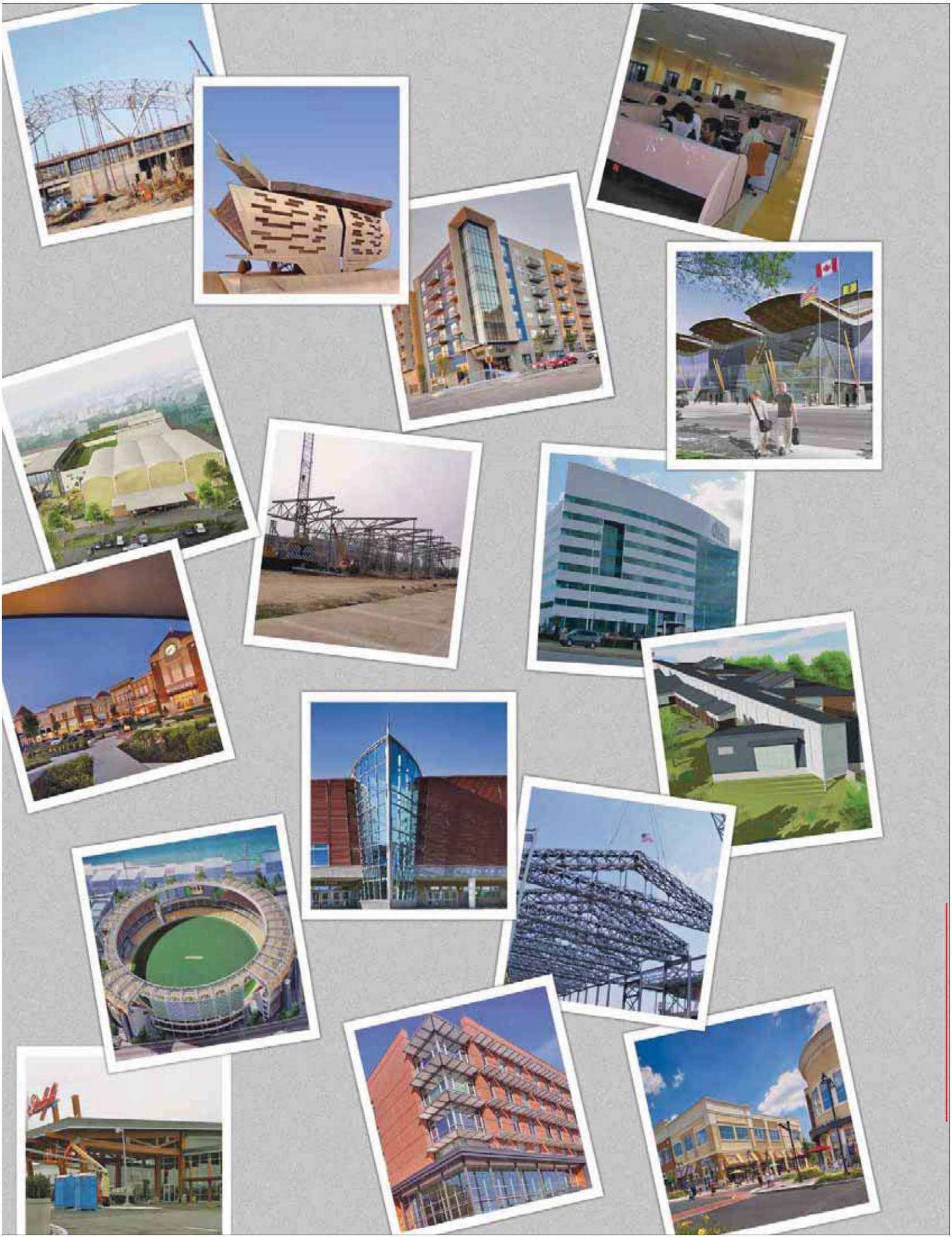
TECHFLOW

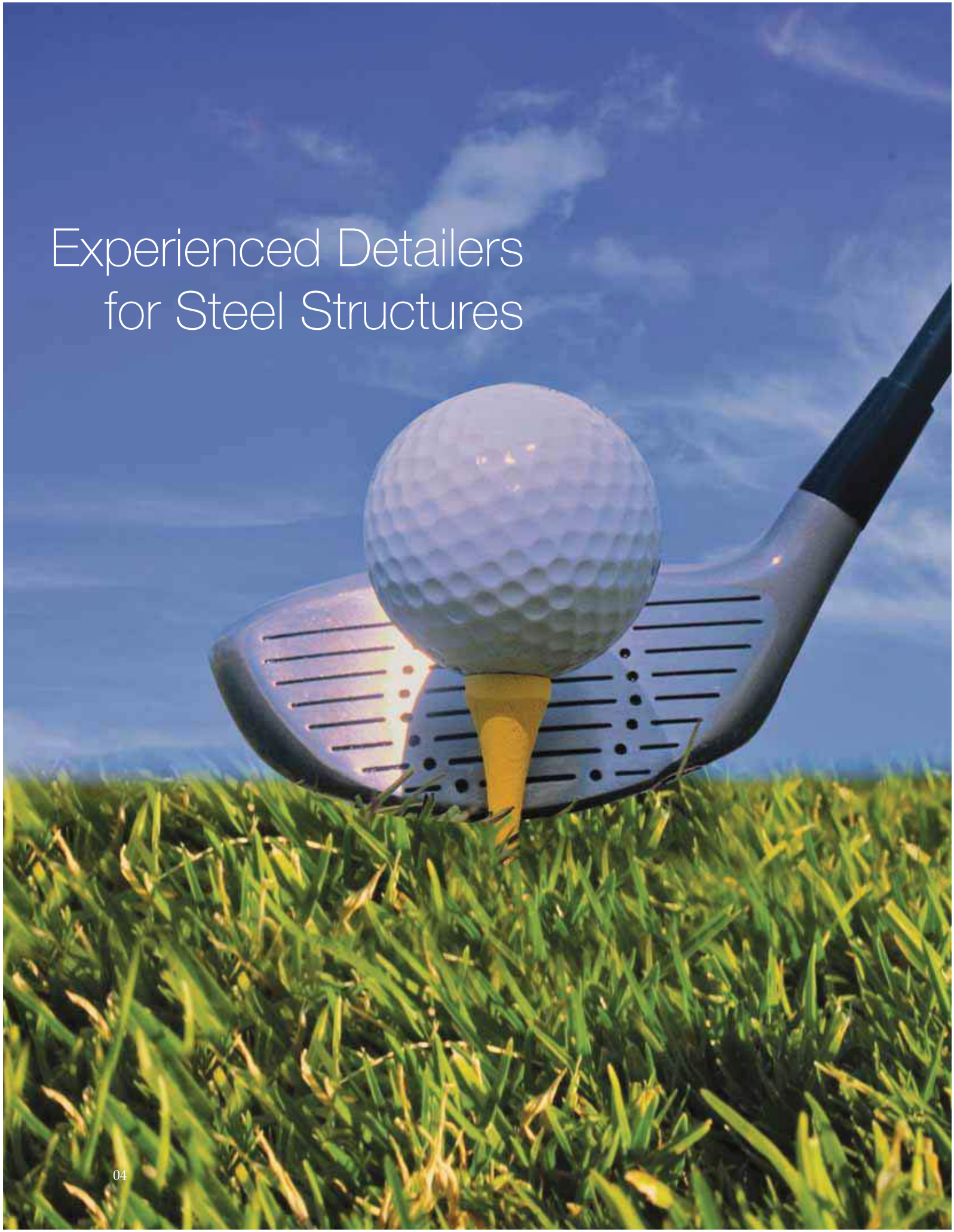
3D Modeling & Detailed Engineering Services

Ver. 02 / Mar. 2012



Contents

Experienced Detailers for Steel Structures



Introduction

Techflow Engineers (I) Pvt. Ltd. an ISO 9001 – 2008 certified company has emerged as a global leader in detailing zone. We have been breaking the boundaries of geographical limits and developing at lighting speed. With our deep-rooted establishment in India (Navi Mumbai) we have stretched across globally having international operations from USA thus giving a thrust to the detailing industry.

Our commitment to quality standards have resulted in client's absolute trust. Clients through out the world have believed and entrusted us with their most challenging and complex structures for error free project execution. Techflow has accepted the challenge and has "stood up" to the client's expectation and strengthened its business relationship with our customer.

Our project list includes some of the most renowned, admired structures, requiring some of the most unique composition of tasks ever found. Be it, commercial project or an industrial one, our creation services is flawless. Our Clients are based across the world to whom we offer our finest services. No challenge is big enough to hinder the zeal of our expert detailers

Our Team is very well conversant with the latest technology of detailing and has efficiently carried out each and every task delegated to us. They are continuously trained for error free project execution. Projects of any size and complexity can not encumber the vigor of our extremely professional team. Updated original software, extremely talented, trained and motivated team and infrastructure at its best have resulted in best quality services offered. Cost effective, timely delivery and adherence to commitment is achieved even at the toughest situation.

Sustained growth and premium Quality of Service in the cut throat competition makes us exceptional amongst our competitor.

Techflow is always been cherished and preferred for its services by its esteemed Clients. It is privileged to have such clients and would always attempt and secure their faith by being amongst the best ones.

Our Strength

Techflow being an ISO 9001 certified company encourages a systematic approach towards its work execution. Our firm commitment to adhere to Quality system lead down in Quality Manual concludes in Quality result in each and every aspect of our work. Thus our commitment to satisfy our customer needs by offering Quality Services at rights time in totality at a price which ensures our competitiveness is attained.

Our employees are our asset. Presently a team of 200+ professional detailers is developed through continuous Investment in training offered in latest Technology resulting in upgraded skill and knowledge of the employees.

Techflow has owned the rights of quite a large number of original 3D software for perfect and timely project completion. Hence any number and any size of project do not hinder our way while accepting projects from Clients. With our State of art Infrastructure and latest version of original software we can accept and perform hassle free task.

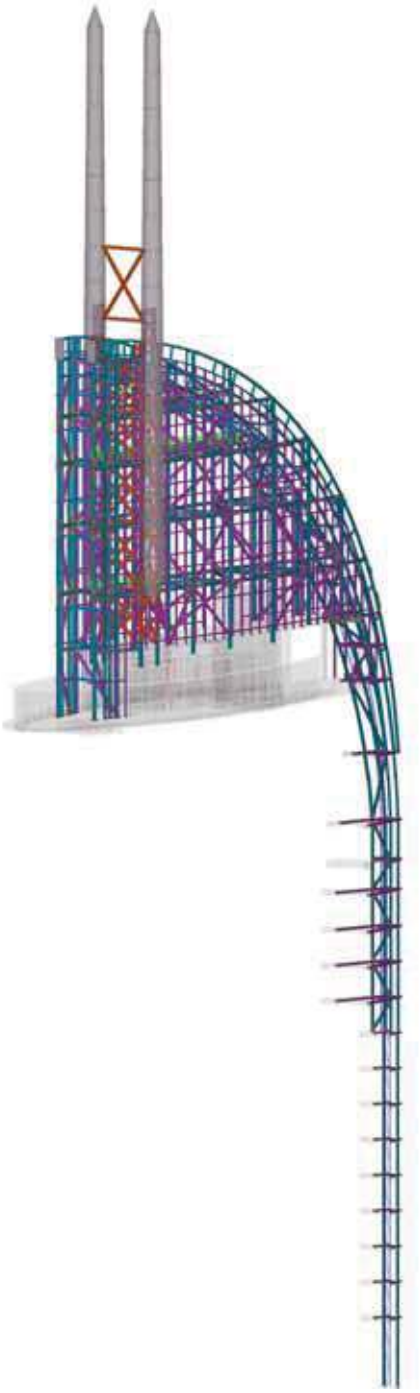
In a way we seek continuous improvement in Quality in all areas of business through progressive adoption of latest Technology, through employee effectiveness and through systematic method of project execution.

Software Licenses

TEKLA Structures	127
AutoCAD	20
CADian	05

The Address Downtown Dubai

Dubai's Newest Landmark



The Address Downtown Dubai formerly known as Burj Dubai Lake Hotel and Service Apartments is a super tall skyscraper set to rise 306 meters alongside the Dubai Mall. The mixed used tower contain a total of 63 floors.

This hotel is the second tallest hotel in the world, beaten only by the 412 meters Marina 101 Tower currently under construction; situated nearby in the 'Megablock Complex' at the Dubai Marina.

Designed by W.S. Atkins and Partners Overseas and built by one of the world's largest construction company, Emaar. Steelwork fabrication and erection with Al Nasr Engineering, Dubai.

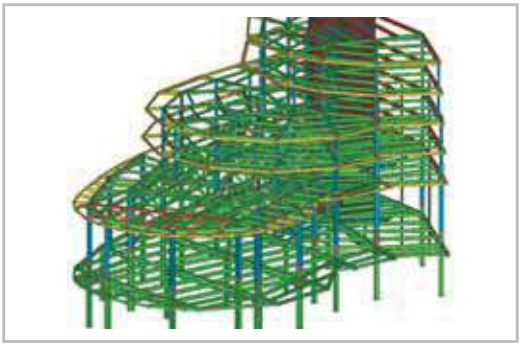
Techflow was selected to provide comprehensive connection design and steel detailing solution that can meet with the client requirement and schedule. There were two phases of steelwork in scope, each of it was 750 Metric Tons.

In phase 1 detailing of supporting structure for slab at 6th - 11th level. The supporting structure was of columns, beams and trusses. Trusses were about 17.5 meters long with 1.8 meters depth and fabricated as a single assembly.

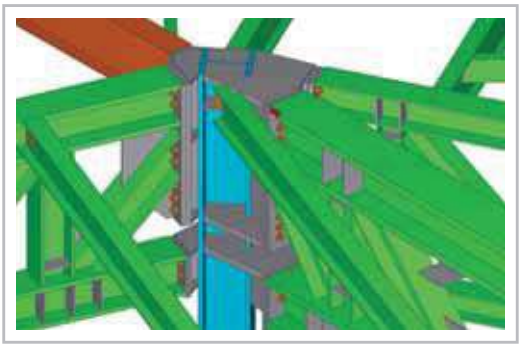
Phase 2 comprise of main entrance canopy at 6th level and roof crown starting from 170.85 meters above ground level and having a height of 104 meters. Two spires emerging from roof crown from both sides at 249 meters from ground level and with height of 57.89 meters.

Considering the complexity and height of structure from the ground level, Wind Tunnel Analysis was done based on ETABS and Robot.

Considering wind forces at this height, the structural consultant braced the crown in all the three directions. The crown is also checked for fatigue. All these factors resulted in 'I' shaped bracings of carrying heavy axial load in all directions.

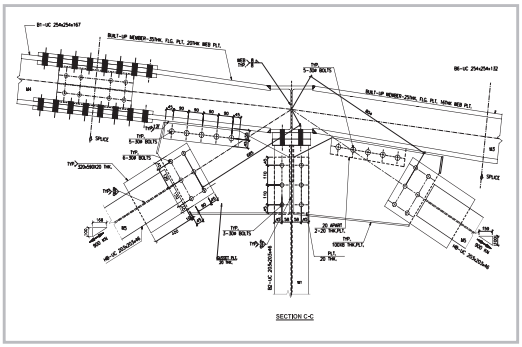


Resolving every force for connection designing and considering erection facility as well was a big task for design department. Connections were schematically design with loads provided on drawing by the design team and sent to the fabricator for approval. Limited lifting capacity of cranes (approx 1.5 Tons) was another obstacle. To resolve this, design team had to break the structure into number of pieces. After getting approval on sketches actual connection design starts as per BS 5950. All the connections are Taylor made to suit location and orientation of members. It took a month to design all the connections.

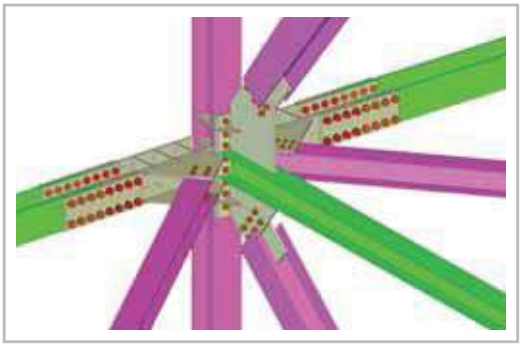


"It was very difficult task to manage bolted connections of more than 6 members at one joint throughout the structure. But with TEKLA Structures it becomes possible to develop such complicated connections without any conflict."

After designing the crown connections, spire connections with crown were designed. It was a slip critical connection for which GR 8.8 bolts required as per BS 4395 part 3. But it was not available in the market. To resolve, a kickoff meeting was immediately held where all participants met face-to-face and discussed the issues critical to expediting the erection.



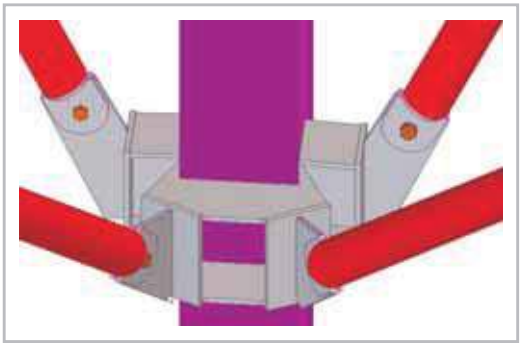
Procedures were established to speed up the flow of information between participants. One alternative was to fabricate shank out of GR 8.8 bolt or shift to A490 bolts supported by AISC standards. But entire design of structure is based on BS standards; test was conducted with both the standards and based on test results A490 bolt was selected.



Detailing, Fabrication and Erection

With critical aesthetic features designed into the steel structure, communication and coordination were essential for successful execution of the project. Cooperation between project managers involved in detailing and fabrication allowed the team to pursue the owner's aggressive schedule.

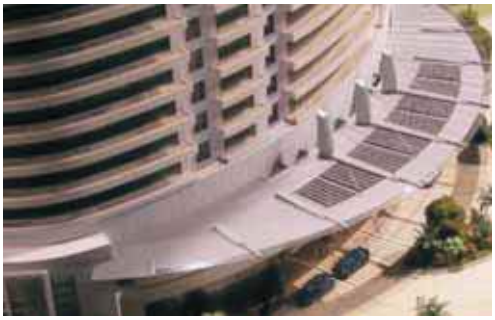
In order to efficiently and accurately produce shop drawings for the structure, we utilized Tekla Structure to produce virtual three-dimensional model.



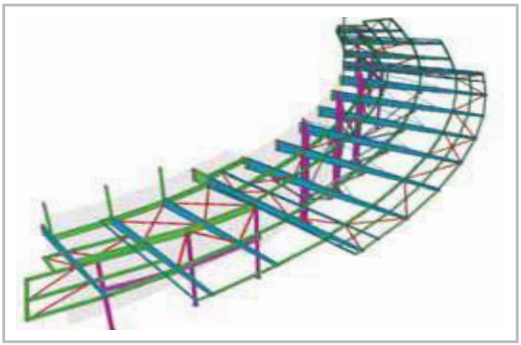
Despite the physical distance between fabricator and detailing team the use of e-mail and model's computerized graphics and renderings helped to communicate clearly.

Canopy

The structure had an entrance canopy which was a precamber canopy, with 107 meters in length and 16 meters in height. Considering the curve shape and setting out dimensions were missing in contract drawings; it was a tough task to place the members during modeling. To resolve this, contract drawings were imported in TEKLA Structures and members were placed using segments to achieve the curve shape. Built up sections were used for beams and columns.



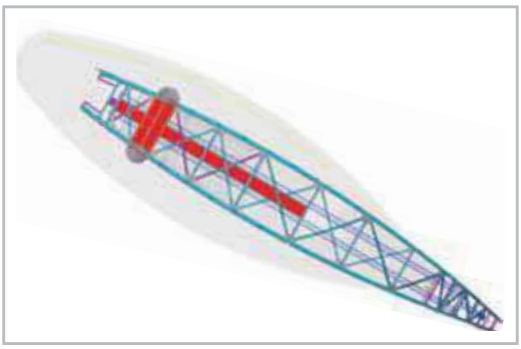
The canopy structure was cladded with 1.5 mm thick brushed stainless steel and 4 mm thick silver color Aluminum composite cladding panels.



Crown

The unusual shape of crown is unique in itself. In a elevation it looks like a cap in shape where as in plan it looks like a ship. The structure comprises of maintenance platforms, ladders and two 58 meters high spires. Considering the complexity of the structure participants involved in this project decided to detail this crown in 3 sequences; the bottom tail part, main crown and the spires.

The bottom tail part was 68 meters in length; starting point was at 170 meters height from ground level and goes up to 238 meters. 'A' shaped large cantilever area at 3.4 meter height provided for ladders used for maintenance and light zone. Main crown had four main floors with two maintenance platforms.

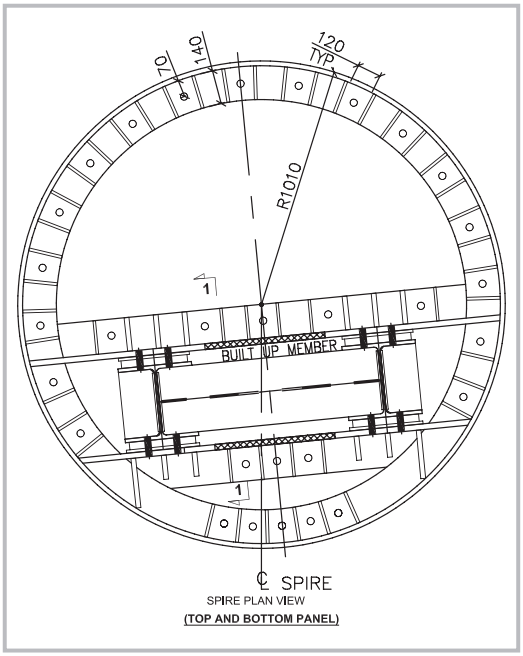


These platforms connect the crown with spires. Two continuous ladders are running along with the external area of the crown. The crown is cladded with the glass and 4 mm thick white color Aluminum composite panels.

Spires

Steel plated two spires of about 58 meters in height are connected with crown. Out of 58 meters, 26 meters are supported with crown where as 32 meters is a cantilever area. Bottom diameter of the spire is 2.5 meter and top diameter is 0.6 meters. Ladders are provided to connect intermediate maintenance platforms. Due to the narrow shape of the spires, detailers had to face problem to detail out the connections.

Techflow's accuracy in detailing and Al Nasr's precision in fabrication resulted in smooth and rapid erection with minimal field modifications.



Owner

Emaar

Architect & Structural Engineer

W.S. Atkins Partners & Overseas

Fabricator

Al Nasr Engineering

Our Scope of Work

Connection Designing & Structural Steel Detailing


furionopolis
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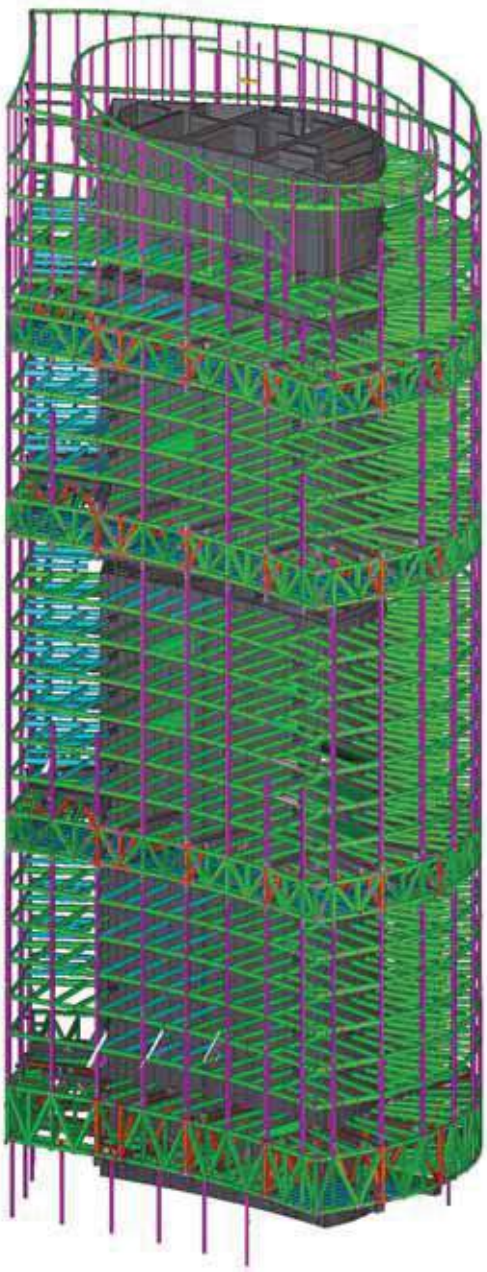
Fusionopolis Information & Commercial Technology Park

The Hub of Infocomm & Media industries

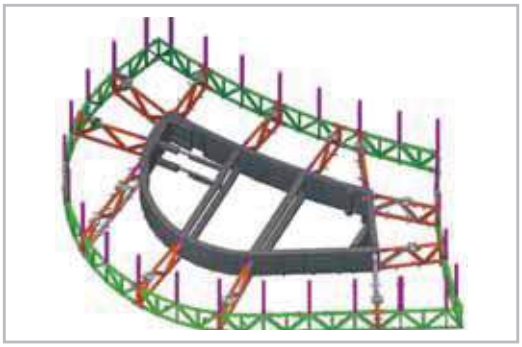


The first of its kind structure in Singapore, Fusionopolis is a 22-24 storey commercial Information and communication Technology (ICT) building located within Central Xchange, a cluster for infocomms and media industries in Singapore's new futuristic city One-North. These buildings consist of a steel structure framework, supported by 3 large tower cores.

Conceptual design was done by world renowned architect Kisho Kurokawa, however architectural consultant was Jurong Consultants Pte. Ltd. and built by the one of the world's largest construction company, Shimizu Corporation. Steelwork, fabrication and erection with Yongnam Holdings Limited.

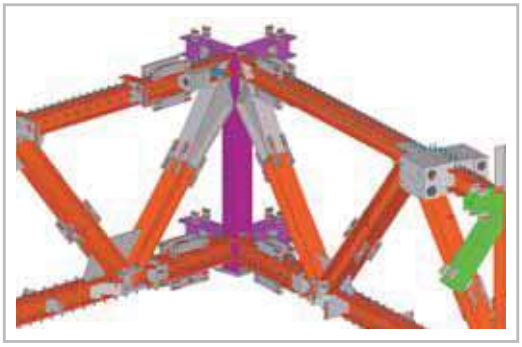
For reducing time span of project, fabrication need to start before final fixing of design by architect and structural consultant.

Techflow was selected to provide comprehensive steel detailing solution that can meet with the client requirement and schedule. Construction proceeded smoothly due to close coordination of all the agencies with N. Srinivasa Rao, Manager – Drawing Office of Yongnam Holdings Limited.



"Since all agencies were working simultaneously, drawings were revised after regular interval.

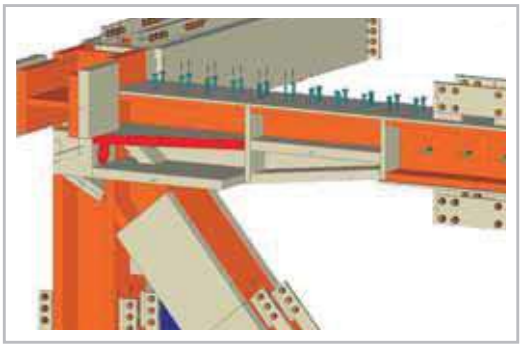
Besides the changes done by architect and consultant, moving with target fixed for submission of shop drawings was a really difficult task, which was achieved by our team"



Technical Features

This building comprises of shear wall at centre, mega cantilever trusses, super columns, peripheral trusses, stub columns and secondary beam. Shear wall is at centre of the building from which 12 cantilever trusses of 15 meters long were extended up to edge of building. These were placed at 4th, 11th, 17th and 22nd level.

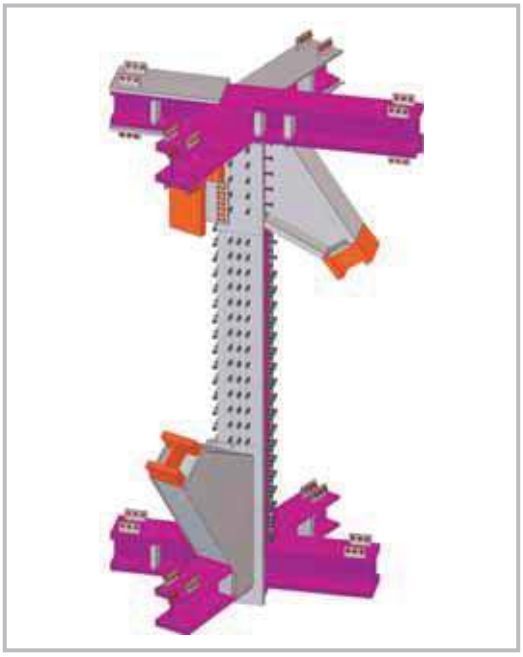
The height of each mega cantilever truss was one floor (4/6 meters height) level. These trusses were connected with 9 super columns embedded in core shear wall and supports stub column and peripheral trusses. Intermediate floors are supported by peripheral trusses running between stub columns and secondary beams.



The top chord is also provided with post tension cables for which anchor block were provided to lock the tendons.

The steel floor framing connection to the concrete wall was established by using embedded steel plates with shear bar anchors. A steel shear plate was field welded to the embedded plate with high-strength snug-tight bolts for the pate-to-beam connections.

Locating super columns in RCC shear wall was a challenging part of this project. As these columns need to be located considering actual location of reinforcement. Slight changes in location of super column revises all the drawings of mega and secondary trusses.



Owner

JTC Corporation, Singapore

Architect

Kisho Kurokawa architect & associates

Structural Consultant

Jurong Consultants Pte., Ltd., Singapore

Fabricator/Contractor

Yongnam Engineering & Construction Pte. Ltd., Singapore

Our Scope of Work

Structural Steel Detailing

Our Capability

Engineering services

Connection Design of Steel Structures

Detailing Services

Structural & Miscellaneous Steel Detailing - Erection & Shop Drawings, FabTrol Reports, CNC Files, DXF Files etc.

Steel Joist & Deck Detailing - Detailing of Open Web Steel Joists & Deck

Equipment Detailing - Detailed drawings of storage and measuring tanks, Pressure vessels

Estimation Services

Pre-bid Estimation, Drawing Checking & Field Checking

Material Take-off's

Advanced Bill of Material, Field Bolt List, Point to Point Bolt List

Deputation Services

Engineering assistance to the companies to execute the projects in-house.

Plate Nesting Services

Plate Cutting Layouts & Reports


Richmond Olympic Oval
6111 River Road

Signature Projects

Richmond Olympic Oval

Fabricator/Contractor: George Third & Son Ltd., Burnaby, B.C. - Canada

Architect: Cannon Johnston Architecture Inc. & Glotman Simpson, Vancouver - Canada

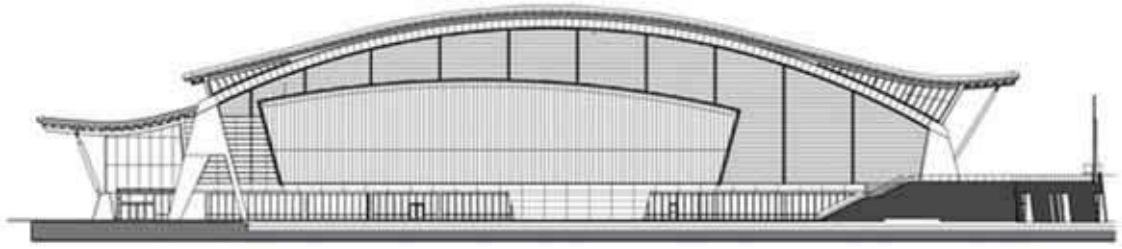
Structural Consultant: Fast+EPP Structural Engineers, Vancouver - Canada

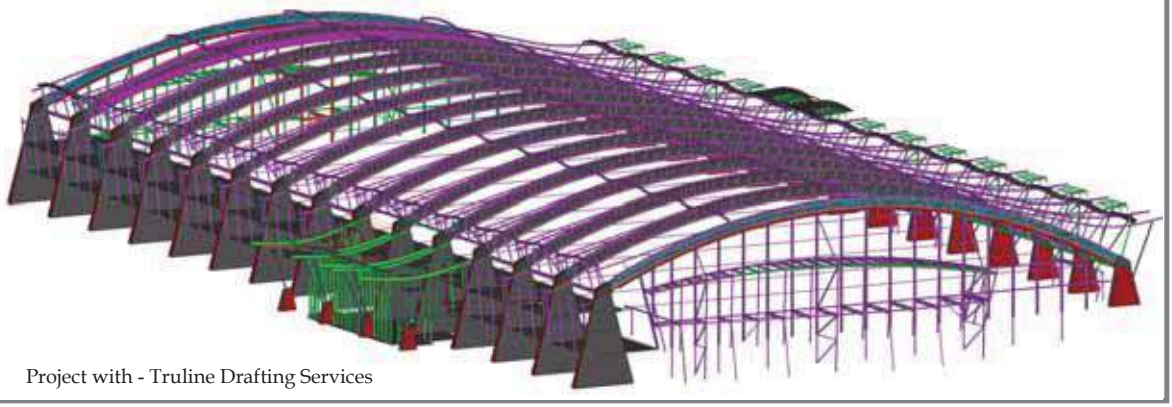
Location: Richmond, B.C. - Canada

Tonnage: 1000 MT

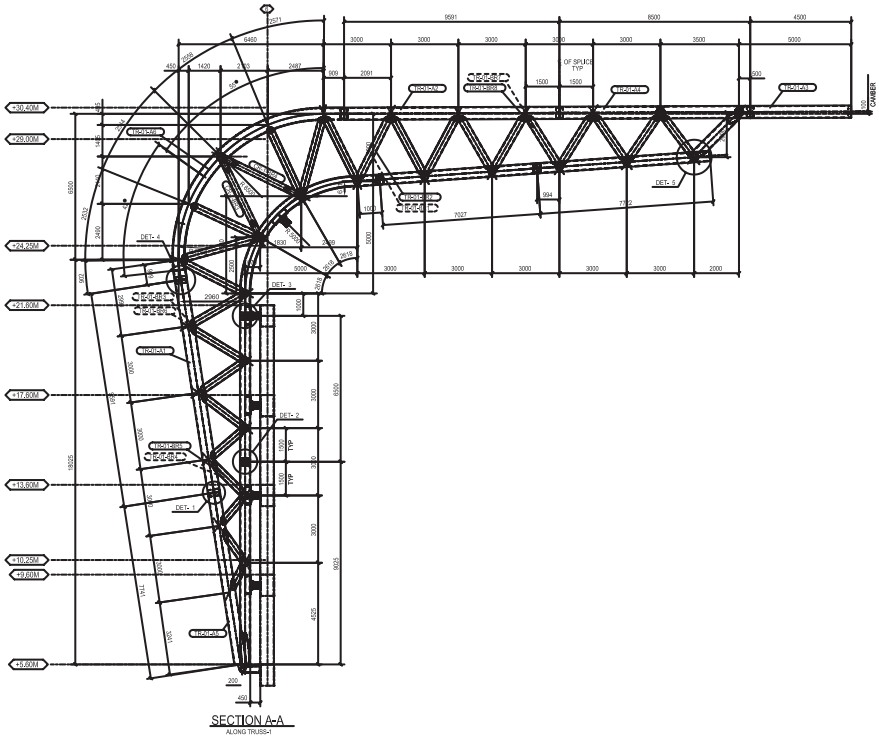
The Richmond Olympic Oval was a major venue of the 2010 Winter Olympics. The building is mainly composed of a 33,000 m^2 oval. It is a house a 400-metre speed skating track with a capacity for approximately 8,000 guests. The roof of the Richmond Oval features an innovative and unique wave design, accentuating arched trusses and rafters, and a curvature in the surface panels that gives the roof a rippled appearance, spanning an area of about 250,000 square feet.

'I' sections and 'Tube' sections were used mainly as structural members. There were numerous coordination that involved glulam beam arches and prefabricated one-of-a-kind wood wave panels for detailing of the structural members. The detailing completed within 3 months duration which consist of preparation of around 3500 fabrication drawings (Truss, Assembly & Part) and 29 erection drawings. Teamwork between Techflow and Truline made this project successful within an aggressive schedule.





Project with - Truline Drafting Services


+30.40M
+28.00M
+24.25M
+21.60M
+17.60M
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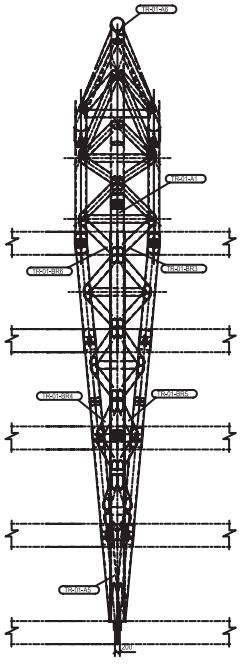
+10.25M
+9.60M
+5.60M
SECTION A-A
ALONG TRUSS-1



Signature Projects

Reconstruction of Wankhede Stadium

Contractor: Larsen & Toubro Limited (ECC Division), Mumbai - India

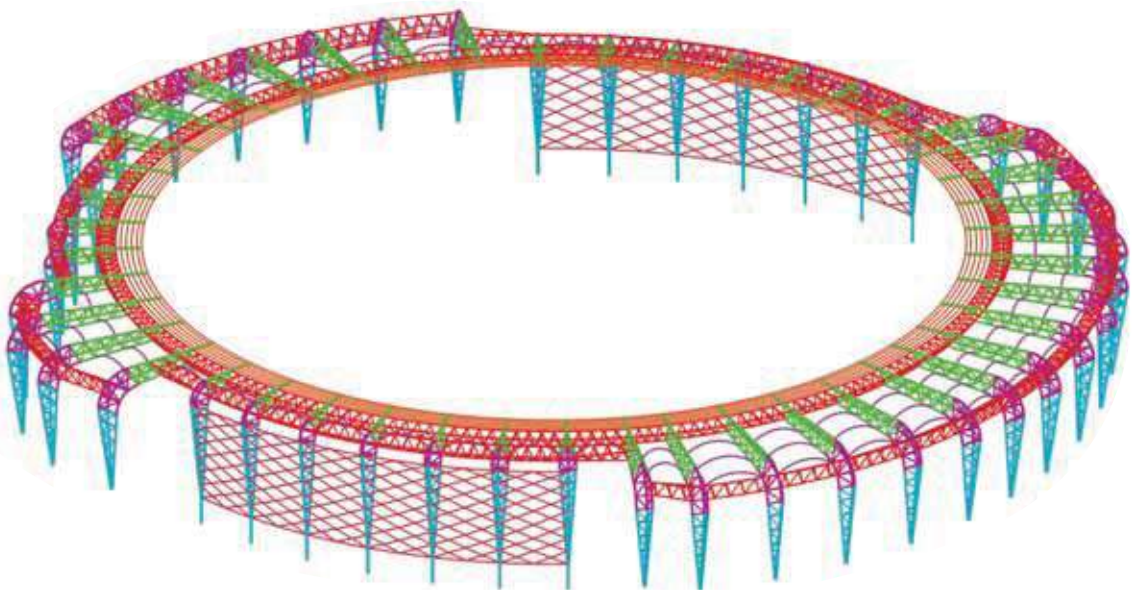
Architect: P.K. Das & Associates and Shashi Prabhu & Associates, Mumbai - India

Structural Consultant: Mahimtura Consultants Pvt. Ltd., Mumbai - India

Location: Mumbai - India

Tonnage: 4000 MT

The most historical landmark of Mumbai, Wankhede Stadium has undergone a reconstruction for preparation for the 2011 Cricket World Cup. As part of the renovation, the main entrance is being widened, and capacity is being increased by demolishing and building a new North and South Stands and refurbishing the East and West Stands. The seating capacity was also increase to 45,000 from 35,000. There was a new roof covering built for the entire stadium. The 25 metre cantilevered roof is the most interesting feature of the proposed stadium. It completely opens up the stands as no pillars or supports come in the way of the spectator's view. The incline of the stands has been carefully planned so that from any part and any level in the stands the ball can be seen as it rises up or travels across the boundary. Another aspect of this challenging project was the tight time-frame. The project was to be completed in 22 months and was to be absolutely ready for the cricket world cup in February 2011.



Signature Projects

GMS Commercial Building

Fabricator/Contractor: Pratibha Industries Ltd., Mumbai - India

Architect: Kamal Malik, Mumbai - India

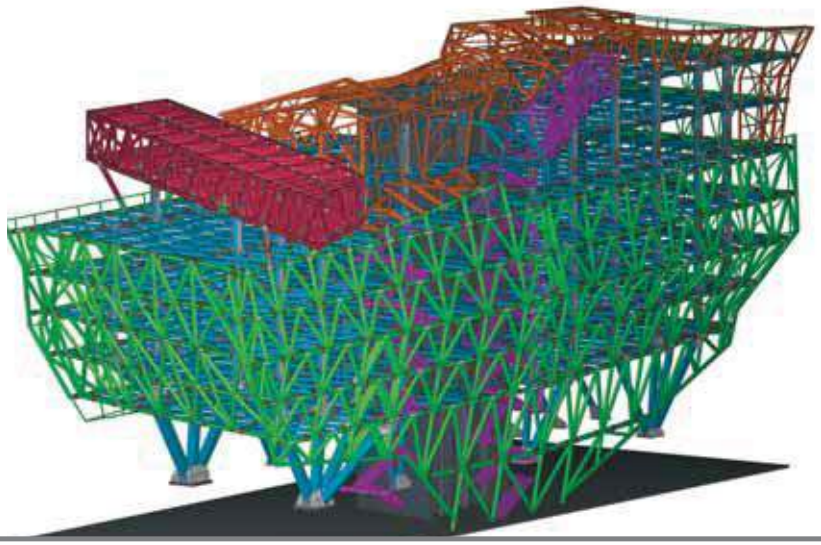
Structural Consultant: WSP Group, Delhi - India

Location: Mumbai - India

Tonnage: 2200 MT

An office building located in the heart of Mumbai, the business capital of India. Techflow was appointed as a connection design and detailing consultant for this project. Connection designing for this project was a quiet tough task due to the unsymmetrical shape and huge cantilever supported area of building. The challenging factor of the building was designing and detailing of the skin truss because of its shape, size and geometry.

The complex structure and huge cantilever supported area made it difficult to erect the building floor wise, hence Techflow proposed to erect the core area at middle of building till terrace level. Accordingly the team planned the erection methodology and divided the building in to 7 sequences. Skin Truss geometry and layout was very difficult to execute from 2D drawings. Hence the team had decided to derive the basic skin truss locating coordinates from the REVITT model prepared by the architect. The another major part in this project was the directors cabin above the terrace level which has almost a cantilever extending more than 20 meters, having a complex connection to design, detail and erect. Techflow had assigned their highly professional staff for designing and detailing. It took three months for the connection designing and six plan months for the detailing of entire project.



Signature Projects

JSW Headquarters

Fabricator/Contractor: Orbit, Inc., Mumbai - India

Architect: Burt, Hill, Washington DC - USA

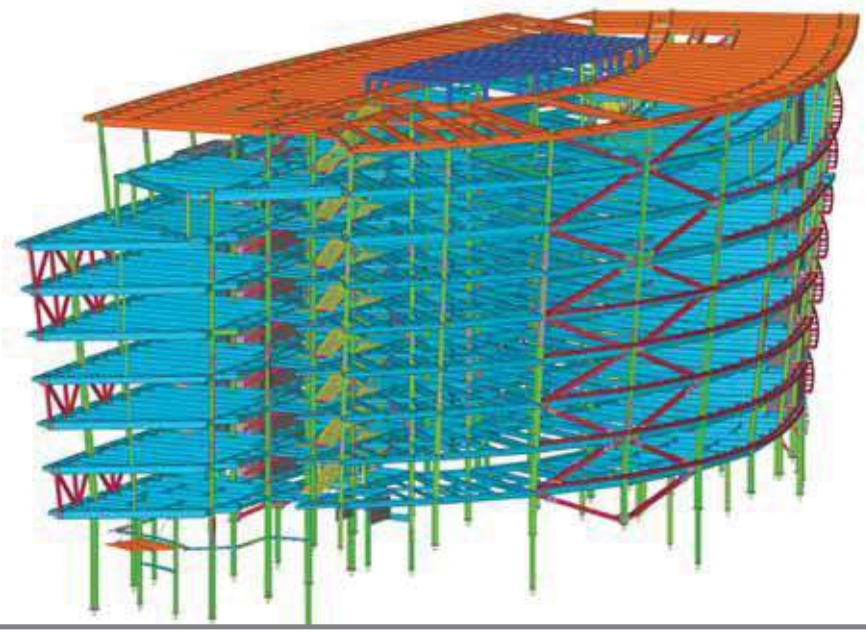
Structural Consultant: Leslie E. Robertson Associates, R.L.L.P, New York - USA &
Dr. Kelkar Designs Pvt. Ltd., Mumbai - India

Location: Mumbai - India

Tonnage: 3600 MT

Headquarters for JSW is one of the largest completely open office complexes in Mumbai. The building is designed to achieve a LEED Platinum rating, and incorporates not only the most advanced sustainable building technologies, but also the latest concepts in corporate office design and configuration. With its large atrium inside and the entirety of the exterior glazed with a high-performance double skin, the building will receive maximum natural light while maintaining extremely efficient systems operations.

This project consists of a 12 story steel structure housing a 350,000-sf (32,500-sm) office tower above a two story, 85,000-sf (7,900-sm) basement for parking. The central atrium is 11 stories and connect the two wings of the building. The peripheral columns are inclined by 6o and atrium columns were exposed to wether with transparent glass cladding 100 mm dia. SS pins were used to connect atrium braces. Our scope for this structure was connection design and detailing.



Signature Projects

Centerpoint West Office Building & Parking Garage

Fabricator: AI Industries, Surrey, B.C. - Canada

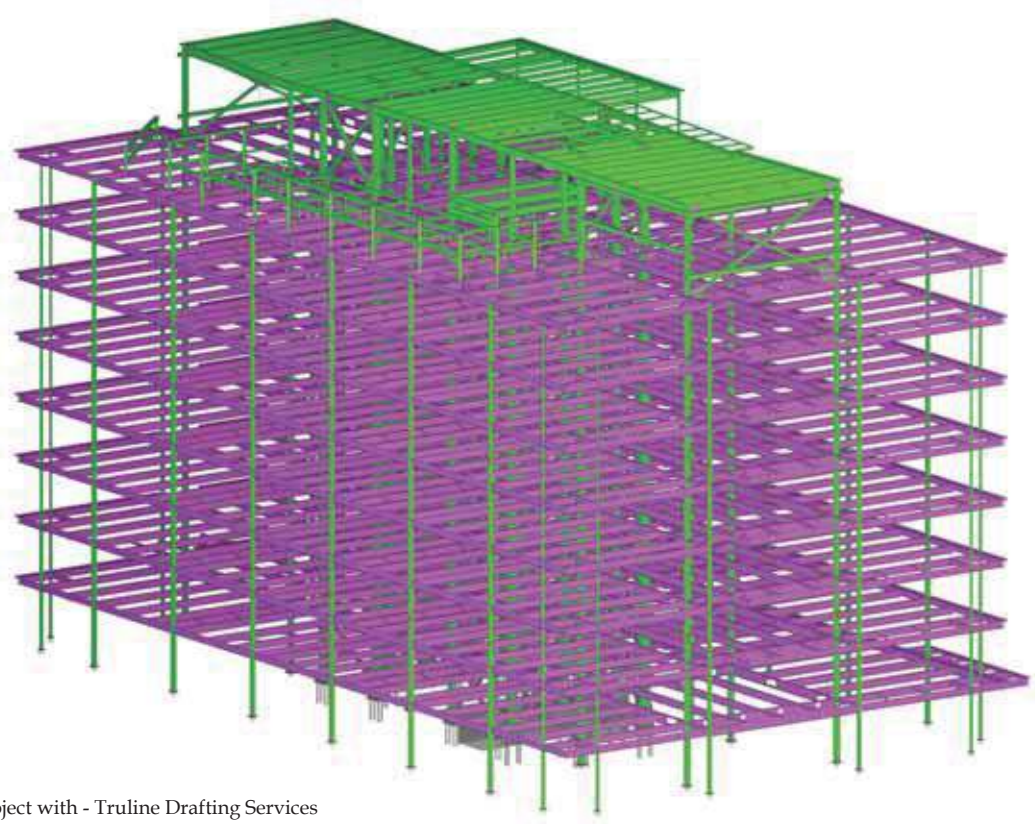
Architect: RIM Architects, Anchorage, Alaska - USA

Structural Consultant: BBFM Engineers Inc., Anchorage, Alaska - USA

Location: Anchorage, Alaska - USA

Tonnage: 1580 MT

The new Centerpoint West office building is a five-story building with approximately 200,000 sf of high quality corporate office environment. A total of 600 parking spaces are provided, with 360 of the spaces in a parking structure immediately west of the building. Radiused canopies are positioned at two entrances. Structurally, the building is a composite structural steel frame laterally supported by a special concentrically braced frame. This design/build project provided high quality design and construction despite a very aggressive time schedule.



Project with - Truline Drafting Services

Signature Projects

Sunshine Towers

Fabricator/Contractor: Pratibha Pipes & Structural Ltd., Mumbai - India

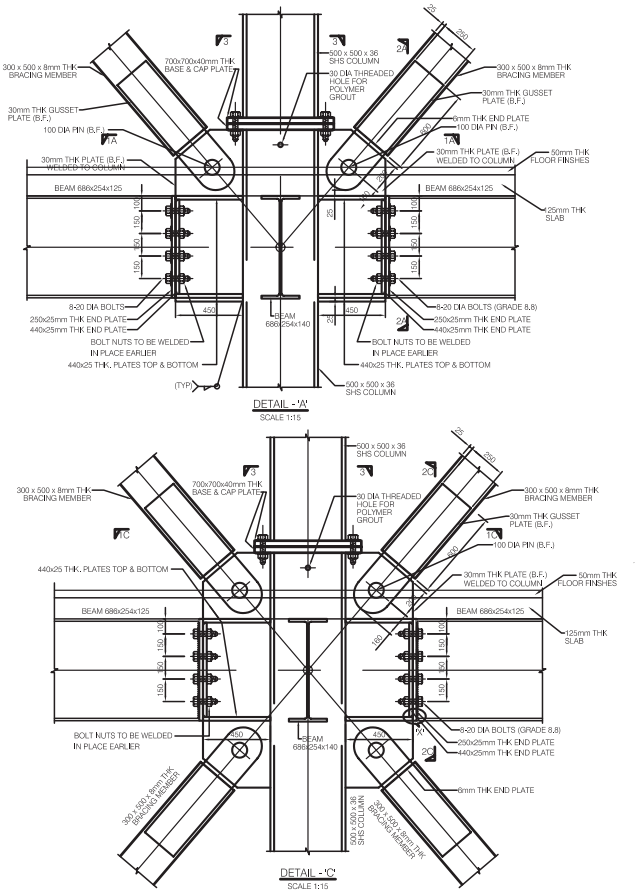
Architect: Raja Aederi Consultants Pvt. Ltd., Mumbai - India

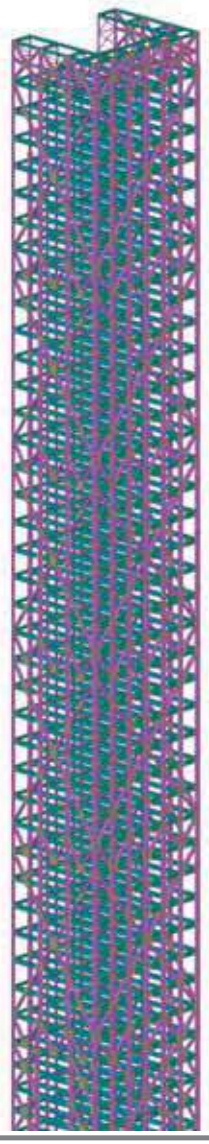
Structural Consultant: Sterling Engg. Consultancy Services Pvt. Ltd., Mumbai - India

Location: Mumbai - India

Tonnage: 2600 MT

Sunshine Tower is one of the tallest composite buildings in India. The building is a 42 storey commercial structure with a height of 195 mtrs. Structural columns imported by Corus and Concrete used is about 15000 cu.mt.






CONRAD

Signature Projects

PPM Conrad Hotel

Contractor: Al-Nasr Engineering, Dubai - UAE

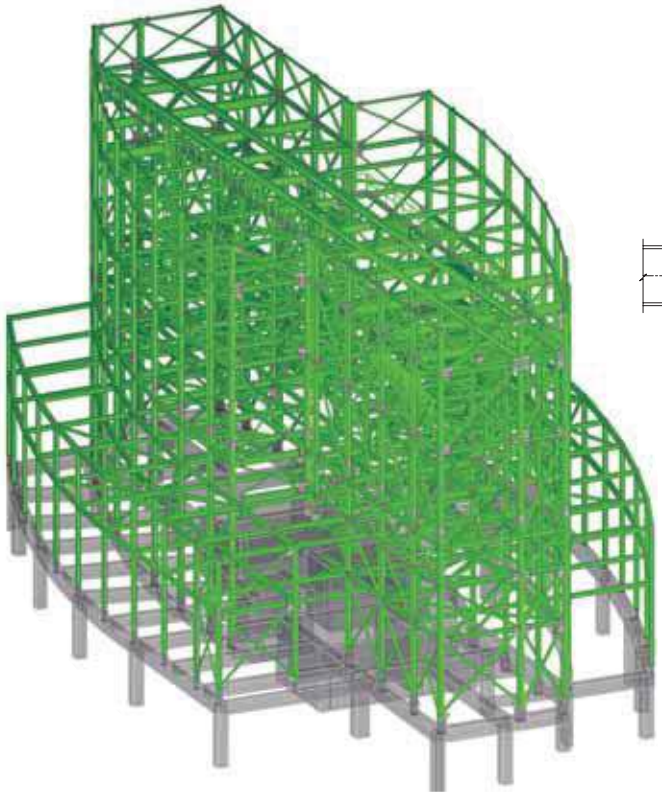
Architect: WS Atkins & Partners Overseas, Dubai - UAE

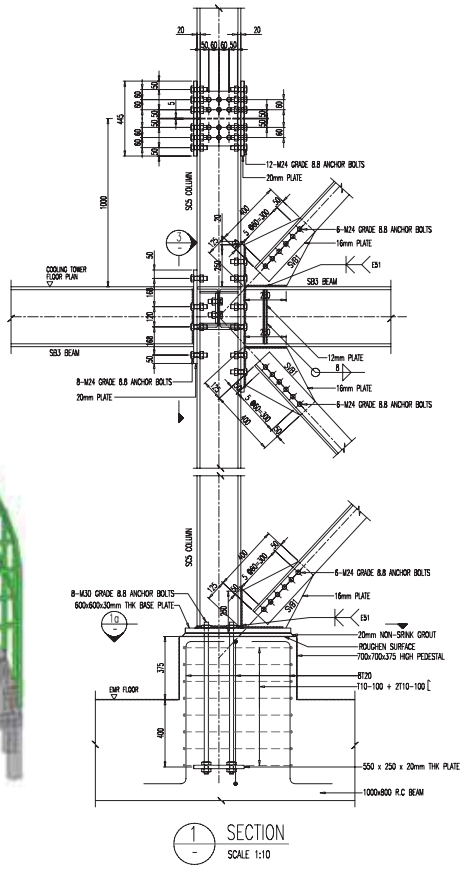
Structural Consultant: Beca Group Ltd., Singapore

Location: Dubai - UAE

Tonnage: 5600 MT

The Conrad Hotel is a luxury brand of Hilton International located in the heart of Dubai's commercial, business and entertainment district at Shaikh Zayed Road. It comprises of a 51 storey tower linked to 13 level automated car park building. Podium up to level 6, roof, pool deck, landscape and car parking area is constructed in structural steel. The tower has a structural height of 255 m (837 ft). Techflow was awarded for connection design and detailing of the project.






4331

Signature Projects

Gateway Casino, Radisson Villa

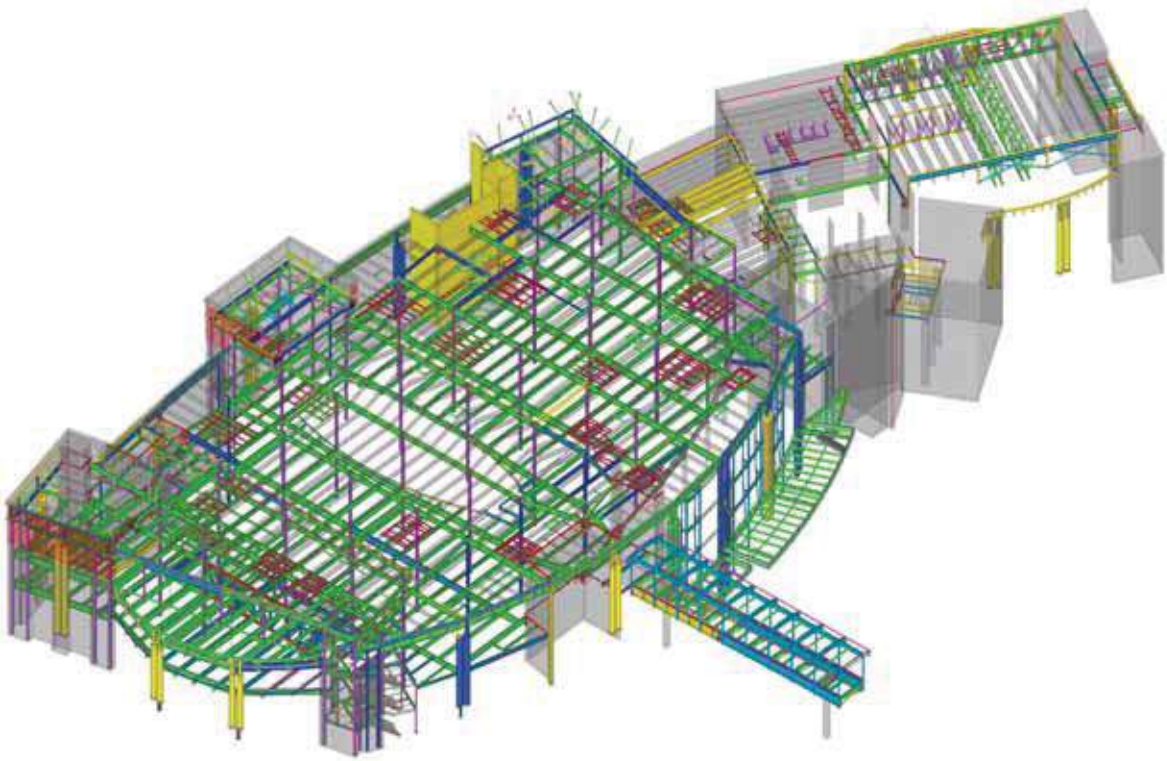
Fabricator/Contractor: George Third & Son Ltd., Burnaby - Canada

Architect: Hewitt + Kwasnicky Architects, Inc.

Structural Consultant: Read Jones Christofferson Consulting Engineers, Vancouver - Canada

Location: Everett - Burnaby, B.C. - Canada

Tonnage: 1000 MT



Project with - Truline Drafting Services


BOEING
787


BOEING
787

Signature Projects

Boeing New Everett Delivery Center Building 45-011

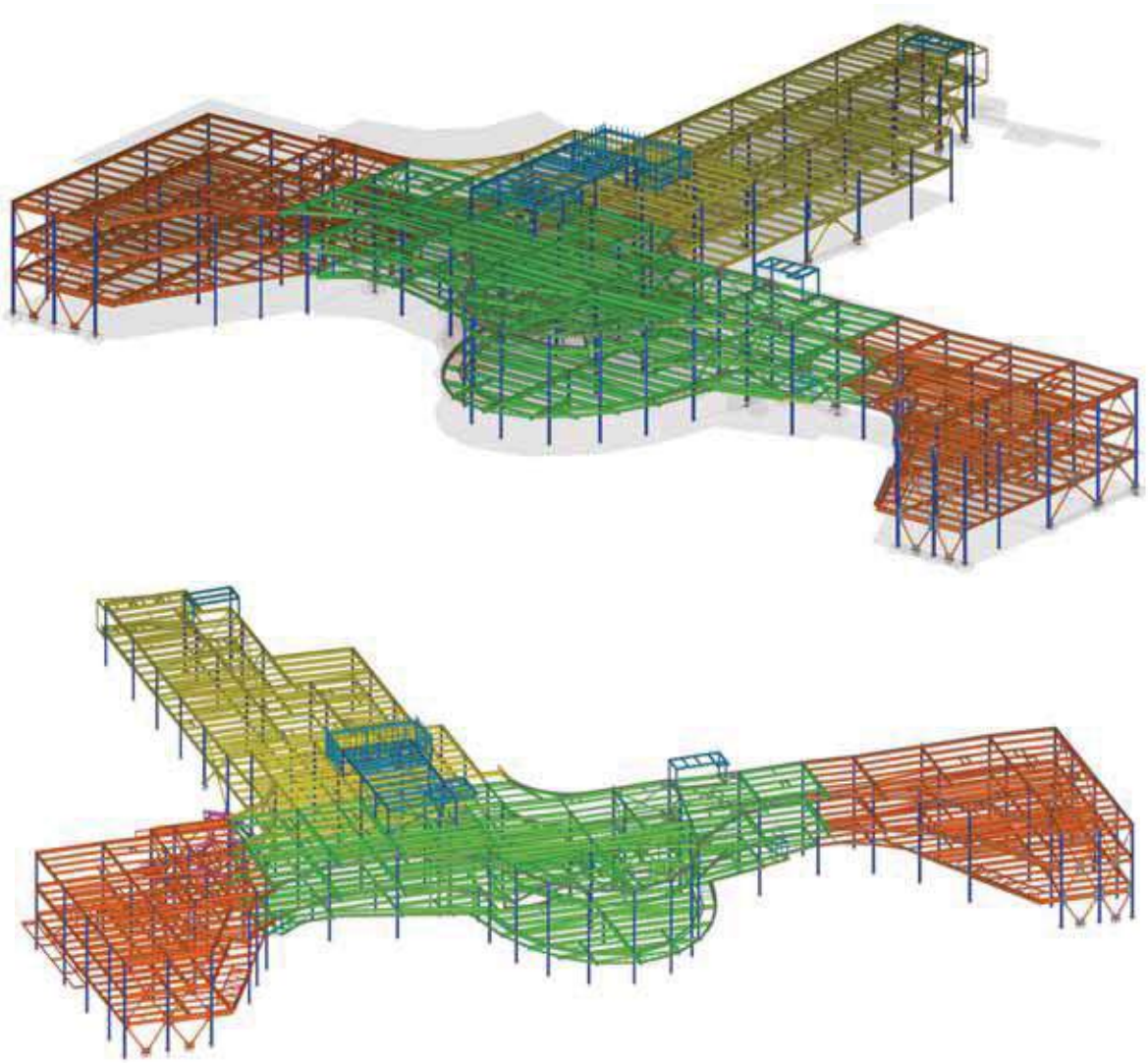
Fabricator/Contractor: AI Industries

Architect: DLR Group

Structural Consultant: Magnusson Klemencic Associates, Seattle - USA

Location: Everett - USA

Tonnage: 4000 MT



Project with - Truline Drafting Services

Signature Projects

Airport Terminal Building

Fabricator/Contractor: Pratibha Pipes & Structural Pvt. Ltd., Mumbai - India

Architect: D.V. Joshi & Co., Mumbai - India

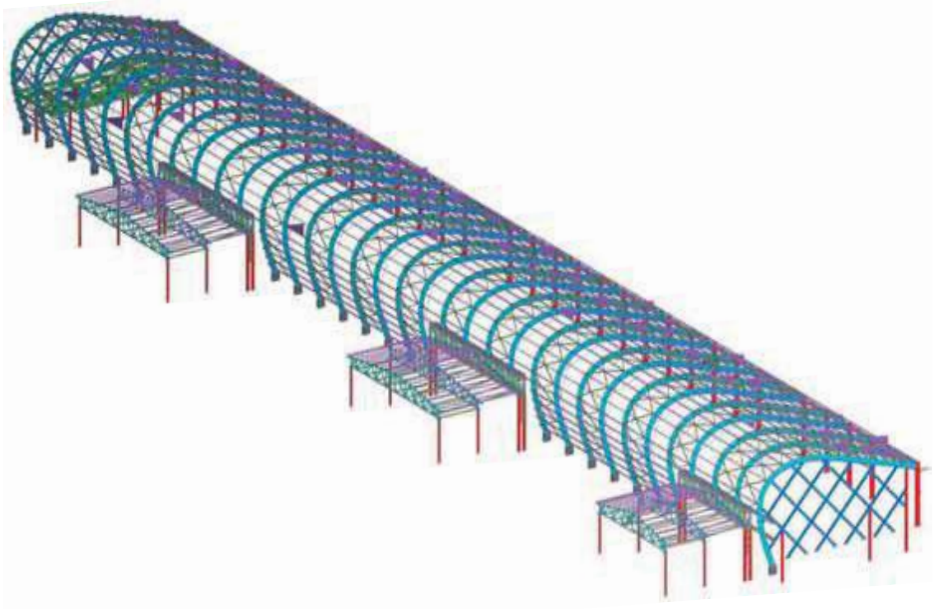
Structural Consultant: Mahimtura Consultants Pvt. Ltd., Mumbai - India

Location: Mumbai - India

Tonnage: 725 MT

Mumbai's Chatrapati Shivaji International Airport (formerly Sahar International Airport) is the busiest airport in India, and caters to cargo and passenger flights. It has two terminals the Domestic Terminal and the International Terminal. The domestic terminal has two terminals Terminal 1A and Terminal 1B. Terminal 1B (with an area of 45000 sq. meters.) was modified to meet the growing demands of air traffic. This terminal building has been described in India, a marvel of design, engineering, and technology.

The main feature of the project was its shape, the shape of the rafter. Tekla Structures made it simple and easy to complete the project within specified time. It took around 15 days for the detailing to fix the geometry of the rafter as per the requirement of architect and client. The capsule shaped two plates were welded to join with each other thus giving the shape to the rafter. A single truss being made up of 8 segments of capsule shaped plates. Placing the purlin on curvature of the main rafter and all welded connections was made easy with Tekla Structures to give aesthetic look to this massive structures.




Emirates

Signature Projects

Emirates Engineering Centre - Hangar H

Fabricator/Contractor: Cleveland Bridge & Engineering Middle East (Pvt.) Ltd.

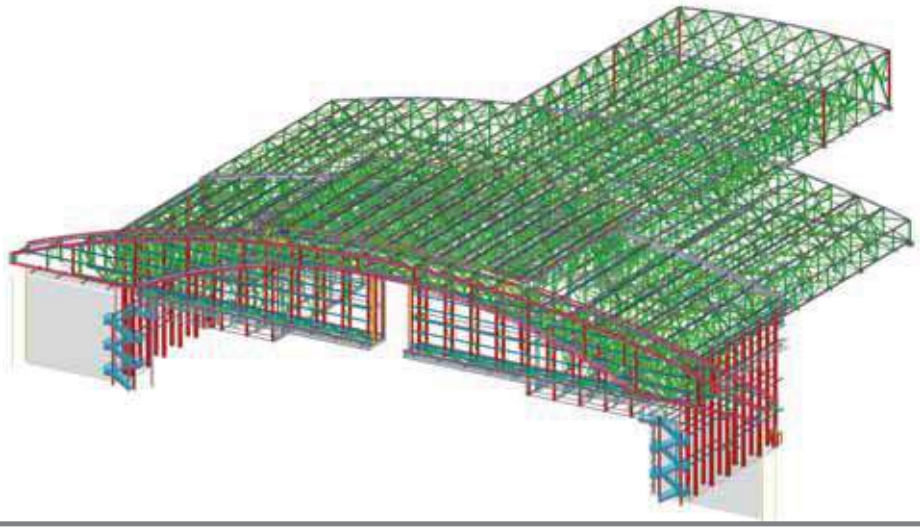
Architect/Structural Consultant: Airport de Paris (ADPI), Dubai - UAE

Location: Dubai - UAE

Tonnage: 2650 MT

The state-of-the-art Emirates Engineering Centre at Dubai International Airport; Designed by Airport de Paris, the new facility is one of the largest civil aviation maintenance facilities in the world, encompassing 55 hectares and comprising eight aircraft hangars and one of the largest workshop facilities in the Middle East. Built in the shape of perfect squares each hangar measured 110 meters by 110 meters. Techflow was awarded for connection design and detailing of hanger 'H'. The total weight of the structural steel utilized amounted to 2650 tons. Hangar has an entrance gate 88 meters wide and bay can accommodate any size of aircraft with an engine thrust of up to 150 pounds, including the Airbus A380, which is 73 meters long with an 80-metre wing span and a tail 24 meters high.

Connection design and detailing of trusses was the core part of this project. Connections were designed in accordance with BS standard. Special precautions were taken while connection design and detailing for avoiding the clashes with the facade members. Main trusses were detailed in 3 parts with actual pre cambering method. Due to huge size, details and numbers of connecting parts each truss assembly were required to be detailed in 5-6 A1 size drawings. The connection design and detailing were completed within aggressive schedule of 10 months.



Signature Projects

Mount Rainier High School

Contractor: AI Industries, Surrey, B.C. - Canada

Architect: BLRB Architects

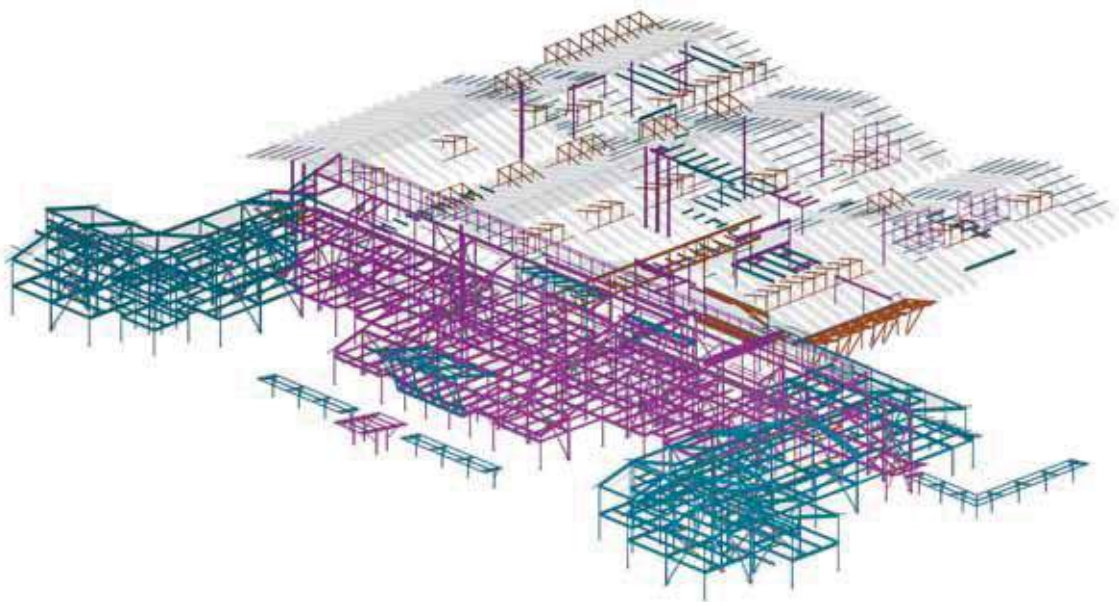
Structural Consultant: BLRB Architects

Location: Des Moines, Washington - USA

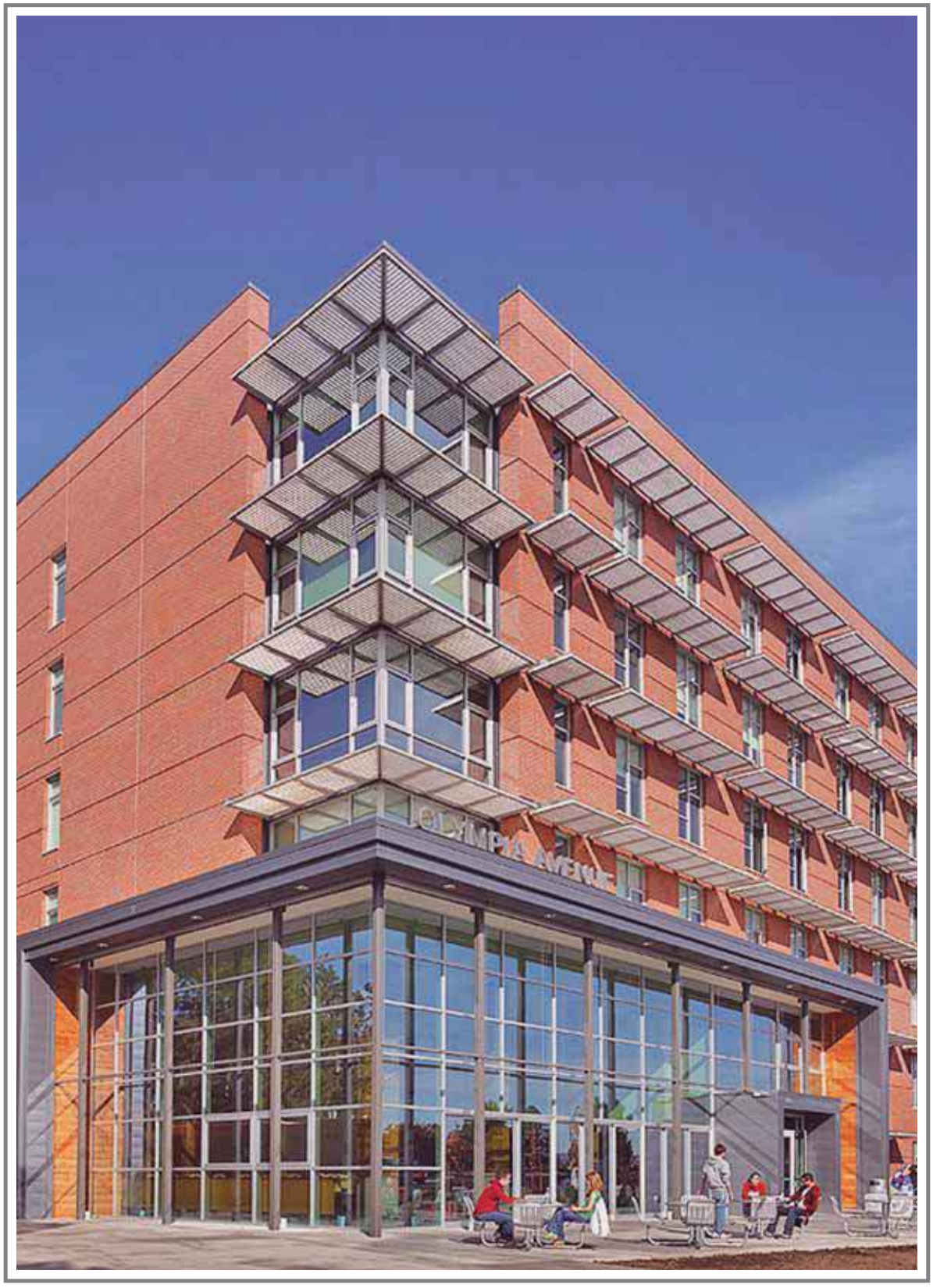
Tonnage: 1100 MT

Mount Rainier school is located nearby SeaTac International Airport. The building is comprised of two-story L-shaped classroom wings, each housing two interdisciplinary learning communities, designed to function as "small learning centers." Sustainable features of the building include maximum use of day lighting.

This project entailed the complete abatement and demolition of an existing 137,000 SF multi-building high school built in 1958. The new 2-story 207,000 SF school is a masonry and steel structure with a metal roof.



Project with - Truline Drafting Services



Signature Projects

Olympia Avenue Student Housing

Fabricator: Lonewolf Welding & Fabrication, Inc.

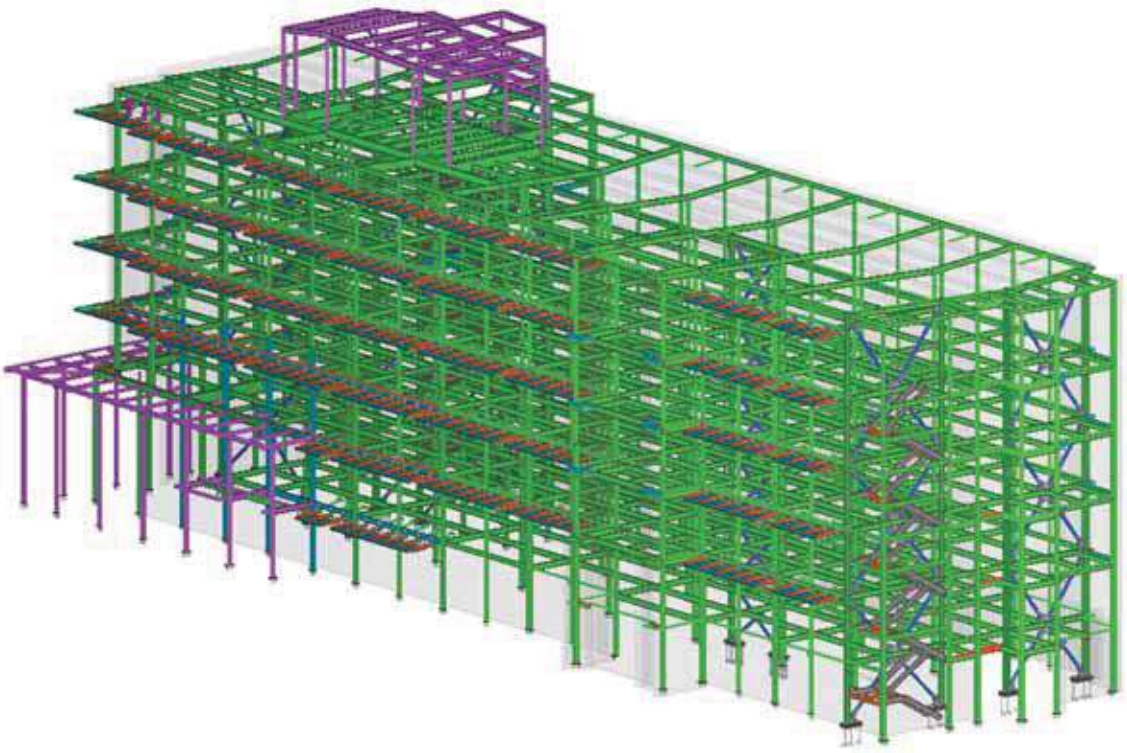
Architect: Mithun's architects, Seattle, Washington - USA

Structural Consultant: Coughlin Porter Lundeen, Seattle, Washington - USA

Location: Pullman, Washington - USA

Tonnage: 377 MT

The first new student housing development on the Pullman campus since 1972, the Olympia Avenue facility sets a standard of quality for residential life, offering flexibility to adapt to changing needs while reflecting the University's values in sustainability and commitment to enhancing the student experience. The building is the first of three phases in this live/learn campus precinct, with each floor housing a mixture of apartments, 2 and 4-bed suites, and traditional dorm rooms with community restrooms.



Project with - Truline Drafting Services

Signature Projects

Chiawana High School

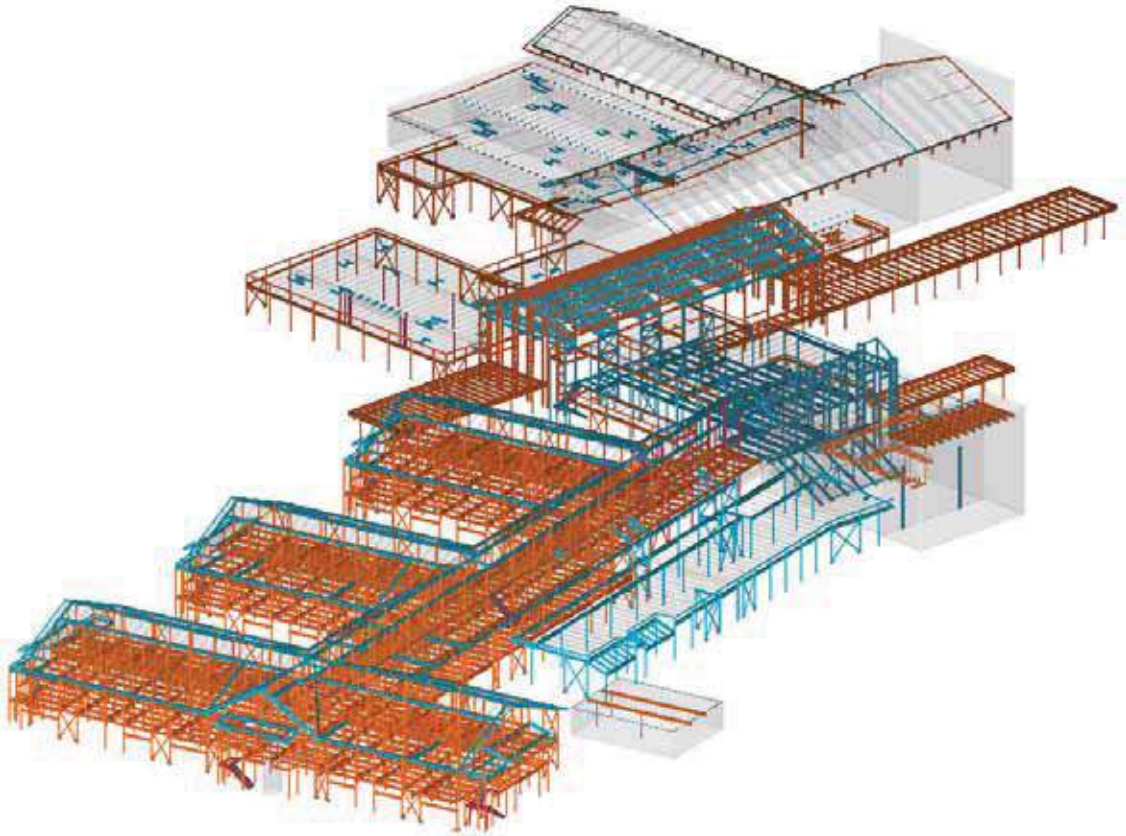
Fabricator: Allied Steel, Lewistown, Montana - USA

Architect: LoofBurrow Architects, Yakima, Washington - USA

Structural Consultant: Meier Enterprises, Inc., Kennewick, Washington

Location: Pasco, Washington

Tonnage: 1100 MT



Project with - Truline Drafting Services

Signature Projects

Shorewood High School Replacement

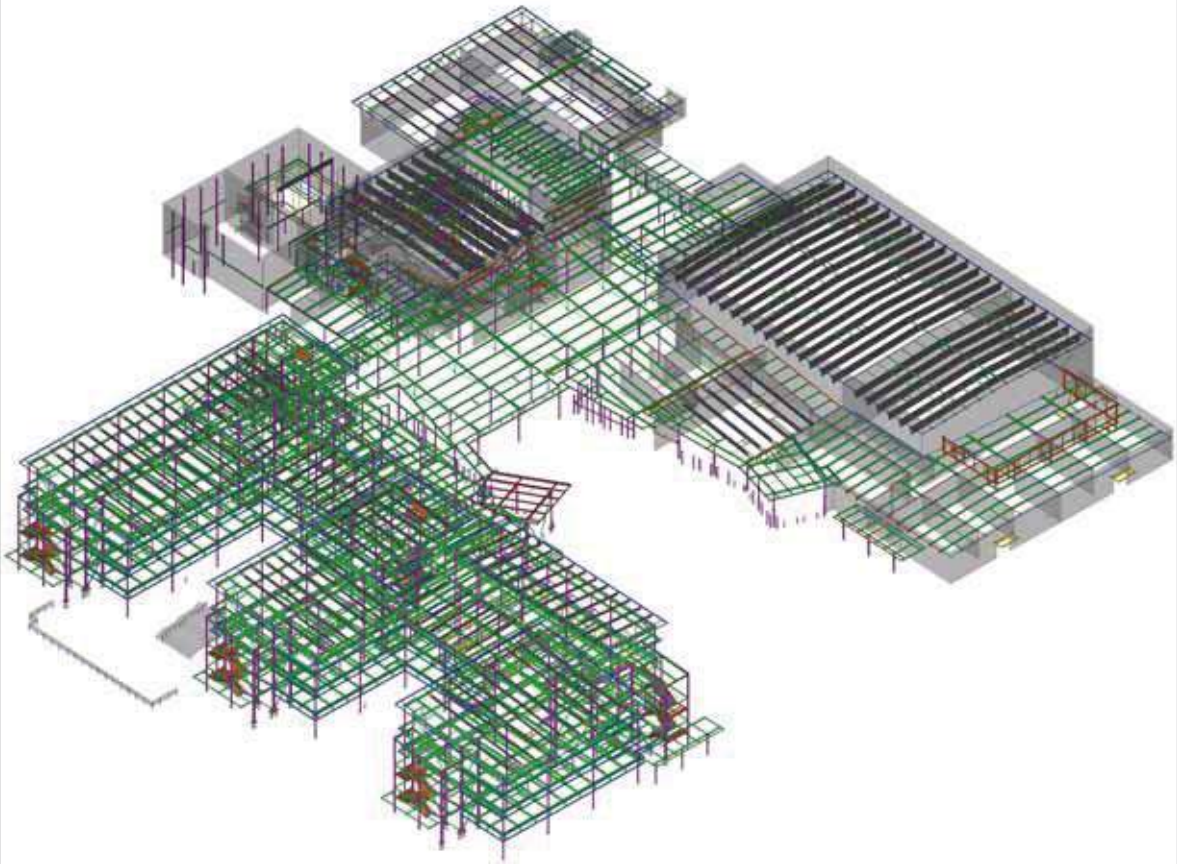
Fabricator: GWI Steel, Ogden, Utah - USA

Architect: Bassetti Architects, Seattle, Washington - USA

Structural Consultant: Coughlin Porter Lundeen, Seattle, Washington - USA

Location: Shoreline, Washington - USA

Tonnage: 1120 MT



Project with - Truline Drafting Services


MAERSK

Signature Projects

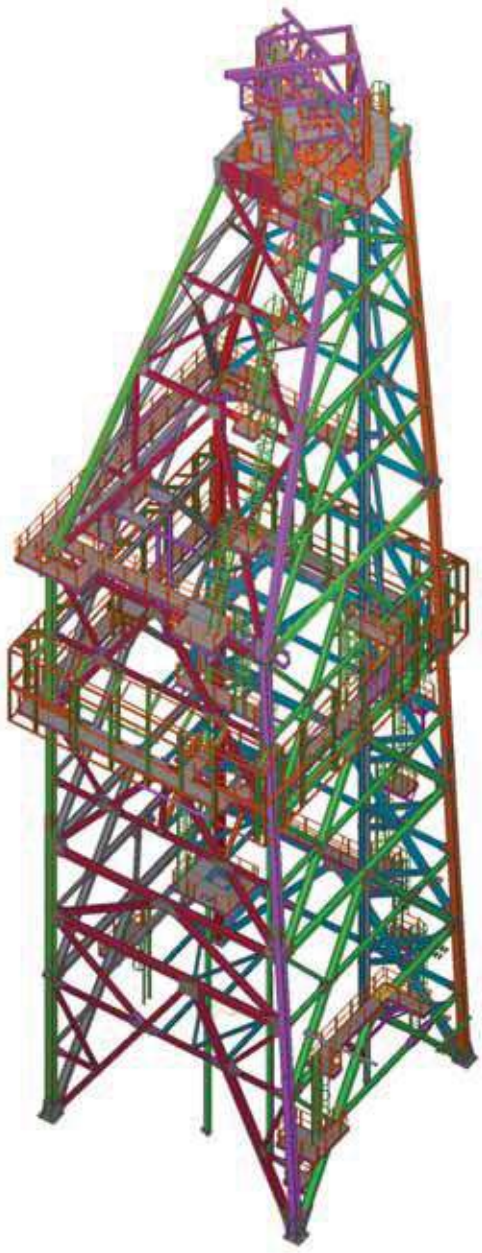
High Efficiency Jack-up Derrick

Fabricator: Yongnam Engineering & Construction Pte. Ltd., Singapore

Structural Consultant: Aker Kvaerner

Location: Denmark

Tonnage: 325 MT



Signature Projects

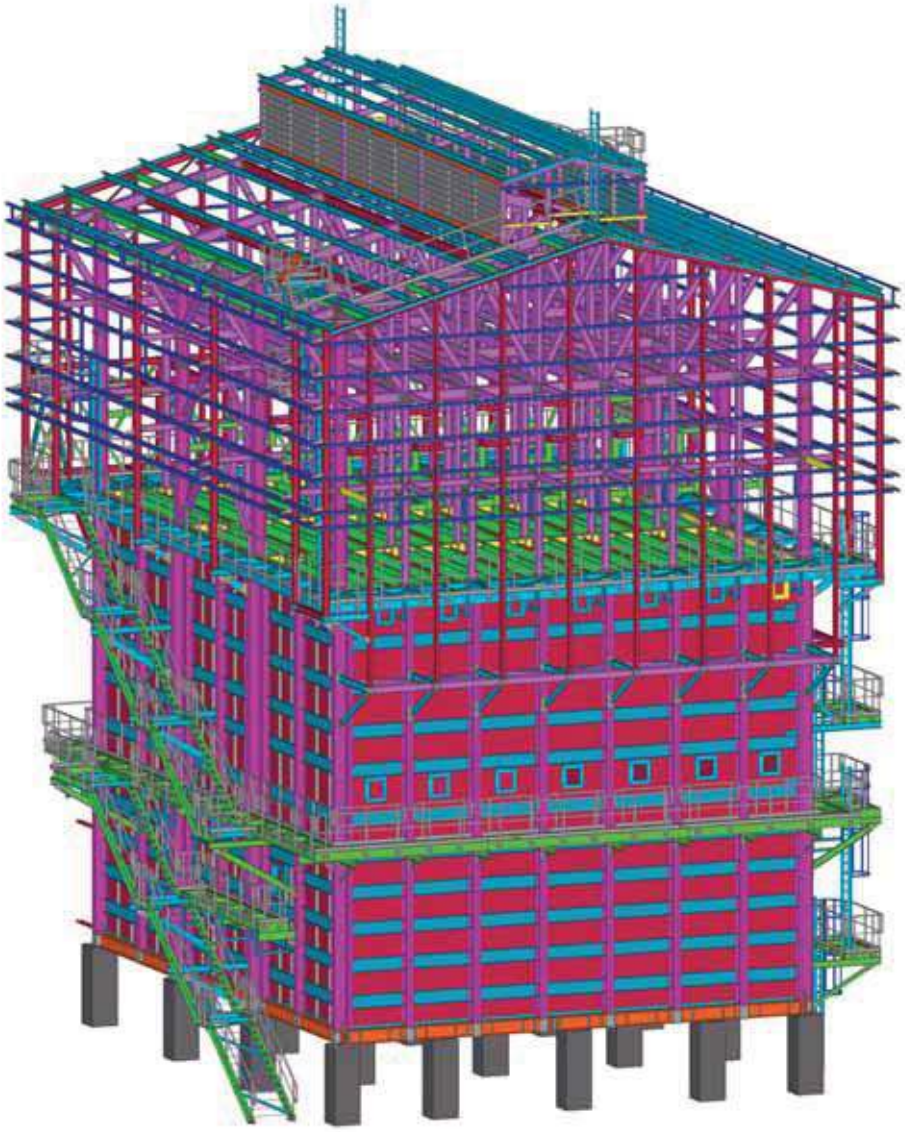
Reformer for Sorfert Fertilizer Complex

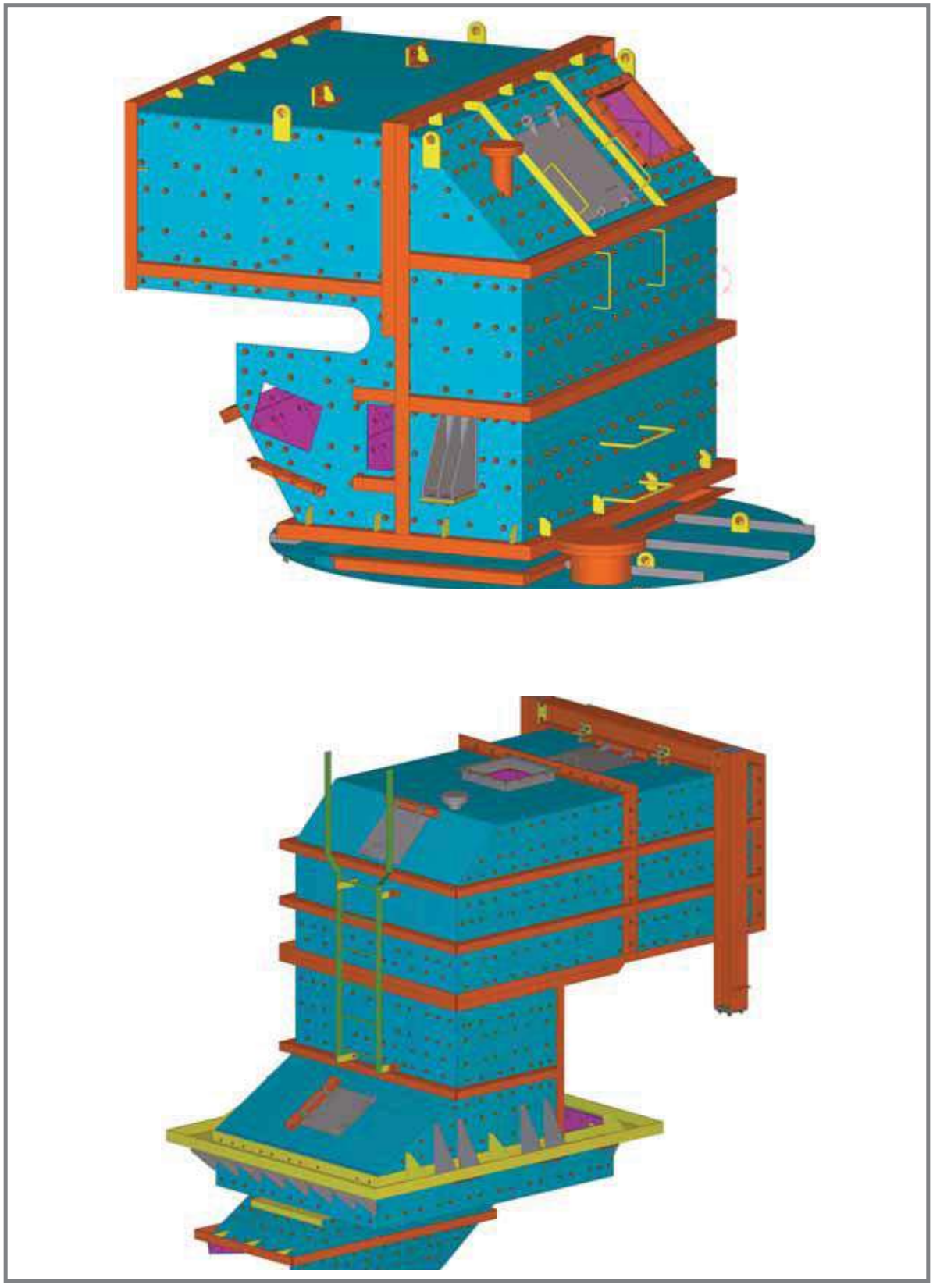
Fabricator/Contractor: UHDE - Germany

Structural Consultant: UHDE - Germany

Location: Algeria

Tonnage: 509 MT





Signature Projects

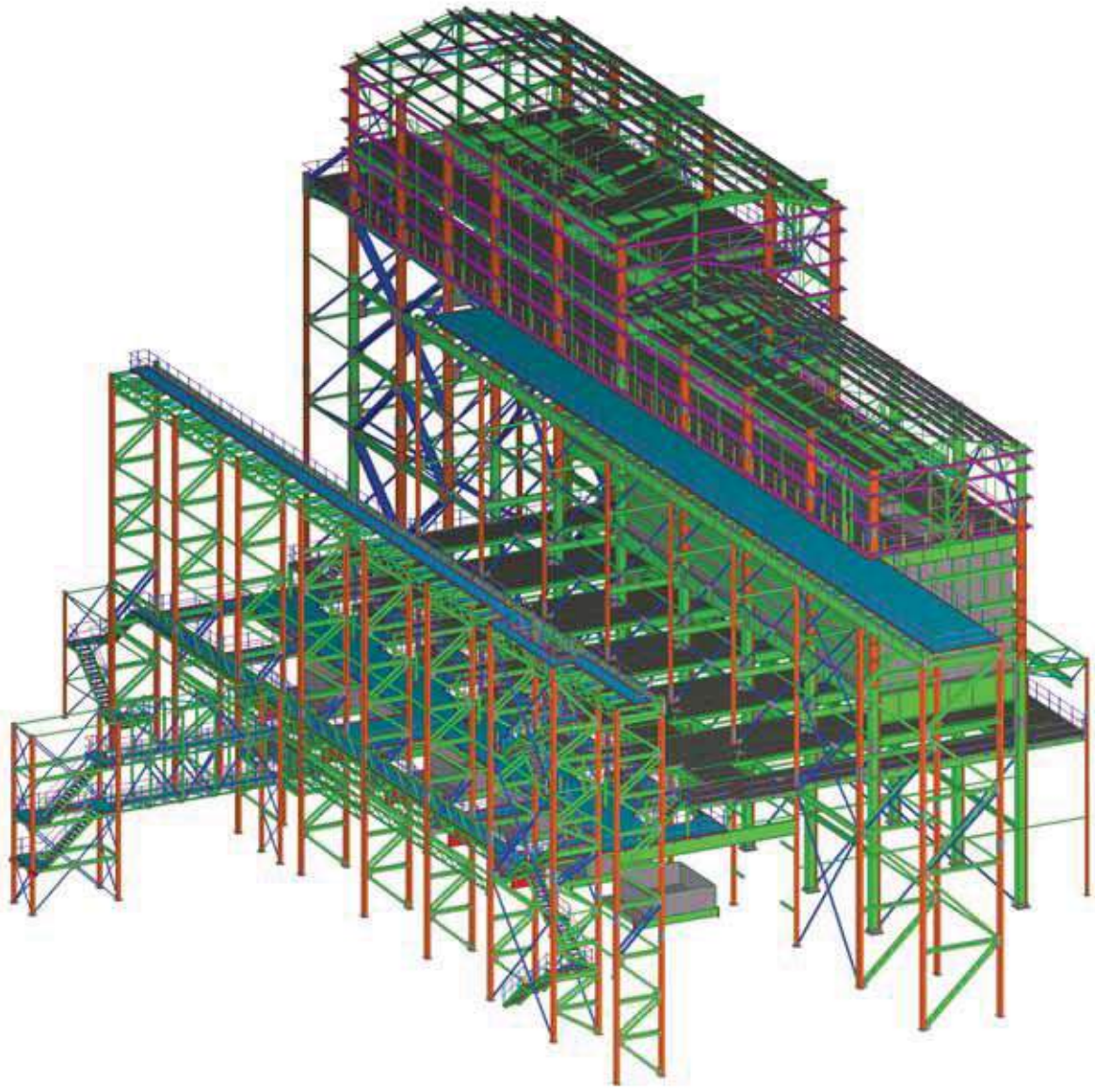
Areva Trekkopje Maxi Plant

Fabricator/Contractor: Cosira international SA PTY LTD. - South Africa

Structural Consultant: Bateman projects

Location: South Africa

Tonnage: 3500 MT



Signature Projects

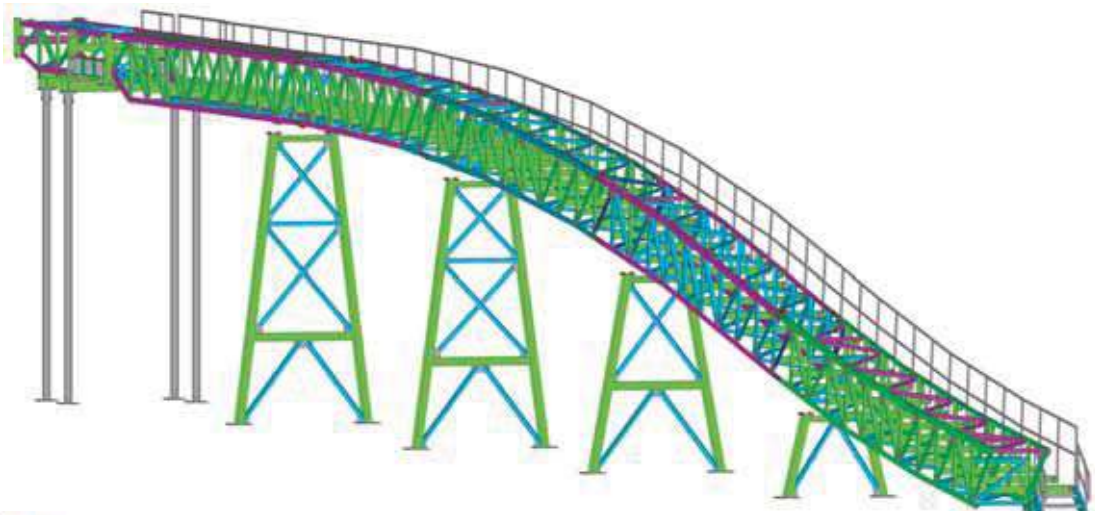
30" Conveyor U1, U2 & U3 for United States Gypsum Company

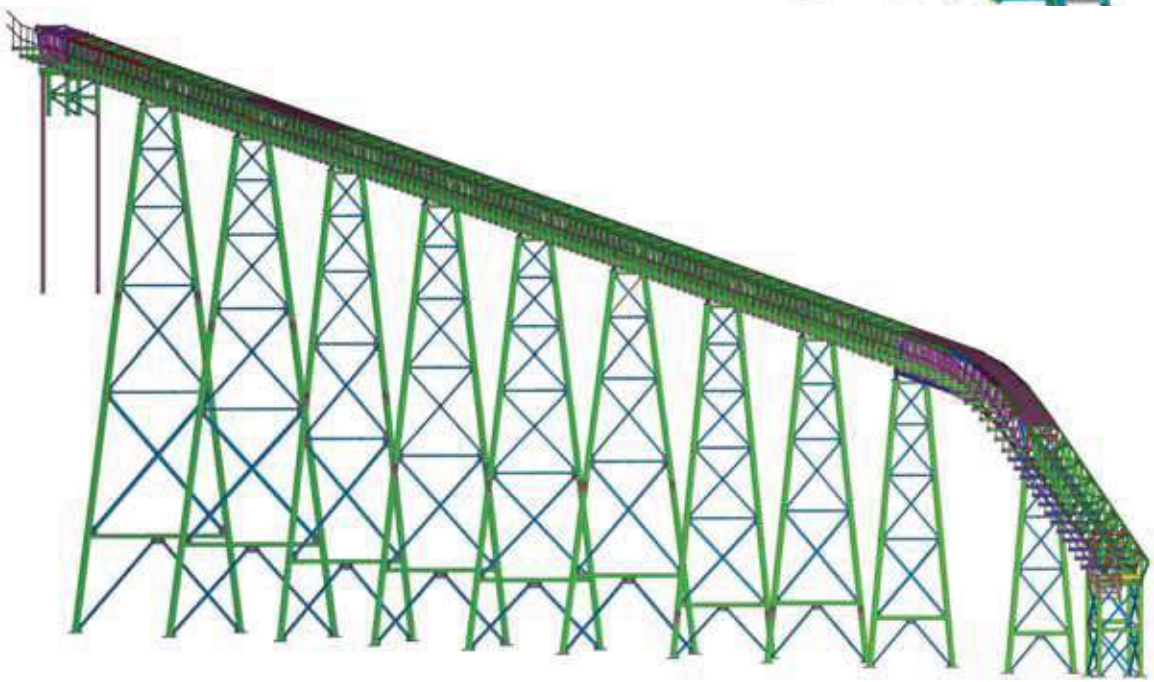
Fabricator/Contractor: Automatic Systems Inc. Kansas City, Missouri - USA

Structural Consultant:

Location: Washingtonville, Pennsylvania - USA

Tonnage: 100 MT each





Signature Projects

Douglas Middelburg Optimisation Project

Fabricator: Cosira International (SA) (Pty) Ltd.

Structural Consultant: Bateman Engineering Technologies Ltd.

Location: South Africa

Tonnage: 1600 MT

Features: Gold Mine Conveyors (Total 11 Nos.)

Signature Projects

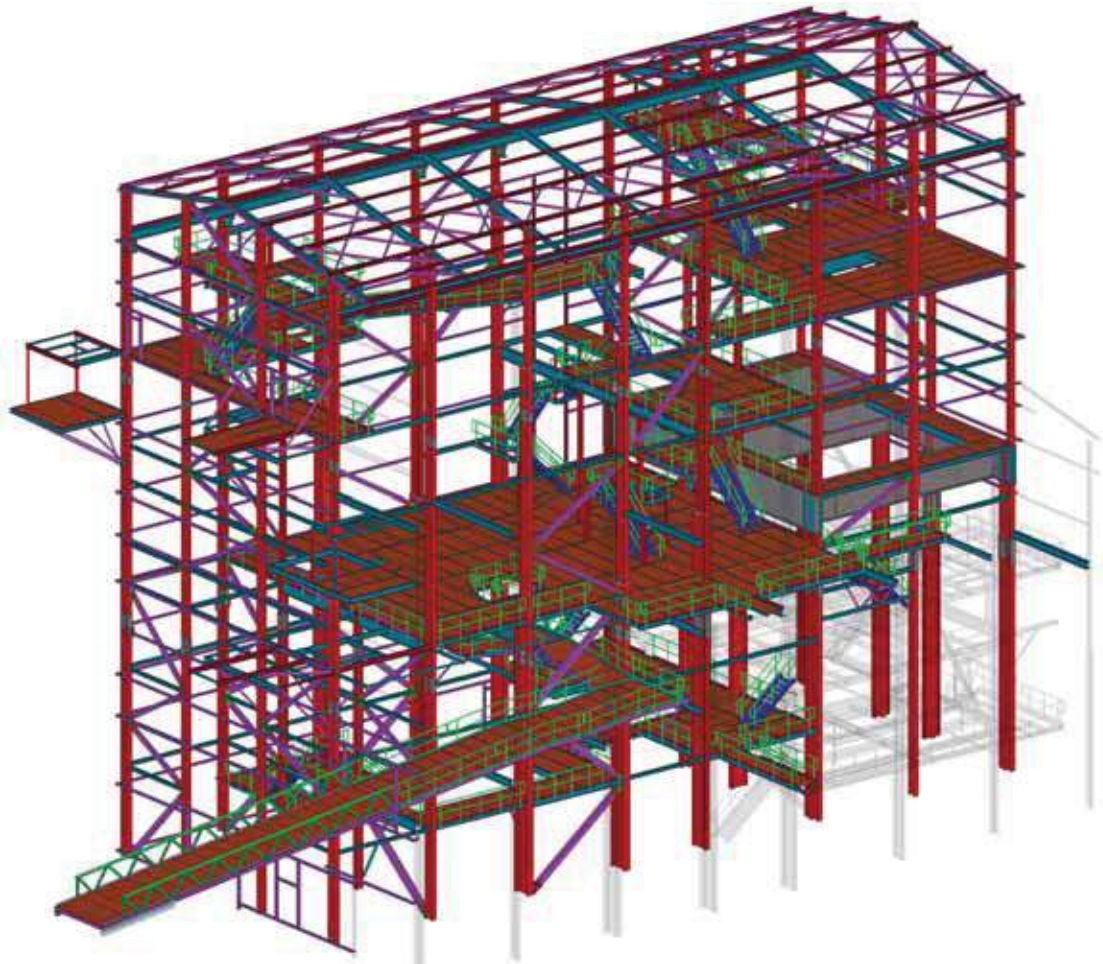
114 TPH Cement Grinding Plant

Fabricator/Contractor: Petron Emirates Contg. & Mfg. Co. (L.L.C.), Dubai - UAE

Structural Consultant: Cemtec Gmbh, Austria

Location: Mussaffah, Abu Dhabi - UAE

Tonnage: 540 MT



Signature Projects

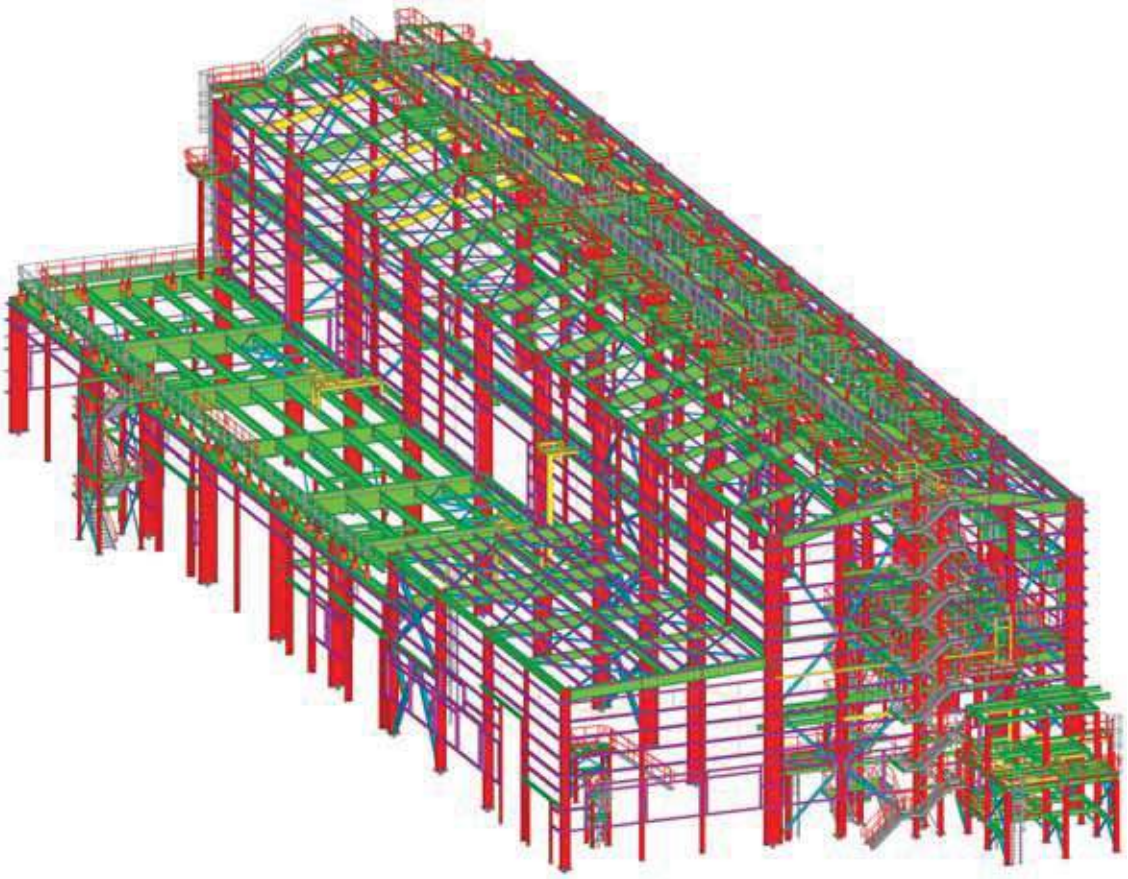
Turbine Building CCPP22 for Power Plant

Fabricator: Excel Industrial Co. Ltd., Ajman - UAE

Structural Consultant: Lahmeyer International

Location: Dubai - UAE

Tonnage: 950 MT



Signature Projects

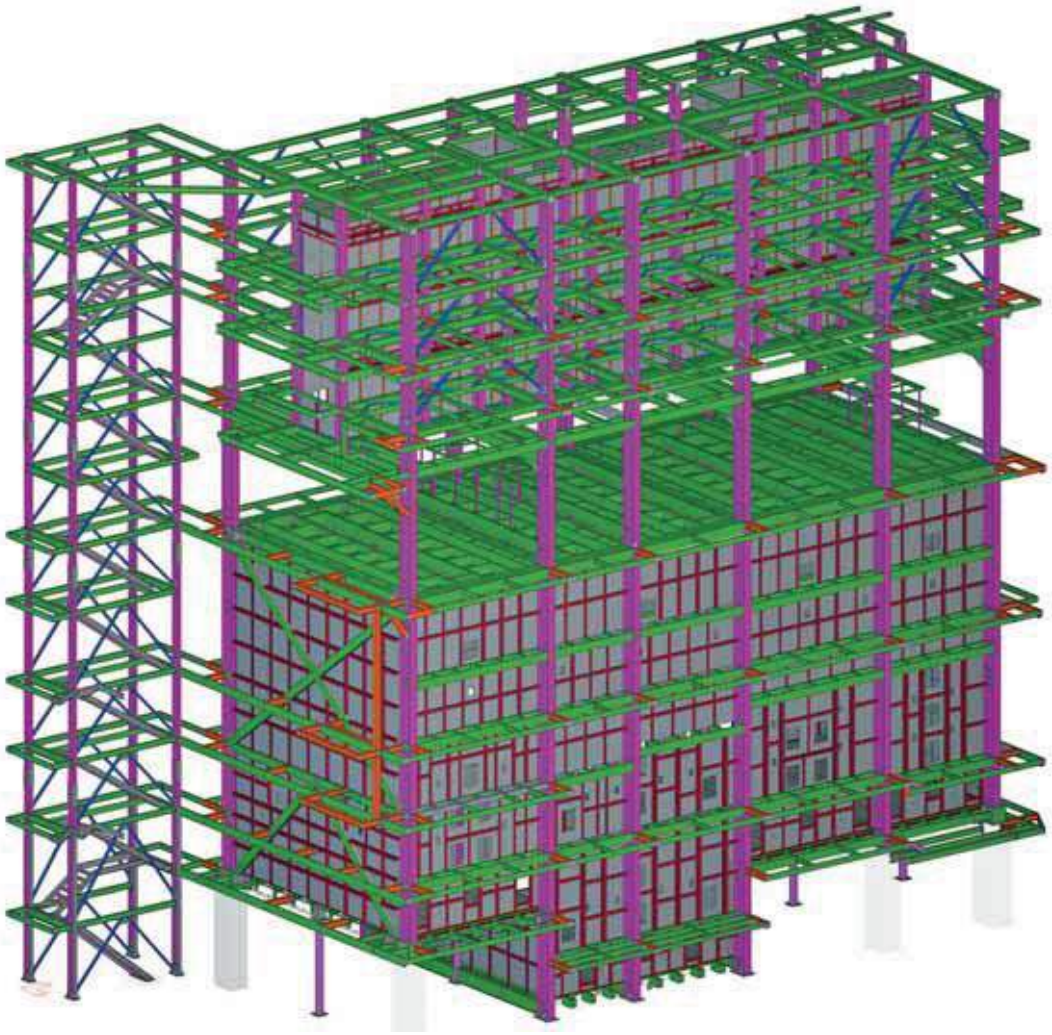
CCR Heater in MSQ Upgradation Program

Fabricator/Contractor: Larsen & Toubro (Design & Engineering Center), Mumbai - India

Structural Consultant: Engineers India Ltd.

Location: Gujarat, India

Tonnage: 750 MT



Signature Projects

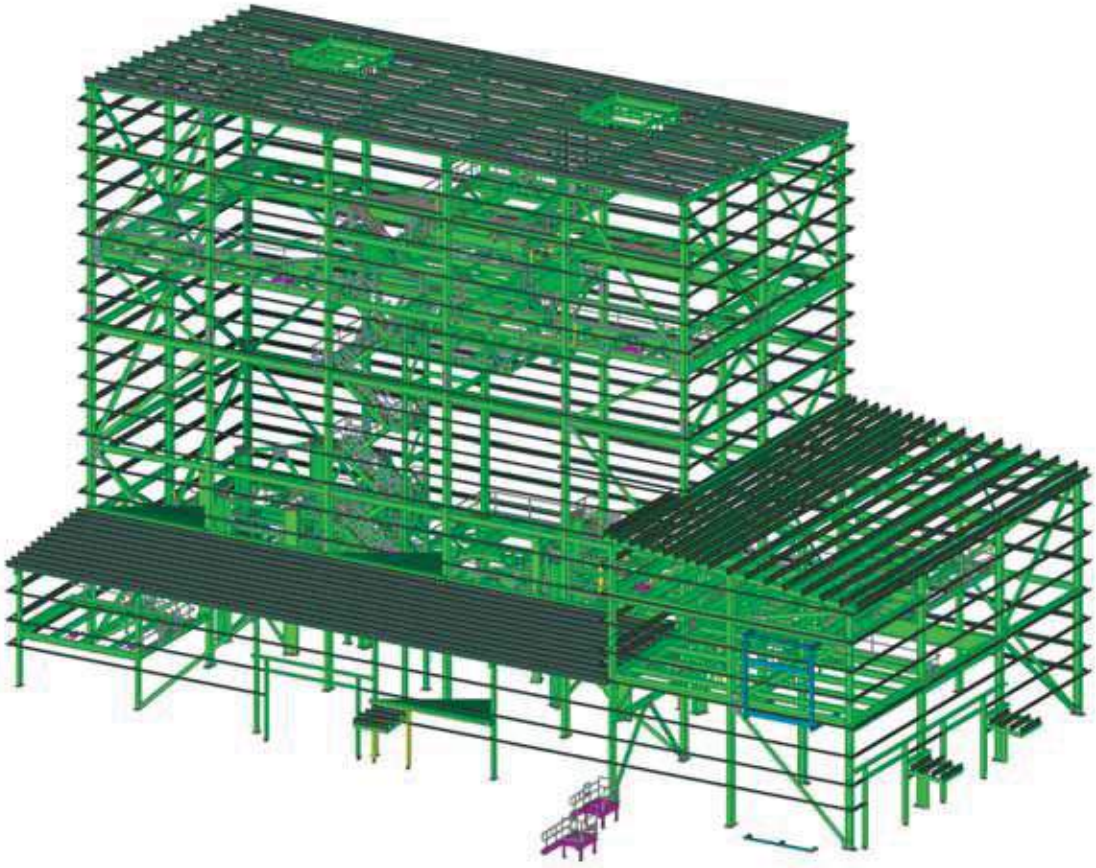
Surface Paste Plant

Fabricator: Allied Steel, Montana - USA

Structural Consultant: Unified Engineering

Location: Montana - USA

Tonnage: 375 MT



Project with - Truline Drafting Services

Signature Projects

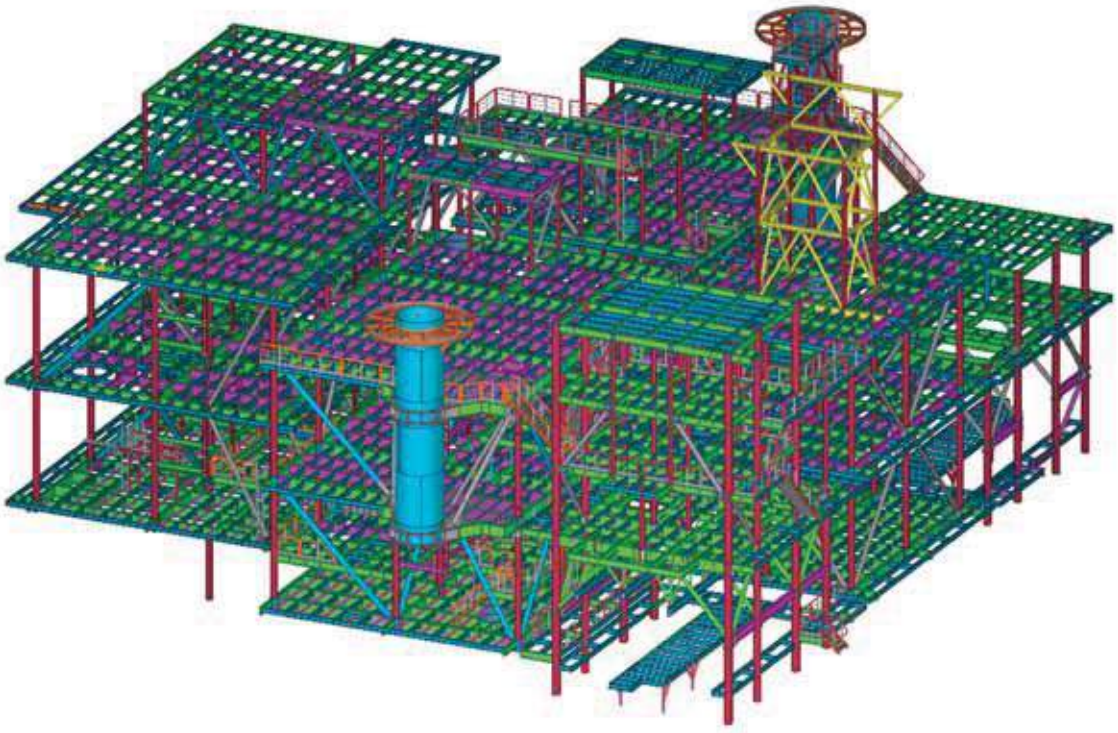
Deep Panuke Production Field Center (PFC)

Fabricator/Contractor: Gulf Piping Co. W.L.L., Abu Dhabi - UAE

Structural Consultant: SBM Offshore

Location: Nova Scotia - Canada

Tonnage: 930 MT



Signature Projects

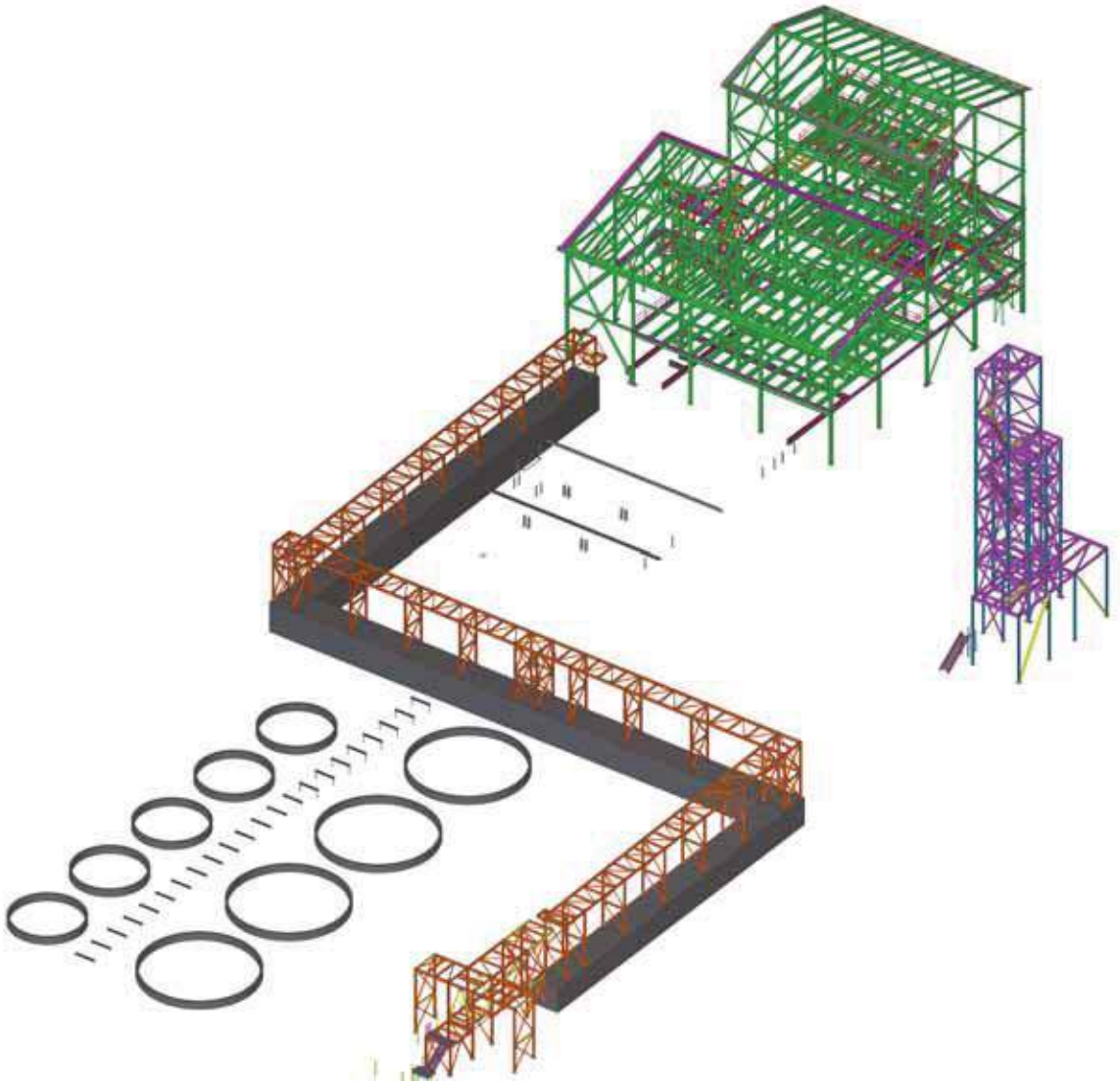
Pacific Coast Canola - Production Facility

Fabricator: Brooklyn Iron Works, Inc., Washington

Structural Consultant: Power Engineers

Location: Warden, Washington - USA

Tonnage: Approx. 575 MT



Project with - Truline Drafting Services

Signature Projects

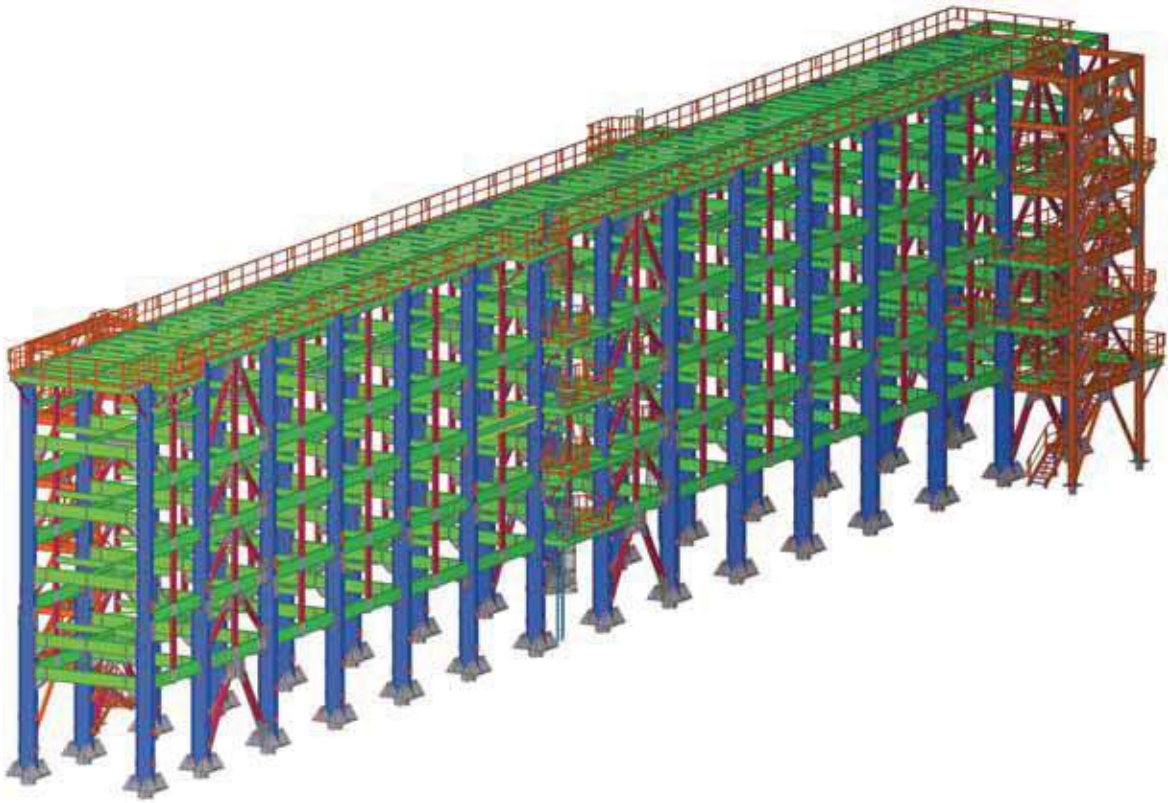
Paradip Refinery Project-Butane ISOM Unit 025 BBRA Pipe Rack

Contractor/Fabricator: Punj Lloyd Ltd., New Delhi

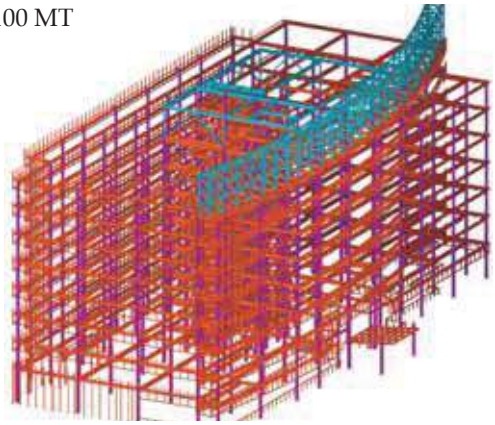
Structural Consultant: Aker Solutions Aker Powergas Pvt. Ltd., Mumbai

Location: Paradip, Orissa - India

Tonnage: 525 MT



1100 MT



OPUS II Interplex Business Park, Canada

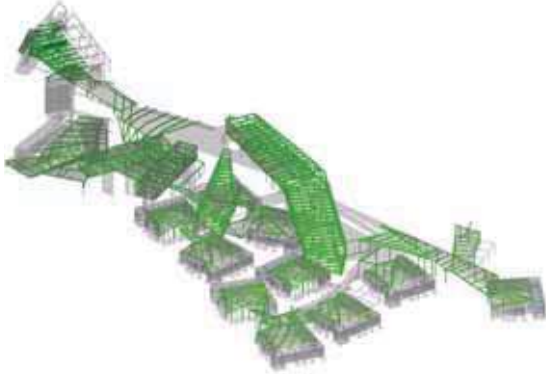
693 MT

University of Oregon, Casanova Extension, USA

580 MT

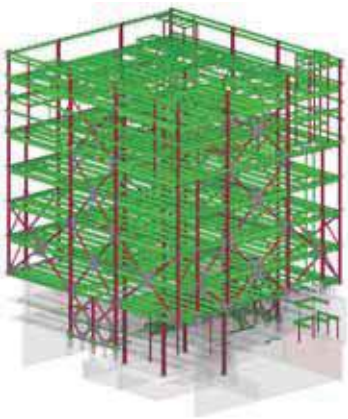
Univ. of Portland New Residence Hall, USA

700 MT



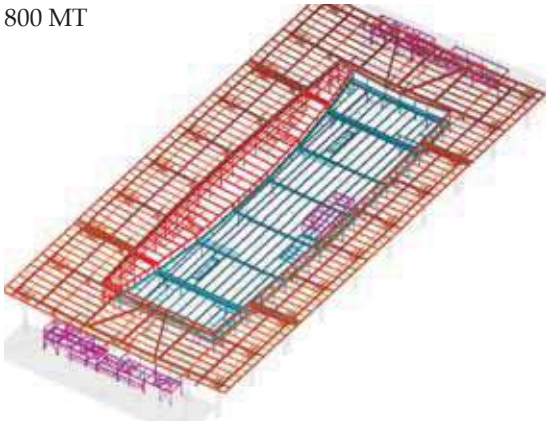
Vedanta Cancer Hospital, Raipur, India

925 MT



2020 Fifth Avenue Building, Seattle, USA

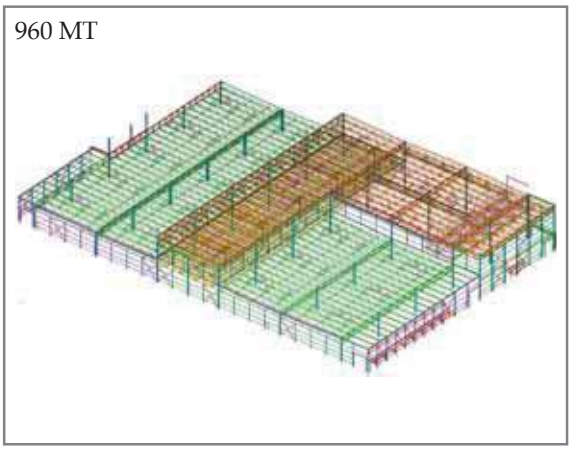
800 MT



Consolidated Rental Car Facility, Seattle, USA

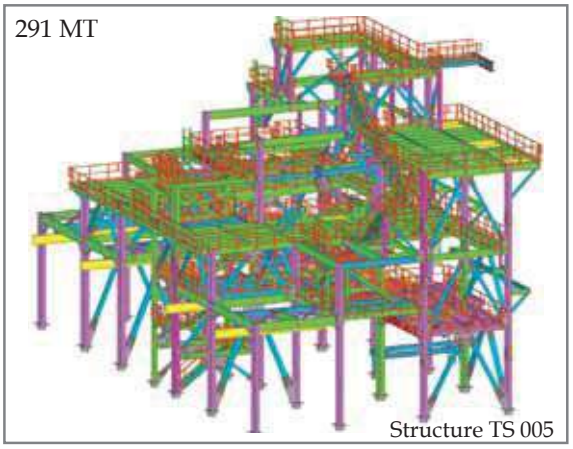
Antamina Conveyor Project, USA

960 MT



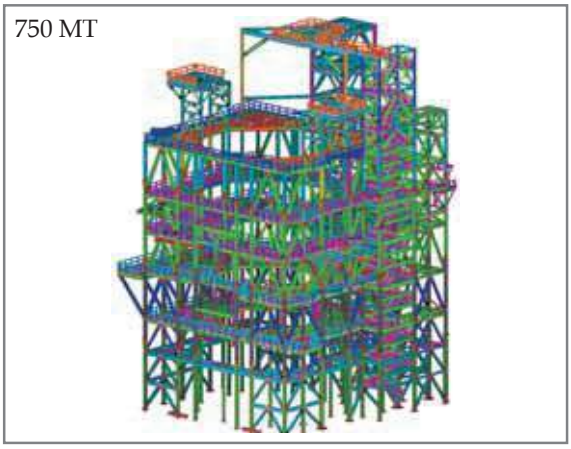
Engine Plant 2PX for Honda of America, Ohio, USA

291 MT



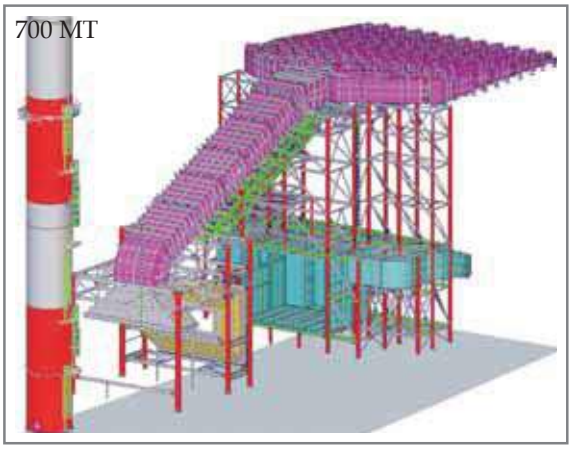
Paradip Refinery Project - Alky & ISOM Unit 24

750 MT



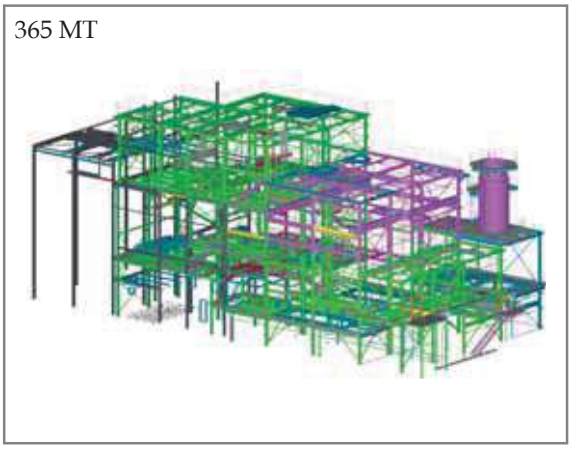
FCC Complex Reliance Refinery, India

700 MT



Reformer Ducting & Supporting System

365 MT



IEPC No. 5 Refiner Line, Washington, USA

Areas of Expertise

Infrastructure Projects

Airport Terminals, Air Traffic control Towers, Airport Hangers, Railway Stations

Commercial & Residential Buildings

IT Parks, Office Buildings, Residential Buildings

Recreational

Hotels, Casinos, Stadiums

Medical

Hospitals, Medical Centers

Educational Buildings

School Buildings, University Buildings, Library, Hostels

Public Utility

Parking Structures, Community Centers, Churches

Industrial and Off-shore Projects

Industrial Shades, Petrochemical Refineries, Power Plants, Turbine Buildings, Fired and CCR Heaters, Conveyors, Reformers and Ducting, Jack up rigs, Pipe Racks

Associated With

American Institute of Steel Construction Inc.

Established in 1921 to serve the structural steel design community and construction industry.

National Institute of Steel Detailing

The National Institute of Steel Detailing (NISD) is an international association which advocates, promotes and serves the interests of the steel detailing industry.

Tekla Structures

Tekla Structures, a powerful, interactive 3D structural modeling system used for Structural Steel Detailing.

Tru Line Drafting Services

Tech Flow Engineers and Tru-Line Drafting joined forces in 2004 to find a way to better serve our customers.

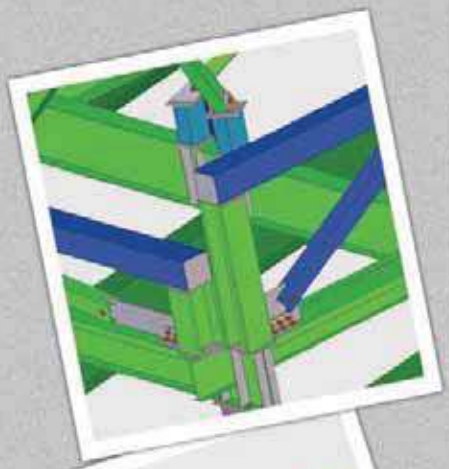
Techflow Institute of Steel Detailing

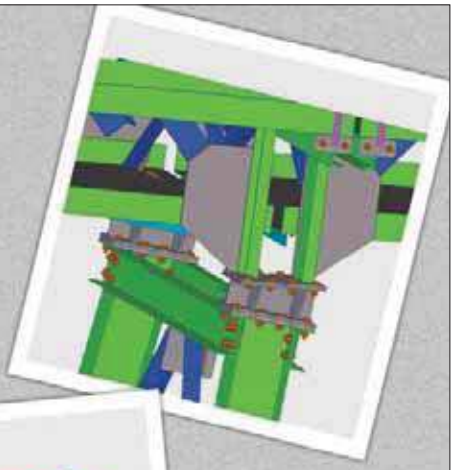
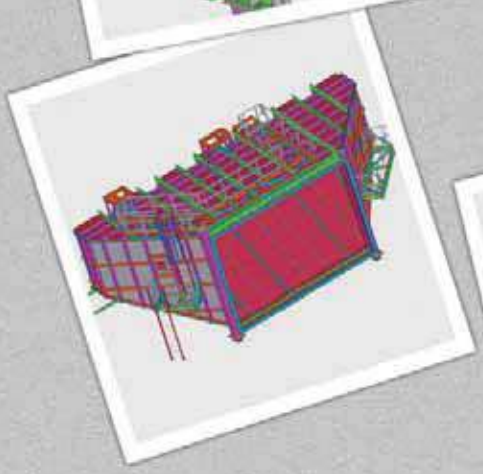
Techflow Institute of Steel Detailing (TISD) provides Training Program of Structural Steel Detailing and Basic/Advance Training Course in TEKLA Structures.

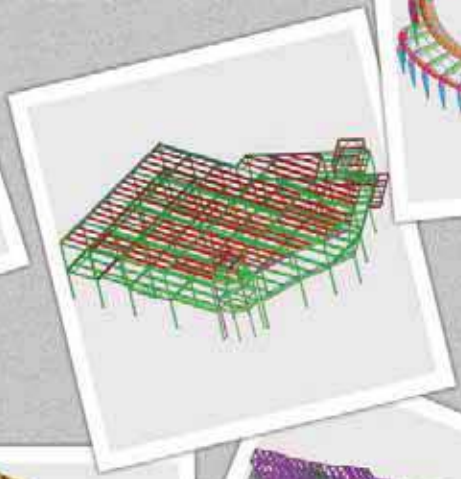
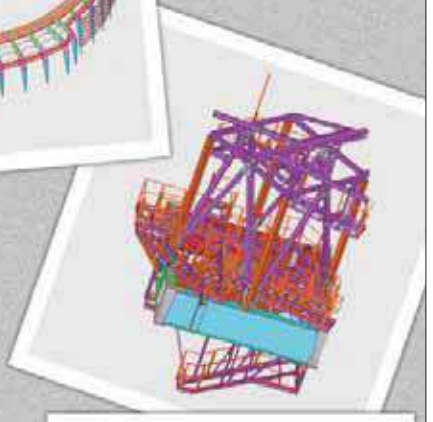
Techflow Structures Pvt. Ltd.

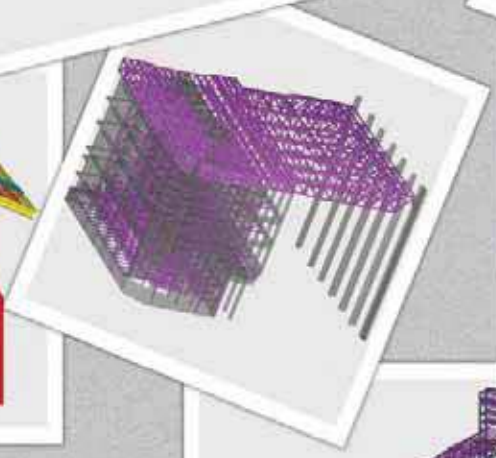
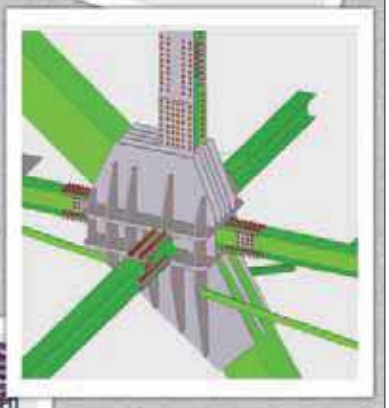
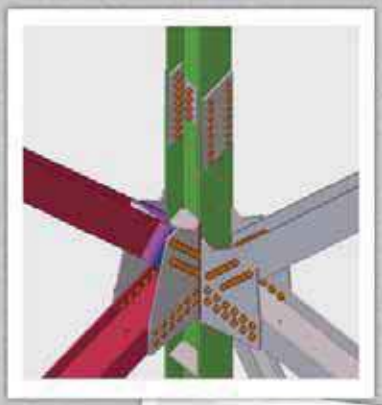
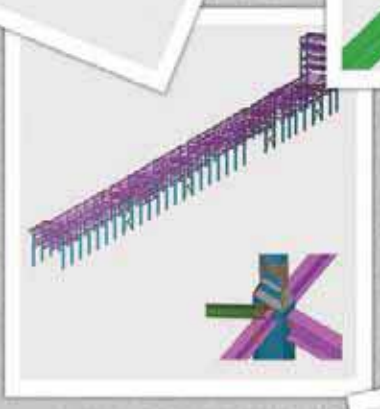
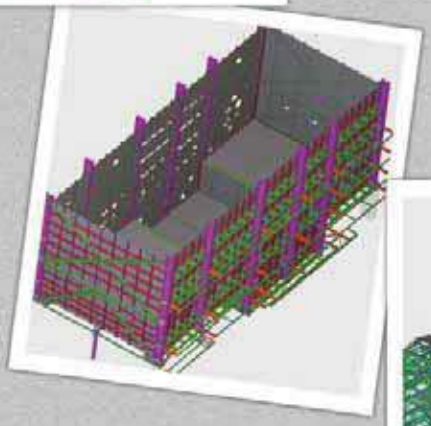
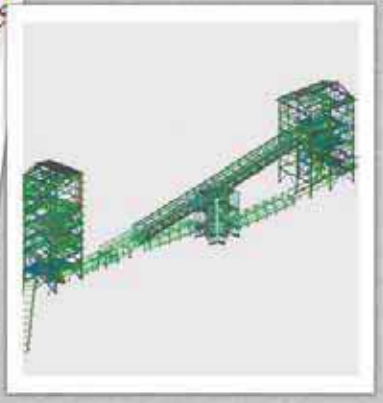
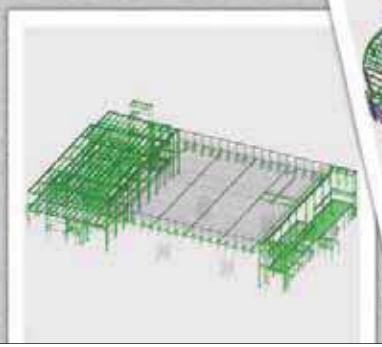
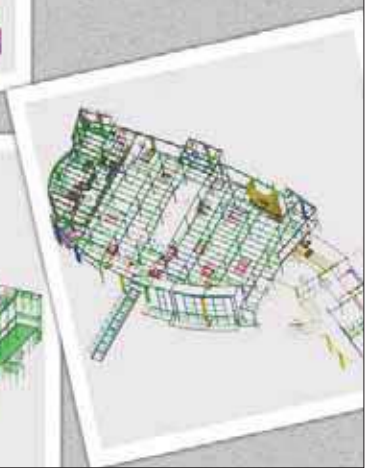
Techflow Structures provides fabrication and erection services for the industry through differentiated and innovative system and service.

It's more about the
'customer delight' than satisfaction
is our Motto for Techflow group.



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