BOOKLET

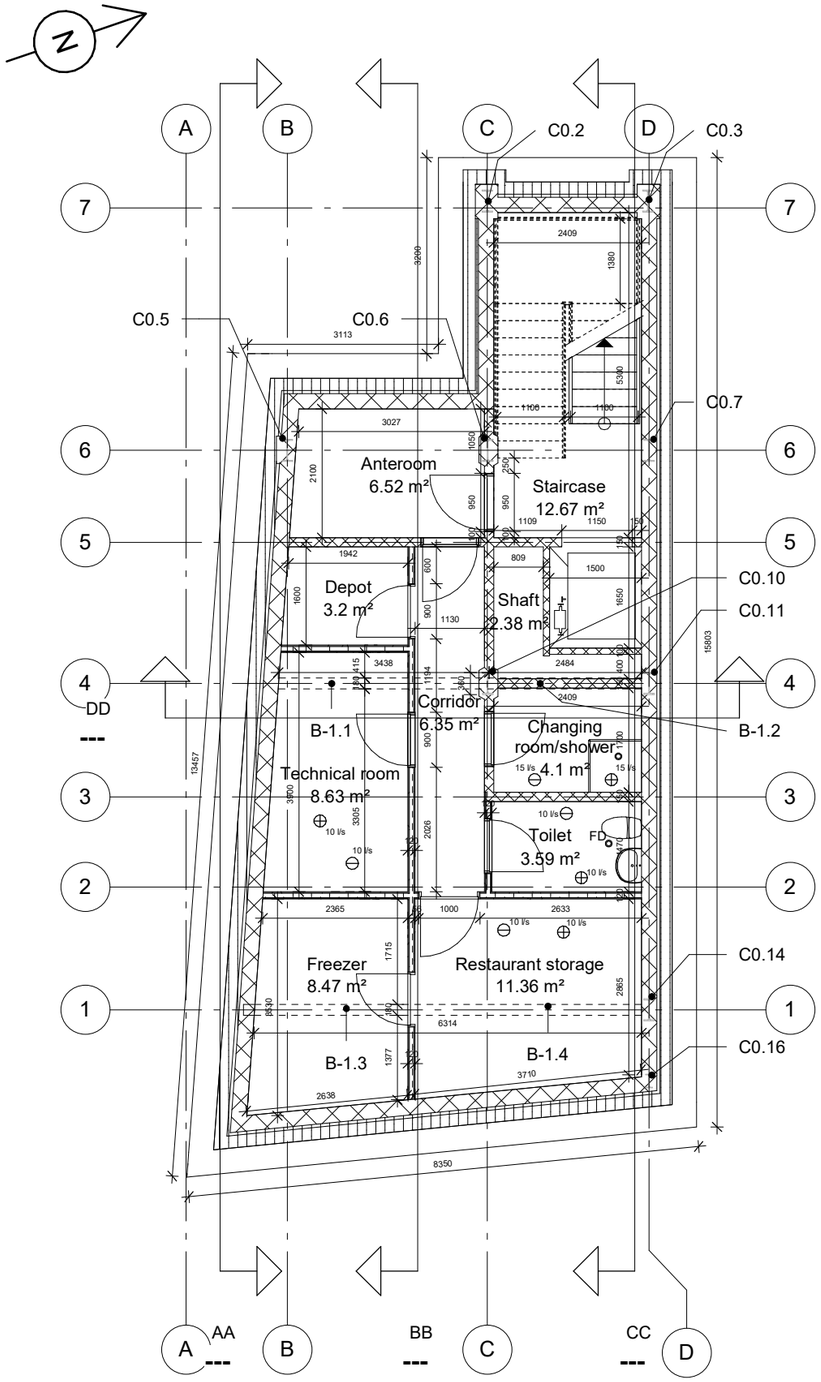
Tender design – blacksmith

AH71P-20S

Carina Pronscaia, Jan 2021

VIA University College, 8700 Horsens

PROJECT: Multipurpose multistory infill building on Mejlgade 37, 8000 Århus			Page 3 out of 3		Soil workers	Concrete	Bricklayer	Blacksmith	Carpenter	Services	Finishes
SUBJECT: Drawing list			Tender design								
AH71P-20S, Carina Pronscaia											
DRAWING NUMBER	**SUBJECT**	**SCALE**	**DATE**	**REVISION**							
K01_TXX_H5_E4_N01	Detail - balcony	1:5	05.01.2021					x	x		
K01_TXX_H5_E4_N04	Detail - beam and IPE column	1:5	05.01.2021					x			
K01_TXX_H5_E4_N05	Detail - two IPE columns connection	1:5	05.01.2021					x			
K01_TXX_H5_E3_N04	Detail - column and foundation	1:5	05.01.2021			x		x			
K01_TXX_H5_E3_N03	Detail - column and basement wall	1:5	05.01.2021			x		x			
K01_TXX_H5_E3_N05	Detail - beam and concrete wall	1:5	05.01.2021								
K01_TXX_H5_E7_N01	Detail - curved beam and column	1:5	05.01.2021					x			
K01_TXX_H1_E4_N02	Balcony beam plan	1:15	05.01.2021					x			
K01_TXX_H1_E4_N03	Balcony decking plan	1:10	05.01.2021					x			
K01_TXX_H1_E4_N04	Balcony sheeting plan	1:10	05.01.2021					x			
K01_TXX_H1_E4_N05	Balcony siding plan	1:10	05.01.2021					x			
K01_TXX_H1_E1_N01	Basement plan - blacksmith	1:100	05.01.2021					x			
K01_TXX_H1_E3_N01	Groundfloor floor plan - blacksmith	1:100	05.01.2021					x			
K01_TXX_H1_E4-5_N01	First and second floor plan - blacksmith	1:100	05.01.2021					x			
K01_TXX_H1_E6_N01	Third floor plan - blacksmith	1:100	05.01.2021					x			
K01_TXX_H2_E7_N01	Fourth floor plan - blacksmith	1:100	05.01.2021					x			
K01_TXX_H2_EX_N01	West and east elevations	1:100	05.01.2021					x	x		
K01_TXX_H2_EX_N02	Balcony front view	1:15	05.01.2021					x	x		
K01_TXX_H1_EX_N02	Construction site plan - blacksmith	1:100	05.01.2021		x			x			



01 Basement
1 : 100

LEGEND

North arrow

IPE hot-dip galvanized steel column, sizes according to Beam and Column calculation

hot-dip galvanized steel beam (placed above the cut plane), sizes according to Beam and Column calculation

Beams B-1.1-4 hot-dip galvanized HEB 180 beams for connection of two HODY decks
Relevant details:
K01_TXX_H5_E4_N04 - beam and column

Columns C0.X are mounted to concrete basement wall above cut plane, ref. K01_TXX_H5_E3_N03 - column and concrete wall

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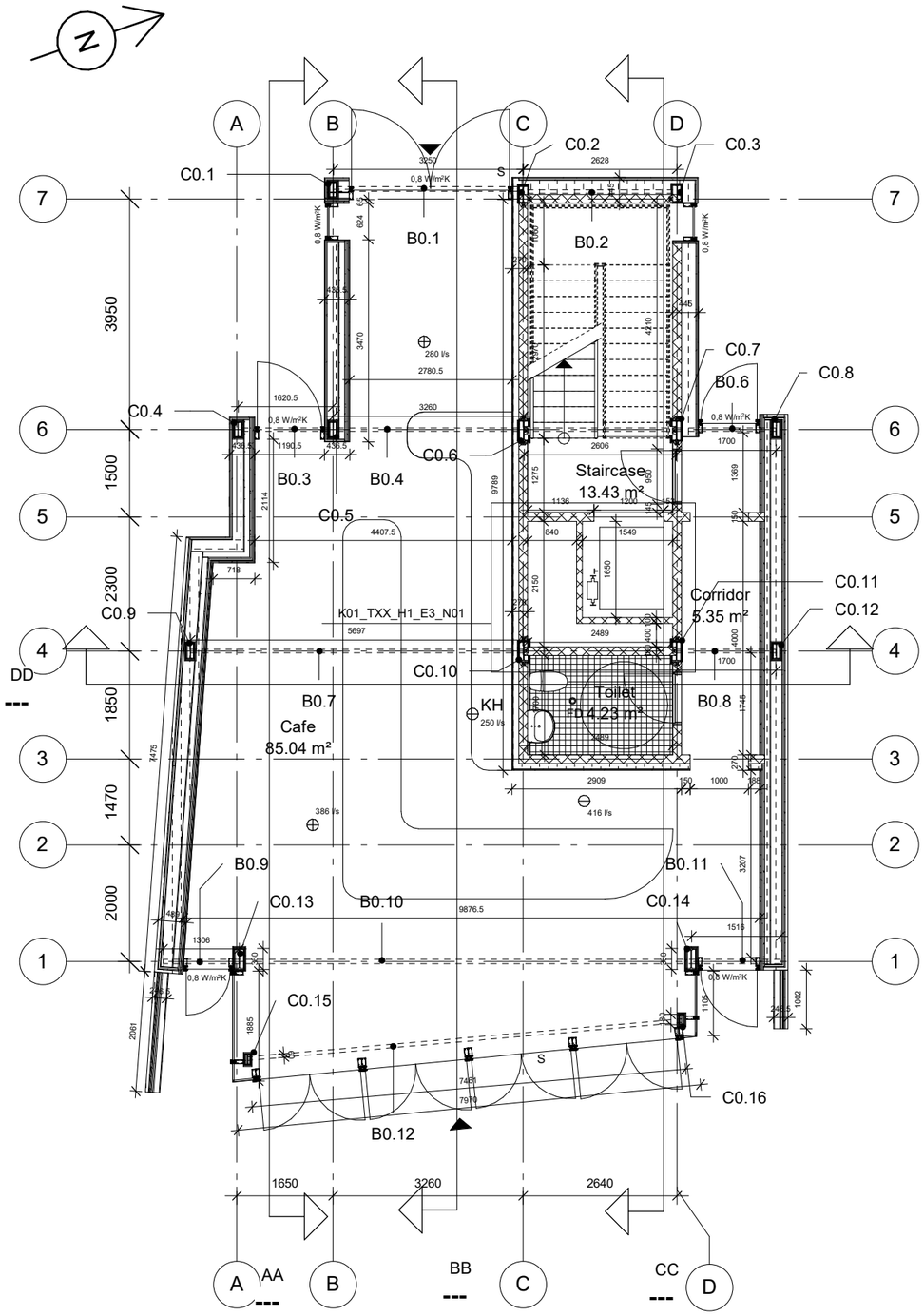
PROJECT: Mejlgade 37, Århus	DATE: 5.1.2021	
SUBJECT: Basement plan	SCALE: 1 : 100	**K01_TXX_H1_E1_N01**
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



03 Groundfloor floor
1 : 100

LEGEND

North arrow

IPE hot-dip galvanized steel column, sizes according to Beam and Column calculation

hot-dip galvanized steel beam (placed above the cut plane), sizes according to Beam and Column calculation

Beams 1, 2, 3, 5, 6, 9, 11, 12 (No. B0.1-3, B0.5-6, B0.9, B0.11-12) - hot-dip galvanized IPE beams for HODY deck support from one side
Relevant details:
K01_TXX_H5_E4_N04 - beam and column

Beams 4, 7, 8, 10 (No. B0.4, B0.7-8, B0.10) - hot-dip galvanized HEB 180 beams for connection of two HODY decks
Relevant details:
K01_TXX_H5_E4_N04 - beam and column

Calculated beams and columns according to Knud Ahler:
B0.4 - IPE 270, replaced with HEB 180
B0.7 - IPE 270, replaced with HEB 180
B0.10 - HEB 360
C0.13 - IPE 360

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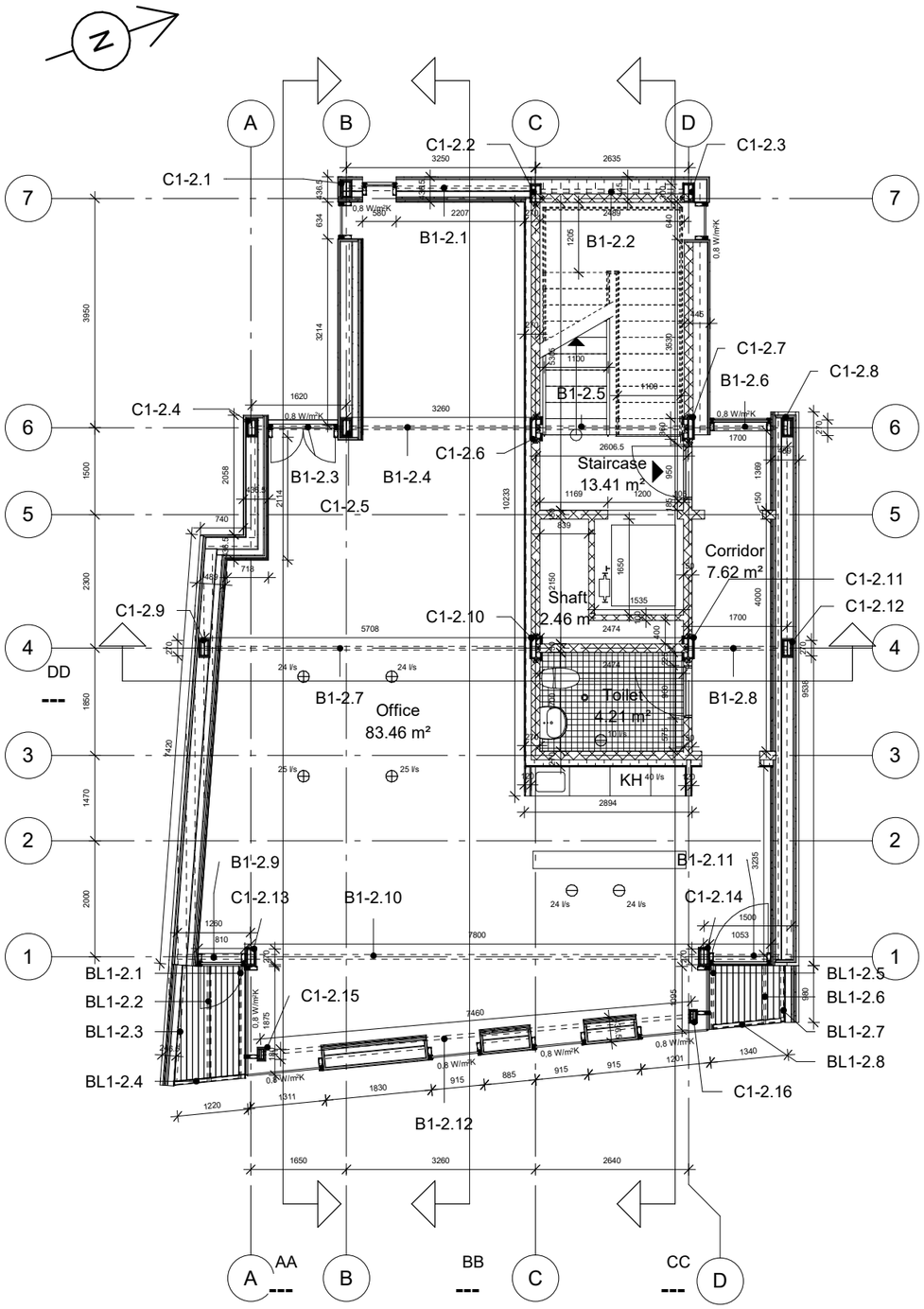
PROJECT: Mejlgade 37, Århus	DATE: 5.1.2021	
SUBJECT: Floor plan - groundfloor	SCALE: 1 : 100	**K01_TXX_H1_E3_N01**
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



04 First and second floor (BT)
1 : 100

LEGEND

North arrow

IPE hot-dip galvanized steel column, sizes according to Beam and Column calculation

hot-dip galvanized steel beam (placed above the cut plane), sizes according to Beam and Column calculation

Beams 1, 2, 3, 5, 6, 9, 11, 12 (No. B1-2.1-3, B1-2.5-6, B1-2.9, B1-2.11-12) - hot-dip galvanized IPE beams for HODY deck support from one side
Relevant details:
K01_TXX_H5_E4_N04 - beam and column

Beams 4, 7, 8, 10 (No. B1-2.4, B1-2.7-8, B1-2.10) - hot-dip galvanized HEB 180 beams for connection of two HODY decks
Relevant details:
K01_TXX_H5_E4_N04 - beam and column

BL1-2.1-8 - UNP and IPE balcony hot-dip galvanized beams
Relevant details:
K01_TXX_H5_E4_N01.1 - balcony

Calculated beams and columns according to Knud Ahler:
B1-2.4 - IPE 220, replaced with HEB 180
B1-2.7 - IPE 220, replaced with HEB 180
B1-2.10 - HEB 260
C2.6 - IPE 270
C1.6 - IPE 270
C1.13 - IPE270
B1-2.1-8 (balcony beams), ref. Balcony drawings (K01_TXX_H1_E4_N02-5)

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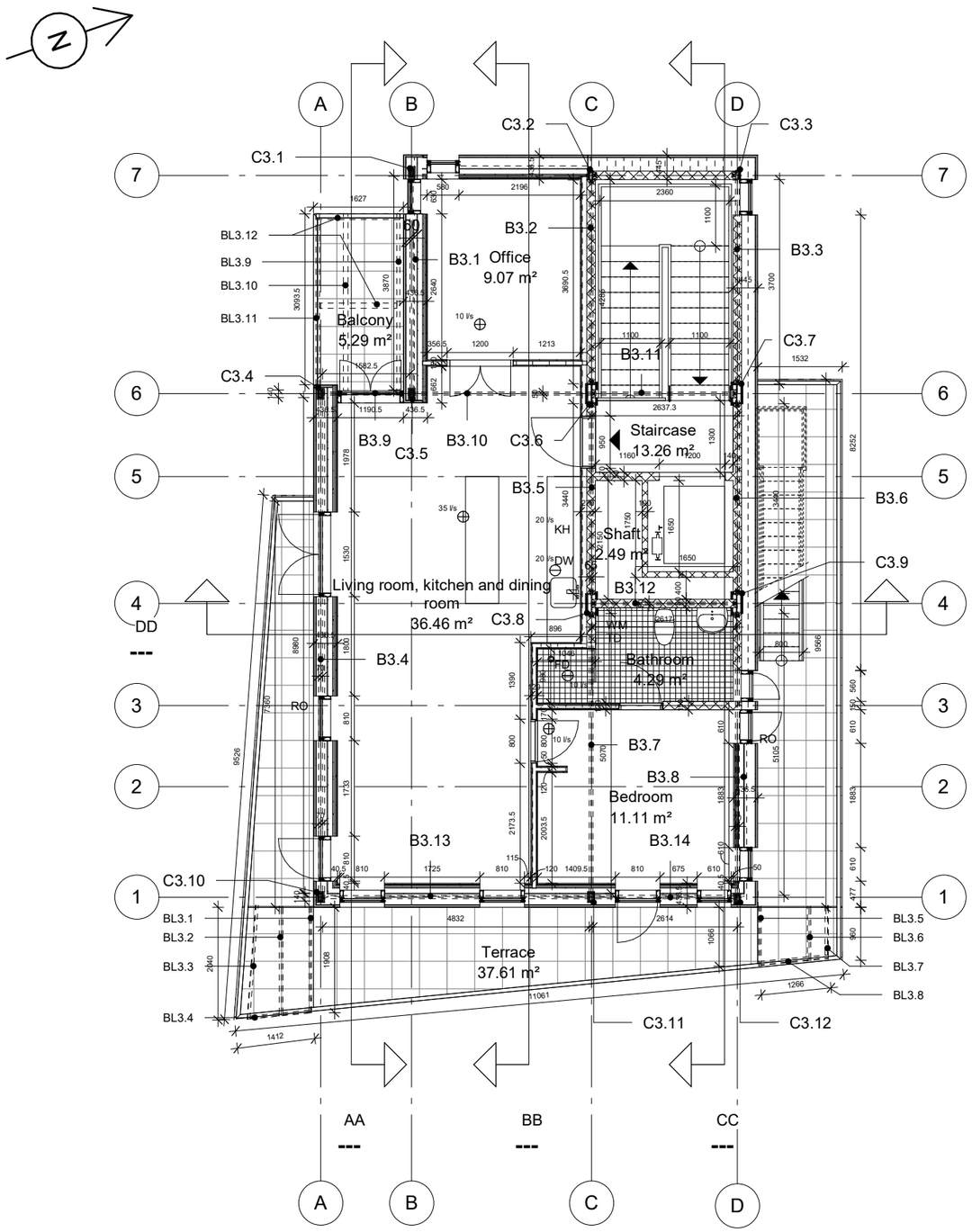
PROJECT: Mejlgade 37, Århus	DATE: 5.1.2021	**K01_TXX_H1_E4_N06**
SUBJECT: Floor plan - first and second floor (BT)	SCALE: 1 : 100	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



06 Third floor
1 : 100

LEGEND

North arrow

IPE hot-dip galvanized steel column, sizes according to Beam and Column calculation

hot-dip galvanized steel beam (placed above the cut plane), sizes according to Beam and Column calculation

B3.1-8 - curved hot-dip galvanized IPE beams for roof support
Relevant details:
K01_TXX_H5_E7_N01 - curved beam and column

B3.9-14 - stabilizing hot-dip galvanized IPE beams
Relevant details:
K01_TXX_H5_E4_N04 - beam and column

BL3.1-12 - UNP and IPE balcony hot-dip galvanized beams
Relevant details:
K01_TXX_H5_E4_N01.1 - balcony

Calculated beams and columns according to Knud Ahler:
B3.2 - IPE 270
B3.4 - IPE 220
C3.6 - IPE 240
C3.10 - IPE 140
B3.1-8 (balcony beams), ref. Balcony drawings (K01_TXX_H1_E4_N02-5)

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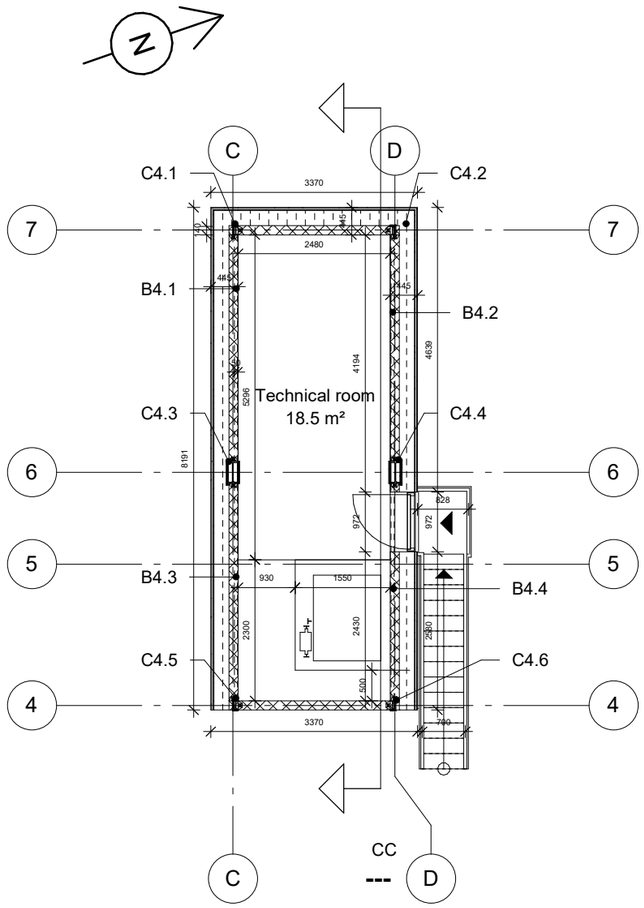
PROJECT: Mejlgade 37, Århus	DATE: 5.1.2021	K01_TXX_H1_E6_N01
SUBJECT: Floor plan - third floor (BT)	SCALE: 1 : 100	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



07 Fourth floor
1 : 100

LEGEND

North arrow

IPE hot-dip galvanized steel column, sizes according to Beam and Column calculation

hot-dip galvanized steel beam (placed above the cut plane), sizes according to Beam and Column calculation

B4.1-4 - curved hot-dip galvanized IPE beams for roof support
Relevant details:
K01_TXX_H5_E7_N01 - curved beam and column

C4.1-6 - hot-dip galvanized IPE columns
Relevant details:
K01_TXX_H5_E7_N01 - curved beam and column

Calculated beams and columns according to Knud Ahler:
B4.1 - IPE 120
C4.1 - IPE 120
C4.3 - IPE 120

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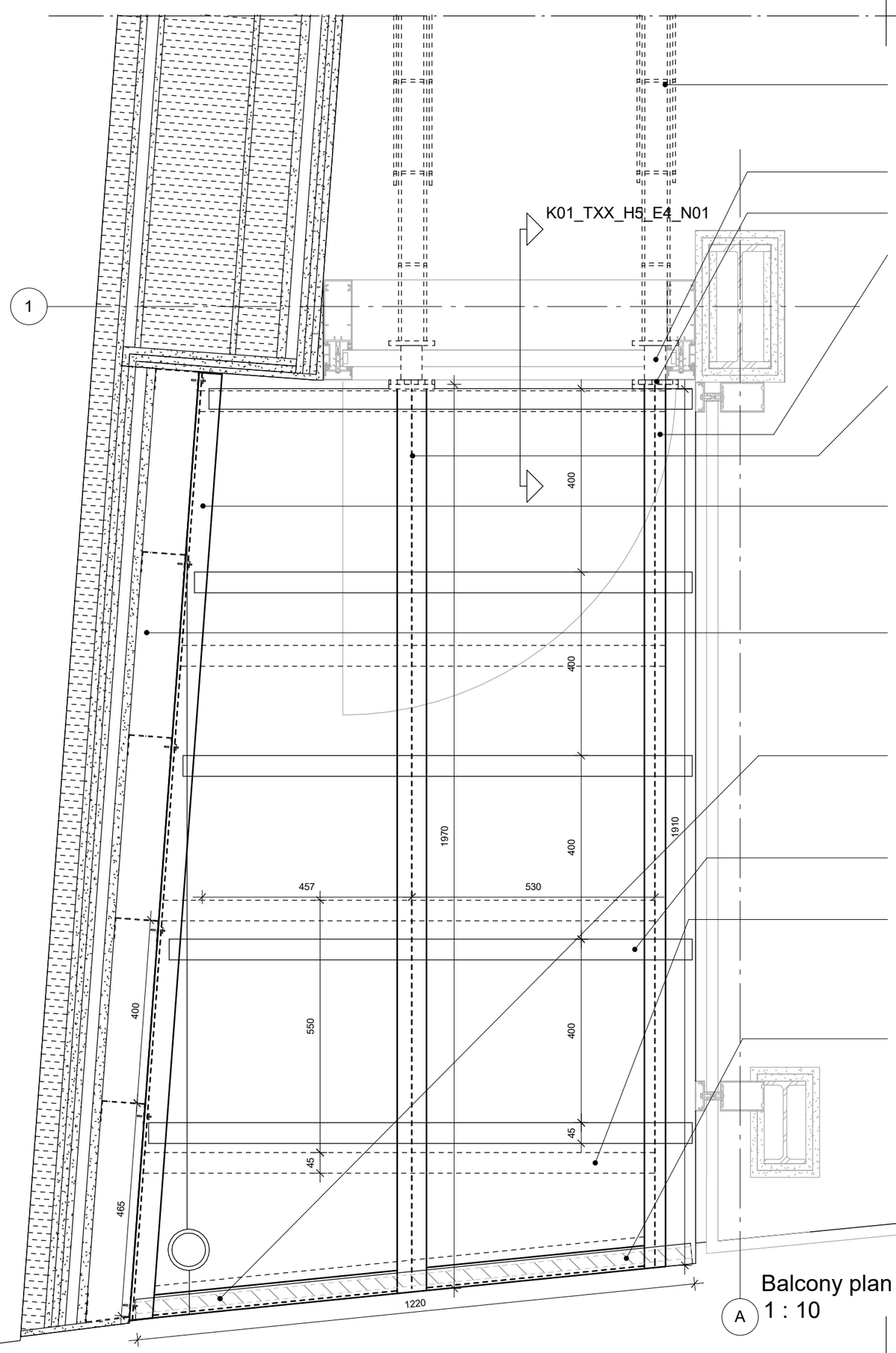
PROJECT: Mejlgade 37, Århus	DATE: 5.1.2021	
SUBJECT: Floor plan - fourth floor	SCALE: 1 : 100	**K01_TXX_H1_E7_N01**
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



700 mm reinforcement bars:
- Ø6 mm reinforcement stirrups, each 200 mm
- connected to SBC connector
- placed on top of HODY plates, casted in concrete deck

Halfen SBC steel balcony connector

Halfen SBC-TSS 10 thermal separator

BL1.2
IPE 100 galvanized steel beam
Width: 50 mm
Thickness: 7,0/5,7 mm
Length: 1910 mm
Galvanization type: hot-dip

BL1.1
IPE 120 galvanized steel beam
Width: 60 mm
Thickness: 7,0/6,3 mm
Length: 1970 mm
Galvanization type: hot-dip

B1.3
UNP S275 JR U-beam (channel) fixed to each vertical steel stud in the wall
Size: 50 x 100 mm
Thickness: 8,5/6 mm
Galvanization type: hot-dip

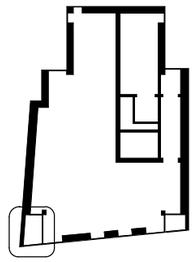
Gyproc ThermoNomic load-bearing steel stud frame, covered with gypsum facing the balcony
Gyproc ShaftWall system EI120: 3 x 15 mm FIre Line gypsum boards, 60 mm I-stud frame and 19 mm Core gypsum board

UNP S275 JR U-beam (channel), fixed to IPE and UNP beams for stabilization
Size: 50 x 100 mm
Thickness: 8,5/6 mm
Galvanization type: hot-dip

UNP S275 JR U-beams (channel), 45 x 80 mm, cc 400, fixed on top of IPE beams

L-shaped steel beam for drain sheeting support
Width: 40 mm
Height: 25 mm
Thickness 4 mm
Spacing: 550 mm
Galvanization type: hot rolled

Stainless steel railing with glass panels
Railing size: 35 x 1250 mm
Stainless grade: 304
Glass panel size: 10 x 600 x 950 mm clear glass



PROCESS:
1. Mounting IPE beam for deck support
2. Mounting HODY plates to IPE beam
3. Placing reinforcement between HODY plate ribs
4. Placing SBC balcony connector with thermal separator, connecting reinforcement bars to reinforcement for HODY deck
5. Connecting IPE100 and IPE120 beams to SBC connectors
6. Casting concrete on top of reinforcement connection (concrete worker)
7. Connecting UNP beam to steel studs in the wall facing neighboring building
8. Building up the facade and the wall facing neighboring building
9. Connecting IPE and UNP beam with UNP beams for stabilization
10. Mounting UNP80 top U-beams on top of structural beams
11. Connecting L-shaped longitudinal beam to UNP80 beams for drain layer
12. Connecting aluminum sheeting with 2% slope for the drain
13. Decking the balcony with timber boards
14. Siding the balcony with fibre cement boards
15. Fixing steel railing to the beams
16. Inserting glass panels

A Balcony plan
1 : 10

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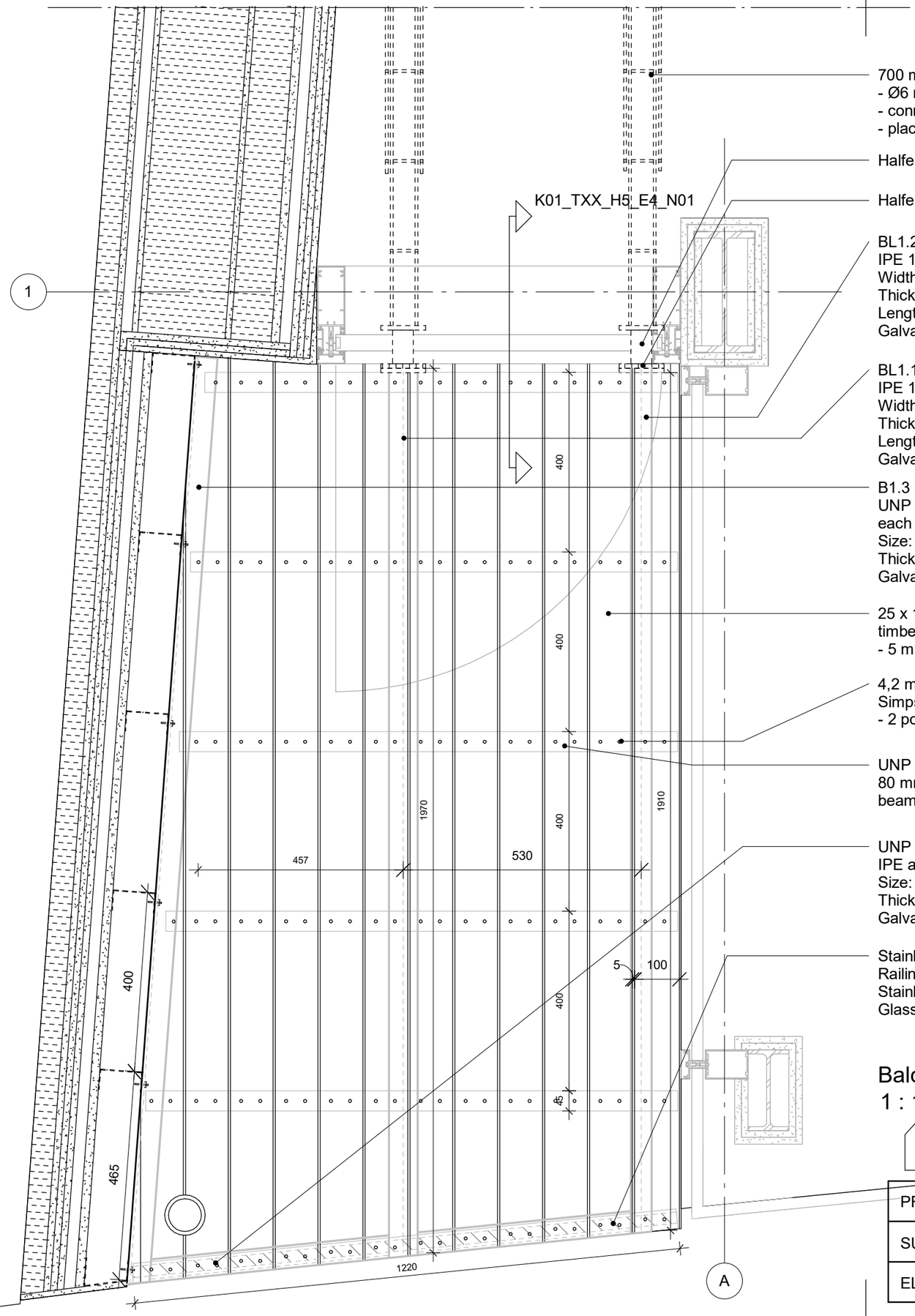
PROJECT: Mejlgade 37, Århus	DATE: 3.1.2021	K01_TXX_H1_E4_N02
SUBJECT: Balcony plan, beams	SCALE: As indicated	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



700 mm reinforcement bars:
- Ø6 mm reinforcement stirrups, each 200 mm
- connected to SBC connector
- placed on top of HODY plates, casted in concrete deck

Halfen SBC steel balcony connector

Halfen SBC-TSS 10 thermal separator

BL1.2
IPE 100 galvanized steel beam
Width: 50 mm
Thickness: 7,0/5,7 mm
Length: 1910 mm
Galvanization type: hot-dip

BL1.1
IPE 120 galvanized steel beam
Width: 60 mm
Thickness: 7,0/6,3 mm
Length: 1970 mm
Galvanization type: hot-dip

B1.3
UNP S275 JR U-beam (channel) fixed to each vertical steel stud in the wall
Size: 50 x 100 mm
Thickness: 8,5/6 mm
Galvanization type: hot-dip

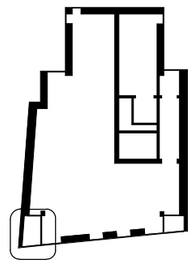
25 x 100 x 2700 mm pressure-treated timber decking
- 5 mm gaps inbetween

4,2 mm x 45 mm timber-to-steel screws (e.g. Simpson Quik)
- 2 pcs. each plank-to-beam connection

UNP S275 JR U-beams (channel), 45 x 80 mm, cc 400, fixed on top of IPE beams

UNP S275 JR U-beam (channel), fixed to IPE and UNP beams for stabilization
Size: 50 x 100 mm
Thickness: 8,5/6 mm
Galvanization type: hot-dip

Stainless steel railing with glass panels
Railing size: 35 x 1250 mm
Stainless grade: 304
Glass panel size: 10 x 600 x 950 mm clear glass



PROCESS:
1. Mounting IPE beam for deck support
2. Mounting HODY plates to IPE beam
3. Placing reinforcement between HODY plate ribs
4. Placing SBC balcony connector with thermal separator, connecting reinforcement bars to reinforcement for HODY deck
5. Connecting IPE100 and IPE120 beams to SBC connectors
6. Casting concrete on top of reinforcement connection (concrete worker)
7. Connecting UNP beam to steel studs in the wall facing neighboring building
8. Building up the facade and the wall facing neighboring building
9. Connecting IPE and UNP beam with UNP beams for stabilization
10. Mounting UNP80 top U-beams on top of structural beams
11. Connecting L-shaped longitudinal beam to UNP80 beams for drain layer
12. Connecting aluminum sheeting with 2% slope for the drain
13. Decking the balcony with timber boards
14. Siding the balcony with fibre cement boards
15. Fixing steel railing to the beams
16. Inserting glass panels

Balcony plan - decking
1 : 10

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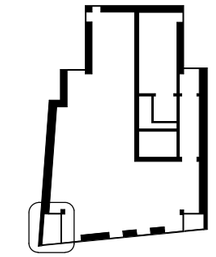
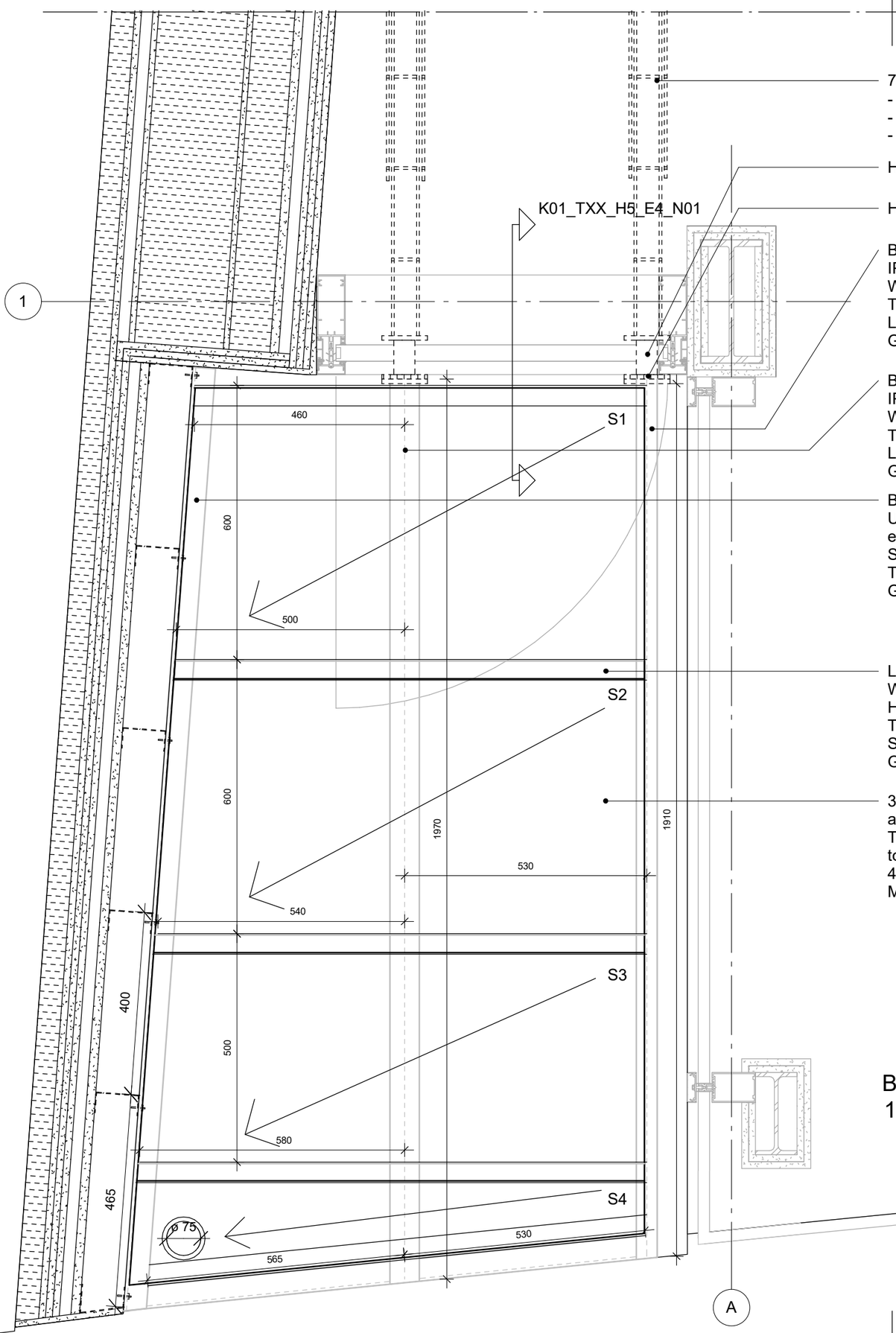
PROJECT: Mejlgade 37, Århus	DATE: 3.1.2021	K01_TXX_H1_E4_N03
SUBJECT: Balcony decking plan	SCALE: As indicated	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	





700 mm reinforcement bars:
- Ø6 mm reinforcement stirrups, each 200 mm
- connected to SBC connector
- placed on top of HODY plates, casted in concrete deck

Halfen SBC steel balcony connector

Halfen SBC-TSS 10 thermal separator

BL1.2
IPE 100 galvanized steel beam
Width: 50 mm
Thickness: 7,0/5,7 mm
Length: 1910 mm
Galvanization type: hot-dip

BL1.1
IPE 120 galvanized steel beam
Width: 60 mm
Thickness: 7,0/6,3 mm
Length: 1970 mm
Galvanization type: hot-dip

B1.3
UNP S275 JR U-beam (channel) fixed to each vertical steel stud in the wall
Size: 50 x 100 mm
Thickness: 8,5/6 mm
Galvanization type: hot-dip

L-shaped steel beam for drain sheeting support
Width: 40 mm
Height: 25 mm
Thickness 4 mm
Spacing: 600 mm
Galvanization type: hot rolled

3 mm x 600 mm stainless precipitation heat-treated aluminum sheet
Top-fixed to L-shaped steel beams and welded together in the middle
45 mm overlap above beams
Max. dimensions: 150 mm x 2500 mm x 8000 mm

PROCESS:
1. Mounting IPE beam for deck support
2. Mounting HODY plates to IPE beam
3. Placing reinforcement between HODY plate ribs
4. Placing SBC balcony connector with thermal separator, connecting reinforcement bars to reinforcement for HODY deck
5. Connecting IPE100 and IPE120 beams to SBC connectors
6. Casting concrete on top of reinforcement connection (concrete worker)
7. Connecting UNP beam to steel studs in the wall facing neighboring building
8. Building up the facade and the wall facing neighboring building
9. Connecting IPE and UNP beam with UNP beams for stabilization
10. Mounting UNP80 top U-beams on top of structural beams
11. Connecting L-shaped longitudinal beam to UNP80 beams for drain layer
12. Connecting aluminum sheeting with 2% slope for the drain
13. Decking the balcony with timber boards
14. Siding the balcony with fibre cement boards
15. Fixing steel railing to the beams
16. Inserting glass panels

Balcony plan - sheeting
1 : 10

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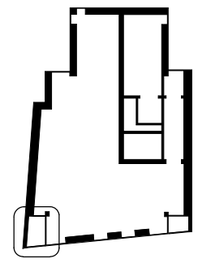
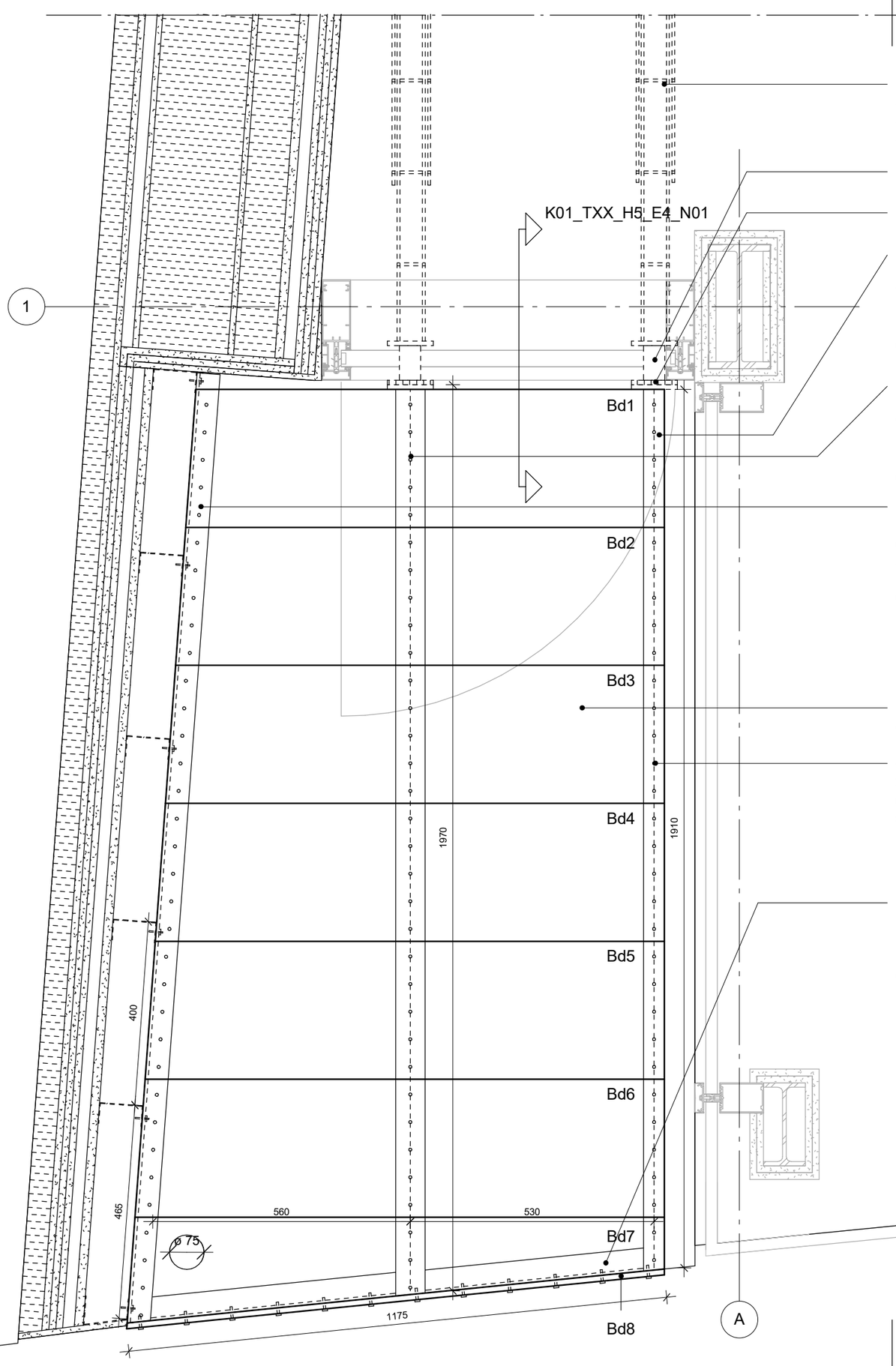
PROJECT: Mejlgade 37, Århus	DATE: 3.1.2021	K01_TXX_H1_E4_N04
SUBJECT: Balcony aluminum sheeting plan	SCALE: As indicated	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	





700 mm reinforcement bars:
- Ø6 mm reinforcement stirrups, each 200 mm
- connected to SBC connector
- placed on top of HODY plates, casted in concrete deck

Halfen SBC steel balcony connector

Halfen SBC-TSS 10 thermal separator

BL1.2
IPE 100 galvanized steel beam
Width: 50 mm
Thickness: 7,0/5,7 mm
Length: 1910 mm
Galvanization type: hot-dip

BL1.1
IPE 120 galvanized steel beam
Width: 60 mm
Thickness: 7,0/6,3 mm
Length: 1970 mm
Galvanization type: hot-dip

B1.3
UNP S275 JR U-beam (channel) fixed to each vertical steel stud in the wall
Size: 50 x 100 mm
Thickness: 8,5/6 mm
Galvanization type: hot-dip

12,5 x 300 mm gypsum-based composite boards (e.g. Fermacell Fibergypsum/Powerpanel)

4,8 mm x 25 mm corrosion-resistant self-drilling zinc plated steel screws for gypsum to steel connection
5 pcs. per each beam to board connection
Each 100 mm on front side

UNP S275 JR U-beam (channel), fixed to IPE and UNP beams for stabilization
Size: 50 x 100 mm
Thickness: 8,5/6 mm
Galvanization type: hot-dip

PROCESS:
1. Mounting IPE beam for deck support
2. Mounting HODY plates to IPE beam
3. Placing reinforcement between HODY plate ribs
4. Placing SBC balcony connector with thermal separator, connecting reinforcement bars to reinforcement for HODY deck
5. Connecting IPE100 and IPE120 beams to SBC connectors
6. Casting concrete on top of reinforcement connection (concrete worker)
7. Connecting UNP beam to steel studs in the wall facing neighboring building
8. Building up the facade and the wall facing neighboring building
9. Connecting IPE and UNP beam with UNP beams for stabilization
10. Mounting UNP80 top U-beams on top of structural beams
11. Connecting L-shaped longitudinal beam to UNP80 beams for drain layer
12. Connecting aluminum sheeting with 2% slope for the drain
13. Decking the balcony with timber boards
14. Siding the balcony with fibre cement boards
15. Fixing steel railing to the beams
16. Inserting glass panels

Balcony plan - siding
1 : 10

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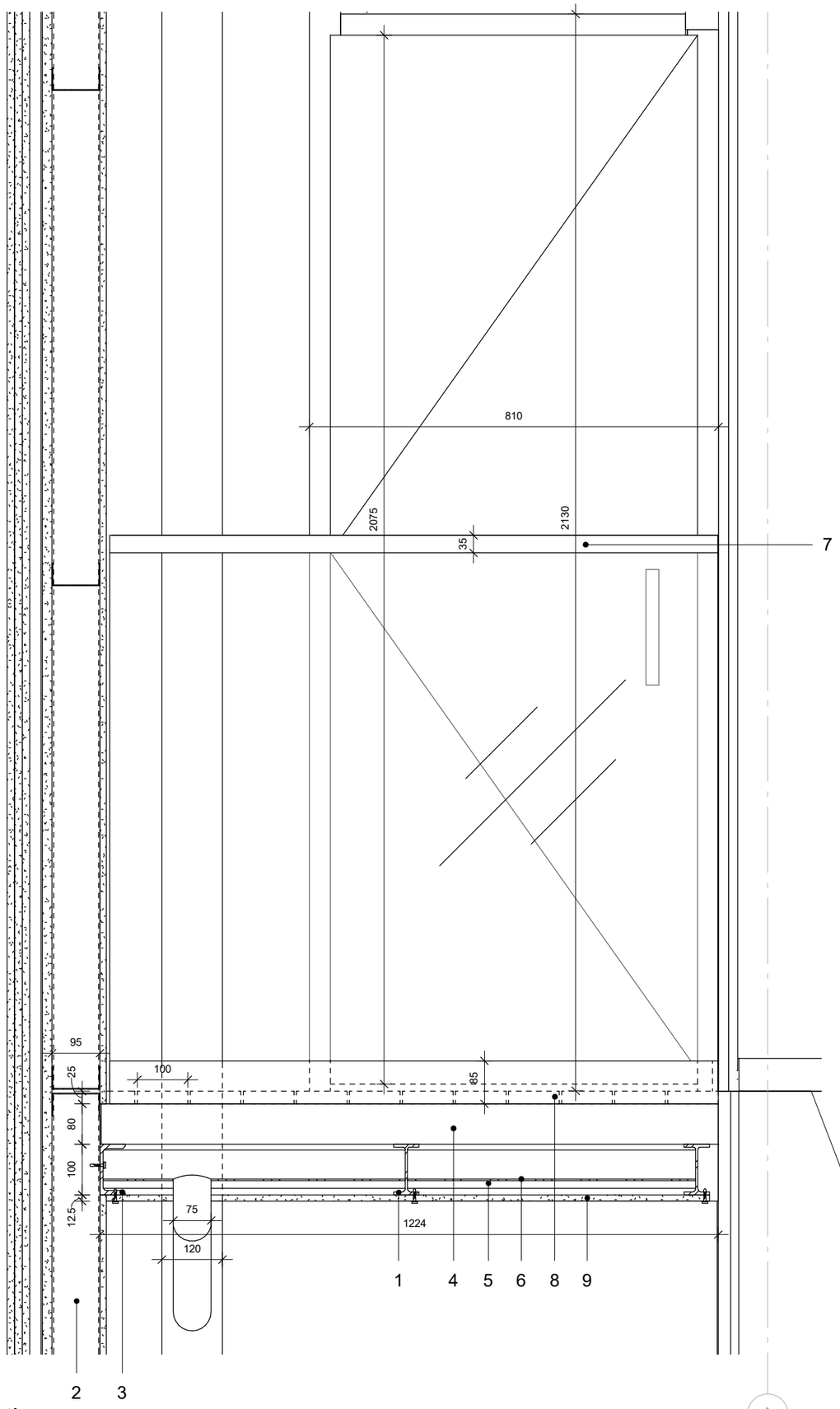
PROJECT: Mejlgade 37, Århus	DATE: 3.1.2021	K01_TXX_H1_E4_N05
SUBJECT: Balcony siding plan	SCALE: As indicated	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



Balcony elevation
1 : 10

PROCESS:
1. Mounting IPE beam for deck support
2. Mounting HODY plates to IPE beam
3. Placing reinforcement between HODY plate ribs
4. Placing SBC balcony connector with thermal separator, connecting reinforcement bars to reinforcement for HODY deck
5. Connecting IPE100 and IPE120 beams to SBC connectors
6. Casting concrete on top of reinforcement connection (concrete worker)
7. Connecting UNP beam to steel studs in the wall facing neighboring building
8. Building up the facade and the wall facing neighboring building
9. Connecting IPE and UNP beam with UNP beams for stabilization
10. Mounting UNP80 top U-beams on top of structural beams
11. Connecting L-shaped longitudinal beam to UNP80 beams for drain layer
12. Connecting aluminum sheeting with 2% slope for the drain
13. Decking the balcony with timber boards
14. Siding the balcony with fibre cement boards
15. Fixing steel railing to the beams
16. Inserting glass panels

1. IPE 100 hot-dip galvanized steel beam
Width: 50 mm
Thickness: 7,0/5,7 mm
2. Gyproc ThermoNomic load-bearing steel stud frame, covered with gypsum facing the balcony
Gyproc ShaftWall system EI120: 3 x 15 mm FIre Line gypsum boards, 60 mm I-stud frame and 19 mm Core gypsum board
3. UNP S275 JR U-beam (channel) fixed to each vertical steel stud in the wall
Size: 50 x 100 mm
Thickness: 8,5/6 mm
Galvanization type: hot-dip
4. UNP S275 JR U-beams (channel), 45 x 80 mm, cc 400, fixed on top of IPE beams
5. L-shaped steel beam for drain sheeting support
Width: 40 mm
Height: 25 mm
Thickness 4 mm
Spacing: 550 mm
Galvanization type: hot rolled
6. 3 mm x 600 mm stainless precipitation heat-treated aluminum sheet
Top-fixed to L-shaped steel beams and welded together in the middle
45 mm overlap above beams
Max. dimensions: 150 mm x 2500 mm x 8000 mm
7. Stainless steel railing with glass panels
Railing size: 35 x 1250 mm
Stainless grade: 304
Glass panel size: 10 x 600 x 950 mm clear tempered glass
8. 25 x 100 x 2700 mm pressure-treated timber decking
- 5 mm gaps inbetween
9. 12,5 x 300 mm gypsum-based composite boards (e.g. Fermacell Fibergypsum/Powerpanel)

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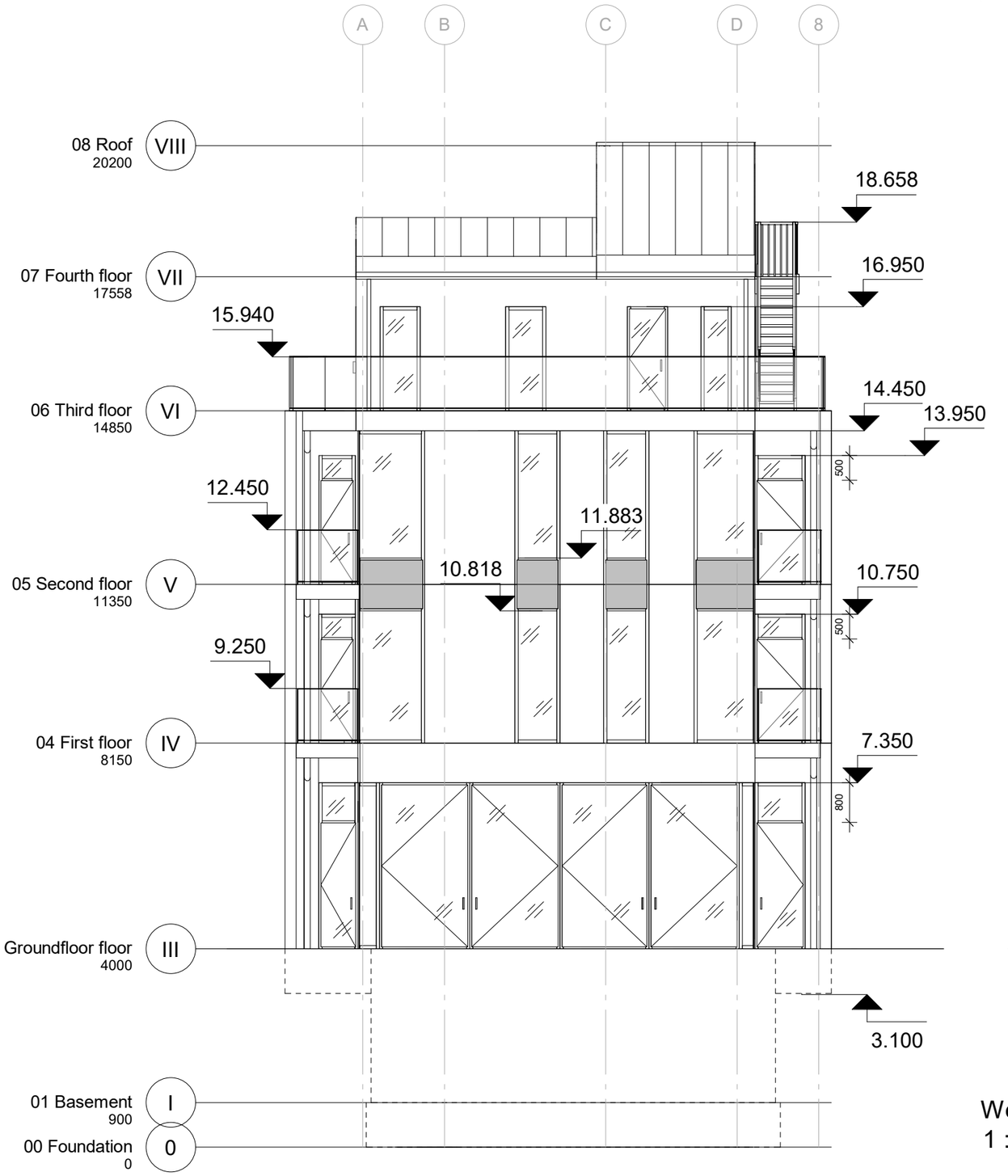
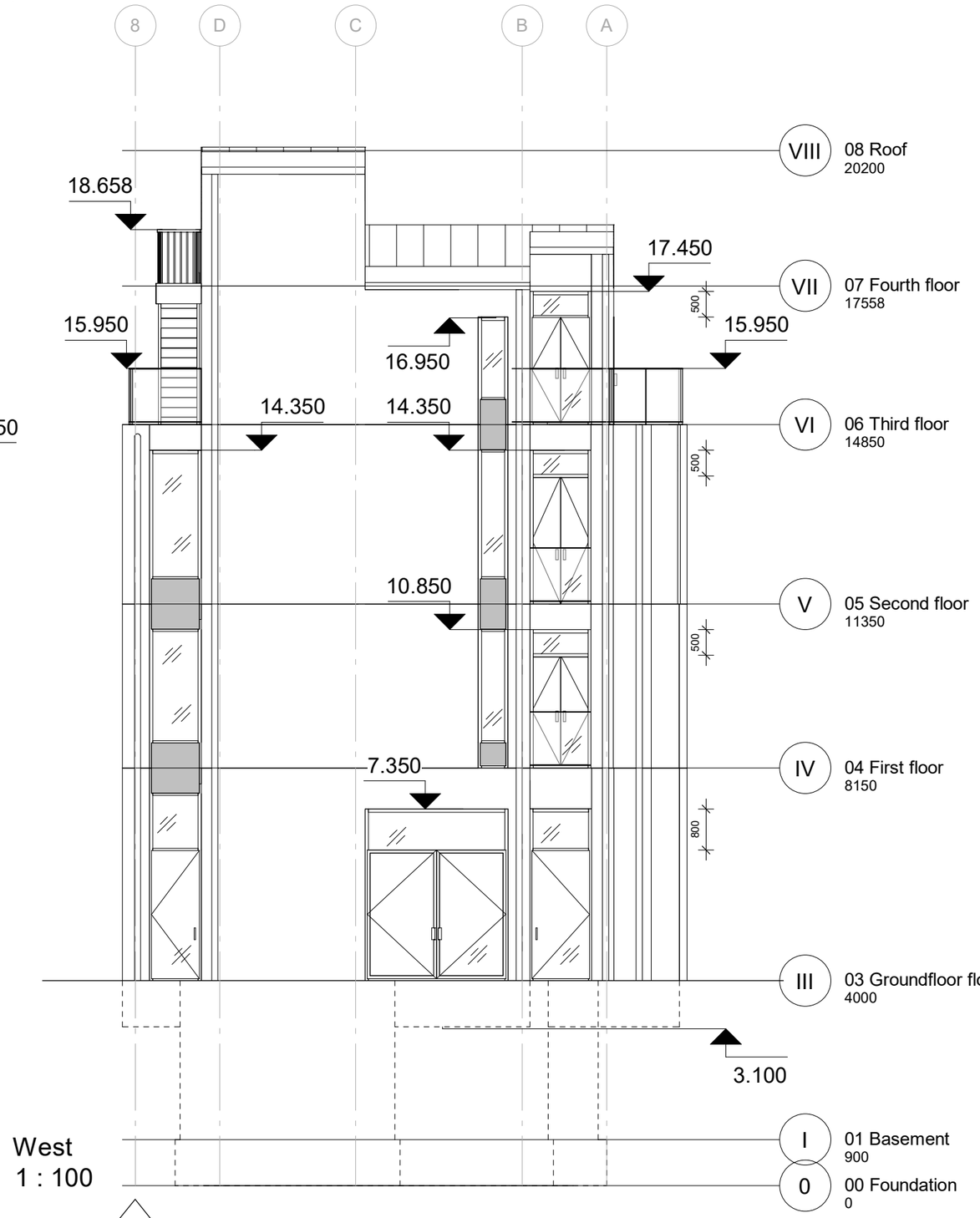
PROJECT: Mejlgade 37, Århus	DATE: 3.1.2021	
SUBJECT: Balcony front view	SCALE: 1 : 10	**K01_TXX_H2_EX_N02**
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



East
1 : 100



West
1 : 100

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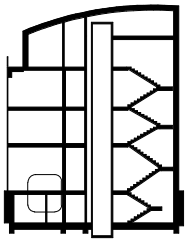
PROJECT: Mejlgade 37, Århus	DATE: 22.12.2020	K01_TXX_H2_EX_N01
SUBJECT: East and West elevations	SCALE: 1 : 100	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



Cross section CC

PROCESS:
1. Placing formwork and reinforcement (concrete and demolition trade)
2. Casting 400 mm wide basement wall (concrete and demolition trade)
3. Placing 400 mm anchor rods in freshly casted concrete wall (concrete and demolition trade)
4. 15 x 420 mm x 230 mm steel base plate placed on top on levelling nuts in upper part of anchor rod
5. Base plate levelled with levelling nuts
6. Fixing upper washer and nut to fix base plate
7. Casting 15 mm of grouting under base plate
7. Delivering, lifting and welding IPE360 column to base plate

DETAIL RELEVANT TO FOLLOWING COMPONENTS:
Columns: C0.2, C0.3, C0.5, C0.6, C0.7, C0.10, C0.11, C0.14, C0.16

(BT) Steel column and concrete wall
1 : 5

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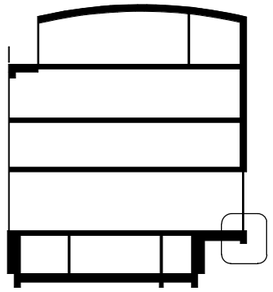
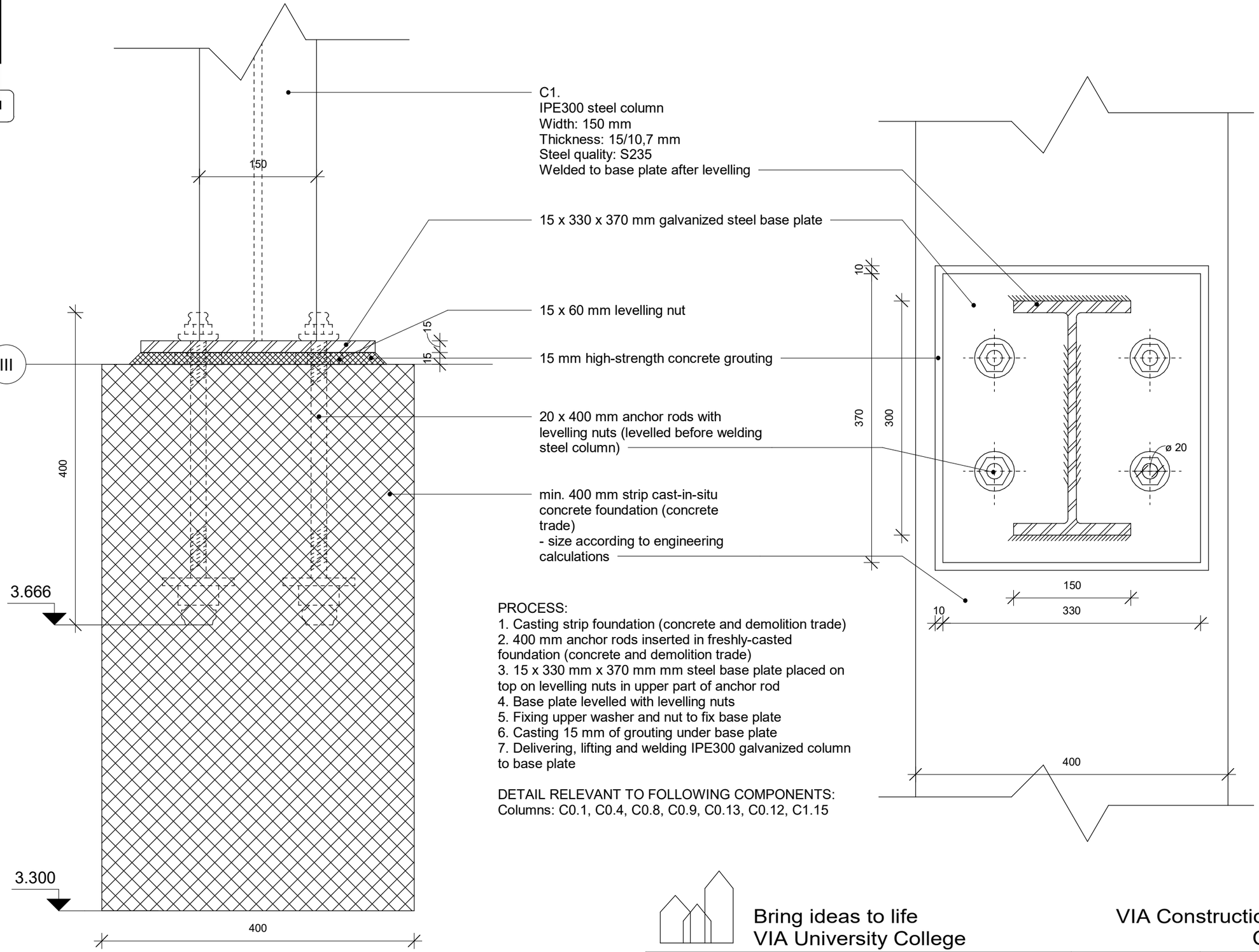
PROJECT: Mejlgade 37, Århus	DATE: 5.1.2021	K01_TXX_H5_E3_N03
SUBJECT: (BT) Steel column and concrete wall	SCALE: As indicated	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



Cross section BB



PROCESS:
1. Casting strip foundation (concrete and demolition trade)
2. 400 mm anchor rods inserted in freshly-casted foundation (concrete and demolition trade)
3. 15 x 330 mm x 370 mm mm steel base plate placed on top on levelling nuts in upper part of anchor rod
4. Base plate levelled with levelling nuts
5. Fixing upper washer and nut to fix base plate
6. Casting 15 mm of grouting under base plate
7. Delivering, lifting and welding IPE300 galvanized column to base plate

DETAIL RELEVANT TO FOLLOWING COMPONENTS:
Columns: C0.1, C0.4, C0.8, C0.9, C0.13, C0.12, C1.15

(BT) Steel column and foundation
1 : 5

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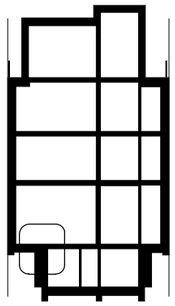
PROJECT: Mejlgade 37, Århus	DATE: 5.1.2021	K01_TXX_H5_E3_N04
SUBJECT: (BT) Steel column and foundation	SCALE: As indicated	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



B-1.X
HEB 180 steel beam for HODY deck support
Width: 180 mm
Thickness: 15/14 mm
Steel quality: S235
Galvanization: hot-dip

25 mm x 160 mm x 400 mm
galvanized steel shims

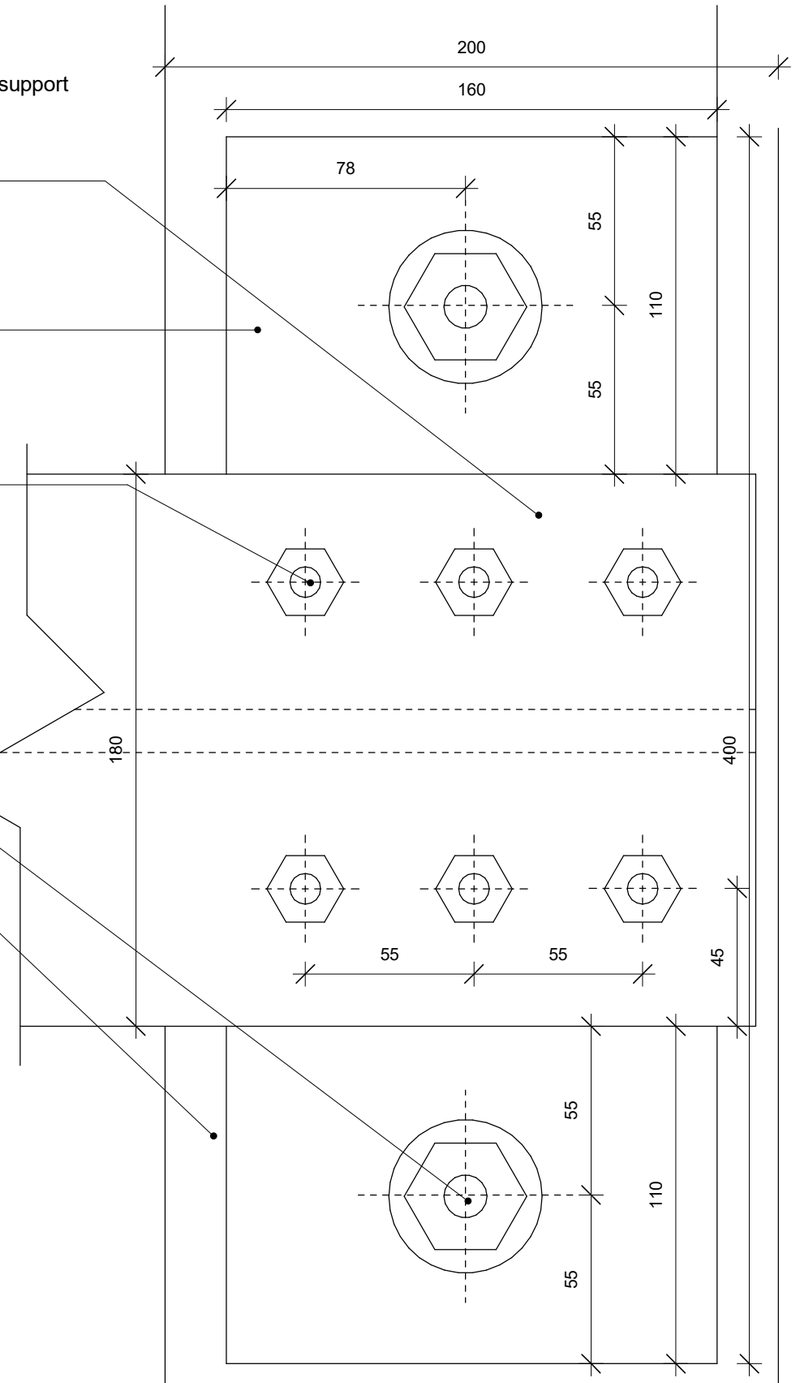
2 grade 8 mm x 30 mm
galvanized steel bolts

300 mm/14 mm anchor bolt, placed in a
pre-made pocket and grouted

200 mm (upper part) cast-in-situ
concrete external basement wall
(concrete trade)

PROCESS:
1. Casting concrete external basement wall (concrete trade)
2. Placing steel shims on top and fixing it with anchor bolts
3. Grounting of anchor bolts
4. Mounting HEB180 steel beam on top, fixing it to shims with 8 mm x 30 mm steel bolts and side welding

DETAIL RELEVANT TO FOLLOWING COMPONENTS:
Beams: B-1.1-4



Steel beam to wall - top view

(BT) Beam and concrete facade
1 : 2

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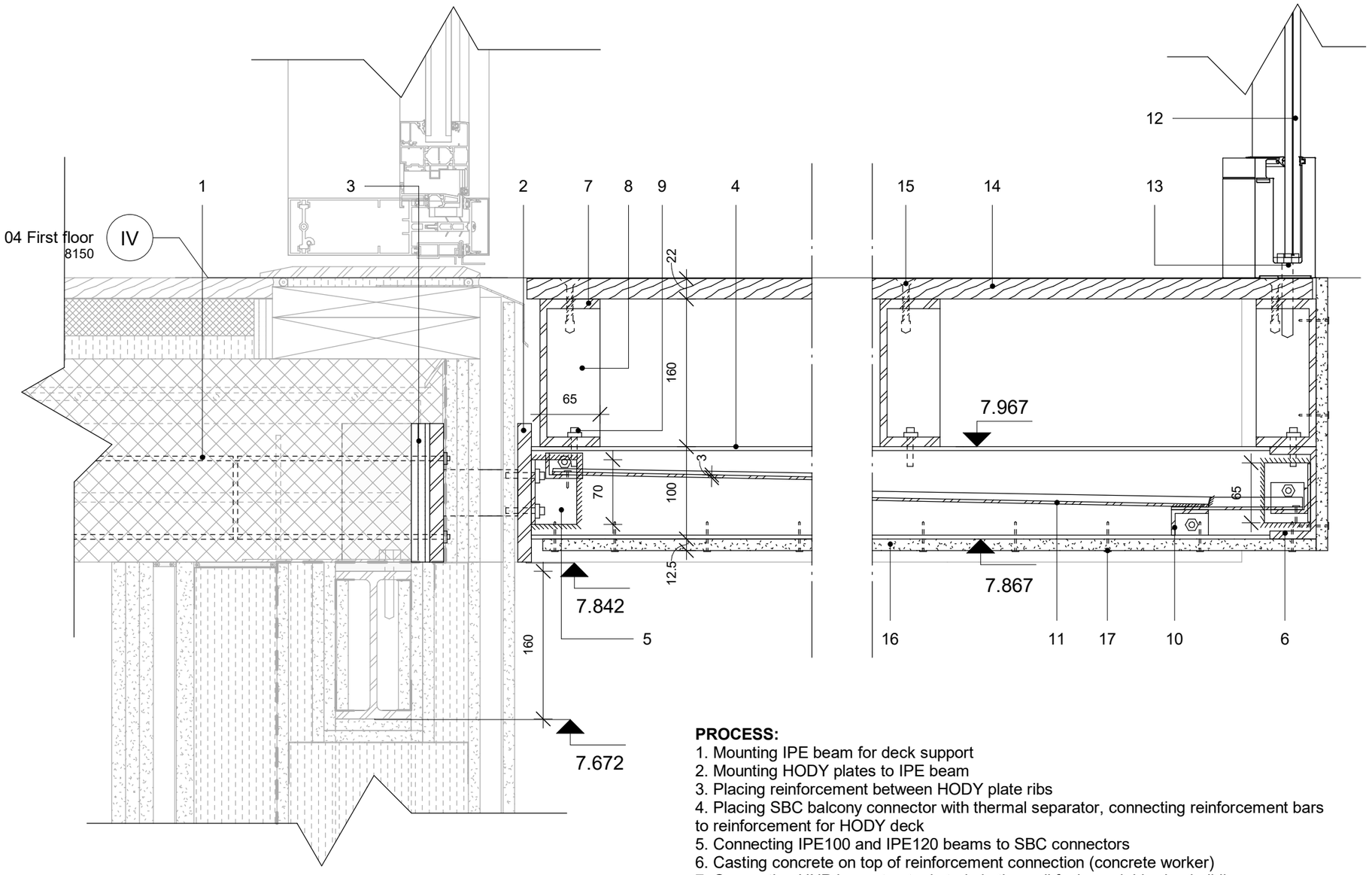
PROJECT: Mejlgade 37, Århus	DATE: 5.1.2021	K01_TXX_H5_E3_N05
SUBJECT: (BT) Beam and concrete facade	SCALE: As indicated	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



PROCESS:
1. Mounting IPE beam for deck support
2. Mounting HODY plates to IPE beam
3. Placing reinforcement between HODY plate ribs
4. Placing SBC balcony connector with thermal separator, connecting reinforcement bars to reinforcement for HODY deck
5. Connecting IPE100 and IPE120 beams to SBC connectors
6. Casting concrete on top of reinforcement connection (concrete worker)
7. Connecting UNP beam to steel studs in the wall facing neighboring building
8. Building up the facade and the wall facing neighboring building
9. Connecting IPE and UNP beam with UNP beams for stabilization
10. Mounting UNP80 top U-beams on top of structural beams
11. Connecting L-shaped longitudinal beam to UNP80 beams for drain layer
12. Connecting aluminum sheeting with 2% slope for the drain
13. Decking the balcony with timber boards
14. Siding the balcony with fibre cement boards
15. Fixing steel railing to the beams
16. Inserting glass panels

Fire demands: building usage category 5, R60
1. 700 mm reinforcement bars:
- Ø6 mm reinforcement stirrups, each 200 mm
- connected to SBC connector
- placed on top of HODY plates, casted in concrete deck
2. Halfen SBC steel balcony connector
3. Halfen SBC-TSS 10 thermal separator
4. IPE 100 galvanized steel beam
Width: 50 mm
Thickness: 7,0/5,7 mm
Length: 1910 mm
Galvanization type: hot-dip
5. 2 pcs. 3 x 70 x 50 mm angle plate
- pre-welded to IPE beam
- connected to SBC connector with 2 pcs. 6 x 30 mm connection bolts
6. UNP S275 JR U-beam (channel), fixed to IPE and UNP beams for stabilization
Size: 50 x 100 mm
Thickness: 8,5/6 mm
Galvanization type: hot-dip
7. UNP S275 JR U-beams (channel), fixed on top of IPE beams, cc 400
Size: 65 x 160 mm
Thickness: 10,5/7,5 mm
Galvanization type: hot-dip
8. 2 pcs. 2 mm pre-welded stiffeners
9. 2 pcs. 6,2 x 35 mm connection bolts
10. L-shaped steel beam for drain sheeting support, fixed to IPE beams with 1,4 mm end-plate and 3 x 20 mm bolts
Width: 40 mm
Height: 25 mm
Thickness 4 mm
Spacing: 550 mm
Galvanization type: hot-dip
11. 3 mm x 600 mm stainless precipitation heat-treated aluminum sheet
- fixed to L-shaped steel beams with 2 x 20 mm self-drilling steel screws and sheets welded to each other
- 45 mm overlap above beams
- max. dimensions: 150 mm x 2500 mm x 8000 mm
12. Stainless steel railing with glass panels
Railing size: 35 x 1250 mm
Stainless grade: 304
Glass panel size: 10 x 600 x 950 mm clear glass
13. 12 x 90 mm stainless steel anchor
14. 25 x 100 x 2700 mm pressure-treated timber decking
- 5 mm gaps inbetween
15. 4,2 mm x 45 mm timber-to-steel screws (e.g. Simpson Quik)
- 2 pcs. each plank-to-beam connection
16. 12,5 x 300 mm gypsum-based composite boards (e.g. Fermacell Fibergypsum/Powerpanel)
17. 4,8 mm x 25 mm corrosion-resistant self-drilling zinc plated steel screws for gypsum to steel connection
- 5 pcs. per each beam to board connection
- each 100 mm on front side, 3 rows

(BT) Balcony
1 : 5

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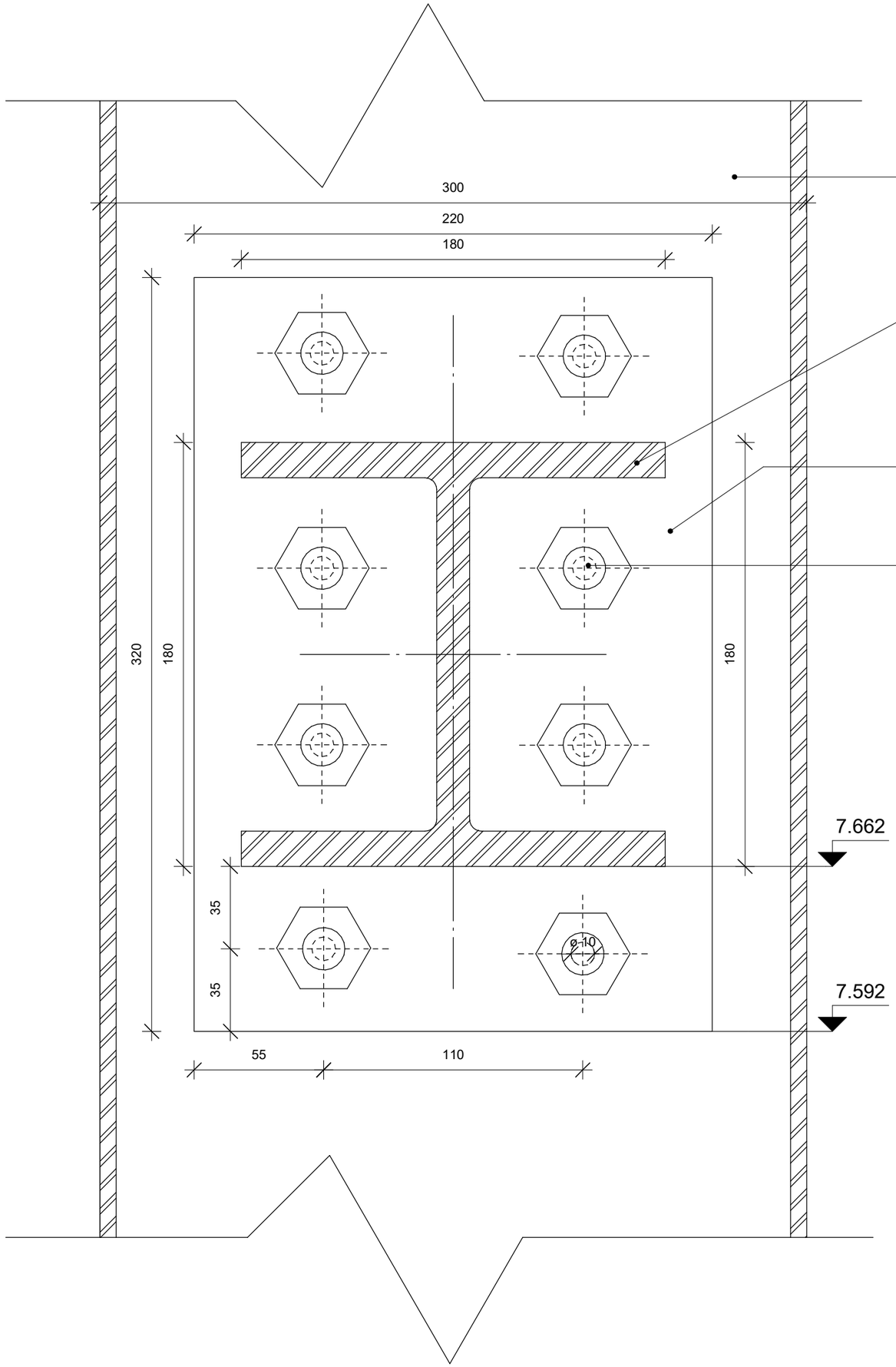
PROJECT: Mejlgade 37, Århus	DATE: 5.1.2021	
SUBJECT: (BT) Balcony	SCALE: 1 : 5	**K01_TXX_H5_E4_N01.1**
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



C0-1.X
IPE300 steel column
Width: 150 mm
Thickness: 15/10,7 mm
Steel quality: S235

B0-2.4; B0-2.7;B0-2.10
HEB180 steel beam for fixing two HODY decks
Width: 180 mm
Thickness: 15/14 mm
Steel quality: S235
Location: Grid lines 1, 3, 6

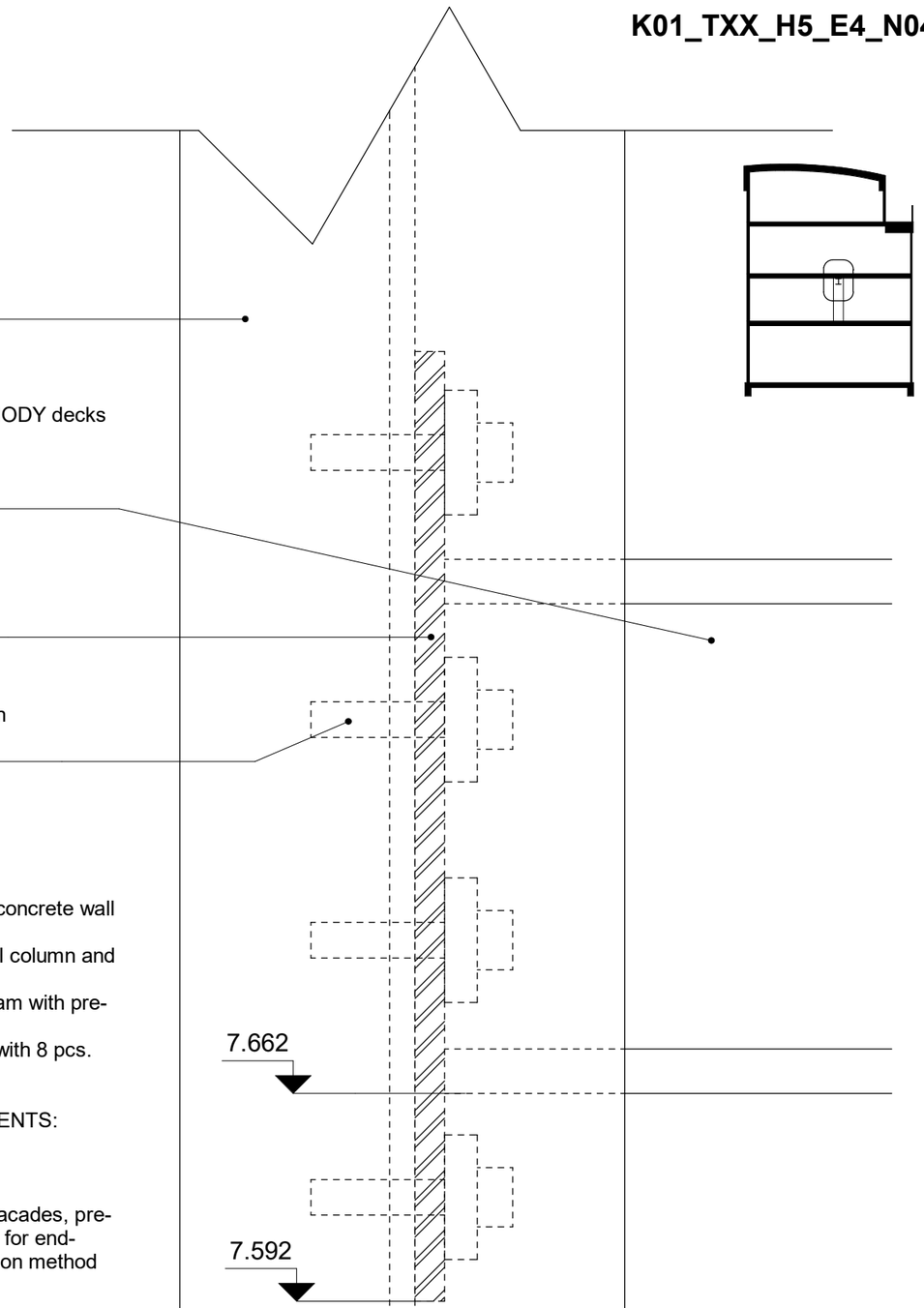
10 mm steel end-plate
- cast together with HEB/IPE beam
- 320 x 220 mm

10 mm x 45 mm 2 grade connection bolts with washers
- 4 pcs. each side

PROCESS
1. Mounting of IPE steel column to concrete wall in the basement
(Ref. K01_TXX_H5_E3_N03 - Steel column and concrete wall)
2. Delivering and lifting HEB180 beam with pre-casted end-plate
3. Connecting the beam to column with 8 pcs. 10 mm x 45 mm connector bolts

DETAIL RELEVANT TO COMPONENTS:
Columns C0-4.X,
Beams: B0-3.4, B0-3.7, B0-3.10

For columns and beams placed in facades, pre-galvanization is required, as well as for end-plates and bolts. Hot-dip galvanization method should be chosen.



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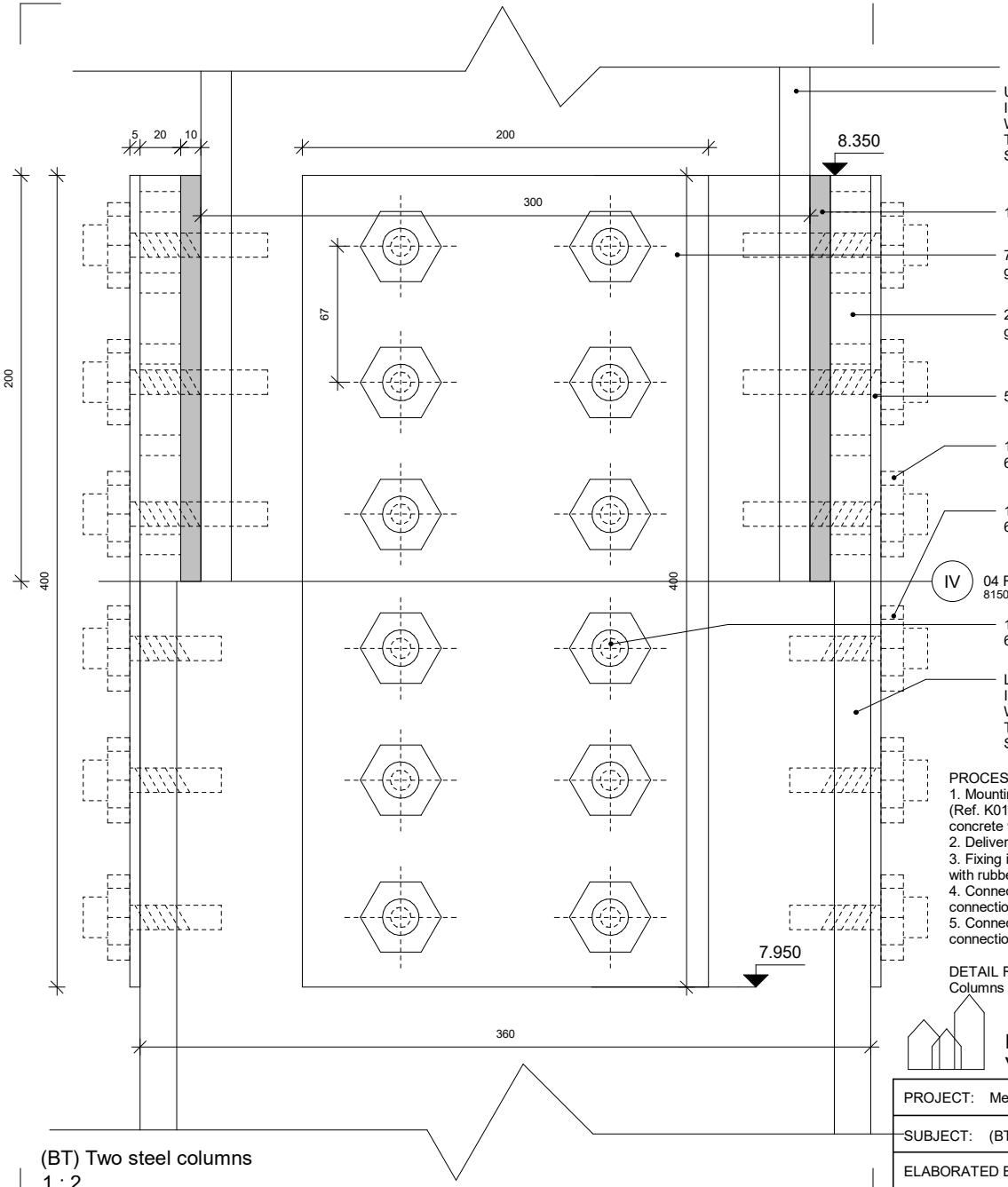
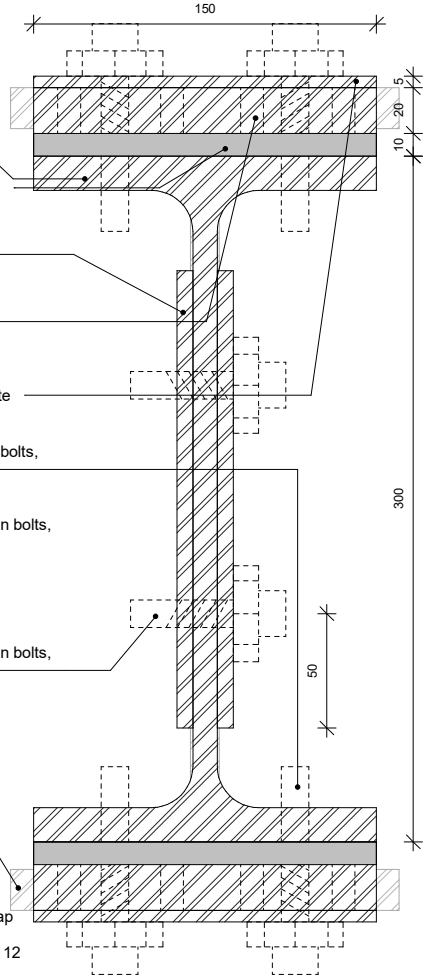
PROJECT: Mejlgade 37, Århus	DATE: 3.1.2021	K01_TXX_H5_E4_N04
SUBJECT: (BT) Steel beam and column, from two sides	SCALE: As indicated	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



(BT) Two steel columns
1 : 2



Upper column
IPE300 hot-dip galvanized steel column
Width: 150 mm
Thickness: 15/10,7 mm
Steel quality: S235

10 mm fill-in rubber or composite material plate

7 x 200 x 400 mm web splice hot-dip galvanized steel plate

20 mm internal perforated flange hot-dip galvanized steel plates

5 mm flange splice hot-dip galvanized steel plate

12 x 65 mm 2 grade stainless steel connection bolts, 6 pcs. each flange side

10,5 x 45 mm 2 grade stainless steel connection bolts, 6 pcs. each flange side

IV 04 First floor
8150

10,5 x 45 mm 2 grade stainless steel connection bolts, 6 pcs. each flange side

Lower column
IPE360 hot-dip galvanized steel column
Width: 170 mm
Thickness: 18/12,7 mm
Steel quality: S235

PROCESS
1. Mounting of IPE360 steel column (Ref. K01_TXX_H5_E3_N03 - Steel column and concrete wall)
2. Delivering and lifting IPE300 column
3. Fixing internal perforated flange plate and filling the gap with rubber strip
4. Connecting two columns with flange splice plates and 12 connection bolts
5. Connecting columns with web splice plates and 12 connection bolts

DETAIL RELEVANT TO COMPONENTS:
Columns C0-4.X

For columns and beams placed in facades, pre-galvanization is required, as well as for splice plates and bolts. Hot-dip galvanization method should be chosen.

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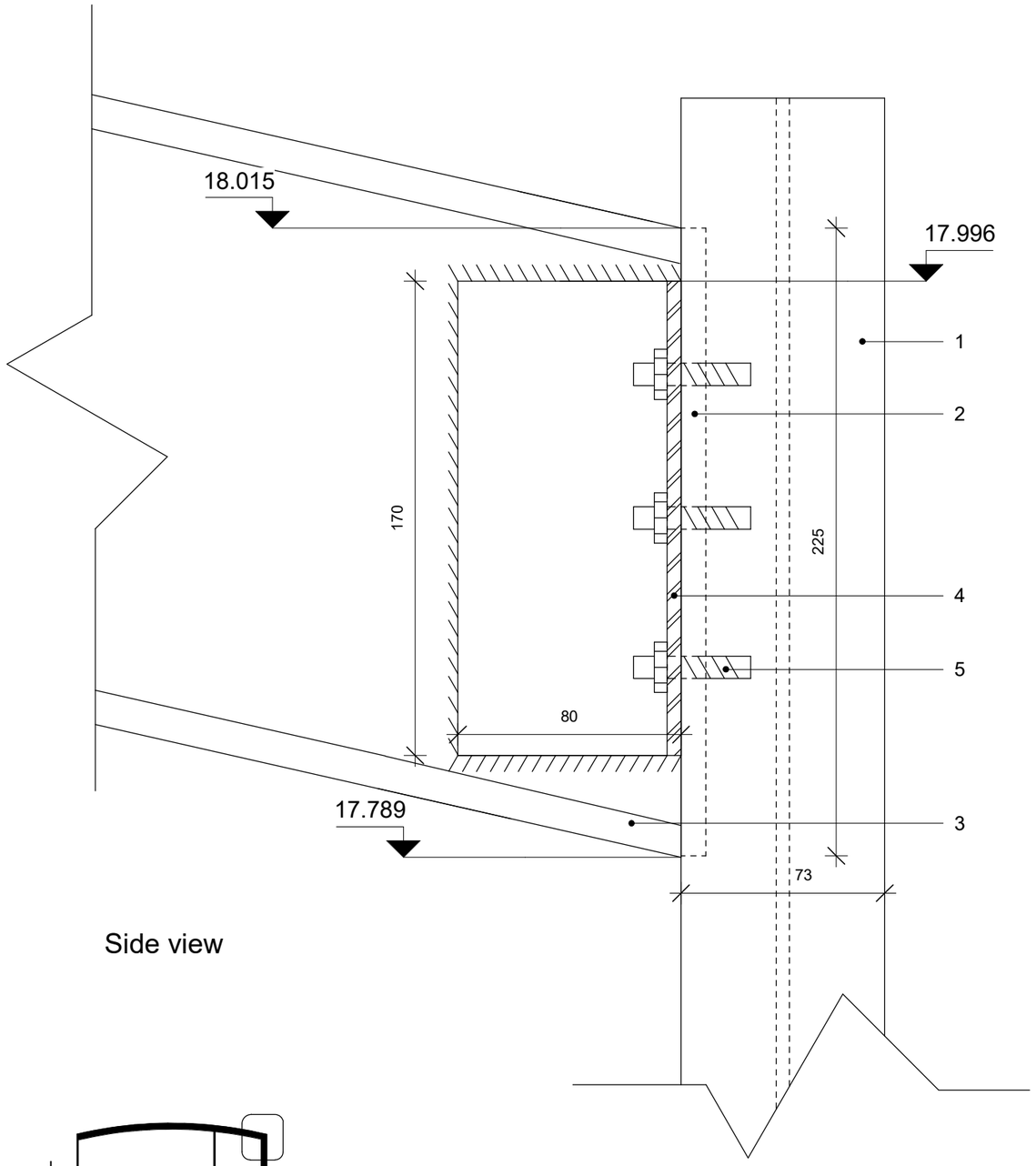
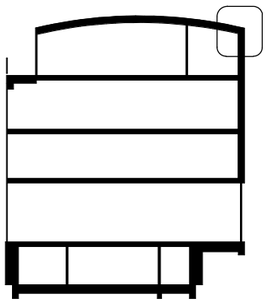
PROJECT: Mejlgade 37, Århus	DATE: 5.1.2021	K01_TXX_H5_E4_N05
SUBJECT: (BT) Two steel columns	SCALE: 1 : 2	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	

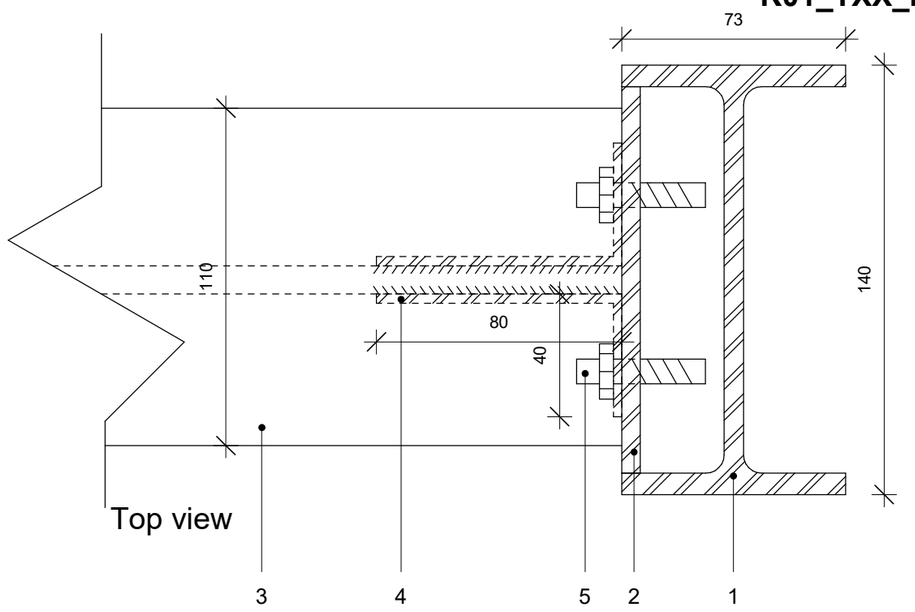


Side view



Cross section BB

(BT) Curved steel beam and column
1 : 2



Top view

1. C4.1-6
IPE140 steel column
Width: 73 mm
Thickness: 7,0/6,9 mm
Steel quality: S235
Galvanization: hot-dip

2. 9 x 116 x 225 mm steel side plate
- cast together with IPE column

3. B3-4.1-4
Curved IPE220 steel beam
Width: 110 mm
Thickness: 12/9,2 mm
Steel quality: S235
Galvanization: hot-dip

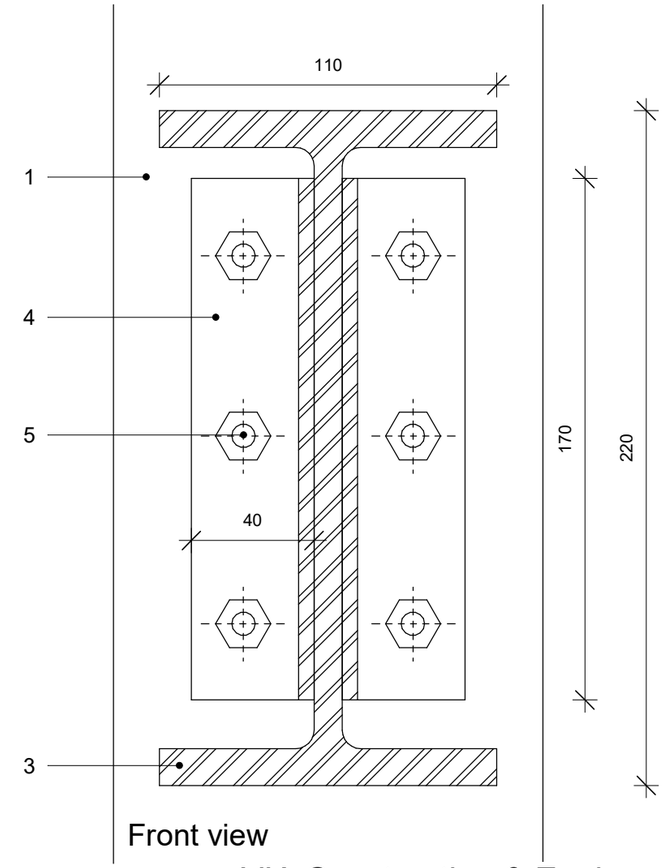
4. 10 mm galvanized steel end-plate
- pre-welded to IPE beam
- 170 x 80 mm

5. 8 mm x 42 mm 2 grade connection bolts with washers
- 6 pcs. each side

PROCESS
1. Mounting of IPE steel column to concrete wall in the basement or foundation
(Ref. K01_TXX_H5_E3_N03 - Steel column and concrete wall
K01_TXX_H5_E3_N04 - Steel column and foundation)
2. Delivering and lifting curved IPE220 beam with pre-welded end-plate
3. Connecting the beam to column with 6 pcs. 8 mm x 42 mm connector bolts

DETAIL RELEVANT TO COMPONENTS:
Columns C3-4.X,
Beams: B3.1-3, B3.7-11, B4.1-4

For columns and beams placed in facades, pre-galvanization is required, as well as for end-plates and bolts. Hot-dip galvanization method should be chosen.



Front view

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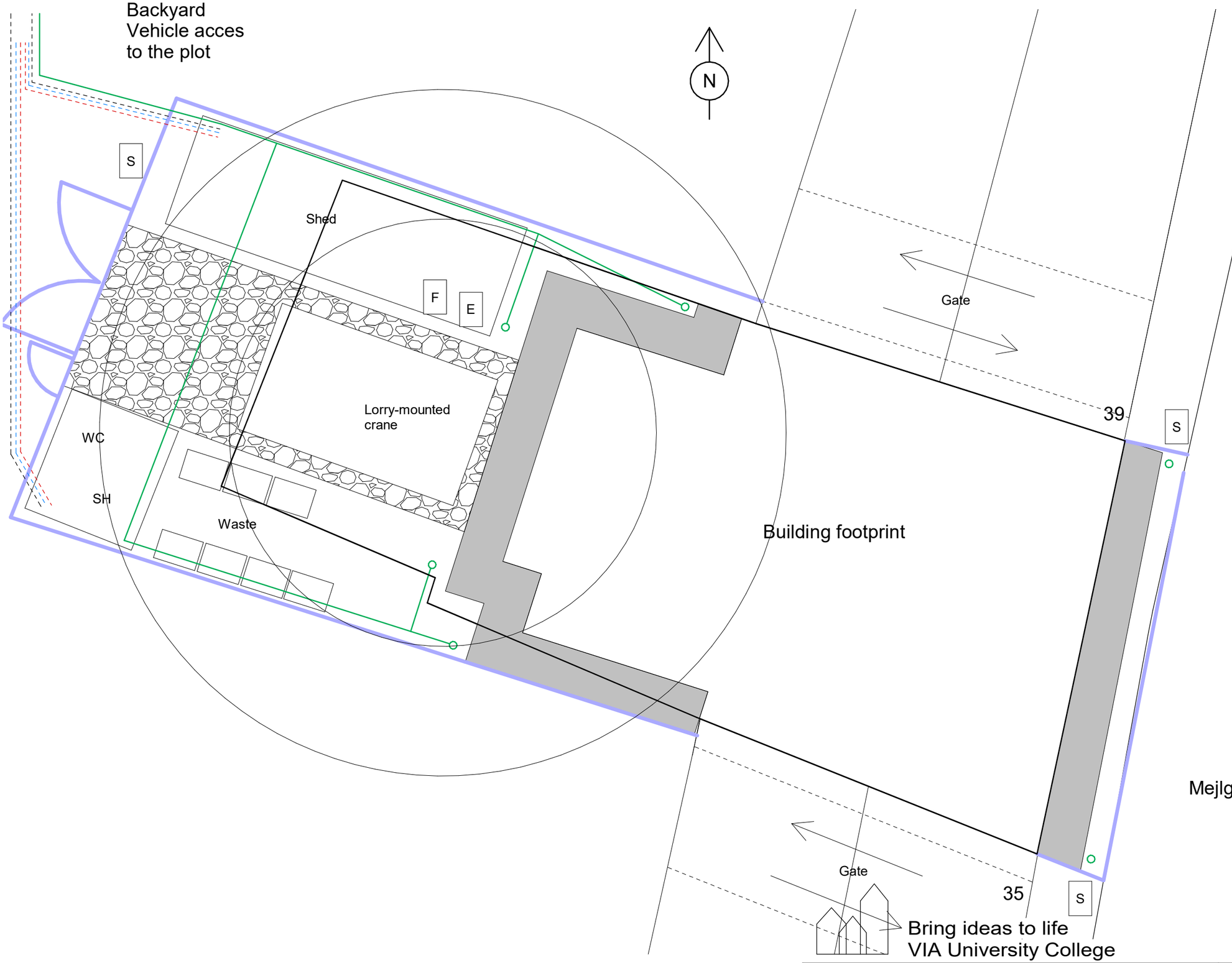
PROJECT: Mejlgade 37, Århus	DATE: 5.1.2021	K01_TXX_H5_E7_N01
SUBJECT: (BT) Curved steel beam and column	SCALE: As indicated	
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	



Legend

- 300 mm mechanical stable gravel
- Scaffolding class 5
- Electric cables
- Water supply
- Sewage
- Lighting
- Plot boundary
- Construction site sound blanket fence
- Entrance for vehicles
- Entrance for workers
- S — Sign and information
- Shed — Shed for workers:
  - 1 wash basin (1 per 5 people)
  - 6 lockers (2 per 1 employee)
  - site manager office
  - eating area
- E — temporary power and fire extinguisher
- F — first aid kit and material safety data sheet
  (second shed can be placed above)
- WC/SH — Shower and toilet cabin
  - 1 toilet, 1 shower, 1 wash basin
- Waste — Waste containers
  - timber
  - metal
  - insulation
  - plywood
  - gypsum
  - concrete
  - plastic

Construction site plan
1 : 100

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PROJECT: Mejlgade 37, Århus	DATE: 5.1.2021	
SUBJECT: Construction site plan	SCALE: 1 : 100	**K01_TXX_H1_EX_N02**
ELABORATED BY: Carina Pronscaia	CLASS: AH71P-20S	

AH71P-20S, Carina Pronscaia						
Case		Tender design				
Client		Aarhus Kommune				
Project		Multistory multipurpose building on Mejlgade 37, 8000 Aarhus				
	Basement	Groundfloor	First floor	Second floor	Third floor	Fourth floor
BEAMS	B-1.1	B0.1	B1.1	B2.1	B3.1 (curved)	B4.1 (curved)
	B-1.2	B0.2	B1.2	B2.2	B3.2 (curved)	B4.2 (curved)
	B-1.3	B0.3	B1.3	B2.3	B3.3 (curved)	B4.3 (curved)
	B-1.4	B0.4	B1.4	B2.4	B3.4 (curved)	B4.4 (curved)
		B0.5	B1.5	B2.5	B3.5 (curved)	
		B0.6	B1.6	B2.6	B3.6 (curved)	
		B0.7	B1.7	B2.7	B3.7 (curved)	
		B0.8	B1.8	B2.8	B3.8 (curved)	
		B0.9	B1.9	B2.9	B3.9	
		B0.10	B1.10	B2.10	B3.10	
		B0.11	B1.11	B2.11	B3.11	
		B0.12	B1.12	B2.12	B3.12	
			BL1.1	BL2.1	B3.13	
			BL1.2	BL2.2	B3.14	
			BL1.3	BL2.3	BL3.1	
			BL1.4	BL2.4	BL3.2	
			BL1.5	BL2.5	BL3.3	
			BL1.6	BL2.6	BL3.4	
			BL1.7	BL2.7	BL3.5	
			BL1.8	BL2.8	BL3.6	
					BL3.7	
					BL3.8	
					BL3.9	
					BL3.10	
					BL3.11	
					BL3.12	
COLUMNS		C0.1	C1.1	C2.1	C3.1	C4.1
		C0.2	C1.2	C2.2	C3.2	C4.2
		C0.3	C1.3	C2.3	C3.3	C4.3
		C0.4	C1.4	C2.4	C3.4	C4.4
		C0.5	C1.5	C2.5	C3.5	C4.5
		C0.6	C1.6	C2.6	C3.6	C4.6
		C0.7	C1.7	C2.7	C3.7	
		C0.8	C1.8	C2.8	C3.8	
		C0.9	C1.9	C2.9	C3.9	
		C0.10	C1.10	C2.10	C3.10	
		C0.11	C1.11	C2.11	C3.11	
		C0.12	C1.12	C2.12	C3.12	
		C0.13	C1.13	C2.13		
		C0.14	C1.14	C2.14		
		C0.15	C1.15	C2.15		
		C0.16	C1.16	C2.16		

calculated in Beam and Column calculation
assumed based on connection between two HODY decks (HEB180)