Karlatornet - CIR-dagen 2023-01-31


Stena Line

Kort om Karlatornet
Byggherre: Serneke + Balder

Plan: 76 våningar (bostäder)
Höjd: 245 m (300 m inklusive pålar)
Bredd: 31x31 m
Slankhet: 8

Betong
Ca 115 000 ton
C40/50 – C70/85

Kravställd E-modul
”vanlig” och självkompakterande
Stor andel slagg

Grundläggning
58 grävpålar ø2000 mm
3,75 m tjock bottenplatta


IVARSSONS
BROKK
SERNEKE
VBK


VBK

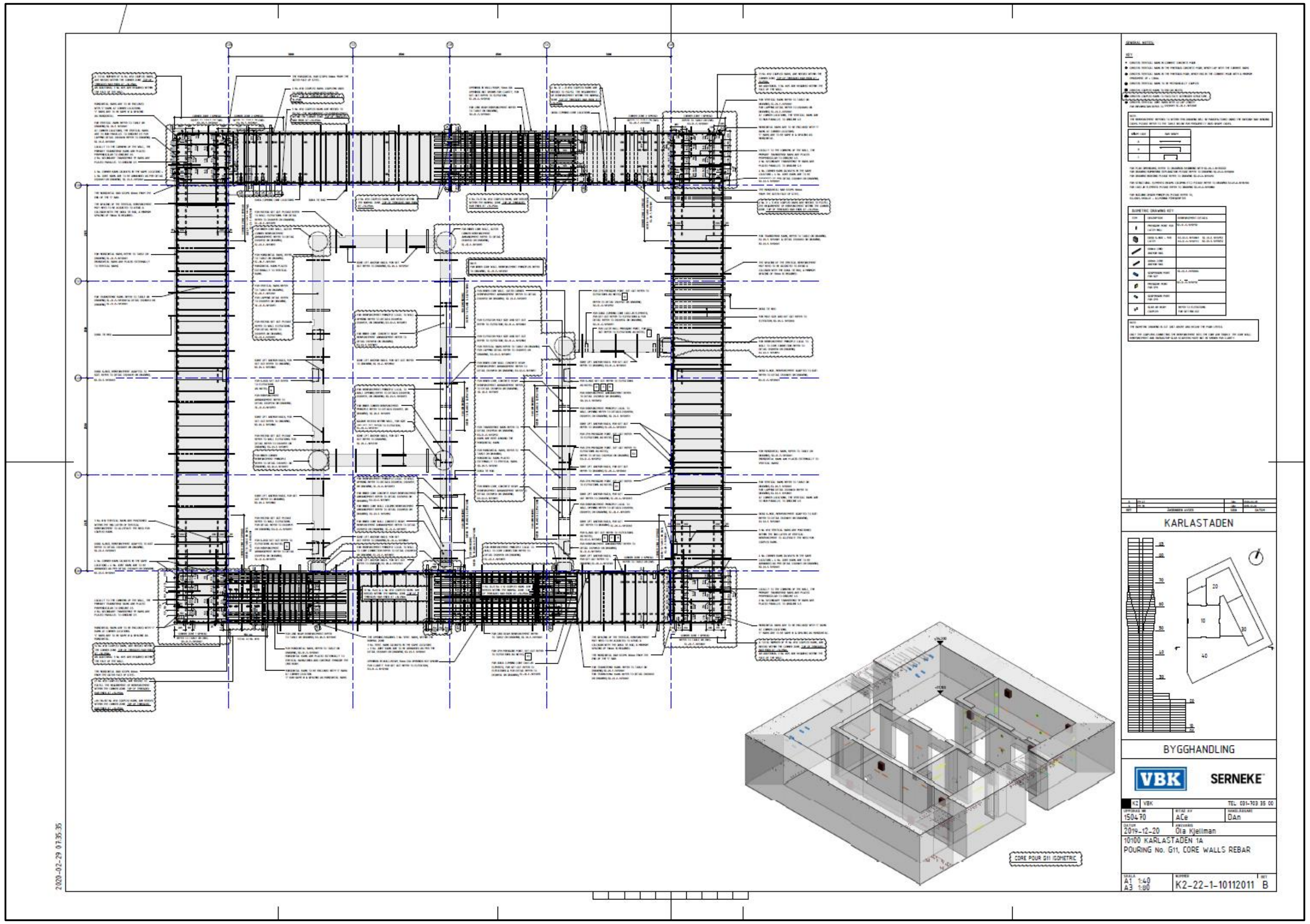

SERNEKE
Thomas
Milwaukee

Stomme

Stabiliserande kärna + utriggare


DENSO
COMBISAFE
R78
Thomas
BETONG
VBK

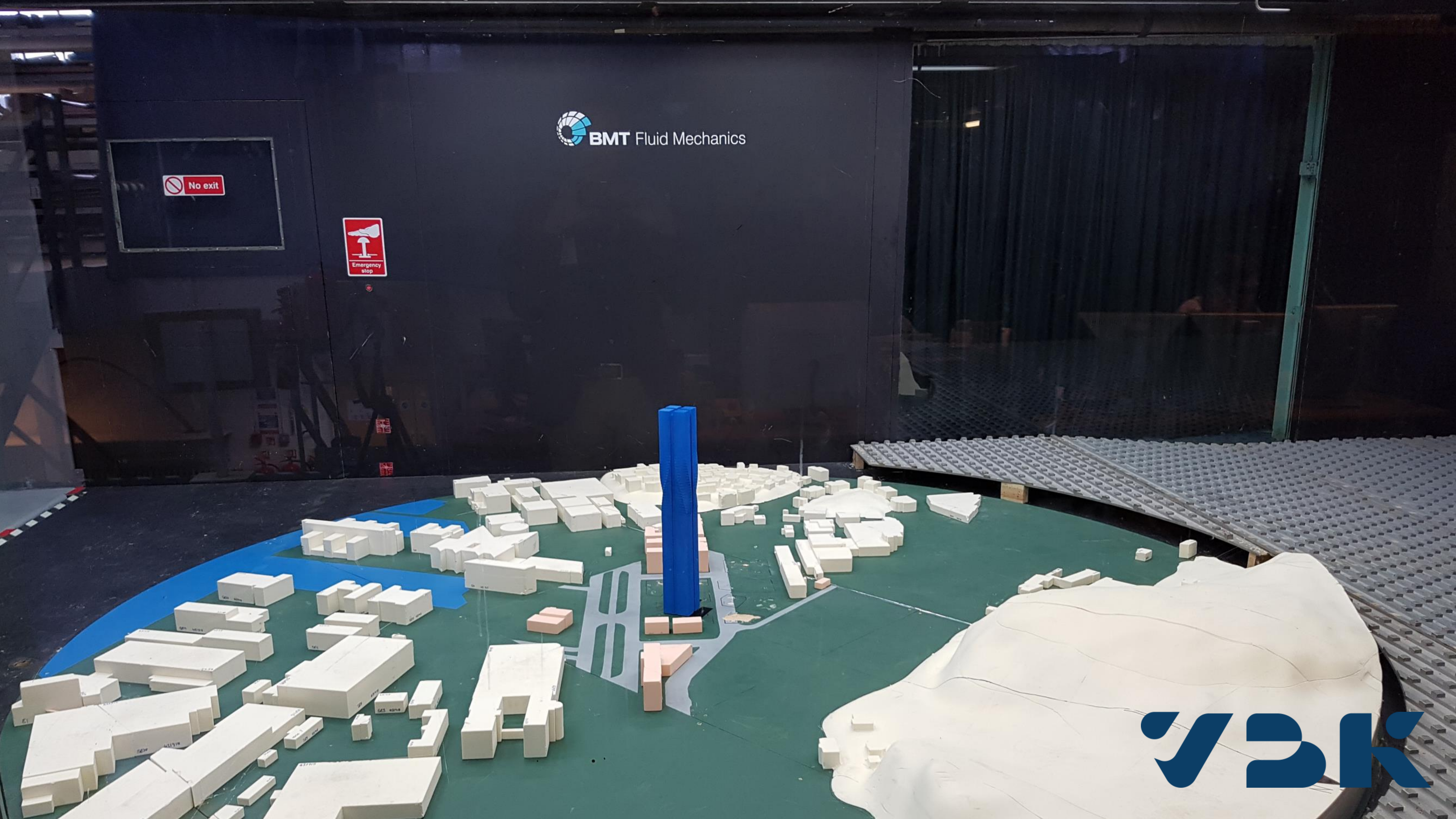

SERNEKE
BAL
DER
Stena Line

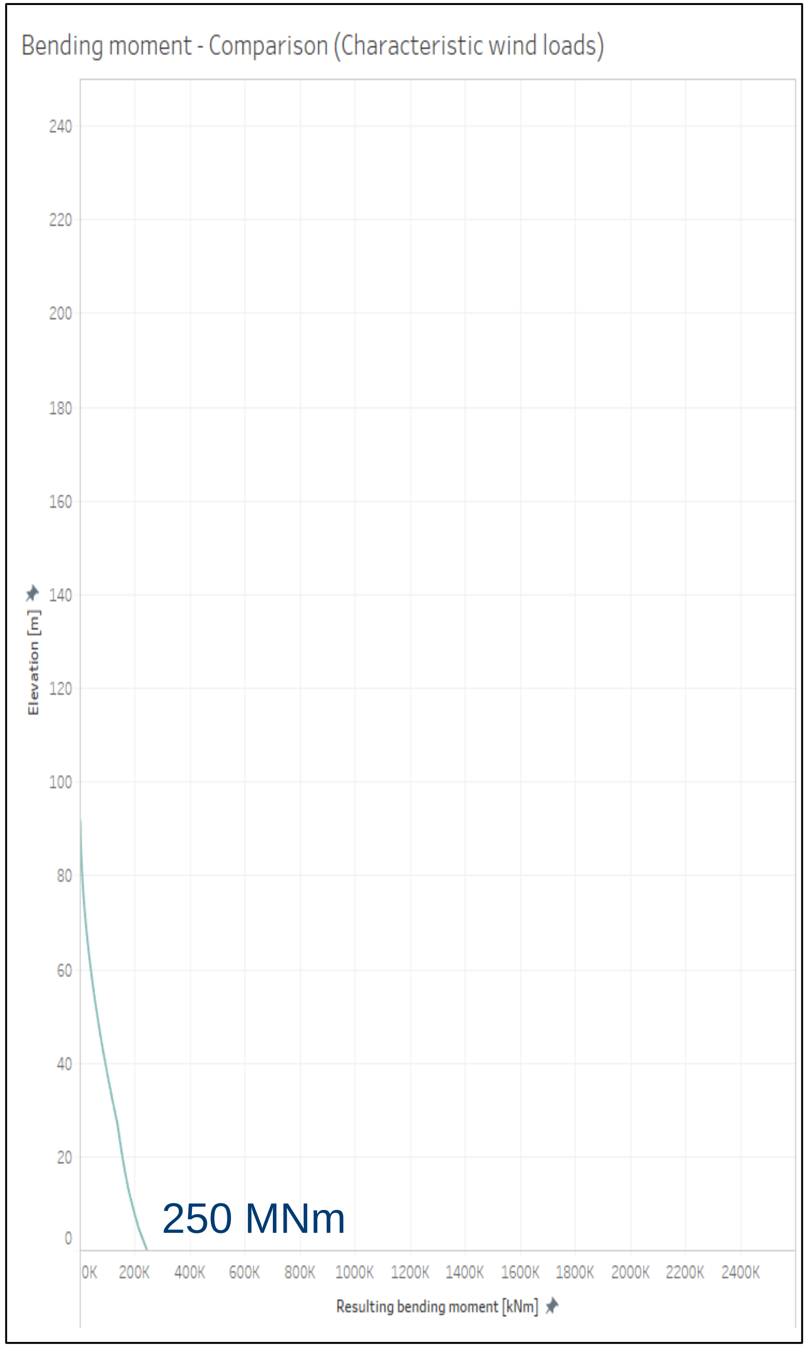

KARLASTADEN
BYGGHANDLING
VBK
SERNEKE
K2 VBK TEL. 031-703 35 00
150470
ACe
DAn
2019-12-20
Ola Kjellman
10100 KARLASTADEN 1A
POURING No. G11, CORE WALLS REBAR
A1 1:40
A3 1:80
K2-22-1-10112011 B
CORE POUR G11 ISOMETRIC
2020-02-29 07:35:35

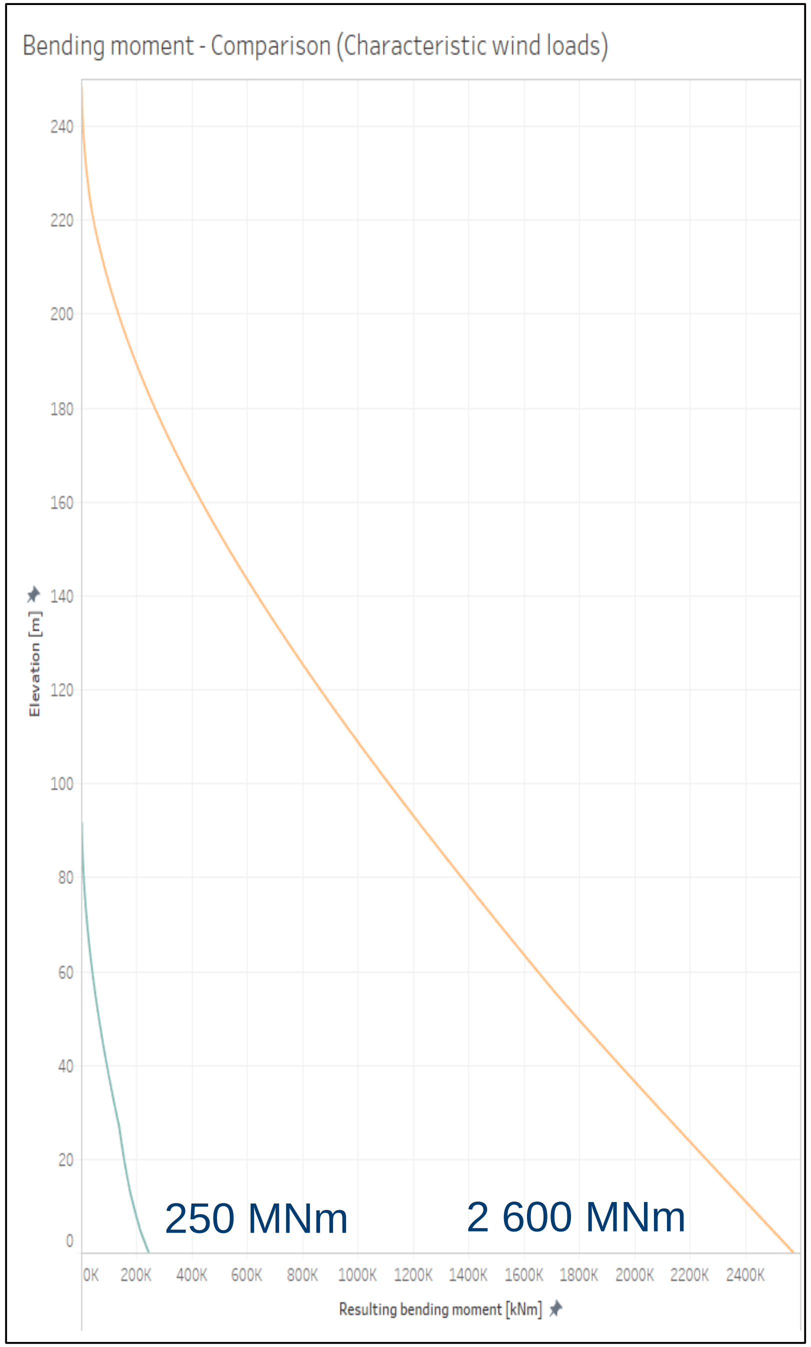

KASK
HELLY HANSEN

Stomme

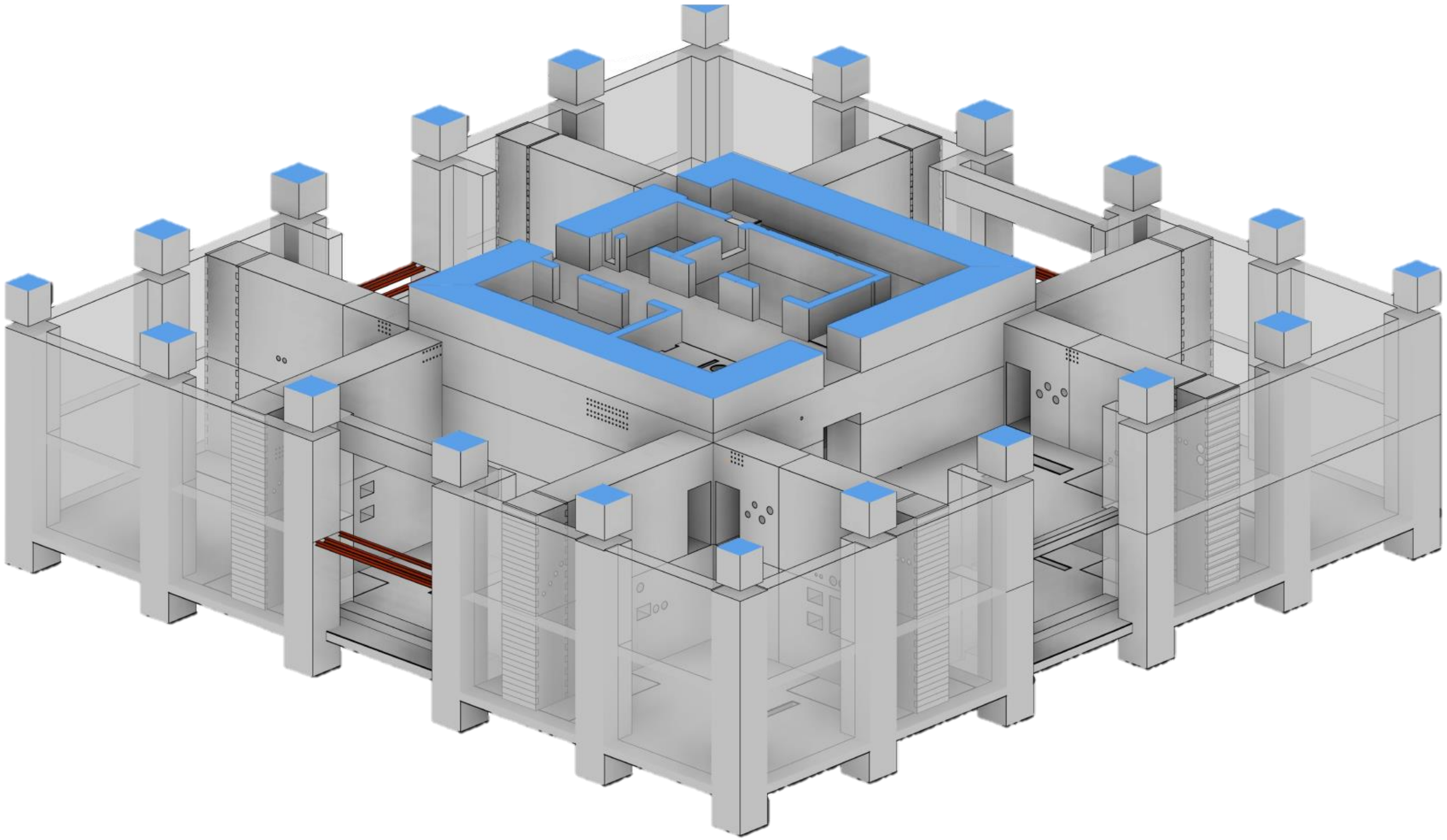
Stabiliserande kärna + utriggare

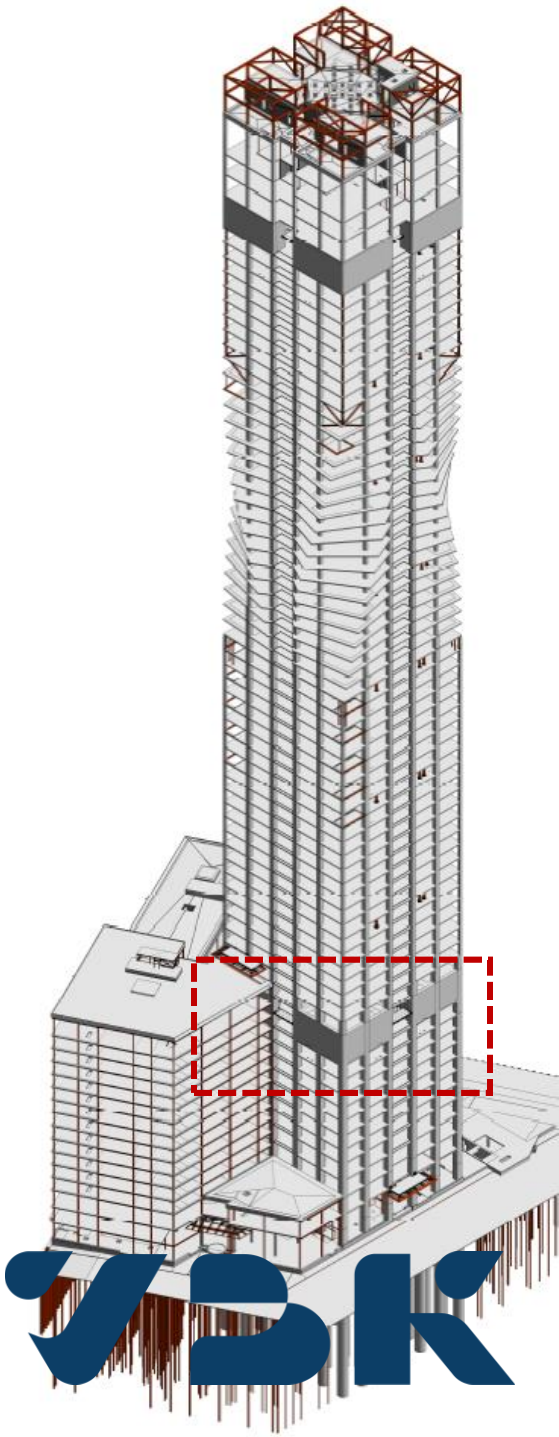

BMT Fluid Mechanics
No exit
Emergency stop

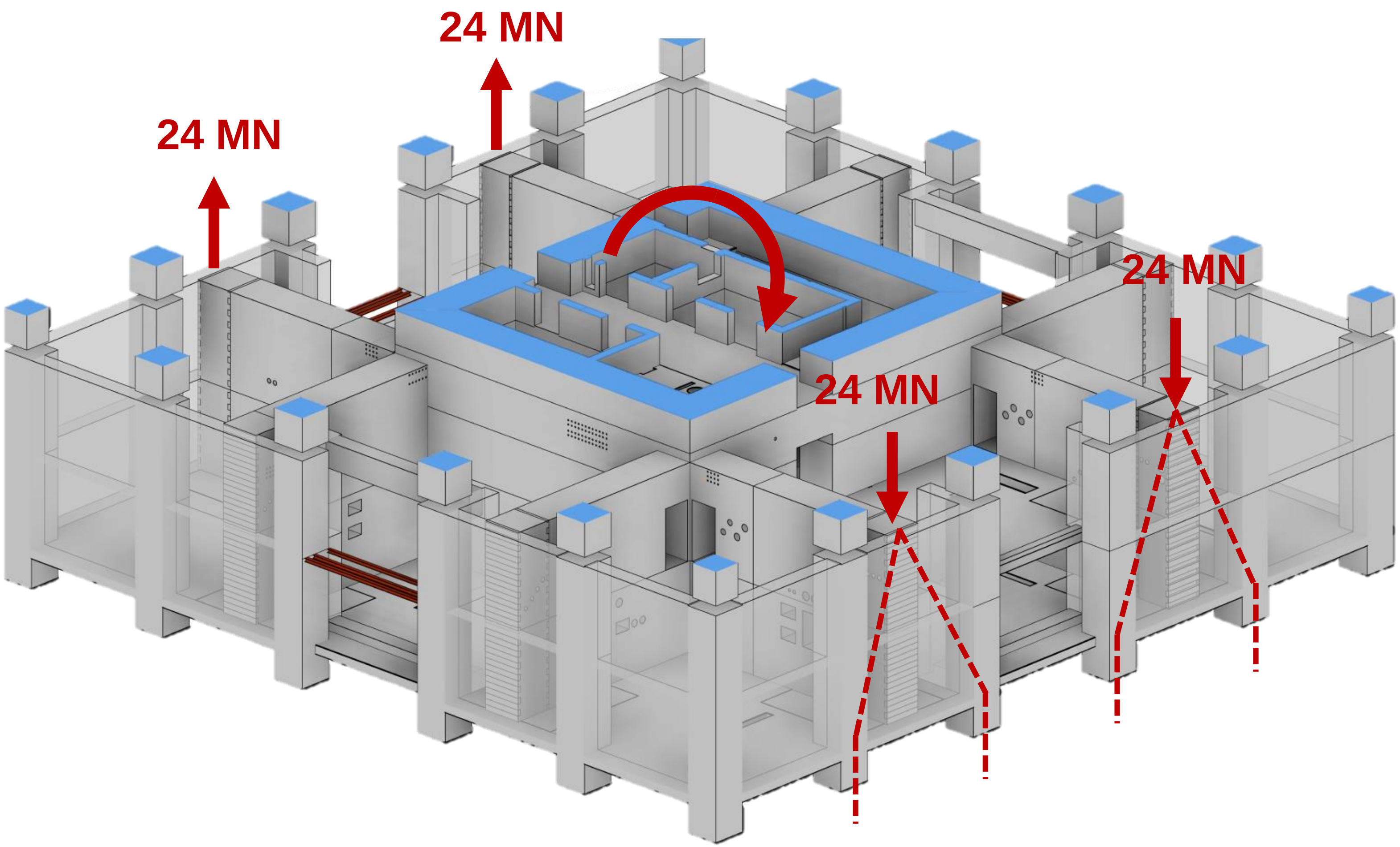

Bending moment - Comparison (Characteristic wind loads)
Elevation [m]
240
220
200
180
160
140
120
100
80
60
40
20
0
250 MNm
0K
200K
400K
600K
800K
1000K
1200K
1400K
1600K
1800K
2000K
2200K
2400K
Resulting bending moment [kNm]

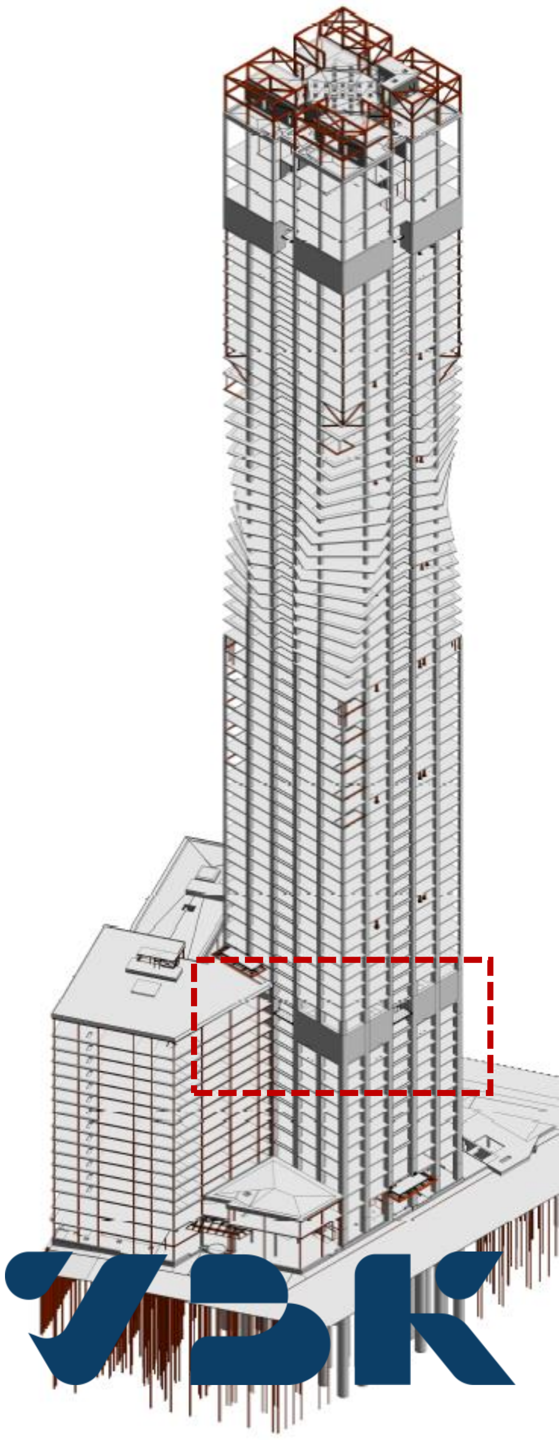


Bending moment - Comparison (Characteristic wind loads)
Elevation [m]
240
220
200
180
160
140
120
100
80
60
40
20
0
0K
200K
400K
600K
800K
1000K
1200K
1400K
1600K
1800K
2000K
2200K
2400K
Resulting bending moment [kNm]
250 MNm
2 600 MNm

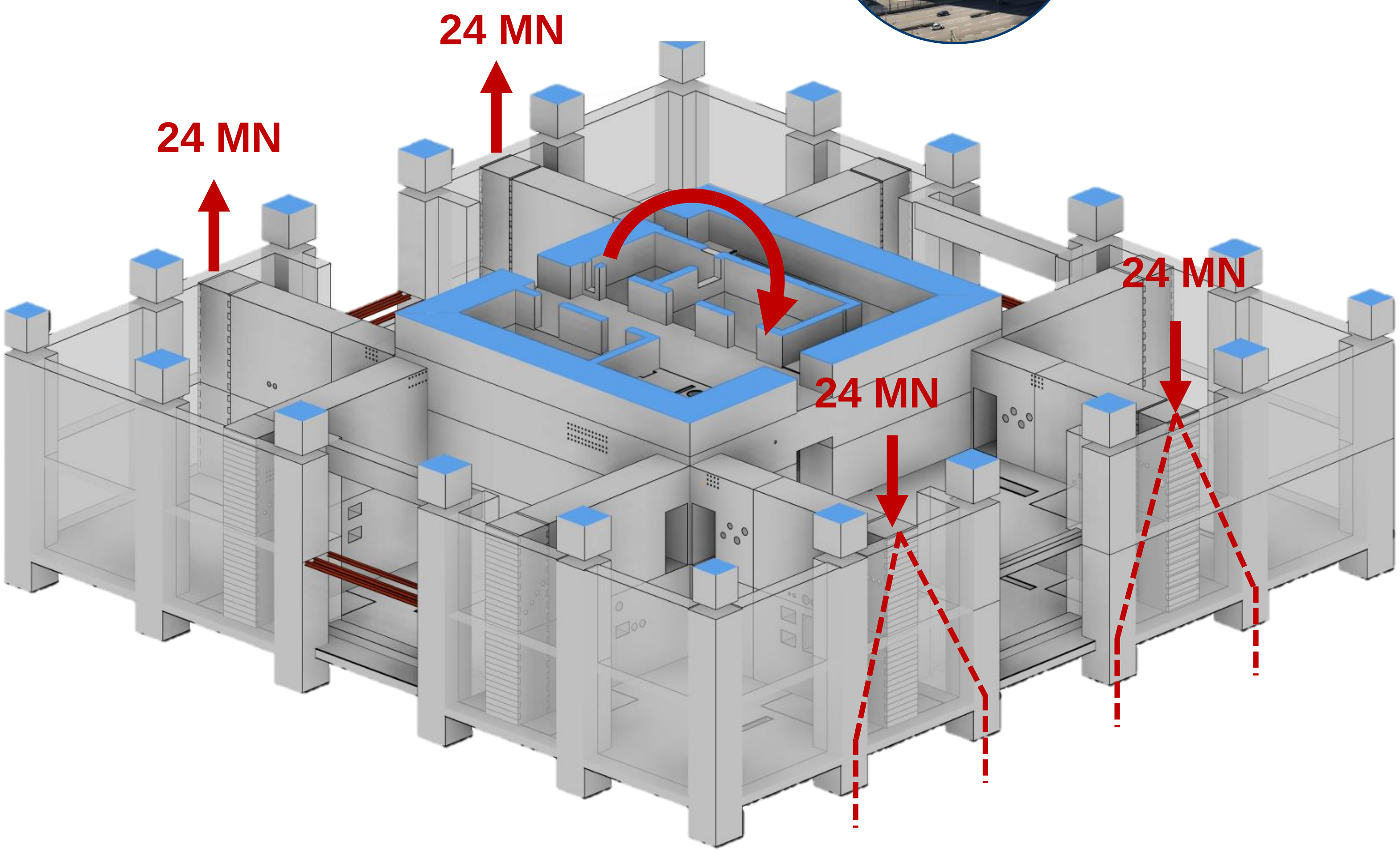


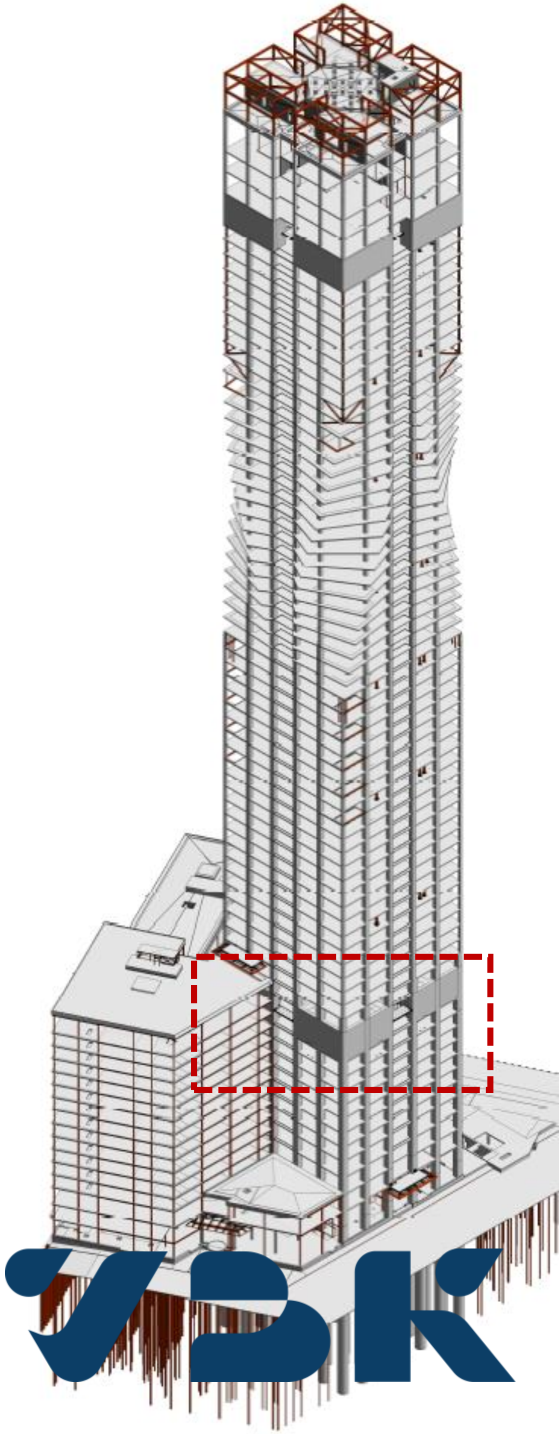


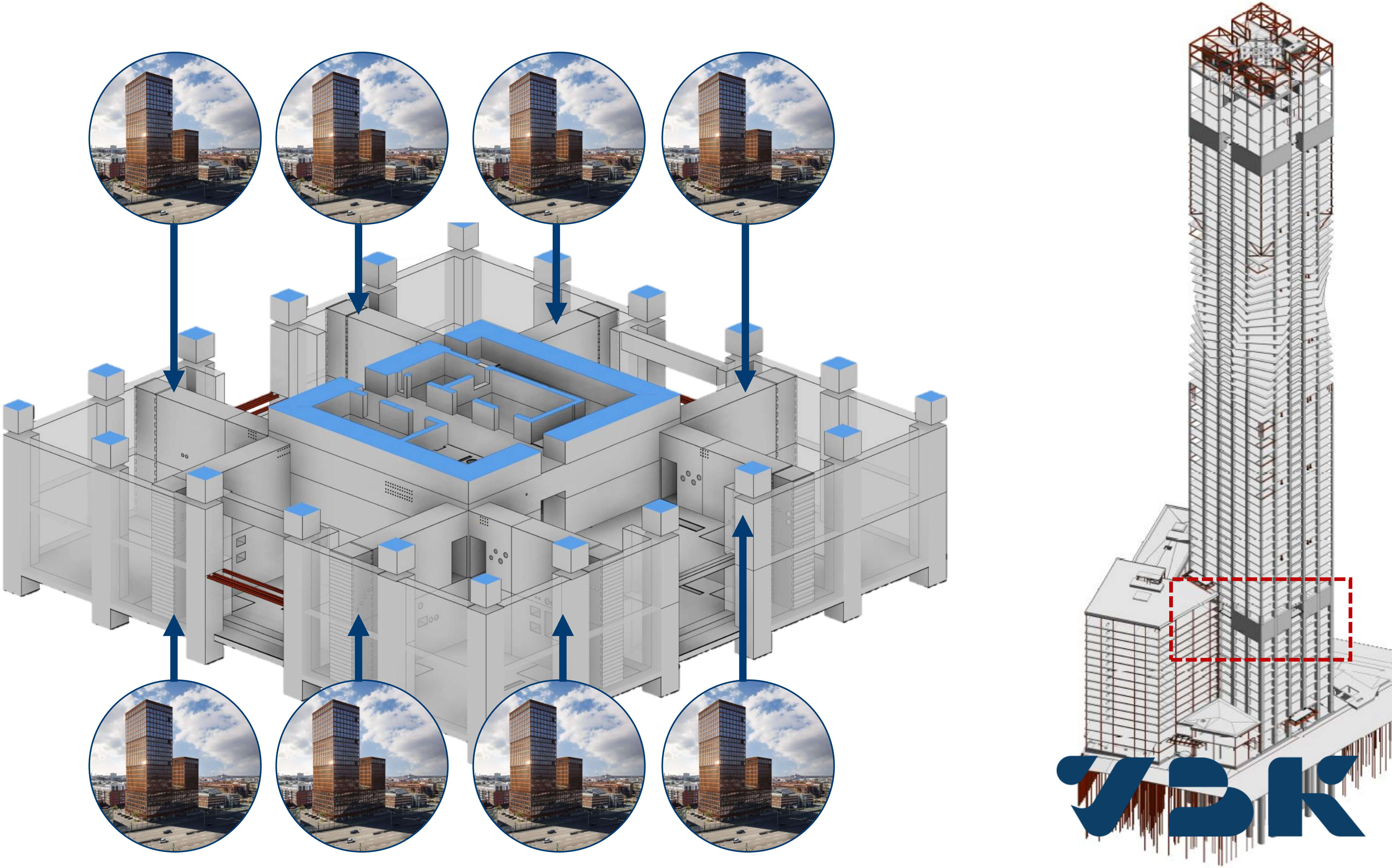

24 MN
24 MN
24 MN
24 MN

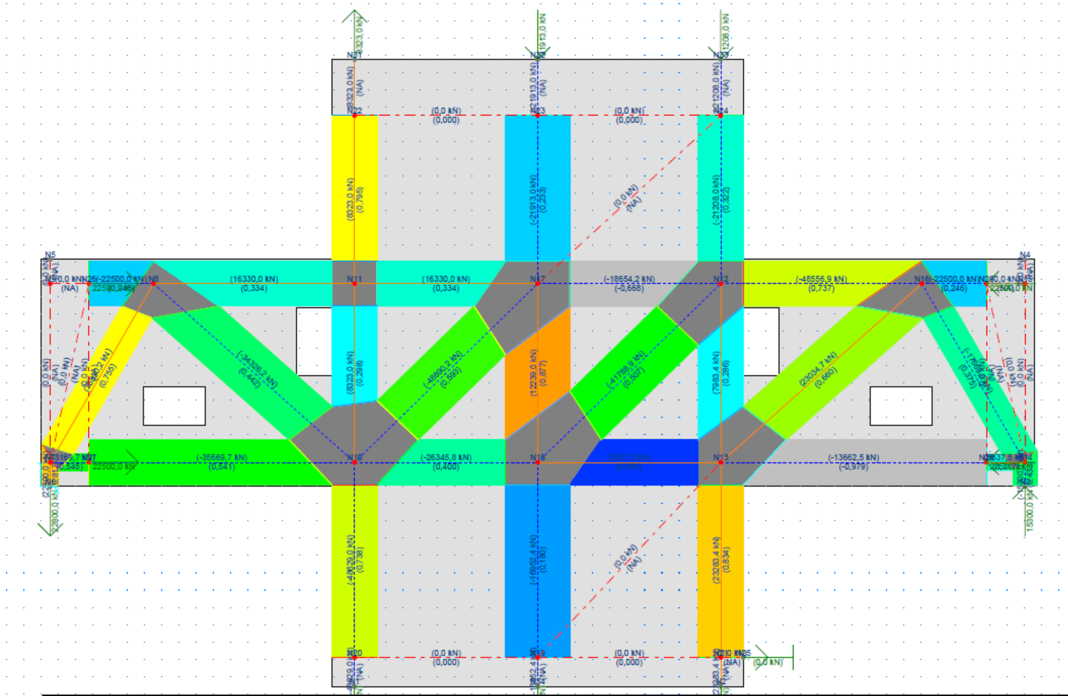


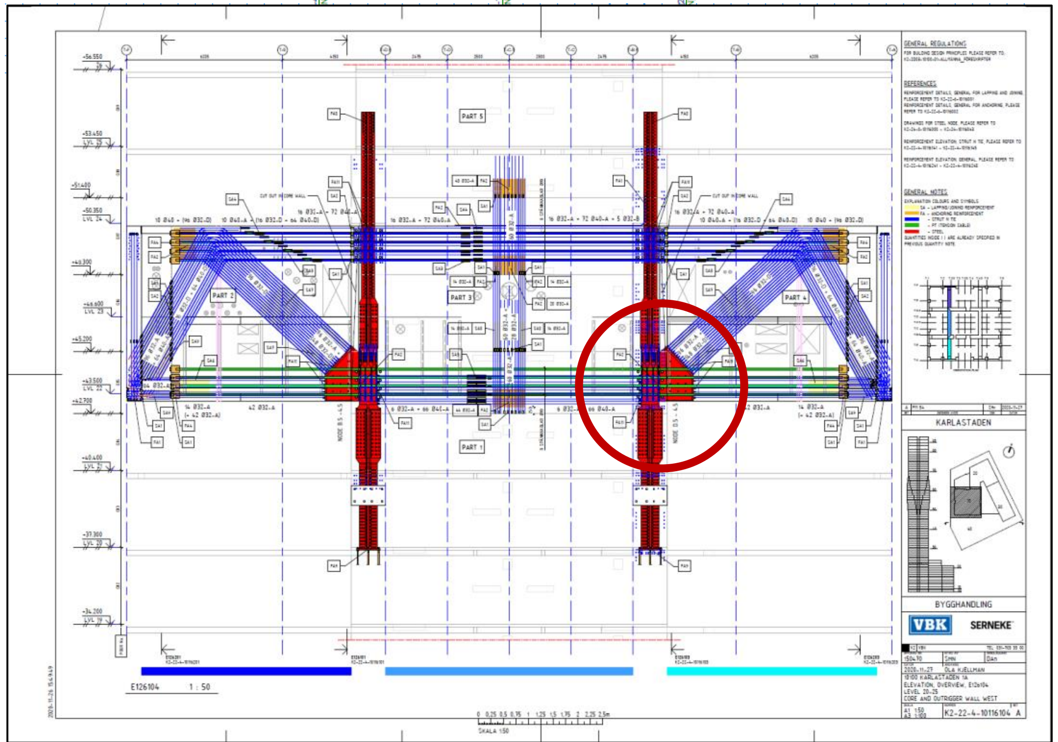
≈ 250 MNm

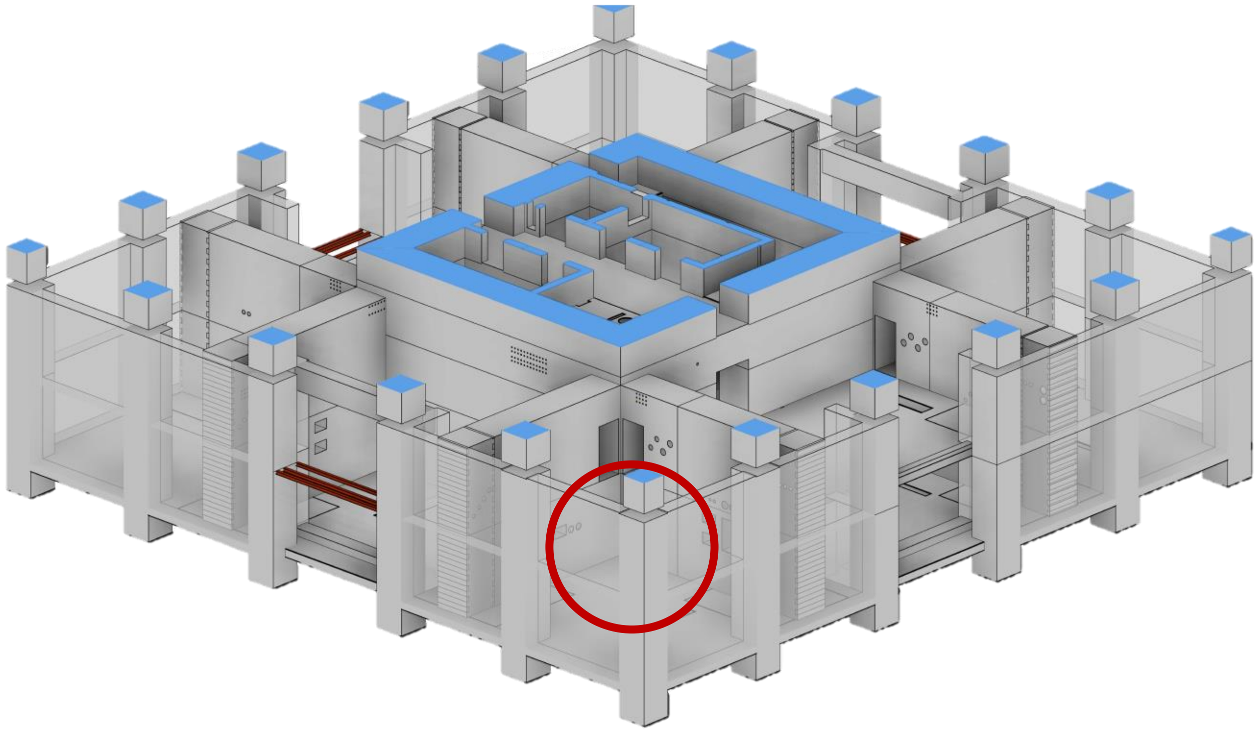


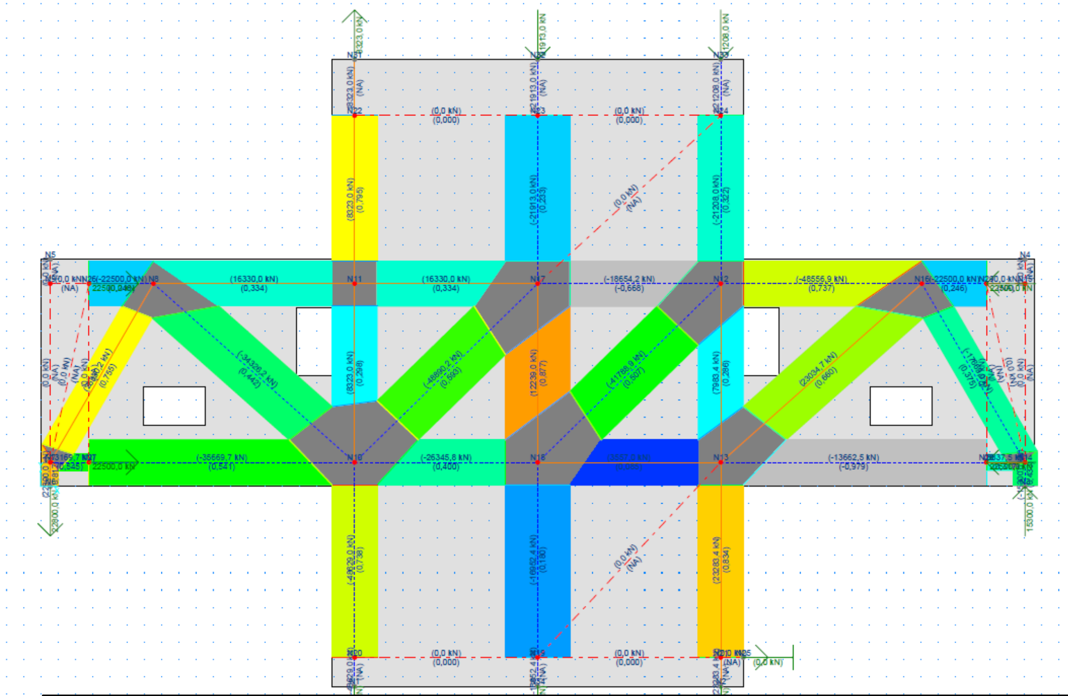


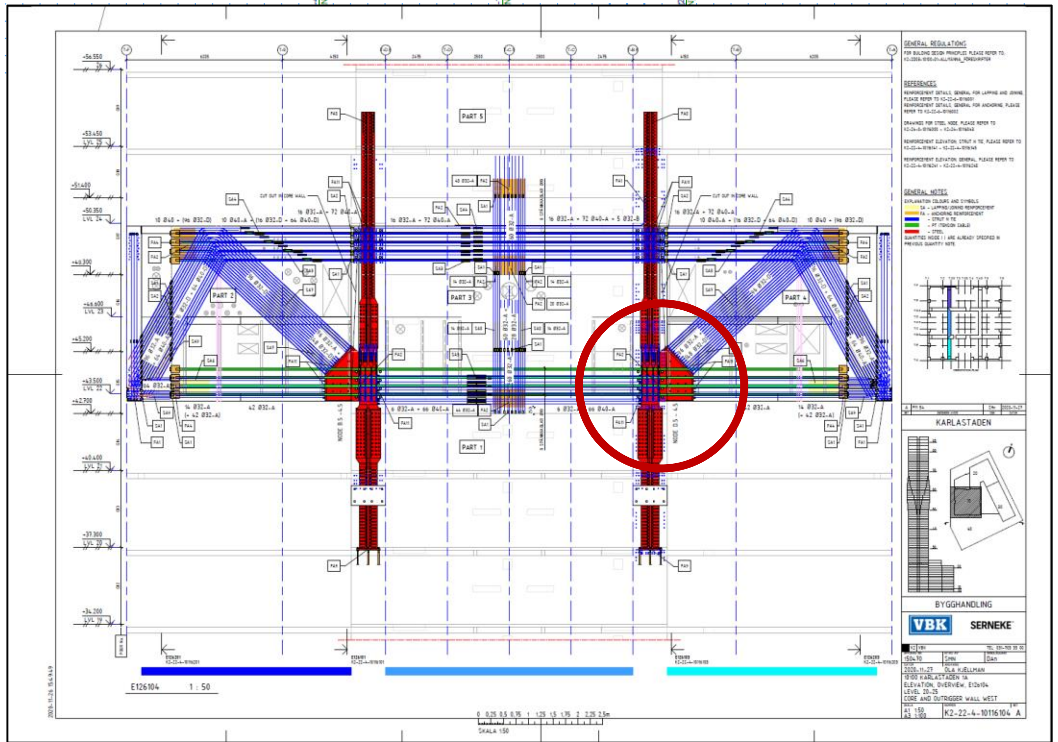




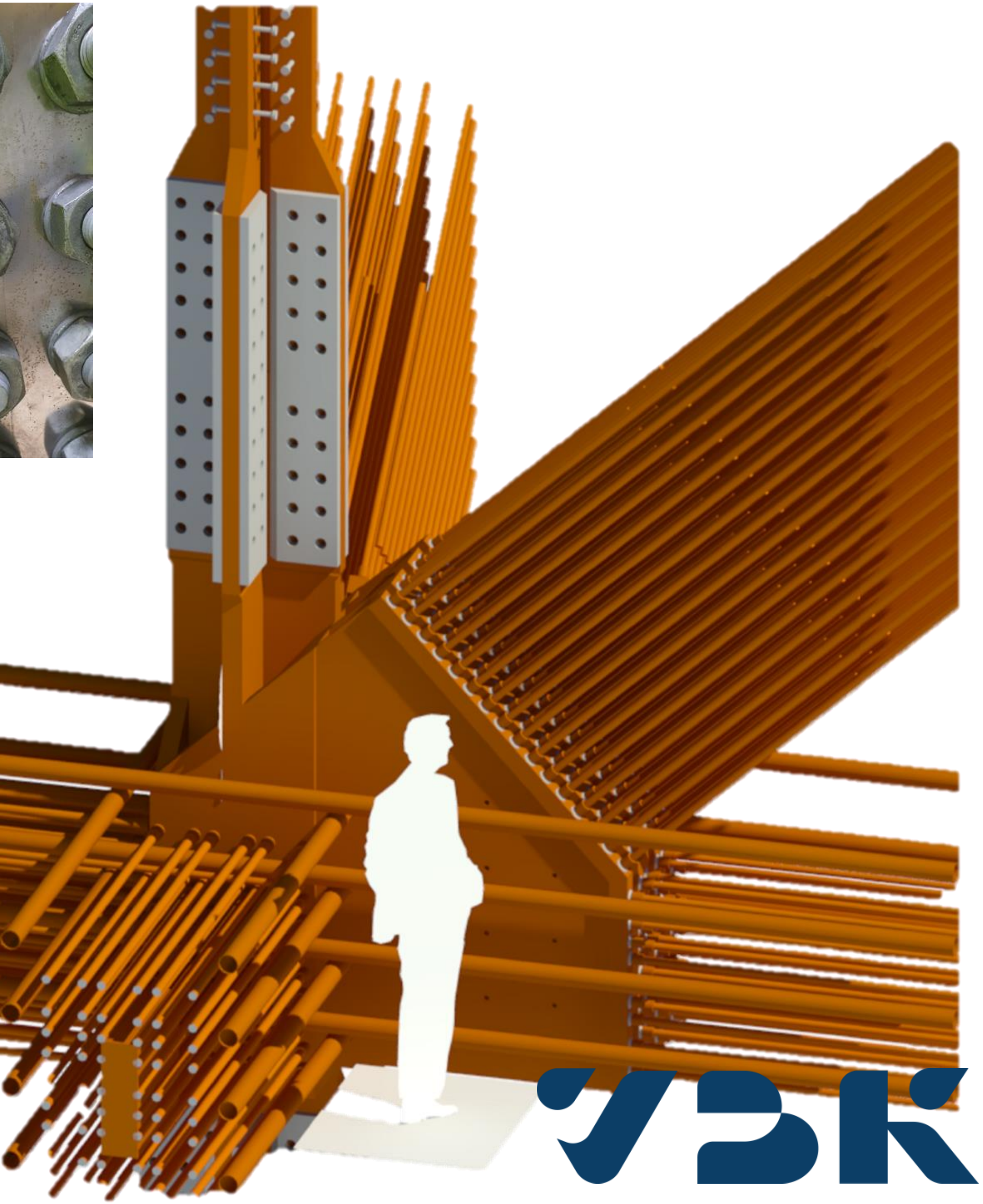

KARLASTADEN
BYGGHANDLING
VBK
SERNEKE
E126104 1 : 50

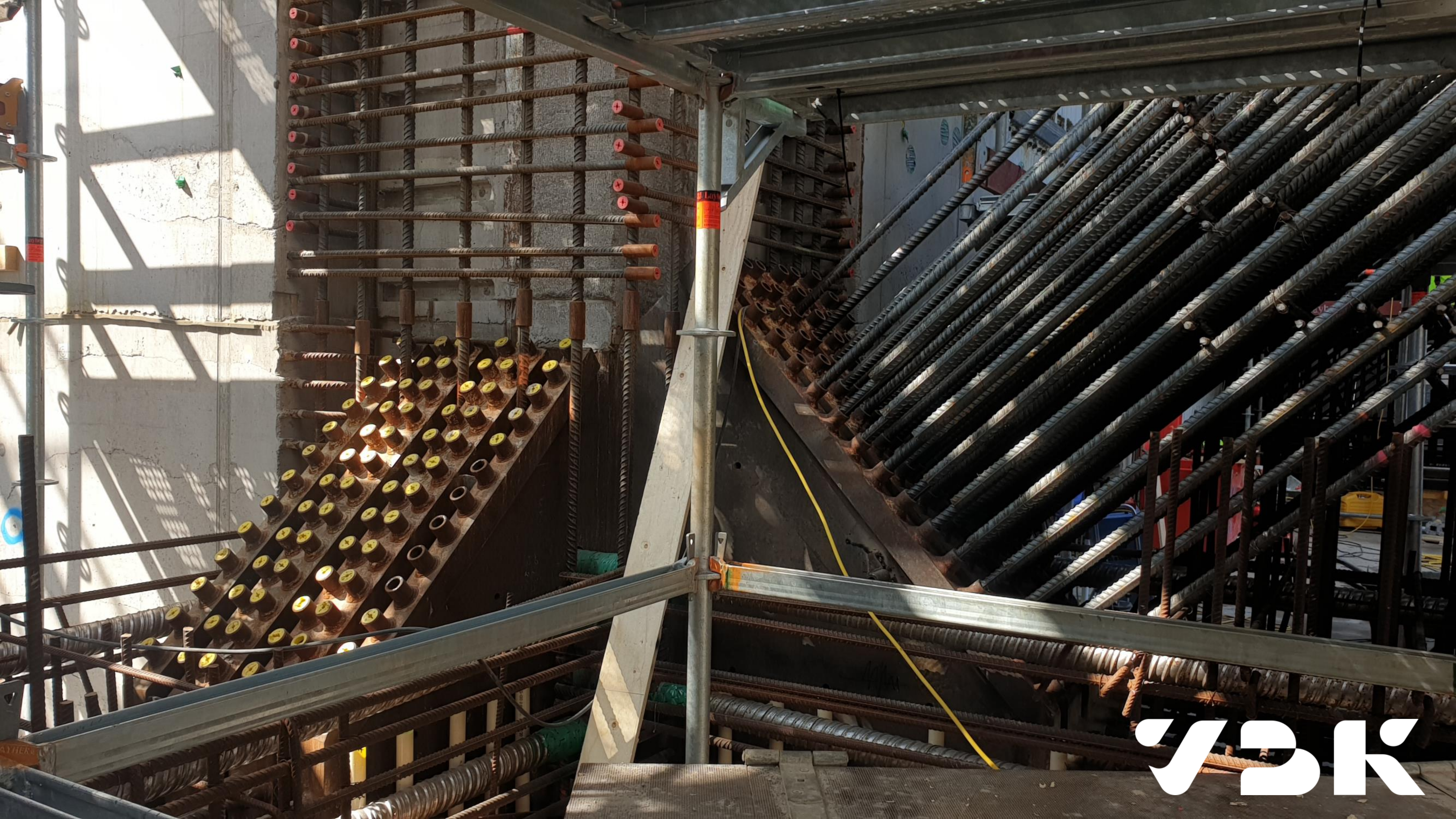




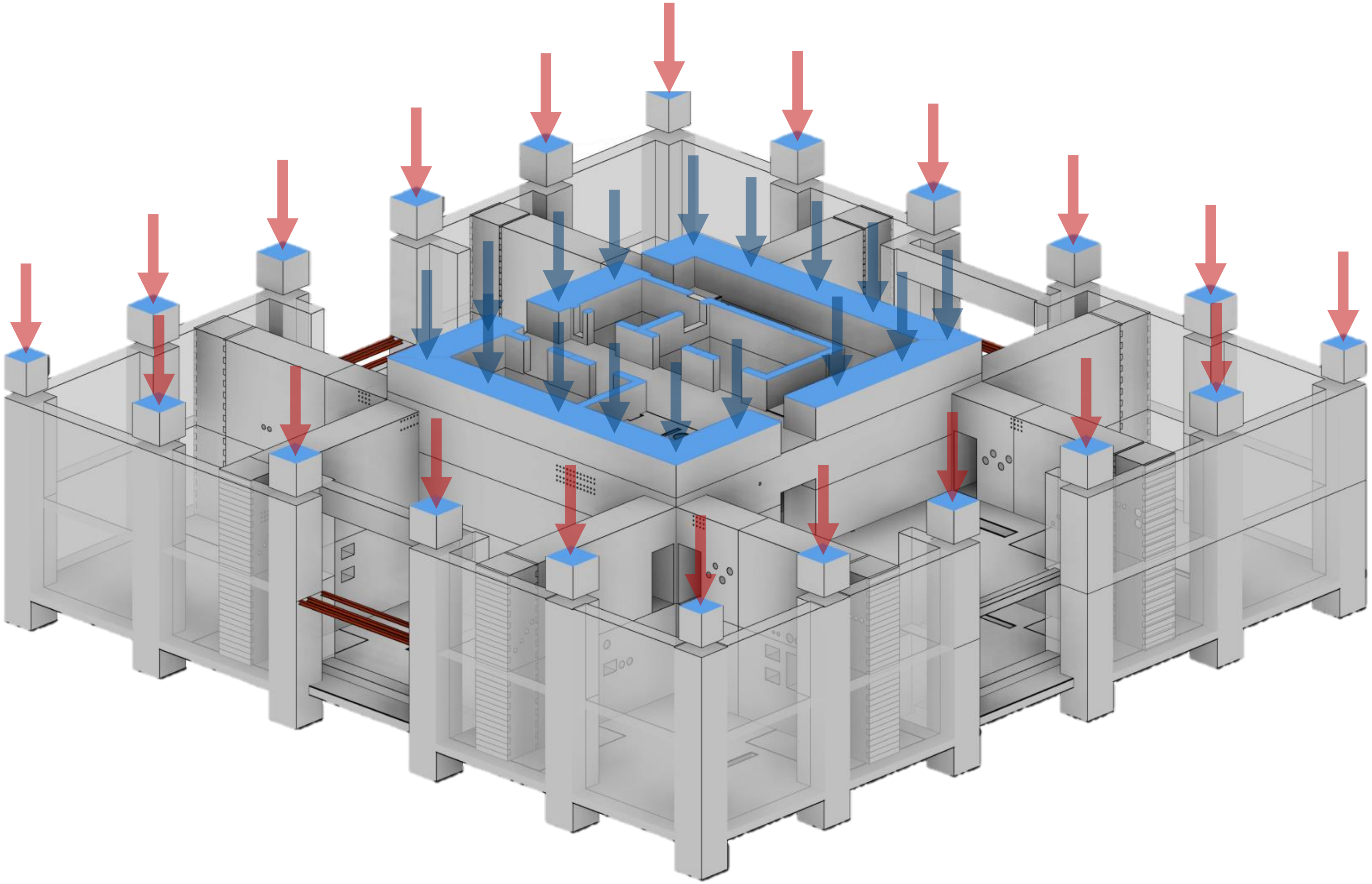


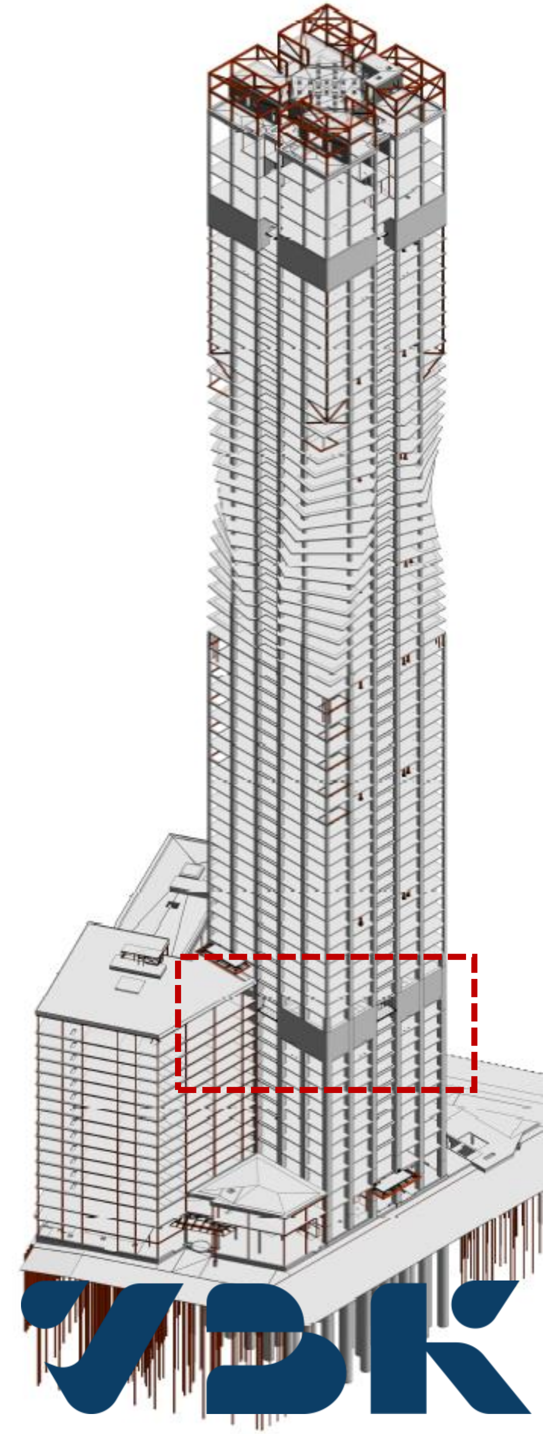
KARLASTADEN
BYGGHANDLING
VBK
SERNEKE



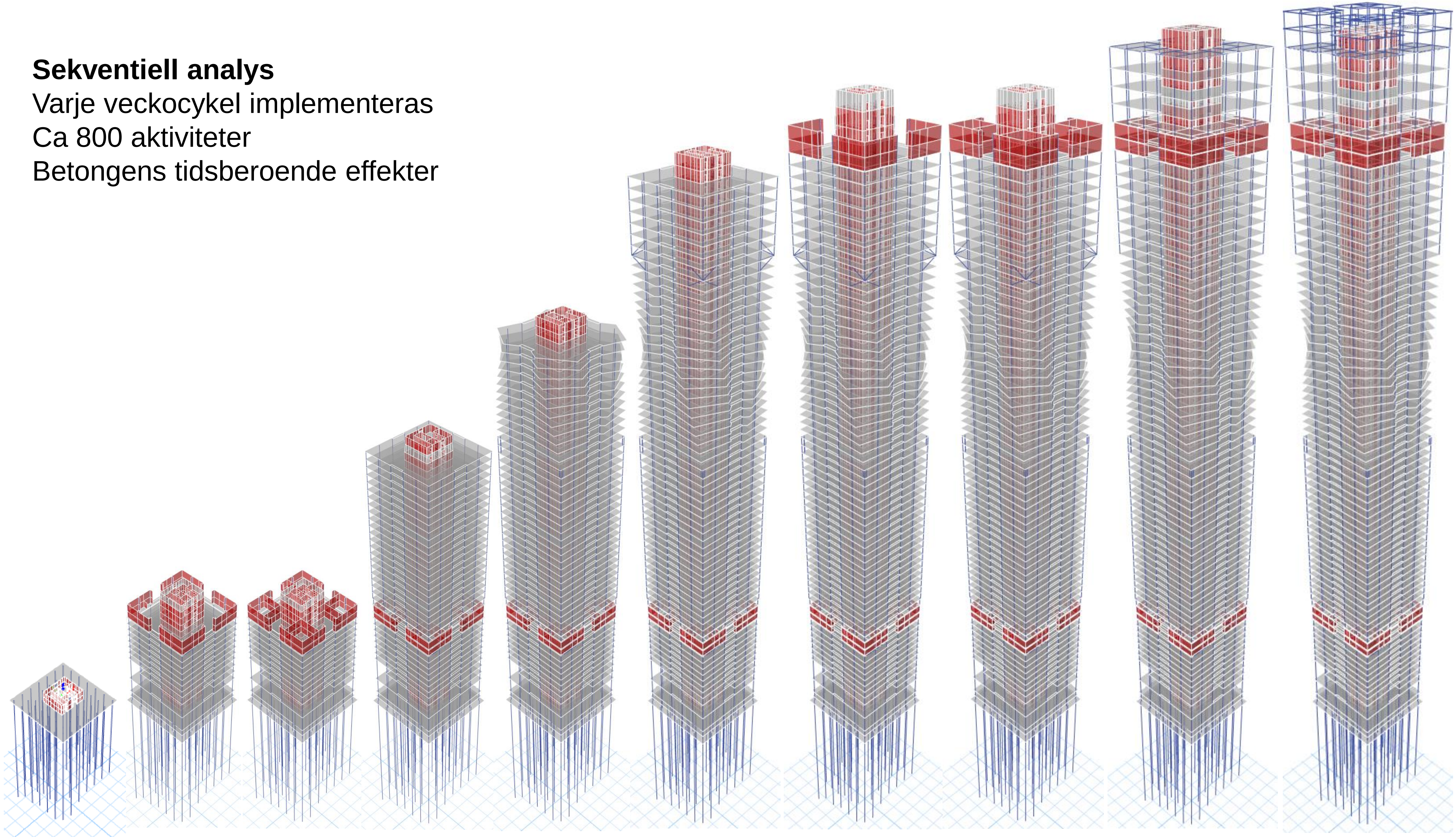



Layher
SERNEKE

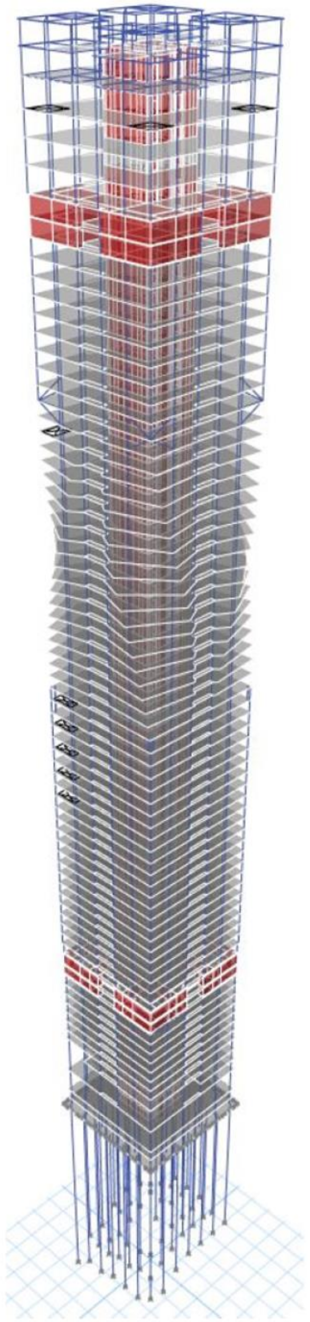




Sekventiell analys
Varje veckocykel implementeras
Ca 800 aktiviteter
Betongens tidsberoende effekter

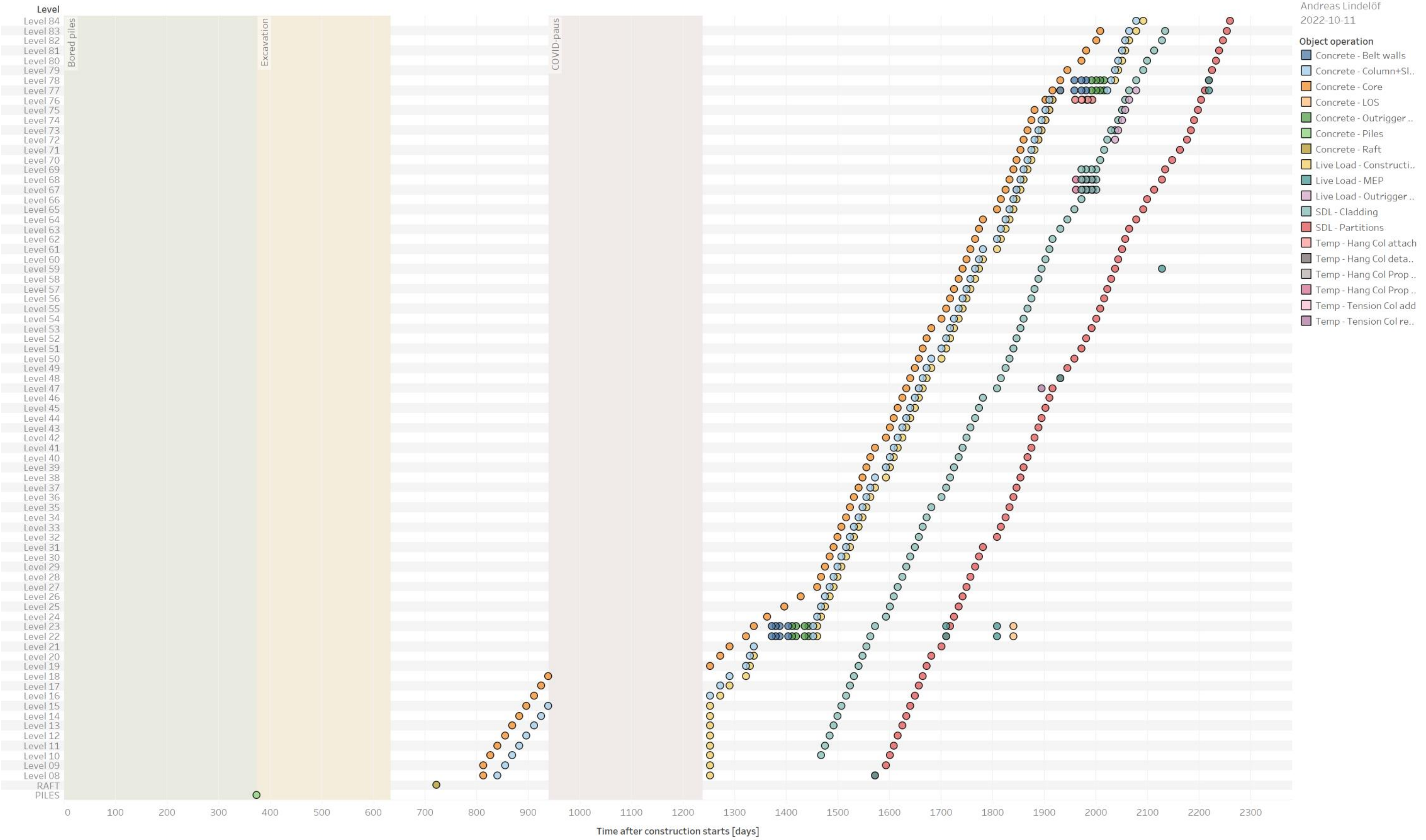


Implemented construction sequence ETABs



Overview of implemented construction sequence

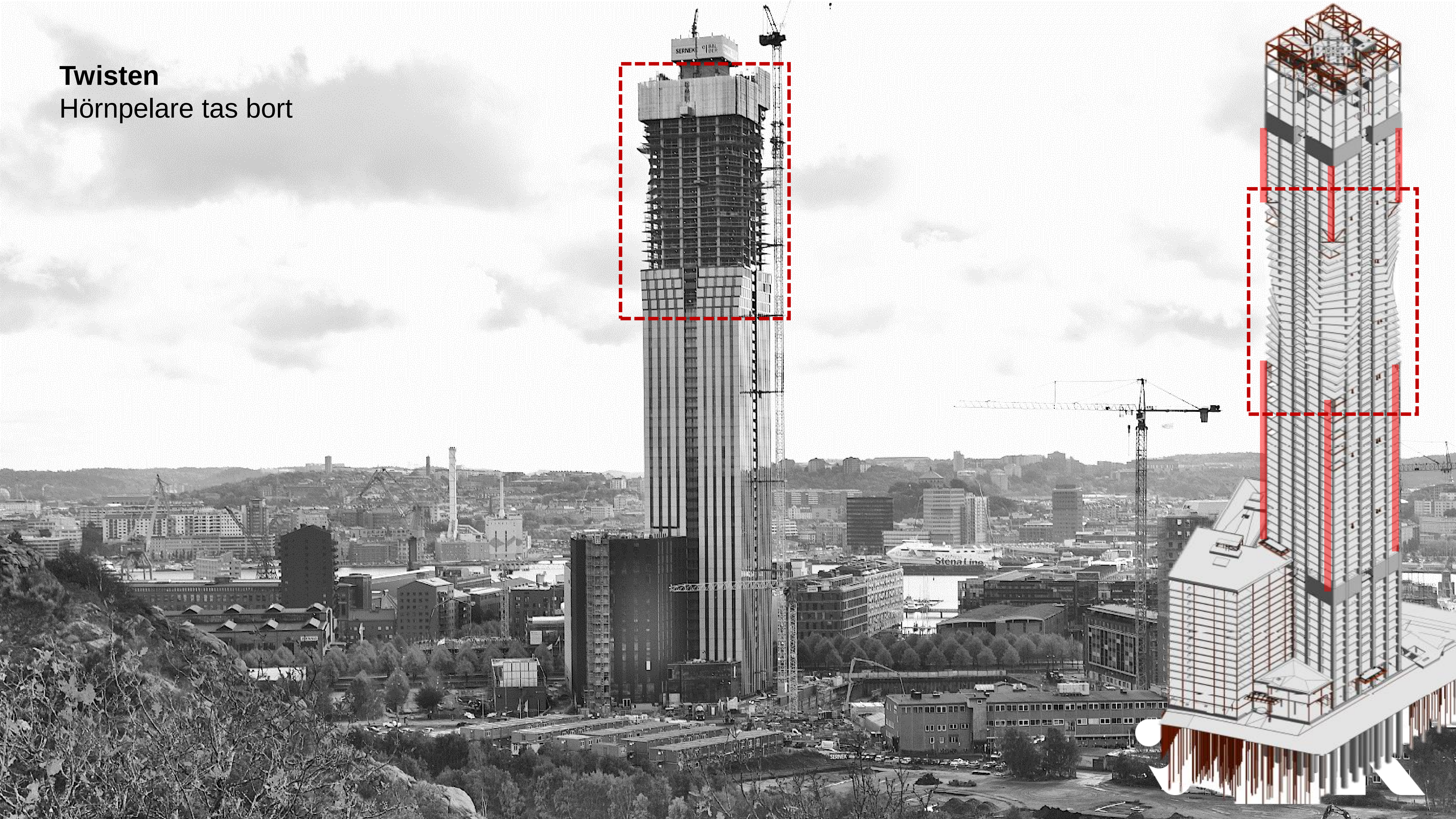
#150470
KVPL
Andreas Lindelöf
2022-10-11



Twisten

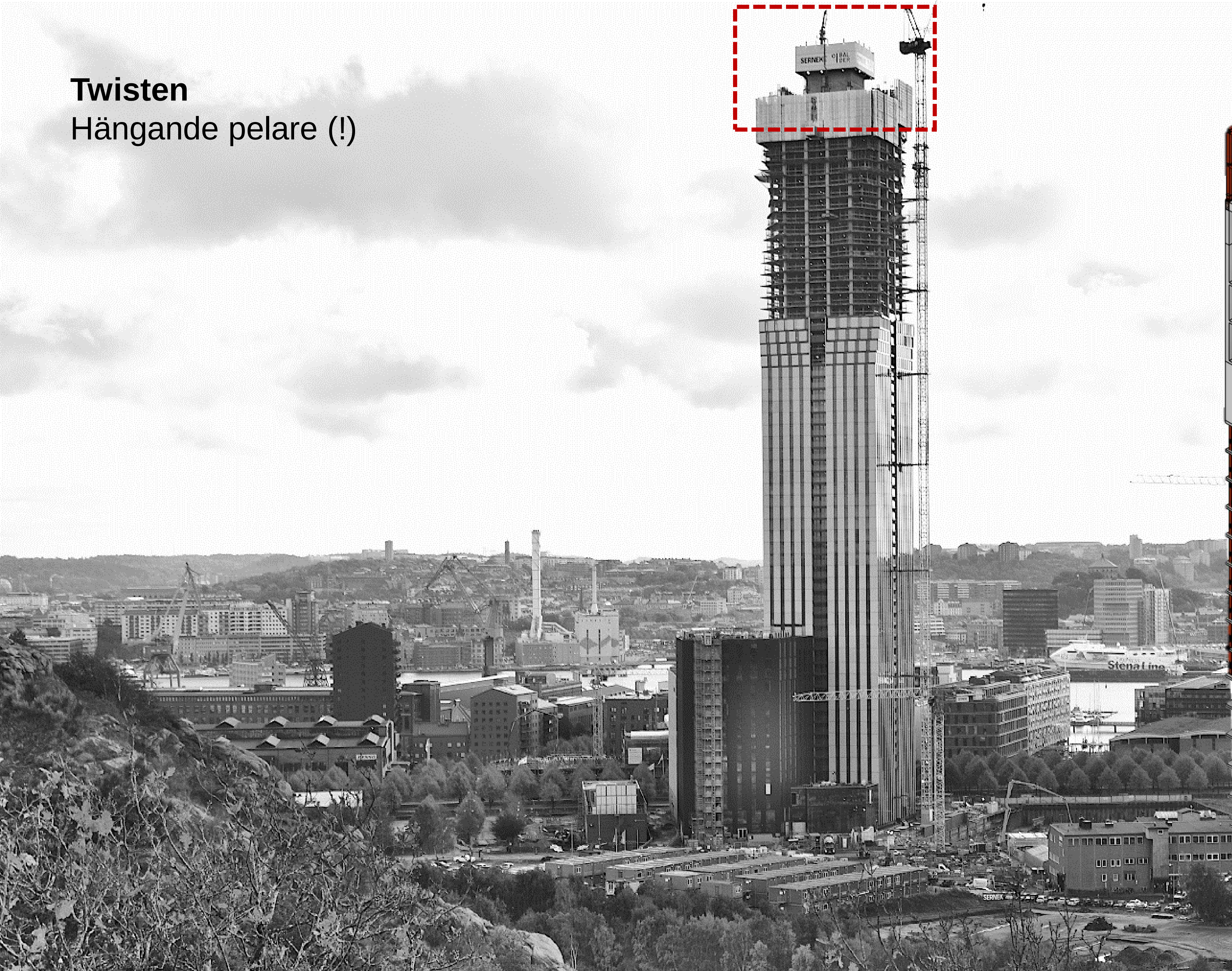
Twisten

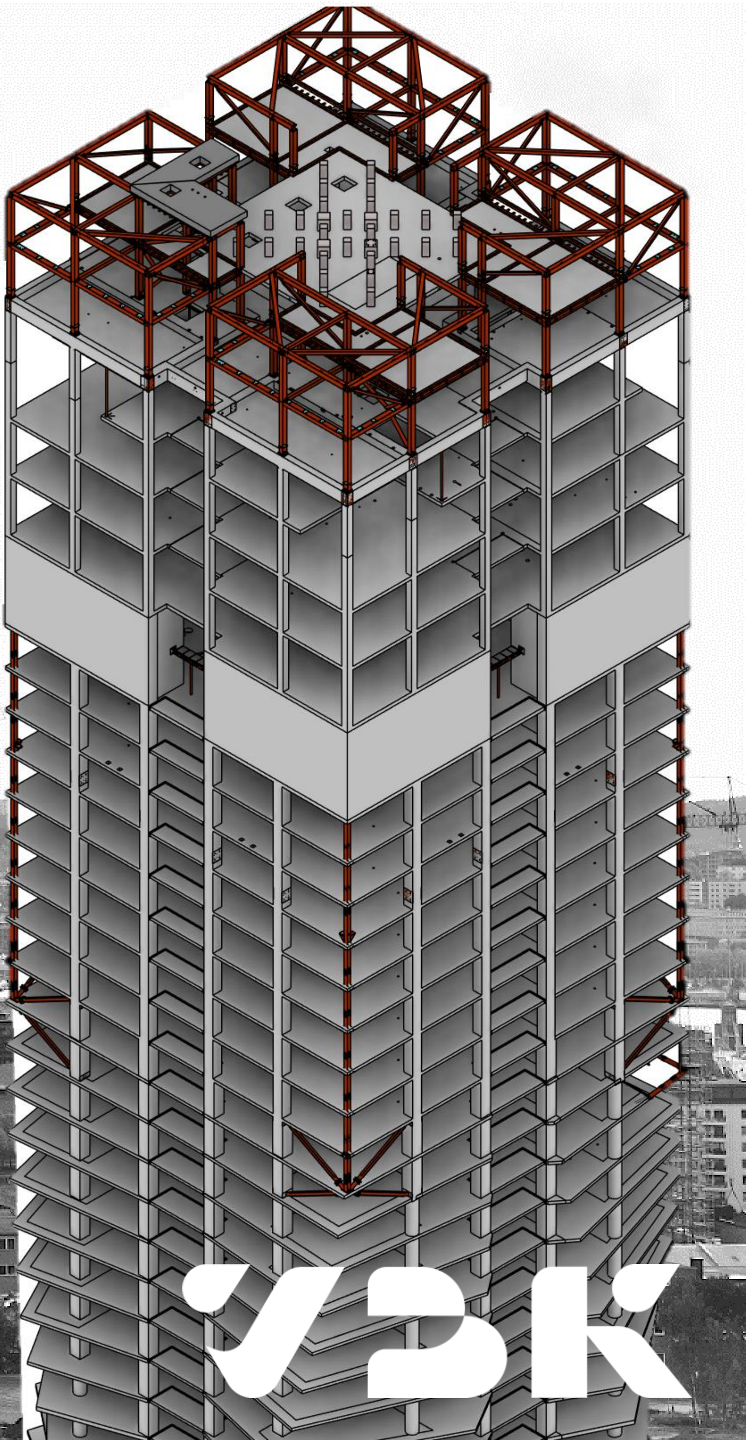
Hörnpelare tas bort



Twisten

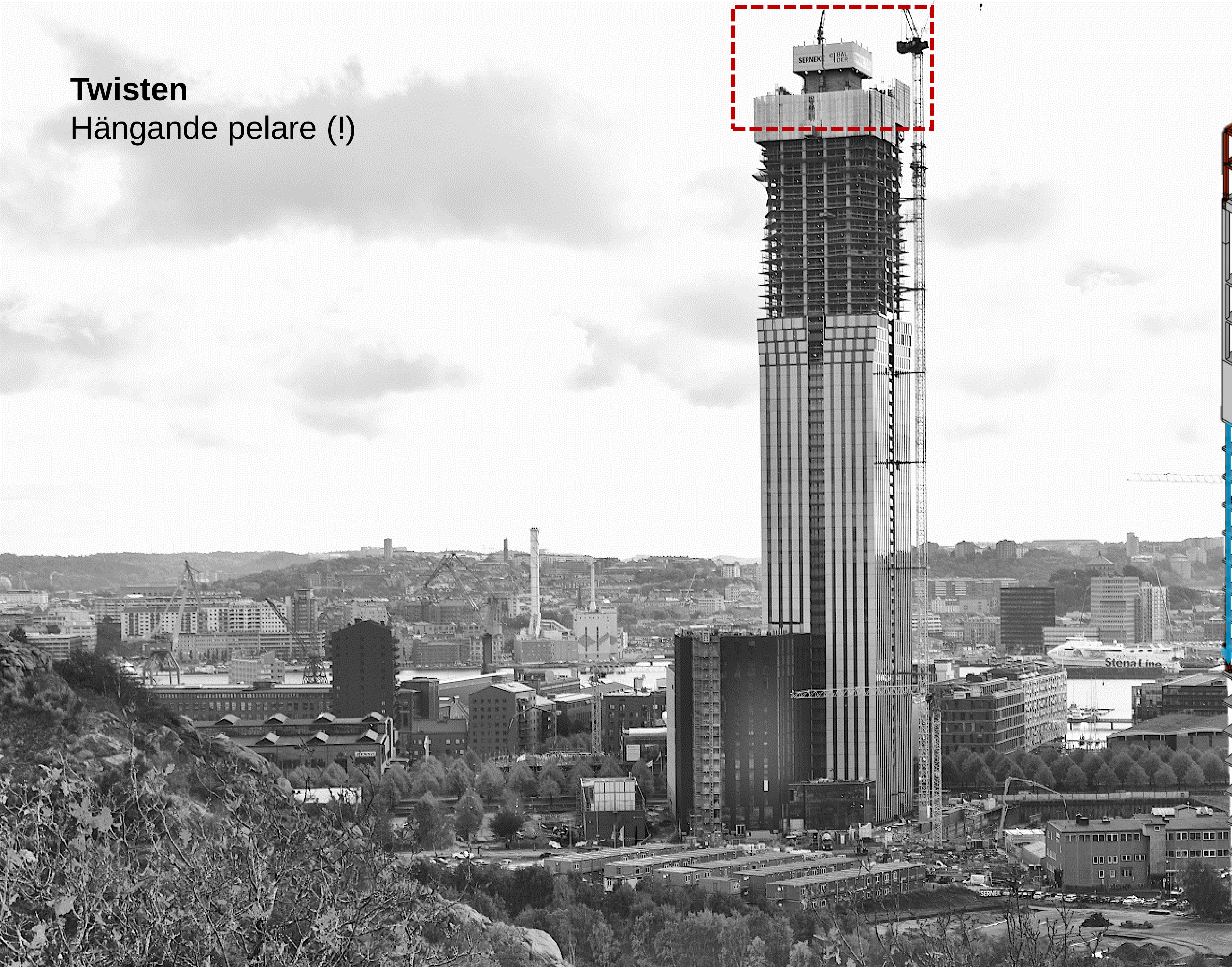
Hängande pelare (!)

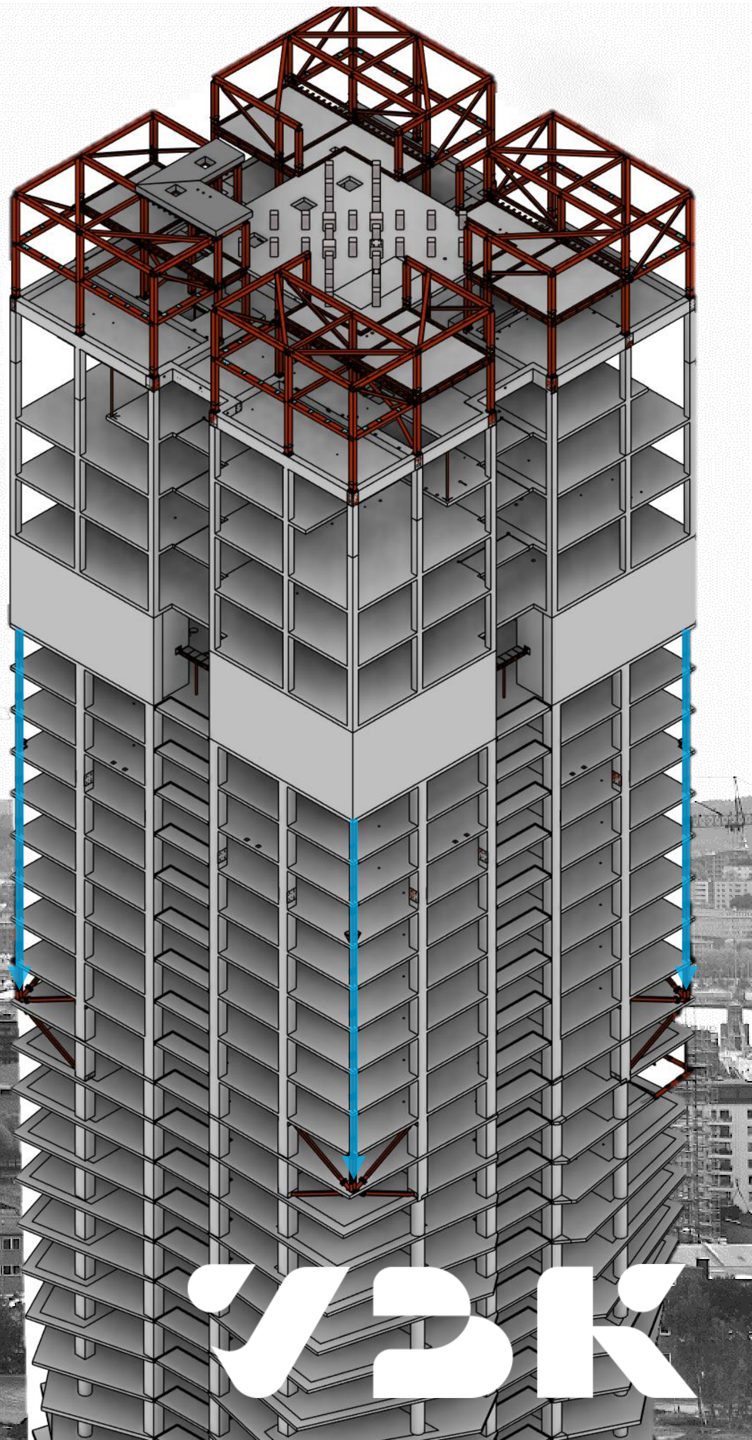




Twisten

Hängande pelare (!)





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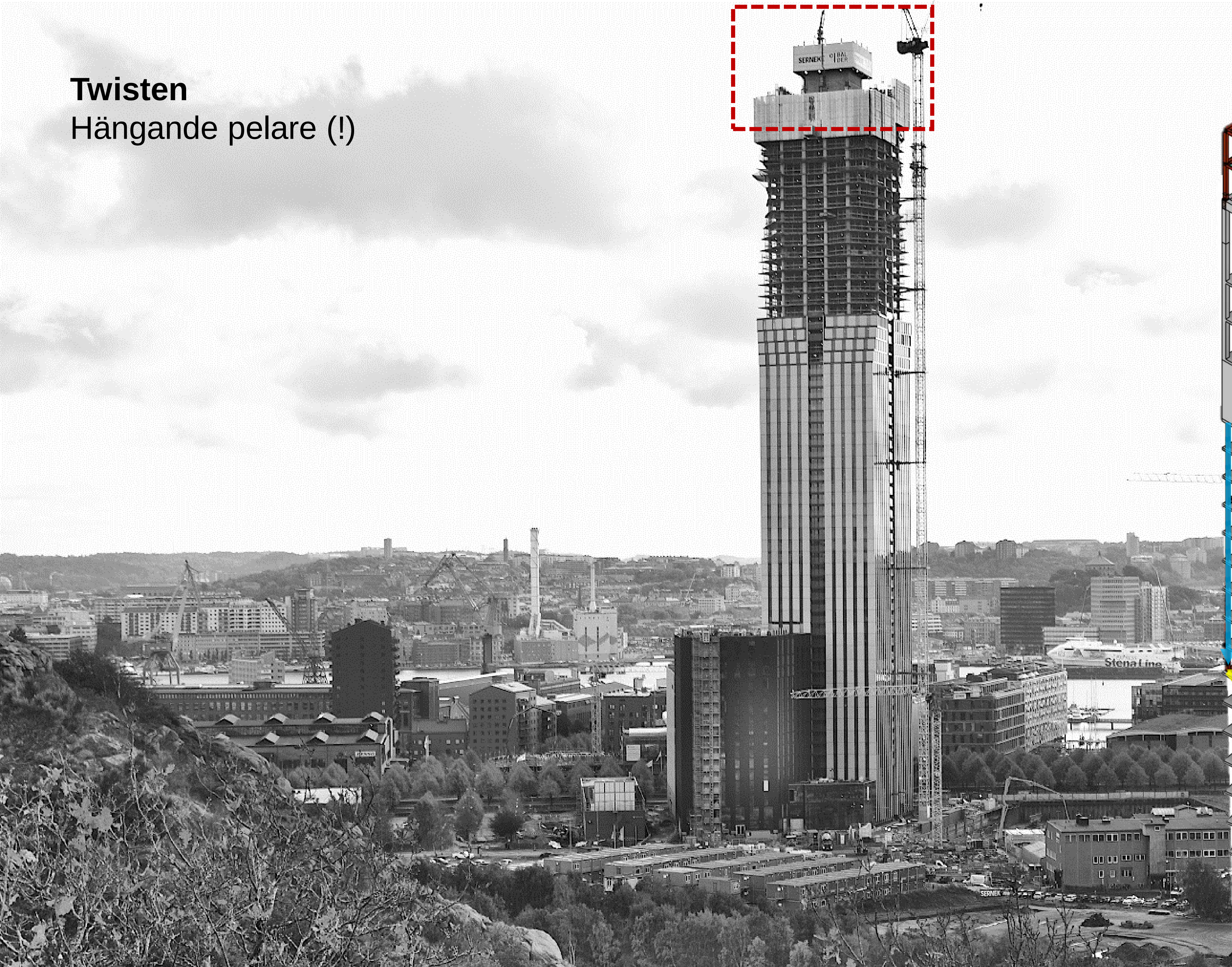
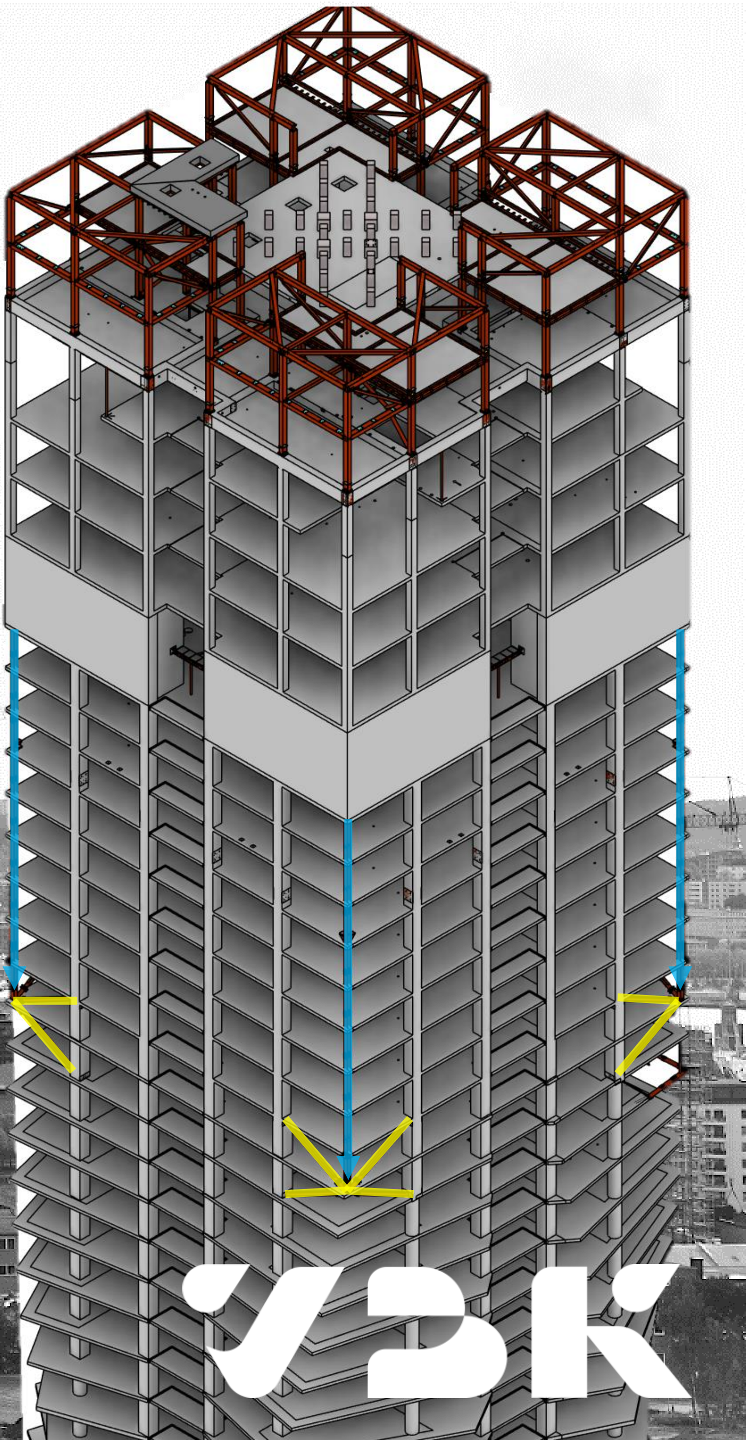
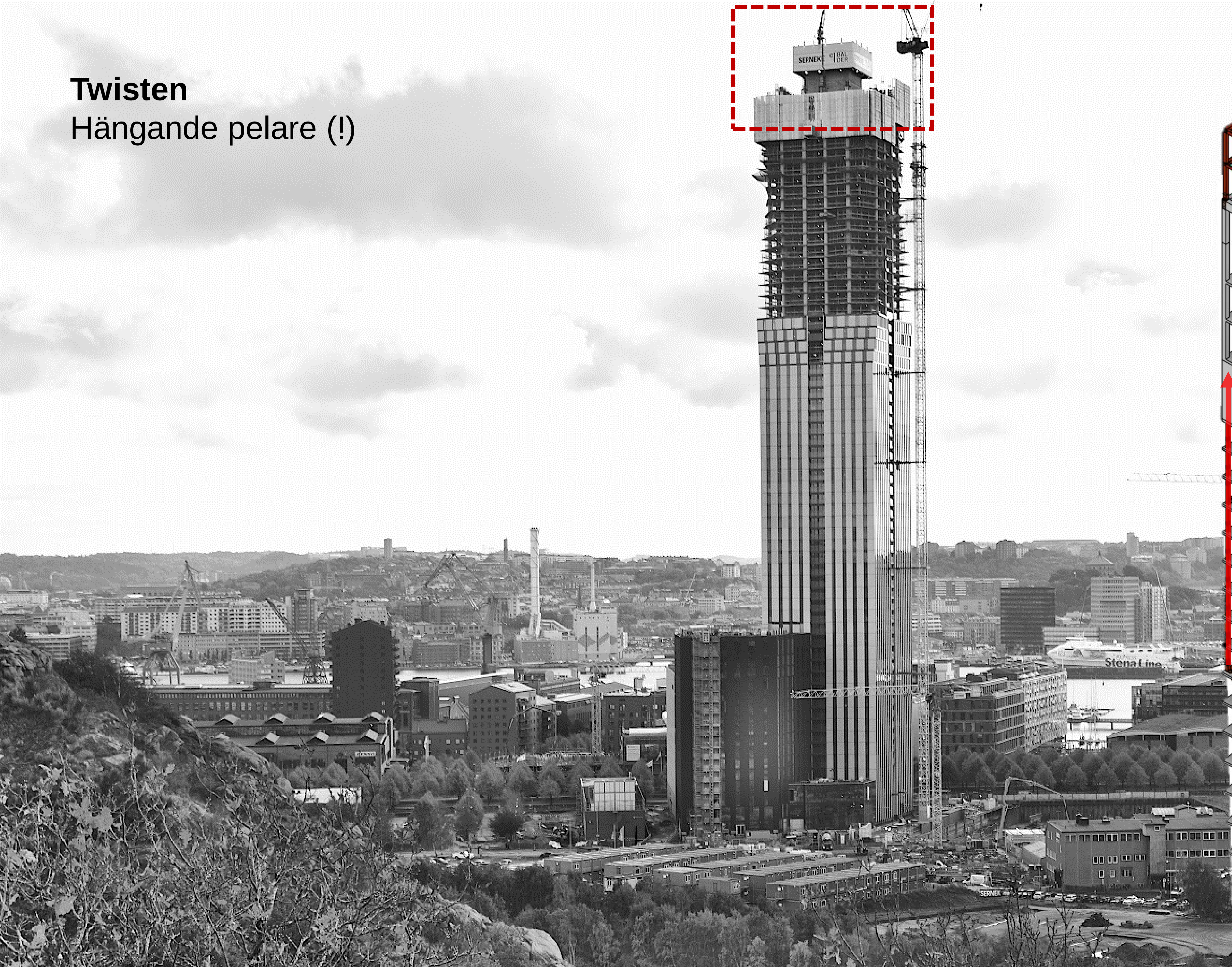
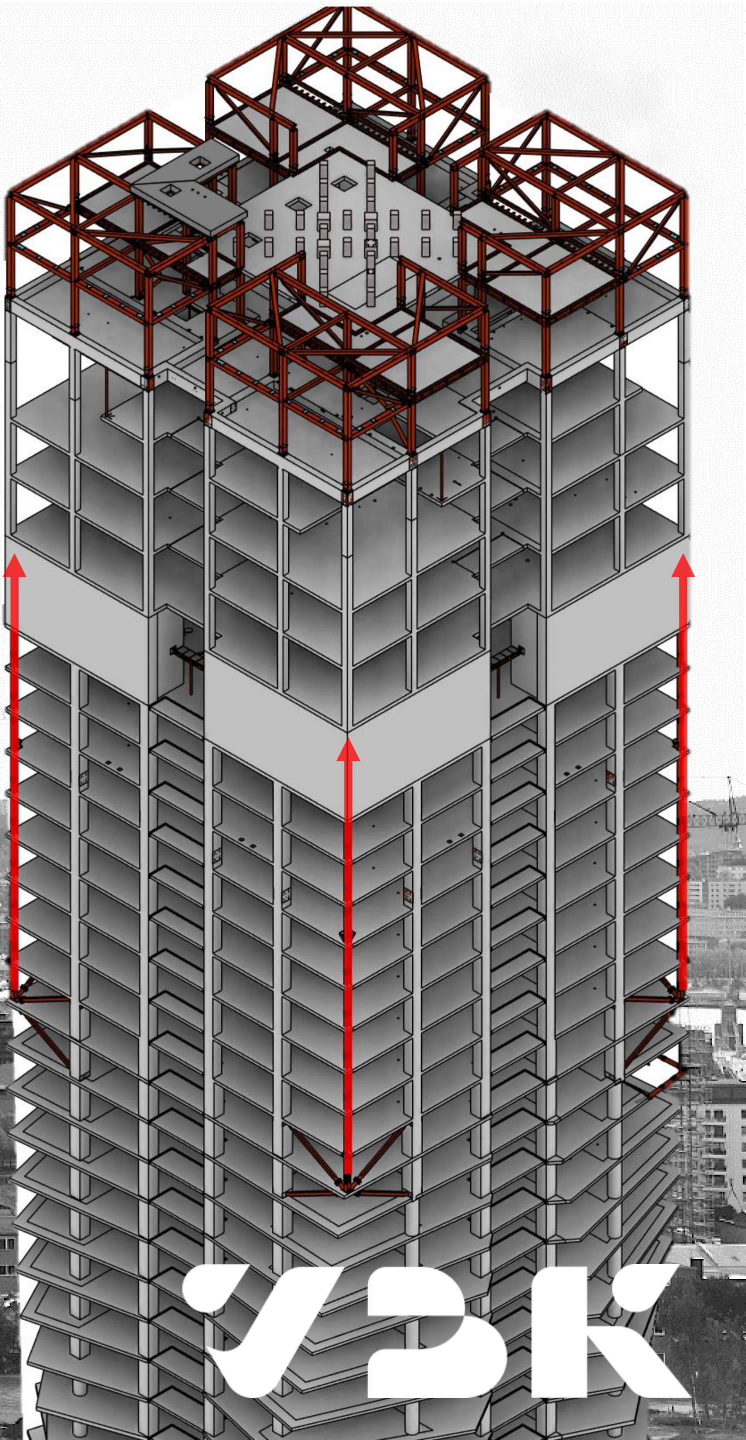




Twisten

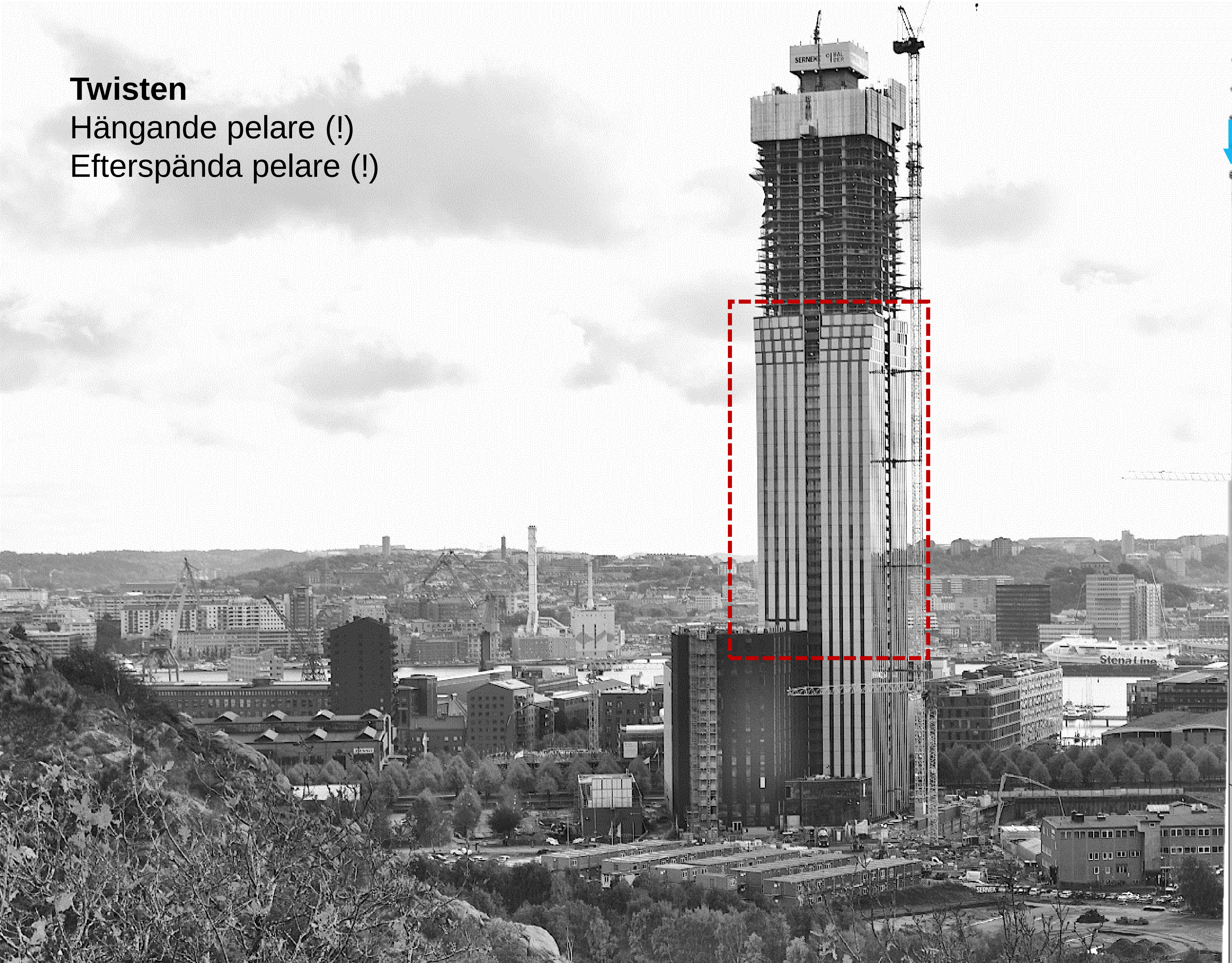
Hängande pelare (!)

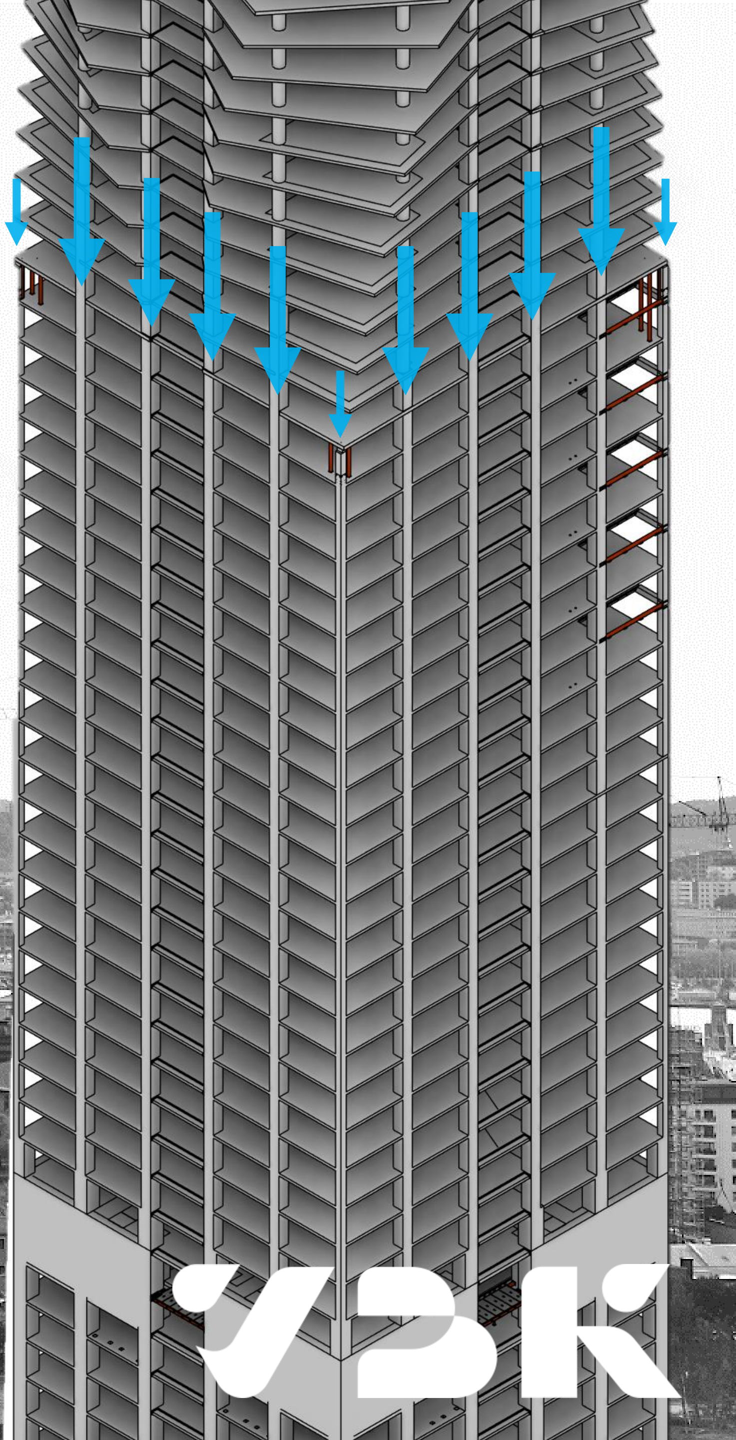





S10

Twisten
Hängande pelare (!)
Efterspända pelare (!)

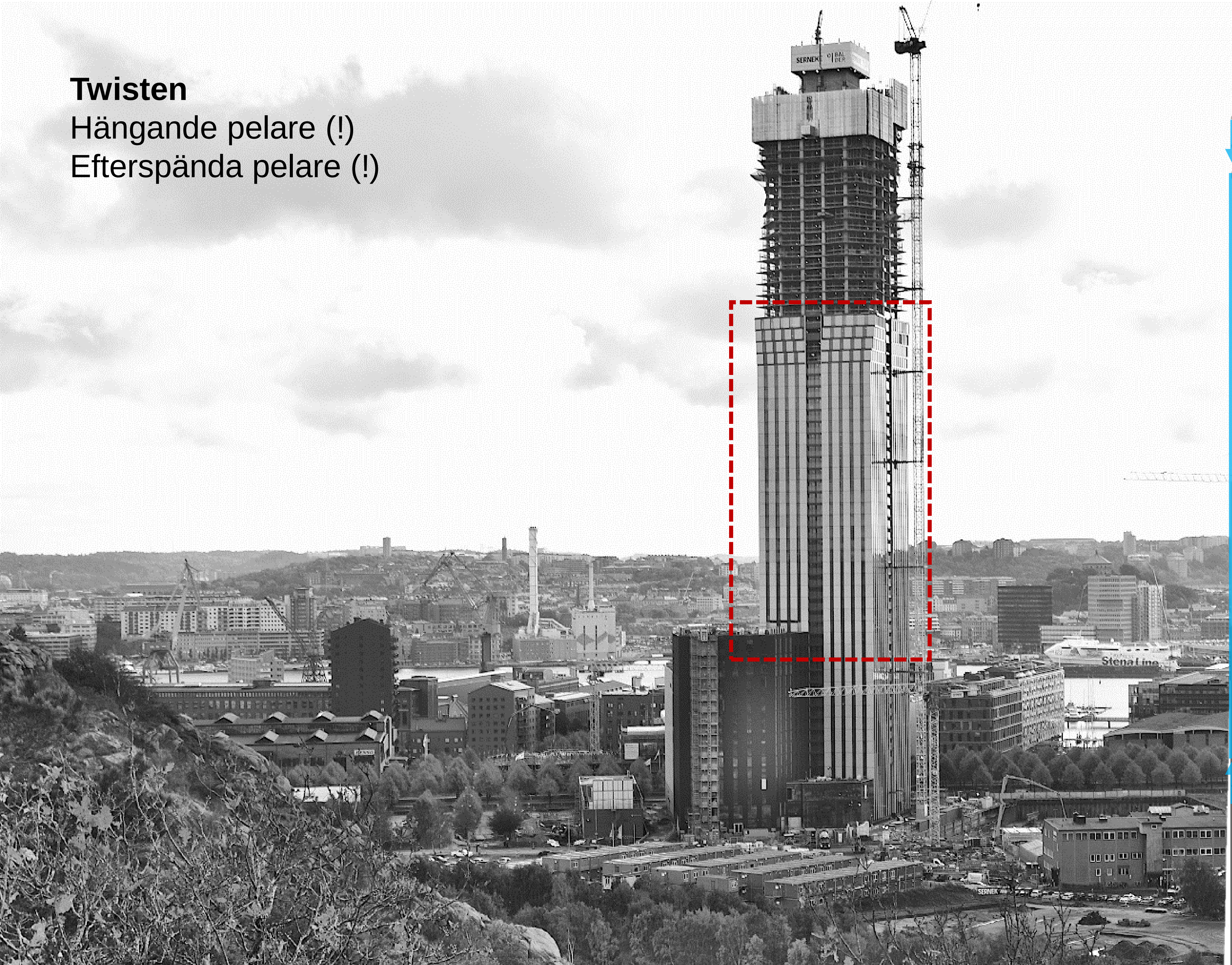


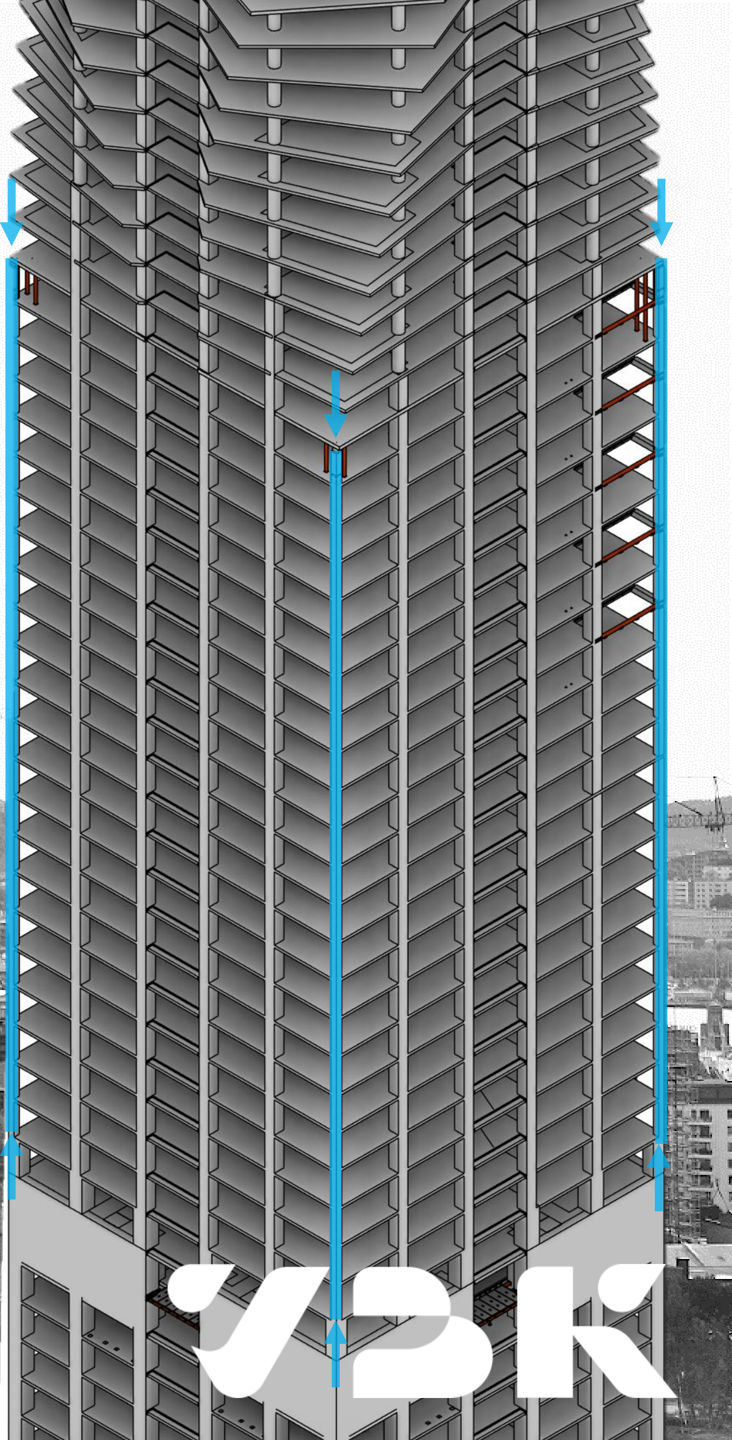


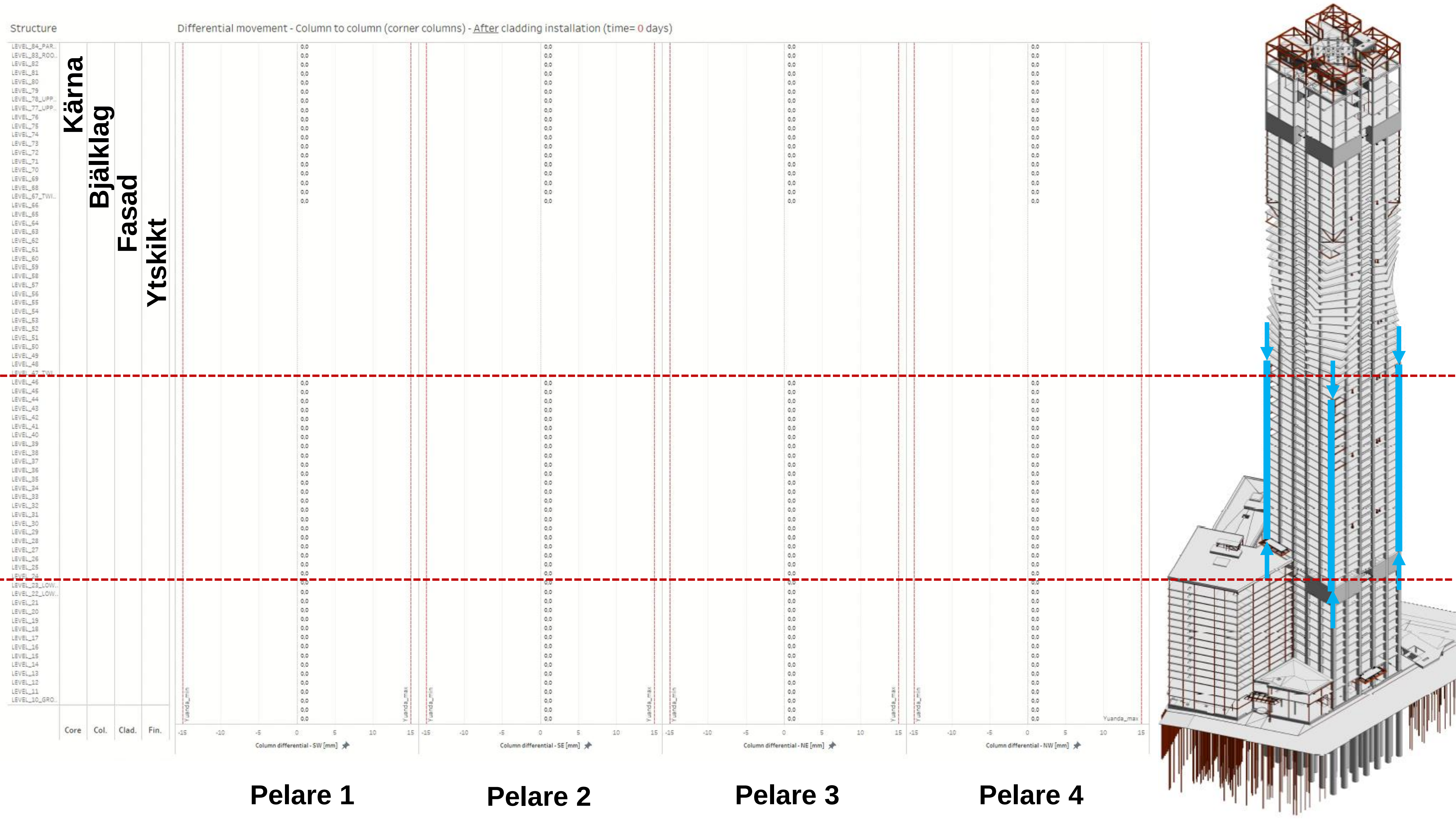
Twisten

Hängande pelare (!)

Efterspända pelare (!)

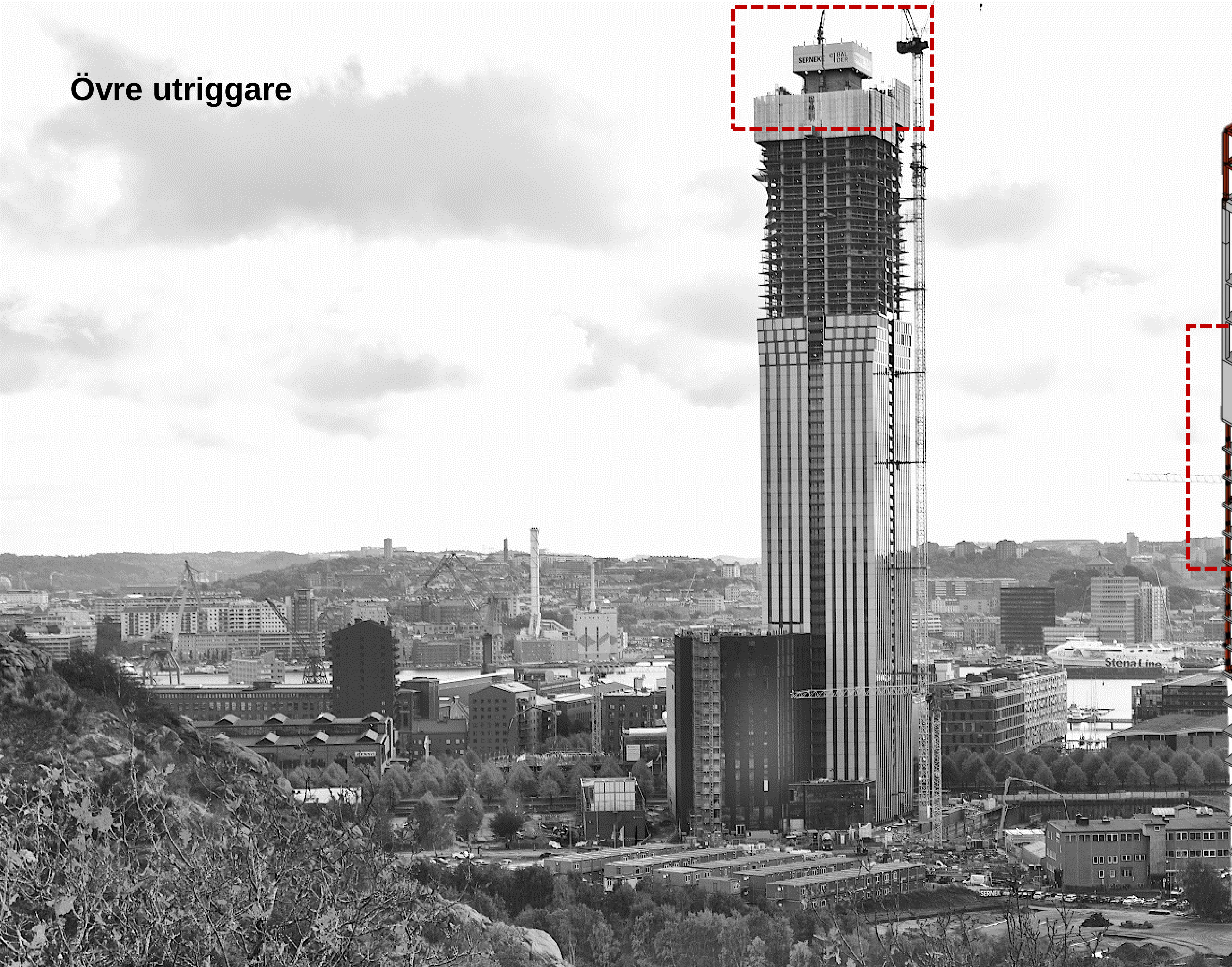


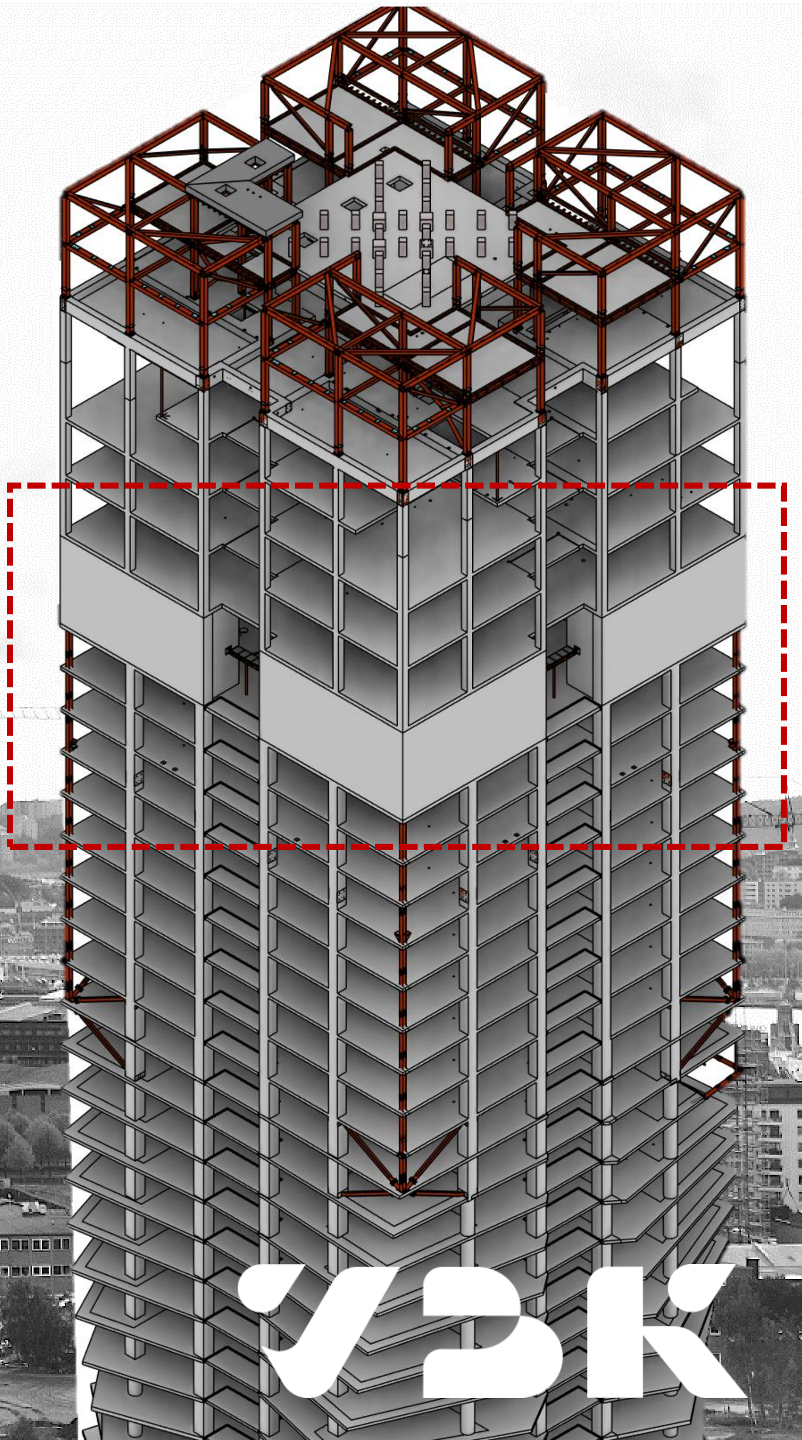


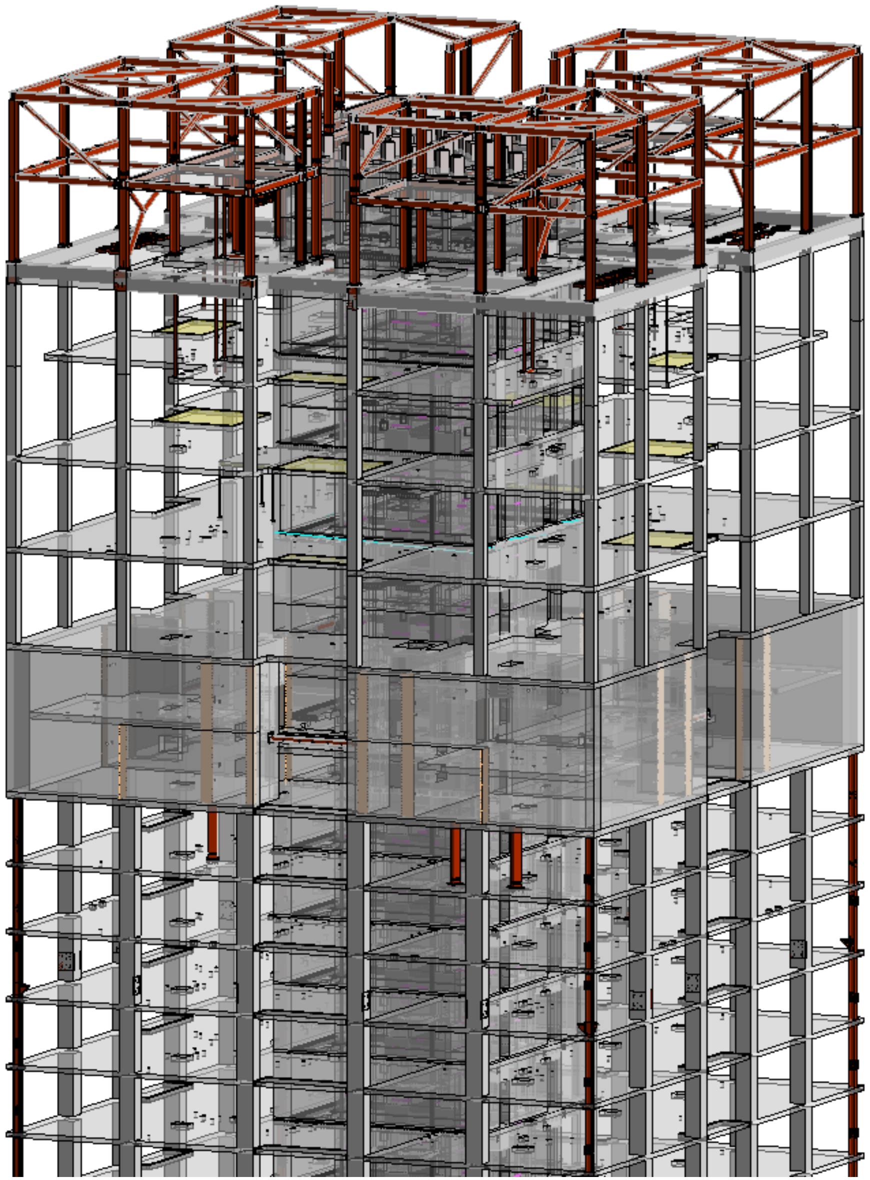

Structure
Differential movement - Column to column (corner columns) - After cladding installation (time= 0 days)
Kärna
Bjälklag
Fasad
Ytskikt
Core
Col.
Clad.
Fin.
Column differential - SW [mm]
Column differential - SE [mm]
Column differential - NE [mm]
Column differential - NW [mm]
Yuanda_min
Yuanda_max
Pelare 1
Pelare 2
Pelare 3
Pelare 4

Vad händer nu?

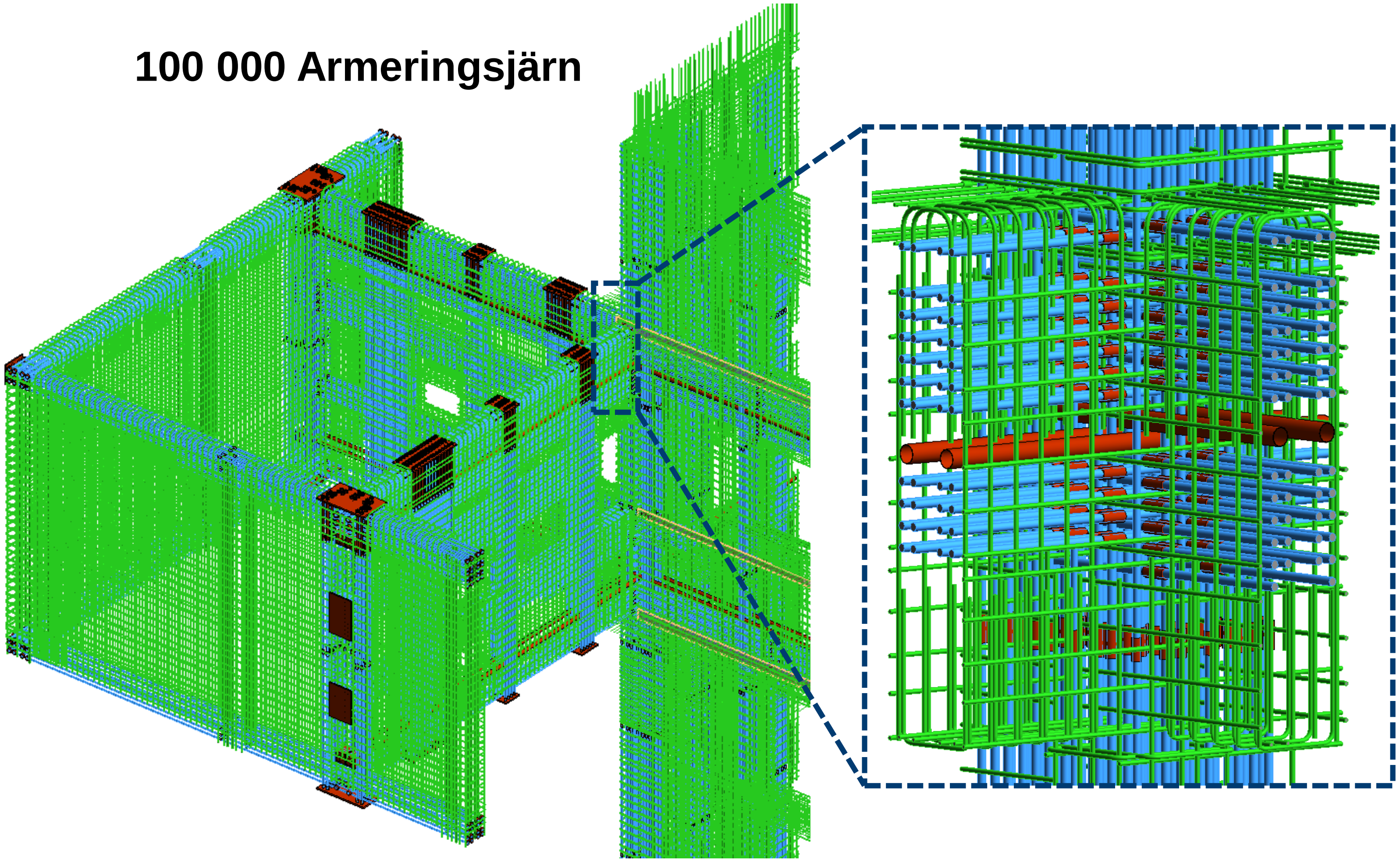
Övre utriggare







100 000 Armeringsjärn



Tack för mig!