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Zastraka Solutions

IMPECCABLE DESIGN & DETAILING





About Us

01



Zastraka is committed to provide reliable and consistent Design & Detailing Services

Our primary goal is to deliver the best quality, on time services within Budget.

02



We understand the importance of the Design & Detailing Services and the impact of quality with respect to Fabrication & Erection of Structures.

We cater to clients all around the globe & different industries which include Construction, Power, Oil & Gas, Onshore & Offshore, Infrastructures and other relevant sectors.

03



Our greatest asset is a highly qualified team of engineers who are well trained to support client requirements

We are equipped with the latest know-how which helps us to complete the task at hand with focus on quality and timelines.

Array of Services Provided

Structural Detailing using 3D Modelling software

To provide quality outputs to fabricators and erectors considering all the process of fabrication & erection of structures

Structural Engineering

Structural engineering focusses on developing functionally robust and stable structures that can withstand external and internal forces

Offshore & Modular Structures Detailing

Detailing of Fixed Type Platform – Jacket Assembly, Topsides Module, Boatlanding structures, Drill Deck, Topsides modules of FPSO, Drillship & Jack-Up Rigs

Detailing of Storage Tanks

Storage tanks designed according to API620 & API-650 specifications

Bridge Structures Detailing

3D modelling the bridge steelwork to create a list of components (girder webs and flanges, stiffeners and bracing elements etc.) required for the structure

Detailing of Industrial Structures

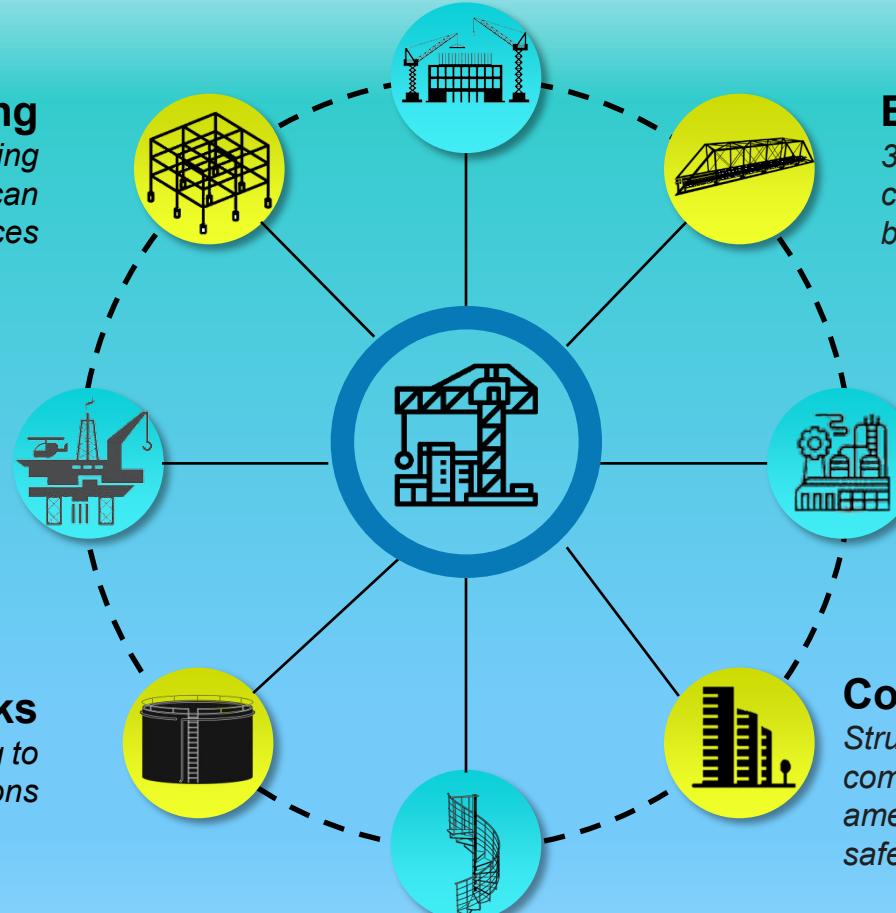
Steel detailing for Industrial building enclosure system, equipment support structures, access platform structures, pipe supports, cable tray supports, traffic items, circular platforms

Commercial Structures Detailing

Structural buildings for high rise residential / commercial with structural supports for all the amenities, access structures, elevator supports and safety requirements

Misc. Steel Detailing

For Stairs, Ladders, Guardrails, Gratings, Fencing



Structural Steel Detailing

Zastraka Detailing Services offers a full suite of Fabricator and Erector Support Services to ensure the fabrication and erection process goes as smoothly as possible. These services consist of preparing complete and accurate reports, CNC files, and material interchange files for the shop and field activities. Most of this information is exported directly from the BIM (Building Information Model) to ensure 100% coordination with the fabrication drawings.

Deliverables to our Clients include

- Advance Bill of Materials
- Anchor Bolt Layout & Details
- Erection / General Arrangement Drawings
- Shop & Part Drawings
- Weld Map Drawings
- NC Data & DXF files
- Material List Reports
- Bolt List
- Bill of Quantities Reports
- Bought Out Lists
- KISS / Fabtrol Reports
- IFC (.ifc/.stp) files for integration
- 3D DWG model

Since the detail drawings are interactively tied to the model, this approach also gives us 100% connectivity of steel members. However, just like any other program, the quality of the output is only as good as the quality of the input. The real power of these programs is realized when we combine these tools with the extensive experience of our structural steel detailers. We conduct regular inter-office training programs and webinars from the 3D software tool to improve the team about steel detailing standards and smart usage of the tool to produce quality outputs and increased productivity.

Offshore Structures Detailing

Detailing concepts of Offshore Structures are unique and requires complete and compliance to the Design standards and code advised by the Client. Since these are complex welded modules, need to have proper coordination to handle all structural needs start from concepts to engineering/detailing/fabrication to erection.

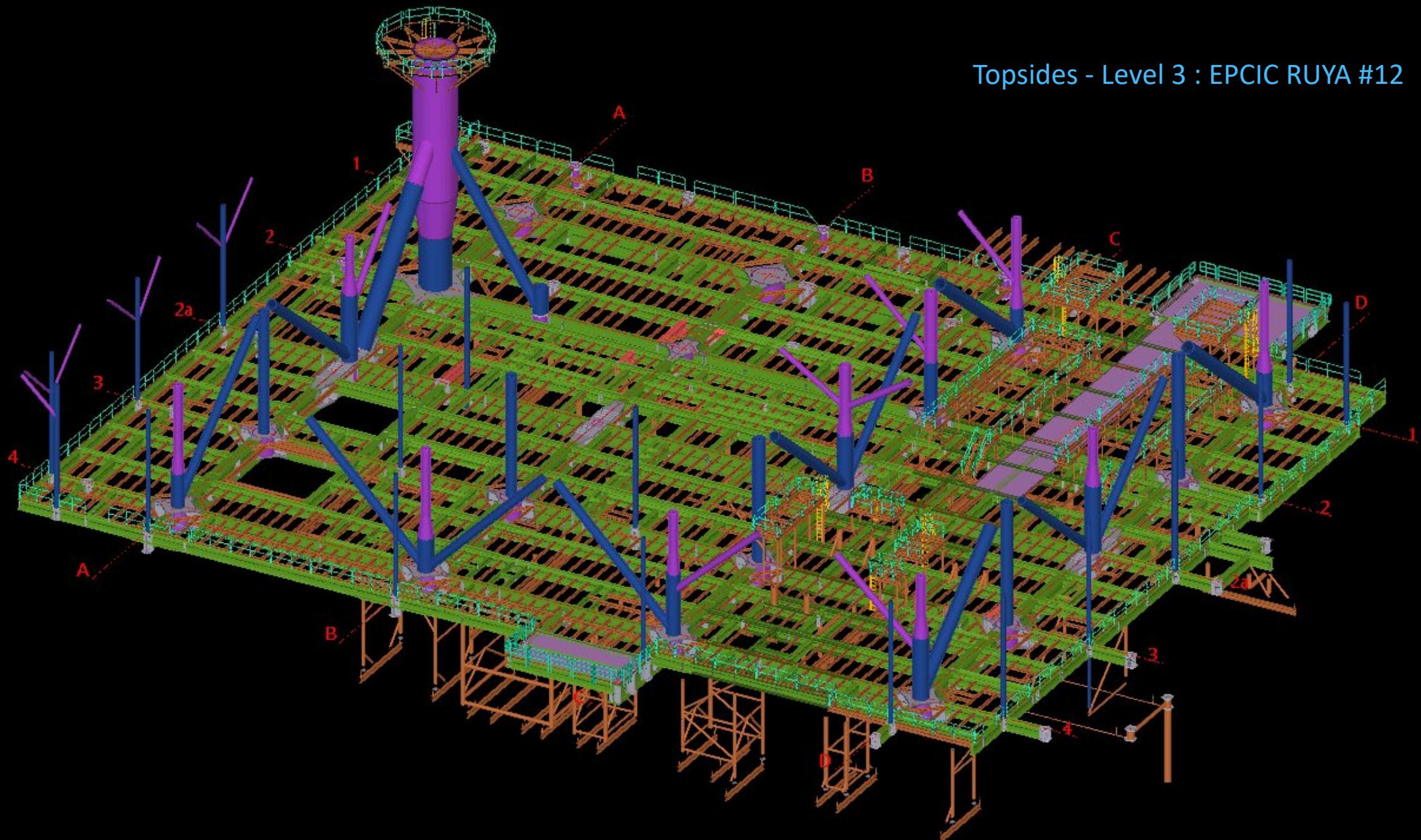
We are using 3D software tool, Tekla with BIM technology for the accurate modeling considering all the interfaces with other disciplines such as Piping, Mechanical, Electrical & Instrumentation.

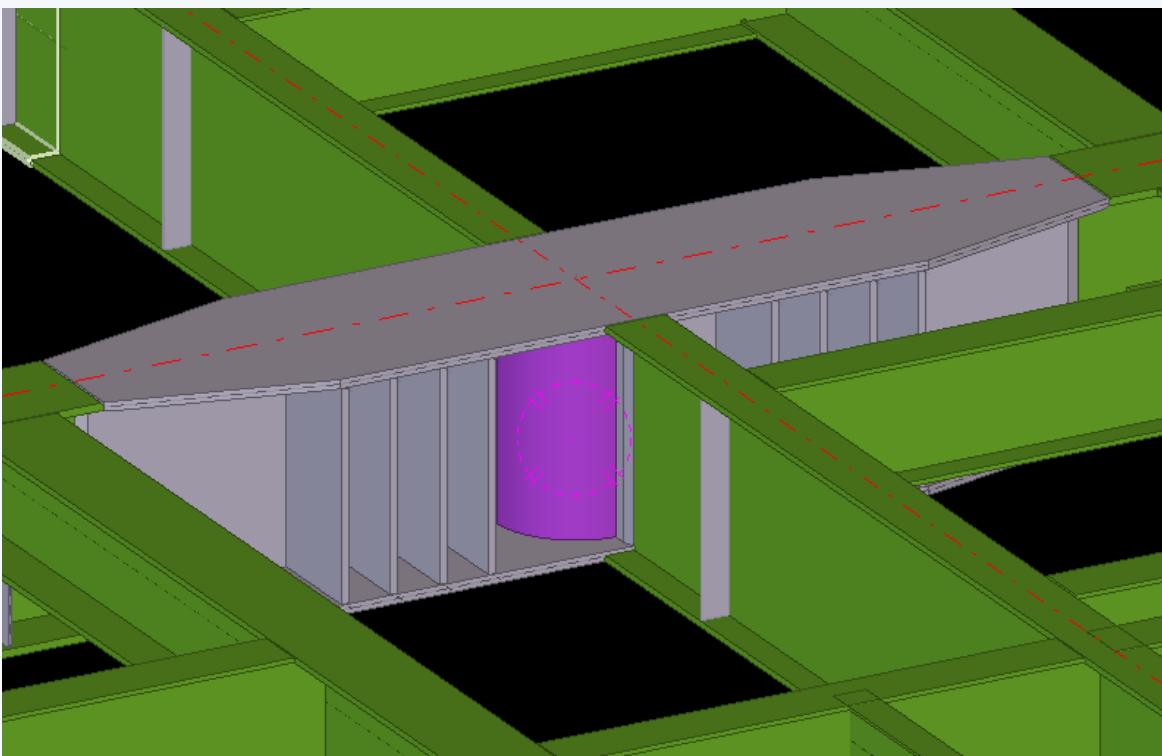
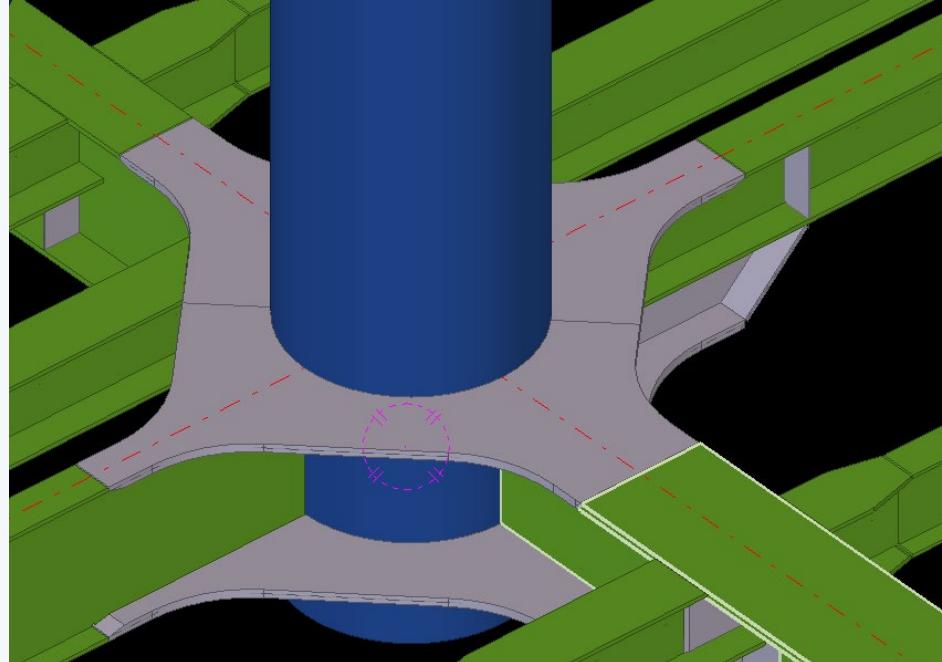
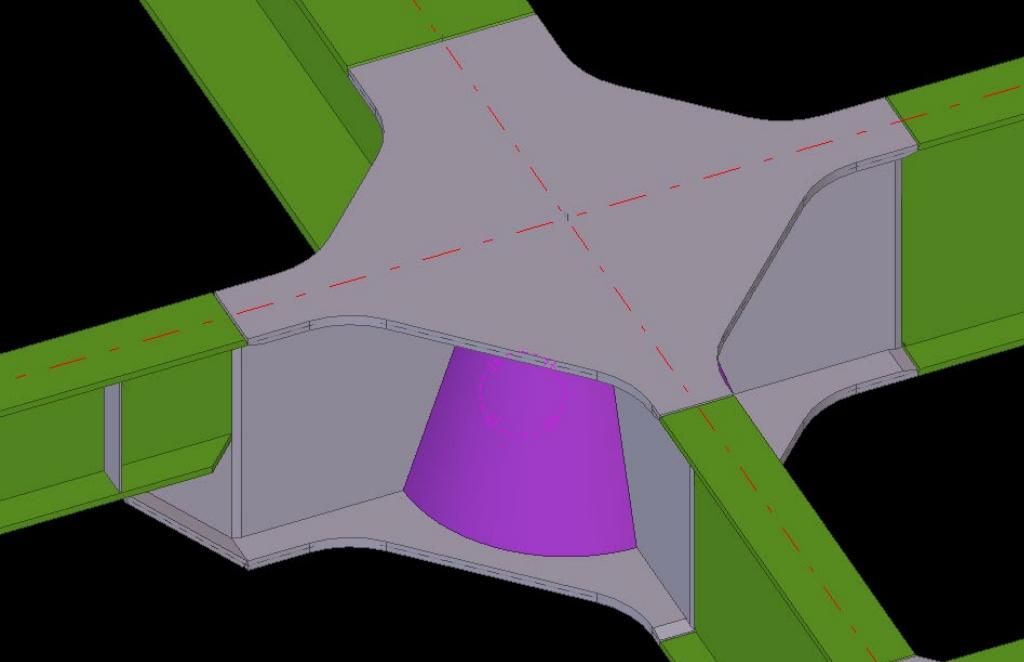
Zastraka Solutions currently working in the Steel Detailing of Level-3 of EPCIC RUYA 12 and we have delivered the drawings, NC files and reports of entire Joint Nodes and Primary Framing. The design activities of secondary framing, tertiary steels and remaining auxiliary structures are also in detailing scope.

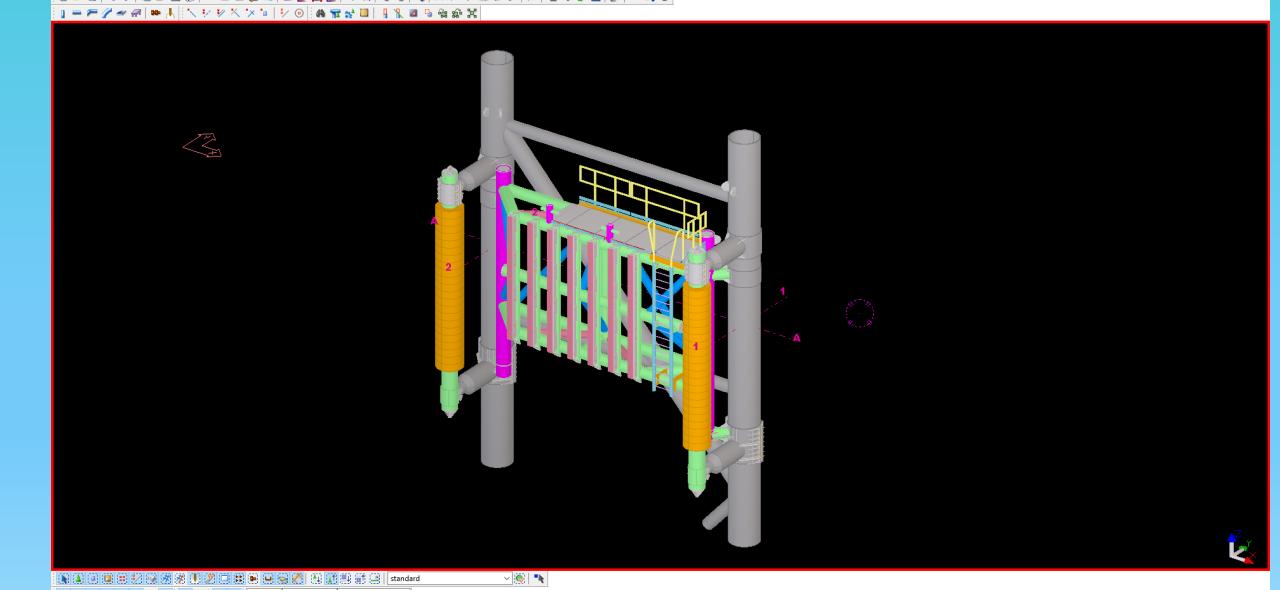
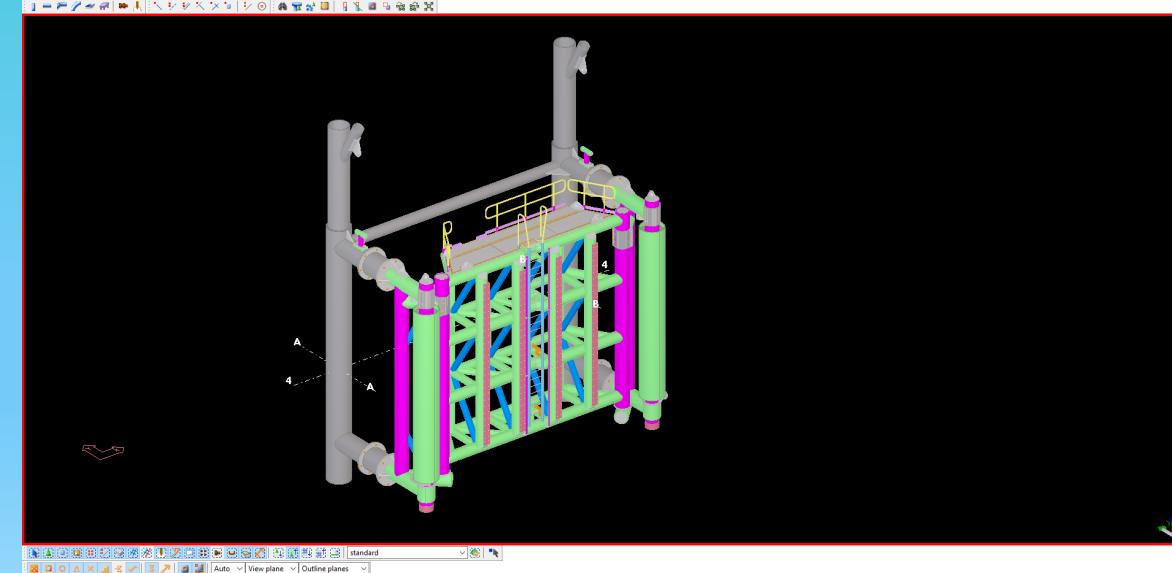
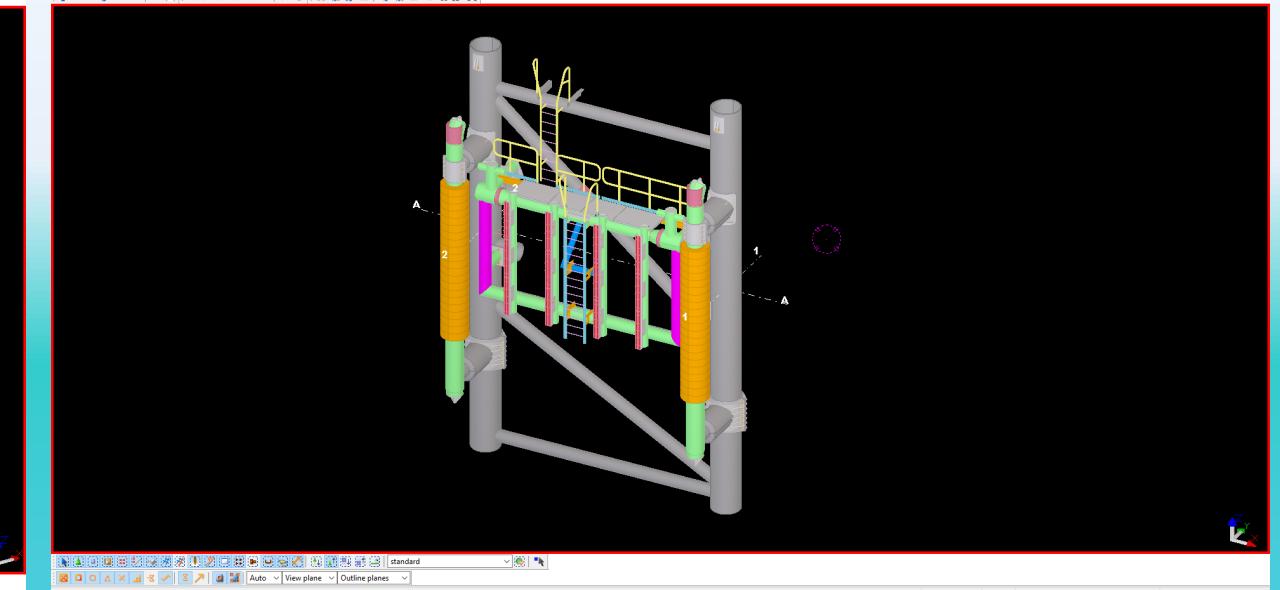
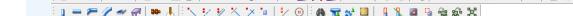
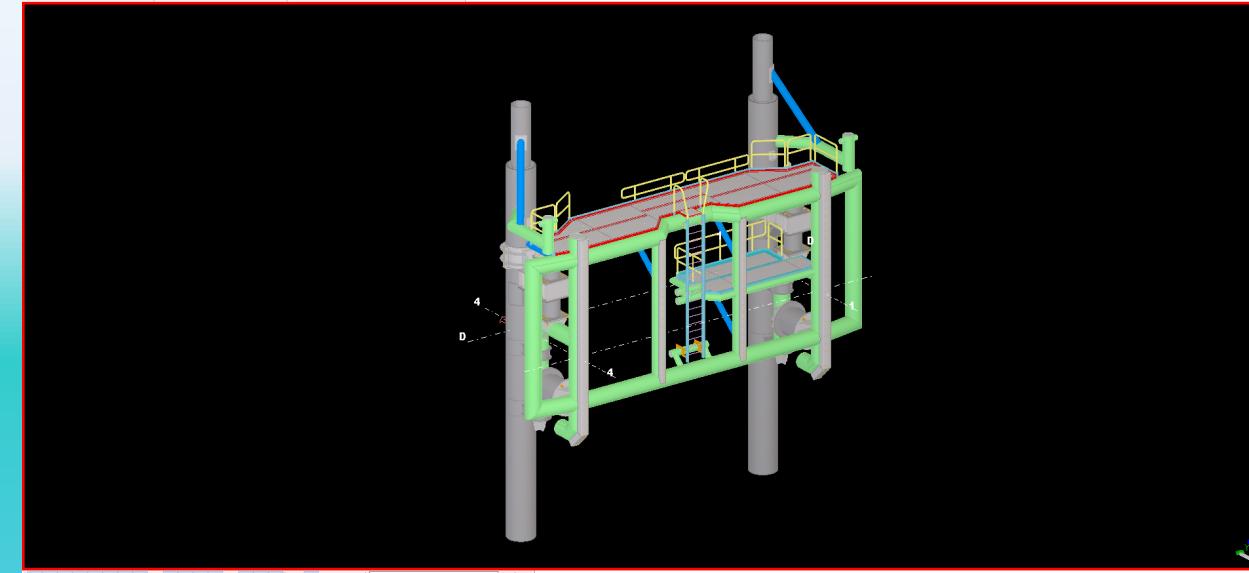
Previous year, we got the opportunity to work in Replacement of Boatlanding Structures in UZ and UAD Oil fields of Abu Dhabi. Client : ADNOC

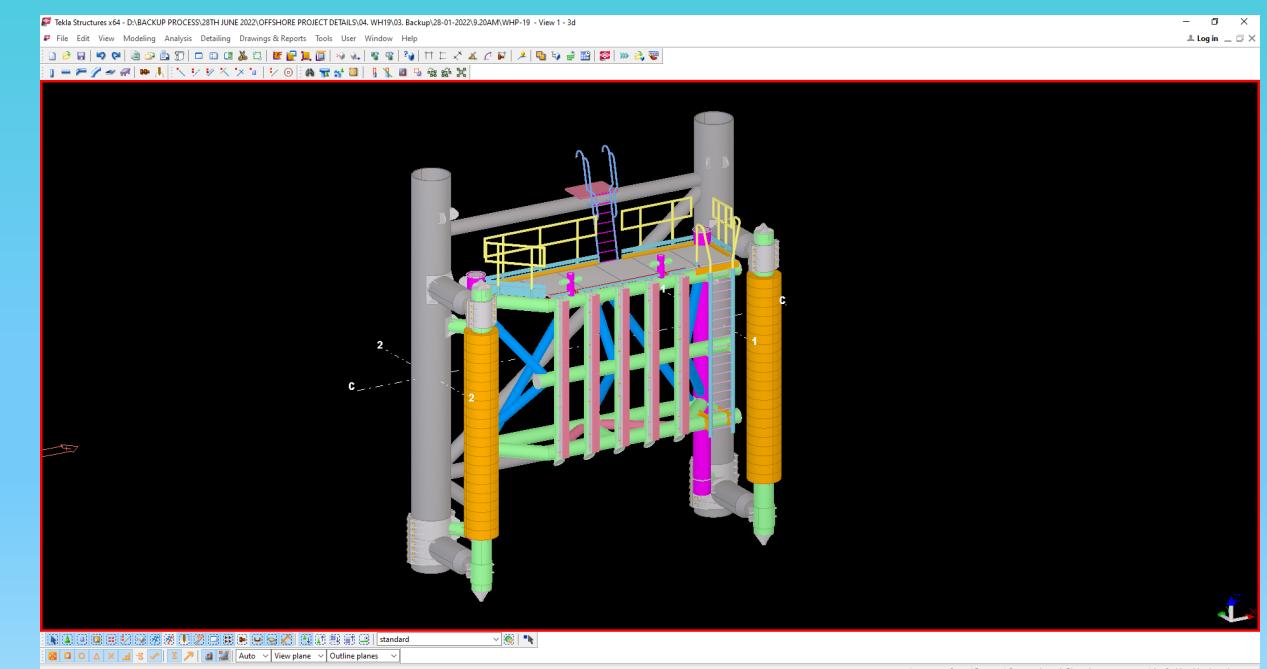
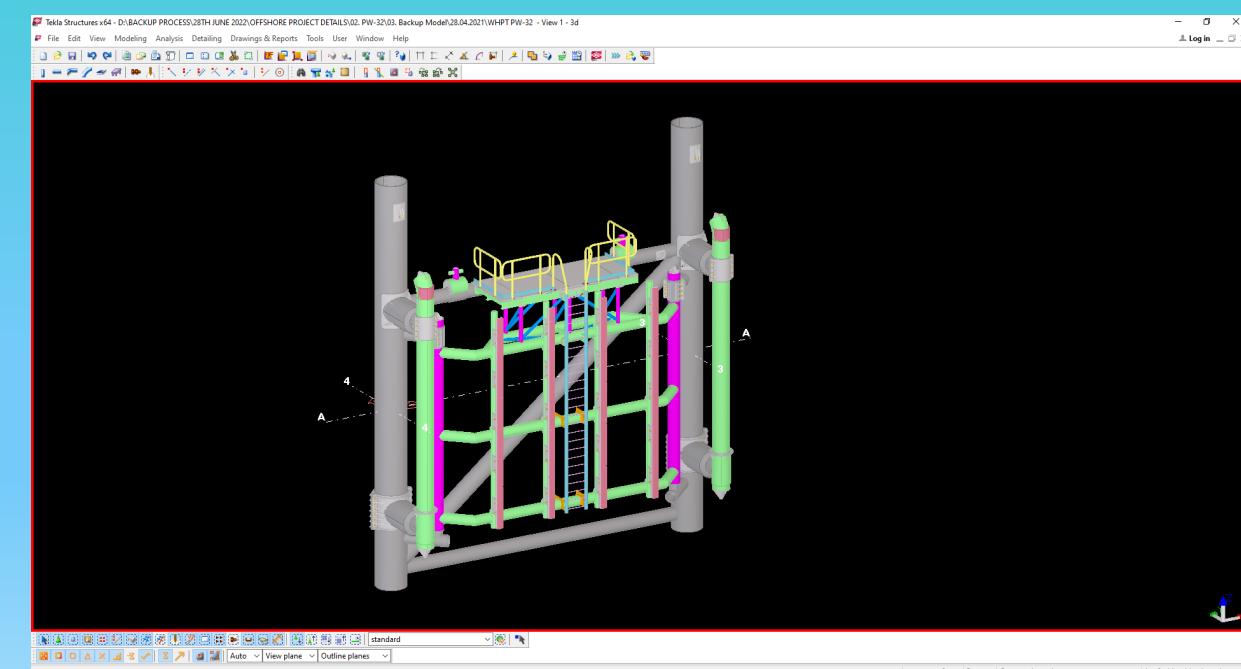
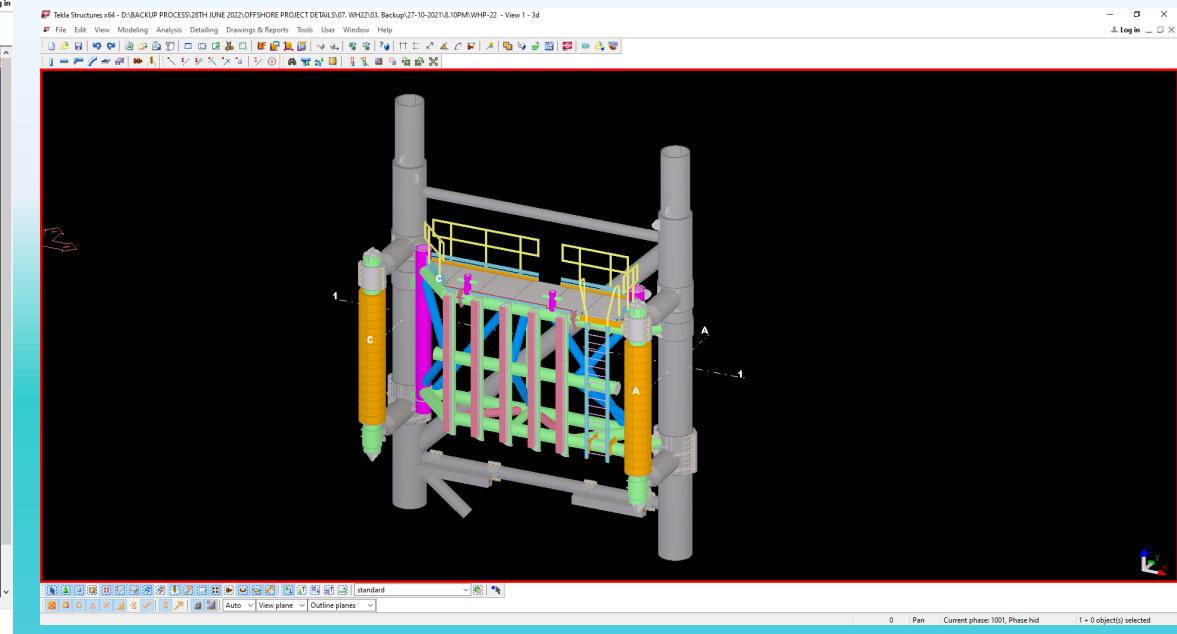
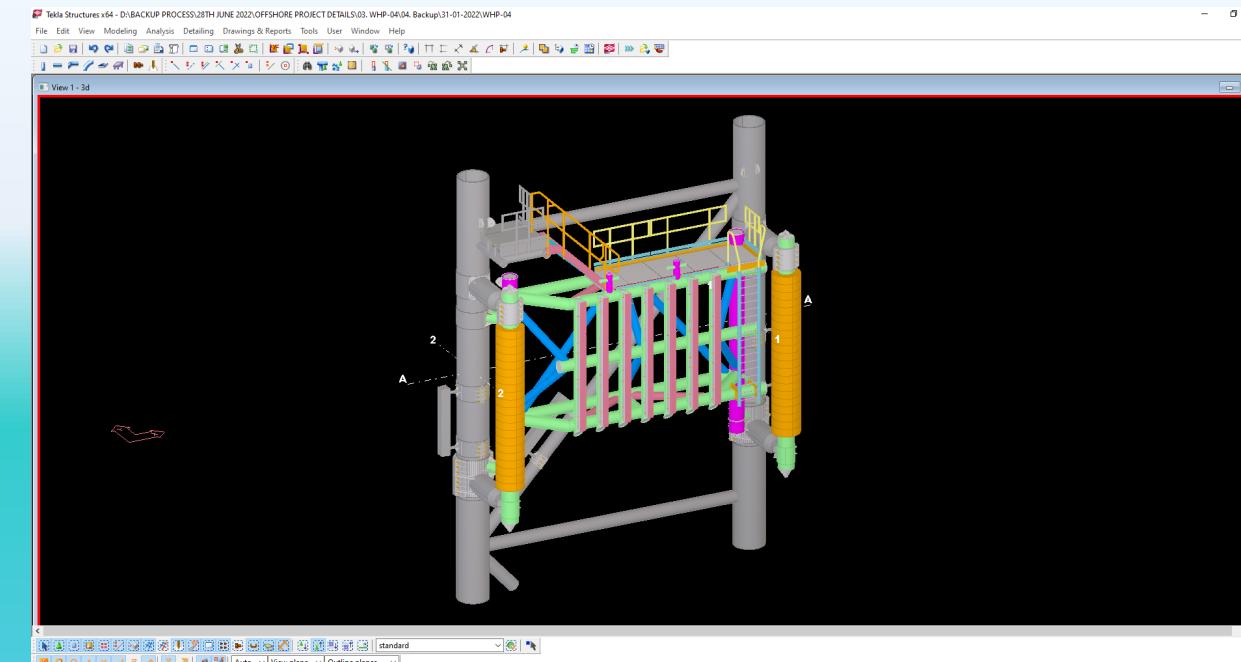
Also, we worked in the drawings editing of various Jacket Assembly structures, Mudmat, Walkway platforms, Pipe Supports structures.

Topsides - Level 3 : EPCIC RUYA #12









Offshore Structures Detailing – Work Experience

During my tenure with SAIPEM Taqa Al Rushaid (STAR) Fabricators, Saudi Arabia, I am involved in the detailing of Fixed Type Platforms for Arabiya & Safaniya Oil fields. Our team responsibilities includes preparation of Shop Drawings of the Jacket Structures, Deck Assembly, Boat Landing Assembly and Drill Deck.

Also, we are preparing the drawings of Temporary Supports, Rigging & Lifting Arrangement, Sea-fastening supports of the facilities.

Client : **Saudi Aramco**

I got an opportunity to visit to PS-1 processing plant and its fixed type platforms of Qatar Petroleum to perform Offshore Surveys and worked in Brownfield activities. Client : **Qatar Petroleum**

I worked in Samsung Heavy Industries Shipyard, Geoje, South Korea for 2 years in Structural Integration Department. I got an opportunity to work in ICHTHYS CPF, West Australia is the world largest Semi submerged platform. Client : **Total**

In Samsung Heavy Industries, INDIA I worked as a Deputy Manager for the projects such as EGINA FPSO, Maersk Drillship & CAT-J Jack Up Rig

Structural Steel Detailing for Modular Fabrication Yard LTEH, Kaattupalli

Zastraka Solutions is the Steel detailing subcon for L & T Energy – Hydrocarbon and was awarded CERES Chemical & Fertilizer plant project in Australia.

We are providing the steel detailing deliverables such as 3D Tekla model, GA Drawings, Fabrication / Shop Drawings, NC Files, DXF files, 3D IFC Model, BOM Reports and Fabtrol Reports to LTEH Yard, Kaattupalli.

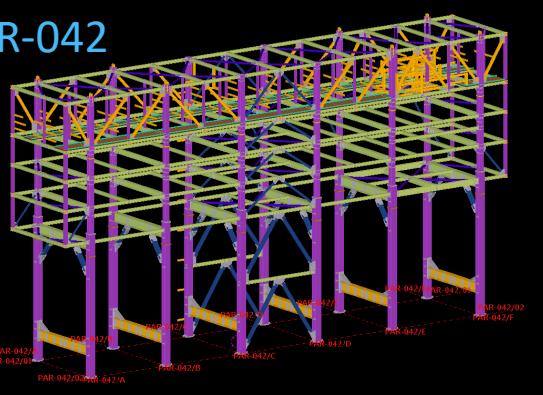
Similar to Offshore structures, these PAR modules (Piperacks) & PAU Modules (Process Units) are thoroughly welded structure and transported as a single module through Barge from Kaattupalli Jetty to Client Site.

We are detailing the Welded frames, Lifting Padeyes, Equipment Supports, Pipe Supports, Floor Plates, Interface Structure details, Cable Tray Supports, Transportation Assemblies, Misc. Steels such as Stairs, Ladders, Handrails & Gratings.

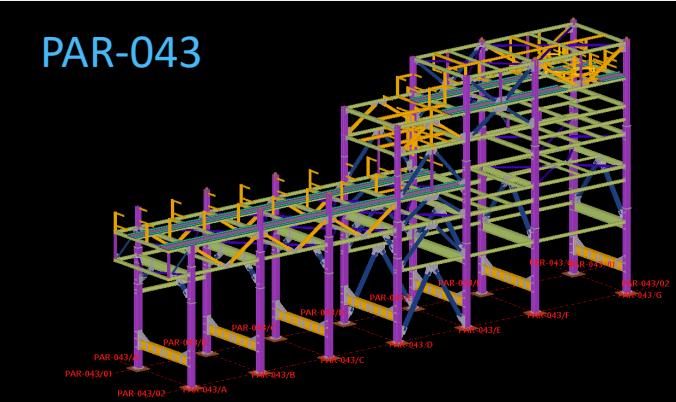
Our clients are appreciating our quality and schedule and encouraging us to increase the team size to work in more tonnages.

PAR Modules of CERES project

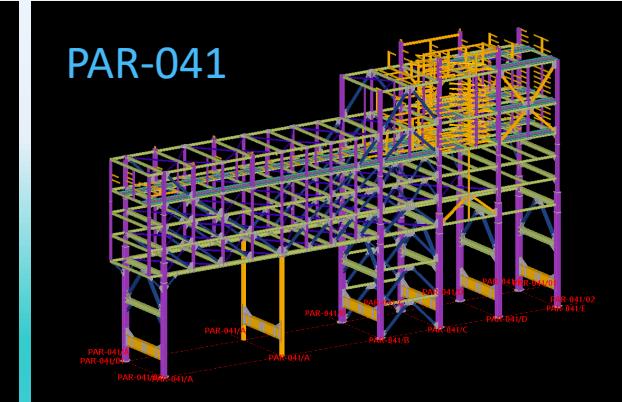
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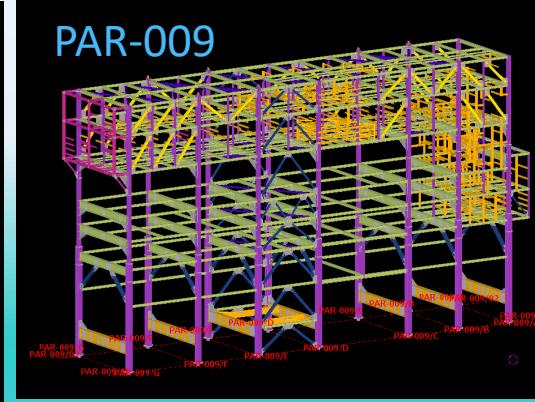
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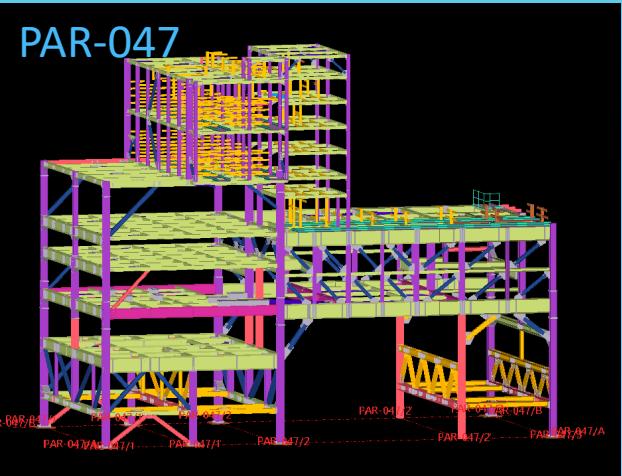
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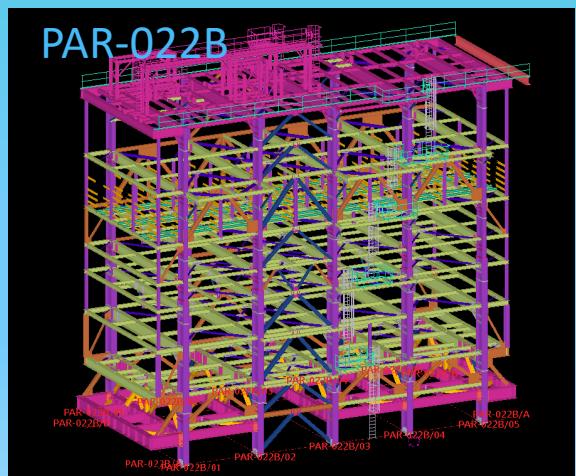
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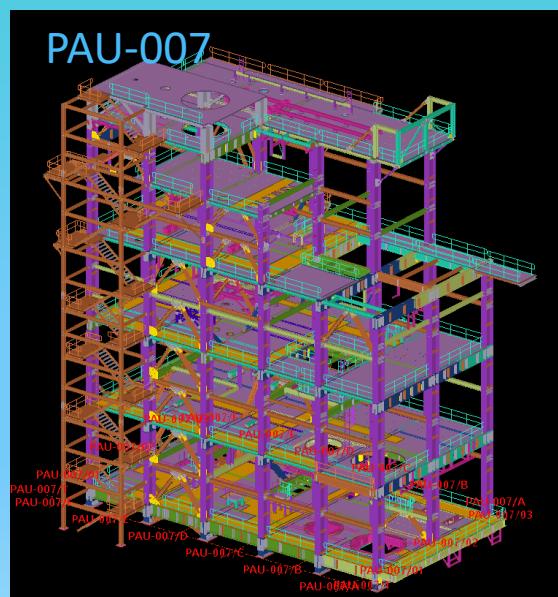
PAR-047



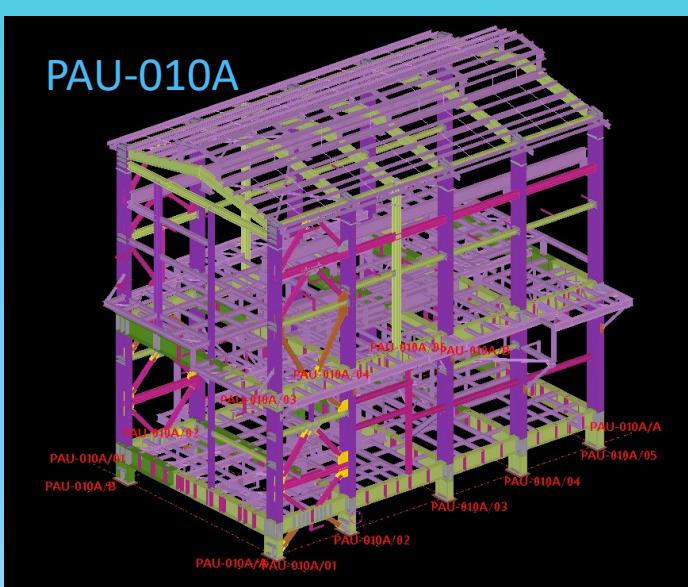
PAR-022B



PAU-007



PAU-010A



Structural Engineering

Structural Frame Design

Structural engineering focusses on developing functionally robust and stable structures that can withstand external and internal forces. At Zastraka, we conduct methodical analysis of the structures and propose comprehensive design ideas that address all the functional requirements.

Connection Design

We design connections with the fabricators and erectors in mind and we work closely with all stakeholders to ensure an economical, safe and code-compliant connections. Our engineers have extensive knowledge of steel connection designing and offer quality connection design services.

Zastraka strives to be a leader in connection design by providing the economical and quick turnaround solution to connection design. We produce structural steel connection calculation that is clear and well organized so that everyone involved in a project is able to understand and follow.

Detailing of Industrial Structures

We are specialized and having expertise to detail various Industrial projects. We expertise in interpreting the design intend drawings and converting them into shop drawings which facilitate the fabricator to fabricate individual members and erect them.

- Piperack structures
- Stair towers
- Warehouse structure
- Walkway platforms
- Machinery support structures
- Power generation buildings
- Oil and gas pipeline support structure
- Circular platforms

Commercial Structures Detailing

Our Steel Detailing Services consist of preparing the complete and accurate fabrication drawings for all steel elements of the structural frame that are shown and sized in the Design Drawings. We have the expertise to detail all kind of Commercial Steel Structures like High-rises, Residential, School Buildings, Office Buildings, Industrial/technological building or PEB Structures. We include erection plans, elevations, sections and details for the proper and safe installation of the structural steel.

Zastraka Detailing Services staff details using the advanced 3D structural steel detailing programs. These programs give us the ability to actually pre-construct the steel frame in a virtual 3D environment. This allows us to get a complete 360 degree view of complicated framing connections and foresee potential conflicts.

Zastraka has expertise in structures like:

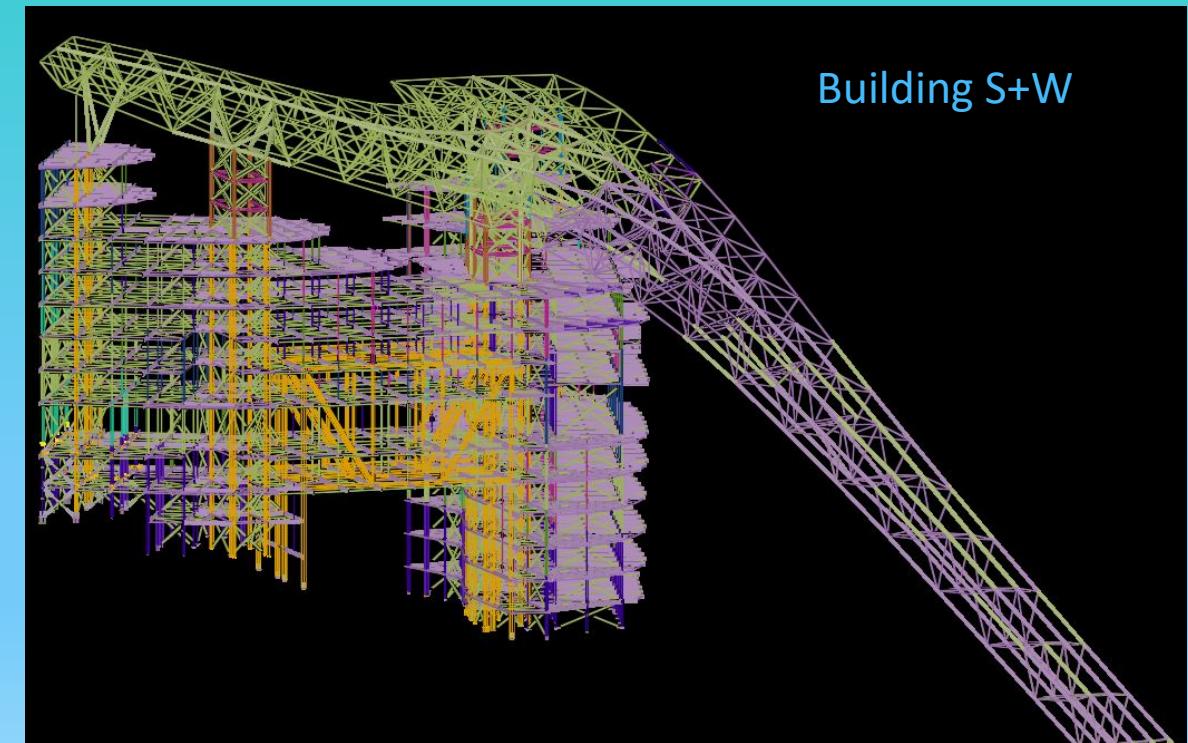
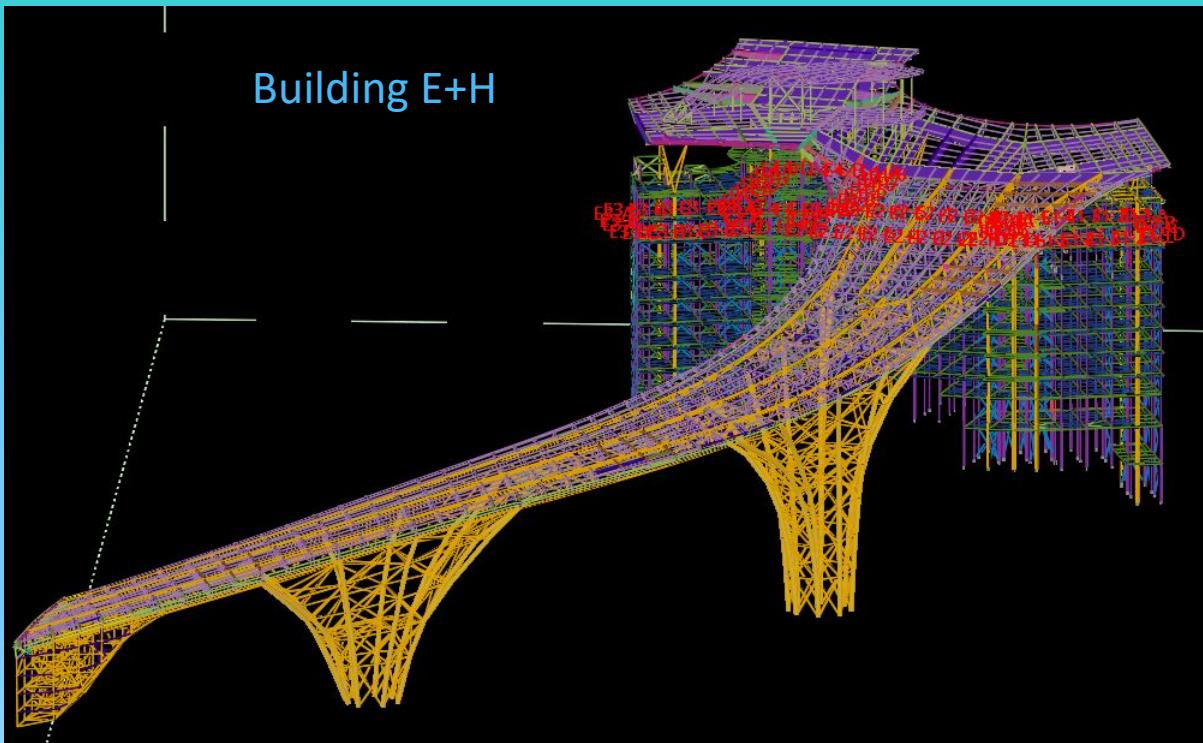
- Resorts
- High Rise Residential Buildings
- Churches
- Office buildings
- High rise buildings
- Parking structures
- Sky walks
- Hospital buildings
- School buildings

The staff of Zastraka typically uses 3D Model with our own internally developed custom components to detail most architectural steel items.

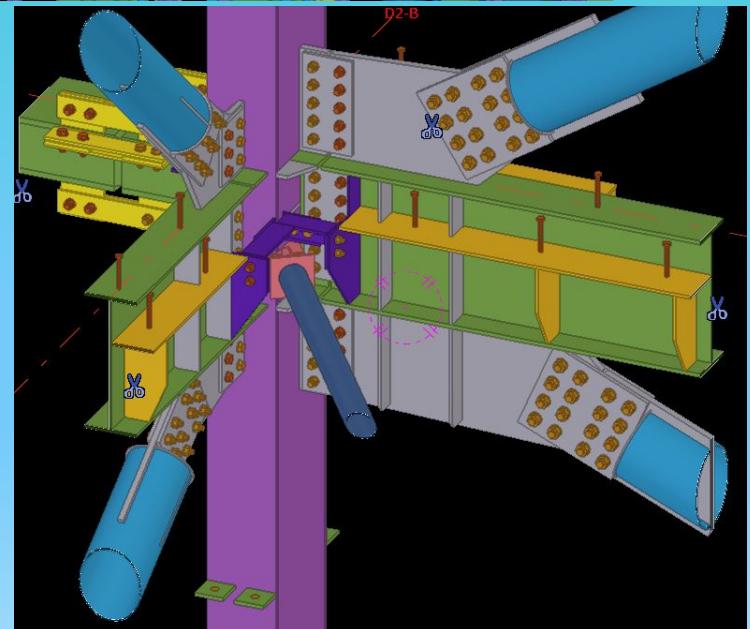
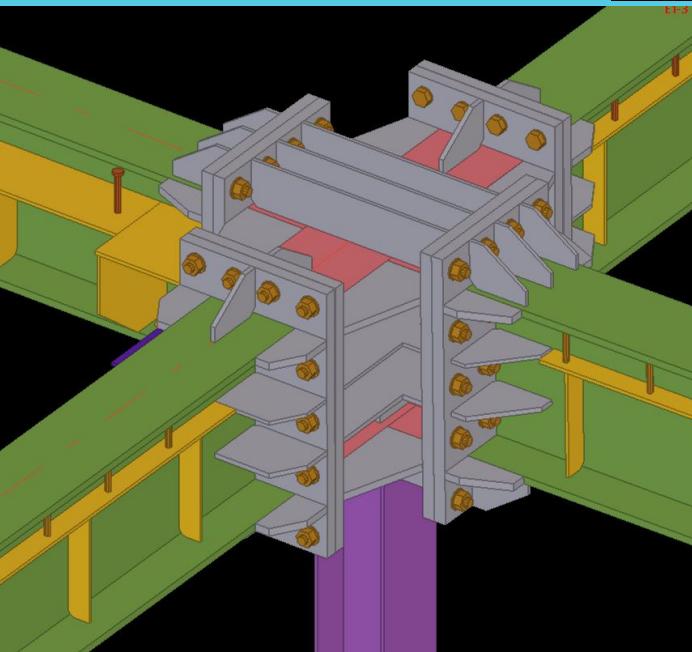
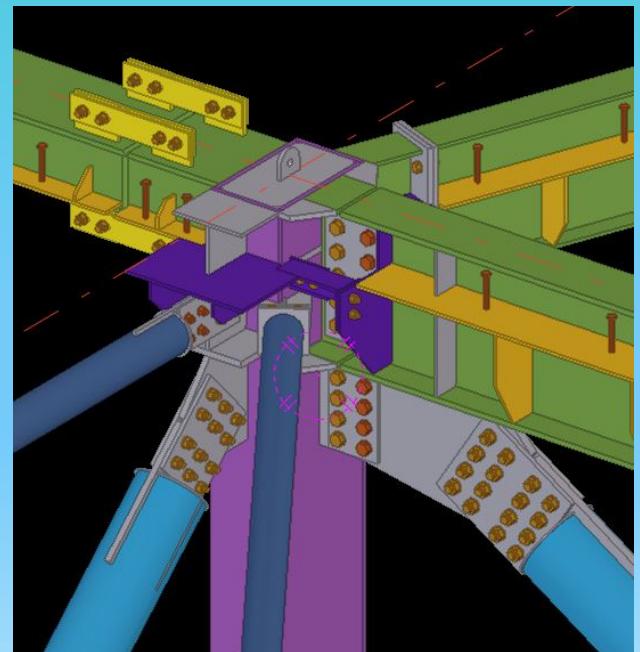
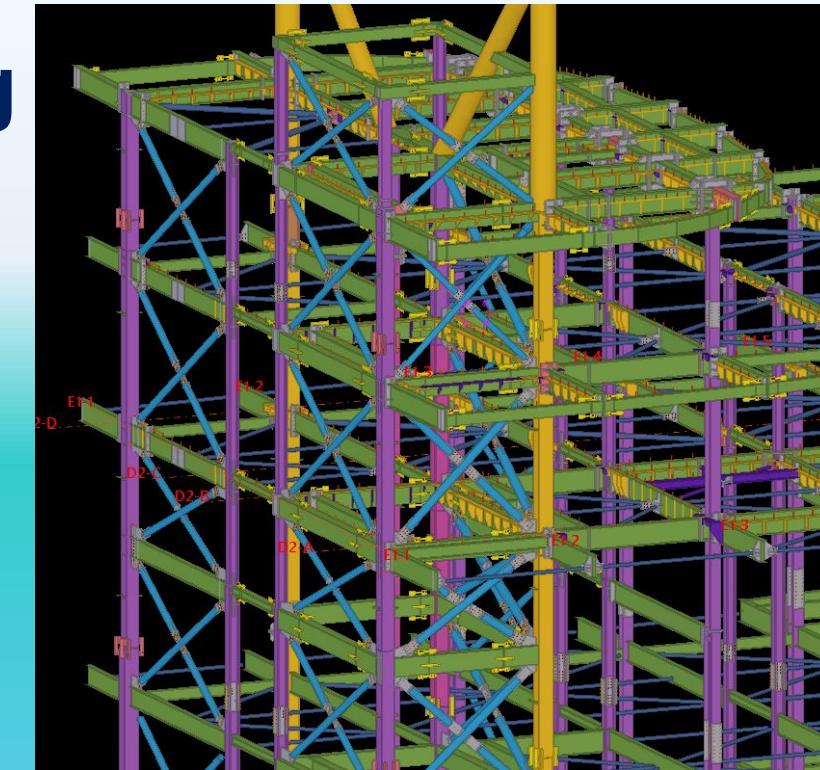
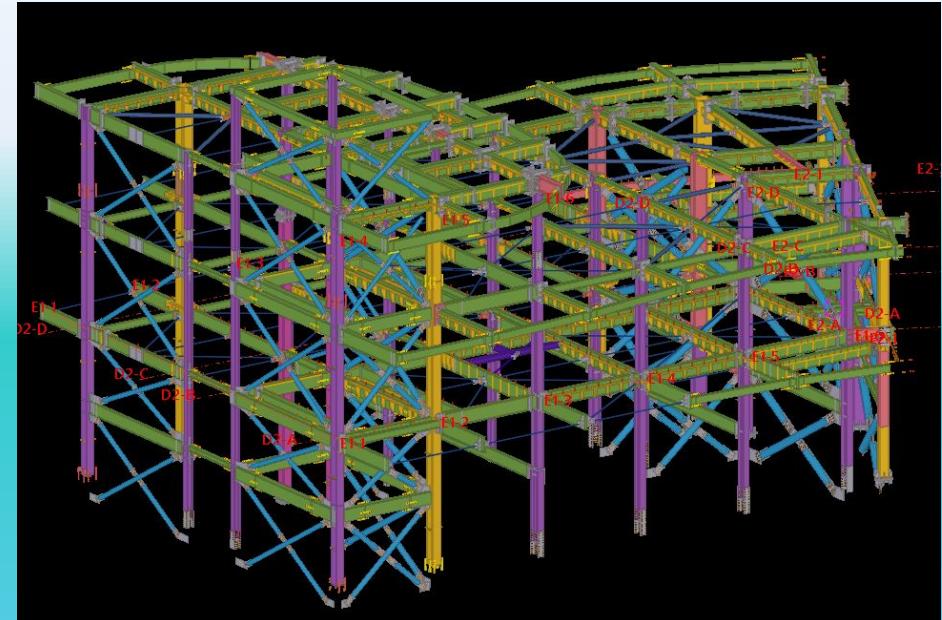
Commercial Structures Detailing

Zastraka Solutions is proud to be a steel detailing sub-contractors of the world's biggest resort project Trojena SKI VILLAGE in Saudi Arabia. We are providing the steel detailing outputs of the building E+H and S+W.

The steel framing of SKI Village project is very different with complex connection details. All the steel connection plates are higher thick, Z-grade plates and requires modelling of the complex geometry of connection details.



Commercial Structures Detailing



Misc. Steel Detailing

Zastraka Detailing Services provides fully coordinated Miscellaneous steel detailing services. Miscellaneous steel detailing demands a lot of self decision while working on it, especially in modelling side. Also, this part of detailing demands good technical knowledge as well. Our well experienced team does each job precisely and through best method.

These items often have minimal design loads that do not affect the structural frame and often include

- Design of metal stairs, including stringers, treads, handrails, and connections.
- Canopy structures
- Trench drain
- Balcony
- Fencing & Gates
- Trellis & Cabana
- Awning
- Garage Screening
- Sign post
- Trash Chute & Trash gate
- Bollards

Structural Detailing using 3D Modelling software

We utilize a suite of software packages to provide your project with the most efficient and best suited 3D modeling services. Our team is fully trained and experienced in the software they use and are experts in building information rich models. All modelling is fully checked by our experienced checking team before 2D drawing production commences.

Our team has extensive skills in 3D BIM modeling and can execute any project, whether it is residential, commercial or industrial, irrespective of the complexity of the project. We have exhibited our modeling skills in projects that involved a mix of structural steel detailing, reinforced concrete detailing, rebar detailing and precast concrete detailing.

We use the advance features of the software tool and our 3D BIM model with Cloud access with all involving parties allows the proper coordination and accurate interface between departments.

Detailing of Storage Tanks & Plate works

Zastraka offers accurate and cost-effective Structural steel engineering services to our clients in industrial, commercial and infrastructural sectors. We provide complete package under our structural steel engineering services, analysis, designing, 2D/3D modeling and detailing services.

Our services include Design and Detailing of Storage Tanks, Tank farms, Cryogenic Tanks, Columns, Heat Exchangers, Pressure vessels, Spheres, Bullets, Silos, Receivers, Stacks, Chemical Injection Skids, etc.,

Our process equipment are designed and detailed as per the client requirements. We adhere to stringent quality standards we set for ourselves, and our superior quality of workmanship ensure that our services will provide long-term returns to our clients

Bridge Structures Detailing

Zastraka has full capabilities in structural steel bridge detailing, including vehicle bridges, pedestrian bridges, steel overpasses and walkways. Whether your fabrication plant focuses exclusively on bridge construction or provide this as an additional service to your structural building division we can provide high quality detailing services.

We are fully versed in bridge fabrication and erection procedures throughout AISC categories, including SBR, IBR and ABR. Our bridge fabrication drawings provide for full scope of fabrication including unspliced rolled sections, field or shop splices, plate girder bridges, as well as truss bridges.

Our bridge erection drawings allows for well organized and planned erection of all steel elements of the structure. We establish zoning in accordance with our clients for each specific structure to ensure that shipping requirements for each zone are met according to the erection schedule, especially for complex bridges with box girders, arches, or trusses.

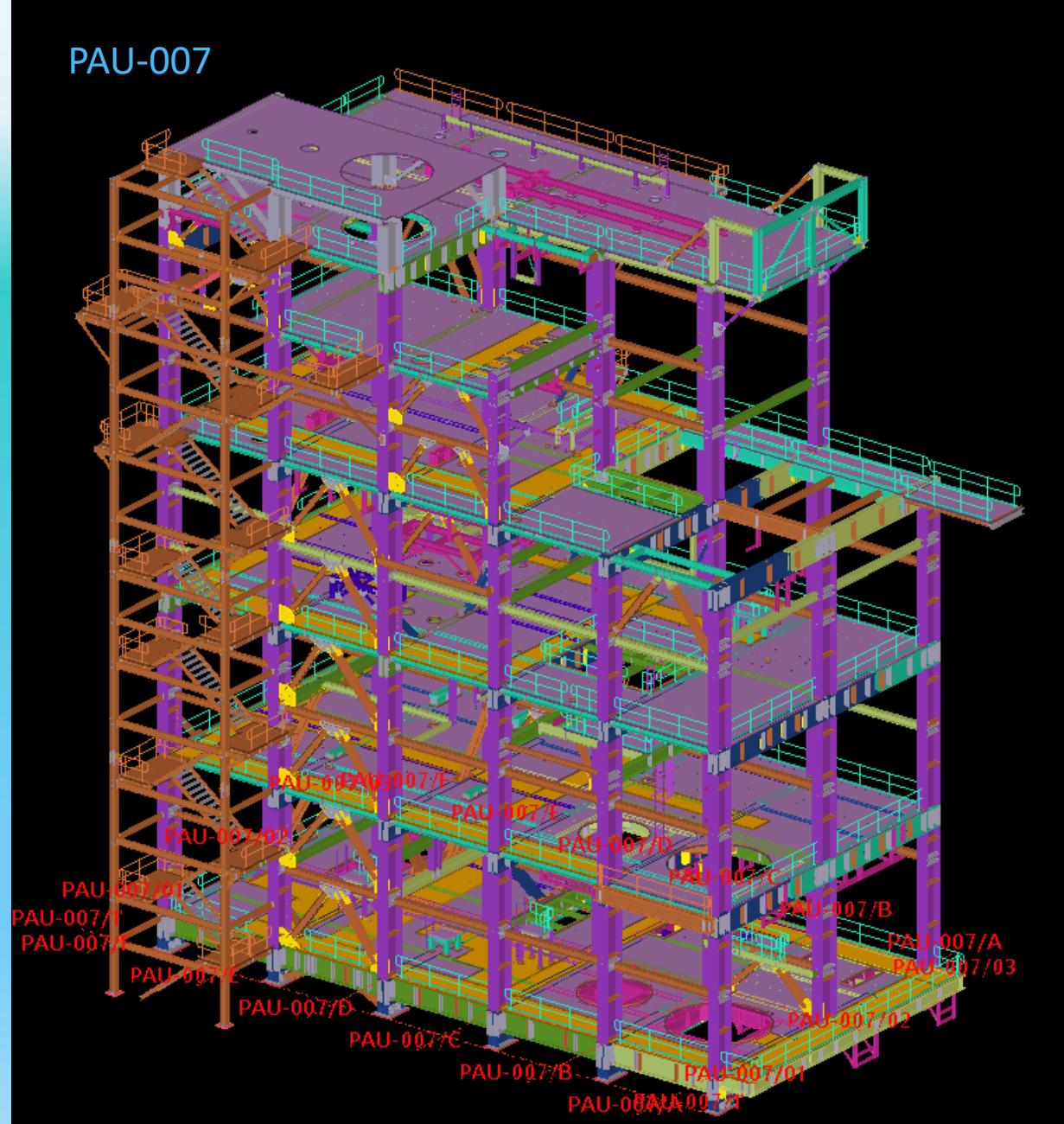
Structural Steel Estimation

Team Zastraka can be the one stop solution for all your structural estimating services. The skilled team of estimators at Zastraka can deliver our clients detailed analysis of the structural steel projects and provide you with accurate estimates with a detailed cost break down.

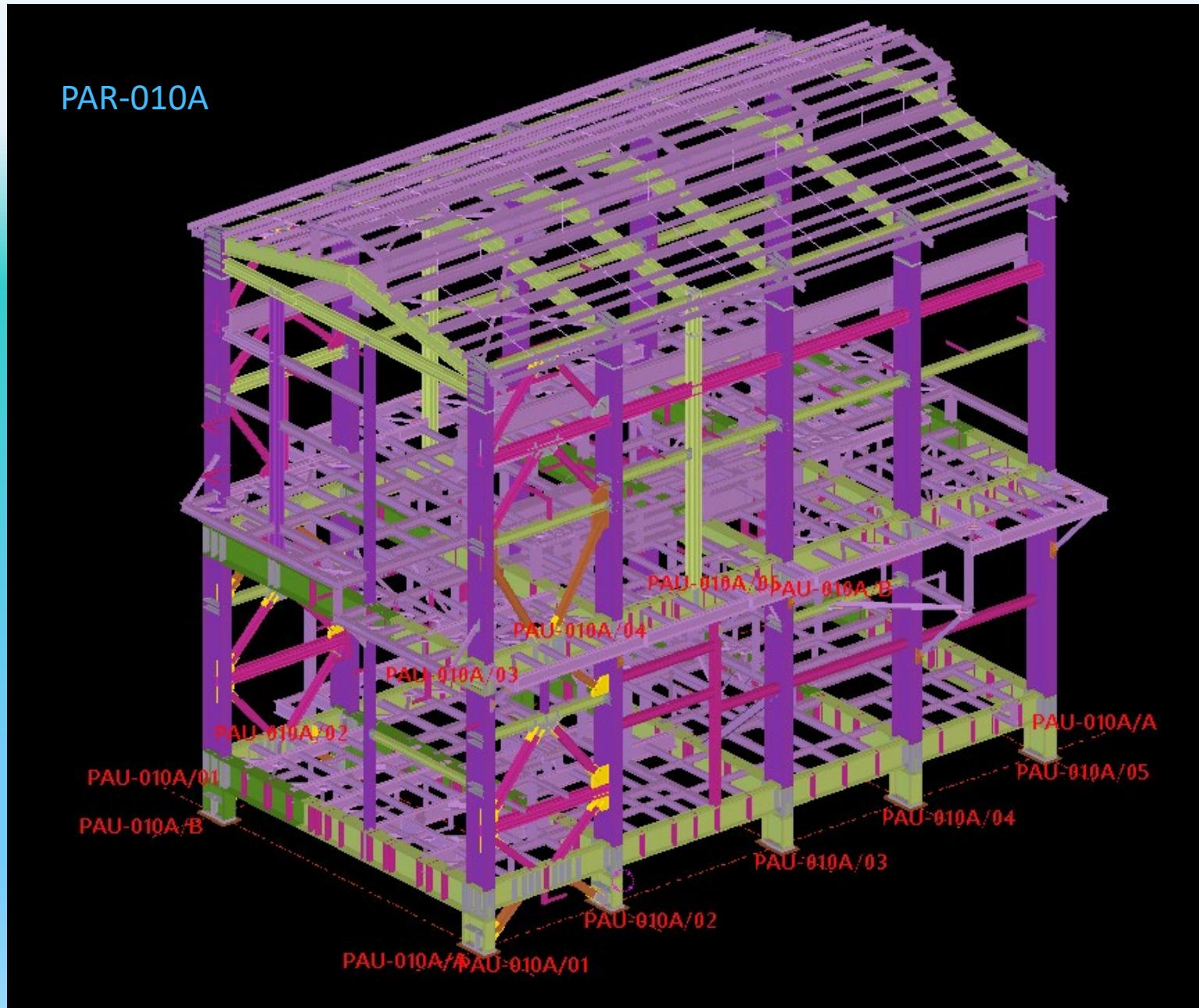
The estimation service ensures that the project runs on the minimum costs, reduced storage space at the site location, and stay with your time schedule. We calculate and offer accurate quotes to our clients which include materials, accessories and erection costs.

STRUCTURAL STEEL TAKE OFF						
Sl No	Qty.	Profile	Grade	Length	Weight(lbs)	Total Weight(lbs)
1	2	C6X8.2	A36	3'-5 3/8"	33	66
2	2	C6X8.2	A36	4'-7 1/4"	45	90
3	1	HSS8X8X5/8	A500-GR.B	12'-5 5/16"	694	694
4	1	HSS8X8X5/8	A500-GR.B	12'-7 1/4"	703	703
5	1	HSS8X8X5/8	A500-GR.B	13'-6 5/8"	756	756
6	1	HSS8X8X5/8	A500-GR.B	30'-5 3/4"	1701	1701
7	1	HSS8X8X5/8	A500-GR.B	30'-7 5/16"	1708	1708
8	1	HSS8X8X5/8	A500-GR.B	39'-3 1/16"	2191	2191
9	1	L3-1/2X3-1/2X1/2	A36	0'-8 7/16"	8	8
10	1	L3-1/2X3-1/2X1/2	A36	4'-2 11/16"	47	47
11	1	L6X6X1/2	A36	2'-1 1/16"	41	41
12	2	L6X6X1/2	A36	23'-4"	457	914
13	4	W6X8.5	A992	4'-11 15/16"	43	172
14	3	W12X26	A992	22'-5"	584	1752
15	5	W12X26	A992	22'-6 7/8"	588	2940
16	2	W12X26	A992	22'-7 1/2"	589	1178
17	1	W12X45	A992	22'-5"	999	999
29	3	W12X58	A992	23'-4"	1350	4050
30	8	W12X65	A992	11'-3 7/8"	736	5888
31	24	W12X65	A992	22'-7 3/4"	1472	35328
32	6	W12X87	A992	11'-3 7/8"	986	5916
Total Weight of 101 members					143397	

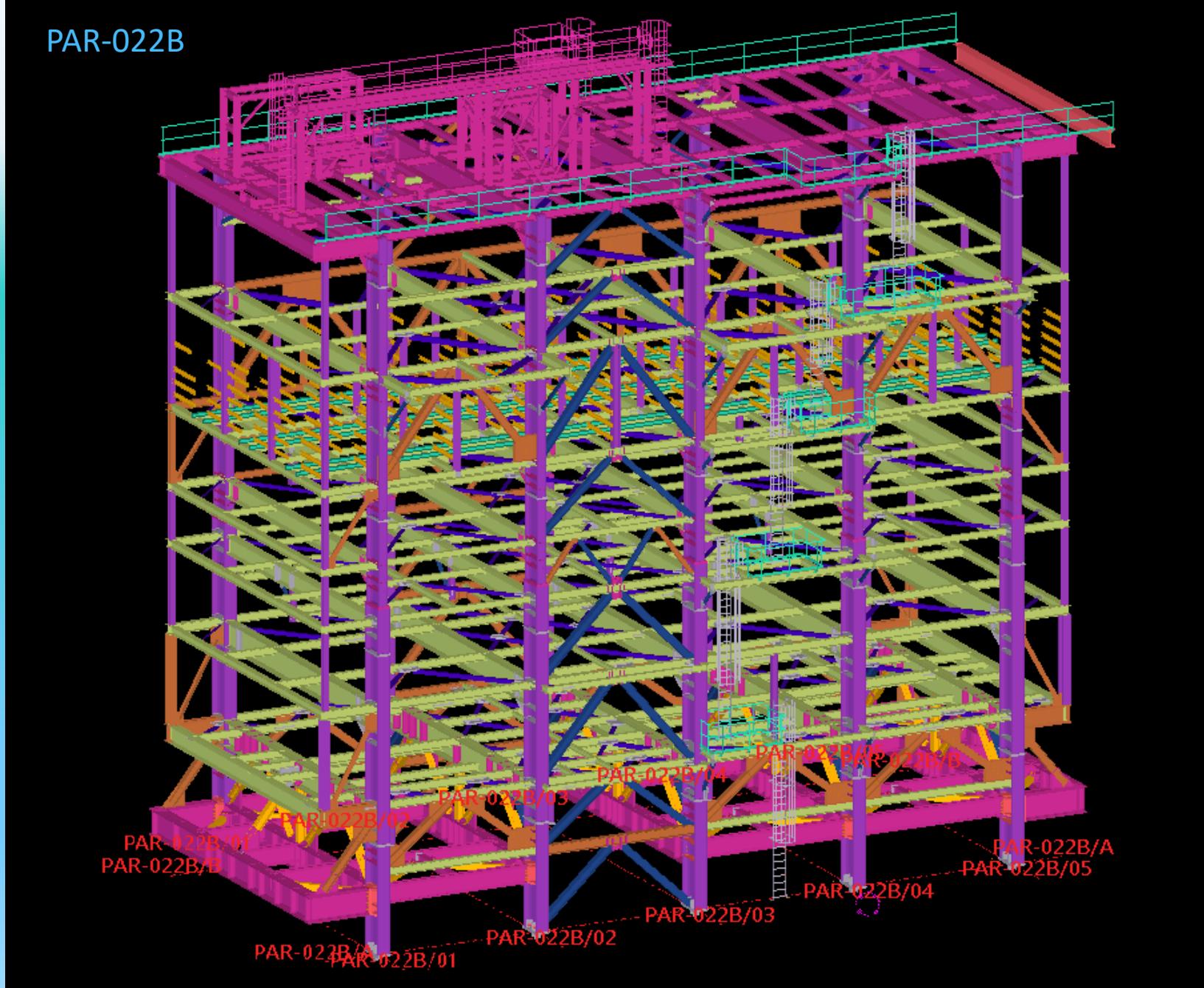
Modular Structural Steel Detailing – CERES Project



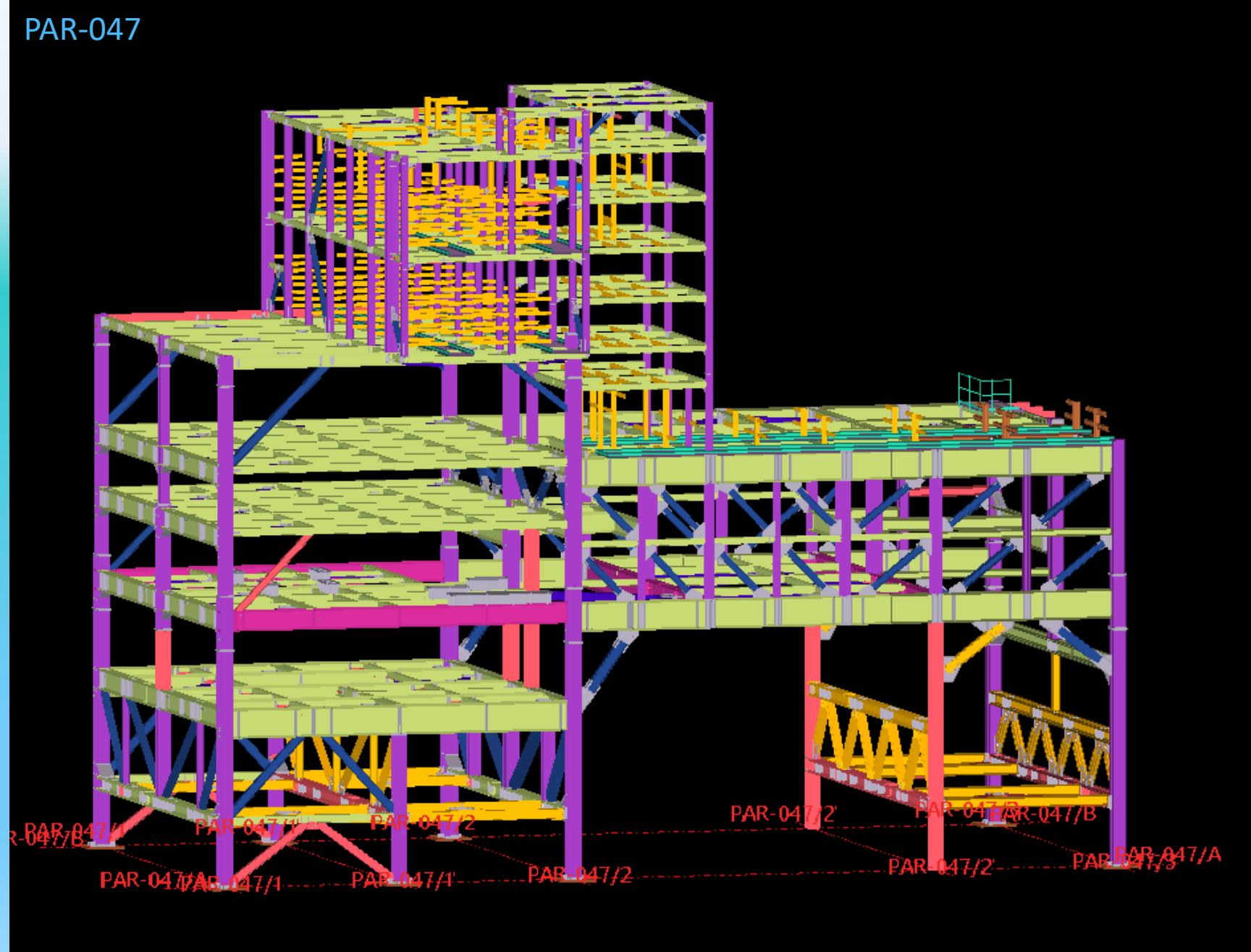
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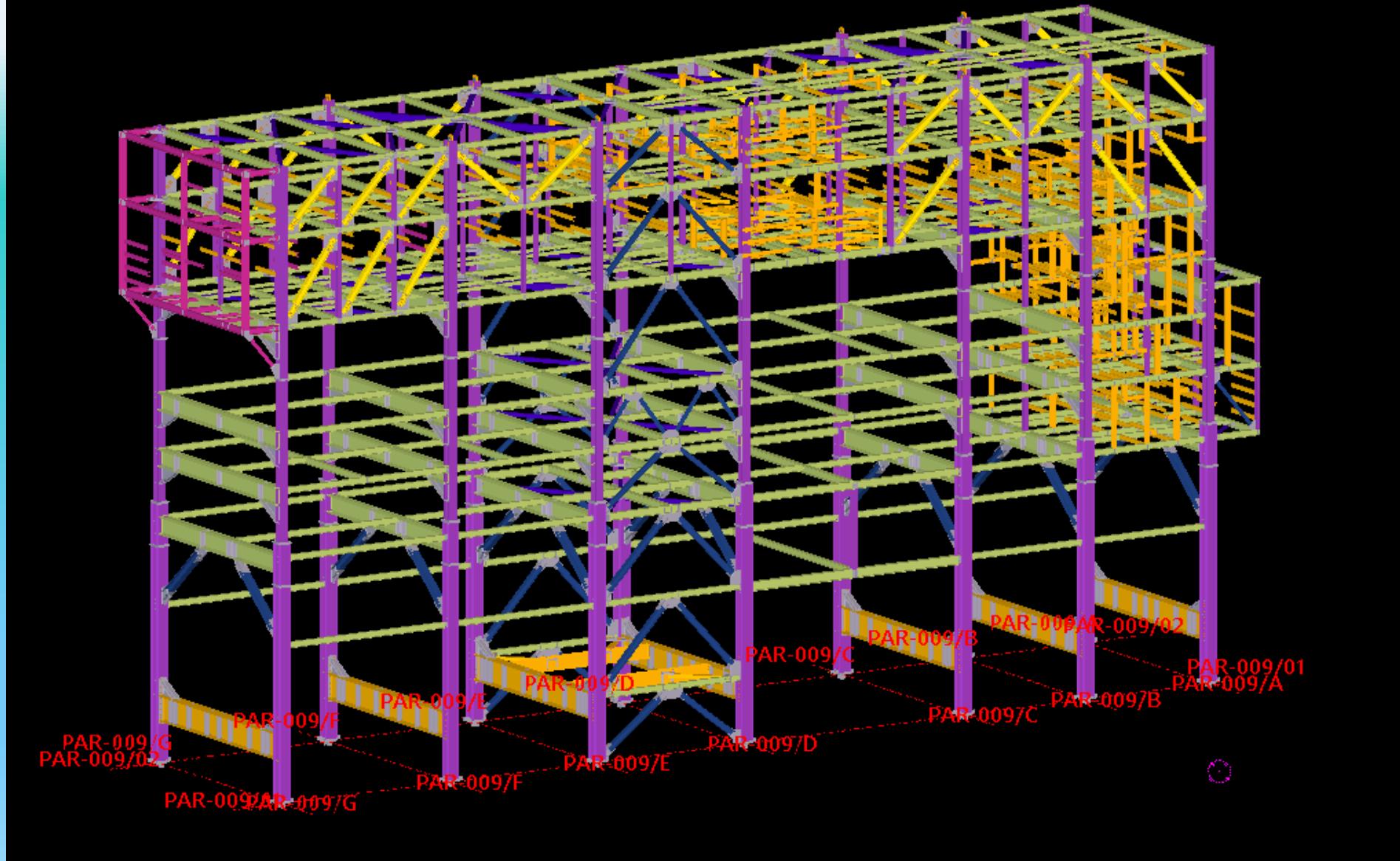
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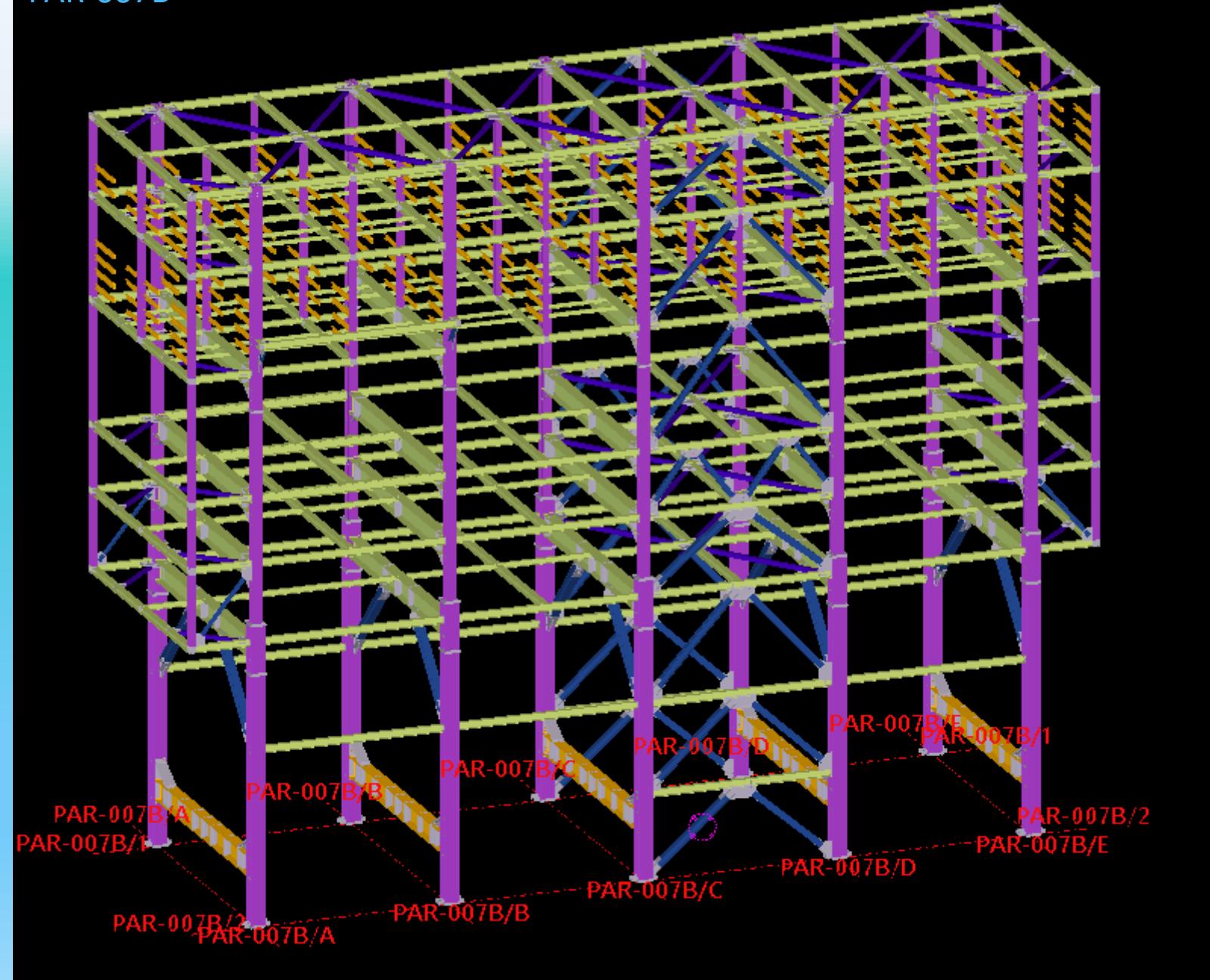
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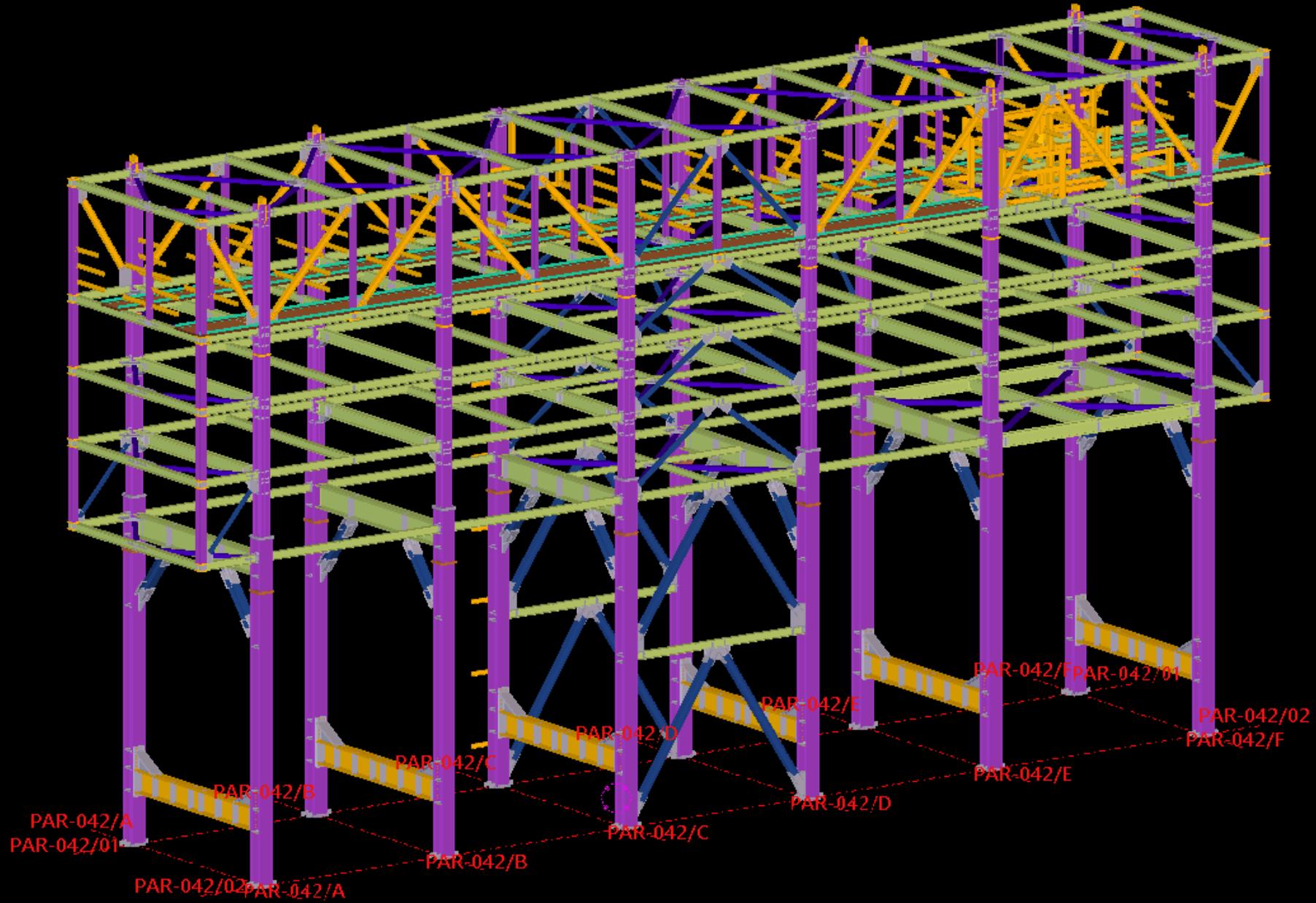
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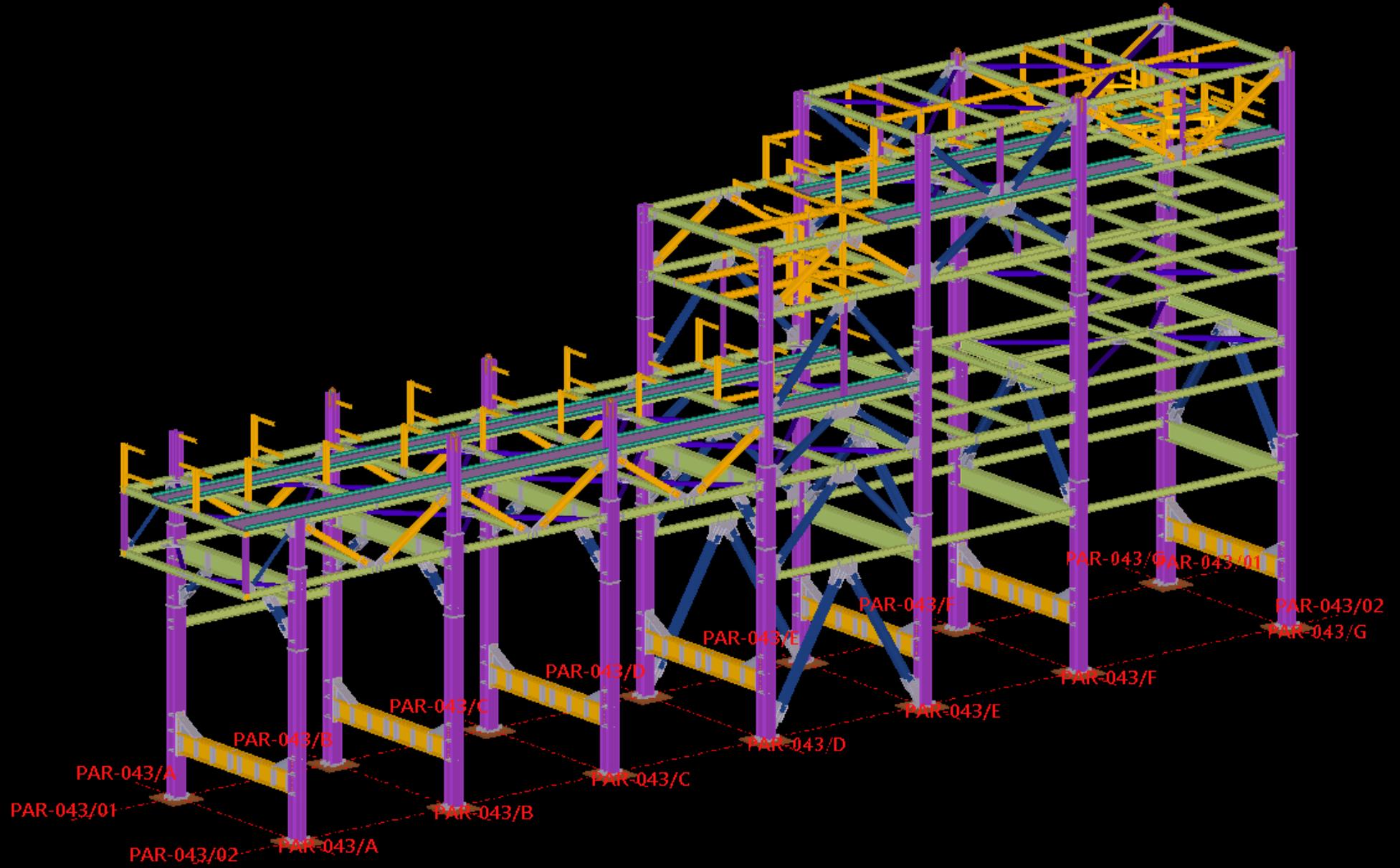
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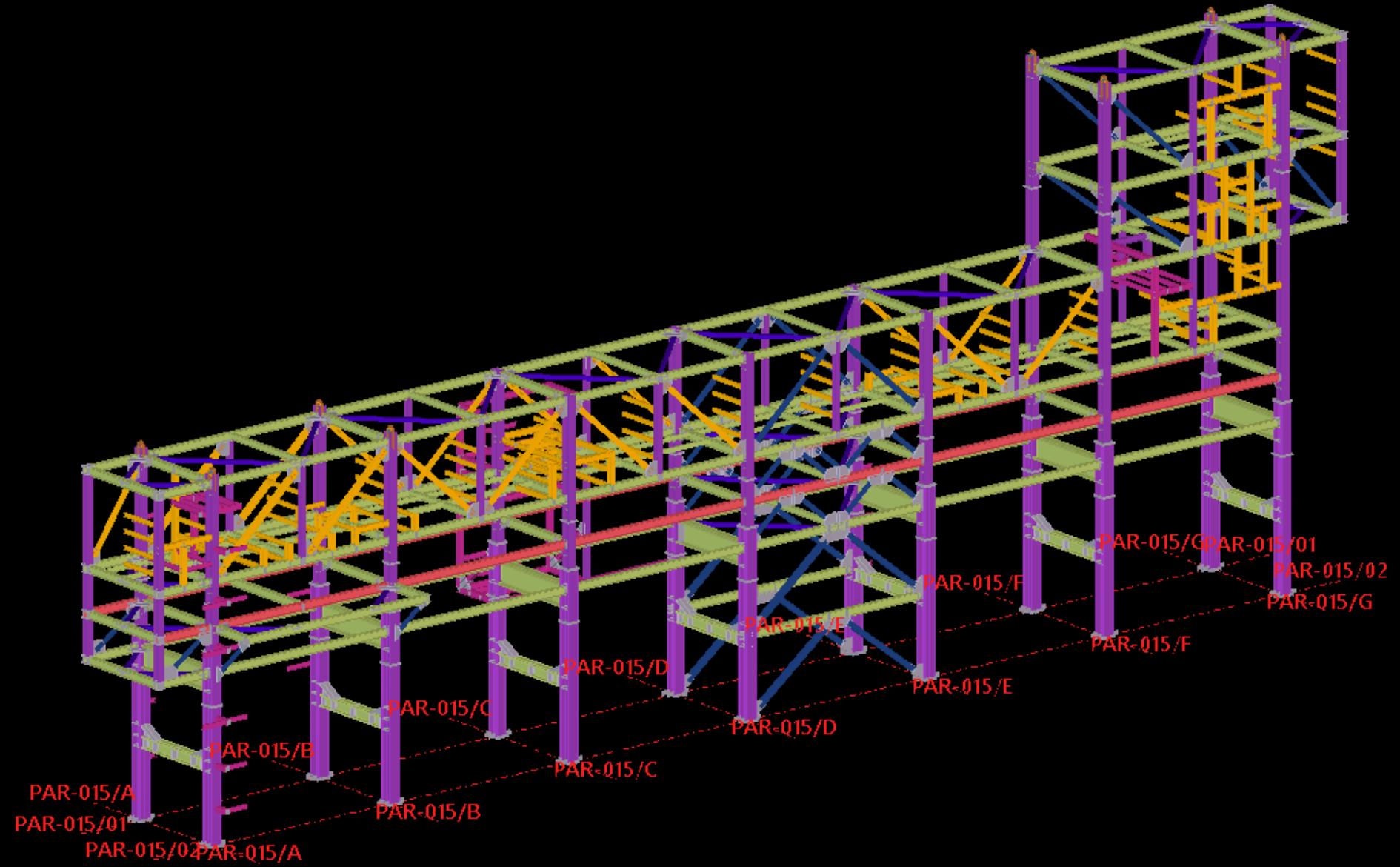
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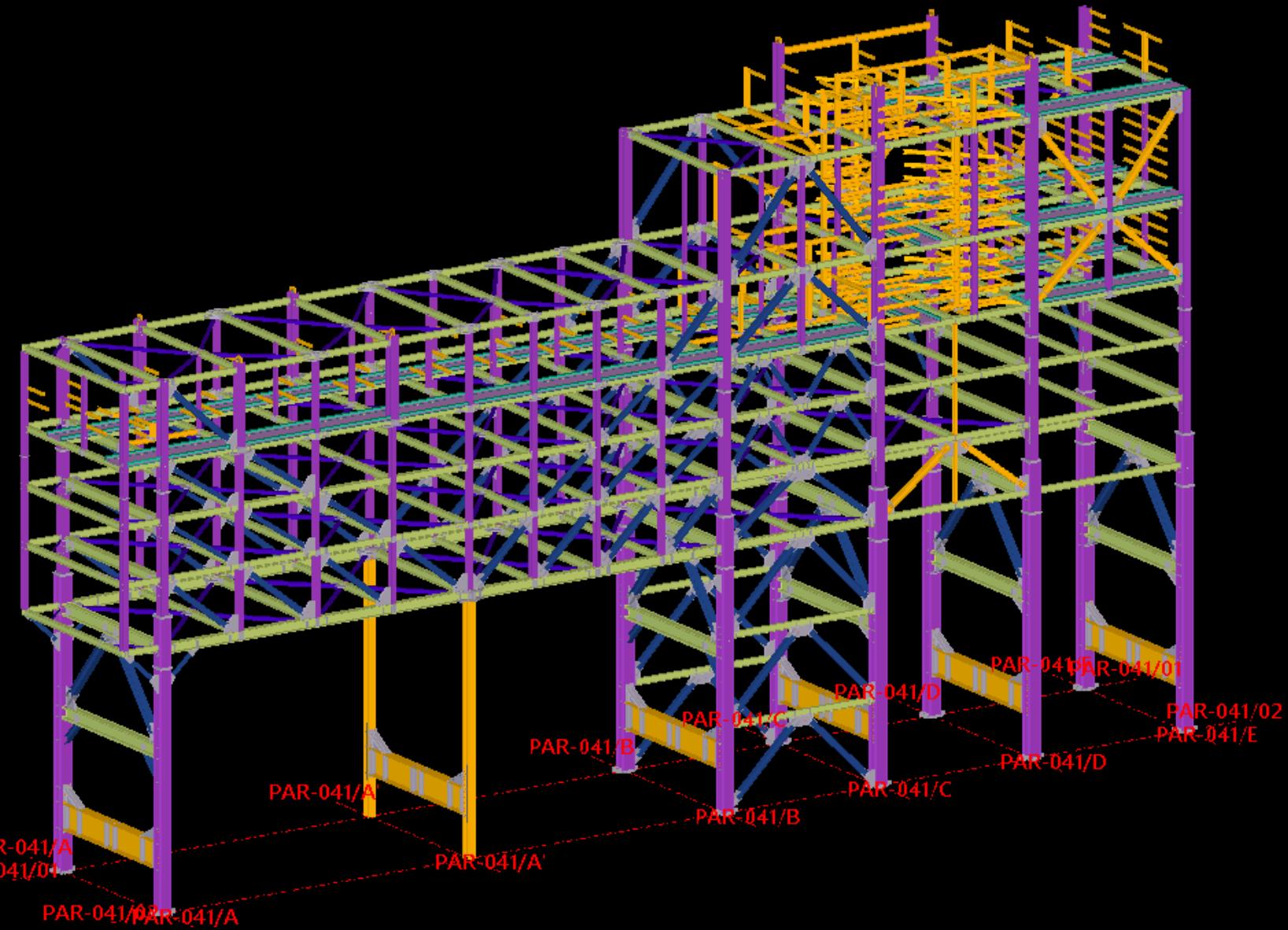
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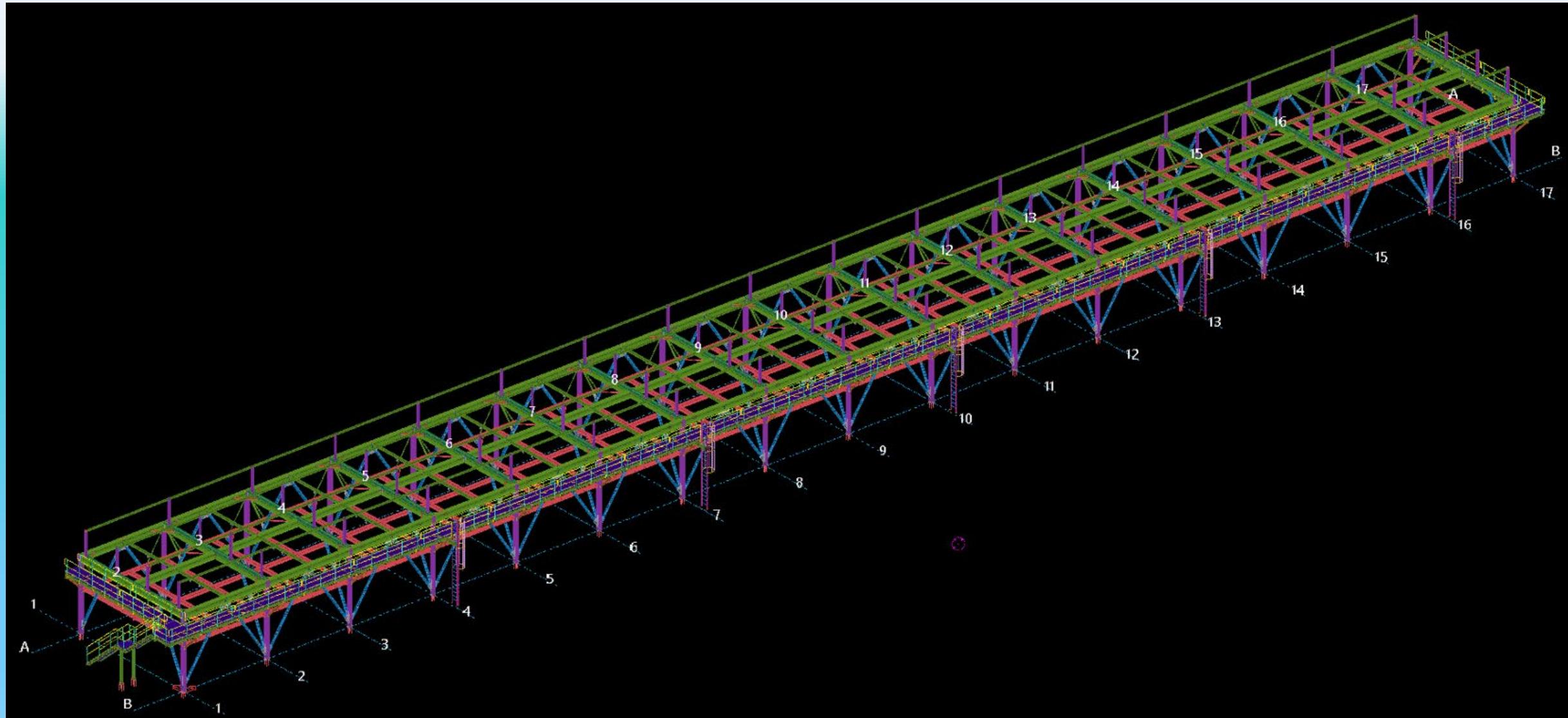
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PAR-041

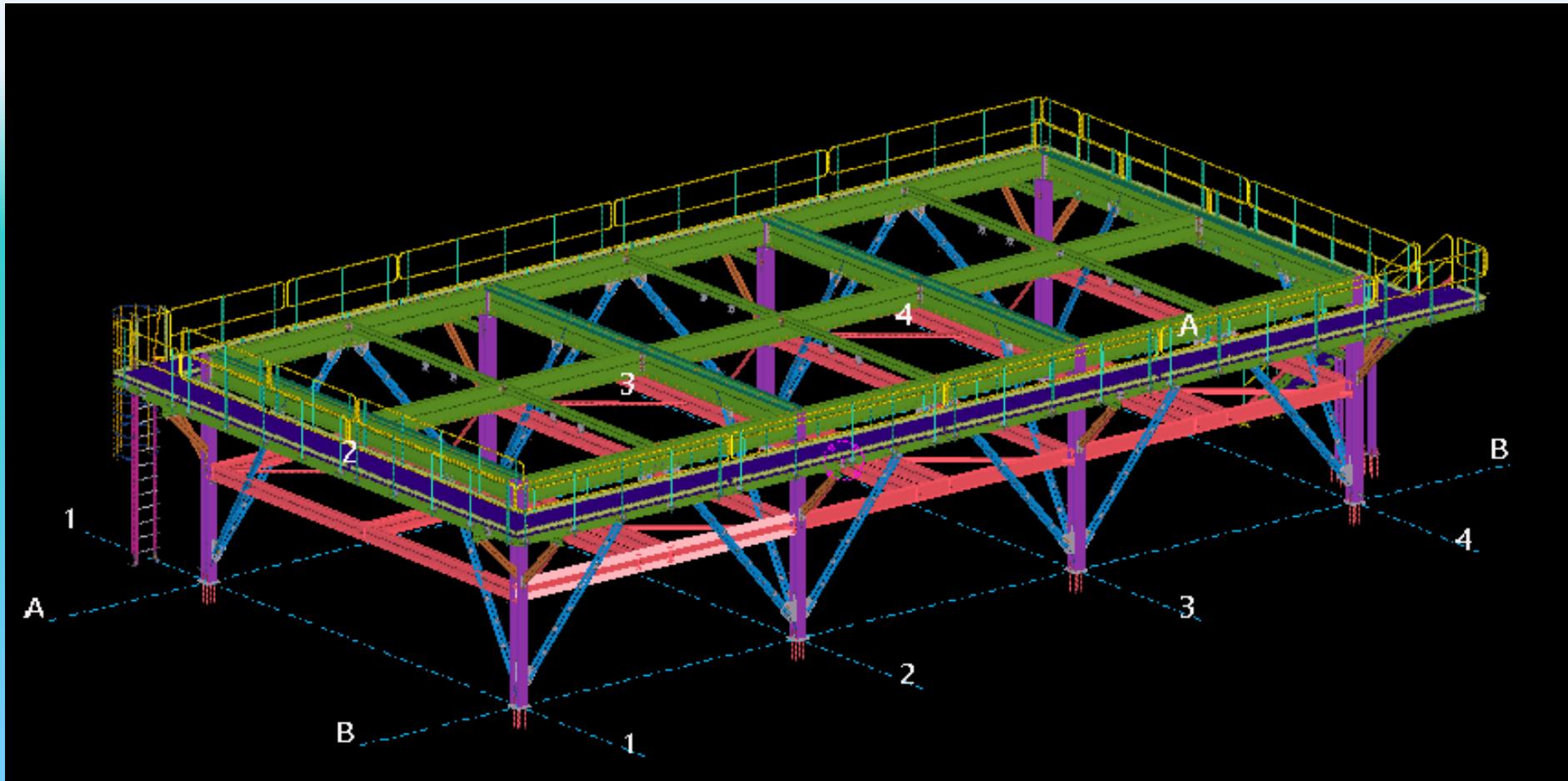


BGR ENERGY – OVERHEAD AIR CONDENSER SUPPORT STRUCTURE



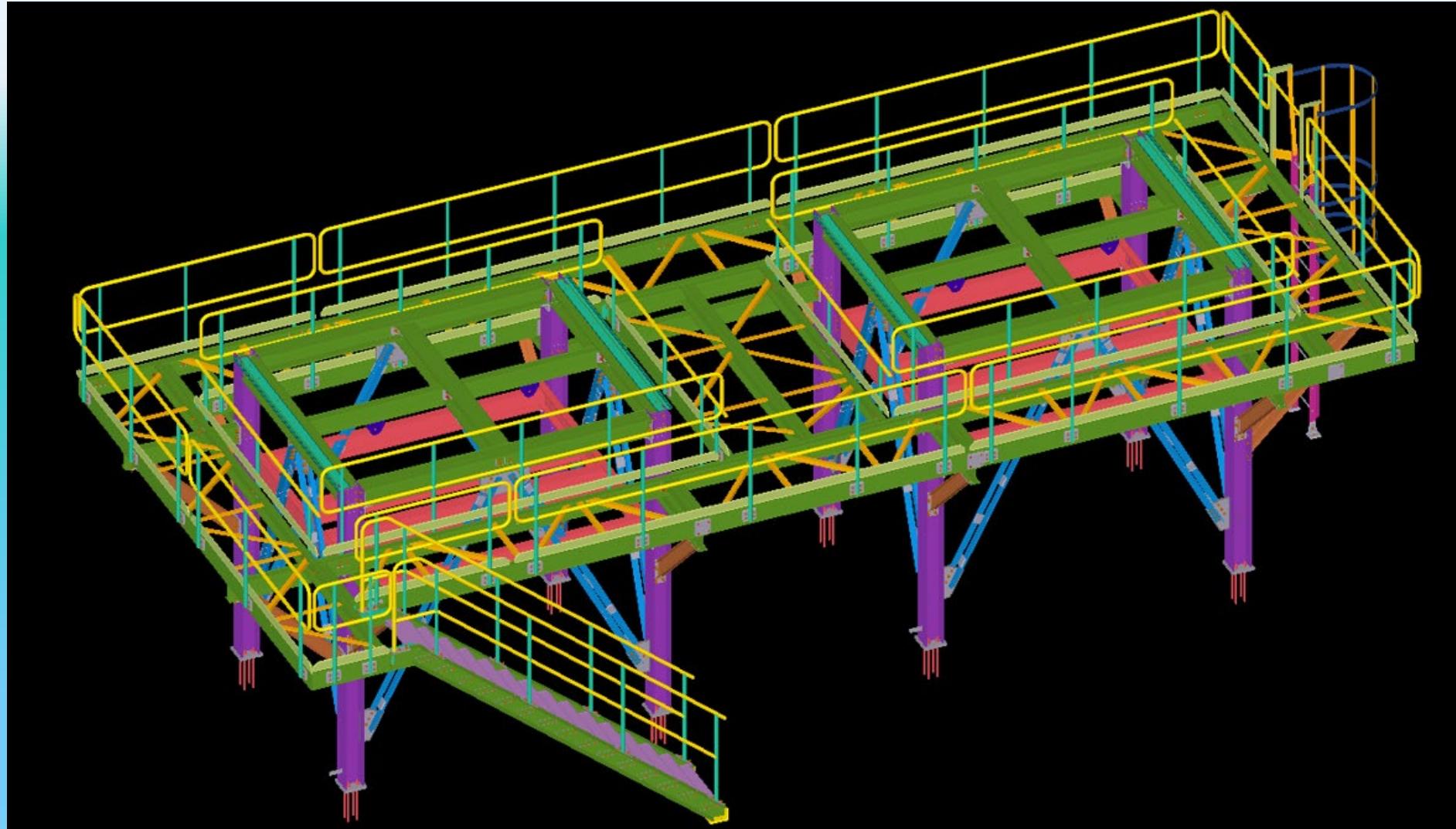
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BGR ENERGY – AIR COOLER SUPPORT STRUCTURE



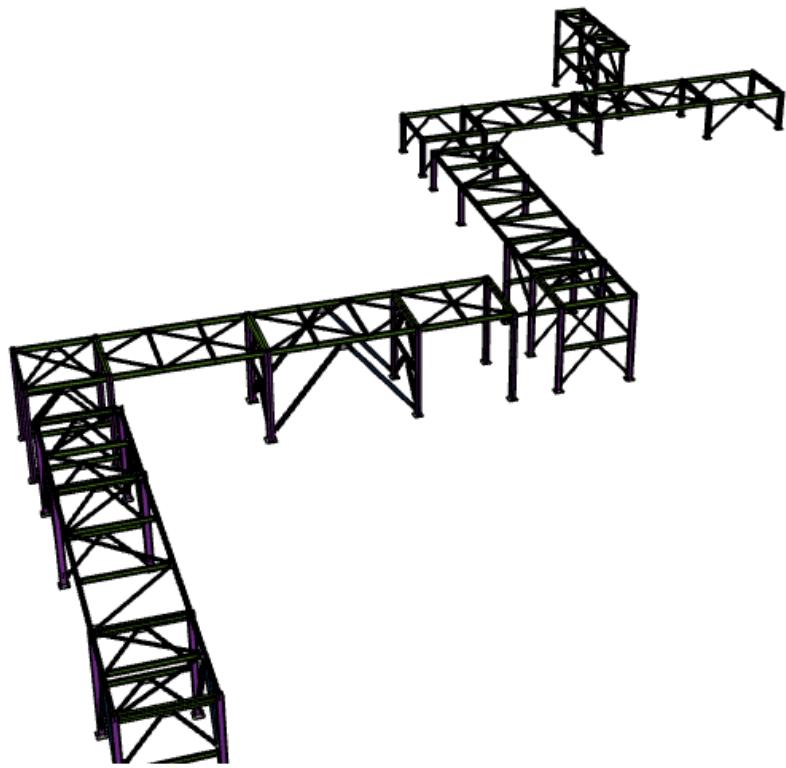
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BGR ENERGY – AIR COOLER SUPPORT STRUCTURE

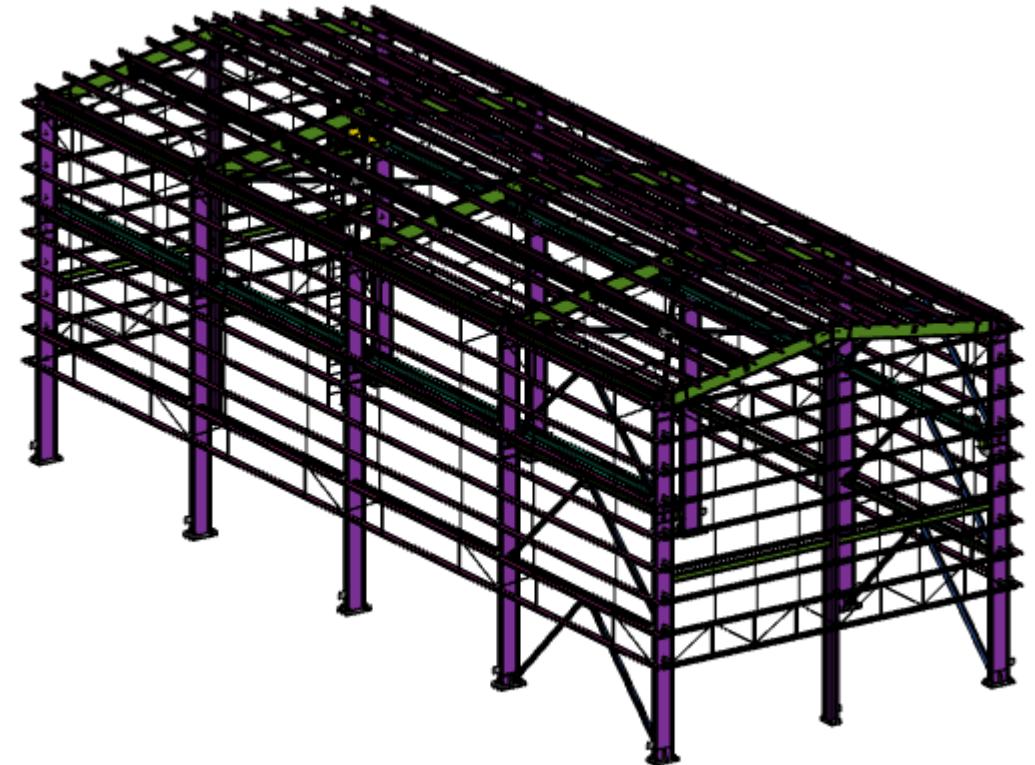


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ADNOC – CRUDE OIL RECEIVING FACILITY AT JEBELDHANNA 800 Tonnes

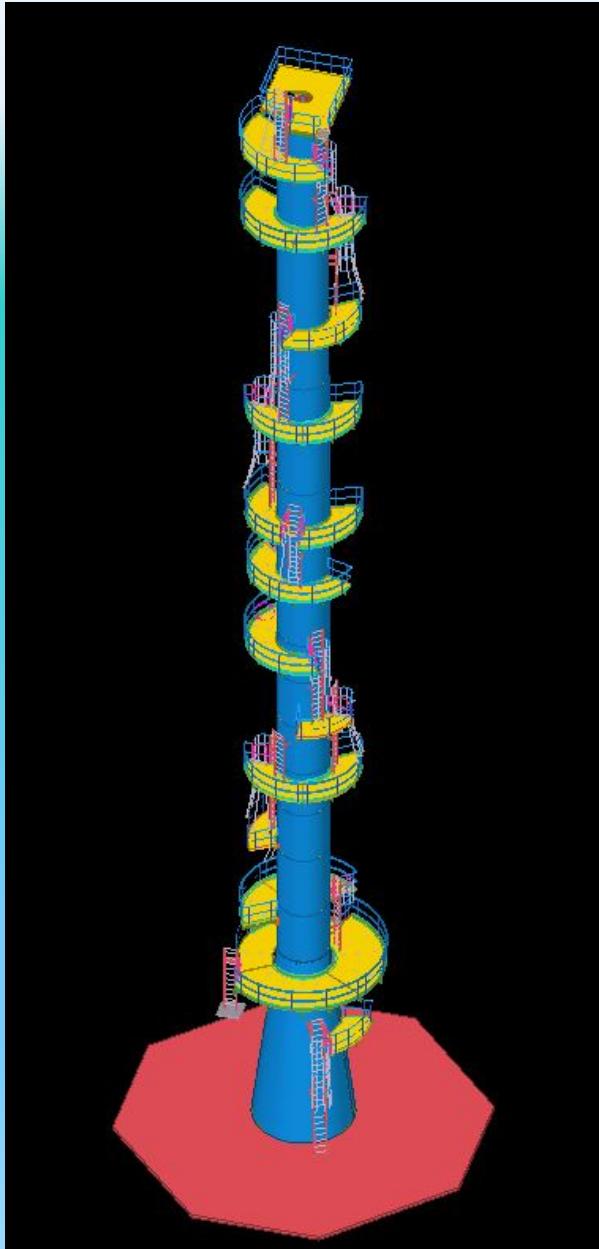


PIPE RACK

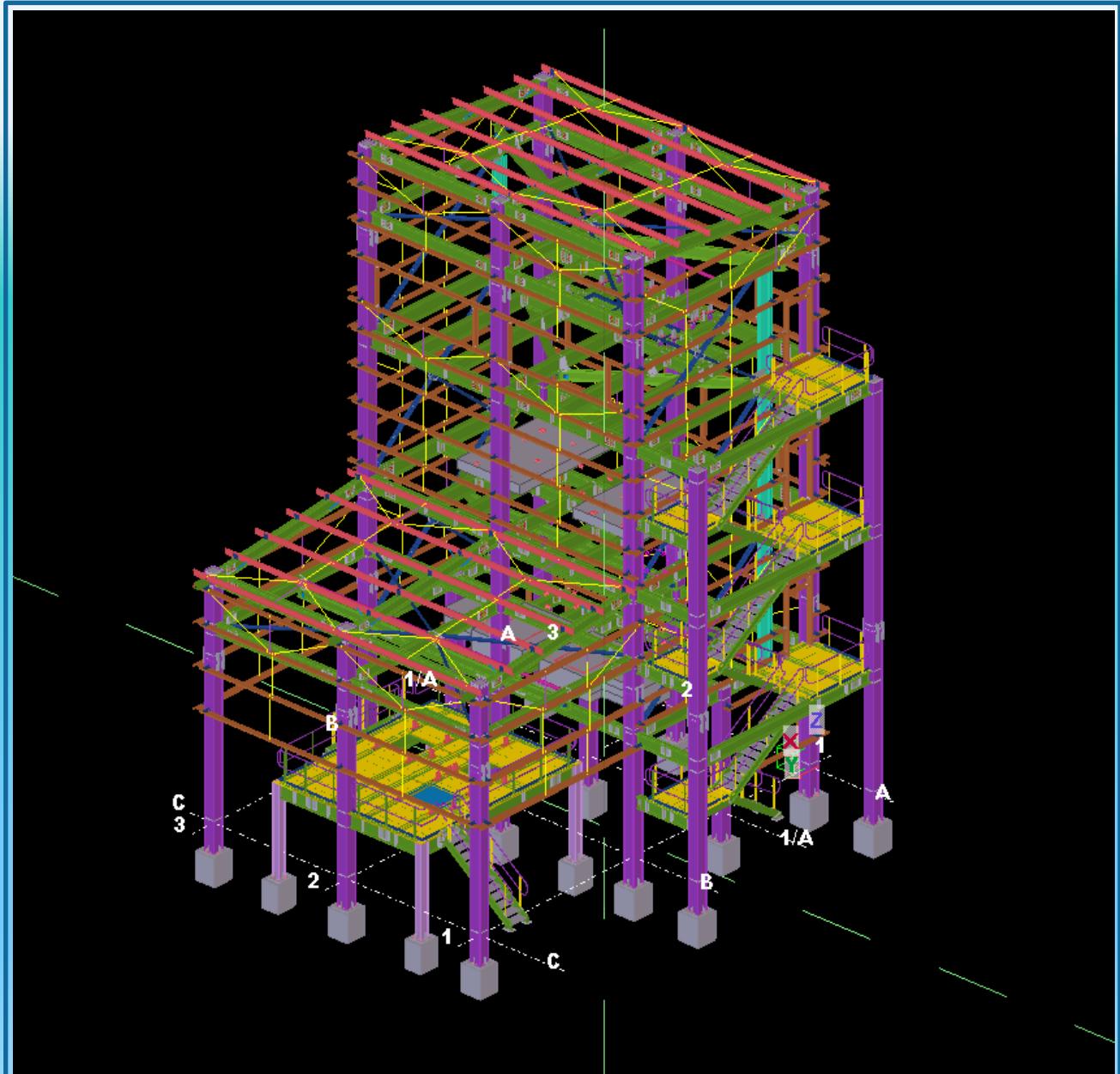
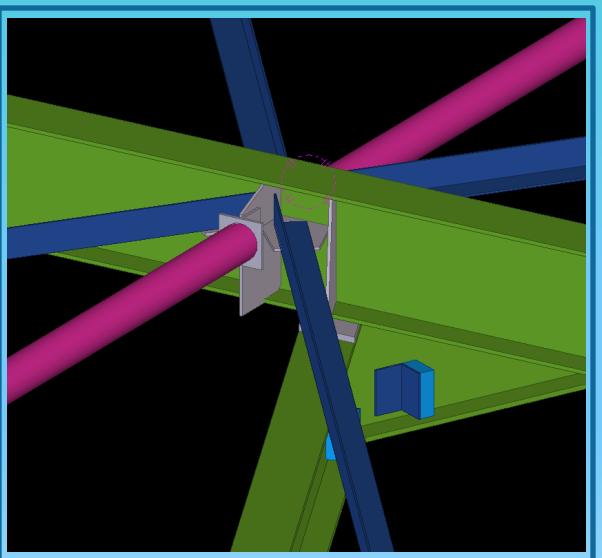
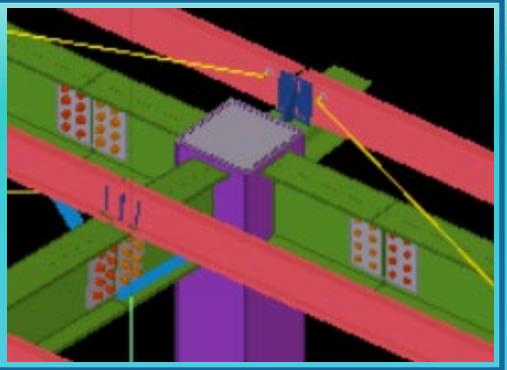


FIRE WATER SHELTER

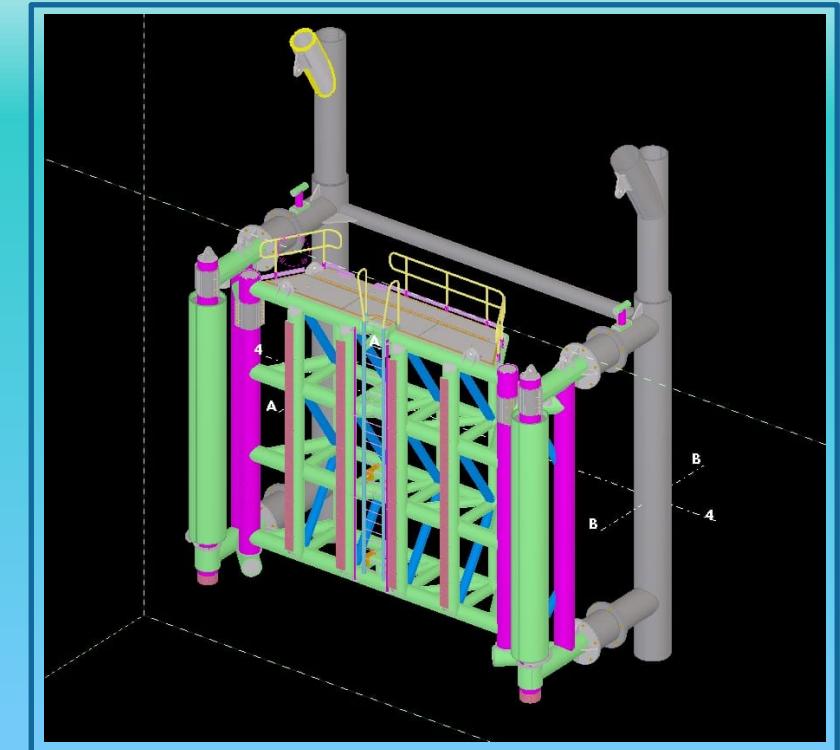
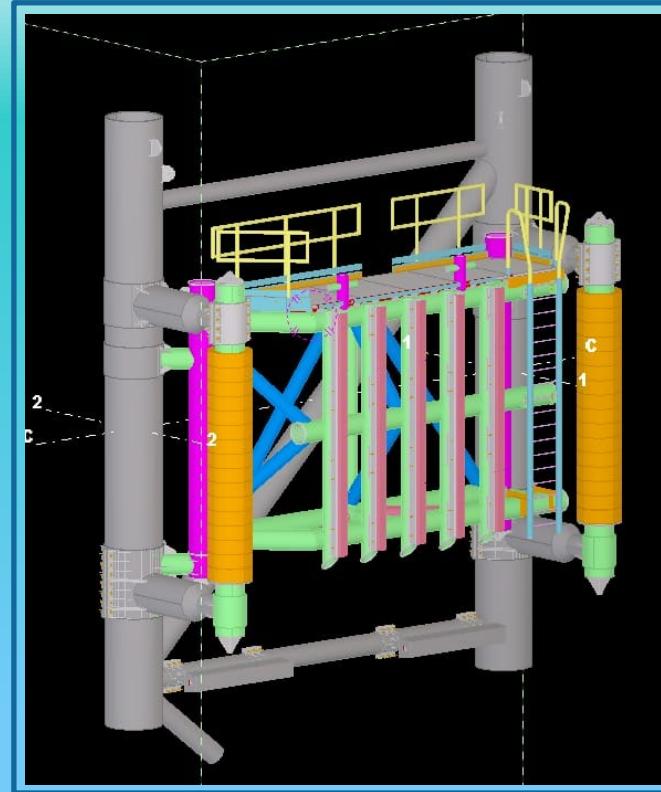
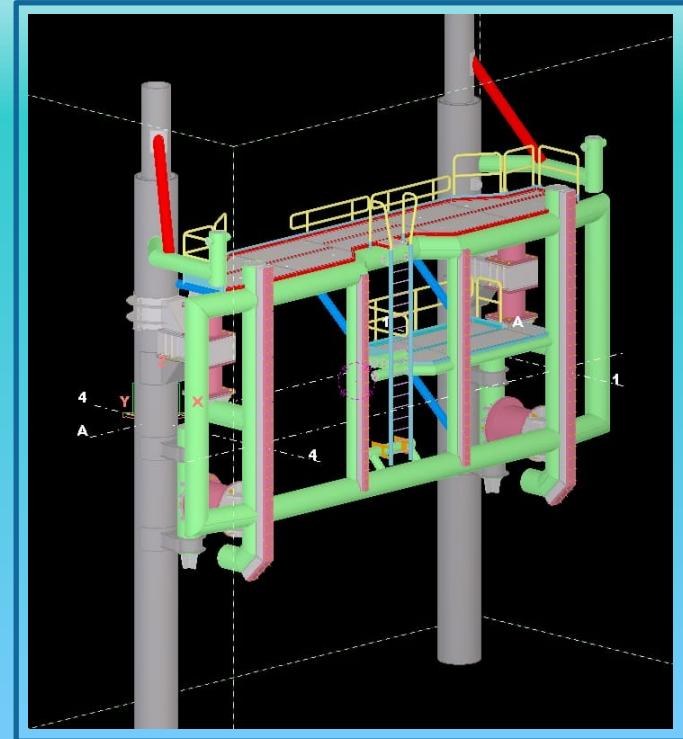
Circular Platform for Built-Up Engg / Technimont – 16 towers -
circular platforms submitted



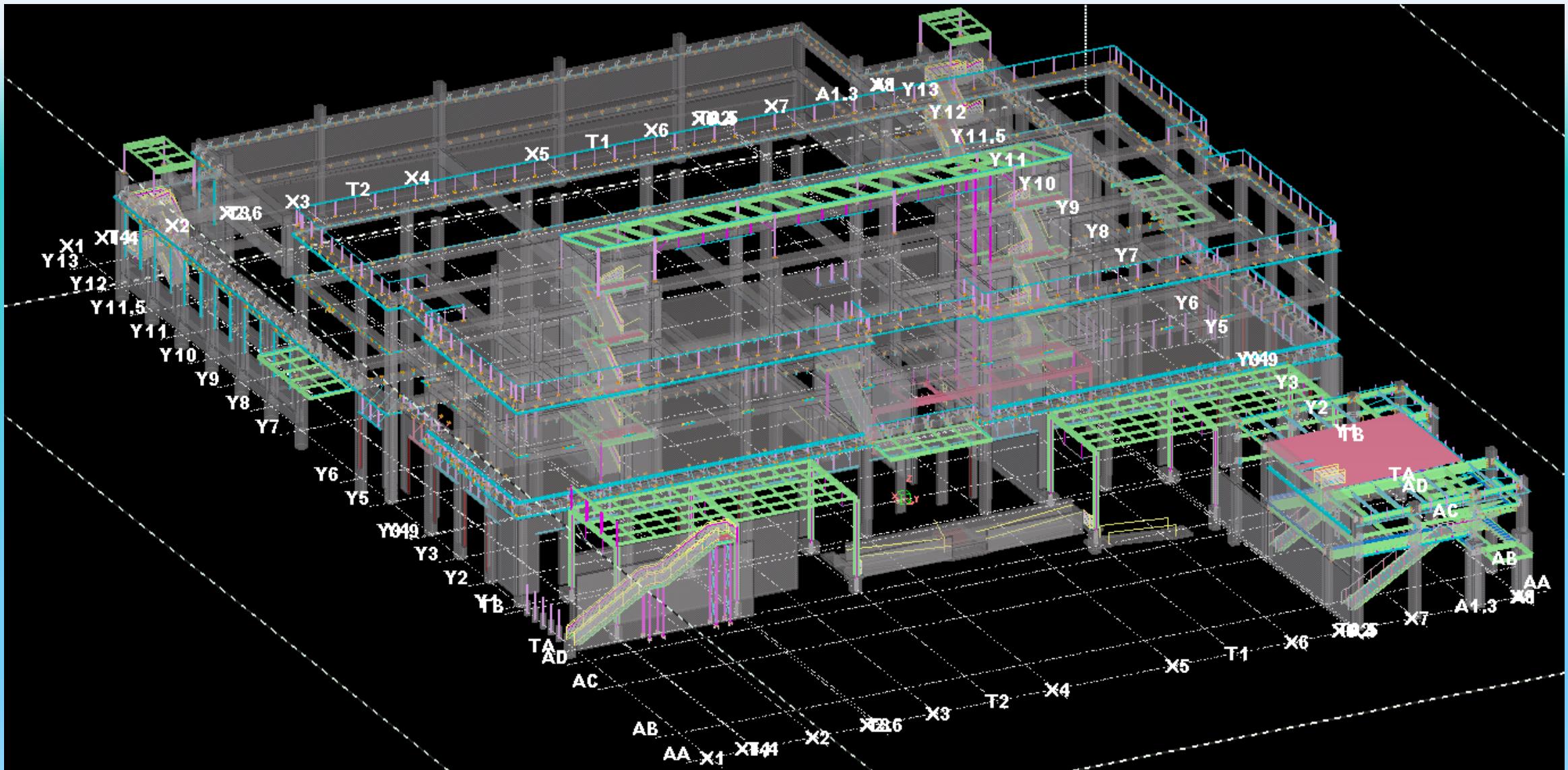
Multi Fuel Boiler 1, Fuel Conveyor Transfer Station, Malaysia



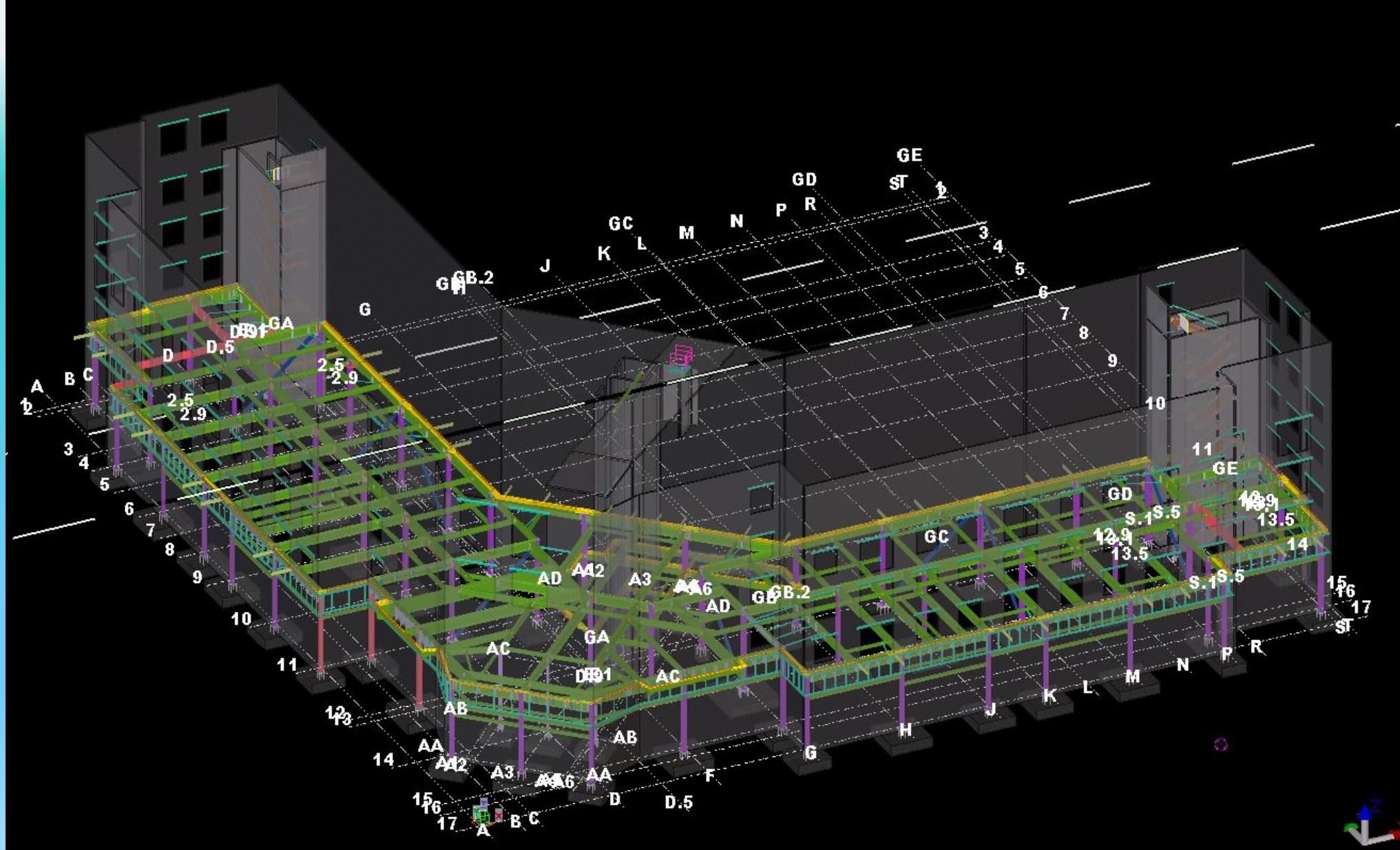
UZ & UAD Part II Boat landing Replacement Project (10 Nos), ADNOC – CCTC, Abu Dhabi



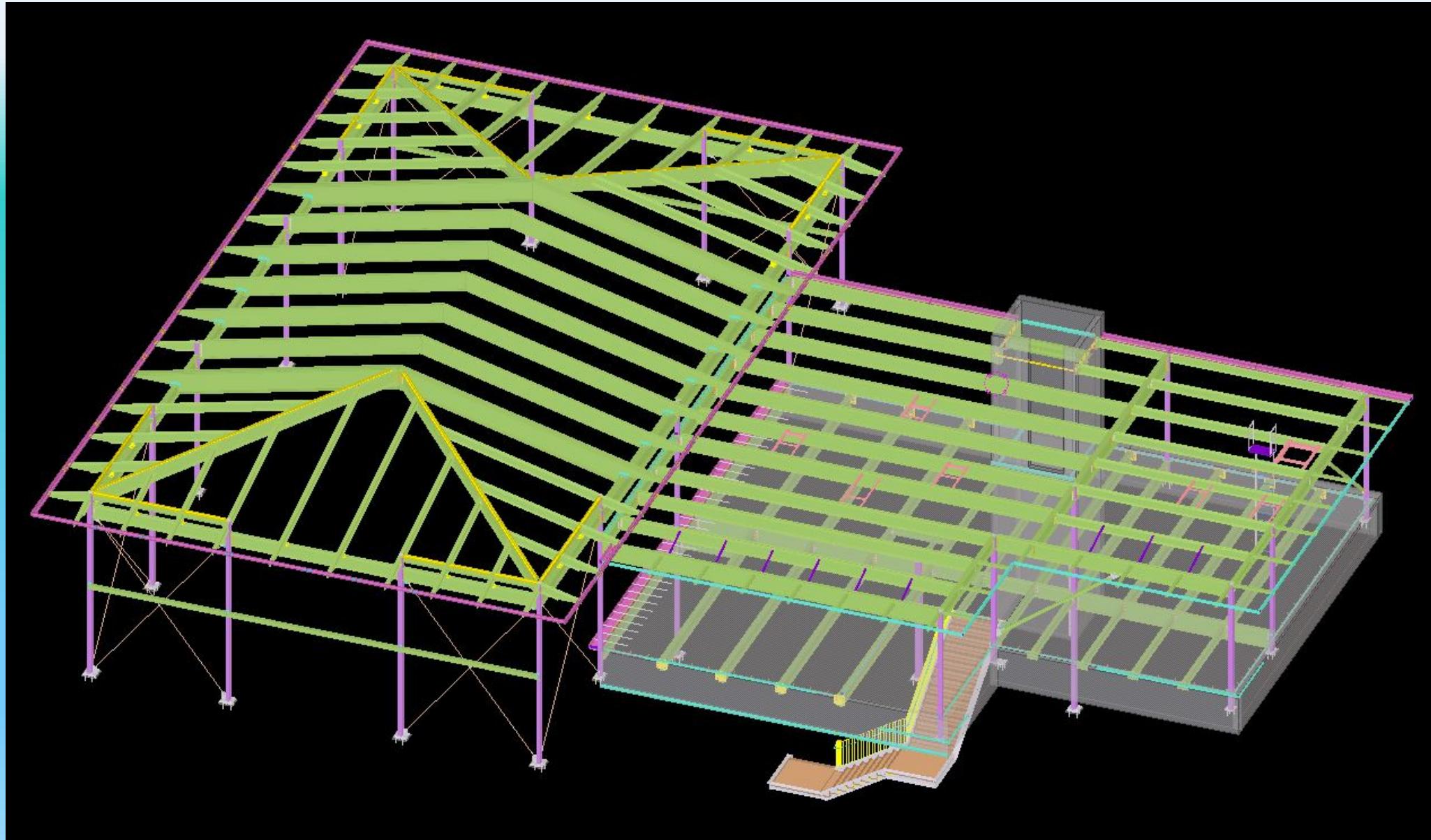
Magnolia, Fort Worth, Texas



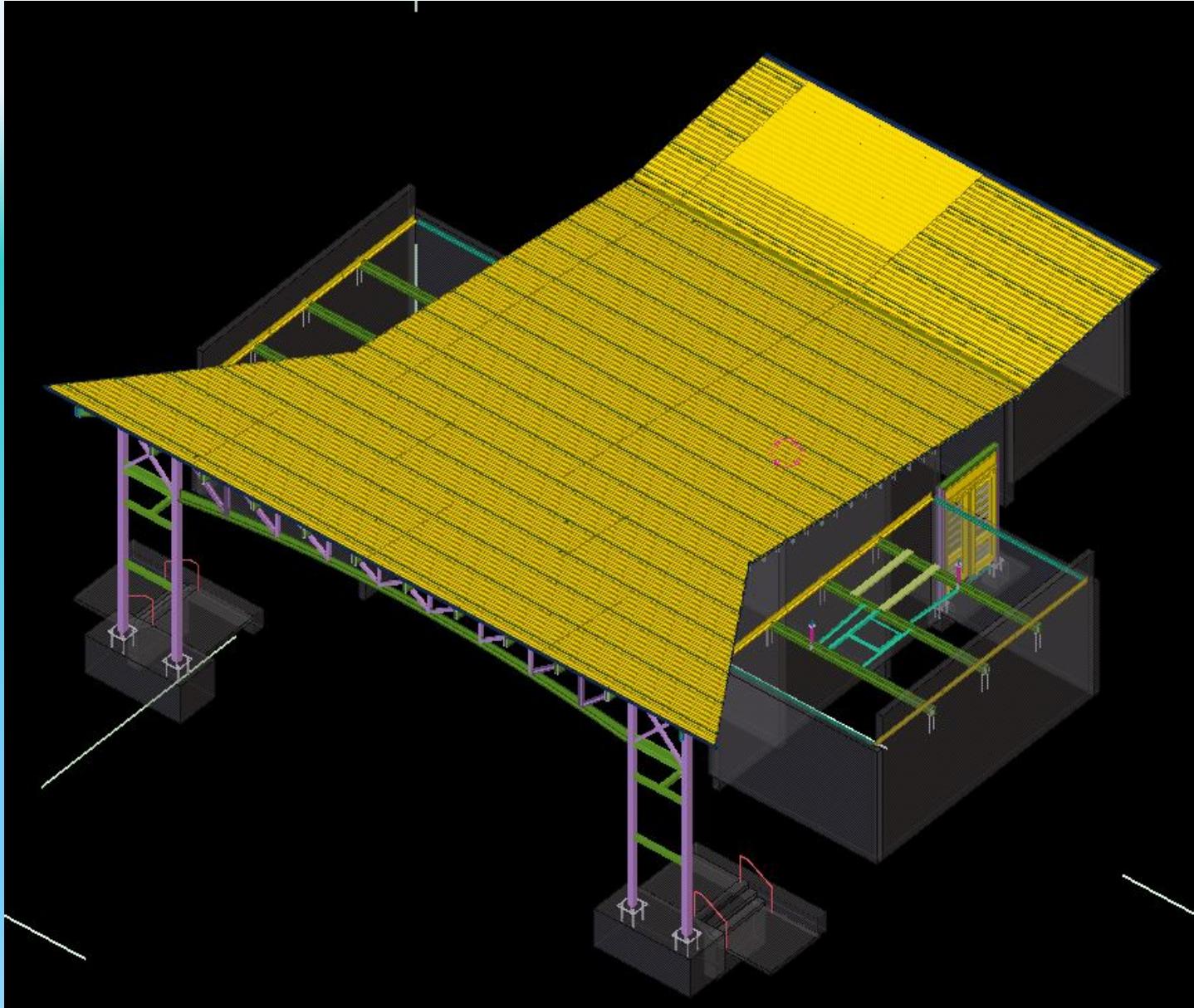
Proscenium Condos - Phase 2, Texas



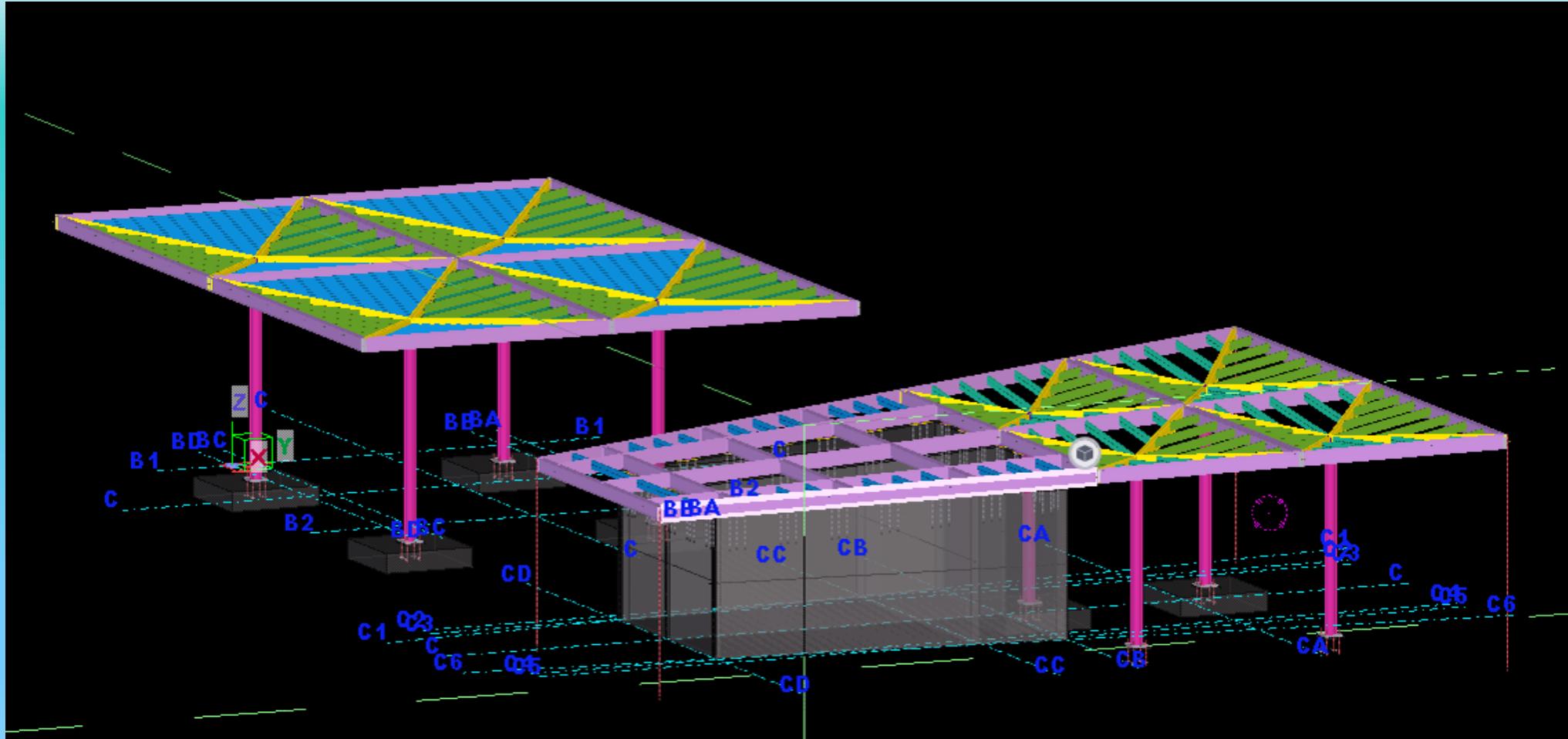
EMU Golf Facility Building



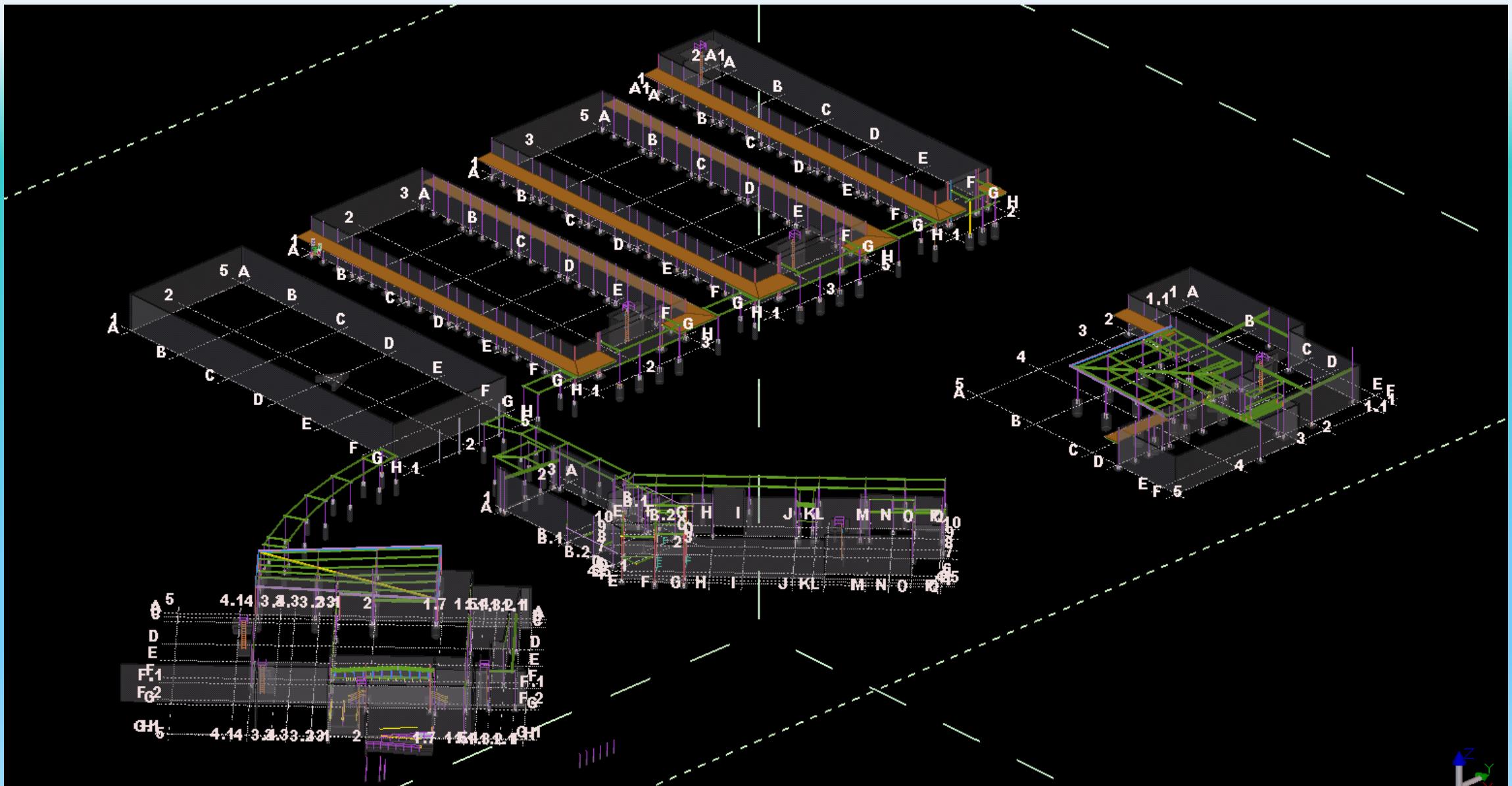
Commons at Agora



Evora Pavillions 2 & 3, Texas

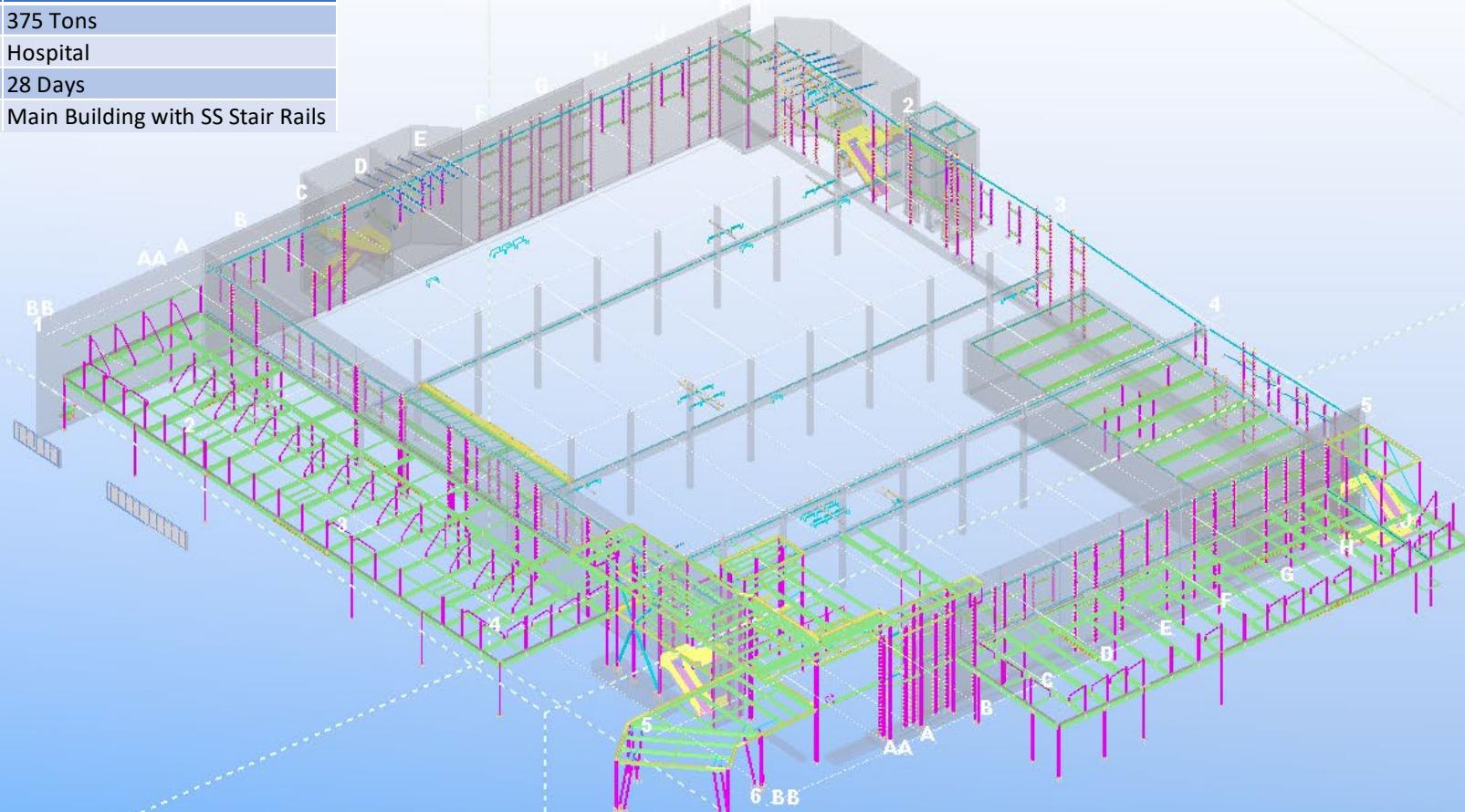


Crescent Elementary School, California



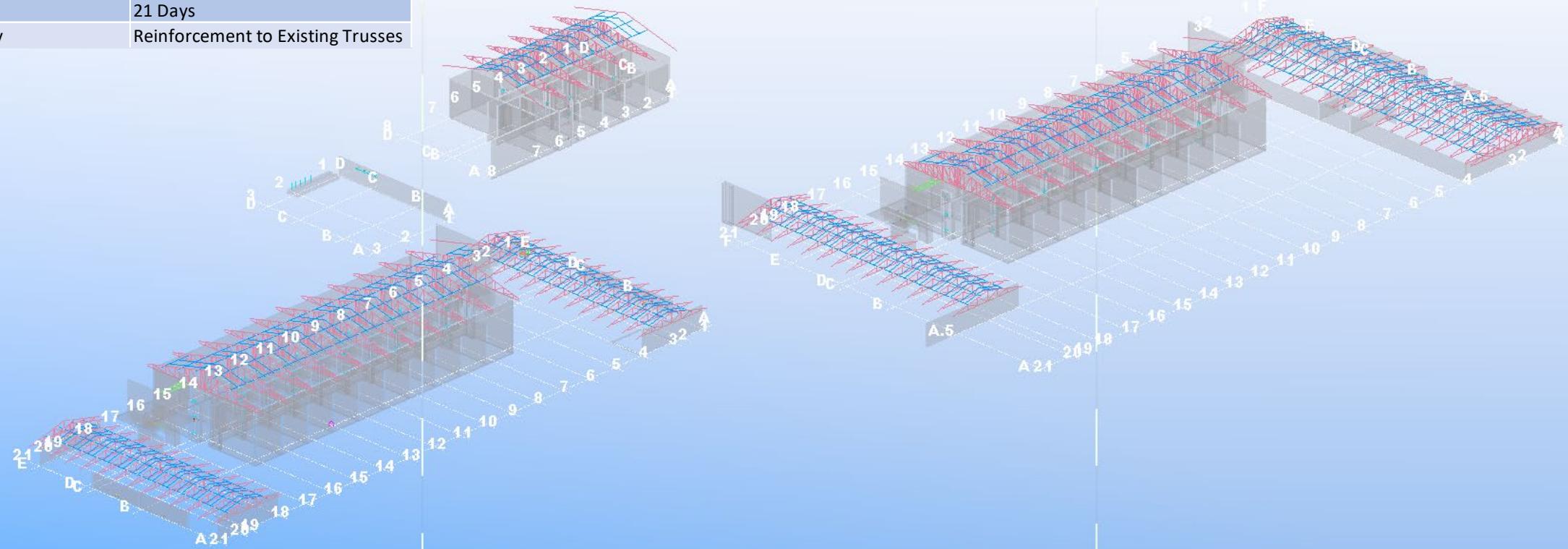
Protea VA Clinic

Name of the Structure	Protea VA Clinic
Tonnage	375 Tons
Structure	Hospital
Schedule	28 Days
Speciality	Main Building with SS Stair Rails



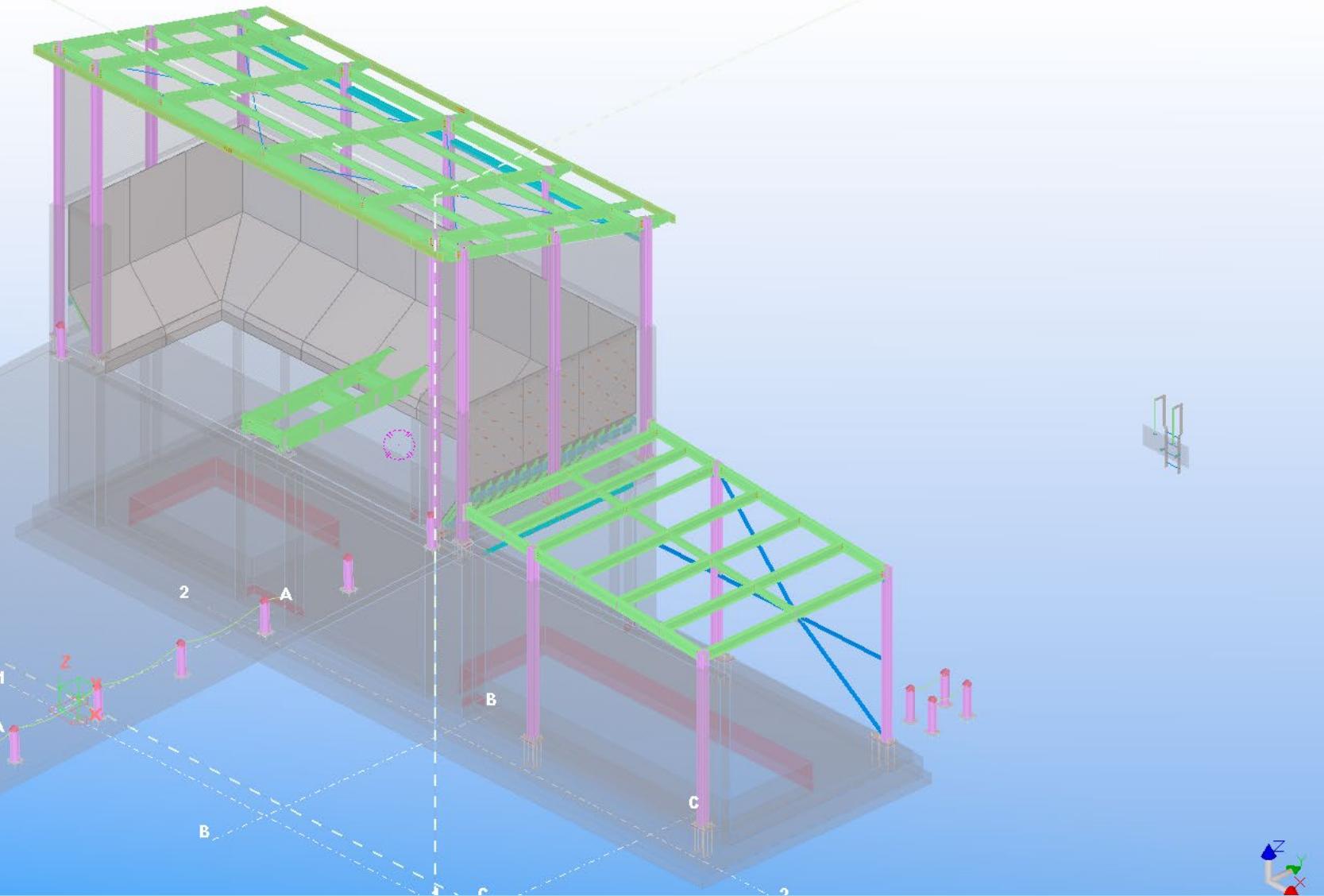
Reinforced Warehouse Structure

Name of the Structure	Quad A Buildings
Tonnage	95 Tons
Structure	Warehouse
Schedule	21 Days
Speciality	Reinforcement to Existing Trusses

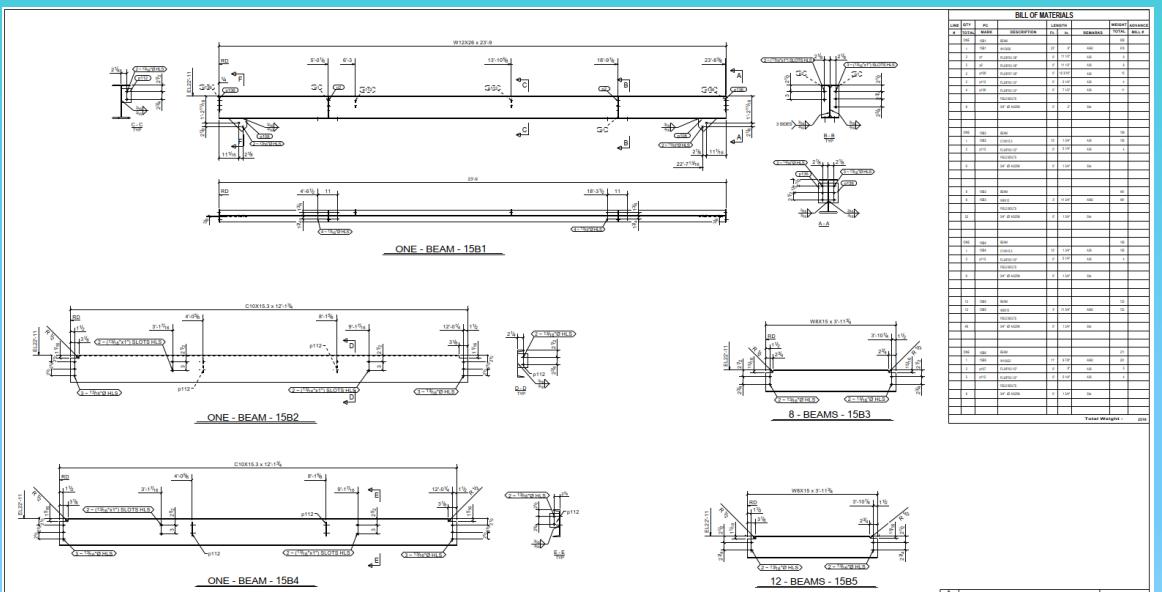
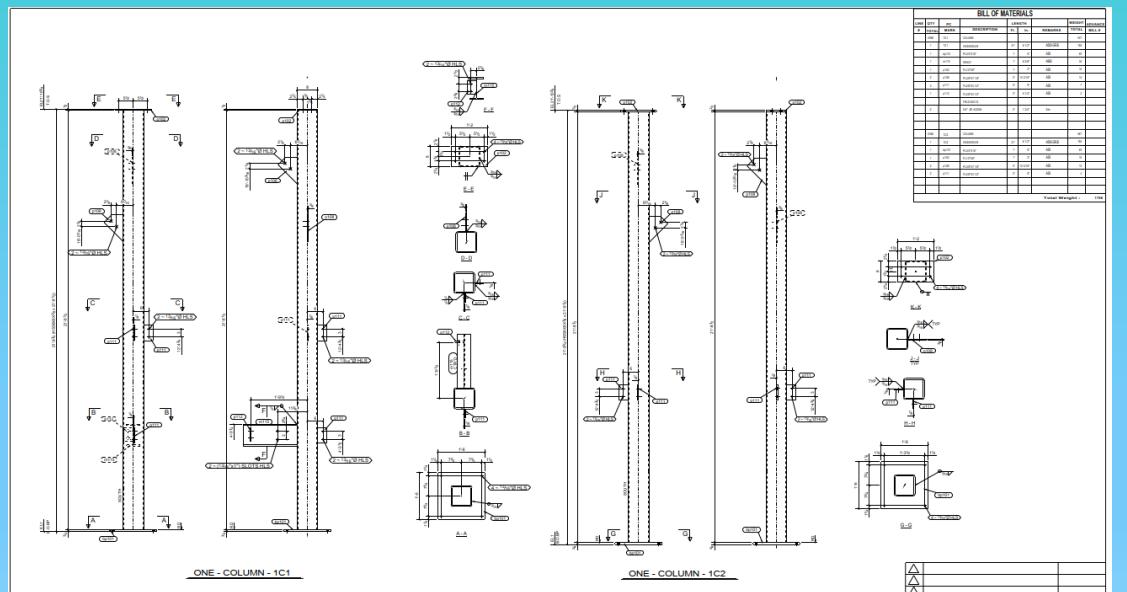
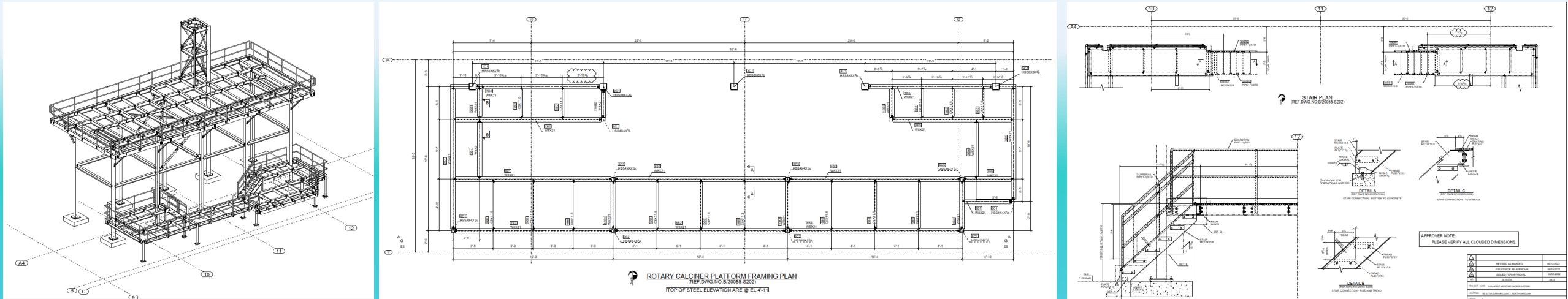


Crane Beam & Plated Structure

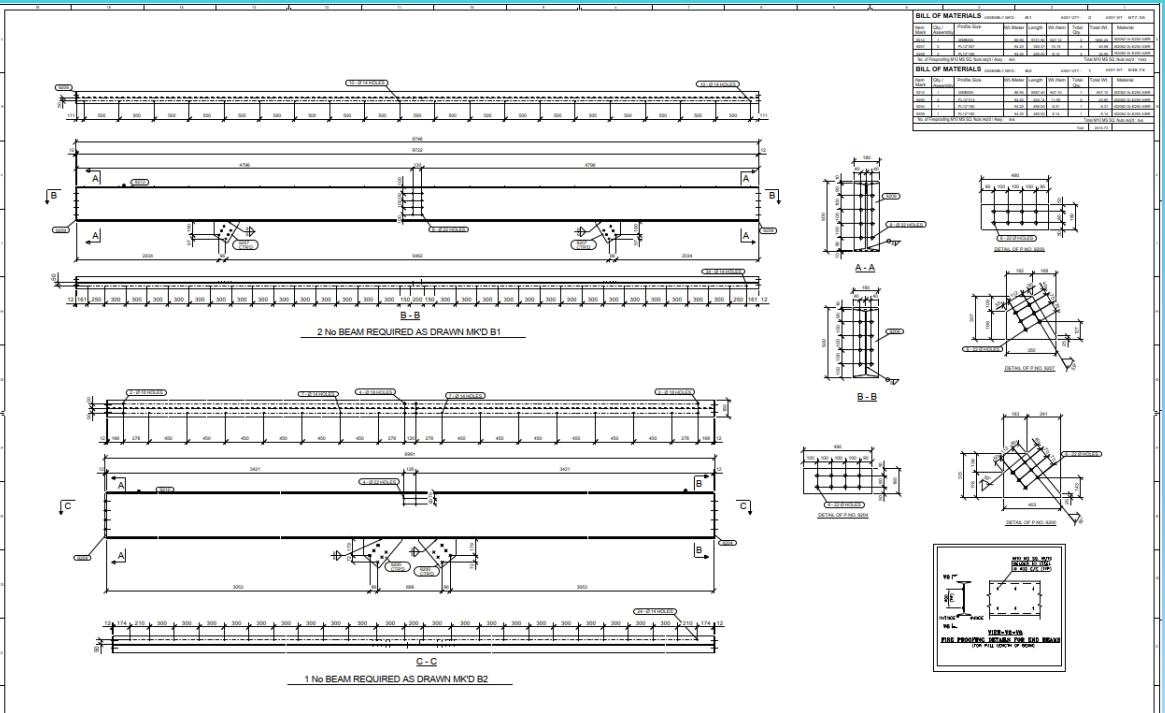
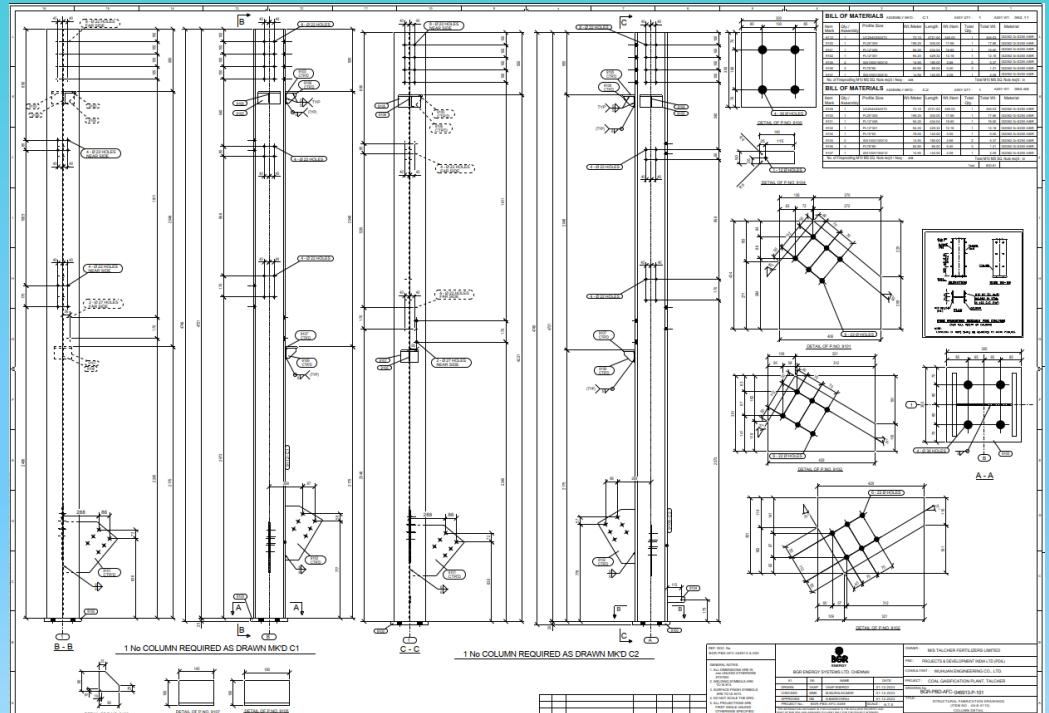
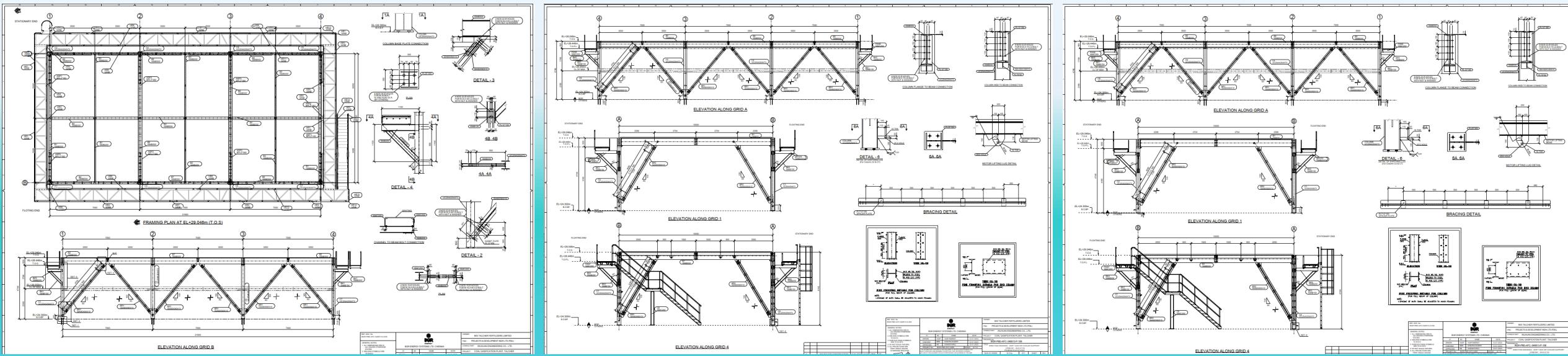
Name of the Structure	Kapaa Transfer Station
Tonnage	36 Tons
Structure	Industrial
Schedule	14 Days
Speciality	Crane Beam & Plated Structure



Sample Drawings



Sample Drawings



LIST OF SOFTWARE

Software	Application	Remarks
Tekla	Structural Modelling & Detailing	
AutoCAD	Computer Aided Design & Drafting	



ACCESS TO SOFTWARE

Software	Application	Remarks
STADD pro	Structural Analysis & Design	
MicroStation	CAD 2D	

Other specific software to meet Client/Project requirement will be used on need basis



THANK YOU