

Economy at a Glance

Prepared by Alex Carrick, ConstructConnect® Chief Economist

Shockingly high material cost hikes set out in 2 tables & 24 graphs (Part I)



Alex Carrick

An important story that's emerging in what are hopefully the winding-down days of the pandemic concerns supply shortages and cost hikes.

The all-items U.S. Consumer Price Index (CPI), which has been consistently under +2.0% year over year

for an extended period, suddenly shot up to +4.2% y/y in April, as a result of moving +0.8% in just one month.

As everyday shoppers, you and I may feel we have something to gripe about. But consider the plight of the unfortunate contracting community. Our soaring expense frustrations pale beside what beleaguered contractors are facing.

Table 1 shows y/y and latest-three-month price hikes for 15 major construction materials and some of the key ingredients of building products (e.g., aluminum in ventilation systems).

Table 1 is a subset of Table 2 which appears at the end of this article and includes a comprehensive list of construction material inputs and special indices. All the numbers come from the Producer Price Index (PPI) data set compiled by the Bureau of Labor Statistics (BLS).

Among the 15 items in Table 1 and for the year-over-year and month-to-month time frames, there's only one instance of a declining index value, -2.9% m/m for iron and steel scrap. But also notice that iron and steel scrap on a y/y basis is +77.2%.

Four items in the left-hand column of Table 1 have more than doubled in price over the past year: softwood lumber, +121.1%; particle board & OSB, +105.9%; regular gasoline, +245.3%; and diesel fuel, +126.7%.

The upwards adjusting 'forestry' and 'steel' product price movements have been ongoing for a while. More recently piquing our interest, though, have been the accelerating price trends for aluminum mill shapes and copper wire and cable. The former is +20.5% y/y and +9.9% m/m; the latter, +30.9% y/y and +8.6% m/m.

On the principle, that it's often easier to grasp what is occurring when one sees a picture, cluster-graphs 1 through 6 show the history of the price indices for 24 of the PPI construction-related material indices.

Forestry products & paneling

In Graph 1, the softwood lumber, plywood and particle board/OSB price index curves have been skyrocketing of late and reaching new summits. Gypsum, while not launching into orbit in quite the same dramatic fashion, is still elevated relative to its history.

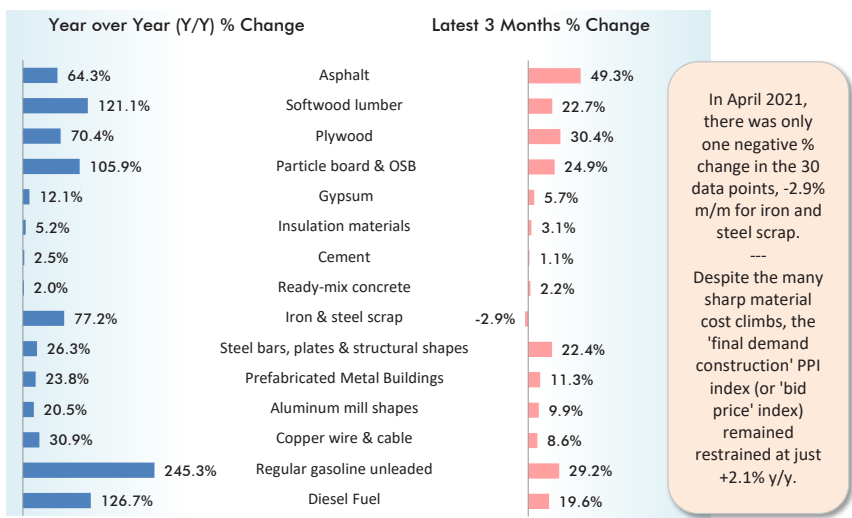
Steel products

In Graph 2, the 'steel bars, plates and structural shapes' price index curve is climbing, although it still has a way to go to match its elevation in 2008. The 'steel pipe and tube' and 'prefabricated metal building' curves, though, are at new heights.

To be continued in *Economy at a Glance*, Vol. 17, Issue 73.

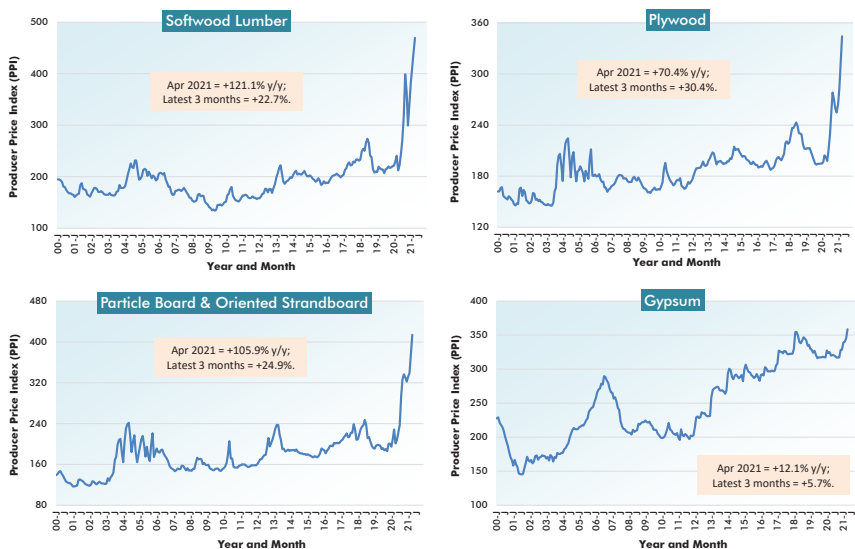
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Table 1: U.S. Construction Material Cost Changes From Producer Price Index (PPI) Series – April 2021



Data source: Bureau of Labor Statistics (BLS) / Chart: ConstructConnect — CanaData.

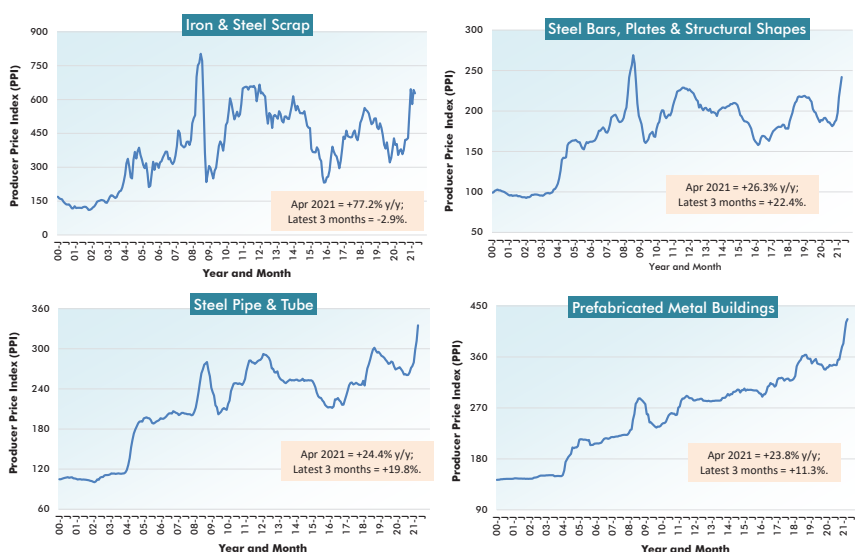
Graph 1: U.S. Construction Material Costs (1) – From Producer Price Index (PPI) Series



The last data points are for April, 2021.

Data source: U.S. Bureau of Labor Statistics (BLS), Producer Price Index (PPI) series, not seasonally adjusted (NSA) / Charts: ConstructConnect — CanaData.

Graph 2: U.S. Construction Material Costs (2) – From Producer Price Index (PPI) Series



The last data points are for April, 2021.

Data source: U.S. Bureau of Labor Statistics (BLS), Producer Price Index (PPI) series, not seasonally adjusted (NSA) / Charts: ConstructConnect — CanaData.

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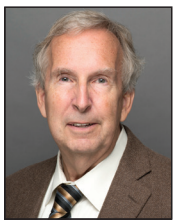
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Continued from *Economy at a Glance*, Vol. 17, Issue 72.

Cement, concrete & brick

All the curves in Graph 3 show steadier, less volatile, progressions of price increases over the past decade. Nevertheless, they're also presently as high as they've been since the corner was turned on the new century. The highest y/y percentage change appearing in Graph 3's text boxes is +3.8% for clay brick.



Alex Carrick

'at the pump') is +49.6% y/y. The diesel fuel PPI has also seen an outsized gain, +126.7% y/y and +19.6% m/m.

The price of asphalt for roads is up by nearly two-thirds (+64.3%) y/y and by one-half (+49.3%) in April alone.

It seems likely that a major infrastructure spending initiative (including road building), as proposed by the new administration in Washington, will be knocked about more than a bit by a seriously escalating cost structure.

To be continued in *Economy at a Glance*, Vol. 17, Issue 74.

Base materials

From Graph 4, iron ore and coal prices are exceptions to the general stepping-up rule these days, as they're simply moving sideways. Aluminum and copper, though, have definitely jumped on board the ascending price elevator.

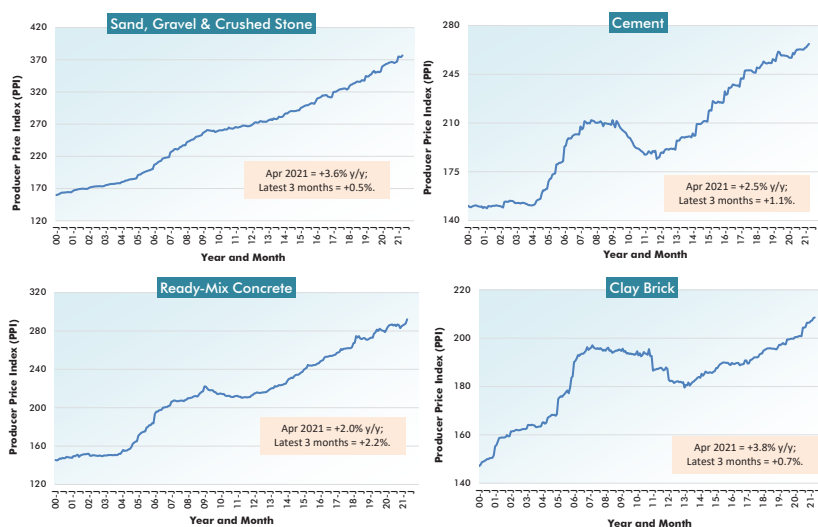
Fiberglass & energy-derived products

The PPI index (which measures prices as goods exit through factory or refinery 'gates') for regular unleaded gasoline is +245.3% y/y, but that still leaves it well short of previous peaks. By the way, the latest measure of the gasoline sub-index in the CPI series (i.e.,

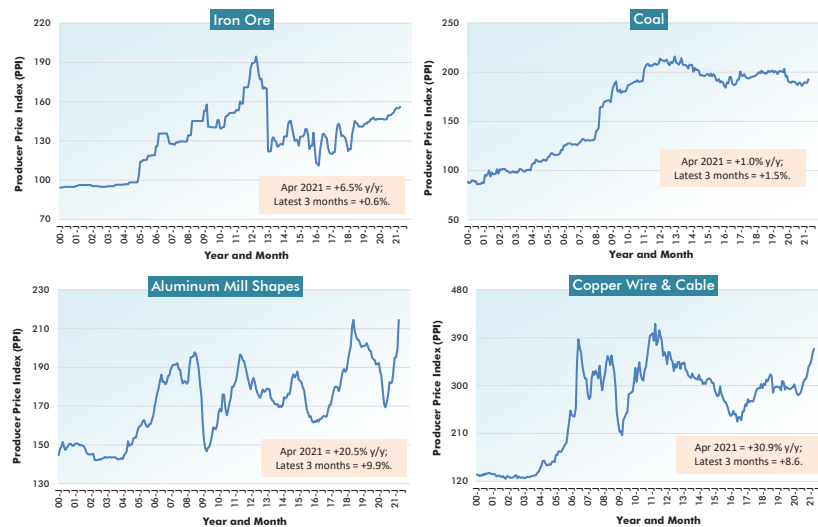
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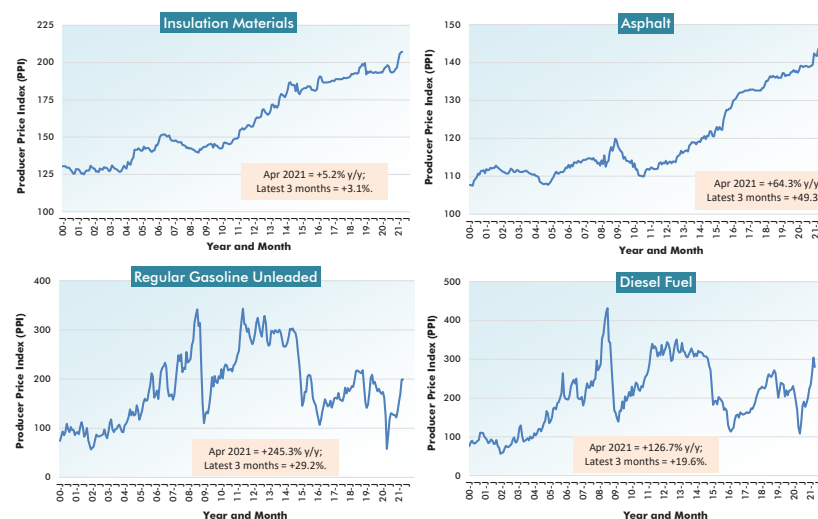
Graph 3: U.S. Construction Material Costs (3) – From Producer Price Index (PPI) Series



Graph 4: U.S. Construction Material Costs (4) – From Producer Price Index (PPI) Series



Graph 5: U.S. Construction Material Costs (5) – From Producer Price Index (PPI) Series



The last data points are for April, 2021.

Data source: U.S. Bureau of Labor Statistics (BLS), Producer Price Index (PPI) series, not seasonally adjusted (NSA). Charts: ConstructConnect — CanaData.

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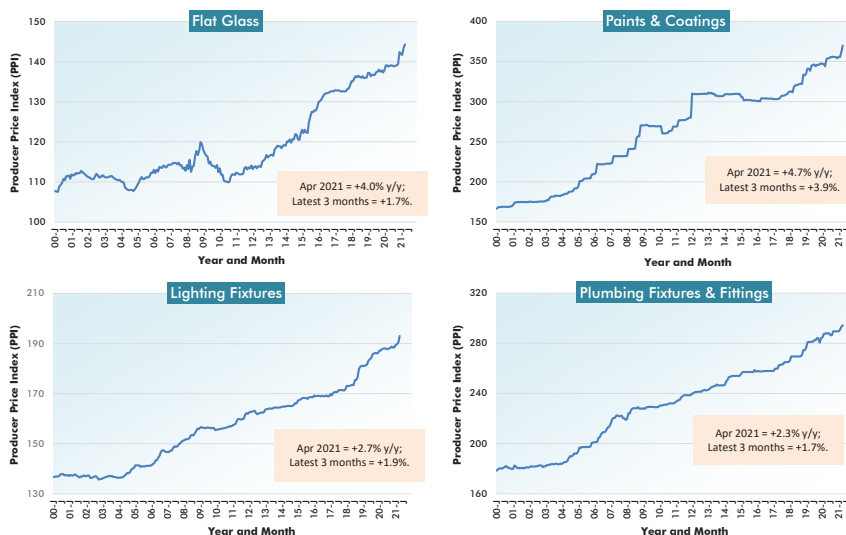
Accessories & arterial

The heftiest year-over-year advance for the four building products set out in Graph 6 is the +4.7% for paints and coatings. Because titanium is a metal that's stronger and lighter than steel, it's used in the framing of space craft. Because it bonds well with human bones, it's utilized in hip and knee replacements and dental work.

In the construction context, though, titanium is a crucial ingredient in the white pigment of paint. Following a similar pattern to many other metals, the price of titanium is on a rebound.

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Graph 6: U.S. Construction Material Costs (6) – From Producer Price Index (PPI) Series



The last data points are for April, 2021.

Data source: U.S. Bureau of Labor Statistics (BLS), Producer Price Index (PPI) series, not seasonally adjusted (NSA) / Charts: ConstructConnect — CanaData.

Table 2: U.S. Producer Price Index (PPI) Results % Change in the April 2021 Index from:

	3 Years Ago	1 Year Ago	6 months Ago	3 months Ago	1 month Ago
Final Demand/Service/Commodity/Energy/Input:					
Final Demand Construction	10.5%	2.1%	2.2%	1.8%	1.1%
New warehouse building construction	9.5%	1.8%	2.7%	2.1%	2.0%
New school building construction	10.7%	1.1%	1.4%	1.3%	0.9%
New office building construction	11.5%	3.5%	3.4%	2.6%	0.5%
New industrial building construction	11.8%	1.6%	1.1%	0.9%	0.7%
New health care building construction	10.6%	2.6%	2.5%	3.2%	2.5%
Architectural & engineering services	5.3%	2.5%	2.5%	0.8%	0.2%
Construction machinery & equipment	9.5%	1.4%	1.4%	0.3%	0.1%
Asphalt	30.6%	64.3%	67.0%	49.3%	16.3%
Plastic construction products	16.7%	14.2%	10.0%	7.8%	3.3%
Softwood lumber	87.6%	121.1%	28.7%	22.7%	6.4%
Hardwood lumber	15.2%	31.6%	29.2%	15.7%	3.5%
Millwork	18.9%	14.0%	6.9%	3.9%	1.8%
Plywood	45.5%	70.4%	27.6%	30.4%	10.0%
Particle board & oriented strandboard (OSB)	77.0%	105.9%	23.0%	24.9%	9.8%
Gypsum	2.8%	12.1%	13.0%	5.7%	3.9%
Insulation materials	7.5%	5.2%	6.8%	3.1%	0.1%
Construction sand, gravel & crushed stone	13.0%	3.6%	3.2%	0.5%	0.7%
Cement	6.3%	2.5%	1.5%	1.1%	0.4%
Ready-mix concrete	7.0%	2.0%	2.1%	2.2%	1.5%
Precast concrete products	14.1%	5.3%	4.5%	2.8%	1.6%
Prestressed concrete products	8.3%	0.2%	3.0%	1.9%	1.3%
Brick (clay)	6.5%	3.8%	1.1%	0.7%	0.1%
Coal	-3.2%	1.0%	1.8%	1.5%	1.9%
Iron ore	15.4%	6.5%	3.4%	0.6%	0.6%
Iron & steel scrap	11.5%	77.2%	48.5%	-2.9%	-2.4%
Steel bars, plates & structural shapes	22.4%	26.3%	32.3%	22.4%	5.1%
Steel pipe & tube	23.8%	24.4%	26.6%	19.8%	7.4%
Fabricated structural metal products	15.9%	12.7%	12.9%	9.7%	2.8%
Prefabricated Metal Buildings	22.4%	23.8%	20.1%	11.3%	1.3%
Aluminum mill shapes	6.6%	20.5%	17.9%	9.9%	7.5%
Flat glass	5.8%	4.0%	3.7%	1.7%	0.6%
Paints, architectural coatings	16.2%	4.7%	4.0%	3.9%	2.1%
Lighting fixtures	11.4%	2.7%	2.2%	1.9%	1.4%
Plumbing fixtures & fittings	9.2%	2.3%	1.7%	1.7%	0.4%
Elevators & escalators	8.4%	1.7%	1.6%	1.6%	0.5%
Heating equipment	16.1%	6.6%	6.4%	6.1%	3.8%
Air conditioning equipment	13.1%	5.1%	4.7%	2.9%	0.8%
Copper wire & cable	18.5%	30.9%	17.8%	8.6%	2.0%
Regular gasoline unleaded	0.7%	245.3%	57.5%	29.2%	0.4%
Diesel Fuel	20.9%	126.7%	49.6%	19.6%	-8.0%
Inputs to new construction	17.6%	18.8%	9.7%	7.3%	2.0%
Inputs to new residential construction	19.2%	19.8%	9.0%	8.4%	2.7%
Inputs to new non-res construction	15.8%	17.6%	10.6%	6.2%	1.5%
Inputs to commercial construction	15.2%	16.0%	10.4%	5.9%	1.6%
Inputs to healthcare structures	16.2%	16.7%	10.0%	6.0%	1.8%
Inputs to industrial structures	16.2%	14.9%	9.9%	5.2%	1.5%
Inputs to highways & streets	12.1%	16.2%	10.3%	5.4%	1.0%
Inputs to power & communication structures	14.6%	18.3%	11.3%	6.7%	1.7%
Inputs to educational & vocational structures	17.7%	17.4%	10.1%	6.4%	2.0%
Construction materials (PPI 'Special Index')	24.8%	23.8%	17.7%	13.8%	5.2%

The 'final demand' indices (at top) reflect the prices paid by owners for the construction of projects. They include material, labor & markups. The 'service', 'commodity' and 'energy' indices (in the middle section of the table) are based on 'factory-gate' sales prices. The 'input' indices (at bottom) reflect costs faced by contractors. They exclude capital investment (i.e., machinery & equipment), labor & imports. The 'input' indices are built up from the 'service' (design, legal, transport & warehousing, etc.) 'commodity' and 'energy' indices.

Data source: Producer Price Index (PPI) series from Bureau of Labor Statistics (BLS) / Table: ConstructConnect — CanaData.