^3 + 12.582x^2 + 1558.533x + 150.984$  for  $6 \leq x \leq 7$
- Eq. 3**  $M_3(x) = -0.697x^3 + 12.547x^2 + 1558.778x + 150.412$  for  $7 \leq x \leq 8$
- Eq. 4**  $M_4(x) = -0.694x^3 + 12.459x^2 + 1559.482x + 148.535$  for  $8 \leq x \leq 9$
- Eq. 5**  $M_5(x) = -0.689x^3 + 12.32x^2 + 1560.737x + 144.769$  for  $9 \leq x \leq 10$
- Eq. 6**  $M_6(x) = -0.681x^3 + 12.099x^2 + 1562.938x + 137.435$  for  $10 \leq x \leq 11$
- Eq. 7**  $M_7(x) = -0.672x^3 + 11.808x^2 + 1566.144x + 125.678$  for  $11 \leq x \leq 12$
- Eq. 8**  $M_8(x) = -0.662x^3 + 11.424x^2 + 1570.752x + 107.246$  for  $12 \leq x \leq 13$
- Eq. 9**  $M_9(x) = -0.649x^3 + 10.949x^2 + 1576.921x + 80.516$  for  $13 \leq x \leq 14$
- Eq. 10**  $M_{10}(x) = -0.635x^3 + 10.354x^2 + 1585.251x + 41.642$  for  $14 \leq x \leq 15$
- Eq. 11**  $M_{11}(x) = -0.62x^3 + 9.657x^2 + 1595.713x - 10.67$  for  $15 \leq x \leq 16$
- Eq. 12**  $M_{12}(x) = -0.603x^3 + 8.833x^2 + 1608.897x - 80.985$  for  $16 \leq x \leq 17$
- Eq. 13**  $M_{13}(x) = -0.584x^3 + 7.881x^2 + 1625.081x - 172.694$  for  $17 \leq x \leq 18$
- Eq. 14**  $M_{14}(x) = -0.564x^3 + 6.783x^2 + 1644.845x - 291.278$  for  $18 \leq x \leq 19$
- Eq. 15**  $M_{15}(x) = -0.542x^3 + 5.548x^2 + 1668.31x - 439.89$  for  $19 \leq x \leq 20$
- Eq. 16**  $M_{16}(x) = -0.519x^3 + 4.158x^2 + 1696.11x - 625.223$  for  $20 \leq x \leq 21$
- Eq. 17**  $M_{17}(x) = -0.494x^3 + 2.625x^2 + 1728.303x - 850.574$  for  $21 \leq x \leq 22$
- Eq. 18**  $M_{18}(x) = -0.469x^3 + 0.931x^2 + 1765.571x - 1123.873$  for  $22 \leq x \leq 23$
- Eq. 19**  $M_{19}(x) = -0.442x^3 - 0.932x^2 + 1808.42x - 1452.382$  for  $23 \leq x \leq 24$
- Eq. 20**  $M_{20}(x) = -0.414x^3 - 2.936x^2 + 1856.516x - 1837.15$  for  $24 \leq x \leq 25$
- Eq. 21**  $M_{21}(x) = -0.385x^3 - 5.123x^2 + 1911.203x - 2292.879$  for  $25 \leq x \leq 26$
- Eq. 22**  $M_{22}(x) = -0.355x^3 - 7.477x^2 + 1972.381x - 2823.088$  for  $26 \leq x \leq 27$
- Eq. 23**  $M_{23}(x) = -0.324x^3 - 9.974x^2 + 2039.814x - 3429.981$  for  $27 \leq x \leq 28$
- Eq. 24**  $M_{24}(x) = -0.292x^3 - 12.648x^2 + 2114.686x - 4128.786$  for  $28 \leq x \leq 29$
- Eq. 25**  $M_{25}(x) = -0.259x^3 - 15.49x^2 + 2197.104x - 4925.493$  for  $29 \leq x \leq 30$
- Eq. 26**  $M_{26}(x) = -0.226x^3 - 18.475x^2 + 2286.654x - 5820.993$  for  $30 \leq x \leq 31$
- Eq. 27**  $M_{27}(x) = -0.192x^3 - 21.621x^2 + 2384.195x - 6828.922$  for  $31 \leq x \leq 32$
- Eq. 28**  $M_{28}(x) = -0.158x^3 - 24.902x^2 + 2489.156x - 7948.496$  for  $32 \leq x \leq 33$
- Eq. 29**  $M_{29}(x) = -0.123x^3 - 28.35x^2 + 2602.956x - 9200.301$  for  $33 \leq x \leq 34$
- Eq. 30**  $M_{30}(x) = -0.088x^3 - 31.92x^2 + 2724.336x - 10575.941$  for  $34 \leq x \leq 35$
- Eq. 31**  $M_{31}(x) = -0.053x^3 - 35.612x^2 + 2853.573x - 12083.712$  for  $35 \leq x \leq 36$
- Eq. 32**  $M_{32}(x) = -0.018x^3 - 39.447x^2 + 2991.598x - 13740$  for  $36 \leq x \leq 37$



Eq. 33  $M_{33}(x) = 0.018x^3 - 43.368x^2 + 3136.711x - 15529.739$  for  $37 \leq x < 38$   
 Eq. 34  $M_{34}(x) = 0.053x^3 - 47.416x^2 + 3290.498x - 17477.695$  for  $38 \leq x < 39$   
 Eq. 35  $M_{35}(x) = 0.088x^3 - 51.53x^2 + 3450.963x - 19563.747$  for  $39 \leq x < 40$   
 Eq. 36  $M_{36}(x) = 0.123x^3 - 55.73x^2 + 3618.963x - 21803.747$  for  $40 \leq x < 41$   
 Eq. 37  $M_{37}(x) = 0.158x^3 - 60.014x^2 + 3794.627x - 24204.495$  for  $41 \leq x < 42$   
 Eq. 38  $M_{38}(x) = 0.192x^3 - 64.32x^2 + 3975.438x - 26735.835$  for  $42 \leq x < 43$   
 Eq. 39  $M_{39}(x) = 0.226x^3 - 68.684x^2 + 4163.111x - 29425.822$  for  $43 \leq x < 44$   
 Eq. 40  $M_{40}(x) = 0.259x^3 - 73.062x^2 + 4355.743x - 32251.091$  for  $44 \leq x < 45$   
 Eq. 41  $M_{41}(x) = 0.292x^3 - 77.472x^2 + 4554.193x - 35227.841$  for  $45 \leq x < 46$   
 Eq. 42  $M_{42}(x) = 0.324x^3 - 81.865x^2 + 4756.271x - 38326.37$  for  $46 \leq x < 47$   
 Eq. 43  $M_{43}(x) = 0.355x^3 - 86.213x^2 + 4960.603x - 41527.58$  for  $47 \leq x < 48$   
 Eq. 44  $M_{44}(x) = 0.385x^3 - 90.557x^2 + 5169.116x - 44863.772$  for  $48 \leq x < 49$   
 Eq. 45  $M_{45}(x) = 0.414x^3 - 94.844x^2 + 5379.203x - 48295.201$  for  $49 \leq x < 50$   
 Eq. 46  $M_{46}(x) = 0.442x^3 - 99.019x^2 + 5587.953x - 51774.367$  for  $50 \leq x < 51$   
 Eq. 47  $M_{47}(x) = 0.469x^3 - 103.15x^2 + 5798.634x - 55355.944$  for  $51 \leq x < 52$   
 Eq. 48  $M_{48}(x) = 0.494x^3 - 107.154x^2 + 6006.842x - 58964.883$  for  $52 \leq x < 53$   
 Eq. 49  $M_{49}(x) = 0.519x^3 - 111.023x^2 + 6211.899x - 62587.557$  for  $53 \leq x < 54$   
 Eq. 50  $M_{50}(x) = 0.542x^3 - 114.776x^2 + 6414.561x - 66235.473$  for  $54 \leq x < 55$   
 Eq. 51  $M_{51}(x) = 0.564x^3 - 118.351x^2 + 6611.186x - 69840.264$  for  $55 \leq x < 56$   
 Eq. 52  $M_{52}(x) = 0.584x^3 - 121.767x^2 + 6802.482x - 73411.123$  for  $56 \leq x < 57$   
 Eq. 53  $M_{53}(x) = 0.603x^3 - 124.959x^2 + 6984.426x - 76868.059$  for  $57 \leq x < 58$   
 Eq. 54  $M_{54}(x) = 0.62x^3 - 127.946x^2 + 7157.672x - 80217.482$  for  $58 \leq x < 59$   
 Eq. 55  $M_{55}(x) = 0.635x^3 - 130.689x^2 + 7319.538x - 83400.856$  for  $59 \leq x < 60$   
 Eq. 56  $M_{56}(x) = 0.649x^3 - 133.239x^2 + 7472.538x - 86460.856$  for  $60 \leq x < 61$   
 Eq. 57  $M_{57}(x) = 0.662x^3 - 135.466x^2 + 7608.355x - 89222.458$  for  $61 \leq x < 62$   
 Eq. 58  $M_{58}(x) = 0.672x^3 - 137.45x^2 + 7731.363x - 91764.624$  for  $62 \leq x < 63$   
 Eq. 59  $M_{59}(x) = 0.681x^3 - 139.119x^2 + 7836.541x - 93973.372$  for  $63 \leq x < 64$   
 Eq. 60  $M_{60}(x) = 0.689x^3 - 140.528x^2 + 7926.653x - 95895.761$  for  $64 \leq x < 65$   
 Eq. 61  $M_{61}(x) = 0.694x^3 - 141.535x^2 + 7992.141x - 97314.657$  for  $65 \leq x < 66$   
 Eq. 62  $M_{62}(x) = 0.697x^3 - 142.261x^2 + 8040.057x - 98368.809$  for  $66 \leq x < 67$   
 Eq. 63  $M_{63}(x) = 0.699x^3 - 142.596x^2 + 8062.502x - 98870.081$  for  $67 \leq x < 68$   
 Eq. 64  $M_{64}(x) = -1634.026x + 120917.887$  for  $68 \leq x \leq 74$

## Shear Force Diagram



## Shear Force Equations

Eq. 1  $V_1(x) = 1634.025$  for  $0 \leq x \leq 6$   
 Eq. 2  $V_2(x) = -2.097x^2 + 25.164x + 1558.533$  for  $6 \leq x \leq 7$   
 Eq. 3  $V_3(x) = -2.092x^2 + 25.094x + 1558.778$  for  $7 < x < 8$

Eq. 4  $V_4(x) = -2.081x^2 + 24.918x + 1559.482$  for  $8 \leq x \leq 9$

Eq. 5  $V_5(x) = -2.066x^2 + 24.639x + 1560.737$  for  $9 \leq x \leq 10$

Eq. 6  $V_6(x) = -2.043x^2 + 24.199x + 1562.938$  for  $10 \leq x \leq 11$

Eq. 7  $V_7(x) = -2.017x^2 + 23.616x + 1566.144$  for  $11 \leq x \leq 12$

Eq. 8  $V_8(x) = -1.985x^2 + 22.848x + 1570.752$  for  $12 \leq x \leq 13$

Eq. 9  $V_9(x) = -1.948x^2 + 21.899x + 1576.921$  for  $13 \leq x \leq 14$

Eq. 10  $V_{10}(x) = -1.906x^2 + 20.709x + 1585.251$  for  $14 \leq x \leq 15$

Eq. 11  $V_{11}(x) = -1.86x^2 + 19.314x + 1595.713$  for  $15 \leq x \leq 16$

Eq. 12  $V_{12}(x) = -1.808x^2 + 17.666x + 1608.897$  for  $16 \leq x \leq 17$

Eq. 13  $V_{13}(x) = -1.752x^2 + 15.762x + 1625.081$  for  $17 \leq x \leq 18$

Eq. 14  $V_{14}(x) = -1.691x^2 + 13.566x + 1644.845$  for  $18 \leq x \leq 19$

Eq. 15  $V_{15}(x) = -1.626x^2 + 11.096x + 1668.31$  for  $19 \leq x \leq 20$

Eq. 16  $V_{16}(x) = -1.556x^2 + 8.316x + 1696.11$  for  $20 \leq x \leq 21$

Eq. 17  $V_{17}(x) = -1.483x^2 + 5.23x + 1728.303$  for  $21 \leq x \leq 22$

Eq. 18  $V_{18}(x) = -1.407x^2 + 1.862x + 1765.571$  for  $22 \leq x \leq 23$

Eq. 19  $V_{19}(x) = -1.325x^2 - 1.864x + 1808.42$  for  $23 \leq x \leq 24$

Eq. 20  $V_{20}(x) = -1.242x^2 - 5.872x + 1856.516$  for  $24 \leq x \leq 25$

Eq. 21  $V_{21}(x) = -1.155x^2 - 10.247x + 1911.203$  for  $25 \leq x \leq 26$

Eq. 22  $V_{22}(x) = -1.064x^2 - 14.953x + 1972.381$  for  $26 \leq x \leq 27$

Eq. 23  $V_{23}(x) = -0.971x^2 - 19.948x + 2039.814$  for  $27 \leq x \leq 28$

Eq. 24  $V_{24}(x) = -0.876x^2 - 25.206x + 2114.686$  for  $28 \leq x \leq 29$

Eq. 25  $V_{25}(x) = -0.778x^2 - 30.98x + 2197.104$  for  $29 \leq x \leq 30$

Eq. 26  $V_{26}(x) = -0.678x^2 - 36.95x + 2286.654$  for  $30 \leq x \leq 31$

Eq. 27  $V_{27}(x) = -0.577x^2 - 43.243x + 2384.195$  for  $31 \leq x \leq 32$

Eq. 28  $V_{28}(x) = -0.474x^2 - 49.803x + 2489.156$  for  $32 \leq x \leq 33$

Eq. 29  $V_{29}(x) = -0.37x^2 - 56.7x + 2602.956$  for  $33 \leq x \leq 34$

Eq. 30  $V_{30}(x) = -0.265x^2 - 63.84x + 2724.336$  for  $34 \leq x \leq 35$

Eq. 31  $V_{31}(x) = -0.16x^2 - 71.225x + 2853.573$  for  $35 \leq x \leq 36$

Eq. 32  $V_{32}(x) = -0.053x^2 - 78.893x + 2991.598$  for  $36 \leq x \leq 37$

Eq. 33  $V_{33}(x) = 0.053x^2 - 86.737x + 3136.711$  for  $37 \leq x \leq 38$

Eq. 34  $V_{34}(x) = 0.16x^2 - 94.831x + 3290.498$  for  $38 \leq x \leq 39$

Eq. 35  $V_{35}(x) = 0.265x^2 - 103.06x + 3450.963$  for  $39 \leq x \leq 40$

Eq. 36  $V_{36}(x) = 0.37x^2 - 111.46x + 3618.963$  for  $40 \leq x \leq 41$

Eq. 37  $V_{37}(x) = 0.474x^2 - 120.029x + 3794.627$  for  $41 \leq x \leq 42$

Eq. 38  $V_{38}(x) = 0.577x^2 - 128.639x + 3975.438$  for  $42 \leq x \leq 43$

Eq. 39  $V_{39}(x) = 0.678x^2 - 137.368x + 4163.111$  for  $43 \leq x \leq 44$

Eq. 40  $V_{40}(x) = 0.778x^2 - 146.124x + 4355.743$  for  $44 \leq x \leq 45$

Eq. 41  $V_{41}(x) = 0.876x^2 - 154.944x + 4554.193$  for  $45 \leq x \leq 46$

Eq. 42  $V_{42}(x) = 0.971x^2 - 163.73x + 4756.271$  for  $46 \leq x \leq 47$

Eq. 43  $V_{43}(x) = 1.064x^2 - 172.425x + 4960.603$  for  $47 \leq x \leq 48$

Eq. 44  $V_{44}(x) = 1.155x^2 - 181.113x + 5169.116$  for  $48 \leq x \leq 49$

Eq. 45  $V_{45}(x) = 1.242x^2 - 189.688x + 5379.203$  for  $49 \leq x \leq 50$

Eq. 46  $V_{46}(x) = 1.325x^2 - 198.038x + 5587.953$  for  $50 \leq x \leq 51$

Eq. 47  $V_{47}(x) = 1.407x^2 - 206.3x + 5798.634$  for  $51 \leq x \leq 52$

Eq. 48  $V_{48}(x) = 1.483x^2 - 214.308x + 6006.842$  for  $52 \leq x \leq 53$

Eq. 49  $V_{49}(x) = 1.556x^2 - 222.046x + 6211.899$  for  $53 \leq x \leq 54$

Eq. 50  $V_{50}(x) = 1.626x^2 - 229.552x + 6414.561$  for  $54 \leq x \leq 55$

Eq. 51  $V_{51}(x) = 1.691x^2 - 236.702x + 6611.186$  for  $55 \leq x \leq 56$

Eq. 52  $V_{52}(x) = 1.752x^2 - 243.534x + 6802.482$  for  $56 \leq x \leq 57$

Eq. 53  $V_{53}(x) = 1.808x^2 - 249.918x + 6984.426$  for  $57 \leq x \leq 58$

Eq. 54  $V_{54}(x) = 1.86x^2 - 255.892x + 7157.672$  for  $58 \leq x \leq 59$

Eq. 55  $V_{55}(x) = 1.906x^2 - 261.379x + 7319.538$  for  $59 \leq x \leq 60$

Eq. 56  $V_{56}(x) = 1.948x^2 - 266.479x + 7472.538$  for  $60 \leq x \leq 61$

Eq. 57  $V_{57}(x) = 1.985x^2 - 270.932x + 7608.355$  for  $61 \leq x \leq 62$

Eq. 58  $V_{58}(x) = 2.017x^2 - 274.9x + 7731.363$  for  $62 \leq x \leq 63$

Eq. 59  $V_{59}(x) = 2.043x^2 - 278.239x + 7836.541$  for  $63 \leq x \leq 64$

Eq. 60  $V_{60}(x) = 2.066x^2 - 281.055x + 7926.653$  for  $64 \leq x \leq 65$

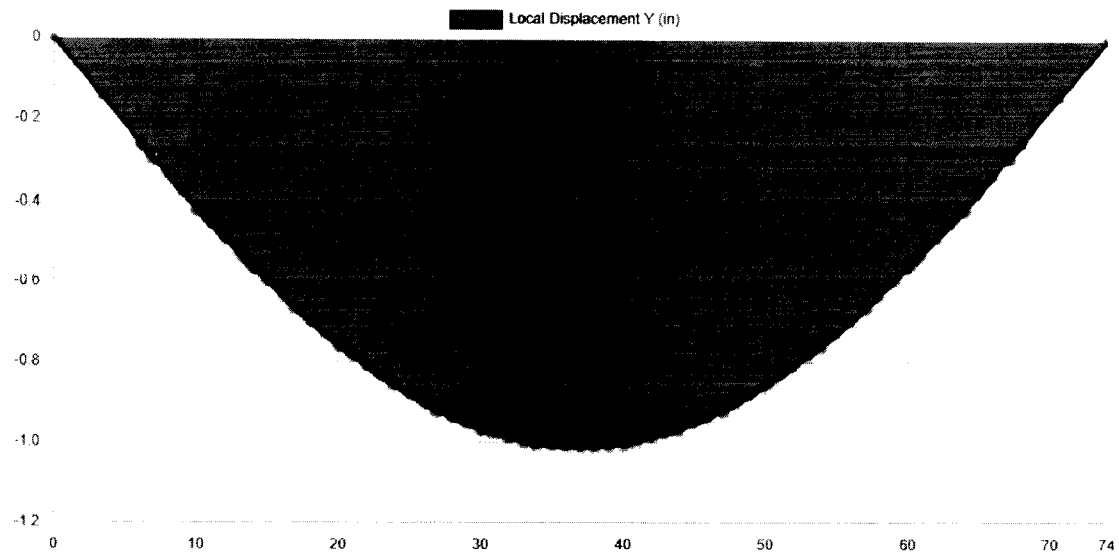
Eq. 61  $V_{61}(x) = 2.081x^2 - 283.07x + 7992.141$  for  $65 \leq x \leq 66$

Eq. 62  $V_{62}(x) = 2.092x^2 - 284.522x + 8040.057$  for  $66 \leq x \leq 67$

**Eq. 63**  $V_{63}(x) = 2.097x^2 - 285.192x + 8062.502$  for  $67 \leq x \leq 68$

**Eq. 64**  $V_{64}(x) = -1634.026$  for  $68 \leq x \leq 74$

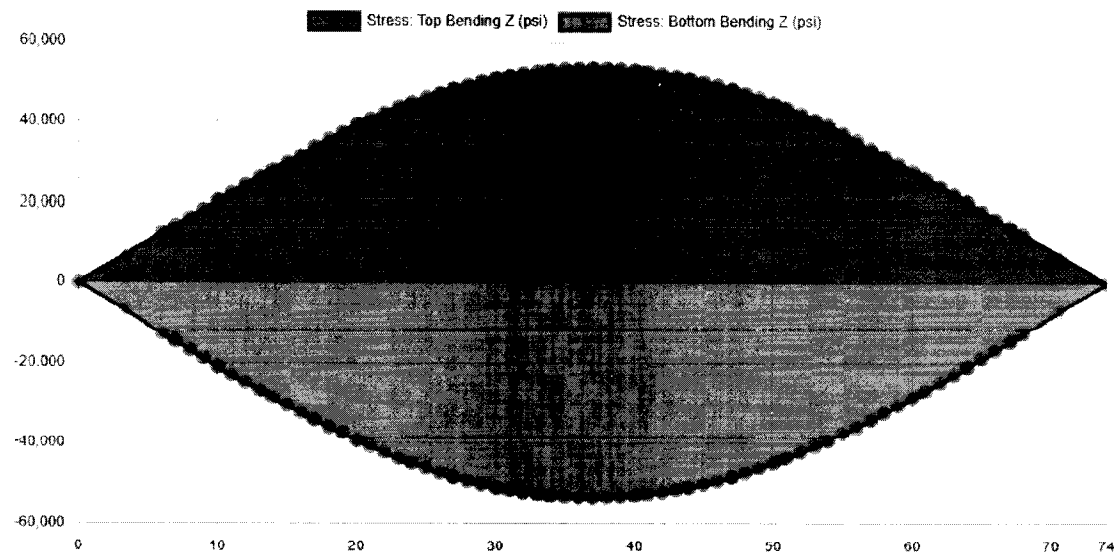
## Displacement



Location (in)	Total Deflection (in)	Span ⓘ
0	0 in	-
37	-1.05 in	L/73
74	0 in	-

ⓘ The Deflection/Span results are calculated using the analysis results and the Deflection Limit of  $L/250$  set in the model settings.

## Bending Stress



## Shear Stress

