

# **BIM PORTFOLIO (2022)**

JEFF SHAM CHUN FAI

# ACADEMIC QUALIFICATIONS

- Project Management Professional Training (2022)
- Certified NEC Professional Training, Engineering Contract (2021)
- Certificate Computational Intelligence and Operational Water Management (2017)
- Master of Science in Environmental Engineering (2012)
- Bachelor of Engineering in Mechanical Engineering (2006)
- Higher diploma in Mechanical Engineering (2003)

# PROFESSIONAL QUALIFICATION

- Engineers Australia (2021)
- Hong Kong Institution of Engineers (2018)
- Institution of Mechanical Engineers (2017)

# BIM RELATED EDUCATION

- Advanced Certificate in BIM MEP (2022)
- Professional Certificate for Building Information Modelling (BIM) Manager (2021)

# BIM EXPERIENCE

- Contract No. DE/2018/04 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 E&M Works for Sewage Treatment Facilities (2021 - 2022)
- Hong Kong International Airport (P561) North Commercial District Enabling Works & (C3801) APM and BHS Tunnel on Existing Airport Island (2017 - 2019)
- Hong Kong International Airport Midfield Concourse Work (P533), Design, Supply, Installation, Test and Commissioning of Sewage Treatment Plant (2013-2016)

# CORE COMPETENCE - BIM INITIATION

- Uses of BIM improve the life cycle and workflow in my design and build project
- For enhancement of DSD Shek Wu Hui Sewage Treatment Works
- Following CIC Standard, ISO19650 and DSD BIM standard.
- Manage to design the MEP, for instance, bioreactor and filtration system, and 3D civil works requirements,
- For instance, openings, plinths and corbels, with aid of Revit 3D modeling, design reviews, coordination and verification among internal engineering teams, RSS, external civil teams and DSD client.
- With visualizing envelop of overhead crane movement pathways, the design from different parties can avoid potential clash on crane during design and coordination.
- By using BIM schedule, concluded for civil parties with the quantity of required features for construction plan and monitoring.

# CORE COMPETENCE - BIM SOFTWARE AND TECHNOLOGIES

- Revit: Revit is widely used in MEP projects for design review, drawing generation, spatial coordination, 3D planning, 3D construction coordination and asset information modelling and modeler resource is secured.
- Navisworks Manage: For clash analysis, combining Navisworks Cache files (.nwc) and generation of Navisworks Document files (.nwd) for design reviews.
- Navisworks Freedom: To navigate 3D models in .nwd, invite stakeholder's opinions in design reviews, design authoring and spatial coordination.
- BIM 360 Docs: It is a cloud based common data environment (CDE) to centralize, store and manage project information throughout the project lifecycle for design review, checking and validation. it also offers model preview in web browser.
- Collaboration Pro: It allows multidiscipline collaboration in most updated models to avoid misalignment by Revit Cloud Sharing.
- AutoCAD: To convert the 3D model in Standard for the Exchange of Product Data (.step) to Revit compatible format.
- Fuzor: To conduct virtual reality (VR) Walkthrough and quickly grab the idea of the model.

# CORE COMPETENCE - BIM USES AND PROCESSES

- Establish BIM Execution Plan based on requirement
- BIM uses in design, subcontracting, procurement, construction stage, and later-on test and commissioning stage and handover stage.
- Generate the preliminary MEP arrangement model, develop the design through frequent verifications, reviews, discussions, coordination and meetings with assistance of BIM uses.
- Consume the most updated structural model from civil team, and link to individual civil work requirements model with showing the void of slab openings, wall openings and recess.
- Design engineer can easily justify the openings and recess with comparison of latest MEP model and structural model, and publish it to civil team for their review.
- Civil team can further consume the model and make comment on the same model with timely, precise and accurate information delivered.
- Assessment of maintenance delivery path in 2D drawing, by 4D modeling.
- Use 4D video to show the delivery method and pathway for the equipment to sort out the potential hazard and examine the feasibility.
- The following slides will show the BIM uses in my experience.



# CORE COMPETENCE - INFORMATION MANAGEMENT

- The digital information, for instance, the 3D model, 4D video, VR execution files, 2D drawing submission, execution plan, are stored in CDE via regular workflow.
- Every weekend, I have managed to upload the update the digital information to CDE to share them to client and external co-working team.
- The CDE is fully compatible with our Revit and collaboration pro, extended application, for instance, synchronization to WIP, share, publish and consume, preview and trace of change, transmittal, sharing by link, recording deliverables, distribution of information, generating logs and report.
- Interoperability could be found in interfacing with external civil team, where they design
- underground services by Civil 3D apart from our Revit, but we could request them to convert their model to .nwc format and we could integrate with our .nwc and generate a .nwd for further visual analysis or clash analysis.
- Terrain is common in our project, which is .dtm, they could convert them to .ifc via civil 3D and make inter operable.
- We would exchange our converted files through CDE in folder specified for each team and usage with folder name of upload date and would send notification email via CDE to avoid losing information.
- I also manage for data quality control workflow, which generate the schedule of family critical parameter in excel format, for instance, family name, type name, size parameter, material, level, quantity, and check against with the design engineer to make sure the input parameter is correct and further ensure the model is correctly built and enable consecutive 2D drawing generation.

# CORE COMPETENCE - COMMERCIAL AND CONTRACTUAL ASPECT

- BIM allows group design review and problem-solving for outstanding solution located either inperson meeting room or online meeting room, it precisely and accurately presents the design information during collaboration which enhance the efficiency and discussion atmosphere with minimizing discrepancy in perception. With better collaboration, abortive works not only highly reduced, but more cost-effective solution also explored. Risk and hazard can be visualized, perceived, predicted, minimized and controlled with aid of BIM uses and by engineering and safety professionals.
- BIM and CDE supposed to be accurate and reliable, however may initiate risk in potential contractual claim once the information incorrect, misleading or outdated. DWSS or blockchain application may be necessary for documentation of submission process. Client and other stakeholder should secure this issue in kick off meeting and project execution plan, further regular interfacing meeting to sort out the information system faults and induced contractual issue.

# CORE COMPETENCE - COMMUNICATION SKILLS

- Biweekly inter-contract task group meeting and monthly BIM project coordination
- Presentation to client
- Listen and clarify the client's questions and requirements, and suggest technical advice
- BIM coordination and review



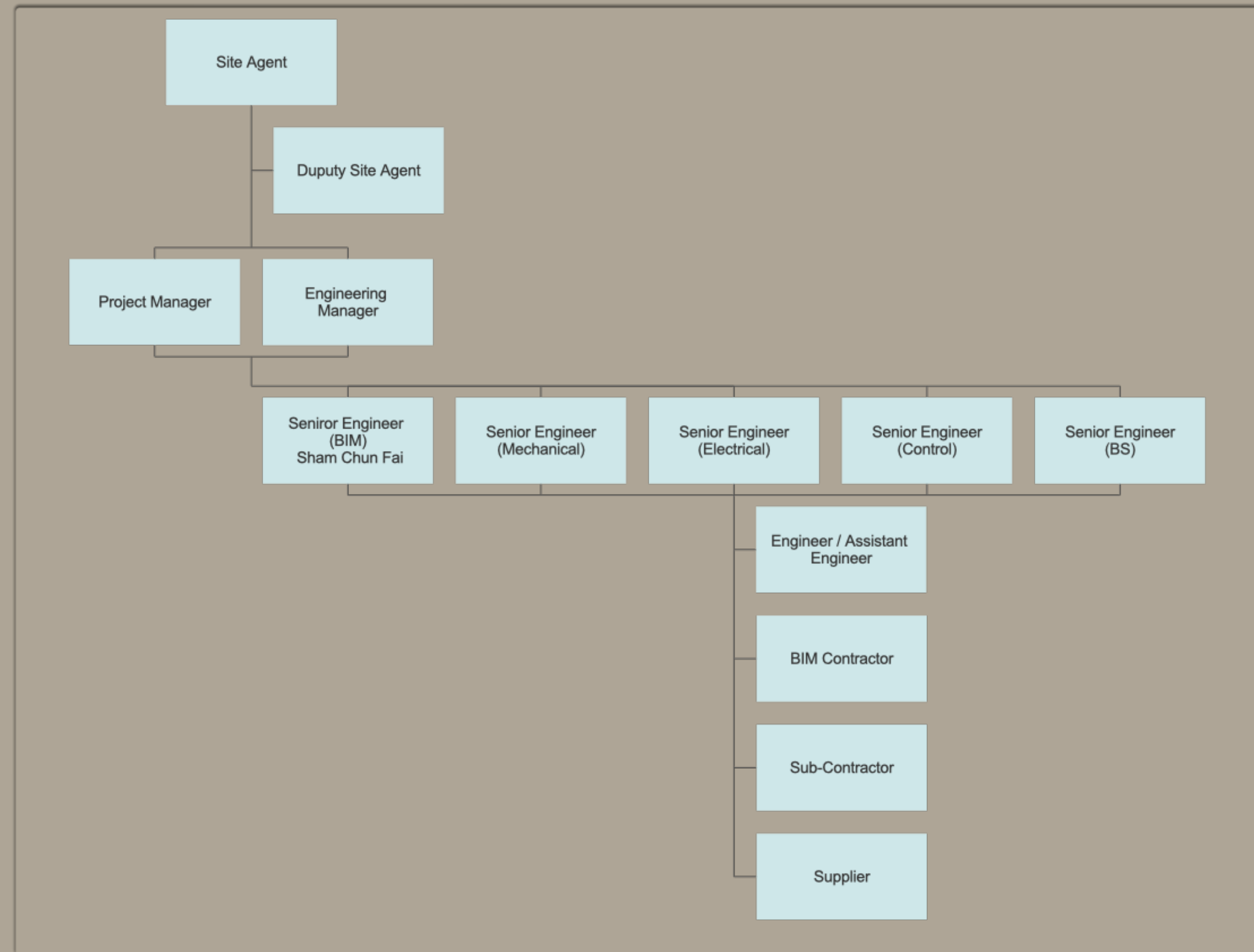
**CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)**

# **CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)**

- Background
  - Uses of BIM improve the life cycle and workflow in design and building project for enhancement of DSD Shek Wu Hui Sewage Treatment Works

# CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)

- O-Chart



# **CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)**

- BIM Initiation
  - Particular Specification
  - CIC Standard
  - PAS 1192
  - DSD BIM Standard

# **CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)**

- BIM Software & Technologies
  - Revit
  - Navisworks Manage
  - Navisworks Freedom
  - BIM360 Docs
  - Collaboration Pro
  - AutoCAD
  - Fuzor
  - 3DS Max



# **CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)**

- BIM Use - Design Authoring
  - MEP Design in either 2D/3D
  - Consolidate the MEP design in 3D
  - Share and Collaborate with Civil design
  - Internal 3D review
  - External 3D review with client
  - Revise MEP 3D design model
  - Generate 2D drawings for client approval
  - Publish 2D drawing and 3D model

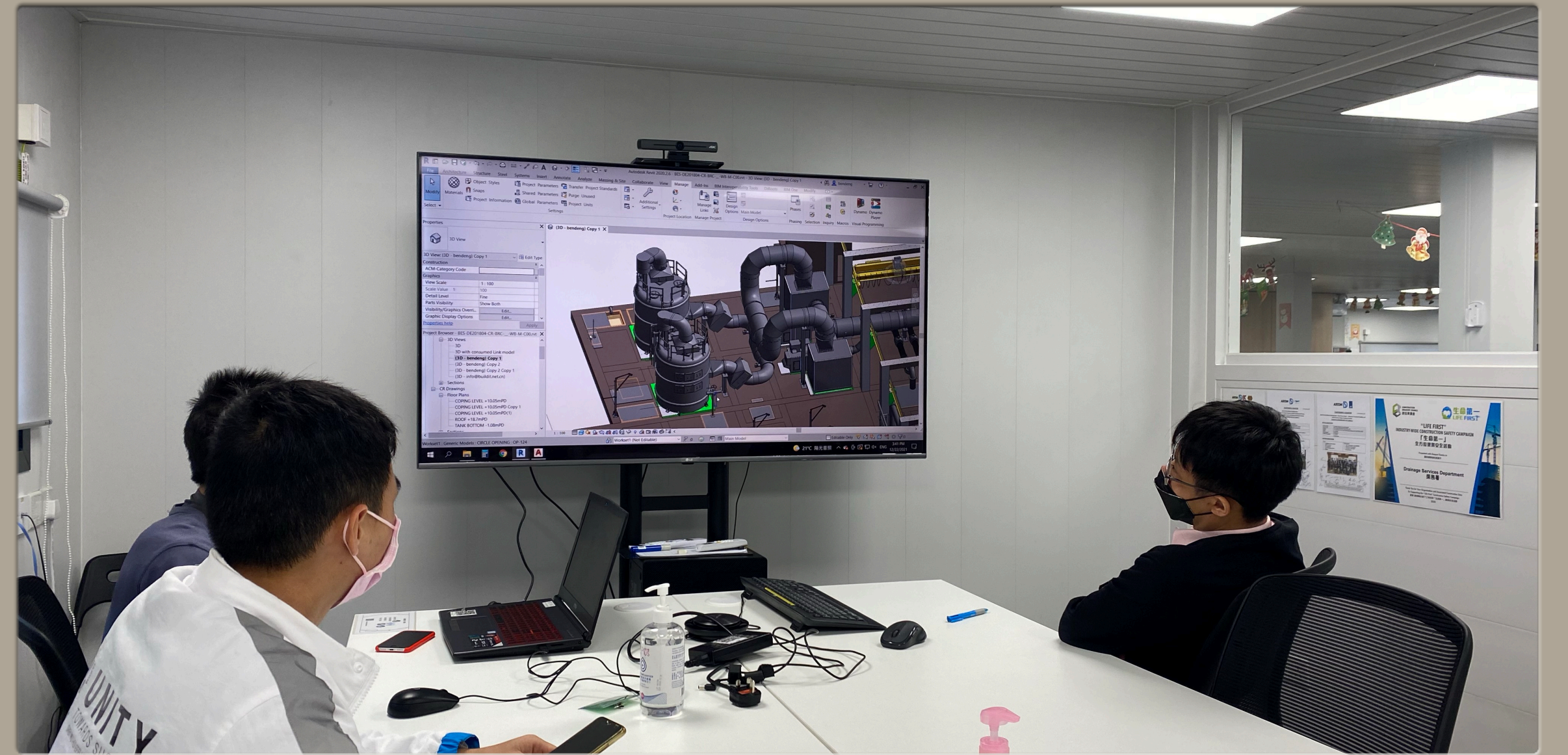
# CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)

- BIM Use - Design Reviews



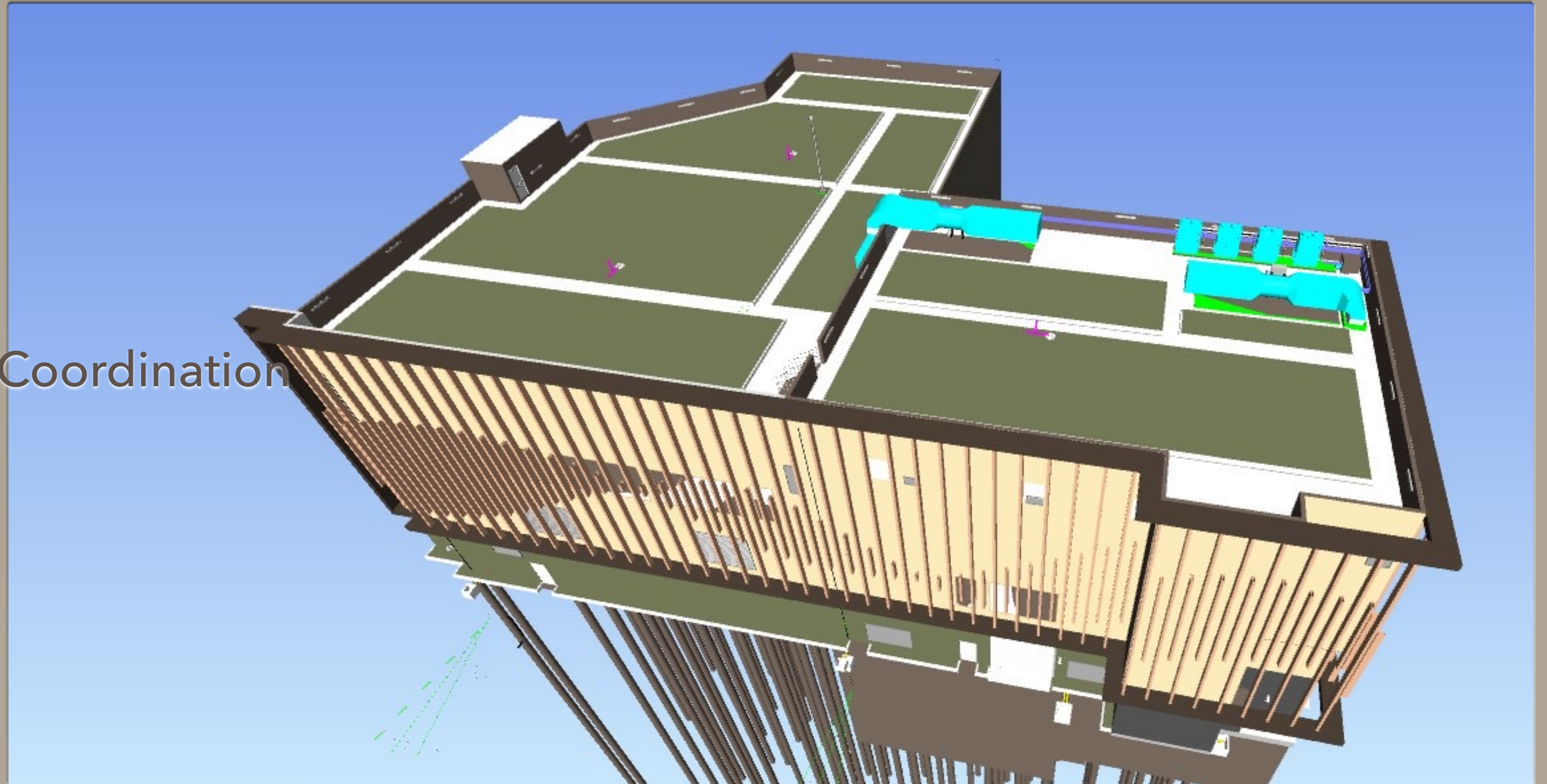


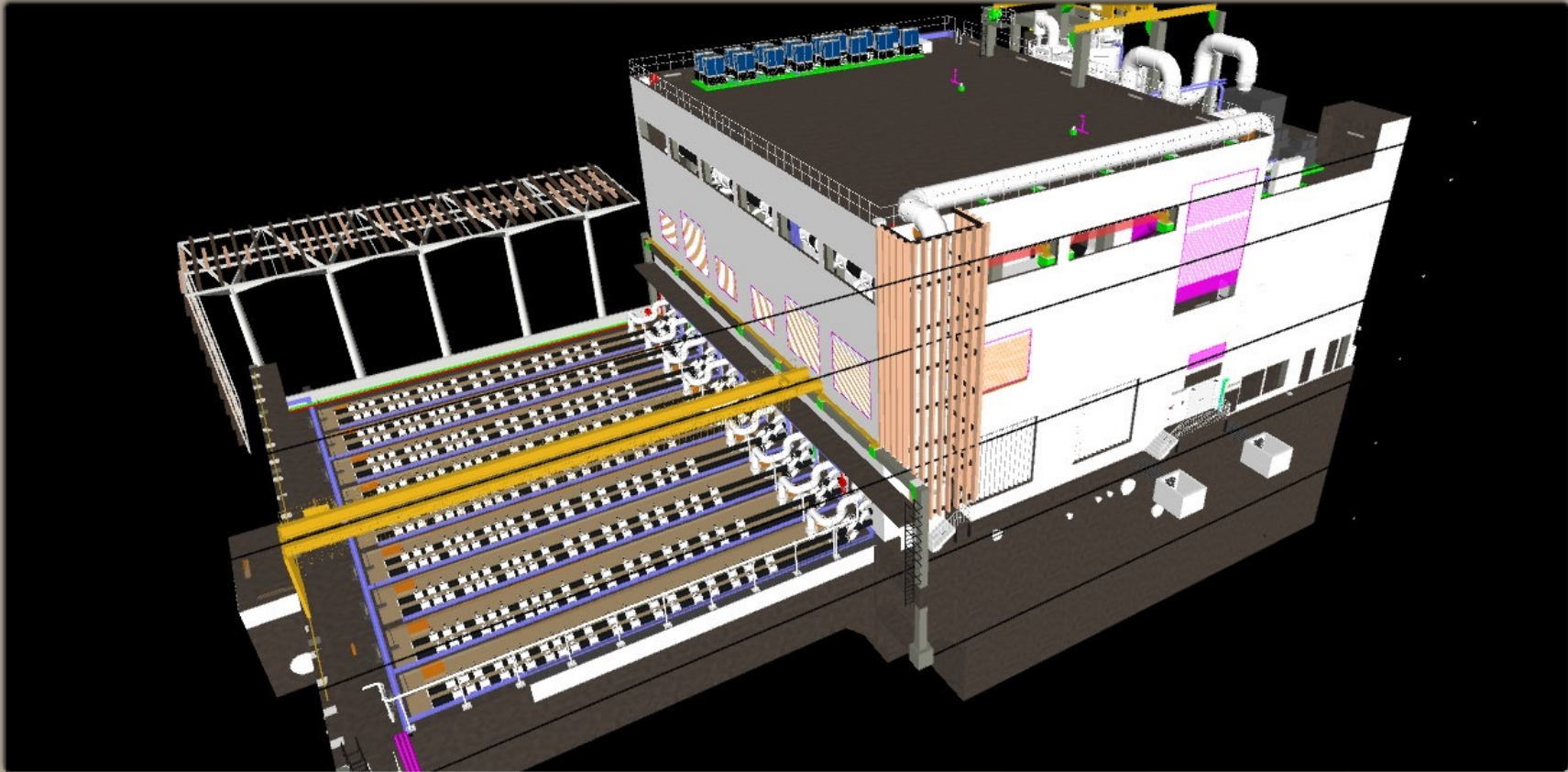
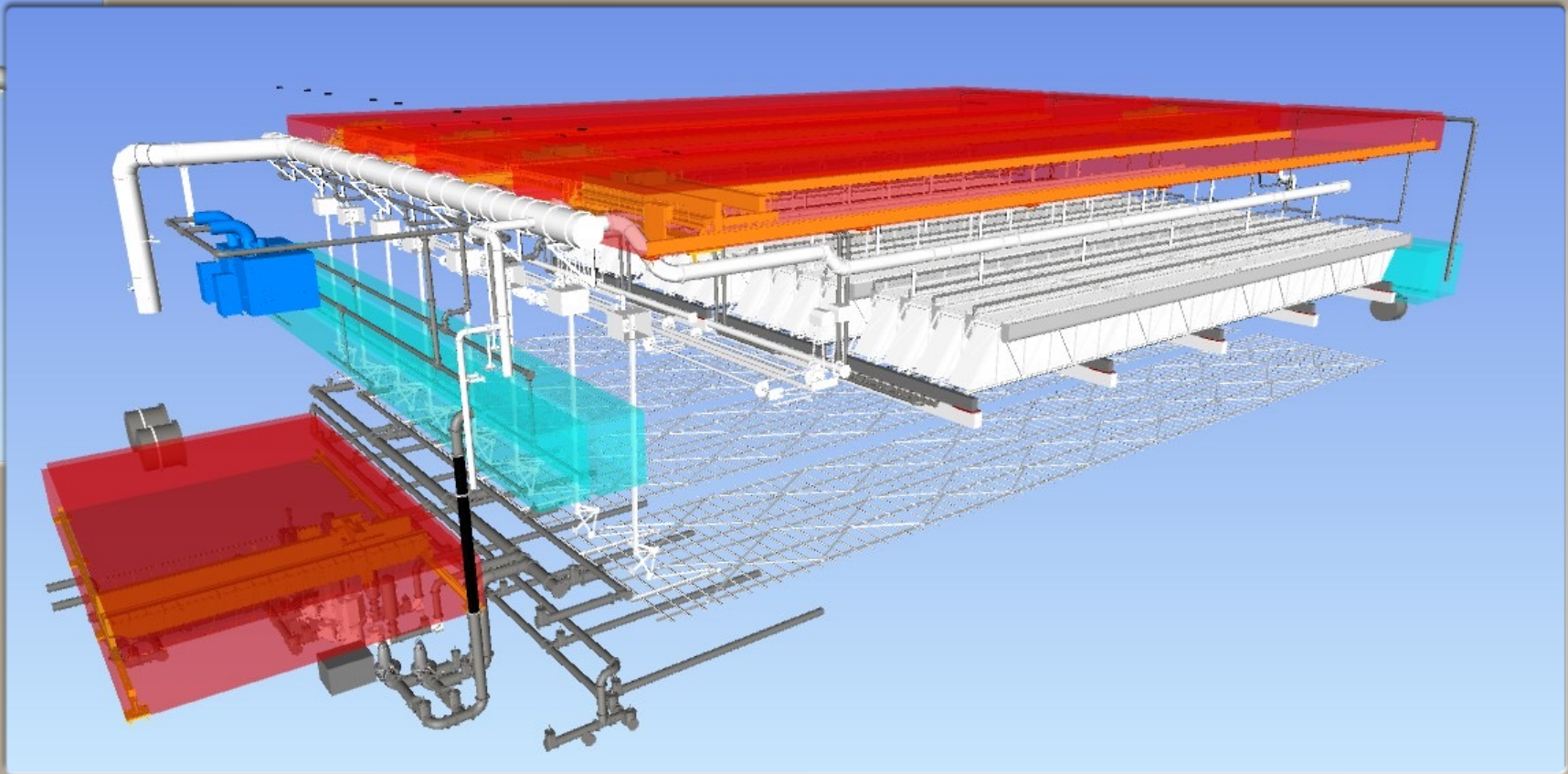
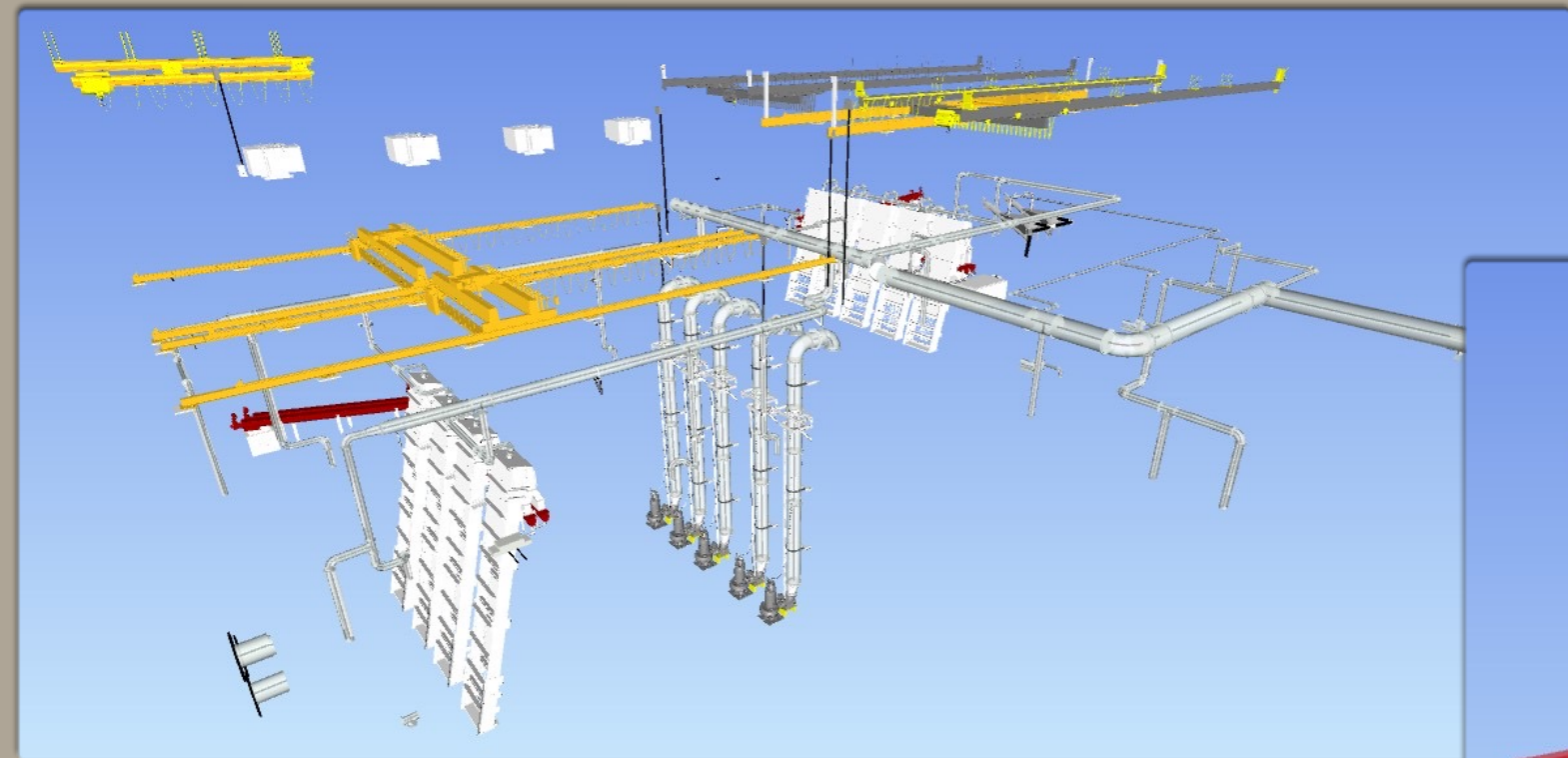
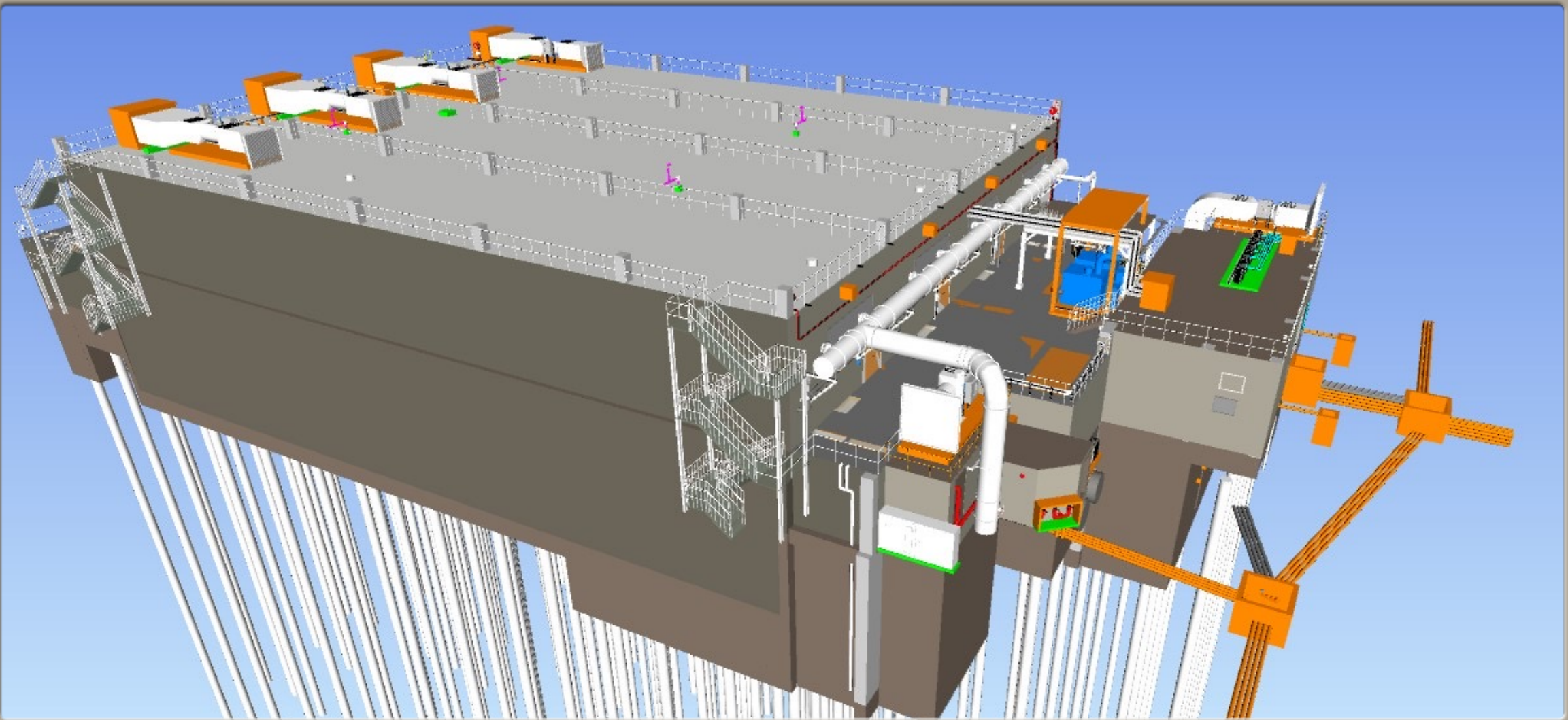
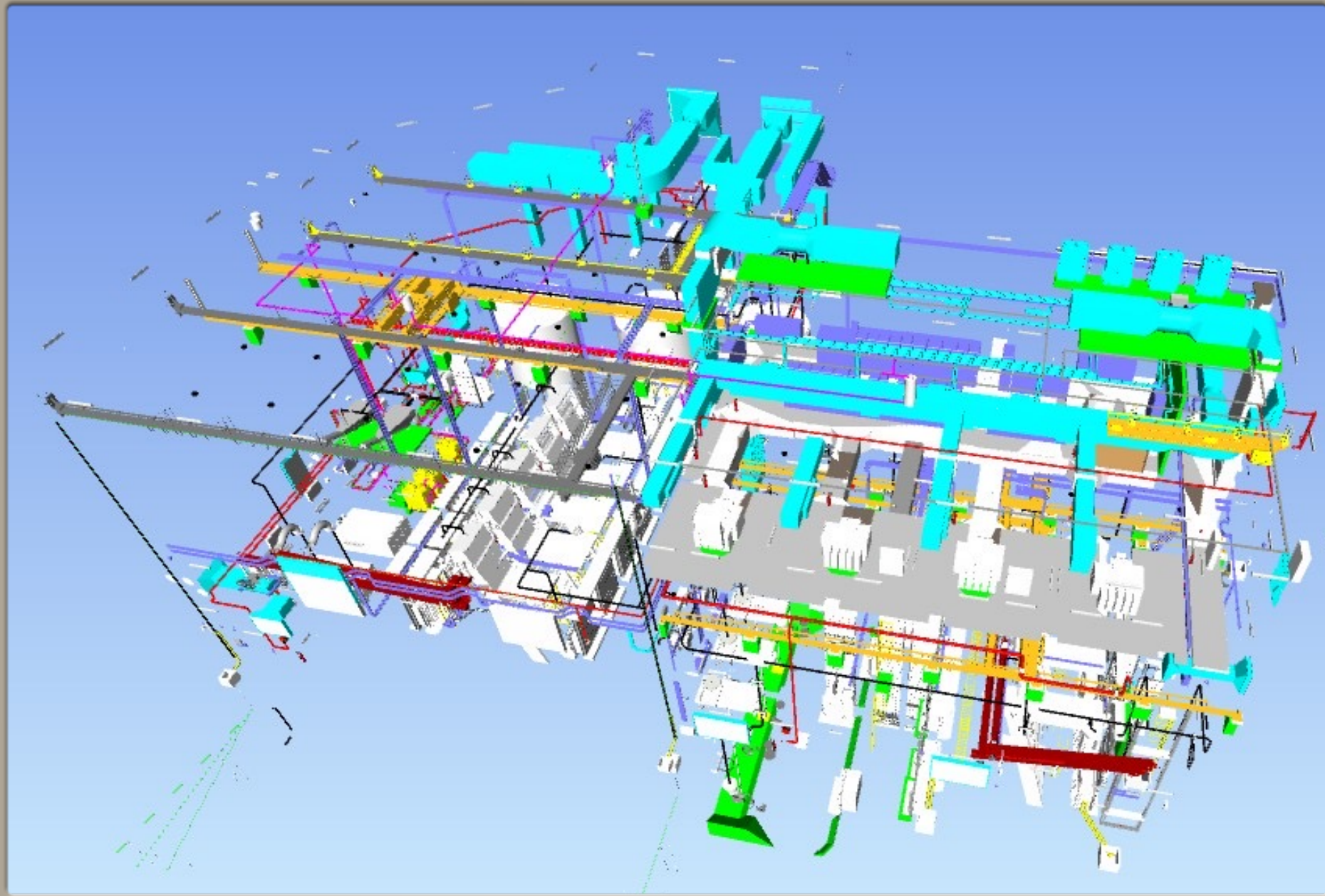


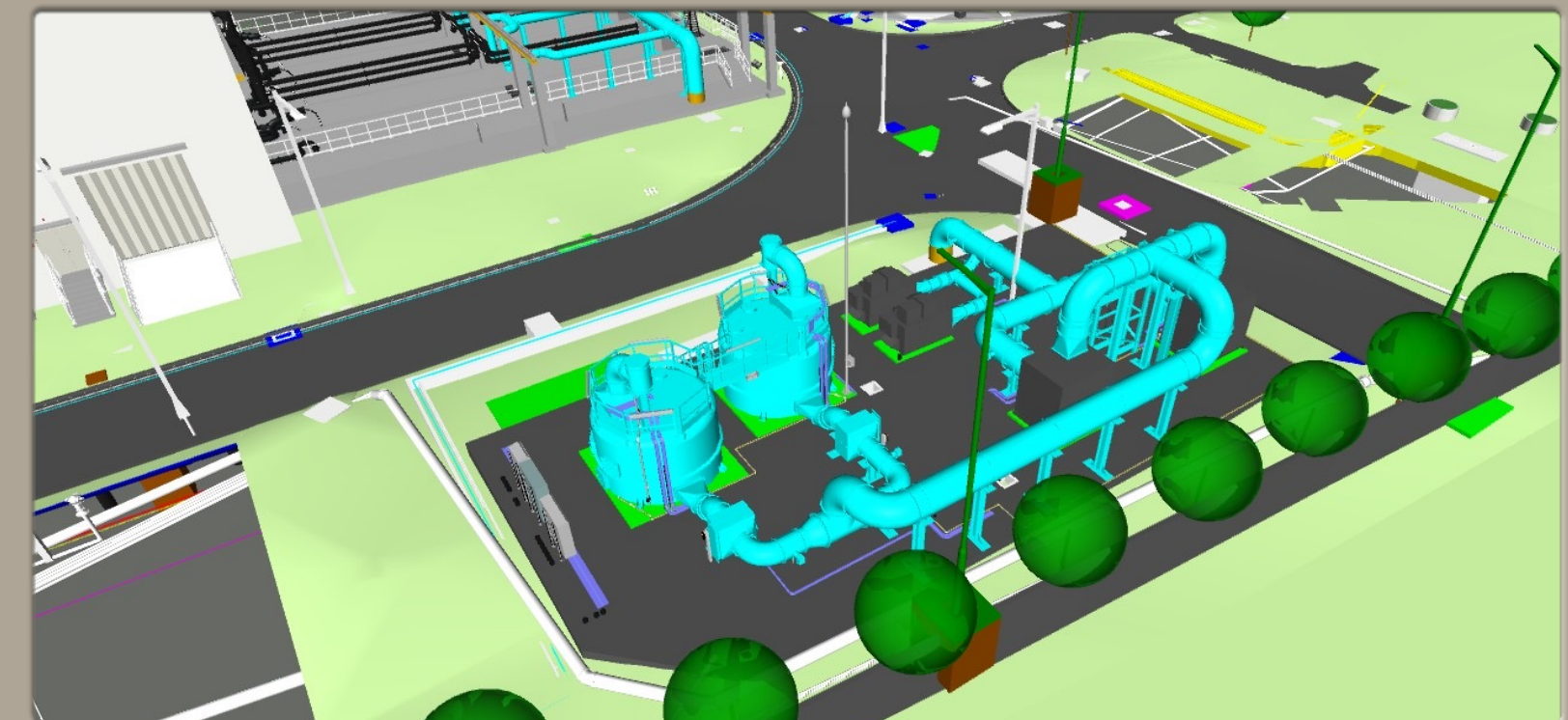
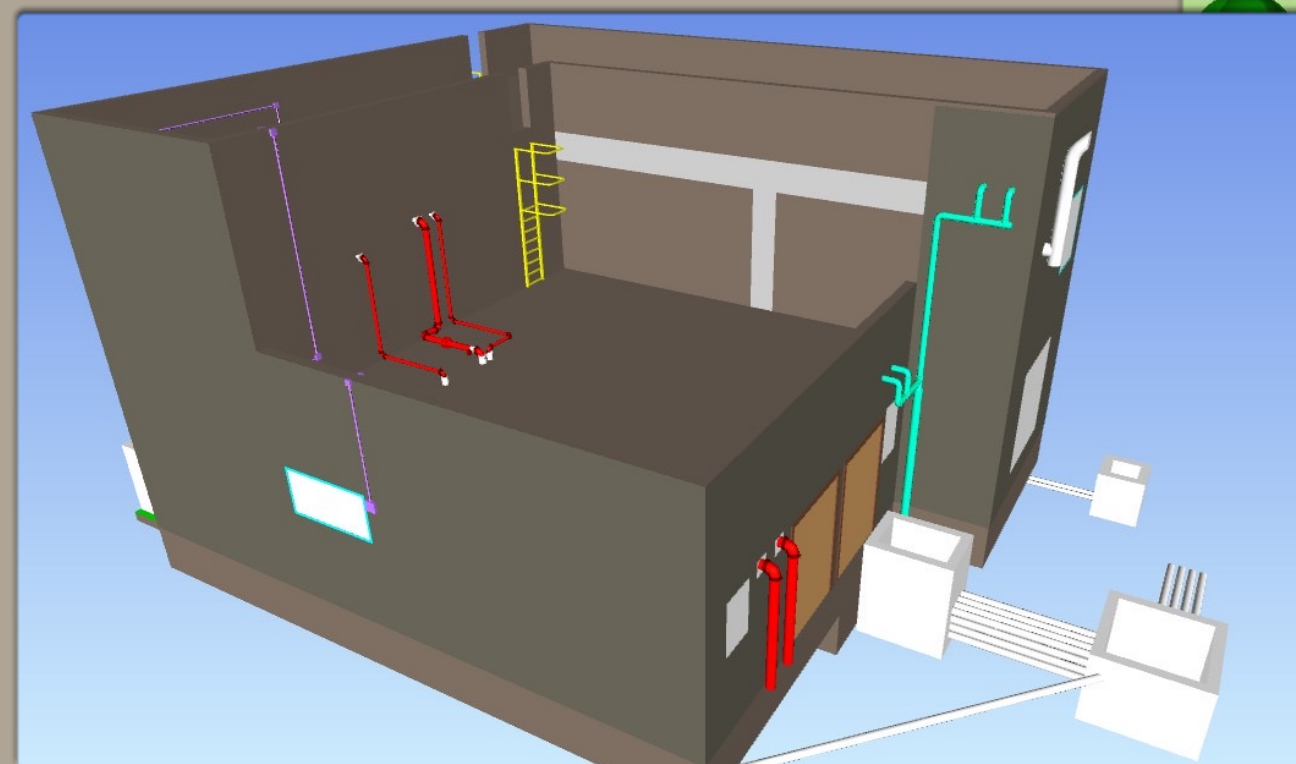
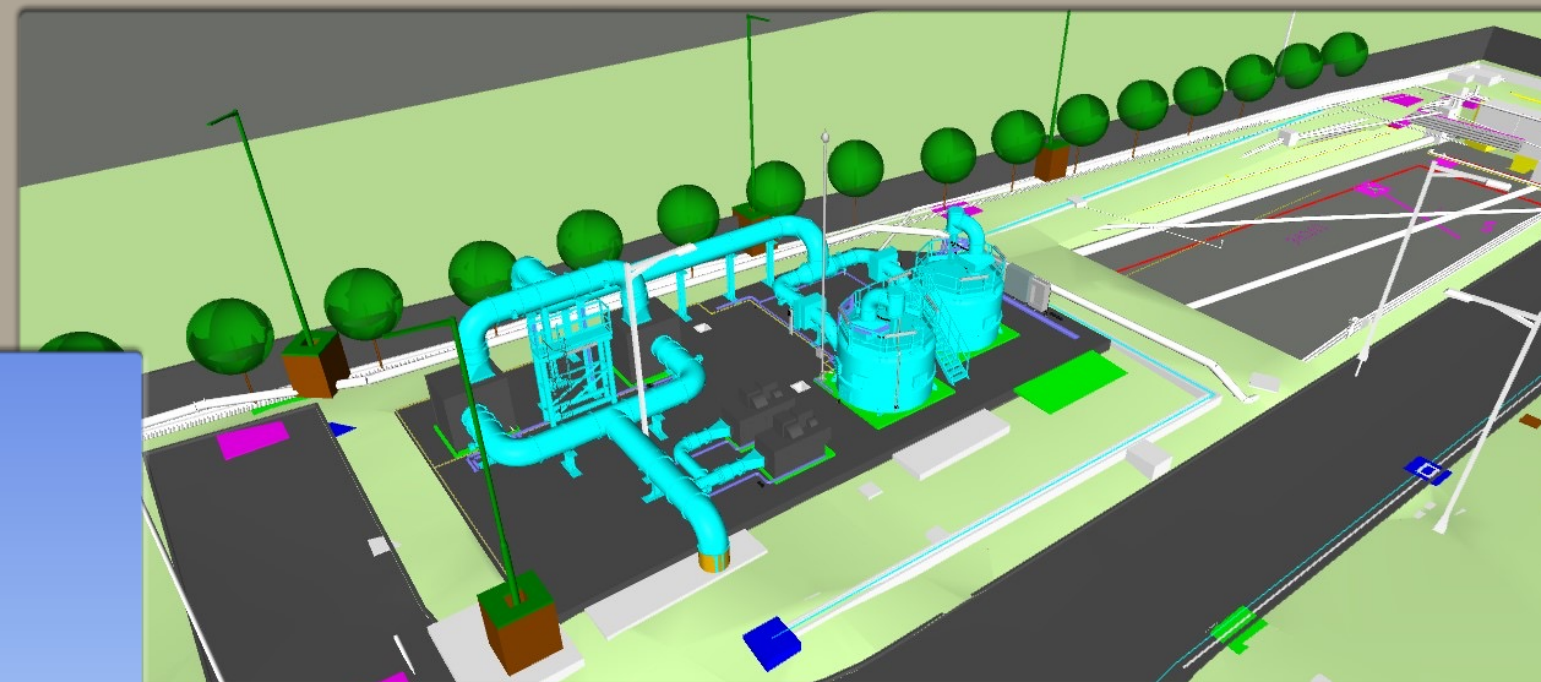
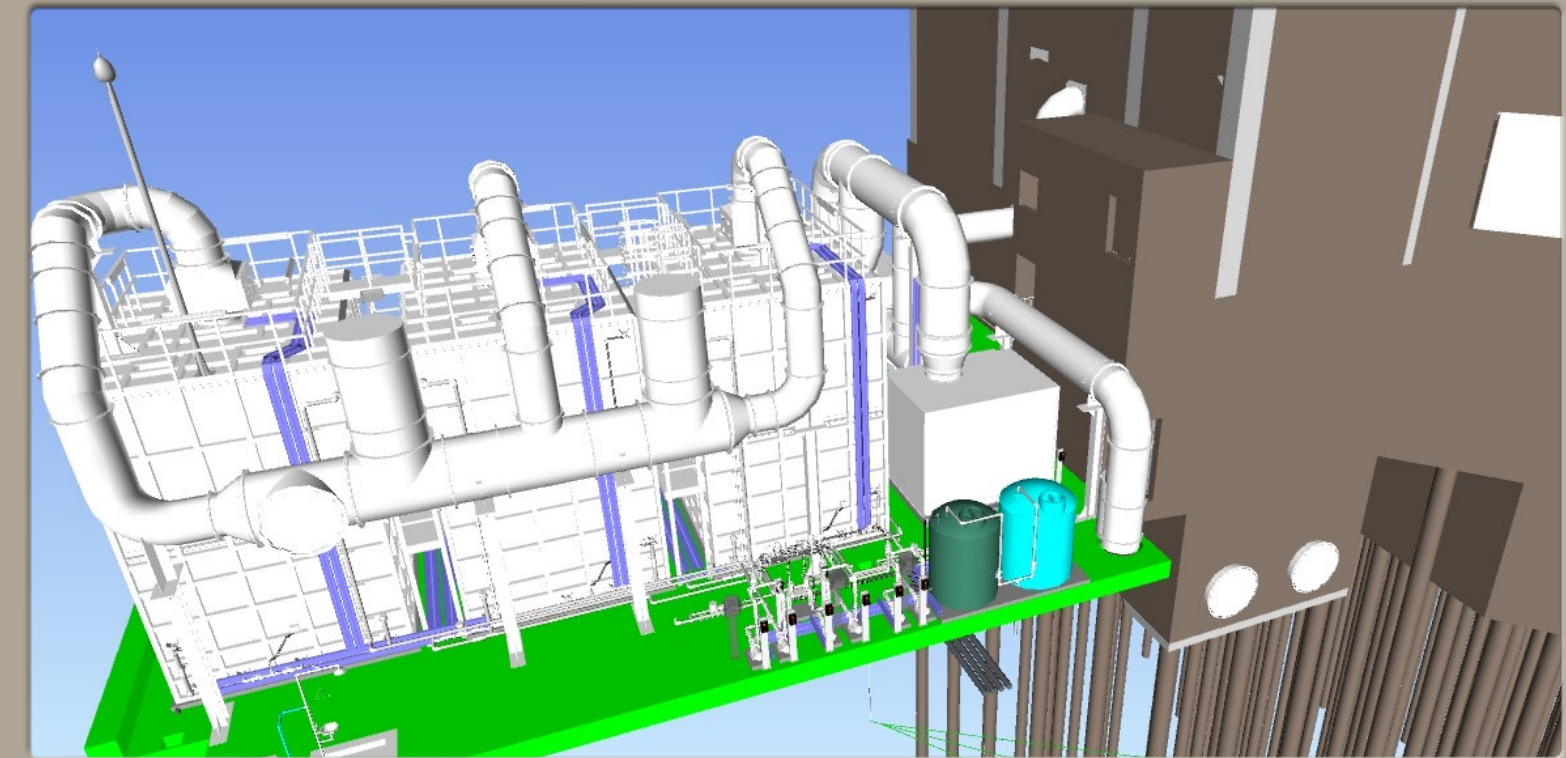
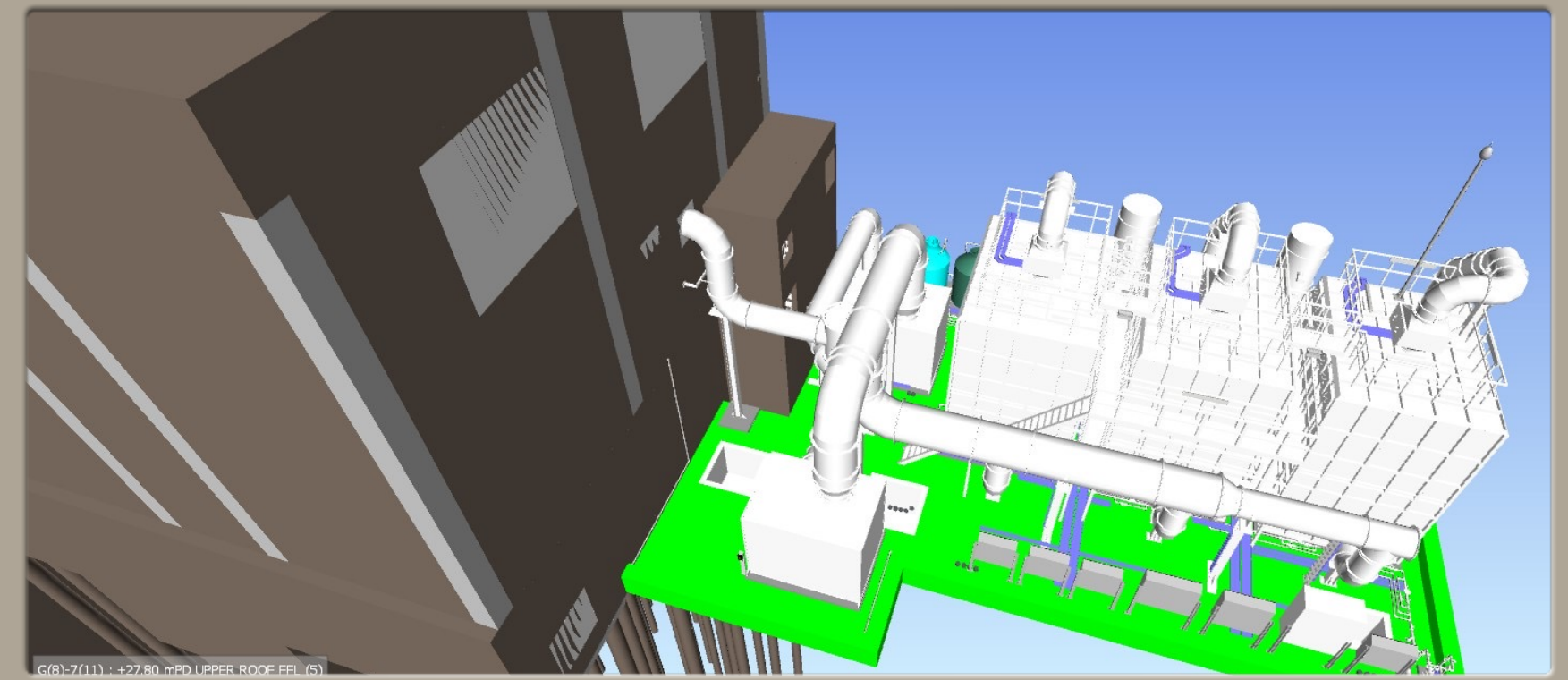


# CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)

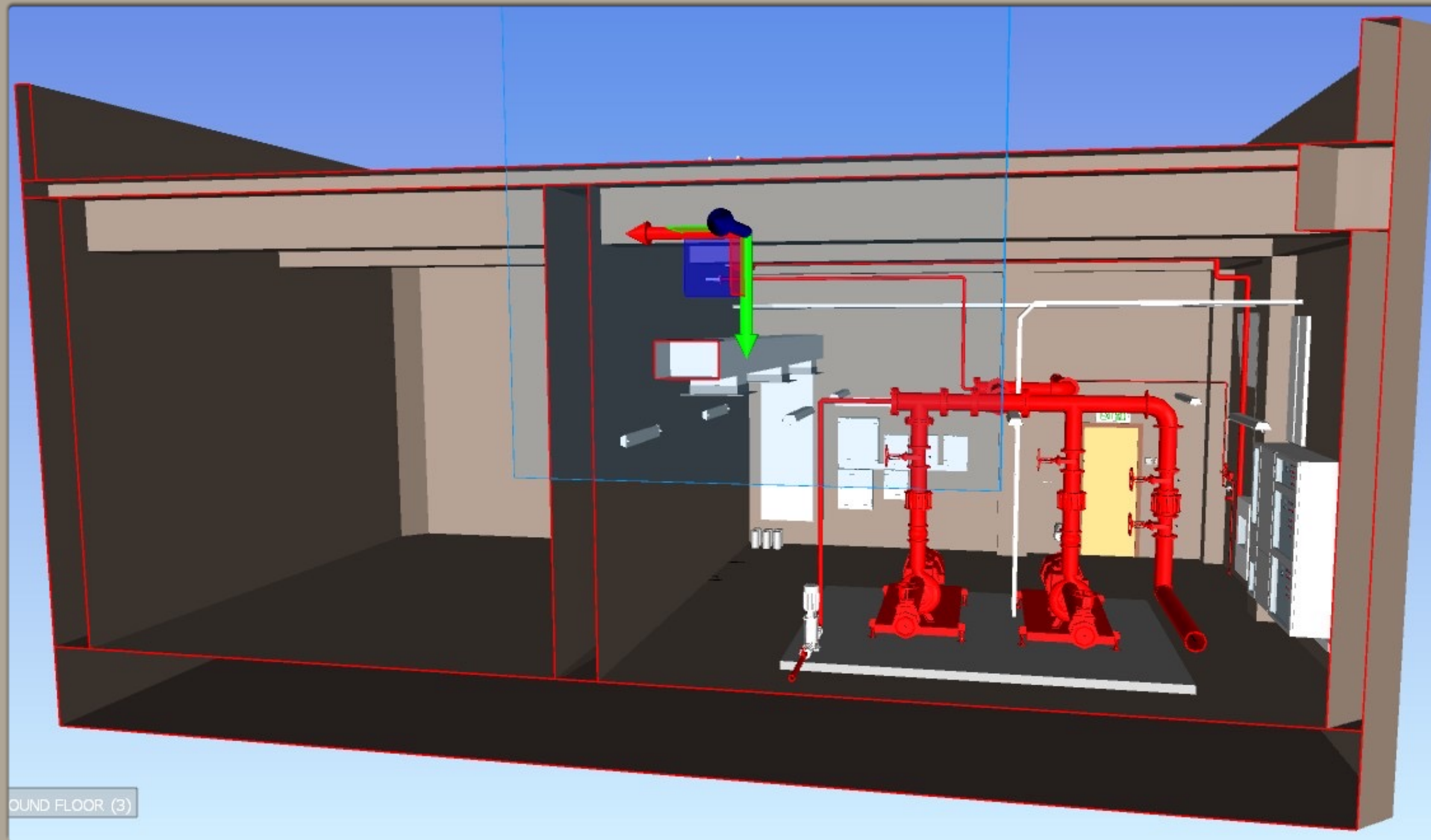
- BIM Use - 3D Coordination



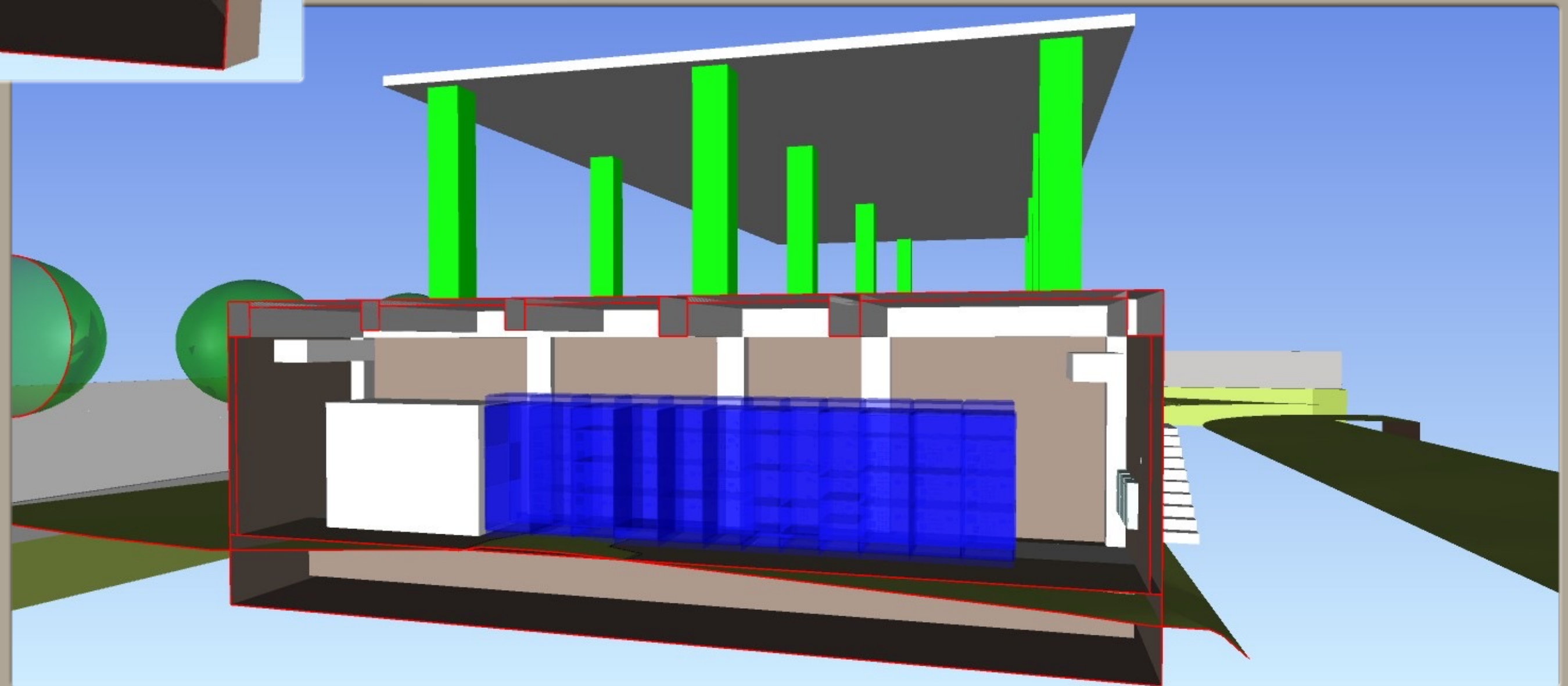
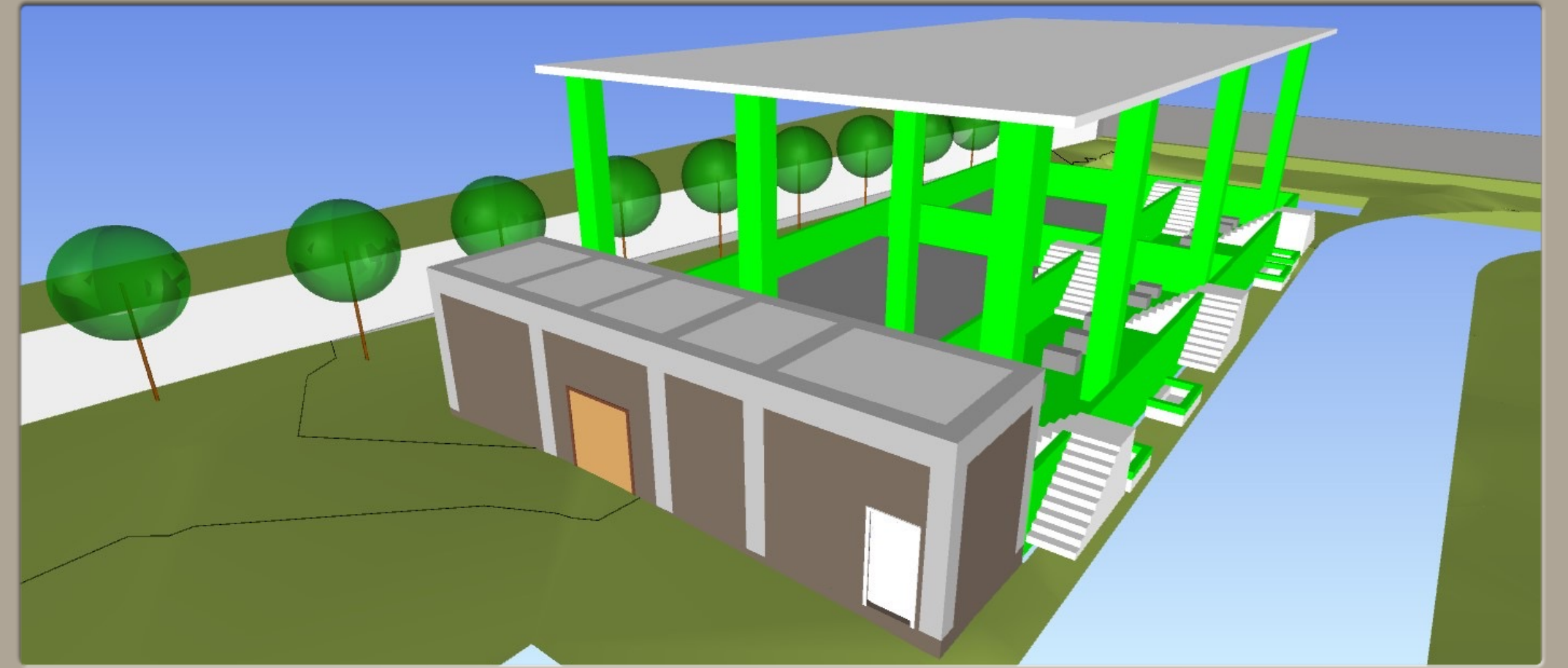








GROUND FLOOR (3)



# CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)

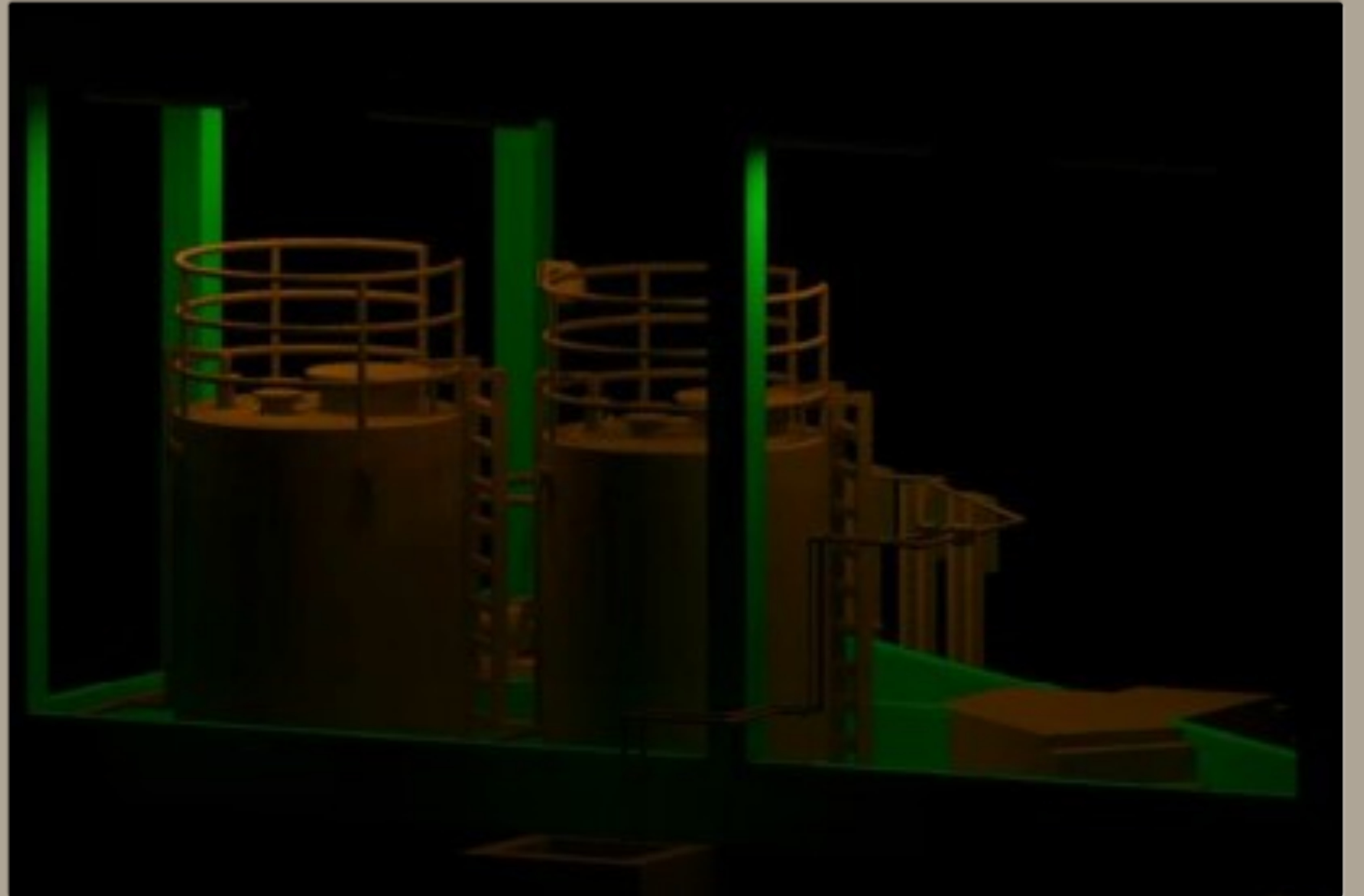
- BIM Use - Cost Estimation

The screenshot displays the Revit software interface with the 'Modify Schedule/Quantities' ribbon active. The main window shows a table titled '<Cable Tray Schedule (INW)>' with three columns: A (Family), B (Size), and C (Length). The table lists various cable tray items with their dimensions and lengths. A total length of 1675.6 is shown at the bottom of the table.

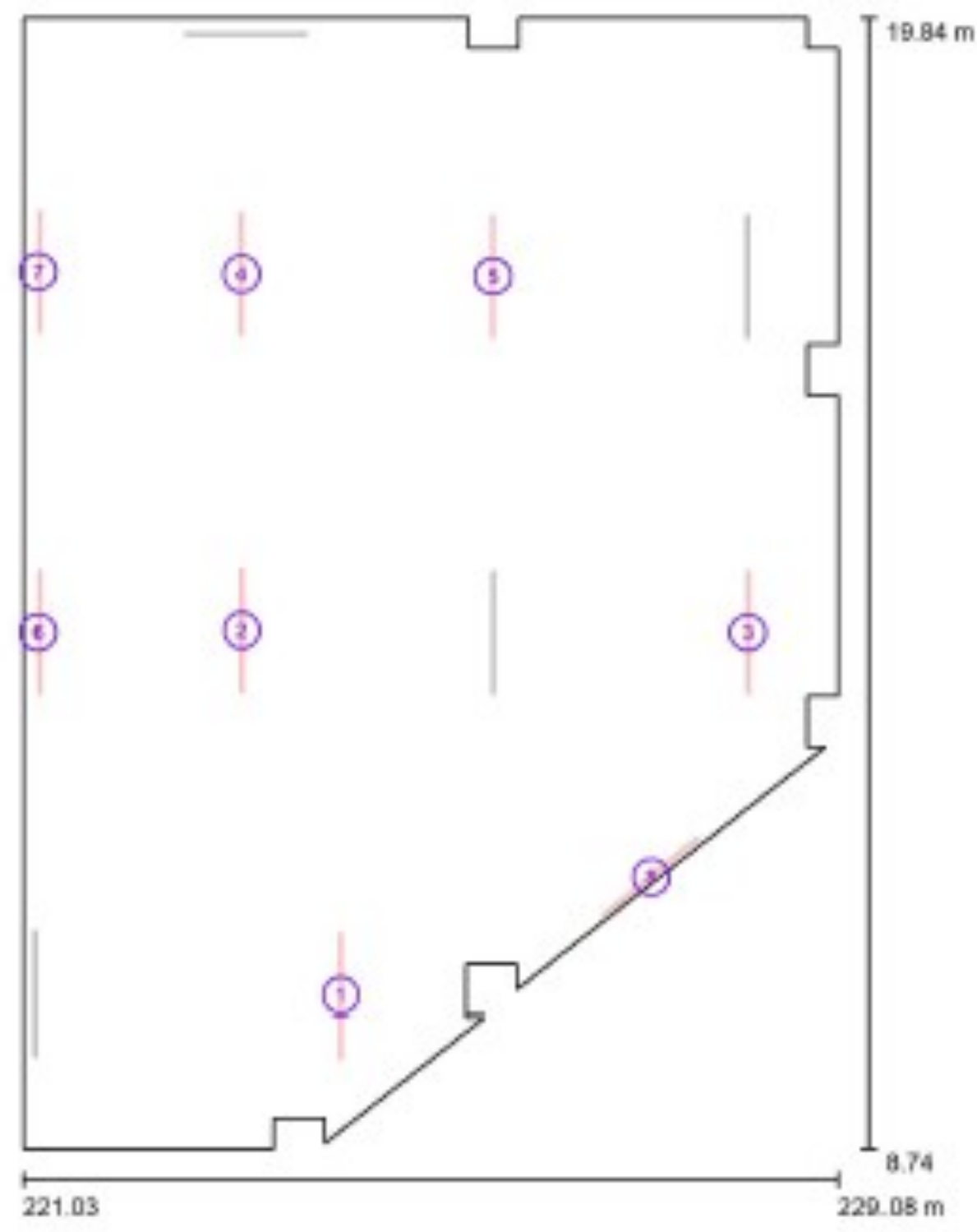
	A	B	C
	Family	Size	Length
Cable Tray with Fittings		50 mmx300 mm	28.1
Cable Tray with Fittings		100 mmx25 mm	36.6
Cable Tray with Fittings		100 mmx50 mm	12.6
Cable Tray with Fittings		150 mmx25 mm	5.1
Cable Tray with Fittings		150 mmx50 mm	114.7
Cable Tray with Fittings		200 mmx50 mm	300.7
Cable Tray with Fittings		200 mmx100 mm	37.9
Cable Tray with Fittings		225 mmx25 mm	1.9
Cable Tray with Fittings		225 mmx50 mm	5.9
Cable Tray with Fittings		250 mmx25 mm	15.8
Cable Tray with Fittings		250 mmx50 mm	123.2
Cable Tray with Fittings		250 mmx100 mm	48.7
Cable Tray with Fittings		300 mmx25 mm	0.4
Cable Tray with Fittings		300 mmx50 mm	307.7
Cable Tray with Fittings		400 mmx50 mm	388.6
Cable Tray with Fittings		450 mmx50 mm	12.9
Cable Tray with Fittings		500 mmx50 mm	33.0
Cable Tray with Fittings		550 mmx50 mm	14.6
Cable Tray with Fittings		600 mmx100 mm	127.1
Cable Tray with Fittings		1000 mmx50 mm	60.3
			1675.6

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- BIM Use - Engineering Analysis

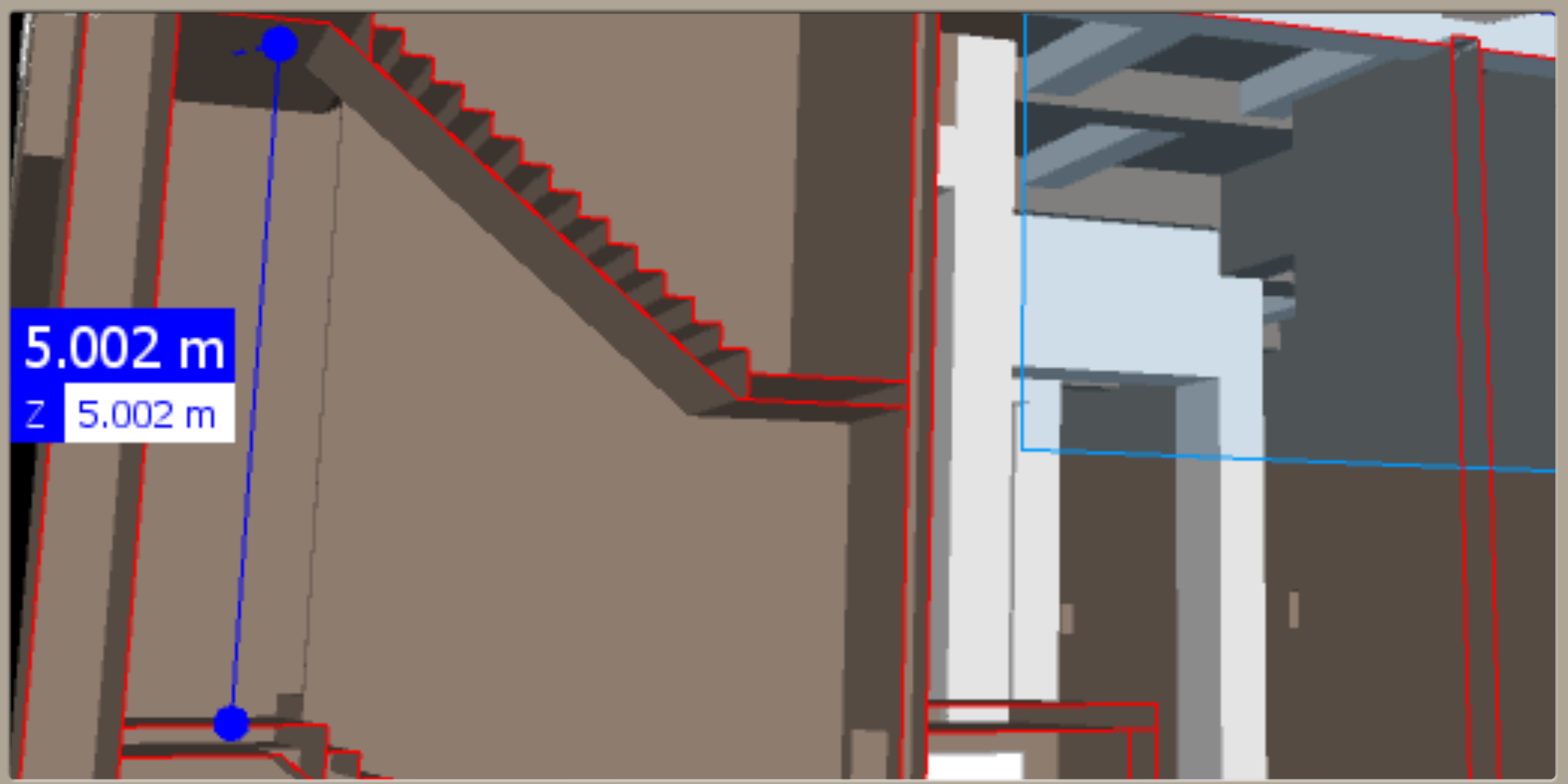
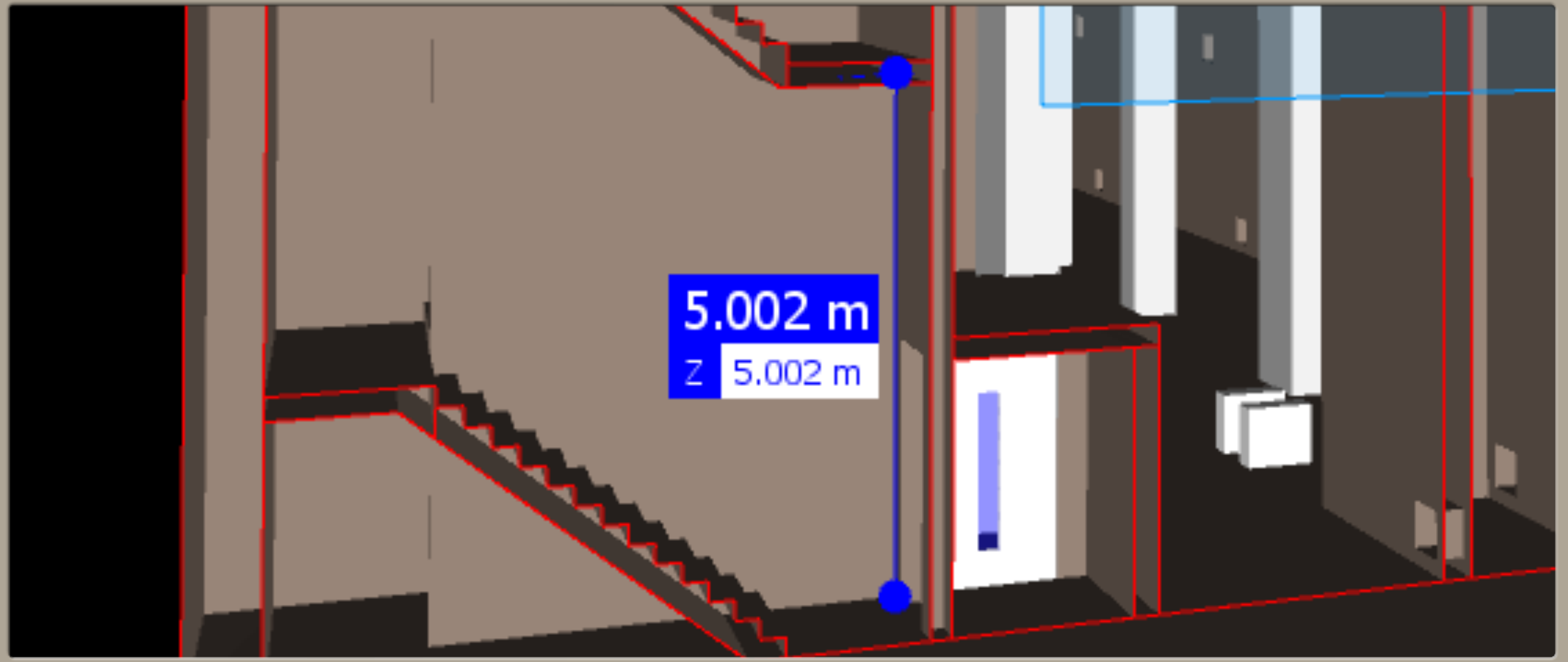


Street Fire Hydrant Pump Room / Normal / Planning data



Scale 1 : 76

No.	Luminaire	Position [m]			Rotation [°]		
		X	Y	Z	X	Y	Z
1	PHILIPS L2 TCW090 2xTLED 14W	224.169	10.220	2.800	0.0	0.0	90.0
2	PHILIPS L2 TCW090 2xTLED 14W	223.191	13.809	2.800	0.0	0.0	90.0
3	PHILIPS L2 TCW090 2xTLED 14W	228.191	13.786	2.800	0.0	0.0	90.0
4	PHILIPS L2 TCW090 2xTLED 14W	223.186	17.319	2.800	0.0	0.0	90.0
5	PHILIPS L2 TCW090 2xTLED 14W	225.672	17.296	2.800	0.0	0.0	90.0
6	PHILIPS L2 TCW090 2xTLED 14W	221.179	13.791	2.500	-90.0	0.0	90.0
7	PHILIPS L2 TCW090 2xTLED 14W	221.179	17.341	2.500	-90.0	0.0	90.0

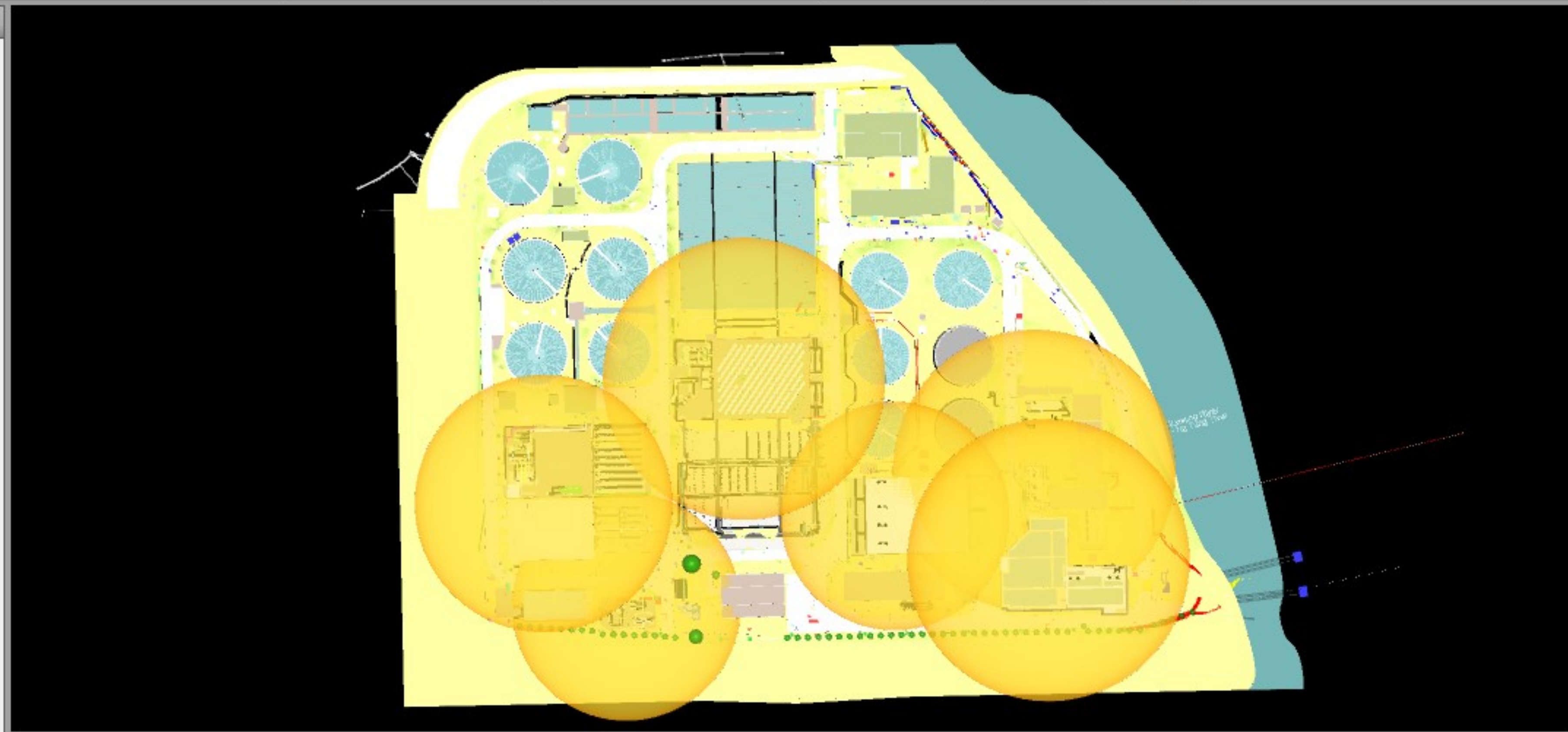


Navigation and View Controls:

- Orthographic
- F.O.V: 83.451
- Align Camera
- Show Tilt Bar
- Steering Wheels
- Pan
- Zoom Window
- Orbit
- Look Around
- Walk
- 3Dconnexion
- Realism
- Lighting
- Mode
- Render Style
- Enable Sectioning
- Sectioning

Project Tree:

- 20220419\_DC-07&DE-04\_FED
- 20220419\_DC-07&DE-04\_FI
- BES-DE201804-BS-LIGHTNING
- Electrical Equipment
- Lightning Coverage
- Lightning Coverage



Properties Panel:

0 Items Selected

Saved Viewpoints:

- elevation

Comments Panel:

Comment	Date	Author	Comment ID	Status

Home Viewpoint Review Animation View Output

Save, Load & Playback

Orthographic

F.O.V. 83.451

Align Camera Show Tilt Bar

Steering Wheels

Pan Zoom Window Orbit

Look Around Walk 3Dconnexion

Realism

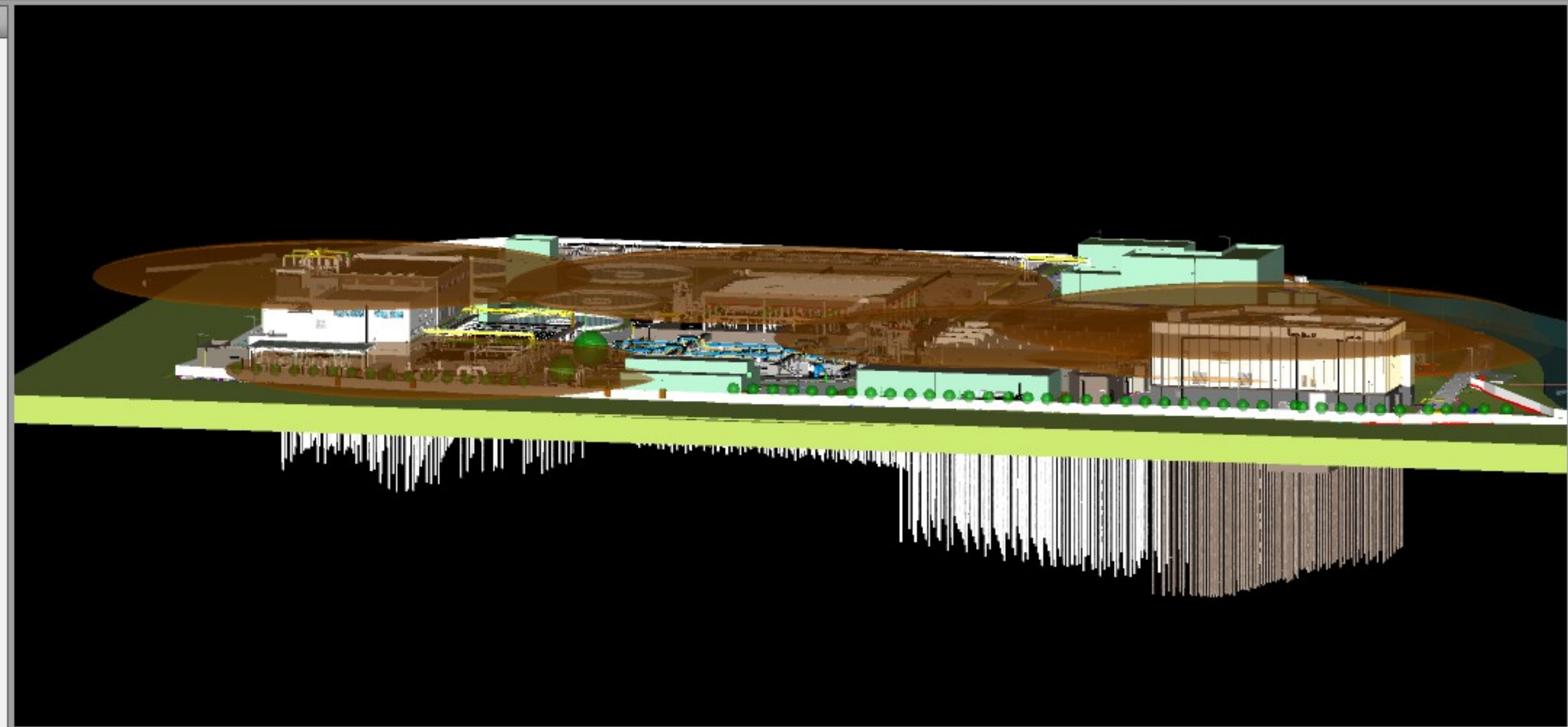
Lighting Mode

Render Style

Enable Sectioning

Section Tree

- 20220419\_DC-07&DE-04\_FED
- 20220419\_DC-07&DE-04\_FI
- BES-DE201804-BS-LIGHTNING
- Electrical Equipment
- Lightning Coverage
- Lightning Coverage



Properties

0 Items Selected

Saved Viewpoints

- elevation

Comments

Comment	Date	Author	Comment ID	Status

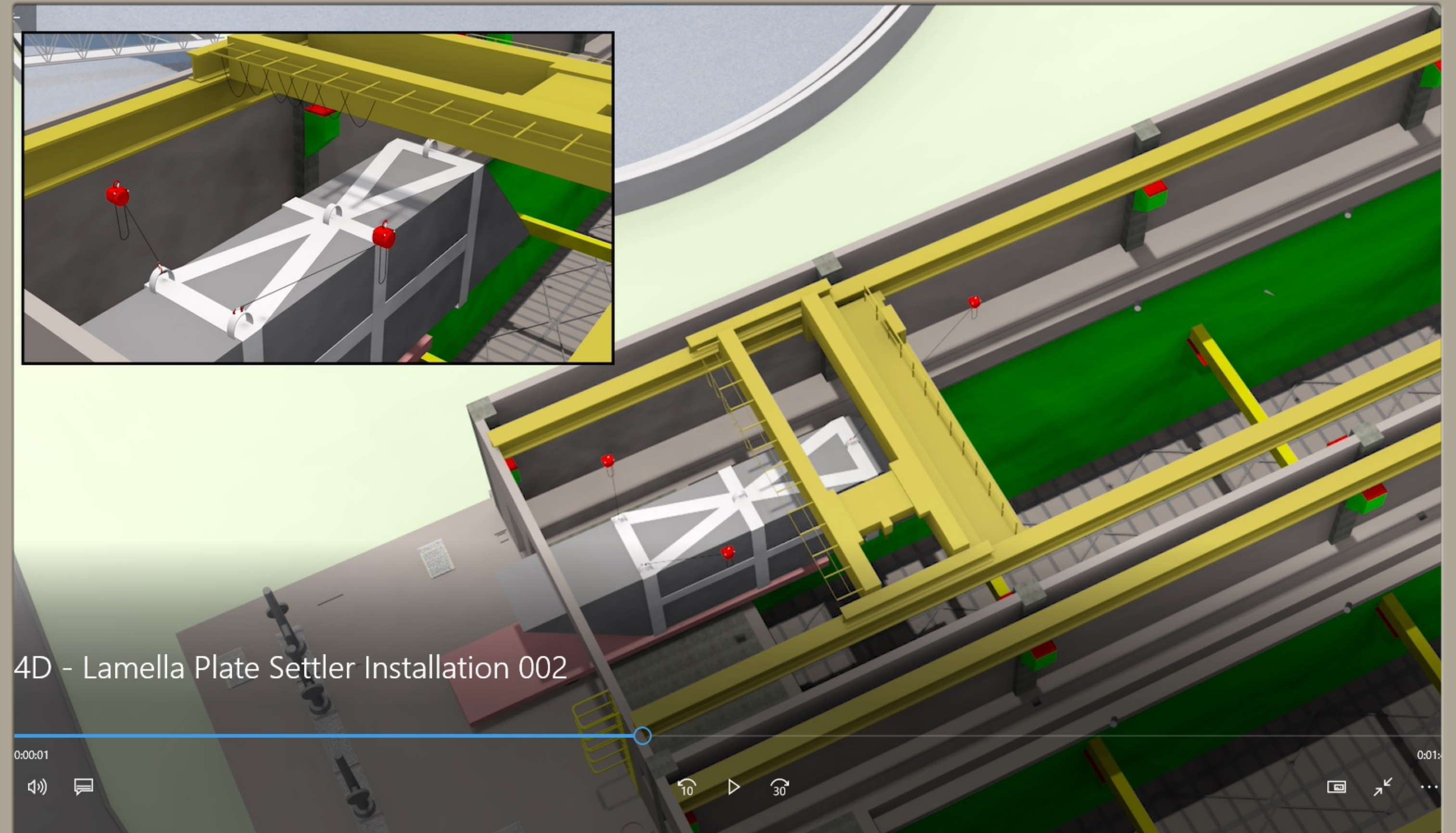
# CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)

- BIM Use - Facility Energy Analysis & Sustainability Evaluation

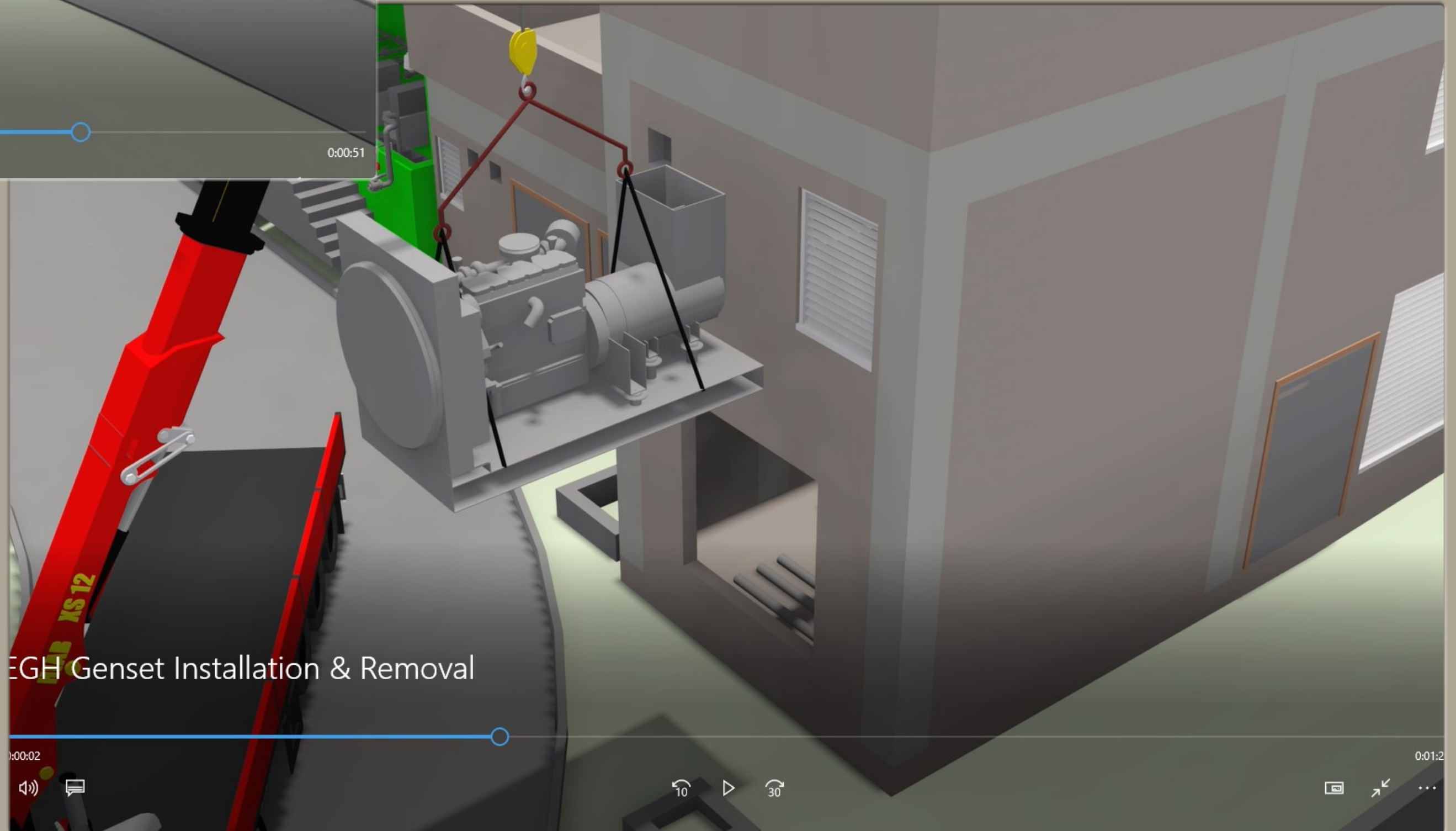
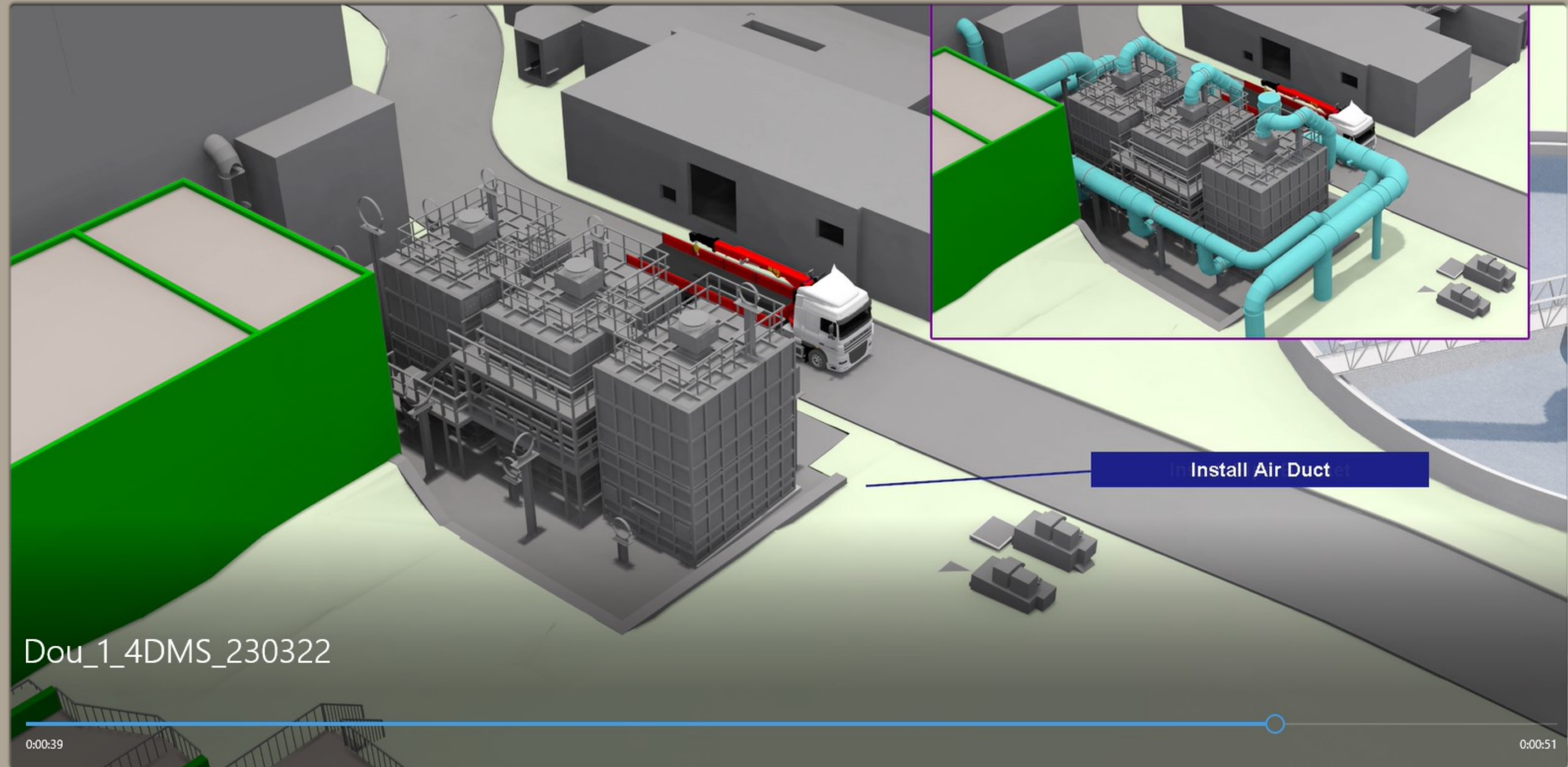
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A	B	C	D	E	F	G	H	I	J
Family and Type	Level	Elevation from Level	Initial Color Temperature	Efficacy	Illuminance	Luminous Flux	Luminous Intensity	Wattage	Count
LIGHTING_L2: Light Fitting 001	GROUND LEVEL 1	+4.690 m	3200 K	149 lm/W	47 lx	1380 lm	439 cd	9 W	1
LIGHTING_L2: Light Fitting 002	GROUND LEVEL 1	+4.690 m	3200 K	149 lm/W	47 lx	1380 lm	439 cd	9 W	1
LIGHTING_L2: Light Fitting 003	GROUND LEVEL 1	+4.690 m	3200 K	149 lm/W	47 lx	1380 lm	439 cd	9 W	1
LIGHTING_L2: Light Fitting 004	GROUND LEVEL 1	+4.690 m	3200 K	149 lm/W	47 lx	1380 lm	439 cd	9 W	1
LIGHTING_L2: Light Fitting 005	GROUND LEVEL 1	+4.690 m	3200 K	149 lm/W	47 lx	1380 lm	439 cd	9 W	1
LIGHTING_L2: Light Fitting 006	GROUND LEVEL 1	+4.690 m	3200 K	149 lm/W	47 lx	1380 lm	439 cd	9 W	1
LIGHTING_L2: Light Fitting 007	GROUND LEVEL 1	+4.690 m	3200 K	149 lm/W	47 lx	1380 lm	439 cd	9 W	1
LIGHTING_L2: Light Fitting 008	GROUND LEVEL 1	+4.690 m	3200 K	149 lm/W	47 lx	1380 lm	439 cd	9 W	1
LIGHTING_L2: Light Fitting 009	GROUND LEVEL 1	+4.690 m	3200 K	149 lm/W	47 lx	1380 lm	439 cd	9 W	1
LIGHTING_L2: Light Fitting 010	GROUND LEVEL 1	+4.690 m	3200 K	149 lm/W	47 lx	1380 lm	439 cd	9 W	1
LIGHTING_L2: Light Fitting 011	GROUND LEVEL 1	+4.690 m	3200 K	149 lm/W	47 lx	1380 lm	439 cd	9 W	1
LIGHTING_L2: Light Fitting 012	GROUND LEVEL 1	+4.690 m	3200 K	149 lm/W	47 lx	1380 lm	439 cd	9 W	1
								111 W	12

# CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)

- BIM Use - 4D Modelling

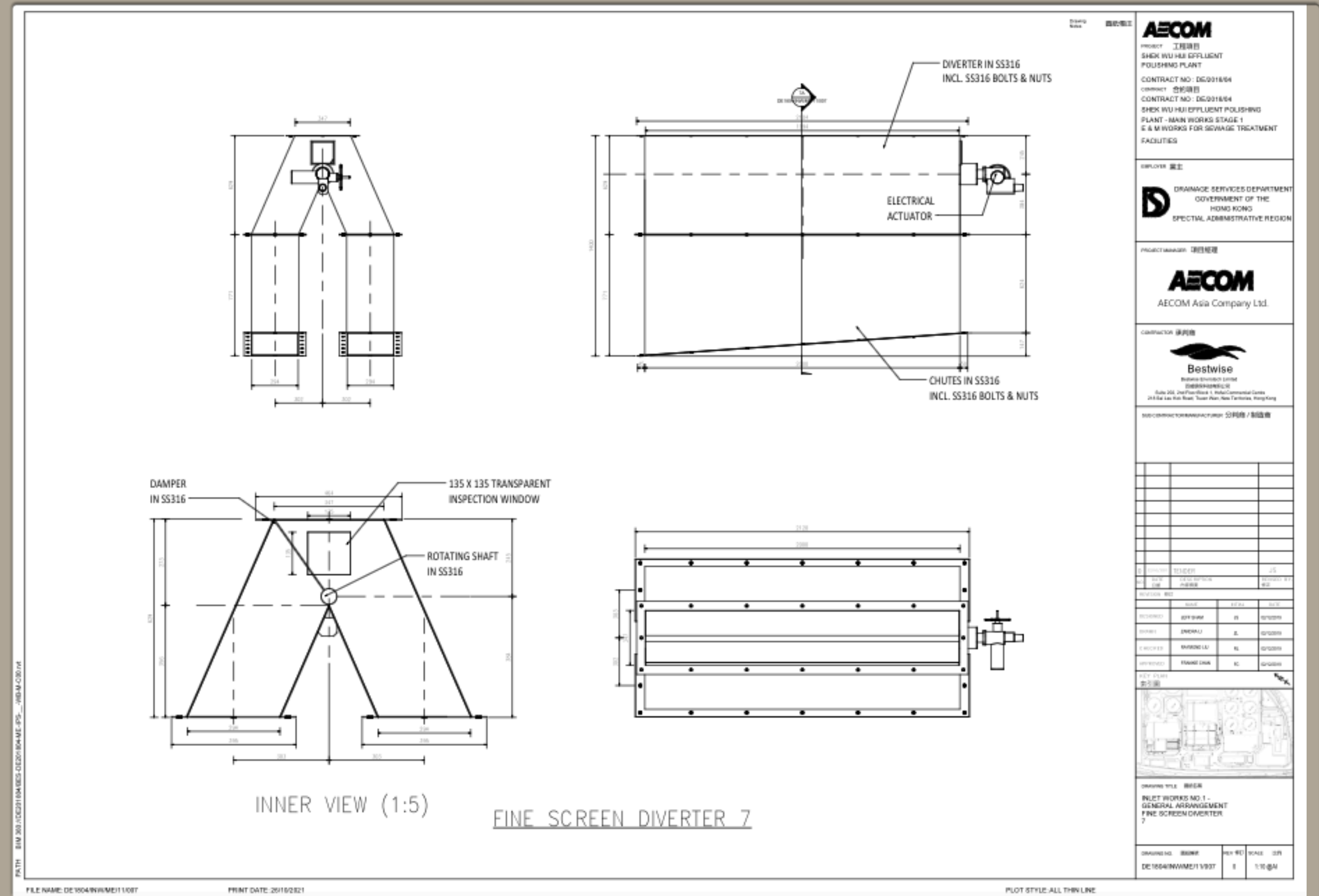






# CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)

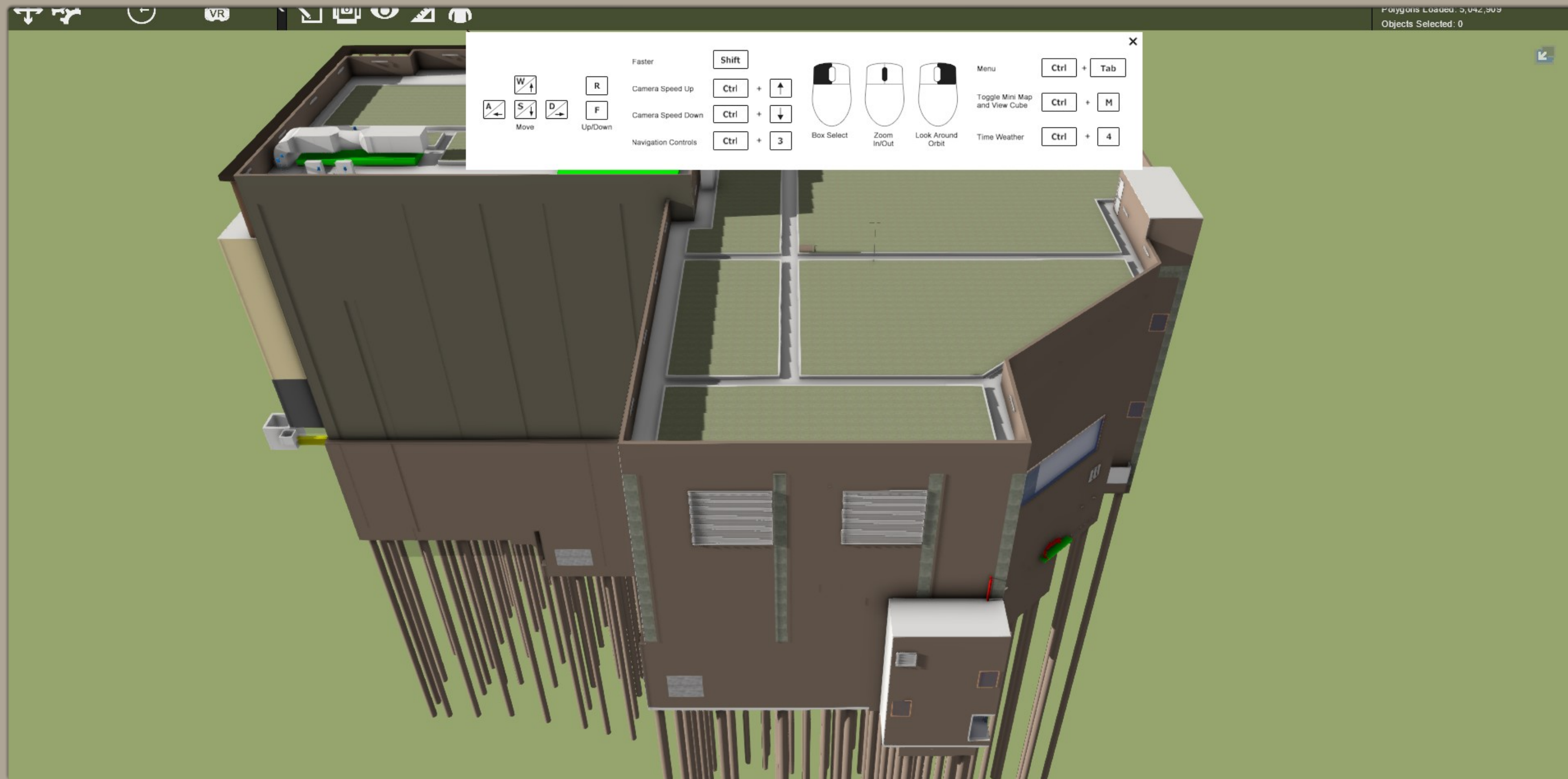
- BIM Use - Digital Fabrication



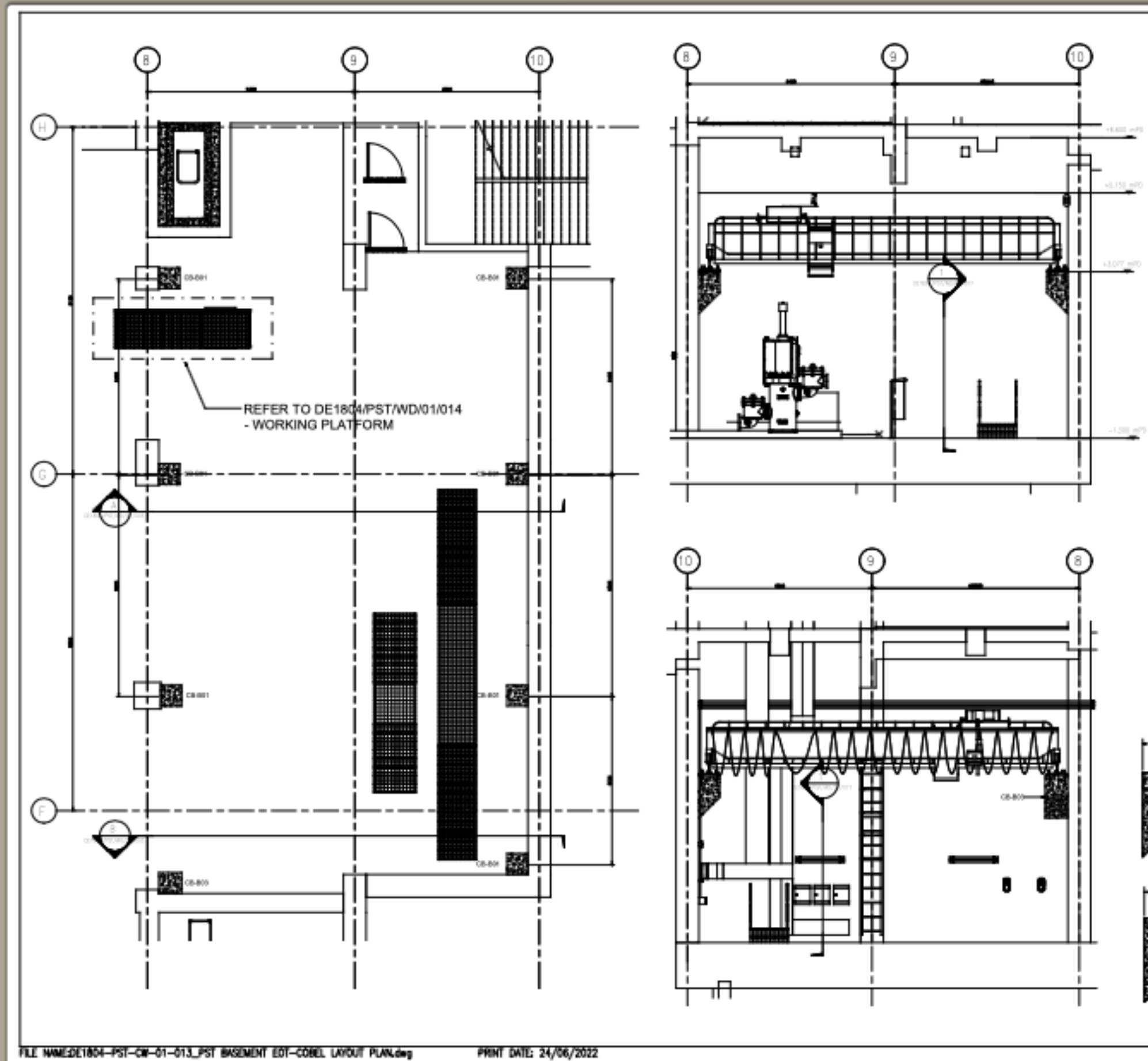
# CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)

- BIM Use - 3D VR

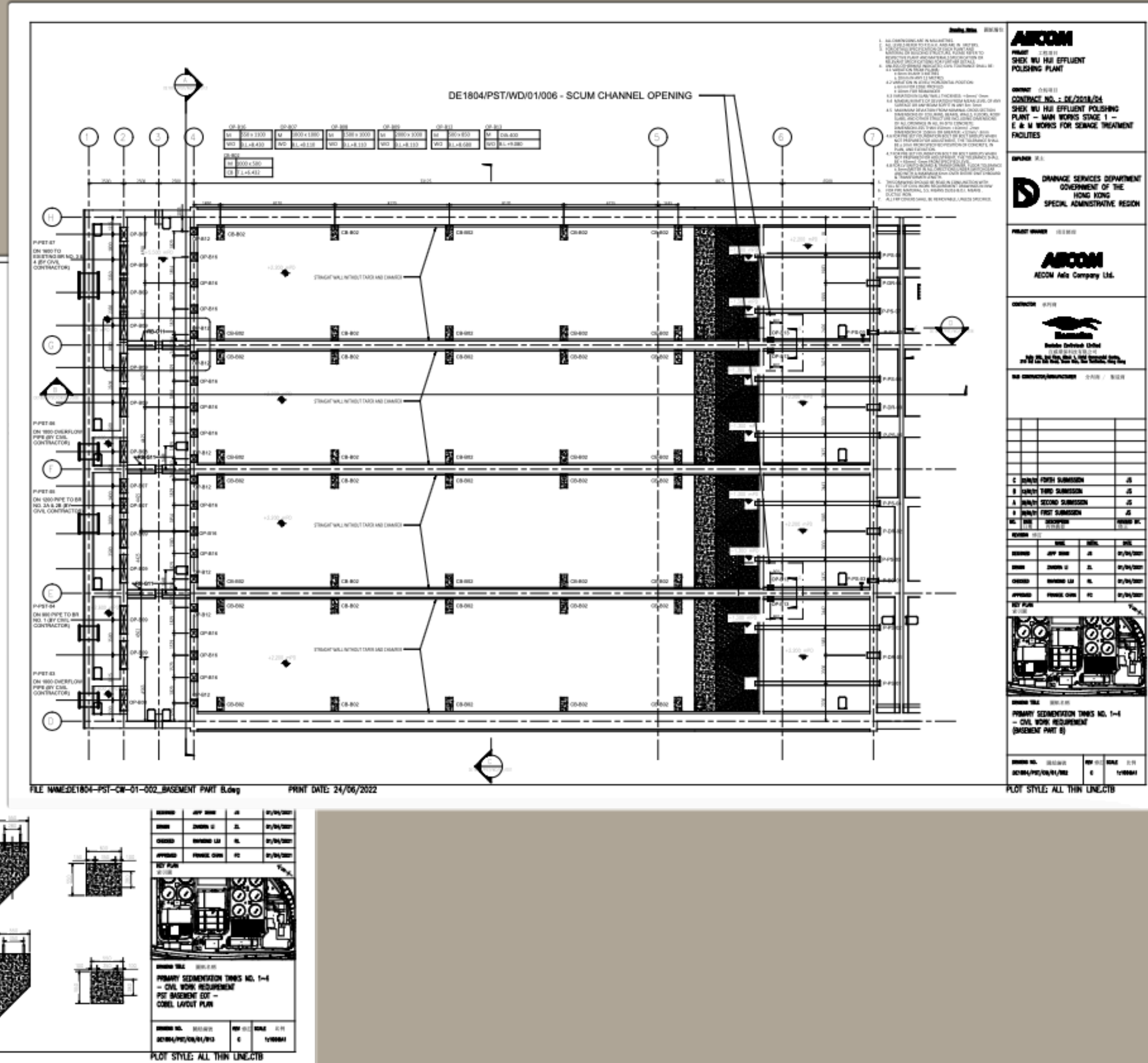




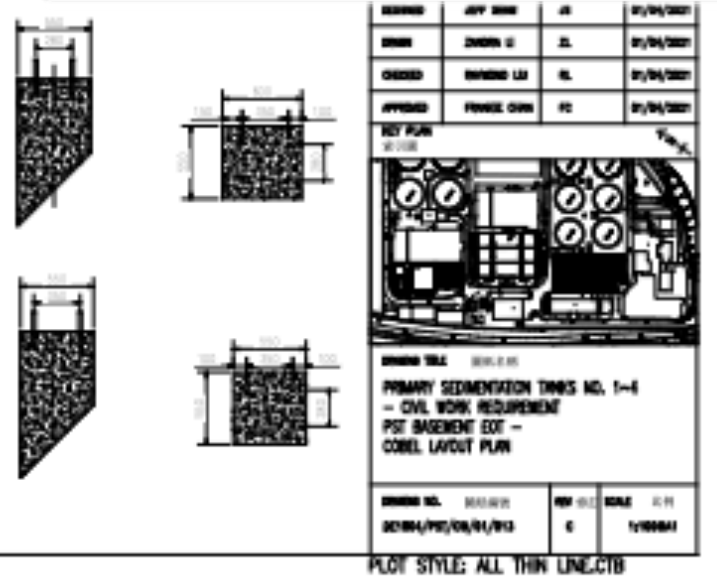




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FILE NAME: DE1804-PST-CR-01-002\_BASEMENT PART B.dwg PRINT DATE: 24/06/2022



FILE NAME: DE1804-PST-CR-01-002\_BASEMENT PART B.dwg PRINT DATE: 24/06/2022

**ARCOM**  
 SHEK WU HUI EFFLUENT POLISHING PLANT  
 CONTRACT NO.: DE/2018/04  
 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 - E & M WORKS FOR SEWAGE TREATMENT FACILITIES  
 DRAWN BY: J.S.  
 CHECKED BY: J.S.  
 APPROVED BY: J.S.  
 DATE: 24/06/2022

**ARCOM**  
 ARCOM Asia Company Ltd.

**Skanska**  
 Skanska (Hong Kong) Limited  
 25/F, 26/F, 27/F, 28/F, 29/F, 30/F, 31/F, 32/F, 33/F, 34/F, 35/F, 36/F, 37/F, 38/F, 39/F, 40/F, 41/F, 42/F, 43/F, 44/F, 45/F, 46/F, 47/F, 48/F, 49/F, 50/F, 51/F, 52/F, 53/F, 54/F, 55/F, 56/F, 57/F, 58/F, 59/F, 60/F, 61/F, 62/F, 63/F, 64/F, 65/F, 66/F, 67/F, 68/F, 69/F, 70/F, 71/F, 72/F, 73/F, 74/F, 75/F, 76/F, 77/F, 78/F, 79/F, 80/F, 81/F, 82/F, 83/F, 84/F, 85/F, 86/F, 87/F, 88/F, 89/F, 90/F, 91/F, 92/F, 93/F, 94/F, 95/F, 96/F, 97/F, 98/F, 99/F, 100/F

NO.	DATE	DESCRIPTION	BY	CHK.
1	24/06/2022	ISSUED FOR SUBMISSION	J.S.	J.S.
2	24/06/2022	ISSUED FOR SUBMISSION	J.S.	J.S.
3	24/06/2022	ISSUED FOR SUBMISSION	J.S.	J.S.
4	24/06/2022	ISSUED FOR SUBMISSION	J.S.	J.S.

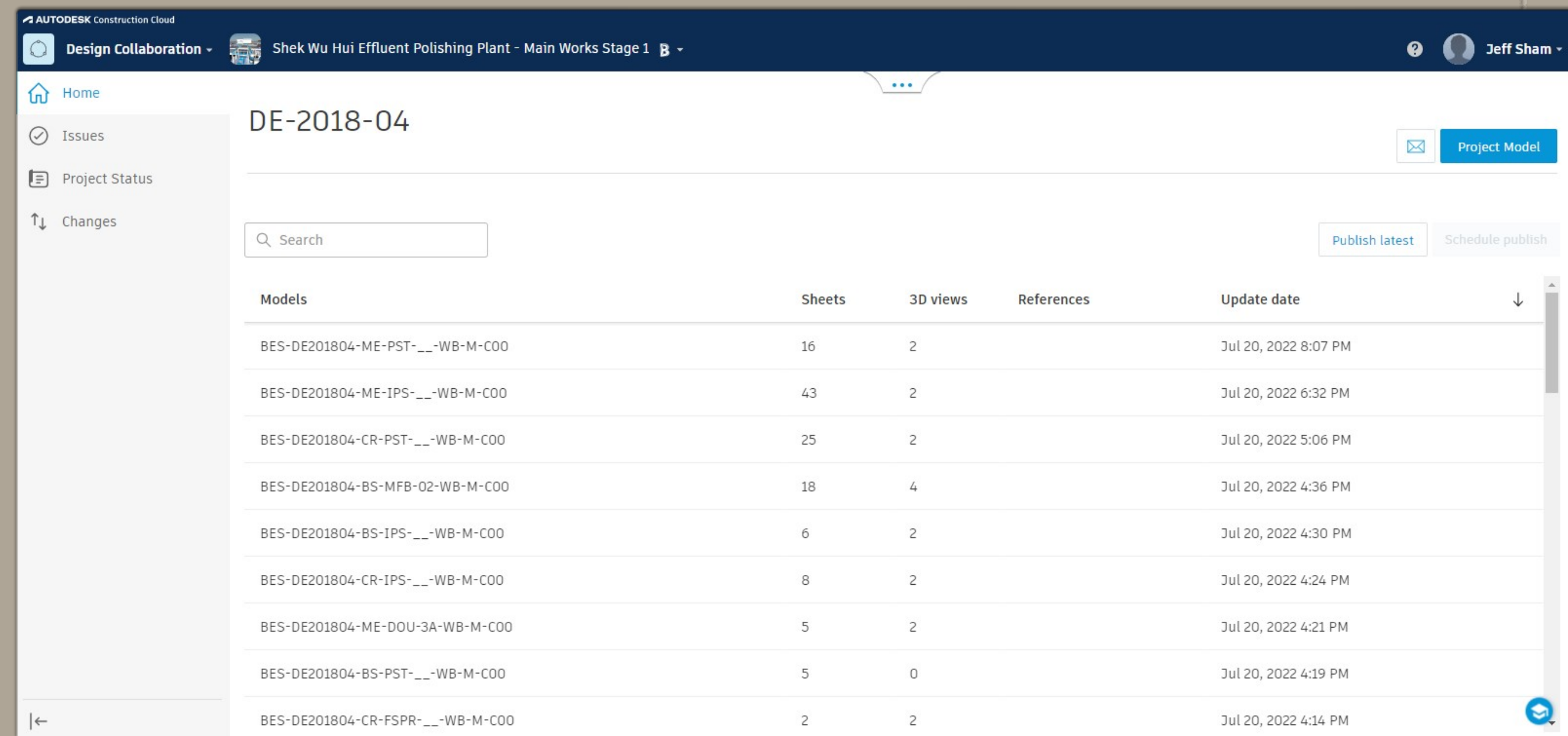


FILE NAME: DE1804-PST-CR-01-002\_BASEMENT PART B.dwg PRINT DATE: 24/06/2022

PRIMARY SEWAGE TREATMENT NO. 1-4  
 - CIVIL WORK REQUIREMENT  
 - CORREL LAYOUT PLAN  
 PLOT STYLE: ALL THIN LINE.CTB

# CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)

- Digital Information Management - BIM360 Docs



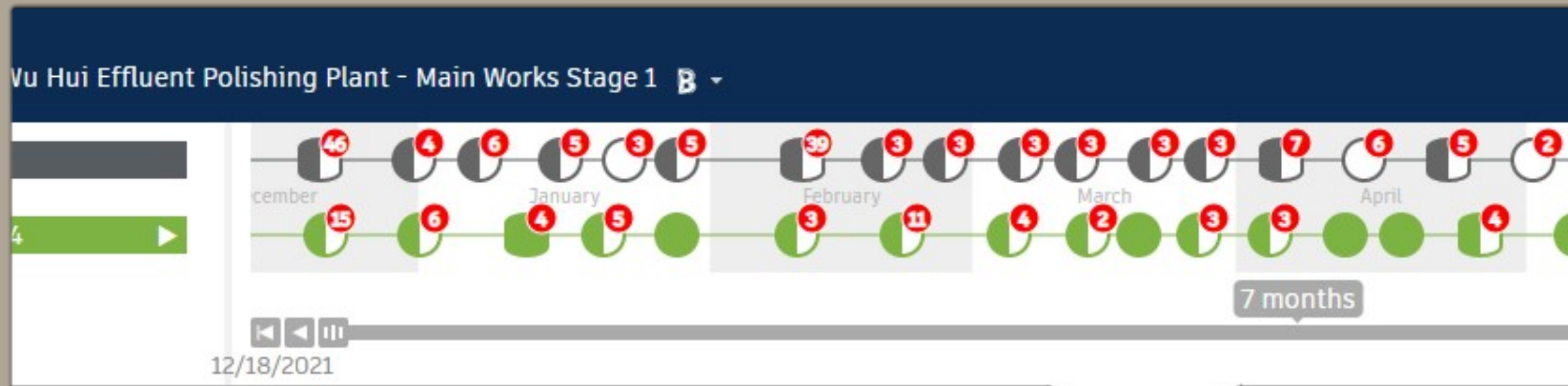
The screenshot displays the Autodesk Construction Cloud interface for a project named 'DE-2018-04'. The interface includes a navigation sidebar on the left with options for Home, Issues, Project Status, and Changes. The main content area shows a search bar and a table of models. The table has columns for Models, Sheets, 3D views, References, and Update date. The user 'Jeff Sham' is logged in, and there are buttons for 'Project Model', 'Publish latest', and 'Schedule publish'.

Models	Sheets	3D views	References	Update date
BES-DE201804-ME-PST-__-WB-M-C00	16	2		Jul 20, 2022 8:07 PM
BES-DE201804-ME-IPS-__-WB-M-C00	43	2		Jul 20, 2022 6:32 PM
BES-DE201804-CR-PST-__-WB-M-C00	25	2		Jul 20, 2022 5:06 PM
BES-DE201804-BS-MFB-02-WB-M-C00	18	4		Jul 20, 2022 4:36 PM
BES-DE201804-BS-IPS-__-WB-M-C00	6	2		Jul 20, 2022 4:30 PM
BES-DE201804-CR-IPS-__-WB-M-C00	8	2		Jul 20, 2022 4:24 PM
BES-DE201804-ME-DOU-3A-WB-M-C00	5	2		Jul 20, 2022 4:21 PM
BES-DE201804-BS-PST-__-WB-M-C00	5	0		Jul 20, 2022 4:19 PM
BES-DE201804-CR-FSPR-__-WB-M-C00	2	2		Jul 20, 2022 4:14 PM

# HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)

- Digital Information Management - BIM360 Docs
  - Cloud-based
  - Web-based
  - Time-stamped
  - Record
    - 3D model submission
    - 3D model review
    - 2D drawings
    - Drawing register
    - Correspondence list
    - Transmittals





018-04

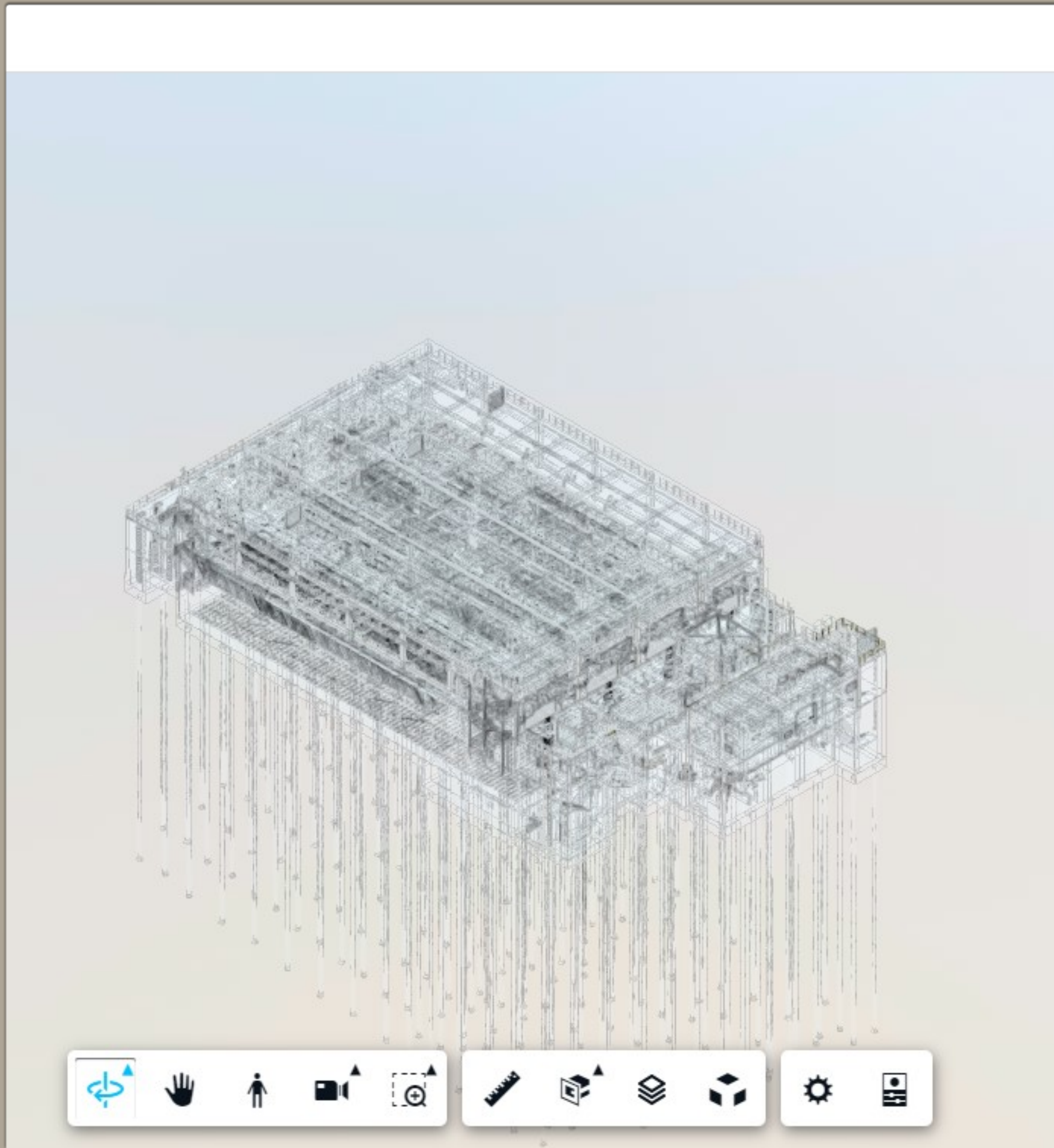
h

	Sheets	3D views	References
01804-ME-PST-__-WB-M-C00	16	2	
01804-ME-IPS-__-WB-M-C00	43	2	
01804-CR-PST-__-WB-M-C00	25	2	
01804-BS-MFB-02-WB-M-C00	18	4	
01804-BS-IPS-__-WB-M-C00	6	2	
01804-CR-IPS-__-WB-M-C00	8	2	

od:fs.folder.co.RpxCYS0ERX-k3v4MSI53...

- Digital Information Management - Collaboration Pro

Models	Sheets	3D views	References	Update date
BES-DE201804-ME-PST-__-WB-M-C00	16	2		Jul 20, 2022 8:07 PM
BES-DE201804-ME-IPS-__-WB-M-C00	43	2		Jul 20, 2022 6:32 PM



Browser address bar: dcs.b360.autodesk.com/home/projects/9006eb5f-ae80-4099-a2a2-0de9b254b5cc/teams/urn:adsk.wipprod:fs.folder:co.RpxCY50ERX-k3v4MS153pQ/model

BIM 360 Document... InnoShare - DE/201... BIM Team - Home

Compare

Change visualization

2 selected

Views (all)

View versions being compared

No changes found

Change your search and filter criteria or select a different model or version.

Models	Compare	To	Changes
<input type="checkbox"/> BES-DE201804-BS-MFB-02-WB-M-COO...	V70 14 Jul 2022	V71 20 Jul 2022	40
<input checked="" type="checkbox"/> BES-DE201804-BS-PST-_-WB-M-COO...	V52 14 Jul 2022	V53 20 Jul 2022	45
<input type="checkbox"/> BES-DE201804-BS-SFHPR-_-WB-M-C...	V20 11 May 2022	V21 08 Jul 2022	42
<input type="checkbox"/> BES-DE201804-BS-TCDS-_-WB-M-CO...	V7 08 Jul 2022	V8 08 Jul 2022	0
<input type="checkbox"/> BES-DE201804-CR-BRC-_-WB-M-COO...	V37 14 Jul 2022	V38 18 Jul 2022	38
<input type="checkbox"/> BES-DE201804-CR-CC-01-WB-M-COO...	V12 17 Jul 2022	V15 20 Jul 2022	3

2 models selected

Cancel Show Changes

Compare

Change visualization

2 selected

Views (all)

View versions being compared

Added 4 Modified 0 of 40 Deleted 1

Search changes

All changes (5) Watched changes (0)

- default 4/0
  - standl [2562413]
  - standl [2565050]
  - standl [2565065]
  - standl [2565073]
- Generic Models 0/1
  - KERB 2 0/1
    - KE-G01 0/1
    - KERB 2 [2574773]**

BES-DE201804-ME-PST-\_-WB-M-COO.rvt

# **CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)**

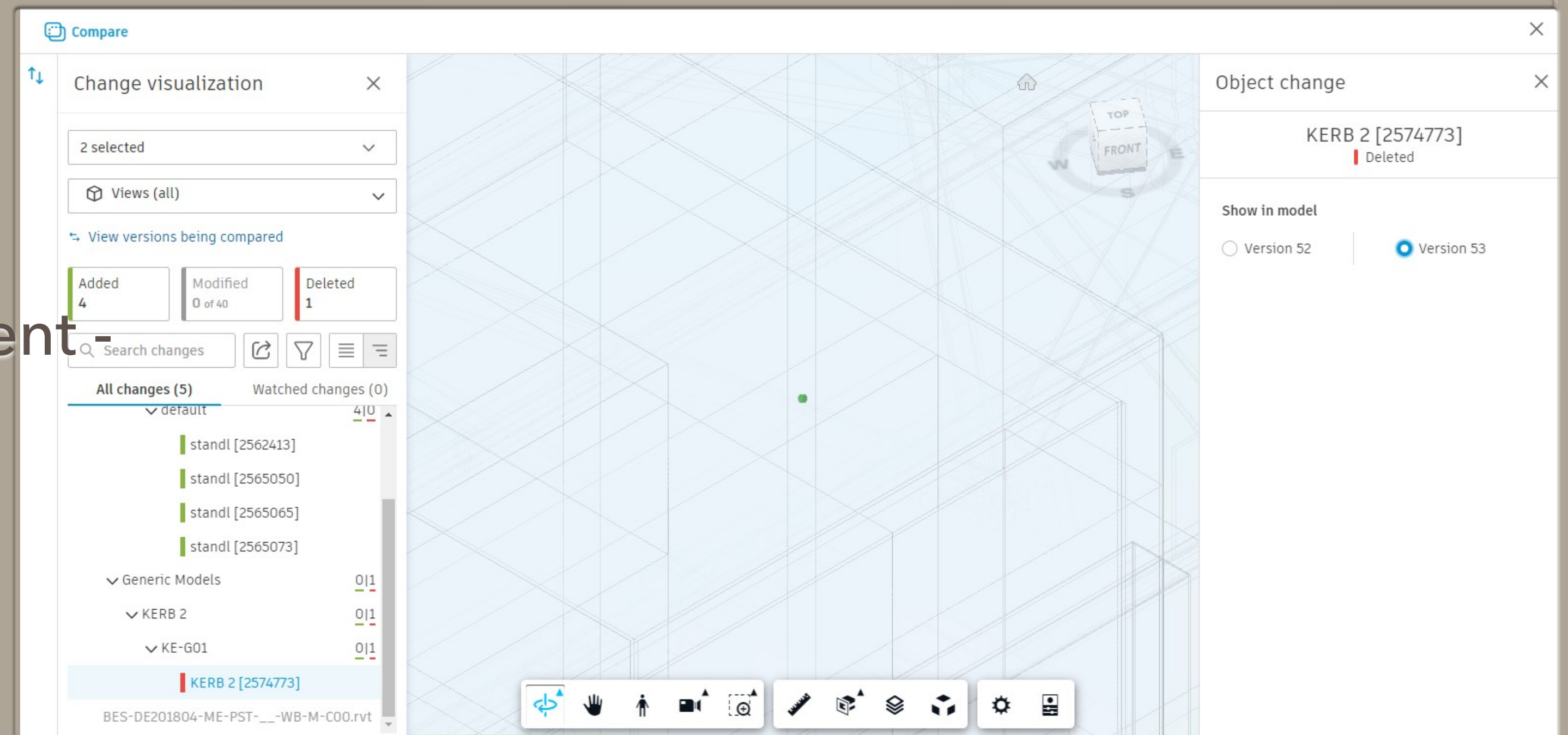
- Digital Information Management - Interoperability

Interoperability could be found in interfacing with external civil team, where they design underground services by Civil 3D apart from our Revit, but we could request them to convert their model to .nwc format and we could integrate with our .nwc and generate a .nwd for further visual analysis or clash analysis. Terrain is common in our project, which is .dtm, they could convert them to .ifc via civil 3D and make inter operable.

Particularly in E&M application, our vendor often use Solidworks or inventor to generate 3D model, to make interoperable, we could use 3D CAD to convert them to .step and import to Revit as family. Lighting simulation also requires conversion from Revit to .ifc, which is interoperable with the simulation software, DIALux. Exporting to COBie format from Revit is also make use of plugin to allow interoperable.

# CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)

- Digital Information Management - collaboration



# CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)

- Digital Information Management - Review & Quality Control

The screenshot displays a web-based interface for a BIM collaboration platform. At the top, a green notification bar reads "You are viewing swhepp\_rss07's screen" with a "View Options" dropdown. The main content area is divided into two parts: a 3D model viewer on the left and a user list on the right.

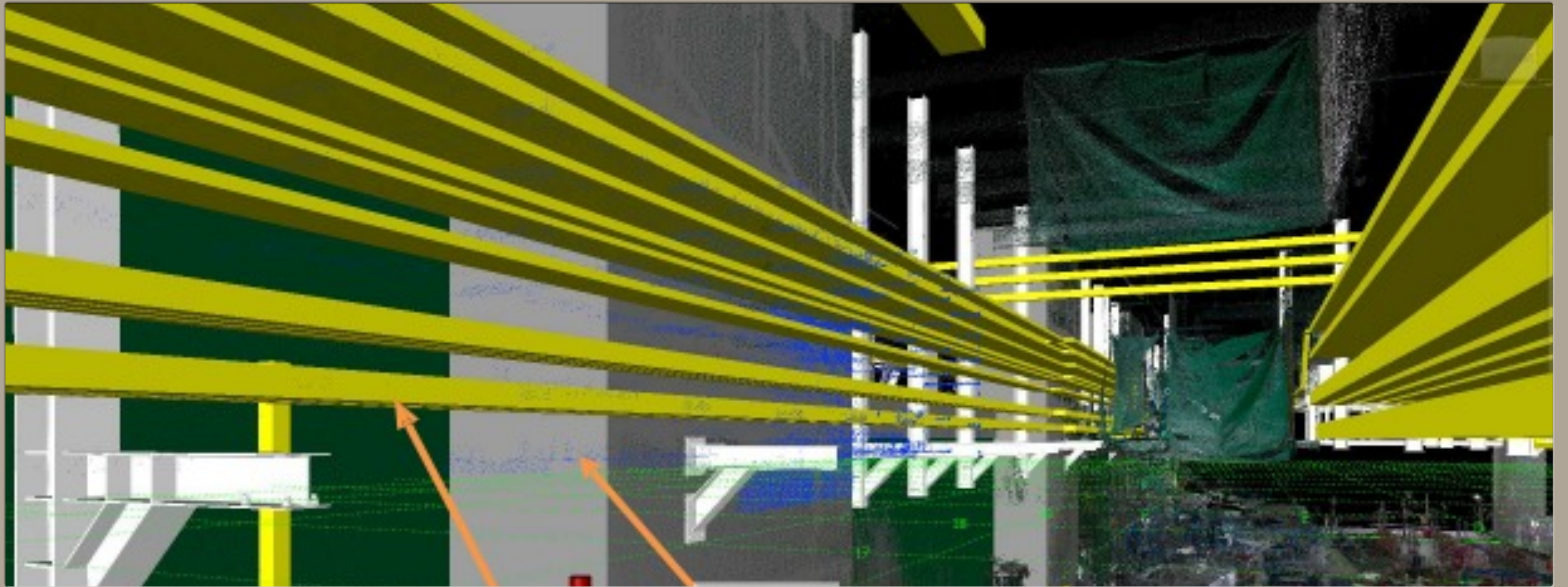
The 3D model viewer shows a detailed architectural rendering of a sewage treatment plant facility, including various structures, pipes, and landscaping. A "Sheets & Views" panel is visible on the left side of the model, and a Windows taskbar is at the bottom.

The user list on the right is a grid of user avatars and names, with the "swhepp\_rss07" user highlighted by a yellow border. The users listed are:

swhepp_rss07	Jeff Sham - BW
Benny	K L Cheung
ARE_EM3 Devan...	Hillman Lau
RE EM7 Eddy	Kent Yip
Adrian LEONG R...	KLCWJV

# **CONTRACT NO. DE/2018/04 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 E&M WORKS FOR SEWAGE TREATMENT FACILITIES (2021 - 2022)**

- Communication Skills
  - Biweekly inter-contract task group meeting
  - Monthly BIM project coordination meeting
  - Meeting with clients, suppliers and sub-contractors
  - Invite BIM review meeting and give advice on BIM
  - Listen expectations of client, senior management, colleagues, suppliers and sub-contractors
  - Promote colleague for BIM uses and BIM trainings



**HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)**

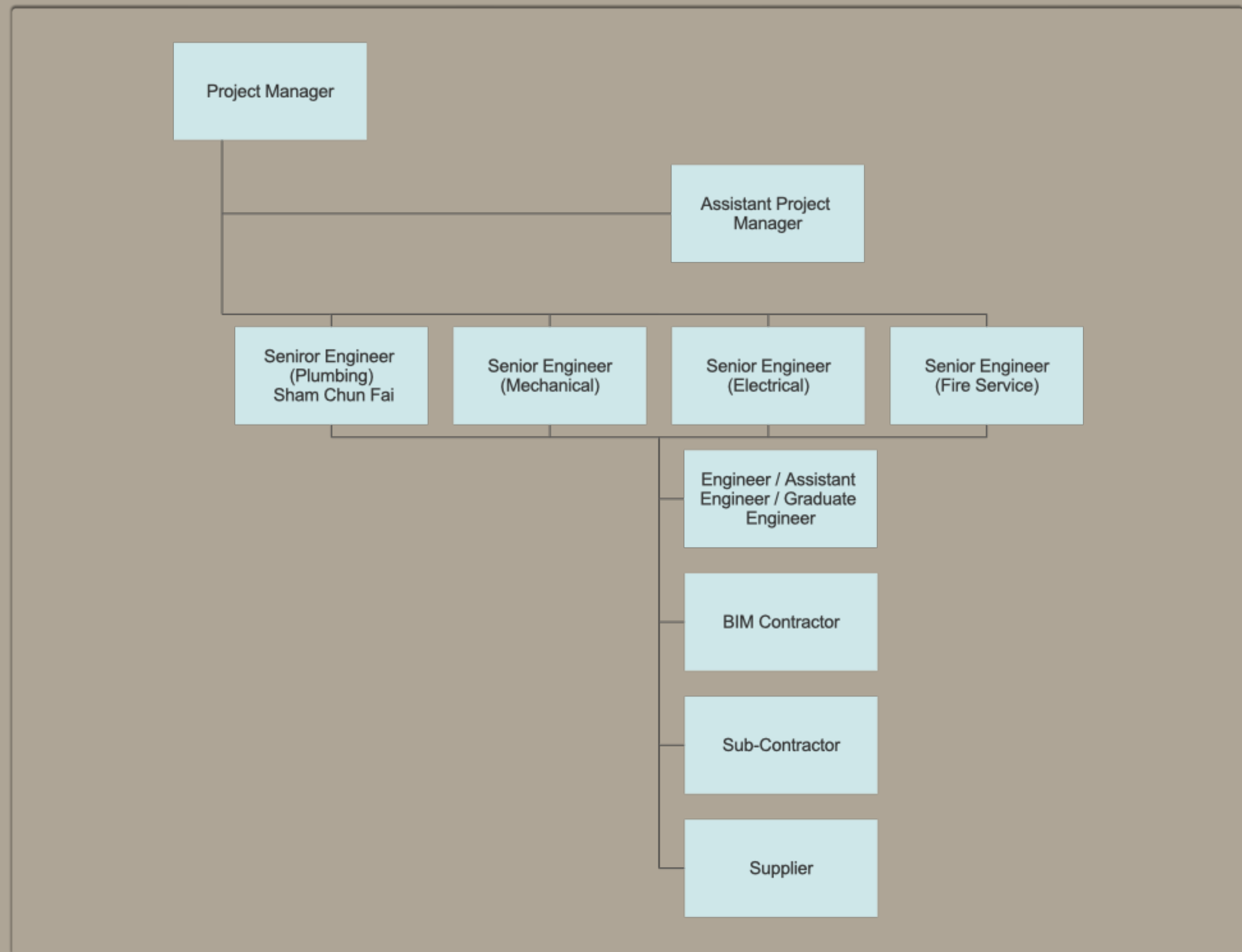
# **HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)**

- Background
  - Uses of BIM improve the coordination and workflow in design and building project in Hong Kong International Airport Works of underground train maintenance facility and pumping station



# HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)

- O-Chart



# **HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)**

- BIM Initiation
  - HKIA BIM Standard
  - PAS 1192

# **HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)**

- BIM Software & Technologies
  - Revit
  - Navisworks Manage
  - Navisworks Freedom
  - AutoCAD
  - Aconex

# **HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)**

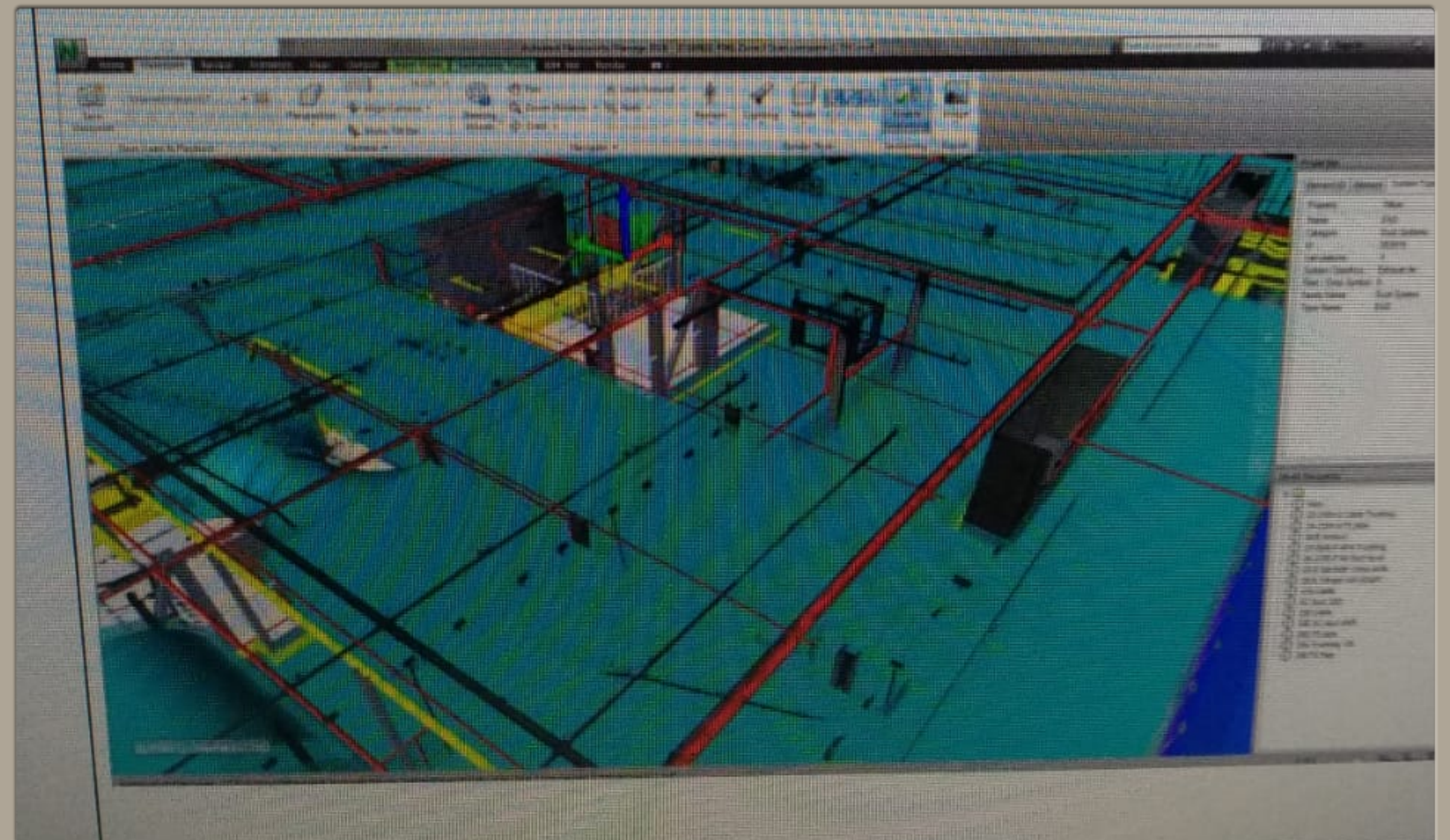
- BIM Use - Design Authoring
  - Using 3D model to collaborate MEP design and Civil design
  - Submit 3D model via Aconex
  - Client review and comment in 3D model
  - Revise the 3D design model and resubmit
  - 2D drawing generation for approval

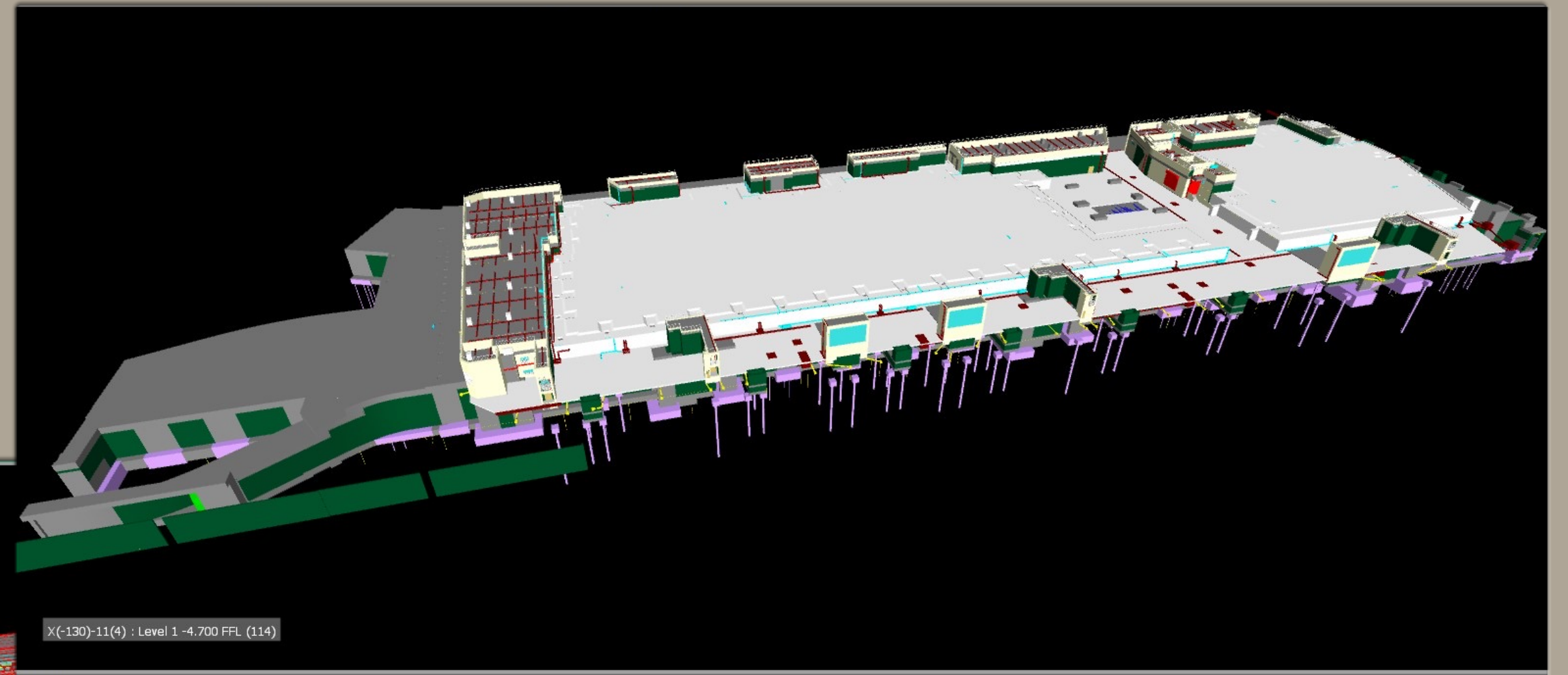
# HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)

- BIM Use - Design Review
  - Internal review among MEP disciplines
  - Client review and comment 3D model after submission via Aconex

# HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)

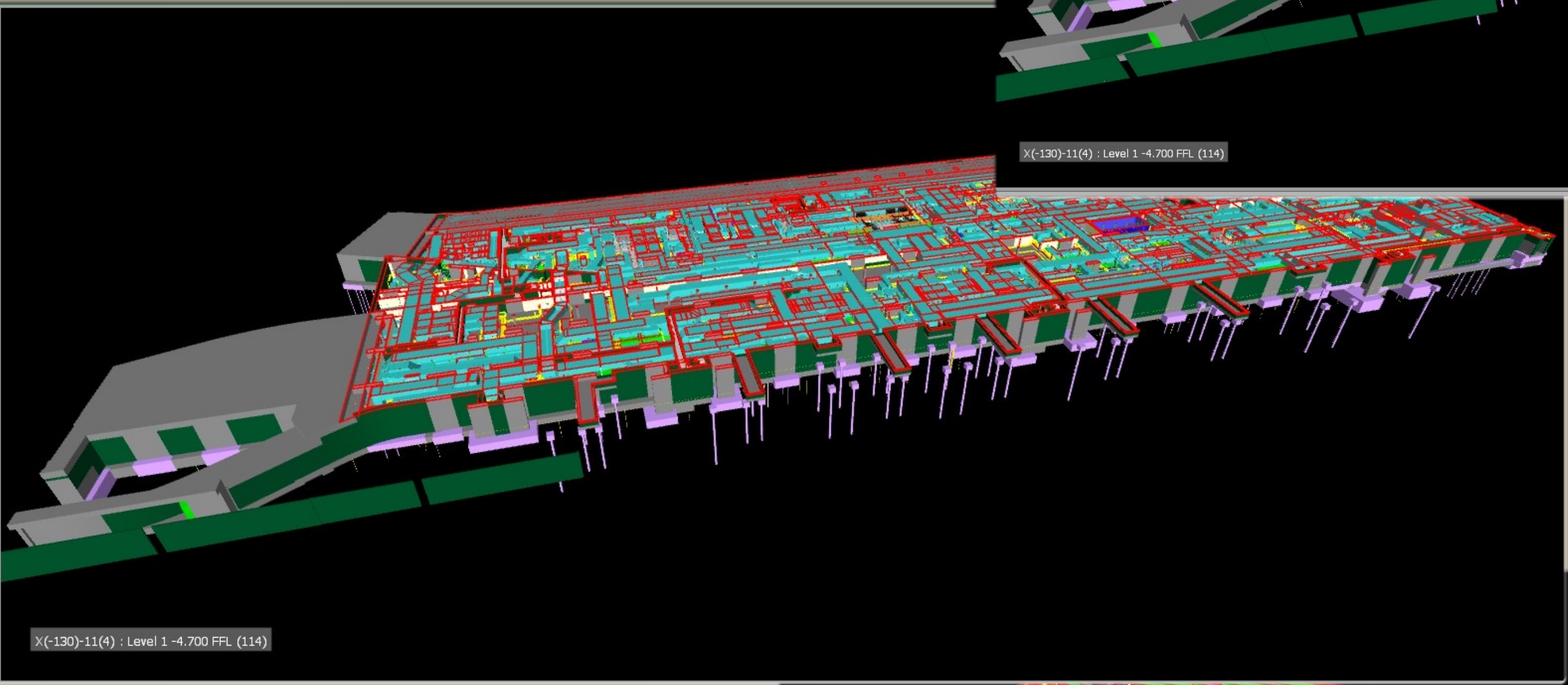
- BIM Use - 3D Coordination
- Coordinate the route and facility locations in 3D model



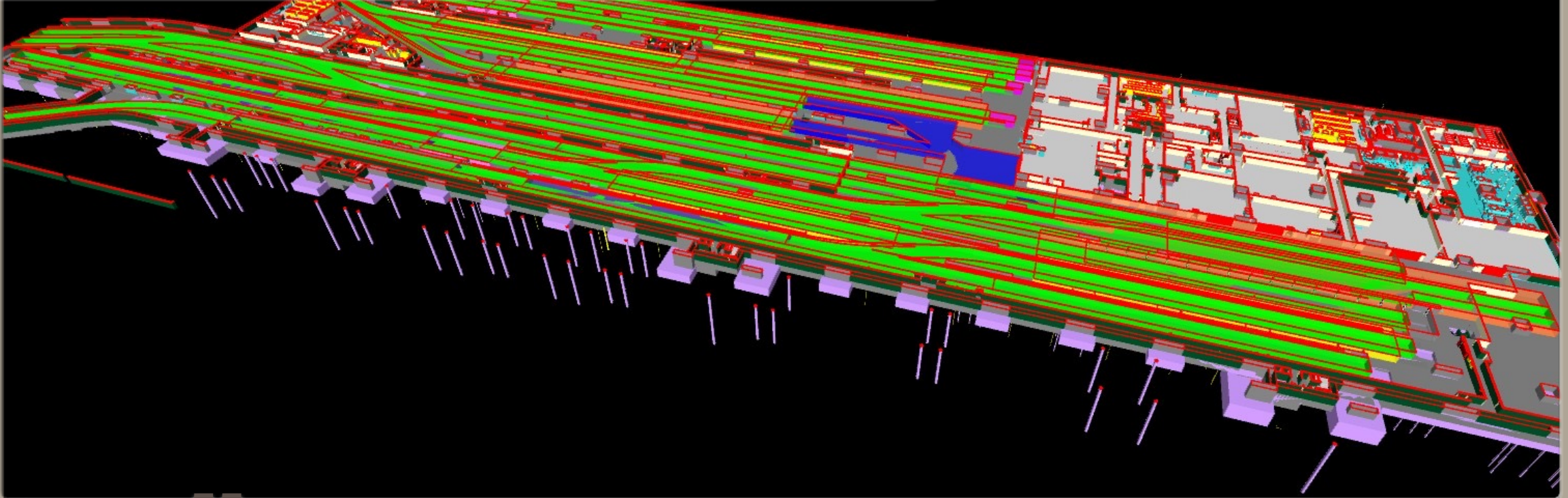


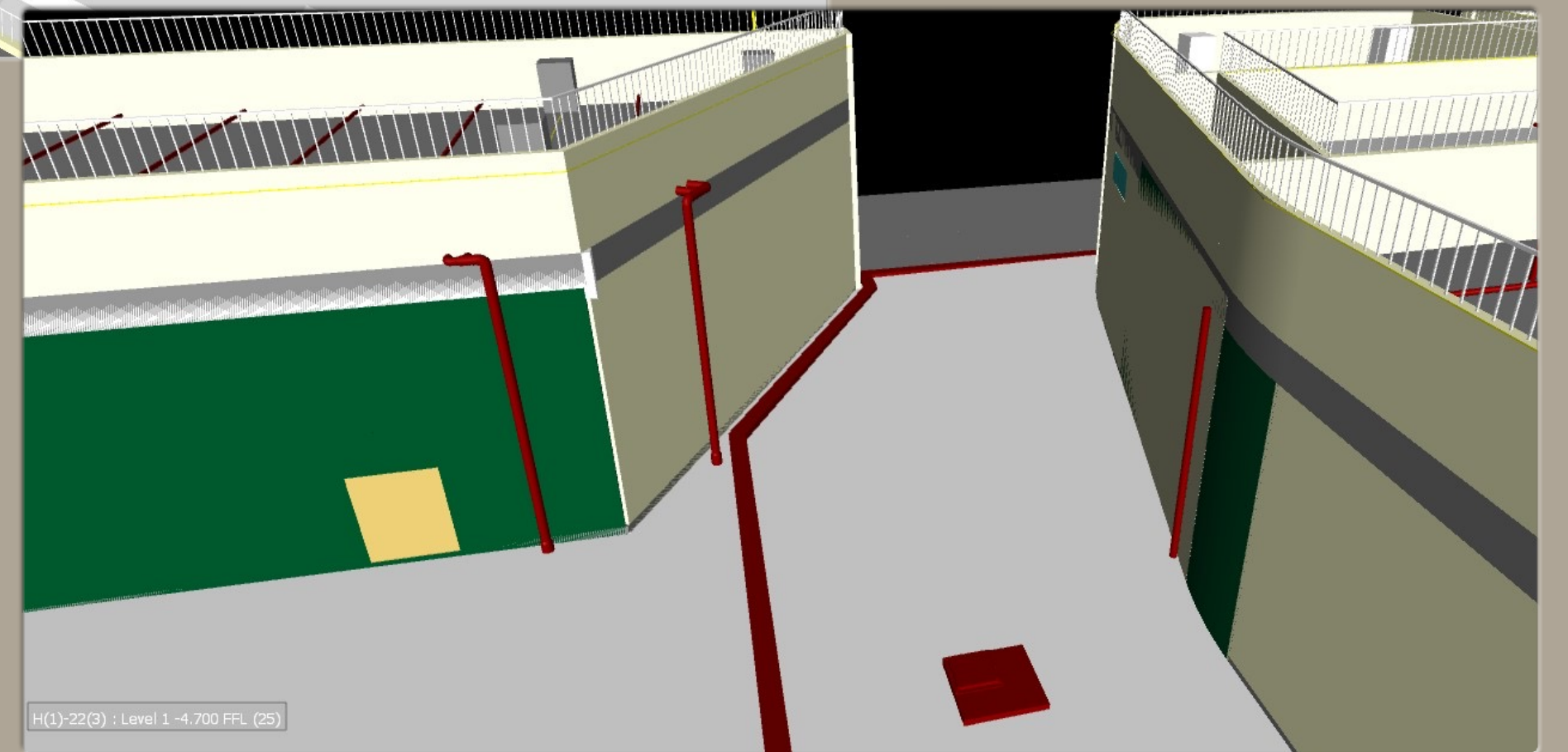
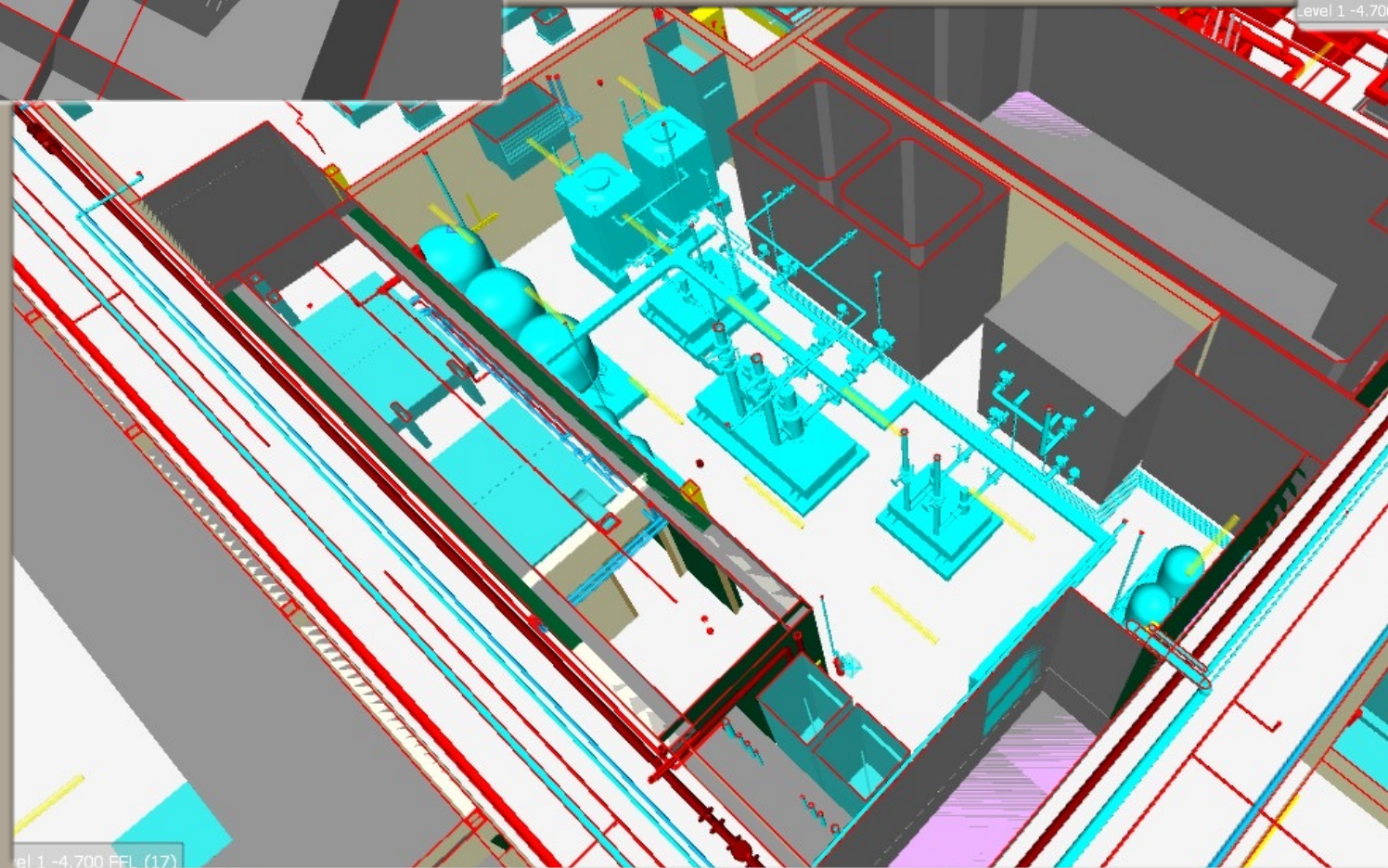
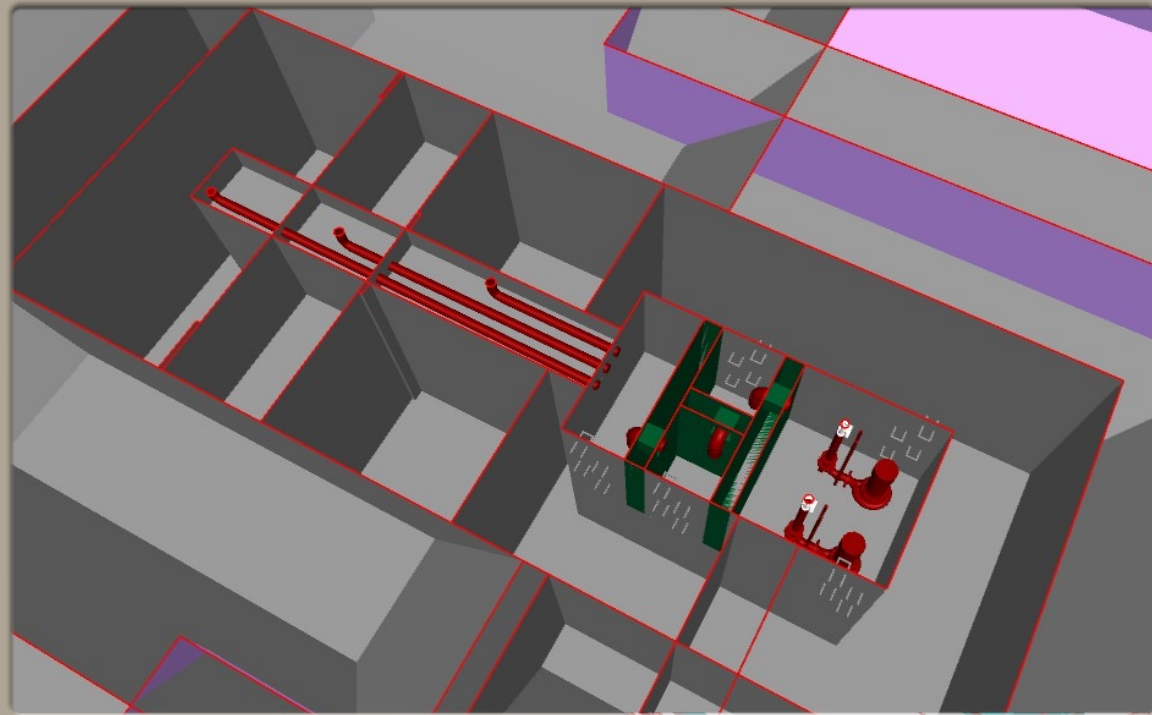
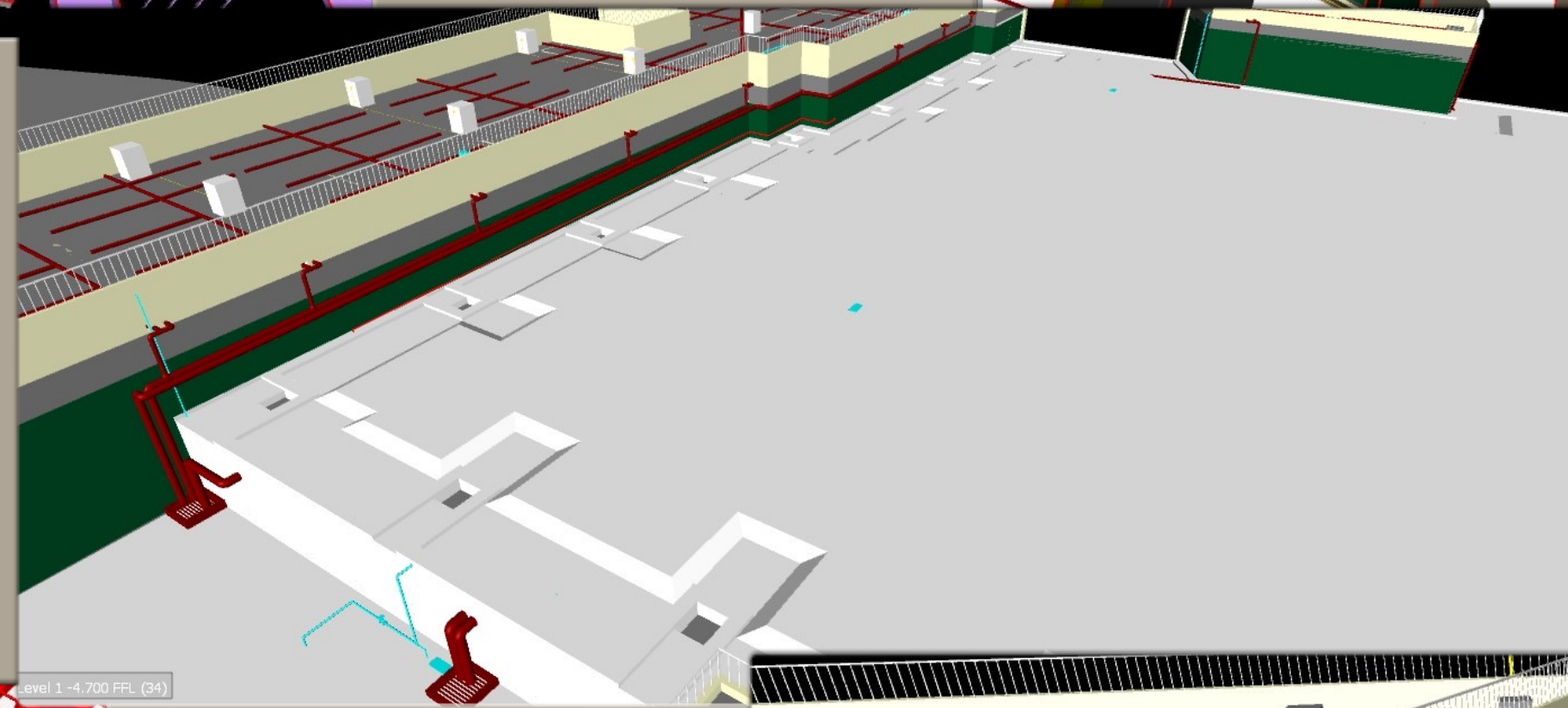
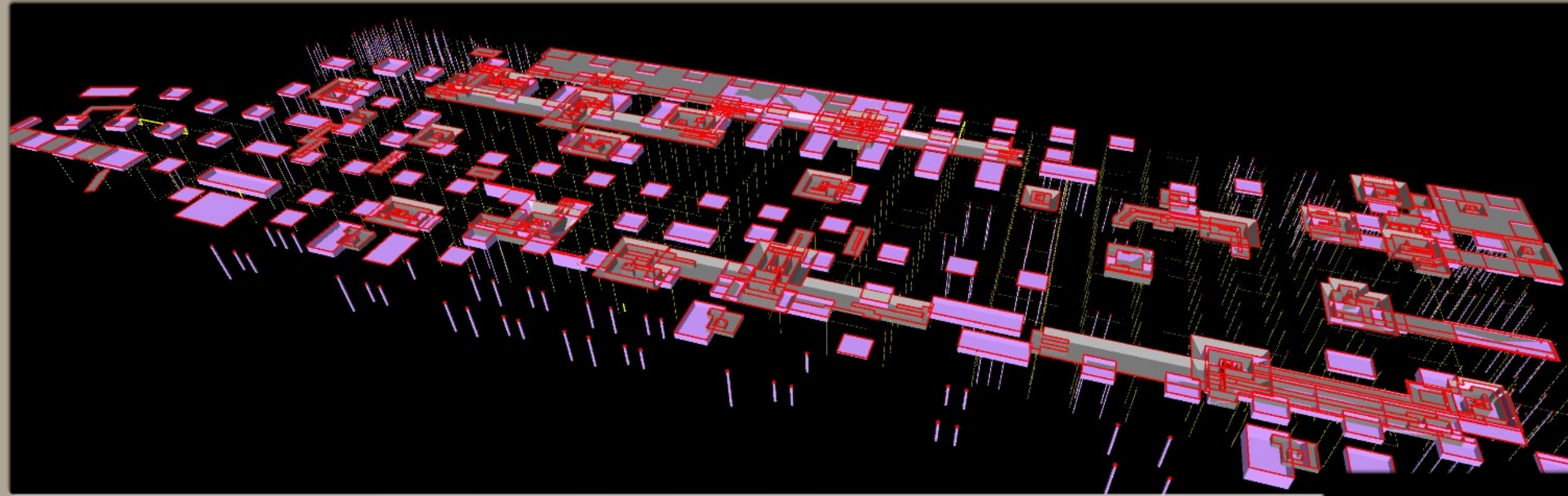
X(-130)-11(4) : Level 1 -4.700 FFL (114)

- Selection Tree
- Standard
    - BaseSlab.nwd
      - Zone 1 Level 1-2.nwd
        - CSC-P561-B-BSAC-W-Zone 1.nwc
        - CSC-P561-B-BSAS-W-Zone 1.nwc
        - CSC-P561-B-BSDR-W-Zone 1.nwc
        - CSC-P561-B-BSEL-W-Zone 1.nwc
        - CSC-P561-B-BSFS-W-Zone 1.nwc
        - CSC-P561-B-BSPL-W-Zone 1.nwc
        - CSC-P561-B-BS-W-Zone 1-Hanger.nwc
      - Zone 1 Level 3.nwd
        - CSC-P561-B-GFXBSAC-W-Zone 1.nwc
        - CSC-P561-B-GFXBSAS-W-Zone 1.nwc
        - CSC-P561-B-GFXBSDR-W-Zone 1.nwc
        - CSC-P561-B-GFXBSEL-W-Zone 1.nwc
        - CSC-P561-B-GFXBSFS-W-Zone 1.nwc
        - CSC-P561-B-GFXBSPL-W-Zone 1.nwc
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      - Zone 2 Level 1-2.nwd
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        - CSC-P561-B-BSAS-W-Zone 2.nwc
        - CSC-P561-B-BSDR-W-Zone 2.nwc
        - CSC-P561-B-BSFS-W-Zone 2.nwc
        - CSC-P561-B-BSPL-W-Zone 2.nwc
        - CSC-P561-B-BSEL-W-Zone 2.nwc
        - CSC-P561-B-BS-W-Zone 2-Hanger.nwc
      - Zone 2 Level 3.nwd
        - CSC-P561-B-GFXBSAC-W-Zone 2.nwc
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        - CSC-P561-B-GFXBSPL-W-Zone 2.nwc
        - CSC-P561-B-GFXBS-W-Zone 2-Hanger.nw
      - Zone 3 Level 1-2.nwd
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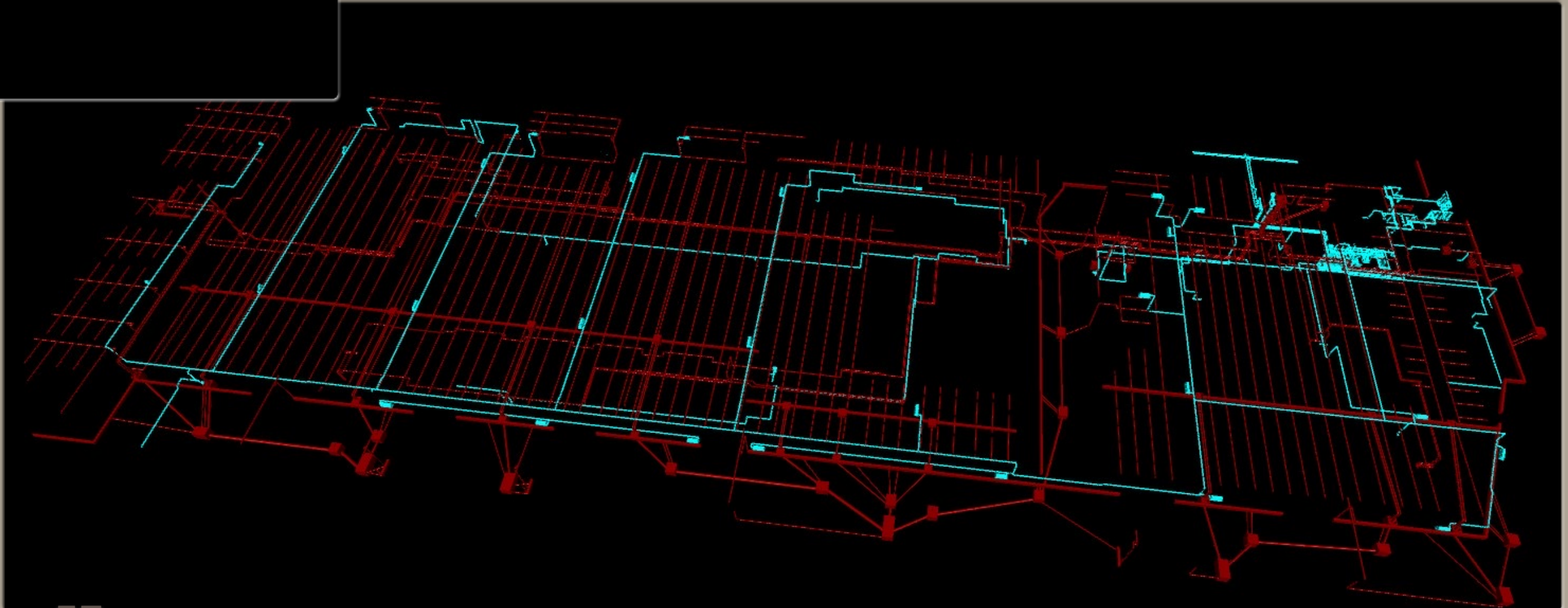
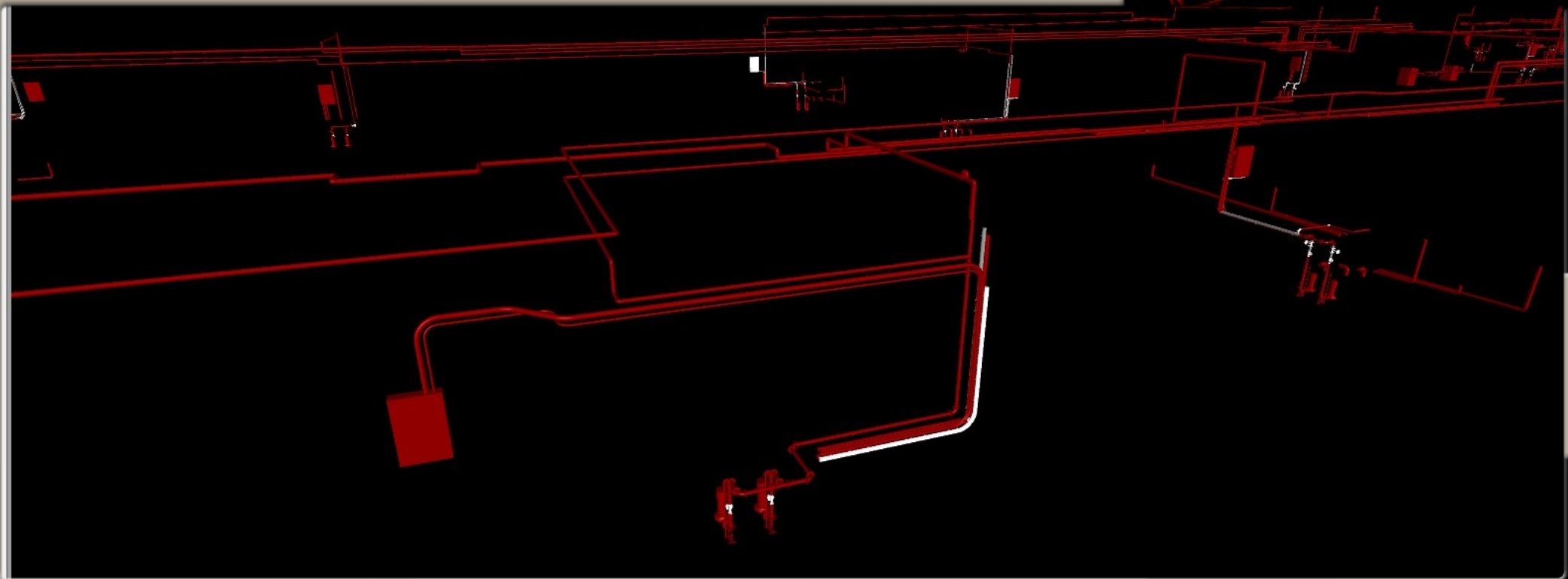
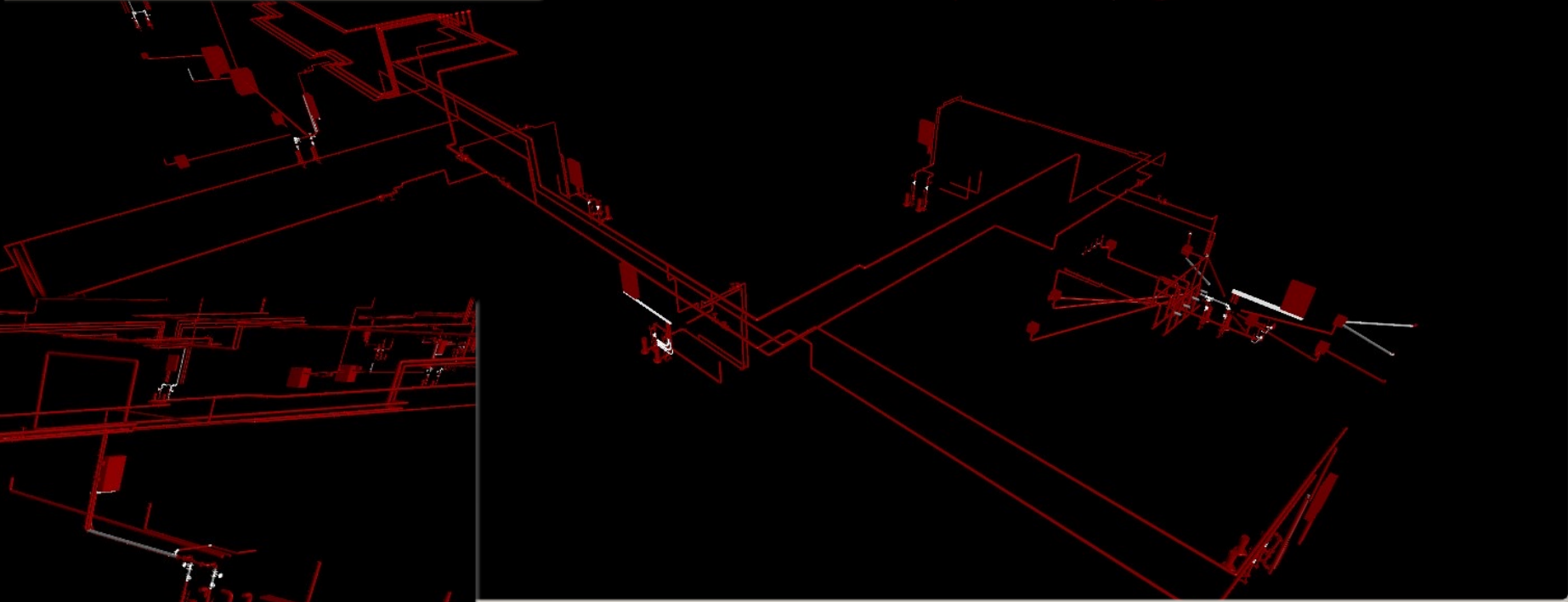
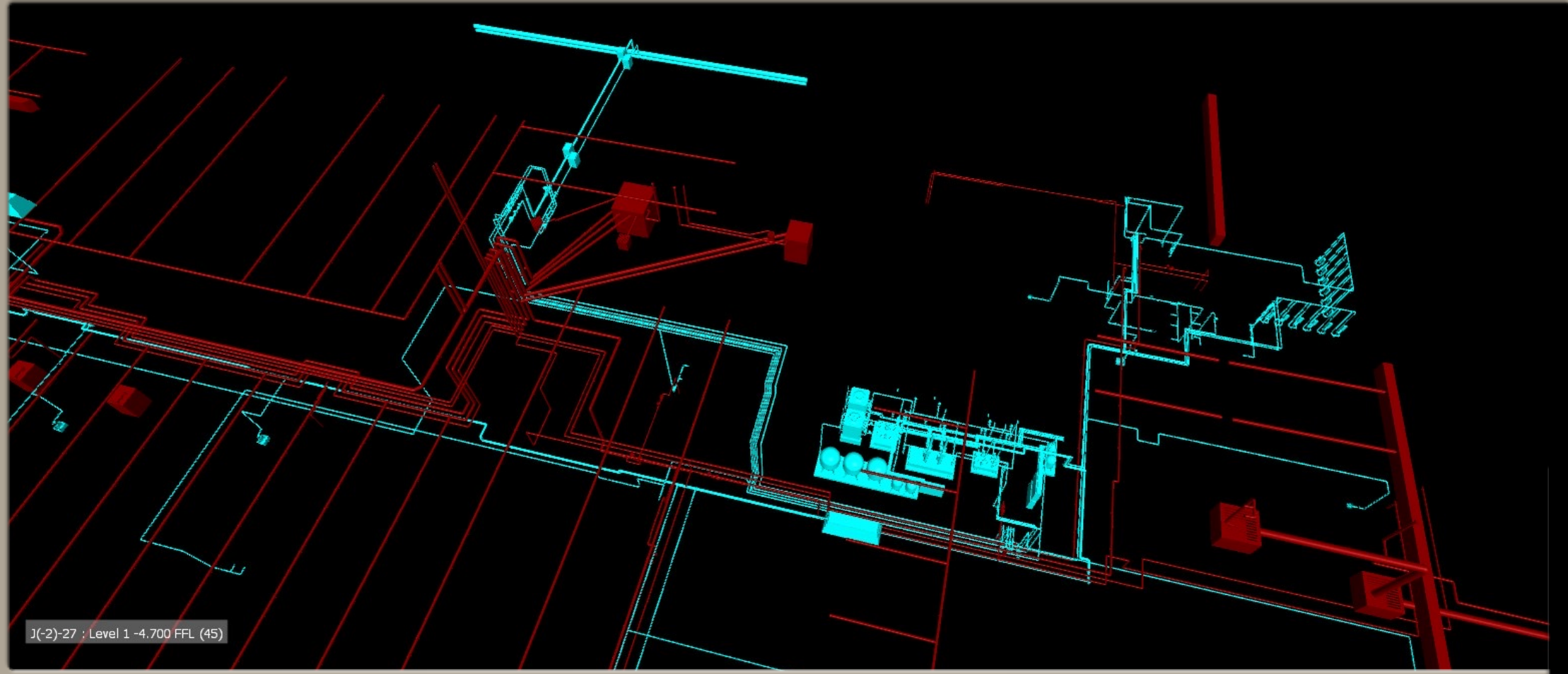


X(-130)-11(4) : Level 1 -4.700 FFL (114)



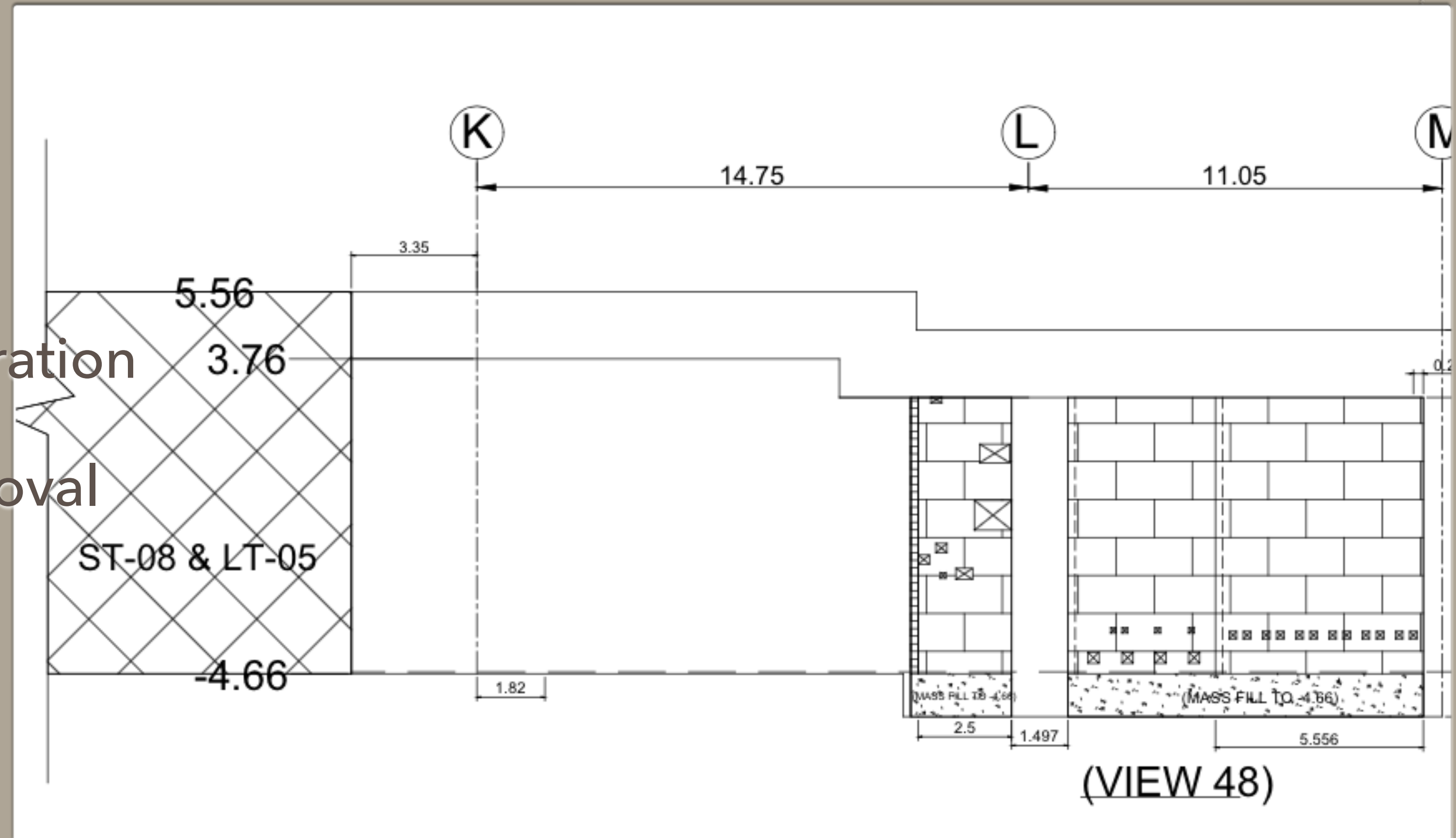






# HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)

- BIM Use - 2D Drawing Generation
- For coordination and approval



# HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)

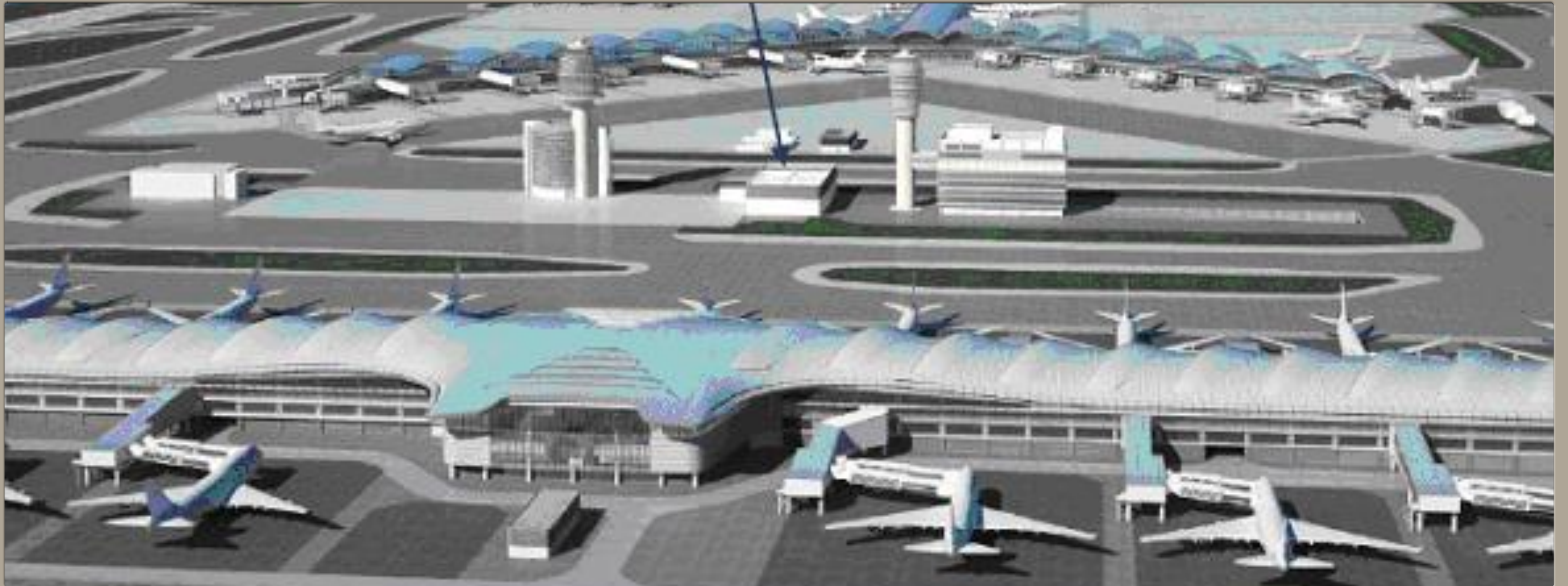
- Digital Information Management - Aconex
  - Cloud-based
  - Web-based
  - Time-stamped
  - Record
    - 3D model submission
    - 2D drawings
    - Drawing register
    - Correspondence list
    - Transmittals
    - Status (pending, endorsed, approval or closed, etc.)

# **HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)**

- Commercial & Contractual
  - Promote Organizational Problem-solving Atmosphere
  - Enhance collaboration with external parties, client and suppliers
  - Elevate company reputation
  - Enable to win bids
  - Reduce potential contractual risks

# **HONG KONG INTERNATIONAL AIRPORT P561 NORTH COMMERCIAL DISTRICT ENABLING WORKS & C3801 APM AND BHS TUNNEL ON EXISTING AIRPORT ISLAND (2017 - 2019)**

- Communication Skills
  - Weekly progress meeting
  - 3D model review meeting with colleagues and clients
  - Meeting with clients, suppliers and sub-contractors
  - Listen expectations of client, senior management, colleagues, suppliers and sub-contractors



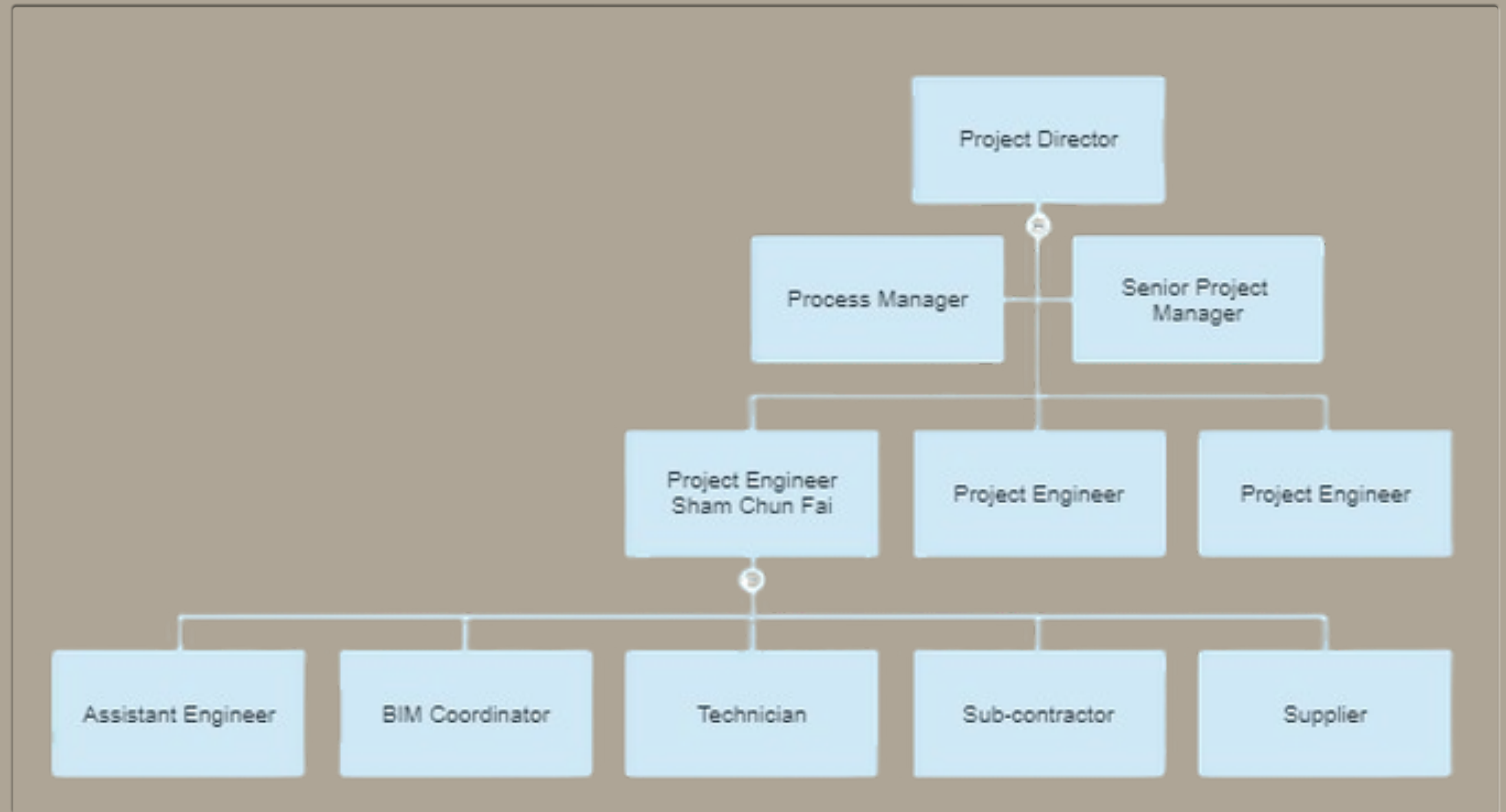
**HONG KONG INTERNATIONAL AIRPORT MIDFIELD CONCOURSE WORK, DESIGN, SUPPLY, INSTALLATION, TEST AND COMMISSIONING OF SEWAGE TREATMENT PLANT (2013-2016)**

# **HONG KONG INTERNATIONAL AIRPORT MIDFIELD CONCOURSE WORK, DESIGN, SUPPLY, INSTALLATION, TEST AND COMMISSIONING OF SEWAGE TREATMENT PLANT (2013-2016)**

- Background
  - Uses of BIM improve the visualization, coordination and as-built in design and building project for sewage treatment plant in Midfield concourse of Hong Kong International Airport

# HONG KONG INTERNATIONAL AIRPORT MIDFIELD CONCOURSE WORK, DESIGN, SUPPLY, INSTALLATION, TEST AND COMMISSIONING OF SEWAGE TREATMENT PLANT (2013-2016)

- O-Chart





# **HONG KONG INTERNATIONAL AIRPORT MIDFIELD CONCOURSE WORK, DESIGN, SUPPLY, INSTALLATION, TEST AND COMMISSIONING OF SEWAGE TREATMENT PLANT (2013-2016)**

- BIM Initiation
  - HKIA BIM Standard
  - PAS 1192

# **HONG KONG INTERNATIONAL AIRPORT MIDFIELD CONCOURSE WORK, DESIGN, SUPPLY, INSTALLATION, TEST AND COMMISSIONING OF SEWAGE TREATMENT PLANT (2013-2016)**

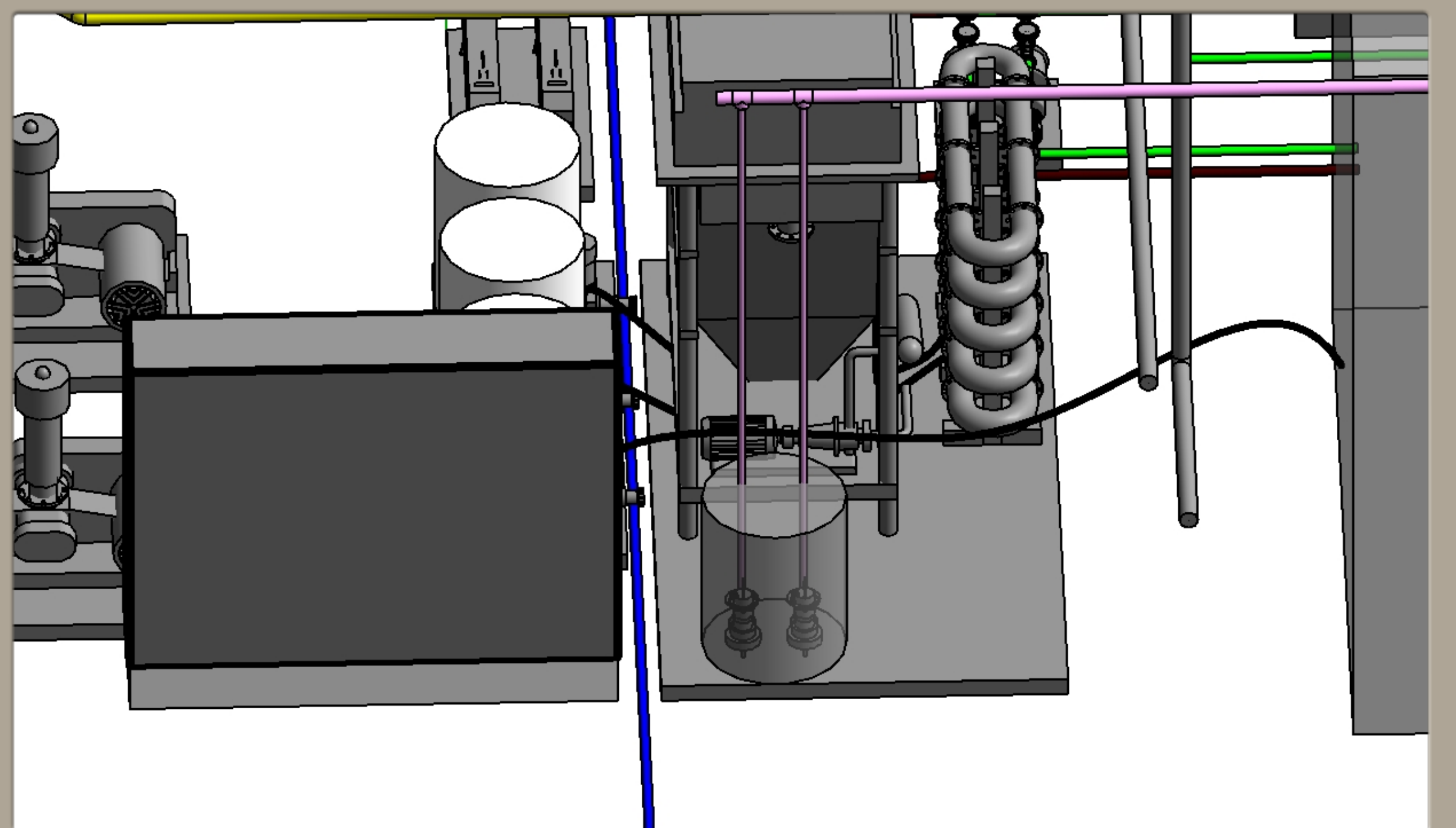
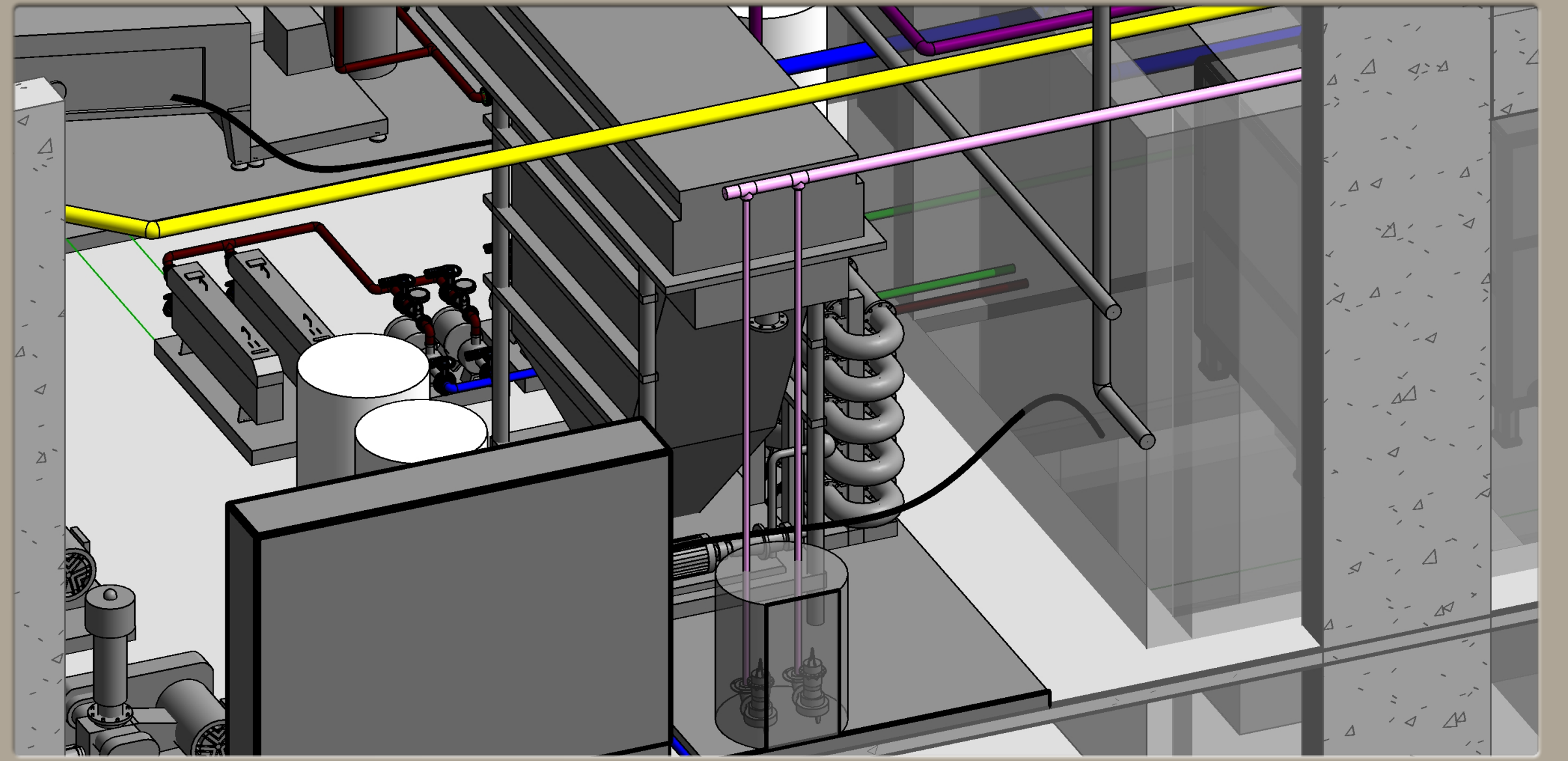
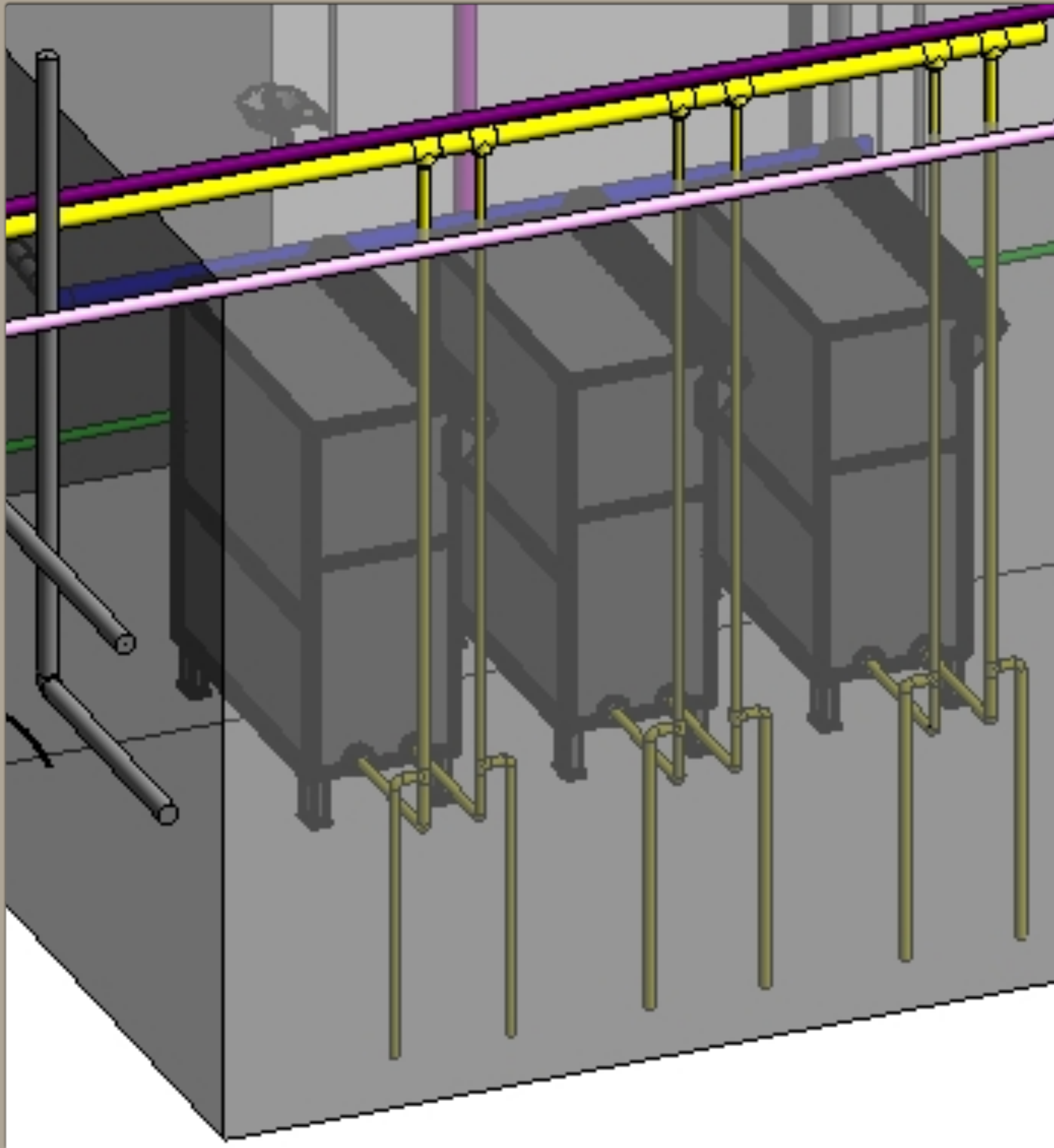
- BIM Software & Technologies
  - Revit
  - Navisworks Freedom
  - AutoCAD

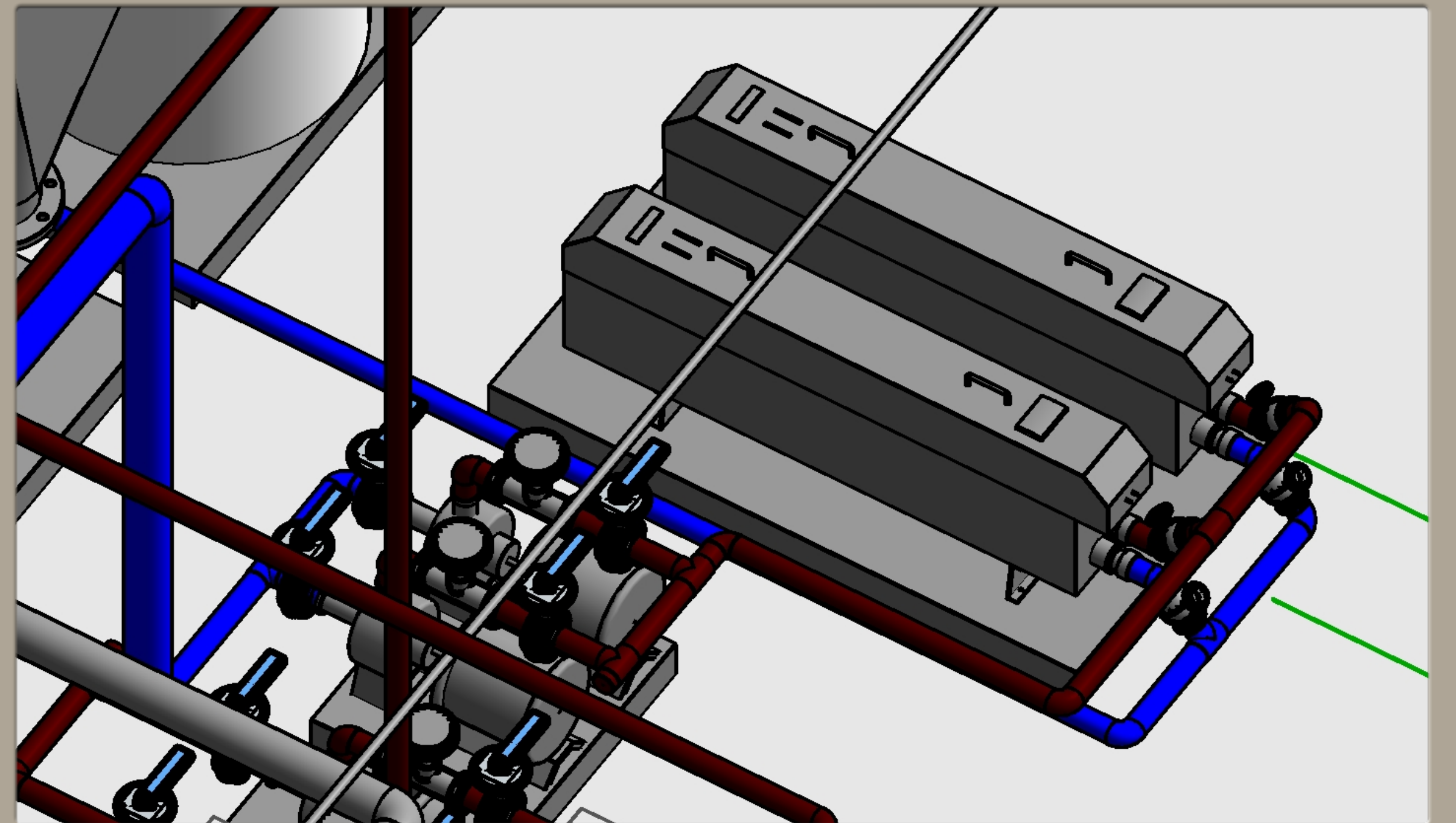
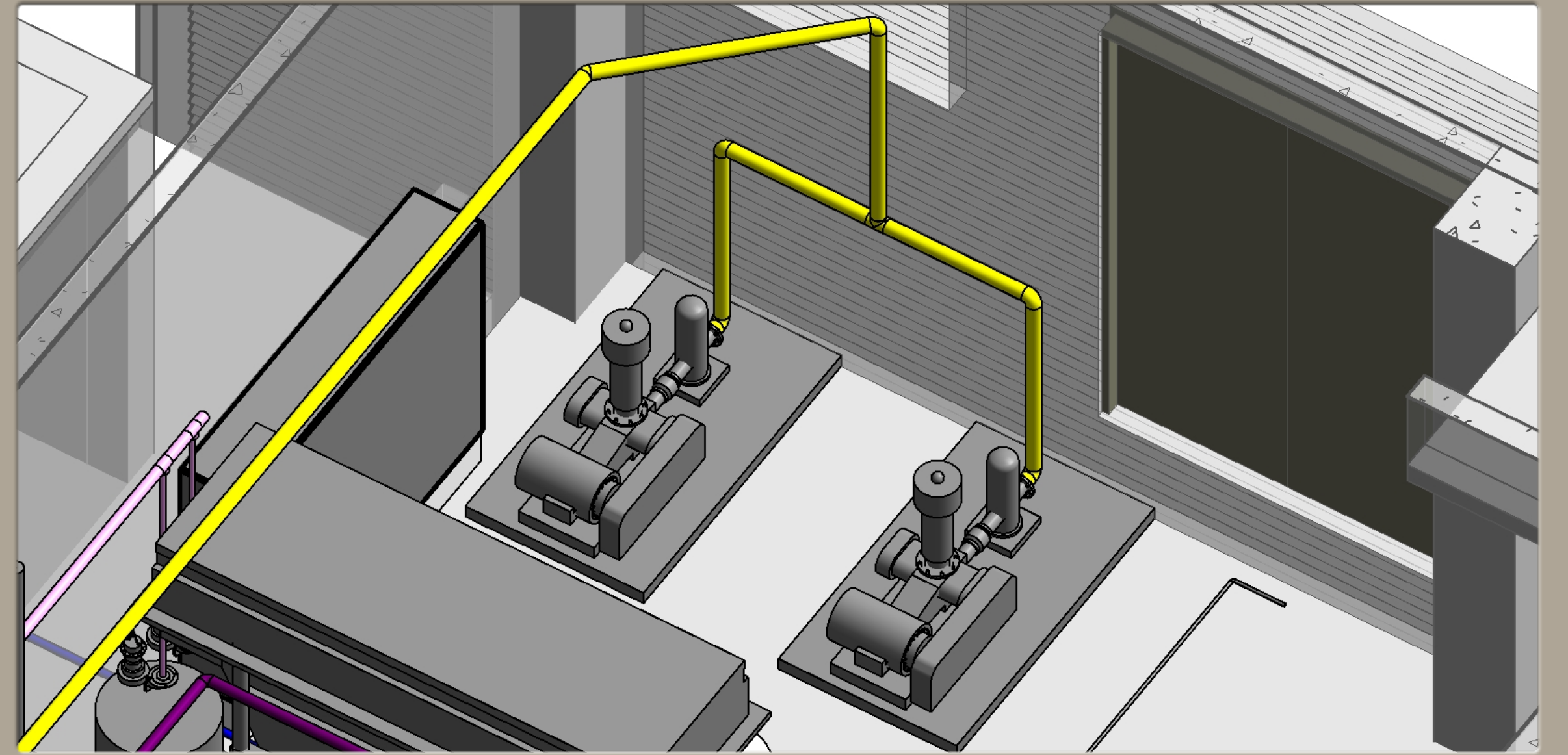
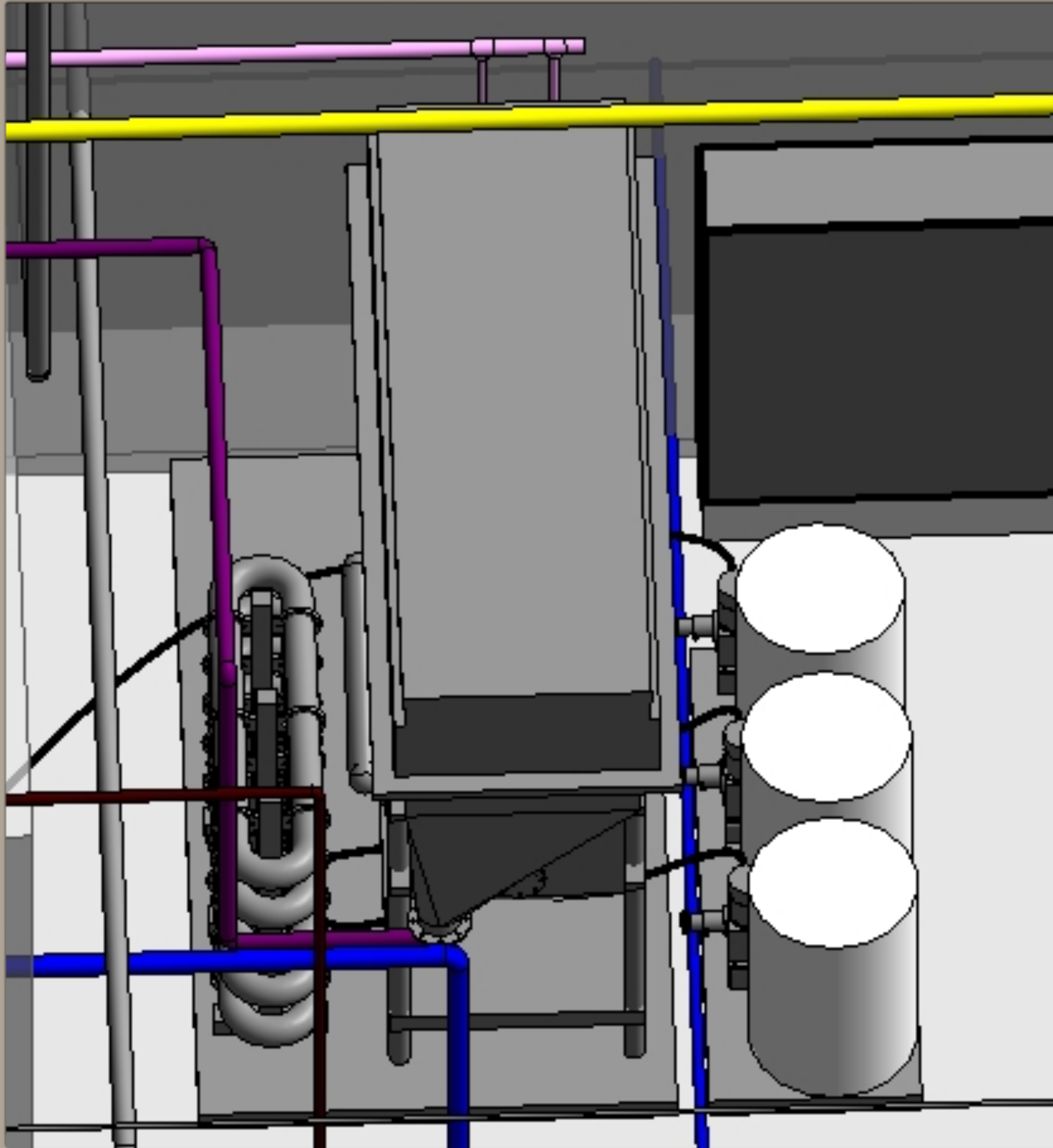
# **HONG KONG INTERNATIONAL AIRPORT MIDFIELD CONCOURSE WORK, DESIGN, SUPPLY, INSTALLATION, TEST AND COMMISSIONING OF SEWAGE TREATMENT PLANT (2013-2016)**

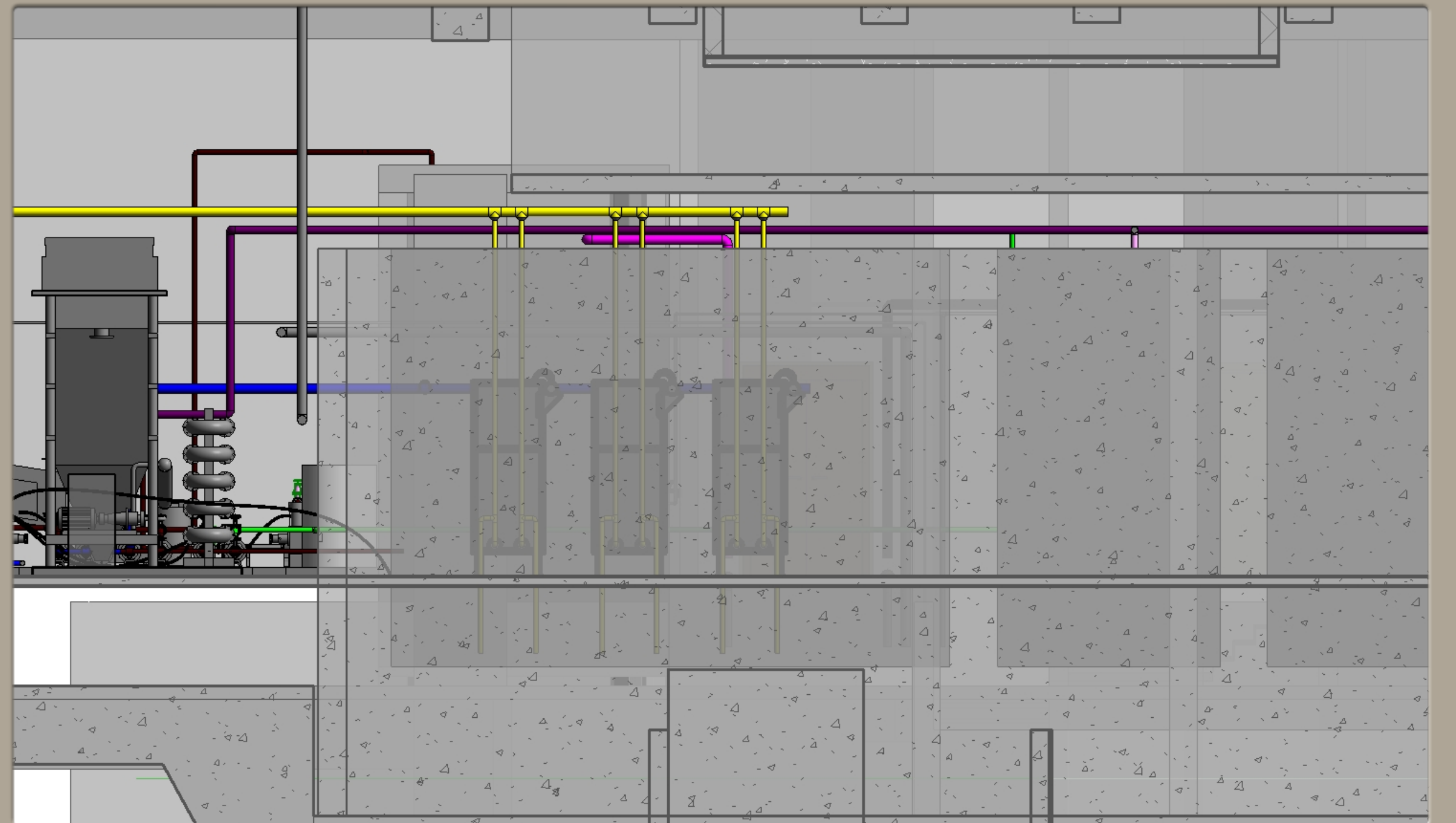
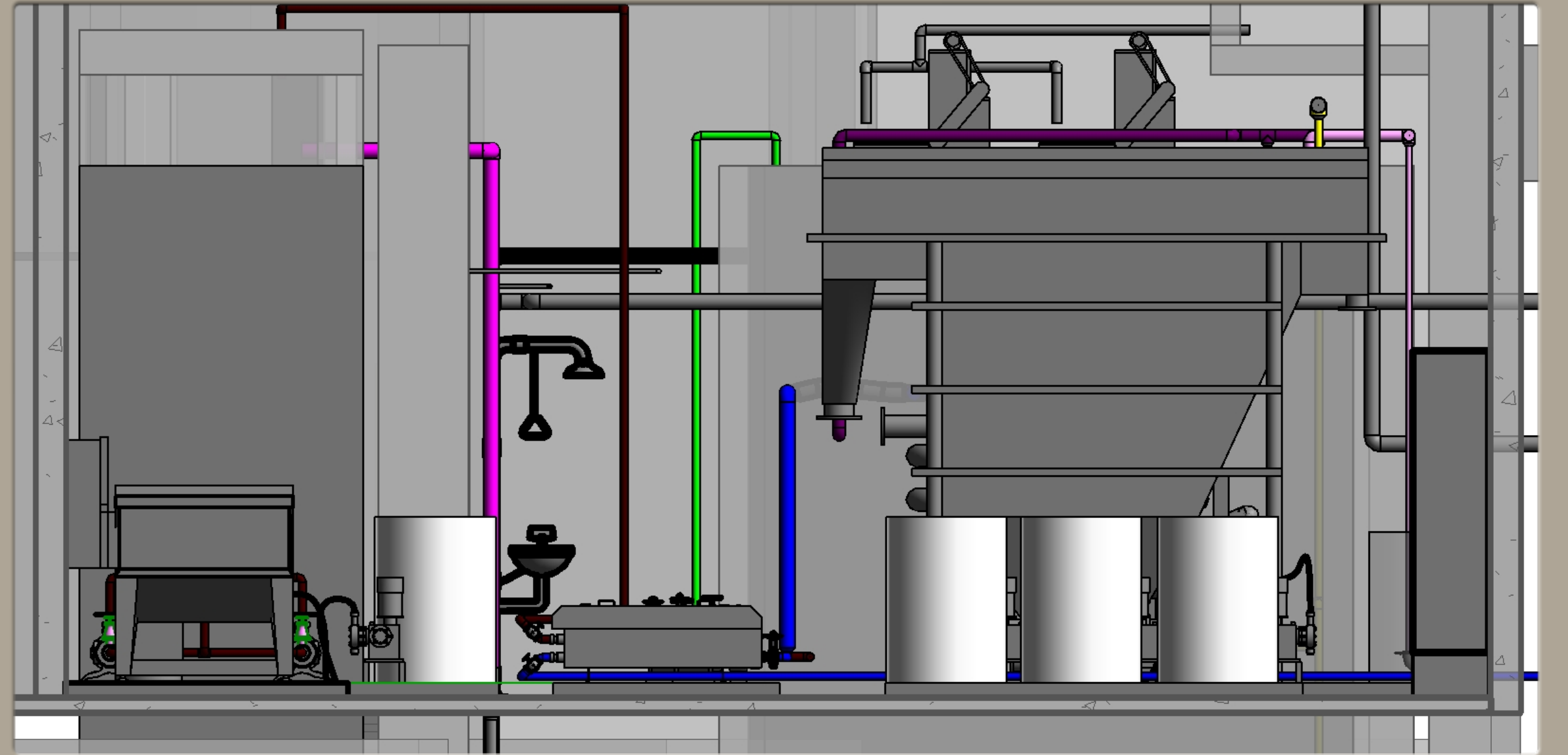
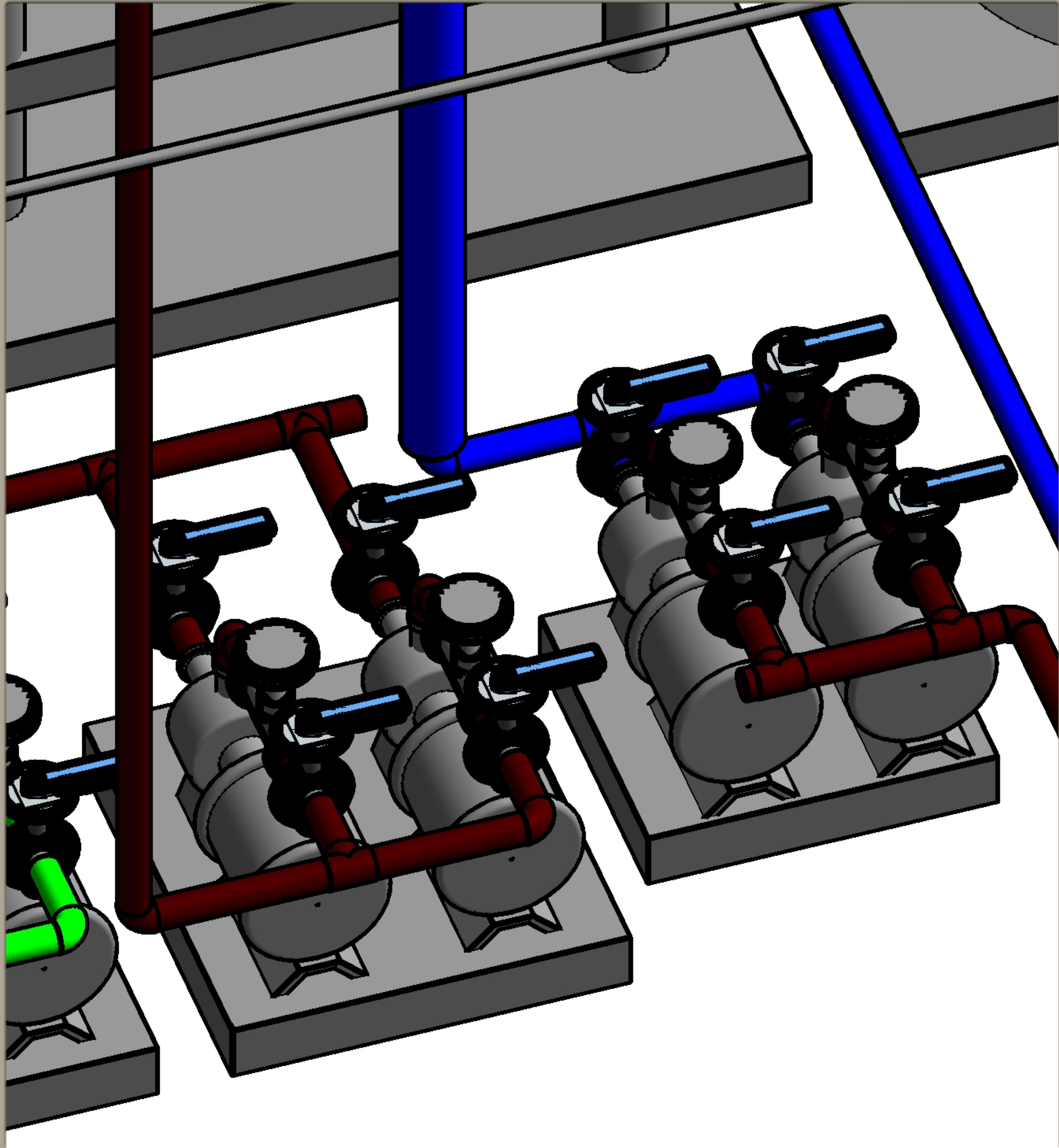
- BIM Use - Design Review
  - Internal review among MEP disciplines

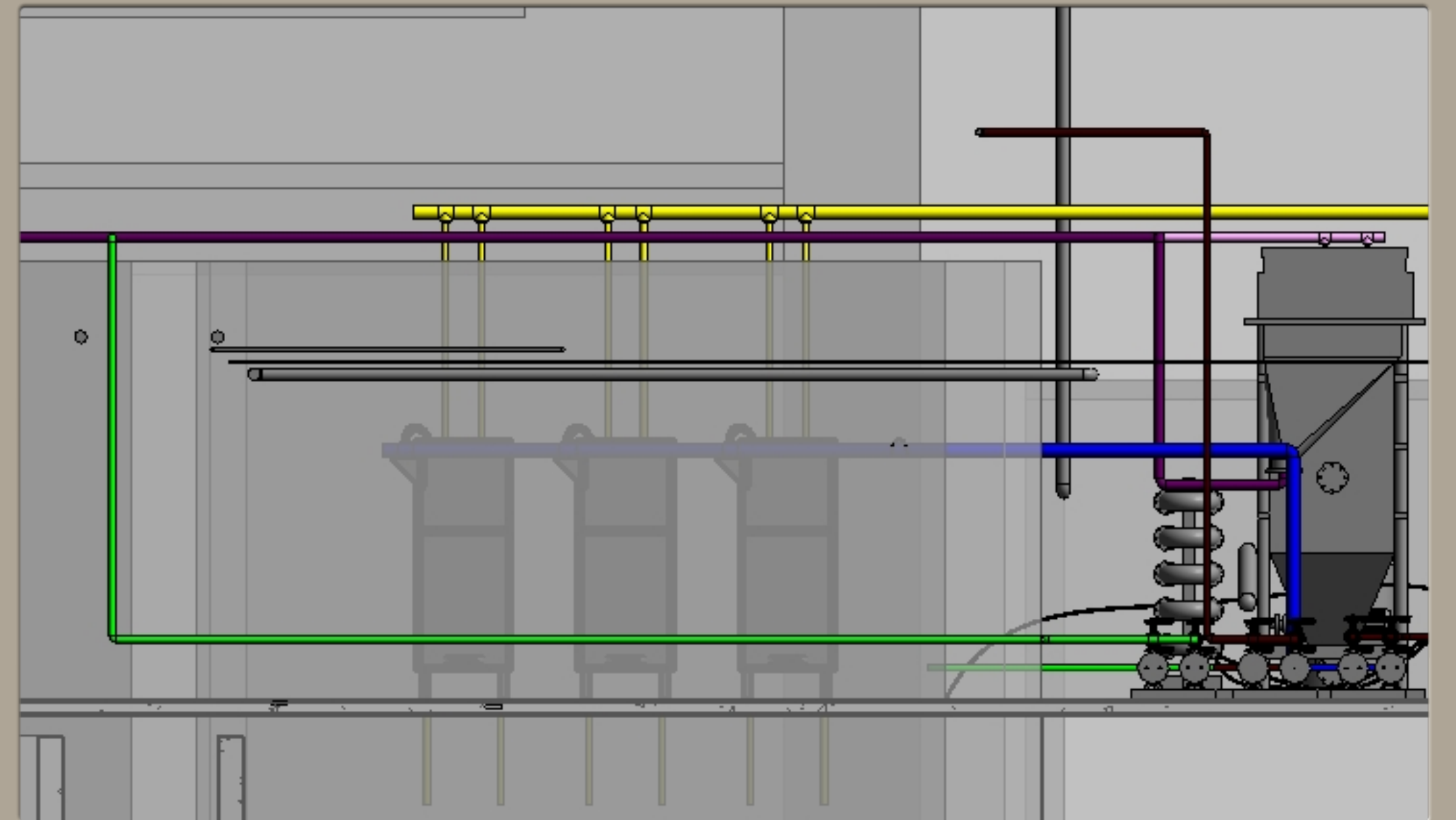
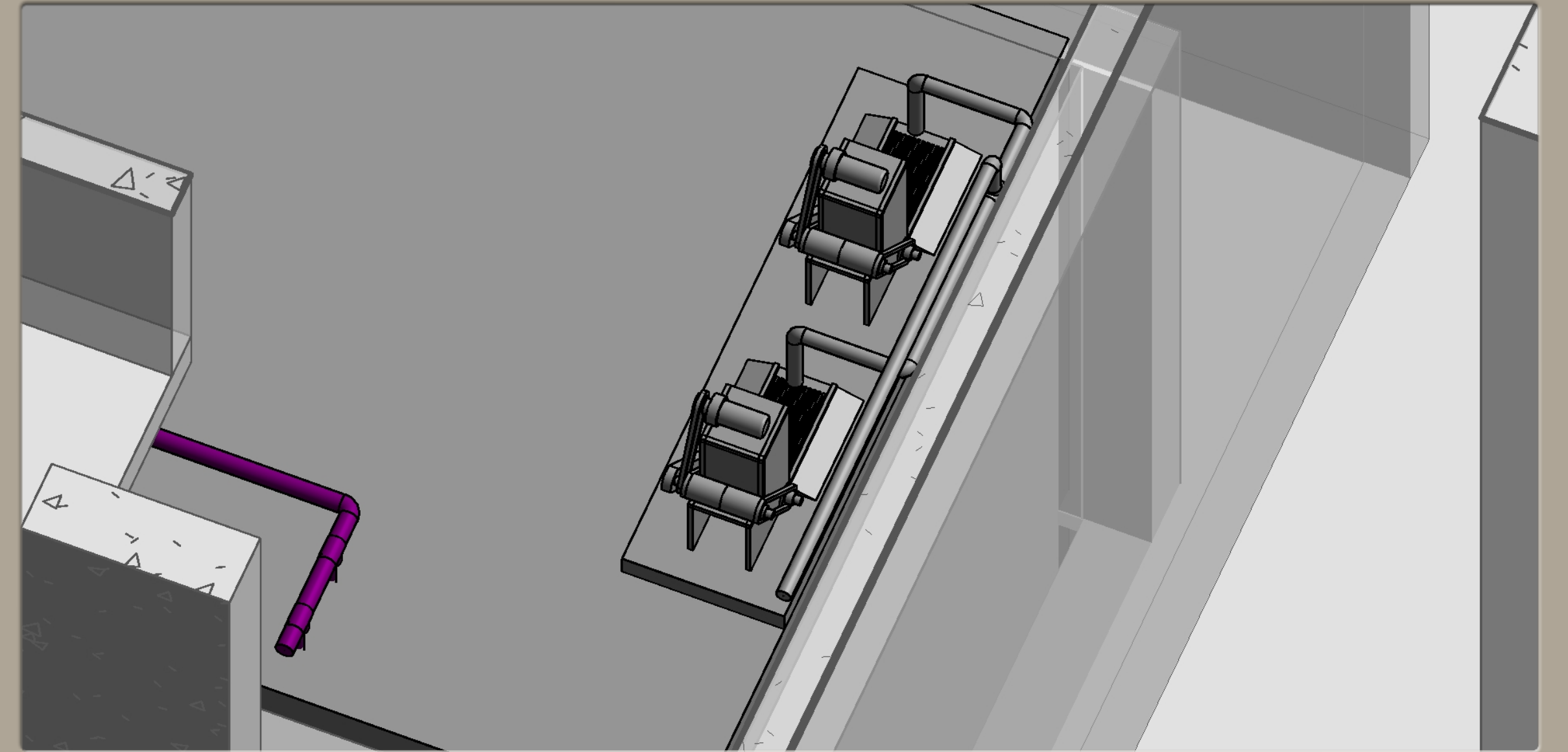
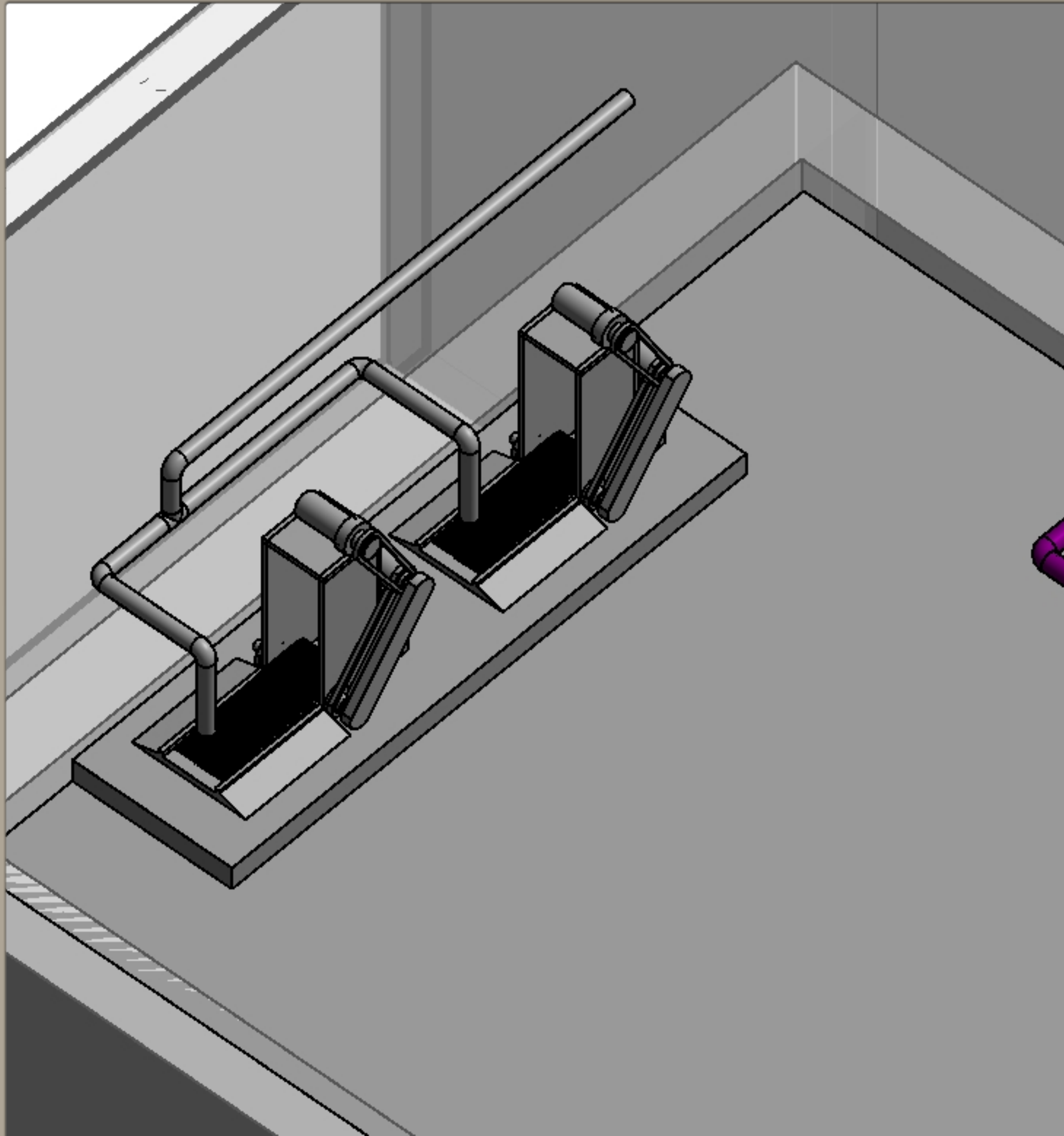
# **HONG KONG INTERNATIONAL AIRPORT MIDFIELD CONCOURSE WORK, DESIGN, SUPPLY, INSTALLATION, TEST AND COMMISSIONING OF SEWAGE TREATMENT PLANT (2013-2016)**

- BIM Use - 3D Coordination
  - Coordinate the route and facility locations in 3D model

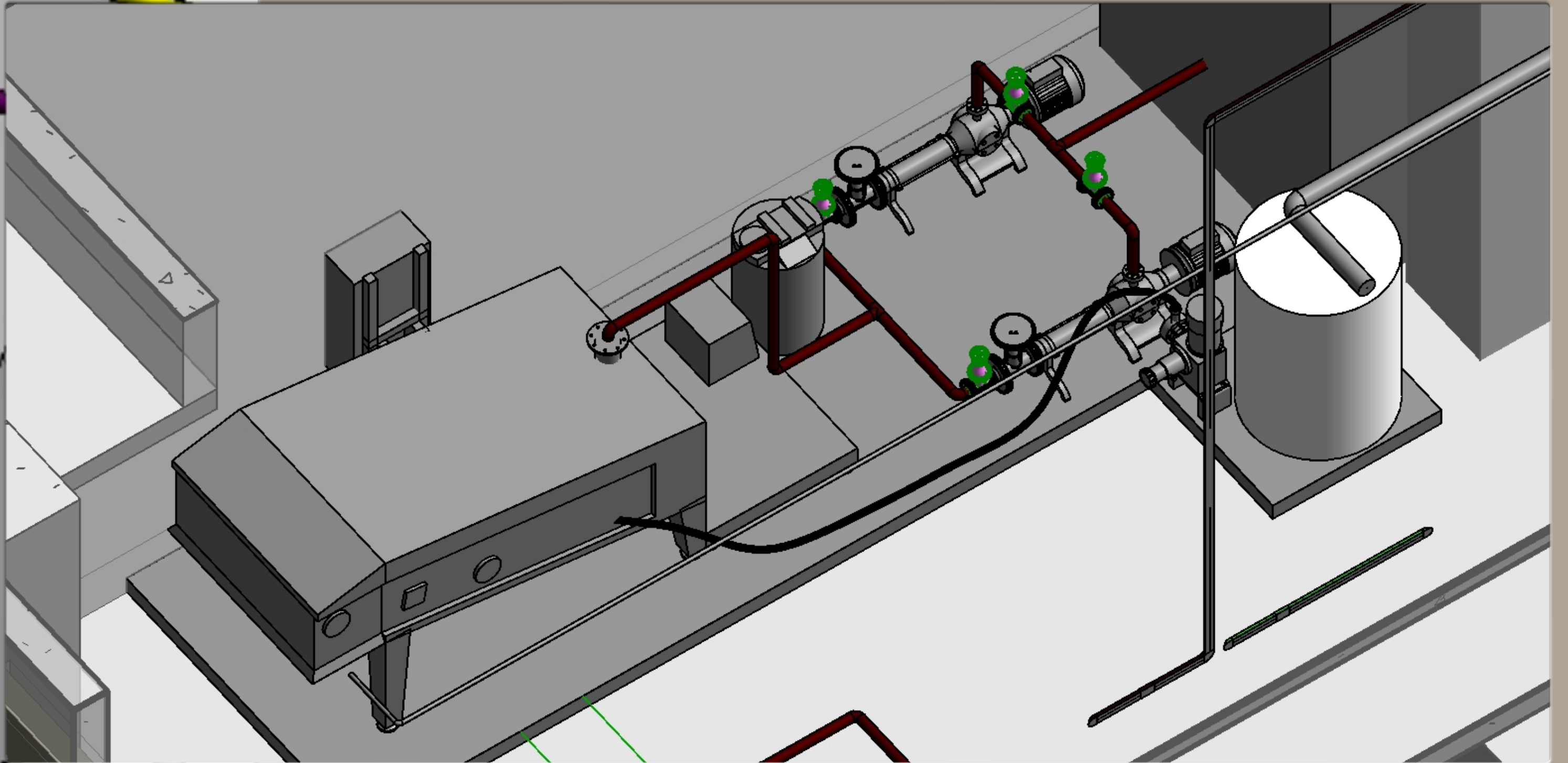
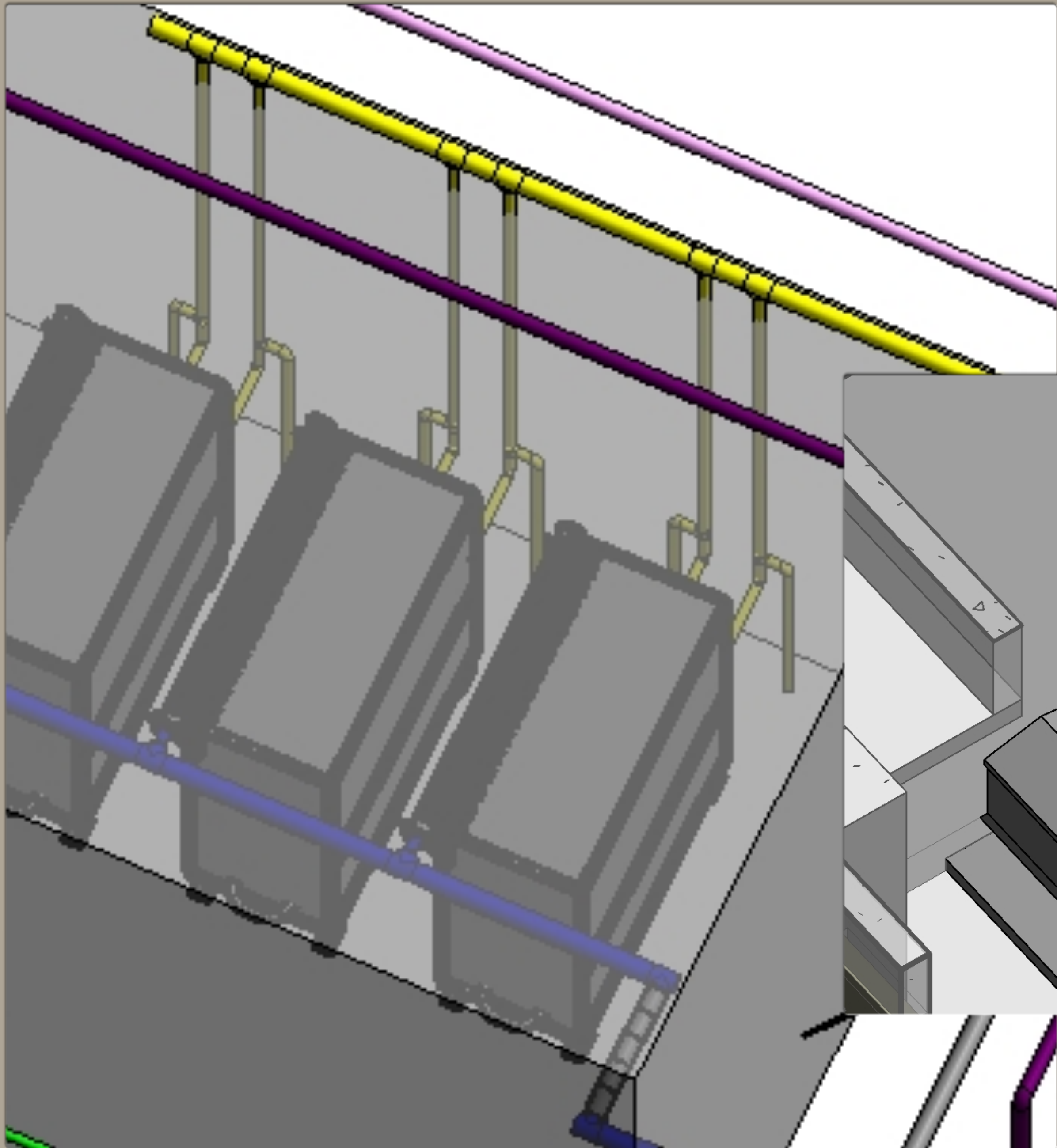






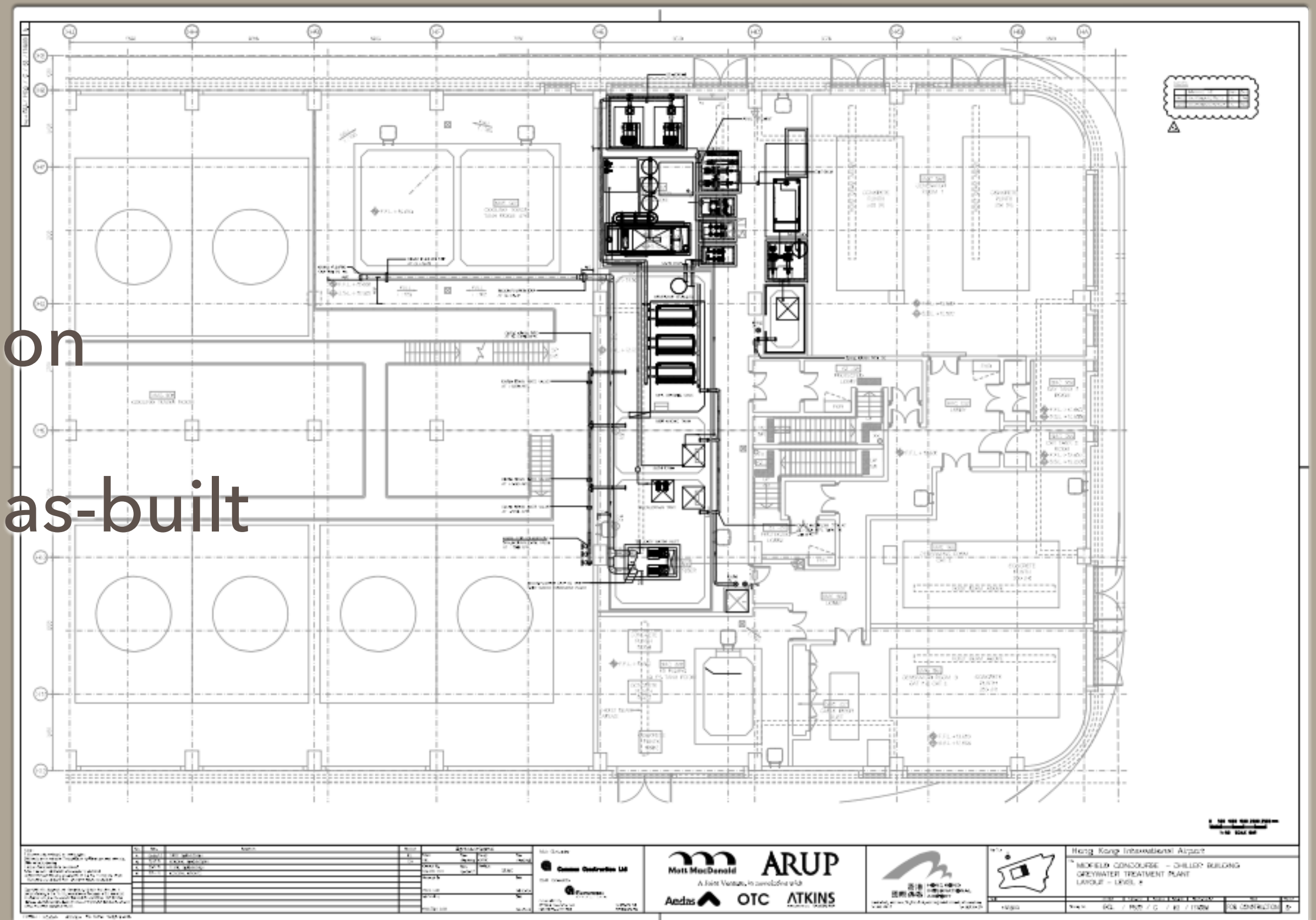






# HONG KONG INTERNATIONAL AIRPORT MIDFIELD CONCOURSE WORK, DESIGN, SUPPLY, INSTALLATION, TEST AND COMMISSIONING OF SEWAGE TREATMENT PLANT (2013-2016)

- BIM Use - 2D Drawing Generation
- For coordination, approval & as-built



# **HONG KONG INTERNATIONAL AIRPORT MIDFIELD CONCOURSE WORK, DESIGN, SUPPLY, INSTALLATION, TEST AND COMMISSIONING OF SEWAGE TREATMENT PLANT (2013-2016)**

- Commercial & Contractual
  - Develop Problem-solving Atmosphere with 3D visualized model
  - Enhance collaboration with external parties and clients
  - Elevate company reputation
  - Enable to win bids
  - Reduce potential contractual risks

# **HONG KONG INTERNATIONAL AIRPORT MIDFIELD CONCOURSE WORK, DESIGN, SUPPLY, INSTALLATION, TEST AND COMMISSIONING OF SEWAGE TREATMENT PLANT (2013-2016)**

- Communication Skills
  - Weekly progress meeting
  - 3D model review meeting with colleagues and clients
  - Meeting with clients, suppliers and sub-contractors
  - Listen expectations of client, senior management, colleagues, suppliers and sub-contractors

## MORE REFERENCE

<https://1drv.ms/u/s!>

[AuVMMPIIdHeZVjYww2JIYhRPs](#)

[XNrqYQ?e=1kSmK1](#)

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