



2020 Building Products Market Update

2nd Edition



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Q3 U.S. Construction Market Outlook



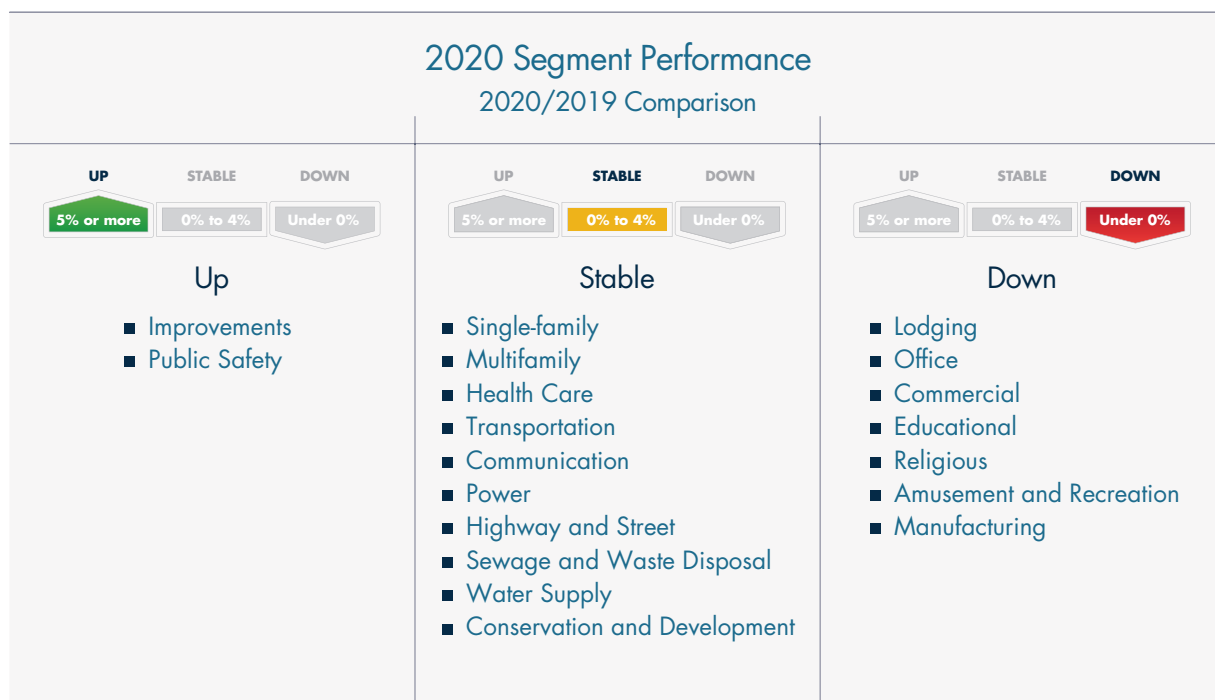
Recent economic disruptions considered in the following forecast include the domestic and foreign impact of COVID-19, high volatility across financial and equity markets, emergency policies set in place by the Federal Reserve, lower oil prices, and mounting political uncertainty in addition to nationwide social unrest headed into the 2020 presidential election.

Based on unprecedented government support, FMI is anticipating the 2020 recession to continue to dissipate. However, anticipated corrections across residential markets are at risk of contributing toward ongoing economic losses and an elongated downtrend in nonresidential construction spending over the next several years.

U.S. Engineering and Construction Outlook

Third Quarter 2020 Report Key Takeaways

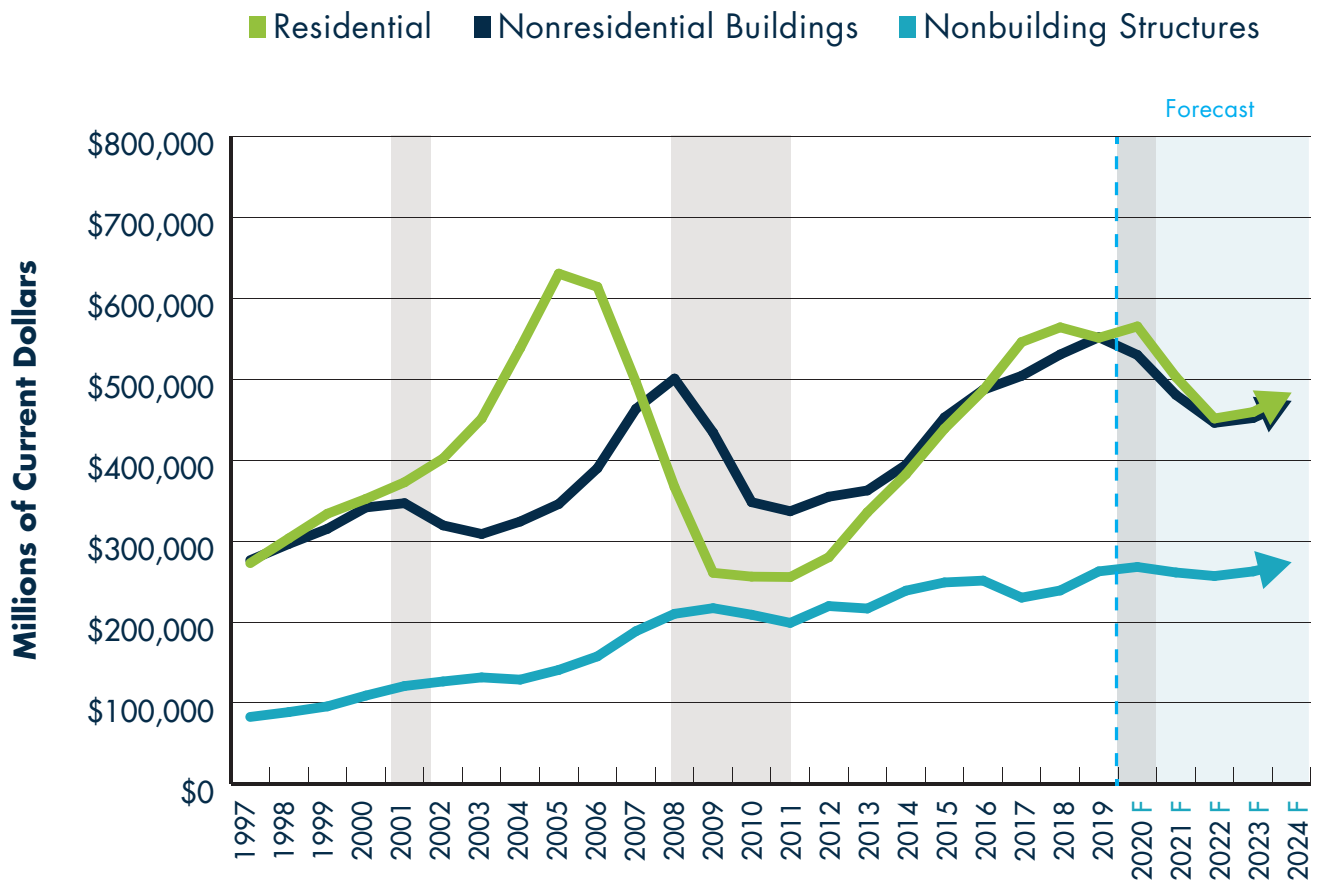
- Total engineering and construction spending for the U.S. is forecast to end flat, or less than -1 percent in 2020, compared to 2 percent growth in 2019.



- Declines will be led by an abrupt contraction in nonresidential building markets. Current anticipated low-performing segments forecast in 2020 include religious (-21 percent), lodging (-14 percent), amusement and recreation (-9 percent), educational (-7 percent) and office (-5 percent).
- Multiple segments that were previously in down categories have been upgraded this quarter to reflect upheld market conditions and investment levels. Based on strong second quarter actuals, year-end forecasts for public safety (9 percent), water supply (9 percent), residential improvements (6 percent), communication (4 percent), and sewage and waste disposal (4 percent) have all been revised and improved substantially.
- FMI's third quarter 2020 Nonresidential Construction Index (NRCI) at 45.6 reflects a large improvement from the second quarter reading of 36.9, up nearly 24 percent. However, the index remains well below the growth threshold of 50, suggesting fewer future engineering and construction opportunities.



Total Construction Put in Place Estimated for the U.S.

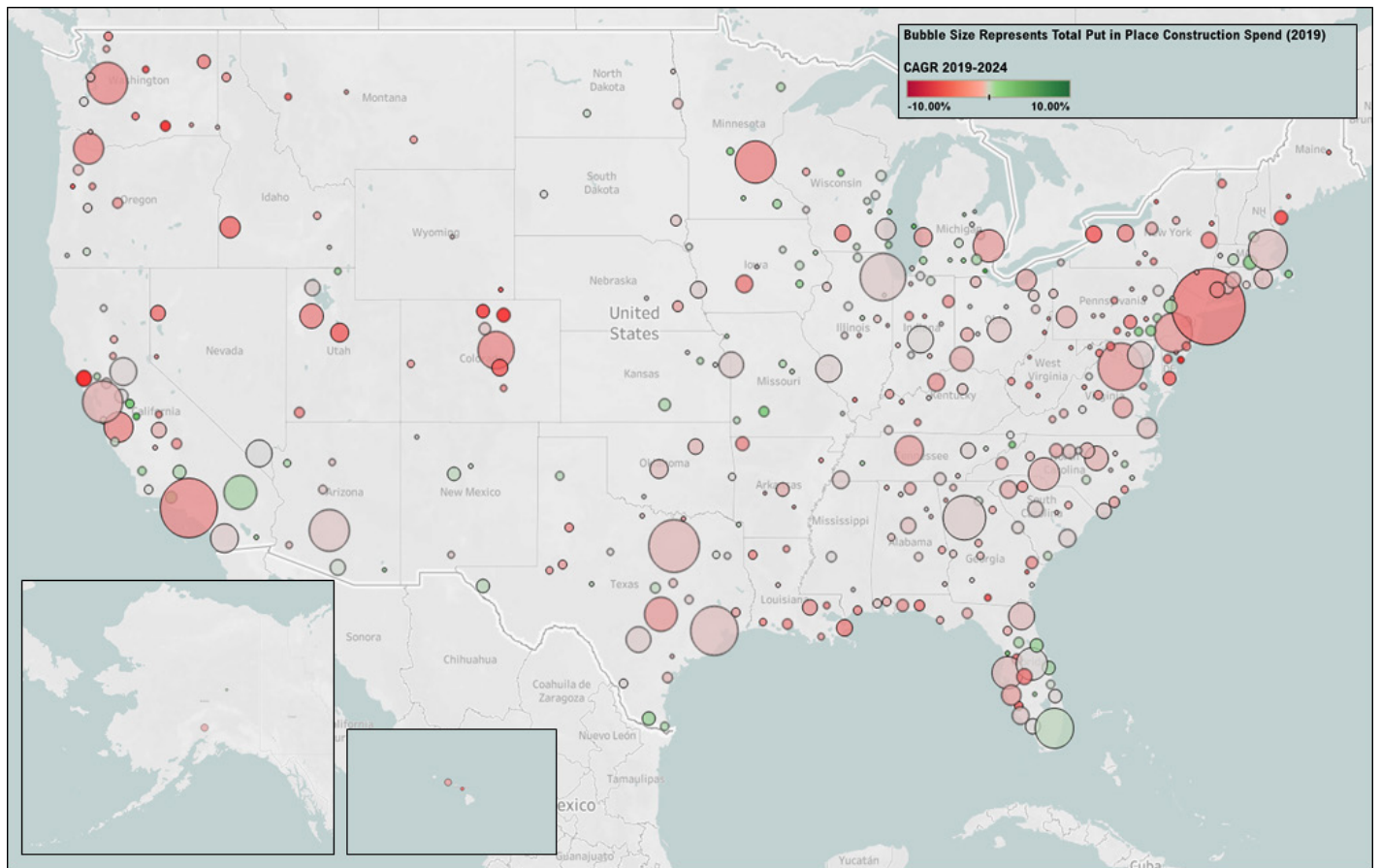


Throughout, the value of construction put in place includes the cost of architectural and engineering work.

Source: U.S. Census and FMI Forecast

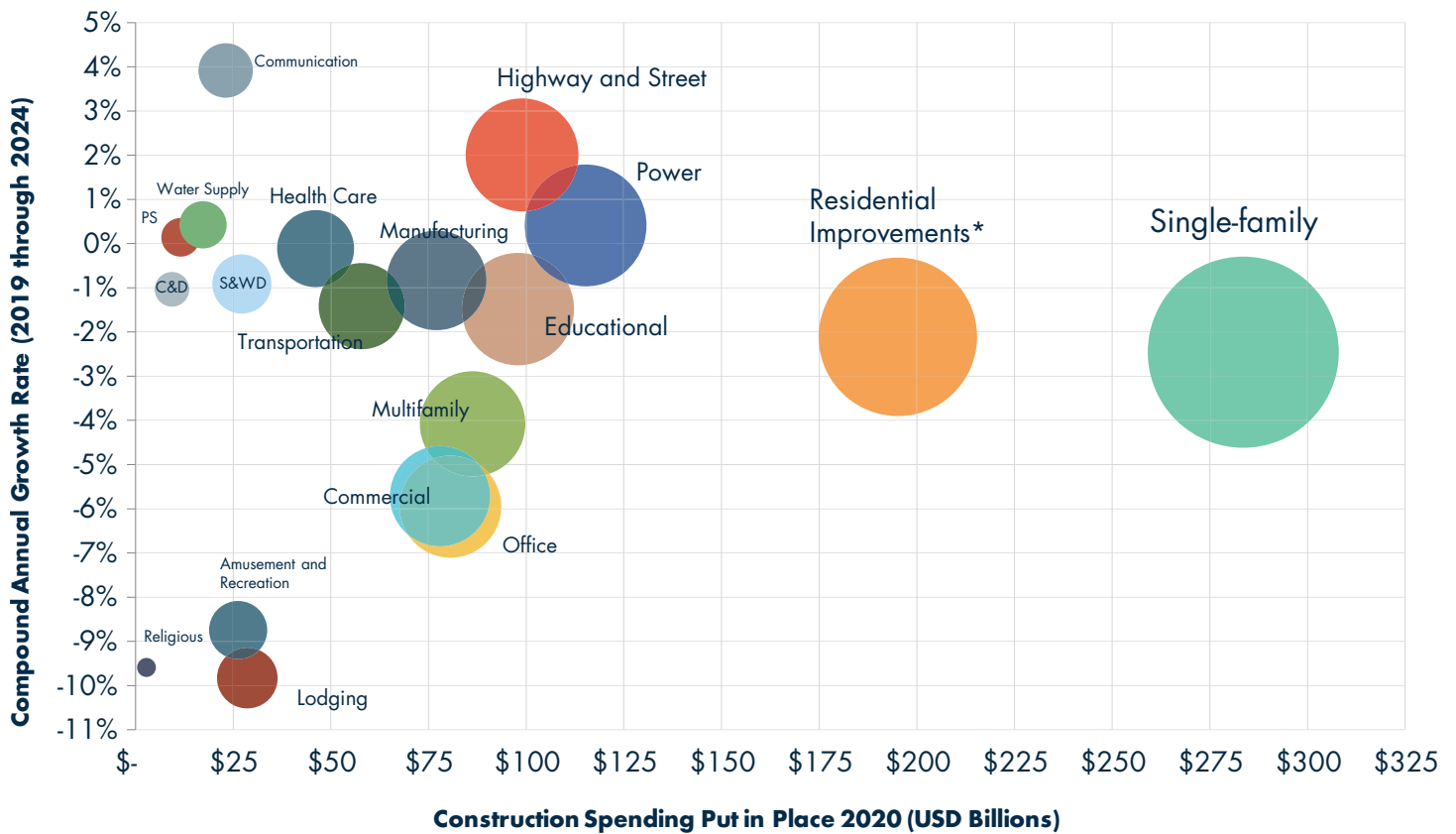


Total Construction Spending Put in Place 2019 and Forecast Growth (2019-2024 CAGR) by Metropolitan Statistical Area



Source: U.S. Census and FMI Forecast

Total Construction Put in Place Estimated for the U.S.



*Improvements includes additions, alterations and major replacements. It does not include maintenance and repairs.

Source: Statistics U.S. and FMI Forecast

Building Products Overview



How COVID-19 Will Impact the Building Products Market

As they shake off the immediate impacts of the global pandemic and subsequent recession, successful building product manufacturers will be focusing on a few key trends that will see them through to the recovery...and beyond.

By Paul Giovannoni

Take it from legendary boxer Mike Tyson, “Everyone has a plan ‘til they get punched in the mouth.” These very descriptive words very much apply to the way COVID-19 impacted and continues to impact the construction industry and all of the stakeholders and influencers within it.

By late 2019, industry pundits were projecting a recession sometime in 2020. After all, we were all riding the nation’s longest positive economic streak in history, so how much longer could it really last anyway? The construction industry—like many others—felt as if it was in a never-ending, ninth-inning loop. That loop closed in mid-March, but a new one is already beginning to emerge.

Building product manufacturers didn’t escape the pandemic’s wrath and, in many cases, were hit harder than other stakeholders in the industry. Many wrapped up banner years in 2019—with revenue at all-time highs, sentiment indicators favorable and construction backlogs overflowing—and quickly pivoted from worrying about where their next new hire was going to come from to hoping that their cash reserves and strategy would endure the pandemic.

The many challenges that COVID-19 and the resulting recession present to manufacturers have been compounded by the industry’s supply chain structure and the lack of direct connection to end customers (contractors) or influencers. In a time when information and insights into market conditions are the most critical, manufacturers for the most part are still at an arm’s length from the market.

The Path to Recovery Will Be Rocky

Even as the country continues to battle the economic and social impacts of COVID-19 and the resulting recession, the construction industry has started to raise its head and look to the future. Many point to the current activity in the residential market as proof and believe the sector will lead the economy out of the recession (or, at minimum, be our industry's bright star). And while current activity supports this assumption, the underlying fundamentals of the residential market, and, to a greater extent, the nonresidential market, indicate that 2021 will likely have its share of challenges as well.

We expect 2021 to bring an overall decline in construction put-in-place spending compared to 2020 levels. This will impact both the residential and nonresidential markets. We break down the reasoning for each below:

- **Residential:** Government stimulus and foreclosure protection regulation has masked the impact of this recession on the supply/demand curve for residential construction. Should we enter a point in time where foreclosure rates increase, the supply of homes will vastly change. An additional factor at play is the affordability of homes and potential tightening of lending. Based on the totality of these factors and others, FMI expects overall residential construction to decline 11 percent in 2021.
- **Nonresidential:** Similar to residential construction, the impact of the current recession has not yet been realized in the current nonresidential landscape. Upon entering this recession, contractor backlogs were overflowing, and the planned projects that have pushed forward have kept the market afloat. Lingered beneath the surface however is a void of new project activity to take its place, which will be felt to the greatest extent in 2021 when FMI forecasts nonresidential building construction to decline 9 percent in total.

While the future is uncertain for the construction industry right now, the sector is taking steps toward evolution and recovery. As we look to the future of the industry and the impact on building product and material manufacturers, there are several themes that emerge as having an impact on how they navigate the uncertainty.



Changing Pace of Construction

Our research indicates that the pace of construction has increased significantly over the last decade, with an approximate reduction in overall project schedule of 30 percent. At the onset of the COVID-19 pandemic, we tracked a rapid deceleration of projects as contractors and project owners quickly rolled out protocols to protect workers and ensure the continuity of projects. These protocols have since become standard for the industry. Still, some level of inefficiency is impacting certain trades versus others. This inefficiency, combined with other project risk factors (i.e., financing, COVID-19 outbreaks, overall economy, etc.), has changed the pace of construction, which in turn is challenging manufacturers as they forecast production, sales and logistics. There is no simple solution to this challenge, though staying close to end customers (i.e., contractors) during preconstruction and construction will certainly provide greater insight.

Emerging Pricing Pressures

Coming into 2020, the industry was at all-time highs in terms of booked backlog and projects in the sales pipeline. This positioned the industry well to resist the impacts of the current recession and weather it better than most other industries. It has also helped keep pressure off pricing and avoid the free fall to the bottom on pricing. We believe this will be short-lived, with pricing pressure expected to begin growing again, both for labor and materials. With PPP loans being spent and backlog being burned through, the subcontractor landscape will begin to shift (if it hasn't already) to a more competitive environment. From the manufacturer's perspective, an increase in "value engineering" and substitution could further increase the importance of having differentiated products, trusted design and contractor relationships, and innovation of "better mousetraps."

Importance of Certainty of Outcomes

When we look back on 2020, there will be many words that come to mind describing how we as a nation felt, one of which will certainly be uncertain. This uncertainty has extended to the construction industry as a whole, with uncertainty surrounding a project's viability, a subcontractor's likelihood of default or the availability of products and materials, to name a few. These factors are pushing sophisticated contractors and owners to mitigate their risk by selecting partners and products that provide a safer and more certain outcome—and even if this is more costly. Manufacturers will get the chance to become more closely aligned with and support their customers now and during the rebound.

Changing Opportunity Mix

The unique aspects of COVID-19, combined with the traditional recessionary impacts on the construction industry, will create new opportunities in repair, retrofit and replacement work. This shift away from new construction will vary considerably by the end market and segment, with lodging, office and commercial all being impacted. In addition to the shift in project type, we also expect a change in the size and scale of project opportunities. We do anticipate project counts will remain somewhat consistent, though the spending volume on those projects will likely reduce considerably as will the cost per square foot. Manufacturers will have to examine their sales strategies and align their product offerings with emerging trends.

The Silver Lining

As one of my colleagues likes to say, “Bulls and bears exist in every market.” Even as the broader market contracts, there will be opportunities for growth, whether it be through focusing on emerging segments, developing innovative products or deepening customer relationships when times are tough. The manufacturers that pivot their strategies and adapt will come out ahead as a recovery accelerates.

We do recognize the trends outlined in this article will vary considerably by organization. If you would like to discuss your specific situation or gain deeper insight from your constituents in the construction supply chain, please email me (pgiovannoni@fminet.com).

Preview of 2021 Building Products Update

For the 2021 Building Products Market Update, we intend to expand our market coverage to include the following additional product categories:

- Building Facade
- Drywall and Framing
- Flooring
- Controls and Low-Voltage Systems



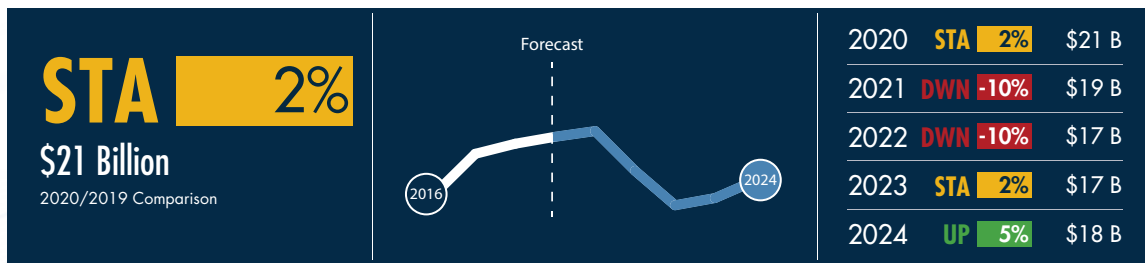


Residential Building Products Outlook

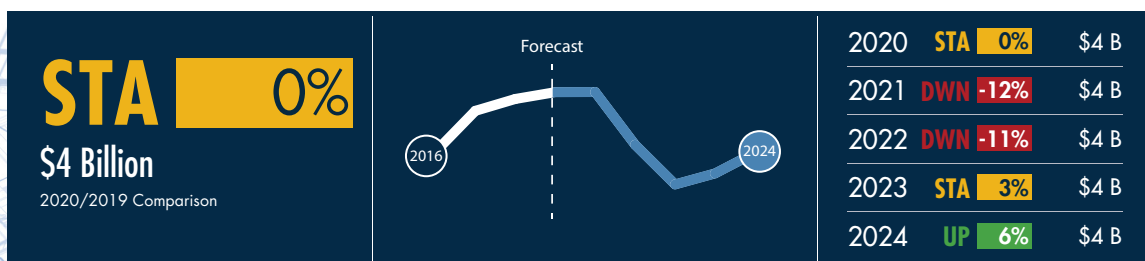
- Lumber price volatility and the resulting increase in construction costs will cause product selection tradeoffs, influencing willingness and ability to select premium products and materials.
- Historically low mortgage refinance rates will increase demand for improvement activity and related products.
- The disappearance of the “starter home” and “level jumping” will create additional pressure on inventory and also influence demand preferences in housing subcategories, thus impacting material selection.
- Skilled labor constraints will remain and will continue to drive builders and remodelers toward easier-to-install products or those that remove steps in the installation process.
- New product innovation will become more important as builders and developers seek to differentiate their inventory from the competition.

Residential Building Products Forecasts

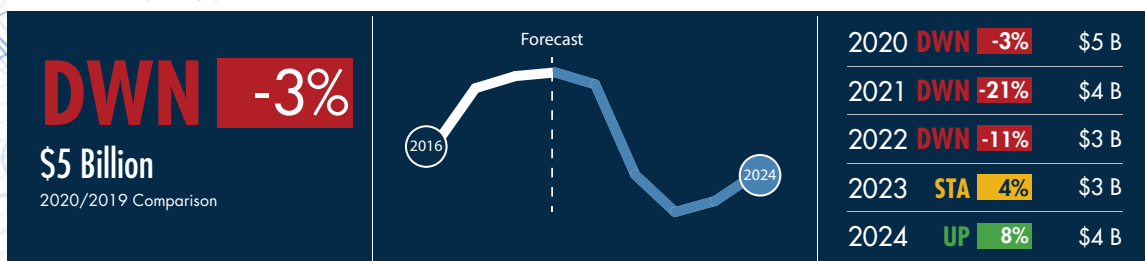
HVAC Equipment and Duct



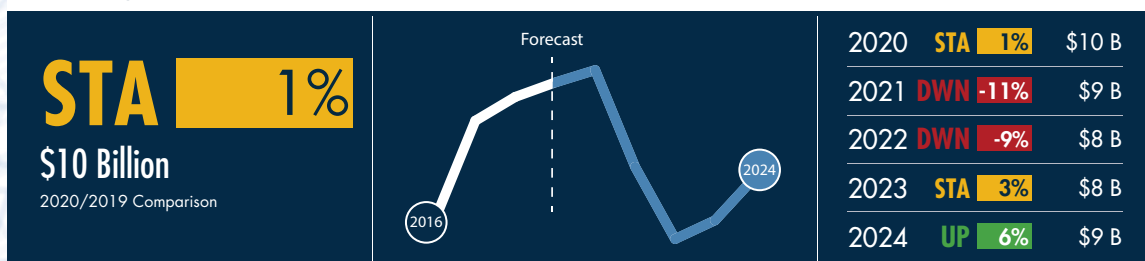
Insulation



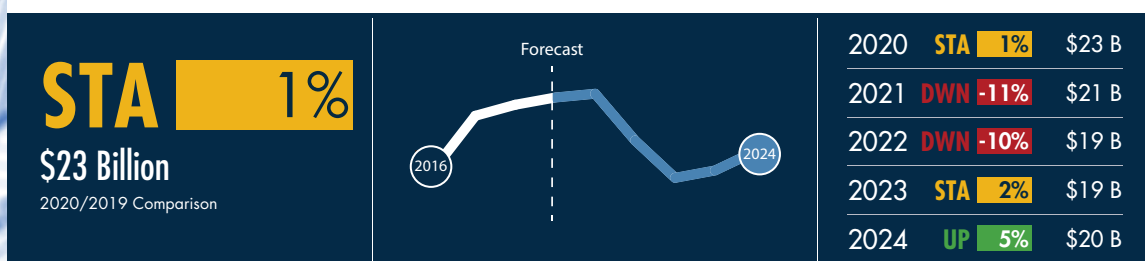
Plumbing Supplies and Fixtures



Roofing



Windows and Doors



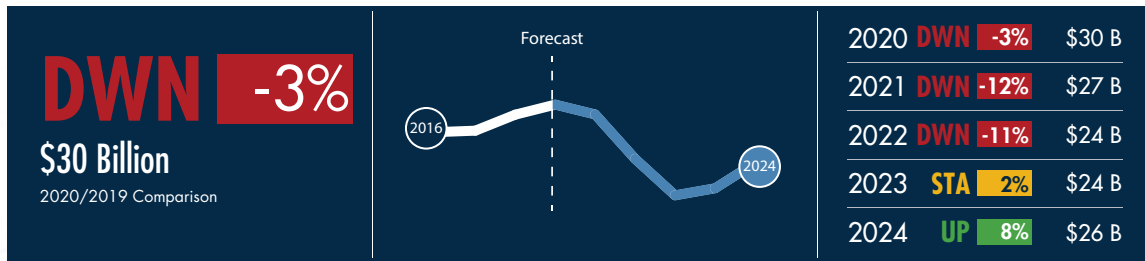


Nonresidential Building Products Outlook

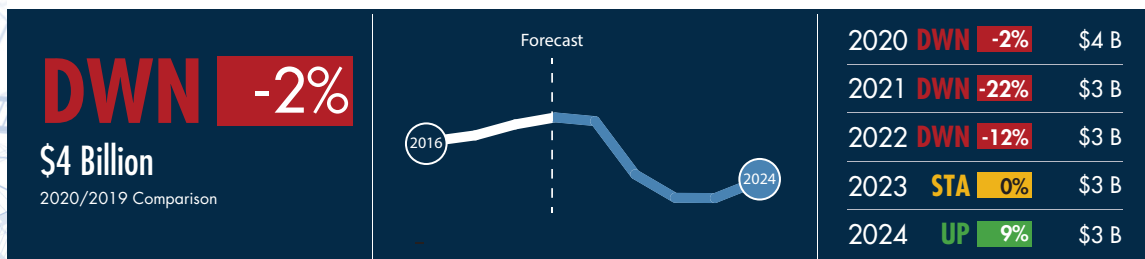
- Prefabrication has proven to be a successful technique during COVID and will likely accelerate in usage as a result.
- Contractor focus on developing in-house design capabilities and the ongoing growth of design-build will continue to drive specification influence onto contractors and away from the design community.
- Technology integration into the preconstruction process will begin influencing the way in which the supply chain interacts and create deeper connections between contractors and manufacturers.
- Market shifts toward renovations and remodeling projects will put an increased focus on interior products and those that support the reaction to COVID.
- Niche market segments will continue to expand despite overall market contraction, i.e., data centers, life science, last-mile warehousing, cold storage, etc.

Nonresidential Building Products Forecasts

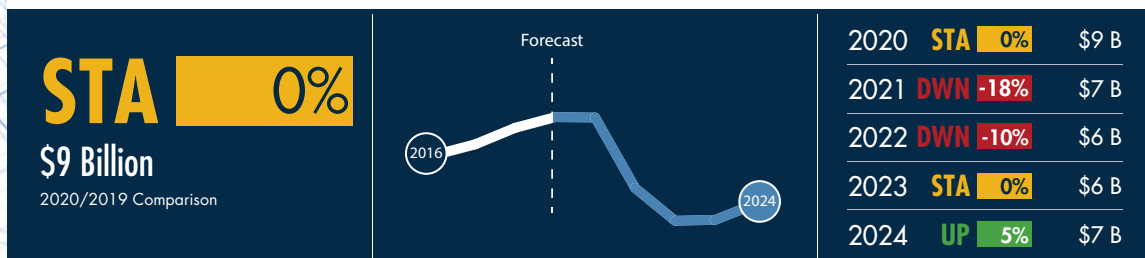
HVAC Equipment and Duct



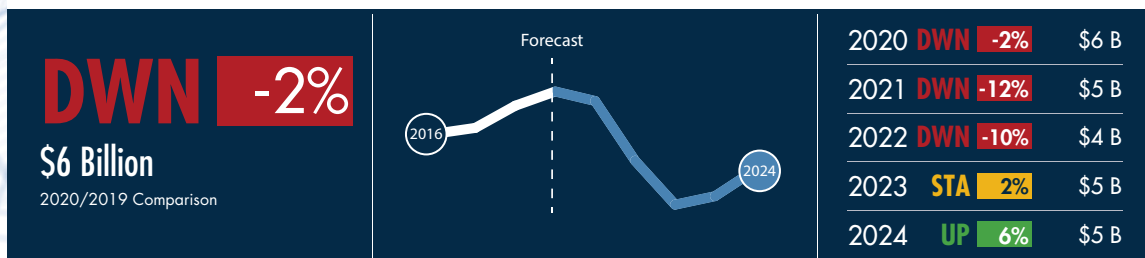
Insulation, Exterior Walls



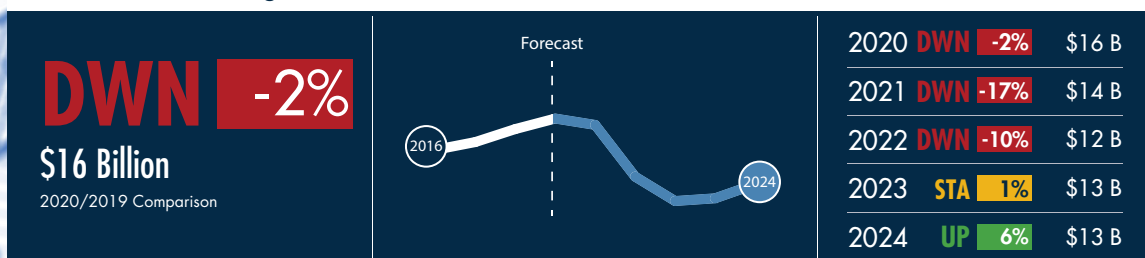
Plumbing Supplies and Fixtures



Roofing System



Windows/Glazing and Doors





Building Material Spending

Construction Put in Place Estimated for Material Value at the Manufacturer Level – Selected Product Segments
Total United States – Millions of Dollars

	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
RESIDENTIAL BUILDINGS									
Total Construction Volume PIP	485,964	545,754	563,877	550,942	554,005	491,434	441,423	449,172	472,460
Manufacturer Net Material Value									
Windows & Doors	19,136	21,910	22,505	22,895	23,099	20,575	18,567	18,966	19,986
Insulation	3,965	4,407	4,535	4,608	4,610	4,040	3,614	3,733	3,956
HVAC Equipment & Duct	17,481	19,599	20,143	20,518	20,825	18,677	16,827	17,217	18,154
Plumbing Supplies & Fixtures	4,042	4,653	4,783	4,823	4,694	3,721	3,319	3,438	3,726
Roofing	8,252	9,305	9,562	9,717	9,851	8,807	8,031	8,232	8,698
TOTAL	52,877	59,874	61,527	62,562	63,079	55,820	50,357	51,585	54,521

NONRESIDENTIAL BUILDINGS									
	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
Total Construction Volume PIP	486,615	503,985	530,357	551,654	529,804	480,467	445,941	451,890	473,107
Manufacturer Net Material Value									
Windows/Glazing & Doors	15,152	15,570	16,270	16,836	16,493	13,704	12,393	12,539	13,292
Insulation, Exterior Walls	3,649	3,736	3,913	4,026	3,966	3,105	2,727	2,723	2,978
HVAC Equipment & Duct	28,759	28,881	30,174	30,986	30,191	26,599	23,654	24,225	26,269
Plumbing Supplies & Fixtures	7,899	8,127	8,483	8,712	8,704	7,185	6,480	6,498	6,839
Roofing System	5,181	5,243	5,482	5,635	5,532	4,888	4,415	4,507	4,789
TOTAL	60,640	61,557	64,321	66,195	64,886	55,482	49,669	50,492	54,167

Building Material Spending

Construction Put in Place Estimated for Material Value at the Manufacturer Level – Selected Product Segments
Total United States – Change From Prior Year – Current Dollar Basis

	2016	2017	2018	2019	2020F	2021F	2022F	2023F	2024F
RESIDENTIAL BUILDINGS									
Total Construction Volume PIP		12.3%	3.3%	-2.3%	0.6%	-11.3%	-10.2%	1.8%	5.2%
Manufacturer Net Material Value									
Windows & Doors		14.5%	2.7%	1.7%	0.9%	-10.9%	-9.8%	2.1%	5.4%
Insulation		11.1%	2.9%	1.6%	0.0%	-12.3%	-10.6%	3.3%	6.0%
HVAC Equipment & Duct		12.1%	2.8%	1.9%	1.5%	-10.3%	-9.9%	2.3%	5.4%
Plumbing Supplies & Fixtures		15.1%	2.8%	0.8%	-2.7%	-20.7%	-10.8%	3.6%	8.4%
Roofing		12.8%	2.8%	1.6%	1.4%	-10.6%	-8.8%	2.5%	5.7%
TOTAL		13.2%	2.8%	1.7%	0.8%	-11.5%	-9.8%	2.4%	5.7%

NONRESIDENTIAL BUILDINGS									
Total Construction Volume PIP		3.6%	5.2%	4.0%	-4.0%	-9.3%	-7.2%	1.3%	4.7%
Manufacturer Net Material Value									
Windows/Glazing & Doors		2.8%	4.5%	3.5%	-2.0%	-16.9%	-9.6%	1.2%	6.0%
Insulation, Exterior Walls		2.4%	4.7%	2.9%	-1.5%	-21.7%	-12.2%	-0.2%	9.4%
HVAC Equipment & Duct		0.4%	4.5%	2.7%	-2.6%	-11.9%	-11.1%	2.4%	8.4%
Plumbing Supplies & Fixtures		2.9%	4.4%	2.7%	-0.1%	-17.5%	-9.8%	0.3%	5.2%
Roofing System		1.2%	4.6%	2.8%	-1.8%	-11.6%	-9.7%	2.1%	6.3%
TOTAL		1.5%	4.5%	2.9%	-2.0%	-14.5%	-10.5%	1.7%	7.3%

Appendix: Product Definitions



Residential

Windows and Doors – Products and associated hardware, including operable windows, skylights, fixed glass, sliding doors, patio doors, entry and service doors, passage doors, garage doors

Insulation – Insulation products utilized in the building envelope, equipment and appliances, including fiberglass, mineral wool, EPS, XPS and foam materials

HVAC Equipment and Duct – Including equipment (furnaces, air conditioning compressors and condensers, dehumidifiers, split systems, boilers), filters, controls, distribution duct and boxes, registers

Plumbing Supplies and Fixtures – Including piping, valves, connections (supply, distribution, waste), meters, water heaters, sinks, toilets, faucets, drains, shower mixers, pans, bathtubs, irrigation, fire sprinklers

Roofing – Including shingles, metal, tile and concrete materials with underlayment and flashings for sloped roofs. Flat-roof materials are excluded from this category and are included with the Nonresidential Buildings, Roofing System category

Nonresidential Buildings

Windows/Glazing and Doors – Products and associated hardware, including operable/inoperable windows and glazing, skylights, roof hatches, storefront, curtainwall, sliding doors, patio doors, entry doors, revolving doors, fire and security doors, overhead doors

Insulation, Exterior Walls – Insulation products utilized in the building wall system, including fiberglass, glass-skinned wall boards, EPS, XPS and foam materials

HVAC Equipment and Duct – Including equipment (boilers, chillers, air handlers, furnaces, compressors, condensers, dehumidifiers, split systems, filters), controls, distribution duct, valves and boxes, registers

Plumbing Supplies and Fixtures – Including piping (supply, distribution, waste), valves, elbows, fittings, hangers, meters, water heaters, boilers, sinks, toilets, faucets, drains, shower mixers, pans, bathtubs, irrigation, fire sprinklers

Roofing System – Sloped-roof systems, including cover material (shingles, metal, tile) with flashing, underlayment and insulation. Low-slope and flat-roof systems include cover material (TPO, EPDM, metal, PVC, BUR), insulation board, cover board, flashing, adhesives, screws. Excludes roof deck material

About the Authors



Paul Giovannoni is a principal within FMI's Strategy practice, and his primary focus is partnering with members of the building products industry by assisting them in developing their strategies relating to growth, value creation and new product launches. Paul's extensive experience working with many of the most well-respected manufacturers and distributors in the industry, combined with his deep relationships in the contractor community, enables him to bring a comprehensive perspective of the market to his clients. Paul can be reached at pgiovannoni@fminet.com.



Porter Wiley is a managing director with FMI Capital Advisors. He leads FMI's Building Products team, which focuses on manufacturers and distributors of products and materials used in residential, commercial and infrastructure construction. With two decades of investment banking experience dedicated to the building products industry, Porter's experience provides him with the ability to isolate the key drivers of company value and communicate the "story" in a compelling manner that will resonate with investors. Porter can be reached at pwiley@fminet.com



Brian Strawberry is a senior economist with FMI. Brian's expertise is in economic and statistical modeling. He leads FMI's efforts in market sizing, forecasting and building product/construction material pricing and consumption trends. Brian's combination of analytical skills and creative problem-solving abilities has proven valuable for many contractors, owners and private equity groups as well as industry associations and internal research initiatives. Brian can be reached at bstrawberry@fminet.com.

Exclusively Focused on the Built Environment

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- Executive Coaching

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- Ownership Transfer & Management Succession



for the Built Environment

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- Project Manager Academy
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- Construction Selling Skills
- Market & Selling Strategies
- Ownership Transfer & Management Succession
- Acquisitions in the Construction Industry

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- Business Development
- Information Technology
- Operations Management
- Financial Management

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