

Building Designer's Application

Version 1.00

Evaluation Version

1-April-2005

U Win Aung Cho

B.E. Civil.

M.Civ.Eng.

Blk. No.6/ Room 002
Station Road Aye-yeik-
mon Estate (1) Hlaing
Township

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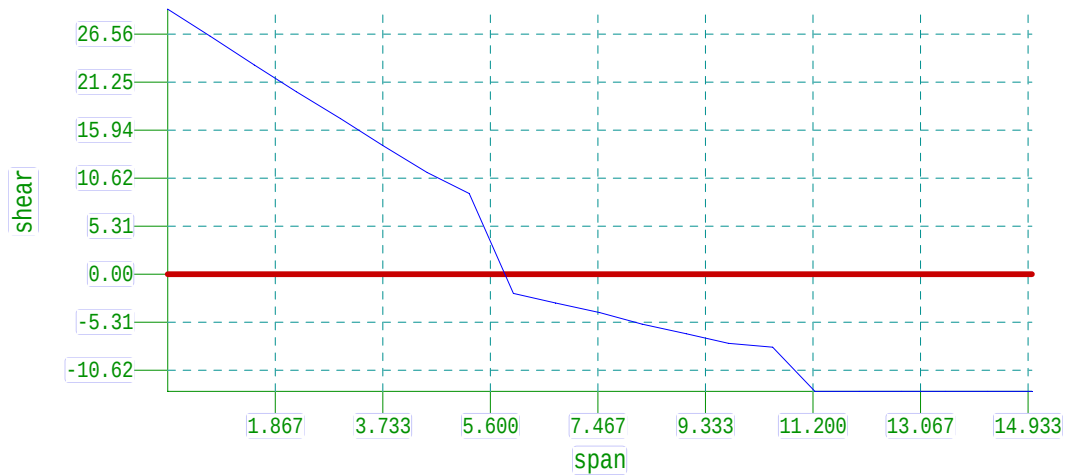
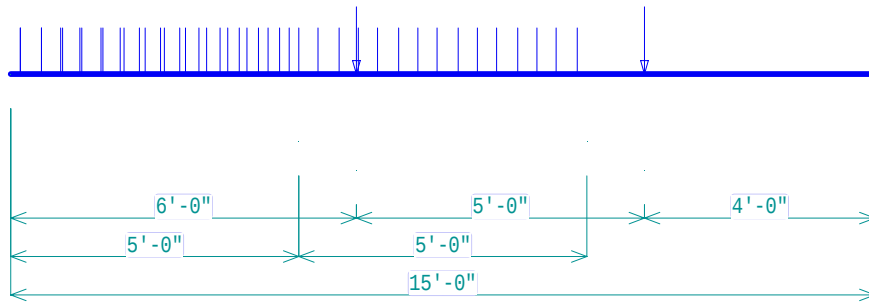
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Documentation

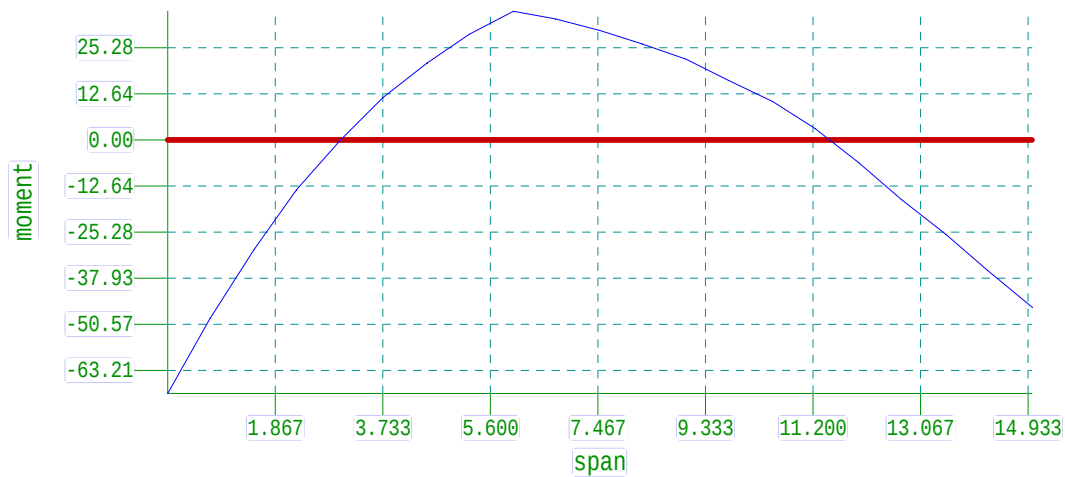
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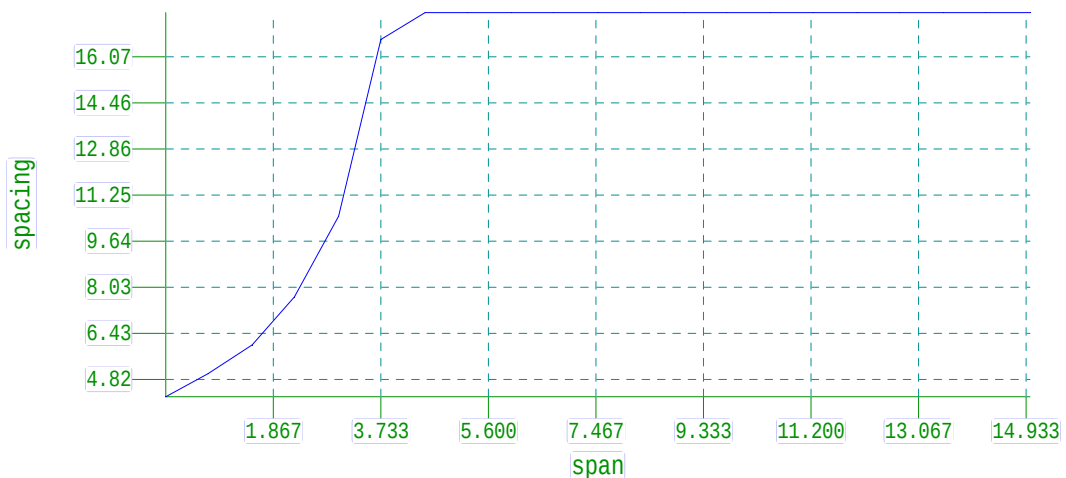
S.F.D.



B.M.D.

Load	UD	Dist	P	Loca.
Case:1	2.500	5.00	10.00	6.00
Case:2	1.500	10.00	5.00	11.00
Case:3	0.000	0.00	0.00	0.00
Case:4	0.000	0.00	0.00	0.00

no	X	Vy	Mz	As	a	Spac
#	ft	kip	kip-ft	in ²	in	in
0	0.00	29.35	-70.00	2.71	5.81	4.28
1	0.75	26.35	-49.11	1.69	3.61	5.03
2	1.50	23.35	-30.48	0.97	2.08	6.09
3	2.25	20.35	-14.09	0.42	0.91	7.73
4	3.00	17.35	0.05	0.00	0.00	10.56
5	3.75	14.35	11.94	0.36	0.76	16.67
6	4.50	11.35	21.58	0.67	1.43	17.67
7	5.25	8.98	29.04	0.92	1.97	17.67
8	6.00	-2.15	35.35	1.15	2.45	17.67
9	6.75	-3.28	33.32	1.07	2.29	17.67
10	7.50	-4.40	30.44	0.97	2.07	17.67
11	8.25	-5.53	26.72	0.84	1.80	17.67
12	9.00	-6.65	22.15	0.69	1.47	17.67
13	9.75	-7.78	16.74	0.51	1.09	17.67
14	10.50	-8.15	10.68	0.32	0.68	17.67
15	11.25	-13.15	3.31	0.10	0.21	17.67
16	12.00	-13.15	-6.55	0.19	0.41	17.67
17	12.75	-13.15	-16.41	0.50	1.07	17.67
18	13.50	-13.15	-26.27	0.82	1.76	17.67
19	14.25	-13.15	-36.14	1.18	2.52	17.67
20	15.00	-13.15	-46.00	1.56	3.34	17.67



Stirrup Spacing

Summary

B x H = 10.0 x 14.0 sqin Span = 15.00 ft

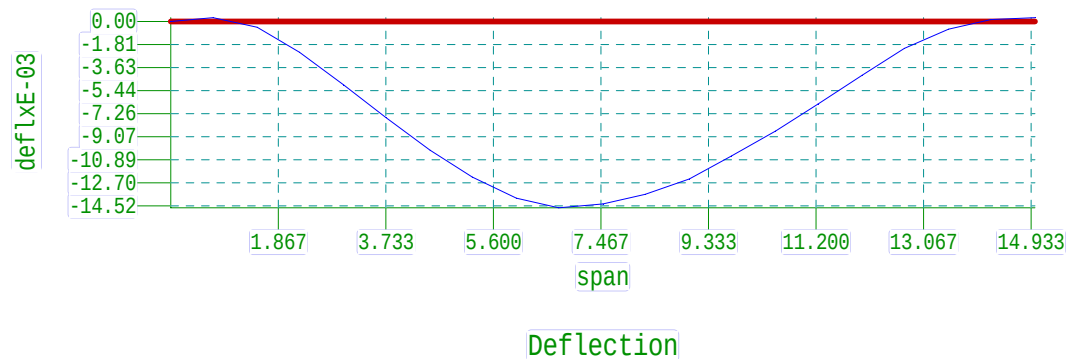
Stirrup dia. = 0.375 in, Maximum spacing = 17.7 in Cover 2.50 in

fc = 2200.0 psi Ec = 2700000 psi fy = 40000.0 psi Es = 29000000 psi

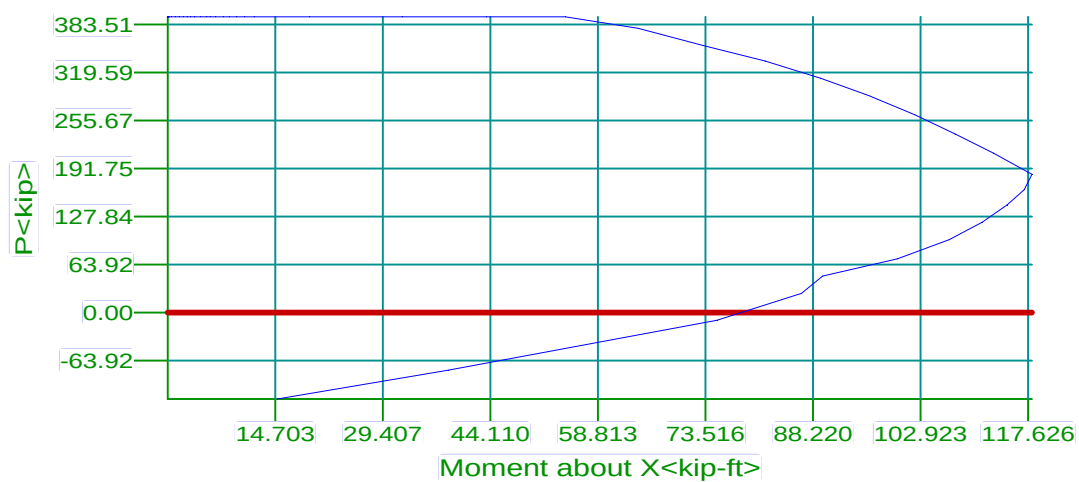
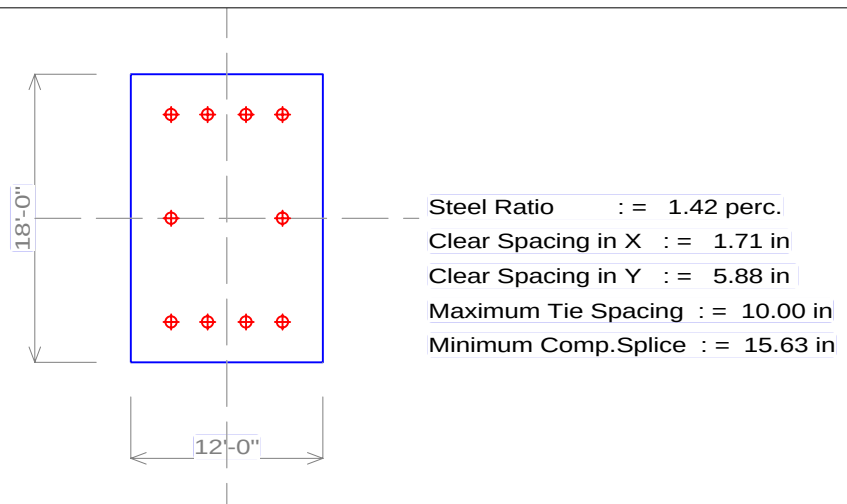
maximum immediate deflection = -0.014706 in.

maximum long-term deflection = -0.023530 in.

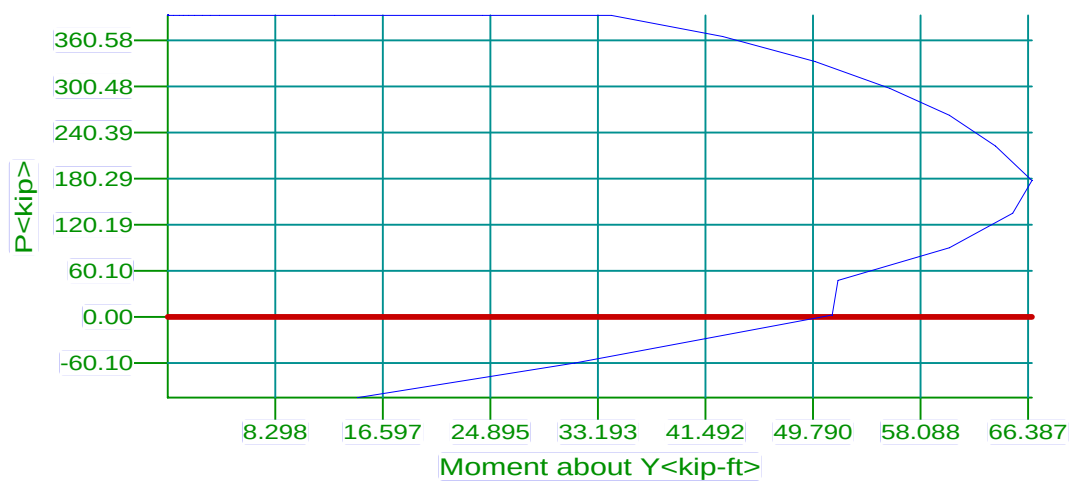
no	X	Mz	As	Ie	defl
#	ft	kip-ft	in^2	in^4	in
0	0.00	-70.00	2.71	3361.41	0.0000
1	0.75	-49.11	1.69	2257.38	0.0004
2	1.50	-30.48	0.97	1399.18	-0.0006
3	2.25	-14.09	0.42	1145.60	-0.0025
4	3.00	0.05	0.00	2286.67	-0.0050
5	3.75	11.94	0.36	1435.06	-0.0077
6	4.50	21.58	0.67	1078.05	-0.0102
7	5.25	29.04	0.92	1339.67	-0.0123
8	6.00	35.35	1.15	1611.41	-0.0140
9	6.75	33.32	1.07	1521.30	-0.0147
10	7.50	30.44	0.97	1397.60	-0.0145
11	8.25	26.72	0.84	1247.56	-0.0137
12	9.00	22.15	0.69	1093.35	-0.0124
13	9.75	16.74	0.51	1031.79	-0.0107
14	10.50	10.68	0.32	1781.38	-0.0087
15	11.25	3.31	0.10	2286.67	-0.0065
16	12.00	-6.55	0.19	2286.67	-0.0043
17	12.75	-16.41	0.50	1037.58	-0.0022
18	13.50	-26.27	0.82	1230.87	-0.0006
19	14.25	-36.14	1.18	1646.78	0.0003
20	15.00	-46.00	1.56	2106.61	0.0003



Variable Name	Value	Value	Value	Value
fc'<psi>	2200.000			
Es <ksi>	29000.000			
fy <psi>	40000.000			
Span <ft>	15.000			
Left End-Moment <kip-ft>	70.000			
Right End-Moment <kip-ft>	-46.000			
Load Data				
Case	U.D. <kip/ft>	Dist.<ft>	P.L.<kip>	Position <ft>
case 1	2.500	5.000	10.000	6.000
case 2	1.500	10.000	5.000	11.000
case 3	0.000	0.000	0.000	0.000
case 4	0.000	0.000	0.000	0.000
Sustained Load Ratio <0..1>	0.600			
B <in>	10.000			
H <in>	14.000			
Cover <in>	2.500			
Stirrup diameter <in>	0.375			
Maximum spacing of Stirrup <in>	17.671			

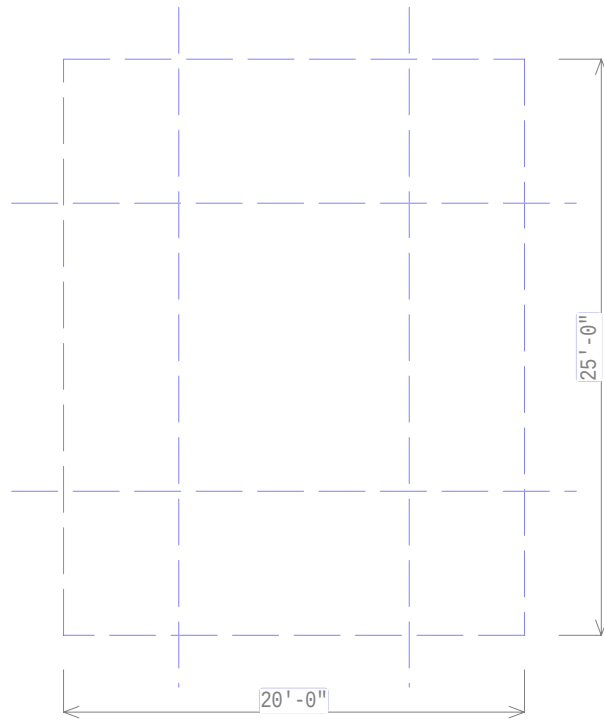


Interaction Diagram for ey

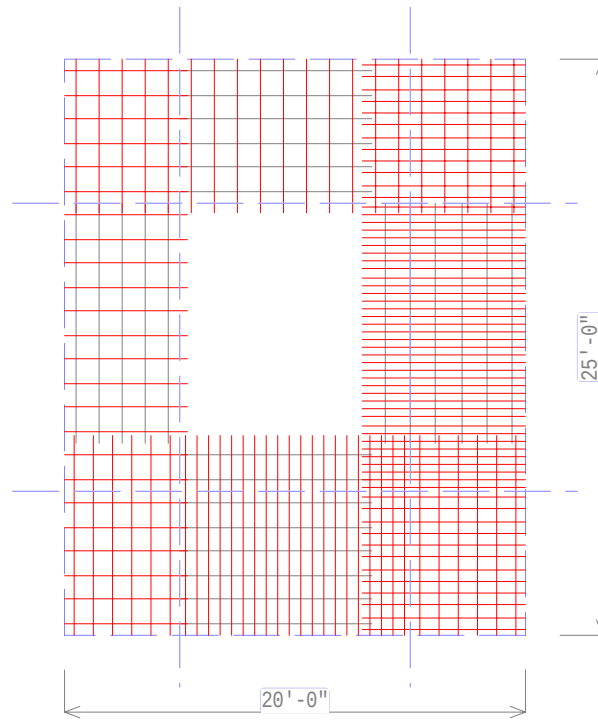


Interaction Diagram for ex

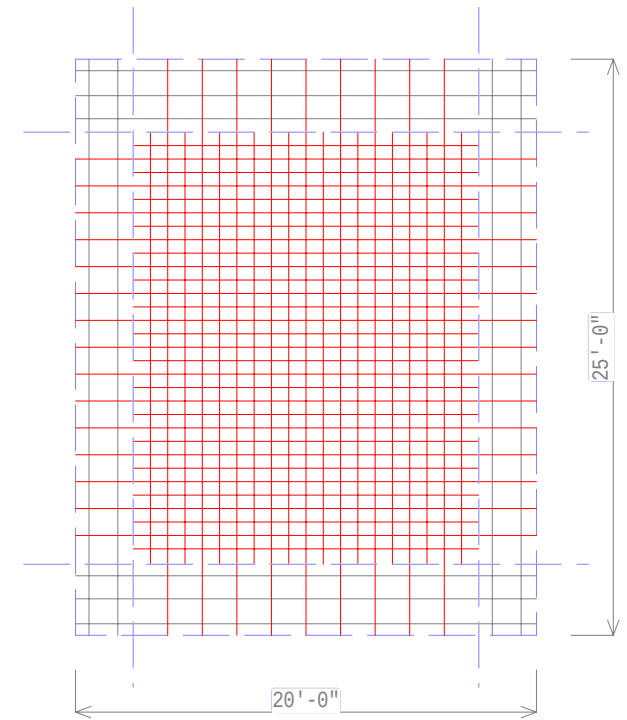
Description	Value	Description	Value
fc'<psi>	3000.0000		
Es <ksi>	29000.0000		
fy <psi>	50000.0000		
Breadth <in>	12.0000		
Height <in>	18.0000		
Cover <in>	2.5000		
Tie bar diameter <in>	0.3750		
Main bar diameter <in>	0.6250		
Bars in X	4		
Bars in Y	3		
P0 <kip>	563.3585	Calculated Value	
Pu <kip>	200.0000	Design Axial Load	
Mux <kip-ft>	80.0000	Design Moment	
Muy <kip-ft>	20.0000	Design Moment	
Muxo <kip-ft>	115.4425		
Muyo <kip-ft>	65.4120		
D/C ratio	0.9987		



Plan

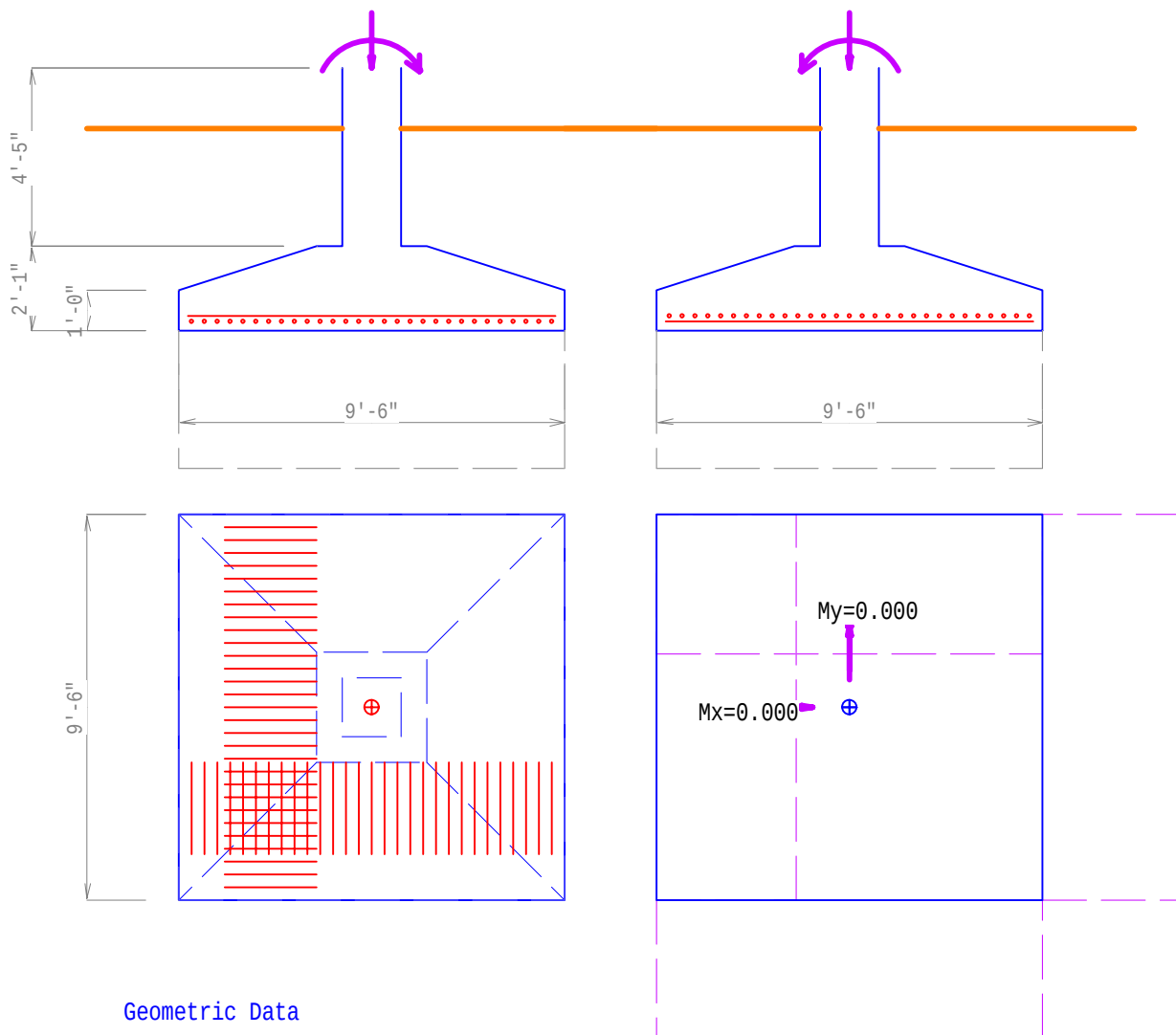


Top Steel



Bottom Steel

Description	Value	Description	Value
fc'<psi>	2200.000		
Es <ksi>	29000.000		
fy <psi>	40000.000		
Short Span <ft>	20.000		
Long Span <ft>	25.000		
Thickness <in>	6.000		
Cover <in>	1.000		
DL (service) <k/ft^2>	0.075		
LL (service) <k/ft^2>	0.137		
Contineuty			
Left	Bottom	Right	Top
0	1	1	0
Re-Bar Dia. <in>	0.375		
ShortAspos <in^2>	0.209	Spacing <in>	7.000
ShortAsneg <in^2>	0.335	Spacing <in>	4.000
Long Aspos <in^2>	0.150	Spacing <in>	9.000
Long Asneg <in^2>	0.235	Spacing <in>	6.000
Caneg	0.071	Cbneg	0.029
Caposdl	0.039	Cbposdl	0.016
Caposll	0.048	Cbposll	0.020
Deflection <in>	0.335	<Long-Termed>	
Collapse Point Load <kip>	15.472		



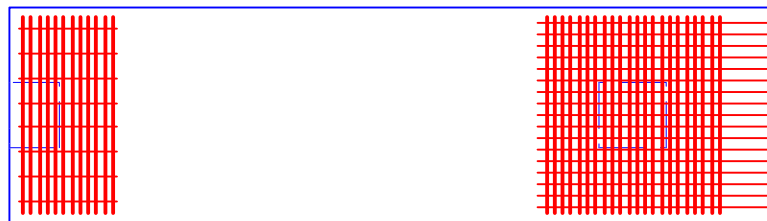
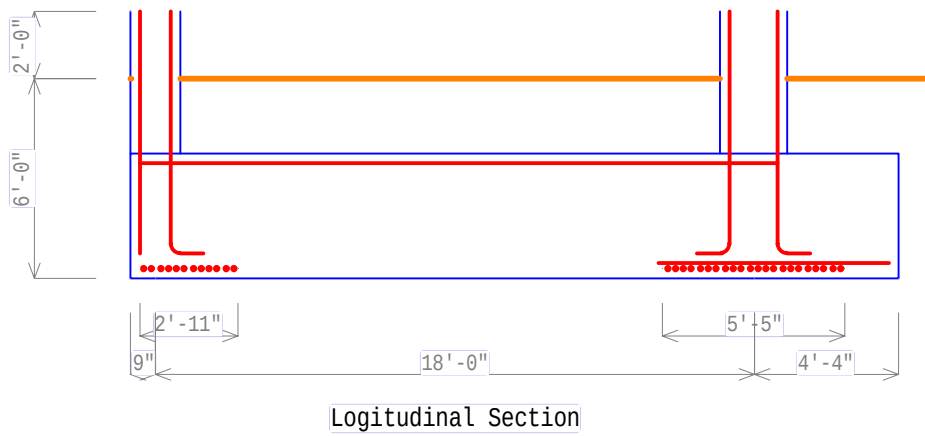
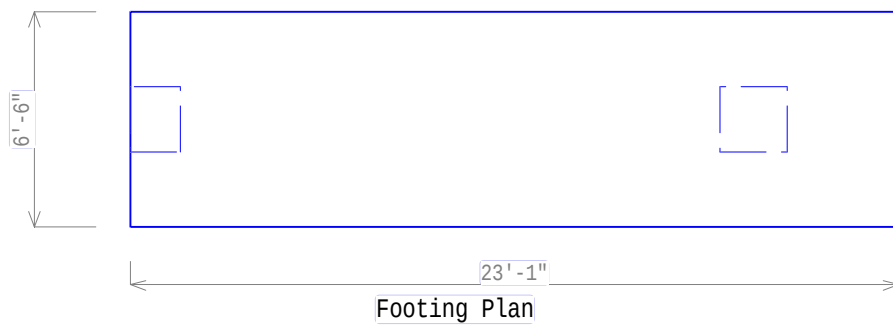
Geometric Data

Footing Size	= 9.500' x 9.500' x 2.083'
Re-Bars diameter	= 0.750 in.
Re-Bars Spacings	= 3.944 in. & 4.088 in.
Cover to steel centroid	= 3.000 in.
Foundation Depth	= 5.000 ft.
Column size	= 18.000 in. x 18.000 in.

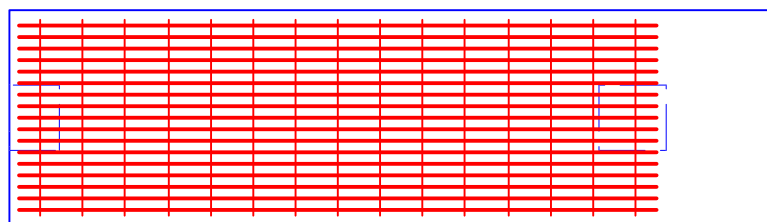
Material Data

Concrete Cylinder Strength	= 2200.000 psi.
Young's Modulus of Concrete	= 2700000.000 psi.
Yield Strength of Re-Bars	= 40000.000 psi.
Young's Modulus of Re-Bars	= 29000000.000 psi.

Variable Name	Value	Comments
fc'<psi>	2200.000	
Es <ksi>	29000.000	
fy <psi>	40000.000	
Service Load <kip>	400.000	
Ultimate Load <kip>	612.500	
Service Moment Mx <kip-ft>	0.000	
Ultimate Moment Mxu <kip-ft>	0.000	
Service Moment My <kip-ft>	0.000	
Ultimate Moment Myu <kip-ft>	0.000	
Column width <ft>	1.500	
Column depth <ft>	1.500	
ex <ft>	0.000	
ey <ft>	0.000	
Foundation depth <ft>	5.000	
cover to steel <ft>	0.250	
Diameter of Re-bar <in>	0.750	
Height of plinth <ft>	1.500	
Column projection <ft>	0.666	
End depth <ft>	1.000	
Depth at column <ft>	2.083	
L <ft>	9.500	
B <ft>	9.500	
Spacing in L direction <ft>	0.329	
Spacing in B direction <ft>	0.341	
Pressure LB <kip/ft^2>	4.432	
Pressure RB <kip/ft^2>	4.432	
Pressure TR <kip/ft^2>	4.432	
Pressure TL <kip/ft^2>	4.432	
Pressure Equ. <kip/ft^2>	6.787	
Effective lx <ft>	9.500	
Effective ly <ft>	9.500	



Bottom Steel Arrangement



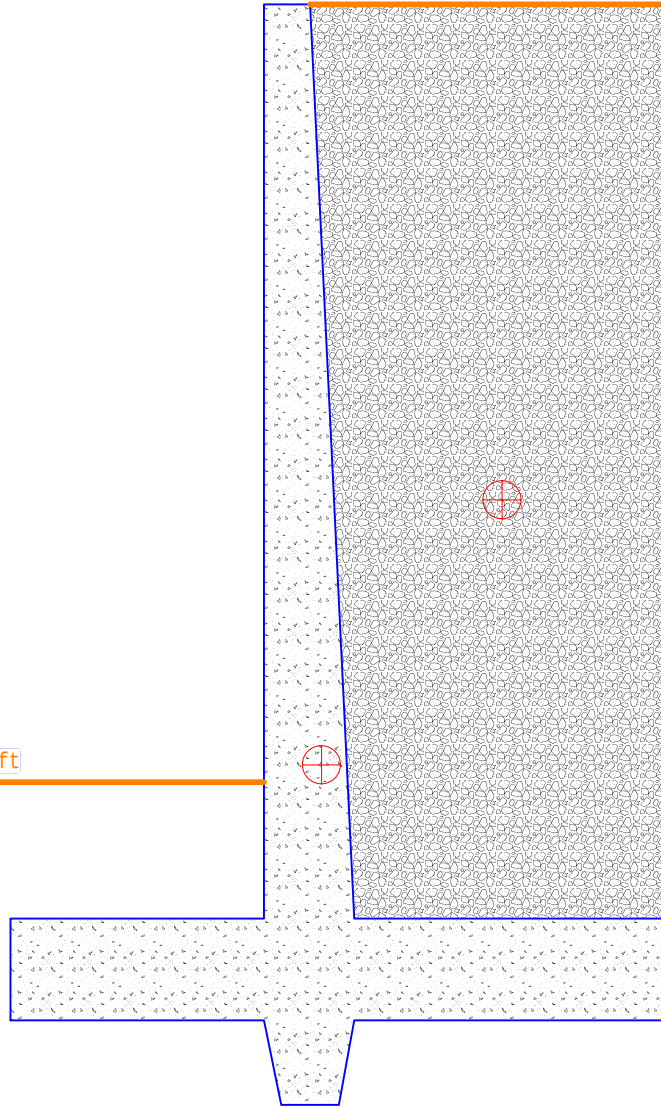
Top Steel Arrangement

Variable Name	Value	Comments
fc'<psi>	2200.000	
Es <ksi>	29000.000	
fy <psi>	40000.000	
Service Load 1 <kip>	300.000	
Ultimate Load 1 <kip>	459.000	
Service Load 2 <kip>	450.000	
Ultimate Load 2 <kip>	690.000	
Column 1 width <ft>	1.500	
Column 1 depth <ft>	2.000	
Column 2 width <ft>	2.000	
Column 2 depth <ft>	2.000	
Length of offset <ft>	0.750	
Column spacing <ft>	18.000	
Foundation depth <ft>	6.000	
cover to steel <ft>	0.292	
Diameter of Long-bar <in>	1.125	
Diameter of Trans-bar <in>	0.875	
Diameter of Temp-bar <in>	0.500	
Height of plinth <ft>	2.000	
Depth of Slab <ft>	3.750	
L <ft>	23.100	
B <ft>	6.500	
Steel Area <in^2>	16.185	Mid-Span
Steel Area <in^2>	16.185	Right Cantilever
Steel Area <in^2>	7.137	Left Transverse
Steel Area <in^2>	13.264	Right Transverse
Steel Area <in^2>	7.021	Left Cantilever
Pressure L <kip/ft^2>	4.995	
Pressure R <kip/ft^2>	4.995	
Beam Width L <ft>	2.937	
Beam Width R <ft>	5.458	

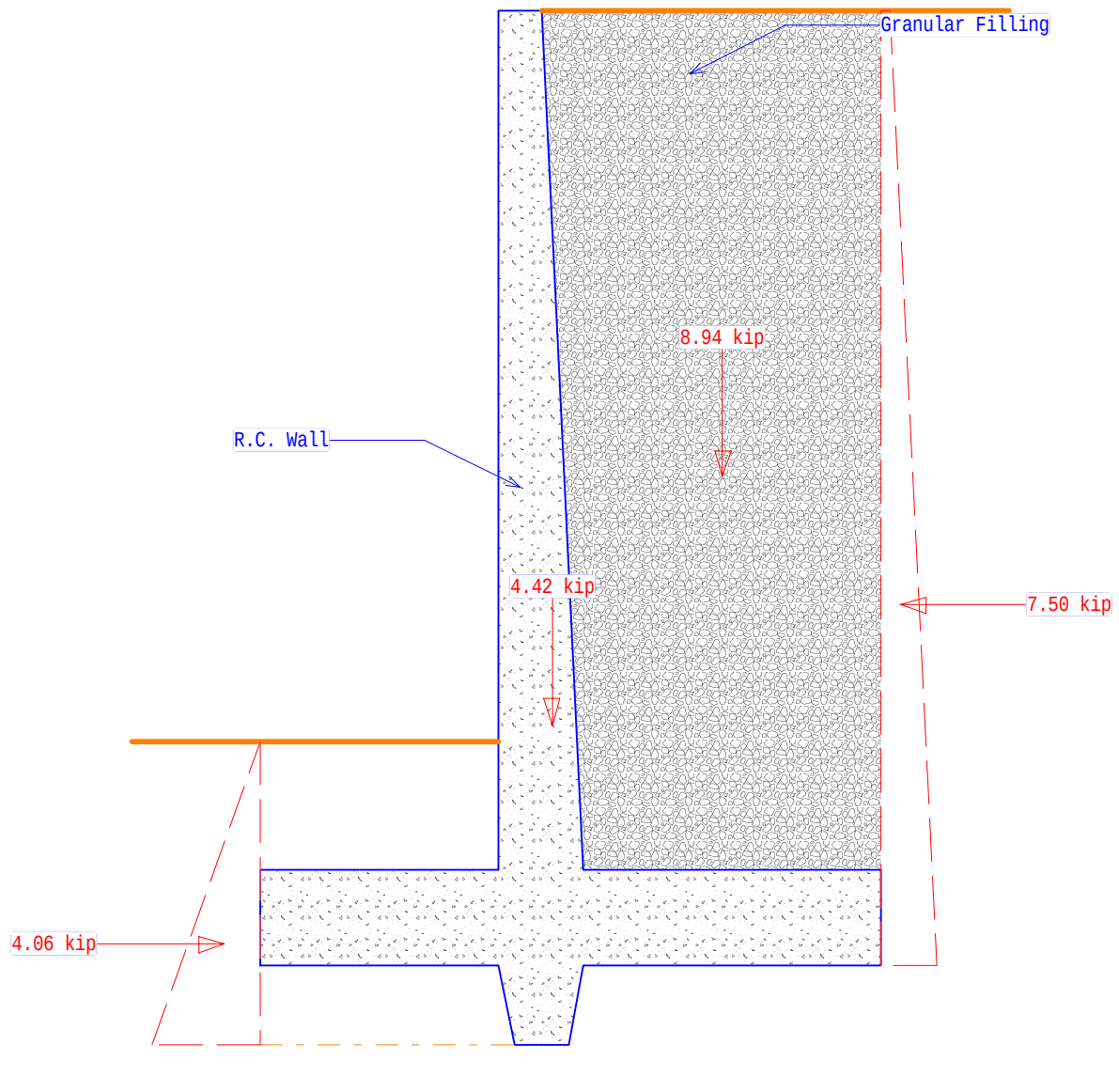
G.L. 0.00 ft

G.L. 11.50 ft

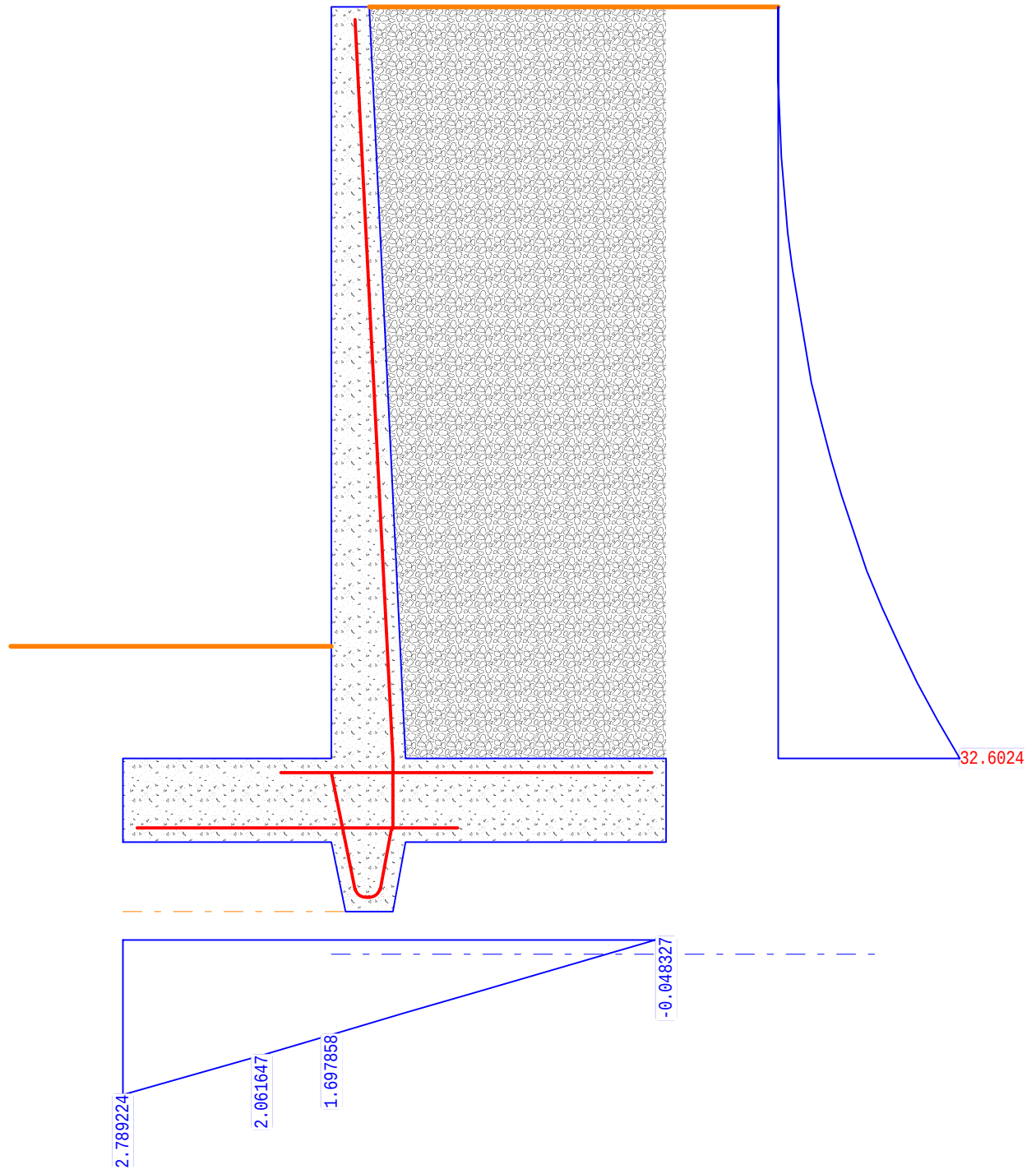
W.T. 17.00 ft



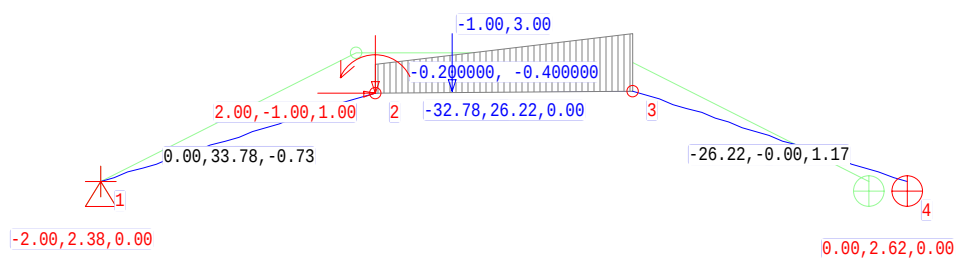
Concrete Section: Area=	29.48,	X=	4.58,	Y=	3.78
Earth Section : Area=	74.50,	X=	7.26,	Y=	7.68



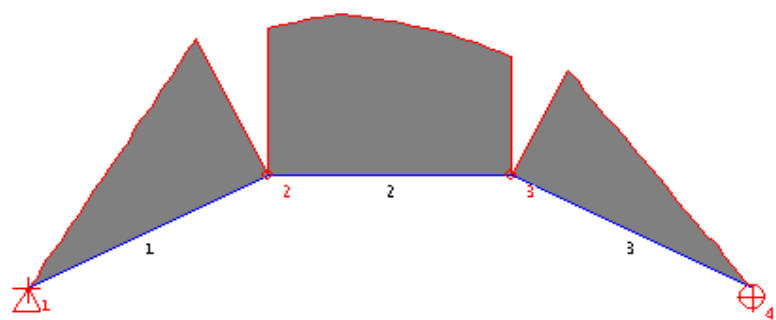
Earth Weight	: Weight=	8.94,	X=	7.26,	Y=	7.68	
Concrete Weight	: Weight=	4.42,	X=	4.58,	Y=	3.78	
Active Force	: Force = [	7.50,	0.00],	X=	10.04,	Y=	5.67
Passive Force	: Force =	4.06,	X=	-0.57,	Y=	0.33	



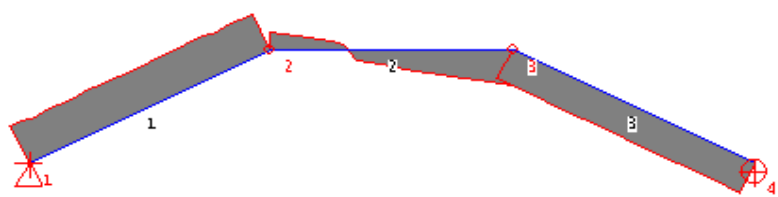
Variable Name	Value	Variable Name	Value
fc'<psi>	6000.000		
Es <ksi>	29000.002		
fy <psi>	80000.000		
D1 <ft>	3.500	D2 <ft>	15.000
L1 <ft>	3.750	L2 <ft>	6.000
T1 <ft>	1.500	T2 <ft>	1.500
Btop <ft>	0.667	Bbot <ft>	1.333
Key <ft>	1.250		
wt <ft>	17.000		
alph <deg>	0.000		
rog <kip/ft^3>	0.120	rogw <kip/ft^3>	0.120
frict <deg>	30.000	Sur <kip/ft^2>	0.400
Eweight <kip>	8.940	Pos <ft>	[7.26, 7.68]
Cweight <kip>	4.422	Pos <ft>	[4.58, 3.78]
Active Force <kip>	7.500	Pos <ft>	[10.04, 5.67]
Passive Force <kip>	4.061	Pos <ft>	[-0.57, 0.33]
Design Moments	Wall Toe		Heel
Mu <kip-ft>	55.424 23.875		30.702
Re-Bar <in^2>	0.738 0.268		0.346
Safety	Overturning Sliding		
	2.004 1.519		



File Name : E:\BDAPP\data\Frame2D\FRAME3.DAT
Members : 3
Nodes : 4
Planes : 0
U.D. Loaded Members : 1
Point Loaded Members : 1



Bending Moment Diagram



Shear Force Diagram

View Mode	Format	Item	Value
Member ID	%d	MomScale	0.2000
Member UD Load	%f, %f	ShearScale	0.6000
Nodal ID	%d	DeflScale	0.3000
Nodal Force	%.2f,%.2f,%.2f		
Member Point Load	%.2f,%.2f		
Result	%.2f,%.2f,%.2f		

```

:INIT
3 4 1 1 1 1
:NODE
0.0 0.0 0 0 1
10.0 5 1 1 1
20.0 5 1 1 1
30.0 0 1 0 1
:MATERIAL
3.372E+5 2.81E4
:ELEMENT
1 1 2
1 2 3
1 3 4
:NODAL_LOAD
2 2 -1 1
:MEM_LOAD
2 -0.2 -0.4
2 -1 3
:DISPLACEMENT
1
4 2 1e30 -0.18

:INIT
NoElem NoJoint NoMat NoJointForce NoUD NoPointLoad
:NODE
x y dx dy thz
:
: [NoJoint ]
:MATERIAL
EA EI
: [NoMat ]
:ELEMENT
Mat Joint1 Joint2
:
: [NoElem ]
:NODAL_LOAD
Joint Fx Fy Mz
:
: [NoJointForce ]
:MEM_LOAD
Element ud1 ud2
:
: [NoUD ]
Element PLoad location
:
: [NoPointLoad]
/// Options
DISPLACEMENT
NoDisp
Joint direction K displacement
:
: [NoDisp]
:PLANE
NoPlane
NoPMat
E nu h
:
: [NoPMat]
nd1 nd2 nd3 nd4 mat
:
: [NoPlane]
:NODAL_AXIS
noSlope
n1 angle
:
: [noSlope]

```

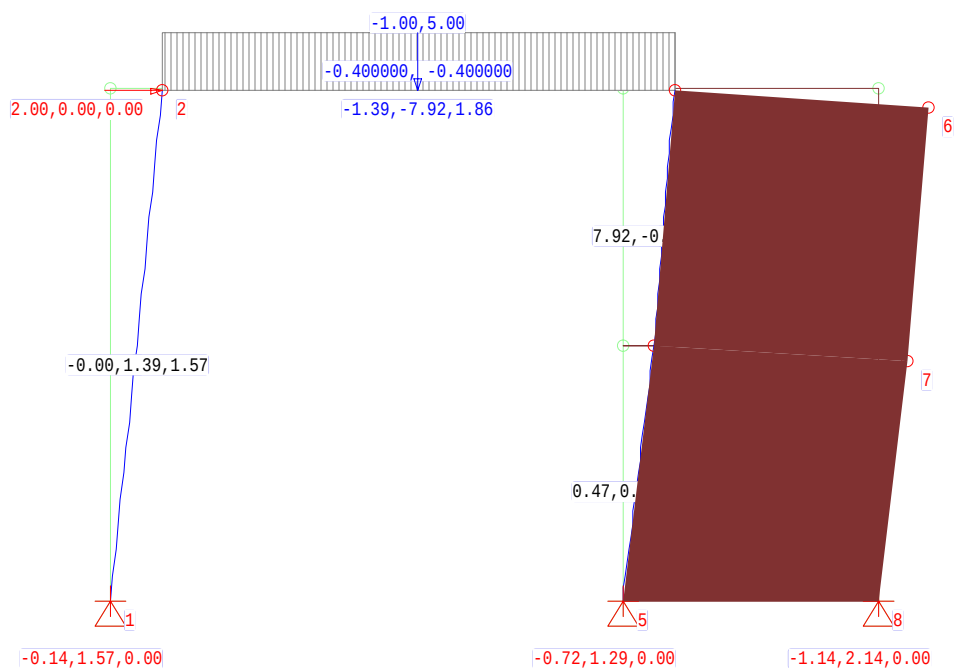
2D Frame Analysis Software-Version 1.00

:Element	Force					
Elm:	Fx	Fy	Mz	Fx	Fy	Mz
1	-0.726	3.021	0.000	0.726	-3.021	33.779
2	0.000	1.378	-32.779	-0.000	2.622	26.223
3	1.173	-2.345	-26.223	-1.173	2.345	-0.000

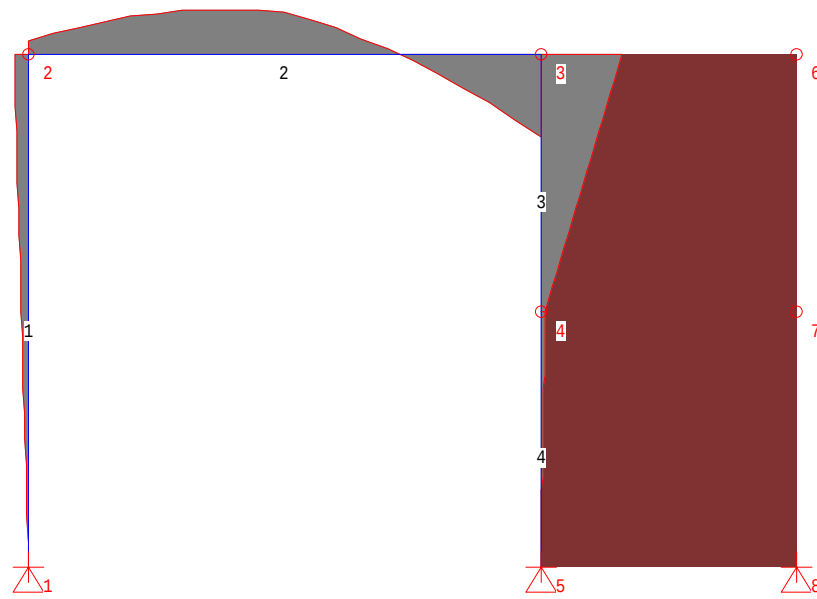
:node	Displacement		
node	Dx	Dy	Rz
1	+0.0000000	+0.0000000	-0.0123375
2	+0.0505093	-0.1009647	-0.0056177
3	+0.0505093	-0.0962377	+0.0061442
4	+0.0985846	+0.0000000	+0.0113609

Date of Last Modified : [27-04-2005]
Time of Last Modified : [13:52:37]

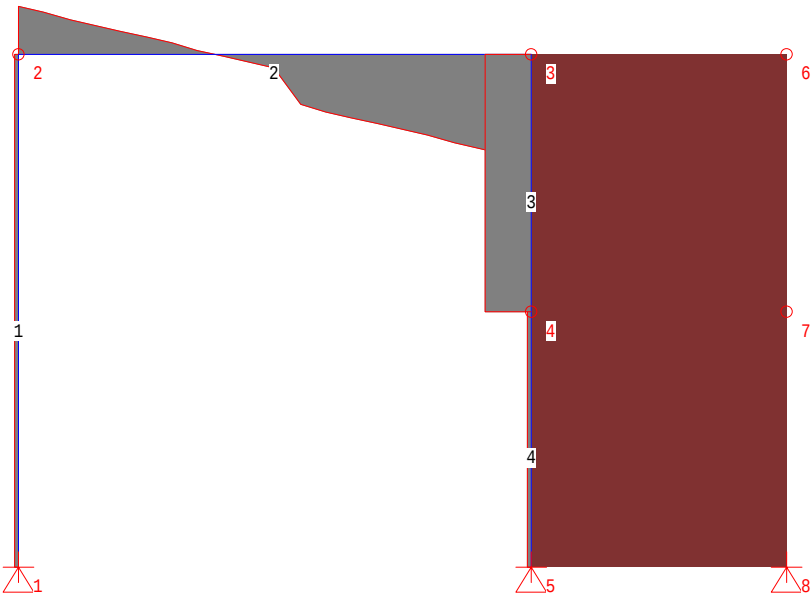
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File Name : E:\BDAPP\data\Frame2D\FRAME4.DAT
Members : 4
Nodes : 8
Planes : 2
U.D. Loaded Members : 1
Point Loaded Members : 1



Bending Moment Diagram



Shear Force Diagram

View Mode	Format	Item	Value
Member ID	%d	MomScale	0.2000
Member UD Load	%f, %f	ShearScale	0.6000
Nodal ID	%d	DeflScale	3.0000
Nodal Force	%.2f,%.2f,%.2f		
Member Point Load	%.2f,%.2f		
Result	%.2f,%.2f,%.2f		

```

:INIT
4 8 2 1 1 1
:NODE
0.0 0.0 0 0 1
0.0 10.0 1 1 1
10.0 10.0 1 1 1
10.0 5 1 1 1
10.0 0 0 0 1
15 10 1 1 1
15 5 1 1 1
15 0 0 0 1
:MATERIAL
3.372E5 2.81E4
.1 .1
:ELEMENT
1 1 2
1 2 3
1 3 4
1 4 5
2 3 6
2 6 7
2 7 8
2 4 7
:NODAL_LOAD
2 2 0 0
:MEM_LOAD
2 -0.4 -0.4
2 -1 5
:DISPLACEMENT
0
5 2 1e20 -0.01
:PLANE
2
1
3E3 0.2 0.5
5 8 7 4 1
4 7 6 3 1

:INIT
NoElem NoJoint NoMat NoJointForce NoUD NoPointLoad
:NODE
x y dx dy thz
:
: [NoJoint ]
:MATERIAL
EA EI
: [NoMat ]
:ELEMENT
Mat Joint1 Joint2
:
: [NoElem ]
:NODAL_LOAD
Joint Fx Fy Mz
:
: [NoJointForce ]
:MEM_LOAD
Element ud1 ud2
:
: [NoUD ]
Element PLoad location
:
: [NoPointLoad]
/// Options
DISPLACEMENT
NoDisp
Joint direction K displacement
:
: [NoDisp]
:PLANE
NoPlane
NoPMat
E nu h
:
: [NoPMat]
nd1 nd2 nd3 nd4 mat
:
: [NoPlane]
:NODAL_AXIS
noSlope
n1 angle
:
: [noSlope]

```

2D Frame Analysis Software-Version 1.00

```
:Element Force
Elm:      Fx      Fy      Mz      Fx      Fy      Mz
  1      1.569      0.139     -0.000     -1.569     -0.139      1.390
  2      1.861      1.569     -1.390     -1.861      3.431     -7.920
  3      3.128      1.491      7.920     -3.128     -1.491     -0.465
  4      1.688      0.093      0.465     -1.688     -0.093      0.000
```

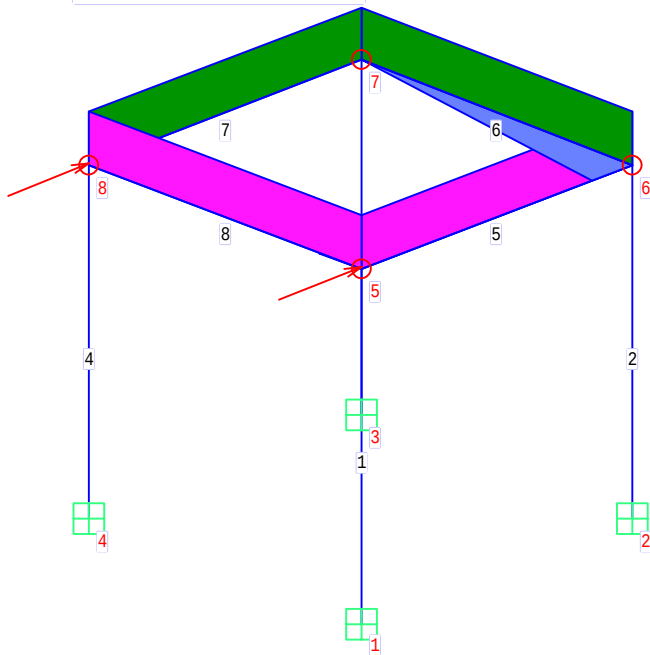
```
:node Displacement
node      Dx      Dy      Rz
  1 +0.0000000 +0.0000000 -0.0007605
  2 +0.0067805 -0.0000465 -0.0005132
  3 +0.0067253 -0.0000714 -0.0000440
  4 +0.0040877 -0.0000250 -0.0007900
  5 +0.0000000 +0.0000000 -0.0008313
  6 +0.0065930 -0.0023532 +0.0000000
  7 +0.0036671 -0.0021224 +0.0000000
  8 +0.0000000 +0.0000000 +0.0000000
```

```
:Plane Element Force
Elm:      sx      sy      sxy      smax      smin
  1     -0.114     -0.304      0.889      0.685     -1.103
  2     -0.235     -0.098      0.141     -0.011     -0.323
```

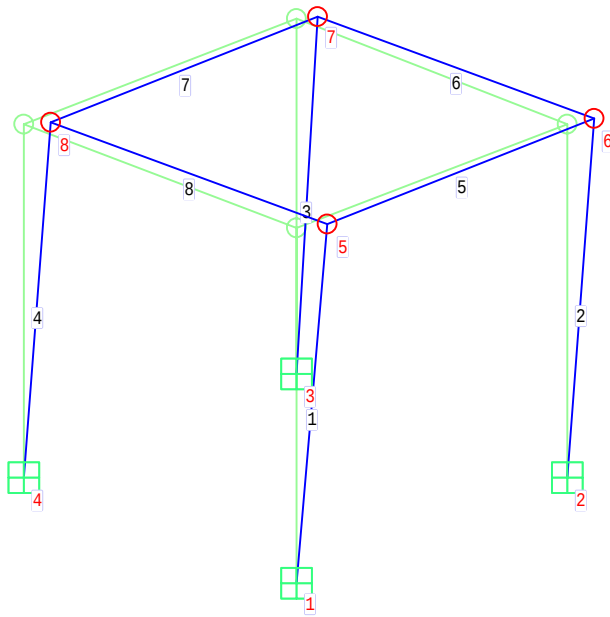
Date of Last Modified : [27-04-2005]
Time of Last Modified : [14:03:29]

Filename: E:\BDAPP\data\Frame2D\FRAME4.DAT

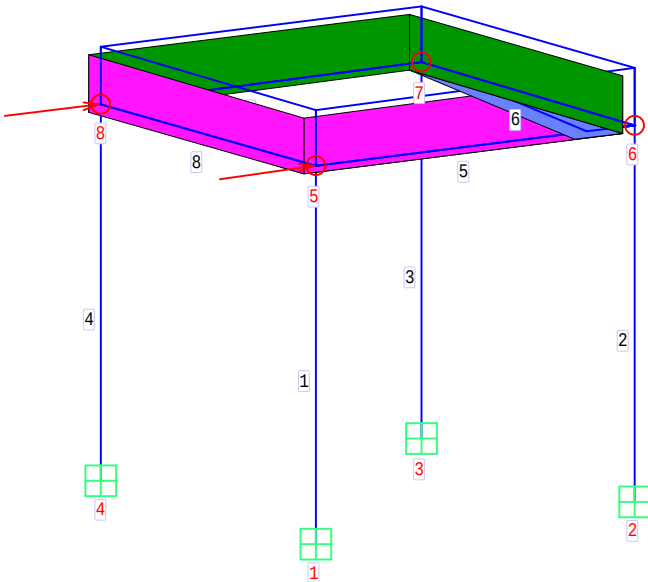
File Name : E:\BDAPP\data\Fram3D\TEST3D3_1.dat
Scale : 1"= 60.000000



File Name : E:\BDAPP\data\Frame3D\TEST3D3_1.dat
Scale : 1"= 60.000000



File Name : E:\BDAPP\data\Frame3D\TEST3D3_1.dat
Scale : 1"= 60.000000




```

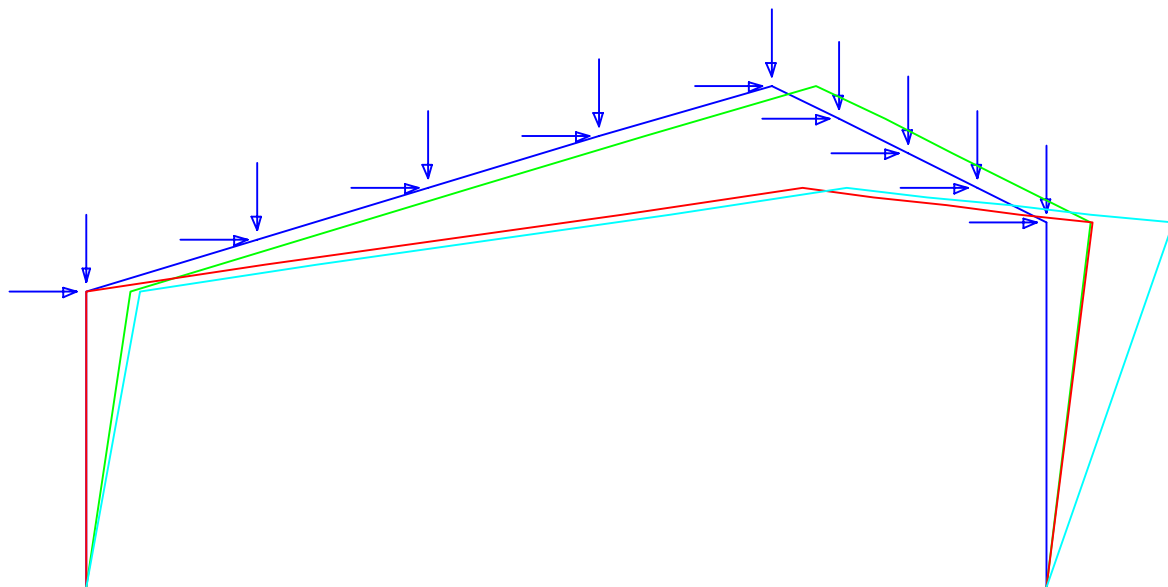
:ELEMENT
8
252883.5 1706964 1706964 1422470 0 1 5
252883.5 1706964 1706964 1422470 0 2 6
252883.5 1706964 1706964 1422470 0 3 7
252883.5 1706964 1706964 1422470 0 4 8
252883.5 1706964 1706964 1422470 0 5 6
252883.5 1706964 1706964 1422470 0 6 7
252883.5 1706964 1706964 1422470 0 7 8
252883.5 1706964 1706964 1422470 0 8 5
:NODE
8
0 0 0 0 0 0 0 0 0
120 0 0 0 0 0 0 0 0
120 120 0 0 0 0 0 0 0
0 120 0 0 0 0 0 0 0
0 0 120 1 1 1 1 1 1
120 0 120 1 1 1 1 1 1
120 120 120 1 1 1 1 1 1
0 120 120 1 1 1 1 1 1
:FORCE
1
:NODAL_LOAD
2
5 40 0 0 0 0 0
8 40 0 0 0 0 0
:MEM_LOAD
4
5 0 0 -1 0 -1 -1
6 1 0 0 0 -1 -1
7 0 0 0 0 -1 -1
8 0 0 0 0 -1 -1
;Sample Data for Rigid3D Module 2
;Member Data
NoMember
EA EIY EIZ GJ Gama
:
:
;Node Data
NoNode
x y z dof(fx, fy, fz, mx, my, mz)
:
:
Load Case Data
NoLoadCase
;Nodal Load Data
No
NodeNo fx fy fz mx my mz
:
:
:MEMLOAD
No
MembNo w1x w2x w1y w2y w1z w2z
:COMBINATION
0
1.0
;Tested with Multiframe3D

```

```

:LOADCASE_1
No.      X      Y      Z      thx      thy      thz
:DISPLACEMENT
1  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
2  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
3  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
4  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
5  4.8066 -2.4009 -0.0488  0.0257  0.0097 -0.0006
6  4.8137 -1.2369 -0.0772  0.0207  0.0379  0.0226
7  3.6491 -1.2291 -0.0651 -0.0075  0.0329  0.0013
8  3.6515 -2.3849 -0.0366 -0.0025  0.0048  0.0129
  Fx      Fy      Fz      Mx      My      Mz
:ELEMENT FORCE
Element 1
102.885  10.157  50.082   7.675 -3142.827  975.482
-102.885 -10.157 -50.082  -7.675 -2867.066  243.363
Element 2
162.788  -0.087  30.131 -267.785 -2346.455  289.769
-162.788  0.087 -30.131  267.785 -1269.248 -300.161
Element 3
137.115  19.873  19.883 -15.052 -1660.433 1086.319
-137.115 -19.873 -19.883  15.052 -725.528 1298.432
Element 4
77.211   30.057  39.903 -153.385 -2461.814 1767.698
-77.211 -30.057 -39.903  153.385 -2326.587 1839.153
Element 5
-15.033  43.808  26.513  59.245 2808.511  497.941
15.033   16.192  93.487 -59.245 1209.956 -40.954
Element 6
-16.279  3.165  69.301  59.292  240.916  493.170
16.279   -3.165  50.699 -59.292 -1357.040 -113.389
Element 7
5.047    3.594 -86.416  58.608  784.820  381.664
-5.047   -3.594 -33.584 -58.608 2385.142  49.665
Element 8
33.651   4.950  43.628 -58.556 -1780.545 -103.720
-33.651  -4.950  76.372  58.556 -184.119 -490.265
No.      Fx      Fy      Fz      Mx      My      Mz
:REACTION
1 -50.0824  10.1570 102.8850 -975.4821 -3142.8269  7.6755
2 -30.1309 -0.0866 162.7883 -289.7695 -2346.4548 -267.7849
3 -19.8830 19.8729 137.1153 -1086.3191 -1660.4329 -15.0522
4 -39.9033 30.0571  77.2114 -1767.6984 -2461.8140 -153.3849
:INIT
8      8      1
:HISTORY
Band Width      23
No. of Support   4

```



Legend

Mechanism 1 ==> Pure Sidesway
 Mechanism 2 ==> Partial Sidesway
 Mechanism 3 ==> Combined Mechanism



Plastic Analysis on Gable Frame

Left Span 15.000
 Right Span 6.000
 Height of Right Column 8.000
 Height of Left Column 6.500
 Height of Crown 3.000
 Work Equation

2.000 x Mp1	1.625 x Mp2	0.000 x Mp3	> 390.000
1.000 x Mp1	4.188 x Mp2	3.500 x Mp3	> 1436.250
1.000 x Mp1	7.125 x Mp2	3.500 x Mp3	> 1905.000

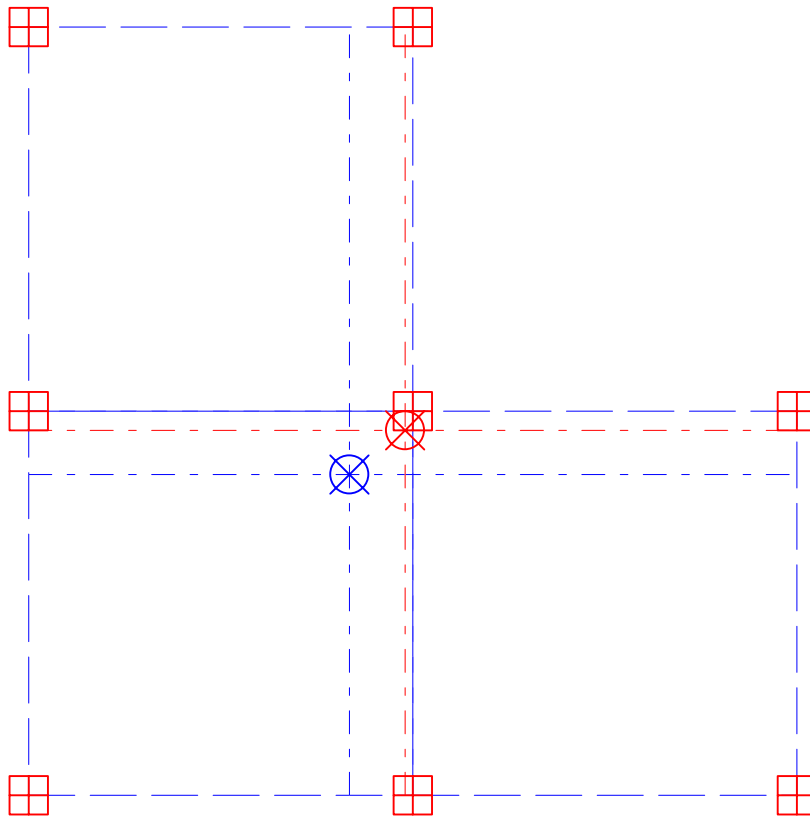
Plastic Moment Resistance : Mp1 Mp2 & Mp3
 120.000 120.000 200.000

Mechanism 1 ==> 435.000 > | 390.000 |
 Mechanism 2 ==> 1322.500 > | 1436.250 |
 Mechanism 3 ==> 1675.000 > | 1905.000 |

Loads on Rafter & There positions

3.750, -10.000 @ 0.000	3.750, -10.000 @ 0.000
7.500, -20.000 @ 3.750	7.500, -20.000 @ 1.500
7.500, -20.000 @ 7.500	7.500, -20.000 @ 3.000
7.500, -20.000 @ 11.250	7.500, -20.000 @ 4.500
3.750, -10.000 @ 15.000	3.750, -10.000 @ 6.000

Variable Name	Value	Value	Value Comments
Left Span	15.000		
Right Span	6.000		
Height of Right Column	8.000		
Height of Left Column	6.500		
Height of Crown	3.000		
Mp1	120.000		
Mp2	120.000		
Mp3	200.000		
number of loads on Left	5		
number of loads on Right	5		
Loads on Left	30.000	-80.000	
Loads on Right	30.000	-80.000	

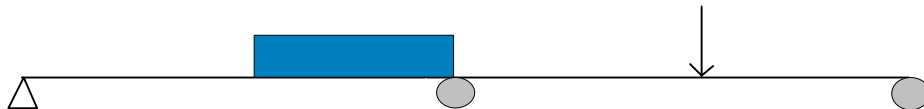


Variable Name	Value	Value	Value	Value	Value	Comments
Number of Col	8.000					
Number of Plate	3.000					
Inertia about X-X	304128.000					
Inertia about Y-Y	304128.000					
Sectional Area	1728.000					
Centroid of Mat	20.000	20.000				
Centroid of Forces	23.464	22.793				
Total Force	-1790.000					
Pressure Coefficients						
0.020	0.016	1.036				
Column Force	Column Mx	Column My	X	Y	Pressure	
-100.000	0.000	0.000	0.000	0.000	0.299	
-200.000	0.000	0.000	24.000	0.000	0.789	
-150.000	0.000	0.000	48.000	0.000	1.278	
-230.000	0.000	0.000	0.000	24.000	0.694	
-450.000	0.000	0.000	24.000	24.000	1.183	
-300.000	0.000	0.000	48.000	24.000	1.672	
-160.000	0.000	0.000	0.000	48.000	1.088	
-200.000	0.000	0.000	24.000	48.000	1.578	
Plate No.	Lx	Ly	x	y		
0	24.000	24.000	12.000	12.000		
1	24.000	24.000	36.000	12.000		
2	24.000	24.000	12.000	36.000		
X	Mxx	Mxy	Vxz			
0.000	0.000	0.000	0.000			
Y	Myx	Myy	Vyz			
0.000	0.000	0.000	0.000			
Action	Max Value	Position				
Mxx	-4561.213	24.000				
Mxy	3204.359	12.438				
Vxz	-591.212	24.000				
Myx	-2486.953	10.696				
Myy	-17651.967	24.001				
Vyz	-685.758	24.000				

```
8 3
-100 0 0
-200 24 0
-150 48 0
-230 0 24
-450 24 24
-300 48 24
-160 0 48
-200 24 48
24 24 12 12
24 24 36 12
24 24 12 36
```



/



Continuous Frame

$A=108 \text{ in}^2$

$I=1728 \text{ in}^4$

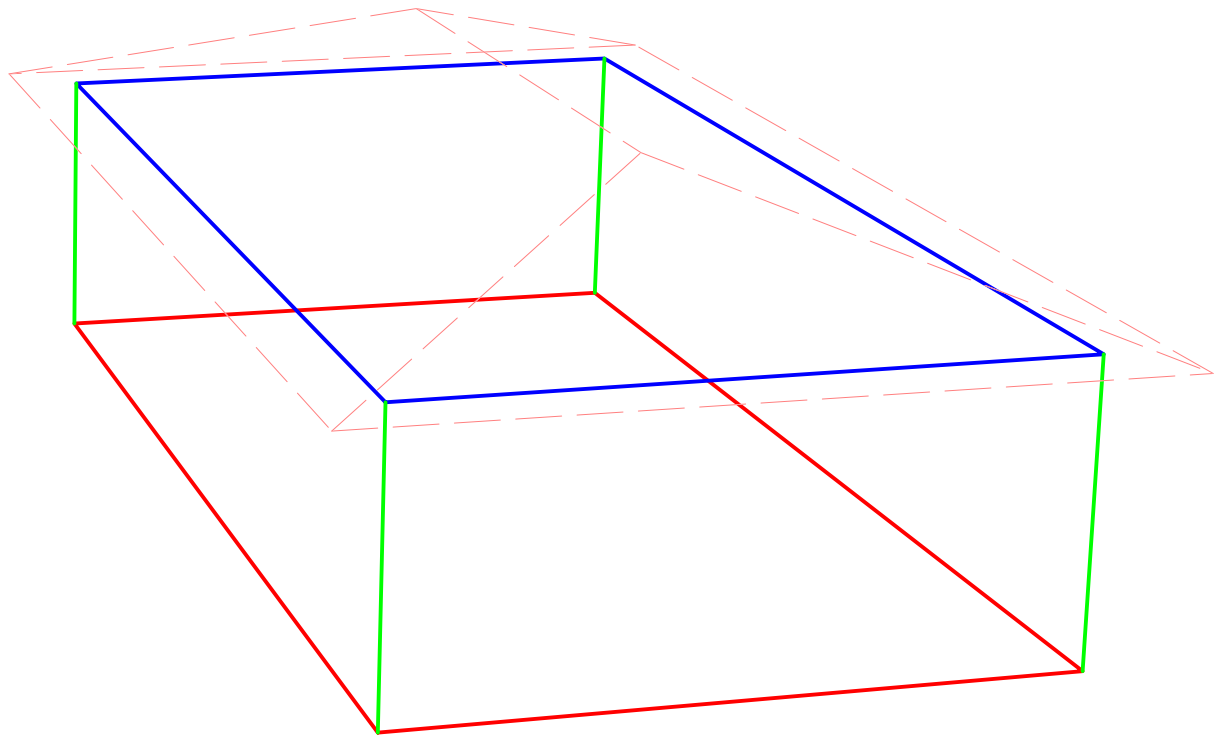
Partial Load = 1 kip/ft

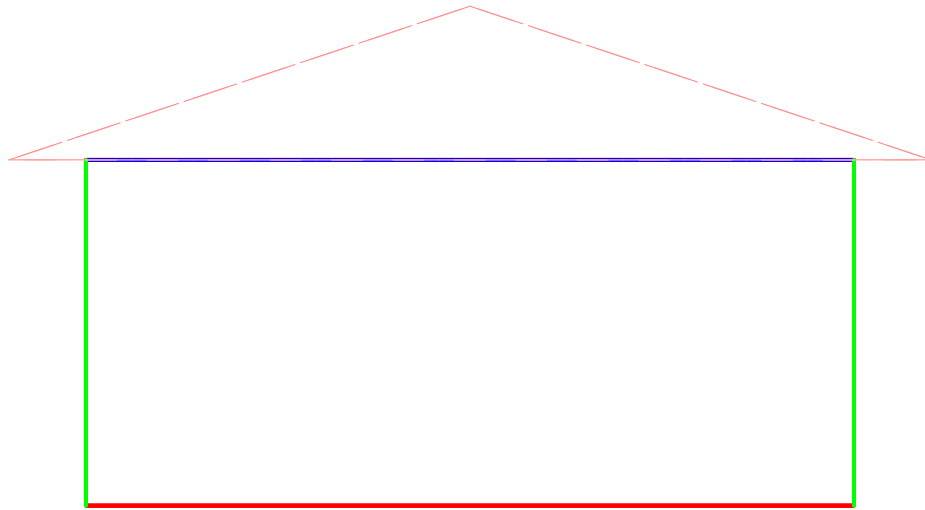
Loaded Length = 5 ft

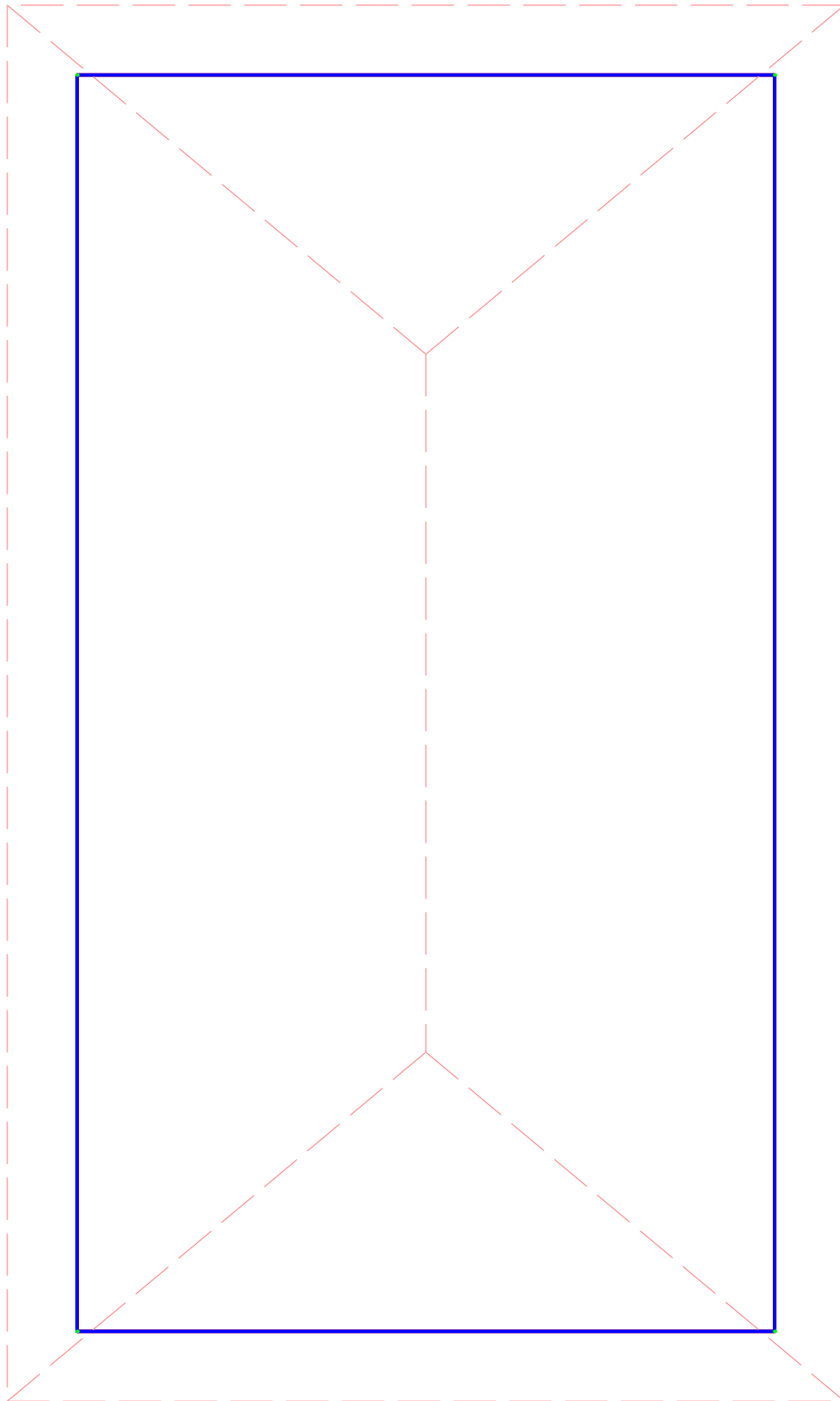
Span Left = 10 ft

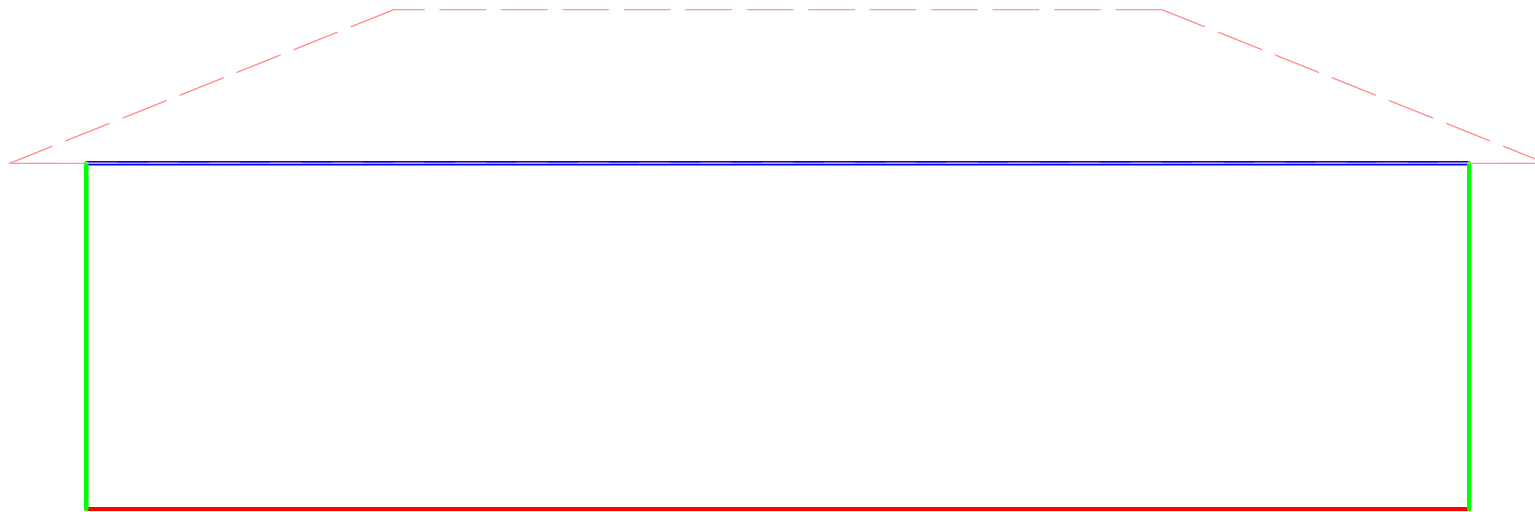
Span Right = 12 ft

Point Load = 5 kip at 6 ft from
left









```
10 REM 3D Drawing Programs
20 L=400:B=720:H=180:el=40:rh=80
30 xcolor 255,0,0
40 xltype 0
50 xlwidth 2
60 xline 0,0 L,0 L,B 0,B 0,0
70 xcolor 0,0,255
80 xline 0,0,H L,0,H L,B,H 0,B,H 0,0,H
90 xcolor 0,255,0
100 xline 0,0,0 0,0,H
110 xline L,0,0 L,0,H
120 xline L,B,0 L,B,H
130 xline 0,B,0 0,B,H
140 xcolor 255,128,128
150 xltype 1
155 xlwidth 0
160 xline -el,-el,H L+el,-el,H L+el,B+el,H -el,B+el,H -el,-el,H
170 xline -el,-el,H L/2,-el+L/2,H+rh L+el,-el,H
180 xline L+el,B+el,H L/2,B+el-L/2,H+rh -el,B+el,H
190 xline L/2,B+el-L/2,H+rh L/2,-el+L/2,H+rh
200 end
```