#### **TERMS & DEFINITIONS**

**Accessory:** An extra building product that supplements a basic solid-sheeted building. Examples would include doors, windows, skylights, ventilators, etc...

**ACI:** American Concrete Institute. The organization that has developed the recognized building code for design of concrete structures.

AISI: The American Iron and Steel Institute.

AISC: American Iron and Steel Construction.

AISE: American Iron and Steel Engineers.

Aluminum-Coated Steel: Steel coated with aluminum for corrosion protection.

ANSI: American National Standards Institute.

**Anchor Bolts:** Bolts used to anchor structural members to a foundation or other support. Usually refers to the bolts at the bottom of all columns and door jambs.

Anchor Bolt Plan: A plan view showing the size, location and projection of all anchor bolts for the metal building systems components, the length and width of the foundation (which may vary from the nominal metal building size). Column reactions (magnitude and directions) and minimum base plate dimension may also be included.

Approval Drawings: Approval drawings may include framing drawings, elevations and sections through the building as furnished by the manufacturer for approval of the buyer. Approval by the buyer affirms that the manufacturer has correctly interpreted the overall contract requirements for the metal building system and its accessories, and the exact location of accessories in the building.

**Architectural Drawings:** A drawing which shows the plan view and/or elevations of the finished building for the purpose of showing the general appearance of the building, indicating all accessory locations.

**ASCE:** American Society of Civil Engineers.

**Astragal:** A closure between the two leafs of a double swing or double slide door to close the joint.

Automatic Welding: A welding operation utilizing a machine to make a continuous, unbroken weld.

**Auxiliary Loads:** All specified dynamic live loads other than the basic design loads which the building must safely withstand, such as cranes, material handling systems, machinery, elevators, vehicles, and impact loads.

**Awning Window:** A window in which the vent or vents pivot outward about the top edge giving an awning effect.

**AWS:** American Welding Society.

#### **TERMS & DEFINITIONS**

**Base Angle:** An angle secured to the perimeter of the foundation to support and close wall panels.

**Base Plate:** A plate attached to the base of a column that rests on the foundation or other support, usually secured by anchor bolts.

**Bay:** The space between frame centerlines or primary supporting members in the longitudinal direction of the building.

**BBC:** Basic Building Code (see BOCA)

**Beam:** A primary member, usually horizontal, that is subjected to bending loads. There are three types; simple, continuous, and cantilever.

**Beam and Column:** A primary structural system consisting of a series of rafter beams supported by columns. Often used as the end frame of a metal building system.

**Bearing Plate:** A steel plate that is set on the top of a masonry support on which a beam or purlin can rest.

Bent: Primary member of a structural system.

Bill of Materials: A list of items or components used for fabrication, shipping, receiving, and accounting purposes.

**Bird Screen:** Wire mesh used to prevent birds from entering the building through ventilators and louvers.

**Blind Rivet:** A small headed pin with expandable shank for joining light gage metal. Typically used to attach flashing, gutter, etc...

**Block or Board Thermal Insulation:** Rigid or semi-rigid thermal insulation preformed into rectangular units.

**BOCA:** Building Officials and Code Administrators International, Inc.

**Bonded Roof:** A roof that carries a written warranty with respect to weather tightness for a stipulated number of years.

**Brace Rods:** Rods or cables used in roof and walls to transfer loads, such as wind loads, and seismic and crane thrusts to the foundation. (Also often used to plumb buildings but not designed to replace erection cables.)

**Bracket:** A structural support projecting from a wall or column on which to fasten another structural member. Examples are canopy bracket, lean-to brackets, and crane runway brackets.

**Bridge Crane:** A load lifting system consisting of a hoist which moves laterally on a beam, girder, or bridge which in turn moves longitudinally on a runway made of beams and rails. Loads can be moved to any point within a rectangle formed by the bridge span and runway length.

#### TERMS & DEFINITIONS

**British Thermal Unit (BTU):** That amount of heat required to raise the temperature of one pound of water by 1 degree F.

**Builder/Contractor:** A general contractor or sub-contractor responsible for providing and erecting metal building systems.

**Building Code:** Regulations established by a recognized agency describing design loads, procedures, and construction details for structures. Usually applying to designated political jurisdiction (city, county, state, etc...)

Built-Up Roofing: A roof covering made up of alternative layers of tar and asphalt material.

**Built-Up Section:** A structural member, usually an "I" section, made from individual flat plates welded together.

**Butt Plate:** The end plate of a structural member usually used to rest against a like plate of another member in forming a connection. Sometimes called a split plate or bolted end plate.

"C" Section: A member formed from steel sheet in the shape of a block "C", that may be used either singularly or back to back.

**Camber:** A predetermined curvature designed into a structural member to offset the anticipated deflection when loads are applied.

**Canopy:** Any overhanging or projecting roof structure with the extreme end usually unsupported.

**Cantilever:** A projecting beam that is supported and restrained at one end only.

**Capillary Action:** That action which causes movement of liquids when in contact with two adjacent surfaces such as panel sidelaps.

**Cap Plate:** A plate located at the top of a column or end of a beam for capping the exposed end of a member.

**Caulk:** To seal and make weather-tight the joints, seams, or voids by filling with a waterproofing compound or material.

**Channel-Hot Rolled:** A member formed while in a semi-molten state at the steel mill to a shape having standard dimensions and properties.

**Clip:** A plate or angle used to fasten two or more members together.

**Closure Strip:** A resilient strip, formed to the contour of ribbed panels used to close openings created by joining metal panels and flashing.

**Cold Forming:** The process of using press brakes or rolling mills to shape steel into desired cross sections at room temperature.

#### **TERMS & DEFINITIONS**

**Collateral Load:** All specified additional dead loads other than the metal building framing, such as sprinklers, mechanical and electrical systems, and ceilings.

**Column:** A primary member used in a vertical position on a building to transfer loads from main roof beams, trusses, or rafters to the foundation.

Continuity: The terminology given to a structural member, as if there were no connections.

Contractor: See builder.

Covering: The exterior roof and wall covering for a metal building system.

Crane: A machine designed to move material by means of hoist.

Crane Rail: A track supporting and guiding the wheels of a bridge crane or trolley system.

**Crane Runway Beam:** The member that supports a crane rail and is supported by columns or rafters depending on the type of crane system. On underhung bridge cranes, a runway beam also acts as a crane rail.

Curb: A raised edge on a concrete floor slab or skylight.

Curtain Wall: Perimeter wall panels that carry only their own weight and wind load.

Damper: A baffle used to open or close the throats of ventilators.

**Dead Load:** The dead load of a building is the weight of all permanent construction, such as floor, roof, framing, and covering members.

**Deflection:** The displacement of a structural member or system under load.

**Design Loads:** Those loads specified in building codes published by Federal, State, County, or City agencies, or in owners' specifications to be used in the design of a building.

Diagonal Bracing: See Brace Rods.

**Diaphragm Action:** The resistance to racking generally offered by the covering system, fasteners and secondary framing.

**Door Guide:** An angle or channel guide used to stabilize or keep plumb a sliding or rolling door during its operation.

**Downspout:** A conduit used to carry water from the gutter of a building to the ground or storm drain.

**Drift Pin:** A tapered pin used during erection to align holes in steel members to be connected by bolting.

Eave: The line along the sidewall formed by the intersection of the planes of the roof and wall.

#### **TERMS & DEFINITIONS**

**Eave Height:** The vertical dimension from finished floor to the eave.

**Eave Strut:** A structural member at the eave to support roof panels and wall panels. It may also transmit wind forced from the roof bracing to the wall bracing.

**Elastic Design:** A design concept utilizing the proportional behavior of material when all stresses are limited to specified allowable values.

**End Frame:** A frame at the endwall of a building to support the roof load from one-half the end bay.

**Erection:** The on-site assembling of fabricated components to form a complete structure.

Erection Drawings: See Framing Drawings.

**Expansion Joint:** A break or space in construction to allow for thermal expansion and contraction of the materials used in the structure.

**Fabrication:** The manufacturing process performed in a plant to convert raw material into finished metal building components. The main operations are cold-forming, cutting, punching, welding, cleaning and painting.

Fascia: A decorative trim or panel projecting from the face of a wall.

Fenestration: Windows or other panels of glass; their number and location.

Field: The "job site", "building site", or general market area.

Filler Strip: See closure strip.

**Finial:** Gable closure at ridge.

**Fixed Base:** A column base that is designed to resist rotation as well as horizontal or vertical movement.

**Flange:** The projecting edge of a structural member.

Flange Brace: A bracing member used to provide lateral support to the flange of a beam, girder, or column.

**Flashing:** A sheet metal closure which functions primarily to provide weather-tightness in a structure and secondarily to enhance appearance.

**Footing:** A pad or mat, usually of concrete, located under a column, wall, or other structural member, that is used to distribute the loads from that member into the supporting soil.

#### **TERMS & DEFINITIONS**

**Force:** The action of one body on another body that changes or tends to change its state of rest or motion. A force may be expressed in pounds (Newton's), kips, or other similar units and may act in any one of the following ways:

- a. Compression force: A force acting on a body tending to compress the body. (Pushing action).
- **b.** Shear force: A force acting on a body which tends to slide one portion of the body against the other portion of the body. (Sliding action).
- c. Tension force: A force acting on a body tending to elongate the body. (Pulling action).
- d. Torsion force: A force acting on a body which tends to twist the body.

**Foundation:** The substructure that supports a building or other structure.

**Framed Opening:** Framework (headers and jambs) and flashing which surrounds an opening in the wall or roof of a building; usually for field installed accessories such as overhead doors or powered roof exhausters.

**Framing:** The primary and secondary structural members (columns, rafters, girts, purlins, brace rod, etc...) which go together to make up the skeleton of a structure to which the covering can be applied.

**Framing Drawings:** Plans and erection instructions which identify all individual parts in sufficient detail to permit the proper erection and installation of all parts of the metal building system furnished by the seller (also known as Erection Drawings).

**Gable:** A triangular portion of the endwall of a building directly under the sloping roof and above the eave line.

**Gable Roof:** A ridge roof that terminates in gables.

Galvanized: Coated with zinc for corrosion resistance.

**Girder:** A main horizontal structural member that supports vertical loads. It may consist of several pieces.

**Girt:** A secondary horizontal structure member attached to sidewall or endwall columns to which wall covering is attached and supported horizontally.

Glaze or Glazing: The process of installing glass in windows and doors.

**Grade:** The term used when referring to the ground elevation around a building.

**Grade Beam:** A concrete beam around the perimeter of a building carrying an exterior wall.

**Grout:** A mixture of cement, sand, and water used to fill cracks and cavities. Often used under base plates or leveling plates to obtain a uniform bearing surfaces.

**Gutter:** A channel member installed at the eave of the roof for the purpose of carrying water from the roof to the drains or downspouts.

Gusset Plate: A steel plate used to reinforce or connect structural elements.

#### **TERMS & DEFINITIONS**

"H" Section: A steel member with an "H" cross section.

**Haunch:** The deepened portion of a column or rafter, designed to accommodate the higher bending moments at such points. (Usually occurs at connection of a column and rafter.)

Header: A horizontal framing structural member over a door, window or other framed opening.

**High Strength Bolts:** Any bolt made from steel having a tensile strength in excess of 100,000 lbs. per square inch. Some examples are ASTM A-325 and A-490.

**High Strength Steel:** Structural steel having a yield strength in excess of 36,000 lbs. per square inch.

Hinged Base: See Pin Connection.

**Hip Roof:** A roof that rises by inclined planes from all four sides of a building. The line where two adjacent sloping sides of a roof meet is called the hip.

**Hoist:** A mechanical lifting device usually attached to a trolley that travels along a bridge, monorail, or jib crane. May be chain or electric operated.

**Hood (Door):** The metal flashing used over exterior slide door track along the full length of the door header to protect the tracks from weather and to conceal them for aesthetic purposes.

**Hot-Rolled shapes:** Steel sections (angles, channels, I-beam, etc...) which are formed by rolling mills while the steel is in a semi-molten state.

ICBO: International Conference of Building Officials.

**Impact Load:** An assumed dynamic load resulting from the motion of machinery, elevators, craneways, vehicles, and other similar moving forces.

Impact Wrench: An electric or pneumatic device used to tighten nuts on bolts.

**Insulation:** Any material used in building construction to reduce heat transfer.

**Internal Pressure:** Pressure inside a building that is a function of wind velocity, and number and location of opening.

**Jack Beam:** A beam used to support another beam or truss and eliminate a column support.

Jack Truss: A truss used to support another truss or beam and eliminate a column support.

**Jib Crane:** A cantilevered boom or horizontal beam with hoist and trolley. This lifting machine may pick up loads in all or part of a circle around the column to which it is attached.

Jig: A device used to hold pieces of material in a certain position during fabrication.

**Kick-Out (Elbow):** (Turn-Out) A lower downspout section used to direct water away from a wall.

#### TERMS & DEFINITIONS

**Kip:** A unit of measure equal to 1,000 pounds. (4.4kN).

Knee: The connecting area of a column and rafter of a structural frame such as a rigid frame.

**Knee Brace:** A diagonal brace designed to resist horizontal loads usually from wind or moving equipment. This member normally has the lower end connected to a column and the upper end connected to an eave strut.

**Lean-to:** A structure such as a shed, having only one slope or pitch and depending upon another structure for partial support.

**Leveling Plate:** A steel plate used on top of a foundation or other support on which a structural column can rest.

Liner Panel: A panel applied as an interior finish.

Live Load: Live load means all loads, including snow, exerted on a roof except dead, wind and lateral loads.

Load Indicator Washer: A washer for high strength bolts in which pre-tension load can be measured as a function of amount of compression on raised portions of the washer.

**Loads:** Anything that causes a force to be exerted on a structural member. Examples of different types are:

- a. Dead Load
- **b.** Impact Load
- **c.** Roof Live Load
- d. Seismic
- e. Wind Load
- f. Crane Load
- g. Collateral Load
- **h.** Auxiliary Load

Louver: An opening provided with fixed or movable slanted fins to allow flow of air.

Masonry: Anything constructed of materials such as bricks, concrete blocks, ceramic blocks and concrete.

Mastic: Caulking or sealant normally used in sealing roof panel laps.

MBDA: Metal Building Dealers Association. (See SBA)

MBMA: Metal Building Manufactures Association.

Metal Building Fiberglass Insulation: A grade of fiberglass insulation blanket specifically manufactured for lamination to a vapor retarder.

Moment: The tendency of a force to cause rotation about a point or axis.

#### TERMS & DEFINITIONS

**Moment Connection:** A connection between two members which transfers the moment from one side of the connection to the other side, and maintains under application of load the same angle between the connected members that exist prior to the loading. Also, a connection that maintains continuity.

**Moment of inertia:** A physical property of a member, which helps define strength and deflection characteristics.

**Monolithic Construction:** A method of pouring concrete grade beam and floor slab together to form the building foundation without forming and pouring each separately.

**Monorail:** A single rail support for a material handling system. Normally a standard hot rolled I-beam.

Multi-Gable Building: Buildings consisting of more than one gable across the width of the building.

**Multi-Span Building:** Building consisting of more than one span across the width of the building. Multiple gable buildings and single gable buildings with interior posts are examples.

Newton: SI unit of measure for force (N).

Panels: See Roof Covering or Wall Covering.

**Parapet:** That portion of the vertical wall of a building that extends above the roofline at the intersection of the wall and roof.

**Pascal:** SI unit of measure for force per unit area (N/m2).

**Peak:** The uppermost point of a gable.

**Peak Sign:** A sign attached to the peak of that building at the endwall showing the building manufacturer.

**Piece Mark:** A number given to each separate part of the building for erection identification. Also called mark number and part number.

Pier: A concrete structure designed to transfer load from the base of a column to a footing.

**Pig Spout:** A sheet metal flashing designed to direct the flow of water out through the face of the gutter rather than through a downspout.

**Pilaster:** A reinforced or enlarged portion of a masonry wall to provide support for roof loads or lateral loads on the wall.

**Pin Connection:** In structural analysis; a member connection to a foundation; another member or structure is designed in such a way that free rotation is assumed.

Plastic Design: A design concept based on multiplying the actual loads by a suitable load factor and using the yield stress as the maximum stress in any member.

#### TERMS & DEFINITIONS

**Plastic Roof or Wall Panels:** Panels used to admit light. They are normally of the same configuration as the metal roof or wall panels, and installed in the same plane.

**Ponding:** The gathering of water at low or irregular areas on a roof.

Pop Rivet: See Blind Rivet.

**Portal Frame:** A rigid frame structure so designed that it offers rigidity and stability in its plane. It is used to resist longitudinal loads where diagonal bracing is not permitted. (Also "Wind Bent".)

**Post (End Post):** A secondary column at the end of a building to support the girts and in the beam and column endwall frame, to additionally support the rafter.

Pre-painted Coil: Coil steel that receives a paint coating prior to the forming operation.

Press Brake: A machine used in cold-forming metal sheet or strip into desired cross sections.

**Prestressed Concrete**: Concrete in which the reinforced cables, wires, or rods in the concrete are tensioned before there is load on the member, holding the concrete in compression for greater strength.

**Primary Members:** The main load carrying members of a structural system, including the columns, endwall posts, rafters, or other main support members.

**Primer Paint:** This is the initial coat of paint applied in the shop to the structural framing of a building for protection against the elements during shipping and erection.

Prismatic Beam: A beam having both flanges parallel about its longitudinal axis.

**Purlin:** A secondary horizontal structural member attached to the primary frame which transfers the roof loads from the roof covering to the primary members.

Rafter: A primary beam supporting the roof system.

Rails (Door): The horizontal stiffening members of framed and paneled doors.

**Rake:** The intersection of the plane of the roof and the plane of the gable. (As opposed to endwalls meeting hip roofs).

Rake Angle: Angle fastened to purlins at rake for attachment of endwall panels.

Rake Trim: A flashing designed to close the opening between the roof and endwall panels.

**Reactions:** The resisting forces at the column bases of a frame, holding the frame in equilibrium under a given loading condition.

**Reinforcing Steel:** The steel placed in concrete to help carry the tension, compression, and shear stresses.

#### TERMS & DEFINITIONS

**Ridge:** Highest point on the roof of the building which describes a horizontal line running the length of the building.

**Ridge Cap:** A transition of the roofing materials along the ridge of the roof. Sometimes called the ridge roll or ridge flashing.

Ridge Connection: See Moment Connection.

**Rigid Frame:** A structural frame consisting of members joined together with rigid (or moment) connections so as to render the frame stable with respect to imposed loads, without the need for bracing in its plane.

**Roof Covering:** The exposed exterior roof skin consisting of panels or sheets, attachments, and joint sealant.

Roof Overhang: A roof extension beyond the endwall/sidewall of a building.

Roof Pitch: Ratio of rise to width.

**Roof Slope:** The angle that a roof surface makes with the horizontal. Usually express in units of vertical rise to 12 units of horizontal run.

**Rolling Doors:** Doors that are supported on wheels which run on a track.

Sag Rod: A tension member used to limit the deflection of a girt of purlin in the direction of the weak axis. Also called Sag Strap or Sag Angle.

**Sandwich Panel:** A panel assembly used as covering; consists of an insulating core material with inner and outer skins.

SBA: Systems Builders Association.

**SBC:** Standard Building Code. (See SBCCI).

SBCCI: Southern Building Code Congress International, Inc.

**Screeding:** The process of striking oil off the excess concrete to bring the top surface of the concrete to proper finish and elevation.

Sealant: Any material that is used to close up cracks or joints thus protecting against leaks.

**Secondary Members:** Members that carry loads to the primary members. In metal building systems, this term includes purlins, girts, struts, diagonal bracing, wind bents, flange, and knee braces, headers, jambs, sag members, and other miscellaneous framing.

#### TERMS & DEFINITIONS

Section Modulus: A physical property of a structural member. It is used in design, and basically describes the bending strength of a member.

**Sectional Overhead Door:** Doors constructed in horizontally hinged sections. They are equipped with springs, tracks, counter balancers, and other hardware which roll the section into an overhead position, clear of the opening.

**Seismic Load:** Seismic Load is the assumed lateral load acting in any horizontal direction on the structural system due to the action of the opening.

**Self-Drilling Screw:** A fastener that combines the function of drilling and tapping. It is used for attaching panels to purlins and girts.

**Self-Tapping Screw:** A fastener that taps its own threads in a pre-drilled hole. It is for attaching panels to purlins and girts, and for connecting trim and flashing.

**Shear:** The force tending to make two contacting parts slide upon each other in opposite directions parallel to their plane of contact.

Shear Diaphragms: See Diaphragm.

**Sheet Groove (Reglet):** A notch or block out formed along the outside edge of the foundation to provide support for the wall panels and serve as a closure along their bottom edge.

**Shim:** A piece of steel used to level base plates or square beams.

**Shipping List:** A list that enumerates by part number or description each piece of material or assembly to be shipped. Also called tally sheet and bill of material.

**Shoulder Bolt:** A fastening used to attach wall and roof paneling to the structural frame. It consists of a large diameter shank and a small diameter stud. The shank provides support for the panel rib.

**Shot Pin:** A device for fastening items by the utilization of a patented device that uses a powdered charge to imbed the item in the concrete and or steel.

SI: The international symbol for the metric unit used by the United States (Le Systeme International d'Unites).

Side Lap Fastener: A fastener used to connect panels together at the side lap.

Sill: The bottom horizontal framing member of an opening such as a window or door.

Sill Angle: See Base Angle.

**Simple Span:** The term used in structural analysis to describe a support condition for a beam, girt, purlin, etc., which offers no resistance to rotation at the supports.

#### TERMS & DEFINITIONS

**Single Slope:** A sloping roof with one surface. The slope is from one wall to the opposite wall of rectangular building.

**Single Span:** A building or structural member without intermediate support.

**Siphon Break:** A small groove to arrest the capillary action of two adjacent surfaces.

Skylight: A roof accessory to admit light, normally mounted on a curbed, framed opening.

Slide Door: A single or double leaf door that opens horizontally by means of overhead trolleys.

Snow Load: A load imposed on buildings or other structures due to snowfall.

**Soffit:** The underside covering of any exterior portion of a metal building system.

Soil Pressure: The load per unit area a structure will exert through its foundation on the soil.

**Spall:** A chip or fragment of concrete that has chipped, weathered, or otherwise broken from the main mass of concrete.

**Span:** The distance between supports of beams, girders, or trusses.

**Specifications:** A statement of particulars of a given job, as to size of building, quality, and performance of people and materials to be used, and then terms of the contract. The most common specifications found in the metal building systems industry is the "Recommended Guide Specifications for Metal Building Systems" published by the Metal Building Manufacturers Association.

Splice: A connection in a structural member.

**Square:** The term used for an area of 100 square feet (9.29 M2).

Stainless Steel: An alloy of steel that contains a high percentage of chromium. Also, may contain nickel or copper. Has excellent resistance to corrosion.

**Stiffener:** A member used to strengthen a plate against lateral or local buckling. Usually a flat bar welded perpendicular to the longitudinal axis of the member. Large concentrated loads, such as crane loads, usually require stiffeners at the point of connection.

**Stiffener Lip:** A short extension of material at an angle to the flange of cold formed structural members, which adds strength to the member.

**Stiles:** The vertical side members of framed and paneled doors.

**Strain:** A change in length per unit length. It is the deformation of a body that is acted upon by forces.

#### TERMS & DEFINITIONS

**Stress:** A measure of the load on a structural member is terms of force per unit area (kips per sq. in.) (MPa).

**Structural Steel Members:** Load carrying member. May be hot-rolled sections, cold formed shapes, or built-up shapes.

**Strut:** A brace made to fit into a frame work to resist forces parallel to its length.

**Stud:** A vertical wall member to which exterior or interior covering or collateral material may be attached. May be either load bearing or non-load bearing.

**Suction:** A partial vacuum resulting from wind loads on a building which cause a load in the outward direction.

**Tapered Member:** A built-up plate member consisting of flanges welded to a variable depth web.

Temperature Reinforcing: Light-weight deformed steel rods or wire mesh placed in concrete to resist possible cracks from thermal expansion or contraction.

**Tensile Strength:** The longitudinal pulling stress a material can bear without tearing apart.

Thermal Block: A spacer of low thermal conductance material.

**Thermal Conductance (C):** The rate of heat flow, in BTU's per hour, through a square foot of material or a combination of materials whose surfaces have a temperature difference of 1° F.

Thermal Conductivity (k): The rate of heat flow, in BTU's per hour, through a square foot of material one inch thick whose surfaces have a temperature difference of 1° F.

Thermal Resistance (R): Resistance to heat flow. The reciprocal of conductance (C).

Thermal Transmittance (U): The rate of heat flow per square foot under steady conditions from the air on the warm side of a barrier to the air on the cold side, for 1 degree F of temperature difference between the two. (BTU/Ft<sup>2</sup> – hr –  $1^{\circ}$ F).

**Thrust:** The horizontal component of a reaction.

Tie: A structural member that is loaded in tension.

**Torque Wrench:** A wrench containing an adjustable mechanism for measuring and controlling the amount of torque or turning force to be exerted – often used in tightening nuts or bolts.

#### TERMS & DEFINITIONS

**Track:** A metal way for wheeled components; specifically one or more lines of ways, with fastenings, ties, etc., for a craneway, monorail, or slide door.

**Translucent Panels:** Panels used to admit light, yet cannot be seen through.

**Tributary Area:** The area which contributes to a specific structural component.

**Trim:** The light-gauge metal used in the finish of a building, especially around openings and at intersections of surfaces. Often referred to as flashing.

**Truss:** A structure made up of three or more members, with each member designed to carry a tension or compression force. The entire structure in turn acts as a beam.

**Turn-of-the-Nut Method:** A method for pre-tensioning high strength bolts. The nut is turned from the snug-tight position, corresponding to a few blows of an impact wrench or the full effort of a man using an ordinary spud wrench.

Turnout: See Kickout.

**UBC:** Uniform Building Code (See ICBO).

**Uplift:** Wind load on a building which causes load in the upward direction (See Suction).

**Valley Gutter:** A channel used to carry off water from the "V" of roofs of multi-gabled buildings.

**Ventilator:** An accessory usually used on the roof that allows air to pass through.

**Wainscot:** Wall material used in the lower portion of a wall that is different from the material in the rest of the wall.

Wall Covering: The exterior wall skin consisting of panels or sheets and their attachments, trim, fascia, and weather sealants.

Web: The portion of a structural member between flanges.

**Web Member:** A secondary structural member interposed between the top and bottom chords of a truss.

Wind Bent: See Portal Frame.

Wind Column: A vertical member supporting a wall system designed to withstand horizontal wind loads.

# TERMS & DEFINITIONS

Wind Load: A load caused by the wind blowing from any horizontal direction.

"Z" Section: A member cold formed from steel sheet in the shape of a block "Z".