TYLER
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STANDARD PRACTICES

1. INTRODUCTION

a. **General** – This "Standard Practices" document describes Tyler Building Systems, L.P.'s standard practices as it relates to the processing and delivery of Buyer's Metal Building System. The "Standard Practices" highlights the responsibilities Tyler Building Systems, L.P. has to Buyer and also the responsibility Buyer assumes when purchasing a metal building system.

b. **Additional Reference Sources**

i. American Institute of Steel Construction (AISC) "Manual of Steel Construction", 1989 Edition.

ii. Metal Building System Manufacturers Association (MBMA) "Metal Building Systems Manual", 2002 Edition.

iii. Tyler Building Systems, L.P. "Construction Handbook", latest edition.

iv. Tyler Building Systems, L.P. "Guidelines for Completing a Metal Building System Contract", latest edition.

v. Tyler Building Systems, L.P. "Metal Building System Specifications", latest edition.

vi. Tyler Building Systems, L.P. "Welding Procedure Specifications", latest edition.

c. Definitions

i. *Seller* – Tyler Building Systems, L.P.

ii. *Buyer* – The party that purchases the Metal Building System from Tyler Building Systems, L.P. Buyer may be an individual, company, organization, or etc.

iii. *Contract* – Tyler Building Systems, L.P.'s "Metal Building System Contract" form.

iv. *Change Order* – Tyler Building Systems, L.P.'s "Change Order" form.

v. *Erector* – The party that erects the Metal Building System. The role of Erector may be performed by either Buyer, Tyler, or a third party.

vi. *Metal Building System* – The material furnished by Tyler Building Systems, L.P.

2. SALE OF A METAL BUILDING SYSTEM

a. **General** – All materials in the Metal Building System are in accordance with the Contract.

i. Generally Included Parts – The parts and accessories included in the sale of a Metal Building System are established solely by the Contract. A typical sale may include the following parts:

1. The end and interior frames of the Metal Building System including columns, rafters, and flange braces.

2. Horizontal load bracing, purlins, girts, eave members, end wall columns, base angle, and other structural framing required to support the roof and wall coverings of the Metal Building System.

3. Nuts and bolts for steel-to-steel connections of the structural framing of the Metal Building System.

4. Exterior metal roof and wall covering of the Metal Building System including trim, fasteners, sealants and closures.

5. Anchor Rod Plans and Erection Drawings.

ii. Accessories – Accessories provided with the Metal Building System are established solely by the Contract.

iii. Material Not Included – The items listed below are not commonly available from Seller. Buyer should assume that these items are excluded unless stated otherwise in the Contract.

1. Materials for foundations or concrete or masonry walls such as reinforcing steel, concrete and masonry material, anchor rods, embedments, anchor bolt templates, leveling plates, tie rod or any other materials required to set or connect to masonry concrete.
2. Interior downspouts, underground drains and connections. Downspout splash blocks.
3. Insulation and insulation accessories.
4. Fire protection materials and systems.
5. Interior framing and finishing materials.
6. Cranes, crane rails, crane runway stops and material handling systems.
7. Electrical equipment, apparatus and wiring.
8. Mechanical equipment such as fans and air conditioning and ventilation units.
9. Miscellaneous iron or steel including, but not limited to, stairs, ladders, railings, platforms, conveyors, hangers, etc.
10. Overhead, roll-up, or other industrial type doors.
11. Flashing or counter flashing material used for tie-in to materials not included in the Metal Building System.
12. Fabrication Drawings.

b. **Contract** – Buyer is responsible for reviewing the Contract in order to determine its accuracy and completeness. Seller is responsible for providing only the material and services specifically included in the Contract.

c. **Change Orders** – Buyer may make changes to a Contract via a Change Order. The Change Order is a written document that describes the 1) changes to be made to the Contract, 2) adjustment in the Contract price due to the changes described in the Change Order, and 3) status of the project while the Change Order is being reviewed by the Buyer. When Buyer requests a change to the Contract, Seller places the project on either Fabrication Hold or All Departments Hold. Fabrication Hold means that the project will be designed and engineered but will not be fabricated for scheduled for delivery until the Change Order is returned to Seller. All Departments Hold means that Seller is performing no work whatsoever on the project until the Change Order is returned to Seller. *Regardless of the type of hold, a Change Order will typically delay the estimated delivery of drawings and/or material quoted in the Contract. Seller is not responsible for expediting the delivery of drawings and/or material that have been delayed due to Change Orders.*

3. DESIGN

a. Buyer's Design Responsibility

i. Buyer is responsible for identifying all applicable building codes, zoning codes, or other regulations applicable to the construction project, including the metal building system.

ii. Buyer is responsible for providing applicable design criteria, codes, standards, and regulations, and all the design loads or other requirements that affect the design or erection of the metal building system. Buyer is specifically responsible for supplying the following information to Seller:

1. The building geometric requirements such as length, width, height, roof shape, and slope, and clearance requirements, both vertical and horizontal.
2. The applicable code or standard that describes the application of design loads to the metal building system.
3. The applicable design loads including Live, Snow, Wind, Seismic, Collateral, and Auxiliary loads. Unless design loads (e.g., collateral and auxiliary) or conditions are specifically set out in the Contract, Seller assumes that no such loads or conditions exist.
4. All coefficients or factors (for example: Exposure, Importance, Building Use, etc.) necessary to adjust general or commonly used values in the specified design standard or code for the local site condition and specified conditions of use.
5. Site and construction conditions that affect design criteria such as conditions causing snow drifting, including location of adjacent structures.

6. Open wall conditions.
7. All information necessary to ensure the metal building system can be designed to comply with the specified code or standard and is compatible with other materials on the Construction Project.
8. All serviceability criteria limiting vertical or horizontal deflection of components or gross building drift that are necessary to ensure that the stiffness of the metal building system is suitable for its specific conditions of use and compatible with materials not included with the metal building system.
9. In the design of the metal building system, the Buyer is responsible for providing clearances and adjustments of material furnished by other trades to accommodate all of the tolerances of the metal building system.

iii. **Foundation Design** – Seller is not responsible for the design, engineering, materials or workmanship of the foundation. Anchor rod plans prepared by Seller are intended to show only location, diameter, and projection of anchor rods required to attach the metal building system to the foundation. Seller is responsible for providing to Buyer the loads imposed by the Metal Building System on the foundation. It is the responsibility of the Buyer to ensure that adequate provisions are made for specifying bolt embedment, bearing angles, tie rods, and/or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the metal building system, other imposed loads, and the bearing capacity of the soil and other conditions of the building site.

iv. **Ventilation, Condensation, and Energy Conservation** – Buyer is responsible for ensuring that adequate provisions are made for ventilation, condensation, and/or energy conservation requirements. Seller is not responsible for the design of the ventilation or energy conservation systems of the Metal Building System. Seller is not responsible for the adequacy of specified ventilation. Seller is not responsible for determining the compliance of the Metal Building System with required energy conservation codes.

v. **Framed Openings** – The design of framed openings in accordance with the design loads specified in the Contract is the responsibility of Seller. Design of materials supplied by others to be installed in these openings is the responsibility of Buyer. It is the responsibility of Buyer to supply to Seller design loads and other requirements that affect the design of the metal building system and its compatibility with other materials.

vi. **Effect on Existing Buildings** – Seller does not investigate the influence of the Metal Building System on existing buildings or structures. Buyer is responsible for verifying that such buildings and structures are adequate to resist snow drifts or other conditions as a result of the presence of the Metal Building System.

b. **Manufacturer's Design Responsibility**

i. **General –** Seller is responsible for the design of the Metal Building System, and for providing engineering data and drawings, as required by the Contract.

ii. **Engineering Data** – Seller provides an Engineer's Letter of Certification, design certification, design calculations, or other engineering data specified by the Contract. The Engineer's Letter of Certification is sealed by Seller's Engineer. Supplying of sealed engineering data and drawings for the Metal Building System does not imply or constitute an agreement that Seller or Seller's Engineer is acting as the Structural Engineer of Record for a project. The Engineer's Letter of Certification lists the Seller job number and design criteria including design codes, standards, loads and other design information in the Contract, and certifies that the structural design complies with the requirements of the Contract.

iii. **Approval Drawings** – When required by the Contract, Approval Drawings are furnished by Seller to the Buyer for approval. In order for Seller to proceed with preparation of fabrication drawings and the manufacture of the Metal Building System, Buyer returns one set of approval documents to Seller with a notation of outright approval or approval subject to Buyer's requested changes or corrections. Approval by Buyer without any changes or corrections affirms that Seller has correctly interpreted Buyer's requirements as set forth in the Contract.

If there are differences between the Approval Drawings as prepared by Seller and the Contract, the Approval Drawings take precedence.

If Buyer returns the Approval Drawings with requested changes, additions or corrections, the documents shall be considered as a request to modify the Contract and will be processed as a Change Order.

4. MATERIALS AND FABRICATION

a. Materials and Material Tests

i. **Materials** – All material used in the fabrication of the Metal Building System shall be new and meet or exceed the physical requirements of Seller's design fabrication processes, and shall be in accordance with Seller's standards and procedures unless otherwise specified in the Contract.

ii. **Material Tests** – Seller orders material for inventory to meet the design criteria for strength and to ensure that these materials possess the qualities required by the fabrication process of each specific component of the Metal Building System. Seller checks and retains test reports covering current inventory materials ordered for stock. However, records are not maintained such that individual components can be identified with individual test reports. If required by Contract, Seller furnishes test reports of current inventory materials. These practices of ordering, testing, stocking, and fabricating make it unnecessary and impractical for Seller to furnish test reports on the specific material used in the manufacture of a specific Metal Building System. Any additional requirements for destructive or nondestructive tests shall be included in the Contract and paid for by Buyer.

b. Fabrication

i. **General** – Seller is responsible for quality workmanship.

ii. **Fabrication Tolerances** – The fabrication tolerances set forth in Section 8 of this Standard Practices document are applicable to cold-formed and built-up welded, structural members. For hot-rolled shapes, the fabrication tolerances shall be in accordance with the "Specification for Design, Fabrication, and Erection of Structural Steel for Buildings" published by the American Institute of Steel Construction, Inc.

iii. **Welding Procedures** – Welding procedures shall be in accordance with the current issue of Seller's "Welding Procedure Specification" document.

iv. **Shop Primer** – Seller shall apply its standard primer unless otherwise specified in the Contract. All structural members of the Metal Building System not fabricated of corrosion resistant materials or protected by a corrosion resistant coating are painted with one coat of shop primer. All surfaces to receive shop primer are cleaned of loose rust, loose mill scale and other foreign matter by using, as a minimum, the hand tool cleaning method SSPC-SP2 (Society for Protective Coatings) prior to painting. Seller is not required to power tool clean, sandblast, flame clean, or pickle. The coat of shop primer is intended to protect the steel framing for only a short period of exposure to ordinary atmospheric conditions. The coat of shop primer does not provide the uniformity of appearance, or the durability and corrosion resistance of a field applied finish coat of paint over a shop primer.

Pre-painted material may be used at Seller's option, provided the pre-painted material is equal to, or exceeds, shop primer.

Minor abrasions to the shop coat caused by handling, loading, shipping, unloading, and erection after painting are to be expected. Any touch-up of these minor abrasions is the responsibility of the Buyer.

Shop primed steel which is stored in the field pending erection should be kept free of the ground, and so positioned as to minimize pockets holding water, dust, mud, and other contamination of the primer film. Repairs of damage to primed surfaces and/or removal of foreign material due to improper field storage or site conditions are the responsibility of the Buyer.

v. **Piece Marking and Identification** – Seller is responsible for clearly marking all individual parts or bundles and packages or identical parts for verification and erection identification. Bolts and fasteners are packaged according to type, size, and length. Loose nuts and washers are packaged according to size. The shipping documents include a shipping list that shows the quantity, description, and piece mark of the various parts.

vi. **Inspection** – Seller inspects Material and parts during fabrication in accordance with Seller's quality system. Any additional inspections desired by Buyer must be specifically include in the Contract.

vii. **Loading** – Materials are packaged in accordance with Seller's standards and loaded in the manner and sequence most convenient and economical for Seller unless otherwise required by Contract.

Materials are commonly fabricated for loading on 40 foot, flatbed, open trailers. If Buyer requires special size, packaging, and loading of materials, all such requirements must be specified in the Contract.

5. **DELIVERY & RECEIPT**

a. **Delivery of Materials** – *(Seller is responsible for this section when the Contract requires Seller to act as Erector.)* Metal Building System material is delivered in the order or sequence that is most convenient and economical to Seller unless specified otherwise in the Contract. Buyer is responsible for promptly receiving materials. Seller may subcontract all or a part of the transportation to a common carrier. Buyer may subcontract receipt of material to Erector.

b. **Receipt of Materials** *(Seller is responsible for this section when the Contract requires Seller to act as Erector.)*

i. **Short Materials -** Immediately upon delivery of material, Buyer will verify material quantities against quantities billed on shipping documents. Neither Seller nor the carrier is responsible for material shortages against quantities billed on shipping documents if such shortages are not noted on shipping documents upon delivery of material and acknowledged by the carrier's agent. Buyer will promptly notify Seller if the material quantities received are correct according to the quantities billed on the shipping documents, but are less than the quantities ordered or the quantities that are necessary to complete the metal building system according the Contract.

ii. **Damaged Material** – Damaged material, regardless of the degree of damage, shall be noted on the shipping documents by Buyer, or Buyer's agent, and acknowledged in writing by the carrier's agent. Seller is not responsible for material damaged in unloading or for packaged or nested materials, including, but not limited to, fasteners, sheet metal, "C" and "Z" sections, and covering panels that become wet and/or are damaged by water while in the possession of others. Packaged or nested material that become wet in transit shall be unpacked, unstacked, and dried by Buyer. Seller is not liable for any claim whatsoever including, but not limited to, labor charges or consequential damages resulting from Buyer's, or Buyer's agent's, use of damaged materials that can be detected by visual inspection.

iii. **Defective or Incorrect Material** – Claim for defective or incorrect material shall be made by Buyer, or Buyer's agent, to Seller's Customer Service Department at 1-800-442-8979, Ext. 212. Seller is not liable for any claim whatsoever including, but not limited to, labor charges or consequential damages, resulting from Buyer's, or Buyer's Agent's, use of defective or incorrect materials that can be detected by visual inspection.

6. **ERECTION & OTHER FIELD WORK**

a. **General** – Buyer is responsible for selecting competent labor to erect the Metal Building System. Seller is not responsible for the erection of the Metal Building System, the supply of any tools or equipment, or any other fieldwork unless specifically stated otherwise by the Contract. Seller does not provide field supervision for the erection of the structure nor does Seller perform any intermediate or final inspections of the Metal Building System during or after building erection.

b. **Work Usually Included in Erection** – The Erector furnishes:

i. All field labor, tools, and equipment necessary to unload at the building site and to completely, erect, safely and properly, the metal building system. Some standard and non-standard components and accessories of a metal building system including, but not limited to, field located openings, special framing, flashing, trim, etc., require minor field modification and fitting.

ii. Insulation and insulation accessories assembled in conjunction with the exterior wall and roof of the metal building system.

iii. The electric power required for metal building erection if commercial power is not available at the job site.

iv. Removal from the building and the job site of Erector's temporary buildings, rubbish resulting from erection work, unused screws and bolts, and drill shavings.

v. Temporary guys and bracing where needed for squaring, plumbing and securing the structural framing against loads, such as wind loads acting on the exposed framing and seismic forces comparable in intensity to those for which the completed structure is designed, as well as loads due to erection equipment and erection operation, but not including loads resulting from the performance of work by others. Bracing furnished by Seller for the metal building system cannot be assumed to be adequate during erection. The temporary guys, braces, falsework and cribbing are the property of the Erector, and the Erector removes them immediately upon completion of erection.

c. **Work Not Usually Included in Erection** – Due to the widely varied types of work encountered in conjunction with the construction of metal building projects, the following is a partial list of the types of work not included in the erection of the metal building system:

i. Receipt of materials, including inspection for short and damaged materials

(*Note: Buyer usually subcontracts the duty of receiving and inspecting materials to Erector. Nevertheless, receipt and inspection of materials remains the primary responsibility of Buyer.)*

(Note: When Seller performs the role of Erector, Seller assumes responsibility for receipt and inspection of Metal Building System materials.)

ii. Site work.

iii. Foundation, concrete or masonry work.

iv. Setting or inspection of setting of anchor bolts, leveling plates, templates, column base tie rods or any item to be set or imbedded in concrete or masonry.

v. Grouting or filling of any kind under columns or door jambs or in the recess at the base of wall panels.

vi. Glazing for the metal building system accessories.

vii. Field painting or field touch-up of the structural framing shop coats or bolts, except the touch-up of field cuts and welds of the structural framing.

viii. Commercial power, if available, including temporary power pole adjacent to the building.

ix. Interior finishing or carpentry work of any kind.

x. Flashing, cutting, drilling or otherwise altering the metal building system, as required, for the assembly or installation of accessories, materials, or equipment supplied by other trades.

xi. Glass cleaning.

xii. Electrical, mechanical, masonry or fireproofing work.

d. **Concrete Slab, Foundation and Anchor Rod Setting** – Buyer is responsible for all additional costs resulting from errors in the concrete slab and foundation. The Erector is responsible for ensuring that concrete dimensions and anchor rod locations are correct before setting any steel.

e. **Interruptions, Delays, or Overtime Wages** – The price for erection and other field work is computed on the basis of a normal forty-hour (five eight-hour days) work week (excluding Saturdays, Sundays, and recognized holidays). The Buyer pays any additional cost incurred by Erector through interruptions, delays, errors, or overtime wages caused by the Buyer, or Buyer's contractors. Interruptions include call backs to complete portions of the erection or other field work that is postponed at Buyer's request.

f. **Hazardous Job Site Conditions** – If hazardous job site conditions prohibit the use of exposed arcs, standard electric motors or normal erection tools and equipment, the Buyer pays any additional costs resulting from such production.

g. **Accessibility of Job Site and Building Floor Area** – The price for erection work is computed based on Buyer providing a job site clean, level, fully accessible to trucks for delivery of materials and erection equipment, and sufficiently compacted to support and permit ready movement of such trucks and equipment. In addition, Buyer furnishes the building floor area, together with a level and compacted work area outside the building at least twenty feet wide on all sides of the building. This work area shall be free of any existing structure not being tied into the Metal Building System, property lines, fences, overhead obstructions, pits, machinery, ditches, pipe lines, electric power lines, unsafe or hazardous conditions or other obstacles and shall be full accessible to Erector's employees, trucks and erection equipment to deliver, store, and lay out materials and to erect the Metal Building System. The Buyer pays to the Erector any additional costs incurred by the Erector resulting from the Buyer's failure to furnish the foregoing.

h. **Erection Tolerances** – Erection tolerances are those set forth in "AISC Code of Standard Practice" except individual members are considered plumb, level and aligned if the deviation does not exceed 1:300. (Ref. American Institute of Steel Construction, Inc.; "Manual of Steel Construction", 9th Edition).

Variations are to be expected in the finished overall dimensions of structural steel frames. Such variations are deemed to be within the limits of good practice when they do not exceed the cumulative effect of rolling, fabricating, and erection tolerances.

When crane support systems are part of a Metal Building System, erection tolerances specified in the "Fabrication and Erection Tolerances" of Section 8 apply. To achieve the required tolerance, grouting of columns and shimming or runway beam may be required. If grouting of column bases is required, the Buyer shall provide such grouting. The party erecting the runway beam is responsible for shimming, plumbing, and leveling of the runway beams. When aligning the runway beams, the alignment should be with respect to the beam webs so that the center of the aligned rails is over the runway web.

i. **Method or Sequence of Erection** – The Erector, by entering into a contract to erect the Metal Building System, holds itself out as skilled in the erection of Metal Building Systems and is responsible for complying with all applicable local, state, and federal construction and safety regulations including OSHA regulations.

Seller may supply erection drawings and instructions suggesting the sequence of erection and appropriate connection of the Metal Building System components. The erection drawings are not intended to specify any particular method of erection to be followed by the Erector. The Erector remains solely responsible for the safety and appropriateness of all techniques and methods utilized by its crews in the erection of the Metal Building System. The Erector is also responsible for supplying any safety devices, such as scaffolds, runways, nets, etc. which may be required to safely erect the Metal Building System.

The proper tightening and inspection of all fasteners is the responsibility of the Erector.

j. **Correction of Errors and Repairs –** The correction of minor misfits by the use of drift pins to draw the components into line, shimming, moderate amounts of reaming, chipping and cutting, and the replacement of minor shortages of material are a normal part of erection and are not subject to claim.

Except for friction type structural connections (not normally utilized in metal building system design), visible gaps between column and/or rafter connection plates can occur as a result of various causes without critical effect to the structural integrity of the Metal Building System. Minimal shimming at bolt locations is considered acceptable regardless of material yield and does not require full surface contact of the connection plates. The purpose of shimming, besides any aesthetic benefits, is to provide resistance to the tightening procedures of high-strength bolts for proper installation. The types of shim can be of a uniform thickness, full size, tapered or notched around bolts to permit installation without removal of bolts. Bolt holes oversized by 3/16" are permitted in full-size shims to facilitate alignment.

For further information regarding shimming, refer to the AISC publication, "Engineering for Steel Construction". In the event of connection gaps, Seller must be consulted for approval and specific recommendations for proper shimming.

Seller does not pay claims for error correction unless the following claim and authorization procedure is strictly complied with by the Buyer, or Buyer's agent, or if the correction work is begun by the Buyer, or Buyer's agent, prior to receipt of Seller's written "Authorization for Corrective Work".

Seller is not liable for any claim resulting from use of any documents not specifically released for construction.

k. **Claims** – *(Seller is responsible for this section when the Contract requires Seller to act as Erector.)* Seller will process claims in accordance with the procedures listed below. Seller is not liable for any claim resulting from use by the Erector of any improper material or material containing defects that can be detected by visual inspection. Costs of disassembling such improper or defective material and costs of erecting replacement material are not subject to claim.

i. Initial Claim – In the event of error, the Buyer shall promptly make a written or verbal "Initial Claim" to Seller for the correction of design, drafting, bill of material or fabrication error. The "Initial Claim" includes:

1. Description of nature and extent of the errors including quantities.
2. Description of nature and extent of proposed corrective work including estimated man-hours.
3. Material to be purchased from other than Seller including estimated quantities and cost.
4. Maximum total cost of proposed corrective work and material to be purchased from other than Seller.

ii. Authorization for Corrective Work – If the error is the fault of Seller, an "Authorization for Corrective Work" shall be issued in writing by Seller to authorize the corrective work at cost not to exceed the maximum total cost as set forth. Seller may choose to perform the corrective work.

Seller, in the "Authorization of Corrective Work", may direct alternative corrective work other than that proposed in the "Initial Claim".

iii. Final Claim – Buyer will forward, in writing, the "Final Claim" to Seller within ten days after completion of the corrective work authorized by Seller. The "Final Claim" shall include:

1. Actual number of man-hours by date of direct labor use on corrective work and actual hourly rates of pay.
2. Taxes and insurance on total actual direct labor.
3. Other direct costs on actual direct labor.
4. Cost of material (not minor supplies) authorized by Seller to be purchased from other than Seller including copies of paid invoices.
5. Total actual direct cost of corrective work (i.e., the sum of 1 through 4 above). The "Final Claim" shall be signed and certified true and correct by Contractor. "Final Claims" are paid to such Contractor by Seller in an amount not to exceed the lesser of the maximum total cost set forth in written "Authorization for Corrective Work" or total actual direct cost of corrective work.

7. GENERAL

a. **Permits, Assessments, Pro Rata and Other Fees –** Seller neither obtains nor pays for any building permits, licenses, public assessments, paving or utility pro rata, utility connections, occupancy fees or other fees required by any governmental authority or utility in connection with the work.

b. **Code or Deed Restriction –** Due to the wide interpretations given to design standards, building codes, zoning codes, and deed restrictions encountered in the construction industry, Seller does not warrant the Metal Building System to comply with any building or zoning code requirements, permit requirement, deed restriction, design procedures, design load, material or equipment requirements, effect of (or on) existing structures, or fabrication procedures except those expressly set out in the Contract. Costs of any additions, modifications, or changes that may be required to comply with such codes, procedures or requirements which are not expressly set out in the Contract, will be paid by Buyer.

When the size, shape, general characteristics of design criteria of a Metal Building System are specified to Seller, Seller is not responsible for the suitability, adequacy, or legality of the Metal Building System or its design.

c. **Postponement of Shipment** – The consideration for the sale of the Metal Building System by Seller does not include provision for the cost of storage of Seller's products beyond the originally scheduled shipping date. If the Buyer requests postponement of shipment of Seller's products beyond the originally scheduled shipping date, the Buyer is responsible for payments as originally scheduled as well as any additional storage, handling trailers, repainting, erection or other costs resulting from the requested postponement.

d. **Penalties and Bonds** – Unless otherwise specified in the Contract, neither Seller nor Erector is liable for any penalties or liquidated damages, regardless of cause. In addition, neither Seller nor Erector furnish or pay for any performance, payment or maintenance bond unless otherwise specified in the Contract.

e. **Completion and Acceptance** – Upon substantial completion of the work provided in the Contract, the Buyer shall deliver to the Erector a signed completion certificate noted as to any items in need of correction or completion. Failure of the Buyer to deliver such noted completion certificate within ten days after notice of substantial completion conclusively constitutes acceptance of the work as satisfactorily completed and waiver by Buyer. If the work provided in the Contract is substantially complete except for minor items noted on the completion certificate that cannot be promptly corrected or completed due to circumstances beyond the control of the Erector, the work provided in the Contract is deemed complete. In addition, partial or complete occupancy of the building conclusively constitutes acceptance of the work as satisfactorily completed and waiver by the Buyer.

f. **Indemnification for Modification, Adaptations and Repairs** – Buyer agrees and obligates himself to indemnify, hold harmless, and assume the defense of Seller against any and all actions, claims, damage, liability, costs and expenses whatsoever in any manner resulting from or arising out of any modifications, adaptations, or repairs made to the Metal Building System by any entity other than Seller.

g. **Consequential Damages** – Seller is not liable for any consequential damages including that resulting from late arrival of the Metal Building System material to the job site or from short, damaged, defective, incorrect or misfit materials.

h. **Changes in Product or Standards** – Seller may make changes in Seller's products and standards without notice.

i. **Paragraph Headings** – Paragraph headings are included for convenient reference and have no bearing on the interpretation of the wording of any paragraph and do not limit one practice to one heading or paragraph.

8. **FABRICATION AND ERECTION TOLERANCES**

a. **Cold-Formed Structural Members –** The fabrication tolerances indicated in Figure 7.1 for cold-formed structural members are defined in Table 7.1.

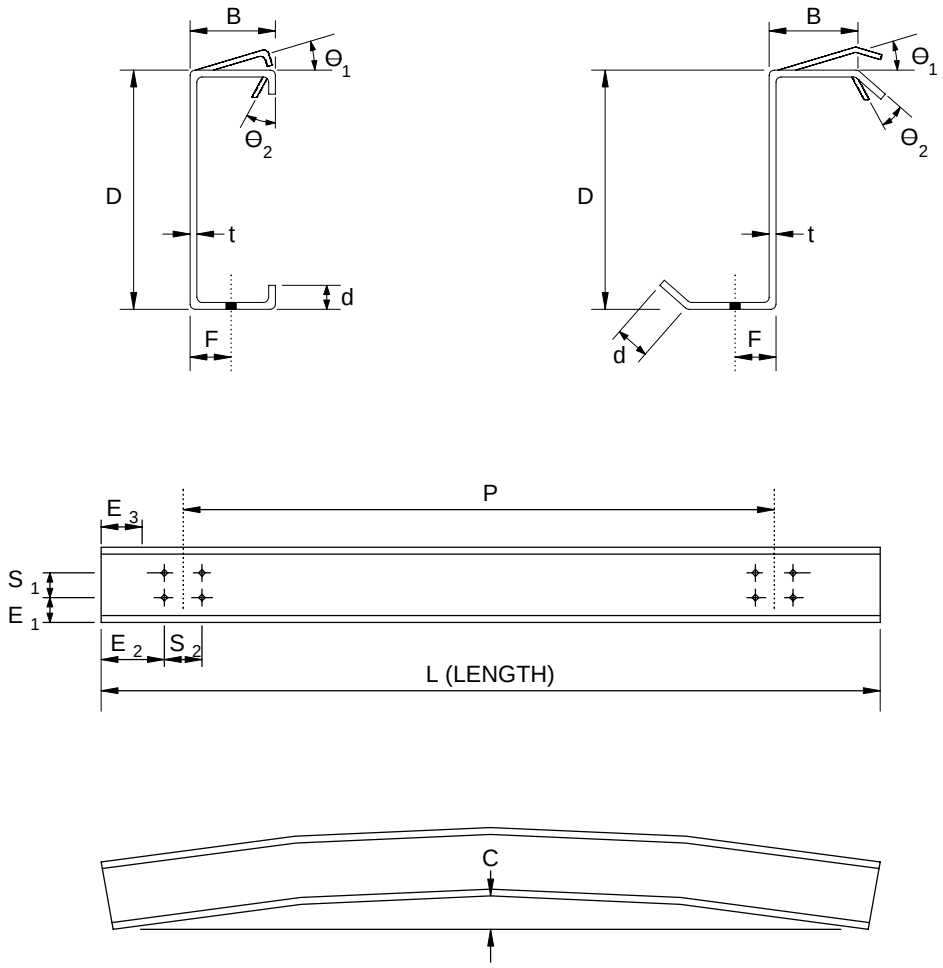


Figure 7.1

Cold-Formed Structural Member

Table 7.1 - Cold Formed Structural Members

	Dimension	Tolerances	
		+	-
Geometry	D	3/16”	3/16”
	B	3/16”	3/16”
	d	3/8”	3/8”
	θ_1	3^o	3^o
	θ_2	5^o	5^o
Hole Location	E_1	1/8”	1/8”
	E_2	1/8”	1/8”
	E_3	1/8”	1/8”
	S_1	1/16”	1/16”
	S_2	1/16”	1/16”
	F	1/8”	1/8”
	P	1/8”	1/8”
Length (L)		1/8”	1/8”
Camber (C)		1/4“ x L (ft) / 10	
Minimum Thickness (t)		0.95 (Design t)	

b. **Built-Up Structural Members** – The fabrication tolerances indicated in Figure 7.2 (a) and Figure 7.2 (b) for built-up structural members are defined in Table 7.2.

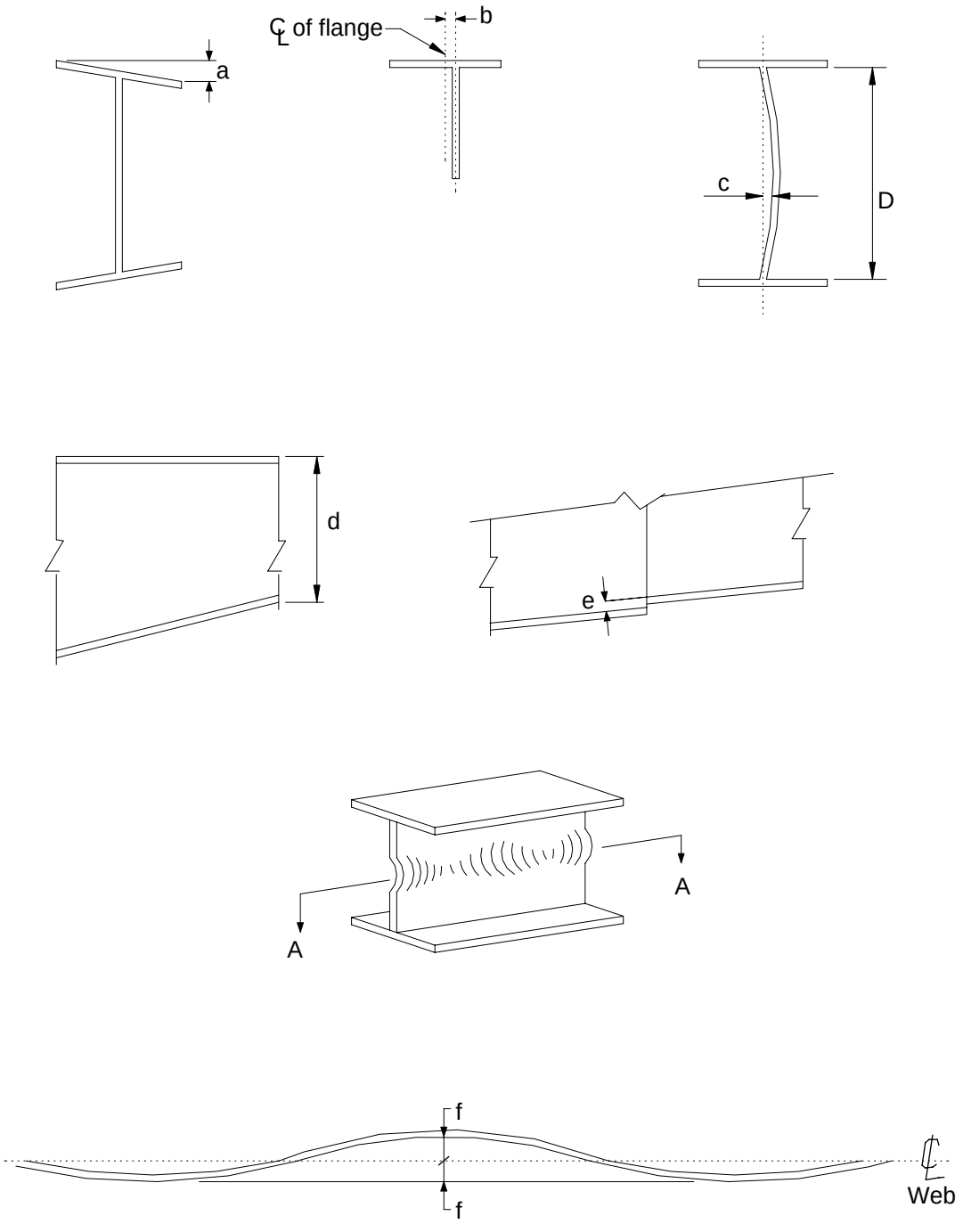


Figure 7.2 (a)
Built-Up Structural Member

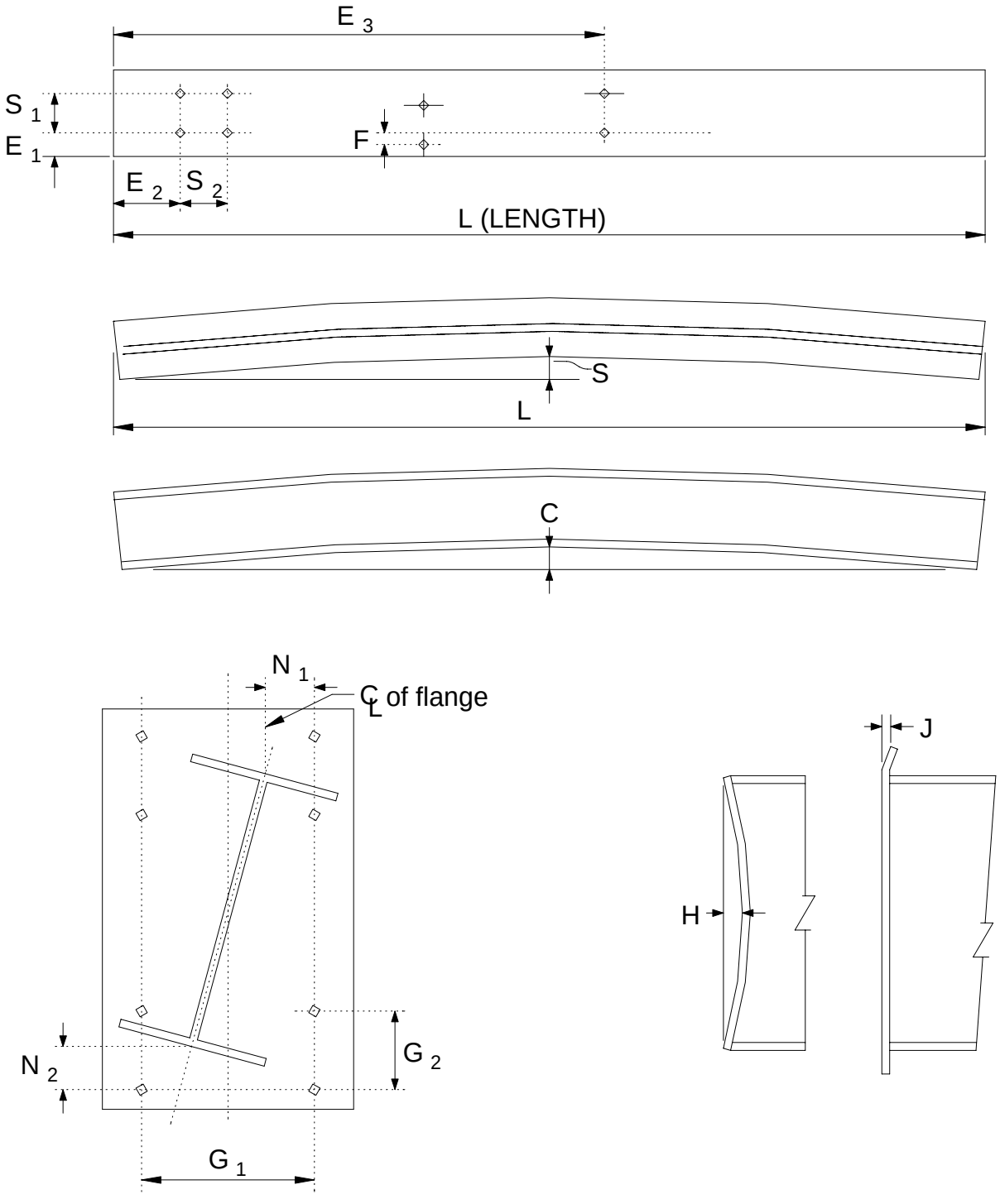
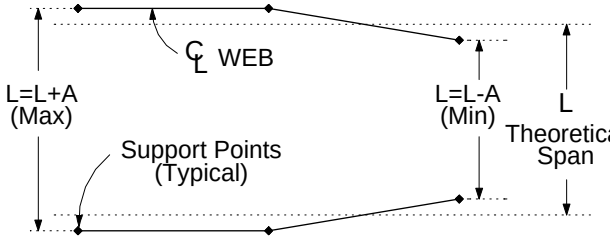
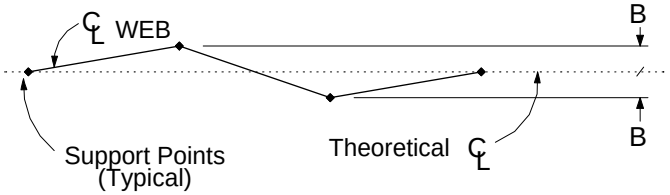
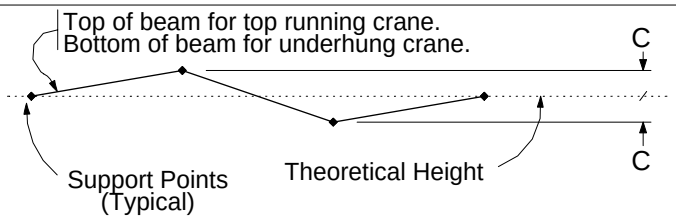
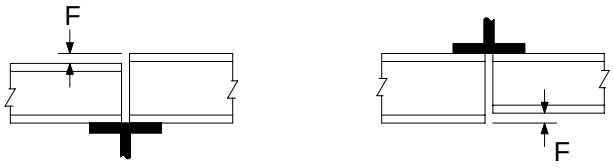


Figure 7.2 (b)
Built-Up Structural Member

Table 7.2 – Built-Up Structural Members

	Dimension		Tolerance	
			+	-
Geometry	a		3^o – 1/4“ Max.	3^o – 1/4“ Max.
	b		1/4“	1/4“
	d		3/16”	3/16”
	e		1/8”	1/8”
	c		D/72”	
	f		D/72”	
Hole Location	E1		1/8”	1/8”
	E2		1/8”	1/8”
	E3		1/8”	1/8”
	S1		1/16”	1/16”
	S2		1/16”	1/16”
	F		1/8”	1/8”
Length (L)			1/4“	1/4“
Sweep (S)			Runway Beams 1/8” x L(ft)/10	
			All other members 1/4” x L(ft)/10	
Camber (C)			1/4” x L(ft)/10	
Splice Plates	N_1		1/8”	1/8”
	N_2		3/16”	3/16”
	G_1		1/16”	1/16”
	G_2		1/16”	1/16”
	H	Up to 24”	1/8”	1/8”
		24” to 48”	3/16”	3/16”
		Over 48”	1/4”	1/4”
	J		1/4”	1/4”

Table 7.3
Crane Runway Beam Erection

Item		Tolerance	Maximum Rate of Change
Span		A = 3/8"	1/4"/20'
Straightness		B = 3/8"	1/4"/20'
Elevation		C = 3/8"	1/4"/20'
Beam to Beam Top Running		D = 3/8"	1/4"/20'
Beam to Beam Underhung		E = 3/8"	1/4"/20'
Adjacent Beams		F = 1/8"	NA