

建築設計安全 (幕牆)

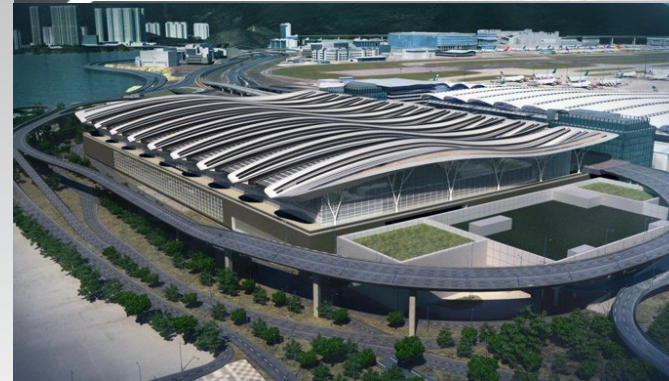
DESIGN FOR SAFETY (FAÇADE)

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19th March 2025

CONTENT

- **RISK**
- **PERMANENT WORKS**
- **TEMPORARY WORKS**
- **CONCLUSION**



Lifting Failure



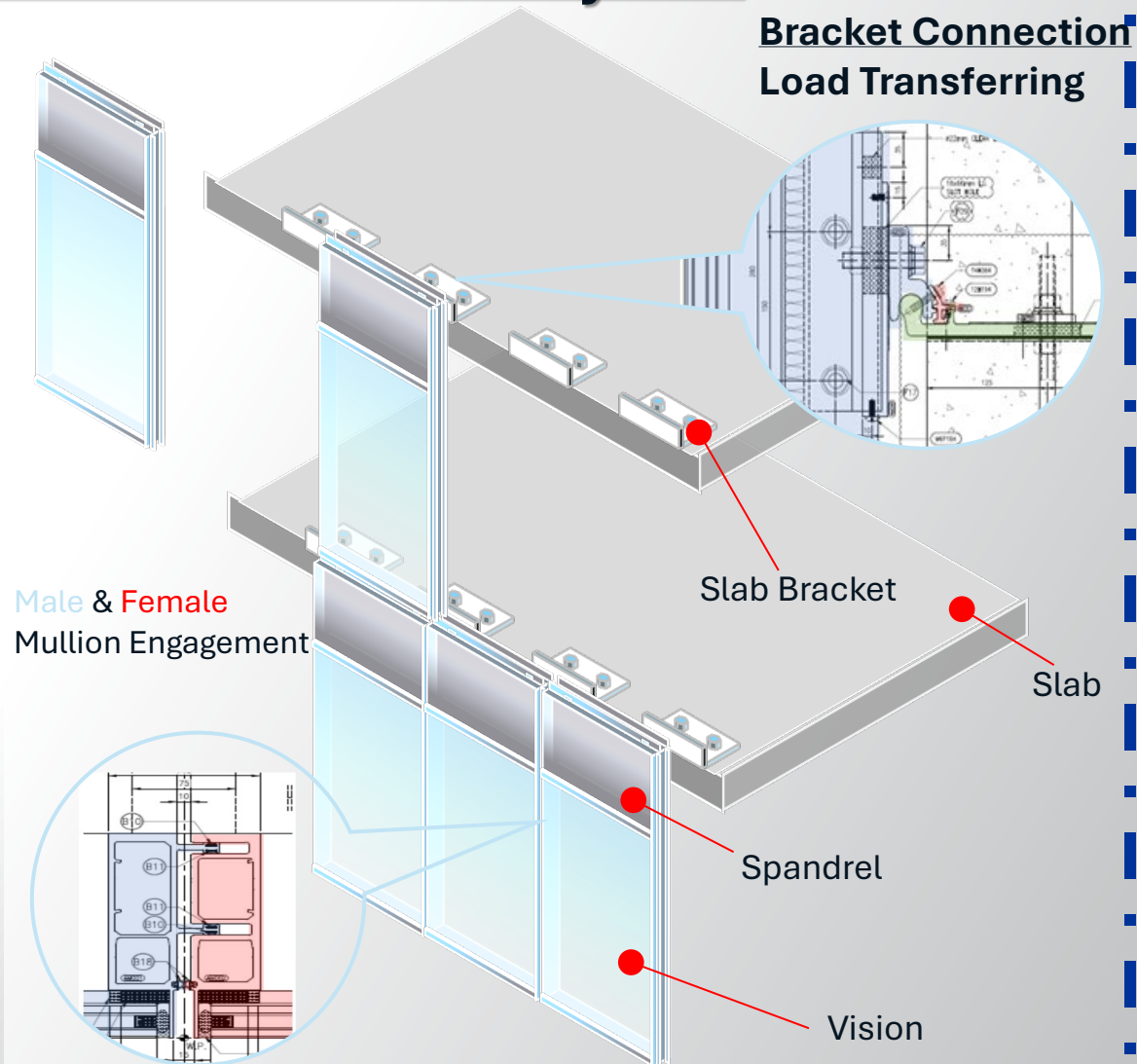
Fall from Height



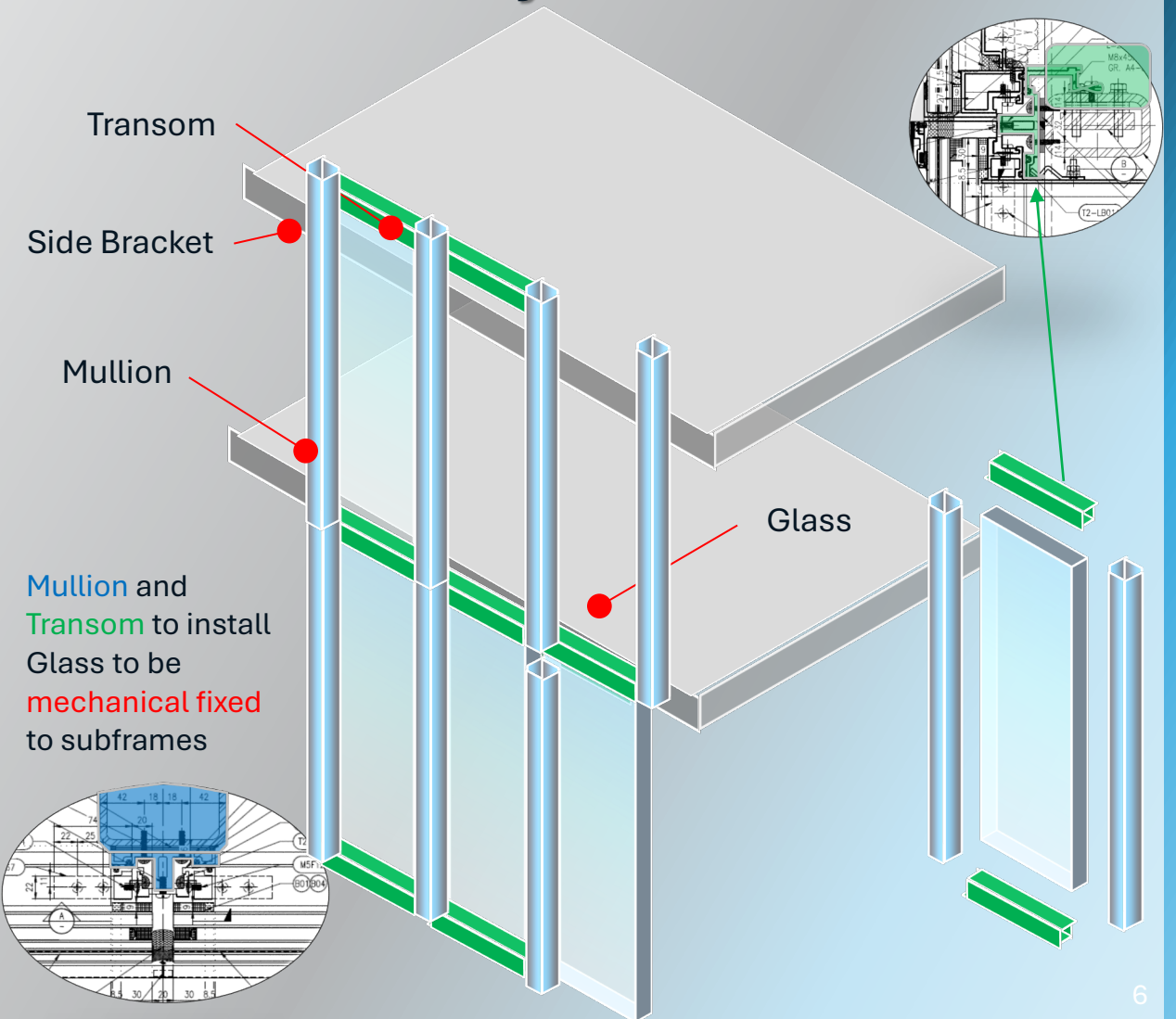
Fire



Unitized Curtain Wall System



Stick Curtain Wall System



Permanent Works

DfMA – ASSEMBLY ON GROUND



Permanent Works

DfMA – BRIDGE w/ CURTAIN WALL



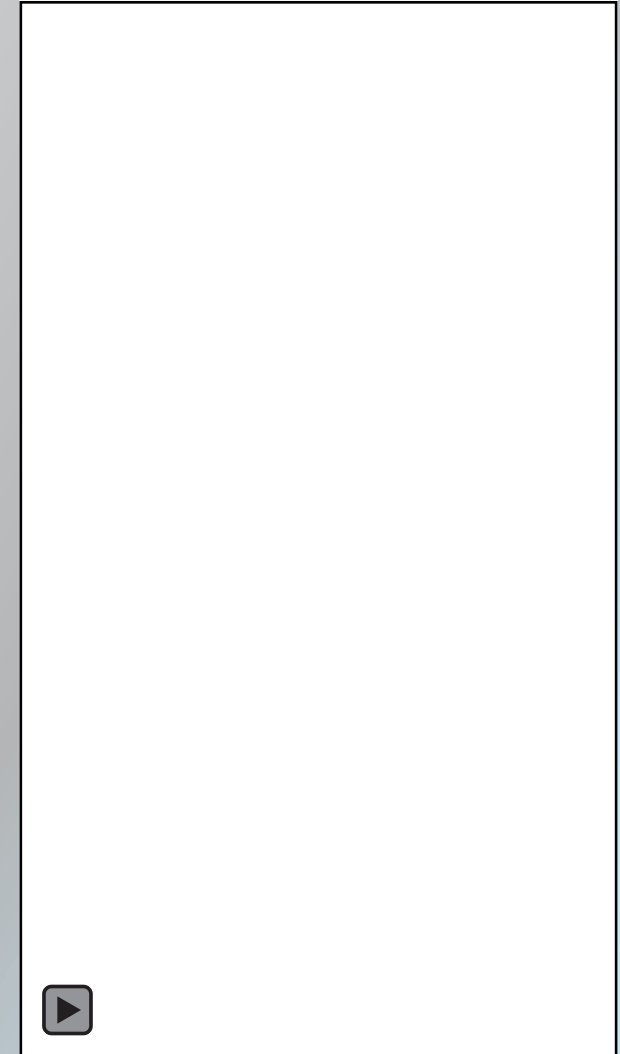
Hoisting the footbridge, together with curtain wall units



Permanent Works

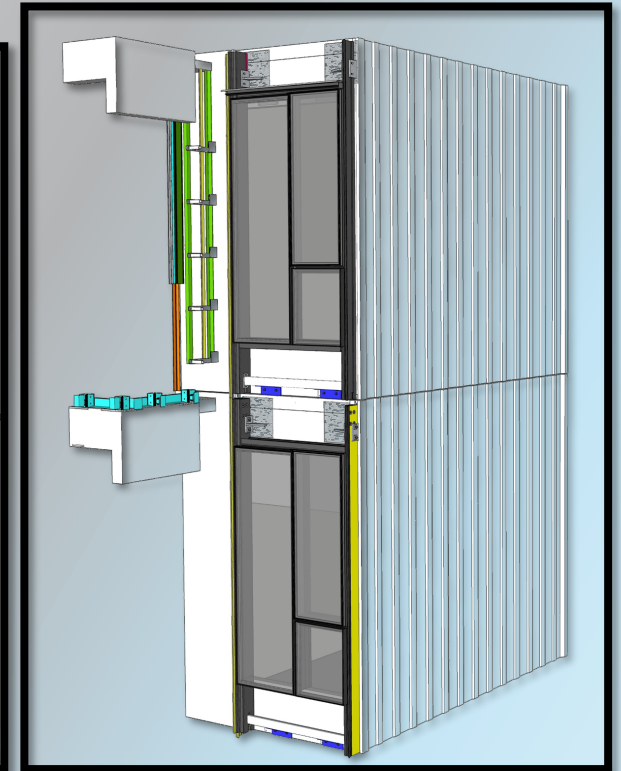
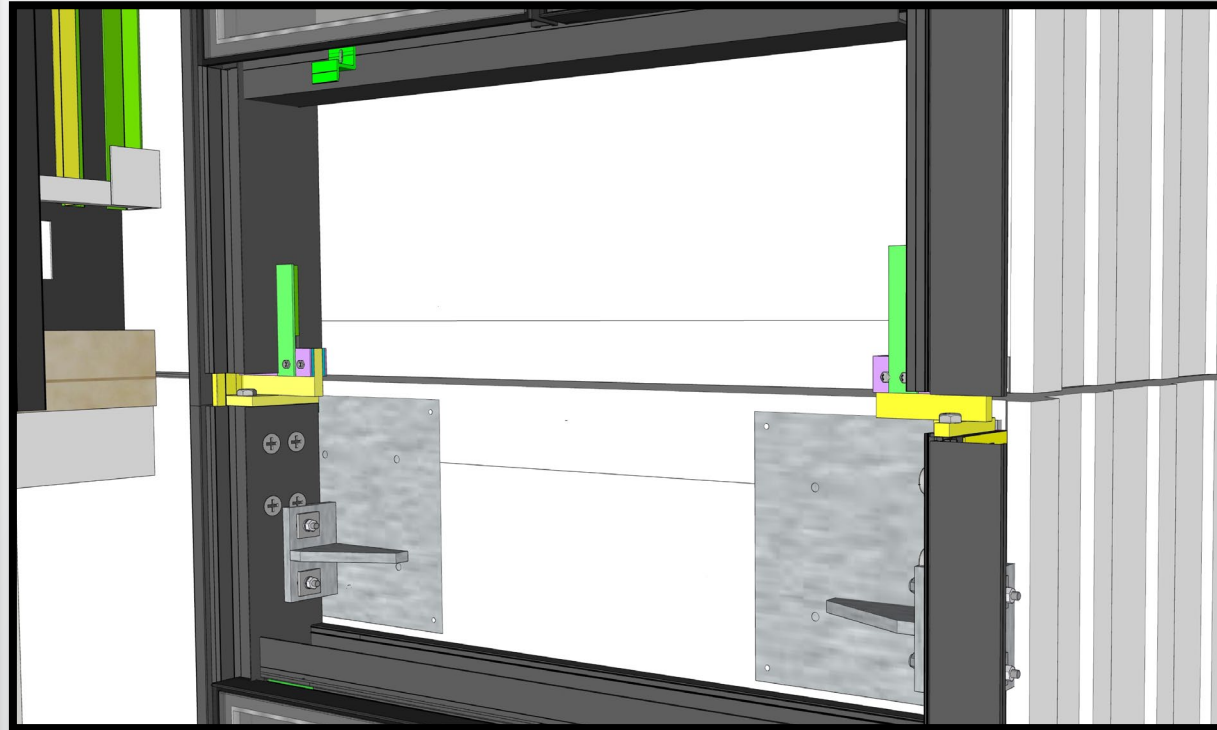
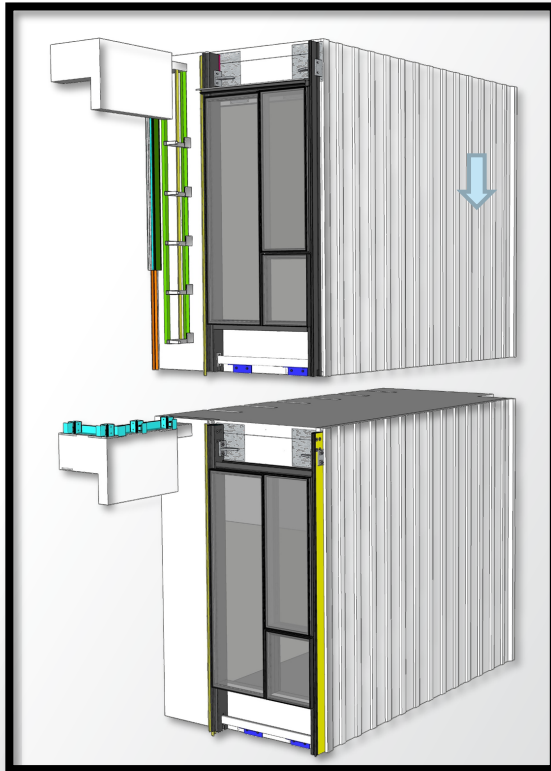
MiC WITH UNITIZED CURTAIN WALL





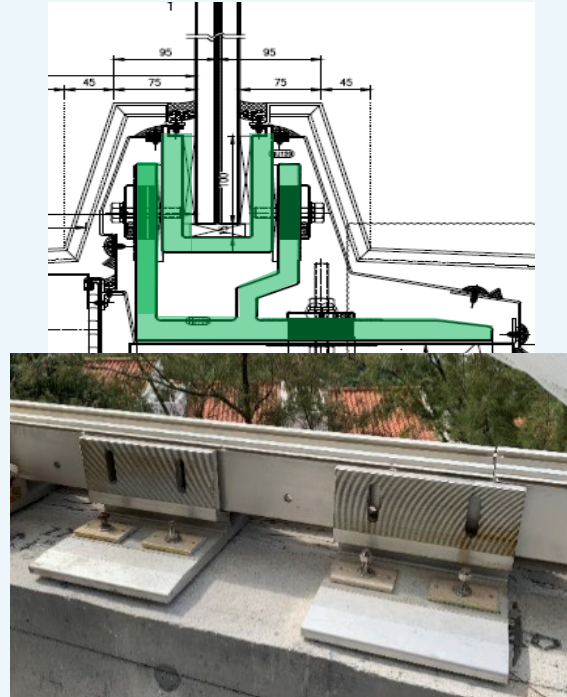
MiC Pre-assembled with Unitized Curtain Wall

- ❖ More works conducted in controlled environment > Higher Quality
- ❖ Less works at site > Safer



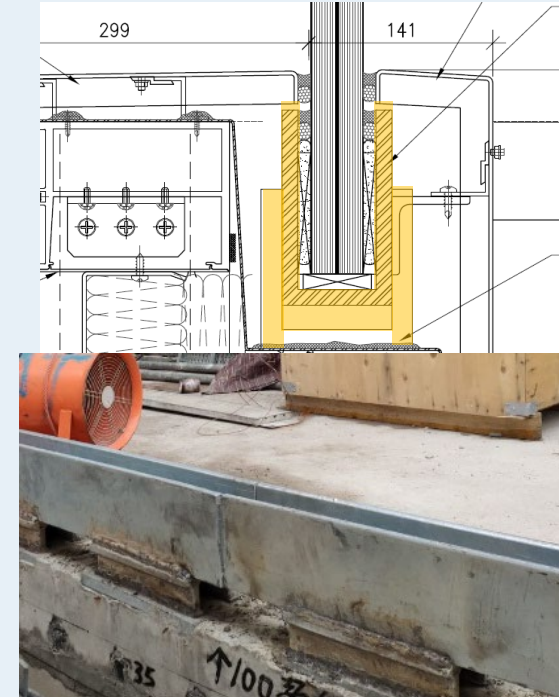
Aluminium Sub-Frame

For HKU Medical Complex Extension
(Design by Entasis)



Steel Sub-Frame

For HKU Medical Complex Extension
(Tender Drawing by Architect & Consultant)



- **0%** Hot Works
- Saving **5%** Total Cost
- Eliminate **Fire Risk**
- Eliminate **Damage by Welding**
- Flexible for **Adjustment**

Design for Safety

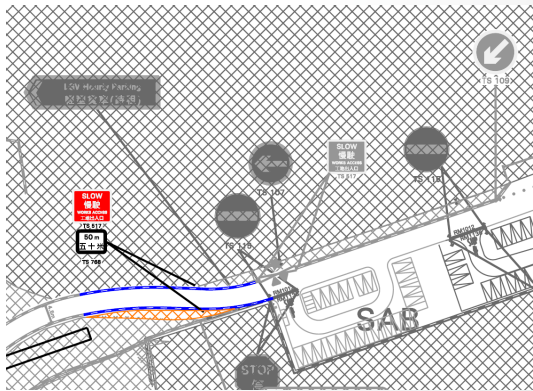
- Change the sub-frame from steel to aluminium.

Permanent Works

ONE TEAM APPROACH



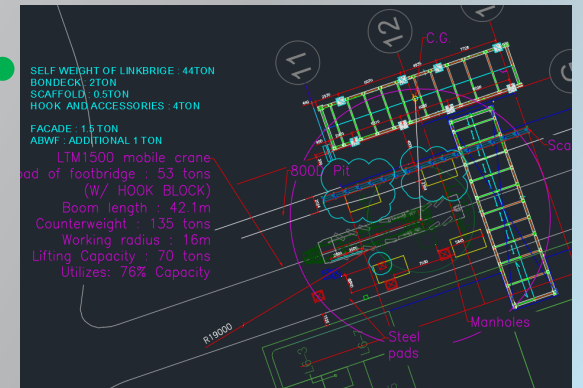
Overall Management



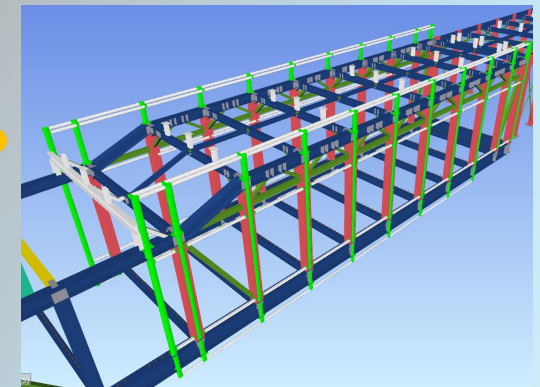
Cleat Pre-assembled



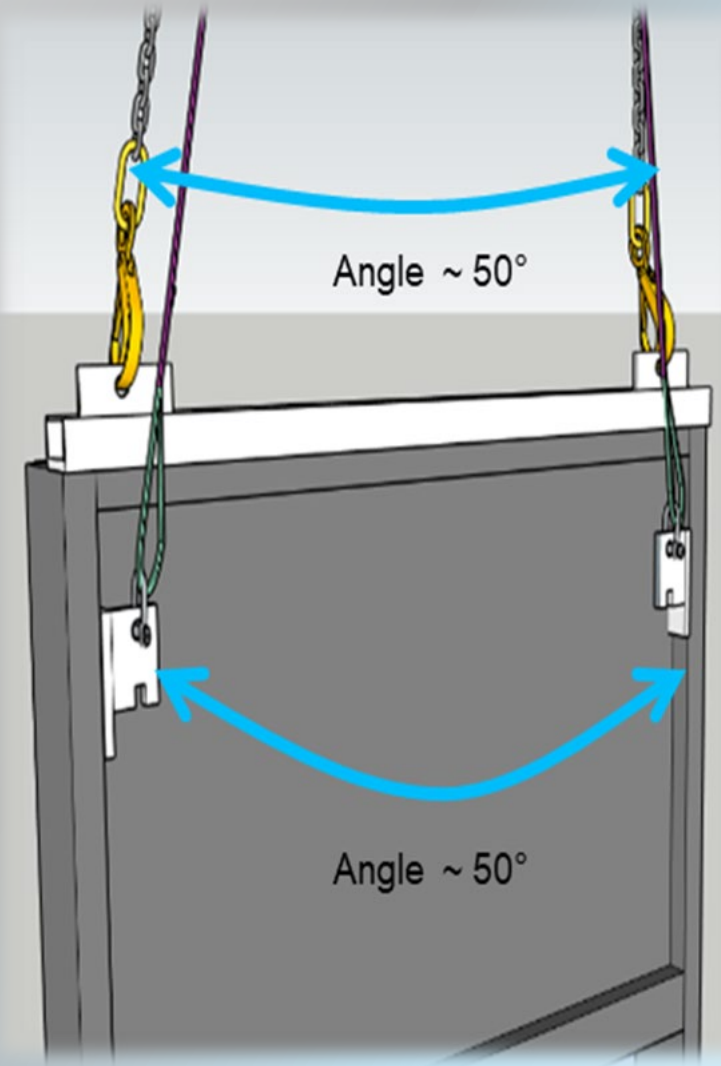
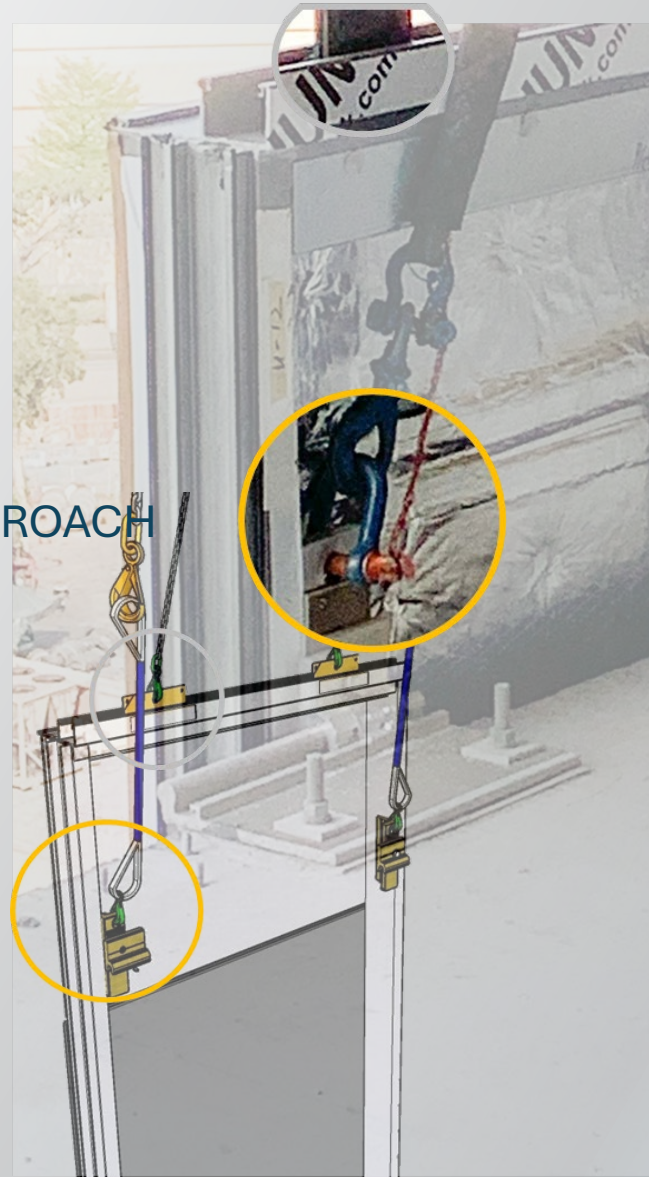
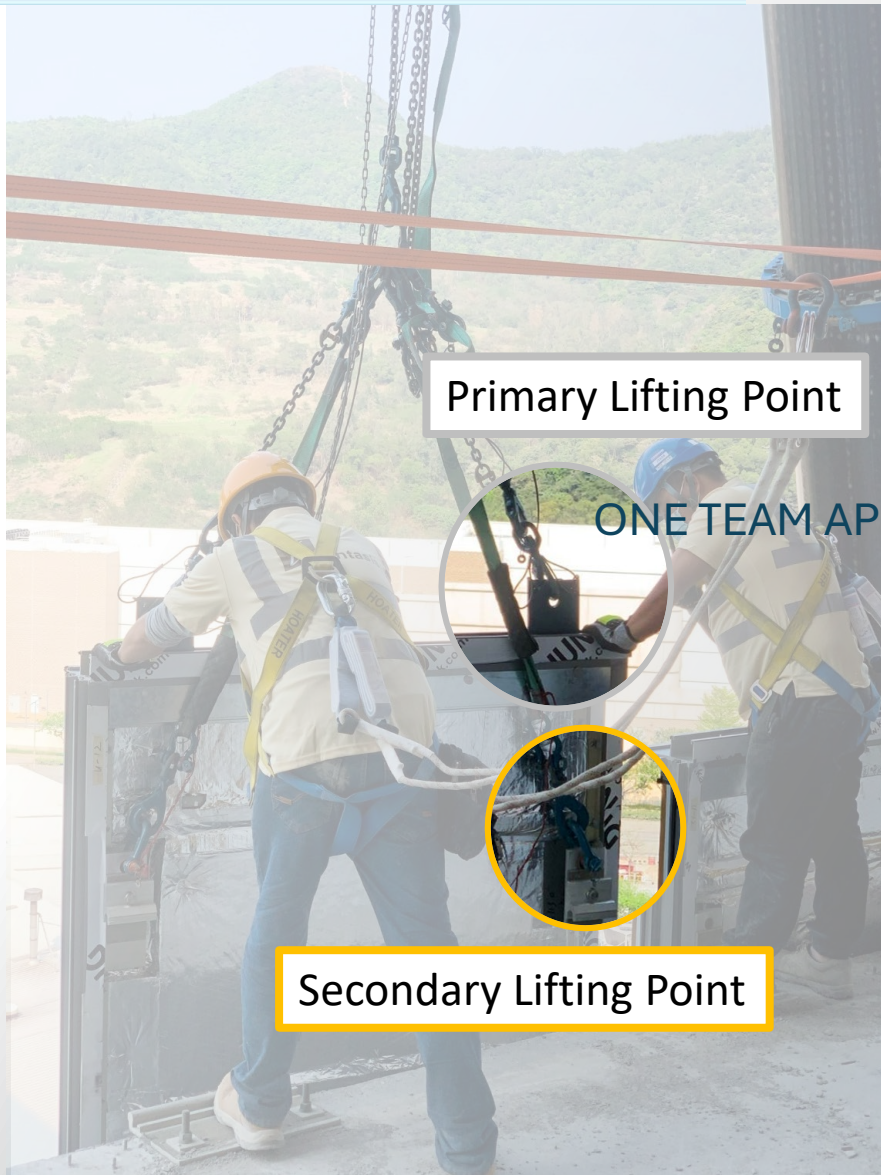
Check for Lifting



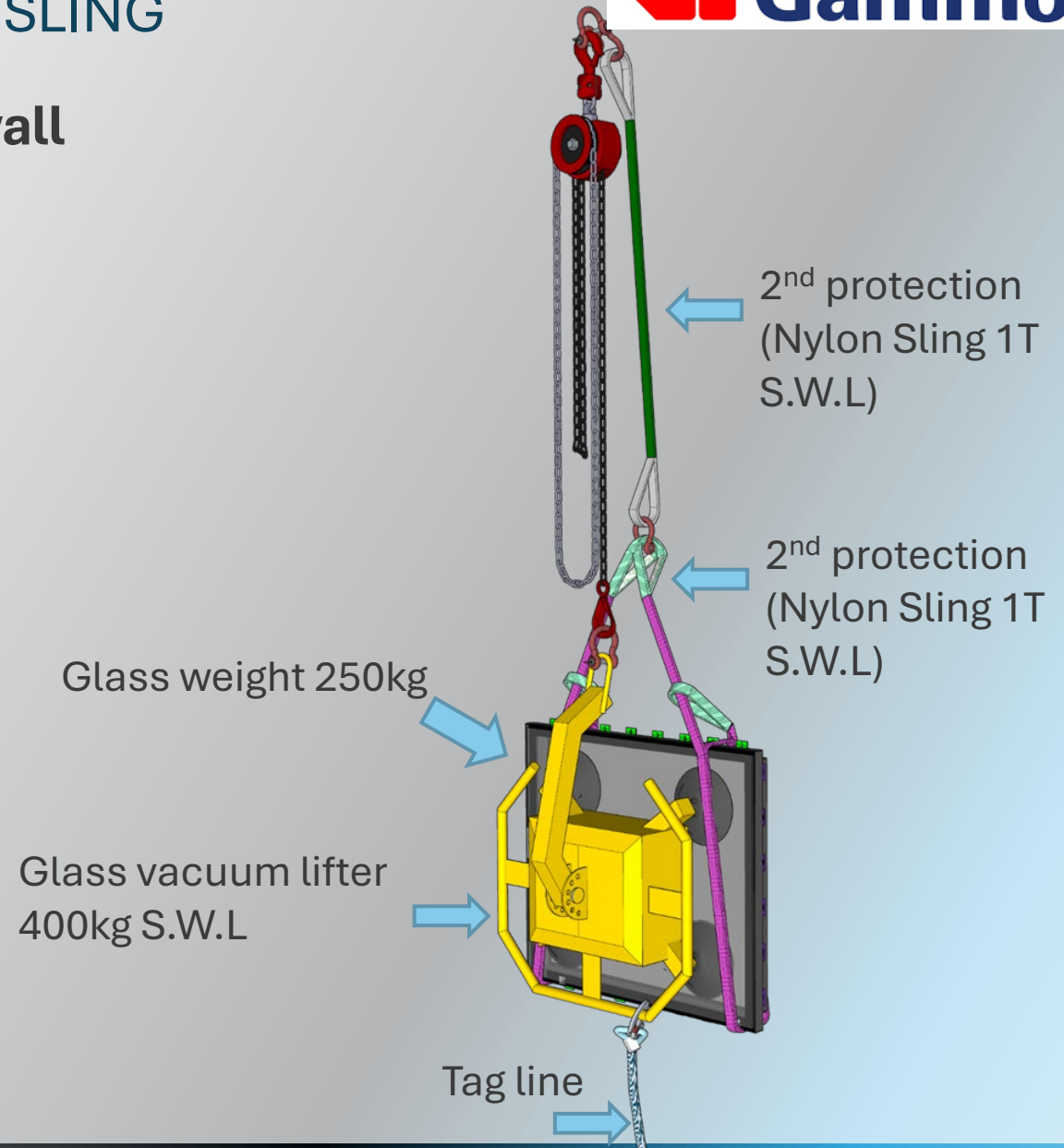
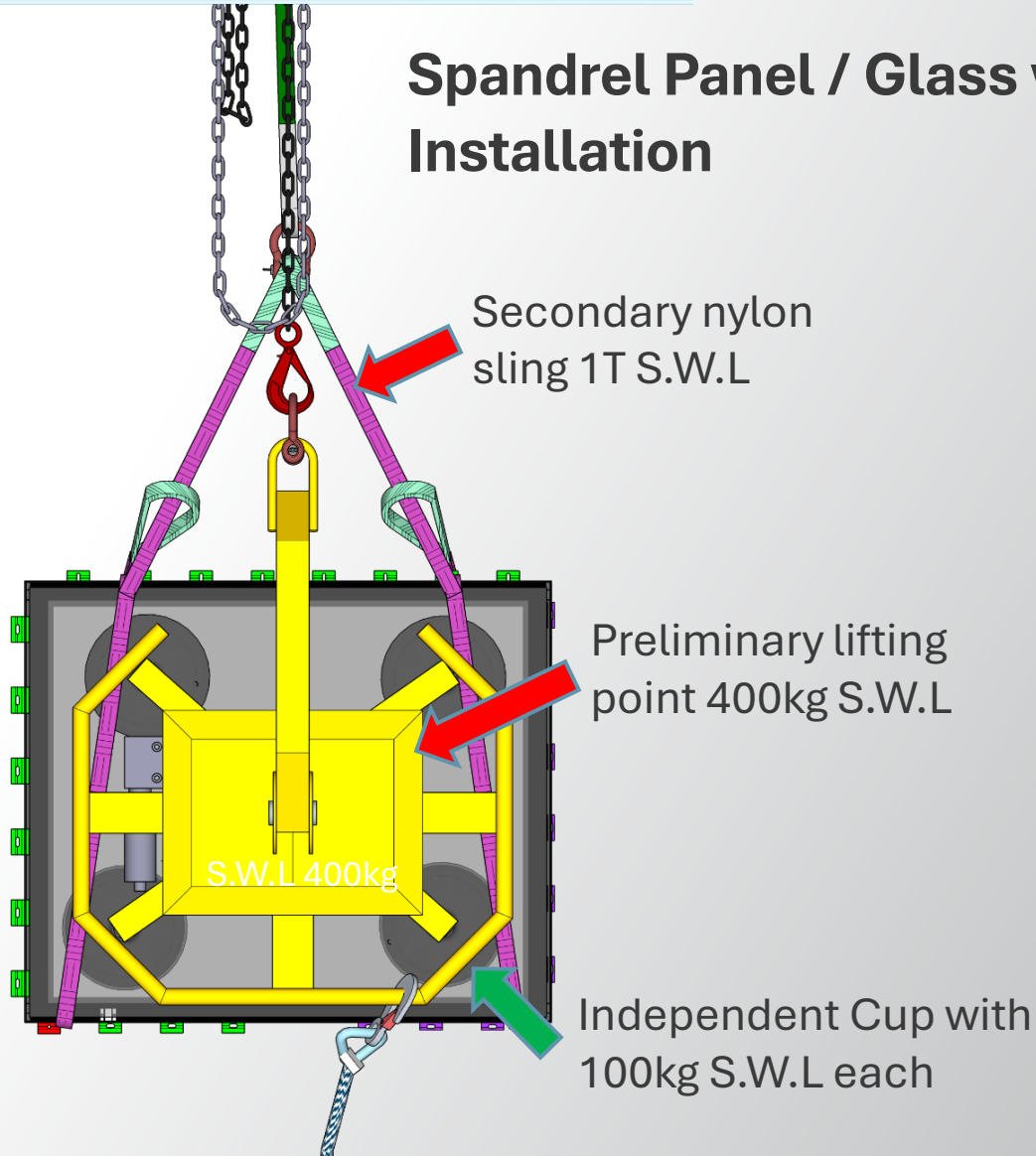
Clash Analysis



SECONDARY SLING



Spandrel Panel / Glass wall Installation





CONCLUSION

Aim for Design for Safety

- **Coordinated Interfaces (avoid abortive works)**
- **Streamlined Sequence of Trades / Works (less risks)**
- **Less Site Works (higher quality / safer)**

- **Safety** ↑
- **Quality** ↑
- **Cost** ↓
- **Time** ↓

THANK YOU!