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Dimenzioniranje (les) _____ 82

Osnovni podatki o modelu

Datoteka:	V3 privijačena plošča.twp
Datum preračuna:	4.7.2025

Način preračuna: 3D model

[X] Teorija I-ga reda	[ ] Modalna analiza	[ ] Stabilnost
[ ] Teorija II-ga reda	[ ] Seizmični preračun	[ ] Faze gradnje
[ ] Nelinearen preračun		

Velikost modela

Število vozlišč:	12212
Število ploskovnih elementov:	11067
Število grednih elementov	964
Število robnih elementov	6168
Število osnovnih obtežnih primerov:	4
Število kombinacij obtežb:	26

Enote mer

Dolžina:	m [cm,mm]
Sila:	kN
Temperatura:	Celsius

Vhodni podatki - Konstrukcija

Shema nivojev

Naziv	z [m]	h [m]
Vmesne lege	6.50	2.50
Etaža	4.00	1.00

Medetaža	3.00	3.00
Pritličje	0.00	

Tabele materialov

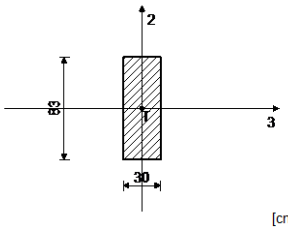
No	Naziv materiala	E[kN/m2]	μ	γ[kN/m3]	αt[1/C]	Em[kN/m2]	μm
1	C 25/30	3.100e+7	0.20	25.00	1.000e-5	3.100e+7	0.20
2	Opeka/Blokovi	3.100e+7	0.20	25.00	1.000e-5	3.100e+7	0.20
3	Les-Iglavci-Masiven les	1.000e+7	0.20	5.00	1.000e-5	1.000e+7	0.20
4	Jeklo	2.100e+8	0.30	78.50	1.000e-5	2.100e+8	0.30

Seti plošč

No	d[m]	e[m]	Material	Tip preračuna	Ortotropija	E2[kN/m2]	G[kN/m2]	α
<2>	0.500	0.250	1	Tanka plošča	Izotropna			
<3>	0.300	0.150	2	Opeka/Bloki	Izotropna			
<5>	0.160	0.080	1	Tanka plošča	Izotropna			

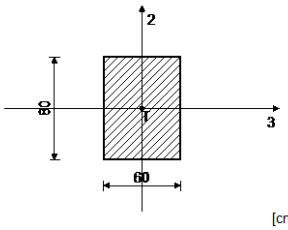
Seti gred

Set: 1 Prerez: b/d=30/83, Fiktivna ekscentričnost



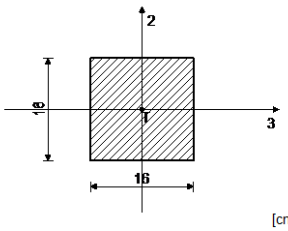
Mat.	A1	A2	A3	I1	I2	I3
1 - C 25/30	2.490e-1	2.075e-1	2.075e-1	5.771e-3	1.868e-3	1.429e-2

Set: 2 Prerez: b/d=60/80, Fiktivna ekscentričnost



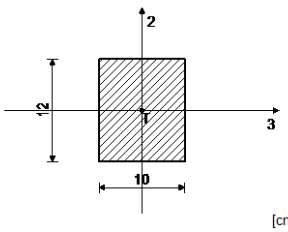
Mat.	A1	A2	A3	I1	I2	I3
1 - C 25/30	4.800e-1	4.000e-1	4.000e-1	3.110e-2	1.440e-2	2.560e-2

Set: 4 Prerez: b/d=16/16, Fiktivna ekscentričnost



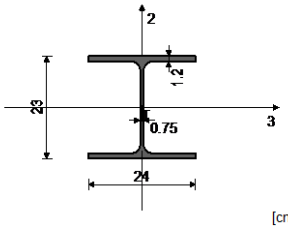
Mat.	A1	A2	A3	I1	I2	I3
3 - Les-Iglavci-M...	2.560e-2	2.133e-2	2.133e-2	9.230e-5	5.461e-5	5.461e-5

Set: 5 Prerez: b/d=10/12, Fiktivna ekscentričnost



Mat.	A1	A2	A3	I1	I2	I3
3 - Les-Iglavci-M...	1.200e-2	1.000e-2	1.000e-2	1.984e-5	1.000e-5	1.440e-5

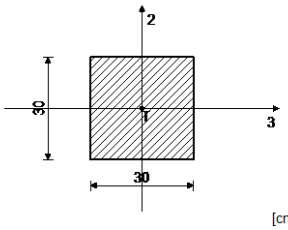
Set: 6 Prerez: IPBl 240, Fiktivna ekscentričnost



[cm]

Mat.	A1	A2	A3	I1	I2	I3
4 - Jeklo	7.680e-3	2.514e-3	5.166e-3	4.170e-7	2.770e-5	7.760e-5

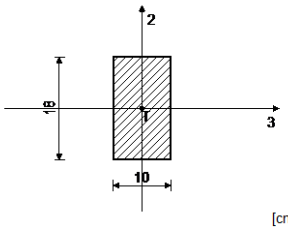
Set: 7 Prerez: b/d=30/30, Fiktivna ekscentričnost



[cm]

Mat.	A1	A2	A3	I1	I2	I3
1 - C 25/30	9.000e-2	7.500e-2	7.500e-2	1.141e-3	6.750e-4	6.750e-4

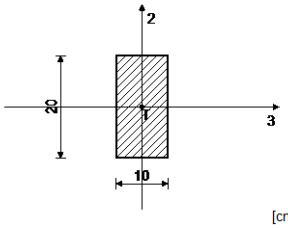
Set: 9 Prerez: b/d=10/18, Fiktivna ekscentričnost



[cm]

Mat.	A1	A2	A3	I1	I2	I3
3 - Les-Iglavci-M...	1.800e-2	1.500e-2	1.500e-2	3.917e-5	1.500e-5	4.860e-5

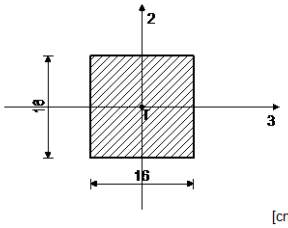
Set: 10 Prerez: b/d=10/20, Fiktivna ekscentričnost



[cm]

Mat.	A1	A2	A3	I1	I2	I3
3 - Les-Iglavci-M...	2.000e-2	1.667e-2	1.667e-2	4.578e-5	1.667e-5	6.667e-5

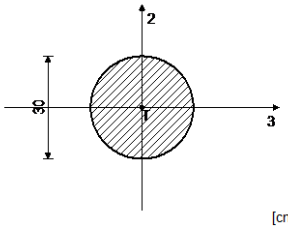
Set: 13 Prerez: b/d=16/16, Fiktivna ekscentričnost



[cm]

Mat.	A1	A2	A3	I1	I2	I3
3 - Les-Iglavci-M...	2.560e-2	2.133e-2	2.133e-2	9.230e-5	5.461e-5	5.461e-5

Set: 14 Prerez: D=30, Fiktivna ekscentričnost



[cm]

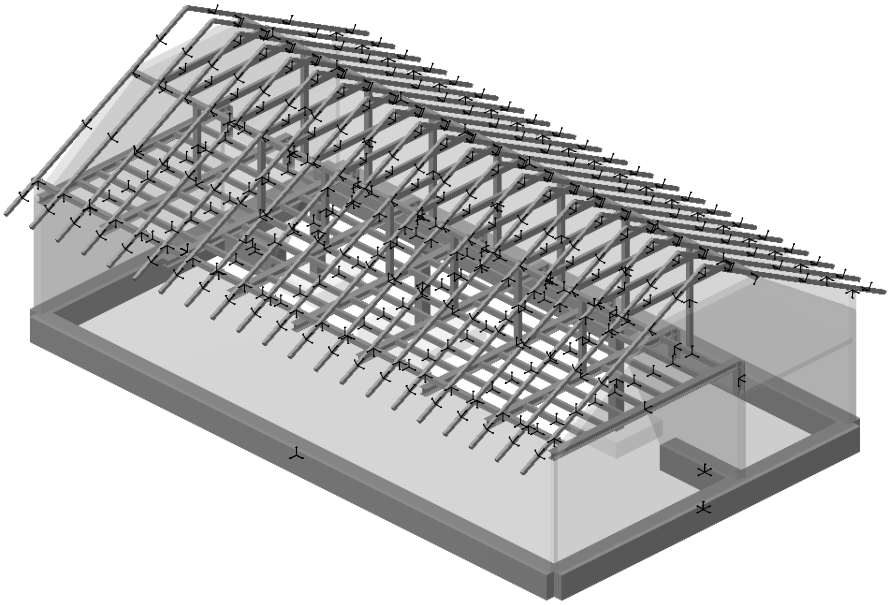
Mat.	A1	A2	A3	I1	I2	I3
4 - Jeklo	7.069e-2	6.362e-2	6.362e-2	7.952e-4	3.976e-4	3.976e-4

Seti površinskih podpor

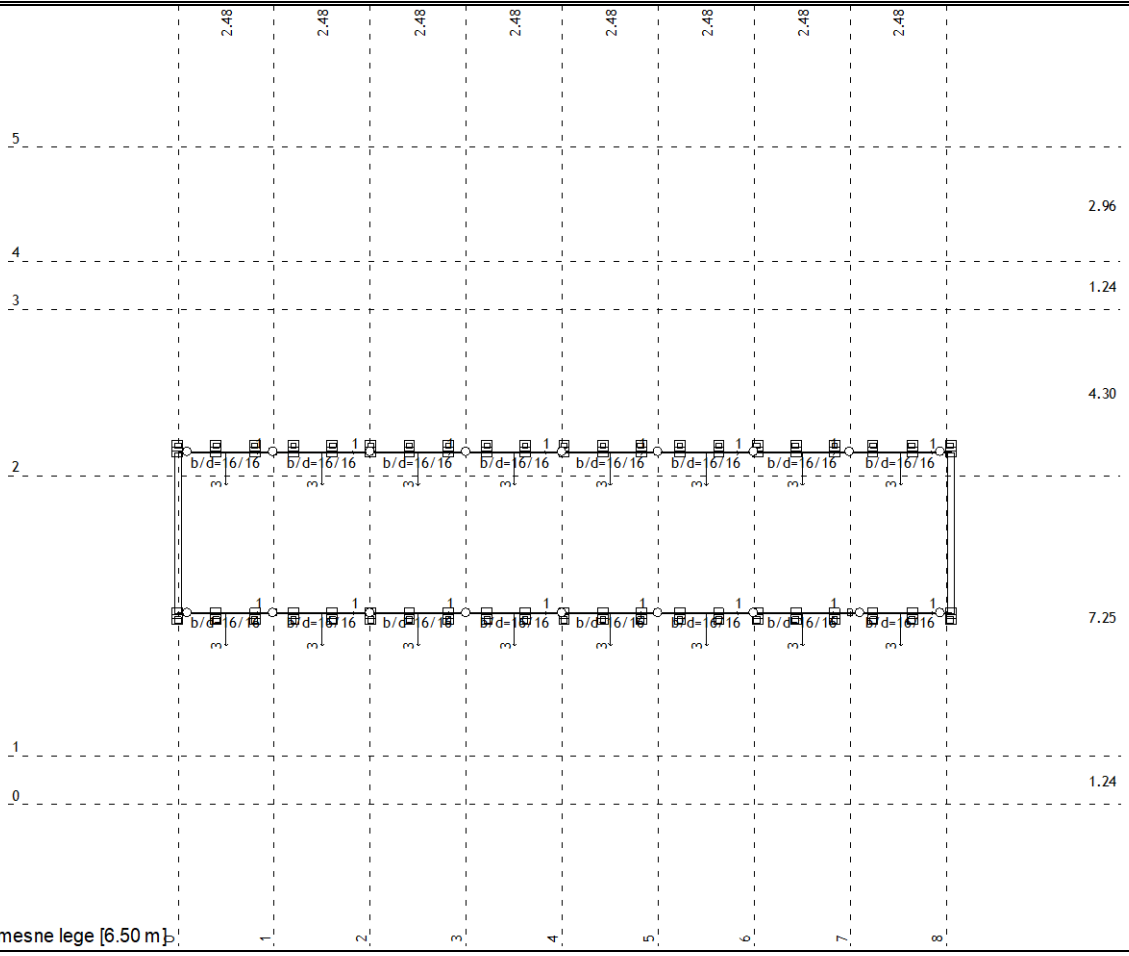
Set	K,R1	K,R2	K,R3
1	1.000e+10	1.000e+10	5.000e+4

Seti linijskih podpor

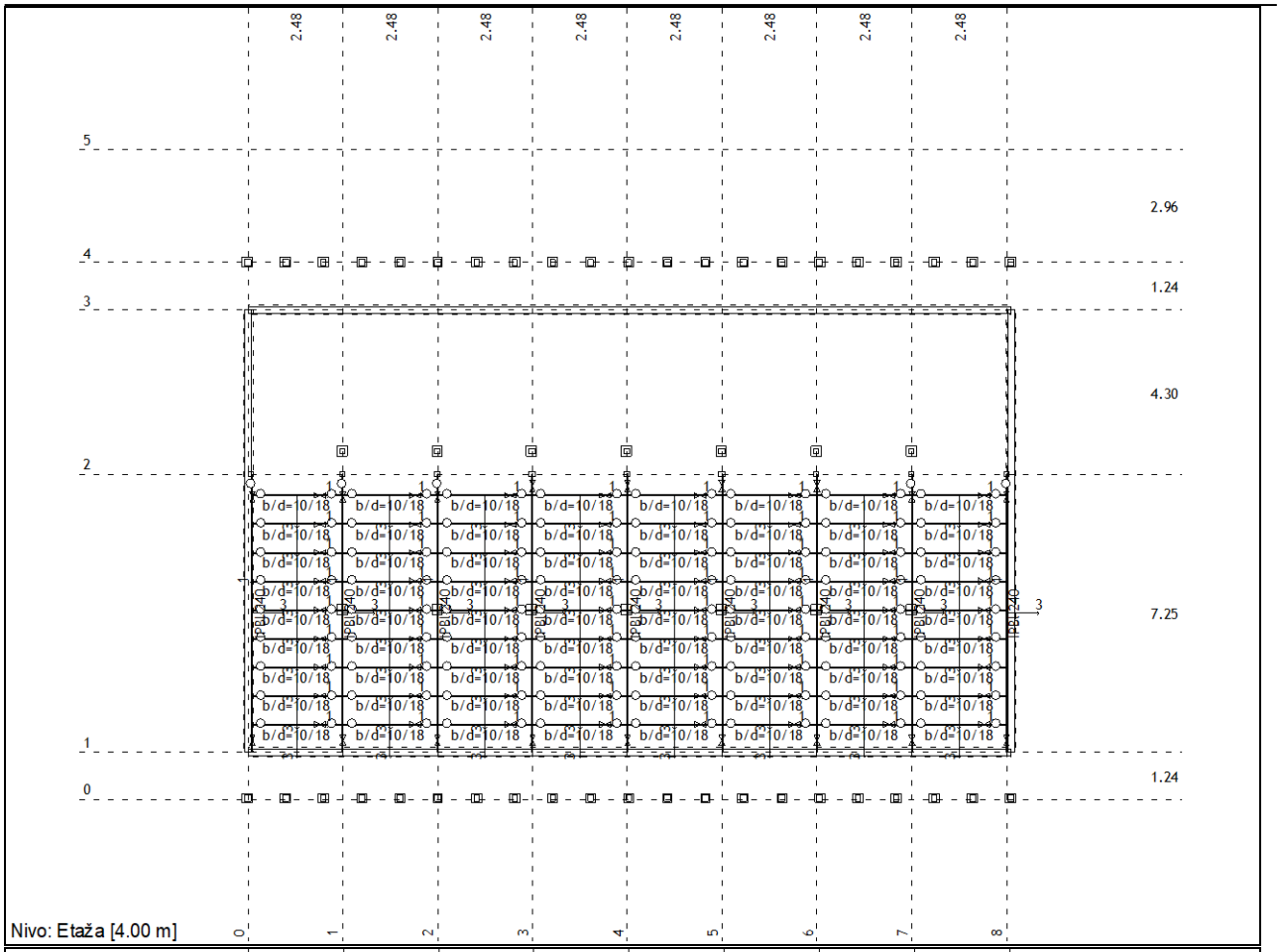
Set	K,R1	K,R2	K,R3	K,M1	Tla [m]
1	1.000e+10	1.000e+10	1.000e+10		0.600

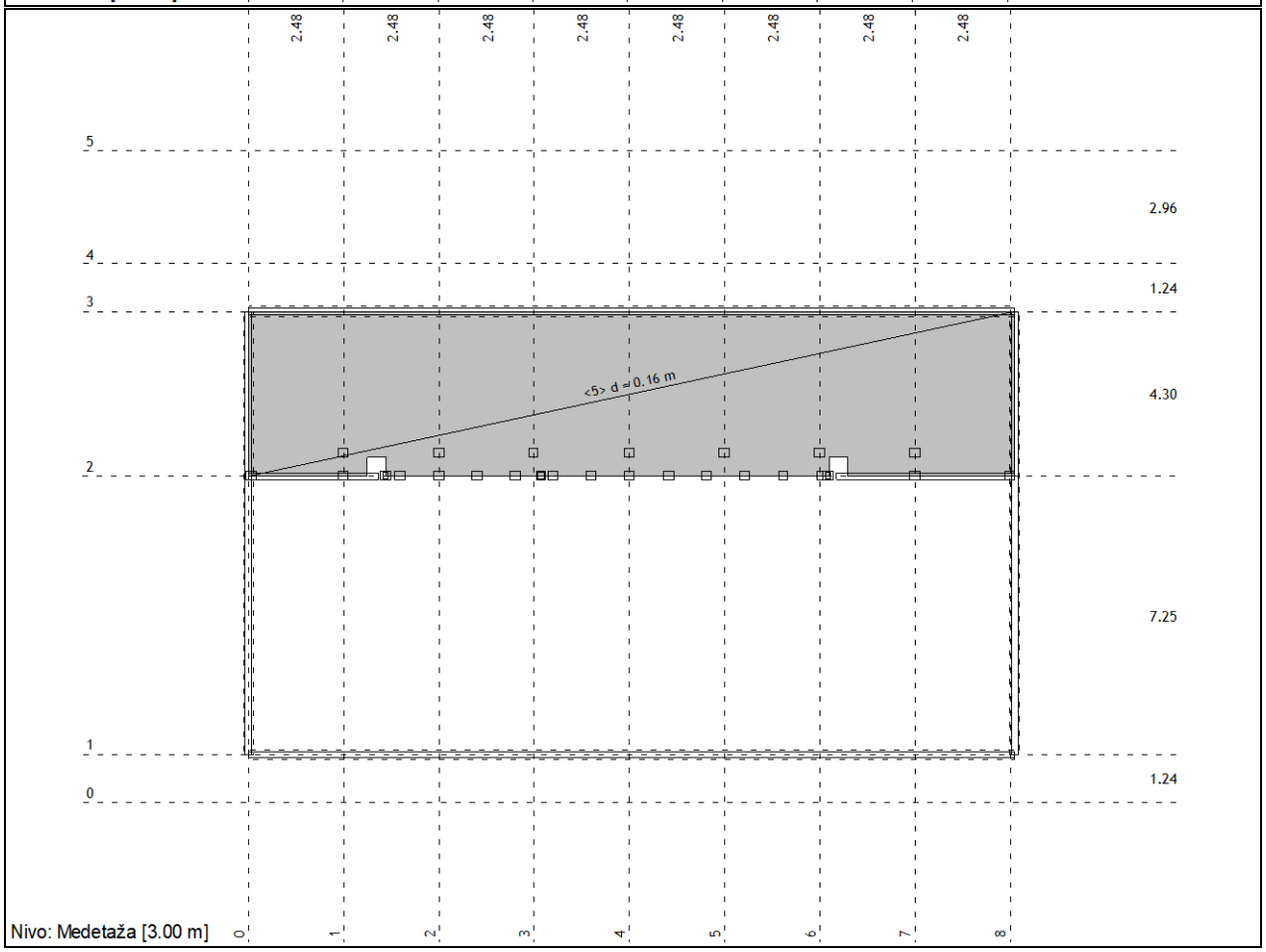


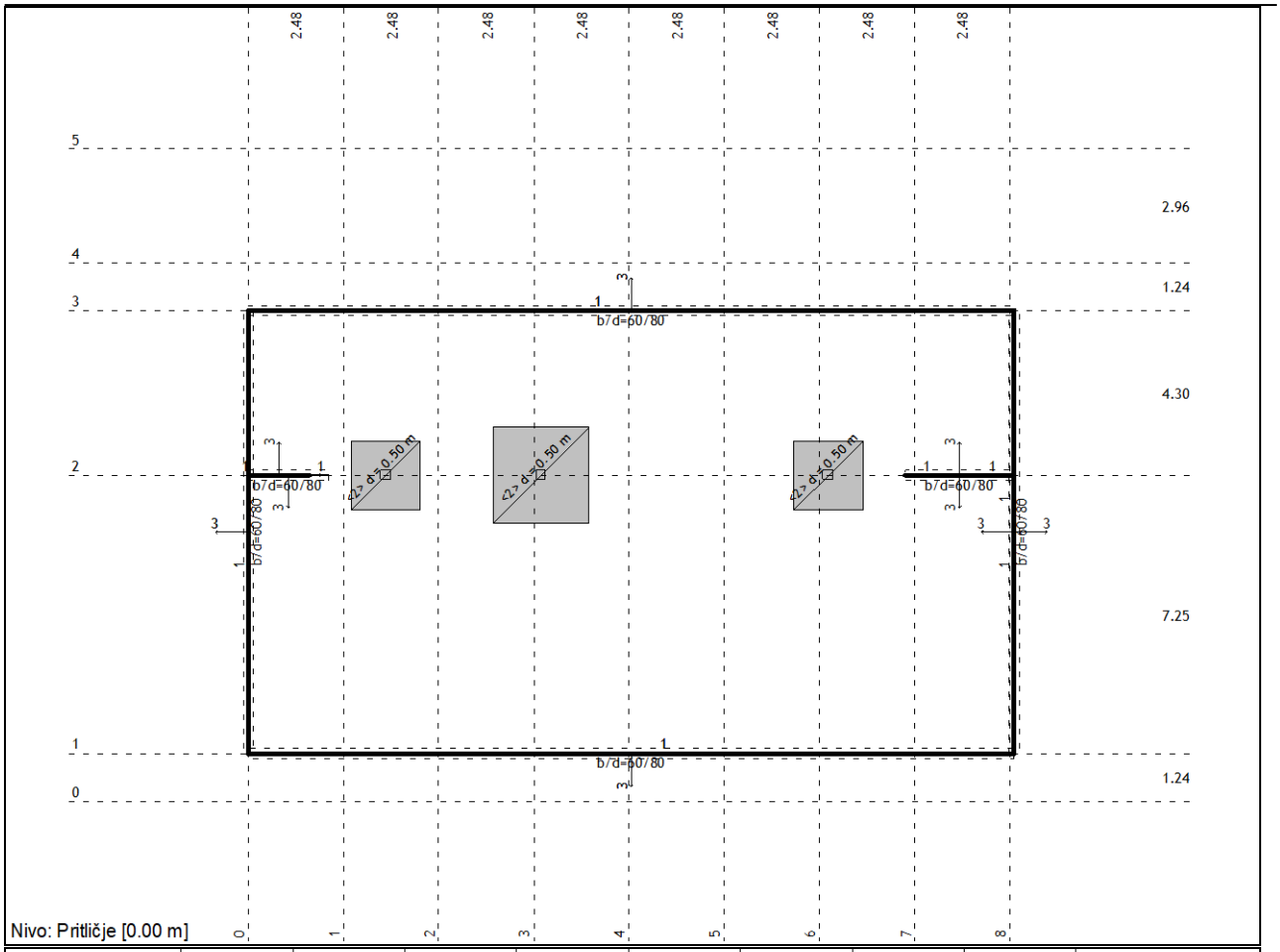
Izometrija

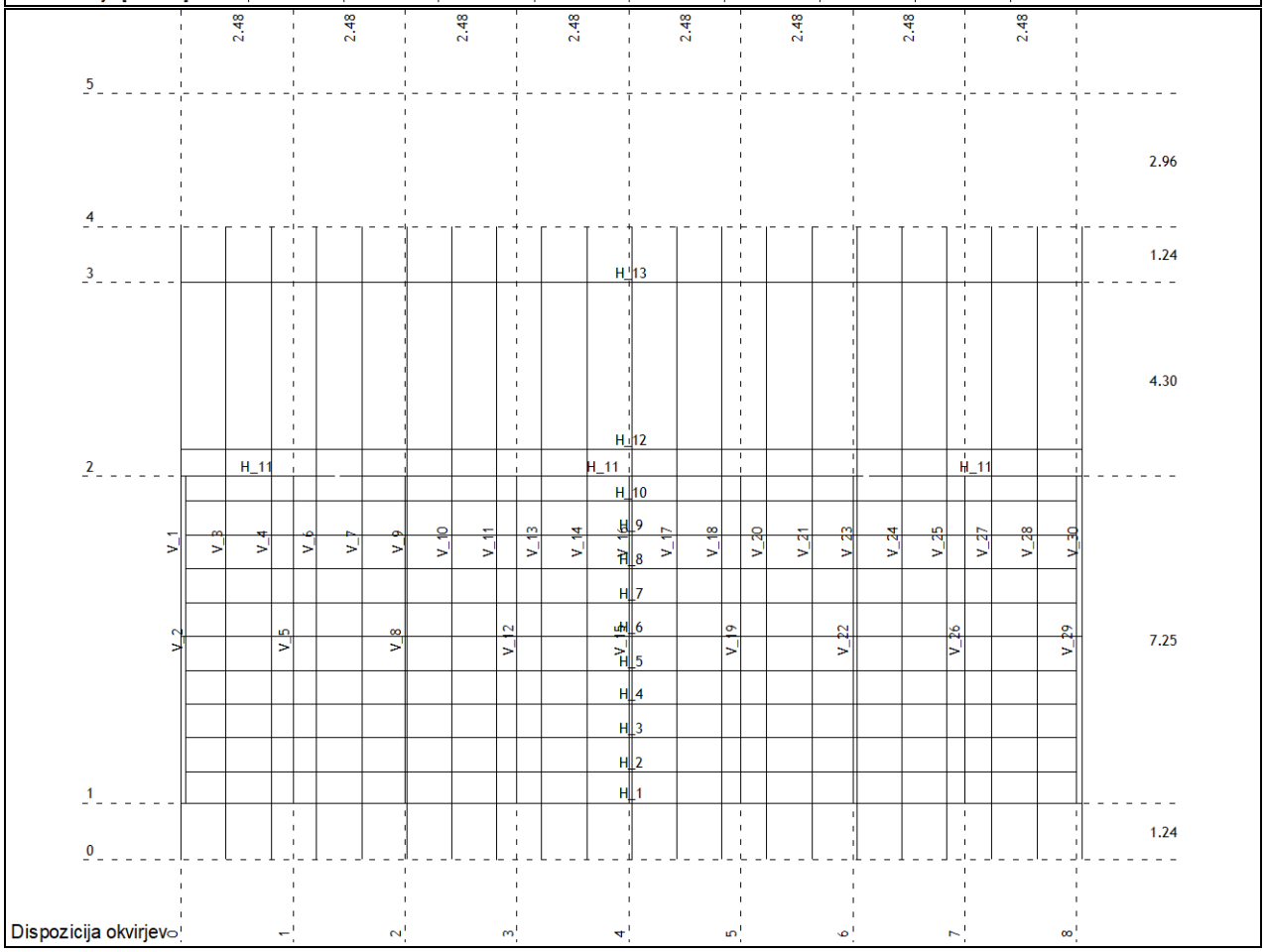


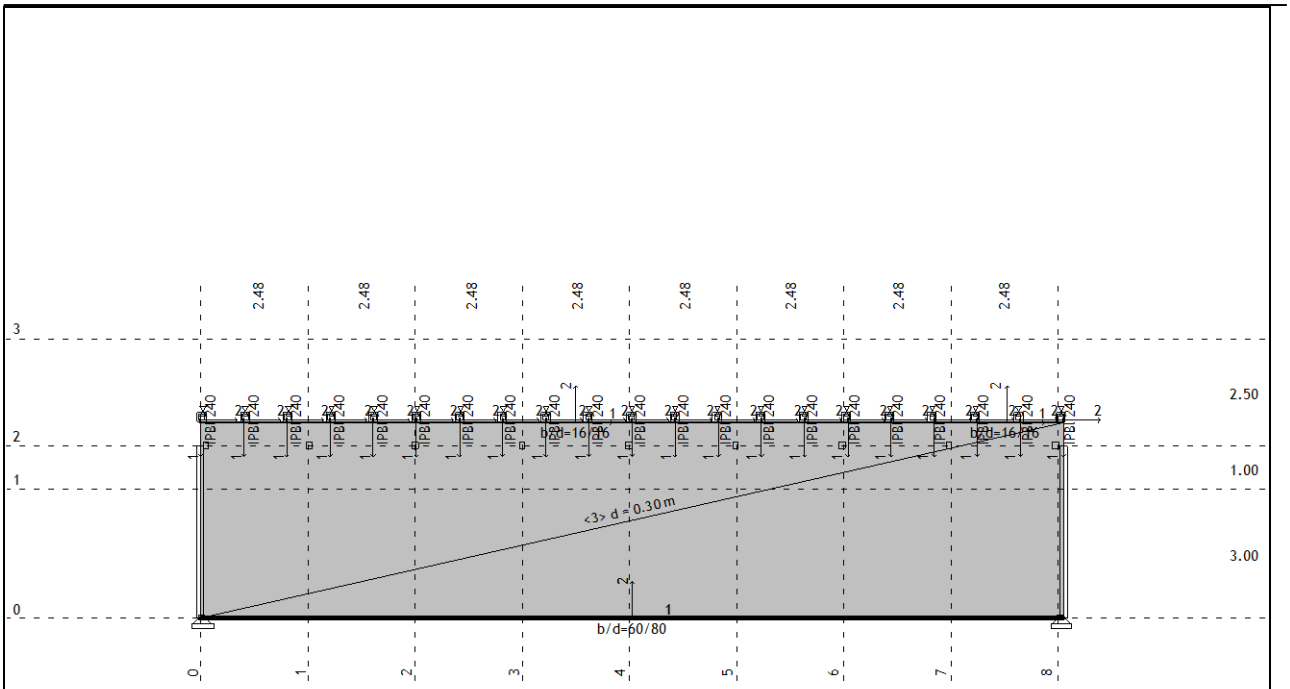
Nivo: Vmesne lege [6.50 m]


2.48
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2.48
2.48
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4.30
7.25
1.24
b/d=10/18
PBL40
0
1
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3
4
5
6
7
8
Nivo: Etaža [4.00 m]

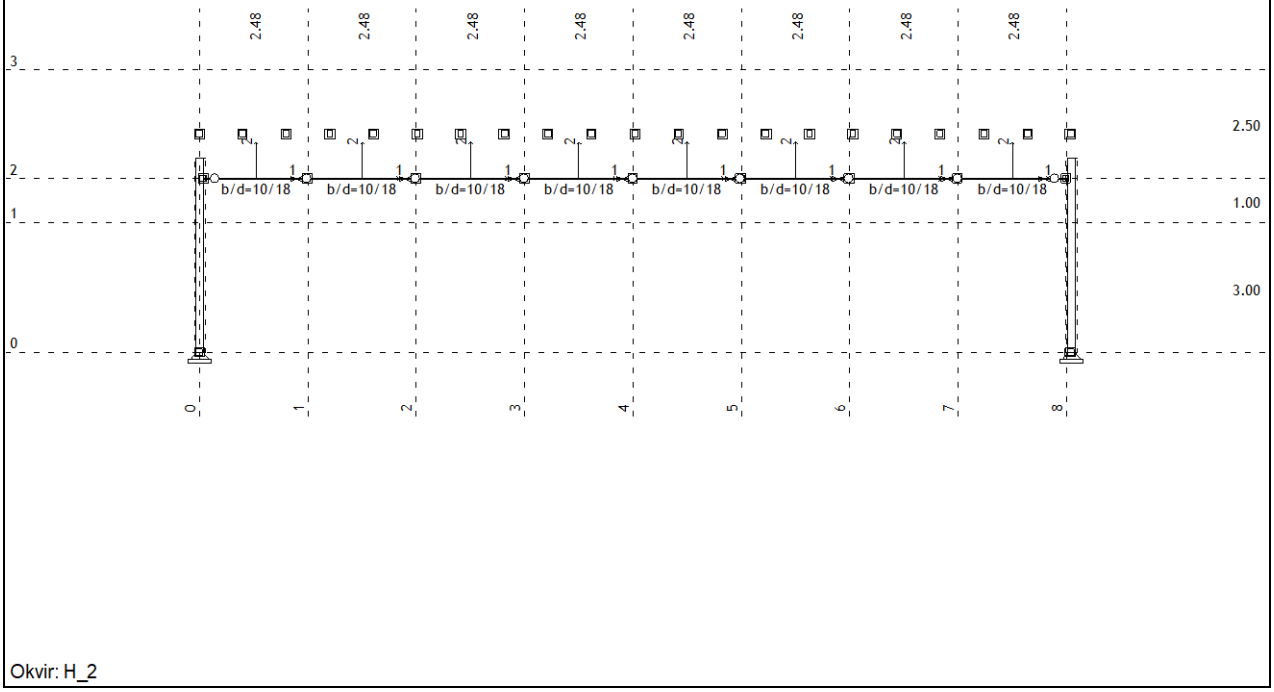

2.48
2.48
2.48
2.48
2.48
2.48
2.48
2.48
5
4
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0
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4.30
7.25
1.24
<5> d = 0.16 m
0
1
2
3
4
5
6
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8
Nivo: Medetaža [3.00 m]


2.48
2.96
1.24
4.30
7.25
1.24
b7/d=60/80
d=0.50 m
Nivo: Pritličje [0.00 m]

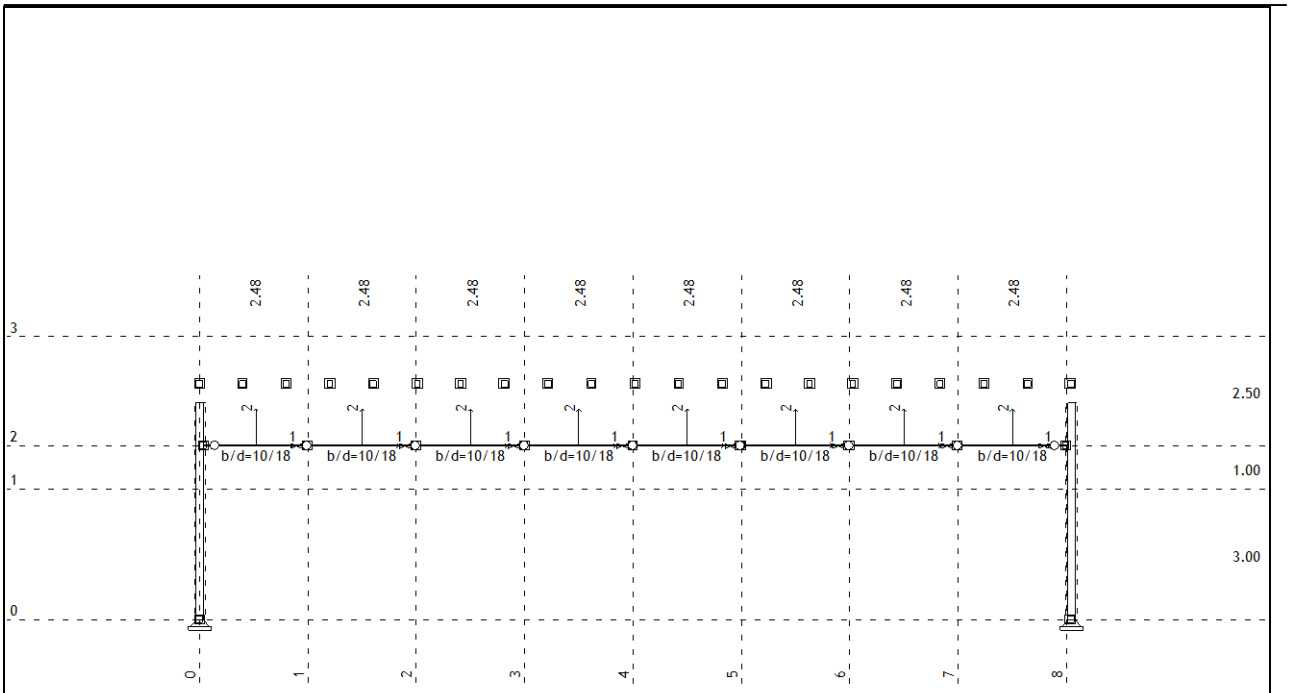

2.48
2.96
1.24
4.30
7.25
1.24
H_13
H_12
H_11
H_10
H_9
H_8
H_7
H_6
H_5
H_4
H_3
H_2
H_1
Dispozicija okvirjev



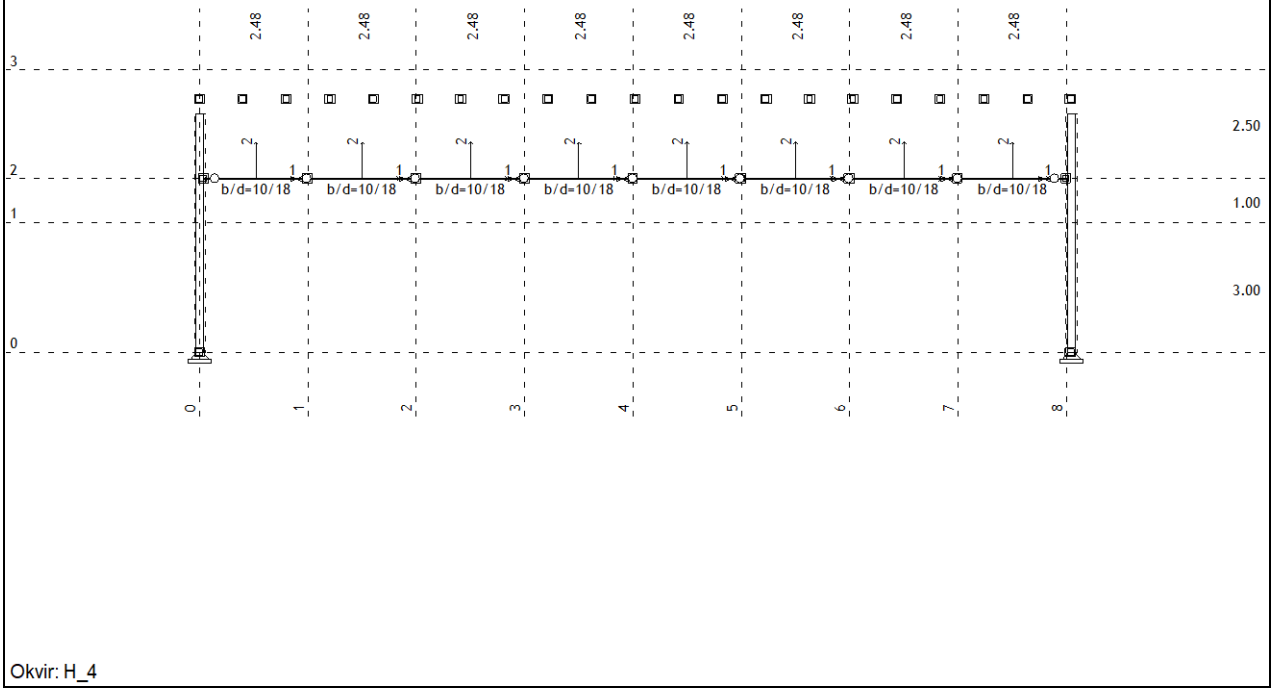
Okvir: H_1



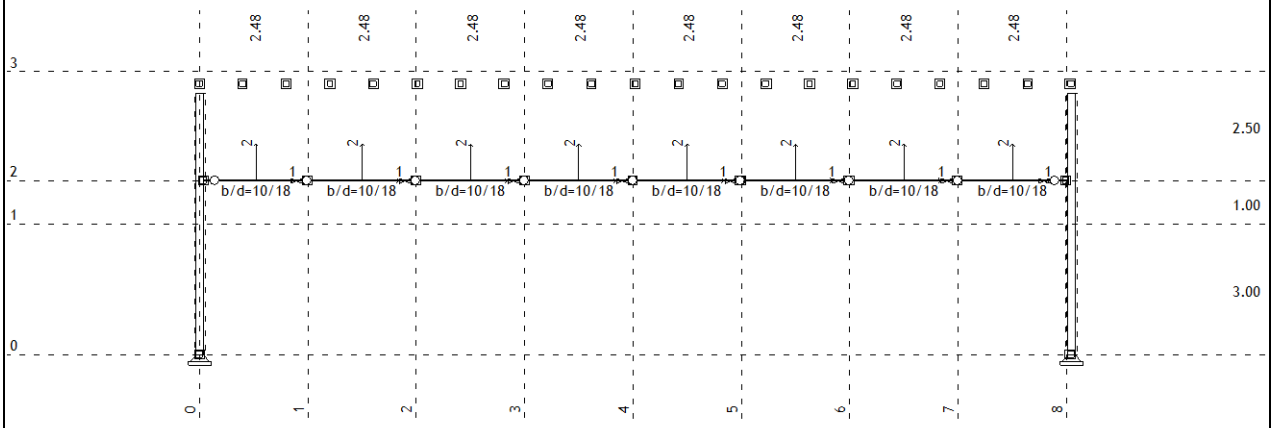
Okvir: H_2



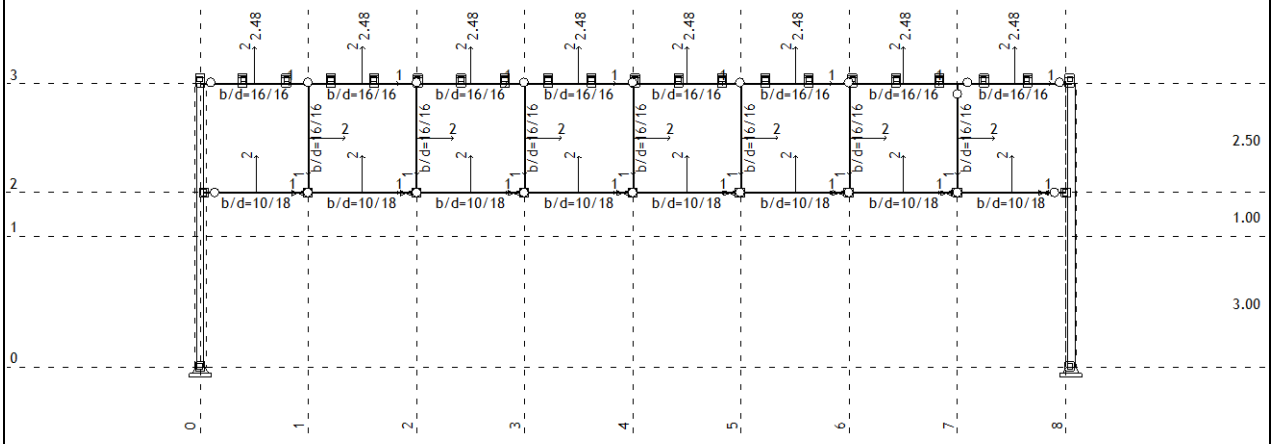
Okvir: H_3



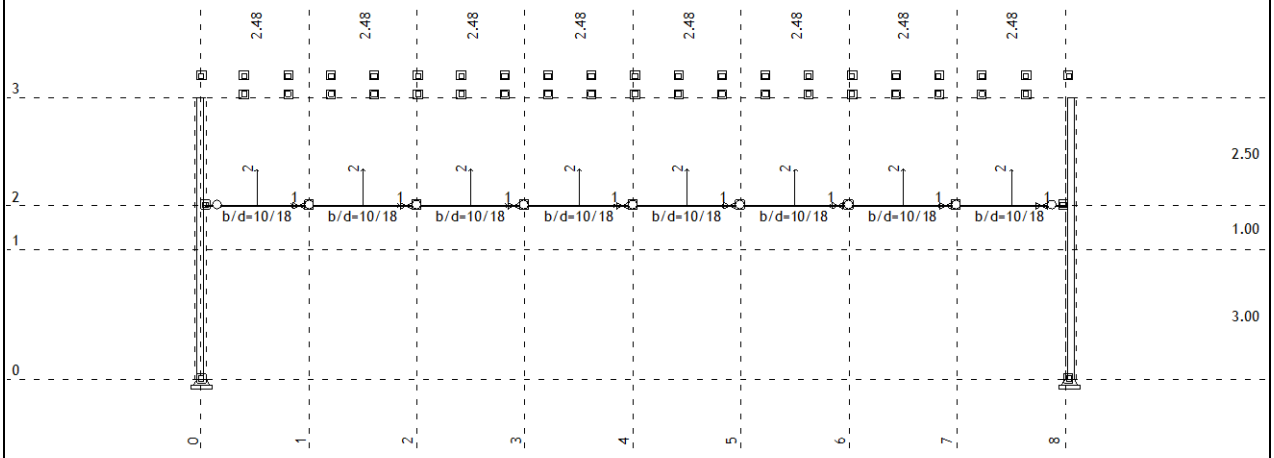
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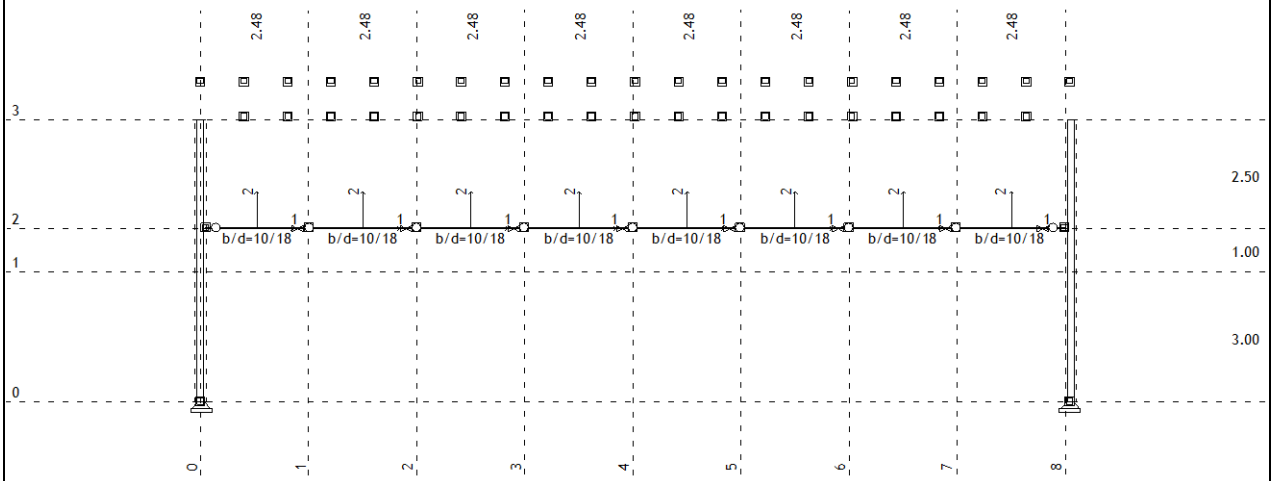
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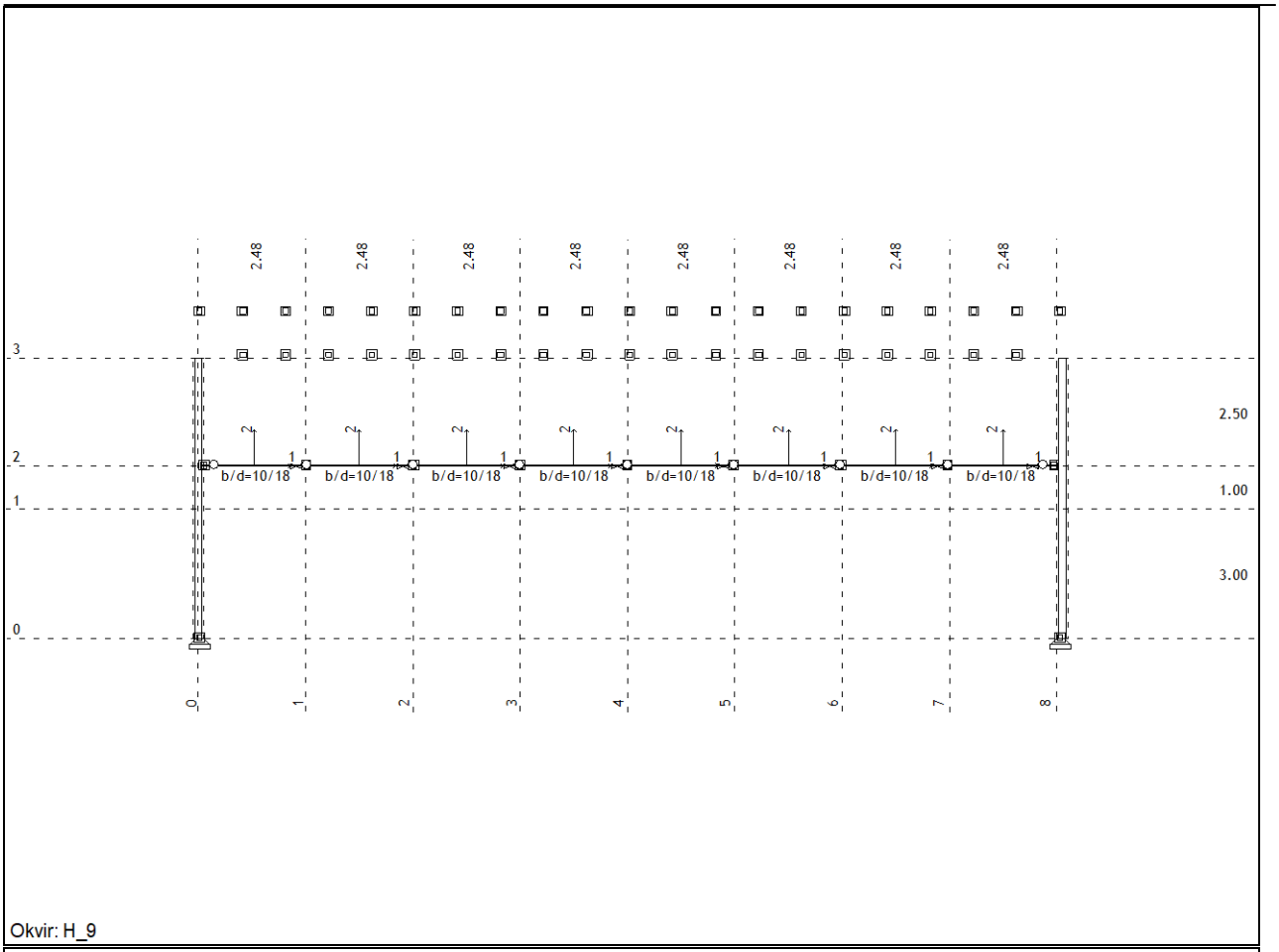
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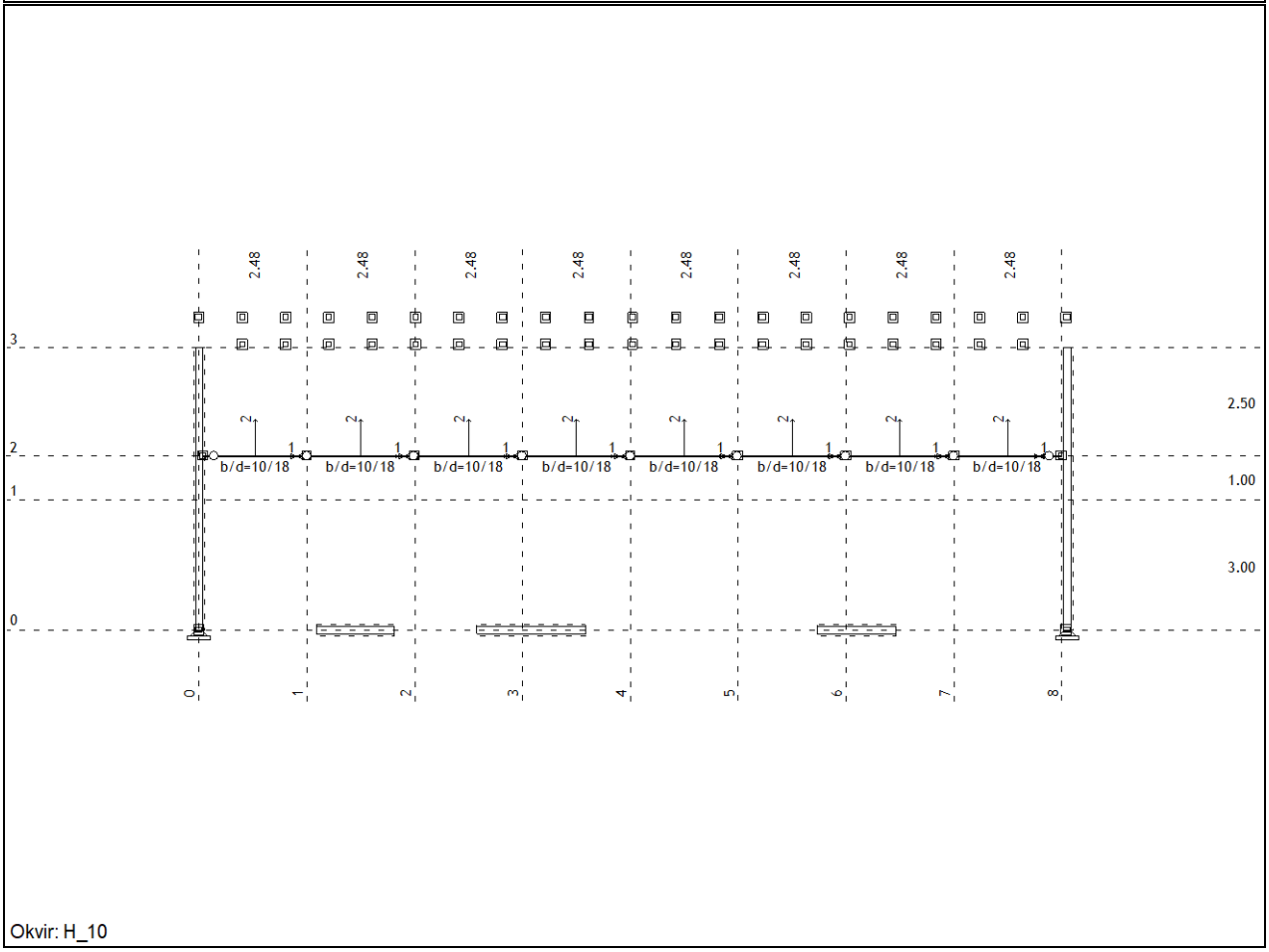
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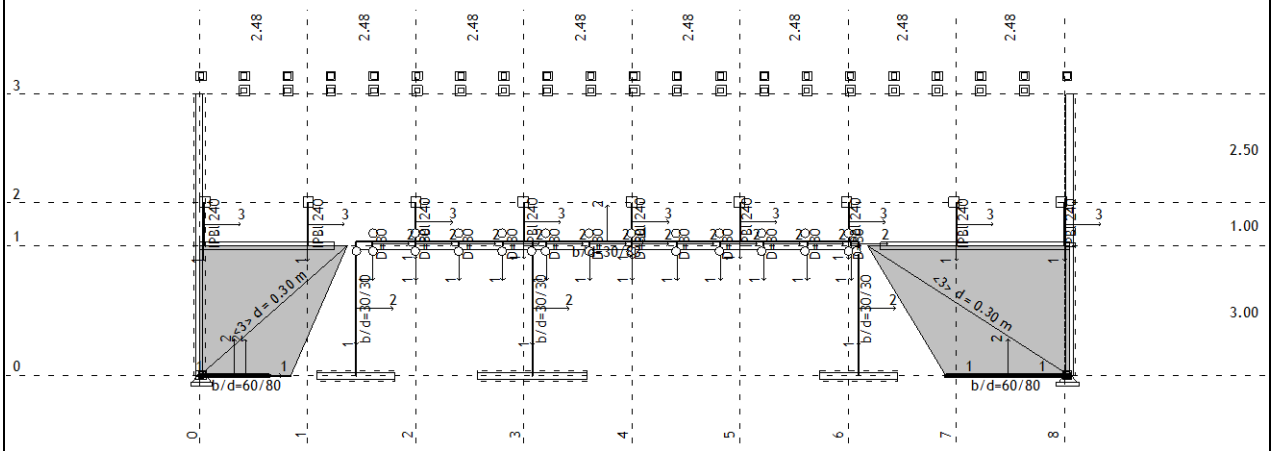
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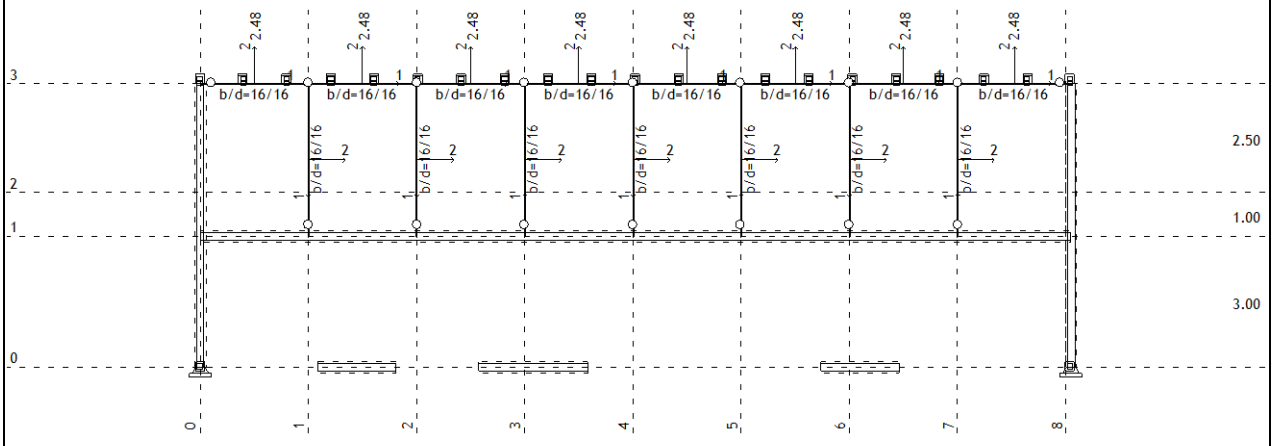
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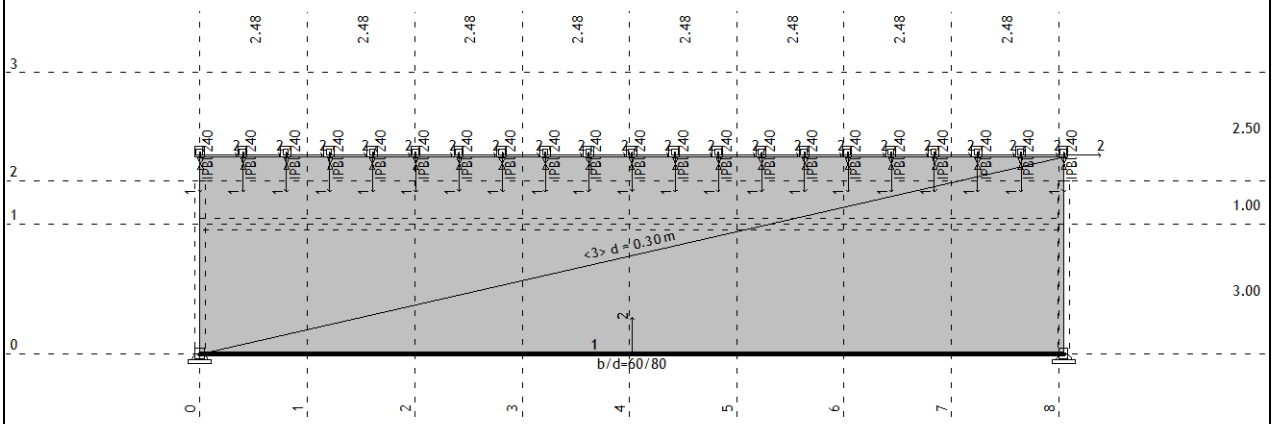
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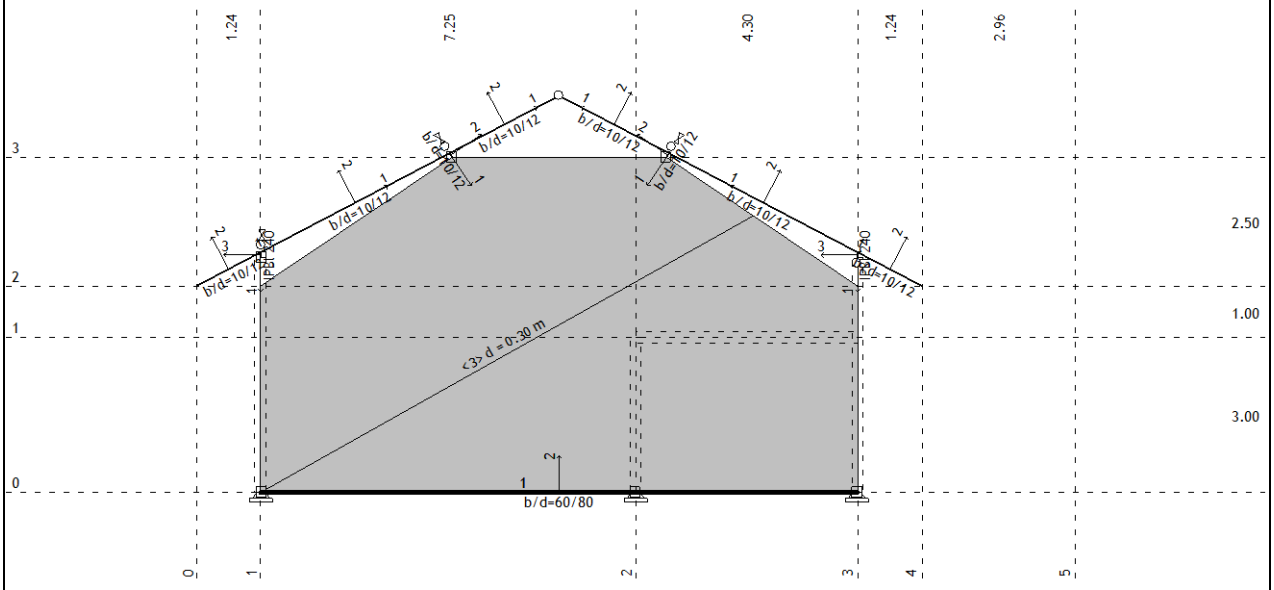
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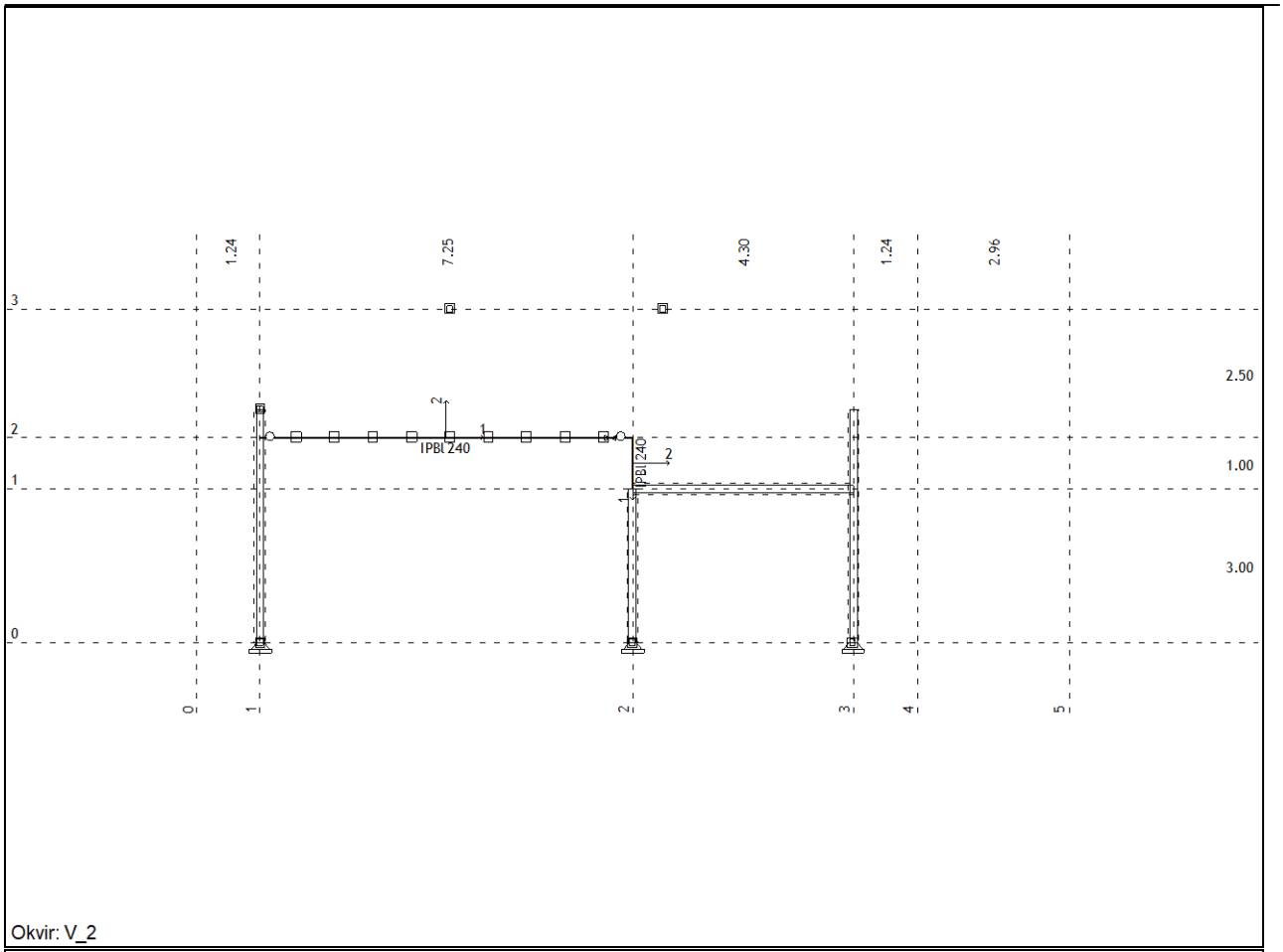
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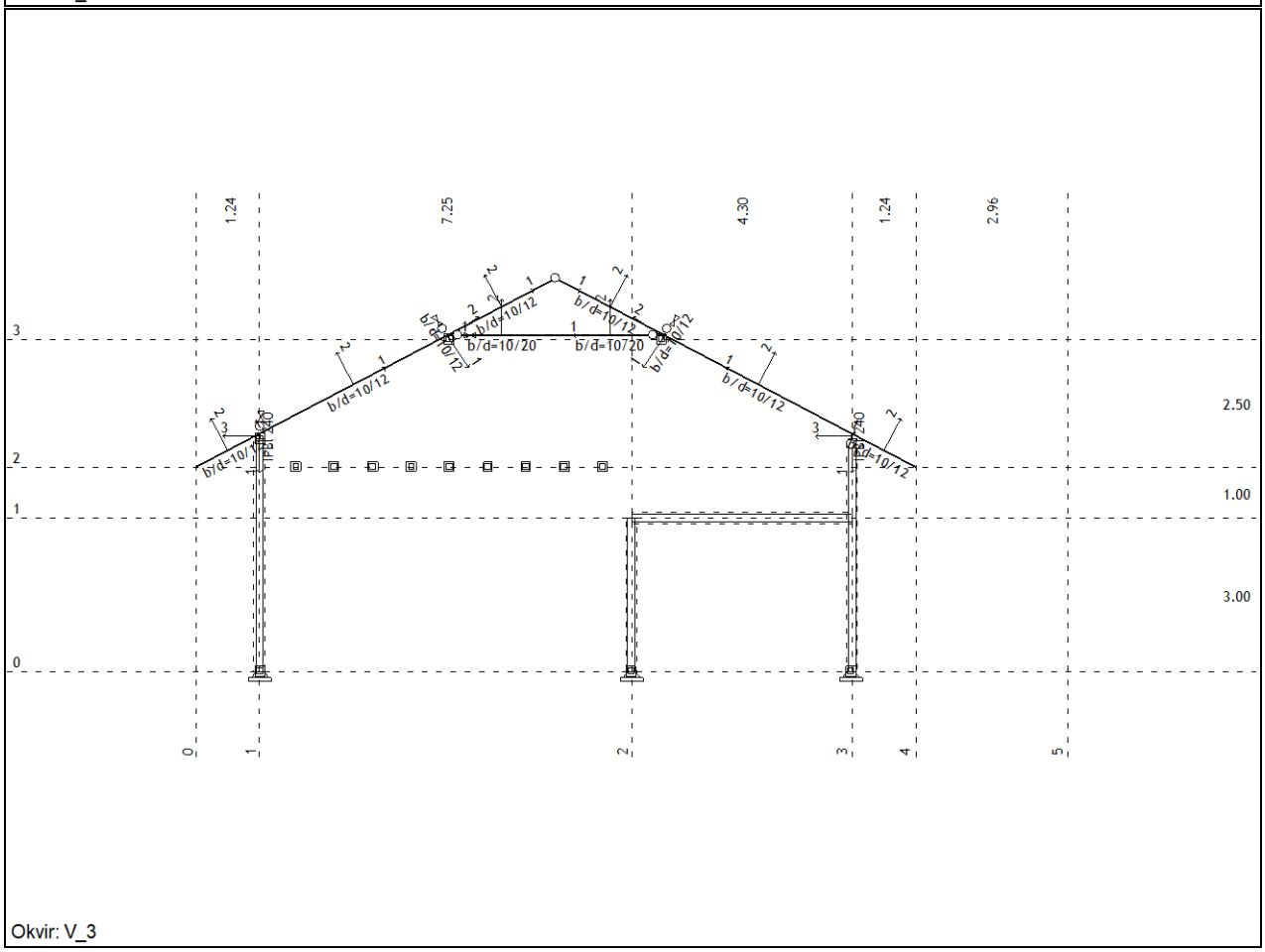
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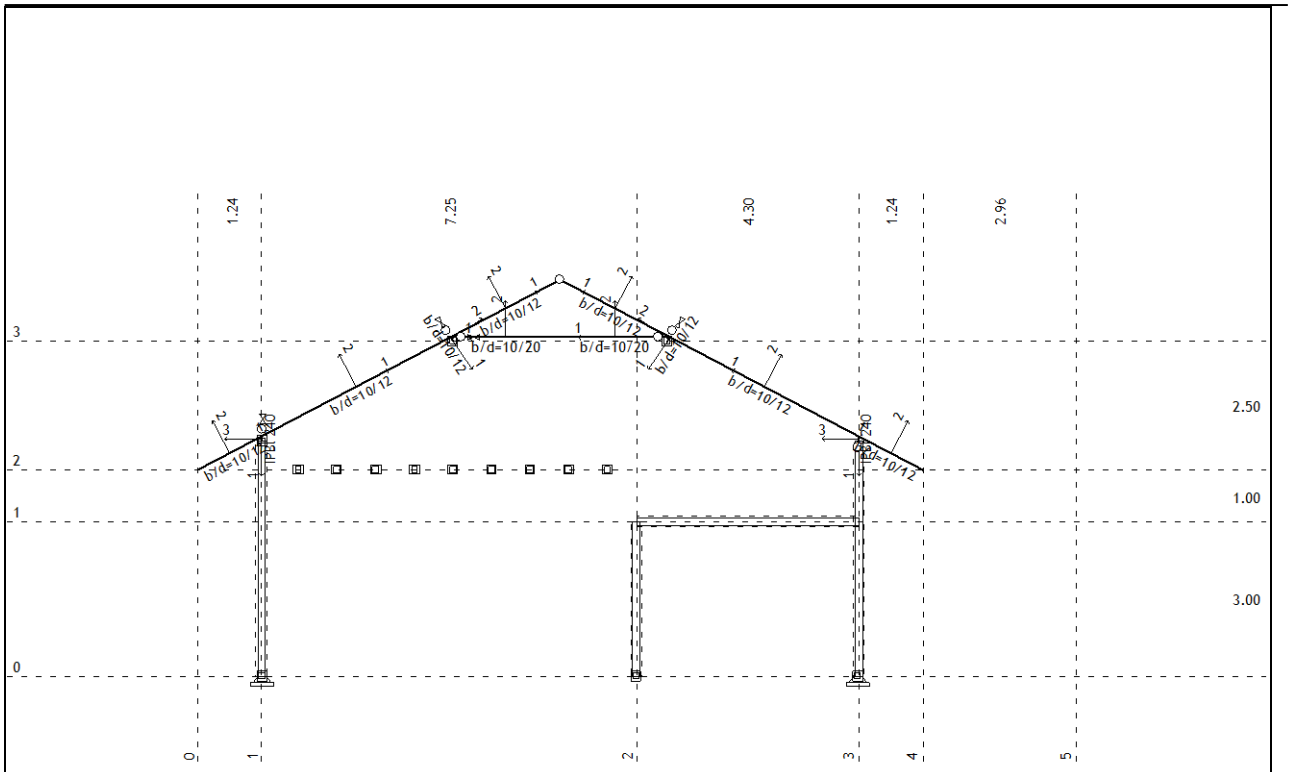
Okvir: V_1



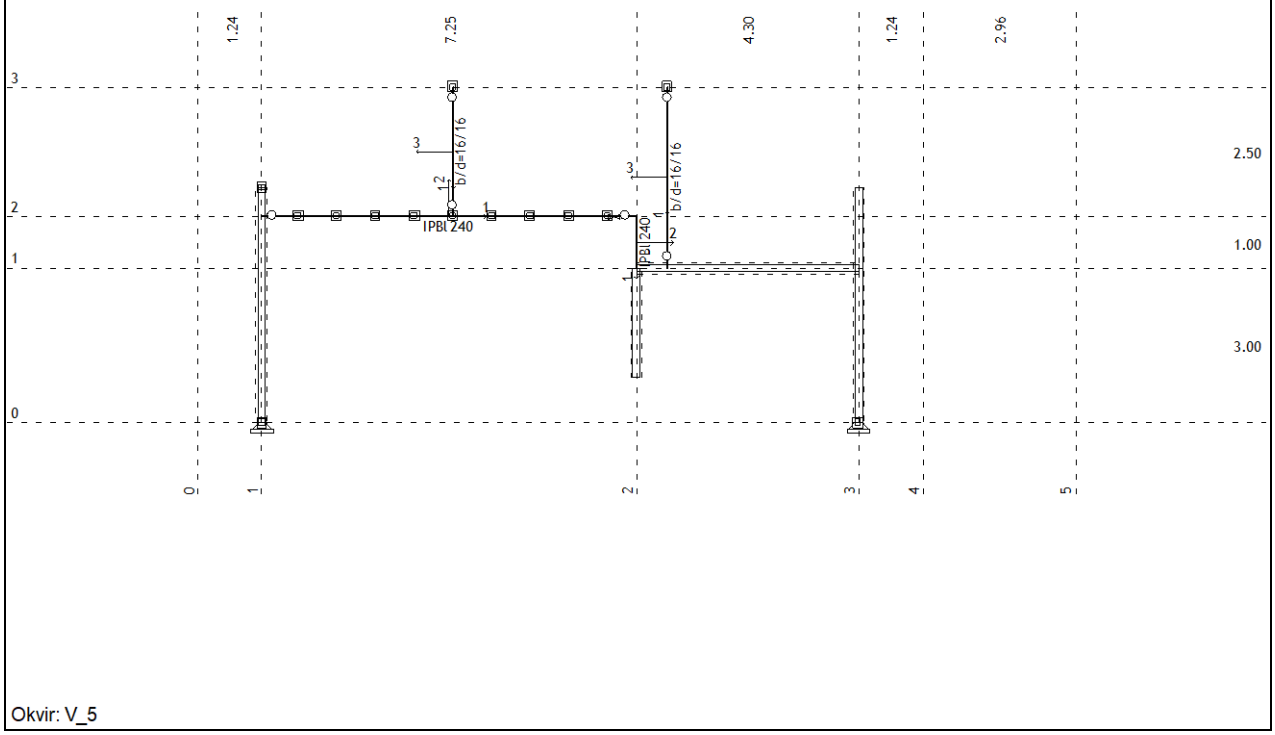
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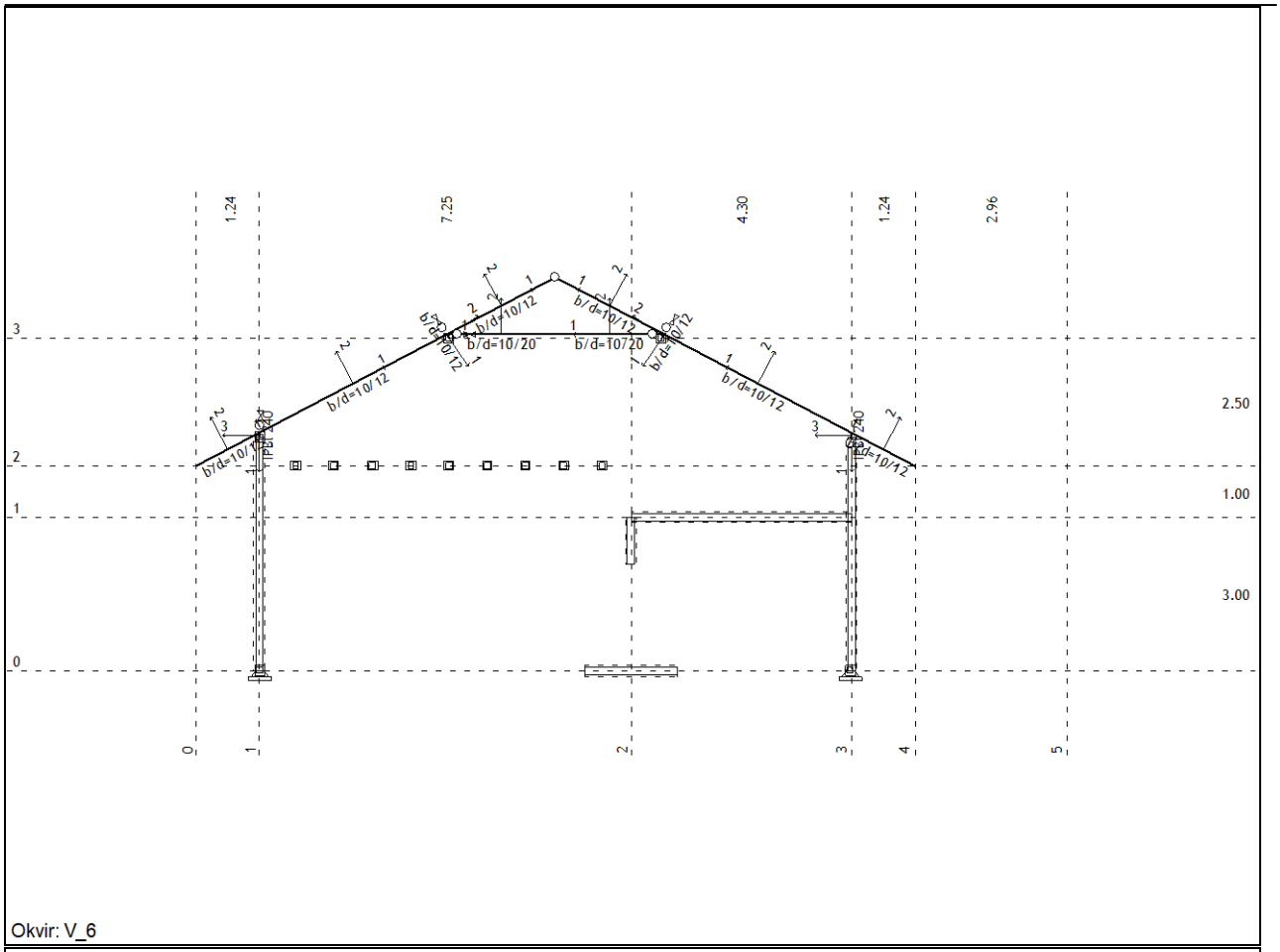
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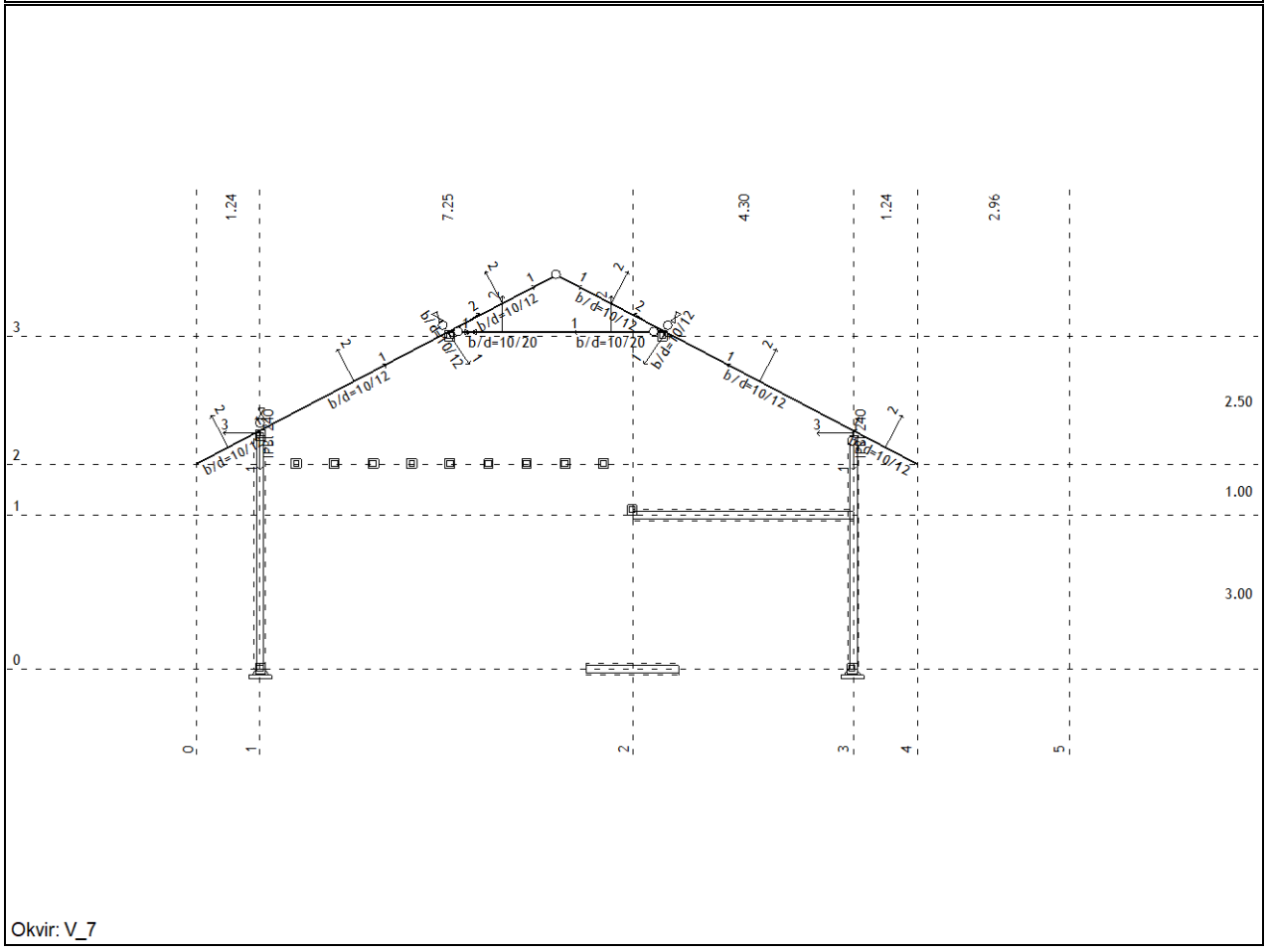
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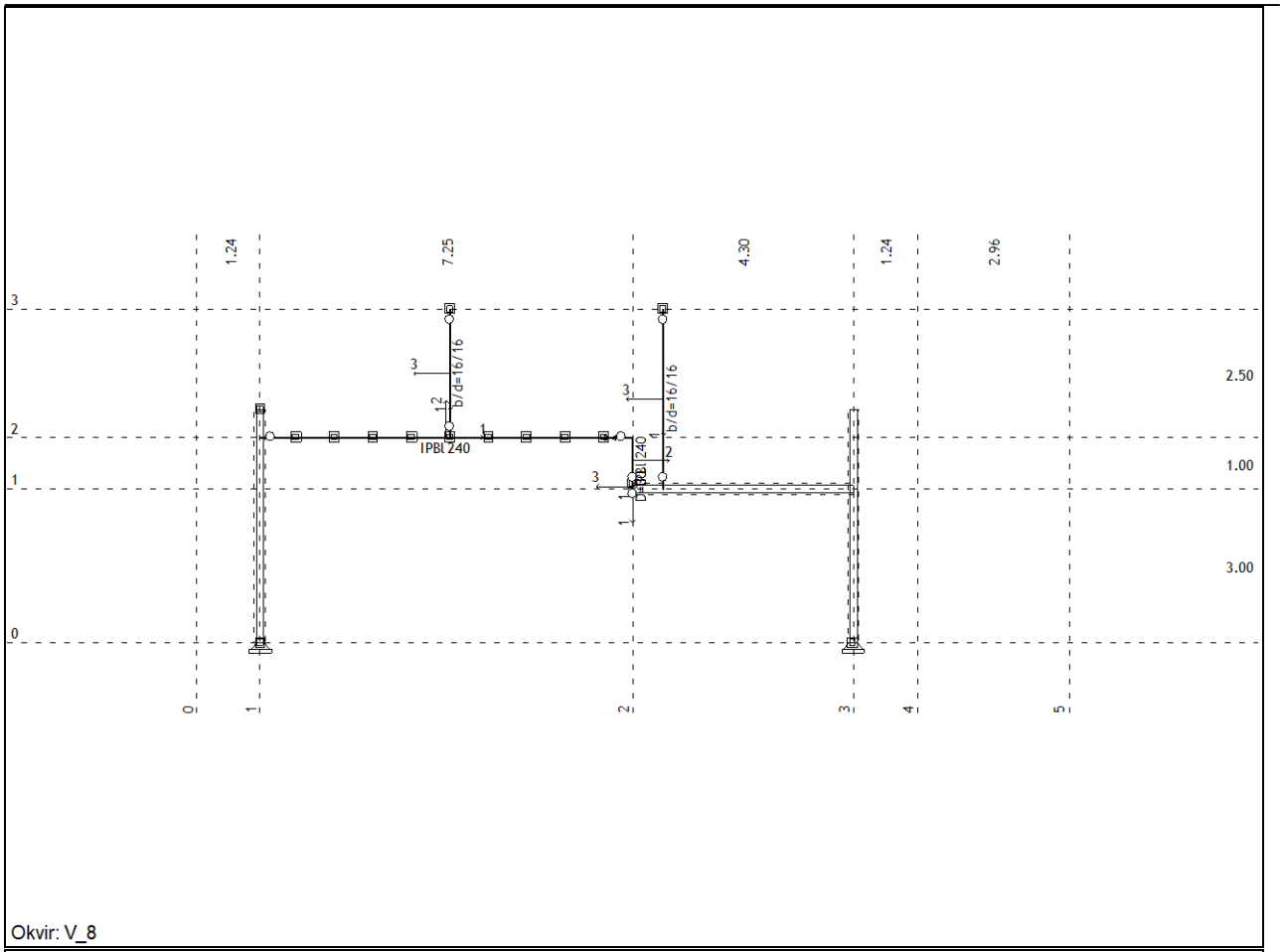
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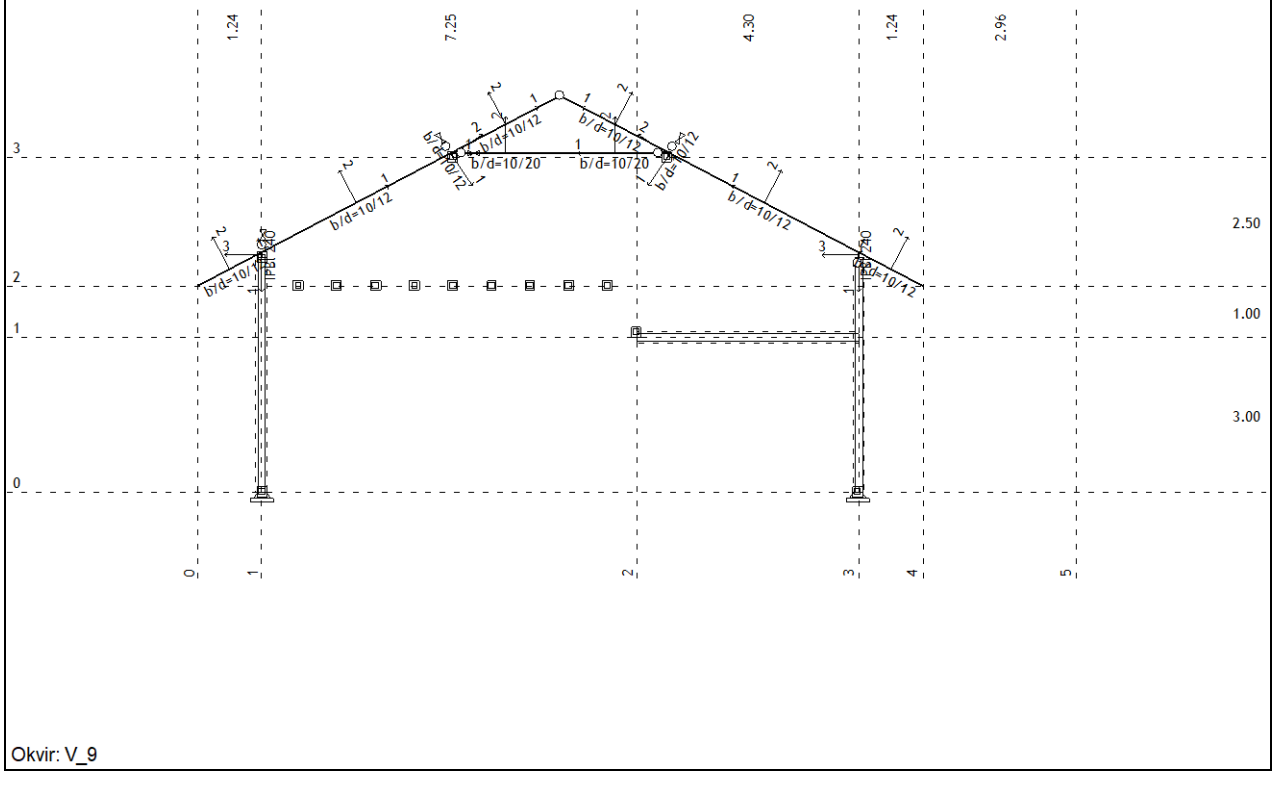
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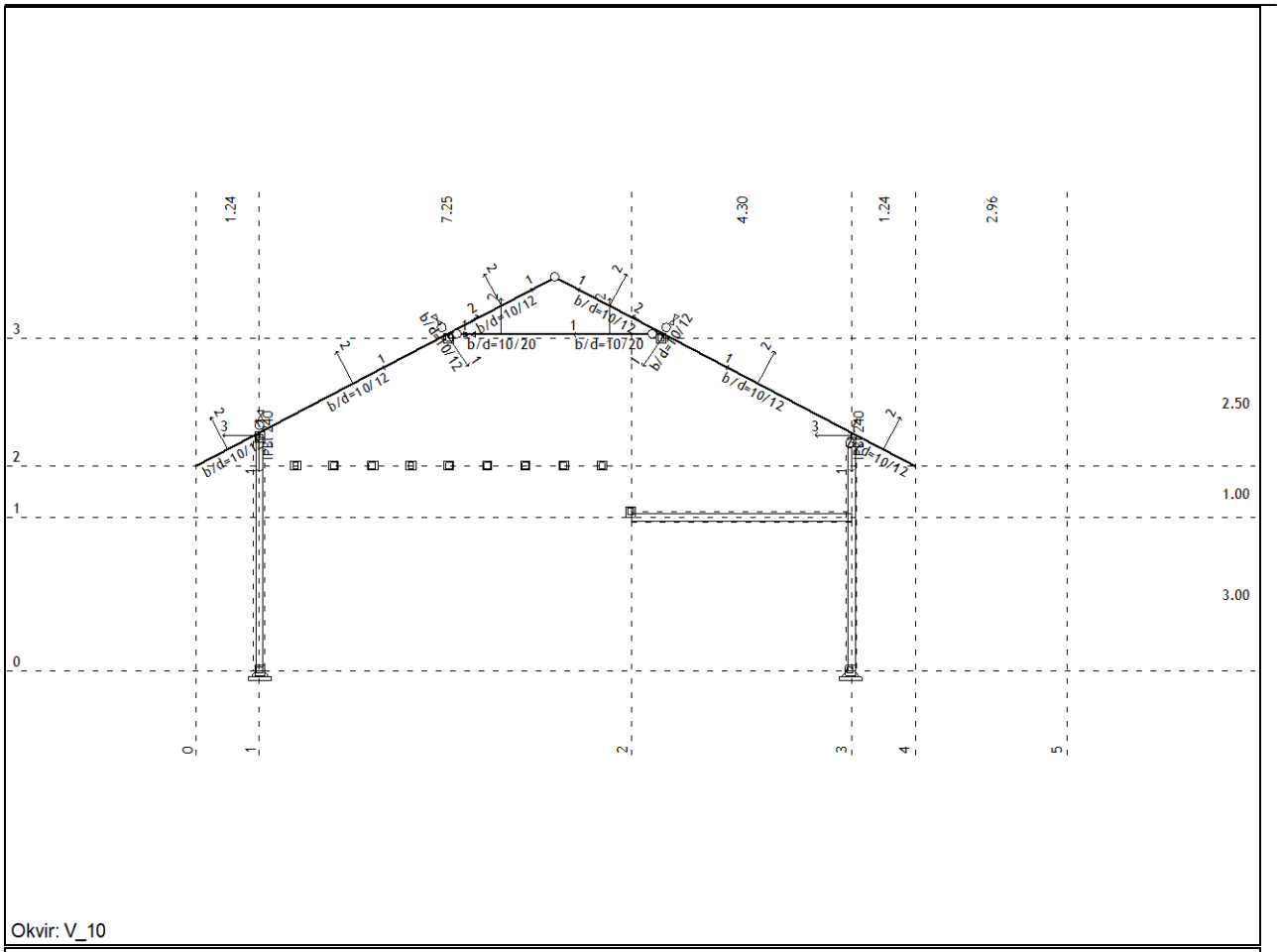
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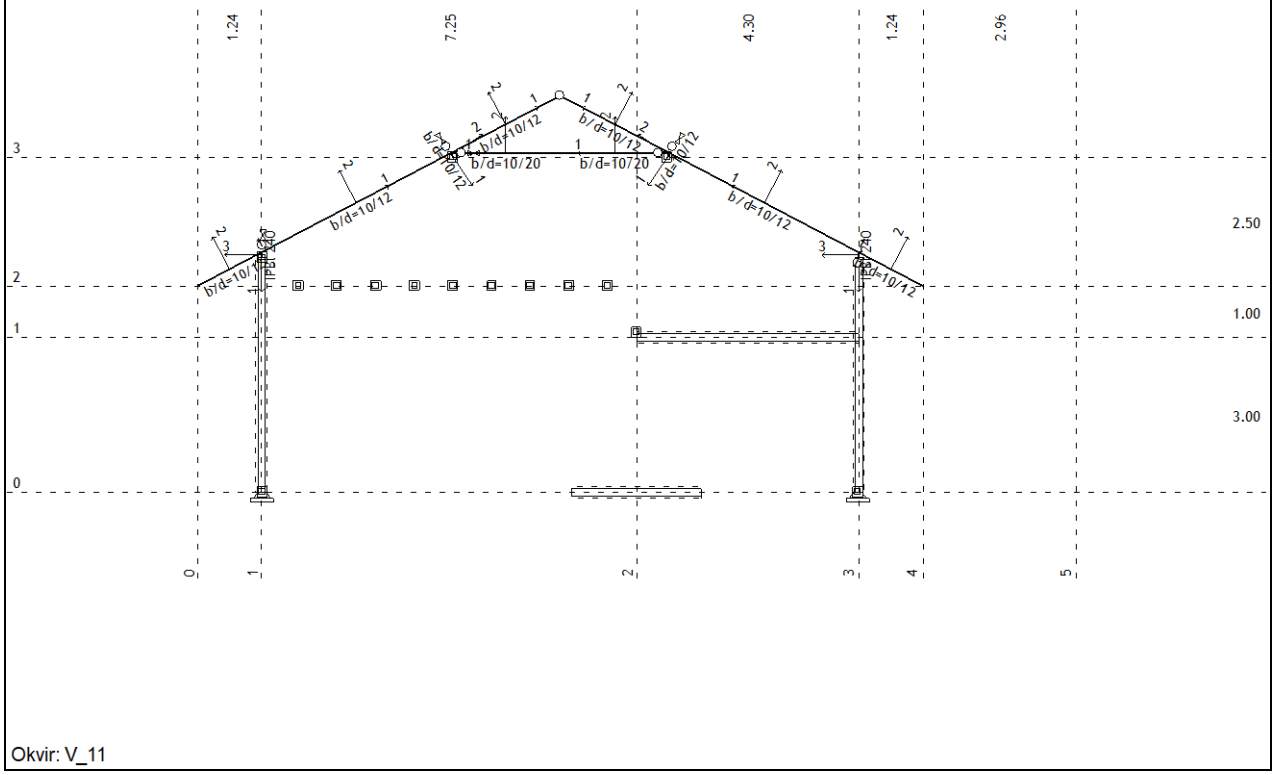
Okvir: V_8



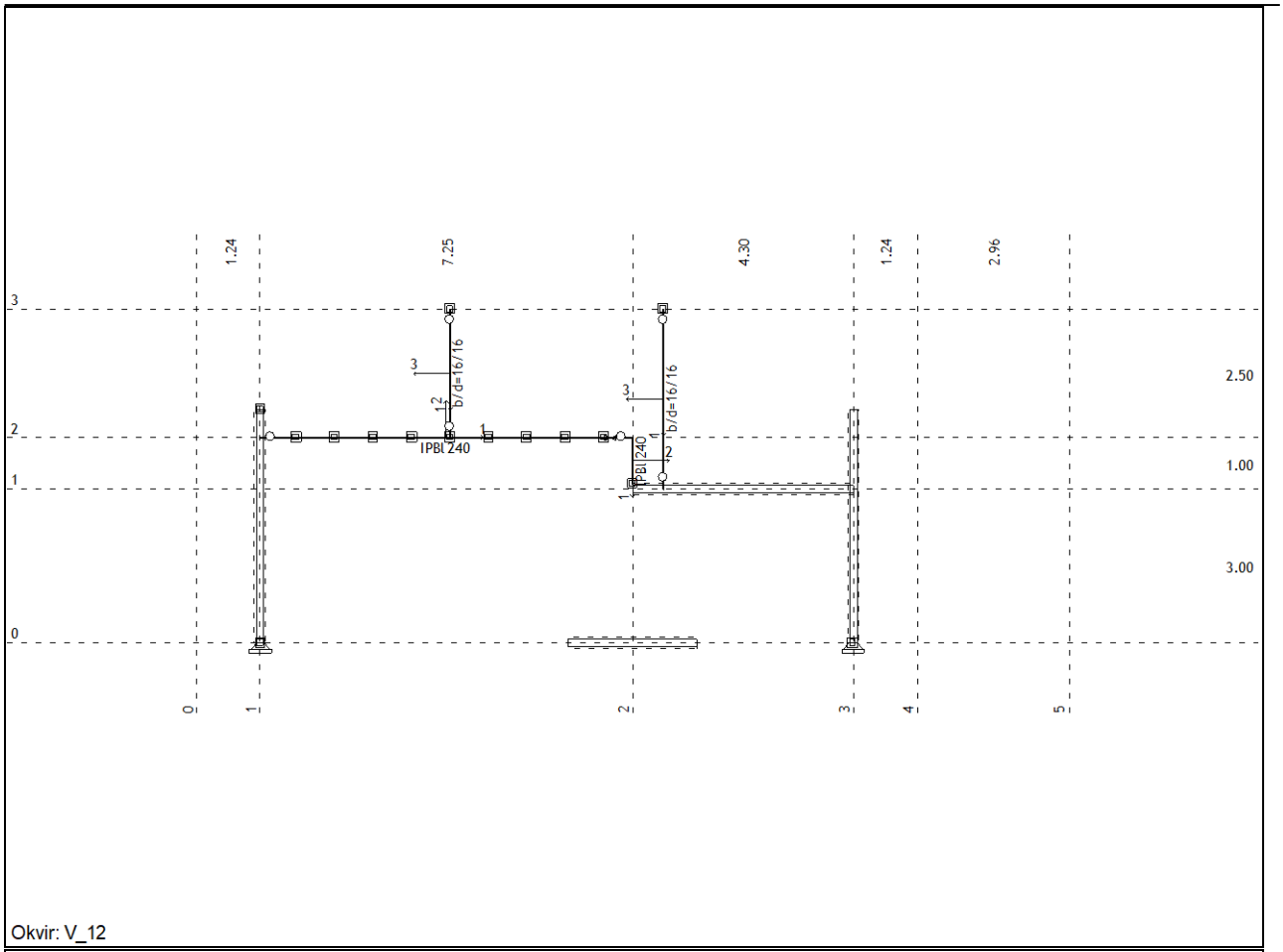
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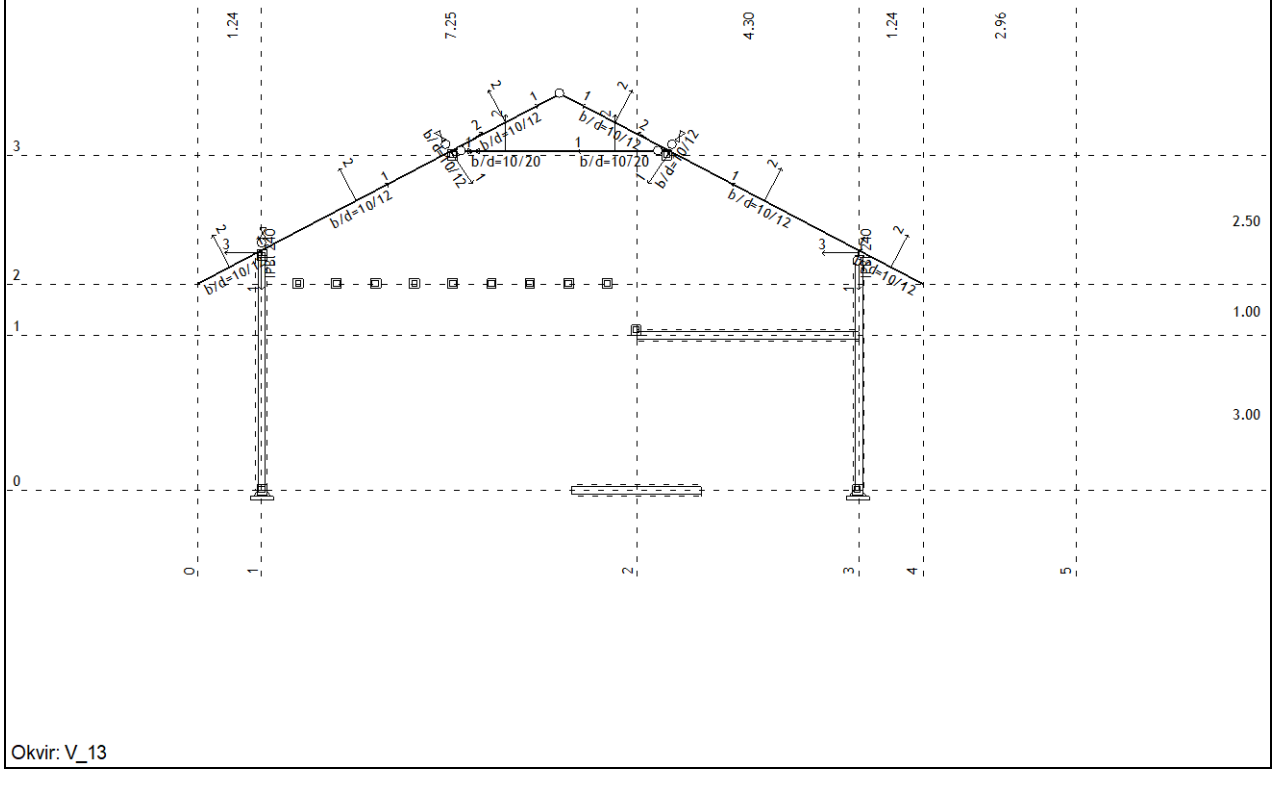
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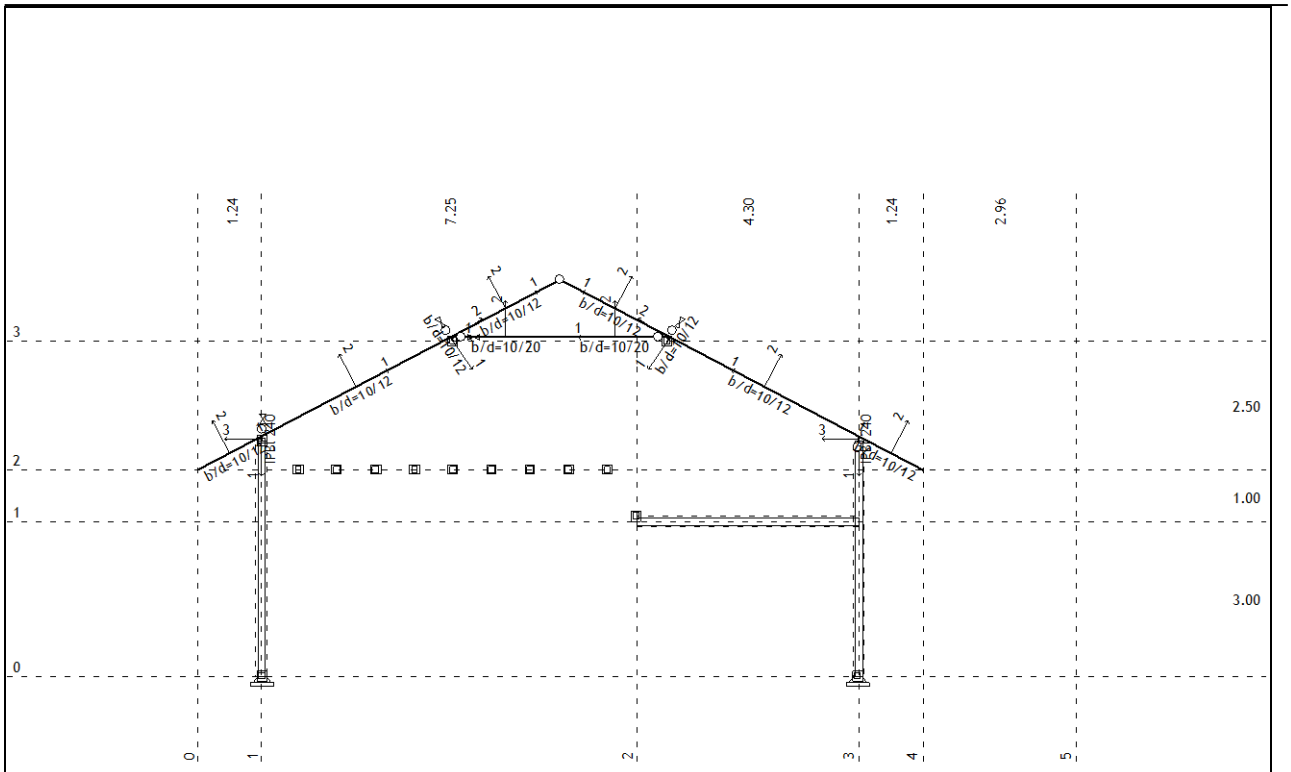
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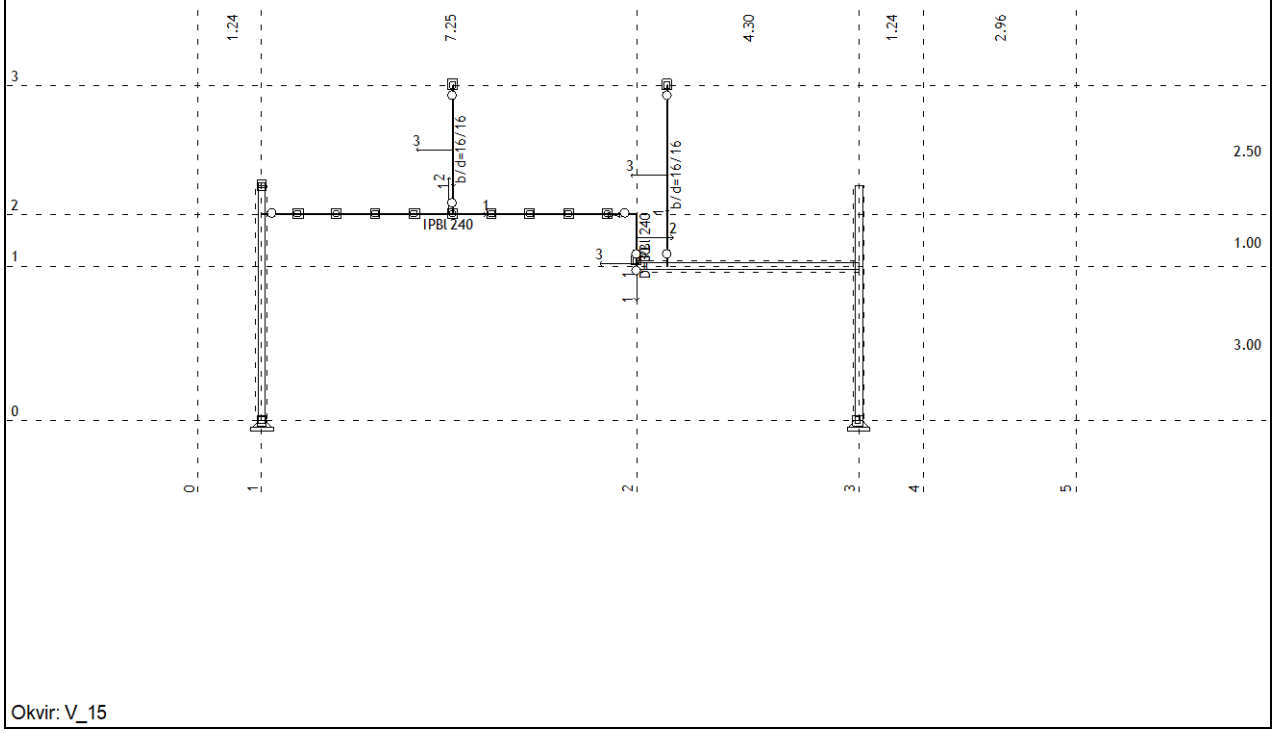
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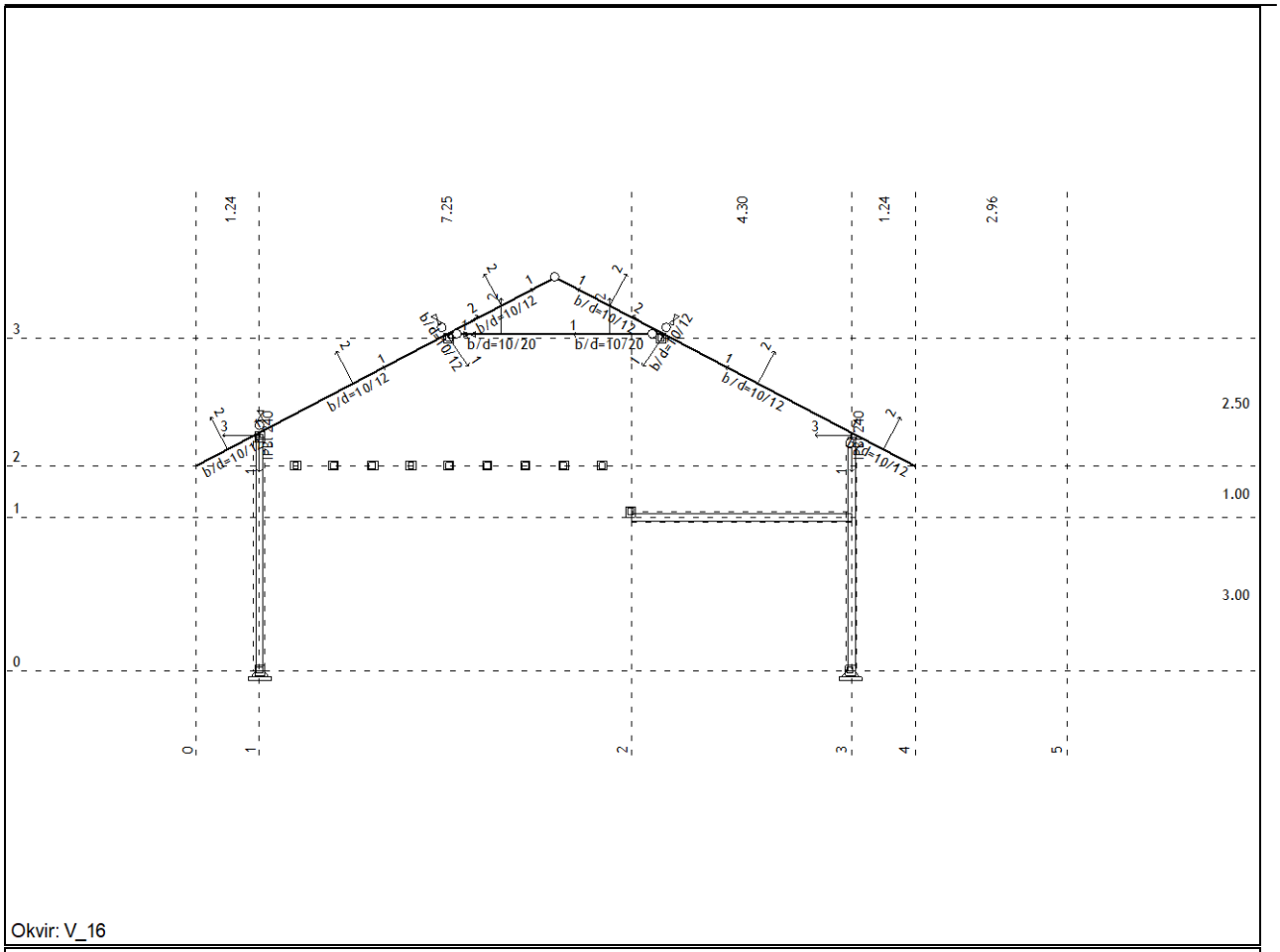
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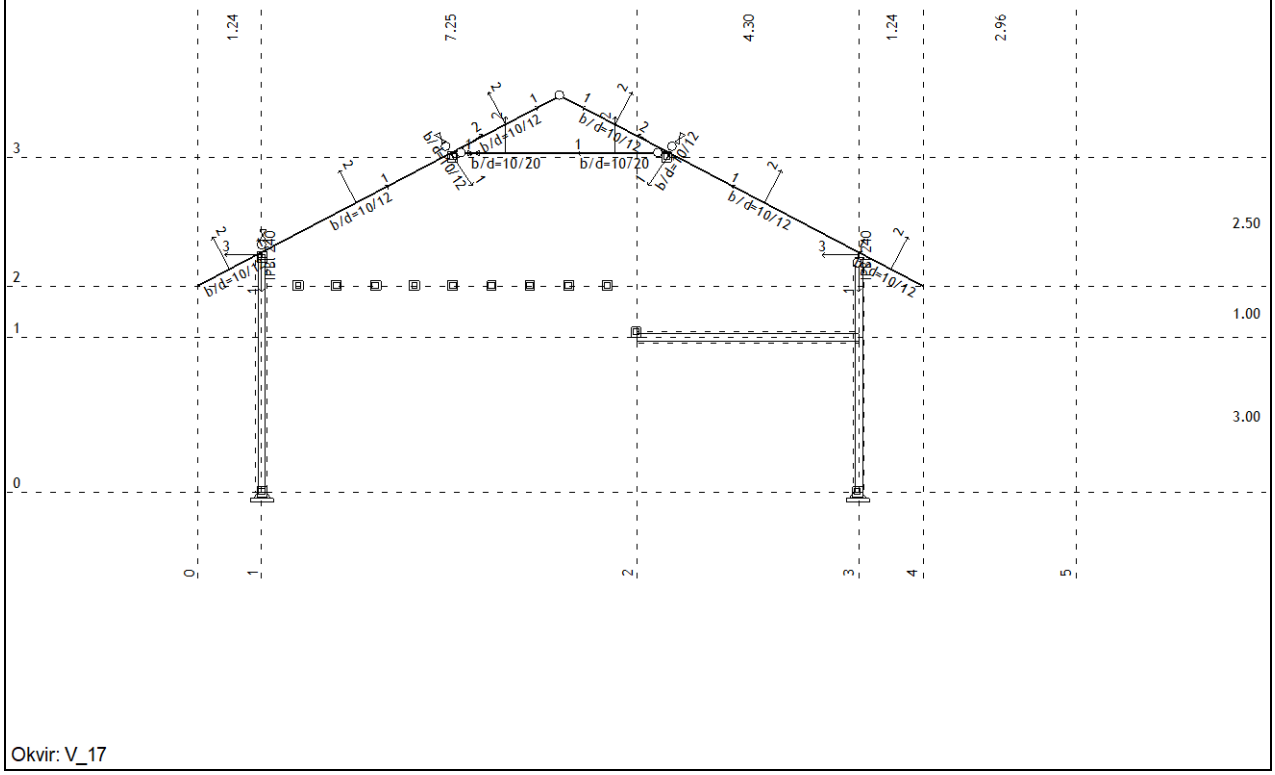
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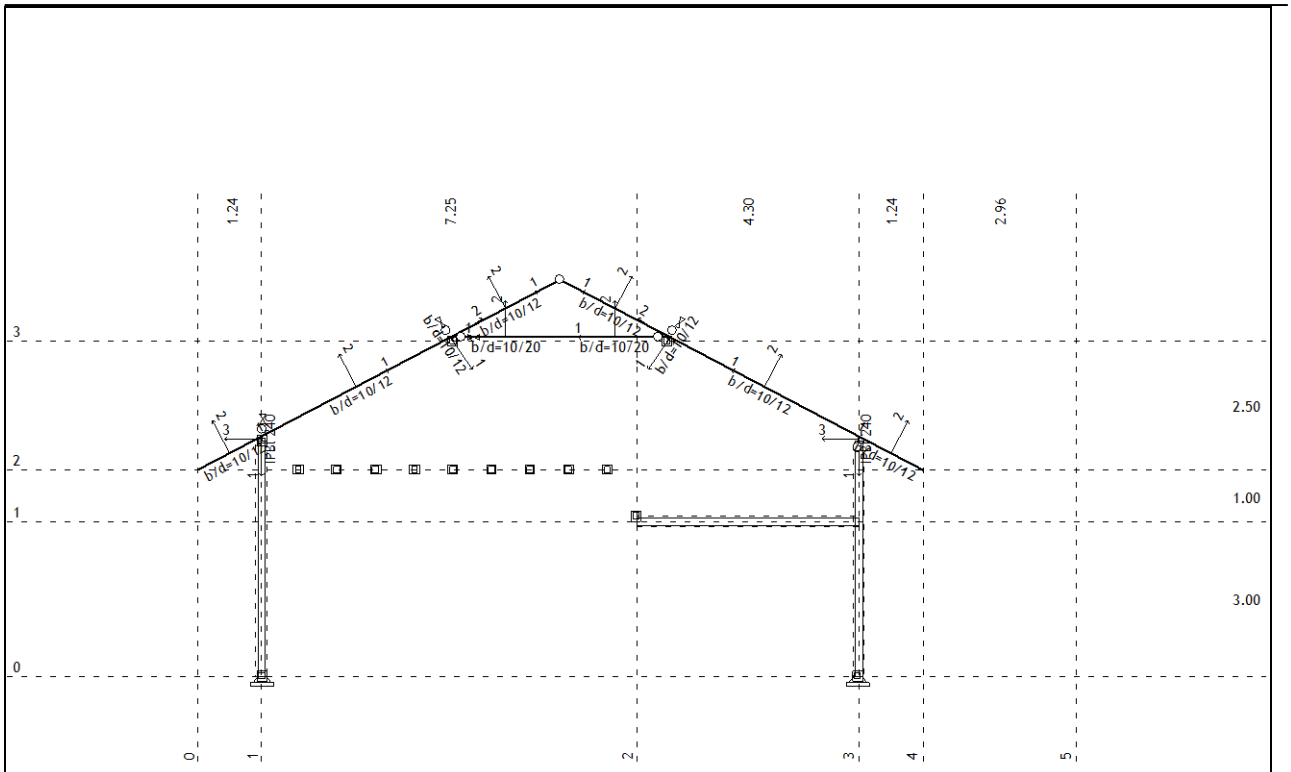
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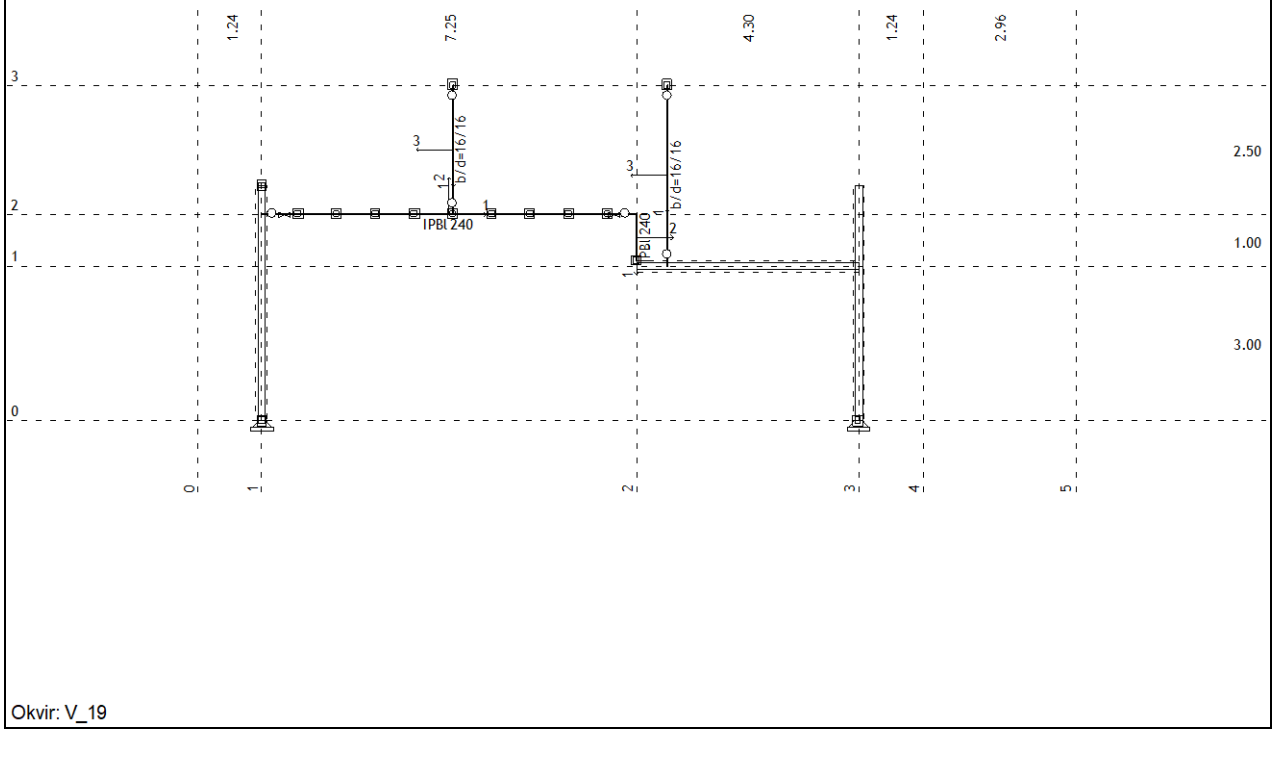
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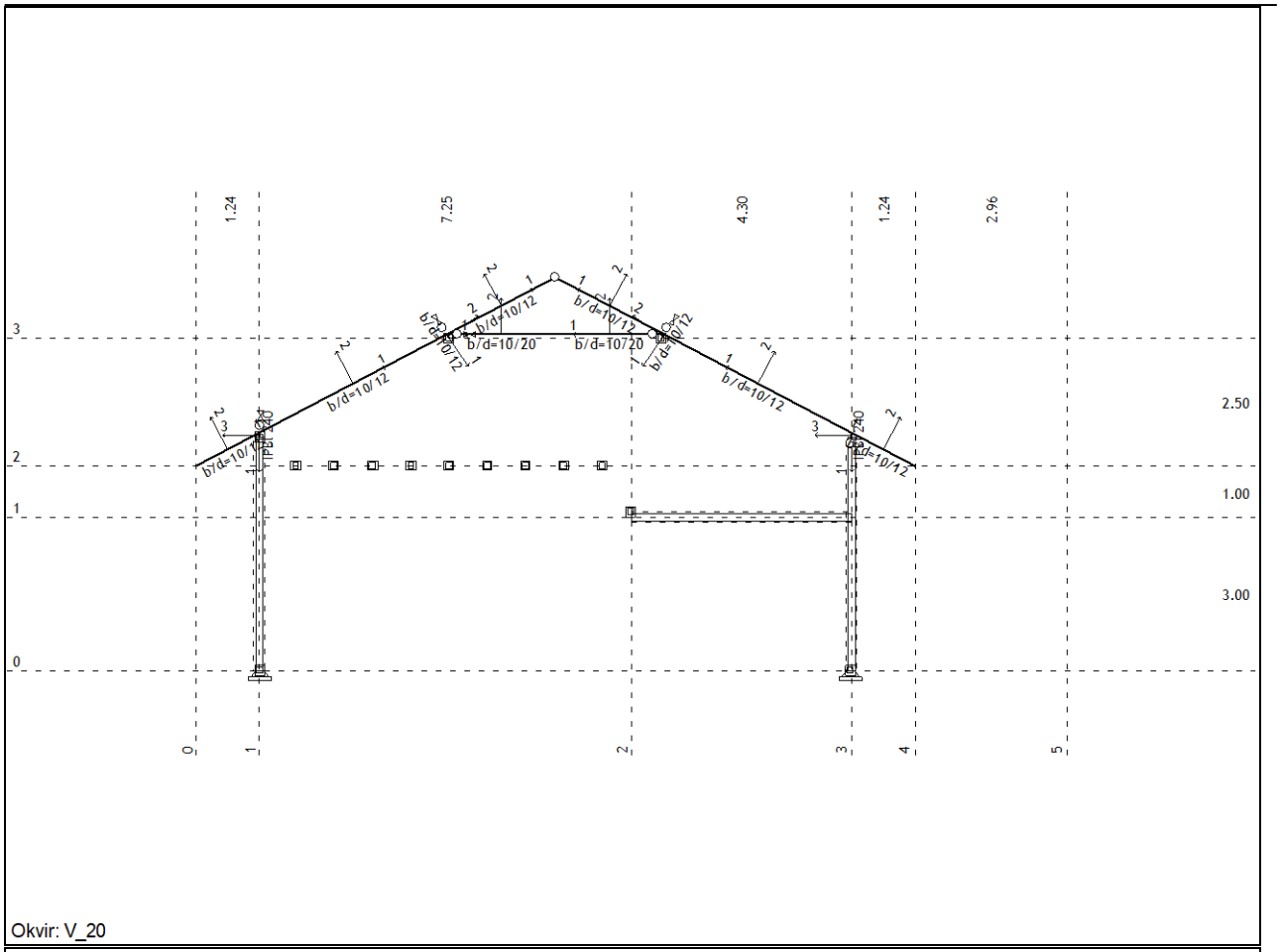
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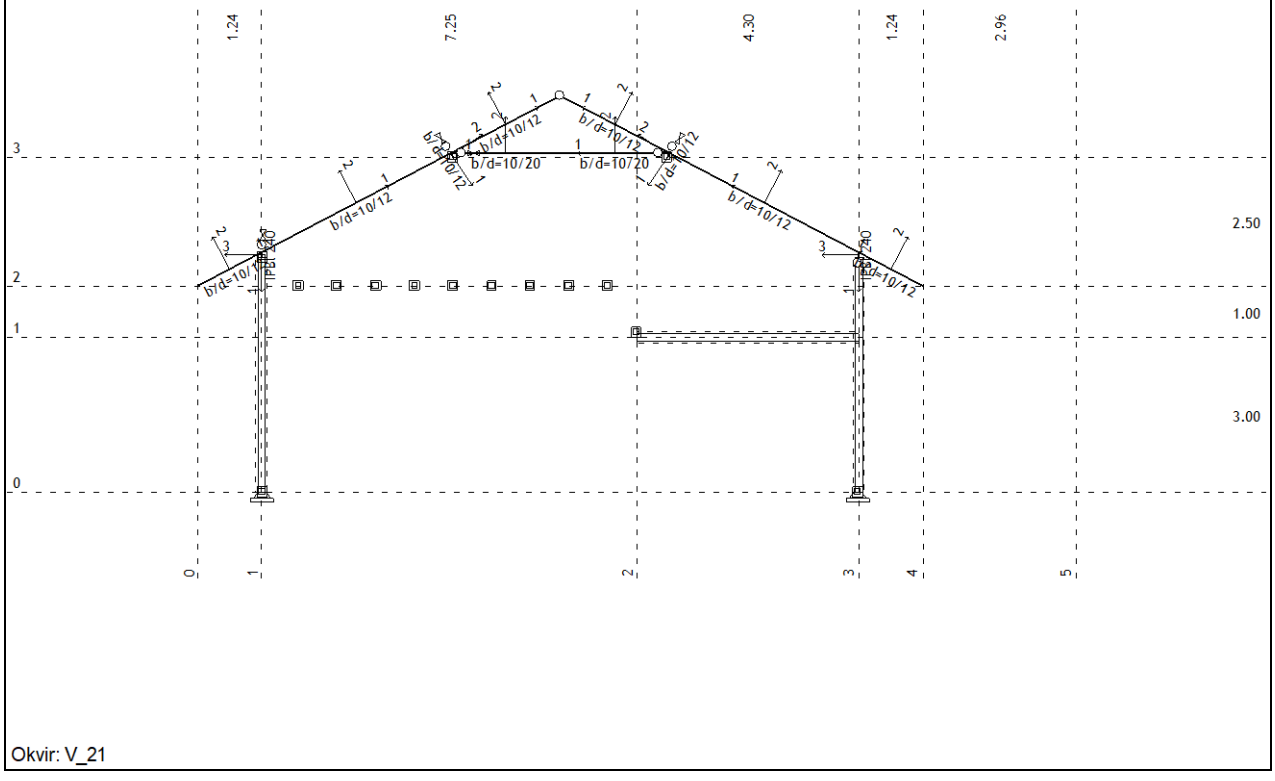
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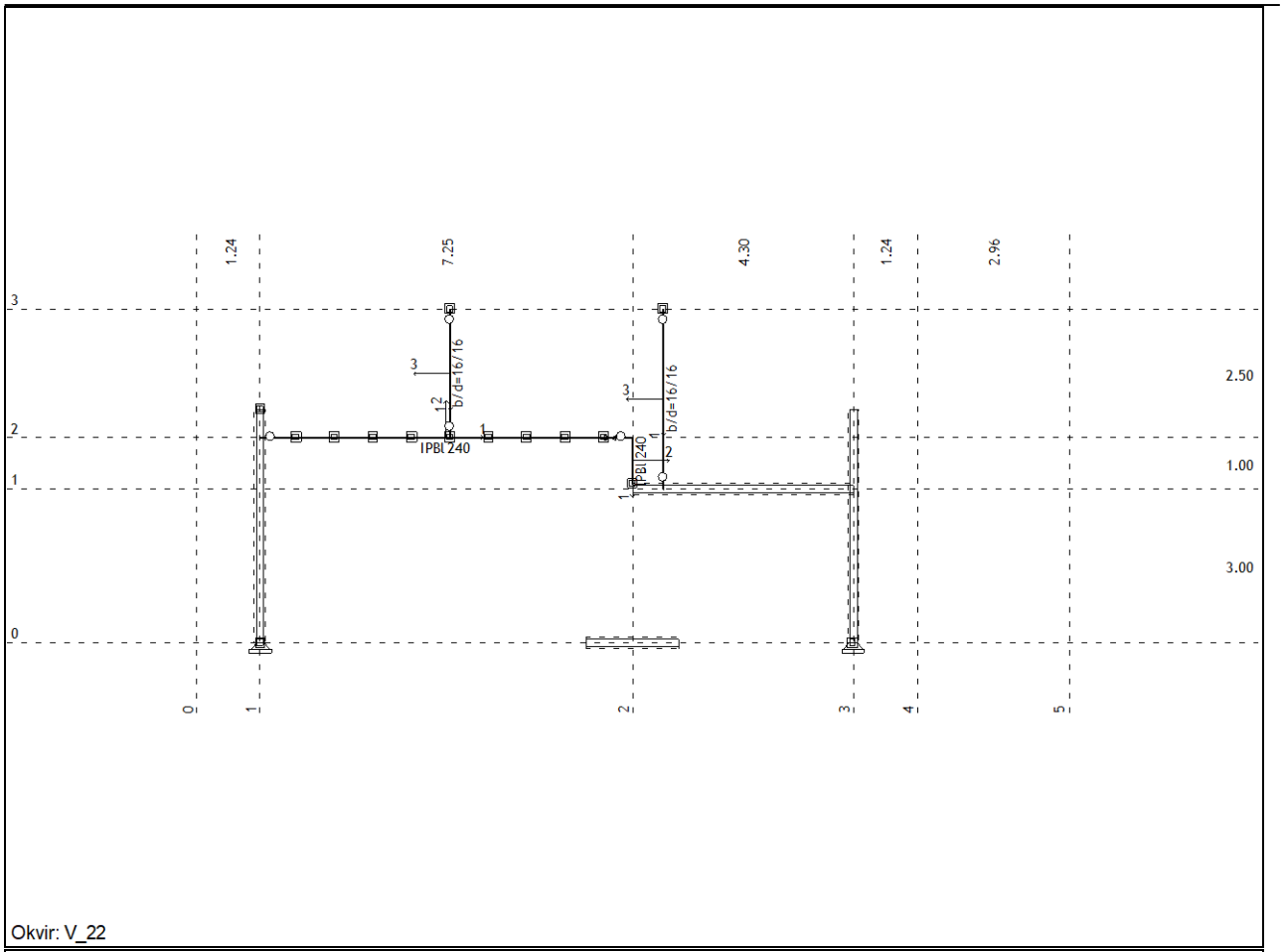
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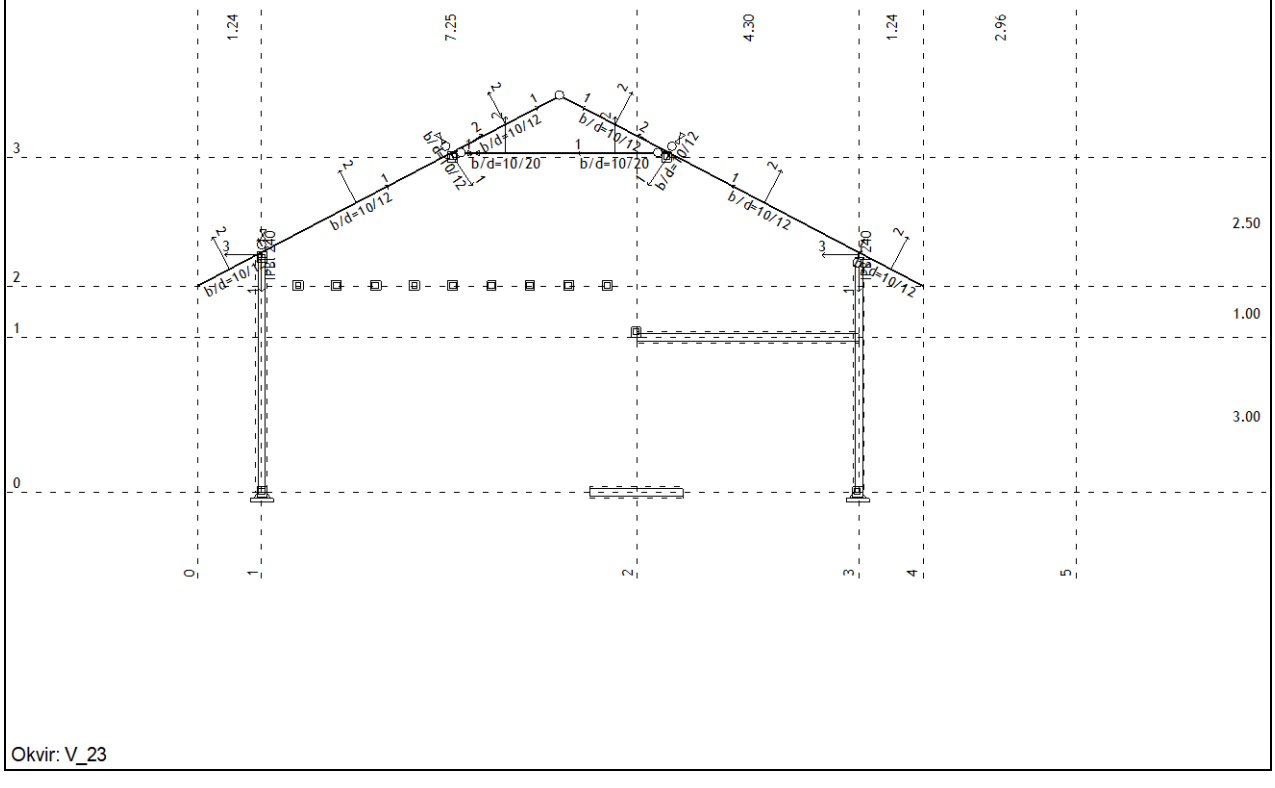
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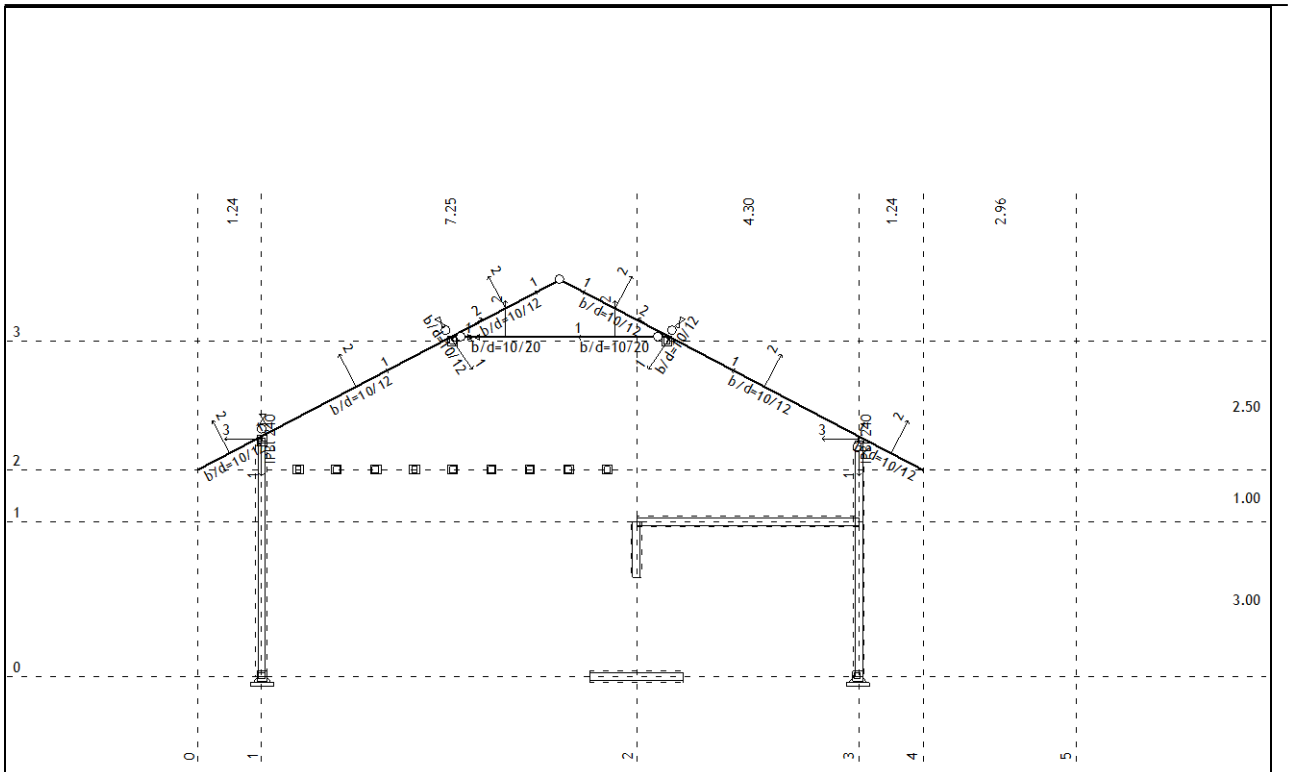
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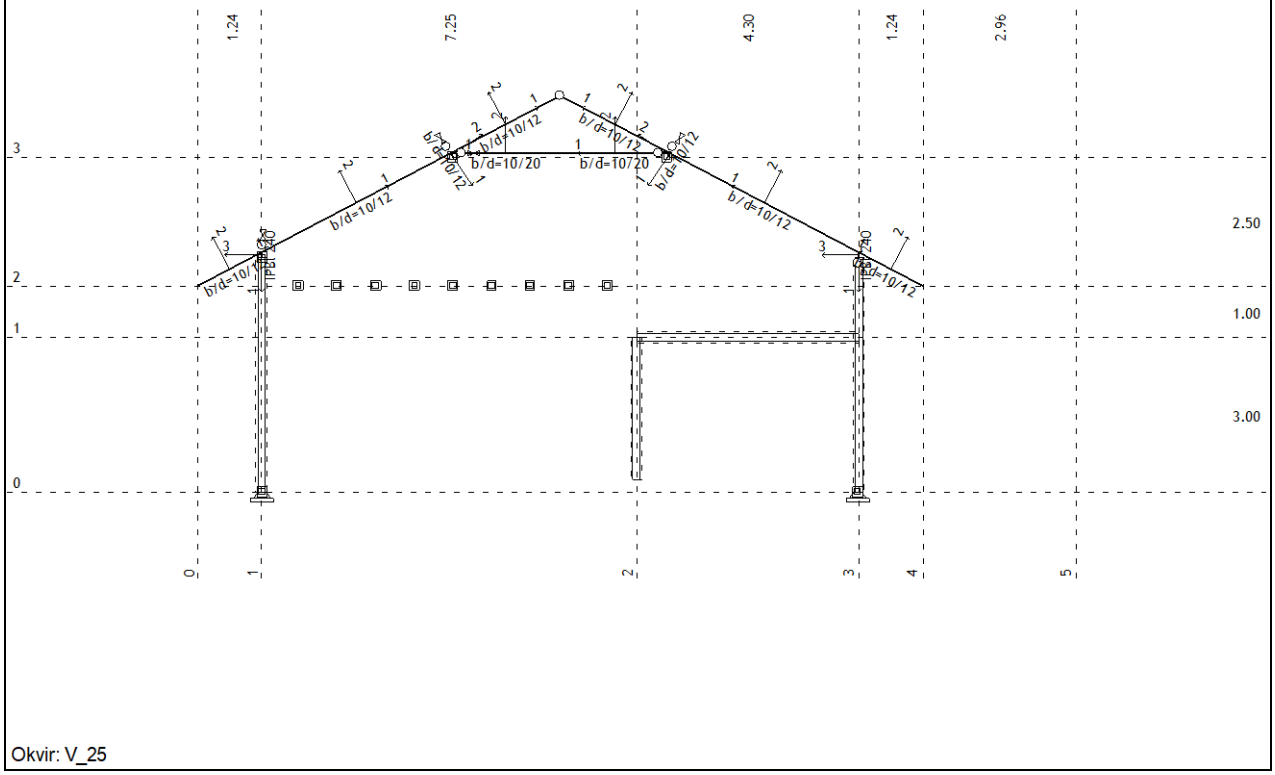
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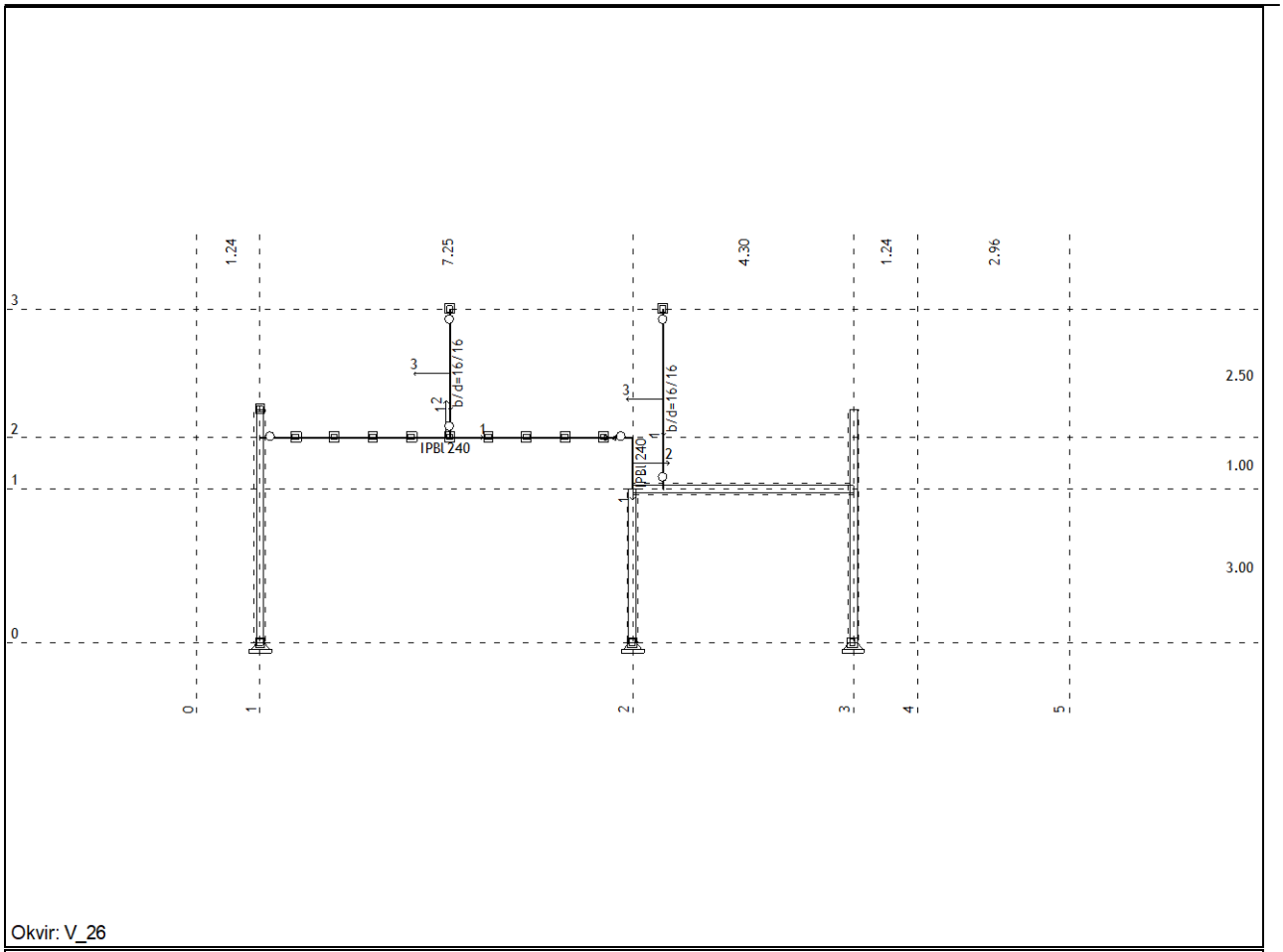
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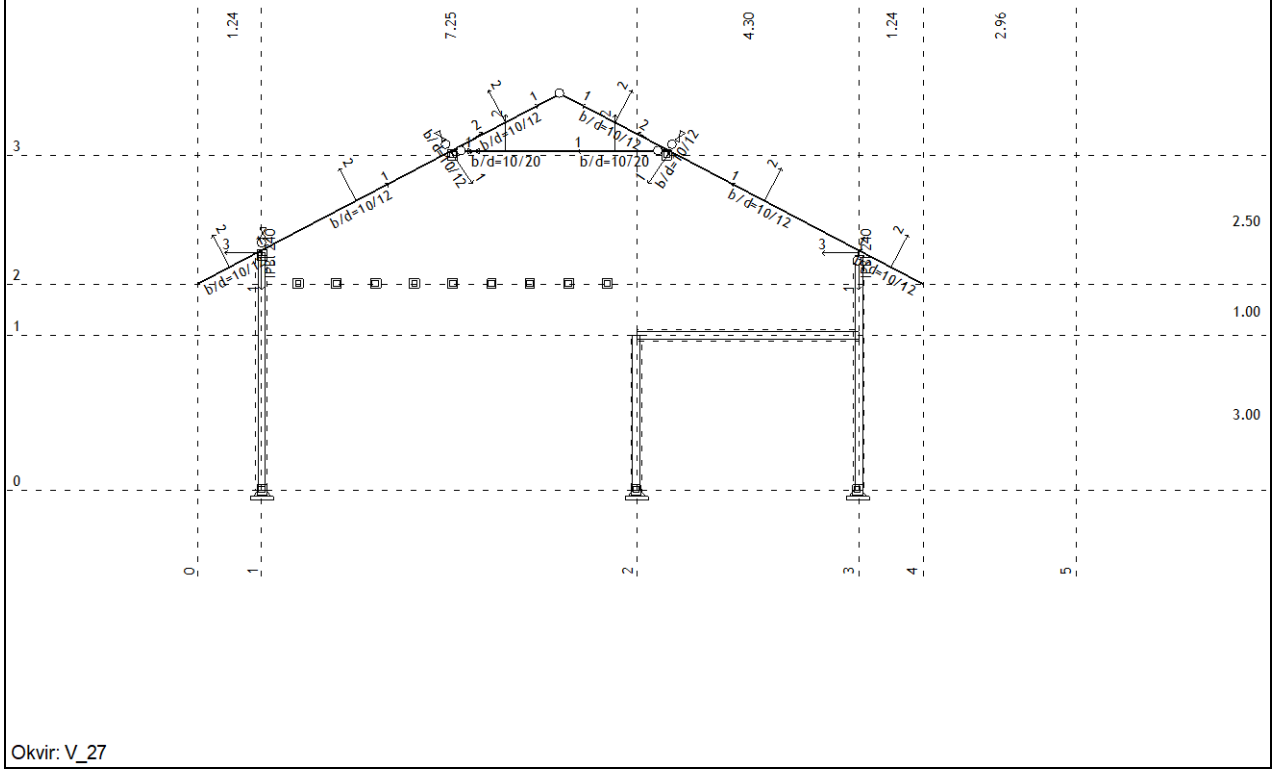
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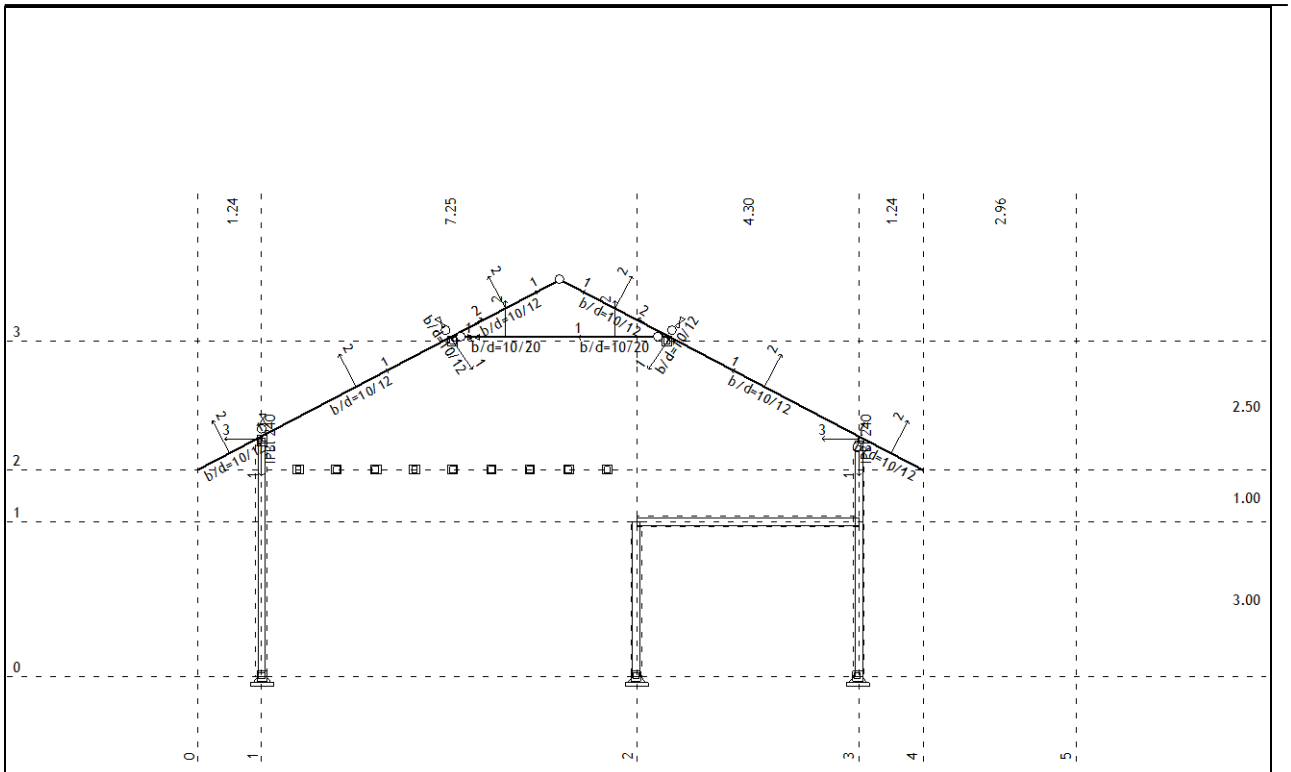
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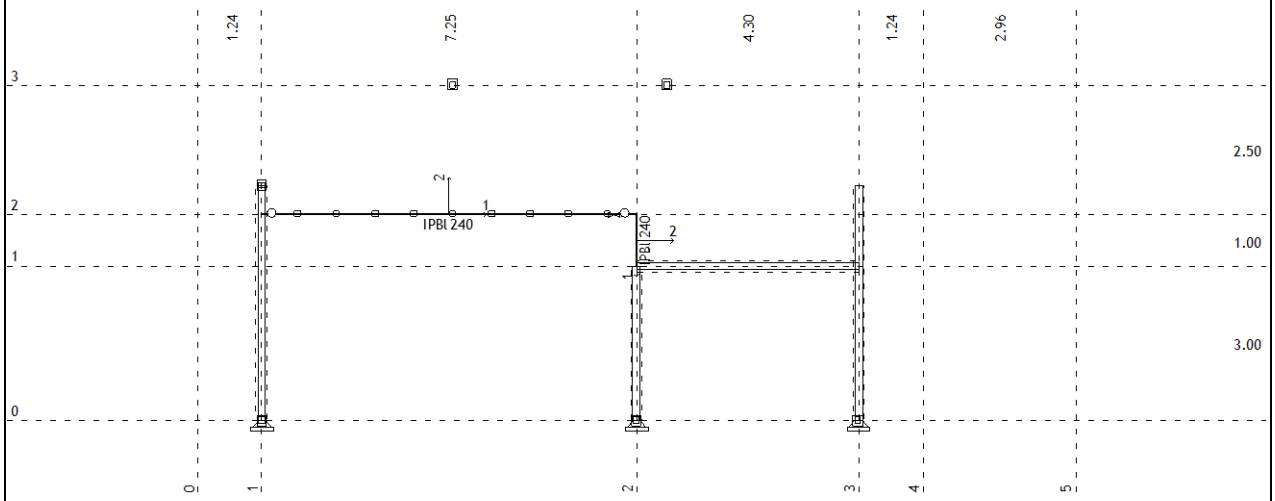
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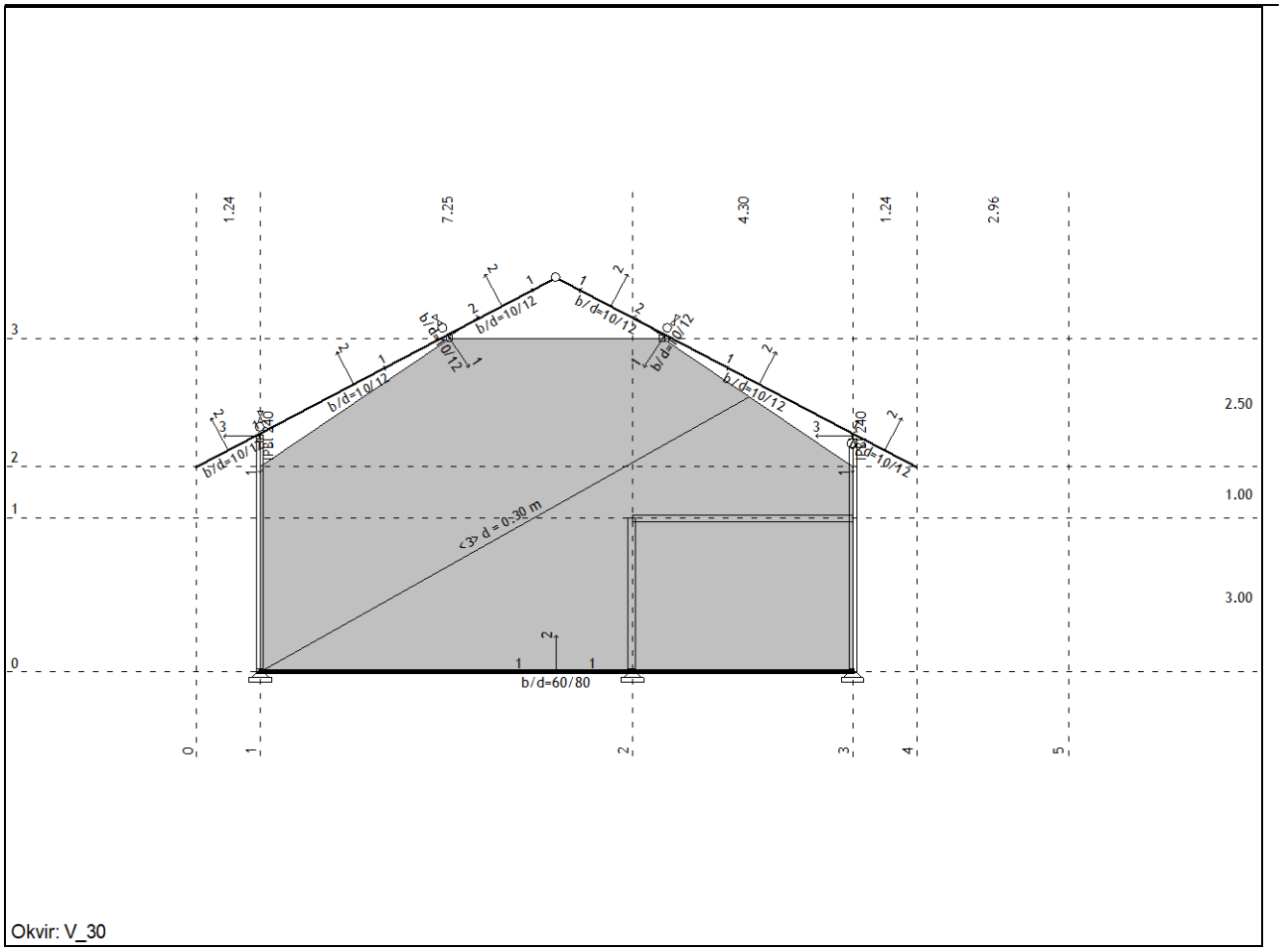
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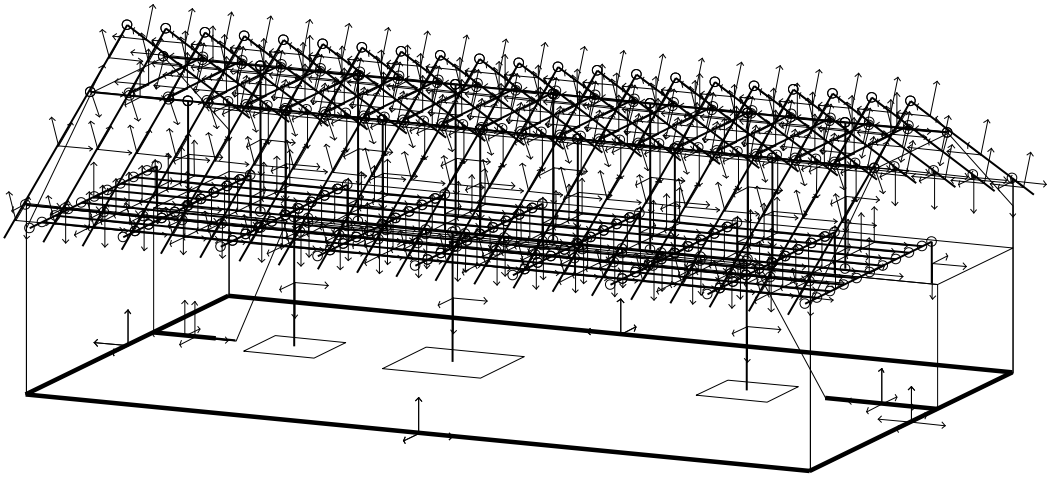
Okvir: V_28



Okvir: V_29



Okvir: V_30

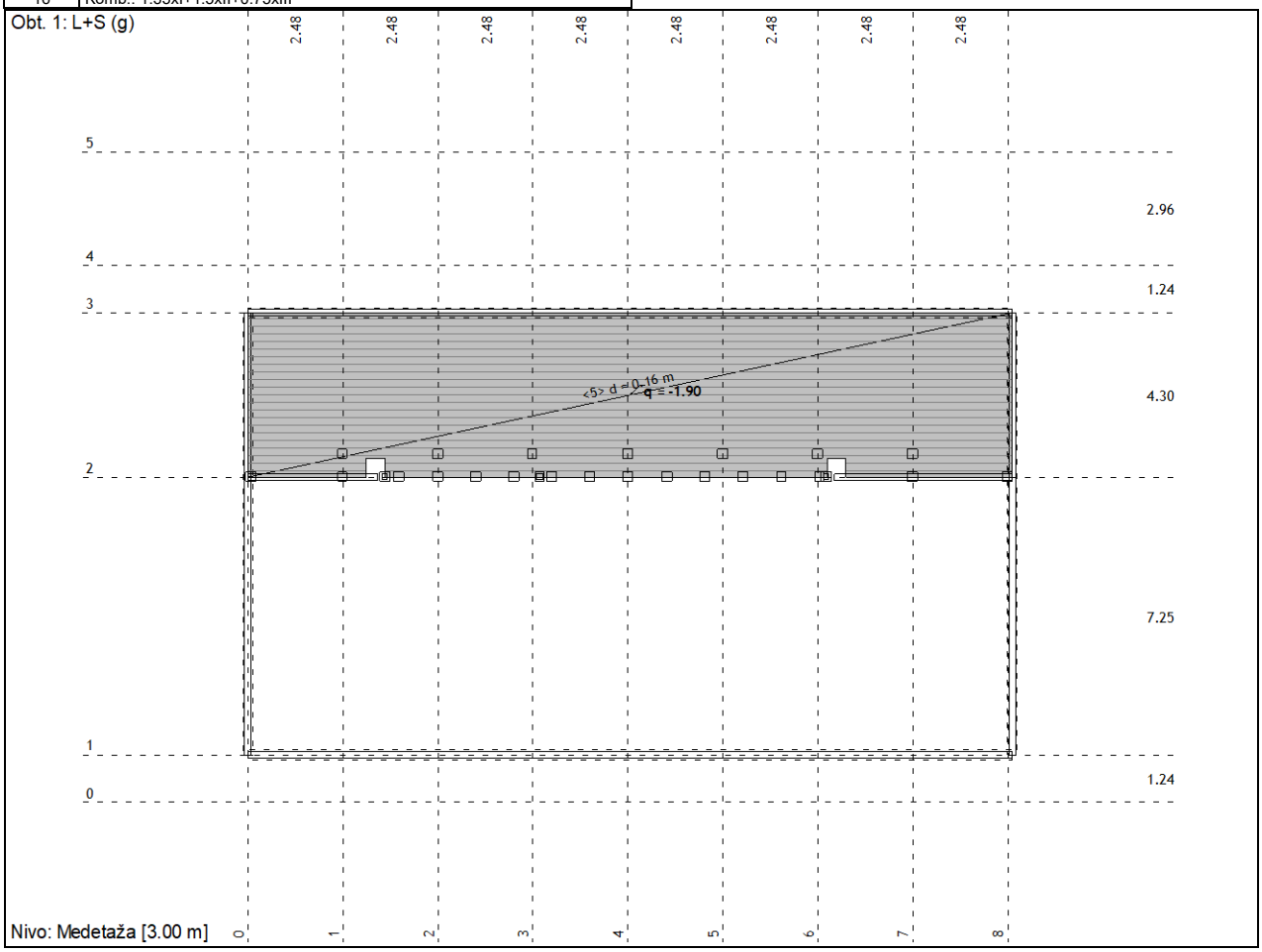


Izometrija

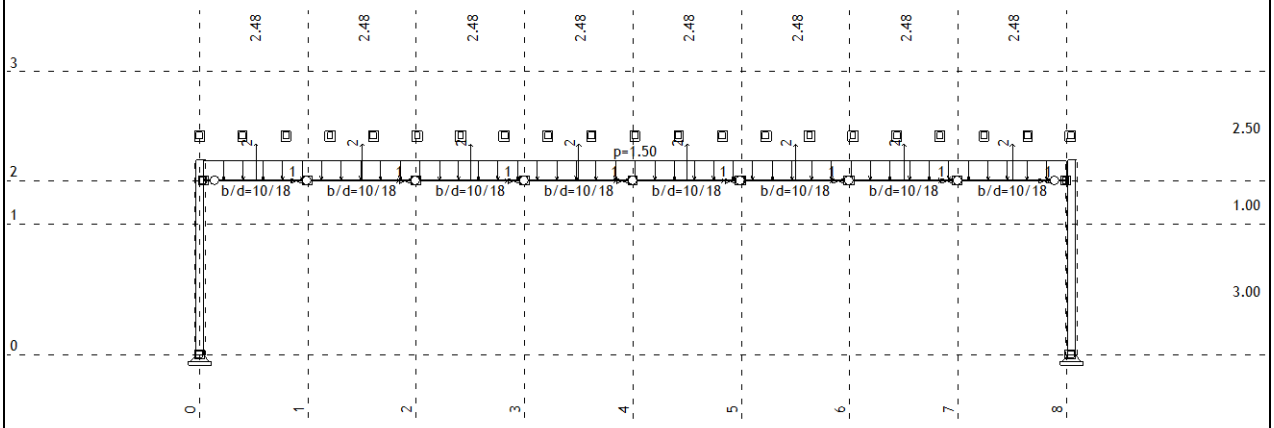
Vhodni podatki - Obtežba

Lista obtežnih primerov

LC	Naziv
1	L+S (g)
2	K
3	S
4	V
5	Komb.: 1.35xI+1.05xII+1.5xIII+0.9xIV
6	Komb.: 1.35xI+1.05xII+0.75xIII+1.5xIV
7	Komb.: 1.35xI+1.5xII+0.75xIII+0.9xIV
8	Komb.: I+1.05xII+1.5xIII+0.9xIV
9	Komb.: I+1.05xII+0.75xIII+1.5xIV
10	Komb.: I+1.5xII+0.75xIII+0.9xIV
11	Komb.: 1.35xI+1.05xII+1.5xIV
12	Komb.: 1.35xI+1.05xII+1.5xIII
13	Komb.: 1.35xI+1.5xIII+0.9xIV
14	Komb.: 1.35xI+1.5xII+0.9xIV
15	Komb.: 1.35xI+0.75xIII+1.5xIV
16	Komb.: 1.35xI+1.5xII+0.75xIII
17	Komb.: I+1.05xII+1.5xIV
18	Komb.: I+1.05xII+1.5xIII
19	Komb.: I+1.5xIII+0.9xIV
20	Komb.: I+1.5xII+0.9xIV
21	Komb.: I+0.75xIII+1.5xIV
22	Komb.: I+1.5xII+0.75xIII
23	Komb.: 1.35xI+1.5xIV
24	Komb.: 1.35xI+1.5xIII
25	Komb.: 1.35xI+1.5xII
26	Komb.: I+1.5xIV
27	Komb.: I+1.5xIII
28	Komb.: I+1.5xII
29	Komb.: 1.35xI
30	Komb.: I

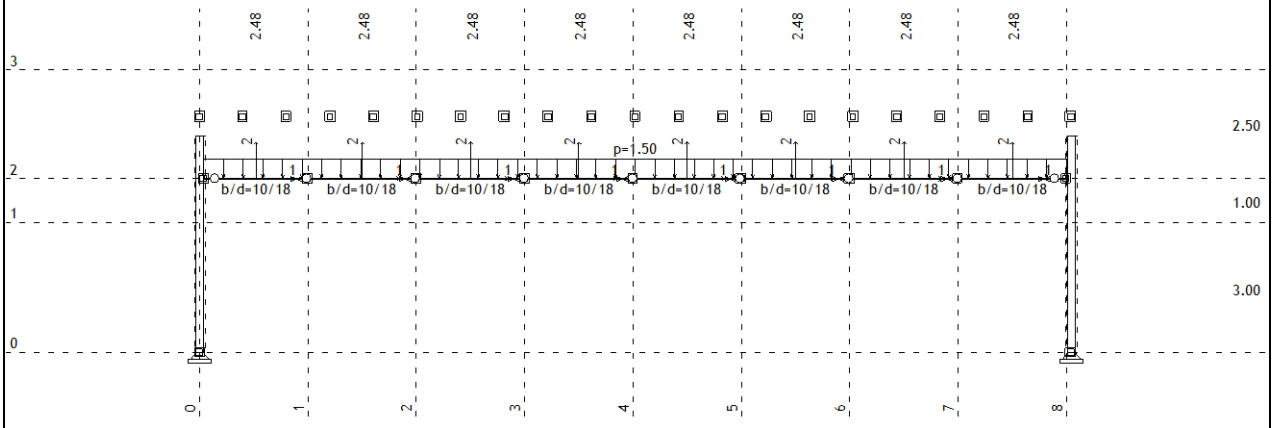


Obt. 1: L+S (g)



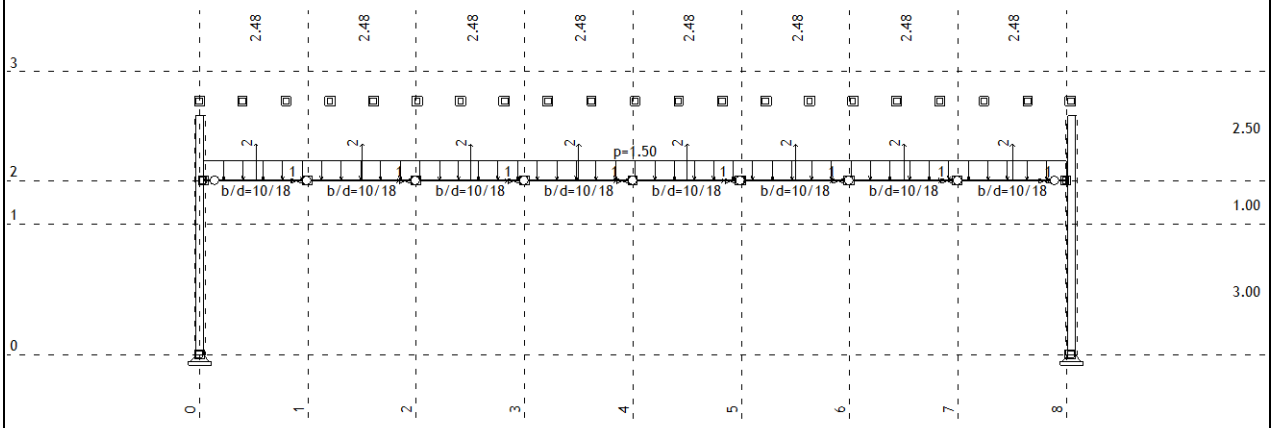
Okvir: H_2

Obt. 1: L+S (g)



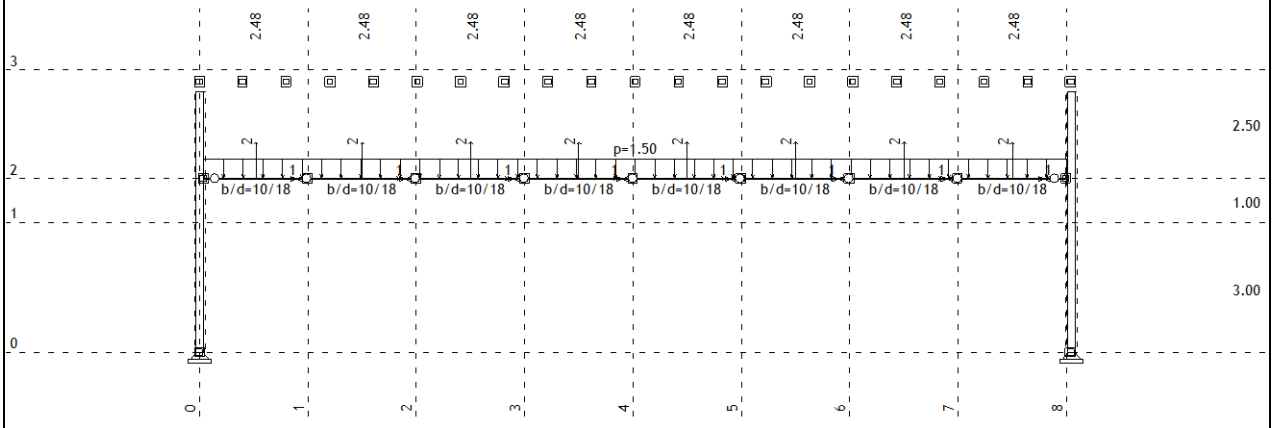
Okvir: H_3

Obt. 1: L+S (g)



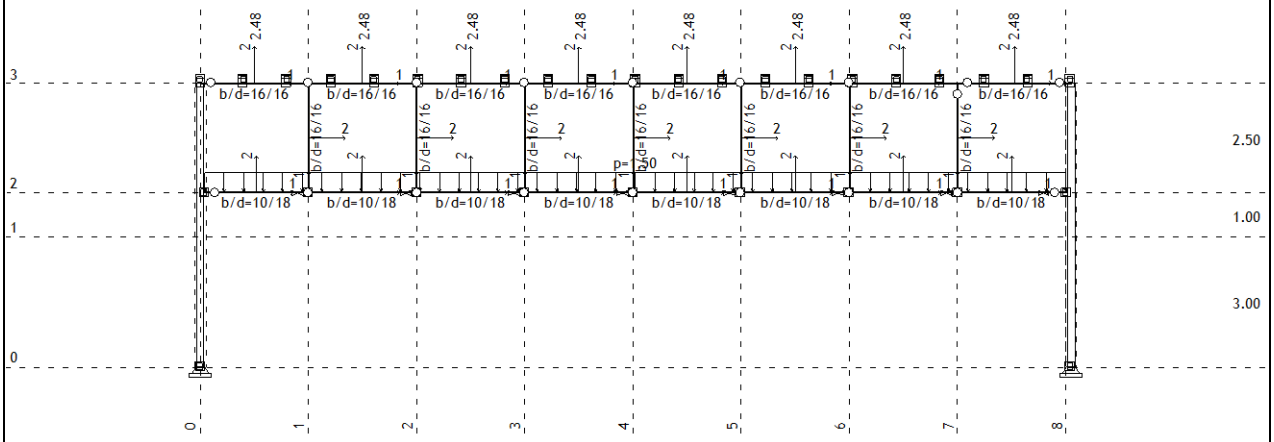
Okvir: H_4

Obt. 1: L+S (g)



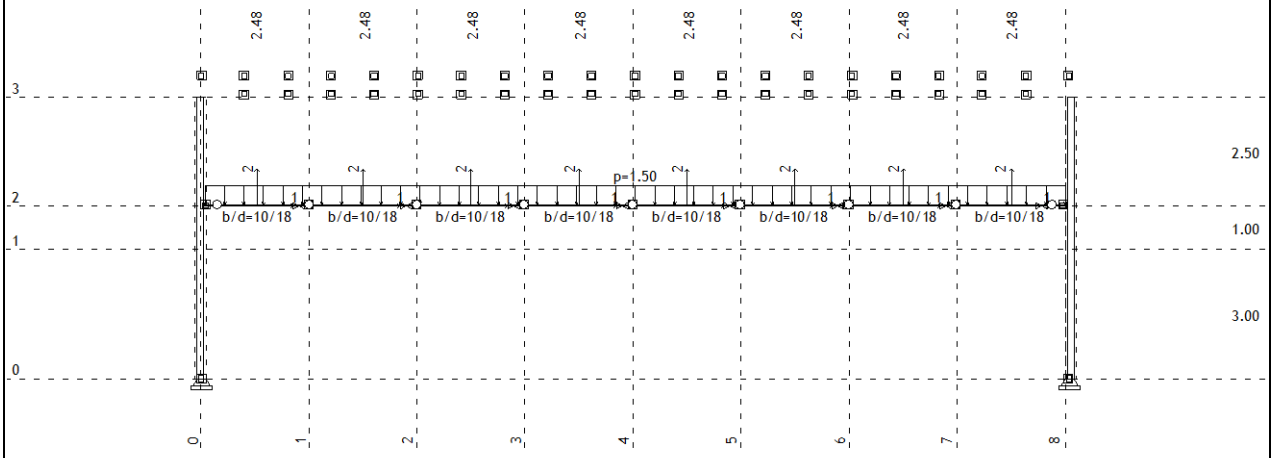
Okvir: H_5

Obt. 1: L+S (g)



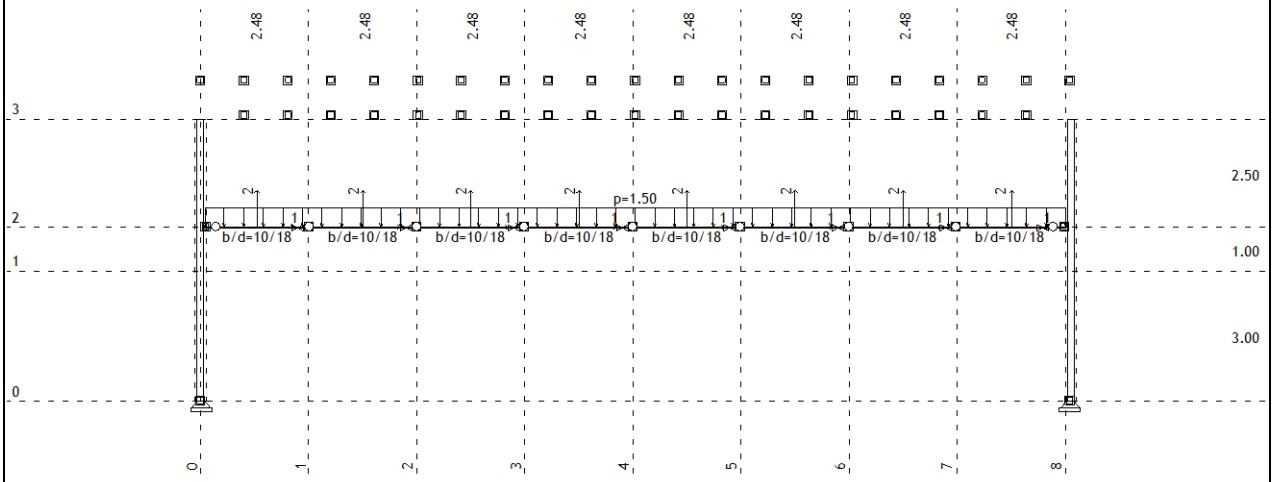
Okvir: H_6

Obt. 1: L+S (g)



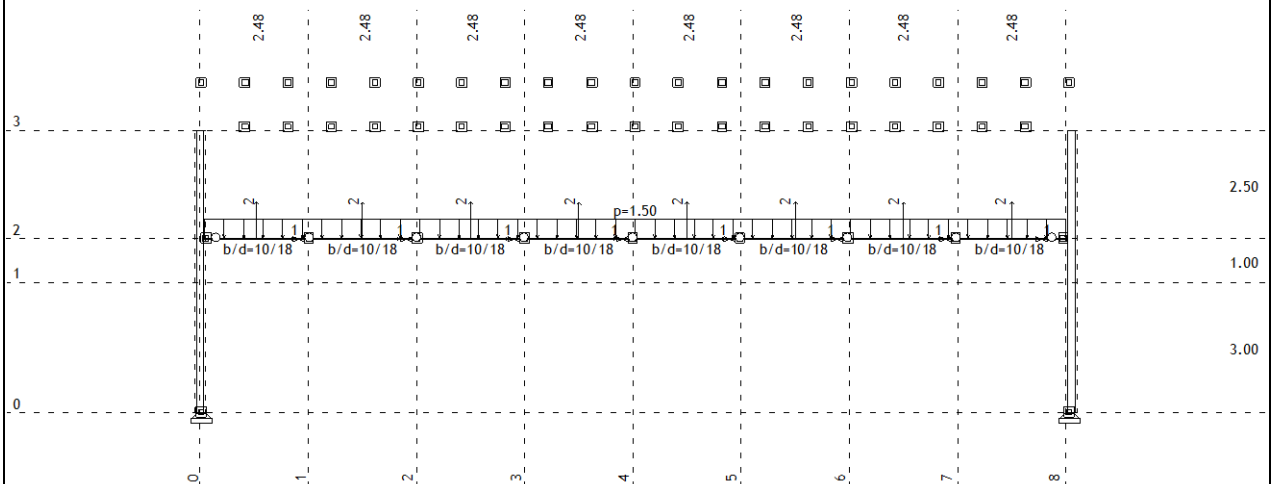
Okvir: H_7

Obt. 1: L+S (g)



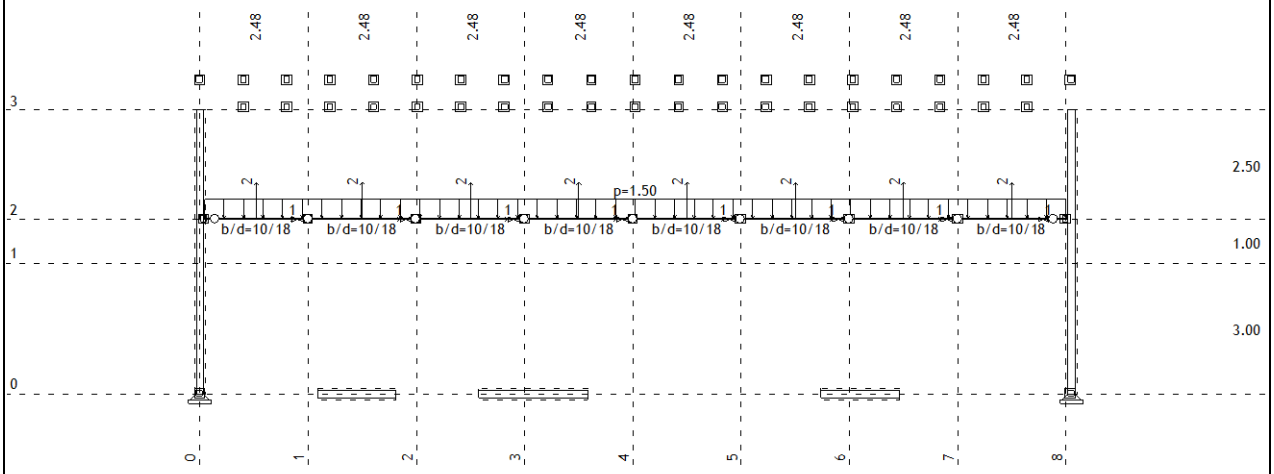
Okvir: H_8

Obt. 1: L+S (g)



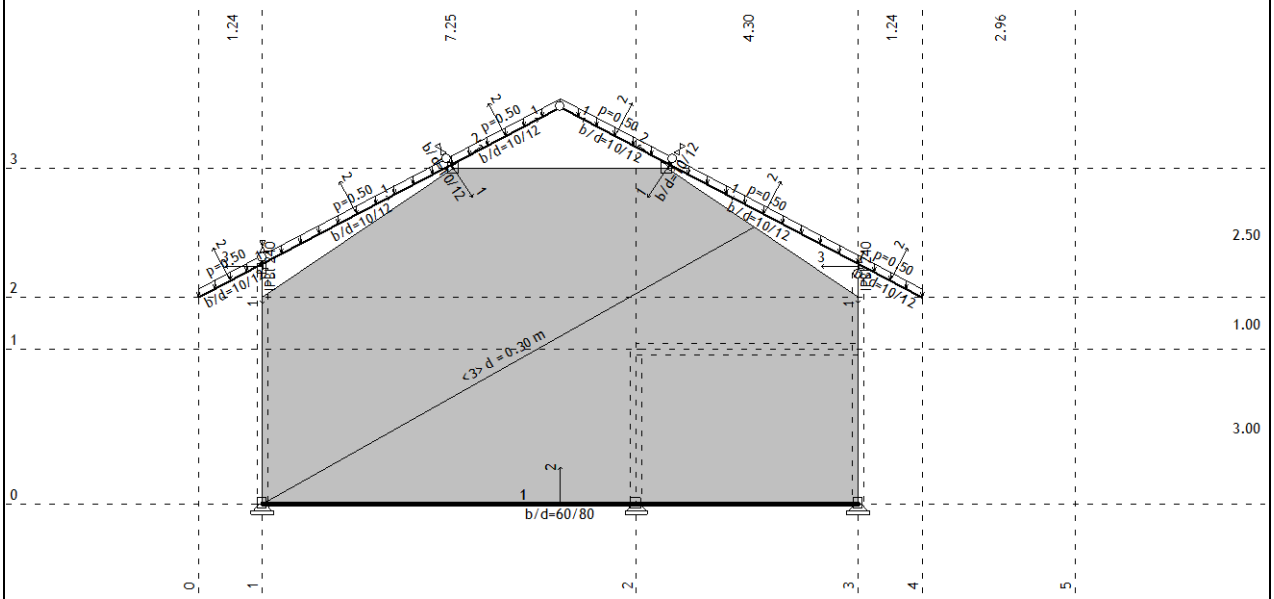
Okvir: H_9

Obt. 1: L+S (g)



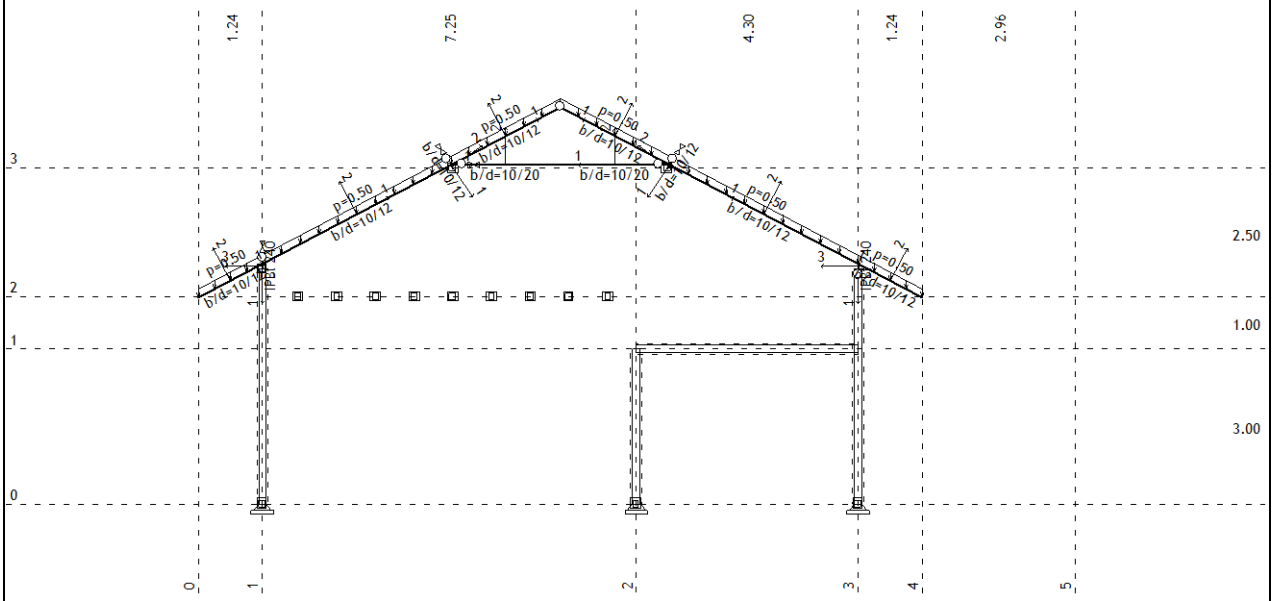
Okvir: H_10

Obt. 1: L+S (g)



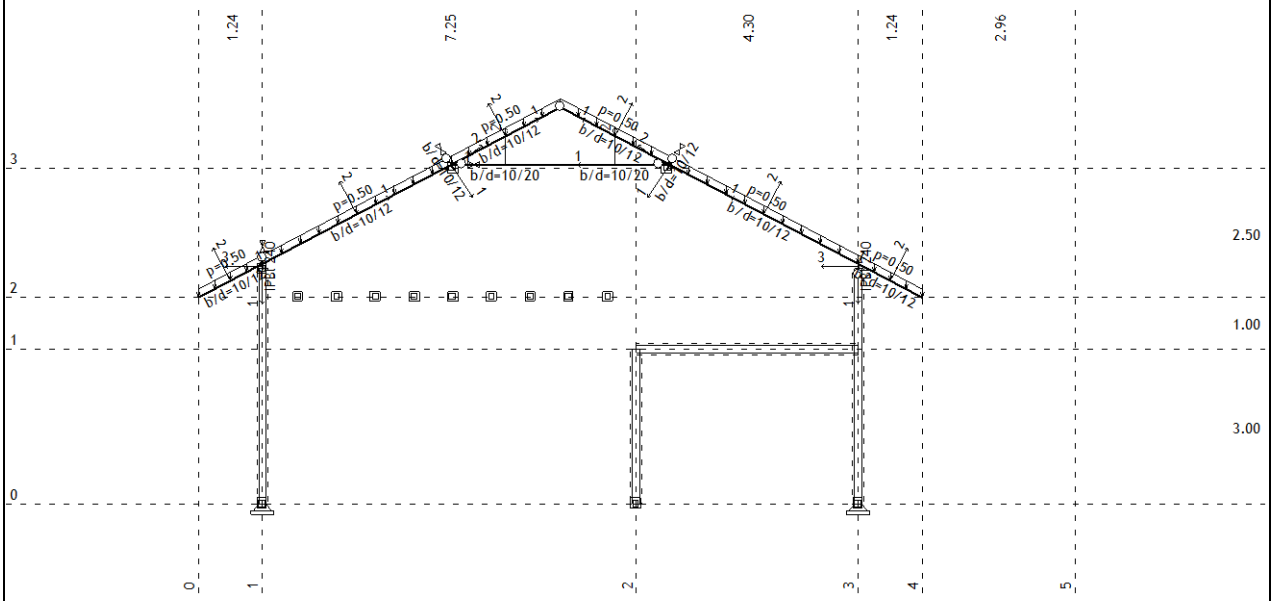
Okvir: V_1

Obt. 1: L+S (g)



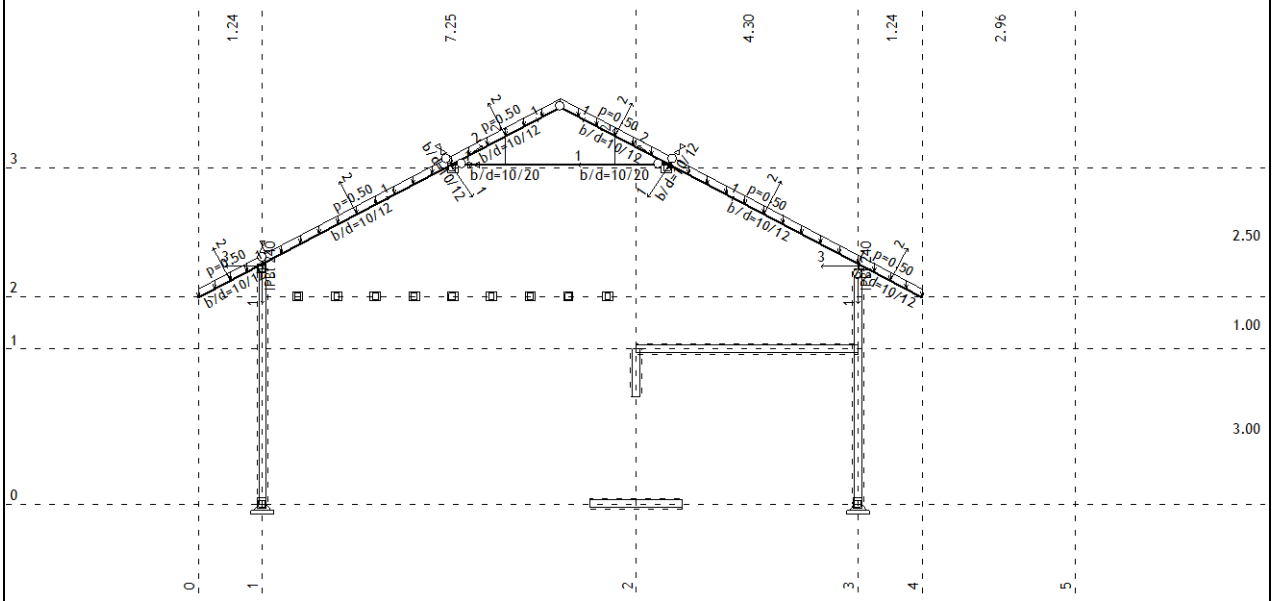
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Obt. 1: L+S (g)



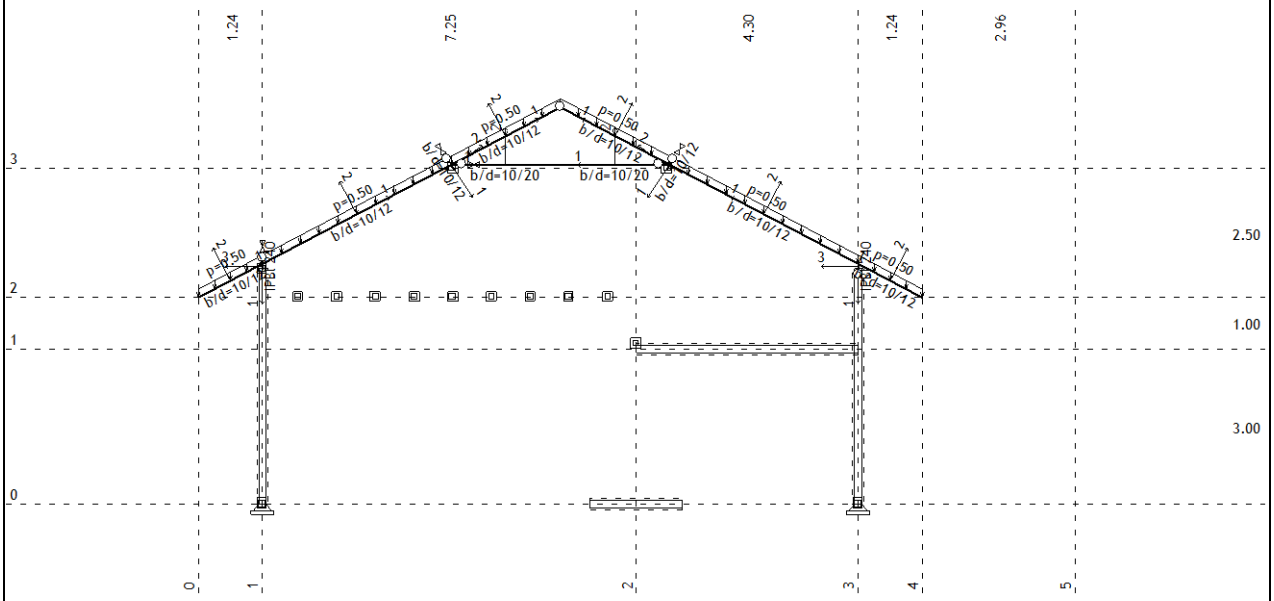
Okvir: V_4

Obt. 1: L+S (g)



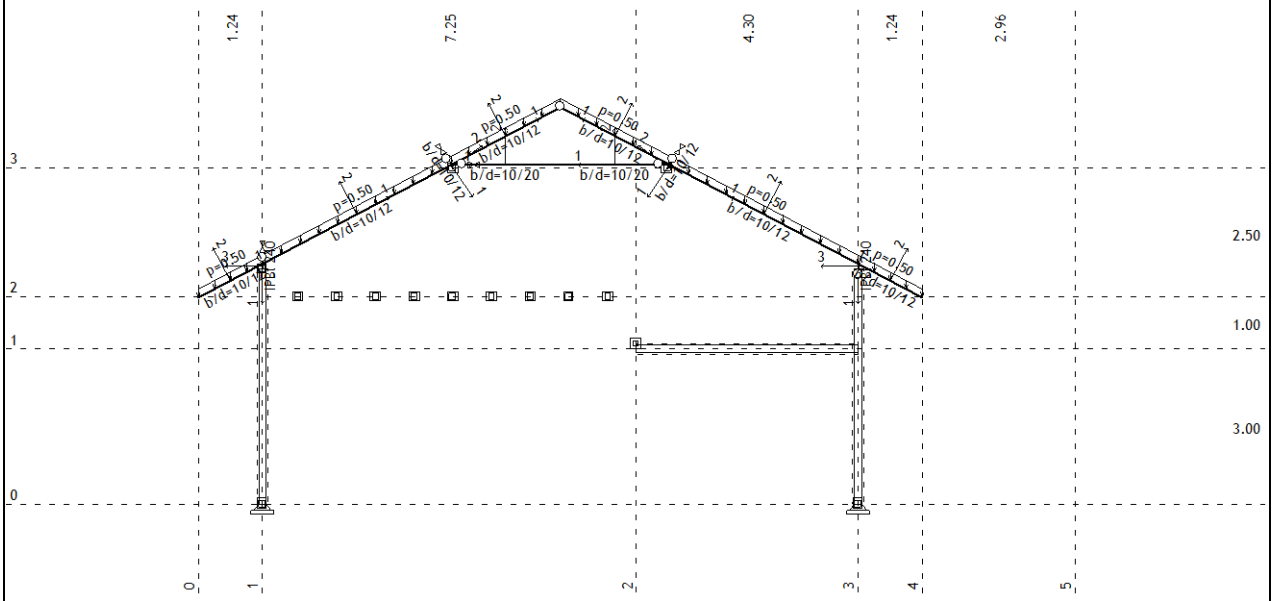
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Obt. 1: L+S (g)



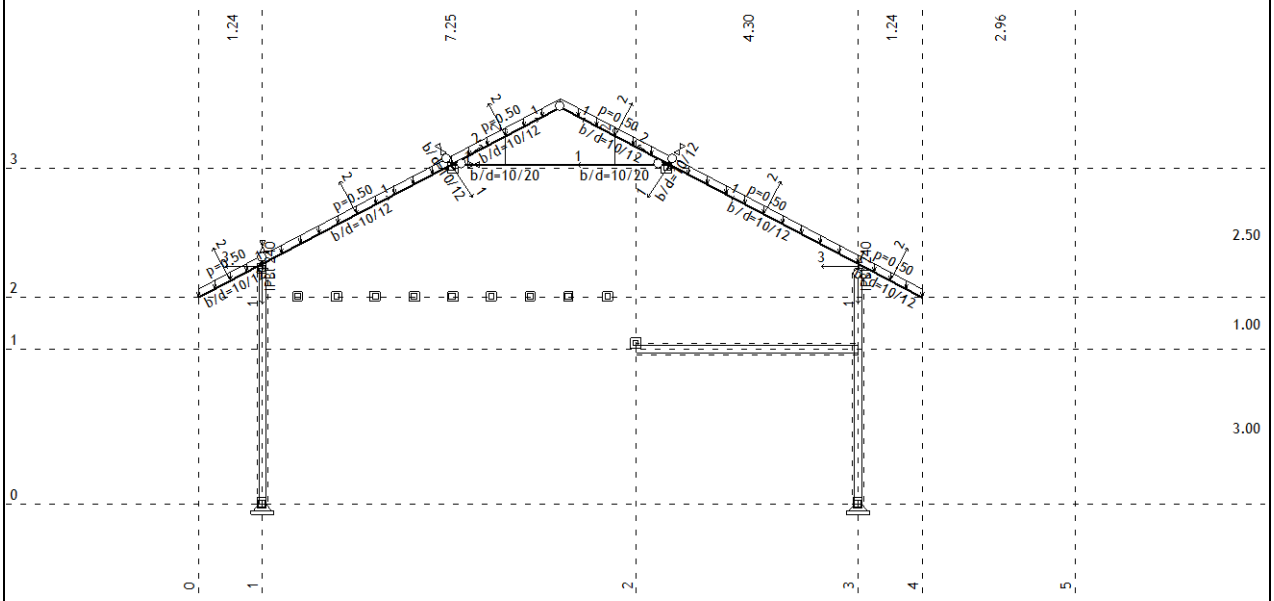
Okvir: V_7

Obt. 1: L+S (g)



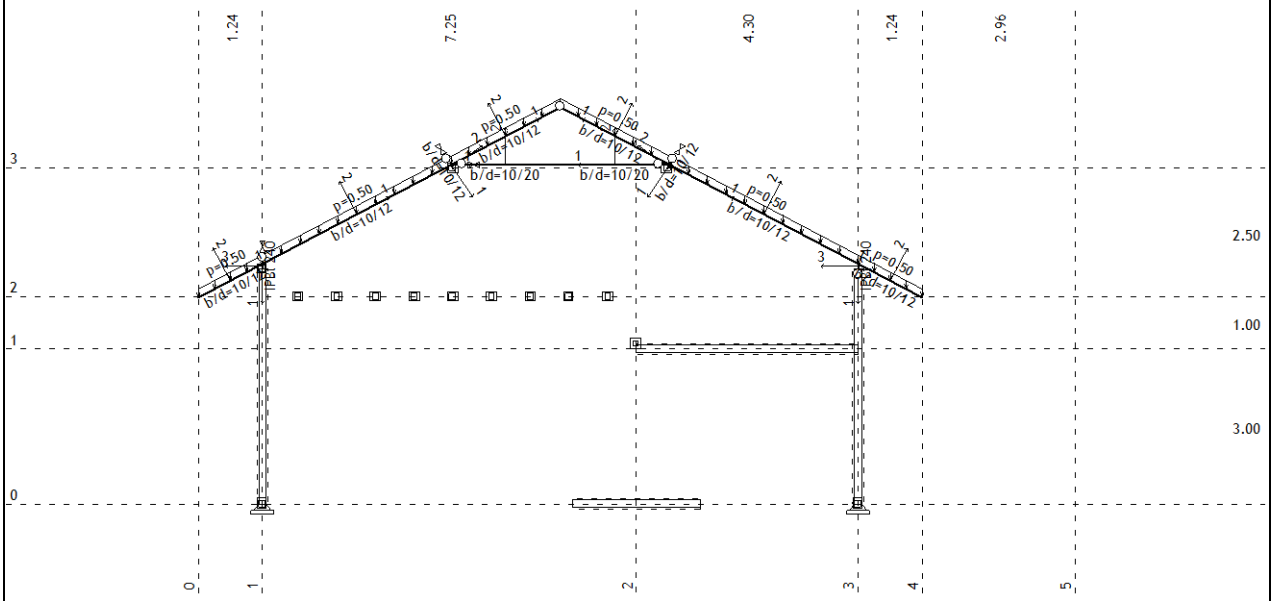
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Obt. 1: L+S (g)



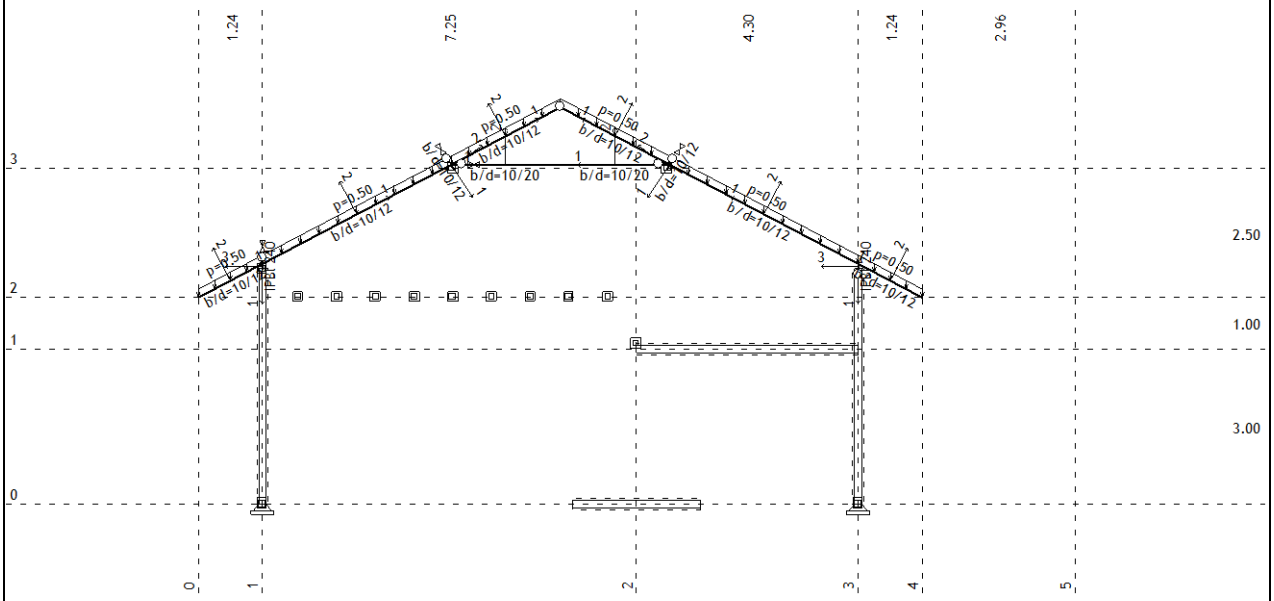
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Obt. 1: L+S (g)



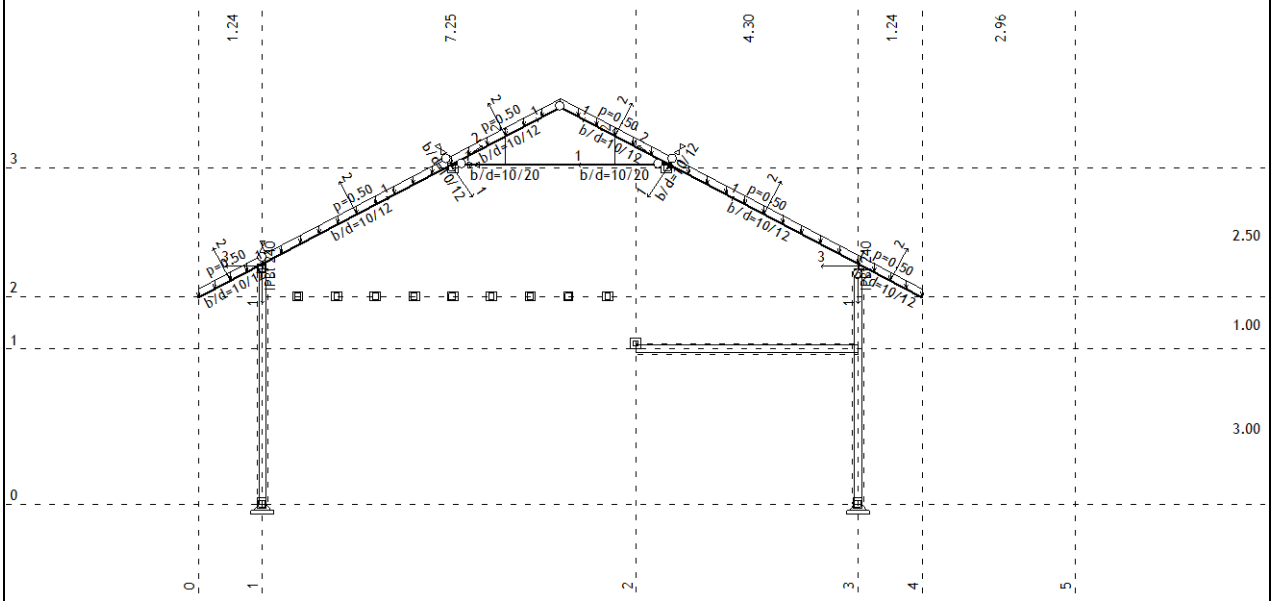
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Obt. 1: L+S (g)



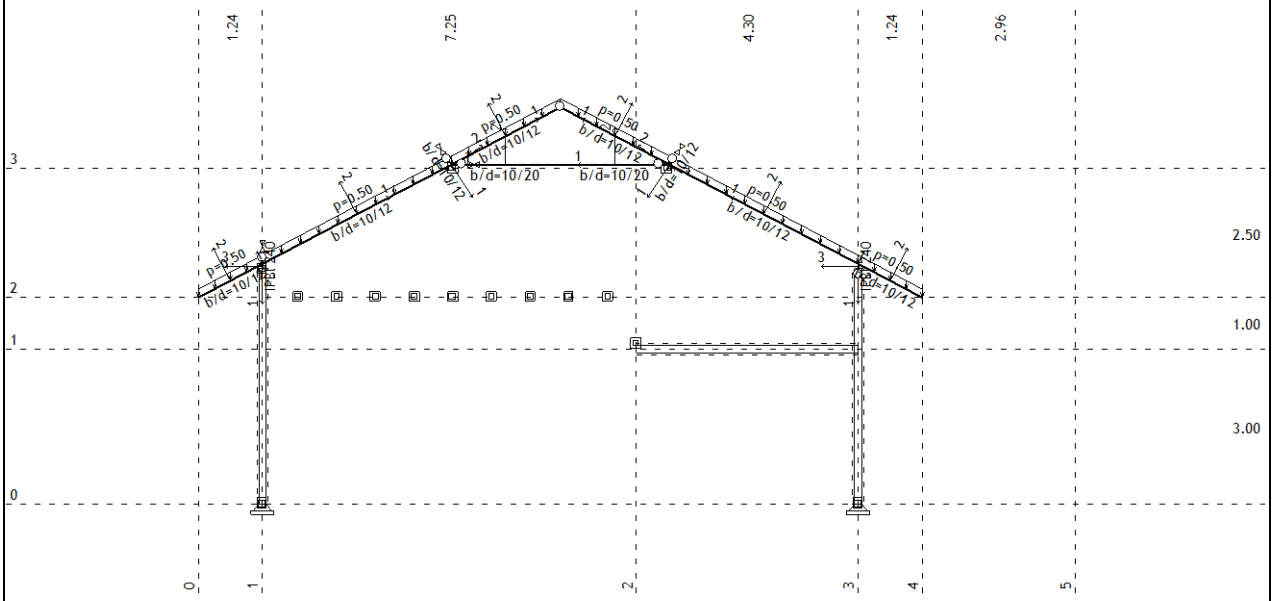
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Obt. 1: L+S (g)



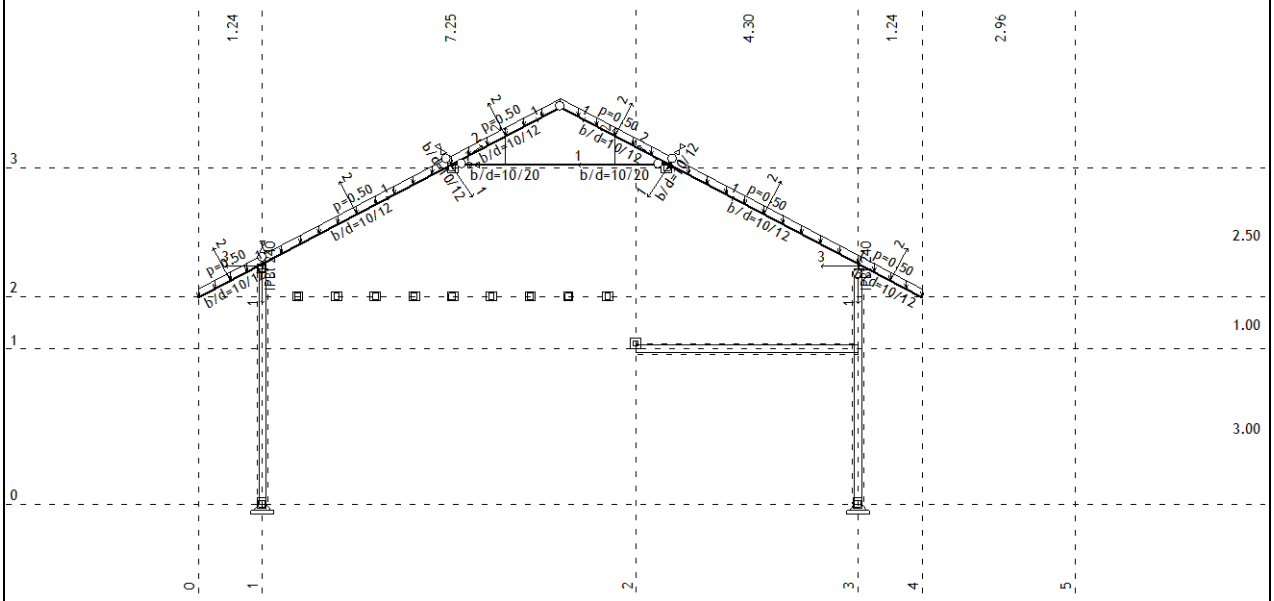
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Obt. 1: L+S (g)



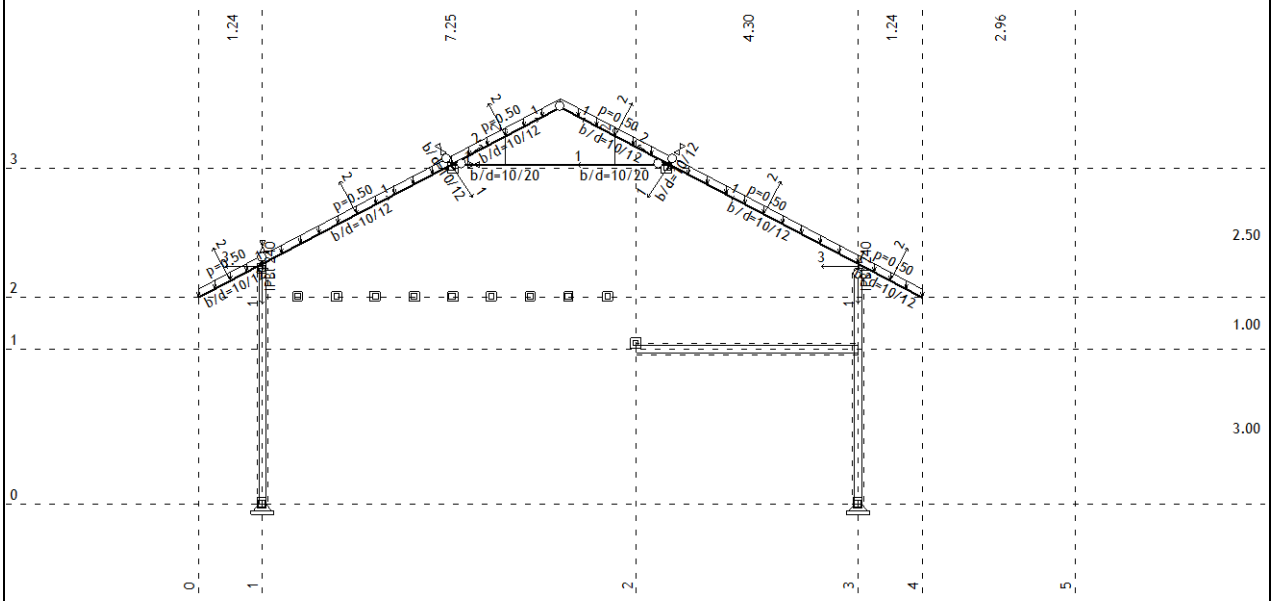
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Obt. 1: L+S (g)



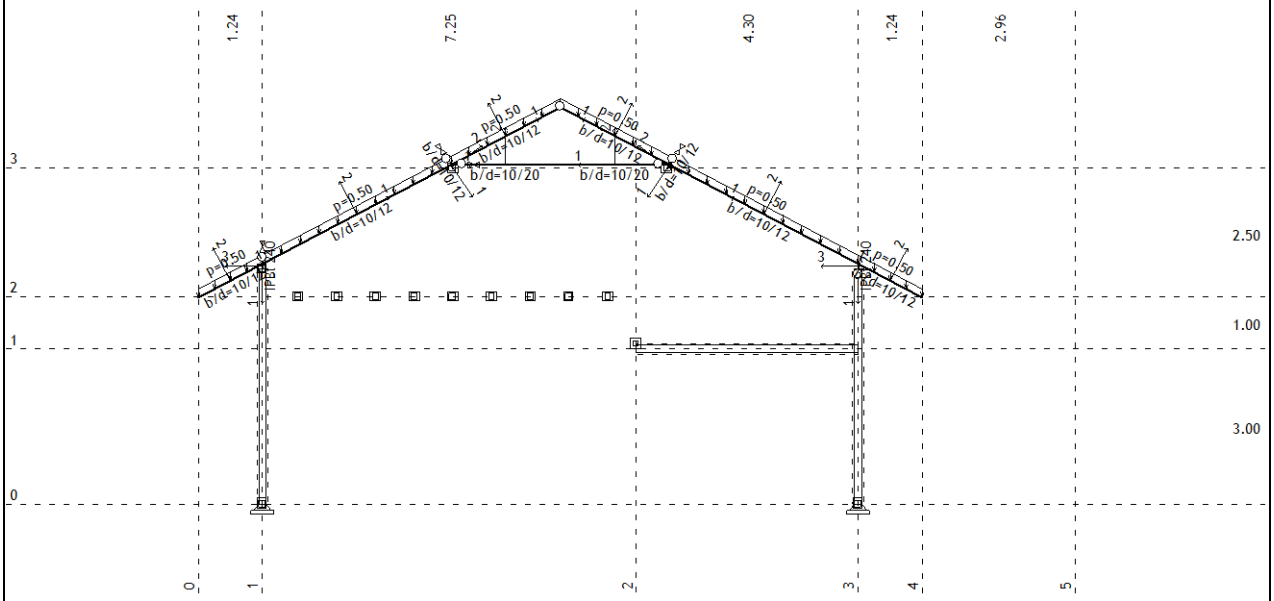
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Obt. 1: L+S (g)



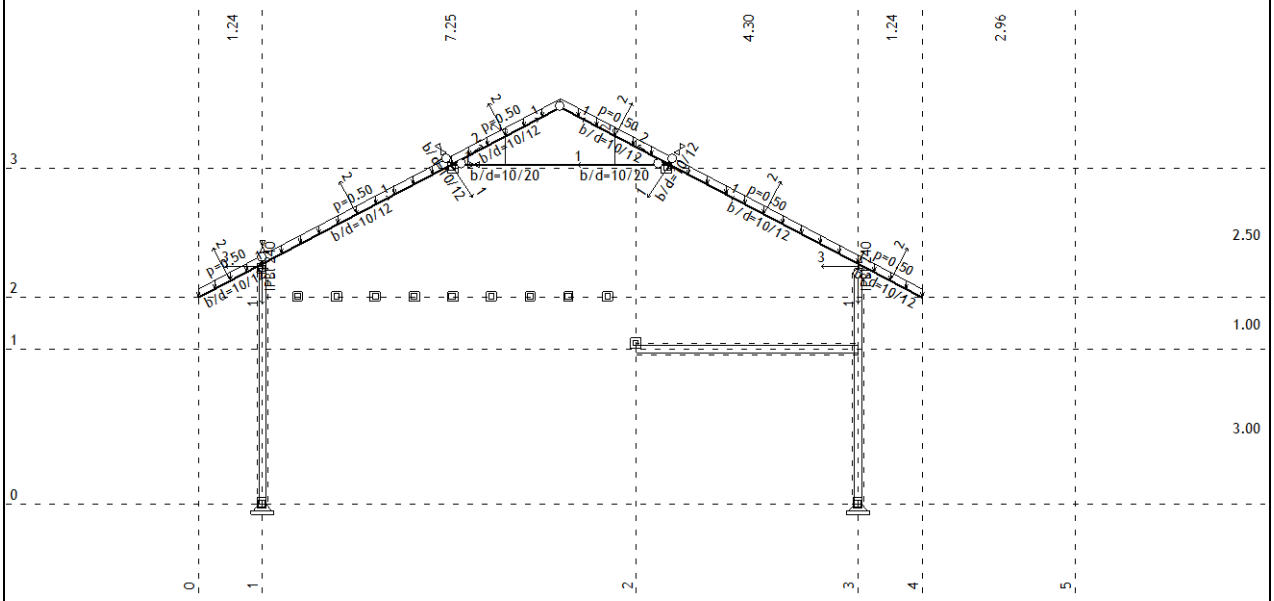
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Obt. 1: L+S (g)



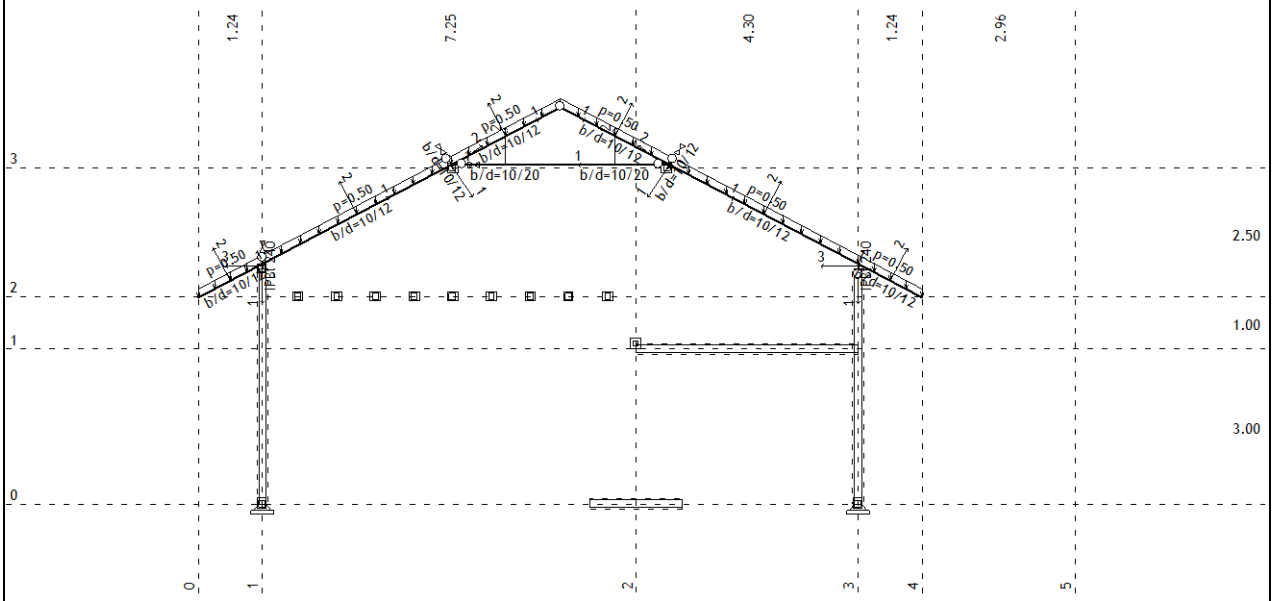
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Obt. 1: L+S (g)



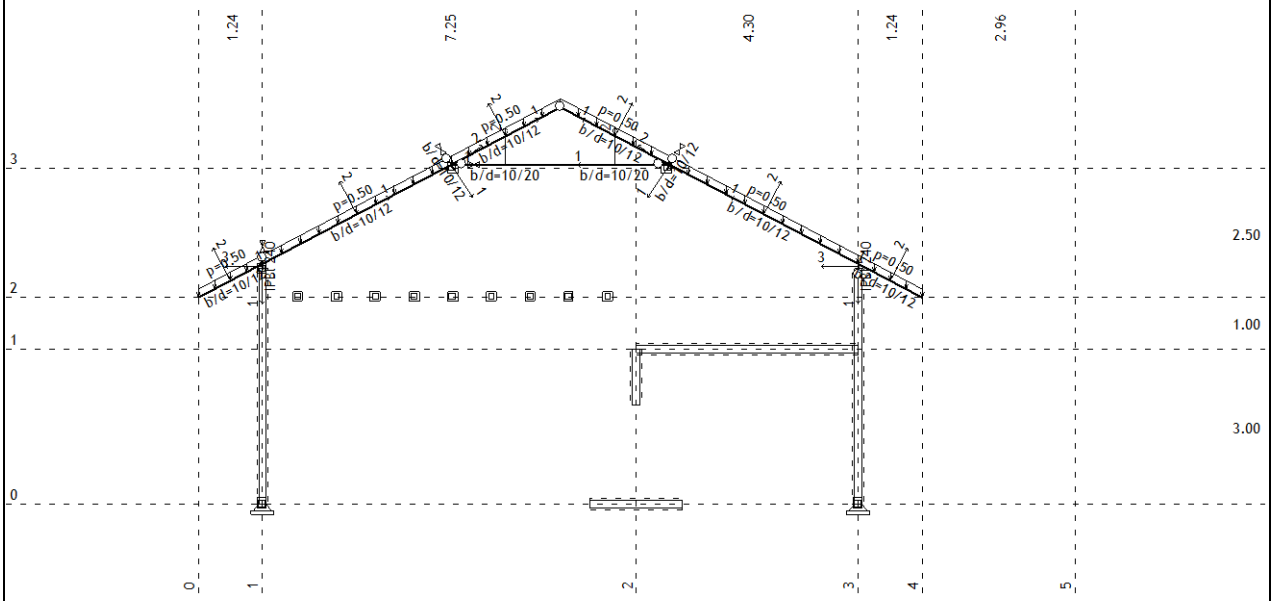
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Obt. 1: L+S (g)



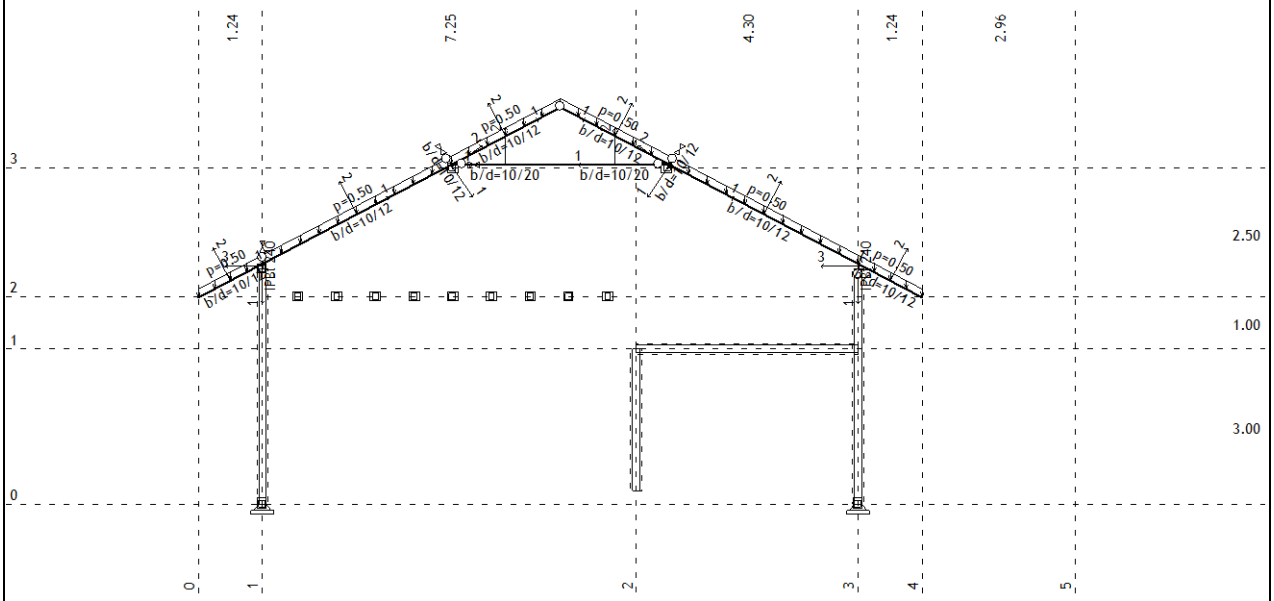
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Obt. 1: L+S (g)



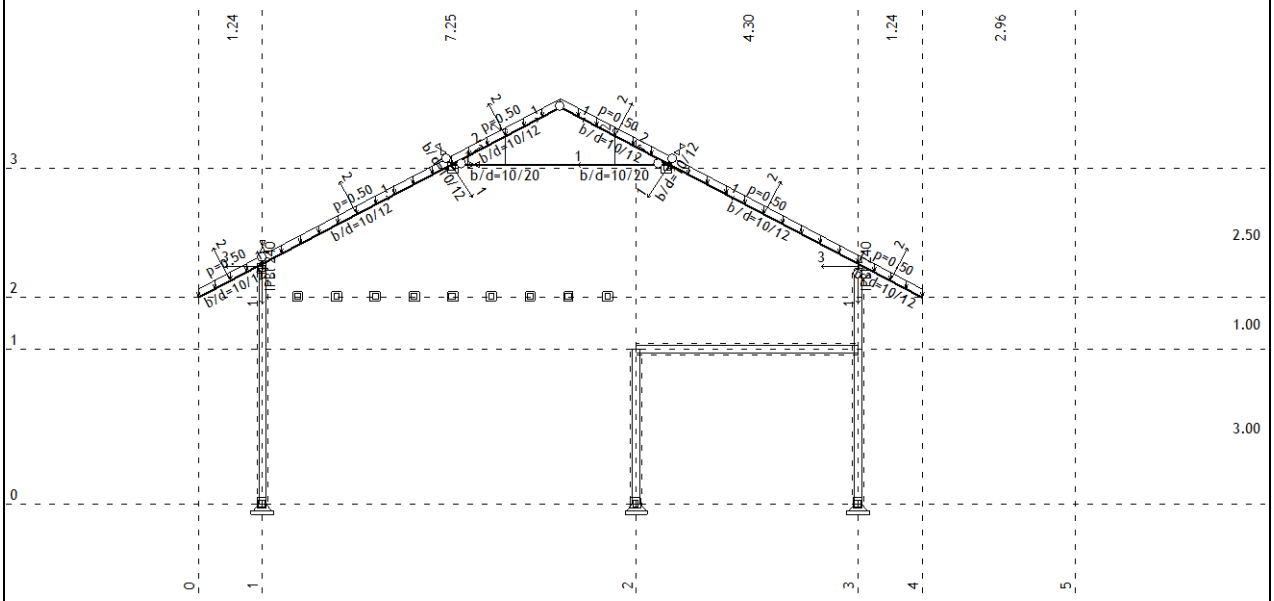
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Obt. 1: L+S (g)



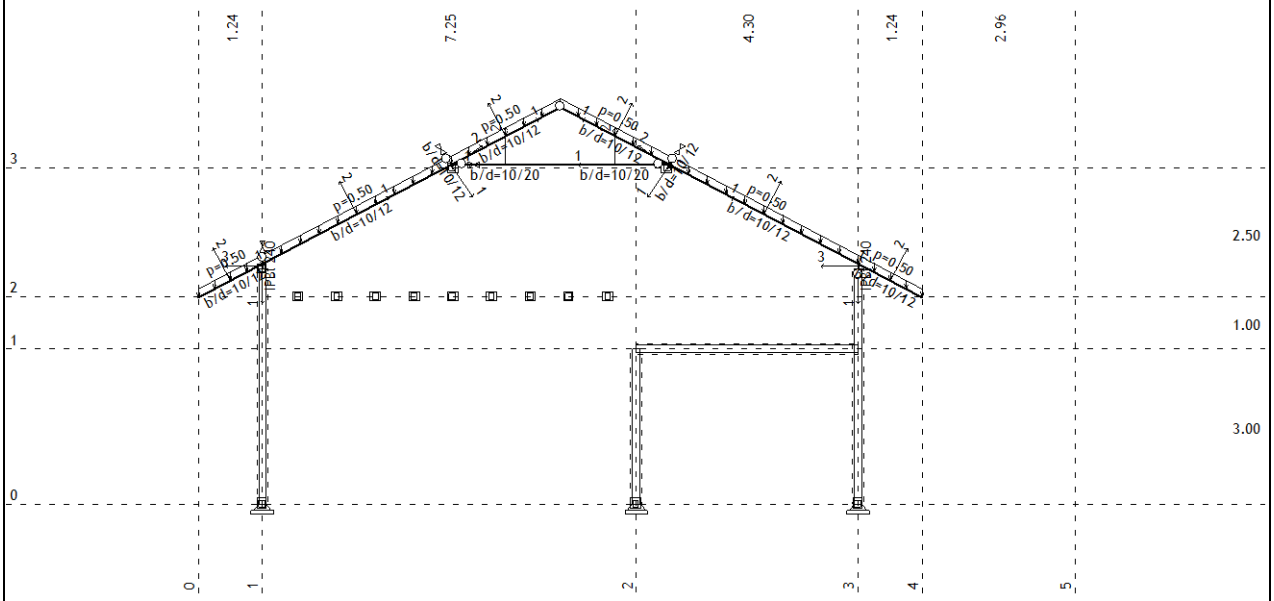
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Obt. 1: L+S (g)



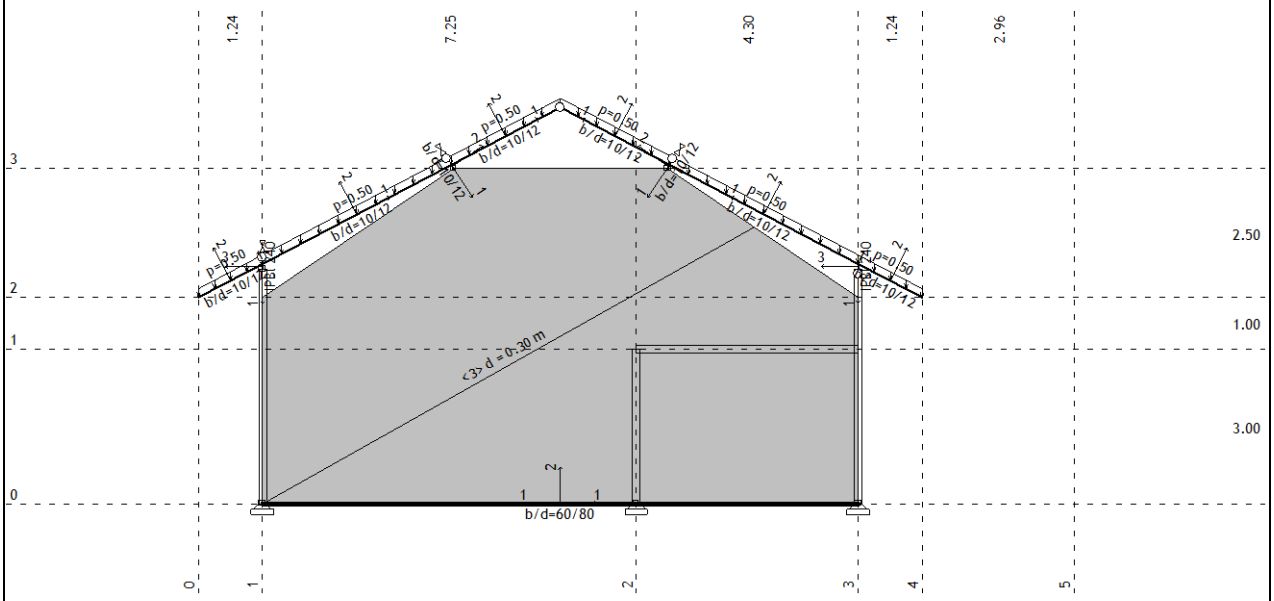
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Obt. 1: L+S (g)



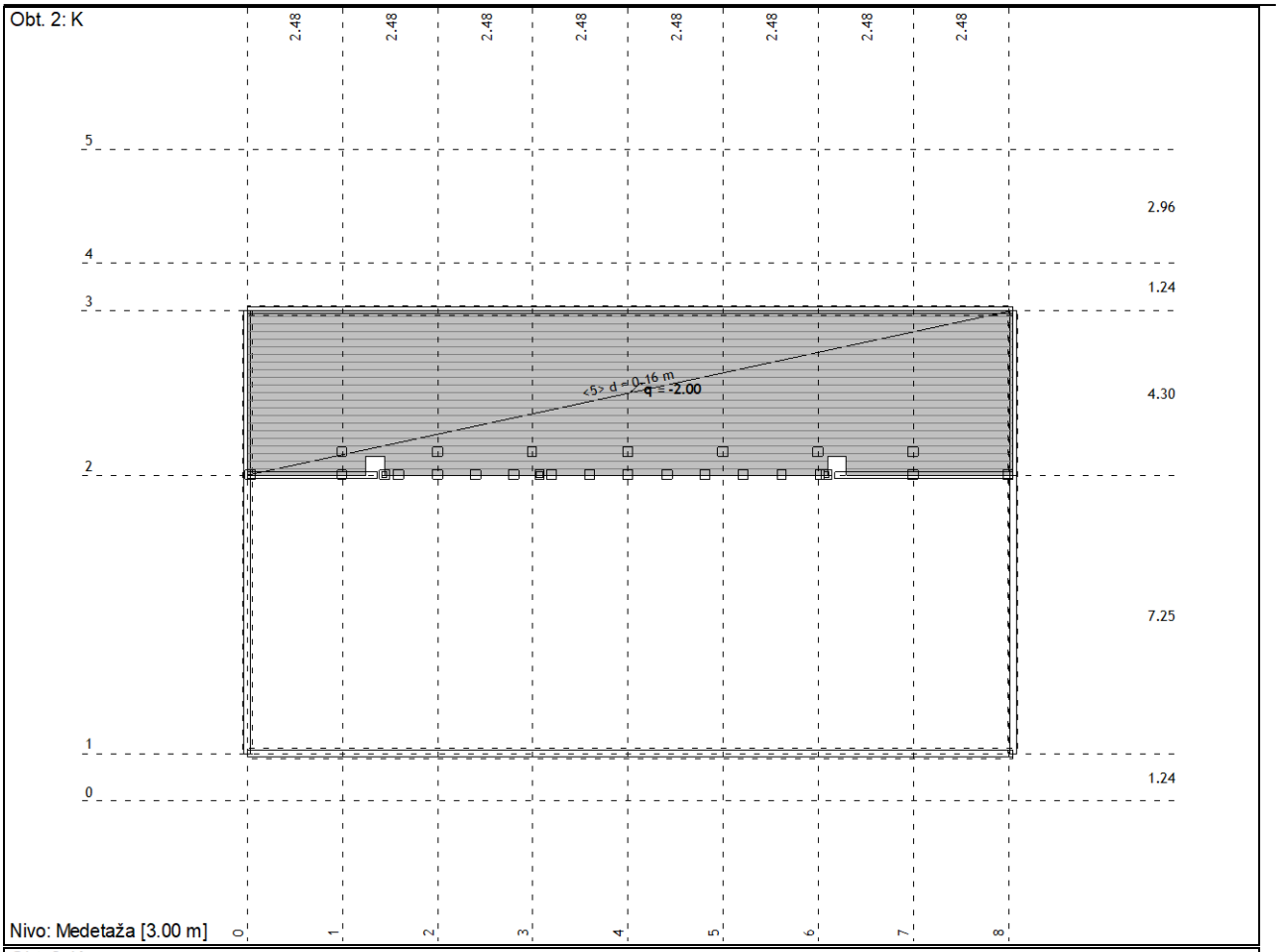
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Obt. 1: L+S (g)



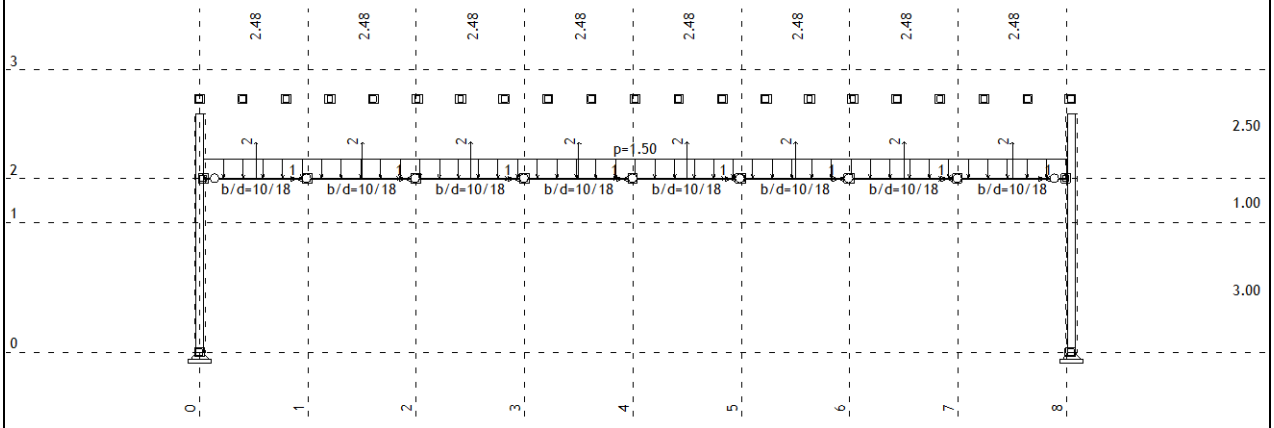
Okvir: V_30

Obt. 2: K



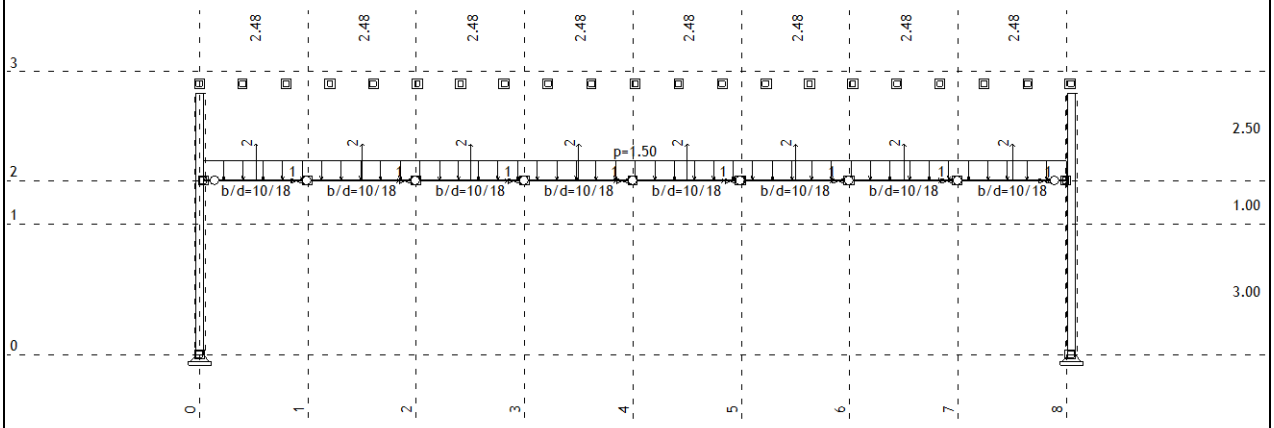
Nivo: Medetaža [3.00 m]

Obt. 2: K



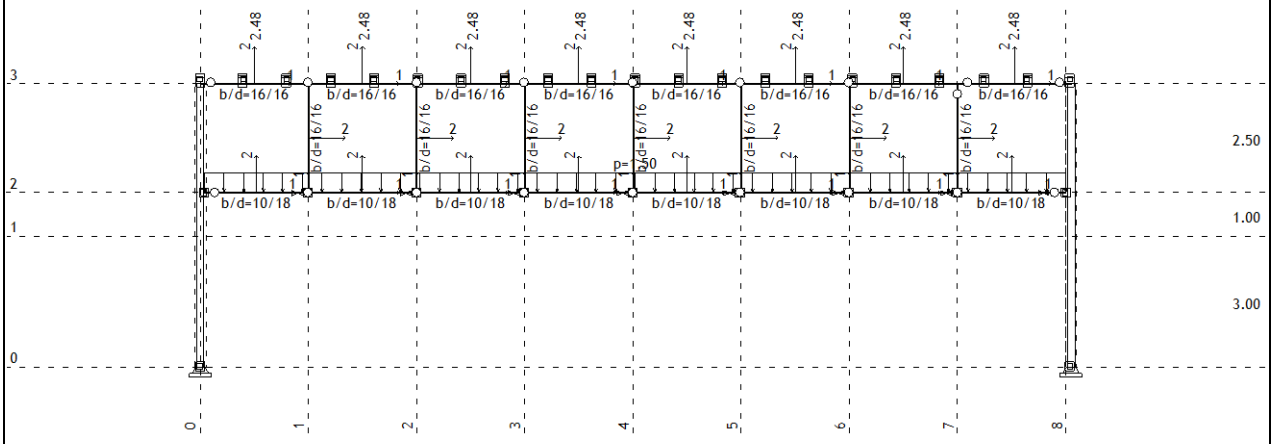
Okvir: H_4

Obt. 2: K



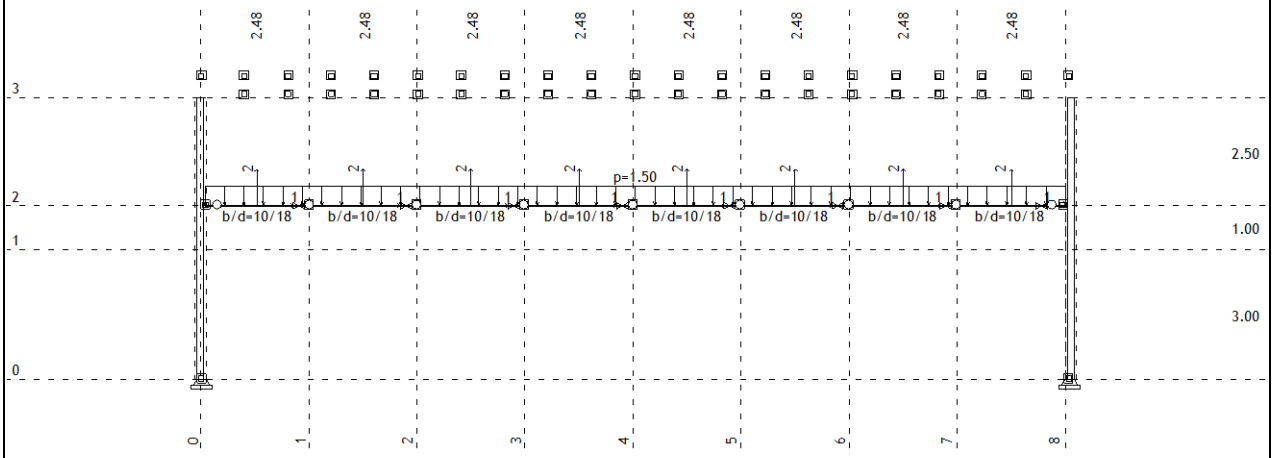
Okvir: H_5

Obt. 2: K



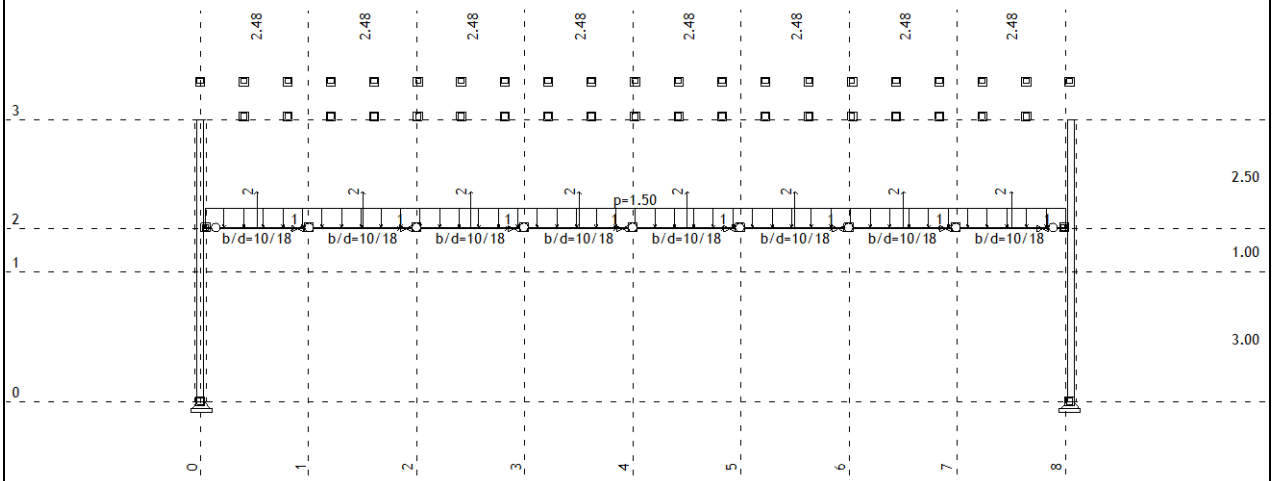
Okvir: H_6

Obt. 2: K



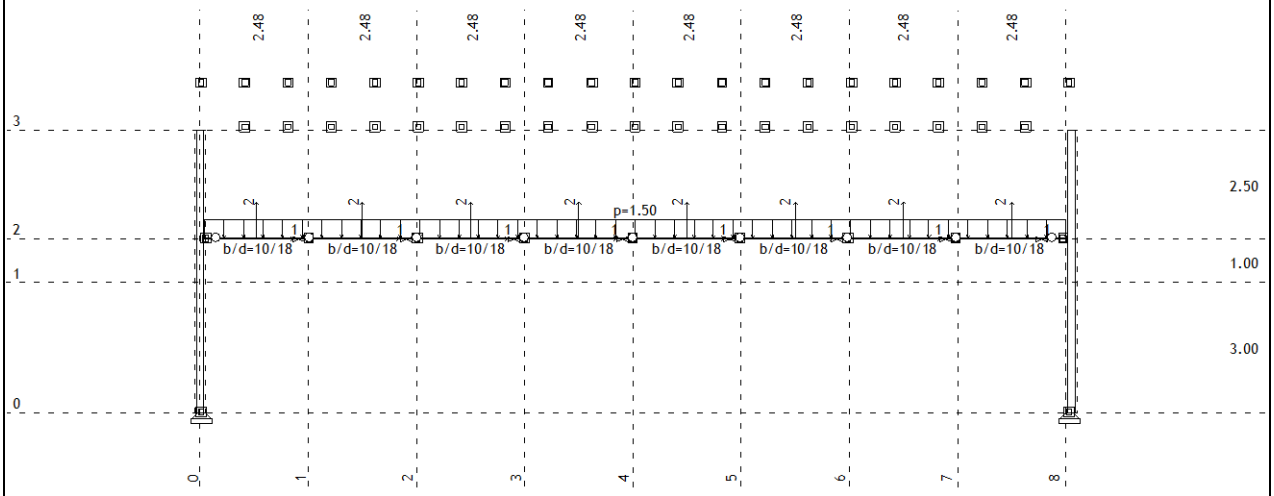
Okvir: H_7

Obt. 2: K



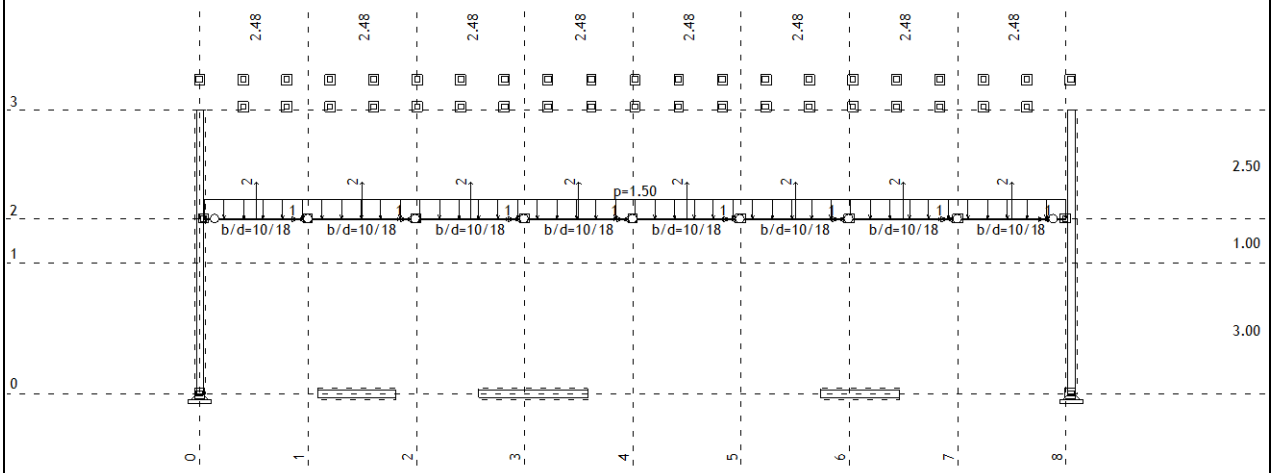
Okvir: H_8

Obt. 2: K



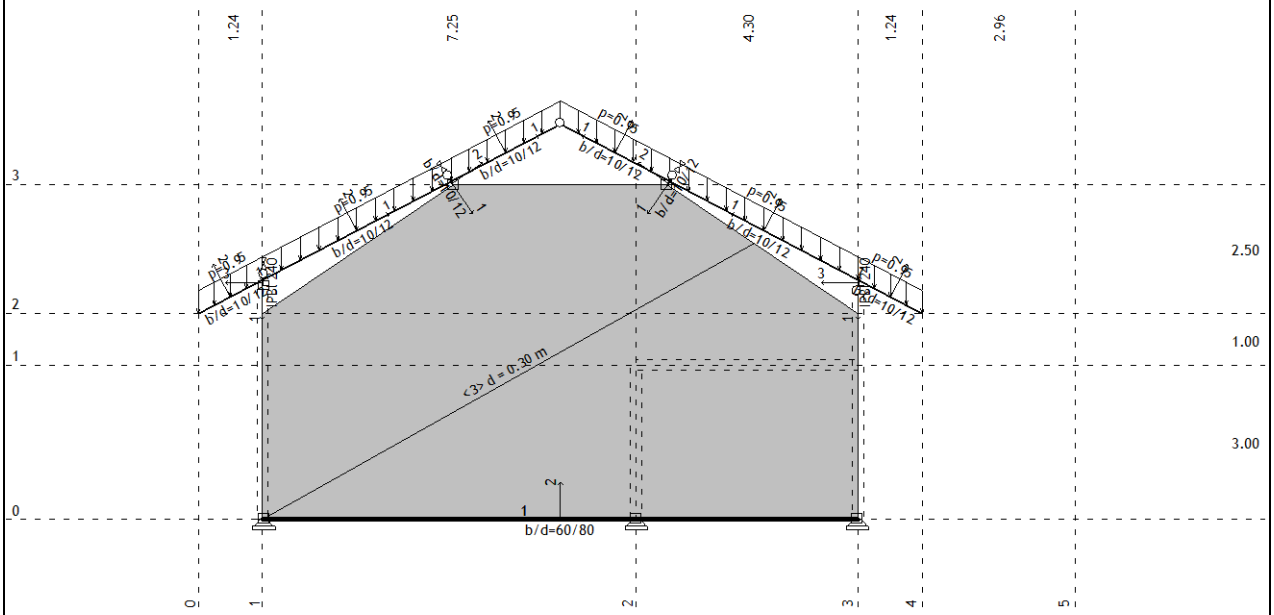
Okvir: H_9

Obt. 2: K



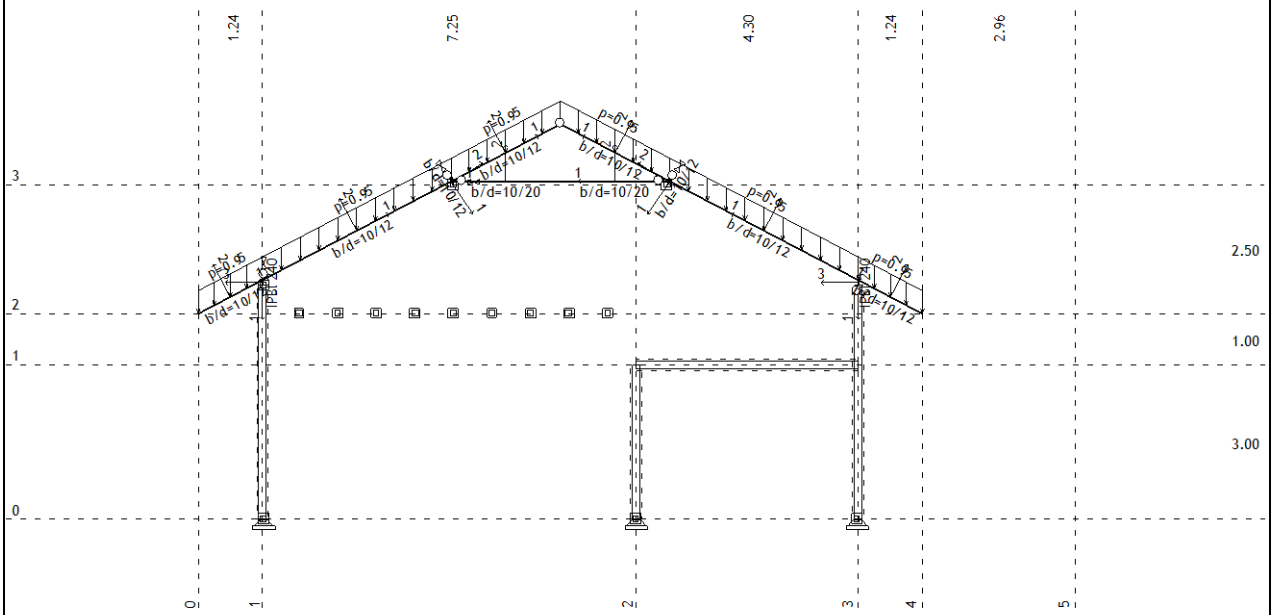
Okvir: H_10

Obt. 3: S



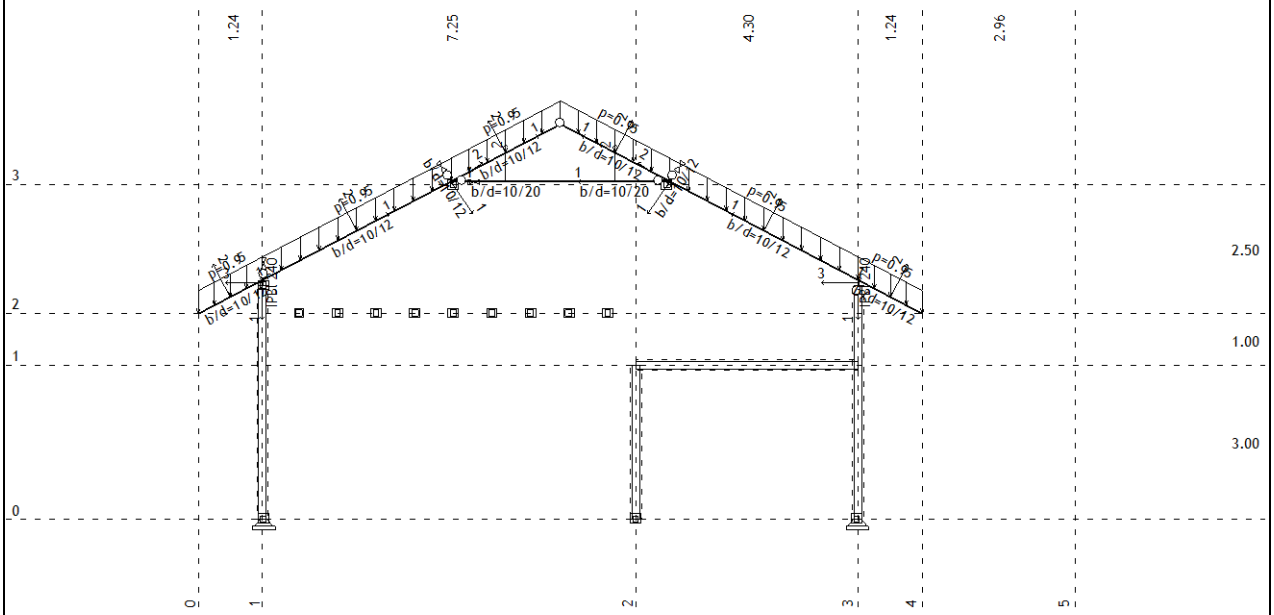
Okvir: V_1

Obt. 3: S



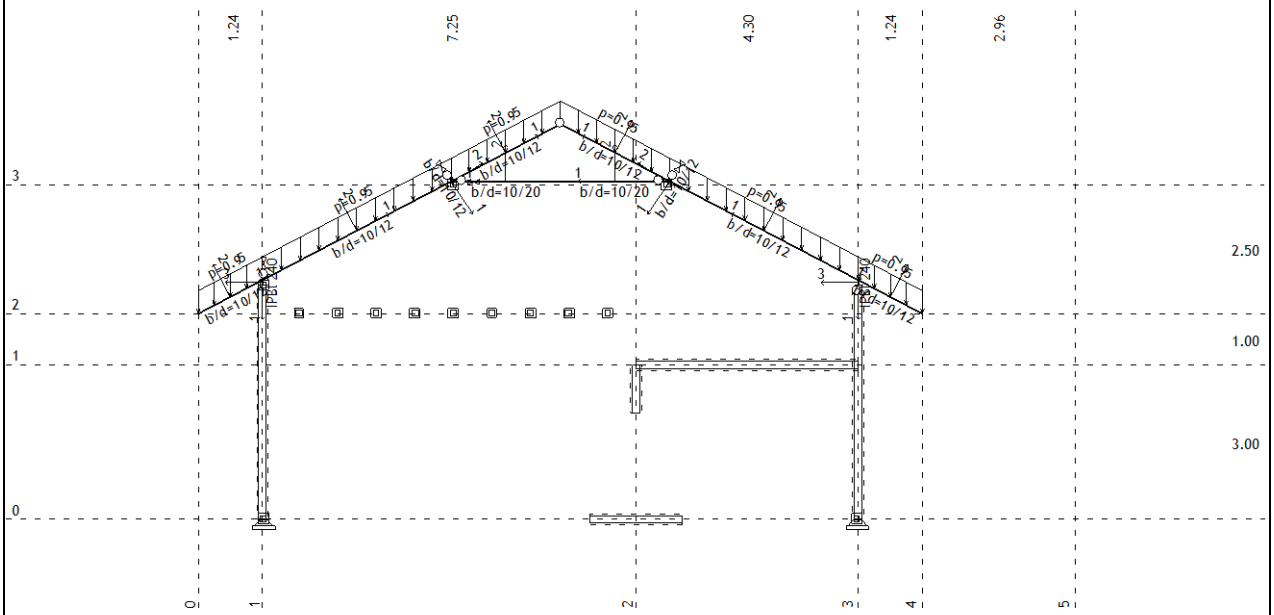
Okvir: V_3

Obt. 3: S



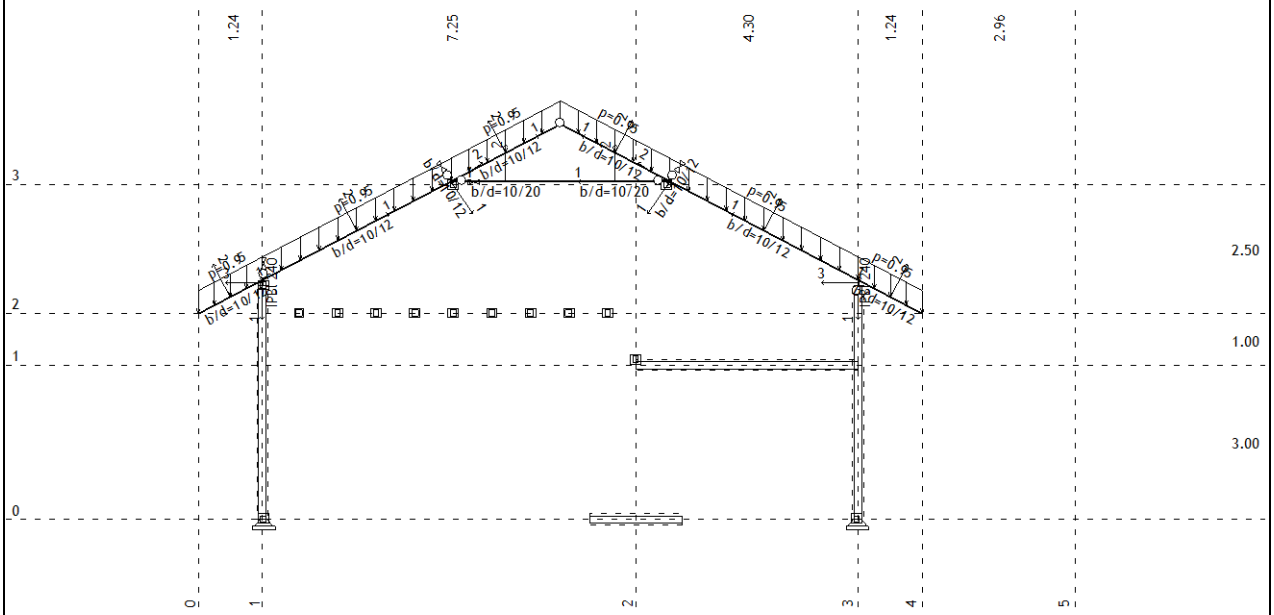
Okvir: V_4

Obt. 3: S



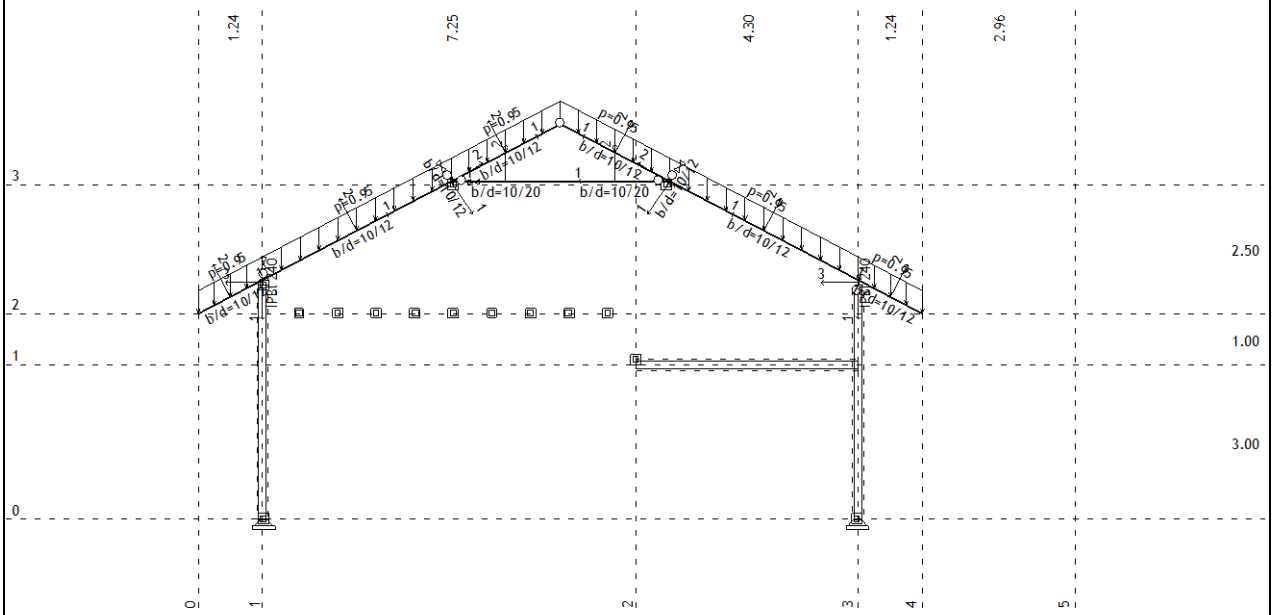
Okvir: V_6

Obt. 3: S



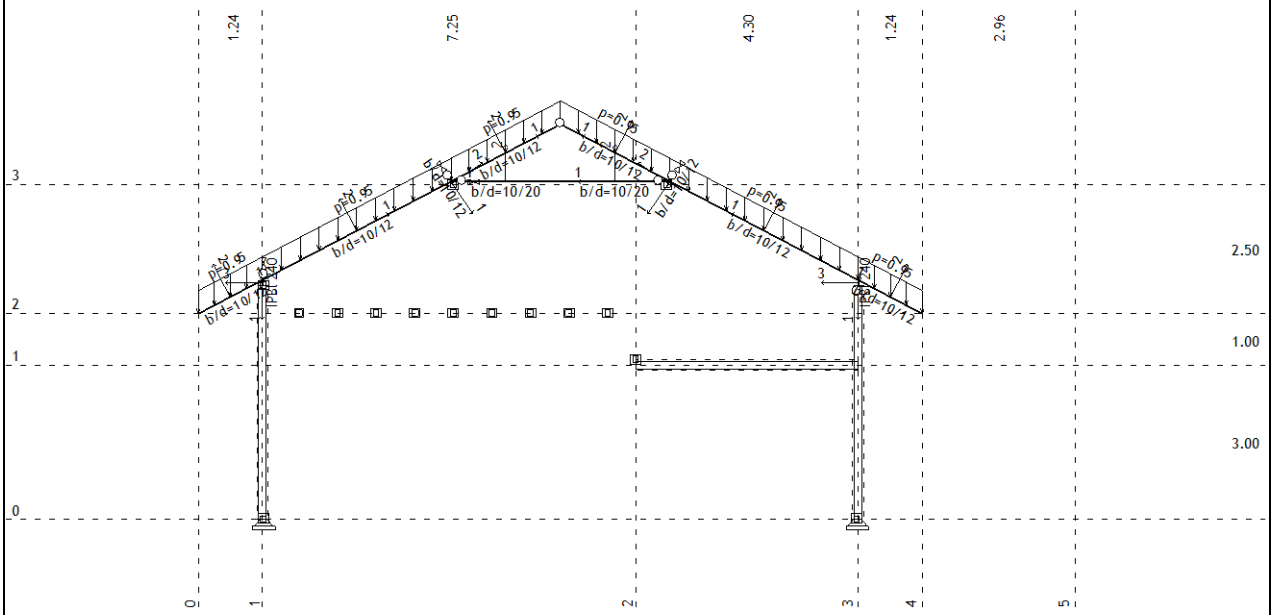
Okvir: V_7

Obt. 3: S



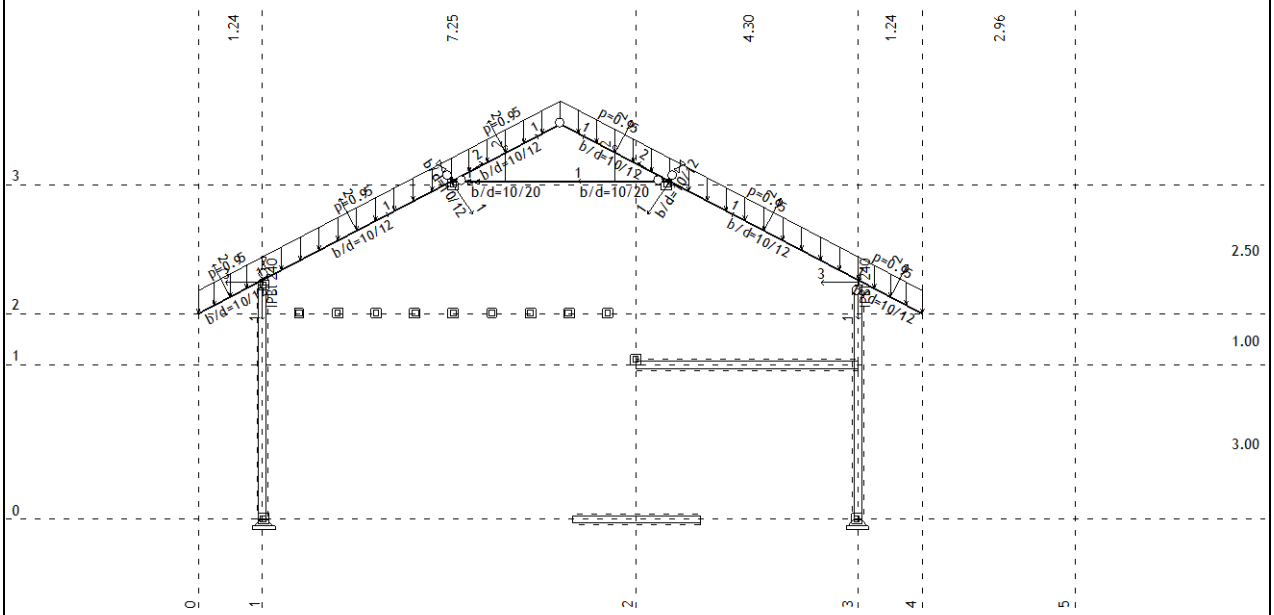
Okvir: V_9

Obt. 3: S



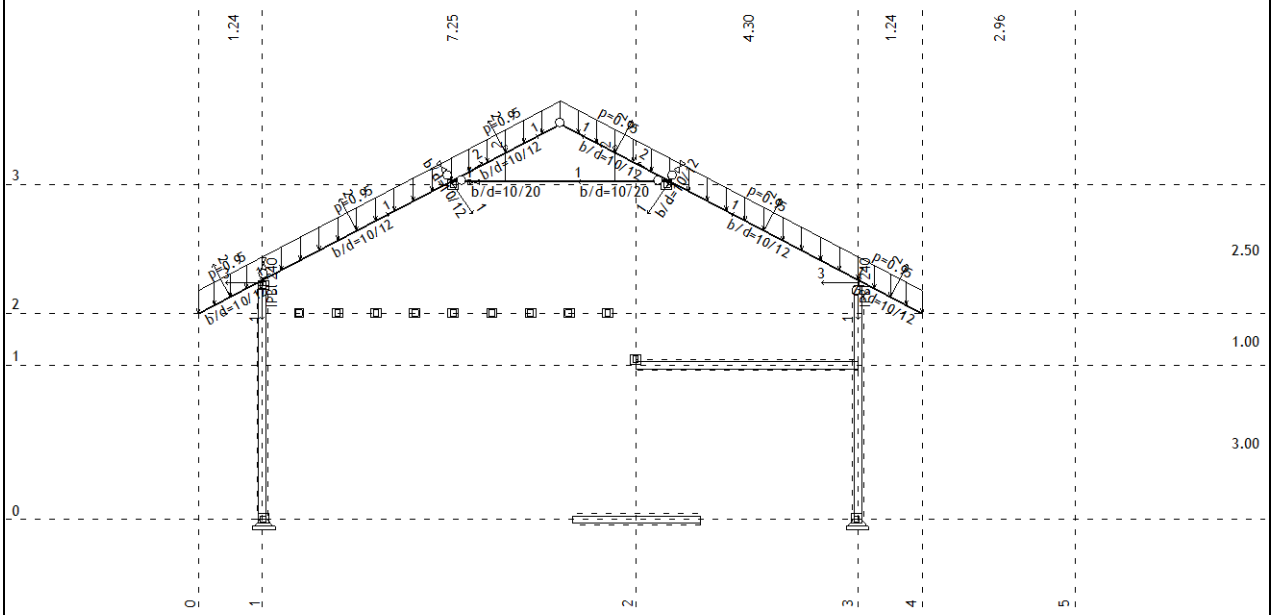
Okvir: V_10

Obt. 3: S



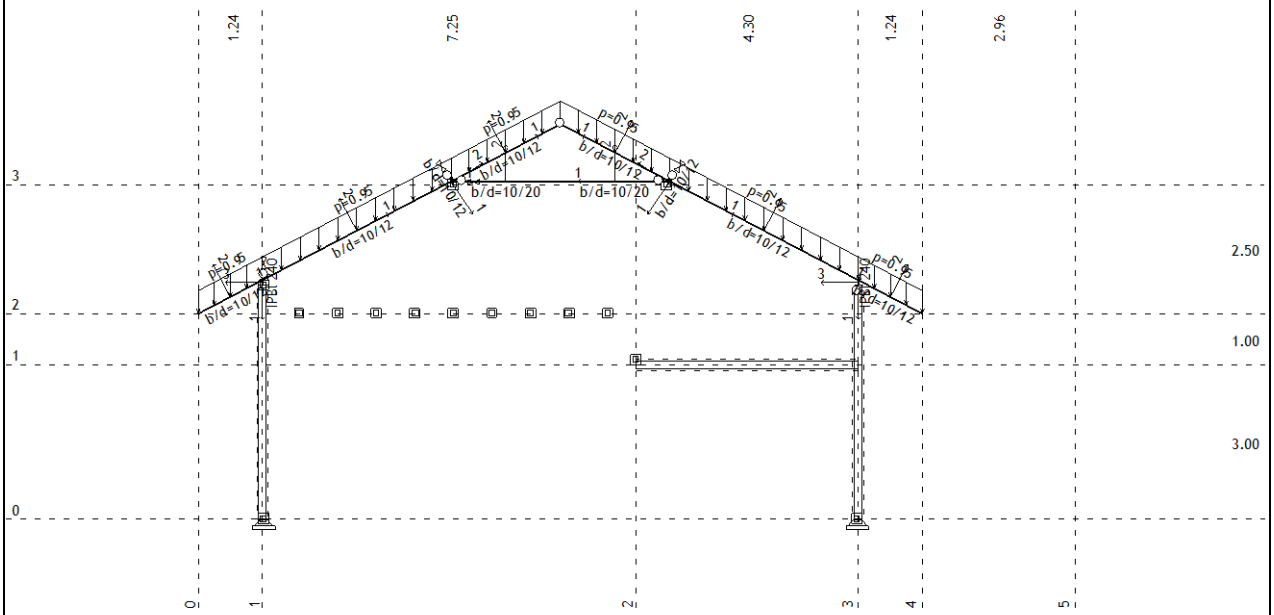
Okvir: V_11

Obt. 3: S



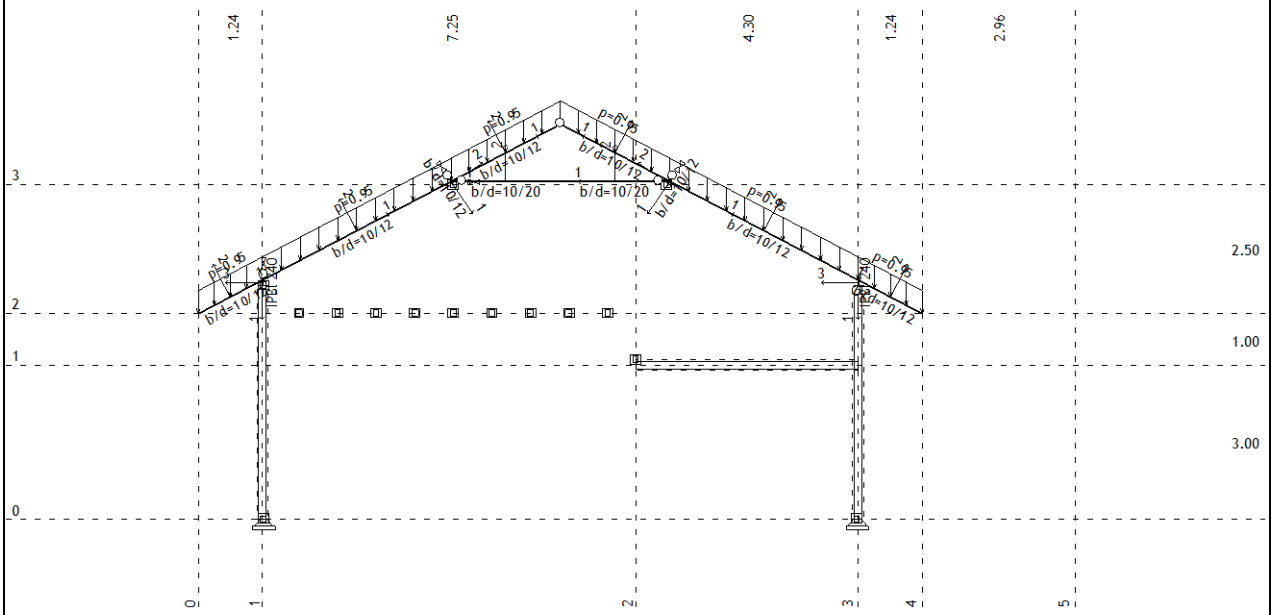
Okvir: V_13

Obt. 3: S



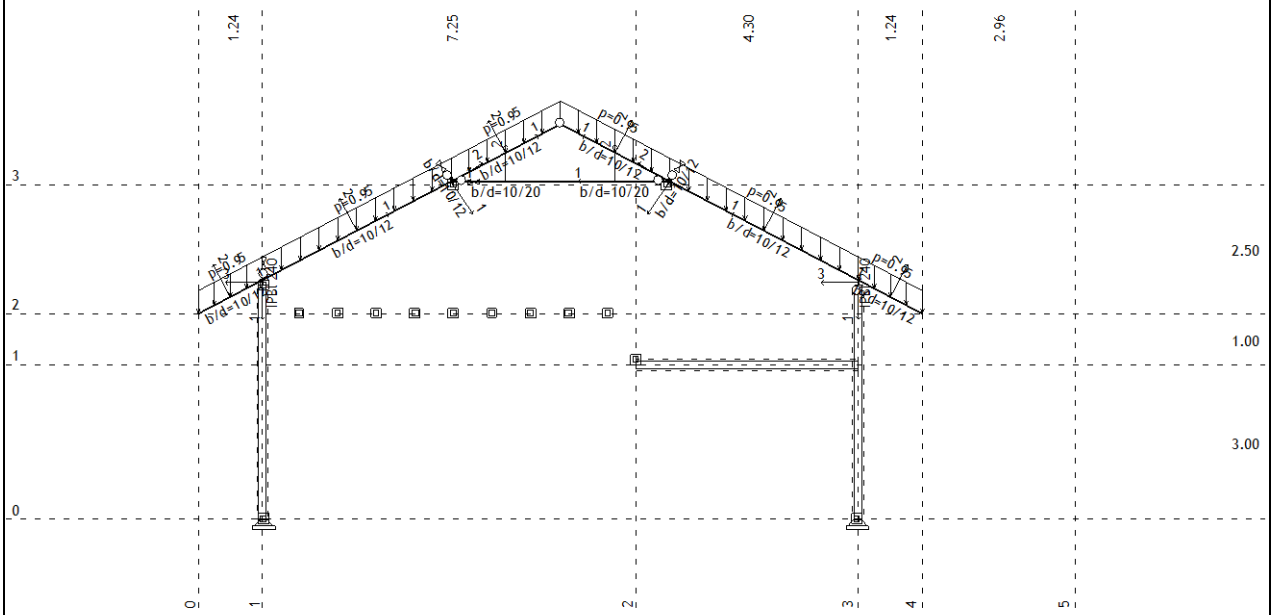
Okvir: V_14

Obt. 3: S



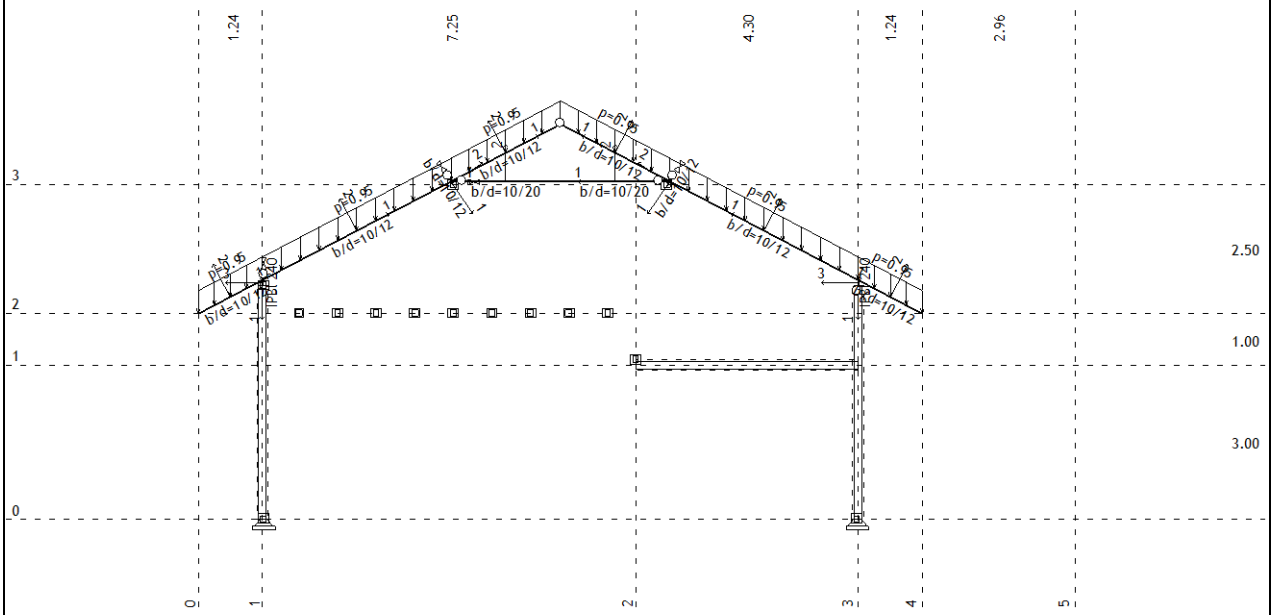
Okvir: V_16

Obt. 3: S



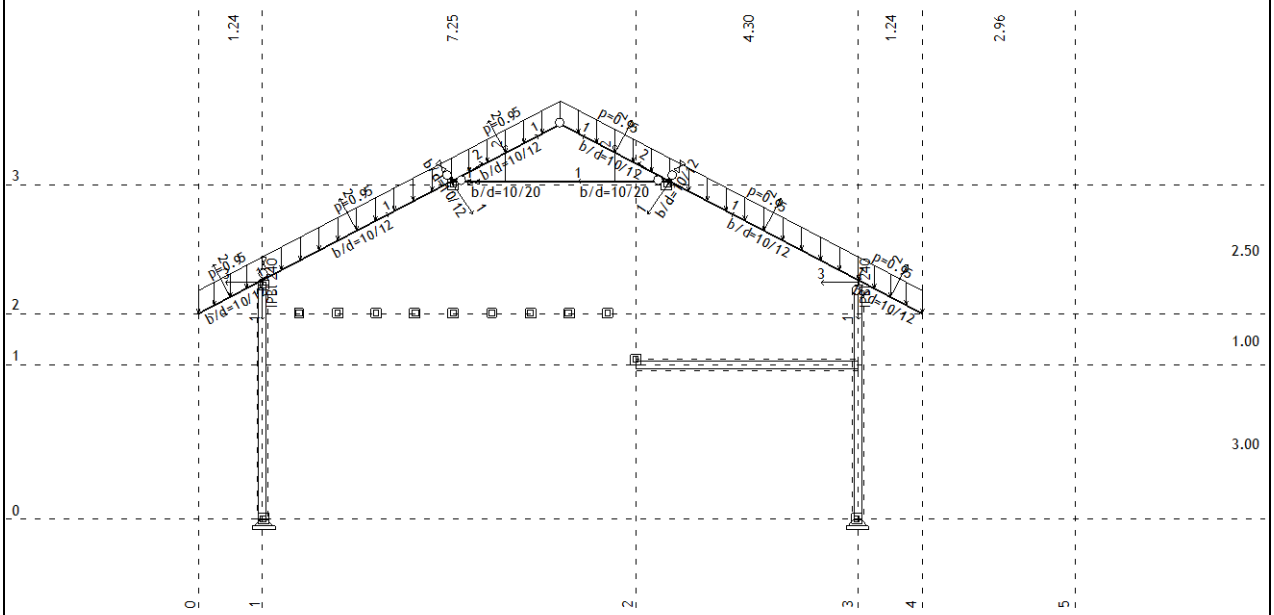
Okvir: V_17

Obt. 3: S



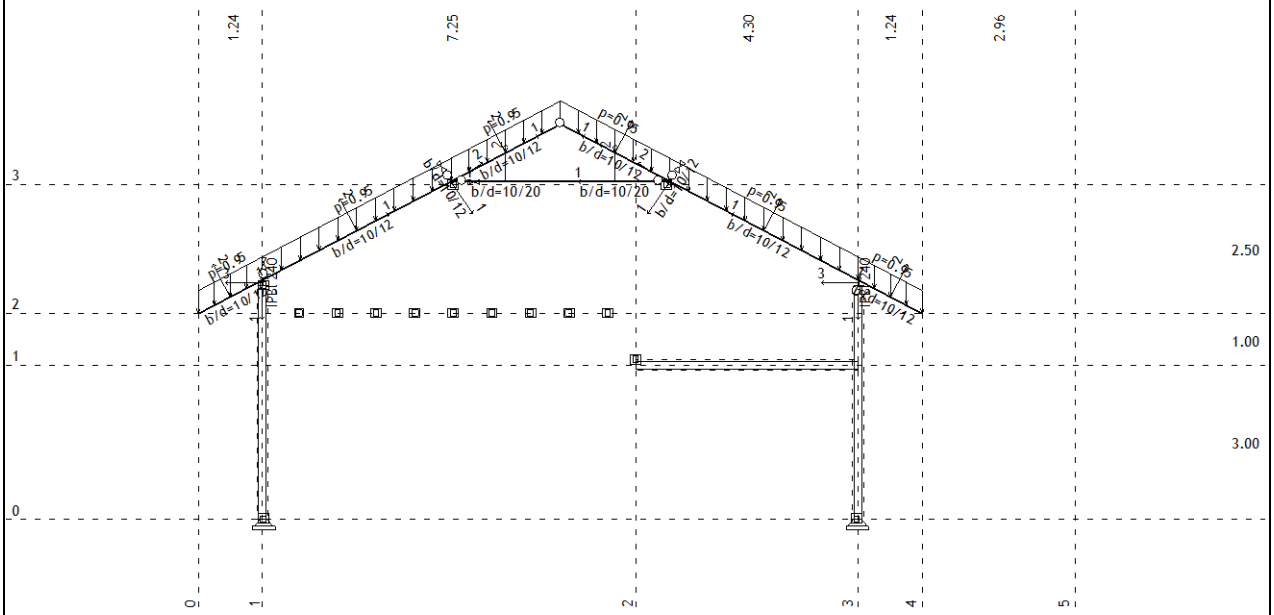
Okvir: V_18

Obt. 3: S



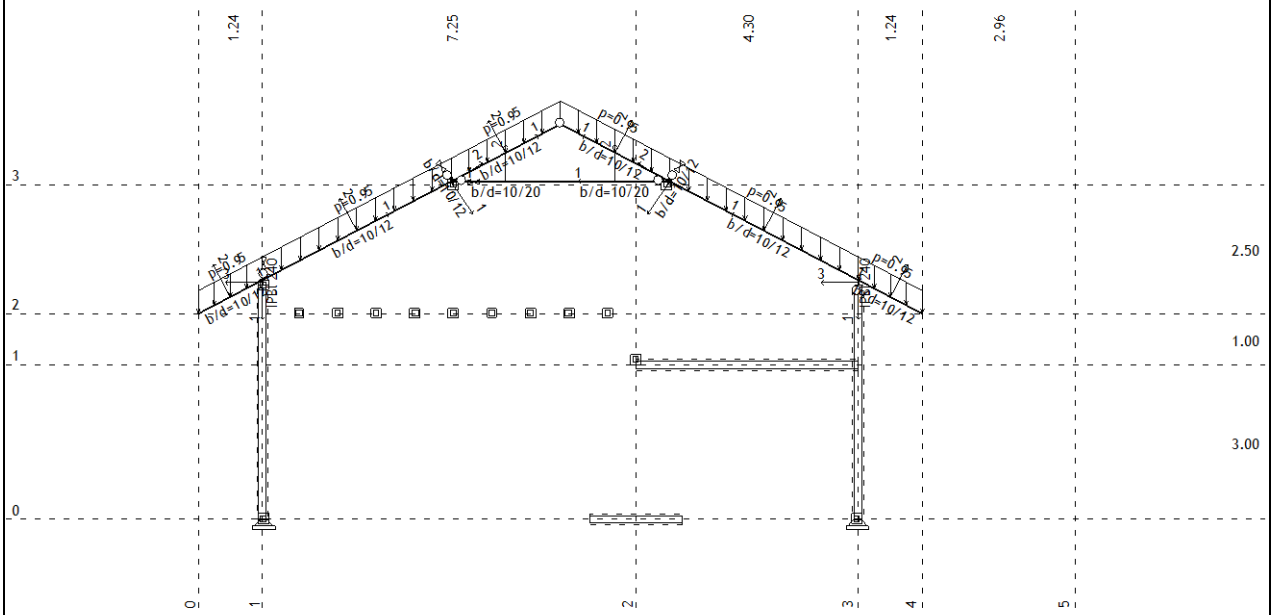
Okvir: V_20

Obt. 3: S



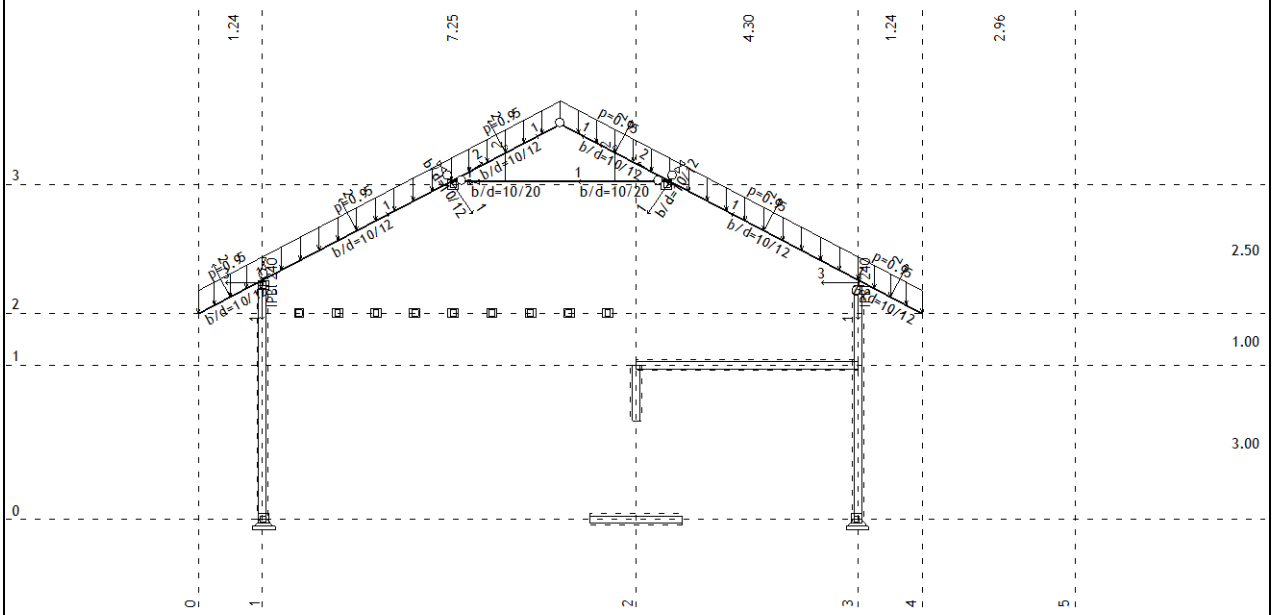
Okvir: V_21

Obt. 3: S



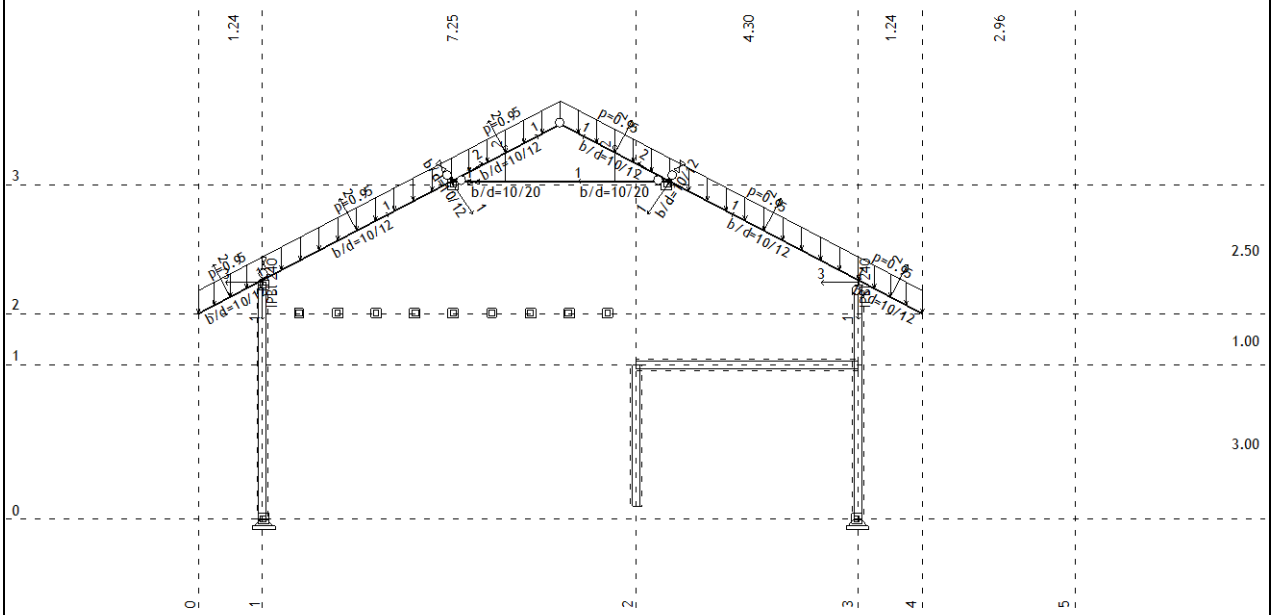
Okvir: V_23

Obt. 3: S



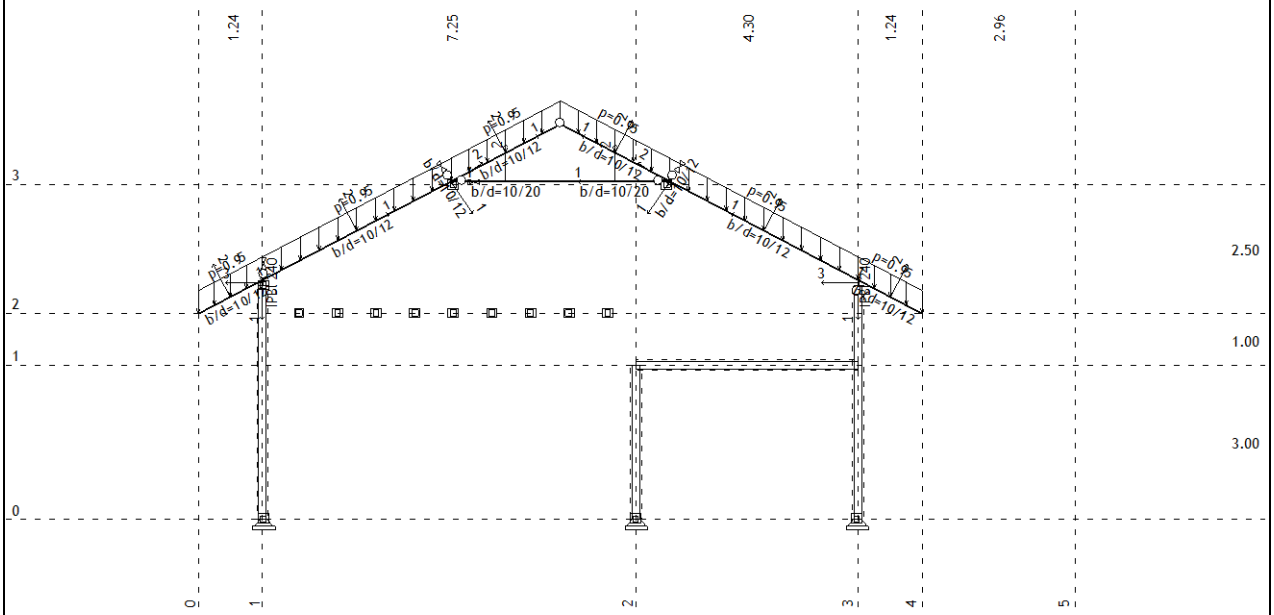
Okvir: V_24

Obt. 3: S



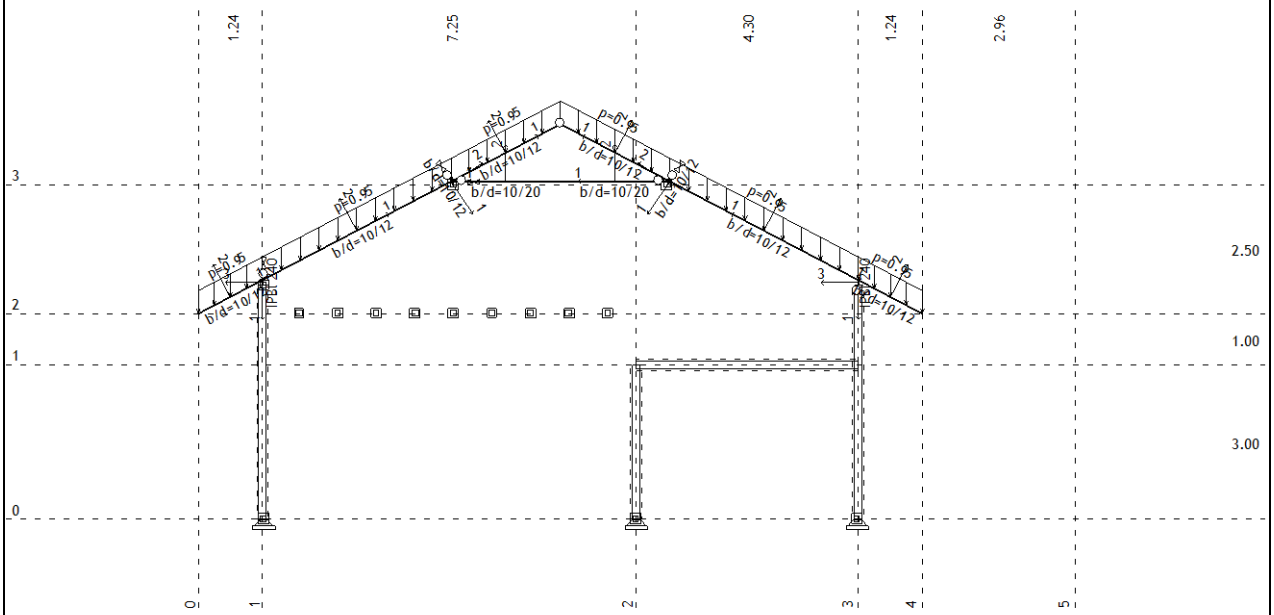
Okvir: V_25

Obt. 3: S



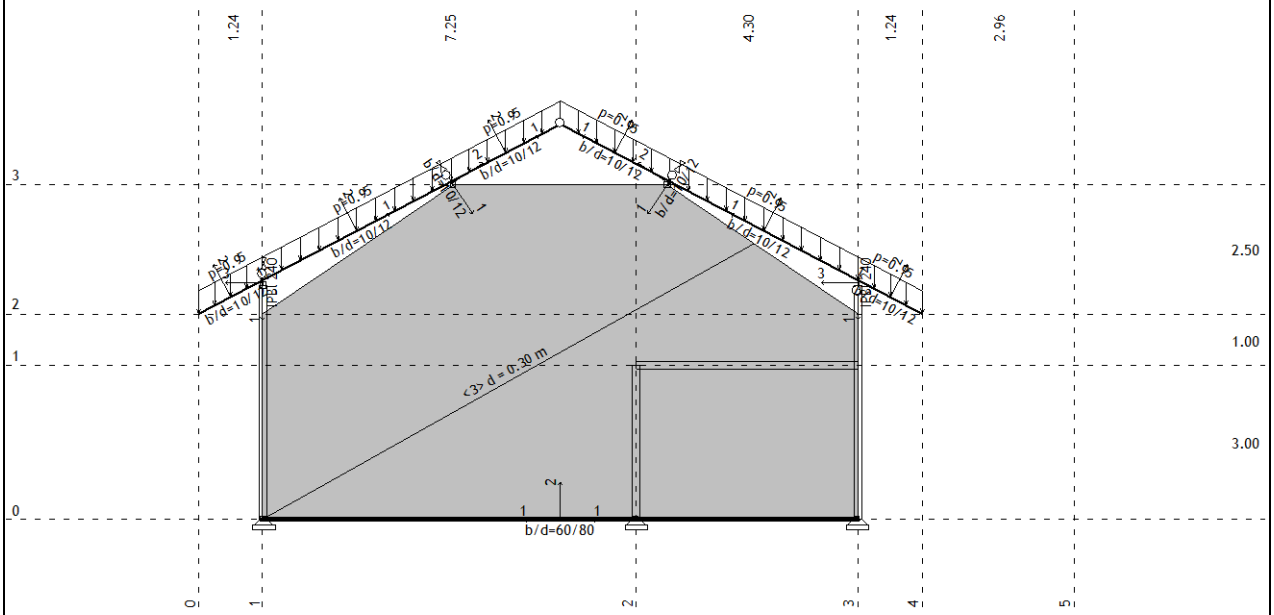
Okvir: V_27

Obt. 3: S



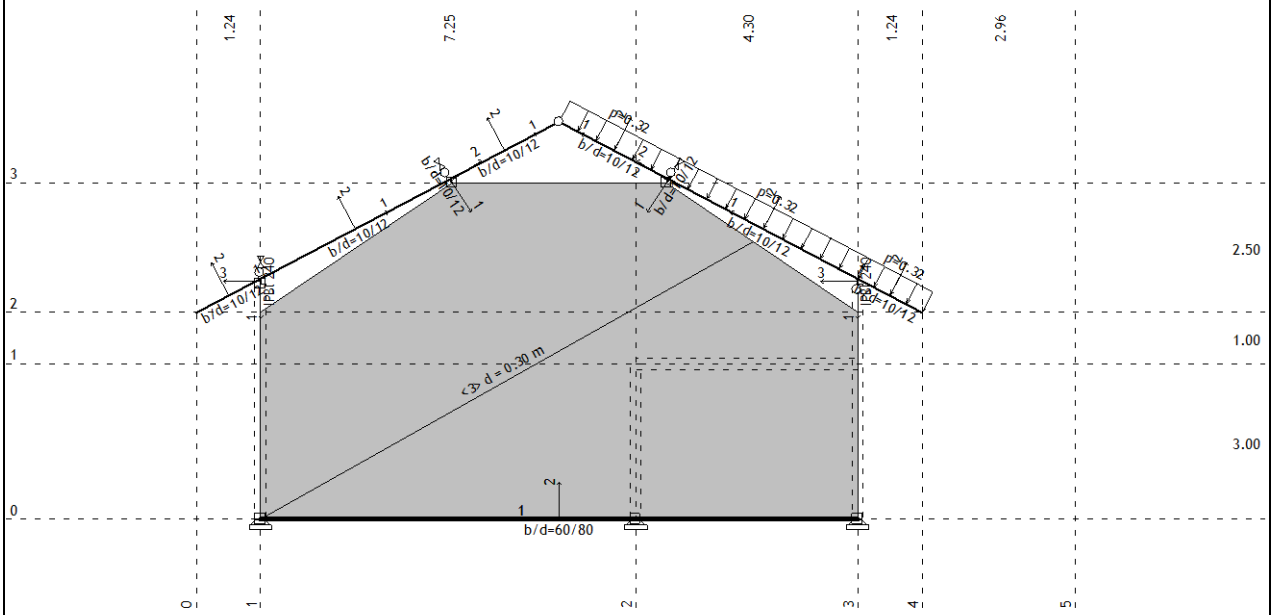
Okvir: V_28

Obt. 3: S



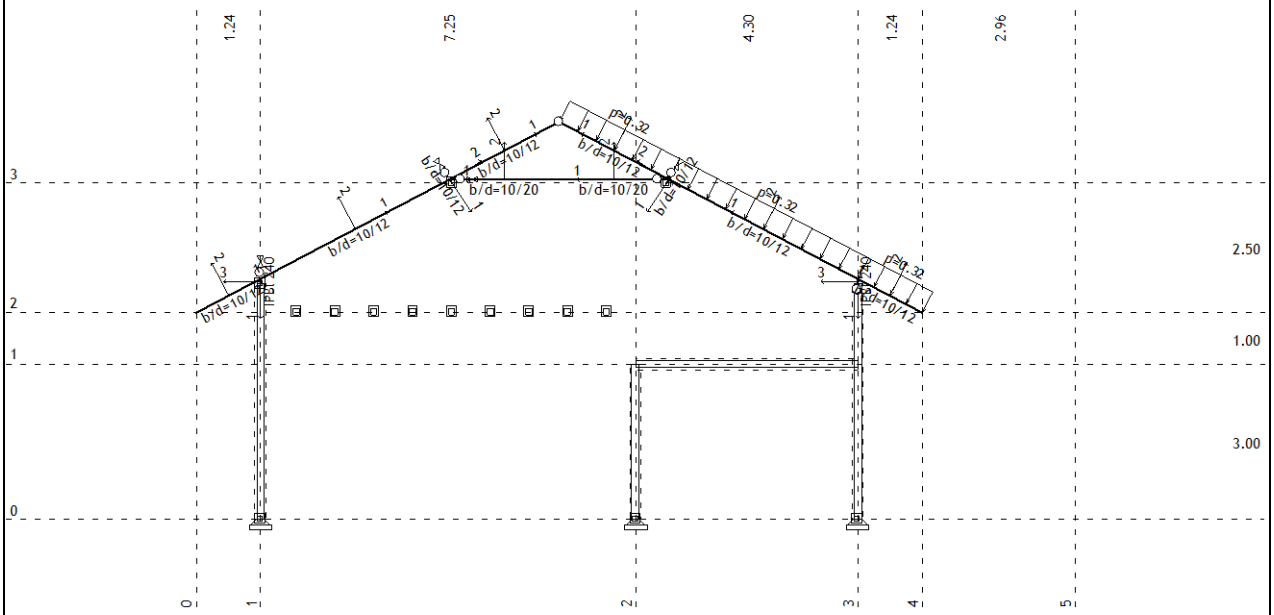
Okvir: V_30

Obt. 4: V



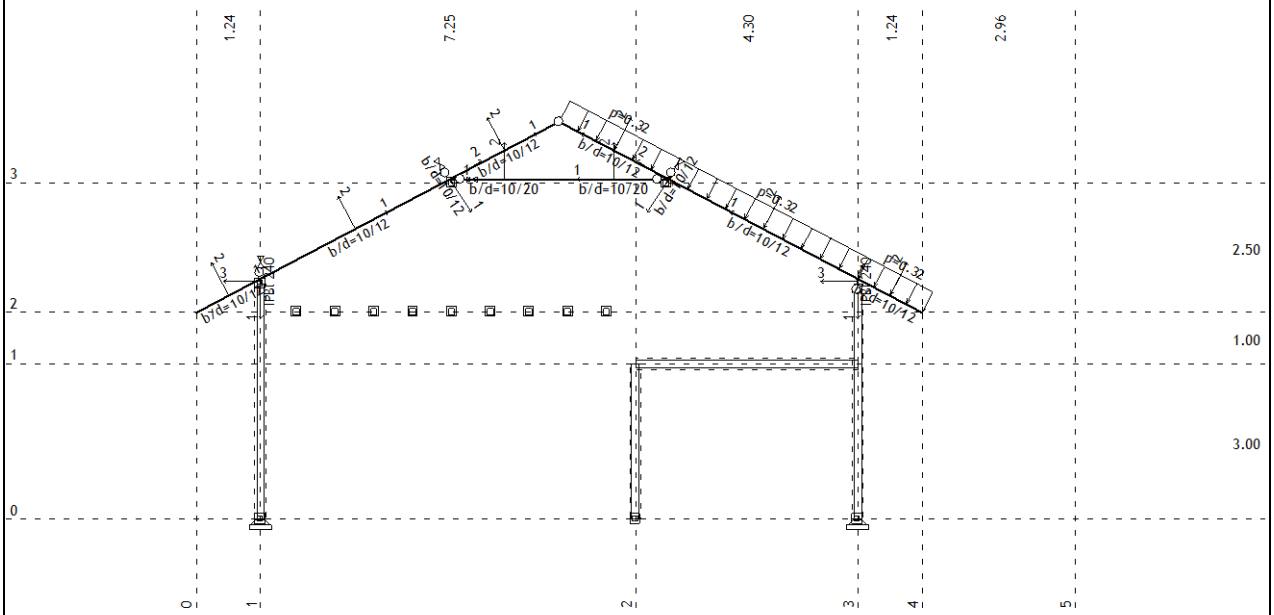
Okvir: V_1

Obt. 4: V



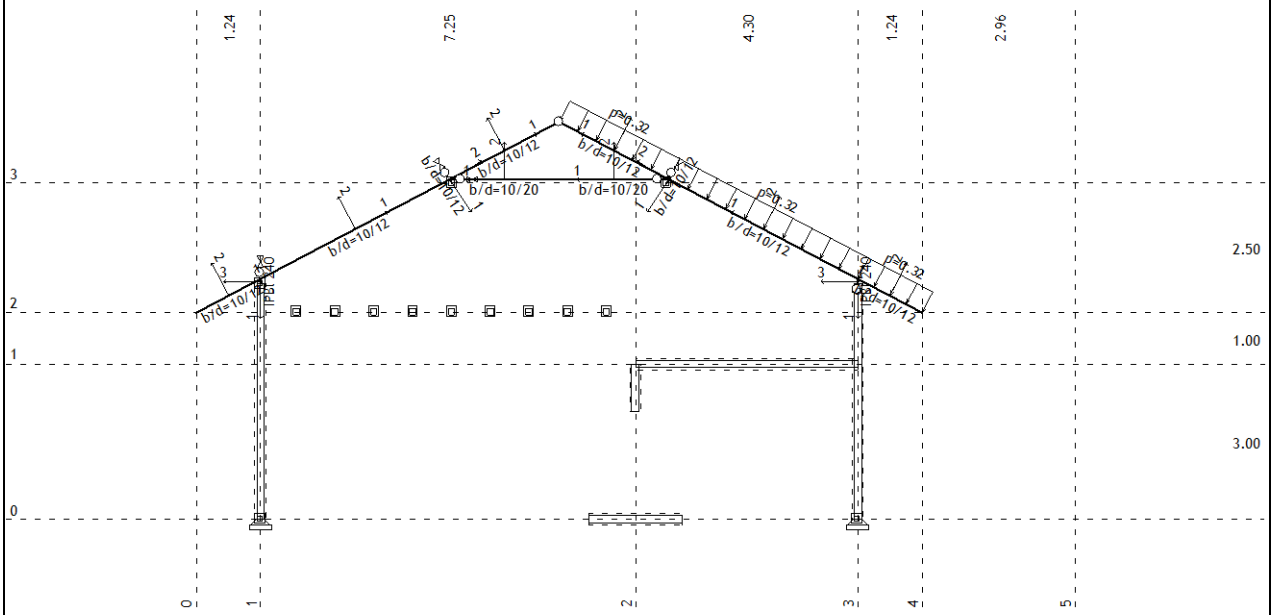
Okvir: V_3

Obt. 4: V



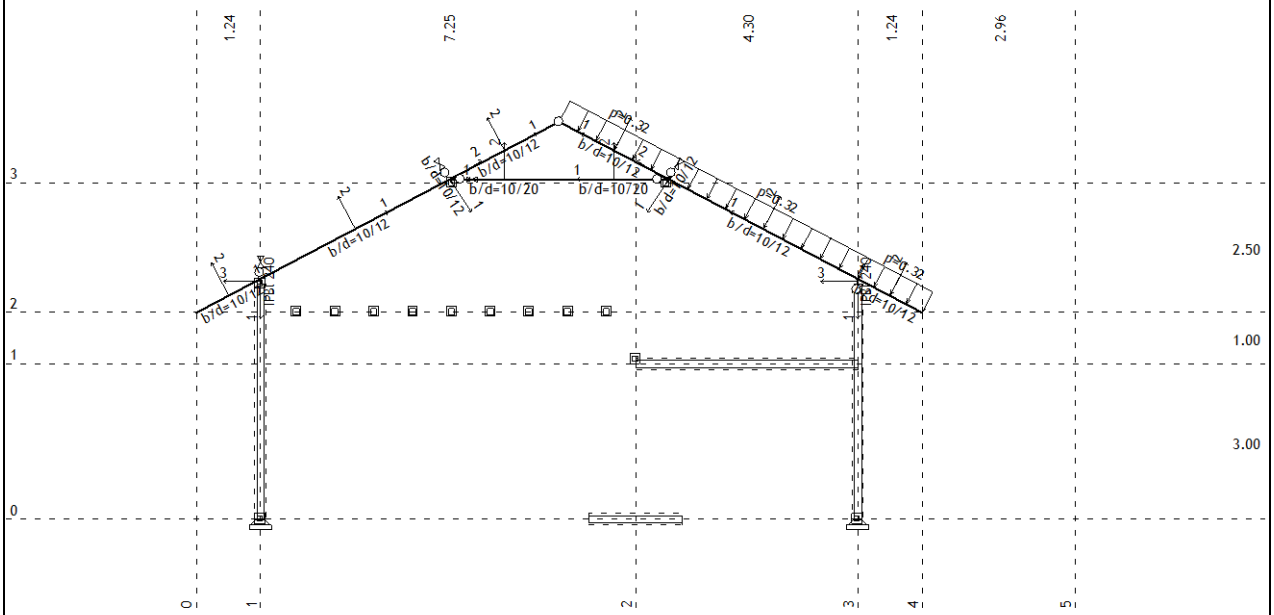
Okvir: V_4

Obt. 4: V



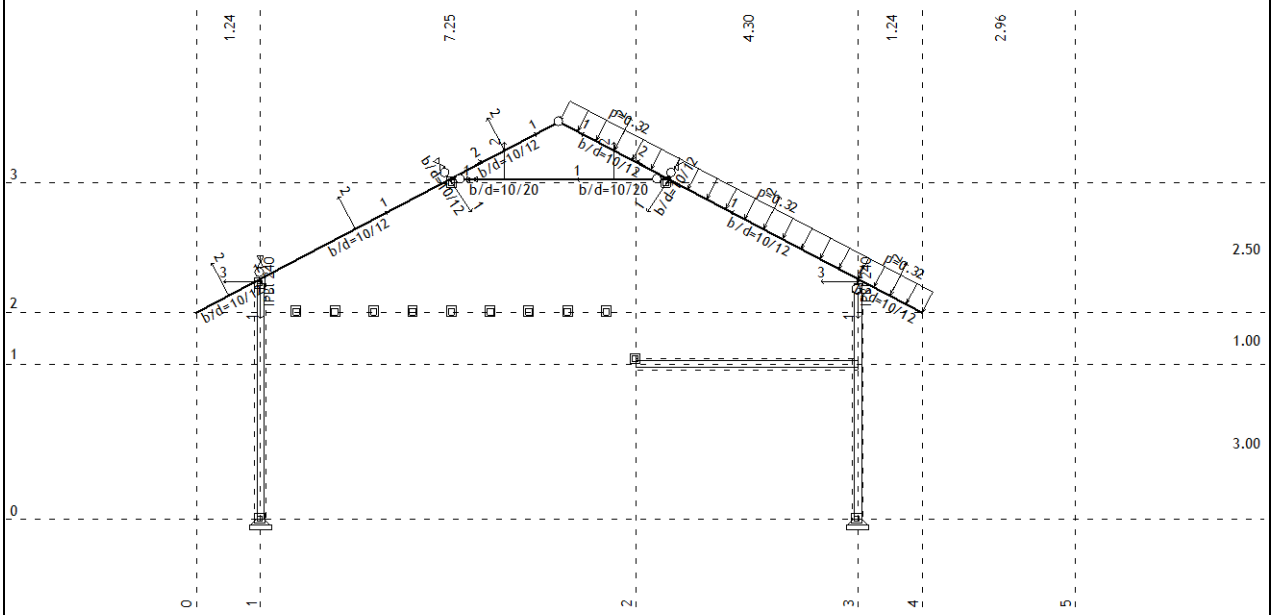
Okvir: V_6

Obt. 4: V



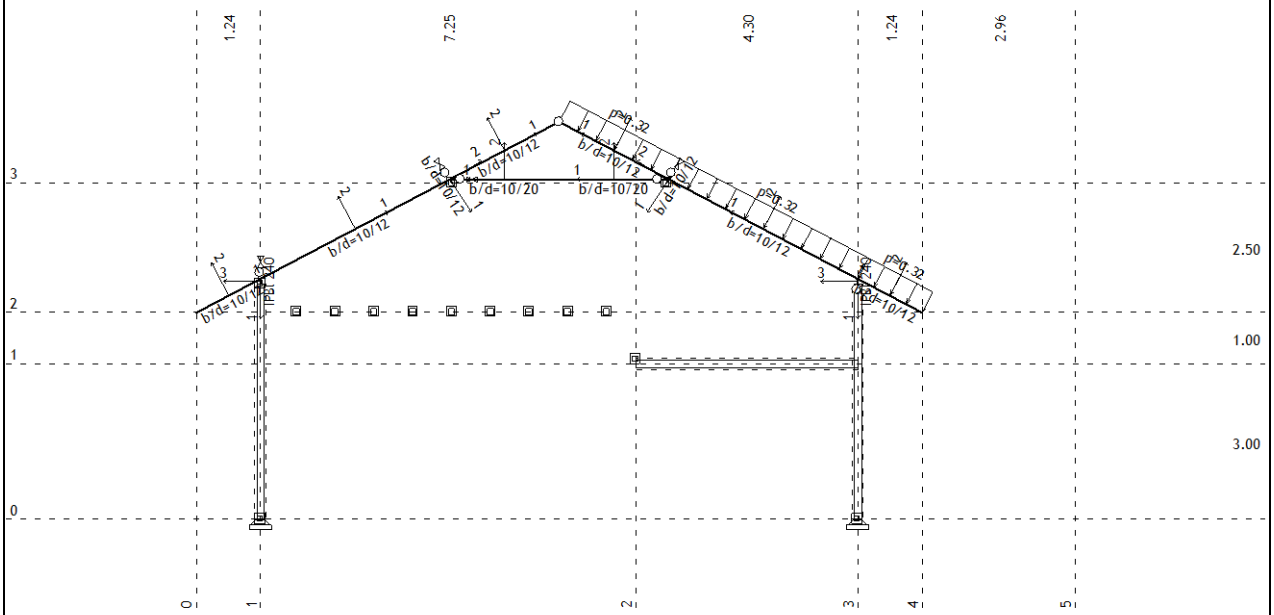
Okvir: V_7

Obt. 4: V



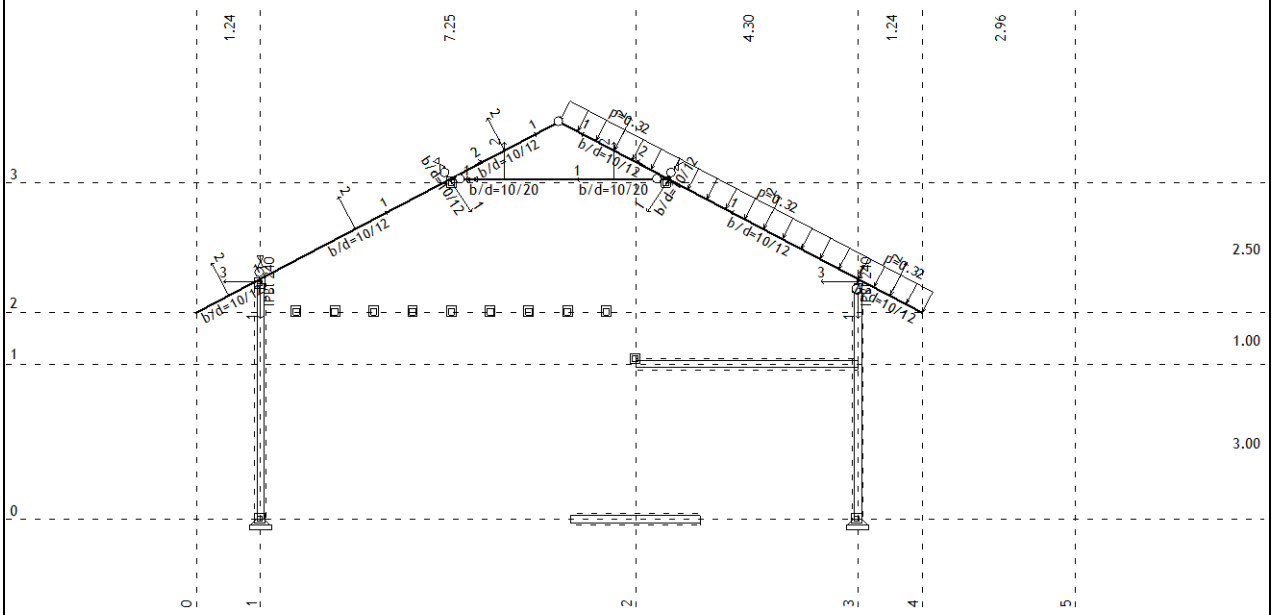
Okvir: V_9

Obt. 4: V



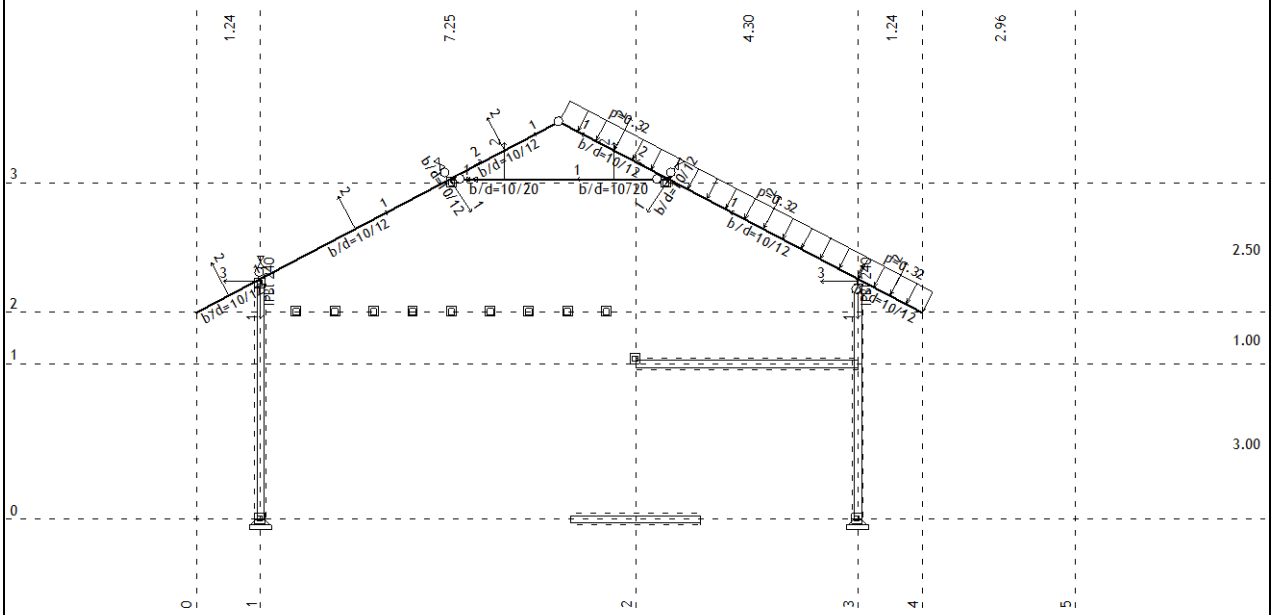
Okvir: V_10

Obt. 4: V



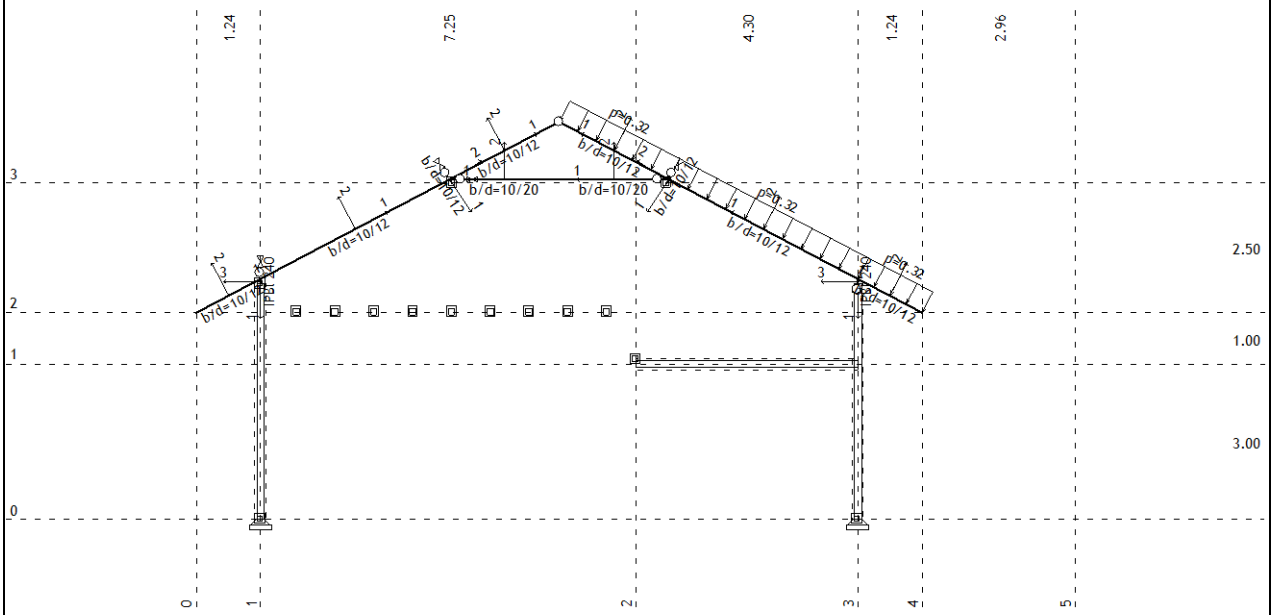
Okvir: V_11

Obt. 4: V



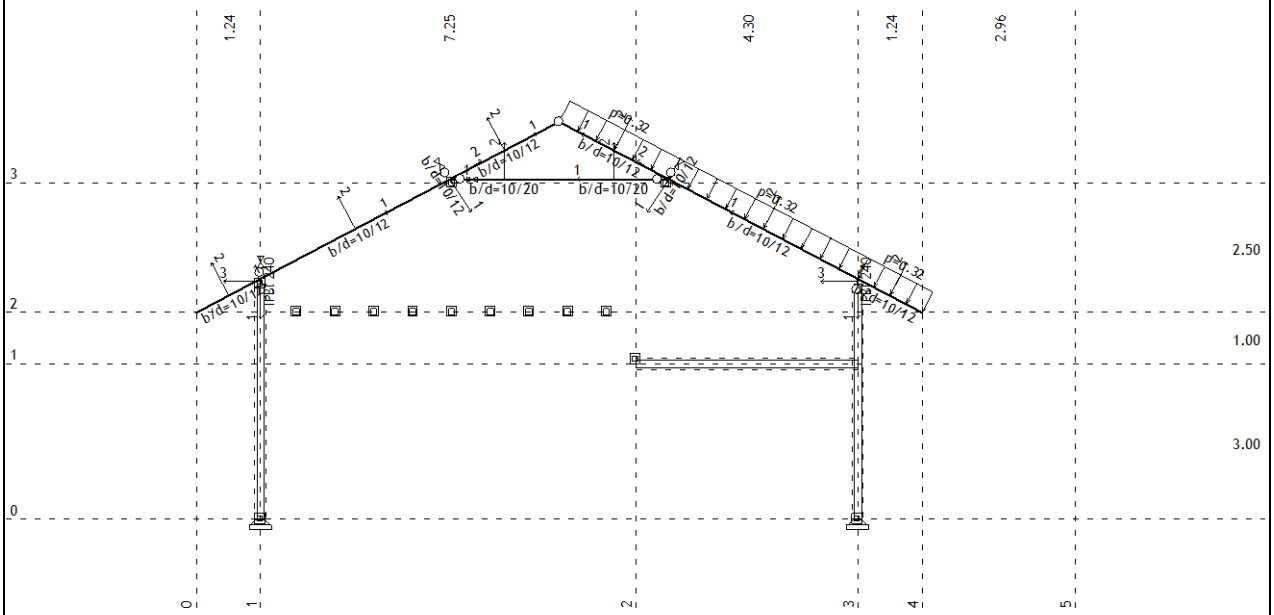
Okvir: V_13

Obt. 4: V



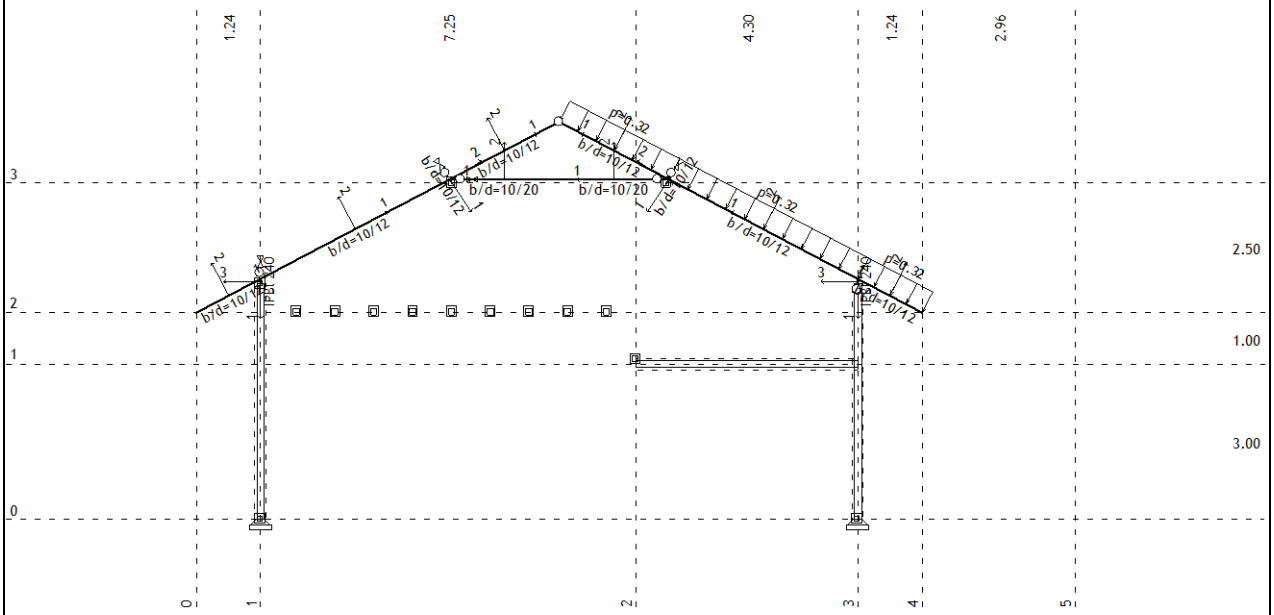
Okvir: V_14

Obt. 4: V



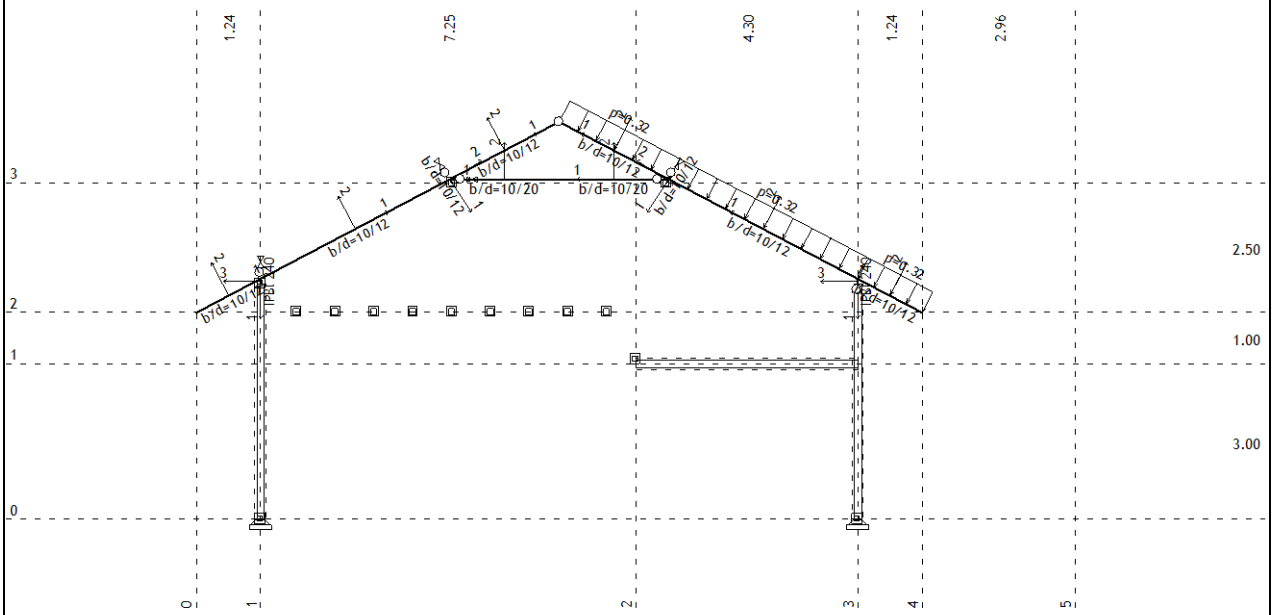
Okvir: V_16

Obt. 4: V



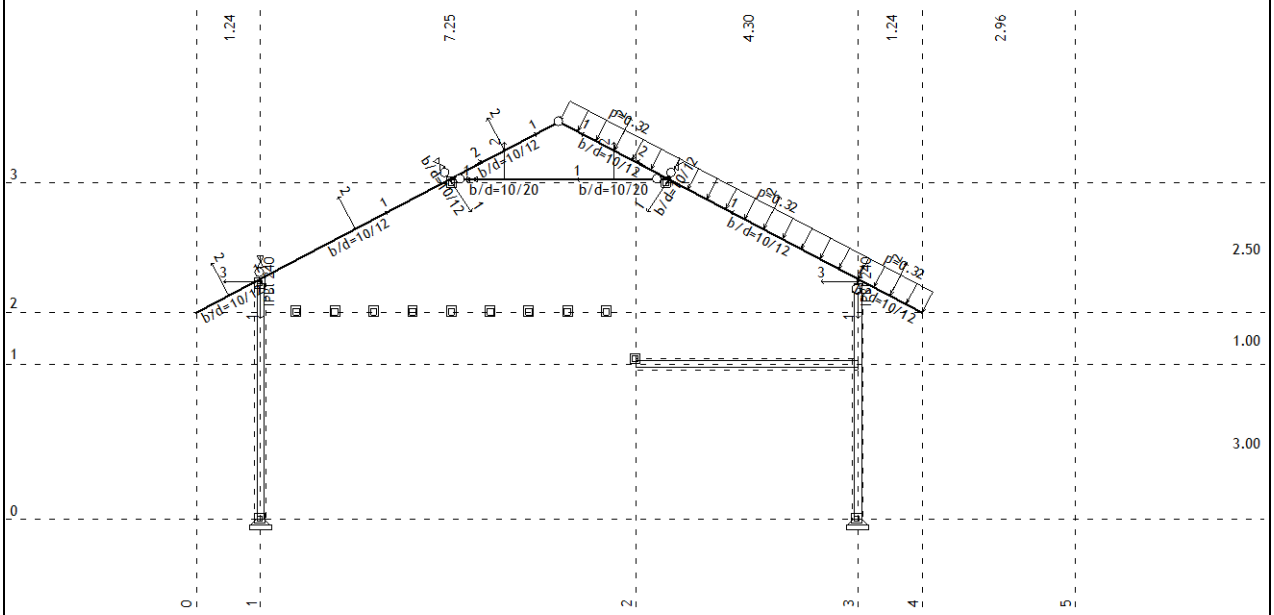
Okvir: V_17

Obt. 4: V



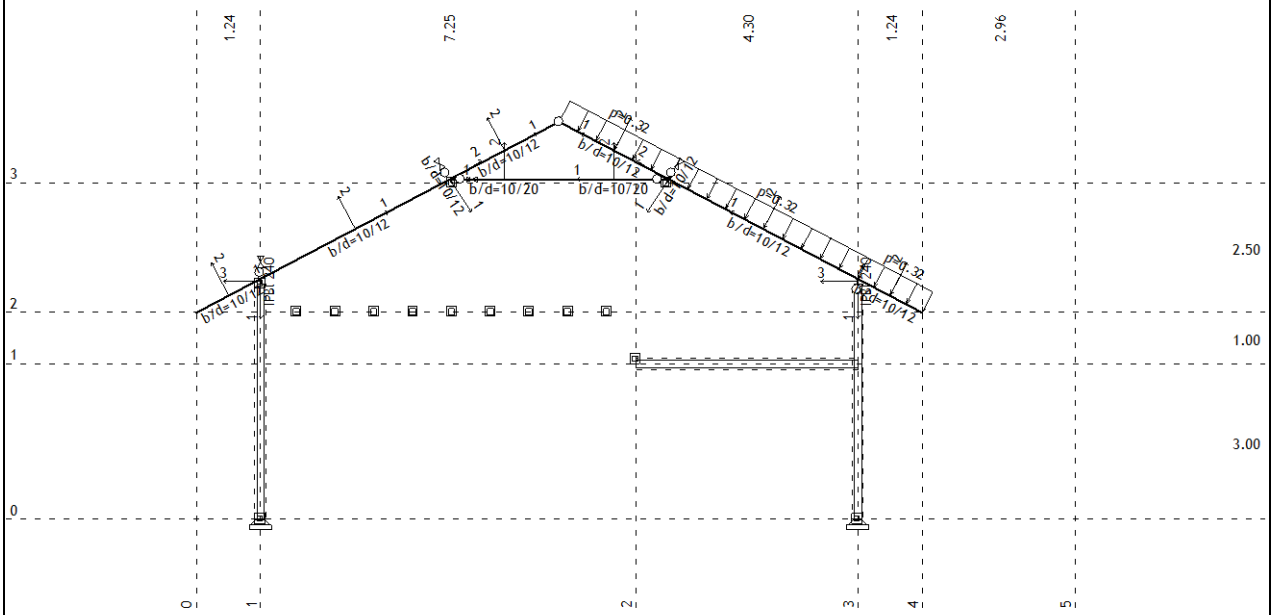
Okvir: V_18

Obt. 4: V



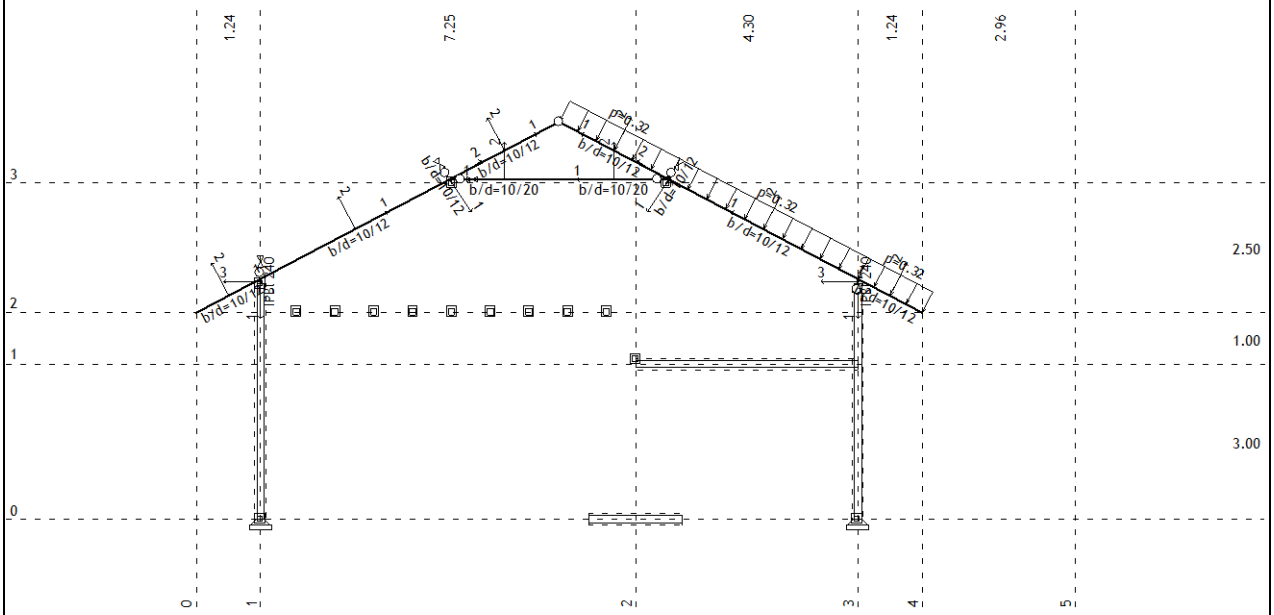
Okvir: V_20

Obt. 4: V



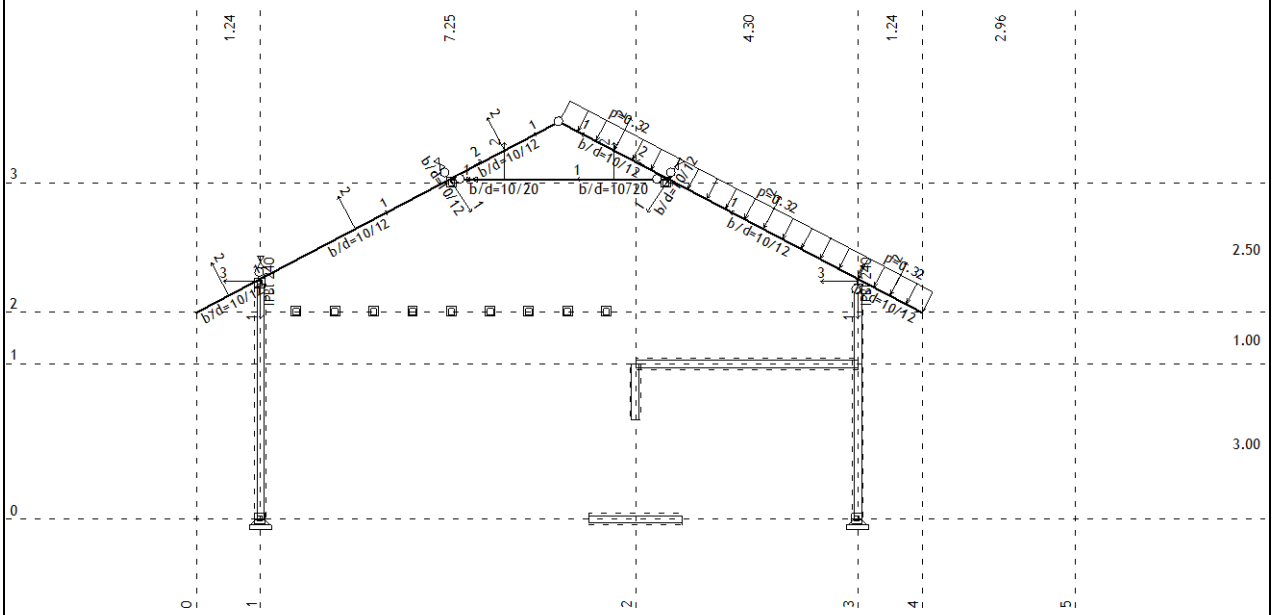
Okvir: V_21

Obt. 4: V



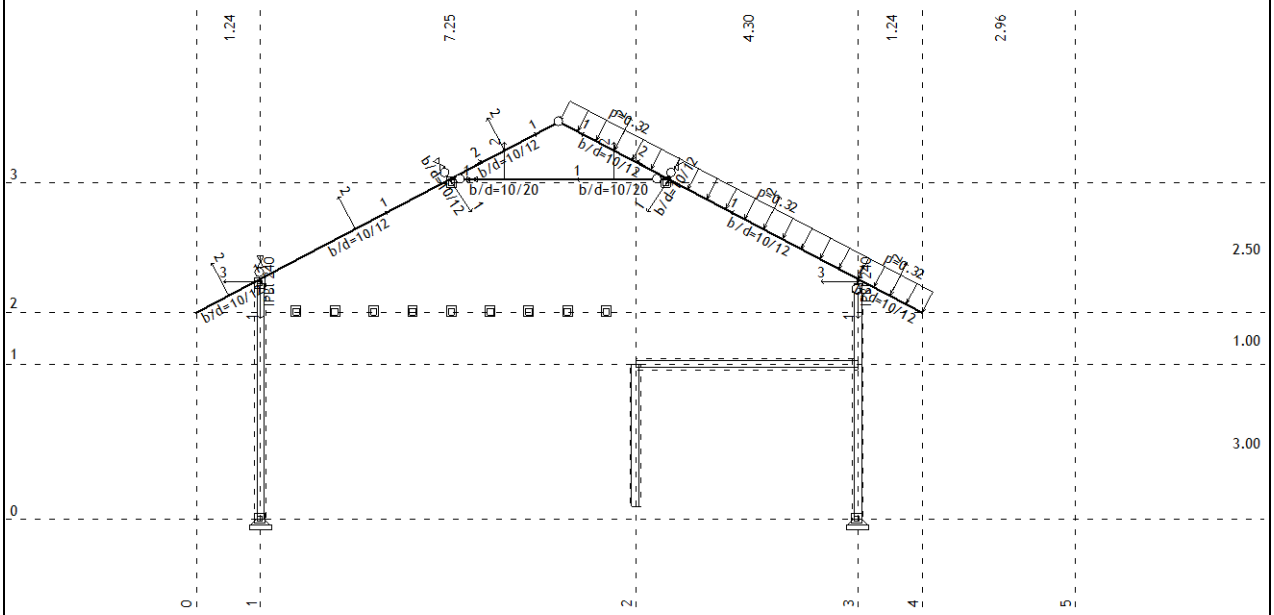
Okvir: V_23

Obt. 4: V



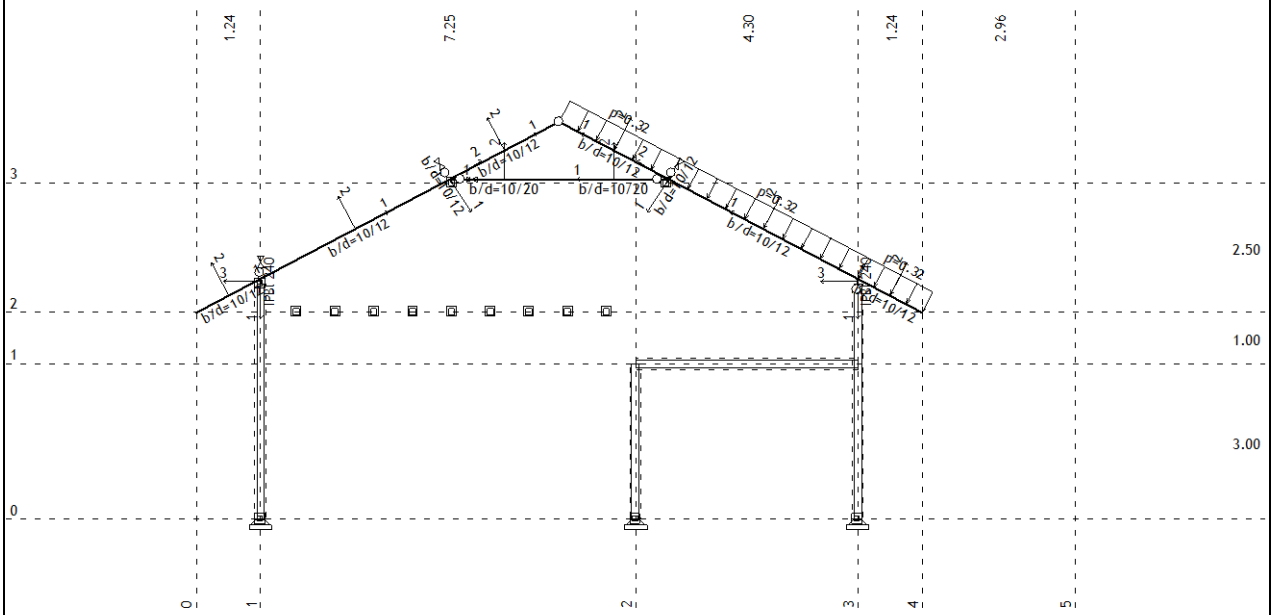
Okvir: V_24

Obt. 4: V



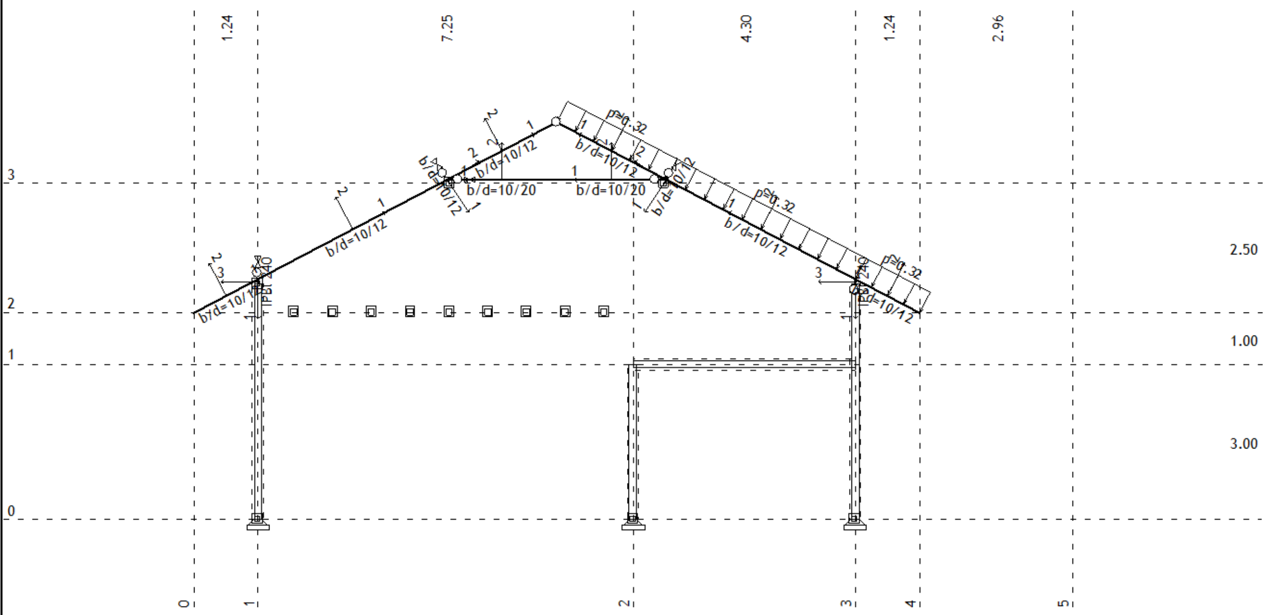
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Obt. 4: V



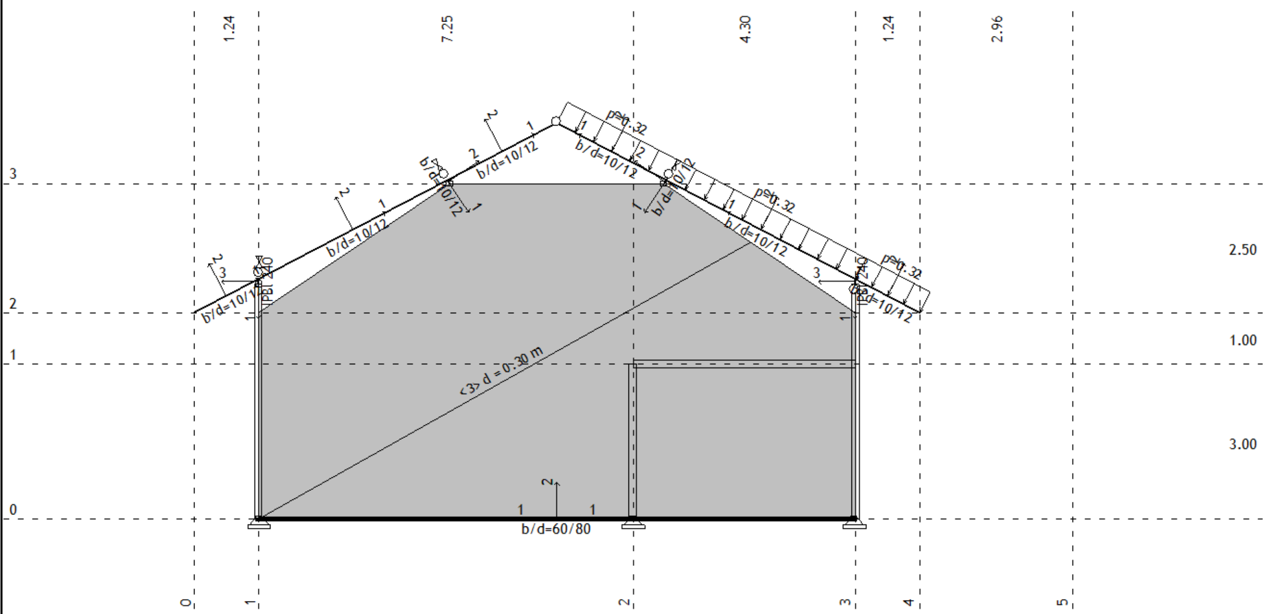
Okvir: V_27

Obt. 4: V



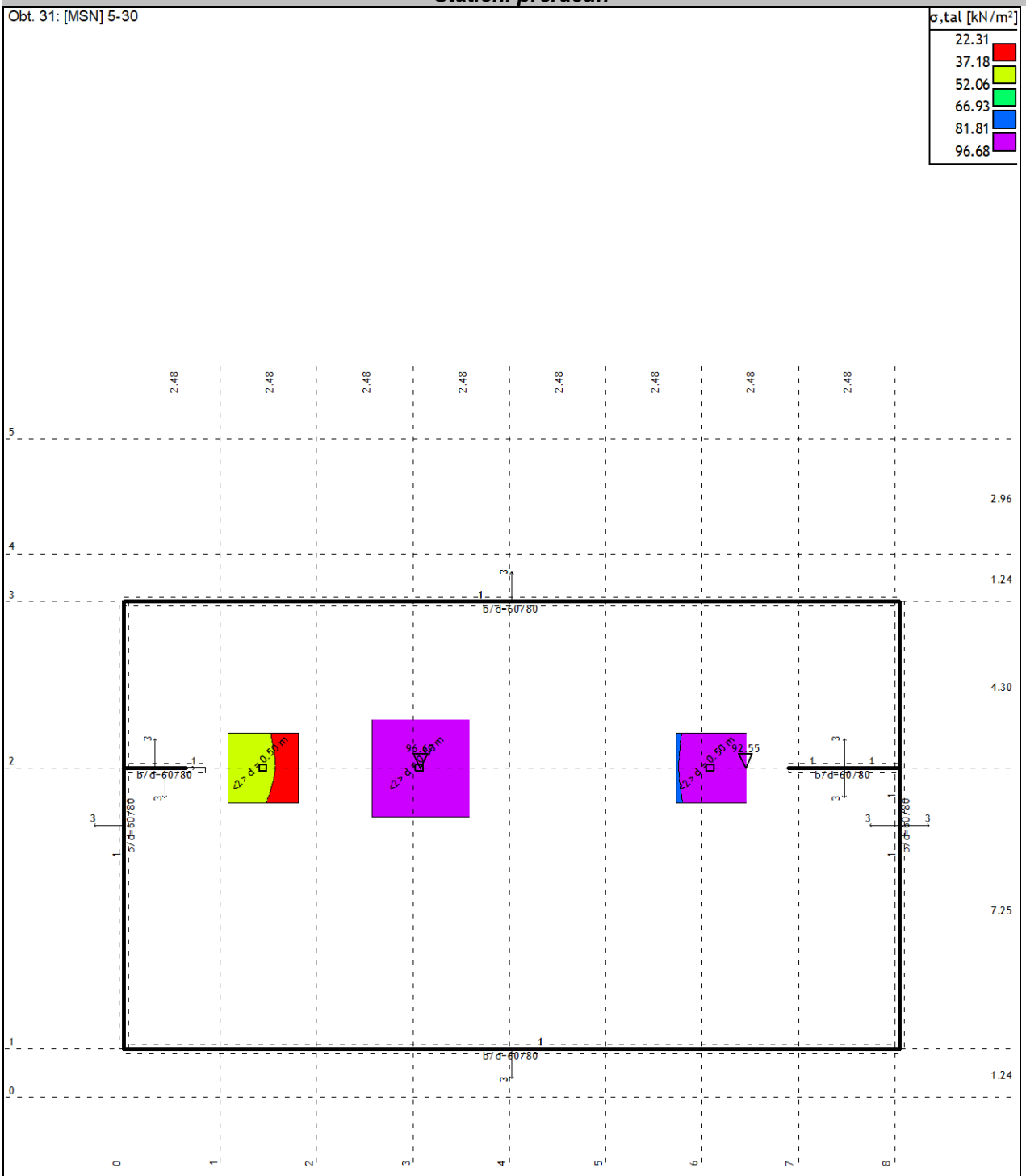
Okvir: V_28

Obt. 4: V



Okvir: V_30

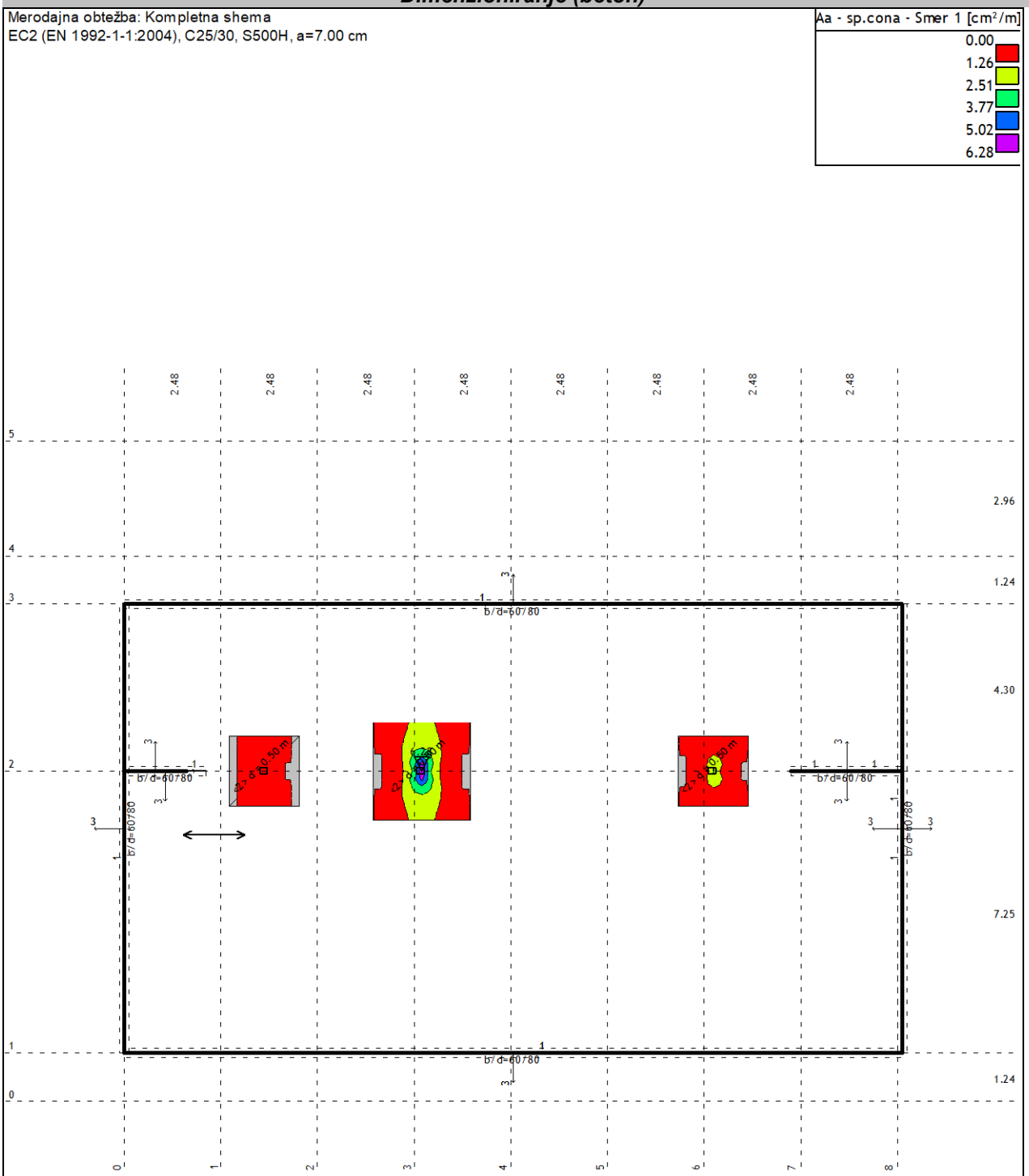
Obt. 31: [MSN] 5-30



Nivo: Pritličje [0.00 m]
Vplivi v pov.podpori: max σ,tal= 96.67 / min σ,tal= 22.31 kN/m²

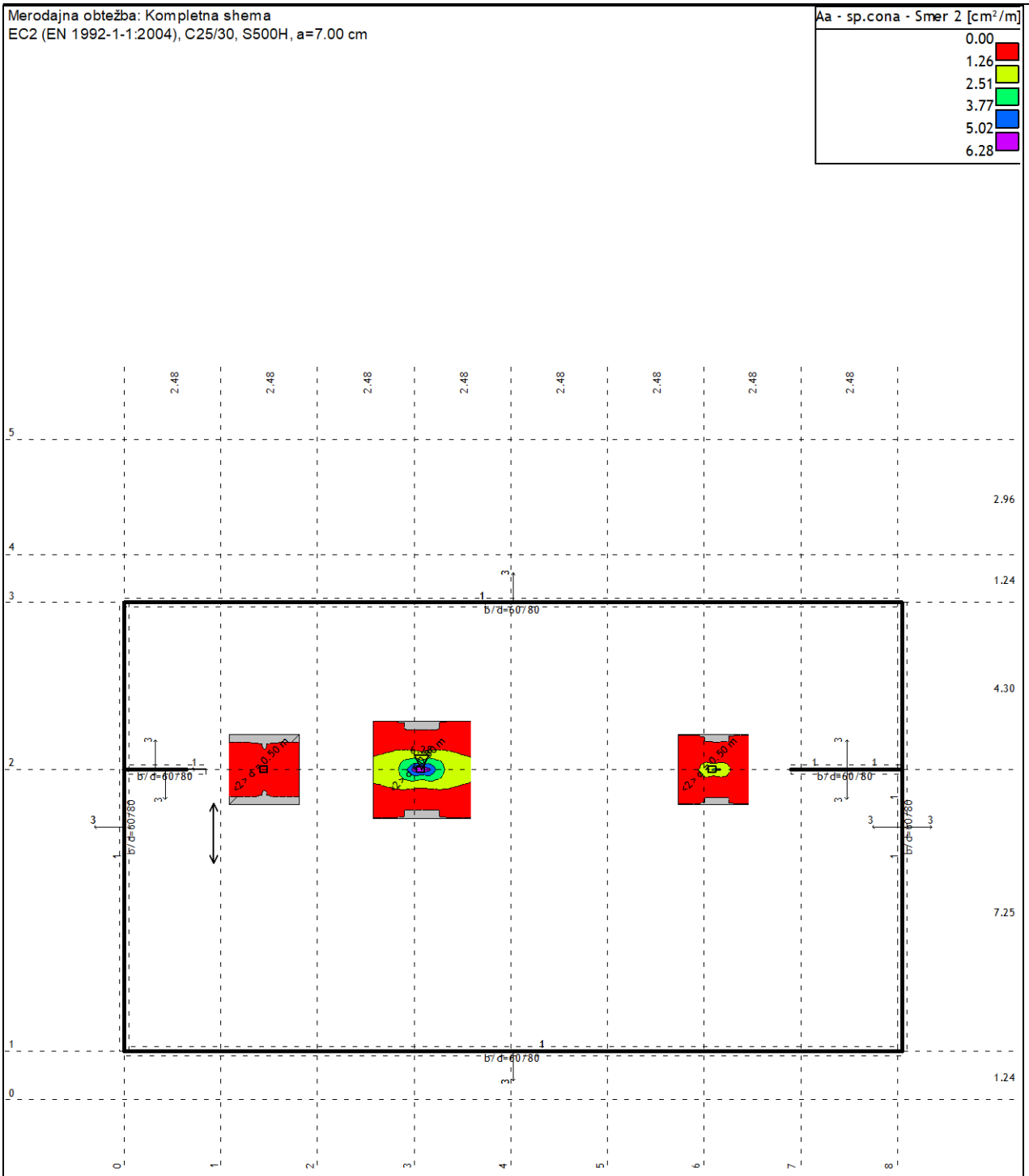
Dimenzioniranje (beton)

Merodajna obtežba: Kompletna shema
EC2 (EN 1992-1-1:2004), C25/30, S500H, a=7.00 cm



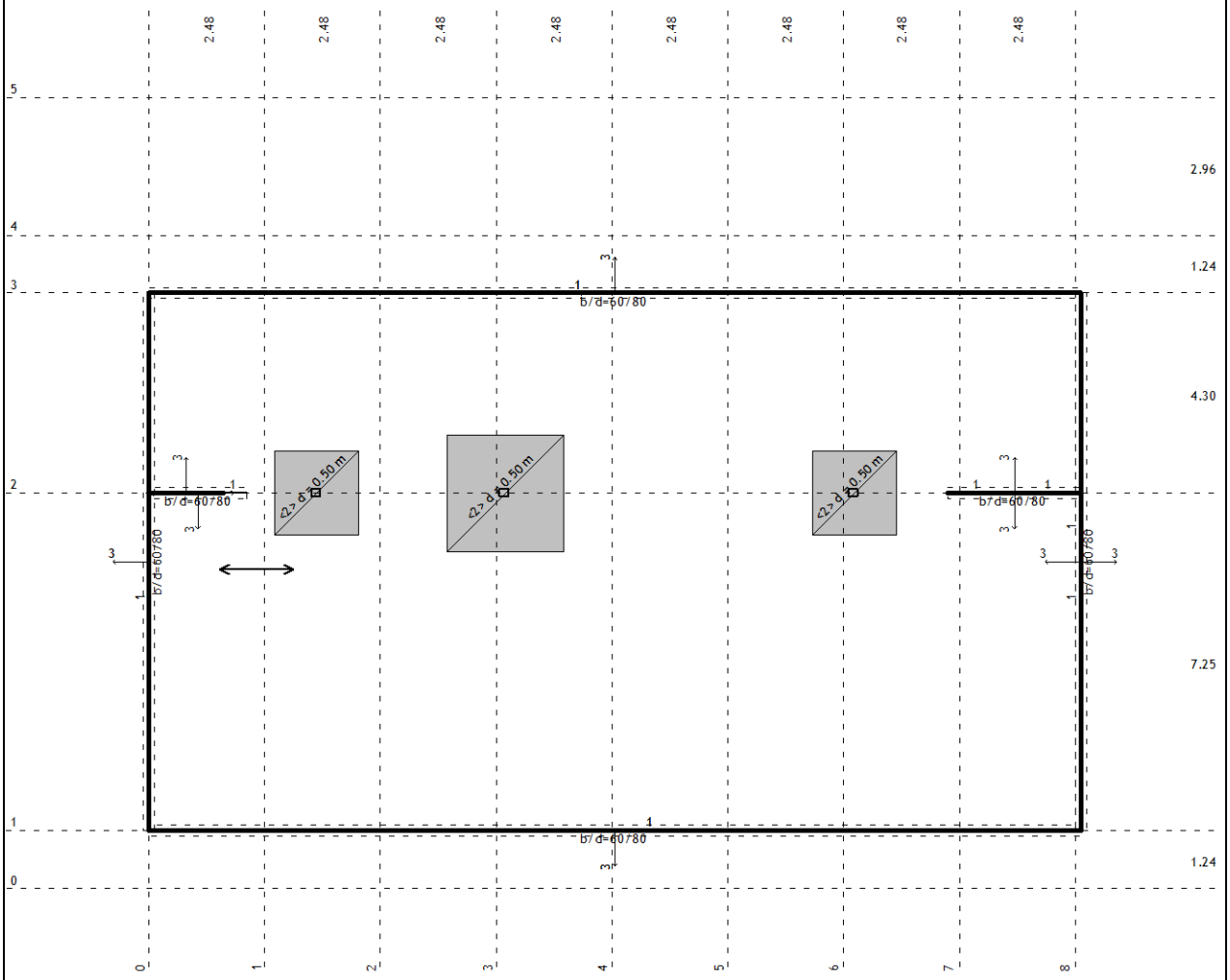
Nivo: Pritličje [0.00 m]
Aa - sp.cona - Smer 1 - max Aa1,s= 6.28 cm²/m

Merodajna obtežba: Kompletna shema
EC2 (EN 1992-1-1:2004), C25/30, S500H, a=7.00 cm



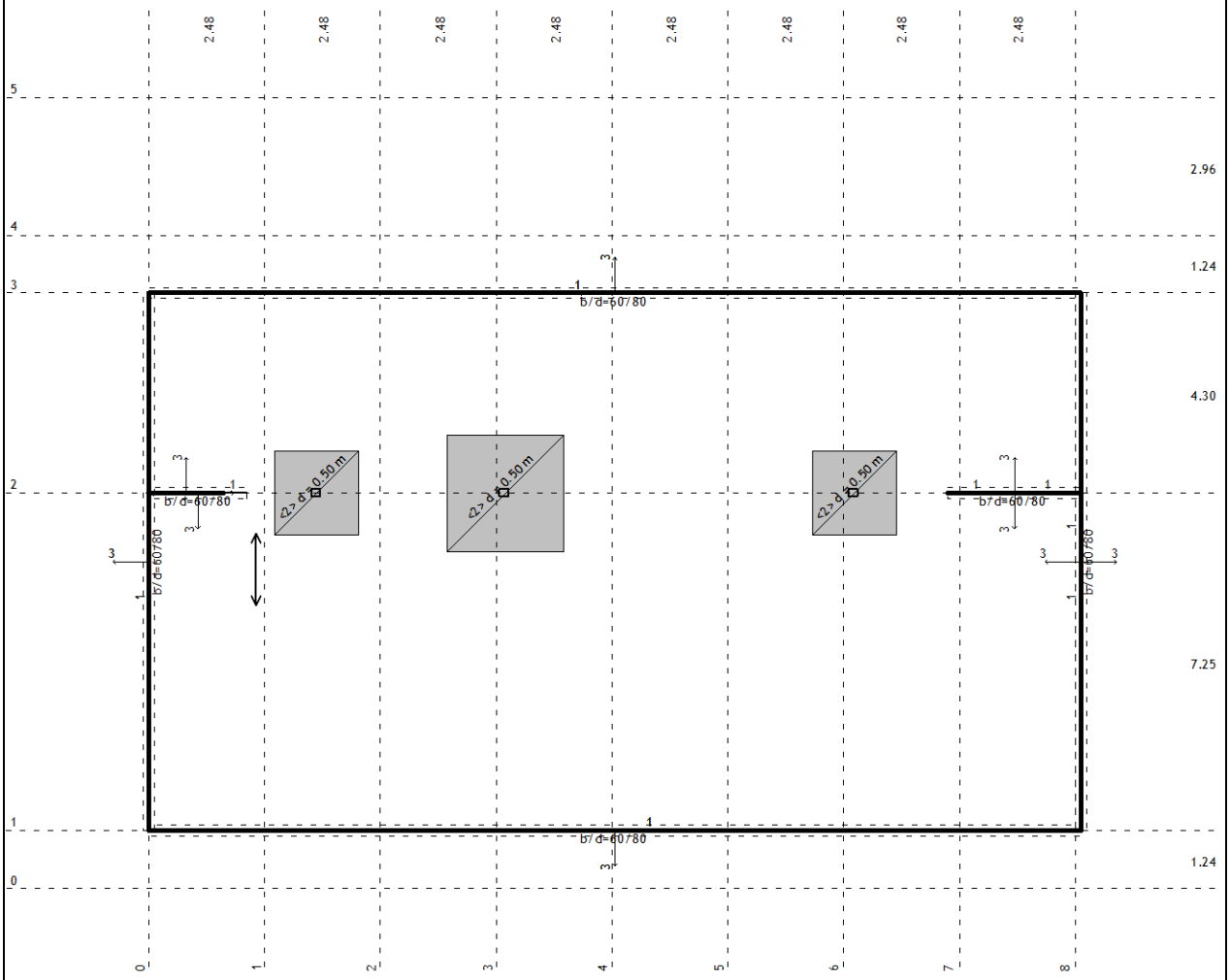
Nivo: Pritličje [0.00 m]
Aa - sp.cona - Smer 2 - max Aa2,s= 6.28 cm²/m

Merodajna obtežba: Kompletna shema
EC2 (EN 1992-1-1:2004), C25/30, S500H, a=7.00 cm



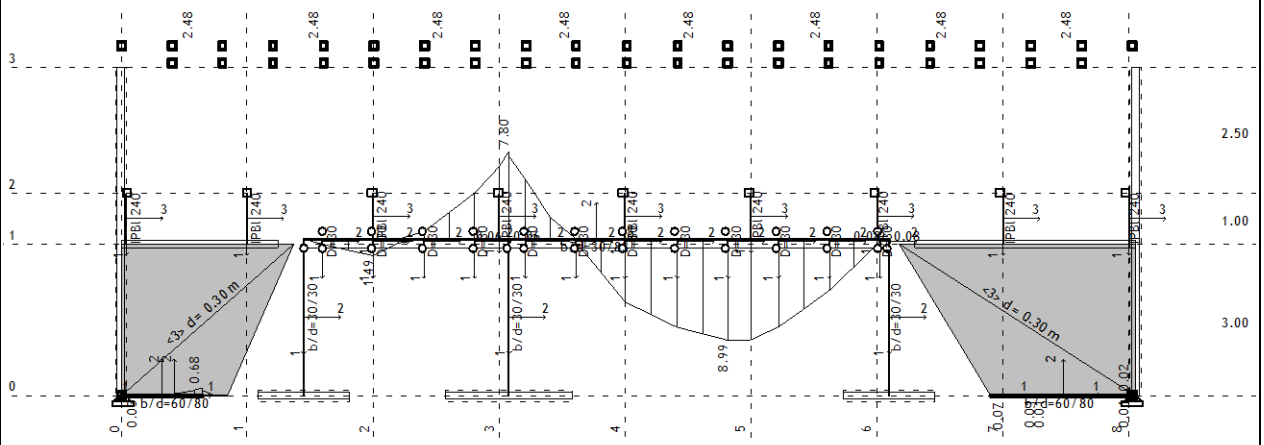
Nivo: Pritličje [0.00 m]
Aa - zg.cona - Smer 1

Merodajna obtežba: Kompletna shema
EC2 (EN 1992-1-1:2004), C25/30, S500H, a=7.00 cm



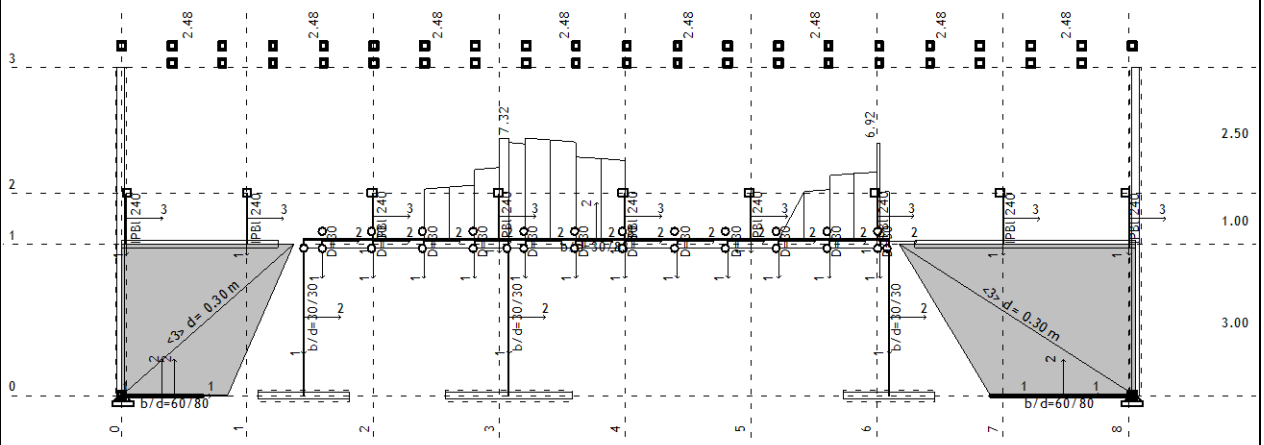
Nivo: Pritličje [0.00 m]
Aa - zg.cona - Smer 2

Merodajna obtežba: Kompletna shema
EC2 (EN 1992-1-1:2004), C35/45, S500H

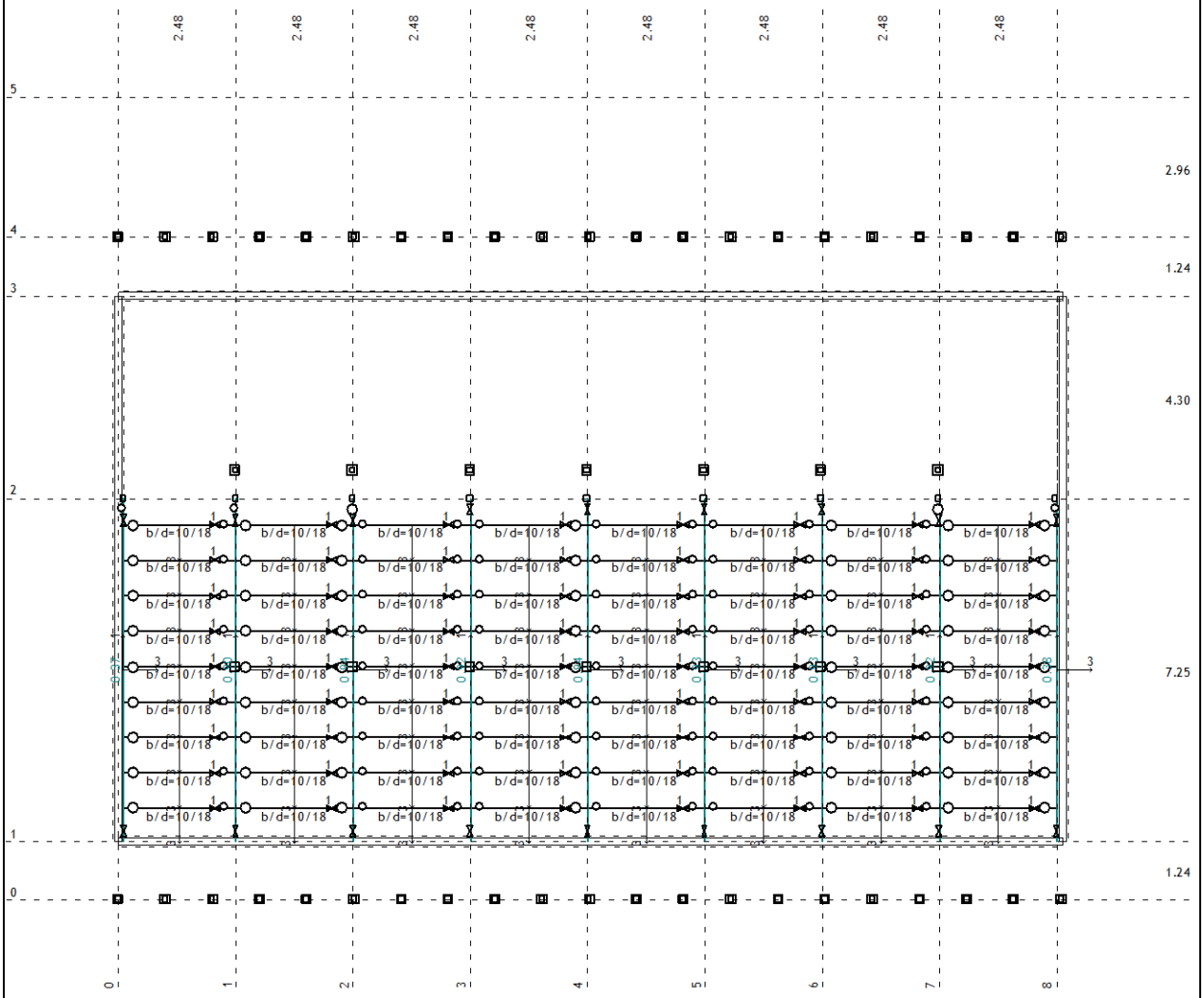


Okvir: H_11
Armatura v gredah: max Aa2/Aa1= 7.80 / 8.99 cm²

Merodajna obtežba: Kompletna shema
EC2 (EN 1992-1-1:2004), C35/45, S500H



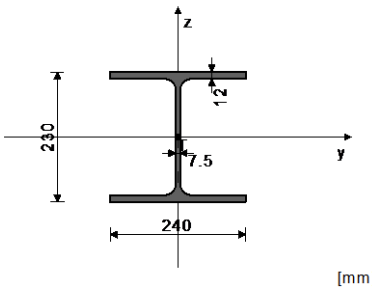
Okvir: H_11
Armatura v gredah: max Aa,st= 7.32 cm²



Nivo: Etaža [4.00 m]
Kontrola stabilnosti

PALICA 5781-2739
PREČNI PREREZ: IPBl 240 [S 235] [Set: 6]
EUROCODE 3 (ENV)

GEOMETRIJSKE KARAKTERISTIKE prereza



Ax =	76.800	cm2
Ay =	51.660	cm2
Az =	25.140	cm2
Ix =	41.700	cm4
Iy =	7760.0	cm4
Iz =	2770.0	cm4
Wy =	674.78	cm3
Wz =	230.83	cm3
Wy,pl =	719.95	cm3
Wz,pl =	345.60	cm3
γM0 =	1.000	
γM1 =	1.100	
γM2 =	1.250	
Anet/A =	0.900	

(fy = 23.5 kN/cm2, fu = 36.0 kN/cm2)

FAKTORJI IZKORIŠČENOSTI PO KOMBINACIJAH OBTEŽB

5. γ=0.92	12. γ=0.92	7. γ=0.92
16. γ=0.91	6. γ=0.83	14. γ=0.82
25. γ=0.81	8. γ=0.79	18. γ=0.79
10. γ=0.79	22. γ=0.78	11. γ=0.72
13. γ=0.70	24. γ=0.70	9. γ=0.70
20. γ=0.69	28. γ=0.68	15. γ=0.61
17. γ=0.59	19. γ=0.57	27. γ=0.57
23. γ=0.51	29. γ=0.50	21. γ=0.48
26. γ=0.38	30. γ=0.37	

PALICA IZPOSTAVLJENA NATEGU IN UPOGIBU
(obtežni primer 5, na 370.0 cm od začetka palice)

Računska osna sila	Nsd =	0.111	kN
Prečna sila v y smeri	Vsd_y =	0.028	kN
Prečna sila v z smeri	Vsd_z =	16.422	kN
Upogibni moment okoli y osi	Msd_y =	125.42	kNm
Upogibni moment okoli z osi	Msd_z =	0.095	kNm
Sistemska dolžina palice	L =	725.00	cm

5.3 KLASIFIKACIJA PREČNIH PREREZOV
Razred prereza 1

5.4 NOSILNOST PREČNIH PREREZOV
5.4.3 Nateg

Plast.rač.nosilnost bruto prereza	Npl.Rd =	1804.8	kN
Mejna rač.nosilnost neto prereza	Nu.Rd =	1791.6	kN
Računska nos. na nateg	Nt.Rd =	1791.6	kN

Prerez ne ustreza duktilnemu obnašanju!
Pogoj 5.13: Nsd <= Nt.Rd (0.11 <= 1791.59)

5.4.5 Upogib y-y

Računski plastični moment	Mpl.Rd =	169.19	kNm
Računska nos.na lokalno izbočitev	Mo.Rd =	144.16	kNm
Računski elastični moment	Mel.Rd =	158.57	kNm
Računska nosilnost na upogib	Mc.Rd =	169.19	kNm

Pogoj 5.17: Msd_y <= Mc.Rd_y (125.42 <= 169.19)

5.4.5 Upogib z-z

Računski plastični moment	Mpl.Rd =	81.216	kNm
Računska nos.na lokalno izbočitev	Mo.Rd =	49.314	kNm
Računski elastični moment	Mel.Rd =	54.246	kNm
Računska nosilnost na upogib	Mc.Rd =	81.216	kNm

Pogoj 5.17: Msd_z <= Mc.Rd_z (0.10 <= 81.22)

5.4.6 Strig

Računska plast.nos.na strig z-z	Vpl.Rd =	209.62	kN

Pogoj 5.20: Vsd_z <= Vpl.Rd_z (16.42 <= 209.62)

Računska plast.nos.na strig y-y	Vpl.Rd =	778.64	kN

Pogoj 5.20: Vsd_y <= Vpl.Rd_y (0.03 <= 778.64)

5.4.9 Upogib z osno in prečno silo
Ni potrebno zmanjšanje upogibne nosilnosti
Pogoj: Vsd_z <= 50%Vpl.Rd_z i Vsd_y <= 50%Vpl.Rd_y

5.4.8 Upogib in osna sila

Razmerje Msd_y / Mpl.Rd_y		0.741

Pogoj 5.36: (0.74 <= 1)

5.5 NOSILNOST ELEMENTOV
5.5.2 Bočna zvrnitev upogibnih nosilcev

Koeficient	C1 =	0.972	
Koeficient	C2 =	0.304	
Koeficient	C3 =	0.980	
Koef.ukl.dolžine za uklon	k =	0.500	
Koef.ukl.dolžine za vbočenje	kw =	1.000	
Koordinata	zg =	0.000	cm
Koordinata	zj =	0.000	cm
Razmak med bočnimi podporami	L =	725.00	cm
Sektorski vztrajnostni moment	Iw =	3.28e+5	cm6
Krit.moment bočne zvrnitve	Mcr =	438.74	kNm
Koeficient	βw =	1.000	
Koeficient imperf.	αLT =	0.210	
Brezdimenz.vitkost	λLT_ =	0.621	
Koeficient zmanjšanja	χLT =	0.882	
Računska uklonska nosilnost	Mb.Rd =	135.64	kNm

5.5.3 Upogib in nateg

Redukcijski koef.za vektorske vplive	ψvec =	0.800	
Elast.odp.mom.za krajne tlač.vlakno	Wcom =	674.78	cm3
Efektivni rač.notranji moment	Meff.sd =	125.41	kNm

Pogoj 5.50: Meff.sd <= Mb.Rd (125.41 <= 135.64)

5.6 LOKALNO IZBOČENJE ZARADI STRIGA
za strig v ravnini z-z

Višina stojine	d =	20.600	cm
Debelina stojine	tw =	0.750	cm

Ni prečnih ojačitev v sredini

Koeficient izbočenja pri strigu	kτ =	5.340	

Ni potrebna kontrola izbočenja zaradi striga

Pogoj: d / tw <= 69 ε (27.47 <= 69.00)

5.6.7 Interakcija prečne sile, upogiba in osne sile
za strig v ravnini z-z

Računski plastični moment pasnic	Mf.Rd =	133.64	kNm

Pogoji 5.66a in 5.66b so izpolnjeni

5.7 VNOS KONCENTRIRANIH SIL V STOJINO
5.7.7 Uklon pasnice v smeri stojine

Koeficient(razred pasnice 1)	k =	0.300	
Površina stojine	Aw =	17.250	cm2
Površina tlač.pasnice	Afc =	28.800	cm2

Preprečen je uklon pasnice v smeri stojine

Pogoj 5.80: (27.47 <= 207.48)

KONTROLA STRIŽNE NOSILNOSTI
(obtežni primer 7, na 706.7 cm od začetka palice)

Računska osna sila	Nsd =	0.110	kN
Prečna sila v y smeri	Vsd_y =	0.028	kN
Prečna sila v z smeri	Vsd_z =	59.416	kN
Upogibni moment okoli y osi	Msd_y =	10.907	kNm
Sistemska dolžina palice	L =	725.00	cm

5.4 NOSILNOST PREČNIH PREREZOV
5.4.6 Strig

Računska plast.nos.na strig z-z	Vpl.Rd =	209.62	kN

Pogoj 5.20: Vsd_z <= Vpl.Rd_z (59.42 <= 209.62)

Računska plast.nos.na strig y-y	Vpl.Rd =	778.64	kN

Pogoj 5.20: Vsd_y <= Vpl.Rd_y (0.03 <= 778.64)

5.6 LOKALNO IZBOČENJE ZARADI STRIGA
za strig v ravnini z-z

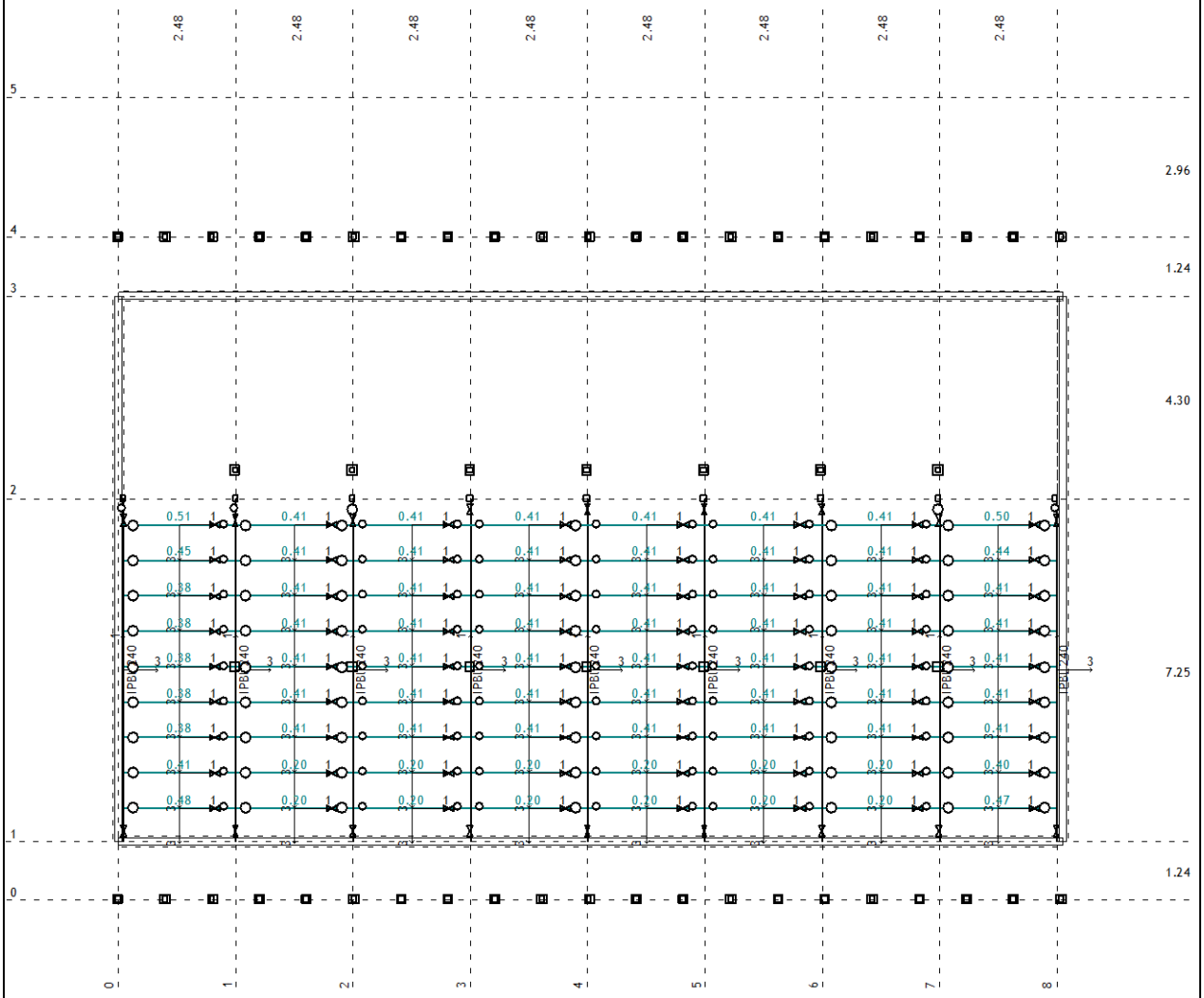
Višina stojine	d =	20.600	cm
Debelina stojine	tw =	0.750	cm

Ni prečnih ojačitev v sredini

Koeficient izbočenja pri strigu	kτ =	5.340	

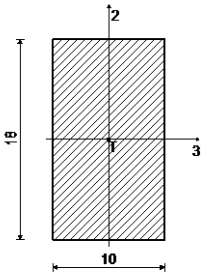
Ni potrebna kontrola izbočenja zaradi striga

Pogoj: d / tw <= 69 ε (27.47 <= 69.00)



Nivo: Etaža [4.00 m]
Kontrola stabilnosti

PALICA 2594-3664
Monoliten les - iglavci in mehki listavci - C24
Eksploatacijski razred 2
EUROCODE (EN 1995-1-1)



[cm]

FAKTORJI IZKORIŠČENOSTI PO KOMBINACIJAH OBTEŽB

7. γ=0.41	14. γ=0.41	16. γ=0.41
25. γ=0.41	20. γ=0.36	22. γ=0.36
10. γ=0.36	28. γ=0.36	11. γ=0.34
12. γ=0.34	5. γ=0.34	6. γ=0.34
9. γ=0.29	8. γ=0.29	17. γ=0.29
18. γ=0.29	23. γ=0.20	24. γ=0.20
15. γ=0.20	13. γ=0.20	29. γ=0.20
26. γ=0.15	27. γ=0.15	19. γ=0.15
21. γ=0.15	30. γ=0.15	

KONTROLA NORMALNIH NAPETOSTI
(obtežni primer 7, na 103.5 cm od začetka palice)

Prečna sila v smeri osi 2	V2ed =	-0.910	kN
Upogibni moment okoli osi 3	M3ed =	-3.258	kNm

KONTROLA NAPETOSTI - UPOGIB

Vrsta obtežbe: osnovno - srednjetrajno			
Korekcijski koeficient	Kmod =	0.800	
Parcialni koef. za karakteristike materiala	γm =	1.300	
Dodatek za elemente z malimi dimenzijami - os 2	Kh_2 =	1.084	
Dodatek za elemente z malimi dimenzijami - os 3	Kh_3 =	1.000	
Faktor oblik (za pravokotni prerez)	km =	0.700	
Karakteristična upogibna trdnost	fm,k =	24.000	MPa
Računska upogibna trdnost - os 2	fm,2,d =	16.017	MPa
Računska upogibna trdnost - os 3	fm,3,d =	14.769	MPa
Odpornostni moment	W3 =	540.00	cm3
Normalna upogibna napetost okoli osi 3	σm3,d =	6.032	MPa

σm3,d <= fm,3,d (6.032 <= 14.769)
Izkoriščenost prereza je 40.8%

DOKAZ BOČNE STABILNOSTI

Vrsta obtežbe: osnovno - srednjetrajno			
Korekcijski koeficient	Kmod =	0.800	
Parcialni koef. za karakteristike materiala	γm =	1.300	
Razmak pridržanih točk pravokotno na smer osi 2	lef =	248.49	cm
5% fraktil modula E paralelno z vlakni	E0.05 =	7400.0	MPa
5% fraktil strižnega modula G	G0.05 =	460.00	MPa
Torzijski vztrajnostni moment	Itor =	3882.8	cm4
Vztrajnostni moment	I2 =	1500.0	cm4
Odpornostni moment	W3 =	540.00	cm3
Kritična napetost uklona	σm,crit =	104.25	MPa
Relativna vitkost za uklon	λrel =	0.480	
Koeficient	k_krit =	1.000	
Normalna upogibna napetost okoli osi 3	σm3,d =	6.032	MPa

σm,3,d <= k_krit x fm,3,d (6.032 <= 14.769)
Izkoriščenost prereza je 40.8%

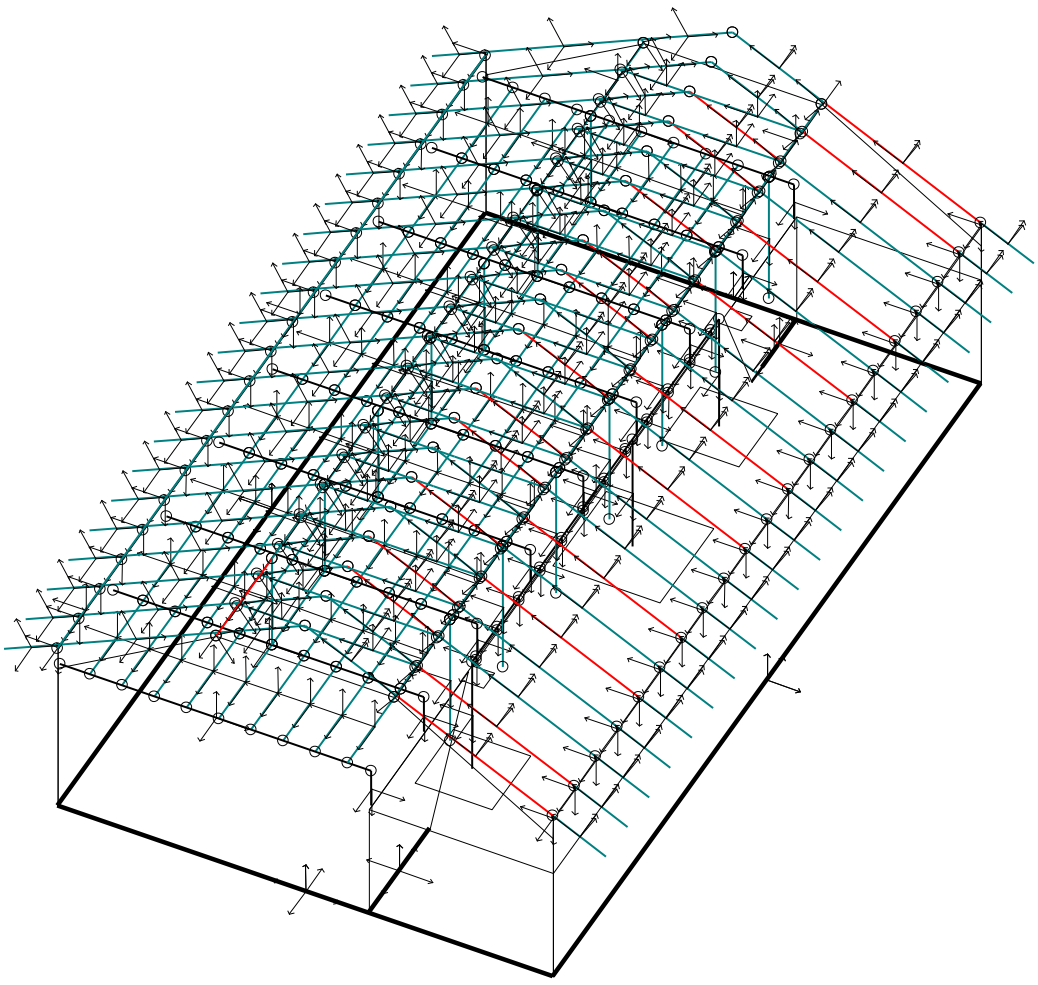
KONTROLA STRIŽNIH NAPETOSTI
(obtežni primer 7, začetek palice)

Prečna sila v smeri osi 2	V2ed =	-5.462	kN

KONTROLA NAPETOSTI - STRIG

Vrsta obtežbe: osnovno - srednjetrajno			
Korekcijski koeficient	Kmod =	0.800	
Parcialni koef. za karakteristike materiala	γm =	1.300	
Karakteristična strižna napetost	fv,k =	4.000	MPa
Računska strižna trdnost	fv,d =	2.462	MPa
Površina prečnega prereza	A =	180.00	cm2
Dejanska strižna napetost(os 2)	τ2,d =	0.455	MPa

τ2,d <= fv,d (0.455 <= 2.462)
Izkoriščenost prereza je 18.5%



Izometrija
Kontrola stabilnosti