

19/10/2023

ΣΕΓΜ

ΣΥΝΕΔΡΙΟ ΣΕΓΜ  
«Μετεξέλιξη και  
Στρατηγικές επιλογές»

19-20  
ΟΚΤΩΒΡΙΟΥ  
2023

Όθλο  
Αθηνών  
Αθήνα

PRESENTATION:

# Διαδικασίες BIM για την Βελτιστοποίηση της Αρχιτεκτονικής Μελέτης Εφαρμογής

ΟΜΙΛΗΤΗΣ:

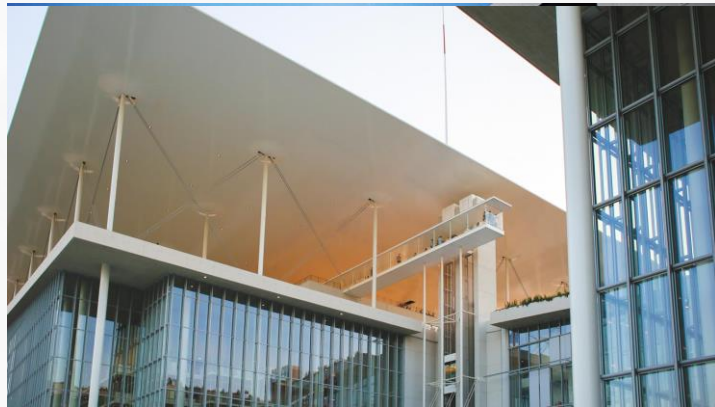
Εμμανουήλ Μπόγρης

EB/ARCHITECTS

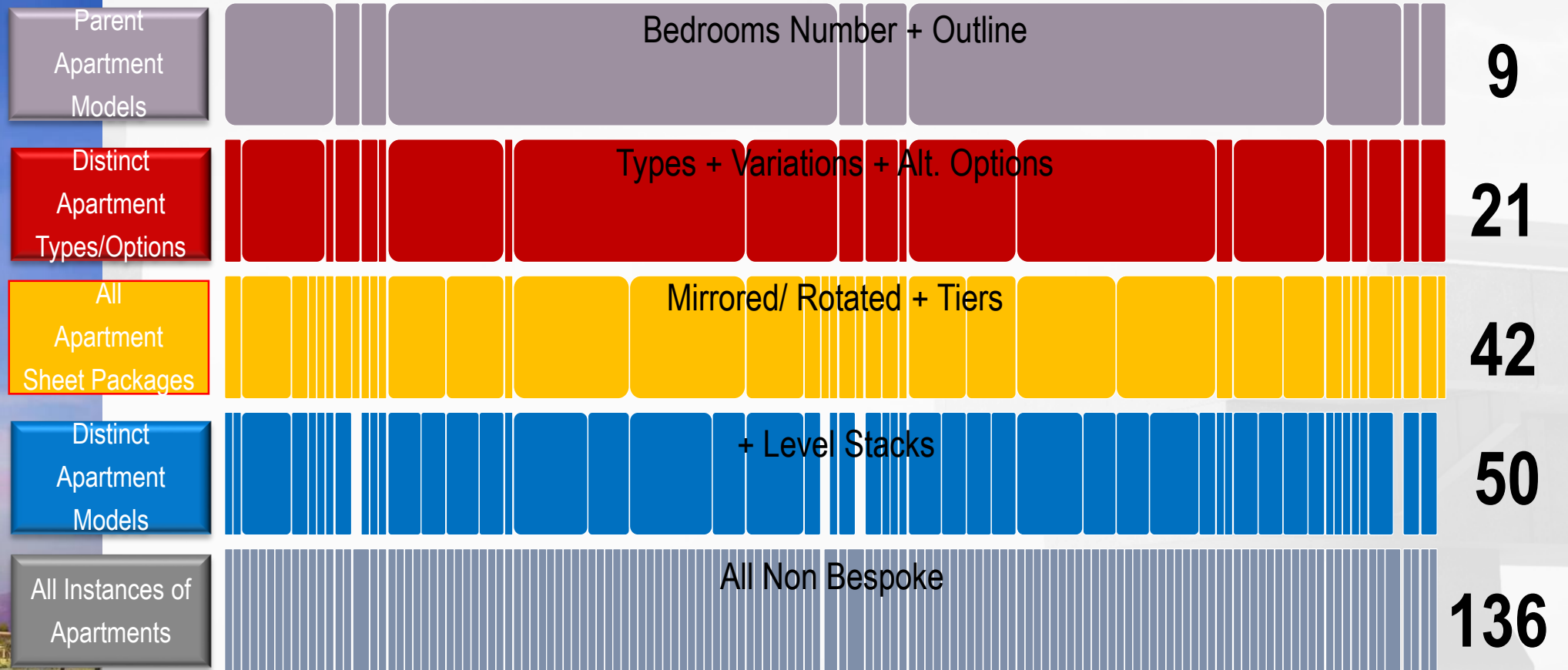
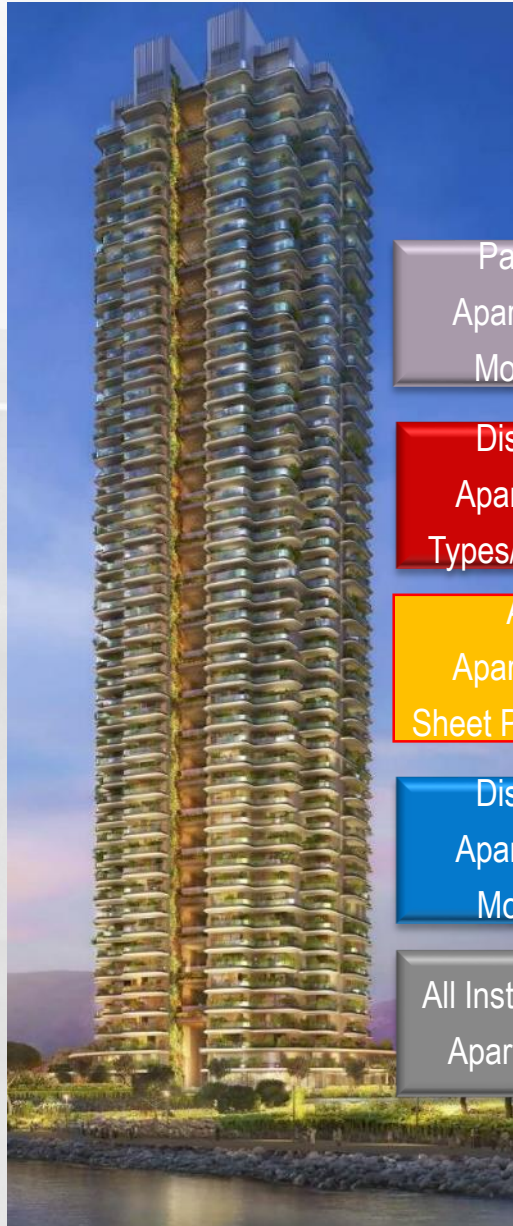
Telescopc Pedestals w. Integrated Slope  
Connector Heads Suitable for Joint Support of  
Tiles

# Κύριοι Στόχοι Αρχιτεκτονικής Μελέτης Εφαρμογής

- Να διασφαλίσει την «Αρχιτεκτονική Πρόθεση» (Design Intent)
- Να περιγράψει με ακριβή & μονοσήμαντο τρόπο το έργο
- Να διασφαλίσει την ασφαλή Προμέτρηση & Κοστολόγηση
- Να περιορίσει την Επισφάλεια κατά την Κατασκευή



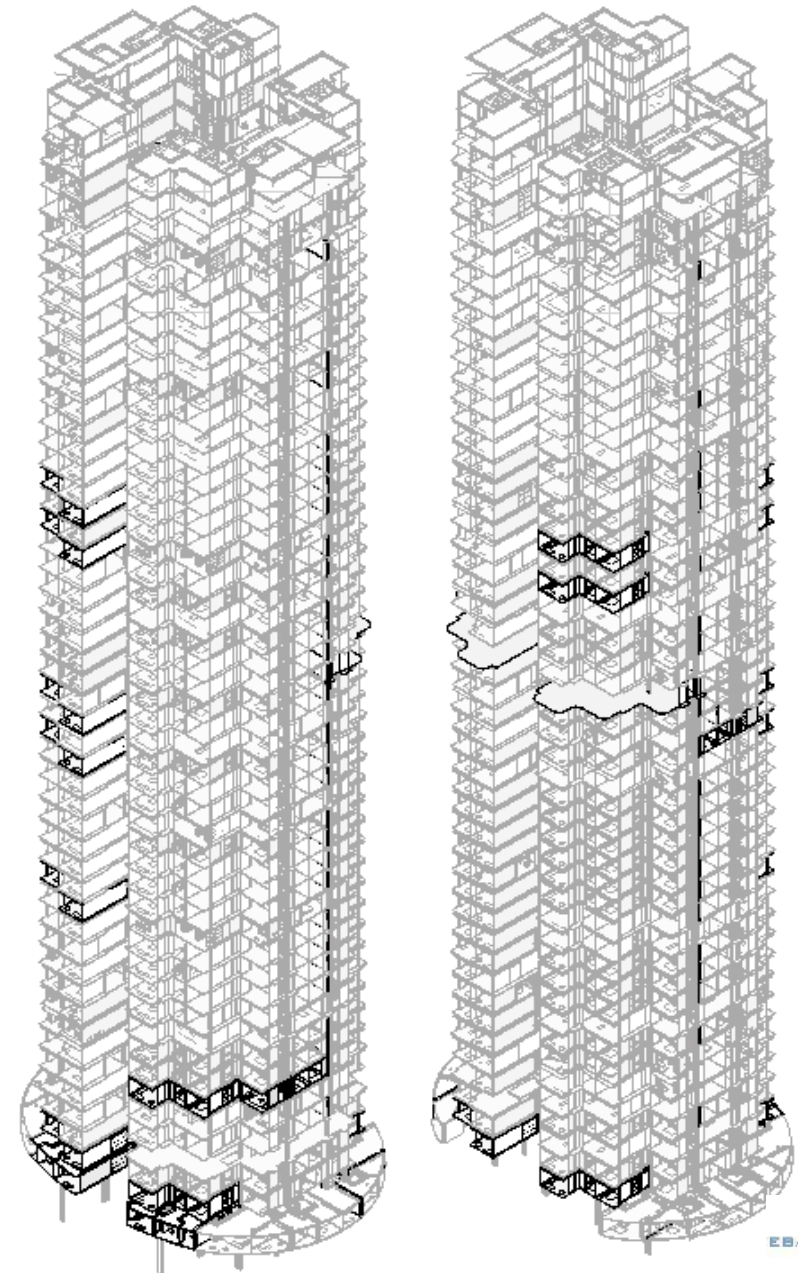
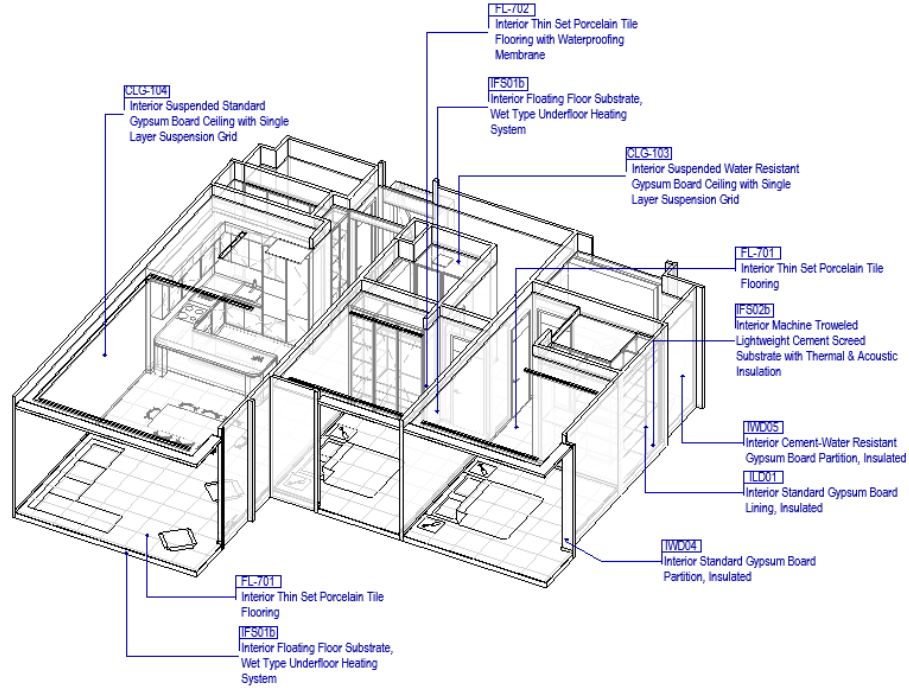
“Να περιγράψει με ακριβή & μονοσήμαντο τρόπο το έργο”



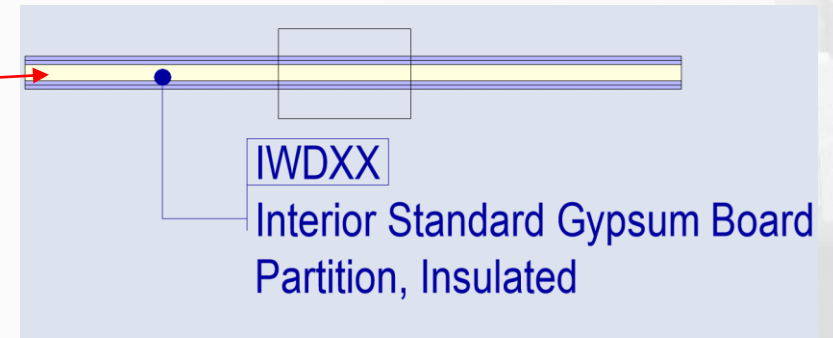
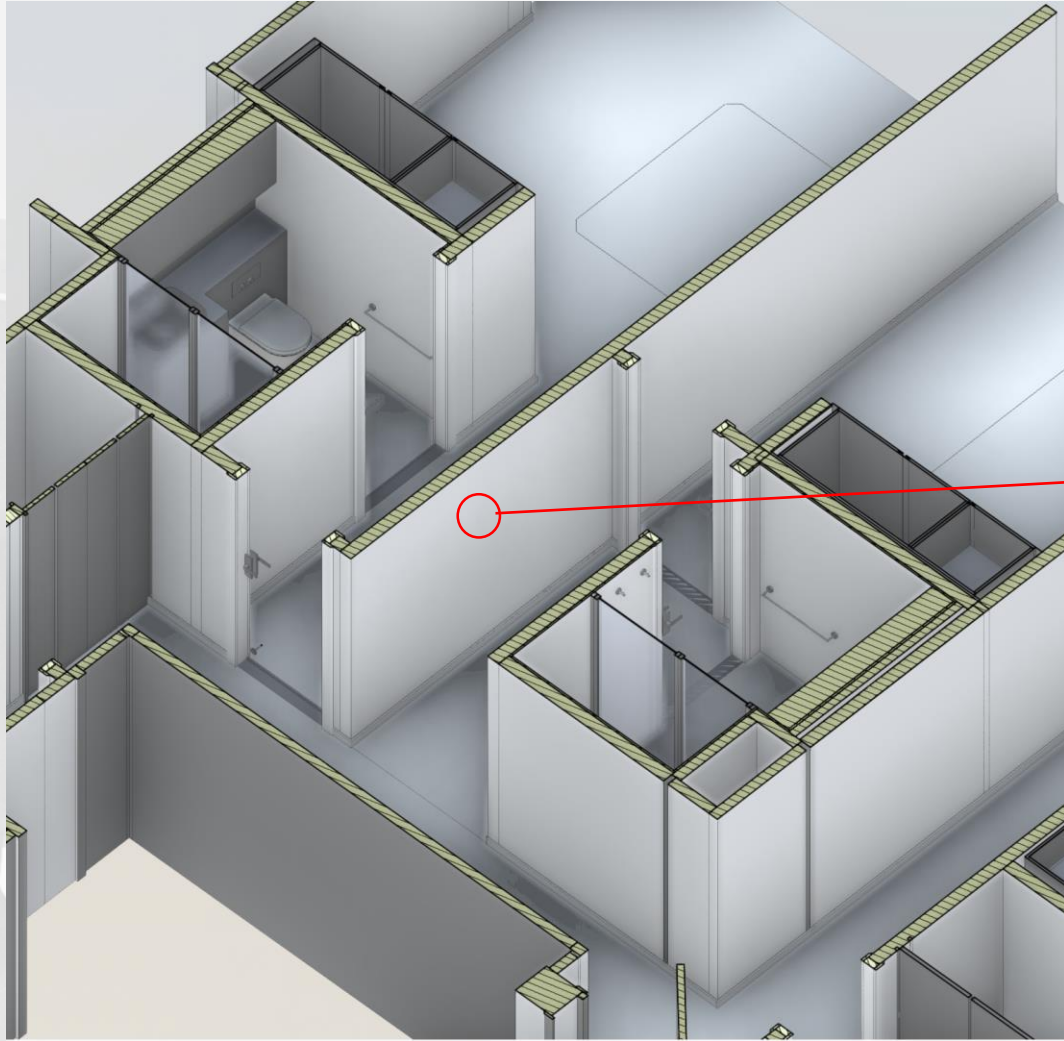
“Να περιγράψει με ακριβή & μονοσήμαντο τρόπο το έργο”

# 2-BED TYPICAL APARTMENTS

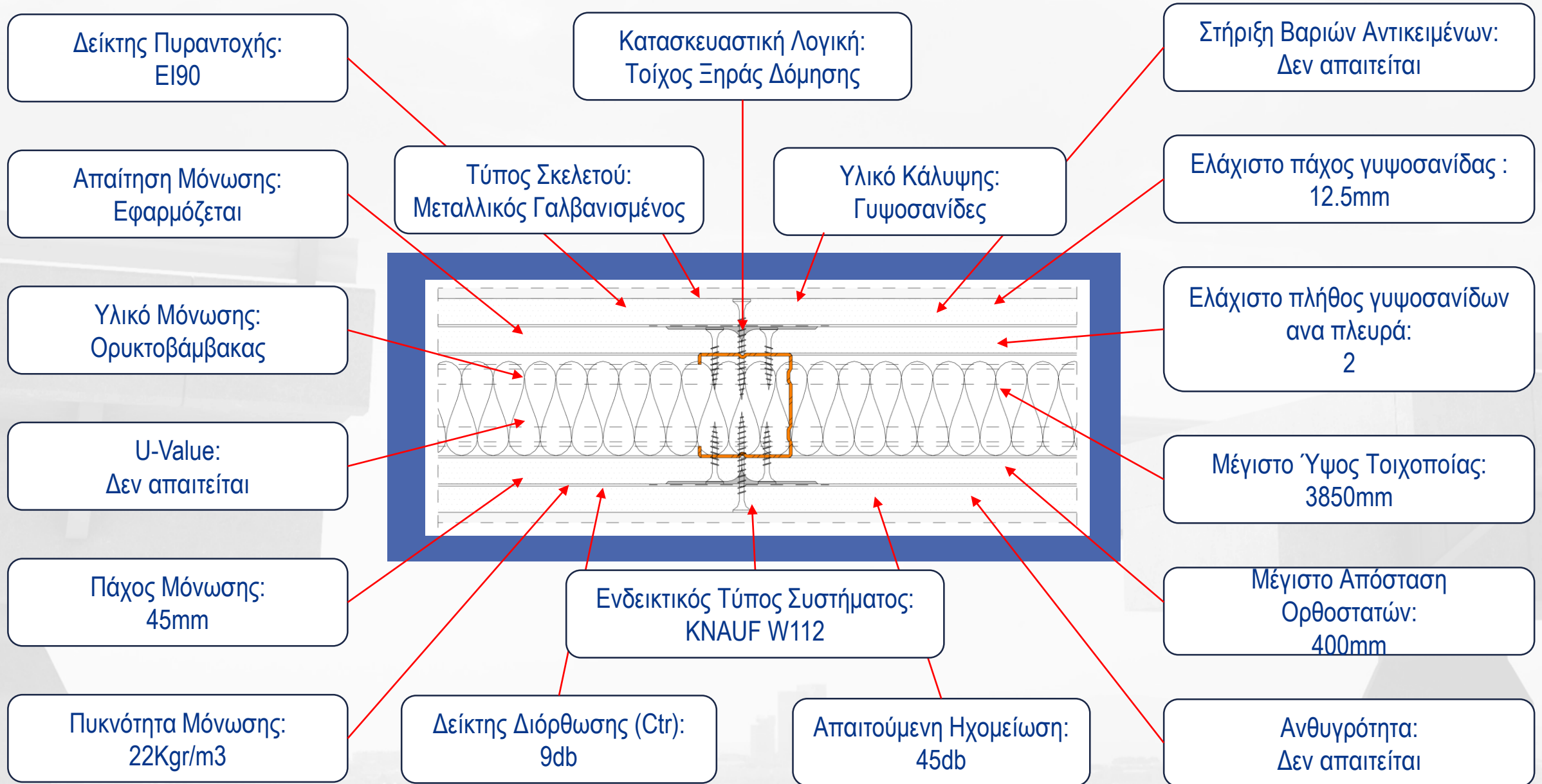
PARENT APT	VARIATION	TRANSFORM	LEVEL	LVL STACK	LINK	TIER	ORIENT.	CORE
2 Bed Corner	Type 4	Mirrored N/S	32	L31-40	2B CR T4 Typ L31-40	1	S	A
2 Bed Corner	Type 3	Typical	32	L31-40	2B CR T3 Typ L31-40	1	N	A
2 Bed Corner	Type 3	Typical	30	L21-30	2B CR T3 Typ L21-30	1	N	A
2 Bed Corner	Type 4	Mirrored N/S	30	L21-30	2B CR T4 Typ L21-30	1	S	A
2 Bed Corner	Type 4	Mirrored N/S	22	L21-30	2B CR T4 Typ L21-30	1	S	A
2 Bed Middle	Type 2	Typical	22	L21-30	2B MD T2 Typ L21-30	1	W	A
2 Bed Corner	Type 4	Mirrored N/S	20	L11-20	2B CR T4 Typ L11-20	1	S	A
2 Bed Corner	Type 4	Mirrored N/S	13	L11-20	2B CR T4 Typ L11-20	1	S	A
1 Bed Corner	Type 4	Rotated 180o	6	L01-10	2B CR T4 Typ L01-10	1	S	B
2 Bed Middle	Type 2	Mirrored E/W	6	L01-10	2B MD T2 Typ L01-10	1	E	B
2 Bed Corner	Type 4	Typical	1	L01-10	2B CR T4 Typ L01-10	1	N	A
2 Bed Corner	Type 4	Mirrored E/W	1	L01-10	2B CR T4 Typ L01-10	1	N	B
1 Bed Corner	Type 4	Rotated 180o	1	L01-10	2B CR T4 Typ L01-10	1	S	B
2 Bed Corner	Type 4	Mirrored N/S	1	L01-10	2B CR T4 Typ L01-10	1	S	A
2 Bed Mezzanine	Type 1	Typical	0	L00	2B MZ T1 Typ L00	1	S	A
1 Bed Mezzanine	Type 1	Mirrored E/W	0	L00	2B MZ T1 Typ L00	1	S	B



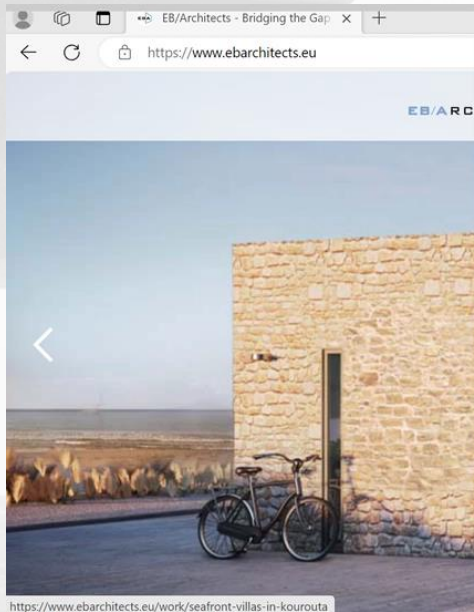
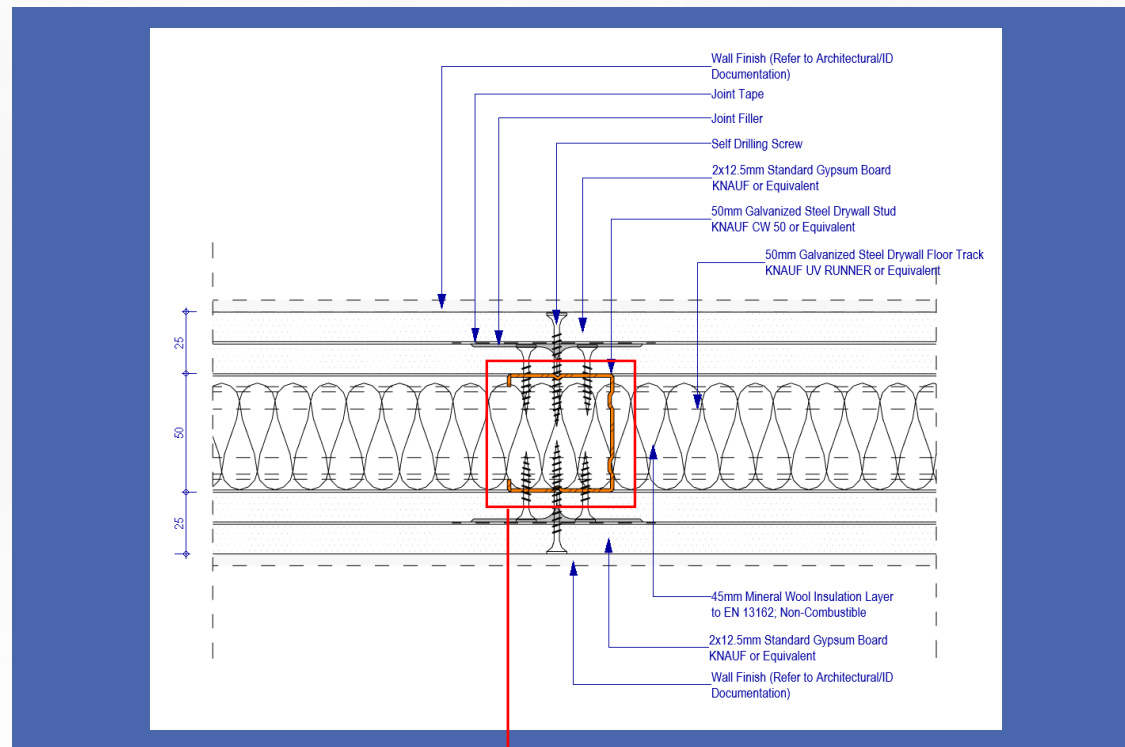
“Να περιγράψει με ακριβή & μονοσήμαντο τρόπο το έργο”



“Να περιγράψει με ακριβή & μονοσήμαντο τρόπο το έργο”



“Να περιγράψει με ακριβή & μονοσήμαντο τρόπο το έργο”



Type Properties

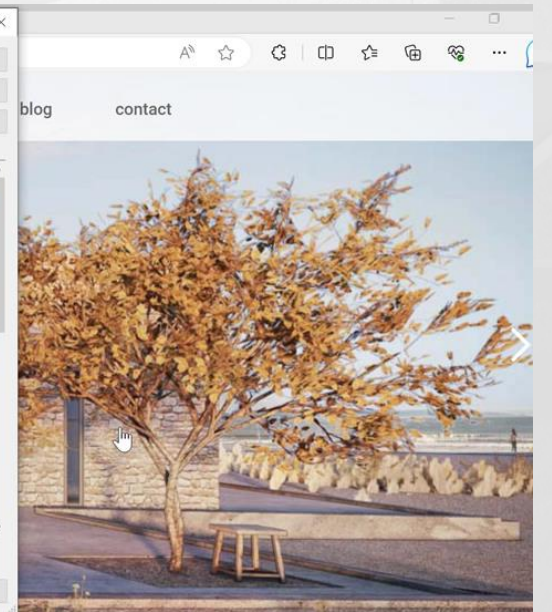
Family: EBA\_DET\_METALS\_Galvanized Steel Stud\_Cut  
Type: CW\_50mm

Parameter	Value
<b>Graphics</b>	
100mm	<input type="checkbox"/>
50mm	<input checked="" type="checkbox"/>
75mm	<input type="checkbox"/>
UW_50mm	<input checked="" type="checkbox"/>
<b>Text</b>	
Multi Category Description	
<b>Structural</b>	
Section Shape	Not Defined
<b>Identity Data</b>	
Type Image	
Keynote	
Model	
Manufacturer	
Type Comments	
URL	
Description	

What do these properties do?

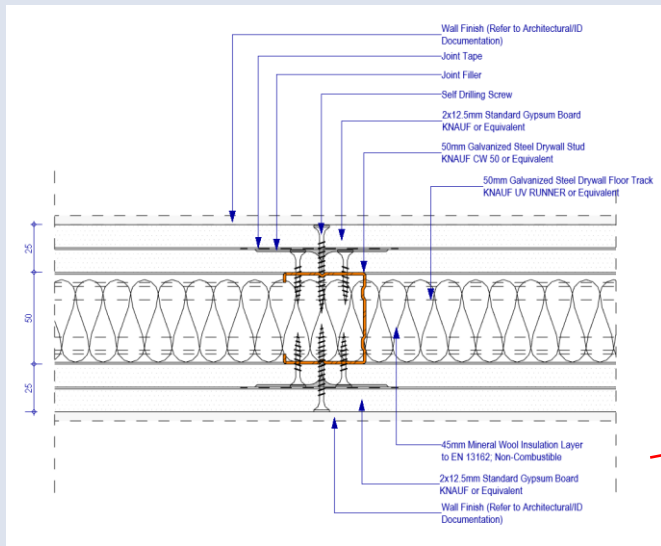
<< Preview

OK Cancel Apply





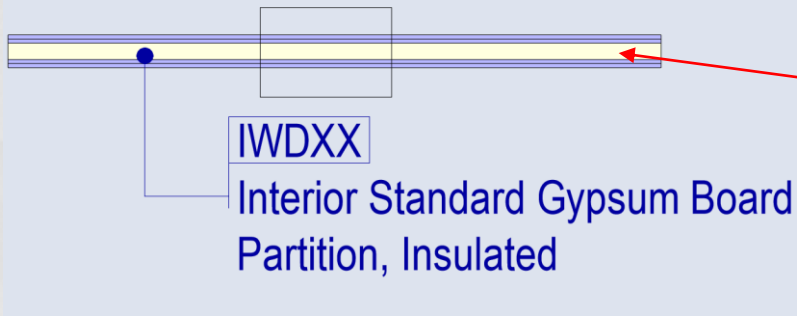
“Να περιγράψει με ακριβή & μονοσήμαντο τρόπο το έργο”



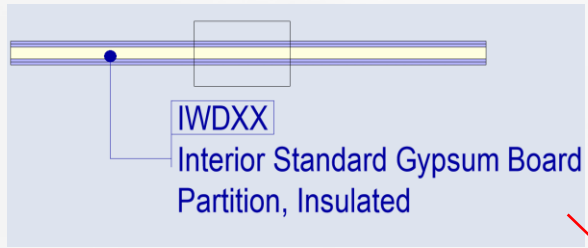
Material: Name	Material: EBA_MAT_Description_ENG
EBA_LOD 350_BOARDINGS & SHEATHINGS_Bitumen Impregnated Fibreboard	Bitumen Impregnated Fibreboard, Expansion Joint Filler in Sheet Form
EBA_LOD 350_BOARDINGS & SHEATHINGS_Cement Board Standard	Standard Cement Board
EBA_LOD 350_BOARDINGS & SHEATHINGS_Gypsum Board Diamant	Diamant Standard Gypsum Board
EBA_LOD 350_BOARDINGS & SHEATHINGS_Gypsum Board Diamant-Mounted inside the Galvanized Frame	Diamant Standard Gypsum Board (mounted inside the frame)
EBA_LOD 350_BOARDINGS & SHEATHINGS_Gypsum Board Fire Rated	Fire Rated Gypsum Board
EBA_LOD 350_BOARDINGS & SHEATHINGS_Gypsum Board Fire Rated & Water Resistant	Fire Rated & Water Resistant Gypsum Board
EBA_LOD 350_BOARDINGS & SHEATHINGS_Gypsum Board Perforated	Perforated Gypsum Board
EBA_LOD 350_BOARDINGS & SHEATHINGS_Gypsum Board Standard	Standard Gypsum Board
EBA_LOD 350_BOARDINGS & SHEATHINGS_Gypsum Board Ultraboard	Ultraboard Standard Gypsum Board
EBA_LOD 350_BOARDINGS & SHEATHINGS_Gypsum Board Water Resistant	Water Resistant Gypsum Board

Family: Basic Wall  
 Type: IWDXX\_Interior Standard Gypsum Board Partition, Insulated, GSGS/GSGS-100mm  
 Total thickness: 0.1000  
 Resistance (R): 0.0769 (m<sup>2</sup>·K)/W  
 Thermal Mass: 4.29 kJ/K

Layers				EXTERIOR SIDE
	Function	Material		Thickness
1	Substrate [2]	EBA_LOD 350_BOARDINGS & SHEATHINGS_Gypsum Board Standard		0.0125
2	Substrate [2]	EBA_LOD 350_BOARDINGS & SHEATHINGS_Gypsum Board Standard		0.0125
3	<b>Core Boundary</b>	<b>Layers Above Wrap</b>		<b>0.0000</b>
4	Structure [1]	EBA_LOD 300/350_METALS_Galvanized Drywall Stud with Mineral Wool Insulation		0.0500
5	<b>Core Boundary</b>	<b>Layers Below Wrap</b>		<b>0.0000</b>
6	Substrate [2]	EBA_LOD 350_BOARDINGS & SHEATHINGS_Gypsum Board Standard		0.0125
7	Substrate [2]	EBA_LOD 350_BOARDINGS & SHEATHINGS_Gypsum Board Standard		0.0125



“Να περιγράψει με ακριβή & μονοσήμαντο τρόπο το έργο”



### IWDXX

Interior Standard Gypsum Board Partition, Insulated, 100mm Thickness, Consisting of the following Layers: [ 12.5mm Standard Gypsum Board, 12.5mm Standard Gypsum Board, 50mm Galvanized Cold-Formed Steel Stud with Cavity Mineral Wool Insulation Batt, Thickness & Density to Suit Specifications, 12.5mm Standard Gypsum Board, 12.5mm Standard Gypsum Board ]

#### CSI Master Classification No & Description

09 21 16 / Gypsum Board Assemblies

#### NRM2 Classification No & Description

2.7 / Internal walls and partitions

#### Stud Spacing (mm) / Maximum Partition Height (m)

625 / 3.20 , 625 / 3.20 , 417 / 3.85

#### Fire Resistance Class

-

#### Weighted Sound Reduction Index ( $R_{w,R}$ in dB)

TBD

#### Correction Factor (Ctr)

TBD

#### Insulation Type

Mineral Wool

#### Insulation Thickness

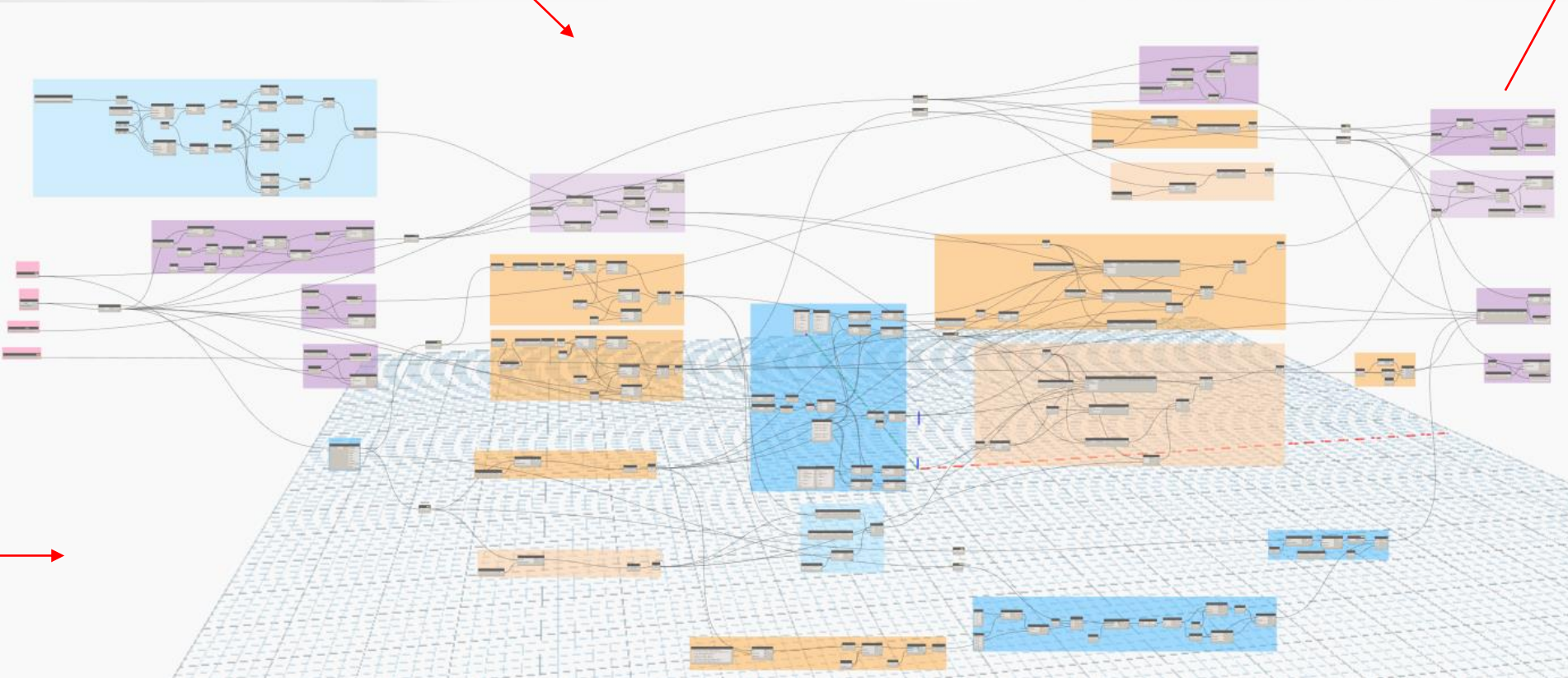
45mm

#### Insulation Density

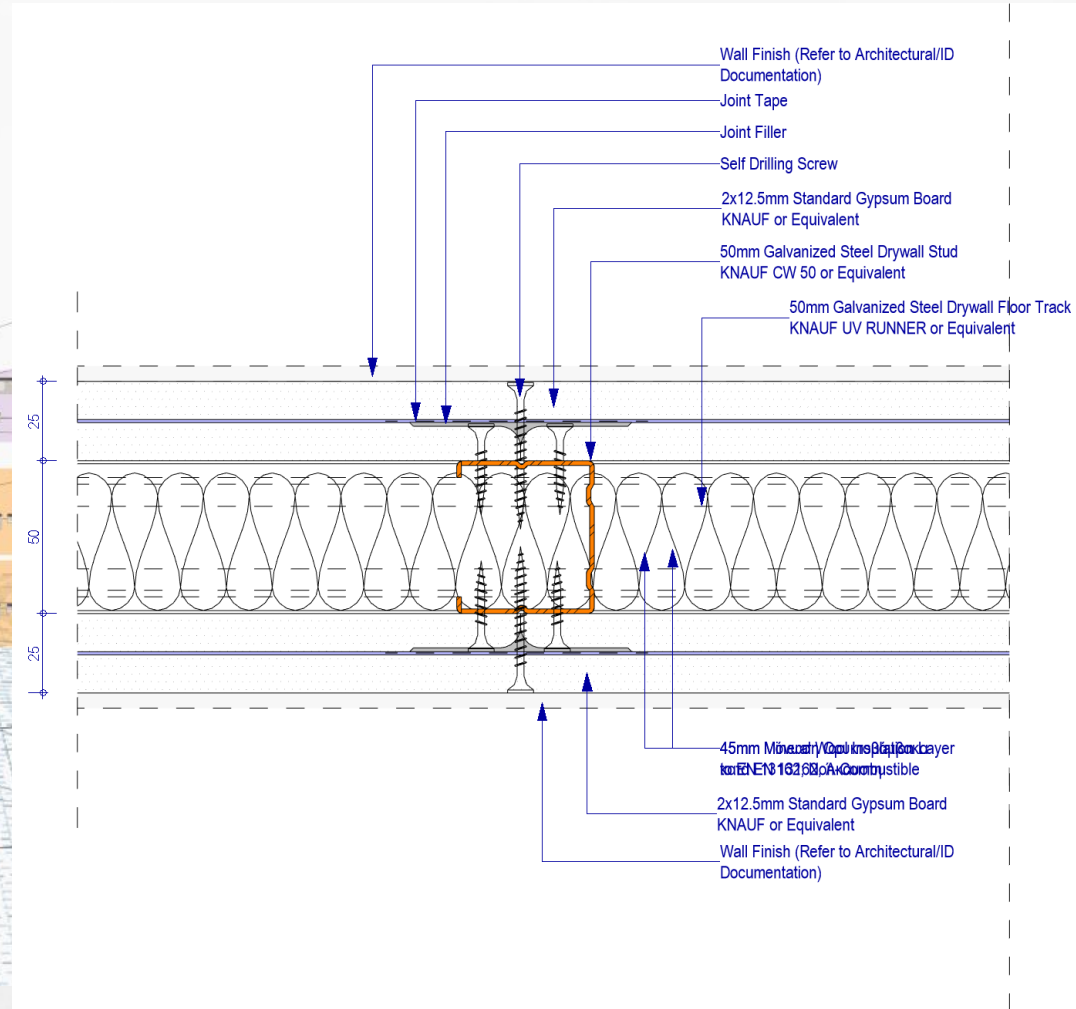
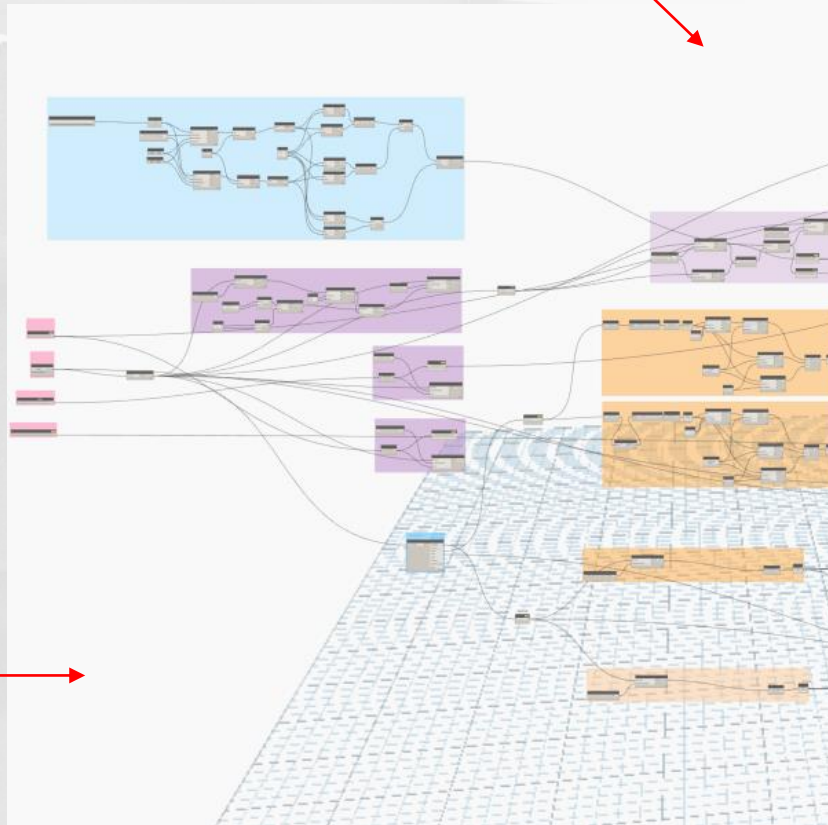
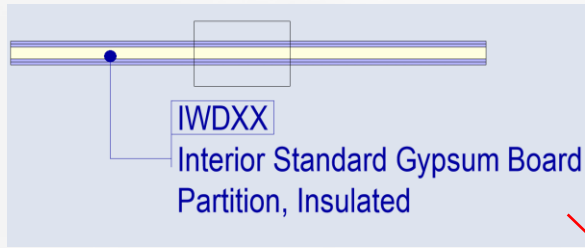
22 (kg/m<sup>3</sup>)

#### U-Value

N/A



“Να περιγράψει με ακριβή & μονοσήμαντο τρόπο το έργο”



**IWDXX**  
Interior Standard Gypsum Board Partition, Insulated, 100mm Thickness, Consisting of the following Layers: [ 12.5mm Standard Gypsum Board, 12.5mm Standard Gypsum Board, 50mm Galvanized Cold-Formed Steel Stud with Cavity Mineral Wool Insulation Batt, Thickness & Density to Suit Specifications, 12.5mm Standard Gypsum Board, 12.5mm Standard Gypsum Board ]

**CSI Master Classification No & Description**

09 21 16 / Gypsum Board Assemblies

**NRM2 Classification No & Description**

2.7 / Internal walls and partitions

**Stud Spacing (mm) / Maximum Partition Height (m)**

625 / 3.20 , 625 / 3.20 , 417 / 3.85

**Fire Resistance Class**

-

**Weighted Sound Reduction Index (R<sub>w,R</sub> in dB)**

TBD

**Correction Factor (Ctr)**

TBD

**Insulation Type**

Mineral Wool

**Insulation Thickness**

45mm

**Insulation Density**

22 (kg/m<sup>3</sup>)

**U-Value**

N/A

# “Να περιγράψει με ακριβή & μονοσήμαντο τρόπο το έργο”

## 09 20 00 Plaster and Gypsum Board

Includes: non-structural metal support assemblies for plaster and gypsum board. Exterior and interior veneer plaster, acoustical plaster, plaster partitions, and plaster fireproofing. Exterior and interior gypsum board, gypsum board assemblies, accessories, and trim.

May Include: acoustical insulation and sealants.

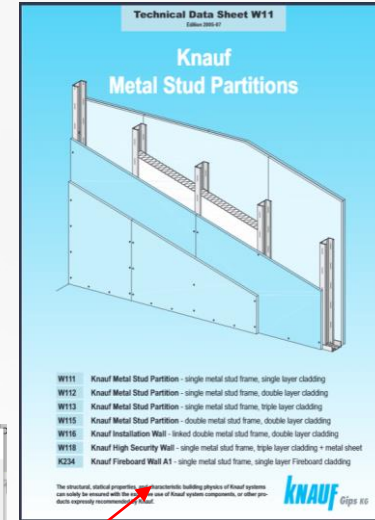
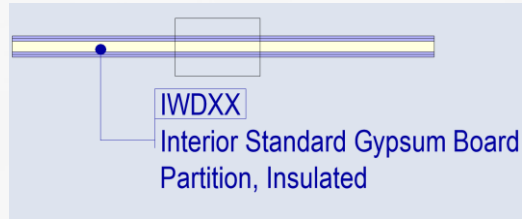
See: 05 40 00 for structural cold-formed metal framing.  
06 11 00 for wood framing.  
07 24 00 for exterior insulation and finish systems.

See Also: 07 92 19 for acoustic sealants.  
09 81 00 for acoustic insulation.

## 09 21 00 Plaster and Gypsum Board Assemblies

Includes: plaster, lath, board, non-structural framing, accessories, and trim for plaster and gypsum board assemblies.

- 09 21 13 Plaster Assemblies
- 09 21 16 Gypsum Board Assemblies
- 09 21 16.23 Gypsum Board Shaft Wall Assemblies
- 09 21 16.33 Gypsum Board Area Separation Wall Assemblies



## NRM 2 Appendix E: Template for pricing summary for elemental bill of quantities (expanded)

Cost centre	Element	U/p	U/p
0	Facilitating works		£0.00
0.1	Toxic/hazardous/contaminated material treatment	£0.00	
0.2	Major demolition works	£0.00	
0.3	Specialist ground works	£0.00	
0.4	Temporary diversion works	£0.00	
0.5	Extraordinary site investigation works	£0.00	
1	Substructure		£0.00
1.1	Substructure	£0.00	
2	Superstructure		£0.00
2.1	Frame	£0.00	
2.2	Upper floors	£0.00	
2.3	Roof	£0.00	
2.4	Stairs and ramps	£0.00	
2.5	External walls	£0.00	
2.6	Windows and external doors	£0.00	
2.7	Internal walls and partitions	£0.00	
2.8	Internal doors	£0.00	
3	Wall finishes		£0.00
3.1	Wall finishes	£0.00	
3.2	Floor finishes	£0.00	
3.3	Ceiling finishes	£0.00	
4	Fittings, furnishings and equipment		£0.00
4.1	Fittings, furnishings and equipment	£0.00	
5	Services		£0.00
5.1	Sanitary installations	£0.00	
5.2	Services equipment	£0.00	
5.3	Disposal installations	£0.00	
5.4	Water installations	£0.00	
5.5	Heat source	£0.00	
5.6	Space heating and air conditioning	£0.00	
5.7	Ventilation	£0.00	
5.8	Electrical installations	£0.00	
5.9	Fuel installations/systems	£0.00	
5.11	Lift and conveyor installations/systems	£0.00	
5.11	Fire and lightning protection	£0.00	
5.12	Communication, security and control systems	£0.00	
5.13	Special installations/systems	£0.00	
5.14	builder's work in connection with services	£0.00	
6	Complete buildings		£0.00
6.1	Pre-fabricated buildings	£0.00	
7	Work to existing building		
7.1	Minor demolition works and alteration works	£0.00	



Type Properties

Family: System Family: Basic Wall

Type: IWDXX\_Interior Standard Gypsum Board Partition, Insulated, GSGS/GSGS-100mm

Type Parameters

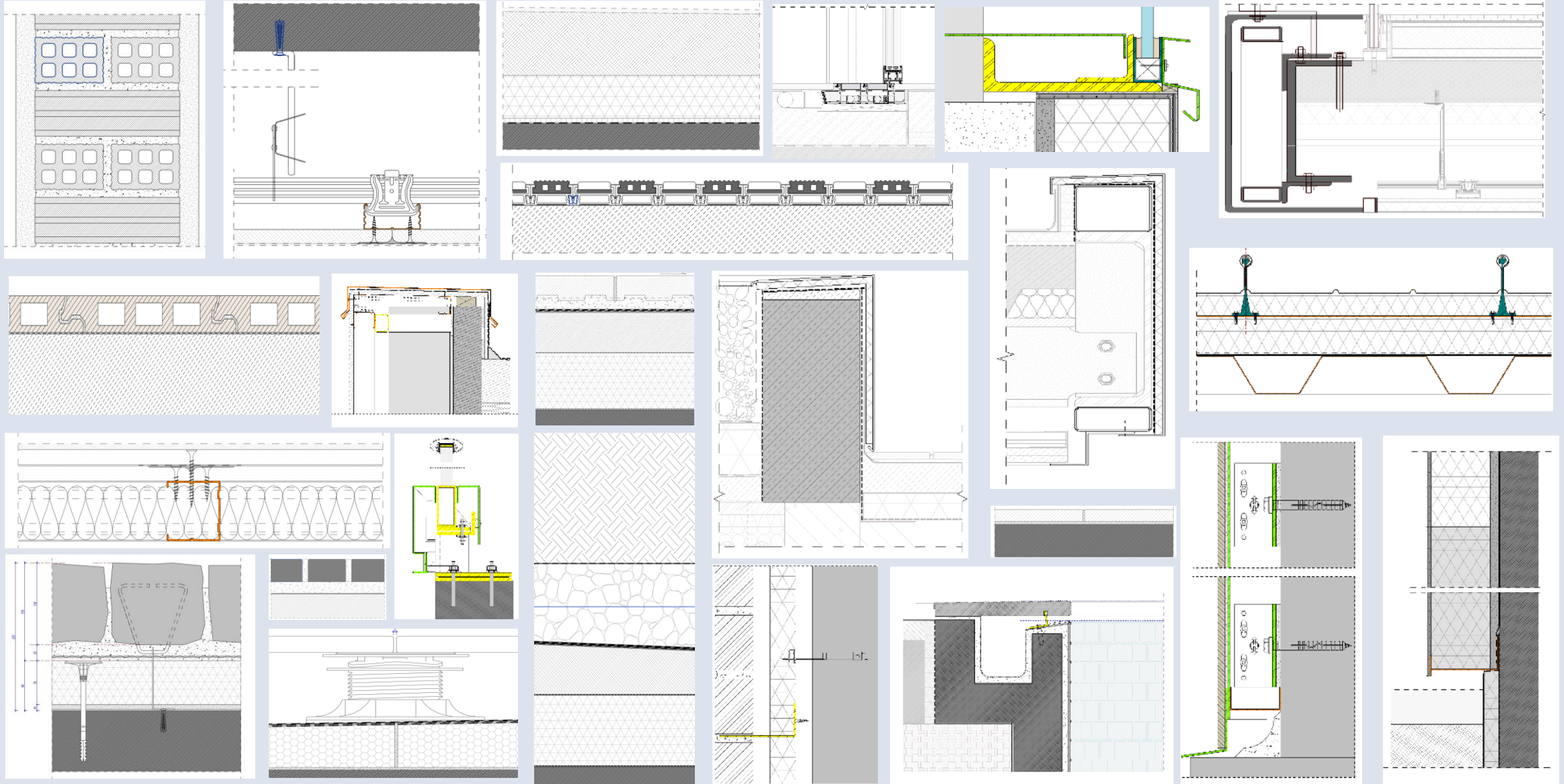
Parameter	Value
EBA_BasisOfDesignLink1	<a href="https://ebarchitectseb.monday.com/boards/3337683808/pulses/43052725">https://ebarchitectseb.monday.com/boards/3337683808/pulses/43052725</a>
<b>Data</b>	
EBA_DAT_Description_ENG	Interior Standard Gypsum Board Partition, Insulated, 100mm Thickness, Consi
EBA_DAT_Description_GR	Εσωτερικό Τοιχοπέτασμα Κοινής Γυψοσανίδας, Θερμομονωμένο, Πάχους 1
EBA_DAT_LOD	350
EBA_DAT_Name-ENG	Interior Standard Gypsum Board Partition, Insulated
EBA_DAT_Type Code	IWD
EBA_DAT_Type Mark	IWDXX
EBA_DAT_ClassificationMasterFormatNumber	09 21 16
EBA_DAT_ClassificationMasterFormatDescription	Gypsum Board Assemblies
EBA_DAT_ClassificationNRM2Number	2.7
EBA_DAT_ClassificationNRM2Description	Internal walls and partitions
EBA_DAT_FireResistanceClass	-
EBA_DAT_InsulationType	Mineral Wool
EBA_DAT_InsulationThickness	45mm
EBA_DAT_InsulationDensity	22 (kg/m3)
EBA_DAT_U-Value	N/A
EBA_DAT_WeightedSoundReductionIndex	TBD
EBA_DAT_SoundCorrectionFactor(Ctr)	TBD
EBA_DAT_SpecificationLink1_ENG	<a href="https://ebarchitectseb.monday.com/boards/3337683808/pulses/43052725">https://ebarchitectseb.monday.com/boards/3337683808/pulses/43052725</a>
EBA_DAT_SpecificationLink1_GR	
EBA_DAT Name-GR	Εσωτερικό Τοιχοπέτασμα Κοινής Γυψοσανίδας, Θερμομονωμένο

What do these properties do?

<< Preview OK Cancel Apply

- Silvira Tower  
Architectural Specifications
- 2) Access panels shall be finished flush with adjacent lining system.
  - 3) No visible joints or fixings.
  - 4) All ironmongery shall be corrosion resistant and concealed.
  - o Skirting: Provide skirting as indicated on the Drawings and as agreed with the Engineer. Refer also to Section 09 05 13.
  - p Fixings: Proprietary metal mechanical fixing as recommended by the manufacturer.
  - q Finish:
    - 1) Flush, butt jointed, taped and skim coated with board plaster finish, as PLS-101 specified in Section 09 25 36, ready to receive finish.
    - 2) Apply paint finish as accepted by the Engineer through the submittal of samples. Refer to Section 09 00 00.
  2. **NIS-203** Non rated plasterboard partition:
    - a. Non load bearing, non rated plasterboard partition, configured as indicated on the Drawings.
    - b. Fire Performance Requirements: Refer to the Fire Strategy Report.
    - c. Acoustic Rating: Refer to the Acoustic Report.
    - d. Duty: Severe
    - e. Partition Thickness: As indicated on the Drawings.
    - f. Framing: Corrosion resistant metal studs at centres as required to achieve the performance requirements, set within floor and ceiling channels and fixed in accordance with the manufacturer's recommendations.
    - g. Lining: 1 or 2 No. layers of plasterboard lining horizontally fixed to either side of metal stud framing, with staggered joints between layers, taken full height to the underside of the slab.
      - 1) Where plasterboard partition is used in wet/ moist area, substitute lining with moisture resistant boards.
      - 2) Where plasterboard partition shall receive tiling, substitute lining with 1 No. layer of the backer board.
      - 3) Provide 18mm plywood pattressing mechanically fixed between metal studs to allow for wall mounted fixtures where indicated on the Drawings.
    - h. Insulation: Provide non-combustible sound deadening mineral or stone wool insulation in the cavity.
      - 1) Thickness: As required to achieve the performance requirements.
      - 2) Fit insulation securely between studs and butt ends of blankets closely together and fill voids.
      - 3) Insulation shall fit snugly into place, filling the cavity completely.
    - i. Provide deflection head detail where required.
    - j. Provide sound isolation clips, placing strips or other suitable accessories as recommended by the manufacturer and as required to mitigate noises such as creaking, clicking, rattling, whistling due to thermal, moisture, wind, structural and other movements.
    - k. Provide shadow gaps where indicated on the Drawings.
    - l. Provide intumescent, smoke and acoustic seals as required to satisfy the performance requirements. Refer also to the Fire Strategy Report and Acoustic Report for fire/acoustic requirements.
    - m. Provide stainless steel trim as required and as indicated on the Drawings. Subject to acceptance by the Engineer through the submittal of samples.
    - o Access Panels:
      - 1) Where indicated on the Drawings, provide demountable panels of the same material and finish to provide access to rainwater downpipes behind, without compromising the performance requirements of the system.
      - 2) Access panels shall be finished flush with adjacent lining system.
      - 3) No visible joints or fixings.
      - 4) All ironmongery shall be corrosion resistant and concealed.
    - o Skirting: Provide skirting as indicated on the Drawings and as agreed with the Engineer. Refer also to Section 09 05 13.
    - p Fixings: Proprietary metal mechanical fixing as recommended by the manufacturer.
    - q Finish:

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**Alumil**

Alumil SUPREME SD77

SD77 PROFILE INDEX - ΕΥΡΕΤΗΡΙΟ ΠΡΟΦΙΛ ΣD77

Frame - Κάσα



S77510



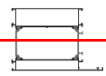
S77514



S77586



S77886



S77906

Sashes - Φύλλα



S77030



S77032



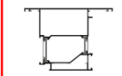
S77034



S77036



S77582



S77584



S77868



S77884

Adjoining profiles - Μνίβι



S77882



S77980



S77656

T profiles - Τού



S77562



S77564



S77888

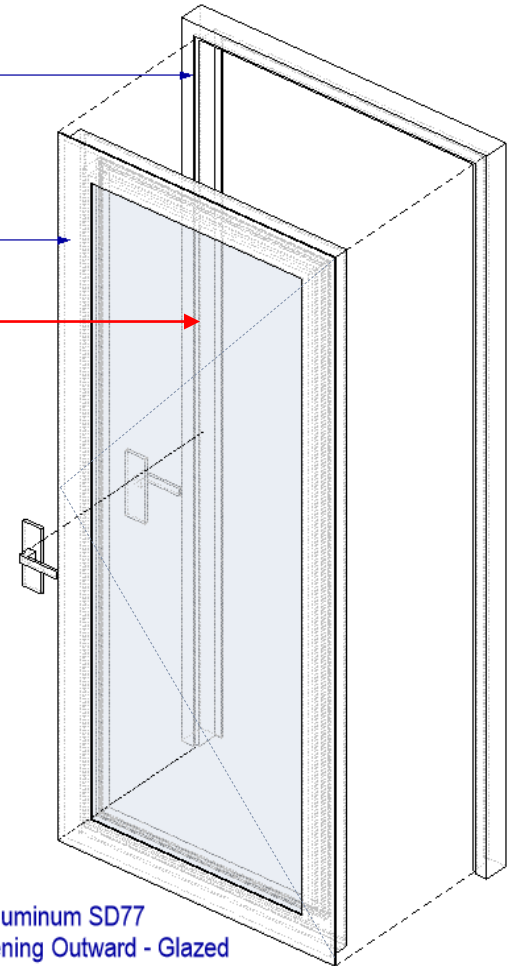
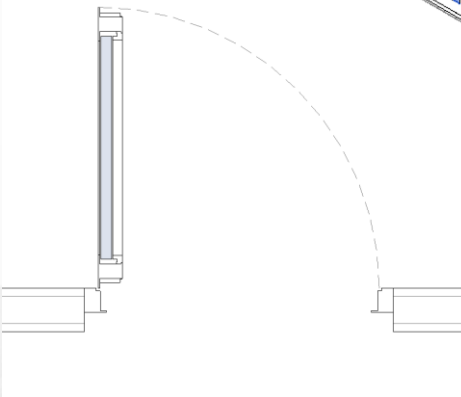
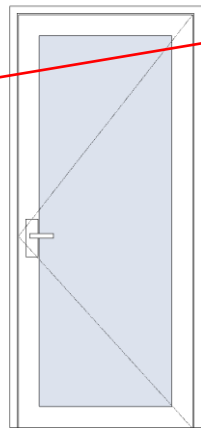
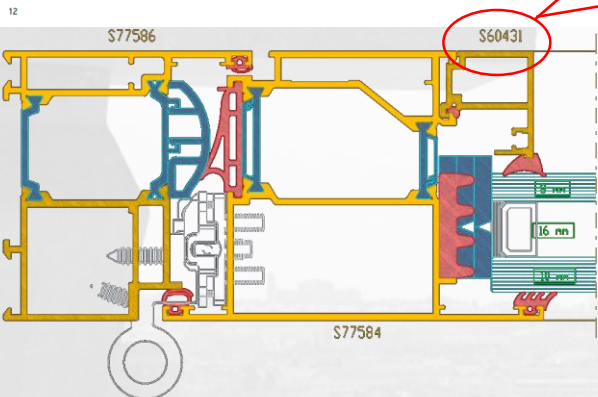
Frame/Mullion (1)		Edit Type
Constraints		
Work Plane	Reference Plane: Front	
Graphics		
Visible	<input checked="" type="checkbox"/>	
Visibility/Graphics Overrides		Edit...
Materials and Finishes		
Material	<By Category>	
Identity Data		
Subcategory	Frame/Mullion	
Solid/Void	Solid	
Profile		
Profile	EBA_PRF_LOD350_GlazingComponent_Aluminum_S60431 : E...	
Horizontal Profile Offset	0.0	
Vertical Profile Offset	0.0	
Angle	180.00°	
Profile Is Flipped	<input checked="" type="checkbox"/>	
Other		
Trajectory Segmentation	<input checked="" type="checkbox"/>	
Maximum Segment Angle	60.00°	

Based on Basis of Design Specifications

EBA\_LOD400\_Frame\_Aluminum S77  
S77586

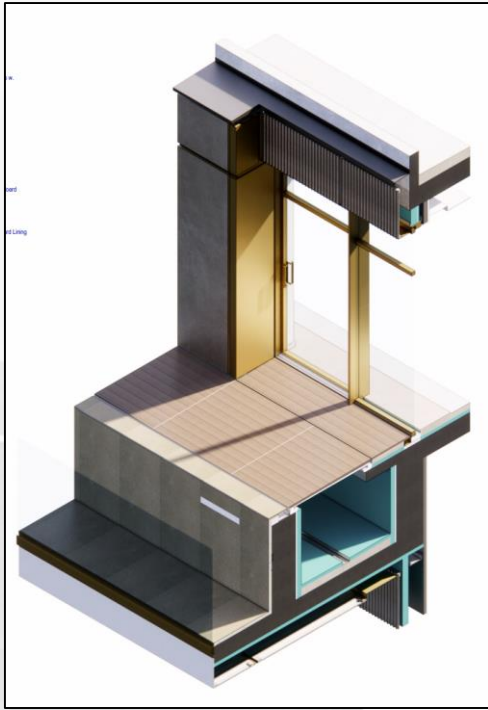
EBA\_LOD400\_Sash\_Aluminum SD77  
Swing Opening Outward - Glazed

EBA\_LOD400\_Door\_Aluminum SD77  
Single Sash Swing Opening Outward - Glazed

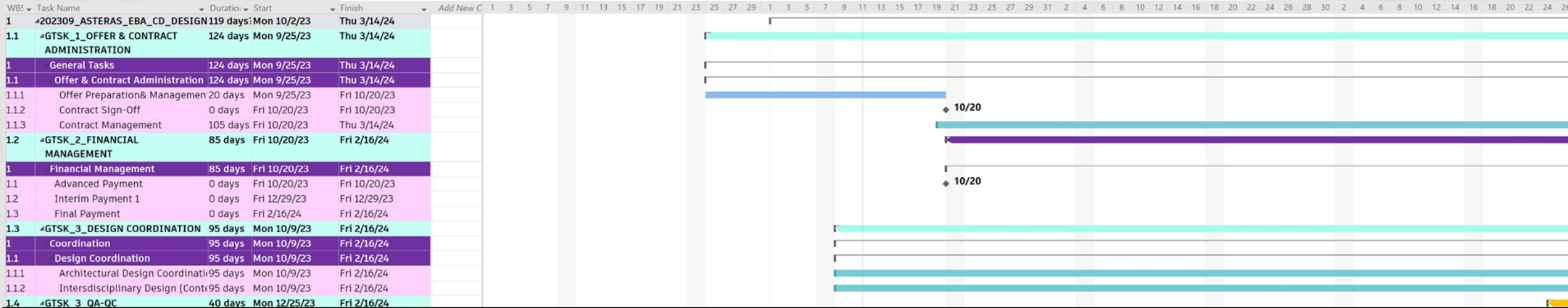




“Να περιγράψει με ακριβή & μονοσήμαντο τρόπο το έργο”

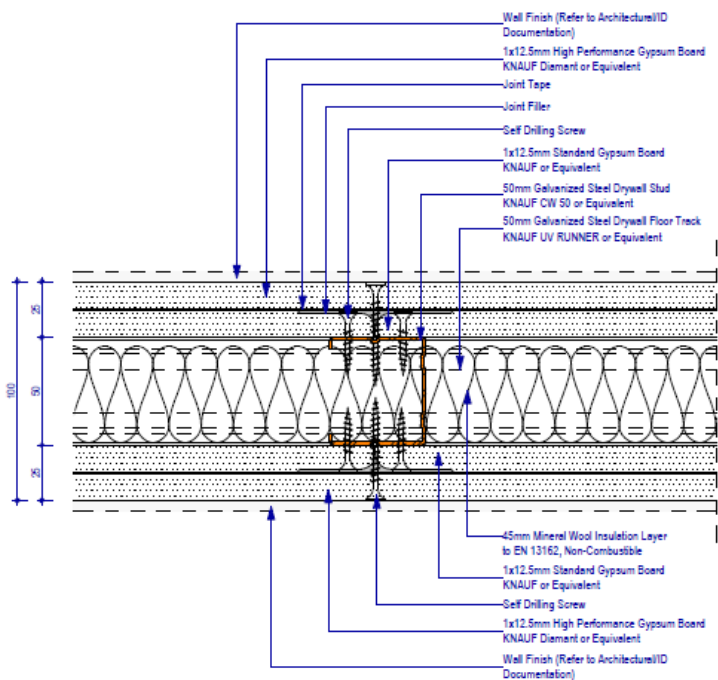


TYPOLOGY SCHEDULE	
Detail Code	Description
AM-808	Aluminum Steel Cove at the Ceiling Edge for installation of 2 Curtain Rails
CLG - INTERIOR CEILING CONSTRUCTION / FINISHES	
CLS-183	Interior Suspended WR Gypsum Board Ceiling
CLS-184	Interior Suspended Gypsum Board Ceiling
DRS - INTERIOR ACCESS PANELS	
DRS-902	Ceiling Access Hatch
DRS - INTERIOR DOORS	
DRS-101	Interior Door: Flush, Single Leaf, Swing Opening
DRS-102	Interior Door: Flush, Single Leaf, Swing Opening, Fire Rated Door with Overpanel
DRS-104	Interior Door: Flush, Single Leaf, Swing Opening
DRS-304	Interior Door: Single Leaf Feature Sliding Glazed with Decorative Louvers
FL - INTERIOR FLOOR FINISHES	
FL-701	797x797mm Porcelain Floor Tiling, Living Areas
FL-702	797x797mm Porcelain Floor Tiling, Wet Areas
ICDAMA - INTERIOR CEILING COVES / SPECIAL ITEMS	
INTERIOR CEILING COVES / SPECIAL ITEMS	
AM-808	Aluminum Steel Cove at the Ceiling Edge for installation of 2 Curtain Rails
ICD01	Magnetic Track System for Lighting, Recessed Installation in Ceiling
IFS - INTERIOR FLOOR SUBSTRATES	
IFS01	Interior Floor Substrate 130mm with Insulation 50mm & Underfloor Heating
IFS02	Interior Floor Substrate 130mm with Insulation 50mm, Underfloor Heating & Waterproofing for Wet Areas
IFS03	Interior Floor Substrate 130mm with Insulation 50mm for Storage Areas
ITH - THRESHOLDS	
ITH01	Movement Joint for Swept Floors, Apartment Entrance
IWD - INTERIOR DRYWALL ASSEMBLIES/PARTITIONS	
MD01	100mm Interior Drywall Partition, Double Sided, 2x12.5mm WR Gypsum Boards & 2x12.5 Gypsum Boards, Insulated
MD02	100mm Interior Drywall Partition, Double Sided, 2x12.5mm WR Gypsum Boards & 2x12.5 WR Gypsum Boards, Insulated
MD03	100mm Interior Drywall Partition, Double Sided, 2x12.5mm Gypsum Boards & 2x12.5 WR Gypsum Boards, Insulated
MD04	75mm Interior Drywall, One Sided, 2x12.5mm Gypsum Boards, Insulated
MD05	75mm Interior Drywall, One Sided, 2x12.5mm WR Gypsum Boards, Insulated
MD06	60mm Shaft Drywall Partition, Double Sided, 2x15mm FRWR Gypsum Boards & 1x12.5mm FRWR Gypsum Board
MD07	80mm Shaft Drywall Partition, Double Sided, 2x15mm FR Gypsum Boards & 1x12.5mm FRWR Gypsum Board
MD08	300mm Interior Drywall Partition, Double Sided, Double Frame, 2x12.5mm FR Gypsum Boards & 2x12.5 FR Gypsum Boards, Insulated
MD09	300mm Interior Drywall Partition, Double Sided, Double Frame, 2x12.5mm FR Gypsum Boards & 2x12.5 FR Gypsum Boards, Insulated
LIN - INTERIOR WALL FINISHES	
LIN-01	797x797mm Porcelain Tile Lining, Colour: Ivory, Finish: Soft, Thickness: 10mm
LIN-02	797x797mm Porcelain Tile Lining, Colour: Ivory, Finish: Bath Hammered, Thickness: 10mm
LIN-03	797x797mm Porcelain Tile Lining, Colour: DFTC-01, Finish: Concrete, Thickness: 10mm
SAN - SANITARY FITTING	
SAN-101	Wall Mounted Toilet 370x540mm
SAN-301	Undercounter Vanity Basin 420x150mm
SAN-601	Bathtub 1600x750
SAN-706	Flush Plate
SAN-711	Towel Rail
SAN-720	Floor Mounted Bath Mixer
SAN-725	Roller Hook
SAN-730	Shower Drain (Tralle)
SAN-731	Heated Towel Rail 480x1140mm
SAN-732	Toilet Roll Holder
SAN-906	Wall Mounted Tap
SAN-916	Shower Tap
TRM - INTERIOR SKIRTINGS	
TRM-101	Interior Painted MDF Skirting 70mm





# “Να περιγράψει με ακριβή & μονοσήμαντο τρόπο το έργο”



## IWD01

Interior High Performance Gypsum Board Partition, Insulated, 100mm Thickness, Consisting of the following Layers: [ 12.5mm Diamant Standard Gypsum Board, 12.5mm Standard Gypsum Board, 50mm Galvanized Cold-Formed Steel Stud with Cavity Mineral Wool Insulation Belt, Thickness & Density to Suit Specifications, 12.5mm Standard Gypsum Board, 12.5mm Diamant Standard Gypsum Board ]

### CSI Master Classification No & Description

09 21 16 / Gypsum Board Assemblies

### NRM2 Classification No & Description

2.7 / Internal walls and partitions

### Stud Spacing (mm) / Maximum Partition Height (m)

625 / 3.20, 625 / 3.20, 417 / 3.85

### Fire Resistance Class

E190

### Weighted Sound Reduction Index ( $R_{w,alt}$ )

$R_w 56 \text{ dB} + (C_{tr} - 9 \text{ dB}) = 47 \text{ dB} \geq 45 \text{ dB}$

### Correction Factor ( $C_{tr}$ )

$C_{tr} - 9 \text{ dB}$

### Insulation Type

Mineral Wool

### Insulation Thickness

45mm

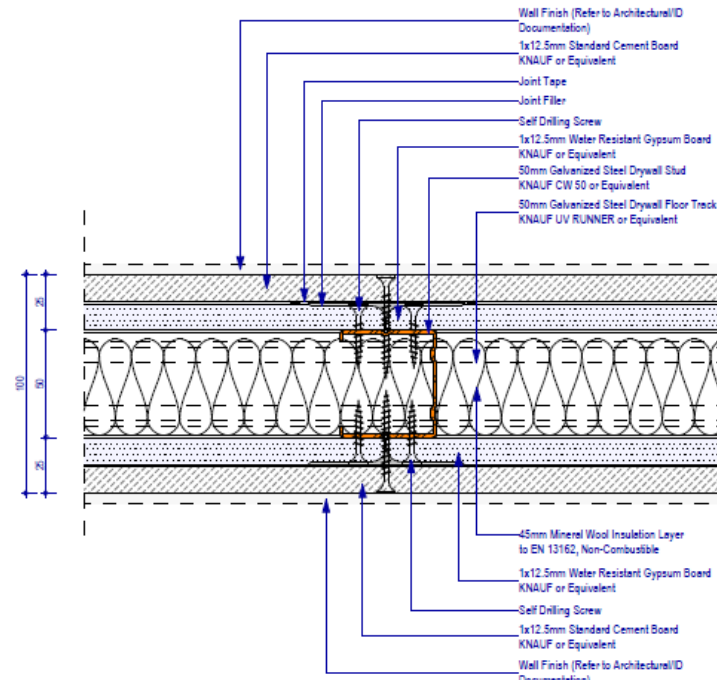
### Insulation Density

22 (kg/m<sup>3</sup>)

### U-Value

N/A

1 IWD01: Interior High-Performance Gypsum Board Partition, Insulated-100mm  
1:2



## IWD02

Interior Cement-Water Resistant Gypsum Board Partition, Insulated, 100mm Thickness, Consisting of the following Layers: [ 12.5mm Standard Cement Board, 12.5mm Water Resistant Gypsum Board, 50mm Galvanized Cold-Formed Steel Stud with Cavity Mineral Wool Insulation Belt, Thickness & Density to Suit Specifications, 12.5mm Water Resistant Gypsum Board, 12.5mm Standard Cement Board ]

### CSI Master Classification No & Description

09 21 16 / Gypsum Board Assemblies

### NRM2 Classification No & Description

2.7 / Internal walls and partitions

### Stud Spacing (mm) / Maximum Partition Height (m)

625 / 3.20, 625 / 3.20, 417 / 3.85

### Fire Resistance Class

E190

### Weighted Sound Reduction Index ( $R_{w,alt}$ )

$R_w 53 \text{ dB} + (C_{tr} - 6 \text{ dB}) = 47 \text{ dB} \geq 45 \text{ dB}$

### Correction Factor ( $C_{tr}$ )

$C_{tr} - 6 \text{ dB}$

### Insulation Type

Mineral Wool

### Insulation Thickness

45mm

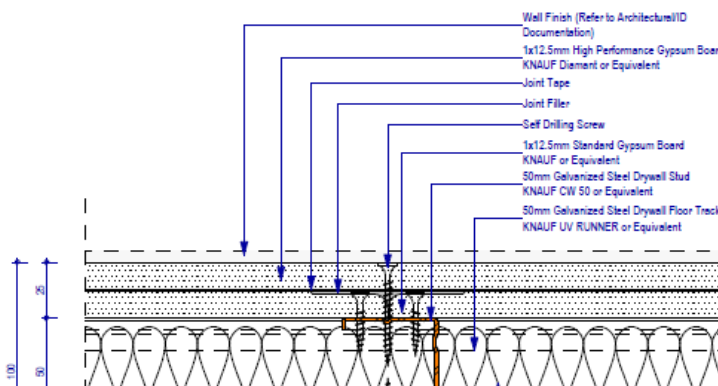
### Insulation Density

22 (kg/m<sup>3</sup>)

### U-Value

N/A

2 IWD02: Interior Cement-Water Resistant Gypsum Board Partition, Insulated-100mm  
1:2



## IWD03

Interior High Performance-Cement-Water Resistant Gypsum Board Partition, Insulated, 100mm Thickness, Consisting of the following Layers: [ 12.5mm Diamant Standard Gypsum Board, 12.5mm Standard Gypsum Board, 50mm Galvanized Cold-Formed Steel Stud with Cavity Mineral Wool Insulation Belt, Thickness & Density to Suit Specifications, 12.5mm Water Resistant Gypsum Board, 12.5mm Standard Cement Board ]

### CSI Master Classification No & Description

09 21 16 / Gypsum Board Assemblies

### NRM2 Classification No & Description

2.7 / Internal walls and partitions

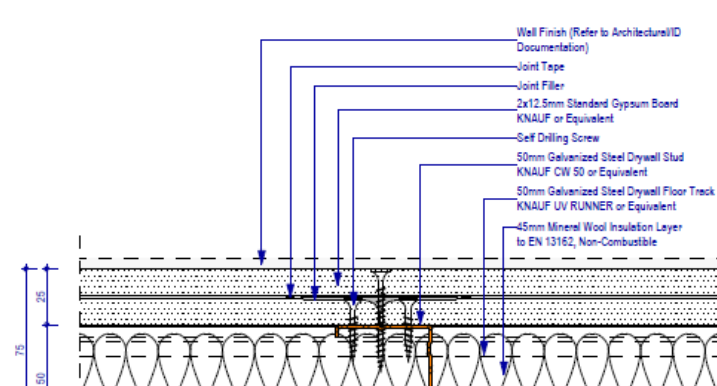
### Stud Spacing (mm) / Maximum Partition Height (m)

625 / 3.20, 625 / 3.20, 417 / 3.85

### Fire Resistance Class

E190

3 IWD03: Interior High-Performance-Cement-Water Resistant Gypsum Board Partition, Insulated-100mm  
1:2



## IWD04

Interior Standard Gypsum Board Partition, Insulated, 75mm Thickness, Consisting of the following Layers: [ 12.5mm Standard Gypsum Board, 12.5mm Standard Gypsum Board, 50mm Galvanized Cold-Formed Steel Stud with Cavity Mineral Wool Insulation Belt, Thickness & Density to Suit Specifications ]

### CSI Master Classification No & Description

09 21 16 / Gypsum Board Assemblies

### NRM2 Classification No & Description

2.7 / Internal walls and partitions

### Stud Spacing (mm) / Maximum Partition Height (m)

625 / 3.20, 625 / 3.20, 417 / 3.85

### Fire Resistance Class

N/A

4 IWD04: Interior Standard Gypsum Board Partition, Insulated-75mm  
1:2



# Data Rich Models For Construction Documentation

The image shows a software interface for creating data-rich models for construction documentation. On the left is a 'Properties' panel for a 'Floor Plan' of type 'HORIZONTAL DETAIL'. The 'Floor Plan' is named 'WALLS\_INTERIOR'. The 'Graphics' section includes settings for 'View Scale' (1:2), 'Display Model' (Normal), 'Detail Level' (Fine), and 'Parts Visibility' (Show Original). The 'Underlay' section shows 'Range: Base Level' as 'None' and 'Range: Top Level' as 'Unbounded'. The 'Extents' section includes 'Crop View', 'Crop Region Visible', and 'Annotation Crop' checkboxes, and 'View Range' (Edit...). The 'Identity Data' section includes 'Associated Level' (WALLS\_EXTERIOR) and 'Scope Box' (None). An 'Apply' button is at the bottom right of the panel.

The main view shows a 2D architectural drawing of a wall section. A callout box points to a specific layer in the wall assembly, labeled 'ILD10'. The drawing includes a 'Temporary Hide/Isolate' label and a 'Ref. Level' indicator. The wall assembly consists of several layers, with the 'ILD10' layer being the interior lining. The drawing also shows a ceiling with a light fixture and a floor with a grid pattern.

**ILD10**  
Interior Standard Gypsum  
Board Lining, Insulated

Clear all slicers

- Categories
- Ceilings
  - Floors
  - Roofs
  - Walls

Search for Specific Term

Thickness: All

Fire Resistance Class: All

Filter by Parameter

None

-

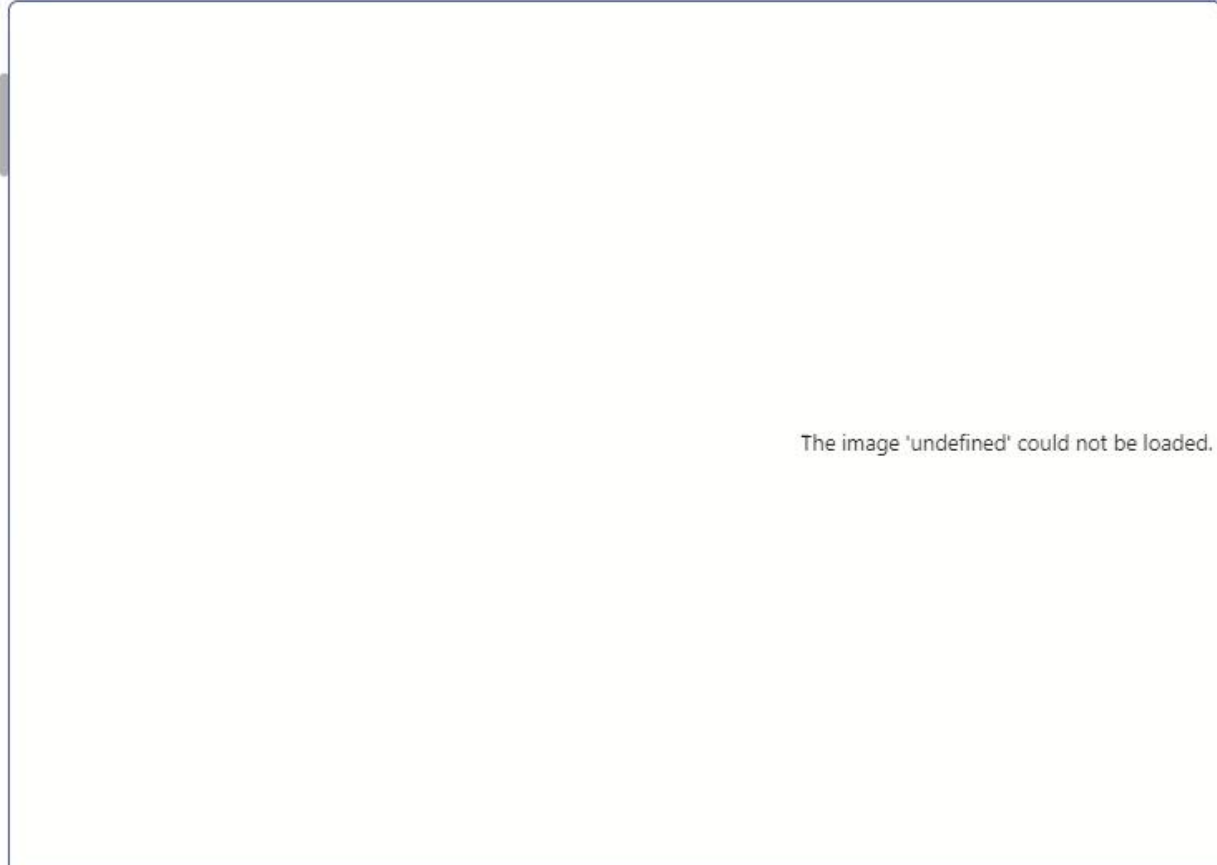
- Categorization
- Exterior
    - Ceilings
      - Exterior Ceilings
    - Floors
      - Exterior Floor Finishes
      - Exterior Floor Substrates
    - Roof Systems
      - Roof Systems
    - Walls
      - Exterior Insulated Facade Systems
      - Exterior Lining Drywalls
      - Exterior Walls Blockwork
  - Interior
    - Ceilings
      - Interior Ceilings
    - Floors
      - Interior Floor Finishes
      - Interior Floor Underlayments/Substrates
    - Walls
      - Interior Lining Drywalls
      - Interior Walls Blockwork
      - Interior Walls Drywalls
      - Interior Walls Shaft

Type Code

EC
EC01_Exterior Suspended Standard Cement Board Ceiling with Double-layer Suspension Grid, /-80mm
EC02_Exterior Suspended Standard Cement Board Ceiling with Single-layer Suspension Grid, /-42.5mm
INSUL 1x
INSUL 2x LAYER
EFF
EFF01_Exterior Granite Cobblestone Flooring-90mm, 100x100x60mm
EFF02_Exterior Natural Stone Tile Flooring-75mm, 600x300x40mm
EFF03_Exterior Natural Stone Tile Flooring-65mm, 600x300x30mm
EFF04_Exterior Natural Stone Tile Flooring-55mm, 600x300x20mm
EFF05_Exterior Composite Wood Plank Deck Flooring-25mm, Plank Width=130mm - Plank Length=1800mm
EFF06_Exterior Raised Porcelain Tiles on Adjustable Pedestals-20mm, 300x300mm
EFF07_Exterior Raised Natural Limestone Tiles on Adjustable Pedestals-20mm, 600x300mm
EFF08_Exterior Raised Composite Wood Plank Deck Flooring on Adjustable Pedestals-25mm, Plank Width=130mm - Plank Length=1800mm
EFF09_Exterior 2nd Phase Concrete Surface Treatment Finish Flooring-150mm
EFF10_Exterior Marble Tile Flooring-50mm, Broomed/ 600x300mm
EFF11_Exterior Precast Cement Paving Tile Flooring-50mm
EFF12_Exterior Precast Cement Paving Tile Flooring-100mm
EFF13_Exterior Tactile Paving for the Visually Impaired-50mm, 400x400mm/ Type D
EFF14_Exterior Tactile Paving for the Visually Impaired-100mm, 400x400mm/ Type D/ Patterned
EFF15_Exterior Tactile Paving for the Visually Impaired-50mm, 400x400mm/ Type C
EFF16_Exterior Tactile Paving for the Visually Impaired-100mm, 400x400mm/ Type C/ Patterned
EFF17_Exterior Tactile Paving for the Visually Impaired-50mm, 300x400mm/ Type B
EFF18_Exterior Tactile Paving for the Visually Impaired-100mm, 300x400mm/ Type B/ Patterned

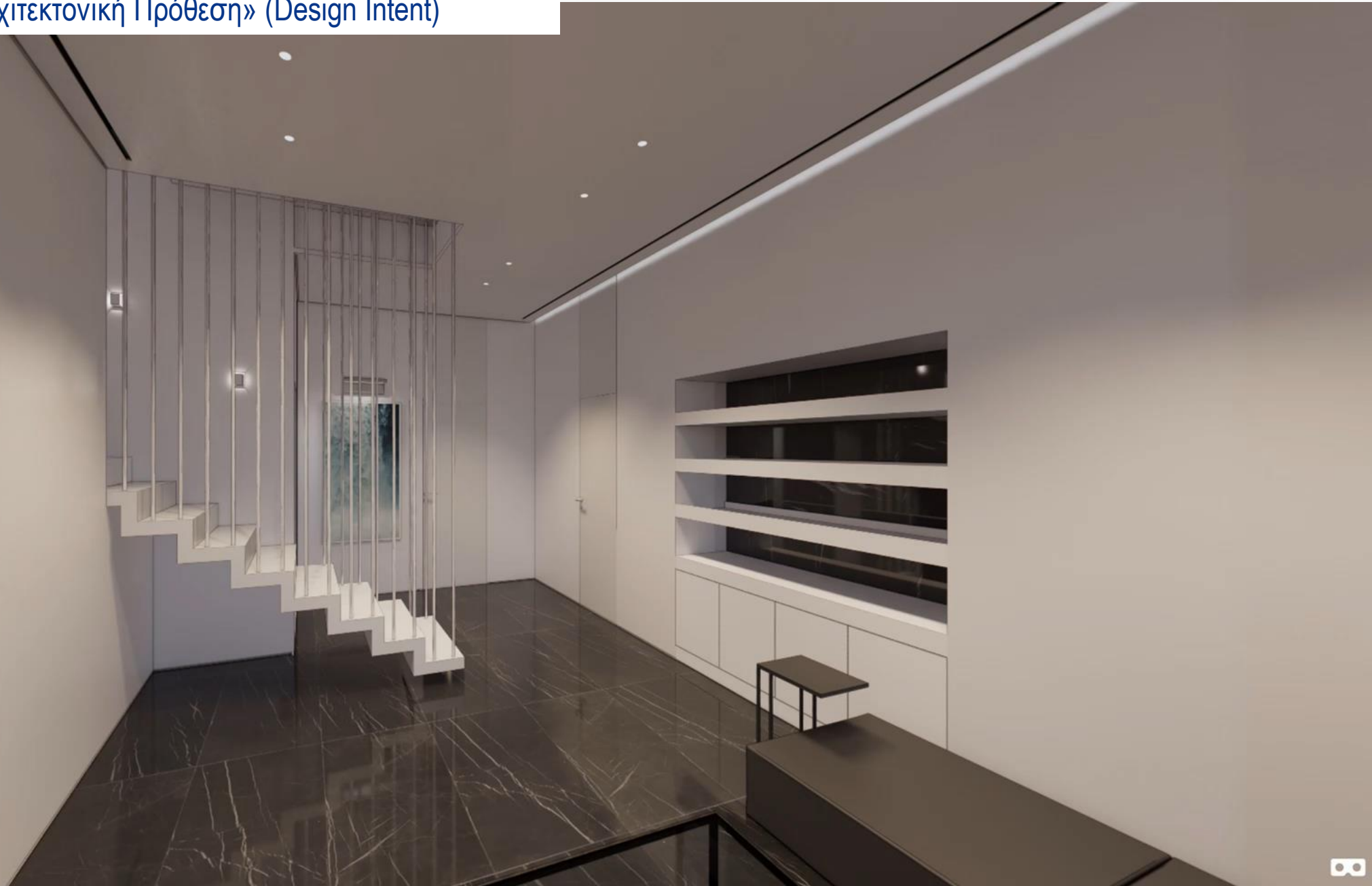
Type Data

Type Name	
MasterFormat	
MasterFormat Number	
Type Code	
Type Mark	
Description_ENG	
Description_GR	

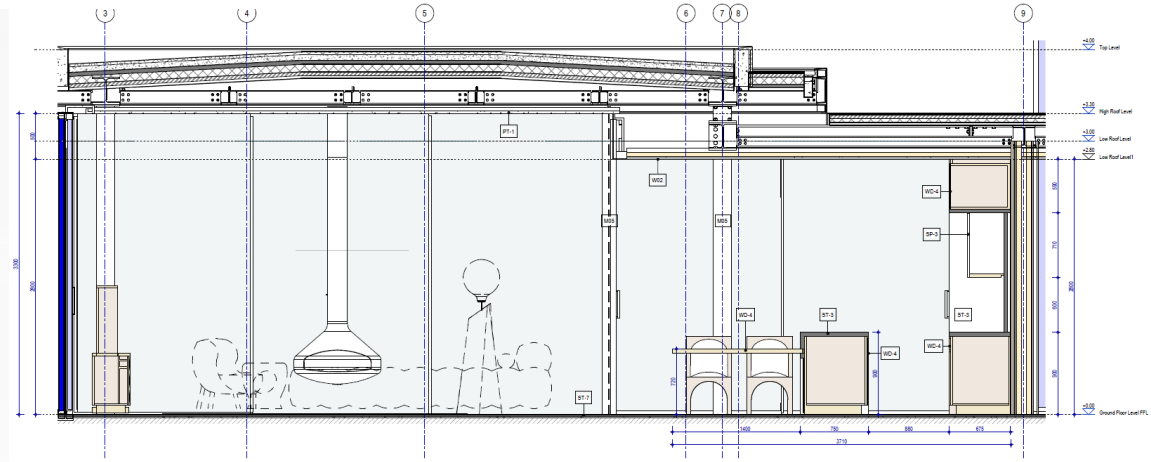




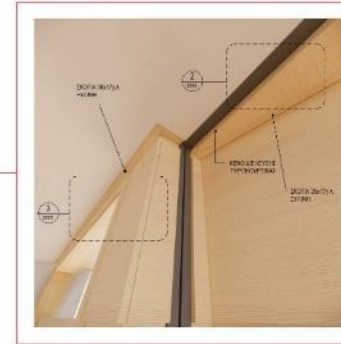
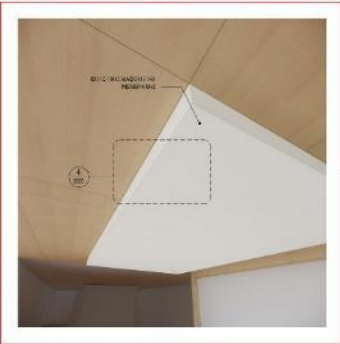
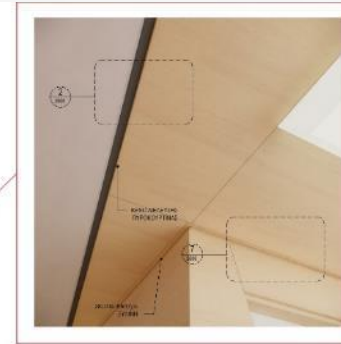
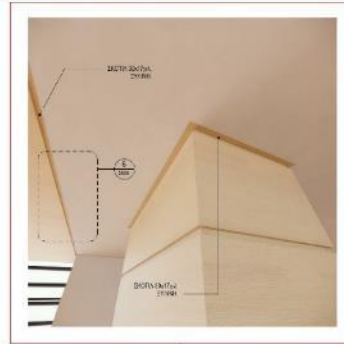
Να διασφαλίσει την «Αρχιτεκτονική Πρόθεση» (Design Intent)



# Να διασφαλίσει την «Αρχιτεκτονική Πρόθεση» (Design Intent)



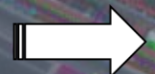
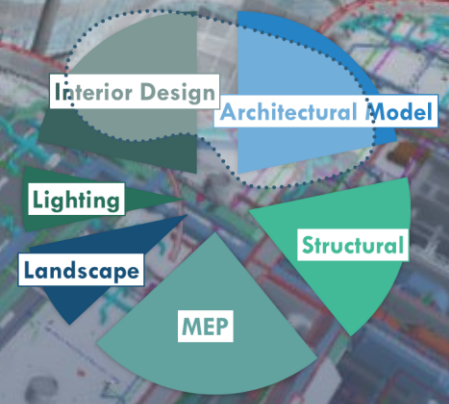
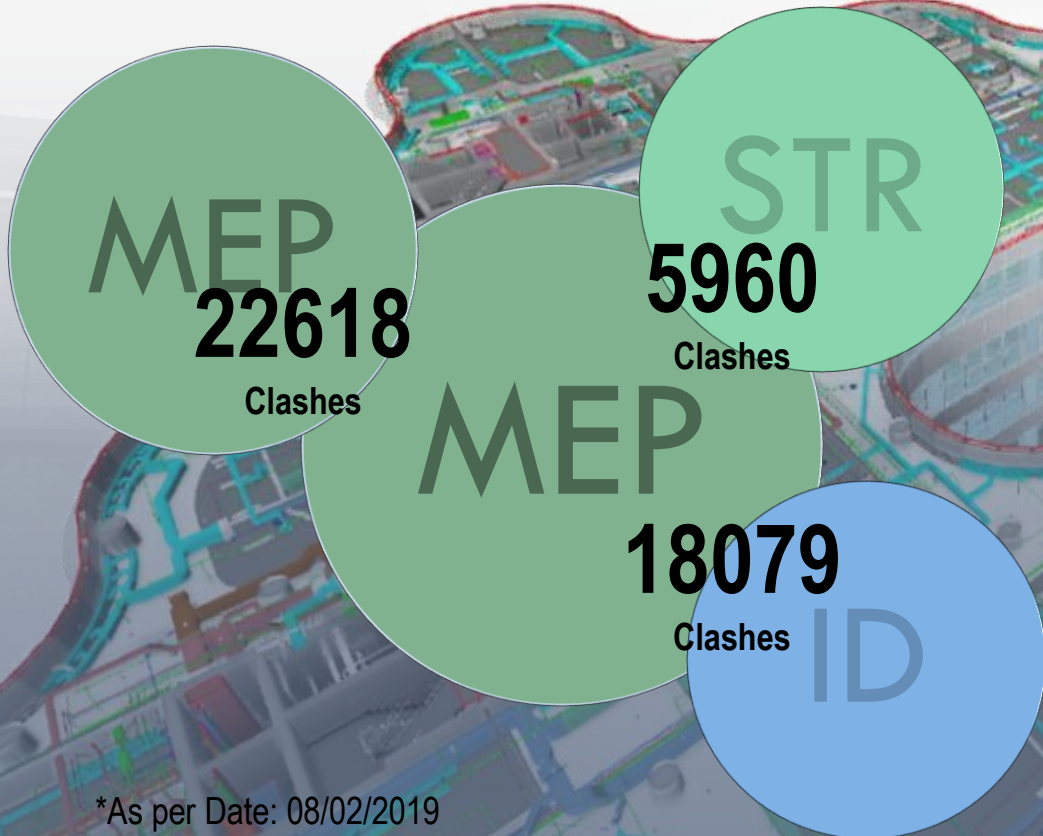
# Να διασφαλίσει την «Αρχιτεκτονική Πρόθεση» (Design Intent)



ΕΠΙΧΡΩΜΑΤΑ ΣΥΜΕΙ  
ΣΥΜΕΙ ΤΗΣ ΣΥΜΕΙ  
ΣΥΜΕΙ ΤΗΣ ΣΥΜΕΙ  
ΣΥΜΕΙ ΤΗΣ ΣΥΜΕΙ



“ Να περιορίσει την Επισφάλεια κατά την Κατασκευή ”

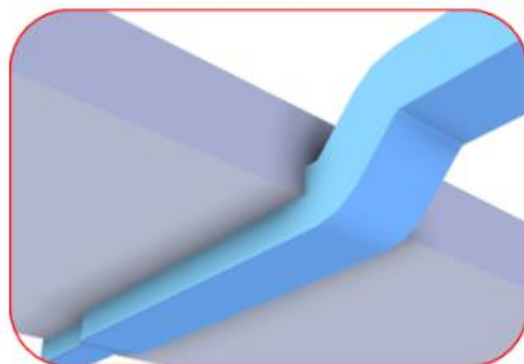


- MEP vs MEP
- MEP vs STRUCTURE
- MEP vs ARCHITECTURAL/INTERIOR DESIGN ELEMENTS

\*As per Date: 08/02/2019

## “ Να περιορίσει την Επισφάλεια κατά την Κατασκευή”

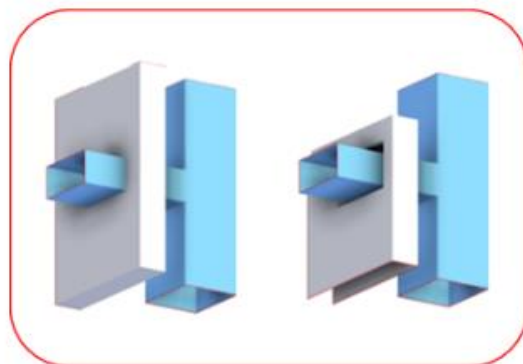
### Category A



Example: Duct vs Concrete Beam

Clashes that require that one of the interfering elements has to be re-located in order for the Clash to be resolved. If not resolved they will have an impact in construction, therefore they are deemed as “Critical”.

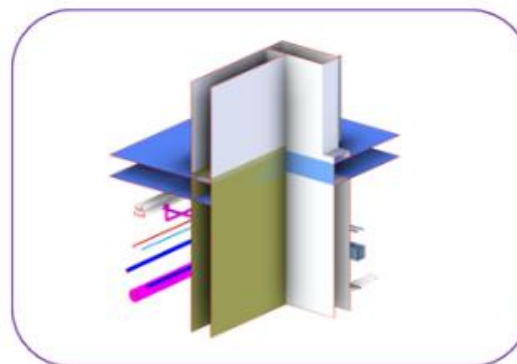
### Category B



Example: Duct vs Structural Wall

Clashes that need to be resolved, but not necessarily require the relocation or re-routing of an element but a modification of the elements involved such as an opening to a structural wall. Also “Critical”.

### Category C

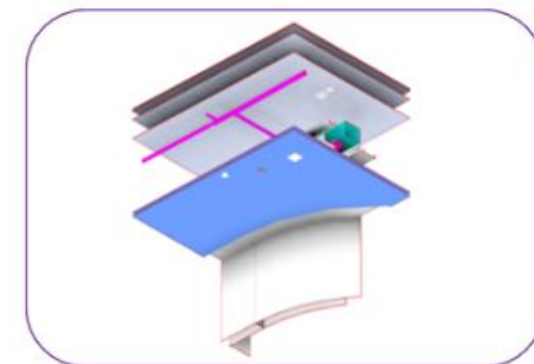


Example: Wall vs Slab

Modeling mistakes, are classified as “non-Critical”. These Clashes will have to be resolved because they affect the quality and integrity of the Models. Also in this Category:

- Clashes of STR & MEP Elements with “soft” Architectural Elements, such as a Gypsum Board Assembly.
- Clashes of minor, “isolated” elements, obviously not critically affecting construction.
- Duplicate Elements.
- Clashes that affect Quantities.

### Category D



Example: Lighting Fixtures vs Ceiling

Clashes caused by software limitations, i.e. hosted elements that appear to clash with the hosts. This type of clashes should be deemed as “non-Critical”.

Clashes due to non-properly connected elements should be included in this Category.

It is not necessarily required to modify the model in order to resolve these Clashes.

**CRITICAL**

**NON-CRITICAL**

# “Να περιορίσει την Επισφάλεια κατά την Κατασκευή”



# PIRAEUS TOWER PROJECT



BIM SUPPORTED SPATIAL COORDINATION / CLASH DETECTION DATA ANALYSIS & REPORTING

### Clash Details

Multiple Clashes

Element 1 Properties

Multiple Categories

VS

Element 2 Properties

Multiple Categories

100\_MEP vs MEP

200\_MEP vs STR

**Clear All Filters**

Year, Month, Day

- Select all
- 2022
  - November
    - 8
    - 23
  - December
    - 22
  - 2023
    - February
      - 23

Element Level

Search

- Select all
- <No level>
- FFL\_Level 03
- FFL\_Level 05
- FFL\_Level 06
- FFL\_Level 16
- FFL\_Level 17
- FFL\_Level 18
- FFL\_Level 19
- FFL\_Level 21
- Level 18 SSL
- Level 19 SSL
- Level 8 SSL

Element Category

Search

- Select all
- Air Terminals
- Cable Trays
- Duct Accessories
- Duct Fittings
- Duct Insulations
- Ducts
- Flex Ducts
- Floors
- Mechanical Equipment
- Pipe Accessories
- Pipe Fittings
- Pipe Insulations

Status

Search

- Select all
- Approved
- Open

Clash Group

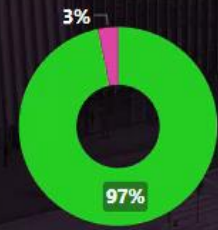
Search

- Select all
- Category A
- Category B
- Category D
- Category TBC
- Category C

Sorted Clash Categories

Search

- Select all
- Air Terminals VS Flex Ducts
- Cable Trays VS Structural Framing
- Duct Accessories VS Duct Insulations
- Duct Fittings VS Duct Insulations
- Duct Fittings VS Ducts
- Duct Fittings VS Flex Ducts
- Duct Fittings VS Structural Framing
- Duct Insulations VS Duct Insulations
- Duct Insulations VS Ducts
- Duct Insulations VS Flex Ducts
- Duct Insulations VS Pipe Fittings
- Duct Insulations VS Pipe Insulations
- Duct Insulations VS Structural Framing



“ Να περιορίσει την Επισφάλεια κατά την Κατασκευή ”

# PIRAEUS TOWER PROJECT

BIM SUPPORTED SPATIAL COORDINATION / CLASH DETECTION DATA ANALYSIS & REPORTING



Current Date

Reset All Filters

## CLASH LEVEL

- (Blank)
- <No Level>
- FFL\_Level 03
- FFL\_Level 05
- FFL\_Level 06
- FFL\_Level 07
- FFL\_Level 08
- FFL\_Level 09
- FFL\_Level 10
- FFL\_Level 12
- FFL\_Level 13
- FFL\_Level 14
- FFL\_Level 15
- FFL\_Level 16
- FFL\_Level 17
- FFL\_Level 18
- FFL\_Level 19
- FFL\_Level 21
- FFL\_LEVEL B2
- FFL\_LEVEL GF

## CLASH TEST DATE

- November
- 8
- 23
- December
- 22
- 2023
- February
- 23

## CLASH TEST

- 100\_MEP vs MEP
- 200\_MEP vs STR
- 300\_MEP vs ARCH

## CLASH CATEGORY

- Category A
- Category B
- Category C
- Category D
- Category TBC

## INTERACTIVE CLASH MATRIX - OPEN CLASHES

Clash Matrix Cell	Air Terminals	Cable Tray Fittings	Cable Trays	Conduits	Duct Accessories	Duct Fittings	Duct Insulations	Ducts	Electrical Equipment	Flex Ducts	Flex Pipes	Floors	Lighting Devices	Lighting Fixtures	Mechanical Equipment	Pipe Accessories	Pipe Fittings	Pipe Insulations	Pipes	Plumbing Fixtures	Sprinklers	Structural Columns	Structural Framing	Walls	Total			
Pipes																			0		0			0	0			
Pipe Insulations																			0	0					0	0		
Pipe Fittings																		0		0					0	0		
Pipe Accessories																	0			0					0	0		
Mechanical Equipment																			0	0		0			0	0		
Lighting Fixtures														0												0	0	
Lighting Devices																											0	0
Floors																			4	4	32						40	0
Flex Pipes											0								0	0	0					0	0	
Flex Ducts										0	0	0		0					0	0	0					0	0	
Electrical Equipment																											0	0
Ducts											0								0	0	0					0	0	
Duct Insulations							0	0			0								0	0	0					0	0	
Duct Fittings							0	0			0								0	0	0					0	0	
Duct Accessories							0																			0	0	
Conduits																										0	0	
Cable Trays											0										0					0	0	
Cable Tray Fittings											0															0	0	
Air Terminals											0															0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	32	0	0	0	0	0	0	40	



WBS	DESCRIPTION	UNIT	ARTICLE STATUS	DATE OF CHANGE		
All	<input type="text" value="Search"/>	All	All	All		
WBS	WORK TYPE	DESCRIPTION	QUANTITY	UNIT	ARTICLE STATUS	DATE OF CHANGE
B		Shell				21/6/2023
B10		Superstructure				21/6/2023
B1010		Floor Construction				21/6/2023
B1010_20		Floor Decks, Slabs, and Toppings				21/6/2023
B1010_20_001	Supply & Install	Substrate, 35mm Screed on Structural Floors - Tower Levels	73,028.37	m2	Updated Quantities	30/6/2023
B1080_10_001	Supply & Install	1/2" Tread Plate 1/4" Riser		m	New	7/10/2023
B20		Exterior Vertical Enclosures				21/6/2023
B2010		Exterior Walls				21/6/2023
B2010_20		Exterior Wall Construction				21/6/2023
B2010_20_001	Supply & Install	Concrete Pony Wall, 200mm Thickness	760.14	m2	Description Changed	30/6/2023
B2020		Exterior Windows				21/6/2023
B2020_30		Exterior Window Wall				21/6/2023
B2020_30_001	Supply & Install	Exterior Curtain Wall Level 10	30.88	m2	Updated Quantities	30/6/2023
B2050		Exterior Doors and Grilles				21/6/2023
B2050_10		Exterior Entrance Doors				21/6/2023
B2050_10_001	Supply & Install	Type A3E, Single Swing BOH Access Door, WxH(mm)=1200x2150, Panel: 45mm Metal, Frame: Hollow Metal with Paint Finish, FR: -	3.00	ea	Updated Quantities	30/6/2023
B2050_10_002	Supply & Install	Type A3F.1, Single Swing Egress Door, WxH(mm)=950x2400, Panel: 45mm Metal, Frame: Hollow Metal with Paint Finish, FR: -	1.00	ea	Updated Quantities	30/6/2023
B2050_10_003	Supply & Install	Type B1B, Double Swing Entry or Lobby Door W/ Hold Open Hardware (900mm Eq Leaf), WxH(mm)=1800x2400, Panel: 45mm Wood, Frame: Hollow Metal with Paint Finish, FR: -	3.00	ea	Updated Quantities	30/6/2023
B2050_10_004	Supply & Install	Type B3B, Double Swing MEP Access Room Door (950mm Eq Leaf), WxH(mm)=1800x2150, Panel: 45mm Metal, Frame: Hollow Metal with Paint Finish, FR: -	5.00	ea	Updated Quantities	30/6/2023
B2080		Exterior Wall Appurtenances				21/6/2023
B2080_10		Exterior Fixed Grilles and Screens				21/6/2023
B2080_10_001	Supply & Install	Upper Facade Bracing: 300x500mm Steel Sections	33.25	Kgr	Updated Quantities	30/6/2023
B2080_10_002	Supply & Install	Upper Facade Bracing: 203.20x254x9.52mm Steel Sections	18.37	Kgr	Updated Quantities	30/6/2023
B2080_50		Exterior Balcony Walls and Railings				21/6/2023
B2080_50_001	Supply & Install	Glazed Railing 1200mm Height Level 33	164.09	m	Updated Quantities	30/6/2023
B2080_50_002	Supply & Install	Pedestal Paved Balcony Parapet Construction Level 19			Deleted	30/6/2023
B2080_70		Exterior Fabrications				21/6/2023
B2080_70_001	Supply & Install	Wide Flange HD400 x 592 Fireproofing	6,028.54	m	Updated Quantities	30/6/2023
B2080_70_002	Supply & Install	Fluted Column Cover Level 19	8.23	m3	Updated Quantities	30/6/2023



Description		Category	Width
Search <input type="text"/>		All	All
WBS	Level	Type Mark	Height
All	All	All	All



WBS	First WORK TYPE	Last DESCRIPTION	QUANTITY	Last UNIT
B		Shell		
B10		Superstructure		
B1010		Floor Construction		
B1010_20		Floor Decks, Slabs, and Toppings		
B1010_20_001	Supply & Install	Substrate_35mm Screed on Structural Floors - Tower Levels	73,028.37	m2
B1080_10_001	Supply & Install	1/2" Tread Plate 1/4" Riser		m
B20		Exterior Vertical Enclosures		
B2010		Exterior Walls		
B2010_20		Exterior Wall Construction		
B2010_20_001	Supply & Install	Concrete Pony Wall, 200mm Thickness	760.14	m2
B2020		Exterior Windows		
B2020_30		Exterior Window Wall		
B2020_30_001	Supply & Install	Exterior Curtain Wall_Level 10	30.88	m2
B2050		Exterior Doors and Grilles		
B2050_10		Exterior Entrance Doors		
B2050_10_001	Supply & Install	Type A3E, Single Swing BOH Access Door. WxH(mm)=1200x2150, Panel: 45mm Metal, Frame: Hollow Metal with Paint Finish, FR: -	3.00	ea
B2050_10_002	Supply & Install	Type A3F.1, Single Swing Egress Door. WxH(mm)=950x2400, Panel: 45mm Metal, Frame: Hollow Metal with Paint Finish, FR: -	1.00	ea
B2050_10_003	Supply & Install	Type B1B, Double Swing Entry or Lobby Door W/ Hold Open Hardware (900mm Eq Leaf). WxH(mm)=1800x2400, Panel: 45mm Wood, Frame: Hollow Metal with Paint Finish, FR: -	3.00	ea
B2050_10_004	Supply & Install	Type B3B, Double Swing MEP Access Room Door (950mm Eq Leaf). WxH(mm)=1800x2150, Panel: 45mm Metal, Frame: Hollow Metal with Paint Finish, FR: -	5.00	ea
B2080		Exterior Wall Appurtenances		
B2080_10		Exterior Fixed Grilles and Screens		
B2080_10_001	Supply & Install	Upper Facade Bracing: 300x500mm Steel Sections	33.25	Kgr
B2080_10_002	Supply & Install	Upper Facade Bracing: 203.20x254x9.52mm Steel Sections	18.37	Kgr
B2080_50		Exterior Balcony Walls and Railings		
B2080_50_001	Supply & Install	Glazed Railing 1200mm Height_Level 33	164.09	m
B2080_50_002	Supply & Install	Pedestal Paved Balcony Parapet Construction_Level 19		
B2080_70		Exterior Fabrications		
B2080_70_001	Supply & Install	Wide Flange HD400 x 592 Fireproofing	6,028.54	m
B2080_70_002	Supply & Install	Fluted Column Cover_Level 19	8.23	m3
B30		Exterior Horizontal Enclosures		
B3010		Roofing		
B3010_50		Low-Slope Roofing		
B3010_50_001	Supply & Install	Roof 125mm Topping Screed on Slab	753.82	m2
B3010_50_002	Supply & Install	Membrane, coverboard & insulation - Long Span_Level 42 Roof	450.57	m2
B3010_50_003	Supply & Install	Membrane, coverboard & insulation - Long Span_Level 33	483.38	m2
B3010_50_004	Supply & Install	Membrane, coverboard & insulation - Long Span_Level 19	287.99	m2
B3010_50_005	Supply & Install	Membrane, coverboard & insulation - Long Span_Level 01-02	9,205.10	m2
B3010_50_006	Supply & Install	Membrane, coverboard & insulation - Typical - Level 33	293.57	m2



BoQ Preview

WBS	DESCRIPTION	QUANTITY	UNIT	ARTICLE STATUS	DATE OF CHANGE	QUANTIFICATION FORMULA
B1010_20_001	Substrate_35mm Screed on Structural Floors - Tower Levels	2,384.81	m <sup>2</sup>	Updated Quantities	30/6/2023	[Area] of [Type Name] = 300mm Structural Conc w/ 35mm Finish/Screed and [Area] of [Type Name] = 220 Deck + 80 Conc + 35mm Finish and [Area] of [Type Name] = 600mm Structural Conc w 35mm Screed
B2080_70_001	Wide Flange HD400 x 592 Fireproofing	167.01	m	Updated Quantities	30/6/2023	[Height]*0.001 of [Category] = Generic Models AND [Type Name] =



FILTERING BY DATA

**Category**  
 All

**Level**  
 LEVEL 05

**Type Name**  
 All

**Type Mark**  
 All

FILTERING BY DIMENSIONS

**Area**  
 0.17 47329.42

**Height Between x & y (mm)**  
 20.00 12,600.00

**Length Between x & y (mm)**  
 2.41 423,295.46

**Thickness (mm)**  
 All

**Width Between x & y (mm)**  
 All

RESET

ELEMENTS

Category	Level	Count	Area (m <sup>2</sup> )	Height (mm)	Length (mm)	Thickness (mm)	Width (mm)	Perimeter (mm)	Volume (m <sup>3</sup> )	WBS Articles	Quantification
Doors	LEVEL 05	72		158,431.00		3,233.40	79,558.00			C1030_10_001 C1030_10_003 C1030_10_006 C1030_10_007 C1030_10_008 C1030_10_011 C1030_10_012 NOT QUANTIFIED	Multiple Values
Floors	LEVEL 05	1	2384.81			335.00		322,610.96	798.92	B1010_20_001	[Area] of [Type Name] = 300mm Structural Conc w/ 35mm Finish/Screed and [Area] of [Type Name] = 220 Deck + 80 Conc + 35mm Finish and [Area] of [Type Name] = 600mm Structural Conc w 35mm Screed
Generic Models	LEVEL 05	58		167,010.00		2,850.00			22.01	B2080_70_001 NOT QUANTIFIED	[Height]*0.001 of [Category] = Generic Models AND [Type Name] = HD400 x 592
Plumbing Fixtures	LEVEL 05	3					596.90				NOT QUANTIFIED
Signage	LEVEL 05	4									NOT QUANTIFIED
Specialty Equipment	LEVEL 05	15		7,315.20						B3010_90_001 NOT QUANTIFIED	[Count] of [Category] = Specialty Equipment AND [Type Name] = Trash - Shute - Circular Section

**WBS CODE**  
 All

**ARTICLE STATUS**  
 All

**DATE OF CHANGE**  
 All

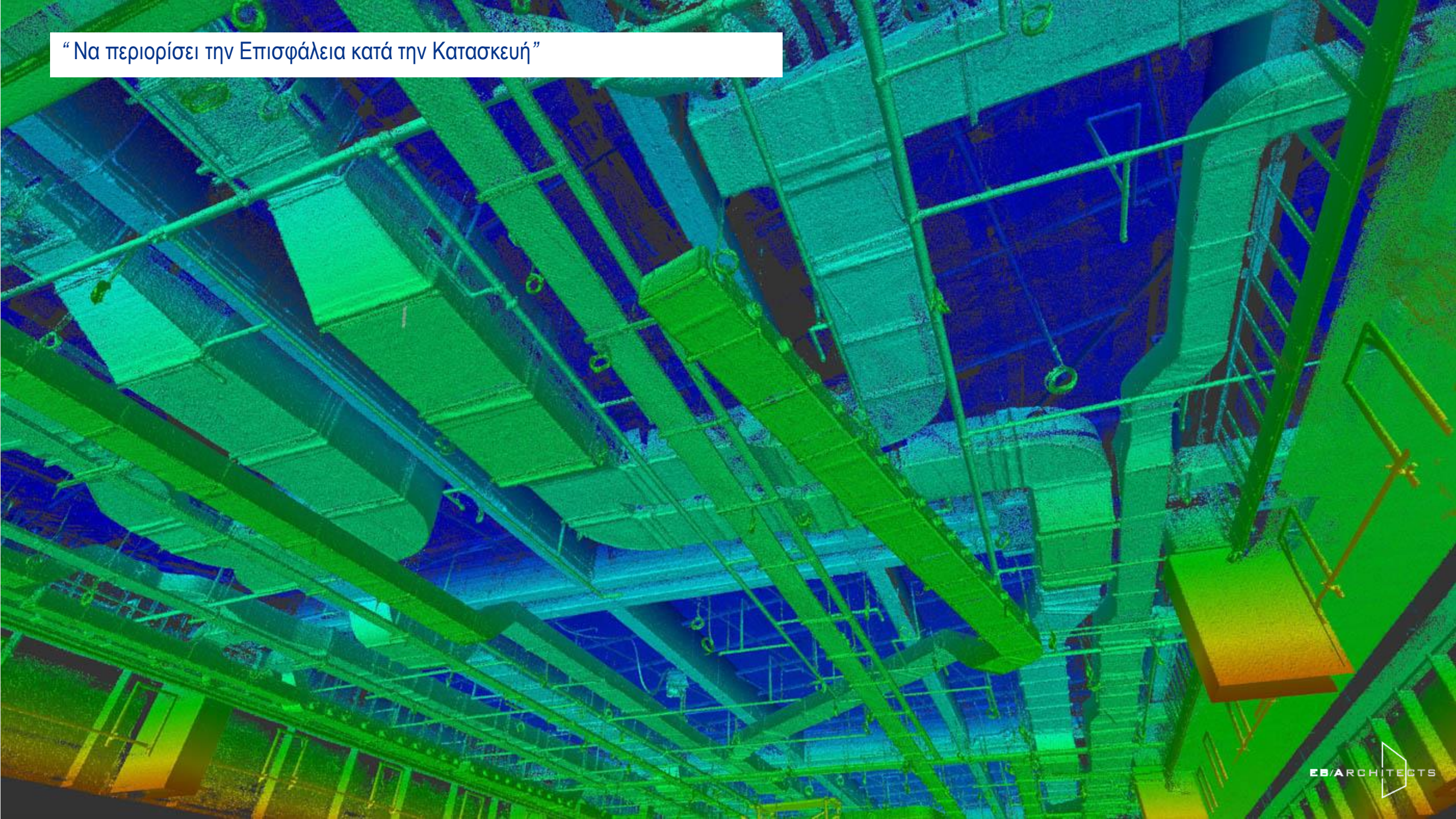
**ELEMENTS QUANTIFIED IN ARTICLES**

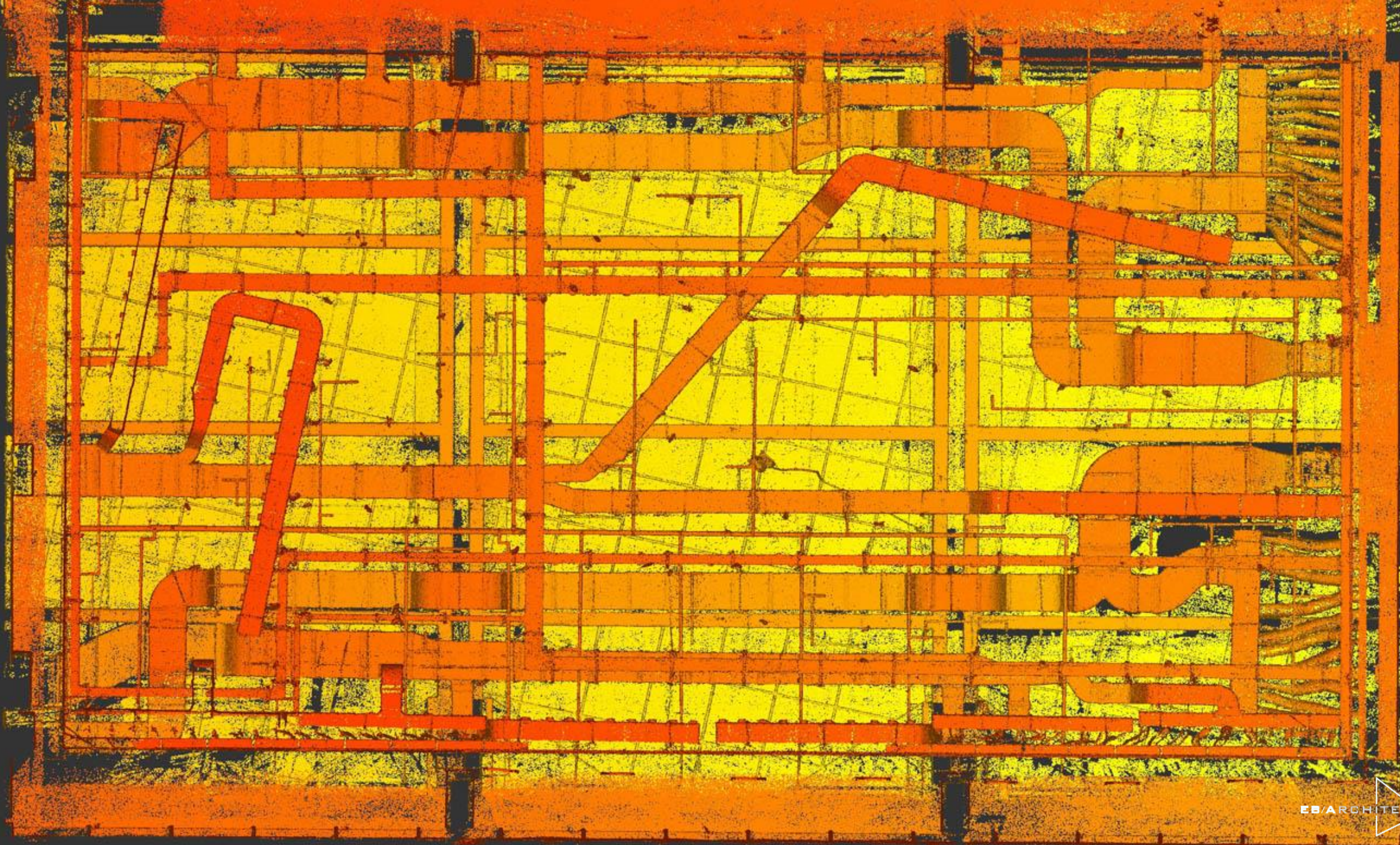
1 Article

Not Quantified

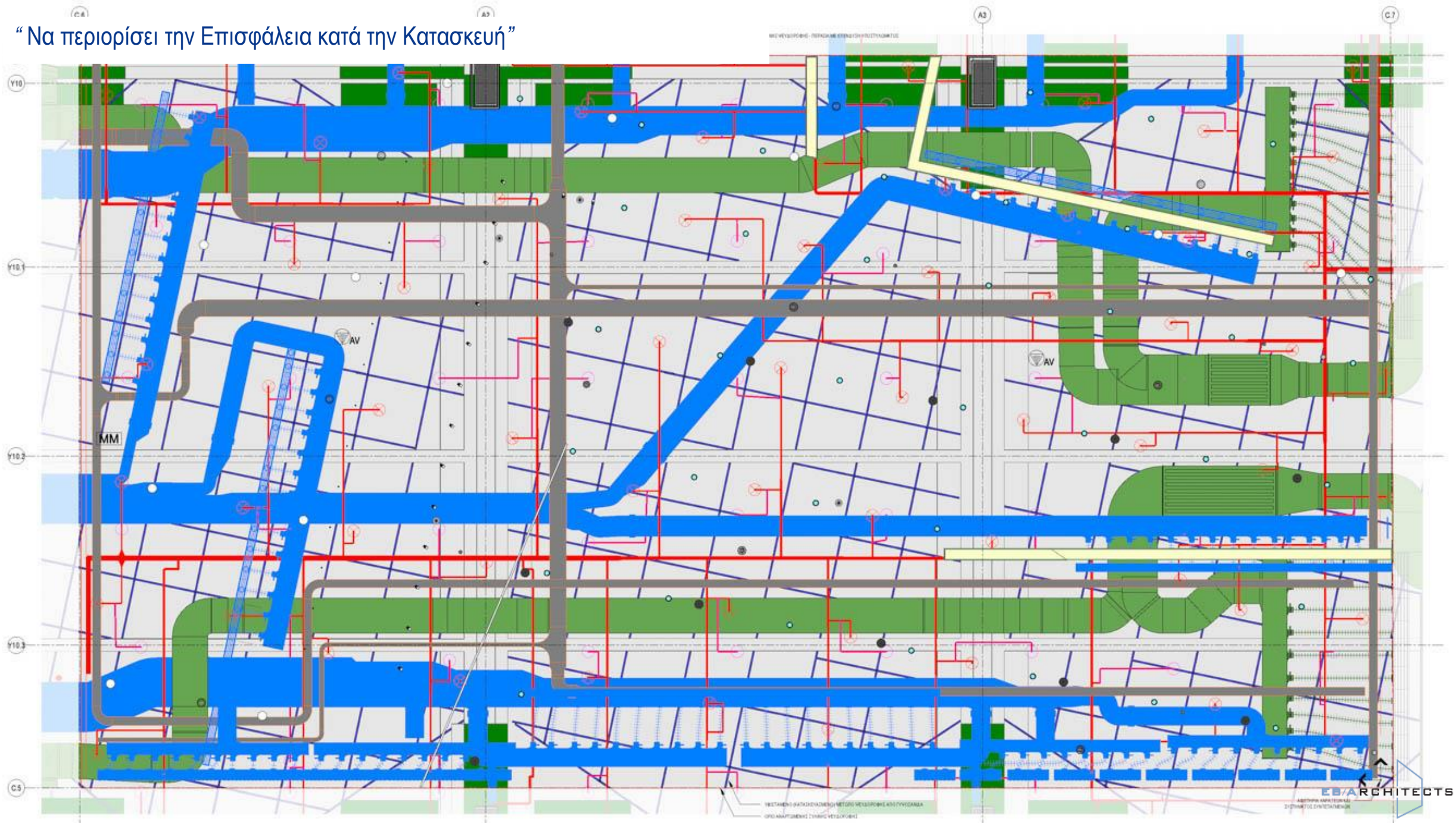


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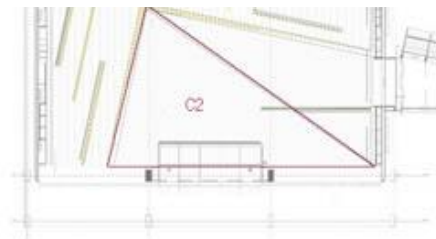
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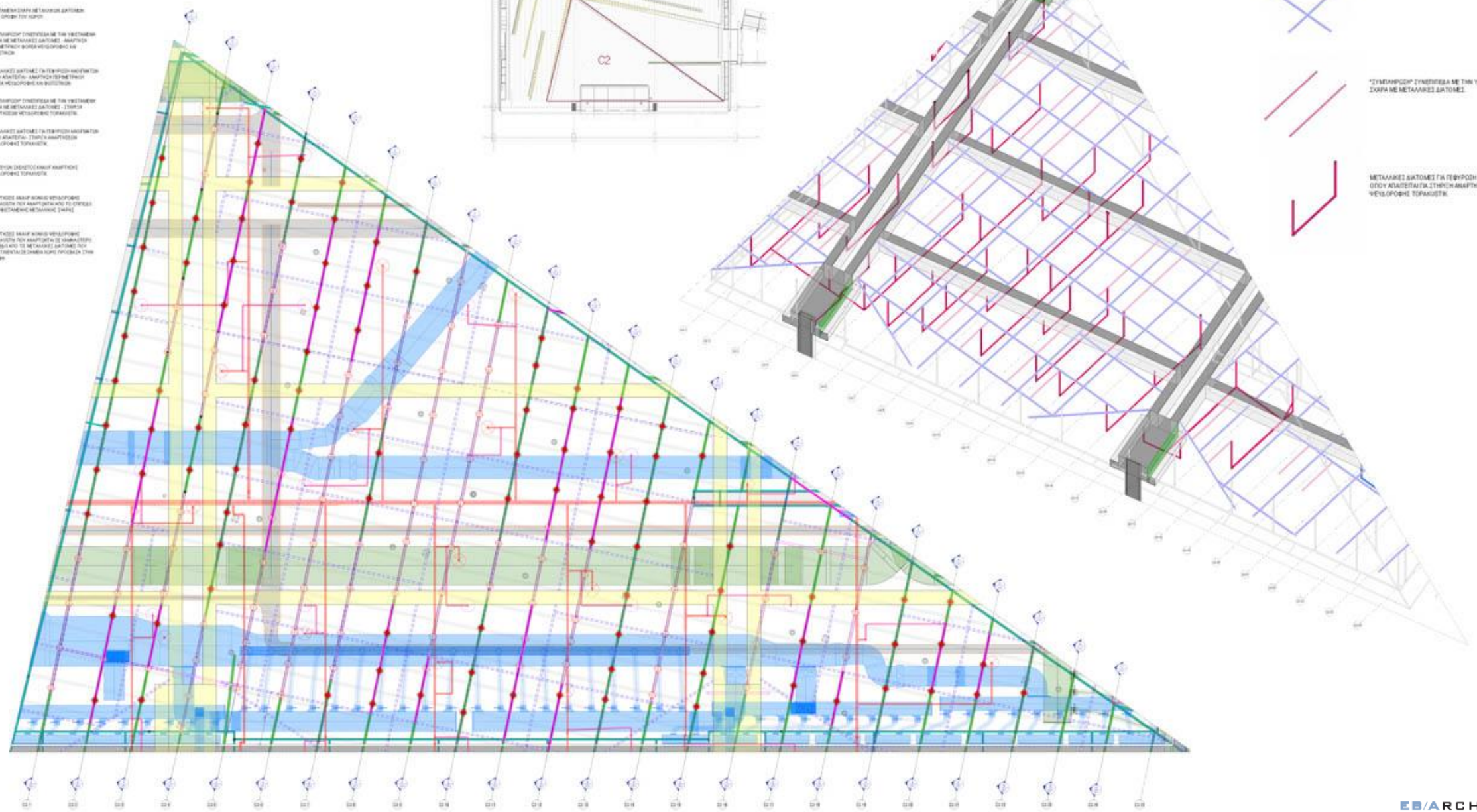
# “Να περιορίσει την Επισφάλεια κατά την Κατασκευή”

ΥΠΟΜΟΝΗ

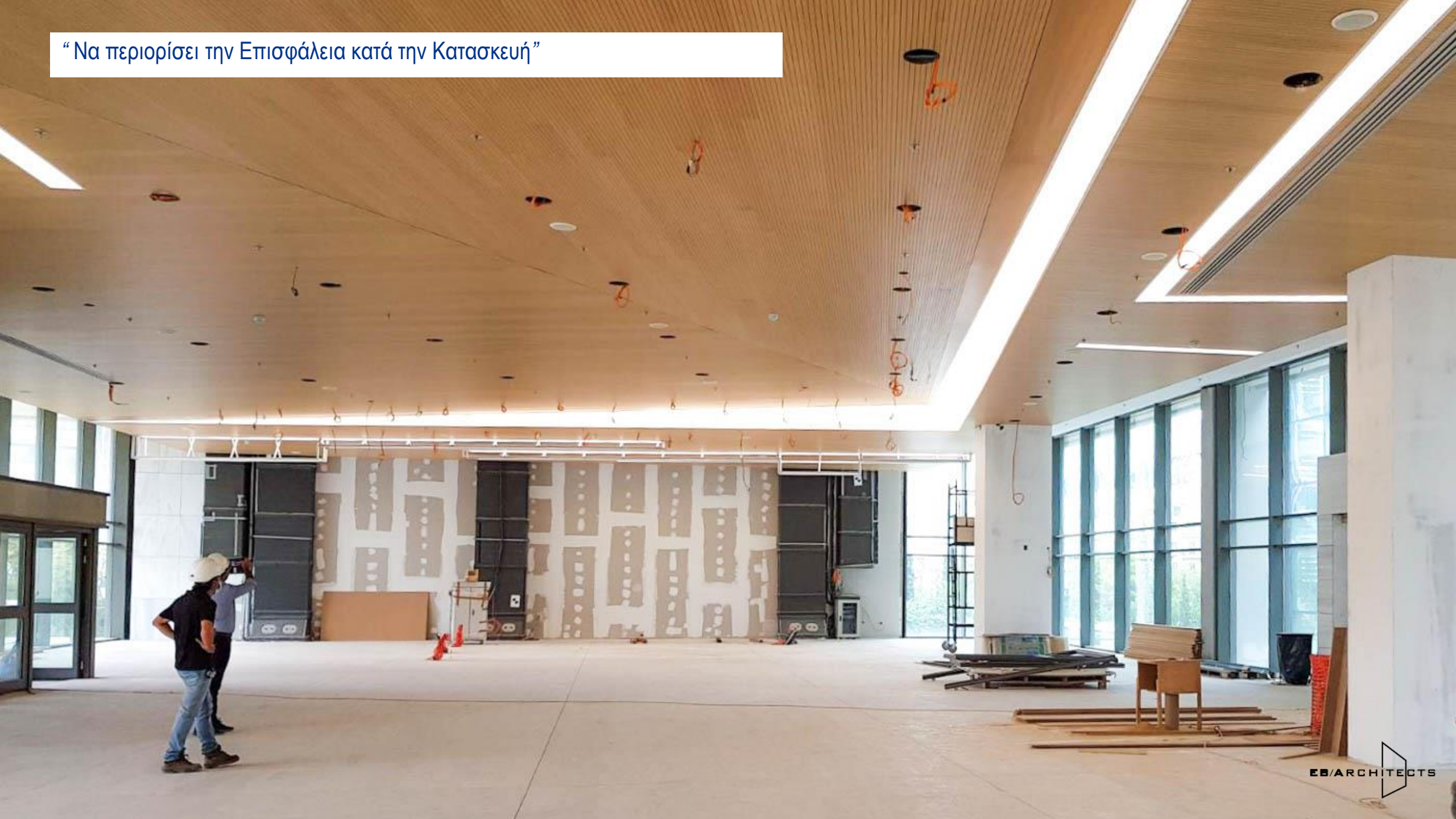
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- ΥΠΟΜΟΝΗ ΣΤΗΝ ΟΡΟΦΗ ΤΟΥ ΚΑΡΟΥ
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# “ Να περιορίσει την Επισφάλεια κατά την Κατασκευή ”



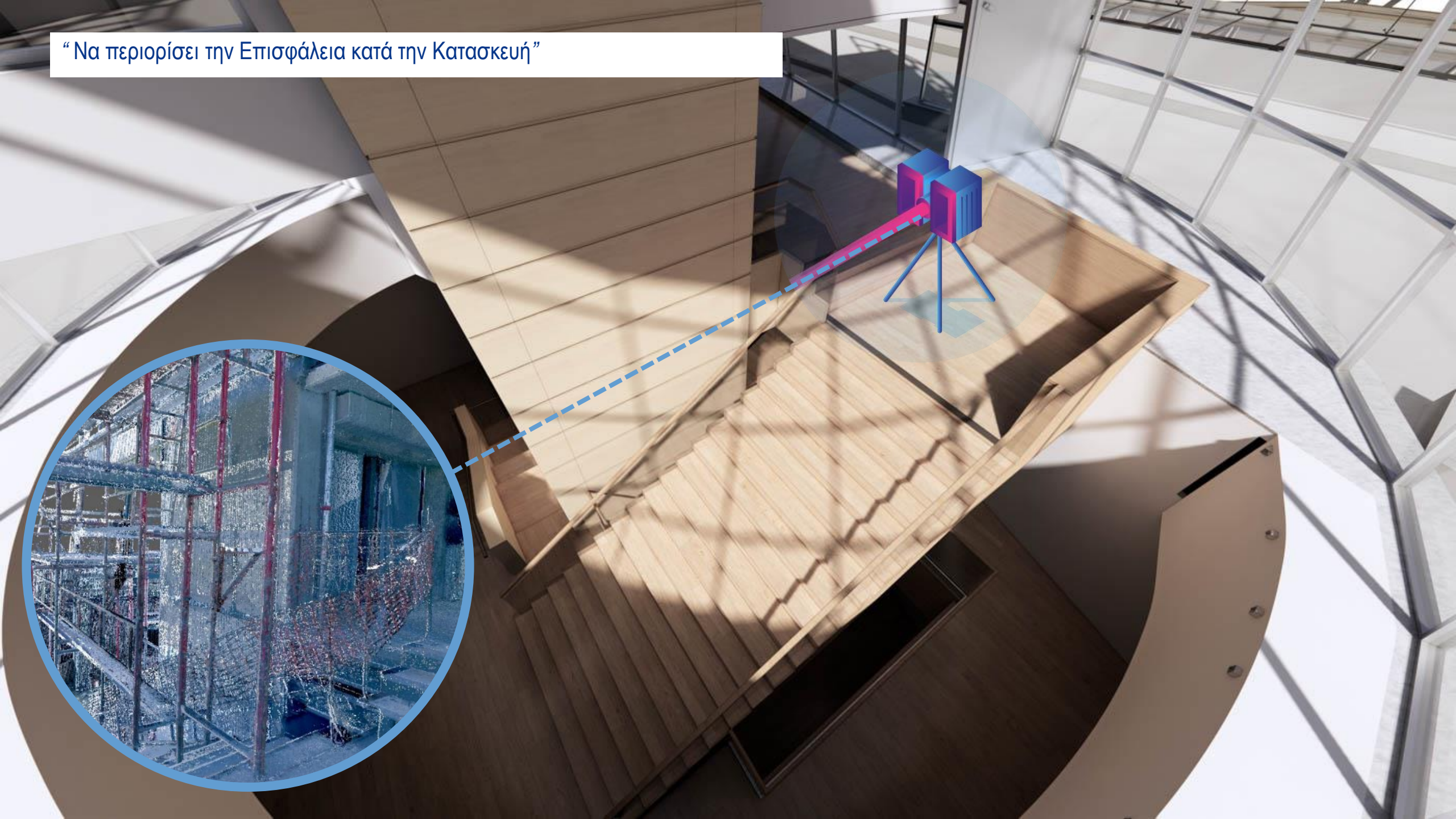
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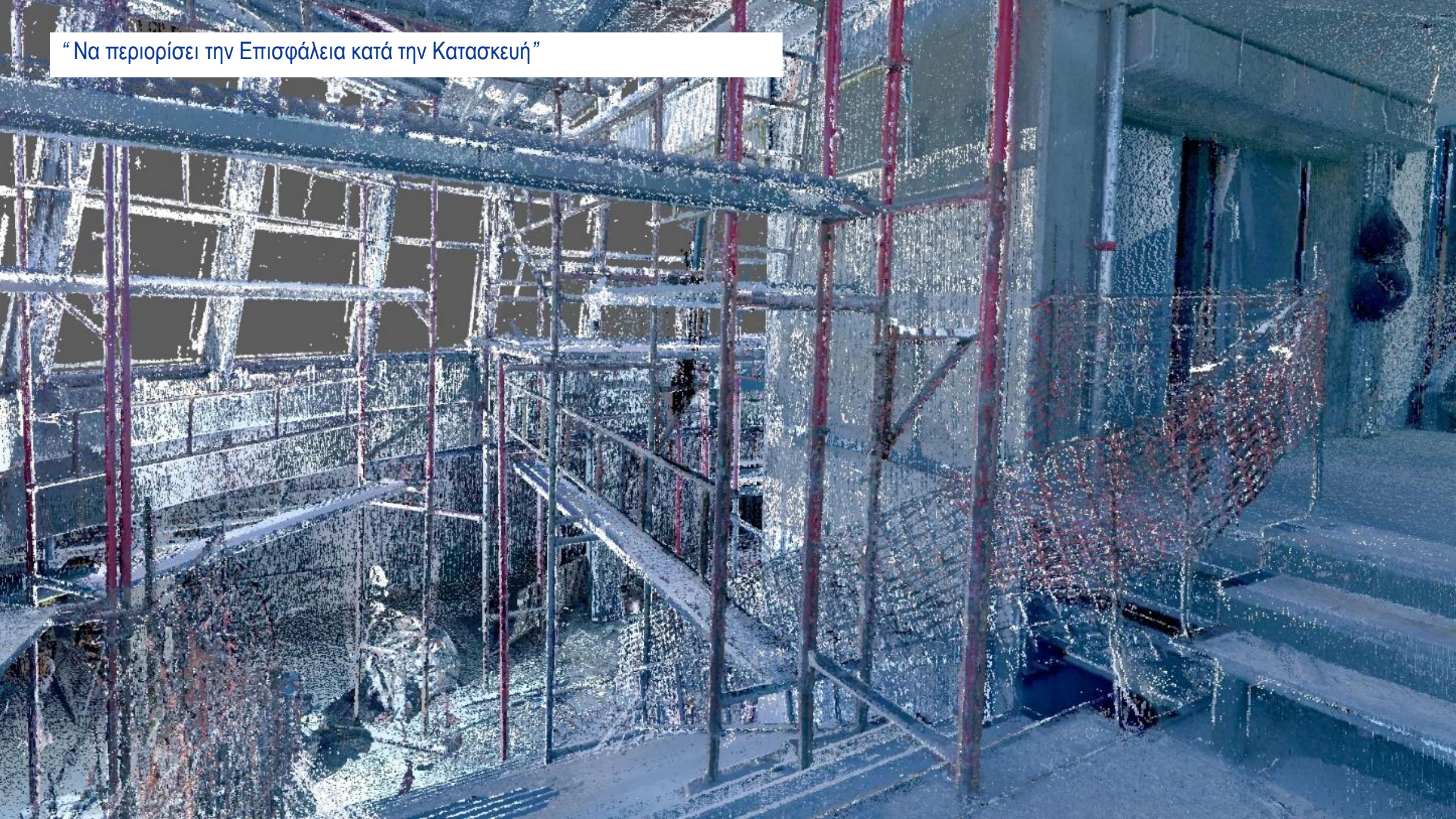


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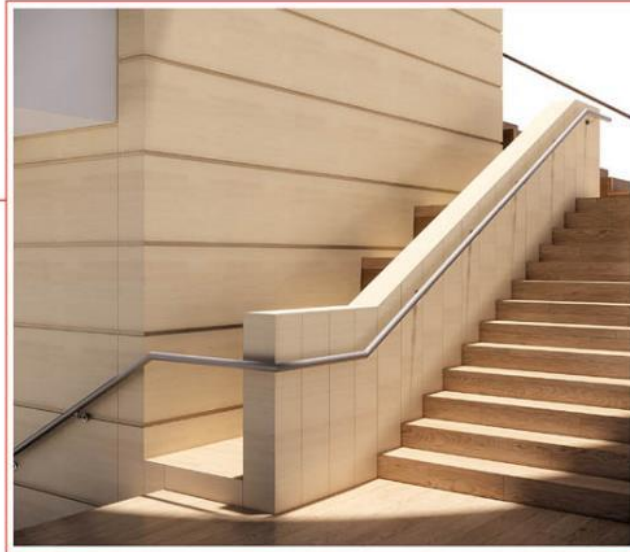


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Ευχαριστούμε!

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