

# WINDOW+ DOOR

Glass Design for  
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State of the  
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# Primed for Growth

DESPITE CHALLENGES AROUND  
COVID-19, THE INDUSTRY LOOKS  
FORWARD TO A ROBUST 2021 AND  
BEYOND, ACCORDING TO THE  
ANNUAL INDUSTRY PULSE REPORT

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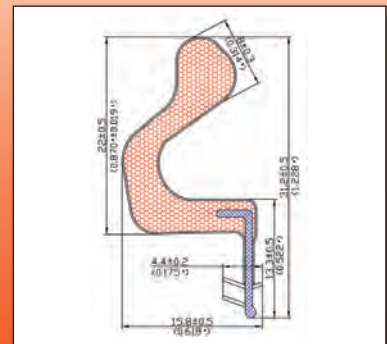
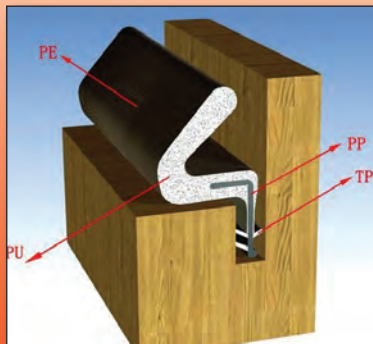
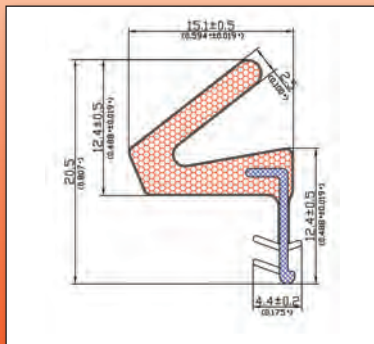


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## The Industry Forecast Issue

### 30. The Industry Pulse: Primed for Growth

Despite challenges around COVID-19, the industry looks forward to a robust 2021 and beyond as demand is booming and residential construction posts historically strong numbers.

*By Laurie Cowin*

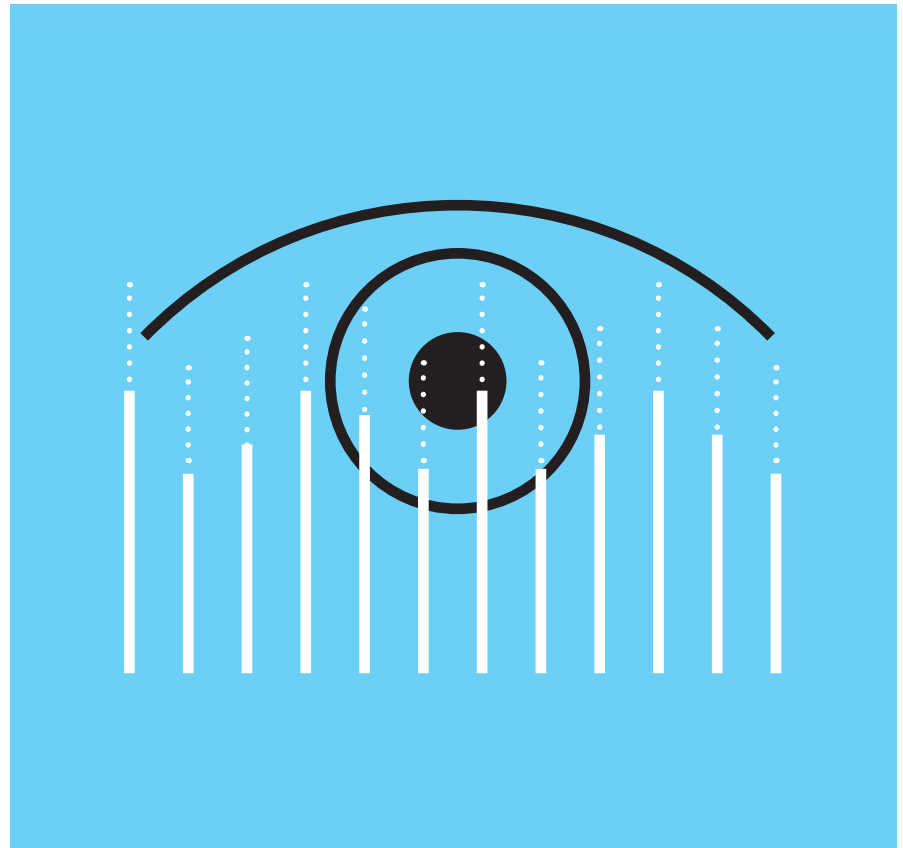
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- The Talk: Weekly insights from our fenestration bloggers

## ➔ The Talk // Blogs of the Month

Catch up on all the latest industry "talk" at windowanddoor.com/talk



### Learning to Change is Worth the Effort

By Chris Kammer, A+W Software North America, a-w.com



### What's in Store for the Window and Door Industry

By Joe Altieri, FlexScreen, flexscreen.com

"The only thing we know for sure about the year ahead is that we can't know anything for sure. But we can prepare based on the things we do know by making wise decisions, keeping a weather-eye on the horizon, and being willing to pivot. Change doesn't care much about our preferred practices, and flexibility has never been more important—in our industry and in our lives."

Window + Door™ (ISSN 1525-1195), Volume 29, Number 1. This periodical is published six times a year, January/February, March/April, May/June, July/August, September/October and November/December by the National Glass Association, 1945 Old Gallows Road, Suite 750, Vienna, VA 22182. There is no charge for subscriptions to qualified requestors in the U.S. and Canada. All other subscriptions will be charged \$49.95 in the U.S. and Canada, and \$79.95 in all other countries. Periodicals postage paid at Vienna, VA, and at additional mailing offices. POSTMASTER: Send changes of address to Window + Door, PO Box 419, Congers NY 10920. Canada Post: Publications Mail Agreement #40612608. Canada Returns to be sent to Bleuchip International PO Box 25542, London, ON N6C 6B2, Canada. For all subscription inquiries, please call 1-800-765-7514. ©2021 National Glass Association. All rights reserved. Printed in the U.S.A.

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## Remodeling, Housing Starts, Contractor Confidence Reveal Positive Momentum for 2021

Both new construction and remodeling sectors reported positive momentum heading into 2021. Total housing starts for 2020 were 1.38 million, a 7 percent gain over the 1.29 million total from 2019. Single-family starts in 2020 totaled 991,000, up 11.7 percent from the previous year.

“The 1.34 million single-family starts pace in December is the highest since September 2006,” says Robert Dietz, the National Association of Home Builders’ chief economist. “And while NAHB is forecasting further production increases in 2021, the gains will be tempered by ongoing supply-side challenges related to material costs and delivery times, a dearth of buildable lots and regional labor shortages that continue to exacerbate affordability woes.”

NAHB also released its Remodeling Market Index for the fourth quarter of 2020, readings of which indicate remodeling activity is strong across projects of all sizes.

“The fourth quarter RMI reading of 79 still signals ongoing growth for remodelers into 2021,” says Dietz. “NAHB’s economic forecast predicts GDP growth accelerating as we enter the second half of 2021, as vaccination rates rise and the labor market continues to improve.”

The Farnsworth Group’s quarterly Contractor Index surveys hundreds of residential contractors from five main areas, including remodeling, exterior (roofers, siding/window contractors), finishing, mechanical and landscaping. Results of the Q4 Index show increasing optimism across the board, though not

yet to pre-pandemic levels. With contractors feeling confident about getting new business in the next six months, their expectations for increased revenue next year is also rising.

## 2020 Housing Report Outlines Major Challenges

The Joint Center for Housing Studies of Harvard University released The State of The Nation’s Housing 2020 report, stating that 2020 was among the most difficult years in American history, citing COVID-19, the movement for racial justice, and the impacts of climate change as challenges to housing.

“In all this upheaval, the nation’s housing challenges have never been so evident—particularly the lack of affordable rental housing, unequal access to good-quality homes, and the vulnerability of much of the housing stock to natural disasters,” the report says.

The report outlines worsening affordability for renters, the pandemic’s effect on homeowners, persistent racial disparities in housing markets, and the devastating effects of climate change.

“All of these sources of distress have important ties to longstanding housing policy issues. The hope is, now that these challenges are so clearly in the spotlight, we can finally re-envision a national housing policy and recommit to the goal to a decent home in a suitable living environment for all,” a press release regarding the report concludes. It also addresses the potential for housing to lead the economic recovery and makes a case of a new national housing agenda.

## IN THE NEWS:

### Month in Review

In acquisitions news, **PGT Innovations** signed a definitive agreement to acquire a 75 percent ownership stake in **Eco Window Systems** and its related companies for a purchase price of \$108 million, subject to closing adjustments.

**Fortune Brands Home & Security Inc.** completed the acquisition of **Larson Manufacturing**; the brand is now part of Fortune Brands’ Outdoors & Security segment. And, **MI Windows and Doors** acquired **Sunrise Windows & Doors**.

**Katerra’s** shareholders approved a recapitalization of the business that will allow the company to “ensure Katerra’s ability to continue to pursue our goal of transforming the construction industry,” says Paal Kibsgaard, CEO.

**Roto** launched a new organization, Door and Door Innovation, for product and market development comprised of a team of “door innovation experts.” **GED Integrated Solutions** partnered with **Sparklike Oy** to distribute non-destructive IG gas analyzers to fenestration products manufacturers in North America. All sales of Sparklike products in the U.S., Canada and Mexico will be handled by GED.

**Andersen** shared \$33 million in profits with employees and donated \$4 million to local communities.

Milestones in 2021: **Fenetech Inc.** is celebrating 25 years of providing ERP software solutions to the glass fabrication and window and door manufacturing industries and **MFM Building Products** will celebrate its 60th anniversary.



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# The Hope of a New Year

*The industry is poised for tremendous growth and innovation this year, but it won't come without its challenges*



By  
**Laurie Cowin**  
EDITOR

At the start of the new year last month, I was filled with hope as we bid farewell to 2020 and looked ahead to 2021. There's something about retiring my 2020 planner and opening my brand-new 2021 planner that makes me think anything is possible. (Yes, I still use a paper planner, in addition to my electronic calendars.)

But there is a lot more that is new about this new year besides an updated calendar. January saw the swearing in of Joe Biden as the 46th president of the United States, alongside Kamala Harris as vice president. And, notably, two COVID-19 vaccines are circulating, with more in the testing and approval process. With that comes the hope of health for millions of people and a more confident economic rebound.

The residential fenestration industry, it seems, is also hopeful and is already banking on a fantastic year of growth and innovation. Much of this is captured in this issue's coverage of the 2021 Industry Pulse, which surveyed suppliers, manufacturers and dealers to get their take on the coming year and how the lessons of the past year

are shaping future business. We also spoke directly with more than a dozen companies to dive further into what we can expect to see in 2021 and beyond.

The key takeaway? Despite some daunting challenges, demand for residential fenestration products and services is hot.

Already in 2020, companies were struggling to keep up with unprecedented demand for products, further challenged by disruptions in the supply chain because of the coronavirus. Sources don't see demand ebbing in 2021; rather, most project it will increase or at least remain at 2020's high levels. Across dealers, manufacturers and supplier survey respondents, 77 percent expect to have sales growth this year, with only 3 percent anticipating a decline. (The remaining 20 percent predict static numbers.) See the Industry Pulse, p. 30, for more supply chain and demand insights.

In the Industry Forecast, p. 46, Dodge Data & Analytics predicts single-family housing to grow 6 percent in volume this year, driven largely by low mortgage rates, first-time buyers and the demand for more space. The growth, however, will face some barriers, including the continuing pandemic and economic uncertainty, as well as rising lumber prices and labor woes.

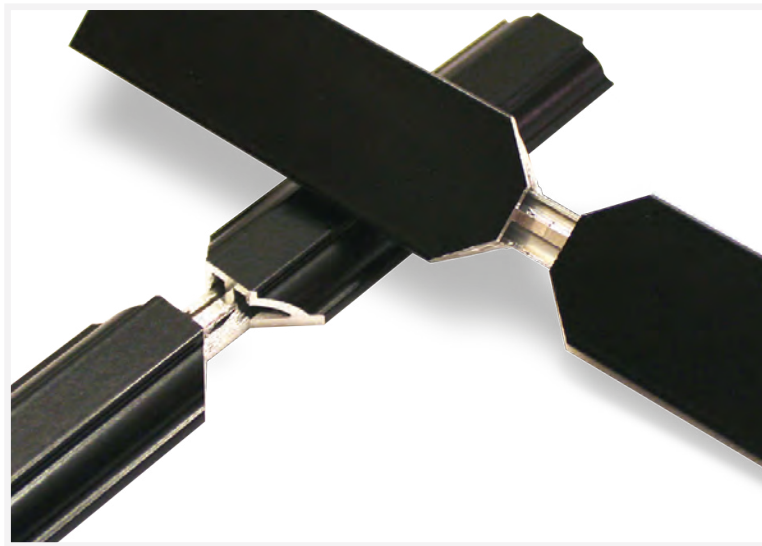
As companies prepare for what several sources predict to be a banner year, some may look to invest in their workforce through training and expansion. Janice Yglesias, executive director of FGIA, makes a case for installation and skilled training programs on Eye on Fenestration, p. 20. Meanwhile, Your Business Matters, p. 24, shares how companies can take steps to encourage diversity, inclusion and open communication.

The year appears to be off to a strong start. As always, Window + Door will keep apprised of the latest news, trends and issues affecting the residential fenestration industry. ■

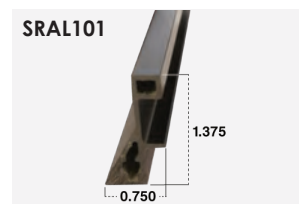
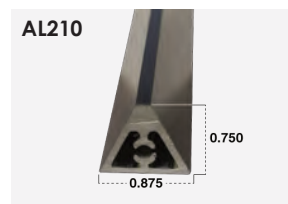
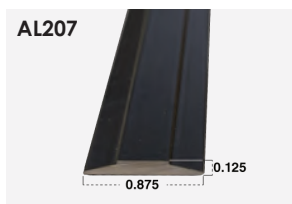
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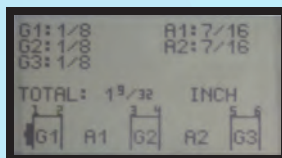
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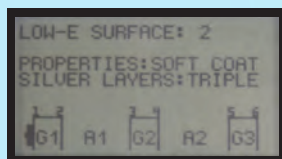


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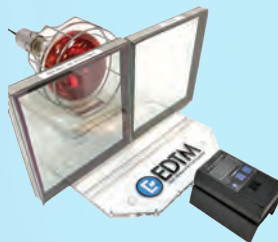
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# In Consideration of Skylights

*Glass design considerations for sloped glazing*



By  
**Urmilla Jokhu-Sowell**

The use of skylights and sloped glazing systems continues to grow in popularity as builders and homeowners seek to incorporate natural daylight in homes and commercial buildings. Sloped glazing is defined as inward or outward angled fenestration installed 15 degrees or more from vertical. Architects and engineers face unique challenges when designing sloped glazing systems.

## Retention of broken glass fragments

Appropriate glass selection is the most important consideration in sloped glazing design due to the life-safety issue of potential glass fallout after breakage. Overhead glazing has a higher chance of falling from the opening when it breaks compared to vertical glass. The International Building Code mandates the use of heat-treated laminated glass lites where sloped glazing is installed over occupied spaces below (2018 IBC Section 2405 Sloped Glazing and Skylights).

- Laminated glass provides protection from broken glass falling from the opening. In insulating glass units, the lite facing the occupied space is the laminated lite, while the other lite can be tempered or heat-strengthened. The minimum interlayer thickness is 0.030 inch, or 0.015 inch for residential skylights less than 16 square feet, provided the highest point of the glass is 12 feet or less above a walking surface.
- Monolithic heat-strengthened and fully tempered glass installed as skylights must have mesh screening capable of supporting twice the weight of the glazing to capture broken glass pieces.
- Annealed glass is limited to areas where the walking surface below the glazing is permanently protected against the risk of falling glass, and in certain greenhouse applications.

## Effective drainage

Water and condensation control can be a challenge

in sloped glazing system designs. Exterior water in sloped glazing pockets cannot drain as quickly as vertical glazing. Higher relative humidity levels in the interior air near skylights may form condensation on the glass. Designers specify internal gutters and channels to drain water to the exterior of the building. Condensation may be collected in evaporation trays where the moisture can be evaporated back into the building space.

Midpoint deflection of the glass may cause water to pool in the middle of a lite, potentially leading to visible exterior staining if the glass is not sufficiently sloped to drain. Exterior caps can impede water drainage, but lower profile caps can reduce the blockage and provide a means to redirect water around them. Alternatively, systems are available with structurally glazed horizontal joints to allow for unimpeded water flow down the face of the glass.

## Mitigation of thermal stress

Unlike vertical fenestration, sloped glazing systems often have more direct orientation to the sun, producing a challenge to balance bringing daylight into the building interior with the impact of increased surface temperature and heat radiating into the building. Thermal properties can be improved using high-performance glass and advanced warm-edge insulated glass spacers. Glare and direct sunlight can be mitigated using frits or patterns on the glass to offer a degree of shading and can be combined with low-emissivity coatings to increase thermal efficiency.

## Analysis of dead loads and live loads

Exterior skylights and sloped glazing can be subjected to a unique combination of loads, including dead load, snow load and wind uplift. The building codes specify various load combinations that skylights and sloped glazing must be designed to meet. In northern climates, snow load is often the limiting factor, while wind is more likely to be the



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limiting factor in a warm, sunny climate, particularly in a coastal location. 2018 IBC section 2404 gives equations for calculating loads for sloped glass, wired sloped glass and sloped patterned glass. The load requirements of ASTM E1300 Standard Practice for Determining Load Resistance of Glass in Buildings must also be followed.

As with wind load, the geographic location of a building is only one factor in determining the design snow load. IBC requires design snow loads to be determined in accordance with ASCE/SEI 7 Minimum Design Loads for Buildings and Other Structures, as it does for wind load. Snow drift loading must be included in the calculation as it can often be several times the magnitude of the ground snow load.

Dead loads and snow loads are examples of long-term loads that may be imposed on the glass. When designing laminated glass for sloped glazing, the

interlayer properties for the appropriate load durations should be used. Calculation of the design loads on skylights and sloped glazing should be performed by the building designer. AAMA GDSG-1 Glass Design Guide for Sloped Glazing and Skylights provides guidance in applying the complex combination of design loads.

### Impact resistance

Sloped glazing and skylights are more susceptible to impact from falling objects and thrown objects than vertical glass. Sloped glazing systems can be designed with increased resistance to water and air infiltration for threats from windstorms and from forced entry.

Incorporating thicker glass substrates with laminated glass and using structural glazing to retain the glass in the framing if breakage occurs can allow sloped glazing to perform in severe weather or forced-entry events. Consult

the NGA with GANA Glazing Manual and Laminated Glazing Reference Manual for additional laminated glass strength considerations.

### Installation methods

Architectural glass is typically supported by capturing the edges of the glass inside perimeter framing. For installations where improved transparency with reduced visible framing is desired, glass can be point supported using fittings directly connected through holes in the glass. NGA Glass Technical Paper FB07-05 (2019) Point Supported Glazing gives additional design considerations. ■

Urmilla Jokhu-Sowell is the technical and advocacy director for the National Glass Association. She has 20 years' experience in the fenestration industry, holds both Bachelor and Master of Science degrees in Civil Engineering, and is a licensed professional engineer.



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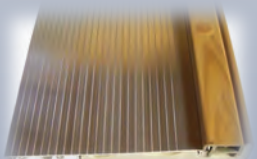
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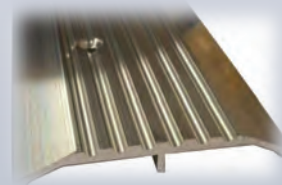
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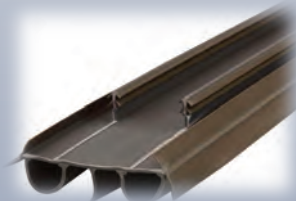
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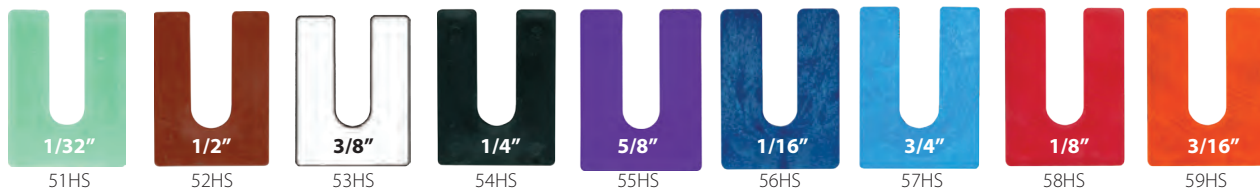
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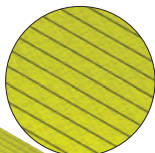
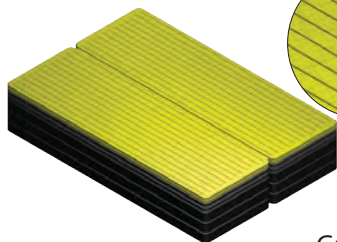
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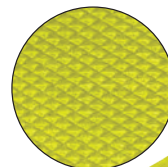
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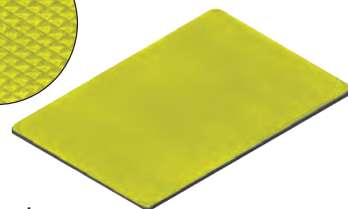
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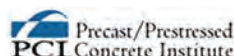
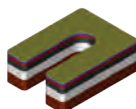
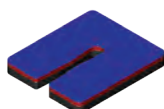
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# Training Investments

*Installation and other skilled training programs could help contractors combat the skilled labor crisis*



By  
**Janice Yglesias**

Since the Great Recession, homebuilders across the U.S. have struggled to come up with enough skilled workers to meet a growing demand for new housing. The National Association of Home Builders points to the labor shortage as one of the key factors that has kept home starts below levels needed to meet that demand.

Some indications are that the trend may be levelling off due to efforts by homebuilding associations and businesses, such as apprenticeship programs and trades education programs during and after high school. Some of these efforts to bring in thousands of new workers have started to pay off, but worker unavailability still ranks highest among the concerns of homebuilders. And, we

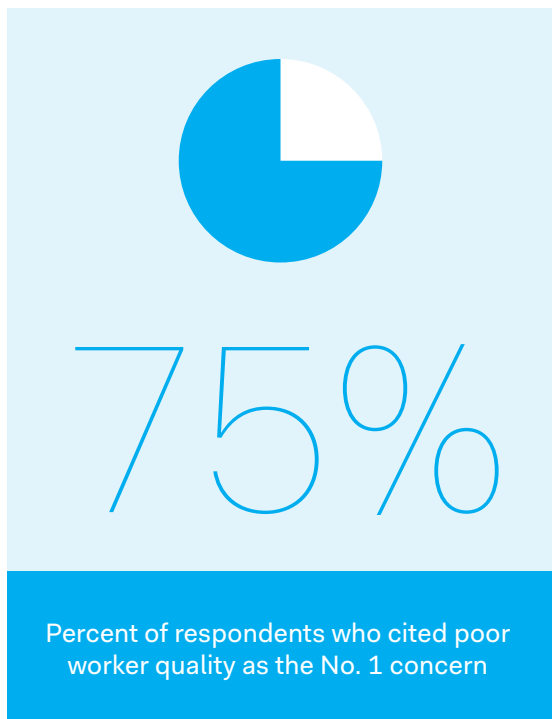
are currently uncertain about how COVID-19 will further affect the shortage.

It is important to understand, though, that it's not just a matter of finding able-bodied workers; it's about finding experienced, skilled workers. According to a survey of nearly 1,000 contractors taken in late 2019 and sponsored by the Associated General Contractors of America and Sage, most construction companies indeed still rank labor shortage as a primary concern, but even more are worried about their ability to find qualified workers. While 72 percent of the respondents said that worker shortages were the top problem, 75 percent of respondents cited poor worker quality as the No. 1 concern.

Consequently, AGC reports that contractors are investing more in training programs for current and new workers; nearly one-third of survey respondents have increased funding for technical education programs and 29 percent have restructured programming for current skilled labor recruits.

The Fenestration and Glazing Industry Alliance has long emphasized the vital role of installation training in realizing the intended performance of fenestration products, while recognizing that installation quality is inherently variable, depending on the experience and expertise of the installer. The long-standing objective of providing proper training to this segment of the labor force, which is vital to the success of the fenestration industry, dovetails naturally into supporting development of qualified, skilled workers for companies to draw upon during this heightened, decade-long workforce shortage.

The industry in general—and FGIA in particular—has developed standards to help ensure proper installation. All are intended to supplement manufacturers' instructions and provide details for integrating the product with surrounding wall construction.



Source: The 2020 Construction Hiring and Business Outlook survey from the Associated General Contractors of America and Sage



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These are typically based on ASTM E2112, *Standard Practice for Installation of Exterior Windows, Doors and Skylights*, and expand from there to cover details of specific configurations of products and different wall configurations encountered in new construction or replacement/renovation. In addition, FGIA also provides installation practices specific to unit skylights, extreme wind/water conditions and punched openings in commercial buildings.

Although the primary source of installation guidance is the fenestration manufacturer's instructions, using installers who already have training around general best practices for window and door installation can expedite and improve the proper application of the manufacturer's instructions, particularly in cases where they are missing or vary in methods and thoroughness.

The need to fill in such gaps and provide more consistency among installers propelled development of InstallationMasters, an FGIA program developed by the American Architectural Manufacturers Association to train and certify residential and light commercial window and door installers. The overall goal of the program is to establish some consistency among installers to help them work more efficiently and uniformly, improve window and door installation practices and reduce the number of callbacks, claims and long-term legal liability that can result from improper installation.

In short, at least until longer-range training programs begin generating quantities of well-prepared, employment-ready workers, contractors must meet the challenge of bringing worker skills up to speed. ■

Janice Yglesias serves as the executive director of the Fenestration and Glazing Industry Alliance, overseeing all daily operations. She joined the association in 1999. She can be reached at [jyglesias@fgiaonline.org](mailto:jyglesias@fgiaonline.org).



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# Diversify Your Workforce

*How companies can take steps to encourage diversity, inclusiveness and open communication—and why it matters*

By  
**Laurie Cowin**

Network. Talk with your employees. Conduct surveys. Get your employees engaged. Measure where you are. Set goals, then establish steps to reach them.

These are just a few of the suggestions about how to recruit a more diverse workforce from panelists in a joint session with the National Glass Association and the Women in Construction during GlassBuild Connect last September. Following are some tips from the panel on how companies can examine their current workforce and take steps to encourage diversity, inclusiveness and more open communication in the workplace.

“A lot of hiring happens because people know people, which is good in some ways, but it also means people often hire those who think like them.”

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## Recruitment and retention

“What gets measured gets managed,” says Lauline Mitchell, NAWIC vice president, BBI Construction. “If you’re interested in truly changing hiring practices, you have to take a moment and be honest about what you’ve done in the past and where you want to go and talk about the steps to get there.”

Several panelists recommended casting a wider net when hiring and perhaps even looking at anonymous resumes, which challenges employers to focus on skills rather than names. “A lot of hiring happens because people know people, which is good in some ways, but it also means people often hire those who think like them,” says Doreen Bartoldus, NAWIC president-elect, Jacobs Engineering.

Developing relationships with local universities and career centers also can be a boon. Diana San Diego, VP of marketing, SAFTI First, often has interns in different departments, which she cites as being especially beneficial to the technology side of the business. “Be in touch with local career centers. It’s old school, but that’s where your talent pool is coming from. I always learn from any new person we bring in. It makes the experience broader for everybody in our organization.”

Hiring isn’t the end goal, however. “Retention is just as or more important than recruitment,” says Nataline Lomedico, CEO, Giroux Glass. “Make [employees] feel valuable ... Check in and make sure people grow and have the opportunity to grow.” Giroux Glass, for example, assigns each non-union employee a buddy who is not a supervisor or a peer in the department. The buddy checks in to ensure the new employee feels heard and discuss future goals.

Retaining a diverse staff can be a significant

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challenge for employers. “Once you get folks there, you can’t forget they are different,” says Mitchell. “They need to be valued and heard like everyone else is. There has to be a culture of respect, and that comes from the top.”

Panelists also recommend examining company culture to ensure it’s inclusive. For instance, many social outings in the industry revolve around golf, but that may not interest much of the staff. Re-think the yearly outing to something that appeals to more staff members.

### **How to ally**

Even if employees are not directly in charge of hiring, they can be better allies. Bartoldus says to be supportive—be an advocate, mentor and teacher and put an end to any harassment employees might see in the office or on the jobsite.

Mitchell echoes Bartoldus’ sentiment of speaking up if you see a colleague’s comment being ignored at the table. Lomedico and San Diego encourage companies to “show you’re listening” and seek someone else’s ideas.

Encourage women to network, too. “What a beautiful thing to be able to network and hear

from others,” says Lomedico. “Networking is an incredible way to encourage other women. Help them with introductions to the right people.”

### **Resiliency in a cyclical industry**

Those in construction often consider it to be a particularly resilient industry and group of people. Although housing is poised for strong growth, the commercial construction outlook is bleak for the coming years. Resiliency, says Lomedico, is a choice.

History shows construction is a particularly cyclical industry; the drive toward progress must always remain despite any extenuating circumstances. “The precipice is calling,” says Mitchell. “Our industry is very cyclical. Spend some time and you’ll see the patterns and understand what happens and how [cycles] develop.”

She continues: “Our industry will self-correct and adjust as the rest of society does ... you have to remain persistent. Work harder, keep digging and keep going until you get where you want to be. Encourage people to dig deep and think about what you want and how to achieve that with the current surroundings.” ■

## The Case for Diversity

Recently, diversity in the workplace has been making headlines. Many dismiss it as a trendy buzz-phrase or deem diversity a soft or feelgood cause of the moment. But recent studies indicate diversity has real impacts on businesses. Take a 2020 study by management consulting firm McKinsey & Company, “Diversity wins: How inclusion matters,” for example. This report studied diversity winners, companies with a diverse workforce, to reveal what drives real progress.

“Our latest analysis reaffirms the strong business case for both gender diversity and ethnic and cultural diversity in corporate leadership—and shows that this business case continues to strengthen,” the report says. “The most diverse companies are now more likely than ever to outperform less diverse peers on profitability.”

The report found that the greater the representation of women, the higher the likelihood of outperformance. “Companies with more than 30 percent women executives were more likely to outperform companies where this percentage ranged from 10 to 30, and in turn these companies were more likely to outperform those with even fewer women executives, or none at all. A substantial differential likelihood of outperformance—48 percent—separates the most from the least gender-diverse companies.”

What’s more, in the case of ethnic and cultural diversity, McKinsey & Company’s business-case findings are equally compelling, the company reports. In 2019, top-quartile companies—those with a higher number of employees of various ethnicities—outperformed those in the fourth quartile by 36 percent in profitability. “As we have previously found, the likelihood of outperformance continues to be higher for diversity in ethnicity than for gender.”

*Editor’s note: For additional studies and research, see the Gloria Cordes Larson Center for Women and Business via Bentley University. CWB develops curated research reports that synthesize current literature, practical research, and solutions to key issues impacting workplace diversity, equity and inclusion.*



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# Primed for Growth

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Despite challenges around COVID-19, the industry looks forward to a robust 2021 and beyond as demand is booming and residential construction posts historically strong numbers **By Laurie Cowin**

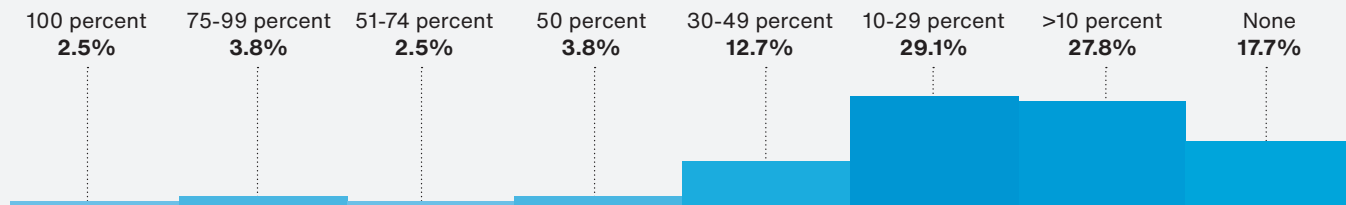
Few would disagree 2020 was an unprecedented year. Based on last year's Industry Pulse survey, most companies were optimistic about business conditions heading into a new decade. They were looking to innovate in the products they offered and ways they did business, and more than 80 percent of respondents anticipated moderate to strong growth. Then March came. The COVID-19 pandemic quickly dominated every headline and, as the severity of virus transmission increased, businesses temporarily shut down and leaders were tasked with navigating an uncertain future. Fortunately, the essential nature of the residential fenestration industry allowed many to continue operations, albeit in a limited capacity with safety provisions and business pivots in place, many of which may remain a permanent part of the landscape. This year's annual Industry Pulse survey looks ahead at the booming housing market, while taking into consideration challenges around labor, material procurement, supply chain and heightened safety considerations as the coronavirus rages across the U.S.

*Editor's Note: Survey responses from which the statistics are derived were collected in October 2020.*

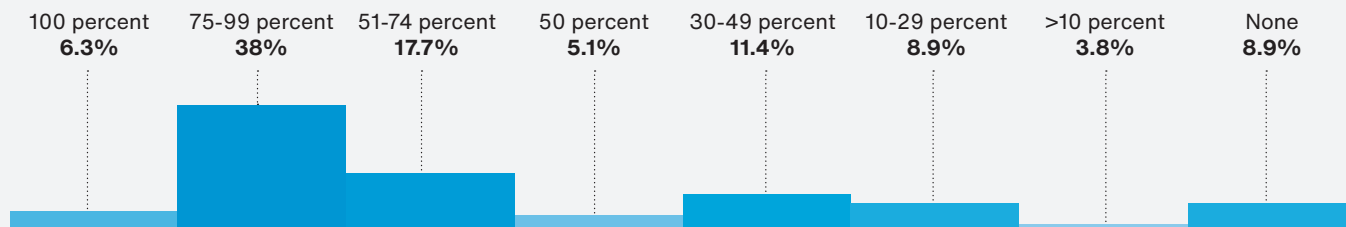
## Meet the Respondents

Manufacturers, suppliers and dealers/distributors contribute to the Industry Pulse each year. See the breakdown of this year's response base, where their key business focus is and business investment plans they have.

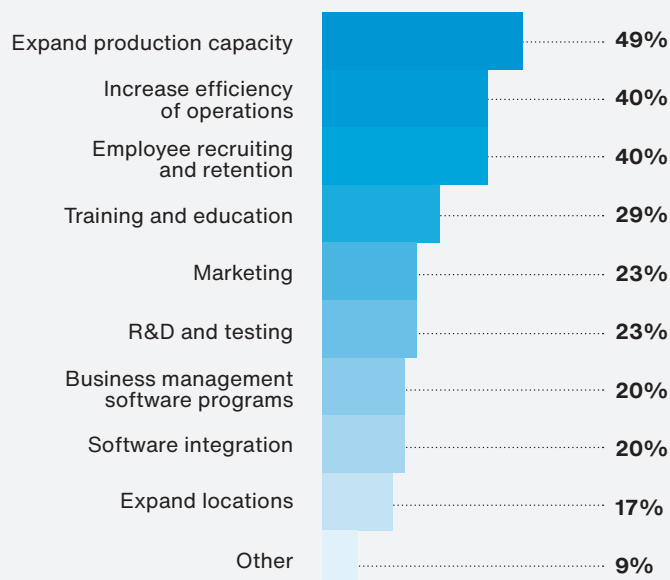
### About what percentage of your business is in residential entry doors?



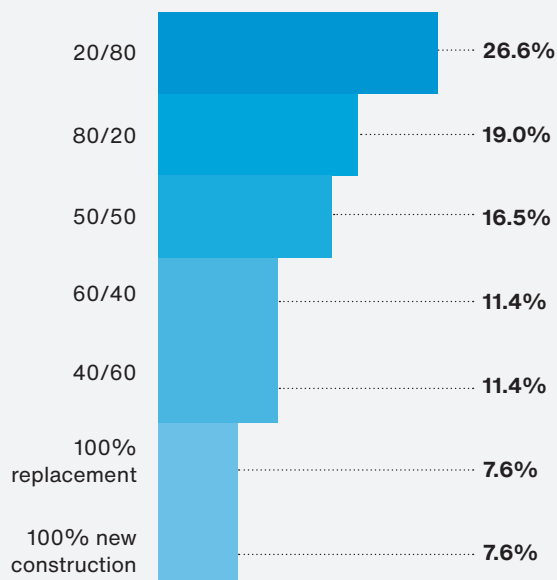
### About what percentage of your business is in residential windows?



### Where do you plan to focus your investments in 2021?\*



### About what percentage of your business was replacement versus new construction in 2019? (replacement/new construction)



\*Respondents could select more than one option

01

# Sales and Housing Growth

This year's survey confirmed what the industry already knows: sales are reaching near-record levels, and sources don't expect that to ebb anytime soon. Larry Johnson, VP, sales, North American fenestration, Quanex Building Products, expects the influx of home renovation projects to carry into 2021, driven in part by people spending more time and working at home. Ensuring adequate space and amenities for those setups drives some renovation.

"These trends, coupled with a boom in new housing starts, have really driven up demand for windows and doors," he says. "We've seen the proof, as many of our customers have backlogs of orders." He also says low interest rates make this an economically advantageous time to purchase homes.

"Even after the pandemic starts to slow down, I think growth is going to continue in a lot of segments," predicts Steve Dillon, marketing director for Veka Inc. "I don't know how that can possibly be a negative thing for our economy. I'm excited about the growth potential over the next three to five years. I think it's going to be pretty astonishing."

02

# Labor

Recruiting and retaining skilled labor remains a challenge for the industry. Sources offer some of their best tips for combatting the shortage.

"One of the biggest things we can do for our workers right now is to help them avoid burnout," says Johnson. "For example, several months ago when the industry ramped back up quickly, we had some folks in our manufacturing facilities working 12-hour shifts and weekends," which he describes as unsustainable. "Being in tune with the people making your products is more important than it's ever been. Do what you can to offer flexibility, avoid excessive shifts if you can and try to deliver competitive compensation."

Johnson also says plant safety is a competitive advantage as potential workers may be hesitant to enter environments where they could be at risk of contracting the coronavirus.

Morgan Donohue, vice president of sales and automation, Erdman Automation, credits the company's employee recruitment and retention with its good benefits, being located in an area where workers can live on a bigger piece of land outside of the downtown area, and a profit sharing and bonus program. The industry's bright future, he believes, also is helpful for employee security since they feel confident in the market's strength.

Nicolle Picray, public relations and brand communications manager, Pella Corp., says promoting company cultures

and career growth opportunities are key. The company recently launched a pilot program at a manufacturing facility for an alternative shift schedule that allows for every Sunday off and a five-day weekend every third week. "We want to achieve optimal work-life balance for our team members, while giving them the opportunity to earn competitive wages," she says.

Social media such as LinkedIn, virtual search engines like Indeed, professional recruiters and word of mouth are among the best practices for Roto North America to recruit and retain new talent, says Dan Gray, director of sales for North American Group. FeneTech, meanwhile, relies heavily on college career fairs, many of which went virtual this year, says Samantha Hudeck, manager of administrative services.

Training programs may also help with the labor shortage, such as Andersen's Certified Contractor Program, which recruits and trains professionals for window and door installation projects, says Grant Davis, senior vice president and general manager, residential and commercial pro division.



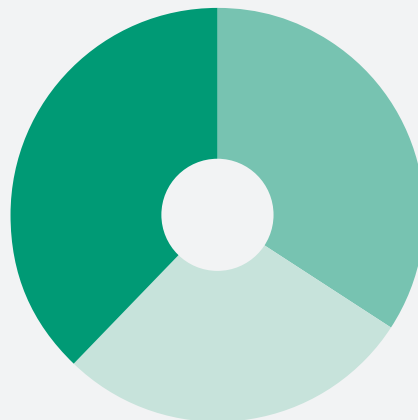
## Did 2020 sales meet your projections?

77 percent of respondents indicated profit margins stayed consistent or increased compared to the previous year.

- Higher than expected
- Lower than expected
- About the same

ALL RESPONDENTS

- 38%
- 28%
- 34%



MANUFACTURERS

- 36%
- 16%
- 48%



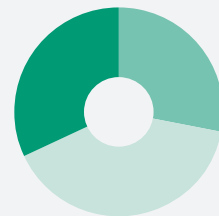
DEALERS

- 45%
- 28%
- 28%

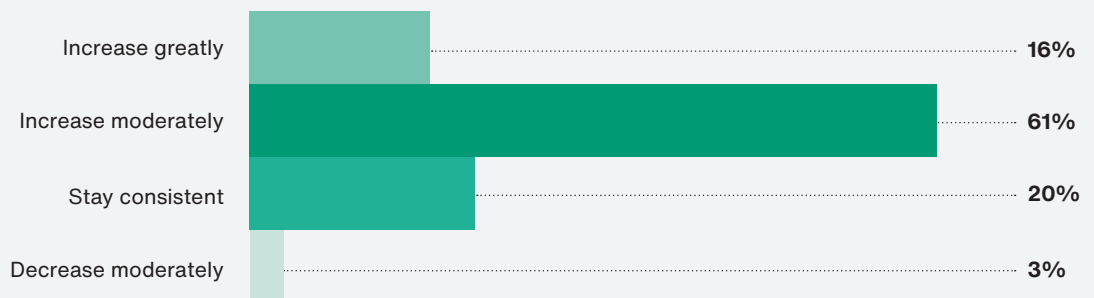


SUPPLIERS

- 32%
- 40%
- 28%

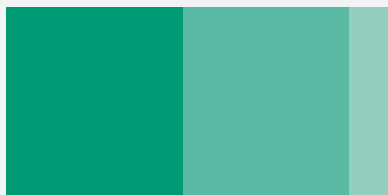


## What are your sales expectations for 2021?



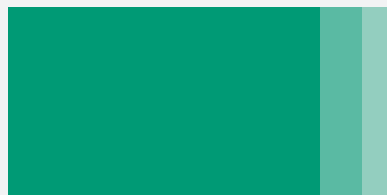
## How did your staff levels change in 2020?

- Added staff 46%
- Eliminated staff 43%
- Same 11%



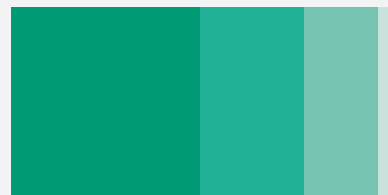
## Do you plan to hire employees in 2021?

- Yes 81%
- Unsure 11%
- No 8%



## What is your biggest staffing challenge?

- Hiring employees 49%
- Retaining employees 19%
- Training employees 27%
- Other 5%



# Product Development

Customization is the name of the game in product development, whether it be software, machinery, components or the end product itself. “Each request is unique to [our customer’s] business,” says Stewart McMillan, Soft Tech product manager. “Requests are for features that take away the need for user calculations.”

Gray reports that Roto North America has several road map projects designed to fill gaps in its product portfolio. “In addition, we are working with several strategic customer partners to develop hardware solutions in close collaboration with their individual requirements,” he says. Among the considerations driving new product development are home automation and larger and heavier windows and doors.

GED Integrated Solutions is set to introduce several new and redesigned products this year, all of which revolve around the goals of minimizing labor, speeding up processes, improving throughput and increasing quality, according to John Moore, vice president of marketing.

Pella solicits consumer feedback regarding product development, launching an online research community in 2018 that Picray describes as instrumental in 2020. “As we’ve navigated COVID-19, we’ve been able to continue gathering insights digitally to move our development and innovation efforts forward,” she says. “Consumers have certainly expanded their vision for how their homes should function during this time. Along with that comes opportunities to uncover new needs, like improving fresh air circulation

and reducing sound from outside the home.” She also notes increased demand for fiberglass products, citing their appropriateness for many climates and low-maintenance appeal to homeowners.

Dillon notes an uptick of interest in hybrid materials and says Veka will be looking into hybrid materials, as well as investing in technology, which he says offers great potential as the world moves further into the digital communication age.

Several sources reference the continuing popularity of biophilic design. “There are countless consumers in locations of stringent coastal code and in locations at risk for hurricanes that still desire to bring the outdoors in and balance overall style with functionality,” says Andersen’s Davis.

Jim Horn, director, channel marketing at Cornerstone Building Brands, which owns Ply Gem, agrees the outdoor living trend, which has topped the company’s trend list for about 10 years, will continue. He also points to the increase of specialized spaces in the home and demand for sound abatement products.

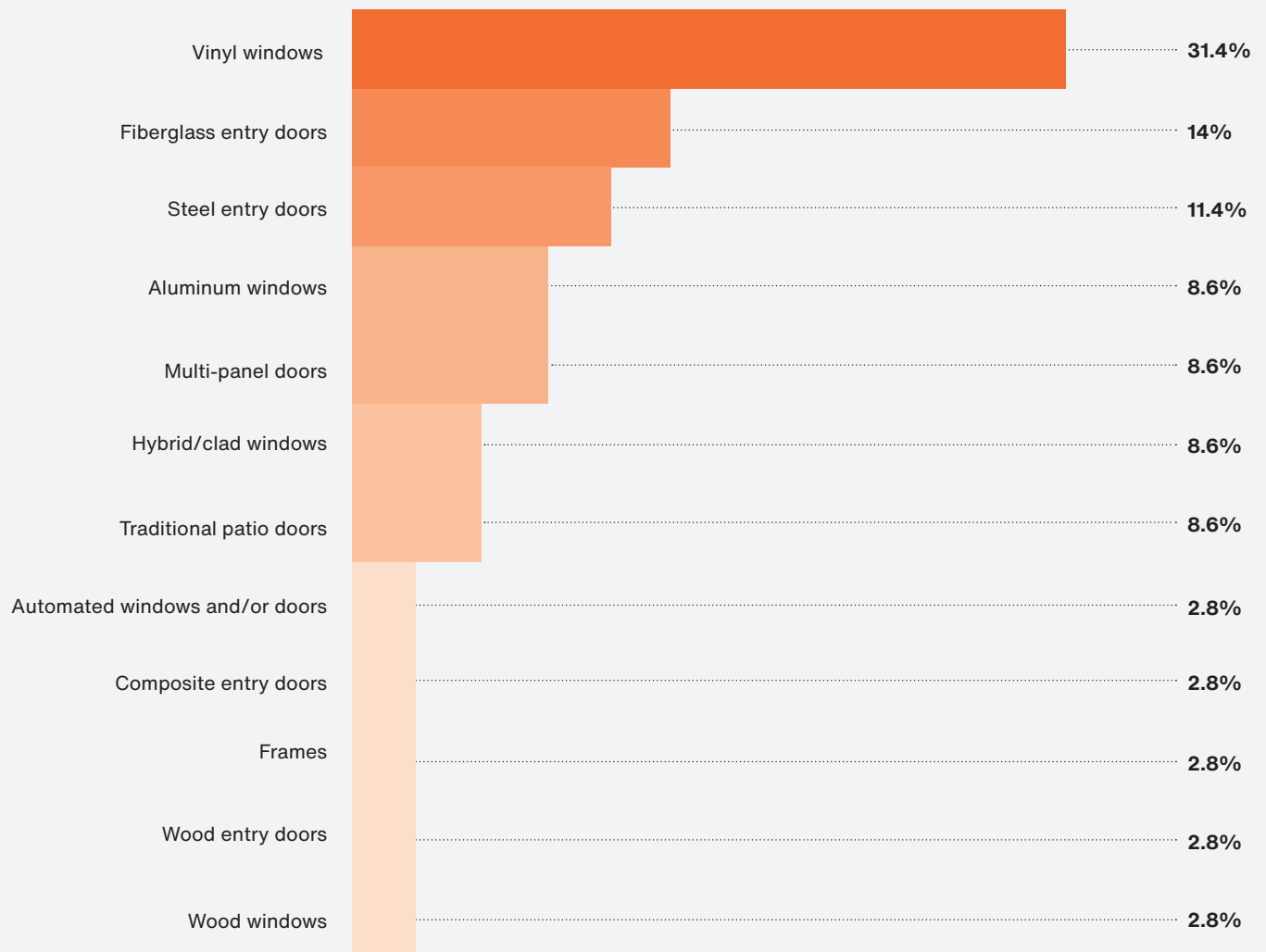
AmesburyTruth also sees more demand for natural lighting and ventilation, which safety products such as window opening control devices can support, according to Michelle Nissen, VP of product management. “The key areas of focus for our teams and our products follow sustainability and safety,” she says.

Increasing building standards also influence design. “Our product development has been based on finding ways to fill openings that continue to

get bigger, and we are also driven to keep up with ever-changing demands on thermal requirements throughout North America,” says Steve Bronson, sales director for the U.S. and West Canada, P.H. Tech. Sliding doors will be a particular focus for the company. “People tell me 9 feet tall is the new 8 feet,” he says, also referencing a true triple-glazed slider and hung window system, enhanced color solutions and impact testing as further areas of product development.

“Windows have become so much more than just frames and glass over the past few decades, and high performance is now something buyers expect to receive from windows at any price point,” says Johnson, Quanex. “Differentiation and innovation will be critical moving into this year and beyond.”

## What products were most in demand in 2020?



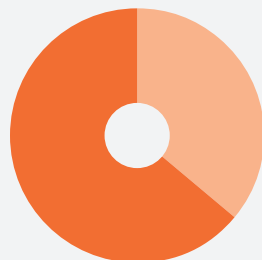
### Did you offer new products in 2020?

Yes 51%  
No 49%

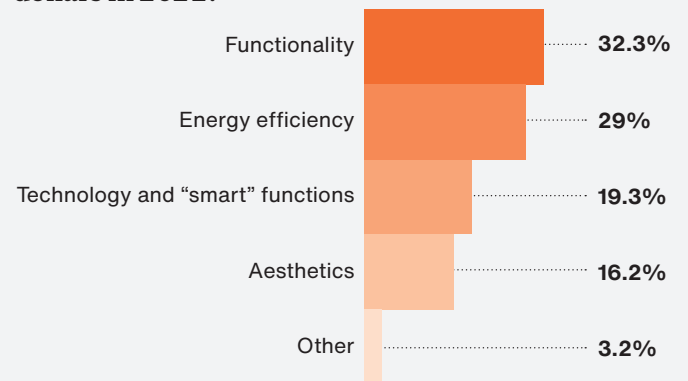


### Do you plan to offer new products in 2021?

Yes 64%  
No 36%



### Where will you focus your product-development dollars in 2021?





# Automation and Technology

## Automation

Sources indicate more and more customers plan to automate where possible, and companies are responding in kind. Mitchell Heckbert, vice president sales and service, Urban Machinery, anticipates more business opportunity around Industry 4.0 and connectivity. “We have several customers asking for more connectivity to the machines,” he says.

Todd Tolson, director of sales, ProLine Automation, estimates 80 percent of the company’s machines have the ability to be connected. “I expect this trend to continue as customers become more comfortable with their machinery being connected to the outside world.” That connection, however, will place a bigger demand on IT departments, he says. “Regular software maintenance and backup protocols are now just as important on the factory floor as they are in the office.”

Continuing difficulties with labor are also pushing automation. “Anything we can do to lower the labor costs in our customers’ factories has been welcomed by them,” says Donohue, Erdman Automation. “All of it is pushing in the direction it’s been going for a while now, which is from an automation standpoint anything you can do to lower your reliance on labor is being done now.”

Further advantages of automation can include reduced costs for the customer. “Many manufacturers are seeking higher-performing products and components and cost savings simultaneously,” says Johnson, Quanex. He says labor reductions stemming from using automated machinery, rather than the price of the components themselves, is one area to cut costs. “We’ve

## Did you invest in automated machinery or advanced software in 2020?

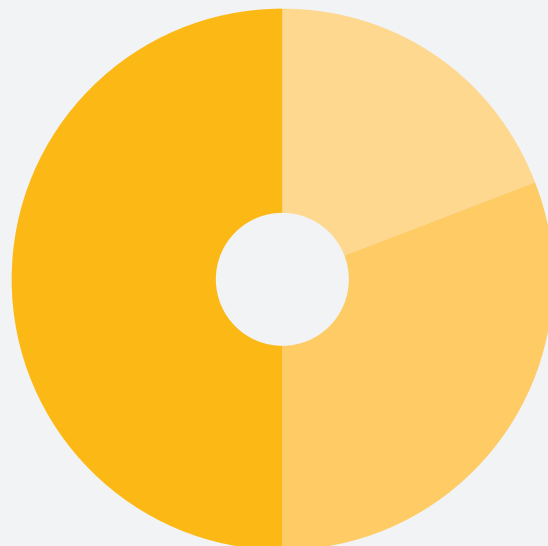
Respondents listed increased throughput and capacity as the top benefit, followed by quality and labor benefits.

- Yes **42%**
- No **58%**



## Do you plan to invest in automated machinery or advanced software systems in 2021?

- Yes **50%**
- No **31%**
- Unsure **19%**





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## Automation and Technology

seen this with automated equipment for warm-edge spacer systems and other areas. Solutions like these can also help with the labor shortage, creating a double advantage for manufacturers.”

Business has been brisk since June 2020, says Tolson, which he credits mostly to increased demand and the inability to get reliable labor. “It’s no surprise to me that the machinery that is most in demand right now is those machines that eliminate or reduce labor,” he says. “I expect this trend to continue.”

Despite delaying equipment investment decisions to this year or even 2022, Marco Patermann, manufacturer’s representative in North and Latin America, says FUX used the opportunity to ensure its customers were up to date with their equipment and promoted service calls. The company is planning to update some of its lamination/wrapping and bending equipment lines with new components. “Some lines are being completely reengineered, taking into account new techniques, technologies, insights and requests from our customers,” he says.

Several sources agree automation is poised for significant growth in the coming years. “We have a bright future; our business is strong,” says Donohue.

As companies look to introduce more automation into their facilities, Matt Batcha, business development at FeneTech, encourages companies to develop a long-view plan. “When a window manufacturer buys a new piece of equipment, they are not going to replace every piece of equipment in their business,” he says. “Equipment runs for decades. It’s important for people to start having discussions because it’ll be

a gradual transition for an overall plan. Maybe it’s just automating one line, and that’s OK, but how do we make those steps to get there?”

### Technology

Sources see tremendous opportunity for technology. “The continued focus on digitalization throughout the entire business and supply chain will provide many future opportunities to all companies that provide consumables and machinery to the industry,” says Ron Crowl, president and CEO of FeneTech.

The transparency technology can provide is also increasingly critical. For example, Dillon points to the NFC tag and RFID technology on products that allow for two-way communication and transparency about where a product is in the manufacturing process.

Crowl and Batcha echo that sentiment, each noting the growing requests for customers to have better visibility of consumables availability in the supply chain. Other popular features include central software systems to aid in efficiency gains and capacity/production features.

GED’s virtual reality system gained traction last year amid the travel restrictions, and is expected to further expand in 2021, according to Laura Fiegelist, marketing communications coordinator. The system uses virtual reality glasses so the customer and GED representative can communicate in real-time and for the GED representative to “see what the customer sees and walk them through everything virtually,” explains Fiegelist.

Moore also shares that the continuing obsolescence of PCs and programmable logic controllers—as well as equipment

that has been designed around these—is a concern in the industry. “You either need to find those obsolete controllers out in the market somewhere to continue to service the equipment or redesign to a new controller,” he explains. “We’re doing a lot of modernizing and redesign of our products to allow our customers to have access to the most updated controller so if a controller goes down, they can replace it.”

Software providers note an increased demand for solutions through the pandemic as customers need to adapt to remote work and do more with less. “Flexibility was, and still is, key during these times,” says McMillan, Soft Tech, who also says the company’s biggest call is integrating into ERP systems.

McMillan also saw companies working on their systems rather than in them. “With some forced downtime, companies took advantage to review their systems to make upgrades and improvements.”

Batcha observed the same trend at FeneTech, with existing customers in particular looking to accelerate projects or do software upgrades while business was shut down or slow. Batcha remembers many discussions with customers who presented business struggles and they worked together to see where they could improve processes. “People are making time to have those discussions because they’re trying to look at how we can improve today and for next year,” Batcha says.

“Software systems should be no different than machines,” he continues. “You’re doing regular maintenance on your machines and, while a software system isn’t a physical thing on the floor, it requires maintenance as well.”





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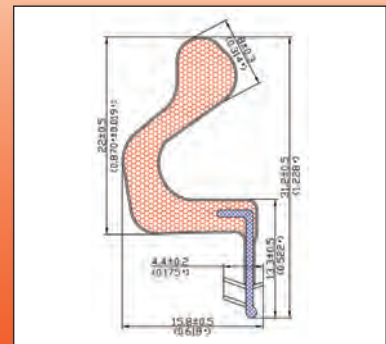
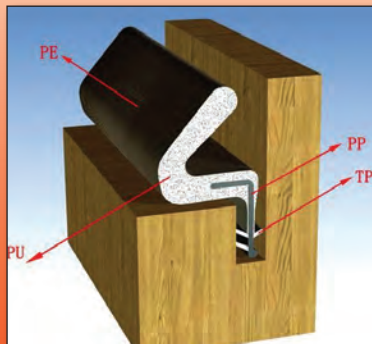
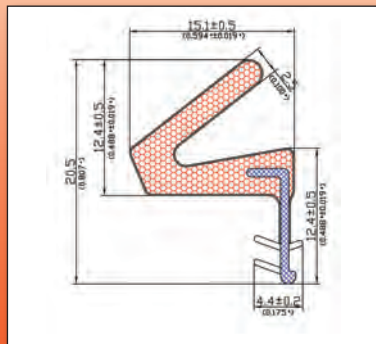


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# Adapting to the Coronavirus

“Early on, like everybody else, we were prepared for the worst,” remembers Veka’s Dillon. “There were so many unknowns in the beginning.” Veka prepared by reducing production and not overpreparing for the pending selling season, he says. “We were cautiously ratcheting down a bit and as things went on, we discovered a ramp-up was happening across the board.” At that point, Veka reversed course and increased production for all of its plants and ended up with what Dillon describes as a banner year in terms of sales.

Many companies have similar stories: uncertainty around the beginning of the pandemic, then quickly pivoting to accommodate

**“Virtual service and installs were implemented and worked very well. We plan to offer this service into the future.”**

demand spikes as businesses re-opened and homeowners invested in their residences. Along the way, companies continued to adapt to keep employees and customers safe and meet demand.

The majority of ProLine Automation’s support staff is located in Canada, where its machinery is also manufactured, says Tolson. The closed border between Canada and the U.S. challenged the company, but

Tolson says the company has used virtual support as its first line of defense for 10 years. “Start-ups with new customers have been interesting,” he says, “but we’ve managed [to] support them by providing videos prior to the machine arriving, and supporting their start-ups via live video meetings.”

“Virtual service and installs were implemented and worked very well. We plan to offer this service into the future,” says Mitchell, Urban Machinery.

Conducting business virtually is pervasive across the entire industry. Gray says Roto pursues new business activities through more product videos, enhanced social media activity and Zoom training sessions.

Most sources also agree remote working is now standard practice, though what form it will take—permanent work remote or a hybrid office/work remote model—is yet to be determined in many cases.

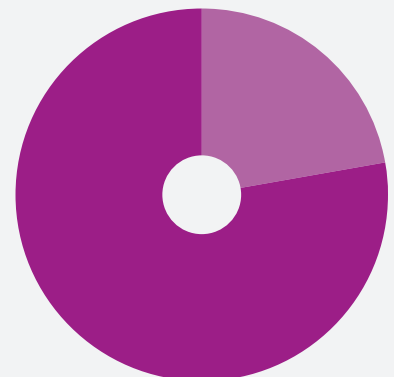
## 1 Did your company need to pause operations during the coronavirus pandemic?

- Yes **34%**
- No **66%**



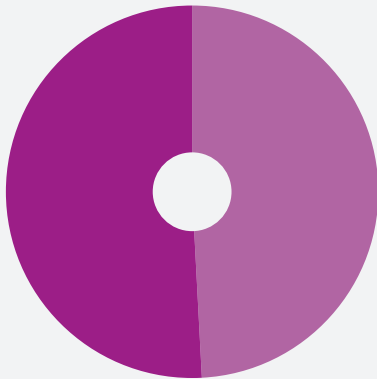
## Did you adopt virtual tools in the office, such as video meeting platforms or cloud software?

- Yes **78%**
- No **22%**



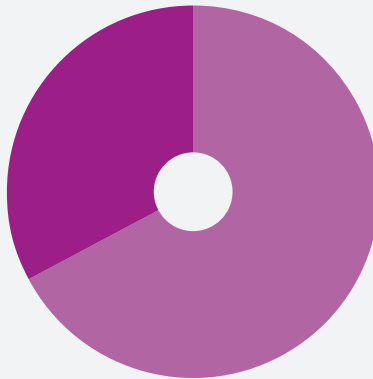
**2 Do you anticipate any changes you made during the pandemic will be a permanent shift for your company?**

● Yes **51%**  
● No **49%**



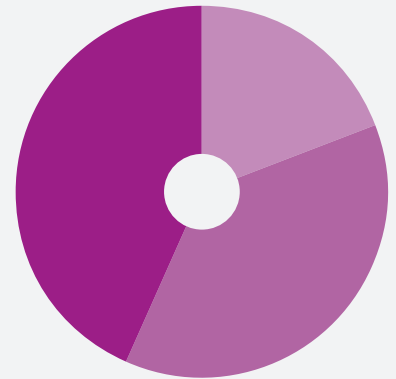
**3 Did you lay off or furlough employees?**

● Yes **33%**  
● No **67%**



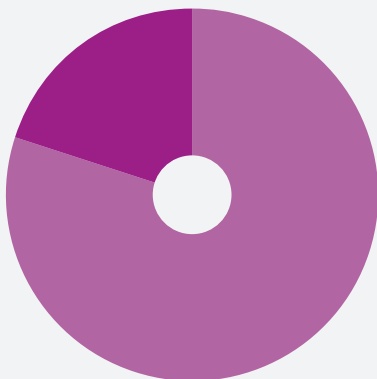
**4 Did you apply for COVID relief funds, such as the Paycheck Protection Program?**

● Yes **47%**  
● No **40%**  
● Unsure **13%**



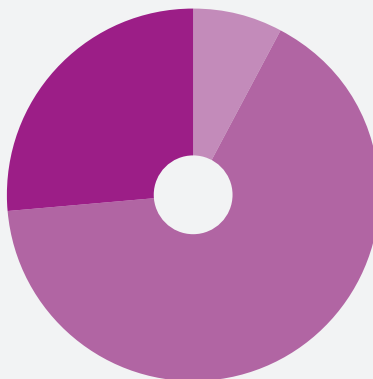
**Did you adopt automated machinery and/or software solutions for the manufacturing floor?**

● Yes **20%**  
● No **80%**



**Overall, did you see a decline in orders/business due to the pandemic?**

● Yes **26.6%**  
● No **65.8%**  
● Unsure **7.6%**



**1** Respondents indicated they paused operations for anywhere from a matter of days to several months.

**2** Virtual meetings internally and externally, remote work policies and a greater willingness to invest in technology will be permanent shifts for some companies.

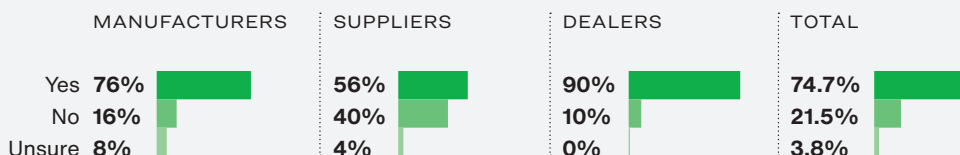
**3** Plant staff was the most affected by furloughs and layoffs, followed by support staff. Of the companies that laid off employees, nearly 90 percent indicated they re-hired them when able.

**4** Of the companies that applied for COVID relief funds, 92 percent received assistance.

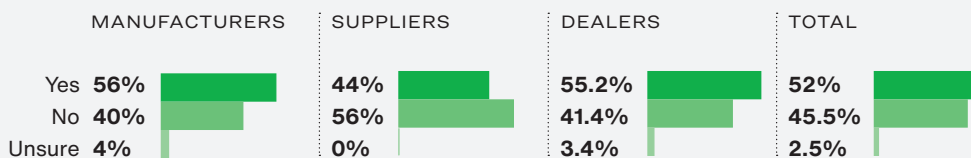


# Supply Chain, Materials and Demand

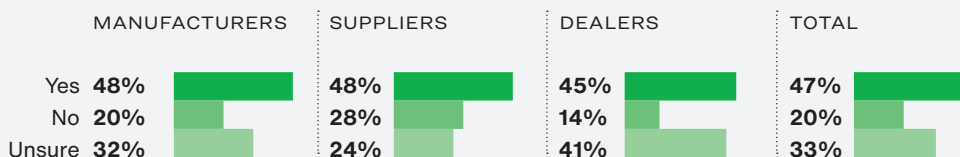
## Was your supply chain affected by the pandemic?



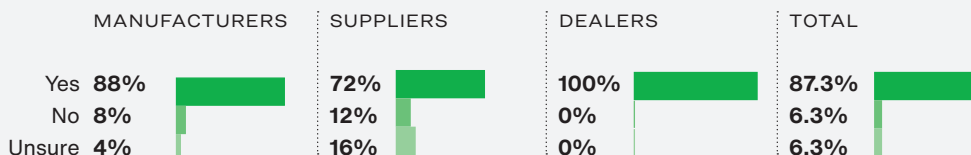
## Did you try a new supplier during 2020?



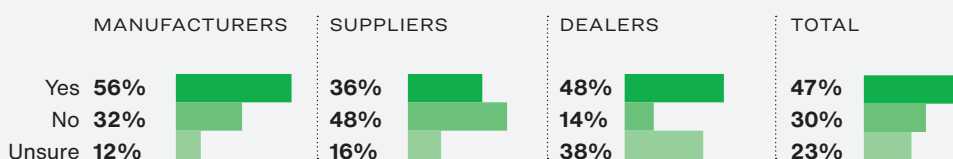
## Do you plan to try a new supplier in 2021?



## Do you anticipate material prices to increase in 2021?



## Do you anticipate having to find different material sources in 2021?



The supply chain took a hit in 2020 between COVID-19-related shutdowns across the world at different times and demand spikes. As such, many companies employ various strategies to ensure a healthy supply chain.

“Roto is utilizing several tactics, such as transport to different ports, securing containers in China in advance of planned shipment, increasing production capacity and investing in new equipment to increase output,” says Gray.

Other companies have been able to expand facilities, such as Pella, which opened new manufacturing facilities in Reidsville, North Carolina, and Troy, Ohio, in addition to adding new production shifts at existing facilities. P.H. Tech expanded its Leetsdale, Pennsylvania, plant, and made equipment investments in that plant and its Quebec, Canada, facility.

AmesburyTruth leveraged the scale of its multiple manufacturing locations and ability to dual manufacture products to keep business going. It also moved manufacturing of some products to North America to reduce long lead times on imported products, according to Nissen.

Continental Industries, meanwhile, anticipated





Roto



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06

## Supply Chain, Materials and Demand

global supply and logistics challenges and adapted by increasing its stock levels to ensure product availability, while also increasing production quantities and frequencies, says Marco Patermann, manufacturer's representative in North and Latin America. "The logical subsequent step," he continues, "is an increase in capacity, which has already been initiated and partially implemented. We live in exciting times and quick adaptation with versatility is one of the key success factors."

Dillon says Veka's four plants across the country help each other. Veka also uses third-party logistics rather than its own trucks. "It's nice to have a network across the country that is in constant communication for all the shipping lanes we can get product out," he says, also citing the need for patience and understanding among companies.

Although material and components suppliers grapple with supply chain challenges, the picture is a bit different for some machinery and equipment providers. Donohue estimates that Erdman Automation sources up to 95 percent of its parts in North America and the company hasn't experienced any significant delays for overseas parts it does procure.



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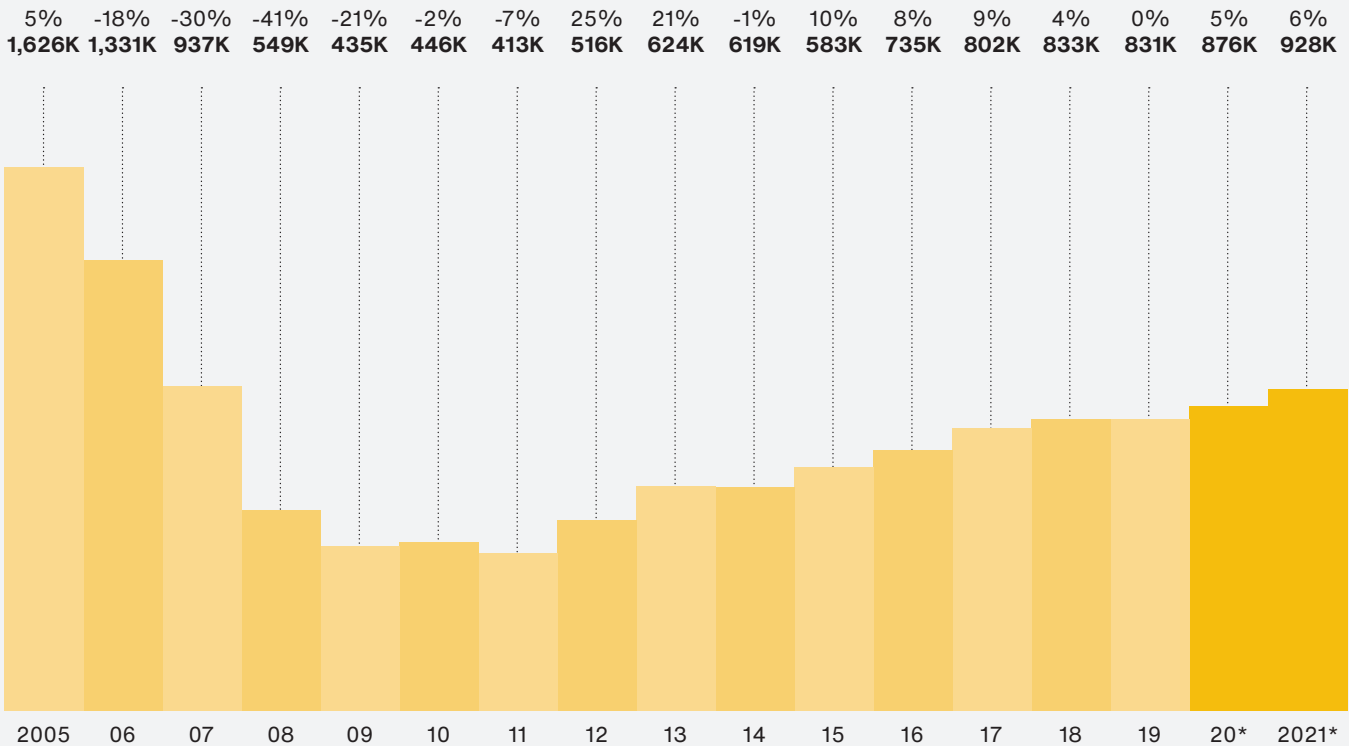
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# Construction

## U.S. Single-Family Housing Starts (thousands of units)

Single-family construction strong as rates tumble



Editor's note: The statistics and projections in this piece were as of November 2020.

\*Projected

Single-family housing is a rare bright spot for the U.S. construction market in 2020 and 2021. While overall construction starts will fall 14 percent to \$738 billion in 2020, with a modest recovery of 4 percent projected in 2021, the single-family market is headed for two more years of growth, according to the Dodge Construction Outlook 2021, from Dodge Data & Analytics.

Even in the face of a pandemic and

economic uncertainty, single-family construction is expected to increase 4 percent in spending in 2020, to \$239 billion, and 5 percent in volume, to 876,000 units, according to the Dodge Outlook. Those increases will continue in 2021, with 7 percent projected gains in spending and 6 percent in volume (\$254 billion and 928,000 units).

Despite the pandemic, single-family construction has been buoyed by

historically low mortgage rates and homebuyers' desires for additional space, according to Richard Branch, chief economist for Dodge, during the 2021 Dodge Outlook Conference, held Nov. 10, 2020. "The single-family market ... is one of three verticals we track that is expected to grow in 2020," says Branch (the others include warehouse construction, and steel and bridge construction). "It's

# Outlook

Single-family continues growth trend, despite double-digit losses in overall construction starts

By Katy Devlin, for Window + Door

clear that lower mortgage rates are overpowering any labor market or economic concerns.”

Although the single-family segment experienced a steep decline in the second quarter of 2020 due to more widespread shutdowns and stay-at-home orders, it quickly recovered as the economy opened back up during the summer months. “Over 1 million units broke ground in the third quarter,” Branch says, making it “the best quarter [for single-family starts] since 2006.”

The projected gains in 2020 and 2021 mark the continuation of a long road to recovery in single-family construction. The segment experienced a dramatic fall following its peak more than a decade ago, dropping from 1.6 million units in 2005 and 1.3 million units in 2006 to a low of 413,000 units in 2011. If the current forecasts are accurate, 2021 would return housing starts to their highest levels since 2007.

The news is dimmer for the other half of the residential equation: multifamily. Multifamily construction is projected to see double-digit declines in 2020, with starts falling an estimated 12 percent in 2020 to 496,000 units. Contraction will continue in 2021, with another 2 percent decline to 484,000 units.

“The multifamily market is exhibiting weakness due to issues in the labor market,” Branch says. “In the labor market downturn, which age group is hit the hardest? It’s the younger side of the demographics. That’s your traditional rental side of the market.”

## Market drivers

*Branch identifies several key drivers of growth in the single-family market.*

### Low mortgage rates

In response to a cratering U.S. GDP in the second quarter of 2020, the Federal Reserve cut federal funds to nearly zero, bringing mortgage interest rates below 3 percent. “Home sales posted a stunning comeback as rates tumbled,” Branch says.

### First-time buyers

“The number of first-time buyers is growing substantially—mainly the millennials age group,” says Branch. Just under 40 percent of millennials own homes, and the number has “risen nicely” over the previous year, he says.

### Demand for space

In the wake of COVID-19, many buyers are looking for more space. “The pandemic has caused people to rethink their living situation,” Branch says. “Perhaps they are looking for additional space outside of urban areas, especially for people who have the flexibility to work from home.”

## Barriers to growth

*Although demand for housing is high, supply side constraints could restrict growth. “We realize demand is up. But we think supply constraints put a cap on growth potential in 2021,” Branch says.*

### Lumber prices

Lumber prices spiked in 2020. Softwood lumber—structural lumber—was up 81.2 percent year-over-year, as of September 2020, while plywood was up 36.4 percent, according to Branch.

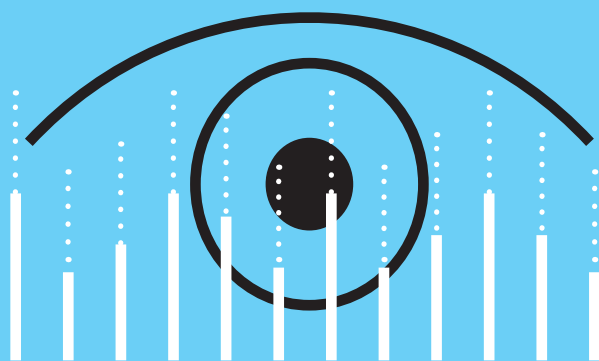
### Labor

“We know that there continues to be in the construction sector a stark availability of skilled and available labor, even despite the job losses we saw back in March and April,” Branch says.

### Land costs

“Land costs and zoning issues are making it harder to build single-family housing,” Branch says.





# State of the Market



Mergers and acquisitions, and market valuations in the fenestration market **By Andrew K. Petryk**

2020 was certainly no ordinary year. The COVID-19 shock reverberated across industries, producing lasting impacts on how companies conduct business. March and April proved to be extremely challenging in the building products market. Pandemic-related labor issues were further complicated

by resin shortages resulting from extreme weather events in the Gulf region. But the slowdown was only short-term, buoyed by a strengthening housing market, with demand accelerating in June of last year.

Public companies in the window and door industry reported strong

performance in the third quarter of 2020. Fortune Brands Home & Security, parent company of Therma-Tru, Larson and Fypon, among others, highlighted 13 percent growth in total sales and double-digit growth across all of its segments. Organic sales for PGT Innovations increased 7 percent in the quarter. PGTI CEO Jeffrey Jackson highlighted growing order flow and a more than doubling of total backlog from the prior year. Masonite International Corp. reported better-than-anticipated performance in its North American residential segment, which saw a 12 percent net sales increase. CEO Howard Carl Heckes highlighted gains in U.S. housing starts and a “robust” repair and remodel market as key drivers. Masonite achieved 6 percent growth in net sales overall for the quarter.

Fortune Brands CEO Nicholas Fink called the pandemic a “catalyst” that spurred a heightened consumer focus on the “critical importance of the home.” Fink points to favorable demographics, accelerating existing home sales, aged housing stock, and near all-time highs in home-equity levels as key drivers for a multiyear tailwind in the U.S. housing market.

## Mergers and acquisitions

The M&A market too saw only a temporary COVID slowdown. An important distinction in this crisis was lending appetite. The credit markets remained open for business. Lenders, although cautious, supported the cash flow needs of many businesses, as well as deal activity. Building products focused on home improvement was a bright spot in the deal market as homebound consumers shifted personal spending toward investments in home repairs, upgrades and renovations. Transaction multiples in the broader industrials market saw only a modest contraction earlier in the year, and valuations have essentially returned to pre-COVID levels.

## 2020 highlights

In December, Sunrise Windows & Doors was acquired by MI Windows and Doors, marking its second buy in under 15 months. MIWD purchased the Milgard Window and Door subsidiary from Masco Corp. in November 2019. The Michigan-based manufacturer of vinyl replacement windows furthers MIWD's strategy to expand its presence in currently underserved channels and end markets, according to a company statement.

Fortune Brands Home & Security completed the purchase of Larson Manufacturing Company in December. The \$660 million net purchase price valued the business at a multiple of 1.7x Revenue and 8.8x TTM EBITDA. The business is now part of the Outdoors & Security Segment, which Fortune Brands renamed in November to align with its strategic focus on the fast-growing outdoor living market. Larson manufactures storm, screen and security doors, and is the leading brand in the \$1 billion U.S. storm door market, which is largely driven by repair and remodel activity, according to a company statement. Larson operates manufacturing facilities in Iowa, Mississippi, North Carolina and South Carolina, and distribution centers in Minnesota and North Carolina.

In November, Great Day Improvements purchased Apex Energy Solutions, broadening its reach to 48 metropolitan markets. Apex offers sunrooms and screen rooms, windows and patio doors.

In February, PGT Innovations completed the \$92 million acquisition of NewSouth Window Solutions, a vertically integrated window and door supplier with a significant volume of sales in impact-resistant applications (72 percent of sales) to the residential (70 percent) replacement (65 percent) market in Florida (98 percent). With the acquisition, PGT Innovations gains entry to the direct-to-consumer channel and expands its reach in

the replacement market. In 2019, NewSouth was forecasted to reach \$82 to \$85 million in net sales.

In February, Cascade Windows acquired Amerimax Windows & Doors, a manufacturer of vinyl windows and doors, from OmniMax International. The transaction marks the first strategic add-on acquisition for Cascade since it was acquired by CenterOak Partners in 2016. With the acquisition, Cascade expands its manufacturing footprint with two facilities in Colorado and California. The combination is expected to significantly broaden its product offering in the retrofit and replacement market in the Western U.S.

In January, Advantage Capital acquired MPI Group, establishing a new growth platform for the financial sponsor. MPI manufactures custom steel doors and frames in the U.S. and internationally. The transaction marks an exit from a 10-year investment for Main Street Capital Corp.

## Looking ahead

Macro indicators point to industry growth in 2021. The Fed raised its real GDP growth forecast; the National Association of Home Builders is forecasting growth in the broader housing market; and increased spending on home improvements is driving strong demand in the window and door market.

The Harvard University Joint Center for Housing Studies is predicting an increase in spending on renovation and repair improvements in 2021, citing strengthening home prices and sales activity—including second home purchases—as key growth factors. The National Association of Realtors is projecting a 10 percent increase in existing home sales in 2021. Existing home sales reached a 15-year high in October 2020. Public window and door manufacturers are forecasting mid- to high- single-digit revenue growth in 2021. There is great visibility in window

and door production deep into the second and third quarter of 2021.

Investor sentiment reflects an optimistic growth outlook, illustrated in public market performance. The BGL Composite Index (JELD, DOOR, PGTI, FBHS) of window and door manufacturers is outperforming broader market indices, registering a 27.82 percent return in 2020, which compares to 15.29 percent for the S&P 500. Public valuations have increased, with the median EBITDA multiple for window and door manufacturers expanding to 10.0x in 3Q 2020 (8.7x in 2019)—up from 6.4x in 1Q 2020.

Strategic and financial buyers are showing strong interest in acquisitions, and capital is plentiful to support the transactions. The debt markets are broadly open and actively pursuing new deals. However, leverage and pricing are increasingly situation-specific as lenders continue to evaluate the long-term impacts of COVID. Deployment of a COVID vaccine and proposed tax reform are variables that could have significant implications on the transaction market.

BGL remains very active in building products, specifically the window and door market, and has a strong pipeline of related transactions heading into 2021. We expect M&A activity to accelerate further into the year and beyond. ■

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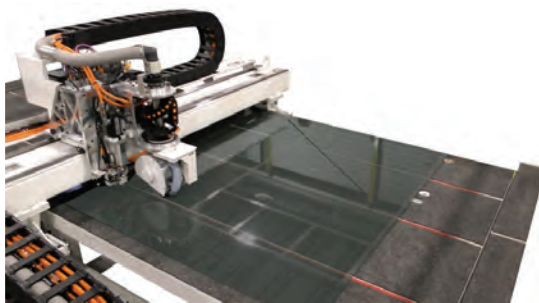
# Products



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01



02



03

## 01 / Chelsea Building Products

Chelsea Building Products introduced the 9600 Series Single Hung, designed for new construction and featuring the side load bottom sash. The series includes coordinating Picture Window, XO Horizontal Slider and XOX Horizontal Slider windows and uses a universal frame system for the single hung and horizontal slider. Other features included a welded 3-inch frame and sash; it can accept 3/4-inch insulated glass.

800/424-3573 | [CHELSEABUILDINGPRODUCTS.COM](http://CHELSEABUILDINGPRODUCTS.COM)

## 02 / GED Integrated Solutions

GED Integrated Solutions introduces its new glass cutting and edge deletion tables. The CleanCut 1700 Series includes the 1700 model (cutting) and the 1700-D model (cutting and deletion). It offers enhanced speed, updated technical features, increased throughput, and optimal energy conservation, according to the company. Using electro-pneumatic actuation to deliver precise amounts of pressure when and where needed for each glass stock in the inventory also helps reduce glass waste and improves scoring and deletion quality, the company reports.

330/963-5401 | [GEDUSA.COM](http://GEDUSA.COM)

## 03 / Roto North America

Roto North America's new X-DRIVE Evolve casement hardware line features the company's new contemporary line consisting of a cover cap, crank handle and lock handle, along with its heavy-duty hardware, which supports bigger and heavier windows. The corner drive system easily connects to and complements the lock bar series, the company reports. The entire lock system is driven by the contemporary lock handle, which is balanced with levers on both sides of the housing. The casement corner drive offers applications for casement and awning windows, achieving performance results of DP90 or higher.

860/526-4996 | [ROTONORTHAMERICA.COM](http://ROTONORTHAMERICA.COM)



# Product/Solution



Quanex Screens can produce up to 125,000 window screens and 22,500 door screens daily.

## Screens Outsourcing Solutions // **Quanex Building Products**

### Challenge

With the pace of current demand, manufacturers need to focus on output in key production areas. And, the labor shortage makes it imperative for experienced employees to help in the core areas of the business. Having to manage labor, inventory and devoting floor space to non-core fabrication efforts such as window screens production can drain resources and valued capacity. Solutions are needed to boost overall plant efficiency and provide needed product.

### Solution

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Make the best use of floor space, reduce labor and free up working capital to invest in other areas. High-quality extrusions and material selections from Quanex give manufacturers the power to build the right solutions to meet and exceed customers' expectations. Contact your sales representative or email [screensinfo@quanex.com](mailto:screensinfo@quanex.com).

building quality windows and doors without the headaches associated with screen production.

Quanex can build screens to exact specifications, package them to specific preferences, and align shipping and delivery to production schedules. Doing so eliminates raw material and finished goods inventory. It can save costs and floor space associated with screen fabrication equipment, allowing manufacturers to

re-direct capital toward higher-margin manufacturing activities.

Quanex has a complete range of screens that include roll-formed and extruded screen profiles, as well as custom items to fit any business needs. With locations throughout the U.S., there's a location nearby for timely shipping and service.

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01



03



02

## 01 / AmesburyTruth

The AmesburyTruth Max Casement hardware system is residentially rated for 48 by 96 inches, and commercially rated for 44- by 84-inch windows and can support and operate a sash up to 140 pounds. The system includes the company's heavy duty hinge and heavy duty encore operator, suitable for use with larger casement windows. Higher design pressures can be attained when combined with multi-point locking systems, Encore (for wood) or Maxim (for vinyl).

800/866-7884 | [AMESBURYTRUTH.COM](http://AMESBURYTRUTH.COM)

## 02 / Elumatec North America

The XL version of the DG 142 double mitre saw is designed for large series production involving 90- and 45-degree size cutting and is available in four cutting length variants: 3,000 mm, 4,500 mm, 6,000 mm and 7,500 mm. The double mitre saw is supplied as standard with saw blades and the E 111 digital display. Extras include a label printer, pulsed coolant system and software modules. 574/273-1790 | [ELUMATEC.COM](http://ELUMATEC.COM)

## 03 / American Renolit Corp.

Renolit EXOFOL FX Pitch Black window frame color features include color hold, surface emboss and scratch resistance. The three-layer construction comprises a PVDF top layer, middle layer of clear PMMA intended to protect pigments from UV radiation, and an acrylic base layer that uses solar shield technology. With a 20-year warranty, the company reports it will not chalk and is easy to clean.

856/467-4880 | [RENOLIT.COM](http://RENOLIT.COM)

# People ON THE MOVE



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**Delahunt**

*Paul Delahunt*, president of **Renewal by Andersen LLC**, retired. With his departure comes the promotion of several executive leaders. *Troy*

*Borrow* is promoted to president of Renewal by Andersen. Andersen also announced several personnel changes. *Chris Galvin* was promoted to president of the Andersen division. *Lance Whitacre* takes on the role of senior vice president of manufacturing and logistics. *Kelly Aronson* was promoted to

senior vice president and chief information officer. *Tracey Gibson* assumes the role of vice president and chief diversity officer.



**Troeger**

**Rehau** promoted *Thomas Troeger* from CMO to CEO of the Americas region. The regional executive board of Rehau Americas, with headquarters in Leesburg, Virginia, includes Troeger, CEO; Theo Haast, chief financial officer; and Terry Barnaby, chief operating officer.



**Klein**

**ODL Inc.** promoted *David Klein* from chief operating officer to president and COO. *Jeff Mulder* will continue his role as chairman and CEO.



**Kaufman**

As part of its recent rebranding initiative that brings **Palmer-Donavin** and Seal-Rite Door under one name, Palmer-Donavin named *Matt Kaufman* as



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the new vice president of sales. He will lead all regional sales managers, and regional sales managers will oversee representatives from both building materials and doors.



**Kragenbring**

**Sullivan Hardware** welcomes *Kyle Kragenbring* as vice president of sales and marketing. Kragenbring will be working to establish a national sales network to bring the business model of developing custom hardware solutions to customers across North America. *Tracy Lammers* also joined Sullivan Hardware as senior design engineer. His skill sets include coordinating with domestic and off-shore resources to ensure quality product.



**Lammers**



**Whitcomb**

**C.R. Laurence** named *Steve Whitcomb* as senior vice president of operations. Whitcomb brings more than 25 years of experience as a CEO and senior leader in the building products, distribution and construction products industries.



**McCord**

*Jim McCord* joined **Soft Tech** in December 2020 as business development manager, based out of Pennsylvania.

**The National Fenestration Rating Council** elected three new members of the board of directors for the 2021 term. Each board member serves a three-year term. The approved board members are *Maggie Kelley*, Southeast Energy Efficiency Alliance; *Mahabir Bhandari*, Oak Ridge National Laboratory; and *Neil Burning*, International Code Council.

**Masonite International Corp.** appointed *John H. Chuang*, co-founder and CEO of workforce solutions company Aquent, to the company's board of directors effective immediately. Chuang has been recognized for his entrepreneurial leadership and accomplishments, as Boston Business Journal's, "40 Under 40," Mass High Tech's "High Tech All-Star," Ernst and Young's "Entrepreneur of the Year," and Staffing Industry Analysts' "Staffing 100." Previously, Chuang served as president of the Massachusetts Staffing Association and as chairman of the board of directors of Angie's List. He has also served as a board member for the American Staffing Association and AIGA.

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# Market Data

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VIEW



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## Builder Confidence

83 (decrease of 3 pts)

Rising material costs and a coronavirus resurgence across much of the nation spurred a three-point drop in December. Even so, builder confidence in the market for newly built single-family homes remains strong. *Source: National Association of Home Builders/Wells Fargo Housing Market Index*

## Revenue Per Project

30–40%

of contractors report their average revenue per project increased in the past 12 months. *Source: The Farnsworth Group 2020 Q4 Contractor Index*

## Residential Starts

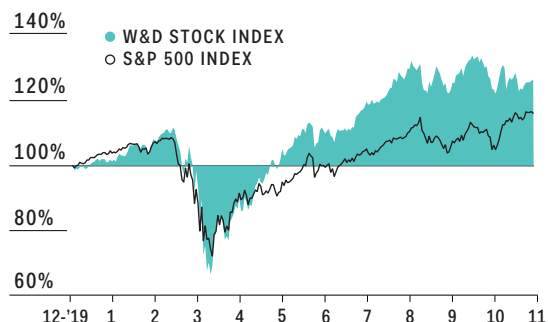
\$344.8b

Residential starts ended 2020 with a 4 percent gain, led by single-family start gains of 11 percent, offset by multifamily falling by 11 percent. *Source: Dodge Data & Analytics*

## ➔ Windows on Wall Street—Building Products Less Exposed to Trade Tension Performing Comparatively Well

Stock prices of publicly traded window and door companies and the broader market increased in November 2020. However, the gain in the W&D Index in November was only 1.9 percent compared to a 9.4 percent increase in the S&P 500. The underperformance was caused by news of the development of multiple potential COVID-19 vaccines that show a high degree of efficacy and that those vaccines would be distributed in 2021. The news caused a trade out of companies that have benefited from trends related to COVID-19 (e.g., new residential and residential repair and remodel) and into names that have underperformed, such as nonresidential construction names.

However, even with the November underperformance, the W&D Index increased by 26.7 percent in the past 12 months compared to a 16.3 percent gain for the S&P 500 during the same period. These gains, as well as recently announced mergers and acquisitions transactions, show that the fundamentals for residential repair and remodel and new construction activity continue to be strong and investors continue to expect growth and strong activity this year.



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