Dong Jian
东健建筑有限公司

Steel Structure, Civil Work & Fabrication

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WELCOME TO Dong Jian Construction PVT Ltd, your trusted partner in construction and building solutions!

ABOUT US:

Dong Jian Construction PVT Ltd is a leading player in the construction sector, offering top-notch services and quality craftsmanship for over 20 years. Company strive towards excellence with professionalism and dedication to deliver tailored solutions in PAKISTAN and CHINA

VISION:

"To be recognized as the industry leader in construction, renowned for our exceptional quality, reliability and efficiency."

MISSION:

Delivering excellence in construction services through innovative solutions, superior craftsmanship and unwavering commitment to client satisfaction.

Mr. Cao Xiao Dong
(CEO's Message)

"Proud of our team's dedication & hard work. Together, we build dreams into reality. Grateful to our clients for their trust. Committed to excellence, innovation, and sustainable practices. Let's continue shaping a brighter future through construction. Thank you all for being part of our success. Onward and upward!"

Our Services:

We offer comprehensive range of construction services for COMMERICAL & INDUSTRIAL projects. We have the expertise and resources to handle projects of any complexity.

General Contracting

We take on the role of the primary contractor, overseeing the entire construction process from start to finish, coordinating with subcontractors and ensuring seamless project execution.

Design-Build

By integrating the design and construction phases, we streamline the process, promoting collaboration and efficiency, ultimately resulting in cost savings and faster project delivery.

Construction Management

Our experienced team provides expert guidance and supervision throughout the construction process to ensure precision.

Renovation and Remodeling

We breathe new life into existing structures, transforming them into modern and functional spaces that align with our clients' vision and lifestyle.

Green Building Solutions

As advocates of sustainable practices, we incorporate eco-friendly materials and techniques into our projects, promoting energy efficiency and environmental responsibility.

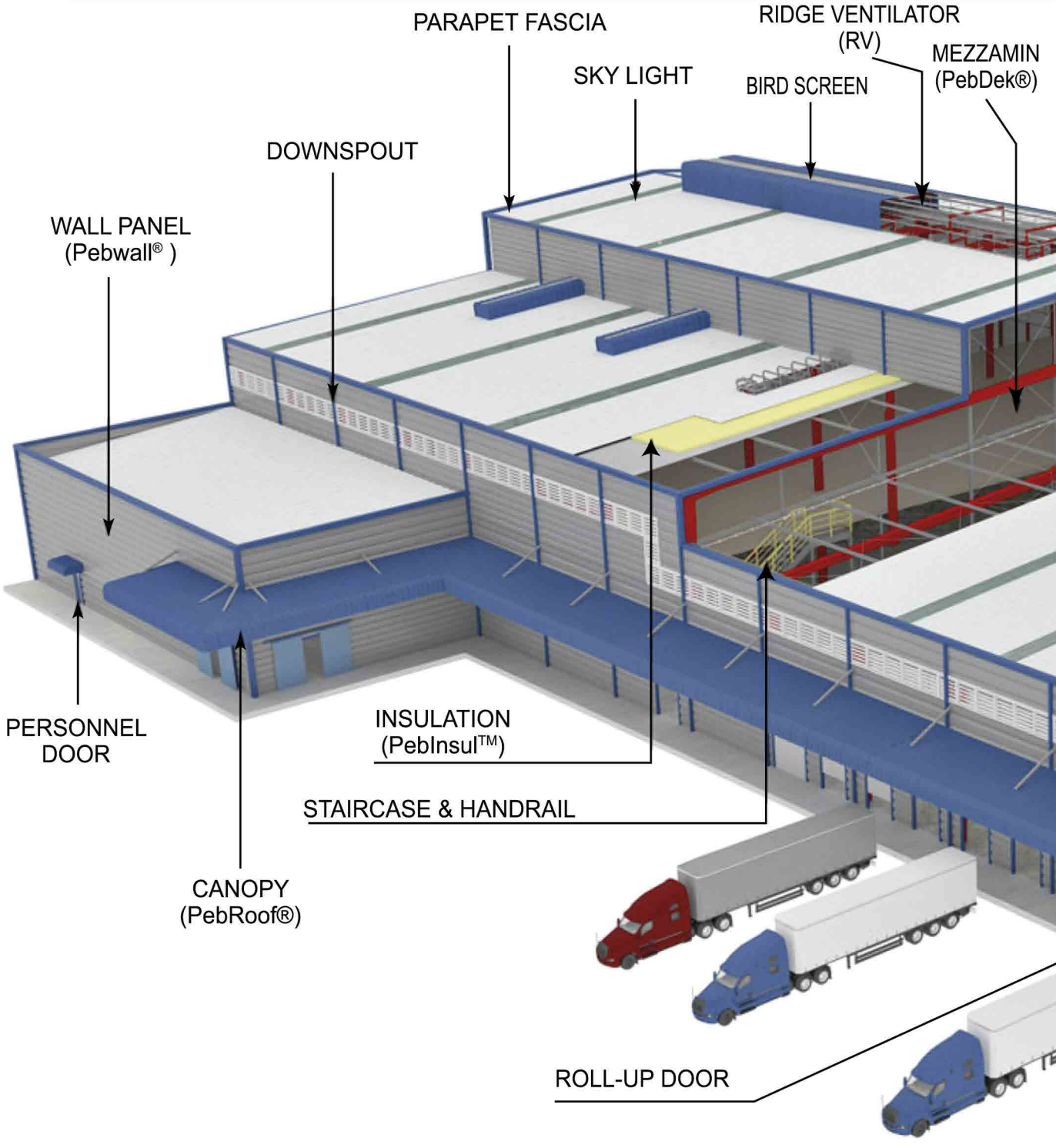
Why Choose Dong Jian Construction PVT Ltd:

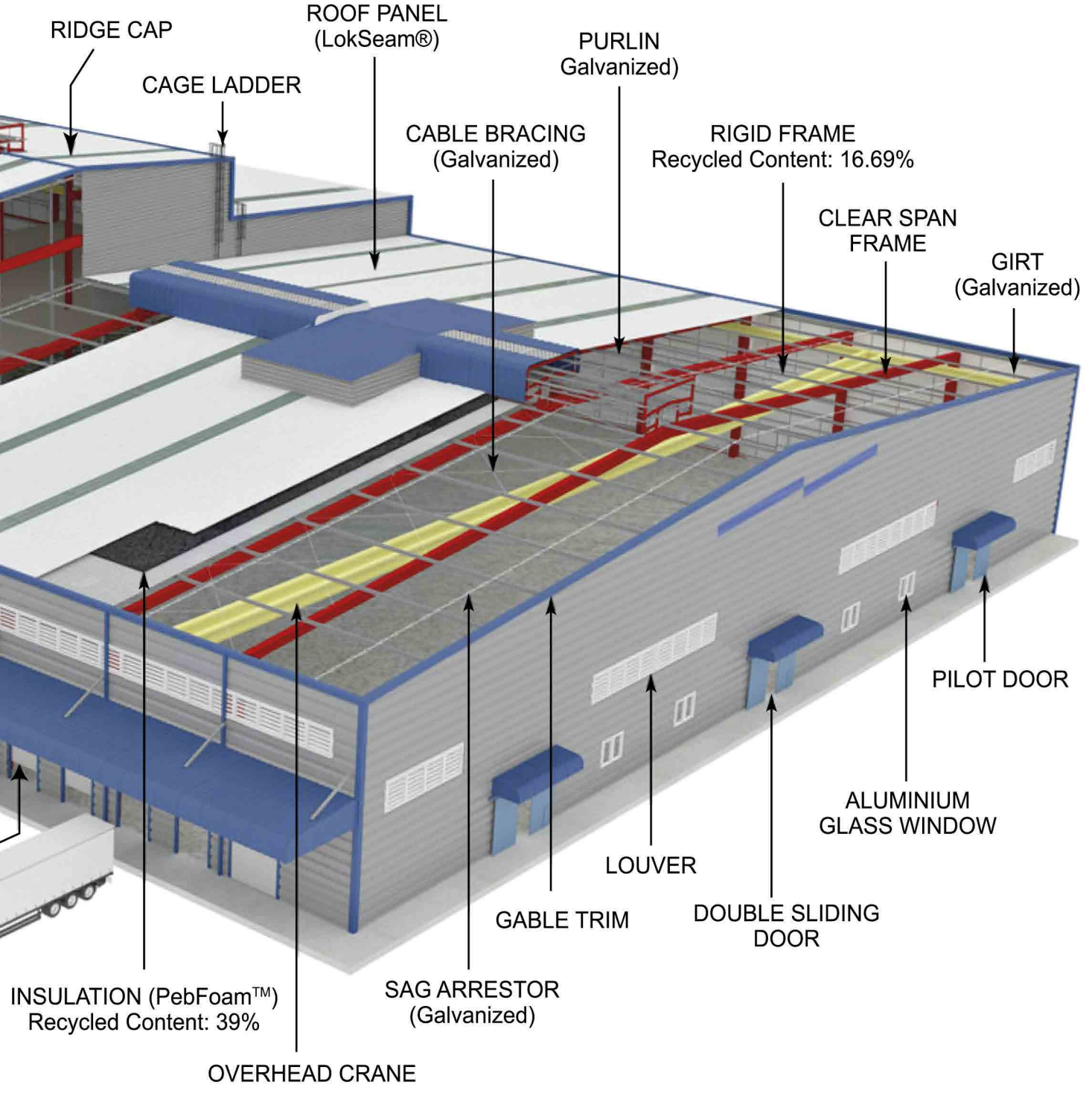
Has diverse portfolio of satisfied customer with experience team of professionals those assures the quality with safety standards so project can be delivered as per customer's demand.

- **Client-Centric Approach**
- **Proven Track Record**
- **Quality Assurance**
- **Safety First**
- **Expert Team**

Reasons to choose Pre Engineered Steel Buildings (PEB) over other types of construction are as follows:

- Time saving
- Cost efficient
- Functional flexibility
- Design flexibility
- Single source responsibility
- Low maintenance required
- Architecture versatility
- Faster occupancy
- Flexibility of expansion
- Environment friendly


PARAPET FASCIA
RIDGE VENTILATOR (RV)
MEZZAMIN (PebDek®)
SKY LIGHT
BIRD SCREEN
DOWNSPOUT
WALL PANEL (Pebwall®)
PERSONNEL DOOR
INSULATION (PebInsul™)
STAIRCASE & HANDRAIL
CANOPY (PebRoof®)
ROLL-UP DOOR


RIDGE CAP
CAGE LADDER
ROOF PANEL
(LokSeam®)
PURLIN
Galvanized)
CABLE BRACING
(Galvanized)
RIGID FRAME
Recycled Content: 16.69%
CLEAR SPAN
FRAME
GIRT
(Galvanized)
PILOT DOOR
ALUMINIUM
GLASS WINDOW
LOUVER
DOUBLE SLIDING
DOOR
GABLE TRIM
SAG ARRESTOR
(Galvanized)
INSULATION (PebFoam™)
Recycled Content: 39%
OVERHEAD CRANE

Comparison between Pre-Engineered Steel Buildings and Conventional Steel Buildings

PROPERTIES:	PEB BUILDINGS	CONVENTIONAL STEEL BUILDINGS
STRUCTURAL WEIGHT	Pre-Engineered Buildings are on the average 30% lighter because of the efficient use of steel. Primary framing members are tapered built up section with larger depths in areas of higher stress.	In conventional steel buildings, i.e. trusses, T.R girders etc are available in market. They are not built-up sections. Increase in weight occurs if required dimensions are not available in the market.
DELIVEVERYPERIOD	Average 6 to 8 weeks	Average 20 to 26 weeks
OVER ALL PRICE	Price per square meter may be as low as by 30% as the conventional building.	Higher price per square meter.
SEISMIC PERFORMANCE	The low weight flexible frames offer higher resistance to seismic forces.	VRigid heavy frames do not perform well in seismic zones.
FUTURE EXPANSIONS	Future expansion is very easy and simple.	Future expansion is most tedious and more costly.
SOURCING AND COORDINATION	Building is supplied complete with all accessories including erection for a single "ONE STOP SOURCE". Quick and efficient: since PEB's are	Many sources of supply are there so it becomes difficult to co ordinate and handle the things.
DESIGN	mainly formed of built-up sections and connections, so the design time is significantly reduced.	Secondary members are selected form standard hot rolled "I" and "C" sections, which are heavier.

Comparison between Pre-Engineered Steel Buildings an Shell Structures

Description	Pre-Engineered Steel Buildings(PEB)	Shell Structures
Installation/ Erection	Pre-Engineered buildings are fabricated with machines under the roof. Only bolt assembling (installation/erection) is done at site quickly. An average size building takes two weeks to erect at site. Faster occupancy and earlier start of production/warehousing is possible with PEB.	Construction activity is carried out open to the sky thus the construction speed cannot match with machine made product.
Quality	PEB is produced with computerized machines under controlled environment of the factory. Dedicated quality control (QC) staff ensures the high quality production as per ISO standards.	Generally, no dedicated QC staff is hired at site for construction. Workmanship varies from man to man and high quality as achieved from machines is not possible.
Maintenance	PEB needs no maintenance.	Customer has to pay extra for seasonal maintenance and annual water proofing after completion of construction. This is hidden cost of shell structures not known to all.
Seismic Resistance	Seismic resistance of PEB is high due to its low weight and flexible behaviour.	Seismic resistance is very low as compared to PEB.
Chance of Leakage	There is no chance of leakage in properly installed PEBs due to presence of laps and special sealants.	Valleys formed in adjacent shells create the chance of seepage/leakage.
Salvage Value	PEB is completely comprising of steel and thus has very high salvage value.	Salvage value is very low as compared to PEB.
Transportation/Shifting	PEBs can be shifted from one location to another conveniently.	Shell structures cannot be shifted.

Applications of Pre-Engineered Steel Buildings (P.E.B) in different sectors

Dong Jian Constructions Pvt Limited. buildings accommodate wide variety of occupants, from factories and showrooms to shopping malls and hyper star.

One is amazed at the value, strength and wide range of design possibilities available when he chooses the Dong Jian Constructions Pvt Limited. for Pre-Engineered Buildings.

Here are some of the applications of Pre-Engineered Buildings in different sectors being used:

Industrial

- Factories
- Workshops
- Ware Houses
- Cold stores
- Car Parking Sheds
- Slaughter Houses
- Bulk Product Storages

Commercial

- Show Rooms
- Distribution Centers
- Super Markets
- Fast Food Restaurants
- Offices
- Labor Camps
- Service Stations
- Shopping Centers

Institutional

- Schools
- Exhibition Halls
- Hospitals
- Theaters
- Auditoriums
- Sports Hall

Recreational

- Gymnasium
- Swimmingpool Enclosures
- Indoor Tennis Courts

Agricultural

- Poultry Buildings
- Dairy Farms
- Green Houses
- Grain Storages
- Animal Confinement

Defense

- Air Craft Hangars
- Administration Buildings
- Resident Barracks
- Support Facilities

Design Concepts

Pre-Engineered Buildings are simple and economical in design, yet fully functional and diverse in purpose.

The entire engineering / detailing process is computerized.

Our engineers work diligently to provide accurate calculations that are completely explained and referenced. They strive for comprehensiveness and clarity, mindful that their work must be easily understood by consultants at locations around the world.

We meet and exceed international quality and design standards

Unless otherwise required, all **DJC** buildings are designed and manufactured in accordance with the following American codes.

Low Rise Building Systems Manual
(MBMA- Metal Building Manufacturer's Association Inc.)
Manual of Steel Construction Allowable Stress Design
(AISC-American Institute of Steel Construction Inc.)
Cold Formed Steel Design Manual
AISI (American Iron and Steel Institute)

Structure Welding Code- Steel
AWS (American Welding Society)

Basic Building Parameters

Pre-Engineered Buildings are defined by the following basic parameters:
Building Width, Length, Height, Roof Slope, End Bay Length, Interior Bay Length and Design Loads.

Building Length

Building length is the distance between the outside flanges of end wall columns in opposite end walls. It is a combination of several bay lengths.

Building Height

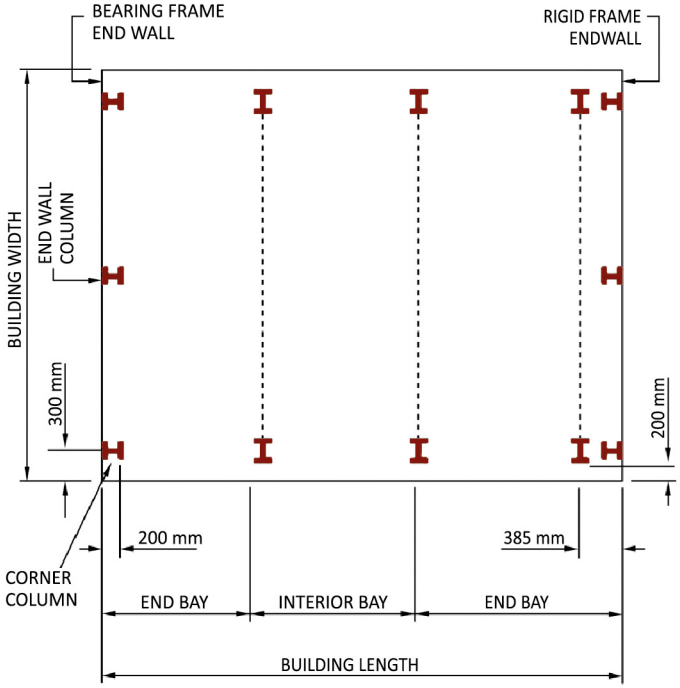
Building height is the eave height, which is usually the distance from the bottom of the main frame column base plate to the top outer point of the eave strut. When columns are recessed or elevated from the finished floor, eave height is the distance from the finished floor level to the top of the eave strut.

Building Width

No matter what primary framing system is used, the building width is defined as the distance from outside of eave strut of one sidewall to outside of eave strut of the opposite side wall.

Roof Slope

This is the angle of the roof with respect to the horizontal. The most common roofs lopes should not be less than 0.5/10. However any practical roof slope is possible.



Basic Building Parameters

End Bay Length
This is the distance from the outside of the outer flange of end wall columns to the centre line of the first interior frame column.

Interior Bay Length
This is the distance between the centre lines of two adjacent interior main frame columns. The most common bay lengths are 6m-7.5m. However any bay length is possible
up to 15 meters.

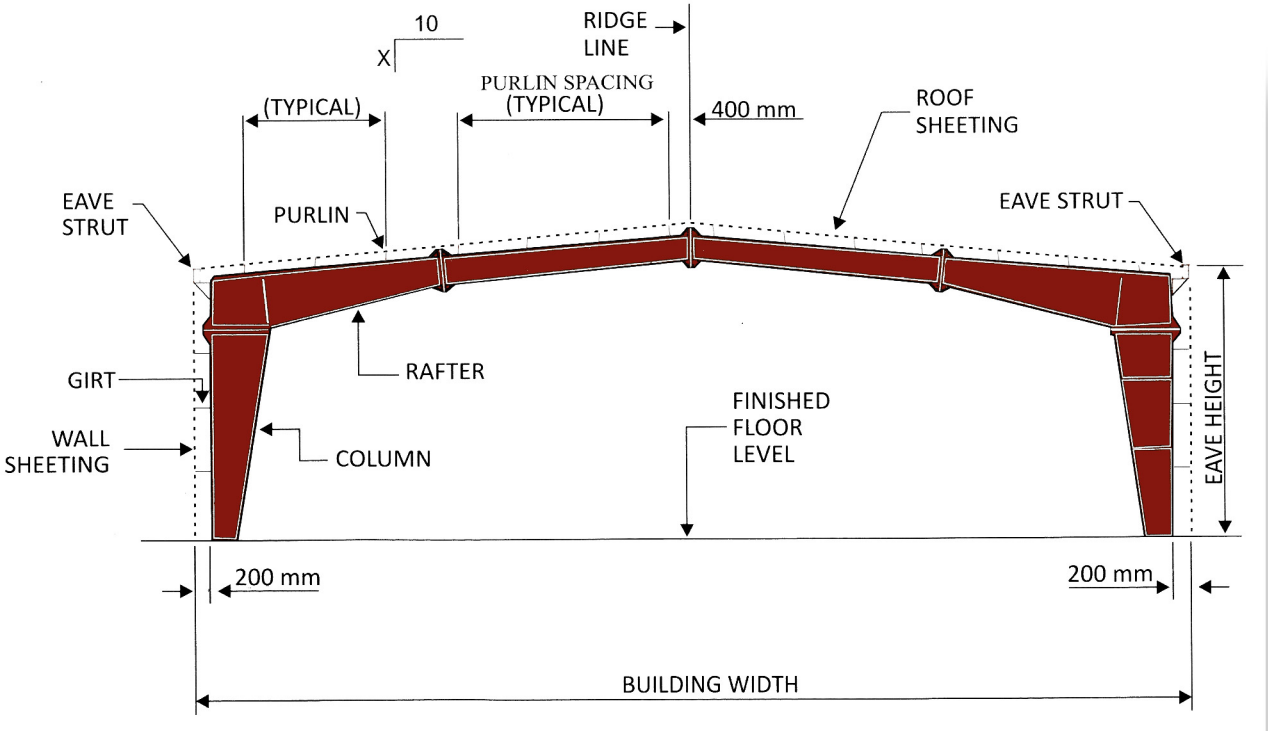
Design Loads
Unless otherwise specified Pre-Engineered Buildings are designed for the following minimum loads:

Roof Live Load:0.57 kN/m'
Design Wind Speed : 130 km/h

Design parameters of snow loads, earthquake loads, collateral loads, crane loads or any other loading must be specified when requesting for a quotation.

Loads are applied in accordance with American codes and standards applicable to pre-engineered buildings unless otherwise requested at the time of quotation.

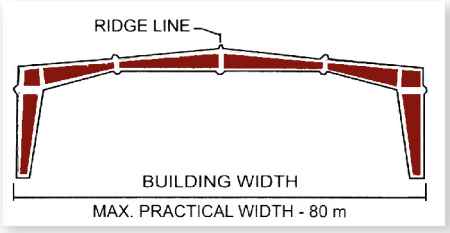
For any detailed information, our representative will be available for discussion.



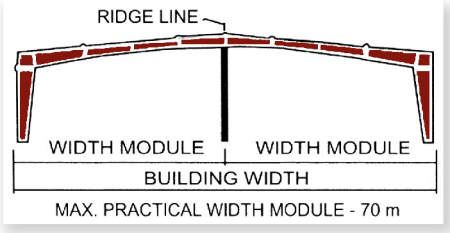
Primary Framing Systems

Dong Jian Constructions Pvt Ltd. Pre-Engineered Buildings are constructed using a variety of framing systems. The diagrams on this page is illustrated those most commonly employed. They are symmetrical at the ridge line. Un-equal Multi span framing systems are also available.

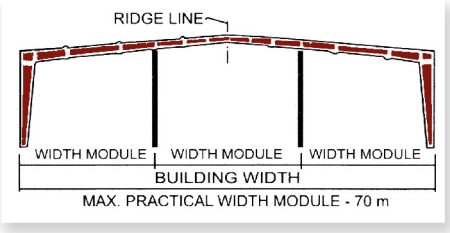
Clear Span (CS)



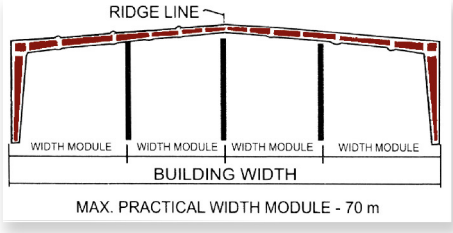
Multi-Span "1" (MS-1)



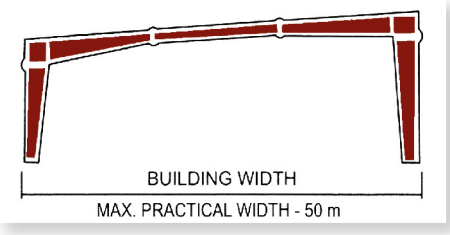
Multi-Span "2" (MS-2)



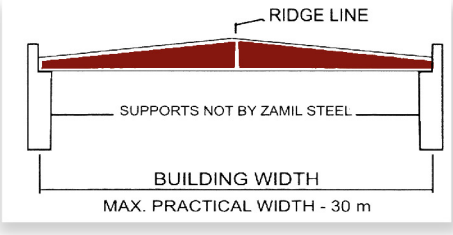
Multi-Span "3" (MS-3)



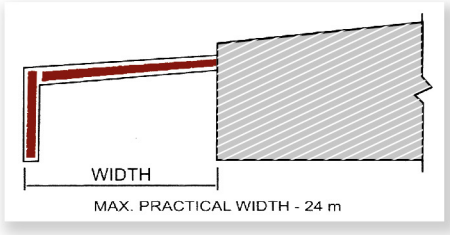
Single Slope (SS)



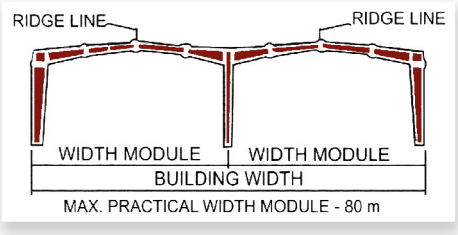
Roof System (RS)



Lean-To (LT)



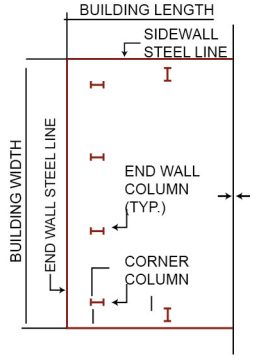
Multi-Gable (MG)



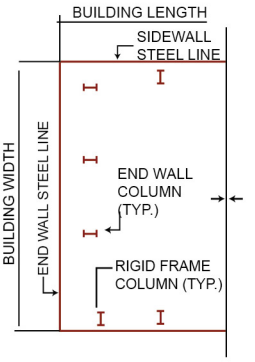
End Walls and Bracing Systems

End walls are constructed with either Rigid Frames or more economical Bearing Frames as PEB standard Practice. End wall grits frame to corner columns and wind columns can be either flush or by-frame. **DJC** Steel Bearing Frames and Wind Columns are manufactured from built-up I-sections instead of the less robust C-sections.

BEARING FRAME ENDWALL



RIGID FRAME ENDWALL



Bracing Systems: All horizontal loads on a structure eventually be transferred to column bases and then to the foundation accordingly. Horizontal loads result from the action of wind forces, seismic (earth quake) forces and overhead cranes on the building structure.

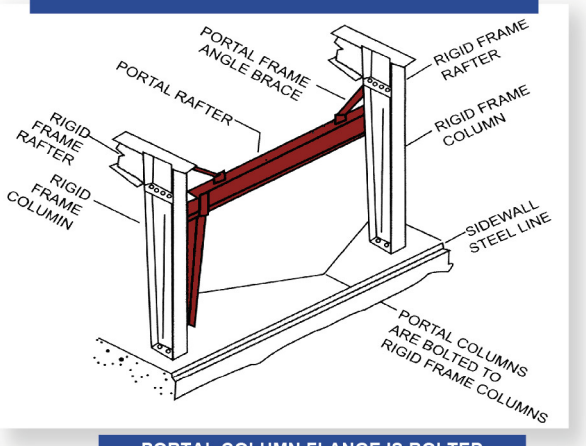
Diagonal Cable Bracing: is used in the roofs and walls of buildings to transfer wind forces to the build substructure. The 12mm diameter cable and the brace ends are made from galvanized strand. The 24mm diameter eye bolt connecting the brace end to the steel structure is made of electro galvanized coated steel and the hillside washer at the end of the cable brace assembly is made of cast

Diagonal Rod Bracing: is used to transfer the longitudinal horizontal loads of traveling overhead cranes to the substructure when the capacity of these cranes falls between 5MT and20MT.

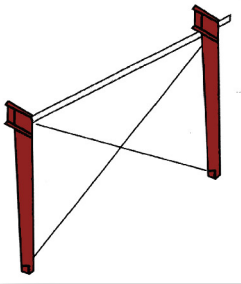
Diagonal Angle Bracing: is used to transfer the longitudinal horizontal loads of traveling overhead cranes to the substructure when the capacity of these cranes excess 20 MT. They are also used as wall bracing in very high buildings.

Portal frames: are used in exterior sidewalls or between the interior columns of multi span/mutli gable buildings when diagonal bracing is not allowed because of a requirement for clear unobstructed space. Portal frames comprise built-up columns and beams. Their columns flanges are bolted to the webs of the rigid frames columns and extend down to 150mm above F.F.L. Care must be taken to ensure that the bottom of the portal rafter is higher than the required unobstructed height.

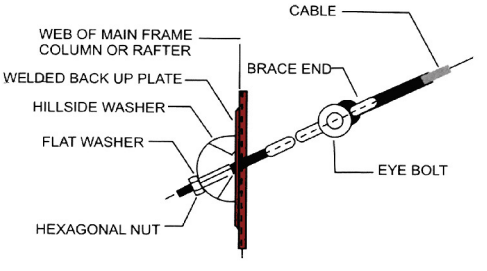
PORTAL FRAME



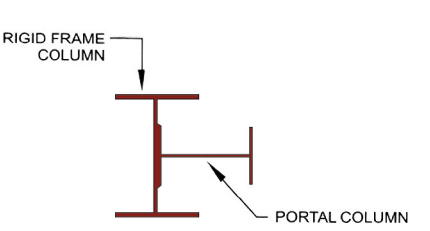
DIAGONAL BRACING



CABLE BRACING

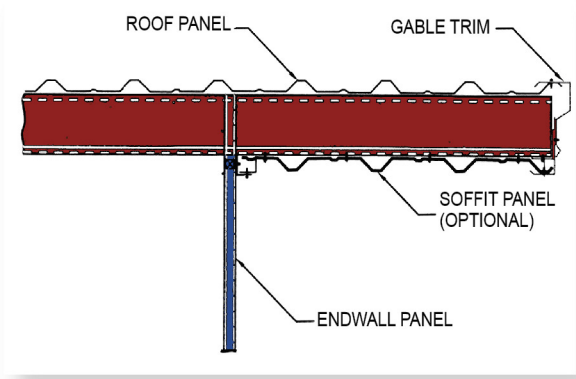


PORTAL COLUMN FLANGE IS BOLTED TO RIGID FRAME COLUMN WEB

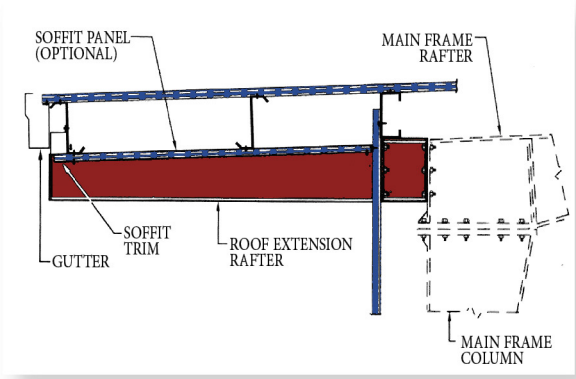


The Section contains few sub system examples of acutal **DJC** Pre-Engineered Buildings, along with simple sketches of some of their structural configurations.

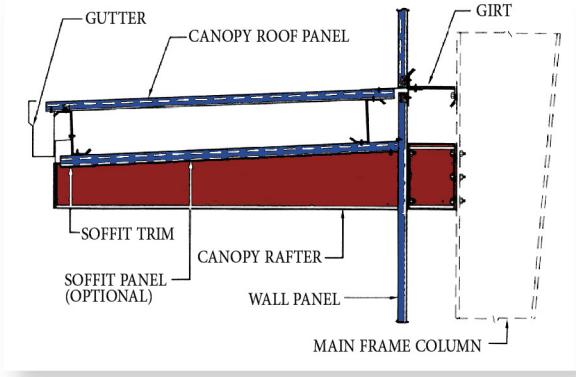
Endwall Roof Extension



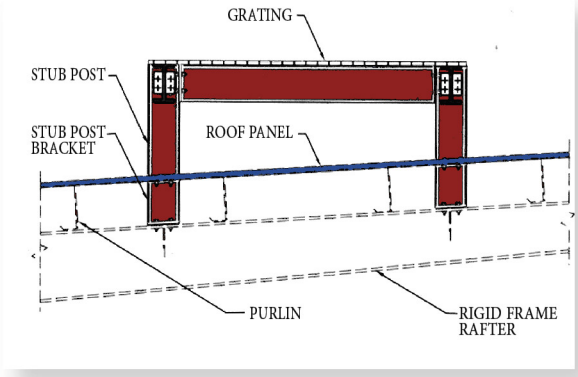
Sidewall Roof Extension



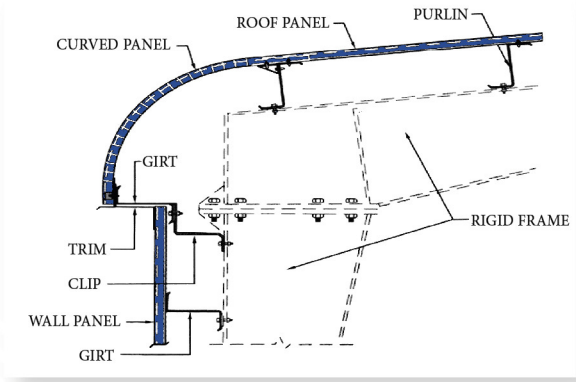
Canopy



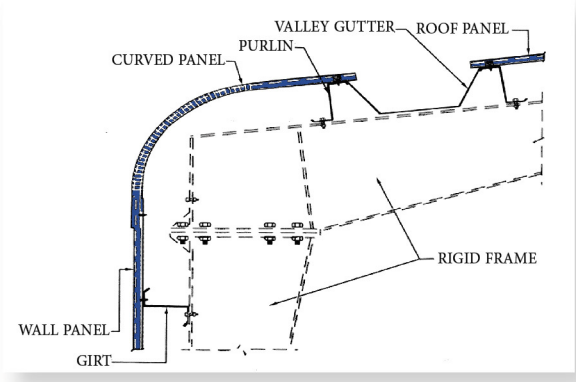
Roof Platform



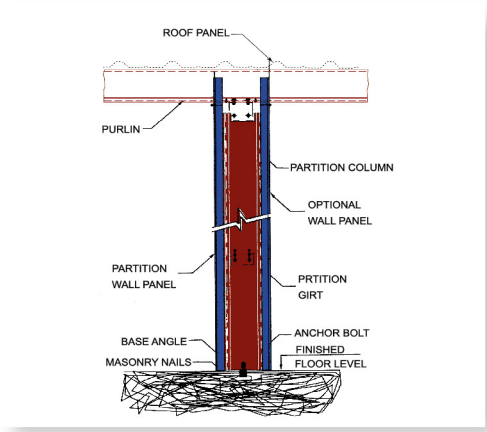
Curved Eave with Projection (Without valley gutter)



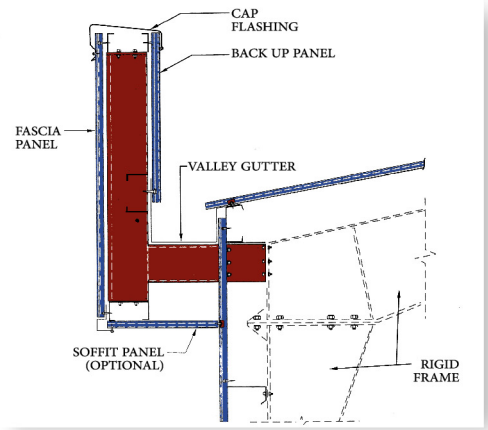
Curved Eave with Projection (With valley gutter)



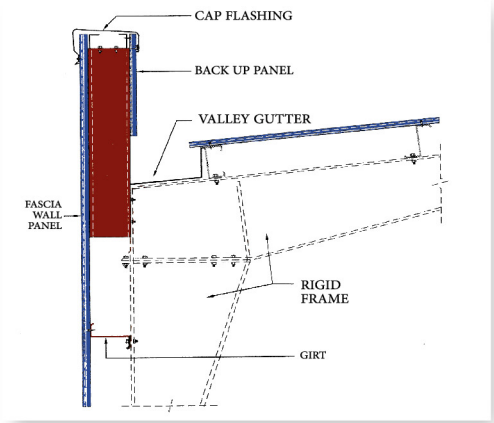
Transverse Partition



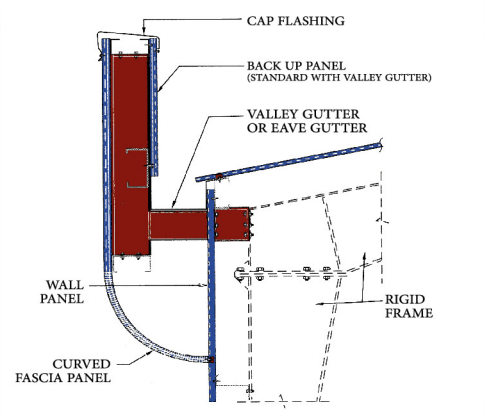
Vertical Fascia with backup Pannel and vally gutter



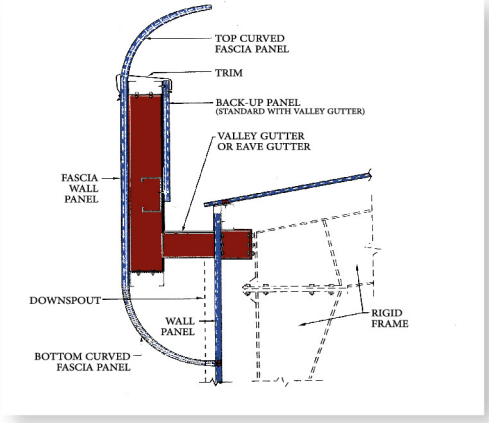
Parapet Fascia



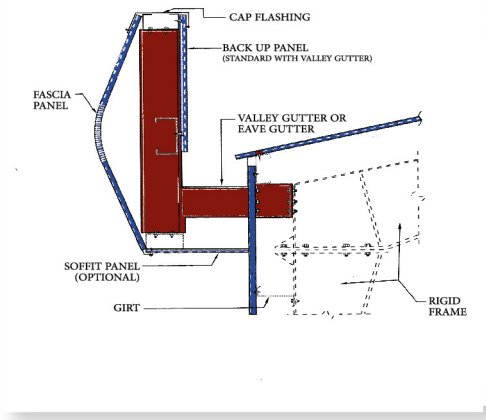
Bottom Curved



Top & Bottom Curved Fascia



Center Curved Fascia



Crane Systems

The most common type of overhead crane in PEB is the overhead Top Running Crane. Building with top running cranes are normally supplied with crane runway beams and crane brackets. Independent crane columns are supplied only when required by design or if specified by a customer.

Buildings with Under hung Cranes are supplied with crane runway beams, rafter brackets, lateral kicker angles and vertical bracings.

Buildings with Mono riot Cranes are supplied with rafter brackets lateral kicker angles and vertical bracings. The Mono Rial beam can be manufactured if design is provided by the crane supplier.

Buildings with Jib Cranes are generally supplied with cap channels (welded to the column flanges) and lateral wall bracings. (Crane rails are excluded from our supply.

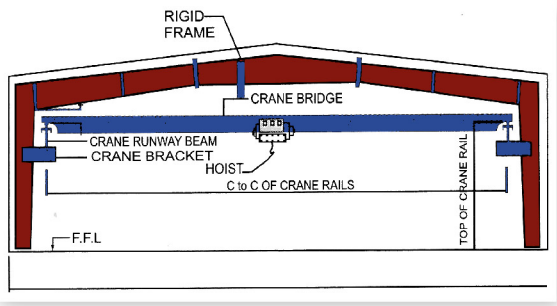
In order to provide the most economical design for crane runway beams and for the supporting building elements, the customer MUST provide the following crane data:

- Location of cranes in the building
- Travel length of cranes
- C.L to C.L distance of crane rails
- Crane hook height
- Static Wheel loads
- Vertical & horizontal clearances
- Wheel base & bumper distances of end carriages
- Type of crane operations (cab or pendant)
- The crane duty cycle (full capacity lifts per hour)
- No. of cranes operating in a single bay

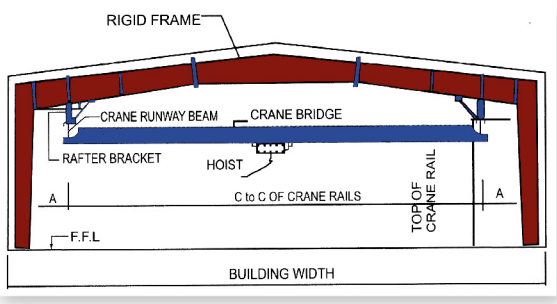
Crane Manufacturer Contact Information

For the most economical and accurate building desing, Please advise your crane manufacturer's contact details at time of reqest for quotation.

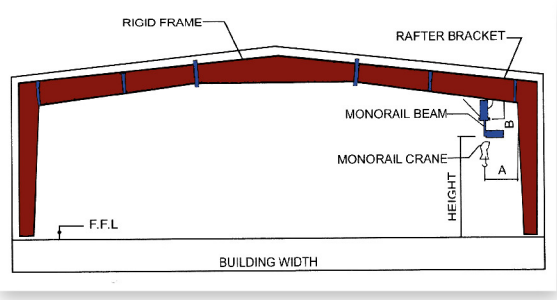
Top Runnig Crane



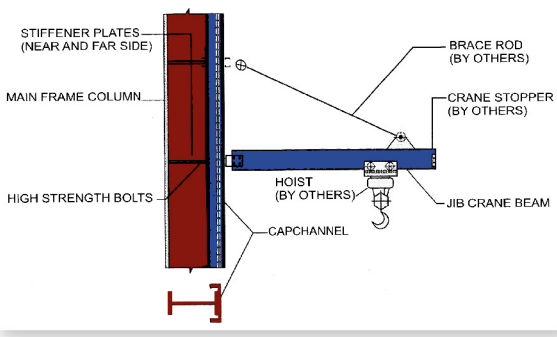
Underhung Crane



Monorail Crane



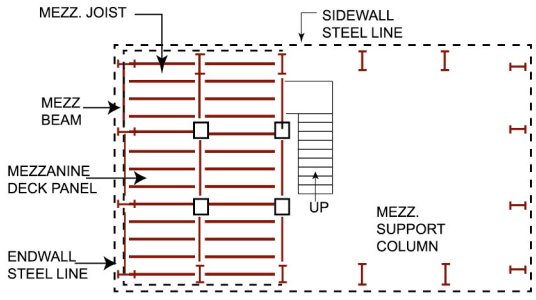
Jib Crane



Mezzanine Systems

A mezzanine system consists of support columns, beams, joists and deck (that is fastened to the joists with self drilling fasteners).

MEZZANINE PLAN



Mezzanine support columns may be square tube Sections or built-up I-sections as required by design.

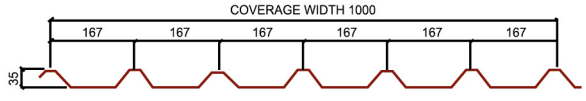
Mezzanine beams are built-up I-sections normally Span in the direction of rigid frame rafters.

Mezzanine joists are built-up I-sections that are spaced 1.5m - 3.0m aprart.

Mezzanine deck panel is intended to carry only the dead Load of wet concrete, acting as a permanent shuttering.

DJC steel's mezzanine deck profile is made of 0.5mm or 0.7mm thick galvanized steel that conforms to ASTMA 653M Grade SS 340.

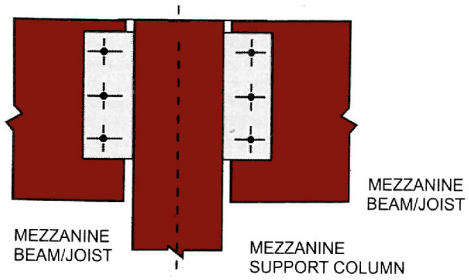
DECKING PANEL



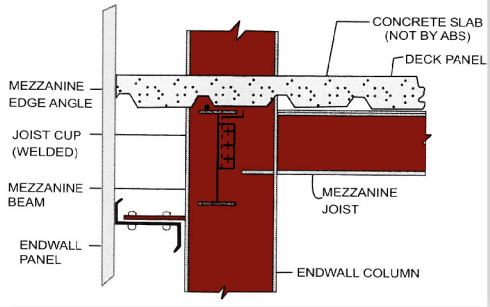
Mezzanine concrete slab should be designed by a qualified structural engineer to span the joist spacing while supporting the specified dead, live and collateral loads. The most common slab thickness is 100 mm(from the bottom of deck to top of concrete). The use of 125 mm and 150 mm slabs should be specified at the time of request for quotation.

Mezzanine deck fasteners are 5mm diameter, self taping screws without a sealing washer spaced at 333 mm center to center.

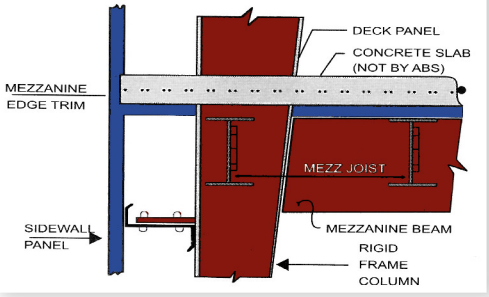
Beam/joist Conn. To Mezz. Column



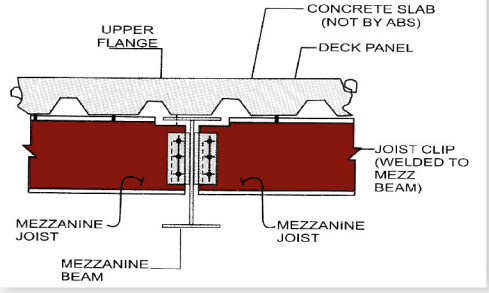
Joist Connection Mezz. Beam @ Endwall



Mezz. Beam Conn To Main Frame Column

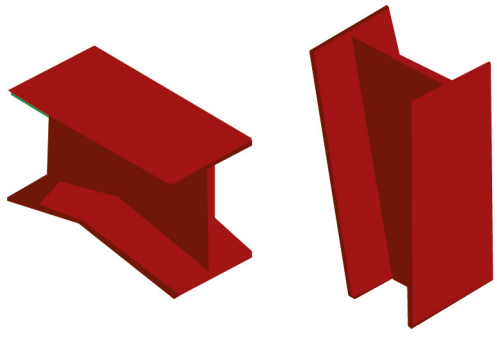


Flush Mezz Joist Connection To Mezz. Beam



Primary Built Up Members
Minimum Yield Strength is 34.5 kN/ com2

High grade steel plate conforming to ASTM A 572M Grade 345. Factory painted with a minimum of 35 microns (DFT) of corrosion protection primer.

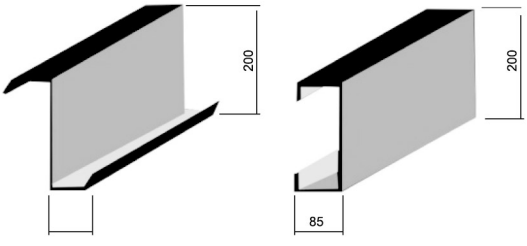


TYPICAL RAFTER

TYPICAL COLUMN

Secondary Members
Minimum Yield Strength is 34.5 kN/ com2

High grade steel conforming to ASTM A 607 Grade 50 or equivalent, available in 1.5 mm, 1.75 mm. 2.0 mm, 2.25 mm, 2.5 mm and 3.0 mm thickness pre-galvanized finish.

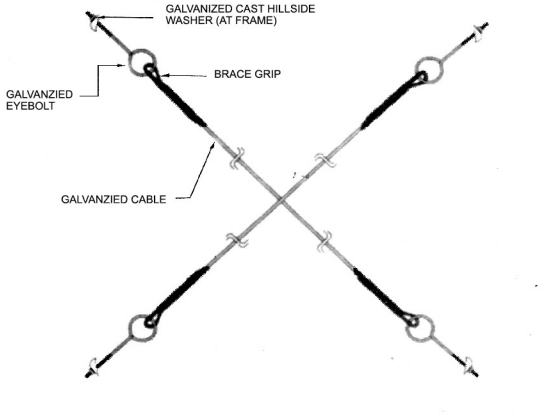


TYPICAL "Z" SECTION

TYPICAL "C" SECTION

Bracing Systems

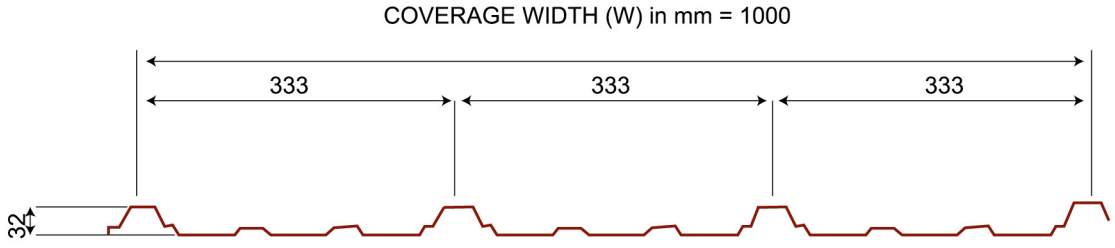
The system shown is cable bracing, Manufactured from ASTM A 475 extra high strength galvanized strands.



Single skin roof and wall panels are produced in an M32/333 profile in 0.5 mm or (0.7 mm optional) AluZinc Coated steel or 0.7 mm Aluminum. They are available in either mill finish or polyester painted finish. Interior liner panels, partition panels, fascia panels and soffit panels are produced in the same profile in 0.5 mm Polyester painted Alum Zinc Coated steel.

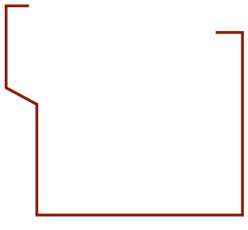
Panel attributes (profile, metal thickness, coating type, paint type, paint thickness and paint color) may be upgraded subject to extended delivery and higher price.

Type 32/222 Profile

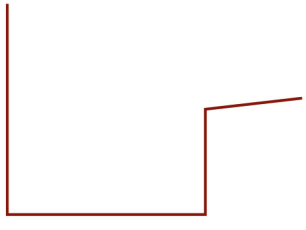


Roof Drainage Components

Eave Gutter



High-Low Valley Gutter



Downspout Section

Common Eave Valley Gutter

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