



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會

Case Sharing of BIM Adoption (Sub-contractors) funded by the CITF

12 February 2026

Case Sharing of BIM Adoption (Sub-contractors)

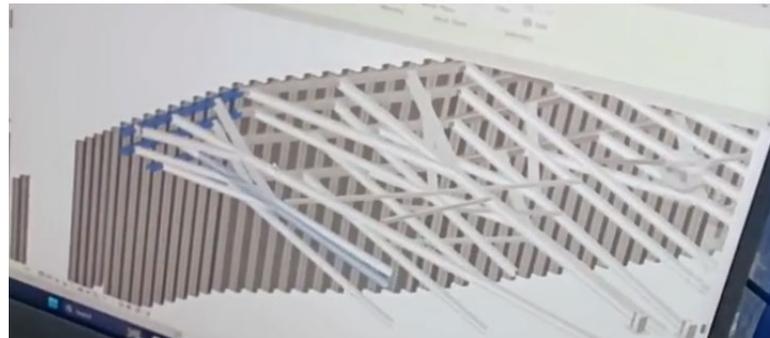
1. Structural and Civil
 - Foundation and Piling
 - Reinforcement Bar Fixing
2. Finishing
 - Gazier work / Curtain wall
 - Marble, Granite and Stone work (Landscaping)
 - Cladding system / Ceiling system
3. E&M
 - Heating, Ventilation and Air-conditioning (HVAC)
 - Fire Services Installation
 - Electrical
 - Plumbing / Building Drainage Installation
 - Multi-trade integrated Mechanical, Electrical and Plumbing



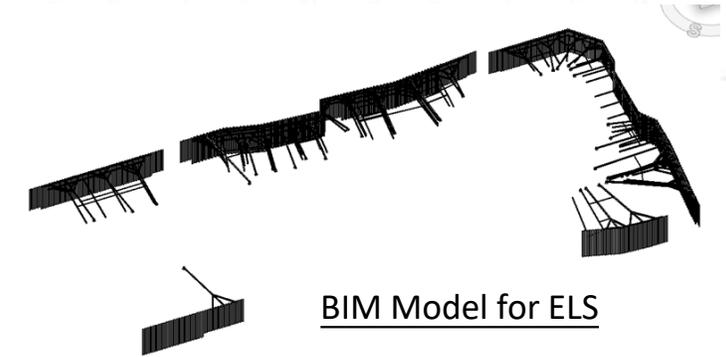
Structural and Civil – Foundation and Piling

Submission ID:	12535
Product:	(PBS18-002) Architecture Engineering & Construction Collection
Site:	Public Housing Development – Tung Chung Area 103
User:	Sub-contractor - Foundation and Piling

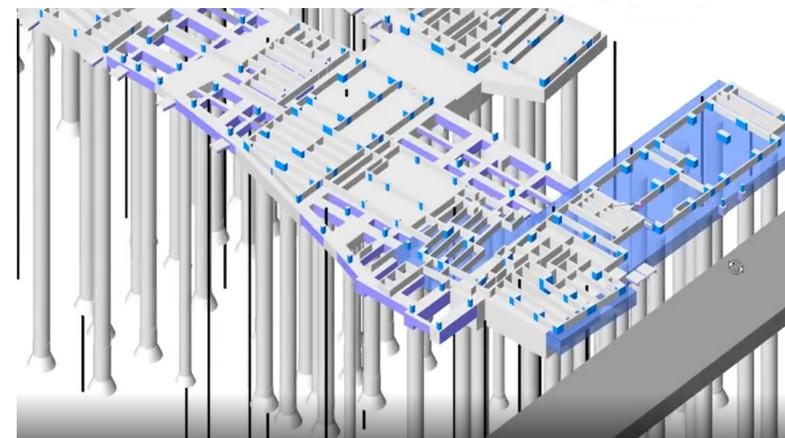
Uses:	Design Authoring, Review, Coordination
Merits:	<ul style="list-style-type: none"> ↑ communication and collaboration between parties. ↑ design efficiency and buildability. ↓ conflict in design stage ↓ abortive work or design change in construction stage



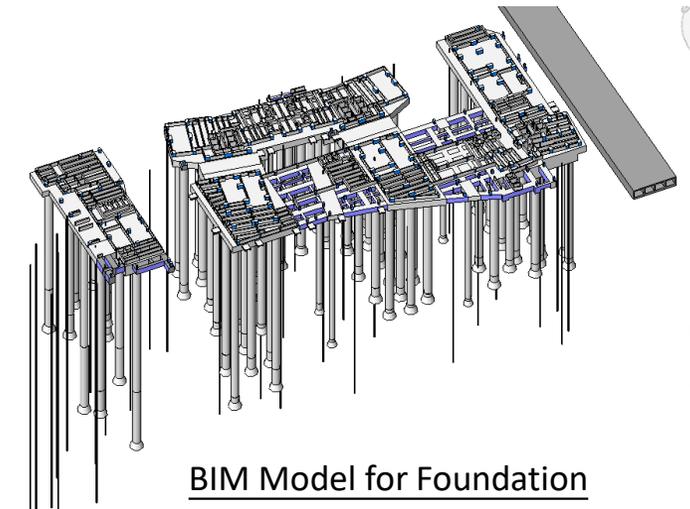
BIM Model for ELS



BIM Model for ELS



BIM Model for Foundation



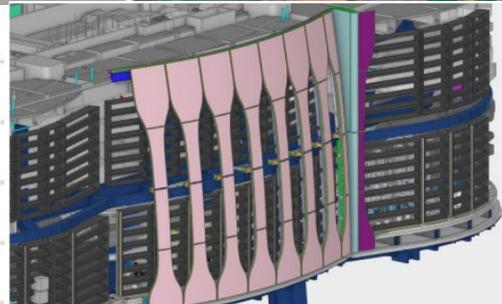
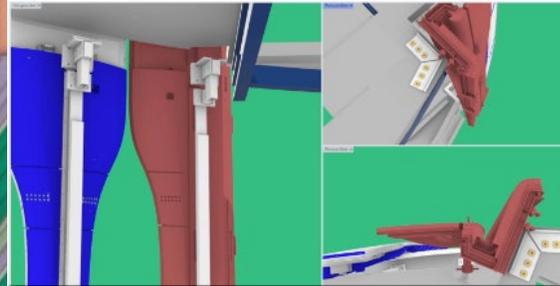
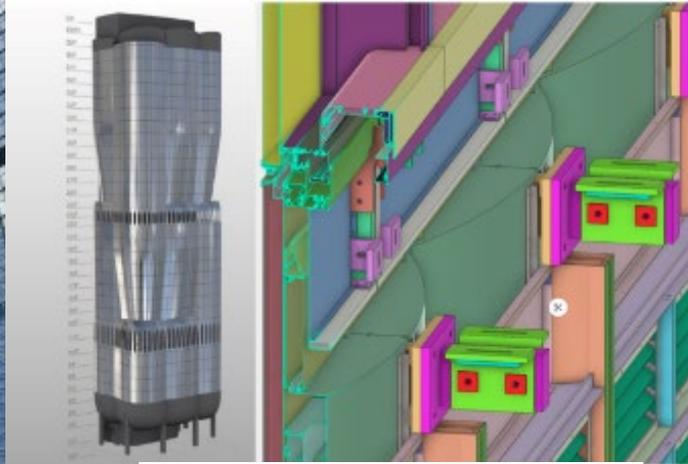
BIM Model for Foundation



Finishing - Gaizer work / Curtain wall

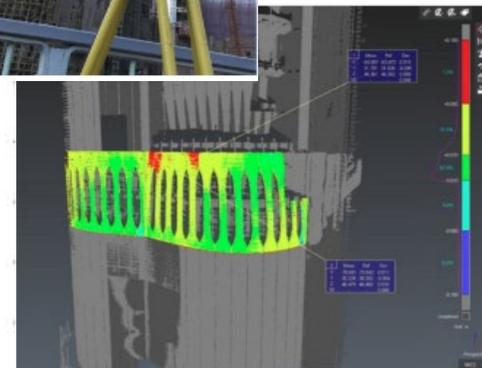
Submission ID:	3949
Product:	(PBS18-002) Architecture Engineering & Construction Collection
Site:	2 Murray Road - The Henderson
User:	Sub-contractor - Gaizer work / Curtain Wall

Uses:	Design Authoring, Review, Coordination, and Installation
Merits:	<ul style="list-style-type: none"> • ↑ efficiency through High-precision BIM models and parameter settings for five-axis CNC machines enable digital manufacturing; • ↑ accuracy and assembly quality through on-site laser surveying and simulating operation sequences in the BIM model tests installation feasibility, helping operators plan effectively • ↓ human errors in fully automated production processes.



Precision in BIM model enable advanced manufacturing through automated production process

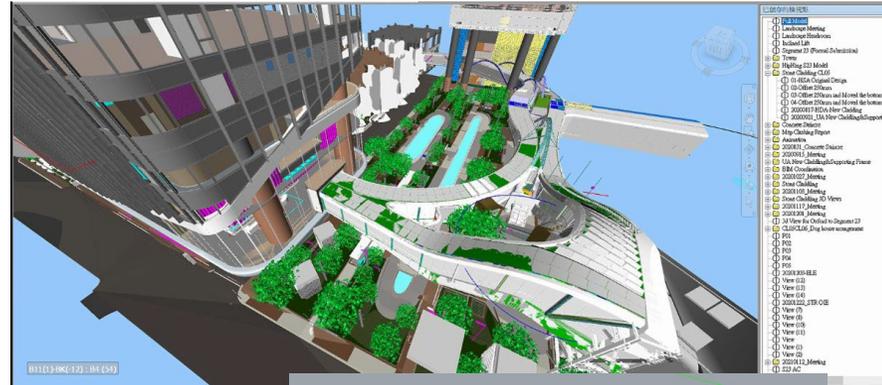
Laser 3D Scan and coordination in BIM model that enable accurate assembly



Finishing – Marble, Granite and Stone work (Landscaping)

Submission ID:	3951
Product:	(PBS18-002) Architecture Engineering & Construction Collection and Rhino 6
Site:	Taikoo Place, Quarry Bay
User:	Sub-contractor - Marble, Granite and Stone work (Landscaping)

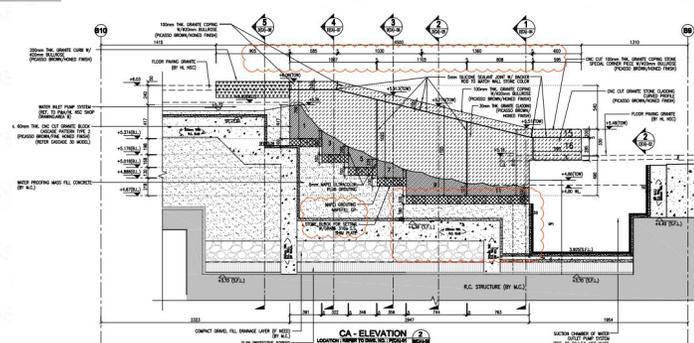
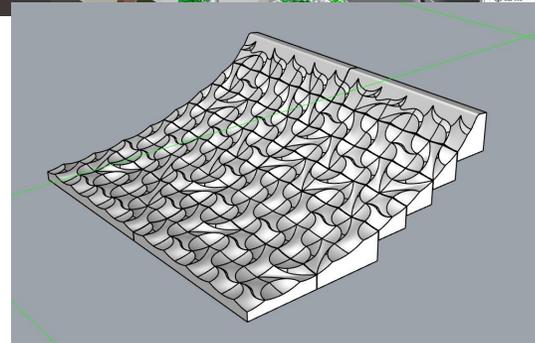
Uses:	Design Authoring, Review, Coordination and Drawing Generation
Merits:	<ul style="list-style-type: none"> ↑ efficiency, drawing production time has reduced by 38%. ↑ coordination. Reduce visual blind spots in the 2D drawings, strengthen quality control, and minimize mistakes.



Level	Walls	Type	Width	Height	Type Part
GF	134	1900W x 2000H	1900.0	2000.0	GL-095
GF	135	1600W x 2000H	1600.0	2000.0	GL-076
GF	136	1600W x 2000H	1600.0	2000.0	GL-076
GF	137	1600W x 2000H	1600.0	2000.0	GL-076
GF	138	1600W x 2000H	1600.0	2000.0	GL-076
GF	139	1600W x 2000H	1600.0	2000.0	GL-076
GF	140	1600W x 2000H	1600.0	2000.0	GL-076
GF	141	1600W x 2000H	1600.0	2000.0	GL-076
GF	142	1600W x 2000H	1600.0	2000.0	GL-076
GF	143	1600W x 2000H	1600.0	2000.0	GL-076
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Design authoring of complex geometry and interfaces



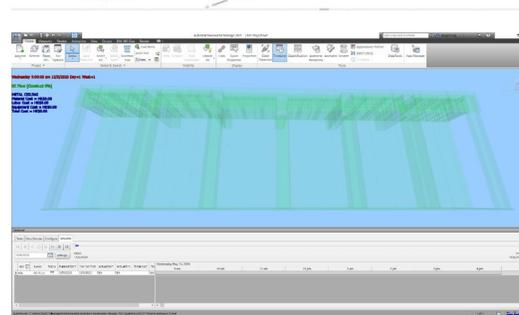
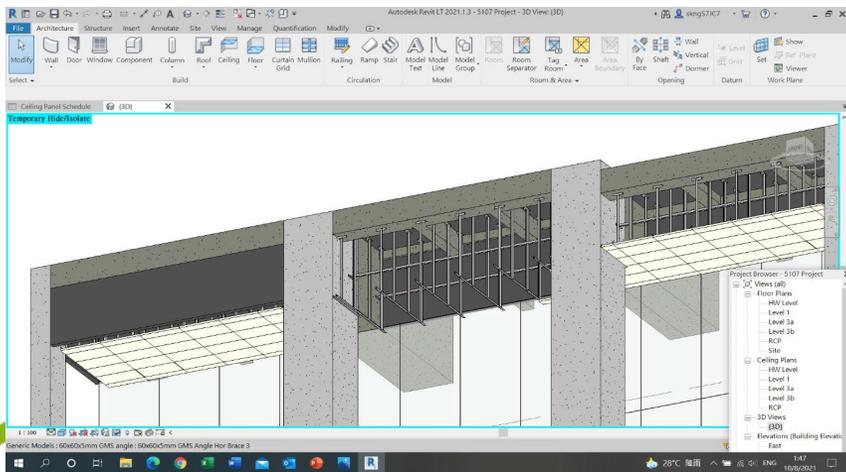
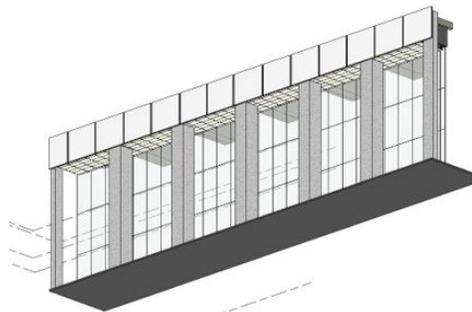
Drawing Generation and Coordination



Finishing – Cladding System / Ceiling System

Submission ID:	5488
Product:	(PBS18-002) Architecture Engineering & Construction Collection
Site:	New Private Teaching Hospital at Chinese University of Hong Kong, Shatin
User:	Sub-contractor – Cladding system / Ceiling system

Uses:	Design Coordination, Drawing Generation, Cost Estimation (Quantity take-off)
Merits:	<ul style="list-style-type: none"> ↑ efficiency and accuracy through BIM quantity take-off ↑ coordination and ↓ wastage of non-standard shaped ceiling panel data for factory manufacturing from BIM model



Autodesk Revit LT 2021.1.3 - 5107 Project - Schedule: Ceiling Panel Schedule

File Architecture Structure Insert Annotate Site View Manage Quantification Modify

Modify Wall Door Window Component Columns Roof Ceiling Floor Curtain Mullion Grid Railing Ramp Stair Model Text Line Model Group Room Room Separator Room Tag Room Area Area Bounds

Select Build Circulation Model Room & Area

Ceiling Panel Schedule X

Family and Type	Panel Length	Panel Width	Cutout Length	Cutout Width	Area	Count
left trimmed ceiling panel: left trimmed ceiling panel 1	1200	600	1100	100	0.81 m ²	1
right trimmed ceiling panel: right trimmed ceiling panel 4	1200	600	930	100	0.63 m ²	1
right trimmed ceiling panel: right trimmed ceiling panel 3	1200	600	850	100	0.64 m ²	1
left trimmed ceiling panel: left trimmed ceiling panel 2	1200	600	830	100	0.64 m ²	1
right trimmed ceiling panel: right trimmed ceiling panel 2	1200	600	770	100	0.64 m ²	1
left trimmed ceiling panel: left trimmed ceiling panel 3	1200	600	760	100	0.65 m ²	1
left trimmed ceiling panel: left trimmed ceiling panel 4	1200	600	670	100	0.65 m ²	1
right trimmed ceiling panel: right trimmed ceiling panel 1	1200	600	560	100	0.67 m ²	1
left trimmed ceiling panel: left trimmed ceiling panel 5	1200	600	400	100	0.68 m ²	1
ceiling access panel: Access Panel 600x820	820	600			0.49 m ²	1
ceiling access panel: Access Panel 600x1200	1200	600			3.60 m ²	5
ceiling panel: Ceiling Panel 235x820	820	235			0.19 m ²	1
ceiling panel: Ceiling Panel 235x1200	1200	235			11.00 m ²	39
ceiling panel: Ceiling Panel 300x100	100	300			0.03 m ²	1
ceiling panel: Ceiling Panel 300x270	270	300			0.08 m ²	1
ceiling panel: Ceiling Panel 300x350	350	300			0.11 m ²	1
ceiling panel: Ceiling Panel 300x370	370	300			0.11 m ²	1
ceiling panel: Ceiling Panel 300x430	430	300			0.13 m ²	1
ceiling panel: Ceiling Panel 300x450	450	300			0.14 m ²	1
ceiling panel: Ceiling Panel 300x530	530	300			0.16 m ²	1
ceiling panel: Ceiling Panel 300x700	700	300			0.21 m ²	1
ceiling panel: Ceiling Panel 300x800	800	300			0.24 m ²	1
ceiling panel: Ceiling Panel 300x820	820	300			0.25 m ²	1
ceiling panel: Ceiling Panel 300x1200	1200	300			10.44 m ²	29
ceiling panel: Ceiling Panel 500x1200	1200	500			0.60 m ²	1
ceiling panel: Ceiling Panel 600x100	100	600			0.12 m ²	2
ceiling panel: Ceiling Panel 600x270	270	600			0.32 m ²	2
ceiling panel: Ceiling Panel 600x350	350	600			0.42 m ²	2
ceiling panel: Ceiling Panel 600x370	370	600			0.44 m ²	2
ceiling panel: Ceiling Panel 600x430	430	600			0.52 m ²	2
ceiling panel: Ceiling Panel 600x450	450	600			0.54 m ²	2
ceiling panel: Ceiling Panel 600x530	530	600			0.64 m ²	2

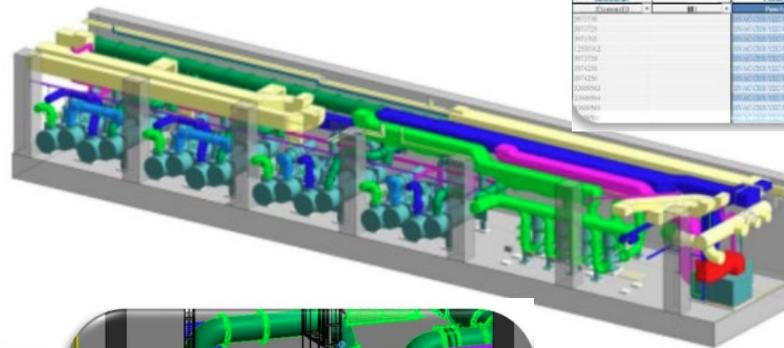
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Design coordination, Drawing Generation and Quantity take off through BIM model

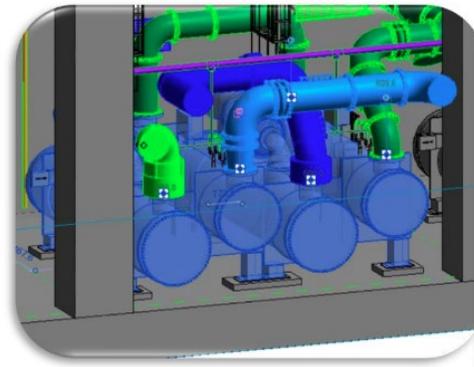
E&M – Heating, Ventilation and Air-conditioning (HVAC)

Submission ID:	4441
Product:	1. (PBS19-009) MagiCAD for Revit (Support and Hanger Module) 2. (PBS19-011) RushForth Tools for Revit
Site:	District Cooling System at Kai Tak Development Phase III (Package D) – E & M Installation
User:	Sub-contractor - E&M (HVAC)

Use:	Design Authoring, Review, Coordination, Drawing Generation and Installation
Merits:	<ul style="list-style-type: none"> • ↑ design efficiency with easy visualisation and checking of site constraints • ↑ assembly efficiency through installation simulation and standardization of parts with high traceability • ↓ material wastage through high percentage of prefabricication



Element Identification	Element Name	Element Description	Element Asset Code	Element Asset Tag No.	Element Plant	Element Manufacturer	Element Manufacturer Code	Element Model No.	Element Weight
00101	DUCT	DUCT	DCS-0400000308						
00102	DUCT	DUCT	DCS-0400000308						
00103	DUCT	DUCT	DCS-0400000308						
00104	DUCT	DUCT	DCS-0400000308						
00105	DUCT	DUCT	DCS-0400000308						
00106	DUCT	DUCT	DCS-0400000308						
00107	DUCT	DUCT	DCS-0400000308						
00108	DUCT	DUCT	DCS-0400000308						
00109	DUCT	DUCT	DCS-0400000308						
00110	DUCT	DUCT	DCS-0400000308						



EMSD.Common.Acquisition V...	
EMSD.Common.Asset Code	KC-DCS-S-B02-HVAC-CHR-0011
EMSD.Common.Asset Relation...	
EMSD.Common.Asset Tag No.	DCS-0400000308
EMSD.Common.Authorization ...	
EMSD.Common.CCS Equipme...	
EMSD.Common.Customer Wa...	
EMSD.Common.Customer Wa...	
EMSD.Common.Division	
EMSD.Common.Equipment No.	
EMSD.Common.Floor	B02
EMSD.Common.Functional Lo...	
EMSD.Common.Grouped Equi...	
EMSD.Common.Inventory No.	
EMSD.Common.Main Work Ce...	
EMSD.Common.Onsite Verifie...	
EMSD.Common.Partner ID	
EMSD.Common.Photo	
EMSD.Common.Plant Section	
EMSD.Common.Serial No.	
EMSD.Common.Start-up Date	
EMSD.Common.Technical ID ...	
EMSD.Common.Technical ID ...	
EMSD.Common.Vendor Warra...	
EMSD.Common.Vendor Warra...	
EMSD.Common.Zone Tag No.	DCS-B02-000063
EMSD.HVAC.Equipment Locati...	

Analysis	MSD.HVAC.Cooling Capacity	17585.00000 kW
Data	EMSD.Common.Catalog Profile	
	EMSD.Common.Construction Type	
	EMSD.Common.Currency	
	EMSD.Common.Documentation	
	EMSD.Common.Equipment Descriptio	
	EMSD.Common.Manufacturer	Carrier
	EMSD.Common.Manufacturer Countr	PRC
	EMSD.Common.Model No.	19XR-C6FC67720TK8 / 19XR-C66C67730TK
	EMSD.Common.Planner Group	
	EMSD.Common.Weight	137000 kg
	EMSD.HVAC.Compressor	Centrifugal
	EMSD.HVAC.Configuration	Package unit
	EMSD.HVAC.Equipment Type	Seawater-cooled
	EMSD.HVAC.Make	Carrier
	EMSD.HVAC.Refrigerant	R-134A
	EMSD.HVAC.Temperature Range	
	EMSD.HVAC.VSD	<input checked="" type="checkbox"/>

Improved design efficiency through 3D visualization in BIM model

Drawing generation from 3D BIM model



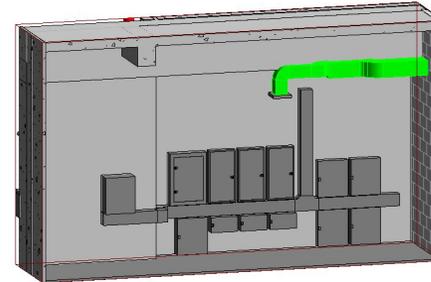
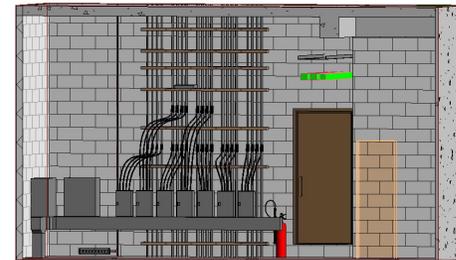
E&M – Electrical

Submission ID:	4280
Product:	(PBS18-002) Architecture Engineering & Construction Collection
Site:	Immigration Headquarters in Tseung Kwun O
User:	Sub-contractor – E&M (Electrical)

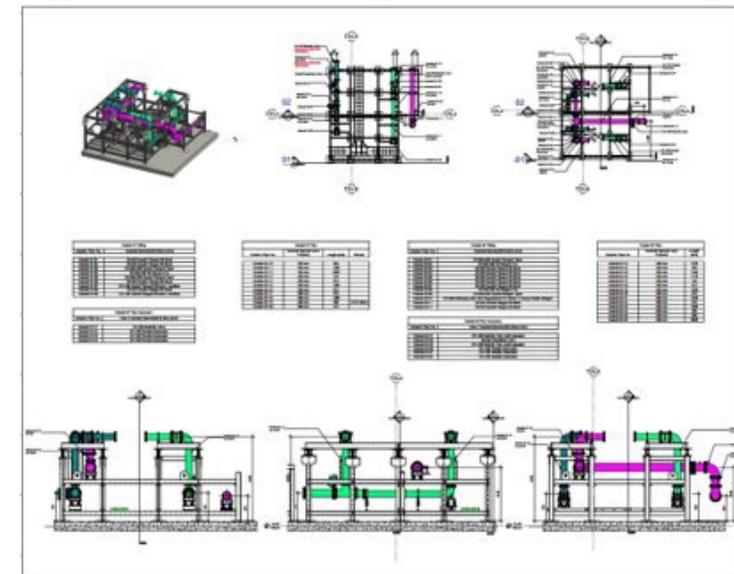
Uses:	Design Authoring, Review, Coordination, Drawing Generation and Installation
Merits:	<ul style="list-style-type: none"> • ↑ coordination with design walk-through, clash analysis / spool drawings generation • ↑ accuracy and ↓ error through standardisation using object library



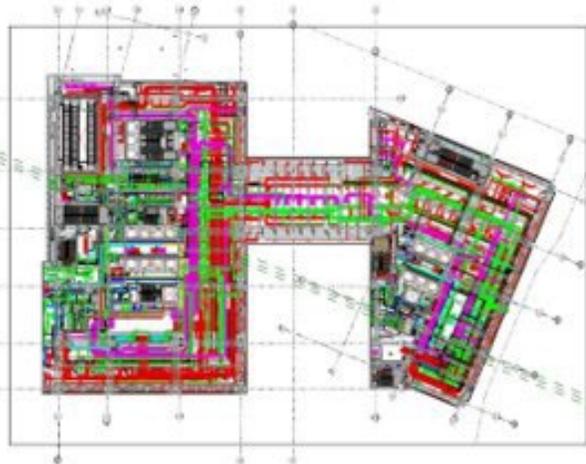
Design coordination, design walk-through, clash analysis and coordination in BIM model



Use of standardized BIM object



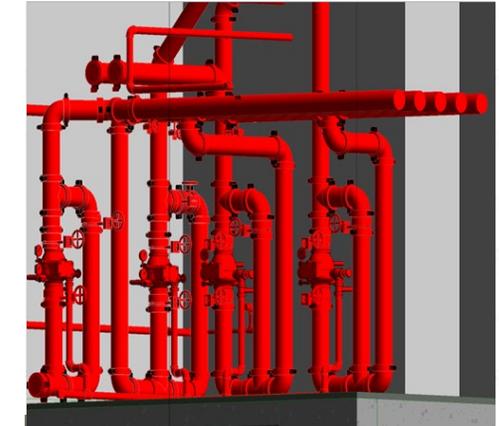
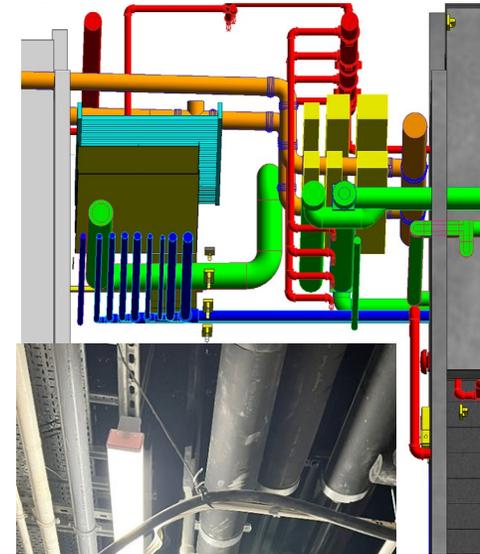
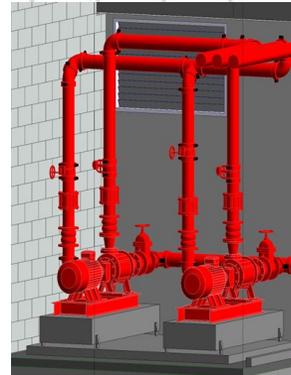
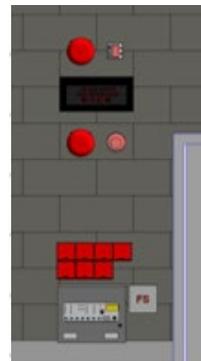
Drawing generation from BIM Model



E&M – Fire Services Installation

Submission ID:	6729
Product:	(PBS18-002) Architecture Engineering & Construction Collection
Site:	T.W.T.L 428 Ma Kok Street, Tsuen Wan
User:	Sub-contractor (Fire Services Installation)

Uses:	Design authoring, Review, and Coordination
Merits:	<ul style="list-style-type: none"> ↑ productivity and time saving through good preparation before construction ↑ quality through pre-identify conflicts in the overall design ↓ 83% time in exporting data into reports makes processing easier compared to traditional method.



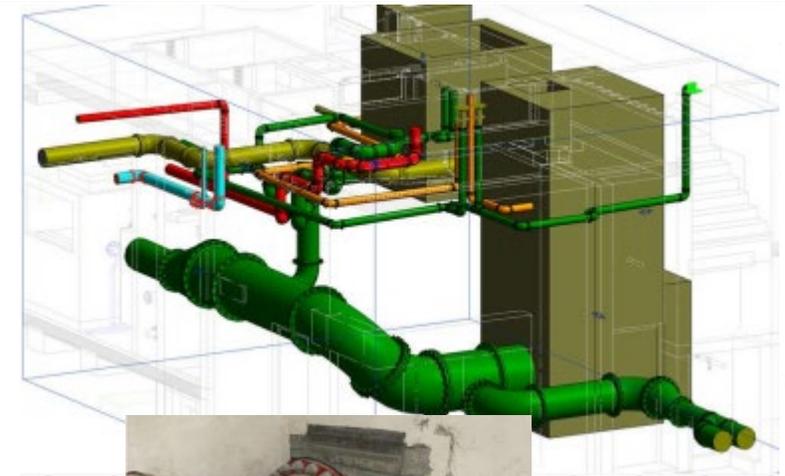
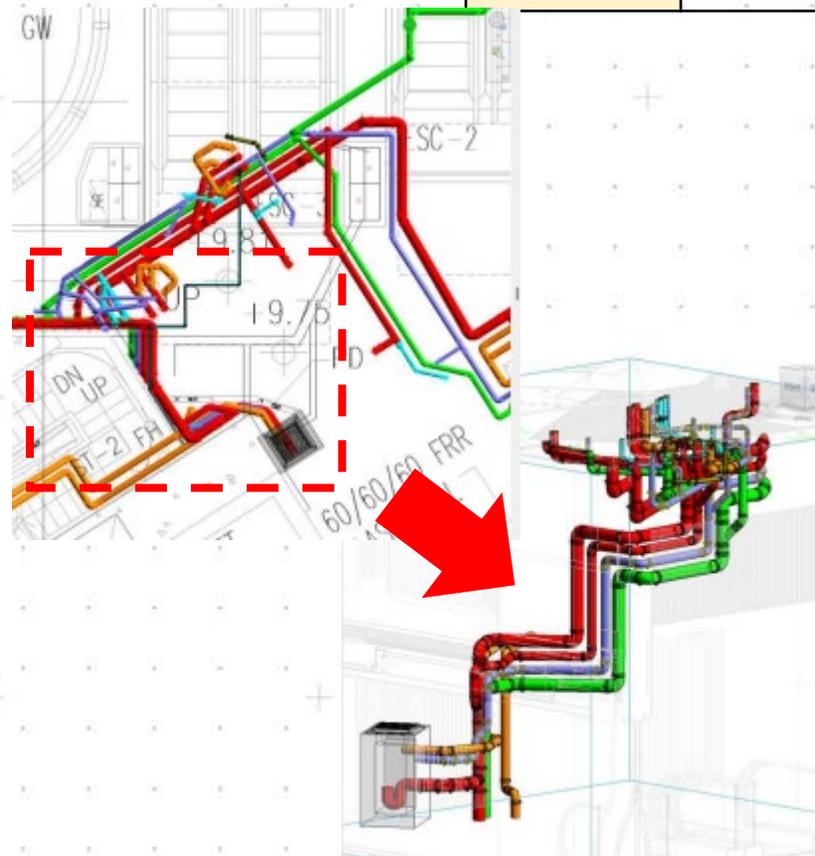
BIM design and completed works



E&M – Plumbing / Building Drainage Installation

Submission ID:	8314
Product:	(PBS18-003) AutoCAD Revit LT Suite
Site:	NKIL 6551, KAI TAK AREA 4C, SITE 3, KOWLOON
User:	Sub-contractor – E&M (Plumbing)

Uses:	Design authoring, Review, and Coordination
Merits:	<ul style="list-style-type: none"> • ↑20-30% Productivity, Standard databases such as COBie format to simplify information input in construction supervision and ensure consistency across teams and reduce human errors • ↓ re-work through cconflict analysis and real-time QC



Simulation through BIM Model before on-site Installation

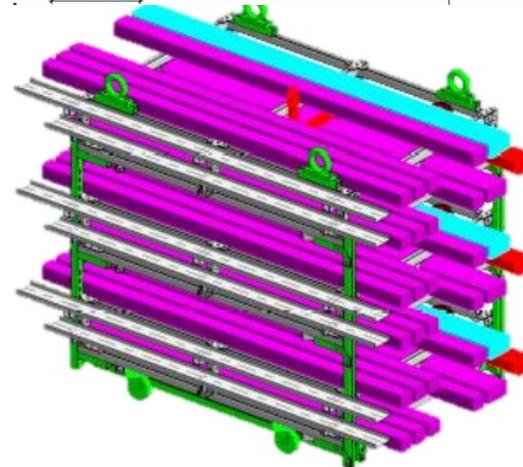
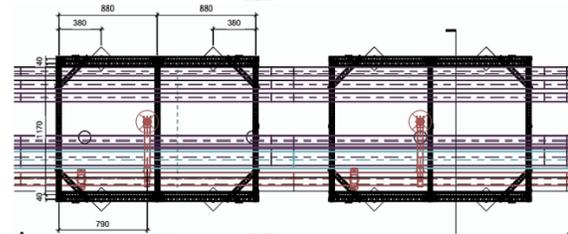
Conflict analysis in BIM model



E&M – Multi-trade integrated Mechanical, Electrical and Plumbing

Submission ID:	15604
Product:	(PBS18-002) Architecture Engineering & Construction Collection
Site:	Legislative Council Complex
User:	Sub-contractor (E&M)

Uses:	Design authoring, Review, Coordination, Drawing Generation and Manufacturing
Merits:	<ul style="list-style-type: none"> • BIM Model integrates multi-disciplinary models, visualizing the structural details that enables design development • Off-site prefabricated manufacturing based on BIM model. • Quality Inspection by using AR with BIM Model



Visualisation of BIM model



4D Modelling for visualizing construction method



Fabrication Drawing from BIM Model



Inspection of as-built with BIM model design in AR

