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Graphical Reports

PT-Force

PT-Profile

Deflection

Load Cases

- Selfweight
- Super Imposed Dead
- Live
- Other
- Prestressing
- Hyper-Static

Load Combinations

- SERVICE\_1\_Min\_LL
- SERVICE\_1\_Max\_LL
- SERVICE\_2\_Min\_LL
- SERVICE\_2\_Max\_LL
- STRENGTH\_1\_Min\_LL
- STRENGTH\_1\_Max\_LL
- INITIAL\_MIN\_LL
- INITIAL\_MAX\_LL
- Cracking\_Moment
- Envelope

## A. Design Parameters and Load Combinations

### A.1 Project Design Parameters

Parameter	Value	Parameter	Value
Concrete		Post-tensioning	
F'c for BEAMS/SLABS	4000.00 psi	SYSTEM	UNBONDED
For COLUMNS/WALLS	4000.00 psi	Fpu	270.00 ksi
Ec for BEAMS/SLABS	3605.00 ksi	Fse	175.00 ksi
For COLUMNS/WALLS	3605.00 ksi	Strand area	0.153 in 2
CREEP factor	2.00	Min CGS from TOP	2.25 in
CONCRETE WEIGHT	NORMAL	Min CGS from BOT for interior spans	3.25 in
UNIT WEIGHT	150.00 pcf	Min CGS from BOT for exterior spans	3.25 in
Tension stress limits / (f'c)1/2		Min average precompression	125.00 psi
At Top	9.000	Max spacing / slab depth	8.00
At Bottom	9.000	Analysis and design options	
Compression stress limits / f'c		Structural system	BEAM
At all locations	0.450	Moment of Inertia over support is	NOT INCREASED
Reinforcement		Moments reduced to face of support	YES
Fy (Main bars)	60.00 ksi	Moment Redistribution	NO
Fy (Shear reinforcement)	60.00 ksi	Effective flange width consideration	YES
Minimum Cover at TOP	2.00 in	Effective flange width implementation method	ACI-318
Minimum Cover at BOTTOM	3.00 in	DESIGN CODE SELECTED	ACI-318 (2005)

### A.2 Load Combinations

Strength load combinations

- 1.2 SW + 1.6 LL + 1.2 SDL + 1.6 X + 1 HYP

Service load combinations

Sustained Load

- 1 SW + 0.3 LL + 1 SDL + 0.3 X + 1 PT

Total Load

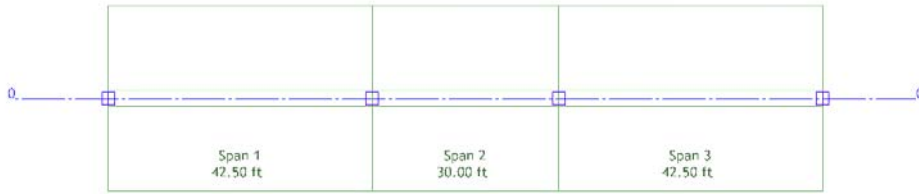
- 1 SW + 1 LL + 1 SDL + 1 X + 1 PT

Initial load combinations

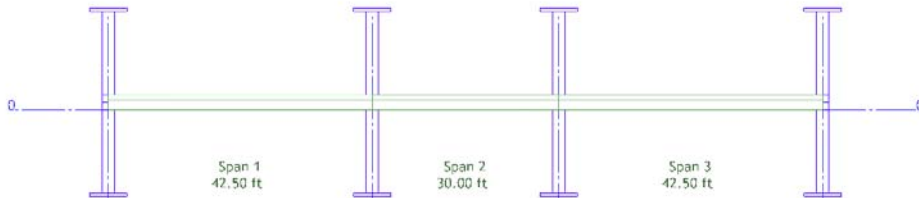
- 1 SW + 0 LL + 0 SDL + 0 X + 1.15 PT

## B. Design Strip Report: B.1 Geometry

### - Plan



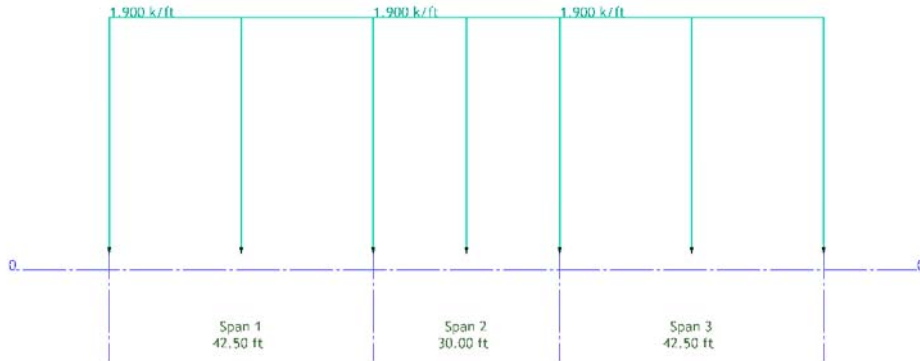
### - Elevation



Project Name: Specific Title:  
File Name: BBY Beam2 Date of Generation: Monday, April 06, 2009

## B.2 Applied loads

### - Superimposed Dead Load



### - Live Load



## - X Load





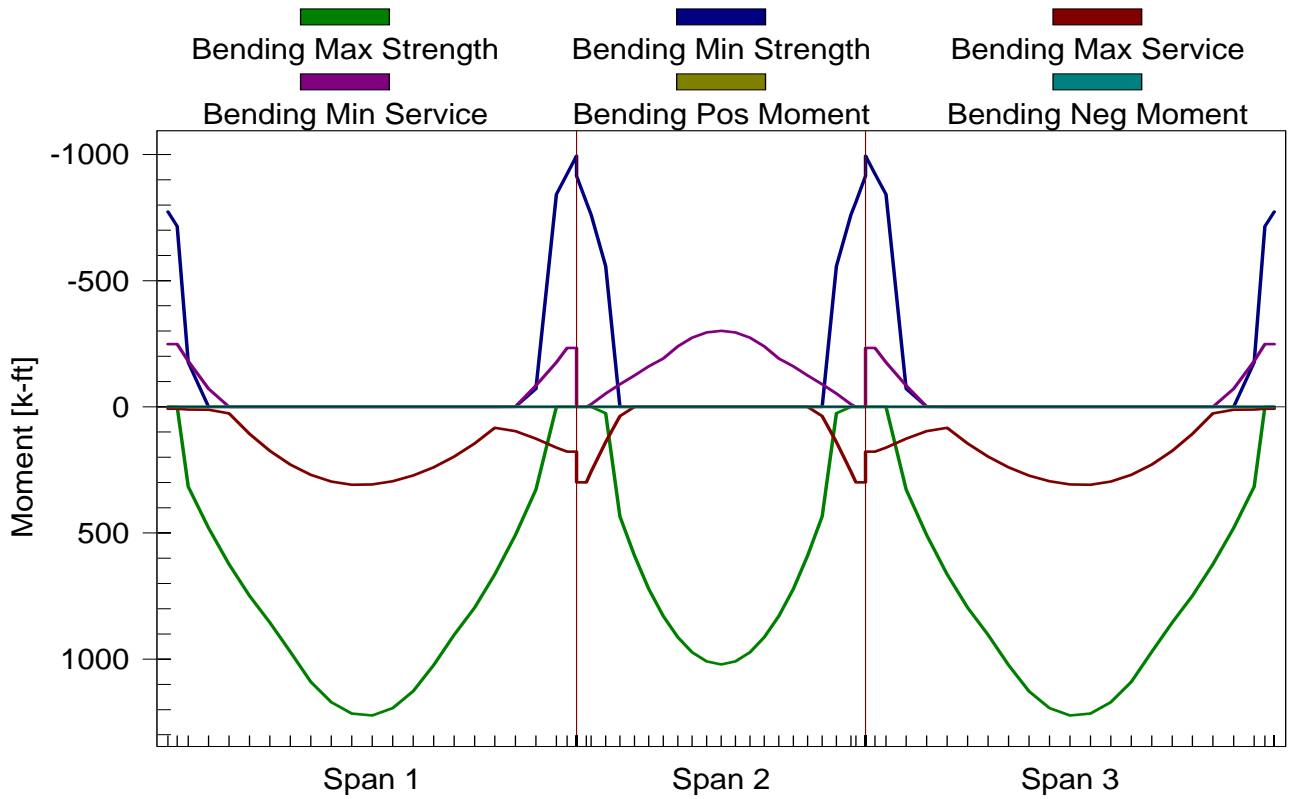
### B.3 Design Moment

**LOAD COMBINATION: Envelope**

## Moment Diagrams

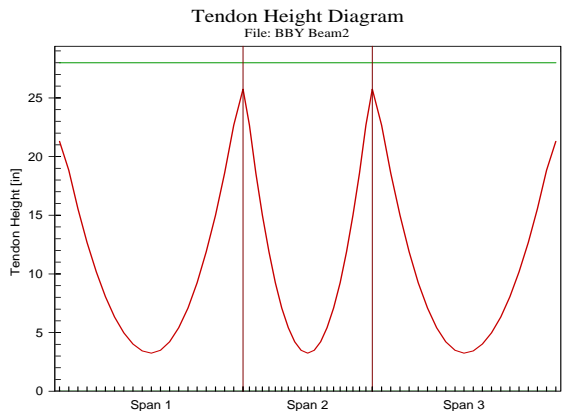
Project: "" / Load Case: Envelope

Moment Drawn on Tension Side



**DESIGN MOMENT**  
 (Moment is drawn on tension side)

### B.4 Tendon Profile



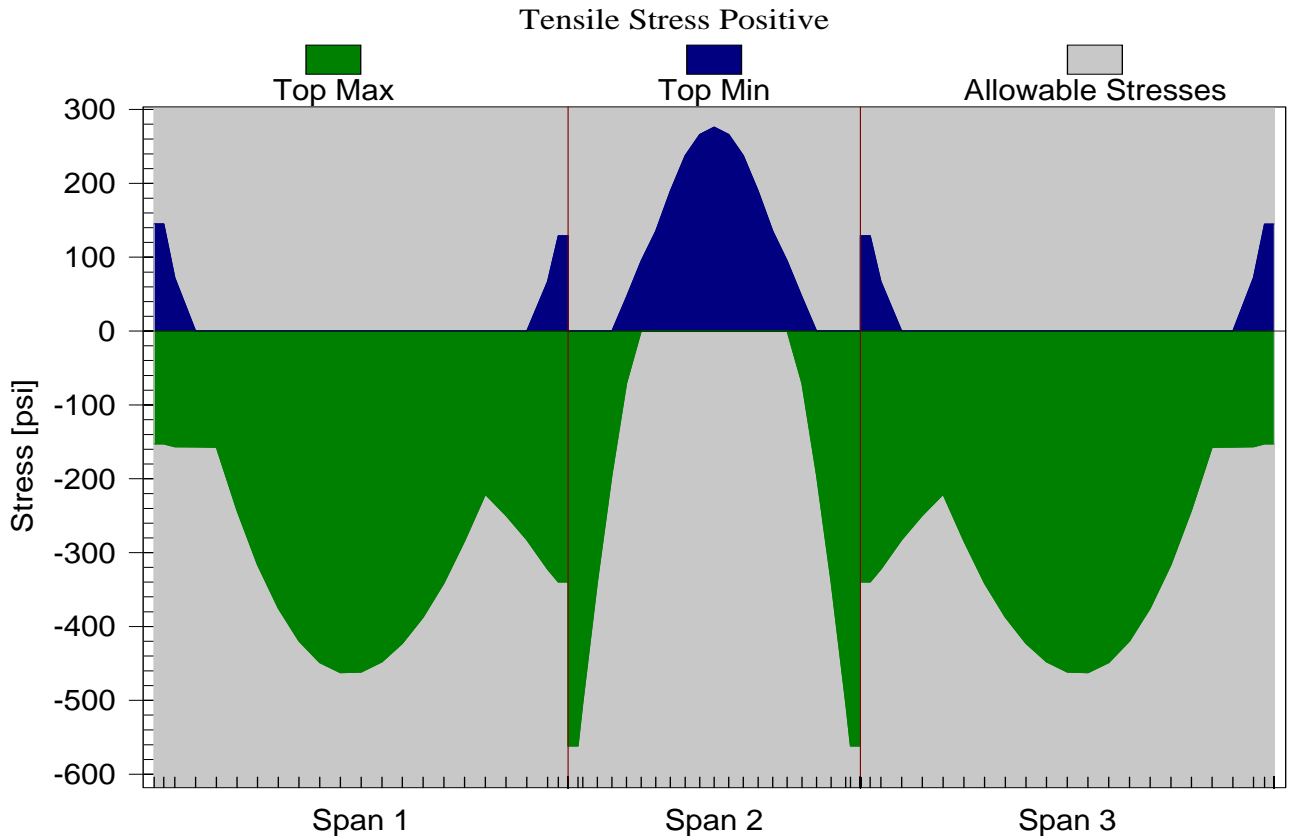
**POST-TENSIONING  
PROFILE**

**B.5 Stress check results / Code check**

**LOAD COMBINATION: Envelope**

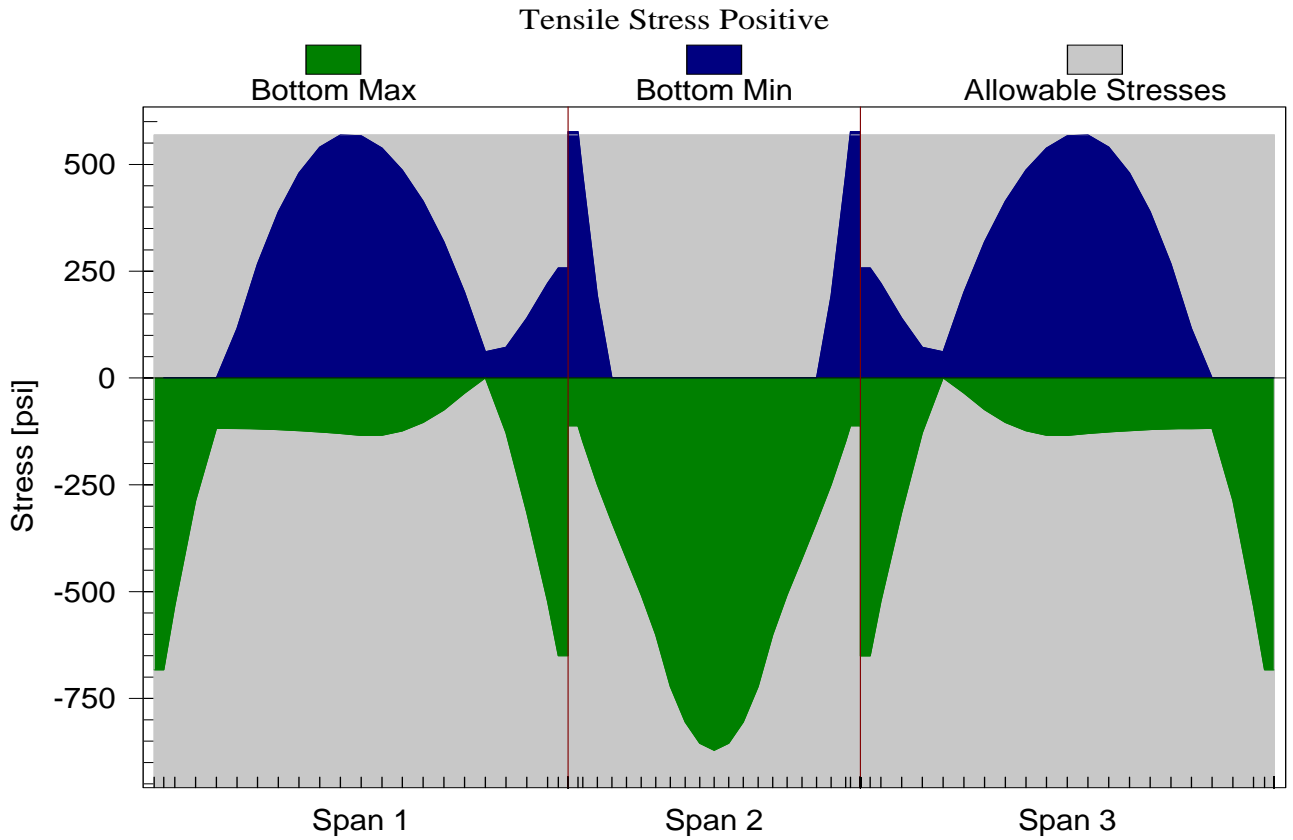
# Stress Diagrams

Project: "" / Load Case: Envelope



# Stress Diagrams

Project: "" / Load Case: Envelope



**SERVICE COMBINATION STRESSES**  
(Tension stress positive)

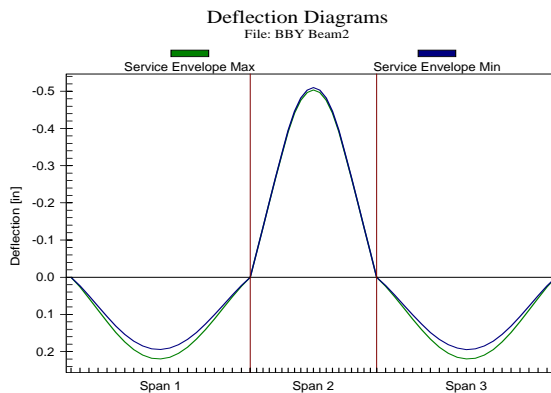
## B.6 Rebar Report

**Base Reinforcement**  
**Isolated bars**  
**Mesh Reinforcement**

### Total Strip Provided Rebar

Span	ID	Location	From ft	Quantity	Size	Length ft	Area in2
1	1	TOP	0.00	6	8	8.50	4.74
1	2	TOP	33.99	6	8	14.50	4.74
2	3	TOP	9.00	5	8	12.00	3.95
2	4	TOP	24.00	6	8	14.50	4.74
3	5	TOP	33.99	6	8	8.50	4.74
1	6	BOT	12.75	4	8	17.00	3.16
1	7	BOT	38.25	3	8	9.00	2.37
2	8	BOT	25.50	3	8	9.00	2.37
3	9	BOT	12.75	4	8	17.00	3.16
1	10	BOT	42.49	3	8	3.00	2.37
2	11	BOT	27.00	3	8	3.00	2.37

## B.8 Deflection



## B.9 Quantities

### CONCRETE

117.57 yd3

### MILD STEEL

1374.84 lbs

### PRESTRESSING MATERIAL

1175.4 lb

## 1 - USER SPECIFIED GENERAL ANALYSIS AND DESIGN PARAMETERS

Parameter	Value	Parameter	Value
Concrete		Post-tensioning	
F'c for BEAMS/SLABS	4000.00 psi	SYSTEM	UNBONDED
For COLUMNS/WALLS	4000.00 psi	Fpu	270.00 ksi
Ec for BEAMS/SLABS	3605.00 ksi	Fse	175.00 ksi
For COLUMNS/WALLS	3605.00 ksi	Strand area	0.153 in <sup>2</sup>
CREEP factor	2.00	Min CGS from TOP	2.25 in
CONCRETE WEIGHT	NORMAL	Min CGS from BOT for interior spans	3.25 in
UNIT WEIGHT	150.00 pcf	Min CGS from BOT for exterior spans	3.25 in
Tension stress limits / (f'c) <sup>1/2</sup>		Min average precompression	125.00 psi
At Top	9.000	Max spacing / slab depth	8.00
At Bottom	9.000	Analysis and design options	
Compression stress limits / f'c		Structural system	BEAM
At all locations	0.450	Moment of Inertia over support is	NOT INCREASED
Reinforcement		Moments reduced to face of support	YES
Fy (Main bars)	60.00 ksi	Moment Redistribution	NO
Fy (Shear reinforcement)	60.00 ksi	Effective flange width consideration	YES
Minimum Cover at TOP	2.00 in	Effective flange width implementation method	ACI-318
Minimum Cover at BOTTOM	3.00 in	DESIGN CODE SELECTED	ACI-318 (2005)

## 2 - INPUT GEOMETRY

### 2.1 Principal Span Data of Uniform Spans

Span	Form	Length	Width	Depth	TF Width	TF Thick.	BF/MF Width	BF/MF Thick.	Rh	Right Mult.	Left Mult.
		ft	in	in	in	in	in	in	in		
1	2	42.50	30.00	28.00	360.00	9.50			28.00	0.50	0.50
2	2	30.00	30.00	28.00	360.00	9.50			28.00	0.50	0.50
3	2	42.50	30.00	28.00	360.00	9.50			28.00	0.50	0.50

### 2.3 Effective Width Data of Uniform Spans

Span	Effective Width
	in
1	127.50
2	90.00
3	127.50

### 2.7 Support Width and Column Data

Joint	Support Width	Length LC	B(DIA.) LC	D LC	% LC	CBC LC	Length UC	B(DIA.) UC	D UC	% UC	CBC UC
	in	ft	in	in			ft	in	in		
1	24.0	14.7	24.0	24.0	100	(1)	14.7	24.0	24.0	100	(1)
2	24.0	14.7	24.0	24.0	100	(1)	14.7	24.0	24.0	100	(1)
3	24.0	14.7	24.0	24.0	100	(1)	14.7	24.0	24.0	100	(1)
4	24.0	14.7	24.0	24.0	100	(1)	14.7	24.0	24.0	100	(1)

## 3 - INPUT APPLIED LOADING

### 3.1 Loading As Appears in User's Input Screen

Span	Class	Type	W	P1	P2	A	B	C	F	M
------	-------	------	---	----	----	---	---	---	---	---

			k/ft <sup>2</sup>	k/ft	k/ft	ft	ft	ft	k	k-ft
1	LL	L		0.540		0.000	42.500			
1	SDL	L		1.900		0.000	42.500			
2	LL	L		0.540		0.000	30.000			
2	SDL	L		1.900		0.000	30.000			
3	LL	L		0.540		0.000	42.500			
3	SDL	L		1.900		0.000	42.500			

NOTE: SELFWEIGHT INCLUSION REQUIRED (SW= SELF WEIGHT Computed from geometry input and treated as dead loading. Unit selfweight W = 150.0 pcf  
 NOTE: LIVE LOADING is SKIPPED with a skip factor of 1.00

### 3.2 Compiled loads

Span	Class	Type	P1	P2	F	M	A	B	C	Reduction Factor
			k/ft	k/ft	k	k-ft	ft	ft	ft	%
1	LL	P	0.540				0.000	42.500		0.000
1	SDL	P	1.900				0.000	42.500		
1	SW	U	4.141							
2	LL	P	0.540				0.000	30.000		0.000
2	SDL	P	1.900				0.000	30.000		
2	SW	U	4.141							
3	LL	P	0.540				0.000	42.500		0.000
3	SDL	P	1.900				0.000	42.500		
3	SW	U	4.141							

## 4 - CALCULATED SECTION PROPERTIES

### 4.1 Section Properties of Uniform Spans and Cantilevers

Span	Area	Yb	Yt	b_eff	I	Yb	Yt
	in <sup>2</sup>	in	in	in	in <sup>4</sup>	in	in
1	3975.00	21.30	6.70	127.50	0.9954E+05	18.85	9.15
2	3975.00	21.30	6.70	90.00	0.8822E+05	17.74	10.26
3	3975.00	21.30	6.70	127.50	0.9954E+05	18.85	9.15

## 5 - MOMENTS, SHEARS AND REACTIONS

### 5.1 Span Moments and Shears (Excluding Live Load)

Span	Load Case	Moment Left	Moment Midspan	Moment Right	Shear Left	Shear Right
		k-ft	k-ft	k-ft	k	k
1	SW	-426.58	412.65	-617.87	-83.49	92.49
2	SW	-396.64	69.16	-396.68	-62.11	62.11
3	SW	-617.93	412.65	-426.52	-92.49	83.48
1	SDL	-195.74	189.35	-283.52	-38.31	42.44
2	SDL	-182.00	31.74	-182.02	-28.50	28.50
3	SDL	-283.55	189.35	-195.72	-42.44	38.31
1	XL	0.00	0.00	0.00	0.00	0.00
2	XL	0.00	0.00	0.00	0.00	0.00
3	XL	0.00	0.00	0.00	0.00	0.00

### 5.2 Reactions and Column Moments (Excluding Live Load)

Joint	Load Case	Reaction	Moment Lower Column	Moment Upper Column
		k	k-ft	k-ft

1	SW	83.49	-213.29	-213.29
2	SW	154.60	110.62	110.62
3	SW	154.60	-110.63	-110.63
4	SW	83.48	213.26	213.26
1	SDL	38.31	-97.87	-97.87
2	SDL	70.94	50.76	50.76
3	SDL	70.94	-50.76	-50.76
4	SDL	38.31	97.86	97.86
1	XL	0.00	0.00	0.00
2	XL	0.00	0.00	0.00
3	XL	0.00	0.00	0.00
4	XL	0.00	0.00	0.00

### 5.3 Span Moments and Shears (Live Load)

Span	Moment Left Max	Moment Left Min	Moment Midspan Max	Moment Midspan Min	Moment Right Max	Moment Right Min	Shear Left	Shear Right
	k-ft	k-ft	k-ft	k-ft	k-ft	k-ft	k	k
1	-59.61	3.97	57.65	-3.84	-84.56	-7.67	-11.26	12.19
2	-62.79	-19.34	28.36	-19.34	-62.79	-19.35	-9.48	9.48
3	-84.57	-7.67	57.65	-3.84	-59.60	3.97	-12.19	11.26

### 5.4 Reactions and Column Moments (Live Load)

Joint	Reaction Max	Reaction Min	Moment Lower Column Max	Moment Lower Column Min	Moment Upper Column Max	Moment Upper Column Min
	k	k	k-ft	k-ft	k-ft	k-ft
1	11.26	-0.37	1.99	-29.80	1.99	-29.80
2	21.67	6.96	24.79	-10.37	24.79	-10.37
3	21.67	6.96	10.37	-24.80	10.37	-24.80
4	11.26	-0.37	29.80	-1.99	29.80	-1.99

## 6 - MOMENTS REDUCED TO FACE OF SUPPORT

### 6.1 Reduced Moments at Face of Support (Excluding Live Load)

Span	Load Case	Moment Left	Moment Midspan	Moment Right
		k-ft	k-ft	k-ft
1	SW	-345.17	412.67	-527.42
2	SW	-336.58	69.16	-336.67
3	SW	-527.50	412.67	-345.08
1	SDL	-158.42	189.33	-242.00
2	SDL	-154.42	31.73	-154.50
3	SDL	-242.08	189.33	-158.33
1	XL	0.00	0.00	0.00
2	XL	0.00	0.00	0.00
3	XL	0.00	0.00	0.00

### 6.2 Reduced Moments at Face of Support (Live Load)

Span	Moment Left Max	Moment Left Min	Moment Midspan Max	Moment Midspan Min	Moment Right Max	Moment Right Min
	k-ft	k-ft	k-ft	k-ft	k-ft	k-ft
1	-48.62	3.61	57.66	-3.84	-72.64	-7.43
2	-53.58	-14.88	28.37	-19.34	-53.58	-14.88
3	-72.65	-7.43	57.65	-3.84	-48.62	3.61



## 7 - SELECTED POST-TENSIONING FORCES AND TENDON PROFILES

### 7.1 Tendon Profile

#### Tendon A

Span	Type	X1/L	X2/L	X3/L	A/L
1	1	0.031	0.500	0.031	---
2	1	0.031	0.500	0.031	---
3	1	0.031	0.500	0.031	---

### 7.2 Selected Post-Tensioning Forces and Tendon Drapes

#### Tendon A

Span	Force	CGS Left	CGS C1	CGS C2	CGS Right	P/A	Wbal	WBal (%DL)
	k	in	in	in	in	psi	k/-	
1	499.550	21.30	---	3.25	25.75	125.67	3.738	62
2	499.550	25.75	---	3.25	25.75	125.67	8.326	138
3	499.550	25.75	---	3.25	21.30	125.67	3.738	62

Approximate weight of strand: 1175.4 LB

### 7.4 Required Minimum Post-Tensioning Forces

Based on Stress Conditions

Based on Minimum P/A

Type	Left	Center	Right	Left	Center	Right
	k	k	k	k	k	k
1	42.95	498.34	224.64	496.88	496.88	496.88
2	106.70	0.00	106.82	496.88	496.88	496.88
3	224.73	498.35	42.76	496.88	496.88	496.88

### 7.5 Service Stresses (tension shown positive)

#### Envelope of Service 1

Span	Left Top Max-T	Left Top Max-C	Left Bot Max-T	Left Bot Max-C	Center Top Max-T	Center Top Max-C	Center Bot Max-T	Center Bot Max-C	Right Top Max-T	Right Top Max-C	Right Bot Max-T	Right Bot Max-C
	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi
1	107.61	-----	-----	-606.31	-----	-417.33	475.24	-----	72.96	-----	-----	-534.92
2	-----	-202.08	6.41	-21.60	187.71	-----	-----	-667.45	-----	-201.92	6.14	-21.87
3	73.08	-----	-----	-535.17	-----	-417.34	475.26	-----	107.47	-----	-----	-606.03

#### Envelope of Service 2

Span	Left Top Max-T	Left Top Max-C	Left Bot Max-T	Left Bot Max-C	Center Top Max-T	Center Top Max-C	Center Bot Max-T	Center Bot Max-C	Right Top Max-T	Right Top Max-C	Right Bot Max-T	Right Bot Max-C
	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi
1	145.14	-----	-----	-683.65	-----	-461.85	566.96	-----	129.05	-----	-----	-650.48
2	-----	-187.54	-----	-112.09	206.61	-----	-----	-700.13	-----	-187.38	-----	-112.36
3	129.18	-----	-----	-650.75	-----	-461.85	566.98	-----	145.01	-----	-----	-683.37

### 7.6 Post-Tensioning Balance Moments, Shears and Reactions

#### Span Moments and Shears

Span	Moment Left	Moment Center	Moment Right	Shear Left	Shear Right
	k-ft	k-ft	k-ft	k	k
1	306.67	-354.92	611.17	-3.10	-3.10
2	550.17	-319.67	550.25	0.00	0.00
3	611.17	-354.92	306.67	3.10	3.10

#### Reactions and Column Moments

Joint	Reaction	Moment Lower	Moment Upper

	Column	Column
	k	k-ft
1	3.102	165.167
2	-3.100	-15.350
3	-3.106	15.350
4	3.104	-165.167

Note: Moments are reported at face of support

## 8 - FACTORED MOMENTS AND REACTIONS ENVELOPE

### 8.1 Factored Design Moments (Not Redistributed)

Span	Left Max	Left Min	Middle Max	Middle Min	Right Max	Right Min
	k-ft	k-ft	k-ft	k-ft	k-ft	k-ft
1	-348.67	-265.11	1210.90	1112.51	-580.44	-476.10
2	-243.42	-181.50	597.96	521.62	-243.54	-181.63
3	-580.57	-476.22	1210.97	1112.59	-348.47	-264.91

### 8.2 Reactions and Column Moments

Joint	Reaction Max	Reaction Min	Moment Lower Column Max	Moment Lower Column Min	Moment Upper Column Max	Moment Upper Column Min
	k	k	k-ft	k-ft	k-ft	k-ft
1	167.28	148.67	-204.95	-255.81	-204.95	-255.81
2	302.22	278.68	217.93	161.67	217.93	161.67
3	302.21	278.68	-161.77	-218.03	-161.77	-218.03
4	167.27	148.66	255.81	204.95	255.81	204.95

### 8.3 Secondary Moments

Span	Left	Midspace	Right
	k-ft	k-ft	k-ft
1	333.42	396.25	459.08
2	431.50	431.50	431.58
3	459.17	396.33	333.42

Note: Moments are reported at face of support

## 10 - MILD STEEL - NO REDISTRIBUTION

### 10.1 Required Rebar

#### 10.1.1 Total Strip Required Rebar

Span	Location	From	To	As Required	Ultimate	Minimum
		ft	ft	in2	in2	in2
1	TOP	0.00	6.37	4.67	0.00	4.67
1	TOP	36.12	42.49	4.67	0.20	4.67
2	TOP	0.00	4.50	3.51	0.00	3.51
2	TOP	10.50	19.50	3.51	0.00	3.51
2	TOP	25.50	30.00	3.51	0.00	3.51
3	TOP	0.00	6.37	4.67	0.20	4.67
3	TOP	36.12	42.49	4.67	0.00	4.67
1	BOT	14.88	27.62	2.40	0.88	2.40
1	BOT	40.39	42.49	1.56	0.00	1.56
2	BOT	0.00	3.00	4.10	0.00	4.10
2	BOT	27.00	30.00	4.10	0.00	4.10
3	BOT	0.00	2.13	1.56	0.00	1.56

3	BOT	14.88	27.62	2.40	0.77	2.40
---	-----	-------	-------	------	------	------

## 10.2 Provided Rebar

### 10.2.1 Total Strip Provided Rebar

Span	ID	Location	From	Quantity	Size	Length	Area
			ft			ft	in2
1	1	TOP	0.00	6	8	8.50	4.74
1	2	TOP	33.99	6	8	14.50	4.74
2	3	TOP	9.00	5	8	12.00	3.95
2	4	TOP	24.00	6	8	14.50	4.74
3	5	TOP	33.99	6	8	8.50	4.74
1	6	BOT	12.75	4	8	17.00	3.16
1	7	BOT	38.25	3	8	9.00	2.37
2	8	BOT	25.50	3	8	9.00	2.37
3	9	BOT	12.75	4	8	17.00	3.16
1	10	BOT	42.49	3	8	3.00	2.37
2	11	BOT	27.00	3	8	3.00	2.37

### 10.2.2 Total Strip Steel Disposition

Span	ID	Location	From	Quantity	Size	Length
			ft			ft
1	1	TOP	0.00	6	8	8.50
1	2	TOP	33.99	6	8	8.51
2	2	TOP	0.00	6	8	5.99
2	3	TOP	9.00	5	8	12.00
2	4	TOP	24.00	6	8	6.00
3	4	TOP	0.00	6	8	8.50
3	5	TOP	33.99	6	8	8.50
1	6	BOT	12.75	4	8	17.00
1	7	BOT	38.25	3	8	4.25
1	10	BOT	42.49	3	8	0.01
2	7	BOT	0.00	3	8	4.75
2	8	BOT	25.50	3	8	4.50
2	10	BOT	0.00	3	8	2.99
2	11	BOT	27.00	3	8	3.00
3	8	BOT	0.00	3	8	4.50
3	9	BOT	12.75	4	8	17.00

## 10.3 Base Reinforcement

### 10.3.1 Isolated bars

### 10.3.2 Mesh Reinforcement

## 12 - SHEAR REINFORCEMENT

### 12.1 Shear Calculation Envelope

#### SPAN 1

XL	X	d	Vu	Mu	Ratio	Req.	Spacing
	ft	in	k	kft		in2	in
0.02	1.00	22.40	-159.16	-267.77	1.00	0.07	21.00
0.05	2.13	22.40	-150.02	-111.63	0.94	0.07	21.00
0.10	4.25	22.40	-132.79	157.77	0.83	0.07	21.00
0.15	6.37	22.40	-115.55	397.12	0.77	0.07	21.00
0.20	8.50	22.40	-98.31	624.88	0.97	0.07	21.00
0.25	10.63	22.40	-81.05	815.79	1.05	0.07	21.00

0.30	12.75	22.40	-63.82	970.83	1.00	0.07	21.00
0.35	14.88	23.02	-46.60	1089.69	0.71	0.07	21.00
0.40	17.00	23.98	-29.37	1170.90	0.43	0.00	0.00
0.45	19.12	24.56	-12.11	1215.20	0.17	0.00	0.00
0.50	21.25	24.75	5.92	1223.32	0.08	0.00	0.00
0.55	23.38	24.51	23.16	1193.79	0.33	0.00	0.00
0.60	25.50	23.79	40.41	1126.61	0.60	0.07	21.00
0.65	27.62	22.59	57.65	1023.25	0.90	0.07	21.00
0.70	29.75	22.40	74.89	882.98	1.05	0.07	21.00
0.75	31.88	22.40	92.10	705.42	1.01	0.07	21.00
0.80	33.99	22.40	109.36	490.95	0.88	0.07	21.00
0.85	36.12	22.40	126.58	239.42	0.79	0.07	21.00
0.90	38.25	22.40	143.84	-20.83	0.90	0.07	21.00
0.95	40.39	22.68	161.07	-312.88	1.00	0.07	21.00
0.98	41.50	24.30	170.21	-480.84	0.98	0.07	21.00

**SPAN 2**

XL	X	d	Vu	Mu	Ratio	Req.	Spacing
	ft	in	k	kft		in2	in
0.03	1.00	23.70	-115.80	-183.31	0.69	0.07	21.00
0.05	1.50	22.68	-111.73	-128.16	0.69	0.07	21.00
0.10	3.00	22.40	-99.57	25.18	0.62	0.07	21.00
0.15	4.50	22.40	-87.38	160.06	0.55	0.07	21.00
0.20	6.00	22.40	-75.23	276.56	0.51	0.07	21.00
0.25	7.50	22.40	-63.05	374.60	0.56	0.07	21.00
0.30	9.00	22.40	-50.88	456.48	0.58	0.07	21.00
0.35	10.50	22.59	-38.70	521.00	0.56	0.07	21.00
0.40	12.00	23.79	-26.55	567.07	0.39	0.00	0.00
0.45	13.50	24.51	-14.38	594.75	0.21	0.00	0.00
0.50	15.00	24.75	-2.21	526.83	0.03	0.00	0.00
0.55	16.50	24.51	14.38	594.75	0.21	0.00	0.00
0.60	18.00	23.79	26.55	567.07	0.39	0.00	0.00
0.65	19.50	22.59	38.70	521.00	0.56	0.07	21.00
0.70	21.00	22.40	50.88	456.40	0.58	0.07	21.00
0.75	22.50	22.40	63.05	374.60	0.56	0.07	21.00
0.80	24.00	22.40	75.23	276.56	0.51	0.07	21.00
0.85	25.50	22.40	87.40	160.06	0.55	0.07	21.00
0.90	27.00	22.40	99.57	25.06	0.62	0.07	21.00
0.95	28.50	22.68	111.73	-128.24	0.69	0.07	21.00
0.97	29.00	23.70	115.80	-183.54	0.69	0.07	21.00

**SPAN 3**

XL	X	d	Vu	Mu	Ratio	Req.	Spacing
	ft	in	k	kft		in2	in
0.02	1.00	24.30	-170.21	-480.99	0.98	0.07	21.00
0.05	2.13	22.68	-161.07	-312.81	1.00	0.07	21.00
0.10	4.25	22.40	-143.84	-20.74	0.90	0.07	21.00
0.15	6.37	22.40	-126.62	239.50	0.79	0.07	21.00
0.20	8.50	22.40	-109.36	490.95	0.88	0.07	21.00
0.25	10.63	22.40	-92.13	705.50	1.01	0.07	21.00
0.30	12.75	22.40	-74.89	882.98	1.05	0.07	21.00
0.35	14.88	22.59	-57.65	1023.25	0.90	0.07	21.00
0.40	17.00	23.79	-40.41	1127.35	0.60	0.07	21.00
0.45	19.12	24.51	-23.16	1193.79	0.33	0.00	0.00
0.50	21.25	24.75	-5.92	1223.32	0.08	0.00	0.00
0.55	23.38	24.56	12.11	1215.20	0.17	0.00	0.00
0.60	25.50	23.98	29.34	1170.90	0.43	0.00	0.00
0.65	27.62	23.02	46.58	1089.69	0.71	0.07	21.00

0.70	29.75	22.40	63.82	970.83	1.00	0.07	21.00
0.75	31.88	22.40	81.05	815.79	1.05	0.07	21.00
0.80	33.99	22.40	98.31	624.95	0.97	0.07	21.00
0.85	36.12	22.40	115.55	397.12	0.77	0.07	21.00
0.90	38.25	22.40	132.79	157.92	0.83	0.07	21.00
0.95	40.39	22.40	150.02	-111.63	0.94	0.07	21.00
0.98	41.50	22.40	159.16	-267.55	1.00	0.07	21.00

Note: "Vu" is related to the load combination which produces the maximum "Ratio"  
 Note: Sections with \*\*\*\* have exceeded the maximum allowable shear stress.

## 14 - DEFLECTIONS

### 14.1 Maximum Span Deflections

Span	SW	SW+PT	SW+PT+ SDL	SW+PT+SDL +Creep	LL	X	Total
	in	in	in	in	in	in	in
1	0.28	0.06	0.18	0.55(926)	0.04(14089)	0.00(****)	0.59(869)
2	-0.01	-0.54	-0.51	-1.54(233)	0.01(38844)	0.00(****)	-1.53(235)
3	0.28	0.06	0.18	0.55(926)	0.04(14089)	0.00(****)	0.59(869)

## 15 - FRICTION, ELONGATION AND LONG TERM LOSSES

### 15.1 Input Parameters

Parameter	Value	Parameter	Value
Type of Strand	Low Relaxation	Coefficient of Angular Friction (meu)	0.07000 1/rad
Age of Concrete at Stressing	5 days	Coefficient of Wobble Friction (K)	0.00140 rad/ft
Ec at Stressing	3122.00 ksi	Ratio of Jacking Stress	0.80
Average Relative Humidity	80.00 percent	Anchor Set	0.25 in
Volume to Surface Ratio of Members	3.31 in	Tendon_A Stressing Method	Both sides
Es of Strand	29000.00 ksi		

### 15.2 Long-term Losses

Tendon	Elastic Shortening	Shrinkage	Creep	Relaxation	Total
	ksi	ksi	ksi	ksi	ksi
TENDON_A	0.58	3.05	2.02	0.25	5.91

### 15.3 Calculated Stresses After Friction and Long-term Losses

Tendon	Span	Stress Left FL Only	Stress Center FL Only	Stress Right FL Only	Stress Left FL+LTL	Stress Center FL+LTL	Stress Right FL+LTL
		ksi	ksi	ksi	ksi	ksi	ksi
TENDON_A	1	54.38	45.82	36.99	48.47	39.91	31.08
TENDON_A	2	36.99	25.46	17.86	31.08	19.56	11.95
TENDON_A	3	17.86	6.86	0.00	11.95	0.95	0.00

### 15.4 Summary

Tendon	Avg. Initial Stress	LTL	Avg. Final Stress	Avg. Final Force	Elongation Left	Elongation Right	Elongation Total	Left Anchor Set	Right Anchor Set
	ksi	ksi	ksi	k	in	in	in	ft	ft
TENDON_A	26.17	5.91	20.26	3.10	8.74	-7.48	1.26	0.00	115.00

### 15.5 Critical Stress Ratios

Tendon	Stressing Left	Stressing Right	Anchorage Left	Anchorage Right	Max
TENDON_A	0.20	0.00	0.20	0.00	0.20

**21 - TENDON HEIGHTS**

<b><u>XL</u></b>	<b>X</b>	<b>CGS A</b>	<b>CGS B</b>	<b>CGS C</b>
	ft	in	in	in
	SPAN 1			
0.00	0.000	21.30	21.30	21.30
0.05	2.125	18.83	20.39	20.39
0.10	4.250	15.56	17.69	17.69
0.15	6.375	12.68	14.30	14.30
0.20	8.500	10.18	11.37	11.37
0.25	10.625	8.06	8.89	8.89
0.30	12.750	6.33	6.86	6.86
0.35	14.875	4.98	5.28	5.28
0.40	17.000	4.02	4.15	4.15
0.45	19.125	3.44	3.48	3.48
0.50	21.250	3.25	3.25	3.25
0.55	23.375	3.49	3.53	3.53
0.60	25.500	4.21	4.37	4.37
0.65	27.625	5.41	5.78	5.78
0.70	29.750	7.09	7.75	7.75
0.75	31.875	9.25	10.28	10.28
0.80	34.000	11.89	13.37	13.37
0.85	36.125	15.00	17.03	17.03
0.90	38.250	18.60	21.25	21.25
0.95	40.375	22.68	24.62	24.62
1.00	42.500	25.75	25.75	25.75

<b><u>XL</u></b>	<b>X</b>	<b>CGS A</b>	<b>CGS B</b>	<b>CGS C</b>
	ft	in	in	in
	SPAN 2			
0.00	0.000	25.75	0.00	25.75
0.05	1.500	22.68	0.00	24.63
0.10	3.000	18.60	0.00	21.25
0.15	4.500	15.00	0.00	17.03
0.20	6.000	11.89	0.00	13.38
0.25	7.500	9.25	0.00	10.28
0.30	9.000	7.09	0.00	7.75
0.35	10.500	5.41	0.00	5.78
0.40	12.000	4.21	0.00	4.38
0.45	13.500	3.49	0.00	3.53
0.50	15.000	3.25	0.00	3.25
0.55	16.500	3.49	0.00	3.53
0.60	18.000	4.21	0.00	4.38
0.65	19.500	5.41	0.00	5.78
0.70	21.000	7.09	0.00	7.75
0.75	22.500	9.25	0.00	10.28
0.80	24.000	11.89	0.00	13.38
0.85	25.500	15.00	0.00	17.03
0.90	27.000	18.60	0.00	21.25
0.95	28.500	22.68	0.00	24.63
1.00	30.000	25.75	0.00	25.75

XL	X	CGS A	CGS B	CGS C
	ft	in	in	in
	SPAN 3			
0.00	0.000	25.75	0.00	25.75
0.05	2.125	22.68	0.00	24.62
0.10	4.250	18.60	0.00	21.25
0.15	6.375	15.00	0.00	17.03
0.20	8.500	11.89	0.00	13.37
0.25	10.625	9.25	0.00	10.28
0.30	12.750	7.09	0.00	7.75
0.35	14.875	5.41	0.00	5.78
0.40	17.000	4.21	0.00	4.37
0.45	19.125	3.49	0.00	3.53
0.50	21.250	3.25	0.00	3.25
0.55	23.375	3.44	0.00	3.48
0.60	25.500	4.02	0.00	4.15
0.65	27.625	4.98	0.00	5.28
0.70	29.750	6.33	0.00	6.86
0.75	31.875	8.06	0.00	8.89
0.80	34.000	10.18	0.00	11.37
0.85	36.125	12.68	0.00	14.30
0.90	38.250	15.56	0.00	17.69
0.95	40.375	18.83	0.00	20.39
1.00	42.500	21.30	0.00	21.30

**22 - POST-TENSIONING BALANCED LOADING**

Span	Type	W	F	M	a	b
		k/ft	k	k-ft	ft	ft
1	3	53.664			0.00	1.32
1	3	66.912			41.18	42.50
1	3	-3.547			1.32	21.25
1	3	-4.423			21.25	41.18
2	3	134.288			0.00	0.93
2	3	134.288			29.07	30.00
2	3	-8.876			0.93	15.00
2	3	-8.876			15.00	29.07
3	3	66.912			0.00	1.32
3	3	53.664			41.18	42.50
3	3	-4.423			1.32	21.25
3	3	-3.547			21.25	41.18
2	4			0.00	6.00	
2	4			0.00	24.00	

**23 - DETAILED MOMENTS**

**SPAN 1**

XL	X	SW	SDL	XL	LL Min	LL Max	PT	Secondary
	ft	k-ft	k-ft	k-ft	k-ft	k-ft	k-ft	k-ft
0.00	0.00	-426.58	-195.74	0.00	-59.60	3.97	330.41	330.33
0.05	2.13	-258.51	-118.62	0.00	-36.91	3.19	234.49	336.93
0.10	4.25	-109.15	-50.08	0.00	-16.65	2.41	104.94	343.52
0.15	6.38	21.52	9.87	0.00	1.07	3.36	-8.60	350.11
0.20	8.50	133.49	61.25	0.00	0.56	17.70	-106.12	356.70

0.25	10.63	226.76	104.05	0.00	0.04	29.60	-187.62	363.29
0.30	12.75	301.33	138.27	0.00	-0.71	40.01	-253.11	369.88
0.35	14.88	357.21	163.91	0.00	-1.49	48.08	-302.58	376.48
0.40	17.00	394.39	180.97	0.00	-2.28	53.71	-336.03	383.07
0.45	19.13	412.87	189.45	0.00	-3.06	56.90	-353.47	389.66
0.50	21.25	412.65	189.35	0.00	-3.84	57.65	-354.88	396.25
0.55	23.38	393.74	180.67	0.00	-4.62	55.97	-338.31	402.84
0.60	25.50	356.13	163.42	0.00	-5.40	51.85	-301.76	409.43
0.65	27.63	299.82	137.58	0.00	-6.18	45.28	-245.24	416.03
0.70	29.75	224.81	103.16	0.00	-6.96	36.28	-168.75	422.62
0.75	31.88	131.11	60.16	0.00	-7.74	24.84	-72.28	429.21
0.80	34.00	18.71	8.59	0.00	-8.53	10.97	44.15	435.80
0.85	36.13	-112.39	-51.57	0.00	-17.83	-5.35	180.56	442.39
0.90	38.25	-262.18	-120.31	0.00	-37.64	-6.64	336.93	448.98
0.95	40.38	-430.68	-197.62	0.00	-59.88	-7.16	513.28	455.58
1.00	42.50	-617.87	-283.52	0.00	-84.56	-7.67	647.69	462.17

**SPAN 2**

XL	X	SW	SDL	XL	LL Min	LL Max	PT	Secondary
	ft	k-ft	k-ft	k-ft	k-ft	k-ft	k-ft	k-ft
0.00	0.00	-396.64	-182.00	0.00	-62.79	-19.34	617.00	431.47
0.05	1.50	-308.13	-141.39	0.00	-49.17	-11.86	489.18	431.47
0.10	3.00	-228.94	-105.06	0.00	-36.77	-3.60	319.43	431.48
0.15	4.50	-159.07	-72.99	0.00	-25.58	3.44	169.65	431.48
0.20	6.00	-98.52	-45.21	0.00	-19.34	9.26	39.84	431.49
0.25	7.50	-47.28	-21.70	0.00	-19.34	13.87	-70.00	431.49
0.30	9.00	-5.36	-2.46	0.00	-19.34	18.65	-159.87	431.49
0.35	10.50	27.25	12.50	0.00	-19.34	22.90	-229.77	431.50
0.40	12.00	50.53	23.19	0.00	-19.34	25.93	-279.69	431.50
0.45	13.50	64.51	29.60	0.00	-19.34	27.76	-309.65	431.51
0.50	15.00	69.16	31.74	0.00	-19.34	28.36	-319.63	431.51
0.55	16.50	64.50	29.60	0.00	-19.34	27.76	-309.64	431.52
0.60	18.00	50.53	23.18	0.00	-19.34	25.93	-279.68	431.52
0.65	19.50	27.23	12.50	0.00	-19.34	22.90	-229.75	431.52
0.70	21.00	-5.38	-2.47	0.00	-19.34	18.64	-159.85	431.53
0.75	22.50	-47.30	-21.71	0.00	-19.34	13.87	-69.97	431.53
0.80	24.00	-98.55	-45.22	0.00	-19.34	9.26	39.87	431.54
0.85	25.50	-159.11	-73.01	0.00	-25.59	3.43	169.69	431.54
0.90	27.00	-228.98	-105.07	0.00	-36.78	-3.60	319.48	431.54
0.95	28.50	-308.17	-141.41	0.00	-49.17	-11.86	489.23	431.55
1.00	30.00	-396.68	-182.02	0.00	-62.79	-19.35	617.05	431.55

**SPAN 3**

XL	X	SW	SDL	XL	LL Min	LL Max	PT	Secondary
	ft	k-ft	k-ft	k-ft	k-ft	k-ft	k-ft	k-ft
0.00	0.00	-617.93	-283.55	0.00	-84.57	-7.67	647.75	462.25
0.05	2.13	-430.73	-197.65	0.00	-59.88	-7.16	513.34	455.66
0.10	4.25	-262.23	-120.33	0.00	-37.64	-6.64	336.98	449.06
0.15	6.38	-112.43	-51.59	0.00	-17.84	-5.36	180.60	442.47
0.20	8.50	18.67	8.57	0.00	-8.53	10.96	44.19	435.87
0.25	10.63	131.08	60.15	0.00	-7.74	24.84	-72.25	429.27
0.30	12.75	224.79	103.15	0.00	-6.96	36.28	-168.72	422.68
0.35	14.88	299.80	137.57	0.00	-6.18	45.28	-245.22	416.08
0.40	17.00	356.11	163.41	0.00	-5.40	51.84	-301.74	409.49
0.45	19.13	393.73	180.67	0.00	-4.62	55.97	-338.29	402.89
0.50	21.25	412.65	189.35	0.00	-3.84	57.65	-354.88	396.29
0.55	23.38	412.87	189.45	0.00	-3.06	56.90	-353.46	389.70
0.60	25.50	394.39	180.97	0.00	-2.28	53.71	-336.04	383.10



0.65	27.63	357.22	163.92	0.00	-1.49	48.08	-302.59	376.51
0.70	29.75	301.35	138.28	0.00	-0.71	40.01	-253.13	369.91
0.75	31.88	226.78	104.06	0.00	0.04	29.60	-187.64	363.31
0.80	34.00	133.52	61.27	0.00	0.56	17.70	-106.15	356.72
0.85	36.13	21.55	9.89	0.00	1.07	3.37	-8.63	350.12
0.90	38.25	-109.11	-50.07	0.00	-16.64	2.41	104.90	343.53
0.95	40.38	-258.47	-118.60	0.00	-36.90	3.19	234.45	336.93
1.00	42.50	-426.52	-195.72	0.00	-59.60	3.97	330.36	330.33

**24 - DETAILED SHEARS**

**SPAN 1**

XL	X	SW	SDL	XL	LL Min	LL Max	PT	Secondary
	ft	k	k	k	k	k	k	k
0.00	0.00	-83.49	-38.31	0.00	0.37	-11.26	-3.10	-3.10
0.05	2.13	-74.69	-34.27	0.00	0.37	-10.11	64.74	-3.10
0.10	4.25	-65.89	-30.24	0.00	0.37	-8.96	57.20	-3.10
0.15	6.38	-57.09	-26.20	0.00	0.37	-7.81	49.66	-3.10
0.20	8.50	-48.29	-22.16	0.00	0.37	-6.67	42.12	-3.10
0.25	10.63	-39.49	-18.12	0.00	0.37	-5.52	34.59	-3.10
0.30	12.75	-30.69	-14.09	0.00	0.37	-4.37	27.05	-3.10
0.35	14.88	-21.90	-10.05	0.00	0.37	-3.22	19.51	-3.10
0.40	17.00	-13.10	-6.01	0.00	0.37	-2.08	11.97	-3.10
0.45	19.13	-4.30	-1.97	0.00	0.37	-0.93	4.44	-3.10
0.50	21.25	4.50	2.07	0.00	0.71	0.00	-3.10	-3.10
0.55	23.38	13.30	6.10	0.00	1.86	0.00	-12.50	-3.10
0.60	25.50	22.10	10.14	0.00	3.01	0.00	-21.90	-3.10
0.65	27.63	30.90	14.18	0.00	4.16	0.00	-31.30	-3.10
0.70	29.75	39.70	18.22	0.00	5.30	0.00	-40.69	-3.10
0.75	31.88	48.49	22.25	0.00	6.45	0.00	-50.09	-3.10
0.80	34.00	57.29	26.29	0.00	7.60	0.00	-59.49	-3.10
0.85	36.13	66.09	30.33	0.00	8.74	0.00	-68.89	-3.10
0.90	38.25	74.89	34.37	0.00	9.89	0.00	-78.29	-3.10
0.95	40.38	83.69	38.40	0.00	11.04	0.00	-87.69	-3.10
1.00	42.50	92.49	42.44	0.00	12.19	0.00	-3.10	-3.10

**SPAN 2**

XL	X	SW	SDL	XL	LL Min	LL Max	PT	Secondary
	ft	k	k	k	k	k	k	k
0.00	0.00	-62.11	-28.50	0.00	0.00	-9.48	0.00	0.00
0.05	1.50	-55.90	-25.65	0.00	0.00	-8.67	119.83	0.00
0.10	3.00	-49.69	-22.80	0.00	0.00	-7.86	106.51	0.00
0.15	4.50	-43.47	-19.95	0.00	0.00	-7.05	93.20	0.00
0.20	6.00	-37.26	-17.10	0.00	0.00	-6.24	79.88	0.00
0.25	7.50	-31.05	-14.25	0.00	0.00	-5.43	66.57	0.00
0.30	9.00	-24.84	-11.40	0.00	0.00	-4.62	53.26	0.00
0.35	10.50	-18.63	-8.55	0.00	0.00	-3.81	39.94	0.00
0.40	12.00	-12.42	-5.70	0.00	0.00	-3.00	26.63	0.00
0.45	13.50	-6.21	-2.85	0.00	0.57	-2.19	13.31	0.00
0.50	15.00	0.00	0.00	0.00	1.38	-1.38	0.00	0.00
0.55	16.50	6.21	2.85	0.00	2.19	-0.57	-13.32	0.00
0.60	18.00	12.42	5.70	0.00	3.00	0.00	-26.63	0.00
0.65	19.50	18.63	8.55	0.00	3.81	0.00	-39.94	0.00
0.70	21.00	24.84	11.40	0.00	4.62	0.00	-53.26	0.00
0.75	22.50	31.06	14.25	0.00	5.43	0.00	-66.57	0.00
0.80	24.00	37.27	17.10	0.00	6.24	0.00	-79.89	0.00

0.85	25.50	43.48	19.95	0.00	7.05	0.00	-93.20	0.00
0.90	27.00	49.69	22.80	0.00	7.86	0.00	-106.52	0.00
0.95	28.50	55.90	25.65	0.00	8.67	0.00	-119.83	0.00
1.00	30.00	62.11	28.50	0.00	9.48	0.00	0.00	0.00

**SPAN 3**

XL	X	SW	SDL	XL	LL Min	LL Max	PT	Secondary
	ft	k	k	k	k	k	k	k
0.00	0.00	-92.49	-42.44	0.00	0.00	-12.19	3.10	3.10
0.05	2.13	-83.69	-38.40	0.00	0.00	-11.04	87.69	3.10
0.10	4.25	-74.89	-34.37	0.00	0.00	-9.89	78.29	3.10
0.15	6.38	-66.10	-30.33	0.00	0.00	-8.75	68.89	3.10
0.20	8.50	-57.30	-26.29	0.00	0.00	-7.60	59.49	3.10
0.25	10.63	-48.50	-22.25	0.00	0.00	-6.45	50.10	3.10
0.30	12.75	-39.70	-18.22	0.00	0.00	-5.30	40.70	3.10
0.35	14.88	-30.90	-14.18	0.00	0.00	-4.16	31.30	3.10
0.40	17.00	-22.10	-10.14	0.00	0.00	-3.01	21.90	3.10
0.45	19.13	-13.30	-6.10	0.00	0.00	-1.86	12.50	3.10
0.50	21.25	-4.50	-2.07	0.00	0.00	-0.71	3.10	3.10
0.55	23.38	4.30	1.97	0.00	0.93	-0.37	-4.43	3.10
0.60	25.50	13.09	6.01	0.00	2.08	-0.37	-11.97	3.10
0.65	27.63	21.89	10.05	0.00	3.22	-0.37	-19.51	3.10
0.70	29.75	30.69	14.08	0.00	4.37	-0.37	-27.05	3.10
0.75	31.88	39.49	18.12	0.00	5.52	-0.37	-34.58	3.10
0.80	34.00	48.29	22.16	0.00	6.67	-0.37	-42.12	3.10
0.85	36.13	57.09	26.20	0.00	7.81	-0.37	-49.66	3.10
0.90	38.25	65.89	30.23	0.00	8.96	-0.37	-57.20	3.10
0.95	40.38	74.69	34.27	0.00	10.11	-0.37	-64.73	3.10
1.00	42.50	83.49	38.31	0.00	11.26	-0.37	3.10	3.10

**25 - FACTORED MOMENTS AND REACTIONS**

Load Combination: 1.20SW + 1.60LL + 1.20SDL + 1.60XL + 1.00SEC

**Factored Design Moments (Not Redistributed)**

Span	Left Max	Left Min	Middle Max	Middle Min	Right Max	Right Min
	k-ft	k-ft	k-ft	k-ft	k-ft	k-ft
1	-348.67	-265.11	1210.90	1112.51	-580.44	-476.10
2	-243.42	-181.50	597.97	521.64	-243.54	-181.63
3	-580.57	-476.22	1210.94	1112.55	-348.47	-264.91

**Reactions and Column Moments**

Joint	Reaction Max	Reaction Min	Moment Lower Column Max	Moment Lower Column Min	Moment Upper Column Max	Moment Upper Column Min
	k	k	k-ft	k-ft	k-ft	k-ft
1	167.28	148.67	-204.95	-255.81	-204.95	-255.81
2	302.22	278.68	217.93	161.67	217.93	161.67
3	302.21	278.68	-161.77	-218.03	-161.77	-218.03
4	167.27	148.66	255.81	204.95	255.81	204.95

Note: Moments are reported at face of support

**27 - DETAILED STRESSES**

**SPAN 1**

XL	X	SW Top	SW Bot	SDL Top	SDL Bot	XL Top	XL Bot	LL Top Max-T	LL Top Max-C	LL Bot Max-T	LL Bot Max-C	PT Top	PT Bot
	ft	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	spi
0.00	0.00												
0.05	2.13	285.	-588.	131.	-270.	0.	0.	41.	-4.	7.	-84.	-384.	407.
0.10	4.25	120.	-248.	55.	-114.	0.	0.	18.	-3.	5.	-38.	-241.	113.
0.15	6.38	-24.	49.	-11.	22.	0.	0.	-1.	-4.	8.	2.	-116.	-145.
0.20	8.50	-147.	303.	-68.	139.	0.	0.	-1.	-20.	40.	1.	-9.	-367.
0.25	10.63	-250.	515.	-115.	236.	0.	0.	0.	-33.	67.	0.	81.	-552.
0.30	12.75	-332.	685.	-153.	314.	0.	0.	1.	-44.	91.	-2.	154.	-701.
0.35	14.88	-394.	812.	-181.	373.	0.	0.	2.	-53.	109.	-3.	208.	-813.
0.40	17.00	-435.	896.	-200.	411.	0.	0.	3.	-59.	122.	-5.	245.	-889.
0.45	19.13	-455.	938.	-209.	431.	0.	0.	3.	-63.	129.	-7.	264.	-929.
0.50	21.25	-455.	938.	-209.	430.	0.	0.	4.	-64.	131.	-9.	266.	-932.
0.55	23.38	-434.	895.	-199.	411.	0.	0.	5.	-62.	127.	-10.	247.	-895.
0.60	25.50	-393.	809.	-180.	371.	0.	0.	6.	-57.	118.	-12.	207.	-811.
0.65	27.63	-331.	681.	-152.	313.	0.	0.	7.	-50.	103.	-14.	145.	-683.
0.70	29.75	-248.	511.	-114.	234.	0.	0.	8.	-40.	82.	-16.	60.	-509.
0.75	31.88	-145.	298.	-66.	137.	0.	0.	9.	-27.	56.	-18.	-46.	-290.
0.80	34.00	-21.	43.	-9.	20.	0.	0.	9.	-12.	25.	-19.	-174.	-25.
0.85	36.13	124.	-255.	57.	-117.	0.	0.	20.	6.	-12.	-41.	-325.	285.
0.90	38.25	289.	-596.	133.	-273.	0.	0.	42.	7.	-15.	-86.	-497.	640.
0.95	40.38	475.	-979.	218.	-449.	0.	0.	66.	8.	-16.	-136.	-692.	1041.
1.00	42.50												

XL	X	Initial Top Max-T	Initial Top Max-C	Initial Bot Max-T	Initial Bot Max-C	Env-1 Top Max-T	Env-1 Top Max-C	Env-1 Bot Max-T	Env-1 Bot Max-C	Env-2 Top Max-T	Env-2 Top Max-C	Env-2 Bot Max-T	Env-2 Bot Max-C
	ft	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi
0.00	0.00												
0.05	2.13	-----	-157.	-----	-119.	44.	-----	-----	-475.	72.	-----	-----	-534.
0.10	4.25	-----	-157.	-----	-118.	-----	-67.	-----	-260.	-----	-68.	-----	-287.
0.15	6.38	-----	-157.	-----	-118.	-----	-152.	-----	-73.	-----	-155.	-----	-71.
0.20	8.50	-----	-157.	-----	-118.	-----	-229.	88.	-----	-----	-243.	116.	-----
0.25	10.63	-----	-157.	-----	-120.	-----	-293.	220.	-----	-----	-316.	267.	-----
0.30	12.75	-----	-156.	-----	-121.	-----	-345.	325.	-----	-----	-376.	389.	-----
0.35	14.88	-----	-155.	-----	-124.	-----	-383.	404.	-----	-----	-420.	480.	-----
0.40	17.00	-----	-153.	-----	-126.	-----	-407.	455.	-----	-----	-449.	540.	-----
0.45	19.13	-----	-152.	-----	-130.	-----	-419.	479.	-----	-----	-463.	569.	-----
0.50	21.25	-----	-150.	-----	-134.	-----	-417.	475.	-----	-----	-462.	567.	-----
0.55	23.38	-----	-150.	-----	-134.	-----	-405.	449.	-----	-----	-448.	538.	-----
0.60	25.50	-----	-155.	-----	-124.	-----	-383.	405.	-----	-----	-423.	487.	-----
0.65	27.63	-----	-164.	-----	-104.	-----	-353.	342.	-----	-----	-388.	414.	-----
0.70	29.75	-----	-178.	-----	-75.	-----	-313.	261.	-----	-----	-341.	319.	-----
0.75	31.88	-----	-197.	-----	-35.	-----	-265.	162.	-----	-----	-284.	201.	-----
0.80	34.00	-----	-221.	13.	-----	-----	-208.	44.	-----	-----	-217.	62.	-----
0.85	36.13	-----	-250.	72.	-----	-----	-142.	-----	-100.	-----	-138.	-----	-128.
0.90	38.25	-----	-283.	140.	-----	-----	-73.	-----	-255.	-----	-68.	-----	-315.
0.95	40.38	-----	-321.	218.	-----	21.	-----	-----	-428.	67.	-----	-----	-523.
1.00	42.50												

**SPAN 2**

XL	X	SW Top	SW Bot	SDL Top	SDL Bot	XL Top	XL Bot	LL Top Max-T	LL Top Max-C	LL Bot Max-T	LL Bot Max-C	PT Top	PT Bot
	ft	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	spi
0.00	0.00												
0.05	1.50	430.	-743.	197.	-341.	0.	0.	69.	17.	-29.	-119.	-808.	1055.
0.10	3.00	320.	-552.	147.	-253.	0.	0.	51.	5.	-9.	-89.	-572.	645.

0.15	4.50	222.	-384.	102.	-176.	0.	0.	36.	-5.	8.	-62.	-362.	284.
0.20	6.00	138.	-238.	63.	-109.	0.	0.	27.	-13.	22.	-47.	-181.	-30.
0.25	7.50	66.	-114.	30.	-52.	0.	0.	27.	-19.	33.	-47.	-28.	-295.
0.30	9.00	7.	-13.	3.	-6.	0.	0.	27.	-26.	45.	-47.	97.	-511.
0.35	10.50	-38.	66.	-17.	30.	0.	0.	27.	-32.	55.	-47.	195.	-680.
0.40	12.00	-71.	122.	-32.	56.	0.	0.	27.	-36.	63.	-47.	265.	-801.
0.45	13.50	-90.	156.	-41.	71.	0.	0.	27.	-39.	67.	-47.	307.	-873.
0.50	15.00	-97.	167.	-44.	77.	0.	0.	27.	-40.	68.	-47.	320.	-897.
0.55	16.50	-90.	156.	-41.	71.	0.	0.	27.	-39.	67.	-47.	306.	-873.
0.60	18.00	-71.	122.	-32.	56.	0.	0.	27.	-36.	63.	-47.	265.	-801.
0.65	19.50	-38.	66.	-17.	30.	0.	0.	27.	-32.	55.	-47.	195.	-680.
0.70	21.00	8.	-13.	3.	-6.	0.	0.	27.	-26.	45.	-47.	97.	-511.
0.75	22.50	66.	-114.	30.	-52.	0.	0.	27.	-19.	33.	-47.	-28.	-295.
0.80	24.00	138.	-238.	63.	-109.	0.	0.	27.	-13.	22.	-47.	-181.	-29.
0.85	25.50	222.	-384.	102.	-176.	0.	0.	36.	-5.	8.	-62.	-363.	284.
0.90	27.00	320.	-552.	147.	-254.	0.	0.	51.	5.	-9.	-89.	-572.	645.
0.95	28.50	430.	-744.	197.	-341.	0.	0.	69.	17.	-29.	-119.	-808.	1055.
1.00	30.00												

XL	X	Initial Top Max-T	Initial Top Max-C	Initial Bot Max-T	Initial Bot Max-C	Env-1 Top Max-T	Env-1 Top Max-C	Env-1 Bot Max-T	Env-1 Bot Max-C	Env-2 Top Max-T	Env-2 Top Max-C	Env-2 Bot Max-T	Env-2 Bot Max-C
	ft	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi
0.00	0.00												
0.05	1.50	-----	-500.	469.	-----	-----	-176.	-----	-66.	-----	-164.	-----	-149.
0.10	3.00	-----	-338.	189.	-----	-----	-104.	-----	-187.	-----	-100.	-----	-250.
0.15	4.50	-----	-195.	-----	-58.	-----	-40.	-----	-295.	-----	-43.	-----	-338.
0.20	6.00	-----	-71.	-----	-272.	27.	-----	-----	-390.	46.	-----	-----	-423.
0.25	7.50	34.	-----	-----	-453.	76.	-----	-----	-475.	95.	-----	-----	-508.
0.30	9.00	120.	-----	-----	-601.	116.	-----	-----	-544.	135.	-----	-----	-577.
0.35	10.50	186.	-----	-----	-716.	148.	-----	-----	-598.	167.	-----	-----	-631.
0.40	12.00	234.	-----	-----	-799.	170.	-----	-----	-637.	189.	-----	-----	-669.
0.45	13.50	262.	-----	-----	-848.	183.	-----	-----	-660.	202.	-----	-----	-692.
0.50	15.00	272.	-----	-----	-865.	188.	-----	-----	-667.	207.	-----	-----	-700.
0.55	16.50	262.	-----	-----	-848.	183.	-----	-----	-660.	202.	-----	-----	-692.
0.60	18.00	234.	-----	-----	-799.	170.	-----	-----	-637.	189.	-----	-----	-669.
0.65	19.50	186.	-----	-----	-716.	148.	-----	-----	-598.	167.	-----	-----	-631.
0.70	21.00	120.	-----	-----	-601.	116.	-----	-----	-544.	135.	-----	-----	-577.
0.75	22.50	34.	-----	-----	-453.	76.	-----	-----	-475.	95.	-----	-----	-508.
0.80	24.00	-----	-71.	-----	-272.	27.	-----	-----	-390.	46.	-----	-----	-423.
0.85	25.50	-----	-195.	-----	-58.	-----	-40.	-----	-295.	-----	-43.	-----	-338.
0.90	27.00	-----	-338.	189.	-----	-----	-104.	-----	-187.	-----	-100.	-----	-250.
0.95	28.50	-----	-500.	469.	-----	-----	-176.	-----	-66.	-----	-164.	-----	-149.
1.00	30.00												

**SPAN 3**

XL	X	SW Top	SW Bot	SDL Top	SDL Bot	XL Top	XL Bot	LL Top Max-T	LL Top Max-C	LL Bot Max-T	LL Bot Max-C	PT Top	PT Bot
	ft	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi
0.00	0.00												
0.05	2.13	475.	-979.	218.	-449.	0.	0.	66.	8.	-16.	-136.	-692.	1041.
0.10	4.25	289.	-596.	133.	-273.	0.	0.	42.	7.	-15.	-86.	-497.	640.
0.15	6.38	124.	-256.	57.	-117.	0.	0.	20.	6.	-12.	-41.	-325.	285.
0.20	8.50	-21.	42.	-9.	19.	0.	0.	9.	-12.	25.	-19.	-174.	-25.
0.25	10.63	-145.	298.	-66.	137.	0.	0.	9.	-27.	56.	-18.	-46.	-290.
0.30	12.75	-248.	511.	-114.	234.	0.	0.	8.	-40.	82.	-16.	60.	-509.
0.35	14.88	-331.	681.	-152.	313.	0.	0.	7.	-50.	103.	-14.	145.	-683.
0.40	17.00	-393.	809.	-180.	371.	0.	0.	6.	-57.	118.	-12.	207.	-811.

0.45	19.13	-434.	895.	-199.	411.	0.	0.	5.	-62.	127.	-10.	247.	-894.
0.50	21.25	-455.	938.	-209.	430.	0.	0.	4.	-64.	131.	-9.	266.	-932.
0.55	23.38	-455.	938.	-209.	431.	0.	0.	3.	-63.	129.	-7.	264.	-929.
0.60	25.50	-435.	896.	-200.	411.	0.	0.	3.	-59.	122.	-5.	245.	-889.
0.65	27.63	-394.	812.	-181.	373.	0.	0.	2.	-53.	109.	-3.	208.	-813.
0.70	29.75	-332.	685.	-153.	314.	0.	0.	1.	-44.	91.	-2.	154.	-701.
0.75	31.88	-250.	515.	-115.	236.	0.	0.	0.	-33.	67.	0.	81.	-552.
0.80	34.00	-147.	303.	-68.	139.	0.	0.	-1.	-20.	40.	1.	-9.	-367.
0.85	36.13	-24.	49.	-11.	22.	0.	0.	-1.	-4.	8.	2.	-116.	-145.
0.90	38.25	120.	-248.	55.	-114.	0.	0.	18.	-3.	5.	-38.	-241.	113.
0.95	40.38	285.	-587.	131.	-270.	0.	0.	41.	-4.	7.	-84.	-384.	407.
1.00	42.50												

XL	X	Initial Top Max-T	Initial Top Max-C	Initial Bot Max-T	Initial Bot Max-C	Env-1 Top Max-T	Env-1 Top Max-C	Env-1 Bot Max-T	Env-1 Bot Max-C	Env-2 Top Max-T	Env-2 Top Max-C	Env-2 Bot Max-T	Env-2 Bot Max-C
	ft	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi
0.00	0.00												
0.05	2.13	----	-321.	218.	----	21.	----	----	-428.	67.	----	----	-523.
0.10	4.25	----	-283.	140.	----	----	-73.	----	-255.	----	-68.	----	-315.
0.15	6.38	----	-250.	72.	----	----	-142.	----	-100.	----	-138.	----	-129.
0.20	8.50	----	-221.	13.	----	----	-208.	44.	----	----	-217.	62.	----
0.25	10.63	----	-197.	----	-35.	----	-265.	162.	----	----	-284.	201.	----
0.30	12.75	----	-178.	----	-75.	----	-313.	261.	----	----	-341.	319.	----
0.35	14.88	----	-164.	----	-104.	----	-353.	342.	----	----	-388.	414.	----
0.40	17.00	----	-155.	----	-124.	----	-383.	405.	----	----	-423.	487.	----
0.45	19.13	----	-150.	----	-134.	----	-405.	449.	----	----	-448.	538.	----
0.50	21.25	----	-150.	----	-134.	----	-417.	475.	----	----	-462.	567.	----
0.55	23.38	----	-152.	----	-130.	----	-419.	479.	----	----	-463.	569.	----
0.60	25.50	----	-153.	----	-126.	----	-407.	455.	----	----	-449.	540.	----
0.65	27.63	----	-155.	----	-124.	----	-383.	404.	----	----	-420.	480.	----
0.70	29.75	----	-156.	----	-121.	----	-345.	325.	----	----	-376.	389.	----
0.75	31.88	----	-157.	----	-120.	----	-293.	220.	----	----	-316.	267.	----
0.80	34.00	----	-157.	----	-119.	----	-229.	88.	----	----	-243.	116.	----
0.85	36.13	----	-157.	----	-118.	----	-152.	----	-73.	----	-155.	----	-71.
0.90	38.25	----	-157.	----	-118.	----	-67.	----	-260.	----	-68.	----	-287.
0.95	40.38	----	-157.	----	-119.	44.	----	----	-475.	72.	----	----	-534.
1.00	42.50												

**28 - REQUIRED POST-TENSIONING**

Note: Required post-tensioning force based on stress conditions

XL	X	PT	X	PT	X	PT
	ft	k	ft	k	ft	k
	SPAN 1		SPAN 2		SPAN 3	
0.00	0.00	---	0.00	---	0.00	---
0.05	2.13	0.00	1.50	78.36	2.13	137.16
0.10	4.25	0.00	3.00	0.00	4.25	0.00
0.15	6.38	0.00	4.50	0.00	6.38	0.00
0.20	8.50	0.00	6.00	0.00	8.50	0.00
0.25	10.63	226.10	7.50	0.00	10.63	0.00
0.30	12.75	371.16	9.00	0.00	12.75	253.67
0.35	14.88	444.92	10.50	0.00	14.88	385.97
0.40	17.00	483.31	12.00	0.00	17.00	448.99
0.45	19.13	499.55	13.50	0.00	19.13	482.18

0.50	21.25	498.34	15.00	0.00	21.25	498.35
0.55	23.38	482.17	16.50	0.00	23.38	499.55
0.60	25.50	449.01	18.00	0.00	25.50	483.31
0.65	27.63	386.00	19.50	0.00	27.63	444.94
0.70	29.75	253.71	21.00	0.00	29.75	371.20
0.75	31.88	0.00	22.50	0.00	31.88	226.15
0.80	34.00	0.00	24.00	0.00	34.00	0.00
0.85	36.13	0.00	25.50	0.00	36.13	0.00
0.90	38.25	0.00	27.00	0.00	38.25	0.00
0.95	40.38	137.10	28.50	78.41	40.38	0.00
1.00	42.50	---	30.00	---	42.50	---

**29 - DETAILED REBAR**

**SPAN 1**

XL	X	Analysis Top	Analysis Bot	Minimum Top	Minimum Bot	Selected Top	Selected Bot
	ft	in2	in2	in2	in2	in2	in2
0.00	0.00	0.00	0.00	4.67	0.00	4.67	0.00
0.05	2.13	0.00	0.00	4.67	0.00	4.67	0.00
0.10	4.25	0.00	0.00	4.67	0.00	4.67	0.00
0.15	6.37	0.00	0.00	4.67	0.00	4.67	0.00
0.20	8.50	0.00	0.00	0.00	0.00	0.00	0.00
0.25	10.63	0.00	0.00	0.00	0.00	0.00	0.00
0.30	12.75	0.00	0.00	0.00	0.00	0.00	0.00
0.35	14.88	0.00	0.00	0.00	2.40	0.00	2.40
0.40	17.00	0.00	0.00	0.00	2.40	0.00	2.40
0.45	19.12	0.00	0.88	0.00	2.40	0.00	2.40
0.50	21.25	0.00	0.73	0.00	2.40	0.00	2.40
0.55	23.38	0.00	0.63	0.00	2.40	0.00	2.40
0.60	25.50	0.00	0.00	0.00	2.40	0.00	2.40
0.65	27.62	0.00	0.00	0.00	2.40	0.00	2.40
0.70	29.75	0.00	0.00	0.00	0.00	0.00	0.00
0.75	31.88	0.00	0.00	0.00	0.00	0.00	0.00
0.80	33.99	0.00	0.00	0.00	0.00	0.00	0.00
0.85	36.12	0.00	0.00	4.67	0.00	4.67	0.00
0.90	38.25	0.00	0.00	4.67	0.00	4.67	0.00
0.95	40.39	0.00	0.00	4.67	1.27	4.67	1.27
1.00	42.49	0.19	0.00	4.67	1.56	4.67	1.56

**SPAN 2**

XL	X	Analysis Top	Analysis Bot	Minimum Top	Minimum Bot	Selected Top	Selected Bot
	ft	in2	in2	in2	in2	in2	in2
0.00	0.00	0.00	0.00	3.51	4.10	3.51	4.10
0.05	1.50	0.00	0.00	3.51	3.24	3.51	3.24
0.10	3.00	0.00	0.00	3.51	0.98	3.51	0.98
0.15	4.50	0.00	0.00	3.51	0.00	3.51	0.00
0.20	6.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	7.50	0.00	0.00	0.00	0.00	0.00	0.00
0.30	9.00	0.00	0.00	0.00	0.00	0.00	0.00
0.35	10.50	0.00	0.00	3.51	0.00	3.51	0.00
0.40	12.00	0.00	0.00	3.51	0.00	3.51	0.00
0.45	13.50	0.00	0.00	3.51	0.00	3.51	0.00
0.50	15.00	0.00	0.00	3.51	0.00	3.51	0.00
0.55	16.50	0.00	0.00	3.51	0.00	3.51	0.00
0.60	18.00	0.00	0.00	3.51	0.00	3.51	0.00

0.65	19.50	0.00	0.00	3.51	0.00	3.51	0.00
0.70	21.00	0.00	0.00	0.00	0.00	0.00	0.00
0.75	22.50	0.00	0.00	0.00	0.00	0.00	0.00
0.80	24.00	0.00	0.00	0.00	0.00	0.00	0.00
0.85	25.50	0.00	0.00	3.51	0.00	3.51	0.00
0.90	27.00	0.00	0.00	3.51	0.98	3.51	0.98
0.95	28.50	0.00	0.00	3.51	3.23	3.51	3.23
1.00	30.00	0.00	0.00	3.51	4.10	3.51	4.10

**SPAN 3**

XL	X	Analysis Top	Analysis Bot	Minimum Top	Minimum Bot	Selected Top	Selected Bot
	ft	in2	in2	in2	in2	in2	in2
0.00	0.00	0.19	0.00	4.67	1.56	4.67	1.56
0.05	2.13	0.00	0.00	4.67	1.27	4.67	1.27
0.10	4.25	0.00	0.00	4.67	0.00	4.67	0.00
0.15	6.37	0.00	0.00	4.67	0.00	4.67	0.00
0.20	8.50	0.00	0.00	0.00	0.00	0.00	0.00
0.25	10.63	0.00	0.00	0.00	0.00	0.00	0.00
0.30	12.75	0.00	0.00	0.00	0.00	0.00	0.00
0.35	14.88	0.00	0.00	0.00	2.40	0.00	2.40
0.40	17.00	0.00	0.00	0.00	2.40	0.00	2.40
0.45	19.12	0.00	0.46	0.00	2.40	0.00	2.40
0.50	21.25	0.00	0.77	0.00	2.40	0.00	2.40
0.55	23.38	0.00	0.77	0.00	2.40	0.00	2.40
0.60	25.50	0.00	0.46	0.00	2.40	0.00	2.40
0.65	27.62	0.00	0.00	0.00	2.40	0.00	2.40
0.70	29.75	0.00	0.00	0.00	0.00	0.00	0.00
0.75	31.88	0.00	0.00	0.00	0.00	0.00	0.00
0.80	33.99	0.00	0.00	0.00	0.00	0.00	0.00
0.85	36.12	0.00	0.00	4.67	0.00	4.67	0.00
0.90	38.25	0.00	0.00	4.67	0.00	4.67	0.00
0.95	40.39	0.00	0.00	4.67	0.00	4.67	0.00
1.00	42.49	0.00	0.00	4.67	0.00	4.67	0.00

**31 - DETAILED FRICTION AND LONGTERM STRESS LOSSES**

**TENDON\_A**

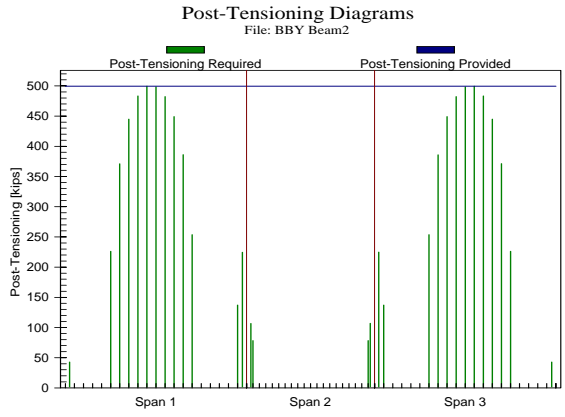
XL	X	Initial Stress	Longterm Loss	Final Stress	X	Initial Stress	Longterm Loss	Final Stress
	ft	ksi	ksi	ksi	ft	ksi	ksi	ksi
	SPAN 1				SPAN 2			
0.00	0.00	54.38	5.91	48.47	0.00	36.99	5.91	31.08
0.05	2.13	53.73	5.91	47.82	1.50	32.61	5.91	26.70
0.10	4.25	52.63	5.91	46.72	3.00	31.46	5.91	25.55
0.15	6.38	51.76	5.91	45.85	4.50	30.71	5.91	24.80
0.20	8.50	50.90	5.91	44.99	6.00	29.94	5.91	24.03
0.25	10.63	50.06	5.91	44.13	7.50	29.20	5.91	23.29
0.30	12.75	49.20	5.91	43.29	9.00	28.44	5.91	22.53
0.35	14.88	48.34	5.91	42.44	10.50	27.70	5.91	21.78
0.40	17.00	47.50	5.91	41.59	12.00	26.95	5.91	21.04
0.45	19.13	46.66	5.91	40.75	13.50	26.20	5.91	20.30
0.50	21.25	45.82	5.91	39.91	15.00	25.46	5.91	19.56
0.55	23.38	44.96	5.91	39.05	16.50	24.72	5.91	18.82
0.60	25.50	44.08	5.91	38.17	18.00	23.98	5.91	18.07
0.65	27.63	43.19	5.91	37.28	19.50	23.24	5.91	17.33

Project Name: Specific Title:  
 File Name: BBY Beam2 Date of Generation: Monday, April 06, 2009

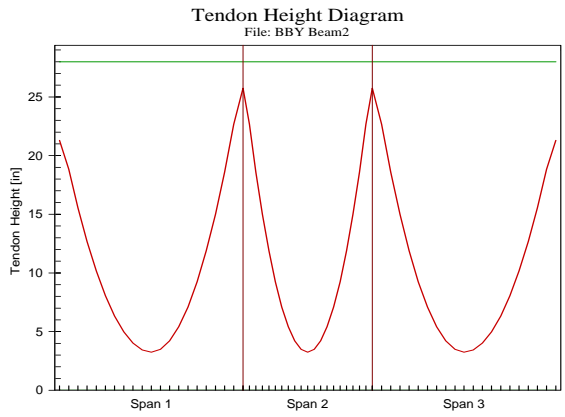
0.70	29.75	42.32	5.91	36.41	21.00	22.52	5.91	16.61
0.75	31.88	41.45	5.91	35.54	22.50	21.79	5.91	15.88
0.80	34.00	40.58	5.91	34.67	24.00	21.07	5.91	15.16
0.85	36.13	39.71	5.91	33.80	25.50	20.35	5.91	14.44
0.90	38.25	38.85	5.91	32.93	27.00	19.63	5.91	13.72
0.95	40.38	38.12	5.91	32.21	28.50	18.92	5.91	13.01
1.00	42.50	36.99	5.91	31.08	30.00	17.86	5.91	11.95

XL	X	Initial Stress	Longterm Loss	Final Stress
	ft	ksi	ksi	ksi
	SPAN 3			
0.00	0.00	17.86	5.91	11.95
0.05	2.13	13.74	5.91	7.83
0.10	4.25	12.74	5.91	6.83
0.15	6.38	11.99	5.91	6.08
0.20	8.50	11.25	5.91	5.34
0.25	10.63	10.51	5.91	4.60
0.30	12.75	9.77	5.91	3.86
0.35	14.88	9.04	5.91	3.13
0.40	17.00	8.31	5.91	2.40
0.45	19.13	7.58	5.91	1.67
0.50	21.25	6.86	5.91	0.95
0.55	23.38	6.16	5.91	0.25
0.60	25.50	5.48	5.91	0.00
0.65	27.63	4.81	5.91	0.00
0.70	29.75	4.14	5.91	0.00
0.75	31.88	3.48	5.91	0.00
0.80	34.00	2.81	5.91	0.00
0.85	36.13	2.15	5.91	0.00
0.90	38.25	1.49	5.91	0.00
0.95	40.38	0.83	5.91	0.00
1.00	42.50	0.00	5.91	0.00

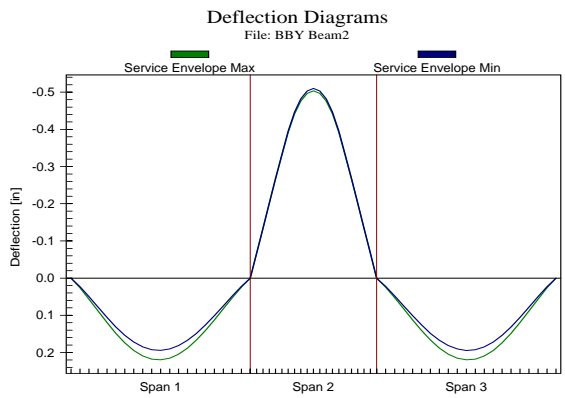




**POST-TENSIONING  
 REQUIRED AND PROVIDED**

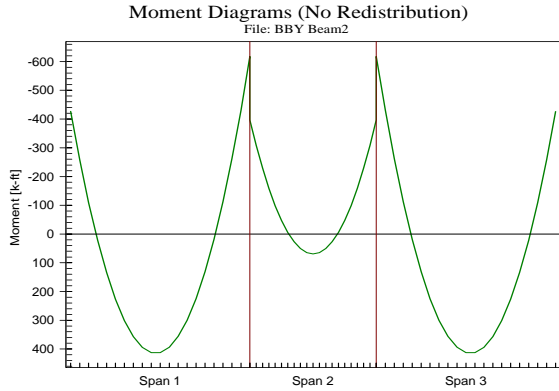


**POST-TENSIONING  
 PROFILE**

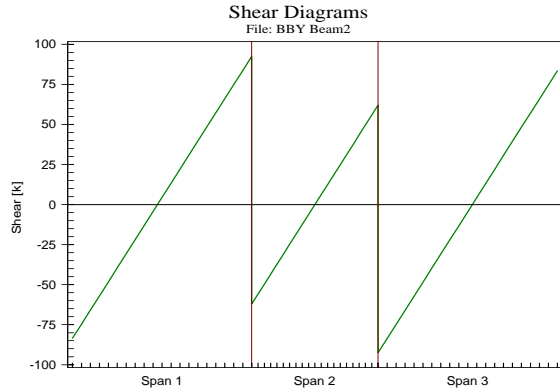


**DEFLECTION**

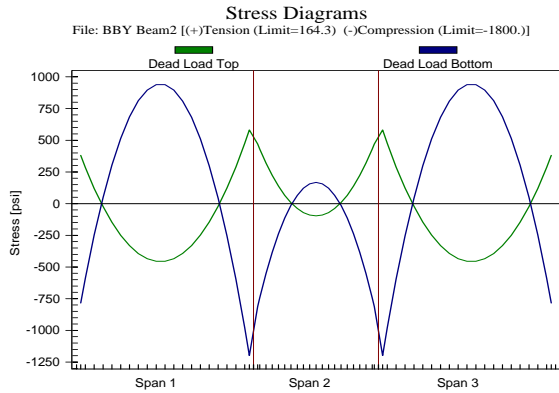
### LOAD CASE: Selfweight



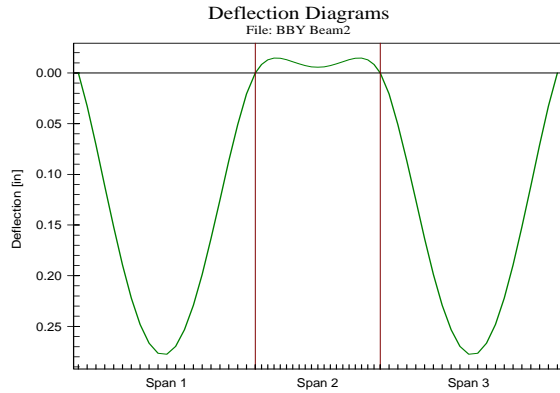
**MOMENT**



**SHEAR**

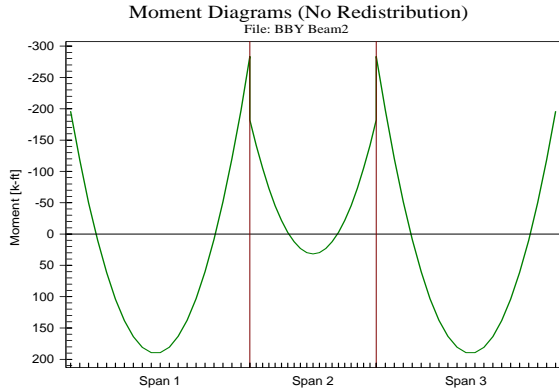


**STRESS**

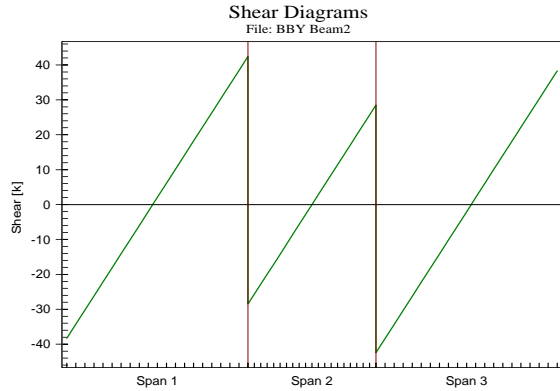


**DEFLECTION**

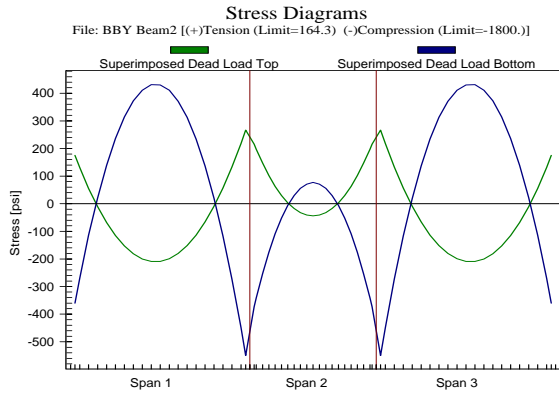
### LOAD CASE: Super Imposed Dead Load



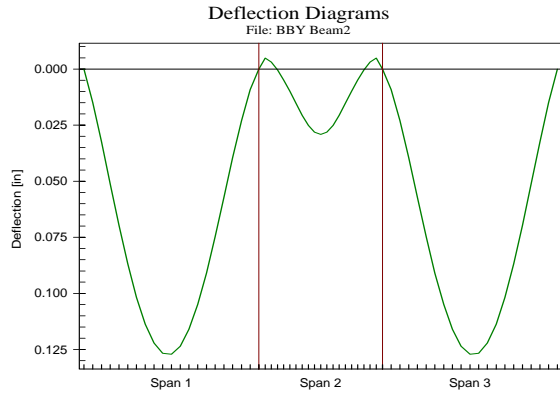
**MOMENT**



**SHEAR**

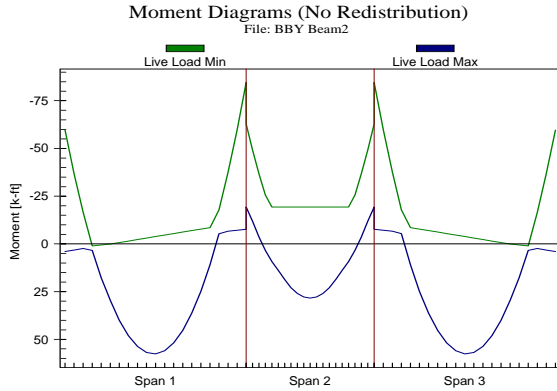


**STRESS**

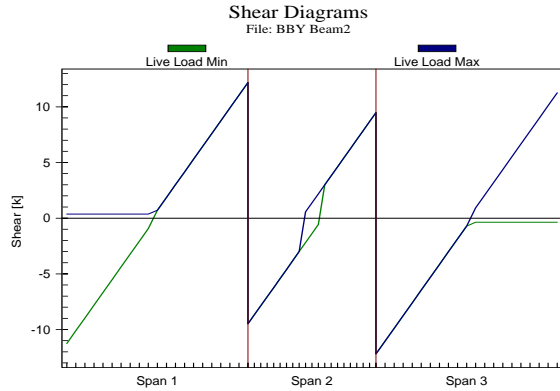


**DEFLECTION**

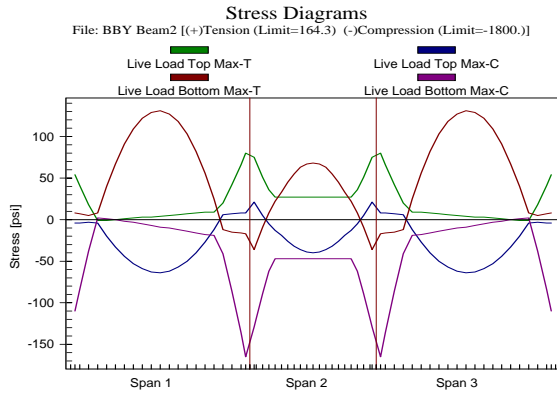
### LOAD CASE: Live Load



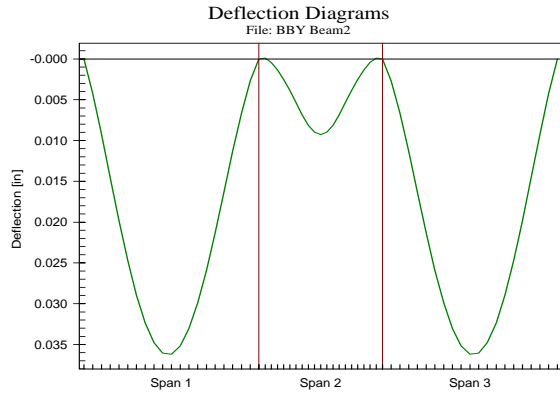
**MOMENT**



**SHEAR**

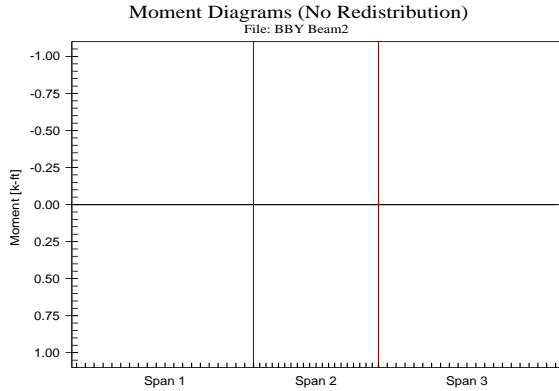


**STRESS**

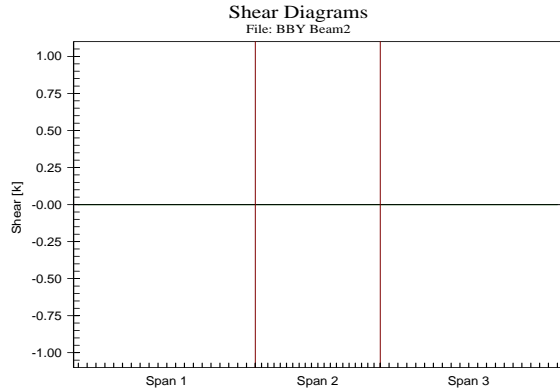


**DEFLECTION**

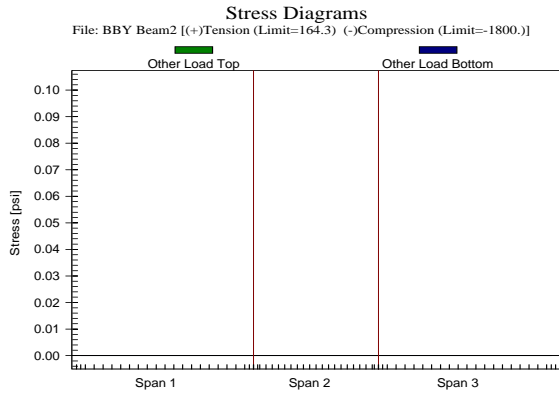
### LOAD CASE: Other Load



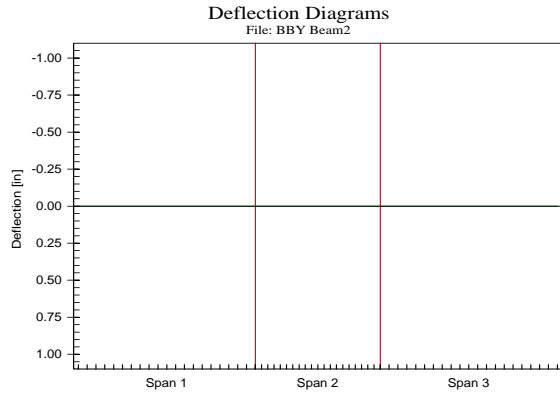
**MOMENT**



**SHEAR**

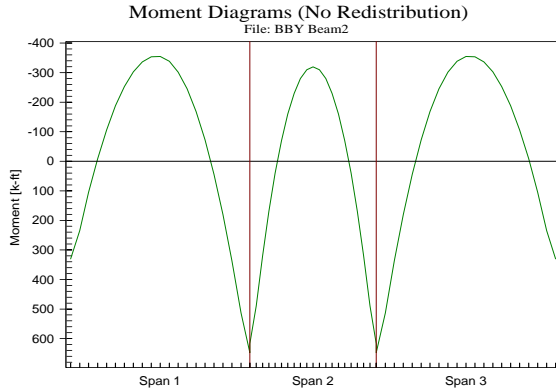


**STRESS**

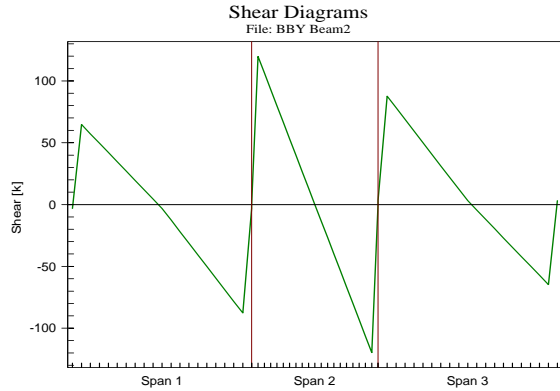


**DEFLECTION**

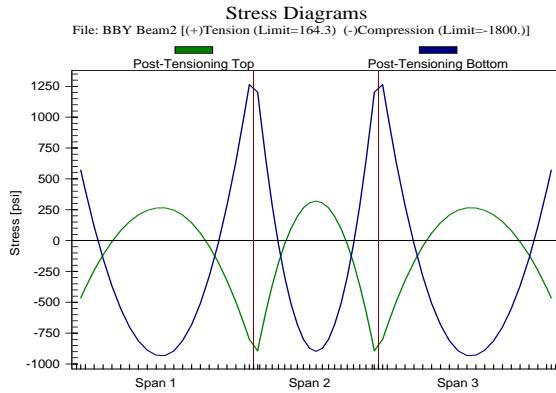
### LOAD CASE: Prestressing Load



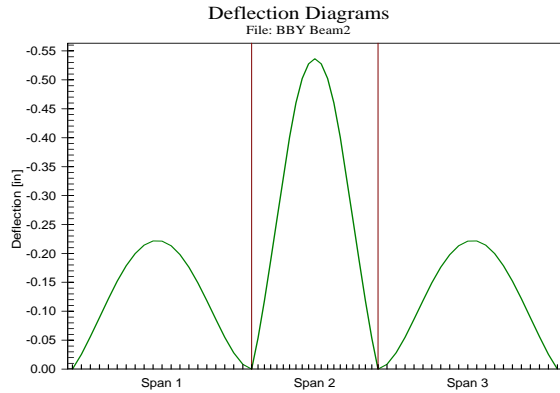
**MOMENT**



**SHEAR**

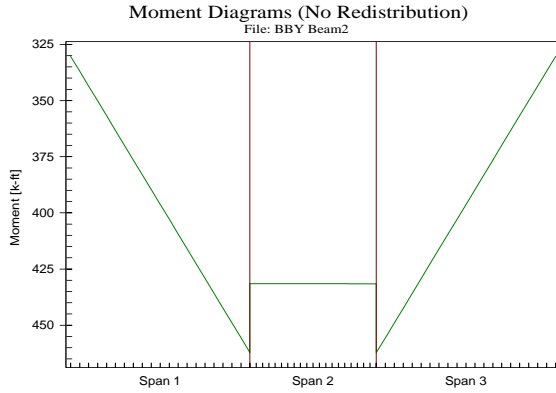


**STRESS**

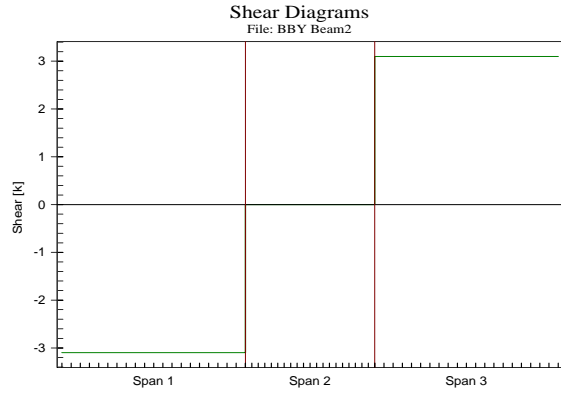


**DEFLECTION**

### LOAD CASE: Hyper Static Load



**MOMENT**

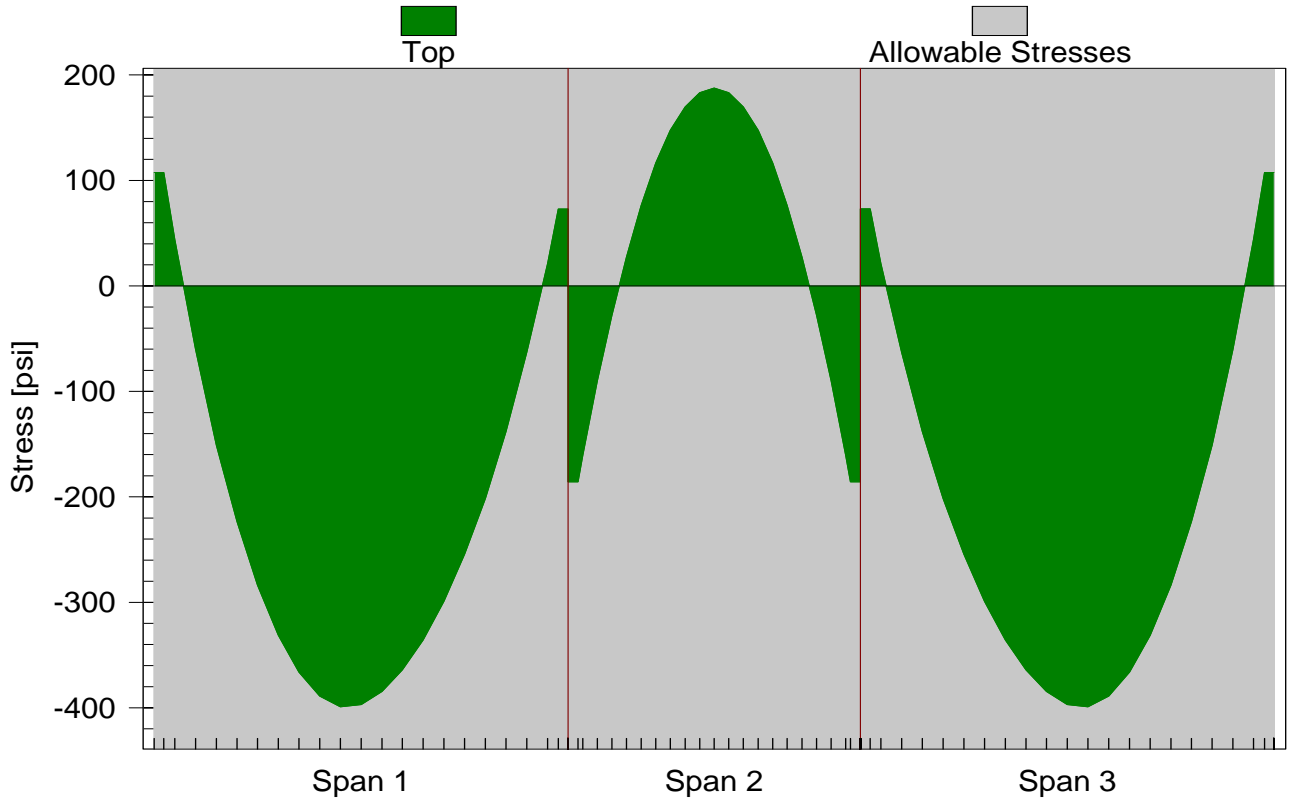


**SHEAR**

**LOAD COMBINATION: SERVICE\_1\_Min\_LL**

# Stress Diagrams

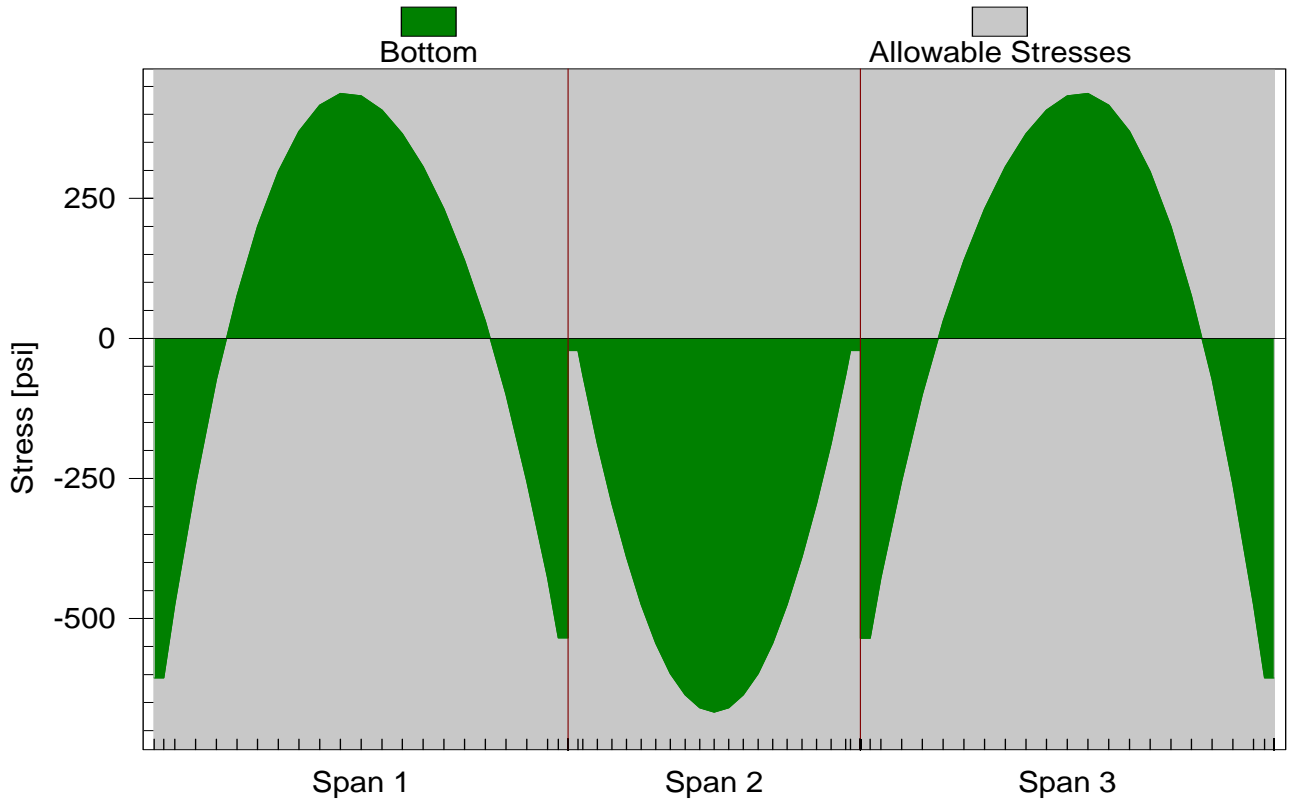
Project: "" / Load Case: SERVICE\_1\_Min\_LL  
+1.00 SW +0.30 LL\_Min +1.00 SDL +0.30 XL +1.00 PT +0.00 HYP +0.00 LAT  
Tensile Stress Positive





# Stress Diagrams

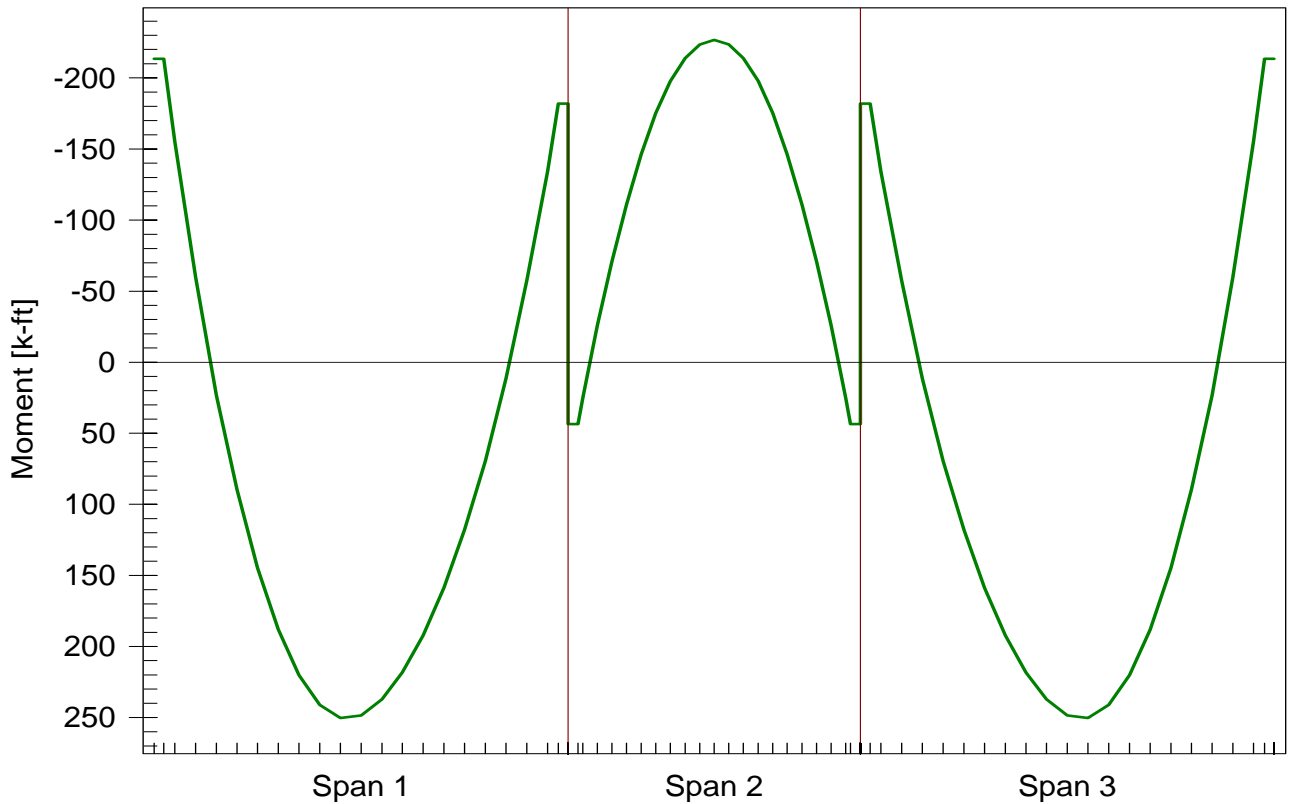
Project: "" / Load Case: SERVICE\_1\_Min\_LL  
+1.00 SW +0.30 LL\_Min +1.00 SDL +0.30 XL +1.00 PT +0.00 HYP +0.00 LAT  
Tensile Stress Positive



**SERVICE COMBINATION STRESSES**  
(Tension stress positive)

# Moment Diagrams

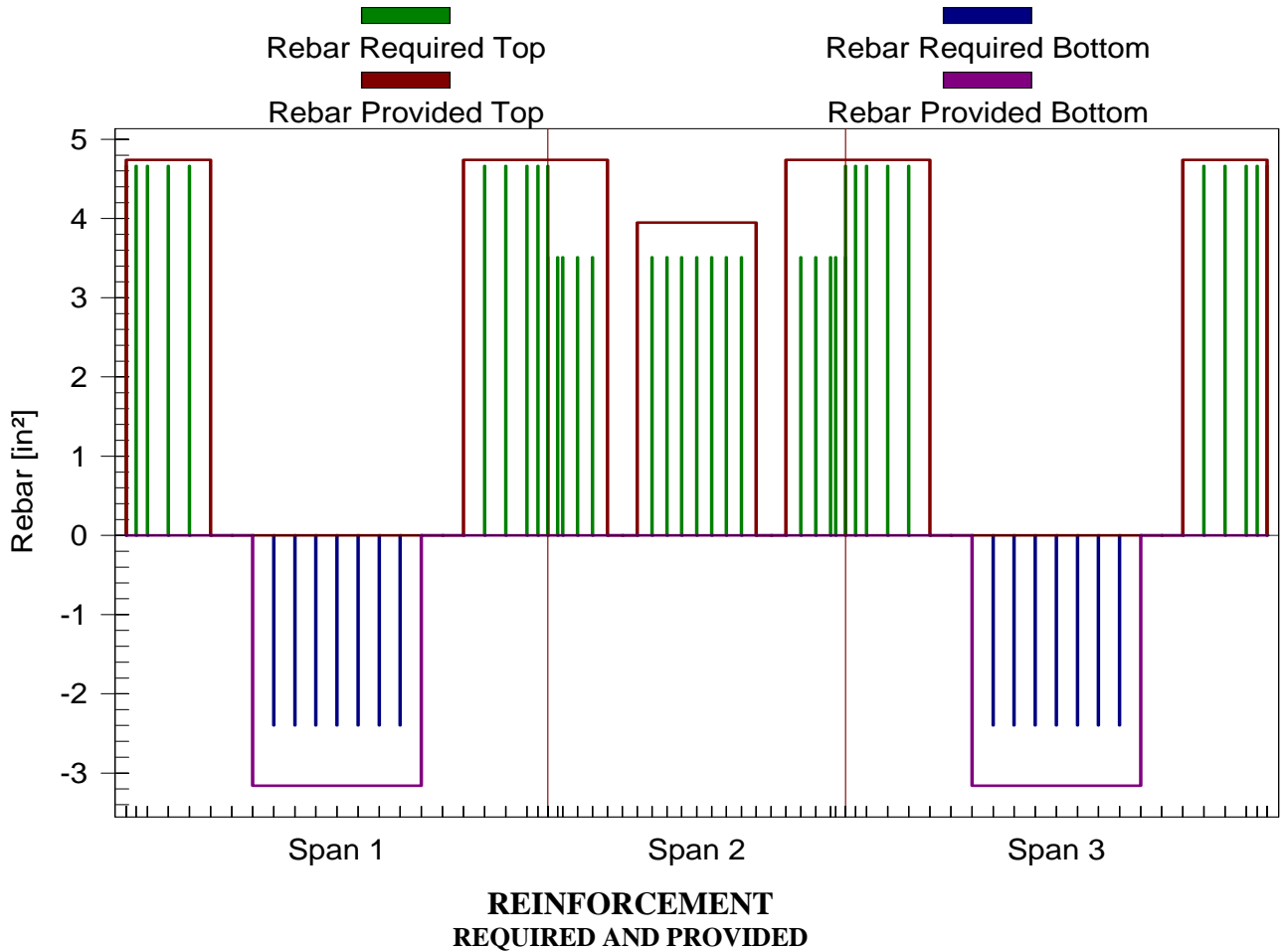
Project: "" / Load Case: SERVICE\_1\_Min\_LL  
+1.00 SW +0.30 LL\_Min +1.00 SDL +0.30 XL +1.00 PT +0.00 HYP +0.00 LAT  
Moment Drawn on Tension Side



**DESIGN MOMENT**  
(Moment is drawn on tension side)

# Rebar Diagrams

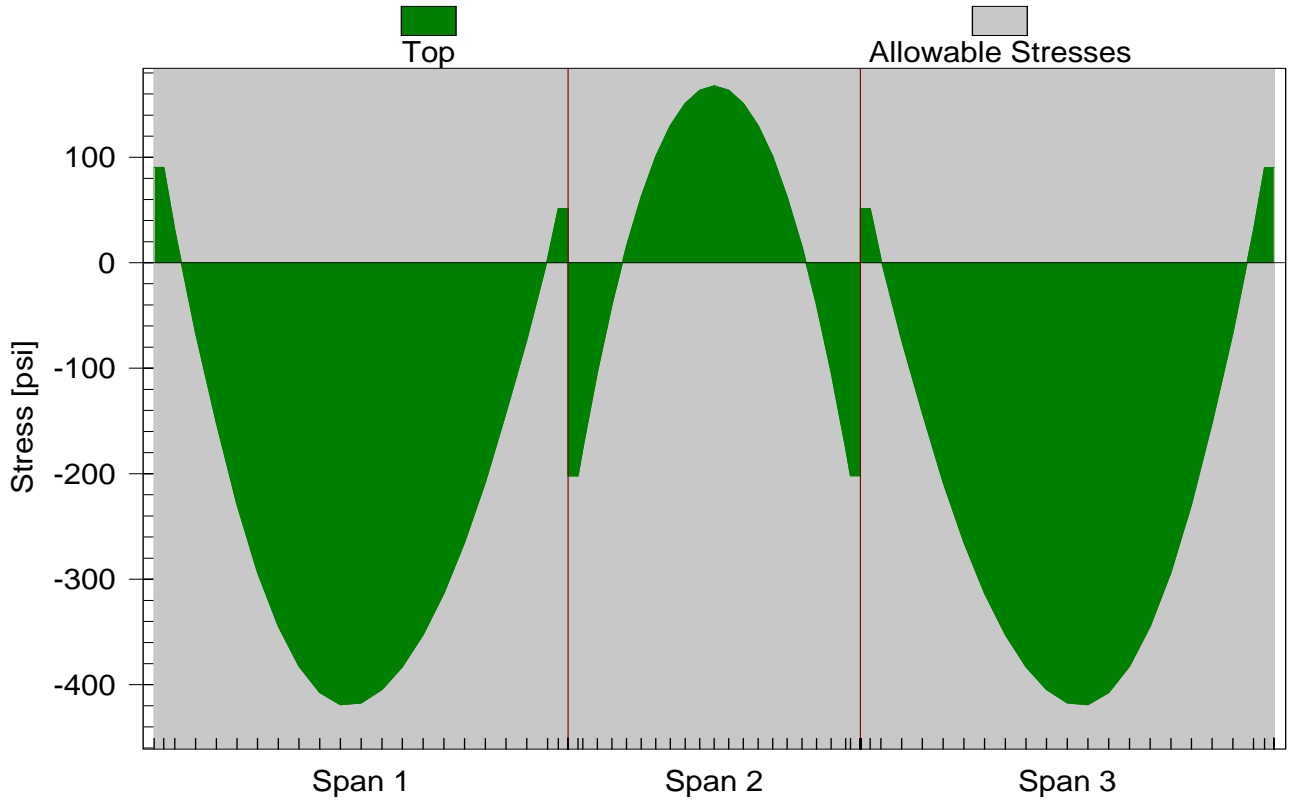
Project: "" / Load Case: SERVICE\_1\_Min\_LL  
 +1.00 SW +0.30 LL\_Min +1.00 SDL +0.30 XL +1.00 PT +0.00 HYP +0.00 LAT



**LOAD COMBINATION: SERVICE\_1\_Max\_LL**

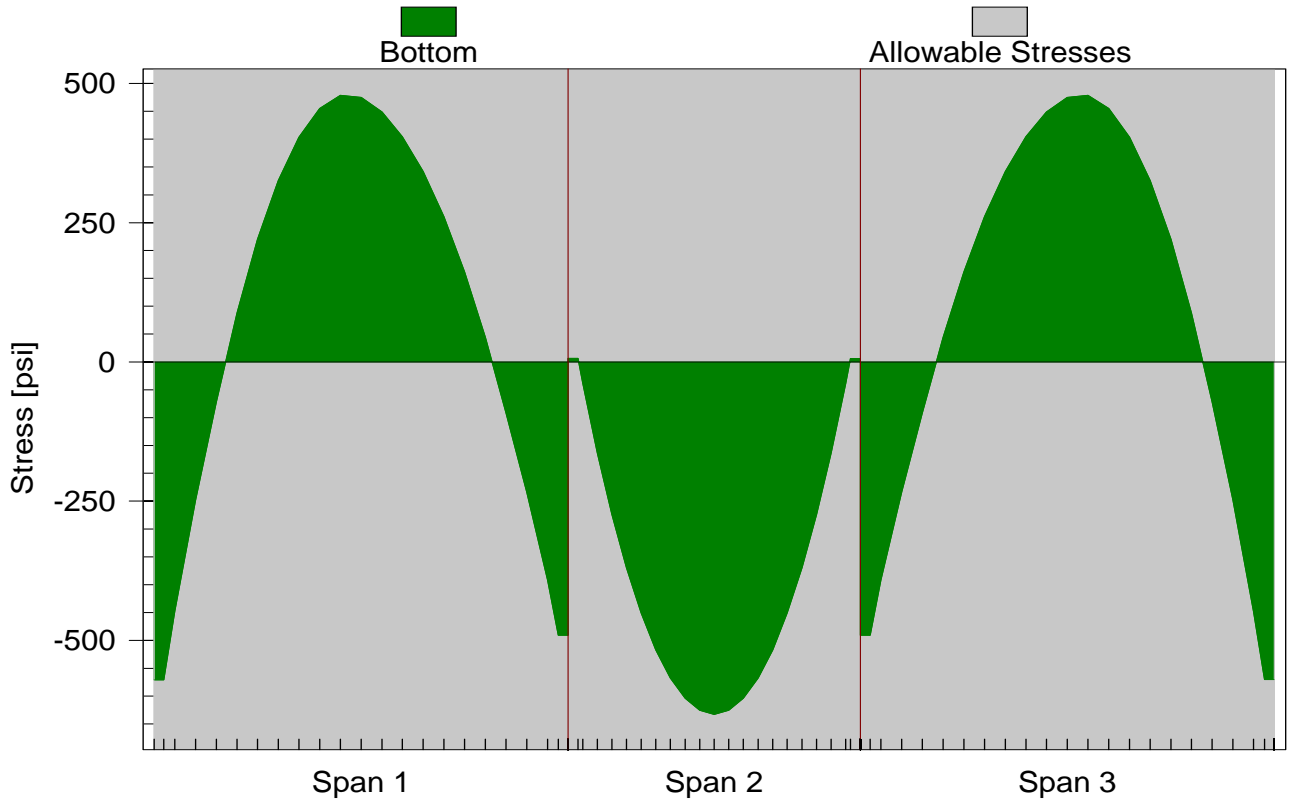
# Stress Diagrams

Project: "" / Load Case: SERVICE\_1\_Max\_LL  
+1.00 SW +0.30 LL\_Max +1.00 SDL +0.30 XL +1.00 PT +0.00 HYP +0.00 LAT  
Tensile Stress Positive



# Stress Diagrams

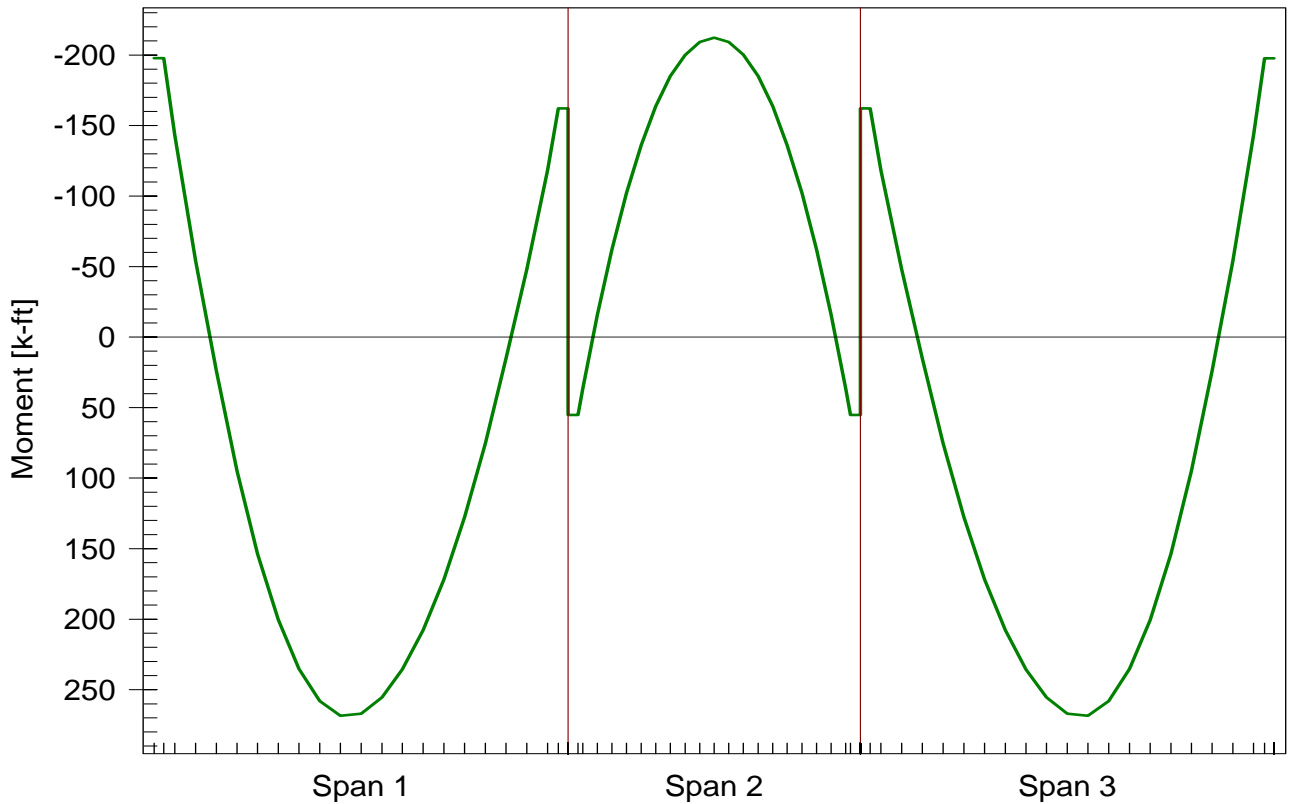
Project: "" / Load Case: SERVICE\_1\_Max\_LL  
+1.00 SW +0.30 LL\_Max +1.00 SDL +0.30 XL +1.00 PT +0.00 HYP +0.00 LAT  
Tensile Stress Positive



**SERVICE COMBINATION STRESSES**  
(Tension stress positive)

# Moment Diagrams

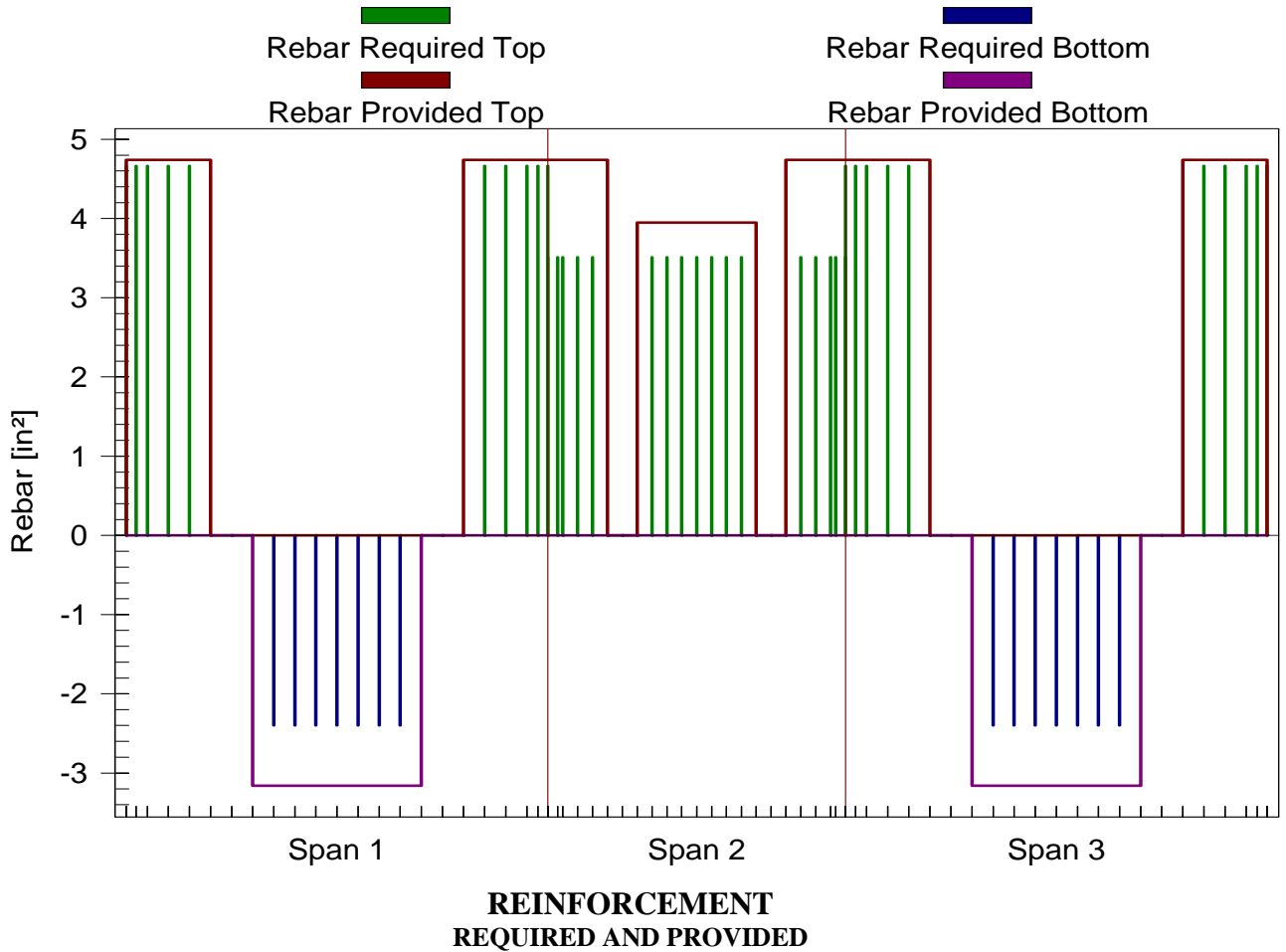
Project: "" / Load Case: SERVICE\_1\_Max\_LL  
+1.00 SW +0.30 LL\_Max +1.00 SDL +0.30 XL +1.00 PT +0.00 HYP +0.00 LAT  
Moment Drawn on Tension Side



**DESIGN MOMENT**  
(Moment is drawn on tension side)

# Rebar Diagrams

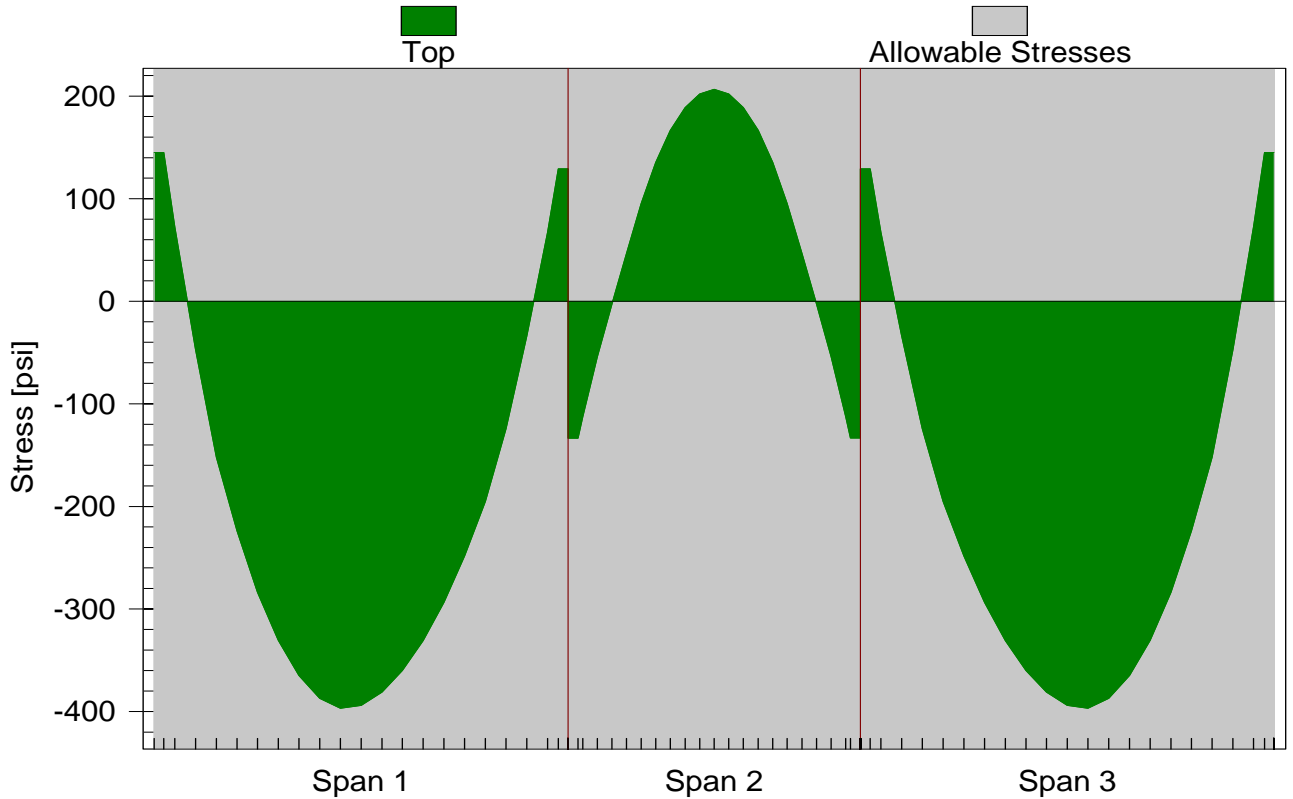
Project: "" / Load Case: SERVICE\_1\_Max\_LL  
 +1.00 SW +0.30 LL\_Max +1.00 SDL +0.30 XL +1.00 PT +0.00 HYP +0.00 LAT



**LOAD COMBINATION: SERVICE\_2\_Min\_LL**

# Stress Diagrams

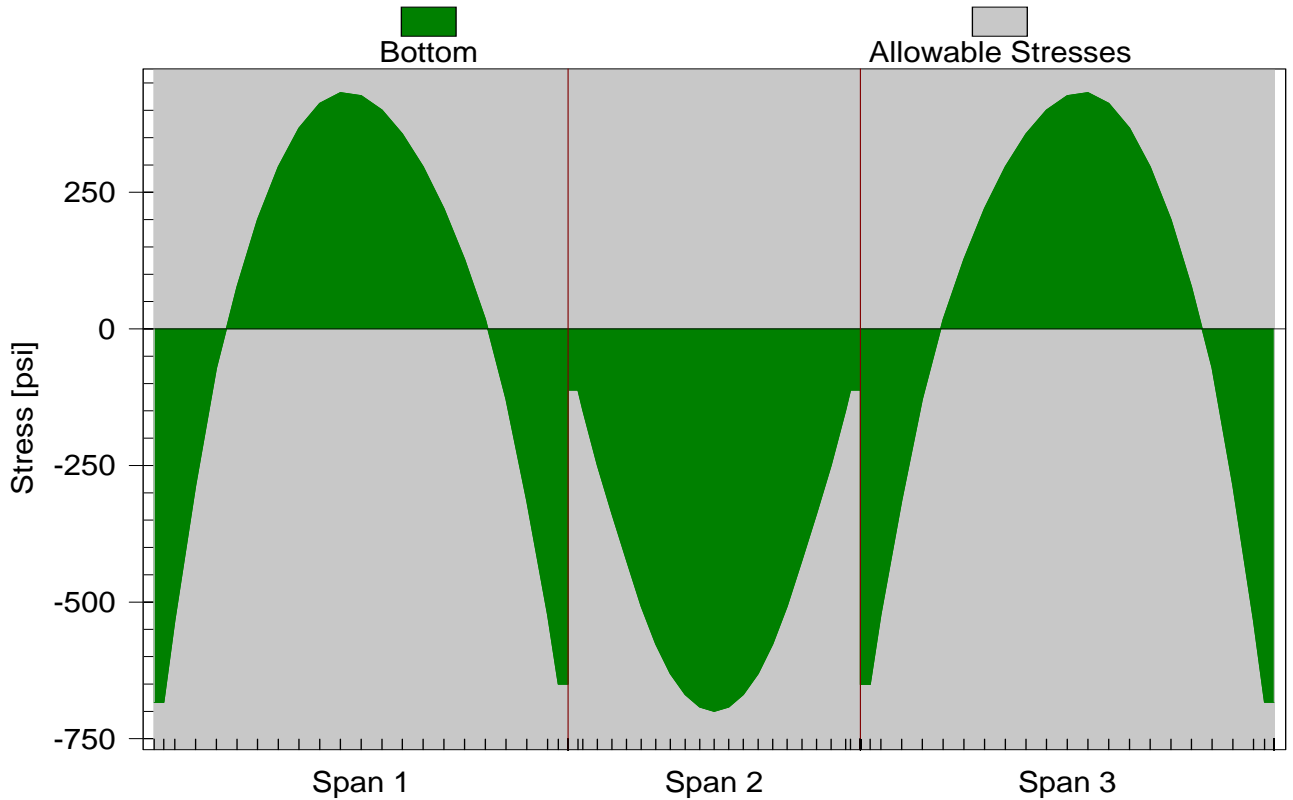
Project: "" / Load Case: SERVICE\_2\_Min\_LL  
+1.00 SW +1.00 LL\_Min +1.00 SDL +1.00 XL +1.00 PT +0.00 HYP +0.00 LAT  
Tensile Stress Positive





# Stress Diagrams

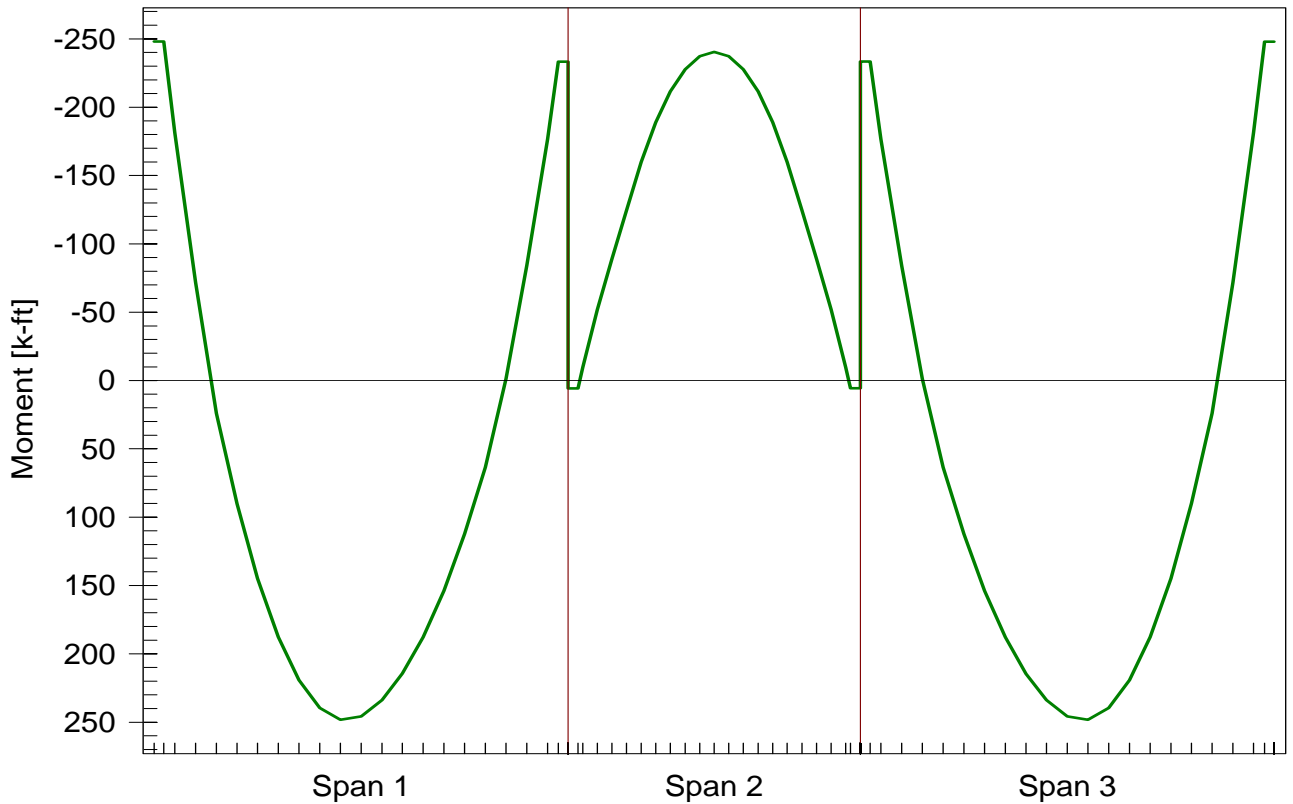
Project: "" / Load Case: SERVICE\_2\_Min\_LL  
+1.00 SW +1.00 LL\_Min +1.00 SDL +1.00 XL +1.00 PT +0.00 HYP +0.00 LAT  
Tensile Stress Positive



**SERVICE COMBINATION STRESSES**  
(Tension stress positive)

# Moment Diagrams

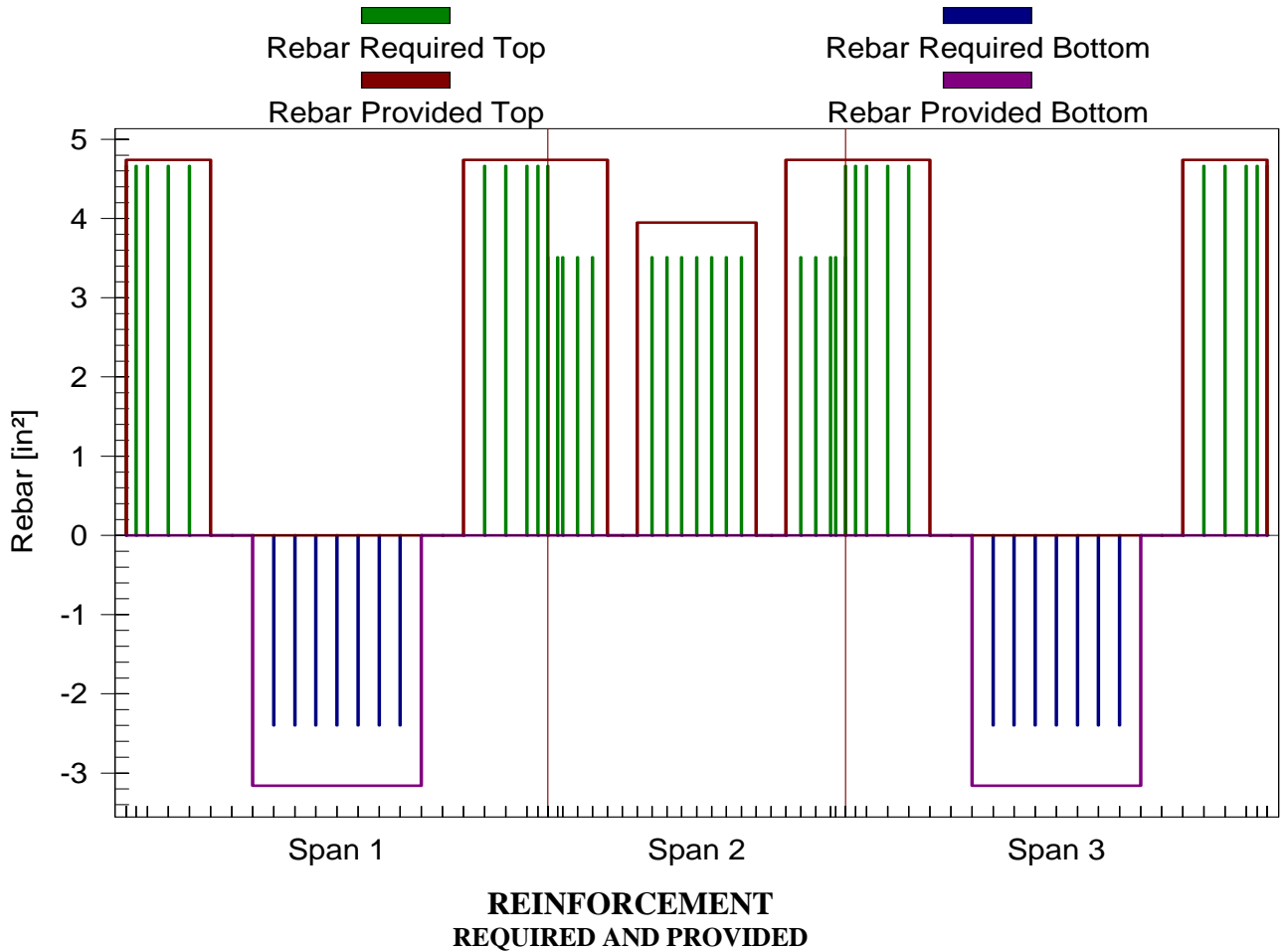
Project: "" / Load Case: SERVICE\_2\_Min\_LL  
+1.00 SW +1.00 LL\_Min +1.00 SDL +1.00 XL +1.00 PT +0.00 HYP +0.00 LAT  
Moment Drawn on Tension Side



**DESIGN MOMENT**  
(Moment is drawn on tension side)

# Rebar Diagrams

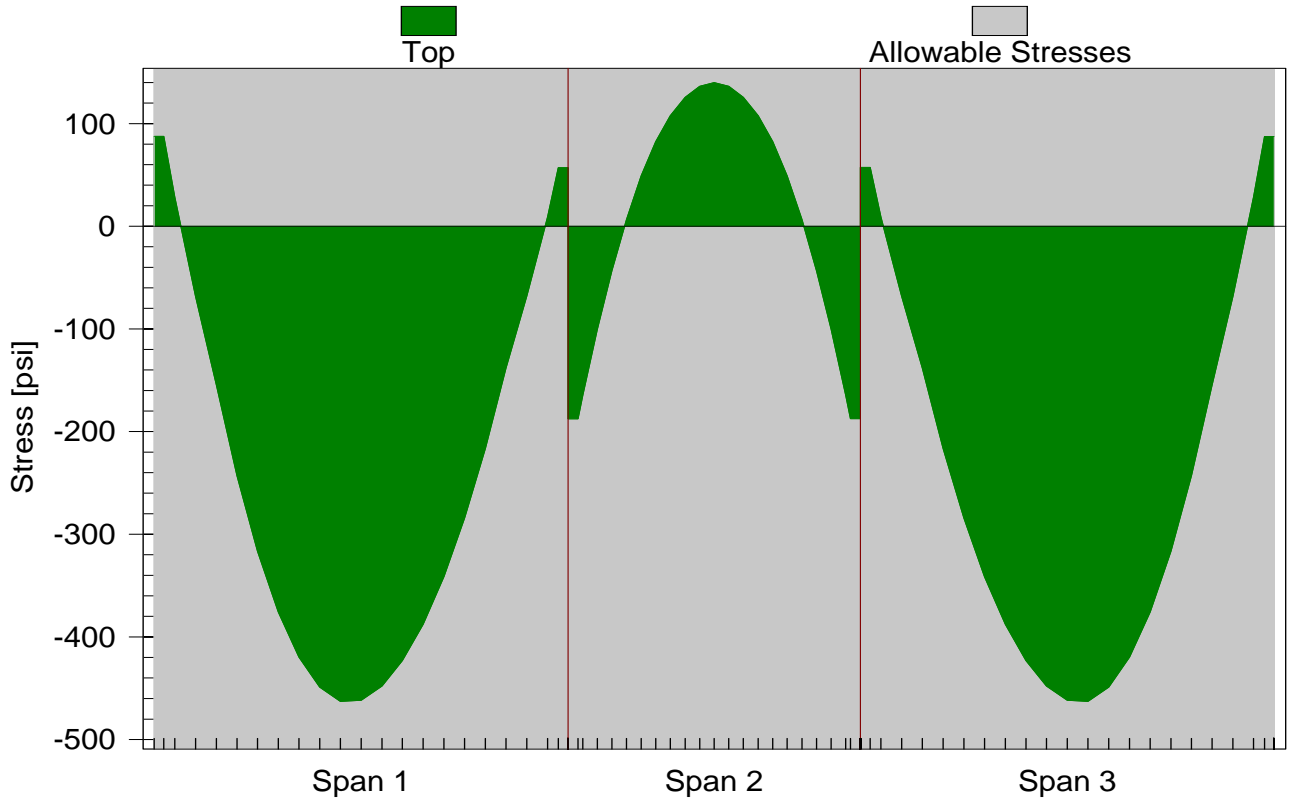
Project: "" / Load Case: SERVICE\_2\_Min\_LL  
 +1.00 SW +1.00 LL\_Min +1.00 SDL +1.00 XL +1.00 PT +0.00 HYP +0.00 LAT



**LOAD COMBINATION: SERVICE\_2\_Max\_LL**

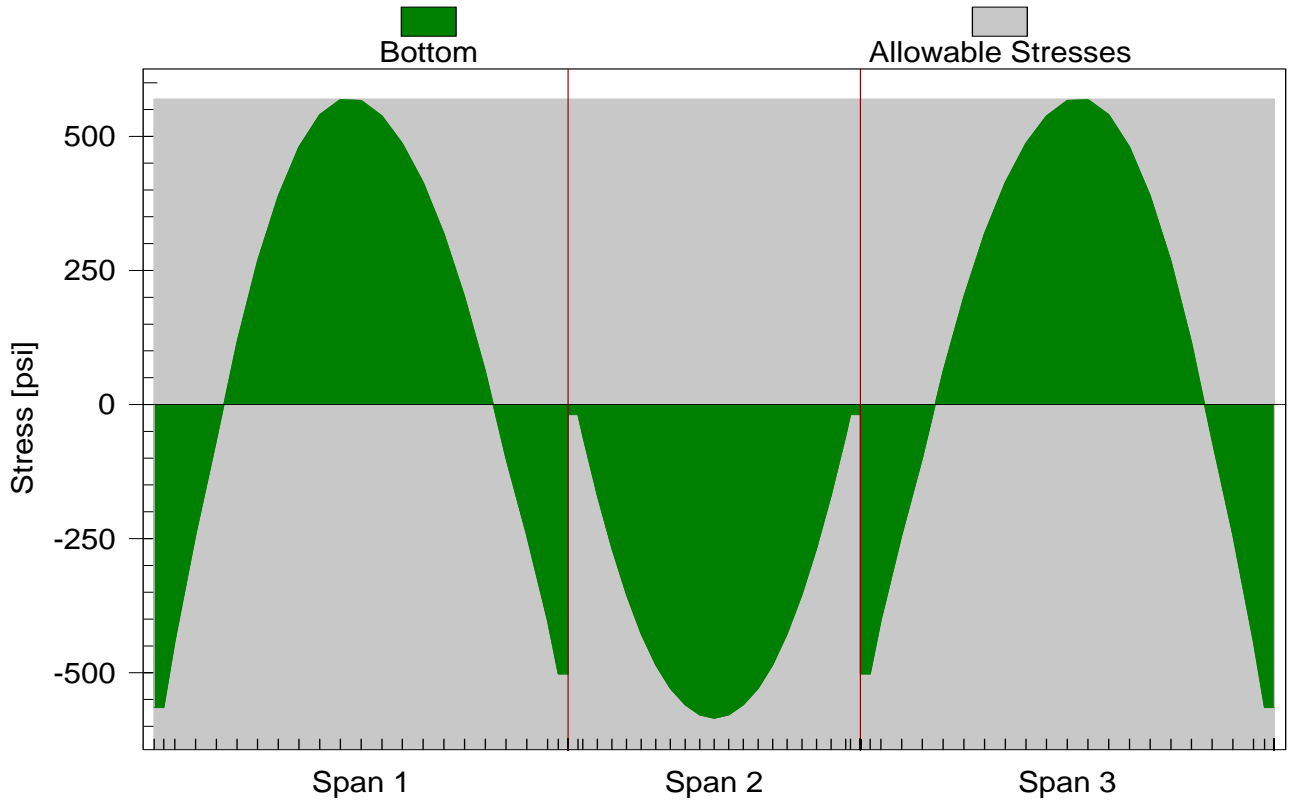
# Stress Diagrams

Project: "" / Load Case: SERVICE\_2\_Max\_LL  
+1.00 SW +1.00 LL\_Max +1.00 SDL +1.00 XL +1.00 PT +0.00 HYP +0.00 LAT  
Tensile Stress Positive



# Stress Diagrams

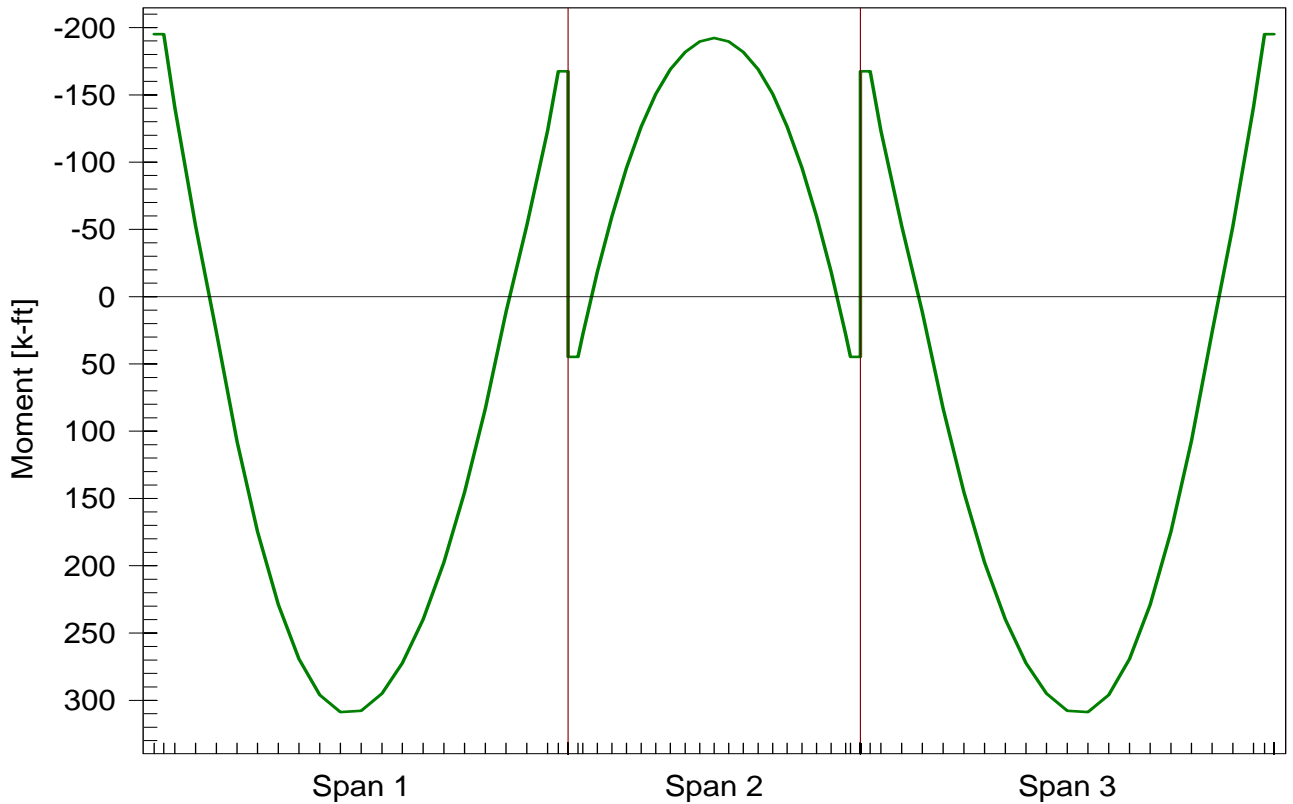
Project: "" / Load Case: SERVICE\_2\_Max\_LL  
+1.00 SW +1.00 LL\_Max +1.00 SDL +1.00 XL +1.00 PT +0.00 HYP +0.00 LAT  
Tensile Stress Positive



**SERVICE COMBINATION STRESSES**  
(Tension stress positive)

# Moment Diagrams

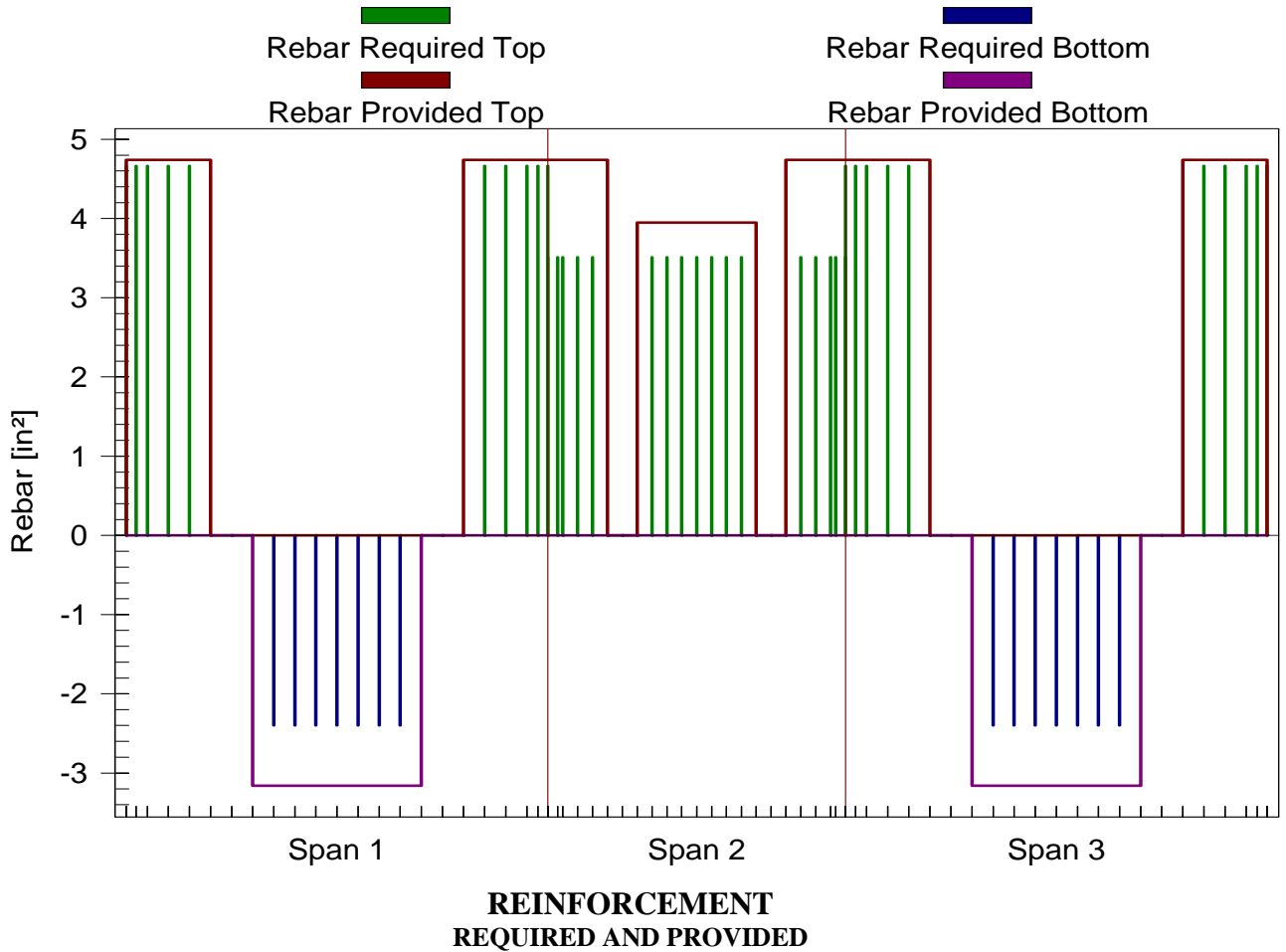
Project: "" / Load Case: SERVICE\_2\_Max\_LL  
+1.00 SW +1.00 LL\_Max +1.00 SDL +1.00 XL +1.00 PT +0.00 HYP +0.00 LAT  
Moment Drawn on Tension Side



**DESIGN MOMENT**  
(Moment is drawn on tension side)

# Rebar Diagrams

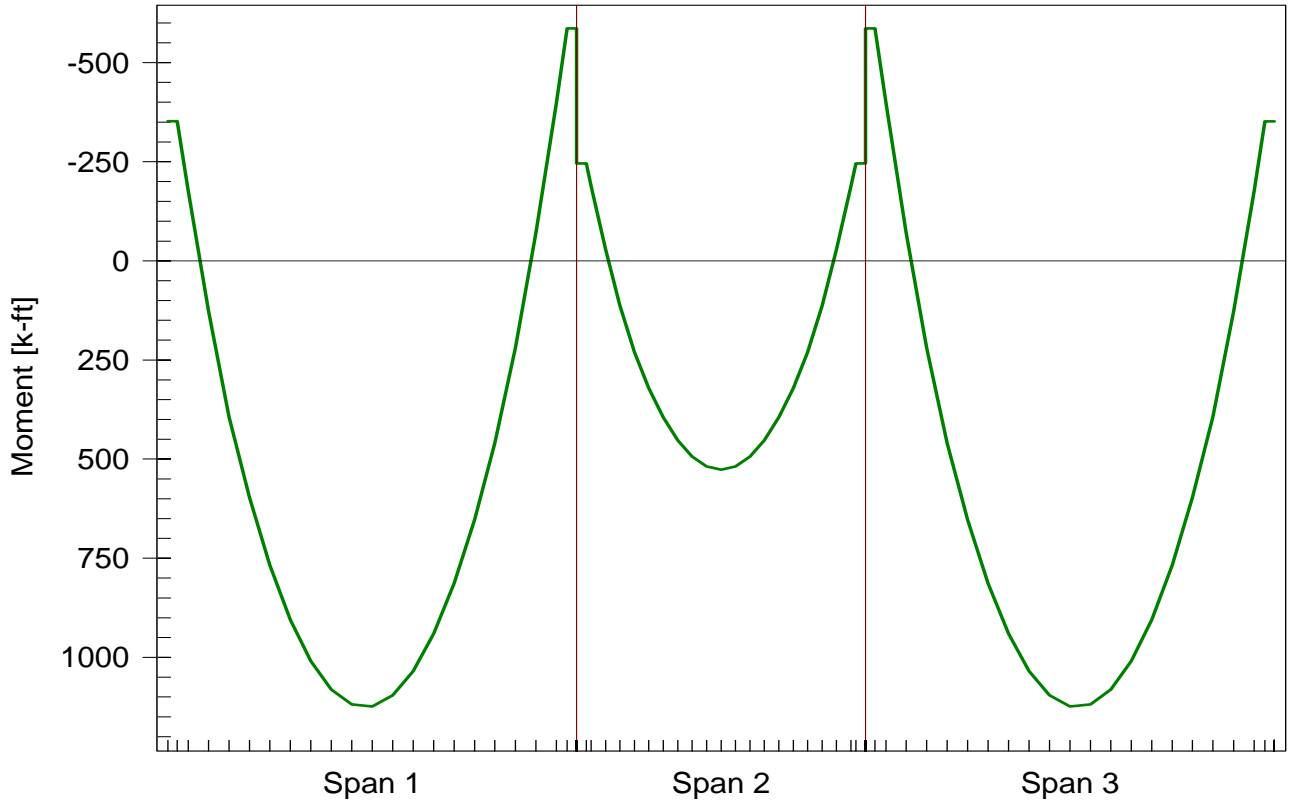
Project: "" / Load Case: SERVICE\_2\_Max\_LL  
 +1.00 SW +1.00 LL\_Max +1.00 SDL +1.00 XL +1.00 PT +0.00 HYP +0.00 LAT



**LOAD COMBINATION: STRENGTH\_1\_Min\_LL**

# Moment Diagrams

Project: "" / Load Case: STRENGTH\_1\_Min\_LL  
+1.20 SW +1.60 LL\_Min +1.20 SDL +1.60 XL +0.00 PT +1.00 HYP +0.00 LAT  
Moment Drawn on Tension Side

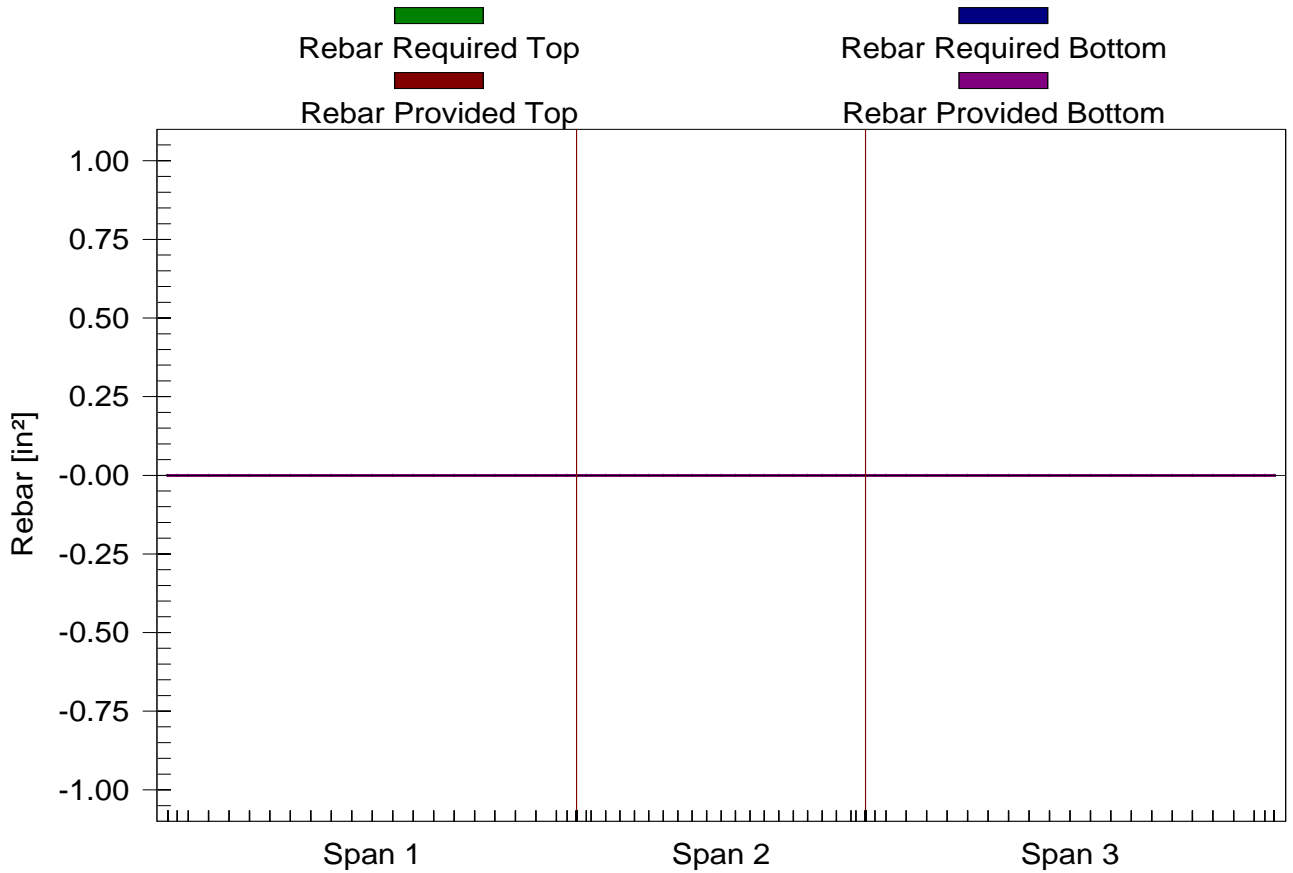


**DESIGN MOMENT**  
(Moment is drawn on tension side)



# Rebar Diagrams

Project: "" / Load Case: STRENGTH\_1\_Min\_LL  
+1.20 SW +1.60 LL\_Min +1.20 SDL +1.60 XL +0.00 PT +1.00 HYP +0.00 LAT

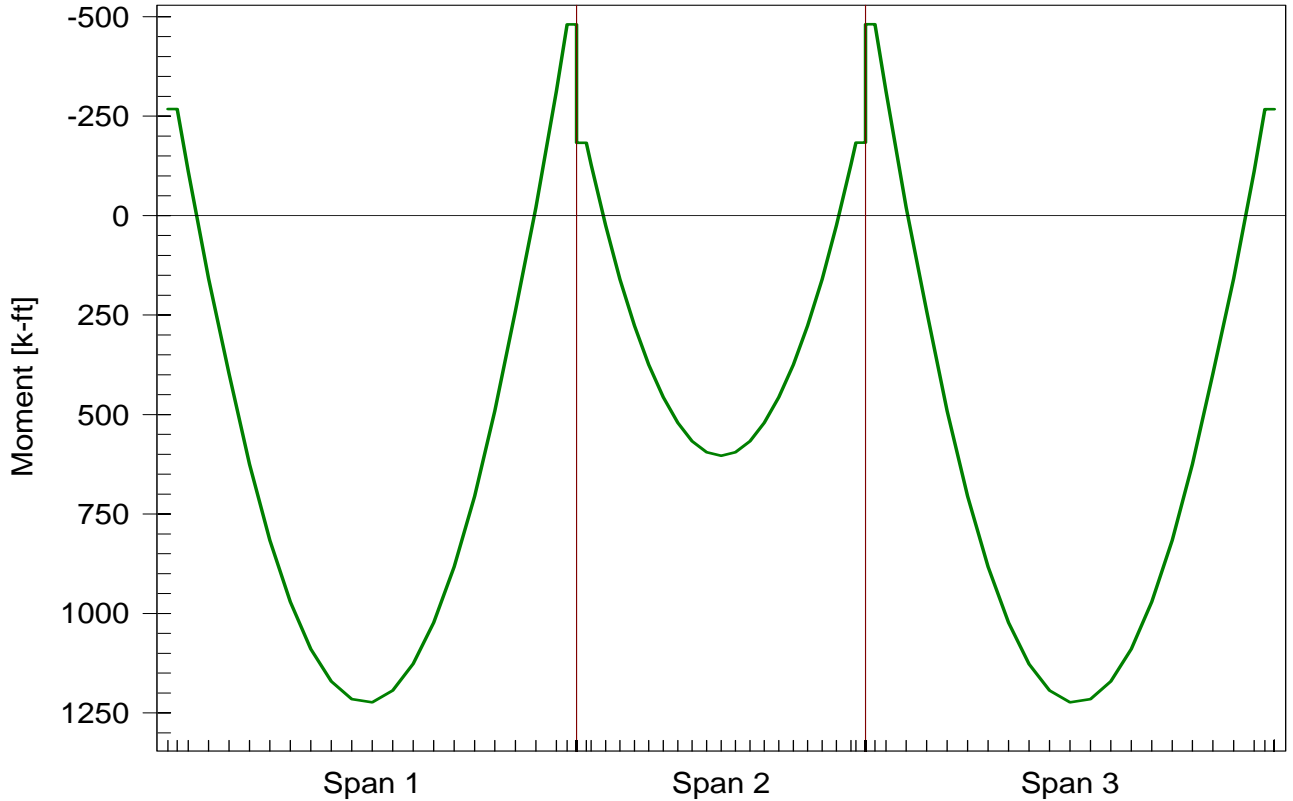


**REINFORCEMENT  
REQUIRED AND PROVIDED**

**LOAD COMBINATION: STRENGTH\_1\_Max\_LL**

# Moment Diagrams

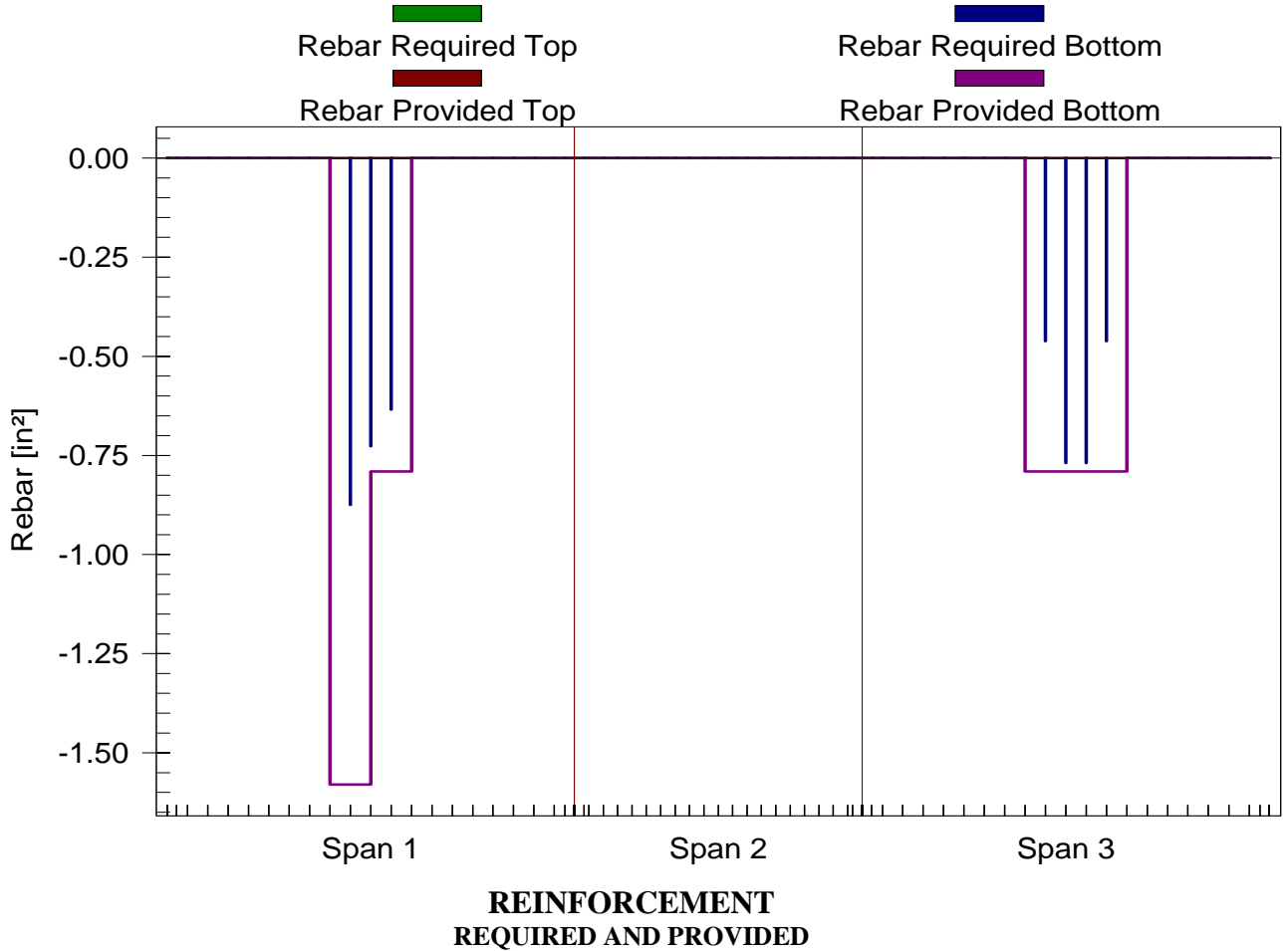
Project: "" / Load Case: STRENGTH\_1\_Max\_LL  
+1.20 SW +1.60 LL\_Max +1.20 SDL +1.60 XL +0.00 PT +1.00 HYP +0.00 LAT  
Moment Drawn on Tension Side



**DESIGN MOMENT**  
(Moment is drawn on tension side)

# Rebar Diagrams

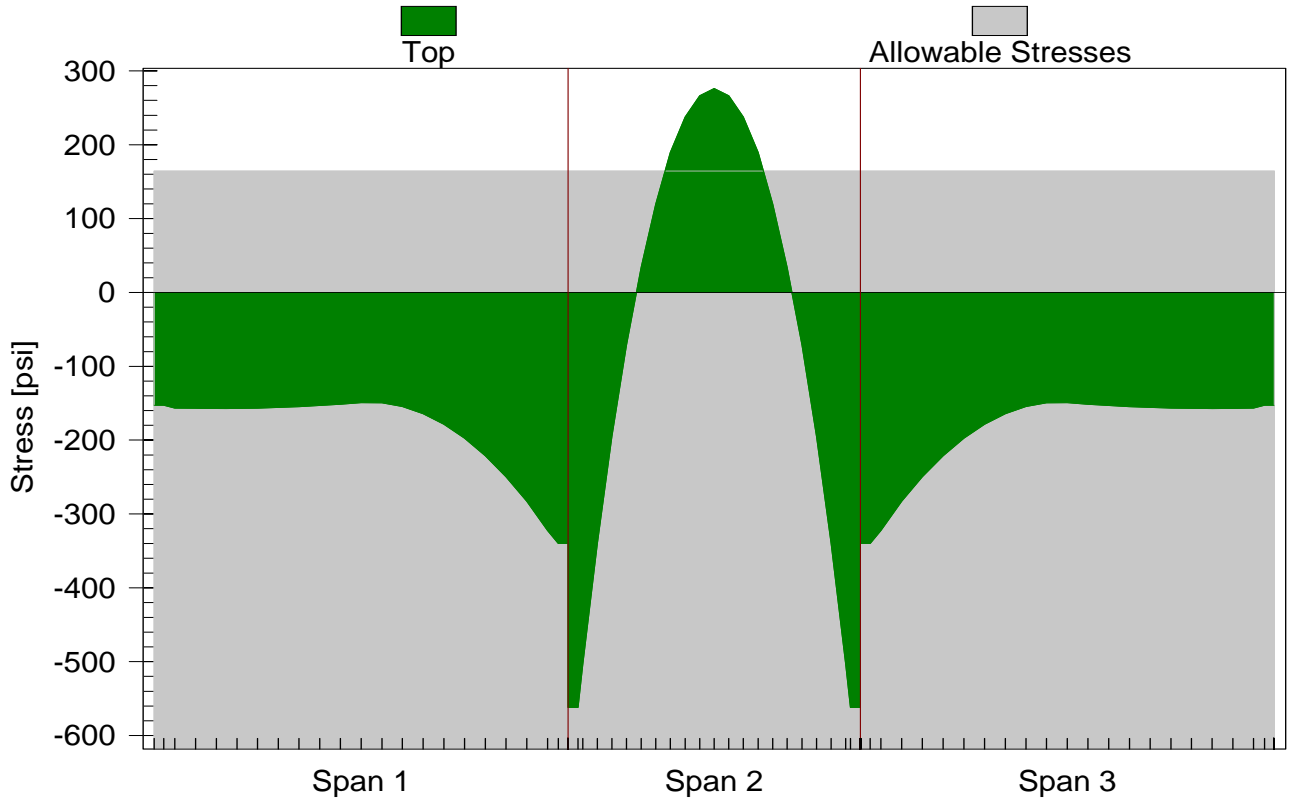
Project: "" / Load Case: STRENGTH\_1\_Max\_LL  
 +1.20 SW +1.60 LL\_Max +1.20 SDL +1.60 XL +0.00 PT +1.00 HYP +0.00 LAT



**LOAD COMBINATION: INITIAL\_MIN\_LL**

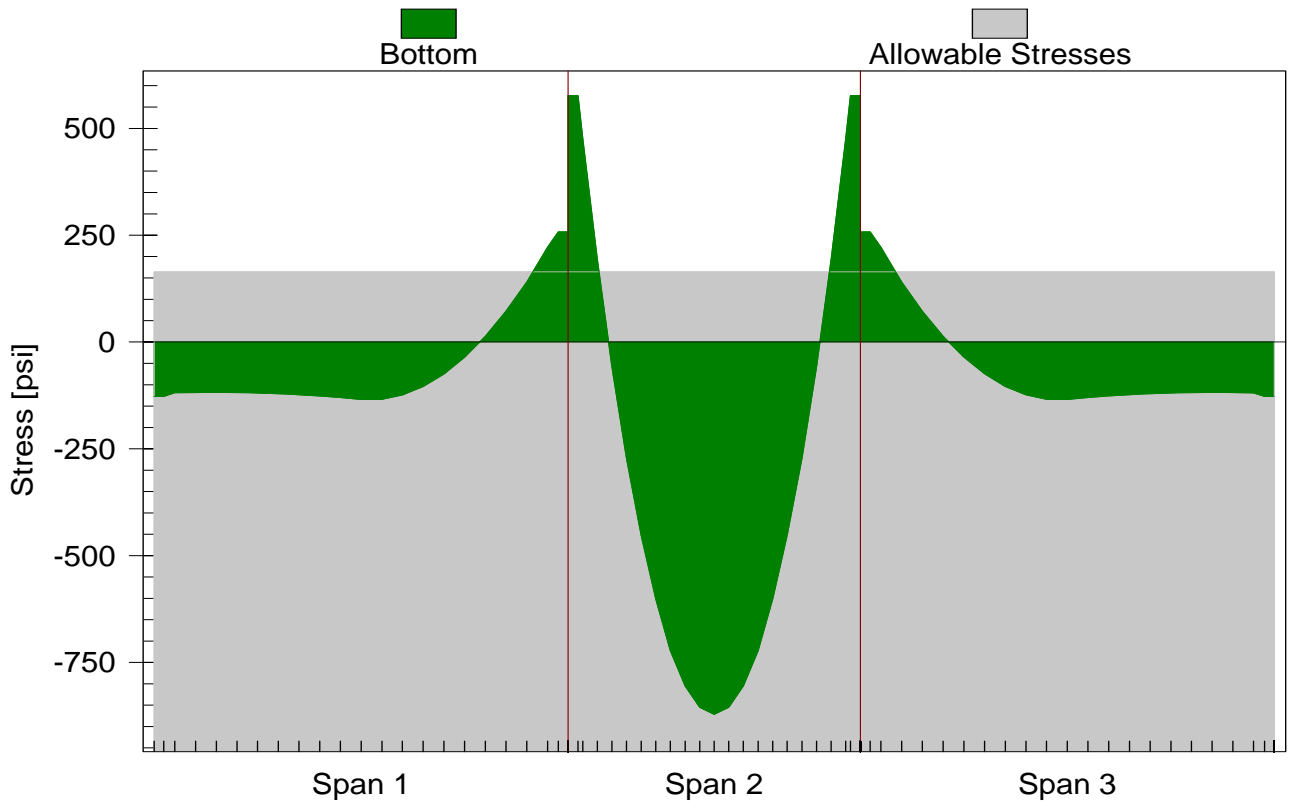
# Stress Diagrams

Project: "" / Load Case: INITIAL\_MIN\_LL  
+1.00 SW +0.00 LL\_Min +0.00 SDL +0.00 XL +1.15 PT +0.00 HYP +0.00 LAT  
Tensile Stress Positive



# Stress Diagrams

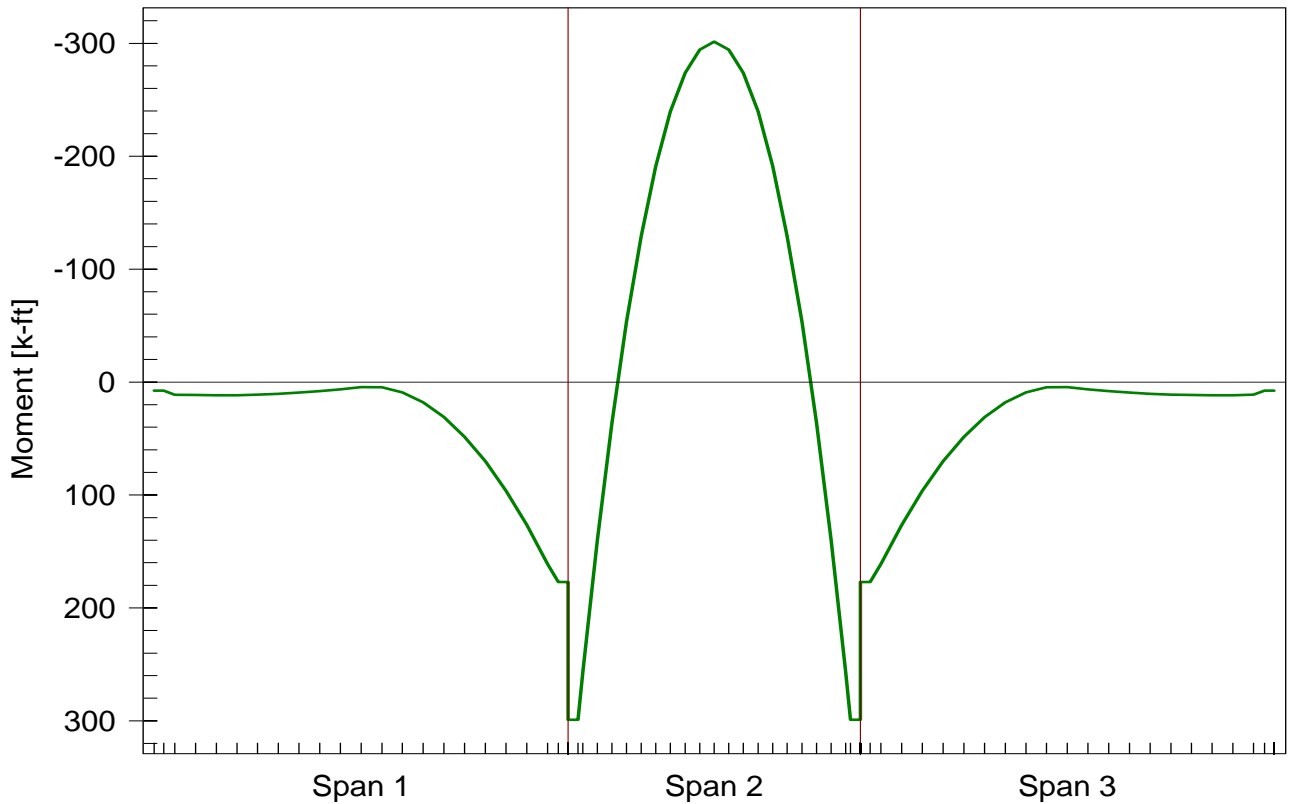
Project: "" / Load Case: INITIAL\_MIN\_LL  
+1.00 SW +0.00 LL\_Min +0.00 SDL +0.00 XL +1.15 PT +0.00 HYP +0.00 LAT  
Tensile Stress Positive



**SERVICE COMBINATION STRESSES**  
(Tension stress positive)

# Moment Diagrams

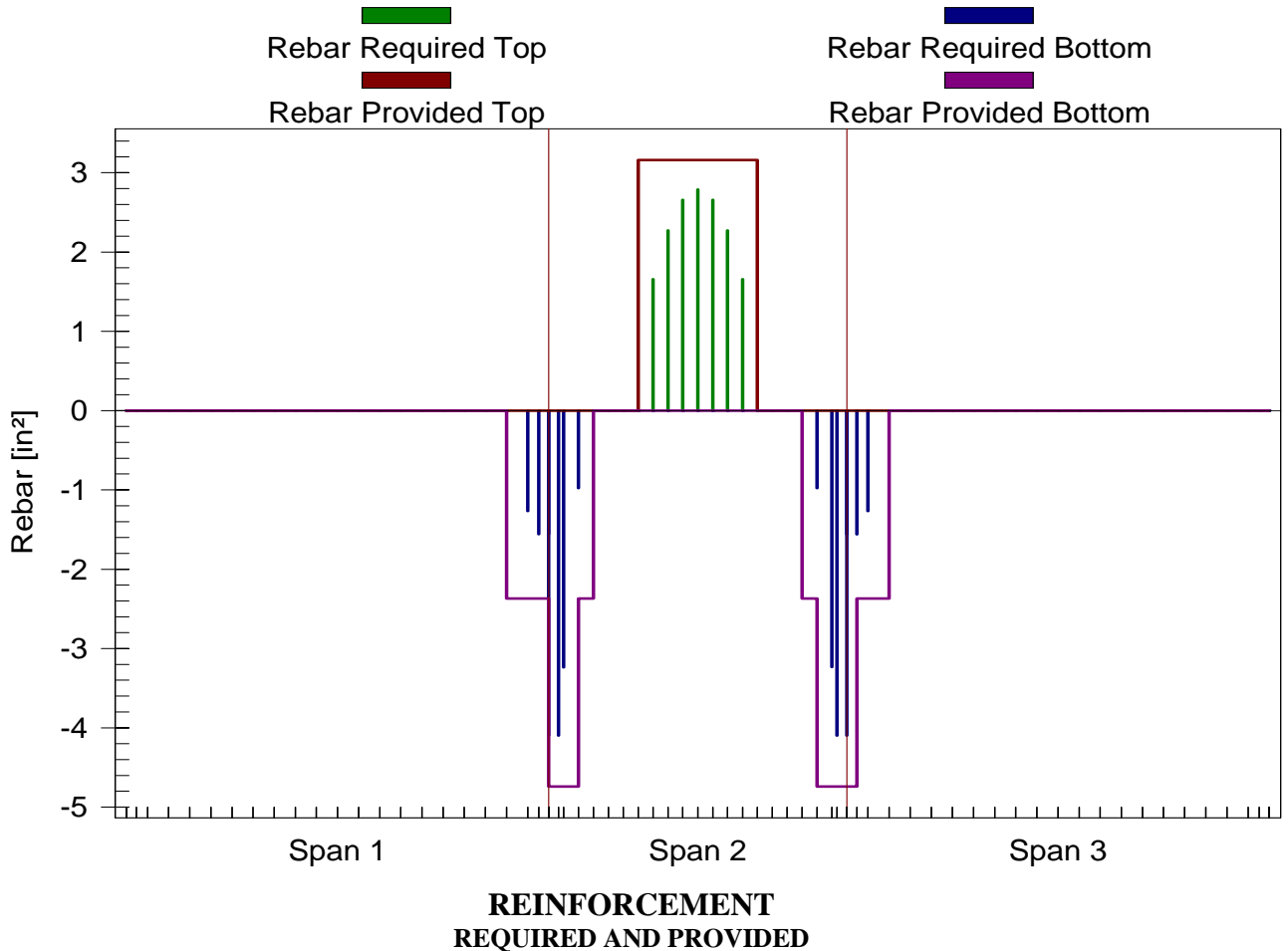
Project: "" / Load Case: INITIAL\_MIN\_LL  
+1.00 SW +0.00 LL\_Min +0.00 SDL +0.00 XL +1.15 PT +0.00 HYP +0.00 LAT  
Moment Drawn on Tension Side



**DESIGN MOMENT**  
(Moment is drawn on tension side)

# Rebar Diagrams

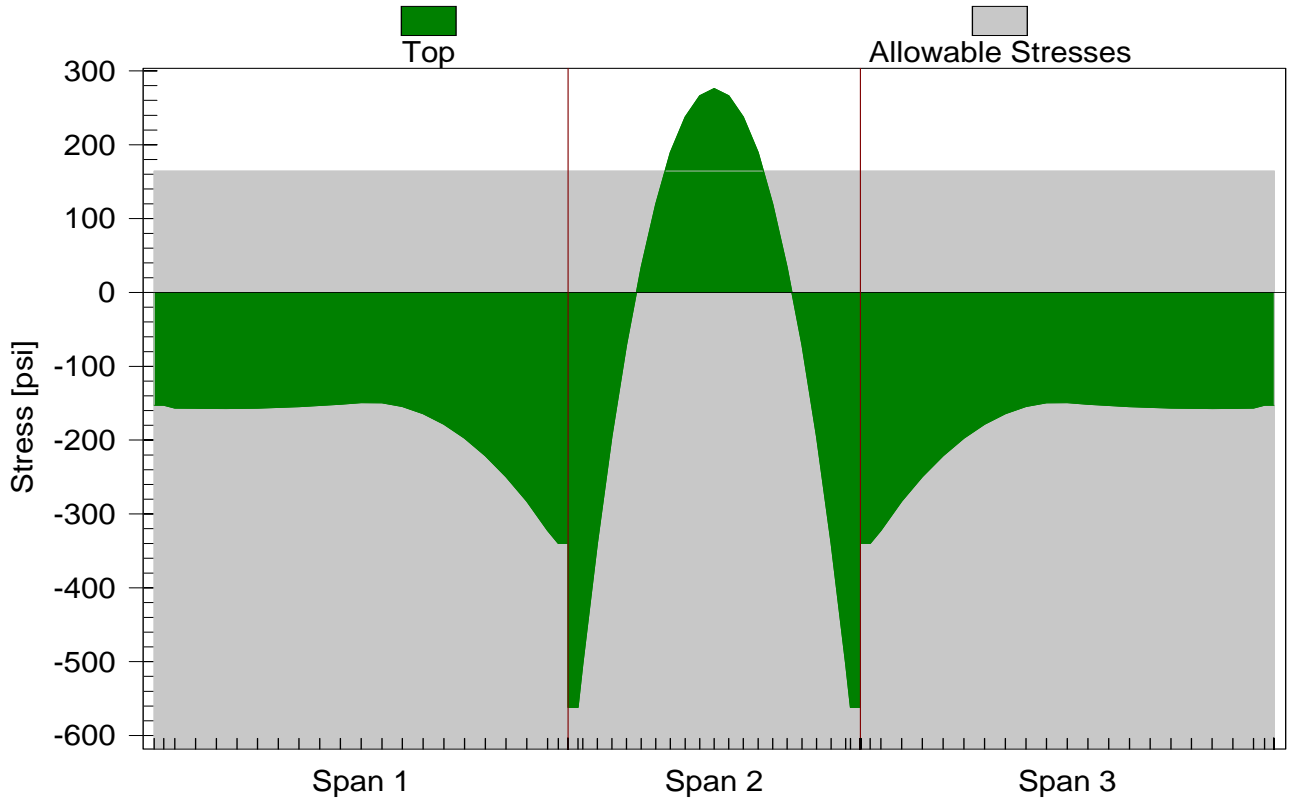
Project: "" / Load Case: INITIAL\_MIN\_LL  
 +1.00 SW +0.00 LL\_Min +0.00 SDL +0.00 XL +1.15 PT +0.00 HYP +0.00 LAT



**LOAD COMBINATION: INITIAL\_MAX\_LL**

# Stress Diagrams

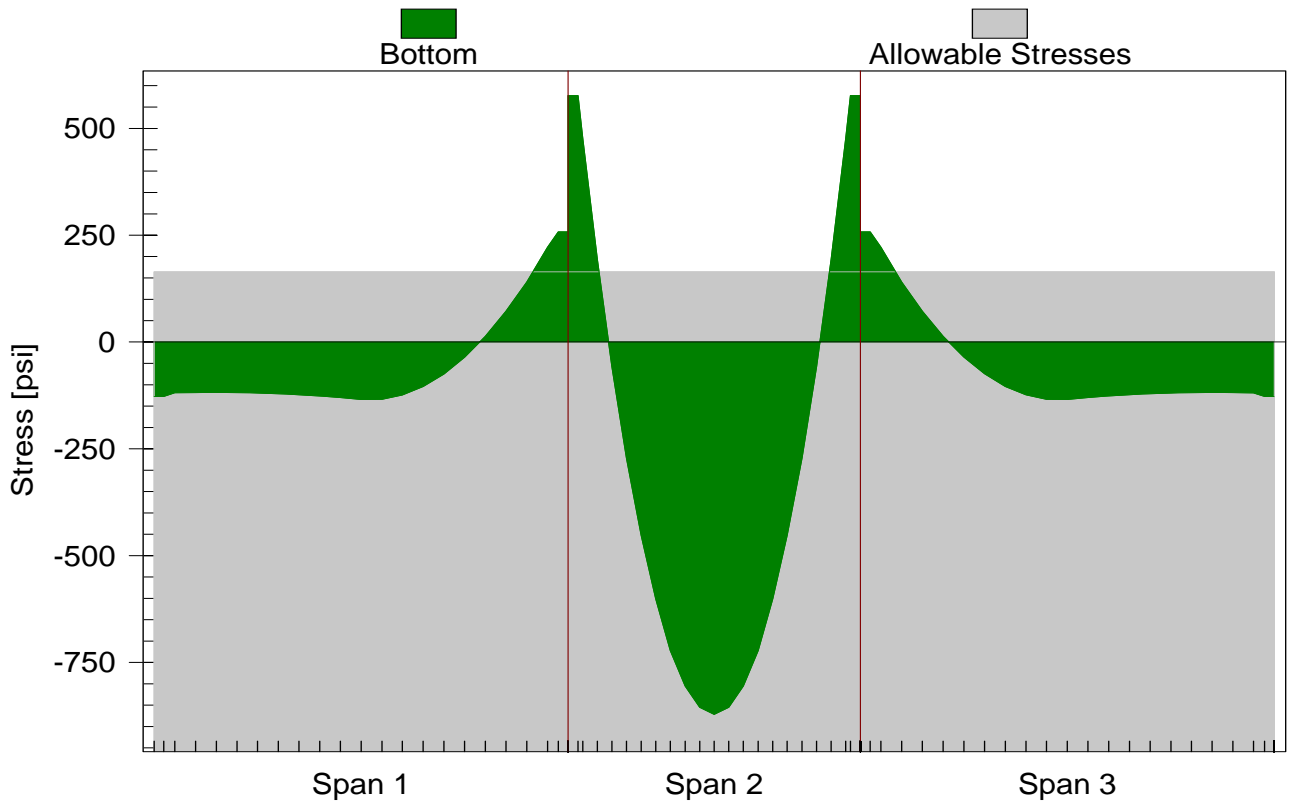
Project: "" / Load Case: INITIAL\_MAX\_LL  
+1.00 SW +0.00 LL\_Max +0.00 SDL +0.00 XL +1.15 PT +0.00 HYP +0.00 LAT  
Tensile Stress Positive





# Stress Diagrams

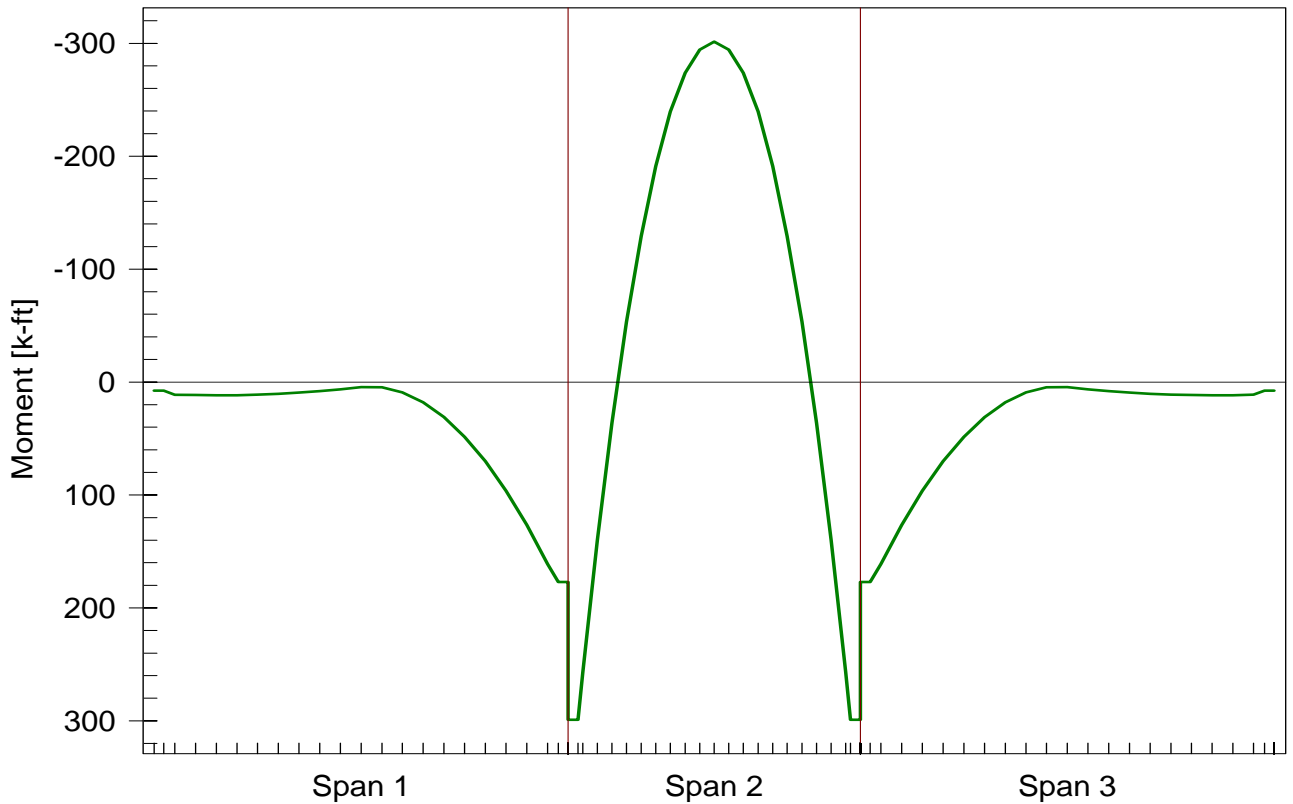
Project: "" / Load Case: INITIAL\_MAX\_LL  
+1.00 SW +0.00 LL\_Max +0.00 SDL +0.00 XL +1.15 PT +0.00 HYP +0.00 LAT  
Tensile Stress Positive



**SERVICE COMBINATION STRESSES**  
(Tension stress positive)

# Moment Diagrams

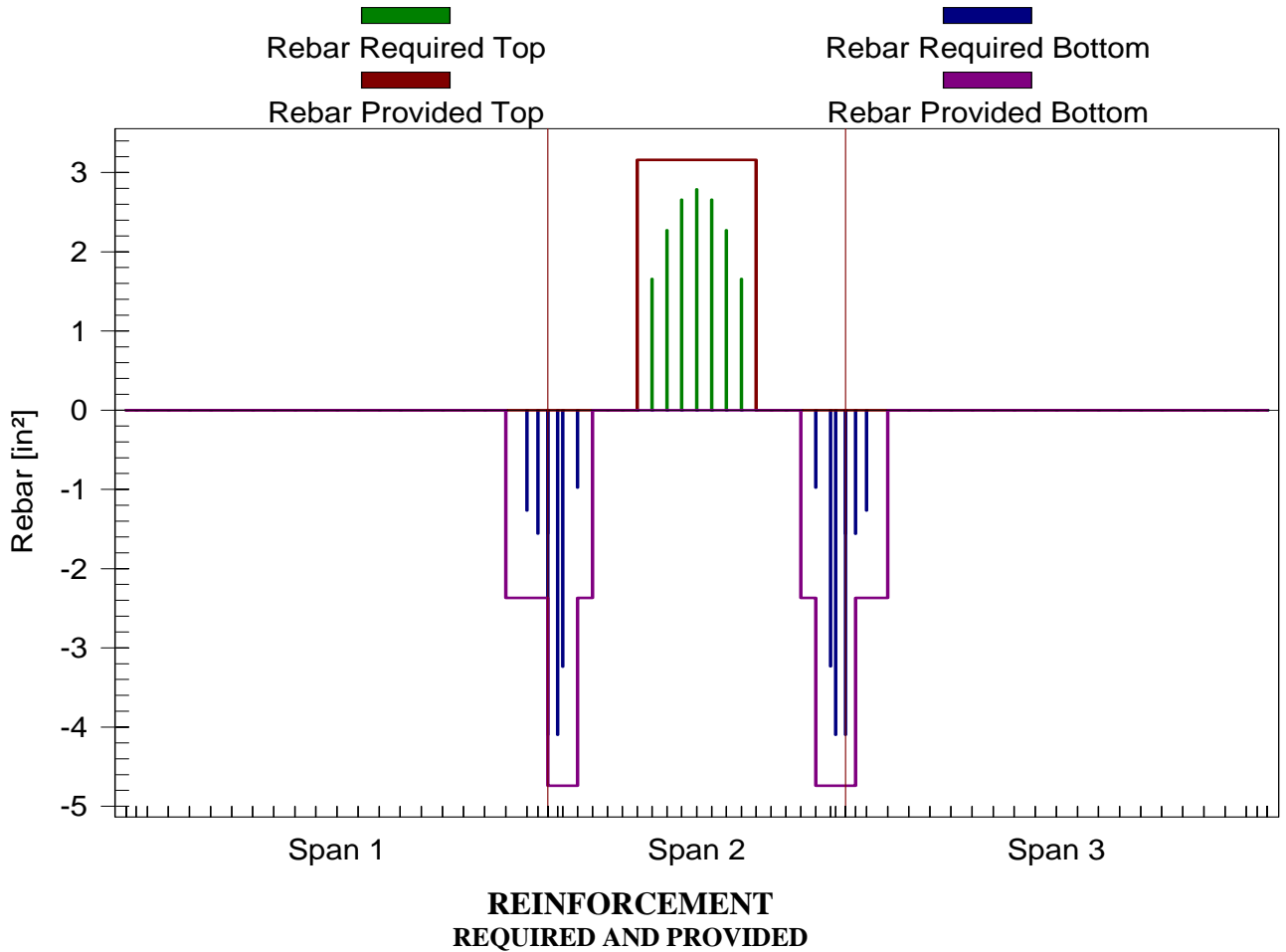
Project: "" / Load Case: INITIAL\_MAX\_LL  
+1.00 SW +0.00 LL\_Max +0.00 SDL +0.00 XL +1.15 PT +0.00 HYP +0.00 LAT  
Moment Drawn on Tension Side



**DESIGN MOMENT**  
(Moment is drawn on tension side)

# Rebar Diagrams

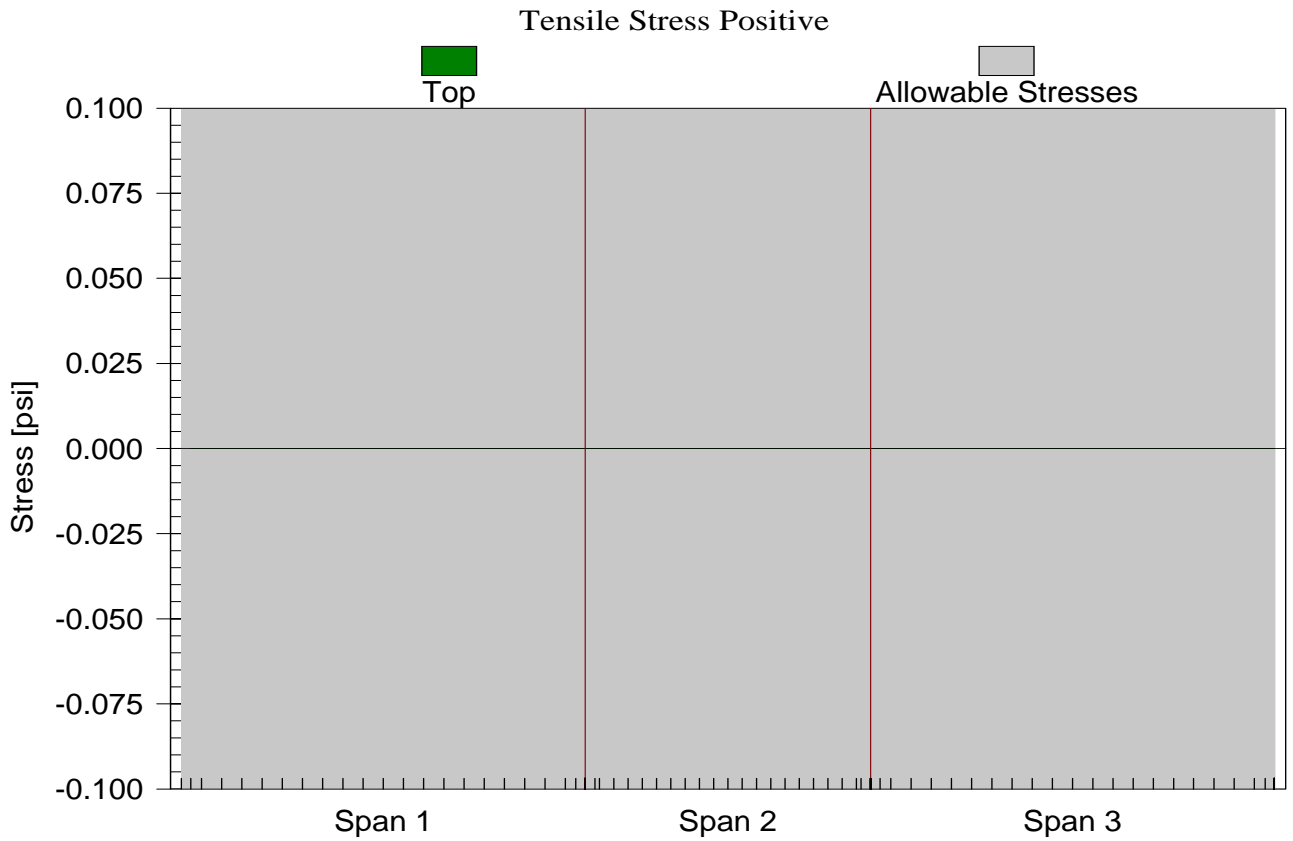
Project: "" / Load Case: INITIAL\_MAX\_LL  
+1.00 SW +0.00 LL\_Max +0.00 SDL +0.00 XL +1.15 PT +0.00 HYP +0.00 LAT



**LOAD COMBINATION: Cracking\_Moment**

# Stress Diagrams

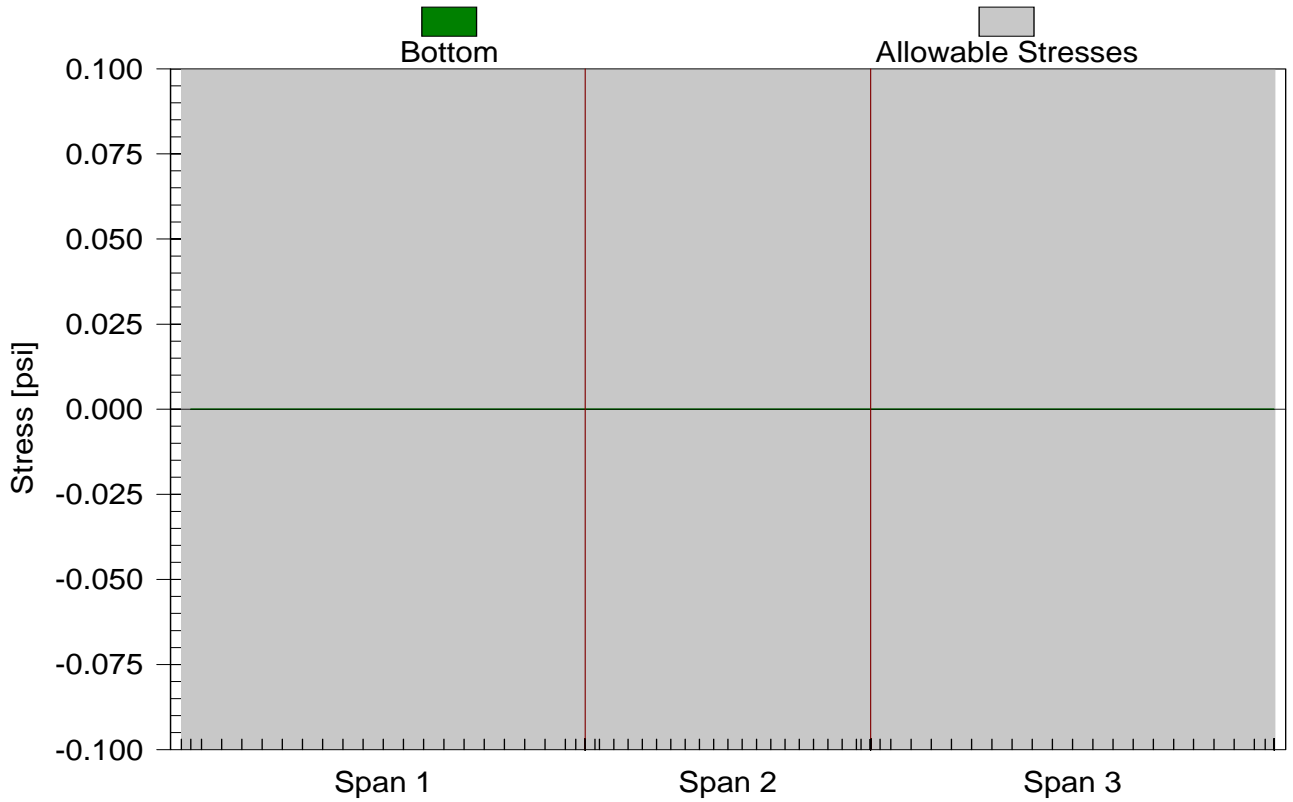
Project: "" / Load Case: Cracking\_Moment



# Stress Diagrams

Project: "" / Load Case: Cracking\_Moment

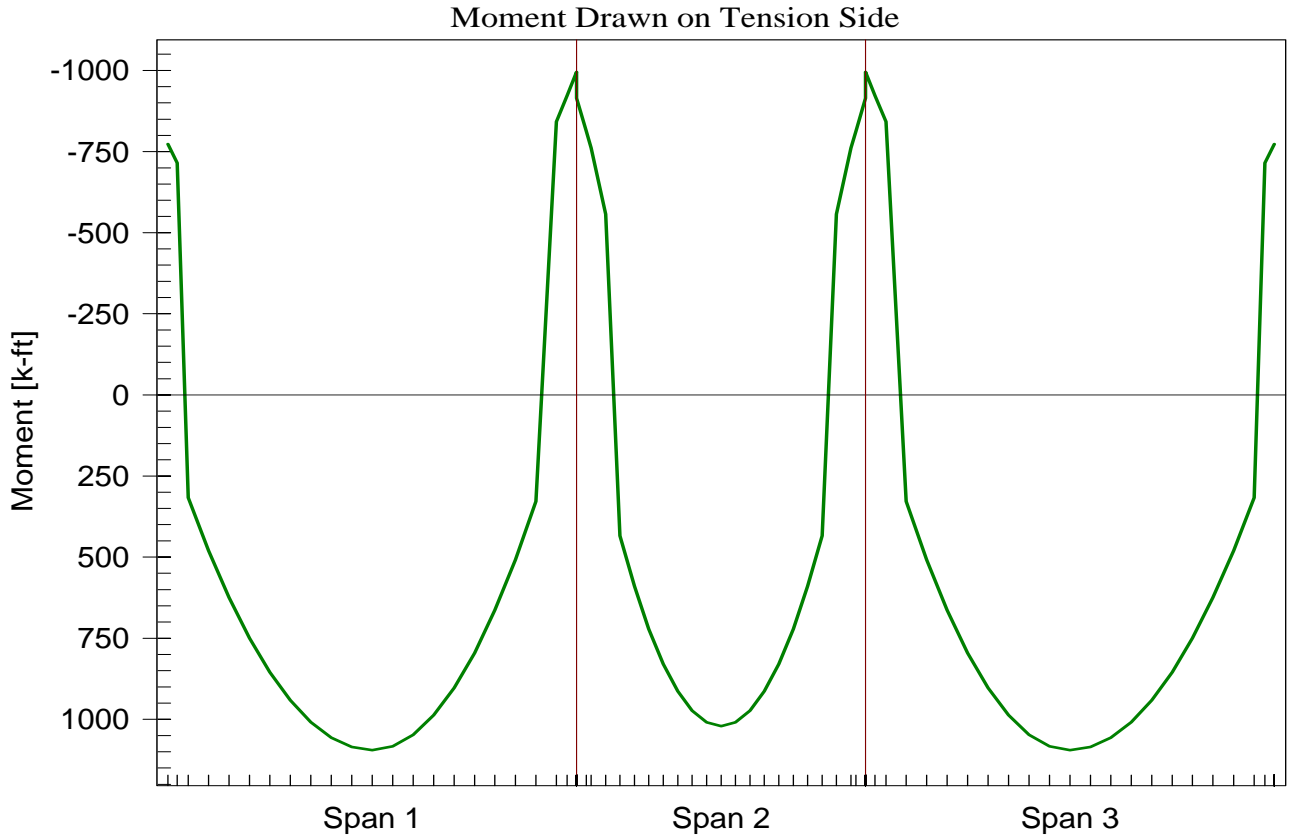
Tensile Stress Positive



**SERVICE COMBINATION STRESSES**  
(Tension stress positive)

# Moment Diagrams

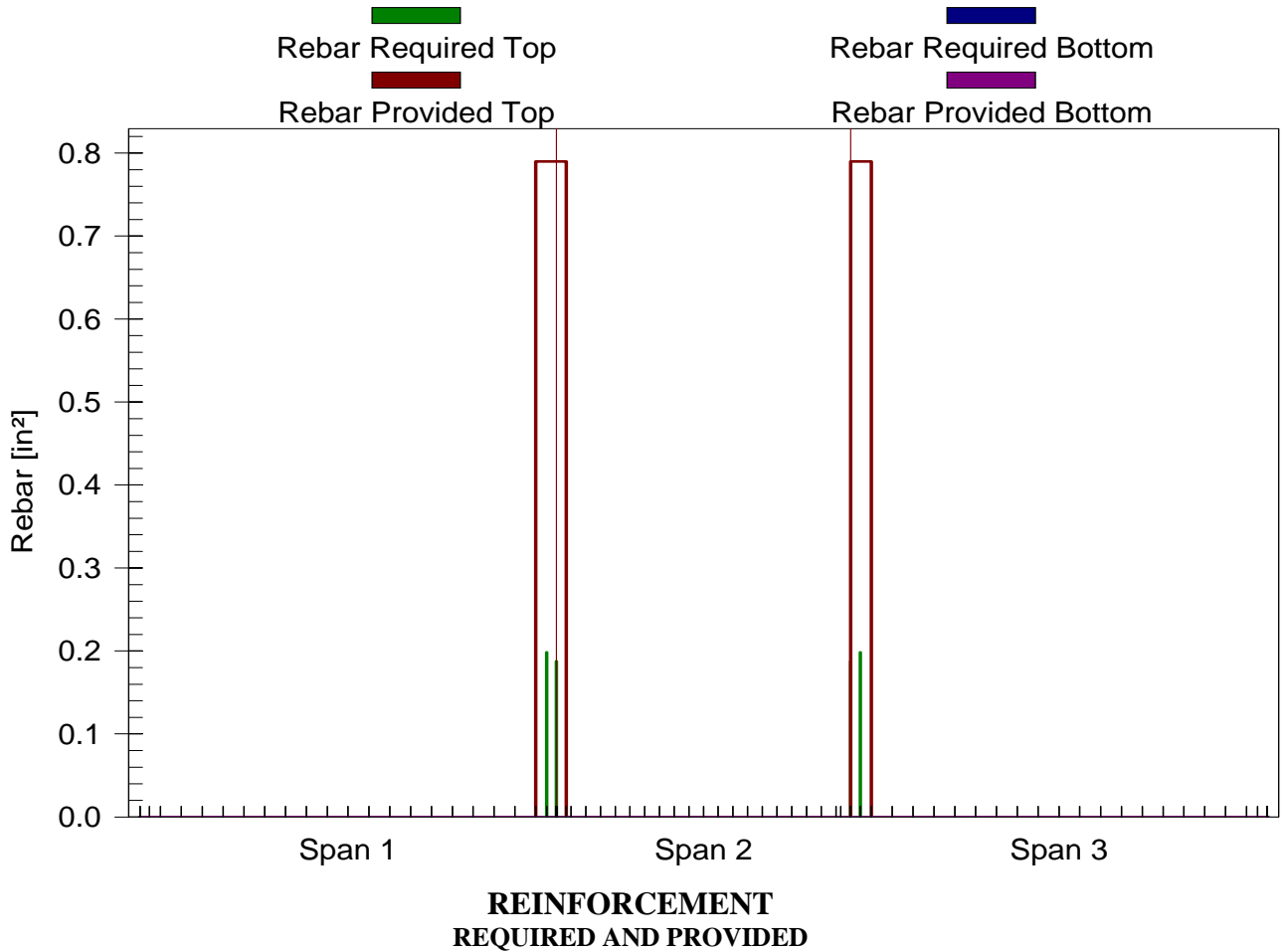
Project: "" / Load Case: Cracking\_Moment



**DESIGN MOMENT**  
(Moment is drawn on tension side)

# Rebar Diagrams

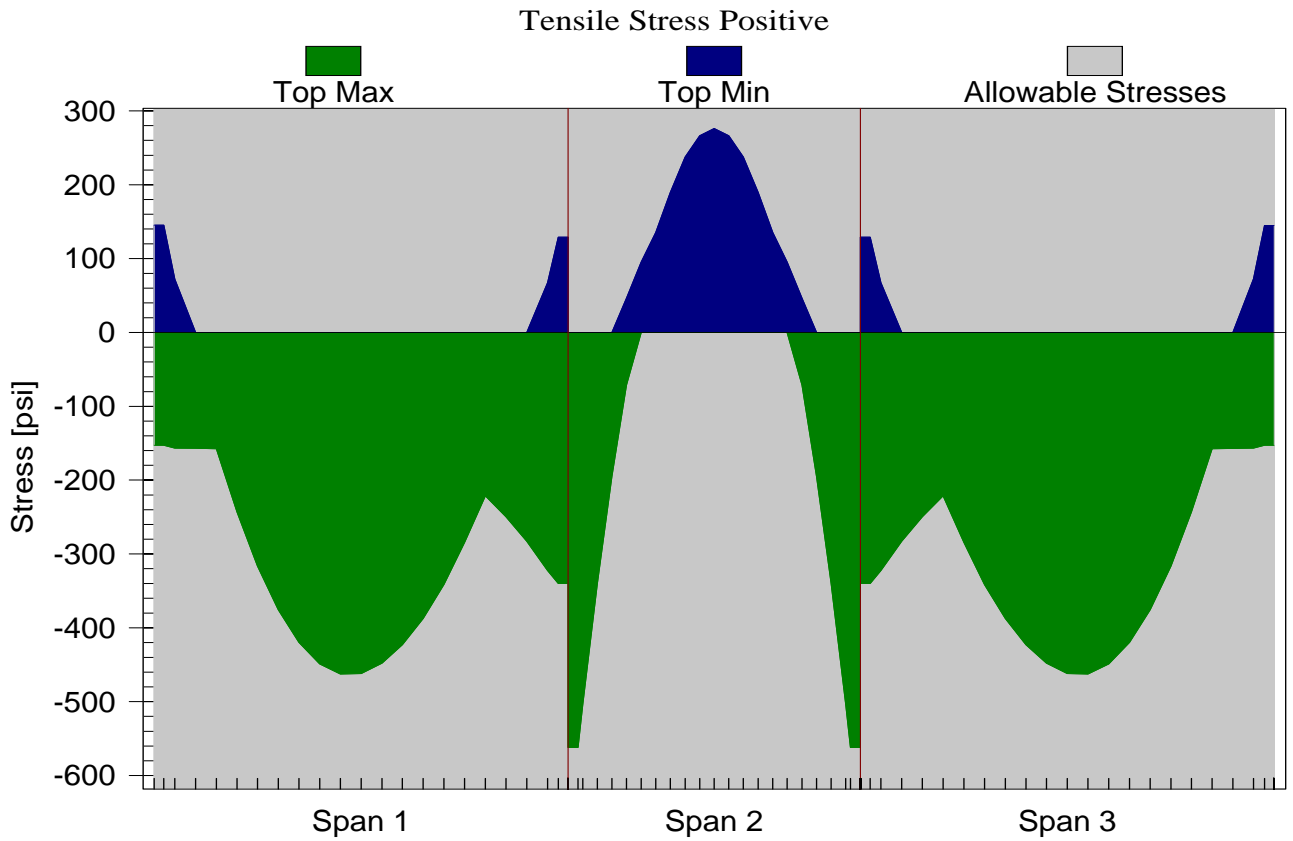
Project: "" / Load Case: Cracking\_Moment



**LOAD COMBINATION: Envelope**

# Stress Diagrams

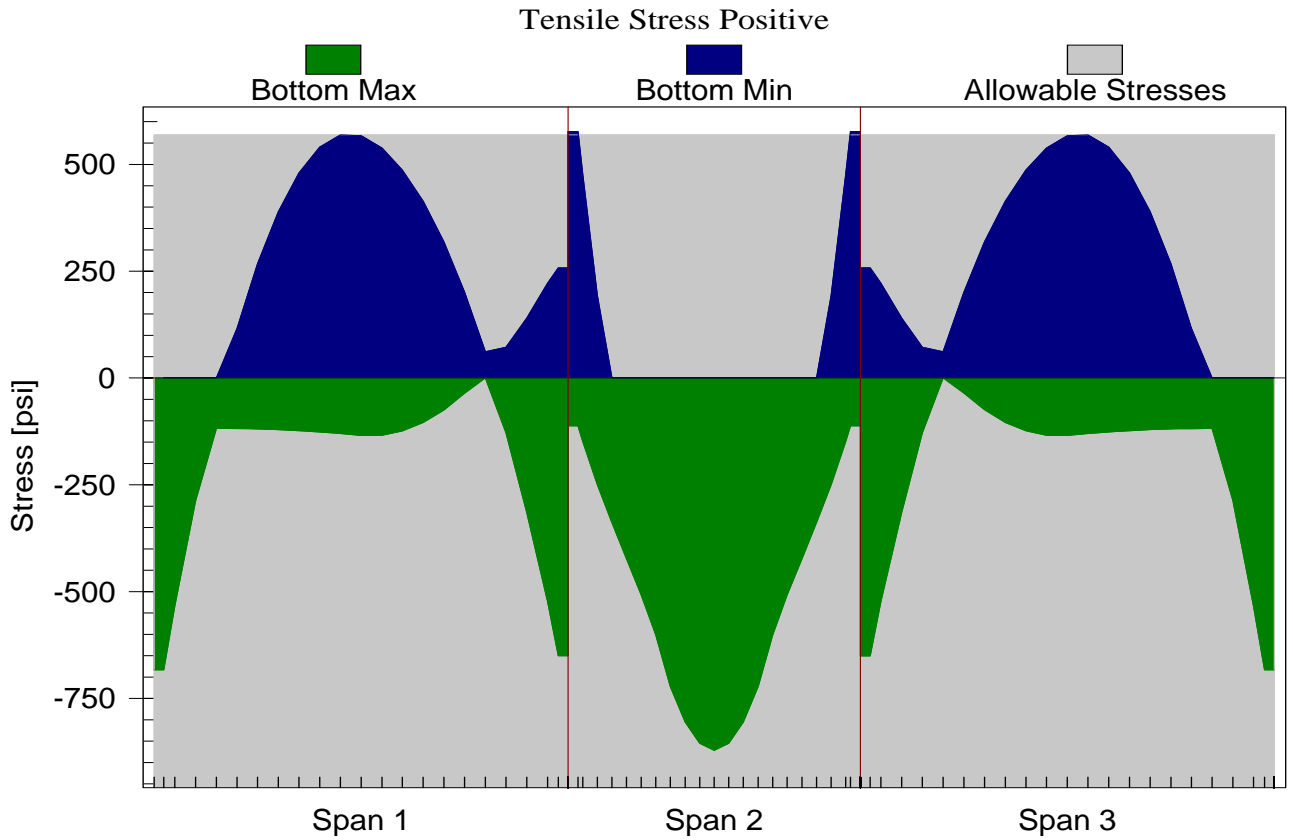
Project: "" / Load Case: Envelope





# Stress Diagrams

Project: "" / Load Case: Envelope

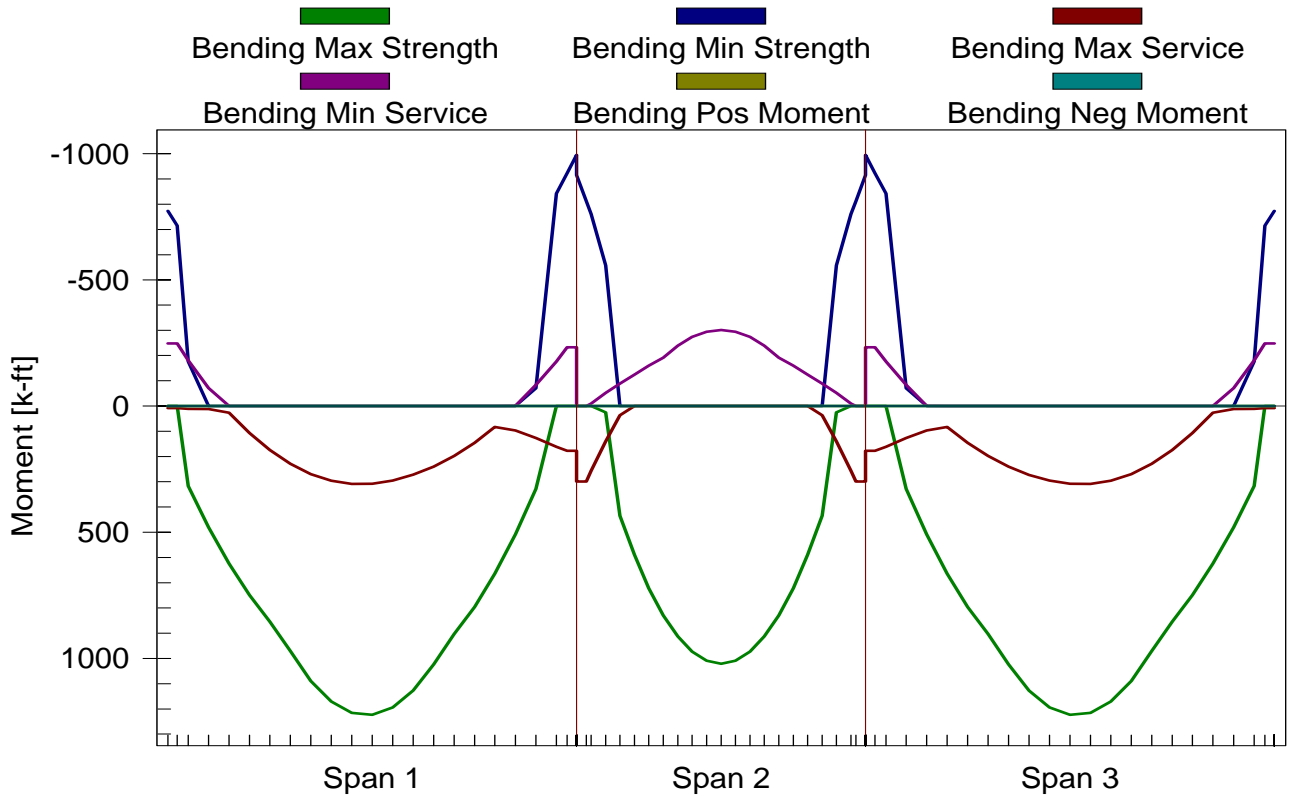


**SERVICE COMBINATION STRESSES**  
(Tension stress positive)

# Moment Diagrams

Project: "" / Load Case: Envelope

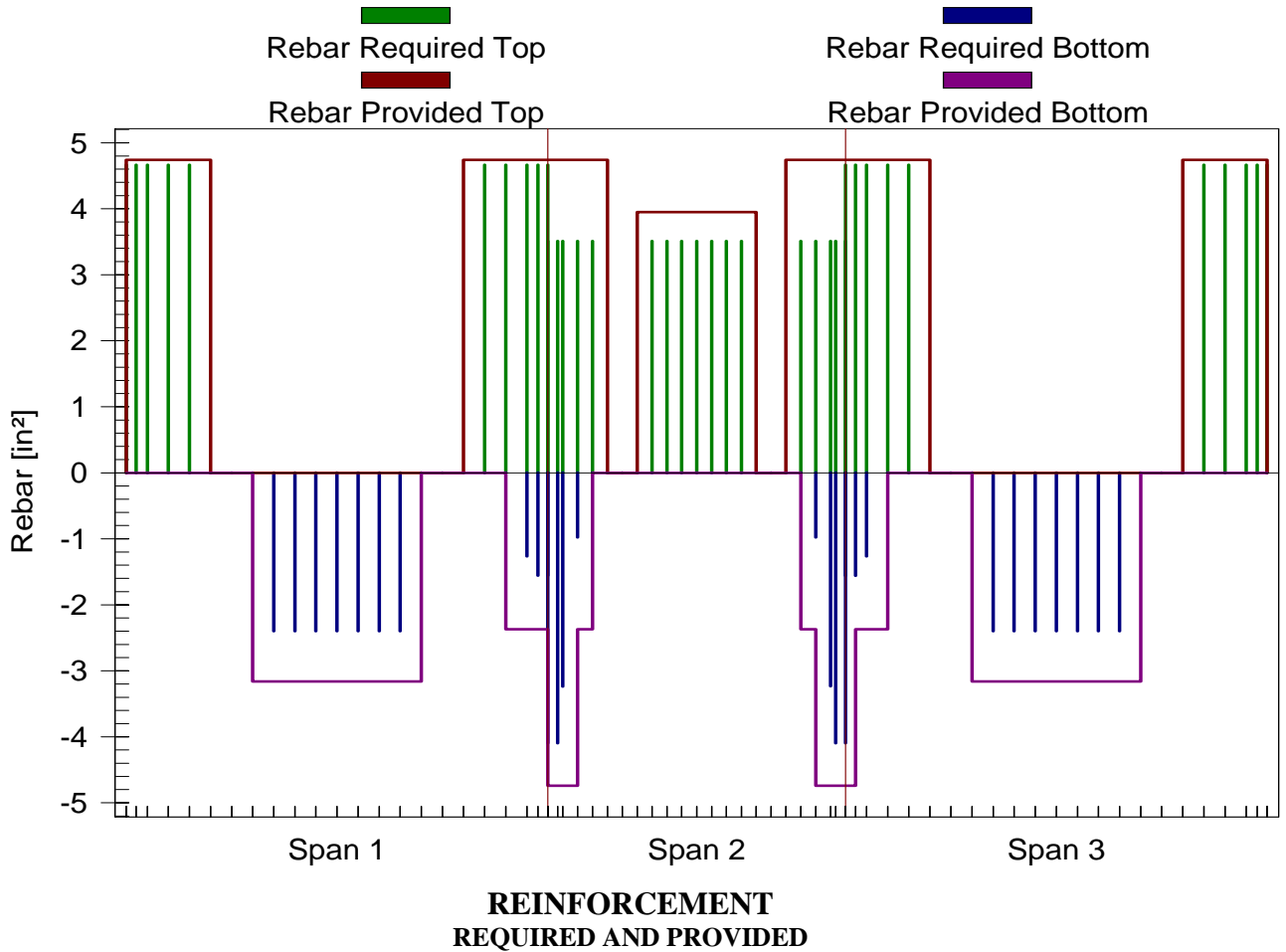
Moment Drawn on Tension Side



**DESIGN MOMENT**  
 (Moment is drawn on tension side)

# Rebar Diagrams

Project: "" / Load Case: Cracking\_Moment



Project Name: Specific Title:  
File Name: BBY Beam2 Date of Generation: Monday, April 06, 2009