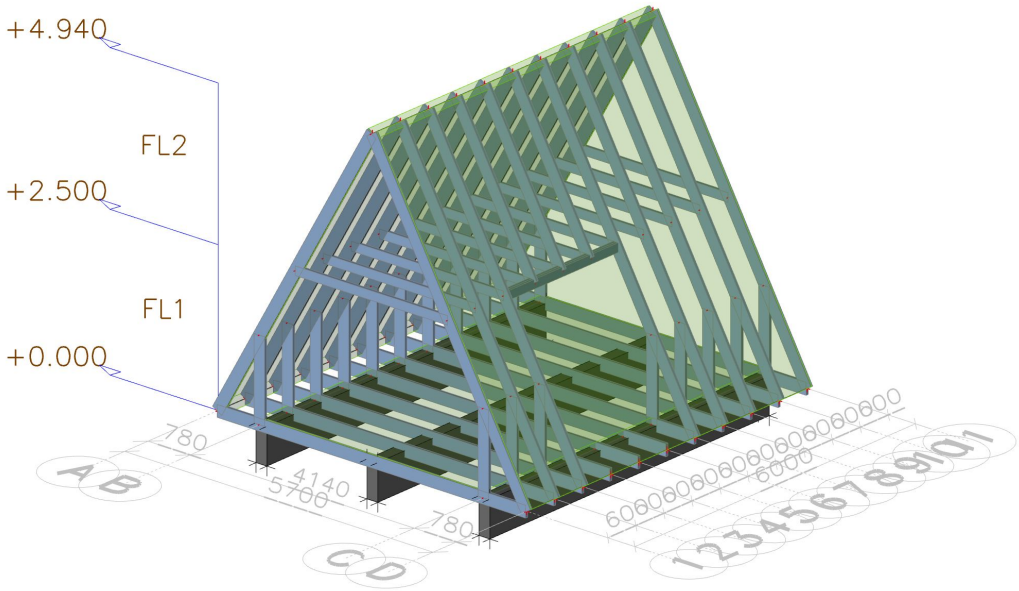
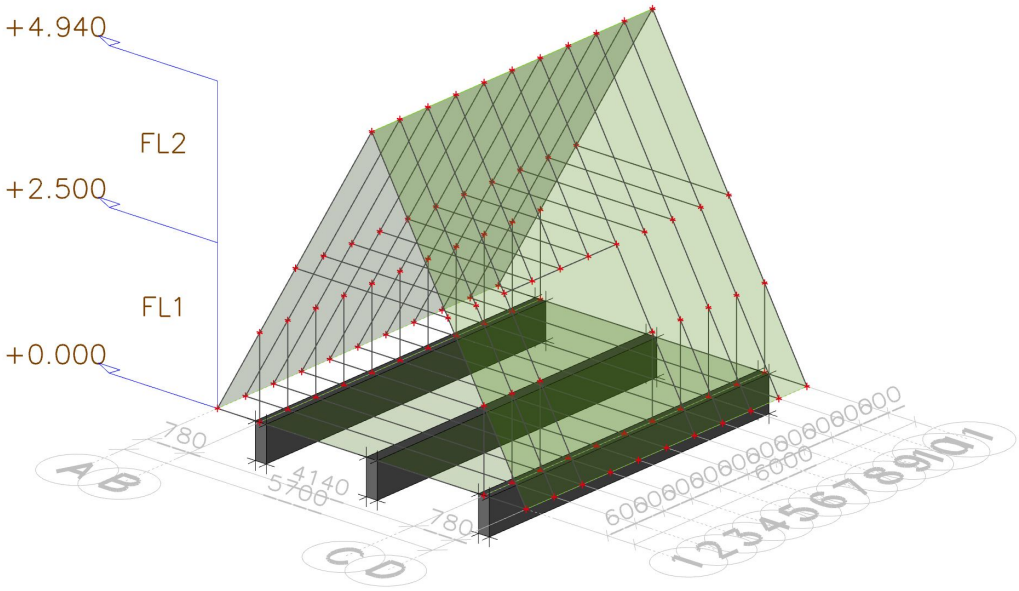
1. Table of contents

The Report is valid for the model Duo. Calculation is made for components of one standard frame and frame next to the entrance.
It is assumed, that the maximum building length is up to 7.5 m.
The wind load is calculated based on the peak velocity pressure at height 5m(height of the building) $q_p(z)=0,73kN/m^2$

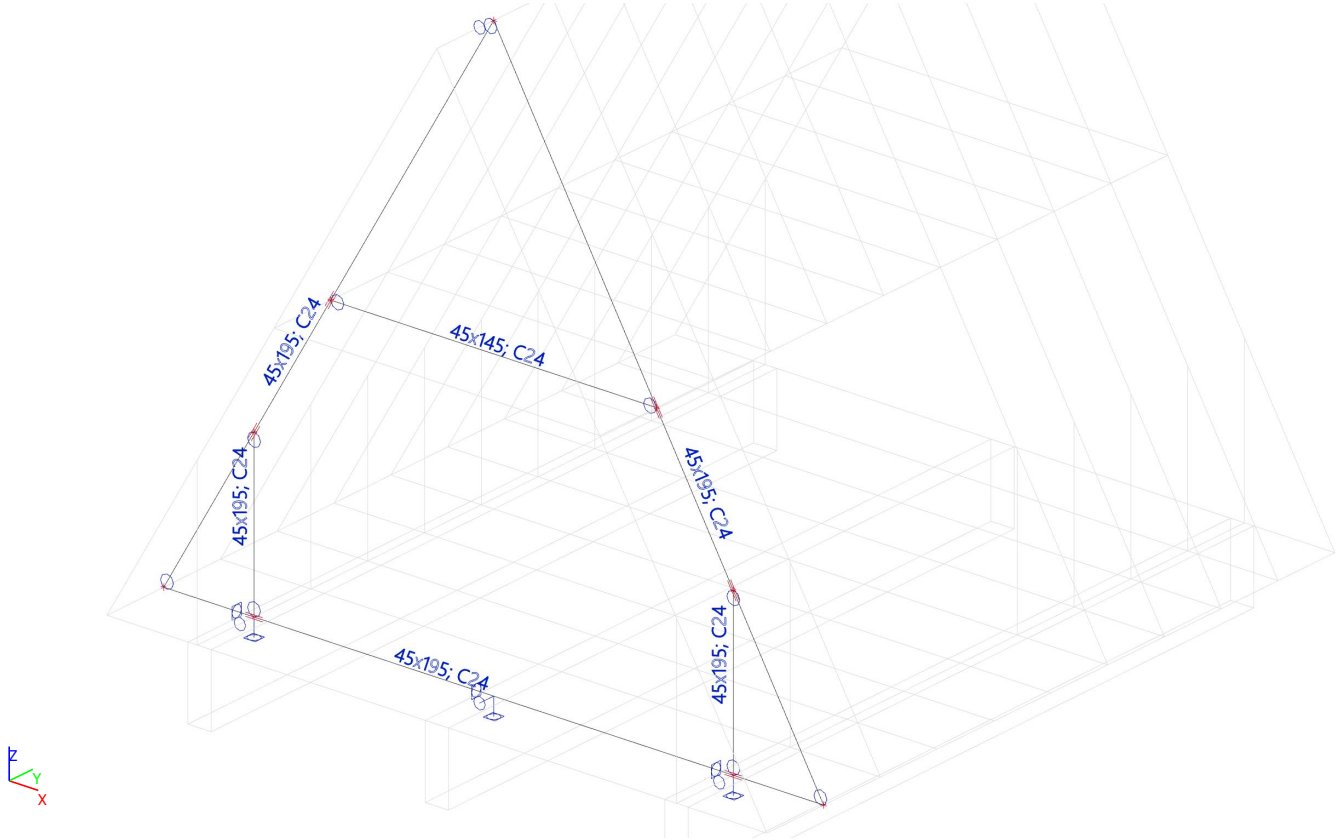
2. Overall structure dimensions



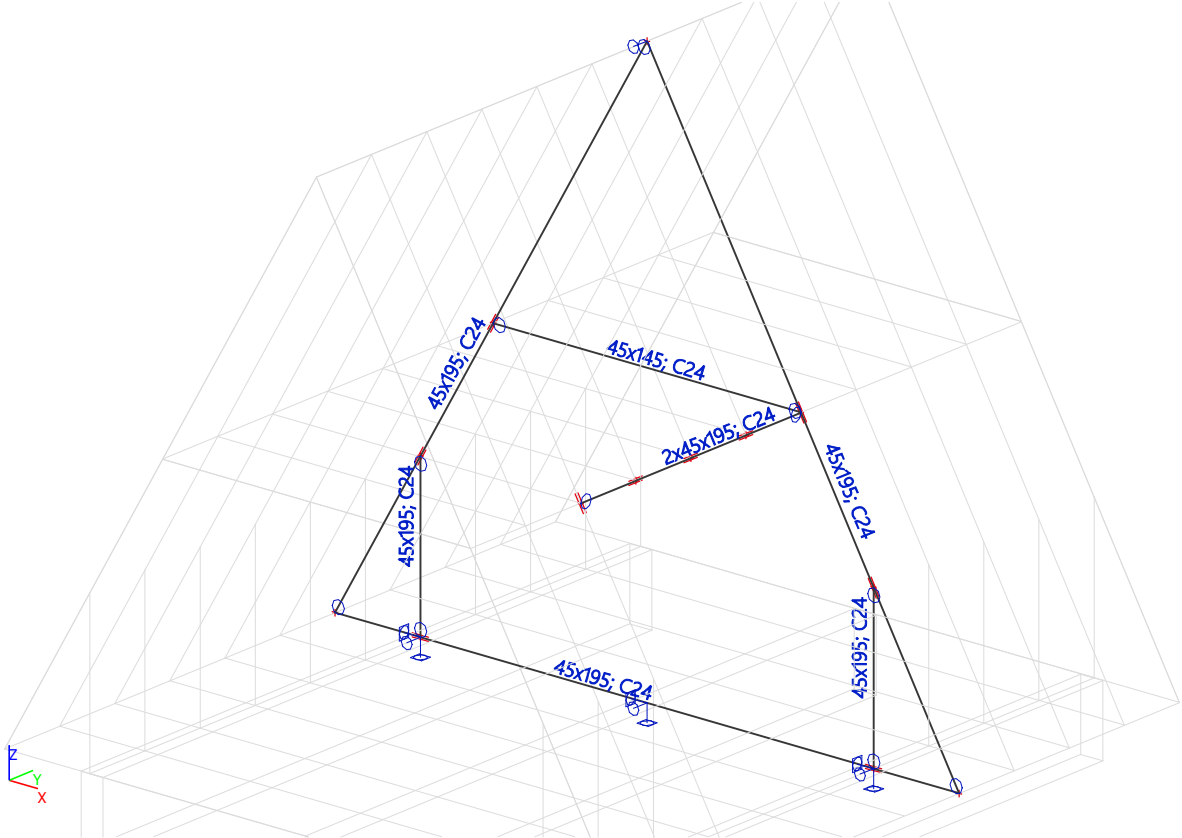
3. Analysis model



4. Base frame and boundary conditions



5. Frame next to the entrance; boundary conditions

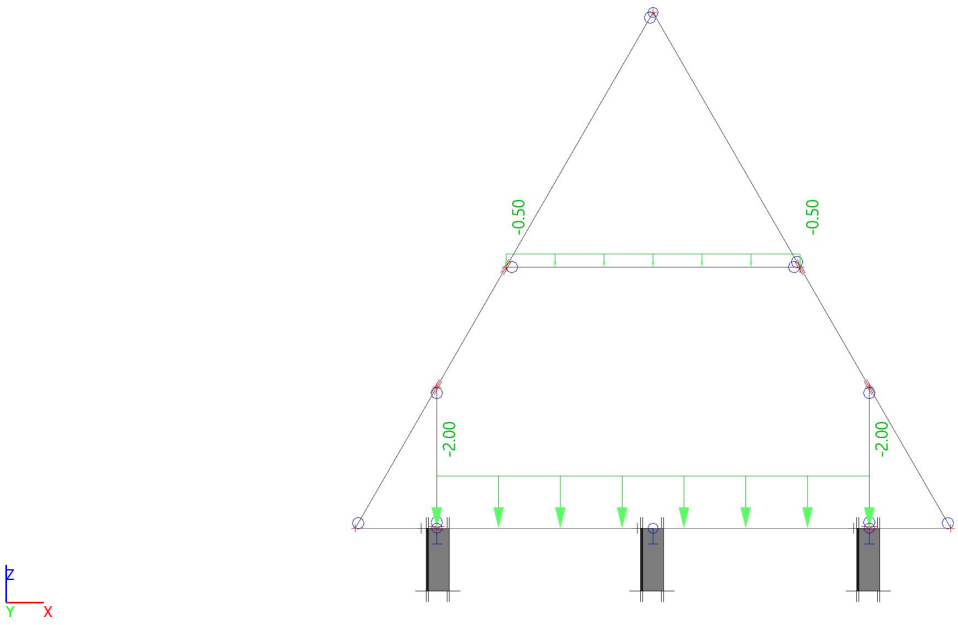


6. Loads

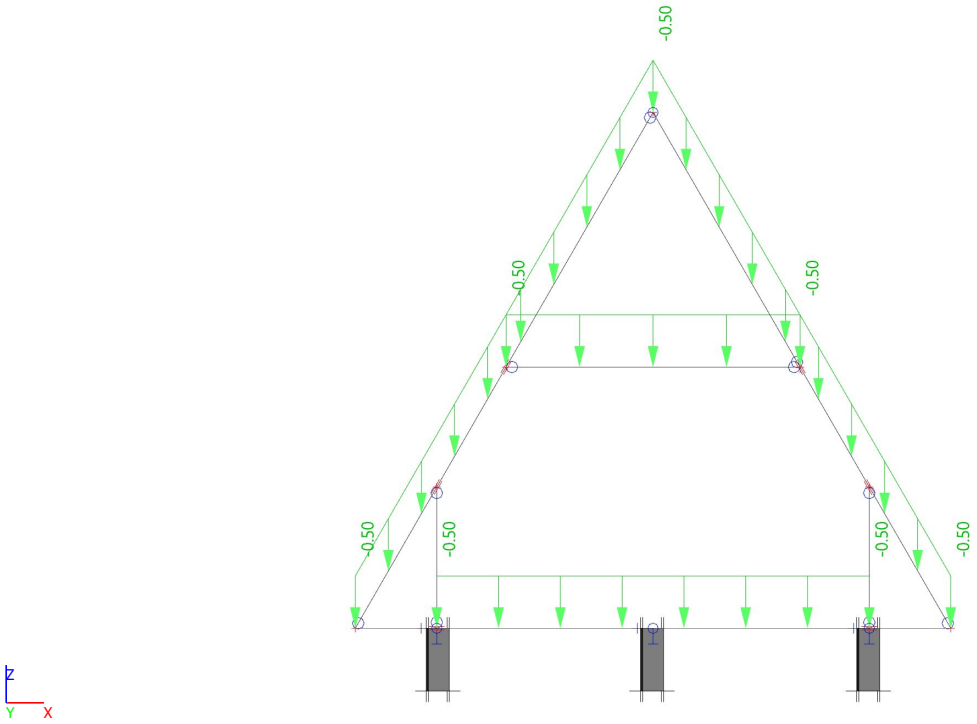
6.1. Load cases

Name	Action type Load type	Direction	Duration
Self Weight	Permanent Self weight	-Z	
Live load	Variable Static		Medium
Wind	Variable Static		Short
Structure weight	Permanent Standard		

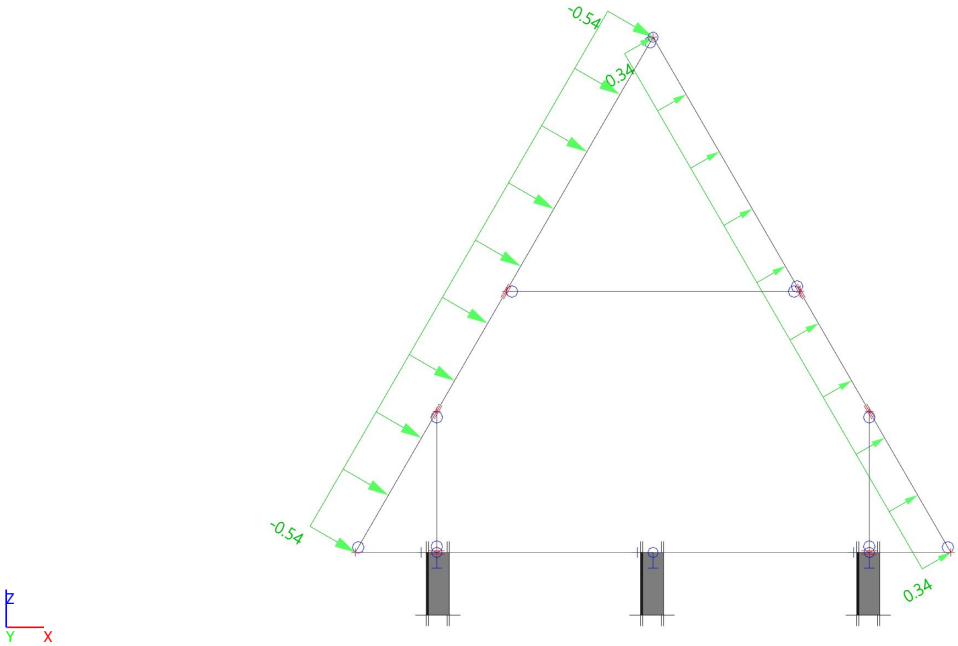
6.2. Live load: Cat A Domestic | kN/m2



6.3. Dead load: structure weight | kN/m2



6.4. Wind load | kN/m2



6.5. Combinations

Name	Description	Type	Load cases
CO1		EN-ULS (STR/GEO) Set B	Self Weight
			Live load
			Wind
			Structure weight
CO2		EN-SLS Characteristic	Self Weight
			Live load
			Wind
			Structure weight

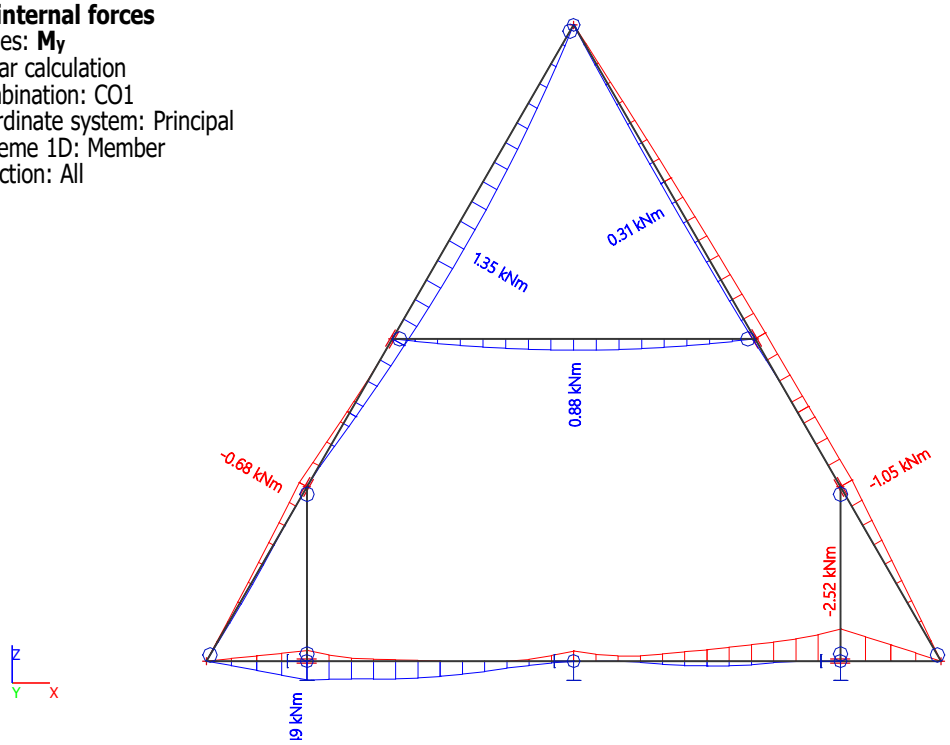
6.6. Content of combinations

Name	Description	Type	Load cases	Coeff. [-]
CO2.1		Envelope - serviceability	Self Weight	1.00
			Structure weight	1.00
CO2.2		Envelope - serviceability	Self Weight	1.00
			Live load	1.00
			Wind	0.60
			Structure weight	1.00
CO2.3		Envelope - serviceability	Self Weight	1.00
			Live load	0.70
			Wind	1.00
			Structure weight	1.00
CO1.1		Envelope - ultimate	Self Weight	1.35
			Structure weight	1.35
CO1.2		Envelope - ultimate	Self Weight	1.00
			Structure weight	1.00
CO1.3		Envelope - ultimate	Self Weight	1.35
			Live load	1.50
			Wind	0.90
			Structure weight	1.35
CO1.4		Envelope - ultimate	Self Weight	1.00
			Live load	1.50
			Wind	0.90
			Structure weight	1.00
CO1.5		Envelope - ultimate	Self Weight	1.35
			Live load	1.05
			Wind	1.50
			Structure weight	1.35
CO1.6		Envelope - ultimate	Self Weight	1.00
			Live load	1.05
			Wind	1.50
			Structure weight	1.00

7. Internal forces and code check of the main frame

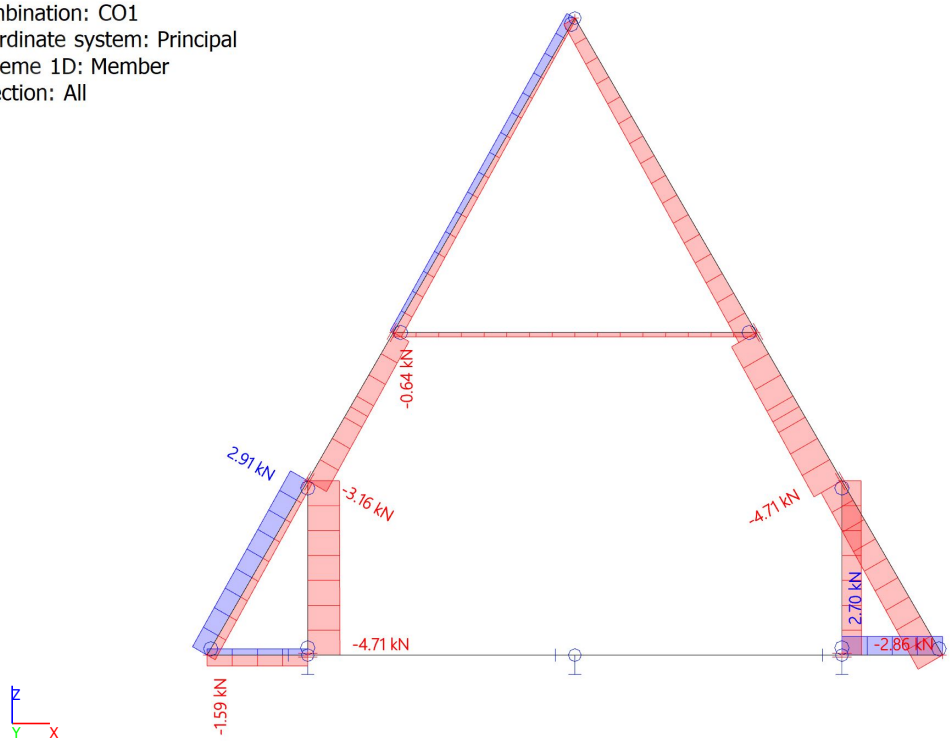
7.1. ULS | Typical frame bending moments My

1D internal forces
Values: **M_y**
Linear calculation
Combination: CO1
Coordinate system: Principal
Extreme 1D: Member
Selection: All



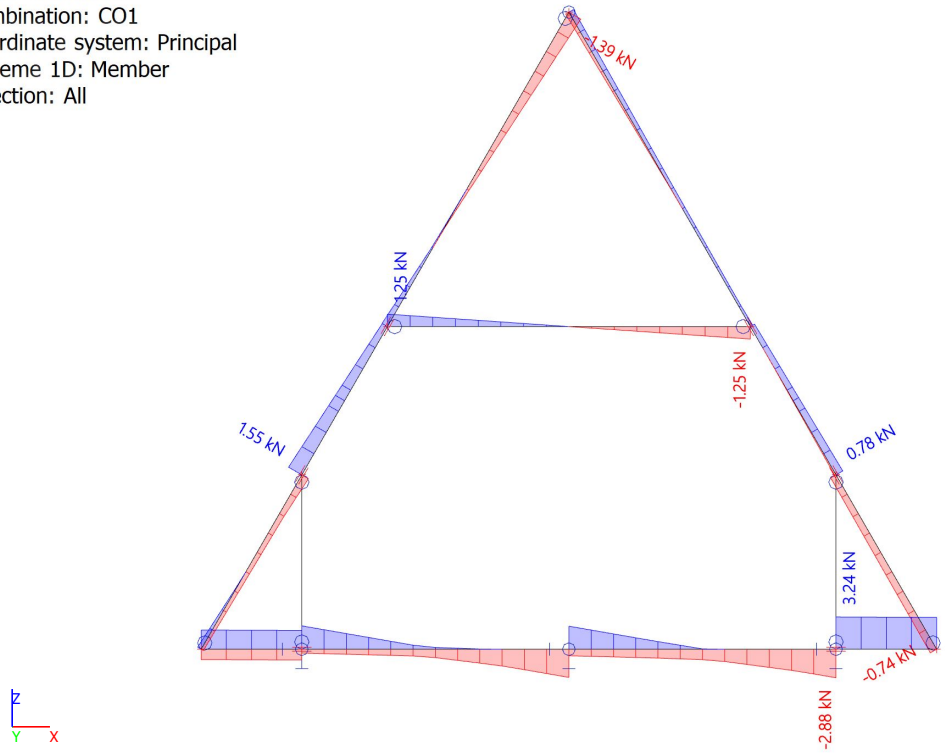
7.2. ULS | Typical frame normal forces N

Values: **N**
Linear calculation
Combination: CO1
Coordinate system: Principal
Extreme 1D: Member
Selection: All

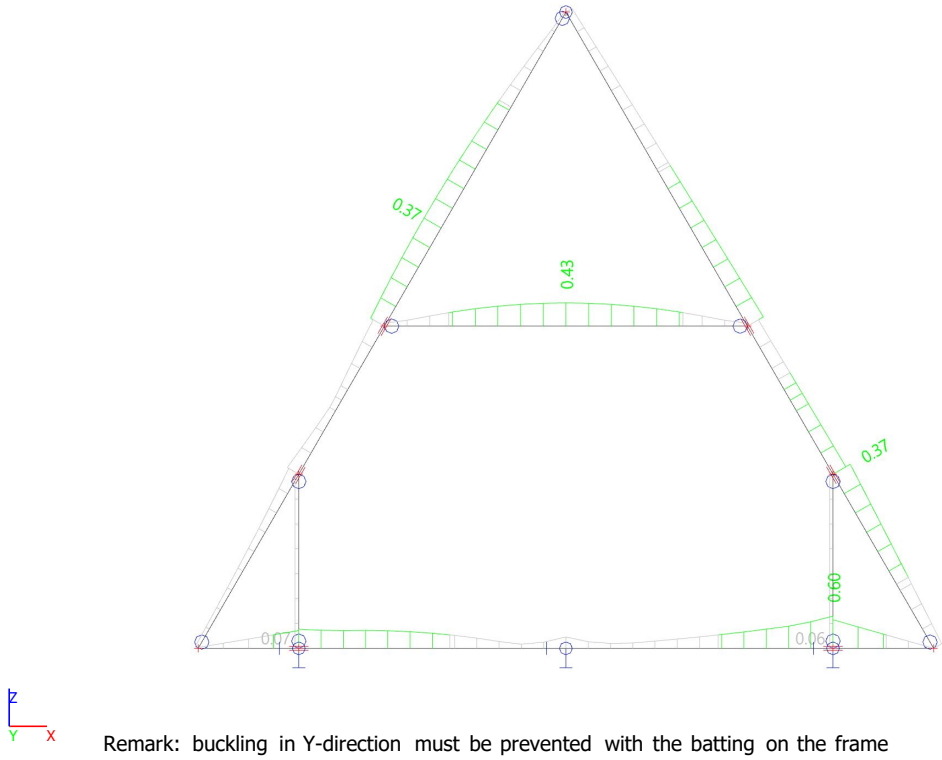


7.3. ULS | Typical frame shear forces Vz

Values: V_z
Linear calculation
Combination: CO1
Coordinate system: Principal
Extreme 1D: Member
Selection: All



7.4. Timber ULS check of typical frame: utilization ratio

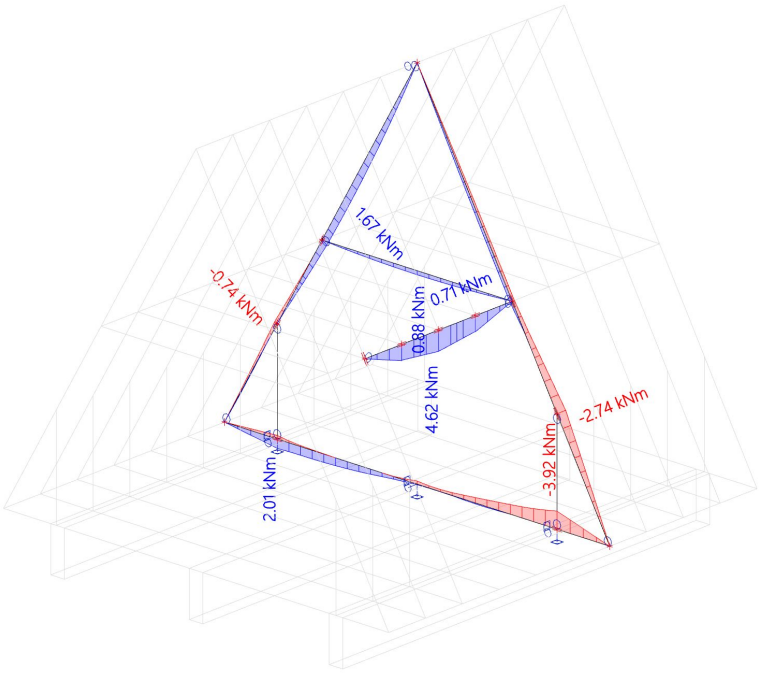


Remark: buckling in Y-direction must be prevented with the batting on the frame

8. Internal forces and code check of the frame next to the entrance

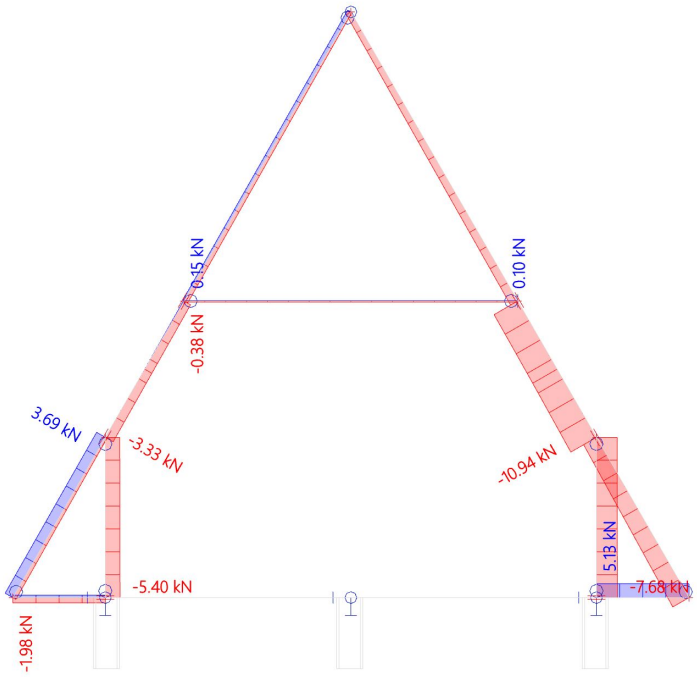
8.1. ULS | Bending moments My

Values: M_y
Linear calculation
Combination: CO1
Coordinate system: Principal
Extreme 1D: Member
Selection: All



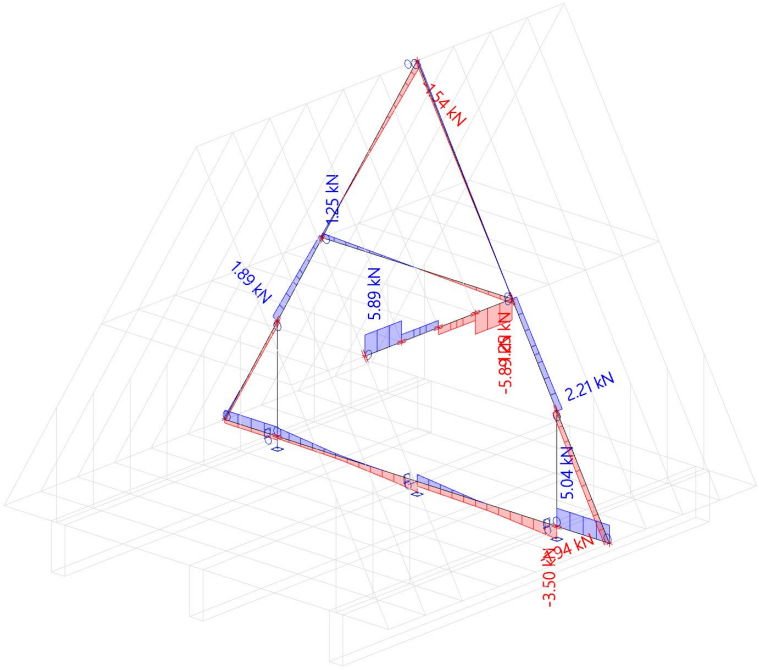
8.2. ULS | Normal forces N

Values: **N**
Linear calculation
Combination: CO1
Coordinate system: Principal
Extreme 1D: Member
Selection: All

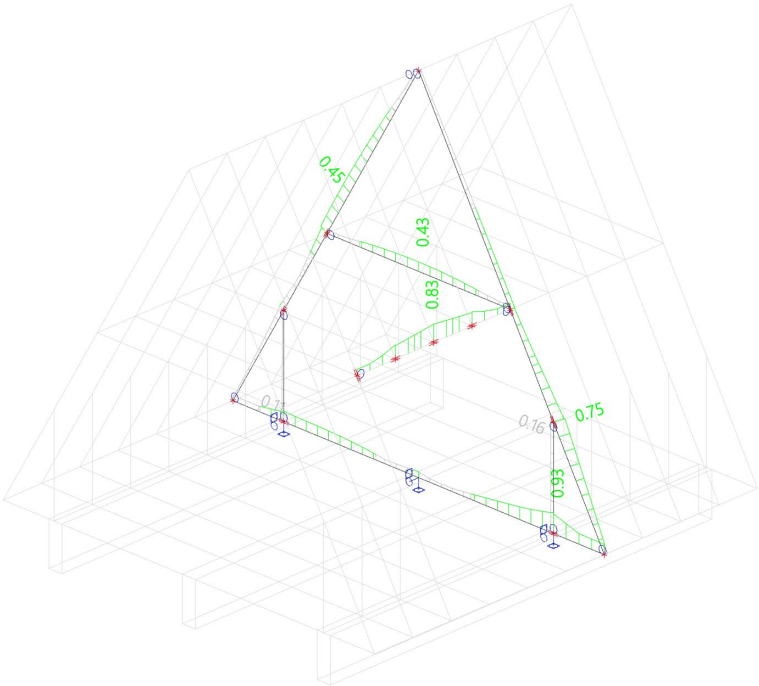


8.3. ULS | Shear forces Vz

Values: V_z
Linear calculation
Combination: CO1
Coordinate system: Principal
Extreme 1D: Member
Selection: All



8.4. Timber ULS check; Unity check



Remark: buckling in Y-direction must be prevented with the batting on the frame