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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

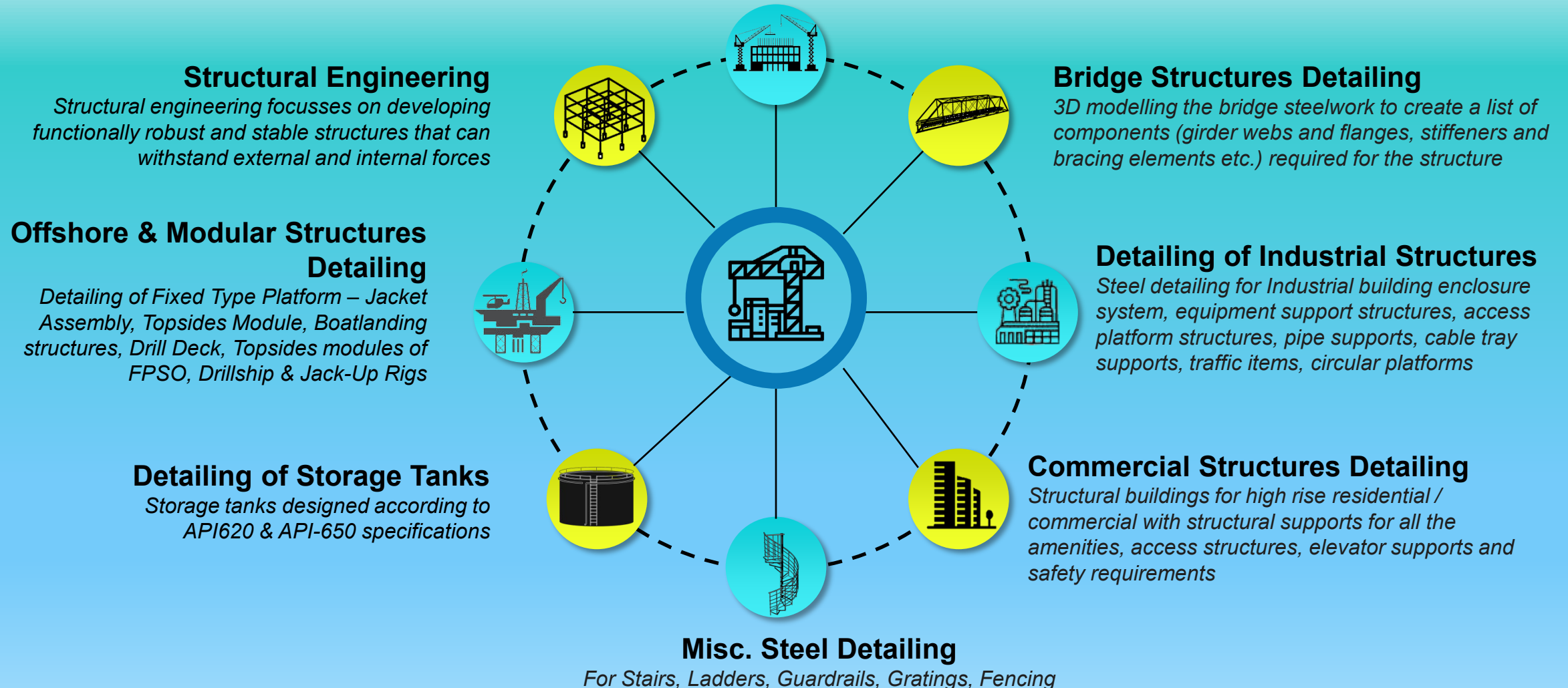
Our greatest asset is a highly qualified team of engineers who are well trained to support client requirements

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 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.

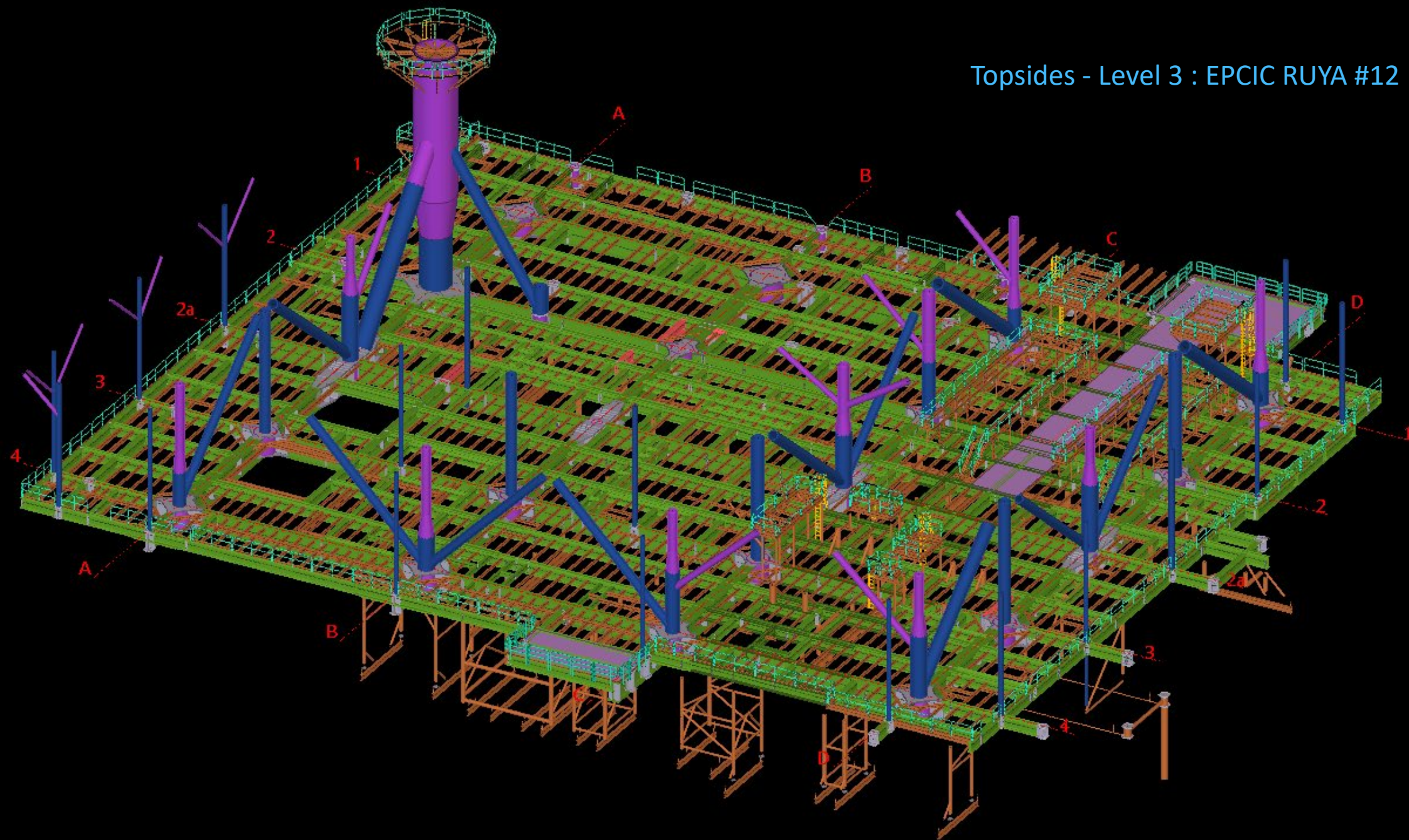
We are using 3D software tool, Tekla with BIM technology for the accurate modeling considering all the interfaces with other disciplines such as Piping, Mechanical, Electrical & Instrumentation.

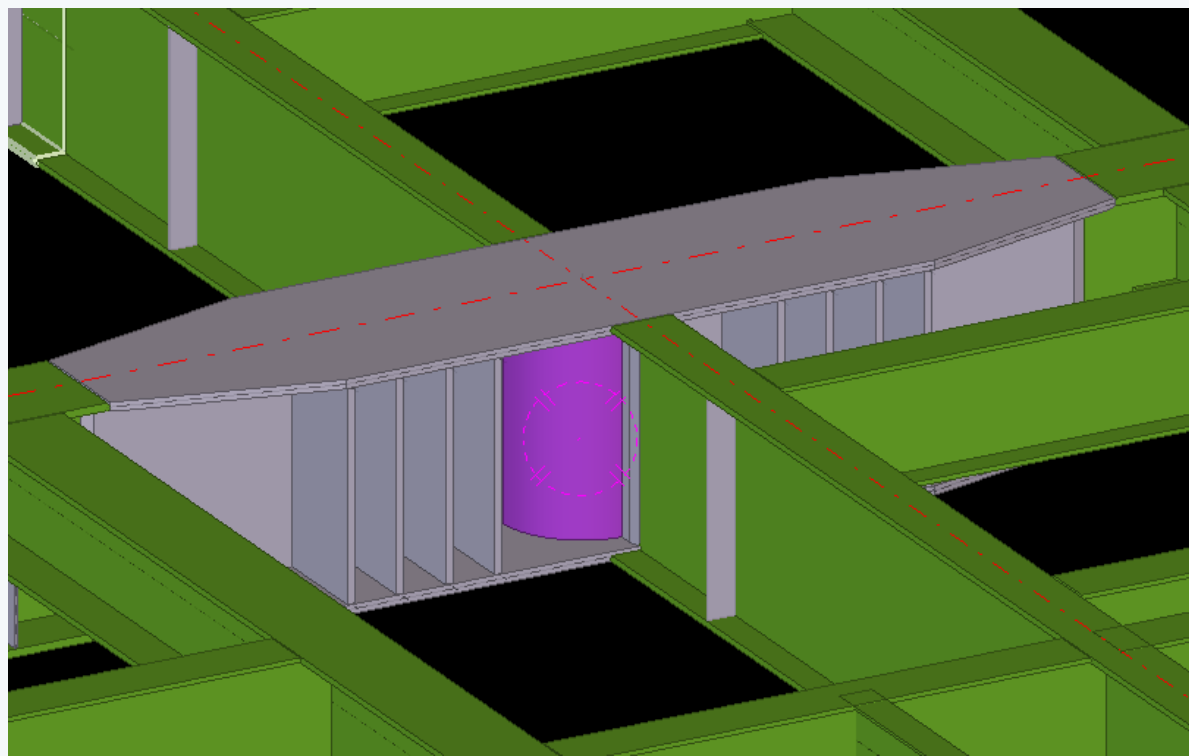
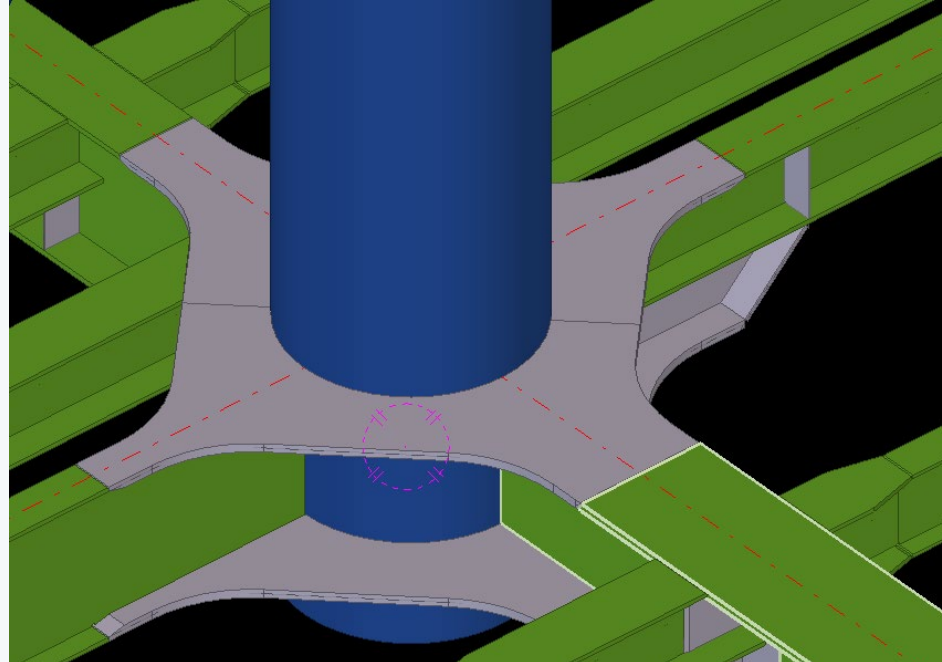
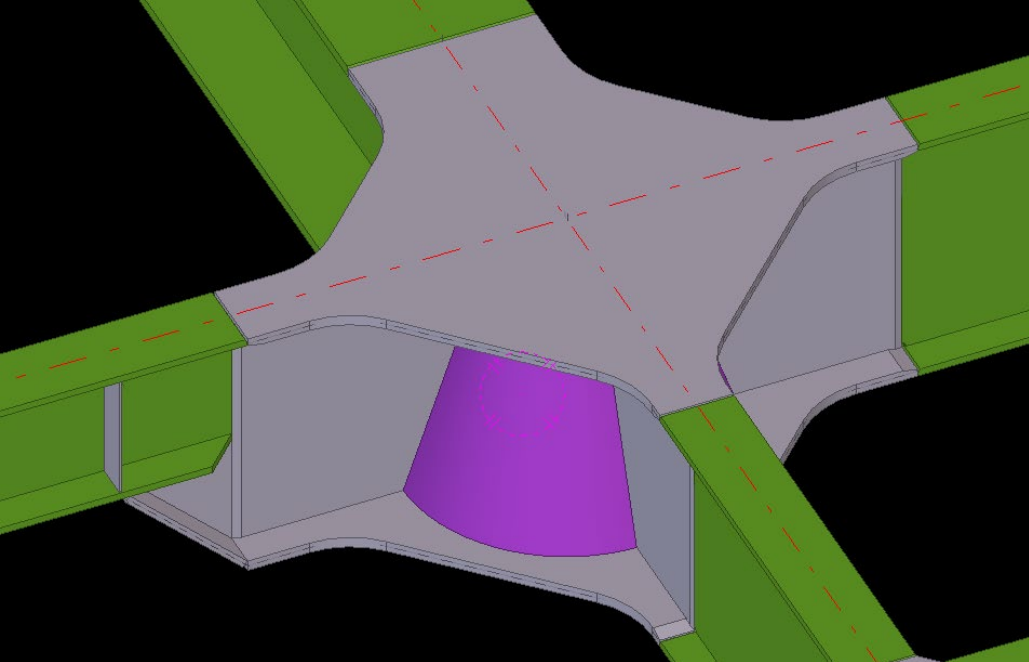
Zastraka Solutions currently working in the Steel Detailing of Level-3 of EPCIC RUYA 12 and we have delivered the drawings, NC files and reports of entire Joint Nodes and Primary Framing. The design activities of secondary framing, tertiary steels and remaining auxiliary structures are also in detailing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

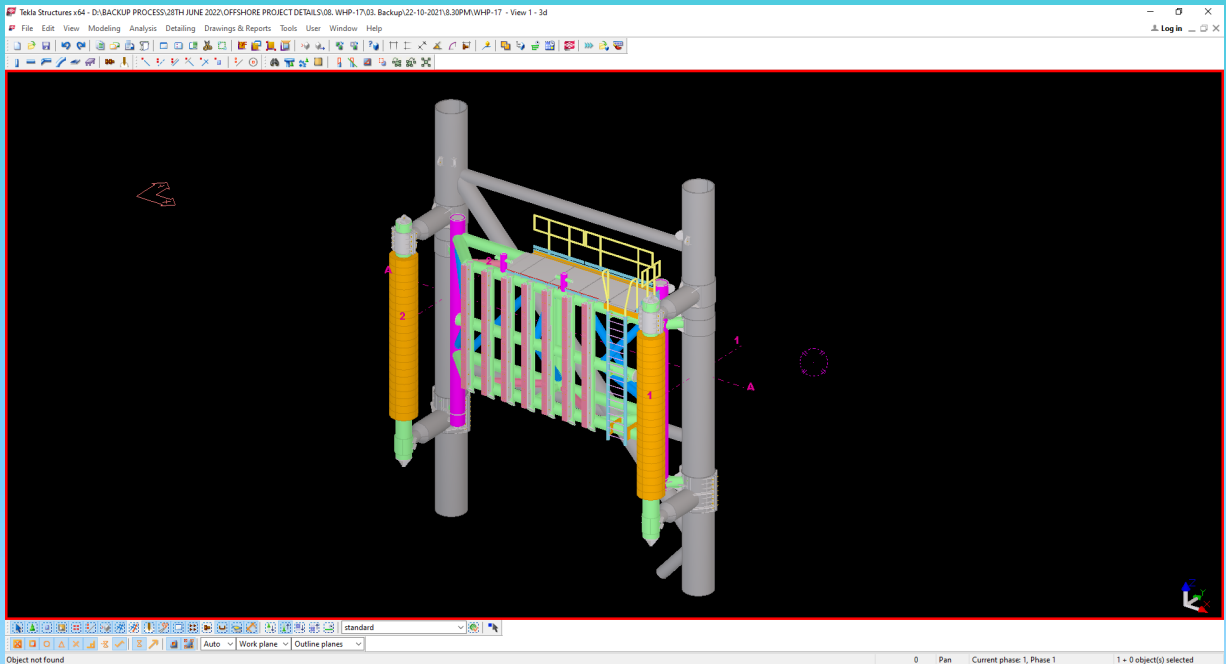
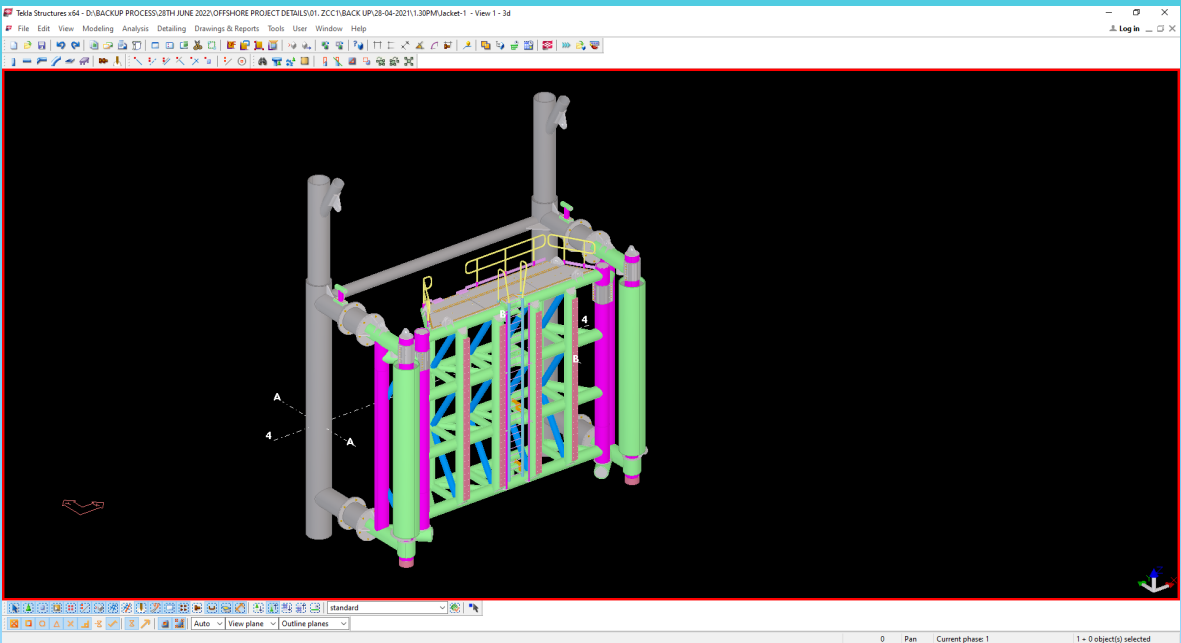
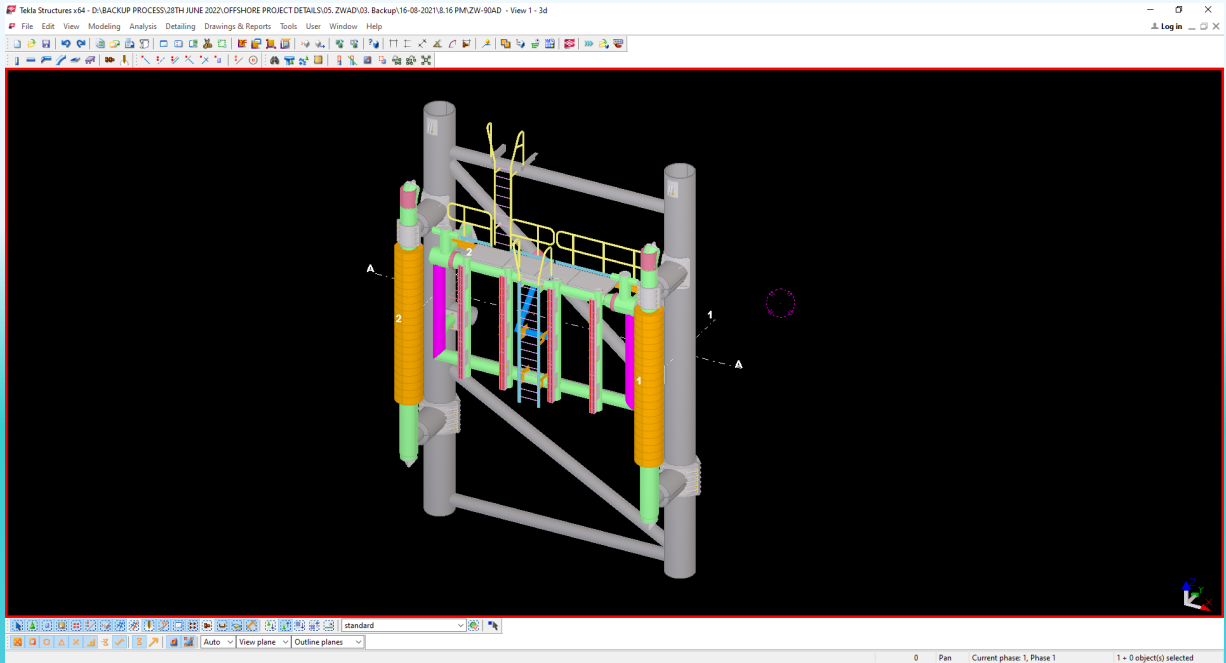
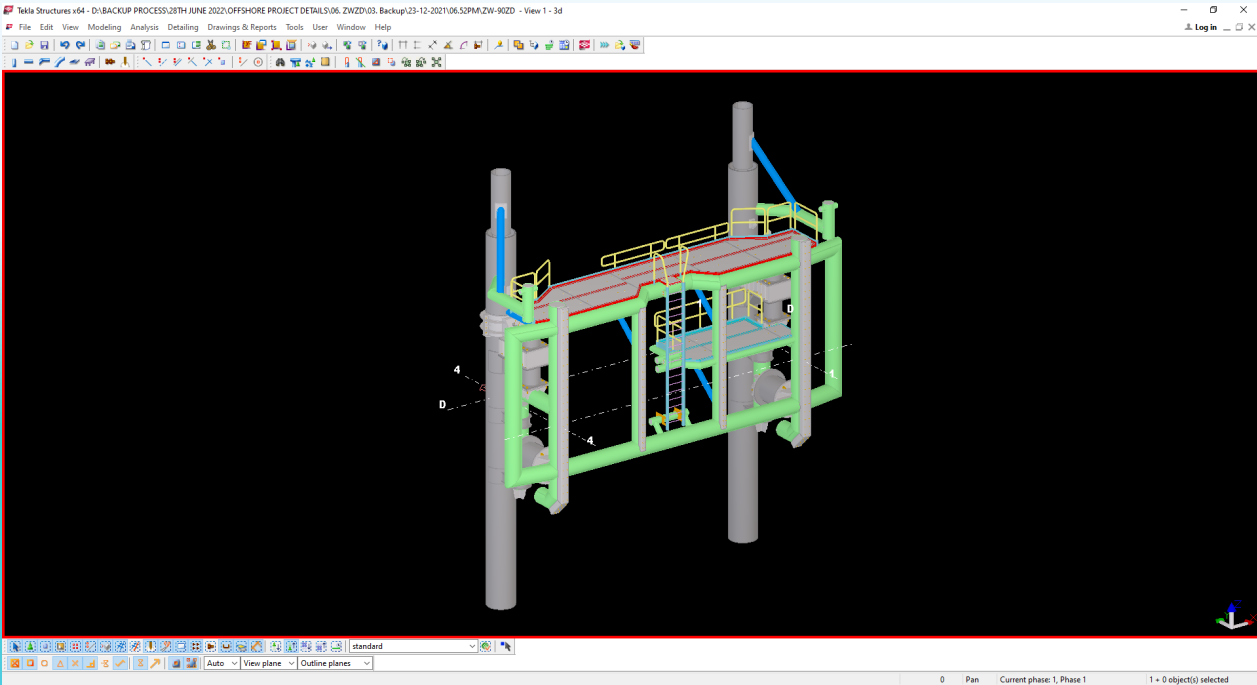
Previous year, we got the opportunity to work in Replacement of Boatlanding Structures in UZ and UAD Oil fields of Abu Dhabi. Client : ADNOC

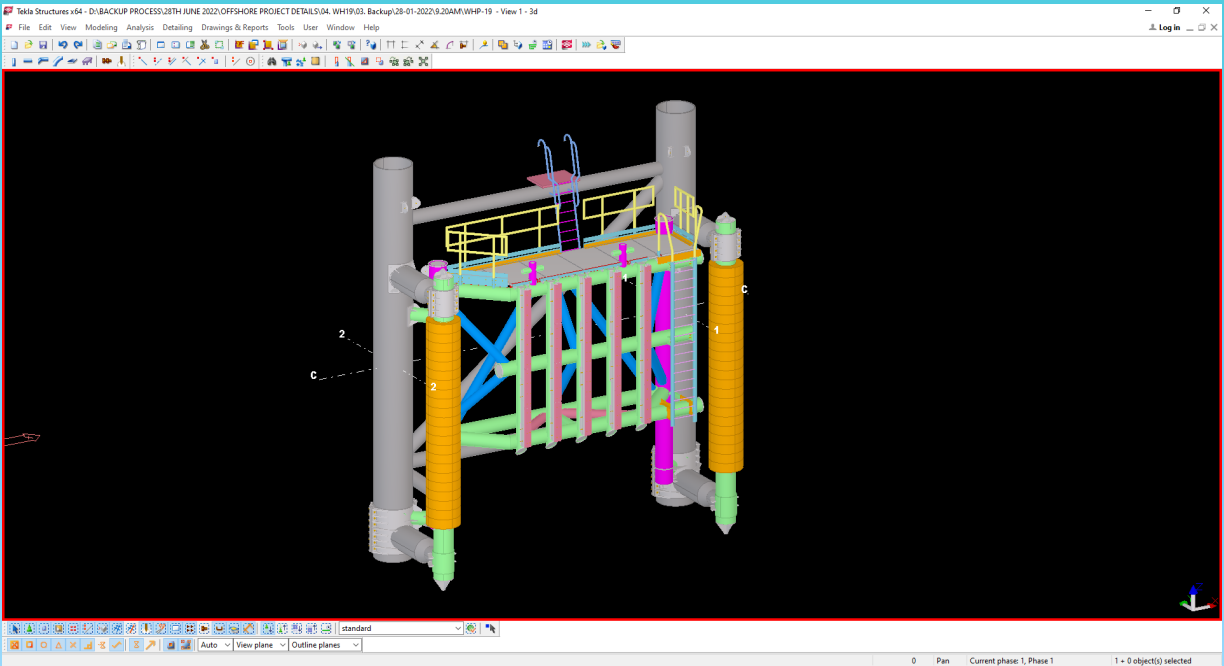
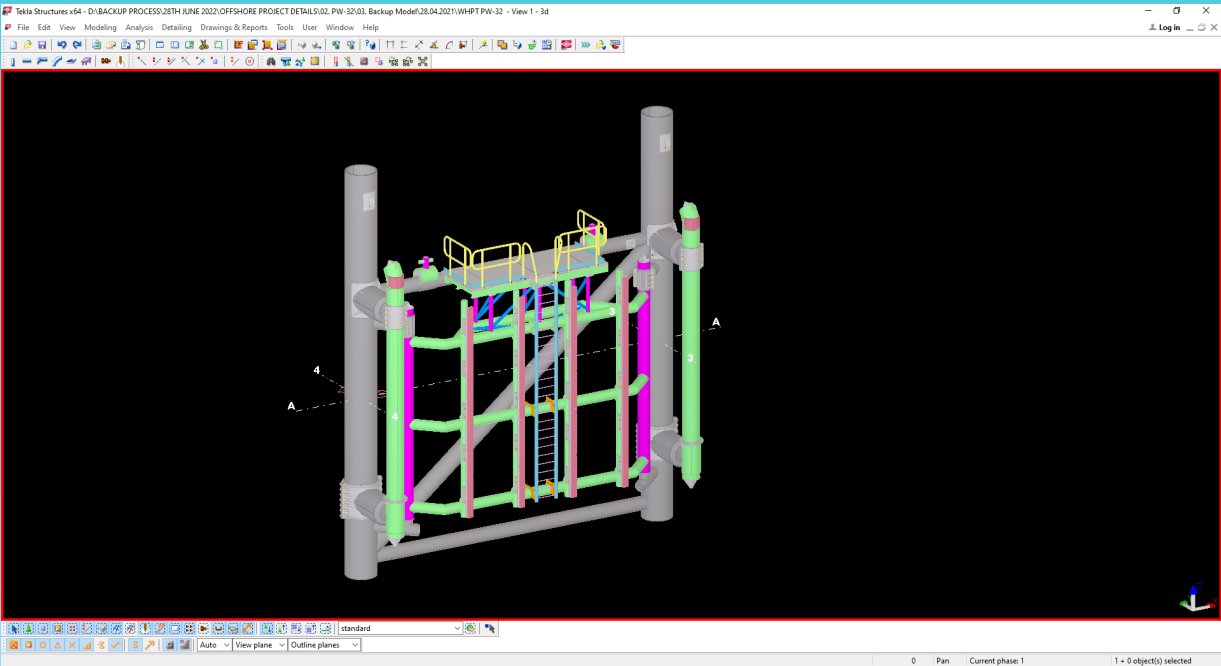
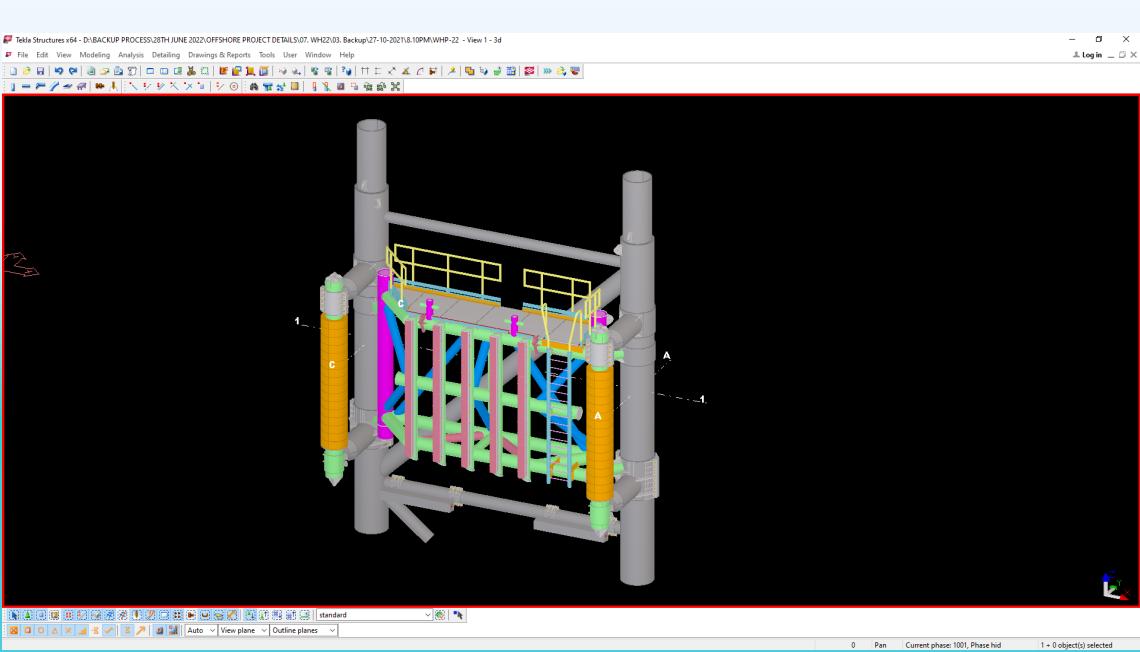
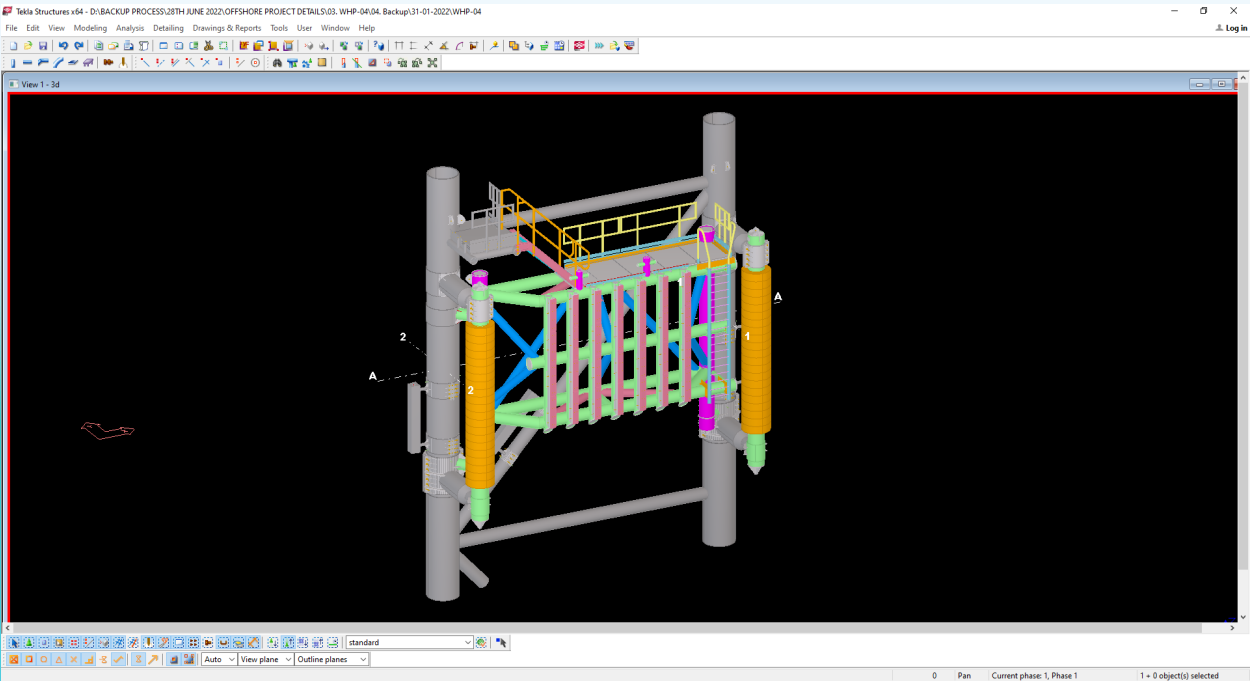
Also, we worked in the drawings editing of various Jacket Assembly structures, Mudmat, Walkway platforms, Pipe Supports structures.

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.

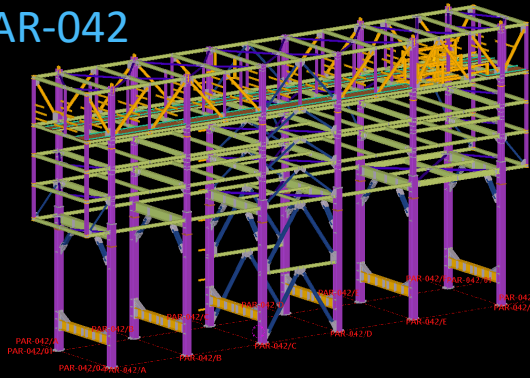
Similar to Offshore structures, these PAR modules (Piperacks) & PAU Modules (Process Units) are thoroughly welded structure and transported as a single module through Barge from Kaattupalli Jetty to Client Site.

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.

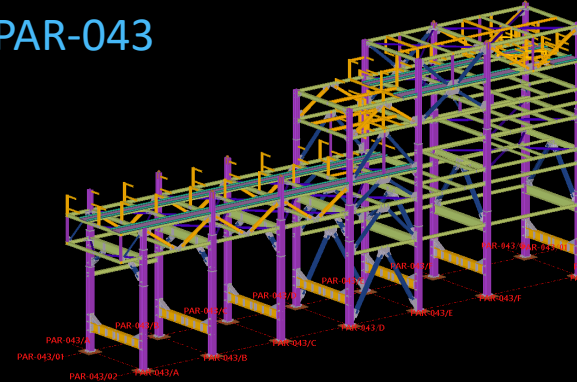
Our clients are appreciating our quality and schedule and encouraging us to increase the team size to work in more tonnages.

PAR Modules of CERES project

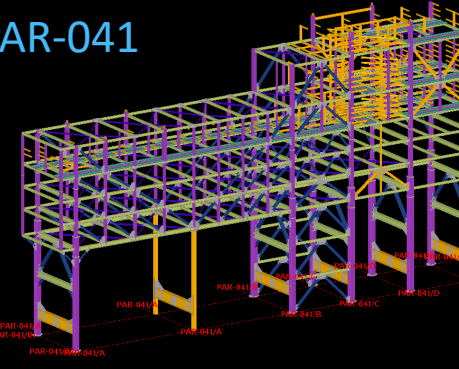
PAR-042



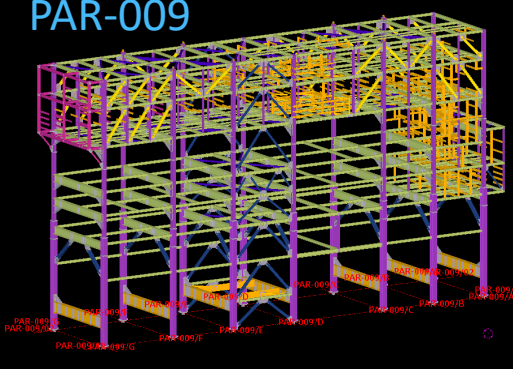
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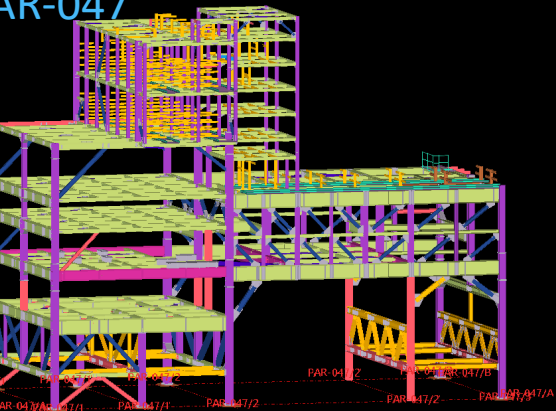
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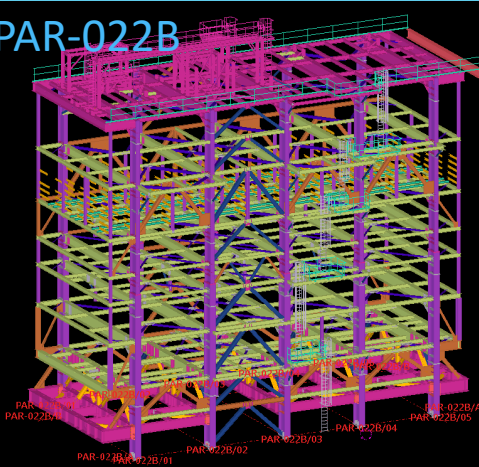
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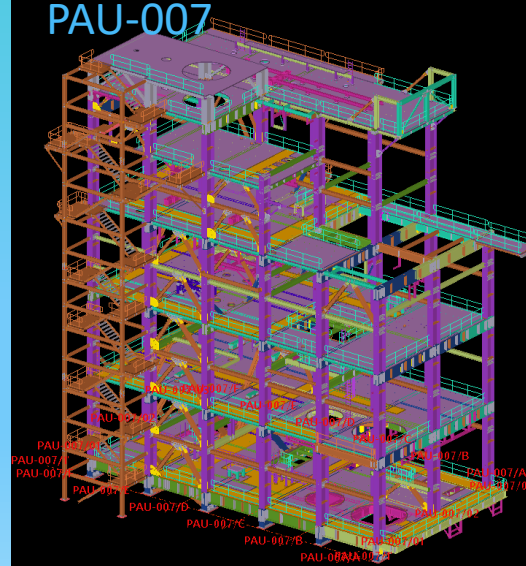
PAR-047



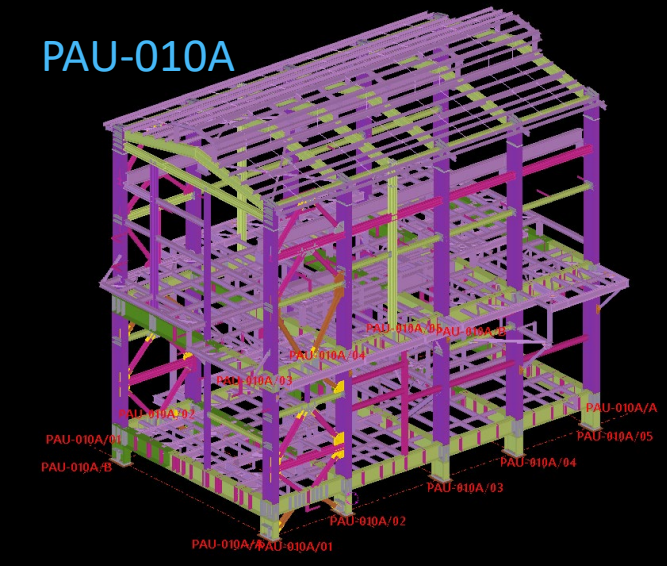
PAR-022B



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

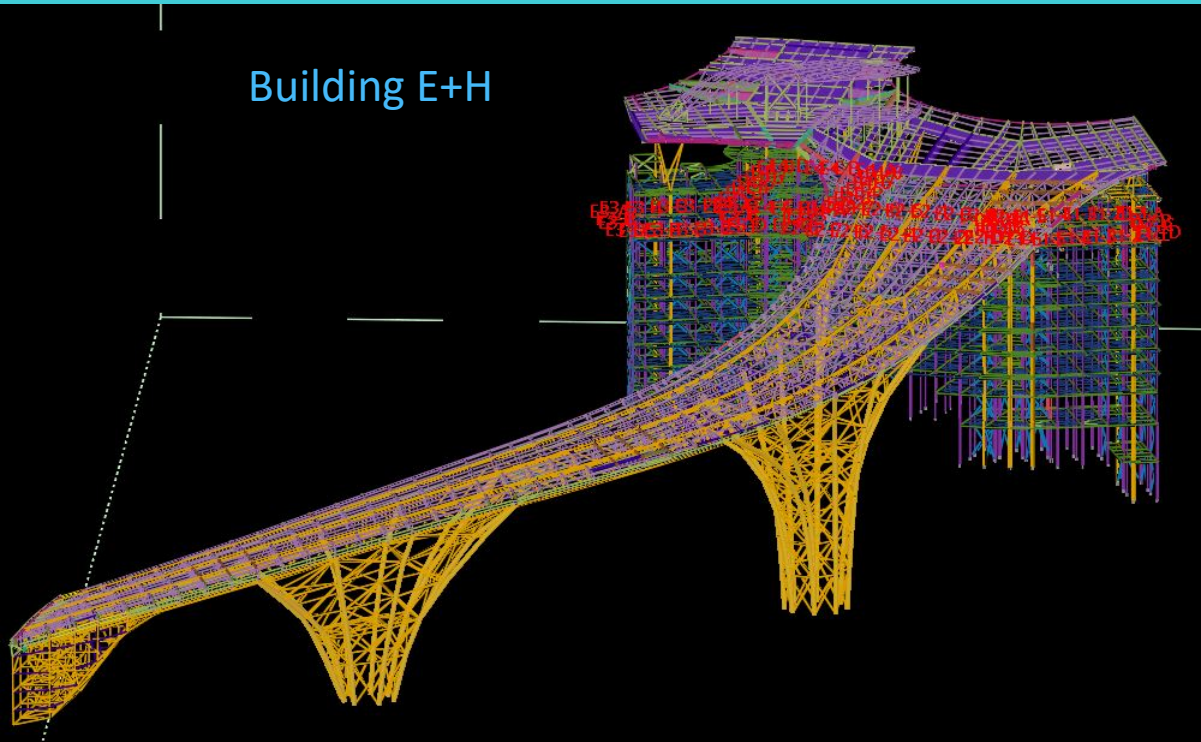
The staff of Zastraka typically uses 3D Model with our own internally developed custom components to detail most architectural steel items.

Commercial Structures Detailing

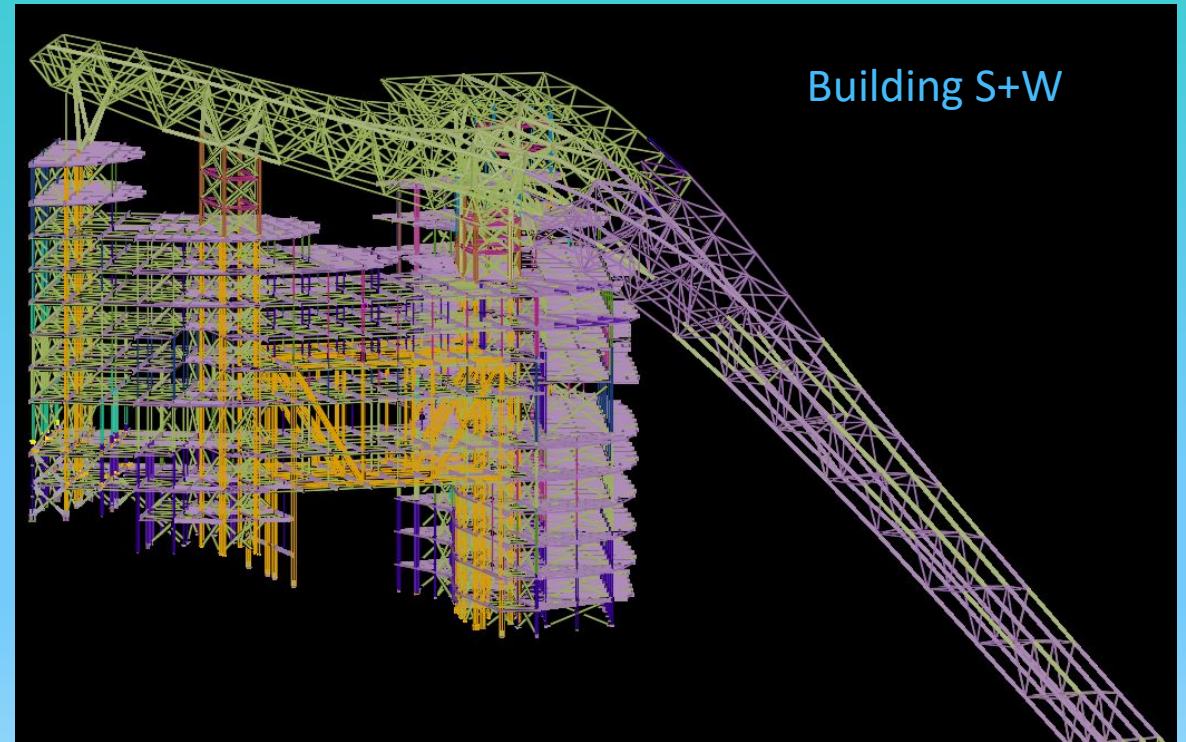
Zastraka Solutions is proud to be a steel detailing sub-contractors of the world's biggest resort project Trojena SKI VILLAGE in Saudi Arabia. We are providing the steel detailing outputs of the building E+H and S+W.

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.

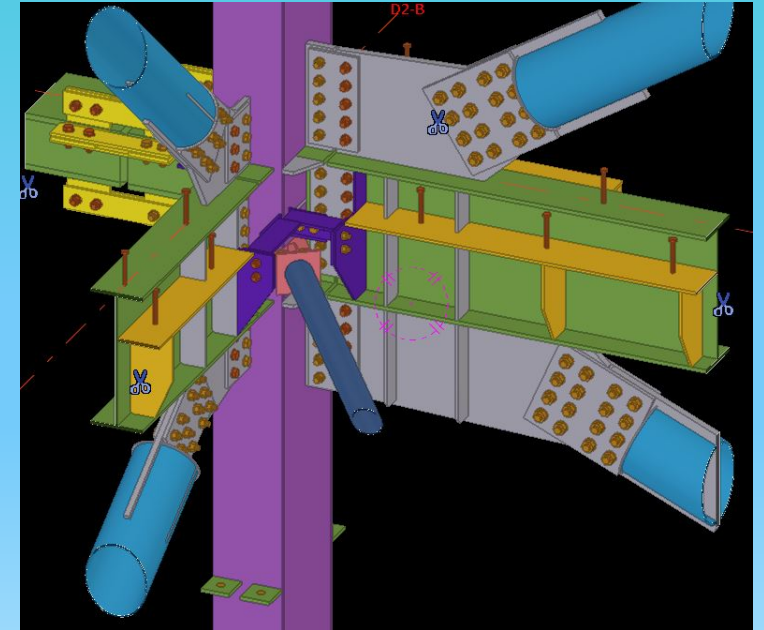
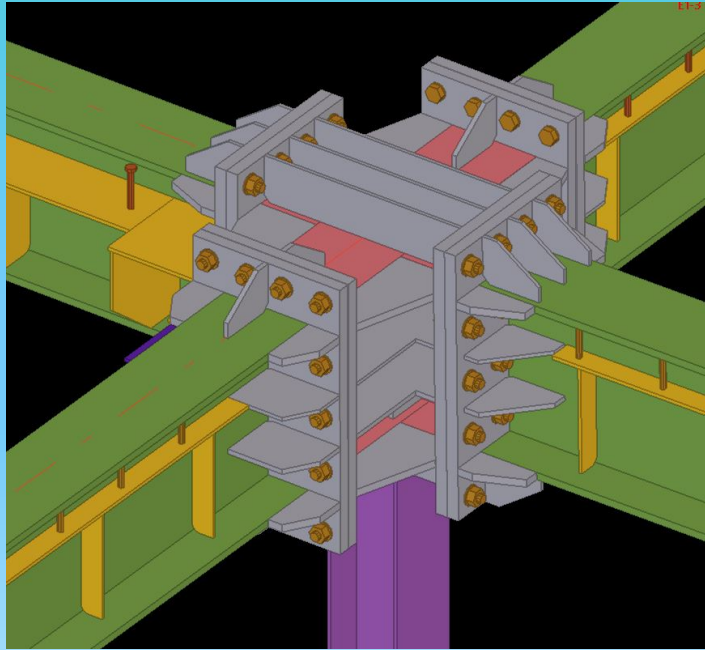
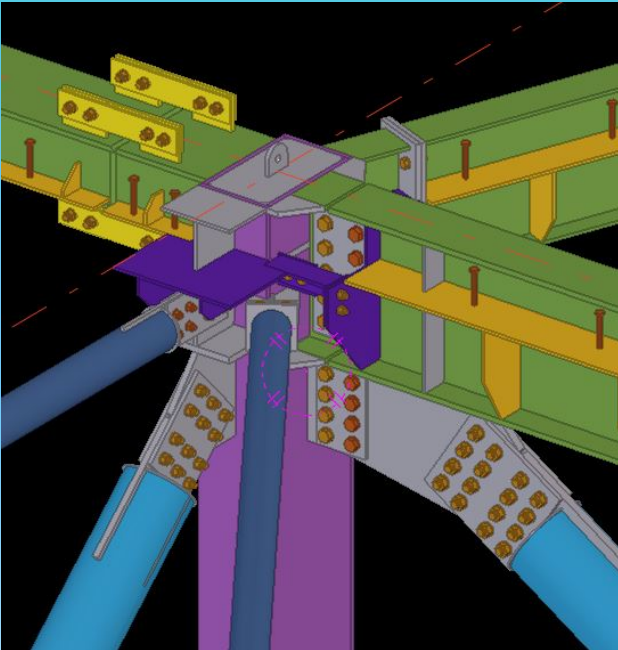
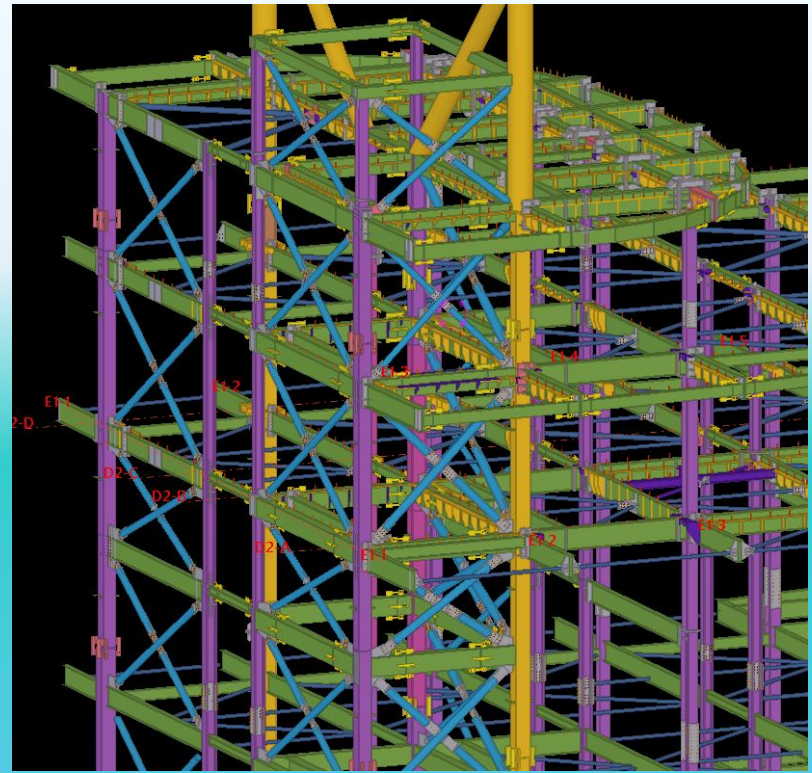
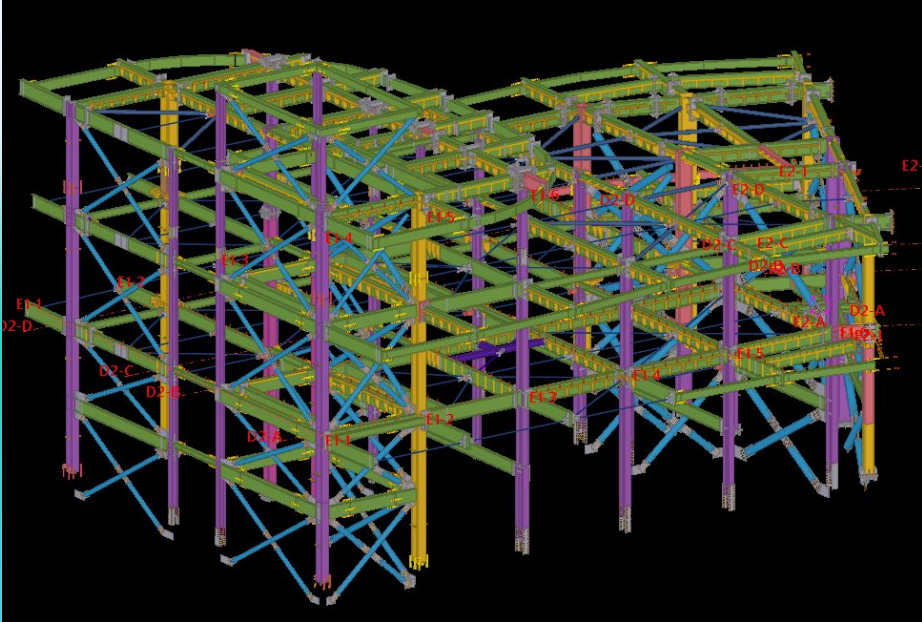
Building E+H



Building S+W



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.

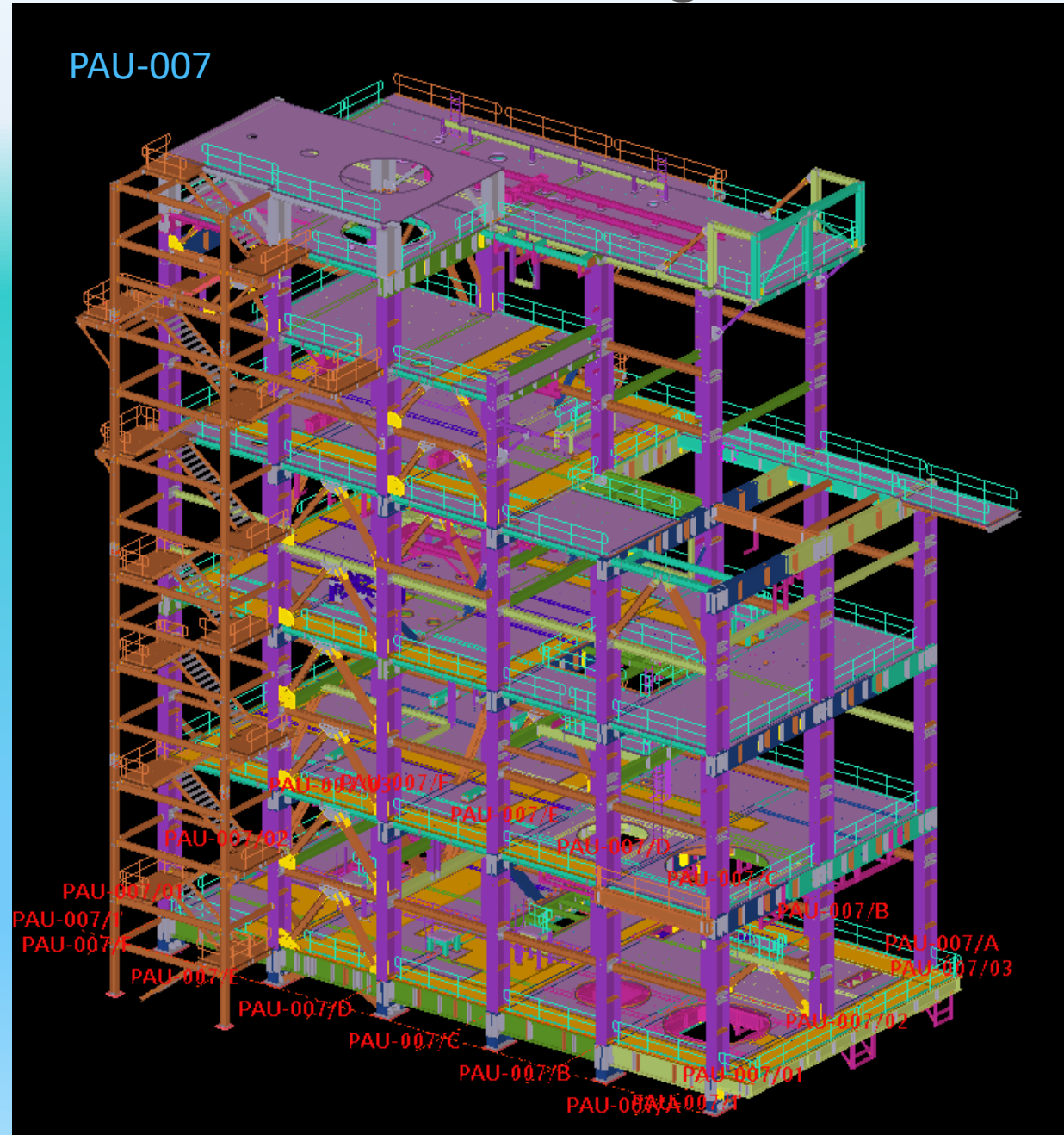
Structural Steel Estimation

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.

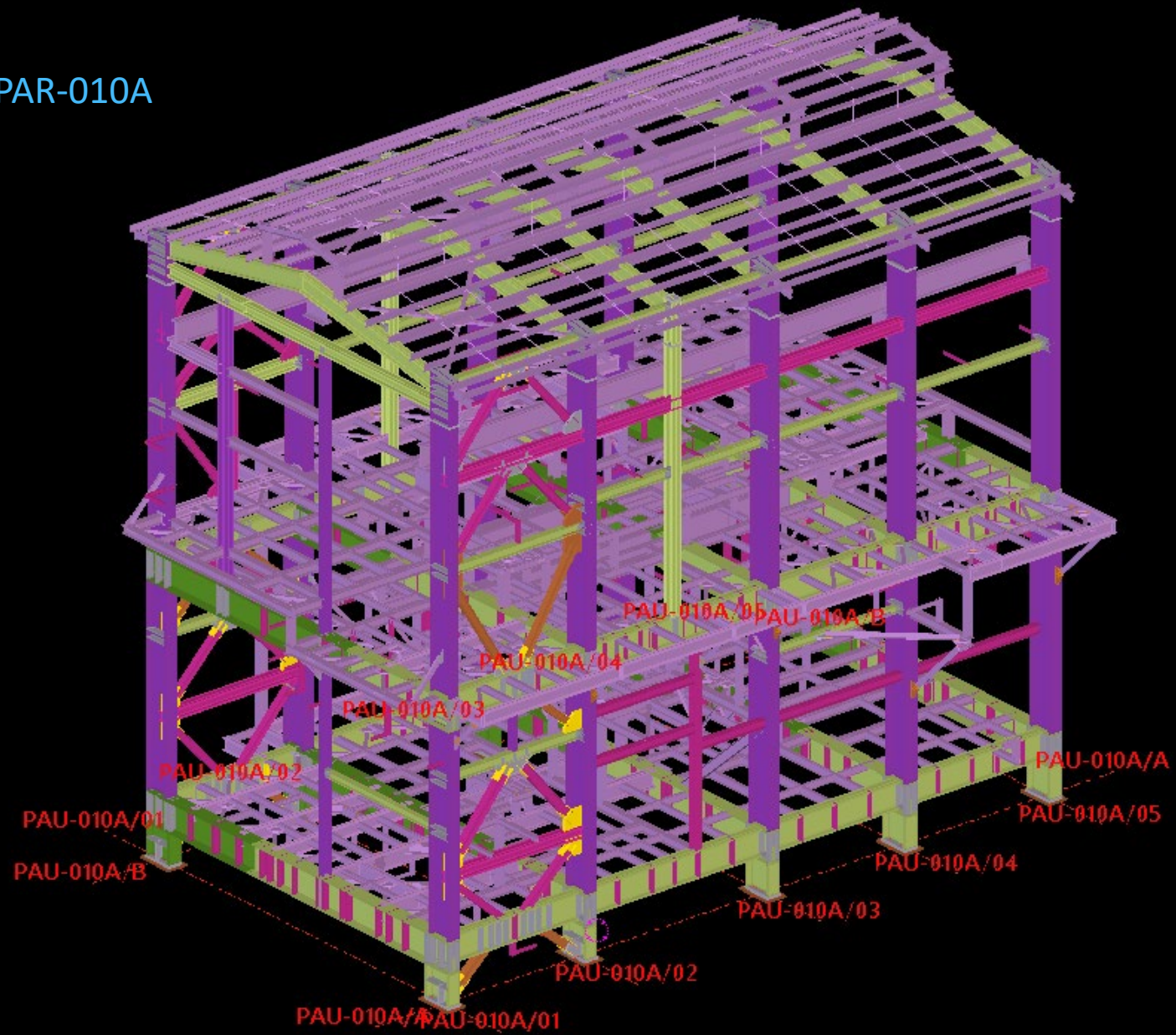
The estimation service ensures that the project runs on the minimum costs, reduced storage space at the site location, and stay with your time schedule. We calculate and offer accurate quotes to our clients which include materials, accessories and erection costs.

| 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 |

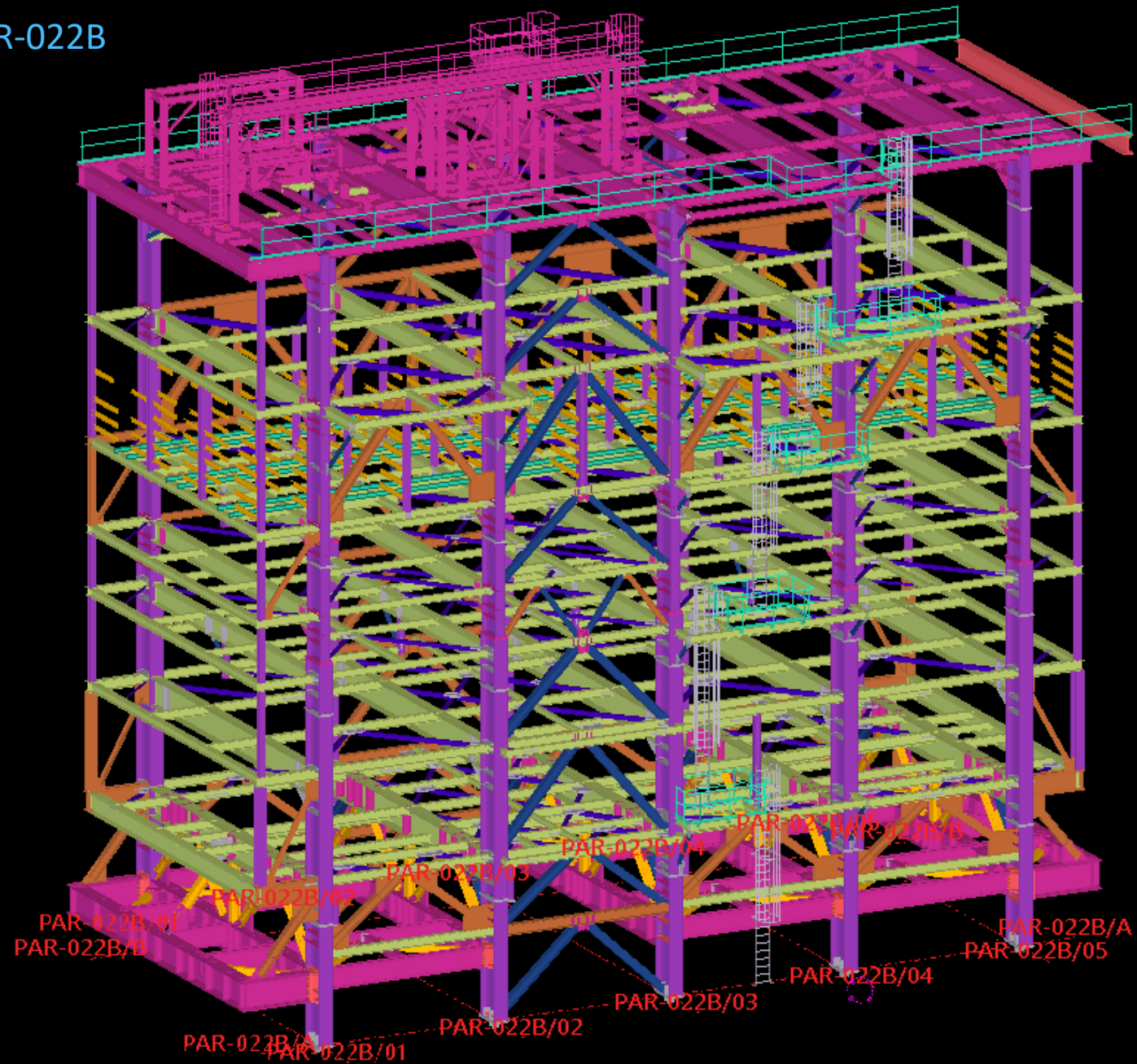
Modular Structural Steel Detailing – CERES Project



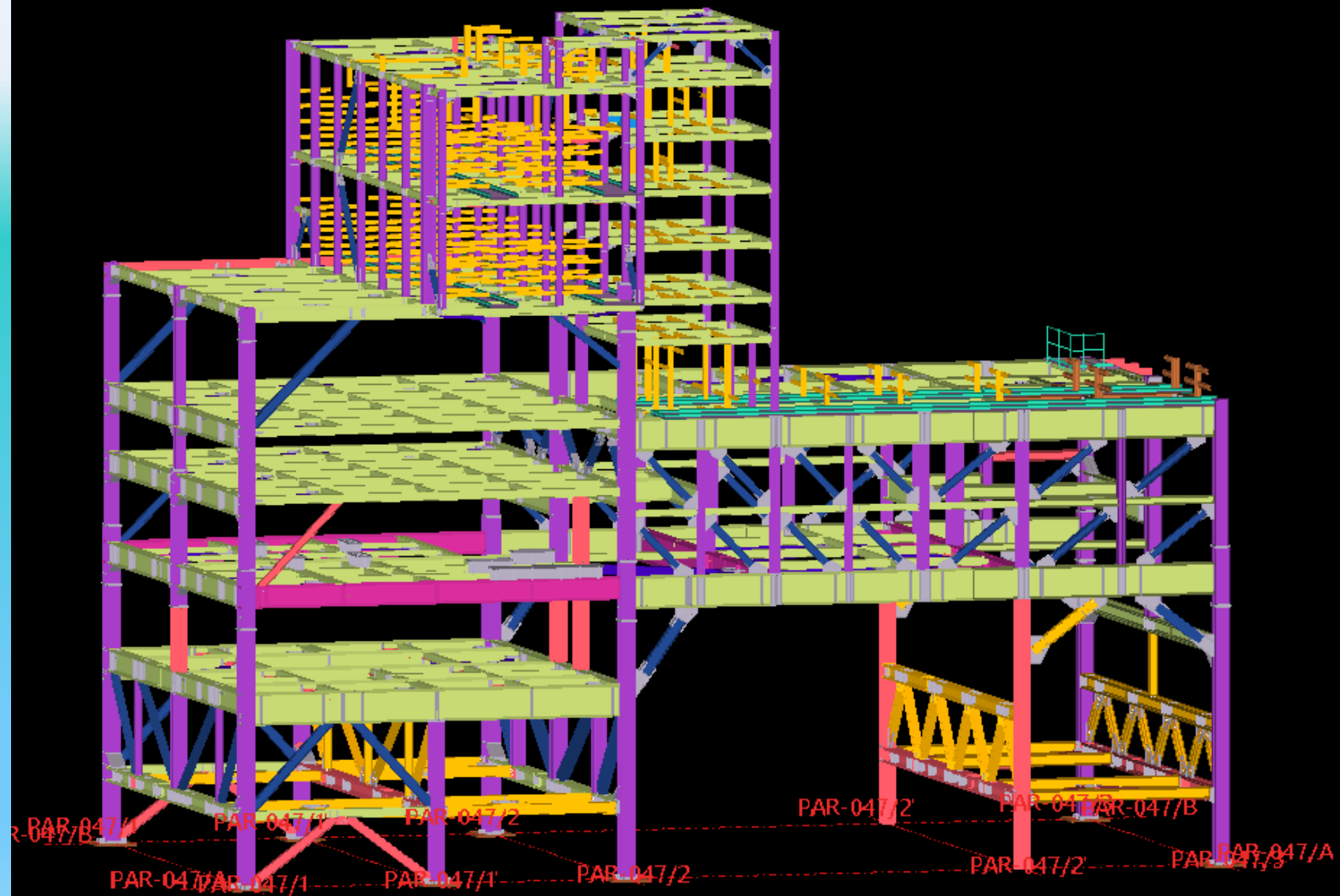
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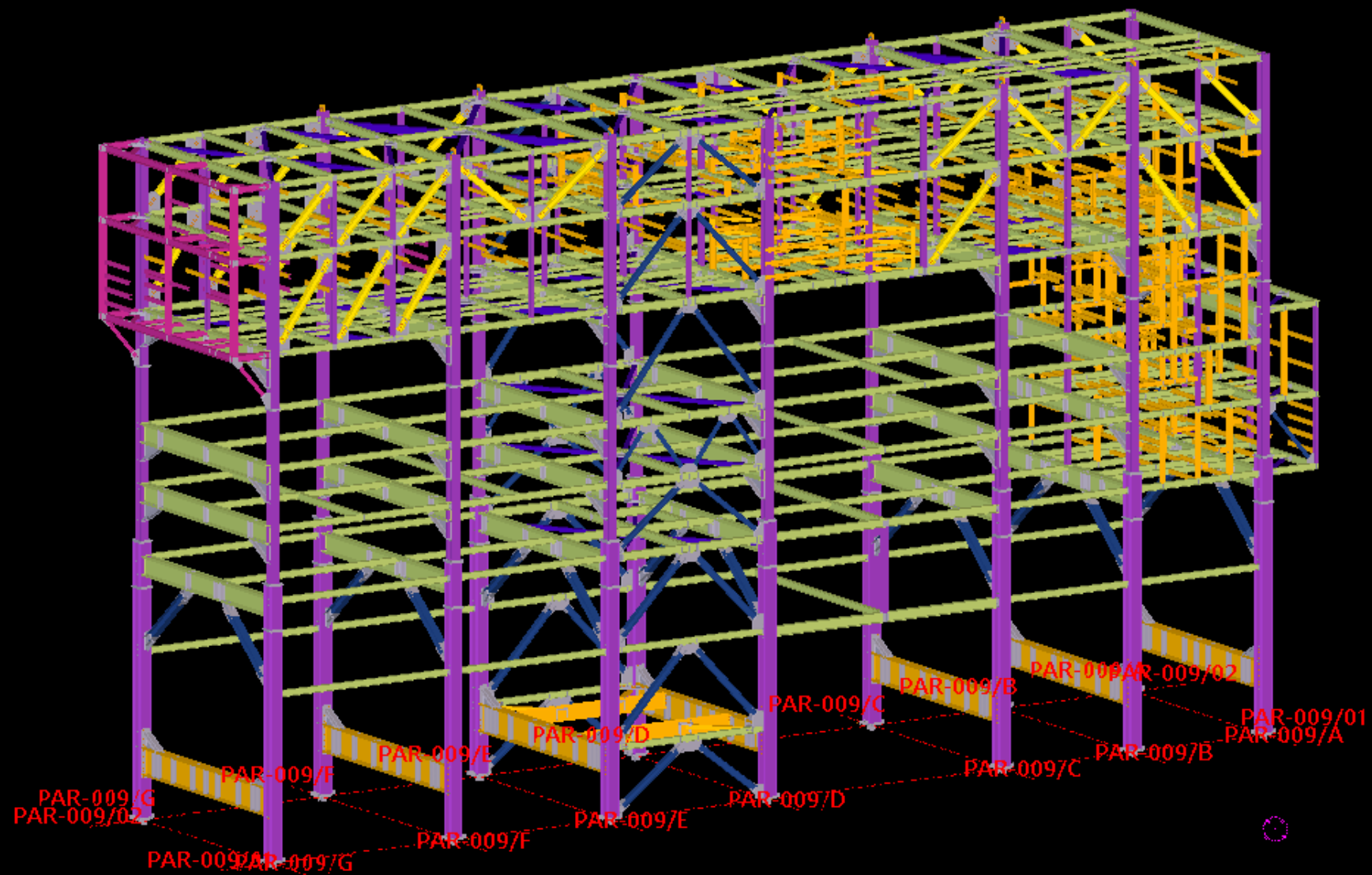
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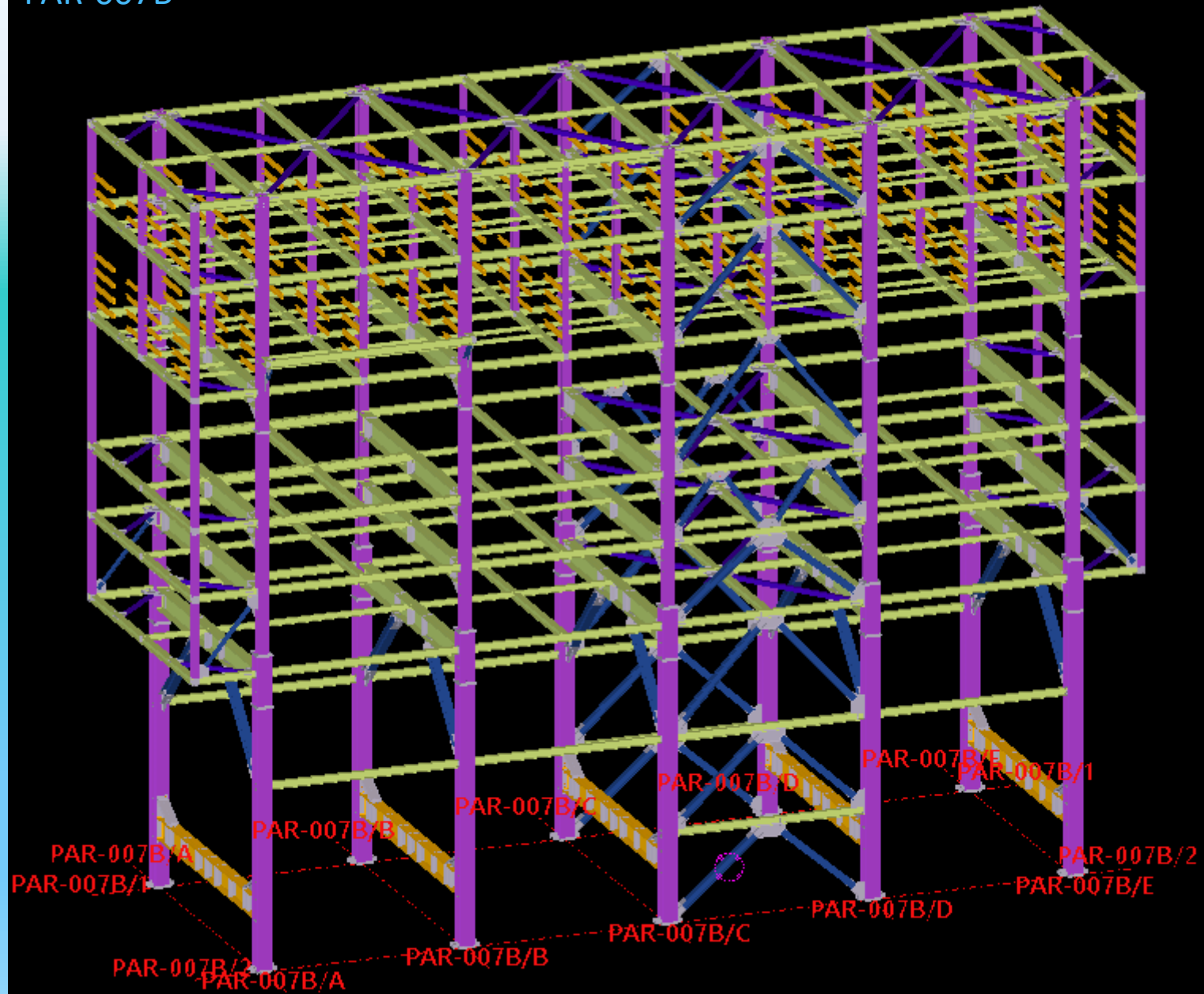
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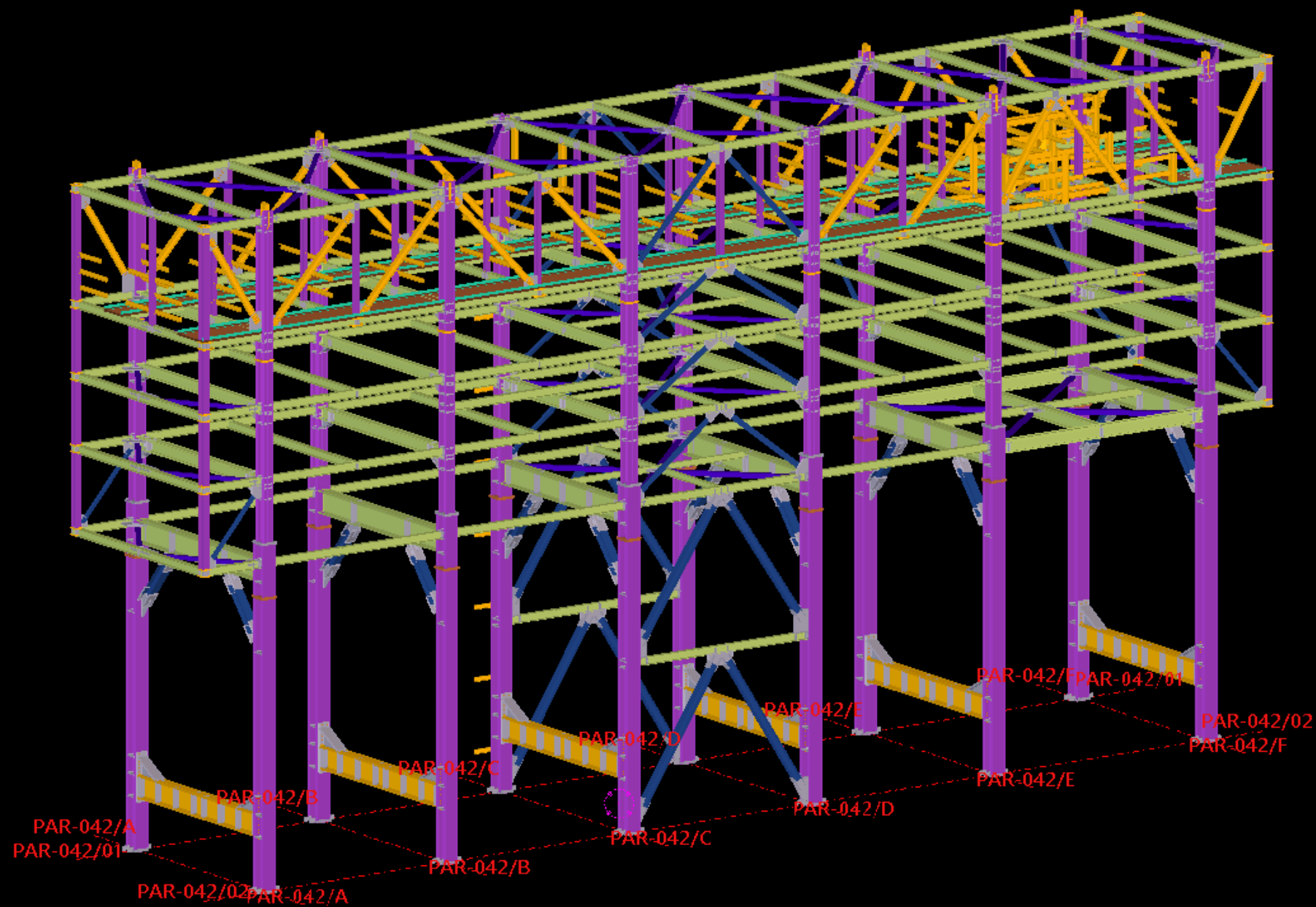
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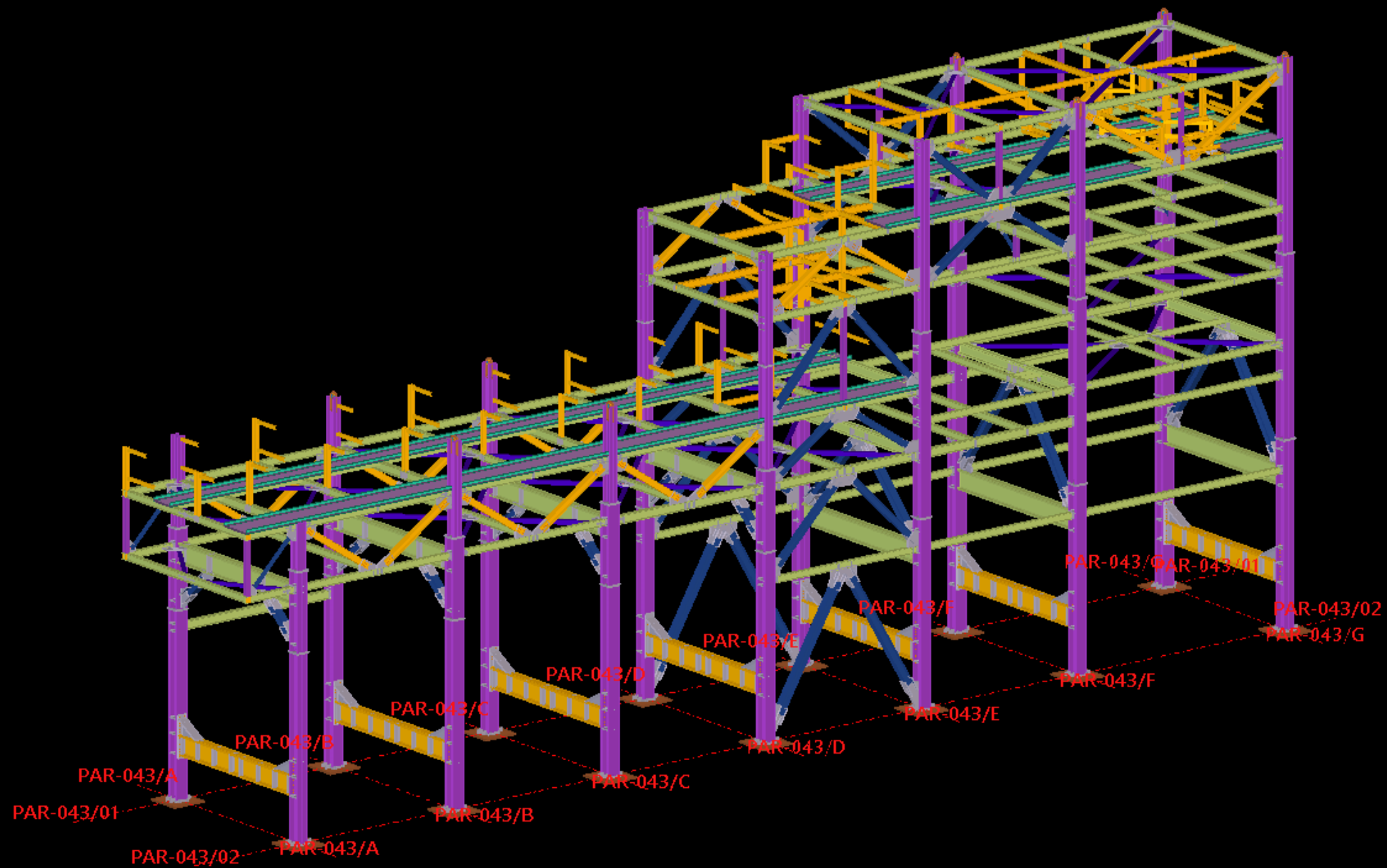
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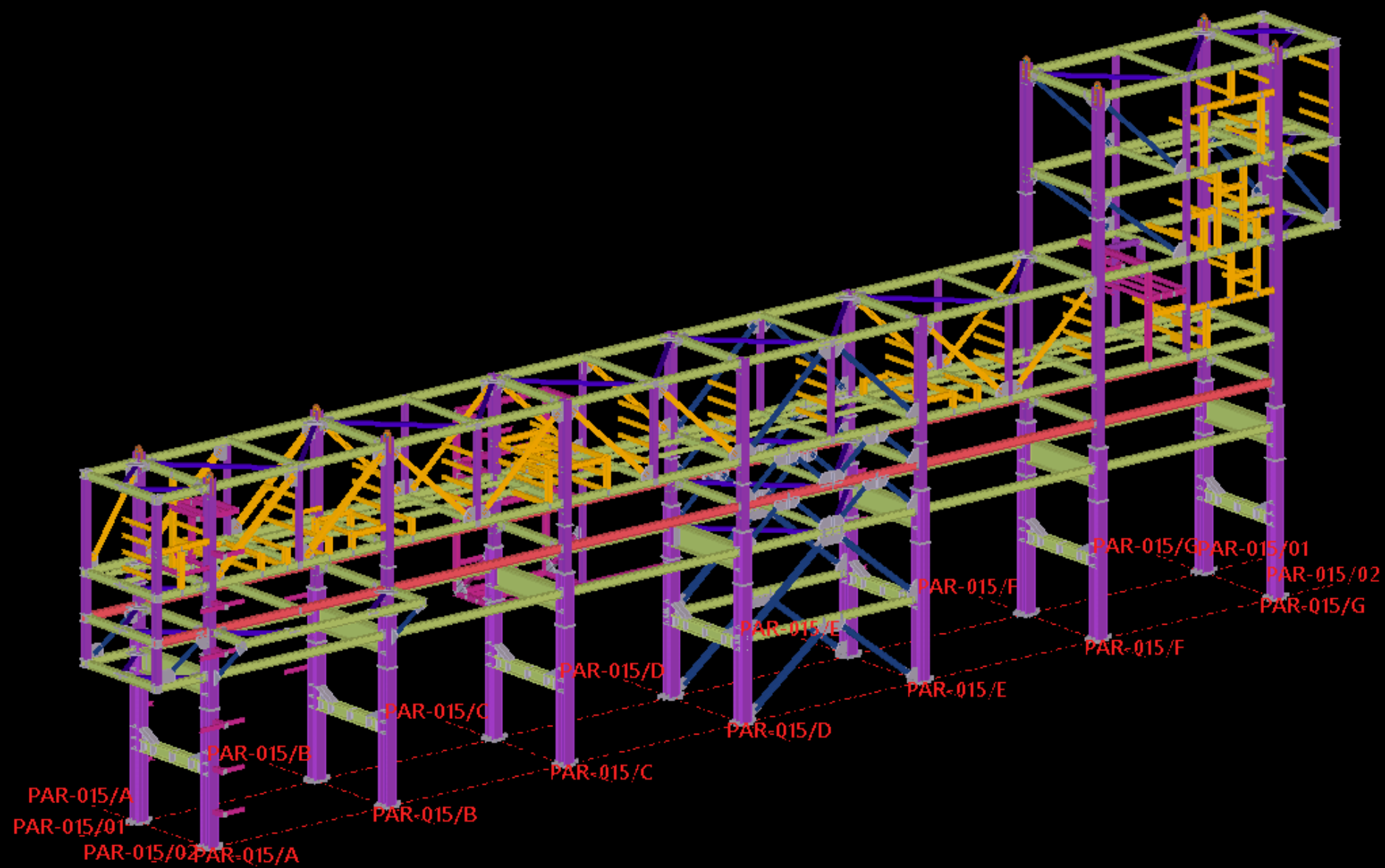
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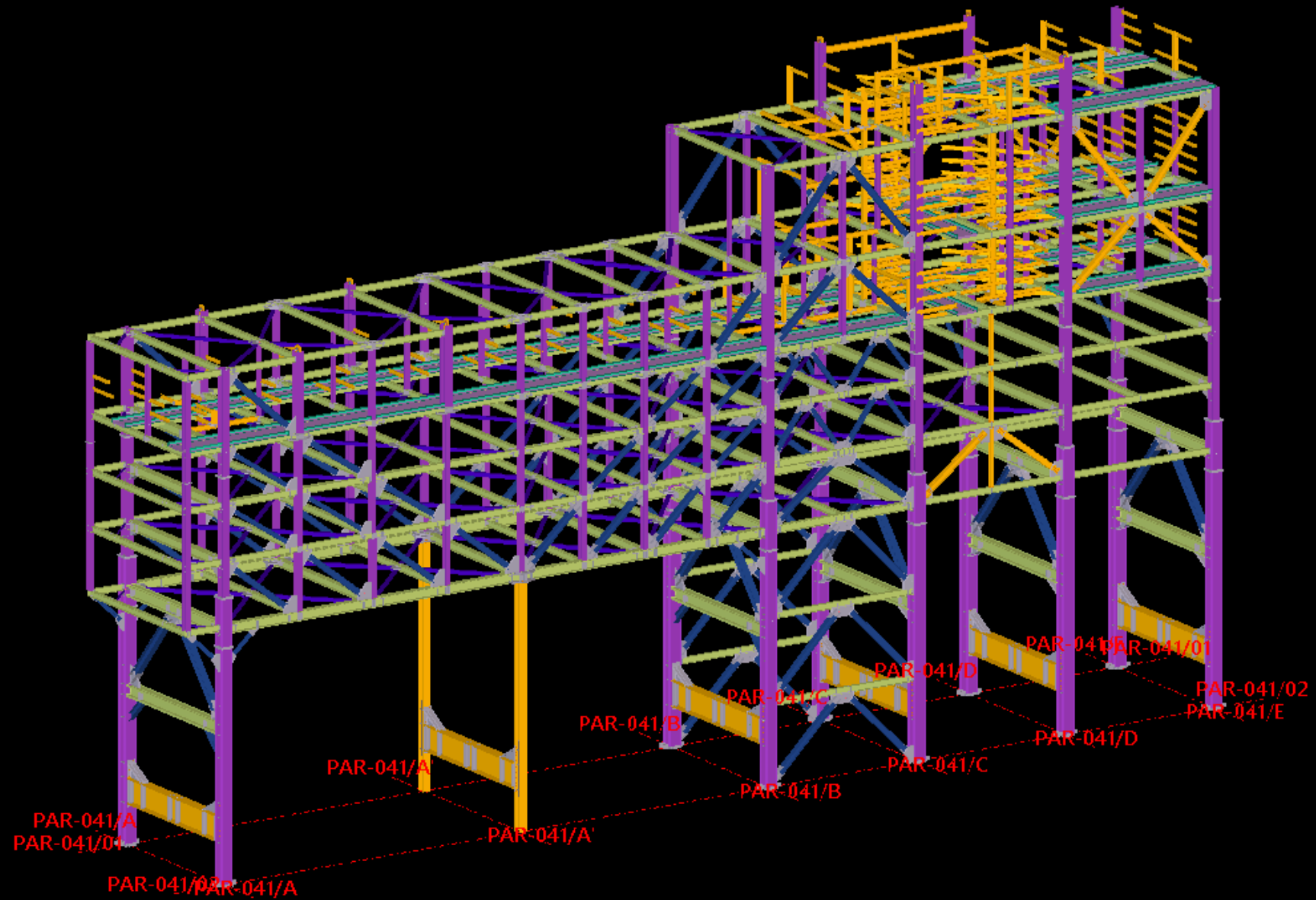
PAR-043



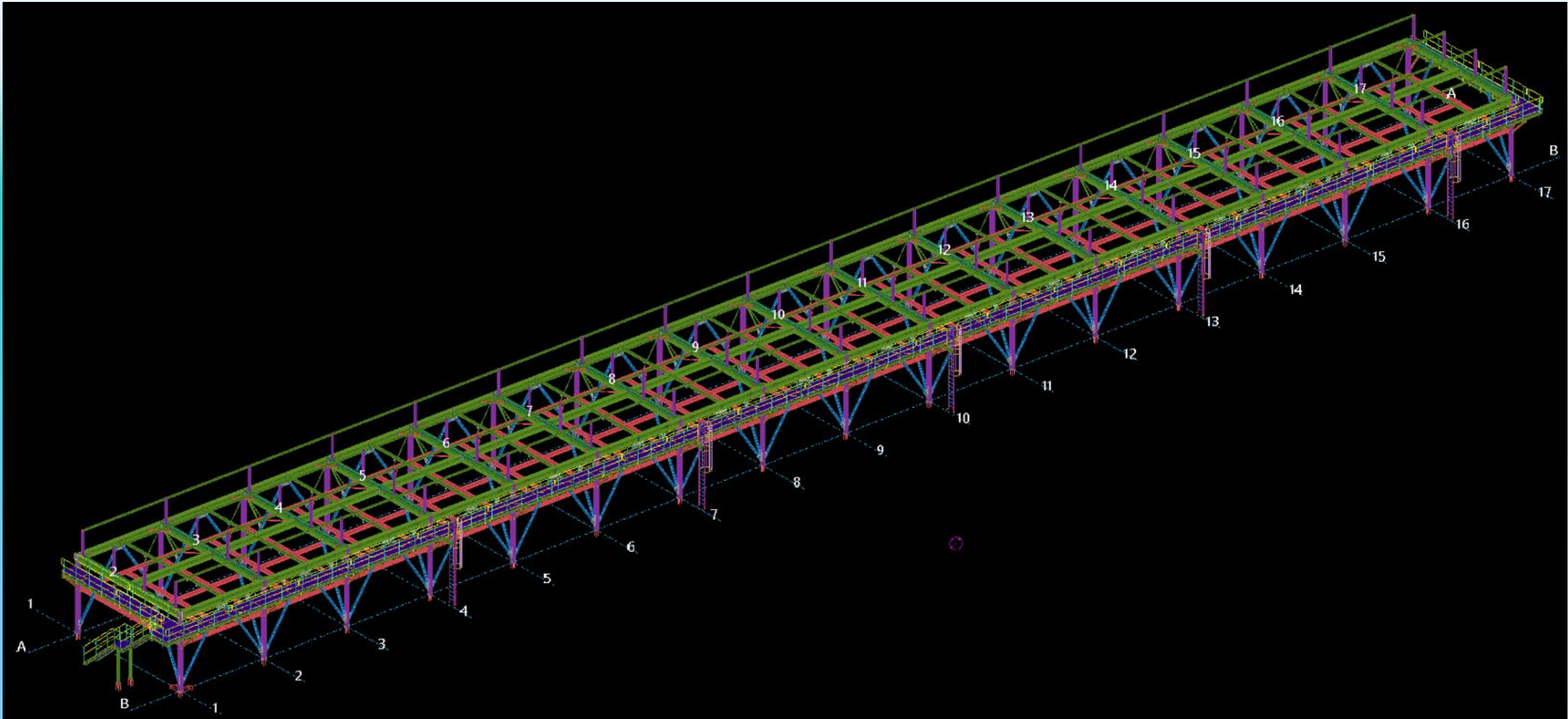
PAR-015



PAR-041

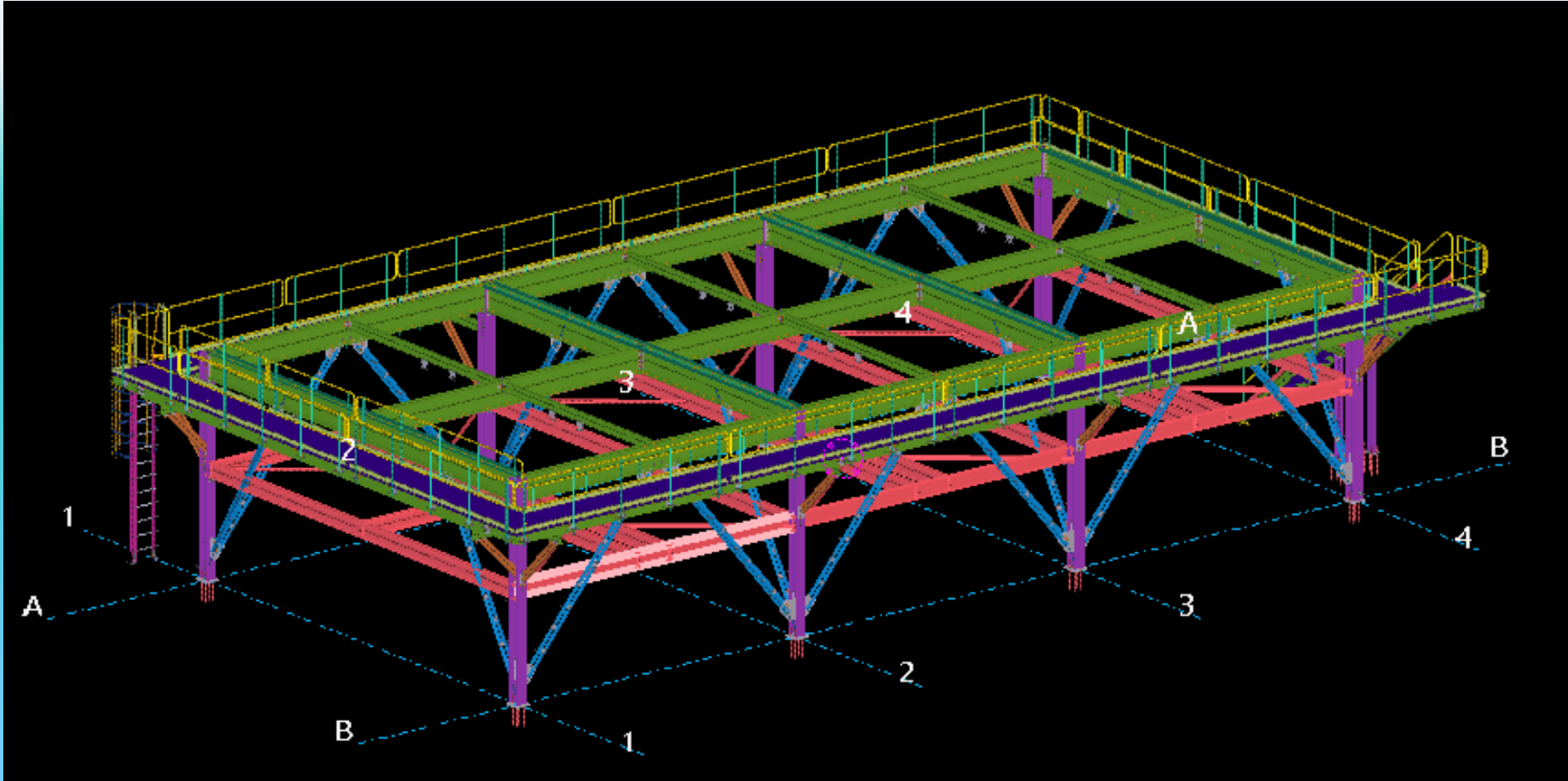


BGR ENERGY – OVERHEAD AIR CONDENSER SUPPORT STRUCTURE



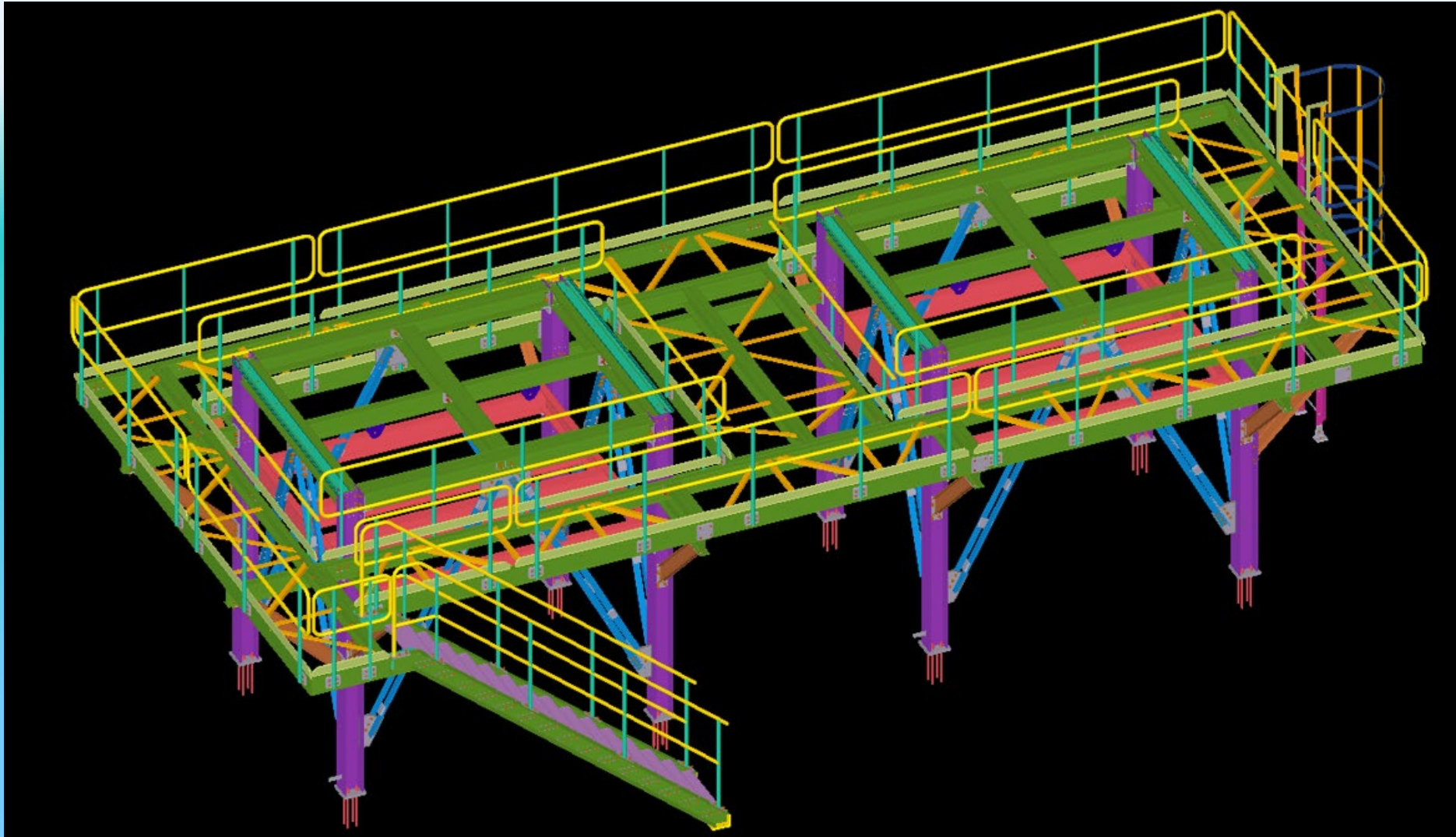
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BGR ENERGY – AIR COOLER SUPPORT STRUCTURE



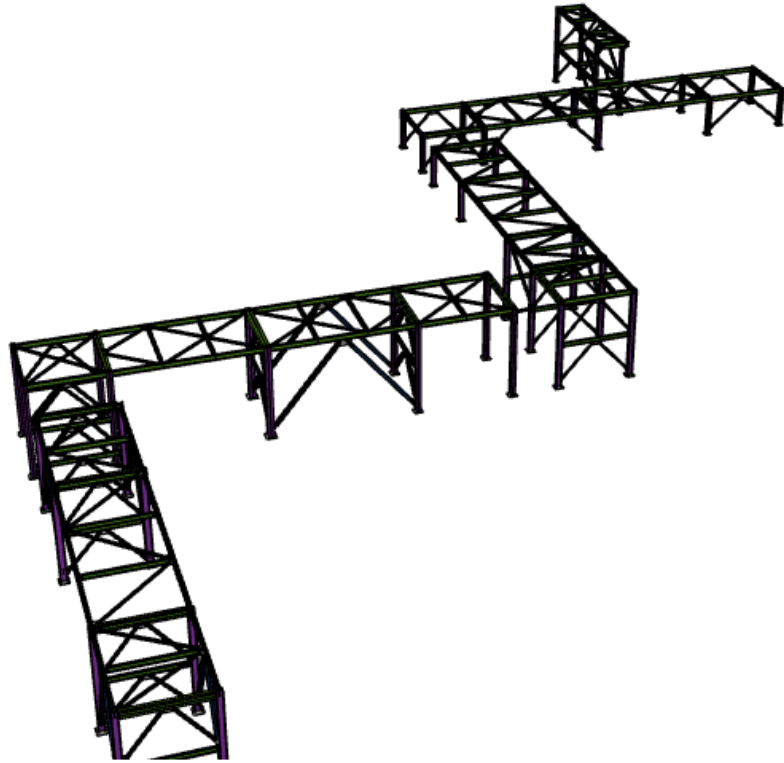
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BGR ENERGY – AIR COOLER SUPPORT STRUCTURE

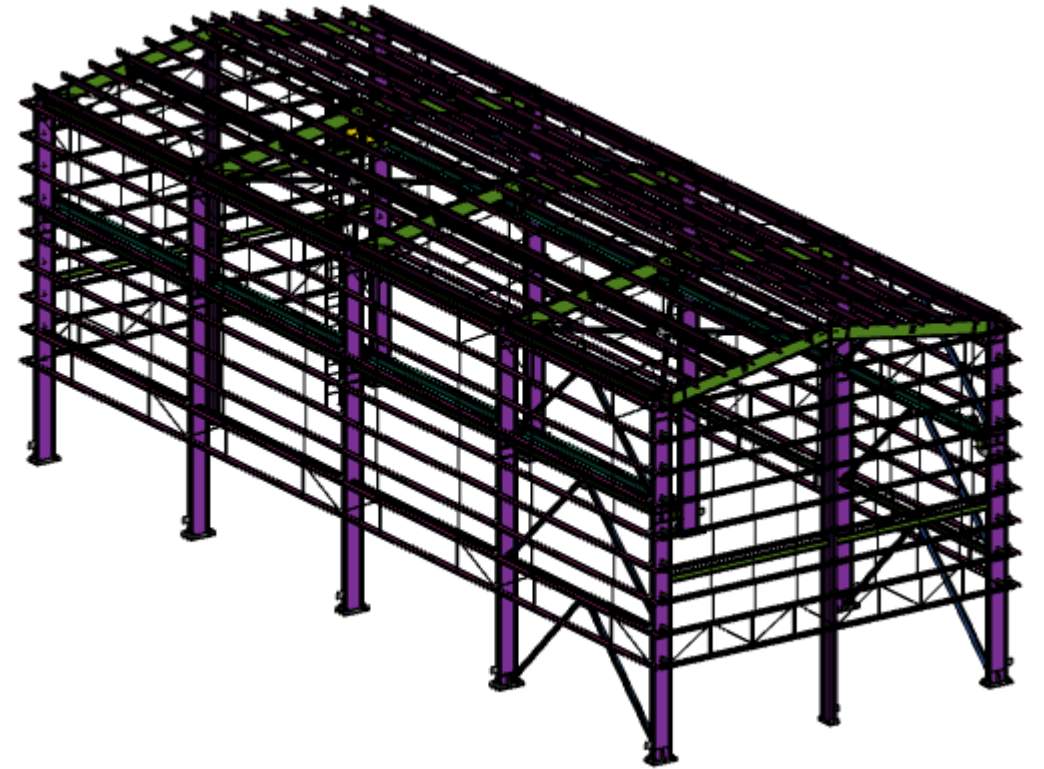


TAG No. 03-E-11702 & 03-E-21702

ADNOC – CRUDE OIL RECEIVING FACILITY AT JEBELDHANNA 800 Tonnes

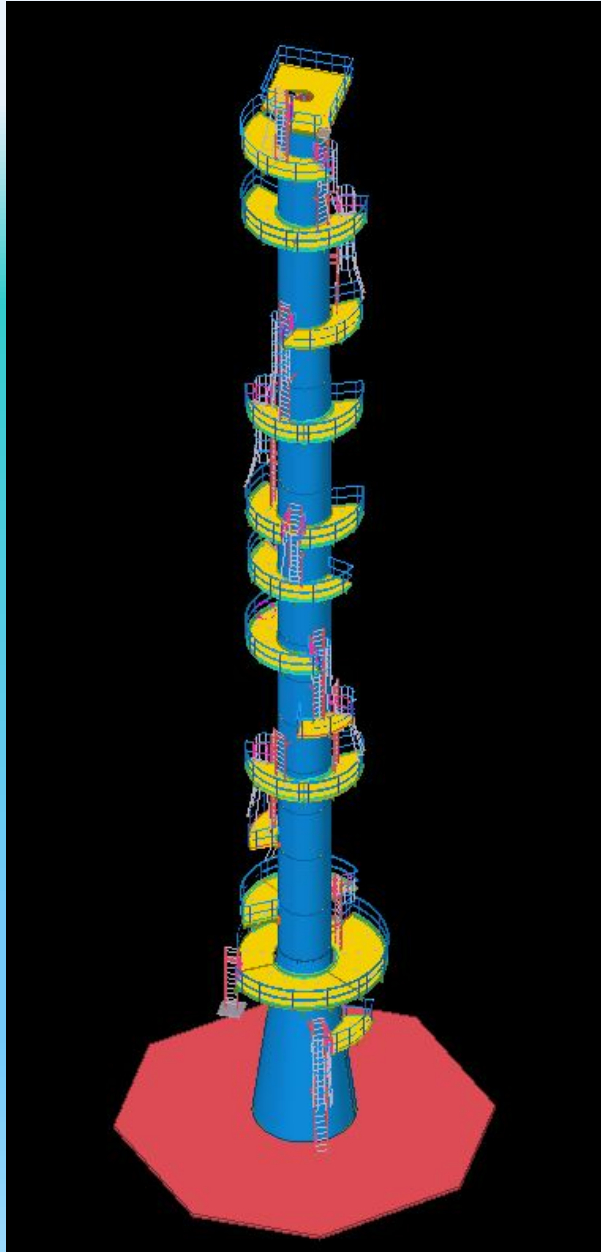


PIPE RACK

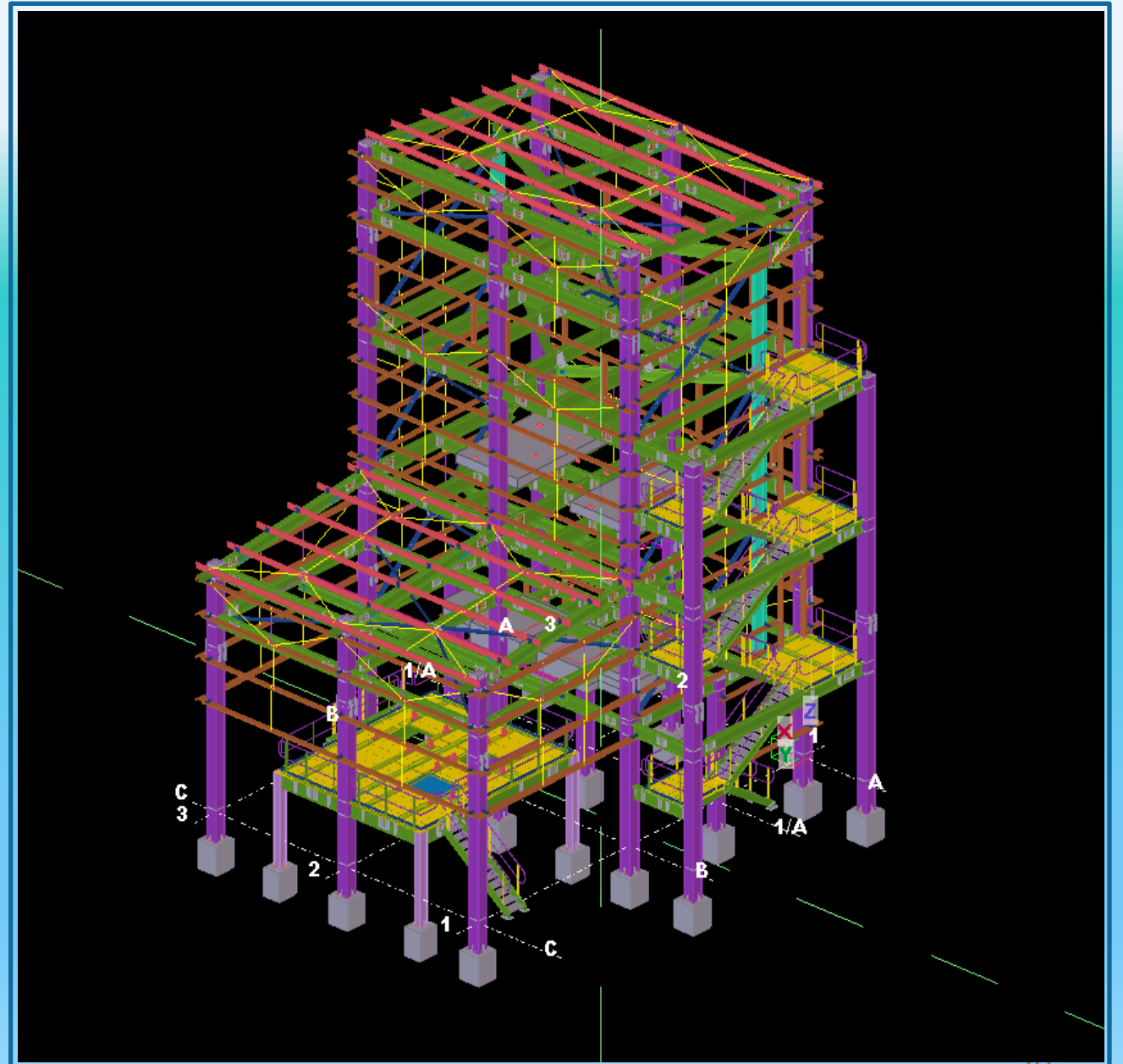
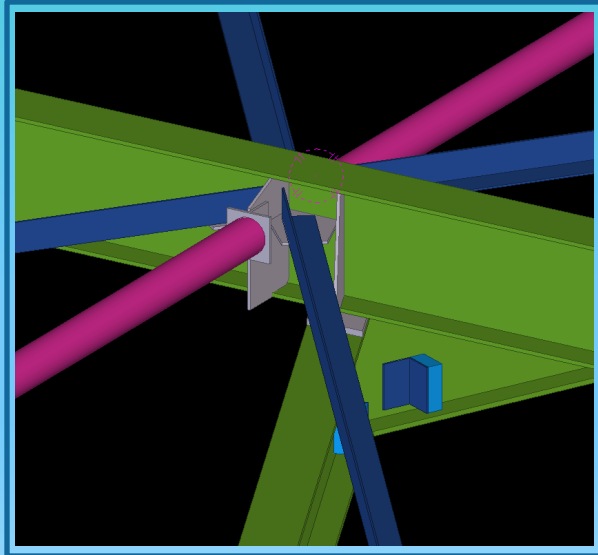
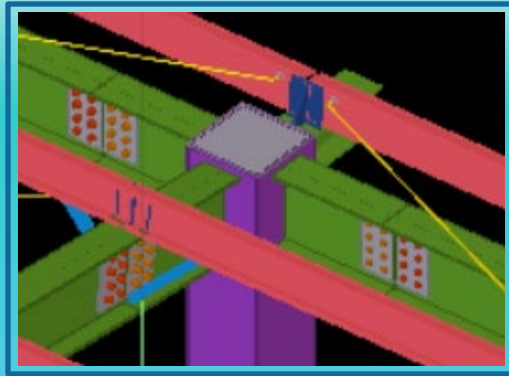


FIRE WATER SHELTER

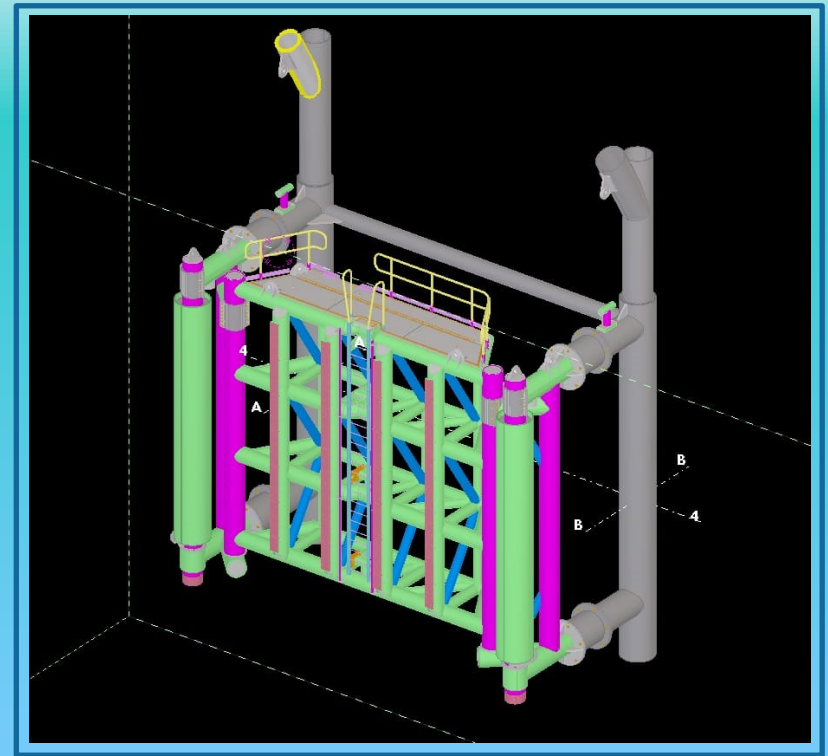
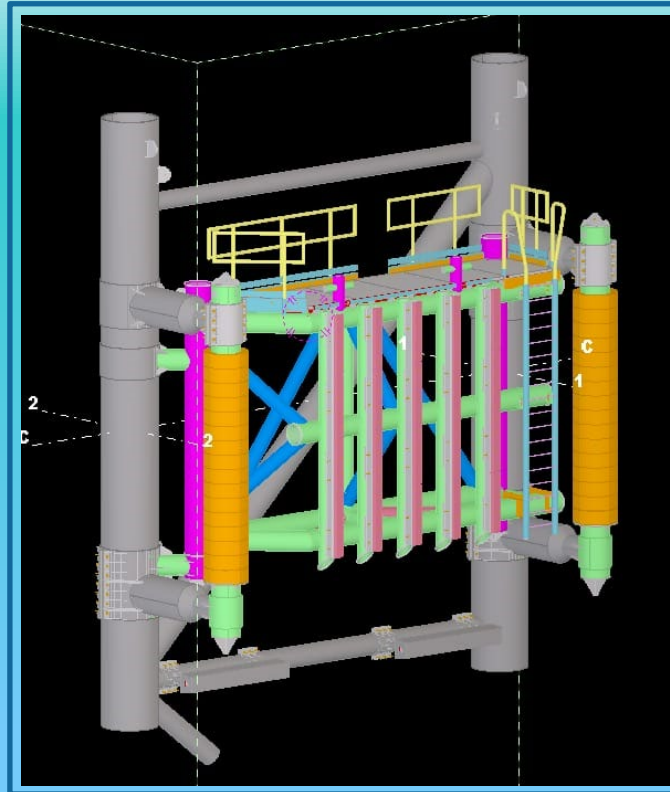
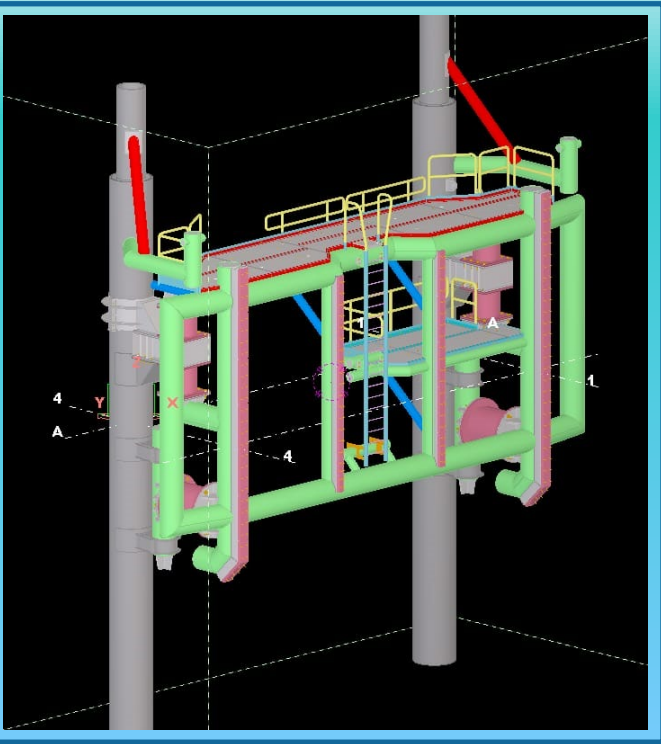
Circular Platform for Built-Up Engg / Technimont – 16 towers -
circular platforms submitted



Multi Fuel Boiler 1, Fuel Conveyor Transfer Station, Malaysia

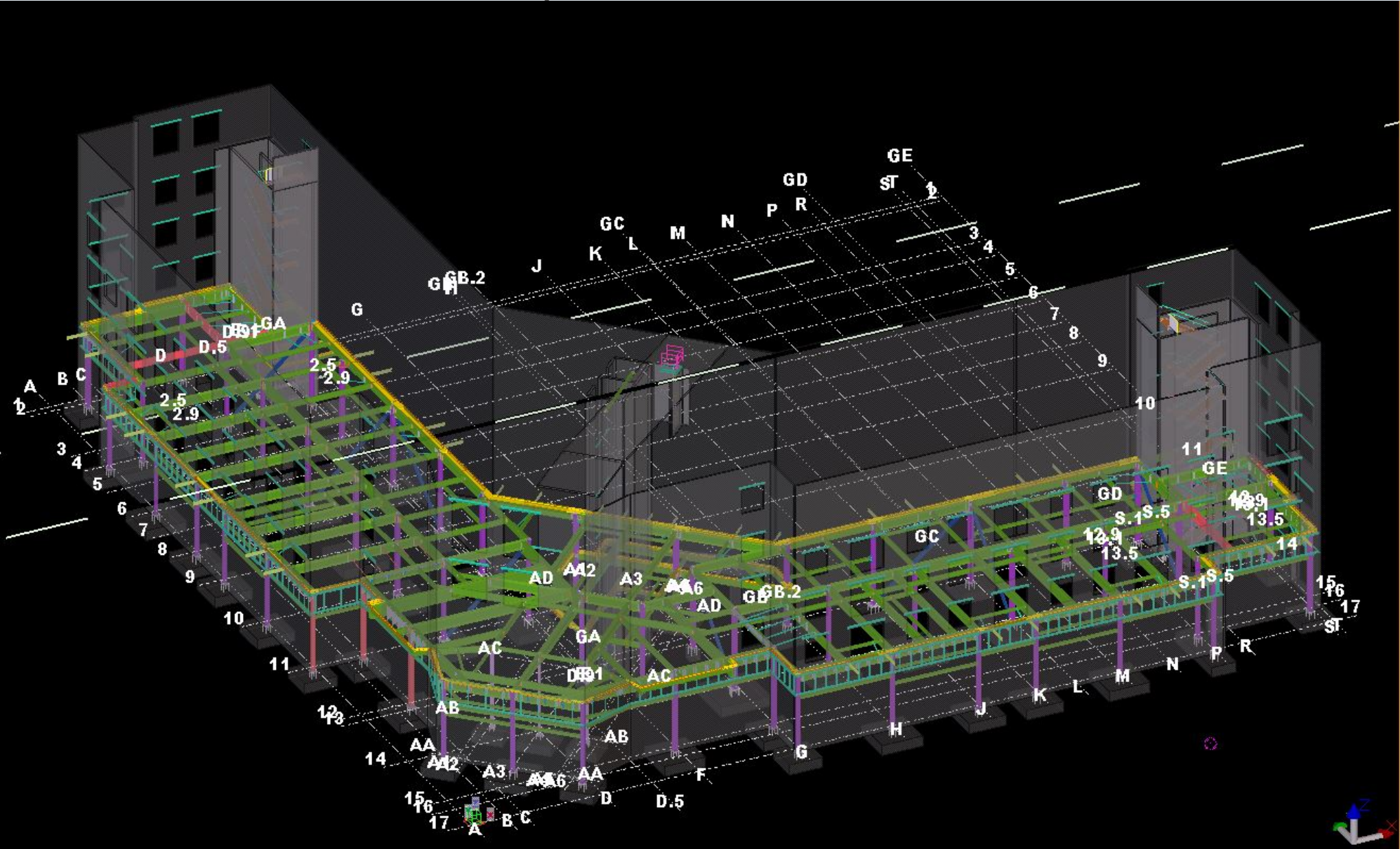


UZ & UAD Part II Boat landing Replacement Project (10 Nos), ADNOC – CCTC, Abu Dhabi

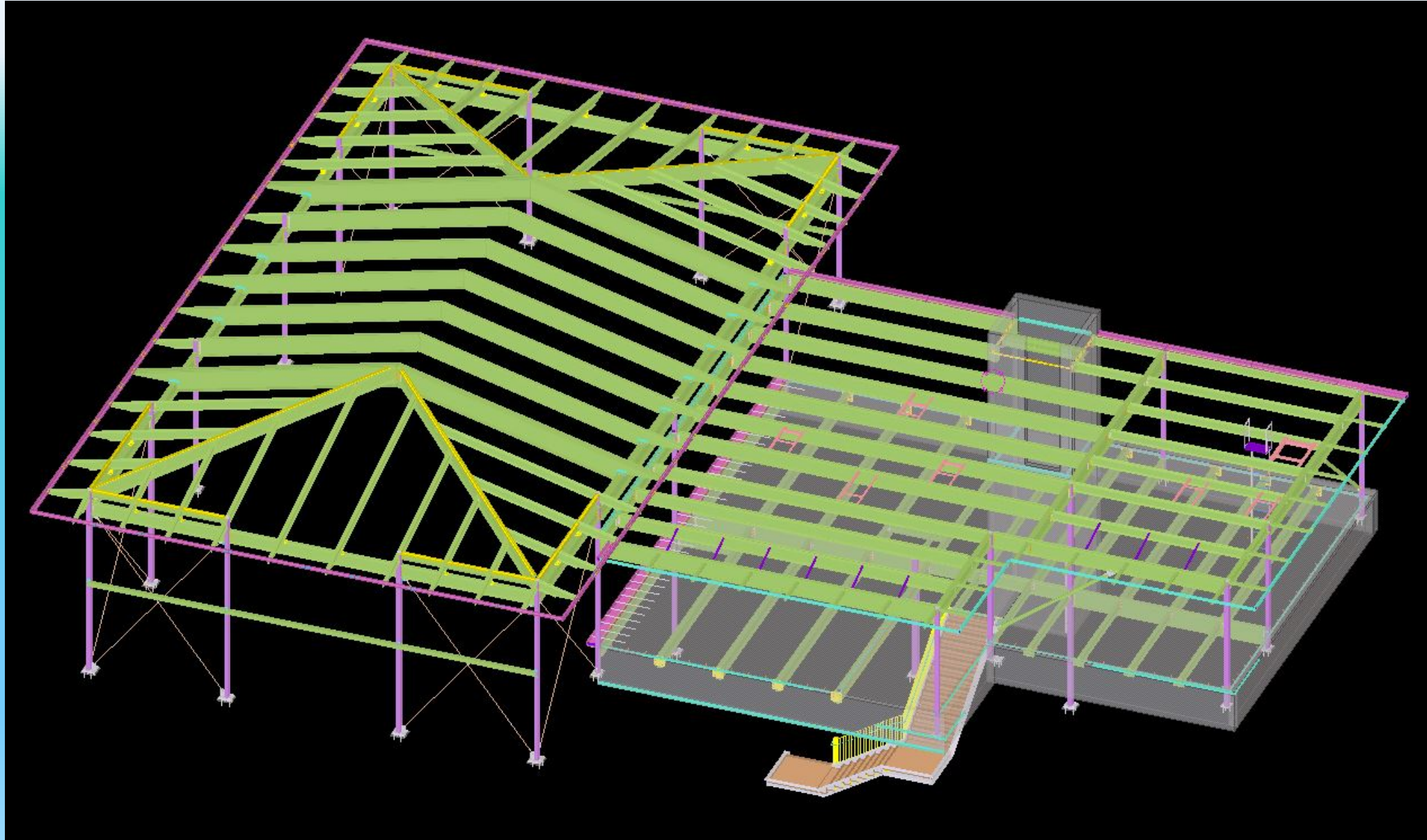


A 3D perspective view of a multi-story building structure. The model shows a grid of columns and beams. Labels include X1, X2, X3, X4, X5, X6, X7, X8, X9, X10, X11, X12, X13, X14, X15, X16, X17, X18, X19, X20, X21, X22, X23, X24, X25, X26, X27, X28, X29, X30, X31, X32, X33, X34, X35, X36, X37, X38, X39, X40, X41, X42, X43, X44, X45, X46, X47, X48, X49, X50, X51, X52, X53, X54, X55, X56, X57, X58, X59, X60, X61, X62, X63, X64, X65, X66, X67, X68, X69, X70, X71, X72, X73, X74, X75, X76, X77, X78, X79, X80, X81, X82, X83, X84, X85, X86, X87, X88, X89, X90, X91, X92, X93, X94, X95, X96, X97, X98, X99, X100. Other labels include Y1, Y2, Y3, Y4, Y5, Y6, Y7, Y8, Y9, Y10, Y11, Y12, Y13, Y14, Y15, Y16, Y17, Y18, Y19, Y20, Y21, Y22, Y23, Y24, Y25, Y26, Y27, Y28, Y29, Y30, Y31, Y32, Y33, Y34, Y35, Y36, Y37, Y38, Y39, Y40, Y41, Y42, Y43, Y44, Y45, Y46, Y47, Y48, Y49, Y50, Y51, Y52, Y53, Y54, Y55, Y56, Y57, Y58, Y59, Y60, Y61, Y62, Y63, Y64, Y65, Y66, Y67, Y68, Y69, Y70, Y71, Y72, Y73, Y74, Y75, Y76, Y77, Y78, Y79, Y80, Y81, Y82, Y83, Y84, Y85, Y86, Y87, Y88, Y89, Y90, Y91, Y92, Y93, Y94, Y95, Y96, Y97, Y98, Y99, Y100. The model is color-coded: columns are grey, beams are blue, and slabs are green. A red rectangular area is highlighted on the right side of the model.

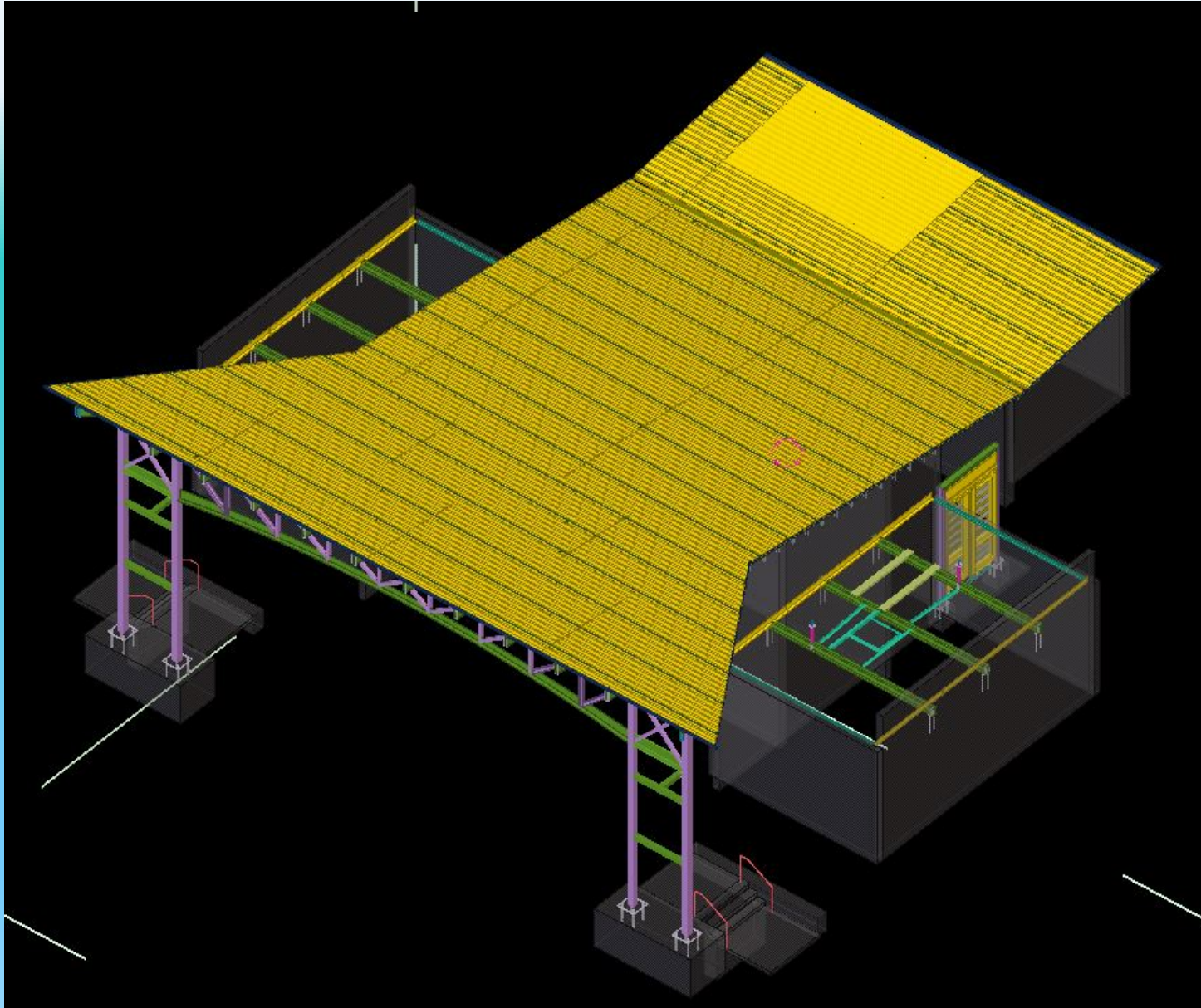
Proscenium Condos - Phase 2, Texas



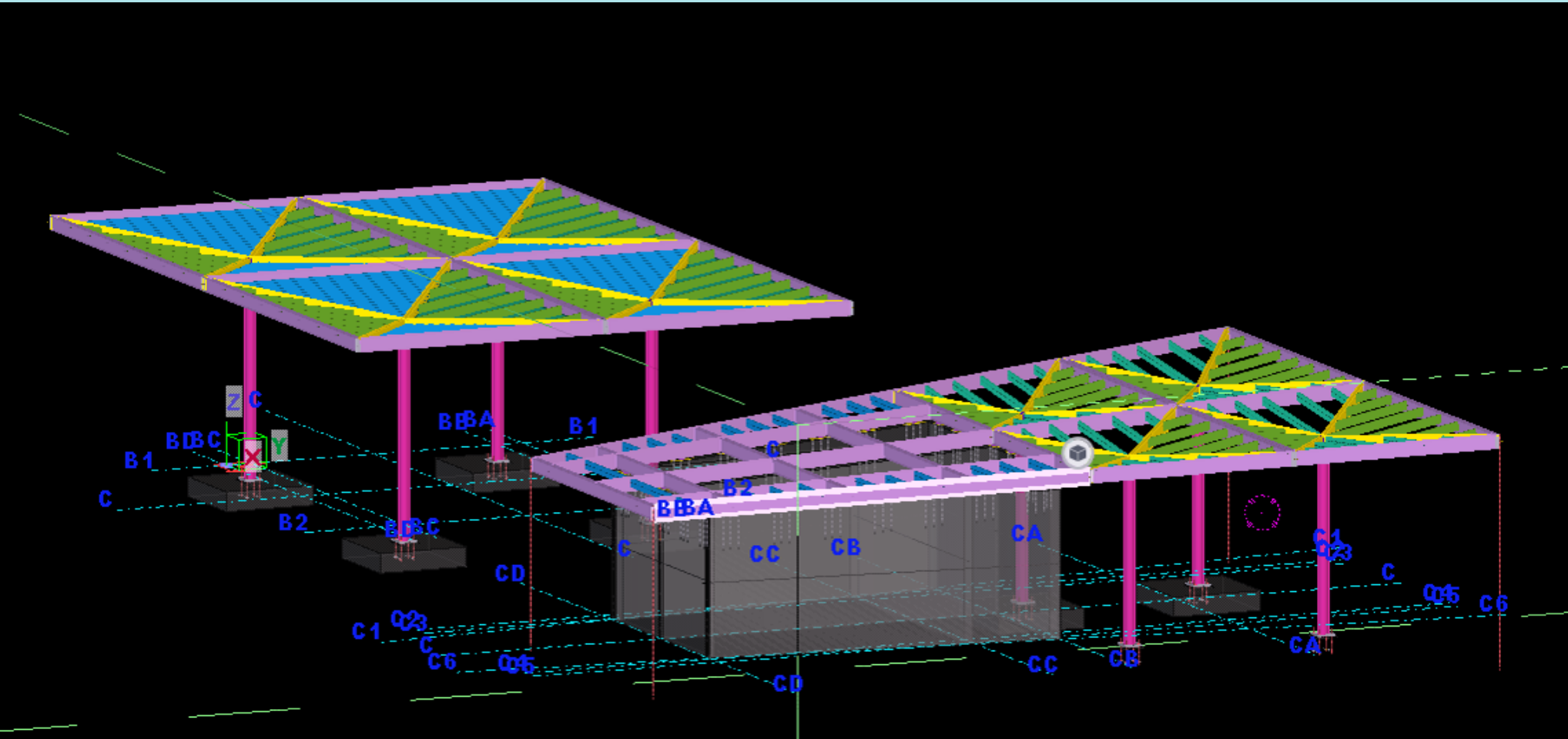
EMU Golf Facility Building



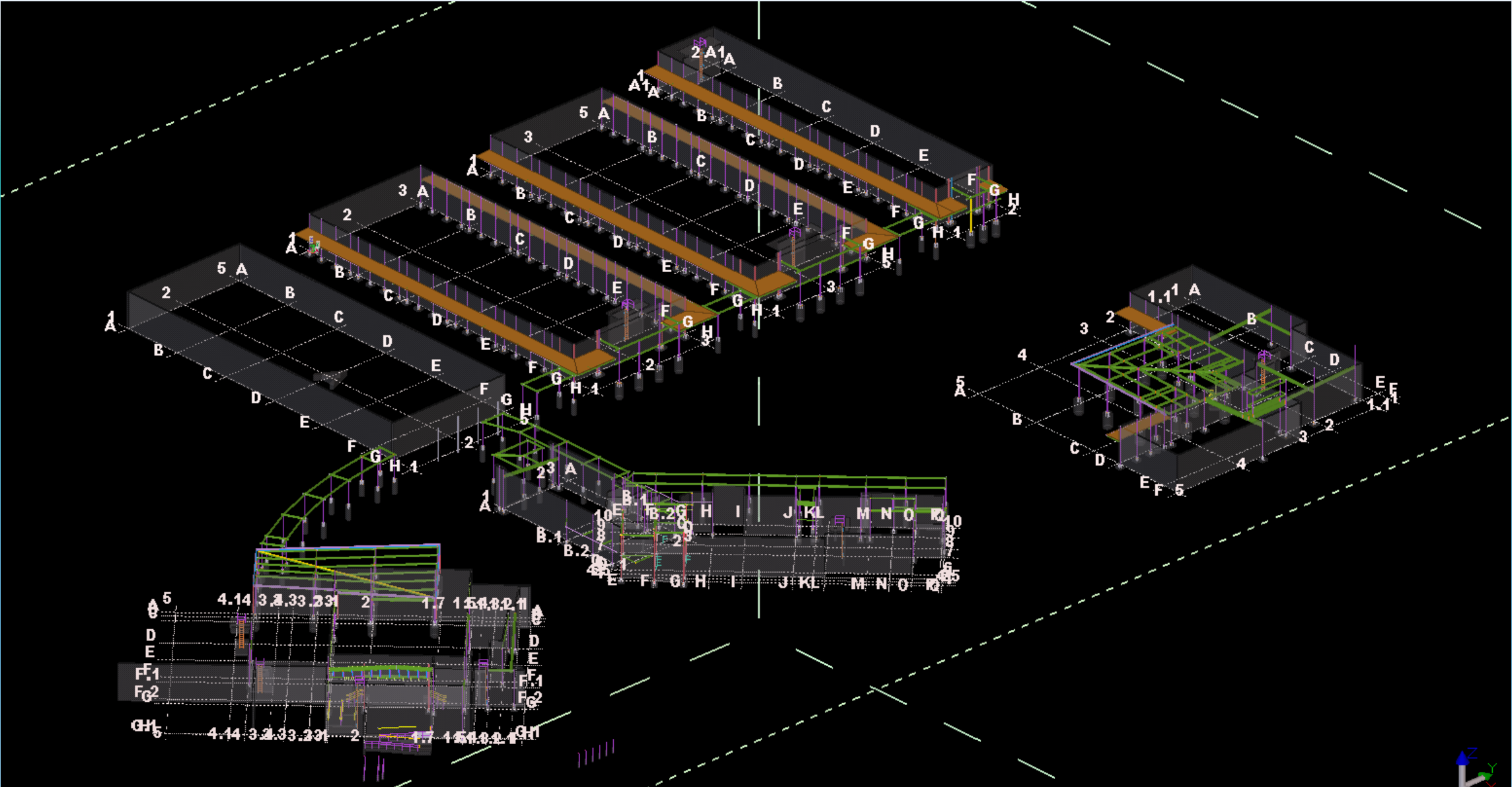
Commons at Agora



Evora Pavillions 2 & 3, Texas

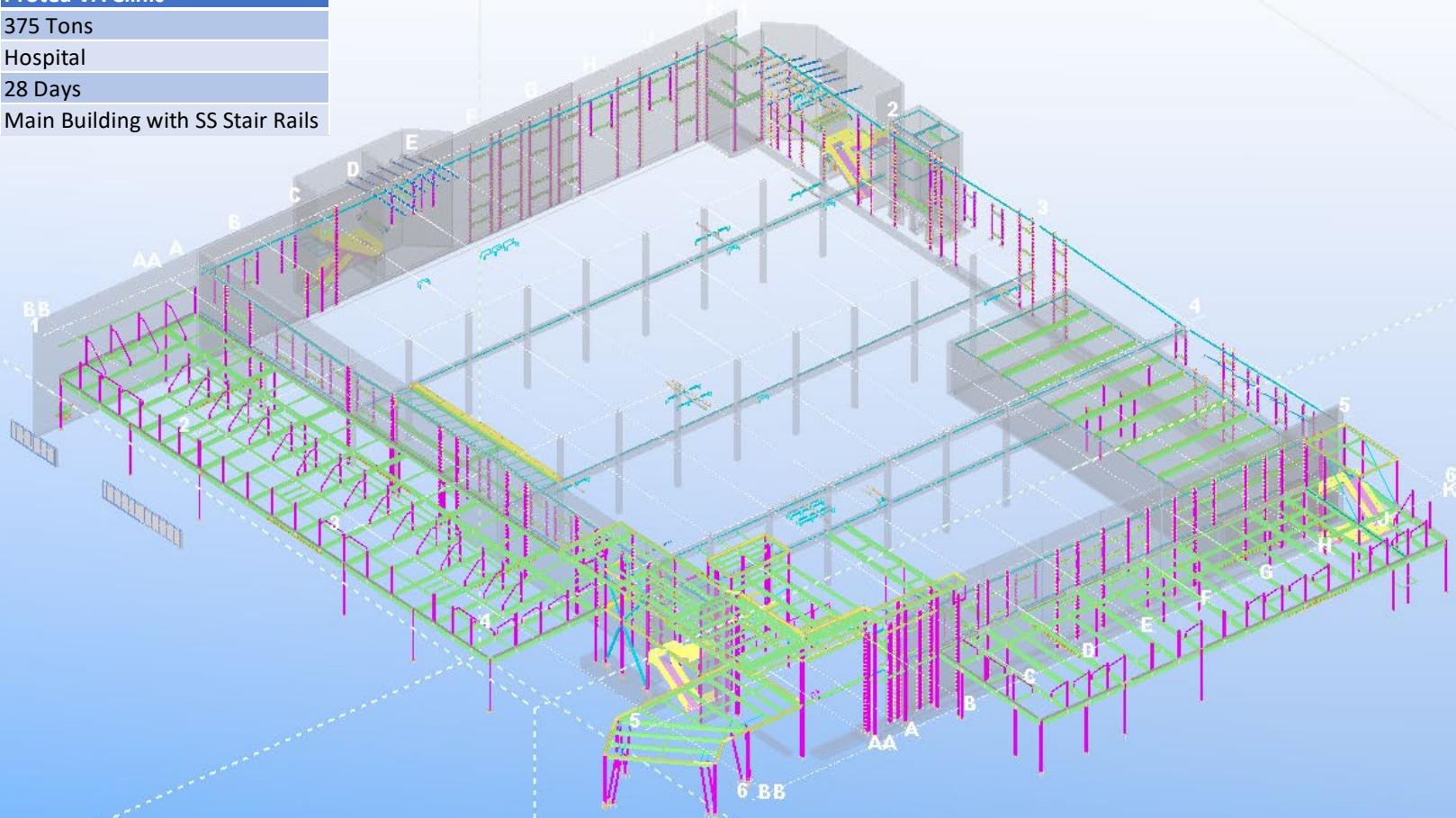


Crescent Elementary School, California



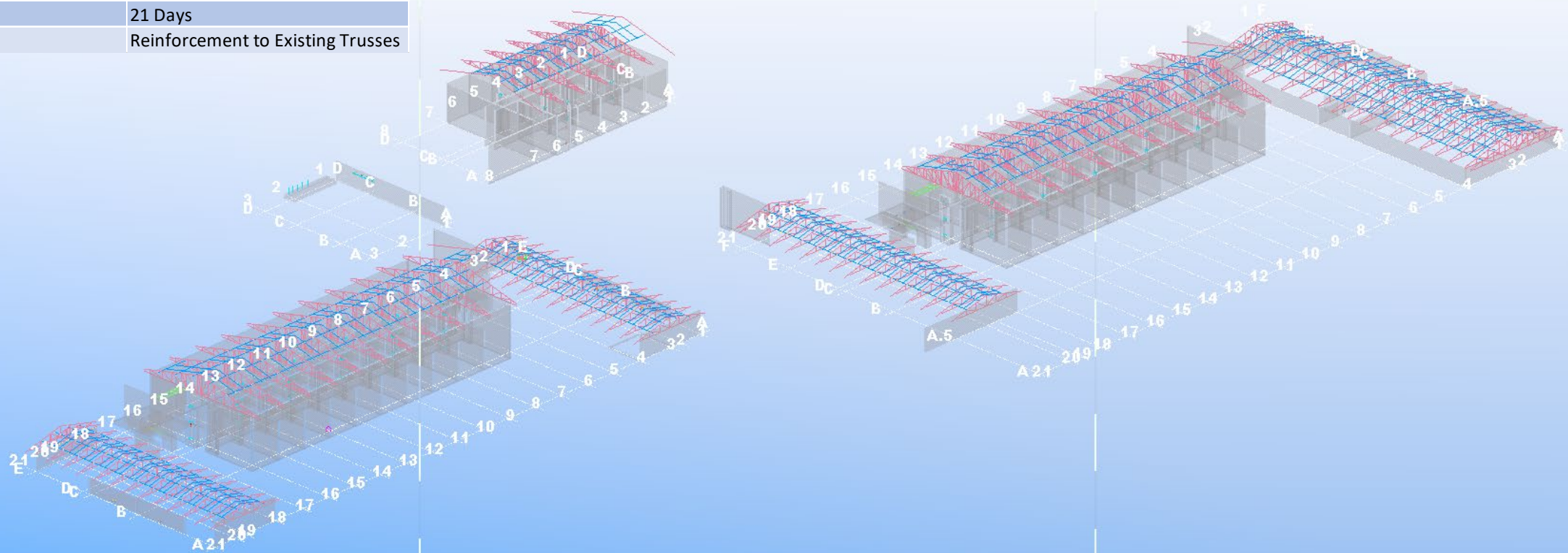
Protea VA Clinic

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



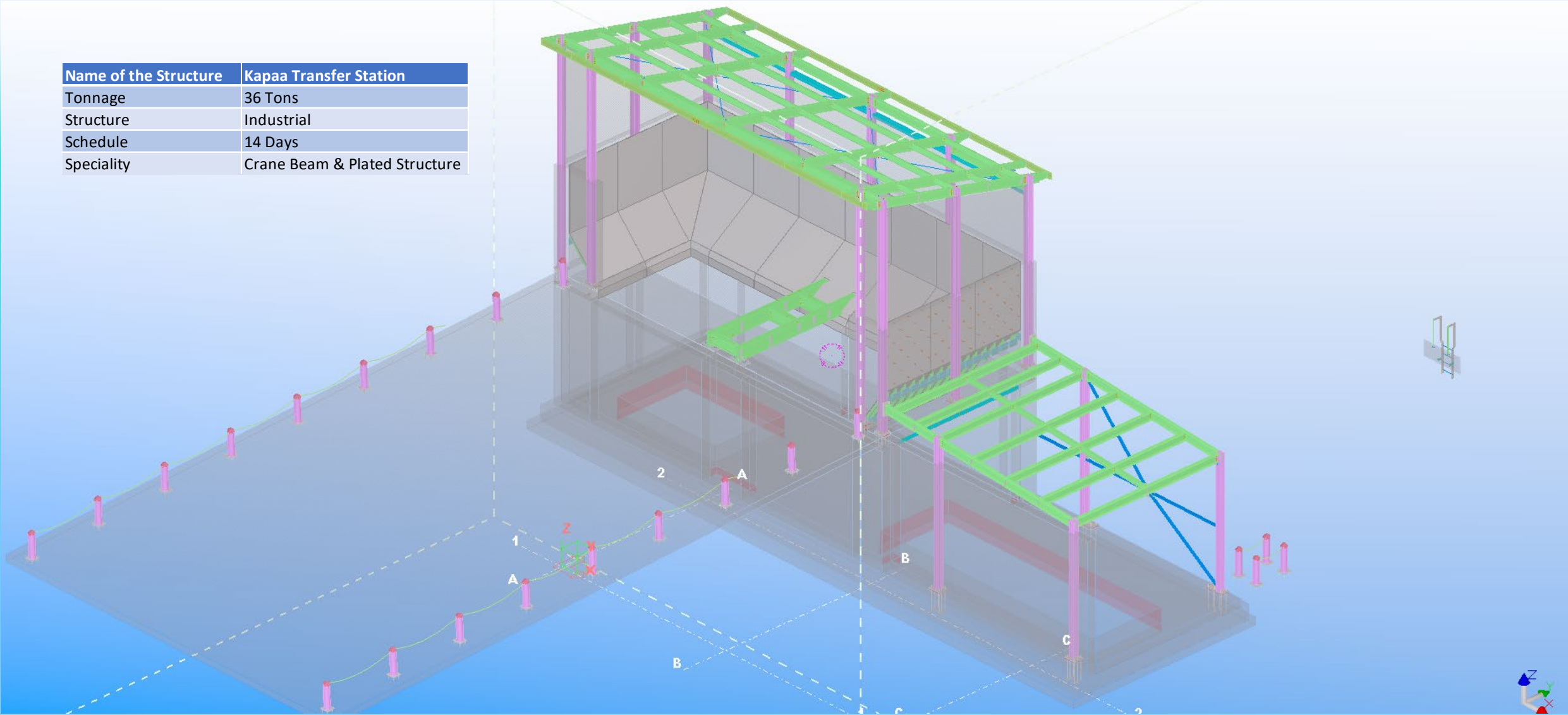
Reinforced Warehouse Structure

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

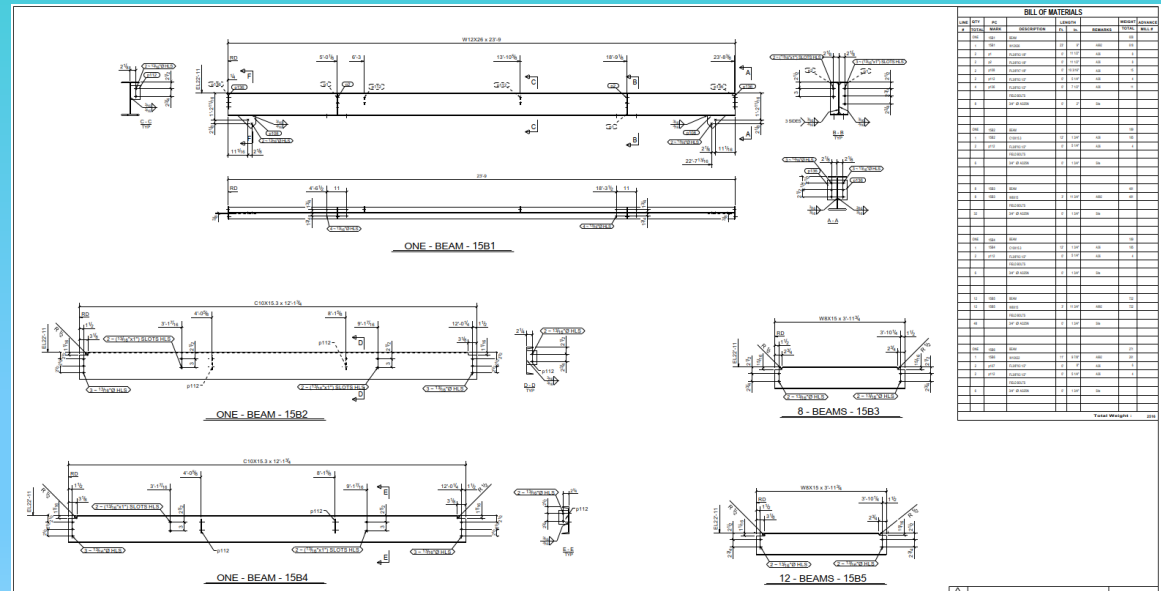
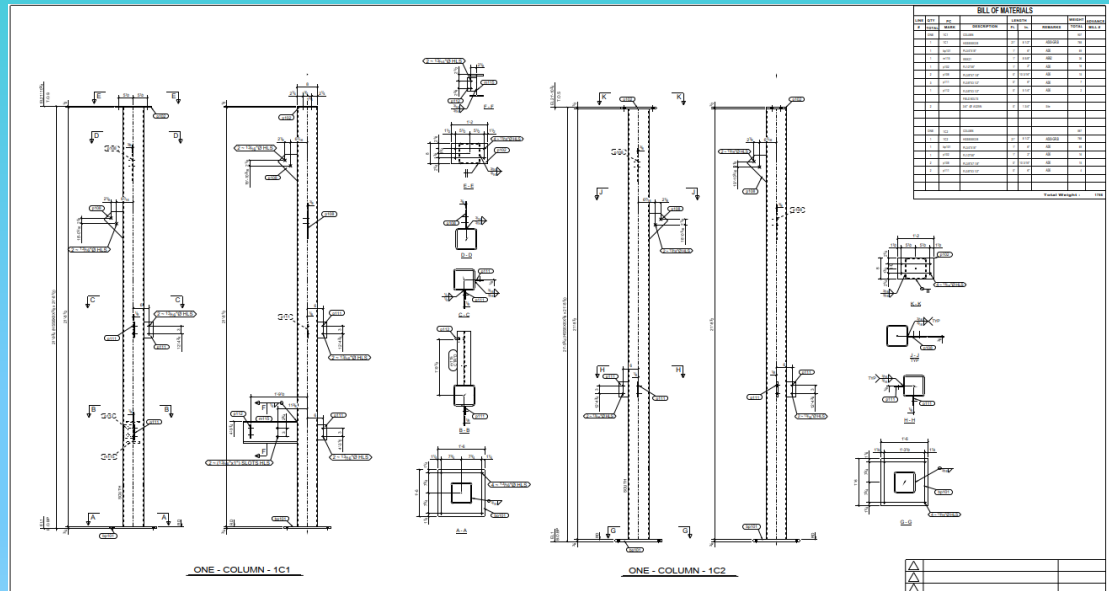
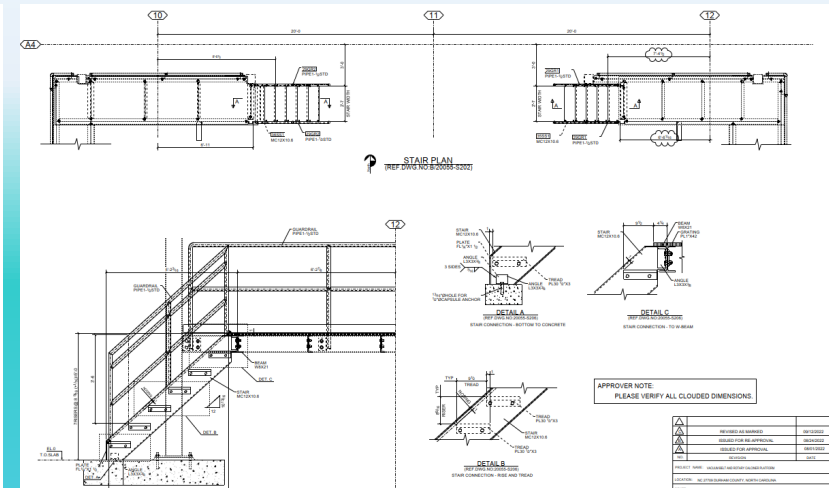
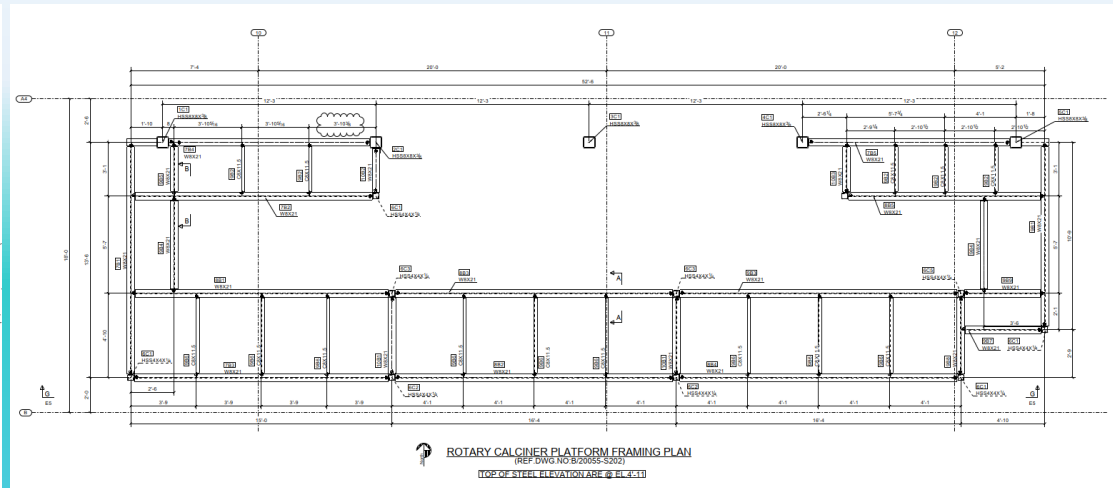
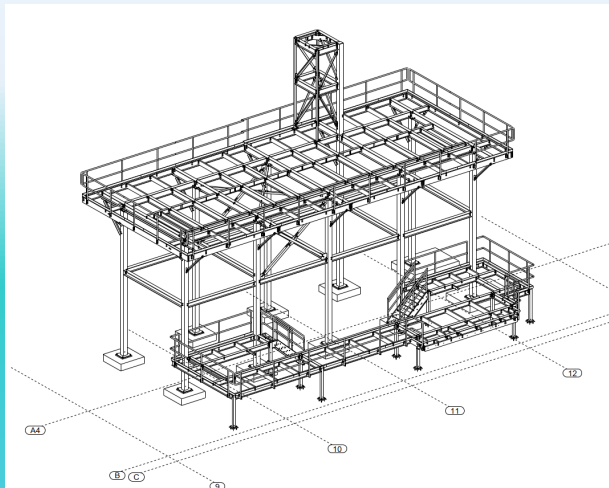


Crane Beam & Plated Structure

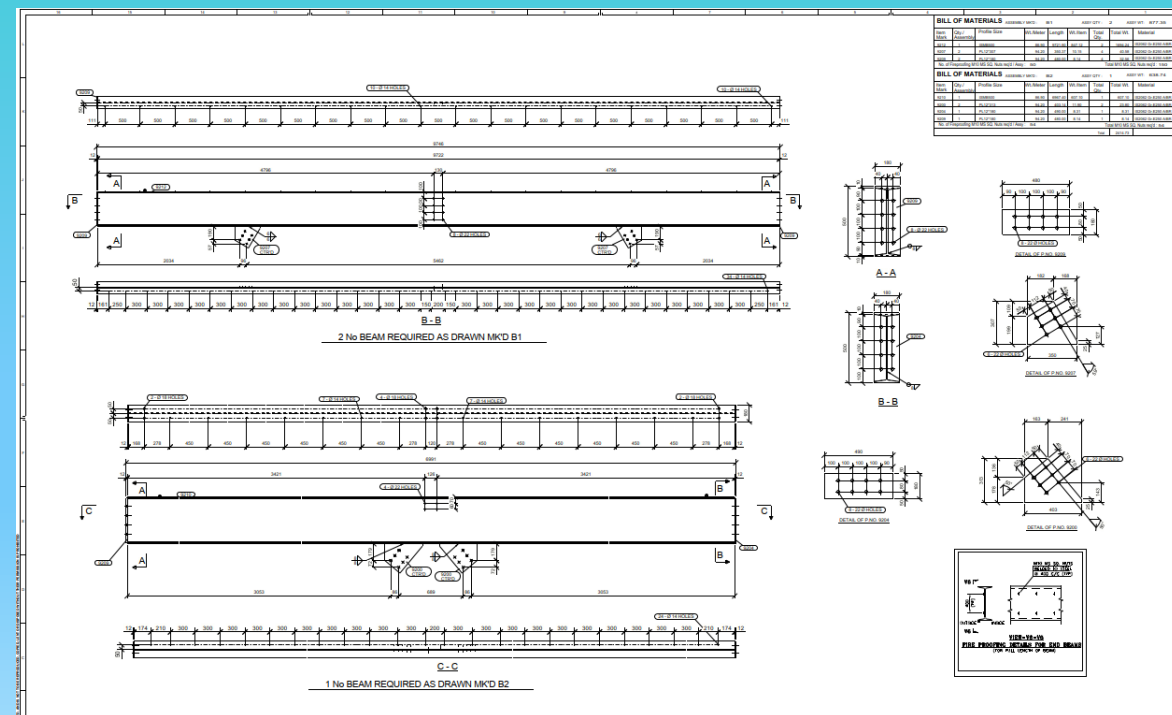
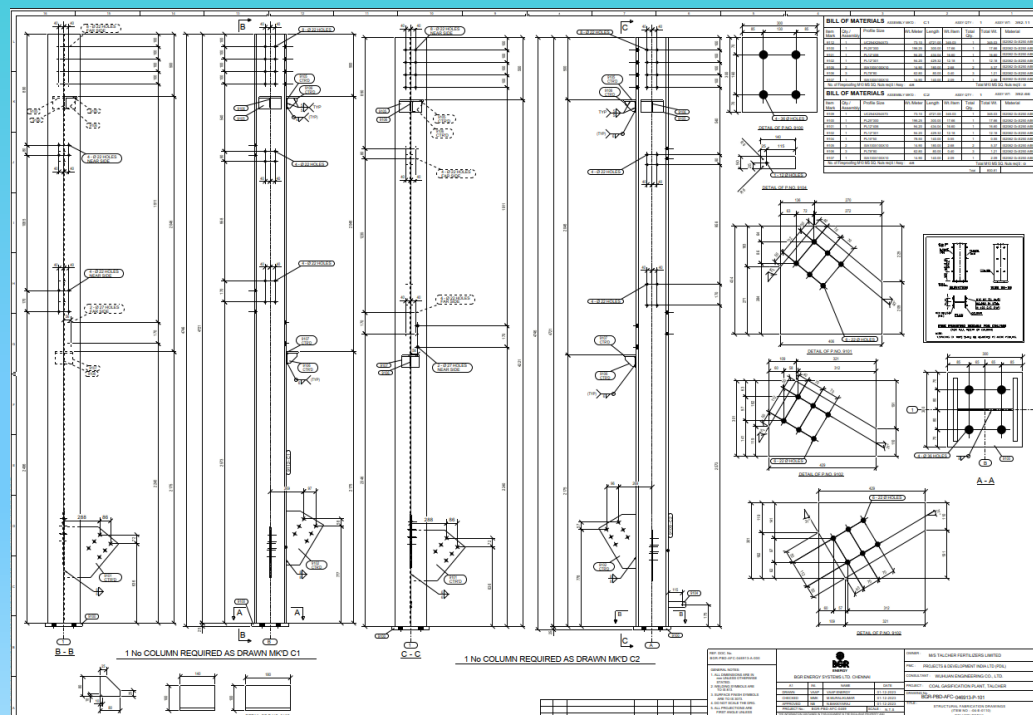
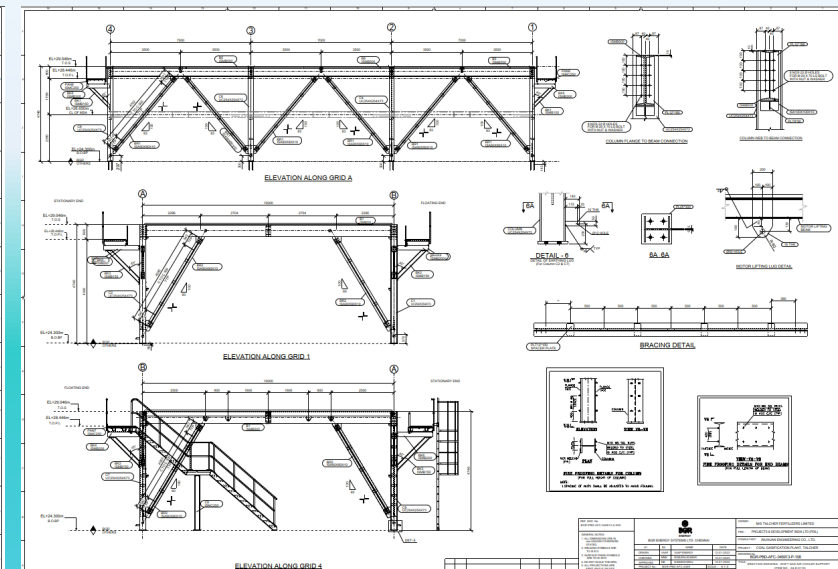
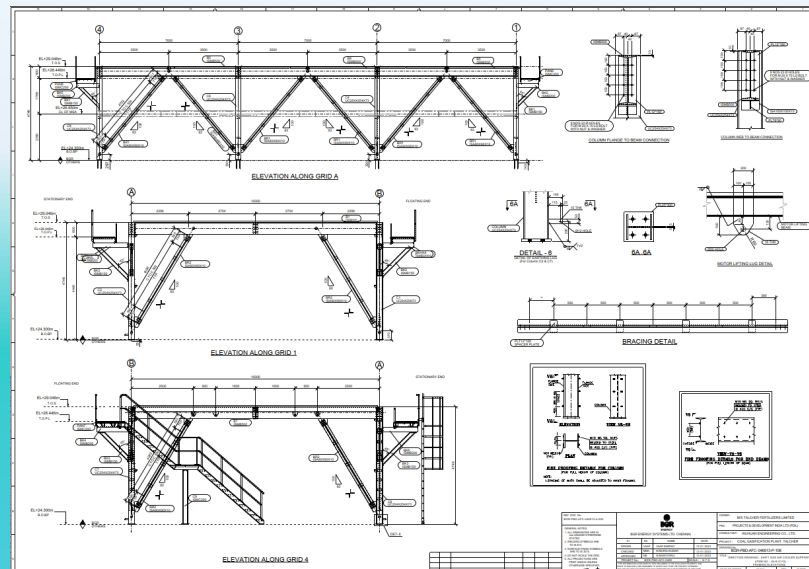
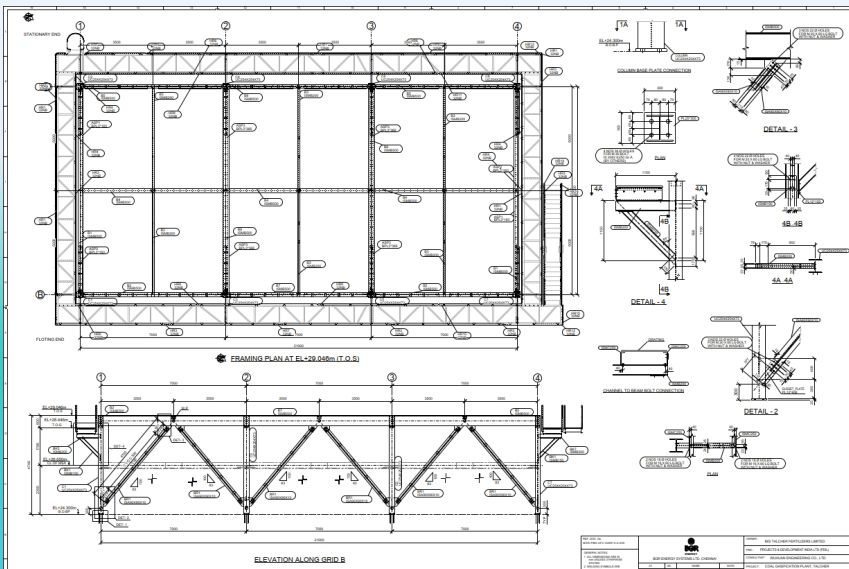
| | |
|-----------------------|-------------------------------|
| Name of the Structure | Kapaa Transfer Station |
| Tonnage | 36 Tons |
| Structure | Industrial |
| Schedule | 14 Days |
| Speciality | Crane Beam & Plated Structure |



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