

```
*****
*
*          STAAD.Pro V8i SELECTseries4          *
*          Version 20.07.09.31                  *
*          Proprietary Program of              *
*          Bentley Systems, Inc.               *
*          Date=   OCT  8, 2015                *
*          Time=   12:14:24                    *
*
*          USER ID: g                          *
*****
```

```
1. STAAD SPACE
INPUT FILE: Pre girder.STD
2. START JOB INFORMATION
3. ENGINEER DATE 30-APR-15
4. END JOB INFORMATION
5. INPUT WIDTH 79
6. UNIT METER KN
7. JOINT COORDINATES
8. 1 0 0 0; 2 41 0 0
9. MEMBER INCIDENCES
10. 1 1 2
11. DEFINE MATERIAL START
12. ISOTROPIC STEEL
13. E 2.05E+008
14. POISSON 0.3
15. DENSITY 76.8195
16. ALPHA 1.2E-005
17. DAMP 0.03
18. ISOTROPIC CONCRETE
19. E 2.17185E+007
20. POISSON 0.17
21. DENSITY 23.5616
22. ALPHA 1E-005
23. DAMP 0.05
24. END DEFINE MATERIAL
25. MEMBER PROPERTY AMERICAN
26. 1 PRIS YD 2 ZD 3 YB 1.75 ZB 0.3
27. CONSTANTS
28. MATERIAL CONCRETE ALL
29. SUPPORTS
30. 1 2 PINNED
31. DEFINE MOVING LOAD
32. TYPE 1 LOAD 23 23 96 96 57 57 57 57 57
33. DIST 1.1 3.2 1.2 4.3 3 3 3 3
34. LOAD 1 LOADTYPE DEAD TITLE LOAD CASE 1 DL
35. MEMBER LOAD
36. 1 UNI GY -50
37. LOAD 2 LOADTYPE LIVE TITLE LOAD CASE 2 LL
38. LOAD GENERATION 13
```

STAAD SPACE

-- PAGE NO. 2

39. TYPE 1 0 0 0 XINC 3
 40. LOAD 16 LOADTYPE LIVE TITLE LOAD CASE 16 PL
 **WARNING-A MOVING LOAD THAT WOULD HAVE BEEN APPLIED BEYOND THE X AND Z RANGES
 OF THE STRUCTURE HAS BEEN IGNORED. CASE= 10 WHEEL 9 OF 9
 **WARNING-A MOVING LOAD THAT WOULD HAVE BEEN APPLIED BEYOND THE X AND Z RANGES
 OF THE STRUCTURE HAS BEEN IGNORED. CASE= 11 WHEEL 8 OF 9
 **WARNING-A MOVING LOAD THAT WOULD HAVE BEEN APPLIED BEYOND THE X AND Z RANGES
 OF THE STRUCTURE HAS BEEN IGNORED. CASE= 11 WHEEL 9 OF 9
 **WARNING-A MOVING LOAD THAT WOULD HAVE BEEN APPLIED BEYOND THE X AND Z RANGES
 OF THE STRUCTURE HAS BEEN IGNORED. CASE= 12 WHEEL 7 OF 9
 **WARNING-A MOVING LOAD THAT WOULD HAVE BEEN APPLIED BEYOND THE X AND Z RANGES
 OF THE STRUCTURE HAS BEEN IGNORED. CASE= 12 WHEEL 8 OF 9
 **WARNING-A MOVING LOAD THAT WOULD HAVE BEEN APPLIED BEYOND THE X AND Z RANGES
 OF THE STRUCTURE HAS BEEN IGNORED. CASE= 12 WHEEL 9 OF 9
 **WARNING-A MOVING LOAD THAT WOULD HAVE BEEN APPLIED BEYOND THE X AND Z RANGES
 OF THE STRUCTURE HAS BEEN IGNORED. CASE= 13 WHEEL 6 OF 9
 **WARNING-A MOVING LOAD THAT WOULD HAVE BEEN APPLIED BEYOND THE X AND Z RANGES
 OF THE STRUCTURE HAS BEEN IGNORED. CASE= 13 WHEEL 7 OF 9
 **WARNING-A MOVING LOAD THAT WOULD HAVE BEEN APPLIED BEYOND THE X AND Z RANGES
 OF THE STRUCTURE HAS BEEN IGNORED. CASE= 13 WHEEL 8 OF 9
 **WARNING-A MOVING LOAD THAT WOULD HAVE BEEN APPLIED BEYOND THE X AND Z RANGES
 OF THE STRUCTURE HAS BEEN IGNORED. CASE= 13 WHEEL 9 OF 9
 *ADDITIONAL MOVING LOAD MESSAGES SUPPRESSED
 *ADDITIONAL MOVING LOAD MESSAGES SUPPRESSED
 41. MEMBER PRESTRESS LOAD
 42. 1 FORCE 12500 ES 0 EM -1 EE 0
 43. LOAD COMB 17 COMBINATION LOAD CASE 17 (1.25DL+2.5LL+1.2PL)
 44. 1 1.25 8 2.5 16 1.2
 45. LOAD COMB 18 COMBINATION LOAD CASE 18 (1.25DL+2.5LL+1.2PL)
 46. 1 1.25 3 2.5 16 1.2
 47. LOAD COMB 19 COMBINATION LOAD CASE 19 (1.25DL+ 1.2PL)
 48. 1 1.25 16 1.2
 49. LOAD COMB 20 COMBINATION LOAD CASE 20 (DL+ LL +PL)
 50. 1 1.0 7 1.0 16 1.0
 51. PERFORM ANALYSIS PRINT ALL

P R O B L E M S T A T I S T I C S

NUMBER OF JOINTS	2	NUMBER OF MEMBERS	1
NUMBER OF PLATES	0	NUMBER OF SOLIDS	0
NUMBER OF SURFACES	0	NUMBER OF SUPPORTS	2

SOLVER USED IS THE IN-CORE ADVANCED SOLVER

TOTAL PRIMARY LOAD CASES = 16, TOTAL DEGREES OF FREEDOM = 6

LOADING 1 LOADTYPE DEAD TITLE LOAD CASE 1 DL

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1	-50.0000	GY	0.00	41.00			

LOADING 2 LOADTYPE LIVE TITLE LOAD CASE 2 LL

LOADING 3

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000	GY	0.00	
1				-23.0000	GY	1.10	
1				-96.0000	GY	4.30	
1				-96.0000	GY	5.50	
1				-57.0000	GY	9.80	
1				-57.0000	GY	12.80	
1				-57.0000	GY	15.80	
1				-57.0000	GY	18.80	
1				-57.0000	GY	21.80	

LOADING 4

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000	GY	3.00	
1				-23.0000	GY	4.10	
1				-96.0000	GY	7.30	
1				-96.0000	GY	8.50	
1				-57.0000	GY	12.80	
1				-57.0000	GY	15.80	
1				-57.0000	GY	18.80	
1				-57.0000	GY	21.80	
1				-57.0000	GY	24.80	

STAAD SPACE

-- PAGE NO. 4

LOADING 5

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000	GY 6.00		
1				-23.0000	GY 7.10		
1				-96.0000	GY 10.30		
1				-96.0000	GY 11.50		
1				-57.0000	GY 15.80		
1				-57.0000	GY 18.80		
1				-57.0000	GY 21.80		
1				-57.0000	GY 24.80		
1				-57.0000	GY 27.80		

LOADING 6

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000	GY 9.00		
1				-23.0000	GY 10.10		
1				-96.0000	GY 13.30		
1				-96.0000	GY 14.50		
1				-57.0000	GY 18.80		
1				-57.0000	GY 21.80		
1				-57.0000	GY 24.80		
1				-57.0000	GY 27.80		
1				-57.0000	GY 30.80		

LOADING 7

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000	GY 12.00		
1				-23.0000	GY 13.10		
1				-96.0000	GY 16.30		
1				-96.0000	GY 17.50		
1				-57.0000	GY 21.80		
1				-57.0000	GY 24.80		
1				-57.0000	GY 27.80		
1				-57.0000	GY 30.80		

STAAD SPACE

-- PAGE NO. 5

1 -57.0000 GY 33.80

LOADING 8

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000 GY	15.00		
1				-23.0000 GY	16.10		
1				-96.0000 GY	19.30		
1				-96.0000 GY	20.50		
1				-57.0000 GY	24.80		
1				-57.0000 GY	27.80		
1				-57.0000 GY	30.80		
1				-57.0000 GY	33.80		
1				-57.0000 GY	36.80		

LOADING 9

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000 GY	18.00		
1				-23.0000 GY	19.10		
1				-96.0000 GY	22.30		
1				-96.0000 GY	23.50		
1				-57.0000 GY	27.80		
1				-57.0000 GY	30.80		
1				-57.0000 GY	33.80		
1				-57.0000 GY	36.80		
1				-57.0000 GY	39.80		

LOADING 10

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000 GY	21.00		
1				-23.0000 GY	22.10		
1				-96.0000 GY	25.30		
1				-96.0000 GY	26.50		
1				-57.0000 GY	30.80		
1				-57.0000 GY	33.80		
1				-57.0000 GY	36.80		

STAAD SPACE

-- PAGE NO. 6

1 -57.0000 GY 39.80

LOADING 11

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000 GY	24.00		
1				-23.0000 GY	25.10		
1				-96.0000 GY	28.30		
1				-96.0000 GY	29.50		
1				-57.0000 GY	33.80		
1				-57.0000 GY	36.80		
1				-57.0000 GY	39.80		

LOADING 12

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000 GY	27.00		
1				-23.0000 GY	28.10		
1				-96.0000 GY	31.30		
1				-96.0000 GY	32.50		
1				-57.0000 GY	36.80		
1				-57.0000 GY	39.80		

LOADING 13

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000 GY	30.00		
1				-23.0000 GY	31.10		
1				-96.0000 GY	34.30		
1				-96.0000 GY	35.50		
1				-57.0000 GY	39.80		

LOADING 14

STAAD SPACE

-- PAGE NO. 7

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000	GY	33.00	
1				-23.0000	GY	34.10	
1				-96.0000	GY	37.30	
1				-96.0000	GY	38.50	

LOADING 15

MEMBER LOAD - UNIT KN METE

MEMBER	UDL	L1	L2	CON	L	LIN1	LIN2
1				-23.0000	GY	36.00	
1				-23.0000	GY	37.10	
1				-96.0000	GY	40.30	

LOADING 16 LOADTYPE LIVE TITLE LOAD CASE 16 PL

***WARNING - INSTABILITY AT JOINT 2 DIRECTION = MX
 PROBABLE CAUSE SINGULAR-ADDING WEAK SPRING
 K-MATRIX DIAG= 5.7784660E+04 L-MATRIX DIAG= 1.4551915E-11 EQN NO 4
 ***NOTE - VERY WEAK SPRING ADDED FOR STABILITY

FOR LOADING - 1

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-1.02500E+03	0.00000E+00	0.00000E+00	0.00000E+00	-7.00417E+03
2	0.00000E+00	-1.02500E+03	0.00000E+00	0.00000E+00	0.00000E+00	7.00417E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 1
 LOADTYPE DEAD TITLE LOAD CASE 1 DL

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.204999996E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 1)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -2050.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-
 MX= 0.00 MY= 0.00 MZ= -42024.99

***TOTAL REACTION LOAD(KN METE) SUMMARY (LOADING 1)
 SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 2050.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-
 MX= 0.00 MY= 0.00 MZ= 42024.99

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 1)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= 1.47996E-02 2

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/		
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ		
							SUPPORT=1	
1	0.00	-1025.00	0.00	0.00	0.00	-7004.17		
	0.00	0.00	0.00	0.00	0.00	7004.17	111000	
2	0.00	-1025.00	0.00	0.00	0.00	7004.17		
	0.00	0.00	0.00	0.00	0.00	-7004.17	111000	

FOR LOADING - 2
 APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
-------	---------	---------	---------	-------	-------	-------

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 2
 LOADTYPE LIVE TITLE LOAD CASE 2 LL

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 2)
 SUMMATION FORCE-X = 0.0000000E+00
 SUMMATION FORCE-Y = 0.0000000E+00
 SUMMATION FORCE-Z = 0.0000000E+00

SUMMATION OF MOMENTS AROUND THE ORIGIN-
 MX= 0.0000000E+00 MY= 0.0000000E+00 MZ= 0.0000000E+00

***TOTAL REACTION LOAD(KN METE) SUMMARY (LOADING 2)
 SUMMATION FORCE-X = 0.0000000E+00
 SUMMATION FORCE-Y = 0.0000000E+00
 SUMMATION FORCE-Z = 0.0000000E+00

SUMMATION OF MOMENTS AROUND THE ORIGIN-
 MX= 0.0000000E+00 MY= 0.0000000E+00 MZ= 0.0000000E+00

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 2)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= 0.00000E+00 0

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ

SUPPORT=1

FOR LOADING - 3

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-4.18834E+02	0.00000E+00	0.00000E+00	0.00000E+00	-2.34618E+03
2	0.00000E+00	-1.04166E+02	0.00000E+00	0.00000E+00	0.00000E+00	1.14779E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 3

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.104573497E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 3)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -5469.19

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 3)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 5469.19

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 3)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= -4.11861E-03 1

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-418.83	0.00	0.00	0.00	-2346.18	
	0.00	29.23	0.00	0.00	0.00	2346.18	111000
2	0.00	-104.17	0.00	0.00	0.00	1147.79	
	0.00	-29.23	0.00	0.00	0.00	-1147.79	111000

FOR LOADING - 4

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-3.77717E+02	0.00000E+00	0.00000E+00	0.00000E+00	-2.61460E+03
2	0.00000E+00	-1.45283E+02	0.00000E+00	0.00000E+00	0.00000E+00	1.53312E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 4

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.134571719E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 4)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -7038.10

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 4)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 7038.10

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 4)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= -4.76760E-03 1

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-377.72	0.00	0.00	0.00	-2614.60	
	0.00	26.38	0.00	0.00	0.00	2614.60	111000
2	0.00	-145.28	0.00	0.00	0.00	1533.12	
	0.00	-26.38	0.00	0.00	0.00	-1533.12	111000

FOR LOADING - 5

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-3.30827E+02	0.00000E+00	0.00000E+00	0.00000E+00	-2.64998E+03
2	0.00000E+00	-1.92173E+02	0.00000E+00	0.00000E+00	0.00000E+00	1.92197E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 5

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.164571703E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 5)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -8607.10

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 5)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 8607.10

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 5)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= -5.08977E-03 1

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-330.83	0.00	0.00	0.00	-2649.98	
	0.00	17.76	0.00	0.00	0.00	2649.98	111000
2	0.00	-192.17	0.00	0.00	0.00	1921.97	
	0.00	-17.76	0.00	0.00	0.00	-1921.97	111000

FOR LOADING - 6

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-2.80624E+02	0.00000E+00	0.00000E+00	0.00000E+00	-2.50263E+03
2	0.00000E+00	-2.42376E+02	0.00000E+00	0.00000E+00	0.00000E+00	2.26393E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 6

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.194571698E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 6)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -10176.10

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 6)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 10176.10

STAAD SPACE

-- PAGE NO. 13

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 6)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= -5.12092E-03 1

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-280.62	0.00	0.00	0.00	-2502.63	
	0.00	5.82	0.00	0.00	0.00	2502.63	111000
2	0.00	-242.38	0.00	0.00	0.00	2263.93	
	0.00	-5.82	0.00	0.00	0.00	-2263.93	111000

FOR LOADING - 7

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-2.29567E+02	0.00000E+00	0.00000E+00	0.00000E+00	-2.22295E+03
2	0.00000E+00	-2.93433E+02	0.00000E+00	0.00000E+00	0.00000E+00	2.50862E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 7

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.224571690E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 7)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -11745.10

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 7)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 11745.10

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 7)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= 5.10070E-03 2

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-229.57	0.00	0.00	0.00	-2222.95	
	0.00	-6.97	0.00	0.00	0.00	2222.95	111000
2	0.00	-293.43	0.00	0.00	0.00	2508.62	
	0.00	6.97	0.00	0.00	0.00	-2508.62	111000

FOR LOADING - 8

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-1.80113E+02	0.00000E+00	0.00000E+00	0.00000E+00	-1.86136E+03
2	0.00000E+00	-3.42887E+02	0.00000E+00	0.00000E+00	0.00000E+00	2.60561E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 8

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.254571688E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 8)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -13314.10

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 8)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 13314.10

STAAD SPACE

-- PAGE NO. 15

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 8)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= 4.98466E-03 2

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-180.11	0.00	0.00	0.00	-1861.36	
	0.00	-18.15	0.00	0.00	0.00	1861.36	111000
2	0.00	-342.89	0.00	0.00	0.00	2605.61	
	0.00	18.15	0.00	0.00	0.00	-2605.61	111000

FOR LOADING - 9

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-1.34722E+02	0.00000E+00	0.00000E+00	0.00000E+00	-1.46824E+03
2	0.00000E+00	-3.88278E+02	0.00000E+00	0.00000E+00	0.00000E+00	2.50452E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 9

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.284571688E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 9)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -14883.10

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 9)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 523.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 14883.10

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 9)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= 4.56665E-03 2

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-134.72	0.00	0.00	0.00	-1468.24	
	0.00	-25.28	0.00	0.00	0.00	1468.24	111000
2	0.00	-388.28	0.00	0.00	0.00	2504.52	
	0.00	25.28	0.00	0.00	0.00	-2504.52	111000

FOR LOADING - 10

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-9.55136E+01	0.00000E+00	0.00000E+00	0.00000E+00	-1.08930E+03
2	0.00000E+00	-3.70486E+02	0.00000E+00	0.00000E+00	0.00000E+00	2.26674E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 10

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.300697439E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 10)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -466.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -14012.50

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 10)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 466.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 14012.50

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 10)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= 3.96543E-03 2

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-95.51	0.00	0.00	0.00	-1089.30	
	0.00	-28.72	0.00	0.00	0.00	1089.30	111000
2	0.00	-370.49	0.00	0.00	0.00	2266.74	
	0.00	28.72	0.00	0.00	0.00	-2266.74	111000

FOR LOADING - 11

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-6.30973E+01	0.00000E+00	0.00000E+00	0.00000E+00	-7.48568E+02
2	0.00000E+00	-3.45903E+02	0.00000E+00	0.00000E+00	0.00000E+00	1.95968E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 11

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.317136926E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 11)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -409.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -12970.90

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 11)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 409.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 12970.90

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 11)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= 3.29304E-03 2

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-63.10	0.00	0.00	0.00	-748.57	
	0.00	-29.54	0.00	0.00	0.00	748.57	111000
2	0.00	-345.90	0.00	0.00	0.00	1959.68	
	0.00	29.54	0.00	0.00	0.00	-1959.68	111000

FOR LOADING - 12

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-3.76723E+01	0.00000E+00	0.00000E+00	0.00000E+00	-4.62627E+02
2	0.00000E+00	-3.14328E+02	0.00000E+00	0.00000E+00	0.00000E+00	1.59176E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 12

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.334042634E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 12)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -352.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -11758.30

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 12)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 352.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 11758.30

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 12)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= 2.57302E-03 2

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-37.67	0.00	0.00	0.00	-462.63	
	0.00	-27.54	0.00	0.00	0.00	462.63	111000
2	0.00	-314.33	0.00	0.00	0.00	1591.76	
	0.00	27.54	0.00	0.00	0.00	-1591.76	111000

FOR LOADING - 13

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-1.91695E+01	0.00000E+00	0.00000E+00	0.00000E+00	-2.42575E+02
2	0.00000E+00	-2.75831E+02	0.00000E+00	0.00000E+00	0.00000E+00	1.17693E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 13

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.351684770E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 13)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -295.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -10374.70

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 13)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 295.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 10374.70

STAAD SPACE

-- PAGE NO. 20

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 13)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= 1.83282E-03 2

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-19.17	0.00	0.00	0.00	-242.58	
	0.00	-22.79	0.00	0.00	0.00	242.58	111000
2	0.00	-275.83	0.00	0.00	0.00	1176.93	
	0.00	22.79	0.00	0.00	0.00	-1176.93	111000

FOR LOADING - 14

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-7.25188E+00	0.00000E+00	0.00000E+00	0.00000E+00	-9.40140E+01
2	0.00000E+00	-2.30748E+02	0.00000E+00	0.00000E+00	0.00000E+00	7.34586E+02

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 14

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.370592460E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 14)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -238.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -8820.10

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 14)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 238.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 8820.10

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 14)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= 1.10380E-03 2

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-7.25	0.00	0.00	0.00	-94.01	
	0.00	-15.62	0.00	0.00	0.00	94.01	111000
2	0.00	-230.75	0.00	0.00	0.00	734.59	
	0.00	15.62	0.00	0.00	0.00	-734.59	111000

FOR LOADING - 15

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	0.00000E+00	-1.61047E+00	0.00000E+00	0.00000E+00	0.00000E+00	-2.11626E+01
2	0.00000E+00	-1.40390E+02	0.00000E+00	0.00000E+00	0.00000E+00	2.27033E+02

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 15

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.390852129E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 15)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = -142.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= -5550.10

***TOTAL REACTION LOAD (KN METE) SUMMARY (LOADING 15)

SUMMATION FORCE-X = 0.00
 SUMMATION FORCE-Y = 142.00
 SUMMATION FORCE-Z = 0.00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.00 MY= 0.00 MZ= 5550.10

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 15)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= 3.35617E-04 2

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	0.00	-1.61	0.00	0.00	0.00	-21.16	
	0.00	-5.02	0.00	0.00	0.00	21.16	111000
2	0.00	-140.39	0.00	0.00	0.00	227.03	
	0.00	5.02	0.00	0.00	0.00	-227.03	111000

FOR LOADING - 16

APPLIED JOINT EQUIVALENT LOADS

JOINT	FORCE-X	FORCE-Y	FORCE-Z	MOM-X	MOM-Y	MOM-Z
1	1.24404E+04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	8.33333E+03
2	-1.24404E+04	1.35749E-04	0.00000E+00	0.00000E+00	0.00000E+00	-8.33333E+03

STATIC LOAD/REACTION/EQUILIBRIUM SUMMARY FOR CASE NO. 16
 LOADTYPE LIVE TITLE LOAD CASE 16 PL

CENTER OF FORCE BASED ON Y FORCES ONLY (METE).
 (FORCES IN NON-GLOBAL DIRECTIONS WILL INVALIDATE RESULTS)

X = 0.409999992E+02
 Y = 0.000000000E+00
 Z = 0.000000000E+00

***TOTAL APPLIED LOAD (KN METE) SUMMARY (LOADING 16)

SUMMATION FORCE-X = 0.0000000E+00
 SUMMATION FORCE-Y = 1.3574895E-04
 SUMMATION FORCE-Z = 0.0000000E+00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.0000000E+00 MY= 0.0000000E+00 MZ= 5.5657062E-03

***TOTAL REACTION LOAD(KN METE) SUMMARY (LOADING 16)

SUMMATION FORCE-X = 0.0000000E+00
 SUMMATION FORCE-Y = -1.3574895E-04
 SUMMATION FORCE-Z = 0.0000000E+00

SUMMATION OF MOMENTS AROUND THE ORIGIN-

MX= 0.0000000E+00 MY= 0.0000000E+00 MZ= -5.5657062E-03

MAXIMUM DISPLACEMENTS (CM /RADIANS) (LOADING 16)
 MAXIMUMS AT NODE
 X = 0.00000E+00 0
 Y = 0.00000E+00 0
 Z = 0.00000E+00 0
 RX= 0.00000E+00 0
 RY= 0.00000E+00 0
 RZ= 1.76081E-02 1

EXTERNAL AND INTERNAL JOINT LOAD SUMMARY (KN METE)-

JT	EXT FX/	EXT FY/	EXT FZ/	EXT MX/	EXT MY/	EXT MZ/	
	INT FX	INT FY	INT FZ	INT MX	INT MY	INT MZ	
							SUPPORT=1
1	12440.37	0.00	0.00	0.00	0.00	8333.33	
	0.00	0.00	0.00	0.00	0.00	-8333.33	111000
2	-12440.37	0.00	0.00	0.00	0.00	-8333.33	
	0.00	0.00	0.00	0.00	0.00	8333.33	111000

LOAD COMBINATION NO. 17
 COMBINATION LOAD CASE 17 (1.25DL+2.5LL+1.2PL)

LOADING- 1. 8. 16.
 FACTOR - 1.25 2.50 1.20

LOAD COMBINATION NO. 18
 COMBINATION LOAD CASE 18 (1.25DL+2.5LL+1.2PL)

LOADING- 1. 3. 16.
 FACTOR - 1.25 2.50 1.20

LOAD COMBINATION NO. 19
 COMBINATION LOAD CASE 19 (1.25DL+ 1.2PL)

LOADING- 1. 16.
 FACTOR - 1.25 1.20

LOAD COMBINATION NO. 20
 COMBINATION LOAD CASE 20 (DL+ LL +PL)

LOADING- 1. 7. 16.
 FACTOR - 1.00 1.00 1.00

***** END OF DATA FROM INTERNAL STORAGE *****

- 52. LOAD LIST 17 TO 20
- 53. START CONCRETE DESIGN
- 54. CODE IS13920
- 55. FC 60000 ALL
- 56. FYMAIN 500000 ALL
- 57. FYSEC 500000 ALL
- 58. DESIGN BEAM ALL

*** WARNING : WIDTH-TO-DEPTH RATIO OF BEAM # 1 SHALL PREFERABLY BE MORE THAN 0.3 AS PER CL 6.1.2

*** WARNING : UDL LOADING IS NOT DEFINED FOR MEMBER # 1.
 DEFAULT VALUE WILL BE USED.

=====

B E A M N O. 1 D E S I G N R E S U L T S

M60 Fe500 (Main) Fe500 (Sec.)

LENGTH: 41000.0 mm SIZE: 300.0 mm X 2000.0 mm COVER: 25.0 mm

FLANGE WIDTH: 3000.0 mm FLANGE DEPTH: 250.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	10250.0 mm	20500.0 mm	30750.0 mm	41000.0 mm
TOP REINF.	0.00 (Sq. mm)	2177.81 (Sq. mm)	2275.30 (Sq. mm)	2177.81 (Sq. mm)	0.00 (Sq. mm)
BOTTOM REINF.	0.00 (Sq. mm)	5751.19 (Sq. mm)	9075.60 (Sq. mm)	6777.92 (Sq. mm)	0.00 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	10250.0 mm	20500.0 mm	30750.0 mm	41000.0 mm
TOP REINF.	2-16i 1 layer(s)	11-16i 2 layer(s)	12-16i 2 layer(s)	11-16i 2 layer(s)	2-16i 1 layer(s)
BOTTOM REINF.	2-50i 1 layer(s)	3-50i 1 layer(s)	5-50i 2 layer(s)	4-50i 2 layer(s)	2-50i 1 layer(s)
SHEAR REINF.	2 legged 8i @ 120 mm c/c	2 legged 8i @ 300 mm c/c	2 legged 8i @ 300 mm c/c	2 legged 8i @ 300 mm c/c	2 legged 8i @ 120 mm c/c

Provide 5-10i along each face of the beam (Side face reinf.)

*****END OF BEAM DESIGN RESULTS*****

59. END CONCRETE DESIGN
 60. FINISH

***** END OF THE STAAD.Pro RUN *****

**** DATE= OCT 8,2015 TIME= 12:14:37 ****

```
*****
*           For questions on STAAD.Pro, please contact           *
*           Bentley Systems or Partner offices                   *
*                                                                 *
*           Telephone           Web / Email                     *
* USA           +1 (714) 974-2500                               *
* UK            +44 (0) 808 101 9246                            *
* SINGAPORE    +65 6225-6158                                    *
* FRANCE       +33 (0) 1 55238400                              *
* GERMANY      +49 0931 40468                                   *
* INDIA        +91 (033) 4006-2021                             *
* JAPAN        +81 (03)5952-6500   http://www.ctc-g.co.jp      *
* CHINA        +86 21 6288 4040                                 *
* THAILAND     +66 (0)2645-1018/19 partha.p@reisoftwareth.com*
*                                                                 *
* Worldwide    http://selectservices.bentley.com/en-US/       *
*                                                                 *
*****
```