

PORTFOLIO WORKING AS:

PROJECT ENGINEER/ FACADE DESIGNER/ FACADE CONSULTANT

2021 & 2022

GERMANY

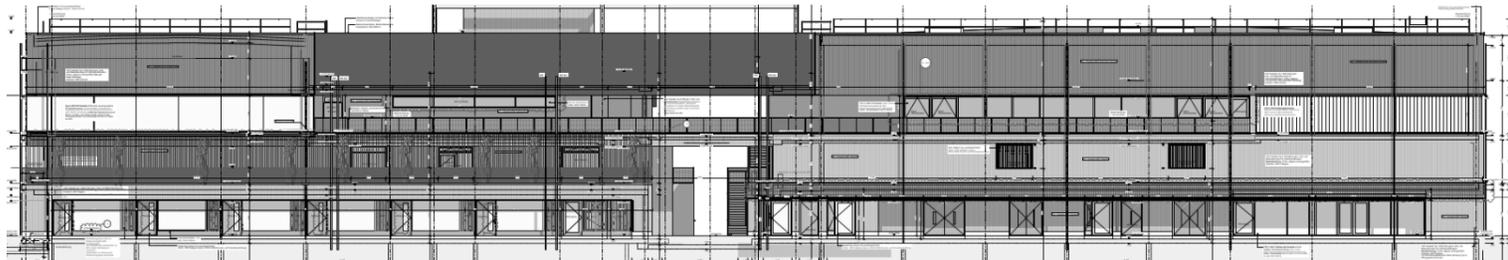
Buenaventura Olea Villoslada

# CAMPUS OST FASSADE

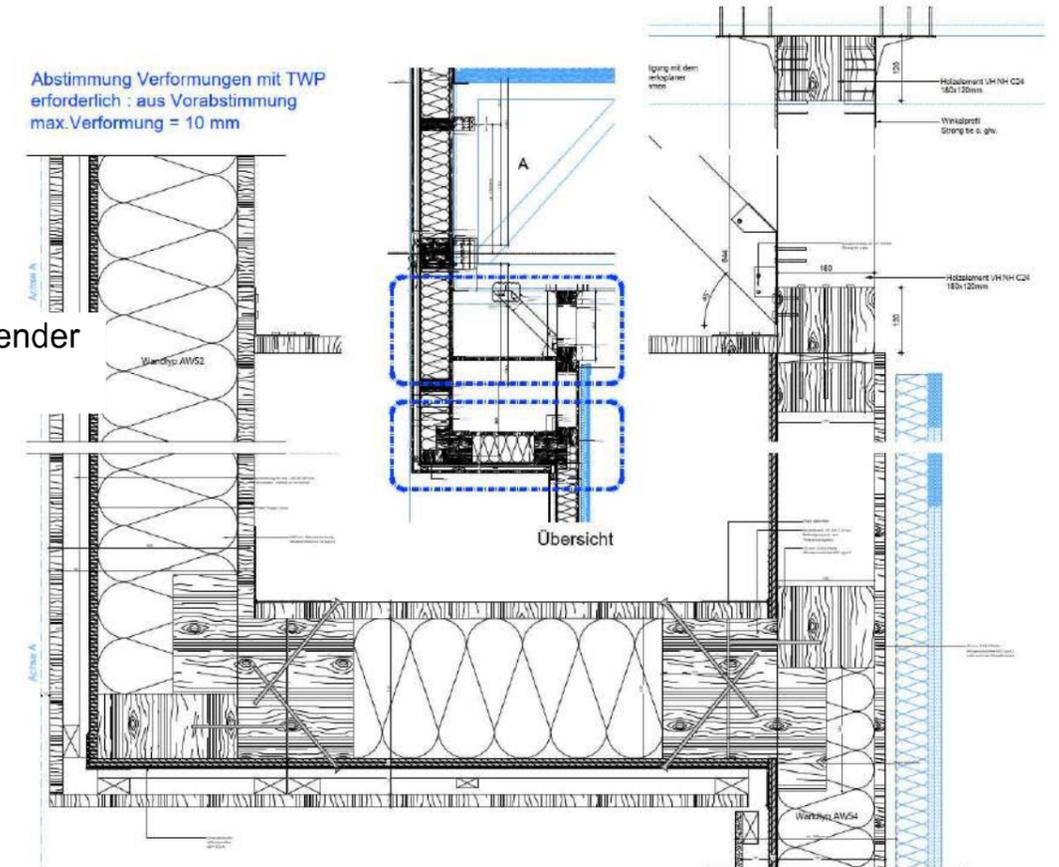


Wooden panel walls and facades for the climate pilot project: Campus East in Munich:

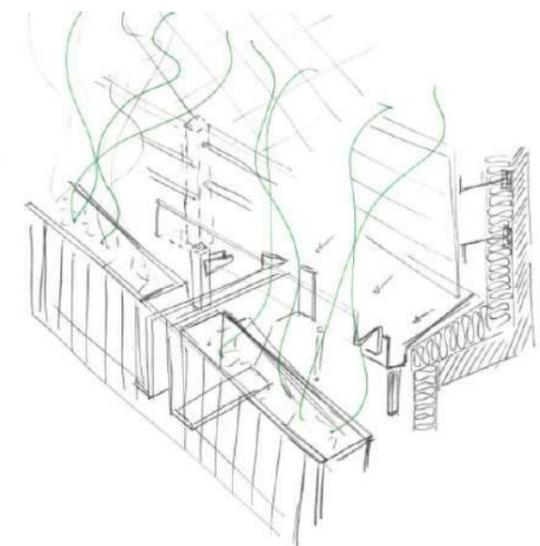
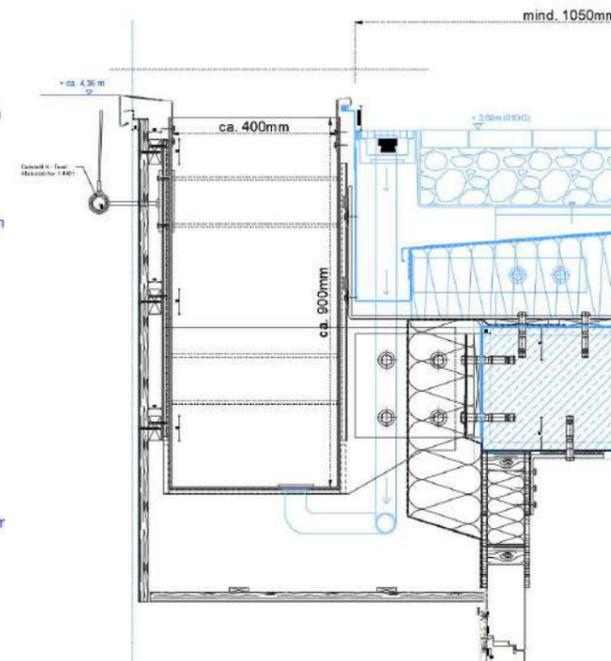
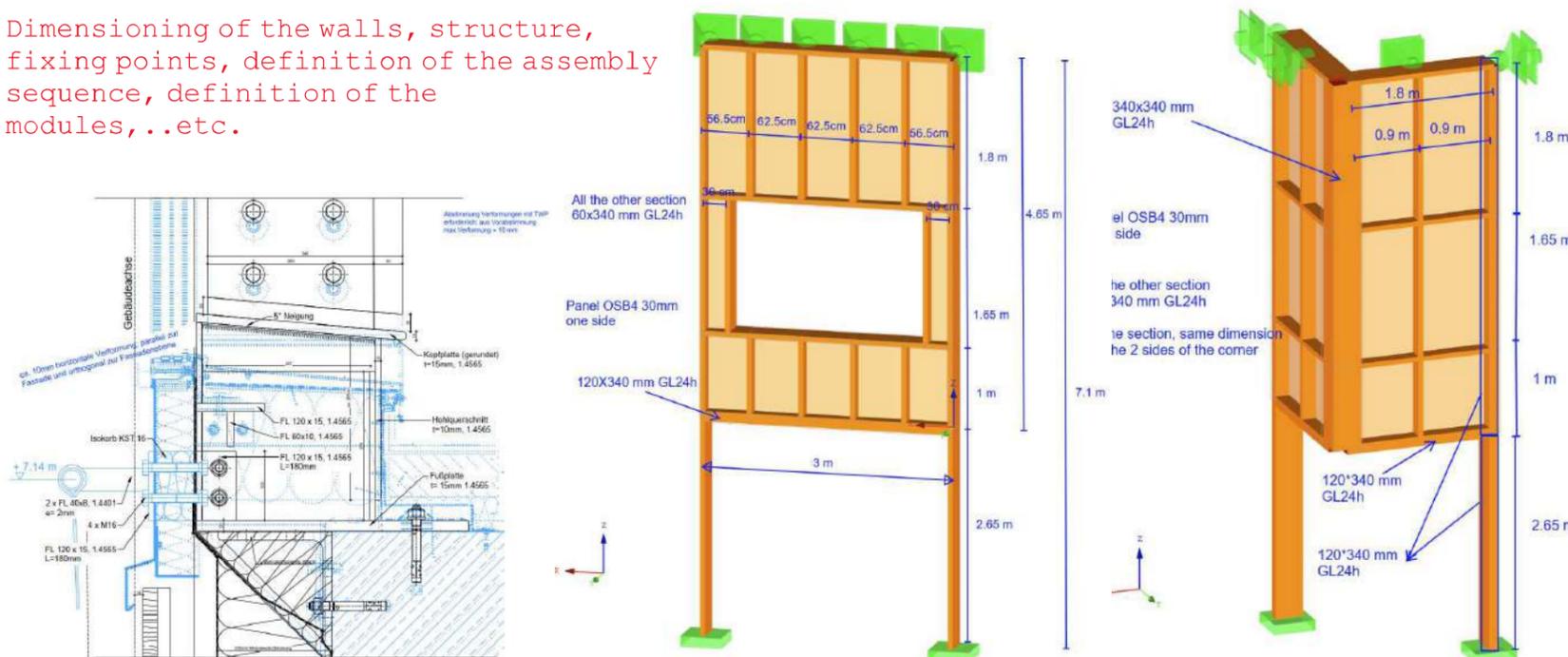
Sustainable exterior wall construction. To be executed as a timber panel construction with integrated vertical greening system. In addition to the requirements of climate neutrality, the compatibility of a maximum degree of prefabrication in a wide variety of dimensions and formats will be a particular challenge for the design of this façade.



Details for Tender in scale 1:1



Dimensioning of the walls, structure, fixing points, definition of the assembly sequence, definition of the modules, ..etc.



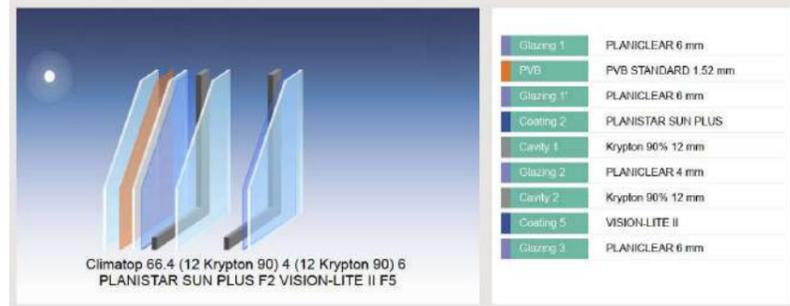
From the first sketches to Details for Tender in scale 1:1

# Neuhauser Straße München



CalumenLive

Friday, July 2, 2021

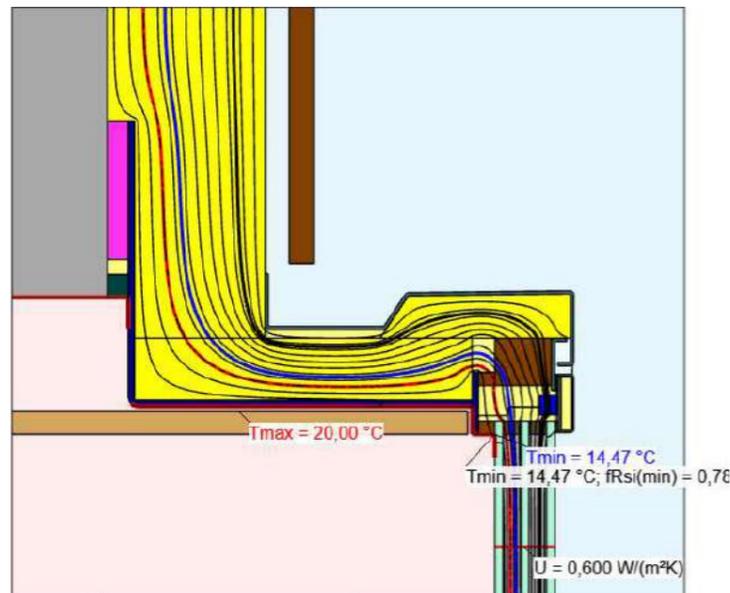
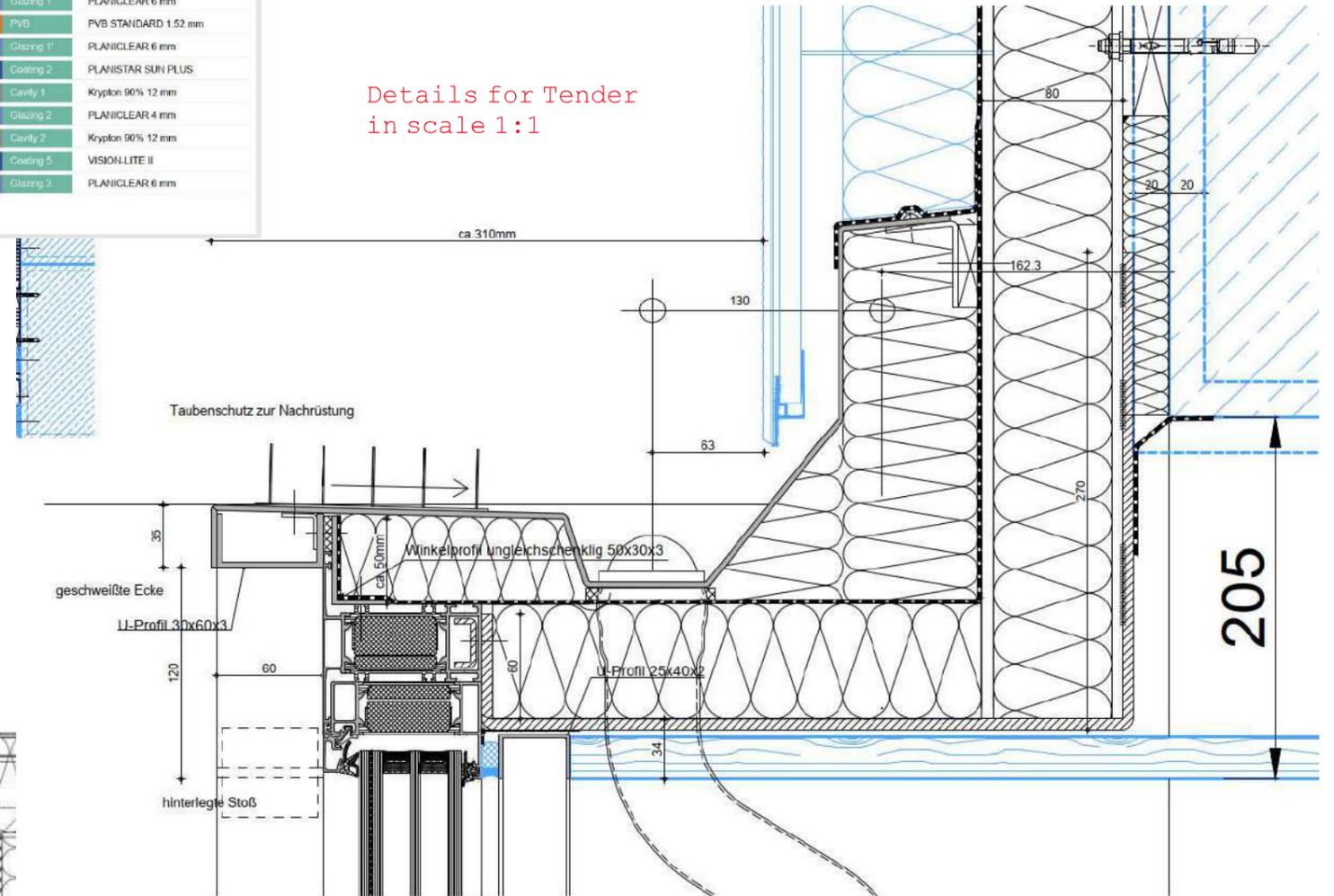


Details for Tender in scale 1:1

Glass composition: maximum Ug-value to be achieved. Requirement according to DGNB (German Sustainable Building Council)

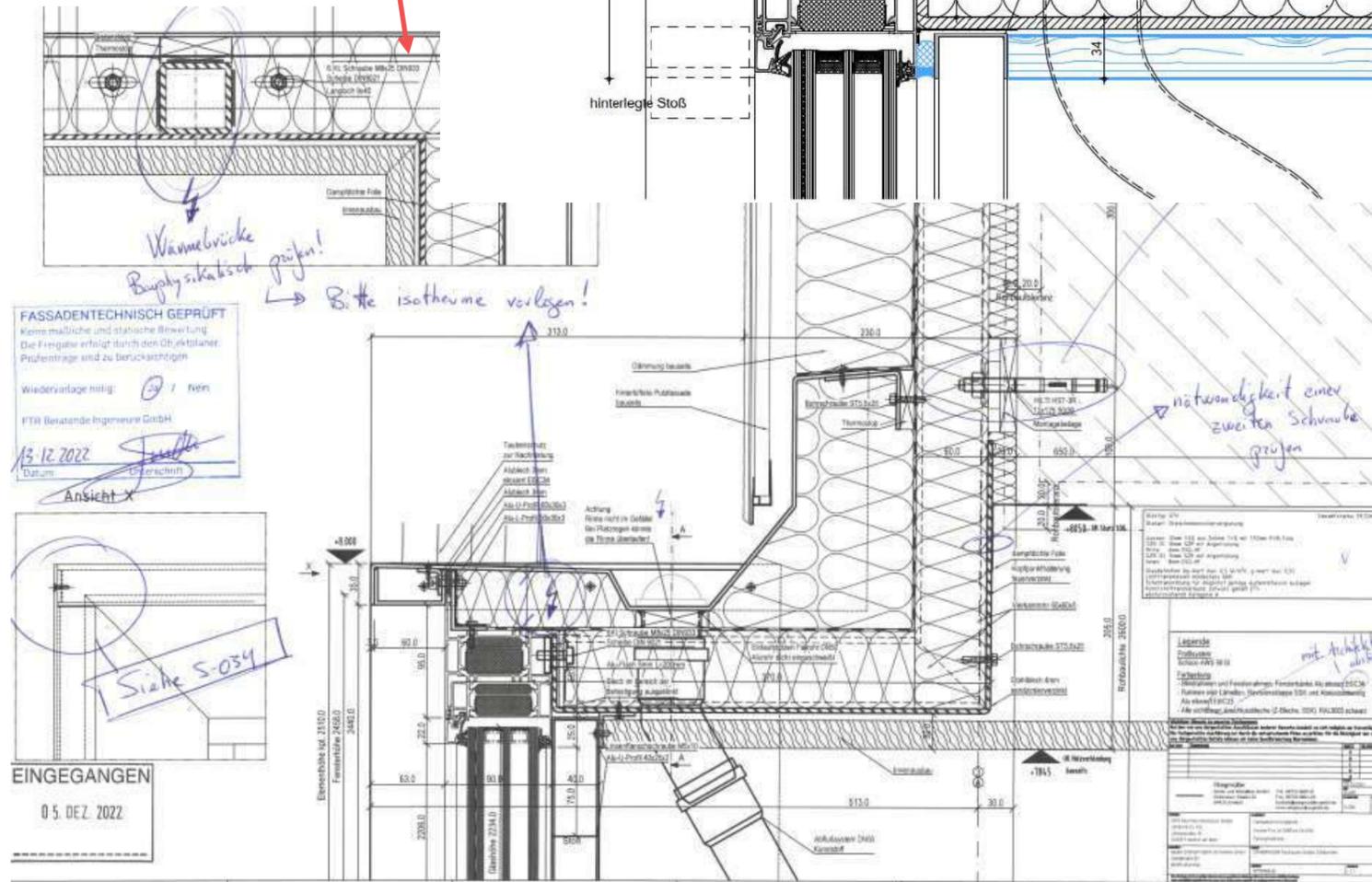
"Shop drawings" by the company Stegmüller, checked and tested as final statement before construction.

(Based on previous Tender details)



$$U_{ges} = \frac{L \cdot 2D}{b_{ges}} = \frac{0,4215}{0,57099} = 0,74\text{ (0,738)} \frac{W}{m^2K}$$

Elaboration of the details taking into account the isothermal curve, the thermal conductivity of the materials and the risk of condensation. Software: Thermal ISO (Sommerinformatik)



Window development in various formats as a decorative facade element

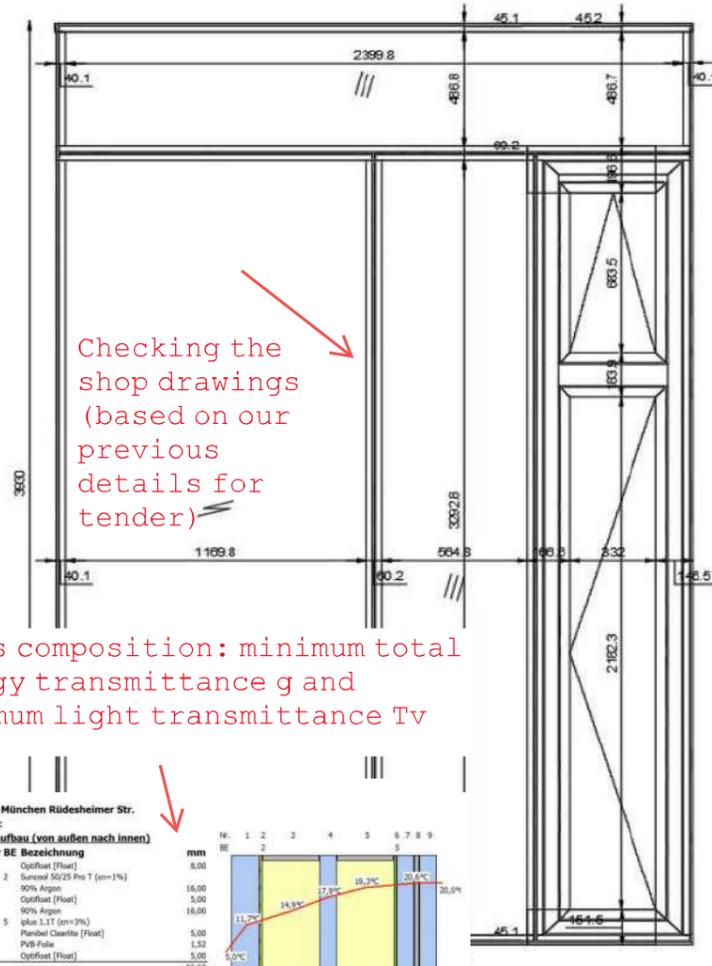


# Rüdesheimer Straße 3-5

## Berechnung Wärmedurchgangskoeffizient U Calculation thermal transmittance coefficient U

Details for Tender  
in scale 1:1

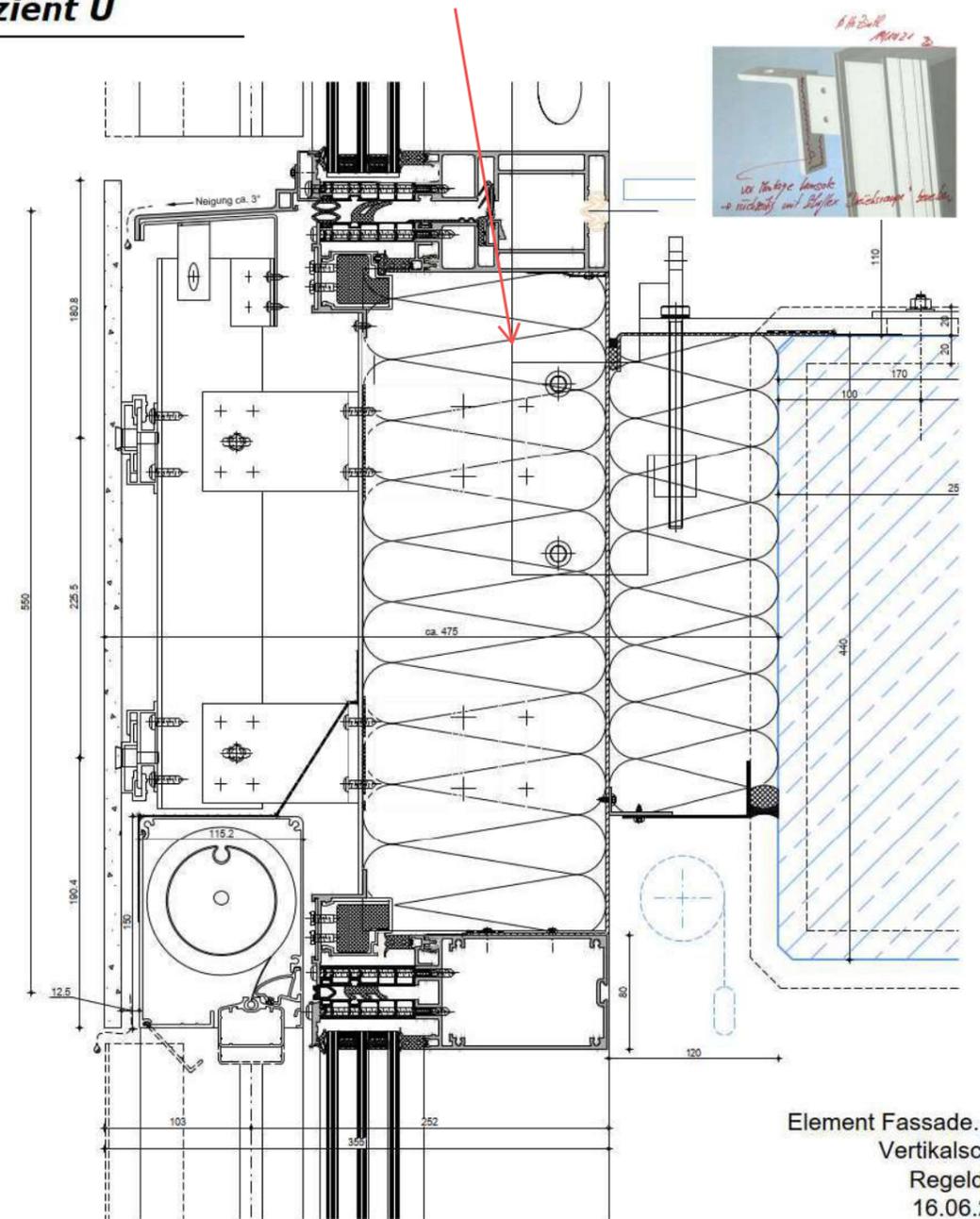
Elaboration and teamwork  
collaboration with the  
company Schindler



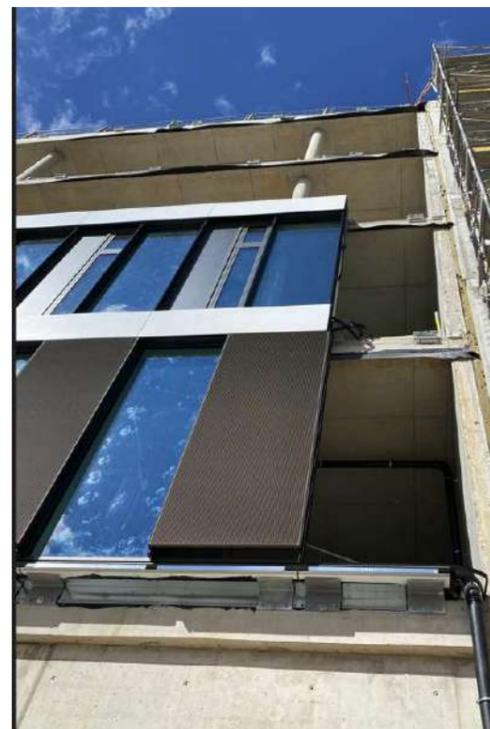
Glass composition: minimum total energy transmittance g and maximum light transmittance Tv

Projekt: München Rüdesheimer Str.  
Position:  
Schichtaufbau (von außen nach innen)

Nummer	BE	Bezeichnung	mm	g
1		Optifloat (Float)	8,00	
2	2	Sonnecol 50/25 Pro T (em=1%)	16,00	11,2%
3		90% Argon	16,00	14,9%
4		Optifloat (Float)	5,00	17,0%
5		90% Argon	16,00	19,3%
6		Optifloat (Float)	5,00	20,6%
7	5	plus 1,17 (em=3%)	5,00	
8		Plumbit Quartzite (Float)	1,32	
9		PVB-Folie	5,00	
10		Optifloat (Float)	5,00	
			96,52	



Element Fassade. Süd  
Vertikalschnitt  
Regeldetail  
16.06.2021



Aluminum modular façade with tested fall-proof expanded metal panels in front of the ventilation casements and ceiling end elements made of Cosentino Dekton.



# Ladehof Augsburg: Neubau eines Bürogebäudes Ladehofstraße

Elabotation of new profiles based on structural values

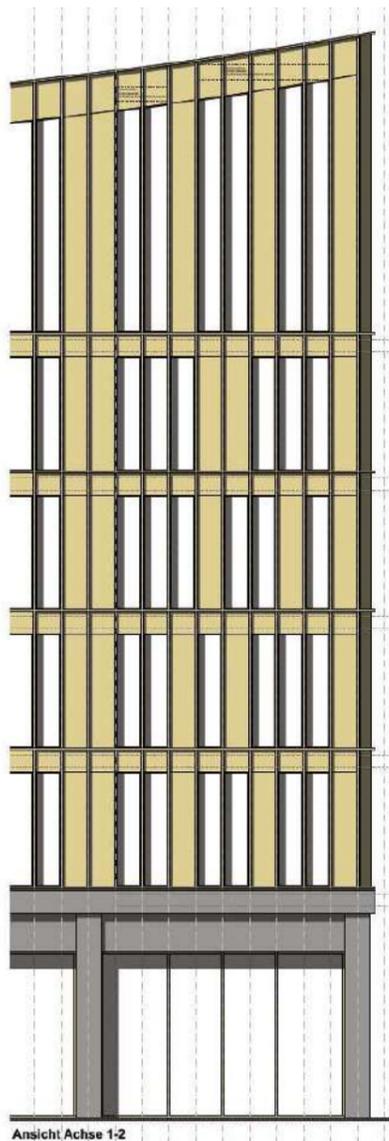


↓

Statische Werte	
Profil:	
Materiel:	Aluminium
Fläche	$A = 22.496 \text{ cm}^2$
Abwicklung	$E_a = 870.11 \text{ mm}$
Dichte	$\rho = 2.70 \text{ g/cm}^3$
Gewicht	$G = 6.075 \text{ kg/m}$
Trägheitsm.	$I_x = 806.47 \text{ cm}^4$
	$I_y = 48.25 \text{ cm}^4$
Widerstand:	$W_x = 69.90 \text{ cm}^3$
	$W_y = 15.38 \text{ cm}^3$
Randabstand	$e_{x1} = 83.50 \text{ mm}$
	$e_{y1} = 31.60 \text{ mm}$
	$e_{x2} = 115.80 \text{ mm}$
	$e_{y2} = 15.10 \text{ mm}$
Verzinsfaktor	$\alpha = 1.00$
Objekt:	
Name:	
Datum:	
Maßstab:	1:1



Special processing of the profiles of different facade systems. Optimization of the static values in relation to the different room heights in the building.



assembly construction

Design of new profiles

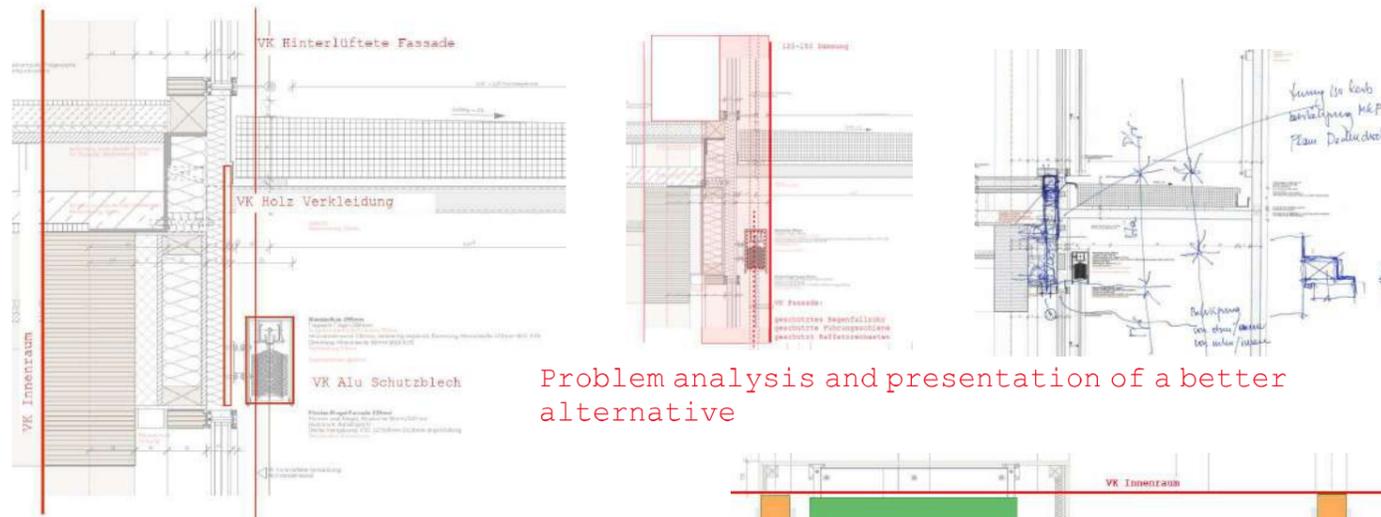
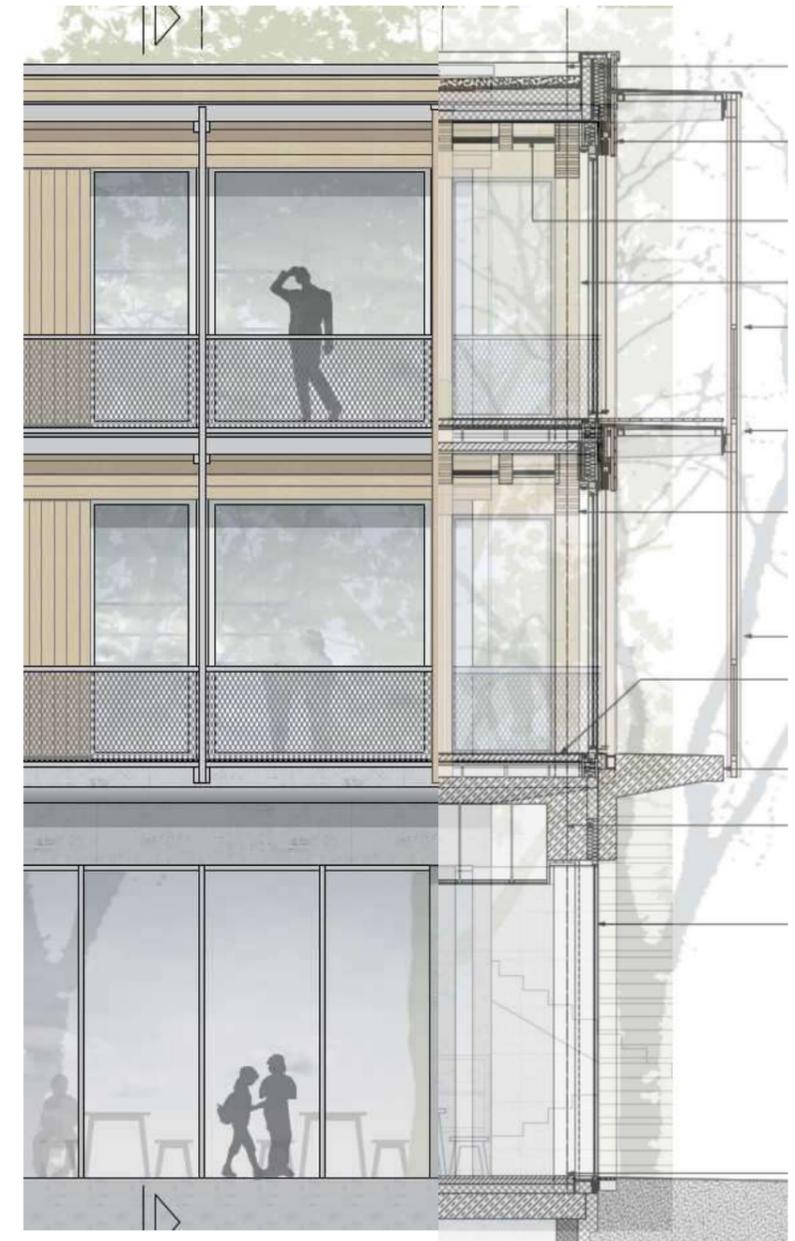
Details for Tender in scale 1:1

Detail Einhängung

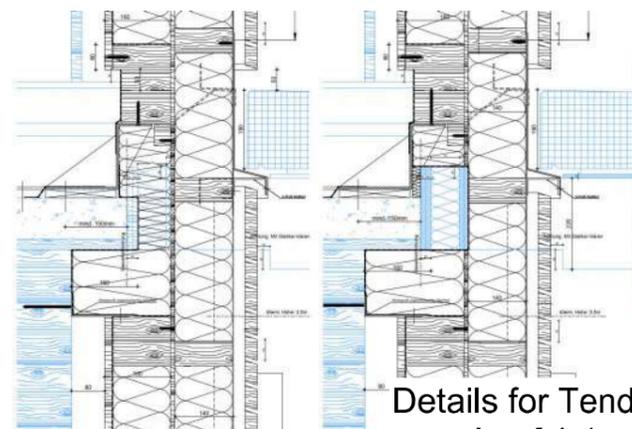
Vertical strips are arranged in front of all surfaces in a grid of 700 mm. These are interrupted at the level of the floor slabs by horizontal cornices. The curved shape of the roof is outlined on the parapet. The sheet metal surfaces are provided with a shiny metallic finish.

Design development of the facade with special attention to the escape balconies, modular wooden panel walls, complicated geometry of the ventilation machine and wooden structure.

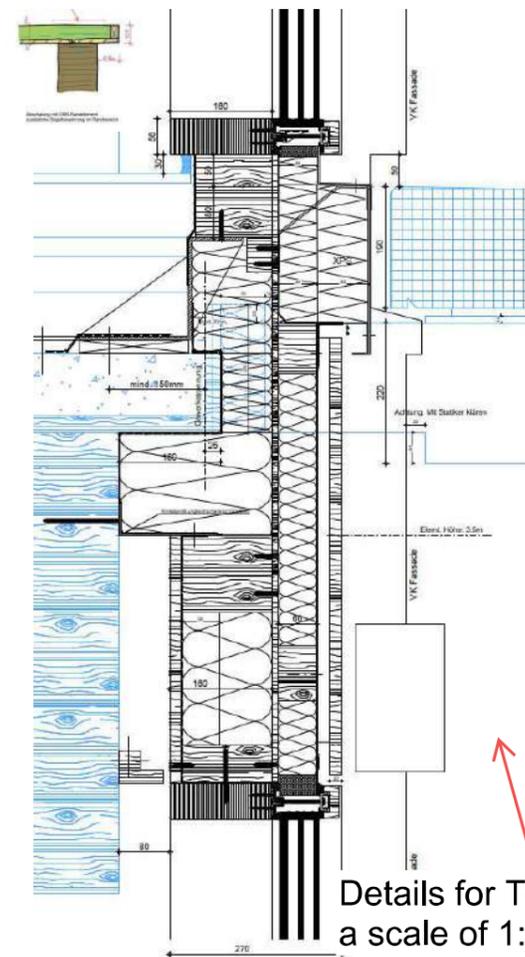
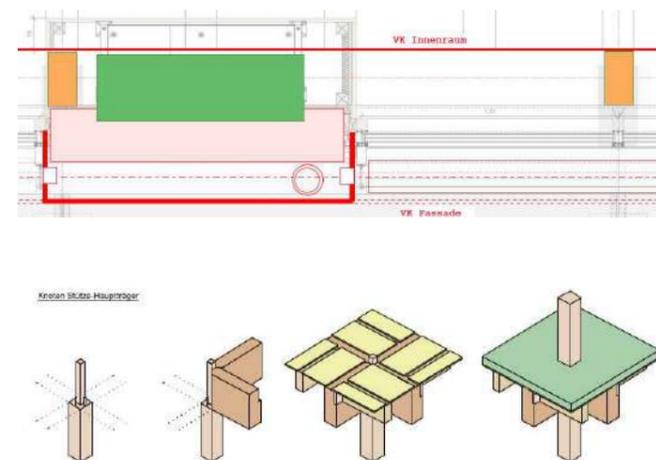
# Neubau Gymnasium Herrsching



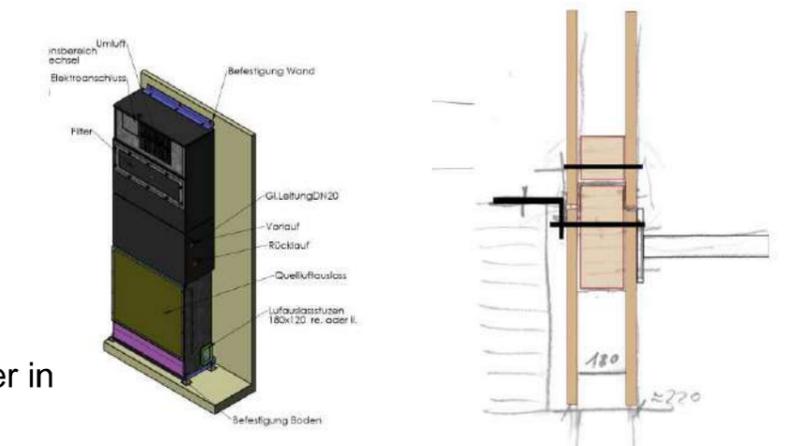
Problem analysis and presentation of a better alternative



Details for Tender in a scale of 1:1



Details for Tender in a scale of 1:1



PORTFOLIO WORKING AS:

SENIOR FACADE ENGINEER / FACADE CONSULTANT

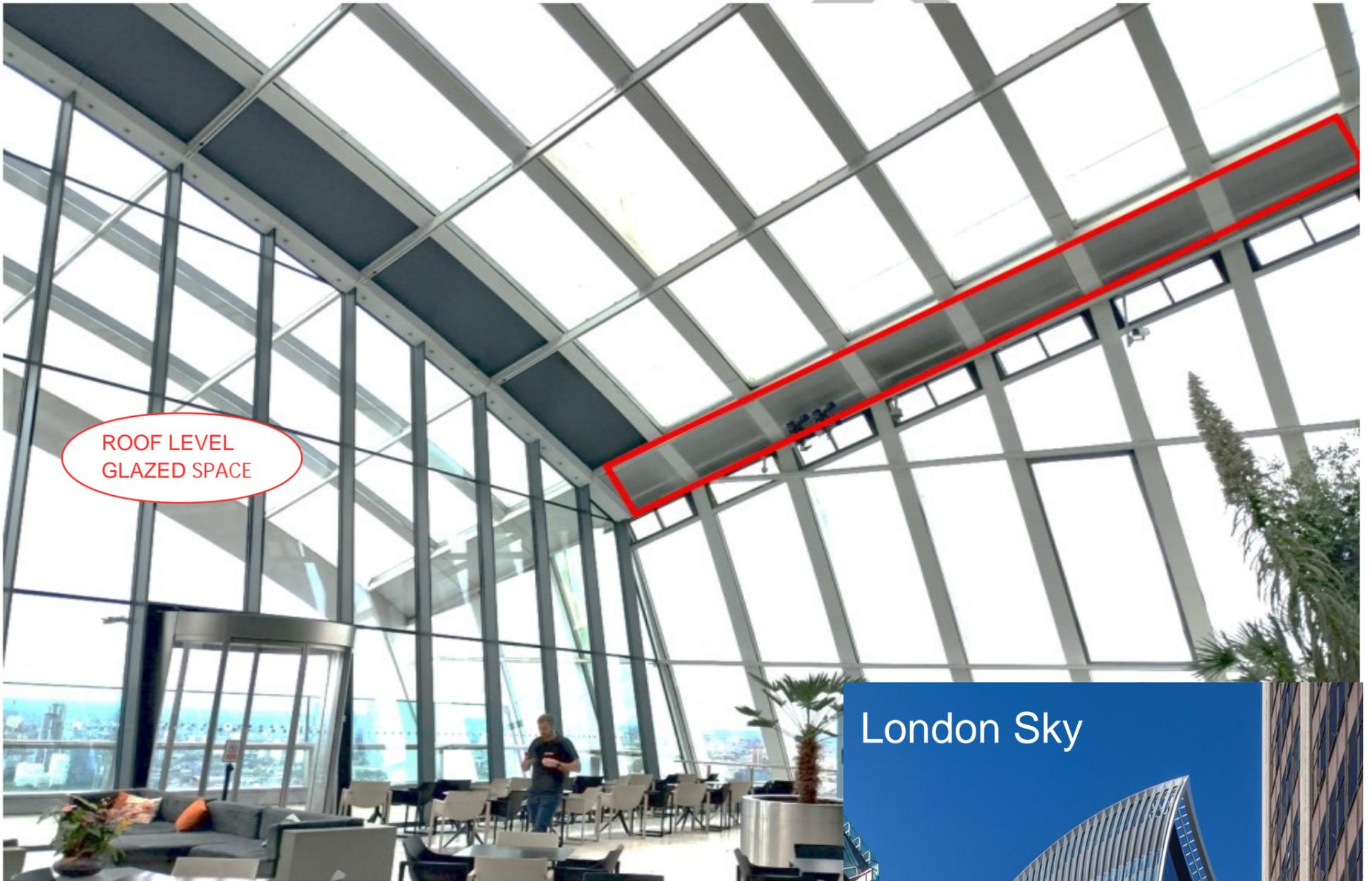
2023 & 2024

LONDON

# LONDON'S SKY GARDEN

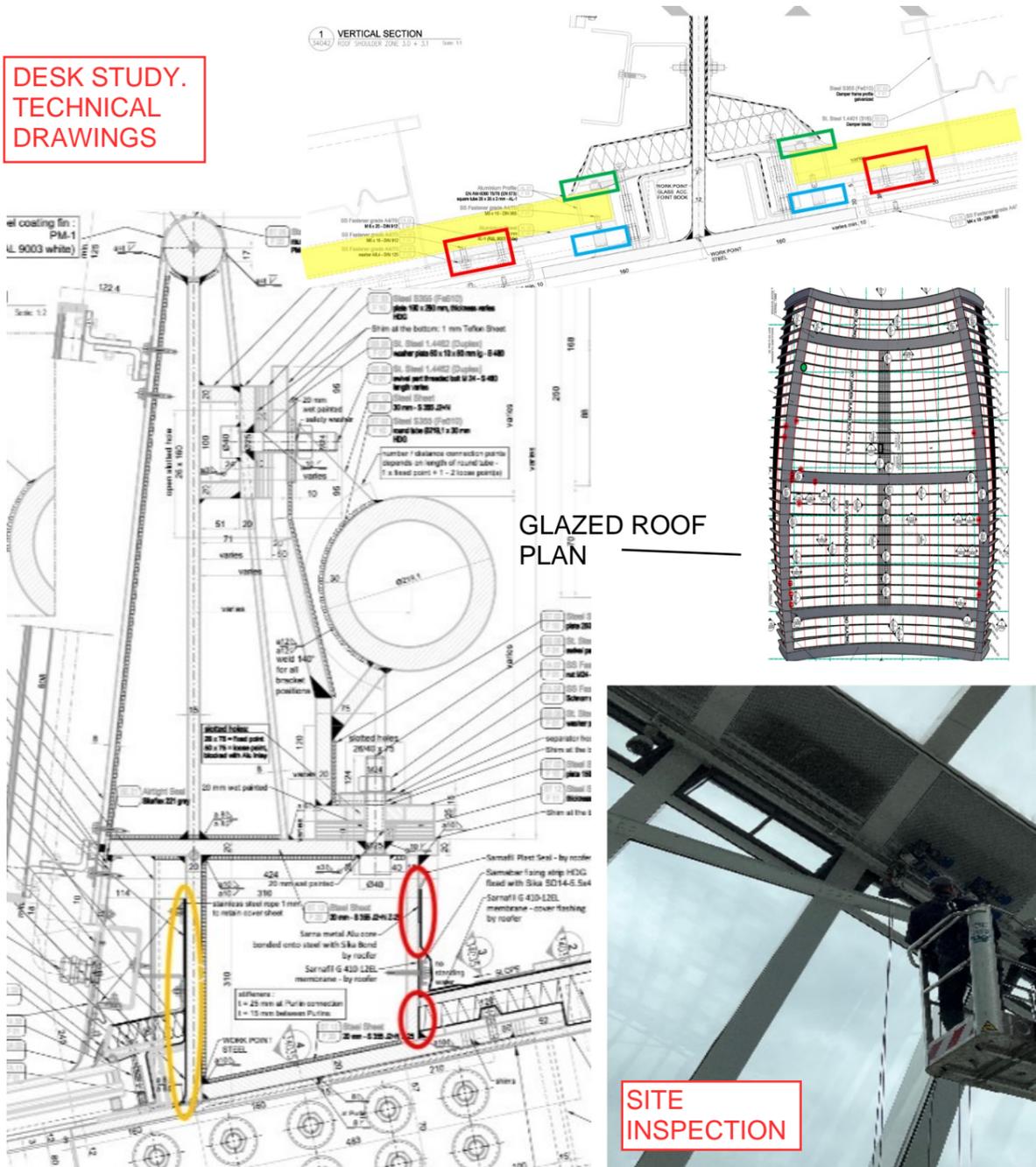
## 20 FENCHURCH STREET

WATER INGRESS INVESTIGATION. DESK STUDY & SITE INSPECTION

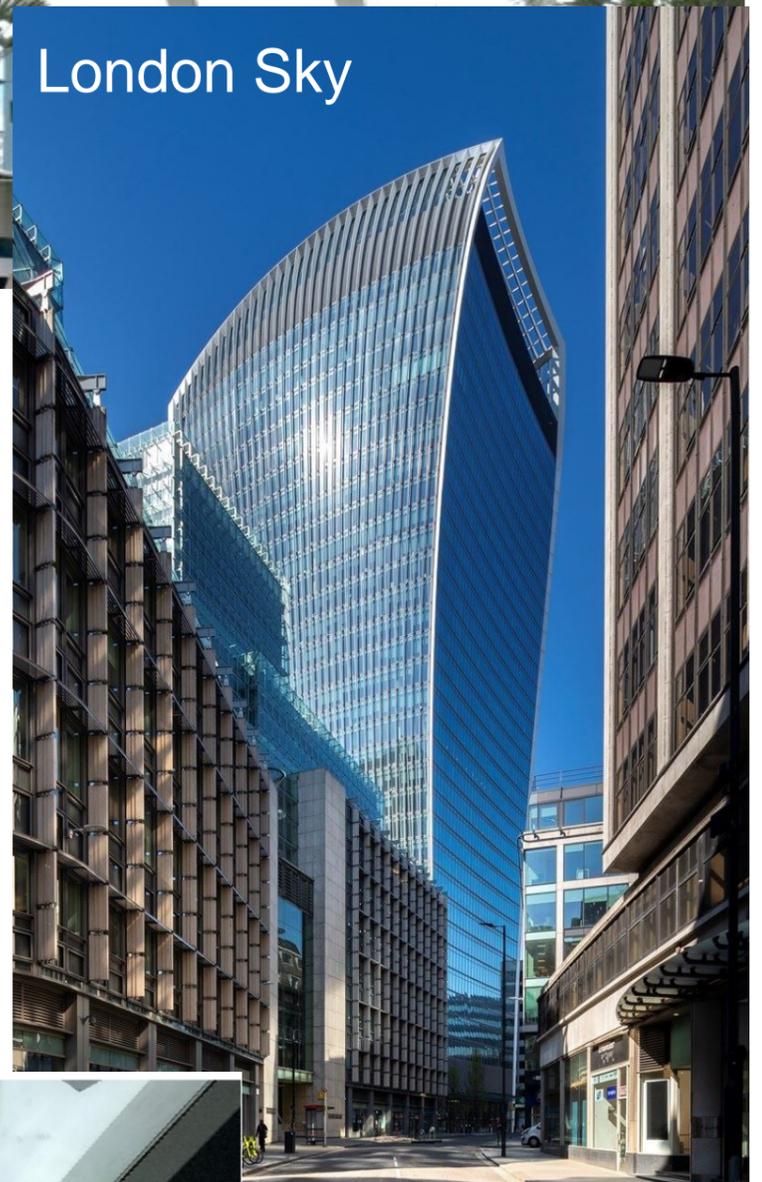


London Sky

DESK STUDY. TECHNICAL DRAWINGS



SITE INSPECTION



# MANCHESTER. Residential



## 2.3 Specific Items.

The following items were observed as requiring action.

Item	1. Cavity tray membrane in lieu of stainless steel
Image	<p>Figure 17: Block B. Level 3. Installation of the cavity tray above the DPC level.</p>
Location	Block B. Level 3 (cavity tray benchmark installation)
Observation	The cavity tray installed as a stainless-steel tray on ground floor (refer to site visit report 12) has been replaced with the membrane used for the DPC.
Actions	Please provide documentation to confirm that the cavity tray was approved by the fire consultant and building control.

# STRATFORD. Office Building

Item General progress

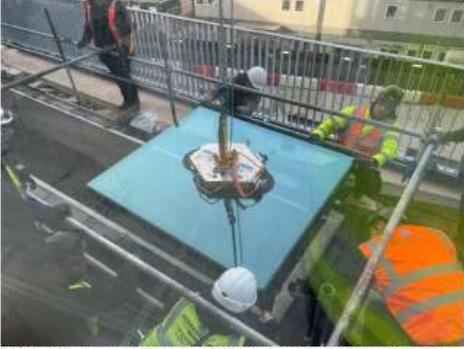
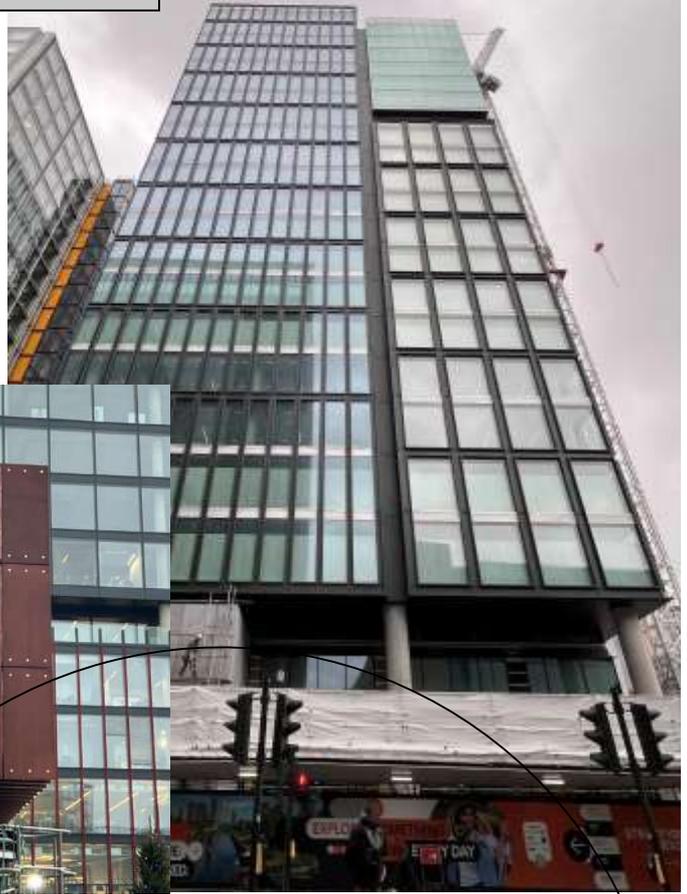


Photo 13: Level 2 – View of the rooflight panel being installed (EWS-14) with special attention to the fixation procedure. Future inspections are required.



Photo 14: Level 1 – View of the parapet and demountable fins (EWS-08). Insulation is still with no temporary protection against water.



## SITE VISIT REPORT

- 1 INSPECTION INFORMATION
  - 1.1 Project
  - 1.2 Inspection Data/ weather
  - 1.3 Attendees
  - 1.4 Circulation
  - 1.5 Items/ Areas Inspected
- 2 OBSERVATIONS
  - 2.1 General Building Progress
  - 2.2 Façade System Progress
  - 2.3 Specific Items
- 3 SUMMARY
  - 3.1 Non-Conformance Rep...

# INSPECTION

Item General progress



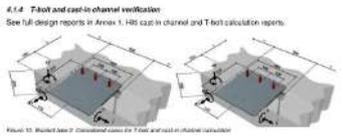
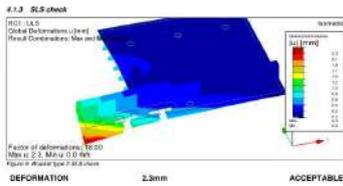
Photo 7: Level 21 (terrace) – View of the membrane to be unrolled and sealed to the roofing membrane.



Photo 8: Level 19 (terrace) – View of the interface between CCF (EWS-04-b) and roofing yet to be finalised.



# LONDON. Residential



### 3 Design Data

This document should be viewed as an annex to TS12 and TS12.1. The design principles outlined in TS12 and TS12.1 are followed. See bracket design load application scheme below.

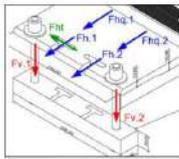


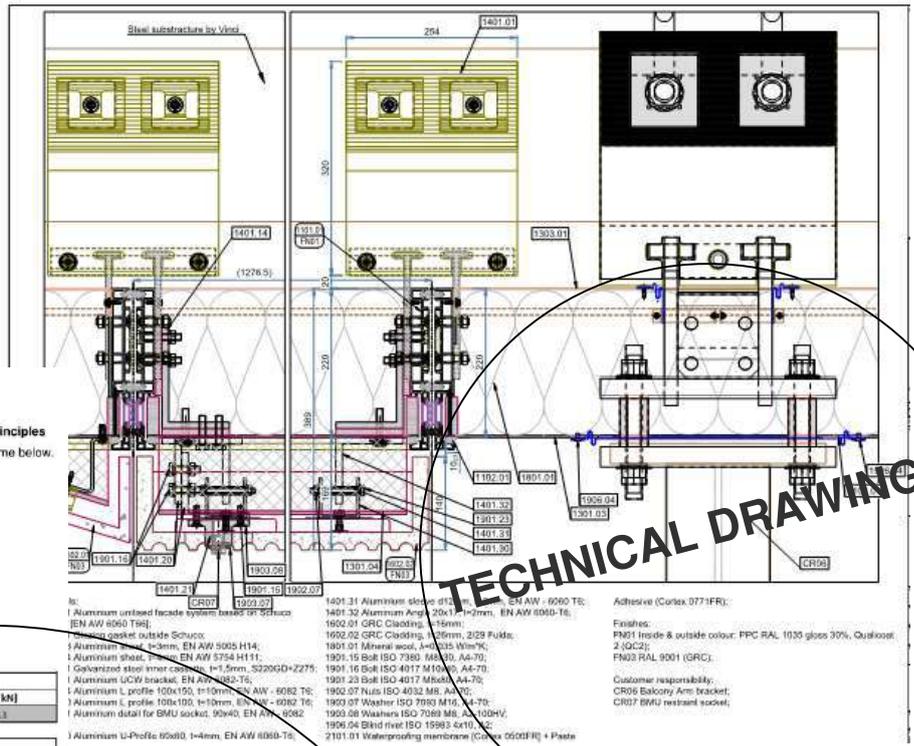
Figure 2. Excerpt from TS12.1. Bracket design load application

See a summary of flat unit bracket design loads below (see 5.1.2 of TS012).

Case 1. Total bracket design loads		
F.v [kN]	F.h [kN]	F.h1 [kN]
13.50	17.39	1.13

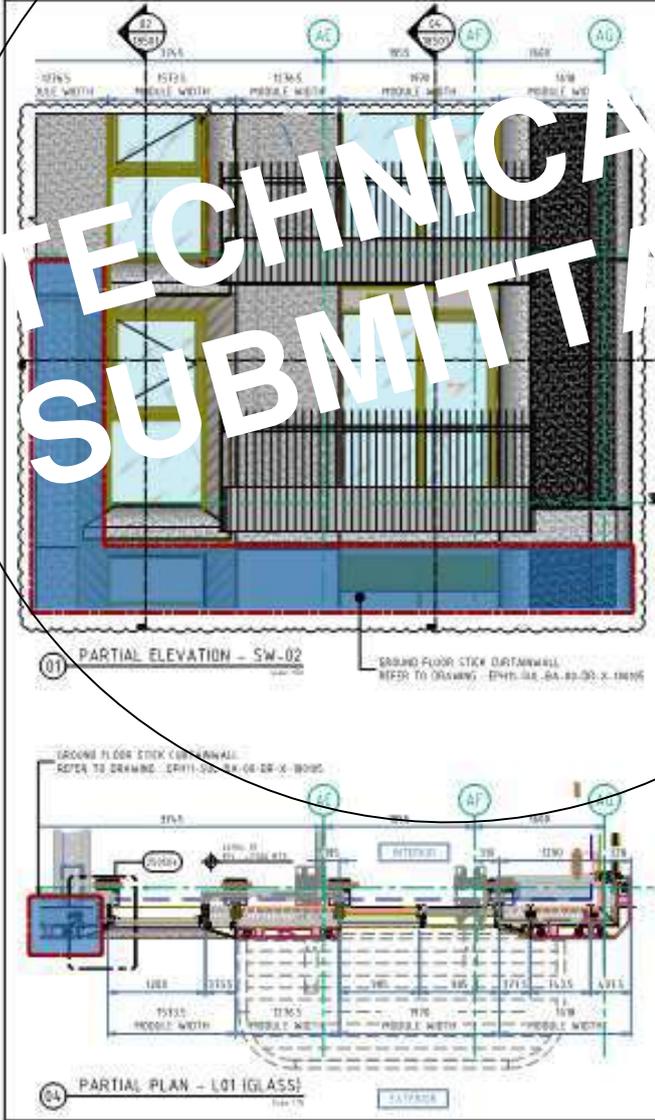
  

Case 2. Total bracket design loads		
F.v [kN]	F.h [kN]	F.h1 [kN]
14.23	16.89	1.06



**TECHNICAL DRAWINGS**

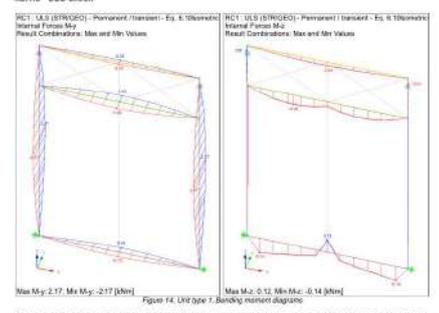
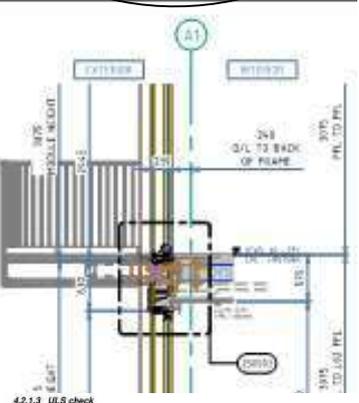
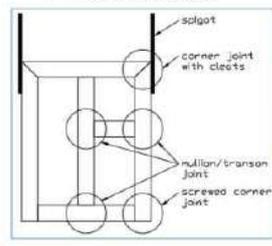
**TECHNICAL SUBMITTALS**



### 1 Introduction

This is issue T01 of the document façade frame joints, lifting operations and

- Unitted façade frame joints
  - Screwed corner joints units)
  - Corner joints with det
  - Mullion/Transom joint
- Spigot and façade unit lifting
  - Evacuation of façade
  - Spigot checks
- BMU socket checks.



A simple and conservative check is done: the maximum bending moments are checked, using the section modulus of the weakest façade unit section (top semi-profile).

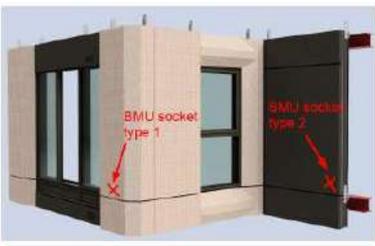


Figure 1. Façade unit components checked in report