

PRILOGA 1C
NASLOVNA STRAN NAČRTA

2 – načrt s področja gradbeništva
2/3 NAČRT SANACIJE IN OJAČITVE VIADUKTOV
VA0045 IN VA0046 DOLGI MOST

PODATKI O GRADNJI

IZN za začasno ojačitev in sanacijo objektov VA0045 in VA0046.	
naziv gradnje	
kratek opis gradnje	Izvedbeni načrt (IZN) za predhodno ojačitev objektov VA0045 in VA0046 z odpravo najbolj kritičnih poškodb za zagotavljanje mehanske odpornosti in stabilnost ter varne uporabe za nadaljnjih 10 let.
VRSTE GRADNJE	NOVOGRADNJA - NOVOZGRAJEN OBJEKT
<i>označiti vse ustrezne vrste gradnje</i>	NOVOGRADNJA - PRIZIDAVA
	REKONSTRUKCIJA
	SPREMEMBA NAMEBNOSTI
	ODSTRANITEV CELOTNEGA OBJEKTA
	LEGALIZACIJA
	X VZDRŽEVALNA DELA V JAVNO KORIST

PODATKI O PROJEKTNI DOKUMENTACIJI

vrsta dokumentacije	IZN (izvedbeni načrt)
številka projekta	4466

PODATKI O NAČRTU

strokovno področje načrta	2 – načrt s področja gradbeništva
naziv načrta	2/3 NAČRT SANACIJE IN OJAČITVE VIADUKTOV VA0045 IN VA0046 DOLGI MOST
številka načrta	7-6/2021
datum izdelave	marec 2026, dopolnjeno maj 2026
datum spremembe	

PODATKI O PROJEKTANTU NAČRTA

projektant načrta (naziv družbe)	PROMICO d.o.o.
naslov	Šmartinska cesta 56, 1000 Ljubljana
odgovorna oseba projektanta načrta	
podpis odgovorne osebe projektanta načrta	



PODATKI O IZDELOVALCU NAČRTA

ime in priimek pooblaščenega arhitekta, pooblaščenega inženirja	
identifikacijska številka	
podpis pooblaščenega arhitekta, pooblaščenega inženirja	

vsebina zvezka

Zvezek 2 od 3: Tehnični del

Številka odseka	Arhivska št.	Faza / objekt	Šifra priloge	Prostor za črtno kodo
0016, 0616	0245.00	004.2160	S.1	

2/3 NAČRT SANACIJE IN OJAČITVE VIADUKTOV VA0045 IN VA0046 DOLGI MOST
Zvezek 1 od 3 – Splošni del, Tehnični del

S	<u>Splošni del</u>
S.1	Naslovna stran načrta (priloga 1C)
S.2.1	Podatki o projektantih sodelavcih načrta
S.3.2	Kazalo vsebine načrta št. 7-6/2021
S.5.1	Izjava projektanta načrta in pooblaščenega strokovnjaka ki je izdelal načrt IZN (priloga 2C)
S.6.	Dokumentacija o recenziji
T	<u>Tehnični del</u>
T.1.1	Tehnično poročilo
T.1.2	Statični račun 1. del

Zvezek 2 od 3 – Tehnični del

S	<u>Splošni del</u>
S.1	Naslovna stran načrta (priloga 1C)
S.3.2	Kazalo vsebine načrta št. 7-6/2021
T	<u>Tehnični del</u>
T.1.2	Statični račun 2. del
T.2.1	Projektantski popis
T.1.2	Projektantski predračun

Številka odseka	Arhivska št.	Faza / objekt	Šifra priloge	Prostor za črtno kodo
0016, 0616	0245.00	004.2160	S.3.2	

2/3 NAČRT SANACIJE IN OJAČITVE VIADUKTOV VA0045 IN VA0046 DOLGI MOST
Zvezek 3 od 3 – Risbe

S	<u>Splošni del</u>
S.1	Naslovna stran načrta (priloga 1C)
S.3.2	Kazalo vsebine načrta št. 7-6/2021

šifra risbe	Risbe	merilo	št. lista
G	<u>Cestne podloge</u>		
G.202	Gradbena situacija s prikazom obstoječe komunalne infrastrukture	M 1:1000	C1
G	<u>Splošni načrti</u>		
G.221.1	Tloris in vzdolžni prerez obstoječega stanja	M 1:200	1
G.231.1	Karakteristični prečni prerez obstoječega stanja	M 1:25	2
G.221.2	Tloris in vzdolžni prerez rekonstruiranega stanja	M 1:200	3
G.231.2	KPP rekonstruiranega stanja	M 1:25	4
G.239.1	Rekonstrukcija podpor	M 1:50	5
G.255.1	Tehnologija v polju 1 in 2 (območje Tržaške c.)	M 1:200/100	6
G.255.2	Tehnologija v polju 3 (območje P+R)	M 1:200/100	7
G.255.3	Tehnologija v polju 4 in 5 (območje železnice)	M 1:200/100	8
G.255.4	Tehnologija v polju 8 in 9 (vodotok, lok. cesta)	M 1:200/100	9
G.255.5	Kataster poškodb – Desni viadukt od osi 1 do 3	M 1:100	10
G.255.6	Kataster poškodb – Desni viadukt od osi 4 do 6	M 1:100	11
G.255.7	Kataster poškodb – Desni viadukt od osi 7 do 9	M 1:100	12
G.255.8	Kataster poškodb – Levi viadukt od osi 1 do 3	M 1:100	13
G.255.9	Kataster poškodb – Levi viadukt od osi 4 do 6	M 1:100	14
G.255.10	Kataster poškodb – Levi viadukt od osi 7 do 9	M 1:100	15
G	<u>Detajli sanacije in ojačitev</u>		
G.251.1	Detajl sanacije poškodb betonskih površin z lokalno reprofilacijo	M 1:10/5	D-1
G.251.2	Dispozicija ojačitvenih ukrepov	M 1:500/100	D-2
G.251.3	Ojačitev nosilca L=34.20 m z zunanjimi kabli (BBR 2x 2x2 15,7mm)	M 1:50/10/1	D-3
G.251.4	Ojačitev nosilca L=39.20 m z zunanjimi kabli (BBR 2x 2x2 15,7mm)	M 1:50/10/1	D-4
G.251.5	Ojačitev nosilca L=34.20 m z zunanjimi kabli (2x 12 Φ15,7 mm)	M 1:50/10/1	D-5
G.251.6	Ojačitev nosilca L=39.20 m z zunanjimi kabli (2x 12 Φ15,7 mm)	M 1:50/10/1	D-6
G.251.7	Obbetoniranje glave stebra	M 1:25	D-7

Številka odseka	Arhivska št.	Faza / objekt	Šifra priloge	Prostor za črtno kodo
0016, 0616	0245.00	004.2160	S.3.2	

T.1.2	Statični račun 2. del
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<i>Številka projekta</i>	4466
<i>Številka načrta</i>	7-6/2021

Številka odseka	Arhivska št.	Faza / objekt	Šifra priloge	Prostor za črtno kodo
0016, 0616	0245.00	004.2160	T.1.2	

2/3 – NAČRT SANACIJE IN OJAČITVE VIADUKTOV VA0046 in VA0046 DOLGI MOST STATIČNI IZRAČUN

SPLOŠNI PODATKI:

PROJEKT: **IZN za začasno ojačitev in sanacijo objektov VA0045 in VA0046**

Številka projekta: 4466

Številka načrta: 7-6/2021

Faza projekta : PZI

PROJEKT ZA IZVEDBO

DATUM: januar 2026

Pripravil:

VSEBINA STATIČNE ANALIZE

1 SPLOŠNO

1.1 OBSTOJEČA KONSTRUKCIJA

1.2 PREDPISI IN STANDARDI

1.3 PODLOGE

1.4 MATERIALI

- 1.4.1 PILOTI
- 1.4.2 PILOTNE BLAZINE
- 1.4.3 STEBRI, OPORNIKI
- 1.4.4 PREKLADNA NOSILCI IN AB PLOŠČA

1.5 RAČUNSKI MODELI

- 1.5.1 KONSTRUKCIJA
- 1.5.2 OZNAKE KONSTRUKCIJSKIH ELEMENTOV
- 1.5.3 PREČNI PREREZI
- 1.5.4 TOGOST LEŽIŠČ

1.6 PREDNAPENJANJE

- 1.6.1 Obstoječi vgrajeni kabli za prednapenjanje
- 1.6.2 Novi kabli za ojačitve

1.7 GEOMEHANSKI POGOJI

2 ANALIZA VPLIVOV

2.1 STALNI VPLIVI

- 2.1.1 LASTNA TEŽA
- 2.1.2 STALNA OBTEŽBA KROVA

2.2 SPREMENLJIVI VPLIVI

- 2.2.1 PROMETNA OBTEŽBA
- 2.2.2 OBTEŽBA VETRA
- 2.2.3 TEMPERATURNI VPLIVI

2.3 POTRESNI VPLIVI

2.4 KOMBINACIJE VPLIVOV

- 2.4.1 MEJNO STANJE NOSILNOSTI
- 2.4.2 MEJNO STANJE UPORABNOSTI
- 2.4.3 Vrednost faktorjev ψ
- 2.4.4 Projektne vrednosti za dimenzioniranje
- 2.4.5 PREGLED KOMBINACIJ

3 ANALIZA PREKLADNE KONSTRUKCIJE

3.1 VGRAJENA ARMATURA

3.2 NOTRANJE SILE

3.3 KONTROLA NOSILNOSTI PREREZA NA UPOGIB

- 3.3.1 KONTROLA NOSILNOSTI FEM ANALIZA
- 3.3.2 KONTROLA NOSILNOSTI – NOSILEC 38,4 m VMESNI
- 3.3.3 KONTROLA NOSILNOSTI – NOSILEC 38,4 m FASADNI
- 3.3.4 DIMENZIONIRANJE OJAČITEV NOSILCI 38,4m, fasadni N1 C2+2
- 3.3.5 KONTROLA NOSILNOSTI – NOSILEC 33,4 m VMESNI
- 3.3.6 KONTROLA NOSILNOSTI – NOSILEC 33,4 m FASADNI
- 3.3.7 KONTROLA NOSILNOSTI – POLJE 3, NOSILEC N5 (levi objekt)
- 3.3.8 KONTROLA NOSILNOSTI – POLJE 7, NOSILEC N1 (levi objekt)
- 3.3.9 DIMENZIONIRANJE OJAČITEV POLJE 3 in 7, fasadni nosilec 33,4m:
- 3.3.10 KONTROLA NOSILNOSTI – POLJE 9, NOSILEC N5 (levi objekt)
- 3.3.11 DIMENZIONIRANJE OJAČITEV POLJE 9, fasadni nosilec 33,4m:

- 3.3.12 KONTROLA NOSILNOSTI – POLJE 6, NOSILEC N1 (desni objekt)
- 3.3.13 DIMENZIONIRANJE OJAČITEV POLJE 6, fasadni nosilec 38,4m:
- 3.3.14 KONTROLA NOSILNOSTI – POLJE 7, NOSILEC N5 (desni objekt)
- 3.3.15 DIMENZIONIRANJE OJAČITEV POLJE 7, fasadni nosilec 38,4m:
- 3.3.16 KONTROLA NOSILNOSTI – PREČNIK
- 3.3.17 POVZETEK REZULTATOV

3.4 STRIŽNA NOSILNOST PREREZA

- 3.4.1 VZDOLŽNI NOSILCI 33,4m FASADNI
- 3.4.2 VZDOLŽNI NOSILCI 33,4m FASADNI
- 3.4.3 VZDOLŽNI NOSILCI 33,4m FASADNI
- 3.4.4 PREČNI NOSILCI

3.5 KONTROLA NAPETONSTI

- 3.5.1 KONTROLA NAPETOSTI SLS, kvazi-stalna
- 3.5.2 KONTROLA NAPETOSTI SLS, karakteristična
- 3.5.3 KONTROLA NAPETOSTI KABLI
- 3.5.4 IZPIS NAPETOSTI ZA POSAMEZNE OBTEŽNE PRIMERE MODEL 35+35+35
- 3.5.5 IZPIS NAPETOSTI ZA POSAMEZNE OBTEŽNE PRIMERE MODEL 35+40+40
- 3.5.6 IZPIS NAPETOSTI ZA POSAMEZNE OBTEŽNE PRIMERE MODEL 35+40+40, C2+2

3.6 KONTROLA DEKOMPRESIJE

4 ANALIZA PREKLADNE KONSTRUKCIJE – PREČNA SMER

4.1 VHODNI PODATKI

- 4.1.1 RAČUNSKI MODEL
- 4.1.2 OBTEŽBE

4.2 IZPIS NOTRANJIH SIL

4.3 KONTROLA NOSILNOSTI

- 4.3.1 AB PLOŠČA nad podporo
- 4.3.2 AB PLOŠČA v polju

5 ANALIZA PODPORNEGA SISTEMA

5.1 VGRAJENA ARMATURA

5.2 NOTRANJE SILE PODPORNI SISTEM

- 5.2.1 NOTRANJE SILE MODEL 35+35+35
- 5.2.2 NOTRANJE SILE MODEL 35+40+40 C2+2

5.3 IZRAČUN POTREBNE ARMATURE

5.4 KONTROLA NOSILNOSTI PREREZA IN KONTROLA NAPETOSTI

- 5.4.1 GLAVA STEBRA MODEL 35+35+35m
- 5.4.2 GLAVA STEBRA MODEL 35+40+40m
- 5.4.3 GLAVA STEBRA MODEL 35+40+40m, C2+2

5.5 KONTROLA PREREZA NA STRIG

- 5.5.1 PREVERBA STRIŽNE NOSILNOSTI OBSTOJEČEGA PREREZA
- 5.5.2 DIMENZIONIRANJE STRIŽNIH OJAČITEV

5.6 KONTROLA NAPETOSTI

5.7 KONTROLA DEKOMPRESIJE

6 DODATNE KONTROLE

6.1 SIDRNI BLOK ZA PREDNAPENJANJE

7 ZAKLJUČEK

8 PRILOGE

8.1 NOTRANJE SILE PREKLADNA KONSTRUKCIJA RAČUNSKI MODEL I. – 35+35+35 m

8.2 NOTRANJE SILE PREKLADNA KONSTRUKCIJA RAČUNSKI MODEL II. – 35+40+40m

8.3 NOTRANJE SILE PREKLADNA KONSTRUKCIJA RAČUNSKI MODEL III. – 35+40+40, C2+2

5 ANALIZA PODPORNEGA SISTEMA

Analiza podpornega sistema je izvedena v sklopu globalne analize objekta z gradbenih faz, časovnih vplivov kot je krčenje in drugih spremenljivih vplivov skladno z Evrokod predpisi.

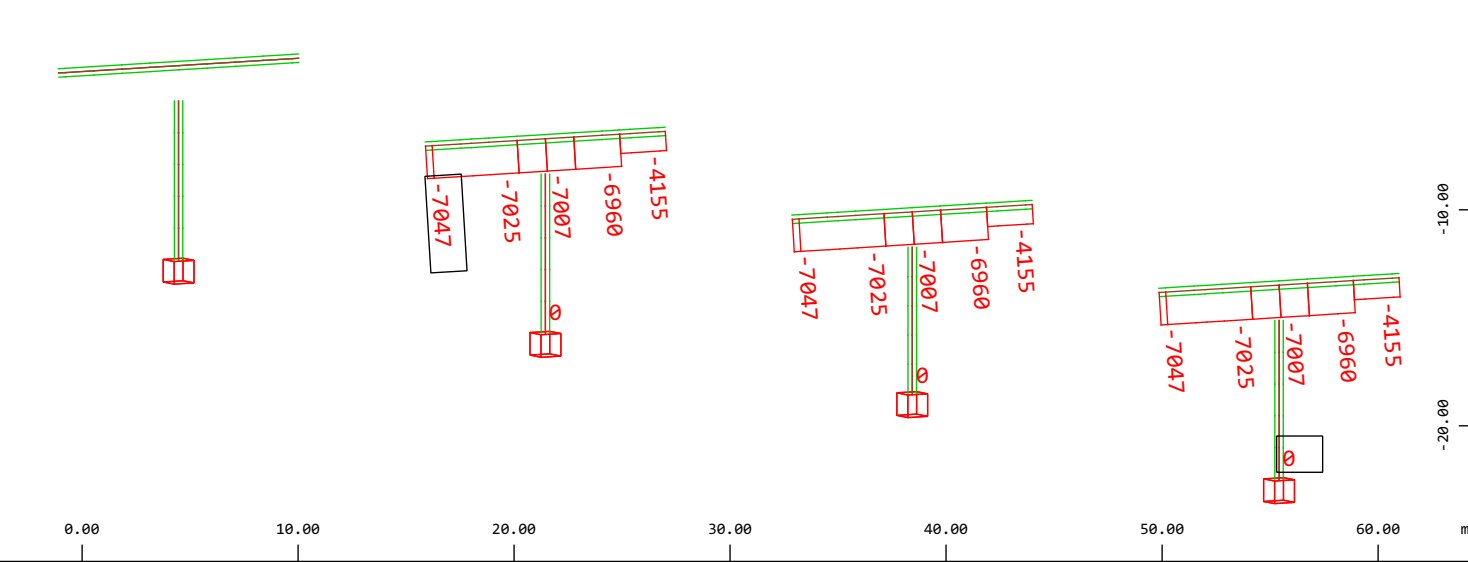
5.1 VGRAJENA ARMATURA

AB STEBRI													
	Kvaliteta:	ČBR40-2											
razporeditev		Φ	19	/	25	cm	→	$A_s =$	11,34	cm^2/m			
skupno	84	Φ	19	/	25/20	cm	→	$A_s =$	238,16	cm^2/m			

GLAVA STEBROV													
	Kvaliteta:		ČBR40-2										
	Prerez C-C												
spodaj	12	Φ	14	/	20	cm	→	A _s =	18,47	cm ²			
bočno	8	Φ	14	/	20	cm	→	A _s =	12,32	cm ²			
Zgoraj	18	Φ	14	/	20/10	cm	→	A _s =	27,71	cm ²			
	12	Φ	14	/	20/10	cm	→	A _s =	18,47	cm ²	20 cm od zg. roba!		
Strižna armatura													
	Φ	14	/	20	cm	→	A _s =	7,70	cm ² /m	n = 4	A _s =	30,79	cm ² /m
	Φ	14	/	40	cm	→	A _s =	3,85	cm ² /m	n = 2	A _s =	7,70	cm ² /m
											A _s =	38,48	cm ² /m

5.2 NOTRANJE SILE PODPORNİ SISTEM

5.2.1 NOTRANJE SILE MODEL 35+35+35



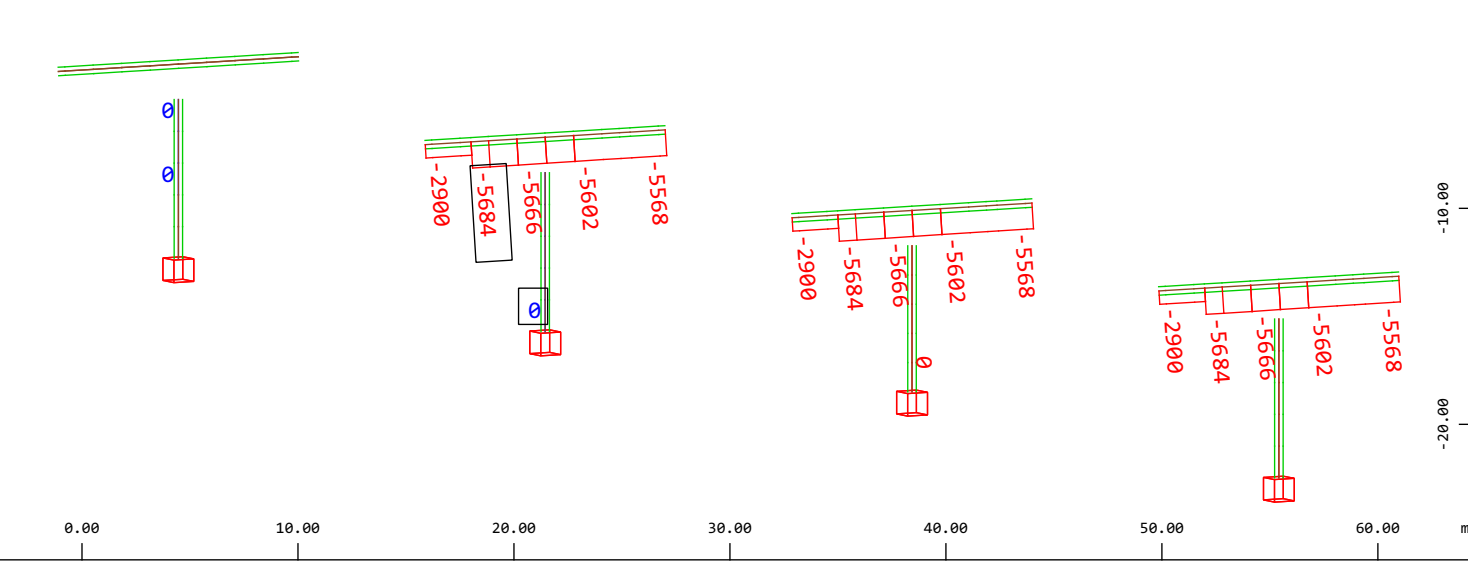
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 5006 (CS 6) Prestress , 1 cm 3D = 16367 kN (Min=-7047) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



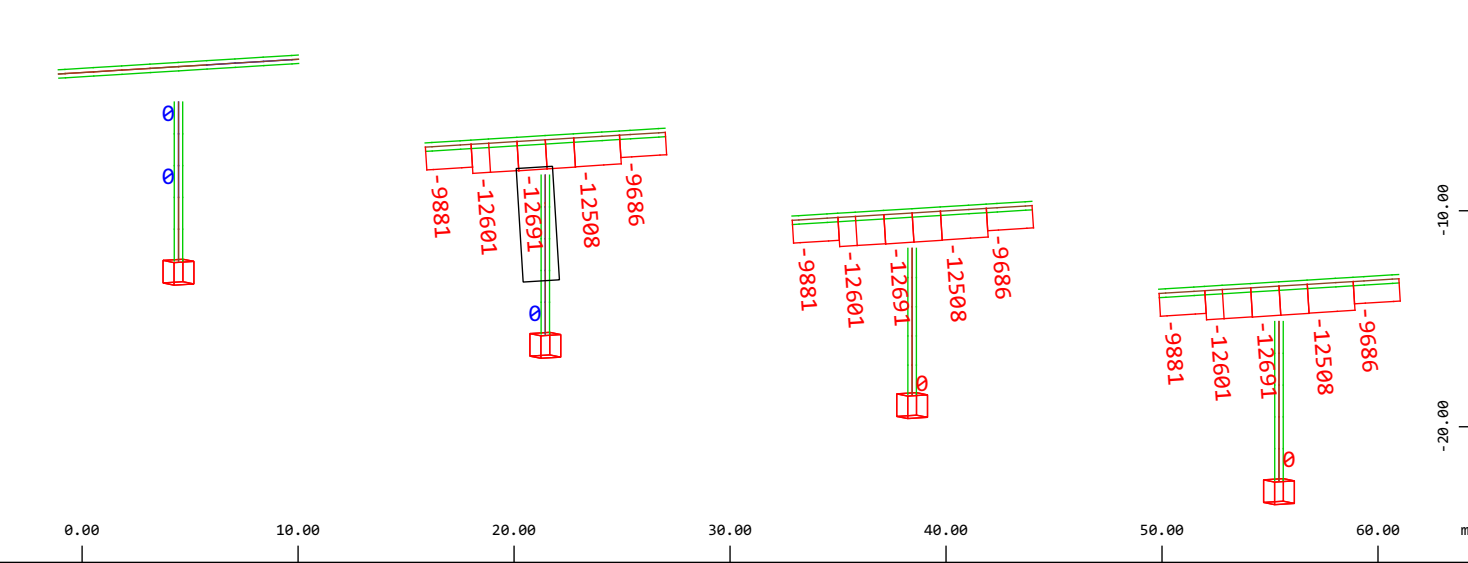
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 5011 (CS 11) Prestress , 1 cm 3D = 16367 kN (Min=-5684) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



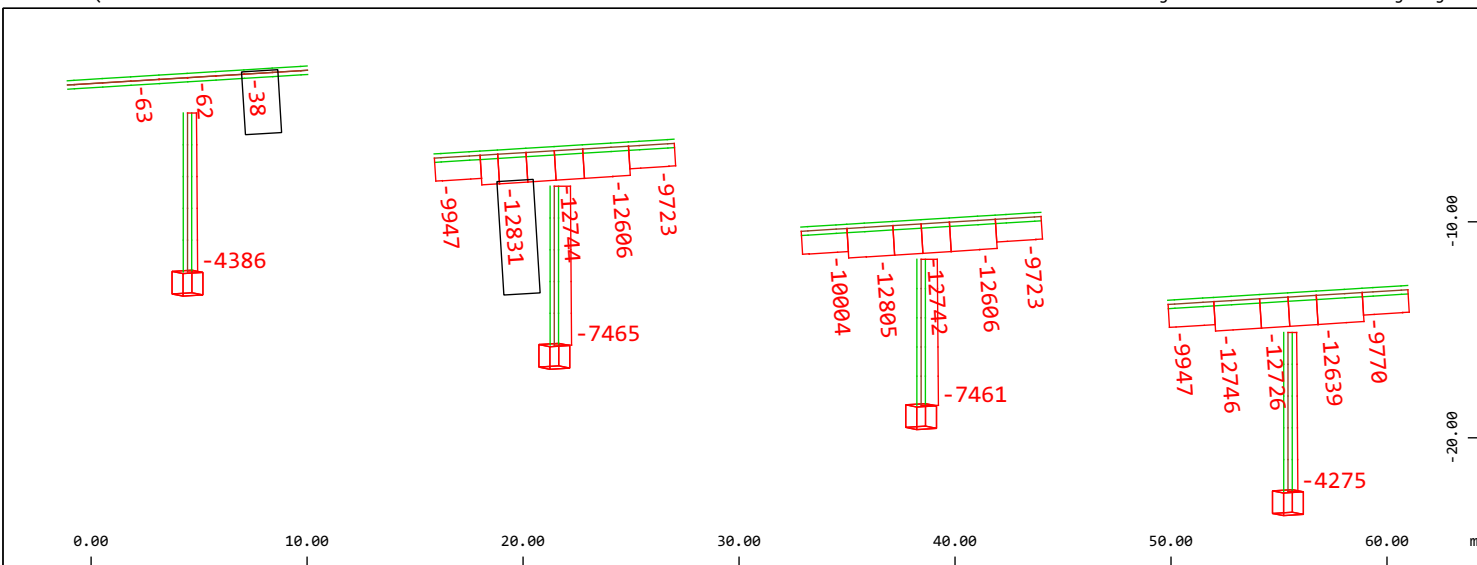
Z

X

Y

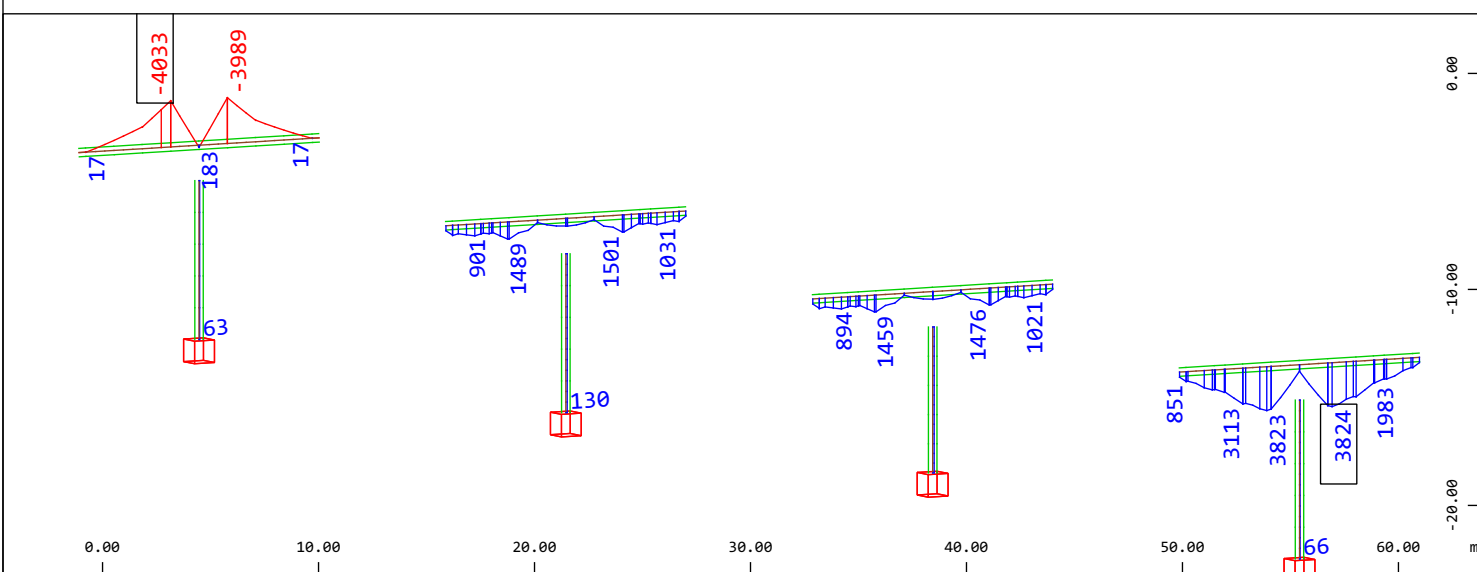
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 7002 sum_P , 1 cm 3D = 32734 kN (Min=-12691) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



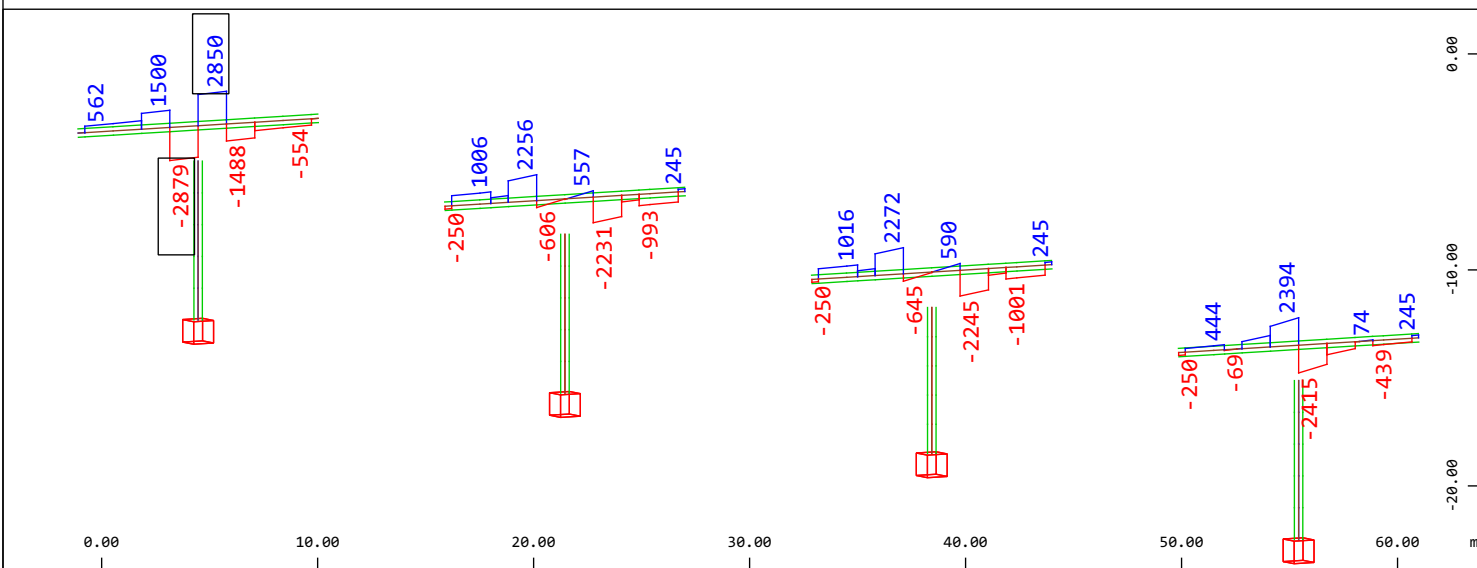
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 4030 (CS 30) Prekladna povezava , 1 cm 3D = 32734 kN
(Min=-12831) (Max= 0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



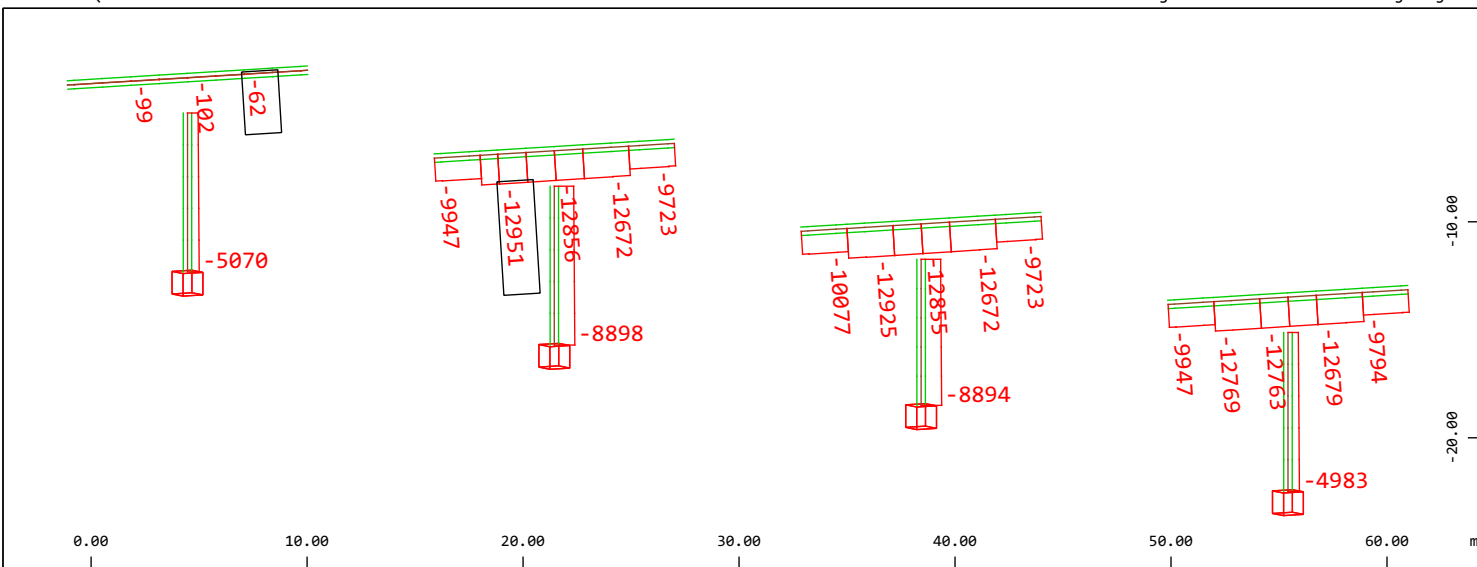
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My (Maximum values cubic interpolated), Loadcase 4030 (CS 30)
Prekladna povezava , 1 cm 3D = 6546.9 kNm (Min=-4033) (Max=3824)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



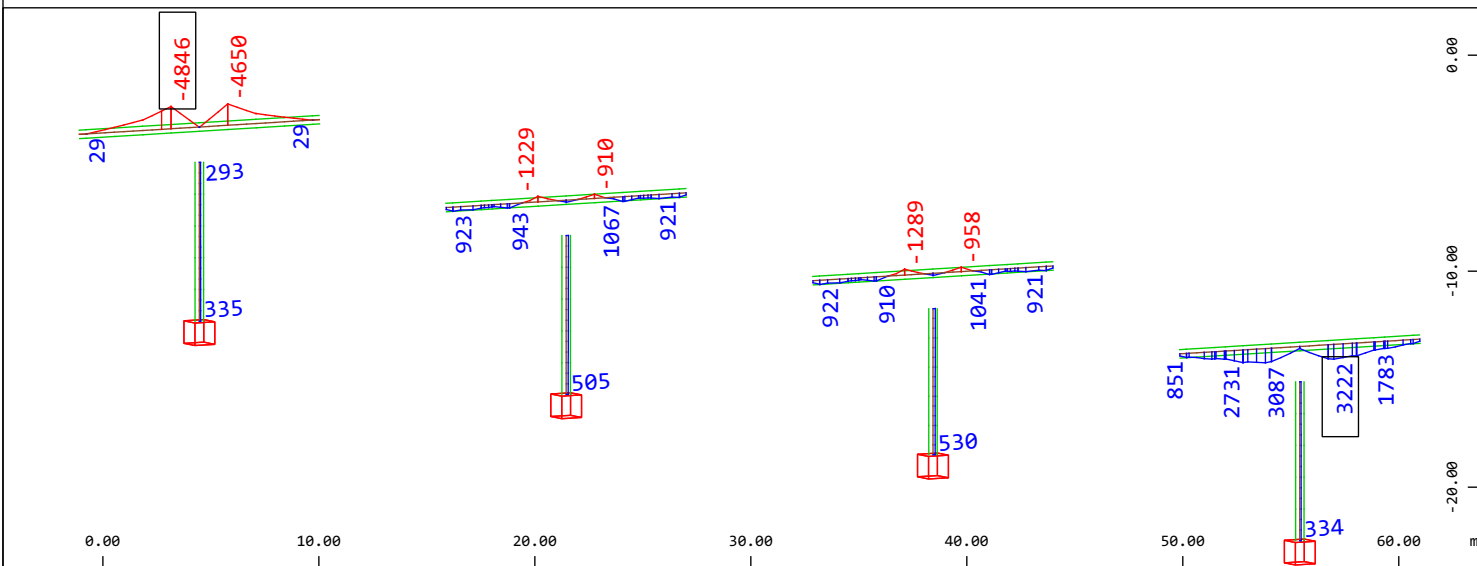
Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 4030 (CS 30) Prekladna povezava , 1 cm 3D = 6546.9 kN
(Min=-2879) (Max=2850)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



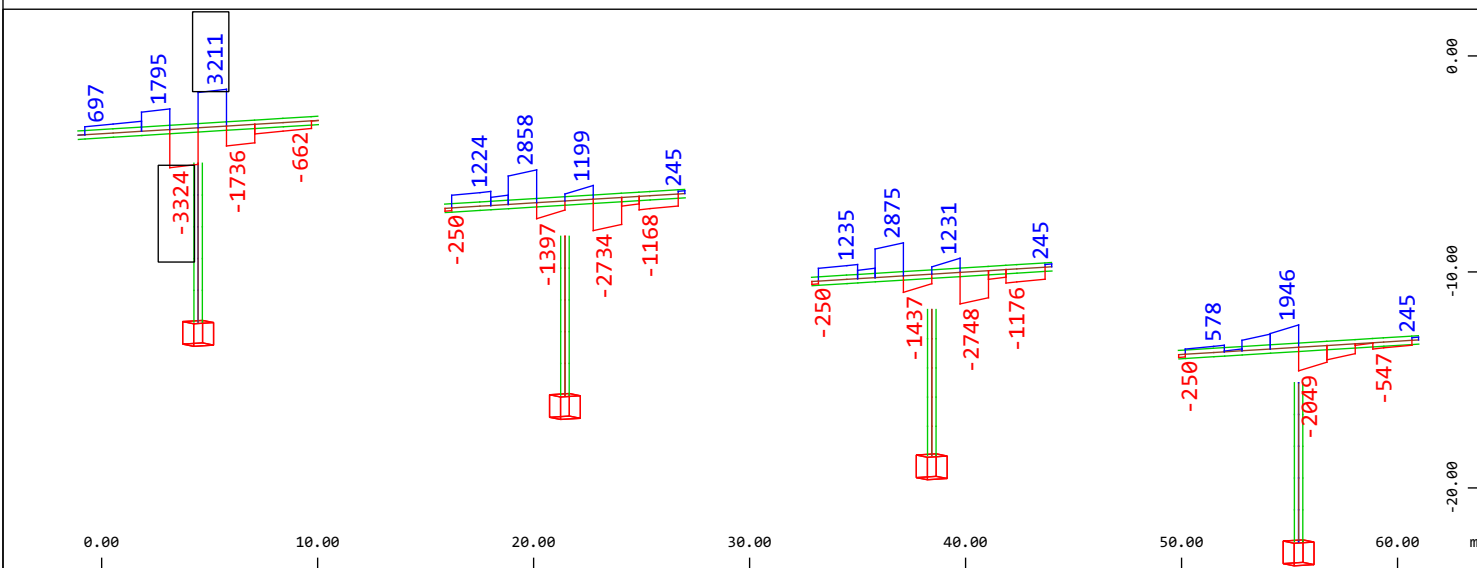
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 4040 (CS 40) Krov , 1 cm 3D = 32734 kN (Min=-12951)
(Max= 0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



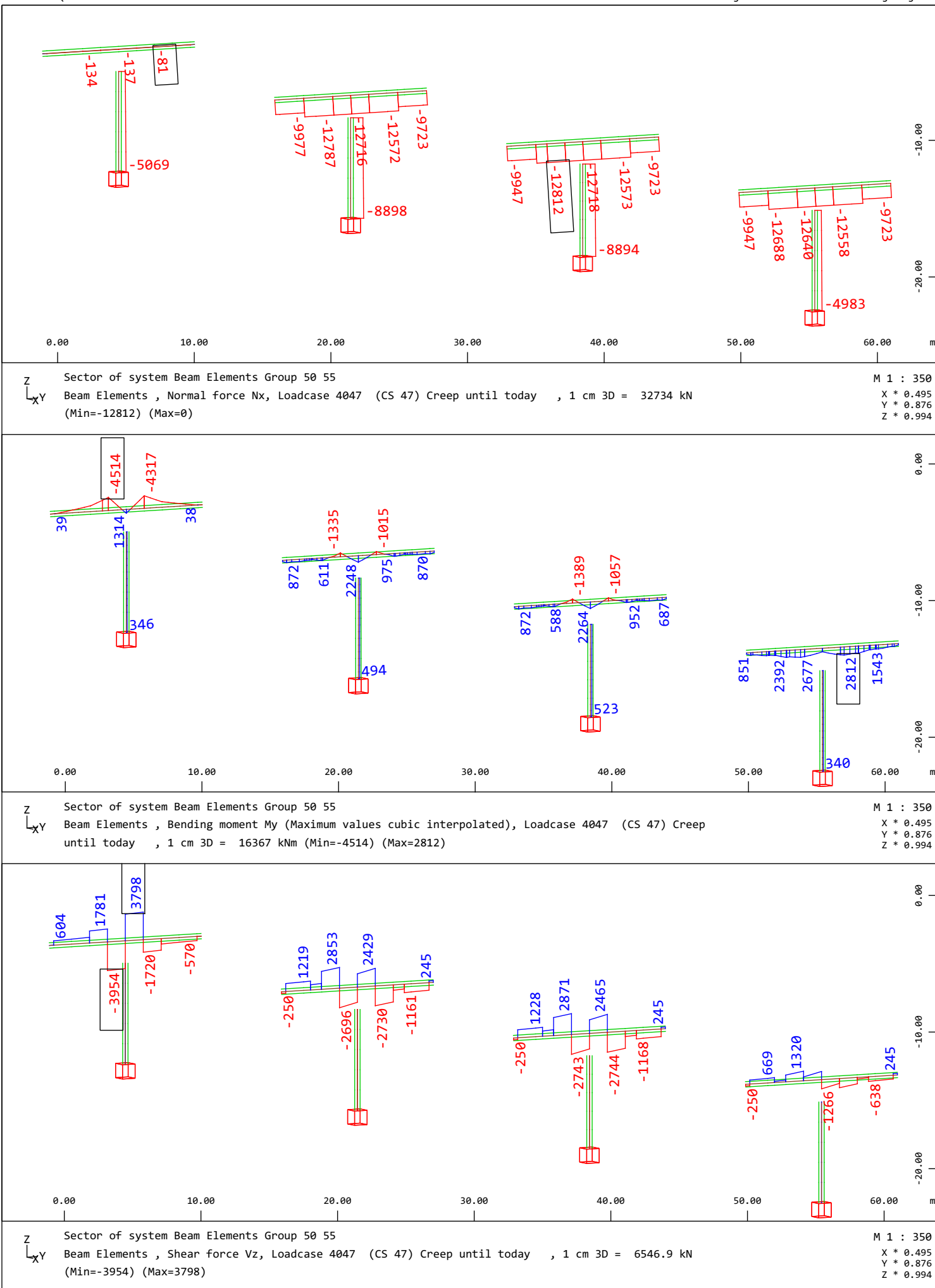
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y (Maximum values cubic interpolated), Loadcase 4040 (CS 40) Krov
, 1 cm 3D = 16367 kNm (Min=-4846) (Max=3222)

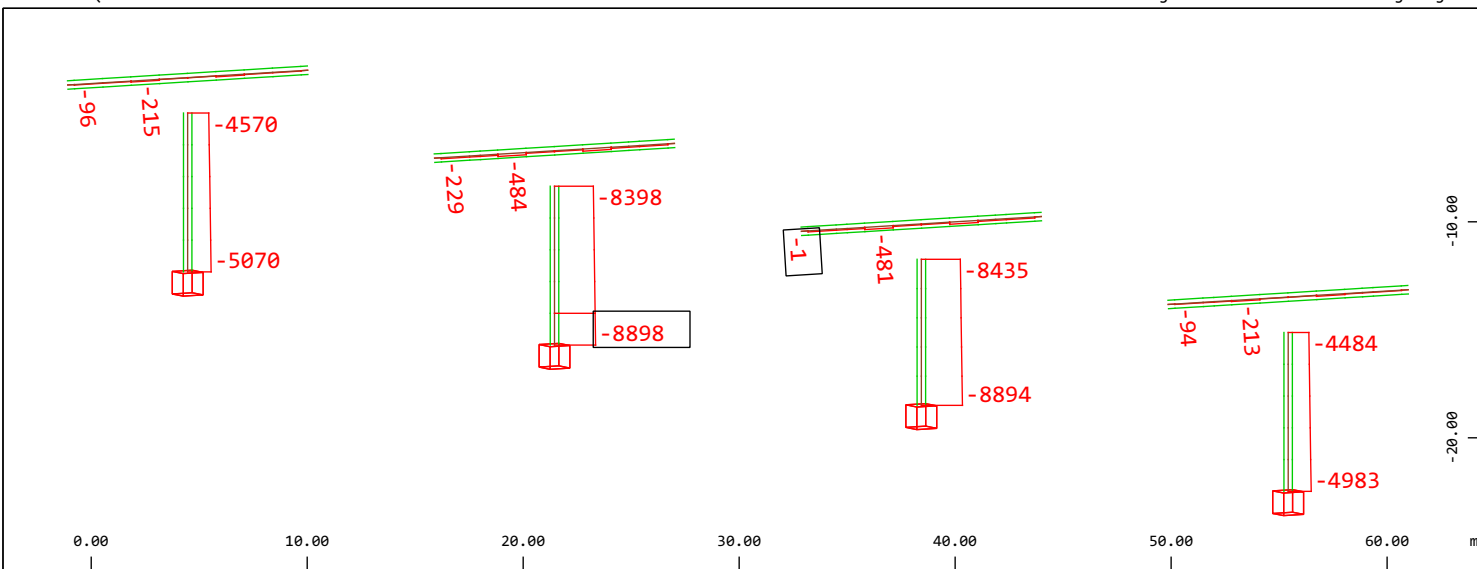
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 4040 (CS 40) Krov , 1 cm 3D = 6546.9 kN (Min=-3324)
(Max=3211)

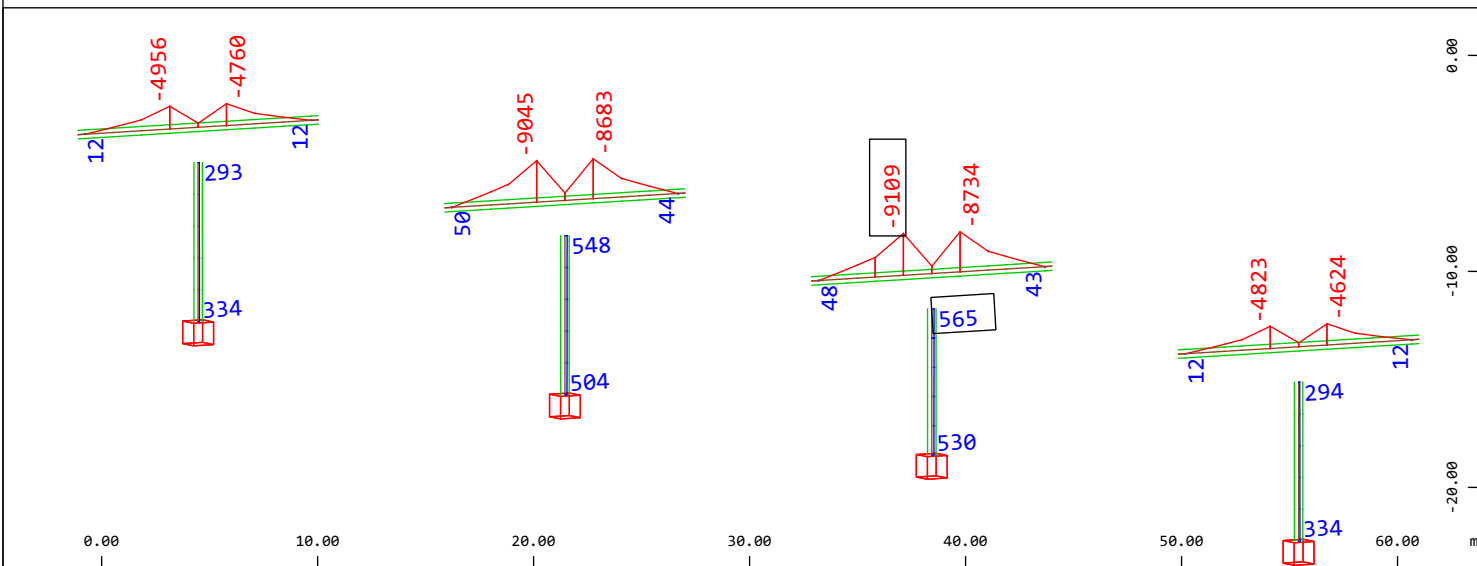
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994





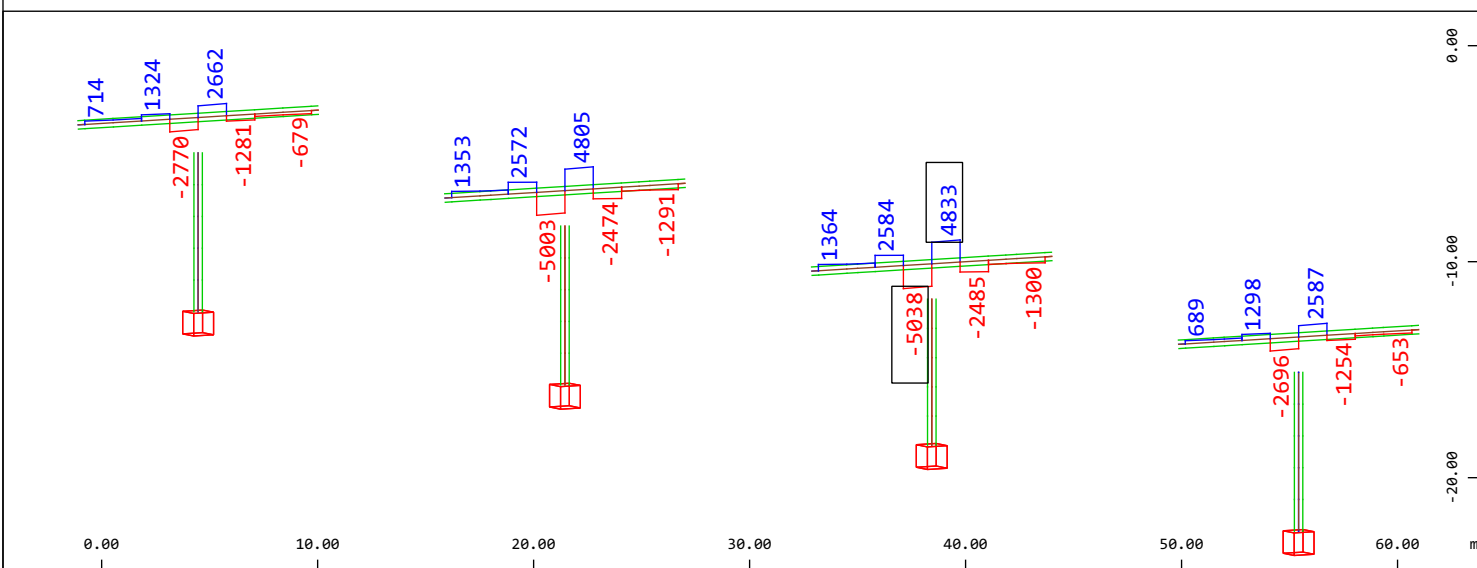
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 7001 sum_G , 1 cm 3D = 16367 kN (Min=-8898) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



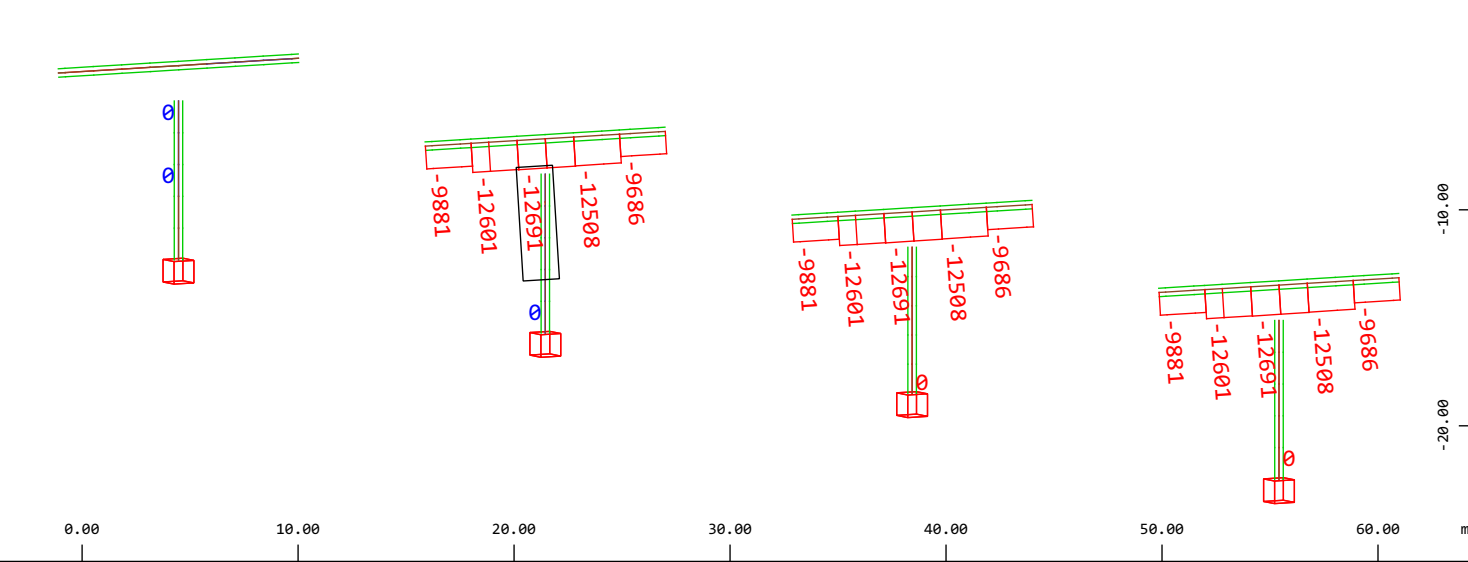
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 7001 sum_G , 1 cm 3D = 16367 kNm (Min=-9109) (Max=565)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 7001 sum_G , 1 cm 3D = 16367 kN (Min=-5038) (Max=4833)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



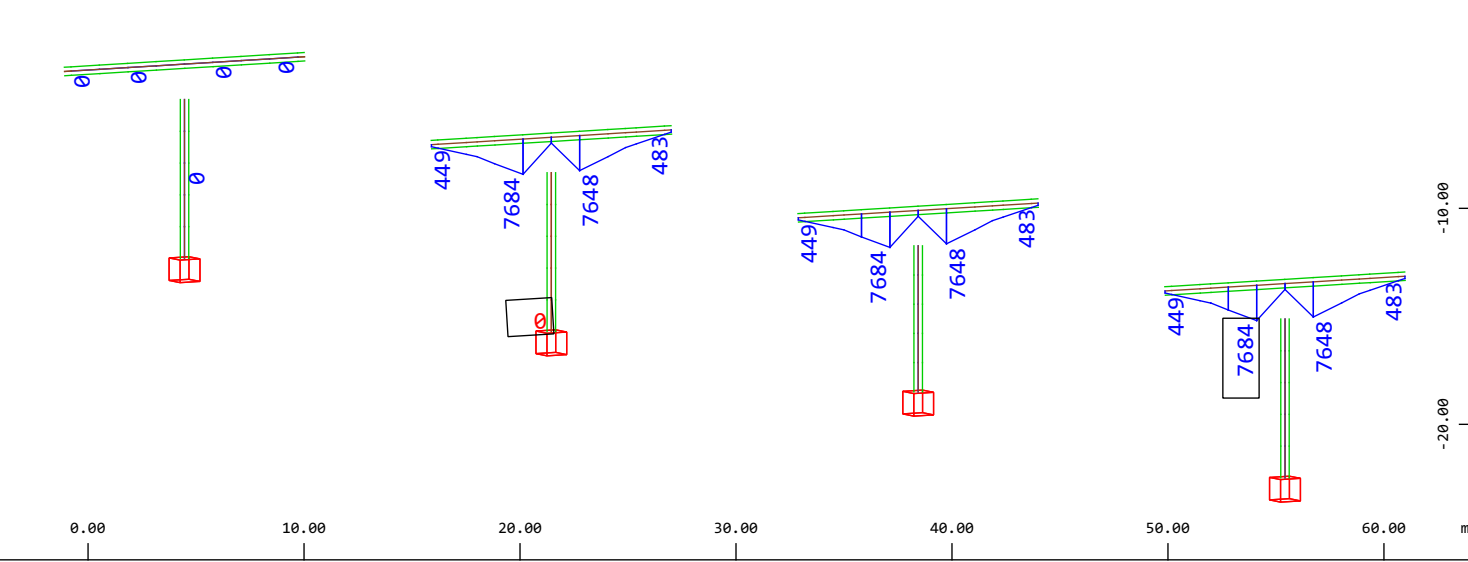
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 7002 sum_P , 1 cm 3D = 32734 kN (Min=-12691) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



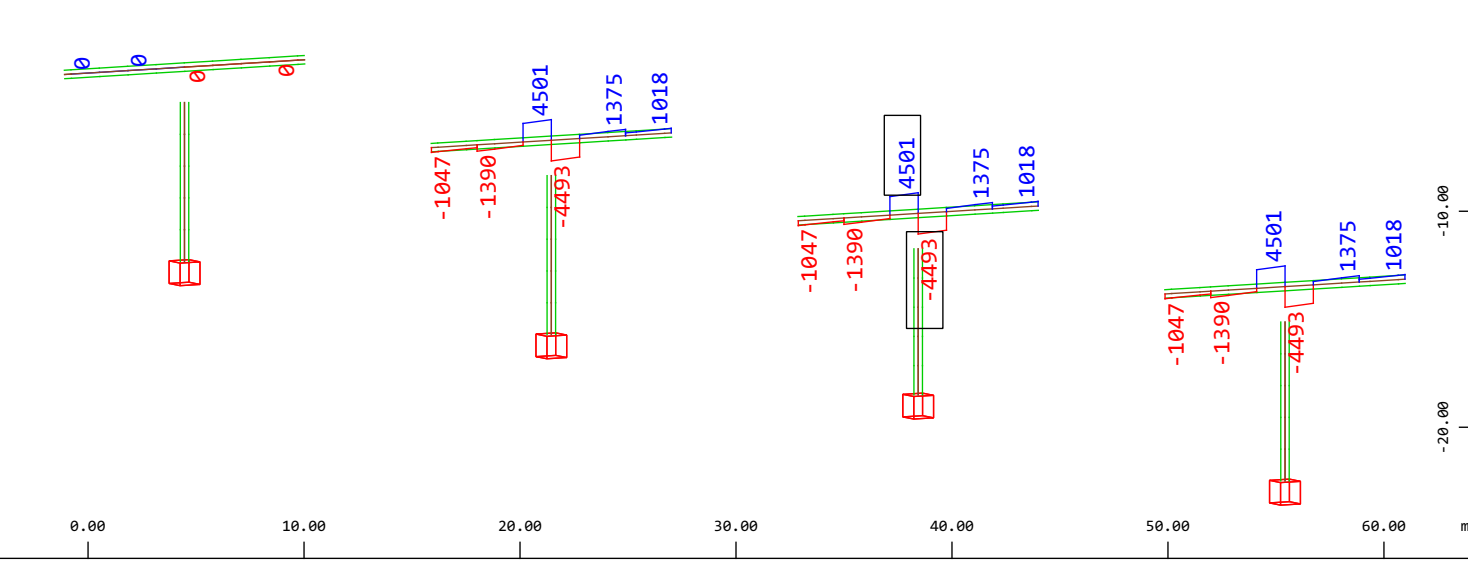
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 7002 sum_P , 1 cm 3D = 16367 kNm (Min= 0) (Max=7684)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



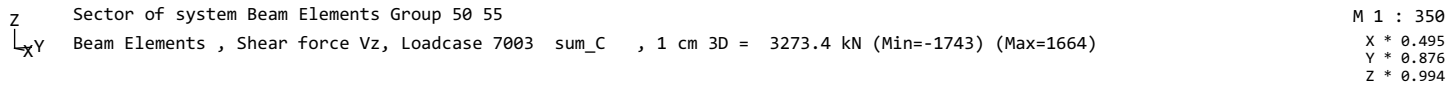
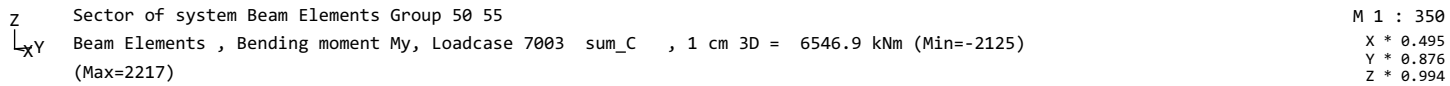
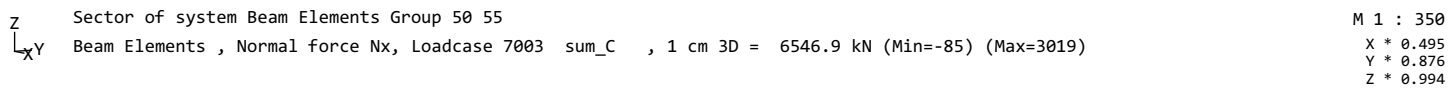
Z

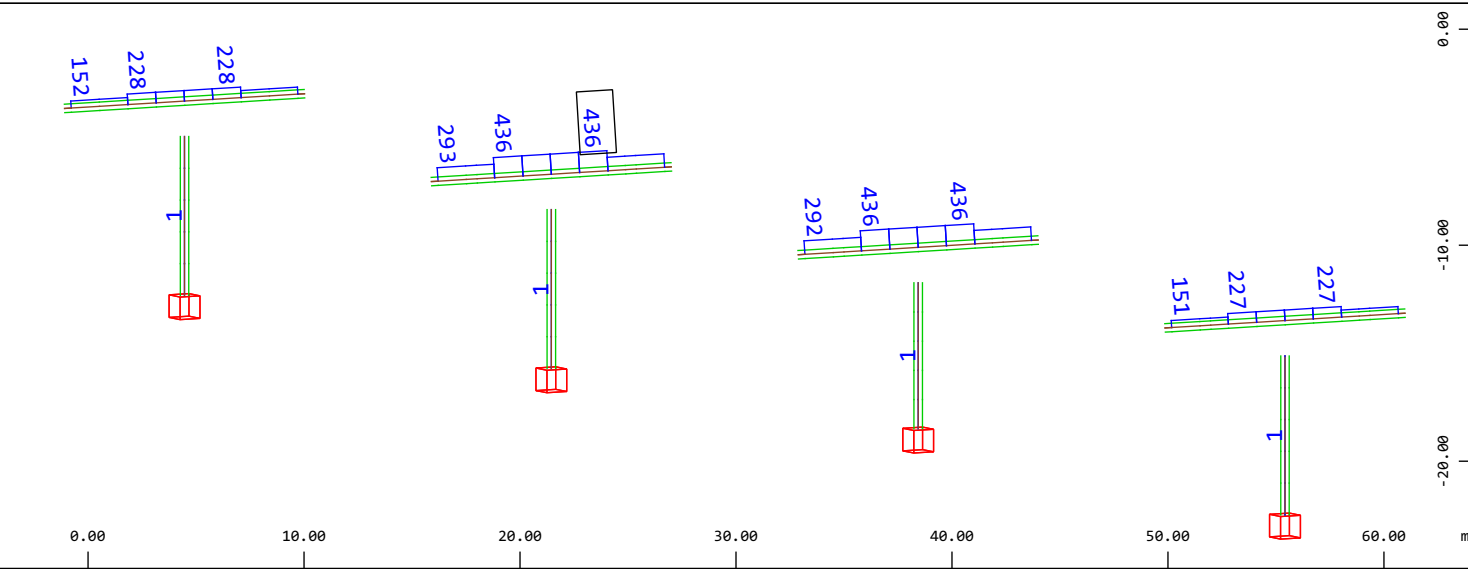
X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 7002 sum_P , 1 cm 3D = 16367 kN (Min=-4493) (Max=4501)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994





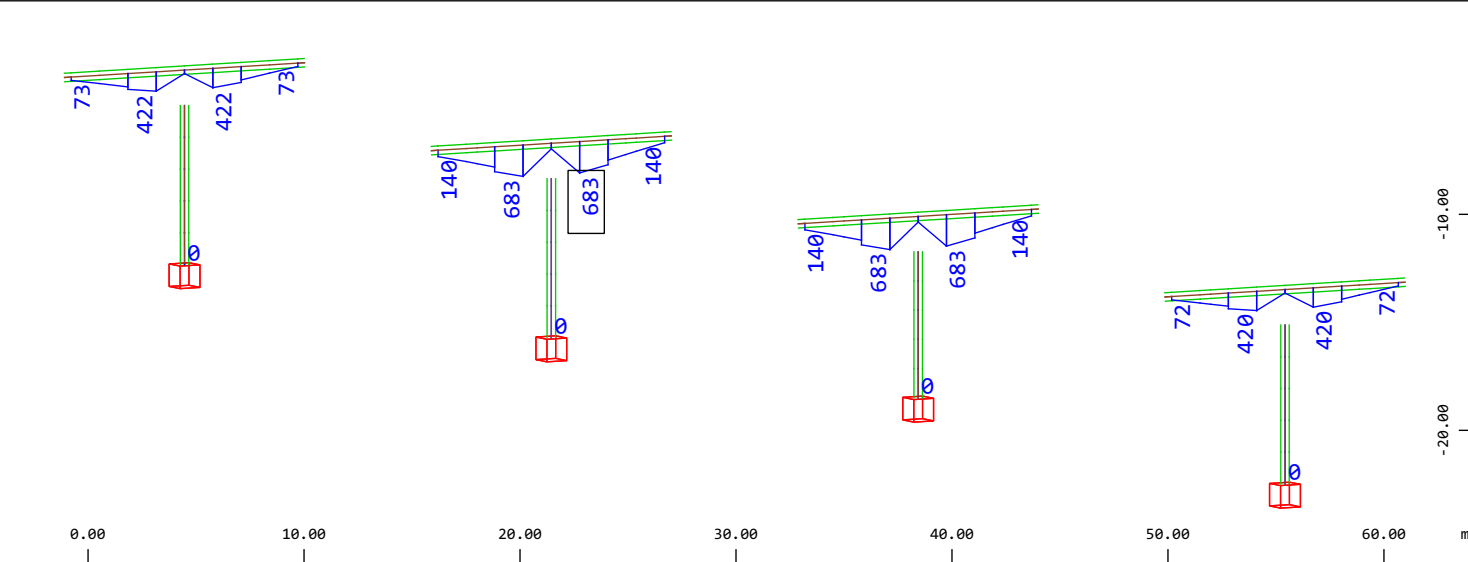
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 907 TEMPERATURA { nyy N UX PtX } , 1 cm 3D = 1636.7 kN
(Max=436)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



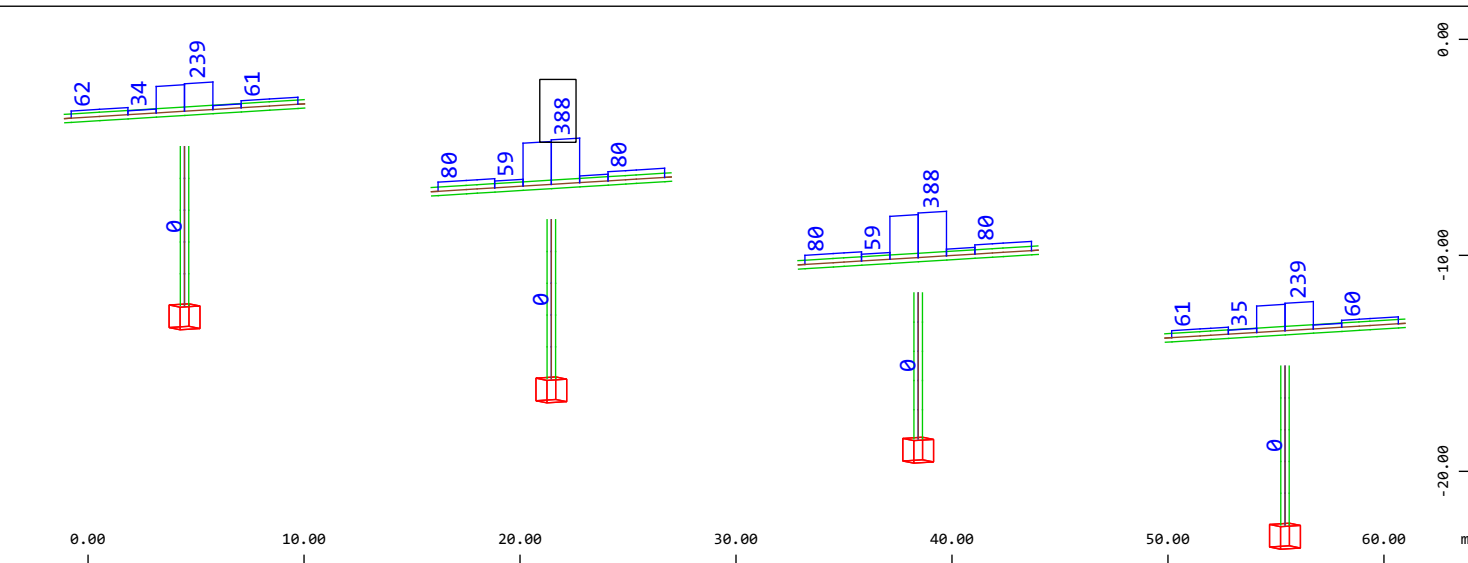
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 901 TEMPERATURA { mxx My PX P } , 1 cm 3D = 1636.7 kNm (Max=683)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



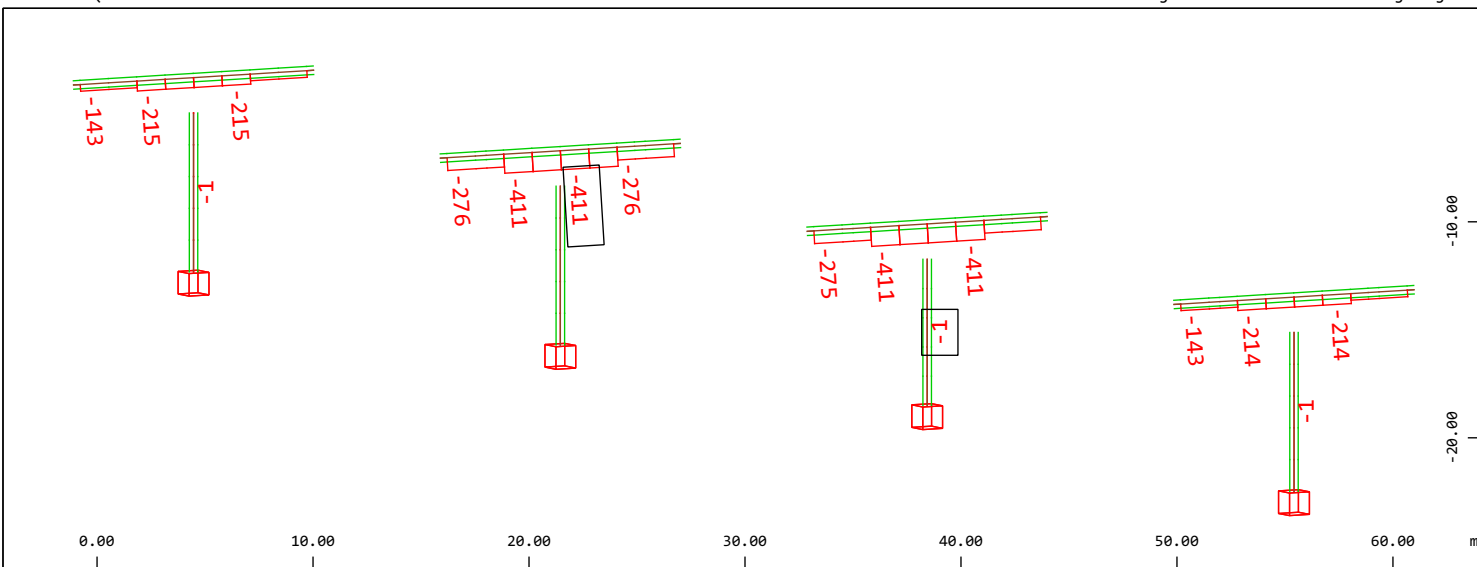
Z

X

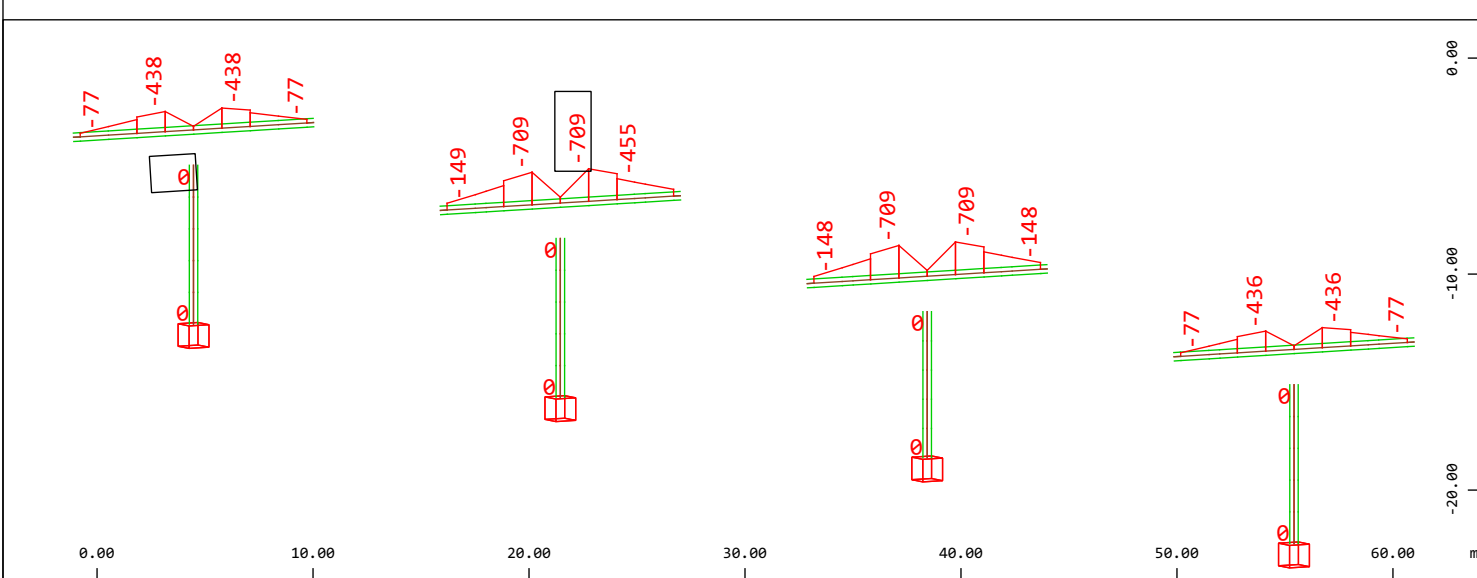
Y

Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 903 TEMPERATURA { myy Vz PY Pt } , 1 cm 3D = 654.69 kN (Max=388)

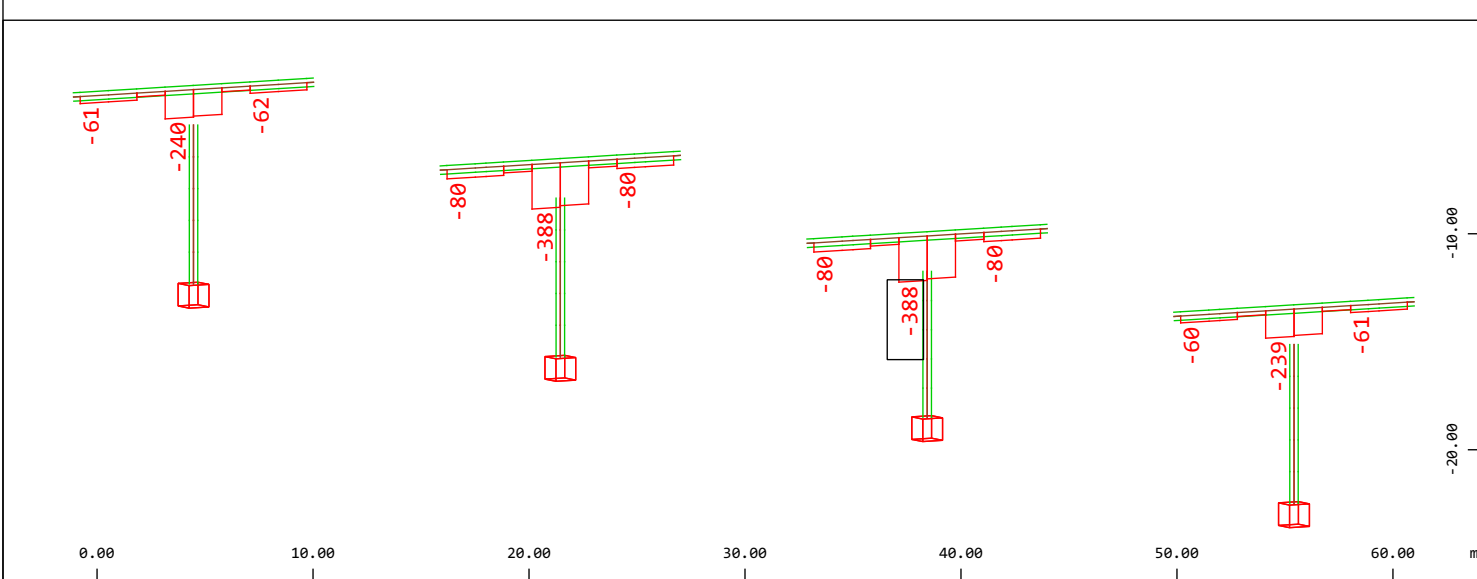
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



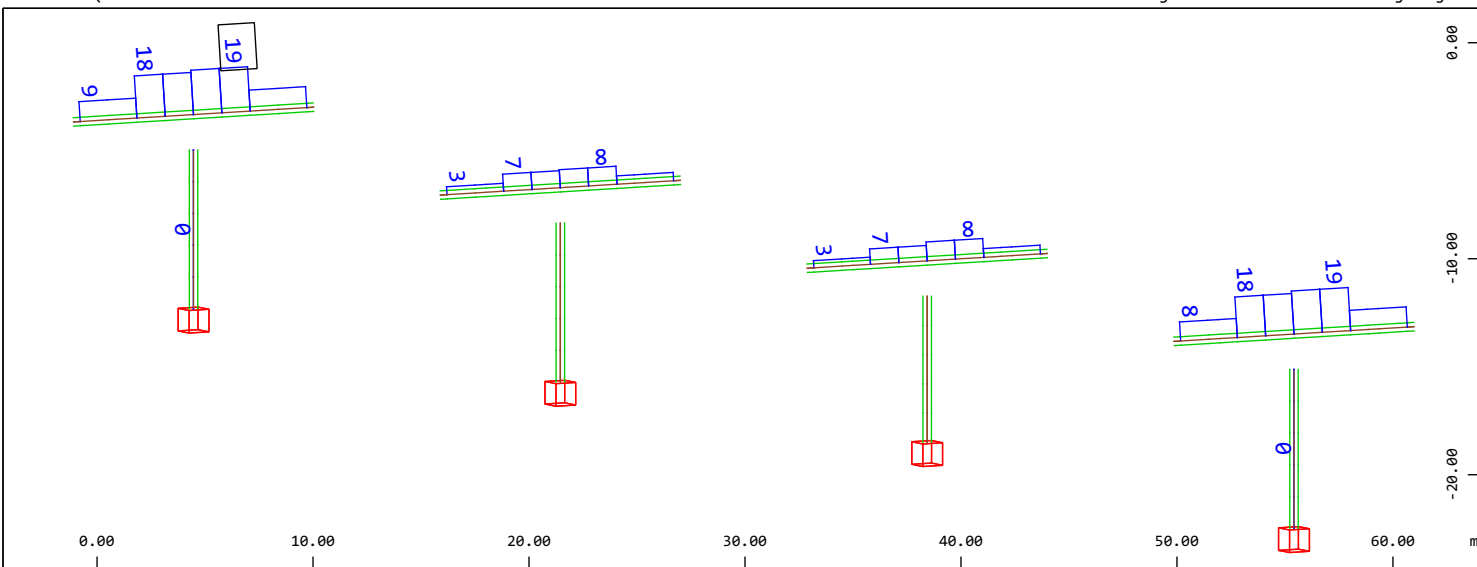
z
x y



z
x y

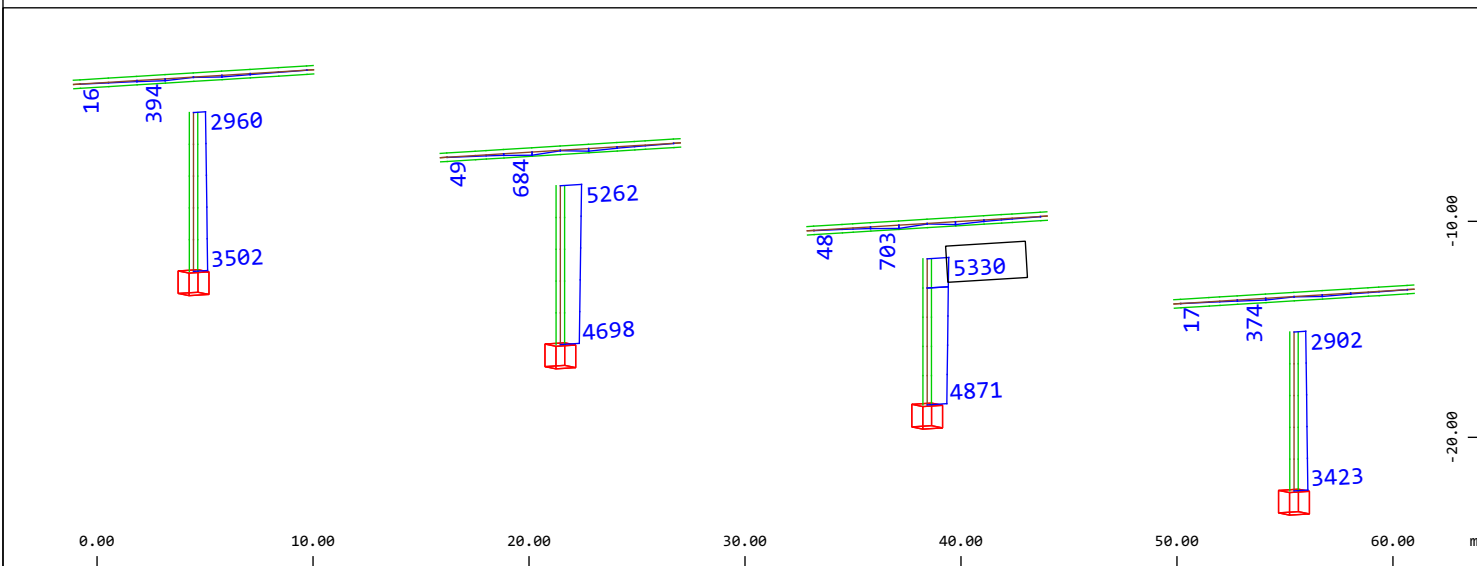


z
x y



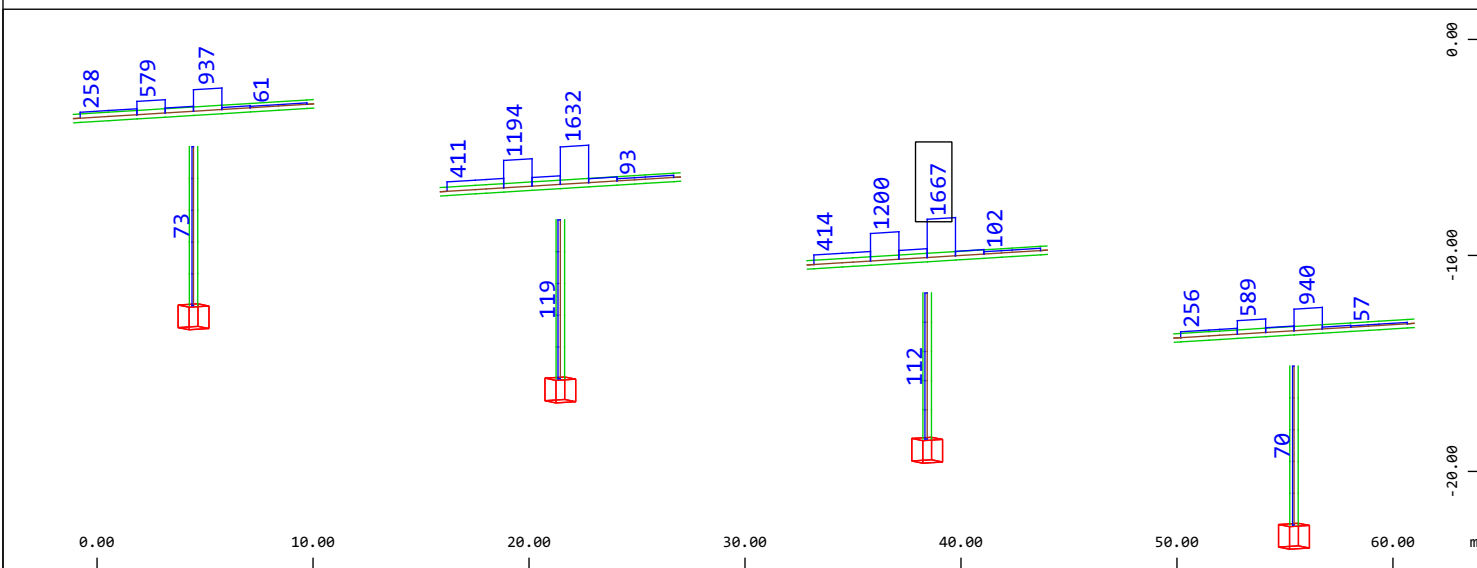
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 927 PROMET ZVEZNA { nyy N UX PtX } , 1 cm 3D = 32.734
kN (Max=19)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



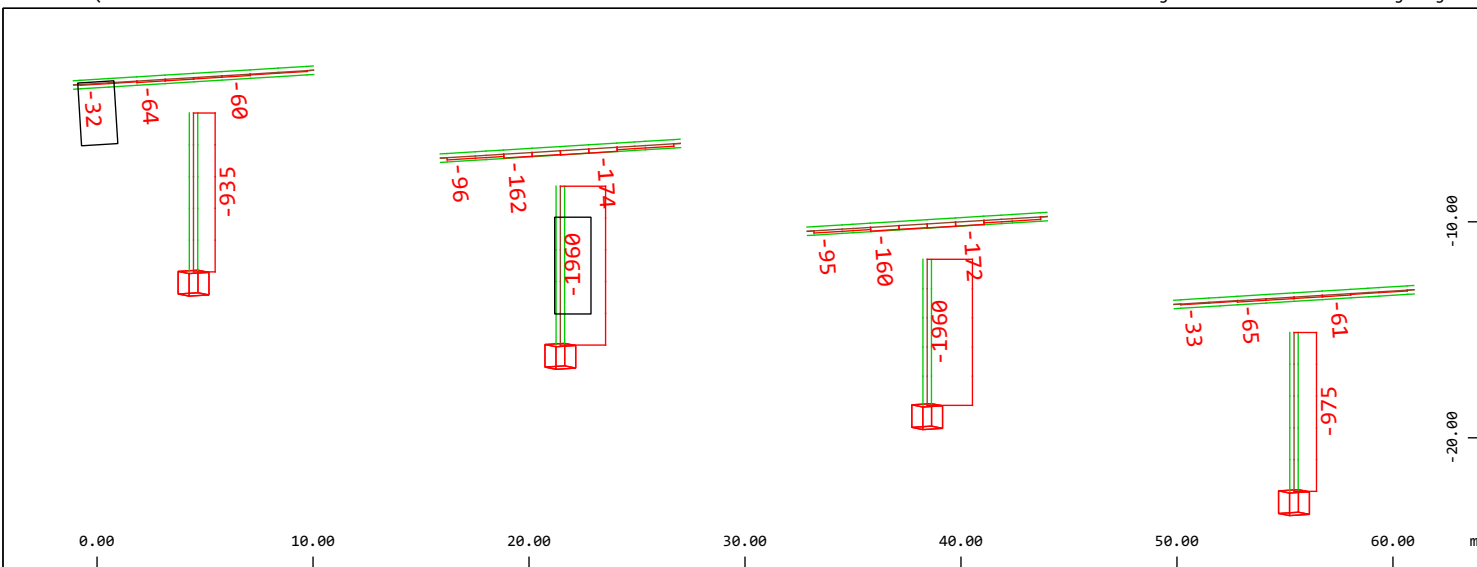
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 921 PROMET ZVEZNA { mxx My PX P } , 1 cm 3D = 16367
kNm (Max=5330)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



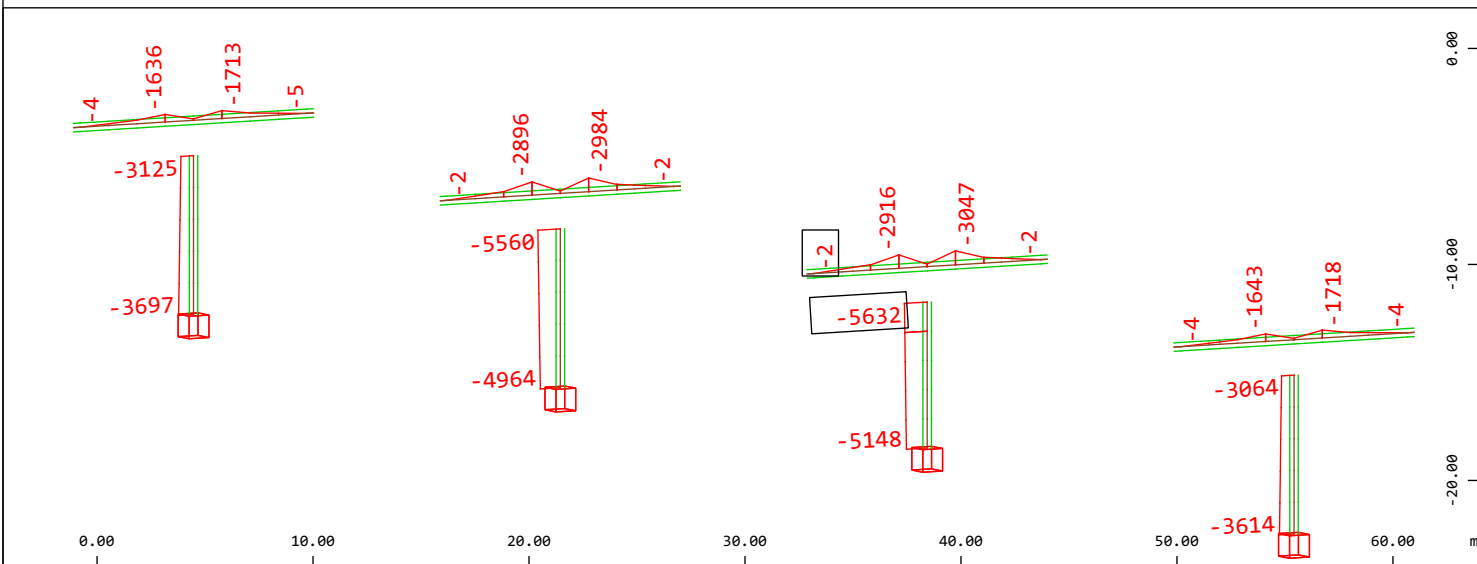
Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 923 PROMET ZVEZNA { myy Vz PY Pt } , 1 cm 3D = 3273.4 kN
(Max=1667)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



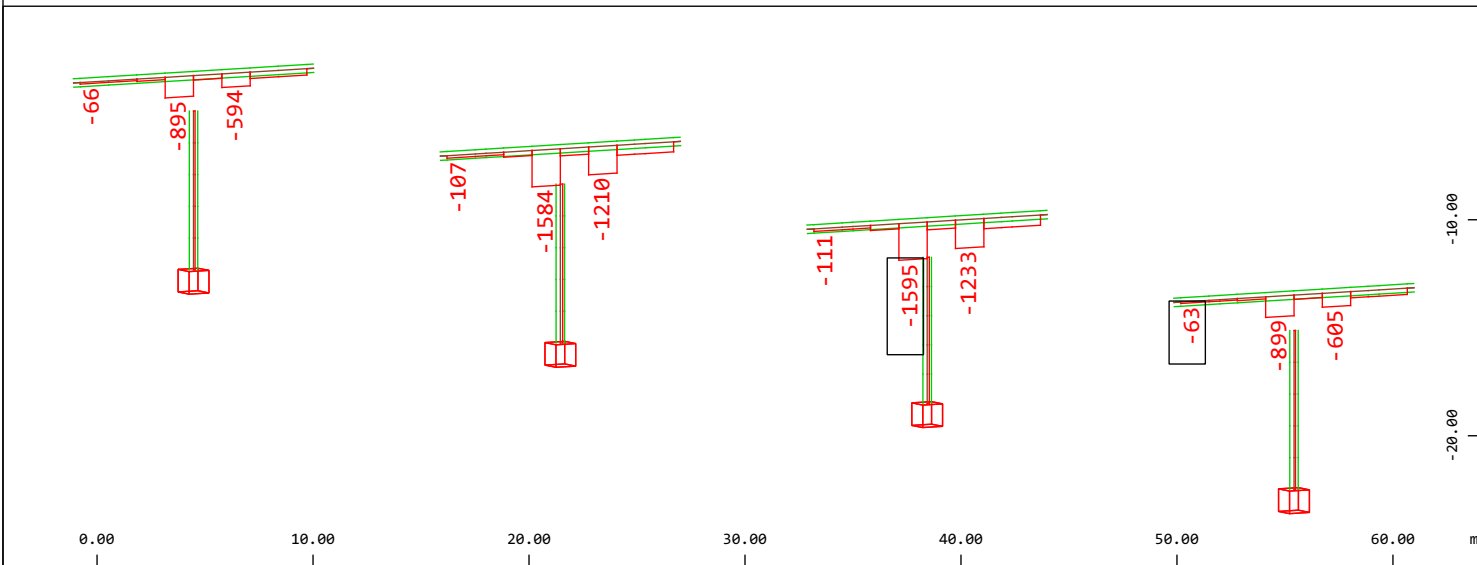
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 928 PROMET ZVEZNA { nyy N UX PtX } , 1 cm 3D = 3273.4
kN (Min=-1960) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



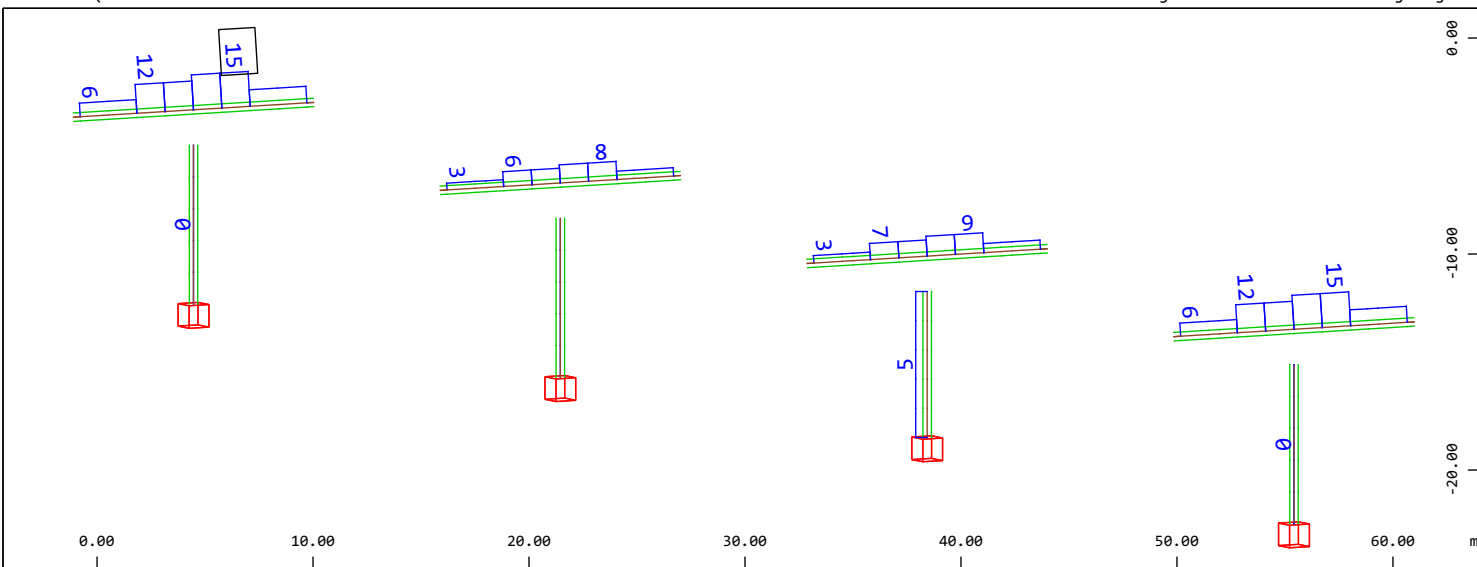
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My, Loadcase 922 PROMET ZVEZNA { mxx My PX P } , 1 cm 3D = 16367
kNm (Min=-5632) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



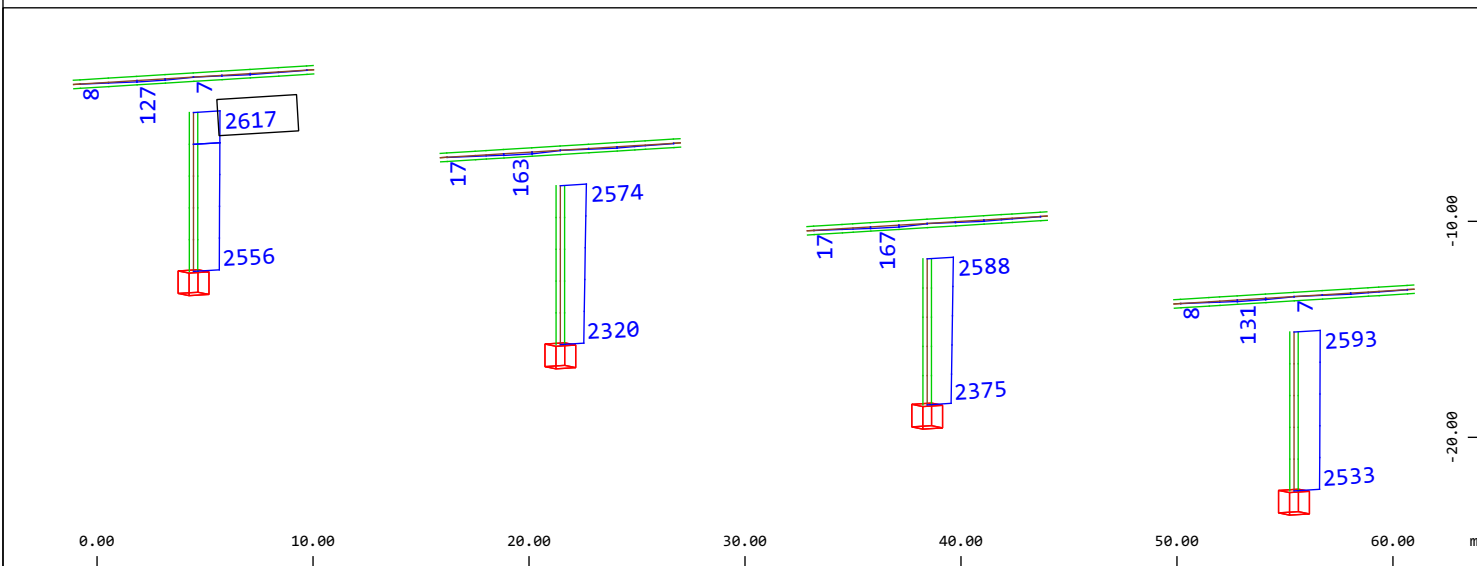
Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 924 PROMET ZVEZNA { myy Vz PY Pt } , 1 cm 3D = 3273.4 kN
(Min=-1595) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



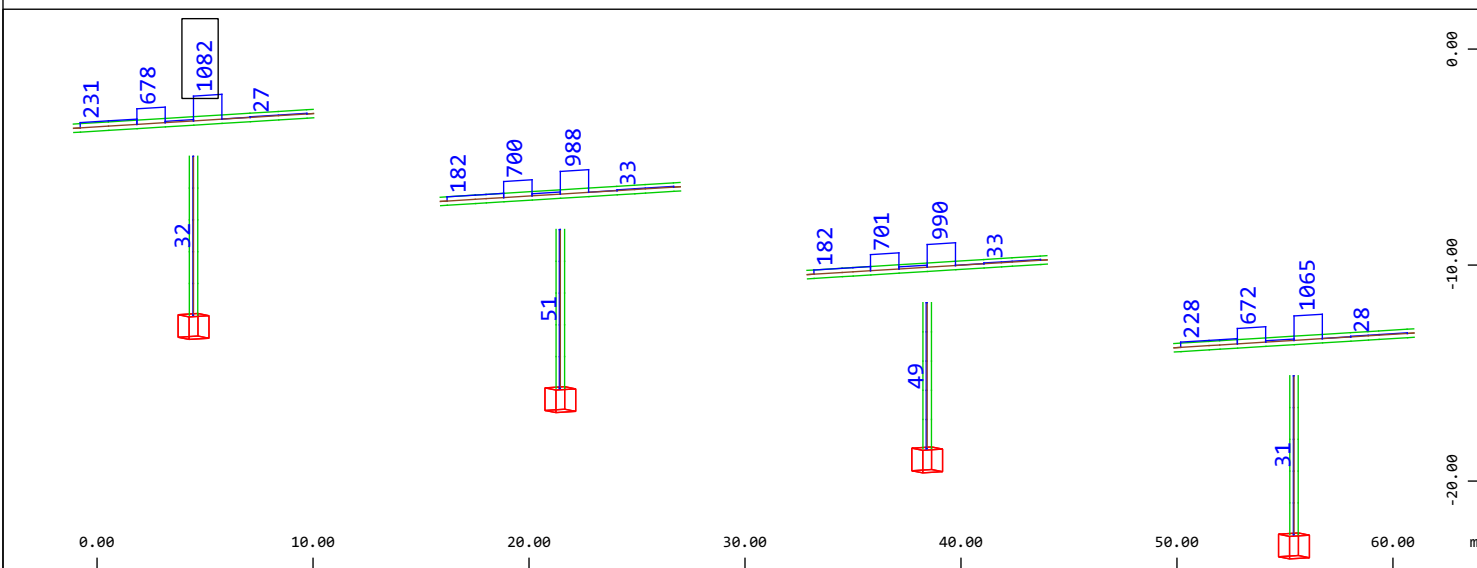
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 947 PROMET TS { nyy N UX PtX } , 1 cm 3D = 32.734 kN
(Max=15)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



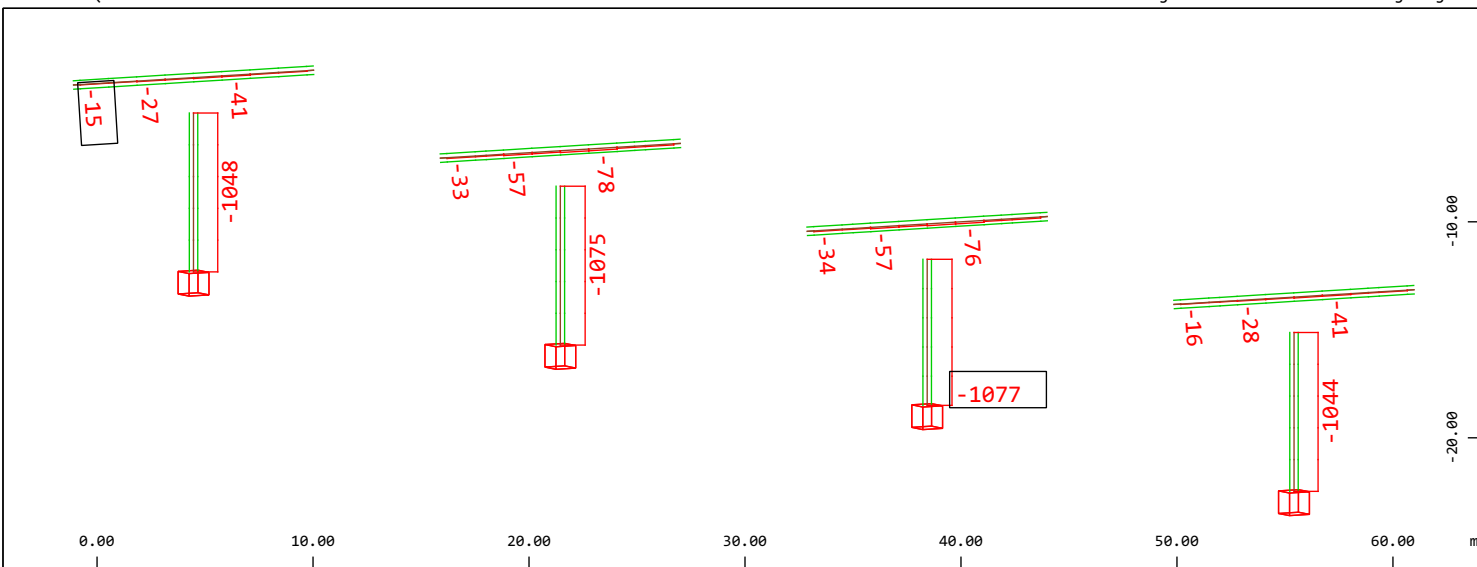
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 941 PROMET TS { mxx My PX P } , 1 cm 3D = 6546.9 kNm
(Max=2617)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



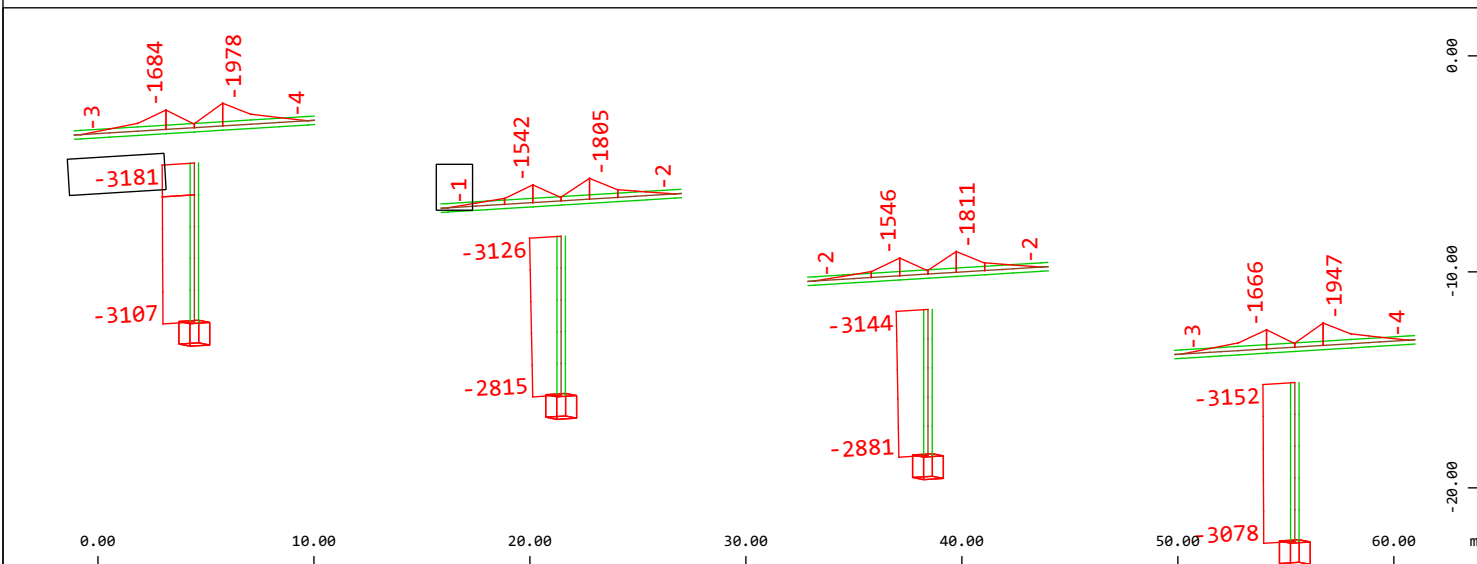
Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 943 PROMET TS { myy Vz PY Pt } , 1 cm 3D = 3273.4 kN
(Max=1082)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



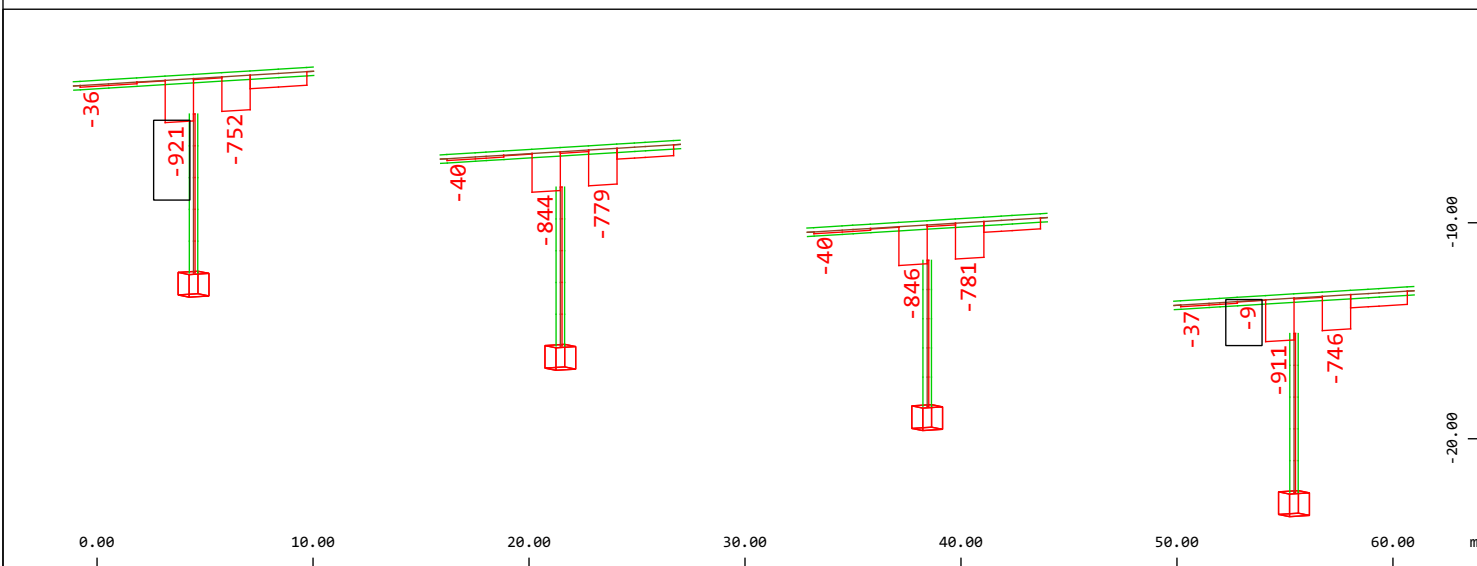
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 948 PROMET TS { nyy N UX PtX } , 1 cm 3D = 3273.4 kN
(Min=-1077) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



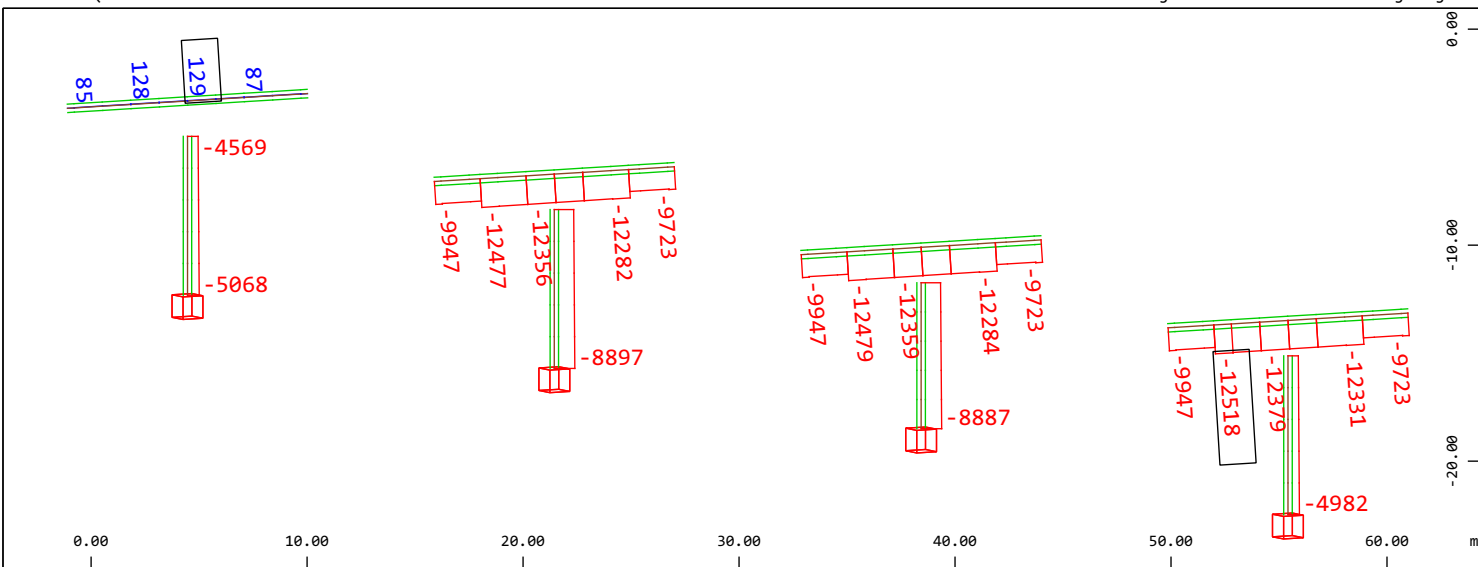
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My, Loadcase 942 PROMET TS { mxx My PX P } , 1 cm 3D = 6546.9 kNm
(Min=-3181) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



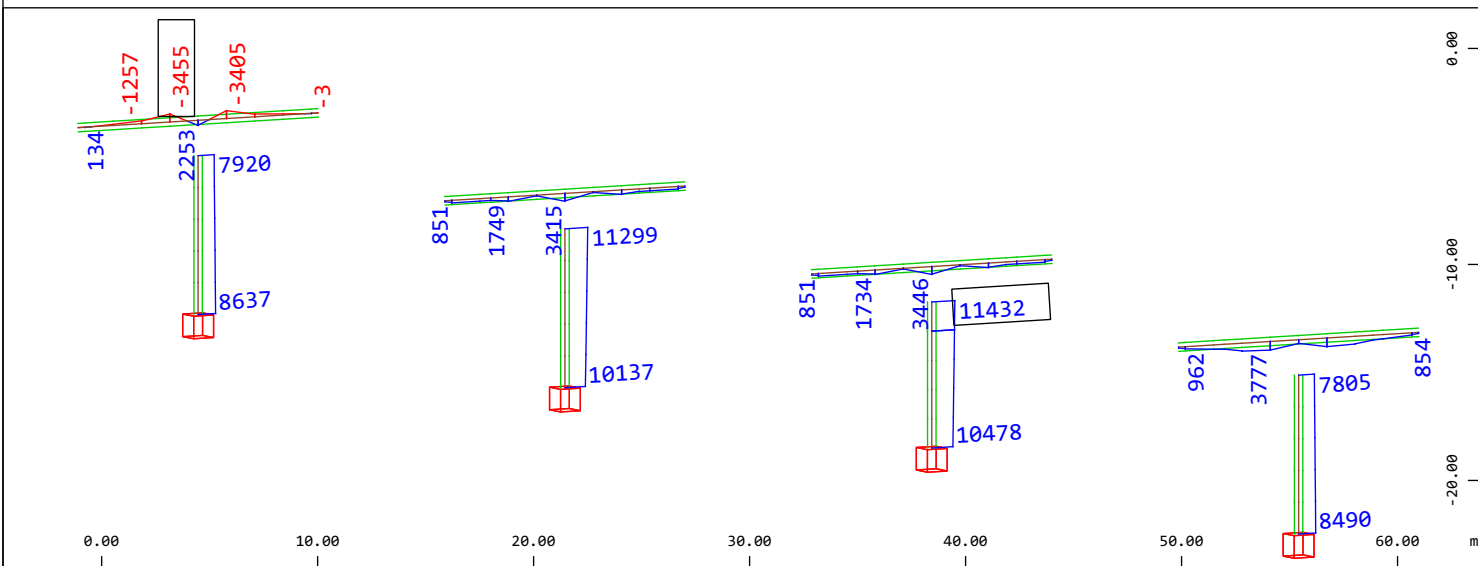
Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 944 PROMET TS { myy Vz PY Pt } , 1 cm 3D = 1636.7 kN
(Min=-921) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



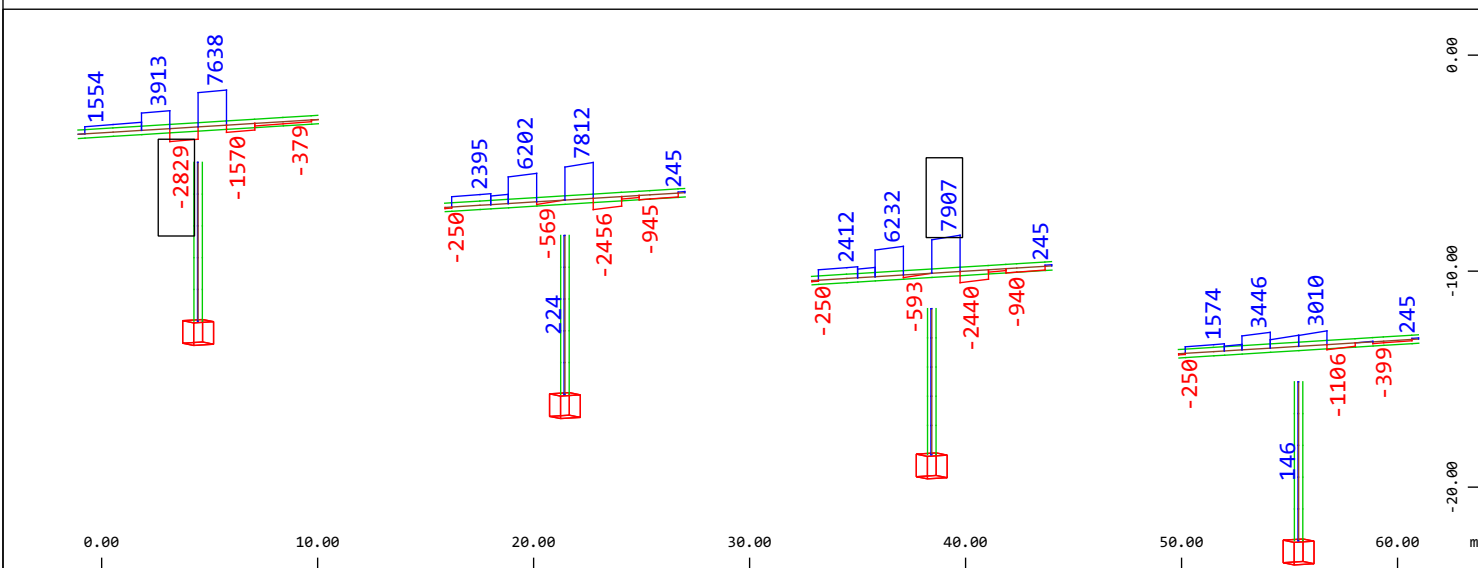
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 2127 MSN,d { nyy N UX PtX } , 1 cm 3D = 32734 kN
(Min=-12518) (Max=129)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



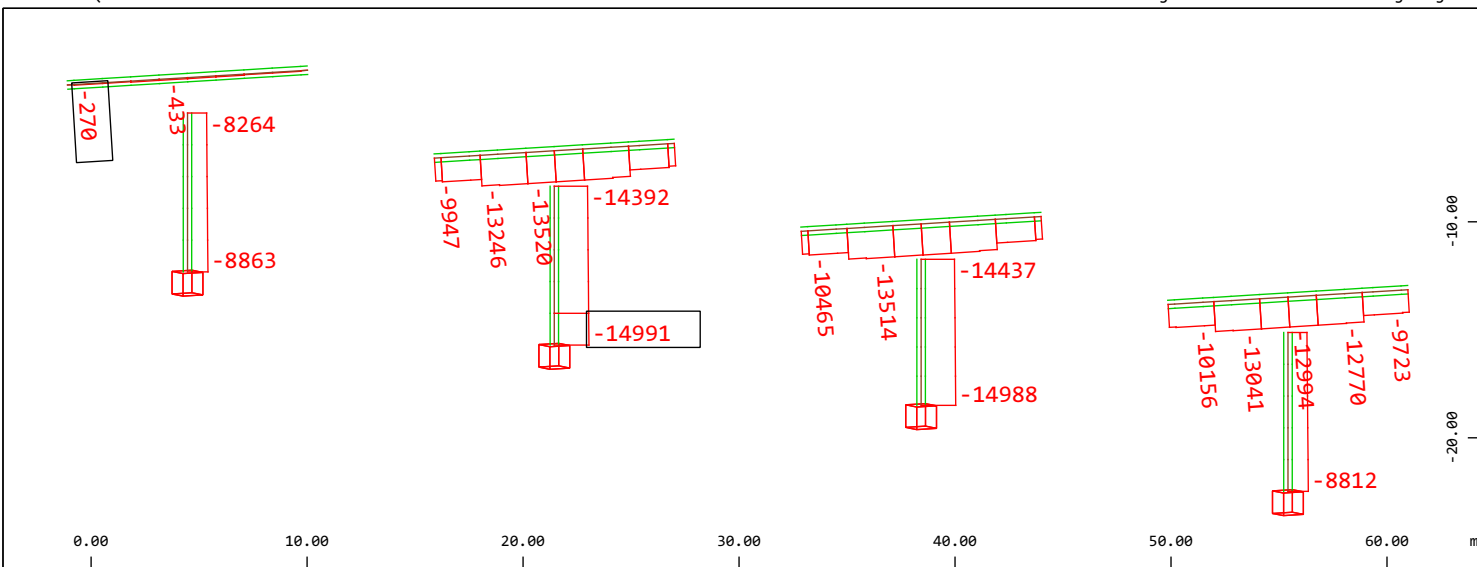
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My, Loadcase 2121 MSN,d { mxx My PX P } , 1 cm 3D = 32734 kNm
(Min=-3455) (Max=11432)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



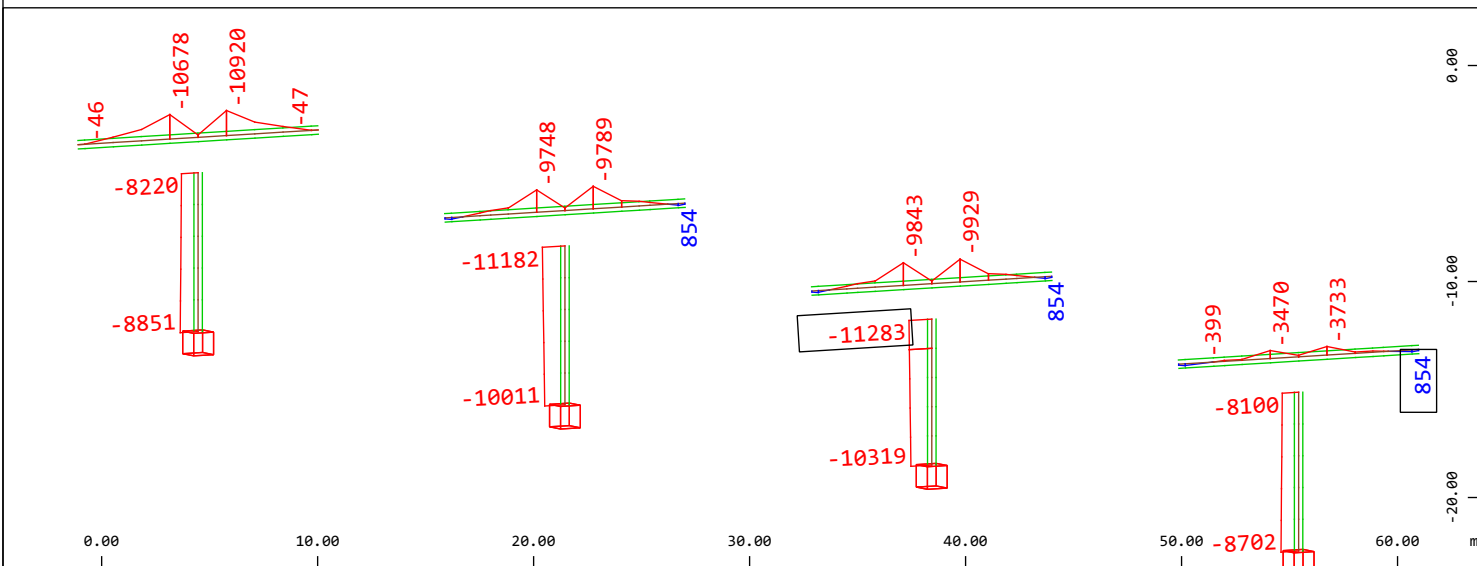
Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 2123 MSN,d { myy Vz PY Pt } , 1 cm 3D = 16367 kN
(Min=-2829) (Max=7907)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



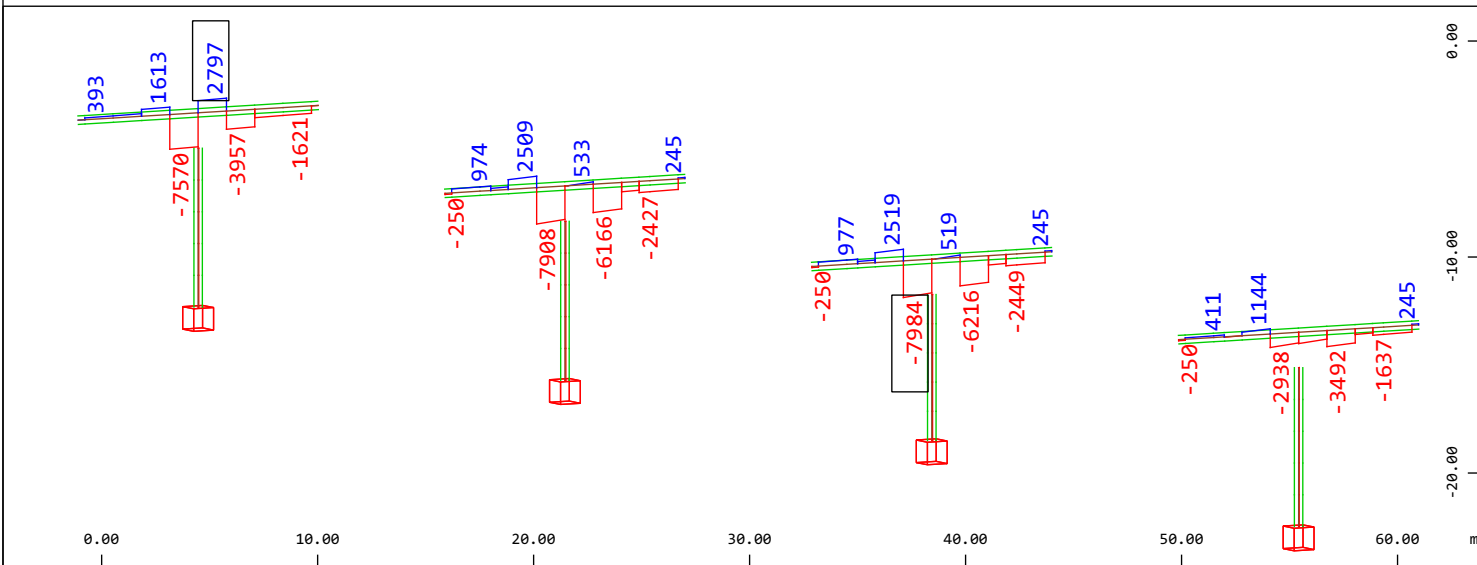
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 2128 MSN,d { nyy N UX PtX } , 1 cm 3D = 32734 kN
(Min=-14991) (Max= 0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



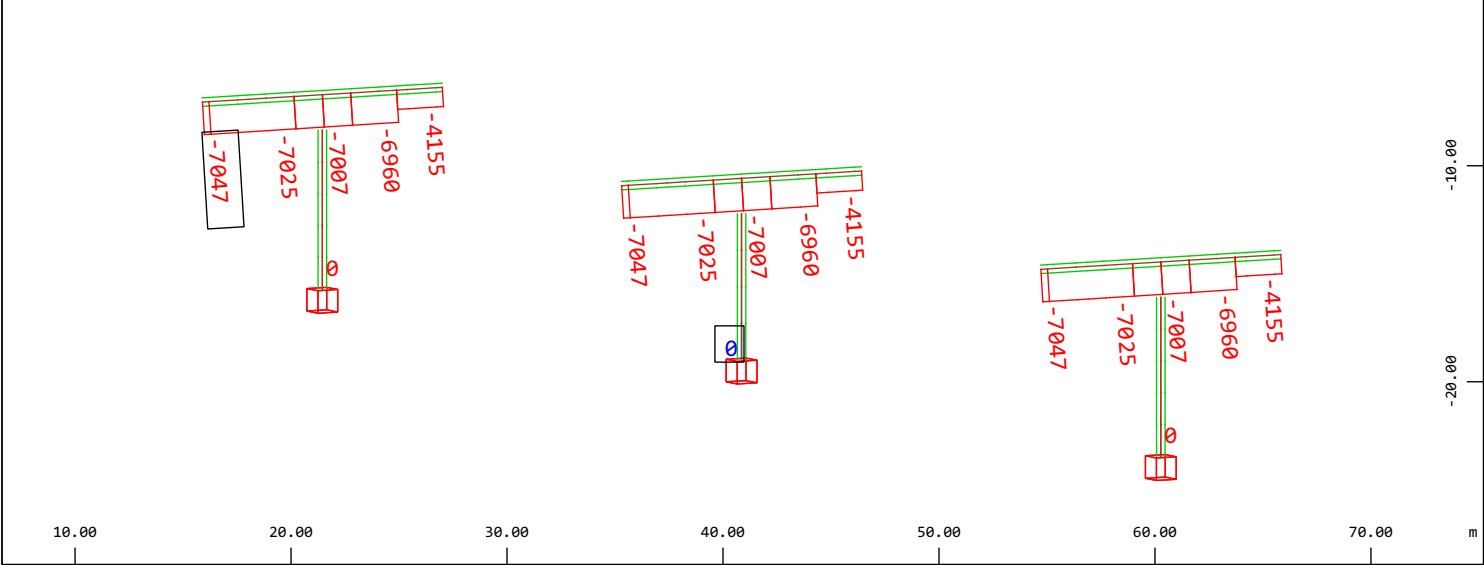
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My, Loadcase 2122 MSN,d { mxx My PX P } , 1 cm 3D = 32734 kNm
(Min=-11283) (Max=854)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994

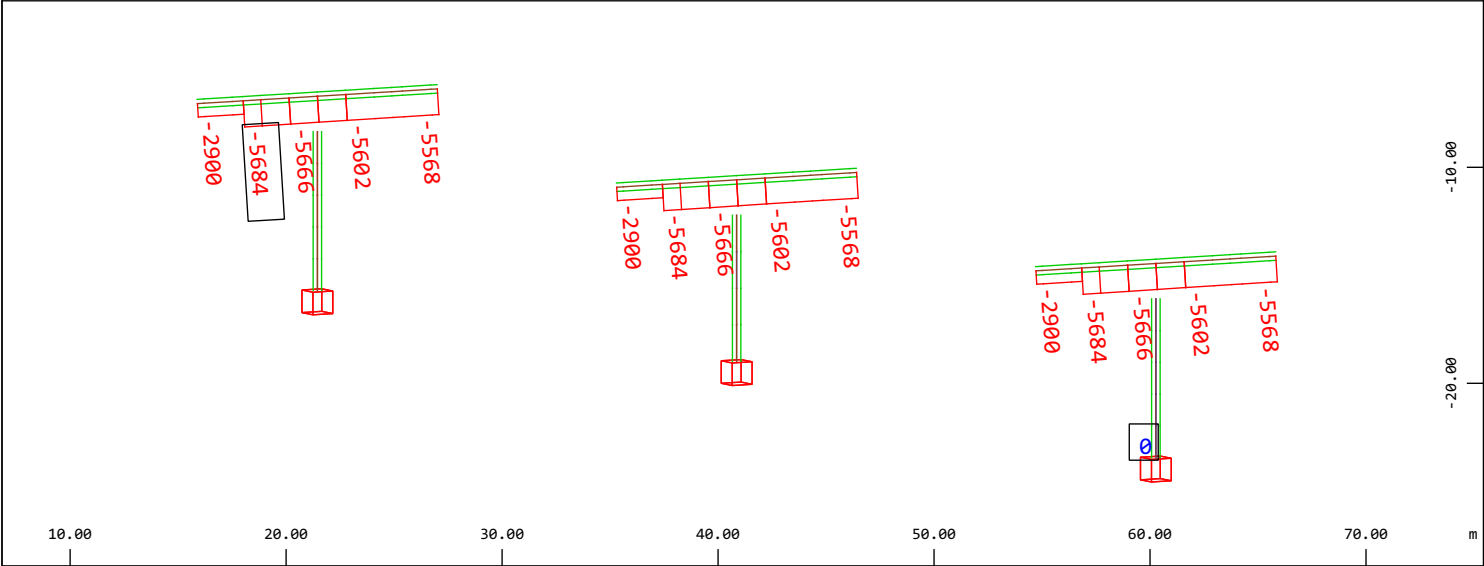


Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 2124 MSN,d { myy Vz PY Pt } , 1 cm 3D = 16367 kN
(Min=-7984) (Max=2797)

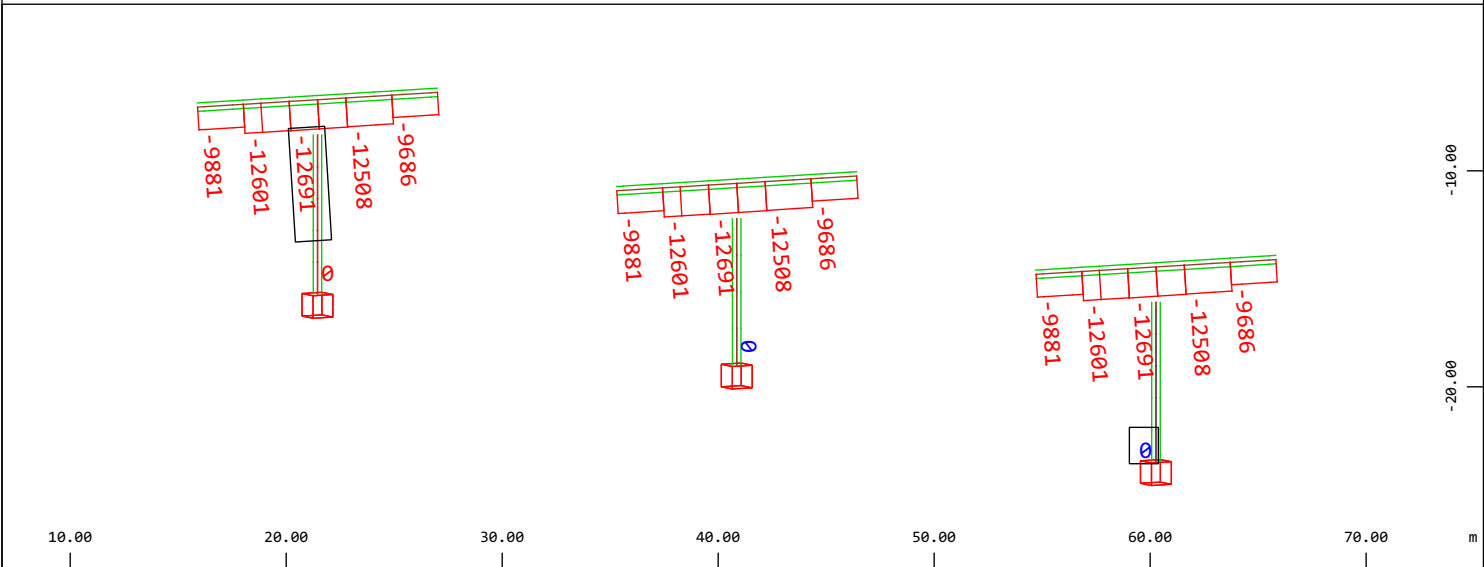
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



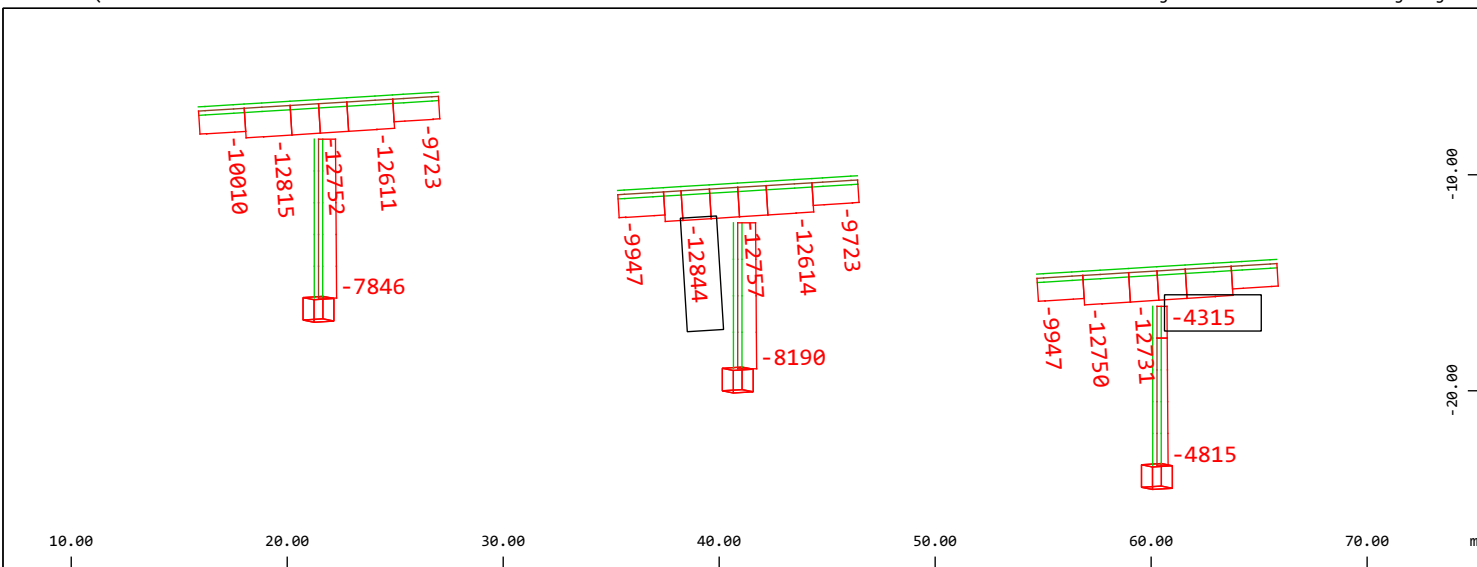
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 5006 (CS 6) Prestress , 1 cm 3D = 16367 kN (Min=-7047) (Max=0)
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 5011 (CS 11) Prestress , 1 cm 3D = 16367 kN (Min=-5684) (Max=0)
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994

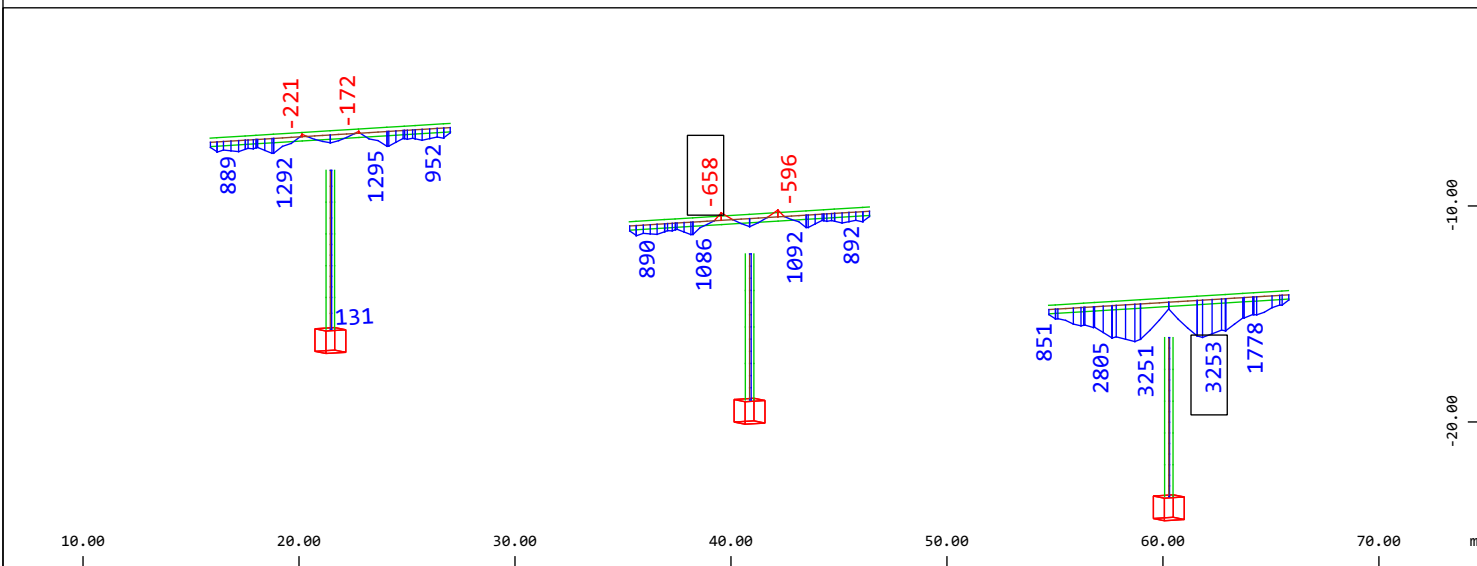


Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 7002 sum_P , 1 cm 3D = 32734 kN (Min=-12691) (Max=0)
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



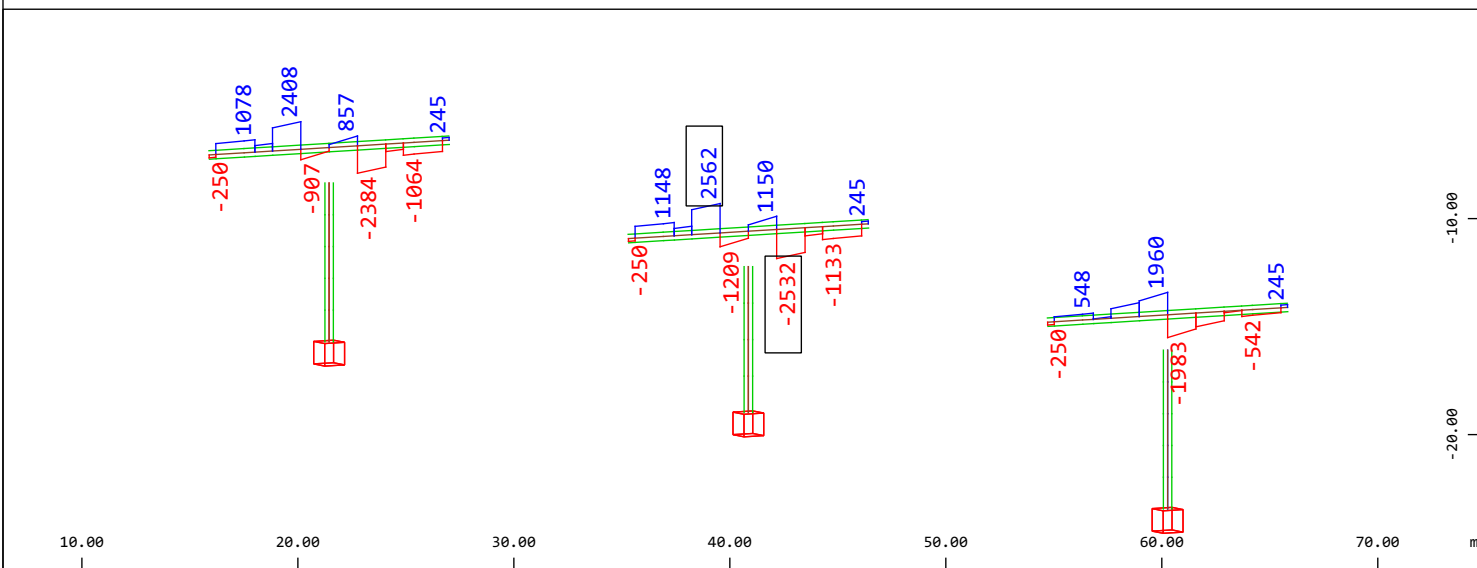
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 4030 (CS 30) Prekladna povezava , 1 cm 3D = 32734 kN
(Min=-12844) (Max=-4315)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



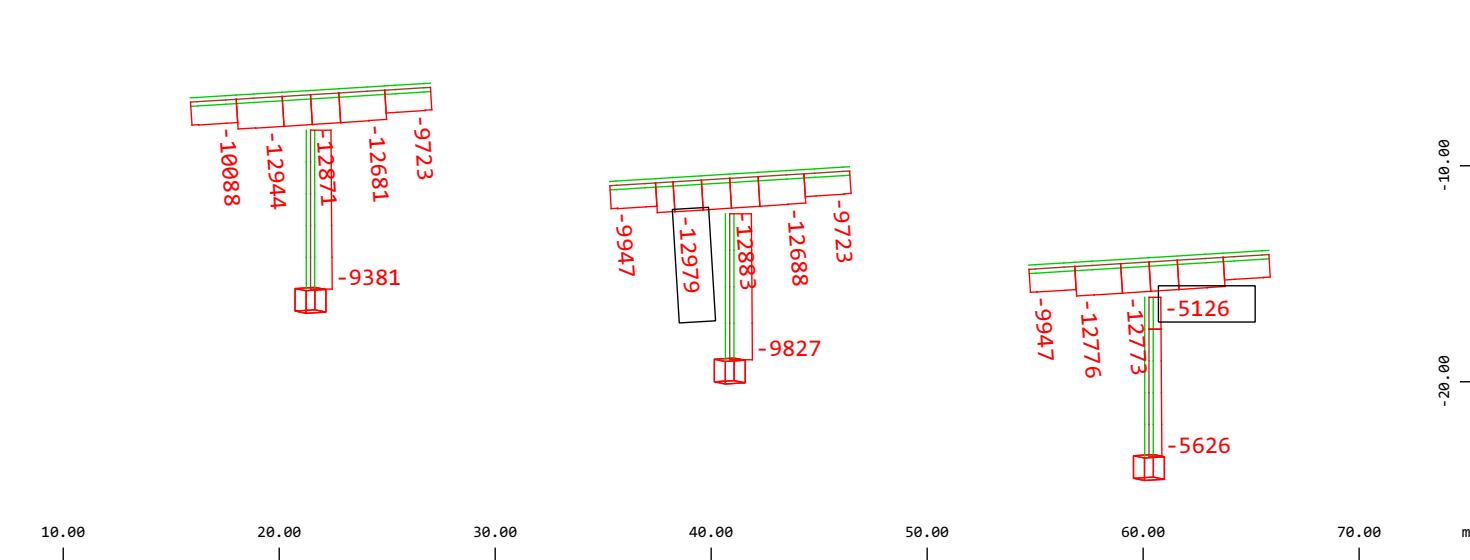
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My (Maximum values cubic interpolated), Loadcase 4030 (CS 30)
Prekladna povezava , 1 cm 3D = 6546.9 kNm (Min=-658) (Max=3253)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 4030 (CS 30) Prekladna povezava , 1 cm 3D = 6546.9 kN
(Min=-2532) (Max=2562)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



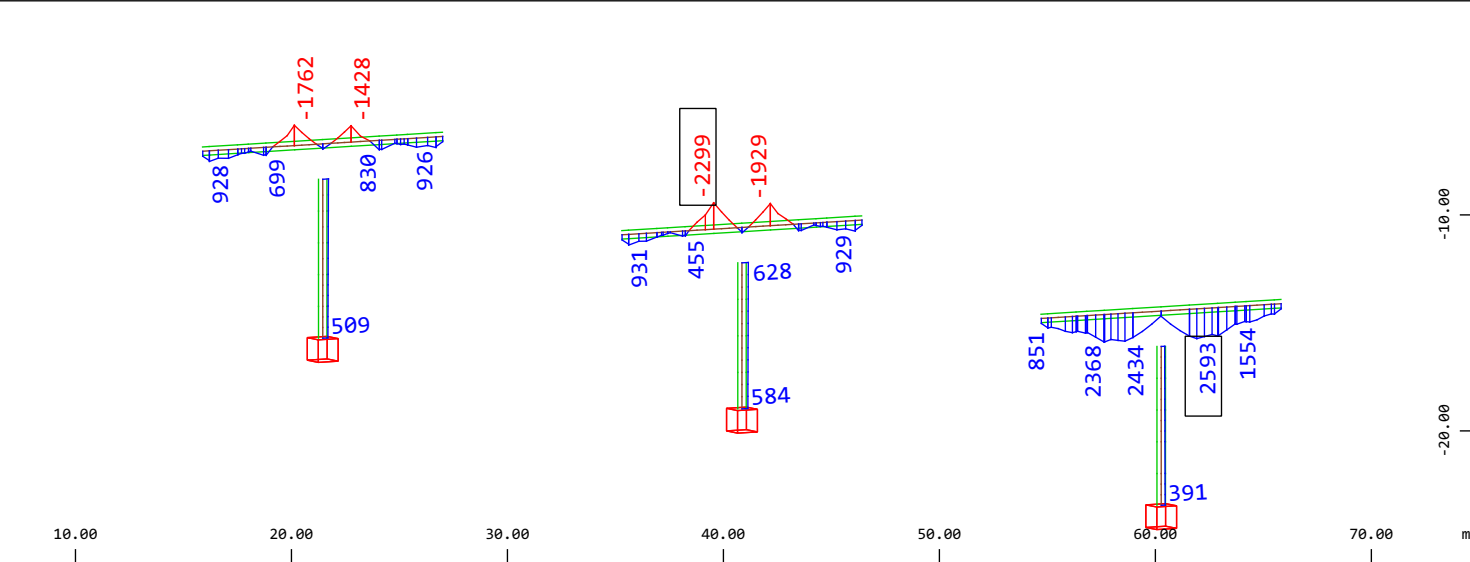
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 4040 (CS 40) Krov , 1 cm 3D = 32734 kN (Min=-12979) (Max=-5126)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



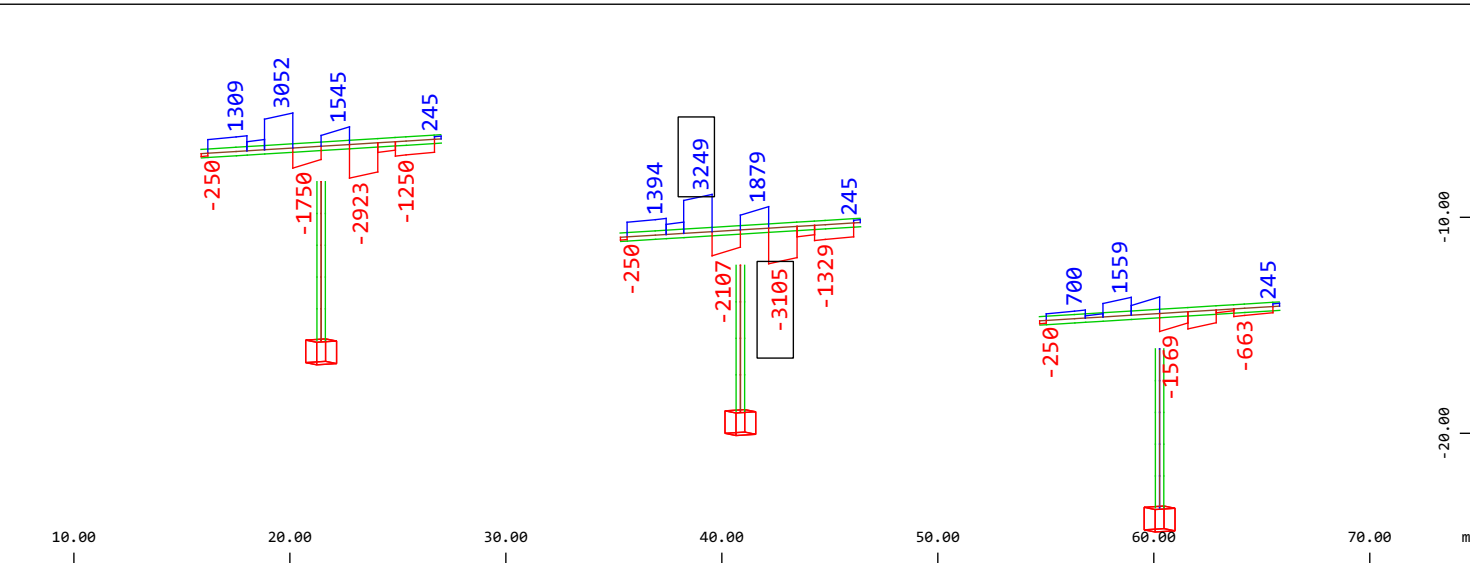
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y (Maximum values cubic interpolated), Loadcase 4040 (CS 40) Krov , 1 cm 3D = 6546.9 kNm (Min=-2299) (Max=2593)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



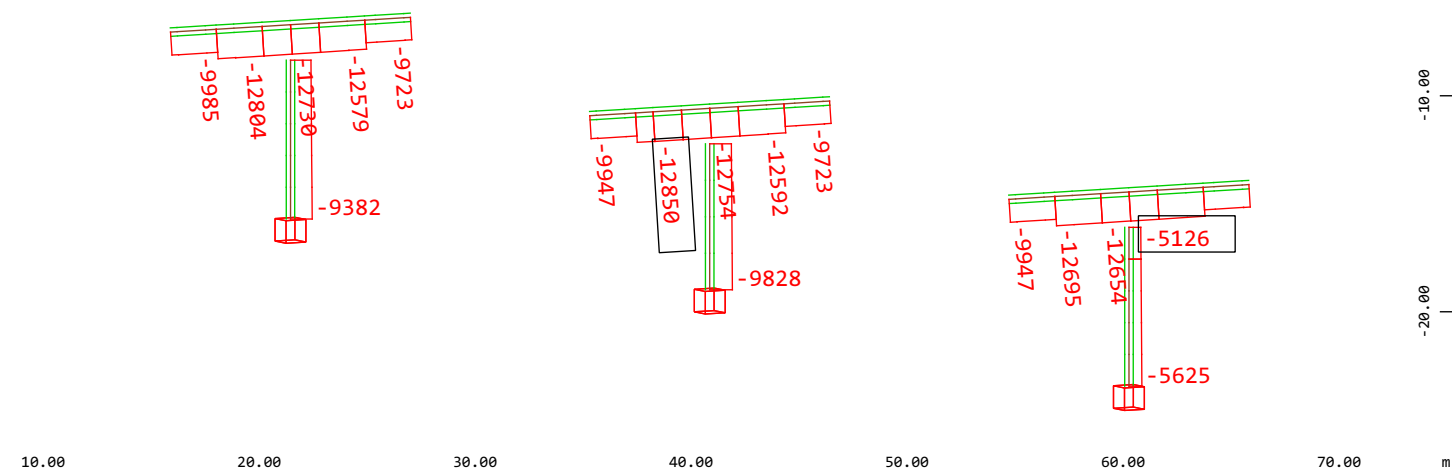
Z

X

Y

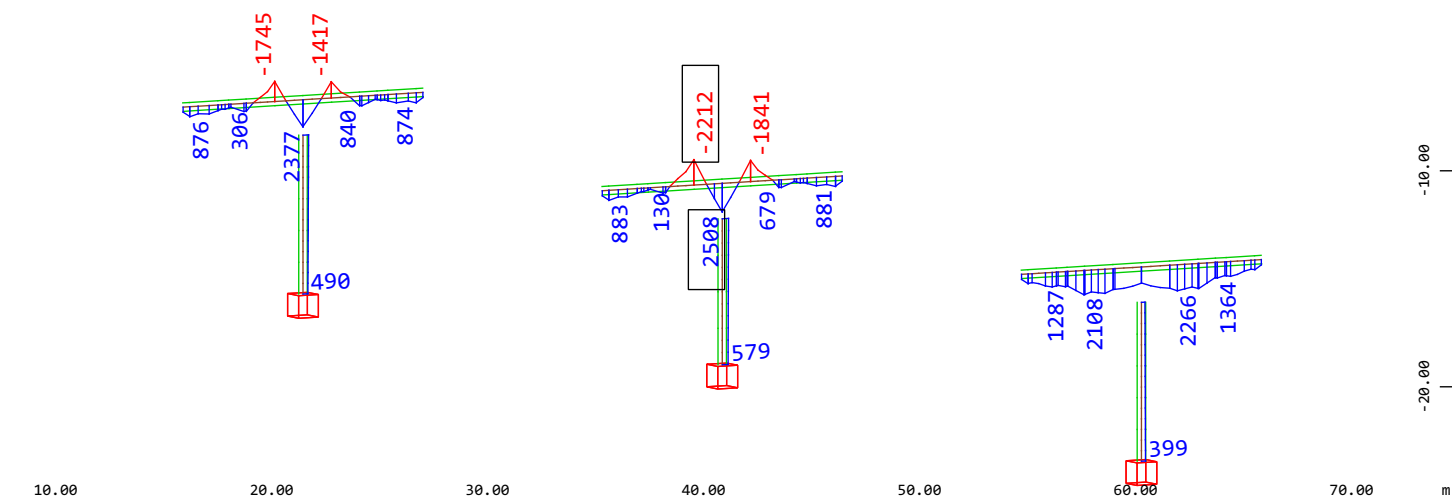
Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 4040 (CS 40) Krov , 1 cm 3D = 6546.9 kN (Min=-3105) (Max=3249)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



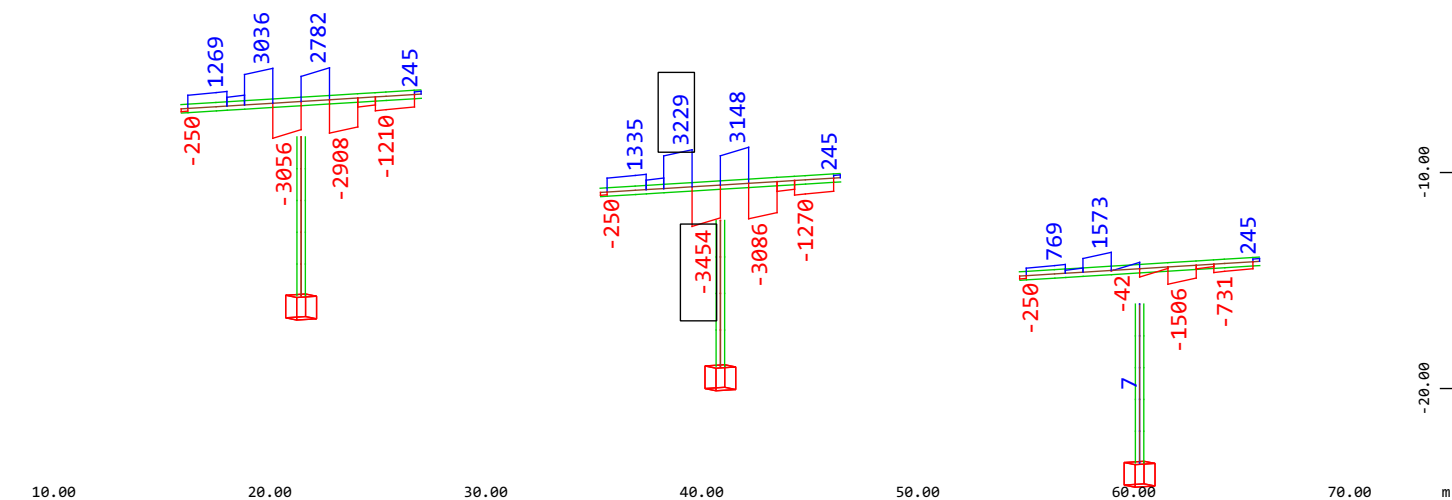
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 4047 (CS 47) Creep until today , 1 cm 3D = 32734 kN
(Min=-12850) (Max=-5126)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



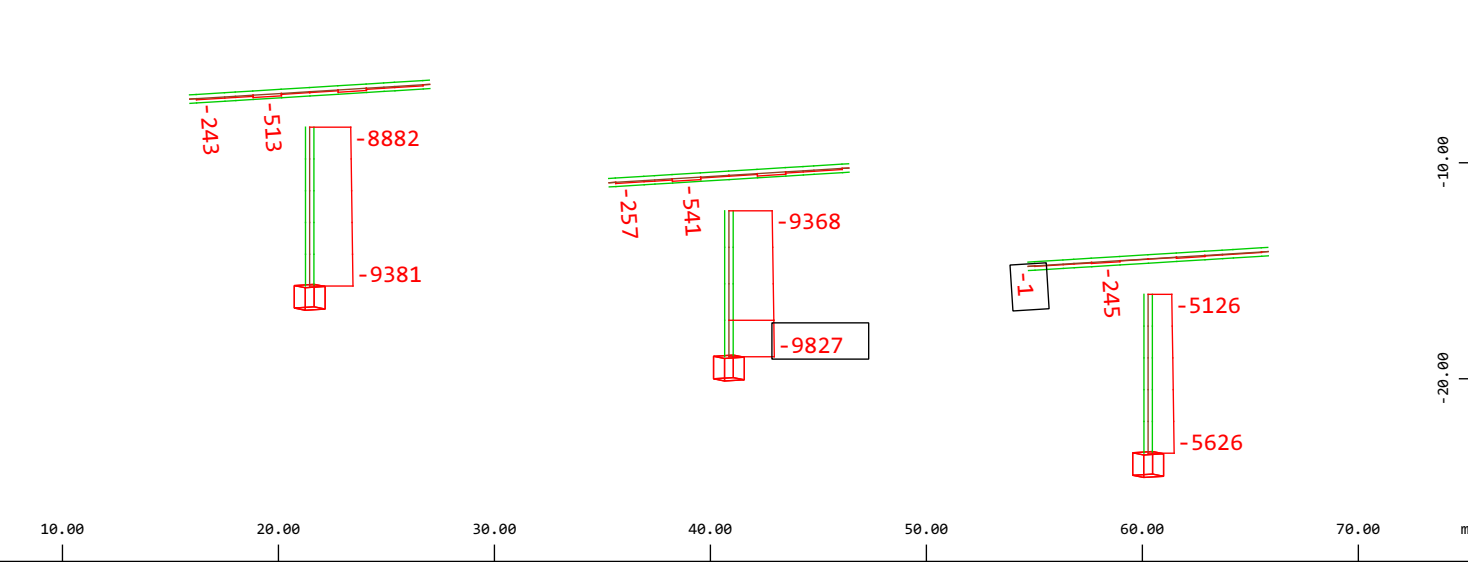
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My (Maximum values cubic interpolated), Loadcase 4047 (CS 47) Creep until today , 1 cm 3D = 6546.9 kNm (Min=-2212) (Max=2508)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 4047 (CS 47) Creep until today , 1 cm 3D = 6546.9 kN
(Min=-3454) (Max=3229)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



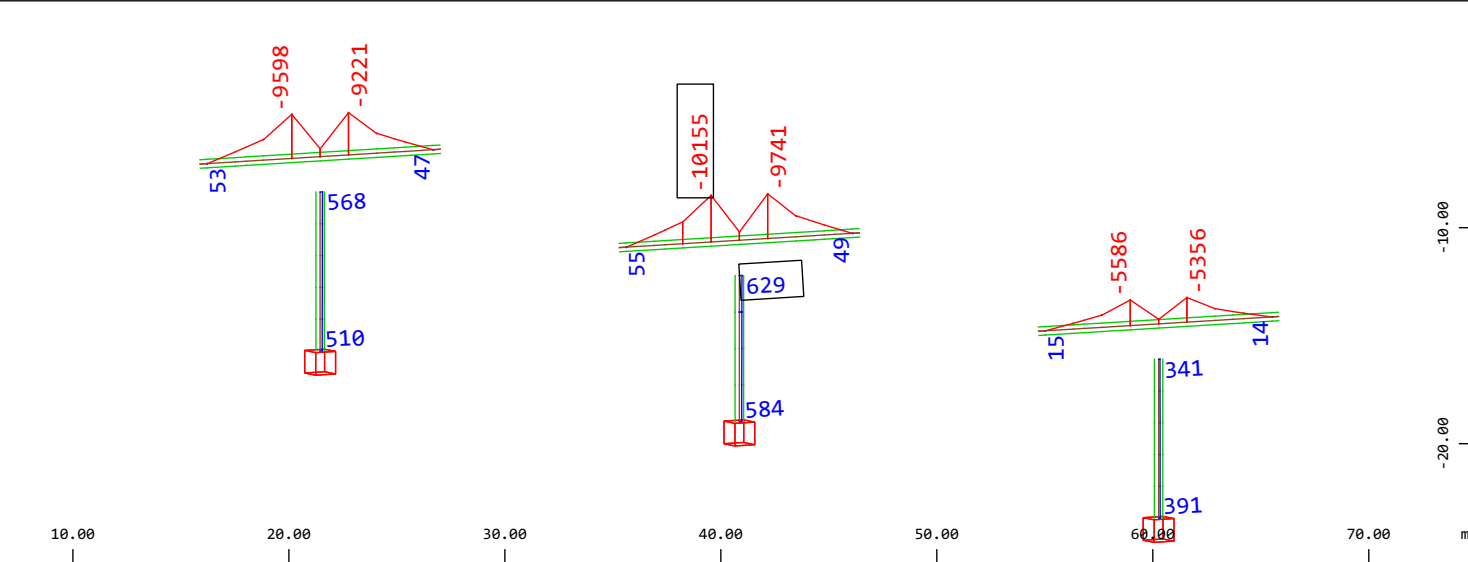
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 7001 sum_G , 1 cm 3D = 16367 kN (Min=-9827) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



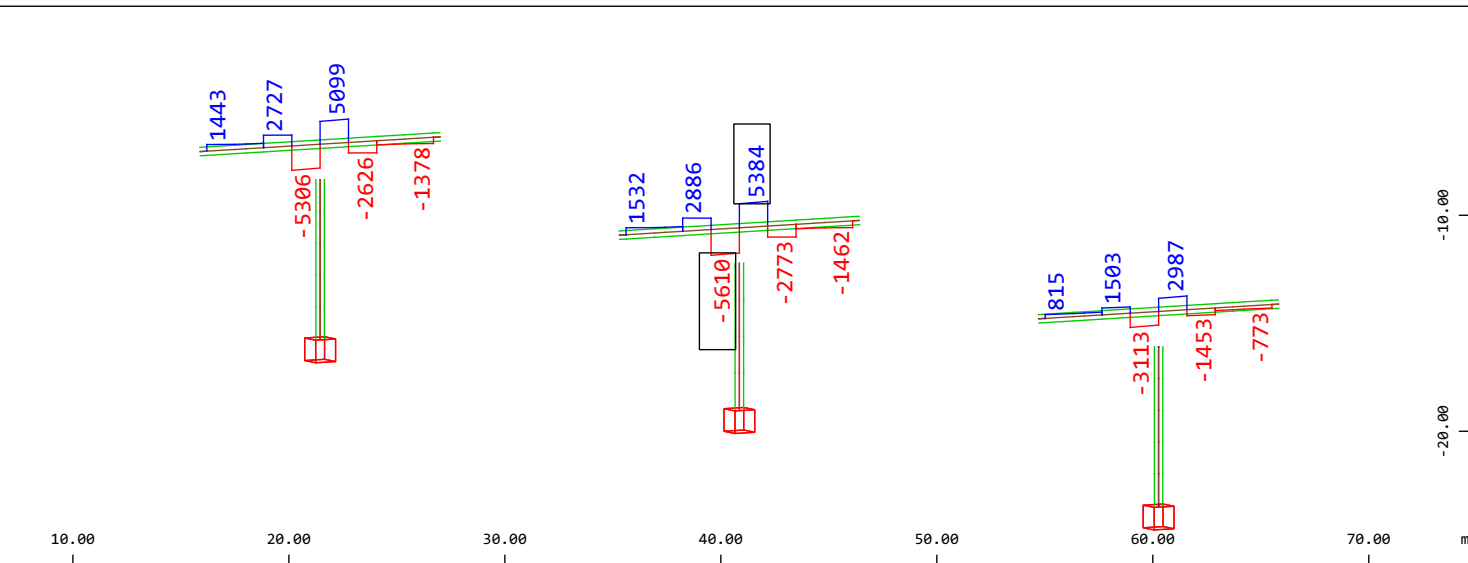
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 7001 sum_G , 1 cm 3D = 16367 kNm (Min=-10155) (Max=629)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



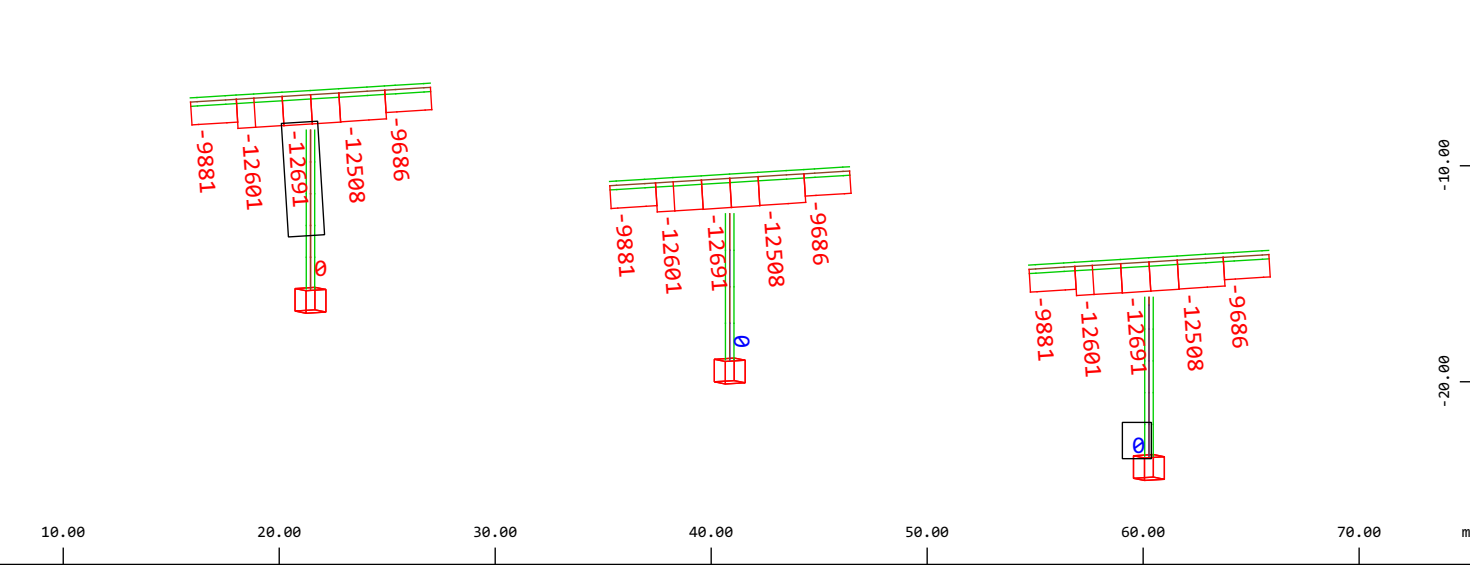
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 7001 sum_G , 1 cm 3D = 16367 kN (Min=-5610) (Max=5384)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



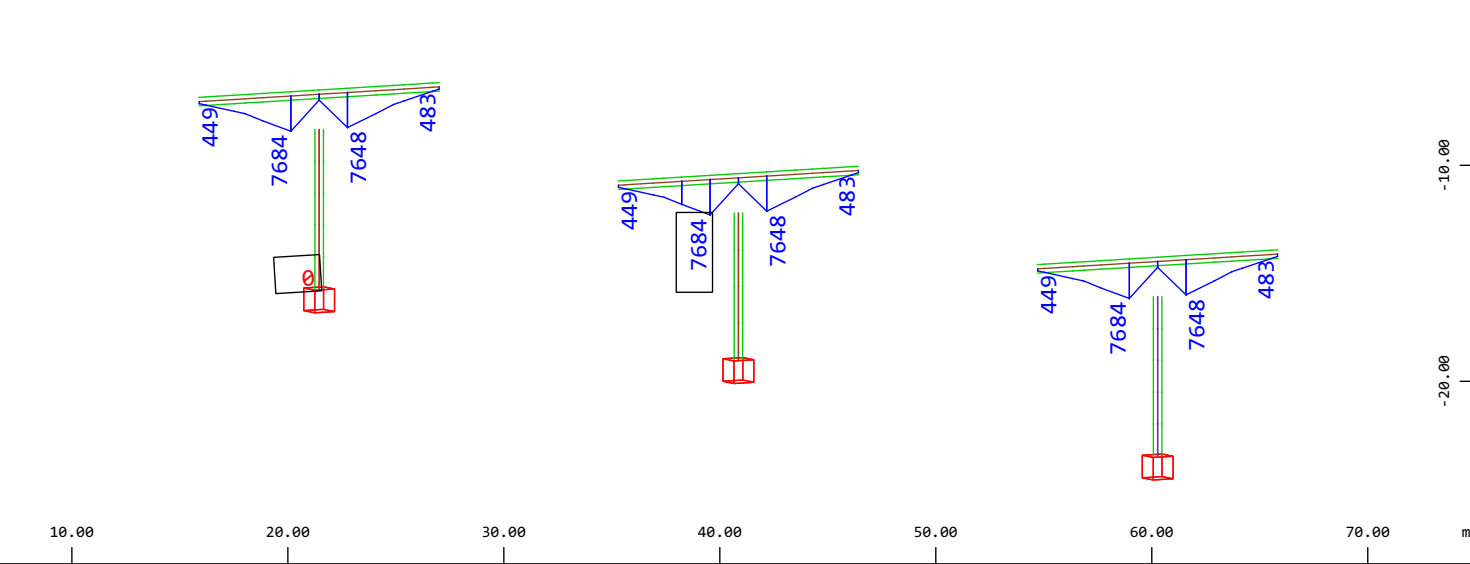
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 7002 sum_P , 1 cm 3D = 32734 kN (Min=-12691) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



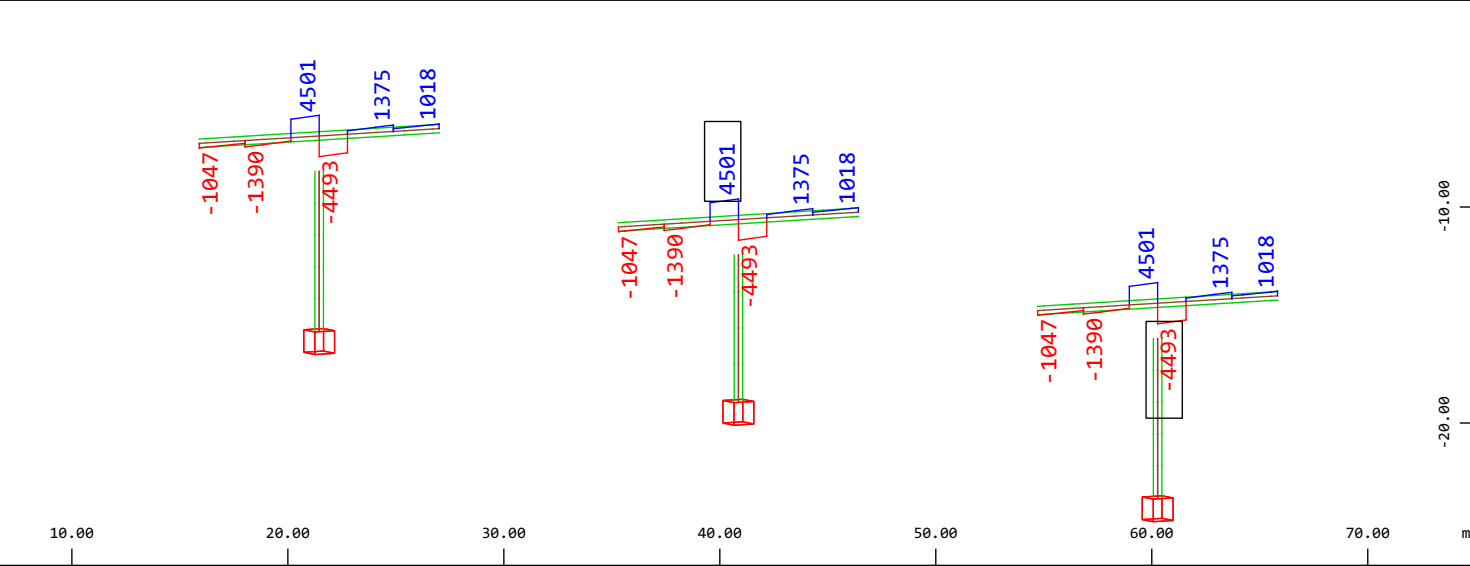
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 7002 sum_P , 1 cm 3D = 16367 kNm (Min= 0) (Max=7684)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



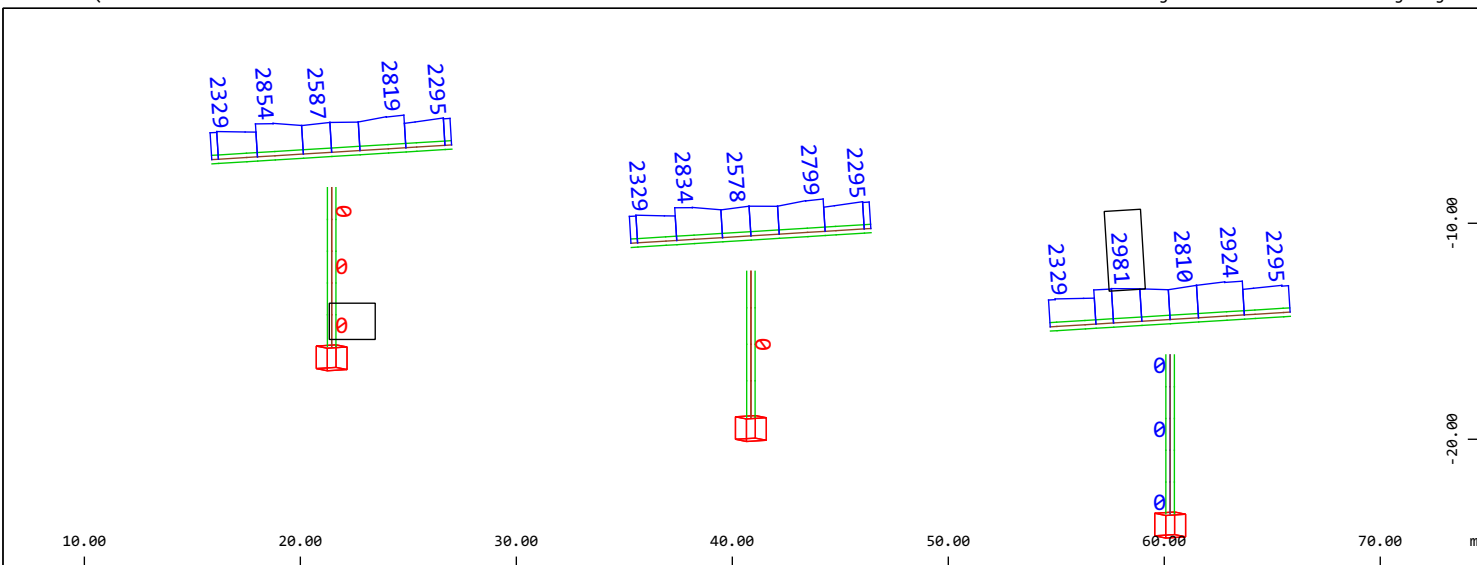
Z

X

Y

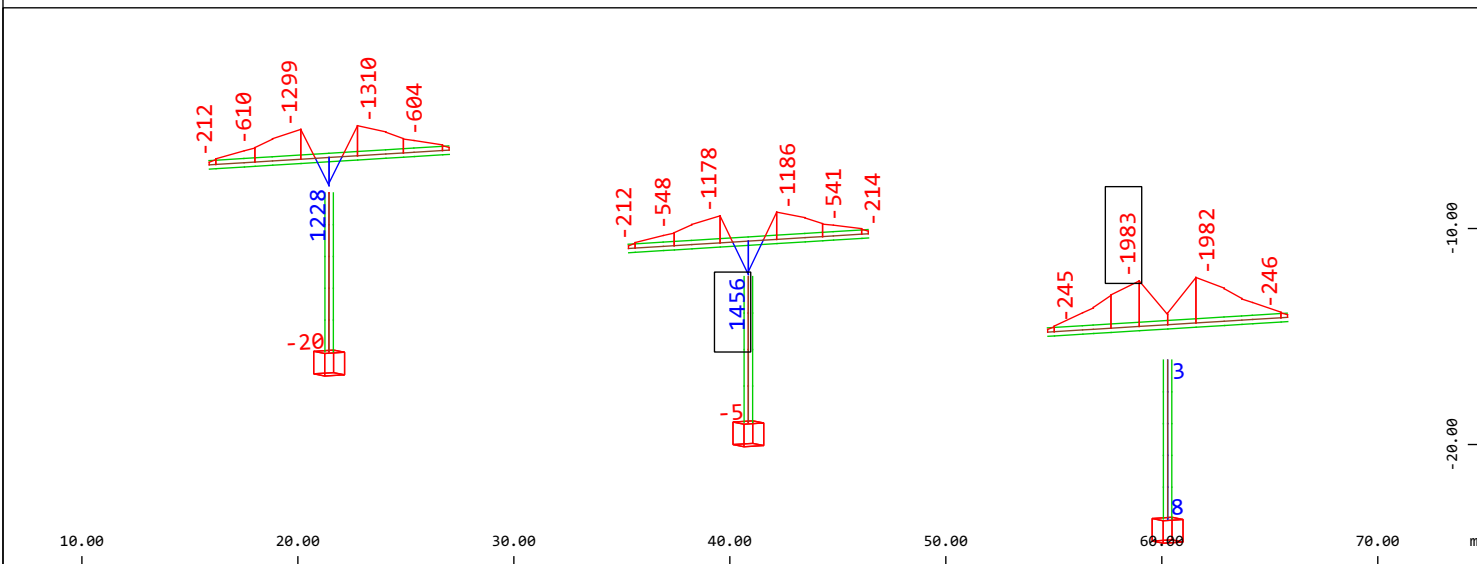
Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 7002 sum_P , 1 cm 3D = 16367 kN (Min=-4493) (Max=4501)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



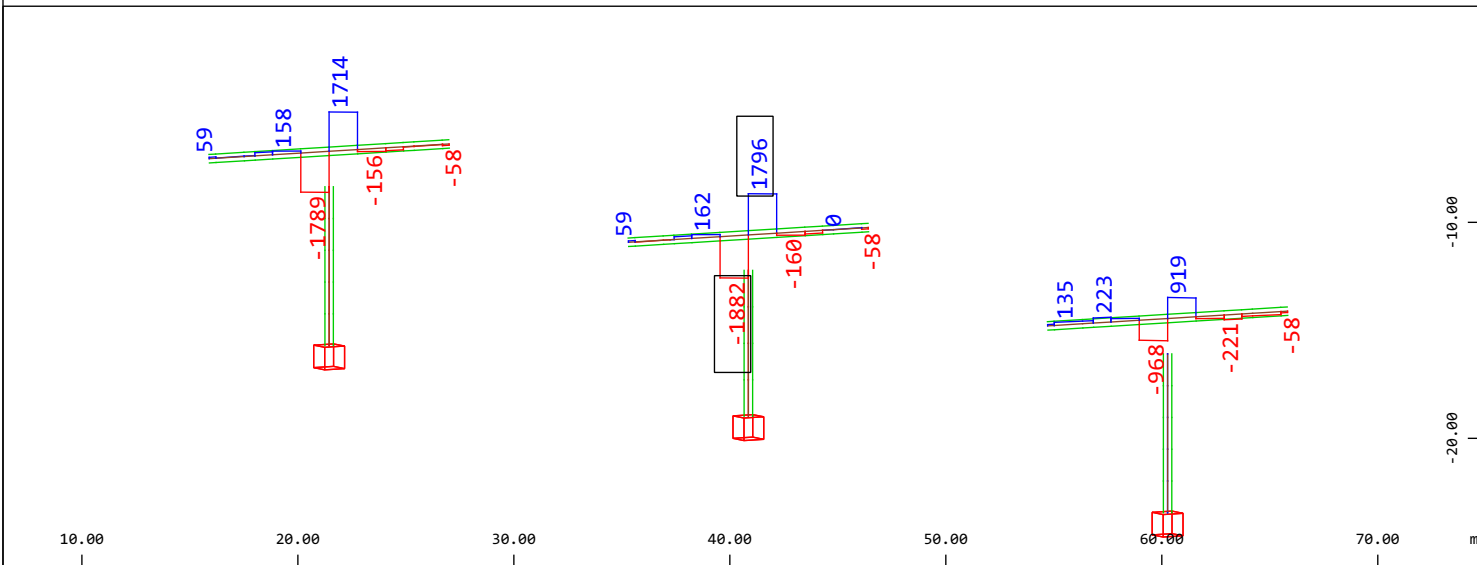
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 7003 sum_C , 1 cm 3D = 6546.9 kN (Min= 0) (Max=2981)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



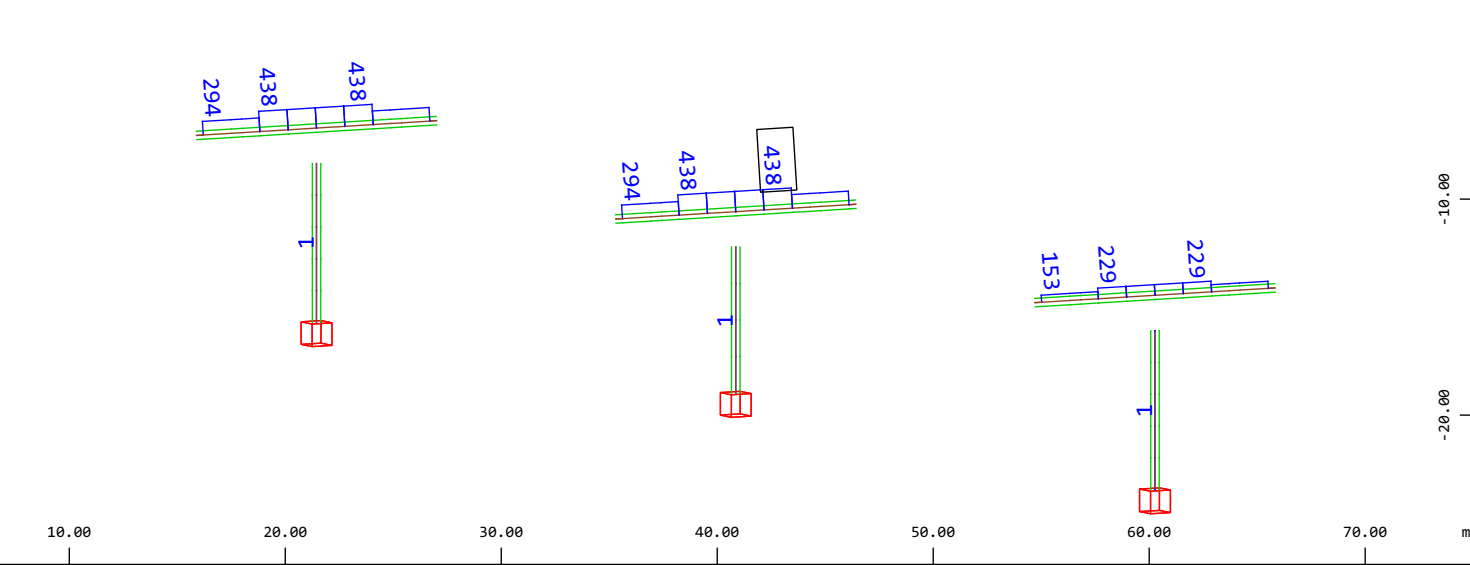
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My, Loadcase 7003 sum_C , 1 cm 3D = 3273.4 kNm (Min=-1983) (Max=1456)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 7003 sum_C , 1 cm 3D = 3273.4 kN (Min=-1882) (Max=1796)

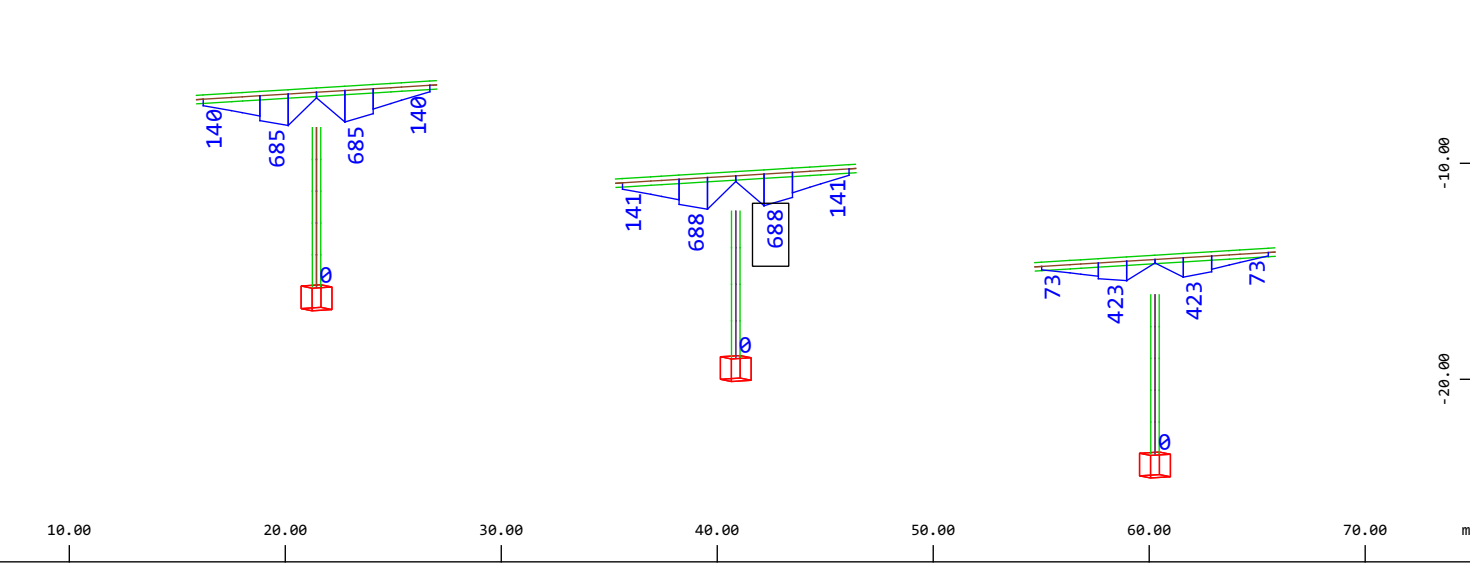
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Normal force N_x , Loadcase 907 TEMPERATURA { nyy N UX PtX } , 1 cm 3D = 1636.7 kN
(Max=438)

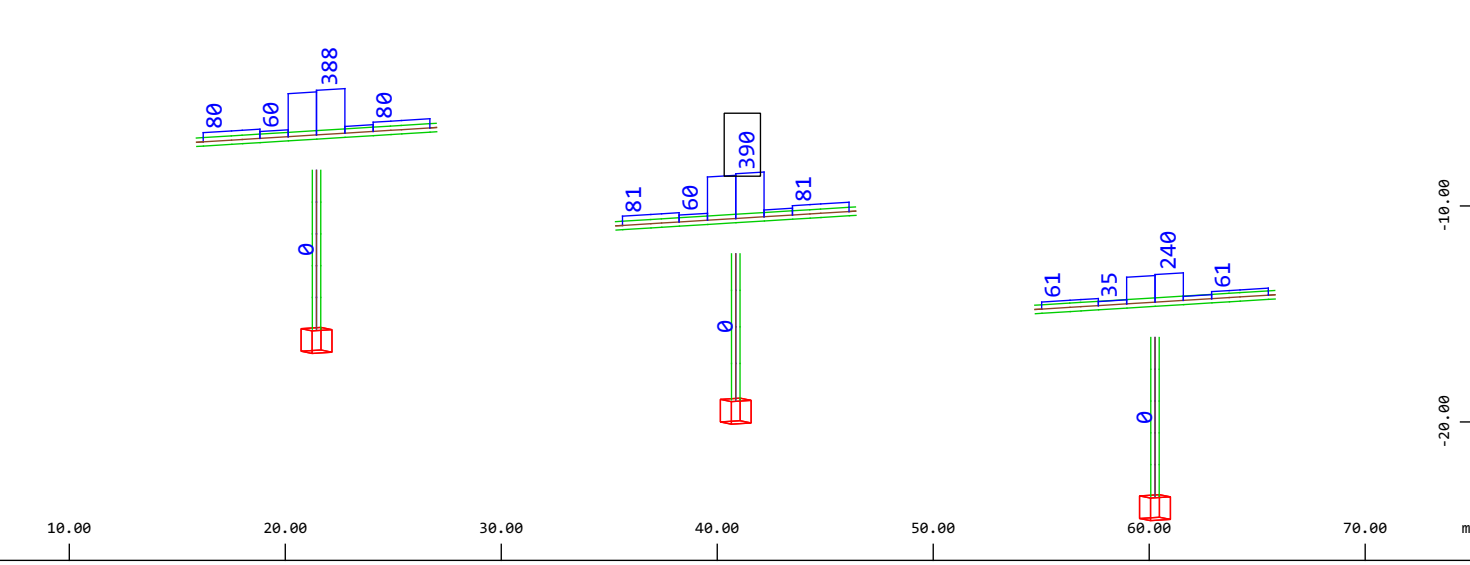
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Bending moment M_y , Loadcase 901 TEMPERATURA { mxx My PX P } , 1 cm 3D = 1636.7 kNm (Max=688)

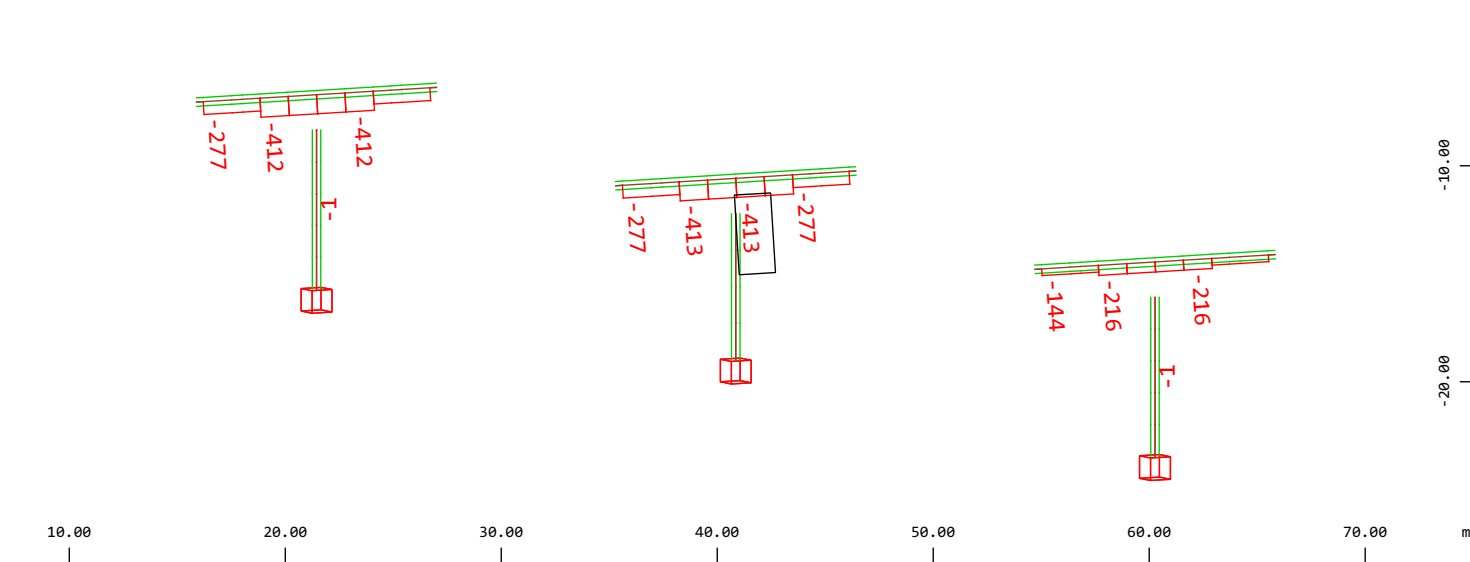
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Shear force V_z , Loadcase 903 TEMPERATURA { myy Vz PY Pt } , 1 cm 3D = 654.69 kN (Max=390)

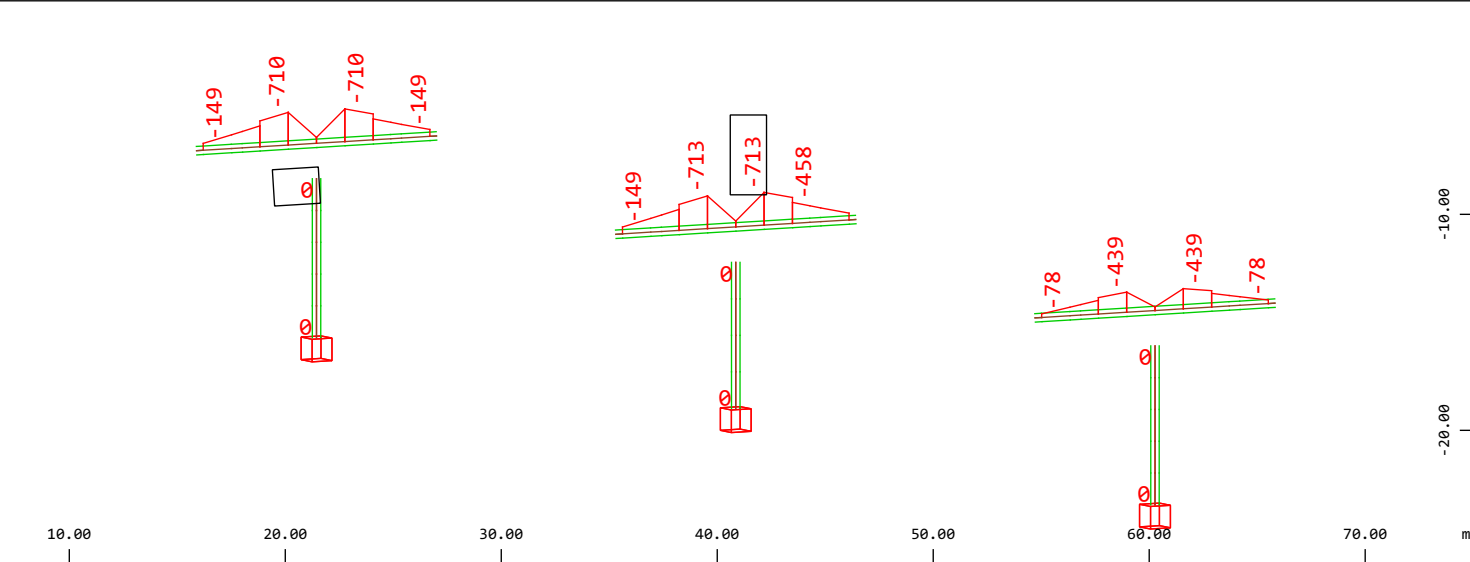
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Normal force N_x , Loadcase 908 TEMPERATURA { nyy N UX PtX } , 1 cm 3D = 1636.7 kN
(Min=-413) (Max=0)

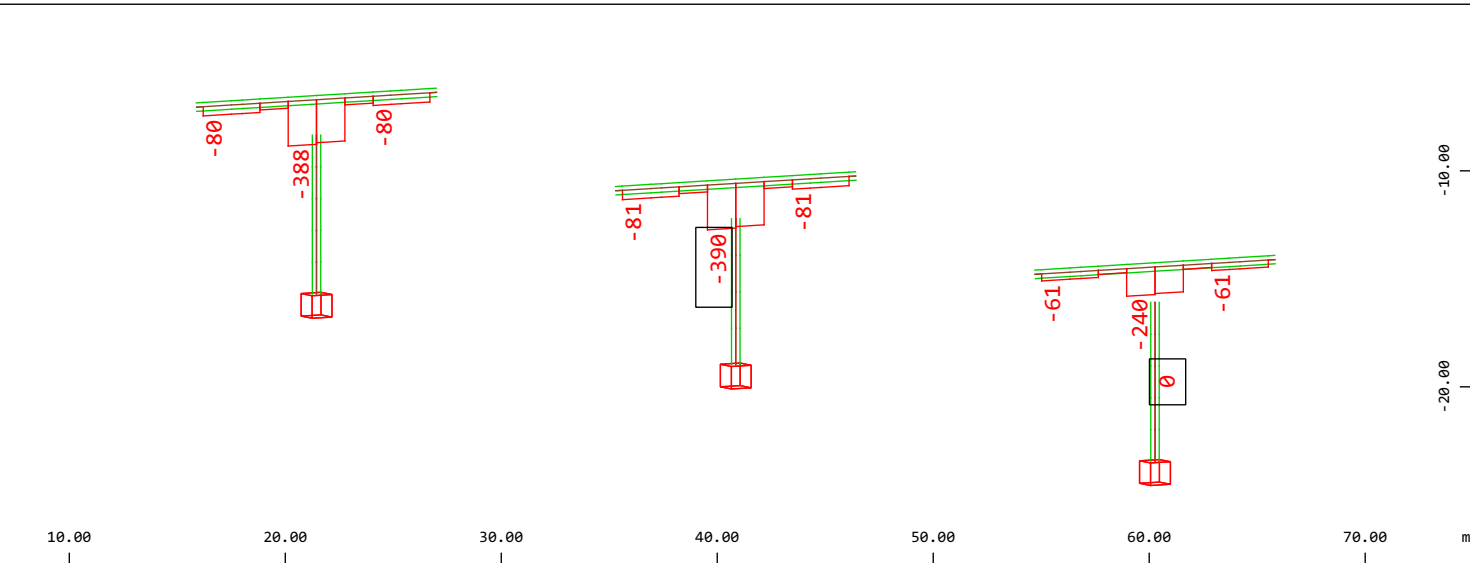
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Bending moment M_y , Loadcase 902 TEMPERATURA { mxx My PX P } , 1 cm 3D = 1636.7
kNm (Min=-713) (Max=0)

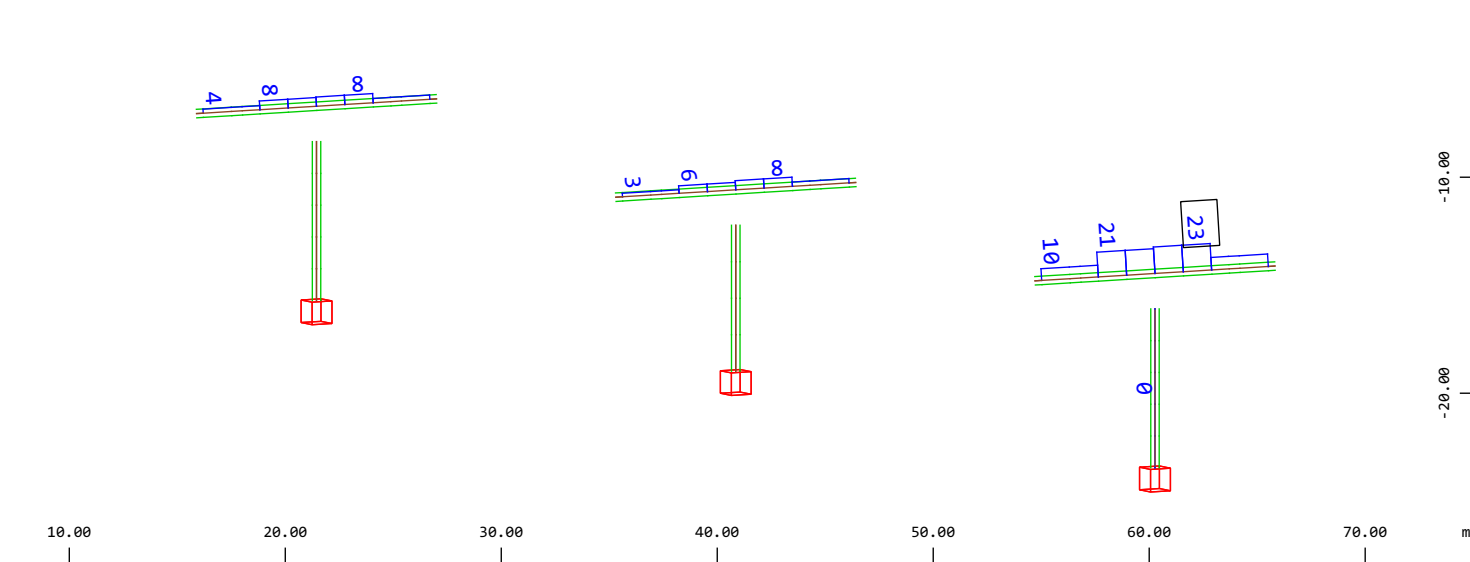
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Shear force V_z , Loadcase 904 TEMPERATURA { myy Vz PY Pt } , 1 cm 3D = 654.69 kN
(Min=-390) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



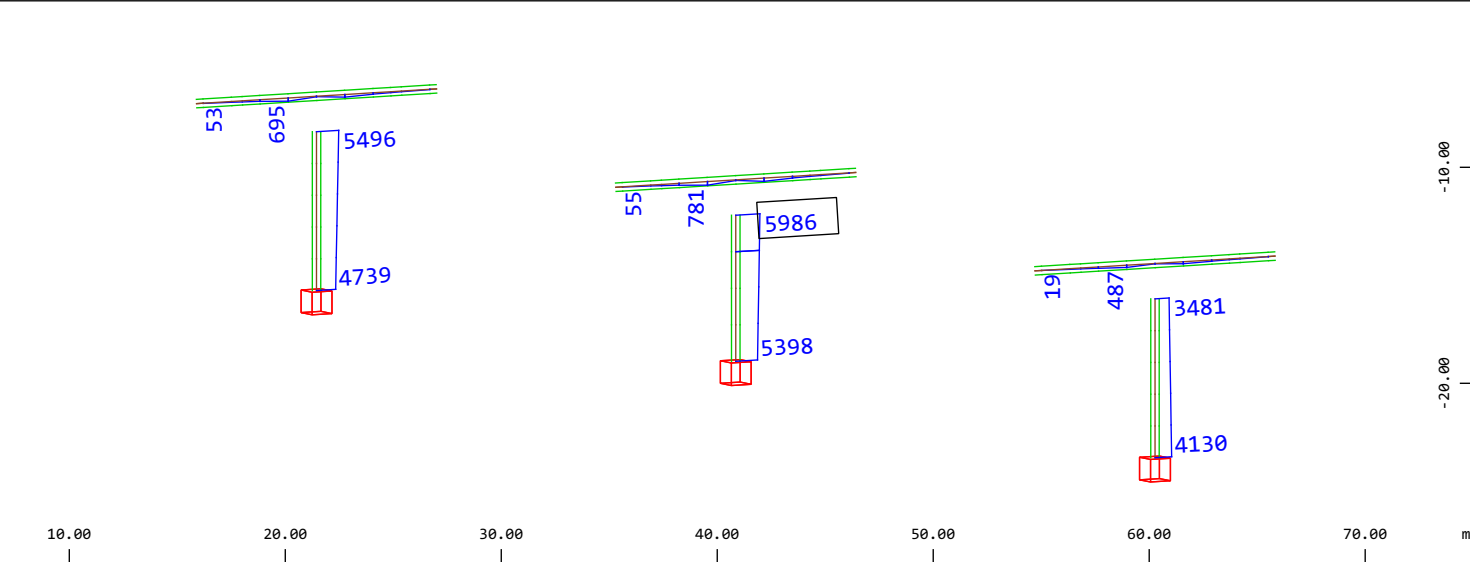
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 927 PROMET ZVEZNA { nyy N UX PtX } , 1 cm 3D = 65.469
kN (Max=23)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



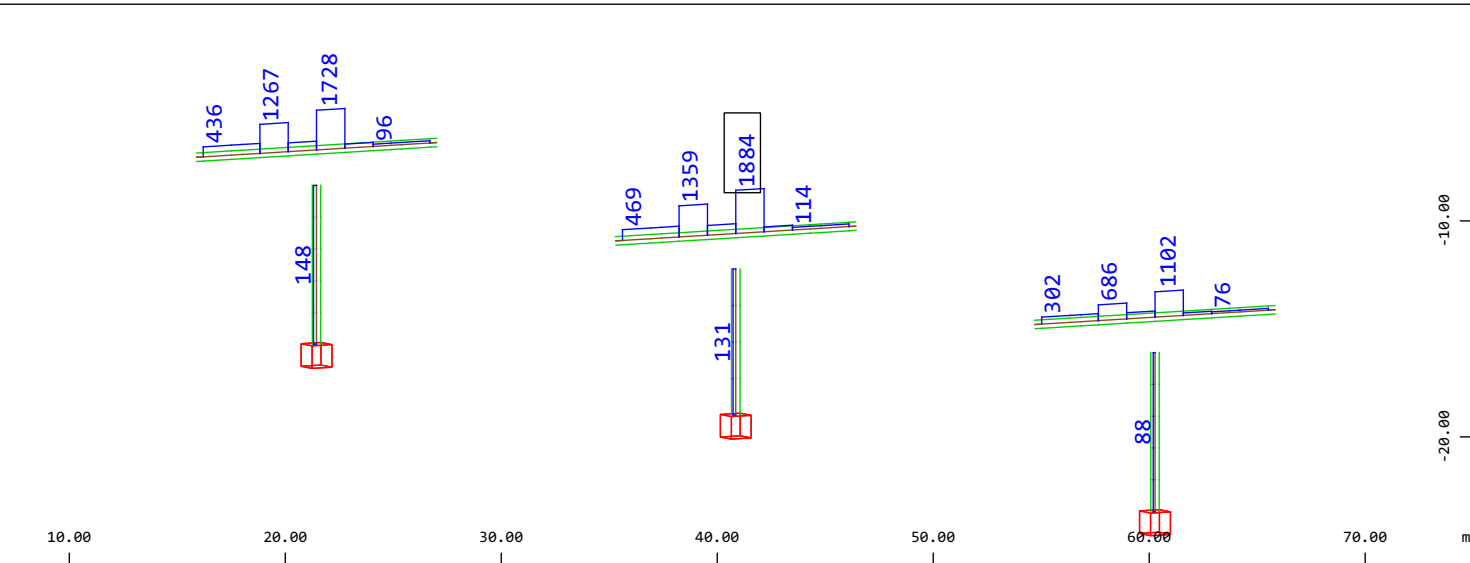
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My, Loadcase 921 PROMET ZVEZNA { mxx My PX P } , 1 cm 3D = 16367
kNm (Max=5986)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



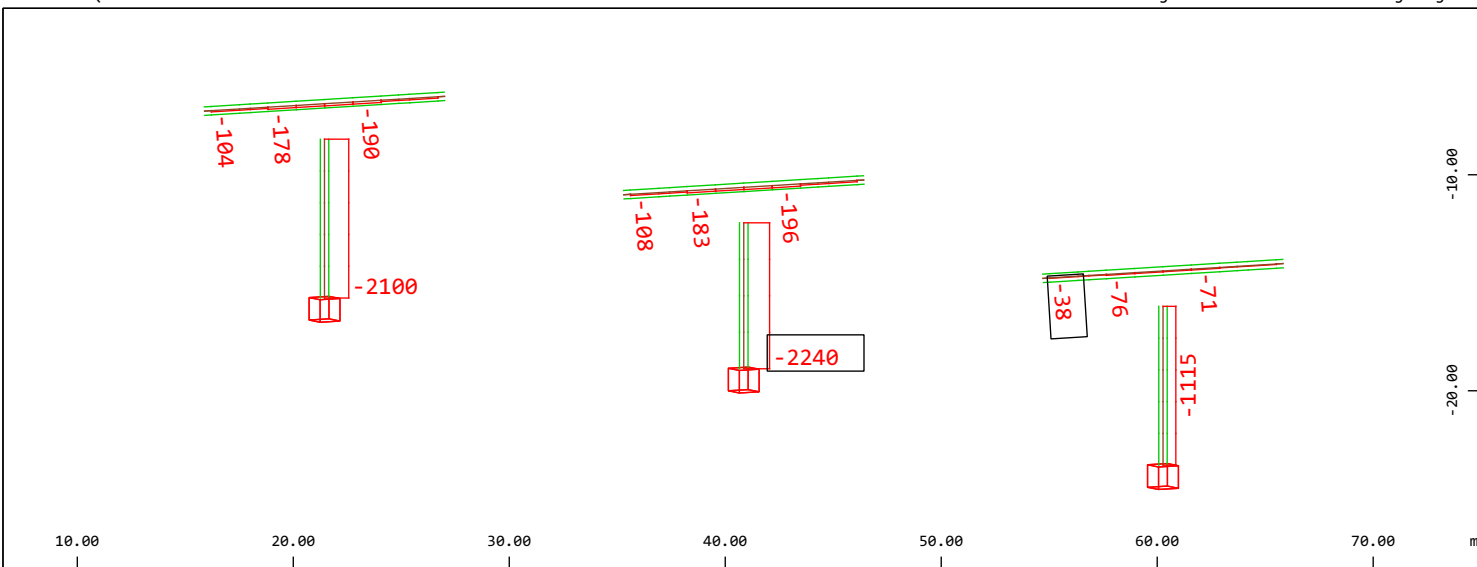
Z

X

Y

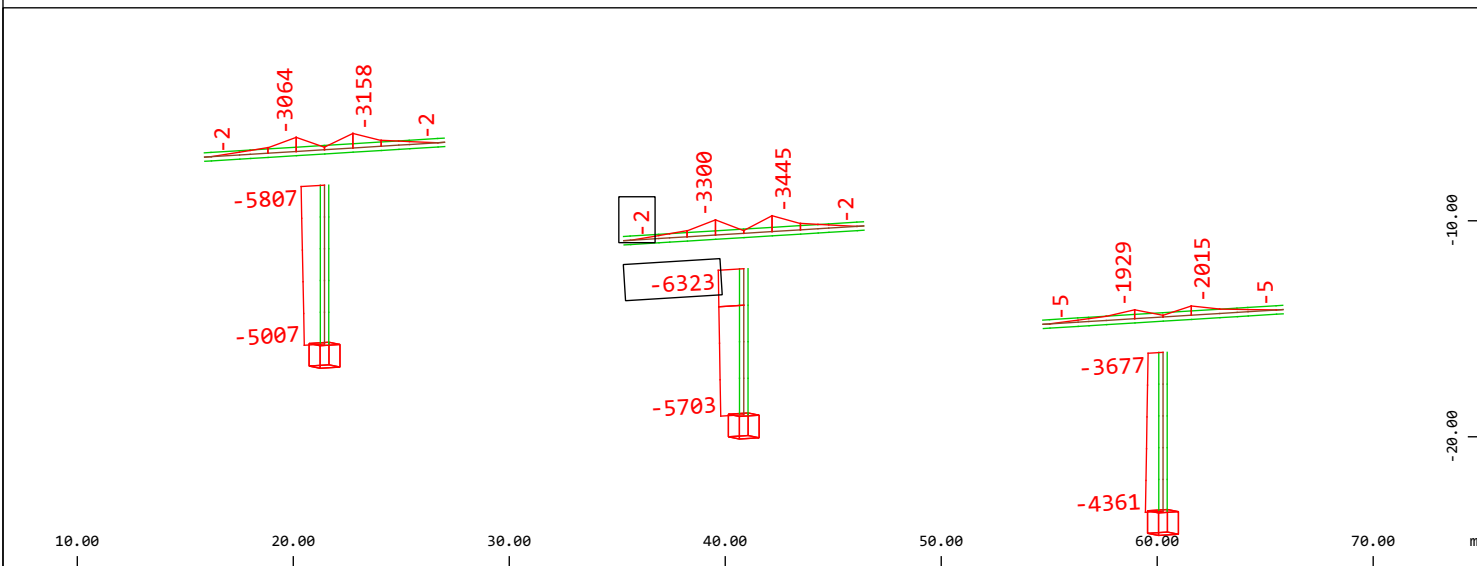
Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 923 PROMET ZVEZNA { myy Vz PY Pt } , 1 cm 3D = 3273.4 kN
(Max=1884)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



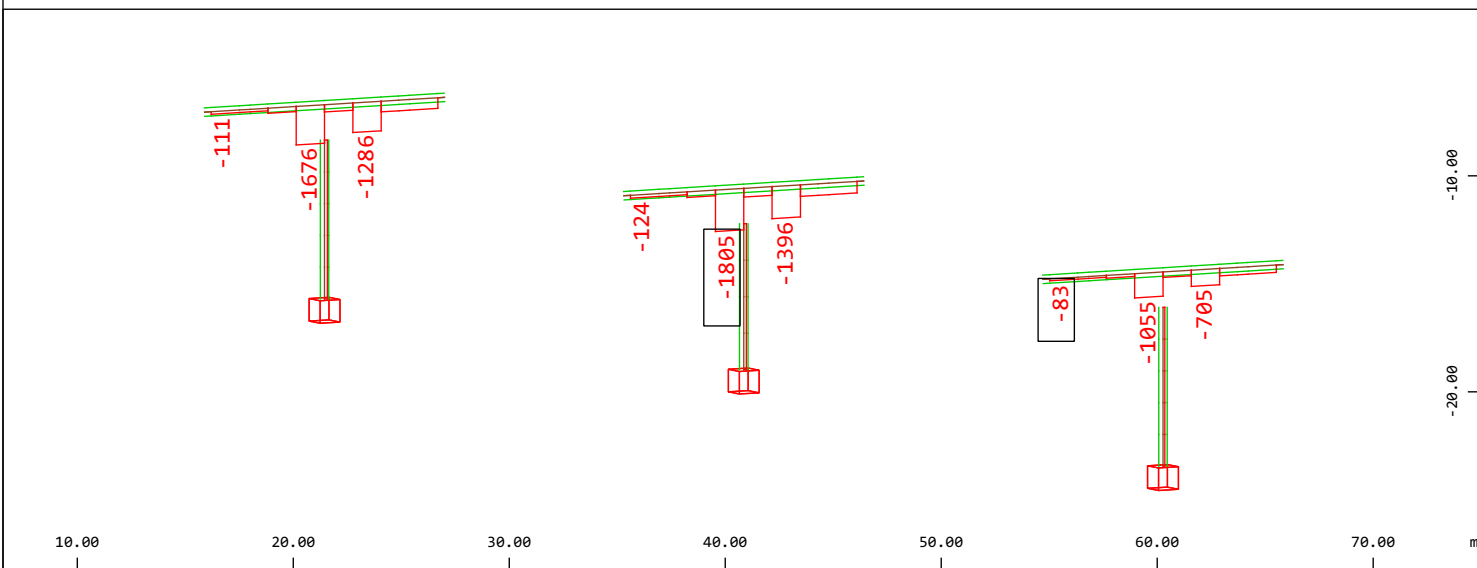
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 928 PROMET ZVEZNA { nyy N UX PtX } , 1 cm 3D = 6546.9
kN (Min=-2240) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



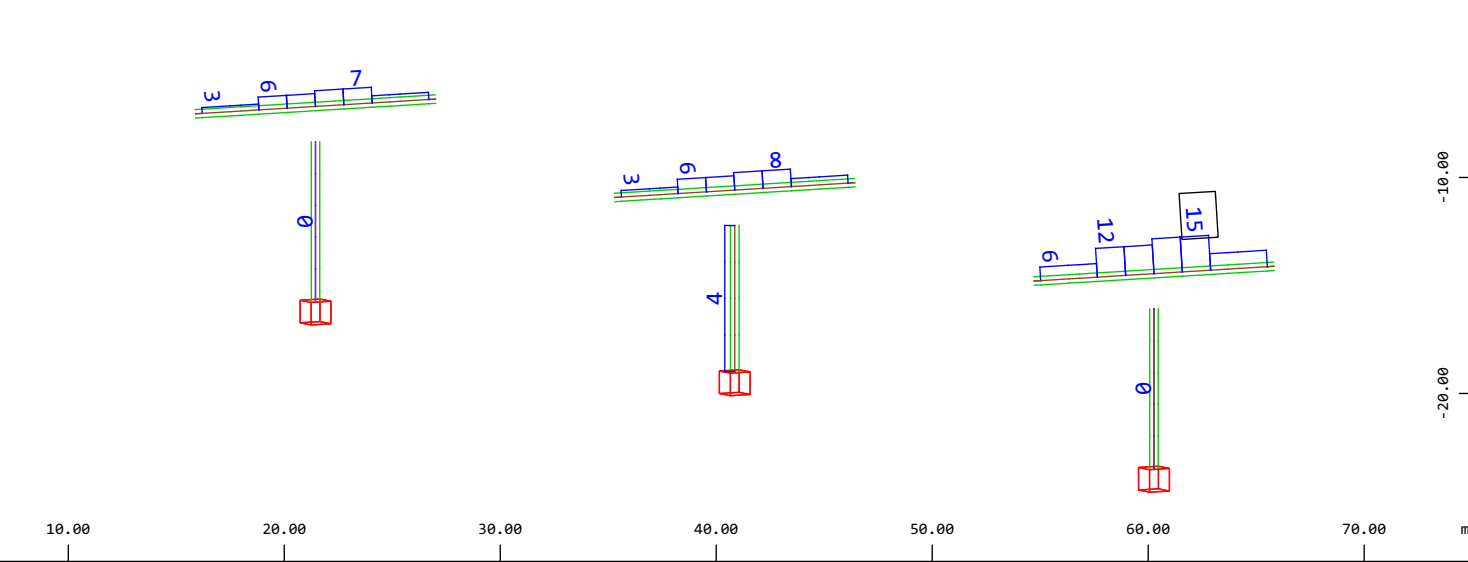
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My, Loadcase 922 PROMET ZVEZNA { mxx My PX P } , 1 cm 3D = 16367
kNm (Min=-6323) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 924 PROMET ZVEZNA { myy Vz PY Pt } , 1 cm 3D = 3273.4 kN
(Min=-1805) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



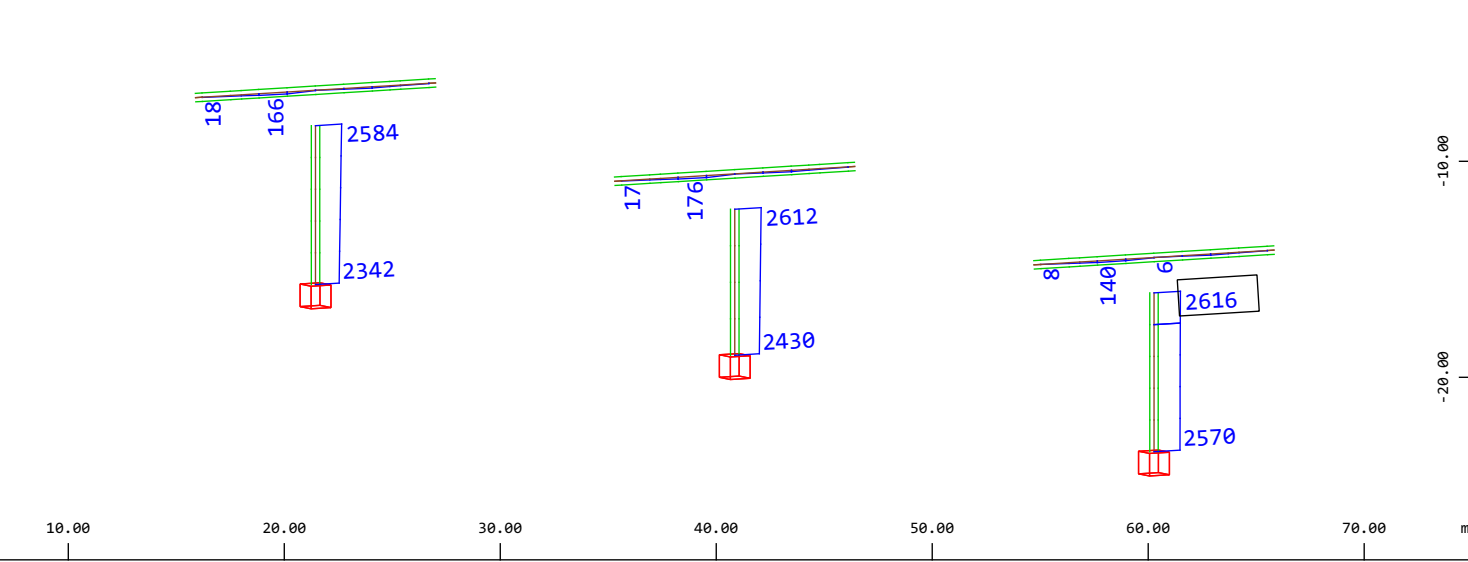
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 947 PROMET TS { nyy N UX PtX } , 1 cm 3D = 32.734 kN
(Max=15)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



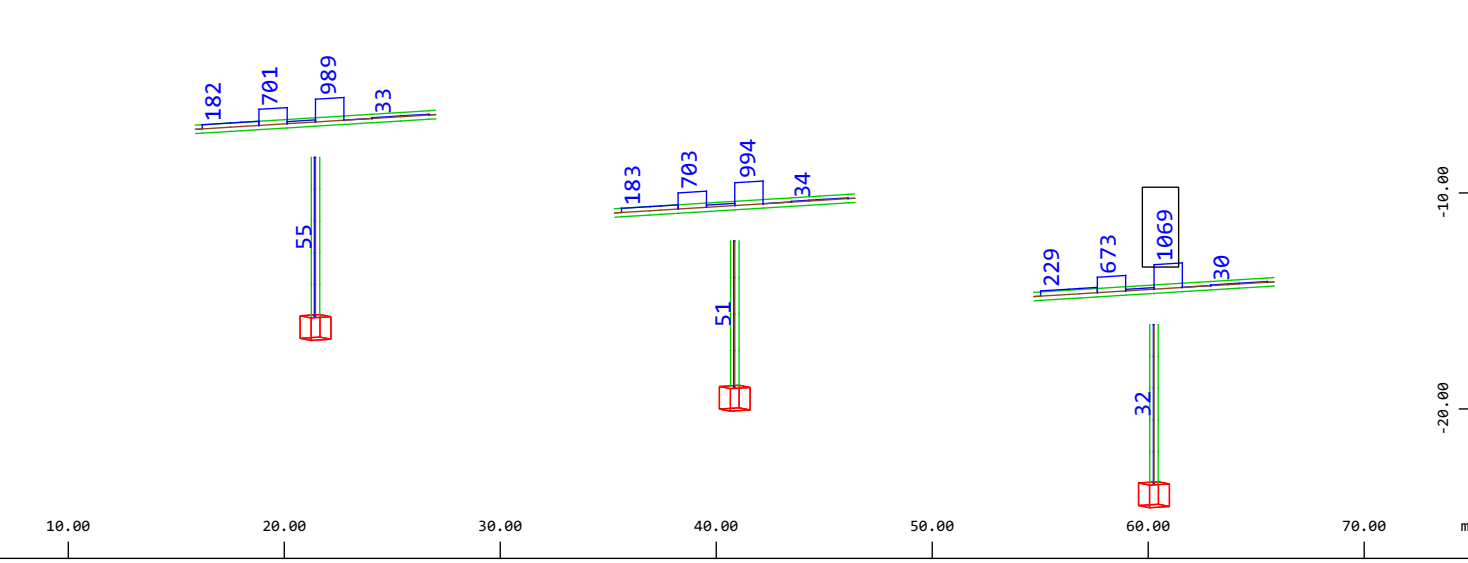
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 941 PROMET TS { mxx My PX P } , 1 cm 3D = 6546.9 kNm
(Max=2616)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



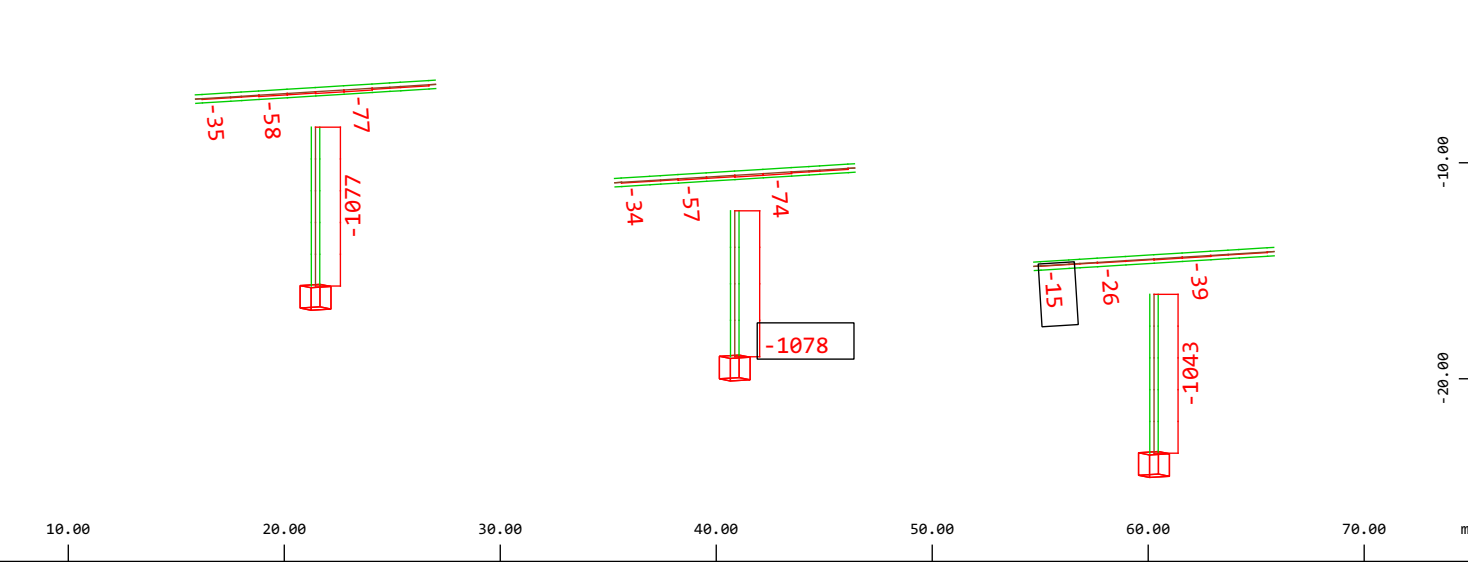
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 943 PROMET TS { myy Vz PY Pt } , 1 cm 3D = 3273.4 kN
(Max=1069)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



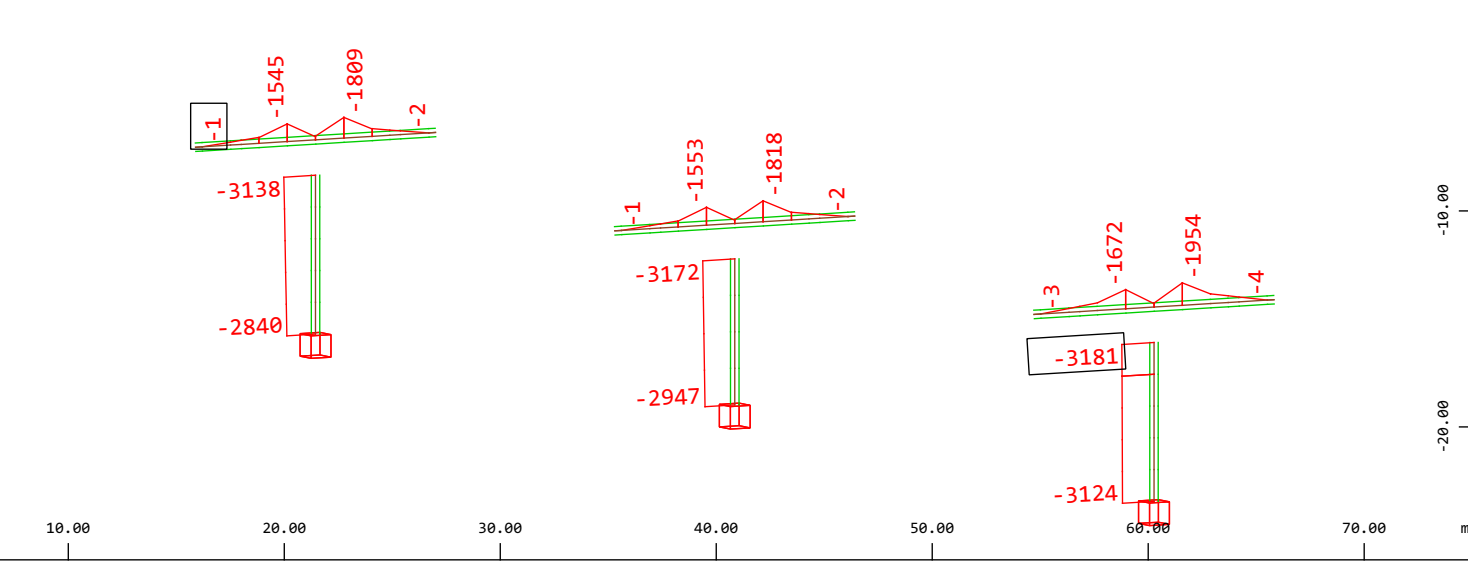
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 948 PROMET TS { nyy N UX PtX } , 1 cm 3D = 3273.4 kN
(Min=-1078) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



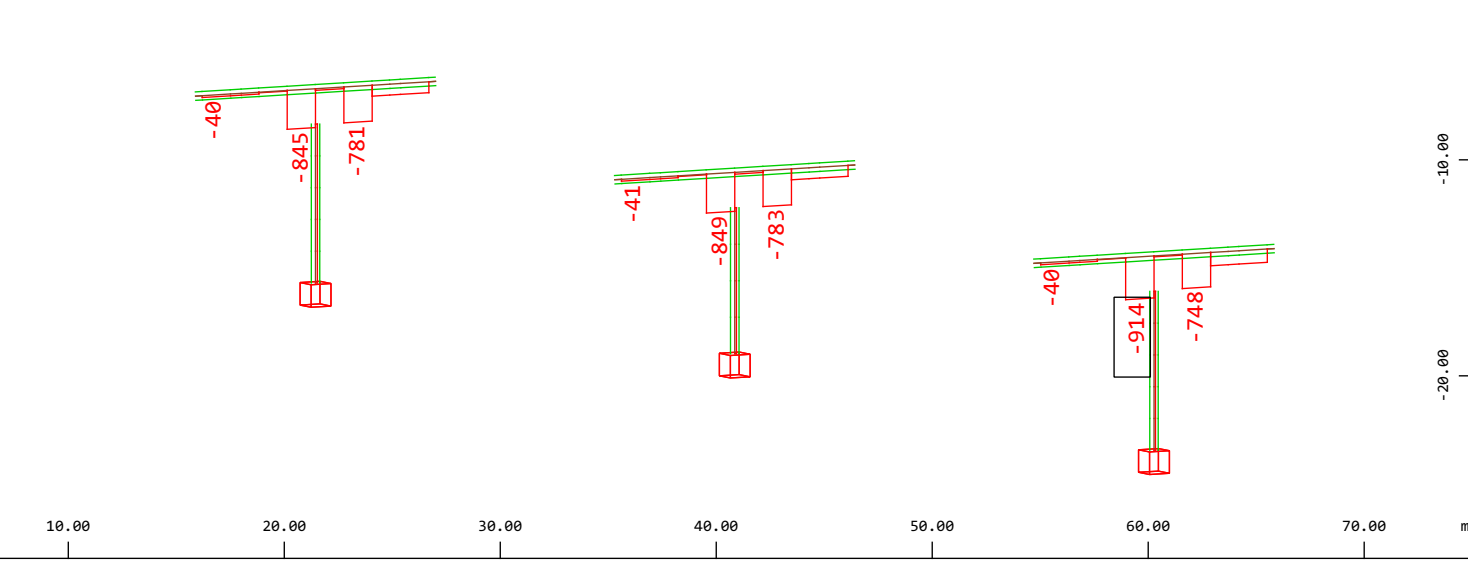
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 942 PROMET TS { mxx My PX P } , 1 cm 3D = 6546.9 kNm
(Min=-3181) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



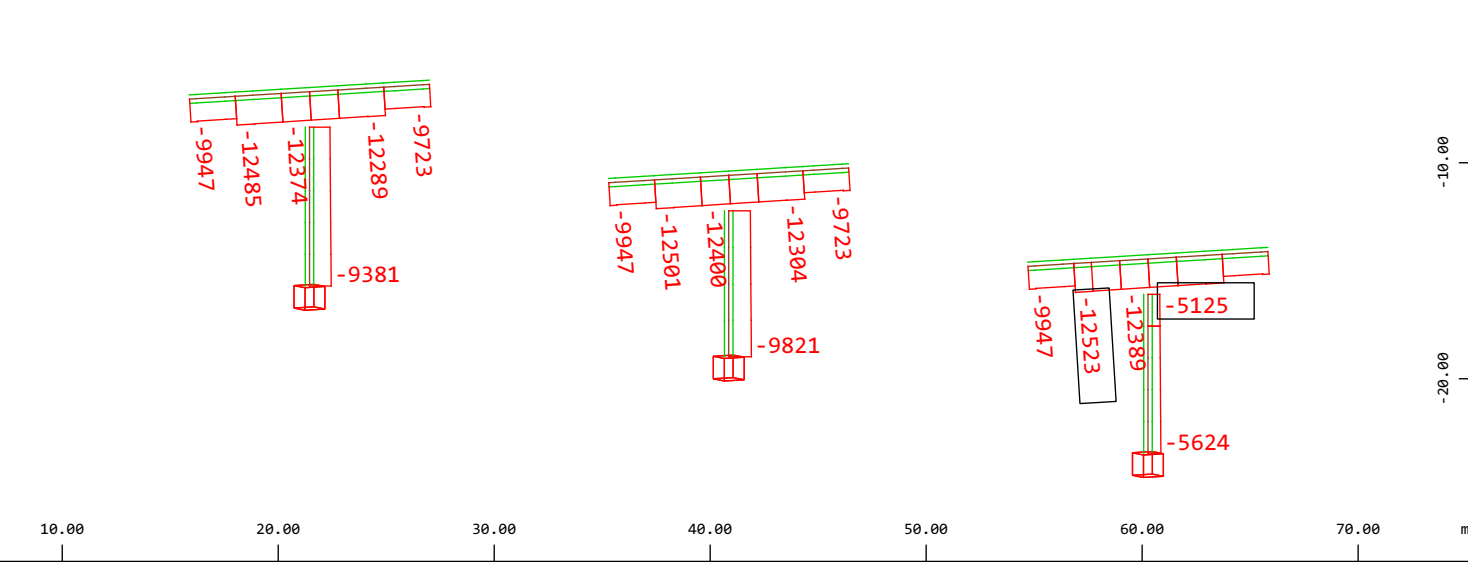
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 944 PROMET TS { myy Vz PY Pt } , 1 cm 3D = 1636.7 kN
(Min=-914) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



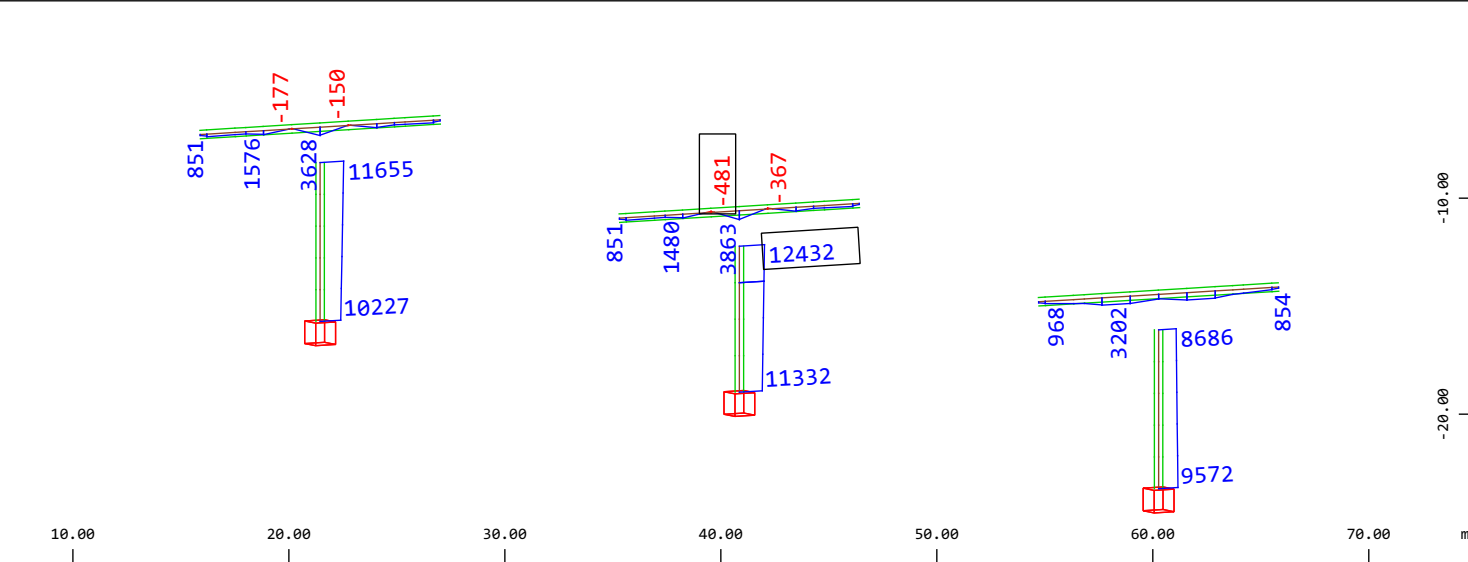
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 2127 desi max--N NYU PTX_UX , 1 cm 3D = 32734 kN
(Min=-12523) (Max=-5125)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



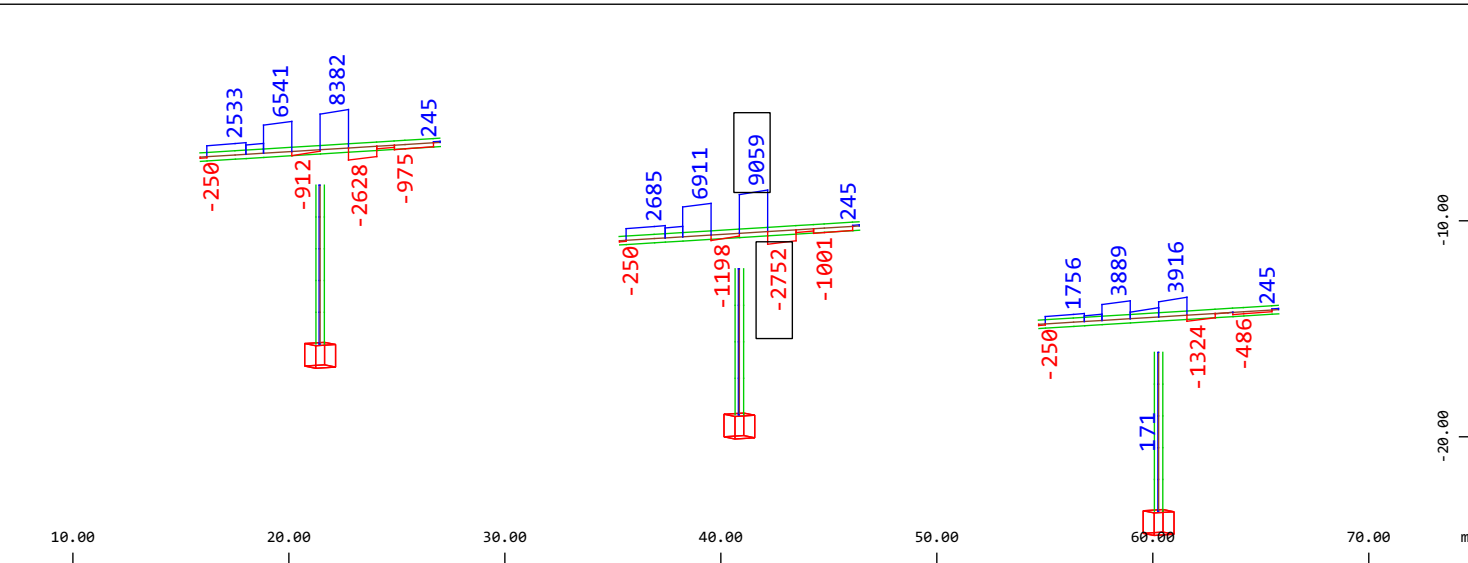
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 2121 desi BEAM-MY_Q-MXX_SPRI-P_PX , 1 cm 3D = 32734 kNm (Min=-481) (Max=12432)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



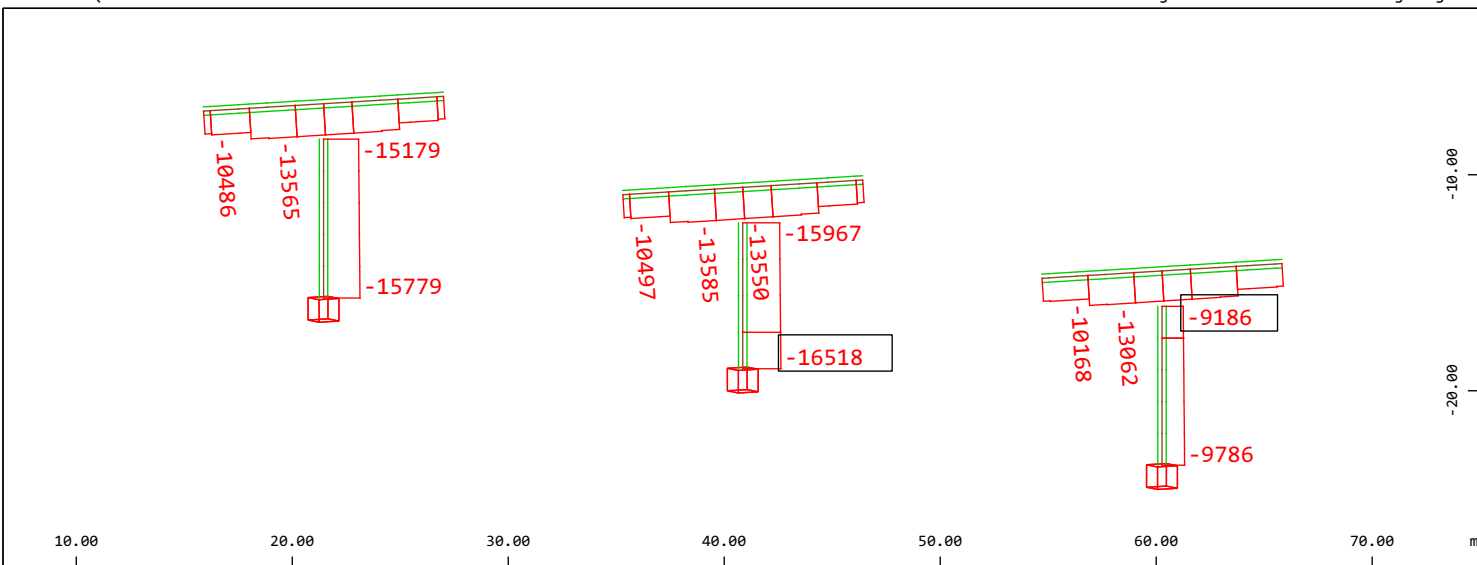
Z

X

Y

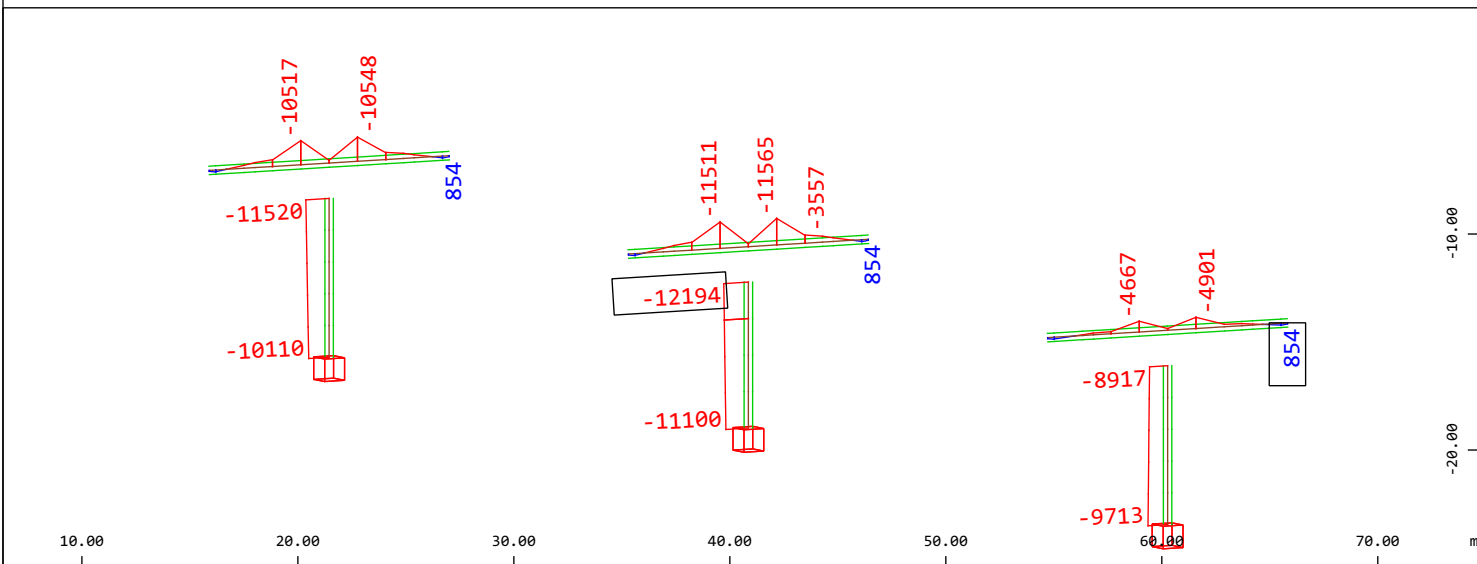
Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 2123 desi max-VZ MYU T_PY , 1 cm 3D = 16367 kN (Min=-2752) (Max=9059)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



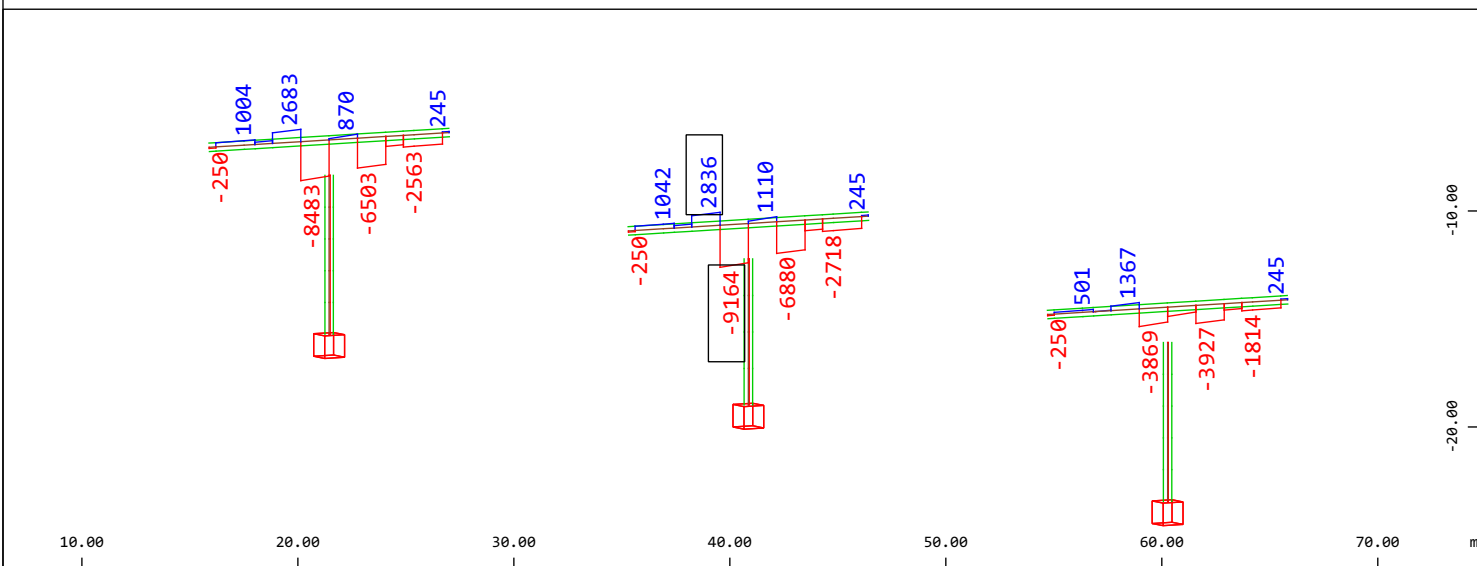
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 2128 desi min--N NYU PTX_UX , 1 cm 3D = 32734 kN
(Min=-16518) (Max=-9186)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 2122 desi min-MY MXX P_PX , 1 cm 3D = 32734 kNm
(Min=-12194) (Max=854)

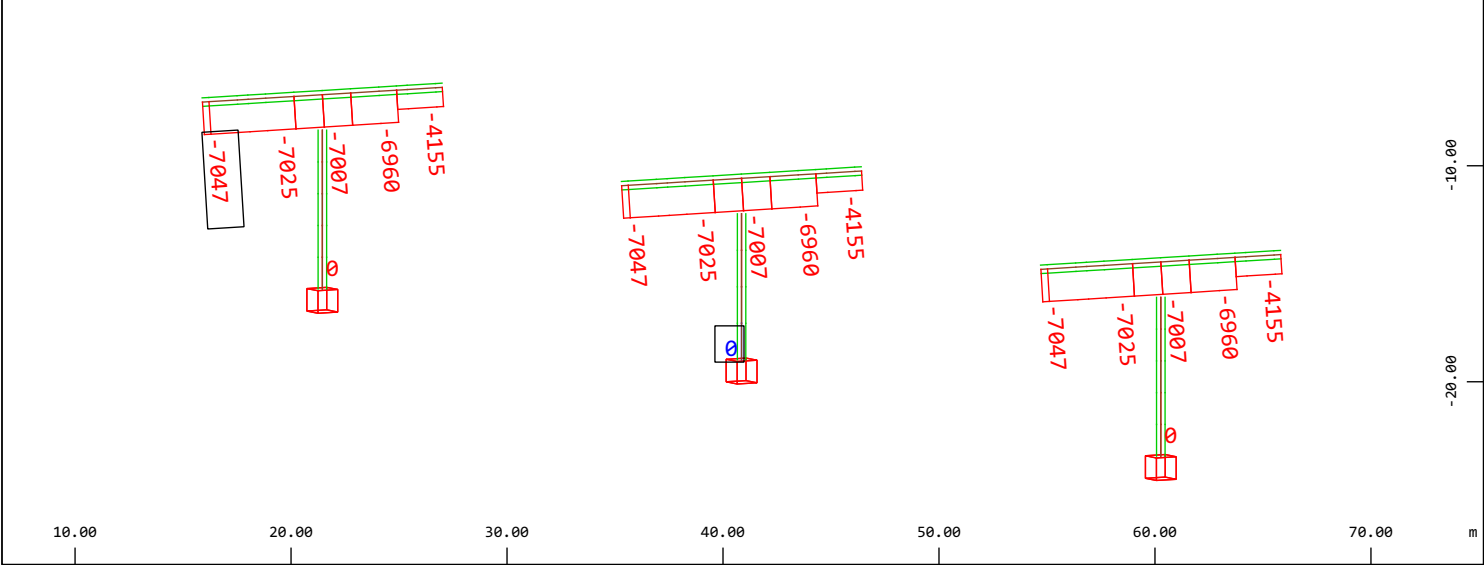
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 2124 desi min-VZ MYU T_PY , 1 cm 3D = 16367 kN
(Min=-9164) (Max=2836)

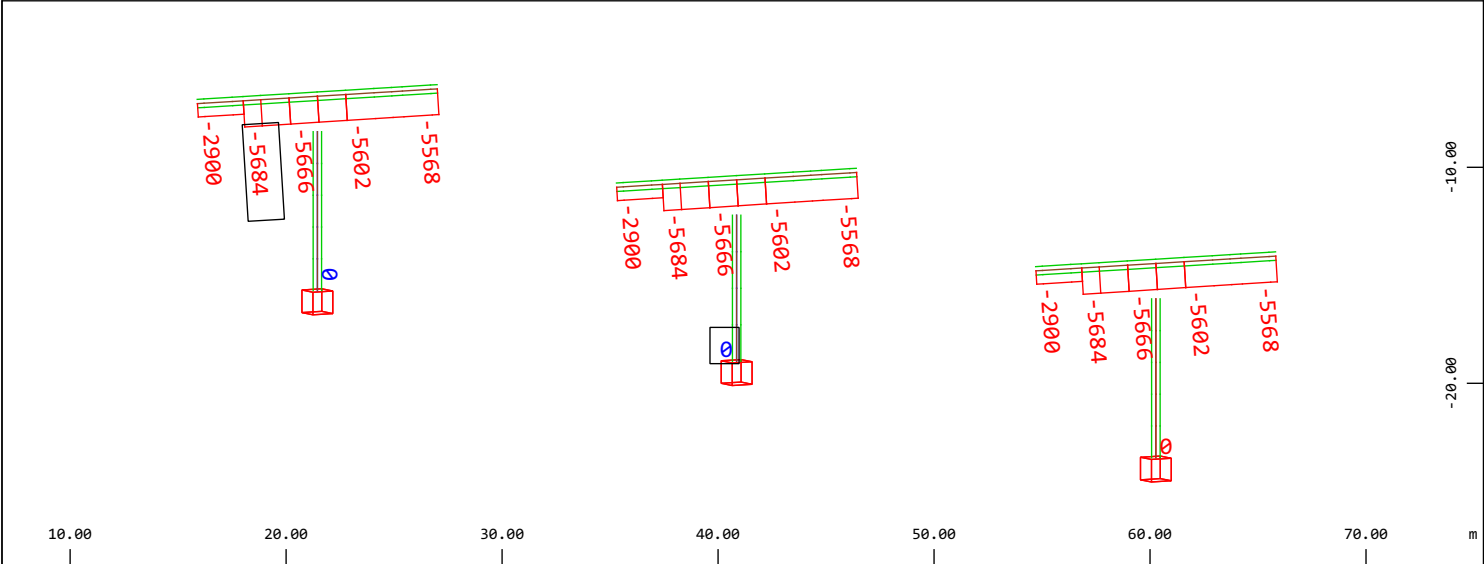
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994

5.2.2 NOTRANJE SILE MODEL 35+40+40 C2+2



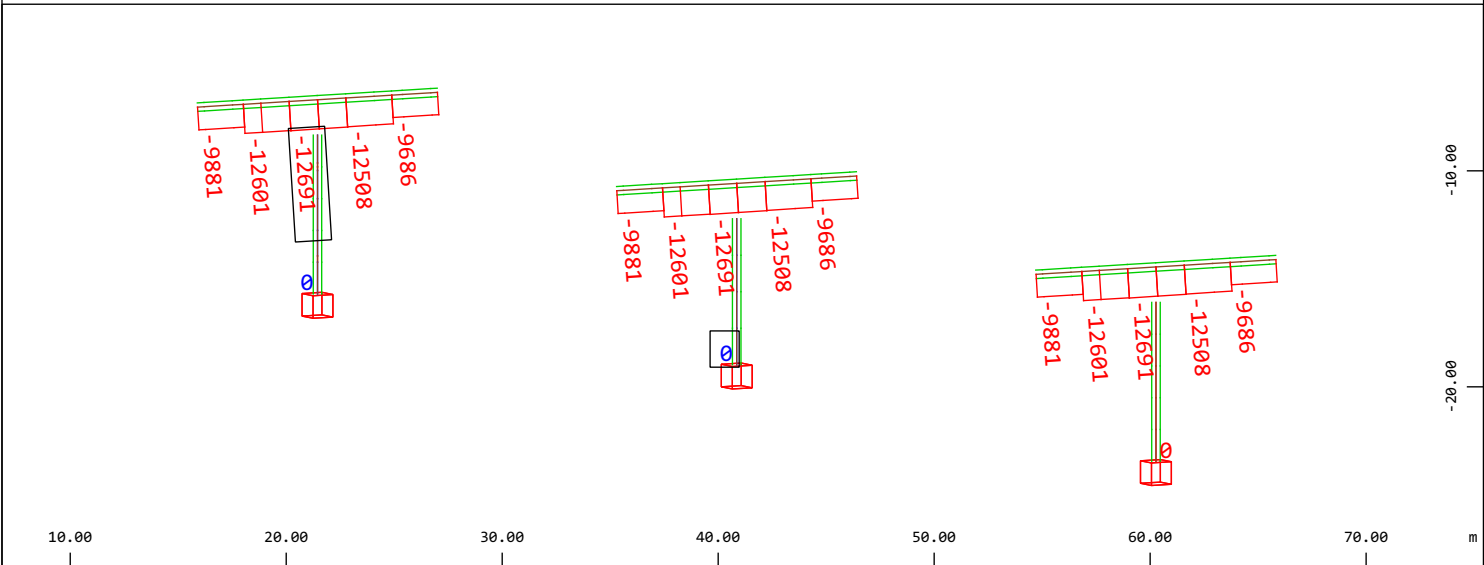
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 5006 (CS 6) Prestress , 1 cm 3D = 16367 kN (Min=-7047)
(Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



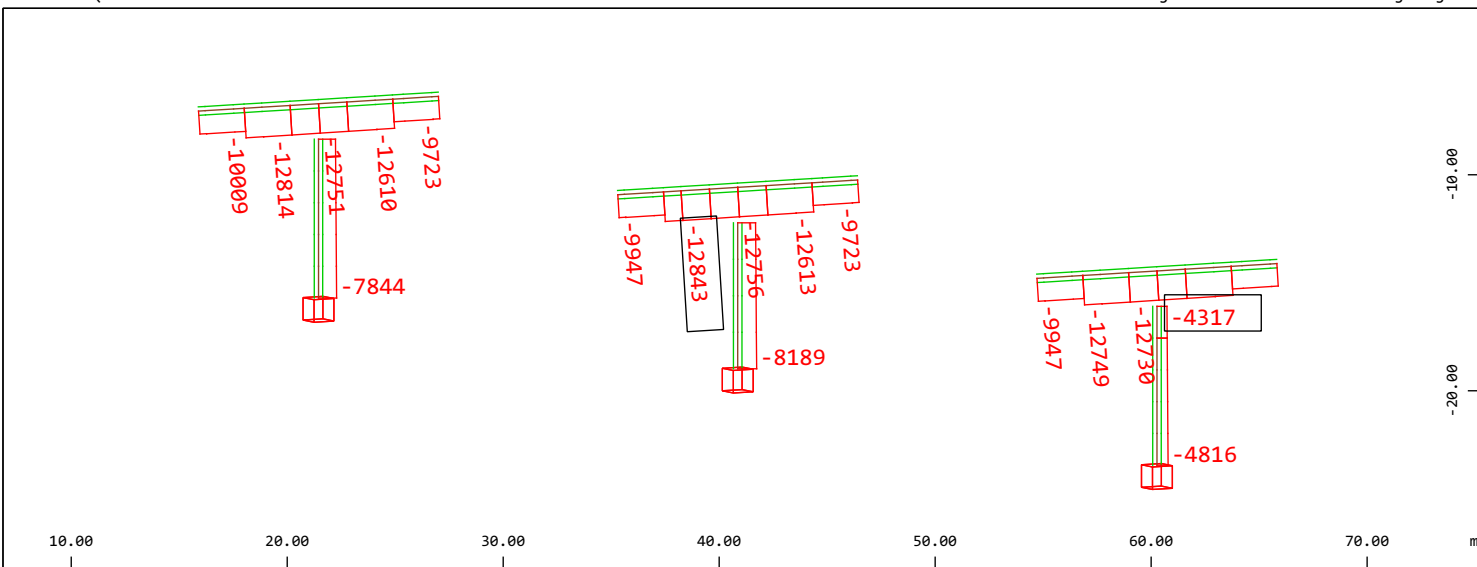
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 5011 (CS 11) Prestress , 1 cm 3D = 16367 kN (Min=-5684)
(Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



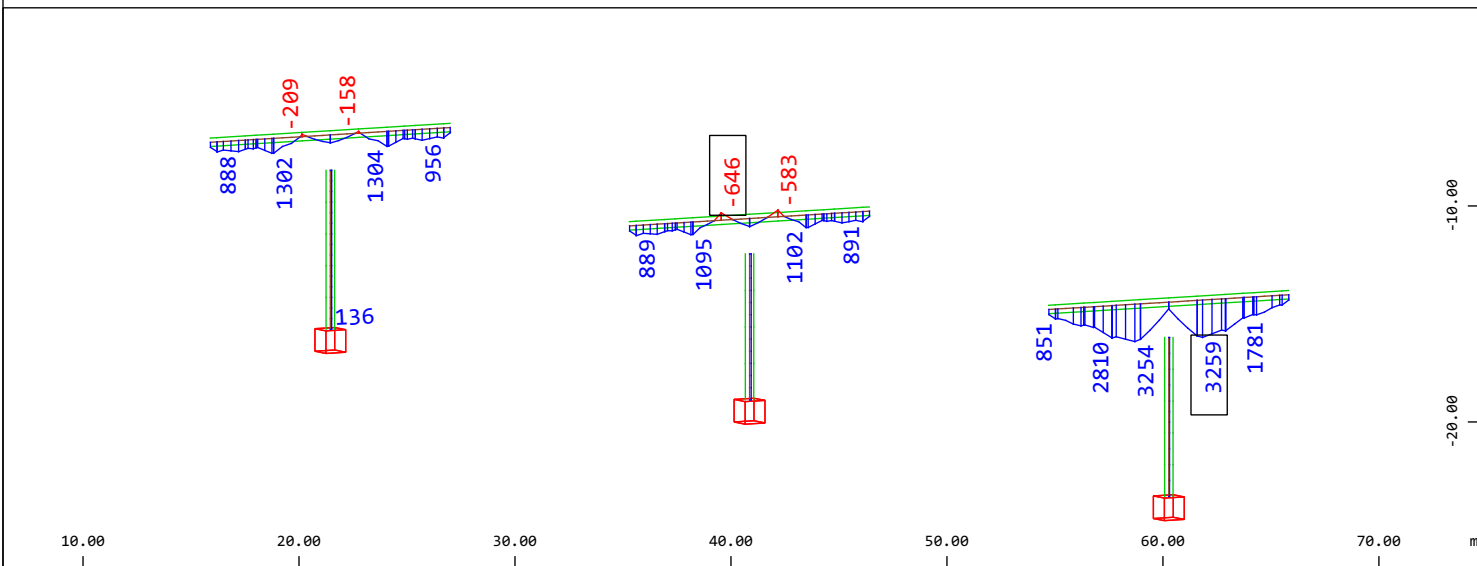
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 7002 sum_P , 1 cm 3D = 32734 kN (Min=-12691) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



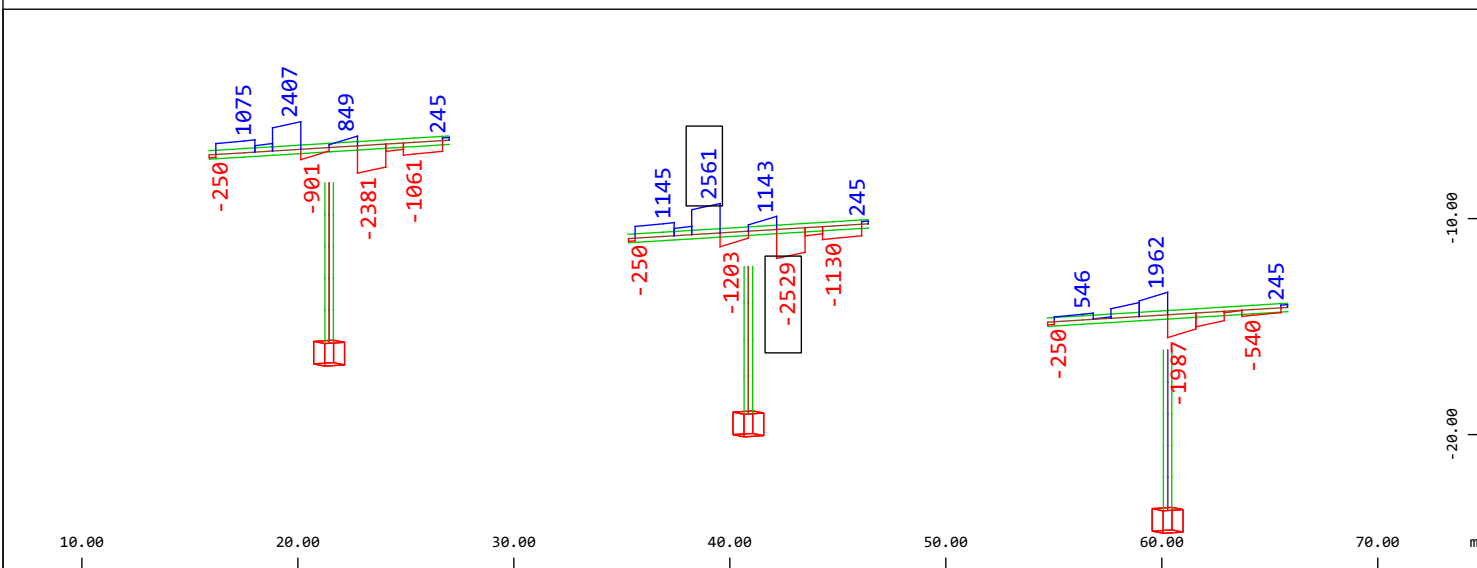
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 4030 (CS 30) Prekladna povezava , 1 cm 3D = 32734 kN
(Min=-12843) (Max=-4317)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



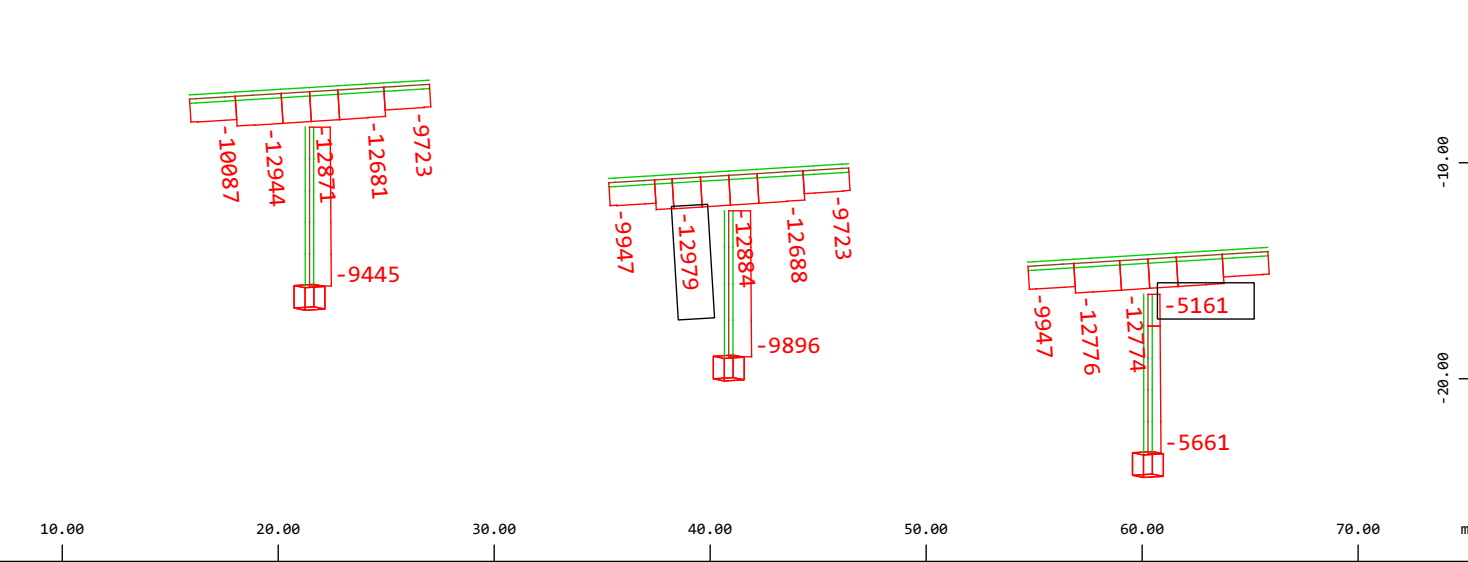
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y (Maximum values cubic interpolated), Loadcase 4030 (CS 30)
Prekladna povezava , 1 cm 3D = 6546.9 kNm (Min=-646) (Max=3259)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 4030 (CS 30) Prekladna povezava , 1 cm 3D = 6546.9 kN
(Min=-2529) (Max=2561)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



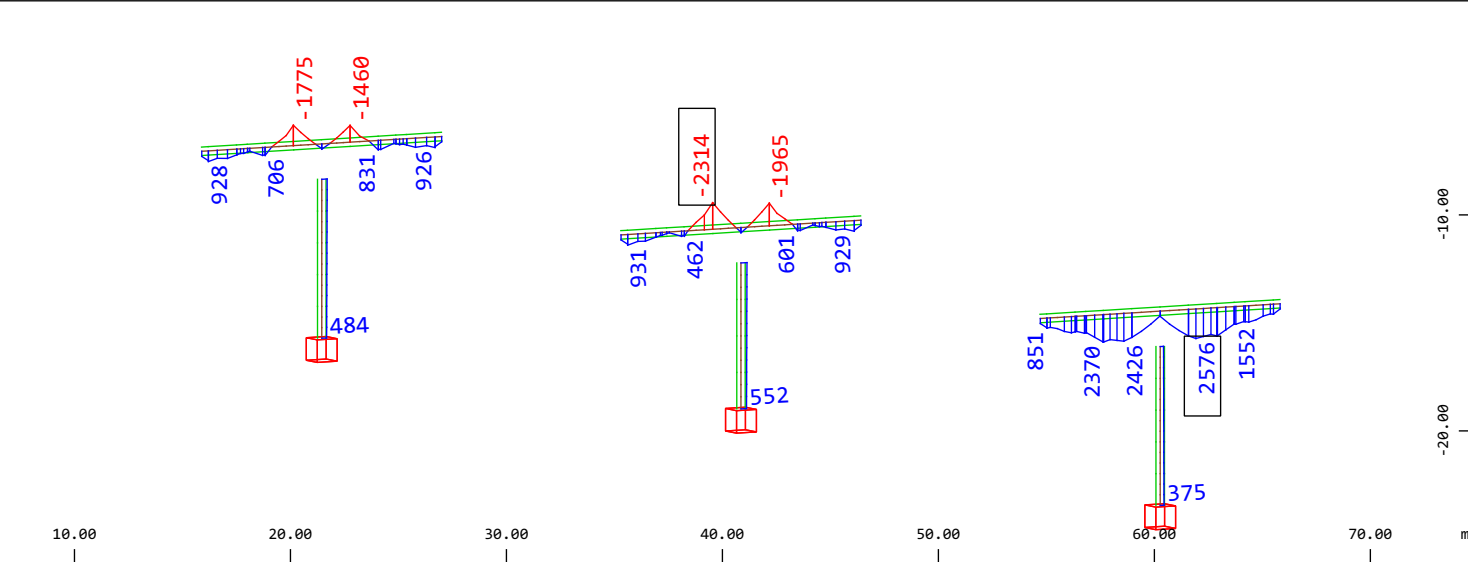
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 4040 (CS 40) Krov , 1 cm 3D = 32734 kN (Min=-12979) (Max=-5161)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



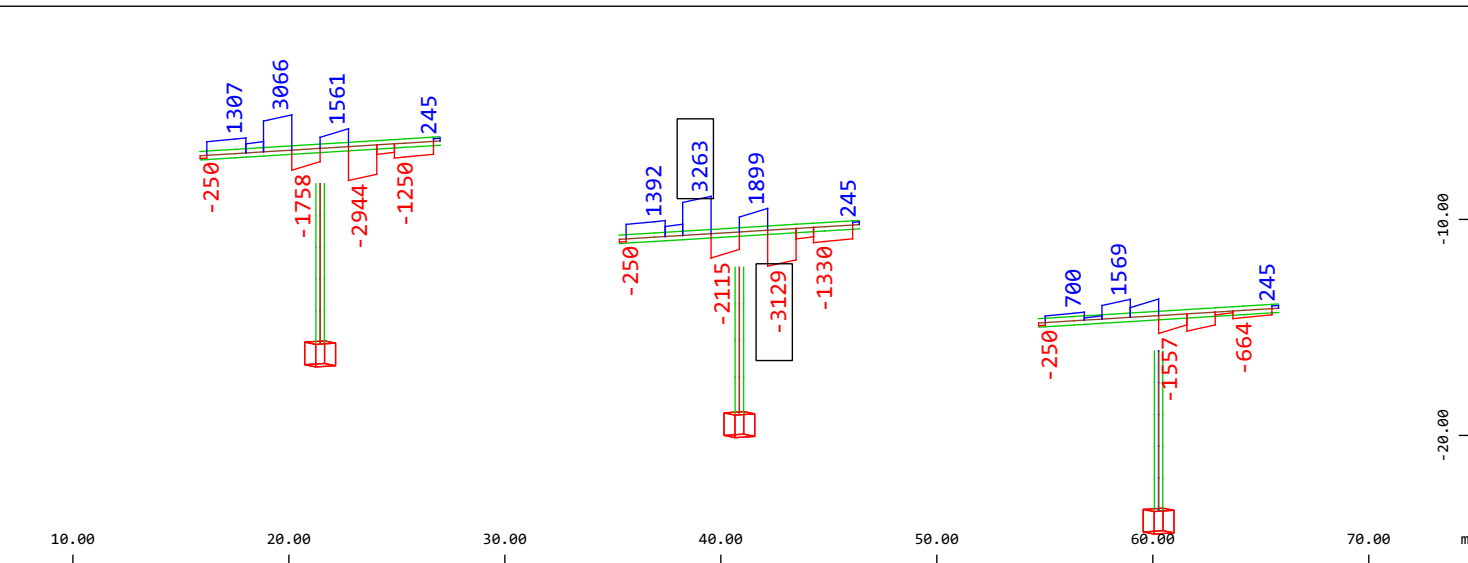
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y (Maximum values cubic interpolated), Loadcase 4040 (CS 40) Krov , 1 cm 3D = 6546.9 kNm (Min=-2314) (Max=2576)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



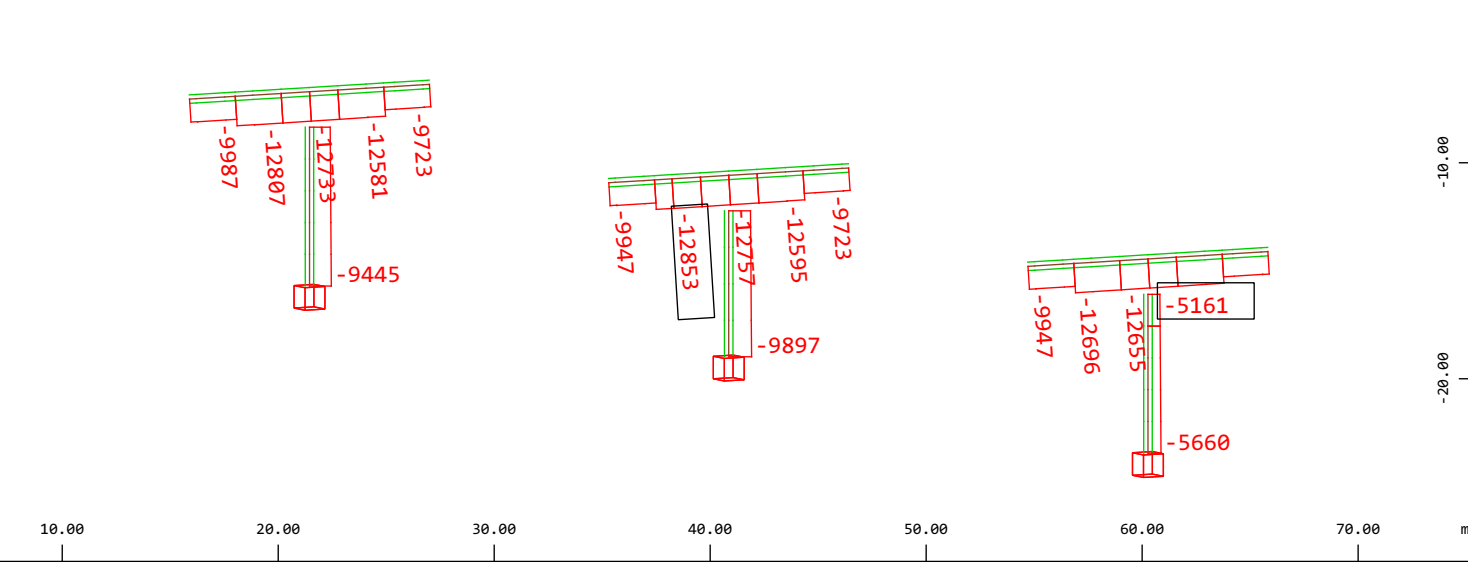
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 4040 (CS 40) Krov , 1 cm 3D = 6546.9 kN (Min=-3129) (Max=3263)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



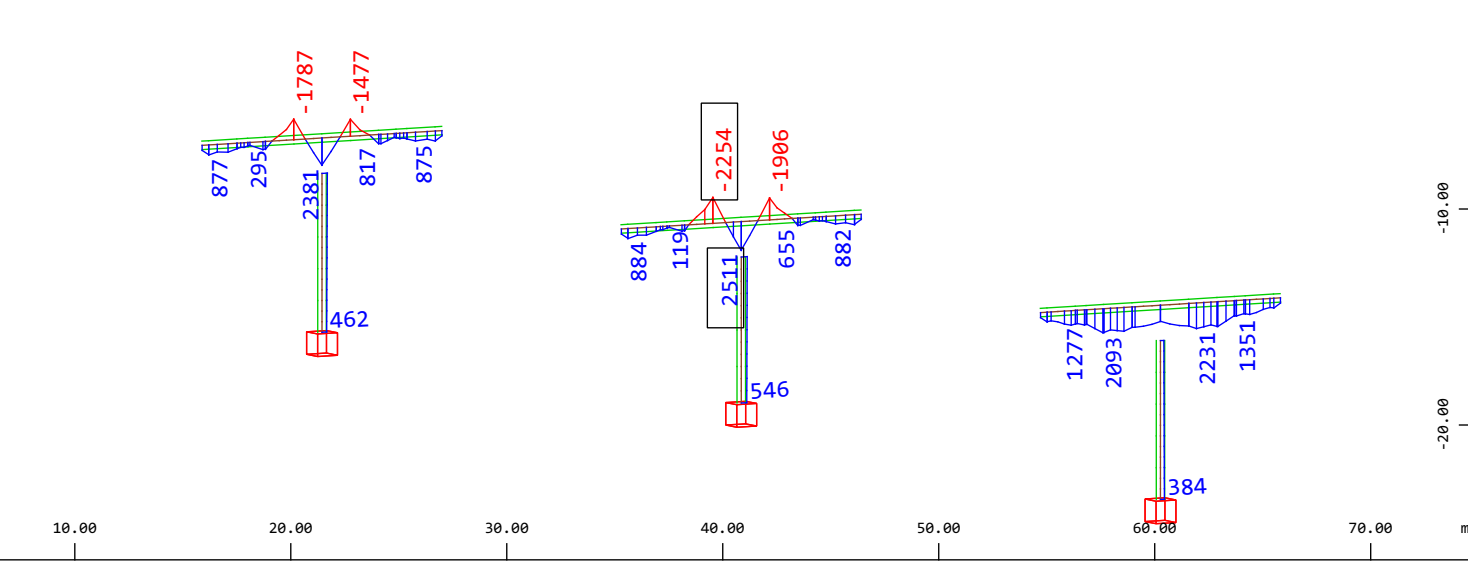
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 4047 (CS 47) Creep until today , 1 cm 3D = 32734 kN
(Min=-12853) (Max=-5161)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



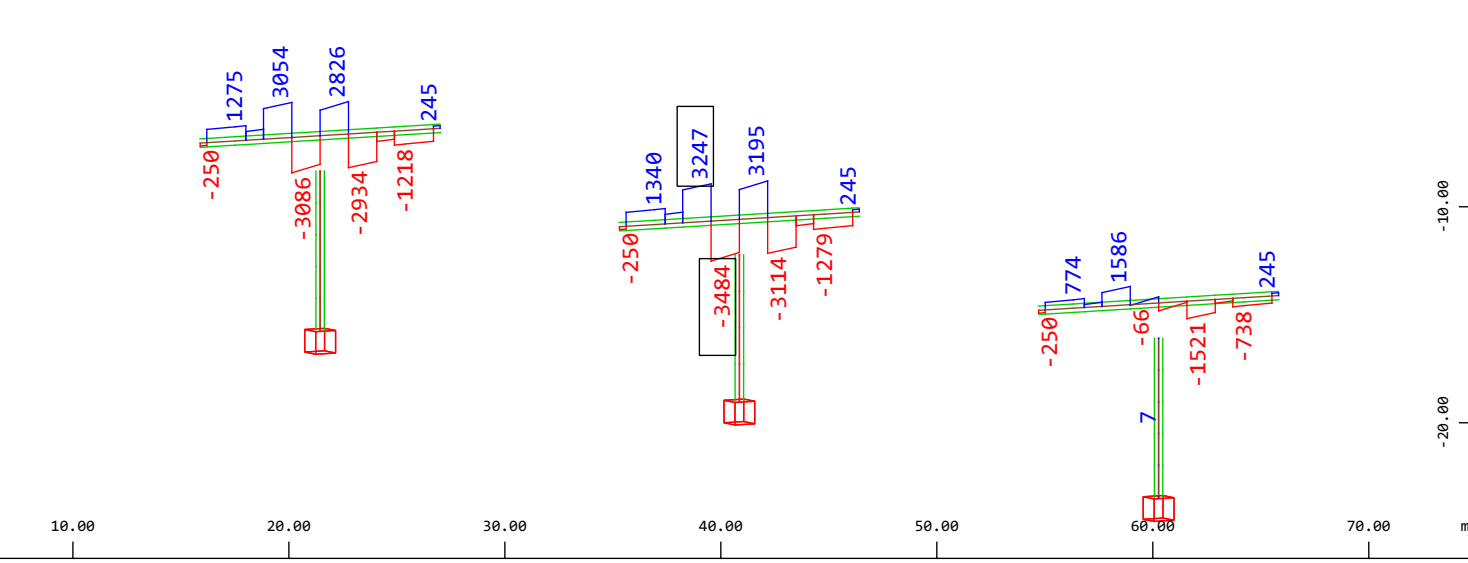
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y (Maximum values cubic interpolated), Loadcase 4047 (CS 47) Creep until today , 1 cm 3D = 6546.9 kNm (Min=-2254) (Max=2511)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



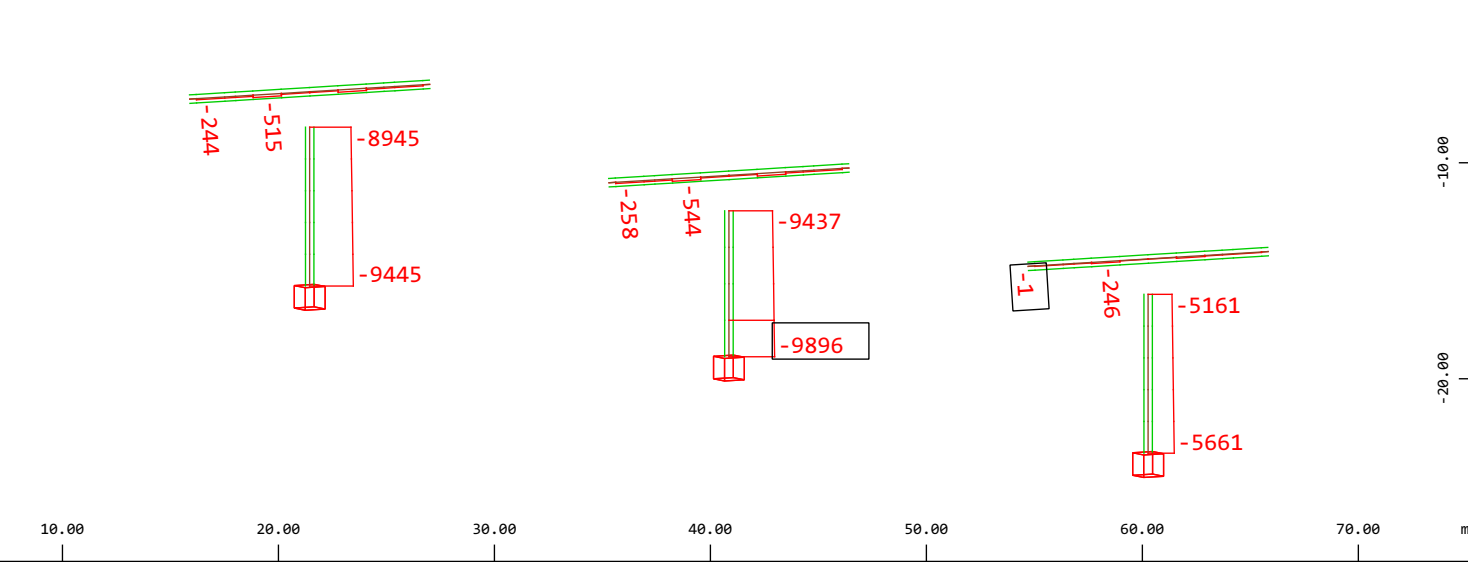
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 4047 (CS 47) Creep until today , 1 cm 3D = 6546.9 kN
(Min=-3484) (Max=3247)

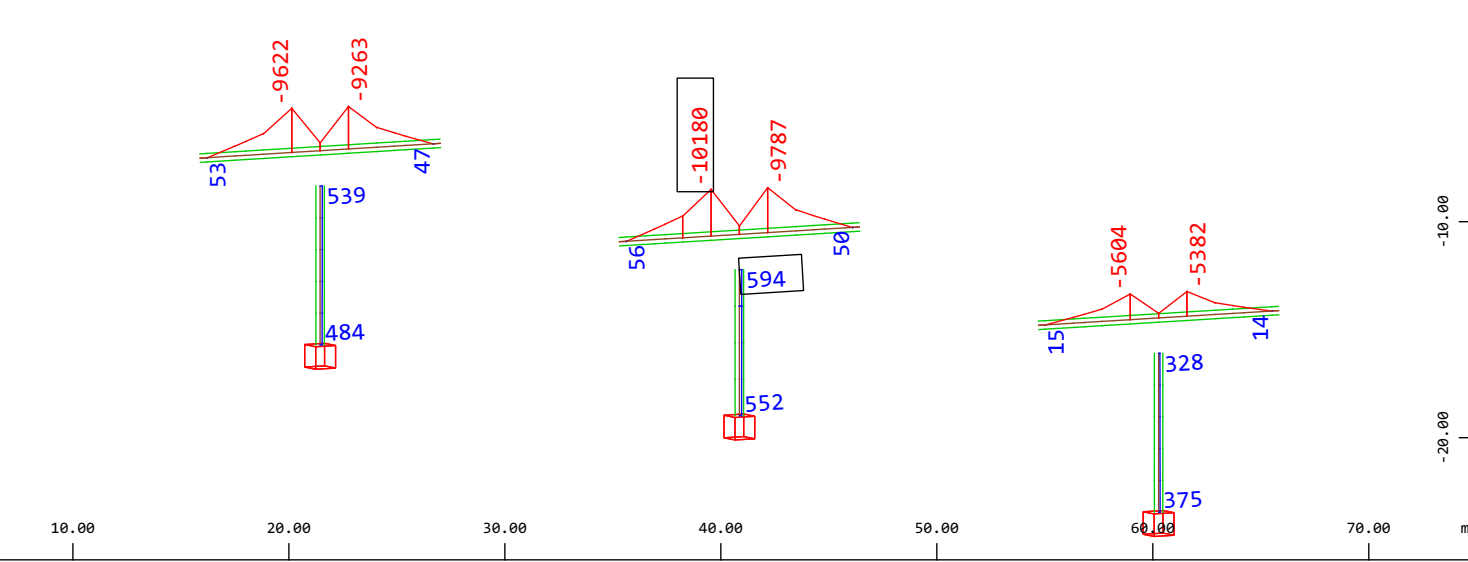
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Normal force N_x , Loadcase 7001 sum_G , 1 cm 3D = 16367 kN (Min=-9896) (Max=0)

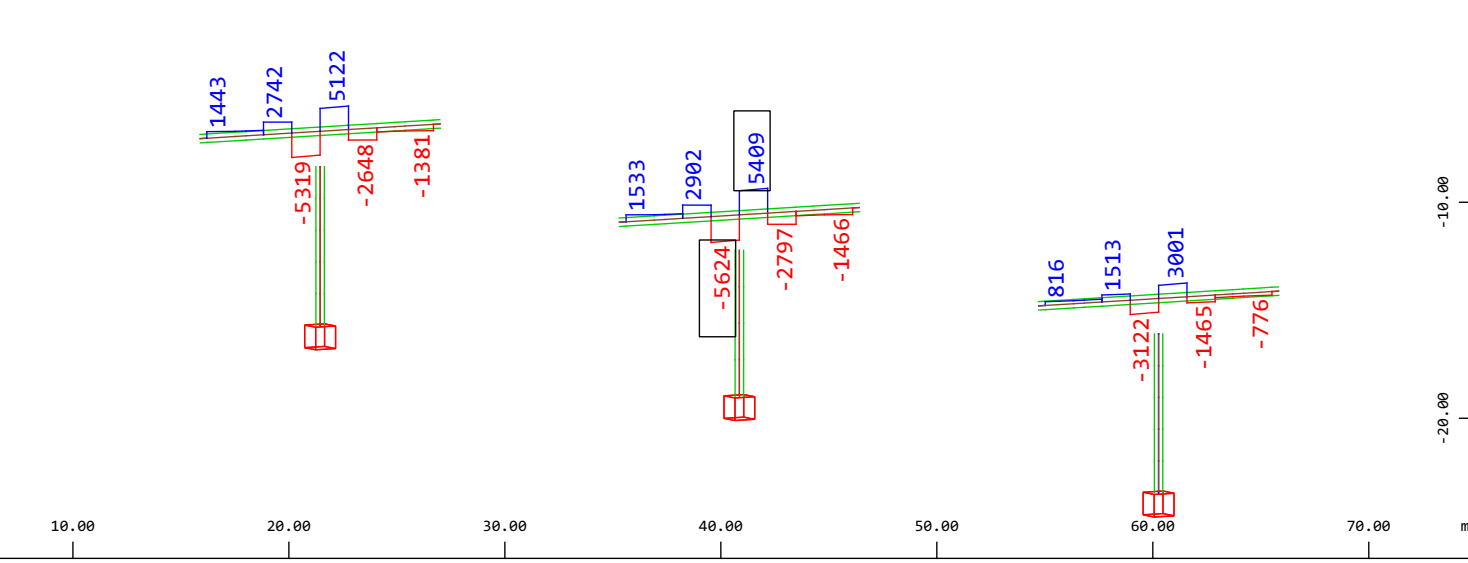
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Bending moment M_y , Loadcase 7001 sum_G , 1 cm 3D = 16367 kNm (Min=-10180) (Max=594)

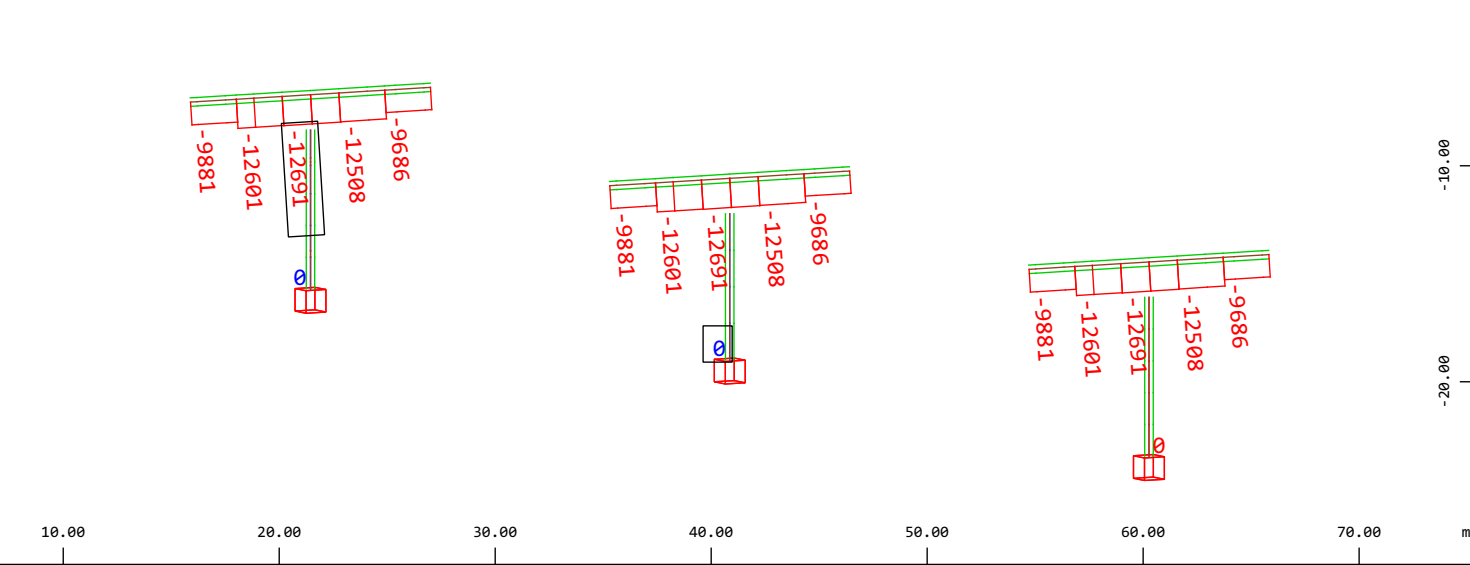
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Shear force V_z , Loadcase 7001 sum_G , 1 cm 3D = 16367 kN (Min=-5624) (Max=5409)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



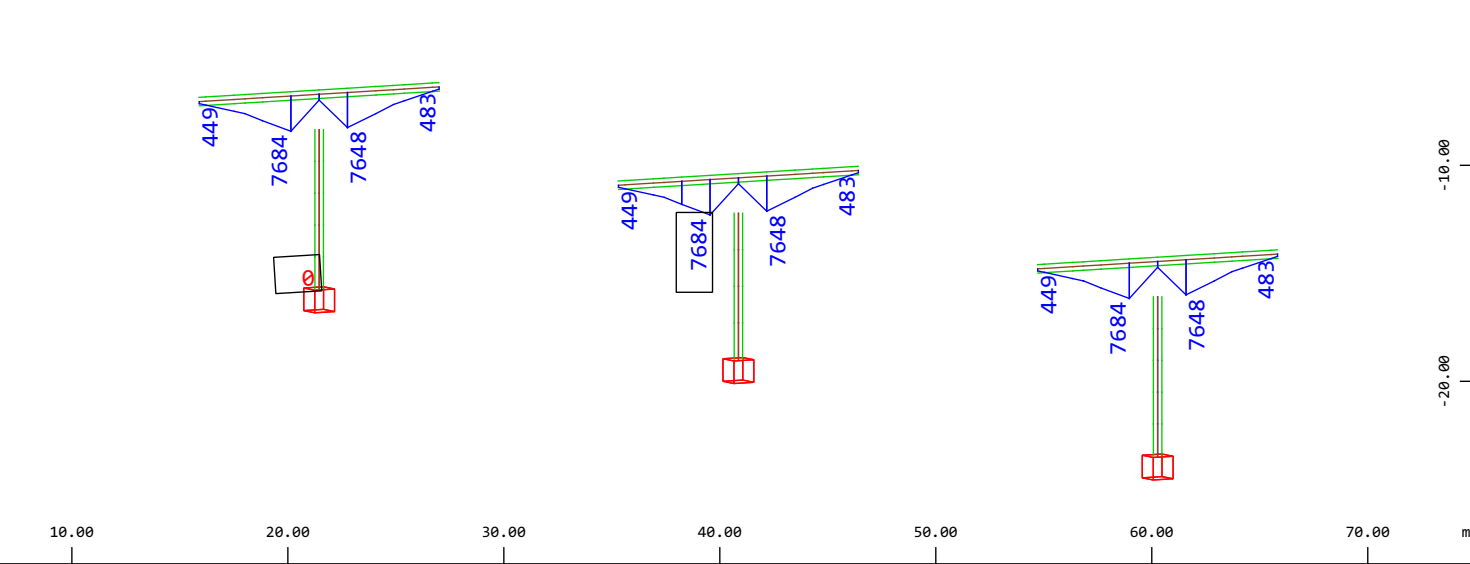
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 7002 sum_P , 1 cm 3D = 32734 kN (Min=-12691) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



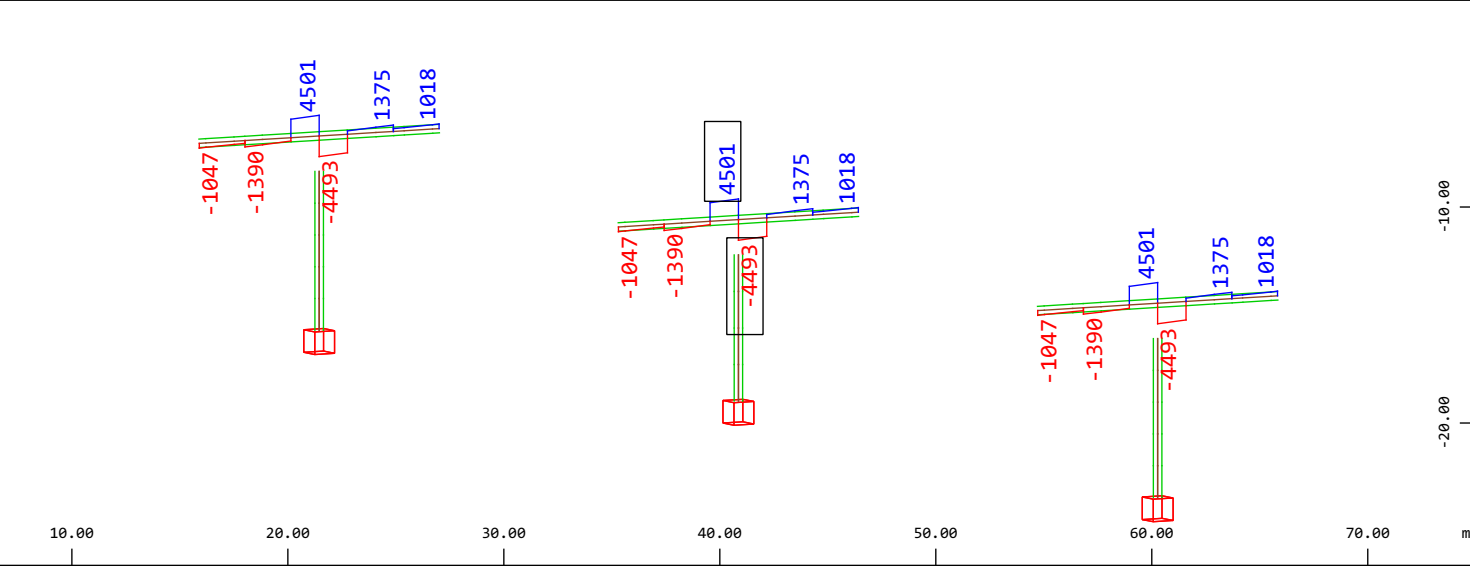
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 7002 sum_P , 1 cm 3D = 16367 kNm (Min= 0) (Max=7684)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



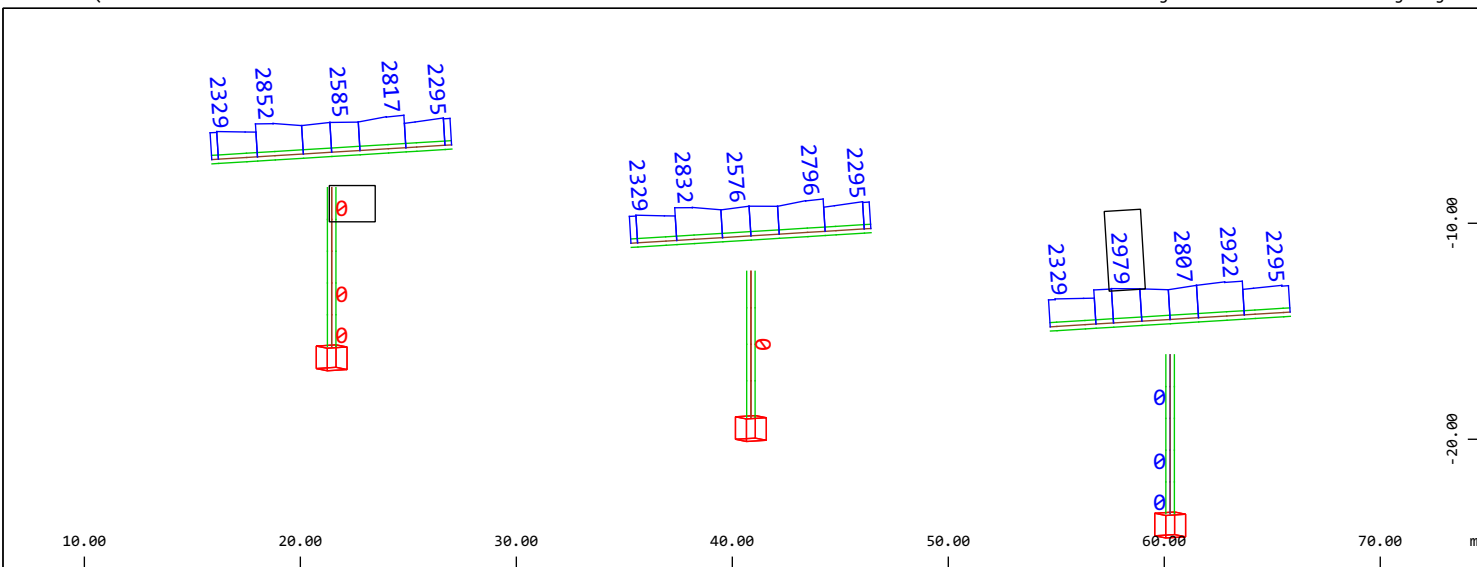
Z

X

Y

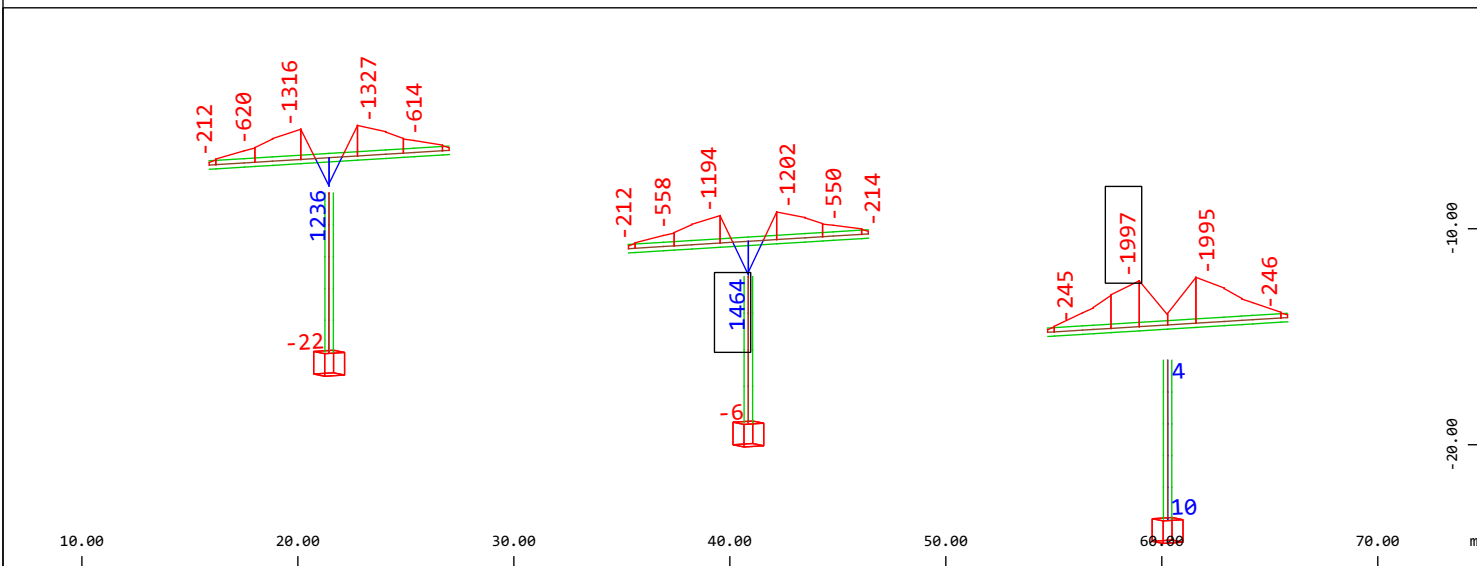
Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 7002 sum_P , 1 cm 3D = 16367 kN (Min=-4493) (Max=4501)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



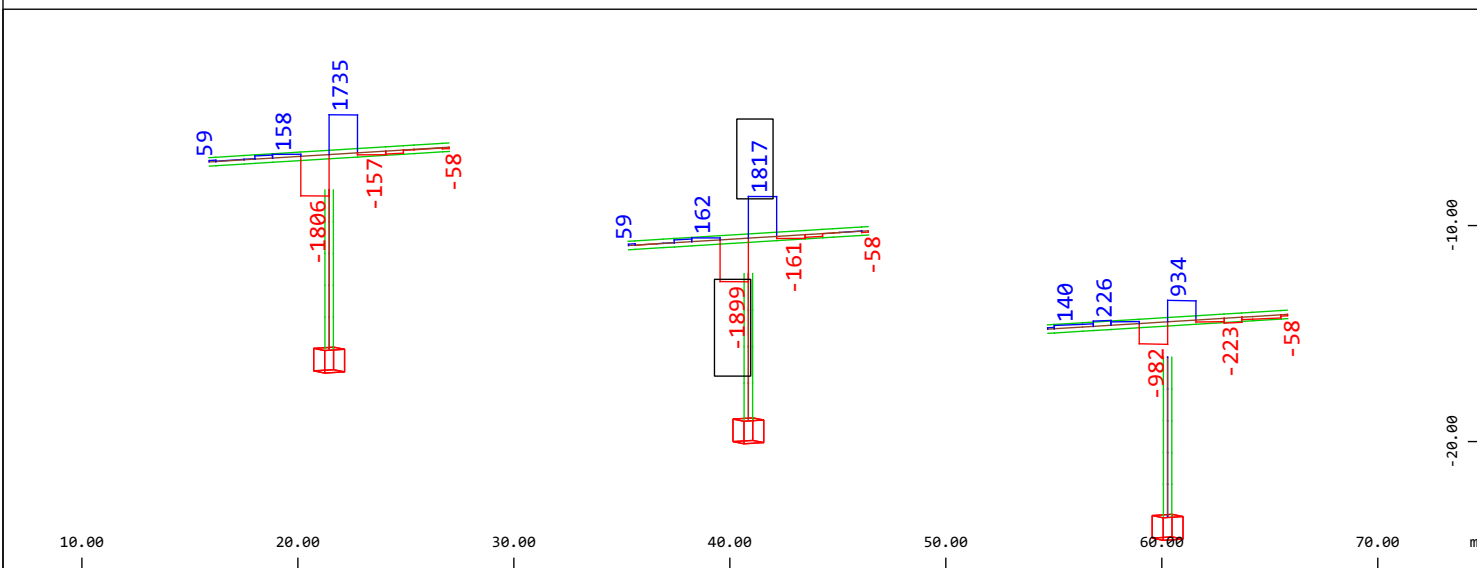
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 7003 sum_C , 1 cm 3D = 6546.9 kN (Min= 0) (Max=2979)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



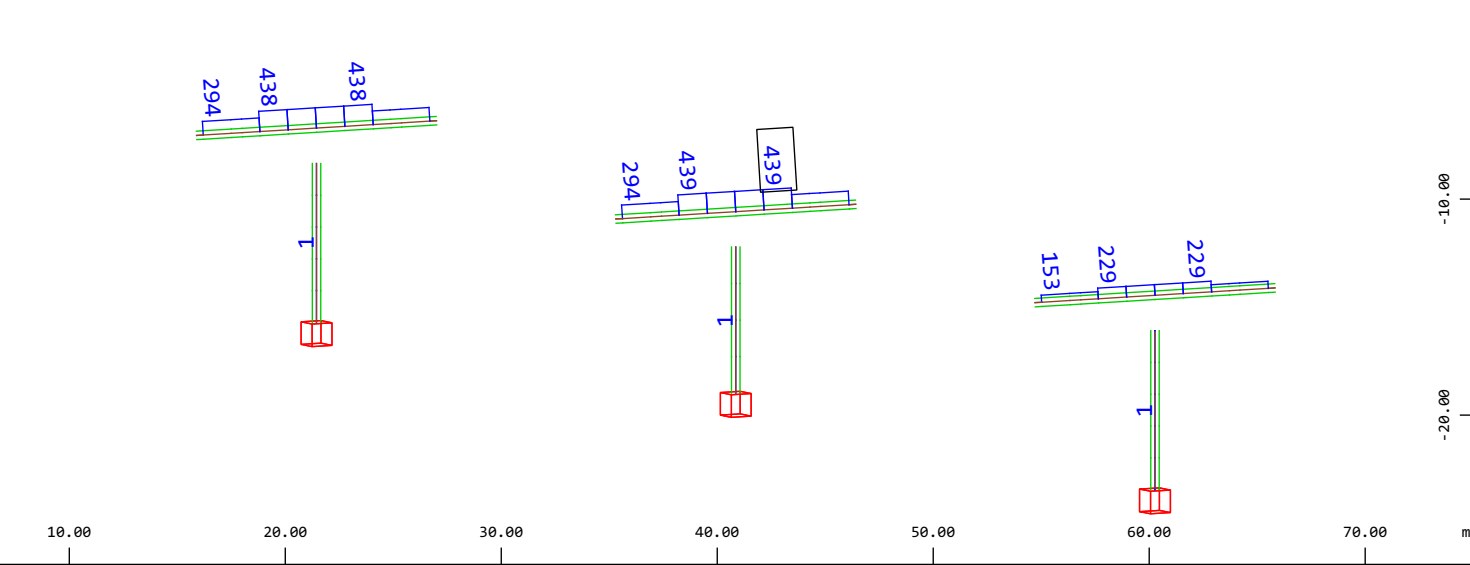
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My, Loadcase 7003 sum_C , 1 cm 3D = 3273.4 kNm (Min=-1997) (Max=1464)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 7003 sum_C , 1 cm 3D = 3273.4 kN (Min=-1899) (Max=1817)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



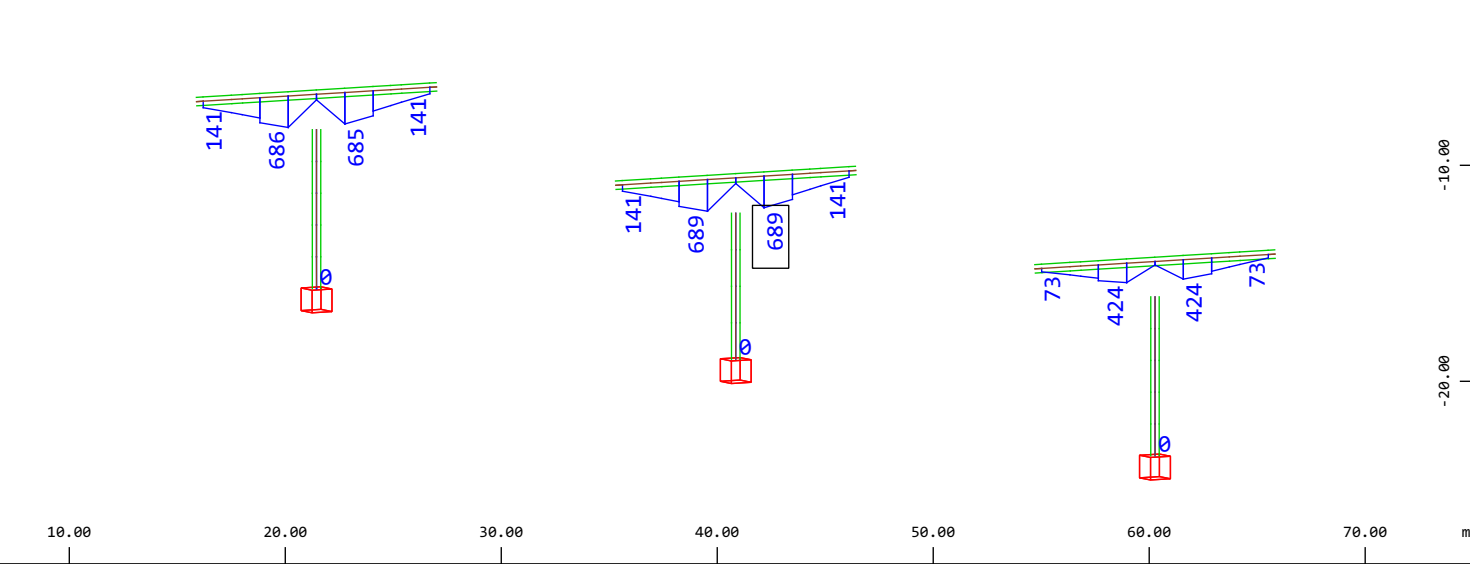
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 907 TEMPERATURA { nyy N UX PtX } , 1 cm 3D = 1636.7 kN
(Max=439)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



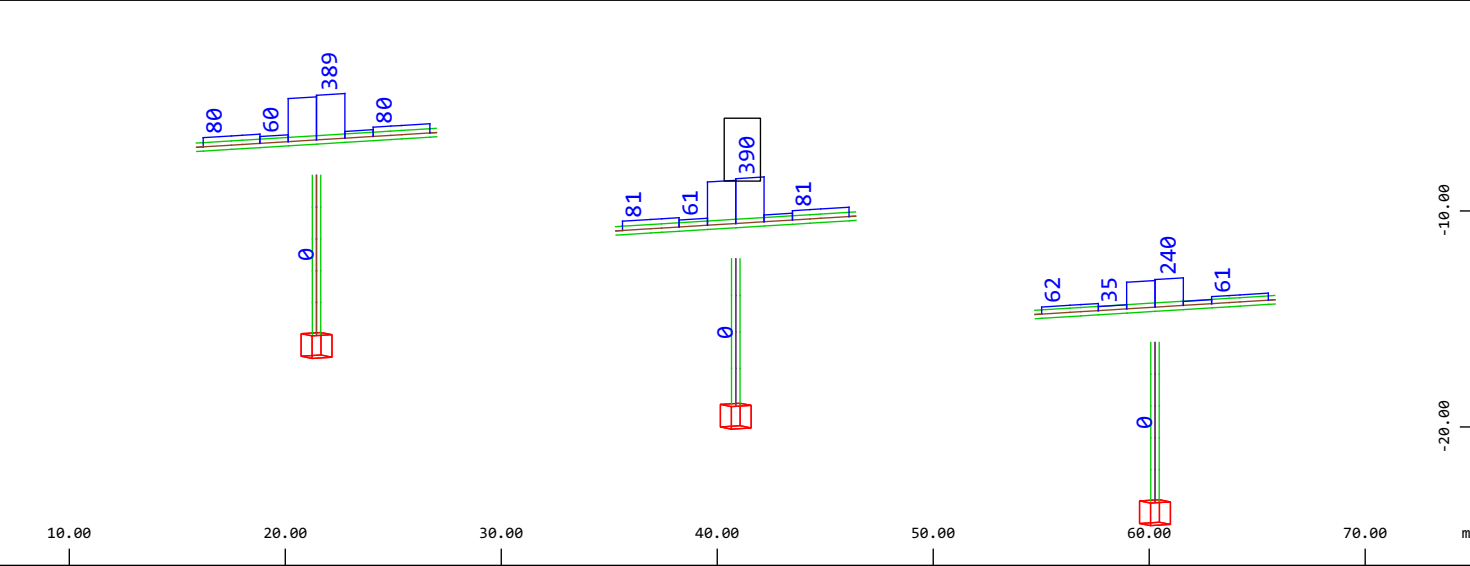
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 901 TEMPERATURA { mxx My PX P } , 1 cm 3D = 1636.7 kNm (Max=689)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



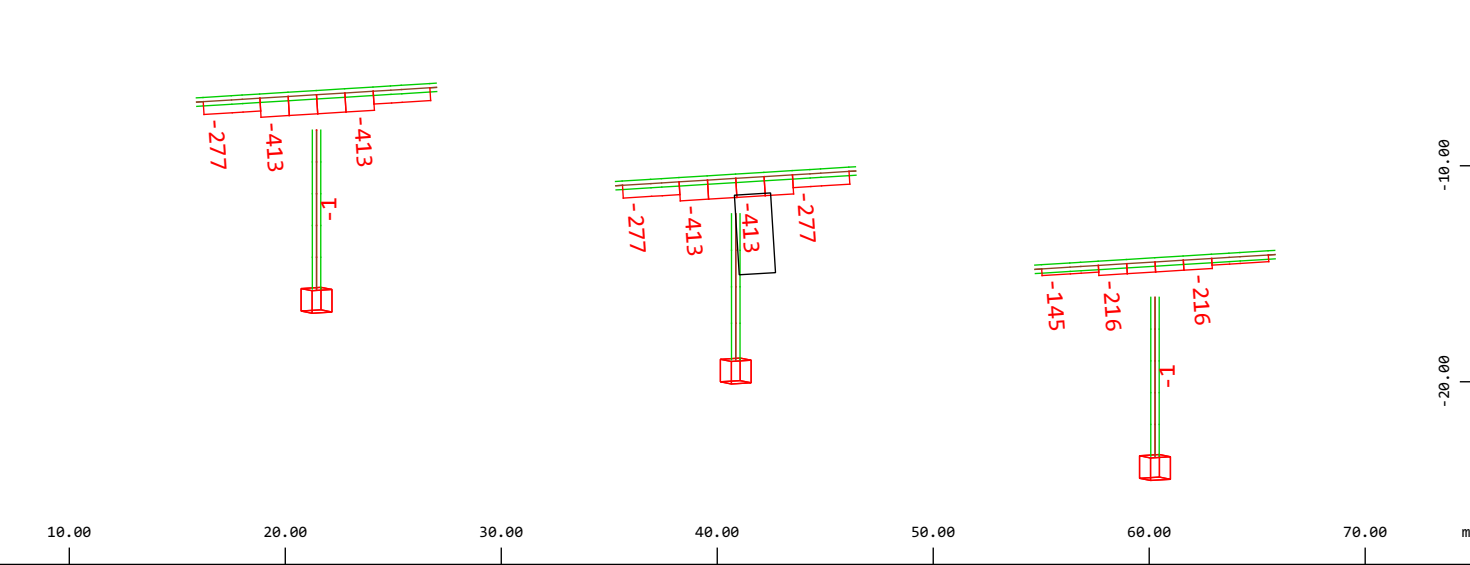
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 903 TEMPERATURA { myy Vz PY Pt } , 1 cm 3D = 654.69 kN
(Max=390)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994

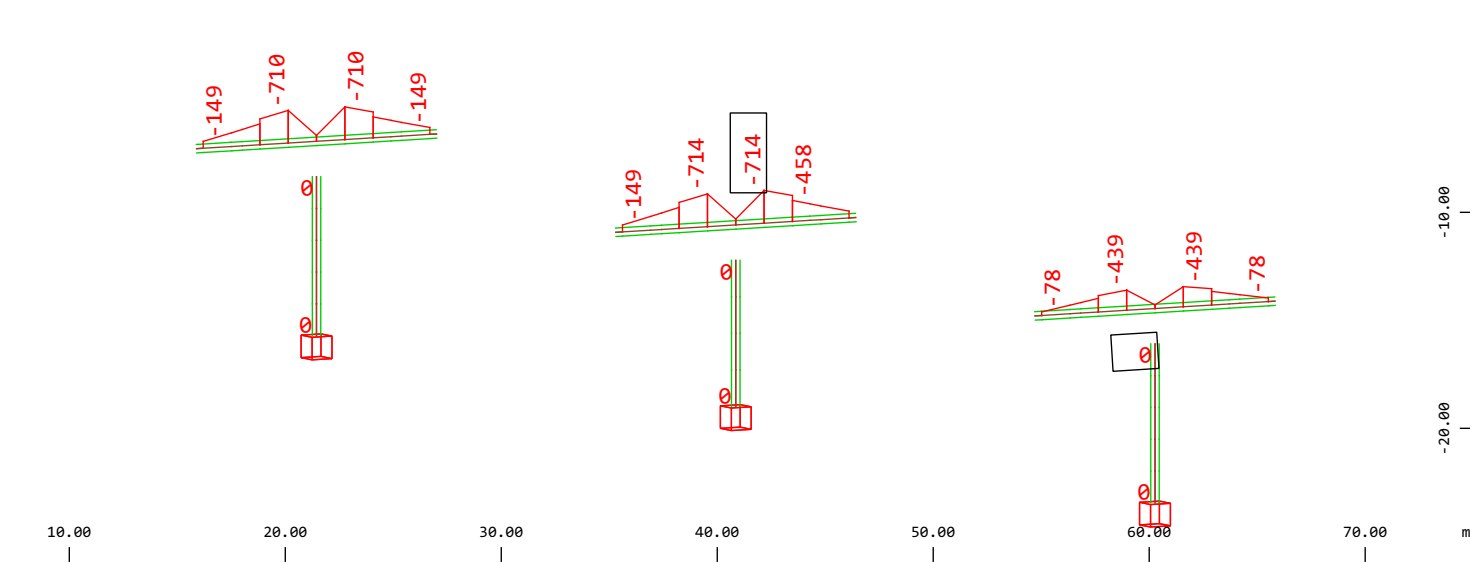


Z

X

Y

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994

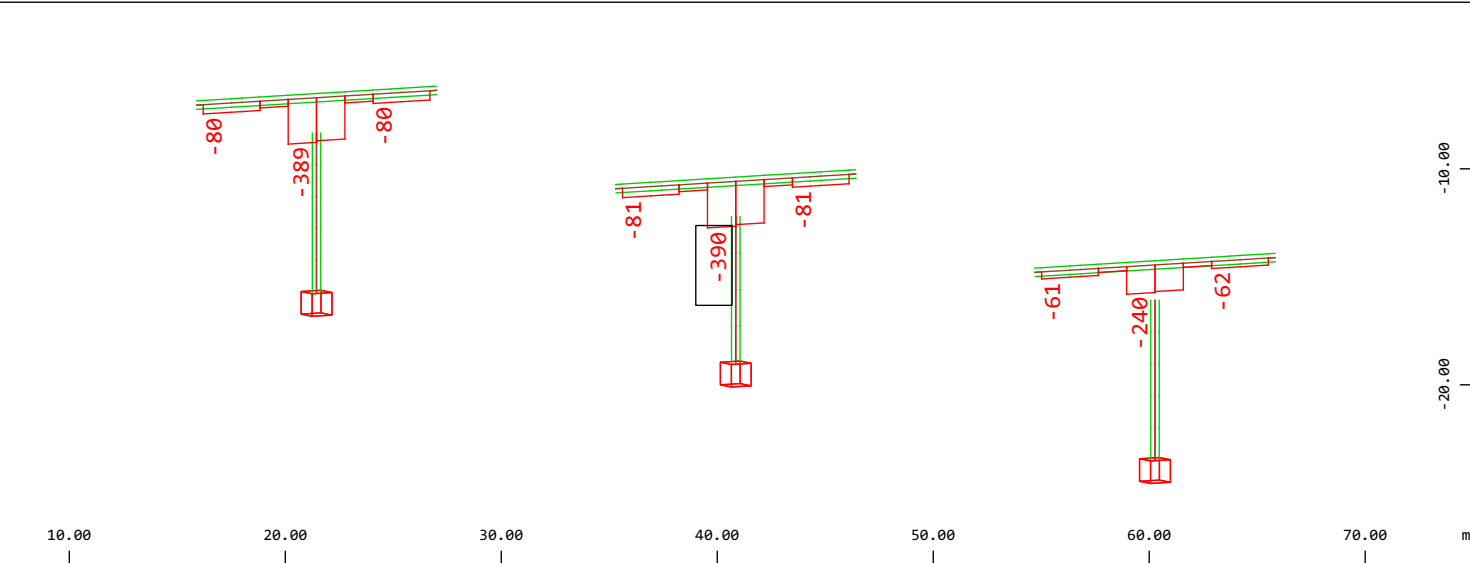


Z

X

Y

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994

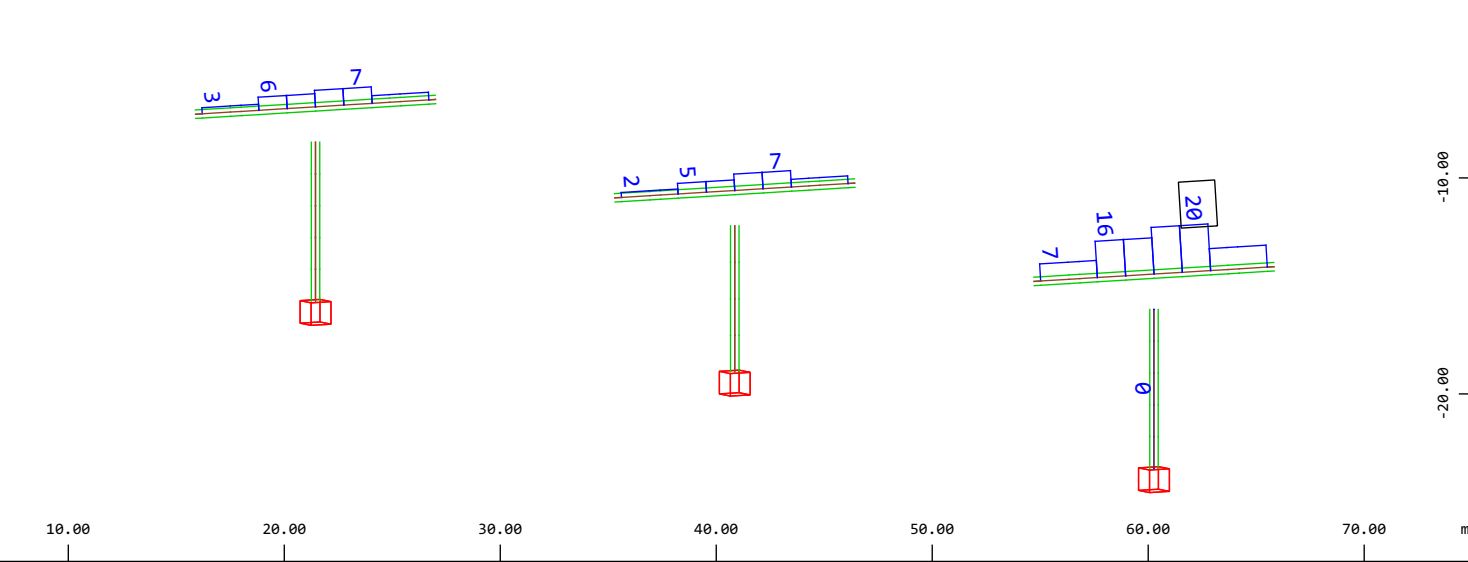


Z

X

Y

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



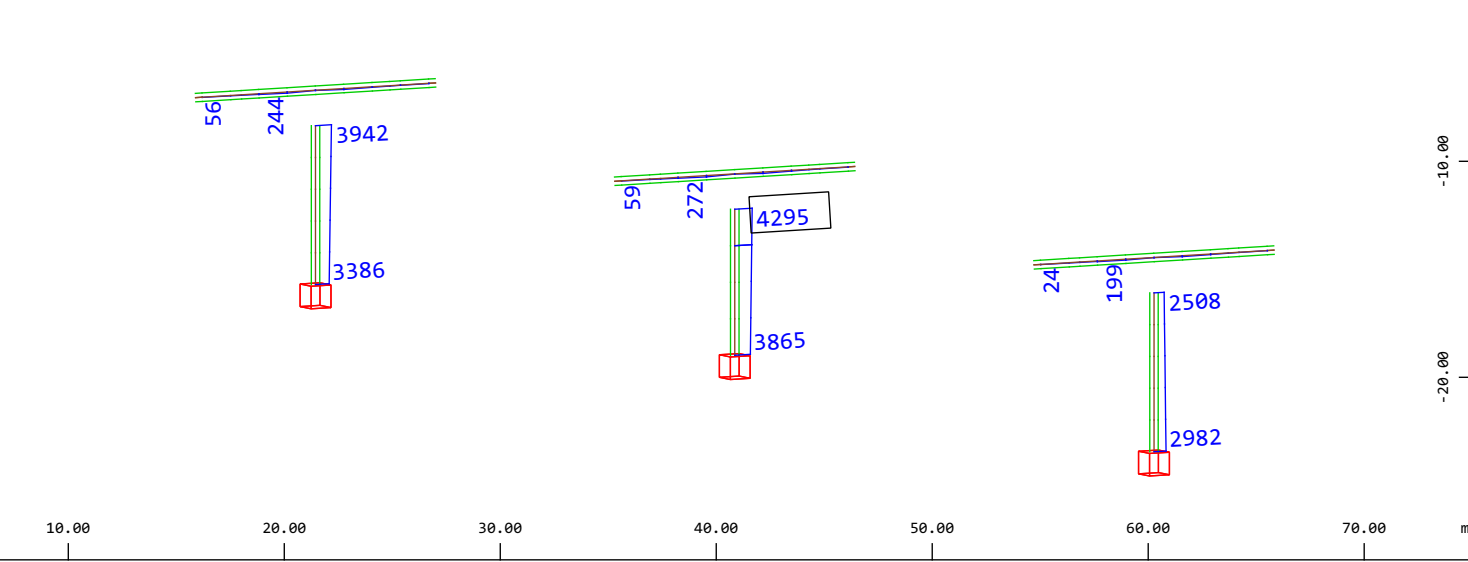
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 927 PROMET ZVEZNA { nyy N UX PtX } , 1 cm 3D = 32.734
kN (Max=20)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



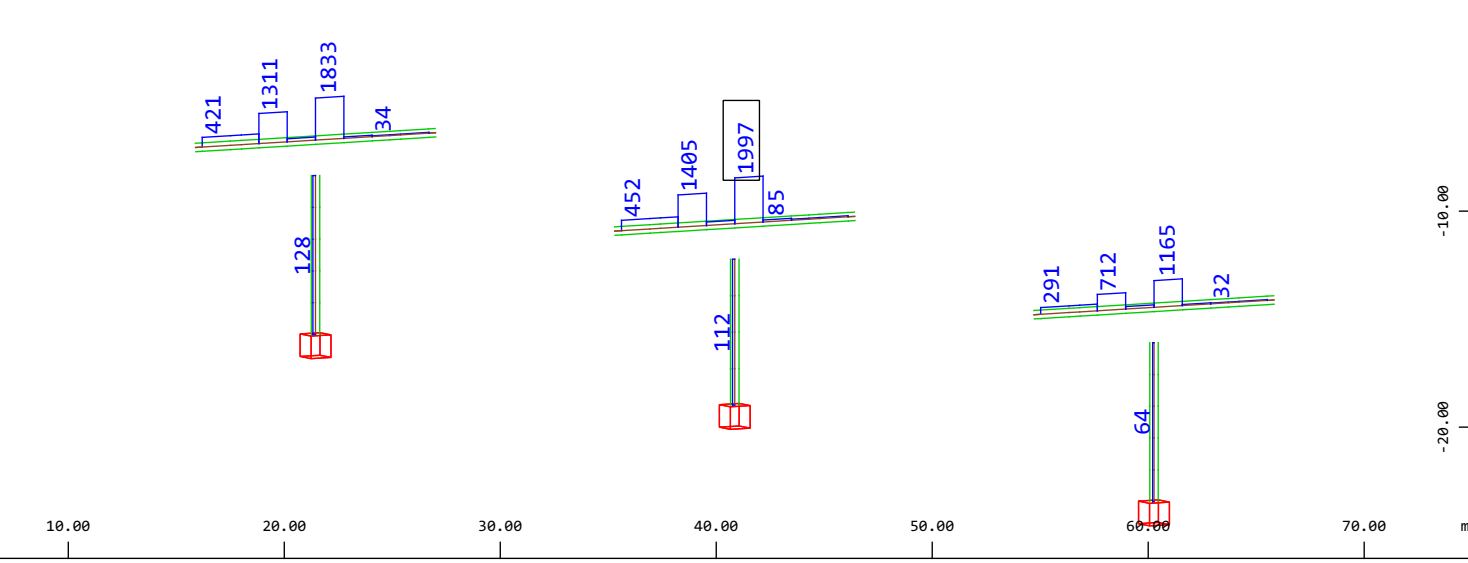
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My, Loadcase 921 PROMET ZVEZNA { mxx My PX P } , 1 cm 3D = 16367
kNm (Max=4295)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



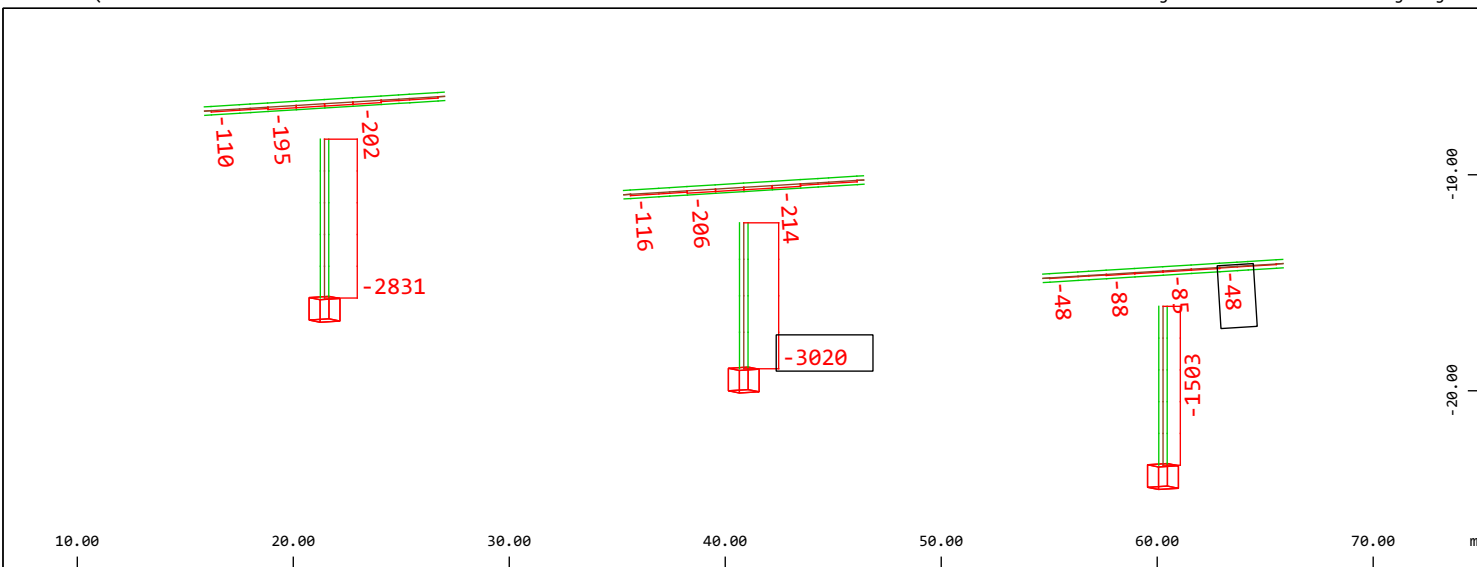
Z

X

Y

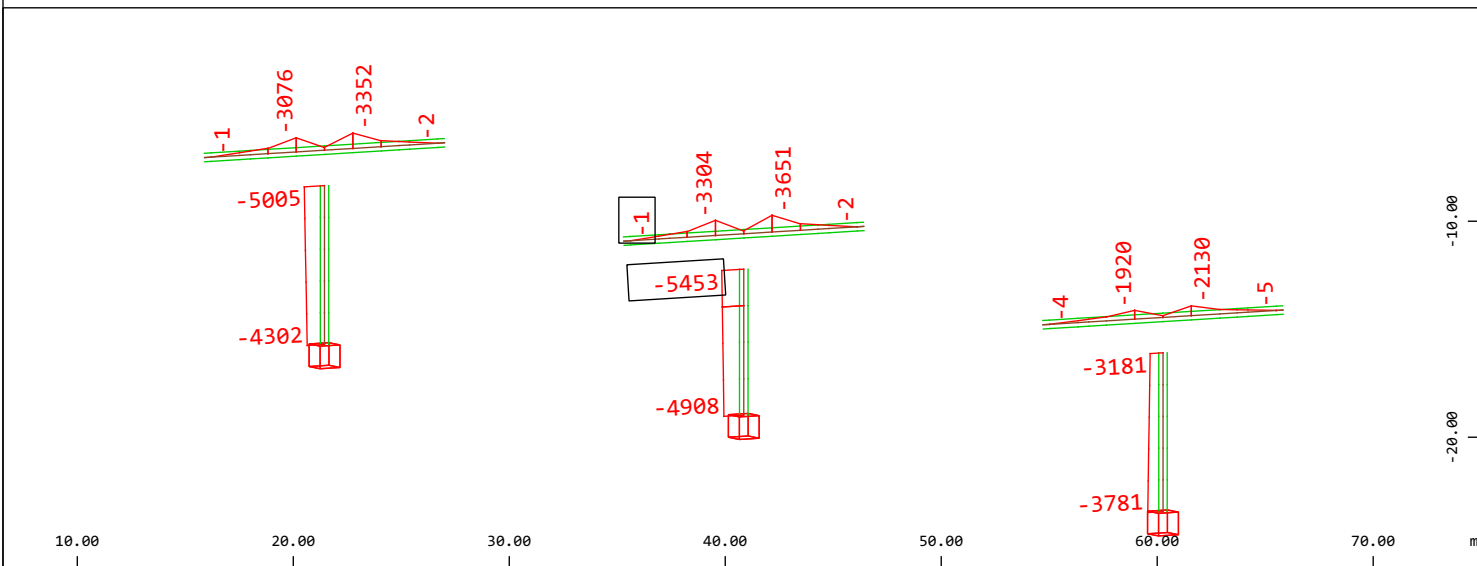
Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 923 PROMET ZVEZNA { myy Vz PY Pt } , 1 cm 3D = 3273.4 kN
(Max=1997)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



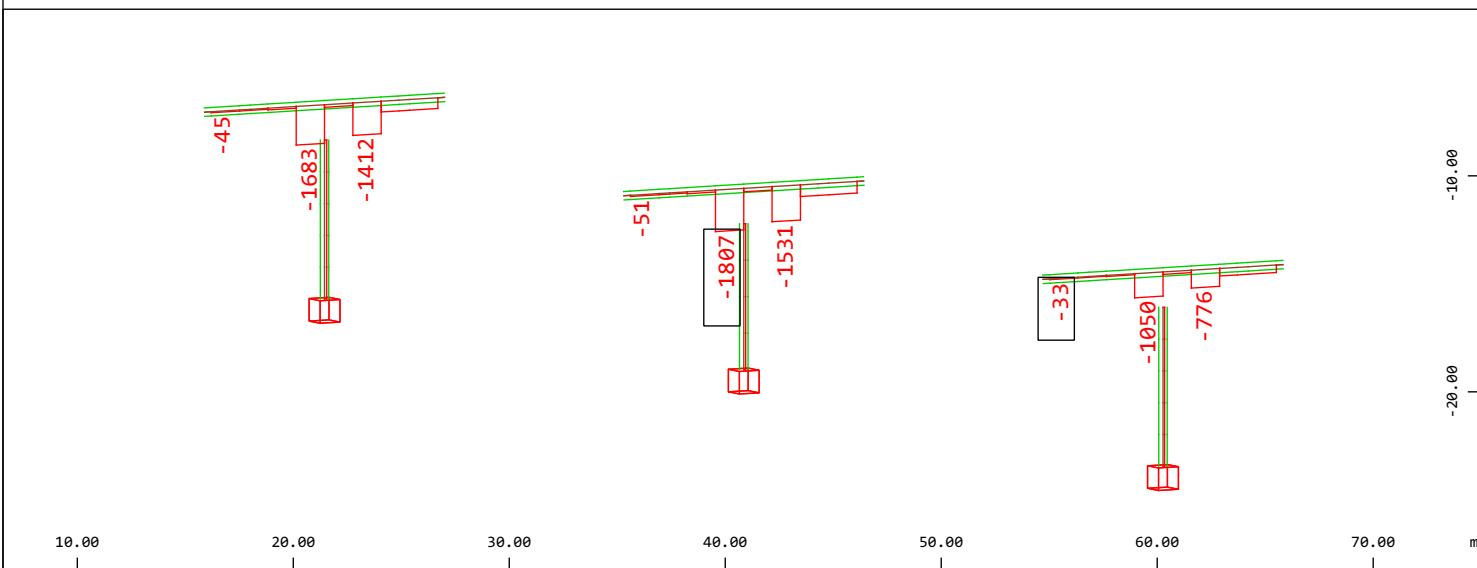
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 928 PROMET ZVEZNA { nyy N UX PtX } , 1 cm 3D = 6546.9
kN (Min=-3020) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



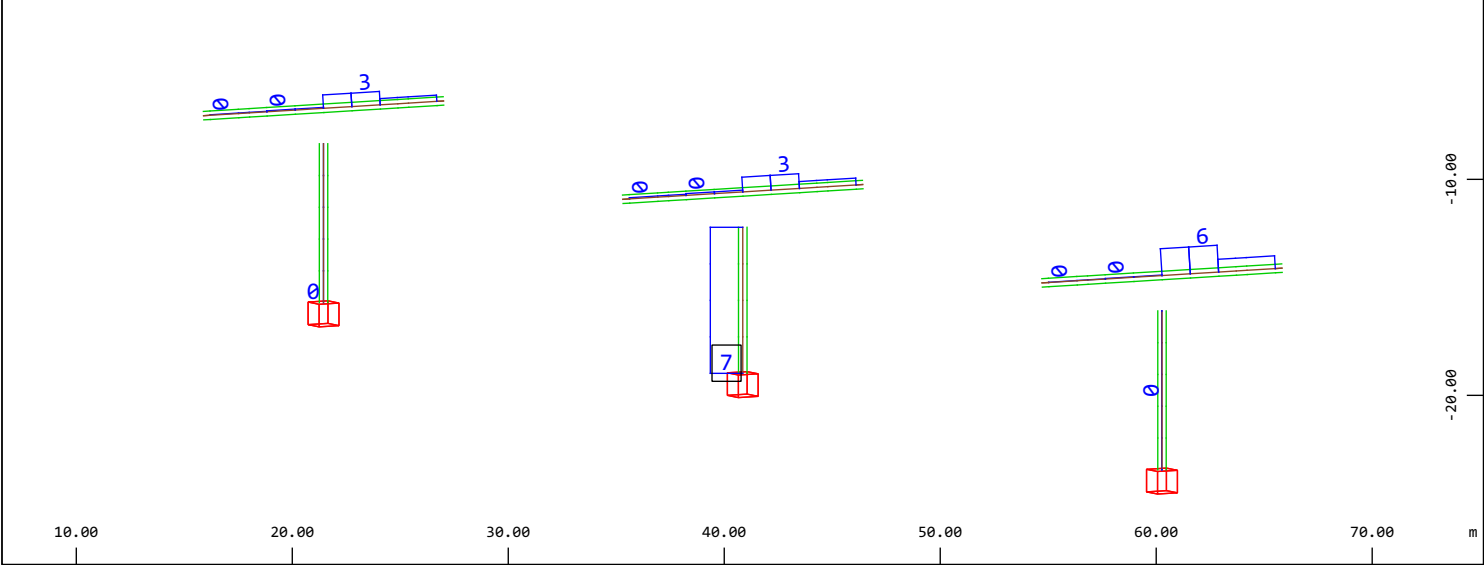
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 922 PROMET ZVEZNA { mxx My PX P } , 1 cm 3D = 16367
kNm (Min=-5453) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994

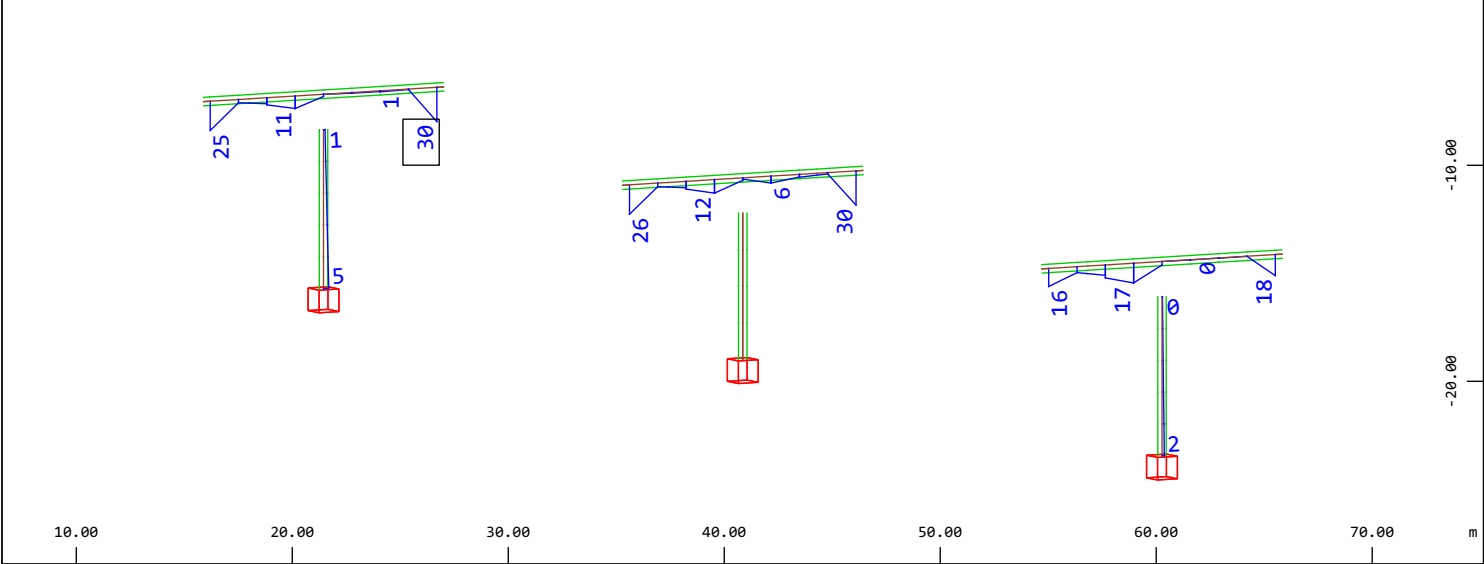


Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 924 PROMET ZVEZNA { myy Vz PY Pt } , 1 cm 3D = 3273.4 kN
(Min=-1807) (Max=0)

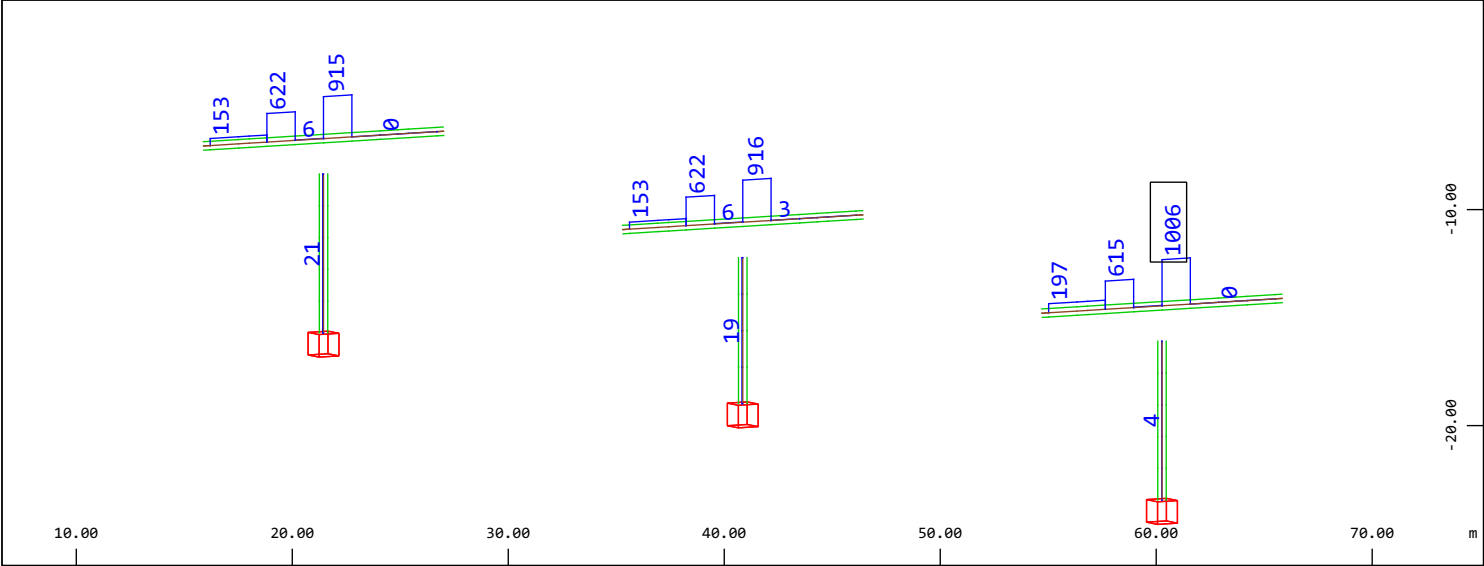
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



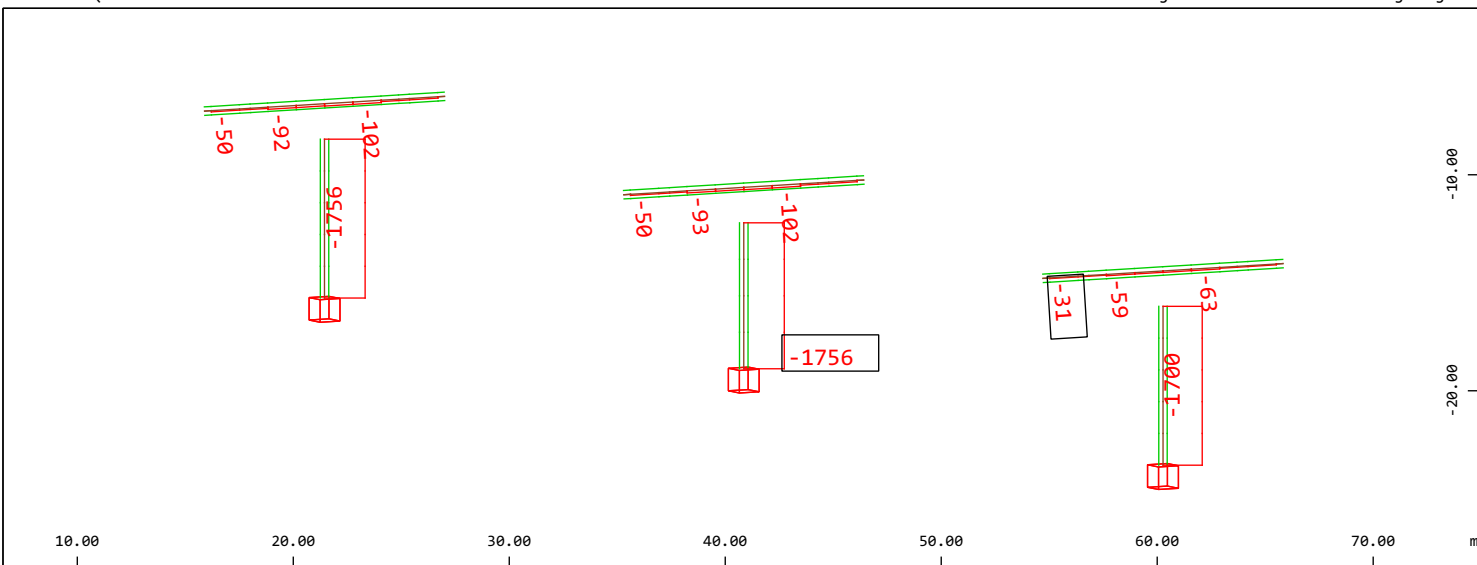
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force Nx, Loadcase 947 PROMET TS { nyy N UX PtX } , 1 cm 3D = 16.367 kN
(Max=7)
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment My, Loadcase 941 PROMET TS { mxx My PX P } , 1 cm 3D = 65.469 kNm
(Max=30)
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994

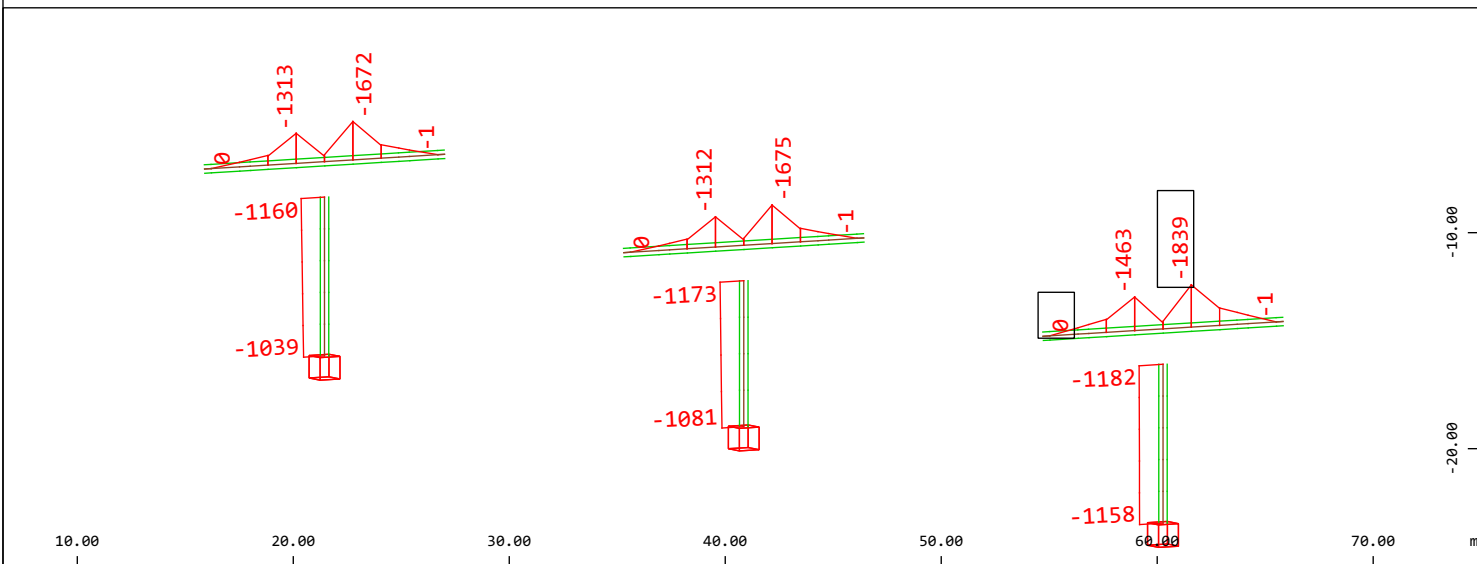


Sector of system Beam Elements Group 50 55
Beam Elements , Shear force Vz, Loadcase 943 PROMET TS { myy Vz PY Pt } , 1 cm 3D = 1636.7 kN
(Max=1006)
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



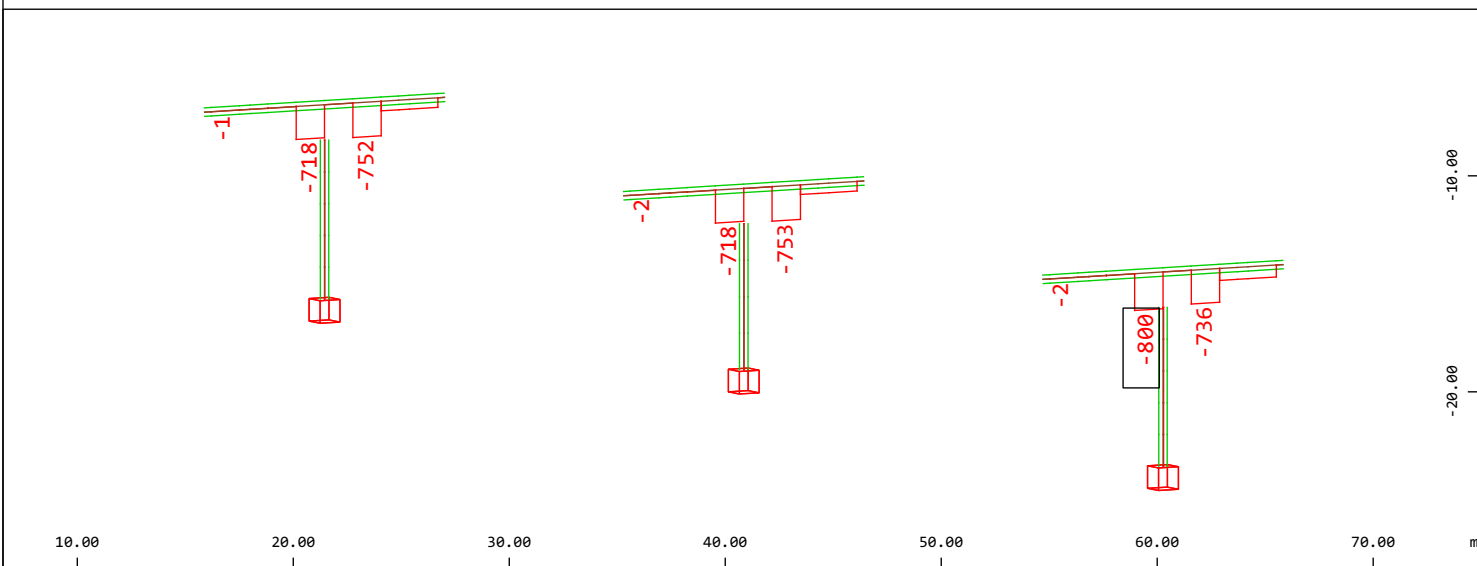
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 948 PROMET TS { nyy N UX PtX } , 1 cm 3D = 3273.4 kN
(Min=-1756) (Max=0)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



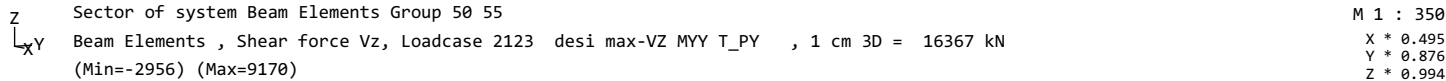
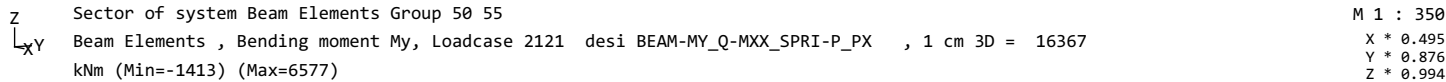
Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 942 PROMET TS { mxx My PX P } , 1 cm 3D = 3273.4 kNm
(Min=-1839) (Max=0)

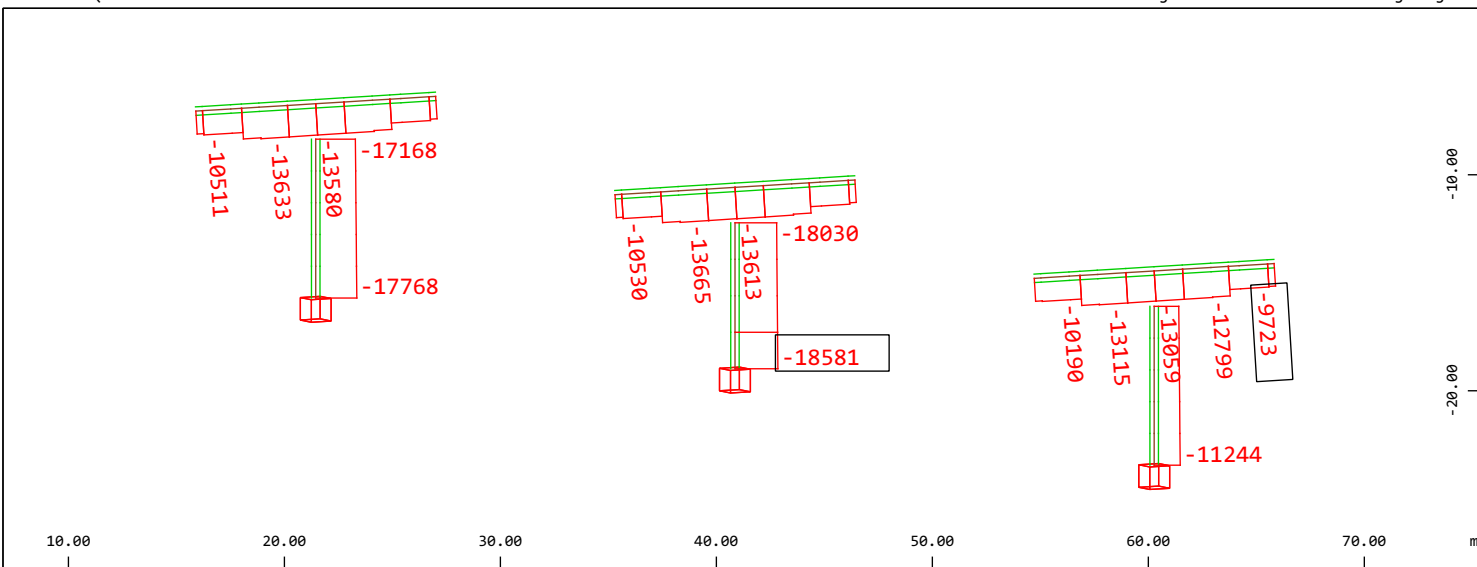
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 944 PROMET TS { myy Vz PY Pt } , 1 cm 3D = 1636.7 kN
(Min=-800) (Max=0)

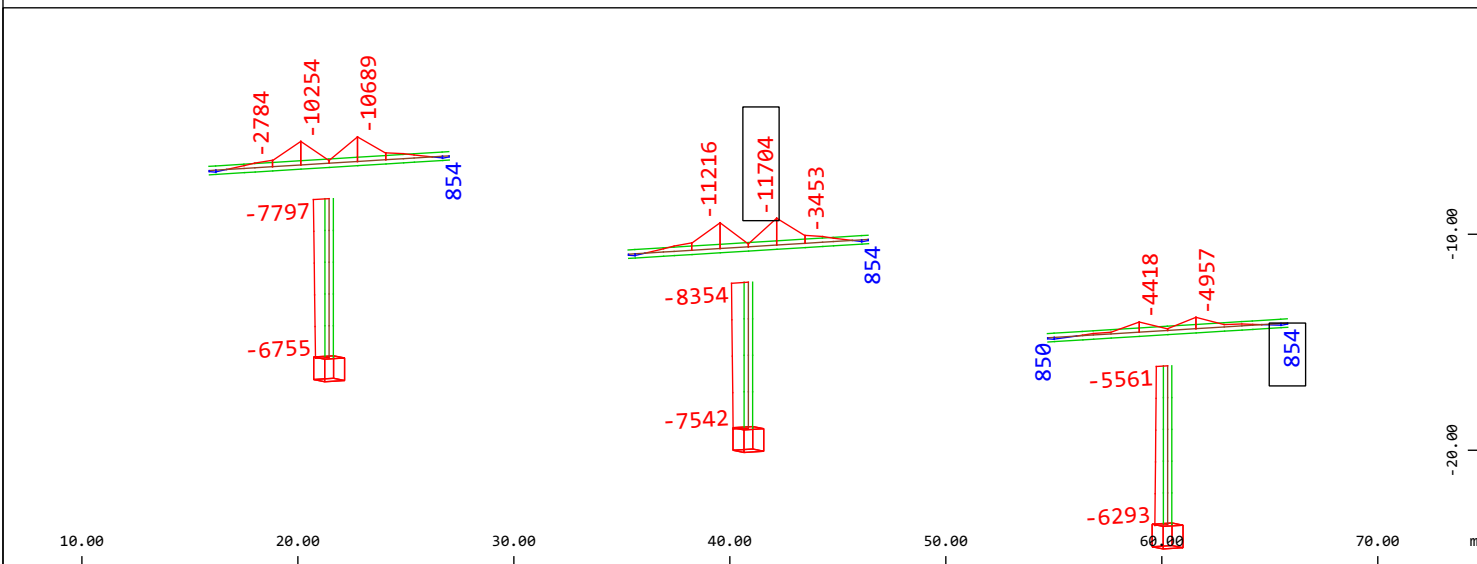
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994





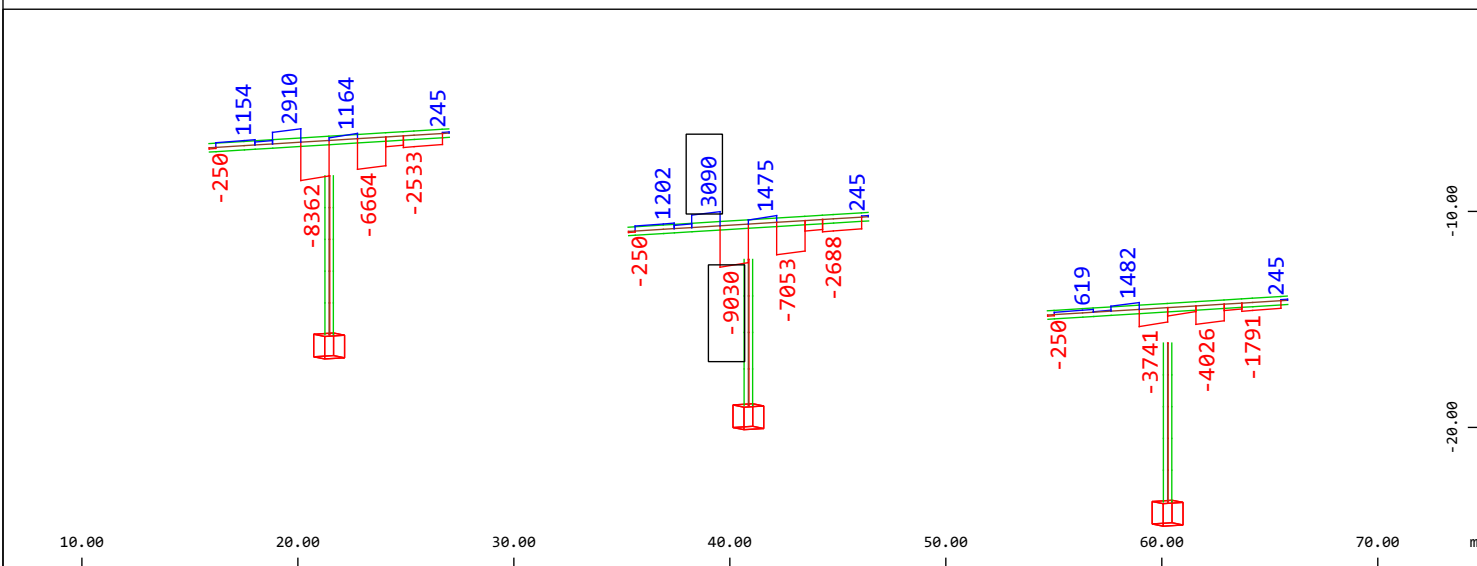
Sector of system Beam Elements Group 50 55
Beam Elements , Normal force N_x , Loadcase 2128 desi min--N NYU PTX_UX , 1 cm 3D = 32734 kN
(Min=-18581) (Max=-9723)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Bending moment M_y , Loadcase 2122 desi min--MY MXX P_PX , 1 cm 3D = 32734 kNm
(Min=-11704) (Max=854)

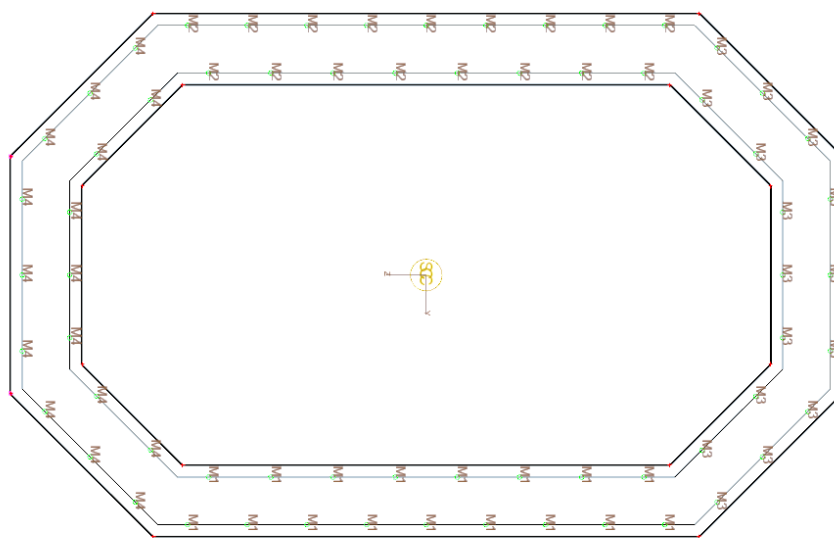
M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Shear force V_z , Loadcase 2124 desi min--VZ MYY T_PY , 1 cm 3D = 16367 kN
(Min=-9030) (Max=3090)

M 1 : 350
X * 0.495
Y * 0.876
Z * 0.994

5.3 IZRAČUN POTREBNE ARMATURE



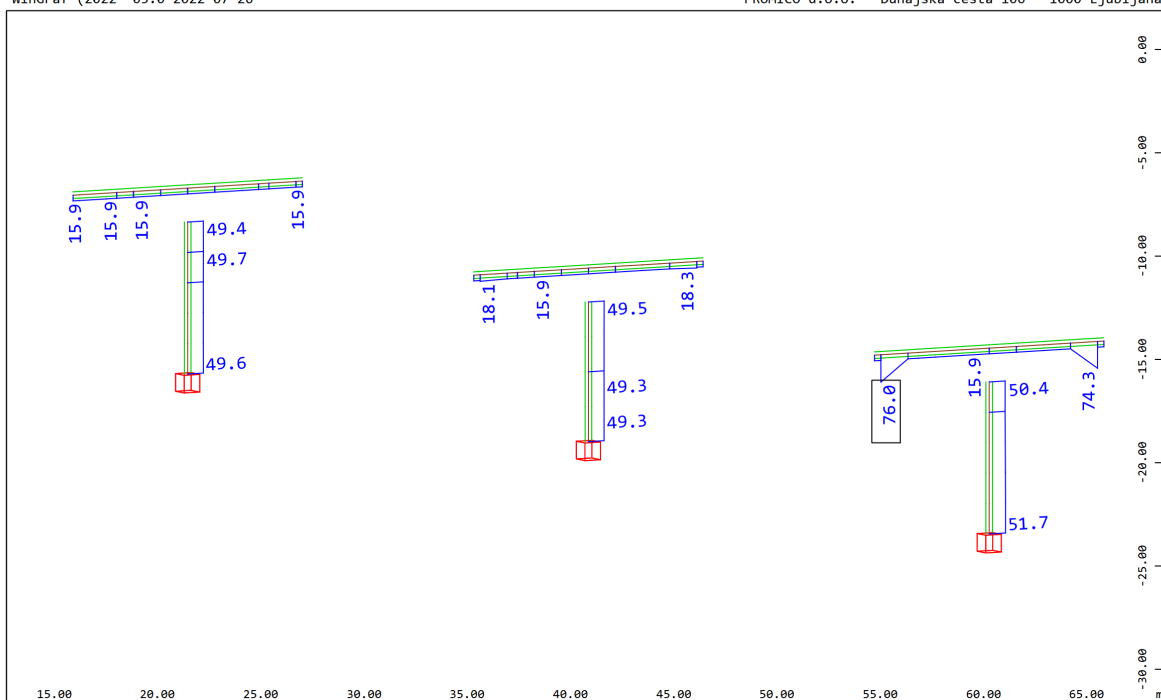
Oznake slojev armature steber



Oznake slojev armature kape stebrov

WinGraf (2022 -05.0 2022-07-26)

PROMICO d.o.o. * Dunajska cesta 106 * 1000 Ljubljana



z
x y

Sector of system Beam Elements Group 50 55

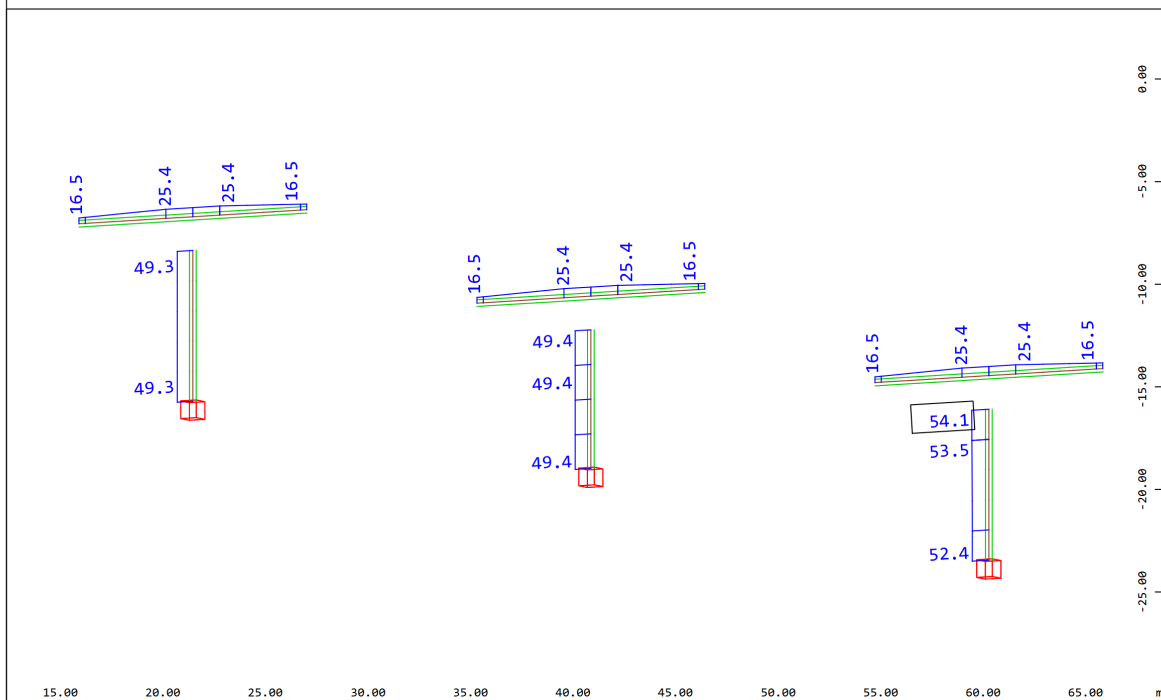
Beam Elements , Longitudinal Reinforcements Lay. M1, Design Case 11 , 1 cm 3D = 163.7 cm2
(Max=76.0)

M 1 : 287

X * 0.495

Y * 0.876

Z * 0.994



z
x y

Sector of system Beam Elements Group 50 55

Beam Elements , Longitudinal Reinforcements Lay. M2, Design Case 11 , 1 cm 3D = 163.7 cm2
(Max=54.1)

M 1 : 289

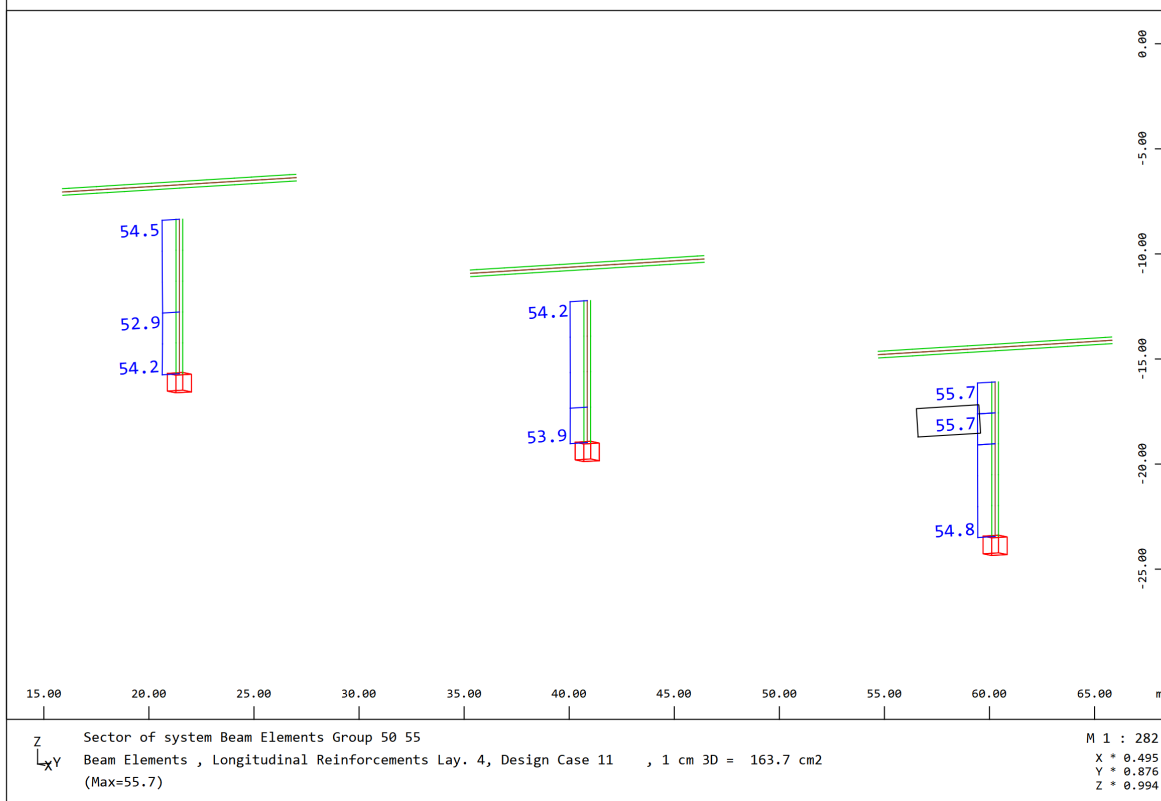
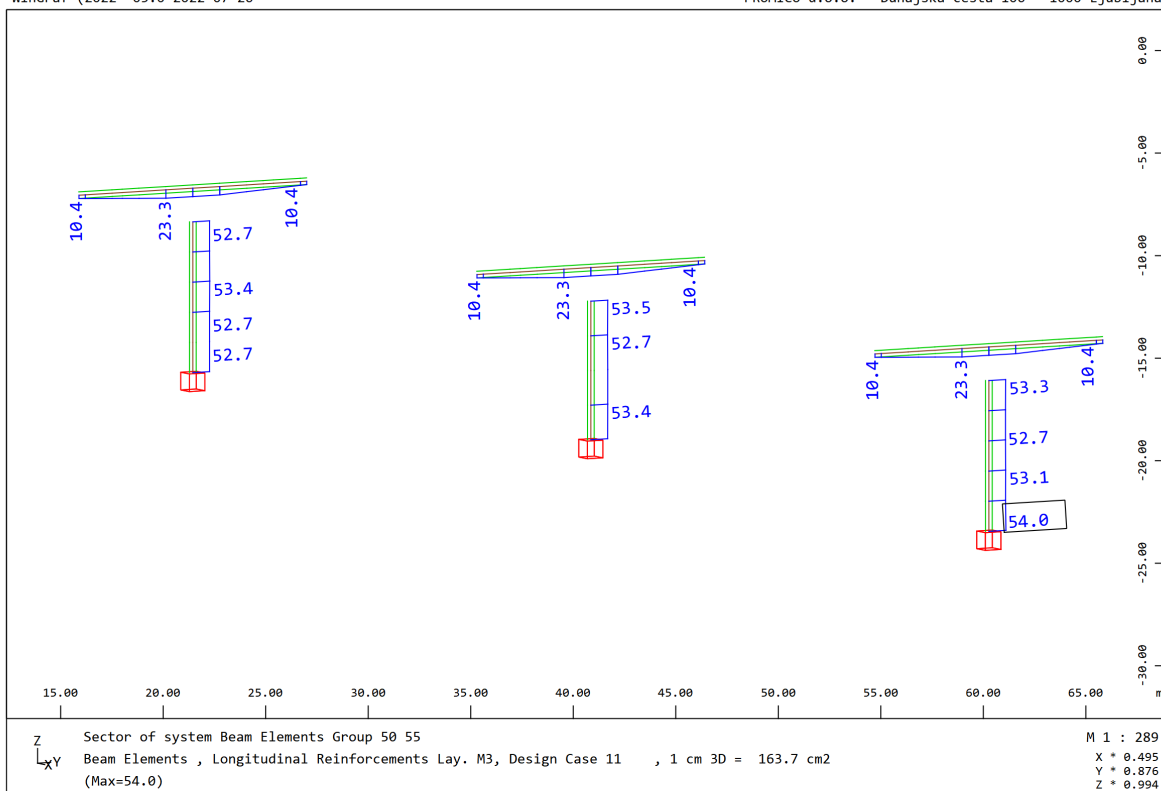
X * 0.495

Y * 0.876

Z * 0.994

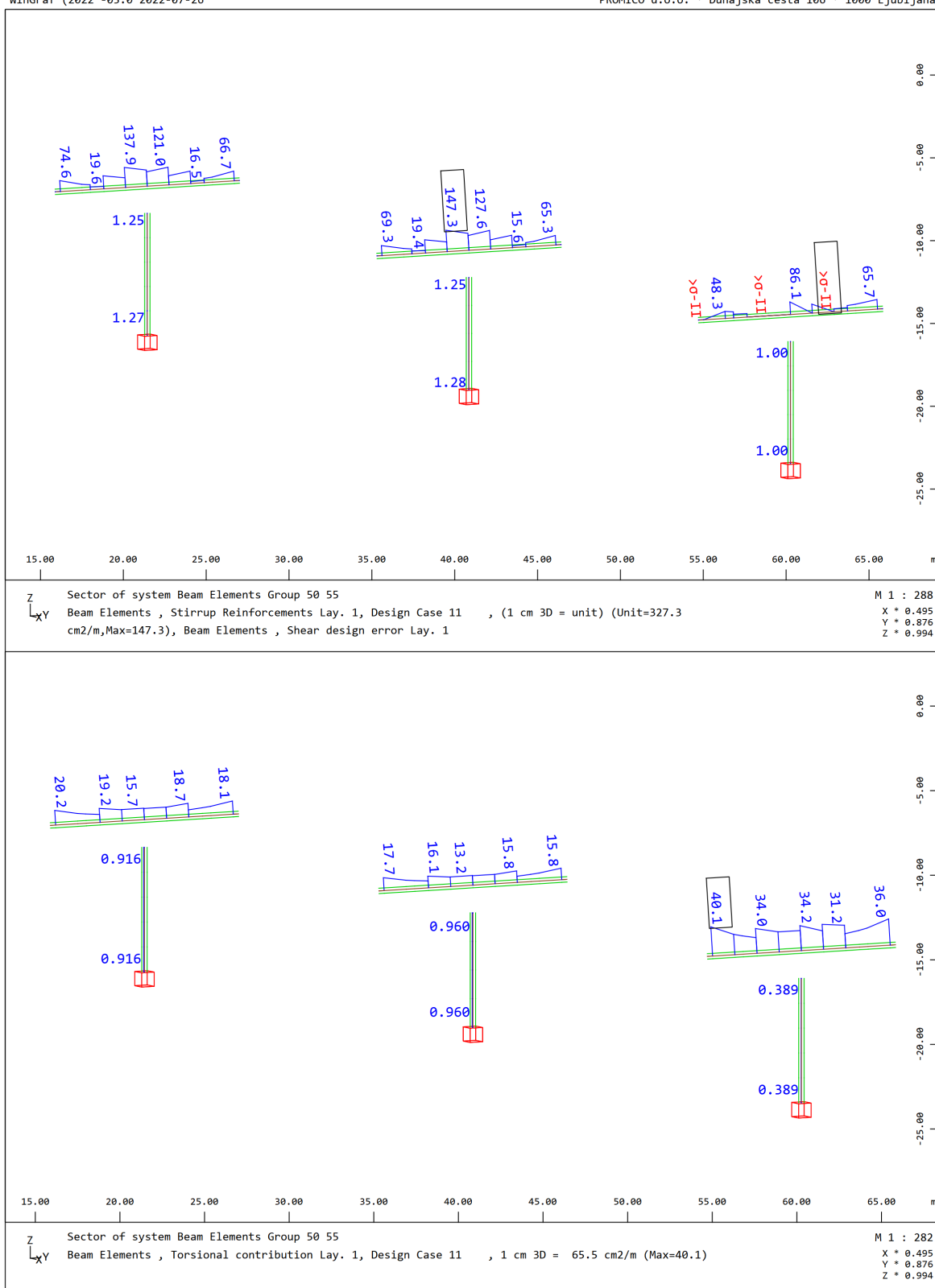
WinGraf (2022 -05.0 2022-07-26)

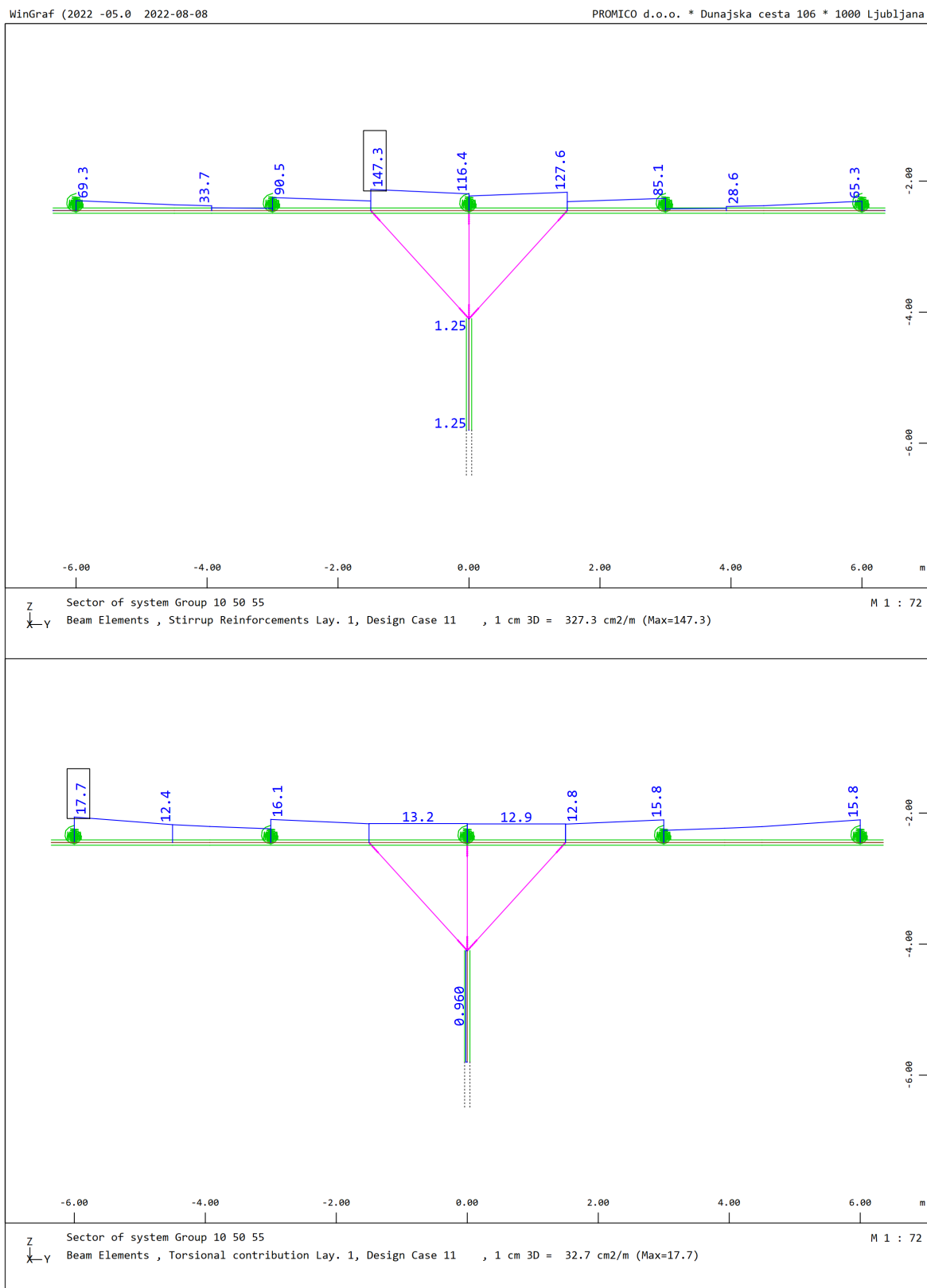
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WinGraf (2022 -05.0 2022-07-26)

PROMICO d.o.o. * Dunajska cesta 106 * 1000 Ljubljana

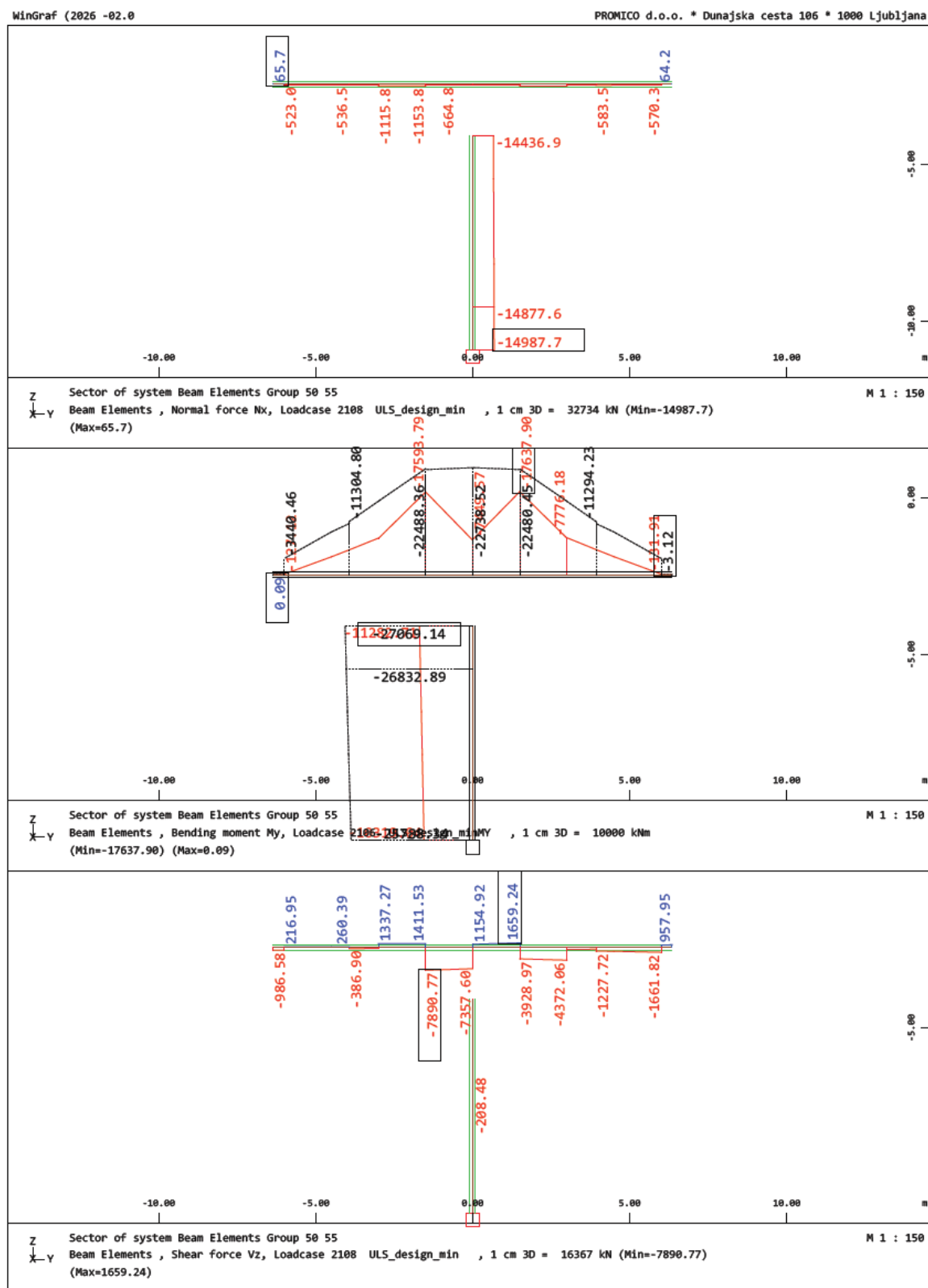




5.4 KONTROLA NOSILNOSTI PREREZA IN KONTROLA NAPETOSTI

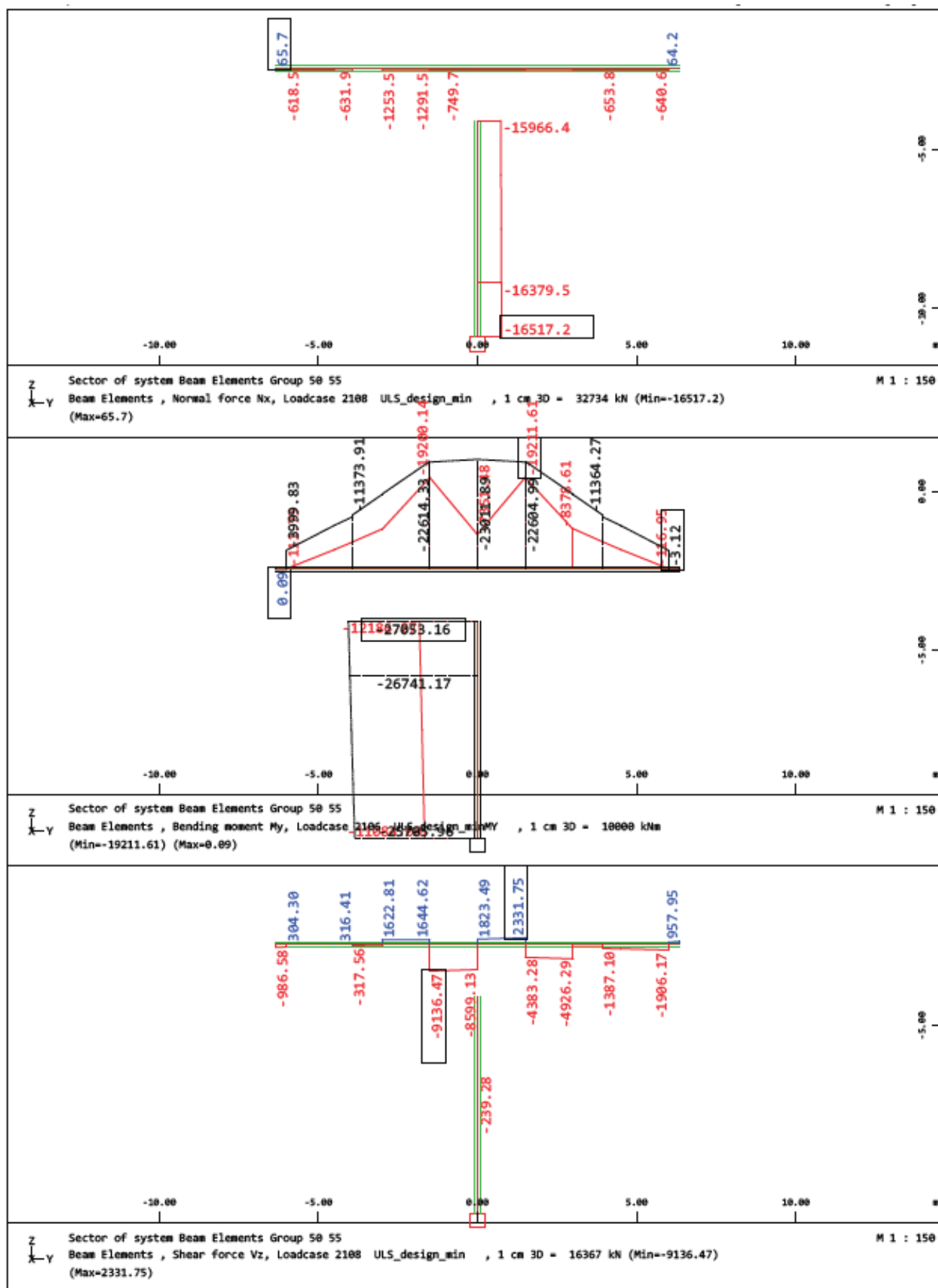
Glede na notranje sile in dimenzioniranje armature v Sofistiku je v nadaljevanju izvedeno kontrolni izračun za merodajni steber.

5.4.1 GLAVA STEBRA MODEL 35+35+35m



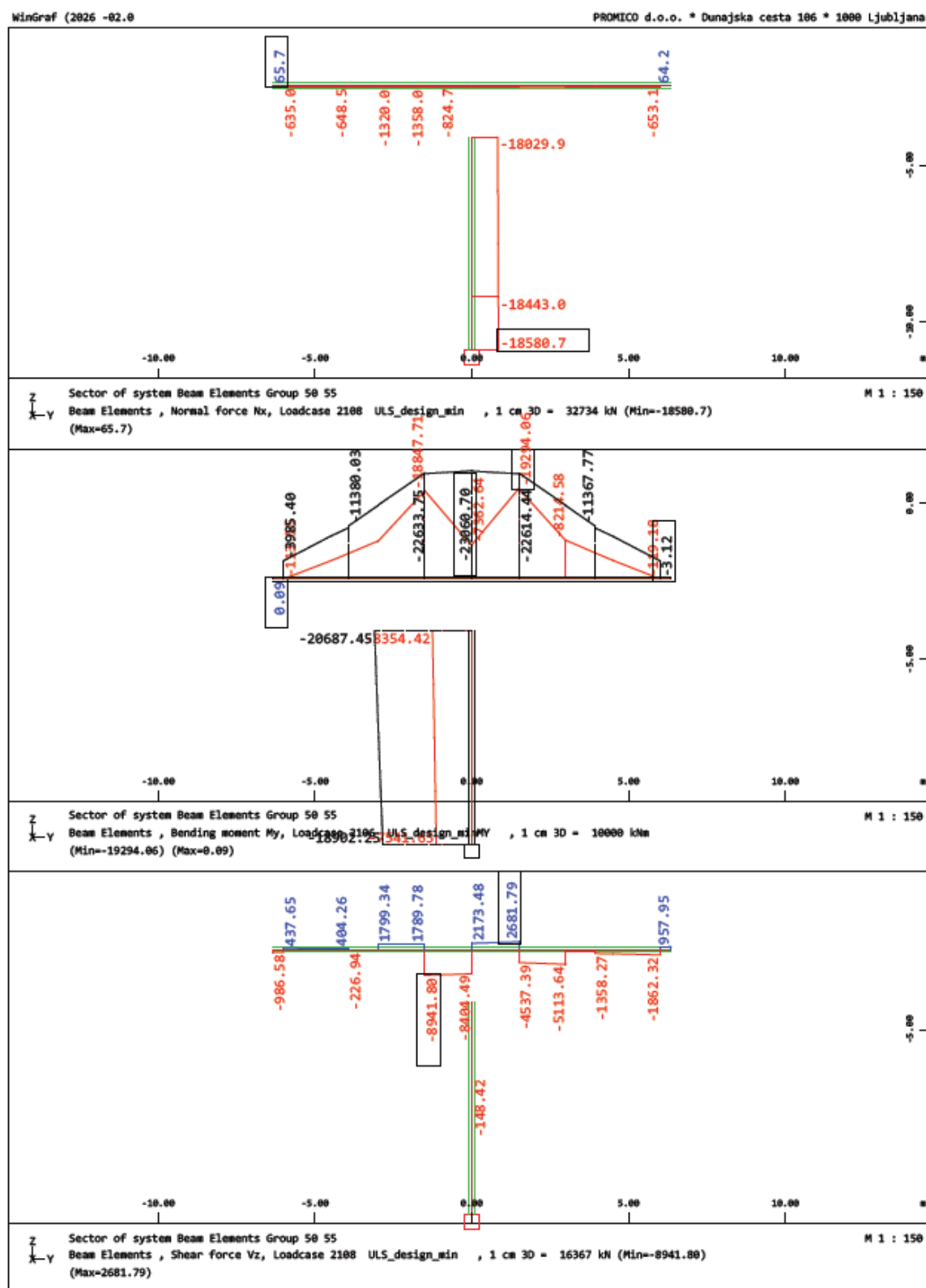
Osne sile, minimalni momenti in prečne sile za MSN (brez primarnega vpliva prednapenjanja)

5.4.2 GLAVA STEBRA MODEL 35+40+40m



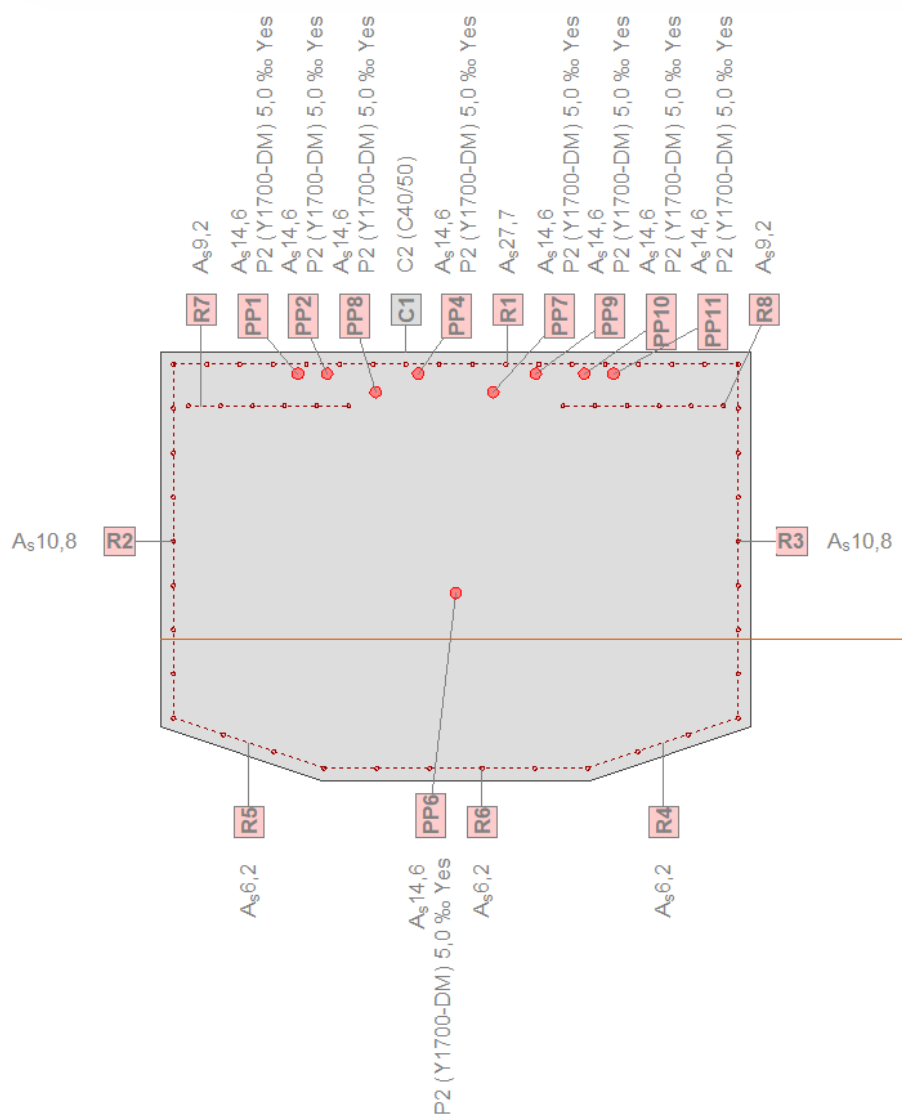
Osne sile, minimalni momenti in prečne sile za MSN (brez primarnega vpliva prednapenjanja)

5.4.3 GLAVA STEBRA MODEL 35+40+40m, C2+2



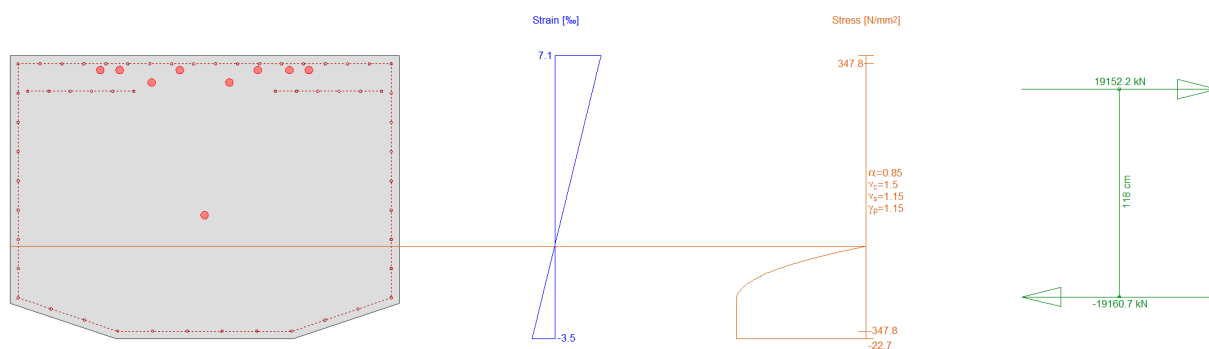
Osne sile, minimalni momenti in prečne sile za MSN (brez primarnega vpliva prednapenjanja)

Dodatna kontrola za merodajne računske obremenitve:



Glava stebra – prerez pri vpetju konzole v steber (območje maksimalnega negativnega momenta)

Efficiency My=-19500,0; eff(M,N)=0.87 OK



Action forces / Efficiency: $\text{eff}(M,N)=0.87$ OK

No.	AP	P	Bending and axial force				Shear forces and torsion				Complete CS $\text{eff}(M,N,V,T)$ [-]
			N [kN]	M_y [kNm]	M_z [kNm]	$\text{eff}(M,N)$ [-]	V_y [kN]	V_z [kN]	T [kNm]	$\text{eff}(V,T)$ [-]	
1	!ULS		0	-19500,0	0	0,87					

Analysis parameters !ULS Standard: Eurocode EN

ID	Diagram σ - ϵ				Strain Limits			σ_s [N/mm ²]	Partial safety factor					Various parameters		
	c	s	p	M	ϵ_{c2} [‰]	ϵ_{cu3} [‰]	ϵ_{ud} [‰]		α_{cc} [-]	γ_c [-]	γ_s [-]	γ_p [-]	γ_m [-]	θ [-]	φ [-]	P(t) [-]
!ULS	2/0	1	1	1	-2.	-3.5	20.		0.85	1.5	1.15	1.15	1.1	45.	0.	t=∞

Extreme stresses and strain

Name	Class	y_q [cm]	z_q [cm]	ϵ [‰]	σ_d [N/mm ²]	γ [-]
C1	C40/50	50	-160	-3.5	-22.7	1.76
C1	C40/50	-110	0	7.1	0.	1.76
R4	S400	49	-156	-3.2	-347.8	1.15
R1	S400	-106	-5	6.9	347.8	1.15
PP6	Y1700-DM	0	-90	6.2	1262.6	1.15
PP1	Y1700-DM	-59	-8	11.6	1304.3	1.15

Ultimate state "ULS"

Internal forces			Strain and Curvature			Stiffness Values		
N [kN]	M_y [kNm]	M_z [kNm]	ϵ_x [‰]	χ_y [km ⁻¹]	χ_z [km ⁻¹]	N/ ϵ_x [kN]	M_y/χ_y [kNm ²]	M_z/χ_z [kNm ²]
-8.5	-22513.4	0.	2,0	-6,7	0,0	4237.38	3382262.23	7004027.26

Prestressing forces

	N_p [kN]	M_{yp} [kNm]	M_{zp} [kNm]
P(t=∞) at start of loading	-13422,4	7885,0	0
Stresses and strain during the last iterations	-17019,4	10041,6	-0,0

Internal section forces represented by two vectors

	Internal Forces			Moments		Geometric Values			
	CS [kN]	Rfmt [kN]	Sum [kN]	M	Unit [kNm]	z	Unit [cm]	x, d	Unit [cm]
Compr. F_c =	-18465.6	-695.1	-19160.7	M_c =	-11277.	z_c =	59	x_c =	53
Tens. F_s =	0.	19152.2	19152.2	M_s =	-11236.4	z_s =	59	d =	141
N =			-8.5	M =	-22513.4	z =	118	x/d =	0.37

Result points and combinations

Formula / Result	Name	Max	Min	Unit
$\sigma(PP11(59,-8))$	σ_{pT}	1304.3	1304.3	N/mm ²
$\Delta\sigma((0,-77))$	$\Delta\sigma_{pT}$	0.	0.	N/mm ²

5.5 KONTROLA PREREZA NA STRIG

5.5.1 PREVERBA STRIŽNE NOSILNOSTI OBSTOJEČEGA PREREZA

GLAVA STEBRA NA X=0m									
Materiali							$\alpha_{cc} =$	0,85	
Beton:	C35/45						$v_c =$	1,50	
		$f_{ck} =$	35	MN/m ²			$f_{cd} = \alpha_{cc} f_{ck}/v_c =$	23,3	MN/m ²
		$\tau_{rd} =$	0,37	MN/m ²			$f_{ctd} = \alpha_{cc} f_{ctk,0,05}/v_c =$	1,27	MN/m ²
		$f_{ctm} =$	3,21	MN/m ²	Redukcijski faktor trdnosti za strižno razpokan beton:				
		$f_{ctk,0,05} =$	2,25	MN/m ²			$v = 0,6*(1 - f_{ck}/250) =$	0,516	
Prerez									
širina		$b =$	2,20	m		$c =$	0,025	m	
višina		$h =$	1,60	m					
računska širina		$b_w =$	2,200	m		premer cevi za kable $\Phi =$	0,00	cm	
statična višina prereza		$d =$	1,58	m					
		$z =$	1,42	m					
		$A_c =$	3,5200	m ²					
		$S =$	0,7040	m ³					
		$I =$	0,7509	m ⁴					
Projektna obremenitev						$\sigma_{cp} = N_{Ed} / A_c =$	3,49	MN/m ²	
		$V_{Ed} =$	7900	kN		$\sigma_{cp}/f_{cd} =$	0,15		
		$N_{Ed} =$	12300	kN		$\alpha_{cw} = 1 + \sigma_{cp}/f_{cd} =$	1,15		
					(koeficient stanja napetosti v tlačnem pasu)				
Kontrola strižne odpornosti:									
$V_{Rd,c} =$				$I*b_w / S * (f_{ctd}^2 + \alpha_1 * \sigma_{cp} * f_{ctd})^{(1/2)} =$	5781,8	kN		V_{Rd} / V_{Ed}	0,73
$V_{Rd(max)} =$				$0,5*b_w * d * v * f_{cd} =$	20859,3	kN			2,64

Prekoračitev strižne nosilnosti konzolnega nosilca pri upoštevanju ugodnega vpliva prednapenjanja in predpostavko, da je prerez nerazpokan. Potrebne so ojačitve prereza za povečanje strižne nosilnosti.

DOLOČITEV V_{Rd}									
GLAVA STEBRA NA $X=1,50$ m									
Materiali									
Beton:	C35/45						$\alpha_{cc} =$	0,85	
							$\nu_c =$	1,50	
		$f_{ck} =$	35	MN/m ²			$f_{cd} = \alpha_{cc} f_{ck} / \nu_c =$	23,3	MN/m ²
		$\tau_{rd} =$	0,37	MN/m ²			$f_{ctd} = \alpha_{cc} f_{ctk,0,05} / \nu_c =$	1,27	MN/m ²
		$f_{ctm} =$	3,21	MN/m ²	Redukcijski faktor trdnosti za strižno razpokan beton:				
		$f_{ctk,0,05} =$	2,25	MN/m ²			$\nu = 0,6 * (1 - f_{ck} / 250) =$	0,516	
Prerez									
širina stojine		$b =$	2,20	m		$c =$	0,025	m	
višina stojine		$h =$	1,35	m					
računska širina stojine		$b_w =$	2,200	m		premer cevi za kable $\Phi =$	0,00	cm	
statična višina prereza		$d =$	1,33	m					
		$z =$	1,19	m					
		$A_c =$	2,9700	m ²					
		$S =$	0,50119	m ³	statični moment nad težiščno osjo				
		$I =$	0,45107	m ⁴					
Projektna obremenitev									
		$V_{Ed} =$	2500	kN		$\sigma_{cp} = N_{Ed} / A_c =$	4,14	MN/m ²	
		$N_{Ed} =$	12300	kN		$\sigma_{cp} / f_{cd} =$	0,18		
						$\alpha_{cw} = 1 + \sigma_{cp} / f_{cd} =$	1,18		
						(koeficient stanja napetosti v tlačnem pasu)			
$V_{Rd,c} =$					$I * b_w / S * (f_{ctd}^2 + \alpha_1 * \sigma_{cp} * f_{ctd})^{(1/2)} =$	5198,9	kN		2,08
$V_{Rd(max)} =$					$0,5 * b_w * d * \nu * f_{cd} =$	17548	kN		2,22

5.5.2 DIMENZIONIRANJE STRIŽNIH OJAČITEV

Merodajna obremenitev za dimenzioniranje:

$$V_{Ed} = 7900 \text{ kN} \quad M_{Ed} = -9800 \text{ kNm} \quad V_{Ed} = 14300 \text{ kN}$$

Norm ☒ ON EC 2-1-1 ☐ ON EC 2-2 ☐ ON B4200 ☐ ON B4700 ☐ ON B4703 ☐ DIN 1045 ☐ DIN EC 2-1-1	Material Beton: C35/45 Bewehrung: BSt 500 $\gamma_{mc} = 1.50$ $\gamma_{my} = 1.15$	Standardbemessung Bauteil: Glava stebra Position: 3 Moment: -9800.00 [kNm] Querkraft: 7900.00 [kN] Normalkraft: -14300.00 [kN] Torsion: 0.00 [kNm] Lastsicherheit: 1.00 tan β : 0.60
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Querschnitt ☒  ☐  ☐  ☐ Allgemein	Breite: 2.200 [m] b=h b_opti Höhe: 1.600 [m] h=b h_opti    	Randabstände oben: 0.050 [m] unten: 0.050 [m]	Knicklängen L _{ky} = 0.00 [m] L _{kz} = 0.00 [m]
---	---	--	--

Berechnungsoptionen ☒ Standardbemessung ☐ Tragmoment ☐ Reaktive Schnittkräfte ☐ Innerer Dehnungszustand ☐ Symmetrische Bewehrung ☐ Flächentragwerk	Bemessung Bewehrungsauswahl Durchbiegung Rissbreite Last Rissbreite Zwang
--	---

Querschnitt as _{bü_Q} = 39.08 cm ² /m+S min As _o = 56.74 cm ²	Dehnungen eps _{so} = 11.91 ‰ eps _u = -3.50 ‰	Spannungen -23.33 MN/m ²
--	---	---

Vgrajena armatura

$$A_{s,obst} = 38,48 \text{ kN/cm}^2 * 40/50 = 30,78 \text{ kN/cm}^2 < A_{s,potr} = 78,16 \text{ kN/cm}^2$$

$$A_{s,potr,dod} = 47,38 \text{ kN/cm}^2$$

Izbrana armatura: $\Phi 18/10, n=2$

$$A_{s,izbrana} = 25,45 * 2 = 50,9 \text{ cm}^2$$

5.6 KONTROLA NAPETOSTI

Omejitev napetosti v betonu: SLS – quasi permanent

Omejitev napetosti v betonu za zagotavljanje linearnega lezenja:

$$\begin{array}{lll} \text{Stebri C35/45} & \rightarrow & \begin{array}{l} |\sigma_{c,perm}| \leq 0,45 \cdot f_{ck} \\ |\sigma_{c,perm}| \leq 15,75 \text{ MPa} \end{array} \end{array}$$

Omejitev napetosti v betonu: SLS – characteristic (rare)

$$\begin{array}{lll} \text{Stebri C35/45} & \rightarrow & \begin{array}{l} |\sigma_{c,rare}| \leq 0,60 \cdot f_{ck} \\ |\sigma_{c,rare}| \leq 21 \text{ MPa} \end{array} \end{array}$$

Srednje vrednosti napetosti v kablji: SLS – rare

V karakteristični (redki) kombinaciji vplivov, morajo biti skladno s SIST EN 1992-1-1, 7.2 (5) srednje vrednosti napetosti prednapetih kablov manjše od $0,75 \cdot f_{pk}$.

$$\sigma_{max} < 0,75 \cdot f_{pk} = 1275 \text{ MPa}$$

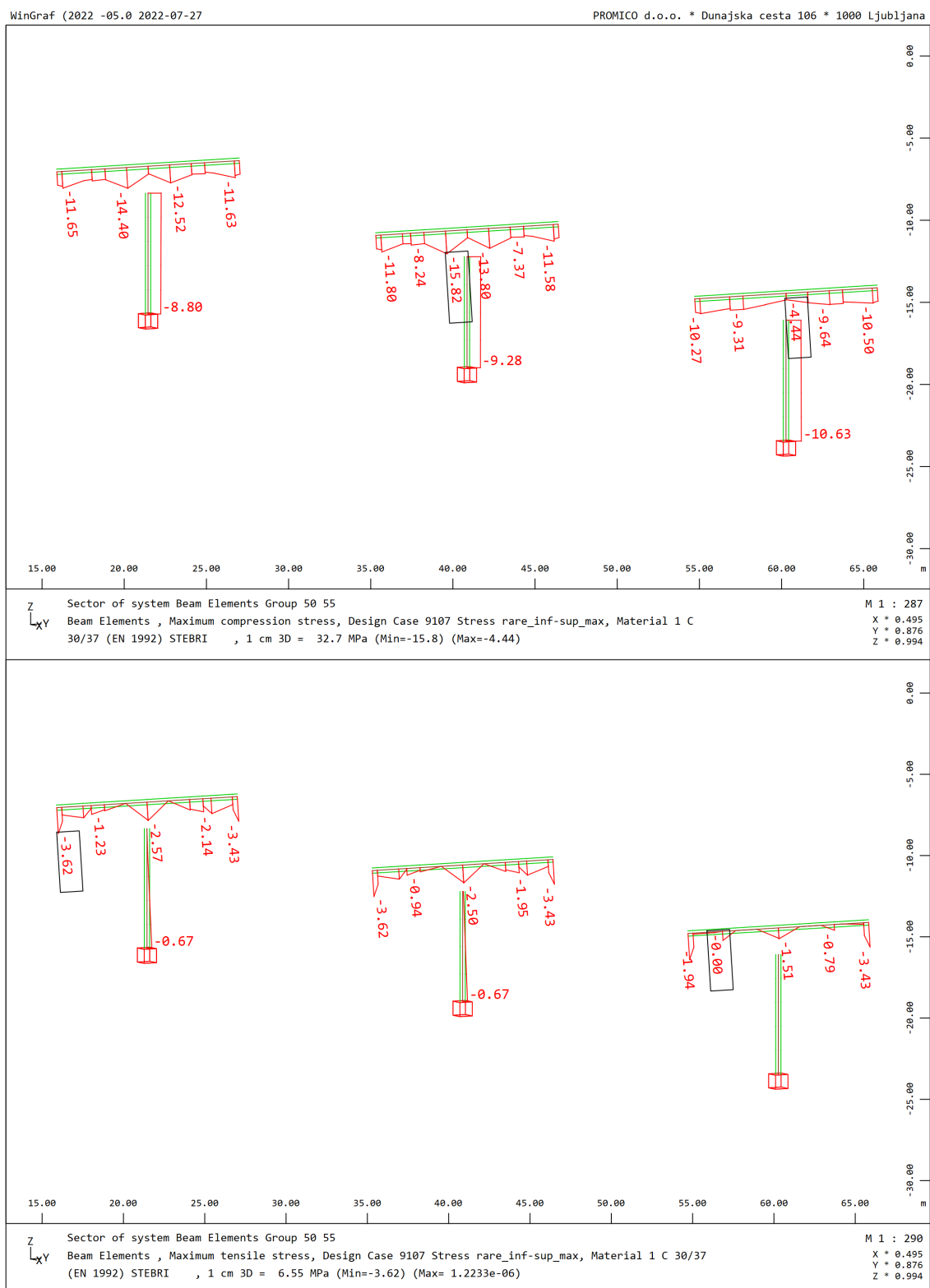
Omejitev napetosti v armaturi: SLS – characteristic (rare)

$$\sigma_s \leq 0,80 \cdot f_{yk} = 400 \text{ MPa}$$

Na naslednjih straneh so prikazane napetosti v stebrih za posamezne obtežbe primere.

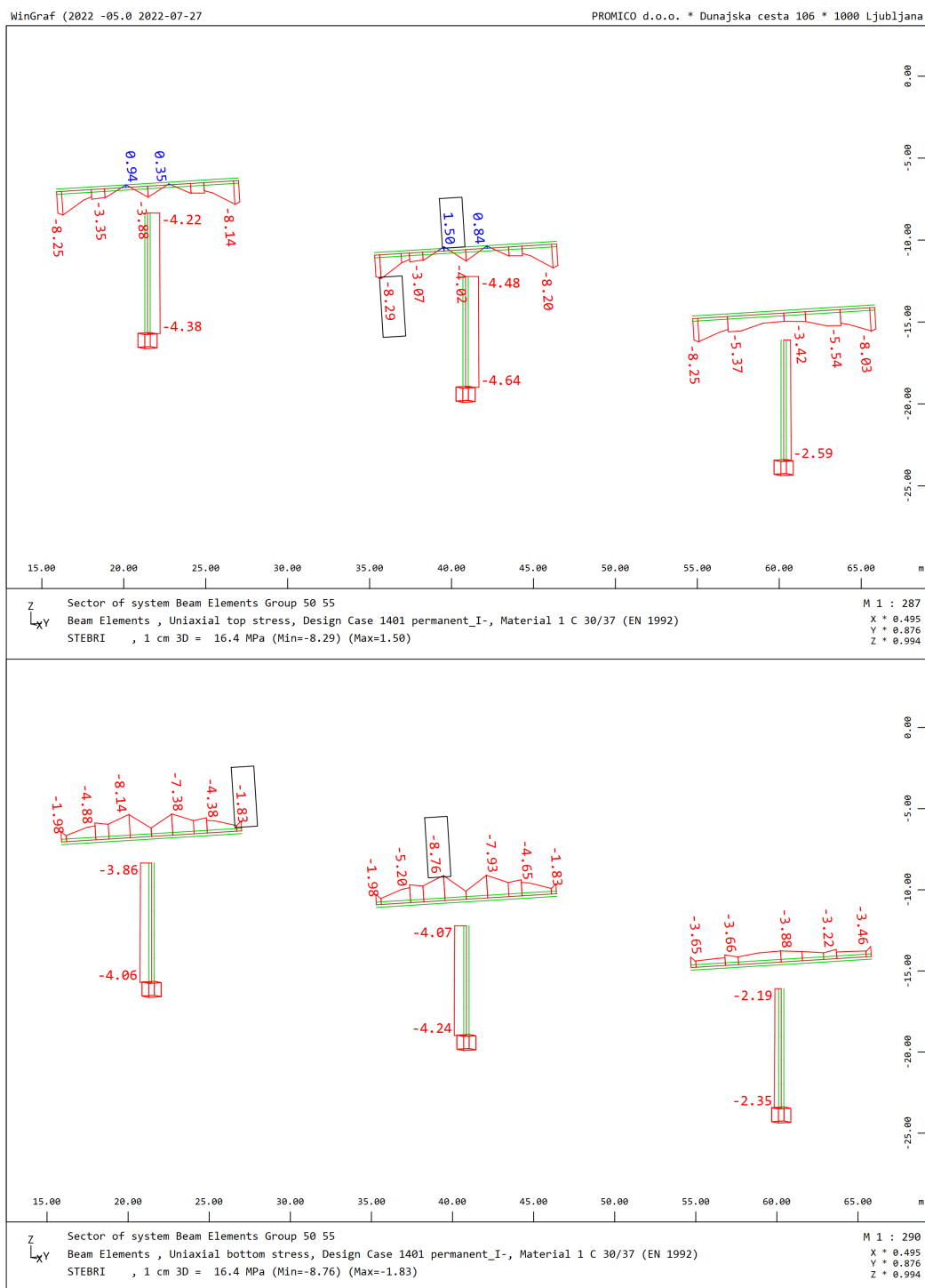
KONTROLA NAPETOSTI za SLS karakteristično kombinacijo

$$|\sigma_{c,rare}| \leq 21,0 \text{ MPa}$$



KONTROLA NAPETOSTI in RAZPOK za SLS kvazi-stalno kombinacijo

$$|\sigma_{c,perm}| \leq 15,75 \text{ MPa}$$

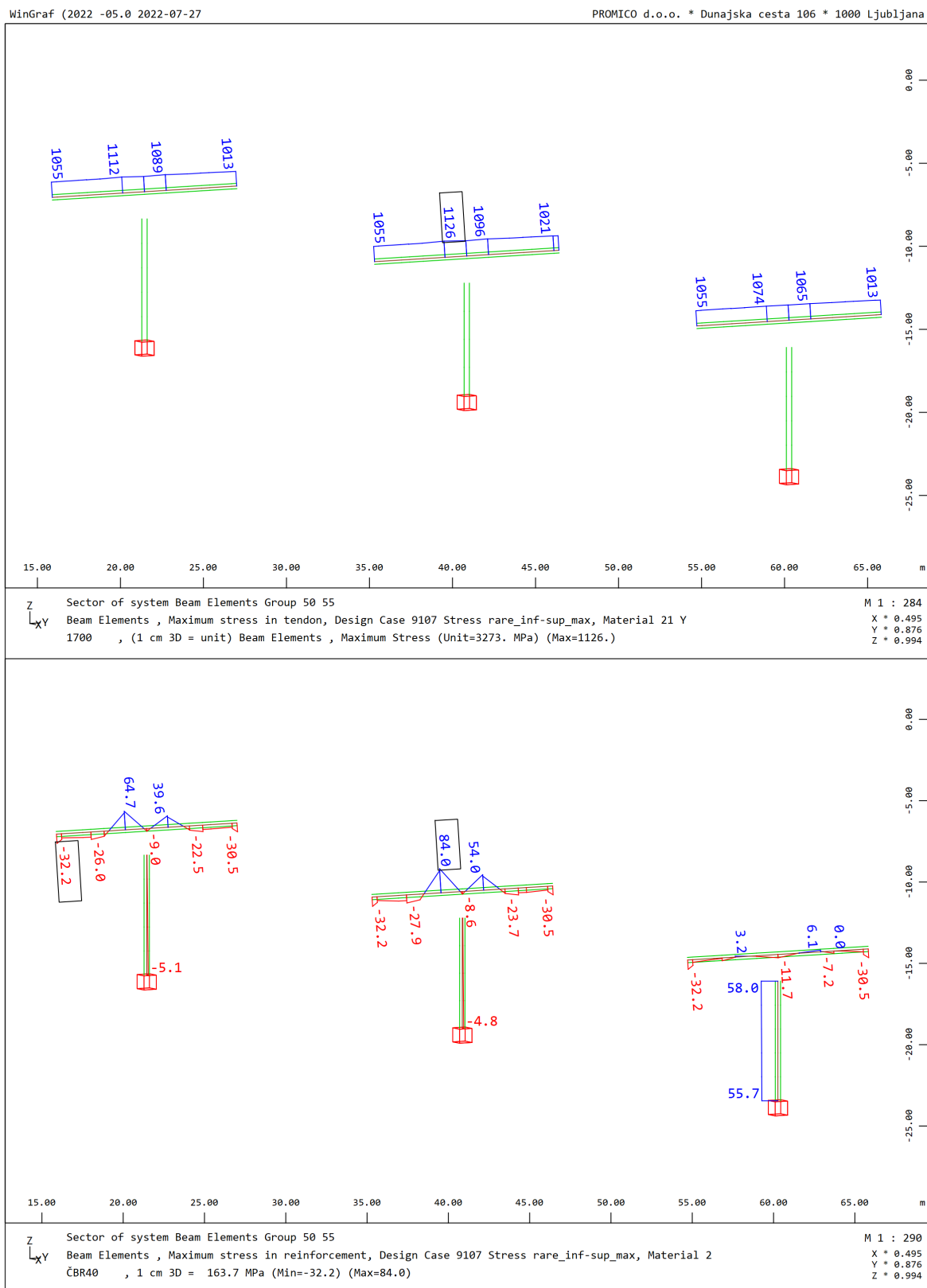


Pogoj dekompresije za pogosto kot tudi za navidezno stalno obtežno kombinacijo ni izpolnjen. Kriterij dekompresije zagotavlja trajnost konstrukcije s tem, da je območje betona okrog kablov pod določeno obtežbo vedno v tlaku in s tem ščiti kabelske cevi oz. kable za prednapenjanje.

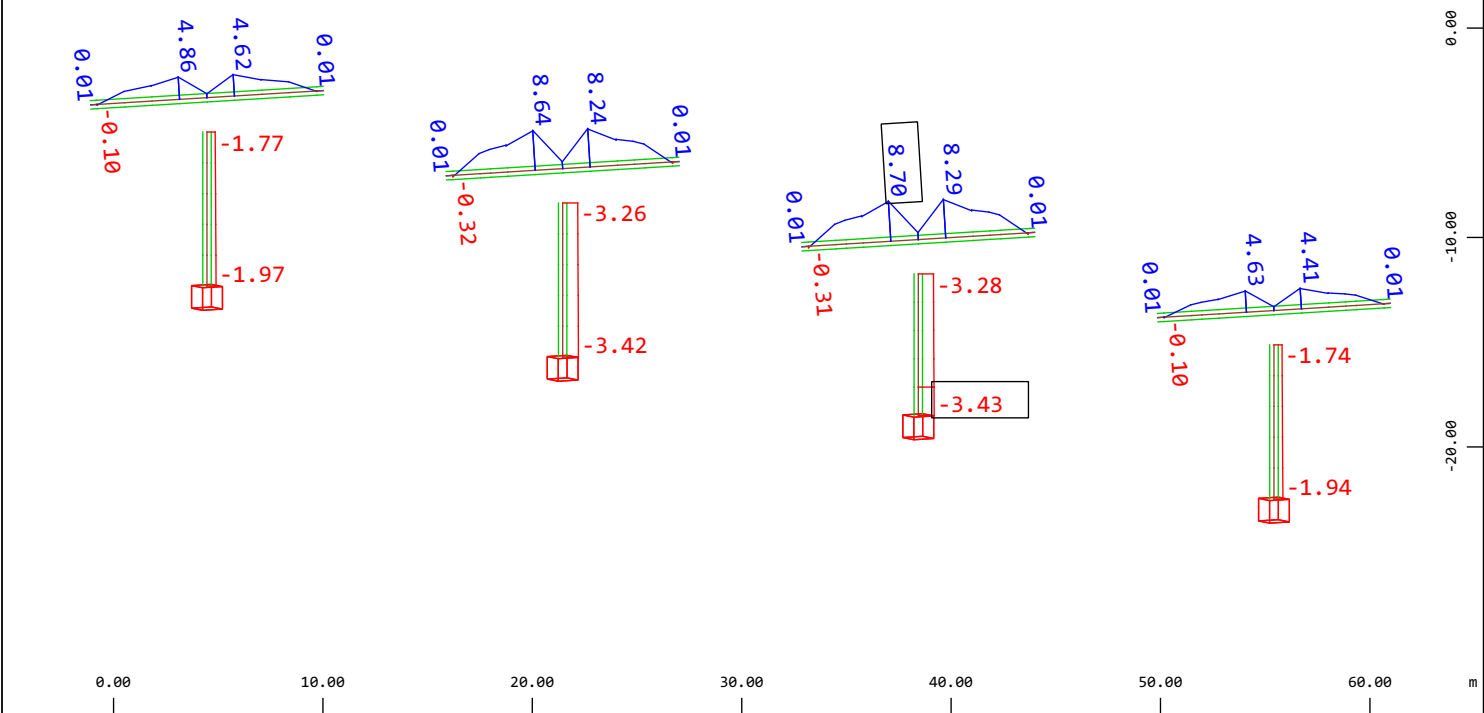
Za predvideno eksploatacijsko dobo do dveh let po rekonstrukciji objekta, zmanjšanje nosilnosti prereza zaradi računske prekoračitve dekompresije v območju kablov ni pričakovati.

NAPETOSTI V KABLIH in ARMATURI za SLS – characteristic

$$(\sigma_{\max,P} \leq 1275 \text{ MPa}) \quad (\sigma_{\max,Y} \leq 400 \text{ MPa})$$

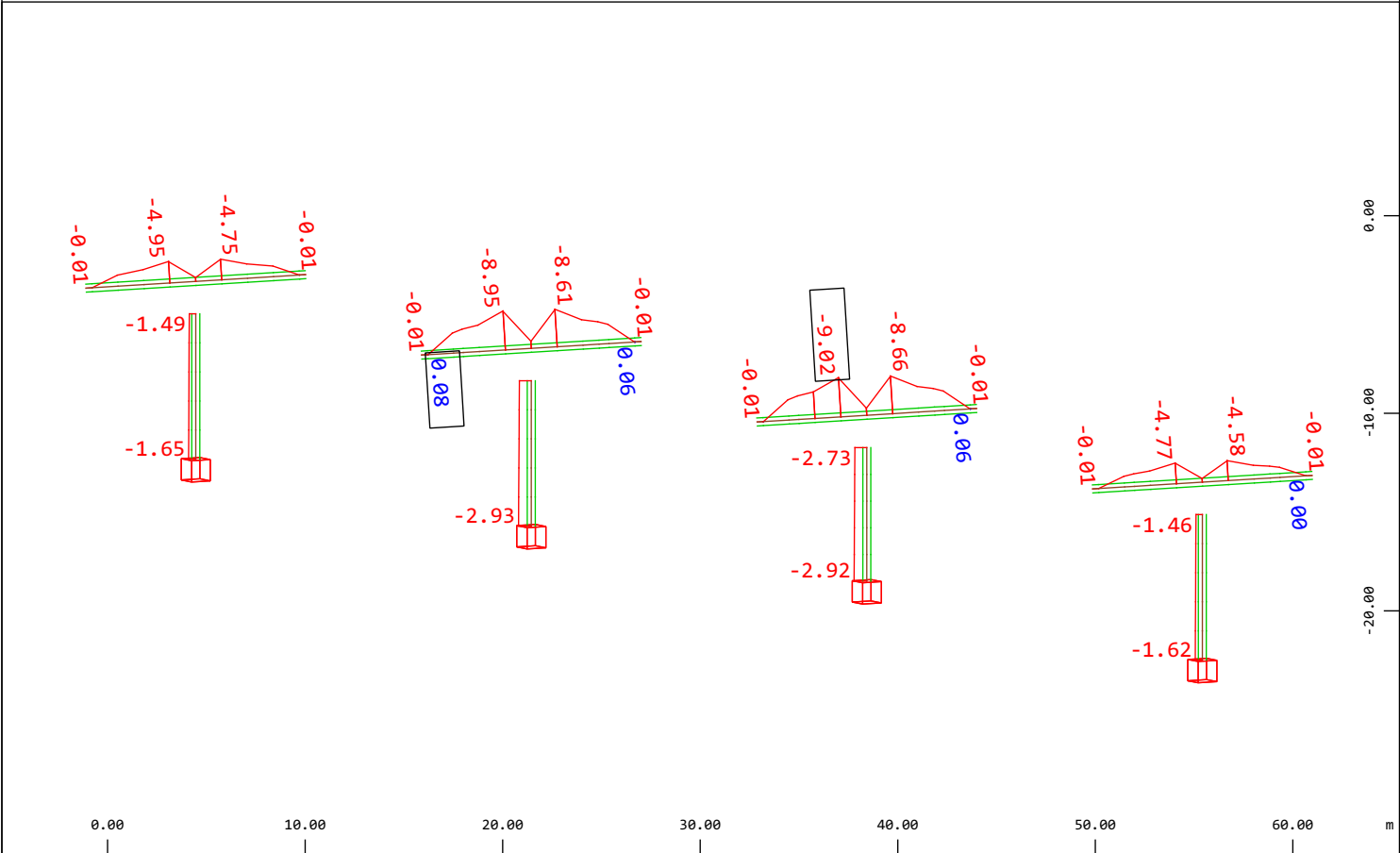


NAPETOSTI FAZE GRADNJE IN POSAMEZNE OBTEŽBE, MODEL 35+35+35



Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7001 sum_G, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 16.367 MPa (Min=-3.43) (Max=8.70)

M 1 : 361
X * 0.495
Y * 0.876
Z * 0.994



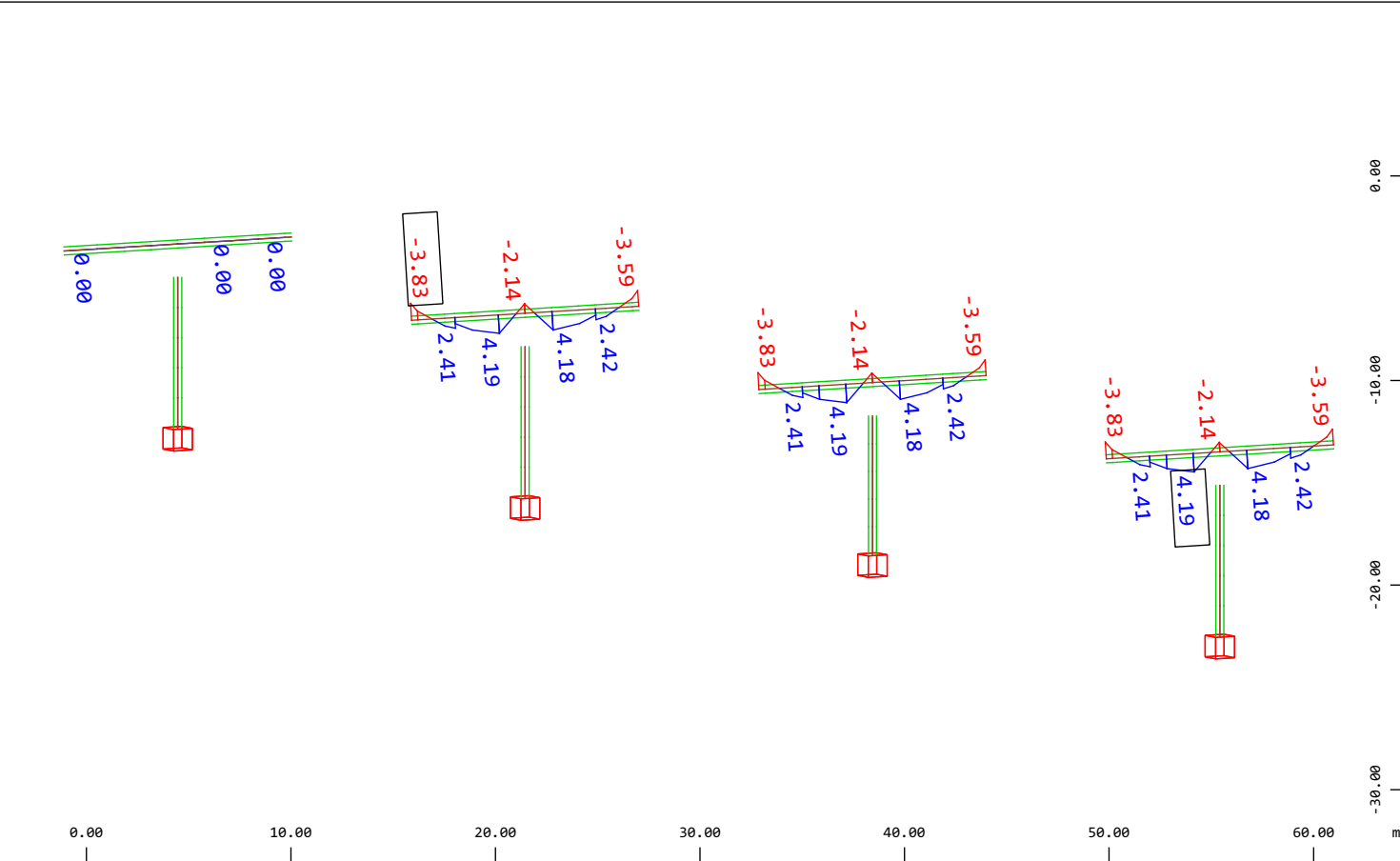
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7001 sum_G, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 16.367 MPa (Min=-9.02) (Max=0.08)

M 1 : 361
X * 0.495
Y * 0.876
Z * 0.994



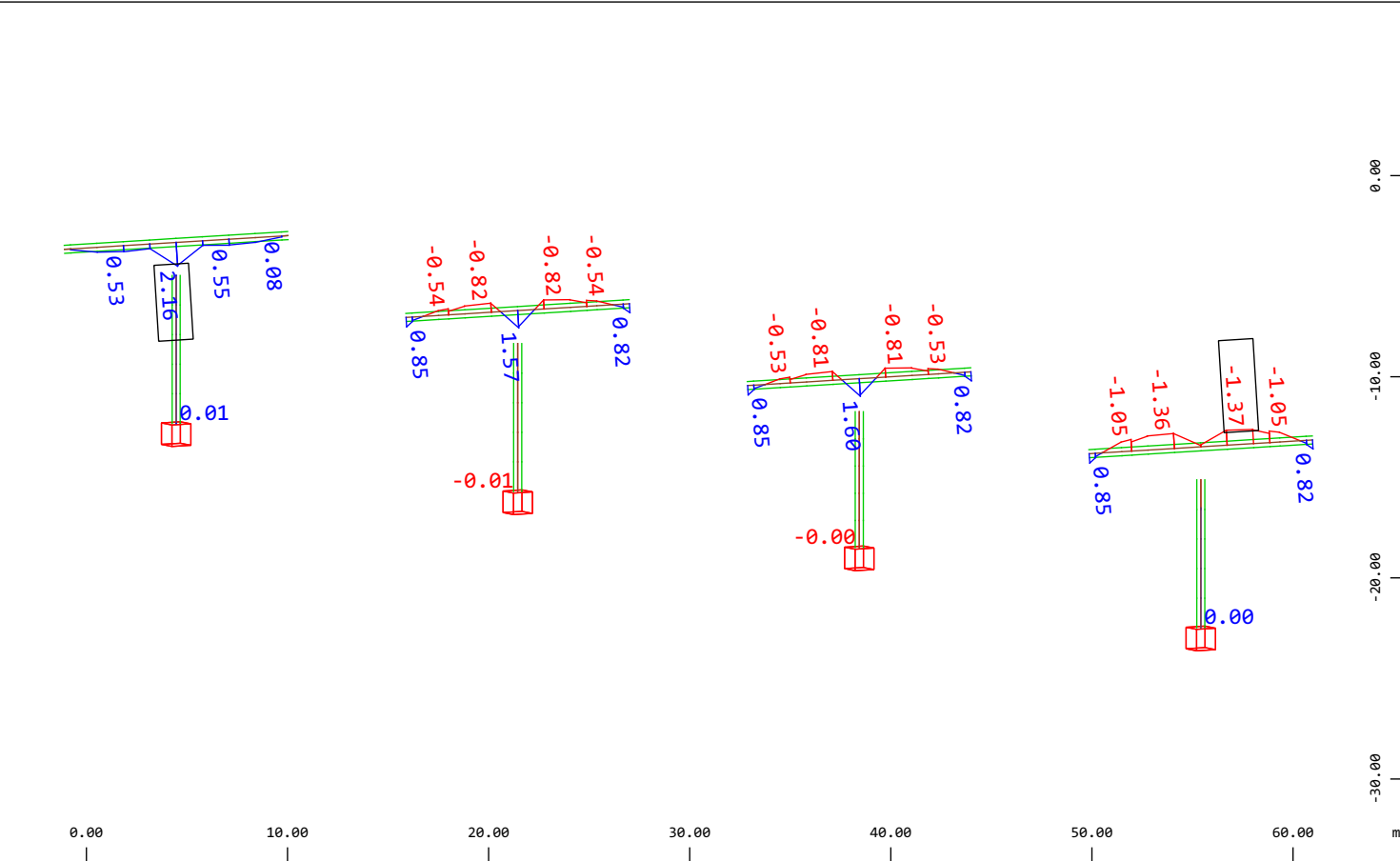
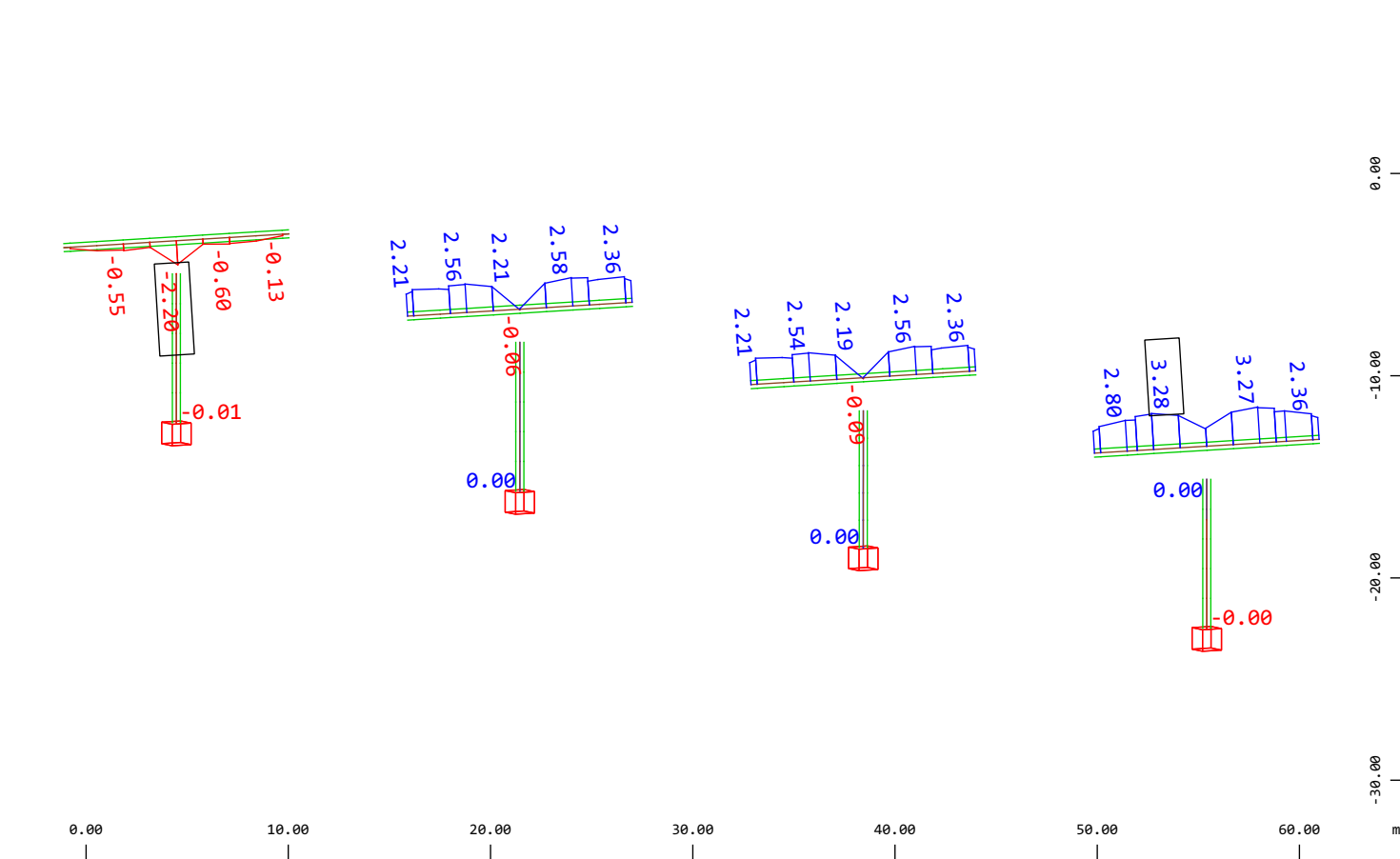
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7002 sum_P, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 32.734 MPa (Min=-11.34) (Max=0.00)

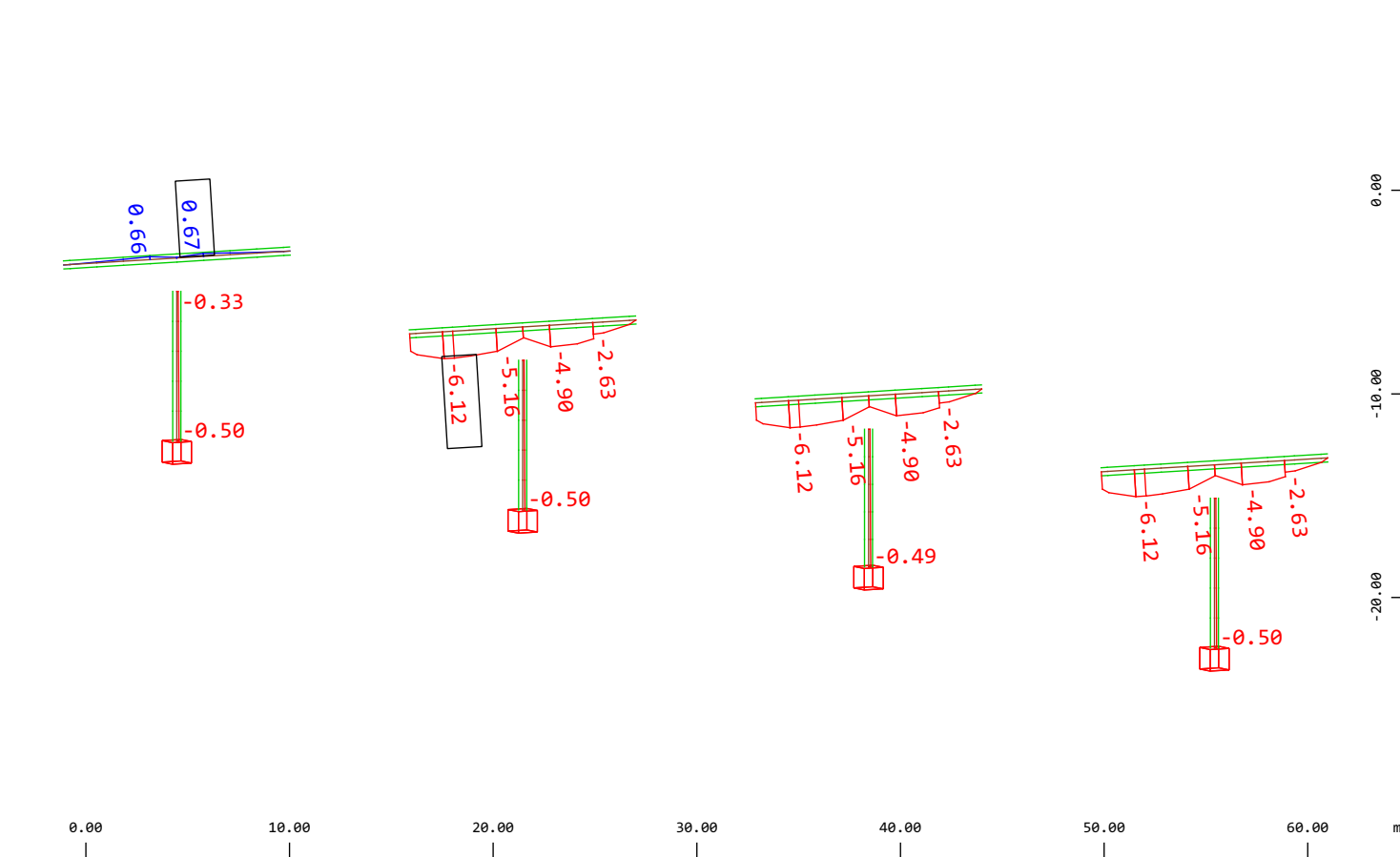
M 1 : 354
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7002 sum_P, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 16.367 MPa (Min=-3.83) (Max=4.19)

M 1 : 352
X * 0.495
Y * 0.876
Z * 0.994





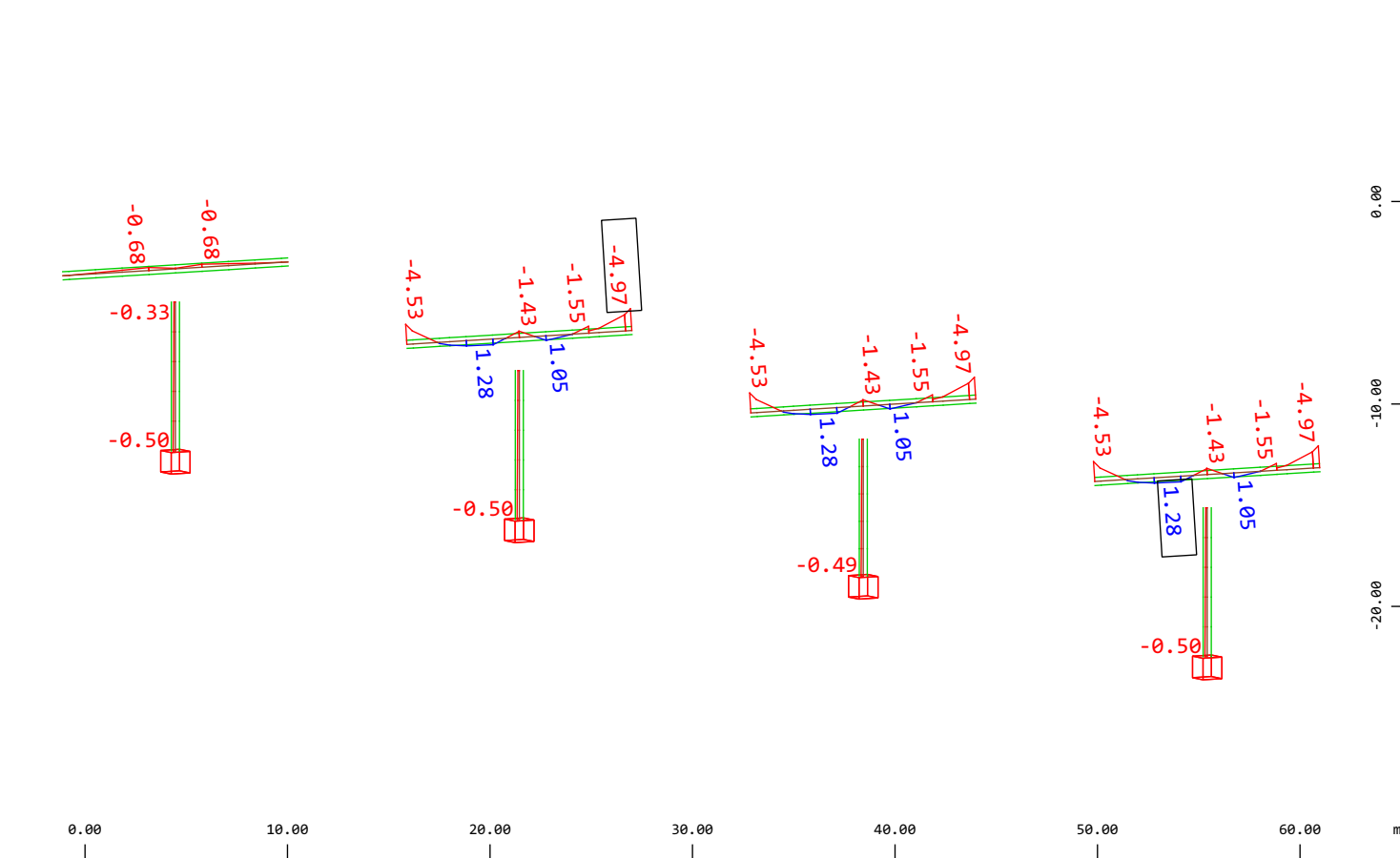
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7006 Sum_06 Prestress, Material 1 C 30/37 (EN 1992)
STEBRI , 1 cm 3D = 16.367 MPa (Min=-6.12) (Max=0.67)

M 1 : 354
X * 0.495
Y * 0.876
Z * 0.994



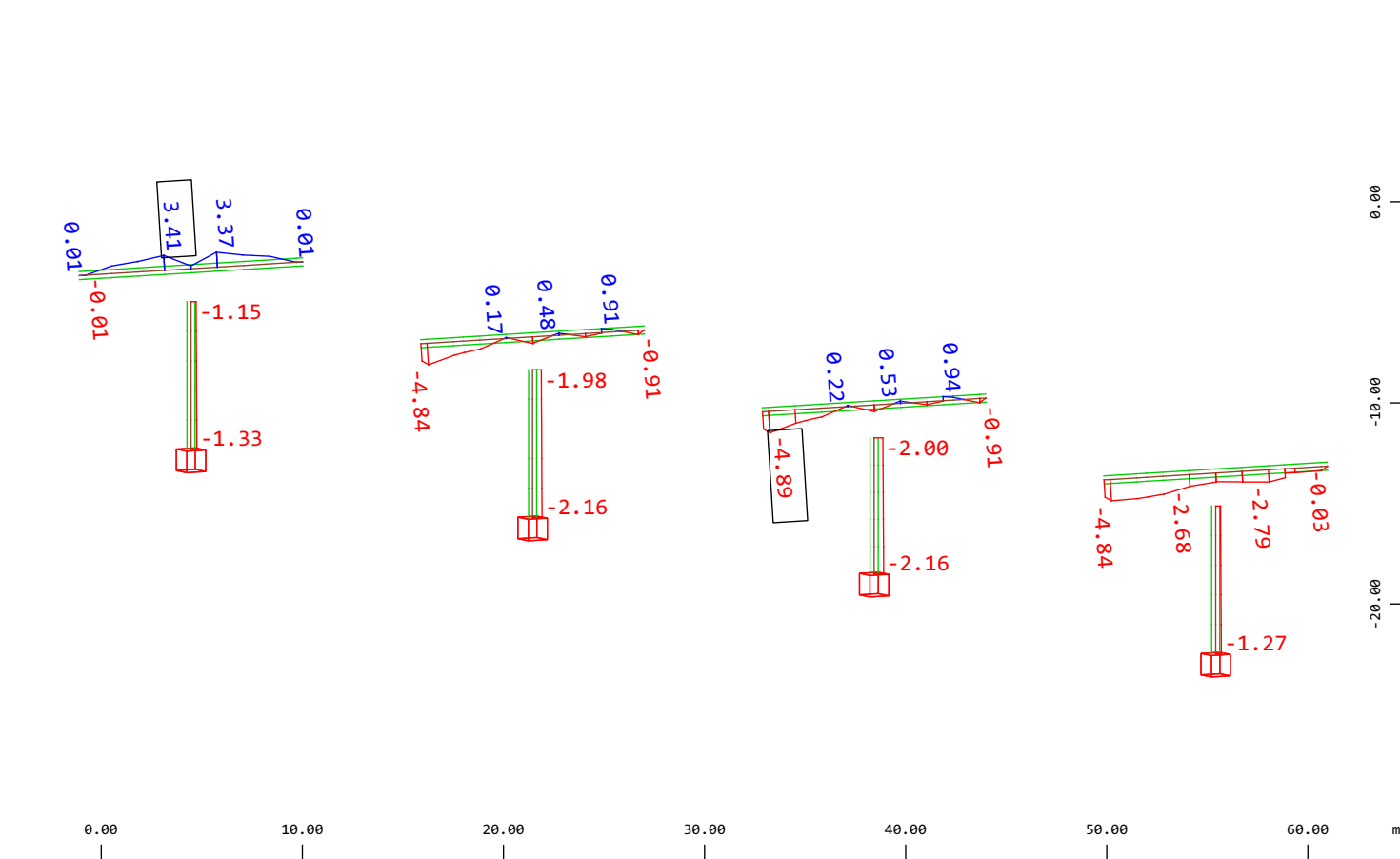
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7006 Sum_06 Prestress, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-4.97) (Max=1.28)

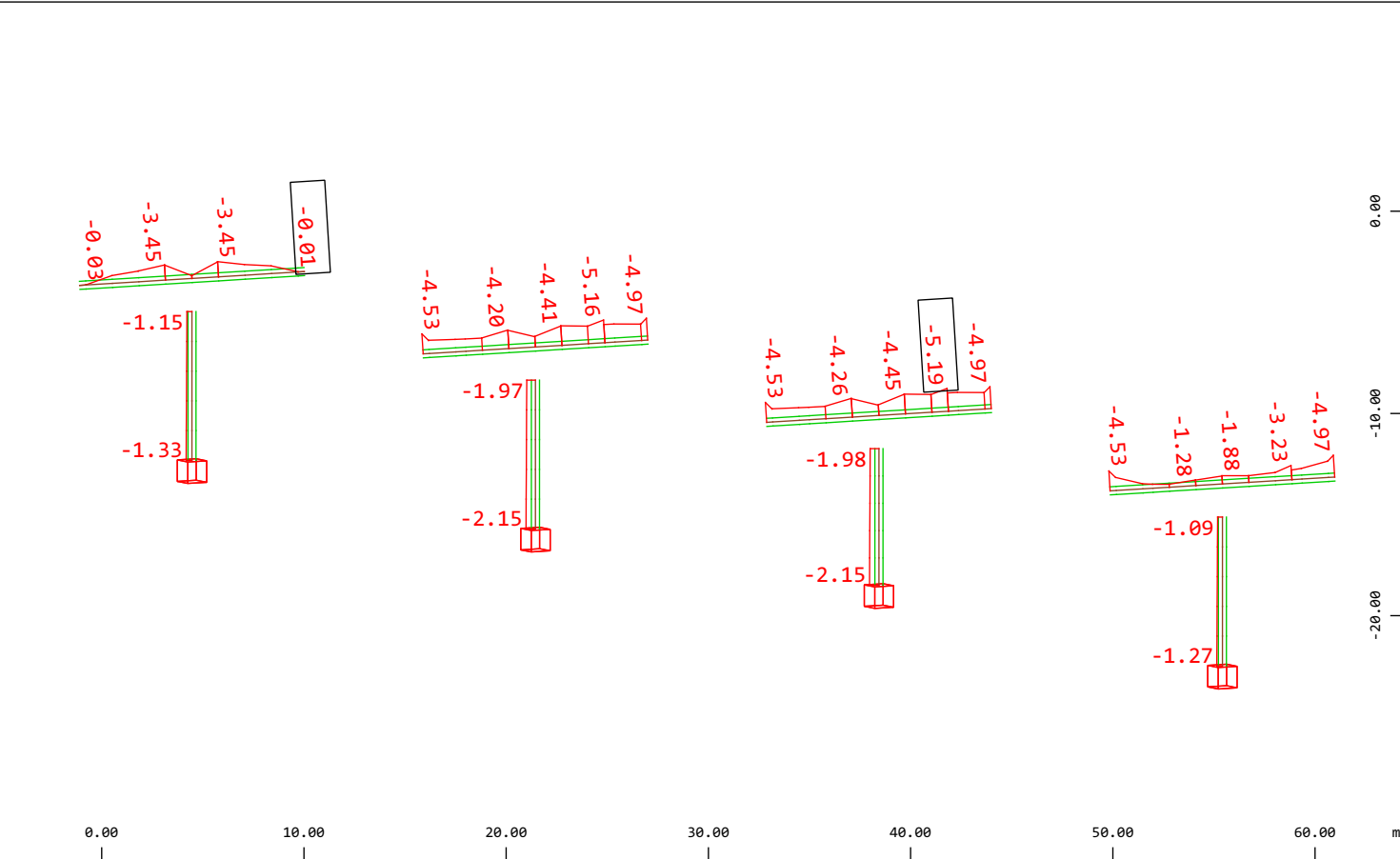
M 1 : 356
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Uniaxial top stress, Design Case 7010 Sum_10 Prekladna konstru, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-4.89) (Max=3.41)

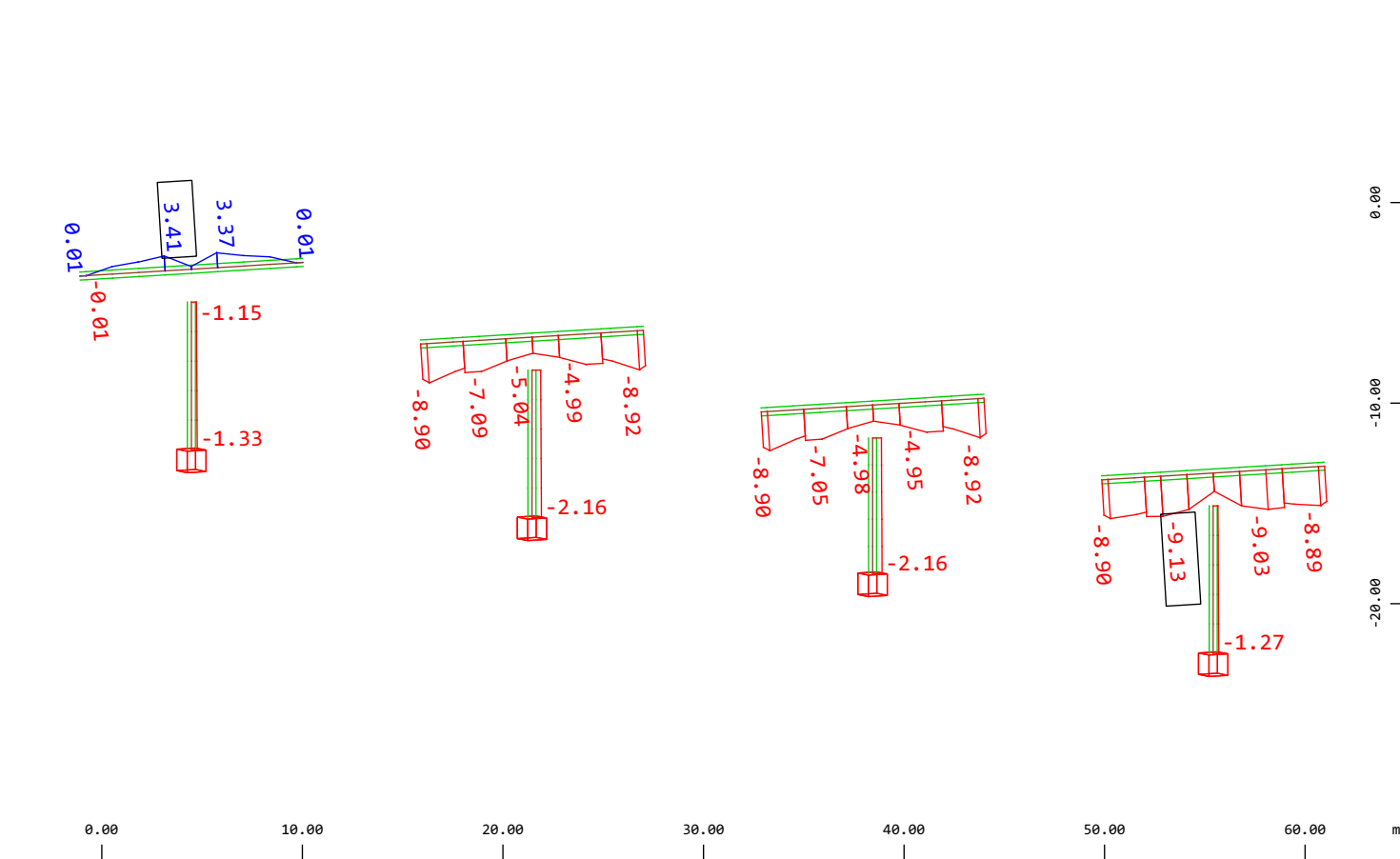
M 1 : 358
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Uniaxial bottom stress, Design Case 7010 Sum_10 Prekladna konstru, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-5.19) (Max=-0.00)

M 1 : 356
X * 0.495
Y * 0.876
Z * 0.994



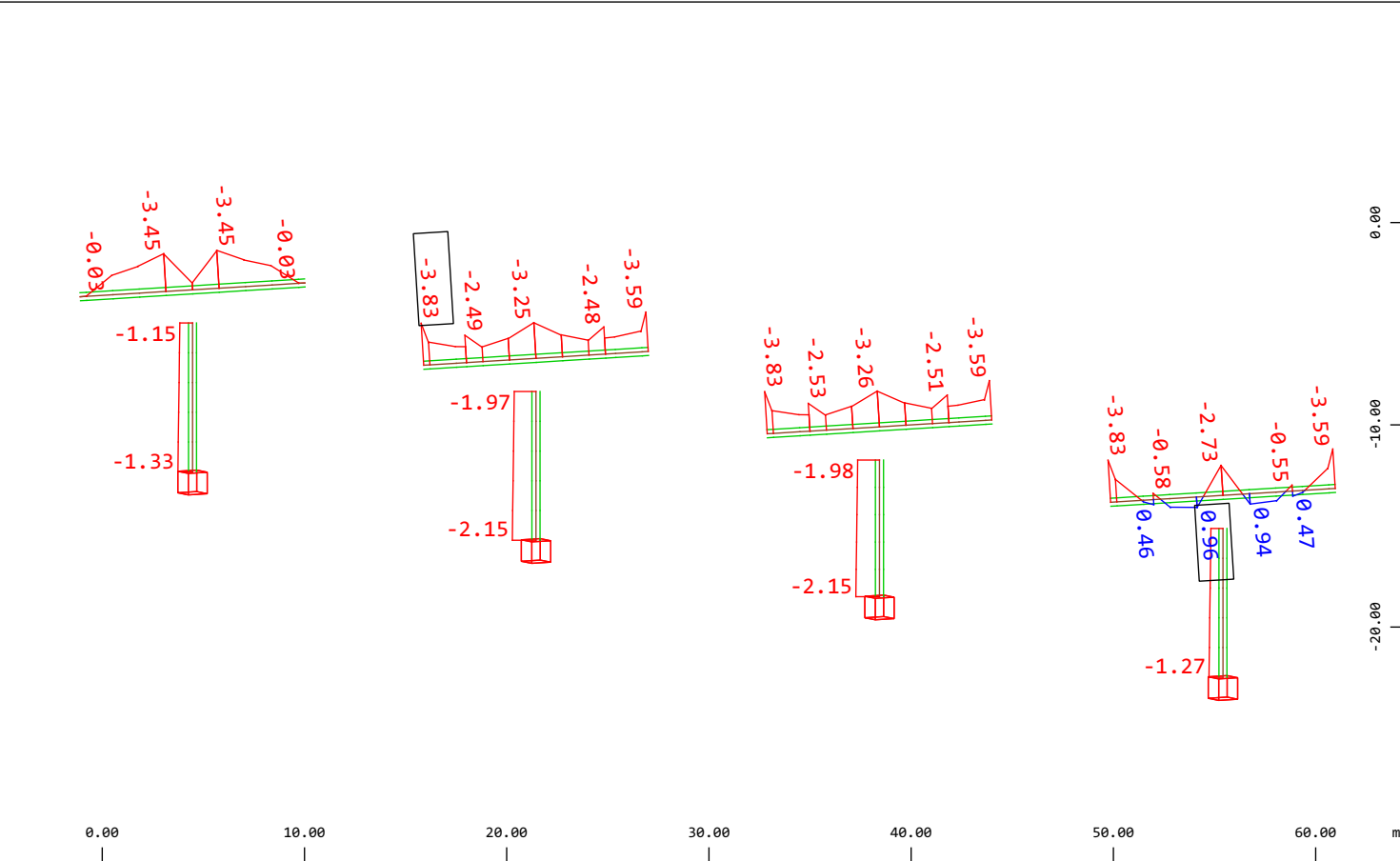
z

x

y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7011 Sum_11 Prestress, Material 1 C 30/37 (EN 1992)
STEBRI , 1 cm 3D = 16.367 MPa (Min=-9.13) (Max=3.41)

M 1 : 359
X * 0.495
Y * 0.876
Z * 0.994



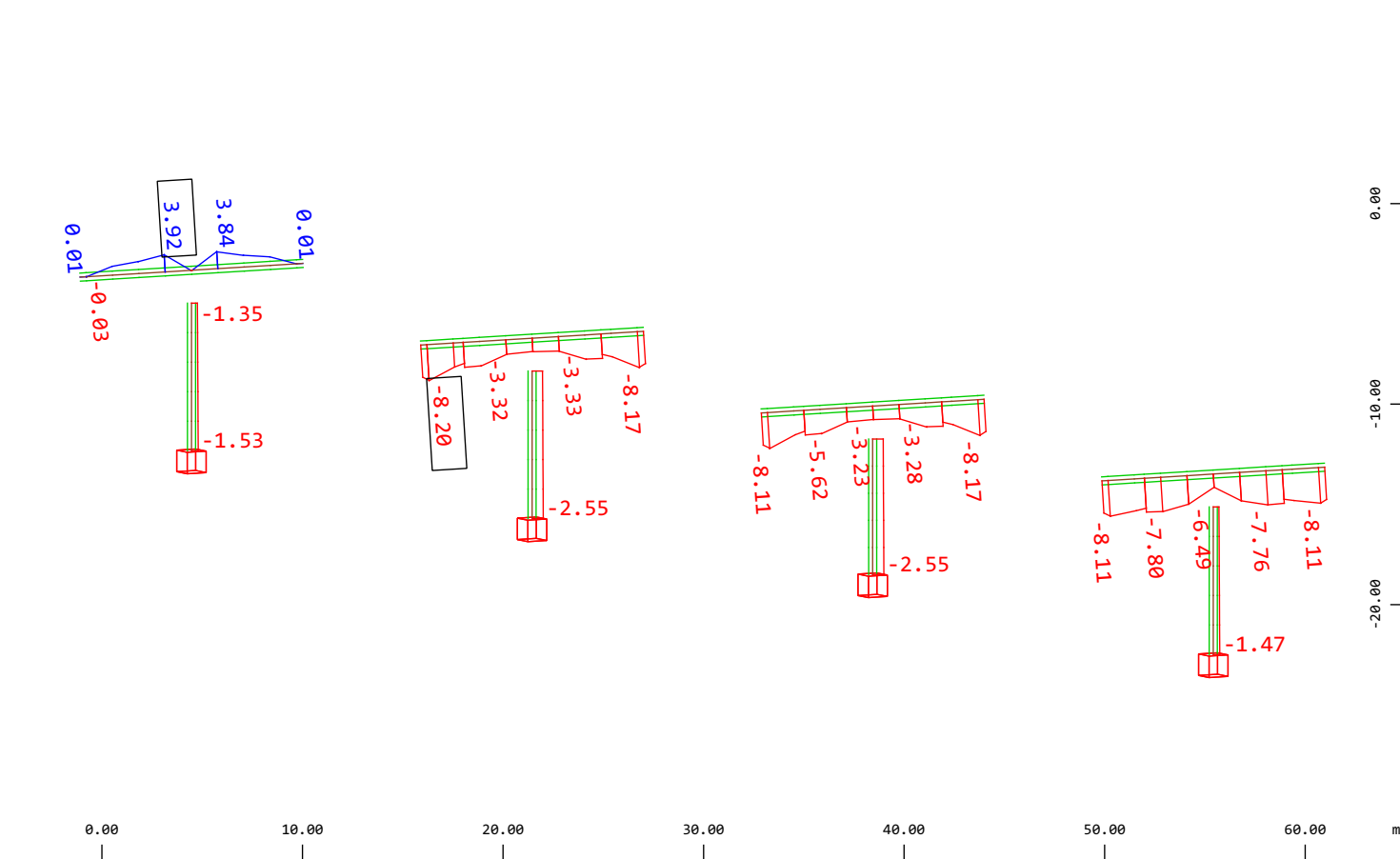
z

x

y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7011 Sum_11 Prestress, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Min=-3.83) (Max=0.96)

M 1 : 356
X * 0.495
Y * 0.876
Z * 0.994



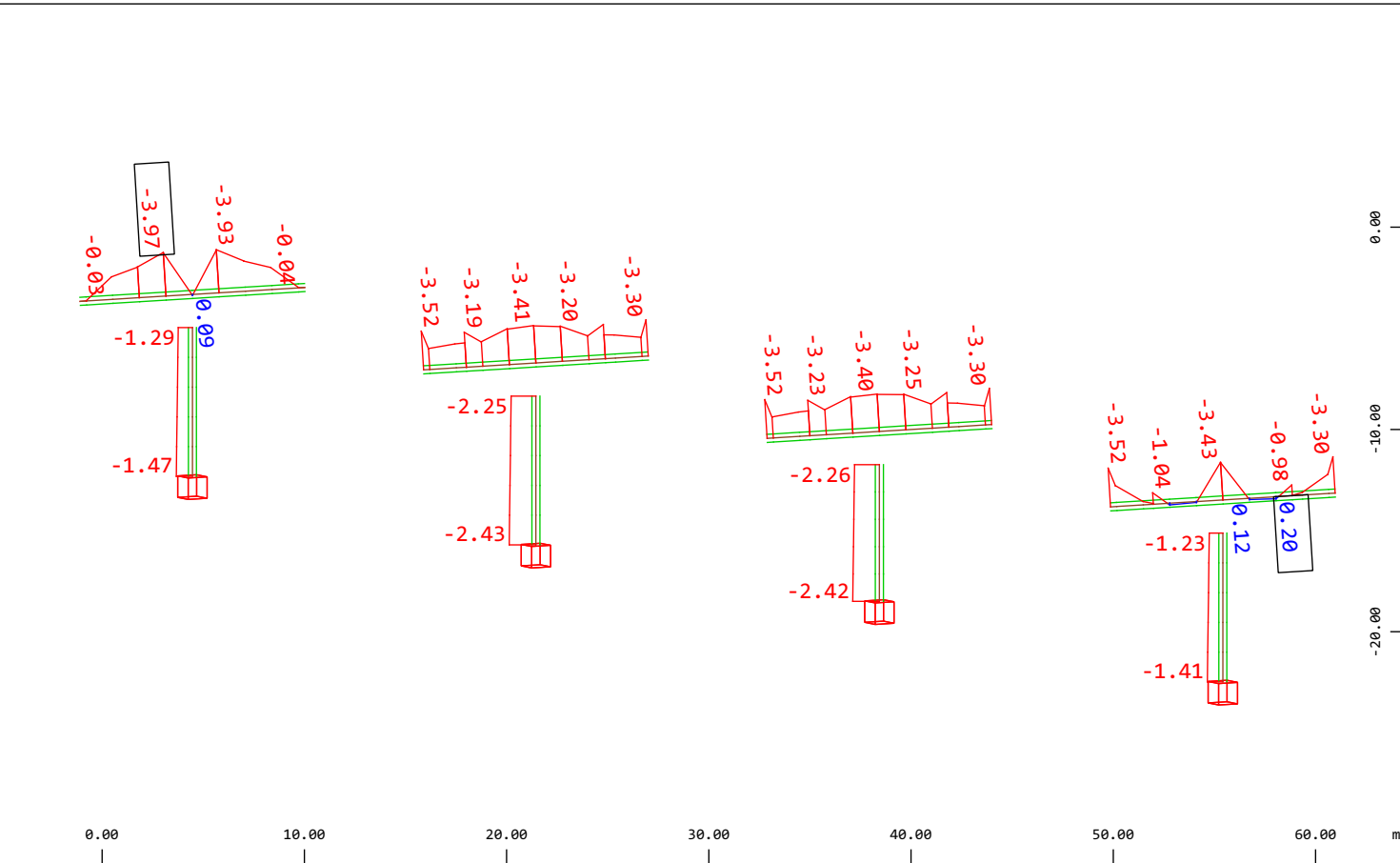
z

x

y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7020 Sum_20 AB plošča prekl, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-8.20) (Max=3.92)

M 1 : 359
X * 0.495
Y * 0.876
Z * 0.994



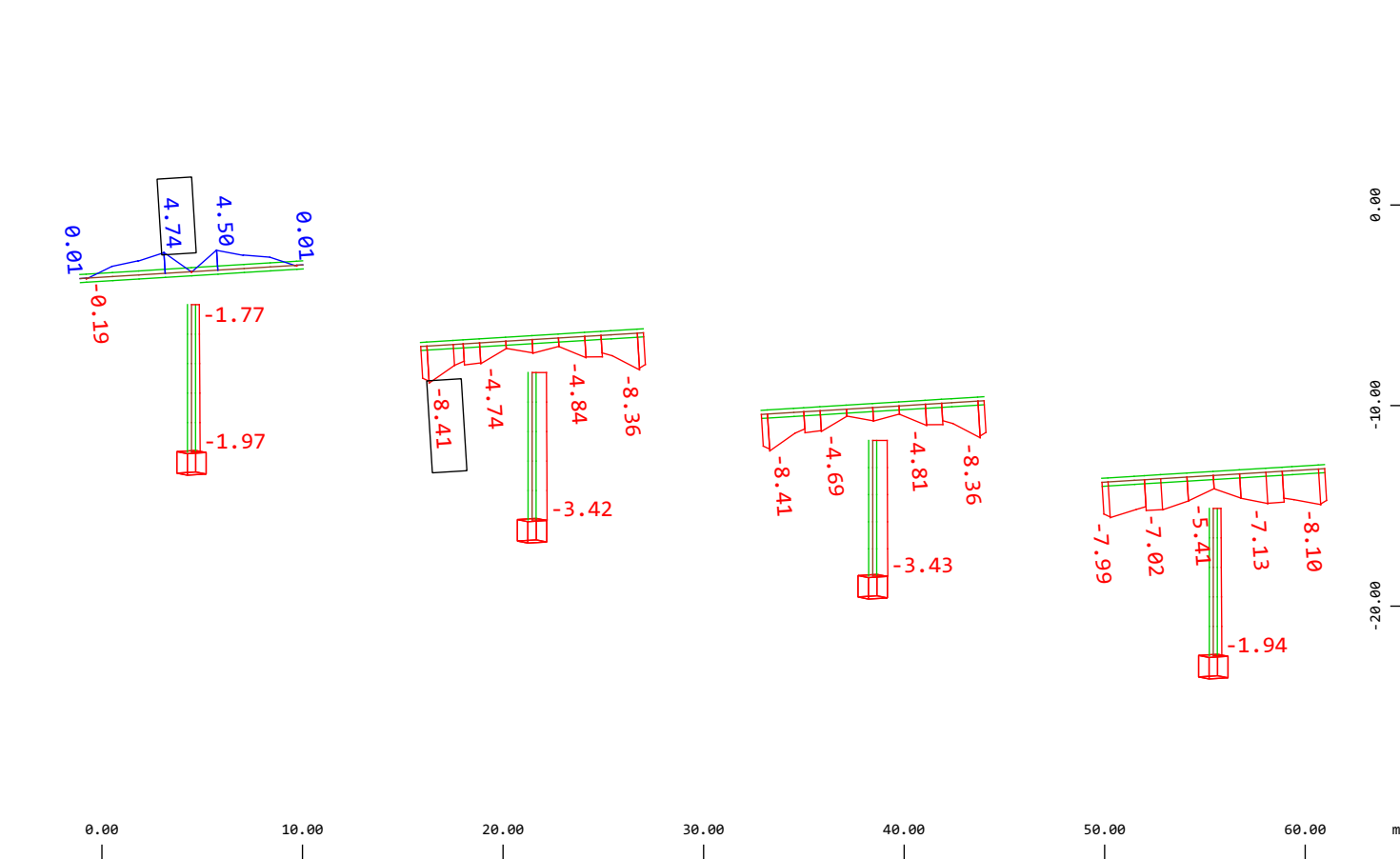
z

x

y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7020 Sum_20 AB plošča prekl, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Min=-3.97) (Max=0.20)

M 1 : 356
X * 0.495
Y * 0.876
Z * 0.994



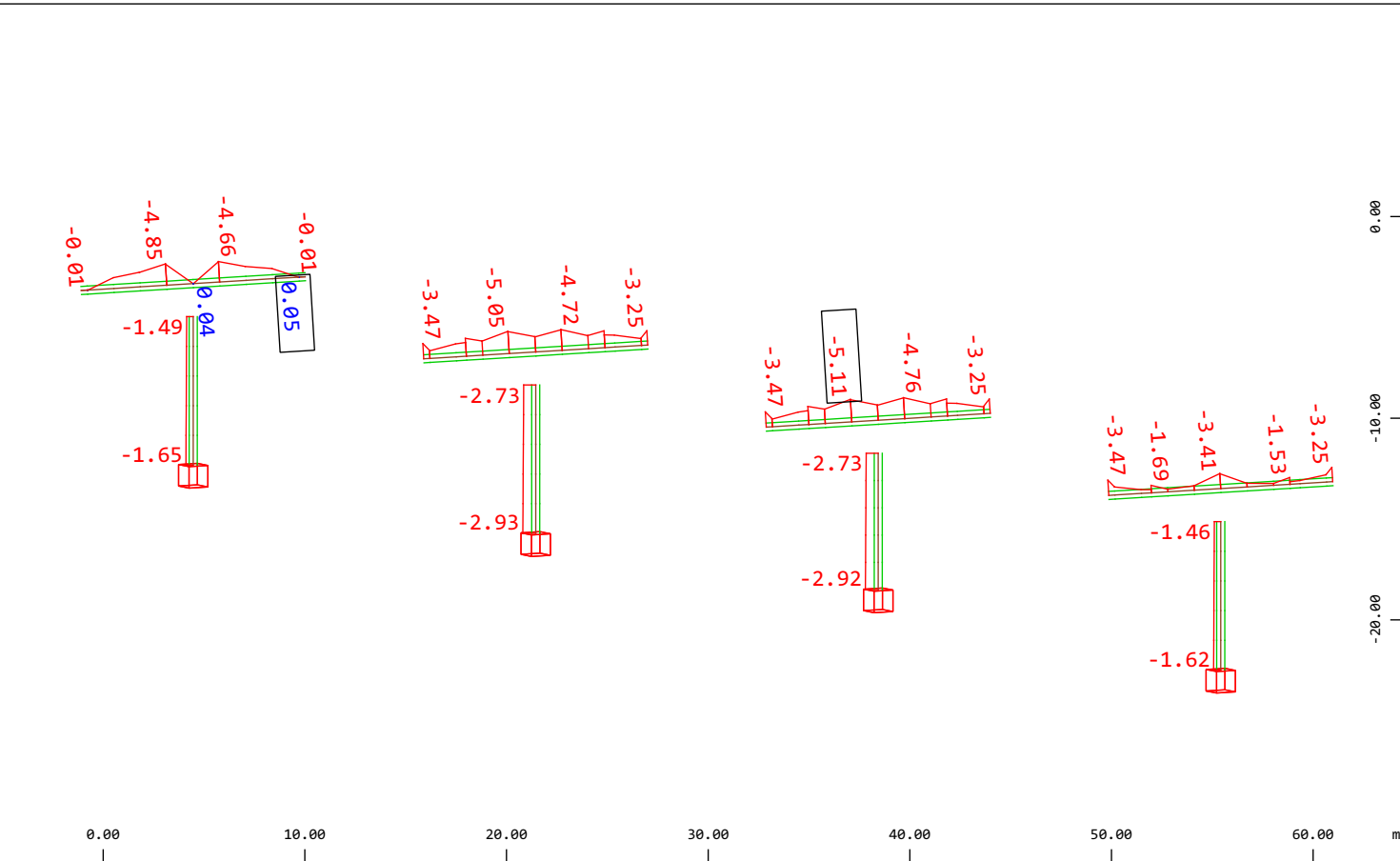
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7040 Sum_40 Krov, Material 1 C 30/37 (EN 1992)
STEBRI , 1 cm 3D = 16.367 MPa (Min=-8.41) (Max=4.74)

M 1 : 359
X * 0.495
Y * 0.876
Z * 0.994



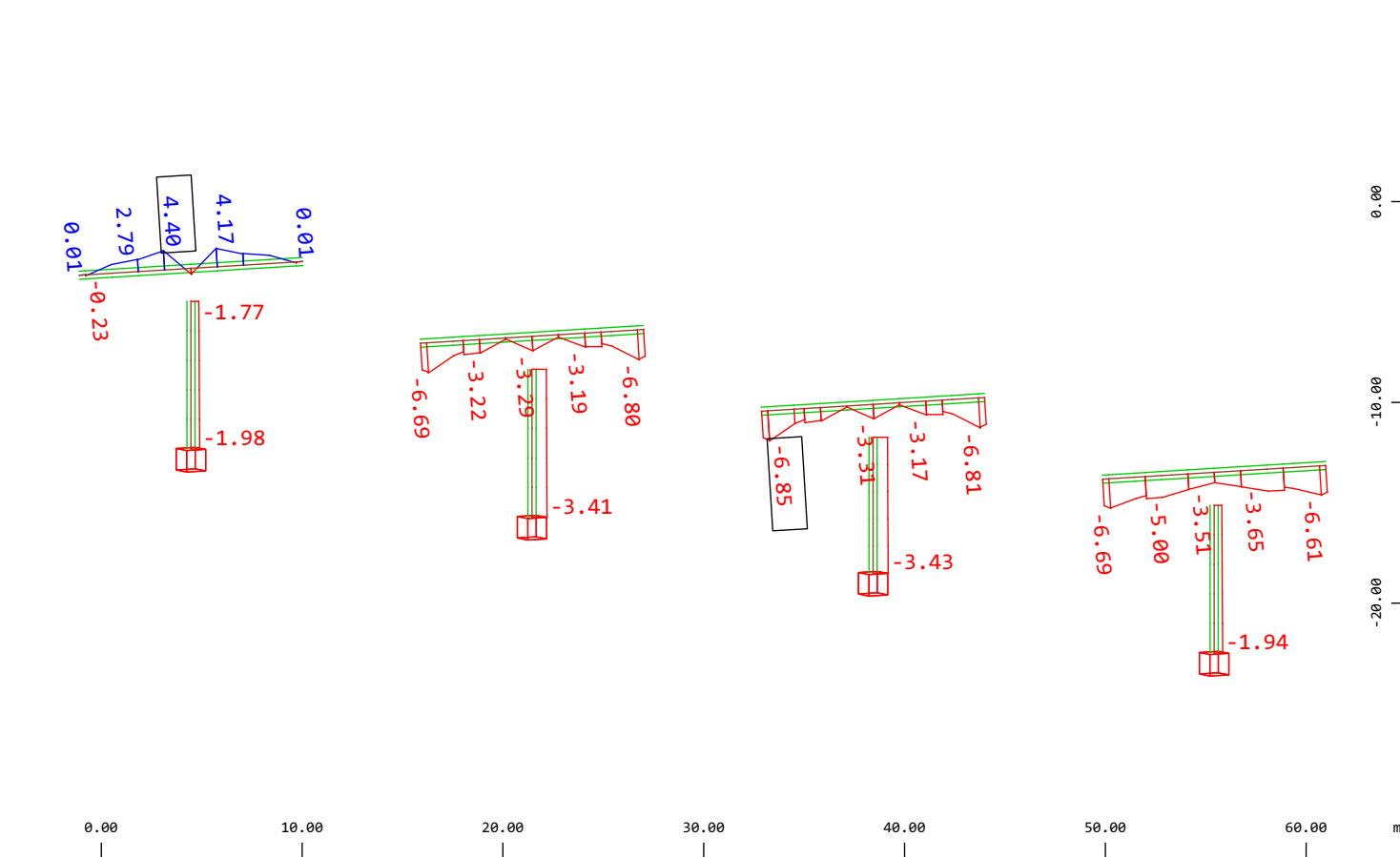
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7040 Sum_40 Krov, Material 1 C 30/37 (EN 1992)
STEBRI , 1 cm 3D = 16.367 MPa (Min=-5.11) (Max=0.05)

M 1 : 357
X * 0.495
Y * 0.876
Z * 0.994

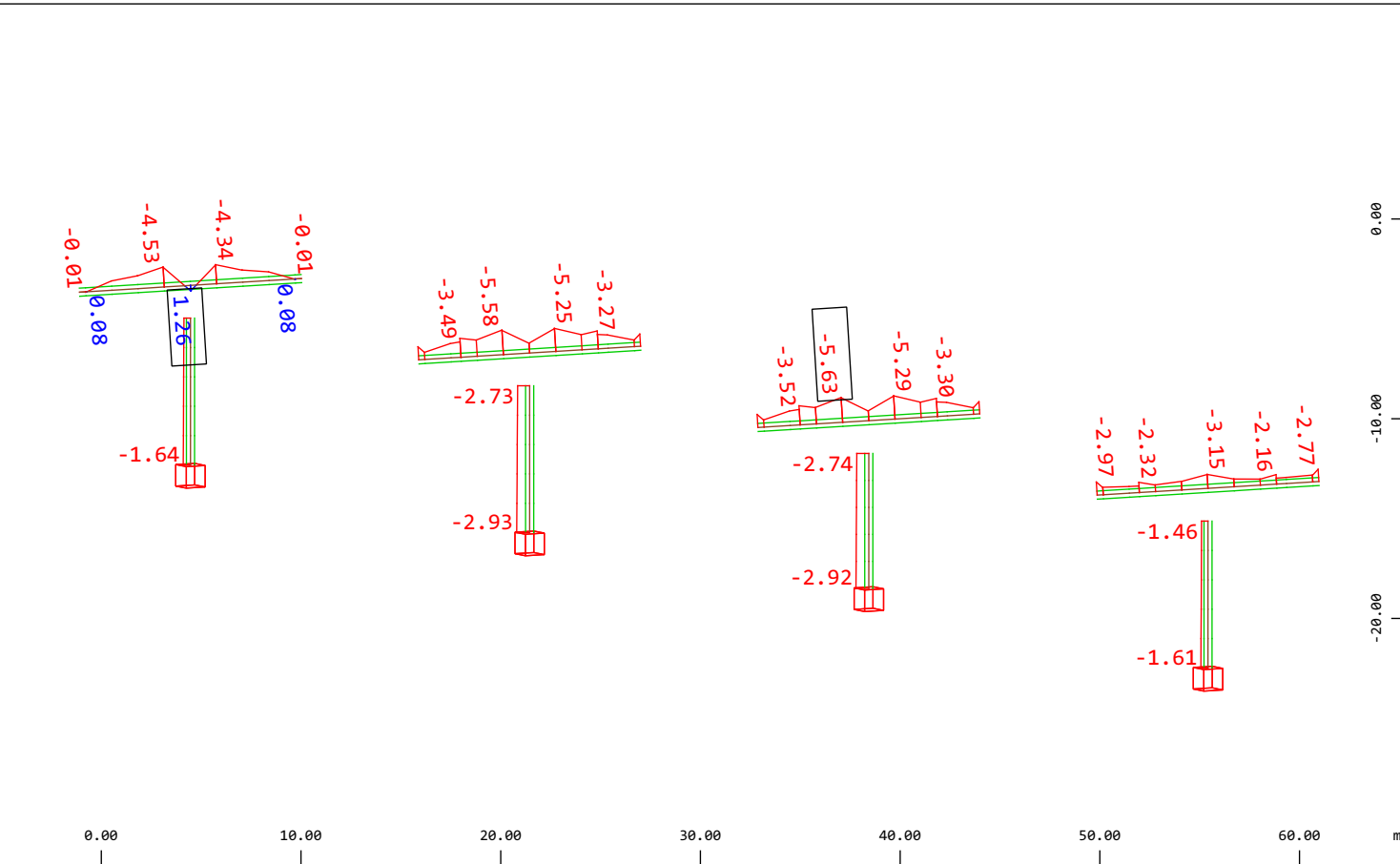


z

xy

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7047 Sum_47 Creep until today, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-6.85) (Max=4.40)

M 1 : 359
X * 0.495
Y * 0.876
Z * 0.994

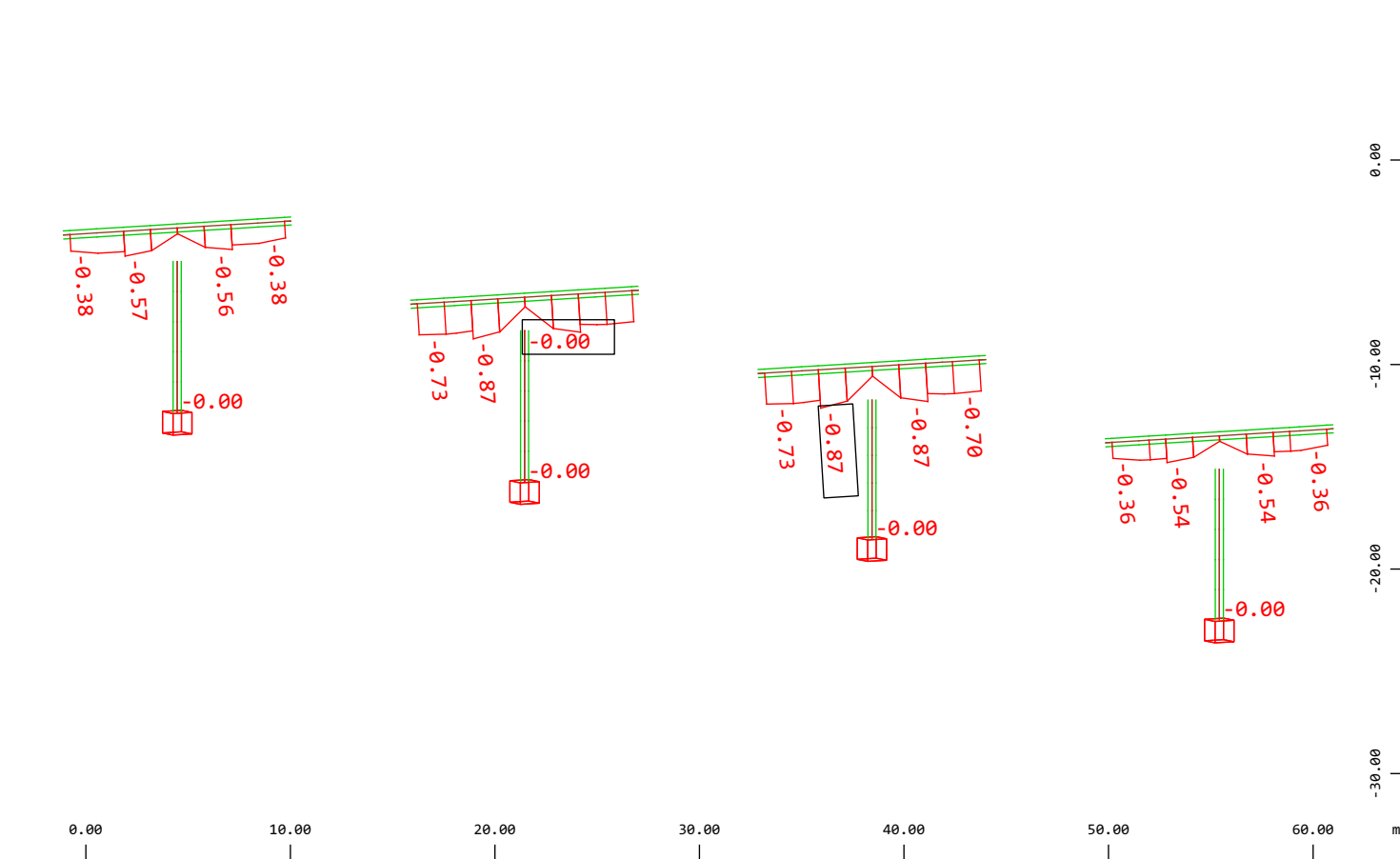


z

xy

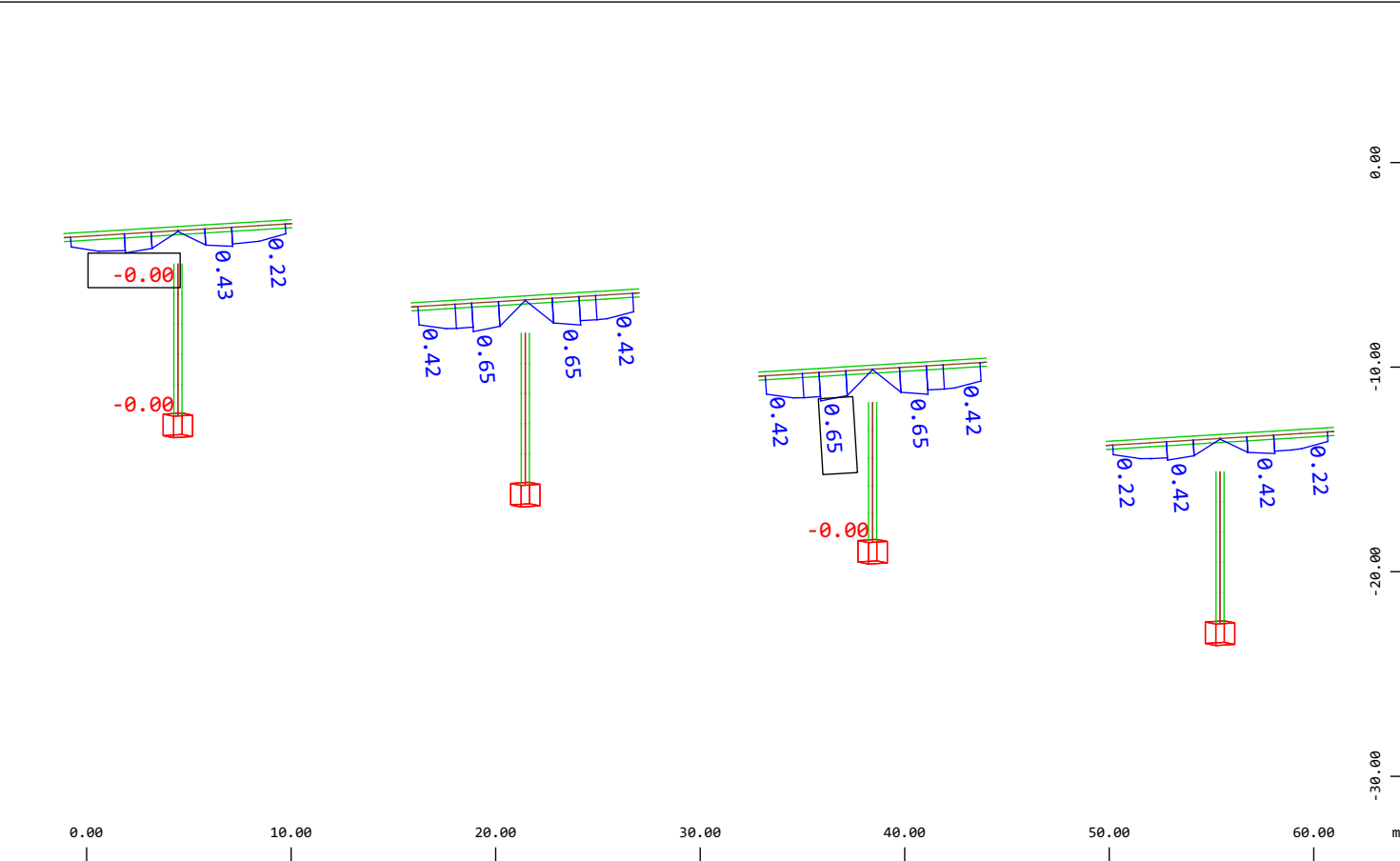
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7047 Sum_47 Creep until today, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-5.63) (Max=1.26)

M 1 : 361
X * 0.495
Y * 0.876
Z * 0.994



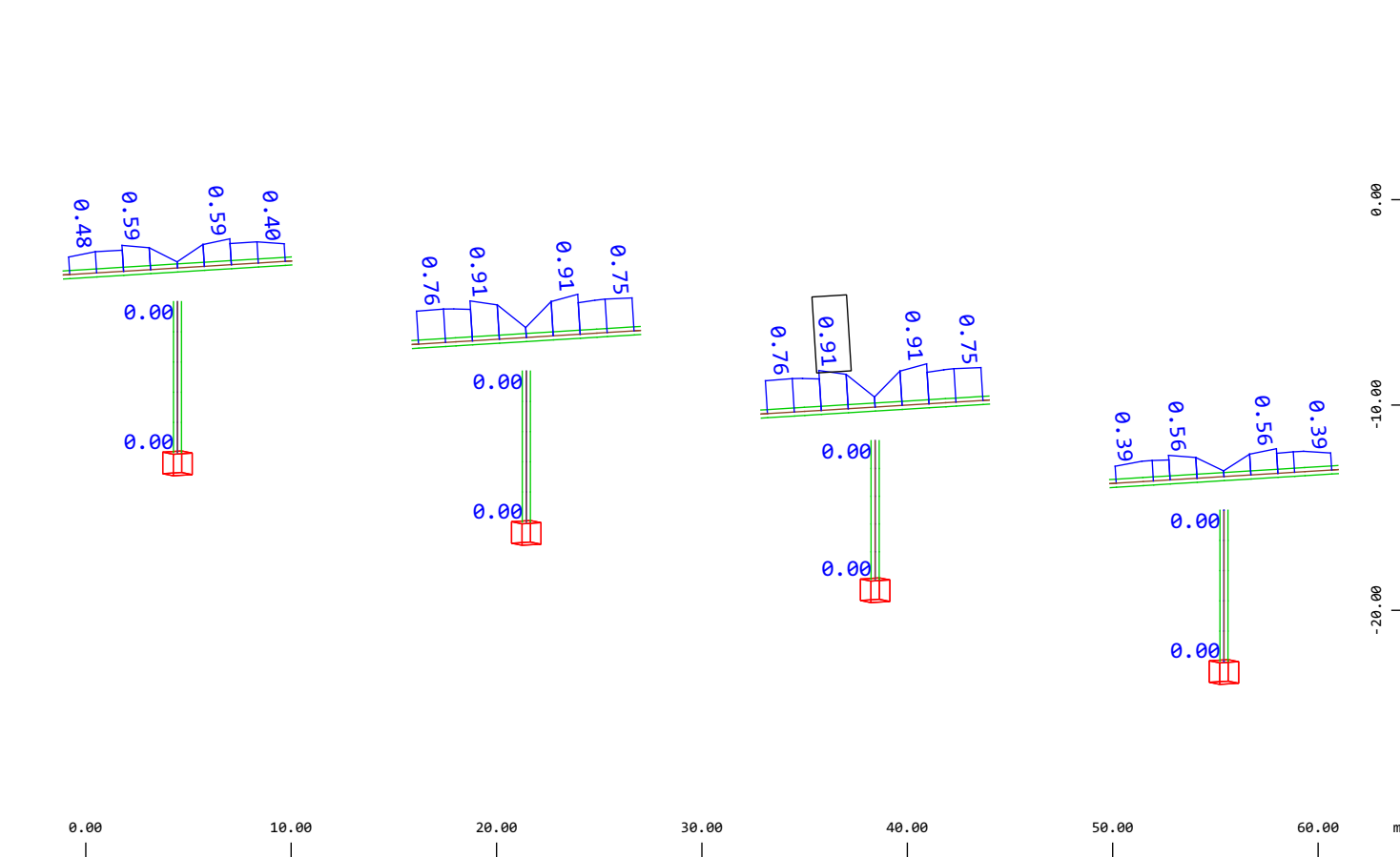
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 901 TEMPERATURA { mxx My PX P }, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Min=-0.87) (Max=0.000)

M 1 : 352
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 901 TEMPERATURA { mxx My PX P }, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Min=-0.00) (Max=0.65)

M 1 : 352
X * 0.495
Y * 0.876
Z * 0.994



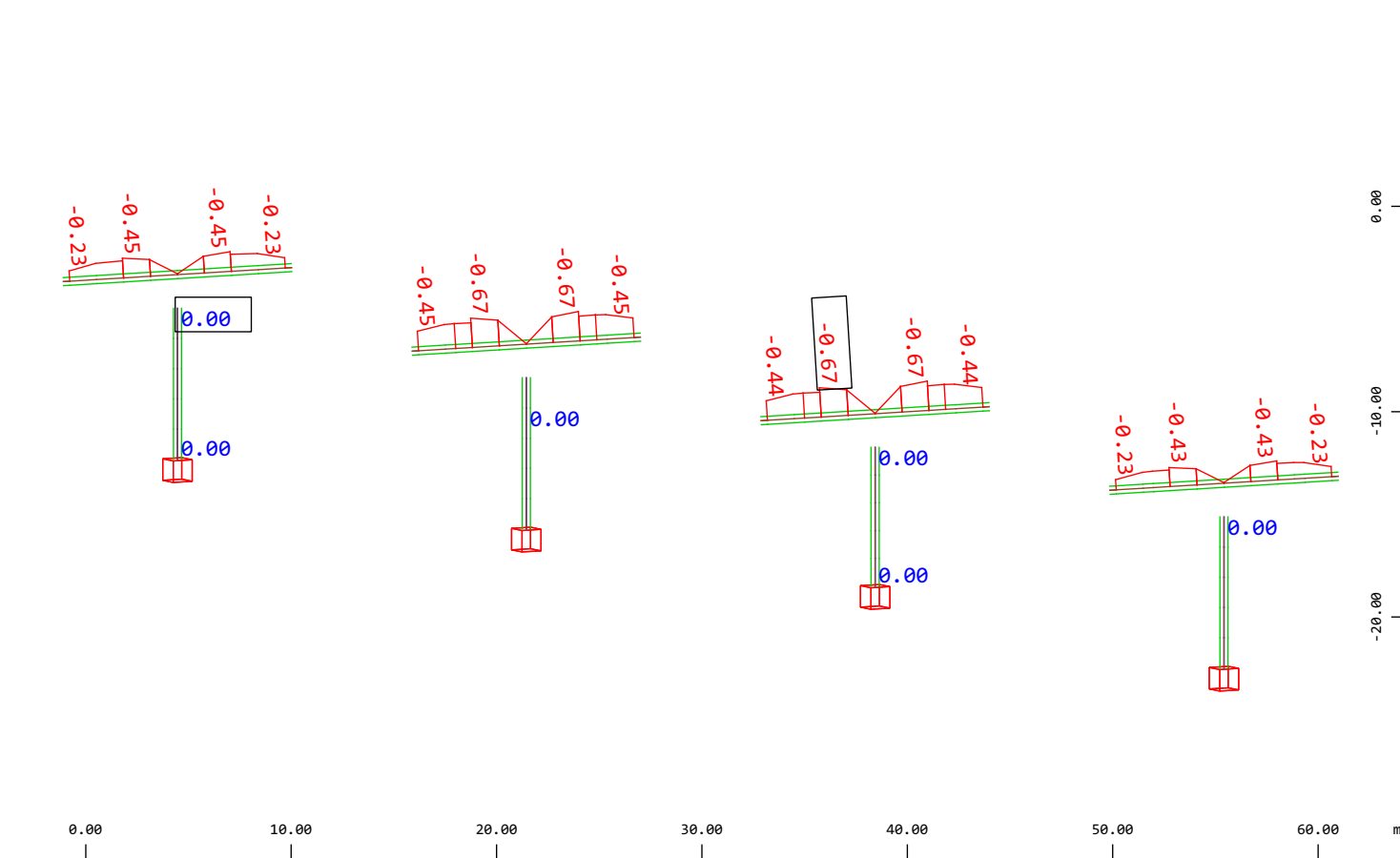
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 902 TEMPERATURA { mxx My PX P }, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Max=0.91)

M 1 : 351
X * 0.495
Y * 0.876
Z * 0.994



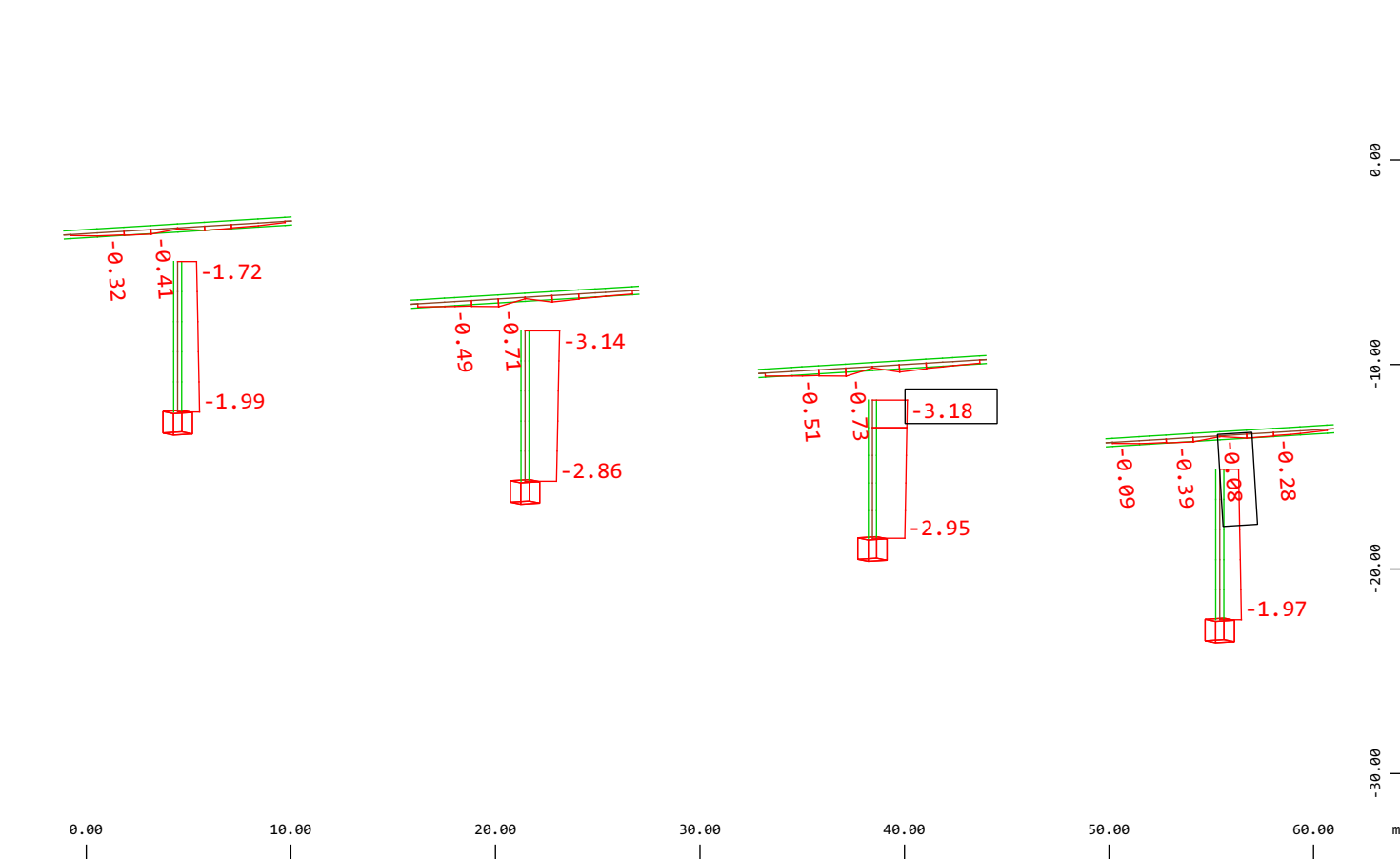
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 902 TEMPERATURA { mxx My PX P }, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Min=-0.67) (Max=0.00)

M 1 : 351
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Uniaxial top stress, Design Case 921 PROMET ZVEZNA { mxx My PX P }, Material 1 C

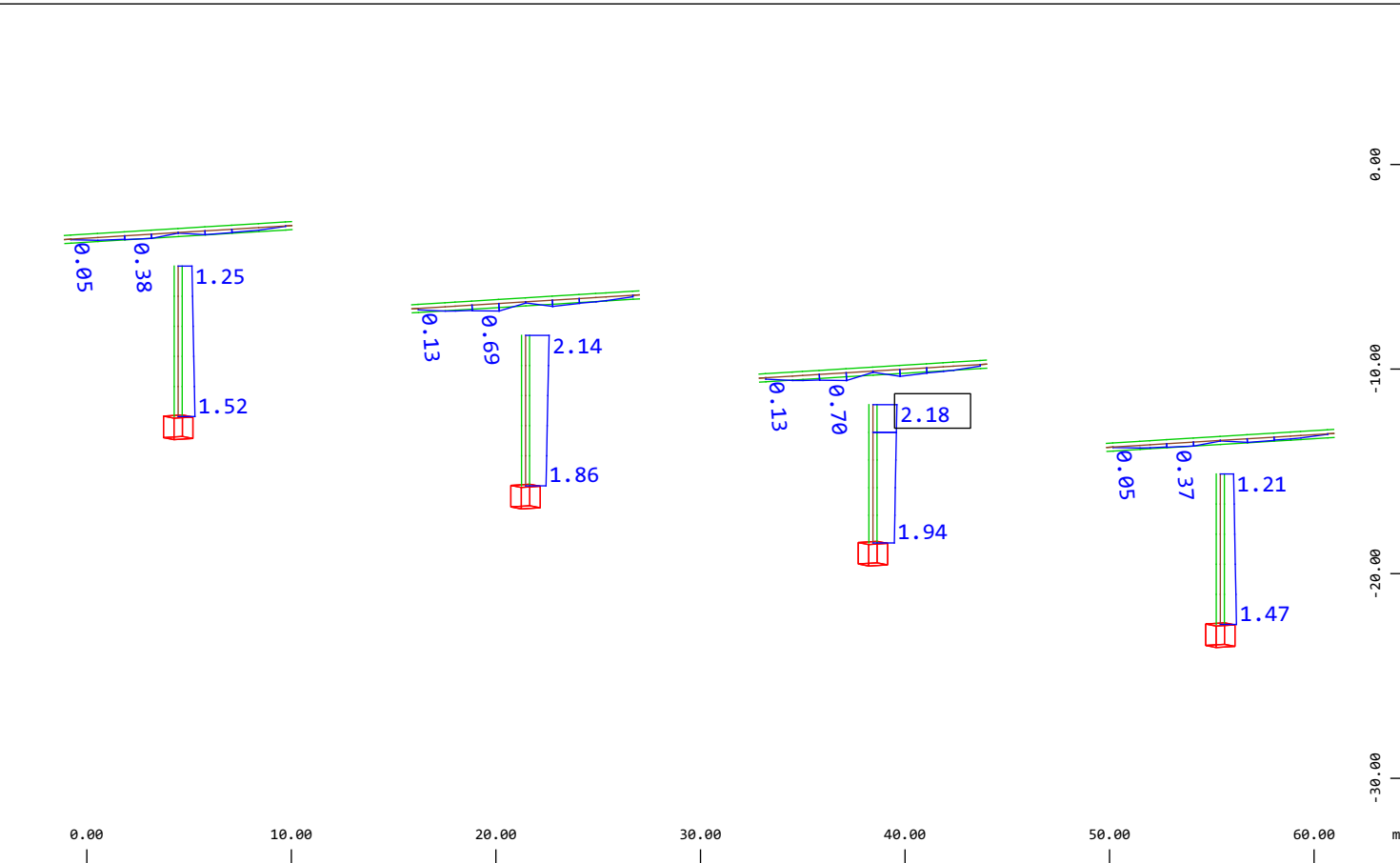
30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Min=-3.18) (Max=0.000)

M 1 : 352

X * 0.495

Y * 0.876

Z * 0.994



Sector of system Beam Elements Group 50 55

Beam Elements , Uniaxial bottom stress, Design Case 921 PROMET ZVEZNA { mxx My PX P }, Material 1 C

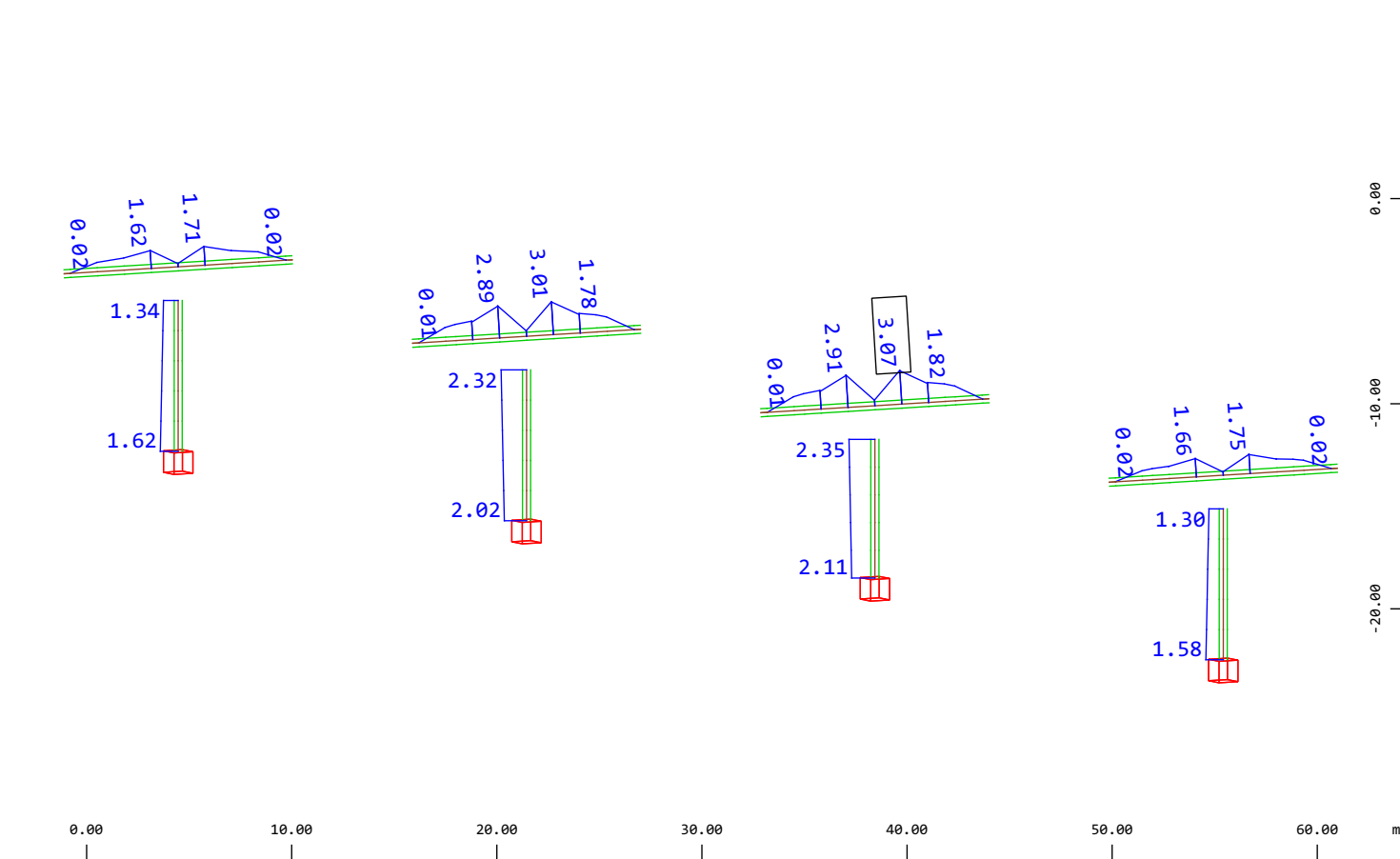
30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Max=2.18)

M 1 : 352

X * 0.495

Y * 0.876

Z * 0.994



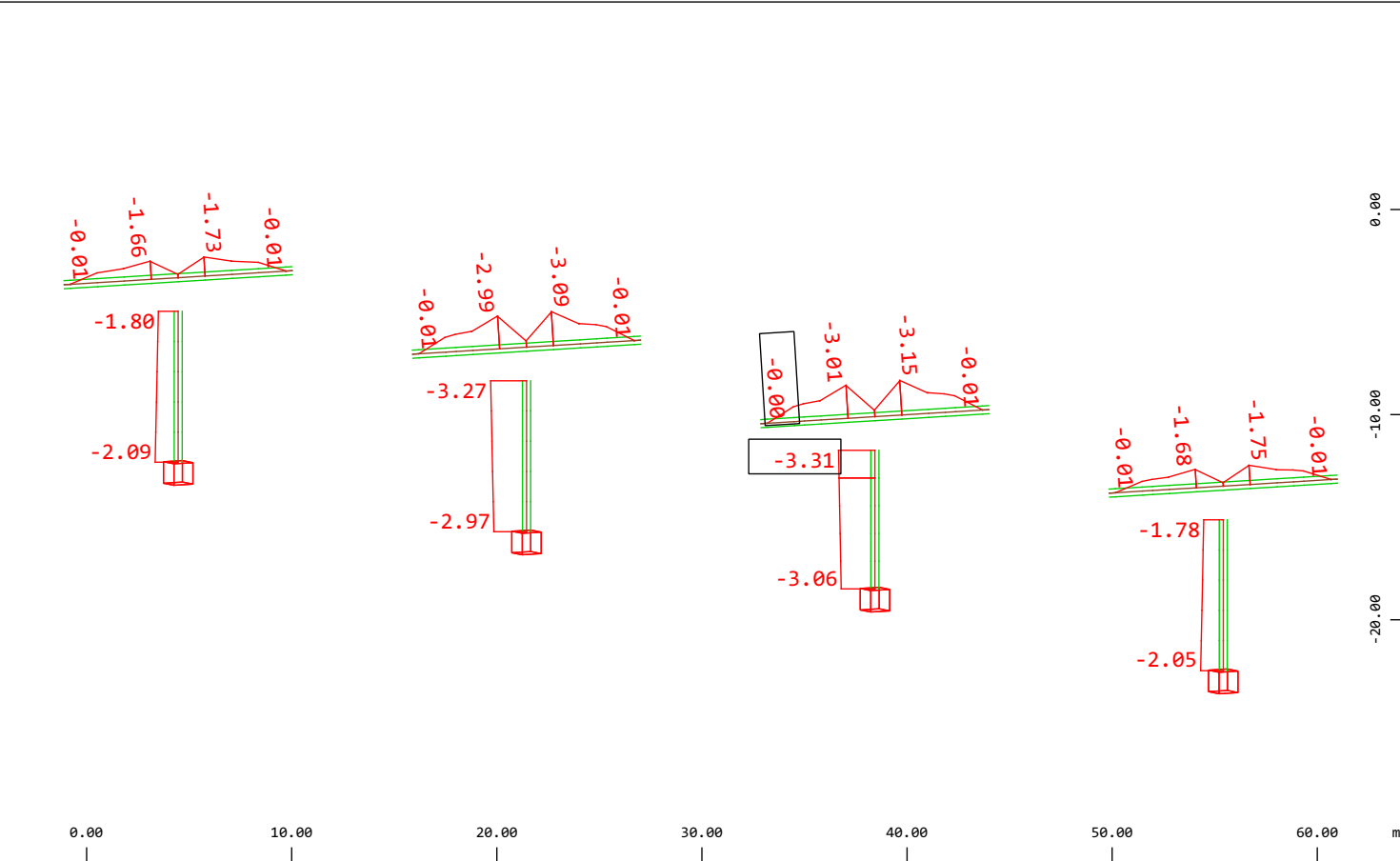
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 922 PROMET ZVEZNA { mxx My PX P }, Material 1 C
30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Max=3.07)

M 1 : 351
X * 0.495
Y * 0.876
Z * 0.994



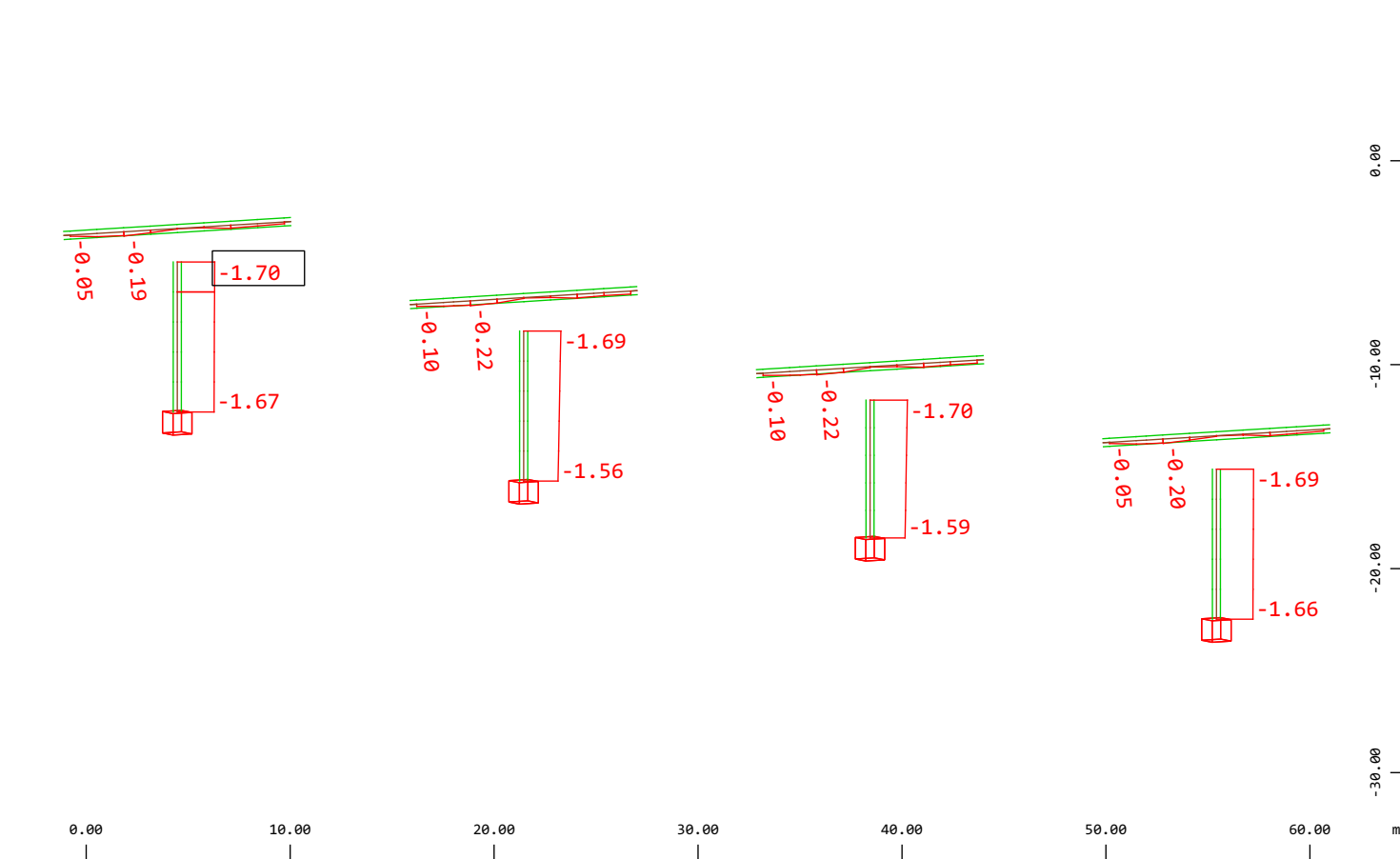
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 922 PROMET ZVEZNA { mxx My PX P }, Material 1 C
30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Min=-3.31) (Max=0.000)

M 1 : 351
X * 0.495
Y * 0.876
Z * 0.994



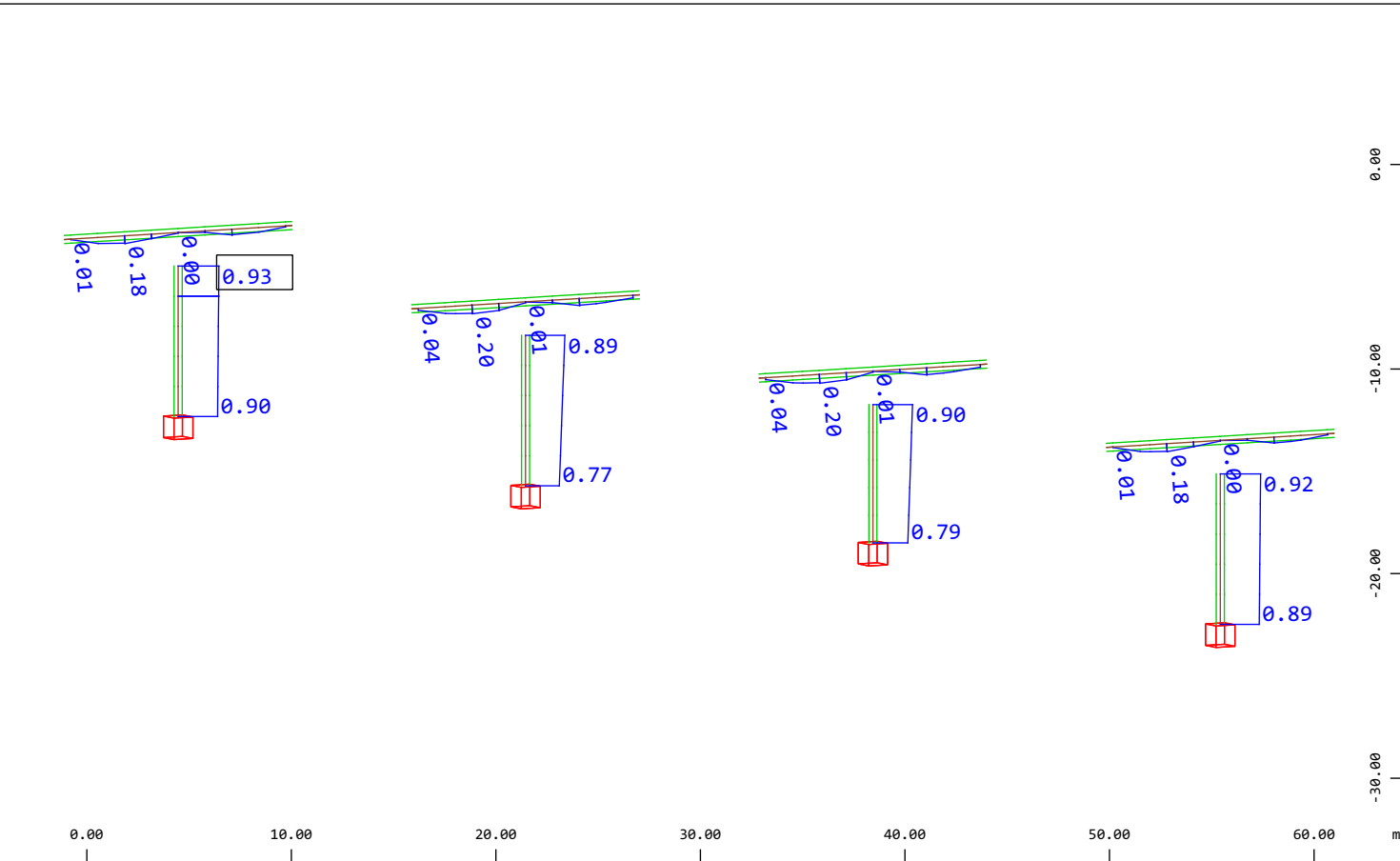
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 941 PROMET TS { mxx My PX P }, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 3.2734 MPa (Min=-1.70) (Max=0.000)

M 1 : 353
X * 0.495
Y * 0.876
Z * 0.994



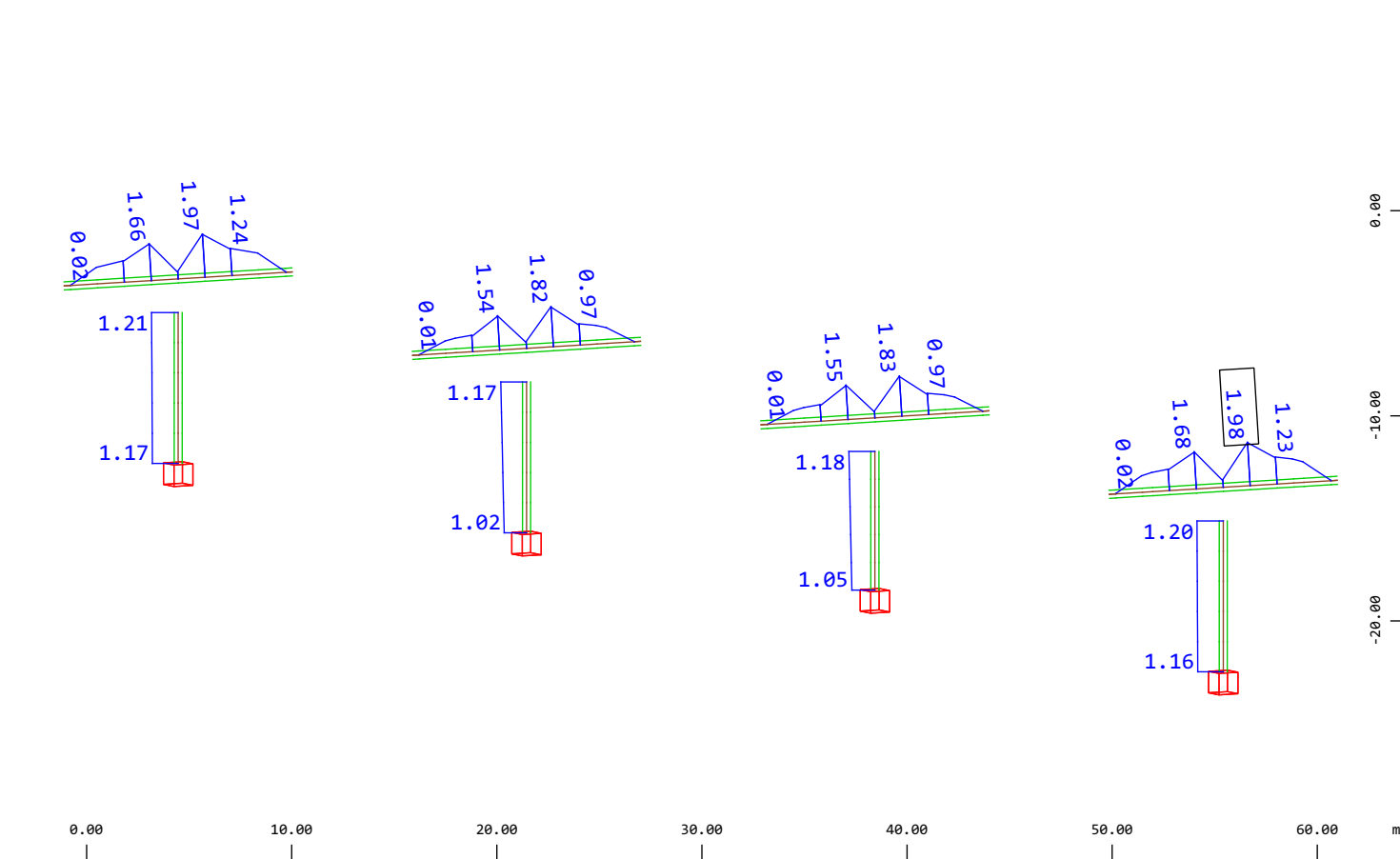
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 941 PROMET TS { mxx My PX P }, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Max=0.93)

M 1 : 352
X * 0.495
Y * 0.876
Z * 0.994



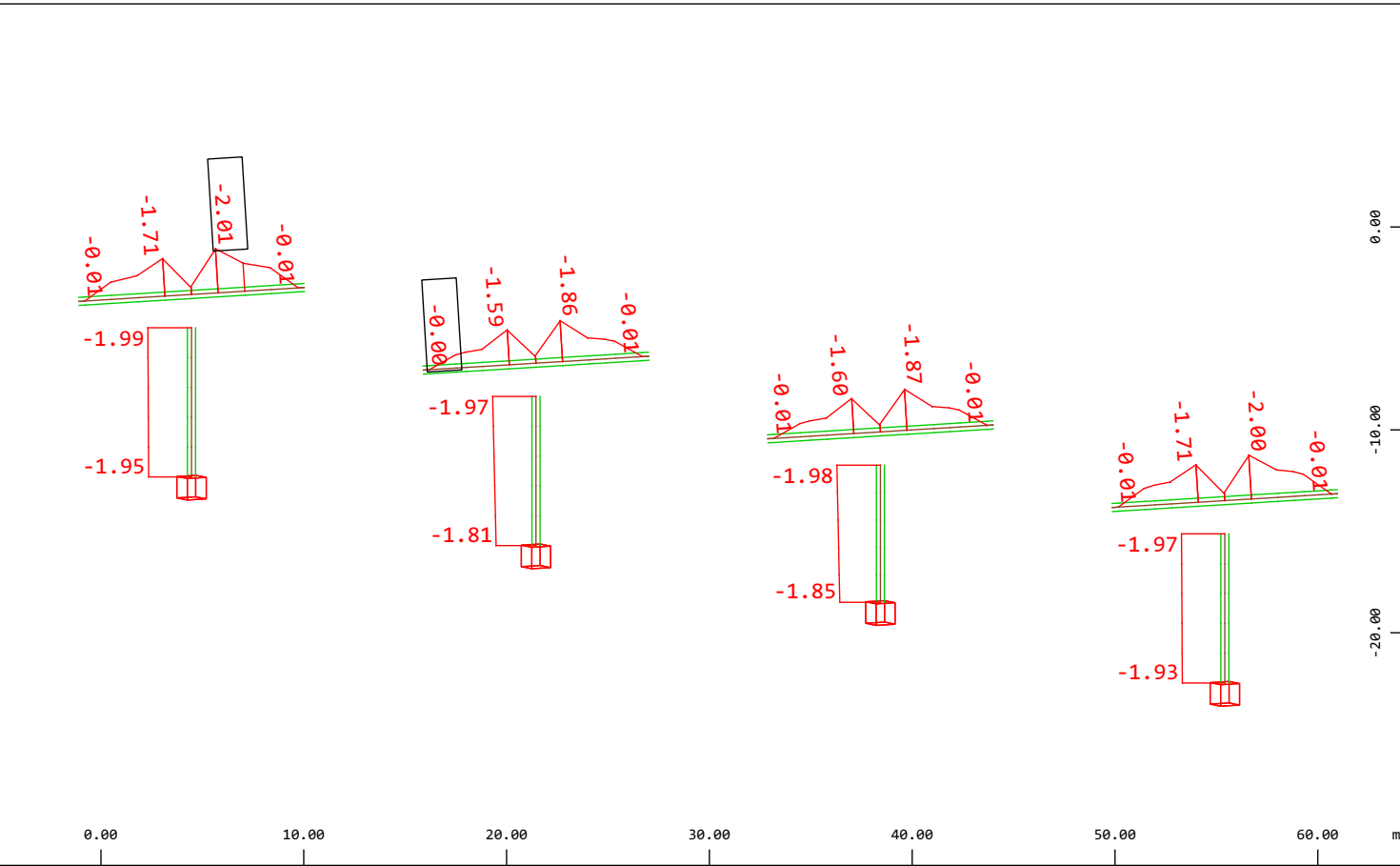
Z

Y

X

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 942 PROMET TS { mxx My PX P }, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 3.2734 MPa (Max=1.98)

M 1 : 351
X * 0.495
Y * 0.876
Z * 0.994



Z

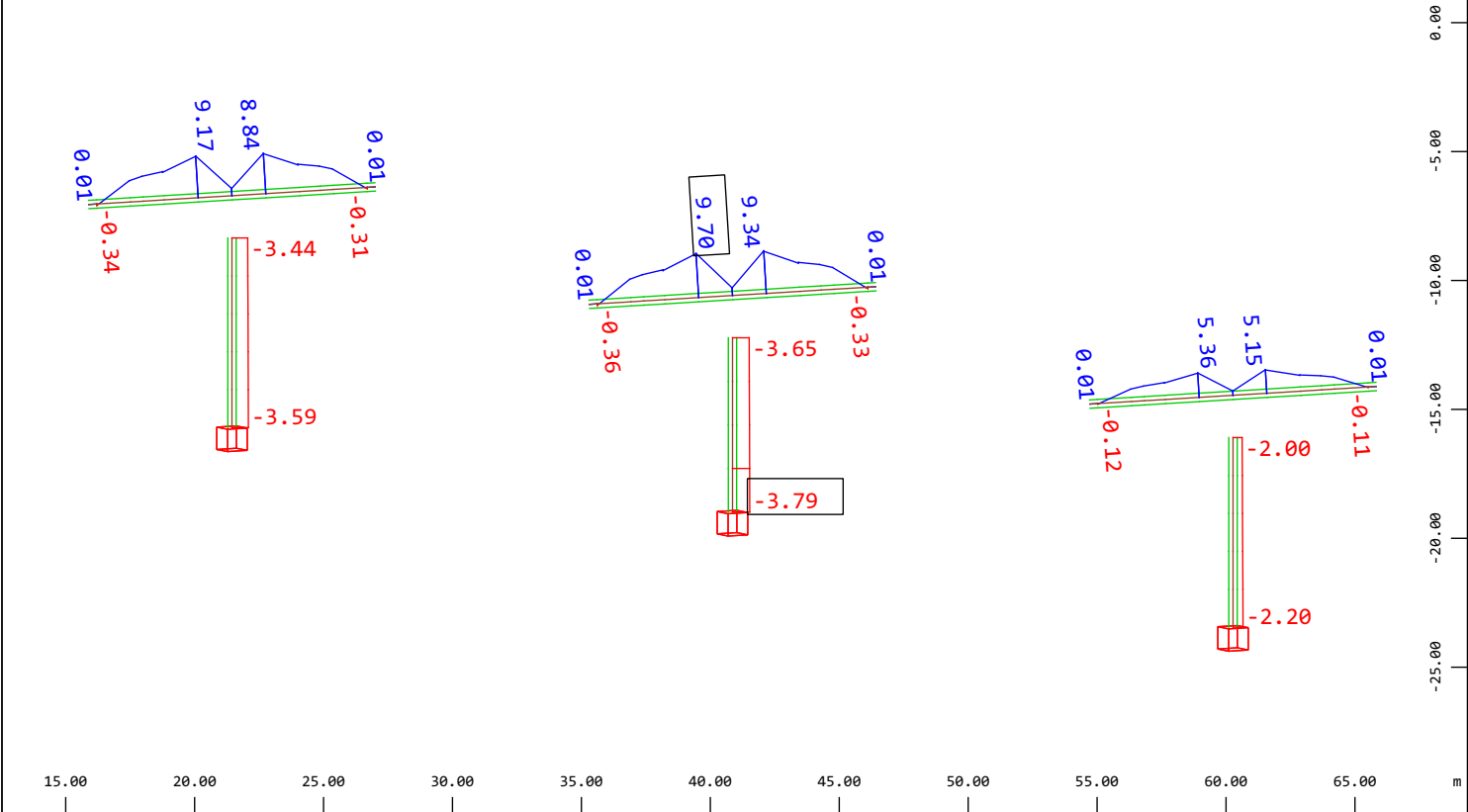
Y

X

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 942 PROMET TS { mxx My PX P }, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 3.2734 MPa (Min=-2.01) (Max=0.000)

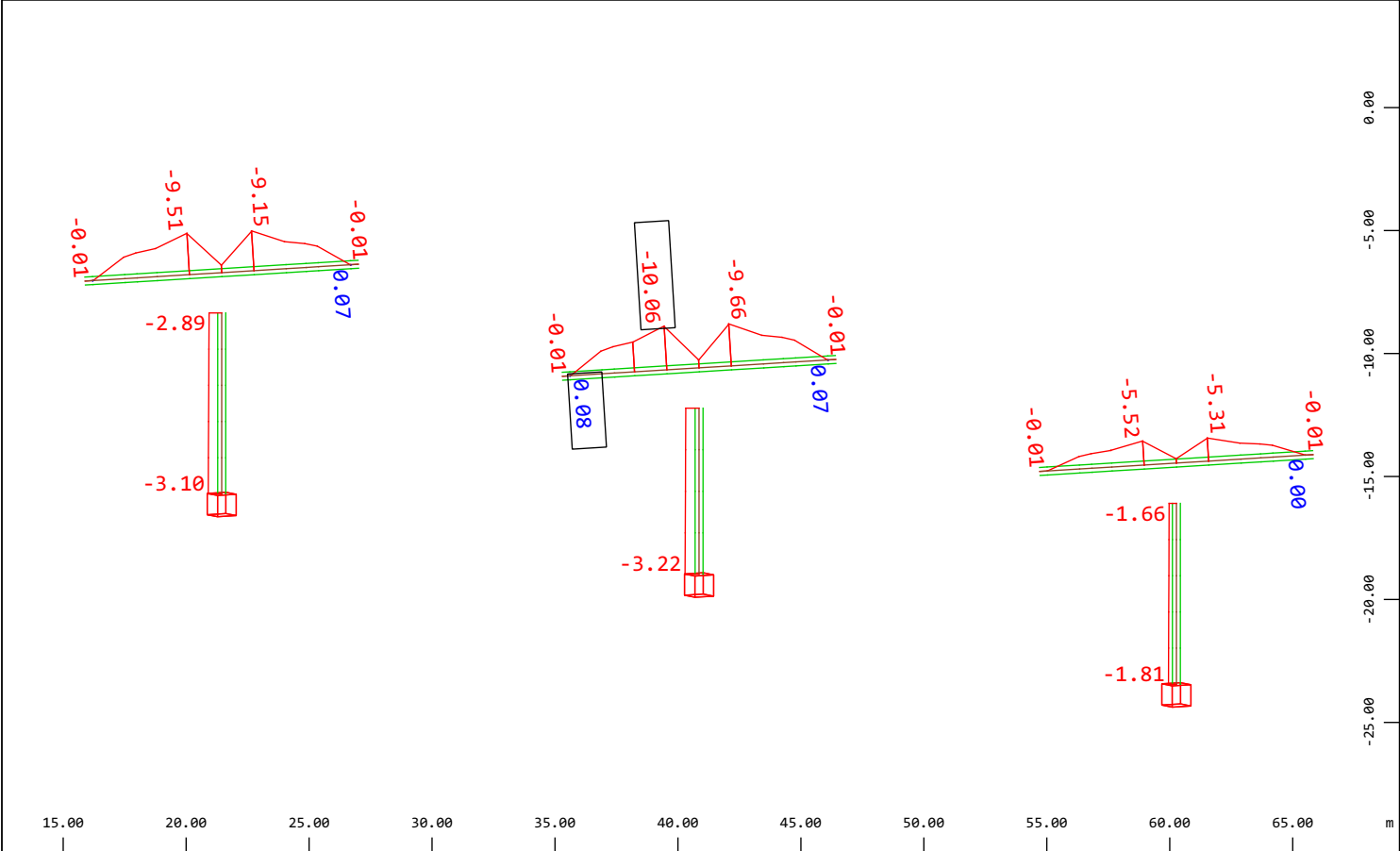
M 1 : 355
X * 0.495
Y * 0.876
Z * 0.994

NAPETOSTI FAZE GRADNJE IN POSAMEZNE OBTEŽBE, MODEL 35+40+40



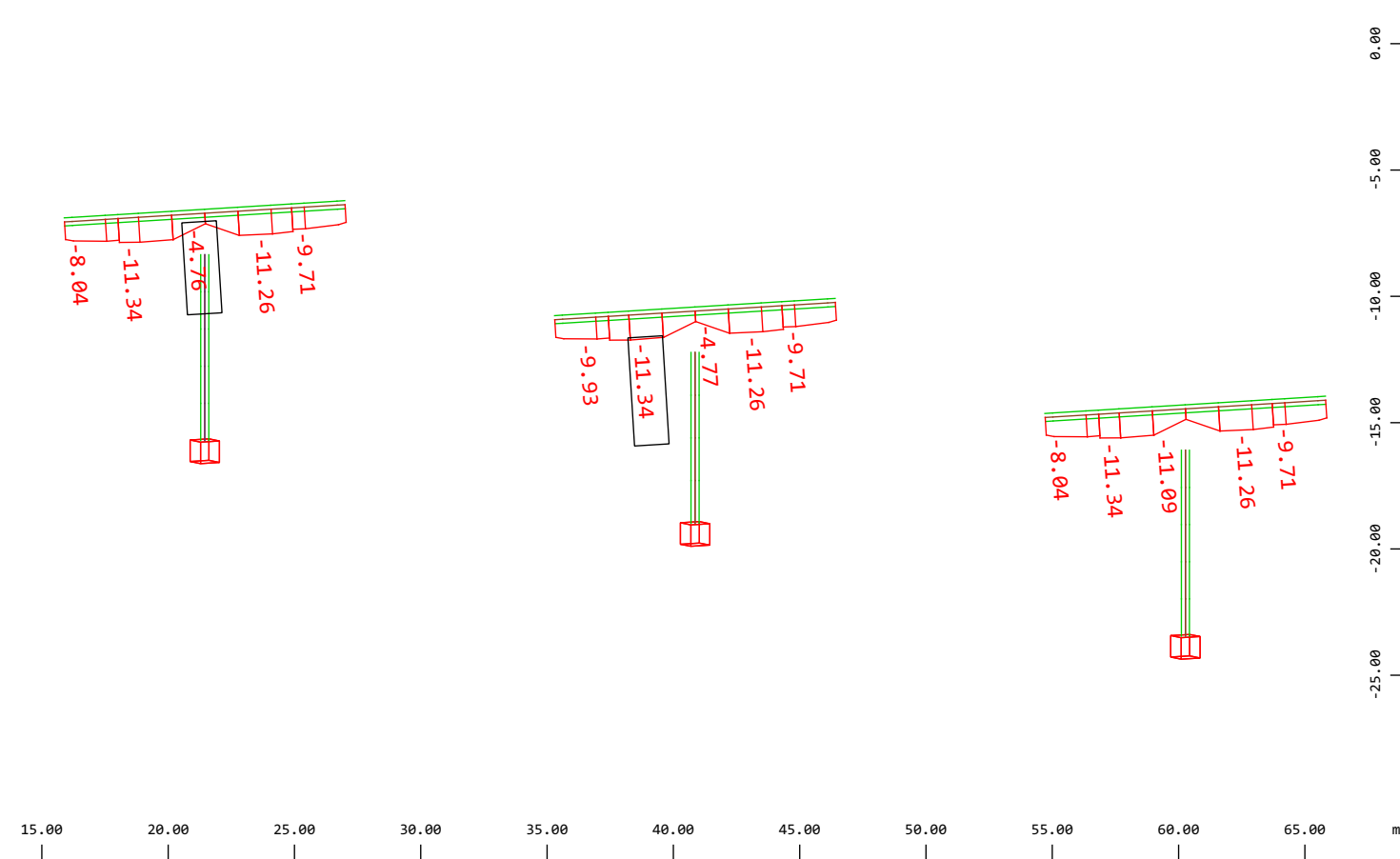
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7001 sum_G, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 16.367 MPa (Min=-3.79) (Max=9.70)

M 1 : 290
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7001 sum_G, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 16.367 MPa (Min=-10.06) (Max=0.08)

M 1 : 290
X * 0.495
Y * 0.876
Z * 0.994



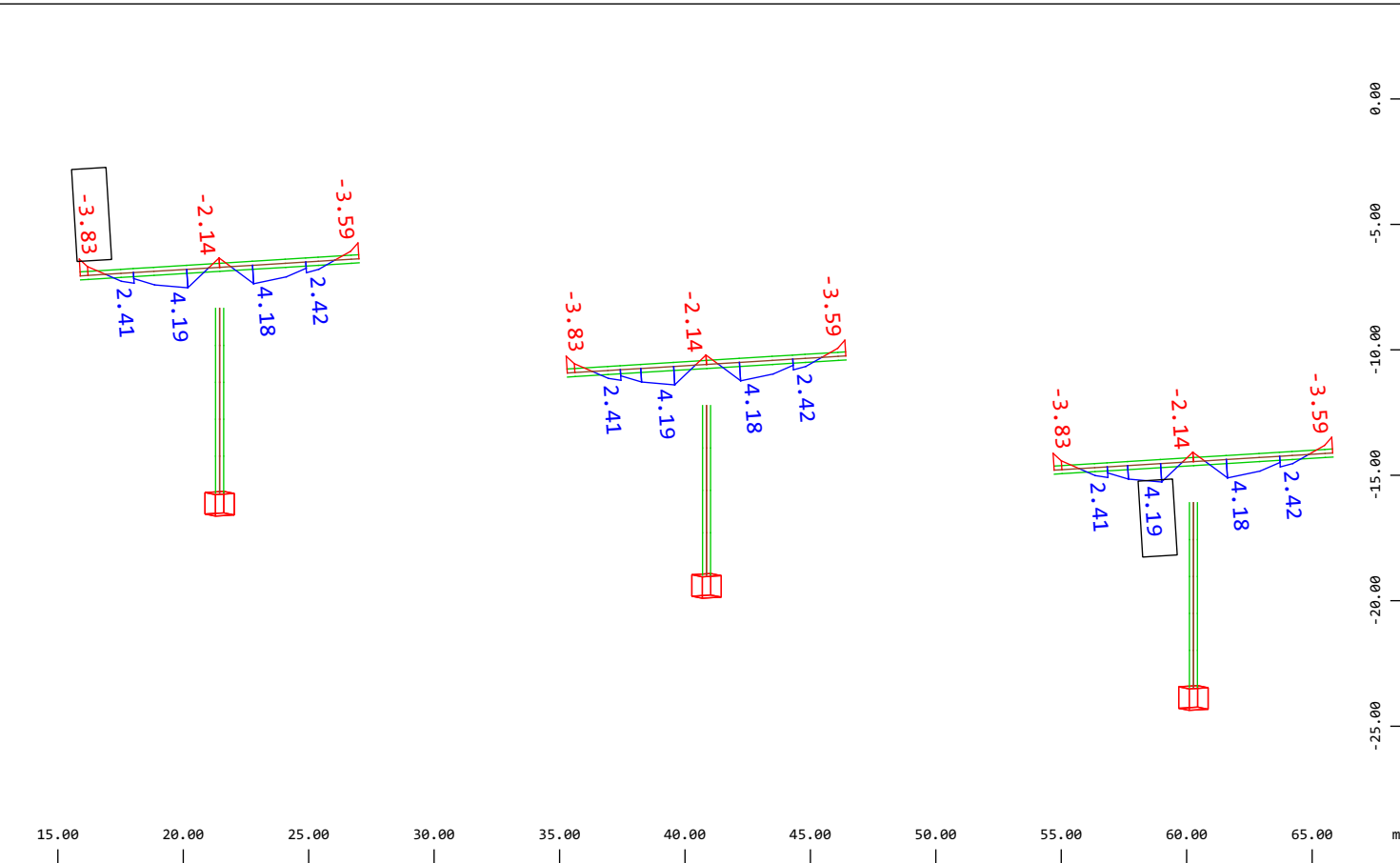
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7002 sum_P, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 32.734 MPa (Min=-11.34) (Max=0.00)

M 1 : 285
X * 0.495
Y * 0.876
Z * 0.994



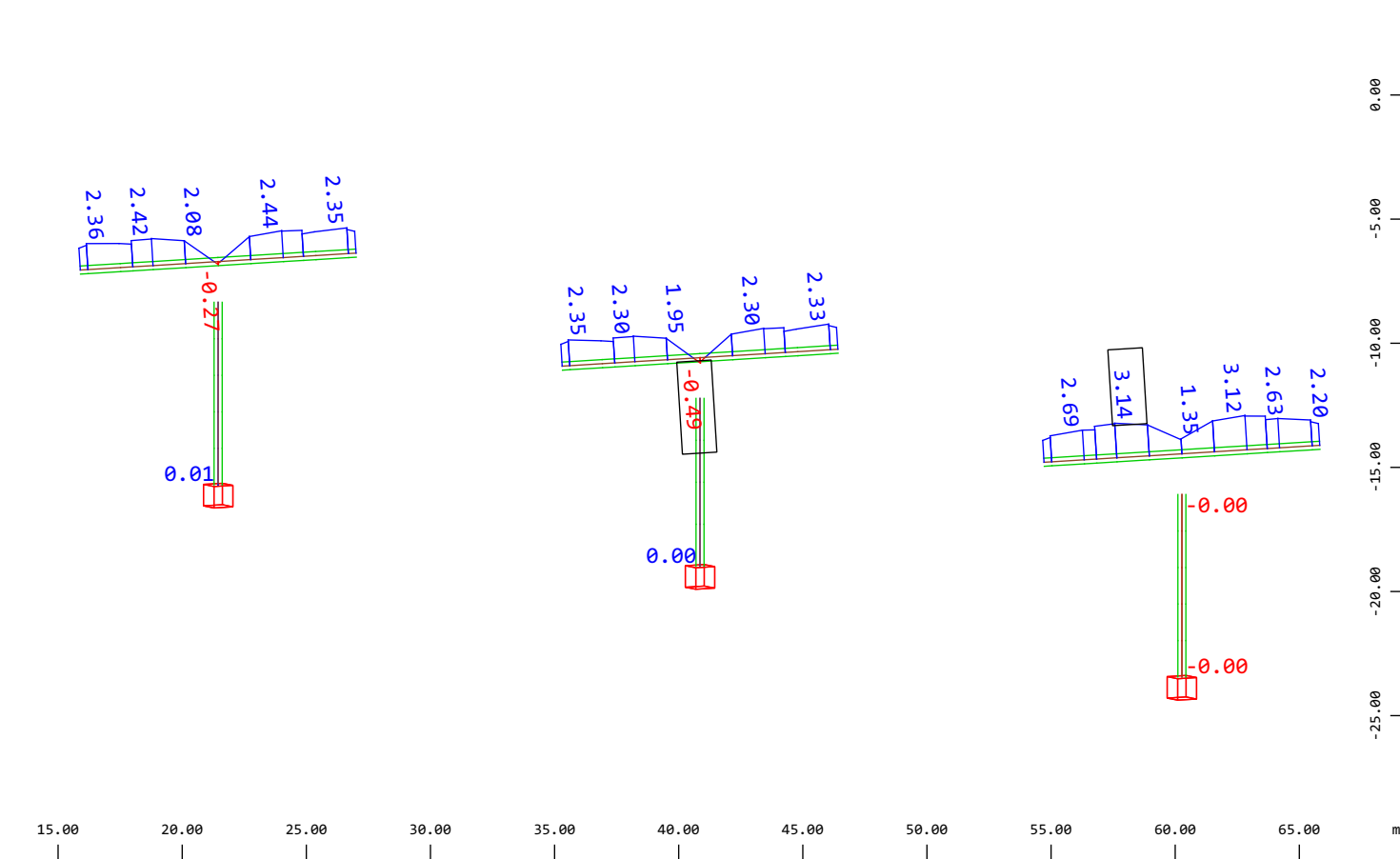
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7002 sum_P, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 16.367 MPa (Min=-3.83) (Max=4.19)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



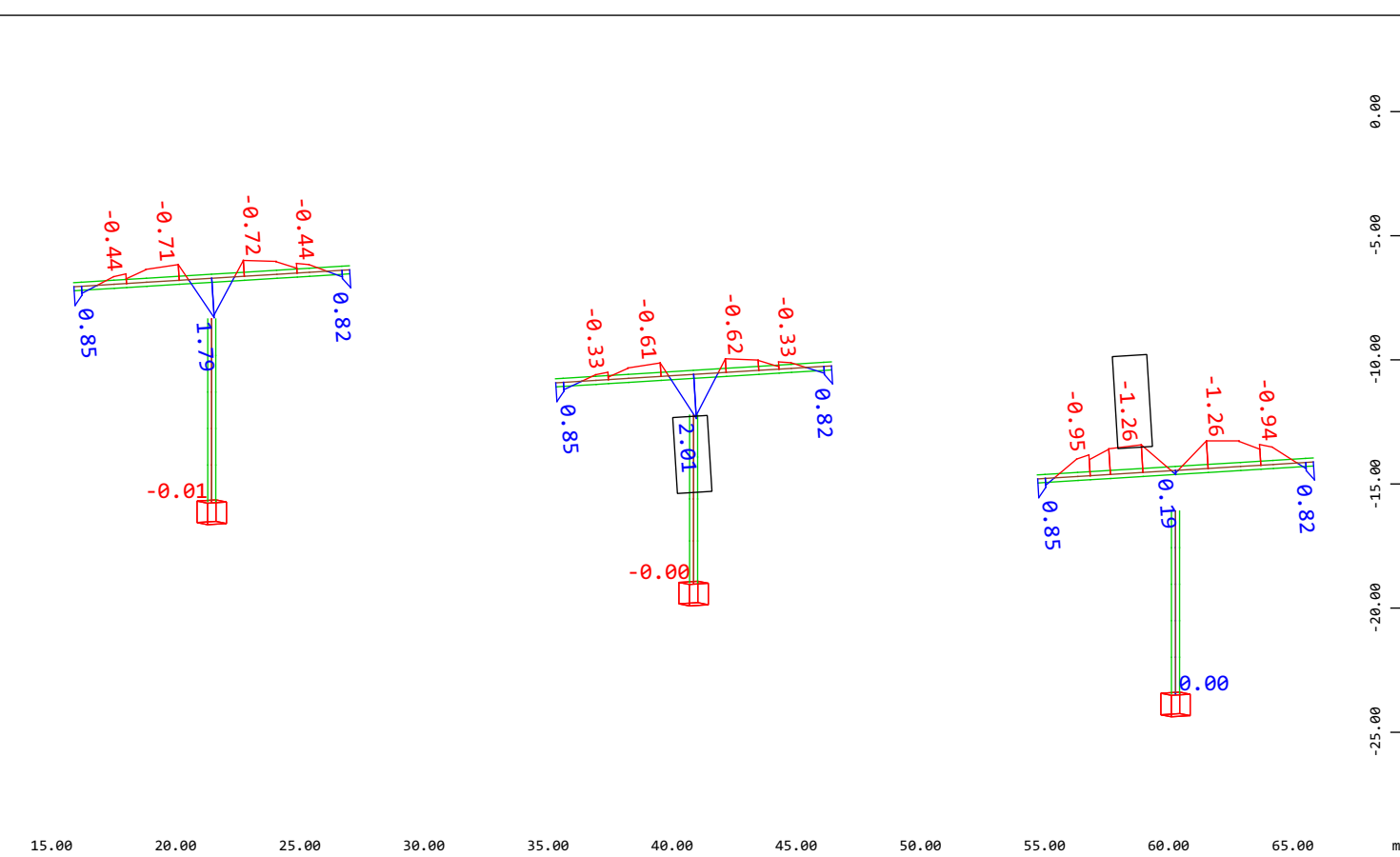
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7003 sum_C, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 6.5469 MPa (Min=-0.49) (Max=3.14)

M 1 : 290
X * 0.495
Y * 0.876
Z * 0.994



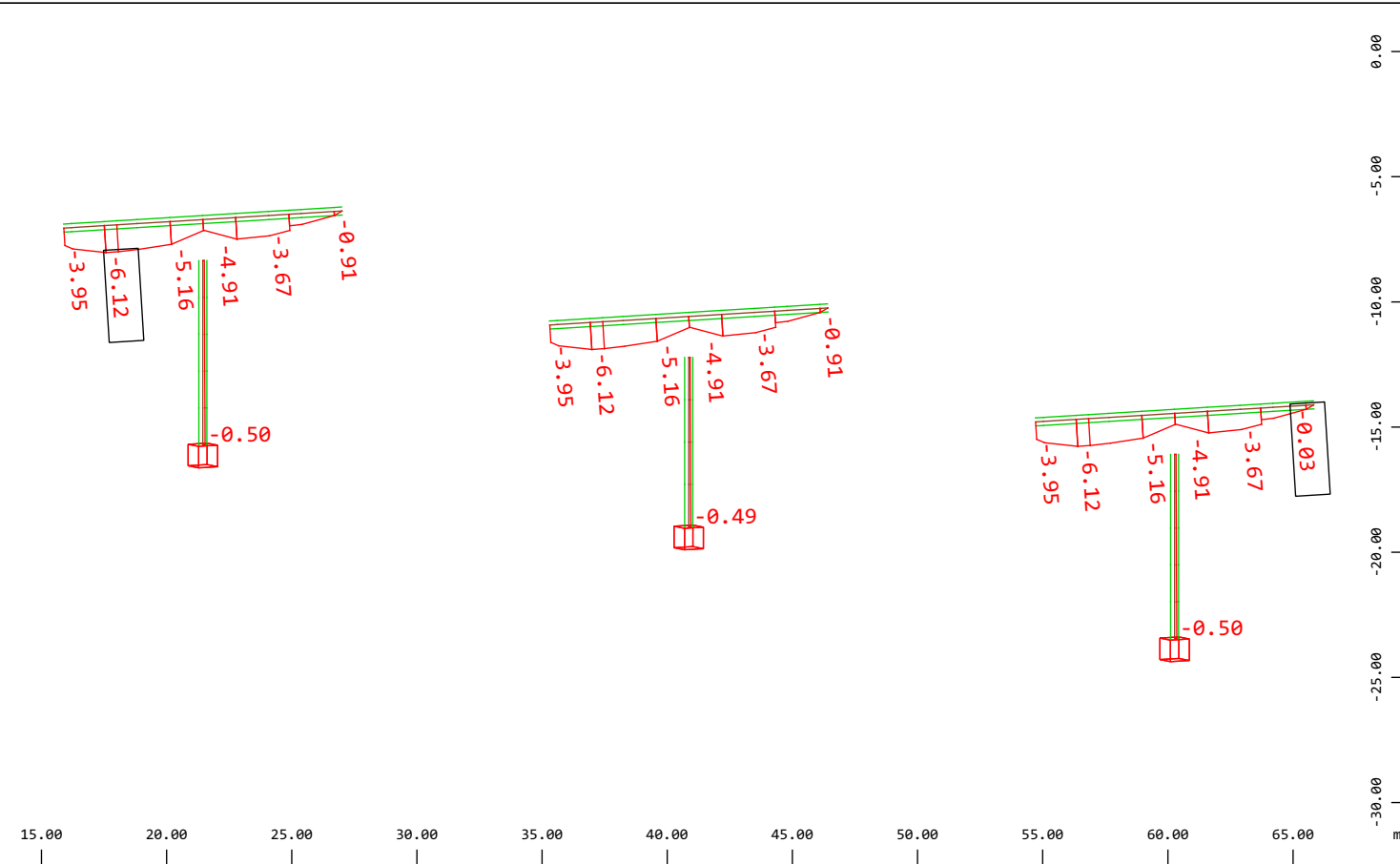
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7003 sum_C, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 3.2734 MPa (Min=-1.26) (Max=2.01)

M 1 : 290
X * 0.495
Y * 0.876
Z * 0.994



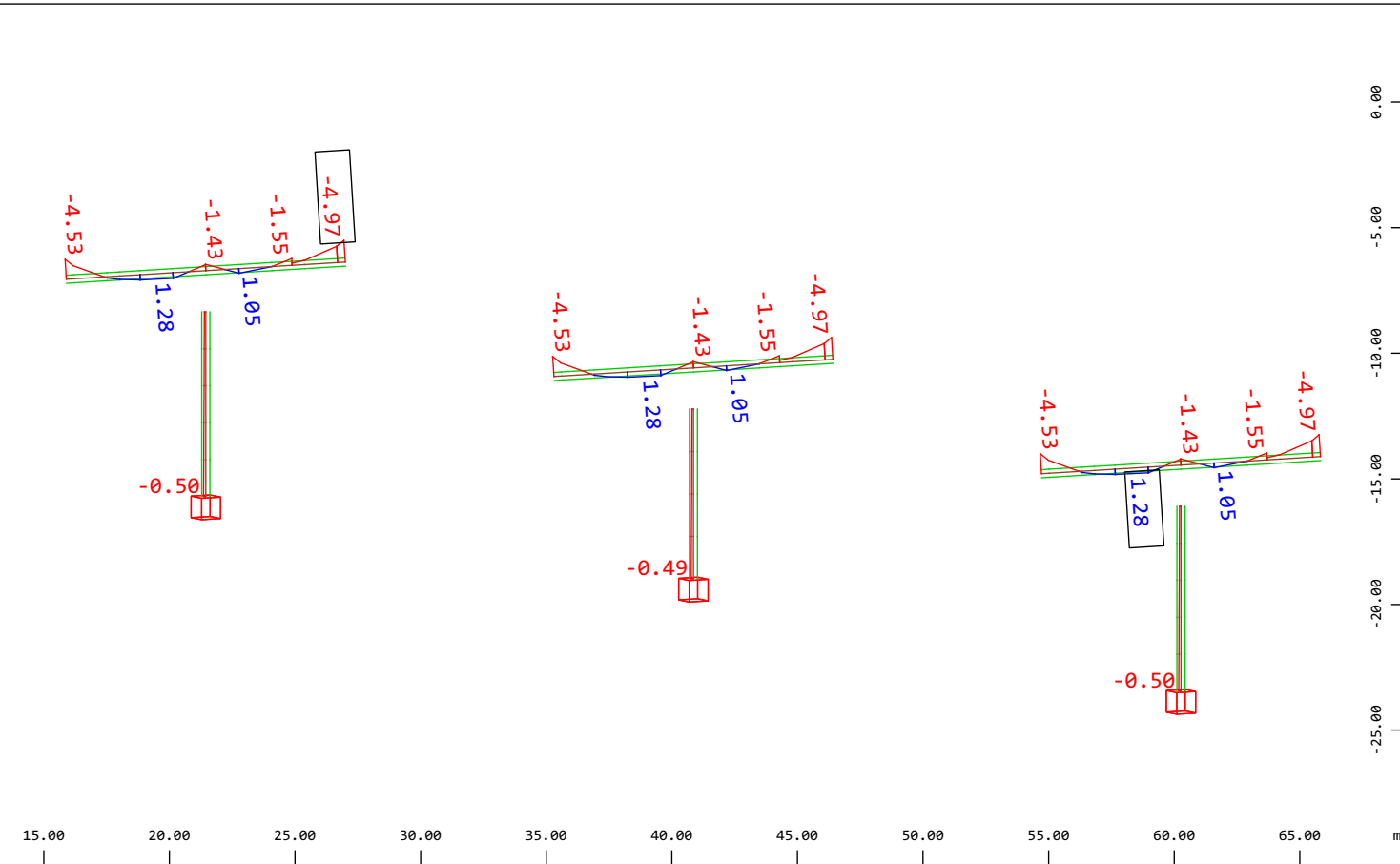
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7006 Sum_06 Prestress, Material 1 C 30/37 (EN 1992)
STEBRI , 1 cm 3D = 16.367 MPa (Min=-6.12) (Max=-0.03)

M 1 : 288
X * 0.495
Y * 0.876
Z * 0.994



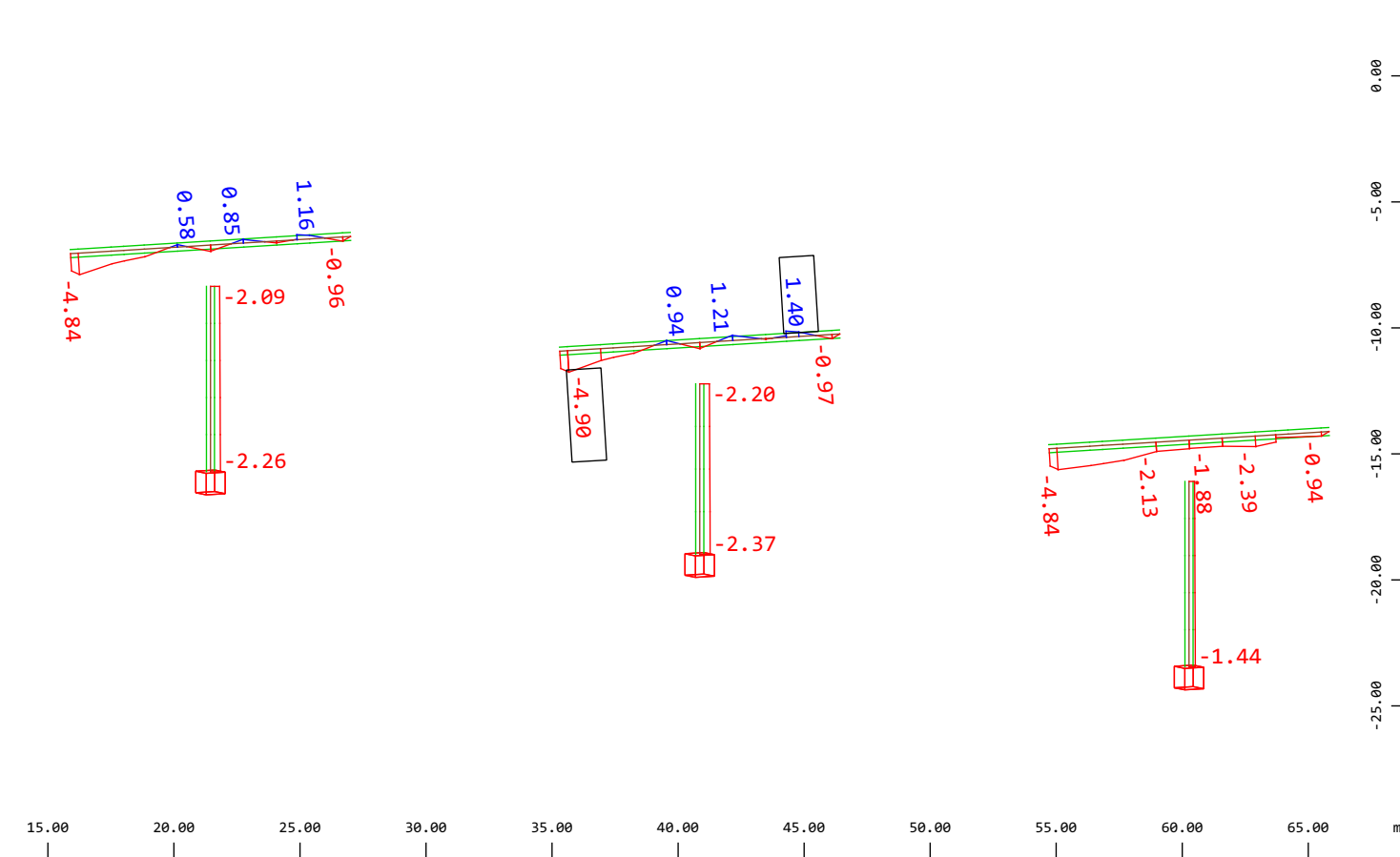
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7006 Sum_06 Prestress, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-4.97) (Max=1.28)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



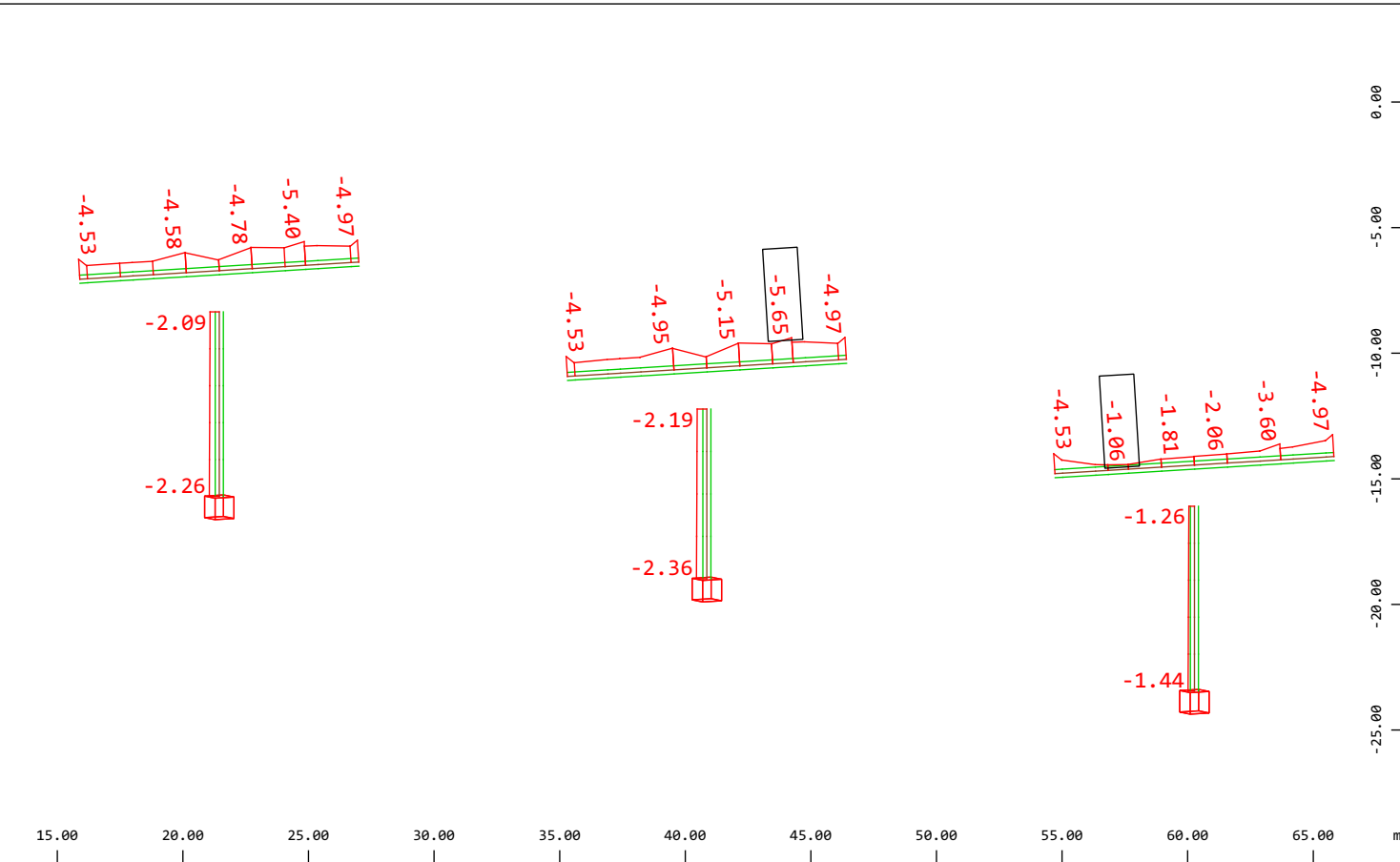
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7010 Sum_10 Prekladna konstru, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-4.90) (Max=1.40)

M 1 : 286
X * 0.495
Y * 0.876
Z * 0.994



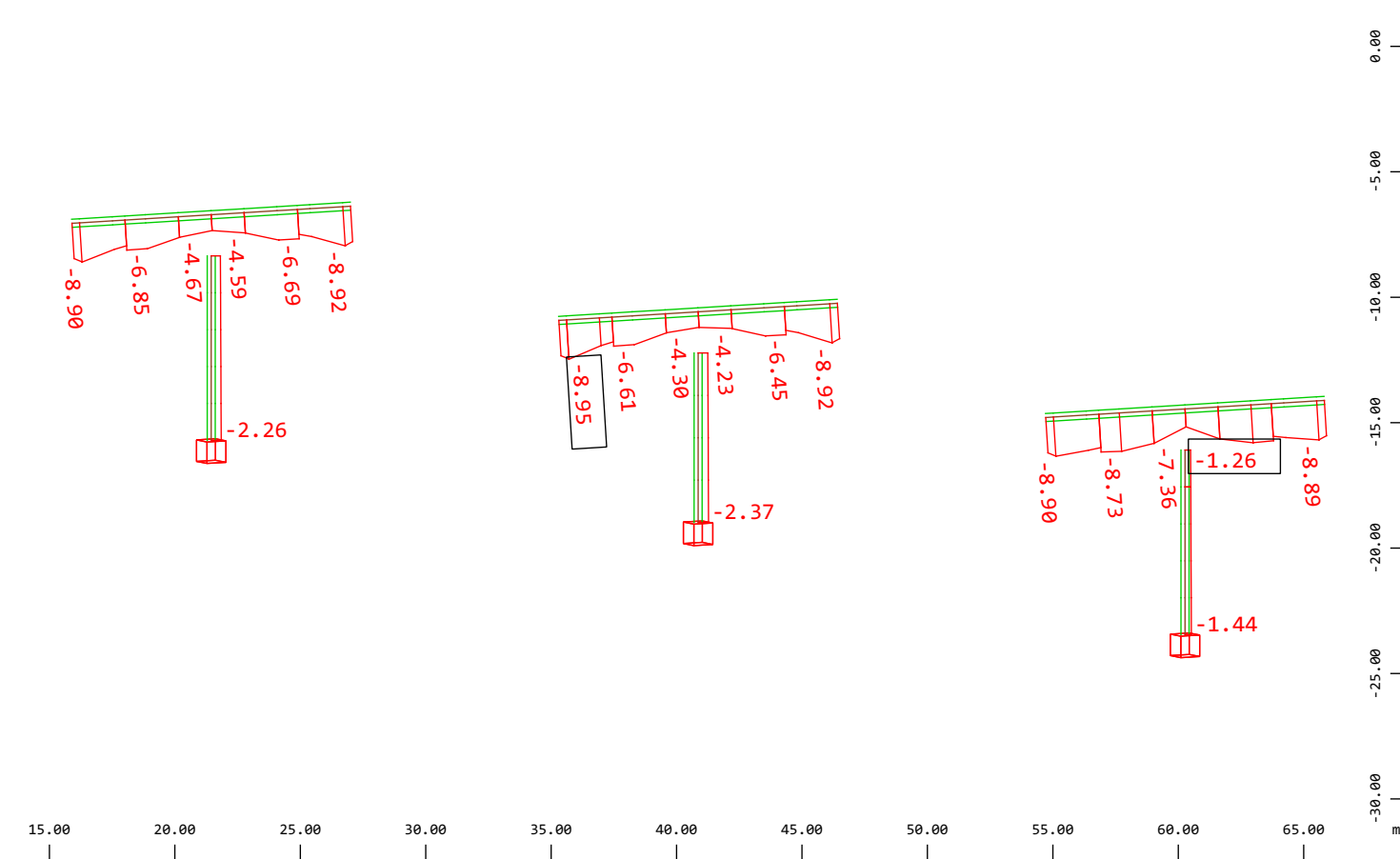
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7010 Sum_10 Prekladna konstru, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-5.65) (Max=-1.06)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



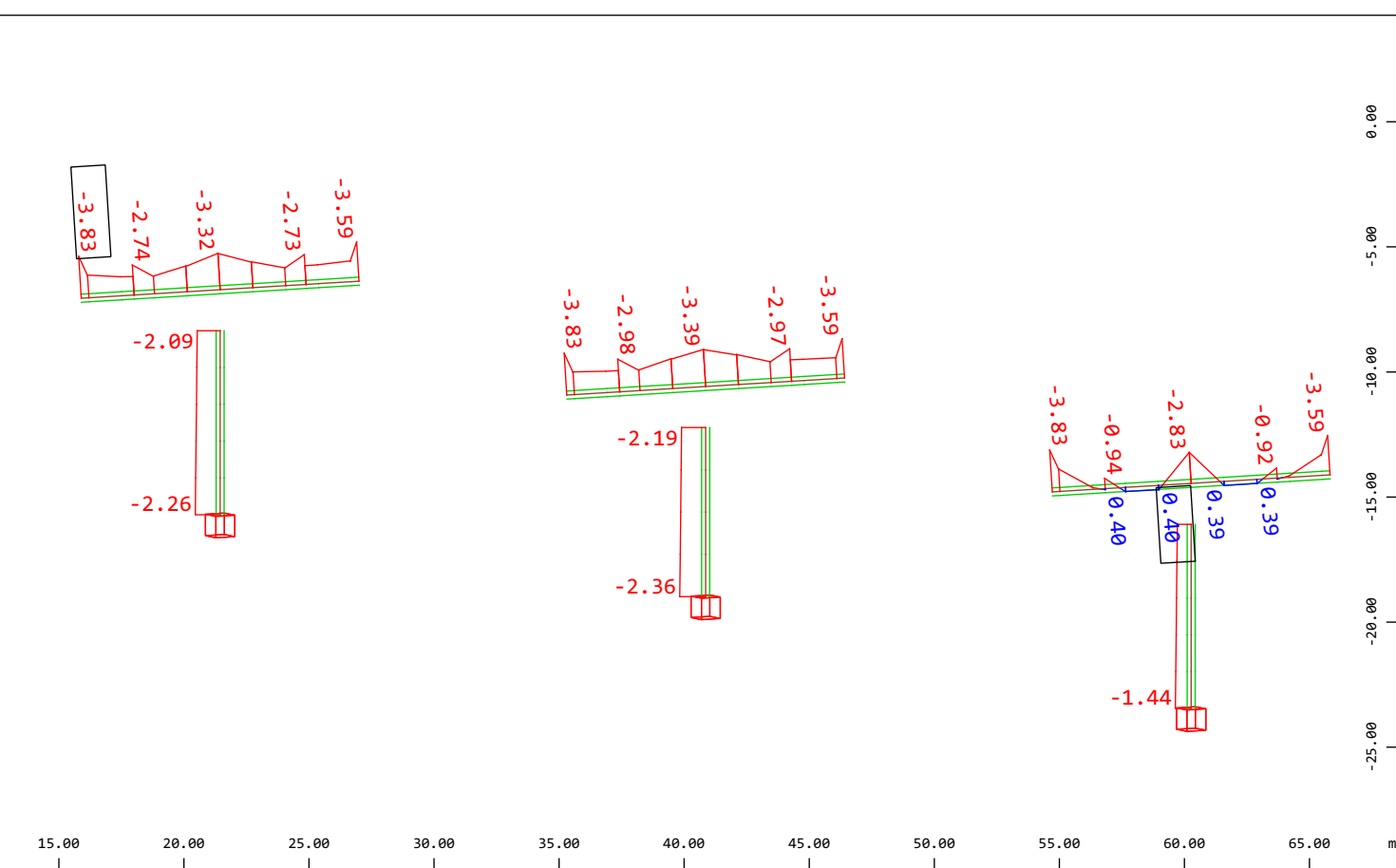
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7011 Sum_11 Prestress, Material 1 C 30/37 (EN 1992)
STEBRI , 1 cm 3D = 16.367 MPa (Min=-8.95) (Max=-1.26)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



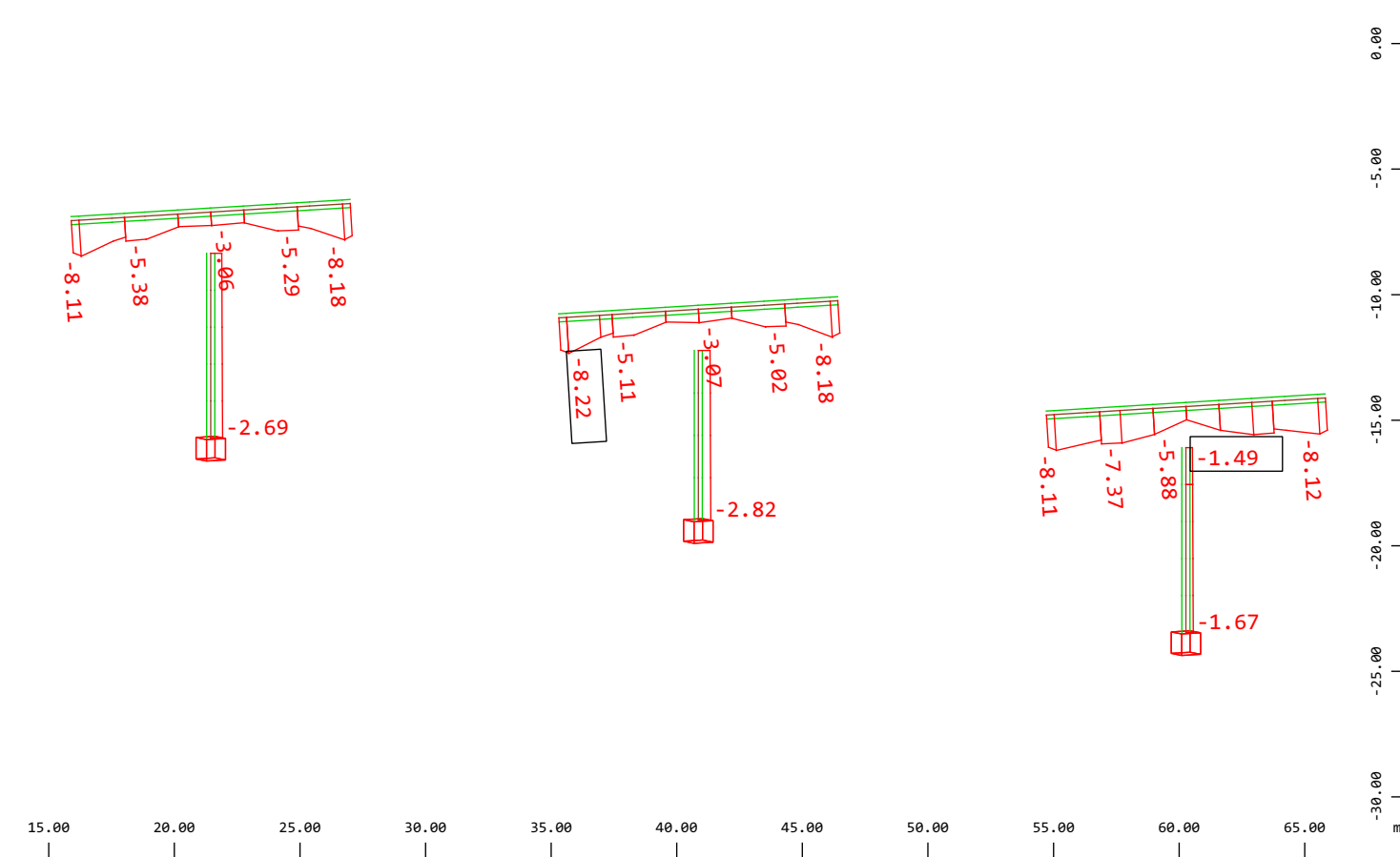
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7011 Sum_11 Prestress, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Min=-3.83) (Max=0.40)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994

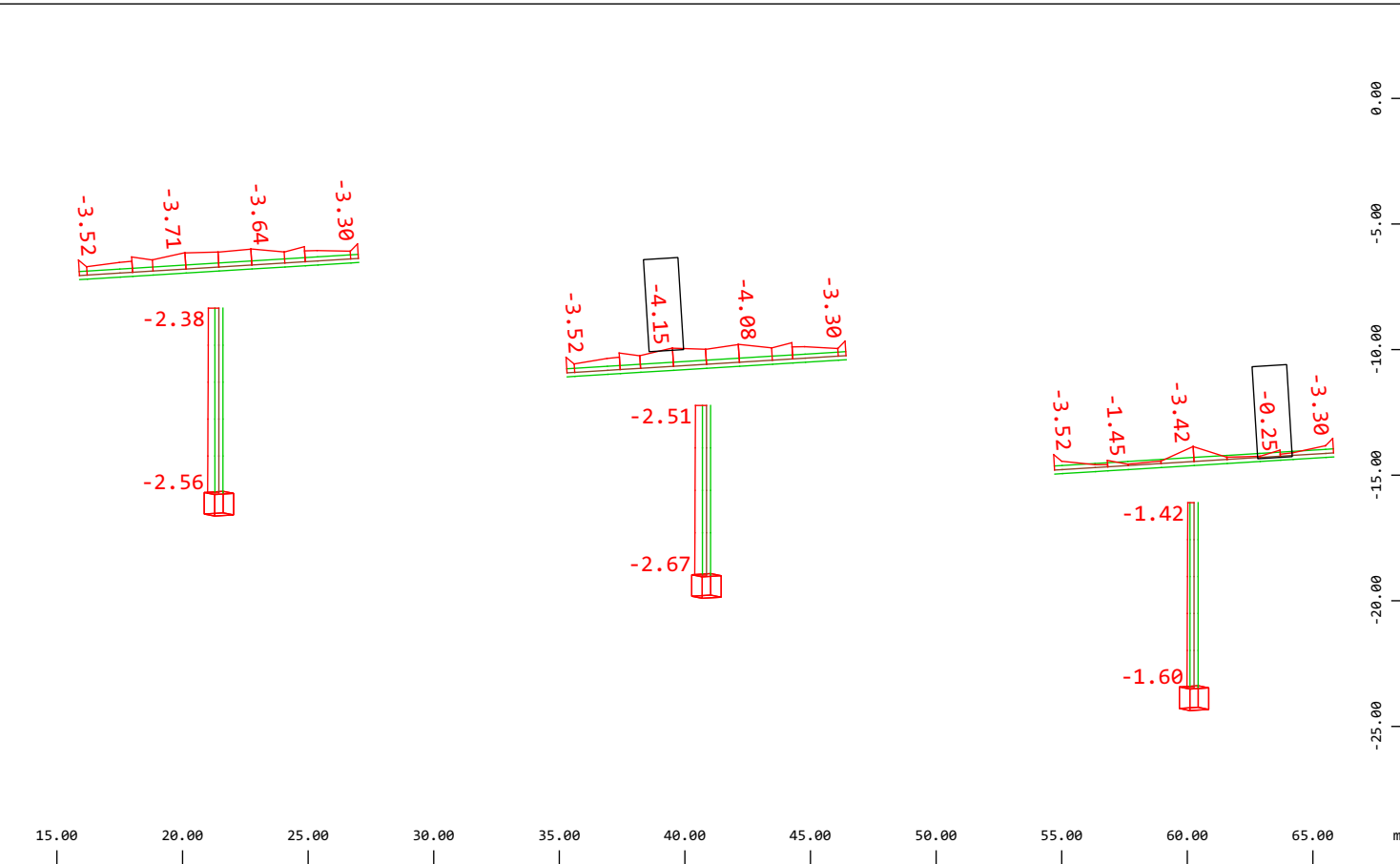


z

xy

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7020 Sum_20 AB plošča prekl, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-8.22) (Max=-1.49)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994

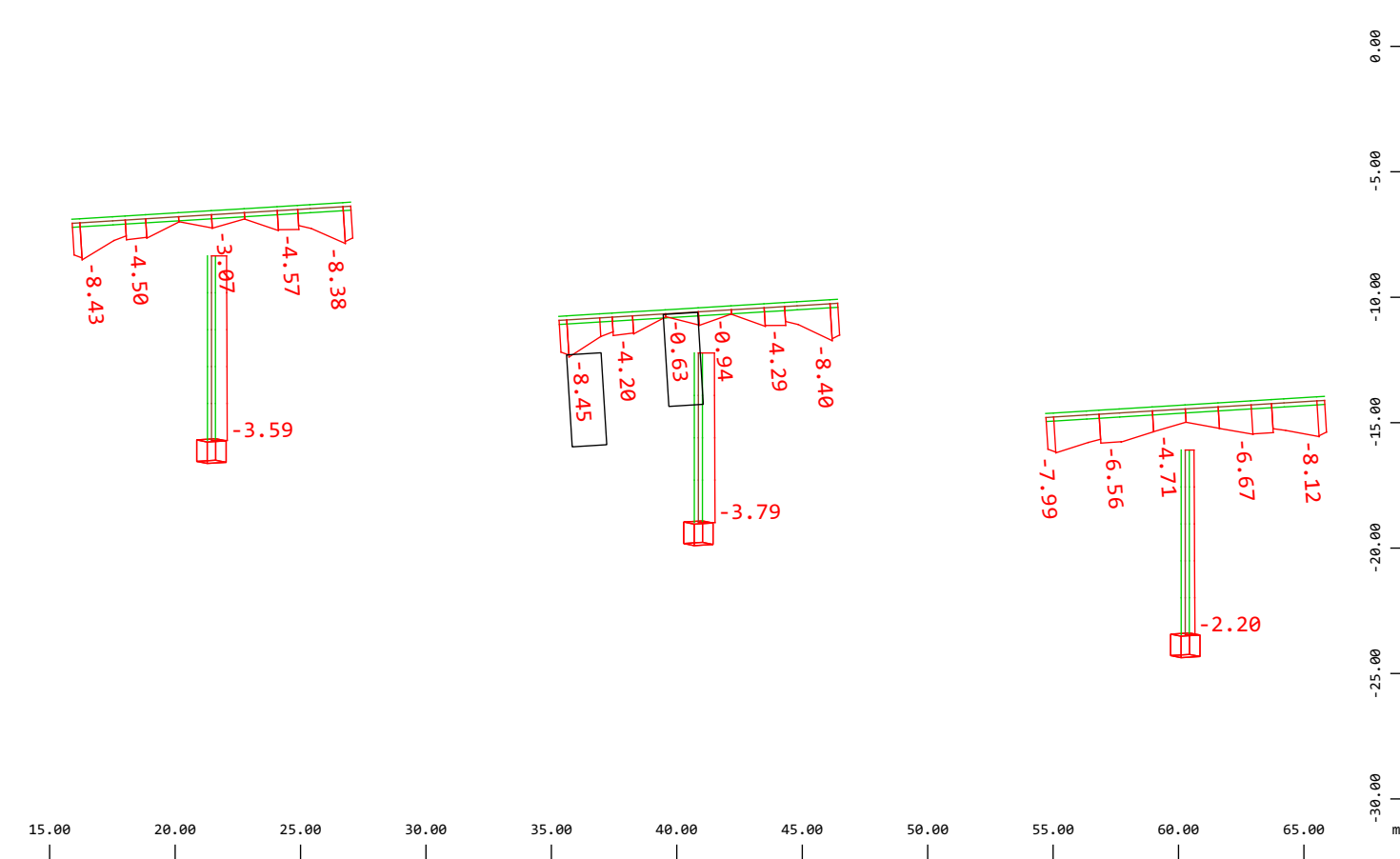


z

xy

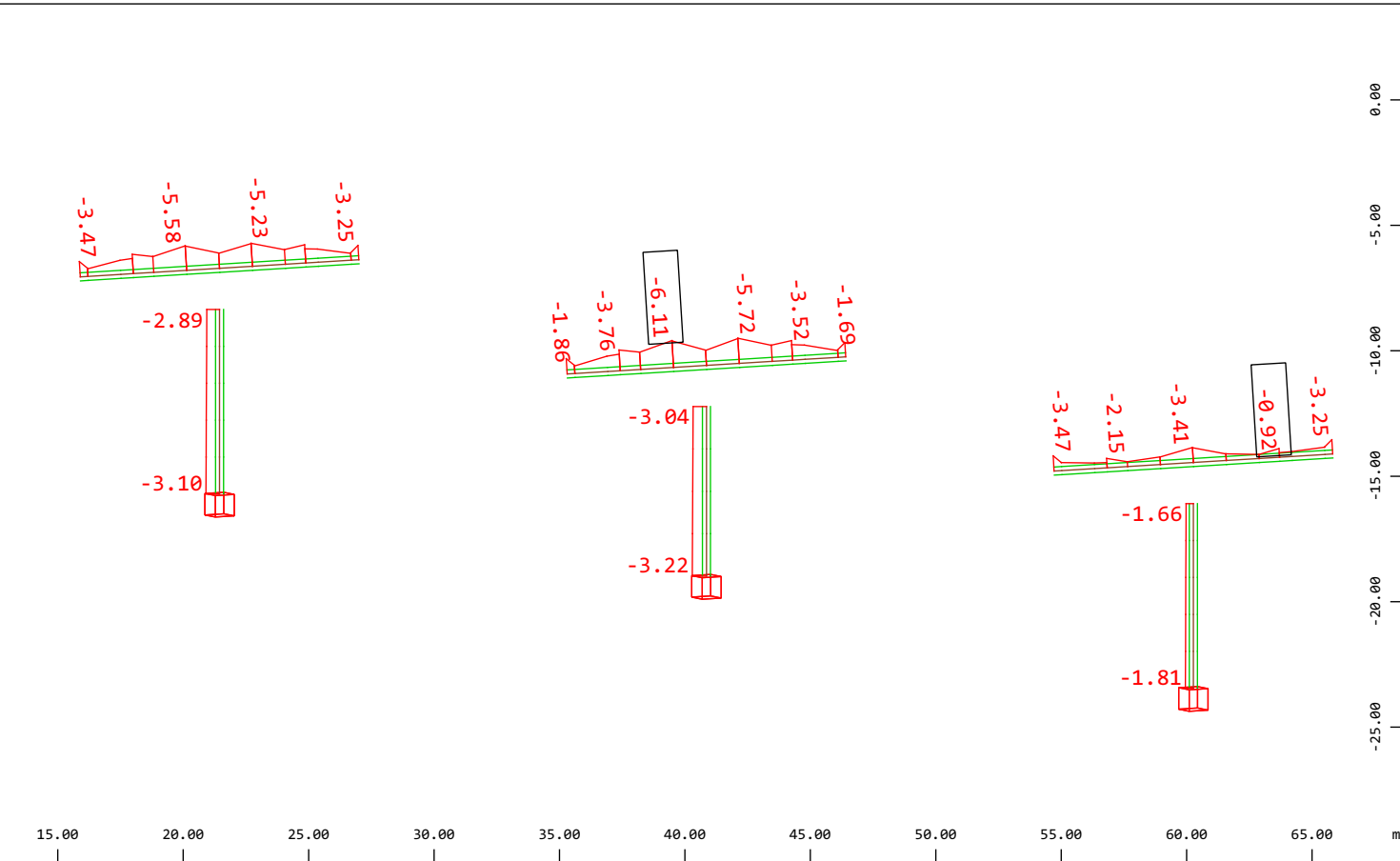
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7020 Sum_20 AB plošča prekl, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-4.15) (Max=-0.25)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



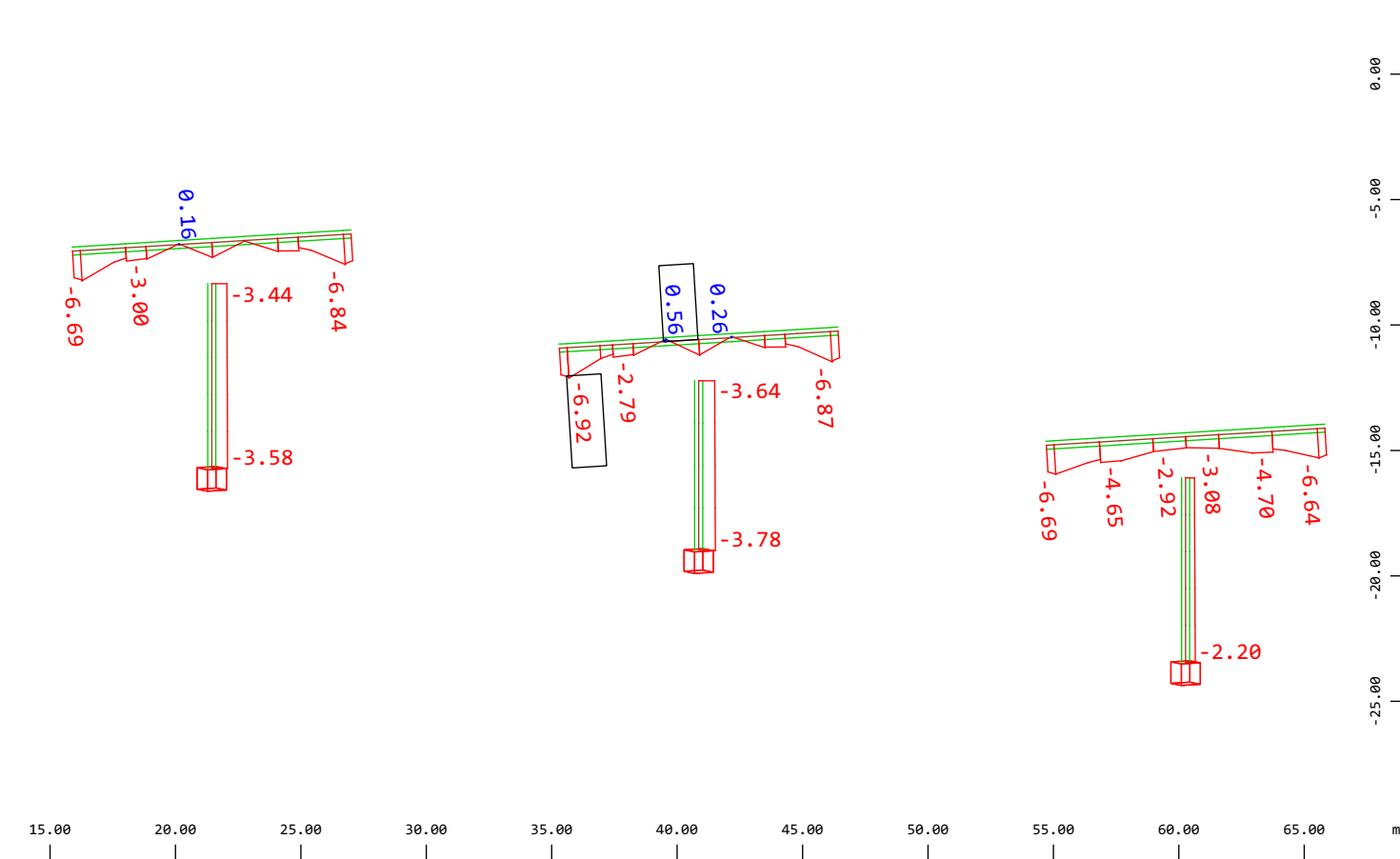
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7040 Sum_40 Krov, Material 1 C 30/37 (EN 1992)
STEBRI , 1 cm 3D = 16.367 MPa (Min=-8.45) (Max=-0.63)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7040 Sum_40 Krov, Material 1 C 30/37 (EN 1992)
STEBRI , 1 cm 3D = 16.367 MPa (Min=-6.11) (Max=-0.92)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



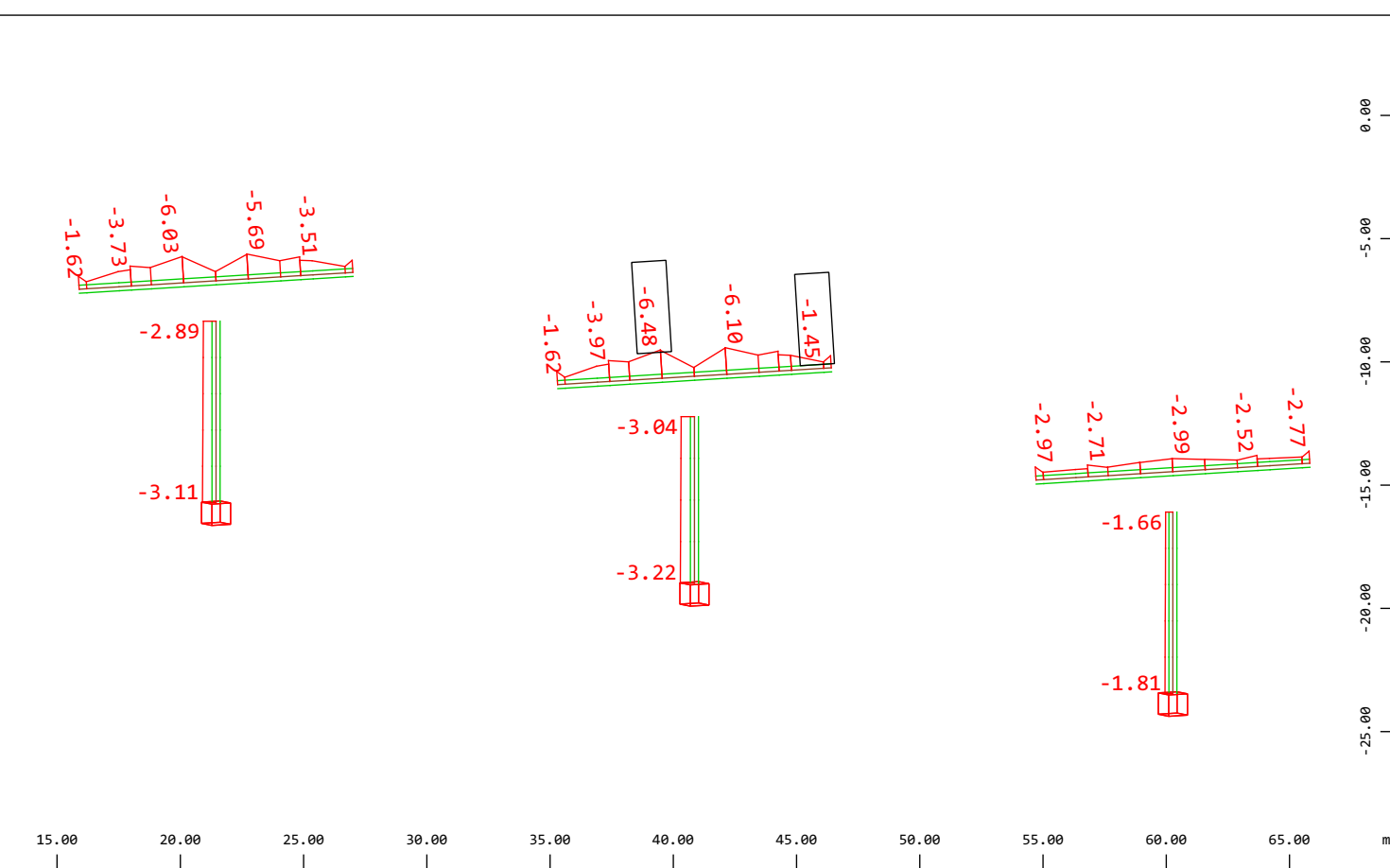
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7047 Sum_47 Creep until today, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-6.92) (Max=0.56)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



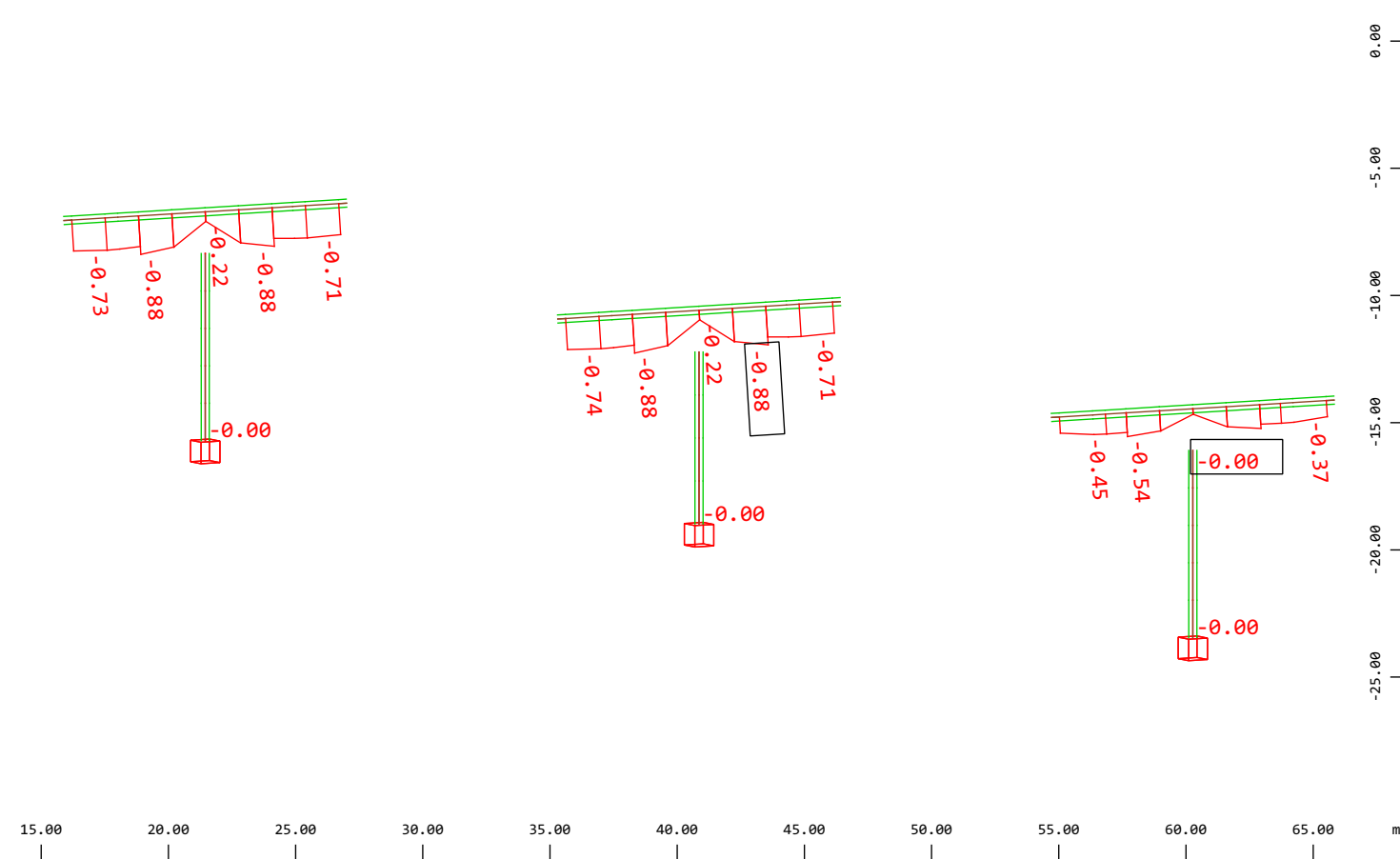
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7047 Sum_47 Creep until today, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-6.48) (Max=-1.45)

M 1 : 290
X * 0.495
Y * 0.876
Z * 0.994



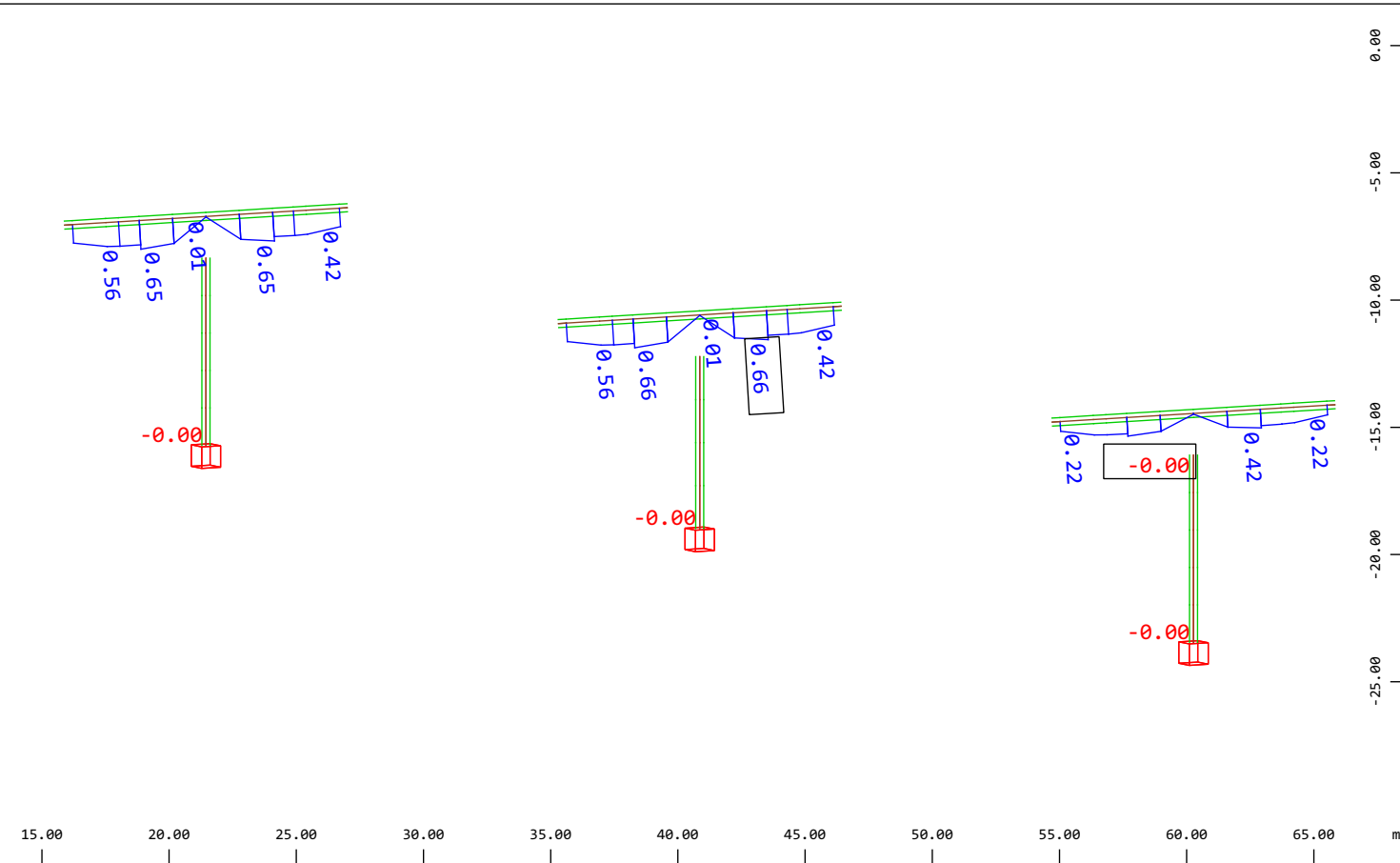
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 901 TEMPERATURA { mxx My PX P }, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Min=-0.88) (Max=0.000)

M 1 : 283
X * 0.495
Y * 0.876
Z * 0.994



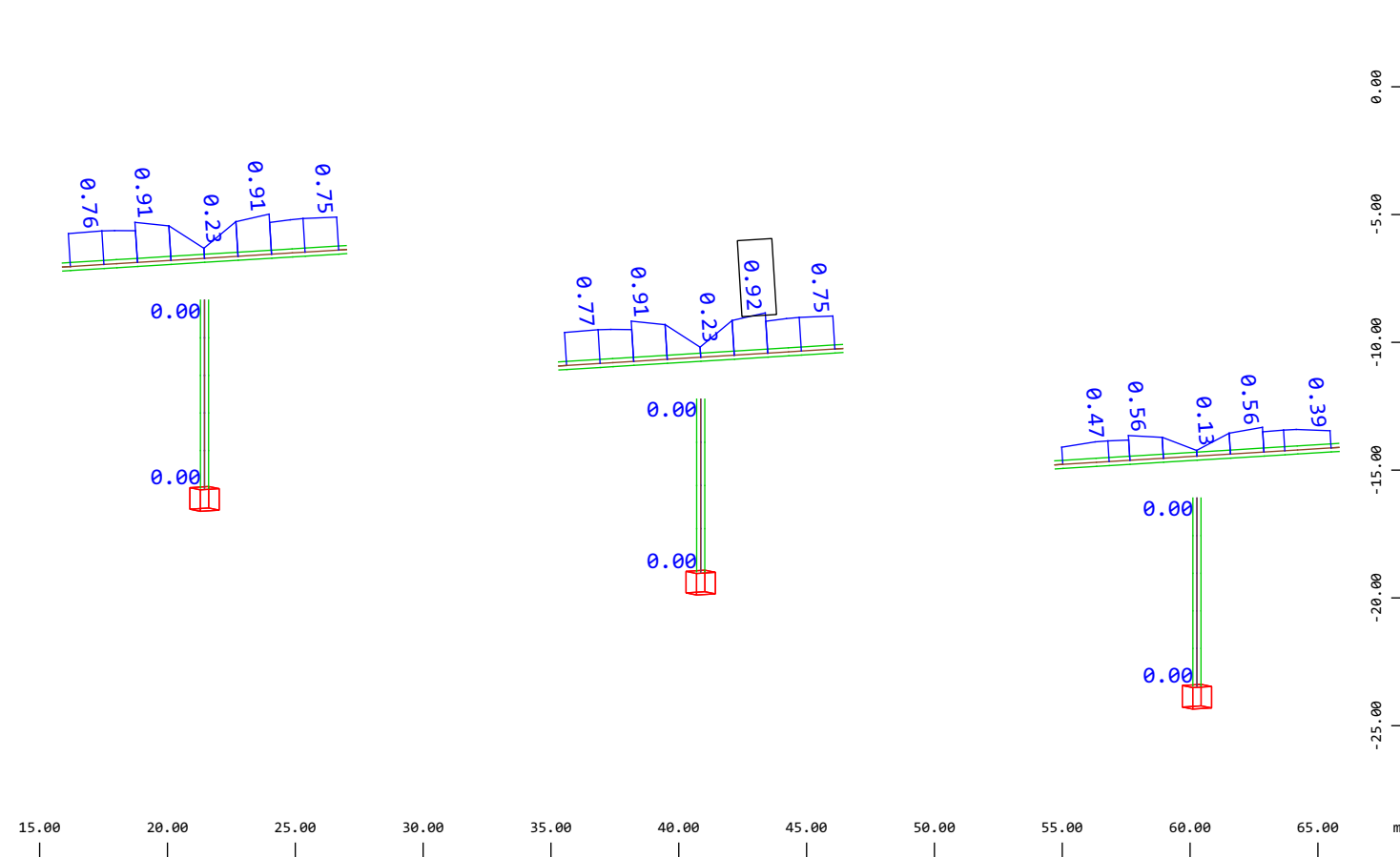
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 901 TEMPERATURA { mxx My PX P }, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Min=-0.00) (Max=0.66)

M 1 : 283
X * 0.495
Y * 0.876
Z * 0.994



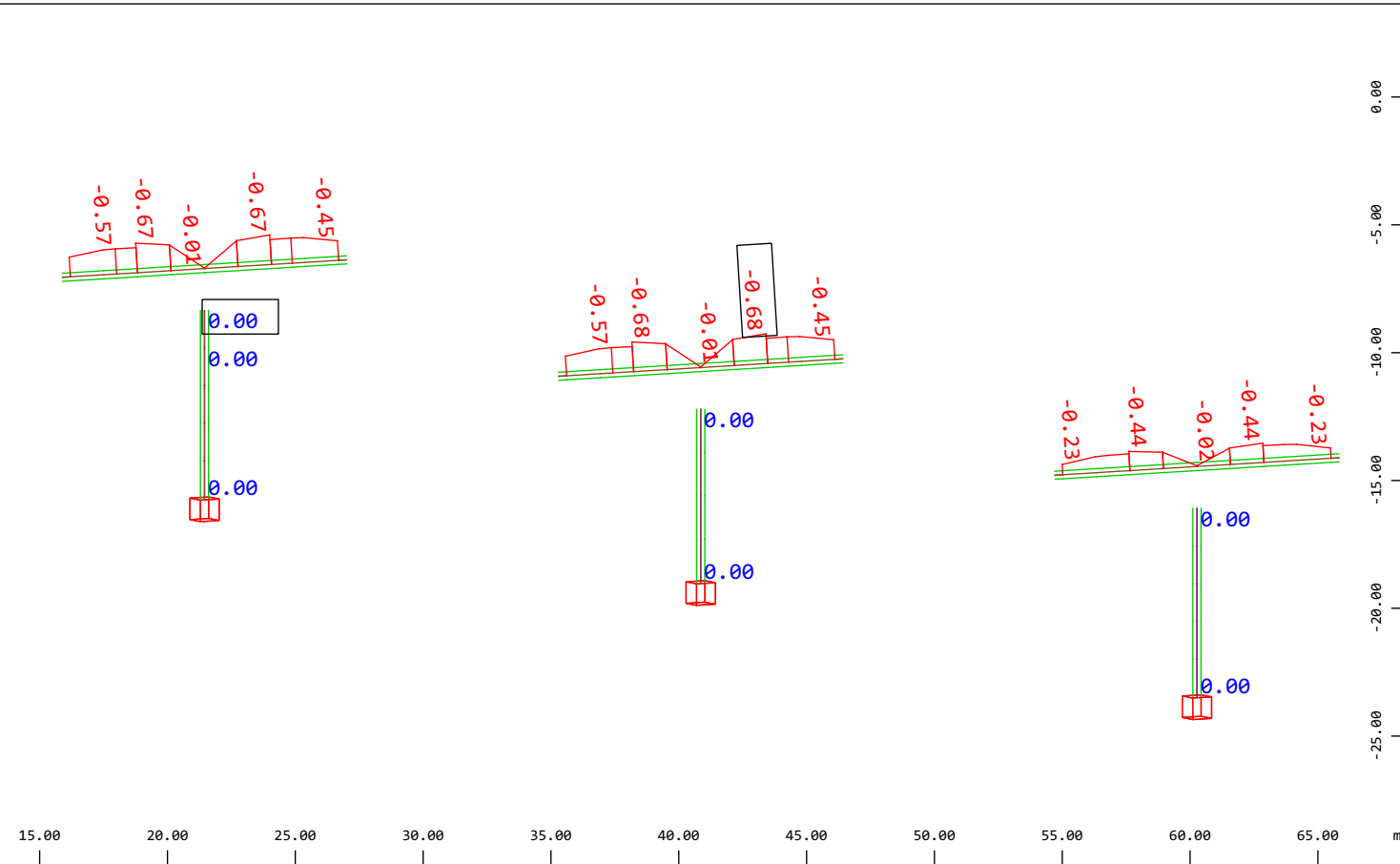
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 902 TEMPERATURA { mxx My PX P }, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Max=0.92)

M 1 : 282
X * 0.495
Y * 0.876
Z * 0.994



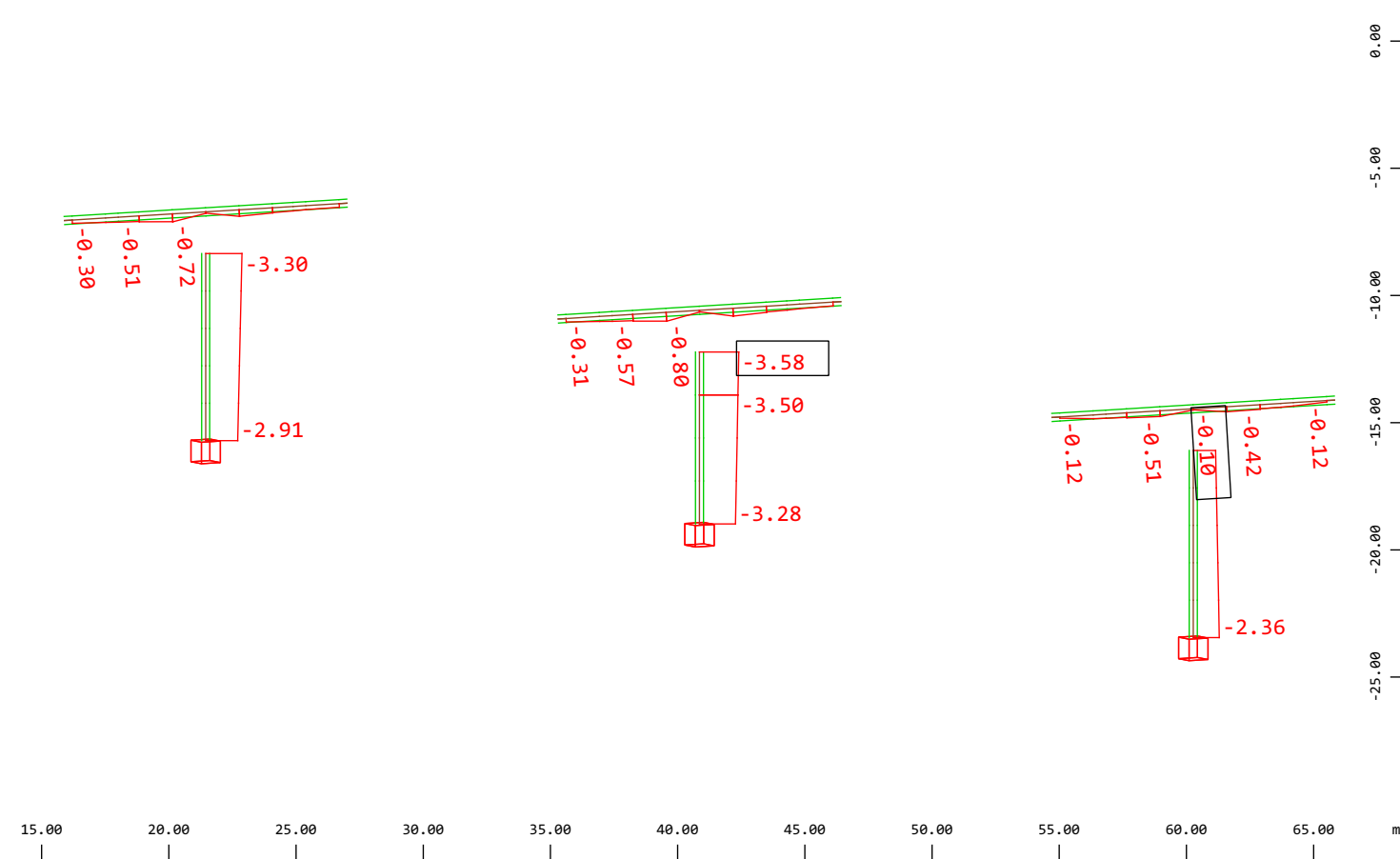
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 902 TEMPERATURA { mxx My PX P }, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Min=-0.68) (Max=0.00)

M 1 : 282
X * 0.495
Y * 0.876
Z * 0.994



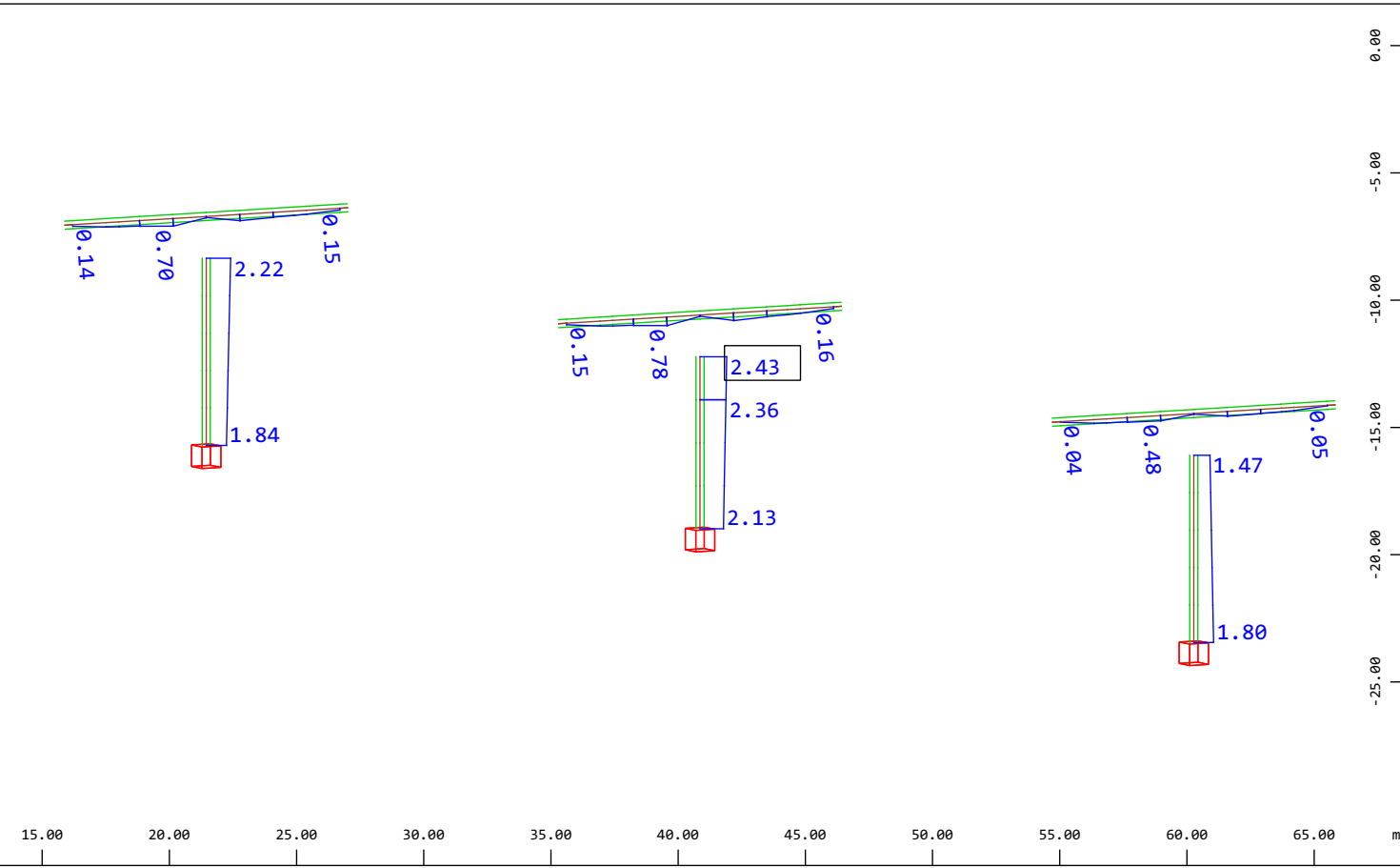
Z

Y

X

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 921 PROMET ZVEZNA { mxx My PX P }, Material 1 C
30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Min=-3.58) (Max=0.000)

M 1 : 283
X * 0.495
Y * 0.876
Z * 0.994



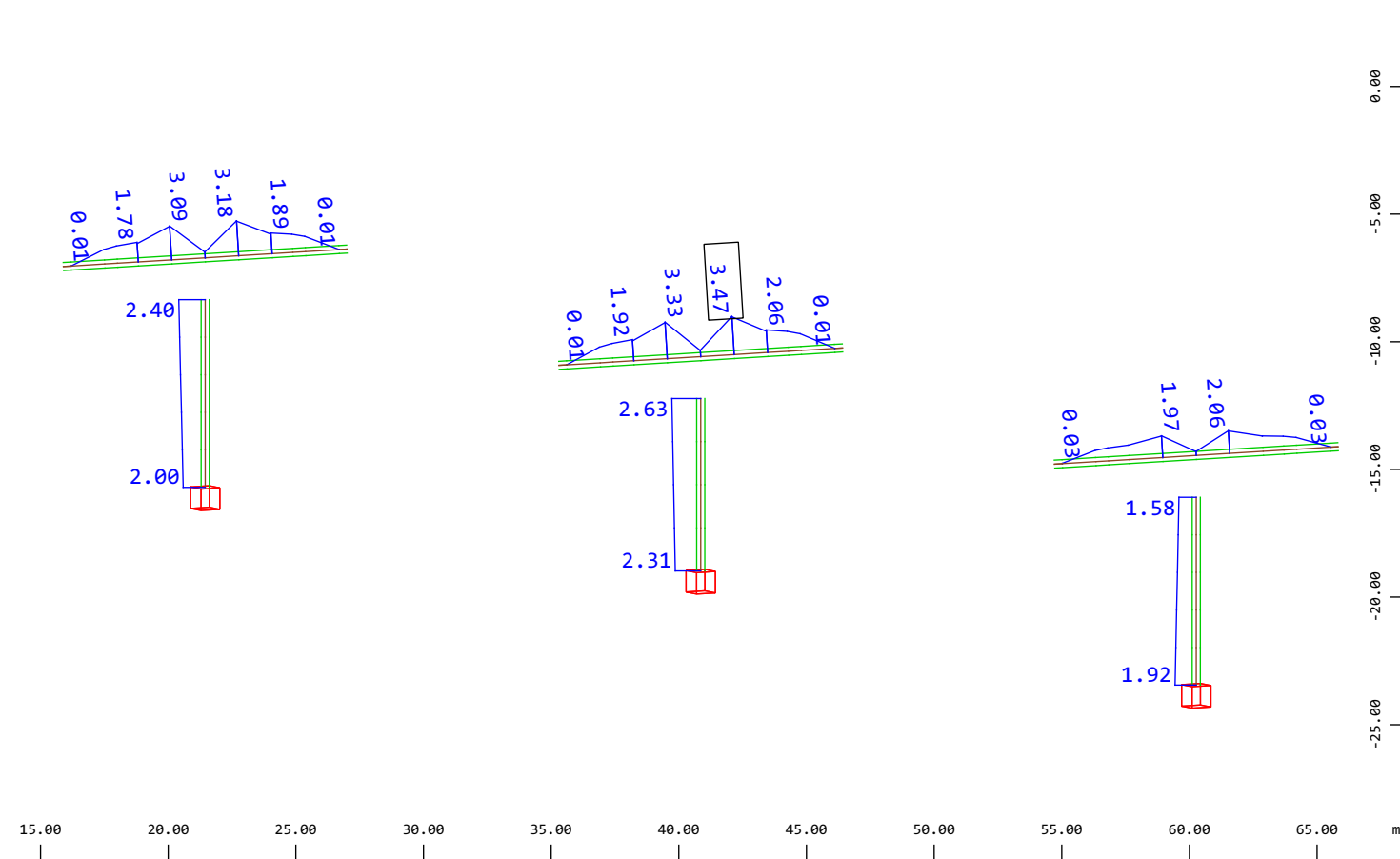
Z

Y

X

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 921 PROMET ZVEZNA { mxx My PX P }, Material 1 C
30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Max=2.43)

M 1 : 283
X * 0.495
Y * 0.876
Z * 0.994



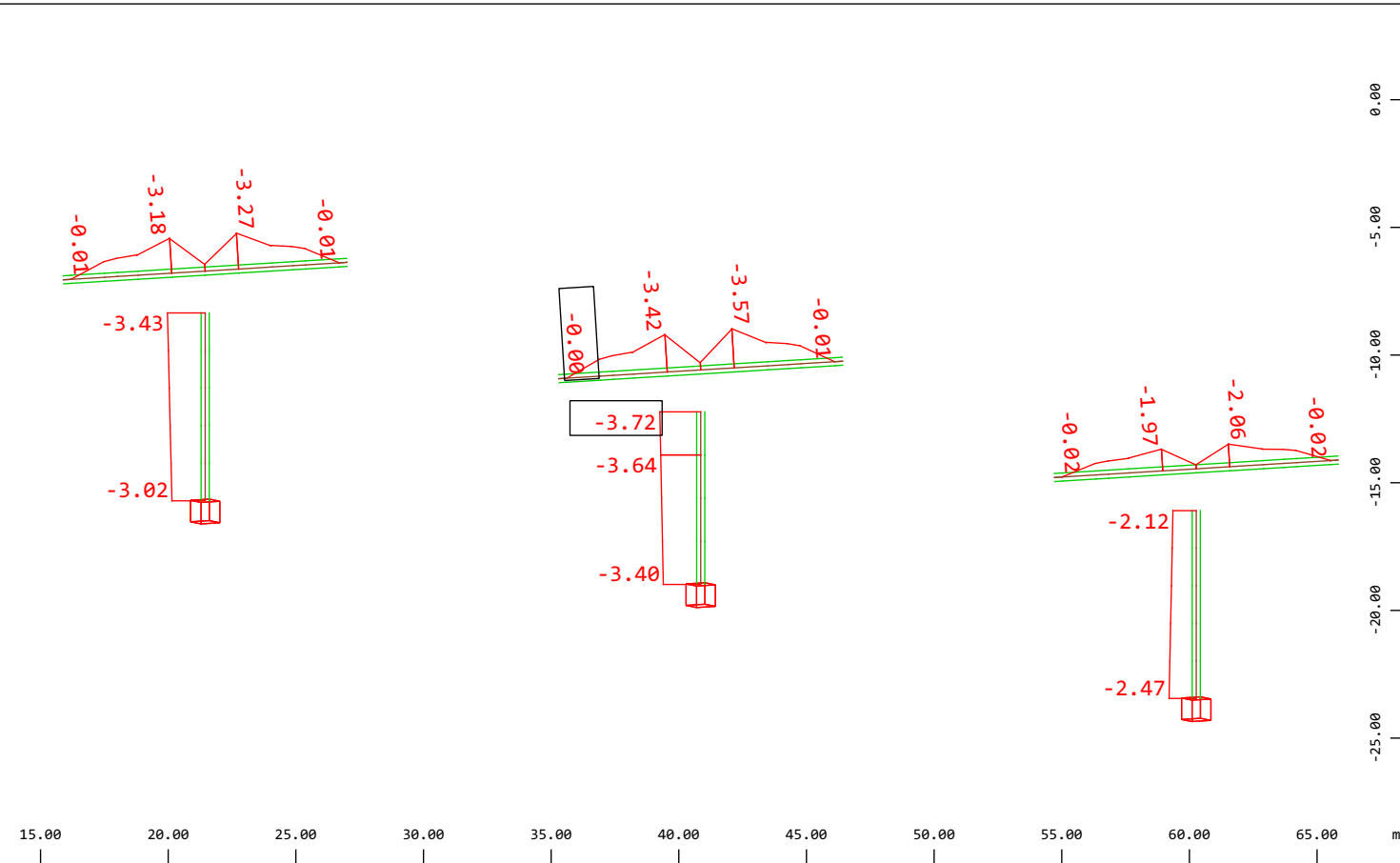
Z

Y

X

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 922 PROMET ZVEZNA { mxx My PX P }, Material 1 C
30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Max=3.47)

M 1 : 282
X * 0.495
Y * 0.876
Z * 0.994



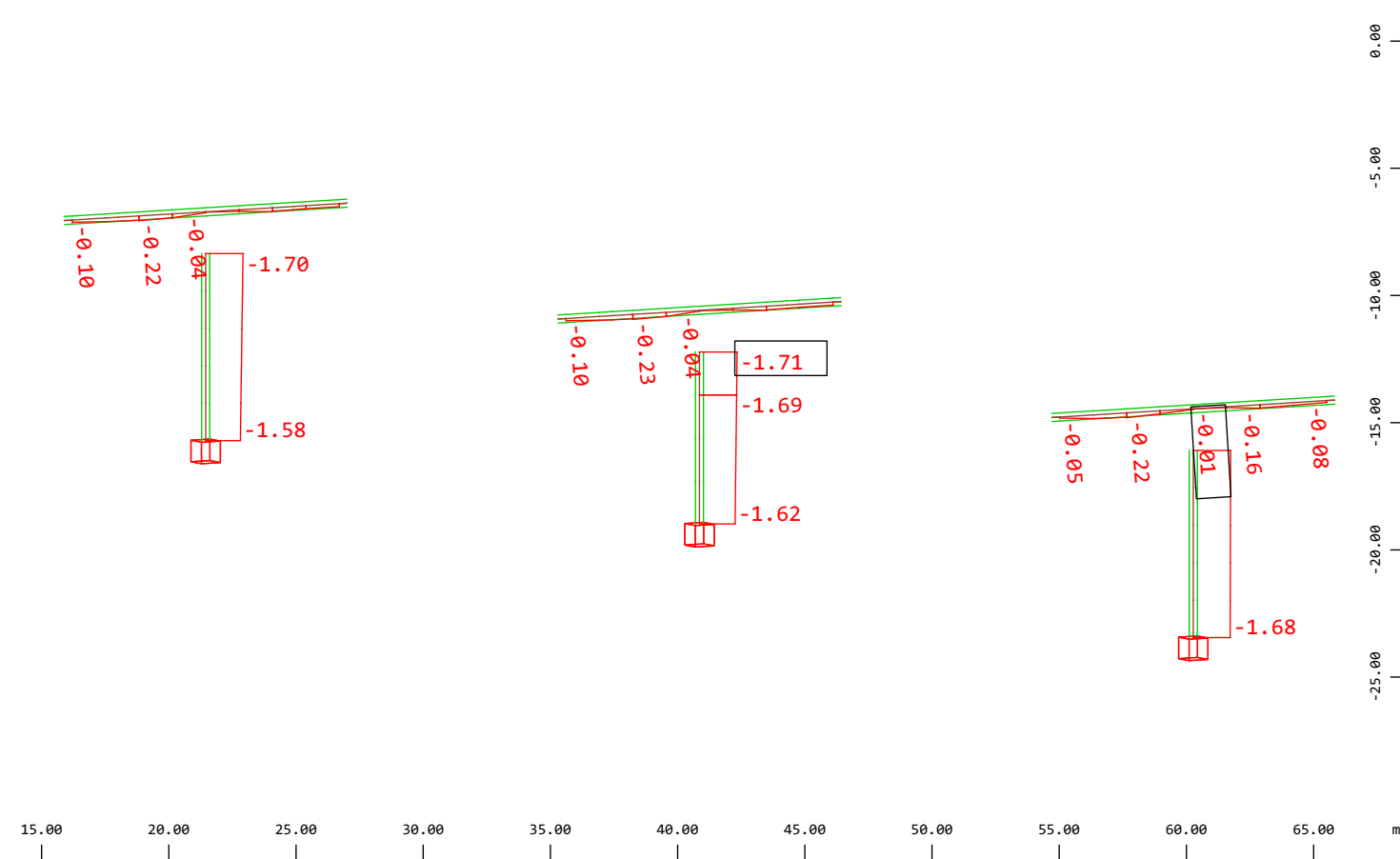
Z

Y

X

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 922 PROMET ZVEZNA { mxx My PX P }, Material 1 C
30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Min=-3.72) (Max=0.000)

M 1 : 282
X * 0.495
Y * 0.876
Z * 0.994



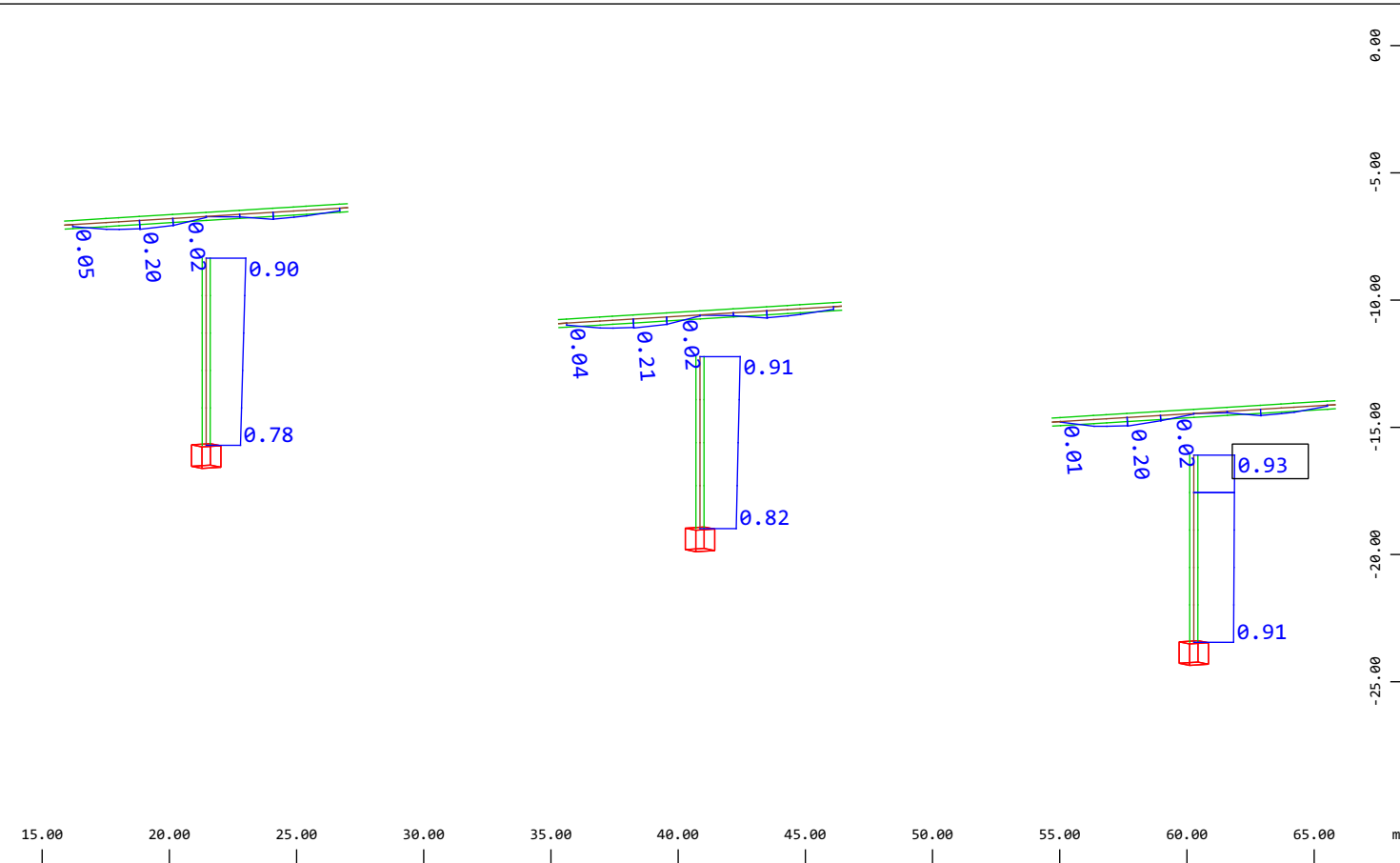
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 941 PROMET TS { mxx My PX P }, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 3.2734 MPa (Min=-1.71) (Max=0.000)

M 1 : 283
X * 0.495
Y * 0.876
Z * 0.994



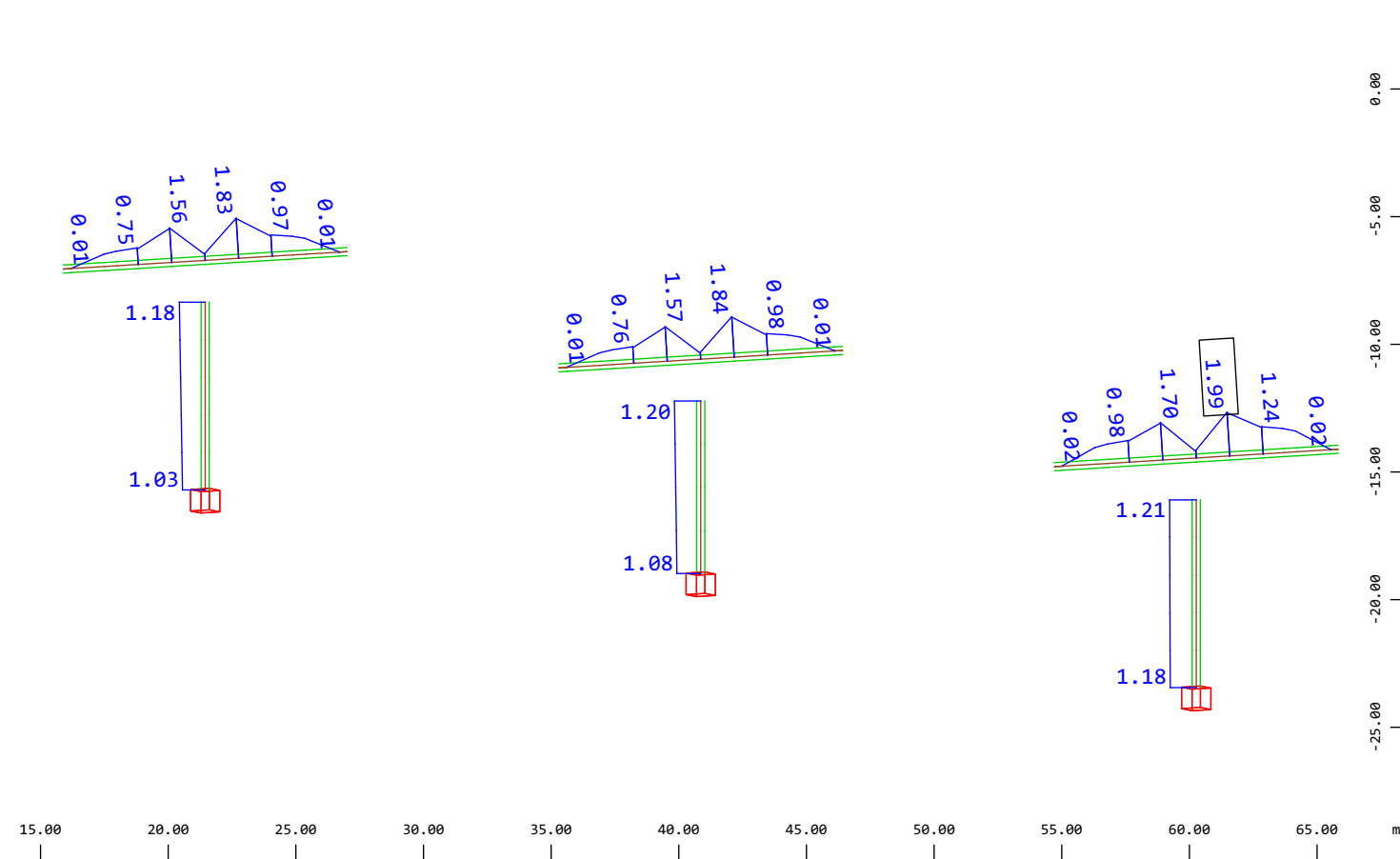
Z

X

Y

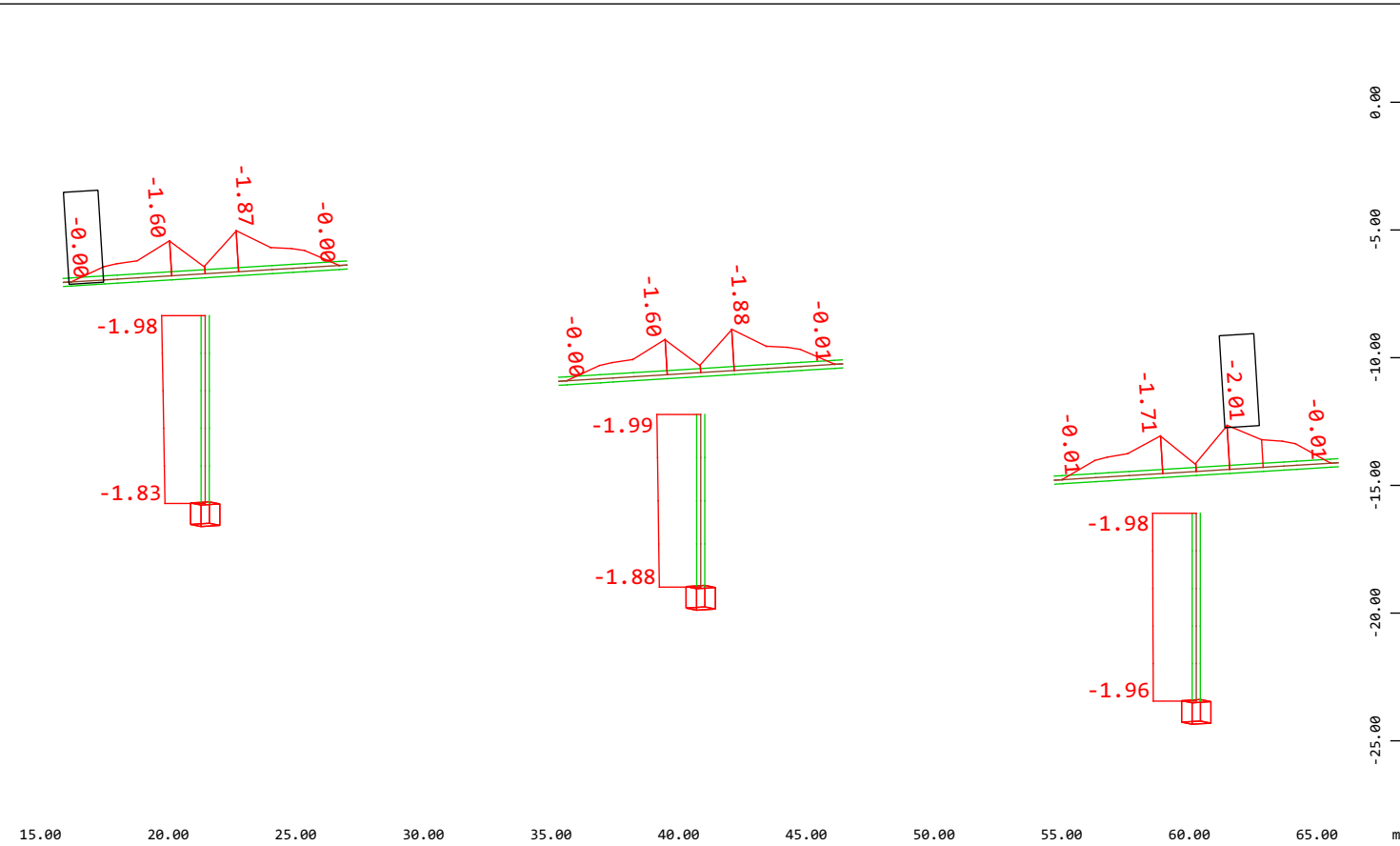
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 941 PROMET TS { mxx My PX P }, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Max=0.93)

M 1 : 283
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 942 PROMET TS { mxx My PX P }, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 3.2734 MPa (Max=1.99)

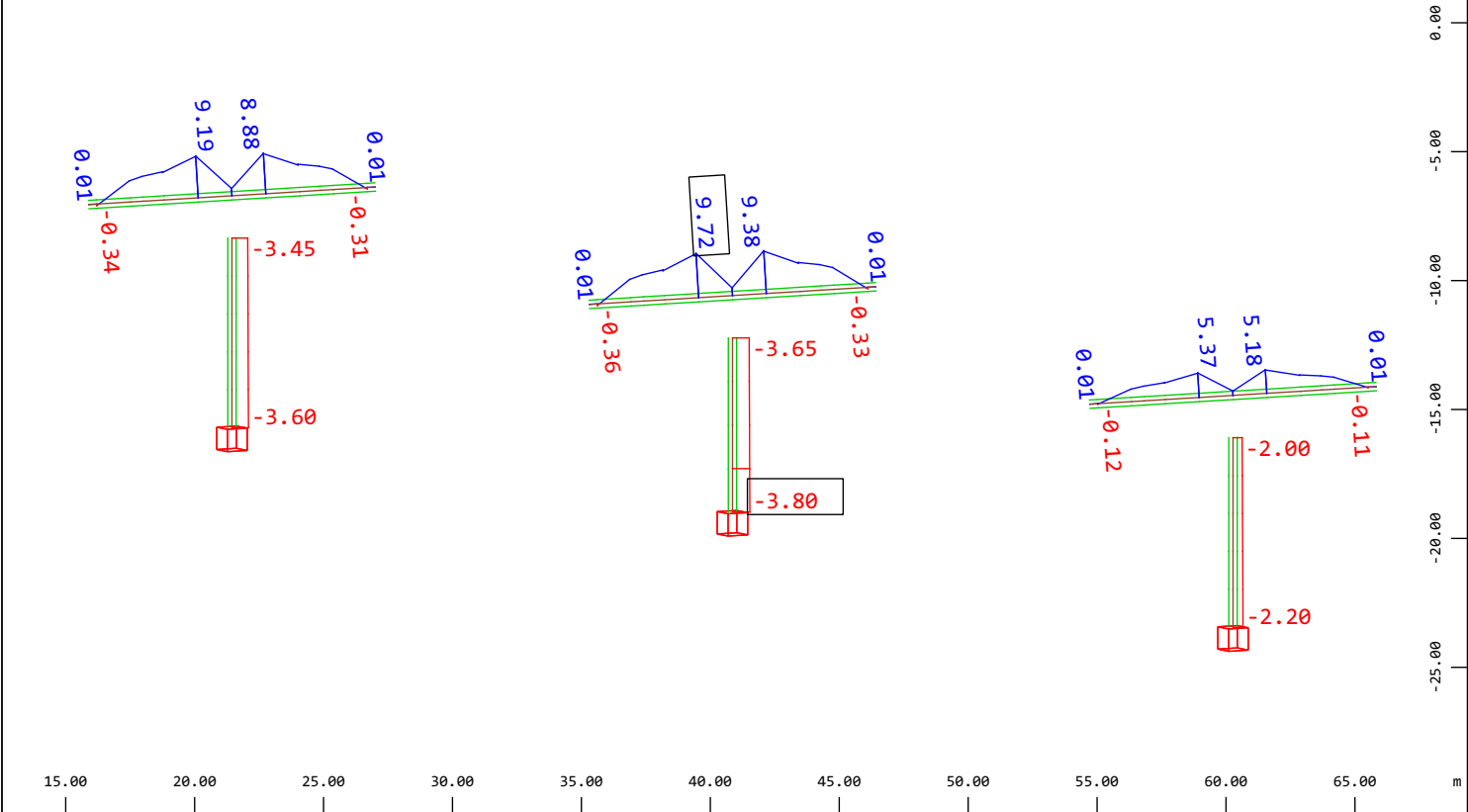
M 1 : 282
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 942 PROMET TS { mxx My PX P }, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 3.2734 MPa (Min=-2.01) (Max=0.000)

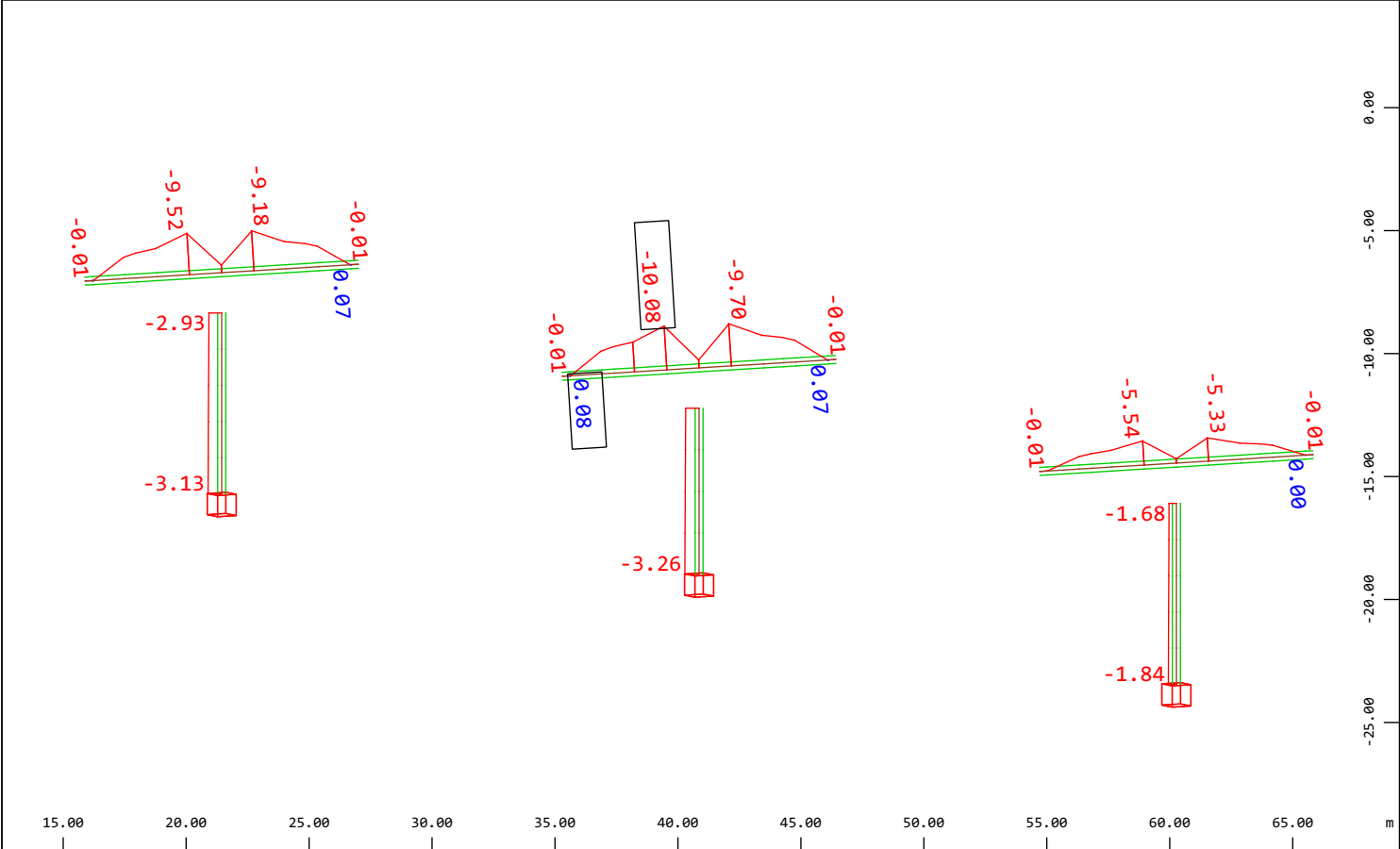
M 1 : 282
X * 0.495
Y * 0.876
Z * 0.994

NAPETOSTI FAZE GRADNJE IN POSAMEZNE OBTEŽBE - MODEL 35+40+40,C2+2



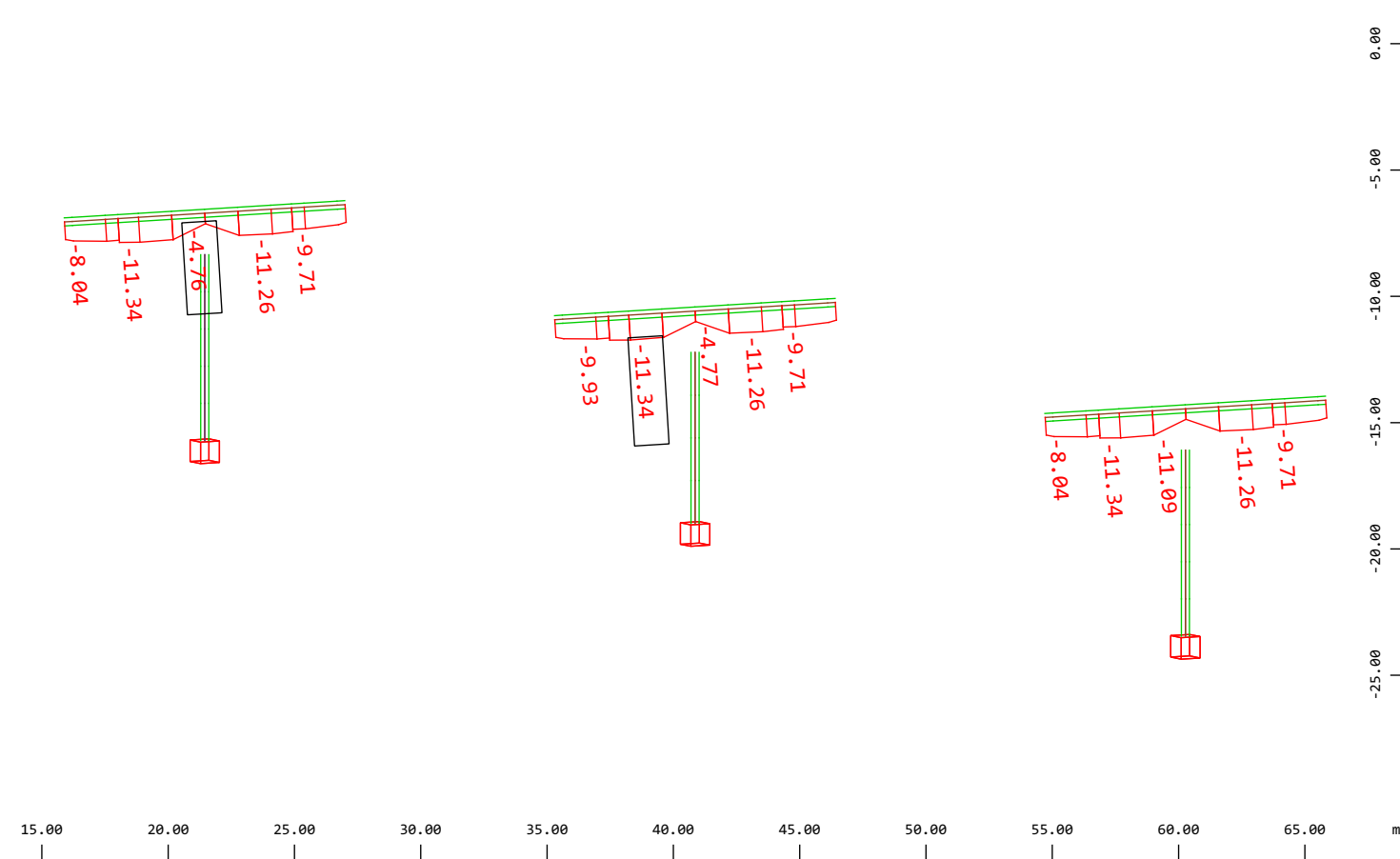
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7001 sum_G, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 16.367 MPa (Min=-3.80) (Max=9.72)

M 1 : 290
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7001 sum_G, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 16.367 MPa (Min=-10.08) (Max=0.08)

M 1 : 290
X * 0.495
Y * 0.876
Z * 0.994



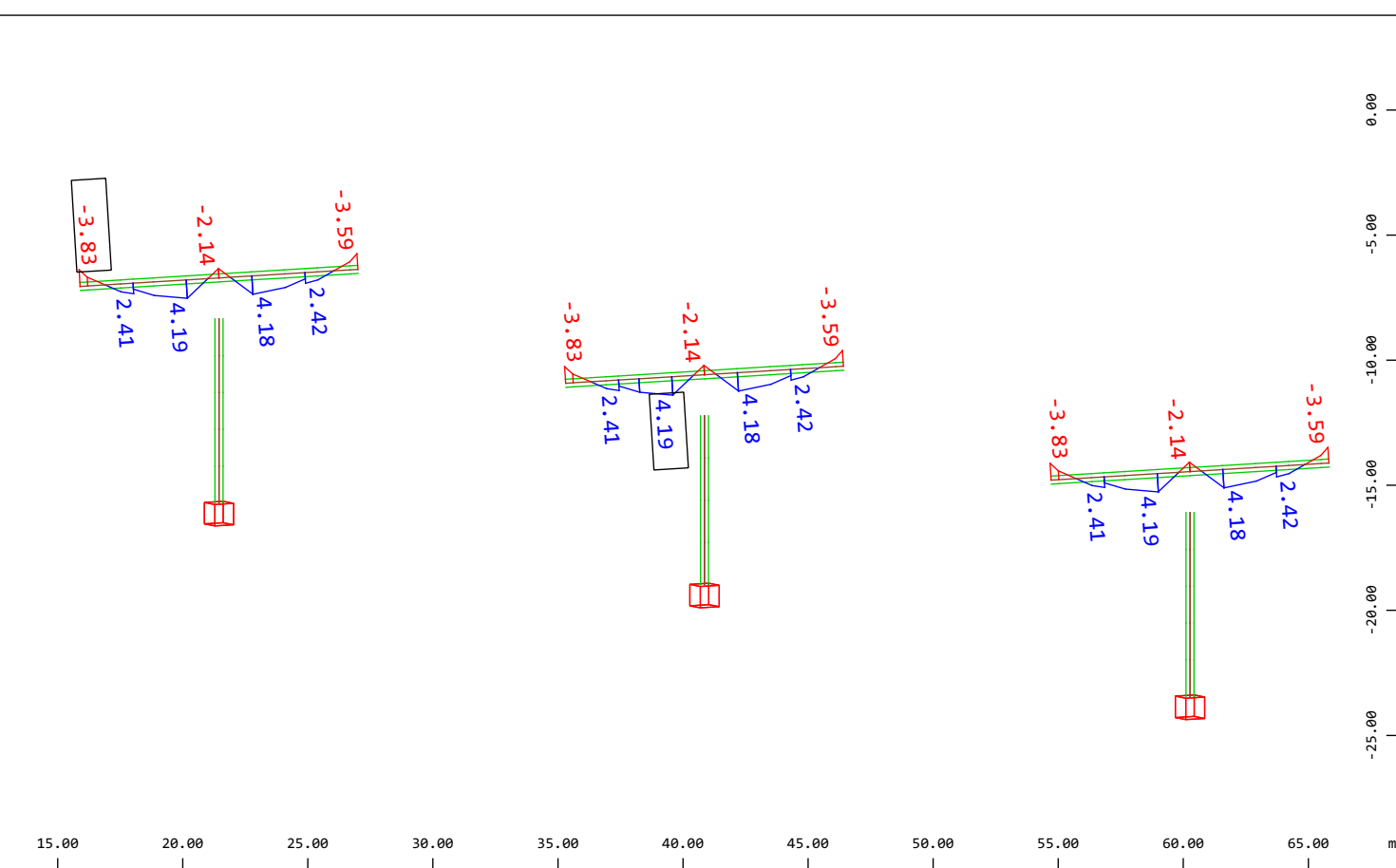
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7002 sum_P, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 32.734 MPa (Min=-11.34) (Max=0.00)

M 1 : 285
X * 0.495
Y * 0.876
Z * 0.994



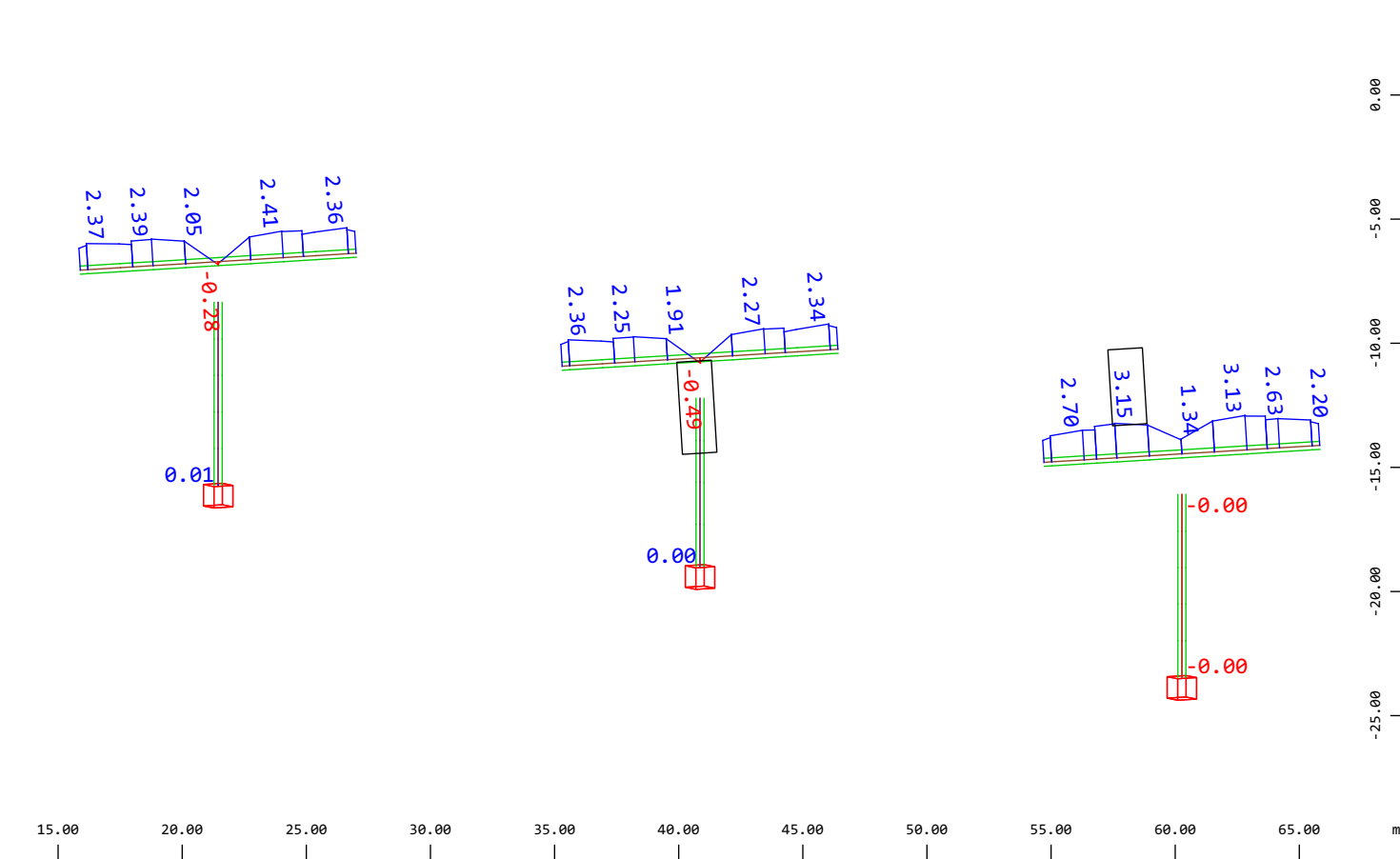
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7002 sum_P, Material 1 C 30/37 (EN 1992) STEBRI
, 1 cm 3D = 16.367 MPa (Min=-3.83) (Max=4.19)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



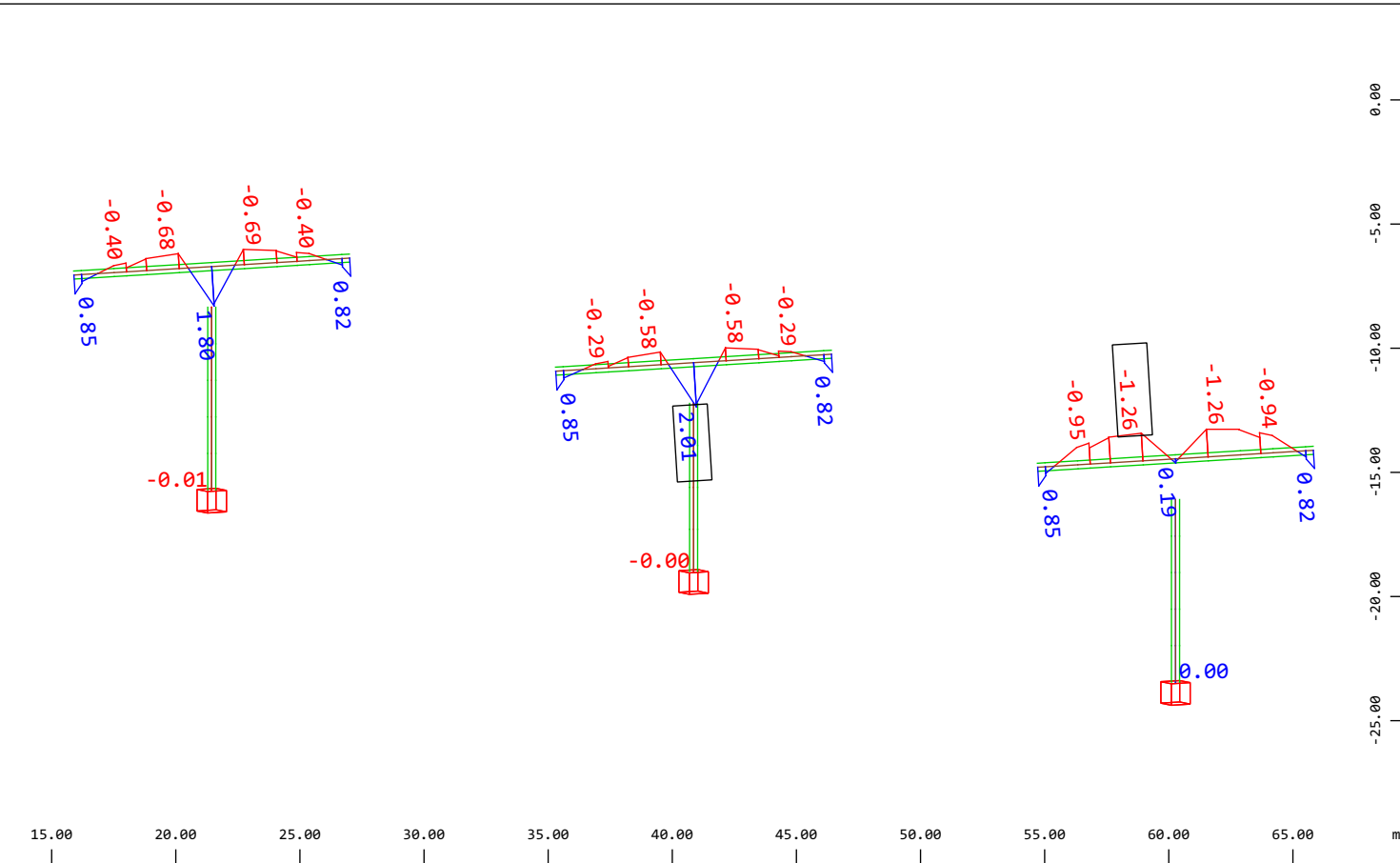
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7003 sum_C, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 6.5469 MPa (Min=-0.49) (Max=3.15)

M 1 : 290
X * 0.495
Y * 0.876
Z * 0.994



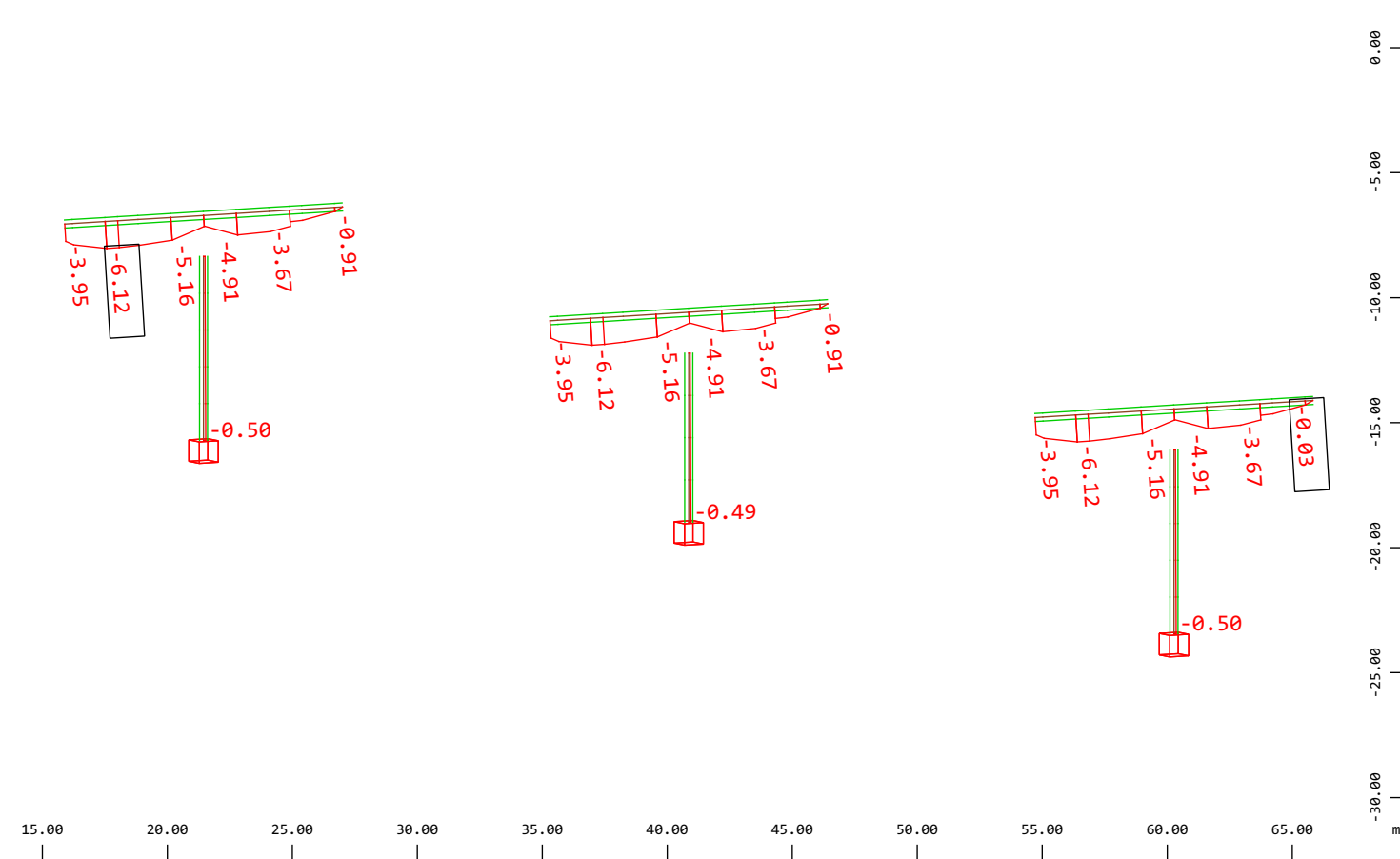
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7003 sum_C, Material 1 C 30/37 (EN 1992) STEBRI ,
1 cm 3D = 3.2734 MPa (Min=-1.26) (Max=2.01)

M 1 : 290
X * 0.495
Y * 0.876
Z * 0.994



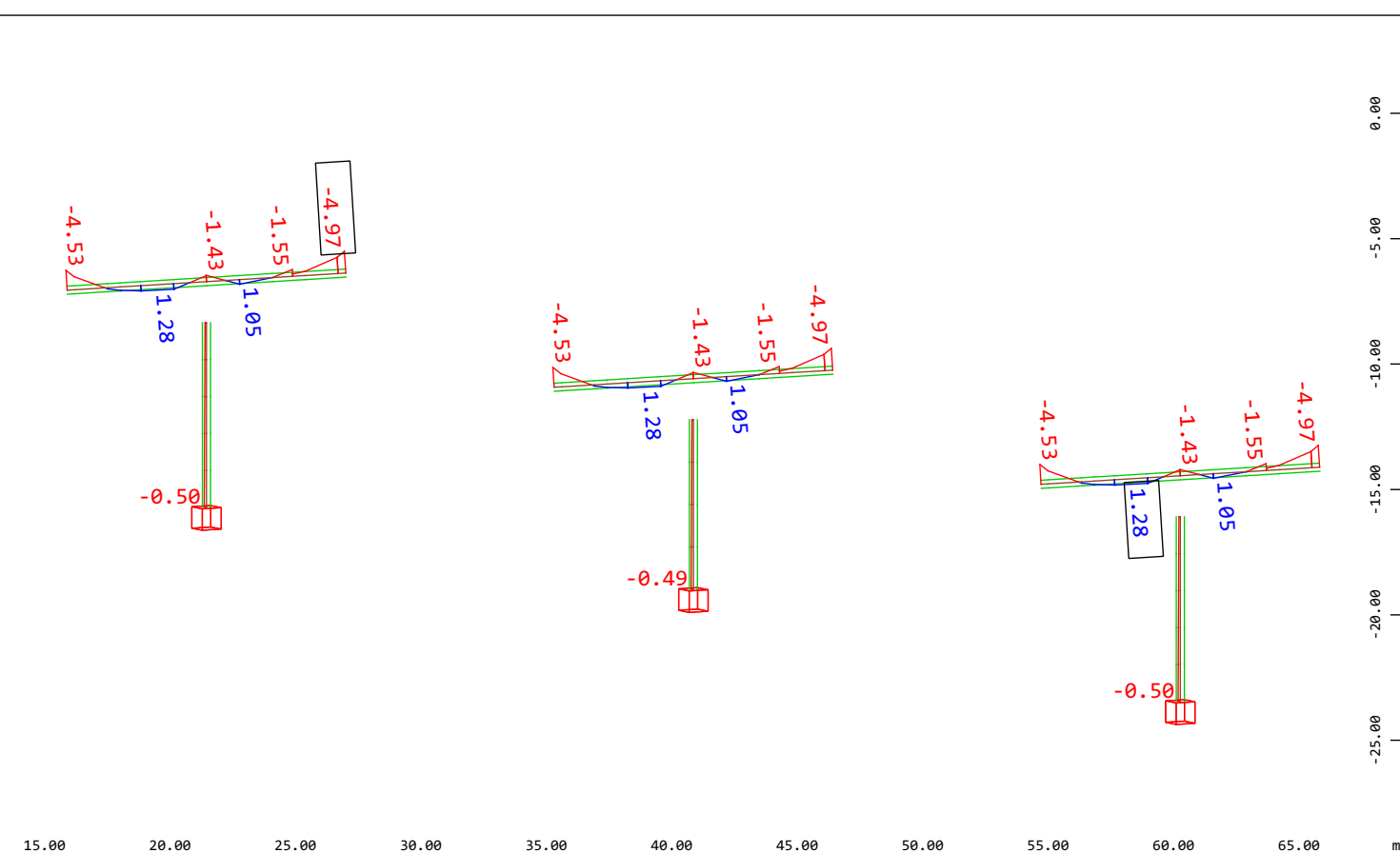
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7006 Sum_06 Prestress, Material 1 C 30/37 (EN 1992)
STEBRI , 1 cm 3D = 16.367 MPa (Min=-6.12) (Max=-0.03)

M 1 : 288
X * 0.495
Y * 0.876
Z * 0.994



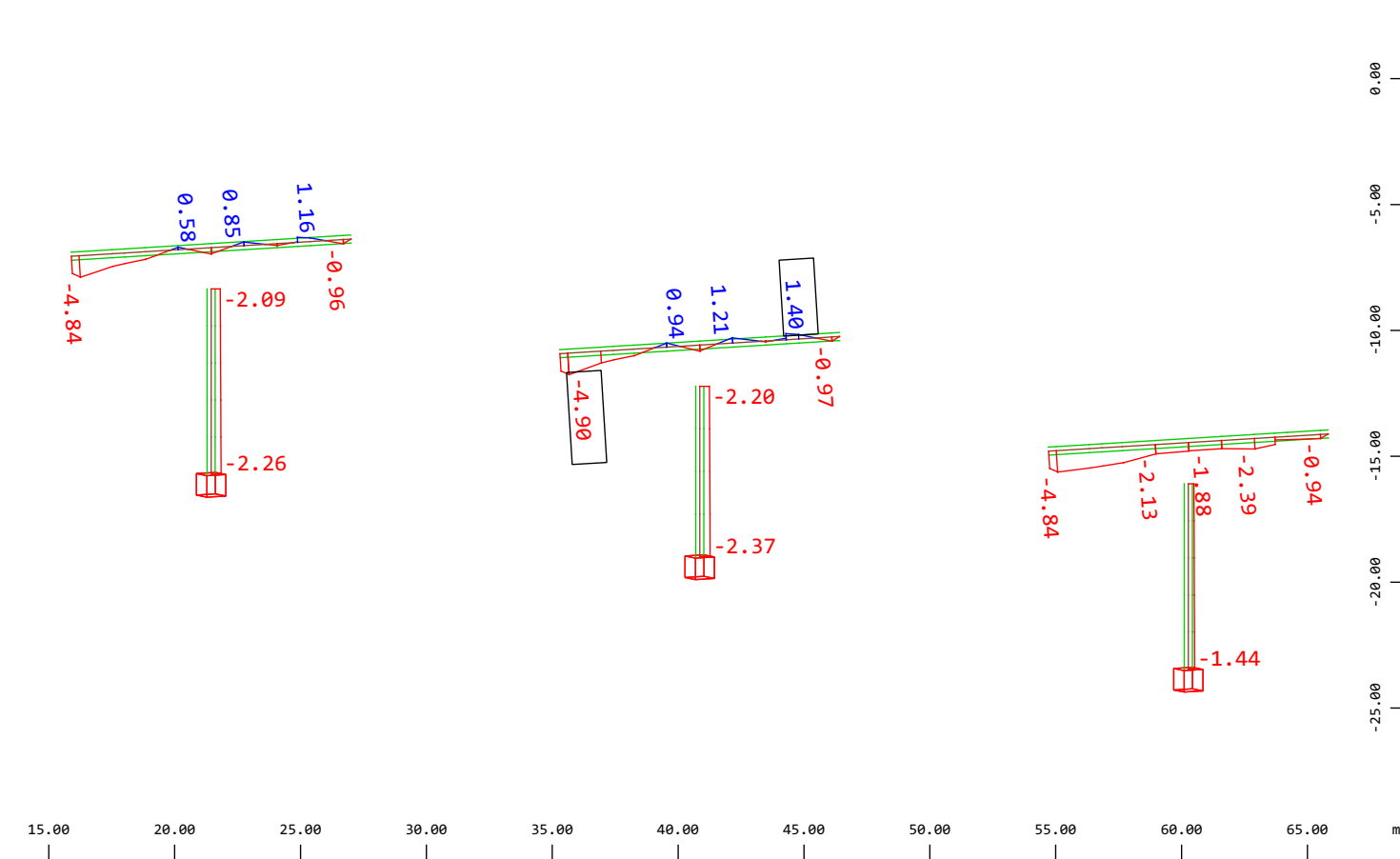
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7006 Sum_06 Prestress, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-4.97) (Max=1.28)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



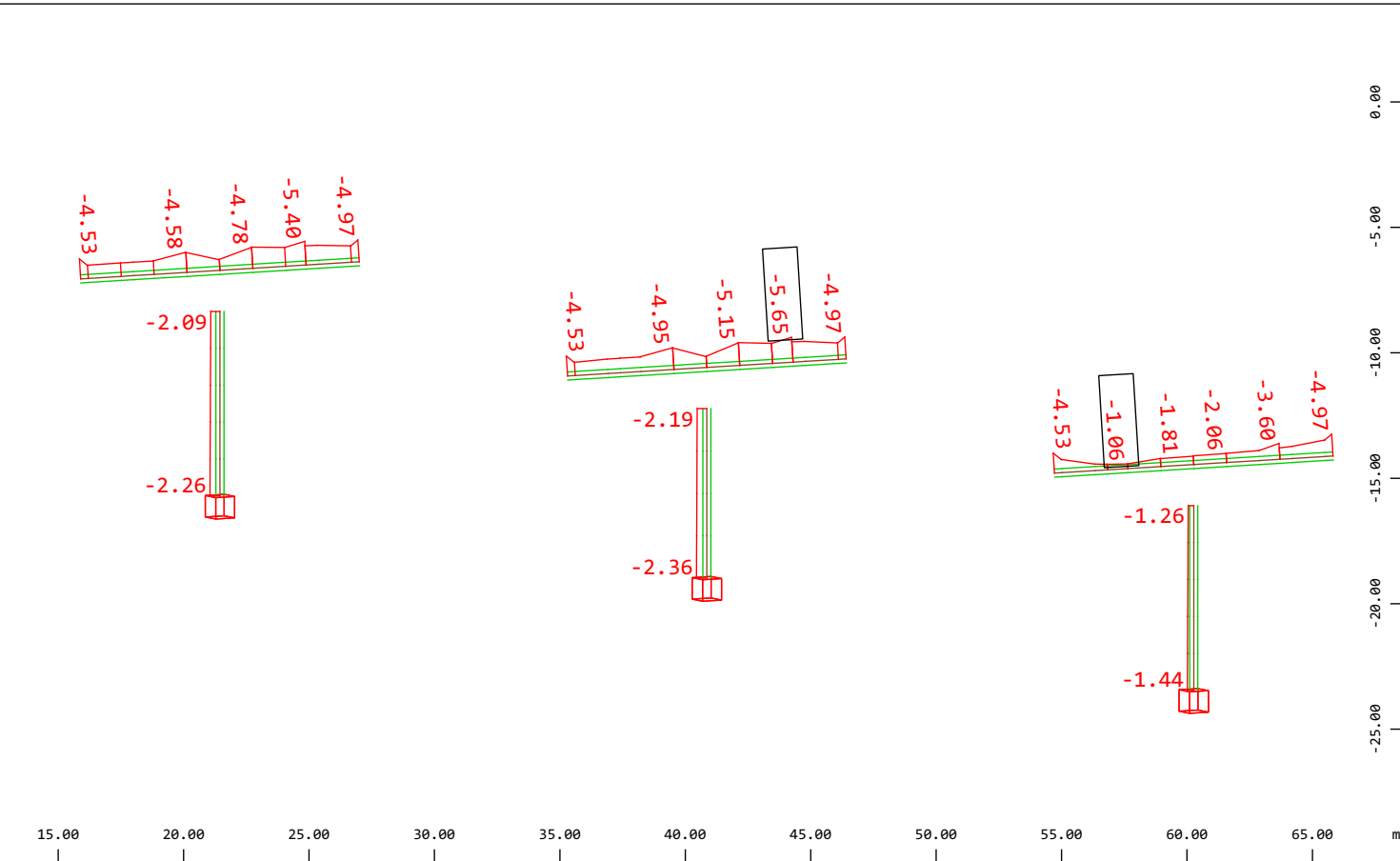
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7010 Sum_10 Prekladna konstru, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-4.90) (Max=1.40)

M 1 : 286
X * 0.495
Y * 0.876
Z * 0.994



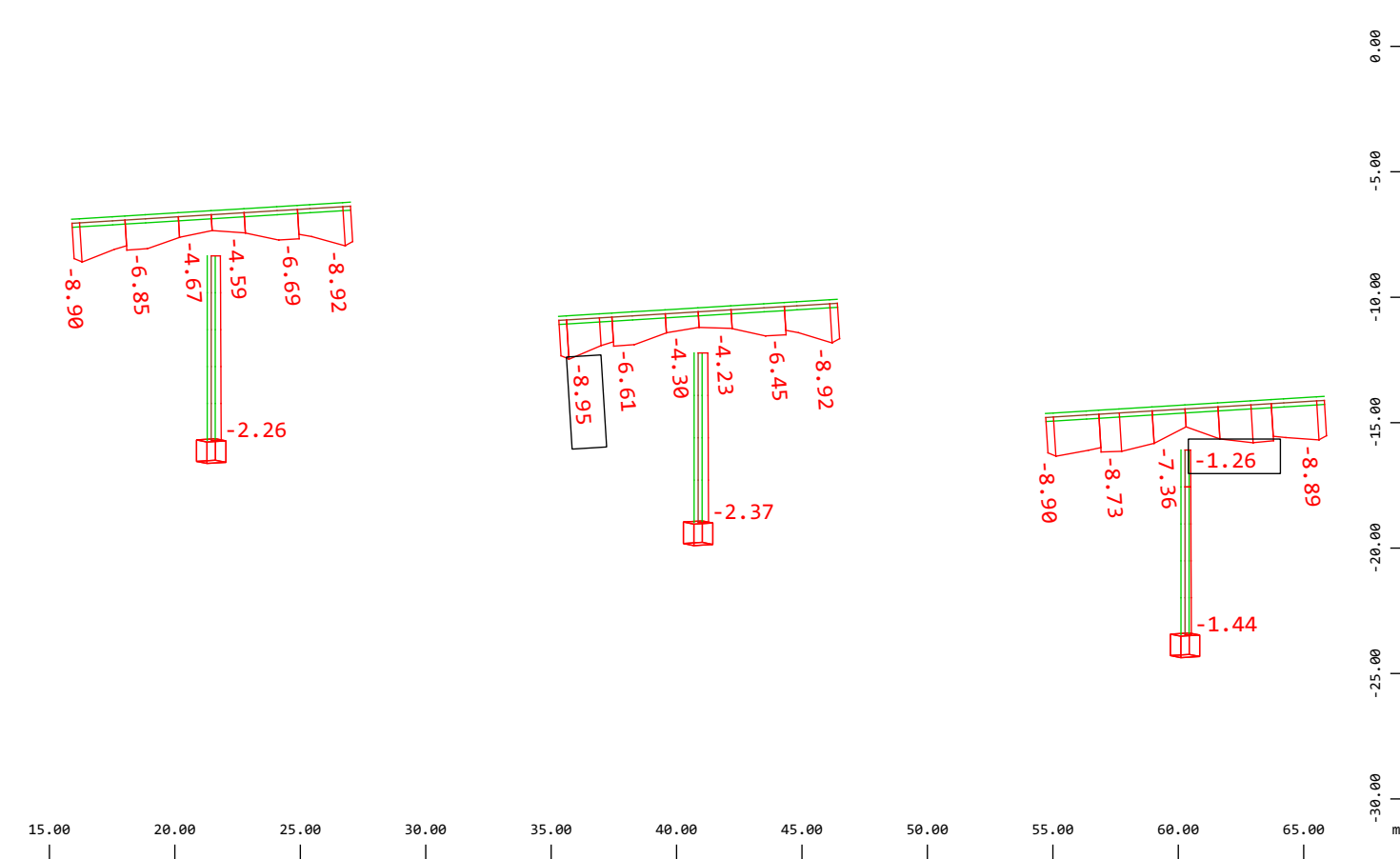
Z

X

Y

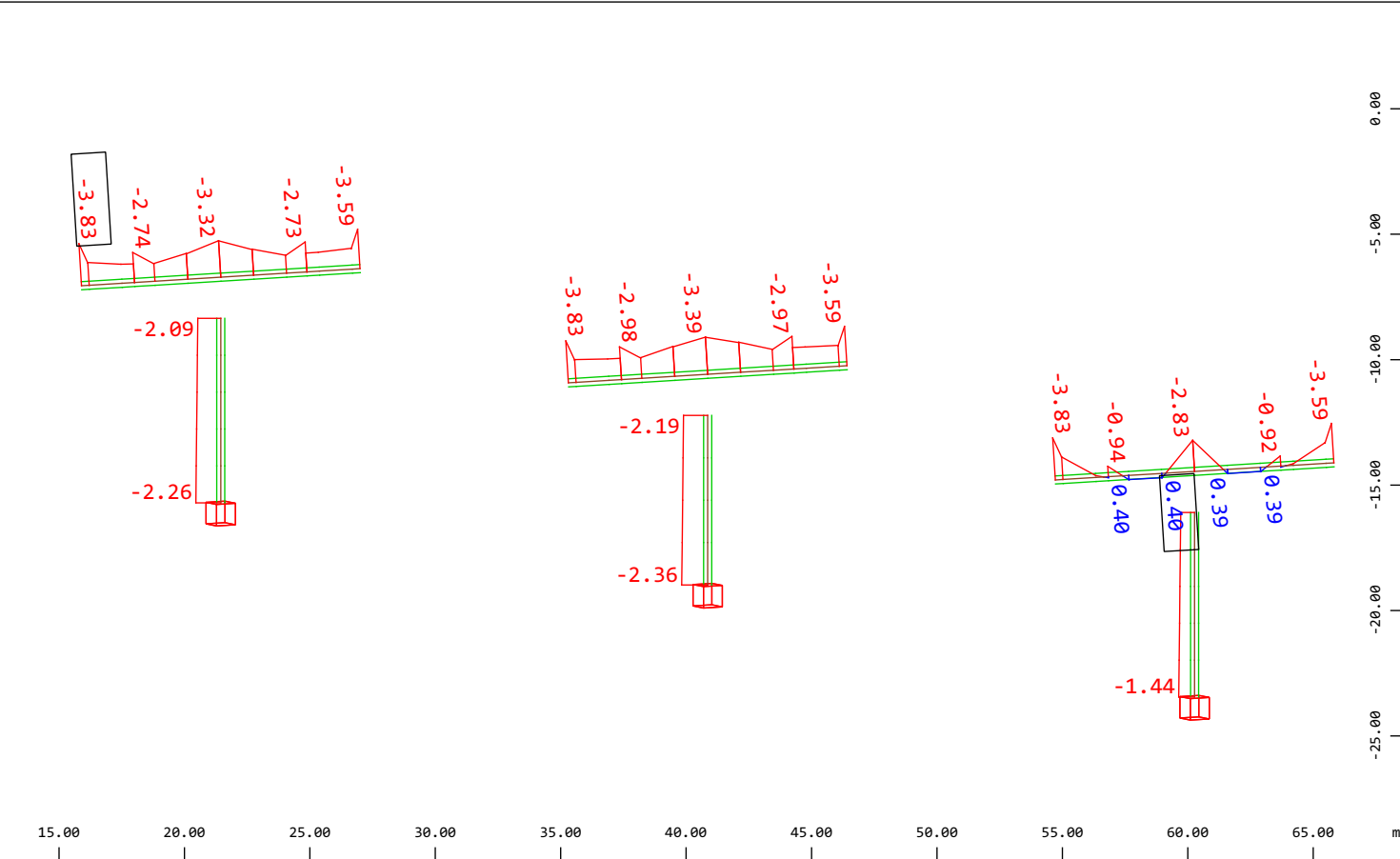
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7010 Sum_10 Prekladna konstru, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-5.65) (Max=-1.06)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



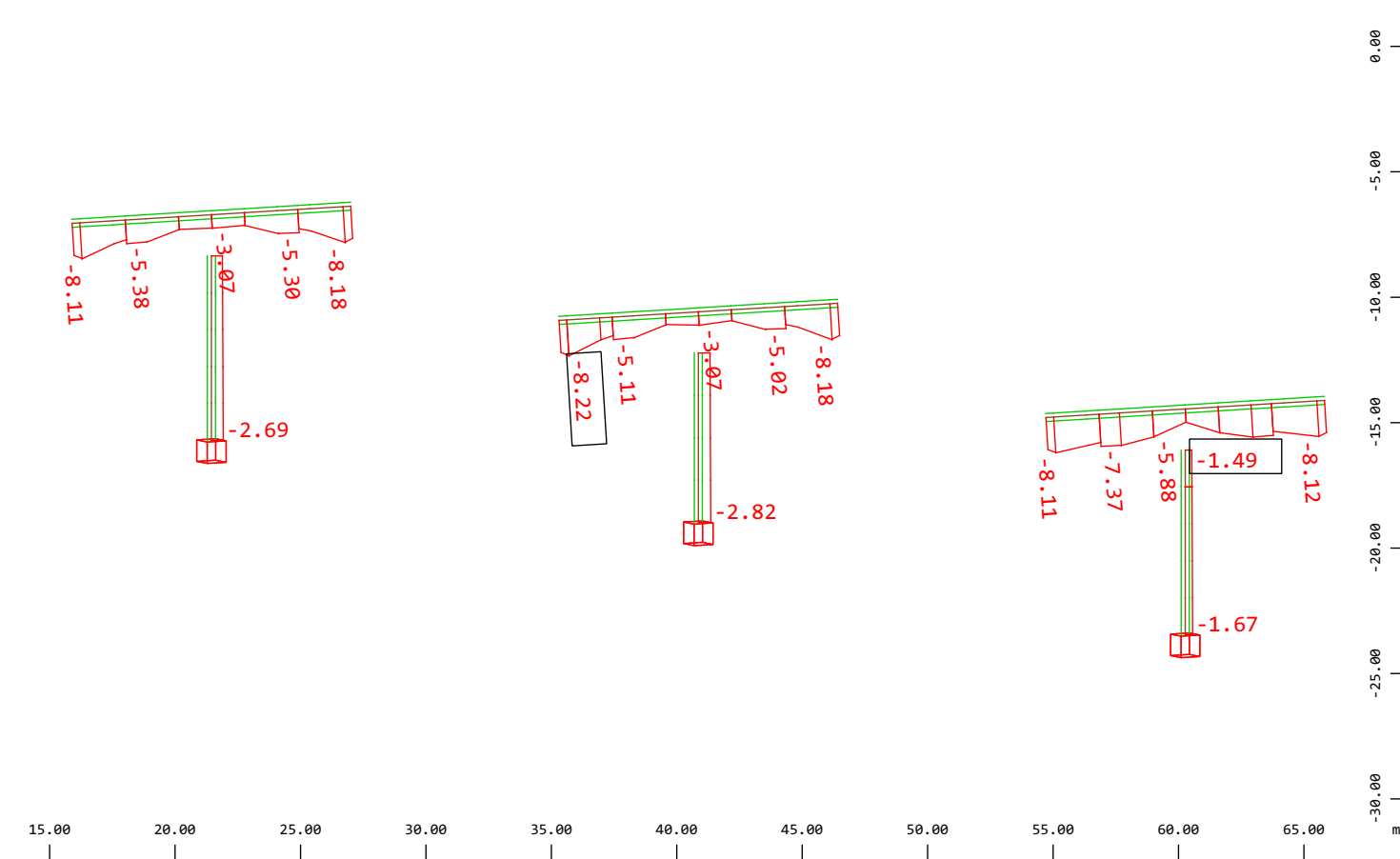
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7011 Sum_11 Prestress, Material 1 C 30/37 (EN 1992)
STEBRI , 1 cm 3D = 16.367 MPa (Min=-8.95) (Max=-1.26)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7011 Sum_11 Prestress, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Min=-3.83) (Max=0.40)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



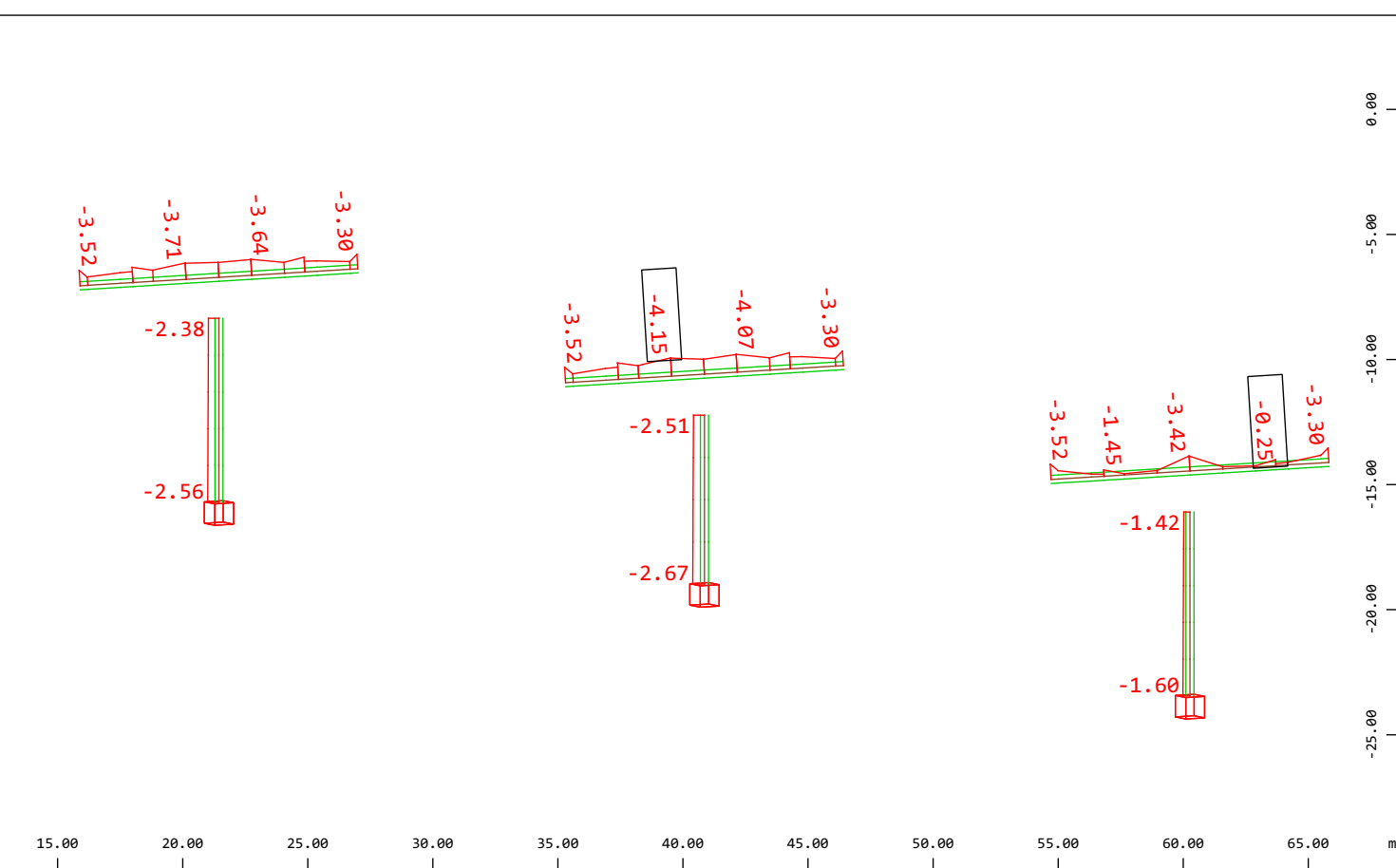
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7020 Sum_20 AB plošča prekl, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-8.22) (Max=-1.49)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



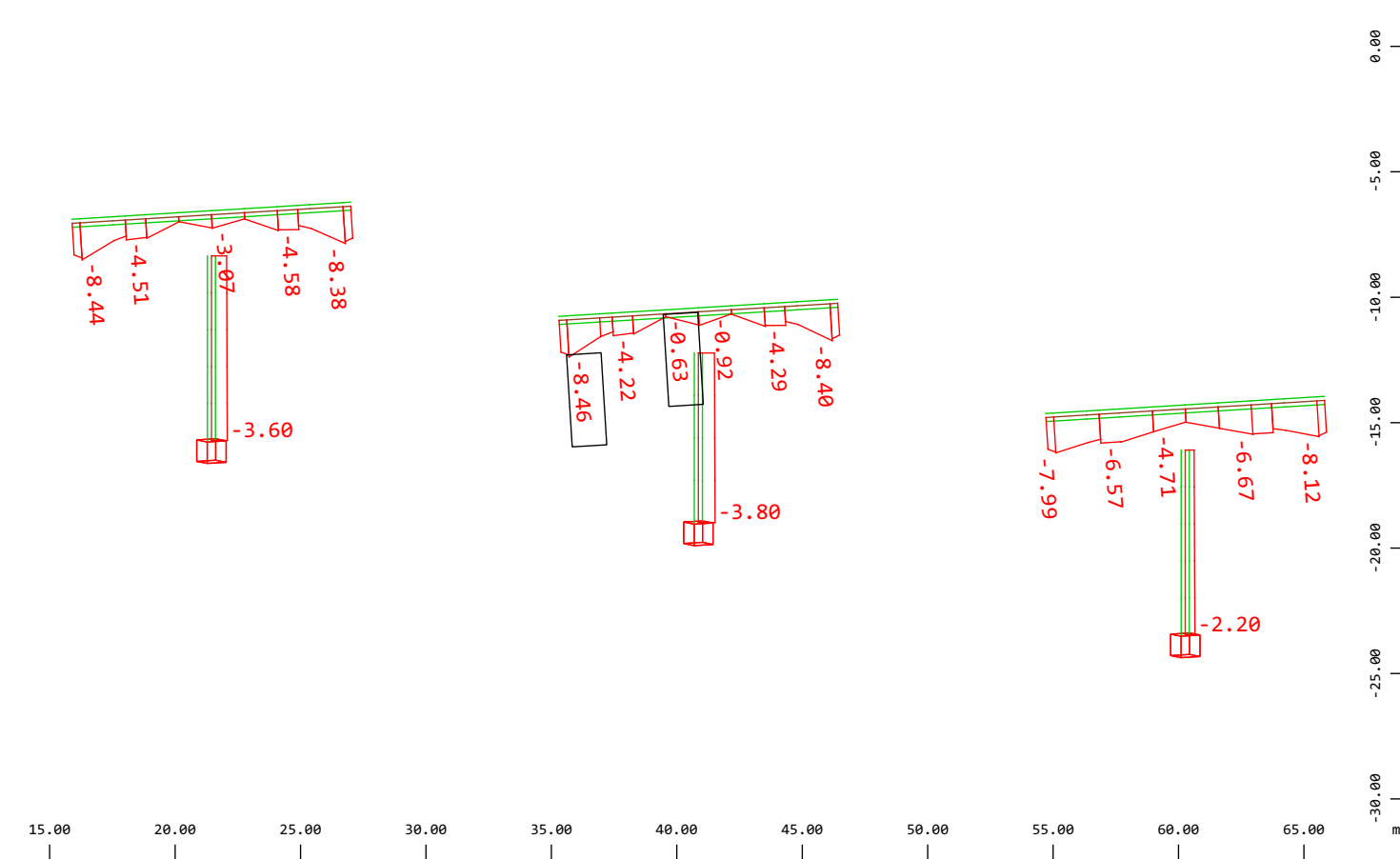
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7020 Sum_20 AB plošča prekl, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-4.15) (Max=-0.25)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



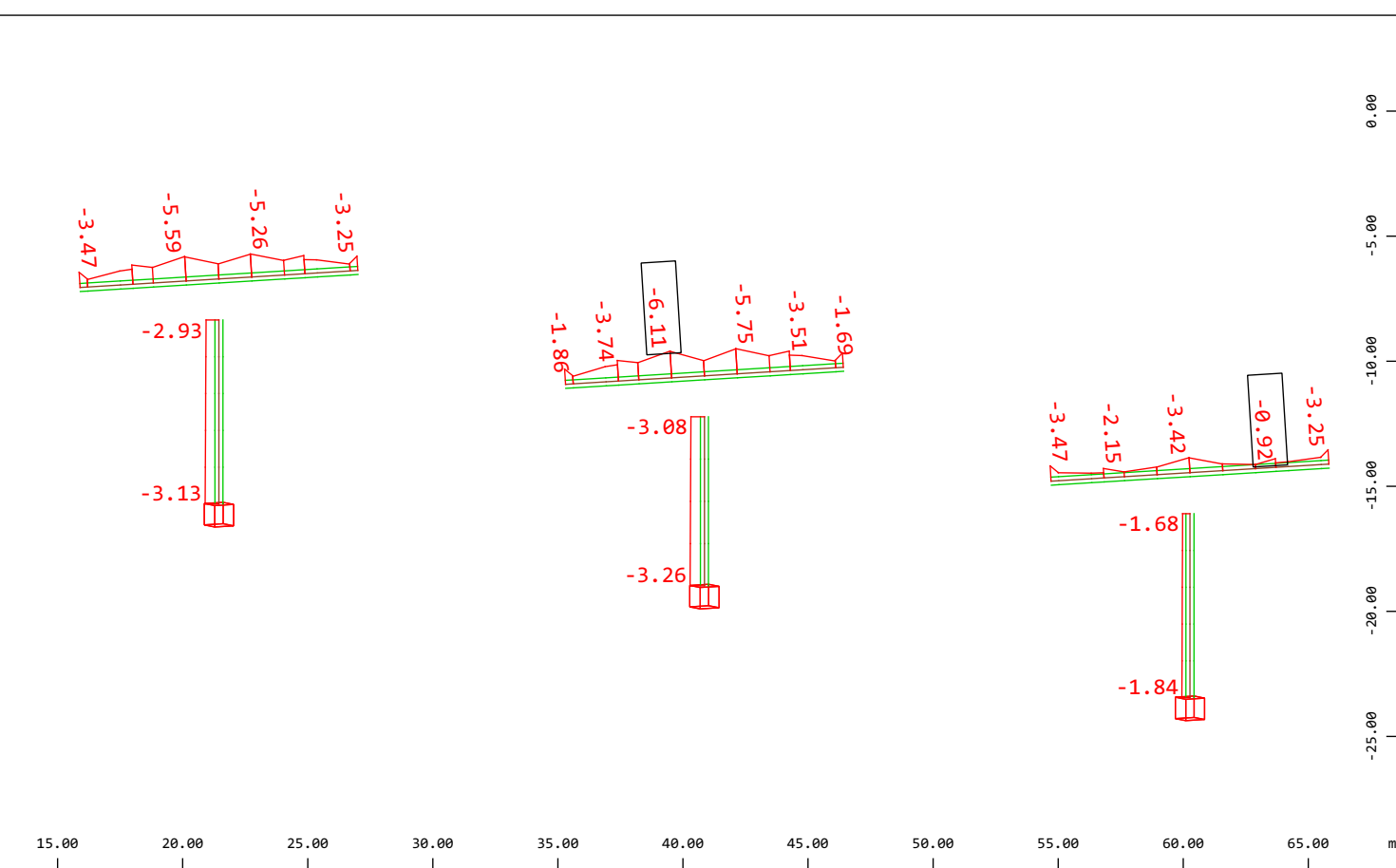
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7040 Sum_40 Krov, Material 1 C 30/37 (EN 1992)
STEBRI , 1 cm 3D = 16.367 MPa (Min=-8.46) (Max=-0.63)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



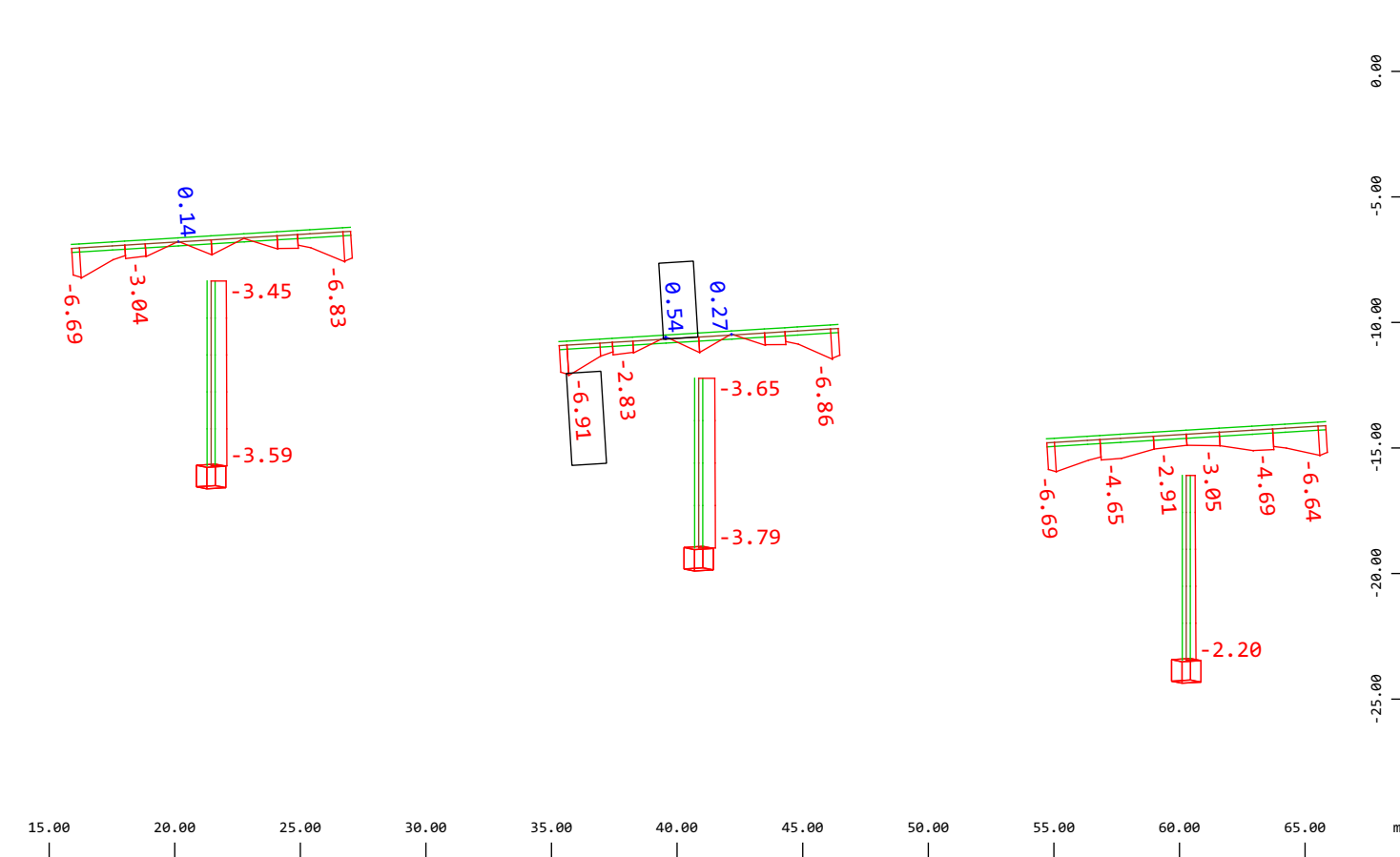
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7040 Sum_40 Krov, Material 1 C 30/37 (EN 1992)
STEBRI , 1 cm 3D = 16.367 MPa (Min=-6.11) (Max=-0.92)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



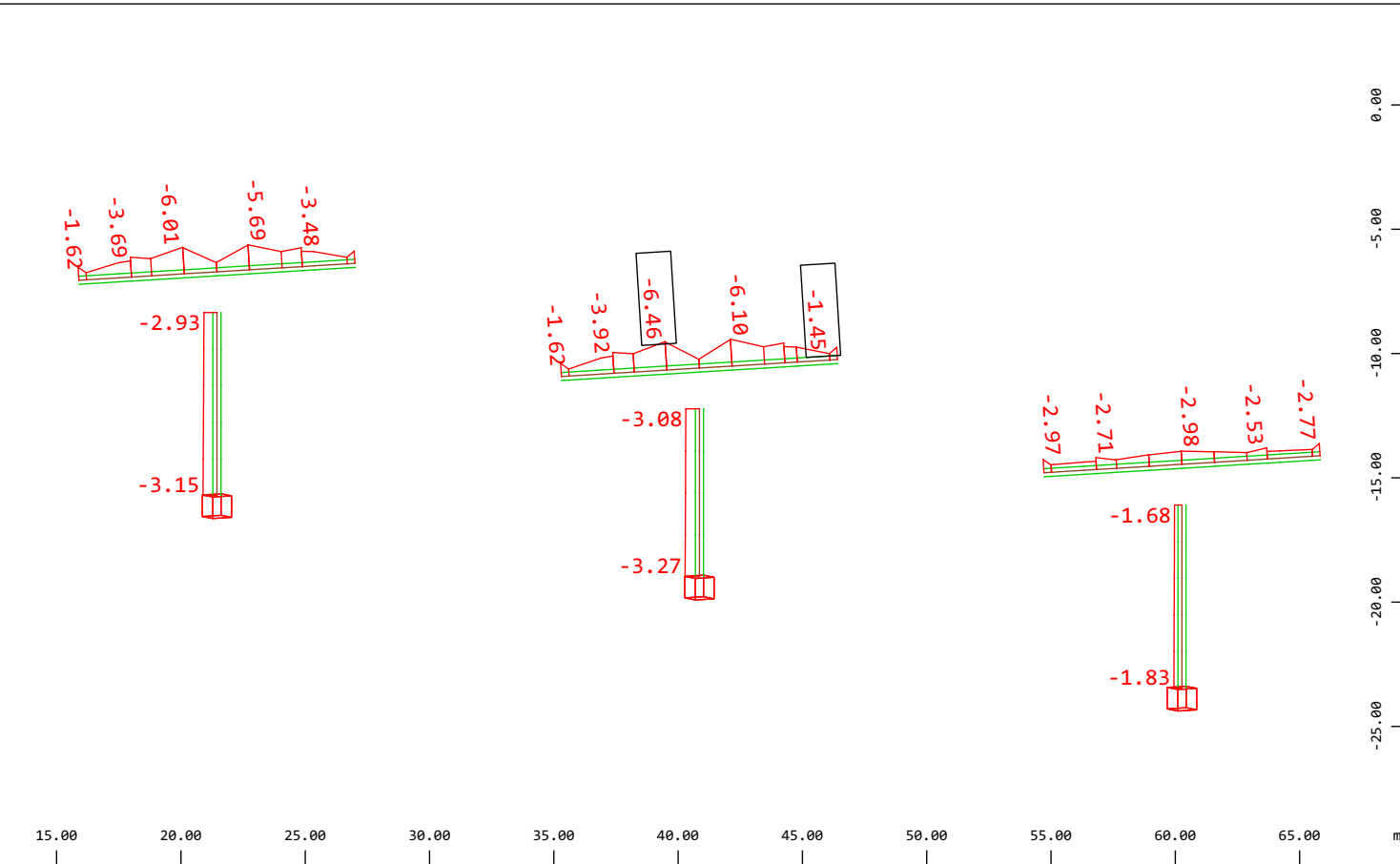
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 7047 Sum_47 Creep until today, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-6.91) (Max=0.54)

M 1 : 287
X * 0.495
Y * 0.876
Z * 0.994



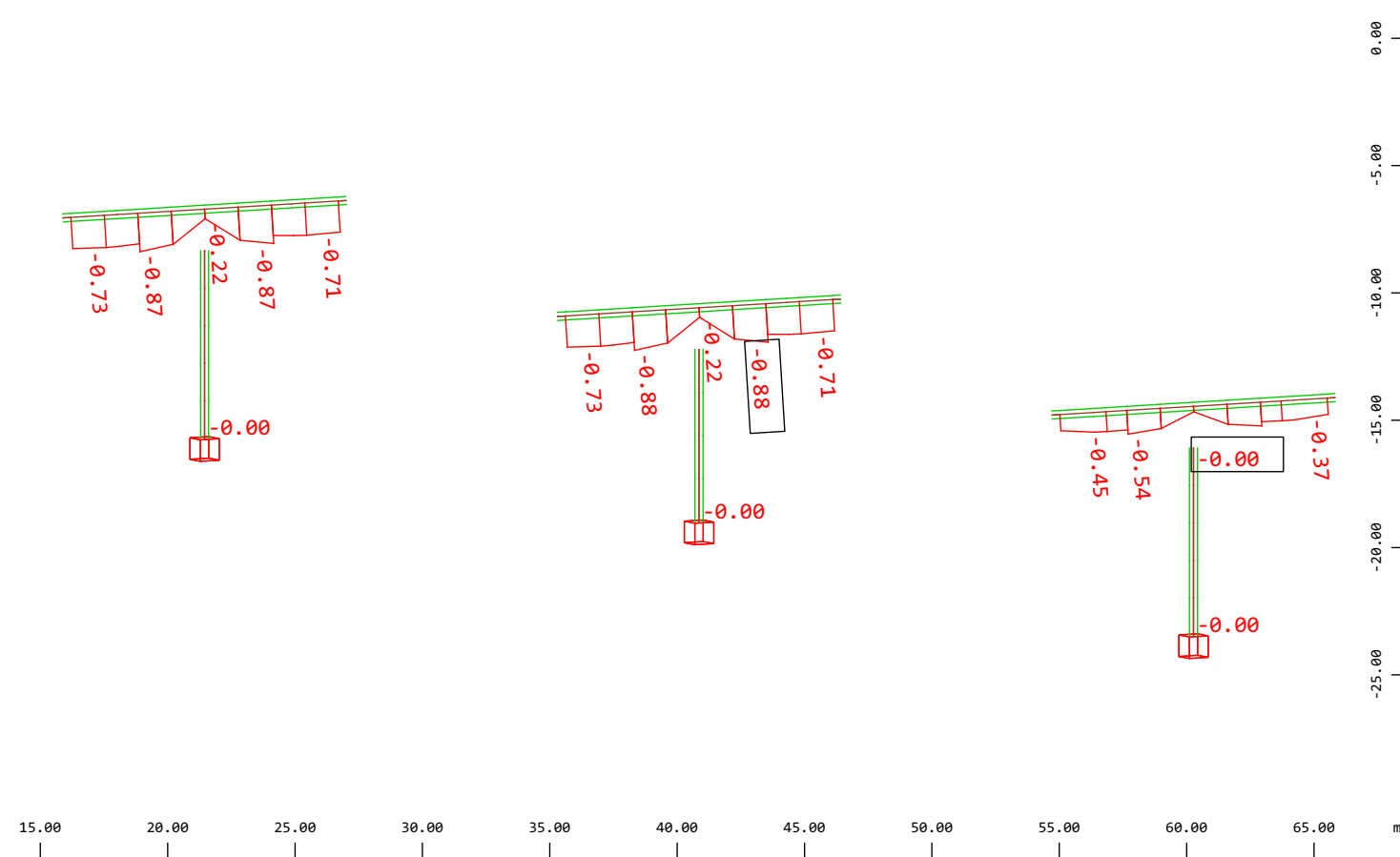
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 7047 Sum_47 Creep until today, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 16.367 MPa (Min=-6.46) (Max=-1.45)

M 1 : 290
X * 0.495
Y * 0.876
Z * 0.994



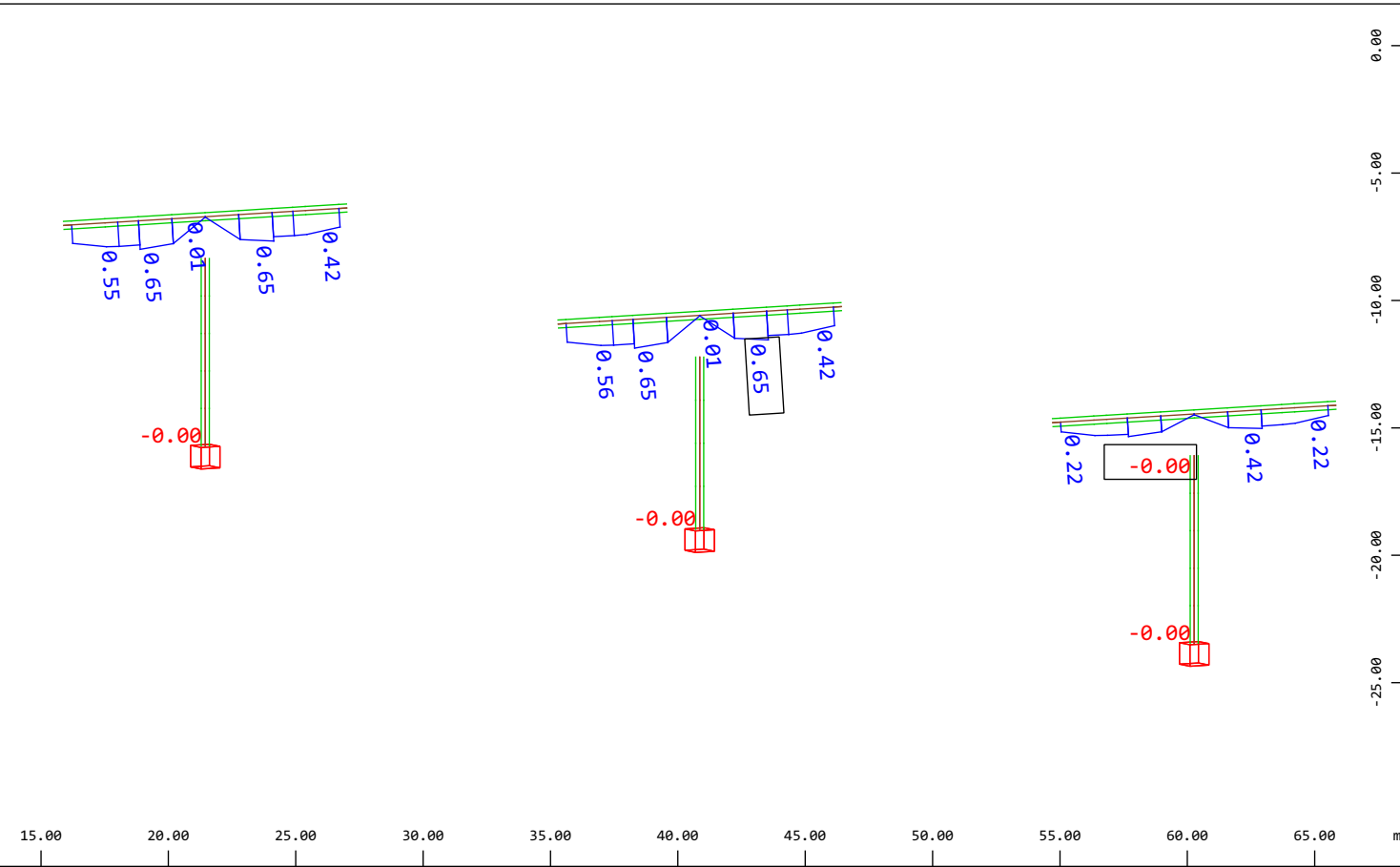
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 901 TEMPERATURA { mxx My PX P }, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Min=-0.88) (Max=0.000)

M 1 : 283
X * 0.495
Y * 0.876
Z * 0.994



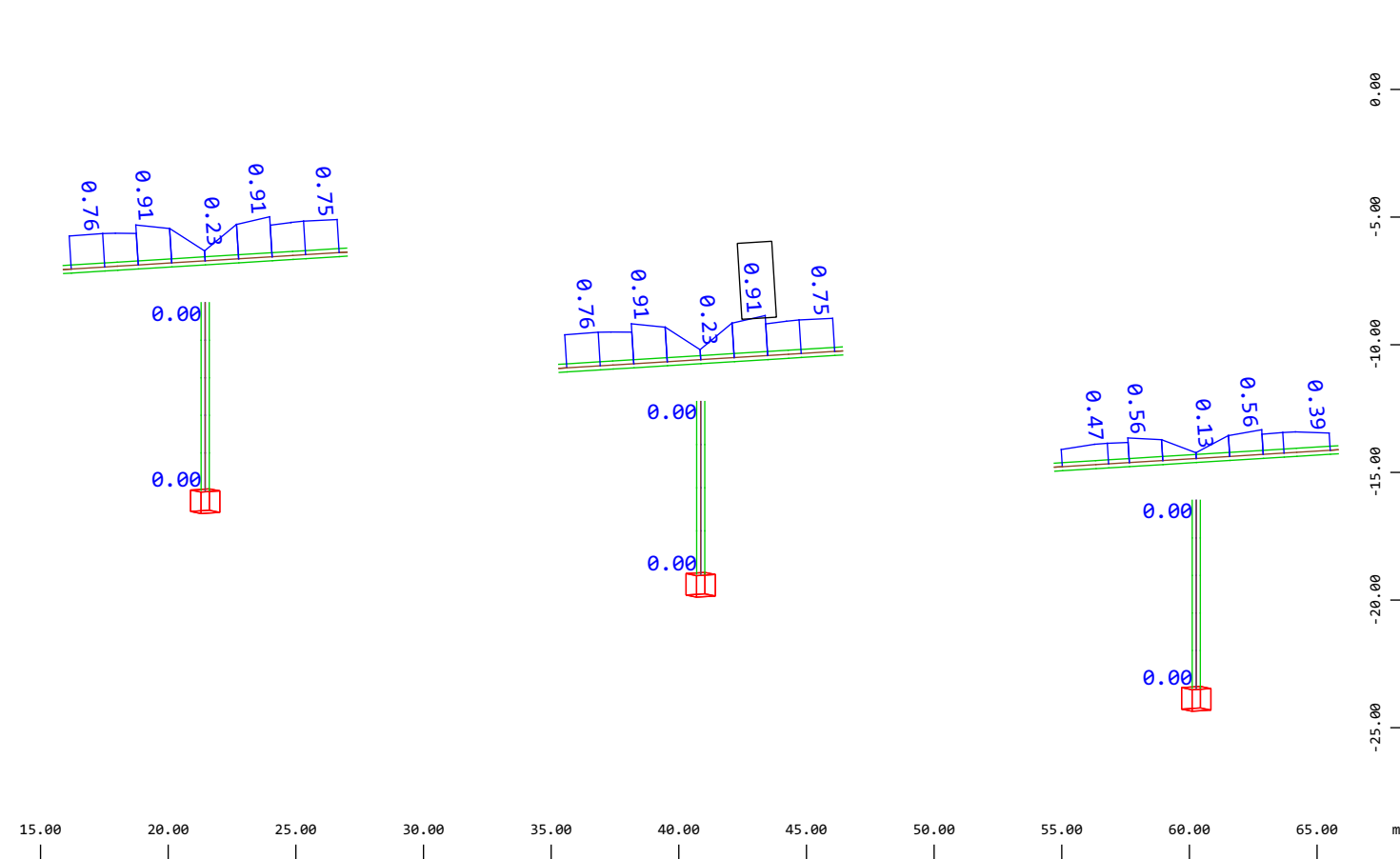
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 901 TEMPERATURA { mxx My PX P }, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Min=-0.00) (Max=0.65)

M 1 : 283
X * 0.495
Y * 0.876
Z * 0.994



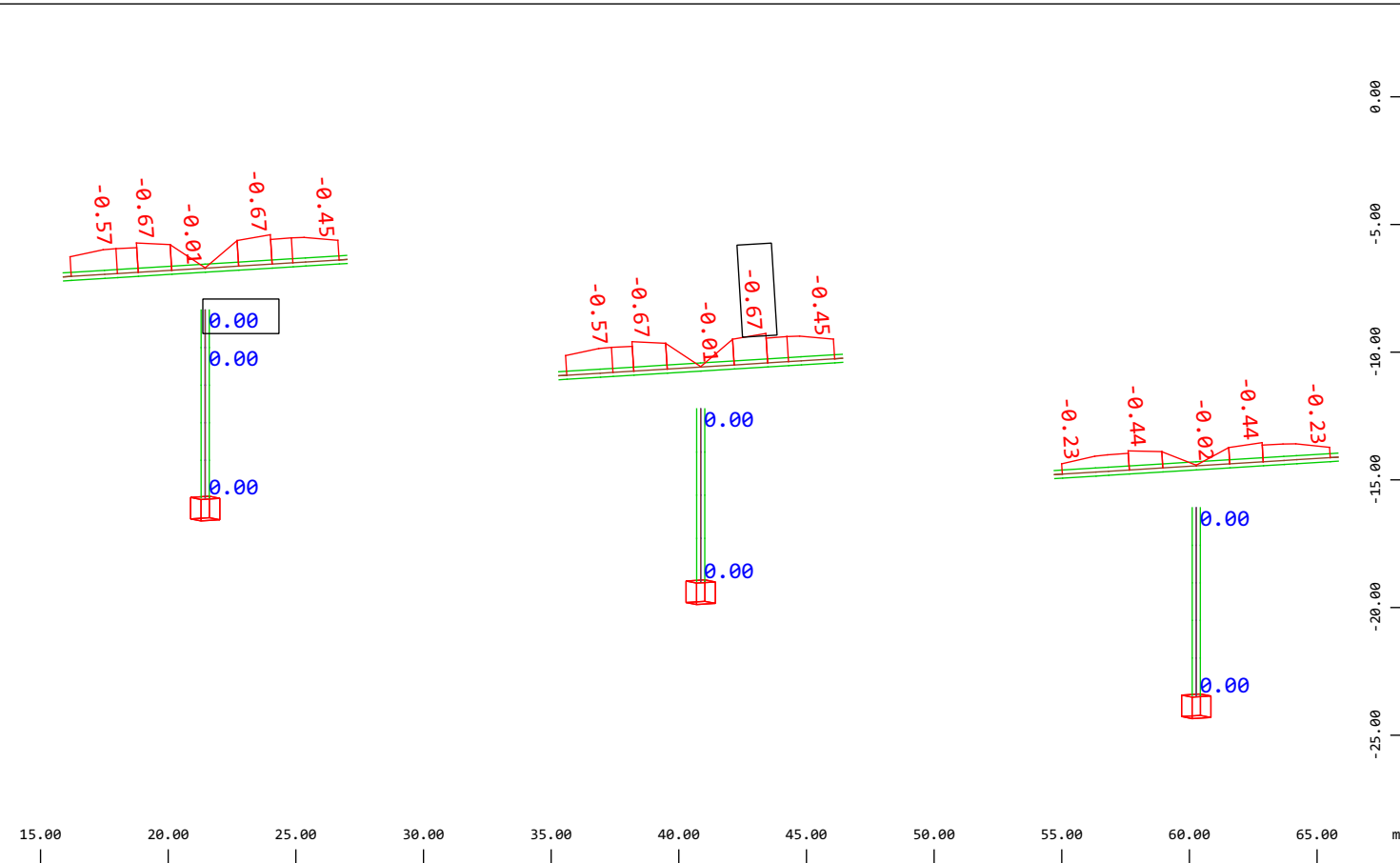
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 902 TEMPERATURA { mxx My PX P }, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Max=0.91)

M 1 : 282
X * 0.495
Y * 0.876
Z * 0.994



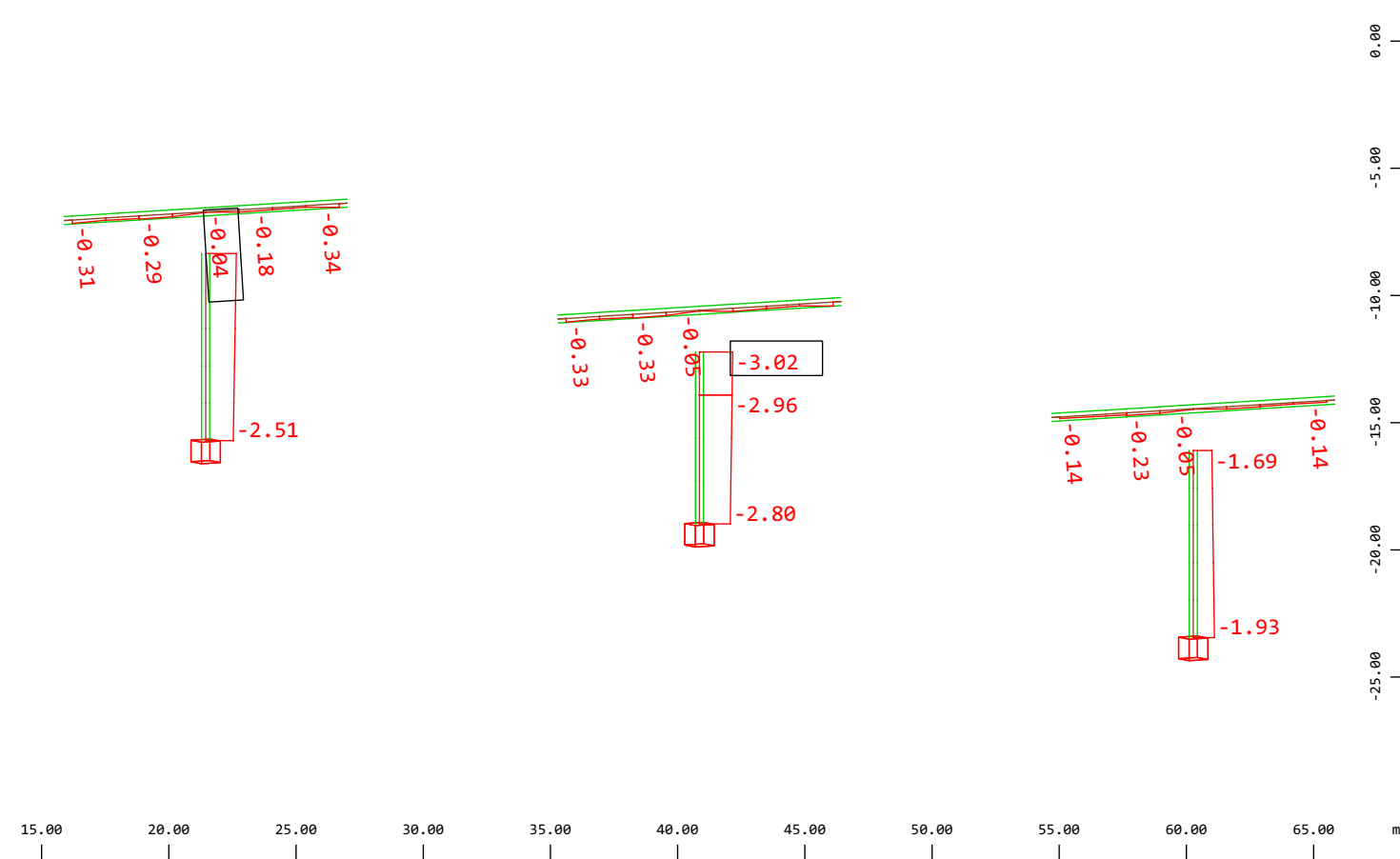
Z

X

Y

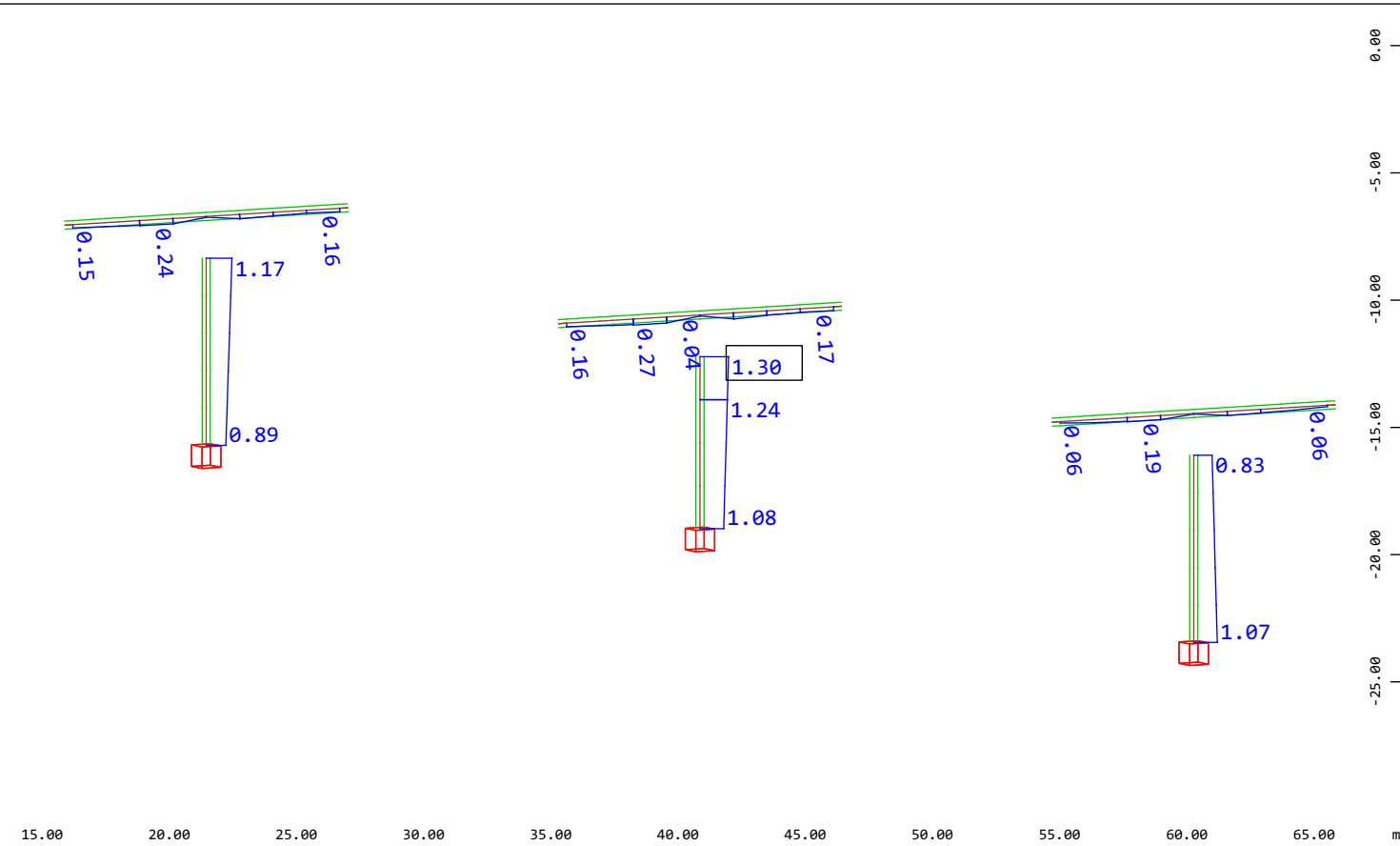
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 902 TEMPERATURA { mxx My PX P }, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 1.6367 MPa (Min=-0.67) (Max=0.00)

M 1 : 282
X * 0.495
Y * 0.876
Z * 0.994



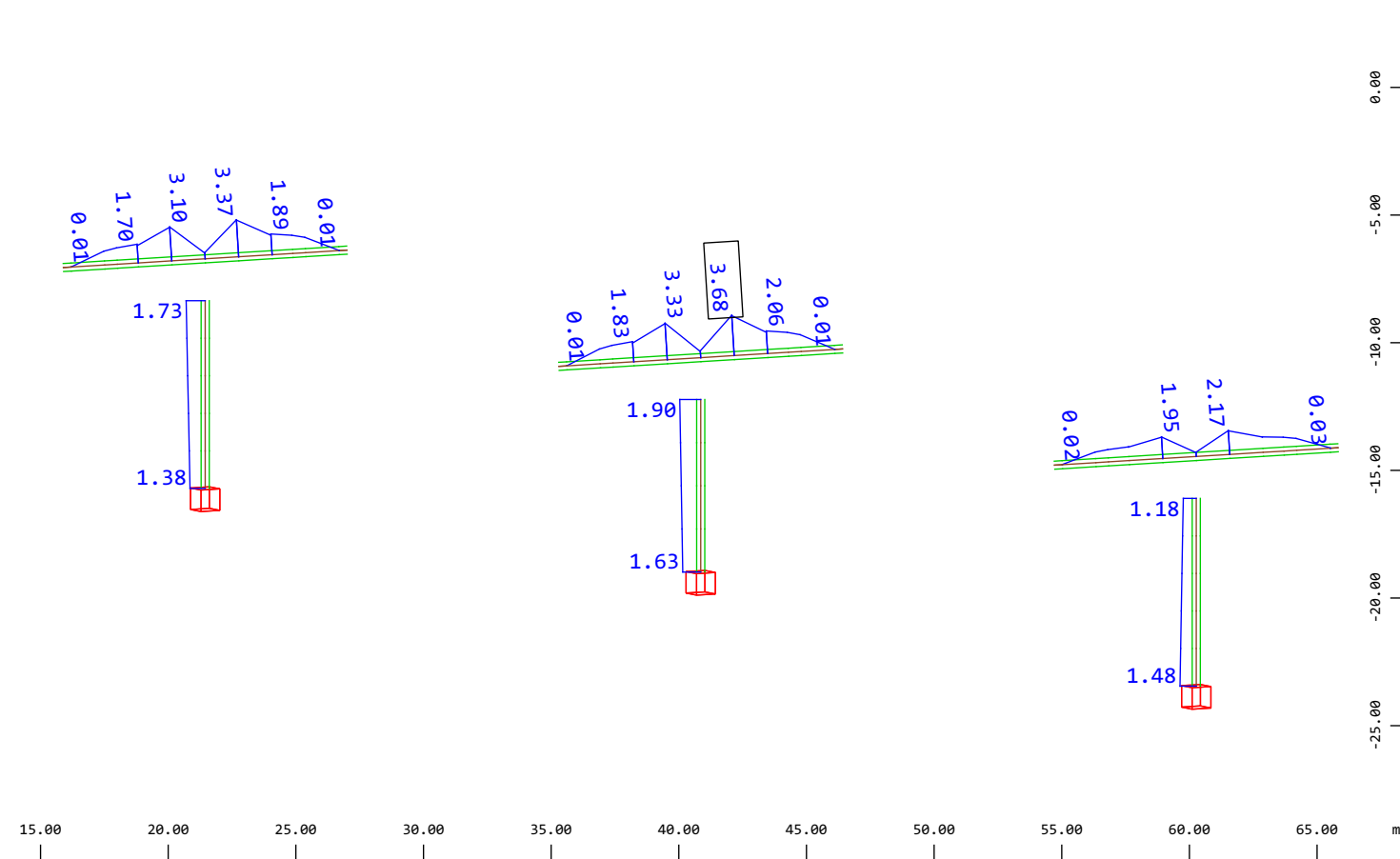
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 921 PROMET ZVEZNA { mxx My PX P }, Material 1 C
30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Min=-3.02) (Max=0.000)

M 1 : 283
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 921 PROMET ZVEZNA { mxx My PX P }, Material 1 C
30/37 (EN 1992) STEBRI , 1 cm 3D = 3.2734 MPa (Max=1.30)

M 1 : 283
X * 0.495
Y * 0.876
Z * 0.994



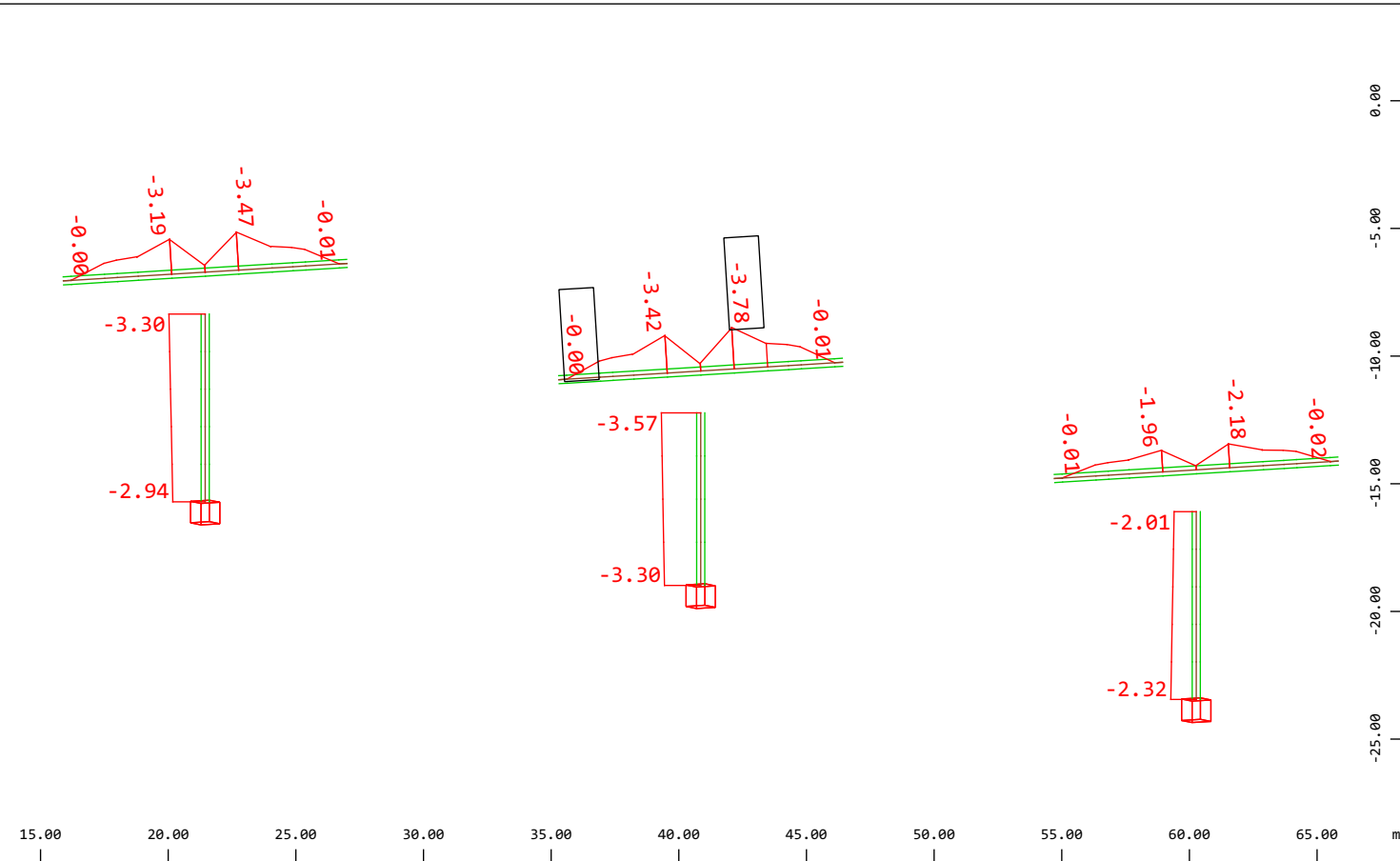
Z

X

Y

Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 922 PROMET ZVEZNA { mxx My PX P }, Material 1 C
30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Max=3.68)

M 1 : 282
X * 0.495
Y * 0.876
Z * 0.994



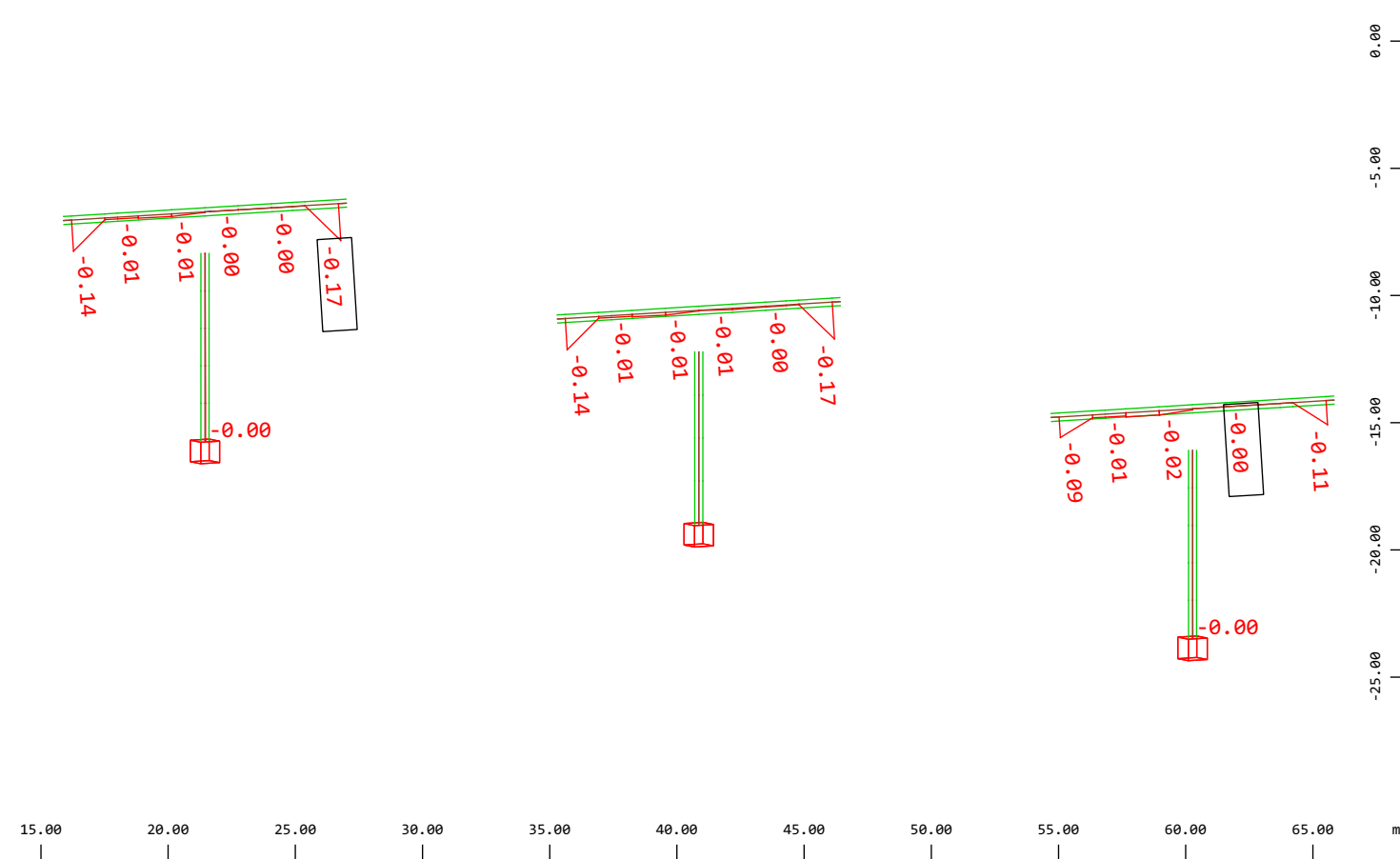
Z

X

Y

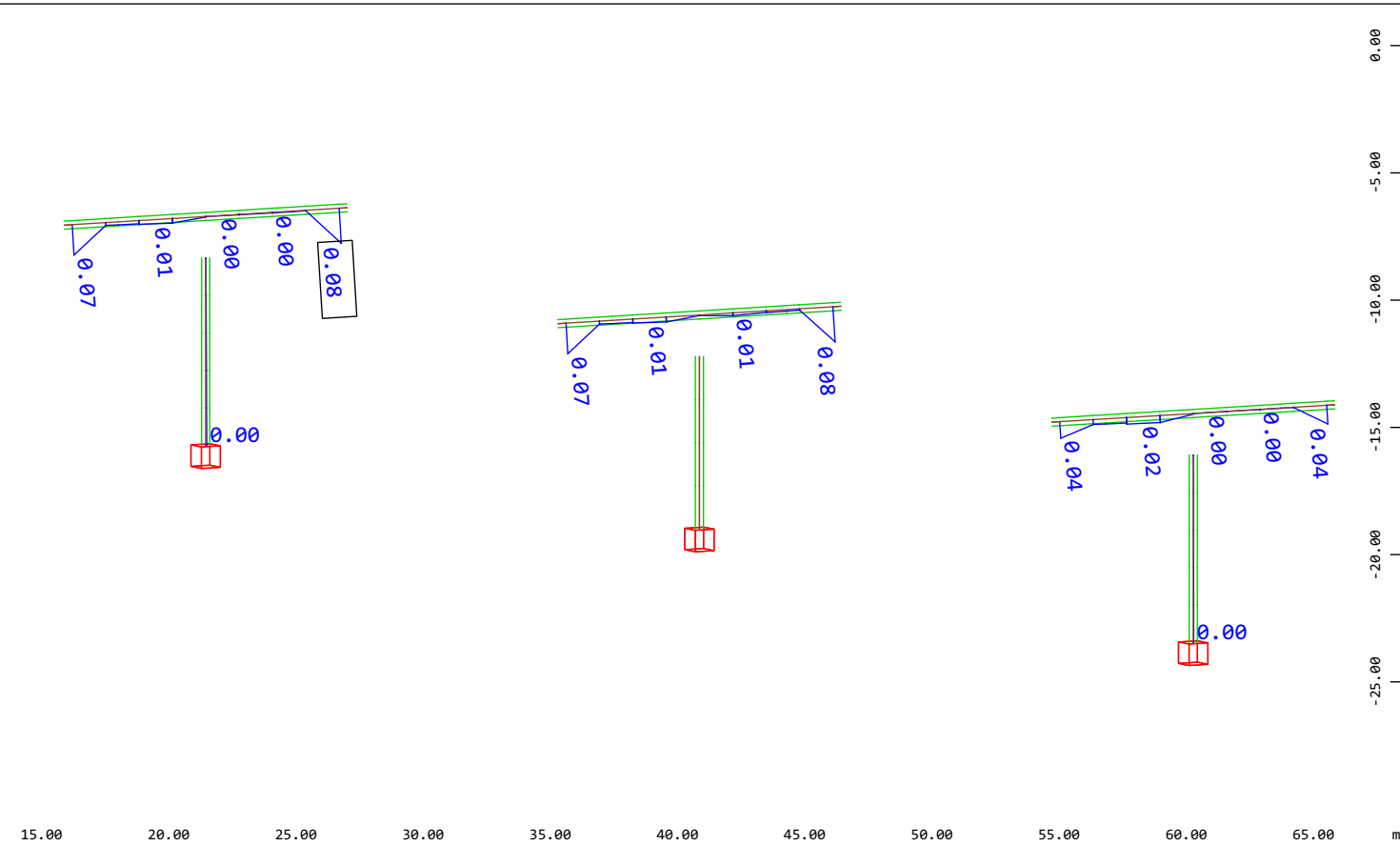
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 922 PROMET ZVEZNA { mxx My PX P }, Material 1 C
30/37 (EN 1992) STEBRI , 1 cm 3D = 6.5469 MPa (Min=-3.78) (Max=0.000)

M 1 : 282
X * 0.495
Y * 0.876
Z * 0.994



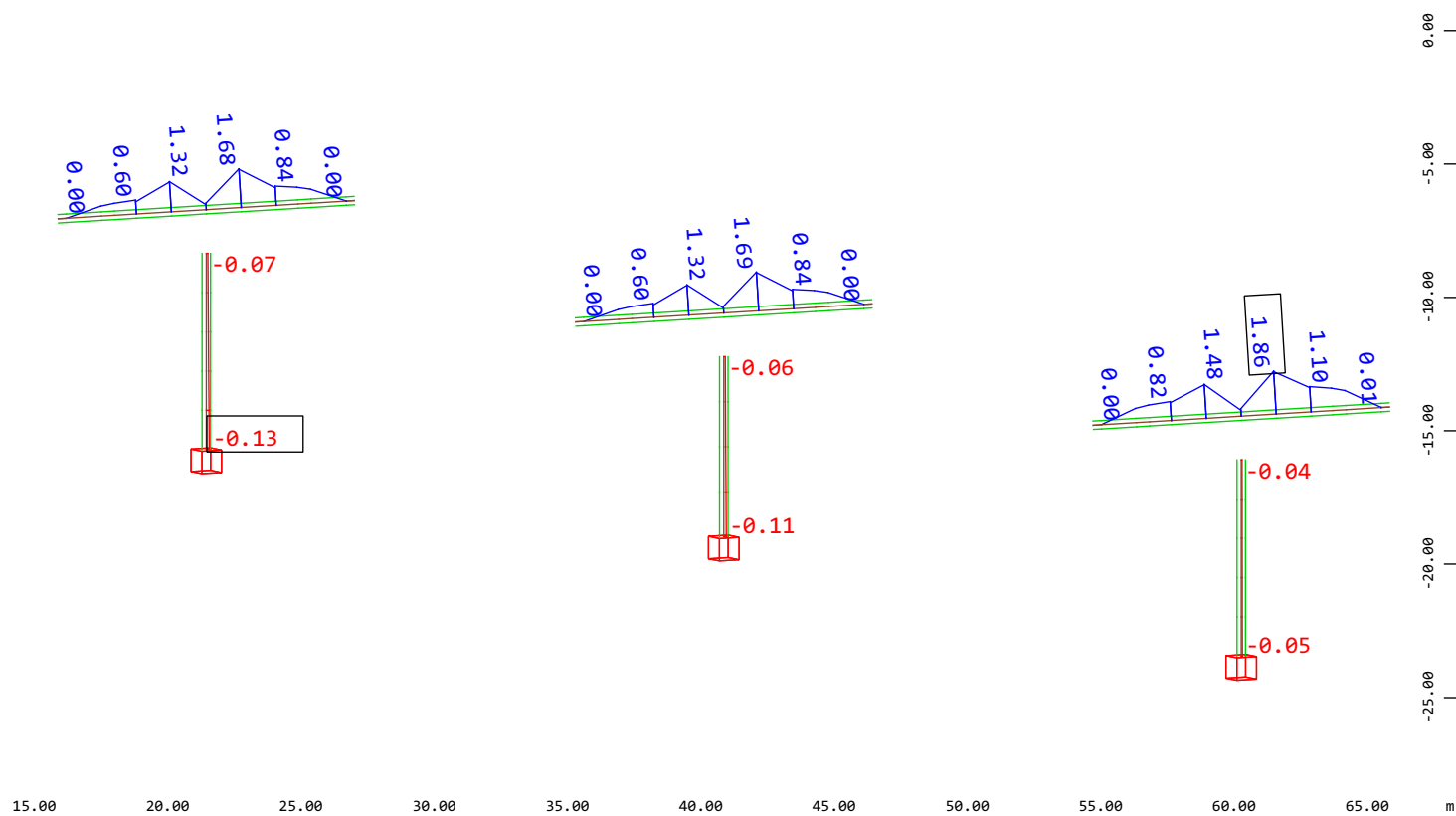
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 941 PROMET TS { mxx My PX P }, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 0.32734 MPa (Min=-0.17) (Max=0.00)

M 1 : 283
X * 0.495
Y * 0.876
Z * 0.994



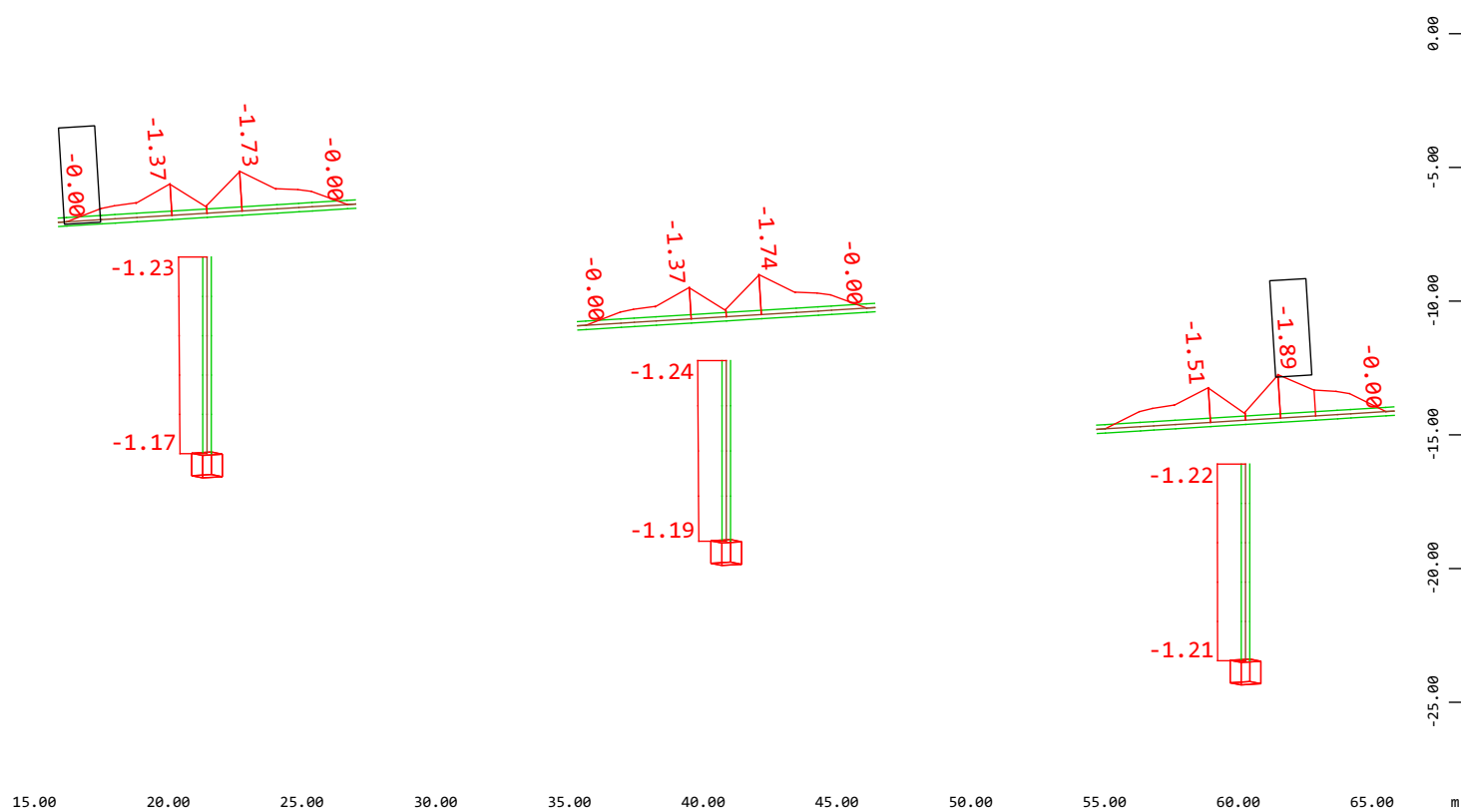
Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 941 PROMET TS { mxx My PX P }, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 0.16367 MPa (Max=0.08)

M 1 : 283
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial top stress, Design Case 942 PROMET TS { mxx My PX P }, Material 1 C 30/37
(EN 1992) STEBRI , 1 cm 3D = 3.2734 MPa (Min=-0.13) (Max=1.86)

M 1 : 282
X * 0.495
Y * 0.876
Z * 0.994



Sector of system Beam Elements Group 50 55
Beam Elements , Uniaxial bottom stress, Design Case 942 PROMET TS { mxx My PX P }, Material 1 C 30/37 (EN 1992) STEBRI , 1 cm 3D = 3.2734 MPa (Min=-1.89) (Max=0.000)

M 1 : 282
X * 0.495
Y * 0.876
Z * 0.994

5.7 KONTROLA DEKOMPRESIJE

V skladu s EN 1992-2 upoštevamo:

Table 7.101N — Recommended values of $w_{\max}$ and relevant combination rules

Exposure Class	Reinforced members and prestressed members without bonded tendons	Prestressed members with bonded tendons
	Quasi-permanent load combination	Frequent load combination
X0, XC1	0,3 ^a	0,2
XC2, XC3, XC4	0,3	0,2 ^b
XD1, XD2, XD3 XS1, XS2, XS3		Decompression
^a For X0, XC1 exposure classes, crack width has no influence on durability and this limit is set to guarantee acceptable appearance. In the absence of appearance conditions this limit may be relaxed.		
^b For these exposure classes, in addition, decompression should be checked under the quasi-permanent combination of loads.		

Pogoj dekompresije je izpolnjen, ko je celoten betonski prerez znotraj razdalje 100 mm od roba kabla oziroma cevi tlačén. Pogoj dekompresije se preverja za **pogosto kombinacijo** za izpostavljenost XD, drugače pa za kvazi stalno obtežno kombinacijo.

Dekompresija v območju kablov:

SLS – frequent

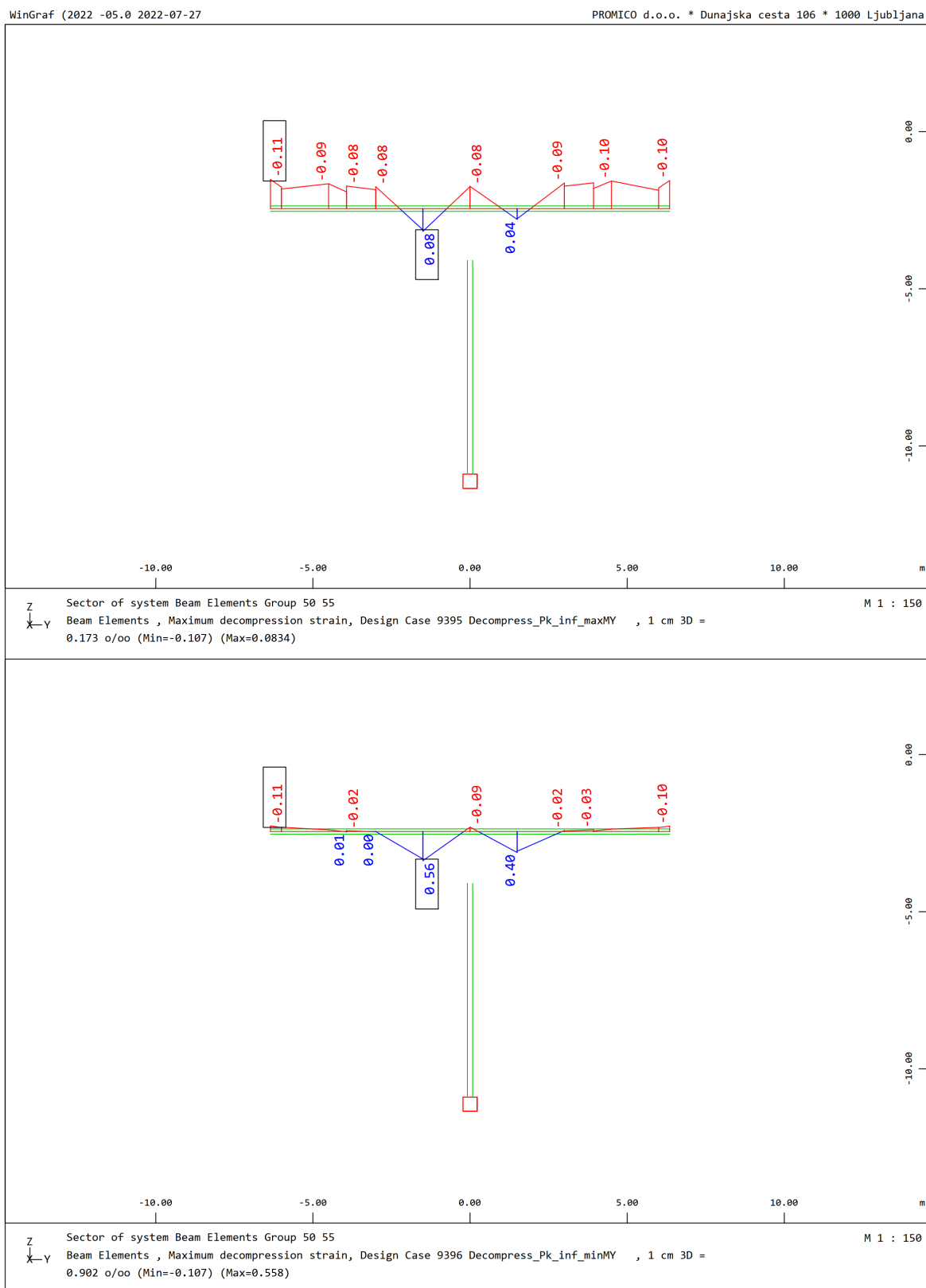
Obtežne kombinacije:

$$G + P + (0,4 \cdot L_{UDL} + 0,75 \cdot L_{TS}) + 0,5 \cdot T$$

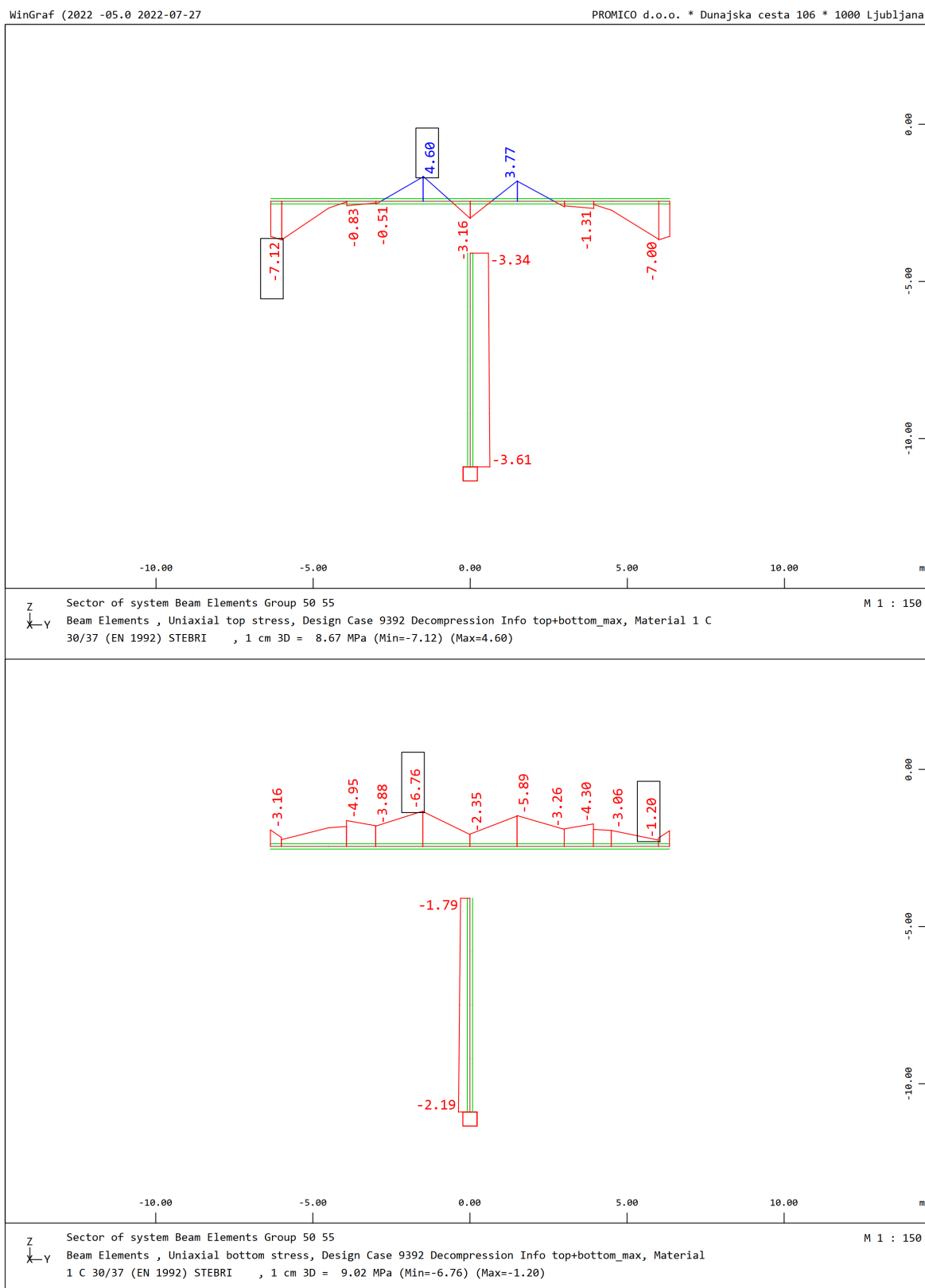
$$G + P + 0,6 \cdot T$$

$$G + P + 0,2 \cdot W + 0,5 \cdot T$$

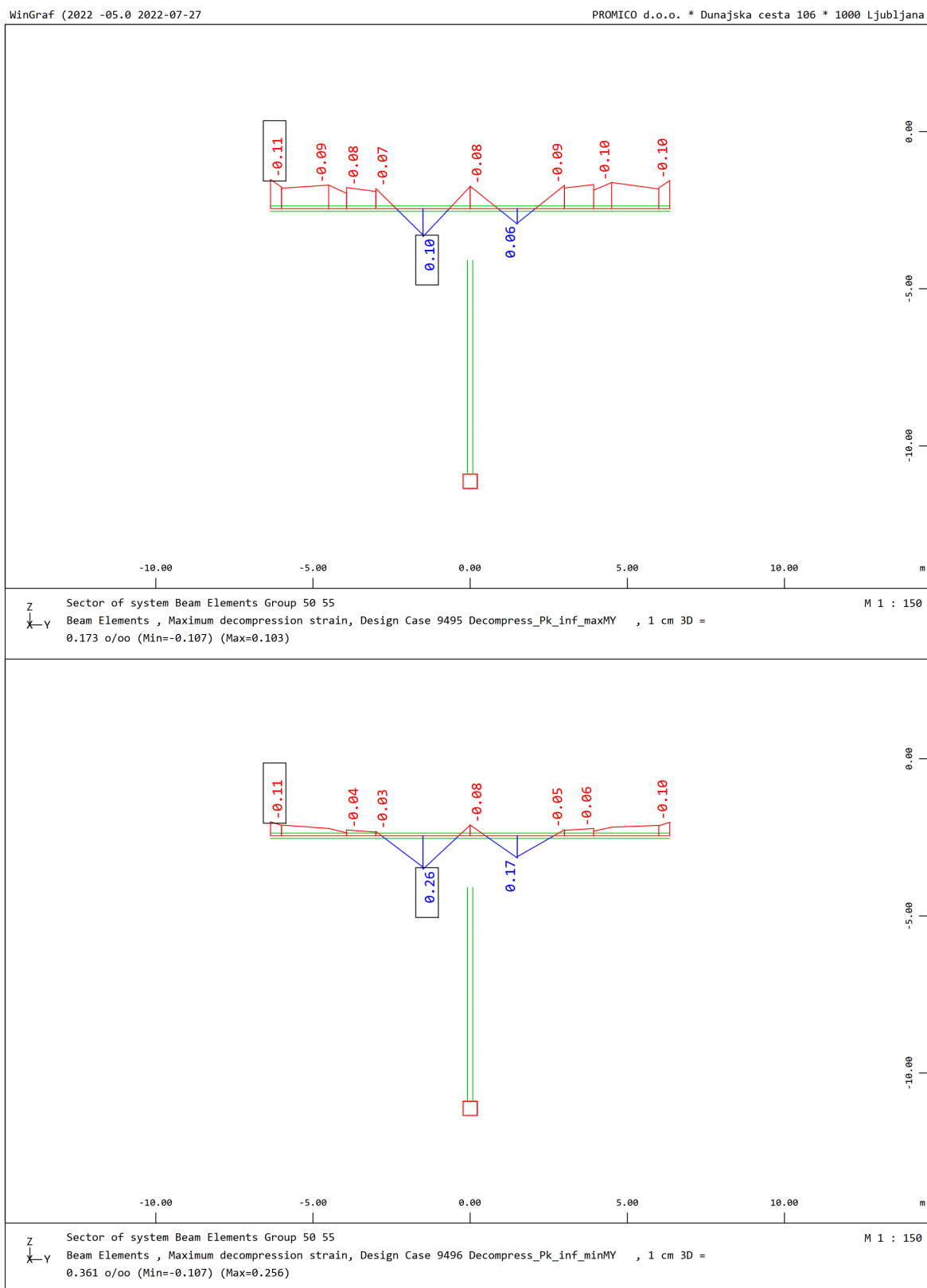
Specifične deformacije – MSU pogosta kombinacija (My,max)



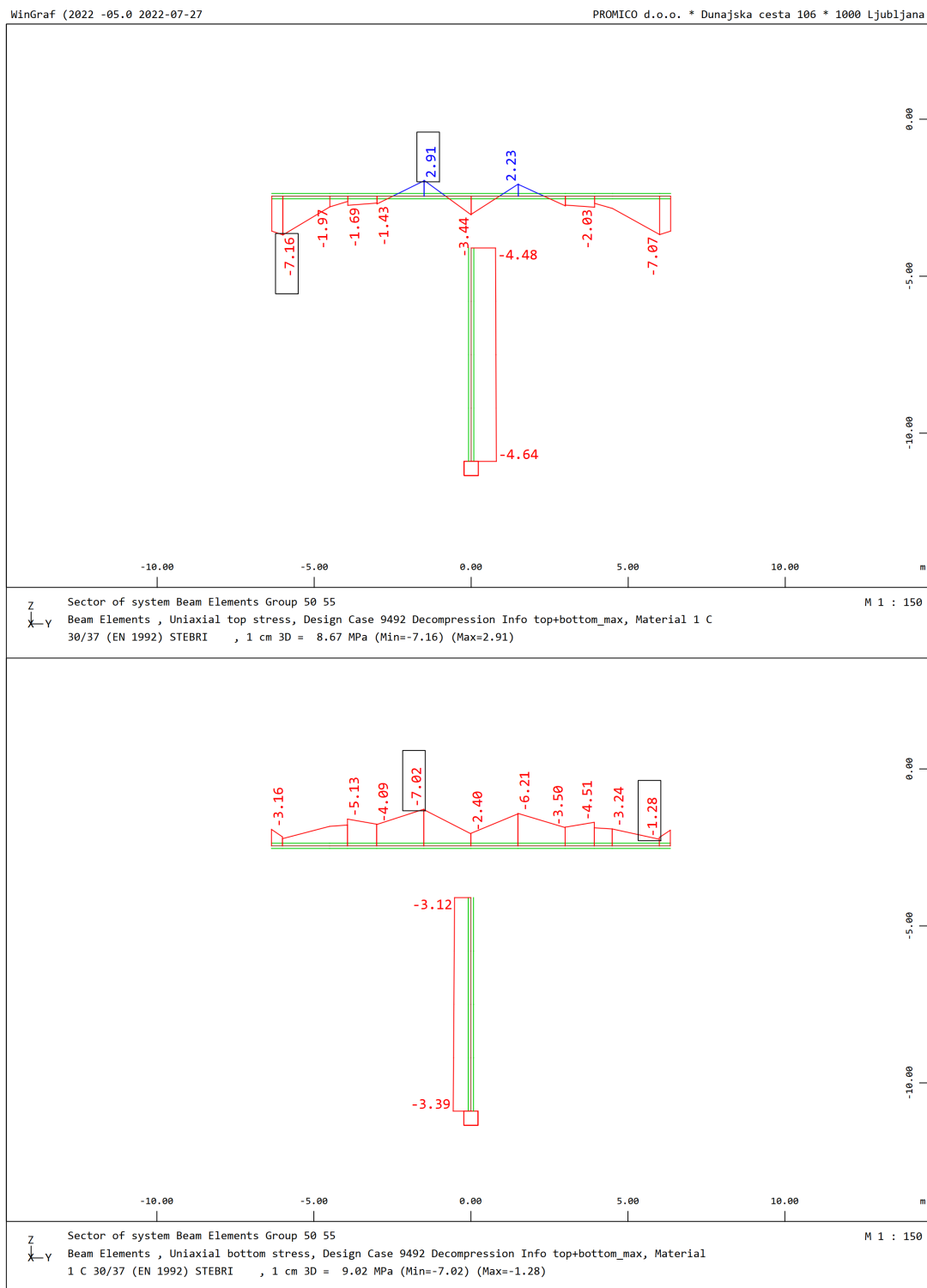
NAPETOSTI ZGORAJ / SPODAJ – MSU pogosta kombinacija (My,max)



Specifične deformacije – MSU kvazi stalna kombinacija ($M_y, \max$)



NAPETOSTI ZGORAJ / SPODAJ – MSU kvazi stalna kombinacija (My,max)



6 DODATNE KONTROLE

6.1 SIDRNI BLOK ZA PREDNAPENJANJE

Sidranje zunanjih kablov za prednapenjanje se izvede z AB blokom, ki se ga obbetonira ob obstoječi nosilec. Strižna povezava je izvedena po celoti s strižnimi trni iz armaturnih palic in iz delno prednapetih nateznih palic visoke kvalitete.

Sidrni blok kabli 12 $\Phi 15,7\text{mm}$:

$F_{p,0} = 2592 \text{ kN}$ $T_{p,Ed} = 2592 \cdot 1,35 = 3499 \text{ kN}$, višina rebra $h = 1,6 \text{ m}$, $T_{p,Ed} = 2186 \text{ kN/m}$

Potrebna armatura: $A_s = \frac{T}{f_{yd}/\sqrt{3}} \rightarrow A_{s,potr} = 87,1 \text{ cm}^2$

Strižna armatura:

9 kom $\Phi 14\text{mm}$ $A_s = 46,2 \text{ cm}^2 \rightarrow F_t = 1986 \text{ kN}$

Palice dywidag WR36:

$f_{p0,1k} = 950 \text{ N/mm}^2$; $\Phi 36\text{mm}$ $A_s = 10,18 \text{ cm}^2 \rightarrow F_t = A_s \cdot f_{yd}/\sqrt{3} = 558 \text{ kN}$
 Skupno 6 kom $F_{t,6} = 3348 \text{ kN} > T_{p,Ed} = 2186 \text{ kN/m}$

Sidrni blok kabli 2x2 $\Phi 15,7\text{mm}$:

$F_{p,0(2x2)} = 864 \text{ kN}$ $T_{p,Ed} = 864 \cdot 1,35 = 1166 \text{ kN}$

Strižna armatura:

9 kom $\Phi 14\text{mm}$ $A_s = 13,85 \text{ cm}^2 \rightarrow F_t = 343 \text{ kN}$

Palice dywidag WR36:

$f_{p0,1k} = 950 \text{ N/mm}^2$; $\Phi 36\text{mm}$ $A_s = 10,18 \text{ cm}^2 \rightarrow F_t = A_s \cdot f_{yd}/\sqrt{3} = 558 \text{ kN}$
 Skupno 6 kom $F_{t,2} = 1116 \text{ kN} \approx T_{p,Ed} = 1166 \text{ kN/m}$

7 ZAKLJUČEK

Statični izračun je izveden skladno po Eurocod predpisih za mejno stanje nosilnosti in za mejno stanje uporabnosti.

Glede na statični izračun in upoštevane obtežbe je računska nosilnost elementov mejna – izkoriščenost glavnih elementov skladno po Eurocode predpisih do 95%. Morebitne oslavitve betonskega prereza, kablov za prednapenjanje kot tudi mehke armature niso upoštevane. Predvideno je, da se s sanacijo objekta vse morebitne oslavitve odpravijo.

Pogoj dekompresije za pogosto kot tudi za navidezno stalno obtežno kombinacijo ni izpolnjen. Kriterij dekompresije zagotavlja trajnost konstrukcije s tem, da je območje betona okrog kablov pod določeno obtežbo vedno v tlaku in s tem ščiti kabelske cevi oz. kable za prednapenjanje.

Za predvideno eksploatacijsko dobo objekta po rekonstrukciji do zamenjave, ki je cca. 2 leti, zmanjšanje nosilnosti prereza zaradi računske prekoračitve dekompresije v območju kablov ni pričakovati.

Pri statičnem izračunu je bila upoštevana prometna obtežba LM1 skladno po SIST EN 1991-2 s prilagoditvenim faktorjem $\alpha_Q = 0,8$.

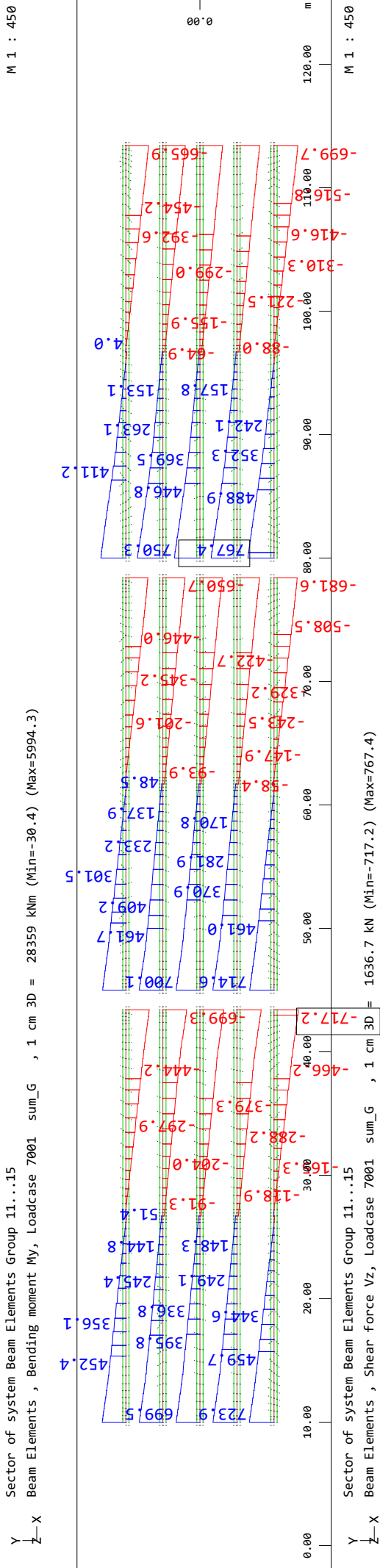
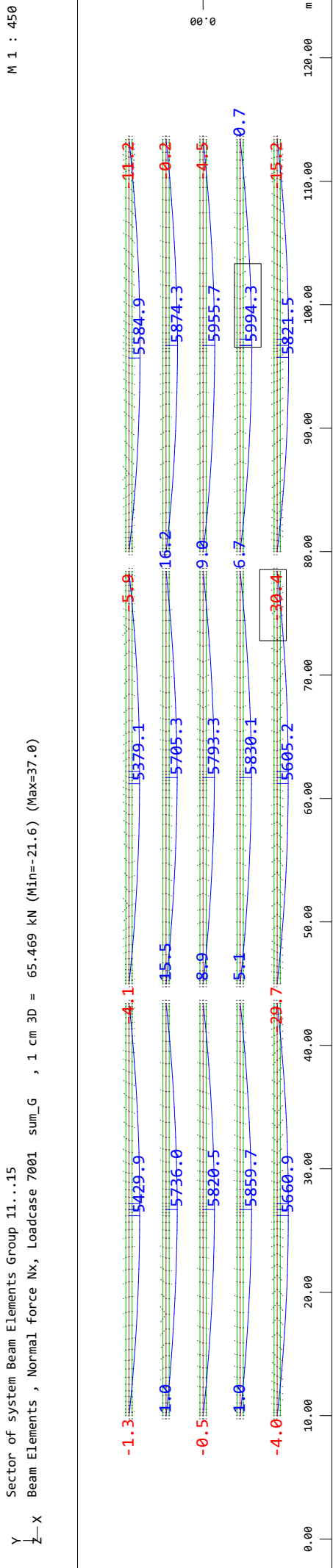
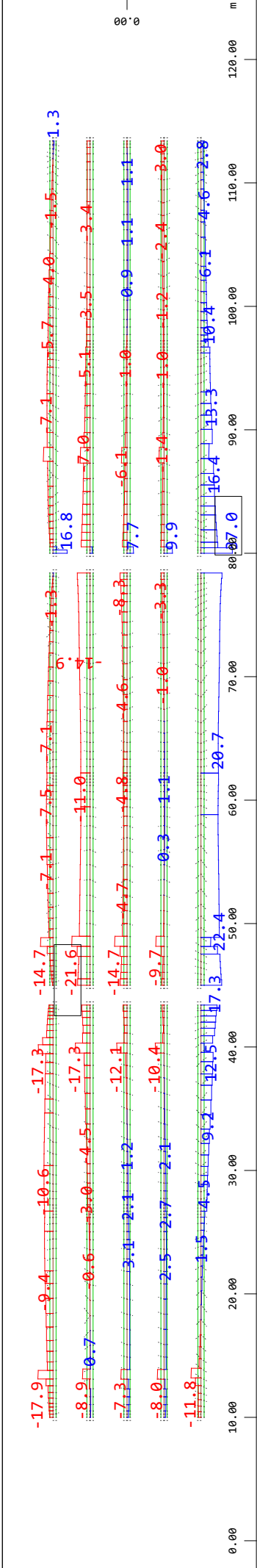
Delni varnostni faktorji so upoštevani skladno s SIST EN 1990 ter določili v tujini uveljavljenih predpisov za določitev nosilnost obstoječih objektov (BAST Heft B 89 in ONR 24008).

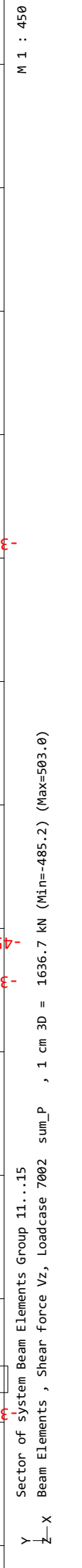
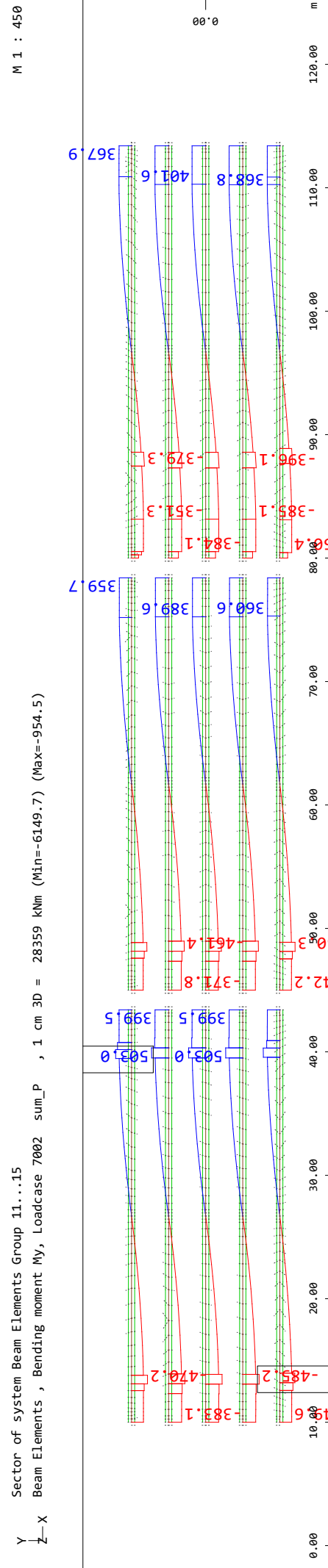
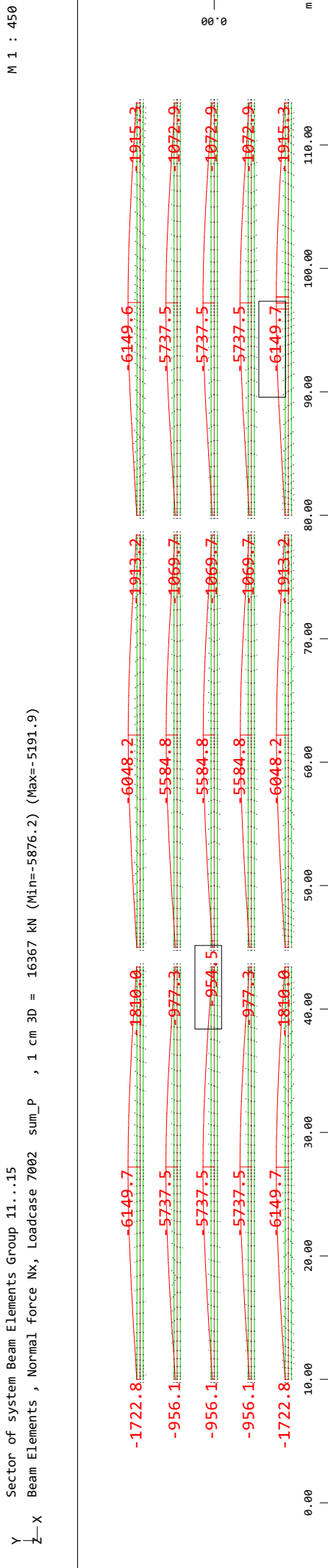
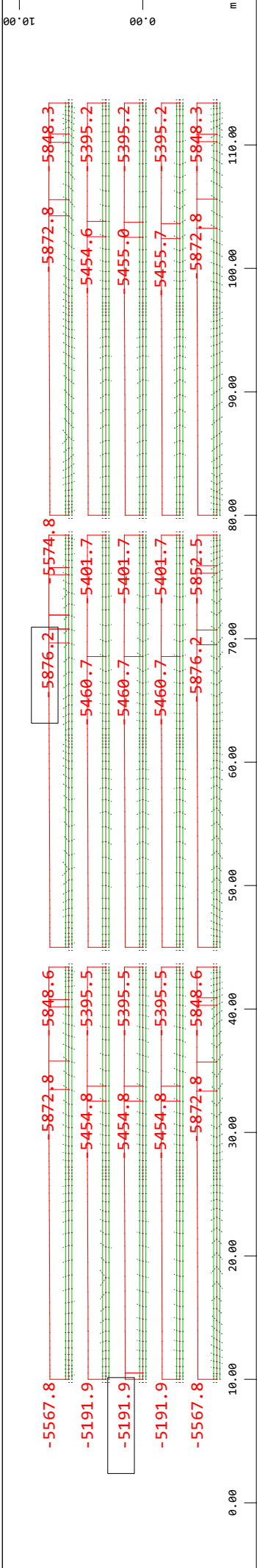
Delni varnostni faktorji za lastno obtežbo obstoječih elementov objekta: $\gamma_{G,OBST} = 1,20$

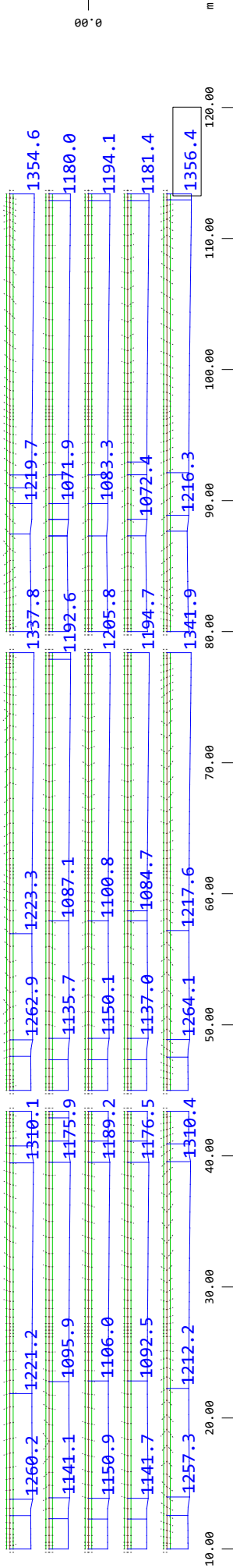
Glede na rezultate statične analize je prekoračena strižna nosilnost konzolnih kap stebrov v območju cca. 1,6 m od vpetja v steber. Izvedejo se zunanje strižne ojačitve betonskega prereza.

8 PRILOGE

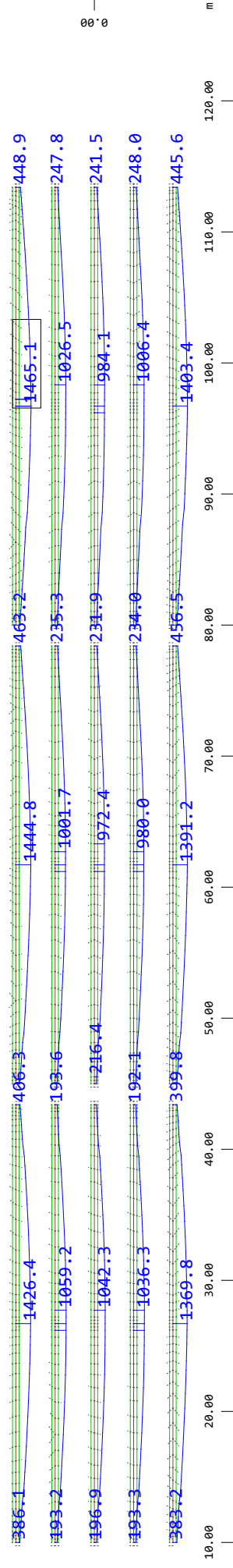
8.1 NOTRANJE SILE PREKLADNA KONSTRUKCIJA RAČUNSKI MODEL I. - 35+35+35 m



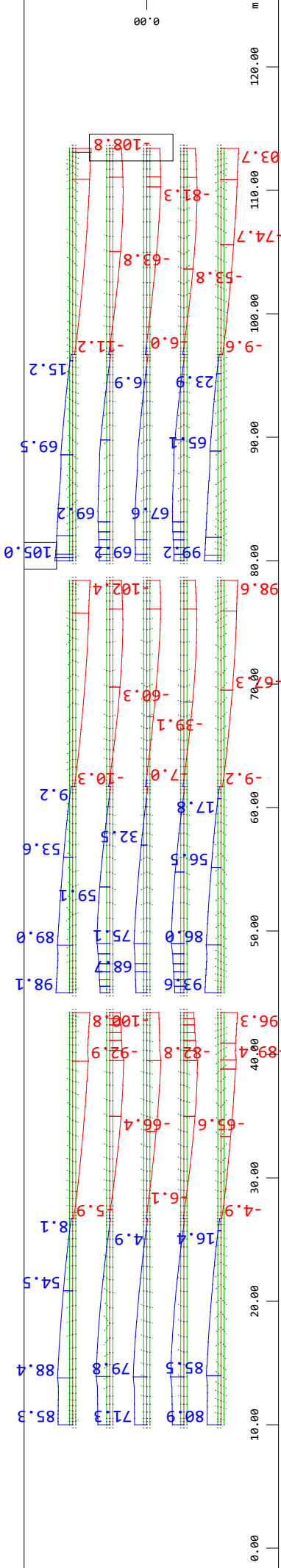




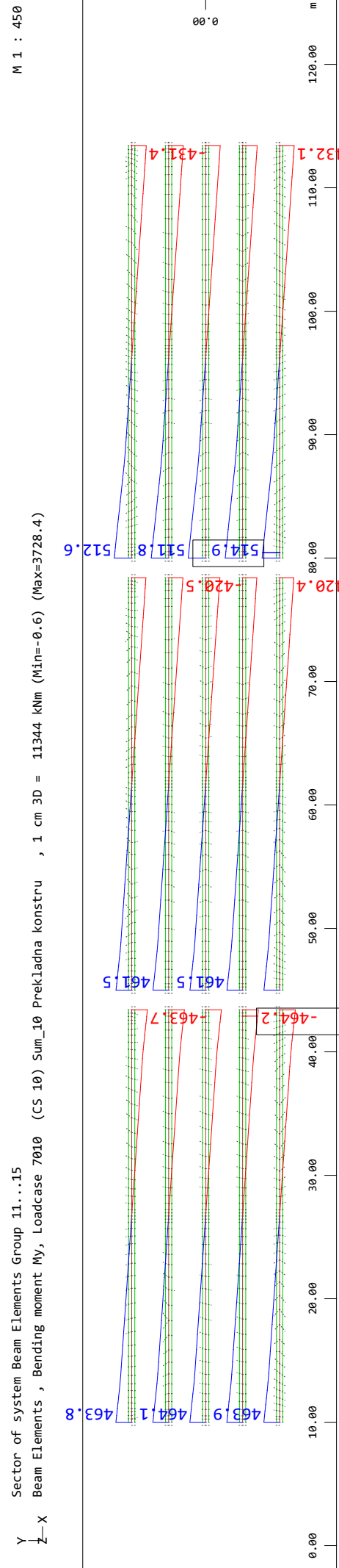
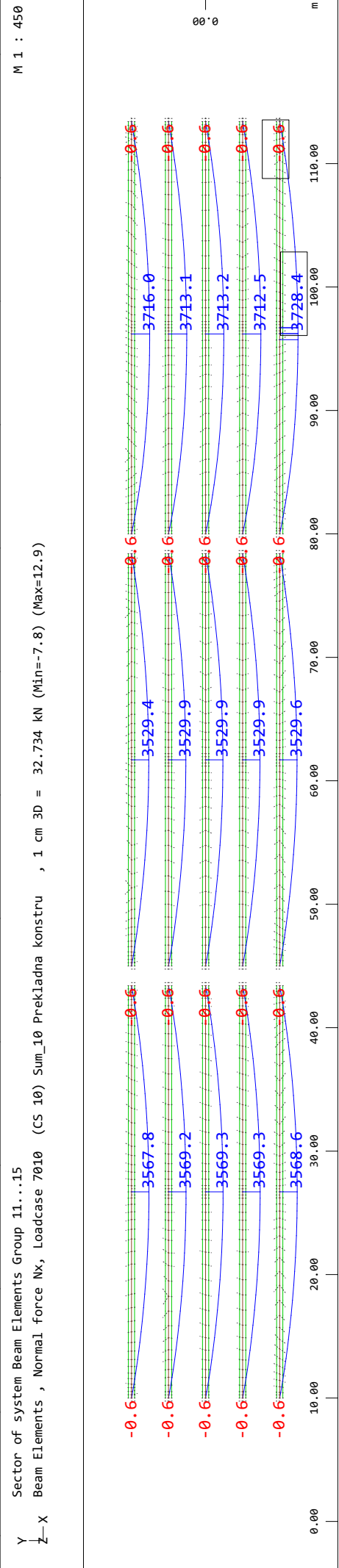
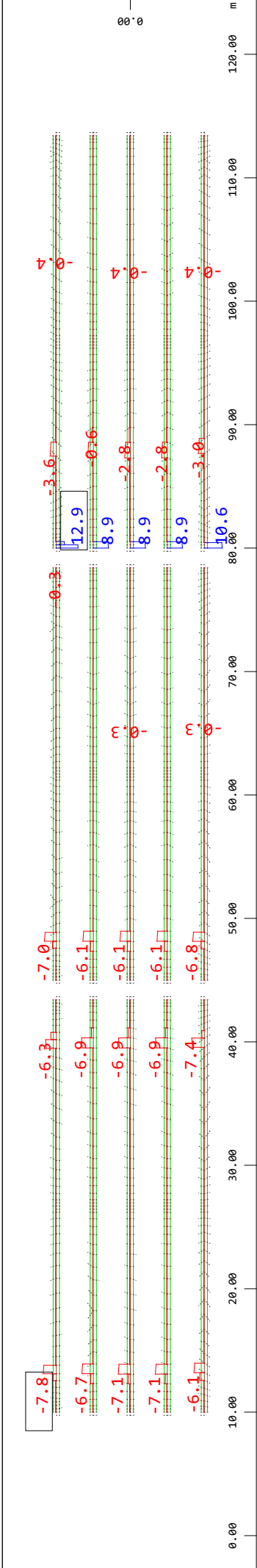
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force Nx, Loadcase 7003 sum_C , 1 cm 3D = 3273.4 kN (Max=1356.4) M 1 : 450

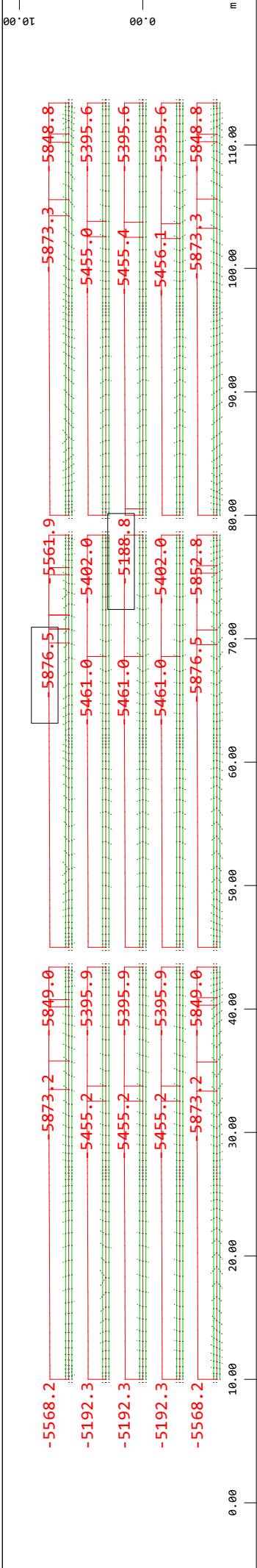


Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment My, Loadcase 7003 sum_C , 1 cm 3D = 5671.9 kNm (Max=1465.1) M 1 : 450

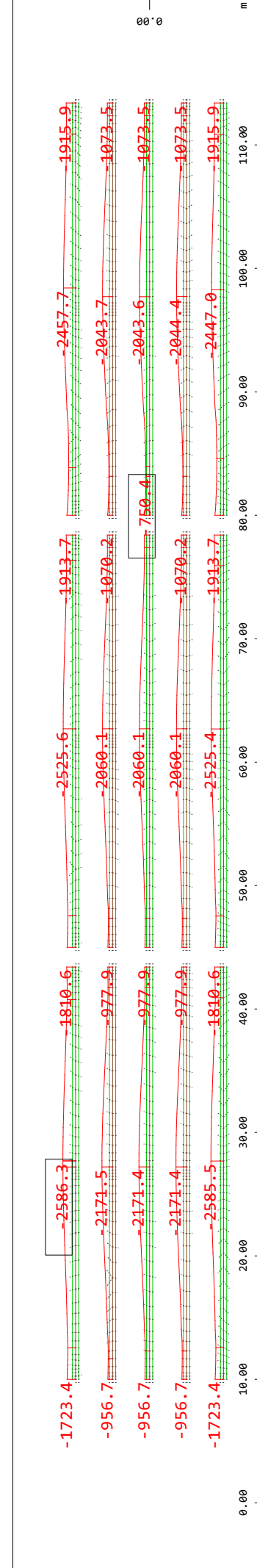


Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force Vz, Loadcase 7003 sum_C , 1 cm 3D = 327.34 kN (Min=-108.8) (Max=105.0) M 1 : 450

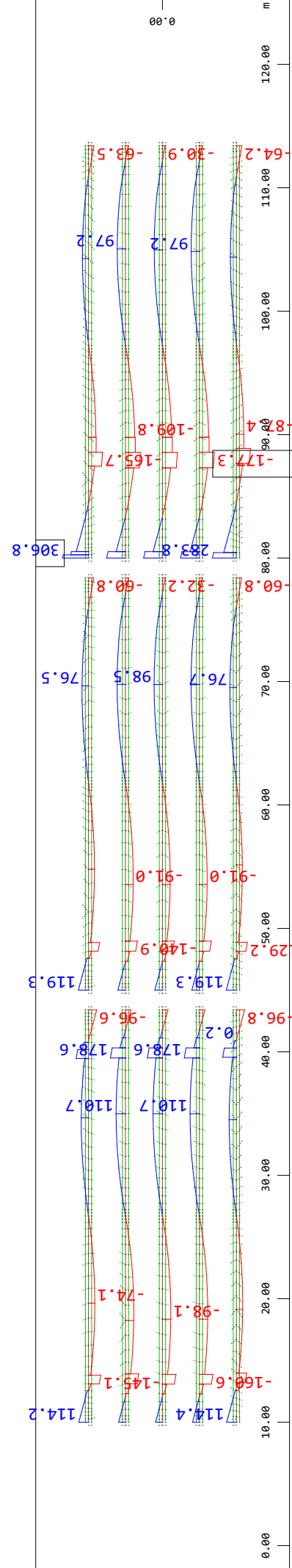




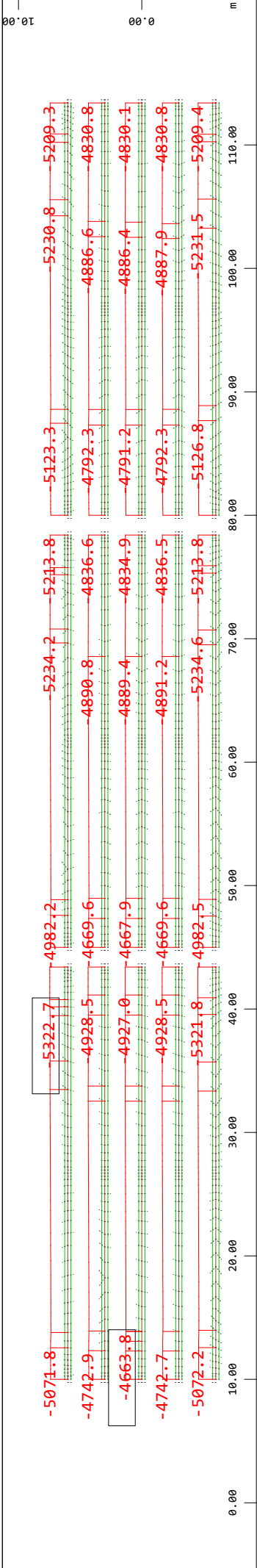
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force N_x , Loadcase 7011 (CS 11) Sum_11 Prestress , 1 cm 3D = 16367 kN (Min=-5876.5) (Max=-5188.8) M 1 : 450



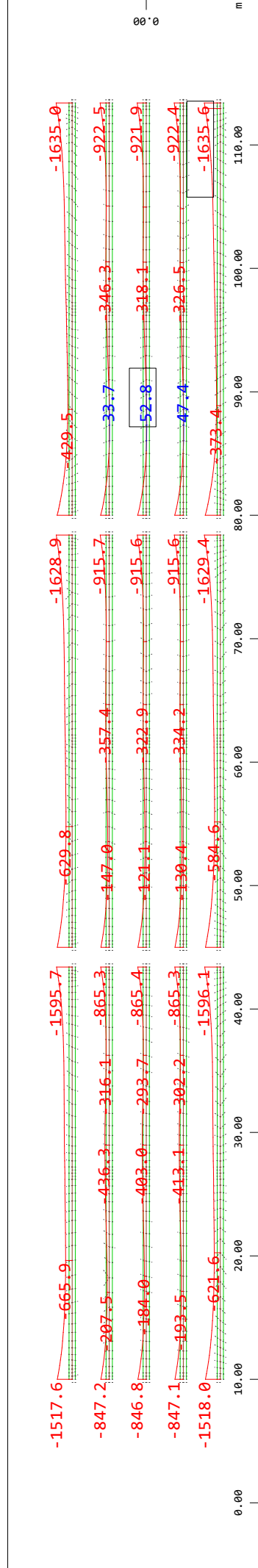
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment M_y , Loadcase 7011 (CS 11) Sum_11 Prestress , 1 cm 3D = 11344 kNm (Min=-2586.3) (Max=-750.4) M 1 : 450



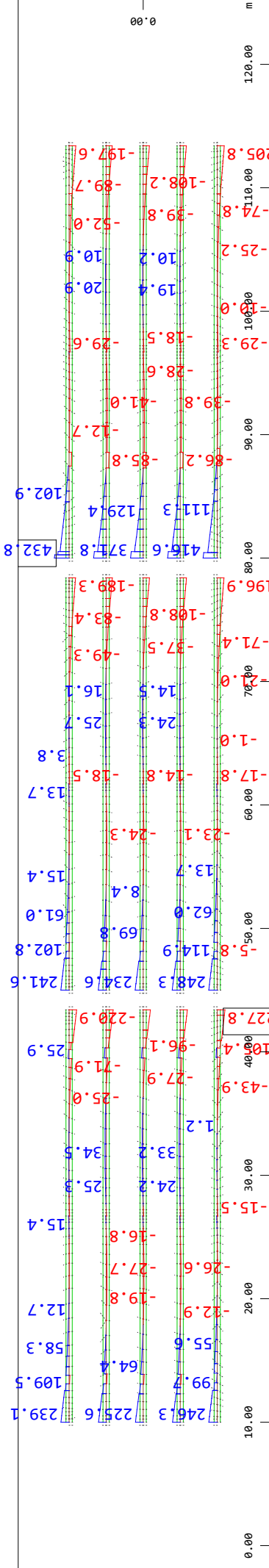
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force V_z , Loadcase 7011 (CS 11) Sum_11 Prestress , 1 cm 3D = 654.69 kN (Min=-177.3) (Max=306.8) M 1 : 450



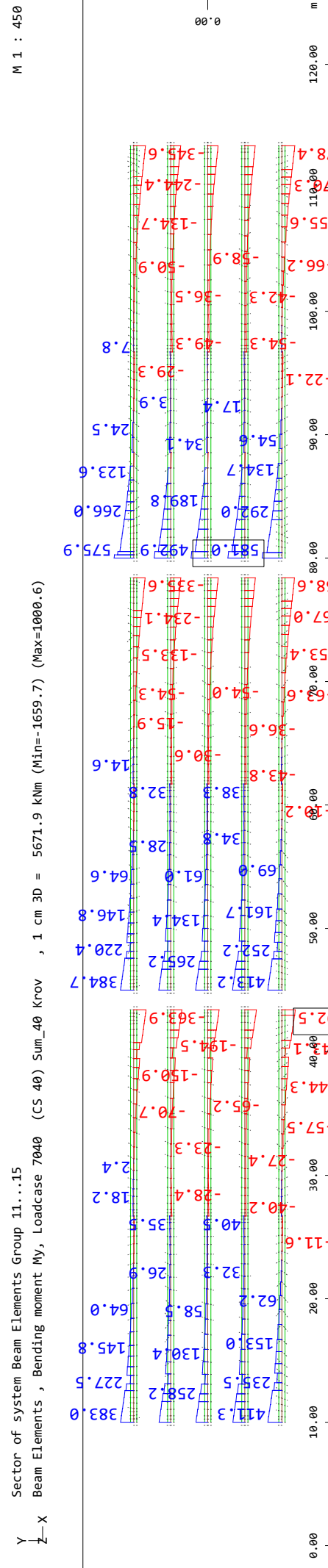
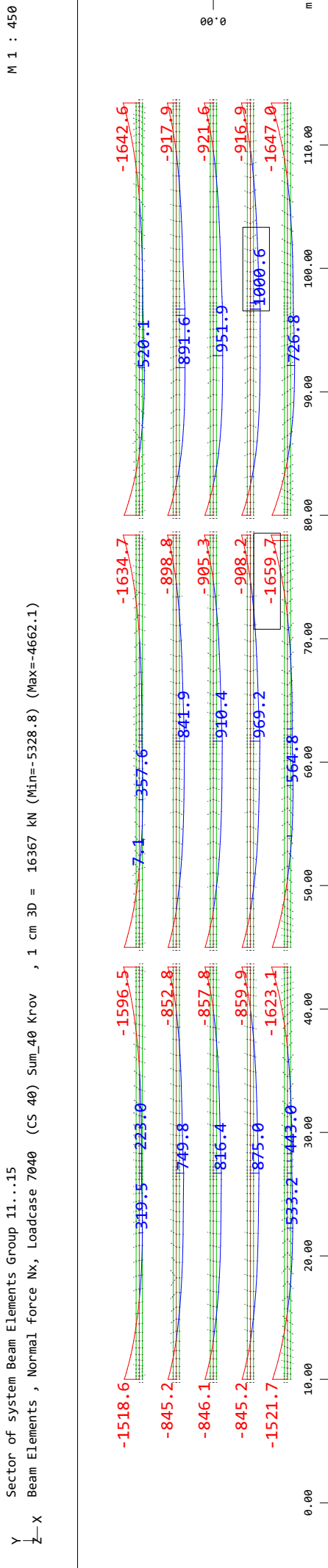
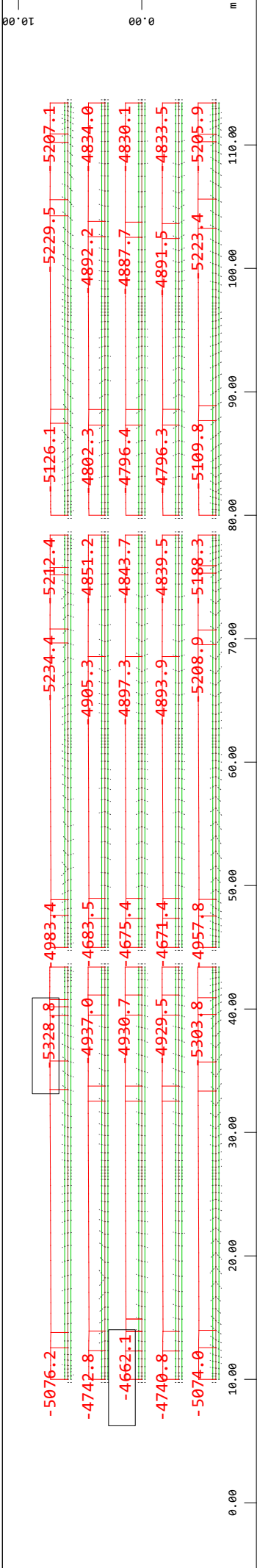
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force N_x , Loadcase 7030 (CS 30) Sum_30 Prekladna povezav , 1 cm 3D = 16367 kN (Min=-5322.7) (Max=-4663.8)

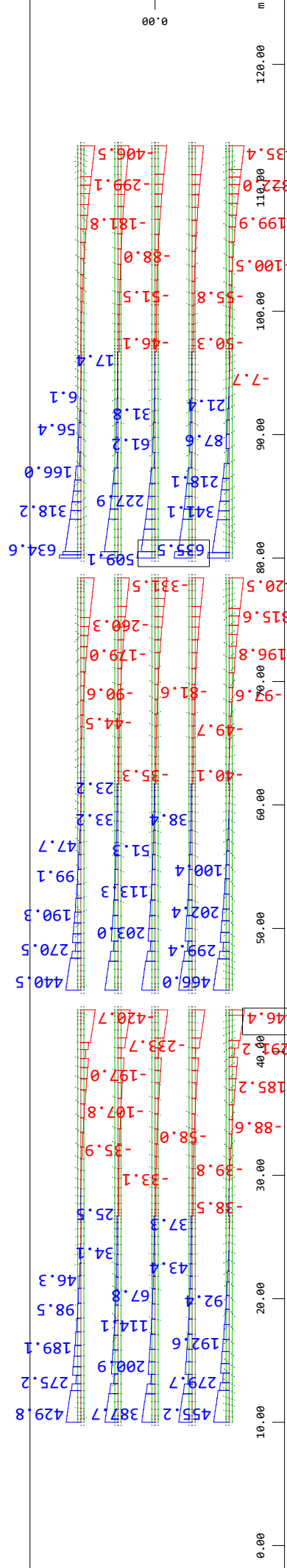
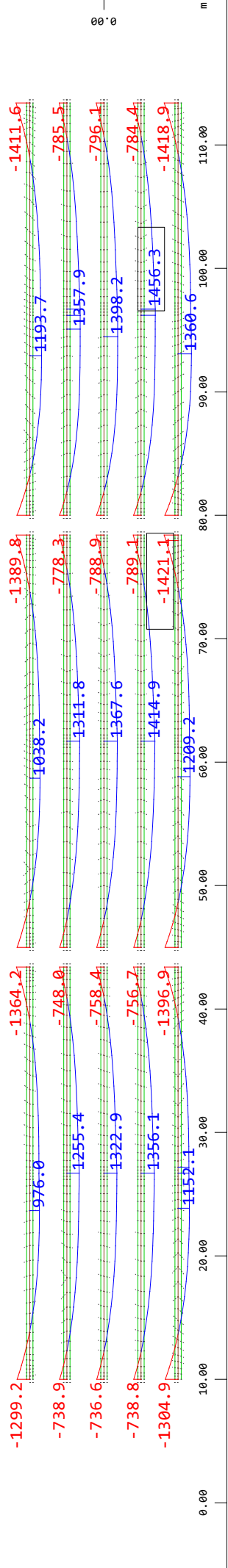
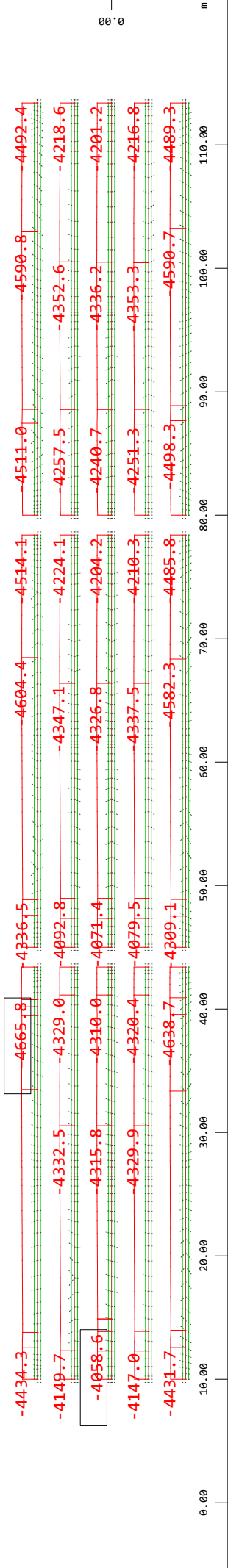


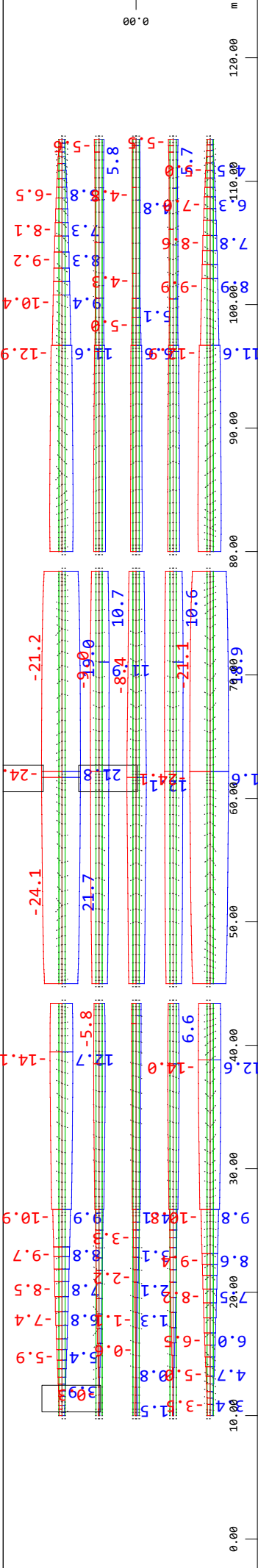
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment M_y , Loadcase 7030 (CS 30) Sum_30 Prekladna povezav , 1 cm 3D = 5671.9 kNm (Min=-1635.6) (Max=52.8)



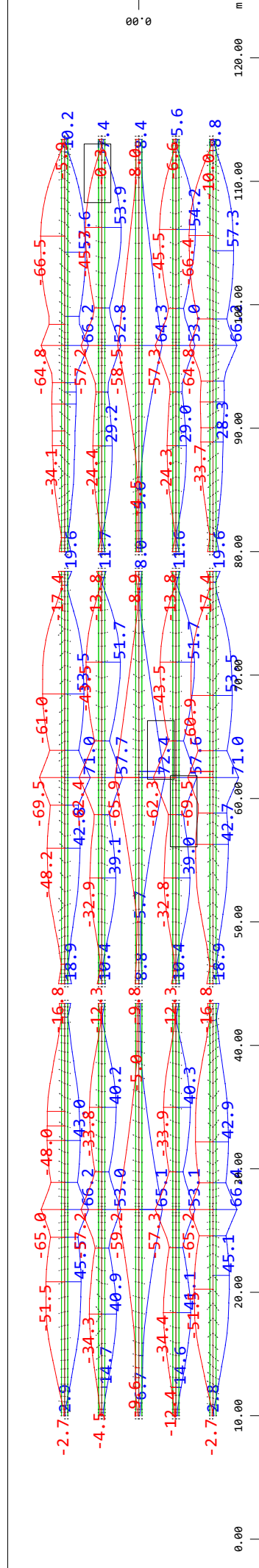
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force V_z , Loadcase 7030 (CS 30) Sum_30 Prekladna povezav , 1 cm 3D = 1636.7 kN (Min=-227.8) (Max=432.8)



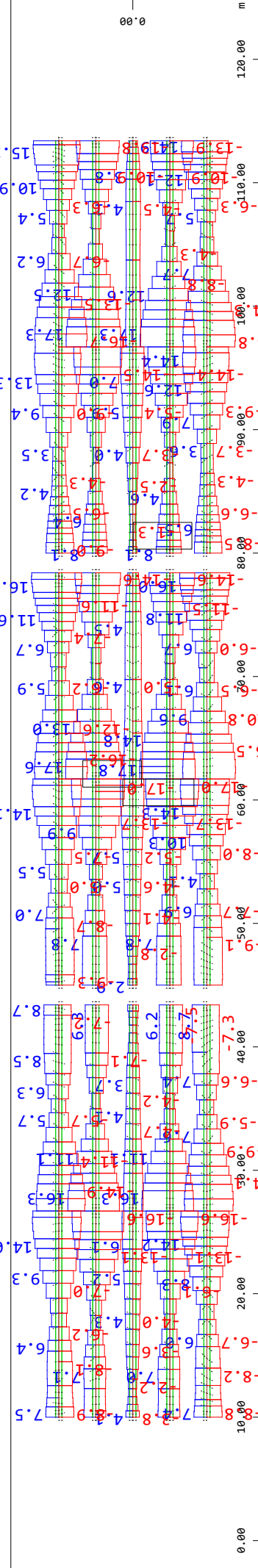




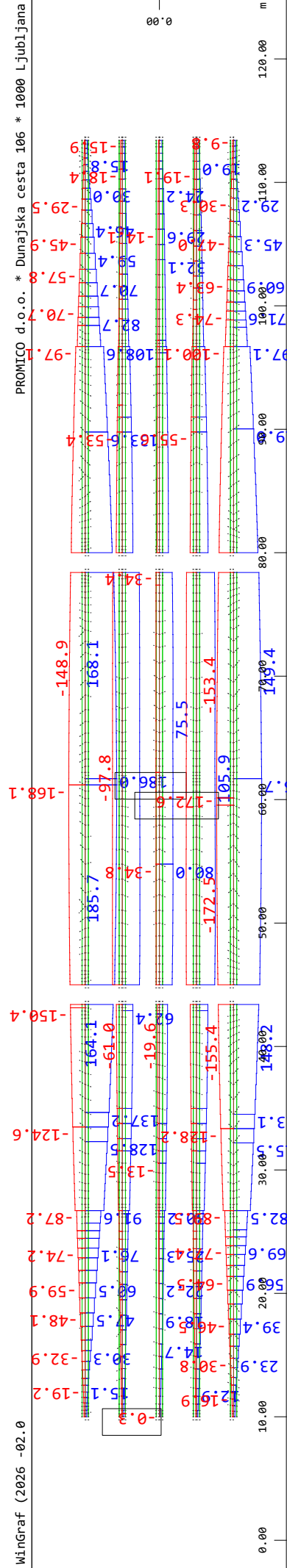
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force Nx, Loadcase 907 TEMPERATURA { nyy N UX PtX } , 1 cm 3D = 65.469 kN (Max=21.8)
Beam Elements , Normal force Ny, Loadcase 908 TEMPERATURA { nyy N UX PtX } , 1 cm 3D = 65.469 kN (Min=-24.2) (Max=-0.3)



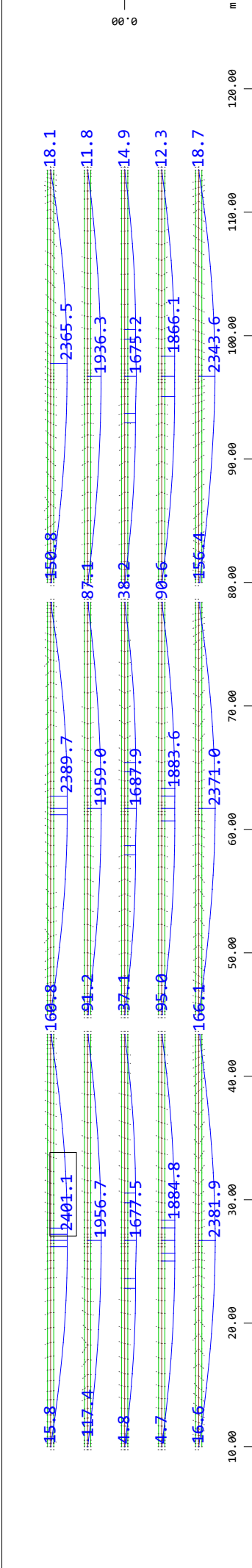
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment My, Loadcase 901 TEMPERATURA { mxx My PX P } , 1 cm 3D = 153.91 kNm (Max=72.4)
Beam Elements , Bending moment Mz, Loadcase 902 TEMPERATURA { mxx My PX P } , 1 cm 3D = 153.91 kNm (Min=-69.5) (Max=-0.3)



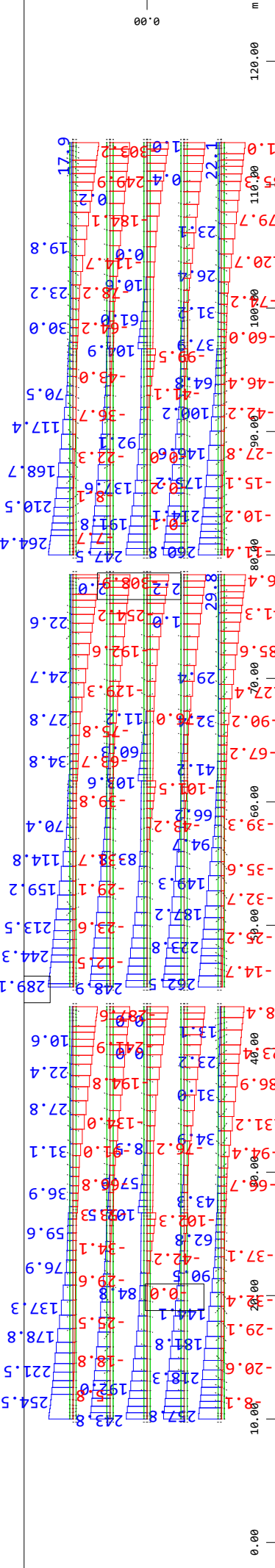
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force Vz, Loadcase 903 TEMPERATURA { myy Vz PY Pt } , 1 cm 3D = 32.734 kN (Max=17.8)
Beam Elements , Shear force Vz, Loadcase 904 TEMPERATURA { myy Vz PY Pt } , 1 cm 3D = 32.734 kN (Min=-17.0) (Max=-1.3)



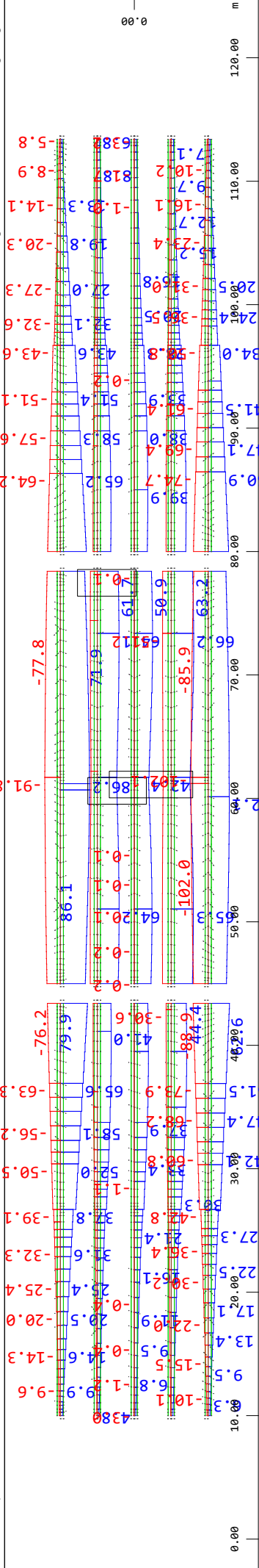
Y
Z-X
Sector of system Beam Elements Group 11...15
Beam Elements , Normal force Nx, Loadcase 927 PROMET ZVEZNA { myy N UX PtX } , 1 cm 3D = 327.34 kN (Max=186.0)
Beam Elements , Normal force Nx, Loadcase 928 PROMET ZVEZNA { myy N UX PtX } , 1 cm 3D = 567.19 kN (Min=-172.6) (Max=-0.3)



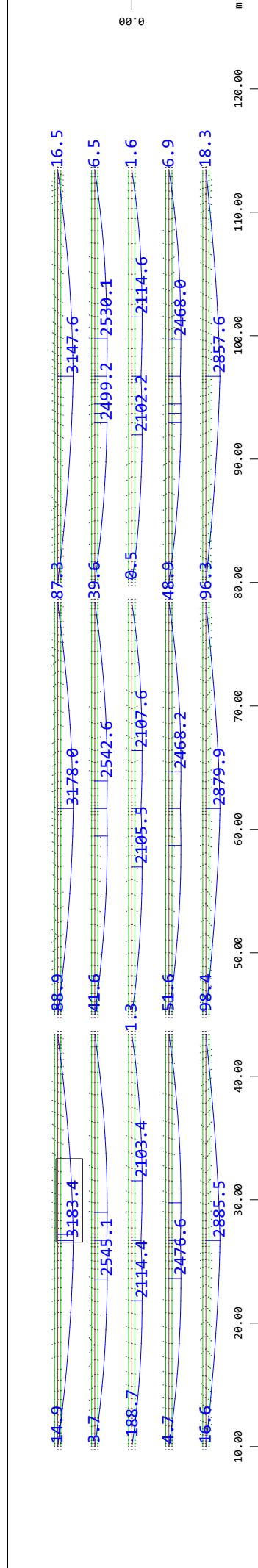
Y
Z-X
Sector of system Beam Elements Group 11...15
Beam Elements , Bending moment My, Loadcase 921 PROMET ZVEZNA { mxx My PX P } , 1 cm 3D = 8000.0 kNm (Max=2401.1)



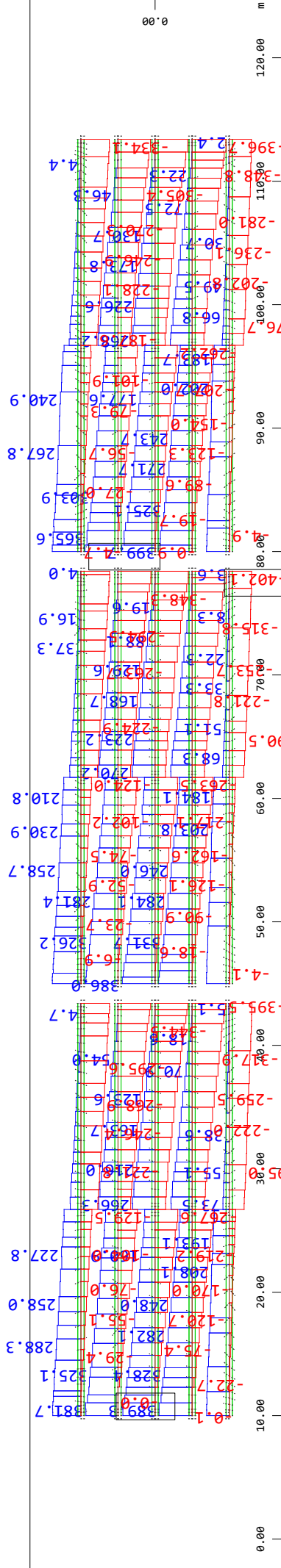
Y
Z-X
Sector of system Beam Elements Group 11...15
Beam Elements , Shear force Vz, Loadcase 923 PROMET ZVEZNA { myy Vz PY Pt } , 1 cm 3D = 654.69 kN (Max=289.1)
Beam Elements , Shear force Vz, Loadcase 924 PROMET ZVEZNA { myy Vz PY Pt } , 1 cm 3D = 654.69 kN (Min=-308.9) (Max=0.00)



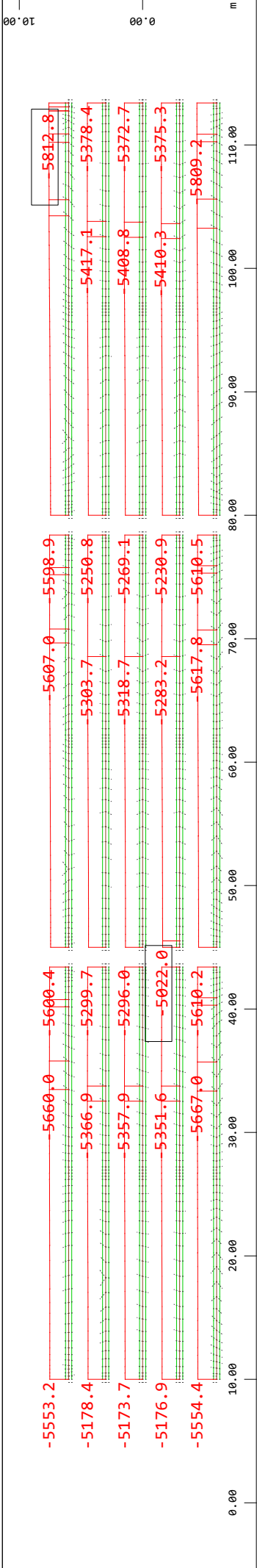
Y
Z-X
Sector of system Beam Elements Group 11...15
Beam Elements , Normal force Nx, Loadcase 947 PROMET TS { myy N UX PtX } , 1 cm 3D = 163.67 kN (Max=86.2)
Beam Elements , Normal force Nx, Loadcase 948 PROMET TS { myy N UX PtX } , 1 cm 3D = 327.34 kN (Min=-102.1) (Max=-0.1)



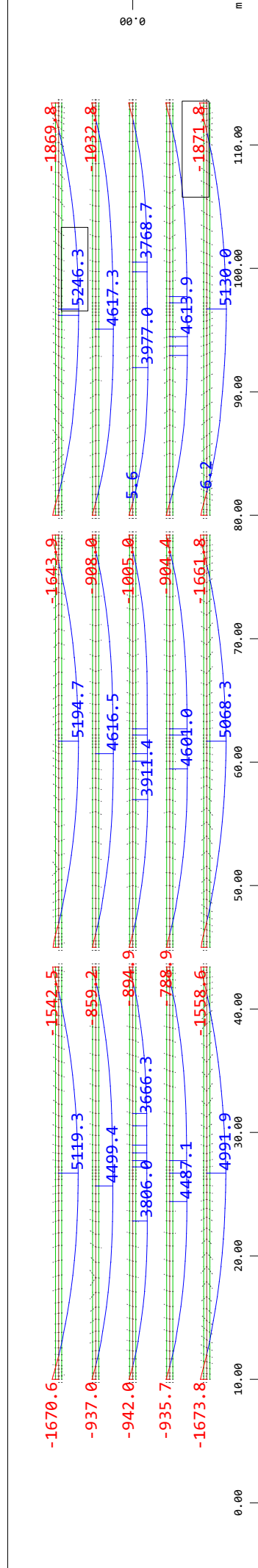
Y
Z-X
Sector of system Beam Elements Group 11...15
Beam Elements , Bending moment My, Loadcase 941 PROMET TS { mxx My Px P } , 1 cm 3D = 11344 kNm (Max=3183.4)



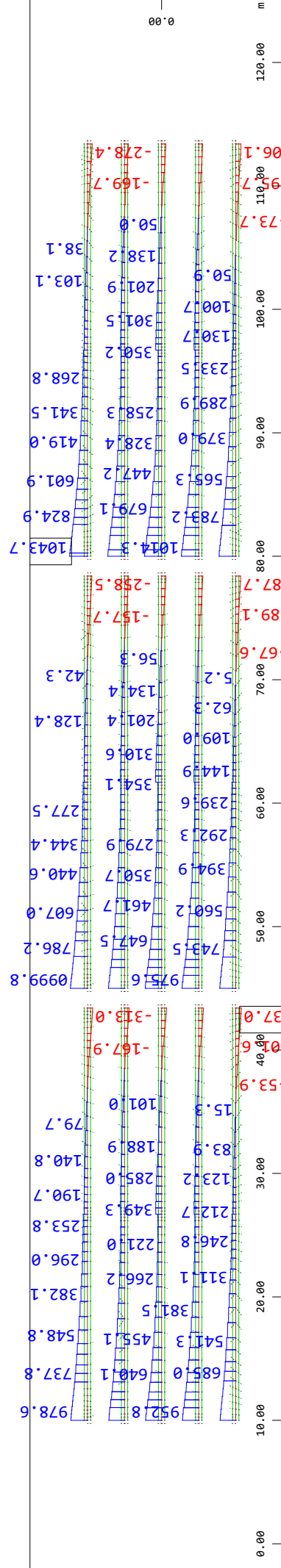
Y
Z-X
Sector of system Beam Elements Group 11...15
Beam Elements , Shear force Vz, Loadcase 943 PROMET TS { myy Vz PY Pt } , 1 cm 3D = 654.69 kN (Max=399.7)
Beam Elements , Shear force Vz, Loadcase 944 PROMET TS { myy Vz PY Pt } , 1 cm 3D = 654.69 kN (Min=-402.1) (Max=0.00)



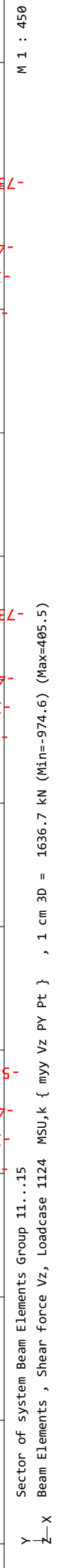
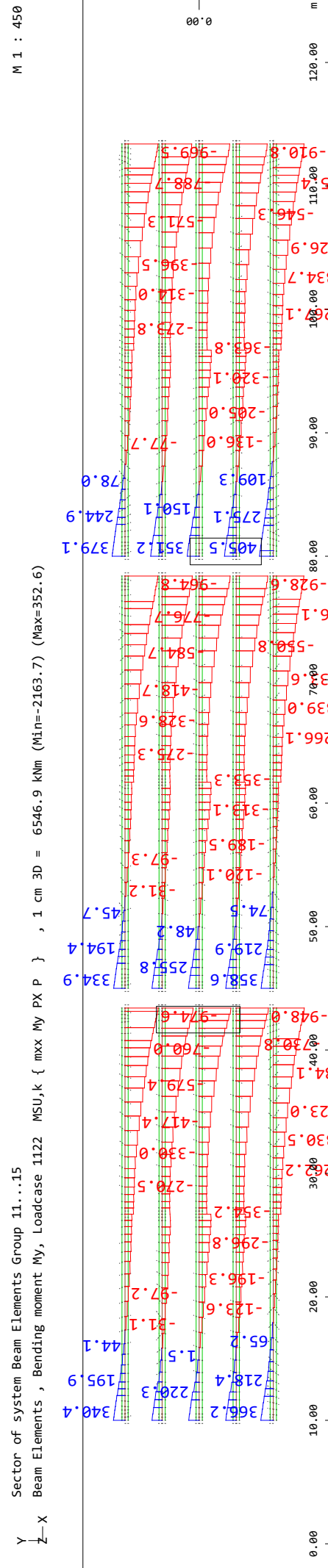
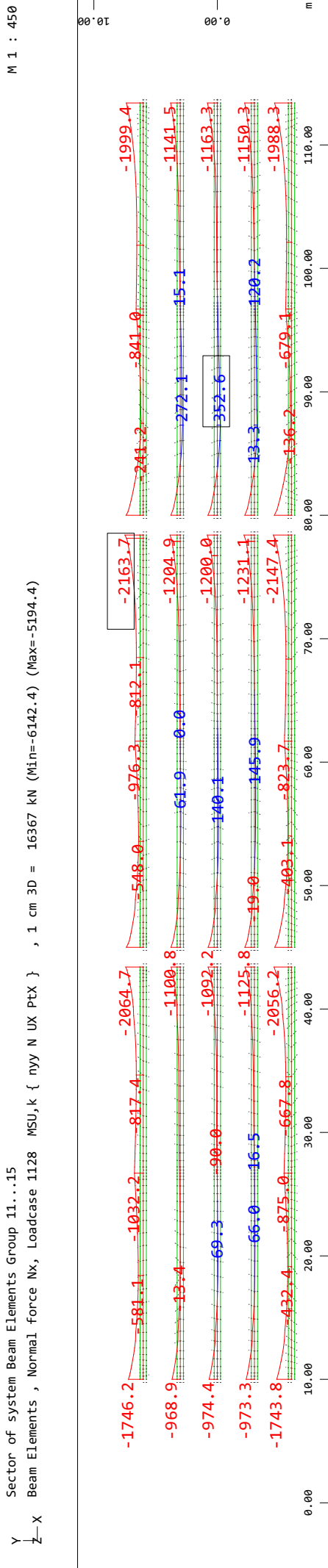
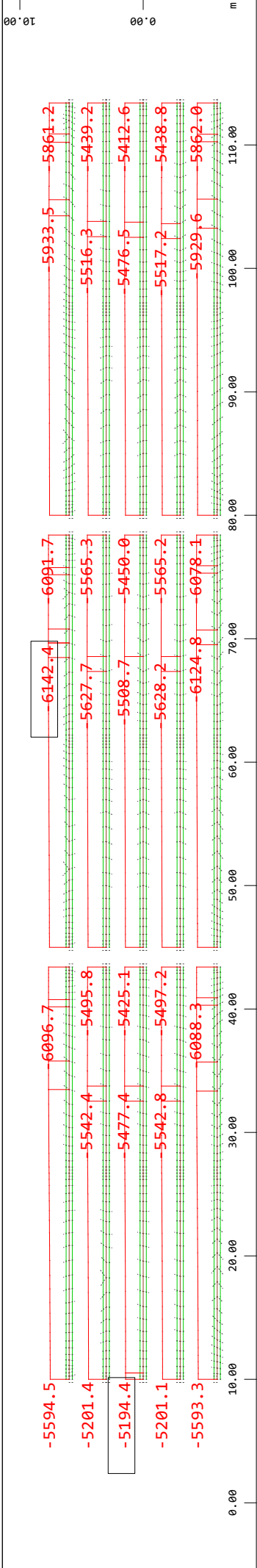
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force N_x , Loadcase 1127 MSU,k { myy N UX PX } , 1 cm 3D = 16367 kN (Min=-5812.8) (Max=-5022.0)

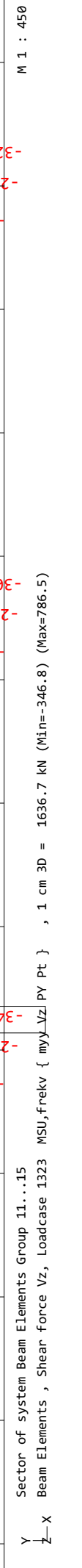
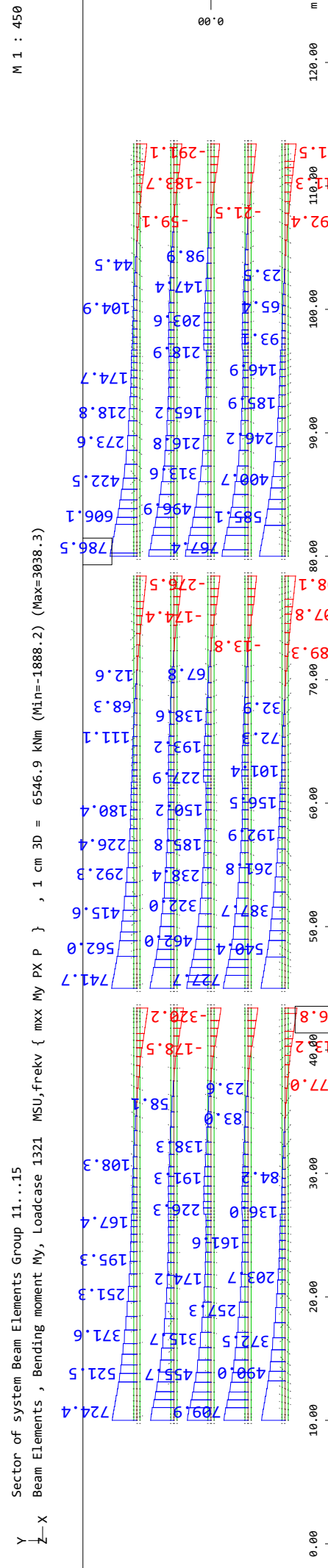
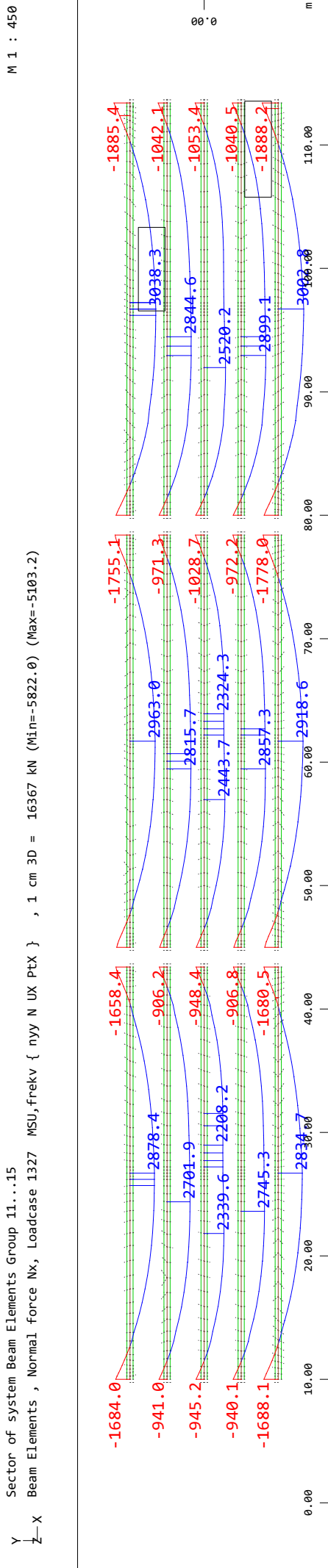
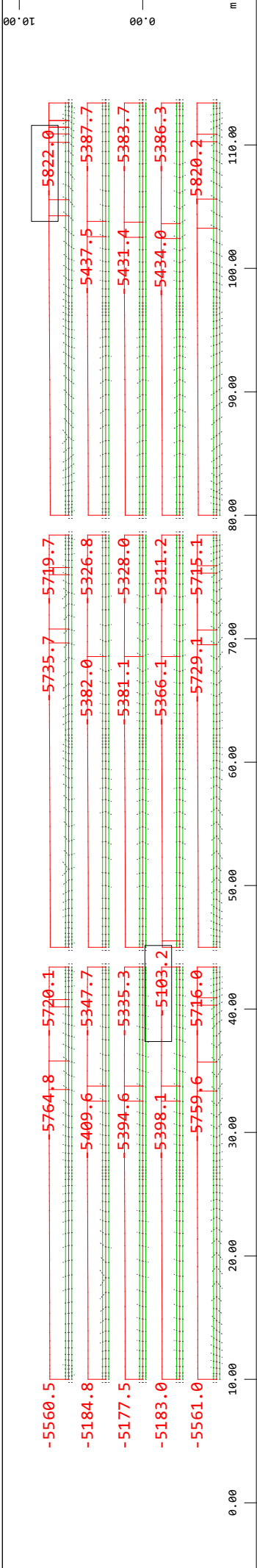


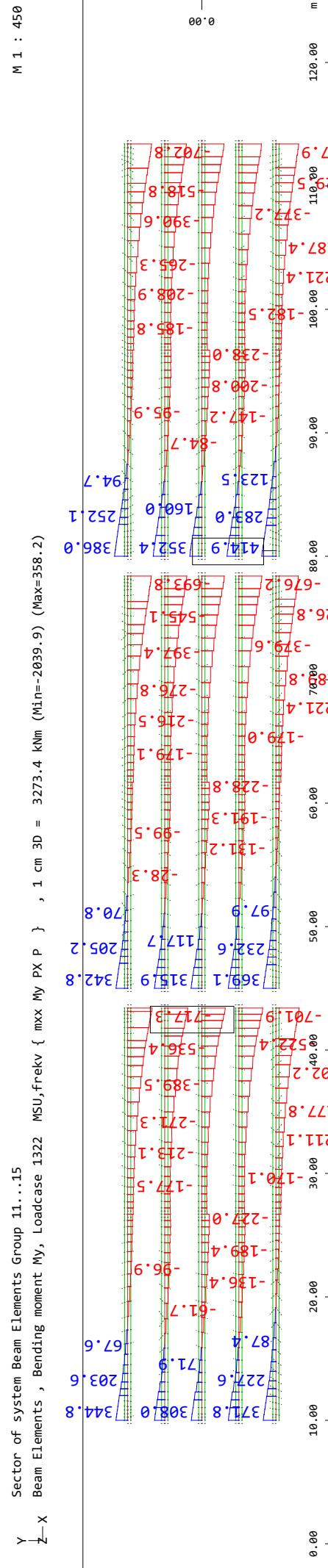
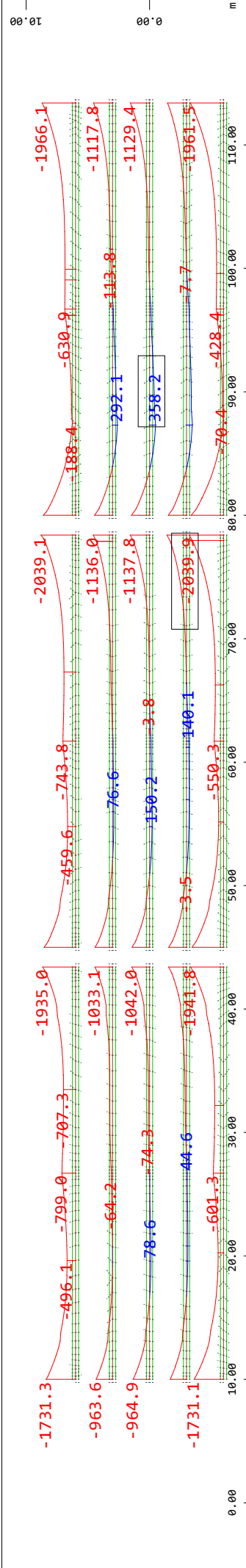
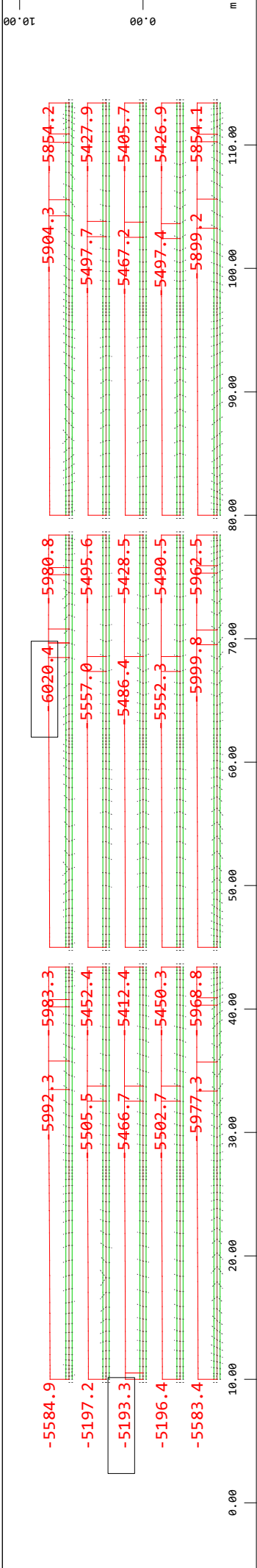
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment M_y , Loadcase 1121 MSU,k { mxx My PX P } , 1 cm 3D = 14531 kNm (Min=-1871.8) (Max=5246.3)

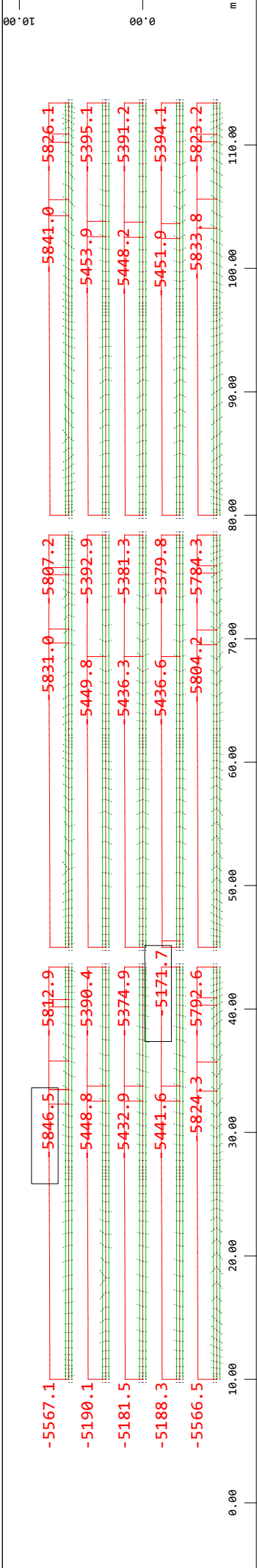


Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force V_z , Loadcase 1123 MSU,k { myy Vz PY Pt } , 1 cm 3D = 3273.4 kN (Min=-337.0) (Max=1043.7)

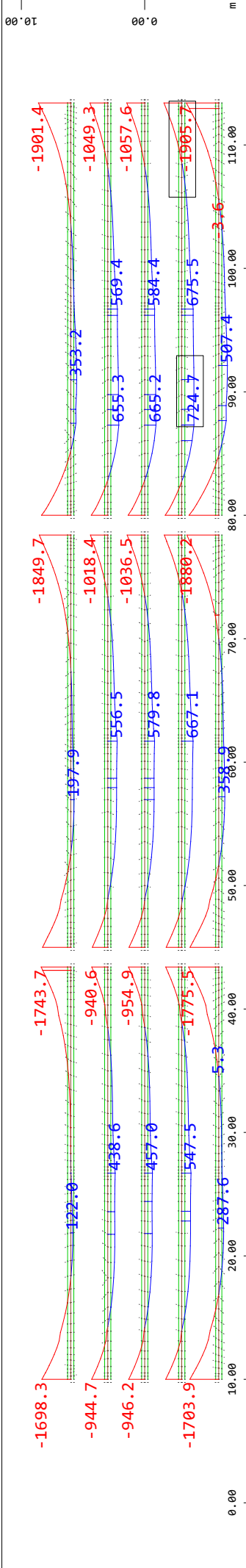




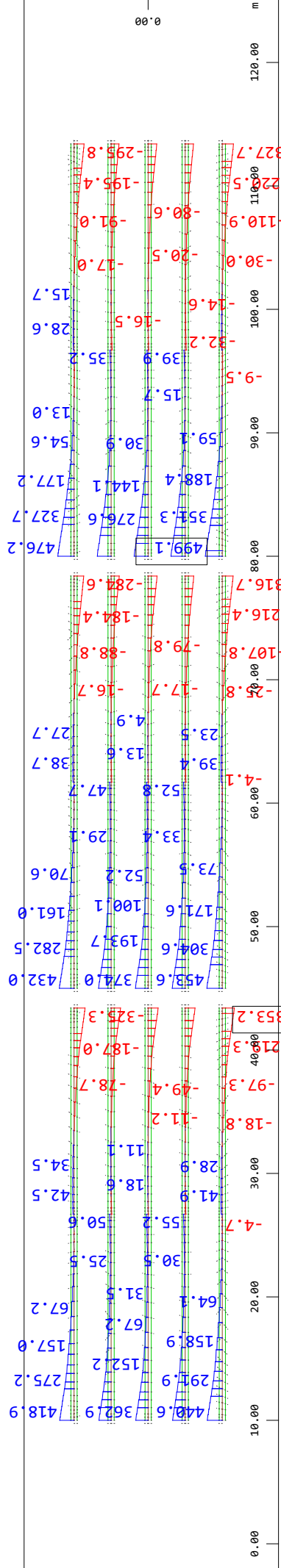




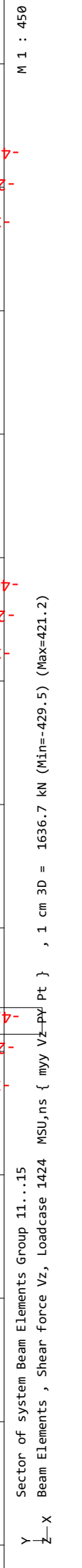
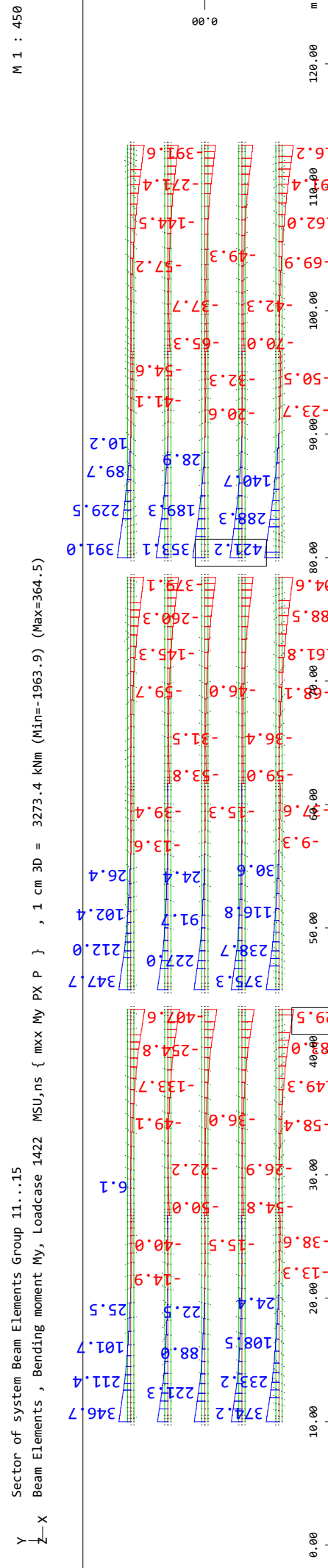
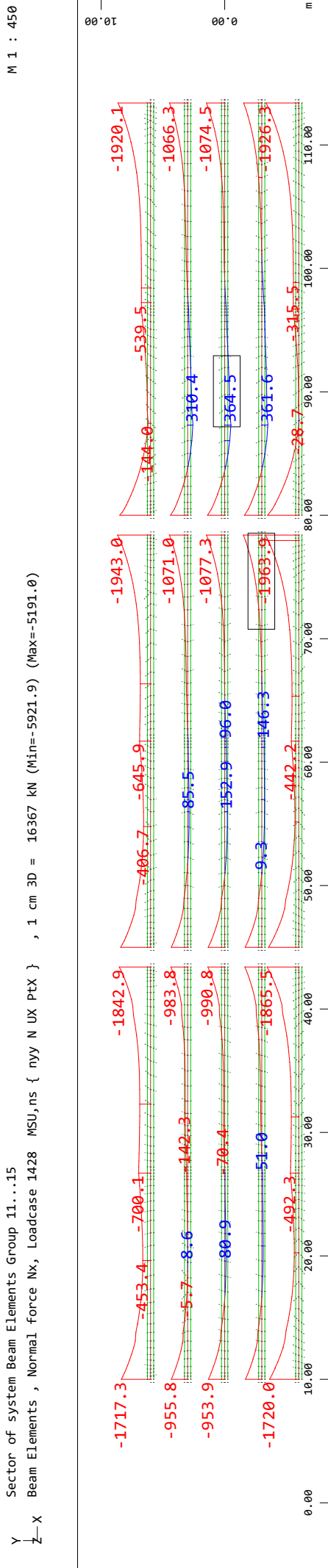
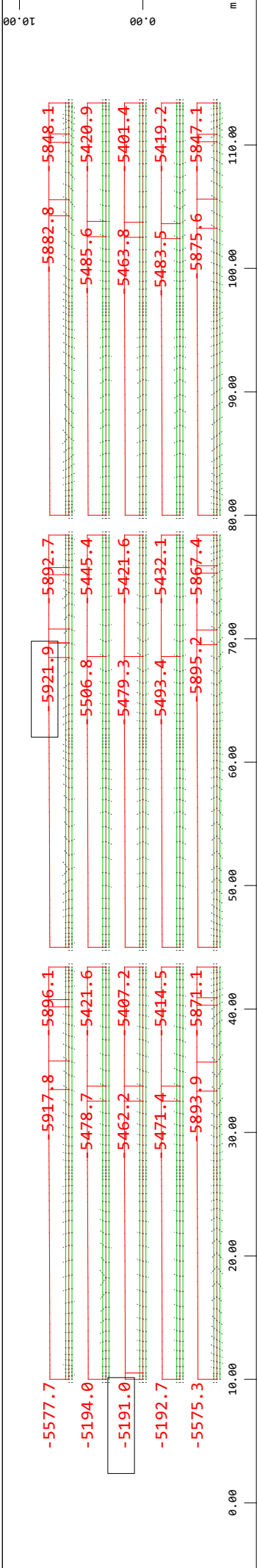
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force N_x , Loadcase 1427 MSU,ns { myy N UX PtX } , 1 cm 3D = 16367 kN (Min=-5846.5) (Max=-5171.7) M 1 : 450

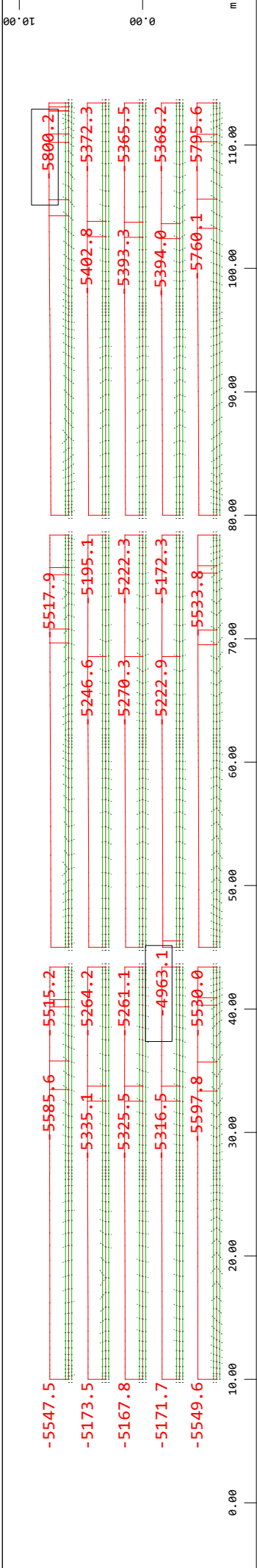


Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment M_y , Loadcase 1421 MSU,ns { mxx My PX P } , 1 cm 3D = 3273.4 kNm (Min=-1905.7) (Max=724.7) M 1 : 450

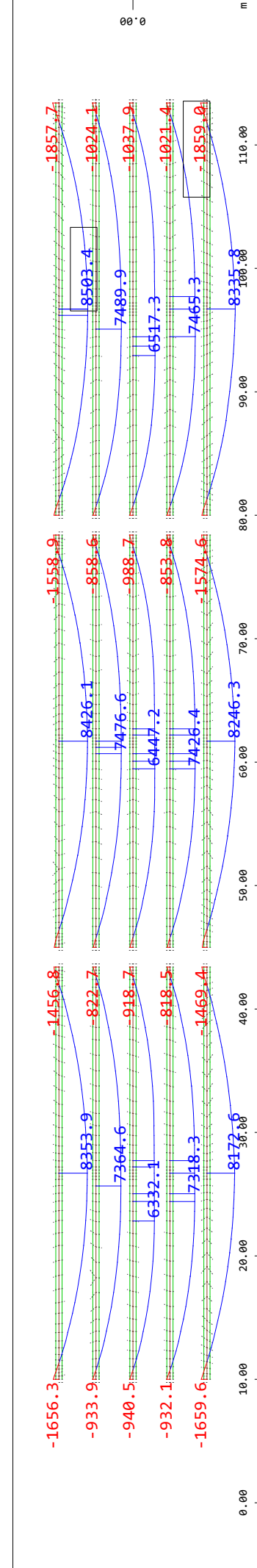


Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force V_z , Loadcase 1423 MSU,ns { myy Vz-PV Pt } , 1 cm 3D = 1636.7 kN (Min=-353.2) (Max=499.1) M 1 : 450

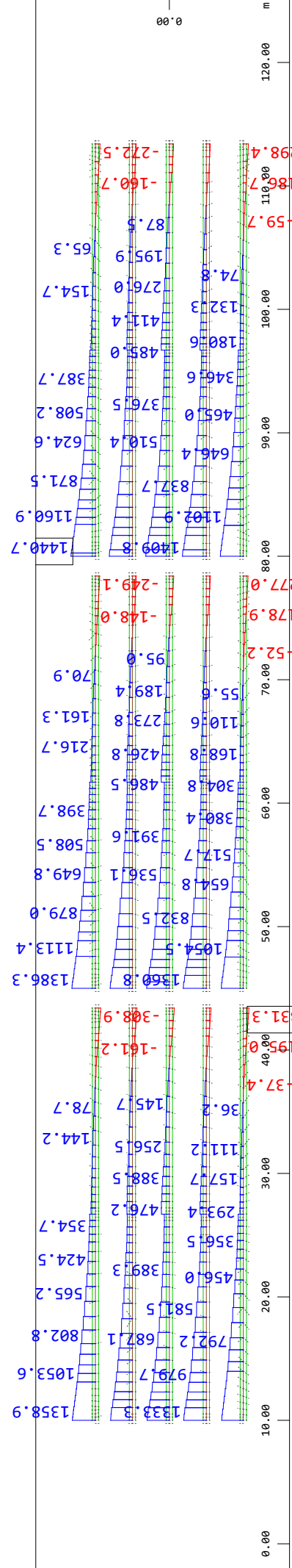




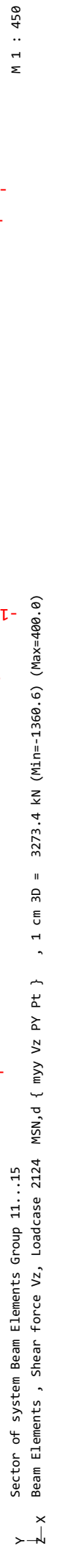
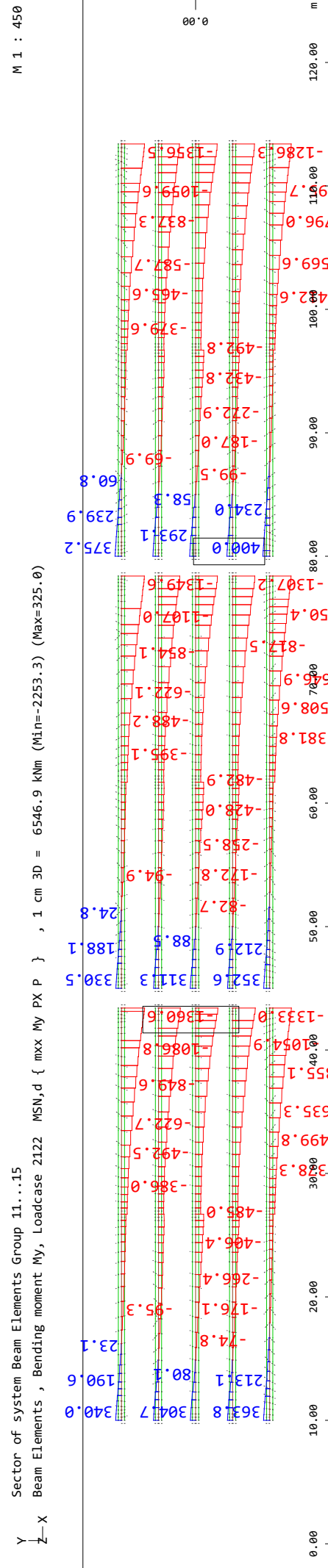
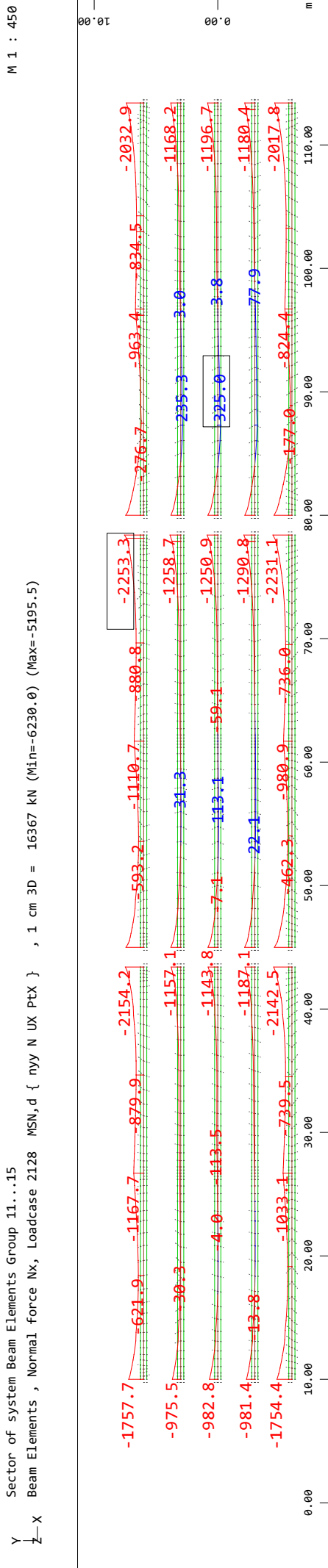
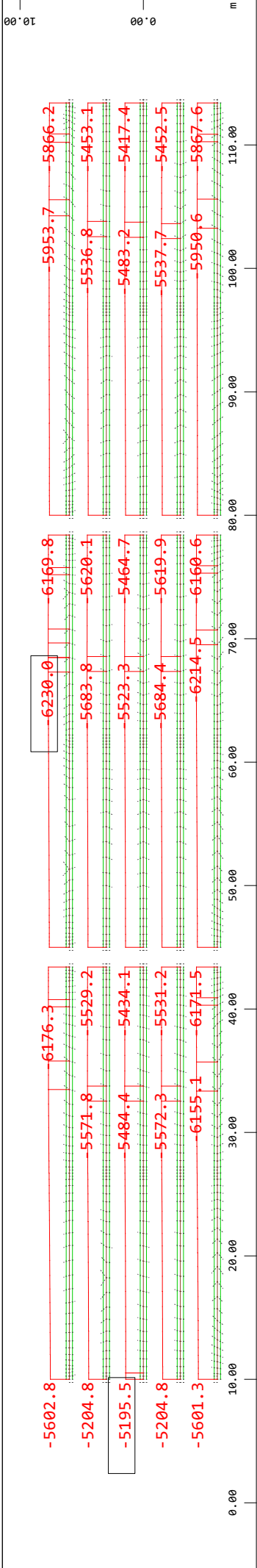
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force Nx, Loadcase 2127 MSN,d { myy N UX PX } , 1 cm 3D = 16367 kN (Min=-5800.2) (Max=-4963.1)



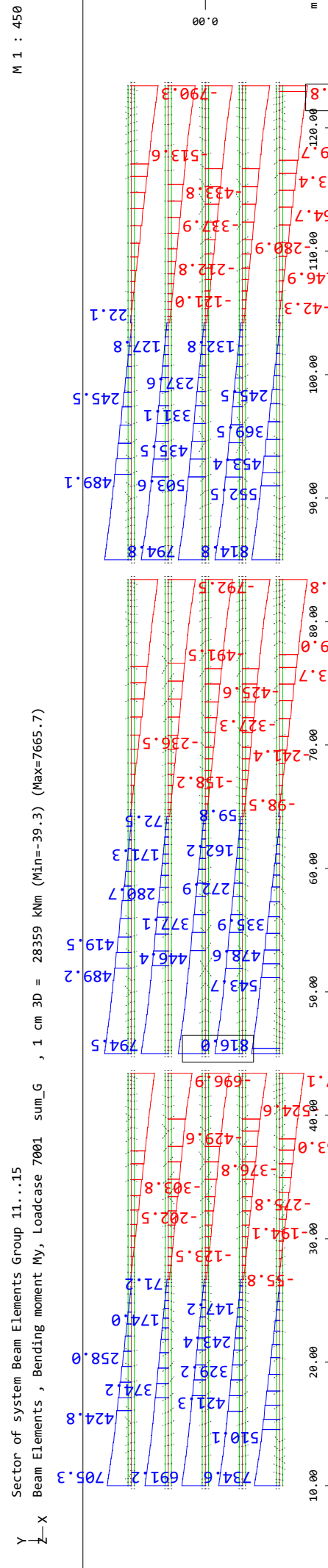
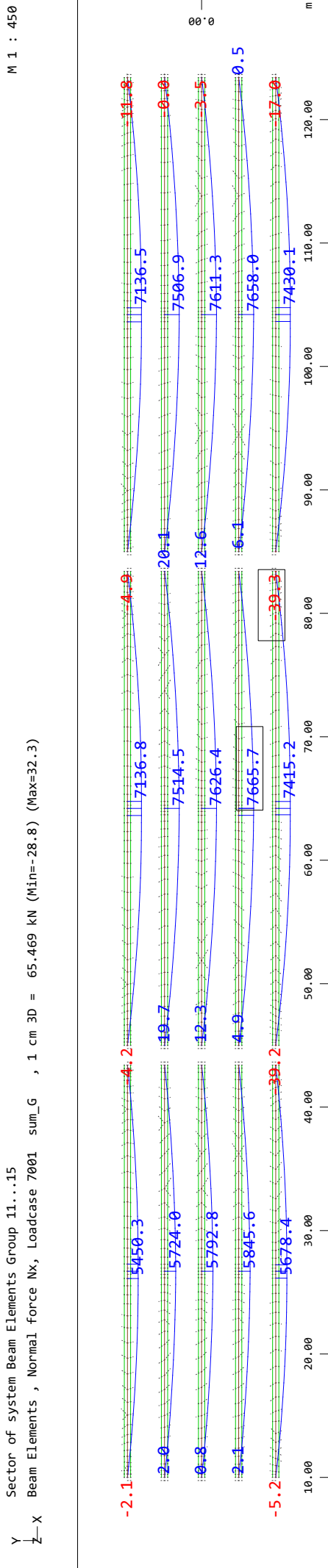
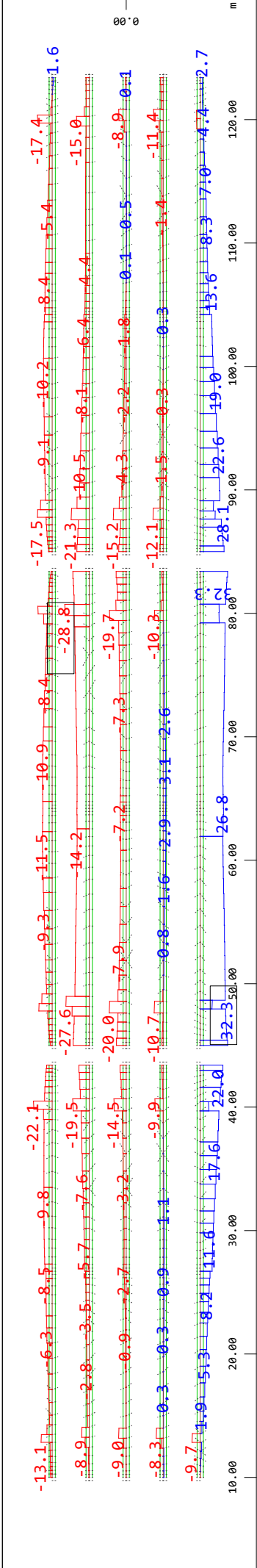
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment My, Loadcase 2121 MSN,d { mxx My PX P } , 1 cm 3D = 16367 kNm (Min=-1859.0) (Max=8503.4)

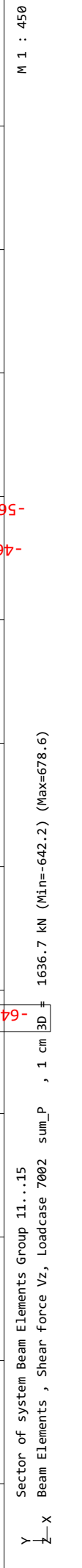
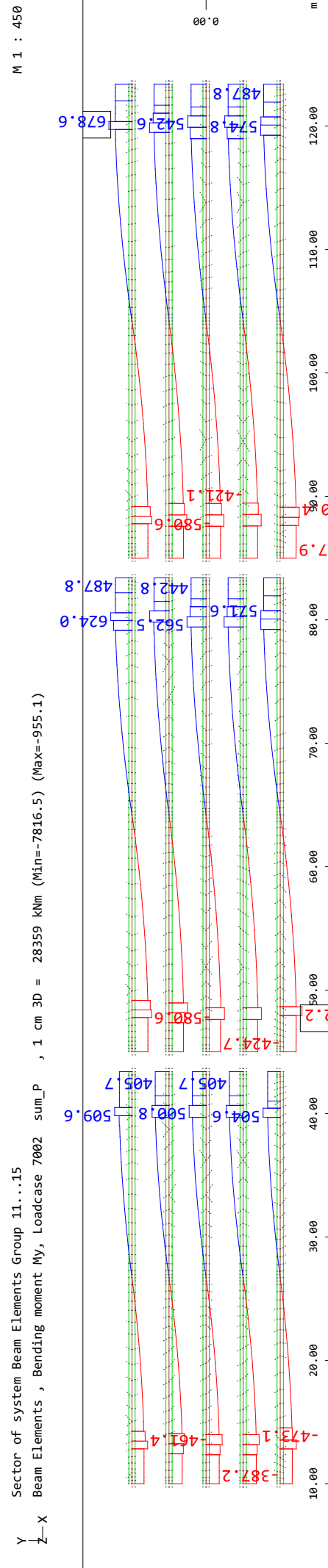
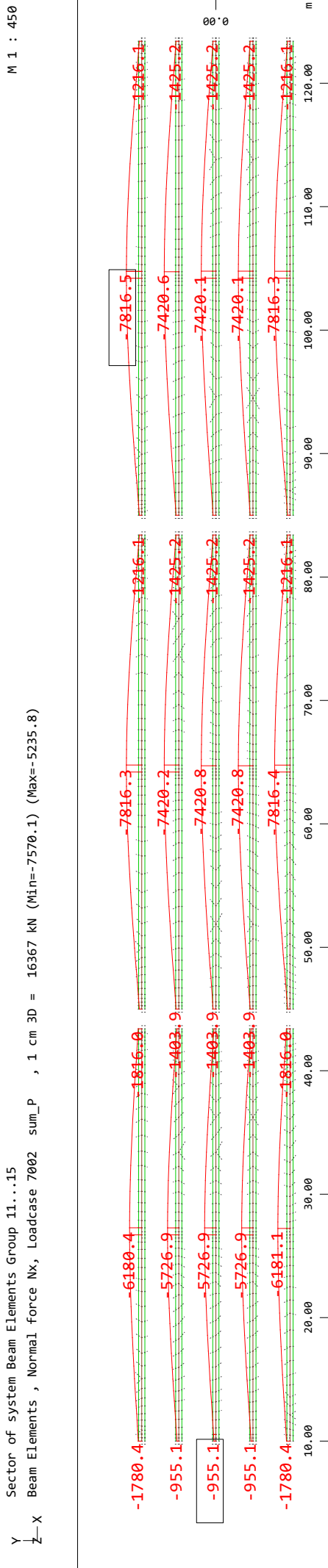
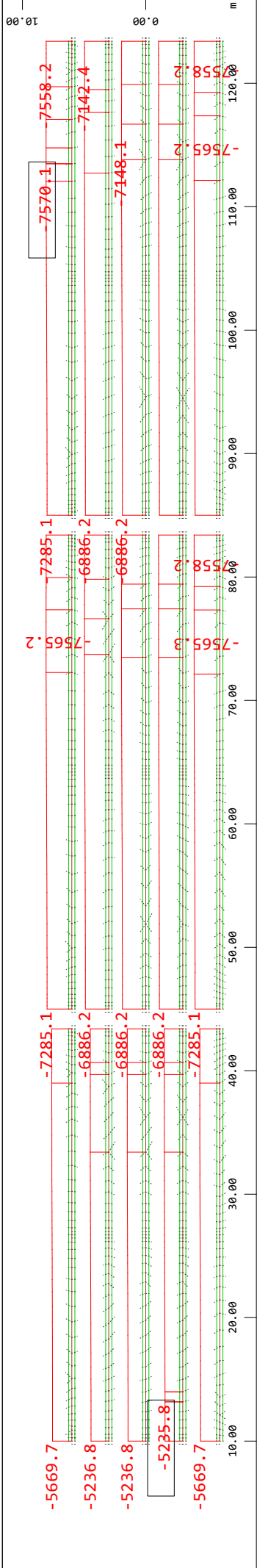


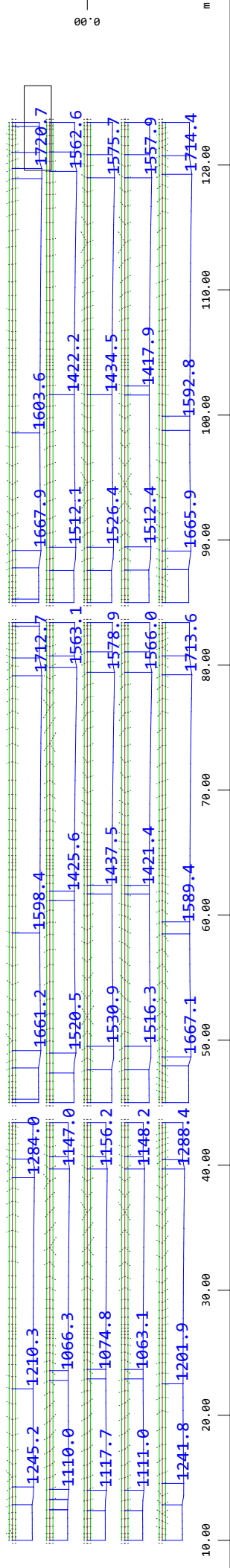
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force Vz, Loadcase 2123 MSN,d { myy Vz PY Pt } , 1 cm 3D = 3273.4 kN (Min=-331.3) (Max=1440.7)



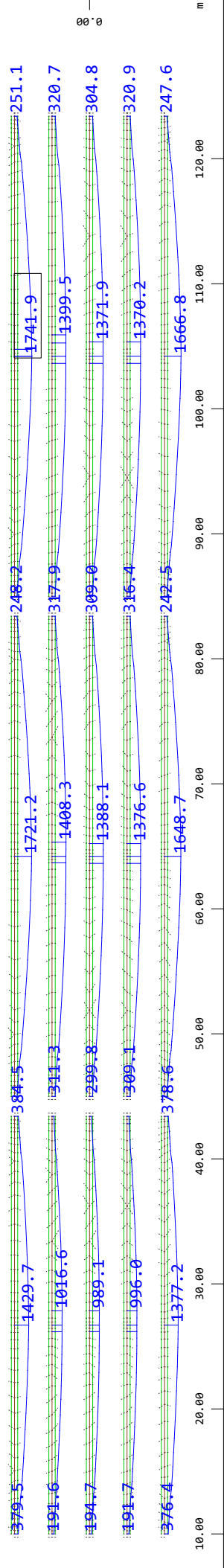
8.2 NOTRANJE SILE PREKLADNA KONSTRUKCIJA RAČUNSKI MODEL II. – 35+40+40m



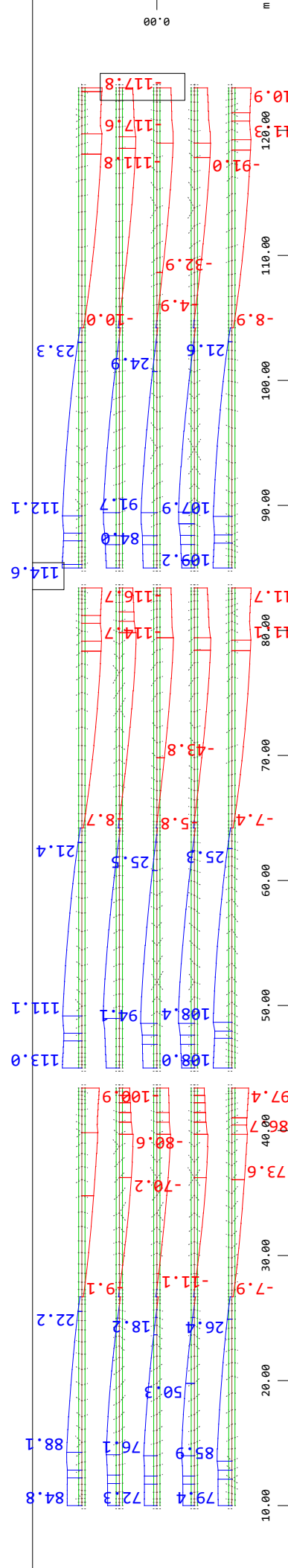




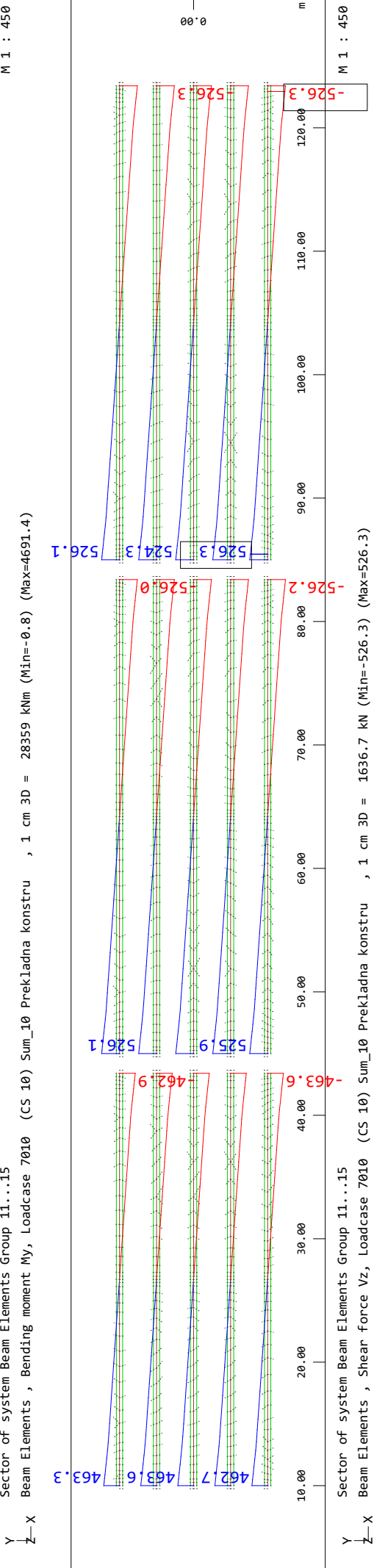
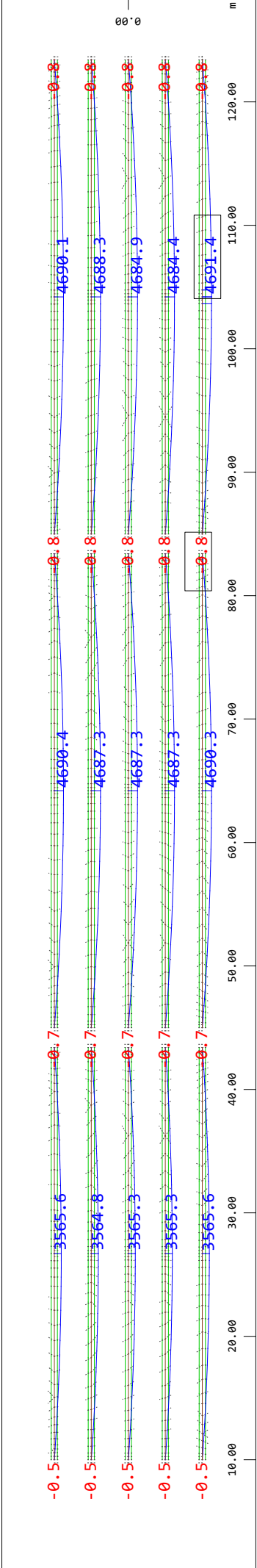
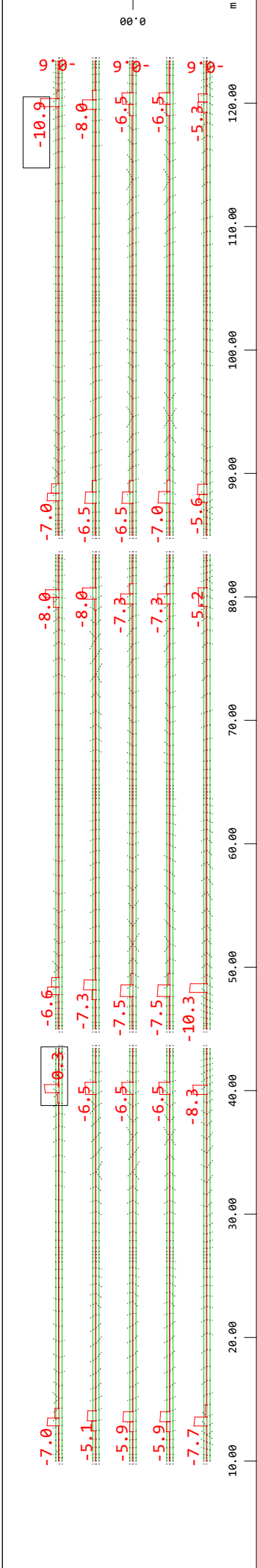
Y
Z X
Sector of system Beam Elements Group 11...15
Beam Elements , Normal force Nx, Loadcase 7003 sum_C 1 cm 3D = 3273.4 kN (Max=1720.7)

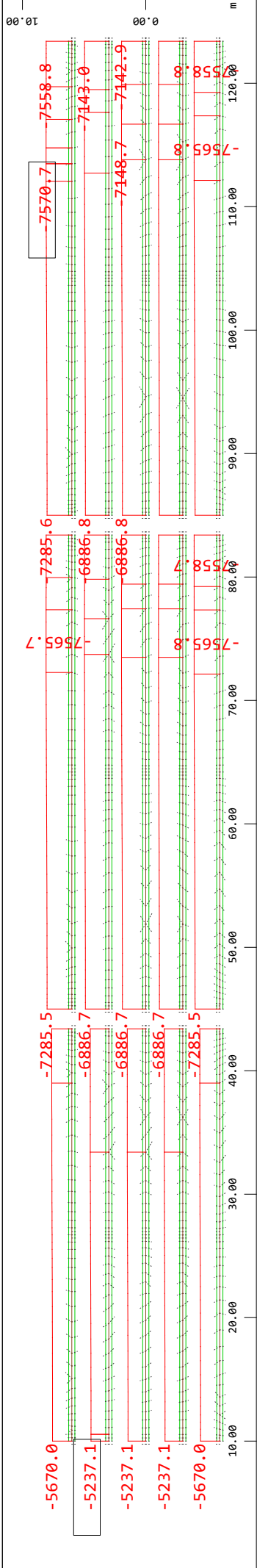


Y
Z X
Sector of system Beam Elements Group 11...15
Beam Elements , Bending moment MY, Loadcase 7003 sum_C , 1 cm 3D = 5671.9 kNm (Max=1741.9)

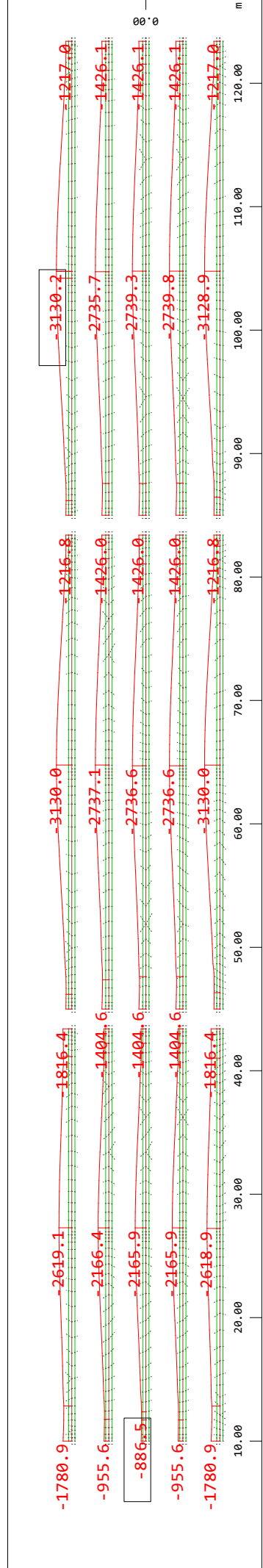


Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force Vz, Loadcase 7003 sum C , 1 cm 3D = 327.34 kN (Min=-117.8) (Max=114.6)
-1 -1 -1 -1 M 1 : 450

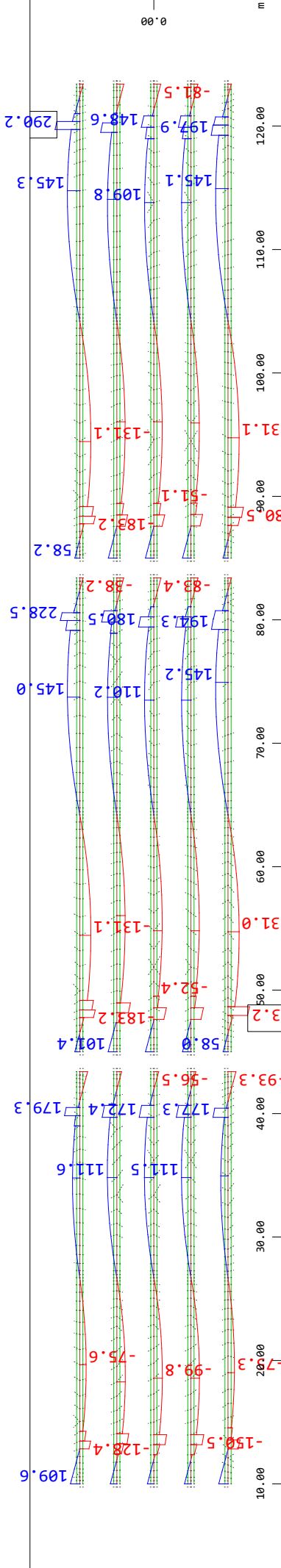




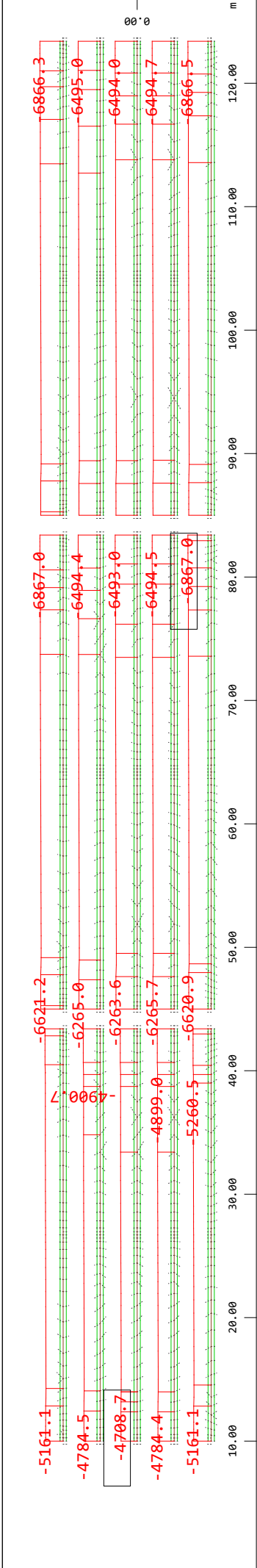
Y
Z-X
Sector of system Beam Elements Group 11...15
Beam Elements , Normal force N_x , Loadcase 7011 (CS 11) Sum_11 Prestress , 1 cm 3D = 16367 kN (Min=-7570.7) (Max=-5237.1)
M 1 : 450



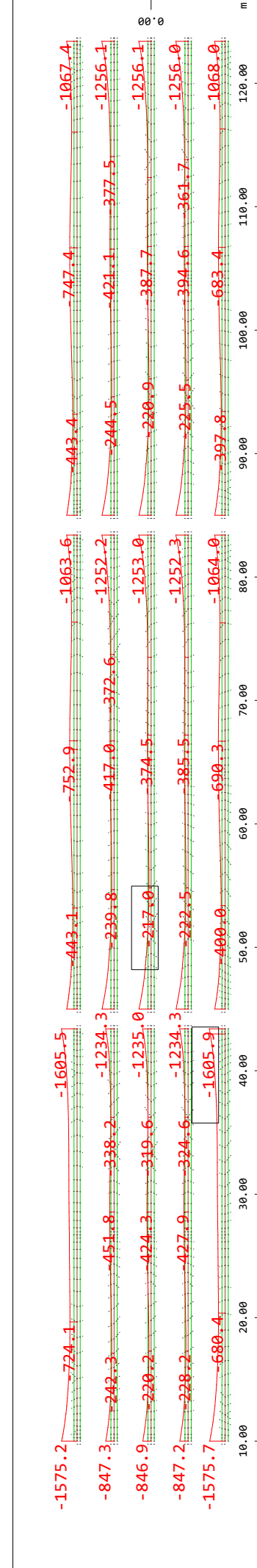
Y
Z-X
Sector of system Beam Elements Group 11...15
Beam Elements , Bending moment M_y , Loadcase 7011 (CS 11) Sum_11 Prestress , 1 cm 3D = 11344 kNm (Min=-3130.2) (Max=-886.5)
M 1 : 450



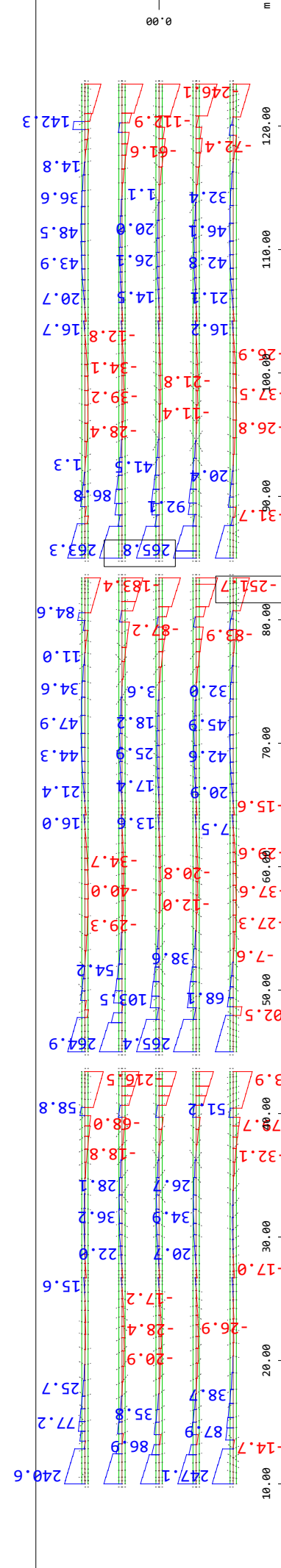
Y
Z-X
Sector of system Beam Elements Group 11...15
Beam Elements , Shear force V_z , Loadcase 7011 (CS 11) Sum_11 Prestress , 1 cm 3D = 654.69 kN (Min=-253.2) (Max=290.2)
M 1 : 450



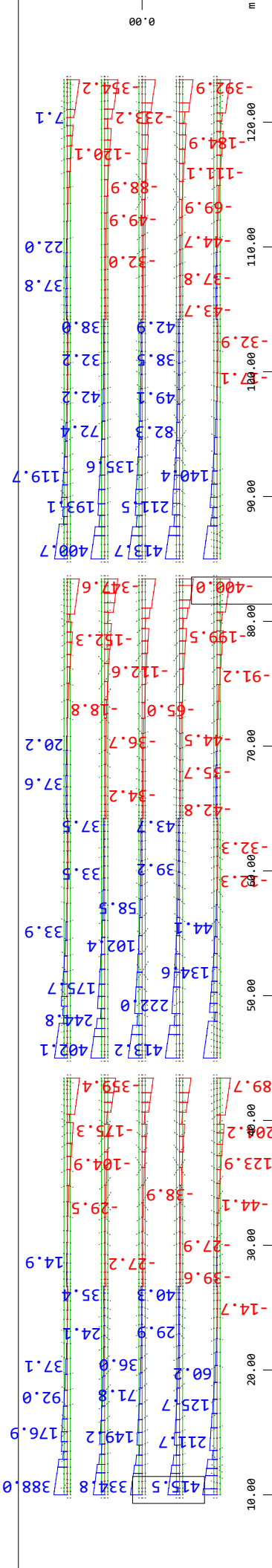
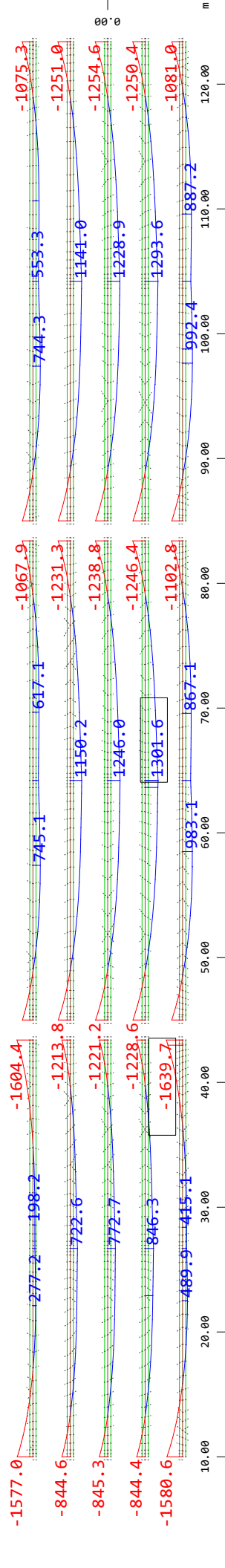
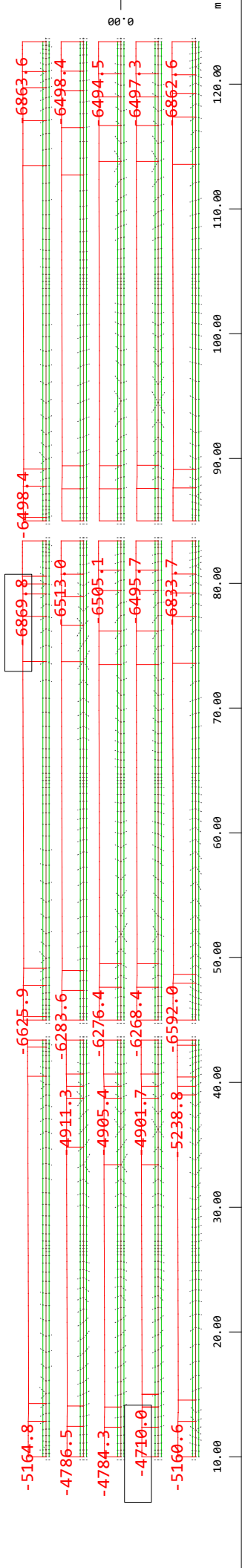
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force N_x , Loadcase 7030 (CS 30) Sum_30 Prekladna povezav , 1 cm 3D = 16367 kN (Min=-6867.0) (Max=-4708.7)

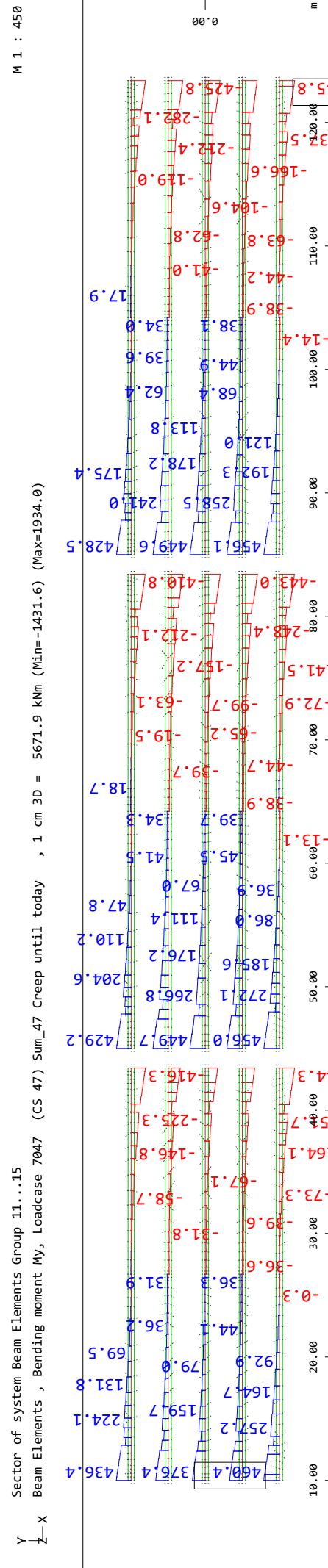
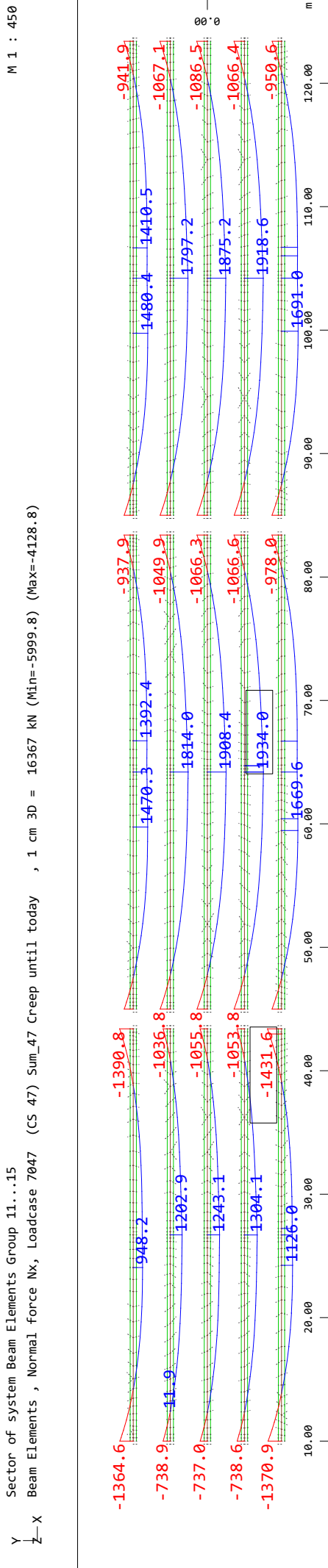
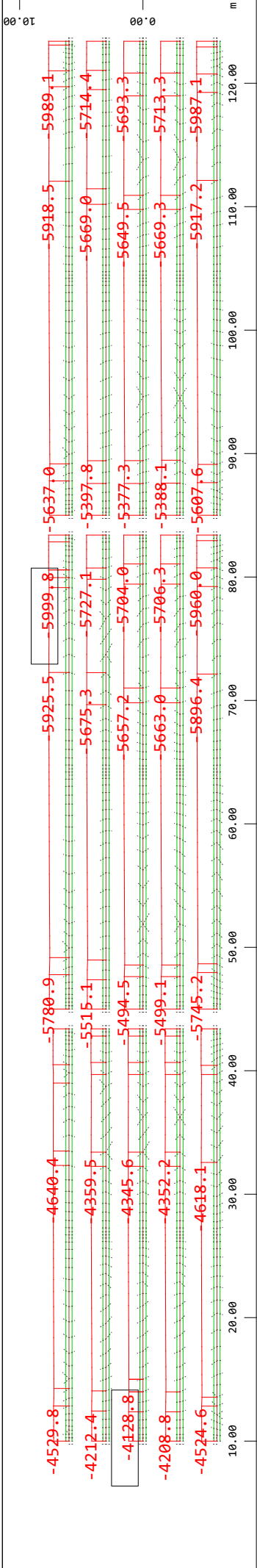


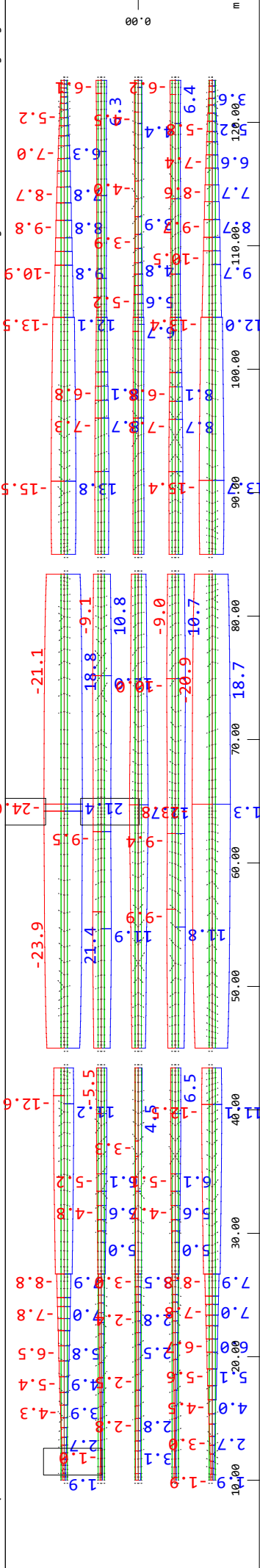
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment M_y , Loadcase 7030 (CS 30) Sum_30 Prekladna povezav , 1 cm 3D = 5671.9 kNm (Min=-1605.9) (Max=-217.0)



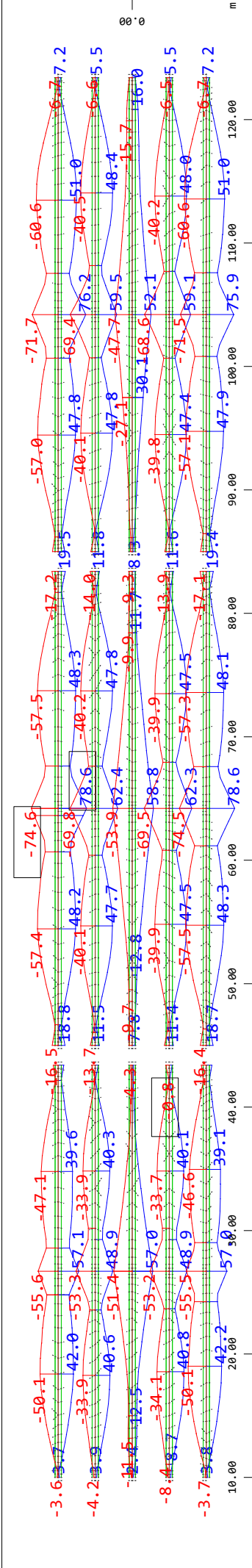
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force V_z , Loadcase 7030 (CS 30) Sum_30 Prekladna povezav , 1 cm 3D = 654.69 kN (Min=-251.7) (Max=265.8)



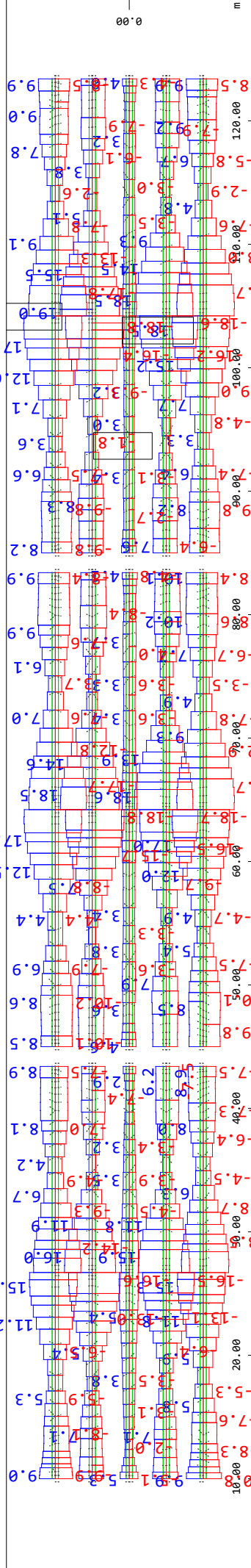




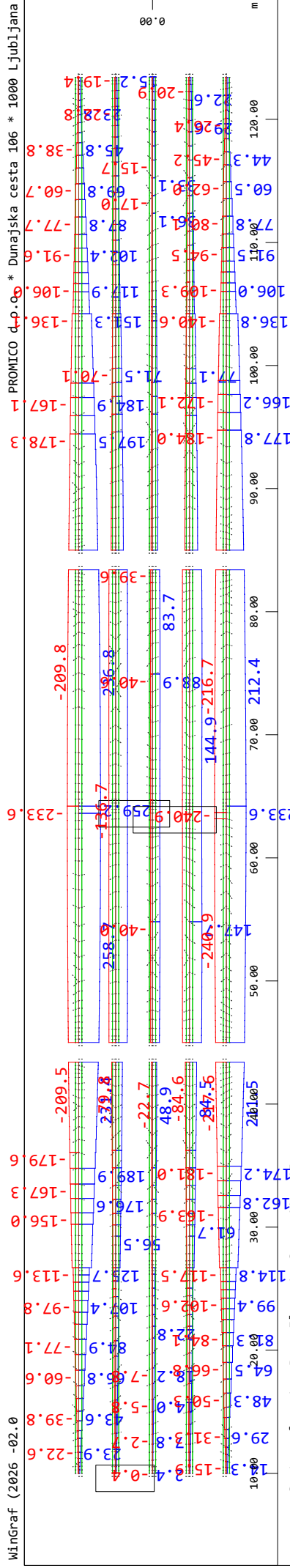
Y
Z-X



Y
Z-X



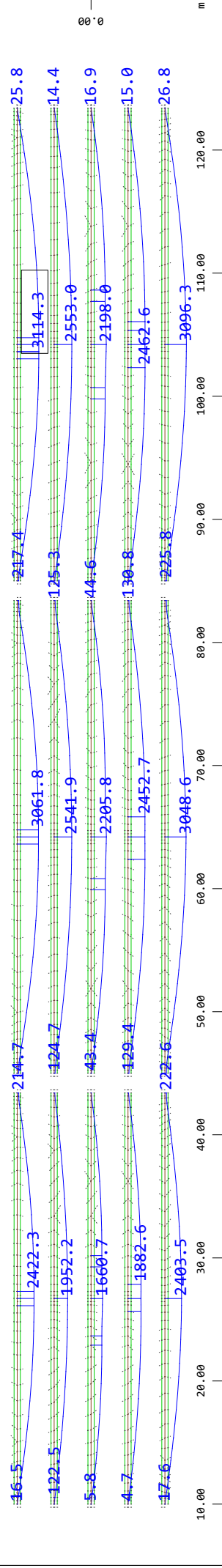
Y
Z-X



Sector of svstem Beam Elements Group 11...15

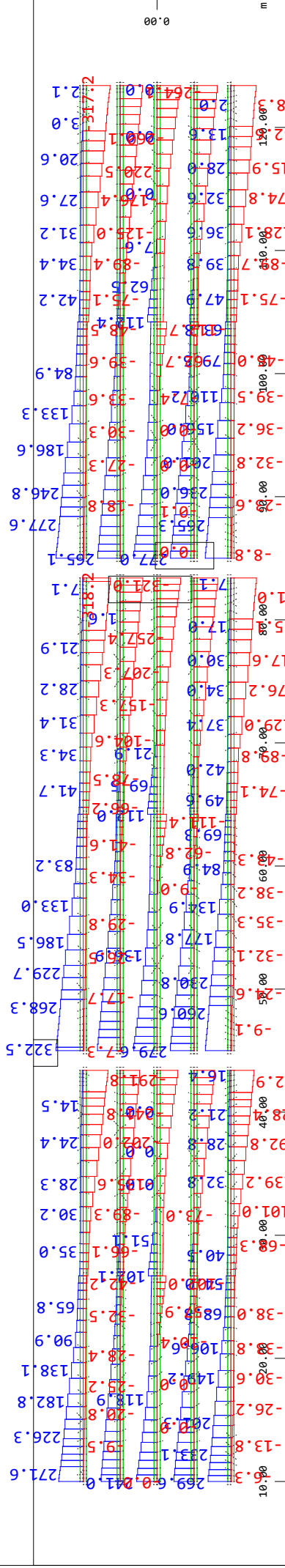
Beam Elements , Normal force Nx, Loadcase 927 PROMET ZVEZNA { nyy N UX PtX } , 1 cm 3D = 654.69 kN (Max=259.2)

Beam Elements , Normal force Nx, Loadcase 928 PROMET ZVEZNA { nyy N UX PtX } , 1 cm 3D = 1134.4 kN (Min=-240.9) (Max=-0.4)



Sector of system Beam Elements Group 11...15

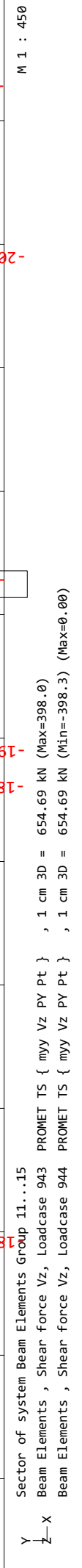
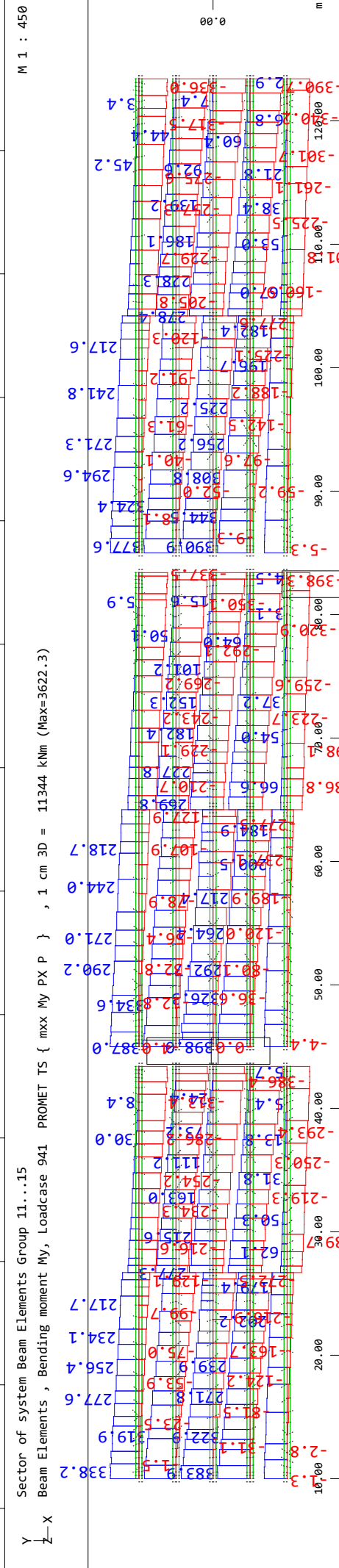
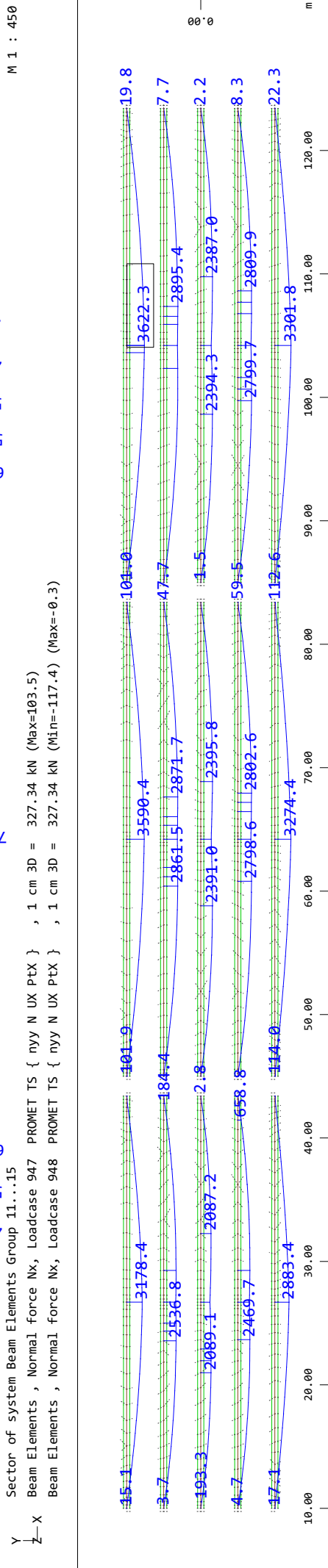
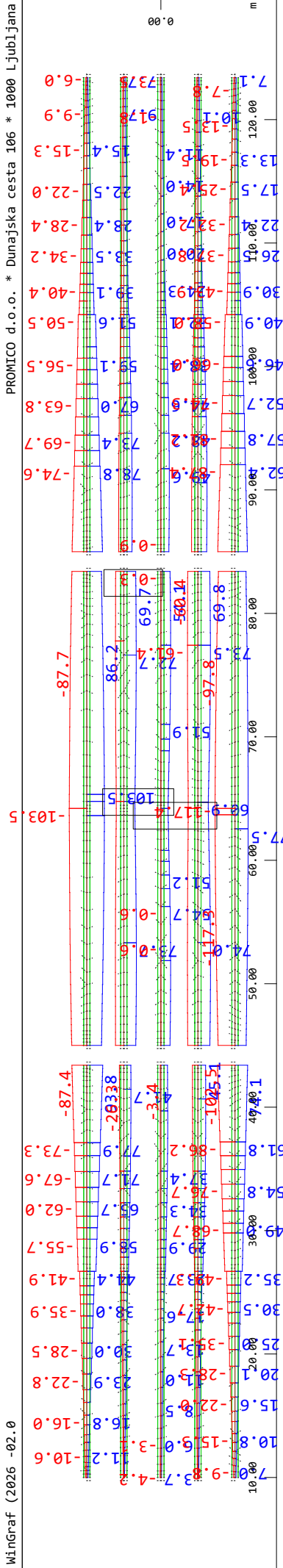
Beam Elements , Bending moment My, Loadcase 921 PROMET ZVEZNA { mxx My PX P } , 1 cm 3D = 8000.0 kNm (Max=3114.3)

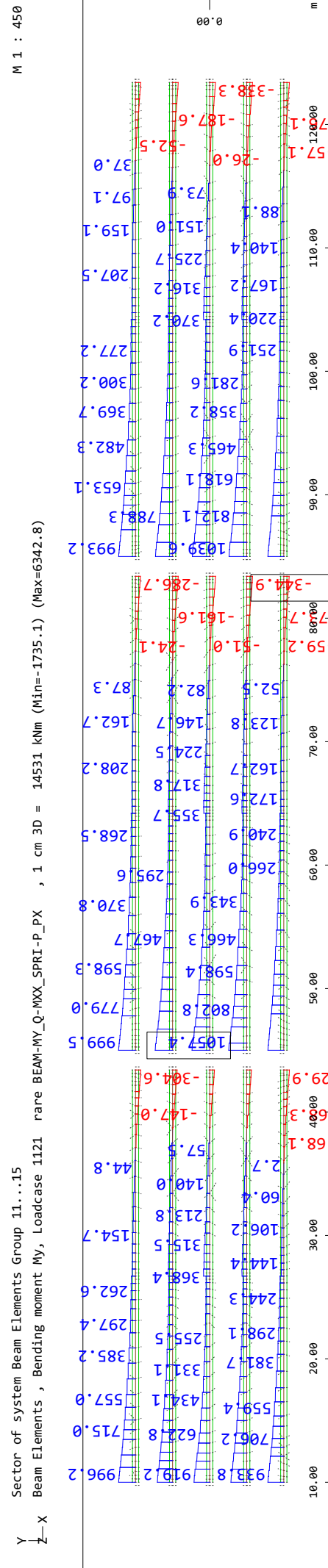
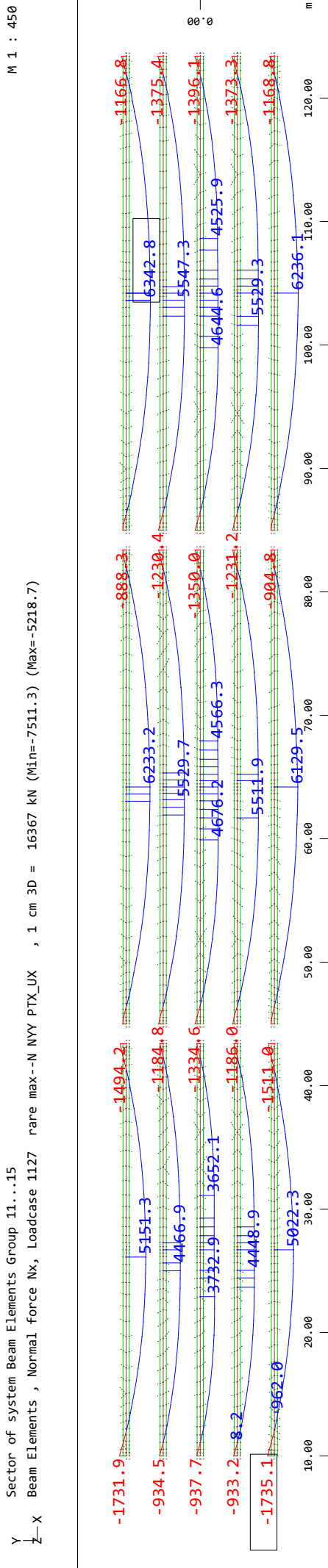
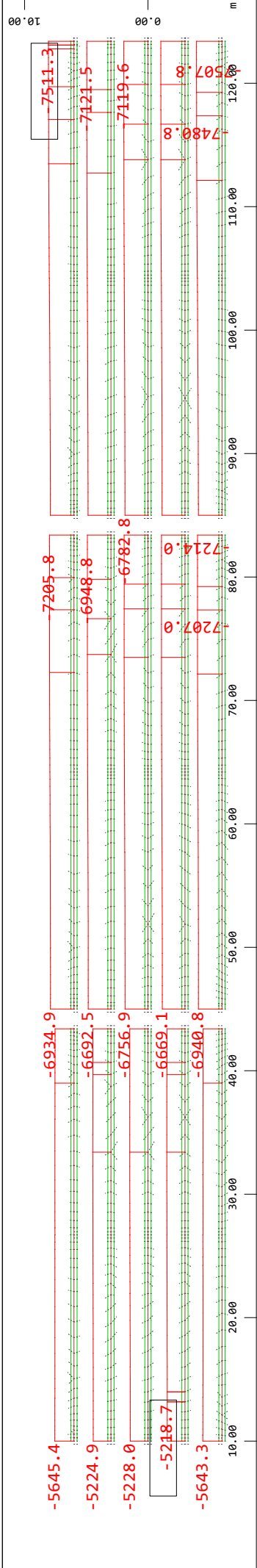


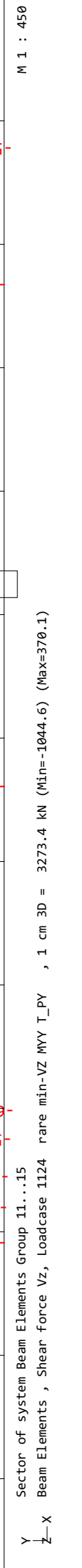
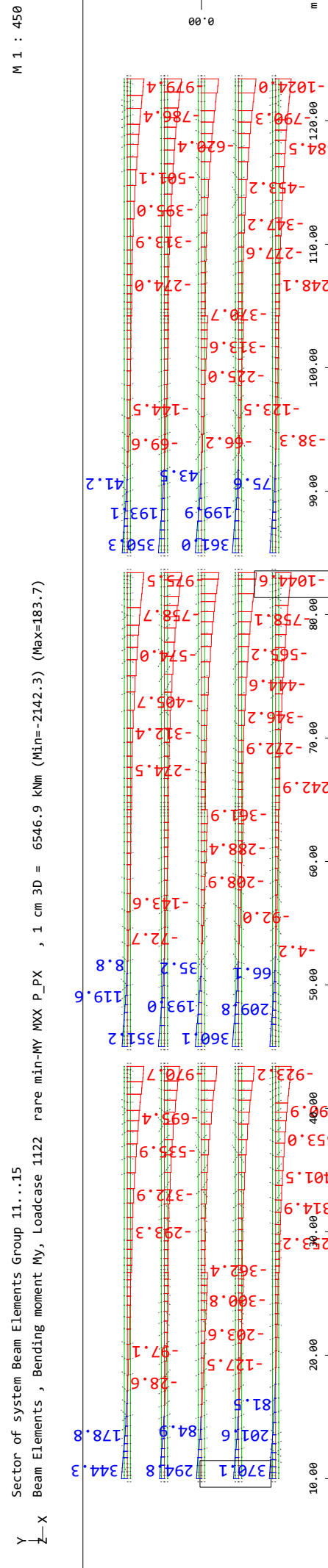
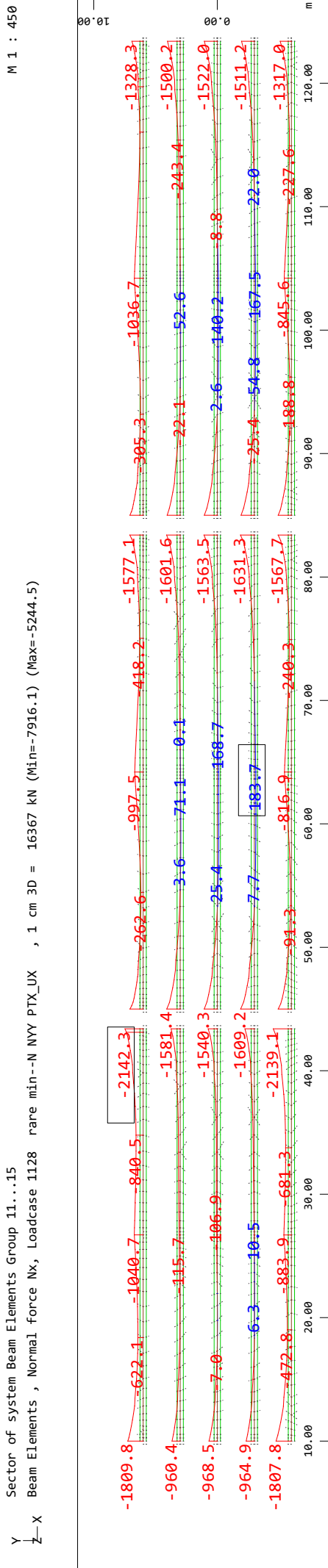
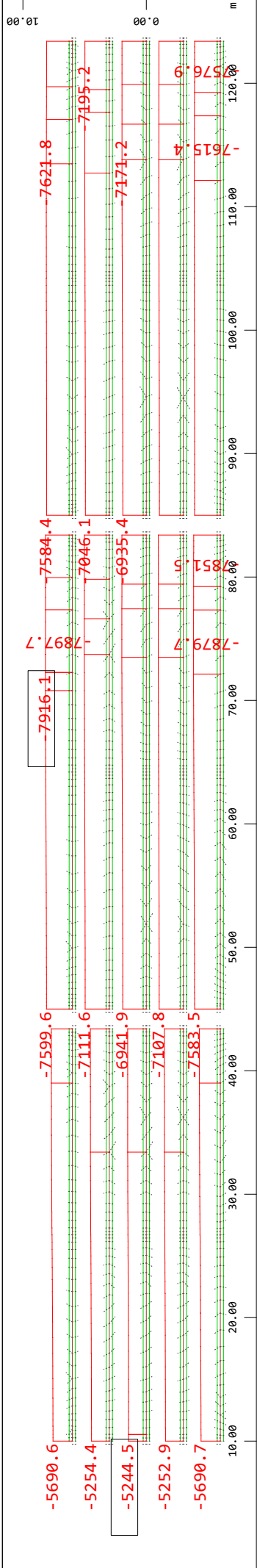
Sector of svstem Beam Elements Group 11...15

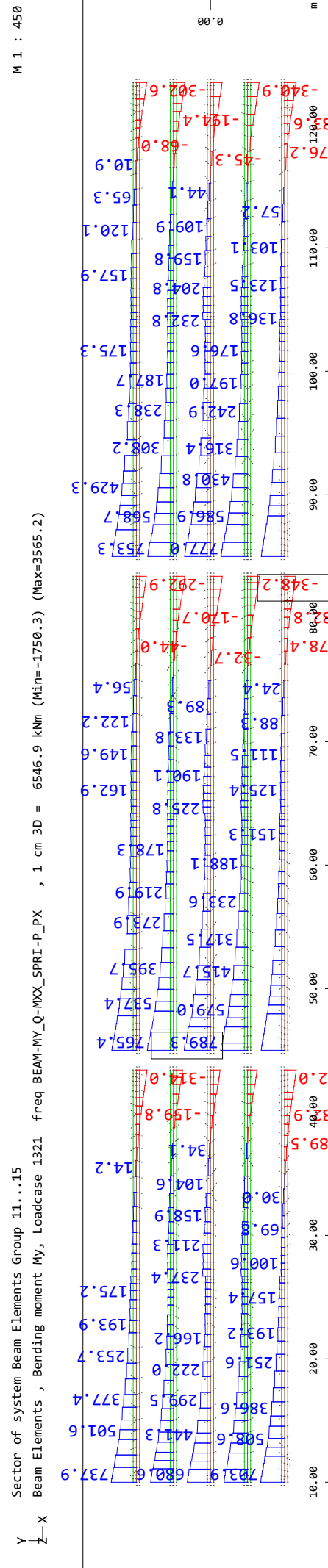
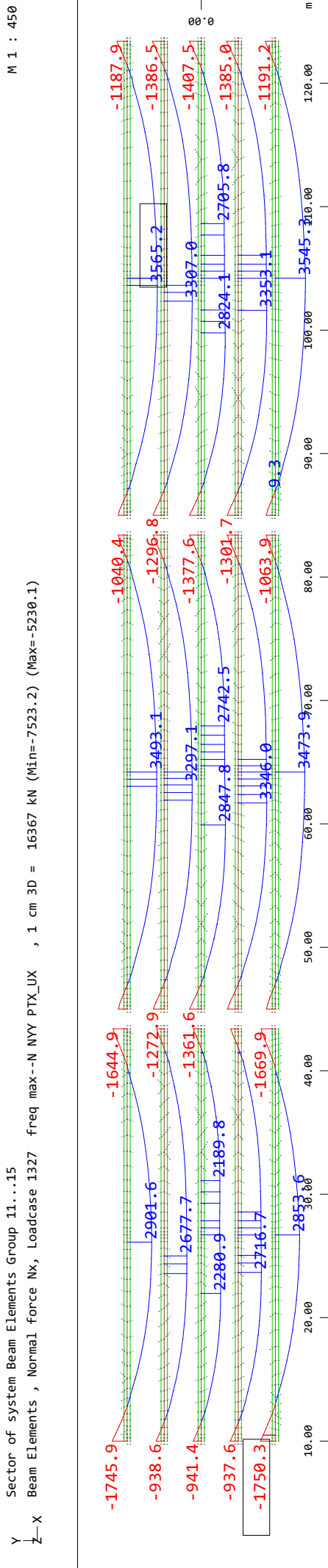
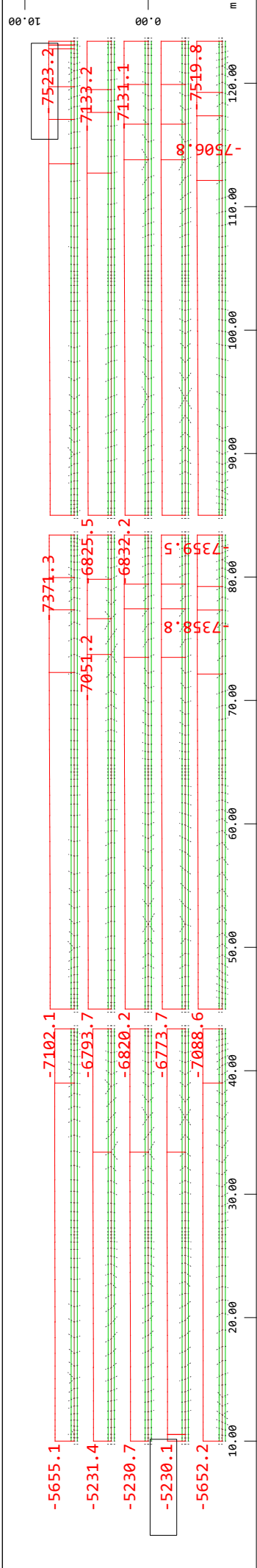
Beam Elements , Shear force Vz, Loadcase 923 PROMET ZVEZNA { myy Vz PY Pt } , 1 cm 3D = 654.69 kN (Max=322.5)

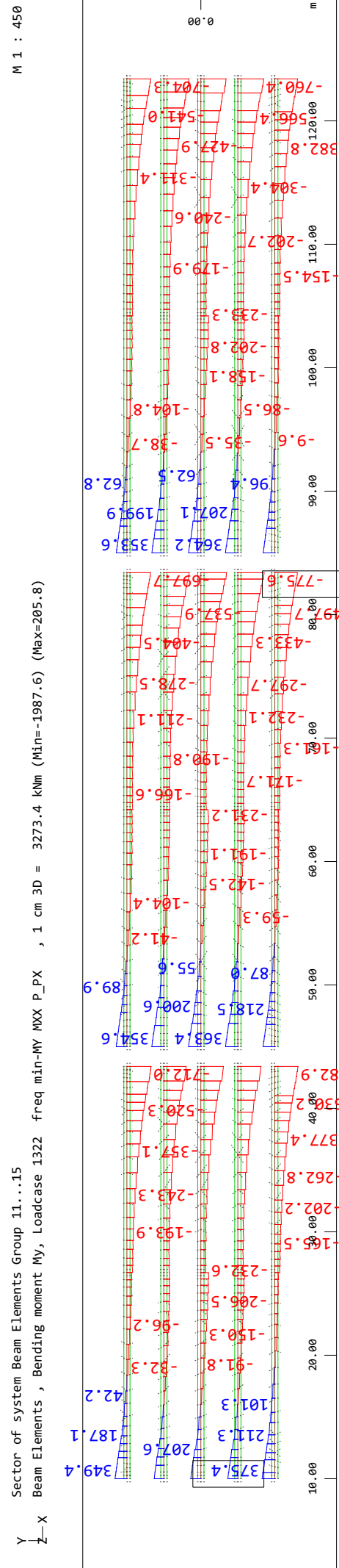
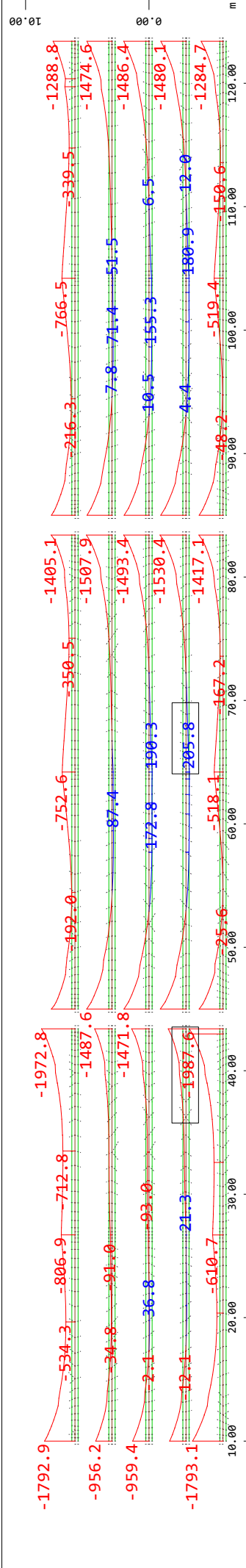
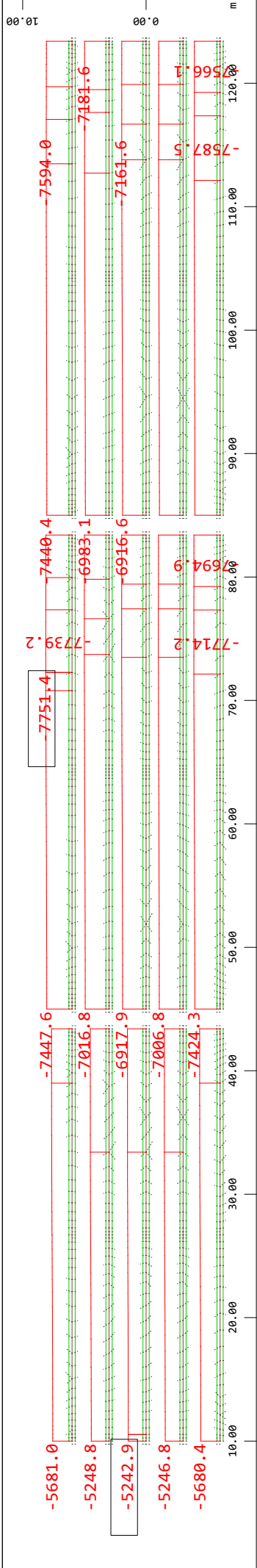
Beam Elements , Shear force Vz, Loadcase 924 PROMET ZVEZNA { myy Vz PY Pt } , 1 cm 3D = 654.69 kN (Min=-321.0) (Max=0.00)



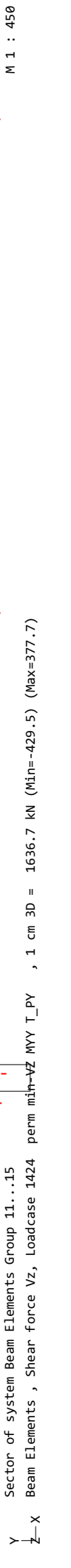
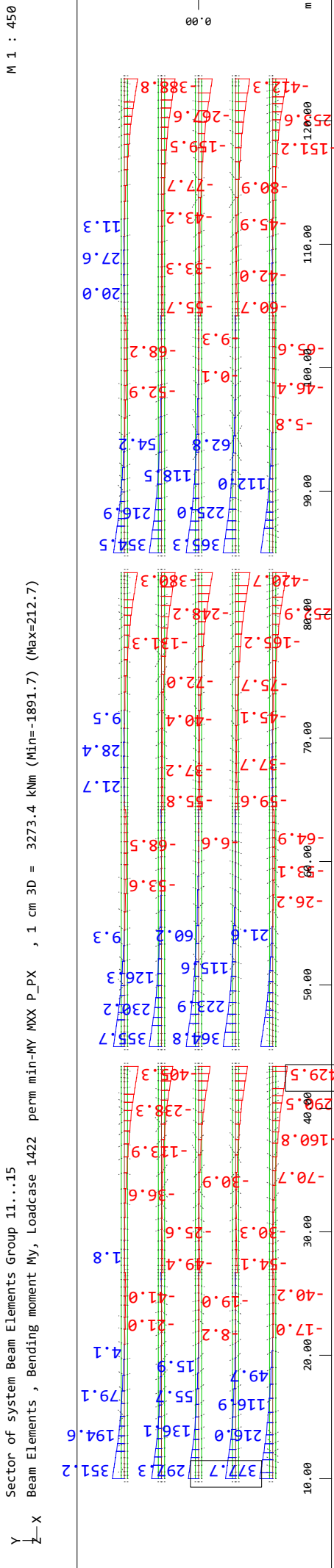
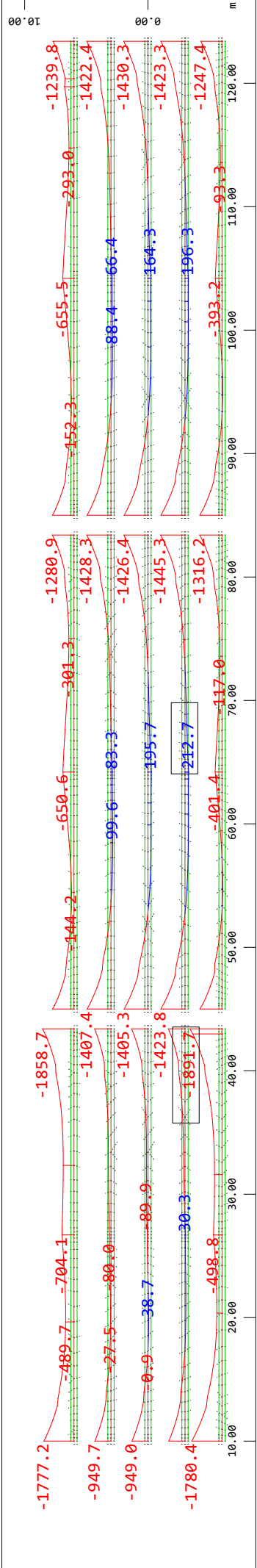
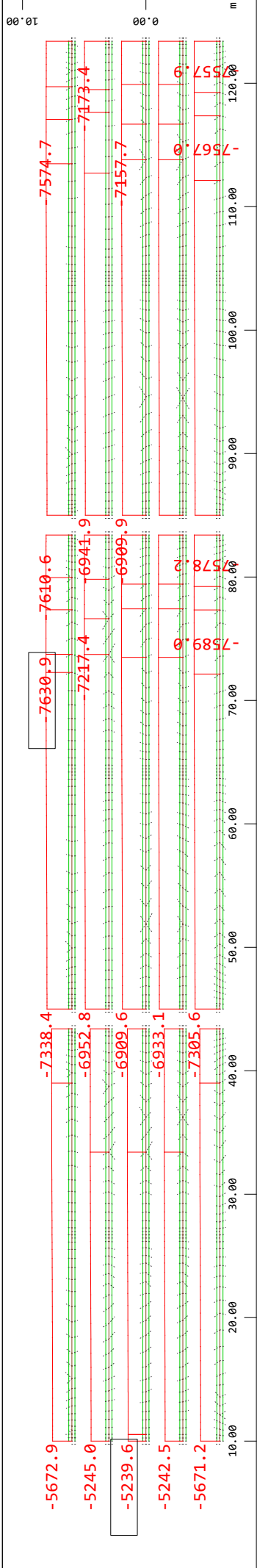


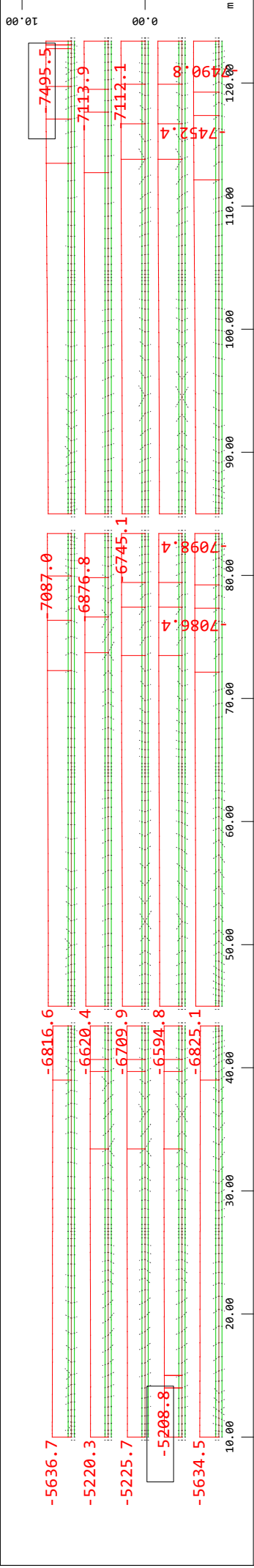






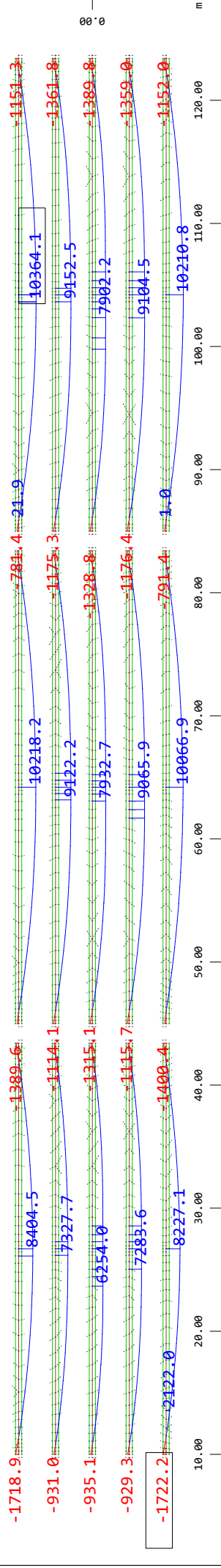






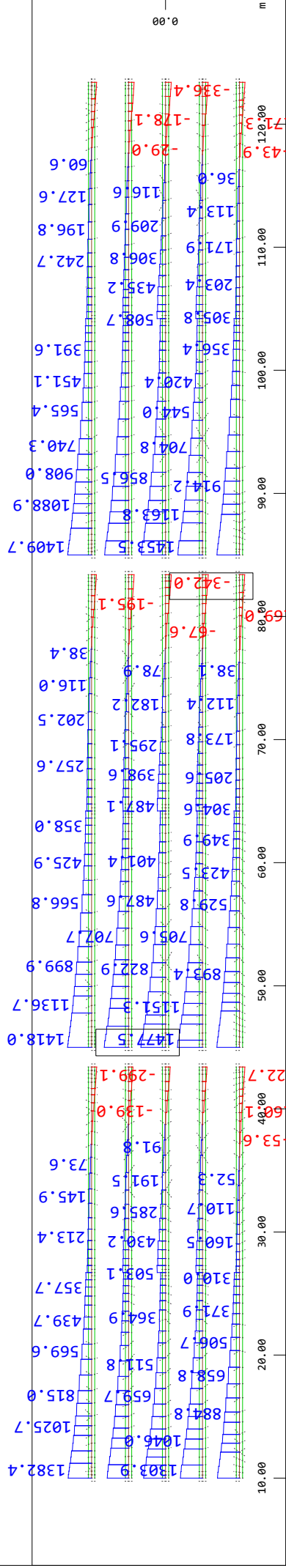
v Sector of svstem Beam Elements Group 11...15

	→	y	Beam Elements :	Normal force Nx:	loadcase 2127	desi max--N	NVY PTX UX	. 1 cm 3D =	16367 kN	(Min=-7495.5)	(Max=-5208.8)
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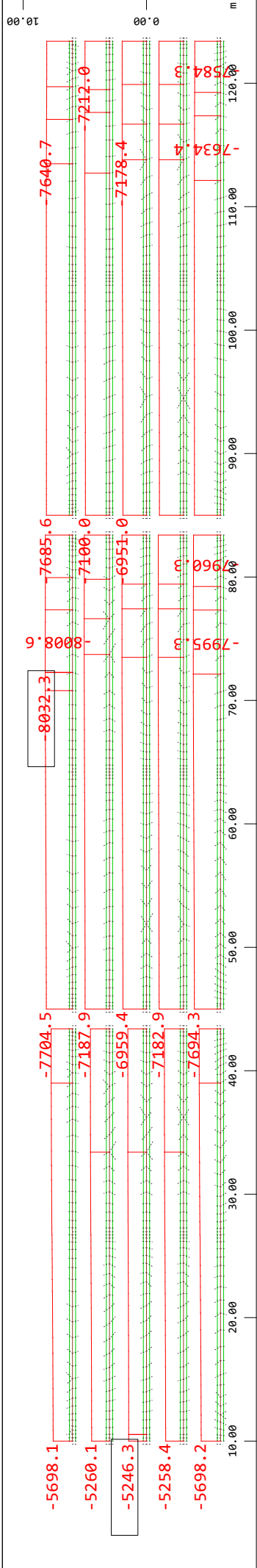
✓ Sector of system Beam Elements Group 11...15

Beam Elements	Bending moment Mw	1 m 3D =	32734 kNm	(Min=-1722 2)	(Max=10364 1)
desi REAM-MV 0-WXX SPRT-P PX	1221				

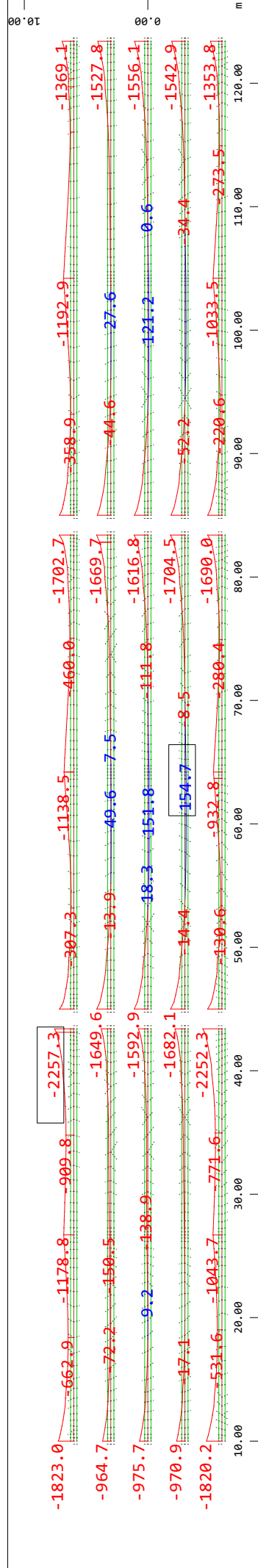


Sector of system Beam Elements Group 11...15

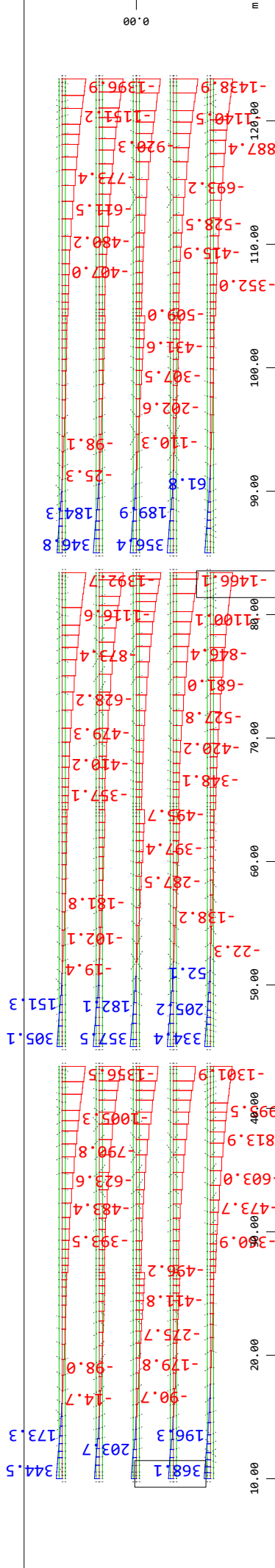
	Beam Elements	Shear force Vz	displacement	max-v7	mvv	t py	1 cm	d0 =	3273.4 kN	(Min=-342.0)	(Max=1477.5)
			nodecase 2123								



Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force N_x , Loadcase 2128 desi min--N NYV PTX_UX , 1 cm 3D = 16367 kN (Min=-8032.3) (Max=-5246.3)

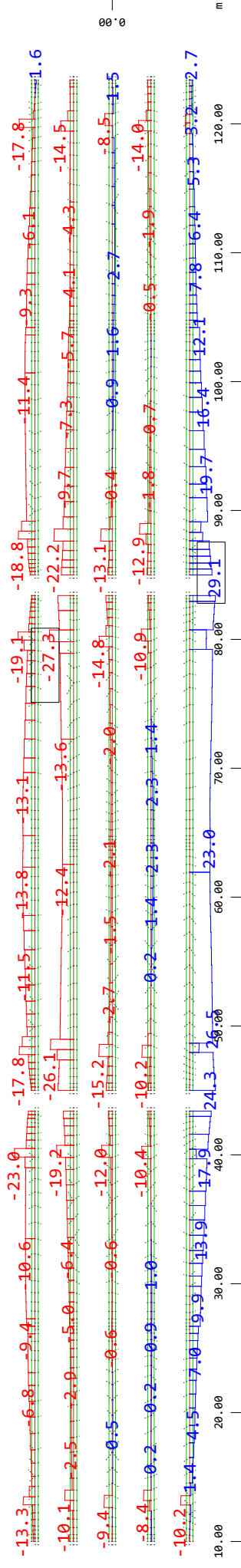


Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment M_y , Loadcase 2122 desi min-MY MXX P_PX , 1 cm 3D = 6546.9 kNm (Min=-2257.3) (Max=154.7)

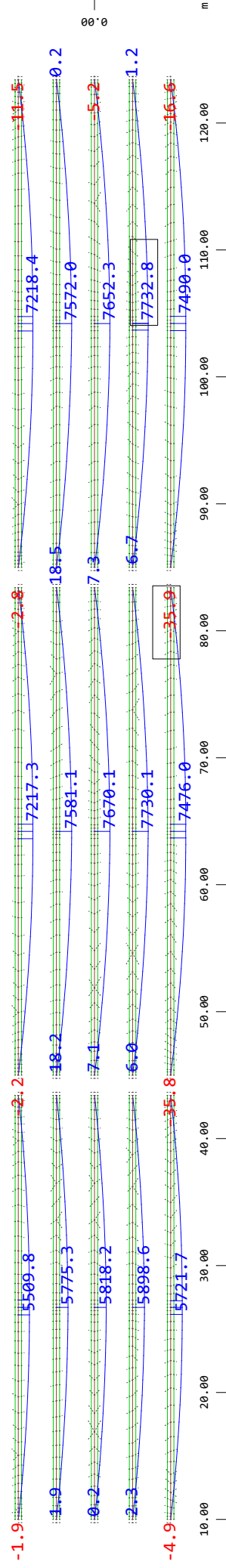


Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force V_z , Loadcase 2124 desi min-VZ MYV T_PY , 1 cm 3D = 3273.4 kN (Min=-1466.1) (Max=368.1)

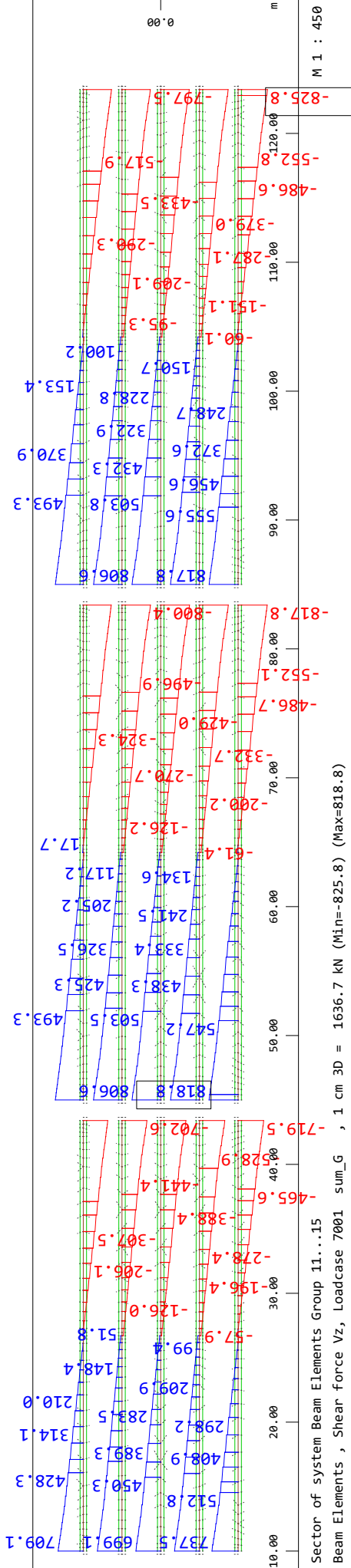
8.3 NOTRANJE SILE PREKLADNA KONSTRUKCIJA RAČUNSKI MODEL III. – 35+40+40, C2+2



Y
Z X
Sector of system Beam Elements Group 11...15
Beam Elements , Normal force Nx, Loadcase 7001 sum_G 1 cm 3D = 65.469 kN (Min=-27.3) (Max=29.1)
M 1 : 450



Y
Z X
Sector of system Beam Elements Group 11...15
Beam Elements , Bending moment My, Loadcase 7001 sum_G , 1 cm 3D = 28359 kNm (Min=-35.9) (Max=7732.8)
M 1 : 450



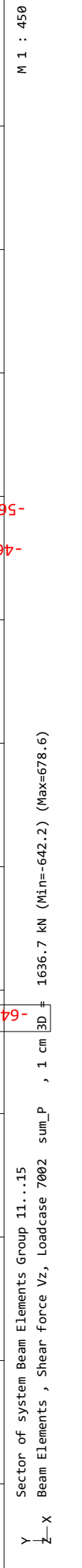
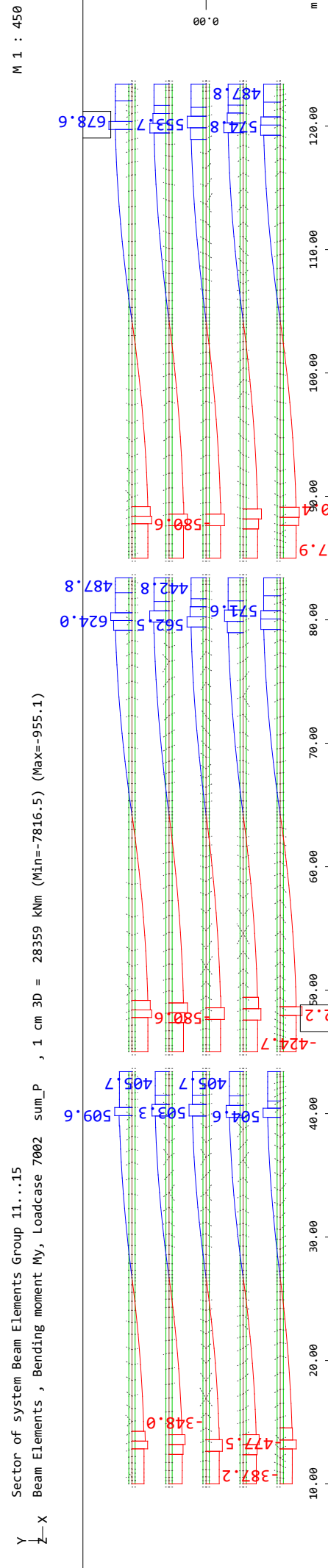
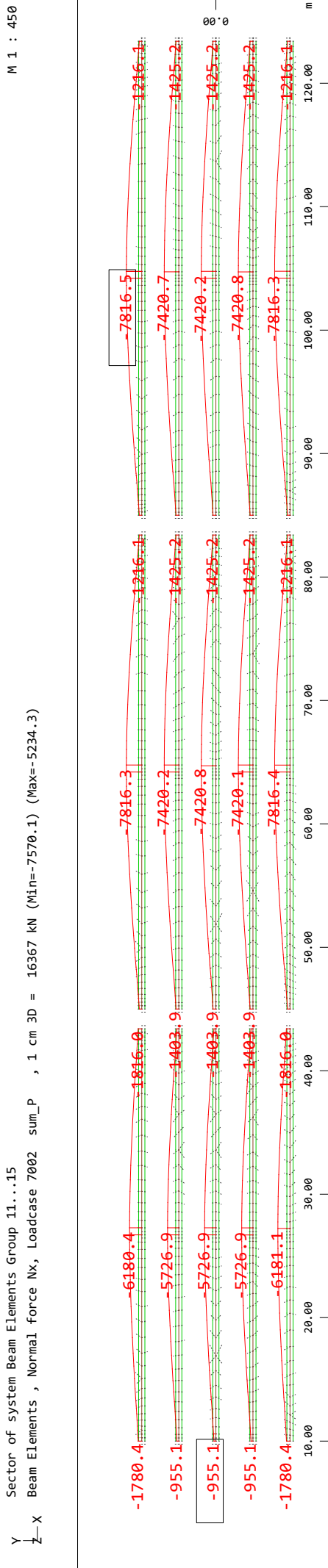
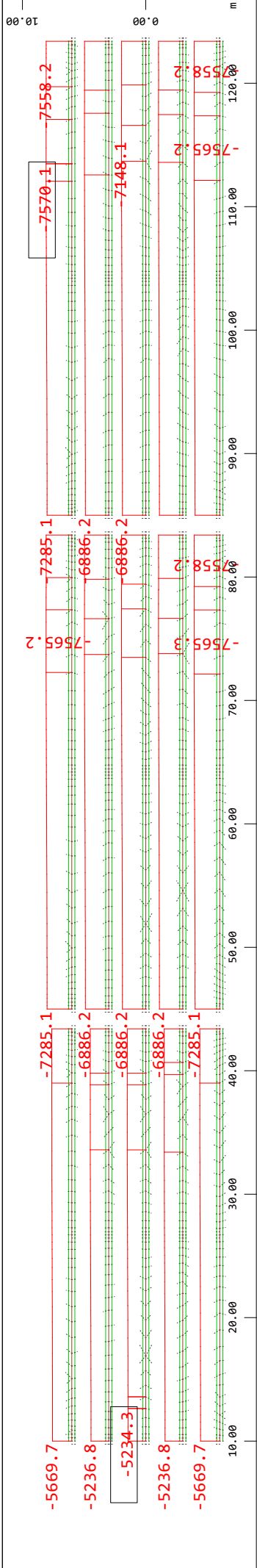
Y
X
Z

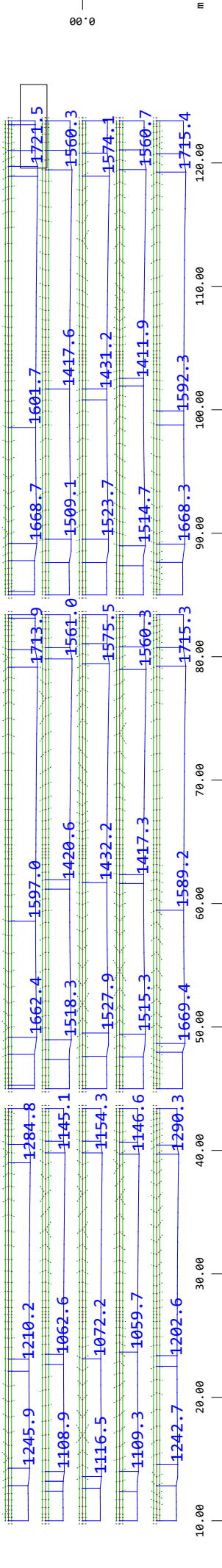
Sector of system Beam Elements Group 11...15

Beam Elements , Shear force Vz, Loadcase 7001 sum_G , 1 cm 3D = 1636.7 kN (Min=-825.8) (Max=818.8)

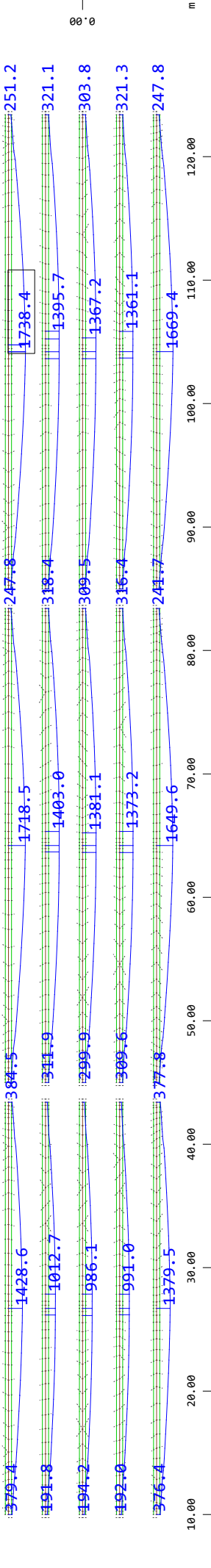
-73 -7 -5 -4 -5 -81 -82

M 1 : 450

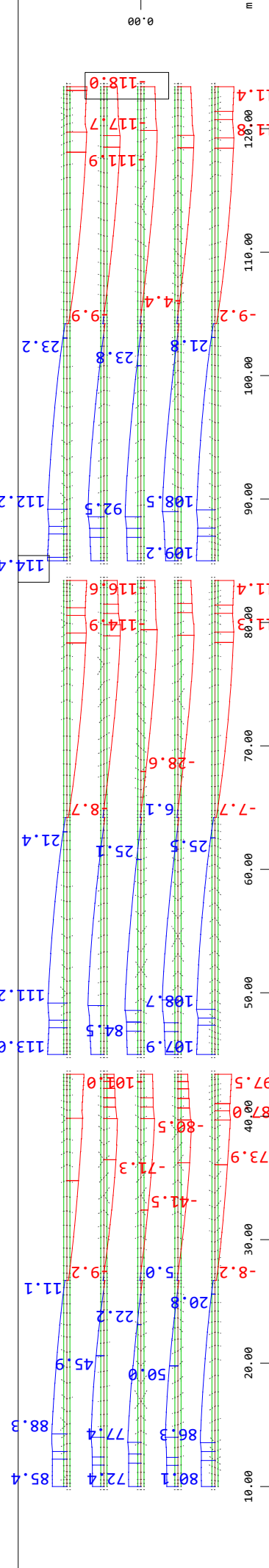




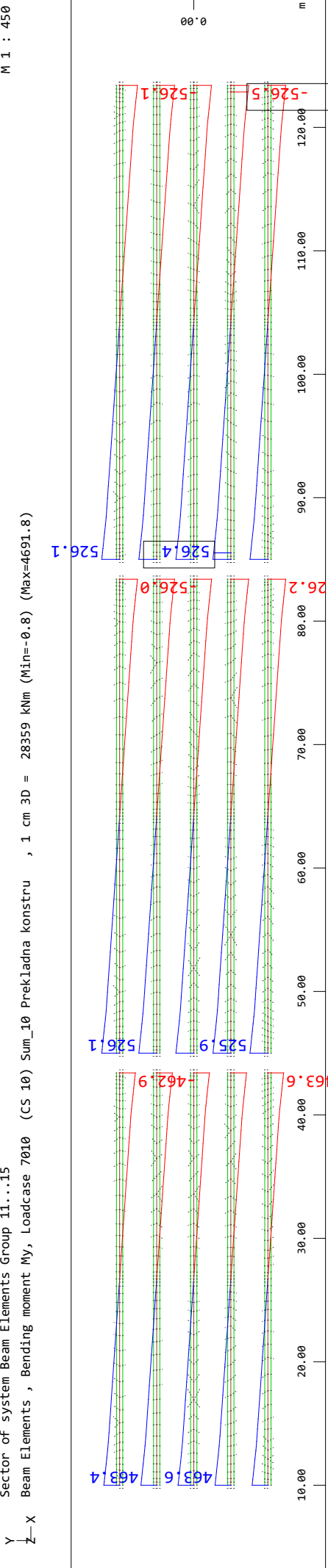
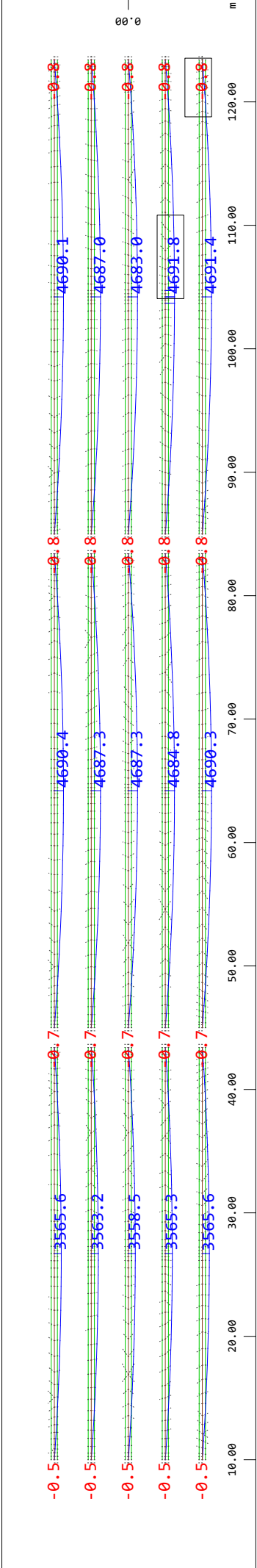
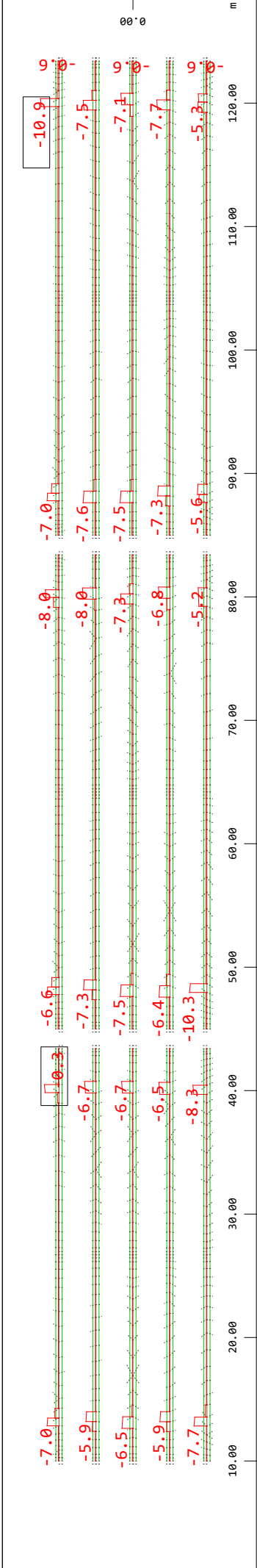
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements, Normal force N_x , Loadcase 7003 sum_C, 1 cm 3D = 3273.4 kN (Max=1721.5)

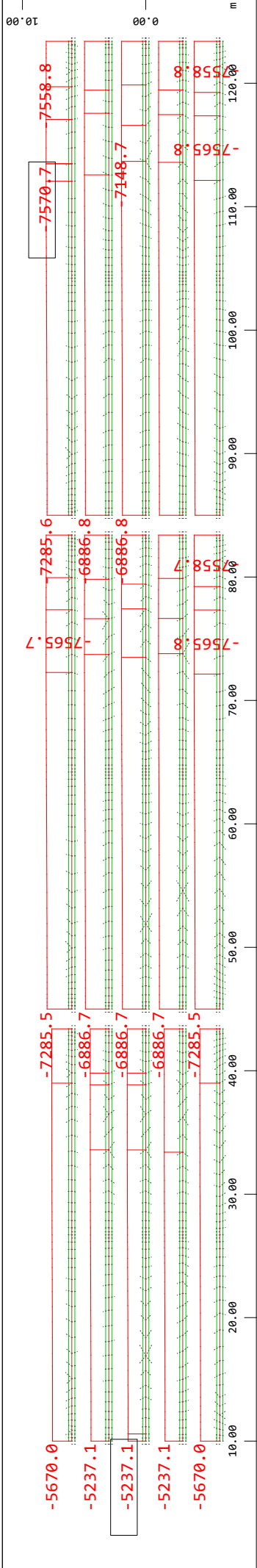


Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements, Bending moment M_y , Loadcase 7003 sum_C, 1 cm 3D = 5671.9 kNm (Max=1738.4)

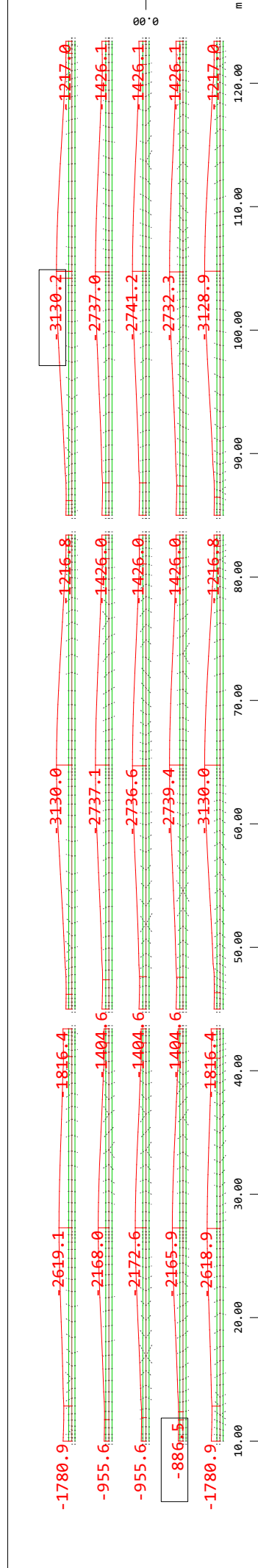


Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements, Shear force V_z , Loadcase 7003 sum_C, 1 cm 3D = 327.34 kN (Min=-118.0) (Max=114.4)

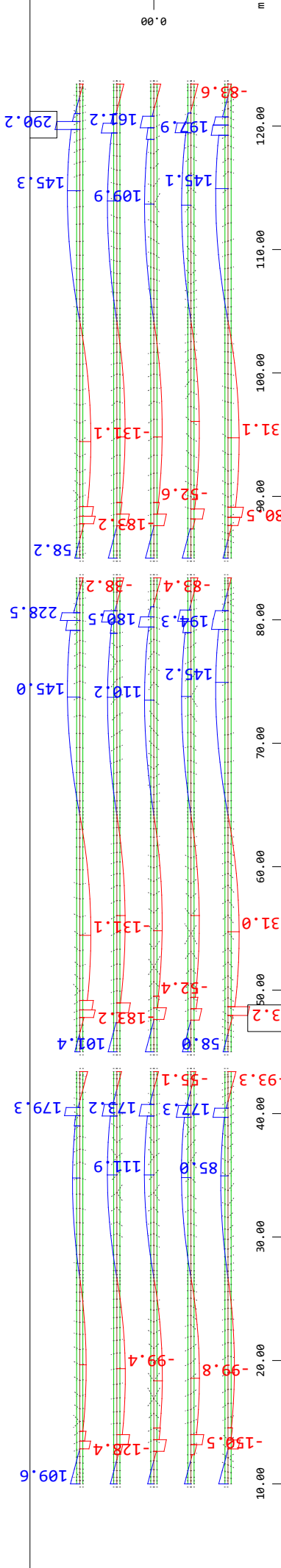




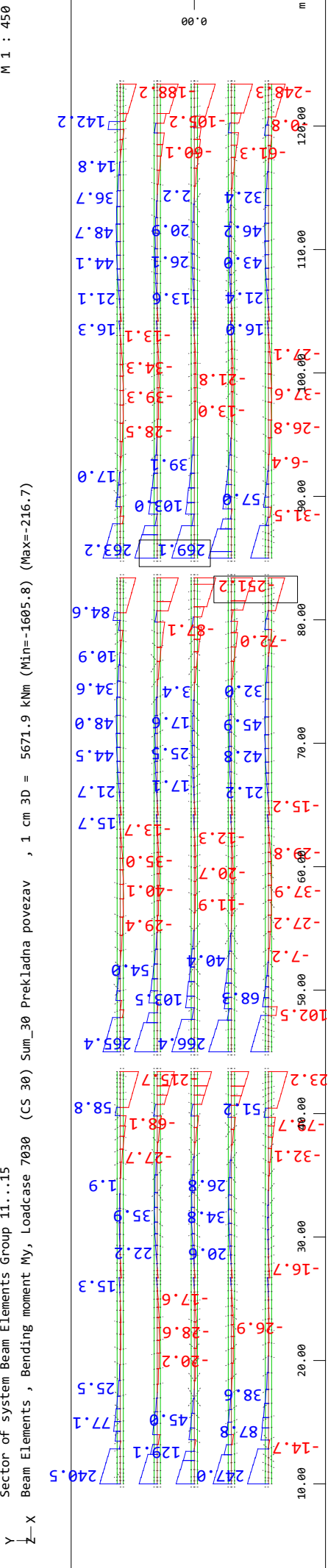
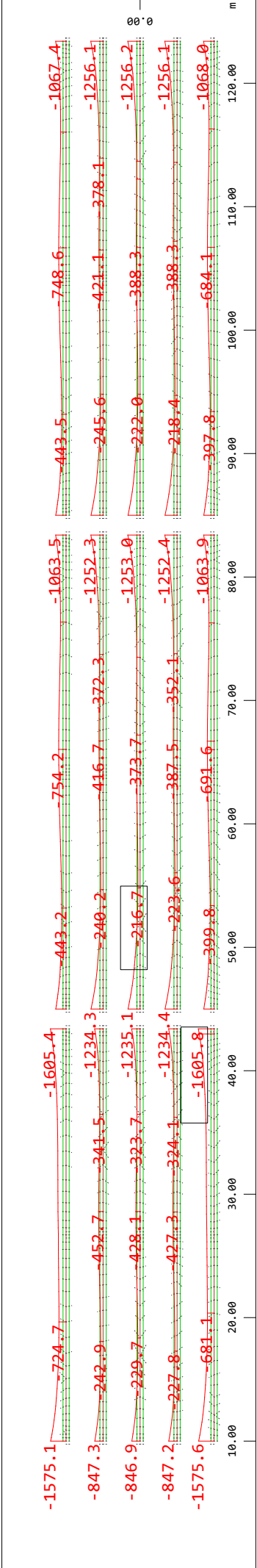
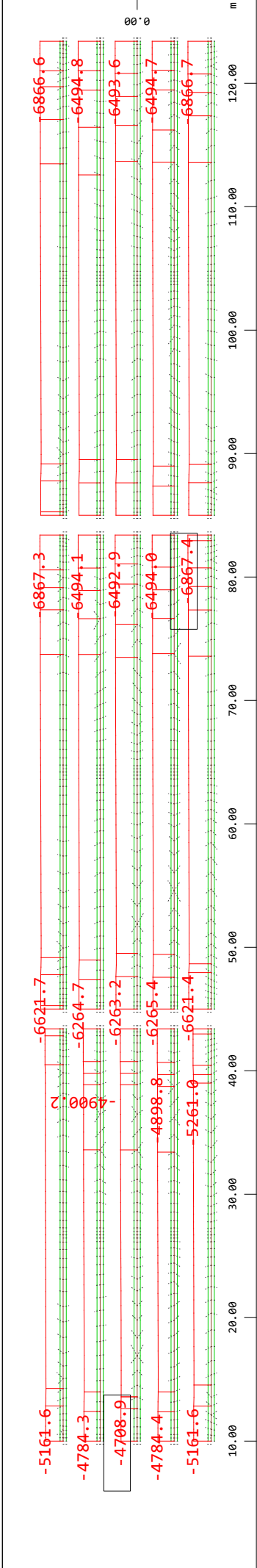
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force N_x , Loadcase 7011 (CS 11) Sum_11 Prestress , 1 cm 3D = 16367 kN (Min=-7570.7) (Max=-5237.1) M 1 : 450

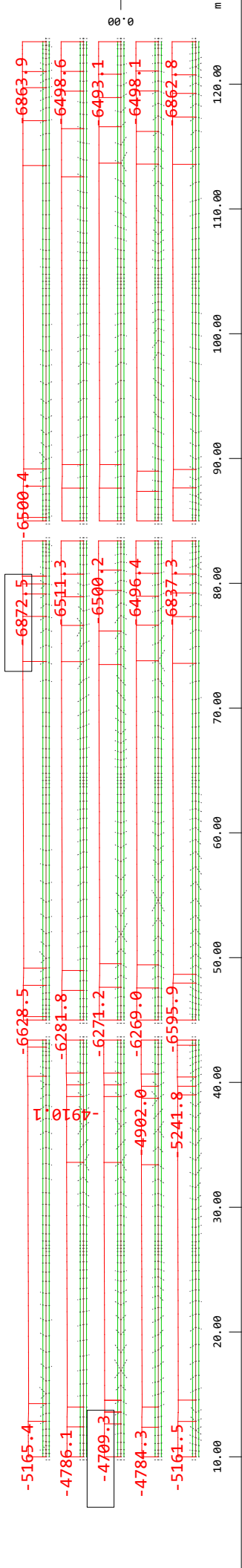


Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment M_y , Loadcase 7011 (CS 11) Sum_11 Prestress , 1 cm 3D = 11344 kNm (Min=-3130.2) (Max=-886.5) M 1 : 450

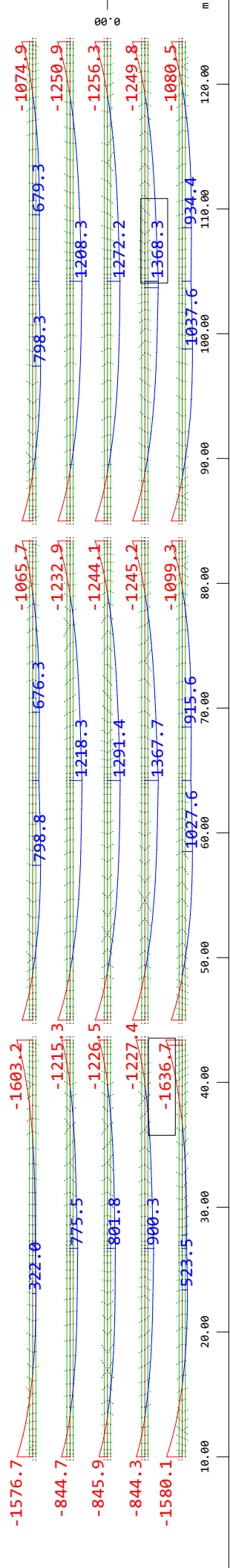


Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force V_z , Loadcase 7011 (CS 11) Sum_11 Prestress , 1 cm 3D = 654.69 kN (Min=-253.2) (Max=290.2) M 1 : 450

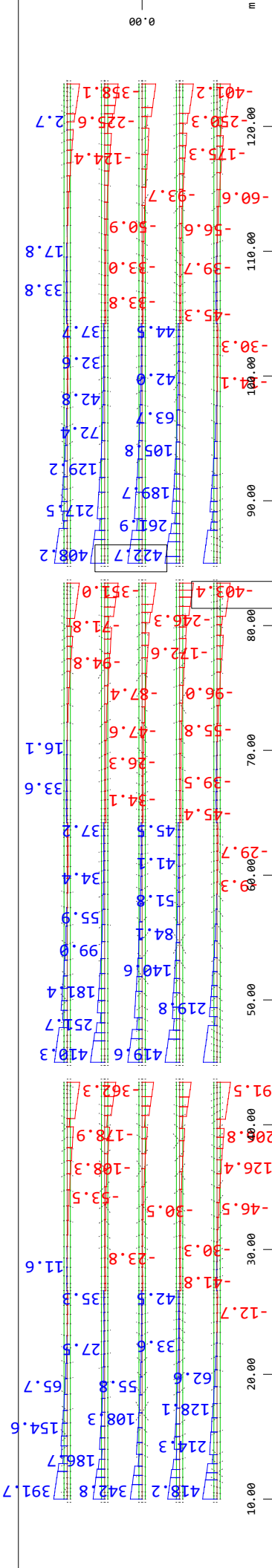




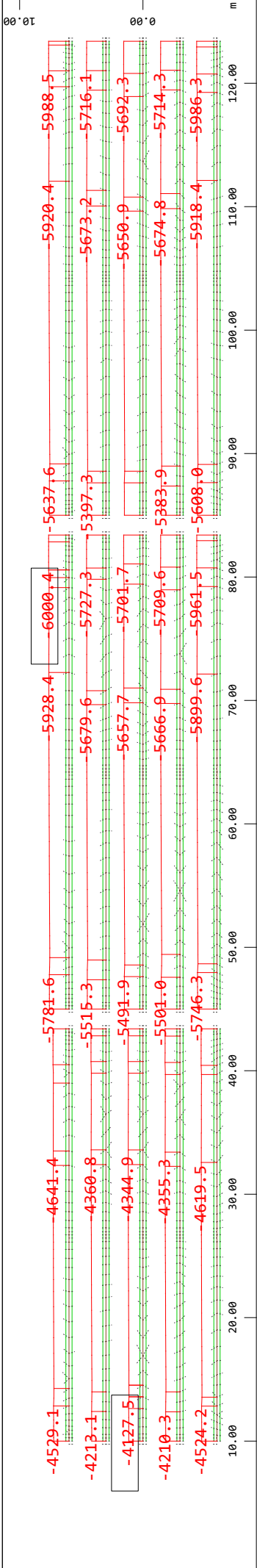
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force N_x , Loadcase 7040 (CS 40) Sum_40 Krov , 1 cm 3D = 16367 kN (Min=-6872.5) (Max=-4709.3) M 1 : 450



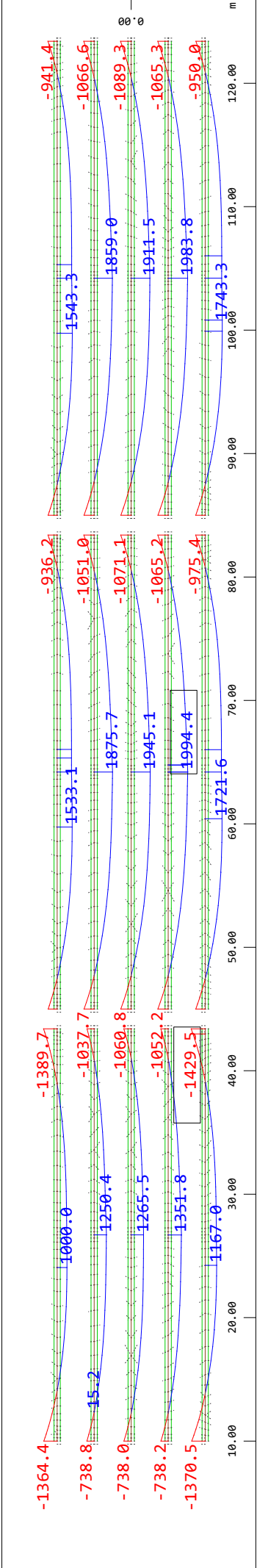
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment M_y , Loadcase 7040 (CS 40) Sum_40 Krov , 1 cm 3D = 5671.9 kNm (Min=-1636.7) (Max=1368.3) M 1 : 450



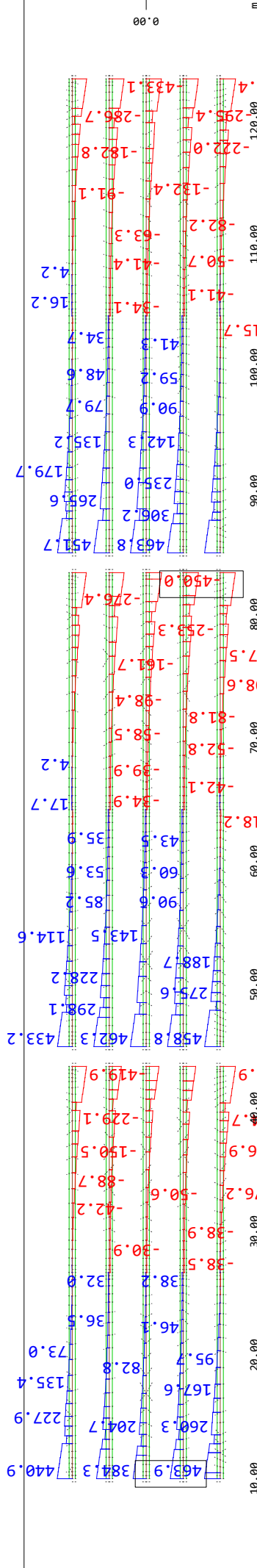
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force V_z , Loadcase 7040 (CS 40) Sum_40 Krov , 1 cm 3D = 1636.7 kN (Min=-403.4) (Max=422.7) M 1 : 450



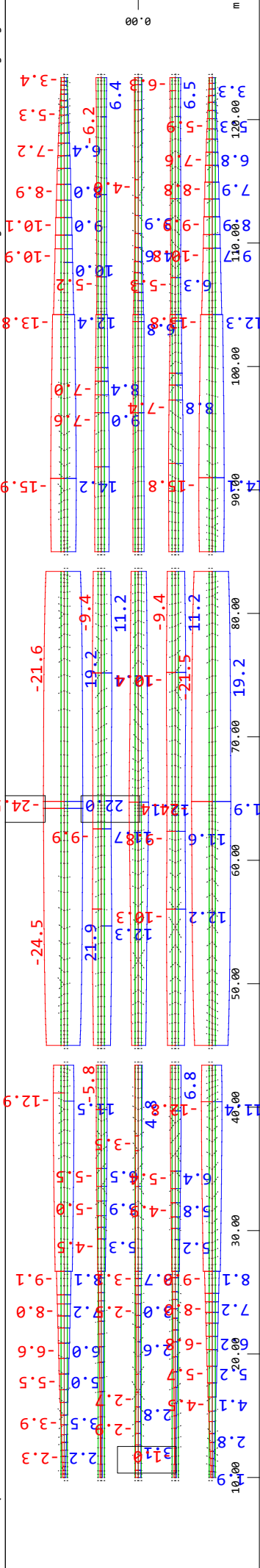
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force N_x , Loadcase 7047 (CS 47) Sum_47 Creep until today , 1 cm 3D = 16367 kN (Min=-6000.4) (Max=-4127.5) M 1 : 450



Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment M_y , Loadcase 7047 (CS 47) Sum_47 Creep until today , 1 cm 3D = 5671.9 kNm (Min=-1429.5) (Max=1994.4) M 1 : 450



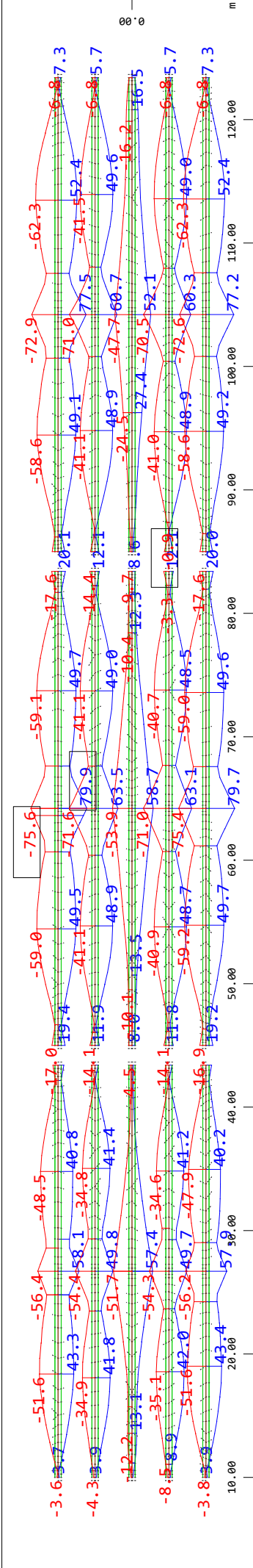
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force V_z , Loadcase 7047 (CS 47) Sum_47 Creep until today , 1 cm 3D = 1636.7 kN (Min=-450.0) (Max=463.9) M 1 : 450



Sector of system Beam Elements Group 11...15

Beam Elements , Normal force Nx, Loadcase 907 TEMPERATURA { nyy N UX PtX } , 1 cm 3D = 65.469 kN (Max=22.0)

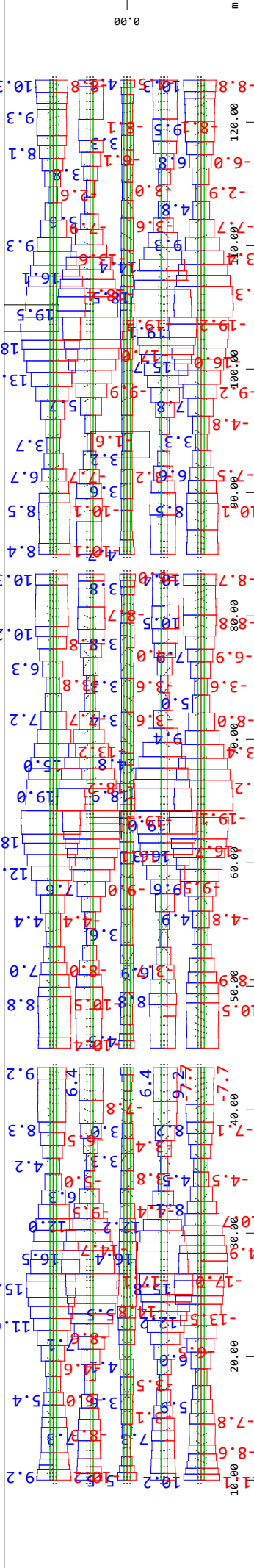
Beam Elements , Normal force Nx, Loadcase 908 TEMPERATURA { nyy N UX PtX } , 1 cm 3D = 65.469 kN (Min=-24.5) (Max=-1.0)



Sector of system Beam Elements Group 11...15

Beam Elements , Bending moment My, Loadcase 901 TEMPERATURA { mxx My PX P } , 1 cm 3D = 153.91 kNm (Max=79.9)

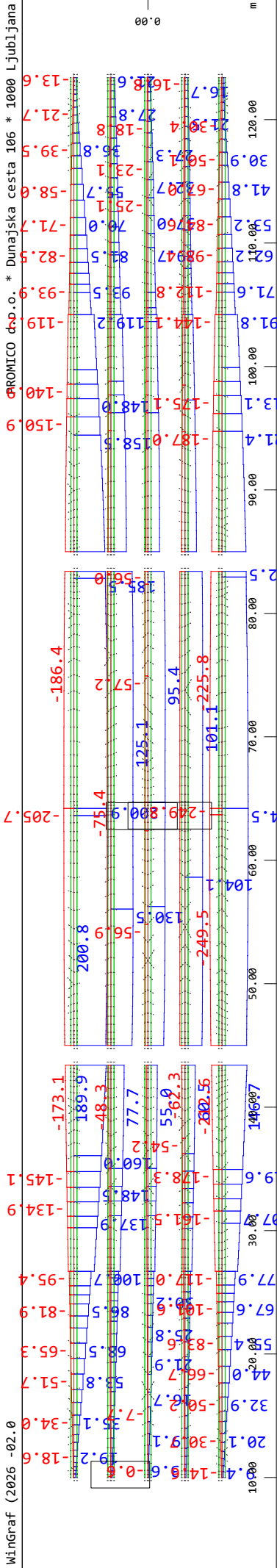
Beam Elements , Bending moment My, Loadcase 902 TEMPERATURA { mxx My PX P } , 1 cm 3D = 153.91 kNm (Min=-75.6) (Max=-0.9)



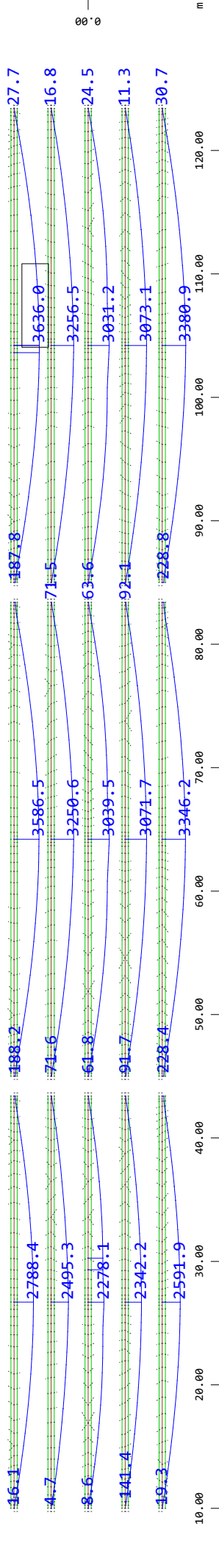
Sector of system Beam Elements Group 11...15

Beam Elements , Shear force Vz, Loadcase 903 TEMPERATURA { myy Vz PY Pt } , 1 cm 3D = 32.734 kN (Max=19.5)

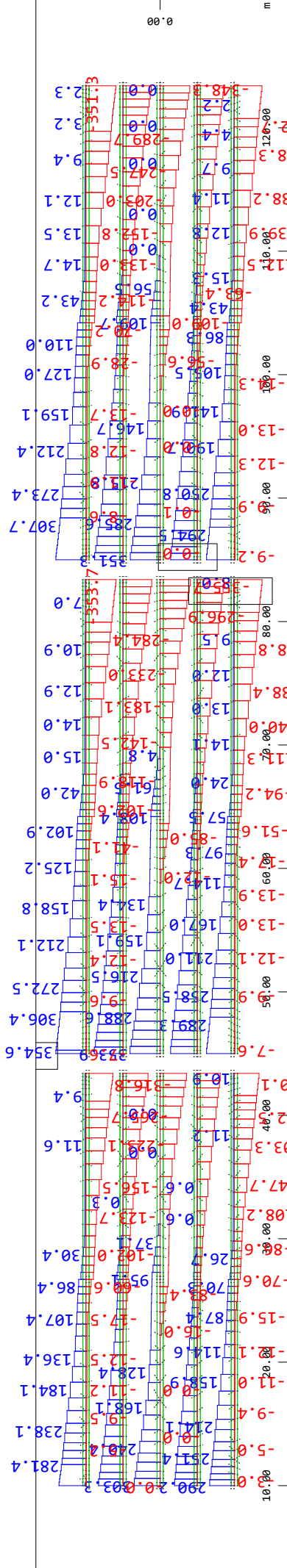
Beam Elements , Shear force Vz, Loadcase 904 TEMPERATURA { myy Vz PY Pt } , 1 cm 3D = 32.734 kN (Min=-19.3) (Max=-1.6)



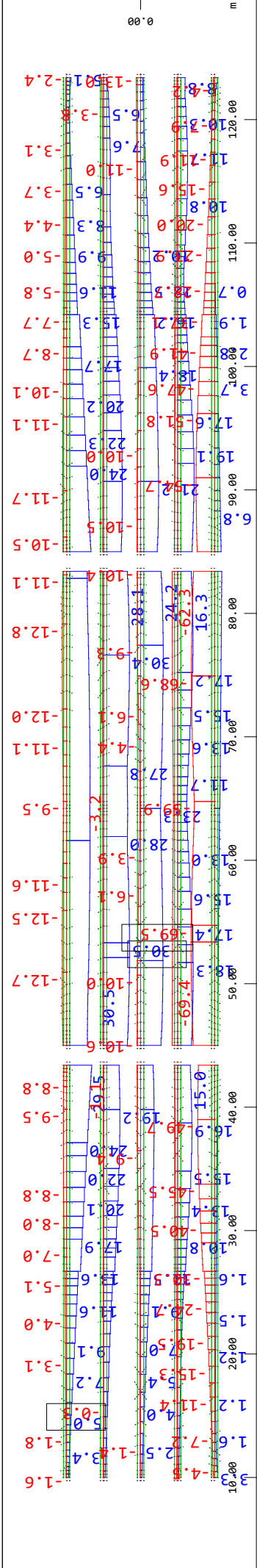
Y Z-X



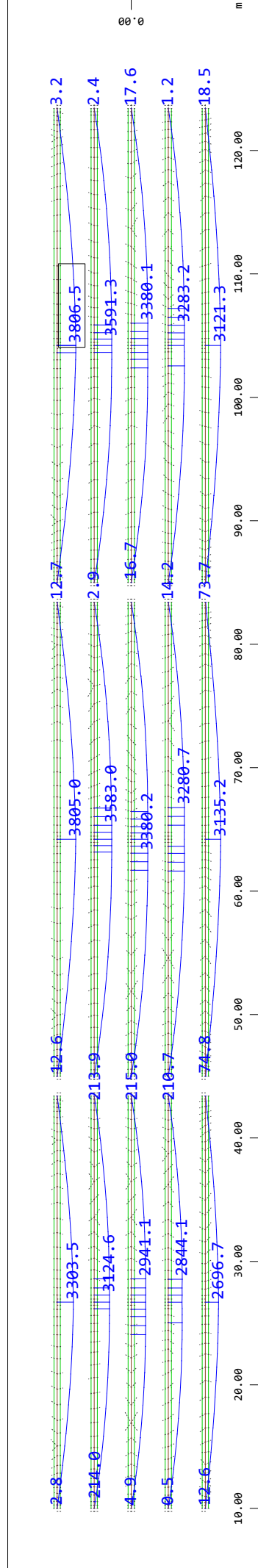
Y Z-X



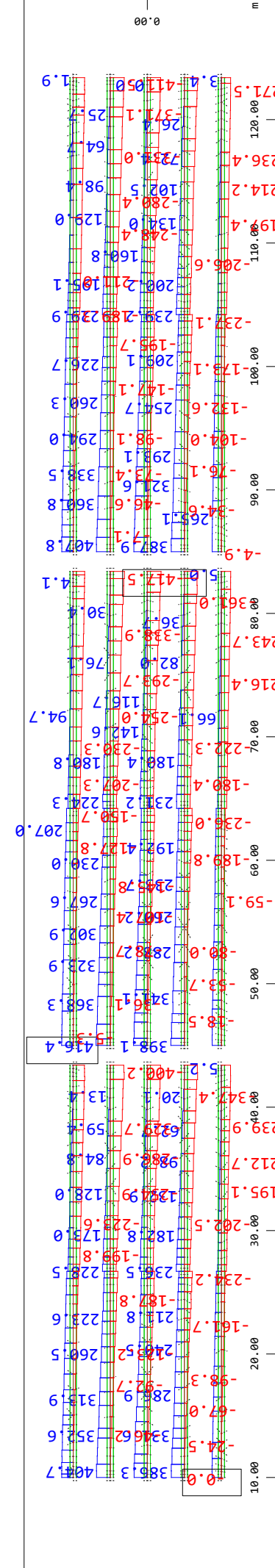
Y Z-X



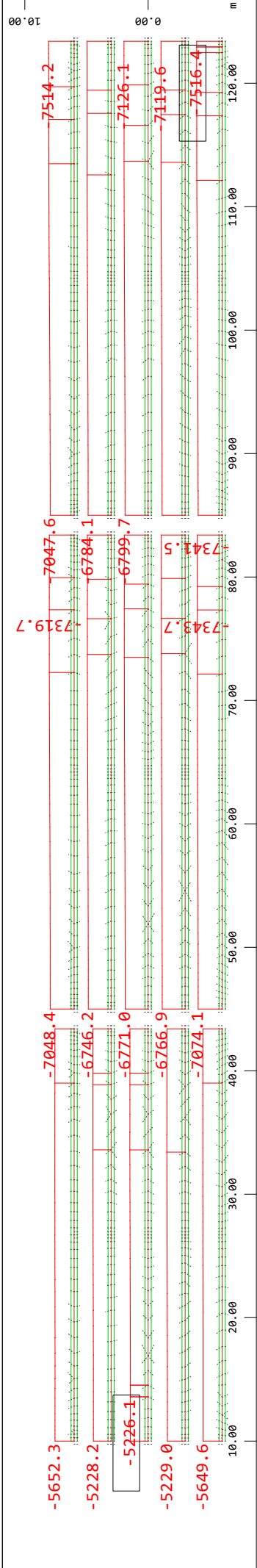
Sector of system Beam Elements Group 11...15
Beam Elements , Normal force Nx, Loadcase 947 PROMET TS { myy N UX PtX } , 1 cm 3D = 65.469 kN (Max=30.5)
Beam Elements , Normal force Ny, Loadcase 948 PROMET TS { myy N UX PtX } , 1 cm 3D = 163.67 kN (Min=-69.5) (Max=-0.3)



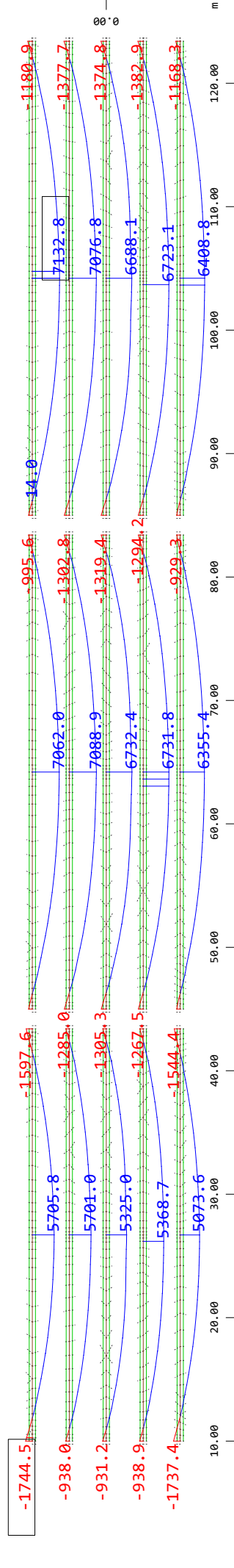
Sector of system Beam Elements Group 11...15
Beam Elements , Bending moment My, Loadcase 941 PROMET TS { mxx My PX P } , 1 cm 3D = 11344 kNm (Max=3806.5)



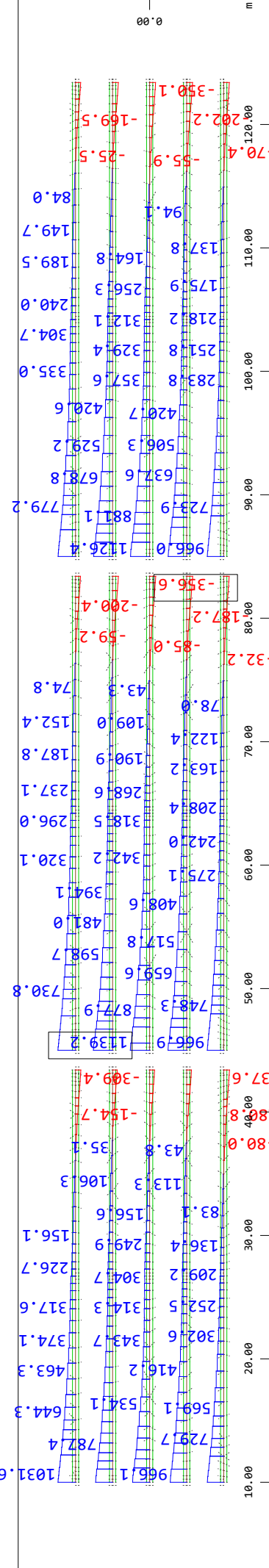
Sector of system Beam Elements Group 11...15
Beam Elements , Shear force Vz, Loadcase 943 PROMET TS { myy Vz PY Pt } , 1 cm 3D = 1636.7 kN (Max=416.4)
Beam Elements , Shear force Vz, Loadcase 944 PROMET TS { myy Vz PY Pt } , 1 cm 3D = 1636.7 kN (Min=-417.5) (Max=0.00)



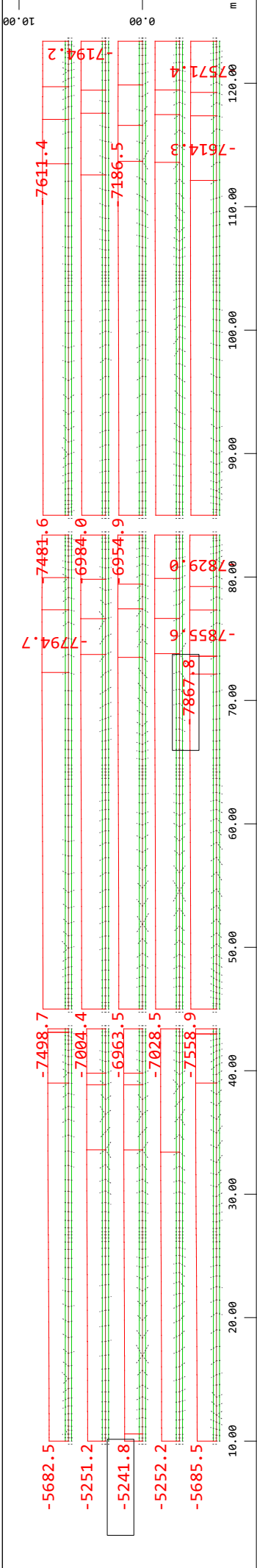
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force N_x , Loadcase 1127 rare max--N MY PTX UX , 1 cm 3D = 16367 kN (Min=-7516.4) (Max=-5226.1)



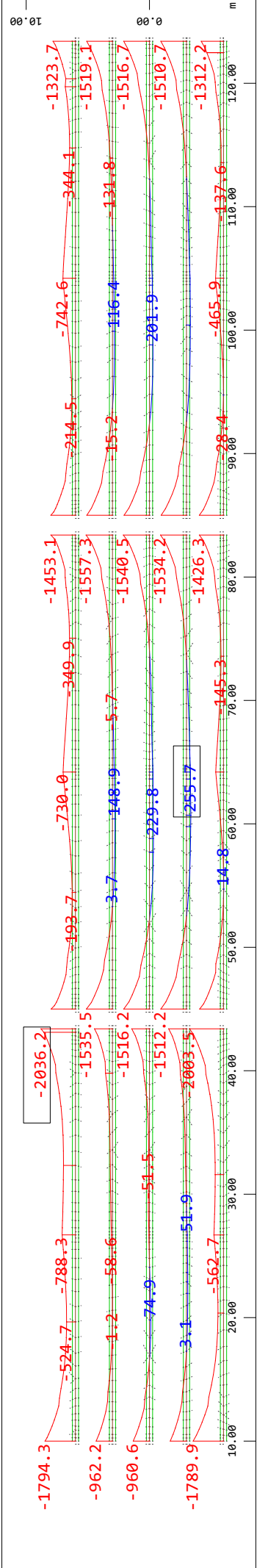
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment M_y , Loadcase 1121 rare BEAM-MY_Q-MXX_SPRI-P_PX , 1 cm 3D = 14531 kNm (Min=-1744.5) (Max=7132.8)



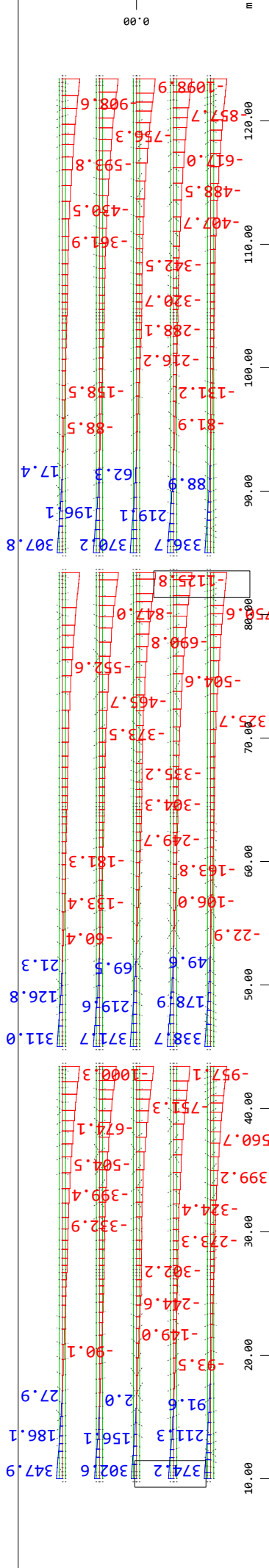
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force V_z , Loadcase 1123 rare max-VZ MY T_PY , 1 cm 3D = 3273.4 kN (Min=-356.6) (Max=1139.2)



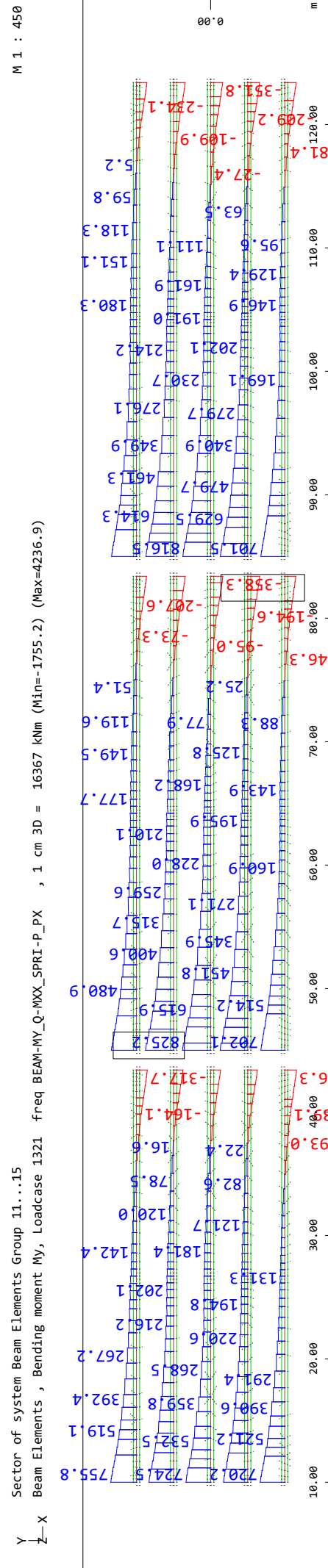
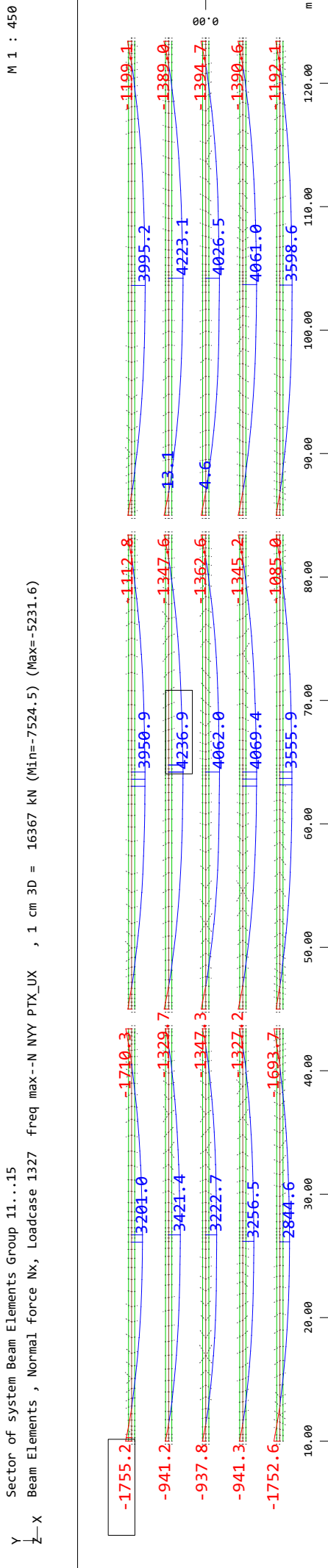
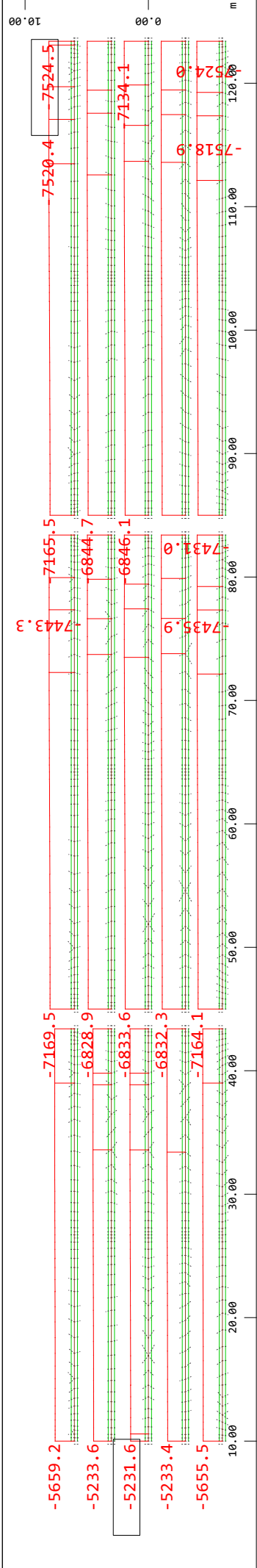
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Normal force N_x , Loadcase 1128 rare min--N VVY PTX UX , 1 cm 3D = 16367 kN (Min=-7867.8) (Max=-5241.8) M 1 : 450

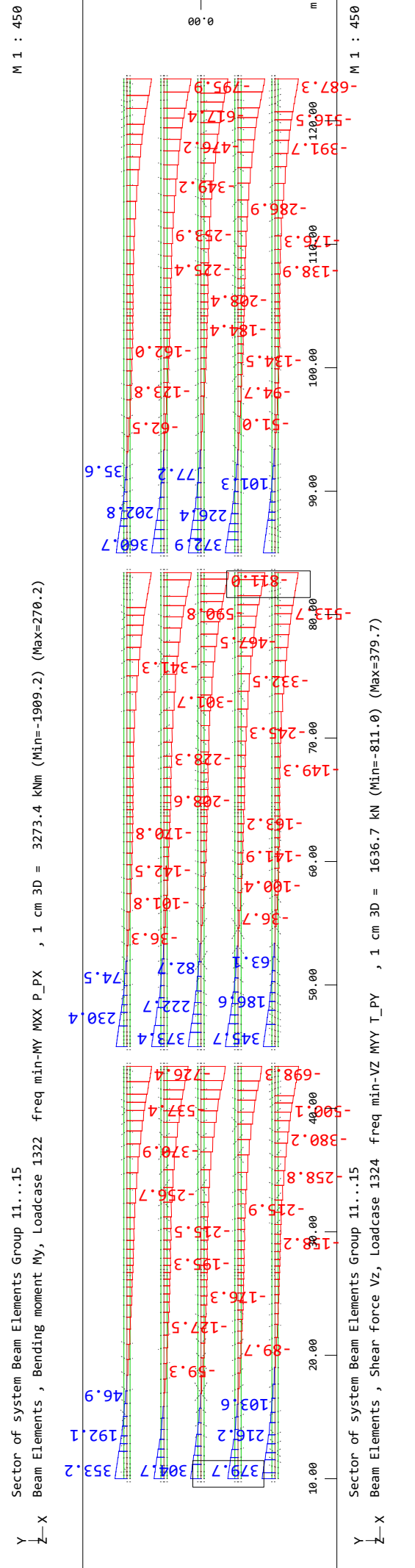
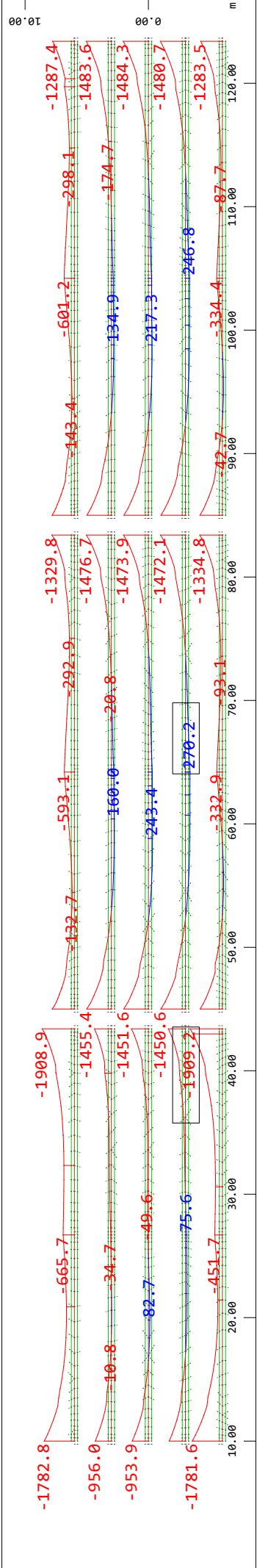
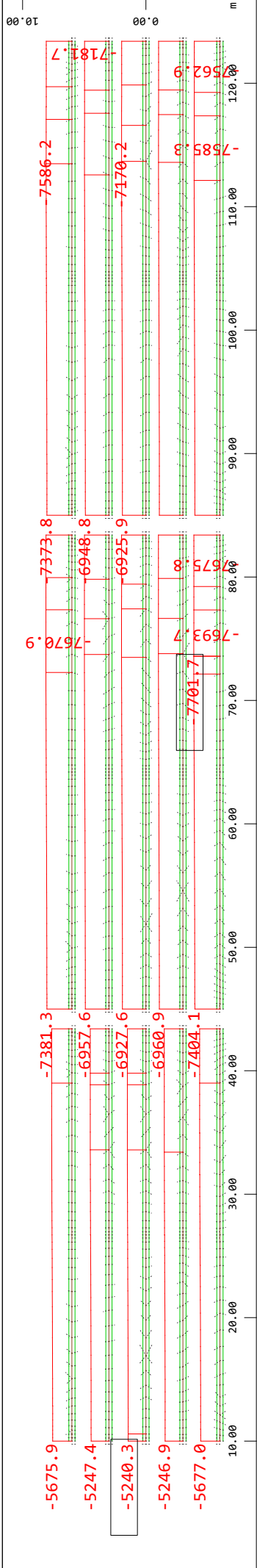


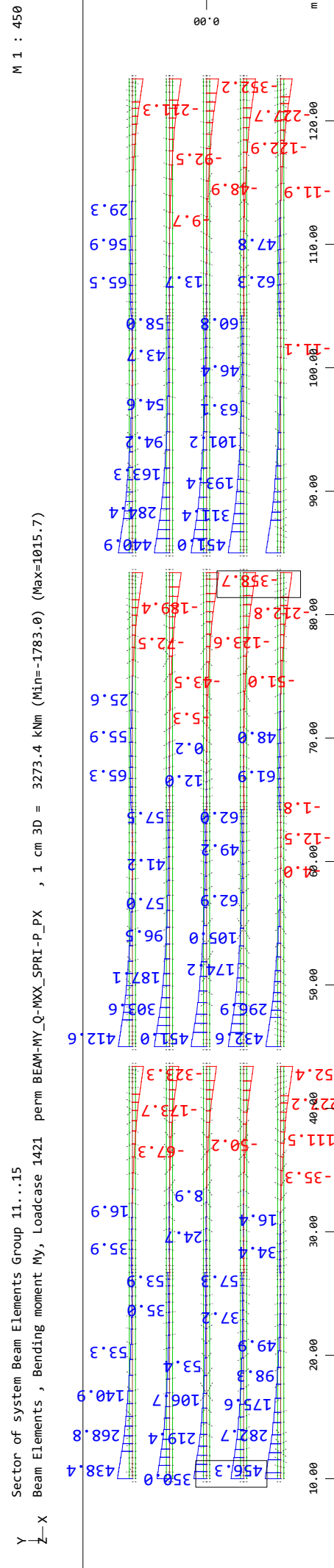
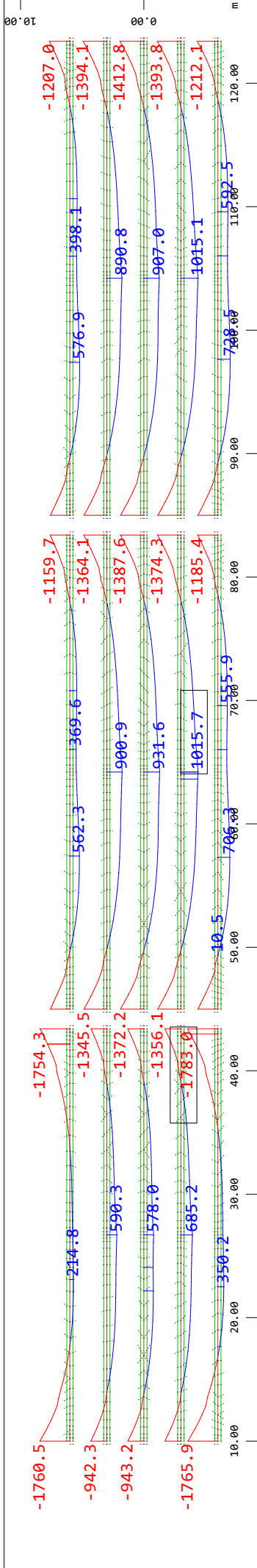
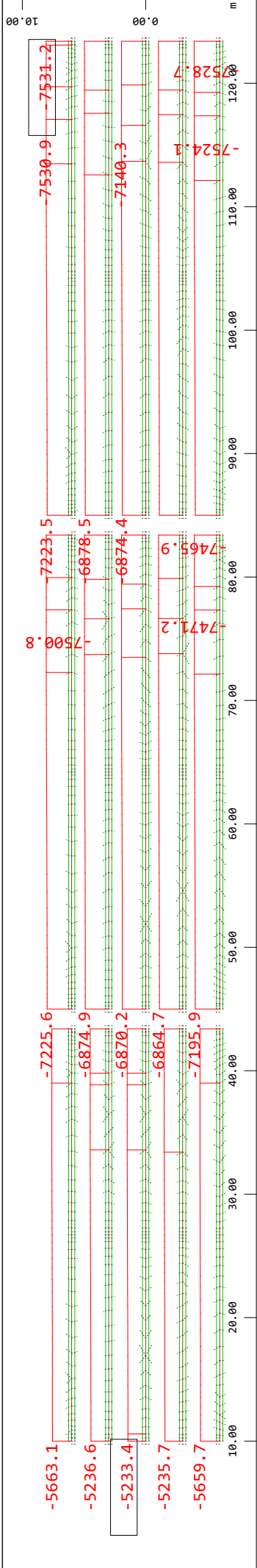
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Bending moment M_y , Loadcase 1122 rare min-MY MXX P PX , 1 cm 3D = 3273.4 kNm (Min=-2036.2) (Max=255.7) M 1 : 450

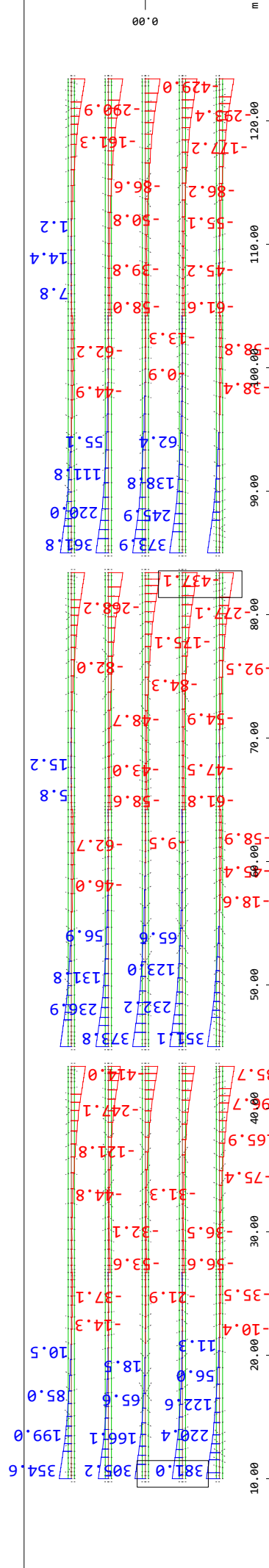
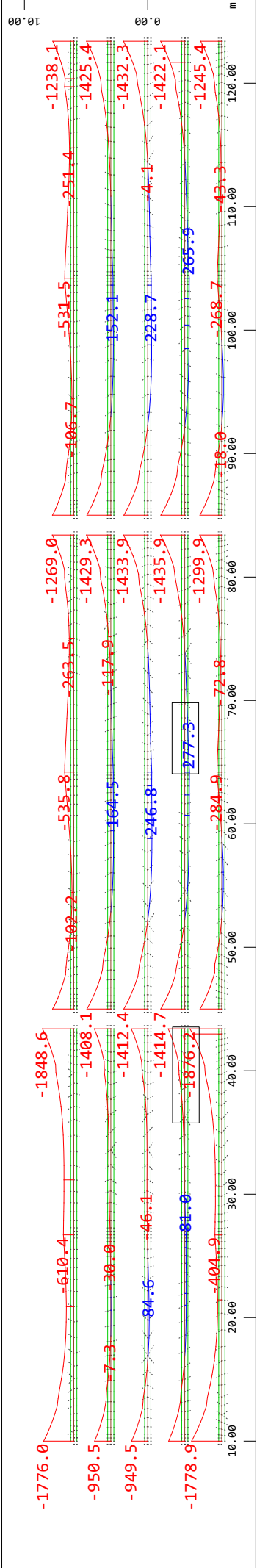
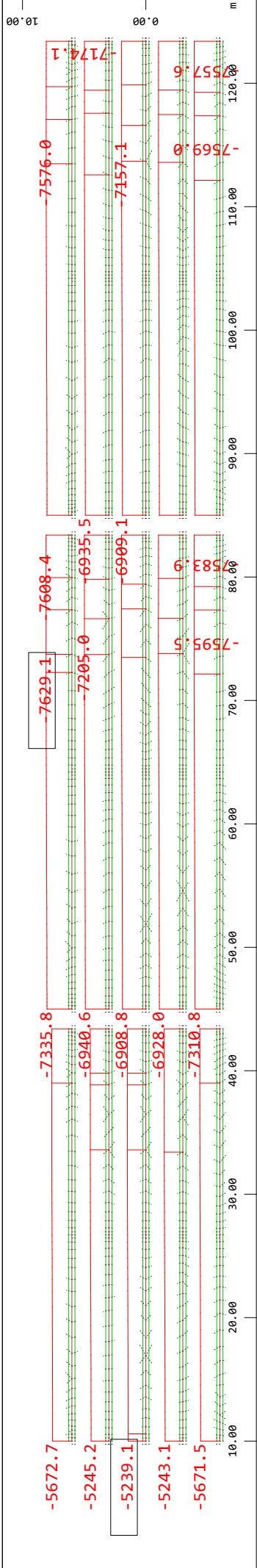


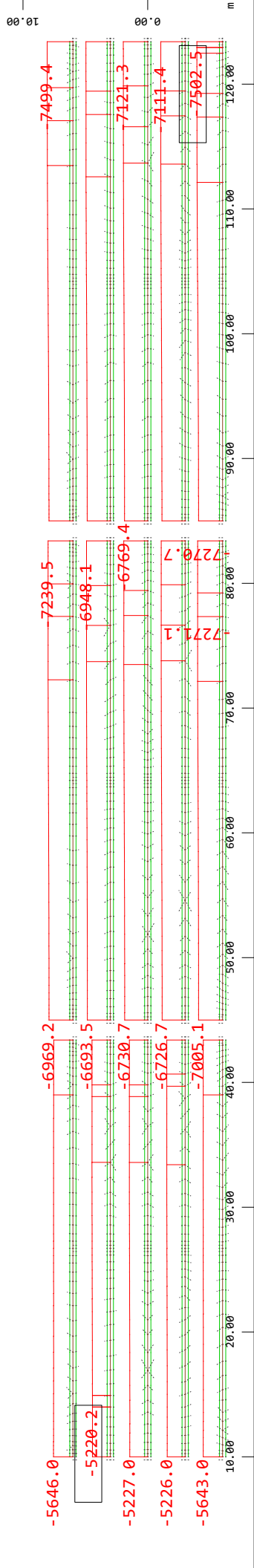
Y Sector of system Beam Elements Group 11...15
Z-X Beam Elements , Shear force V_z , Loadcase 1124 rare min-VZ MYV T PY , 1 cm 3D = 3273.4 kN (Min=-1125.8) (Max=374.2) M 1 : 450



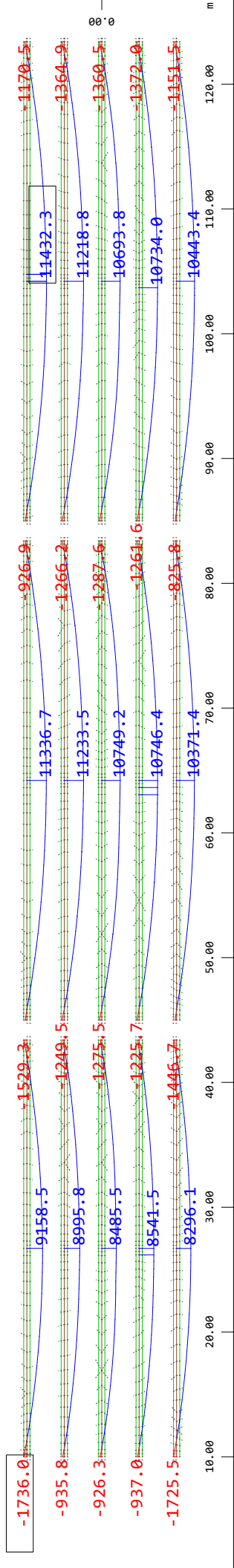








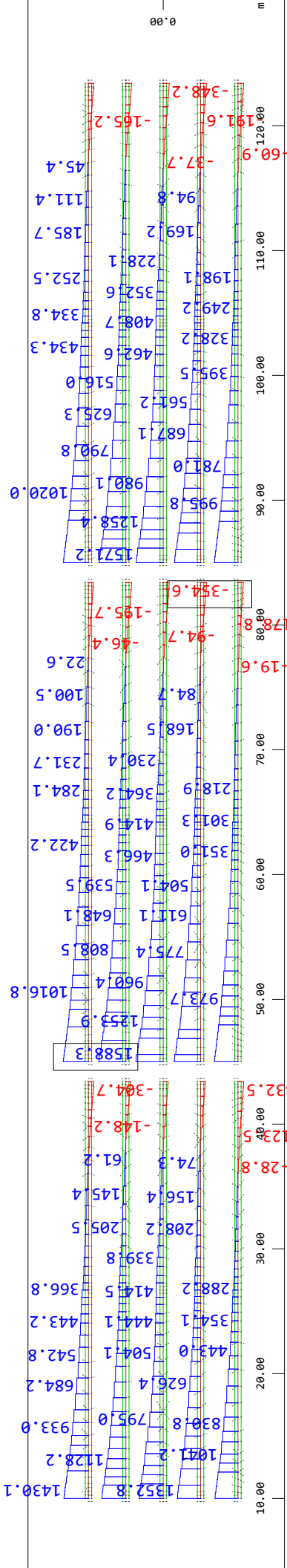
Y
Z X
Sector of system Beam Elements Group 11...15
Beam Elements , Normal force Nx, Loadcase 2127 desi max--N NPY PTX UX , 1 cm 3D = 16367 kN (Min=-7502.5) (Max=5220.2)
M 1 : 450



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Y
Z X
Sector of system Beam Elements Group 11...15
Beam Elements , Bending moment My, Loadcase 2121
desi BEAM-MY_Q-MXX_SPRI-P_PX , 1 cm 3D = 32734 kNm (Min=-1736.0) (Max=11432.3)
M 1 : 450

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Y
Z X
Sector of system Beam Elements Group 11...15
Beam Elements , Shear force Vz, Loadcase 2123 desl max-VZ MYV T_PY , 1 cm 3D = 3273.4 kN (Min=-354.6) (Max=1588.3)
M 1 : 450

