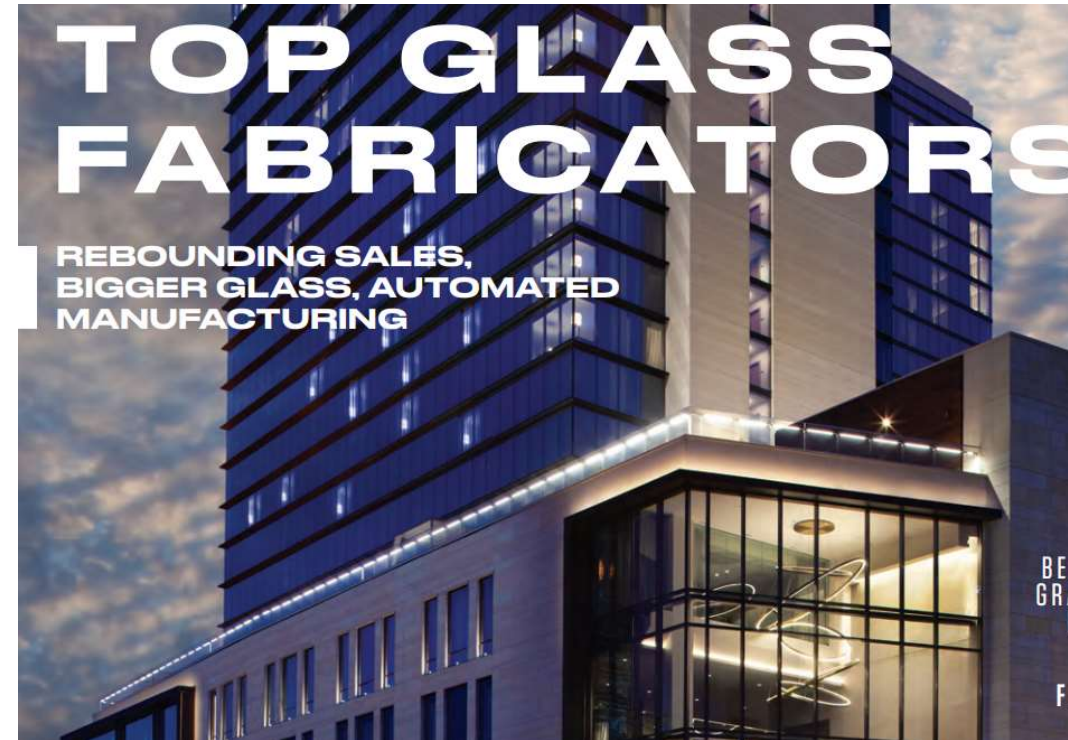




NGA GLASS CONFERENCE™

CHICAGO — JULY 18-20, 2022



TREND WATCH

FROM GLASS MAGAZINE'S TOP REPORTS

July 19, 2022

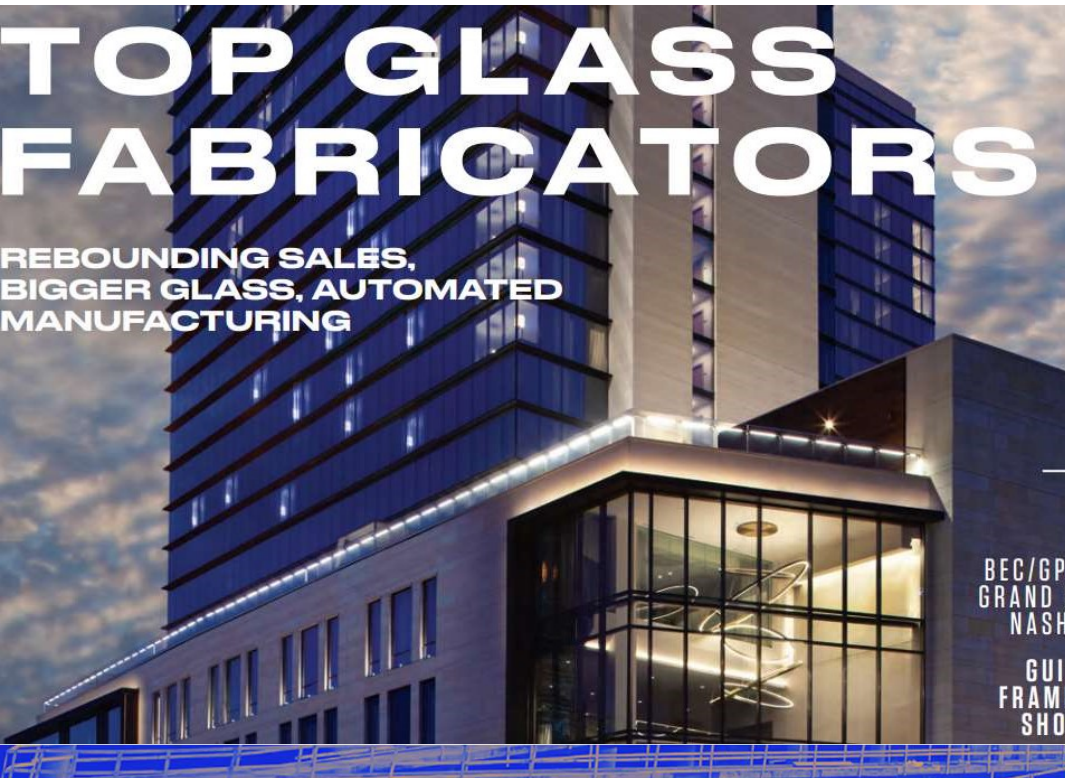


THE SURVEYS



- Celebrated its 30th anniversary
- First published in 1992
- Provides industry health check
- Consistent participation

THE SURVEYS



- In its 11th year
- Consistent participation
- Focuses on market challenges and product trends

SALES + MARKETS

TOP 50 GLAZIERS



- Combined sales topped \$3.8 billion (returning to pre-pandemic levels)
- 54% reported higher sales in 2021
- 26% reported lower sales
- Backlogs are stronger

SALES + MARKETS

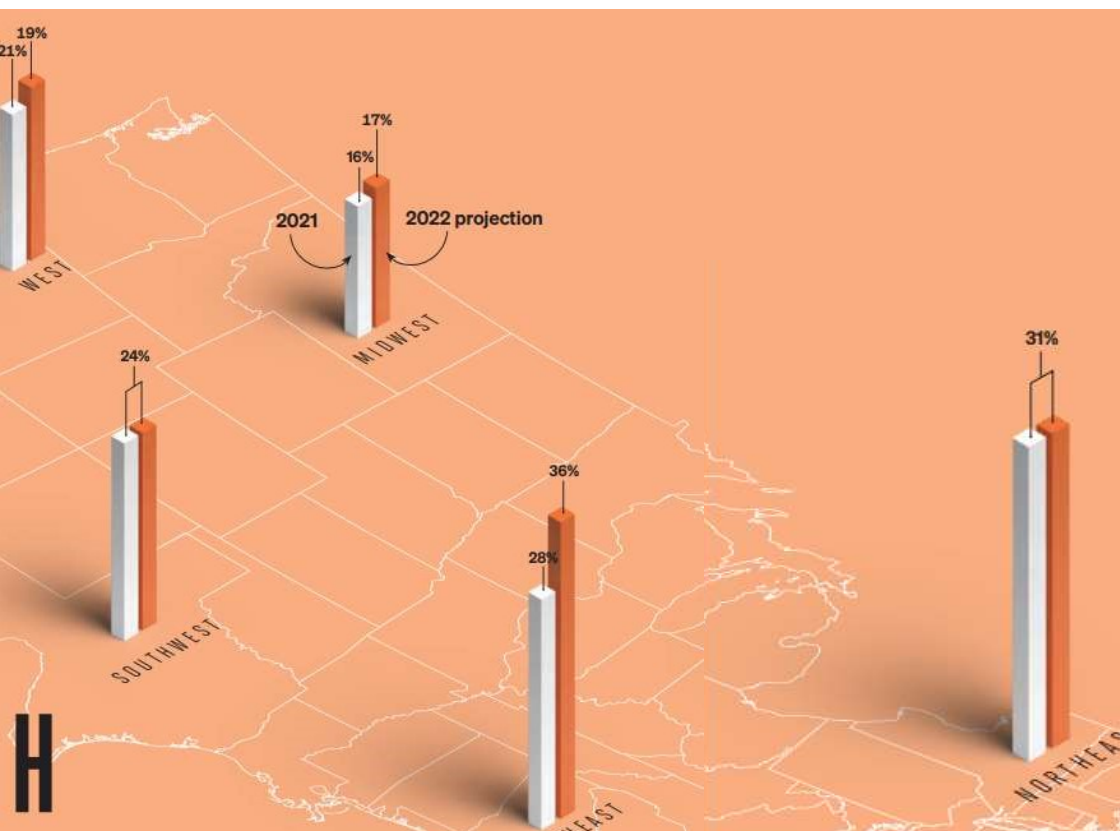
TOP FABRICATORS



- 63% reported higher sales in 2021
- 26% reported sales growth in 2020
- Only 11% reported a decline in sales 2021

SALES + MARKETS

TOP 50 GLAZIERS



- Glaziers eye Northeast and Southeast for growth

“Survey respondents attributed the growth to projects restarting after pandemic delays.”

SALES + MARKETS

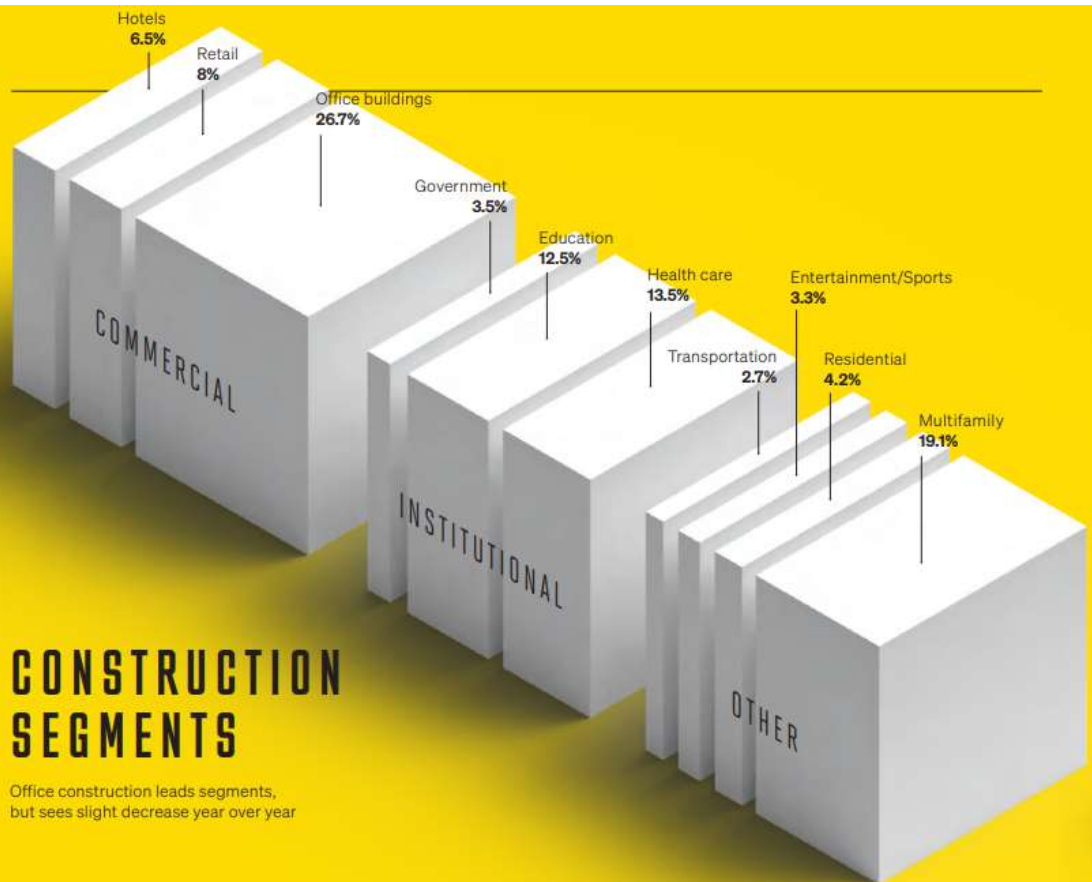
TOP FABRICATORS

- Southeast was viewed as the strongest U.S. geographic region in 2021.



PRODUCTS + PROJECTS

TOP 50 GLAZIERS



- Office construction still leads way
- However, segment accounted 26.7% of work in 2021, down from 31% in 2020 and 33% in 2019.

PRODUCTS + PROJECTS

TOP 50 GLAZIERS

- Trending: ballistic/security glazing, curved or bent glass, jumbo glass, bird-friendly glass
- 68% worked on a project with ballistic glazing, 63% with curved or bent glass; 59% with jumbo; 44% with bird-friendly



PRODUCTS + PROJECTS

TOP FABRICATORS



Fabricating capabilities

- 95% Tempered
- 82% Laminated
- 82% Decorative
- 70% Bird-friendly
- 68% Insulating
- 63% High performance
- 58% Jumbo
- 50% Protective
- 20% Curved
- 17% Dynamic
- 7% VIG

PRODUCTS + PROJECTS

TOP FABRICATORS



2021 Design Trends

- 71% More jumbo glass
- 59% Bird-friendly
- 53% Energy-efficient glass
- 47% Security glass/impact systems
- 35% Decorative glass

PRODUCTS + PROJECTS

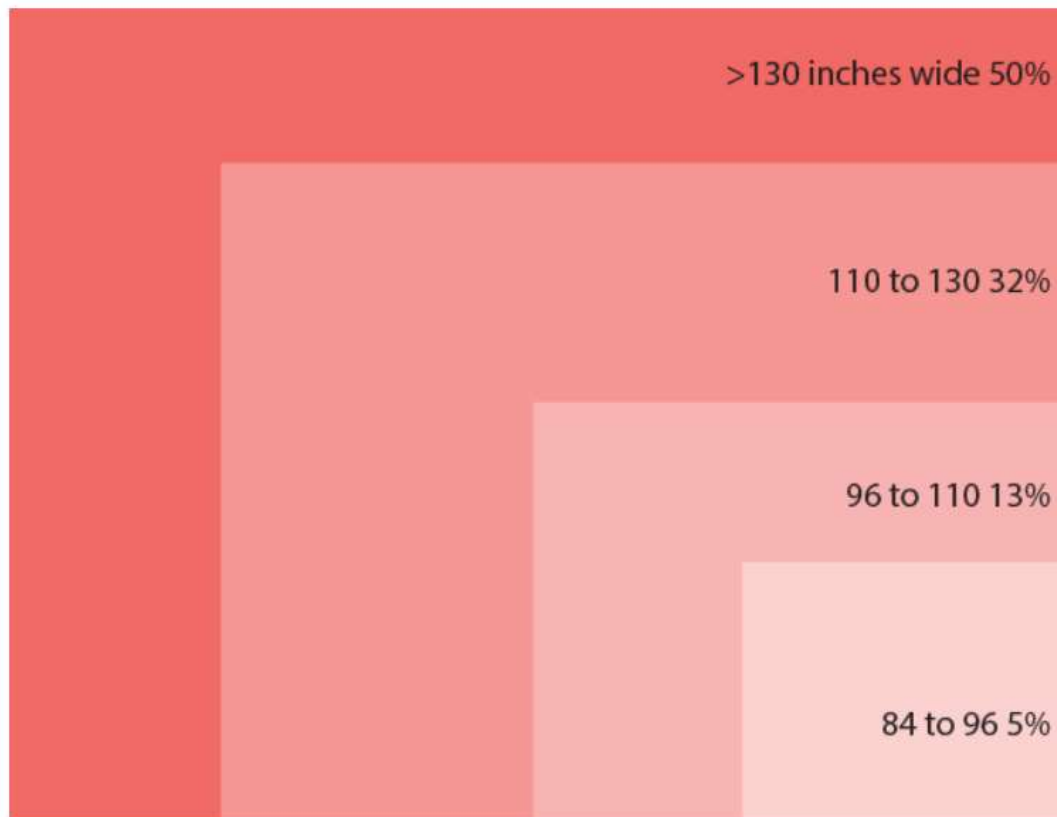
TOP FABRICATORS



- Companies continue to innovate products
- 41% said they launched new lines in 2021

PRODUCTS + PROJECTS

TOP FABRICATORS



What is jumbo?

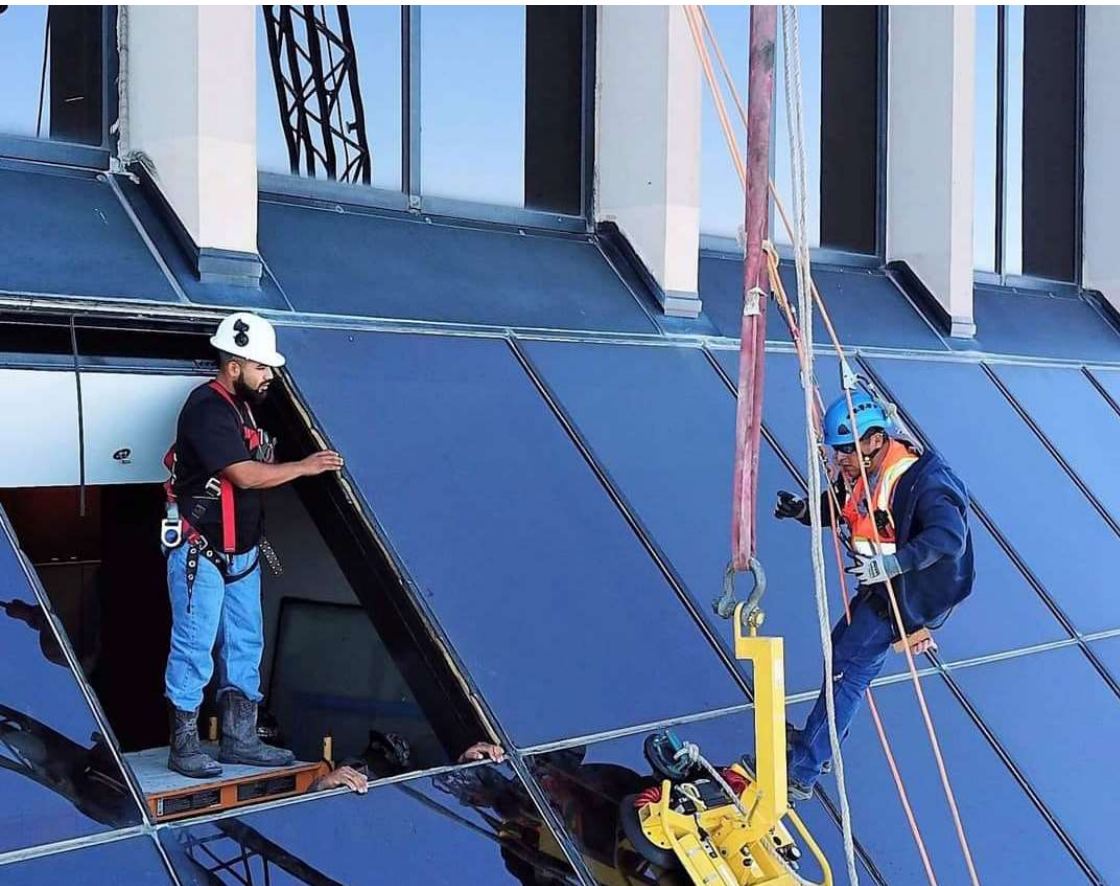
When asked to choose a size range they thought to be “jumbo,” half of respondents said glass that is more than 130 inches wide.

Size range considered jumbo glass (inches) by fabricators



INVESTMENTS

TOP 50 GLAZIERS

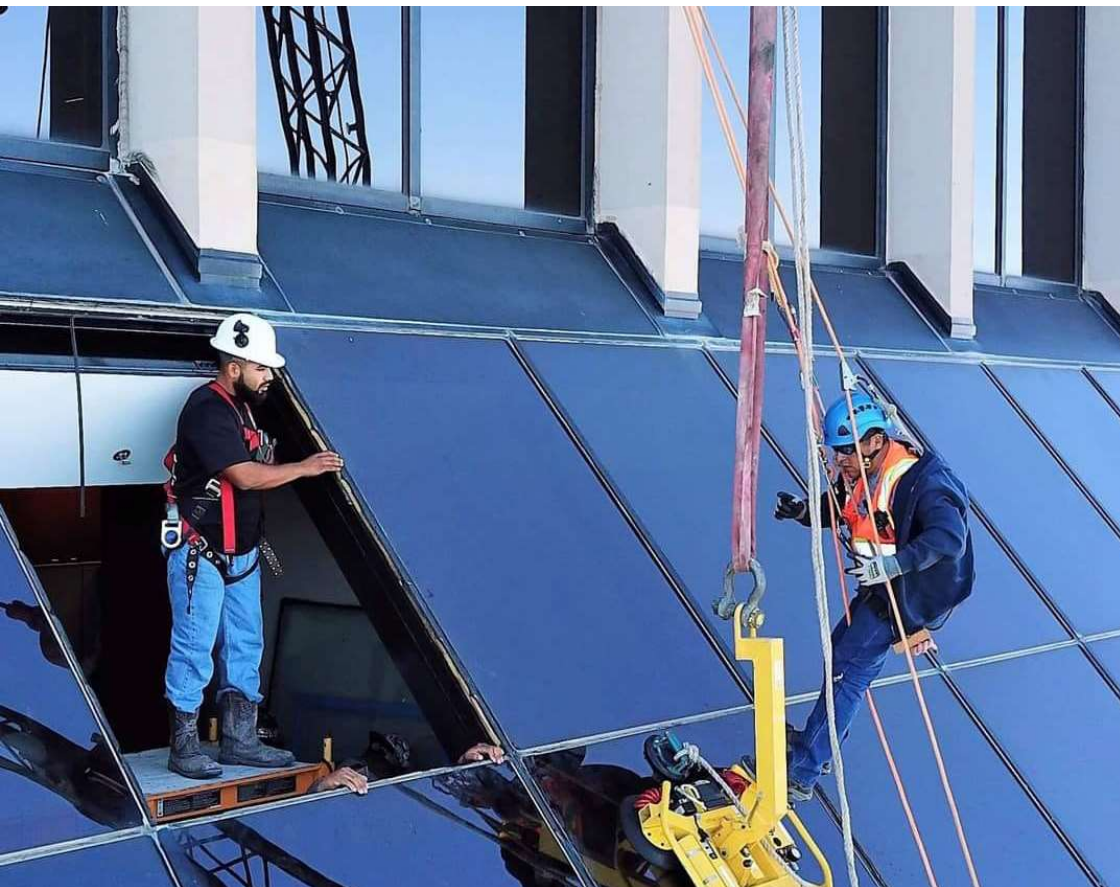


2021 Capital Acquisitions

- 69% *Fabrication equipment*
- 67% Software
- 65% Trucks
- 57% Handling equipment

INVESTMENTS

TOP 50 GLAZIERS



- 48% of glaziers manufacture curtain wall systems in-house.
- 17% are fabricating glass in-house, up from 9% in the 2021 survey.

INVESTMENTS TOP FABRICATORS

2021 FABRICATOR FACTS

68%

Automated some part of
manufacturing process

79%

Used more software for plant
optimization

89%

Added production capacity



INVESTMENTS TOP FABRICATORS



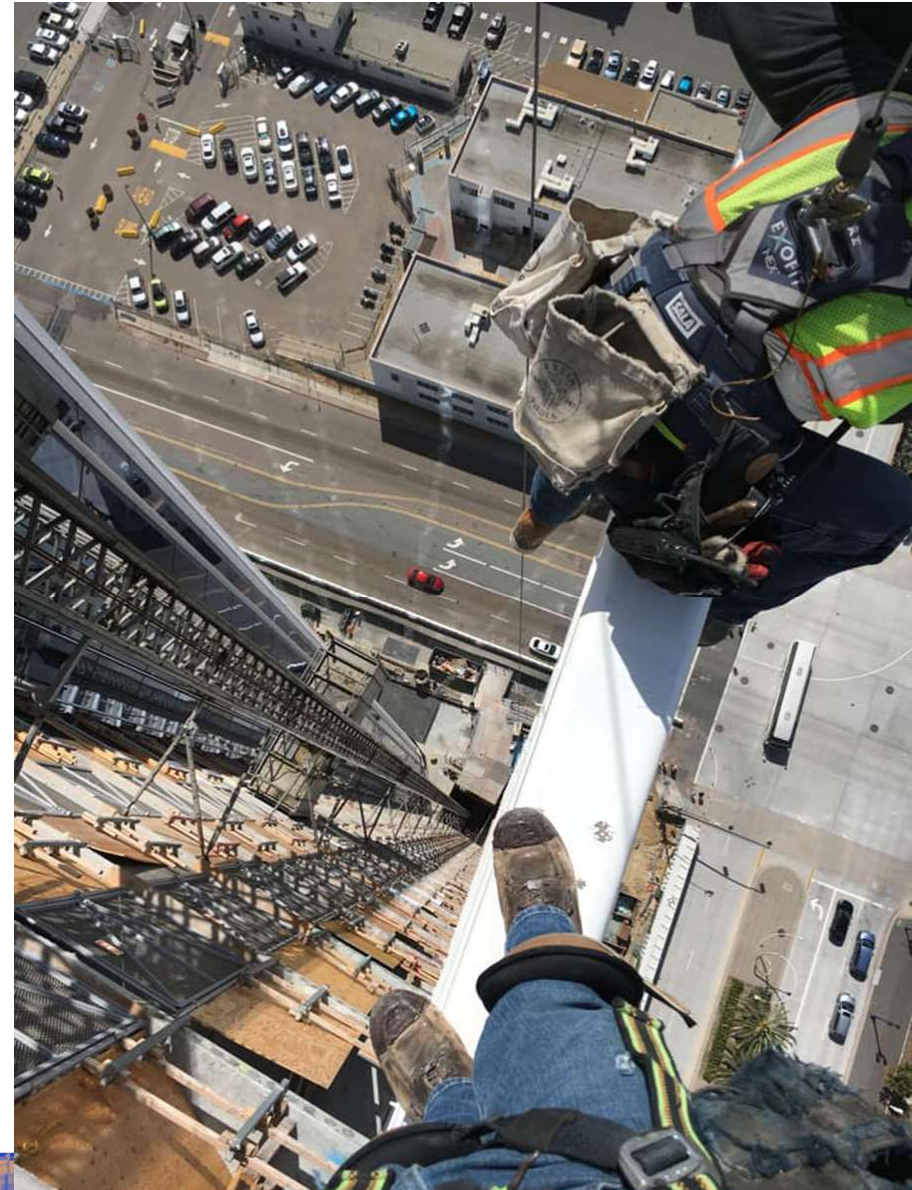
Expansion and Investment for 2022

- 71% Capital equipment
- 50% New product lines
- 24% Add locations
- 12% Make acquisitions

CHALLENGES

TOP 50 GLAZIERS

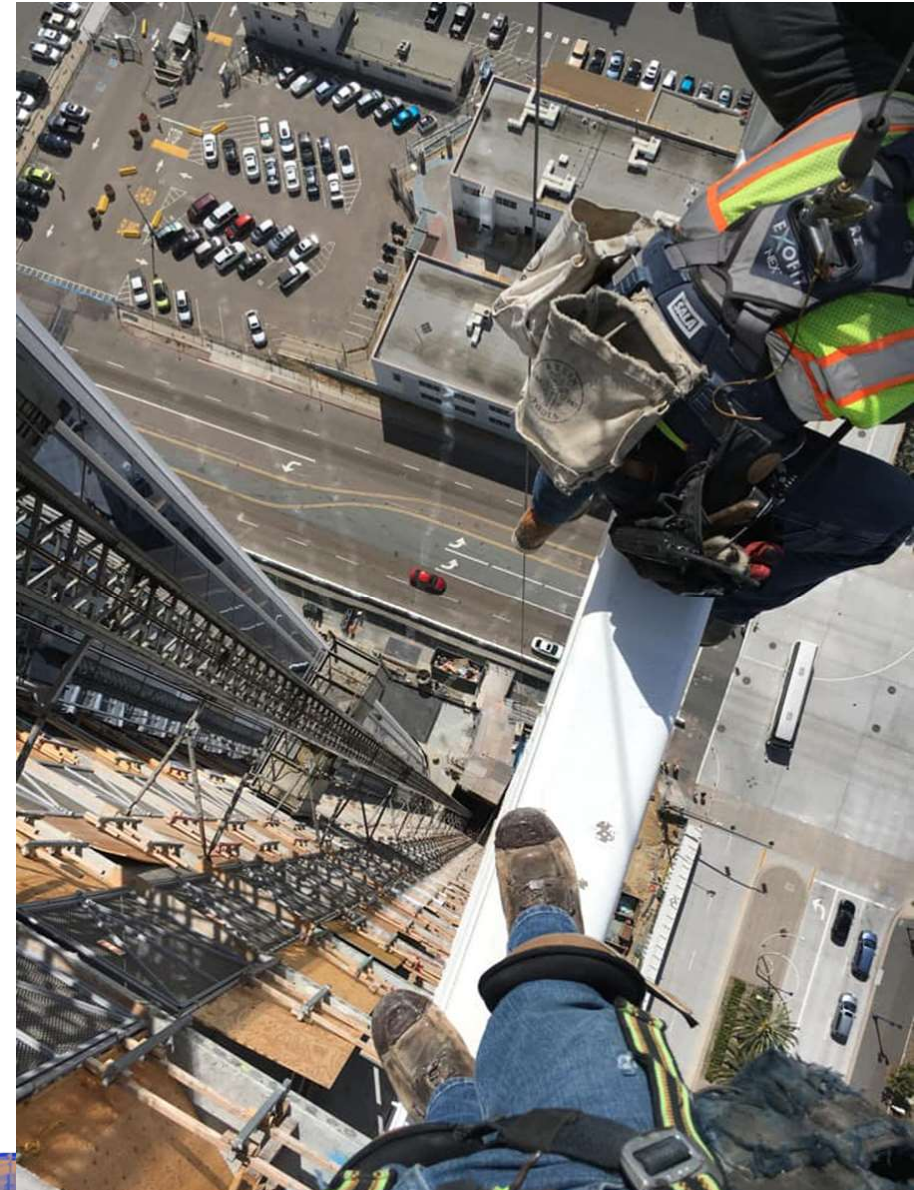
“Work may have returned. Stability has not.”



CHALLENGES

TOP 50 GLAZIERS

“Obtaining commodity materials such as aluminum and glass have exponentially gotten more difficult—lead times have increased and continue to do so. Projects are rapidly starting back up, so the demand is up for such items, and this poses challenges in locking in on inventory and cost.”



CHALLENGES

TOP 50 GLAZIERS



SHIFTING CHALLENGES

87%

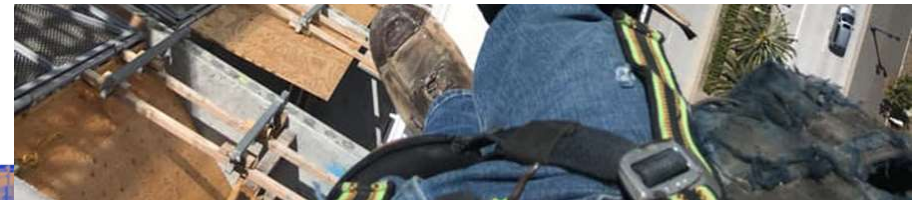
Supply chain

65%

Lead times

53%

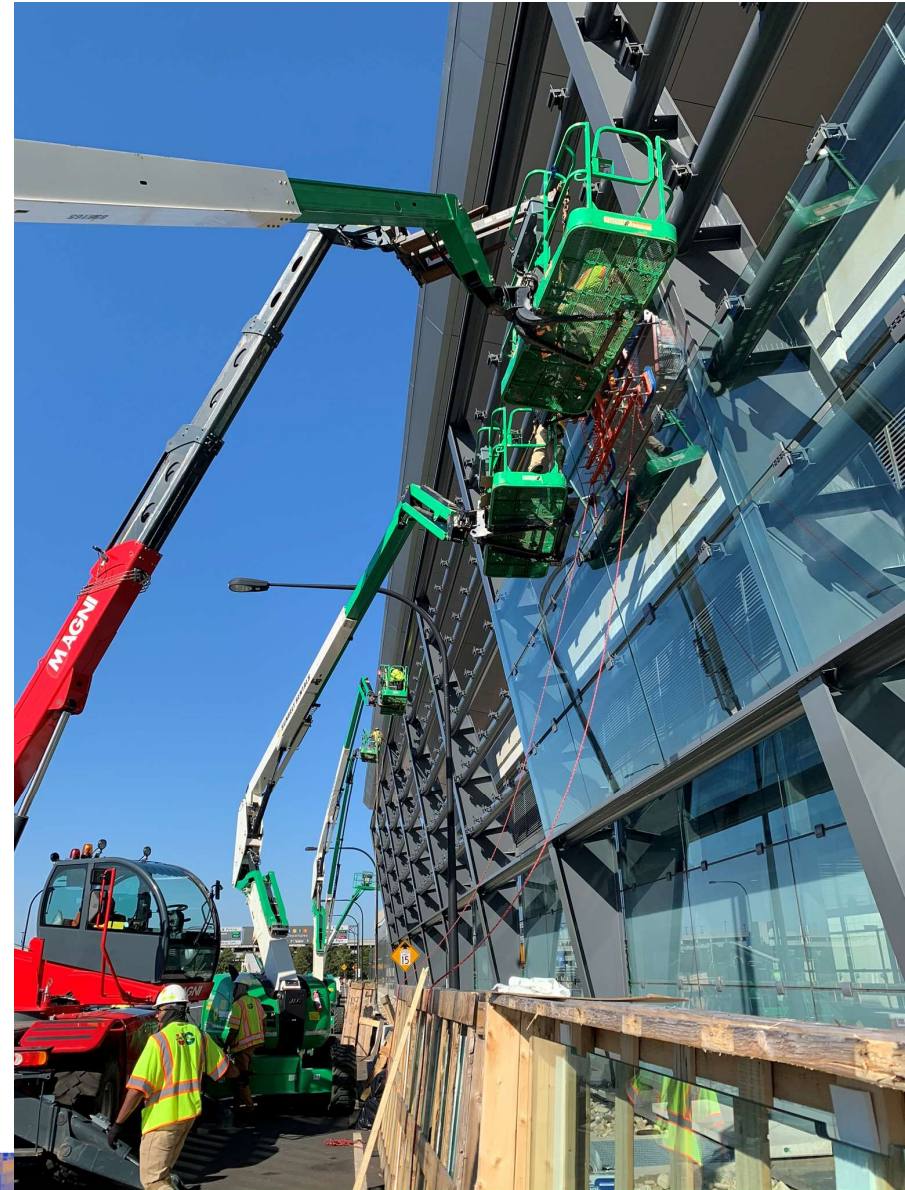
Harder to find workers in
2021 compared to 2020



CHALLENGES

TOP FABRICATORS

“Things that people don’t consider have been difficult to get, but they are necessary for the process—cork or synthetic tabs, or the labels that we put on our glass, for example.”

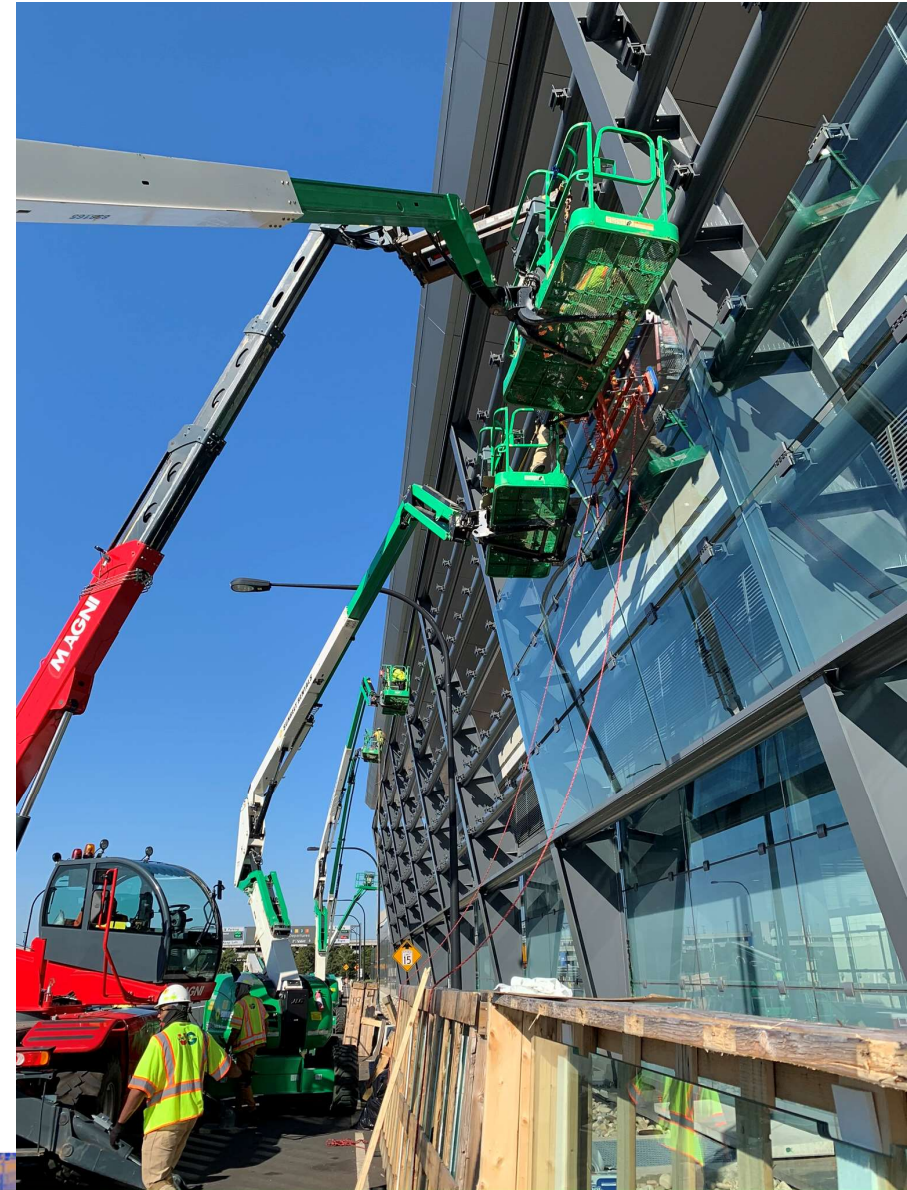


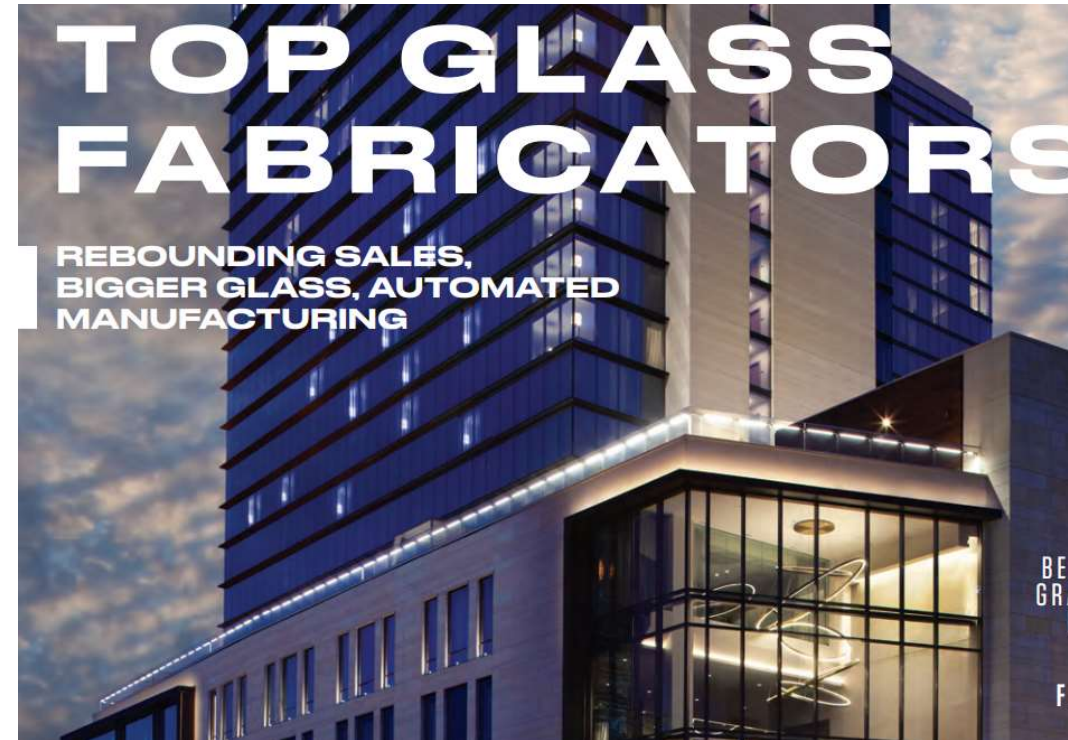
CHALLENGES

TOP FABRICATORS

Biggest Pain Point in Terms of Supply Chain

- 52% Logistics/trucking
- 24% Procuring raw glass
- 18% Getting hardware
- 6% Getting spacers





To participate in the 2023 surveys, email:
Norah Dick, associate editor, Glass Magazine
ndick@glass.org

