



OSSFA Report to ACEC-Ontario

What Every Engineer Needs To Know About Steel Fabrication Today.

Our 40 members in OSSFA are reporting the present market conditions with respect to structural steel prices and design options to help with project schedule lead times.

Today in Ontario, when we look at structural steel. We can compare a free-standing 12 500 sf - LCBO Store, (Pre-Covid, Structural steel shell and steel joists) in 2019, it typically cost \$420,000 for this steel material. Today it will cost over \$1,000,000! This same building pre covid, in 2019 would take 2-3 months to be fabricated and built. Today this same LCBO store can take 3-4 times longer, (10-12 months using steel joists) and can be 2-3 times more expensive.

This is a steel fabricator's new reality in 2022 and why we see more beams/ purlin- channels being redesigned and substituted from steel joists, for roof and floor systems to speed up the schedule. Further, the much higher material costs have a drastic impact on financing/ carrying costs. Hence many fabricators across Ontario are requiring deposits to book and finance the material. The sooner the material arrives, the less likely we incur future increases!

Most construction projects are bid on a firm lump sum basis, meaning the bidder is on the hook for any errors or unstated omissions from the bid specifications. It is not uncommon to be bidding on a project where your site presence may be six months down the road. In a pre-pandemic world, and with a proper take off, a contractor could be reasonably sure of material costing and committed delivery schedules. While putting labour hours to a project was an educated guess, based on prior productivity level experience, steel fabricators are still susceptible to on-site conditions, absenteeism, material delays and weather-related issues.

Today is a new ball game. Material pricing is fluctuating, with many suppliers unwilling to commit to holding their prices for forty-five days, never mind the life of the contract. Supply chain issues are interrupting material deliveries. The lack of experienced personnel is impacting the contractor's anticipated productivity level. All of this leads to higher costs, with a fabricator attempting to cover their risk while trying to be competitive.

What Challenges Do Steel Fabricators Face Today?

Steel Fabricators have lost money the last few years in fixed-price contracts. Some fabricators are using a price escalation clause or open-book system with Owners stating what prices they

have used in their price and the difference will be paid by the owner later. Some financially strong fabricators are managing to get material prices held to some extent by getting a deposit from Owner's and paying for all material as it arrives in their yards- COD, helping in some cases to get material quicker and avoiding some surcharges. **But with paying over double/triple for material, fabricators are now requiring deposits not because they want it, but rather, because it's now a necessity. It's the only way most fabricators can finance a project these days.**

Historically, steel suppliers would warn fabricators on future material increases coming, giving us time to talk to owners, budget properly, book beforehand and pre-plan our shop schedules. Today, we are not certain when we will even get our material. Making it hard to commit to project schedules. In the past, our suppliers would hold prices typically for 30 days- (2019) then it went to 7 days (2020). Now it is not guaranteed- 0 days and no warnings (2021-2022). **Also factoring in this is that we used to get the steel material delivered to our plants within 2-3 weeks. Today it takes 4-6 weeks for structural shapes and 10-12 months for steel Joists!**

How Can Engineers Help with Today's Structural Steel Reality?

Offer options on Roofing systems (Beams vs. Joists) and Columns (WF vs. HSS). Show an optional roof plan and optional column chart. These options may help the fabricator price out the cheapest option for roof and columns and the best option with readily available material. Once we establish the final design options we can then run with production.

Many owners/ designers that need the project to continue and meet a reasonable schedule are redesigning from steel joist roof systems to steel beams and or purlins/ C- channels. Today we have steel Joist lead times of 10-12 months (it used to be 1-2 months)! So, some orders are being booked right now for January 2023 and the prices for steel joists have risen as other products have. We are also getting reports that roof beams vs. steel Joists is also narrowing on cost. Steel Joists have increased so much in the last year that a design engineer must look at switching to roof beams as a substitution to save 6-8 months on a project schedule!

- Engineers should be flexible and change steel materials if or when a fabricator says they can't get it or it will take many months to receive! HSS material is hard to source (longer lead times) and historically over the last 2 years has increased the most, HSS commonly used for building columns- may have to substitute to WF beam material or use other grades- A500 HSS as one option as a substitute if viable.
- Consultants should tell owners there is no room to review bids for weeks. It must be done quickly- in a few days, get your fabricator on board, book the material, and pay for it on delivery (to minimize surcharges) and be flexible in changing steel later. This is the only real solution today.

What Does the Future Hold for the Structural Steel Industry?

Mills are being cautious. Labour and shipping shortages and covid protocols are still here. Yet demand for structural steel despite the higher prices from last year is still very strong! When lumber prices escalated last year, Outdoor Lumber Mills popped up overnight to meet demand and reward those that did. Eventually, lumber oversupply lowered prices. A steel Mill takes 3-4 years to build and takes large amounts of capital to set up and produce. Hence, we cannot keep pace with demand as quickly as other building products. But good news is coming, as a few new steel mills are coming online later this year and into 2023.

There is strong demand already for booking future structural steel/ building contracts from March to August 2022. The question becomes with continued strong demand well into 2022. Why would material prices drop? It appears from many published reports that the current state of steel products will continue well into 2nd quarter of 2022. But this is speculation in our opinion, as no one has a crystal ball and knows for sure.

In conclusion, steel fabricators have their hands full dealing with many scenarios beyond their control. It appears the structural steel industry has stabilized, it's a new normal and our members are ready and able to serve the needs of the construction industry. For a list of OSSFA fabricator members, please visit us at: ossfa.com

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