UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Fiscal Year Ended October 31, 2019

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number 1-33913

QUANEX BUILDING PRODUCTS CORPORATION
(Exact name of registrant as specified in its charter)

Delaware	**26-1561397**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

1800 West Loop South, Suite 1500, Houston, Texas 77027
(Address of principal executive offices and zip code)
Registrant's telephone number, including area code: (713) 961-4600

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.01 par value	**NX**	**New York Stock Exchange**

Securities registered pursuant to Section 12(g) of the Act: NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes x No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No x

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes x No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	x	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No x

The aggregate market value of the voting and non-voting common equity held by non-affiliates as of April 30, 2019, computed by reference to the closing price for the Common Stock on the New York Stock Exchange, Inc. on that date, was $544,032,919. Such calculation assumes only the registrant's officers and directors at such date were affiliates of the registrant.

At December 9, 2019 there were outstanding 33,019,430 shares of the registrant's Common Stock, $0.01 par value.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive Proxy Statement for its 2020 Annual Meeting of Stockholders to be filed with the Commission within 120 days of October 31, 2019 are incorporated herein by reference in Part III of this Annual Report on Form 10-K.

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Unless the context indicates otherwise, references to "Quanex", the "Company", "we", "us" and "our" refer to the consolidated business operations of Quanex Building Products Corporation and its subsidiaries.

Cautionary Note Regarding Forward-Looking Statements

Certain of the statements contained in this document and in documents incorporated by reference herein, including those made under the caption *"Management's Discussion and Analysis of Financial Condition and Results of Operations"* are "forward-looking" statements as defined under the Private Securities Litigation Reform Act of 1995. Generally, the words "expect," "believe," "intend," "estimate," "anticipate," "project," "will" and similar expressions identify forward-looking statements, which generally are not historical in nature. Forward looking statements are (1) all statements which address future operating performance, (2) events or developments that we expect or anticipate will occur in the future, including statements relating to volume, sales, operating income and earnings per share, and (3) statements expressing general outlook about future operating results. Forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from our historical experience and our current projections or expectations. As and when made, we believe that these forward-looking statements are reasonable. However, caution should be taken not to place undue reliance on any such forward-looking statements since such statements speak only as of the date when made and there can be no assurance that such forward-looking statements will occur. We are not obligated to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Factors that could cause actual results to differ materially from those expressed or implied by the forward-looking statements include, but are not limited to the following:

- changes in market conditions, particularly in the new home construction, and residential remodeling and replacement activity markets in the United States, United Kingdom, Germany and elsewhere;
- changes in non-pass-through raw material costs;
- changes in domestic and international economic conditions;
- changes in purchases by our principal customers;
- fluctuations in foreign currency exchange rates;
- our ability to maintain an effective system of internal controls;
- our ability to successfully implement our internal operating plans and acquisition strategies;
- our ability to successfully implement our plans with respect to information technology (IT) systems and processes;
- our ability to control costs and increase profitability;
- changes in environmental laws and regulations;
- changes in warranty obligations;
- changes in energy costs;
- changes in tax laws, and interpretations thereof;
- changes in interest rates;
- our ability to service our debt facilities and remain in good standing with our lenders;
- changes in the availability or applicability of our insurance coverage;
- our ability to maintain good relationships with our suppliers, subcontractors, and key customers; and
- the resolution of litigation and other legal proceedings.

Additional factors that could cause actual results to differ materially are discussed under "*Item 1A. Risk Factors*" included elsewhere in this Annual Report on Form 10-K.

About Third-Party Information

In this report, we rely on and refer to information regarding industry data obtained from market research, publicly available information, industry publications, United States government sources and other third parties. Although we believe this information is reliable, we cannot guarantee the accuracy or completeness of the information and have not independently verified it.

PART I

Item 1. *Business.*

Our Company

Quanex was incorporated in Delaware on December 12, 2007, as Quanex Building Products Corporation. We manufacture components for original equipment manufacturers (OEM) in the building products industry. These components can be categorized as window and door (fenestration) components and kitchen and bath cabinet components. Examples of fenestration components include (1) energy-efficient flexible insulating glass spacers, (2) extruded vinyl profiles, (3) window and door screens, and (4) precision-formed metal and wood products. In addition, we provide certain other non-fenestration components and products, which include solar panel sealants, trim moldings, vinyl decking, fencing, water retention barriers, and conservatory roof components. We use low-cost production processes and engineering expertise to provide our customers with specialized products for their specific window, door, and cabinet applications. We believe these capabilities provide us with unique competitive advantages. We serve a primary customer base in North America and the United Kingdom (U.K.), and also serve customers in international markets through our operating plants in the U.K. and Germany, as well as through sales and marketing efforts in other countries.

Our History

Our predecessor company, Quanex Corporation, was organized in Michigan in 1927 as Michigan Seamless Tube Company, and was later reincorporated in Delaware in 1968. In 1977, Michigan Seamless Tube Company changed its name to Quanex Corporation. On December 12, 2007, Quanex Building Products Corporation was incorporated as a wholly-owned subsidiary in the state of Delaware, in order to facilitate the separation of Quanex Corporation's vehicular products and building products businesses. This separation became effective on April 23, 2008, through a spin-off of the building products business to Quanex Corporation's then-existing shareholders. Immediately following the spin-off, our former parent company, consisting principally of the vehicular products business and all non-building products related corporate accounts, merged with a wholly-owned subsidiary of Gerdau S.A.

Since the spin-off in 2008, we have evolved our business by making investments in organic growth initiatives and taking a disciplined approach to new business and strategic acquisition opportunities, while disposing of non-core businesses.

Notable developments and transactions which occurred since the spin-off include the following:

- in March 2011, we acquired Edgetech, I.G. Inc. and its German subsidiary, which provided us with three manufacturing facilities, one each in the United States (U.S.), U.K. and Germany, that produce and market a full line of flexible insulating glass spacer systems for window and door customers in North America and abroad. This acquisition complemented our then existing insulating glass products business in the U.S.;
- in December 2012, we acquired substantially all of the assets of Alumco Inc. and its subsidiaries (Alumco), an aluminum screen manufacturer, which allowed us to expand the scope of our fenestration business to include screens for vinyl window and door manufacturers and to expand our geographic reach throughout the U.S.;
- in April 2014, we sold our interest in a limited liability company which held the net assets of our Nichols Aluminum business to a privately held company that provides aluminum rolled products and extrusions, aluminum recycling and specification aluminum alloy production;
- in June 2015, we acquired the outstanding ownership shares of Flamstead Holdings Limited, an extruder of vinyl lineal products and manufacturer of other plastic products incorporated and registered in England and Wales. Following a pre-sale reorganization and purchase, Flamstead Holdings Limited owned 100% of the ownership shares of the following subsidiaries: HL Plastics Limited, Vintage Windows Limited, Wegoma Machinery Sales Limited (renamed in 2016 as Avantek Machinery Company), and Liniar Limited (collectively referred to as “HLP”), each registered in England and Wales. This acquisition expanded our vinyl extrusion product offerings and grew our international presence in the global fenestration business;
- in November 2015, we completed the merger of QWMS, Inc., a Delaware corporation which was a newly-formed and wholly-owned Quanex subsidiary, and WII Holding, Inc. (WII), a Delaware corporation. Upon satisfaction or waiver of conditions set forth in the merger agreement, QWMS, Inc. merged with and into WII, and WII became our wholly-owned subsidiary, and, as a result, we acquired all the subsidiaries of WII (referred to collectively as Woodcraft). Woodcraft is a manufacturer of cabinet doors and other components for OEMs in the kitchen and bathroom cabinet industry, operating various plants in the U.S. and Mexico;

- in October 2016, we committed to a restructuring plan that included the closure of two vinyl extrusion plants in the U.S. and our kitchen and bathroom cabinet door plant in Guadalajara, Mexico; and
- in September 2017, we closed a kitchen and bathroom cabinet door plant in Lansing, Kansas, and, in October 2017, sold a wood-flooring business in Shawano, Wisconsin.

As of October 31, 2019, we operated 30 manufacturing facilities located in 17 states in the U.S., two facilities in the U.K., and one in Germany. These facilities feature efficient plant design and flexible manufacturing processes, enabling us to produce a wide variety of custom engineered products and components primarily focused on the window and door segment of the residential building products markets. We are able to maintain minimal levels of finished goods inventories at most locations because we typically manufacture products upon order to customer specifications. We believe the primary drivers of our operating results are residential remodeling and replacement activity and new home construction in the markets we serve.

Our Industry

Our business is largely North American based and dependent upon the spending and growth activity levels of our customers which include national and regional residential window, door and cabinet manufacturers. Our international presence includes vinyl extruded lineals for house systems to smaller customers primarily in the U.K., as well as our insulating glass business in the U.K. and Germany.

We use data related to housing starts and window shipments in the U.S., as published by or derived from third-party sources, to evaluate the fenestration market in these countries. We also use data related to cabinet demand in the U.S. to evaluate the residential cabinet market.

The following table presents calendar-year annual housing starts information as of October 2019 the National Association of Home Builders (NAHB) (units in thousands):

	Single-family Units		Multi-family Units		Manufactured Units		
Period	**Units**	**% Change**	**Units**	**% Change**	**Units**	**% Change**	**Total Units**
Annual Data							
2013	620	N/A	308	N/A	60	N/A	988
2014	647	4%	355	15%	64	7%	1,066
2015	713	10%	394	11%	71	11%	1,178
2016	786	10%	392	(1)%	81	14%	1,259
2017	852	8%	357	(9)%	93	15%	1,302
2018	873	2%	377	6%	97	4%	1,347
Annual Data - Forecast							
2019	854	(2)%	383	2%	97	—%	1,334
2020	873	2%	385	1%	111	14%	1,369
2021	893	2%	399	4%	115	4%	1,407

Ducker Worldwide LLC, a consulting and research firm, indicated that window shipments in the residential remodeling and replacement (R&R) market are expected to decline slightly during the calendar year ended 2019, increase 2% during 2020 and increase 3% during 2021. Derived from reports published by Ducker, the overall decline in window shipments for the trailing twelve months ended September 30, 2019 was 1.6%. During this period, R&R activity and new construction decreased 0.9% and 2.5%, respectively.

According to Catalina Research, a consulting and research firm, total U.S. residential cabinet demand is expected to increase through 2020. Projections from Catalina Research as of September 2019 include growth rates for the stock, semi-custom (the cabinet market we primarily operate in) and custom cabinet markets, which are presented in the table below:

Cabinet Market Annual Growth Rates

Period	Stock	Semi-Custom	Custom	Overall
Annual Data				
2012	(4.9)%	10.0%	5.3%	1.7%
2013	28.9%	5.7%	6.3%	17.0%
2014	16.6%	(15.6)%	(10.0)%	2.3%
2015	16.7%	10.1%	21.6%	15.4%
2016	5.3%	1.0%	8.1%	4.4%
2017	7.3%	5.7%	(0.3)%	6.0%
Annual Data - Forecast				
2018	7.9%	(1.6)%	3.8%	4.9%
2019	4.4%	(2.6)%	4.6%	2.7%
2020	4.2%	0.5%	3.8%	3.3%

We have noted the following trends which we believe affect our industry:

- the recent growth in the housing market over the past several years has been predominately in new construction which has outpaced the growth in the residential remodeling and replacement sector;
- the recovery of the housing market has slowed due primarily to the declining growth of multi-family units;
- programs in the U.S. such as Energy Star have improved customer awareness of the technological advances in window and door energy-efficiency, but the government has been reluctant to enforce stricter energy standards;
- foreign currency rates in the U.K. and other European nations have changed significantly relative to the United States Dollar due in part to Brexit in the U.K., as well as other international unrest or uncertainties;
- commodity prices have fluctuated in recent years, and to the extent we cannot pass this cost to our customers, this impacts the cost of critical materials used in our manufacturing processes such as resin, which affects margins related to our vinyl extrusion products; oil products such as butyl, which affects our insulating glass products; and aluminum, wood and silicone products used by our other businesses; and
- higher energy efficiency standards in Europe should favorably impact sales of our insulating glass spacer products in the short- to mid-term.

Strategy

Our vision is to be the preferred supplier to our customers in each market we serve. Our strategy to achieve this vision includes the following:

- focus on organic growth with our current customer base and expand our market share with national and regional customers by providing: (1) a quality product; (2) a high level of customer service; (3) product choices at different price points; and (4) new products or enhancements to existing product offerings. These enhancements may include higher thermal efficiency, enhanced functionality, improved weatherability, better appearance and best-in-class quality for our fenestration and cabinet door products;
- realize improved profitability in our manufacturing processes through: (1) ongoing preventive maintenance programs; (2) better utilization of our capacity by focusing on operational efficiencies and reducing scrap; (3) marketing our value added products; and (4) focusing on employee safety;
- offer logistic solutions that provide our customers with just-in-time service which can reduce their processing costs;

- pursue targeted business acquisitions that allow us to expand our existing footprint, enhance our existing product offerings, acquire complementary technology, enhance our leadership position within the markets we serve, and expand into adjacent markets or service lines; and
- exit unprofitable service lines or customer relationships.

Our Strengths

We believe our strengths include design expertise, new technology development capability, high quality manufacturing, just-in-time delivery systems, customer service, the ability to generate unique patented products and participation in industry advocacy.

Raw Materials and Supplies

We purchase a diverse range of raw materials, which include PVC resin, epoxy resin, butyl, titanium dioxide (TiO_2) desiccant powder, silicone and EPDM rubber compounds, coated and uncoated aluminum sheet and wood (both hardwood and softwood). These raw materials are generally available from several suppliers at market prices. We may enter into sole sourcing arrangements with our suppliers from time to time if we believe we can realize beneficial savings, but only after we have determined that the vendor can reliably supply our raw material requirements. These sole sourcing arrangements generally have termination clauses to protect us if a sole sourced vendor could not provide raw materials timely and on economically feasible terms. We believe there are other qualified suppliers from which we could purchase raw materials and supplies.

Competition

Our products are sold under highly competitive conditions. We compete with a number of companies, some of which have greater financial resources than us. We believe the primary competitive factors in the markets we serve include price, product quality, delivery and the ability to manufacture to customer specifications. The volume of engineered building products that we manufacture represents a small percentage of annual domestic consumption. Similarly, our subsidiaries in the U.K. compete against some larger vinyl producers and smaller window manufacturers. For our kitchen and bathroom cabinet door business, we believe we are the largest supplier to OEMs in the U.S., but we compete with other national and regional businesses, including OEMs who are vertically integrated.

We compete against a range of small and mid-size metal, vinyl and wood products suppliers, wood molding companies, and the in-house operations of customers who have vertically integrated fenestration operations. We also compete against insulating glass (IG) spacer manufacturing firms. IG systems are used in numerous end markets including residential housing, commercial construction, appliances and transportation vehicles, but we primarily serve the residential housing market. Competition is largely based on regional presence, custom engineering, product development, quality, service and price. Primary competitors include, but are not limited to, Veka, Deceuninck, Energi, Vision Extrusions, GED Integrated Solutions, Technoform, Swiss Spacer, Thermix, RiteScreen, Allmetal, and Endura. Competitors in the vinyl extrusion business in the U.K. include Epwin, Veka, Synseal, Eurocell and others. Primary competitors in the cabinet door business in the U.S. include Conestoga, Decore-ative Specialties, Northern Contours and others.

Sales, Marketing, and Distribution

We sell our products to customers in various countries. Therefore, we have sales representatives whose territories essentially cover the U.S., Canada, Europe, and to a lesser extent, the Middle East, Latin and South America, Australia, New Zealand and Asia. Our sales force is tasked with selling and marketing our complete range of components, products and systems to national and regional OEMs through a direct sales force in North America and Europe, supplemented with the limited use of distributors and independent sales agents.

Customers

Certain of our businesses or product lines are largely dependent on a relatively few large customers. See Note 1, "Nature of Operations, Basis of Presentation and Significant Accounting Policies - Concentration of Credit Risk and Allowance for Doubtful Accounts," of the accompanying financial statements in this Annual Report on Form 10-K for related disclosure.

Sales Backlog

Given the short lead times involved in our business, we have a relatively low backlog, approximately $25 million as of October 31, 2019. The criteria for revenue recognition has not been met with regard to sales backlog, and therefore, we have not recorded revenue or deferred revenue pursuant to these sales orders. If these sales orders result in a sale, we will record revenue during fiscal 2020 in accordance with our revenue recognition accounting policy.

Seasonal Nature of Business

Our business is impacted by seasonality. We have historically experienced lower sales for our products during the first half of our fiscal year as winter weather reduces homebuilding and home improvement activity. Our operating income tends to decline during this period of lower sales because a higher percentage of our operating expenses are fixed overhead. We typically experience more favorable results in the third and fourth quarters of the fiscal year. Our exposure to seasonality was somewhat tempered with the entry into the kitchen and bathroom cabinet door industry, which is focused "inside the house" and less susceptible to inclement weather. Expenses for labor and other costs are generally semi-variable throughout the year.

Working Capital

We fund operations through a combination of available cash and cash equivalents, cash flow generated from our operations, and borrowings from our revolving credit facility. We extend credit to our domestic customers in the ordinary course of business generally for a term of 30 days, while the terms for our international customers vary from cash advances to 90 days. Inventories of raw materials are carried in quantities deemed necessary to ensure a smooth production process, some of which are governed by consignment agreements with suppliers. We strive to maintain minimal finished goods inventories, while ensuring an adequate supply on hand to service customer needs.

Service Marks, Trademarks, Trade Names, and Patents

Our federally registered trademarks or service marks include QUANEX, QUANEX and design, "Q" design, TRUSEAL TECHNOLOGIES, DURASEAL, DURALITE, SOLARGAIN EDGE TAPE, ENVIROSEALED WINDOWS, EDGETHERM, EDGETECH, ECOBLEND, SUPER SPACER, TSS, TRUE WARM, E & Design, QUIET EDGE, HEALTH SMART WINDOWS, ENERGY WISE WINDOWS, DESI-ROPE, 360 and design, INTELLICLIP, SUSTAINAVIEW, MIKRON, MIKRONWOOD, MIKRONBLEND, MIKRON BLEND and design, ENERGYCORE, FUSION INSULATED SYSTEM, AIRCELL, SUPERCOAT, SUPERCAP, STYLELOCK, STYLELOCK and design, K2 MIKRON and design, HOMESHIELD, HOMESHIELD and design, STORM SEAL, and TENON. We consider the following marks, design marks and associated trade names to be valuable in the conduct of our business: HOMESHIELD, TRUSEAL TECHNOLOGIES, EDGETECH, MIKRON, WOODCRAFT and QUANEX. Through HLP, we hold a number of registered designs, patents and trademarks registered in the U.K., which include: MODLOK, LINIAR, SUPERCUT, and various other trademarks and patents which are pending approval. Generally, our business does not depend on patent protection, but patents obtained with regard to our vinyl extrusion products and processes, fabricated metal components and IG spacer products business remain a valuable competitive advantage over other building products manufacturers. We obtain patent protection for various dies and other tooling created in connection with the production of customer-specific vinyl profile designs and vinyl extrusions. Our fabricated metal components business obtains patent protection for its thresholds. Our window sealant business unit relies on patents to protect the design of several of its window spacer products. Although we hold numerous patents, the proprietary process technology that has been developed is also considered a source of competitive advantage.

Environmental and Employee Safety Matters

We are subject to extensive laws and regulations concerning worker safety, the discharge of materials into the environment and the remediation of chemical contamination. To satisfy such requirements, we must make capital and other expenditures on an on-going basis. The cost of worker safety and environmental matters has not had a material adverse effect on our operations or financial condition in the past, and we are not currently aware of any existing conditions that we believe are likely to have a material adverse effect on our operations, financial condition, or cash flows.

Safety and Environmental Policies

For many years, we have maintained compliance policies that are designed to help protect our workforce, to identify and reduce the potential for job-related accidents, and to minimize liabilities and other financial impacts related to worker safety and environmental issues. These policies include extensive employee training and education, as well as internal policies embodied in our Code of Business Conduct and Ethics. We have a Director of Environmental, Health and Safety and maintain a company-wide committee, comprising leaders from across the organization, which meets regularly to discuss safety issues and drive safety improvements. We plan to continue to focus on safety in particular as a core strategy to improve our operational efficiency and financial performance.

Remediation

Under applicable state and federal laws, we may be responsible for, among other things, all or part of the costs required to remove or remediate wastes or hazardous substances at locations we, or our predecessors, have owned or operated. From time to time, we also have been alleged to be liable for all or part of the costs incurred to clean up third-party sites where there might have been an alleged improper disposal of hazardous substances. At present, we are not involved in any such matters.

Environmental Compliance Costs

From time to time, we incur routine expenses and capital expenditures associated with compliance with existing environmental regulations, including control of air emissions and water discharges, and plant decommissioning costs. We have not incurred any material expenses or capital expenditures related to environmental matters during the past three fiscal years, and do not expect to incur a material amount of such costs in fiscal 2020. While we will continue to have future expenditures related to environmental matters, any such amounts are impossible to reasonably estimate at this time. Based upon our experience to date, we do not believe that our compliance with environmental requirements will have a material adverse effect on our operations, financial condition or cash flows.

Employees

As of October 31, 2019, we had 3,632 employees. Of these employees, 2,988 were domiciled in the U.S., 558 in the U.K., and 86 in Germany.

For Investors

We periodically file or furnish documents to the Securities and Exchange Commission (SEC), including our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other reports as required. These reports are also available free of charge from the Investor Relations Section of our website at http://www.quanex.com, as soon as reasonably practicable after we file such material or furnish it to the SEC. As permitted by the SEC rules, we post relevant information on our website. However, the information contained on our website is not incorporated by reference into this Annual Report on Form 10-K and should not be considered part of this report.

Item 1A. *Risk Factors.*

The following risk factors, along with other information contained elsewhere in this Annual Report on Form 10-K and our other public filings with the SEC, should be carefully considered before deciding to invest in our securities. Additional risks and uncertainties that are not currently known to us or that we may view as immaterial could impair our business if such risks were to develop into actual events. Therefore, any of these risks could have a material adverse effect on our financial condition, results of operations and cash flows. This listing of risk factors is not all-inclusive and is not necessarily presented in order of importance.

Industry Risks

Any sustained decline in residential remodeling, replacement activities, or housing starts could have a material adverse effect on our business, financial condition and results of operations.

The primary drivers of our business are residential remodeling, replacement activities and housing starts. The home building and residential construction industry is cyclical and seasonal, and product demand is based on numerous factors such as interest rates, general economic conditions, consumer confidence and other factors beyond our control. Declines in the number of housing starts and remodeling expenditures resulting from such factors could have a material adverse effect on our business, results of operations and financial condition.

If the availability of critical raw materials were to become scarce or if the price of these items were to increase significantly, we might not be able to timely produce products for our customers or maintain our profit levels.

We purchase from outside sources significant amounts of raw materials, such as butyl, titanium dioxide, vinyl resin, aluminum, steel, silicone and wood products for use in our manufacturing facilities. Because we do not have long-term contracts for the supply of many of our raw materials, their availability and price are subject to market fluctuation and may be subject to curtailment or change. Any of these factors could affect our ability to timely and cost-effectively manufacture products for our customers.

Compliance with, or liabilities under, existing or future environmental laws and regulations could significantly increase our costs of doing business.

We are subject to extensive federal, state and local laws and regulations concerning the discharge of materials into the environment and the prevention and/or remediation of chemical contamination. To satisfy such requirements, we must make capital and other expenditures on an on-going basis. Future expenditures relating to environmental matters will necessarily depend upon whether such regulations and future governmental decisions or interpretations of these regulations apply to us and our facilities. It is likely that we will be subject to increasingly stringent environmental standards, and we will incur additional expenditures to comply with such standards. Furthermore, if we fail to comply with applicable environmental regulations, we could be subject to substantial fines or penalties and to civil and criminal liability.

Our goodwill and indefinite-lived intangible assets may become impaired and could result in a charge to income.

We evaluate our goodwill and indefinite-lived intangible assets at least annually to determine whether we must test for impairment. In making this assessment, we must use judgment to make estimates of future operating results and appropriate residual values. Actual future operating results and residual values associated with our operations could differ significantly from these estimates, which may result in an impairment charge in a future period, resulting in a decrease in net income from operations in the year of the impairment, as well as a decline in our recorded net worth. We recorded goodwill impairment charges in 2019 and 2016 and could record future impairment charges. Goodwill totaled $145.6 million at October 31, 2019. The results of goodwill impairment testing are described in the accompanying notes to the audited financial statements, Note 5, "Goodwill and Intangible Assets" included elsewhere in this Annual Report on Form 10-K.

We may not be able to protect our intellectual property.

We rely on a combination of copyright, patent, trade secrets, confidentiality procedures and contractual commitments to protect our proprietary information. However, these measures can only provide limited protection and unauthorized third parties may try to copy or reverse engineer portions of our products or may otherwise obtain and use our intellectual property. If we cannot protect our proprietary information against unauthorized use, we may not be able to retain a perceived competitive advantage and we may lose sales to the infringing sellers, which may have a material adverse effect on our financial condition, results of operations and cash flows.

We are subject to various existing and contemplated laws, regulations and government initiatives that may materially impact the demand for our products, our profitability or our costs of doing business.

Our business may be materially impacted by various governmental laws, regulations and initiatives that may artificially create, deflate, accelerate, or decelerate consumer demand for our products. For example, when the government issues tax credits designed to encourage increased homebuilding or energy-efficient window purchases, the credits may create a spike in demand that would not otherwise have occurred and our production capabilities may not be able to keep pace, which could materially impact our profitability. Likewise, when such laws, regulations or initiatives expire, our business may experience a material loss in sales volume or an increase in production costs as a result of the decline in consumer demand.

Our operations outside the U.S. require us to comply with a number of U.S. and international anti-corruption regulations, violations of which could have a material adverse effect on our consolidated results of operations and consolidated financial condition.

Our international operations require us to comply with a number of U.S. and international regulations, including the Foreign Corrupt Practices Act (FCPA) and the United Kingdom Bribery Act 2010. While we have implemented appropriate training and compliance programs to prevent violations of these anti-bribery regulations, we cannot ensure that our policies, procedures and programs will always protect us from reckless or criminal acts committed by our employees or agents. Allegations of violations of applicable anti-corruption laws, may result in internal, independent, or government investigations, and violations of anti-corruption laws may result in severe criminal or civil sanctions or other liabilities which could have a material adverse effect on our business, consolidated results of operations and financial condition.

Due to the fact that we have operations located within the U.K., our business and financial results may be negatively impacted as a result of the U.K.'s planned exit from the European Union (E.U.), resulting primarily from (a) continued depression in the value of the British Pound Sterling as compared to the United States Dollar; and (b) potential price increases or unavailability of supplies purchased by our U.K. businesses from companies located in the E.U. or elsewhere. These risks would be heightened in the event that the U.K. and the E.U. are unable to reach a mutually satisfactory exit agreement before the current deadline of January 31, 2020.

Following the U.K.’s vote to leave the E.U. in 2016 (commonly referred to as Brexit), the value of the British Pound Sterling incurred significant fluctuations. Additionally, further actions related to Brexit may occur in the future. If the value of the British Pound Sterling continues to incur similar fluctuations, unfavorable exchange rate changes may negatively affect the value of our operations and businesses located in the U.K., as translated to our reporting currency, the United States Dollar, in accordance with US GAAP, which may impact the revenue and earnings we report. For more information with respect to Exchange Rate risk applicable to us, please see Part 2 Item 7A. "Market Risk Disclosures" elsewhere in this Annual Report on Form 10-K. Continued fluctuations in the British Pound Sterling may also result in the imposition of price adjustments by E.U.-based suppliers to our U.K. businesses, as those suppliers seek to compensate for the changes in value of the British Pound Sterling as compared to the European Euro. In addition, a so-called “Hard Brexit,” where no formal agreement is made between the E.U. and U.K. prior to the U.K.’s exit, could result in a continued deflation of the British Pound Sterling; additional increases in prices, fees, taxes or tariffs applicable to goods that are bought and sold between the U.K. and Europe, and a negative impact on end markets in the U.K. as a result of declines in consumer sentiment or decreased immigration rates into the U.K. Any of these results could have a material adverse effect on the business, revenues and financial condition of our U.K. and European operations.

Failure to achieve and maintain effective internal controls could have a material adverse effect on our business and on our stock price.

Effective internal controls are necessary for us to effectively monitor our business, prevent fraud or theft, remain in compliance with our credit facility covenants, and provide reliable financial reports, both to the public and to our lenders. If we fail to maintain the adequacy of our internal controls, both in accordance with current standards and as standards are modified over time, we could trigger an event of default under our credit facilities or lose the confidence of the investing community, both of which could result in a material adverse effect on our stock price, limit our ability to borrow funds, or result in the application of unfavorable commercial terms to borrowings then outstanding.

The impact of foreign trade relations and associated tariffs could adversely impact our business.

We currently source a number of raw materials from international suppliers. Import tariffs, taxes, customs duties and/or other trading regulations imposed by the U.S. government on foreign countries, or by foreign countries on the U.S., could significantly increase the prices we pay for certain raw materials, such as aluminum and wood, that are critical to our ability to manufacture our products. In addition, we may be unable to find a domestic supplier to provide the necessary raw materials on an economical basis in the amounts we require. If the cost of our raw materials increases, or if we are unable to procure the necessary raw materials required to manufacture our products, then we could experience a negative impact on our operating results, profitability, customer relationships and future cash flows.

Company Risks

Our business will suffer if we are unable to adequately address potential supplier or customer pricing pressures, both with respect to OEMs that have significant pricing leverage over suppliers, and to large suppliers who have significant pricing leverage over our customers.

Our primary customers are OEMs, who have substantial leverage in setting purchasing and payment terms. In addition, many of our suppliers are large international conglomerates with numerous customers that are much larger than us, which lessens our leverage in pricing and supply negotiations. We attempt to manage this pricing pressure and to preserve our business relationships with suppliers and OEMs by negotiating reasonable price concessions when needed, and by reducing our production costs through various measures, which may include managing our purchase process to control the cost of our raw materials and components, maintaining multiple supply sources where possible, and implementing cost-effective process improvements. However, our efforts in this regard may not be successful and our operating margins could be negatively impacted.

Our revenues could decline or we may lose business if our customers vertically integrate their operations, diversify their supplier base, or transfer manufacturing capacity to other regions.

Certain of our businesses or product lines are largely dependent on a relatively few large customers. Although we believe we have an extensive customer base, if we were to lose one of these large customers or if one such customer were to materially reduce its purchases as a result of vertical integration, supplier diversification, or a shift in regional focus, our revenue, general financial condition and results of operations could be adversely affected.

Our credit facility contains certain operational restrictions, reporting requirements, and financial covenants that limit the aggregate availability of funds.

Our revolving credit facility contains certain financial covenants and other operating and reporting requirements that could present risk to our operating results or limit our ability to access capital for use in the business. For a full discussion of the various covenants and operating requirements imposed by our revolving credit facility and information related to the potential limitations on our ability to access capital, see Item 7, *Management's Discussion and Analysis of Financial Conditions and Results of Operations-Liquidity and Capital Resources*, in this Annual Report on Form 10-K.

We may not be able to successfully manage or integrate acquisitions, and if we are unable to do so, then our profitability could be adversely affected.

We cannot provide assurance that we will successfully manage or integrate acquisition targets once we have purchased them. If we acquire a business for which we do not fully understand or appreciate the specific business risks, if we overvalue or fail to conduct effective due diligence on an acquisition, or if we fail to effectively and efficiently integrate a business that we acquire, then there could be a material adverse effect on our ability to achieve the projected growth and cash flow goals associated with the new business, which could result in an overall material adverse effect on our long-term profitability or revenue generation.

If our information technology systems fail, or if we experience an interruption in our operations due to an aging information system infrastructure, then our results of operations and financial condition could be materially adversely affected.

The failure of our information technology systems, our inability to successfully maintain, enhance and/or replace our information technology systems when necessary, or a significant compromise of the integrity or security of the data that is generated from our information technology systems, could adversely affect our results of operations and could disrupt business and prevent or severely limit our ability to respond to data requests from our customers, suppliers, auditors, shareholders, employees or government authorities.

We are subject to data security and privacy risks that could negatively affect our results or operations.

In addition to our own sensitive and proprietary business information, we collect transactional and personal information about our customers and employees. Any breach of our or our service providers' network, or other vendor systems, may result in the loss of confidential business and financial data, misappropriation of our consumers' or employees' personal information or a disruption of our business. Any of these outcomes could have a material adverse effect on our business or our vendor and customer relationships, and could also result in unwanted media attention, reputational damage, or the imposition of fines, lawsuits, or significant legal or remediation expenses.

We may not have the right personnel in place to achieve our operating goals, and the rural location of some of our operations may make it difficult to locate or hire highly skilled employees.

We operate in some rural areas and small towns where the competition for labor can be fierce, and where the pool of qualified employees may be very small. If we are unable to obtain skilled workers and adequately trained professionals to conduct our business, we may not be able to manage our business to the necessary high standards. In addition, we may be forced to pay higher wages or offer other benefits that might impact our cost of labor and thereby negatively impact our profitability.

Equipment failures or catastrophic loss at any of our manufacturing facilities could prevent us from manufacturing our products.

An interruption in production capabilities at any of our facilities due to equipment failure, catastrophic loss, or other reasons could result in our inability to manufacture products, which could severely affect delivery times, return or cancellation rates, and future sales, any of which could result in lower sales and earnings or the loss of customers. Although we have a disaster recovery plan in place, we currently have one plant which is the sole source for our insulating glass spacer business in the U.S. If that plant were to experience a catastrophic loss and our disaster recovery plan were to fail, it could have a material adverse effect on our results of operations or financial condition.

Product liability claims and product replacements could harm our reputation, revenue generation and financial condition, or could result in costs related to litigation, warranty claims, or customer accommodations.

We have, on occasion, found flaws and deficiencies in the manufacturing, design, testing or installation of our products, which may result from a product defect, a defect in a component part provided by our suppliers, or as a result of the product being installed incorrectly by our customer or an end user. The failure of products before or after installation could result in litigation or claims by our customers or other users of the products, or in the expenditure of costs related to warranty coverage, claim settlement, litigation, or customer accommodation. In addition, we are currently party to certain legal claims related to a commercial sealant product, and there is no assurance that we will prevail on those claims. We may be required to expend legal fees, expert costs, and other costs associated with defending the claims and/or lawsuits. We may elect to enter into legal settlements or be forced to pay any judgments that result from an adverse court decision. Any such settlements, judgments, fees and/or costs could negatively impact our profitability, results of operations, cash flows and financial condition.

Our insurance coverage may be inapplicable or inadequate to cover certain liabilities, and our insurance policies may exclude coverage for certain products.

While we maintain a robust insurance program that is reasonably designed to cover our known and unknown risks, there is no assurance that our insurance carriers will voluntarily agree to cover every potential liability, or that our insurance policies include limits large enough to cover all liabilities associated with our business or products. In addition, coverage under our insurance policies may be unavailable in the future for certain products. For example, during a prior renewal of our insurance program, our insurance carriers excluded future coverage of a product line we no longer manufacture or sell. If our insurers refuse to cover claims, in whole or in part, or if we exhaust our available insurance coverage at some point in the future, then we might be forced to expend legal fees and settlement or judgment costs, which could negatively impact our profitability, results of operations, cash flows and financial condition.

Risks Associated with Investment in Quanex Securities

Our corporate governance documents and the provisions of Delaware law may delay or preclude a business acquisition or divestiture that stockholders may consider to be favorable, which might result in a decrease in the value of our common shares.

Our certificate of incorporation and bylaws and Delaware law contain provisions that could make it more difficult for a third party to acquire us without the consent of our Board of Directors. These provisions include restrictions on the ability of our stockholders to remove directors and supermajority voting requirements for stockholders to amend our organizational documents and limitations on action by our stockholders by written consent. In addition, our Board of Directors has the right to issue preferred stock without stockholder approval, which could be used to dilute the stock ownership of a potential hostile acquirer. Although we believe these provisions protect our stockholders from coercive or otherwise unfair takeover tactics, and thereby provide for an opportunity for us to receive a higher bid by requiring potential acquirers to negotiate with our Board of Directors, these provisions apply even if the offer may be considered beneficial by some stockholders.

We have the ability to issue additional equity securities, which would lead to dilution of our issued and outstanding common stock.

We are authorized to issue, without stockholder approval, 1,000,000 shares of preferred stock, no par value, in one or more series, which may give other stockholders dividend, conversion, voting, and liquidation rights, among other rights, which may be superior to the rights of holders of our common stock. The issuance of additional equity securities or securities convertible into equity securities would result in dilution of existing stockholders' equity interests. Our Board of Directors has no present intention to issue any such preferred shares, but has the right to do so in the future. In addition, we were authorized, by prior stockholder approval, to issue up to 125,000,000 shares of our common stock, $0.01 par value per share, of which 37,370,402 were issued at October 31, 2019. These authorized shares can be issued, without stockholder approval, as securities convertible into either common stock or preferred stock.

Item 1B. ***Unresolved Staff Comments.***

None.

Item 2. ***Properties.***

The following table lists our principal properties by location, general character and use as of October 31, 2019.

Location	Character & Use of Property
Executive Offices	
Houston, Texas*	Executive corporate office
North American Fenestration Segment	
Akron, Ohio*	Segment executive office and R&D facility
Rice Lake, Wisconsin	Fenestration products
Cambridge, Ohio*	Flexible spacer and solar adhesives
Richmond, Kentucky	Vinyl and composite extrusions
Kent, Washington*	Vinyl and composite extrusions
European Fenestration Segment	
Denby, United Kingdom*	Vinyl and composite extrusions
Heinsberg, Germany*	Flexible spacer
North American Cabinet Components Segment	
St. Cloud, Minnesota	Hardwood doors & components for kitchen and bath

* These locations are leased as of October 31, 2019.

In addition to the locations identified above, our North American Fenestration Segment maintains 14 additional facilities for the manufacture and distribution of fenestration, spacer and extrusion products within the continental U.S., our European Fenestration Segment maintains one additional location for the production of spacer in the U.K., and our North American Cabinet Components Segment maintains 12 locations to manufacture hardwood doors and other wood components for kitchen and bath cabinets. We maintain a lease in Yakima, Washington, which will expire in 2021, related to a location which was closed as a result of restructuring activities. See Note 1, "Nature of Operations, Basis of Presentation and Significant Accounting Policies - Restructuring" to the accompanying consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

We believe our operating properties are in good condition and well maintained, and are generally suitable and adequate to carry on our business. In fiscal 2019, on a consolidated basis, our facilities operated at approximately 59% of capacity. This capacity utilization is subject to variability by product line, seasonality, and location.

Item 3. ***Legal Proceedings.***

From time to time, we, along with our subsidiaries, are involved in various litigation matters arising in the ordinary course of our business, including those arising from or related to contractual matters, commercial disputes, intellectual property, personal injury, environmental matters, product performance or warranties, product liability, insurance coverage and personnel and employment disputes.

We regularly review with legal counsel the status of all ongoing proceedings, and we maintain insurance against these risks to the extent deemed prudent by our management and to the extent such insurance is available. However, there is no assurance that we will prevail in these matters or that our insurers will accept full coverage of these matters, and we could, in the future, incur judgments, enter into settlements of claims, or revise our expectations regarding the outcome or insurability of matters we face, which could materially impact our results of operations.

We have been and are currently party to multiple claims, some of which are in litigation, relating to alleged defects in a commercial sealant product that was manufactured and sold during the 2000's. Several claims were resolved during fiscal 2017, 2018 and 2019, and we continue to defend the remaining claims. While we believe that our product was not defective and that we would prevail in these commercial sealant product claims if taken to trial, the timing, ultimate resolution and potential impact of these claims is not currently determinable. Nevertheless, after taking into account all currently available information, including our defenses, the advice of our counsel, and the extent and currently-expected availability of our existing insurance coverage, we believe that the eventual outcome of these commercial sealant claims will not have a material adverse effect on our overall financial condition, results of operations or cash flows, and we have not recorded any accrual with regard to these claims.

We reserve for litigation loss contingencies that are both probable and reasonably estimable. We do not expect that losses resulting from any current legal proceedings will have a material adverse effect on our consolidated financial statements if or when such losses are incurred.

For discussion of environmental issues, see Item 1, *"Business - Environmental and Employee Safety Matters"* discussed elsewhere in this Annual Report on Form 10-K.

Item 4. *Mine Safety Disclosures.*

Not Applicable.

PART II

Item 5. ***Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.***

Our common stock has been listed on the New York Stock Exchange under the ticker symbol NX since April 24, 2008. Electronic copies of our public filings are available on the Securities and Exchange Commission's website (www.sec.gov). There were approximately 1,856 holders of our common stock (excluding individual participants in securities positions listings) on record as of December 9, 2019.

Equity Compensation Plan Information

The following table summarizes certain information regarding equity compensation to our employees, officers and directors under equity compensation plans as of October 31, 2019:

Plan Category	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights[1]	(b) Weighted-average exercise price of outstanding options, warrants and rights[2]	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	2,252,331	$ 18.71	1,678,721

[1] Column (a) includes securities that may be issued upon future vesting of performance share awards that have been previously granted to key employees and officers. The number of securities reflected in this column includes the maximum number of shares that would be issued pursuant to these performance share awards assuming the performance measures are achieved. The performance measures may not be achieved.

[2] The weighted-average exercise price in column (b) does not include the impacts of the performance share awards or any securities that may be issued thereunder. For additional details, see Note 14, "Stock-Based Compensation" included elsewhere within this Annual Report on Form 10-K.

Issuer Purchases of Equity Securities

Set forth below is a table summarizing the program and the repurchase of shares during the quarter ended October 31, 2019.

Period	(a) Total Number of Shares Purchased [1]	(b) Average Price Paid per Share[1]	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs[1]	(d) Maximum US Dollars Remaining that May Yet Be Used to Purchase Shares Under the Plans or Programs[1]
August 2019	—	$—	—	$21,630,466
September 2019	—	—	—	$21,630,466
October 2019	175,000	18.37	175,000	$18,415,158
Total	175,000	$18.37	175,000	

[1] On August 30, 2018, our Board of Directors approved a stock repurchase program that authorized the repurchase of up to $60.0 million worth of shares of our common stock. Repurchases under the new program will be made in open market transactions or privately negotiated transactions, subject to market conditions, applicable legal requirements and other relevant factors. The program does not have an expiration date or a limit on the number of shares that may be purchased. During the years ended October 31, 2019 and 2018, we purchased 583,398 shares and 1,900,000 shares, respectively, at a cost of $9.6 million and $32.0 million, respectively, under this program.

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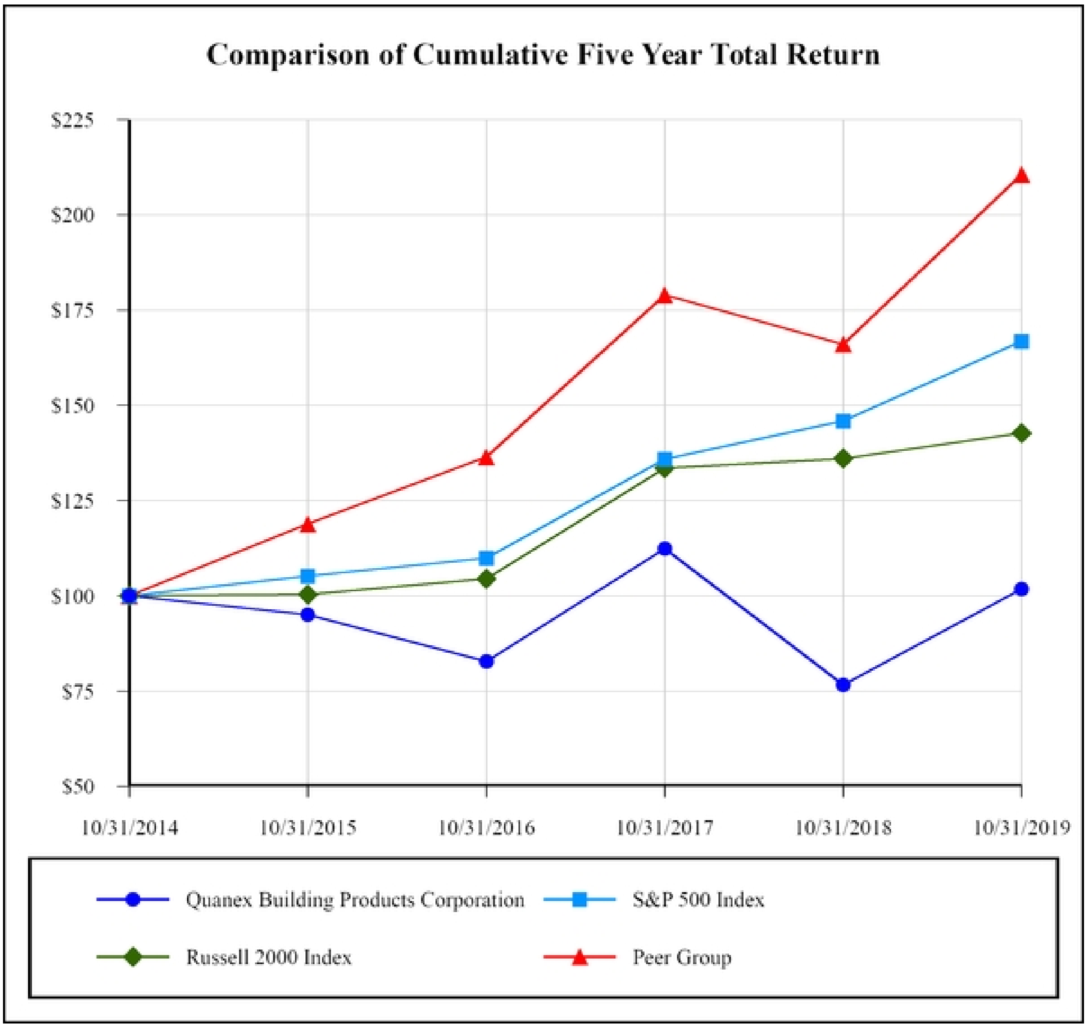
Stock Performance Graph

The following chart represents a comparison of the five year total return of our common stock to the Standard & Poor's 500 Index (S&P 500), the Russell 2000 Index, and a peer group index selected by us, which includes companies offering similar products and services to ours. The companies in our peer group for the year ended October 31, 2019 are AAON Inc., American Woodmark Corp, Apogee Enterprises Inc., Armstrong Flooring Inc., Continental Building Products Inc., Cornerstone Building Brands Inc., CSW Industrials Inc., Gibraltar Industries Inc., Griffon Corporation, Insteel Industries Inc., Masonite International, Patrick Industries Inc., PGT Innovations, Inc., Simpson Manufacturing Company Inc., and Trex Company Inc.



INDEXED RETURNS	For the Years Ended					
Company Name / Index	**10/31/2014**	**10/31/2015**	**10/31/2016**	**10/31/2017**	**10/31/2018**	**10/31/2019**
Quanex Building Products Corporation	$ 100.00	$ 95.04	$ 82.83	$ 112.41	$ 76.68	$ 101.82
S&P 500 Index	$ 100.00	$ 105.20	$ 109.94	$ 135.93	$ 145.91	$ 166.81
Russell 2000 Index	$ 100.00	$ 100.34	$ 104.46	$ 133.53	$ 136.03	$ 142.70
New Peer Group	$ 100.00	$ 118.85	$ 136.42	$ 178.95	$ 166.02	$ 210.61

Item 6. ***Selected Financial Data.***

The following table presents selected historical consolidated financial and operating data for the periods shown. The selected consolidated financial data as of October 31, 2019, 2018, 2017, 2016 and 2015 and for each of the fiscal years then ended was derived from our audited consolidated financial statements for those dates and periods, adjusted for discontinued operations, as indicated. Data reflects the adoption of accounting standards updates and accounting changes made during the year ended October 31, 2019. The following information should be read in conjunction with "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" and our audited financial statements and related notes included elsewhere in this Annual Report on Form 10-K.

	Fiscal Years Ended October 31,				
	2019[1][2]	2018[2][3][4]	2017[2]	2016[2][5][6][7]	2015[8]
	(Dollars in thousands, except per share data)				
Consolidated Statements of Income					
Net sales	$ 893,841	$ 889,785	$ 866,555	$ 928,184	$ 645,528
Cost and expenses:					
Cost of sales (excluding depreciation and amortization)	694,420	697,022	672,488	710,947	499,680
Selling, general and administrative	101,292	103,758	98,085	115,012	86,718
Restructuring charges	370	1,486	4,550	529	—
Depreciation and amortization	49,586	51,822	57,495	53,146	35,220
Asset impairment charges	74,600	—	—	12,602	—
Operating (loss) income	(26,427)	35,697	33,937	35,948	23,910
Non-operating (expense) income:					
Interest expense	(9,643)	(11,100)	(9,595)	(36,498)	(991)
Other, net	116	1,156	1,160	(5,074)	234
(Loss) income from continuing operations before income taxes	(35,954)	25,753	25,502	(5,624)	23,153
Income tax (expense) benefit	(10,776)	800	(6,819)	3,765	(7,539)
(Loss) income from continuing operations	(46,730)	26,553	18,683	(1,859)	15,614
Income from discontinued operations, net of taxes	—	—	—	—	479
Net (loss) income	$ (46,730)	$ 26,553	$ 18,683	$ (1,859)	$ 16,093
Basic (loss) earnings per common share:					
Basic (loss) earnings from continuing operations	$ (1.42)	$ 0.77	$ 0.55	$ (0.05)	$ 0.46
Basic earnings from discontinued operations	—	—	—	—	0.01
Basic (loss) earnings per share	$ (1.42)	$ 0.77	$ 0.55	$ (0.05)	$ 0.47
Diluted (loss) earnings per common share:					
Diluted (loss) earnings from continuing operations	$ (1.42)	$ 0.76	$ 0.54	$ (0.05)	$ 0.46
Diluted earnings from discontinued operations	—	—	—	—	0.01
Diluted (loss) earnings per share	$ (1.42)	$ 0.76	$ 0.54	$ (0.05)	$ 0.47
Cash dividends declared per share	$ 0.32	$ 0.20	$ 0.16	$ 0.16	$ 0.16
Other Financial & Operating Data					
Cash provided by operating activities	$ 96,372	$ 104,611	$ 79,778	$ 87,341	$ 67,087
Cash used for investing activities	(23,559)	(26,052)	(32,627)	(282,103)	(160,144)
Cash (used for) provided by financing activities	(71,264)	(65,817)	(55,133)	195,448	(4,581)
Acquisitions, net of cash acquired	—	—	—	245,904	(131,689)
Capital expenditures	$ 24,883	$ 26,484	$ 34,564	$ 37,243	$ (29,982)
Selected Consolidated Balance Sheet Data at Year End					
Cash and cash equivalents	$ 30,868	$ 29,003	$ 17,455	$ 25,526	$ 23,125
Total assets	645,110	743,214	774,944	781,418	566,581
Long-term debt, excluding current portion	156,414	209,332	218,184	259,011	53,767
Total liabilities	$ 314,923	$ 347,992	$ 367,252	$ 412,742	$ 170,441

(1) In 2019, we recorded goodwill impairment charges of $74.6 million associated with our cabinet components business.

(2) In 2019, 2018, 2017 and 2016, we incurred $0.4 million, $1.5 million, $4.6 million, and $0.5 million respectively, of restructuring costs associated with the closure of several plant facilities. See Note 1, "Nature of Operations, Basis of Presentation and Significant Accounting Policies - Restructuring," included elsewhere in this Annual Report on Form 10-K.

(3) In October 2018, we refinanced our credit facility resulting in a charge of $1.1 million of unamortized deferred financing fees. See Note 8, "Debt and Capital Lease Obligations" included elsewhere in this Annual Report on Form 10-K.

(4) In 2018, we recorded a $6.5 million net benefit related to the tax effect of implementing the Tax Cuts and Jobs Act, which was signed into law on December 22, 2017. See Note 10, "Income Taxes" included elsewhere in this Annual Report on Form 10-K.

(5) In November 2015, we acquired Woodcraft, a manufacturer of cabinet doors and other components to OEMs in the kitchen and bathroom cabinet industry. The results of operations of Woodcraft including revenue of $223.4 million and net income of $4.1 million have been included in our consolidated operating results since the date of acquisition, November 2, 2015.

(6) In July 2016, we refinanced our credit facility resulting in a $3.1 million prepayment call premium fee, a charge of $8.1 million of unamortized deferred financing fees and a charge of $5.5 million of unamortized original issuer’s discount. See Note 8, "Debt and Capital Lease Obligations" included elsewhere in this Annual Report on Form 10-K.

(7) In October 2016, we recorded a goodwill impairment charge of $12.6 million associated with our U.S. vinyl extrusion business.

(8) In June 2015, we acquired HLP, a vinyl profile extruder with operations located in the U.K. The results of operations of HLP include revenue of $42.3 million and net income of $1.5 million for the period June 15, 2015 through October 31, 2015.

Item 7. ***Management's Discussion and Analysis of Financial Condition and Results of Operations.***

The following discussion and analysis contains forward-looking statements based on our current assumptions, expectations, estimates and projections about our business and the homebuilding industry, and therefore, it should be read in conjunction with our consolidated financial statements and related notes thereto, as well as *"Cautionary Note Regarding Forward-Looking Statements"* discussed elsewhere within this Annual Report on Form 10-K. For a listing of potential risks and uncertainties which impact our business and industry, see "*Item 1A. Risk Factors."* Actual results could differ from our expectations due to several factors which include, but are not limited to: market price and demand for our products, economic and competitive conditions, capital expenditures, new technology, regulatory changes and other uncertainties. Unless otherwise required by law, we undertake no obligation to publicly update any forward-looking statements, even if new information becomes available or other events occur in the future.

Our Business

We manufacture components for original equipment manufacturers in the building products industry. These components can be categorized as window and door (fenestration) components and kitchen and bath cabinet components. Examples of fenestration components include (1) energy-efficient flexible insulating glass spacers, (2) extruded vinyl profiles, (3) window and door screens, and (4) precision-formed metal and wood products. In addition, we provide certain other non-fenestration components and products, which include solar panel sealants, trim moldings, vinyl decking, fencing, water retention barriers, and conservatory roof components. We use low-cost production processes and engineering expertise to provide our customers with specialized products for their specific window, door, and cabinet applications. We believe these capabilities provide us with unique competitive advantages. We serve a primary customer base in North America and the U.K., and also serve customers in international markets through our operating plants in the U.K. and Germany, as well as through sales and marketing efforts in other countries.

We continue to invest in organic growth initiatives and we intend to continue evaluating business acquisitions that allow us to expand our existing fenestration and cabinet component footprint, enhance our product offerings, provide new complementary technology, enhance our leadership position within the markets we serve, and expand into new markets or service lines. We have disposed of non-core businesses in the past, and continue to evaluate our business portfolio to ensure that we are investing in markets where we believe there is potential future growth.

We currently have three reportable business segments: (1) North American Fenestration segment ("NA Fenestration"), comprising four operating segments primarily focused on the fenestration market in North America manufacturing vinyl profiles, IG spacers, screens & other fenestration components; (2) European Fenestration segment ("EU Fenestration"), comprising our U.K.-based vinyl extrusion business, manufacturing vinyl profiles and conservatories, and the European insulating glass business manufacturing IG spacers; and (3) North American Cabinet Components segment ("NA Cabinet Components"), comprising our North American cabinet door and components business and two wood-manufacturing plants. We maintain a grouping called Unallocated Corporate & Other, which includes transaction expenses, stock-based compensation, long-term incentive awards based on the performance of our common stock and other factors, certain severance and legal costs not deemed to be allocable to all segments, depreciation of corporate assets, interest expense, other, net, income taxes and inter-segment eliminations, and executive incentive compensation and medical expense fluctuations relative to planned costs as determined during the annual planning process. Other corporate general and administrative costs have been allocated to the reportable business segments, based upon a relative measure of profitability in order to more accurately reflect each reportable business segment's administrative costs. We allocate corporate expenses to businesses acquired mid-year from the date of acquisition. The accounting policies of our operating segments are the same as those used to prepare our accompanying consolidated financial statements. Corporate general and administrative expenses allocated during the years ended October 31, 2019, 2018 and 2017 were $18.3 million, $18.7 million and $17.0 million, respectively.

Notable Items

During 2017, we rationalized capacity and closed two U.S. vinyl plants and two cabinet door plants, relocating assets to improve overall operational efficiency. We have incurred $0.4 million, $1.5 million and $4.6 million of expense associated with these restructuring efforts during fiscal 2019, 2018 and 2017, respectively, and recognized $6.2 million of accelerated depreciation and amortization associated with related assets during fiscal 2017.

On December 22, 2017, President Trump signed into law the Tax Cuts and Jobs Act (the Act) that included sweeping tax reform which affected U.S. corporations, including a reduction of the statutory federal corporate tax rate from 35% to 21%. We made an initial assessment of the Act and recorded a discrete benefit of $6.5 million, which included a charge of $1.2 million for a one-time mandatory transition tax on deemed repatriation of previously tax-deferred and unremitted foreign earnings during the fiscal year ended October 31, 2018. We completed the accounting for the income tax effects of the Act and recorded a charge of $0.4 million for the re-measurement of the one-time mandatory transition tax during the year ended October 31, 2019. The Act also imposed additional tax law changes that became effective during fiscal 2019, which include new requirements for a global intangible low-taxed income provision (GILTI) and a deduction for foreign-derived intangible income (FDII), which resulted in a net charge of $1.2 million during the year ended October 31, 2019.

Market Overview and Outlook

We believe the primary drivers of our operating results continue to be North American residential remodeling and replacement (R&R) and new home construction activity. We believe that housing starts and window shipments are indicators of activity levels in the homebuilding and window industries, and we use this data, as published by or derived from third-party sources, to evaluate the market. We have historically evaluated the market using data from the National Association of Homebuilders (NAHB) with regard to housing starts, and published reports by Ducker Worldwide, LLC (Ducker), a consulting and research firm, with regard to window shipments. These sources generally provide information about activity levels in the U.S.

The NAHB has forecasted calendar-year housing starts (excluding manufactured units) to increase slightly through 2021. Ducker indicated that window shipments in the R&R market are expected to decline slightly during the calendar year ended 2019, increase 2% during 2020 and increase 3% during 2021. Derived from reports published by Ducker, the overall decline in window shipments for the trailing twelve months ended September 30, 2019 was 1.6%. During this period, R&R activity and new construction decreased 0.9% and 2.5%, respectively.

Our U.K. vinyl business (commonly referred to as "HLP") is largely focused on the sale of vinyl house systems under the trade name “Liniar” to smaller window manufacturers in the U.K. HLP is one of the larger providers of vinyl extruded products in the U.K. in terms of volume shipped. Currently, the U.K. is experiencing a shortage in affordable housing, with rising demand due in part to a growing immigrant population. HLP’s current primary customers are smaller window fabricators, as opposed to the larger OEMs that comprise a large portion of the North American market. These manufacturers seek the quality and technology of the specific products identified by the Liniar trade name. In addition, HLP services non-fenestration markets including the manufacture of roofing for conservatories, vinyl decking and vinyl water retention barriers used for landscaping. We believe there are growth opportunities within these markets in the U.K. and potential synergies which may enable us to sell complementary products.

Woodcraft manufactures kitchen and bathroom cabinet doors and components, amongst other products, using a variety of woods from traditional hardwoods to engineered wood products. Currently, Woodcraft sells all of its products in the U.S., so domestic housing starts and R&R activity constitute the primary drivers of this business as well. We also utilize industry publications to evaluate the wood markets and commodity trends. Although NAHB forecasts indicate expected continued growth in the U.S. housing market, much of this anticipated growth is in new construction for multi-family dwellings, or rental properties, which is not the primary market for Woodcraft’s products. In recent years, forecasts project increased growth in single family homes. The cabinet door market is stratified as follows: stock (low-cost, low-variations), semi-custom (more customized, just-in-time manufacturing, higher price point) and custom (precise customer specifications, just-in-time manufacturing, high-end price point). Woodcraft's primary market is semi-custom.

Our business is seasonal, particularly our fenestration business, as inclement weather during the winter months tends to slow down construction, particularly as related to “outside of the house” construction. To some extent, we believe our kitchen and bathroom cabinet door business lessens the impact of seasonality on our operating results, as the cabinet business is “inside of the house” and less susceptible to weather. However, significant weather events do disrupt the construction industry. The Southern U.S. was impacted by Hurricane Michael in October 2018 and Hurricanes Harvey and Irma in August and September of 2017. Although our operating plants were not directly impacted, several of our customers were impacted directly, as well as indirectly, as some skilled laborers relocated to the region for construction jobs. From a longer-term perspective, the rebuilding efforts from these storms spur additional growth in construction beyond the year in which they make landfall.

We are impacted by regulation of energy standards. Although the U.S. government has been less aggressively pursuing higher energy efficiency standards in recent years, other countries have implemented higher energy efficiency standards which should bode well for our fenestration-related business in these markets, particularly our warm-edge spacer products.

We utilize several commodities in our business for which pricing can fluctuate, including polyvinyl resin (PVC), petroleum products, aluminum, titanium dioxide (TIO2), silicone and wood. For the majority of our customers and critical suppliers, we have price adjusters in place which effectively share the base pass-through price changes for these commodities with our customers commensurate with the market at large. Our long-term exposure to these price fluctuations is somewhat mitigated due to the contractual component of the adjuster program. However, these adjusters are not in place with all customers, and there is a level of exposure to such volatility due to the lag associated with the timing of price updates in accordance with our customer agreements.

In July 2016, the U.K. voted to exit the European Union (commonly referred to as "Brexit"), which has impacted the valuation of the British Pound Sterling relative to other currencies used in our business, including our reporting currency, the United States Dollar. The Pound remains well below the pre-Brexit level, and some general market uncertainty remains in the U.K. Although we do not know the long-term effects of this change, there has been some impact on our results of operations to date (primarily foreign currency translation).

The global economy remains uncertain due to currency devaluations, political unrest, terror threats, and even the political landscape in the U.S. These and other macro-economic factors have impacted the global financial markets, which may have contributed to significant changes in foreign currencies. We continue to monitor our exposure to changes in exchange rates.

Comparison of the fiscal years ended October 31, 2019 and 2018

This table sets forth our consolidated results of operations for the twelve-month periods ended October 31, 2019 and 2018.

	For the Years Ended October 31,					
	2019		2018		2019 vs. 2018	
	Amounts	% of Sales	Amounts	% of Sales	$ Change	Variance %
	(Dollars in millions)					
Net sales	$ 893.8	100%	$ 889.8	100%	$ 4.0	—%
Cost of sales (excluding depreciation and amortization)	694.4	78%	697.0	78%	(2.6)	—%
Selling, general and administrative	101.2	11%	103.8	12%	(2.6)	3%
Restructuring charges	0.4	—%	1.5	—%	(1.1)	73%
Depreciation and amortization	49.6	6%	51.8	6%	(2.2)	4%
Asset impairment charges	74.6	8%	—	—%	74.6	(100)%
Operating income	(26.4)	(3)%	35.7	4%	(62.1)	(174)%
Interest expense	(9.6)	(1)%	(11.1)	(1)%	1.5	14%
Other, net	0.1	—%	1.2	—%	(1.1)	(92)%
Income tax (expense) benefit	(10.8)	(1)%	0.8	—%	(11.6)	(1,450)%
Net (loss) income	$ (46.7)	(5)%	$ 26.6	3%	$ (73.3)	(276)%

Our year-over-year results by reportable segment follow. Our comparison of the results for the fiscal years ended October 31, 2018 and 2017 by reportable segment for the prior year comparative periods can be found in the annual report on Form 10-K for the year ended October 31, 2018.

Changes Related to Operating Income by Reportable Segment:

NA Fenestration

	For the Years Ended October 31,			
	2019	2018	$ Change	Variance %
	(Dollars in millions)			
Net sales	$ 503.8	$ 485.4	$ 18.4	4%
Cost of sales (excluding depreciation and amortization)	386.2	372.0	14.2	(4)%
Selling, general and administrative	50.4	54.2	(3.8)	7%
Restructuring charges	0.4	1.4	(1.0)	71%
Depreciation and amortization	27.0	27.2	(0.2)	1%
Operating income	$ 39.8	$ 30.6	$ 9.2	30%
Operating income margin	8%	6%		

Net Sales. Net sales increased $18.4 million, or 4%, for the twelve months ended October 31, 2019 compared to the same period in 2018. We experienced an increase of $10.0 million related to price, $7.2 million of revenue growth driven both by new volume and market growth, and an increase of $1.2 million related to surcharges.

Cost of Sales. Cost of sales increased $14.2 million, or 4%, for the twelve months ended October 31, 2019 compared to the same period in 2018. Cost of sales increased due to the corresponding increase in volume coupled with inflationary cost increases. A portion of the raw material increases are recovered through surcharges.

Selling, General and Administrative. Our selling, general and administrative expenses decreased by $3.8 million, or 7%, for the twelve months ended October 31, 2019 compared to the same period in 2018. This decrease was due primarily to lower compensation expenses as a result of a reduction in headcount.

Restructuring Charges. Restructuring charges of $0.4 million incurred during the twelve months ended October 31, 2019 primarily relate to facility lease expense related to a vinyl extrusion plant which was closed in January 2017 in the U.S. that has not been sublet or otherwise exited as of October 31, 2019. Restructuring charges of $1.4 million incurred for the twelve months ended October 31, 2018 relate to two such plants in the prior year.

EU Fenestration

	For the Years Ended October 31,			
	2019	2018	$ Change	Variance %
	(Dollars in millions)			
Net sales	$ 164.9	$ 160.0	$ 4.9	3%
Cost of sales (excluding depreciation and amortization)	114.1	114.9	(0.8)	1%
Selling, general and administrative	23.0	22.8	0.2	(1)%
Depreciation and amortization	8.8	9.6	(0.8)	8%
Operating income	$ 19.0	$ 12.7	$ 6.3	50%
Operating income margin	12%	8%		

Net Sales. Net sales increased $4.9 million, or 3%, when comparing the twelve months ended October 31, 2019 compared to the same period in 2018. This increase reflects $7.4 million of volume increases and $6.2 million of base price increases, partially offset by $8.7 million of unfavorable foreign currency rate changes.

Cost of Sales. The cost of sales decreased $0.8 million for the twelve months ended October 31, 2019 compared to the same period in 2018. This decrease is primarily related to the impact of foreign currency rate changes during the period.

Selling, General and Administrative. Our selling, general and administrative expense increased $0.2 million for the twelve months ended October 31, 2019 compared to the same period in 2018 due to increased marketing expenses, which were offset by foreign currency rate changes.

Depreciation and Amortization. Depreciation and amortization expense decreased $0.8 million for the twelve months ended October 31, 2019 compared to the same period in 2018 due to foreign currency rate changes coupled with the run-off of depreciation expense.

NA Cabinet Components

	For the Years Ended October 31,			
	2019	2018	$ Change	Variance %
	(Dollars in millions)			
Net sales	$ 229.6	$ 249.8	$ (20.2)	(8)%
Cost of sales (excluding depreciation and amortization)	197.2	214.1	(16.9)	8%
Selling, general and administrative	18.8	18.0	0.8	(4)%
Restructuring charges	—	0.1	(0.1)	100%
Depreciation and amortization	13.2	14.4	(1.2)	8%
Asset impairment charge	74.6	—	74.6	(100)%
Operating loss	$ (74.2)	$ 3.2	$ (77.4)	(2,419)%
Operating loss margin	(32)%	1%		

Net Sales. Net sales decreased $20.2 million for the twelve months ended October 31, 2019 compared to the same period in 2018. On a year-over-year basis, we realized a decrease of $23.7 million as a result of lower volumes primarily related to the industry shift from semi-custom to stock cabinets, which was partially offset by $3.5 million of price increases and raw material surcharges.

Cost of Sales. The cost of sales decreased $16.9 million for the twelve months ended October 31, 2019 compared to the same period in 2018 as a result of market volume declines.

Selling, General and Administrative. Our selling, general and administrative expense increased $0.8 million for the twelve months ended October 31, 2019 compared to the same period in 2018, largely driven by a loss on the sale of fixed assets.

Restructuring Charges. Restructuring charges of $0.1 million for the year ended October 31, 2018 represent the remaining costs from the Kansas plant closure effected in September 2017 which were incurred during the first quarter of the year ended October 31, 2018.

Depreciation and Amortization. Depreciation and amortization expense decreased $1.2 million for the twelve months ended October 31, 2019 compared to the same period in 2018, reflecting the run-off of depreciation expense related to existing assets and disposals during the period.

Asset Impairment Charge. Asset impairment charges of $74.6 million relate to goodwill impairment charges. For further information, see Note 5, "Goodwill and Intangible Assets" included elsewhere in this Annual Report on Form 10-K.

Unallocated Corporate & Other

	For the Years Ended October 31,			
	2019	2018	$ Change	Variance %
	(Dollars in millions)			
Net sales	$ (4.5)	$ (5.4)	$ 0.9	17%
Cost of sales (excluding depreciation and amortization)	(3.1)	(4.0)	0.9	(23)%
Selling, general and administrative	9.0	8.8	0.2	(2)%
Depreciation and amortization	0.6	0.6	—	—%
Operating loss	$ (11.0)	$ (10.8)	$ (0.2)	(2)%

Net Sales. Net sales for Unallocated Corporate & Other represents the elimination of inter-segment sales for the twelve months ended October 31, 2019 and 2018.

Cost of Sales. Cost of sales for Corporate & Other consists of the elimination of inter-segment sales, profit in inventory, and other costs.

Selling, General and Administrative. Our selling, general and administrative expenses increased $0.2 million, for the twelve months ended October 31, 2019 compared to the same period in 2018. This increase is attributable to $2.0 million of higher compensation expense primarily related to the valuations of our stock based compensation awards and higher severance expense of $1.9 million related to executive severance and headcount reduction, which were offset by $3.6 million of lower medical expenses due to reimbursement of certain medical expenses during the twelve months ended October 31, 2019.

Changes Related to Non-Operating Items:

Interest Expense. Interest expense decreased $1.5 million for the twelve months ended October 31, 2019 compared to the same period in 2018. The decrease in interest expense was primarily driven by the absence of $1.1 million of deferred financing fees which were incurred in 2018 related to amending the 2016 Credit Agreement. Excluding these fees, interest expense decreased slightly due to lower debt balances during 2019, partially offset by higher interest rates. The weighted average interest rate for borrowings outstanding for the twelve months ended October 31, 2019 was 4.07% compared with 3.76% for the twelve months ended October 31, 2018.

Other, net. The reduction in other, net of $1.1 million for the twelve months ended October 31, 2019 compared to the same period in 2018 relates primarily to a decrease in net pension service benefits.

Income Taxes. We recorded income tax expense of $10.8 million on a pre-tax loss of $36.0 million for the twelve months ended October 31, 2019, an effective rate of 30.0%, and income tax benefit of $0.8 million on pre-tax income of $25.8 million for the twelve months ended October 31, 2018, an effective benefit rate of 3.1%. The effective rate for the twelve months ended October 31, 2019 was primarily impacted by the fact that a majority of the $74.6 million asset impairment charge in the NA Cabinet Components segment did not generate a tax benefit, and a net charge of $1.2 million related to GILTI and FDII. The effective rate for the twelve months ended October 31, 2018 reflects the impact of the Act, which reduced our federal tax rate from 35.0% to 21.0% as of January 1, 2018, and resulted in a discrete tax benefit.

Liquidity and Capital Resources

Overview

Historically, our principal sources of funds have been cash on hand, cash flow from operations, and borrowings under our credit facilities. As of October 31, 2019, we had $30.9 million of cash and equivalents, $142.5 million outstanding under our credit facilities, $4.8 million of outstanding letters of credit and $15.9 million outstanding under capital leases. We had $177.7 million available for use under a revolving credit facility at October 31, 2019.

On July 29, 2016, we entered into a $450.0 million credit agreement comprising a $150.0 million Term Loan A and a $300.0 million revolving credit facility (collectively, the " 2016 Credit Agreement"), under which we borrowed $150.0 million and $150.0 million, respectively. The proceeds from the 2016 Credit Agreement, along with additional funding of $16.4 million of cash on hand, were used to repay outstanding borrowings under our prior credit facilities of $309.2 million, to pay a 1% prepayment call premium, to settle outstanding interest accrued, and to pay loan fees which totaled $2.8 million. In addition, we expensed $8.1 million to write-off unamortized deferred financing fees and $5.5 million of unamortized original issuer's discount associated with our prior credit facilities. The 2016 Credit Agreement was to mature in 2021 (5-year term) and required interest payments calculated, at our election and depending upon our Consolidated Leverage Ratio, at either a Base Rate plus an applicable margin (0.50% to 1.25%) or the LIBOR Rate plus an applicable margin (1.50% to 2.25%). We included deferred financing fees of $2.8 million as a contra-liability account, and were amortizing this balance straight-line over the term of the facility.

On October 18, 2018, we amended and restated the 2016 Credit Agreement by entering into a $325.0 million revolving credit facility (the "2018 Credit Facility"), under which we borrowed $205.0 million. The proceeds from the 2018 Credit Facility, along with additional funding of $10.0 million of cash on hand, were used to repay outstanding borrowings under the 2016 Credit Agreement of $213.5 million, to settle outstanding interest accrued under the prior facility, and to pay loan fees which totaled $1.0 million. In addition, we expensed $1.1 million to write-off unamortized deferred financing fees associated with the 2016 Credit Agreement. The 2018 Credit Facility matures in 2023 (5-year term) and requires interest payments calculated, at our election and depending upon our Consolidated Leverage Ratio, at either a Base Rate plus an applicable margin (0.25% to 1.00%) or the LIBOR Rate plus an applicable margin (1.25% to 2.00%). We included deferred financing fees of $1.5 million as a contra-liability account, and are amortizing this balance straight-line over the term of the facility.

The weighted average interest rate of borrowings outstanding for the twelve-month periods ended October 31, 2019 and 2018 was 4.07% and 3.76%, respectively. We were in compliance with our debt covenants as of October 31, 2019. For additional details of the Credit Agreement, see "Item 1A. Risk Factors" included elsewhere within this Annual Report on Form 10-K.

Analysis of Cash Flow

The following table summarizes our cash flow results for the years ended October 31, 2019, 2018 and 2017:

	Year Ended October 31,		
	2019	2018	2017
	(In millions)		
Cash flows provided by operating activities	$ 96.4	$ 104.6	$ 79.8
Cash flows used for investing activities	$ (23.6)	$ (26.1)	$ (32.6)
Cash flows used for financing activities	$ (71.3)	$ (65.8)	$ (55.1)

Operating Activities

Operating cash flow for the year ended October 31, 2019 declined by approximately $8.2 million compared to the year ended October 31, 2018. Unfavorable impacts to cash receipts as a result of a reduction in net income were largely offset by favorable working capital changes, including a lower accrued incentive, a favorable change in accounts payable and improved inventory management. Cash provided by operating activities increased $24.8 million for the year ended October 31, 2018 compared to the year ended October 31, 2017. Cash receipts were impacted favorably by higher net income along with a reduction of inventory in 2018 versus a build in 2017 and favorable changes in accounts payable and accrued liabilities.

Investing Activities

Cash used for investing activities for the year ended October 31, 2019 decreased $2.5 million compared to the year ended October 31, 2018 due to a $1.6 million decline in our investment in capital expenditures year-over-year, as well as $0.9 million of additional proceeds from the sale of capital assets. Cash used for investing activities decreased $6.5 million in 2018 compared to 2017. Our investment in capital expenditures declined $8.1 million during 2018, which partially offset a decrease of $1.5 million in proceeds from the sale of capital assets during the year.

At October 31, 2019, we had firm purchase commitments of approximately $6.9 million for the purchase or construction of capital assets. We plan to fund these capital expenditures through cash from operations or borrowings under our revolving credit facility.

Financing Activities

In 2019, cash used for financing activities was $71.3 million and related primarily to net debt repayments of $54.0 million, payment of dividends of $10.6 million, and share repurchases of $9.6 million. In 2018, our cash used for financing activities was $65.8 million and related primarily to share repurchases of $32.0 million, net debt repayments of $29.5 million, payment of dividends of $7.0 million, and other spending of $2.0 million, partially offset by funds received from the issuance of common stock in settlement of stock option exercises of $4.7 million. In 2017, cash used for financing activities was $55.1 million and related primarily to repayment of borrowings under our credit facility, an acquisition earn-out payment of $8.5 million, and payment of dividends of $5.5 million, partially offset by funds received from the issuance of common stock in settlement of stock option exercises of $8.0 million.

Liquidity Requirements

Our strategy for deploying cash is to invest in organic growth opportunities, develop our infrastructure, and make strategic acquisitions. Other uses of cash include paying cash dividends to our shareholders and repurchasing our own stock. We have historically invested cash and cash equivalents in commercial paper with terms of three months or less. We did not have any investments during the years ended October 31, 2019 and 2018. We maintain cash balances in foreign countries which totaled $9.8 million and $15.7 million as of October 31, 2019 and 2018. During the years ended October 31, 2019 and 2018, we repatriated $24.2 million and $2.8 million, respectively, of foreign earnings from our international divisions.

We believe that we have sufficient funds and adequate financial resources available to meet our anticipated liquidity needs. We expect to use our cash flow from operations to fund operations for the next twelve months and the foreseeable future. We believe these funds should be adequate to provide for our working capital requirements, capital expenditures, and dividends, while continuing to meet our debt service requirements.

Senior Credit Facility

We maintain our $325.0 million 2018 Credit Facility, which contains a revolving credit facility, with Wells Fargo Bank, National Association, as Agent, Swingline Lender and Issuing Lender, and Bank of America, N.A. serving as Syndication Agent. The 2018 Credit Facility has a five-year term, maturing on October 18, 2023, and requires interest payments calculated, at our election and depending upon our Consolidated Leverage Ratio, at either a Base Rate plus an applicable margin or the LIBOR Rate plus an applicable margin. At the time of the initial borrowing, the applicable rate was LIBOR + 1.50%. In addition, we are subject to commitment fees for the unused portion of the 2018 Credit Facility. The applicable margin and commitment fees range from 0.45% to 2.30%, depending upon the type of loan and consolidated leverage ratio.

The 2018 Credit Facility provides for revolving credit commitments for a minimum principal amount of $10.0 million, up to an aggregate amount of $150.0 million, subject to the lender's discretion to elect or decline the incremental increase. We can also borrow up to the lesser of $15.0 million or the revolving credit commitment, as defined, under a Swingline feature of the 2018 Credit Facility.

The 2018 Credit Facility contains a: (1) Consolidated Interest Coverage Ratio requirement whereby we must not permit the Consolidated Interest Coverage Ratio, as defined, to be less than 2.25 to 1.00, and (2) Consolidated Leverage Ratio requirement, whereby we must not permit the Consolidated Leverage Ratio, as defined, to be greater than 3.25 to 1.00.

In addition to maintaining these financial covenants, the 2018 Credit Facility also limits our ability to enter into certain business transactions, such as to incur indebtedness or liens, to acquire businesses or dispose of material assets, make restricted payments, pay dividends (limited to $20.0 million per year) and to conduct other transactions as further defined in the 2018 Credit Facility. Some of these limitations, however, do not take effect so long as total leverage is less than or equal to 2.75 to 1.00 and available liquidity exceeds $25 million. Substantially all of our domestic assets, with the exception of real property, are pledged as collateral for the 2018 Credit Facility.

Issuer Purchases of Equity Securities

On August 30, 2018, our Board of Directors approved a stock repurchase program that authorized the repurchase of up to $60.0 million worth of shares of our common stock. Repurchases under the new program will be made in open market transactions or privately negotiated transactions, subject to market conditions, applicable legal requirements and other relevant factors. The program does not have an expiration date or a limit on the number of shares that may be purchased. During the years ended

October 31, 2019 and 2018, we purchased 583,398 shares and 1,900,000 shares, respectively, at a cost of $9.6 million and $32.0 million, respectively, under this program.

Contractual Obligations and Commercial Commitments

The following table summarizes our known contractual obligations and commitments as of October 31, 2019:

	Payments Due by Period				
	Total	2020	2021-2022	2023-2024	Thereafter
Contractual Obligations:	(In thousands)				
Long-term debt, including interest[1]	$ 164,751	$ 5,560	$ 11,121	$ 148,070	$ —
Capital leases	15,865	1,050	1,691	1,736	11,388
Operating leases[2]	47,539	9,121	12,993	10,205	15,220
Unconditional purchase obligations[3]	18,683	18,683	—	—	—
Total contractual cash obligations[4]	$ 246,838	$ 34,414	$ 25,805	$ 160,011	$ 26,608

[1] Interest on our long-term debt was computed using rates in effect at October 31, 2019.

[2] Operating leases include facilities, light vehicles, forklifts, office equipment and other operating equipment.

[3] The unconditional purchase obligations consist of commitments to buy miscellaneous parts, inventory, and expenditures related to capital projects in progress.

[4] This table excludes tax reserves recorded in accordance with ASC Topic 740 "*Income Taxes*," as we are unable to reasonably estimate the timing of future cash flows related to these reserves.

During fiscal 2020, we expect to contribute approximately $3.7 million to our pension plan to maintain our 100% funding threshold and meet our minimum contribution requirements. Pension contributions beyond 2020 cannot be determined since the amount of any contribution is heavily dependent on the future economic environment and investment returns on pension plan assets. Obligations are based on current and projected obligations of the plans, performance of the plan assets, if applicable, and the timing and amount of funding contributions. At October 31, 2019, we have recorded a long-term liability for deferred pension and postretirement benefits totaling $13.3 million. We believe the effect of the plans on liquidity is not significant to our overall financial condition.

Our supplemental benefit plan and deferred compensation plan liabilities fluctuate based on changes in the market value of certain equity securities, including our common stock. As of October 31, 2019, our liability under the supplemental benefit plan and the deferred compensation plan was approximately $4.2 million and $3.8 million, respectively.

The following table reflects other commercial commitments or potential cash outflows that may result from a contingent event.

	Amount of Commitment Expiration per Period				
	Total	2020	2021-2022	2023-2024	Thereafter
Other Commercial Commitments:	(In thousands)				
Standby letters of credit	$ 4,800	$ 4,800	$ —	$ —	$ —

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements, as such term is defined in the rules promulgated by the SEC, that we believe would be material to investors and for which it is reasonably likely to have a current or future effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Effects of Inflation

We have experienced the impact of inflation on our cost of raw materials, labor, freight and overhead. While we utilize contractual price indexing along with periodic base price increases to minimize the effect of inflation on our results, we have not been able to fully recover all of the inflationary cost increases. We believe inflation has not had a significant effect on our earnings or financial position over the previous three fiscal years. We cannot provide assurance, however, that our results of operations and financial position will not be materially impacted by inflation in the future.

Critical Accounting Policies and Estimates

The preparation of our financial statements in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) requires us to make estimates and assumptions that affect the reported amount of assets, liabilities, revenues and expenses and related disclosures of contingent assets and liabilities. Estimates and assumptions about future events and their effects cannot be perceived with certainty. Estimates may change as new events occur, as more experience is acquired, as additional information becomes available and as our operating environment changes. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, and that we believe provide a basis for making judgments about the carrying value of assets and liabilities that are not readily available through open market quotes. We must use our judgment with regard to uncertainties in order to make these estimates. Actual results could differ from these estimates.

We believe the following are the most critical accounting policies used in the preparation of our consolidated financial statements as well as the significant judgments and uncertainties affecting the application of these policies. We consider an estimate to be critical if it is subjective and if changes in the estimate using different assumptions would result in a material impact to our financial position or results of operations.

Revenue from Contracts with Customers

On November 1, 2018, we adopted Accounting Standards Codification Topic 606, *Revenue from Contracts with Customers* (ASC Topic 606) using the modified retrospective method and applying ASC Topic 606 to all revenue contracts with customers. Results for reporting periods beginning on or after November 1, 2018 are presented under ASC Topic 606. In accordance with the modified retrospective approach, prior period amounts were not adjusted and are reported under ASC Topic 605, *Revenue Recognition*. As a result of adoption, there was not a material impact on our consolidated financial statements. We expect the impact of the adoption of ASC Topic 606 to continue to be immaterial to our net income on an ongoing basis.

Revenue Recognition

We recognize revenue that reflects the consideration we expect to receive for product sales when the promised items are transferred to customers. Revenue for product sales is recognized when control of the promised products is transferred to our customers, and we expect to be entitled to consideration in exchange for transferring those products. We account for a contract when a customer provides us with a firm purchase order that identifies the products to be provided, the payment terms for those services, and when collectability of the consideration due is probable.

Performance obligations

A performance obligation is a promise to provide the customer with a good or service. Our performance obligations include product sales, with each product included in a customer contract being recognized as a separate performance obligation. For contracts with multiple performance obligations, the standalone selling price of each product is generally readily observable.

Revenue from product sales is recognized at a point in time when the product is transferred to the customer, in accordance with the shipping terms, which is generally upon shipment. We estimate a provision for sales returns and warranty allowances to account for product returns related to general returns and product nonconformance.

Pricing and sales incentives

Pricing is established at or prior to the time of sale with our customers and we record sales at the agreed-upon net selling price, reflective of current and prospective discounts.

Practical expedients and exemptions

We generally expense incremental costs of obtaining a contract when incurred because the amortization period would be less than one year. Additionally, we do not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less.

Shipping and handling costs

We have elected to account for shipping and handling services as fulfillment services in accordance with ASC Topic 606 guidance; accordingly, freight revenue will be combined with the product deliverable rather than being accounted for as a distinct performance obligation within the terms of the agreement. Shipping and handling costs incurred by us for the delivery of goods to customers are considered a cost to fulfill the contract and are included in Cost of sales in the accompanying Condensed Consolidated Statements of Income.

Contract assets and liabilities

Deferred revenue, which is not significant, is recorded when we have remaining unsatisfied performance obligations for which we have received consideration.

Allowance for Doubtful Accounts

We record trade accounts receivable at billed amounts, less an allowance for doubtful accounts. This allowance is established to estimate the risk of loss associated with our trade receivables which may arise due to the inability of our customers to pay or due to changes in circumstances. The allowance is maintained at a level that we consider appropriate based on factors that affect collectability, including: (a) historical trends of write-offs, recoveries and credit losses; (b) the credit quality of our customers; and (c) projected economic and market conditions. Different assumptions or changes in economic circumstances could result in changes to the allowance. Our historical bad debt expense has approximated 0.3% of sales for the years ended October 31, 2019, 2018 and 2017. If bad debt expense increased by 1% of net sales, the impact on operating results would have been an increase in net loss of $6.8 million for the year ended October 31, 2019, and a decrease in net income of $9.2 million and $6.4 million for the years ended October 31, 2018 and 2017, respectively.

Business Combinations - Contingencies

We apply the acquisition method of accounting for business combinations in accordance with U.S. GAAP, which requires us to make use of estimates and judgments to allocate the purchase price paid for acquisitions to the fair value of the net assets and liabilities acquired. We use established valuation techniques and engage reputable valuation specialists to assist us with these valuations. However, there is a risk that we may not identify all pre-acquisition contingencies or that our estimates may not reflect the actual results when realized. We utilize a reasonable measurement period to record any adjustment related to the opening balance sheet (generally, less than one year). After the measurement period, changes to the opening balance sheet can result in the recognition of income or expense as period costs. To the extent these items stem from contingencies that existed at the balance sheet date, but are contingent upon the realization of future events, the cost is charged to expense at the time the future event becomes known. If our purchase accounting estimates are not correct, or if we do not recognize contingent assets or liabilities accurately, we may incur losses.

Impairment or Disposal of Long-Lived Assets

Property, Plant and Equipment and Intangible Assets with Defined Lives

We make judgments and estimates in conjunction with the carrying value of our long-term assets, including property, plant and equipment, and identifiable intangibles. These judgments may include the basis for capitalization, depreciation and amortization methods and the useful lives of the underlying assets. In accordance with U.S. GAAP, we review the carrying values of these assets for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. We determine that the carrying amount is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. If the carrying value exceeds the sum of the undiscounted cash flows and after considering alternate uses for the asset, an impairment charge would be recorded in the period in which such review is performed. We measure the impairment loss as the amount by which the carrying amount of the long-lived asset exceeds its fair value. Fair value is determined by reference to quoted market prices in active markets, if available, or by calculating the discounted cash flows associated with the use and eventual disposition of the asset. Therefore, if there are indicators of impairment, we are required to make long-term forecasts of our future revenues and costs related to the assets subject to review. Forecasts require assumptions about demand for our products and future market conditions. Although there may be no indicators of impairment in the current period, unanticipated changes to assumptions or circumstances in future periods could result in an impairment charge in the period of the change. No impairment charges were incurred with regard to our property, plant and equipment for the years ended October 31, 2019, 2018 and 2017.

We monitor relevant circumstances, including industry trends, general economic conditions, and the potential impact that such circumstances might have on the valuation of our identifiable intangibles. Events and changes in circumstances that may cause a triggering event and necessitate such a review include, but are not limited to: a decrease in sales for certain customers, improvements or changes in technology, and/or a decision to phase-out a trademark or trade name. Such events could negatively impact the carrying value of our identifiable intangibles. It is possible that changes in such circumstances or in the numerous variables associated with the judgments, assumptions, and estimates made by us in assessing the appropriate valuation of our identifiable intangibles could require us to further write down a portion of our identifiable intangibles and record related non-cash impairment charges in the future. We apply a variety of techniques to establish the carrying value of our intangible assets, including the relief from royalty and excess current year earnings methods.

During October 2016 and continuing throughout 2017, we determined that a triggering event occurred which necessitated a review of our long-term assets as prescribed above (expected reduction in volume for our U.S. vinyl business and results below our forecasts for Woodcraft). Based on an undiscounted cash flow analysis, we determined that our property, plant and equipment and defined-lived intangible assets were not impaired. However, with regard to our U.S. vinyl business, we recorded a change in accounting estimate associated with shortening the remaining useful lives of certain property, plant and equipment to be retired as part of the announced closures of several plants. We recognized incremental depreciation expense of $4.3 million in 2017 as a result of the change in estimates. In addition, we shortened the life of several defined-lived intangible assets, which resulted in the recognition of incremental amortization expense of $1.9 million for the year ended October 31, 2017. There have been no impairments or related expenses of property, plant and equipment and defined-lived intangibles during the year ended October 31, 2019 and 2018.

Goodwill

We use the acquisition method to account for business combinations and, to the extent that the purchase price exceeds the fair value of the net assets acquired, we record goodwill. In accordance with U.S. GAAP, we are required to evaluate our goodwill at least annually. We perform our annual goodwill assessment as of August 31, or more frequently if indicators of impairment exist. The first step in our annual goodwill assessment is to perform the optional qualitative assessment allowed by ASC Topic 350 “Intangibles - Goodwill and Other” (ASC 350). In our qualitative assessment, we evaluate relevant events or circumstances to determine whether it is more likely than not (i.e., greater than 50%) that the fair value of a reporting unit is less than its carrying amount. If we determine that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, ASC 350 requires us to compare the fair value of such reporting unit to its carrying value including goodwill. To determine the fair value of our reporting units, we use multiple valuation techniques including a discounted cash flow analysis, using the applicable weighted average cost of capital, in combination with a market approach that utilizes market multiples and a selection of guideline public companies. This test requires us to make assumptions about the future growth of our business and the market in general, as well as other variables such as the level of investment in capital expenditure, growth in working capital requirements and the terminal or residual value of our reporting units beyond the periods of estimated annual cash flows. We use a third-party valuation firm to assist us with this analysis. If the fair value of each reporting unit exceeds its carrying value, no action is required. Otherwise, an impairment loss is recorded to the extent that the carrying amount of the reporting unit including goodwill exceeds the fair value of that reporting unit. We believe the estimates and assumptions used in our impairment assessment are reasonable based on available market information, but variations in any of the assumptions could result in materially different calculations of fair value and determinations of whether or not an impairment is indicated during current or future periods.

During the second quarter of 2019, our reporting unit included in our NA Cabinet Components segment experienced financial performance for the year to date period ended March 31, 2019 that was below our budget. As a result, we developed a new long-range forecast for this reporting unit that was below its previous long-range forecast as a result of an industry-wide shift from semi-custom cabinets to stock cabinets. We determined that the combination of i) actual financial results below planned performance, ii) a downward revision of the long-range forecast, and iii) the historical narrow margin of fair value over carrying value in previous annual and interim goodwill assessments represented a triggering event that would more likely than not indicate that the carrying value of this reporting unit was greater than its fair value. Therefore, we performed a quantitative impairment test of the goodwill balance at March 31, 2019. The quantitative impairment test was conducted using multiple valuation techniques, including a discounted cash flow analysis, which utilizes Level 3 fair value inputs, and resulted in an asset impairment charge of $30.0 million during the second quarter of 2019.

At our annual testing date, August 31, 2019, we had five reporting units with goodwill balances: two reporting units included in our NA Fenestration operating segment, two reporting units included in our EU Fenestration operating segment, and one reporting unit included in our NA Cabinet Components operating segment. We performed a qualitative assessment of the two reporting units in the NA Fenestration segment and the two reporting units in the EU Fenestration segment. This review included an analysis of historical goodwill test results, operating results relative to forecast, projected results over the next five years, and other measures and concluded that there were no indicators of potential impairment associated with these reporting units. Therefore, no additional testing was deemed necessary for the reporting units in the NA Fenestration segment and the EU Fenestration segment. Also, at our annual testing date, we performed a quantitative assessment of the reporting unit in our NA Cabinet Components segment primarily due to the recent impairment of goodwill during the second quarter of 2019 and the history of a narrow margin of fair value above carrying value in quantitative assessments performed in prior years. We determined that the fair value of this reporting unit exceeded its carrying value by approximately 5%. At that date, we concluded that no impairment was necessary.

After the annual assessment date and prior to our fiscal year end of October 31, 2019, the reporting unit in our NA Cabinet Components segment was notified about a change in strategy at one of our large customers that may result in lower sales volumes in the future. In addition, we continued to experience lower-than-expected volumes as a result of the ongoing shift in demand from semi-custom cabinets to stock cabinets. Based on this information, we updated our long-range forecast for this reporting unit to reflect the expected volume declines. This revised long-range forecast was utilized to perform another quantitative impairment test of this reporting unit as of October 31, 2019, which resulted in an asset impairment charge of $44.6 million during the fourth quarter of 2019. As a result of the quantitative assessments performed in the second and fourth quarters of 2019, we recorded impairment charges totaling $74.6 million during the year ended October 31, 2019, reducing the goodwill balance applicable to the reporting unit included in our NA Cabinet Components operating segment from $113.7 million to $39.1 million.

Restructuring

We account for restructuring costs in accordance with U.S. GAAP, whereby we accrue for one-time severance benefits pursuant to an approved plan of restructuring at the communication date, when affected employees have been notified of the potential severance and sufficient information has been provided for the employee to calculate severance benefits, in the event the employee is involuntarily terminated. In addition, we accrue costs associated with the termination of contractual commitments including operating leases at the time the lease is terminated pursuant to the lease provisions or in accordance with another agreement with the landlord. Otherwise, we continue to recognize operating lease expense through the cease-use date. After the cease-use date, we determine if our operating lease payments are at market. We assume sublet of the facility at the market rate. To the extent our lease obligations exceed the fair value rentals, we discount to arrive at the present value and record a liability. If the facility is not sublet, we expense the amount of the lease in the current period until sublet. For other costs directly related to the restructuring effort, such as equipment moving costs, we expense in the period incurred.

In 2017, we incurred costs related to plant closures which were announced in 2016, including equipment moving costs, additional employee termination and severance costs, retirements and inventory adjustments, operating lease costs, accelerated amortization and depreciation costs, and equipment lease termination costs. In addition, we incurred costs related to the closure of a kitchen and bathroom cabinet door plant in Lansing, Kansas. Restructuring costs totaled $4.6 million for the year ended October 31, 2017. During the year ended October 31, 2018, we negotiated the exit from one of the vinyl extrusion plants, and the lease for the plant in Lansing, Kansas expired. During the years ended October 31, 2019 and 2018, we incurred $0.4 million and $1.5 million of restructuring costs related to these leases, and expect to continue to incur costs related to the remaining vinyl plant during fiscal 2020 until such time we are able to sublet or otherwise negotiate an exit from the facility.

Income Taxes

We operate in various jurisdictions and therefore our income tax expense relates to income taxes in the U.S., U.K., Canada, and Germany, as well as local and state income taxes. We recognize the effect of a change in tax rates in the period of the change. We record the estimated future tax effects of temporary differences between the tax basis of assets and liabilities and the amounts reported in our consolidated balance sheets, as well as net operating losses and tax credit carry forward. We evaluate the carrying value of our net deferred tax assets and determine if our business will generate sufficient future taxable income to realize the net deferred tax assets. We perform this review for recoverability on a jurisdictional basis, whereby we consider both positive and negative evidence related to the likelihood of realization of the deferred tax assets. The weight given to the positive and negative evidence is commensurate with the extent to which the evidence can be objectively verified. We evaluate recoverability based on an estimate of future taxable income using the long-term forecasts we use to evaluate long-lived assets, goodwill and intangible assets for impairment, taking into consideration the future reversal of existing taxable temporary differences and reviewing our current financial operations. In the event that our estimates and assumptions indicate we will not generate sufficient future taxable income to realize our deferred tax assets, we will record a valuation allowance, to the extent indicated, to reduce our deferred tax assets to their realizable value.

Annually, we evaluate our tax positions to determine if there have been any changes in uncertain tax positions or if there has been a lapse in the statute of limitations with regard to such positions. Our liability for uncertain tax positions at October 31, 2019 and 2018 totaled $0.6 million and related to certain state tax items regarding the interpretation of tax laws and regulations.

We believe we will have sufficient taxable income in the future to fully utilize our unreserved deferred tax assets recorded as of October 31, 2019. There is a risk that our estimates related to the future use of loss carry forwards and our ability to realize our deferred tax assets may not come to fruition, and that the results could materially impact our financial position and results of operations. We have recorded the benefit associated with the “patent box” deduction in the U.K. with regard to our operations at HLP. We believe that it is more likely than not that our deduction with regard to this position would be sustained upon examination. In addition, we recorded the effect of a statutory change in the deferred tax rate from 19% to 17% in the U.K. in 2017 results, which provided a discrete tax benefit of $1.0 million during the period. Our deferred tax assets at October 31, 2019 and 2018 totaled $21.0 million and $19.8 million, respectively, against which we had recorded a valuation allowance of $1.6 million and $1.3 million, respectively.

Insurance

We manage our costs of workers’ compensation, group medical, property, casualty and other liability exposures through a combination of self-insurance retentions and insurance coverage with third-party carriers. Liabilities associated with our portion of this exposure are not discounted. We estimate our exposure by considering various factors which may include: (1) historical claims experience, (2) severity factors, (3) estimated claims incurred but not reported and (4) loss development factors, which are used to estimate how claims will develop over time until settled or closed. While we consider a number of factors in preparing our estimate of risk exposure, we must use our judgment to determine the amounts to accrue in our financial statements. Actual claims can differ significantly from estimated liabilities if future claims experience differs from historical experience, and if we determine that our assumptions used for analysis or our development factors are flawed. We do not recognize insurance recoveries until any contingencies relating to the claim have been resolved.

Inventory

We record inventory at the lower of cost or market value. Inventories are valued using the first-in first-out (FIFO) method. In the second quarter of 2019, we changed the method of inventory costing for certain inventory in two plants included in our North American Fenestration reportable business segment to the FIFO method from the last-in first-out (LIFO) method. We utilize the FIFO method to determine costs at all of our other operating locations. We believe that the FIFO method is preferable as it provides uniformity of inventory valuation across our global operations, aligns with a majority of our peers which use FIFO as their only inventory valuation method, and provides better matching of revenues and expenses. The impact of this change in accounting principle on the financial statements for each period presented is further explained in Note 3, "Inventories", contained elsewhere herein this Annual Report on Form 10-K. Fixed costs related to excess manufacturing capacity have been expensed in the period, and therefore, are not capitalized into inventory. Inventory quantities are regularly reviewed and provisions for excess or obsolete inventory are recorded primarily based on our forecast of future demand and market conditions. Significant unanticipated changes to our forecasts or changes in the net realizable value of our inventory would require a change in the provision for excess or obsolete inventory. For the years ended October 31, 2019, 2018 and 2017, our inventory reserves are approximately 5%, 6%, and 5% of gross inventory, respectively. Assuming an increase in obsolescence equal to 1% of gross inventory, net loss would have increased by $0.5 million for the year ended October 31, 2019, and net income would have been reduced by $1.0 million and $0.7 million for the years ended October 31, 2018 and 2017, respectively.

Retirement Plans

We sponsor a defined benefit pension plan and an unfunded postretirement plan that provides health care and life insurance benefits for a limited pool of eligible retirees and dependents. The measurement of liabilities related to these plans is based on our assumptions related to future events, including expected return on plan assets, rate of compensation increases, and healthcare cost trend rates. The discount rate reflects the rate at which benefits could be effectively settled on the measurement date. We determine our discount rate using a RATE: Link Model whereby target yields are developed from bonds across a range of maturity points, and a curve is fitted to those targets. Spot rates (zero coupon bond yields) are developed from the curve and used to discount benefit payments associated with each future year. This model assumes spot rates will remain level beyond the 30-year point. We determine the present value of plan benefits by applying the discount rates to projected benefit cash flows. Actual pension plan asset investment performance, as well as other economic experience such as discount rate and demographic experience, will either reduce or increase unamortized pension losses at the end of any fiscal year, which ultimately affects future pension costs.

As of October 31, 2019, our projected benefit obligation (PBO) and accumulated benefit obligation (ABO) exceeded the fair value of the plan assets by $13.1 million and $12.1 million, respectively. As a comparison, our PBO and ABO exceeded the fair value of plan assets by $3.9 million and $3.3 million, respectively, as of October 31, 2018. During fiscal 2019, we contributed $0.7 million to the pension plan to meet minimum contribution requirements. We expect to continue to fund at this level for fiscal 2020. Expected contributions are dependent on many variables, including the variability of the market value of the assets as compared to the obligation and other market or regulatory conditions. In addition, we take into consideration our business investment opportunities and our cash requirements. Accordingly, actual funding may differ greatly from current estimates. As of October 31, 2019, a 1% decrease in the discount rate would result in an increase in the PBO of $5.7 million.

Under U.S. GAAP, we are not required to immediately recognize the effects of a deviation between actual and assumed experience under our pension plan, or to revise our estimate as a result. This approach allows the favorable and unfavorable effects that fall within an acceptable range to be netted and disclosed as an unrecognized gain or loss. As of October 31, 2019 and 2018, a net actuarial loss of $6.7 million and $3.0 million, respectively, was included in our accumulated other comprehensive (loss) income. There were no net prior service costs or transition obligations for the years ended October 31, 2019 and 2018. The effect on fiscal years after 2019 will depend on the actual experience of the plans.

Mortality assumptions used to determine the obligations for our pension plans are based on the RP-2006 base mortality table with MP-2018 mortality improvement scale.

Stock-Based Compensation

We have issued stock-based compensation in the form of stock options to directors, employees and officers, and non-vested restricted stock awards to certain key employees and officers. We apply the provisions of ASC Topic 718 "*Compensation - Stock Compensation*" (ASC 718), to determine the fair value of stock option awards on the date of grant using the Black-Scholes valuation model. We recognize the fair value as compensation expense on a straight-line basis over the requisite service period of the award based on awards ultimately expected to vest. Stock options granted to directors vest immediately while the stock options granted to our employees and officers typically vest ratably over a three-year period with service and continued employment as the vesting conditions. For new option grants to retirement-eligible employees, we recognize expense and vest immediately upon grant, consistent with the retirement vesting acceleration provisions of these grants. For employees near retirement age, we amortize such grants over the period from the grant date to the retirement-eligibility date if such period is shorter than the standard vesting schedule. For grants of non-vested restricted stock, we calculate the compensation expense at the grant date as the number of shares granted multiplied by the closing stock price of our common stock on the date of grant. This expense is recognized ratably over the vesting period. Our non-vested restricted stock grants to officers and employees cliff vest over a three-year period with service and continued employment as the only vesting criteria. Our fair value determination of stock-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, our expected stock price volatility over the term of the awards, actual and projected employee stock option exercise behavior over the expected term, our dividend rate, risk-free rate and expectation with regards to forfeitures. Option-pricing models were developed for use in estimating the value of traded options that have no vesting or hedging restrictions and are fully transferable. Because our employee stock options have certain characteristics that are significantly different from traded options, and because changes in the subjective assumptions can materially affect the estimated value, the valuation models may not provide an accurate measure of the fair value of our employee stock options. Accordingly, that value may not be indicative of the fair value observed in a willing buyer/willing seller market transaction.

We have granted other awards which are linked to the performance of our common stock, but will settle in cash rather than the issuance of shares of our common stock. The value of these awards fluctuates with changes in our stock price, with the resulting gains or losses reflected in the period of the change. We have recorded current and non-current liabilities related to these awards reflected in our consolidated balance sheets at October 31, 2019 and 2018, included elsewhere within this Annual Report on Form 10-K.

In addition, we have granted performance share units which settle in cash and shares upon vesting. The awards granted during the years ended October 31, 2018 and 2017 have vesting criteria based on a market condition (relative total shareholder return) and an internal performance condition (earnings per share growth). The award granted during the year ended October 31, 2019 utilizes return on net assets as the vesting condition and settles in cash. We utilize a Monte Carlo simulation model to value the market condition and our stock price on the date of grant to value the internal performance condition. We bifurcate the liability and equity portion of the awards (amounts expected to settle in cash and shares, respectively) and recognize expense ratably over the vesting period of three years. We estimate that the performance measures will be met and shares will vest at target until the year of settlement (third year of cliff vesting). As of October 31, 2019, we expect 56,103 performance share awards to vest, of which 28,051 would be paid in our common stock and 28,051 would settle in cash.

We also awarded performance restricted stock units to key employees and officers in December 2018 and 2017. These awards cliff vest upon a three-year service period with the absolute total shareholder return of our common stock over this three-year term as the vesting criteria. The number of performance restricted stock units earned is variable depending on the metric achieved, and the settlement method is 100% in our common stock, with accrued dividends paid in cash at the time of vesting, assuming the shares had been outstanding throughout the performance period. To value the performance restricted stock units, we utilize a Monte Carlo simulation model to arrive at a grant-date fair value. This amount will be adjusted for forfeitures and expensed over the three-year term of the award with a credit to additional paid-in-capital. Similar to performance shares, the performance restricted stock units are not considered outstanding shares, do not have voting rights, and are excluded from diluted weighted-average shares used to calculate earnings per share until the performance criteria is probable to result in the issuance of contingent shares.

Recent Accounting Pronouncements

In June 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2016-13, *Financial Instruments - Credit Losses (Topic 326).* This amendment replaces the incurred loss impairment methodology in current U.S. GAAP and requires that financial assets be measured on an amortized cost basis and presented at the net amount expected to be collected. This new methodology reflects expected credit losses (rather than probable credit losses) and requires consideration of a broader range of supportable information when determining these estimated credit losses, including relevant experience, current conditions and supportable forecasts to determine collectability. In addition, the amendment provides guidance with regard to the use of an allowance for credit losses for purchased financial assets and available-for-sale debt securities. This amendment becomes effective for fiscal years beginning after December 15, 2019, including interim periods within that fiscal year. We expect to adopt this amendment during fiscal 2021, with no material impact on our consolidated financial statements.

In February 2016, the FASB established Topic 842, *Leases*, by issuing ASU No. 2016-02, which requires lessees to recognize leases on-balance sheet and disclose key information about leasing arrangements. The new standard establishes a right-of-use model (ROU) that requires a lessee to recognize a ROU asset and lease liability on the balance sheet for all leases with a term longer than 12 months. Leases will be classified as finance or operating, with classification affecting the pattern and classification of expense recognition in the income statement.

The new standard is effective for us on November 1, 2019, with early adoption permitted. We plan to adopt using a modified retrospective transition approach, applying the new standard to all leases existing at the date of initial application. We expect to adopt the new standard on November 1, 2019 and use the effective date as our date of initial application. Consequently, financial information will not be updated and the disclosures required under the new standard will not be provided for dates and periods prior to November 1, 2019.

The new standard provides a number of optional practical expedients in transition. We will elect all of the new standard’s available transition practical expedients.

This standard will have a material effect on our financial statements. The most significant effects on our financial statements relate to the recognition of new ROU assets and lease liabilities on our balance sheet for our operating leases and providing significant new disclosures about our leasing activities. We do not expect a significant change in our leasing activities between now and adoption.

On adoption, we will recognize additional operating liabilities ranging from $40.0 million to $45.0 million, with corresponding ROU assets of the same amount based on the present value of the remaining minimum rental payments under current leasing standards for existing operating leases.

The new standard also provides practical expedients for an entity’s ongoing accounting. We will elect the short-term lease recognition exemption for all leases that qualify. This means, for those leases that qualify, we will not recognize ROU assets or lease liabilities, and this includes not recognizing ROU assets or lease liabilities for existing short-term leases of those assets in transition. We also currently expect to elect the practical expedient to not separate lease and non-lease components for all of our leases.

In August 2018, the FASB issued ASU No. 2018-14, *Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715-20).* This amendment modifies the disclosure requirements for employers that sponsor defined benefit pensions or other postretirement plans. Specifically, the amendment removes disclosures which were no longer considered cost beneficial, clarifies certain disclosure requirements, and adds disclosures identified as relevant. This amendment becomes effective for fiscal years beginning after December 15, 2020, including interim periods within that fiscal year. We expect to adopt this amendment during fiscal 2022, with no impact on our consolidated financial statements.

Item 7A. *Quantitative and Qualitative Disclosures About Market Risk.*

The following discussion of our exposure to various market risks contains “forward looking statements” regarding our estimates, assumptions and beliefs concerning our exposure. Although we believe these estimates and assumptions are reasonable in light of information currently available to us, we cannot provide assurance that these estimates will not materially differ from actual results due to the inherent unpredictability of interest rates, foreign currency rates and commodity prices as well as other factors. We do not use derivative financial instruments for speculative or trading purposes.

Interest Rate Risk

Our outstanding debt bears interest at variable rates and accordingly is sensitive to changes in interest rates. Based upon the balances of the variable rate debt at October 31, 2019, a hypothetical 1.0% increase or decrease in interest rates could result in approximately $1.4 million of additional pre-tax charges or credit to our operating results. This sensitivity pertains primarily to our outstanding revolving credit facility borrowings outstanding under the 2018 Credit Facility as of October 31, 2019.

Foreign Currency Rate Risk

Our international operations have exposure to foreign currency rate risks, primarily due to fluctuations in the Euro, the British Pound Sterling and the Canadian Dollar. From time to time, we enter into foreign exchange contracts associated with our operations to manage a portion of the foreign currency rate risk.

The notional and fair market values of these positions at October 31, 2019 and 2018, were as follows:

		Notional as indicated		Fair Value in $	
		October 31, 2019	October 31, 2018	October 31, 2019	October 31, 2018
Foreign currency exchange derivatives:			(In thousands)		
Buy EUR, Sell USD	EUR	301	455	$ 1	$ 1
Sell CAD, Buy USD	CAD	405	229	2	—
Sell GBP, Buy USD	GBP	73	22	—	—
Buy EUR, Sell GBP	EUR	57	34	—	—
Buy USD, Sell EUR	USD	13	12	—	—

At October 31, 2019 and 2018, we held foreign currency derivative contracts hedging cross-border intercompany and commercial activity for our insulating glass spacer business. Although these derivatives hedge our exposure to fluctuations in foreign currency rates, we do not apply hedge accounting and therefore, the change in the fair value of these foreign currency derivatives is recorded directly to other income and expense in the accompanying consolidated statements of (loss) income. To the extent the gain or loss on the derivative instrument offsets the gain or loss from the remeasurement of the underlying foreign currency balance, changes in exchange rates should have no effect. See Note 12, "Derivative Instruments", contained elsewhere herein this Annual Report on Form 10-K.

During October 2018, we settled an unhedged foreign currency intercompany loan which facilitated the HLP acquisition. For the year ended October 31, 2018, we realized a loss of less than $0.1 million related to this foreign currency exposure. For the year ended October 31, 2017, we recorded a foreign currency gain of $0.7 million, of which $0.5 million was realized.

On June 23, 2016, voters in the U.K. voted for the U.K. to exit the E.U. (referred to as Brexit). The U.K. is currently due to leave the E.U. on January 31, 2020, but the actual timing, terms of its withdrawal and the nature of its future with the E.U. are still being debated. Since the 2016 vote, the primary impact on our financial performance has been related to foreign currency fluctuations of the British Pound Sterling. This fluctuation has driven foreign currency translation impacts, as well as raw material cost increases from upstream suppliers located outside of the U.K.

Given the lack of comparable precedent, it is difficult for us to predict the future impacts on our U.K. based operations, which accounted for approximately 15% of our total sales for the year ended October 31, 2019. Due to the fact that we manufacture and sell a majority of our U.K. products within the U.K., there is minimal risk to our ability to physically deliver goods and complete sales. As such, we believe we are well positioned within the U.K. to respond to potential changes to underlying demand as a result
of the final Brexit outcome. The primary focus for our U.K. operations centers on the availability and pricing of raw materials. While we source the majority of our raw materials from within the U.K., many of the primary upstream raw materials our vendors utilize are being sourced from outside of the U.K., which could expose us to cross-border issues and raw material price impacts due to foreign currency volatility. If the U.K. exits the E.U. without an agreement (referred to as a hard Brexit), there could be complete closure of the U.K. border which could have widespread negative ramifications for the U.K. We do not expect a full closure to occur and instead assume at a minimum that trading with certain countries will continue uninterrupted. Since we purchase the same raw materials utilized in our U.K. facilities at our other non-U.K. facilities and source raw materials from multiple countries, we believe we are prepared to utilize our existing Quanex-wide supply infrastructure to minimize potential supply disruptions as much as possible.

Commodity Price Risk

We purchase polyvinyl resin (PVC) as the significant raw material consumed in the manufacture of vinyl extrusions. We have a monthly resin adjuster in place with a majority of our customers and our resin supplier that is adjusted based upon published industry indices for resin prices for the prior month. This adjuster effectively shares the base pass-through price changes of PVC with our customers commensurate with the market at large. Our long-term exposure to changes in PVC prices is somewhat mitigated due to the contractual component of the resin adjuster program. In addition, there is a level of exposure to short-term volatility due to the one month lag.

We also charge our customers a surcharge related to petroleum-based raw materials. The surcharge is intended to offset the rising cost of products which are highly correlated to the price of oil including butyl and other oil-based raw materials. The surcharge is in place with the majority of our customers who purchase these products and is adjusted monthly based upon the 90-day average published price for Brent crude. The oil-based raw materials that we purchase are subject to similar pricing schemes. As such, our long-term exposure to changes in oil-based raw material prices is significantly reduced under this surcharge program.

Similarly, Woodcraft includes a surcharge provision in the majority of its customer arrangements to insulate against significant fluctuations in the price for various hardwood products used as the primary raw material for kitchen and bathroom cabinet doors. Like our vinyl extrusion business, we are exposed to short-term volatility in wood prices due to a lag in the timing of price updates which generally could extend for up to three months.

Item 8. ***Financial Statements and Supplementary Data.***

INDEX TO FINANCIAL STATEMENTS

Quanex Building Products Corporation

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
Quanex Building Products Corporation

Opinion on the financial statements

We have audited the accompanying consolidated balance sheets of Quanex Building Products Corporation (a Delaware corporation) and subsidiaries (the "Company") as of October 31, 2019 and 2018, the related consolidated statements of (loss) income, comprehensive (loss) income, stockholders' equity, and cash flows for each of the three years in the period ended October 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of October 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended October 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of October 31, 2019, based on criteria established in the 2013 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), and our report dated December 12, 2019 expressed an unqualified opinion.

Basis for opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical audit matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which they relate.

Goodwill impairment of the reporting unit included in the North American Cabinet Components operating segment

As described further in Note 1 to the Company's financial statements, the Company is required to evaluate goodwill for impairment annually or more frequently if indicators of impairment exist. The Company performs its annual goodwill impairment test as of August 31. The Company determined that indicators of impairment exist as of March 31, 2019 and then subsequently on October 31, 2019 for the reporting unit included in the North American ("NA") Cabinet Components operating segment. As such, the Company estimated the fair value of this reporting unit to determine if the fair value was less than the carrying amount. As a result of these assessments, the Company recognized goodwill impairments of $30.0 million at March 31, 2019 and $44.6 million at October 31, 2019. We identified the estimation of the fair value of the reporting unit included in the NA Cabinet Components operating segment as a critical audit matter.

The principal considerations for our determination that the goodwill impairment of the reporting unit included in the NA Cabinet Components operating segment is a critical audit matter include the significant judgments and assumptions management makes to estimate the fair value of the reporting unit for purposes of measuring the impairment of goodwill. Auditing the fair value of the reporting unit involved a high degree of auditor judgment, subjectivity and audit effort in evaluating management's significant assumptions, including future revenues, earnings and cash flows, expected growth rates, terminal growth rates, discount rates, guideline public companies and market multiples. In addition, the audit effort involved the use of valuation specialists to assist in performing these procedures and evaluating the audit evidence obtained.

Our audit procedures related to the estimation of the fair value of the reporting unit included in the NA Cabinets Components operating segment included the following, among others.

- We tested the effectiveness of controls over goodwill impairment including those over the determination of fair value, including controls relating to management's development of forecasts of future revenues, earnings and cash flows, discount rates, market multiples and selection of guideline public companies.
- We evaluated management's ability to accurately forecast revenues, earnings and cash flows by comparing actual results to management's historical forecasts
- We evaluated the reasonableness of management's forecasts of revenues, earnings and cash flows by comparing the forecasts to historical revenues, earnings and cash flows, communications to the Board of Directors, press releases and industry reports.
- We utilized our valuation specialists to evaluate:
  - The discount rate, including the testing of underlying source information and the mathematical accuracy of the calculations, and developing a range of independent estimates and comparing those to the discount rates selected by management.
  - Market multiples by evaluating the selected comparable publicly traded companies and the adjustments made for difference in growth prospects and risk profiles between the reporting unit and the comparable publicly traded companies. We tested the underlying source information and mathematical accuracy of calculations.

/s/ GRANT THORNTON LLP

We have served as the Company's auditor since 2014.

Houston, Texas
December 12, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
Quanex Building Products Corporation

Opinion on internal control over financial reporting
We have audited the internal control over financial reporting of Quanex Building Products Corporation (a Delaware corporation) and subsidiaries (the “Company”) as of October 31, 2019, based on criteria established in the 2013 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of October 31, 2019, based on criteria established in the 2013 Internal Control-Integrated Framework issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the consolidated financial statements of the Company as of and for the year ended October 31, 2019, and our report dated December 12, 2019 expressed an unqualified opinion on those financial statements.

Basis for opinion
The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and limitations of internal control over financial reporting
A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ GRANT THORNTON LLP

Houston, Texas
December 12, 2019

MANAGEMENT'S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management of the Company, including the Chief Executive Officer and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended. The Company's internal control system was designed to provide reasonable assurance to management and the Company's Board of Directors regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

All internal control systems, no matter how well designed, have inherent limitations. A system of internal control may become inadequate over time because of changes in conditions, or deterioration in the degree of compliance with the policies or procedures. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Management assessed the effectiveness of the Company's internal control over financial reporting as of October 31, 2019 using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control — Integrated Framework (2013).* Based on this assessment, management has concluded that, as of October 31, 2019, the Company's internal control over financial reporting was effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles based on such criteria.

Grant Thornton LLP, the Company's independent registered public accounting firm, has issued an attestation report on the effectiveness of the Company's internal control over financial reporting. This report appears on page 40.

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QUANEX BUILDING PRODUCTS CORPORATION
CONSOLIDATED BALANCE SHEETS
As of October 31, 2019 and 2018

	October 31, 2019	October 31, 2018
	(In thousands, except share amounts)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 30,868	$ 29,003
Accounts receivable, net of allowance for doubtful accounts of $393 and $325	82,946	84,014
Inventories, net	67,159	70,730
Prepaid and other current assets	9,353	7,296
Total current assets	190,326	191,043
Property, plant and equipment, net of accumulated depreciation of $317,568 and $288,607	193,600	201,370
Goodwill	145,563	219,627
Intangible assets, net	107,297	121,919
Other assets	8,324	9,255
Total assets	$ 645,110	$ 743,214
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 63,604	$ 52,389
Accrued liabilities	39,221	45,968
Income taxes payable	6,183	2,780
Current maturities of long-term debt	746	1,224
Total current liabilities	109,754	102,361
Long-term debt	156,414	209,332
Deferred pension and postretirement benefits	13,322	4,218
Deferred income taxes	19,363	17,510
Liability for uncertain tax positions	556	606
Other liabilities	15,514	13,965
Total liabilities	314,923	347,992
Commitments and contingencies		
Stockholders’ equity:		
Preferred stock, no par value, shares authorized 1,000,000; issued and outstanding - none	—	—
Common stock, $0.01 par value, shares authorized 125,000,000; issued 37,370,402 and 37,433,817 respectively; outstanding 33,021,789 and 33,339,032, respectively	374	374
Additional paid-in-capital	254,673	254,678
Retained earnings	185,703	243,904
Accumulated other comprehensive loss	(33,817)	(30,705)
Less: Treasury stock at cost, 4,348,613 and 4,094,785 shares, respectively	(76,746)	(73,029)
Total stockholders’ equity	330,187	395,222
Total liabilities and stockholders' equity	$ 645,110	$ 743,214

See notes to consolidated financial statements.

QUANEX BUILDING PRODUCTS CORPORATION
CONSOLIDATED STATEMENTS OF (LOSS) INCOME
For the Years Ended October 31, 2019, 2018 and 2017

	Year Ended October 31,		
	2019	2018	2017
	(In thousands, except per share amounts)		
Net sales	$ 893,841	$ 889,785	$ 866,555
Cost and expenses:			
Cost of sales (excluding depreciation and amortization)	694,420	697,022	672,488
Selling, general and administrative	101,292	103,758	98,085
Restructuring charges	370	1,486	4,550
Depreciation and amortization	49,586	51,822	57,495
Asset impairment charges	74,600	—	—
Operating (loss) income	(26,427)	35,697	33,937
Non-operating (expense) income:			
Interest expense	(9,643)	(11,100)	(9,595)
Other, net	116	1,156	1,160
(Loss) income before income taxes	(35,954)	25,753	25,502
Income tax (expense) benefit	(10,776)	800	(6,819)
Net (loss) income	$ (46,730)	$ 26,553	$ 18,683
Basic (loss) earnings per common share	$ (1.42)	$ 0.77	$ 0.55
Diluted (loss) earnings per common share	$ (1.42)	$ 0.76	$ 0.54
Weighted-average common shares outstanding:			
Basic	32,960	34,701	34,230
Diluted	32,960	35,025	34,837
Cash dividends per share	$ 0.32	$ 0.20	$ 0.16

See notes to consolidated financial statements.

QUANEX BUILDING PRODUCTS CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME

For the Years Ended October 31, 2019, 2018 and 2017

	Year Ended October 31,		
	2019	2018	2017
		(In thousands)	
Net (loss) income	$ (46,730)	$ 26,553	$ 18,683
Other comprehensive (loss) income:			
Foreign currency translation adjustments gain (loss)	1,864	(6,640)	11,524
Change in pension from net unamortized (loss) gain (pretax)	(6,572)	2,253	3,462
Change in pension from net unamortized (loss) gain tax benefit (expense)	1,596	(1,242)	(1,297)
Total other comprehensive (loss) income, net of tax	(3,112)	(5,629)	13,689
Comprehensive (loss) income	$ (49,842)	$ 20,924	$ 32,372

See notes to consolidated financial statements.

QUANEX BUILDING PRODUCTS CORPORATION
CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
For the Years Ended October 31, 2019, 2018 and 2017

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock		Total Stockholders' Equity
	Shares	Amount				Shares	Amount	
	(In thousands, except share amounts)							
Balance at October 31, 2016	37,560,249	$ 376	$ 254,540	$ 214,892	$ (38,765)	(3,339,753)	$ (62,367)	$ 368,676
Net income	—	—	—	18,683	—	—	—	18,683
Foreign currency translation adjustment	—	—	—	—	11,524	—	—	11,524
Change in pension from net unamortized gain (net of tax expense of $1,297)	—	—	—	—	2,165	—	—	2,165
Common dividends ($0.16 per share)	—	—	—	(5,516)	—	—	—	(5,516)
Expense related to stock-based compensation	—	—	5,189	—	—	—	—	5,189
Stock options exercised	—	—	(76)	(1,451)	—	507,660	9,480	7,953
Tax benefit from share-based compensation	—	—	(4)	—	—	—	—	(4)
Restricted stock awards granted	—	—	(1,752)	—	—	161,350	1,752	—
Performance share awards vested	—	—	(1,261)	—	—	—	1,261	—
Other	(51,372)	(1)	(917)	(59)	—	—	(1)	(978)
Balance at October 31, 2017	37,508,877	$ 375	$ 255,719	$ 226,549	$ (25,076)	(2,670,743)	$ (49,875)	$ 407,692
Net income	—	—	—	26,553	—	—	—	26,553
Foreign currency translation adjustment	—	—	—	—	(6,640)	—	—	(6,640)
Change in pension from net unamortized gain (net of tax expense of $1,242)	—	—	—	—	1,011	—	—	1,011
Common dividends ($0.20 per share)	—	—	—	(7,020)	—	—	—	(7,020)
Expense related to stock-based compensation	—	—	1,874	—	—	—	—	1,874
Treasury shares purchased, at cost	—	—	—	—	—	(1,900,000)	(32,034)	(32,034)
Stock options exercised	—	—	(149)	(2,141)	—	377,218	7,036	4,746
Restricted stock awards granted	—	—	(1,371)	—	—	73,400	1,371	—
Performance share awards vested	—	—	(473)	—	—	25,340	473	—
Other	(75,060)	(1)	(922)	(37)	—	—	—	(960)
Balance at October 31, 2018	37,433,817	$ 374	$ 254,678	$ 243,904	$ (30,705)	(4,094,785)	$ (73,029)	$ 395,222
Net loss	—	—	—	(46,730)	—	—	—	(46,730)
Foreign currency translation adjustment	—	—	—	—	1,864	—	—	1,864
Change in pension from net unamortized loss (net of tax expense of $1,596)	—	—	—	—	(4,976)	—	—	(4,976)
Common dividends ($0.32 per share)	—	—	—	(10,644)	—	—	—	(10,644)
Treasury shares purchased, at cost	—	—	—	—	—	(583,398)	(9,551)	(9,551)
Expense related to stock-based compensation	—	—	2,045	—	—	—	—	2,045
Stock options exercised	—	1	—	(322)	—	204,770	3,609	3,288
Restricted stock awards granted	—	—	(1,720)	(505)	—	124,800	2,225	—
Other	(63,415)	(1)	(330)	—	—	—	—	(331)
Balance at October 31, 2019	37,370,402	$ 374	$ 254,673	$ 185,703	$ (33,817)	(4,348,613)	$ (76,746)	$ 330,187

See notes to consolidated financial statements.

QUANEX BUILDING PRODUCTS CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOW
For the Years Ended October 31, 2019, 2018 and 2017

	Year Ended October 31,		
	2019	2018	2017
		(In thousands)	
Operating activities:			
Net (loss) income	$ (46,730)	$ 26,553	$ 18,683
Adjustments to reconcile net (loss) income to cash provided by operating activities:			
Depreciation and amortization	49,586	51,822	57,495
Loss (gain) on disposition of capital assets	732	(142)	1,528
Stock-based compensation	2,045	1,874	5,189
Deferred income tax	3,260	(5,556)	(112)
Charge for deferred loan costs and debt discount	—	1,064	—
Asset impairment charges	74,600	—	—
Other, net	2,176	135	1,741
Changes in assets and liabilities, net of effects from acquisitions:			
Decrease (increase) in accounts receivable	574	(5,550)	5,378
Decrease (increase) in inventory	3,797	17,230	(3,240)
(Increase) decrease in other current assets	(2,014)	217	186
Increase (decrease) in accounts payable	8,124	8,325	(4,893)
(Decrease) increase in accrued liabilities	(6,760)	6,892	(7,521)
Increase in income taxes	3,416	676	4,670
Increase in deferred pension and postretirement benefits	2,531	2,038	(271)
Increase (decrease) in other long-term liabilities	513	(523)	1,382
Other, net	522	(444)	(437)
Cash provided by operating activities	96,372	104,611	79,778
Investing activities:			
Capital expenditures	(24,883)	(26,484)	(34,564)
Proceeds from disposition of capital assets	1,324	432	1,937
Cash used for investing activities	(23,559)	(26,052)	(32,627)
Financing activities:			
Borrowings under credit facility	83,500	268,500	53,500
Repayments of credit facility borrowings	(136,000)	(296,250)	(98,875)
Debt issuance costs	—	(1,001)	—
Repayments of other long-term debt	(1,526)	(1,798)	(2,722)
Common stock dividends paid	(10,644)	(7,020)	(5,516)
Issuance of common stock	3,287	4,746	7,953
Payment of acquisition earn-out contingency	—	—	(8,497)
Payroll tax paid to settle shares forfeited upon vesting of stock	(330)	(960)	(976)
Purchase of treasury stock	(9,551)	(32,034)	—
Cash used for financing activities	(71,264)	(65,817)	(55,133)
Effect of exchange rate changes on cash and cash equivalents	316	(1,194)	(89)
Increase (decrease) in cash and cash equivalents	1,865	11,548	(8,071)
Cash and cash equivalents at beginning of period	29,003	17,455	25,526
Cash and cash equivalents at end of period	$ 30,868	$ 29,003	$ 17,455

See notes to consolidated financial statements.

QUANEX BUILDING PRODUCTS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of Operations, Basis of Presentation and Significant Accounting Policies

Nature of Operations

Quanex Building Products Corporation is a component supplier to original equipment manufacturers (OEMs) in the building products industry. These components can be categorized as window and door (fenestration) components and kitchen and bath cabinet components. Examples of fenestration components include: (1) energy-efficient flexible insulating glass spacers, (2) extruded vinyl profiles, (3) window and door screens, and (4) precision-formed metal and wood products. We also manufacture cabinet doors and other components for OEMs in the kitchen and bathroom cabinet industry. In addition, we provide certain other non-fenestration components and products, which include solar panel sealants, trim moldings, vinyl decking, fencing, water retention barriers, and conservatory roof components. We have organized our business into three reportable business segments: (1) North American Fenestration (NA Fenestration), (2) European Fenestration (EU Fenestration) and (3) North American Cabinet Components (NA Cabinet Components). For additional discussion of our reportable business segments, see Note 17, "Segment Information." We use low-cost production processes and engineering expertise to provide our customers with specialized products for their specific window, door, and cabinet applications. We believe these capabilities provide us with unique competitive advantages. We serve a primary customer base in North America and the United Kingdom (U.K.), and also serve customers in international markets through our operating plants in the U.K. and Germany, as well as through sales and marketing efforts in other countries.

Unless the context indicates otherwise, references to "Quanex", the "Company", "we", "us" and "our" refer to the consolidated business operations of Quanex Building Products Corporation and its subsidiaries.

Basis of Presentation and Principles of Consolidation

Our consolidated financial statements have been prepared by us in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP). We consolidate our wholly-owned subsidiaries and eliminate intercompany sales and transactions. We have no cost or equity investments in companies that are not wholly-owned. In our opinion, these audited financial statements contain all adjustments necessary to fairly present our financial position, results of operations and cash flows for the periods presented.

Use of Estimates

In preparing financial statements, we make informed judgments and estimates that affect the reported amounts of assets and liabilities as of the date of the financial statements and affect the reported amounts of revenues and expenses during the reporting period. We review our estimates on an ongoing basis, including those related to impairment of long lived assets and goodwill, pension and retirement liabilities, contingencies and income taxes. Changes in facts and circumstances may result in revised estimates and actual results may differ from these estimates. During the year ended October 31, 2017, we recorded a change in estimate related to certain assets involved in restructuring activities, as more fully described under the caption "Restructuring."

A summary of our significant accounting policies consistently applied in the preparation of the accompanying consolidated financial statements follows:

Revenue from Contracts with Customers

On November 1, 2018, we adopted Accounting Standards Codification Topic 606, *Revenue from Contracts with Customers* (ASC Topic 606) using the modified retrospective method and applying ASC Topic 606 to all revenue contracts with customers. Results for reporting periods beginning on or after November 1, 2018 are presented under ASC Topic 606. In accordance with the modified retrospective approach, prior period amounts were not adjusted and are reported under ASC Topic 605, “Revenue Recognition.” As a result of adoption, there was not a material impact on our consolidated financial statements. We expect the impact of the adoption of ASC Topic 606 to continue to be immaterial to our net income on an ongoing basis.

Revenue recognition

The core principle of ASC Topic 606 is to recognize revenue that reflects the consideration we expect to receive for product sales when the promised items are transferred to customers. Revenue for product sales is recognized when control of the promised products is transferred to our customers, and we expect to be entitled to consideration in exchange for transferring those products. We account for a contract when a customer provides us with a firm purchase order that identifies the products to be provided, the payment terms for those services, and when collectability of the consideration due is probable.

Performance obligations

A performance obligation is a promise to provide the customer with a good or service. Our performance obligations include product sales, with each product included in a customer contract being recognized as a separate performance obligation. For contracts with multiple performance obligations, the standalone selling price of each product is generally readily observable.

Revenue from product sales is recognized at a point in time when the product is transferred to the customer, in accordance with the shipping terms, which is generally upon shipment. We estimate a provision for sales returns and warranty allowances to account for product returns related to general returns and product nonconformance.

Pricing and sales incentives

Pricing is established at or prior to the time of sale with our customers and we record sales at the agreed-upon net selling price, reflective of current and prospective discounts.

Practical expedients and exemptions

We generally expense incremental costs of obtaining a contract when incurred because the amortization period would be less than one year. Additionally, we do not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less.

Shipping and handling costs

We have elected to account for shipping and handling services as fulfillment services in accordance ASC Topic 606 guidance; accordingly, freight revenue will be combined with the product deliverable rather than being accounted for as a distinct performance obligation within the terms of the agreement. Shipping and handling costs incurred by us for the delivery of goods to customers are considered a cost to fulfill the contract and are included in Cost of sales in the accompanying Condensed Consolidated Statements of Income.

Contract assets and liabilities

Deferred revenue, which is not significant, is recorded when we have remaining unsatisfied performance obligations for which we have received consideration.

Disaggregation of revenue

We produce a wide variety of products that are used in the fenestration industry, including insulating glass spacer systems; extruded vinyl products; metal fabricated products; and astragals, thresholds and screens. In addition, we produce certain non-fenestration products, including kitchen and bath cabinet doors and components, flooring and trim moldings, solar edge tape, plastic decking, fencing, water retention barriers, conservatory roof components, and other products.

The following table summarizes our product sales for the three years ended October 31, 2019, 2018, and 2017 into groupings by segment which we believe depicts how the nature, amount, timing and uncertainty of our revenues and cash flows are affected by economic factors. For further details regarding our results by segment, refer to Note 17, “Segment Information”.

	Year Ended October 31,		
	2019	2018	2017
	(in thousands)		
NA Fenestration:			
United States - fenestration	$ 439,536	$ 412,000	$ 399,694
International - fenestration	31,106	39,309	34,279
United States - non-fenestration	17,061	18,211	25,263
International - non-fenestration	16,134	15,846	15,642
	$ 503,837	$ 485,366	$ 474,878
EU Fenestration:			
United States - fenestration	$ —	$ —	$ 303
International - fenestration	139,638	135,415	129,140
International - non-fenestration	25,359	24,558	18,520
	$ 164,997	$ 159,973	$ 147,963
NA Cabinet Components:			
United States - fenestration	$ 13,144	$ 14,596	$ 17,083
United States - non-fenestration	214,211	232,990	229,550
International - non-fenestration	2,289	2,227	2,175
	$ 229,644	$ 249,813	$ 248,808
Unallocated Corporate & Other:			
Eliminations	$ (4,637)	$ (5,367)	$ (5,094)
	$ (4,637)	$ (5,367)	$ (5,094)
Net sales	$ 893,841	$ 889,785	$ 866,555

Cash and Cash Equivalents

Cash equivalents include all highly liquid investments with an original maturity of three months or less. Such securities with an original maturity which exceeds three months are deemed to be short-term investments. We maintain cash and cash equivalents at several financial institutions, which at times may not be federally insured or may exceed federally insured limits. We have not experienced any losses in such accounts and believe we are not exposed to any significant credit risks on such accounts.

Concentration of Credit Risk and Allowance for Doubtful Accounts

Certain of our businesses or product lines are largely dependent on a relatively few large customers. Although we believe we have an extensive customer base, the loss of one of these large customers or if such customers were to incur a prolonged period of decline in business, our financial condition and results of operations could be adversely affected. For the years ended October 31, 2019, 2018 and 2017, no customers provided more than 10% of our consolidated net sales.

We have established an allowance for doubtful accounts to estimate the risk of loss associated with our accounts receivable balances. Our policy for determining the allowance is based on factors that affect collectability, including: (a) historical trends of write-offs, recoveries and credit losses; (b) the credit quality of our customers; and (c) projected economic and market conditions. We believe our allowance is adequate to absorb any known or probable losses as of October 31, 2019.

Business Combinations

We apply the acquisition method of accounting for business combinations in accordance with U.S. GAAP, which requires us to make use of estimates and judgments to allocate the purchase price paid for acquisitions to the fair value of the assets and liabilities acquired. We account for contingent assets and liabilities at fair value on the acquisition date, and record changes to fair value associated with these assets and liabilities as a period cost as incurred. We use established valuation techniques and engage reputable valuation specialists to assist us with these valuations.

Inventory

We record inventory at the lower of cost or net realizable value. Inventories are valued using the first-in first-out (FIFO) method. Fixed costs related to excess manufacturing capacity are evaluated and expensed in the period, to insure that inventory is properly capitalized. Inventory quantities are regularly reviewed and provisions for excess or obsolete inventory are recorded primarily based on our forecast of future demand and our estimates regarding current and future market conditions. Significant unanticipated variances to our forecasts could require a change in the provision for excess or obsolete inventory, resulting in a charge to net income during the period of the change.

During the year ended October 31, 2019, we changed the method of inventory costing for certain inventory in two plants located in our NA Fenestration reportable business segment to the first-in first-out (FIFO) method from the last-in first-out method. We utilize the FIFO method to determine costs at all of our other operating locations. We believe that the FIFO method is preferable as it provides uniformity of inventory valuation across our global operations, aligns with how we internally manage inventory, and provides better matching of revenues and expenses. The impact of this change in accounting principle on the financial statements for each period presented is further explained in Note 3, "Inventories."

Long-Lived Assets

Property, Plant and Equipment and Intangible Assets with Defined Lives

We make judgments and estimates related to the carrying value of property, plant and equipment, intangible assets with defined lives, and long-lived assets, which include determining when to capitalize costs, the depreciation and amortization methods to use and the useful lives of these assets. We evaluate these assets for impairment when there are indicators that the carrying values of these assets might not be recoverable. Such indicators of impairment may include changes in technology, significant market fluctuations, historical losses or loss of a significant customer, or other changes in circumstance that could affect the assets' ability to generate future cash flows. When we evaluate these assets for impairment, we compare the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset to its carrying value. If the carrying value exceeds the sum of the undiscounted cash flows, and there is no alternative use for the asset, we determine that the asset is impaired. To measure the impairment charge, we compare the carrying amount of the long-lived asset to its fair value, as determined by quoted market prices in active markets, if available, or by discounting the projected future cash flows using our incremental borrowing rate. This calculation of fair value requires us to develop and employ long-term forecasts of future operating results related to these assets. These forecasts are based on assumptions about demand for our products and future market conditions. Future events and unanticipated changes to these assumptions could require a provision for impairment, resulting in a charge to net income during the period of the change.

We monitor relevant circumstances, including industry trends, general economic conditions, and the potential impact that such circumstances might have on the valuation of our identifiable intangible assets with finite lives. Events and changes in circumstance that may cause a triggering event and necessitate such a review include, but are not limited to: a decrease in sales for certain customers, improvements or changes in technology, and/or a decision to discontinue the use of a trademark or trade name, or allow a patent to lapse. Such events could negatively impact the fair value of our identifiable intangible assets. In such circumstances, we may evaluate the underlying assumptions and estimates made by us in order to assess the appropriate valuation of these identifiable intangible assets and compare to the carrying value of the assets. We may be required to write down these identifiable intangible assets and record a non-cash impairment charge. When we originally value our intangible assets, we use a variety of techniques to establish the carrying value of the assets, including the relief from royalty method, excess current year earnings method and income method.

Changes in market conditions throughout 2019 and 2017 impacted our long-term forecasts of future operating results with regard to the reduction of significant sales volume to a large customer of our United States (U.S.) vinyl operations, and lower-than-expected operating performance of our North American Cabinet Components business. We determined that these conditions were indicators of triggering events which necessitated an evaluation of certain long-term assets utilized in these businesses for potential impairment. We compared the projected undiscounted cash flows we expected to realize associated with these assets over the remaining useful lives of the primary operating assets to the net book value of the long-term assets, including goodwill, and determined that these assets were not impaired. Therefore, we did not record an impairment charge related to property, plant and equipment or intangible assets with defined lives during the years ended October 31, 2019 and 2017. There were no indicators of triggering events noted for the year ended October 31, 2018.

Software development costs, including costs incurred to purchase third-party software, are capitalized when we have determined that the technology is capable of meeting our performance requirements, and we have authorized funding for the project. We cease capitalization of software costs when the software is substantially complete and is ready for its intended use.

The software is then amortized over its estimated useful life. When events or circumstances indicate the carrying value of internal use software might not be recoverable, we assess the recoverability of these assets by comparing the carrying value of the asset to the undiscounted future cash flows expected to be generated from the asset's use, consistent with the methodology to test other property, plant and equipment for impairment.

Property, plant and equipment is stated at cost and is depreciated using the straight-line method over the estimated useful lives of the assets. We capitalize betterments which extend the useful lives or significantly improve the operational efficiency of assets. We expense repair and maintenance costs as incurred.

The estimated useful lives of our primary asset categories at October 31, 2019 were as follows:

	Useful Life (in Years)
Land improvements	7 to 25
Buildings	25 to 40
Building improvements	5 to 20
Machinery and equipment	2 to 15

Leasehold improvements are depreciated over the shorter of their estimated useful lives or the term of the lease.

Goodwill

We use the acquisition method to account for business combinations and, to the extent that the purchase price exceeds the fair value of the net assets acquired, we record goodwill. In accordance with U.S. GAAP, we are required to evaluate our goodwill at least annually. We perform our annual goodwill assessment as of August 31, or more frequently if indicators of impairment exist. The first step in our annual goodwill assessment is to perform the optional qualitative assessment allowed by ASC Topic 350 "Intangibles - Goodwill and Other" (ASC 350). In our qualitative assessment, we evaluate relevant events or circumstances to determine whether it is more likely than not (i.e., greater than 50%) that the fair value of a reporting unit is less than its carrying amount. If we determine that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, ASC 350 requires us to compare the fair value of such reporting unit to its carrying value including goodwill. To determine the fair value of our reporting units, we use multiple valuation techniques including a discounted cash flow analysis, using the applicable weighted average cost of capital, in combination with a market approach that utilizes market multiples and a selection of guideline public companies. This test requires us to make assumptions about the future growth of our business and the market in general, as well as other variables such as the level of investment in capital expenditure, growth in working capital requirements and the terminal or residual value of our reporting units beyond the periods of estimated annual cash flows. We use a third-party valuation firm to assist us with this analysis. If the fair value of each reporting unit exceeds its carrying value, no action is required. Otherwise, an impairment loss is recorded to the extent that the carrying amount of the reporting unit including goodwill exceeds the fair value of that reporting unit. We believe the estimates and assumptions used in our impairment assessment are reasonable based on available market information, but variations in any of the assumptions could result in materially different calculations of fair value and determinations of whether or not an impairment is indicated during current or future periods.

During the second quarter of 2019, our reporting unit included in our NA Cabinet Components segment experienced financial performance for the year to date period ended March 31, 2019 that was below our budget. As a result, we developed a new long-range forecast for this reporting unit that was below its previous long-range forecast as a result of an industry-wide shift from semi-custom cabinets to stock cabinets. We determined that the combination of i) actual financial results below planned performance, ii) a downward revision of the long-range forecast, and iii) the historical narrow margin of fair value over carrying value in previous annual and interim goodwill assessments represented a triggering event that would more likely than not indicate that the carrying value of this reporting unit was greater than its fair value. Therefore, we performed a quantitative impairment test of the goodwill balance at March 31, 2019. The quantitative impairment test was conducted using multiple valuation techniques, including a discounted cash flow analysis, which utilizes Level 3 fair value inputs, and resulted in an asset impairment charge of $30.0 million during the second quarter of 2019.

At our annual testing date, August 31, 2019, we had five reporting units with goodwill balances: two reporting units included in our NA Fenestration operating segment, two reporting units included in our EU Fenestration operating segment, and one reporting unit included in our NA Cabinet Components operating segment. We performed a qualitative assessment of the two reporting units in the NA Fenestration segment and the two reporting units in the EU Fenestration segment. This review included an analysis of historical goodwill test results, operating results relative to forecast, projected results over the next five years, and other measures and concluded that there were no indicators of potential impairment associated with these reporting units. Therefore, no additional testing was deemed necessary for the reporting units in the NA Fenestration segment and the EU Fenestration segment. Also, at our annual testing date, we performed a quantitative assessment of the reporting unit in our NA Cabinet Components segment primarily due to the recent impairment of goodwill during the second quarter of 2019 and the history of a narrow margin of fair value above carrying value in quantitative assessments performed in prior years. We determined that the fair value of this reporting unit exceeded its carrying value by approximately 5%. At that date, we concluded that no impairment was necessary.

After the annual assessment date and prior to our fiscal year end of October 31, 2019, the reporting unit in our NA Cabinet Components segment was notified about a change in strategy at one of our large customers that may result in lower sales volumes in the future. In addition, we continued to experience lower-than-expected volumes as a result of the ongoing shift in demand from semi-custom cabinets to stock cabinets. Based on this information, we updated our long-range forecast for this reporting unit to reflect the expected volume declines. This revised long-range forecast was utilized to perform another quantitative impairment test of this reporting unit as of October 31, 2019, which resulted in an asset impairment charge of $44.6 million during the fourth quarter of 2019. As a result of the quantitative assessments performed in the second and fourth quarters of 2019, we recorded impairment charges totaling $74.6 million during the year ended October 31, 2019, reducing the goodwill balance applicable to the reporting unit included in our NA Cabinet Components operating segment from $113.7 million to $39.1 million.

Restructuring

We accrue one-time severance costs pursuant to an approved plan of restructuring at the communication date, when affected employees have been notified of the potential severance and sufficient information has been provided for the employee to calculate severance benefits, in the event the employee is involuntarily terminated. In addition, we accrue costs associated with the termination of contractual commitments including operating leases at the time the lease is terminated pursuant to the lease provisions or in accordance with another agreement with the landlord. Otherwise, we continue to recognize operating lease expense through the cease-use date. After the cease-use date, we determine if our operating lease payments are at market. We assume sublet of the facility at the market rate. To the extent our lease obligations exceed the fair value rentals, we discount to arrive at the present value and record a liability. If the facility is not sublet, we expense the amount of the assumed sublet in the current period. For other costs directly related to the restructuring effort, such as equipment moving costs, we expense in the period incurred.

In September 2017, we closed a kitchen and bathroom cabinet door plant in Lansing, Kansas. We expensed $4.6 million associated with our restructuring efforts for the year ended October 31, 2017, including cost of equipment moves, employee termination costs and severance, professional fees and operating lease costs. Our facility lease obligations were deemed to be at fair market value. We negotiated the exit of one of the vinyl facilities during September 2018, and the lease of the cabinet door plant expired during fiscal 2018. We incurred $0.4 million and $1.5 million of expenses related to operating leases costs during the years ended October 31, 2019 and 2018, respectively, and we expect to incur costs related to the operating leases for the remaining vinyl facility during fiscal 2020 until we are able to sublet or otherwise exit the lease.

In addition, we evaluated the remaining depreciable lives of property, plant and equipment that has been abandoned, displaced or otherwise disposed as a result of the plant closures. We recorded a change in estimate associated with the remaining useful lives of these assets which resulted in an increase in depreciation expense of $4.3 million for the year ended October 31, 2017. Furthermore, we evaluated the remaining service lives of intangible assets with defined lives associated with our U.S. vinyl extrusion business and recorded a change in estimate associated with the remaining useful lives of a customer relationship intangible and a utility process intangible asset resulting in an increase in amortization expense of $1.9 million for the year ended October 31, 2017. We did not incur similar increases in depreciation or amortization expenses related to restructuring activities during the years ended October 31, 2019 and 2018.

Insurance

We manage our exposure to losses for workers' compensation, group medical, property, casualty and other insurance claims through a combination of self-insurance retentions and insurance coverage with third-party carriers. We record undiscounted liabilities associated with our portion of these exposures, which we estimate by considering various factors such as our historical claims experience, severity factors and estimated claims incurred but not reported, for which we have developed loss development factors, which are estimates as to how claims will develop over time until closed. While we consider a number of factors in preparing the estimates, sensitive assumptions using significant judgment are made in determining the amounts that are accrued in the financial statements. Actual claims could differ significantly from these estimated liabilities, depending on future claims experience. We do not record insurance recoveries until any contingencies relating to the claim have been resolved.

Retirement Plans

We sponsor a defined benefit pension plan and an unfunded postretirement plan that provides health care and life insurance benefits for a limited pool of eligible retirees and dependents. To measure our liabilities associated with these plans, we make assumptions related to future events, including expected return on plan assets, rate of compensation increases, and healthcare cost trend rates. The discount rate reflects the rate at which benefits could be effectively settled on the measurement date. We determine our discount rate using a RATE: Link Model whereby target yields are developed from bonds across a range of maturity points, and a curve is fitted to those targets. Spot rates (zero coupon bond yields) are developed from the curve and used to discount benefit payments associated with each future year. Actual pension plan asset investment performance, as well as other economic experience such as discount rate and demographic experience, will either reduce or increase unamortized pension losses at the end of any fiscal year, which ultimately affects future pension costs.

Warranty Obligations

We accrue warranty obligations when we recognize revenue for certain products. Our provision for warranty obligations is based on historical costs incurred for such obligations and is adjusted, where appropriate, based on current conditions and factors. Our ability to estimate our warranty obligations is subject to significant uncertainties, including changes in product design and our overall product sales mix.

Income Taxes

We record the estimated future tax effects of temporary differences between the tax basis of assets and liabilities and the amounts reported in our consolidated balance sheets, as well as net operating losses and tax credit carry forwards. We evaluate the carrying value of the net deferred tax assets and determine whether we will be able to generate sufficient future taxable income to realize our deferred tax assets. We perform this review for recoverability on a jurisdictional basis, whereby we consider both positive and negative evidence related to the likelihood of realization of the deferred tax assets. The weight given to the positive and negative evidence is commensurate with the extent to which the evidence can be objectively verified. Cumulative losses in recent years is a significant piece of negative evidence that is difficult to overcome in determining that a valuation allowance is not needed against deferred tax assets. Thus, it is generally difficult for positive evidence regarding projected future taxable income exclusive of reversing taxable temporary differences to outweigh objective negative evidence of recent financial reporting losses. We recorded a net loss for the year ended October 31, 2019 and net income for the years ended October 31, 2018 and 2017. We have recorded pre-tax cumulative income from operations of $43.2 million for the three-year period ended October 31, 2019. We believe we will fully realize our deferred tax assets, net of a recorded valuation allowance. We project future taxable income using the same forecasts used to test long-lived assets and intangibles for impairment, scheduling out the future reversal of existing taxable temporary differences and reviewing our most recent financial operations. In the event the estimates and assumptions indicate we will not generate sufficient future taxable income to realize our deferred tax assets, we record a valuation allowance against a portion of our deferred tax assets.

We evaluate our on-going tax positions to determine if it is more-likely-than-not we will be successful in defending such positions if challenged by taxing authorities. To the extent that our tax positions do not meet the more-likely-than-not criteria, we record a liability for uncertain tax positions. We have recorded a liability for uncertain tax positions which stem from certain state tax items related to the interpretation of tax laws and regulations. We continue to evaluate our positions regarding various state tax interpretations at each reporting date, until the applicable statute of limitations lapse.

On December 22, 2017, the Tax Cuts and Jobs Act (the Act) was signed into law. The Act reduced our federal income tax statutory rate from 35.0% to 21.0% and 23.3% for the fiscal years ended October 31, 2019 and 2018, respectively. We have re-measured our deferred income tax assets and liabilities and have recorded tax expense for the one-time mandatory transition tax on deemed repatriation of previously tax-deferred and unremitted foreign earnings. For further details of the impact of the Act, see Note 10, "Income Taxes."

Derivative Instruments

We have historically used financial and commodity-based derivative contracts to manage our exposure to fluctuations in foreign currency exchange rates and aluminum prices. All derivatives are measured at fair value on a recurring basis and the methodology and classifications are discussed further in Note 13, "Derivative Instruments." We have not designated the derivative instruments we use as cash flow hedges under ASC Topic 815 "*Derivatives and Hedging*" (ASC 815). Therefore, all gains and losses, both realized and unrealized, are recognized in the consolidated statements of income (loss) in the period of the change as the underlying assets and liabilities are marked-to-market. We do not enter into derivative instruments for speculative or trading purposes. As such, these instruments are considered economic hedges, and are reflected in the operating activities section of the consolidated statements of cash flow.

Foreign Currency Translation

Our consolidated financial statements are presented in our reporting currency, the United States Dollar. Our German and U.K. operations are measured using the local currency as the functional currency. The assets and liabilities of our foreign operations which are denominated in other currencies are translated to United States Dollars using the prevailing exchange rates as of the balance sheet date. Revenues and expenses are translated at the average exchange rates for the applicable period. The resulting translation adjustments are recorded as a component of accumulated other comprehensive loss on the consolidated balance sheets.

Occasionally, we enter into transactions that are denominated in currencies other than our functional currency. At each balance sheet date, we translate these asset or liability accounts to our functional currency and record unrealized transaction gains or losses. When these assets or liabilities settle, we record realized transaction gains or losses. These realized and unrealized gains or losses are included in the accompanying consolidated statements of (loss) income under the caption, “Other, net.”

Stock–Based Compensation

We have issued stock-based compensation in the form of stock options to directors, employees and officers, and non-vested restricted stock awards to certain key employees and officers. We apply the provisions of ASC Topic 718 “*Compensation - Stock Compensation*” (ASC 718), to determine the fair value of stock option awards on the date of grant using the Black-Scholes valuation model. We recognize the fair value as compensation expense on a straight-line basis over the requisite service period of the award based on awards ultimately expected to vest. Stock options granted to directors vest immediately while the stock options granted to our employees and officers typically vest ratably over a three-year period with service and continued employment as the vesting conditions. For new option grants to retirement-eligible employees, we recognize expense and vest immediately upon grant, consistent with the retirement vesting acceleration provisions of these grants. For employees near retirement age, we amortize such grants over the period from the grant date to the retirement-eligibility date if such period is shorter than the standard vesting schedule. For grants of non-vested restricted stock, we calculate the compensation expense at the grant date as the number of shares granted multiplied by the closing stock price of our common stock on the date of grant. This expense is recognized ratably over the vesting period. Our non-vested restricted stock grants to officers and employees cliff vest over a three-year period with service and continued employment as the only vesting criteria. Our fair value determination of stock-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, our expected stock price volatility over the term of the awards, actual and projected employee stock option exercise behavior over the expected term, our dividend rate, risk-free rate and expectation with regards to forfeitures. Option-pricing models were developed for use in estimating the value of traded options that have no vesting or hedging restrictions and are fully transferable. Because our employee stock options have certain characteristics that are significantly different from traded options, and because changes in the subjective assumptions can materially affect the estimated value, the valuation models may not provide an accurate measure of the fair value of our employee stock options. Accordingly, that value may not be indicative of the fair value observed in a willing buyer/willing seller market transaction.

We have granted other awards which are linked to the performance of our common stock, but will settle in cash rather than the issuance of shares of our common stock. The value of these awards fluctuates with changes in our stock price, with the resulting gains or losses reflected in the period of the change. We have recorded current and non-current liabilities related to these awards reflected in the accompanying consolidated balance sheets at October 31, 2019 and 2018. See Note 15, “Stock-based Compensation.”

In addition, we have granted performance share units which settle in cash and shares upon vesting. The awards granted during the years ended October 31, 2018 and 2017 have vesting criteria based on a market condition (relative total shareholder return) and an internal performance condition (earnings per share growth). The award granted during the year ended October 31, 2019 utilizes return on net assets as the vesting condition and settles in cash. We utilize a Monte Carlo simulation model to value the market condition and our stock price on the date of grant to value the internal performance condition. We bifurcate the liability and equity portion of the awards (amounts expected to settle in cash and shares, respectively) and recognize expense ratably over the vesting period of three years.

We have also granted performance restricted stock units which settle in shares upon vesting. These awards cliff vest upon a three-year service period with the absolute performance of our common stock as the vesting criteria. We utilized a Monte Carlo simulation model to arrive at a grant-date value of these performance restricted stock units. This amount, which is settled in our common stock, is expensed over the three-year term of the award with a credit to additional paid-in-capital.

Treasury Stock

We use the cost method to record treasury stock purchases whereby the entire cost of the acquired shares of our common stock is recorded as treasury stock (at cost). When we subsequently reissue these shares, proceeds in excess of cost upon the issuance of treasury shares are credited to additional paid in capital, while any deficiency is charged to retained earnings.

Earnings per Share Data

We calculate basic earnings per share based on the weighted average number of our common shares outstanding for the applicable period. We calculate diluted earnings per share based on the weighted average number of our common shares outstanding for the period plus all potentially dilutive securities using the treasury stock method, whereby we assume that all such shares are converted into common shares at the beginning of the period, if deemed to be dilutive. If we incur a loss from continuing operations, the effects of potentially dilutive common stock equivalents (stock options and unvested restricted stock awards) are excluded from the calculation of diluted earnings per share because the effect would be anti-dilutive. Performance shares and performance restricted stock units are excluded from contingent shares for purposes of calculating diluted weighted average shares until the performance measure criteria is probable and shares are likely to be issued.

Supplemental Cash Flow Information

The following table summarizes our supplemental cash flow information for the years ended October 31, 2019, 2018 and 2017:

	Year Ended October 31,		
	2019	2018	2017
		(In thousands)	
Cash paid for interest	$ 9,020	$ 7,890	$ 9,019
Cash paid for income taxes	5,081	4,217	3,334
Cash received from income tax refunds	1,020	95	1,167
Noncash investing and financing activities:			
Investment in capital leases	567	799	16,846
Increase in capitalized expenditures in accounts payable and accrued liabilities	2,897	264	392

Related Party Transactions

During the years ended October 31, 2018 and 2017, we leased several operating facilities from a company that was directly owned by the former owner of our U.K.-based vinyl extrusion business, who was our employee until his retirement in October 2018. We recorded rent expense of $1.3 million and $1.2 million related to the related party leases for the years ended October 31, 2018 and 2017. We did not participate in any related party transactions during the year ended October 31, 2019.

Subsequent Events

We have evaluated events occurring after the balance sheet date for possible disclosure as a subsequent event through the date the financial statements were issued.

2. Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable consisted of the following as of October 31, 2019 and 2018:

	October 31,	
	2019	2018
	(In thousands)	
Trade receivables	$ 82,745	$ 83,828
Other	594	511
Total	$ 83,339	$ 84,339
Less: Allowance for doubtful accounts	393	325
Accounts receivable, net	$ 82,946	$ 84,014

The changes in our allowance for doubtful accounts were as follows:

	Year Ended October 31,		
	2019	2018	2017
		(In thousands)	
Beginning balance as of November 1, 2018, 2017 and 2016, respectively	$ 325	$ 333	$ 251
Bad debt expense	700	46	131
Amounts written off	(916)	(54)	(49)
Recoveries	284	—	—
Balance as of October 31,	$ 393	$ 325	$ 333

3. Inventories

Inventories consisted of the following at October 31, 2019 and 2018:

	October 31,	
	2019	2018
	(In thousands)	
Raw materials	$ 32,818	$ 41,584
Finished goods and work in process	35,538	31,727
Supplies and other	2,593	1,794
Total	$ 70,949	$ 75,105
Less: Inventory reserves	3,790	4,375
Inventories, net	$ 67,159	$ 70,730

The changes in our inventory reserve accounts were as follows for the years ended October 31, 2019, 2018 and 2017:

	Year Ended October 31,		
	2019	2018	2017
		(In thousands)	
Beginning balance as of November 1, 2018, 2017 and 2016, respectively	$ 4,375	$ 4,620	$ 3,929
Charged to cost of sales	341	1,201	1,296
Write-offs	(939)	(1,415)	(661)
Other	13	(31)	56
Balance as of October 31,	$ 3,790	$ 4,375	$ 4,620

As described in Note 1, “Nature of Operations and Basis of Presentation - Inventories,” during the year ended October 31, 2019, we elected to change our method of accounting for certain inventory in our NA Fenestration reportable business segment from LIFO to FIFO. We applied this change in method of inventory costing by retrospectively adjusting the prior period financial statements. As a result of the retrospective adjustment of the change in accounting principle, certain amounts in our consolidated statements of net income for the three months and year ended October 31, 2018 was adjusted as follows (there was no impact to the corresponding three months and year ended October 31, 2017):

	Three months ended October 31, 2018			Year ended October 31, 2018		
	As Reported [(1)]	Impact of change to FIFO	As Adjusted	As Reported [(1)]	Impact of change to FIFO	As Adjusted
	(In thousands, except per share amounts)					
Cost of sales	$ 187,960	$ (300)	$ 187,660	$ 697,322	$ (300)	$ 697,022
Operating income	11,396	300	11,696	35,397	300	35,697
Income before income taxes	8,153	300	8,453	25,453	300	25,753
Income tax (expense) benefit	(1,661)	(75)	(1,736)	875	(75)	800
Net income	6,492	$ 225	6,717	26,328	$ 225	26,553
Basic earnings per common share	$ 0.19	$ —	$ 0.19	$ 0.76	$ 0.01	$ 0.77
Diluted earnings per common share	$ 0.19	$ —	$ 0.19	$ 0.75	$ 0.01	$ 0.76

(1) As reported cost of sales and operating income have been updated to reflect the adoption of accounting standards update 2017-07. See Note 20, "New Accounting Guidance " for further details.

The consolidated balance sheet for the year ended October 31, 2018 was adjusted as follows:

	As of October 31, 2018		
	As Reported	Impact of change to FIFO	As Adjusted
	(In thousands)		
Inventories, net	$ 69,365	$ 1,365	$ 70,730
Deferred income taxes	17,215	295	17,510
Retained earnings	242,834	1,070	243,904

The consolidated statement of cash flow for the year ended October 31, 2018 was adjusted as follows (there was no impact to the corresponding year ended October 31, 2017):

	As of October 31, 2018		
	As Reported	Impact of change to FIFO	As Adjusted
	(In thousands)		
Net income	$ 26,328	$ 225	$ 26,553
Deferred income tax	(5,631)	75	(5,556)
Decrease in inventory	17,530	(300)	17,230

During the fourth quarter of 2019, we updated our assessment of the impact of the change in method of inventory costing and noted the impact would have not changed significantly.

4. Property, Plant and Equipment

Property, plant and equipment consisted of the following at October 31, 2019 and 2018:

	October 31,	
	2019	2018
	(In thousands)	
Land and land improvements	$ 10,298	$ 10,366
Buildings and building improvements	101,569	98,212
Machinery and equipment	386,953	371,106
Construction in progress	12,348	10,293
Property, plant and equipment, gross	511,168	489,977
Less: Accumulated depreciation	317,568	288,607
Property, plant and equipment, net	$ 193,600	$ 201,370

Depreciation expense for the years ended October 31, 2019, 2018, and 2017 was $34.3 million, $35.6 million and $39.1 million, respectively.

Assets recorded under capital leases had a historical cost of $16.6 million and $22.2 million, respectively, and accumulated depreciation of $3.7 million and $3.4 million, respectively as of October 31, 2019 and 2018. Depreciation expense related to these assets totaled $0.2 million, $1.1 million and $2.0 million for the periods ended October 31, 2019, 2018, and 2017, respectively. Refer to Note 7, ""Debt and Capital Lease Obligations"" for additional information on capital leases.

If there are indicators of potential impairment, we evaluate our property, plant and equipment for recoverability over the remaining useful lives of the assets. We did not incur impairment losses associated with these assets for the years ended October 31, 2019, 2018, and 2017. See further discussion at Note 1, "Nature of Operations, Basis of Presentation and Significant Accounting Policies - Long-Lived Assets - Property, Plant and Equipment and Intangible Assets with Defined Lives."

5. Goodwill and Intangible Assets

Goodwill

The change in the carrying amount of goodwill for the years ended October 31, 2019 and 2018 was as follows:

	Year Ended October 31,	
	2019	2018
	(In thousands)	
Beginning balance as of November 1, 2018 and 2017	$ 219,627	$ 222,194
Goodwill impairment charge	(74,600)	—
Foreign currency translation adjustment	536	(2,567)
Balance as of October 31,	$ 145,563	$ 219,627

At our annual testing date, August 31, 2019, we had five reporting units with goodwill balances. Two of these units were included in our NA Fenestration segment and had goodwill balances of $35.9 million and $2.8 million, two units were included in our EU Fenestration segment with goodwill balances of $50.9 million and $16.8 million, and our NA Cabinet Components segment had one unit with a goodwill balance of $83.8 million. During the the year ended October 31, 2019, we recorded impairment charges of $74.6 million associated with our NA Cabinet Components segment. The details of the impairment charges, as well as the results of our goodwill assessment as of August 31, 2019 are more fully described at Note 1, "Nature of Operations, Basis of Presentation and Significant Accounting Policies - Long-Lived Assets - Goodwill."

Identifiable Intangible Assets

Amortizable intangible assets consisted of the following as of October 31, 2019 and 2018:

	October 31, 2019	October 31, 2019		October 31, 2018	
	Remaining Weighted Average Useful Life	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
		(In thousands)			
Customer relationships	10 years	$ 153,950	$ 70,103	$ 153,704	$ 59,332
Trademarks and trade names	10 years	55,745	35,210	55,583	32,668
Patents and other technology	3 years	22,386	19,471	22,278	17,646
Total		$ 232,081	$ 124,784	$ 231,565	$ 109,646

We do not estimate a residual value associated with these intangible assets. During the year ended October 31, 2017, we determined that triggering events occurred which necessitated a review of our long-term assets. Based on an undiscounted cash flow analysis, we determined that our defined-lived intangible assets were not impaired. In addition, we shortened the life of several defined-lived intangible assets, which resulted in the recognition of incremental amortization expense of $1.9 million for the year ended October 31, 2017. We did not incur any corresponding incremental amortization expense during the years ended October 31, 2019 and 2018. See additional disclosure at Note 1, "Nature of Operations, Basis of Presentation and Significant Accounting Policies - Restructuring."

During each of the years ended October 31, 2019 and 2018, we retired fully amortized identifiable assets of $0.3 million related to customer relationships and patents and other technology, respectively.

The aggregate amortization expense associated with identifiable intangible assets for the years ended October 31, 2019, 2018, and 2017 was $15.3 million, $16.2 million and $18.4 million, respectively.

Estimated remaining amortization expense, assuming current intangible balances and no new acquisitions, for future fiscal years ending October 31, is as follows (in thousands):

	Estimated Amortization Expense
2020	$ 14,284
2021	12,562
2022	11,941
2023	11,194
2024	10,464
Thereafter	46,852
Total	$ 107,297

We did not incur impairment losses related to our identifiable intangible assets during the years ended October 31, 2019, 2018, and 2017.

6. Accrued Liabilities

Accrued liabilities consisted of the following at October 31, 2019 and 2018:

	October 31,	
	2019	2018
	(In thousands)	
Payroll, payroll taxes and employee benefits	$ 19,637	$ 28,202
Accrued insurance and workers compensation	3,514	3,095
Sales allowances	6,323	6,514
Deferred compensation (current portion)	1,231	153
Deferred revenue	1,251	287
Warranties	136	148
Audit, legal, and other professional fees	2,561	2,170
Accrued taxes	2,403	2,286
Other	2,165	3,113
Accrued liabilities	$ 39,221	$ 45,968

7. Debt and Capital Lease Obligations

Long-term debt consisted of the following at October 31, 2019 and 2018:

	October 31,	
	2019	2018
	(In thousands)	
Revolving Credit Facility	$ 142,500	$ 195,000
Capital lease obligations	15,865	17,043
Unamortized deferred financing fees	$ (1,205)	$ (1,487)
Total debt	$ 157,160	$ 210,556
Less: Current maturities of long-term debt	746	1,224
Long-term debt	$ 156,414	$ 209,332

Revolving Credit Facility

On July 29, 2016, we entered into a $450.0 million credit agreement comprising a $150.0 million Term Loan A and a $300.0 million revolving credit facility (collectively, the “2016 Credit Agreement”), with Wells Fargo Bank, National Association, as Agent, Swingline Lender and Issuing Lender, and Bank of America, N.A. serving as Syndication Agent. The 2016 Credit Agreement had a five-year term, maturing on July 29, 2021, and required interest payments calculated, at our election and depending upon our Consolidated Leverage Ratio, at either a Base Rate plus an applicable margin (0.50% to 1.25%) or the LIBOR Rate plus an applicable margin (1.50% to 2.25%). At the time of the initial borrowing, the applicable rate was LIBOR + 2.00%. In addition, we were subject to commitment fees for the unused portion of the 2016 Credit Agreement (0.20% to 0.30%).

On October 18, 2018, we amended and extended the 2016 Credit Agreement by entering into a $325.0 million revolving credit facility (the “2018 Credit Facility”), with Wells Fargo Bank, National Association, as Agent, Swingline Lender and Issuing Lender, and Bank of America, N.A. serving as Syndication Agent. The 2018 Credit Facility has a five-year term, maturing on October 18, 2023, and required interest payments calculated, at our election and depending upon our Consolidated Leverage Ratio, at either a Base Rate plus an applicable margin or the LIBOR Rate plus an applicable margin. At the time of the initial borrowing, the applicable rate was LIBOR + 1.50%. In addition, we are subject to commitment fees for the unused portion of the 2018 Credit Facility.

The applicable margin and commitment fees are outlined in the following table:

Pricing Level	Consolidated Leverage Ratio	Commitment Fee	LIBOR Rate Loans	Base Rate Loans
I	Less than or equal to 1.50 to 1.00	0.200%	1.25%	0.25%
II	Greater than 1.50 to 1.00, but less than or equal to 2.25 to 1.00	0.225%	1.50%	0.50%
III	Greater than 2.25 to 1.00, but less than or equal to 3.00 to 1.00	0.250%	1.75%	0.75%
IV	Greater than 3.00 to 1.00	0.300%	2.00%	1.00%

In the event of default, outstanding borrowings accrue interest at the Default Rate, as defined, whereby the obligations will bear interest at a per annum rate equal to 2% above the total per annum rate otherwise applicable.

The 2018 Credit Facility provides for incremental revolving credit commitments for a minimum principal amount of $10.0 million, up to an aggregate amount of $150.0 million, subject to the lender's discretion to elect or decline the incremental increase. We can also borrow up to the lesser of $15.0 million or the revolving credit commitment, as defined, under a Swingline feature of the Credit Agreement.

The 2018 Credit Facility contains a: (1) Consolidated Interest Coverage Ratio requirement whereby we must not permit the Consolidated Interest Coverage Ratio, as defined, to be less than 2.25 to 1.00, and (2) Consolidated Leverage Ratio requirement whereby we must not permit the Consolidated Leverage Ratio, as defined, must be greater than 3.25 to 1.00.

In addition to maintaining these financial covenants, the 2018 Credit Facility also limits our ability to enter into certain business transactions, such as to incur indebtedness or liens, to acquire businesses or dispose of material assets, make restricted payments, pay dividends (limited to $20.0 million per year) and other transactions as further defined in the 2018 Credit Facility. Some of these limitations, however, do not take effect so long as total leverage is less than or equal to 2.75 to 1.00 and available liquidity exceeds $25 million. Substantially all of our domestic assets, with the exception of real property were utilized as collateral for the Credit Agreement.

We utilized initial borrowings of $205.0 million from the 2018 Credit Facility, along with additional funding of $10.0 million of cash on hand, to repay outstanding borrowings under the 2016 Credit Agreement of $213.5 million, to settle outstanding interest accrued and loan fees under the prior facility, and to pay loan fees associated with the 2018 Credit Agreement which totaled $1.0 million. We expensed $1.1 million of unamortized deferred financing fees associated with the 2016 Credit Agreement, while deferring the remaining $0.5 million of unamortized deferred financing fees attributable to the remaining lenders from the previous facility over the life of the 2018 Credit Facility.

As of October 31, 2019, we had $142.5 million of borrowings outstanding under the 2018 Credit Facility (reduced by unamortized debt issuance costs of $1.2 million), $4.8 million of outstanding letters of credit and $15.9 million outstanding under capital leases. We had $177.7 million available for use under the 2018 Credit Facility at October 31, 2019. The borrowings outstanding as of October 31, 2019 under the 2018 Credit Facility accrue interest at 3.30% per annum, and our weighted average borrowing rate for borrowings outstanding during the years ended October 31, 2019 and 2018 was 4.07% and 3.76%, respectively. We were in compliance with our debt covenants as of October 31, 2019.

Other Debt Instruments

We maintain certain capital lease obligations related to equipment purchases, vehicles, and warehouse space. The cost and accumulated depreciation of property, plant and equipment under capital leases at October 31, 2019 was $16.6 million and $3.7 million. These obligations accrue interest at an average rate of 3.60%, and extend through the year 2037.

The table below presents the scheduled maturity dates of our long-term debt outstanding (excluding deferred loan costs of $1.2 million) at October 31, 2019 (in thousands):

	Revolving Credit Facility	Capital Leases and Other Obligations	Aggregate Maturities
2020	$ —	$ 1,050	$ 1,050
2021	—	842	842
2022	—	849	849
2023	142,500	1,008	143,508
2024	—	728	728
Thereafter	—	11,388	11,388
Total	$ 142,500	$ 15,865	$ 158,365

8. Retirement Plans

We have a number of retirement plans covering substantially all employees. We provide both defined benefit and defined contribution plans. In general, an employee’s coverage for retirement benefits depends on the location of employment.

Defined Benefit Plan

We have a non-contributory, single employer defined benefit pension plan that covers the majority of our domestic employees, excluding the Woodcraft employees who are not currently participating. Effective January 1, 2007, we amended this defined benefit pension plan to include a cash balance formula for all new salaried employees hired on or after January 1, 2007 and for any non-union employees who were not participating in a defined benefit plan prior to January 1, 2007. All participating salaried employees hired after January 1, 2007, are eligible to receive credits equivalent to 4% of their annual eligible wages. Some of the employees at the time of the amendment were “grandfathered” and are eligible to receive credits ranging up to 6.5% based upon a percentage of benefits received under our defined benefit plan prior to this amendment of the pension plan. Additionally, every year the participants will receive an interest related credit on their respective balance equivalent to the prevailing 30-year Treasury rate. For employees who were participating in this plan prior to January 1, 2007, the benefit formula is a more traditional formula for retirement benefits, whereby the plan pays benefits to employees upon retirement, using a formula which considers years of service and pensionable compensation prior to retirement. Of our pension plan participants, 99% have their benefit determined pursuant to the cash balance formula.

The Medicare Prescription Drug, Improvement and Modernization Act of 2003 (the "Act") was signed into law on December 8, 2003. This Act introduces a Medicare prescription-drug benefit beginning in 2006 as well as a federal subsidy to sponsors of retiree health care plans that provide a benefit at least “actuarially equivalent” to the Medicare benefit. We concluded that our plans are at least “actuarially equivalent” to the Medicare benefit. For those who are otherwise eligible for the subsidy, we have not included this subsidy per the Act in our benefit calculations. The impact to net periodic benefit cost and to benefits paid did not have a material impact on the consolidated financial statements.

Funded Status and Net periodic Benefit Cost

The changes in benefit obligation and plan assets, and our funded status (reported in deferred pension and postretirement benefits on the consolidated balance sheets) were as follows:

	October 31,	
	2019	2018
Change in Benefit Obligation:	(In thousands)	
Beginning balance as of November 1, 2018 and 2017, respectively	$ 35,959	$ 38,323
Service cost	3,629	3,908
Interest cost	1,456	1,130
Actuarial loss (gain)	7,690	(4,296)
Benefits paid	(3,581)	(2,551)
Administrative expenses	(830)	(555)
Projected benefit obligation at October 31,	$ 44,323	$ 35,959
Change in Plan Assets:		
Beginning balance as of November 1, 2018 and 2017, respectively	$ 32,064	$ 34,340
Actual return on plan assets	2,869	66
Employer contributions	690	764
Benefits paid	(3,581)	(2,551)
Administrative expenses	(830)	(555)
Fair value of plan assets at October 31,	$ 31,212	$ 32,064
Non current liability - Funded Status	$ (13,111)	$ (3,895)

As of October 31, 2019 and 2018, included in our accumulated comprehensive loss was a net actuarial loss of $6.7 million and $3.0 million, respectively. There were no net prior service costs or transition obligations for the years ended October 31, 2019 and 2018.

As of October 31, 2019 and 2018, the accumulated benefit obligation was $43.3 million and $35.4 million, respectively. The accumulated benefit obligation is the present value of pension benefits (whether vested or unvested) attributed to employee service rendered before the measurement date, and based on employee service and compensation prior to that date. The accumulated benefit obligation differs from the projected benefit obligation in that it includes no assumption about future compensation levels.

The net periodic benefit cost for the years ended October 31, 2019, 2018 and 2017, was as follows:

	Year Ended October 31,		
	2019	2018	2017
	(In thousands)		
Service cost	$ 3,629	$ 3,908	$ 3,794
Interest cost	1,456	1,130	859
Expected return on plan assets	(1,977)	(2,172)	(1,863)
Amortization of net loss	125	64	574
Net periodic benefit cost	$ 3,233	$ 2,930	$ 3,364

The changes in plan assets and projected benefit obligations which were recognized in our other comprehensive loss for the years ended October 31, 2019, 2018 and 2017 were as follows:

	Year Ended October 31,		
	2019	2018	2017
	(In thousands)		
Net loss (gain) arising during the period	$ 6,697	$ (2,189)	$ (2,888)
Less: Amortization of net loss	$ 125	$ 64	$ 574
Total recognized in other comprehensive loss	$ 6,572	$ (2,253)	$ (3,462)

Measurement Date and Assumptions

We generally determine our actuarial assumptions on an annual basis, with a measurement date of October 31. The following table presents our assumptions for pension benefit calculations for the years ended October 31, 2019, 2018 and 2017:

	For the Year Ended October 31,					
	2019	2018	2017	2019	2018	2017
Weighted Average Assumptions:	Benefit Obligation			Net Periodic Benefit Cost		
Discount rate	3.10%	4.44%	3.68%	4.44%	3.68%	3.66%
Rate of compensation increase	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Expected return on plan assets	n/a	n/a	n/a	6.50%	6.50%	6.50%

The discount rate was used to calculate the present value of the projected benefit obligation for pension benefits. The rate reflects the amount at which benefits could be effectively settled on the measurement date. We used a RATE: Link Model whereby target yields are developed from bonds across a range of maturity points, and a curve is fitted to those targets. Spot rates (zero coupon bond yields) are developed from the curve and used to discount benefit payments associated with each future year. This model assumes spot rates will remain level beyond the 30-year point. We determine the present value of plan benefits by applying the discount rates to projected benefit cash flows.

The expected return on plan assets was used to determine net periodic pension expense. The rate of return assumptions were based on projected long-term market returns for the various asset classes in which the plans were invested, weighted by the target asset allocations. We review the return assumption at least annually. The rate of compensation increase represents the long-term assumption for expected increases in salaries.

Plan Assets

The following tables provide our target allocation for the year ended October 31, 2019, as well as the actual asset allocation by asset category and fair value measurements as of October 31, 2019 and 2018:

	Target Allocation	Actual Allocation	
	October 31, 2019	October 31, 2019	October 31, 2018
Equity securities	60.0%	61.0%	61.0%
Fixed income	40.0%	39.0%	39.0%

	Fair Value Measurements at	
	October 31, 2019	October 31, 2018
	(In thousands)	
Money market fund	$ 574	$ 597
Large capitalization	$ 8,092	$ 8,362
Small capitalization	2,489	2,559
International equity	6,219	6,385
Other	1,848	1,913
Equity securities	$ 18,648	$ 19,219
High-quality core bond	$ 9,525	$ 9,736
High-quality government bond	1,228	1,251
High-yield bond	1,237	1,261
Fixed income	$ 11,990	$ 12,248
Total securities(1)	$ 31,212	$ 32,064

(1) Quoted prices in active markets for identical assets (Level 1).

Inputs and valuation techniques used to measure the fair value of plan assets vary according to the type of security being valued. All of the equity and debt securities held directly by the plans were actively traded and fair values were determined based on quoted market prices.

Our investment objective for defined benefit plan assets is to meet the plans’ benefit obligations, while minimizing the potential for future required plan contributions. The investment strategies focus on asset class diversification, liquidity to meet benefit payments and an appropriate balance of long-term investment return and risk. Target ranges for asset allocations are determined by matching the actuarial projections of the plans’ future liabilities and benefit payments with expected long-term rates of return on the assets, taking into account investment return volatility and correlations across asset classes. Plan assets are diversified across several investment managers and are generally invested in liquid funds that are selected to track broad market equity and bond indices. Investment risk is carefully controlled with plan assets rebalanced to target allocations on a periodic basis and monitoring of performance of investment managers relative to the investment guidelines established with each investment manager.

Expected Benefit Payments and Funding

Our pension funding policy is to make the minimum annual contributions required pursuant to the plan. We accelerated contributions to target a 100% funding threshold. Additionally, we consider funding annual requirements early in the fiscal year to potentially maximize the return on assets. For the fiscal years ended October 31, 2019, 2018 and 2017, we made total pension contributions of $0.7 million, $0.8 million and $3.6 million, respectively.

During fiscal 2020, we expect to contribute approximately $3.7 million to the pension plan to reach targeted funding levels and meet minimum contribution requirements. This expected contribution level will be dependent on many variables, including the market value of the assets compared to the obligation, as well as other market or regulatory conditions. In addition, we consider the cash requirements of our business investment opportunities. Accordingly, actual funding amounts and the timing of such funding may differ from current estimates.

The following table presents the total benefit payments expected to be paid to participants by year, which includes payments funded from our assets, as well as payments paid from the plan for the year ended October 31, (in thousands):

	Pension Benefits
2020	$ 3,211
2021	3,227
2022	3,181
2023	3,187
2024	3,322
2025 - 2029	17,098
Total	$ 33,226

Defined Contribution Plan

We also sponsor a defined contribution plan into which we and our employees make contributions. We merged a predecessor plan sponsored by Woodcraft into our defined contribution plan effective January 1, 2017. We match 50% up to the first 5% of employee annual salary deferrals under our existing plan. Beginning January 1, 2018, the plan was amended to provide the same match to Woodcraft employees. Prior to January 1, 2018, we matched 35% up to the first 5% of employee deferrals for employees who participated in the predecessor Woodcraft plan. We do not offer our common stock as a direct investment option under these plans. For the years ended October 31, 2019, 2018 and 2017, we contributed approximately $2.7 million, $2.6 million and $2.4 million for these plans, respectively.

Other Plans

Under our postretirement benefit plan, we provide certain healthcare and life insurance benefits for a small number of eligible retired employees who were employed prior to January 1, 1993. Certain employees may become eligible for those benefits if they reach normal retirement age while working for us. We continue to fund benefit costs on a pay-as-you-go basis. The table below indicates the amount of these liabilities included in the accompanying consolidated balance sheets:

	October 31, 2019	October 31, 2018
	(In thousands)	
Accrued liabilities	$ 49	$ 49
Deferred pension and postretirement benefits	311	323
Total	$ 360	$ 372

We also have supplemental benefit plans covering certain executive officers and a non-qualified deferred compensation plan covering members of the Board of Directors and certain key employees. Our liability under the supplemental benefit plan was approximately $4.2 million and $3.4 million as of October 31, 2019 and 2018, and our liability under the deferred compensation plan was approximately $3.8 million and $3.5 million, respectively. As of October 31, 2019 and 2018, the current portion of these liabilities was recorded under the caption "Accrued Liabilities," and the long-term portion was included under the caption "Other Liabilities" in the accompanying balance sheets.

9. Warranty Obligations

We accrue warranty obligations as we recognize revenue associated with certain products. We make provisions for our warranty obligations based upon historical experience of costs incurred for such obligations adjusted, as necessary, for current conditions and factors. There are significant uncertainties and judgments involved in estimating our warranty obligations, including changing product designs, differences in customer installation processes and future claims experience which may vary from historical claims experience. Therefore, the ultimate amount we incur as warranty costs in the near and long-term may not be consistent with our current estimate.

A reconciliation of the activity related to our accrued warranty, including both the current and long-term portions (reported in accrued liabilities and other liabilities, respectively, on the accompanying consolidated balance sheets) follows:

	Year Ended October 31,	
	2019	2018
	(In thousands)	
Beginning balance as of November 1, 2018, and 2017, respectively	$ 295	$ 323
Provision for warranty expense	—	4
Change in accrual for preexisting warranties	(20)	(16)
Warranty costs paid	(15)	(16)
Total accrued warranty	$ 260	$ 295
Less: Current portion of accrued warranty	136	148
Long-term portion at October 31,	$ 124	$ 147

10. Income Taxes

We provide for income taxes on taxable income at the applicable statutory rates. The following table summarizes the components of income tax expense (benefit) for the years ended October 31, 2019, 2018 and 2017:

	Year Ended October 31,		
	2019	2018	2017
	(In thousands)		
Current			
Federal	$ 3,338	$ 983	$ 1,991
State and local	299	417	873
Non-United States	3,879	3,356	4,067
Total current	7,516	4,756	6,931
Deferred			
Federal	1,497	(5,828)	1,860
State and local	1,087	670	(450)
Non-United States	676	(398)	(1,522)
Total deferred	3,260	(5,556)	(112)
Total income tax expense (benefit)	$ 10,776	$ (800)	$ 6,819

For financial reporting purposes, (loss) income before income taxes for the years ended October 31, 2019, 2018 and 2017 includes the following components:

	Year Ended October 31,		
	2019	2018	2017
	(In thousands)		
Domestic	$ (58,247)	$ 9,721	$ 9,189
Foreign	22,293	16,032	16,313
Total (loss) income before income taxes	$ (35,954)	$ 25,753	$ 25,502

The following table reconciles our effective income tax rate to the federal statutory rate for the years ended October 31, 2019, 2018 and 2017:

	Year Ended October 31,		
	2019	2018	2017
United States tax at statutory rate	21.0 %	23.3 %	35.0 %
State and local income tax	3.1	3.4	1.7
Non-United States income tax	(0.5)	(1.6)	(9.1)
Deferred rate impact	—	—	(4.1)
General business credits	(4.7)	(0.4)	(0.5)
Change in valuation allowance	(1.5)	(0.1)	(0.6)
Other permanent differences	3.0	—	3.3
Deferred rate impact of enactment of tax reform	—	(30.5)	—
Foreign tax positions under the Act (GILTI and FDII)	3.3	—	—
Tax impact of stock based compensation	(1.6)	(0.5)	—
Impact of deemed repatriation	(1.1)	4.8	—
Asset impairment charges	(50.7)	—	—
Return to actual adjustments	(0.3)	(1.5)	1.0
Effective tax rate	(30.0)%	(3.1)%	26.7 %

On December 22, 2017, the Tax Cuts and Jobs Act (the Act) was signed into law. The Act reduced our federal income tax statutory rate from 35.0% to 21.0% for the fiscal year ending October 31, 2019 and 23.3% for the fiscal year ended October 31, 2018, which reflects the period November 1, 2017 to December 31, 2017 at the previous 35.0% rate and the period January 1, 2018 to October 31, 2018 at the new 21.0% rate. The Act also imposed additional tax law changes that became effective during fiscal 2019, which include new requirements for a global intangible low-taxed income provision (GILTI) and a deduction for foreign-derived intangible income (FDII). We elected to account for the tax on GILTI as a period cost and therefore have not recorded deferred taxes related to GILTI on our foreign subsidiaries.

The October 31, 2019 effective rate was primarily impacted by a net charge of $1.2 million related to GILTI and FDII, as well as discrete charge of $0.4 million for the adjustment of the one-time mandatory transition tax on deemed repatriation of previously tax-deferred and unremitted foreign earnings and $0.6 million related to the vesting or exercise of equity-based compensation awards. Additionally, during the year ended October 31, 2019, we recorded a $74.6 million asset impairment charge, which was primarily non-deductible, in the NA Cabinet Components segment, as further explained in Note 5, "Goodwill and Intangible Assets."

Discrete items contributing to the October 31, 2018 income tax benefit included $7.7 million for the re-measurement of our deferred income tax assets and liabilities due to the decrease in the federal corporate income tax rate, a benefit of $0.2 million for the true up of our accruals and related deferred taxes from prior year filings and settled tax audits, and a benefit of $0.2 million related to the vesting or exercise of equity-based compensation awards, partially offset by a tax expense of $1.2 million for the one-time mandatory transition tax on deemed repatriation of previously tax-deferred and unremitted foreign earnings.

The decrease in the October 31, 2017 effective tax rate is due primarily to a greater proportion of U.S. taxable income in relation to foreign taxable income for the year. The U.S. tax rate is generally higher than the foreign tax rate. The effective rate is also lower due to a change over a period of three years in the deferred tax rate, primarily in the U.K., from 19% to 17%.

Given the significance of the Act, the SEC staff issued Staff Accounting Bulletin No. 118 (SAB 118), which allows registrants to record provisional amounts during a one year “measurement period”. As of October 31, 2019, we have completed the accounting for the tax effects of the Act.

In light of the Act, we repatriated $24.2 million and $2.8 million of foreign earnings from our international operations during the years ended October 31, 2019 and 2018, respectively. This was repatriation of excess cash that was a portion of the one-time mandatory transition tax discussed above. We will continue to evaluate our foreign cash position and may repatriate additional foreign earnings in the future. With the exception of the one-time mandatory transition tax on deemed repatriation of previously tax-deferred and unremitted foreign earnings, we do not anticipate any material tax impact from any potential repatriation of previously unremitted foreign earnings. If the investment in our foreign subsidiaries were completely realized, we could incur an estimated residual U.S. tax liability of $0.1 million.

The decrease in the 2017 effective tax rate is due primarily to a greater proportion of U.S. taxable income in relation to foreign taxable income for the year. The U.S. tax rate is generally higher than the foreign tax rate. The effective rate is also lower due to a change over a period of three years in the deferred tax rate, primarily in the U.K., from 19% to 17%.

Significant components of our net deferred tax liabilities and assets were as follows:

	October 31,	
	2019	2018
	(In thousands)	
Deferred tax assets:		
Employee benefit obligations	$ 7,227	$ 9,910
Accrued liabilities and reserves	1,646	1,609
Pension and other benefit obligations	4,365	1,872
Inventory	632	548
Loss and tax credit carry forwards	2,915	3,716
Other	110	119
Total gross deferred tax assets	16,895	17,774
Less: Valuation allowance	1,560	1,275
Total deferred tax assets, net of valuation allowance	15,335	16,499
Deferred tax liabilities:		
Property, plant and equipment	11,075	10,577
Goodwill and intangibles	23,623	23,432
Total deferred tax liabilities	34,698	34,009
Net deferred tax liabilities	$ 19,363	$ 17,510

At October 31, 2019, state operating loss carry forwards totaled $37.5 million. The majority of these losses begin to expire in 2025. Tax credits available to offset future tax liabilities totaled $1.4 million and are expected to be utilized within the next twelve months. We evaluate tax benefits of operating losses and tax credit carry forwards on an ongoing basis, including a review of historical and projected future operating results, the eligible carry forward period and other circumstances. We have recorded a valuation allowance for certain state net operating losses as of October 31, 2019 and 2018, totaling $1.6 million and $1.3 million, respectively ($1.2 million and $1.0 million, respectively, net of federal taxes) for the respective periods. In assessing the need for a valuation allowance, we consider both positive and negative evidence related to the likelihood of realization of the deferred tax assets.

The following table reconciles the change in the unrecognized income tax benefit associated with uncertain tax positions for the years ended October 31, 2019, 2018 and 2017 (in thousands):

	Unrecognized Income Tax Benefits
Balance at October 31, 2016	$ 579
Additions for tax positions related to the current year	—
Additions for tax positions related to the prior year	12
Balance at October 31, 2017	$ 591
Additions for tax positions related to the current year	—
Additions for tax positions related to the prior year	15
Balance at October 31, 2018	$ 606
Additions for tax positions related to the current year	—
Additions for tax positions related to the prior year	16
Reassessment of position	(66)
Balance at October 31, 2019	$ 556

As of October 31, 2019, our unrecognized tax benefit (UTB) relates to certain state tax items regarding the interpretation of tax laws and regulations. At October 31, 2019, $0.6 million is recorded as a liability for uncertain tax positions. The disallowance of the UTB would not materially affect the annual effective tax rate.

We, along with our subsidiaries, file income tax returns in the U.S. and various state jurisdictions as well as in the U.K., Germany and Canada. In certain jurisdictions, the statute of limitations has not yet expired. We generally remain subject to examination of our U.S. income tax returns for 2016 and subsequent years. We generally remain subject to examination of our various state and foreign income tax returns for a period of four to five years from the date the return was filed. The state impact of any federal changes remains subject to examination by various states for a period of up to one year after formal notification to the state of the federal change.

Judgment is required in assessing the future tax consequences of events that have been recognized in our financial statements or tax returns. The final outcome of the future tax consequences of legal proceedings, if any, as well as the outcome of competent authority proceedings, changes in regulatory tax laws, or interpretation of those tax laws could impact our financial statements. We are subject to the effect of these matters occurring in various jurisdictions. We do not believe any of the UTB at October 31, 2019 will be recognized within the next twelve months.

11. Commitments and Contingencies

Operating Leases and Purchase Obligations

We have operating leases for certain real estate and equipment used in our business. Rental expense for the years ended October 31, 2019, 2018 and 2017 was $9.9 million, $9.5 million and $10.5 million, respectively.

We are a party to non-cancelable purchase obligations primarily for door hardware, primary and secondary steel and primary and secondary aluminum used in our manufacturing processes, as well as expenditures related to capital projects in progress. We paid $11.1 million and $5.2 million pursuant to these arrangements for the years ended October 31, 2019 and 2018, respectively. These obligations total $18.7 million and $16.7 million at October 31, 2019 and 2018, respectively, and extend through fiscal 2018. Future amounts paid pursuant to these arrangements will depend, to some extent, on our usage.

The following table presents future minimum rental payments under operating leases with remaining terms in excess of one year at October 31, 2019 (in thousands):

	Operating Leases
2020	$ 9,121
2021	6,981
2022	6,012
2023	5,506
2024	4,699
Thereafter	15,220
Total	$ 47,539

Asset Retirement Obligation

We maintain an asset retirement obligation associated with a leased facility in Kent, Washington. We have estimated our future cash flows associated with this asset retirement obligation and recorded an asset and corresponding liability. We are depreciating the asset and accreting the liability over a seven year term, to culminate in an asset retirement obligation of $2.2 million as of February 2025.

Remediation and Environmental Compliance Costs

Under applicable state and federal laws, we may be responsible for, among other things, all or part of the costs required to remove or remediate wastes or hazardous substances at locations we, or our predecessors, have owned or operated. From time to time, we also have been alleged to be liable for all or part of the costs incurred to clean up third-party sites where there might have been an alleged improper disposal of hazardous substances. At present, we are not involved in any such matters.

From time to time, we incur routine expenses and capital expenditures associated with compliance with existing environmental regulations, including control of air emissions and water discharges, and plant decommissioning costs. We have not incurred any material expenses or capital expenditures related to environmental matters during the past three fiscal years, and do not expect to incur a material amount of such costs in fiscal 2020. While we will continue to have future expenditures related to environmental matters, any such amounts are impossible to reasonably estimate at this time. Based upon our experience to date, we do not believe that our compliance with environmental requirements will have a material adverse effect on our operations, financial condition or cash flows.

Litigation

From time to time, we, along with our subsidiaries, are involved in various litigation matters arising in the ordinary course of our business, including those arising from or related to contractual matters, commercial disputes, intellectual property, personal injury, environmental matters, product performance or warranties, product liability, insurance coverage and personnel and employment disputes.

We regularly review with legal counsel the status of all ongoing proceedings, and we maintain insurance against these risks to the extent deemed prudent by our management and to the extent such insurance is available. However, there is no assurance that we will prevail in these matters or that our insurers will accept full coverage of these matters, and we could, in the future, incur judgments, enter into settlements of claims, or revise our expectations regarding the outcome or insurability of matters we face, which could materially impact our results of operations.

We have been and are currently party to multiple claims, some of which are in litigation, relating to alleged defects in a commercial sealant product that was manufactured and sold during the 2000's. During the years ended October 31, 2018 and 2017, our insurance carrier reimbursed fees and expenses originally incurred as part of our defense of these various commercial sealant claims totaling $0.5 million and $4.0 million, respectively. There were no corresponding reimbursements during 2019. While we believe that our product was not defective and that we would prevail in these commercial sealant product claims if taken to trial, the timing, ultimate resolution and potential impact of these claims is not currently determinable. Nevertheless, after taking into account all currently available information, including our defenses, the advice of our counsel, and the extent and currently-expected availability of our existing insurance coverage, we believe that the eventual outcome of these commercial sealant claims will not have a material adverse effect on our overall financial condition, results of operations or cash flows, and we have not recorded any accrual with regard to these claims.

12. Derivative Instruments

Our derivative activities are subject to the management, direction, and control of the Chief Financial Officer and Chief Executive Officer. Certain transactions in excess of specified levels require further approval from the Board of Directors.

The nature of our business activities requires the management of various financial and market risks, including those related to changes in foreign currency exchange rates and aluminum scrap prices. We have historically used foreign currency forwards and options to mitigate or eliminate certain of those risks at our subsidiaries. We use foreign currency contracts to offset fluctuations in the value of accounts receivable and payable balances that are denominated in currencies other than the United States Dollar, including the Euro, British Pound Sterling and Canadian Dollar. Currently, we do not enter into derivative transactions for speculative or trading purposes. We are exposed to credit loss in the event of nonperformance by the counterparties to our derivative transactions. We attempt to mitigate this risk by monitoring the creditworthiness of our counterparties and limiting our exposure to individual counterparties. In addition, we have established master netting agreements in certain cases to facilitate the settlement of gains and losses on specific derivative contracts.

We have not designated any of our derivative contracts as hedges for accounting purposes in accordance with the provisions under the Accounting Standards Codification topic 815, *Derivatives and Hedging* (ASC 815). Therefore, changes in the fair value of these contracts and the realized gains and losses are recorded in the consolidated statements of (loss) income for the years ended October 31, 2019, 2018 and 2017 were as follows (in thousands):

		Year Ended October 31,		
Derivatives Not Designated as Hedging Instruments	**Location of (Loss) or Gain:**	**2019**	**2018**	**2017**
Foreign currency derivatives	Other, net	$ (10)	$ (11)	$ (88)

We have chosen not to offset any of our derivative instruments in accordance with the provisions of ASC 815. Therefore, the assets and liabilities are presented on a gross basis on our accompanying consolidated balance sheets. Less than $0.1 million of fair value related to foreign currency derivatives was included in prepaid and other current assets as of the years ended October 31, 2019 and 2018, and less than $0.1 million of fair value related to foreign currency derivatives was included in accrued liabilities as of October 31, 2019.

The following table summarizes the notional amounts and fair value of outstanding derivative contracts at October 31, 2019 and 2018 (in thousands):

		Notional as indicated		Fair Value in $	
		October 31, 2019	October 31, 2018	October 31, 2019	October 31, 2018
Foreign currency derivatives:					
Buy EUR, Sell USD	EUR	301	455	$ 1	$ 1
Sell CAD, Buy USD	CAD	405	229	2	—
Sell GBP, Buy USD	GBP	73	22	—	—
Buy EUR, Sell GBP	EUR	57	34	—	—
Buy USD, Sell EUR	USD	13	12	—	—

For the classification in the fair value hierarchy, see Note 13, "Fair Value Measurements of Assets and Liabilities", included herewith.

13. Fair Value Measurements of Assets and Liabilities

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy distinguishes between (1) market participant assumptions developed based on market data obtained from independent sources (observable inputs) and (2) an entity's own assumptions about market participant assumptions developed based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which gives the highest priority to Level 1 and the lowest priority to Level 3. The three levels of the fair value hierarchy are described below:

- Level 1 - Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.
- Level 2 - Inputs other than quoted prices included within Level 1 that are observable for the asset or liability either directly or indirectly including quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability (e.g., interest rates) and inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3 - Inputs that are both significant to the fair value measurement and unobservable.

As of October 31, 2019 and 2018, foreign currency derivatives were the only instruments being measured on a recurring basis. Less than $0.1 million of foreign currency derivatives were included in total assets as of October 31, 2019 and less than $0.1 million of foreign currency derivatives were included in total assets and total liabilities as of October 31, 2018. All of our derivative contracts are valued using quoted market prices from brokers or exchanges and are classified within Level 2 of the fair value hierarchy.

As of October 31, 2019 and 2018, we had approximately $2.4 million of certain property, plant and equipment located in our NA Fenestration segment that was recorded at fair value on a non-recurring basis and classified as Level 3. The fair value was based on broker opinions.

Carrying amounts reported on the balance sheet for cash, cash equivalents, accounts receivable and accounts payable approximate fair value due to the short-term maturity of these instruments. Our outstanding debt is variable rate debt that re-prices frequently, thereby limiting our exposure to significant changes in interest rate risk. As a result, the fair value of our debt instruments approximates carrying value at October 31, 2019 and 2018 (Level 2 measurement).

The liability portion of our performance share awards are marked-to-market on a quarterly basis during a three-year vesting period based on market data (Level 2 measurement). For further information, refer to Note 14, "Stock-Based Compensation - Performance Share Awards."

14. Stock-Based Compensation

We have established and maintain an Omnibus Incentive Plan (2008 Plan) that provides for the granting of restricted stock awards, stock options, restricted stock units, performance share awards, performance restricted stock units, and other stock-based and cash-based awards. The 2008 Plan is administered by the Compensation and Management Development Committee of the Board of Directors.

The aggregate number of shares of common stock authorized for grant under the 2008 Plan is 7,650,000 as approved by the shareholders. Any officer, key employee and/or non-employee director is eligible for awards under the 2008 Plan. We grant restricted stock units to non-employee directors on the first business day of each fiscal year. Annually, pending approval by the Compensation & Management Development Committee of our Board of Directors in December, we grant a mix of restricted stock awards, performance shares and/or performance restricted stock units to officers, management and key employees. We also historically granted stock options to certain officers, directors and key employees. Occasionally, we may make additional grants to key employees at other times during the year.

Restricted Stock Awards

Restricted stock awards are granted to key employees and officers annually, and typically cliff vest over a three-year period with service and continued employment as the only vesting criteria. The recipient of the restricted stock awards is entitled to all of the rights of a shareholder, except that the awards are nontransferable during the vesting period. The fair value of the restricted stock award is established on the grant date and then expensed over the vesting period resulting in an increase in additional paid-in-capital. Shares are generally issued from treasury stock at the time of grant.

A summary of non-vested restricted stock awards activity during the years ended October 31, 2019, 2018 and 2017, follows:

	Restricted Stock Awards	Weighted Average Grant Date Fair Value per Share
Non-vested at October 31, 2016	266,700	$ 19.19
Granted	93,800	19.46
Vested	(73,100)	17.67
Forfeited	(3,100)	19.65
Non-vested at October 31, 2017	284,300	19.66
Granted	73,400	20.70
Vested	(111,800)	20.16
Forfeited	(28,700)	19.66
Non-vested at October 31, 2018	217,200	19.76
Granted	124,800	13.78
Vested	(42,500)	17.87
Forfeited	(69,400)	19.19
Non-vested at October 31, 2019	230,100	$ 17.02

The total weighted average grant-date fair value of restricted stock awards that vested during the years ended October 31, 2019, 2018 and 2017 was $1.3 million, $2.3 million and $1.3 million, respectively. As of October 31, 2019, total unrecognized compensation cost related to unamortized restricted stock awards totaled $1.5 million. We expect to recognize this expense over the remaining weighted average period of 1.8 years.

Stock Options

Historically, stock options have been awarded to key employees, officers and non-employee directors. Effective May 2015, the director compensation structure was revised to eliminate the grant of stock options to non-employee directors. In December 2017, the Compensation & Management Development Committee of the Board of Directors approved a change to the long-term incentive award program eliminating the grant of stock options and replacing this award with a grant of performance restricted stock units as further described below. As a result, stock options were not granted during the years ended October 31, 2019 and 2018. Stock options typically vest ratably over a three-year period with service and continued employment as the vesting conditions. Our stock options may be exercised up to a maximum of ten years from the date of grant. The fair value of the stock options is determined on the grant date and expensed over the vesting period resulting in an increase in additional paid-in-capital. For employees who are nearing retirement-eligibility, we recognize stock option expense ratably over the shorter of the vesting period or the period from the grant-date to the retirement-eligibility date.

We use the Black-Scholes pricing model to estimate the fair value of our stock options. A description of the methodology for the valuation assumptions follows:

- *Expected Volatility* – For stock options granted prior to July 1, 2013, we used an estimate of the historical volatility of a selected peer group. Effective July 1, 2013, we determined that we had sufficient historical data to calculate the volatility of our common stock since our spin-off in April 2008. We believe there has been uncertainty in the U.S. equities market over the past several years and that uncertainty has contributed to volatility in equities in general. We expect this volatility to continue over the foreseeable future. Therefore, we believe that our historical volatility is a proxy for expected volatility. We have not excluded any of our historical data from the volatility calculation, and we are not aware of any specific significant factors which might impact our future volatility.

- *Expected Term* – For stock options granted prior to July 1, 2013, we determined the expected term using historical information of our former parent company prior to the spin-off in 2008, with regards to option vesting, exercise behavior and contractual expiration, as we believed that this employee group was the most similar to our employee group. Separate groups of employees that have similar historical exercise behavior were considered separately. Effective July 1, 2013, we determined that we had sufficient historical data to estimate our expected term using our own data with regards to the exercise behavior, cancellations, retention patterns and remaining contractual terms. When analyzing these patterns and variables, we considered the stratification of the awards (large grants to relatively few employees versus smaller grants to many others), the age of certain employees with larger grants, the historical exercise behavior of the employee group, and fluctuations/volatility of our underlying common stock, as to whether the stock options are expected to be out-of-the-money. For our directors, stock options vested immediately, and, as such, the expected term approximated the contractual term, after adjusting for historical forfeitures. We believe our estimates are reasonable given these factors.

- *Risk-Free Rate* – We base the risk-free rate on the yield at the date of grant of a zero-coupon United States Treasury bond whose maturity period equals the option's expected term.

- *Expected Dividend Yield* – We base the expected dividend yield on our historical dividend payment of approximately $0.16 per share.

The following table summarizes the assumptions used to estimate the fair value of our stock options granted during the year ended October 31, 2017.

	Year Ended October 31, 2017
Weighted-average expected volatility	34.7%
Weighted-average expected term (in years)	5.7
Risk-free interest rate	2.0%
Expected dividend yield over expected term	1.0%
Weighted average grant date fair value	$6.25

The following table summarizes our stock option activity for the years ended October 31, 2019, 2018 and 2017.

	Stock Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (000s)
Outstanding at October 31, 2016	2,386,220	$ 16.84	5.1	$ 2,384
Granted	292,600	19.45		
Exercised	(507,660)	15.67		
Forfeited/Expired	(18,402)	19.90		
Outstanding at October 31, 2017	2,152,758	17.44	5.2	$ 9,700
Granted	—	—		
Exercised	(377,218)	12.58		
Forfeited/Expired	(21,884)	19.28		
Outstanding at October 31, 2018	1,753,656	18.47	5.0	$ 51
Granted	—	—		
Exercised	(204,770)	15.76		
Forfeited/Expired	(132,700)	20.01		
Outstanding at October 31, 2019	1,416,186	18.71	4.2	$ 1,449
Vested or expected to vest at October 31, 2019	1,416,186	18.71	4.2	$ 1,449
Exercisable at October 31, 2019	1,334,714	$ 18.67	4.0	$ 1,449

Intrinsic value is the amount by which the market price of the common stock on the date of exercise exceeds the exercise price of the stock option. For the years ended October 31, 2019, 2018 and 2017, the total intrinsic value of our stock options that were exercised totaled $0.4 million, $2.9 million and $3.1 million, respectively. The total fair value of stock options vested during the years ended October 31, 2019, 2018 and 2017, was $1.1 million, $1.5 million and $1.8 million, respectively. As of October 31, 2019, substantially all compensation cost related to stock options has been recognized.

Restricted Stock Units

Restricted stock units may be awarded to key employees and officers from time to time, and annually to non-employee directors. The non-employee director restricted stock units vest immediately but are payable only upon the director's cessation of service unless an election is made by the non-employee director to settle and pay the award on an earlier specified date. Restricted stock units awarded to employees and officers typically cliff vest after a three-year period with service and continued employment as the vesting conditions. Restricted stock units are not considered outstanding shares and do not have voting rights, although the holder does receive a cash payment equivalent to the dividend paid, on a one-for-one basis, on our outstanding common shares. Once the vesting criteria is met, each restricted stock unit is payable to the holder in cash based on the market value of one share of our common stock. Accordingly, we record a liability for the restricted stock units on our balance sheet and recognize any changes in the market value during each reporting period as compensation expense.

During the years ended October 31, 2019, 2018 and 2017, 34,050, 18,050 and 24,560 restricted stock units, respectively, were granted and immediately vested with corresponding weighted average grant date fair value of $15.51, $21.85 and $15.65, respectively. As of October 31, 2019, there were 4,616 non-vested restricted stock units from the fiscal 2019 grant which will vest in December 2020. As of October 31, 2018 and 2017, there were no non-vested restricted stock units. During the year ended October 31, 2019, we paid less than $0.4 million to settle restricted stock units. We did not make any payments to settle restricted stock units during the years ended October 31, 2018 and 2017.

Performance Share Awards

We have granted performance share awards to key employees and officers annually in December. In addition, we awarded performance shares in January 2016 to a new officer. These awards cliff vest after a three-year period with service and performance measures such as relative total shareholder return (R-TSR) and earnings per share (EPS) growth as vesting conditions. The number of performance share awards earned is variable depending on the metrics achieved. The settlement method is 50% in cash and 50% in our common stock. Performance share awards issued during the year ended October 31, 2019 vest with return on net assets (RONA) as the vesting condition and pay out 100% in cash.

To account for these awards, we have bifurcated the portion subject to a market condition (R-TSR) and the portion subject to an internal performance measure (EPS or RONA). We have further bifurcated these awards based on the settlement method, as the portion expected to settle in stock (equity component) and the portion expected to settle in cash (liability component).

To value the shares subject to the market condition, we utilized a Monte Carlo simulation model to arrive at a grant-date fair value. This amount will be expensed over the three-year term of the award with a credit to additional paid-in-capital. To value the shares subject to the EPS and RONA performance measures, we used the value of our common stock on the date of grant as the grant-date fair value per share. This amount will be expensed over the three-year term of the award, with a credit to additional paid-in-capital, and could fluctuate depending on the number of shares ultimately expected to vest based on our assessment of the probability that the performance conditions will be achieved. The portion of the awards expected to settle in cash is recorded as a liability and is marked to market over the three-year term of the award, and could fluctuate depending on the number of shares ultimately expected to vest. Depending on the achievement of the performance conditions, 0% to 200% of the awarded performance shares may ultimately vest.

The following table summarizes our performance share grants and the grant date fair value for the EPS, R-TSR, and RONA performance metrics:

		Grant Date Fair Value			
Grant Date	**Shares Awarded**	**EPS**	**R-TSR**	**RONA**	**Forfeited**
November 30, 2016	186,500	$ 19.45	$ 26.61	—	42,230
December 7, 2017	146,500	20.70	21.81	—	33,208
December 5, 2018	131,500	—	—	13.63	18,100

On December 3, 2018 and January 25, 2019, 139,164 shares vested pursuant to the December 2013 grant and a total of 4,300 shares vested pursuant to the January 2016 grant, however, performance conditions resulted in no share issuances or cash payments for either of these awards. The November 2016 and December 2017 grants include a return on invested capital (ROIC) metric which, if achieved, could enhance the number of shares that are ultimately issued but cannot exceed the maximum (200%). Due to the uncertainty with regard to achieving this metric, no value has been assigned. In the event and at such time as the metric is deemed achievable, compensation expense will begin to be recognized through the remaining vesting period. For the years ended October 31, 2019 and 2017, we recorded $1.1 million and $3.0 million, respectively, of compensation expense related to performance share awards. For the year ended October 31, 2018, we recorded a decrease in compensation expense of $0.9 million, which reflected a decrease in the number of shares expected to vest in November 2019 associated with the November 30, 2016 performance share grant.

Performance share awards are not considered outstanding shares and do not have voting rights, although dividends are accrued over the performance period and will be payable in cash based upon the number of performance shares ultimately earned.

Performance shares are excluded from diluted weighted-average shares used to calculate earnings per share until the performance criteria is probable to result in the issuance of contingent shares. We evaluate the probability of the performance share vesting within one year of the vesting date. As of October 31, 2019, we have deemed 56,103 performance share awards from our November 30, 2016 grant to vest, of which 28,051 will be paid in our common stock and 28,051, along with accrued dividends, will settle in cash. For the years ended October 31, 2019 and 2017, there were 28,051 and 23,175 shares, respectively, related to performance shares that were potentially dilutive and considered in the diluted weighted average shares calculations. No contingent shares related to performance shares are included in diluted weighted average shares for the year ended October 31, 2018.

Performance Restricted Stock Units

We awarded performance restricted stock units to key employees and officers beginning in December 2017. These awards cliff vest upon a three-year service period with the absolute total shareholder return of our common stock over this three-year term as the vesting criteria. The number of performance restricted stock units earned is variable depending on the metric achieved, and the settlement method is 100% in our common stock, with accrued dividends paid in cash at the time of vesting, assuming the shares had been outstanding throughout the performance period.

To value the performance restricted stock units, we utilized a Monte Carlo simulation model to arrive at a grant-date fair value. This amount will be adjusted for forfeitures and expensed over the three-year term of the award with a credit to additional paid-in-capital. Depending on the achievement of the performance conditions, a minimum of 0% and a maximum of 150% of the awarded performance restricted stock units may vest. Specifically, the awards vest on a continuum with the following Absolute Total Shareholder Return (A-TSR) milestones:

Vesting Level	Vesting Criteria	Percentage of Award Vested
Level 1	A-TSR greater than or equal to 50%	150%
Level 2	A-TSR less than 50% and greater than or equal to 20%	100%
Level 3	A-TSR less than 20% and greater than or equal to -20%	50%
Level 4	A-TSR less than -20%	—%

The following table summarizes our performance restricted stock unit grants and the grant date fair value for the A-TSR performance metric:

Grant Date	Shares Awarded	Grand Date Fair Value	Shares Forfeited
December 7, 2017	78,200	$ 17.76	17,754
December 5, 2018	89,200	$ 13.63	13,800

During the years ended October 31, 2019 and 2018, we recorded compensation expense of approximately $0.7 million and $0.4 million related to our performance share restricted units.

Similar to performance shares, the performance restricted stock units are not considered outstanding shares, do not have voting rights, and are excluded from diluted weighted-average shares used to calculate earnings per share until the performance criteria is probable to result in the issuance of contingent shares.

The following table summarizes amounts expensed as selling, general and administrative expense related to restricted stock awards, stock options, restricted stock units, performance share awards and performance restricted stock units for the years ended October 31, 2019, 2018 and 2017 (in thousands):

	Year Ended October 31,		
	2019	2018	2017
Restricted stock awards	$ 1,018	$ 1,462	$ 1,810
Stock options	158	467	1,820
Restricted stock units	950	(364)	855
Performance share awards	1,131	(944)	3,001
Performance restricted stock units	708	401	—
Total compensation expense	3,965	1,022	7,486
Income tax effect	997	(35)	1,999
Net compensation expense	$ 2,968	$ 1,057	$ 5,487

15. Stockholders' Equity

As of October 31, 2019, our authorized capital stock consists of 125,000,000 shares of common stock, at par value of $0.01 per share, and 1,000,000 shares of preferred stock, with no par value. As of October 31, 2019 and 2018, we had 37,370,402 and 37,433,817 shares of common stock issued, respectively, and 33,021,789 and 33,339,032 shares of common stock outstanding, respectively. There were no shares of preferred stock issued or outstanding at October 31, 2019 and 2018.

Stock Repurchase Program and Treasury Stock

On August 30, 2018, our Board of Directors approved a stock repurchase program that authorized the repurchase of up to $60.0 million worth of shares of our common stock. Repurchases under the new program will be made in open market transactions or privately negotiated transactions, subject to market conditions, applicable legal requirements and other relevant factors. The program does not have an expiration date or a limit on the number of shares that may be purchased. During the years ended October 31, 2019 and 2018, we purchased 583,398 shares and 1,900,000 shares, respectively, at a cost of $9.6 million and $32.0 million, respectively, under this program.

We record treasury stock purchases under the cost method whereby the entire cost of the acquired stock is recorded as treasury stock. Shares are generally issued from treasury stock at the time of grant of restricted stock awards, upon the exercise of stock options, and upon the vesting of performance shares and performance restricted stock units. On the subsequent issuance of treasury shares, we record proceeds in excess of cost as an increase in additional paid in capital. A deficiency of such proceeds relative to costs would be applied to reduce paid-in-capital associated with prior issuances to the extent available, with the remainder recorded as a charge to retained earnings. We recorded a charge to retained earnings of $0.3 million and $2.1 million in the years ended October 31, 2019 and 2018, respectively.

For a summary of treasury stock activity for the years ended October 31, 2019, 2018 and 2017, refer to the *Consolidated Statement of Stockholders' Equity* located elsewhere herein.

16. Other Income (Expense)

Other income included under the caption "Other, net" on the accompanying consolidated statements of (loss) income, consisted of the following (in thousands):

	Year Ended October 31,		
	2019	2018	2017
Foreign currency transaction (losses) gains	$ (187)	$ 113	$ 713
Foreign currency exchange derivative losses	(197)	(11)	(88)
Pension service benefit	396	978	430
Interest income	63	69	86
Other	41	7	19
Other income	$ 116	$ 1,156	$ 1,160

Other income for the years ended October 31, 2018 and 2017 has been updated to reflect the adoption of Accounting Standards Update 2017-07. For further information, see Note 21, "New Accounting Guidance".

17. Segment Information

We present three reportable business segments: (1) NA Fenestration, comprising three operating segments primarily focused on the fenestration market in North America including vinyl profiles, insulating glass spacers, screens & other fenestration components; (2) EU Fenestration, comprising our U.K.-based vinyl extrusion business, manufacturing vinyl profiles & conservatories, and the European insulating glass business manufacturing insulating glass spacers; and (3) NA Cabinet Components, comprising our cabinet door and components operations. We maintain a grouping called Unallocated Corporate & Other, which includes transaction expenses, stock-based compensation, long-term incentive awards based on the performance of our common stock and other factors, certain severance and legal costs not deemed to be allocable to all segments, depreciation of corporate assets, interest expense, other, net, income taxes and inter-segment eliminations, and executive incentive compensation and medical expense fluctuations relative to planned costs as determined during the annual planning process. Other general and administrative costs associated with the corporate office are allocated to the reportable segments, based upon a relative measure of profitability in order to more accurately reflect each reportable business segment's administrative costs. We allocate corporate expenses to businesses acquired mid-year from the date of acquisition. The accounting policies of our operating segments are the same as those used to prepare the accompanying consolidated financial statements. Corporate general and administrative expenses allocated during the years ended October 31, 2019, 2018 and 2017 were $18.3 million, $18.7 million and $17.0 million, respectively.

ASC Topic 280-10-50, “*Segment Reporting*” (ASC 280) permits aggregation of operating segments based on factors including, but not limited to: (1) similar nature of products serving the building products industry, primarily the fenestration business; (2) similar production processes, although there are some differences in the amount of automation amongst operating plants; (3) similar types or classes of customers, namely the primary OEMs; (4) similar distribution methods for product delivery, although the extent of the use of third-party distributors will vary amongst the businesses; (5) similar regulatory environment; and (6) converging long-term economic similarities.

Segment information for the years ended October 31, 2019, 2018 and 2017 was as follows (in thousands):

	NA Fenestration[1]	EU Fenestration[1]	NA Cabinet Comp.	Unallocated Corp. & Other	Total
Year Ended October 31, 2019					
Net sales	$ 503,837	$ 164,997	$ 229,644	$ (4,637)	$ 893,841
Depreciation and amortization	27,054	8,845	13,178	509	49,586
Operating income (loss)	39,765	19,040	(74,236)	(10,996)	(26,427)
Capital expenditures	12,984	6,365	5,383	151	24,883
Total assets	$ 226,243	$ 212,239	$ 181,416	$ 25,212	$ 645,110
Year Ended October 31, 2018					
Net sales	$ 485,366	$ 159,973	$ 249,813	$ (5,367)	$ 889,785
Depreciation and amortization	27,248	9,607	14,401	566	51,822
Operating income (loss)	30,633	12,702	3,167	(10,805)	35,697
Capital expenditures	13,929	5,450	6,965	140	26,484
Total assets	$ 239,915	$ 214,704	$ 272,313	$ 16,282	$ 743,214
Year Ended October 31, 2017					
Net sales	$ 474,878	$ 147,963	$ 248,808	$ (5,094)	$ 866,555
Depreciation and amortization	34,308	8,833	13,811	543	57,495
Operating income (loss)	25,955	13,673	4,089	(9,780)	33,937
Capital expenditures	$ 18,822	$ 7,841	$ 7,349	$ 552	$ 34,564

[1] NA Fenestration and EU Fenestration were previously named "NA Engineered Components" and "EU Engineered Components".

The following table summarizes the change in the carrying amount of goodwill by segment for the years ended October 31, 2019 and 2018 (in thousands):

	NA Fenestration	EU Fenestration	NA Cabinet Comp.	Unallocated Corp. & Other	Total
Balance as of October 31, 2017	$ 38,712	$ 69,735	$ 113,747	$ —	$ 222,194
Foreign currency translation adjustment	—	(2,567)	—	—	(2,567)
Balance as of October 31, 2018	$ 38,712	$ 67,168	$ 113,747	$ —	$ 219,627
Asset impairment charge	—	—	(74,600)	—	(74,600)
Foreign currency translation adjustment	—	536	—	—	536
Balance as of October 31, 2019	$ 38,712	$ 67,704	$ 39,147	$ —	$ 145,563

For further details of Goodwill, see Note 5, "Goodwill and Intangible Assets", located herewith.

We did not allocate non-operating expense or income tax expense to the reportable segments. The following table reconciles operating income (loss) as reported above to net (loss) income for the years ended October 31, 2019, 2018 and 2017:

	Year Ended October 31,		
	2019	2018	2017
		(in thousands)	
Operating (loss) income	$ (26,427)	$ 35,697	$ 33,937
Interest expense	(9,643)	(11,100)	(9,595)
Other, net	116	1,156	1,160
Income tax (expense) benefit	(10,776)	800	(6,819)
Net (loss) income	$ (46,730)	$ 26,553	$ 18,683

Geographic Information

Our manufacturing facilities and all long-lived assets are located in the U.S., U.K. and Germany. We attribute our net sales to a geographic region based on the location of the customer. The following tables provide information concerning our net sales for the years ended October 31, 2019, 2018 and 2017, and our long-lived assets as of October 31, 2019 and 2018 (in thousands):

	Year Ended October 31,		
Net sales	2019	2018	2017
United States	$ 683,204	$ 676,776	$ 667,063
Europe	162,106	159,652	148,370
Canada	20,088	23,610	24,442
Asia	18,360	18,584	17,028
Other foreign countries	10,083	11,163	9,652
Total net sales	$ 893,841	$ 889,785	$ 866,555

	Year Ended October 31,	
Long-lived assets, net	2019	2018
United States	$ 288,722	$ 384,595
Germany	16,899	16,507
United Kingdom	140,839	141,814
Total long-lived assets, net	$ 446,460	$ 542,916

Long-lived assets, net includes: property, plant and equipment, net; goodwill; and intangible assets, net.

18. Earnings Per Share

We compute basic (loss) earnings per share by dividing net (loss) income by the weighted average number of common shares outstanding during the period. Diluted earnings per common and potential common shares include the weighted average of additional shares associated with the incremental effect of dilutive employee stock options, non-vested restricted stock as determined using the treasury stock method prescribed by U.S. GAAP and contingent shares associated with performance share awards, if dilutive.

The computation of basic and diluted earnings per share for the years ended October 31, 2019, 2018 and 2017 follows (in thousands, except per share data):

	Net (Loss) Income	Weighted Average Shares	Per Share
Year Ended October 31, 2019			
Basic loss per common share	$ (46,730)	32,960	$ (1.46)
Diluted loss per common share [1]	$ (46,730)	32,960	$ (1.46)
Year Ended October 31, 2018			
Basic earnings per common share	$ 26,553	34,701	$ 0.77
Effect of dilutive securities:			
Stock options		198	
Restricted stock		126	
Diluted earnings per common share	$ 26,553	35,025	$ 0.76
Year Ended October 31, 2017			
Basic earnings per common share	$ 18,683	34,230	$ 0.55
Effect of dilutive securities:			
Stock options		446	
Restricted stock		138	
Performance shares		23	
Diluted earnings per common share	$ 18,683	34,837	$ 0.54

[1] The computation of diluted earnings per share excludes outstanding stock options and other common stock equivalents when their inclusion would be anti-dilutive. During the twelve-month period ended October 31, 2019, 39,766 shares of common stock equivalents, 113,383 shares of restricted stock and 28,051 contingent shares related to performance share awards and performance restricted stock units were excluded from the computation of diluted earnings per share.

For the years ended October 31, 2019, 2018 and 2017, we had 1,267,141, 1,000,356, and 686,650 securities, respectively, that were potentially dilutive in future earnings per share calculations. Such dilution will be dependent on the excess of the market price of our stock over the exercise price and other components of the treasury stock method.

19. Unaudited Quarterly Data

Selected quarterly financial data for the years ended October 31, 2019 and 2018 was as follows (amounts in thousands, except per share amounts):

For the Quarter Ended	January 31, 2019	April 30, 2019	July 31, 2019	October 31, 2019
Net sales	$ 196,808	$ 218,203	$ 238,461	$ 240,369
Cost of sales (excluding depreciation and amortization)	158,557	171,378	181,357	183,128
Depreciation and amortization	12,572	12,404	12,182	12,428
Operating (loss) income	(2,450)	(19,363)	19,110	(23,724)
Net (loss) income	$ (3,649)	$ (23,974)	$ 11,841	$ (30,948)
Basic earnings per share	(0.11)	(0.73)	0.36	(0.94)
Diluted earnings per share	(0.11)	(0.73)	0.36	(0.94)
Cash dividends paid per common share	$ 0.08	$ 0.08	$ 0.08	$ 0.08

For the Quarter Ended	January 31, 2018	April 30, 2018	July 31, 2018	October 31, 2018
Net sales	$ 191,666	$ 214,212	$ 239,821	$ 244,086
Cost of sales (excluding depreciation and amortization)	154,521	169,030	185,811	187,660
Depreciation and amortization	13,273	13,310	12,691	12,548
Operating (loss) income	(596)	7,767	16,830	11,696
Net (loss) income	$ 4,947	$ 4,136	$ 10,753	$ 6,717
Basic (loss) earnings per share	0.14	0.12	0.31	0.19
Diluted (loss) earnings per share	0.14	0.12	0.31	0.19
Cash dividends paid per common share	$ 0.04	$ 0.04	$ 0.04	$ 0.08

Quarterly (loss) earnings per share results may not sum to the consolidated earnings per share results on the accompanying consolidated statements of (loss) income due to rounding and changes in weighted average shares during the respective periods. Results for the 2018 quarters have been updated to reflect the impact of an accounting change from the LIFO inventory method to the FIFO inventory method and for the adoption of Accounting Standards Update 2017-07. See Note 3, "Inventories" and Note 20, "New Accounting Guidance" for further details.

20. New Accounting Guidance

Accounting Standards Recently Adopted

In May 2017, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2017-09, *Compensation - Stock Compensation (Topic 718)*, which provides guidance as to when changes in share-based payment awards under Topic 718 should be accounted for as a modification of the award. Essentially, the changes should be considered a modification unless specific criteria are met. We adopted this guidance as of November 1, 2018 with no impact to the financial statements.

In March 2017, the FASB issued ASU No. 2017-07, *Compensation - Retirement Benefits (Topic 715)*, Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost. This update provides explicit guidance on how to present the service cost component and other components of net benefit cost in the income statement and allows only the service cost component of net benefit cost to be eligible for capitalization. We adopted this change retrospectively as of November 1, 2018, resulting in a reclassification for the twelve months ended October 31, 2018 and 2017 of $0.8 million and $0.3 million of benefit, respectively, from the "Cost of sales" line item and approximately $0.2 million and $0.1 million of benefit for the corresponding periods from the "Selling, general and administrative" line item to the "Other, net" line item on the accompanying condensed consolidated statement of income.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805)*, which provides clarity when determining whether a set of assets and activities constitutes a business. Specifically, if substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not deemed to be a business. We adopted this change prospectively as of November 1, 2018 with no impact to the financial statements.

In January 2017, the FASB issued ASU 2017-04, *Intangibles - Goodwill and Other* (Topic 350). This guidance simplifies the current two-step goodwill impairment test by eliminating the second step. Essentially, the entity compares the fair value of a reporting unit with its carrying value amount and recognizes an impairment charge for the amount by which the carrying value exceeds the fair value. The resulting loss is limited to the amount of goodwill. This guidance also eliminates the requirement for a reporting unit with zero or negative carrying value to perform a qualitative assessment of goodwill and apply step-two of the goodwill impairment test if the qualitative assessment fails. Thus, the same impairment assessment will be applied to all reporting units (even if the carrying value is zero or negative). We prospectively adopted this guidance as of February 1, 2019 with no material impact to the consolidated financial statements. See Note 5, "Goodwill and Intangible Assets," for further details of the goodwill impairment analysis performed during the year ended October 31, 2019.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments*. This amendment is intended to reduce diversity in practice as to how certain cash receipts and cash payments are presented and classified in the statement of cash flows by providing guidance for several specific cash flow issues. We adopted this change retrospectively as of November 1, 2018 which resulted in a reclassification of $8.5 million of earn-out payments related to a prior period acquisition from investing activities to financing activities within the Statement of Cash Flow for the year ended October 31, 2017.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers*. This guidance prescribes a methodology to determine when revenue is recognizable and constitutes a principles-based approach to revenue recognition based on the consideration to which the entity expects to be entitled in exchange for goods or services. In addition, this guidance requires additional disclosure in the notes to the financial statements with regard to the methodology applied. This pronouncement essentially superseded and replaced existing revenue recognition rules in U.S. GAAP, including industry-specific guidance. We adopted this guidance using the modified retrospective approach on November 1, 2018. Based on our evaluation, we have concluded that the adoption of this new guidance did not have a material impact on our consolidated financial statements. For additional information, refer to Note 1, “Nature of Operations and Basis of Presentation - Revenue from Contracts with Customers”.

Accounting Standards Not Yet Adopted

In February 2016, the FASB established Topic 842, *Leases*, by issuing ASU No. 2016-02, which requires lessees to recognize leases on-balance sheet and disclose key information about leasing arrangements. The new standard establishes a right-of-use model (ROU) that requires a lessee to recognize a ROU asset and lease liability on the balance sheet for all leases with a term longer than 12 months. Leases will be classified as finance or operating, with classification affecting the pattern and classification of expense recognition in the income statement.

The new standard is effective for us on November 1, 2019, with early adoption permitted. We plan to adopt using a modified retrospective transition approach, applying the new standard to all leases existing at the date of initial application. We expect to adopt the new standard on November 1, 2019 and use the effective date as our date of initial application. Consequently, financial information will not be updated and the disclosures required under the new standard will not be provided for dates and periods prior to November 1, 2019.

The new standard provides a number of optional practical expedients in transition. We will elect all of the new standard’s available transition practical expedients.

This standard will have a material effect on our financial statements. The most significant effects on our financial statements relate to the recognition of new ROU assets and lease liabilities on our balance sheet for our operating leases and providing significant new disclosures about our leasing activities. We do not expect a significant change in our leasing activities between now and adoption.

On adoption, we will recognize additional operating liabilities ranging from $40.0 million to $45.0 million, with corresponding ROU assets of the same amount based on the present value of the remaining minimum rental payments under current leasing standards for existing operating leases.

The new standard also provides practical expedients for an entity’s ongoing accounting. We will elect the short-term lease recognition exemption for all leases that qualify. This means, for those leases that qualify, we will not recognize ROU assets or lease liabilities, and this includes not recognizing ROU assets or lease liabilities for existing short-term leases of those assets in transition. We also currently expect to elect the practical expedient to not separate lease and non-lease components for all of our leases.

Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.***

None.

Item 9A. ***Controls and Procedures.***

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15(e) under the Securities Exchange Act of 1934 (1934 Act) as of October 31, 2019. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of October 31, 2019, the disclosure controls and procedures are effective.

Management's Annual Report on Internal Control over Financial Reporting

Refer to Management's Annual Report on Internal Control over Financial Reporting located in *"Part 2, Item 8. Financial Information"* of this Annual Report on Form 10-K.

Auditor's Report Relating to Effectiveness of Internal Control over Financial Reporting

Refer to the Report of Independent Registered Public Accounting Firm located in *"Part 2, Item 8. Financial Information"* in this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There have been no changes in internal controls over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the 1934 Act) during the most recent fiscal quarter that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Item 9B. ***Other Information.***

None.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance.***

Pursuant to General Instruction G(3) to Form 10-K, the information on *"Directors, Executive Officers and Corporate Governance"* is incorporated herein by reference from the Registrant's Definitive Proxy Statement relating to the 2020 Annual Meeting of Stockholders of Quanex Building Products Corporation or an amendment to this Form 10-K, which is to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, within 120 days after the close of the fiscal year ended October 31, 2019.

Item 11. ***Executive Compensation.***

Pursuant to General Instruction G(3) to Form 10-K, the information on *"Executive Compensation"* is incorporated herein by reference from the Registrant's Definitive Proxy Statement relating to the 2020 Annual Meeting of Stockholders of Quanex Building Products Corporation or an amendment to this Form 10-K, which is to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, within 120 days after the close of the fiscal year ended October 31, 2019.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.***

Pursuant to General Instruction G(3) to Form 10-K, the information on *"Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters"* is incorporated herein by reference from the Registrant's Definitive Proxy Statement relating to the 2020 Annual Meeting of Stockholders of Quanex Building Products Corporation or an amendment to this Form 10-K, which is to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, within 120 days after the close of the fiscal year ended October 31, 2019.

Item 13. ***Certain Relationships and Related Transactions, and Director Independence.***

Pursuant to General Instruction G(3) to Form 10-K, the information on *"Certain Relationships and Related Transactions, and Director Independence"* is incorporated herein by reference from the Registrant's Definitive Proxy Statement relating to the 2020 Annual Meeting of Stockholders of Quanex Building Products Corporation or an amendment to this Form 10-K, which is to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, within 120 days after the close of the fiscal year ended October 31, 2019.

Item 14. ***Principal Accountant Fees and Services.***

Pursuant to General Instruction G(3) to Form 10-K, the information on *"Principal Accountant Fees and Services"* is incorporated herein by reference from the Registrant's Definitive Proxy Statement relating to the 2020 Annual Meeting of Stockholders of Quanex Building Products Corporation or an amendment to this Form 10-K, which is to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, within 120 days after the close of the fiscal year ended October 31, 2019.

PART IV

Item 15. ***Exhibits and Financial Statement Schedules.***

1. Financial Statements

The financial statements included in this report are listed in the Index to Financial Statements located elsewhere in this Annual Report on Form 10-K.

2. Financial Statement Schedules

Schedules for which provision is made in the applicable accounting regulations of the SEC are either not required under the related instructions or inapplicable.

3. Exhibits

The exhibits required to be filed pursuant to Item 15(b) of Form 10-K are listed in the Exhibit Index filed herewith, which Exhibit Index is incorporated herein by reference. Exhibits 10.1 through 10.52 listed in the Exhibit Index filed herewith, are management or compensatory plans or arrangements required to be filed as exhibits to this Annual Report on Form 10-K pursuant to Item 15(b) thereof.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

QUANEX BUILDING PRODUCTS CORPORATION

Date: December 12, 2019

/s/ Scott M. Zuehlke

Scott M. Zuehlke
Senior Vice President - Chief Financial Officer and Treasurer
(Principal Financial Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Name	Title	Date
/s/ William C. Griffiths William C. Griffiths	Chairman of the Board, President and Chief Executive Officer	December 12, 2019
/s/ Susan F. Davis Susan F. Davis	Director	December 12, 2019
/s/ Joseph D. Rupp Joseph D. Rupp	Director	December 12, 2019
/s/ Curtis M. Stevens Curtis M. Stevens	Director	December 12, 2019
/s/ Robert R. Buck Robert R. Buck	Director	December 12, 2019
/s/ Donald R. Maier Donald R. Maier	Director	December 12, 2019
/s/ Meredith W. Mendes Meredith W. Mendes	Director	December 12, 2019
/s/ Scott M. Zuehlke Scott M. Zuehlke	Senior Vice President - Chief Financial Officer and Treasurer (Principal Financial Officer)	December 12, 2019
/s/ Mark A. Livingston Mark A. Livingston	Vice President, Chief Accounting Officer and Controller (Principal Accounting Officer)	December 12, 2019

EXHIBIT INDEX

Exhibit Number	Description of Exhibits
2.1	Distribution Agreement among Quanex Corporation, Quanex Building Products LLC and Quanex Building Products Corporation (incorporated by reference to Exhibit 10.1 to Quanex Corporation's Current Report on Form 8-K (Reg. No. 001-05725) filed with the Commission on December 24, 2007).
2.2	Agreement and Plan of Merger, dated as of January 31, 2011, by and among Quanex Building Products Corporation, QSB Inc., Lauren Holdco Inc., Lauren International, Inc. and Kevin E. Gray, as agent for the shareholders of Lauren Holdco Inc., filed as Exhibit 2.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on February 2, 2011, and incorporated herein by reference.
2.3	Limited Liability Company Interest Purchase Agreement dated February 7, 2014, by and among Quanex Building Products Corporation, Nichols Aluminum, LLC and Aleris International Inc., filed as Exhibit 2.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on February 10, 2014, and incorporated herein by reference.
2.4	First Amendment to Limited Liability Company Interest Purchase Agreement dated April 1, 2014, by and among Quanex Building Products Corporation, Nichols Aluminum, LLC and Aleris International Inc., filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on April 7, 2014, and incorporated herein by reference.
2.5	Share Purchase Agreement dated June 15, 2015 by and among R.L. Hartshorn and others, and Quanex Building Products Corporation, filed as Exhibit 2.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on June 16, 2015, and incorporated herein by reference.
2.6	Agreement and Plan of Merger, dated as of August 30, 2015, by and among Quanex Building Products Corporation, QWMS, Inc., WII Holding, Inc., and Olympus Growth Fund IV, L.P, solely in its capacity as the representative of the stockholders of WII Holding, Inc, filed as Exhibit 2.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 30, 2015, and incorporated herein by reference.
3.1	Restated Certificate of Incorporation of the Registrant dated as of March 4, 2016, filed as Exhibit 3.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on March 7, 2016, and incorporated herein by reference.
3.2	Third Amended and Restated Bylaws of the Registrant dated as of March 4, 2016, filed as Exhibit 3.2 of the Registrant's Quarterly Report on Form 10-Q (Reg. No. 001-33913) for the quarter ended July 31, 2016, and incorporated herein by reference.
4.1	Form of Registrant's common stock certificate, filed as Exhibit 4.1 of Amendment No. 1 to the Registrant's Registration Statement on Form 10 (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on February 14, 2008, and incorporated herein by reference.
4.2	Credit Agreement dated as of October 18, 2018, by and among the Company; the lenders party thereto; and Wells Fargo Bank, National Association, as Agent; filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on October 18, 2018, and incorporated herein by reference.
†10.1	Quanex Building Products Corporation Amended and Restated 2008 Omnibus Incentive Plan, filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on February 28, 2014, and incorporated herein by reference.
†10.2	Quanex Building Products Corporation Deferred Compensation Plan as amended, filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (Reg. No. 001-33913) for the quarter ended January 31, 2014, as filed with the Securities and Exchange Commission on March 6, 2014, and incorporated herein by reference.
†10.3	Quanex Building Products Corporation Restoration Plan, filed as Exhibit 10.8 of Amendment No. 4 to the Registrant's Registration Statement on Form 10 (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on March 17, 2008, and incorporated herein by reference.
†10.4	Quanex Building Products Corporation Supplemental Employees Retirement Plan, filed as Exhibit 10.9 of Amendment No. 4 to the Registrant's Registration Statement on Form 10 (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on March 17, 2008, and incorporated herein by reference.

EXHIBIT INDEX

Exhibit Number	Description of Exhibits
†10.5	Form of Severance Agreement between the Registrant and certain of its executive officers, filed as Exhibit 10.5 of Amendment No. 1 to the Registrant's Registration Statement on Form 10 (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on February 14, 2008, and incorporated herein by reference.
†10.6	Form of Indemnity Agreement between the Registrant and each of its independent directors, effective September 2, 2008, filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 29, 2008, and incorporated herein by reference.
†10.7	Form of Indemnity Agreement between the Registrant and each of its officers, effective September 2, 2008, filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 29, 2008, and incorporated herein by reference.
†10.8	Agreement between Quanex Building Products Corporation and William C. Griffiths, effective July 9, 2013, filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on July 9, 2013, and incorporated herein by reference.
†10.9	Change in Control Agreement between Quanex Building Products Corporation and William C. Griffiths, effective July 9, 2013, filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on July 9, 2013, and incorporated herein by reference.
†10.10	Indemnity Agreement between Quanex Building Products Corporation and William C. Griffiths, effective July 9, 2013, the form of which is filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 29, 2008, and incorporated herein by reference.
†10.11	Form of Stock Option Agreement for Employees under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.12	Form of Stock Option Agreement for Section 16 Officers under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.13	Form of Stock Option Agreement for Key Leaders under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.3 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.14	Form of Stock Option Agreement for Non-Employee Directors under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.15	Form of Restricted Stock Award Agreement for Employees under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.5 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.16	Form of Restricted Stock Award Agreement for Section 16 Officers under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.6 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.17	Form of Restricted Stock Award Agreement for Key Leaders under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.7 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.18	Form of Restricted Stock Award Agreement for Non-Employee Directors under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.8 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.

EXHIBIT INDEX

Exhibit Number	Description of Exhibits
†10.19	Form of Restricted Stock Unit Award Agreement for Employees under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.9 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.20	Form of Restricted Stock Unit Award Agreement for Section 16 Officers under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.10 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.21	Form of Restricted Stock Unit Award Agreement for Key Leaders under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.11 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.22	Form of Restricted Stock Unit Award Agreement for Non-Employee Directors under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.12 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.23	Amended Form of Performance Share Award Agreement for Employees under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.
†10.24	Amended Form of Performance Share Award Agreement for Section 16 Officers under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.
†10.25	Amended Form of Performance Share Award Agreement for Key Leaders under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.3 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.
†10.26	Form of Performance Share Award Agreement for Non-Employee Directors the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.16 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.27	Amended Form of Performance Unit Award Agreement for Employees under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.
†10.28	Amended Form of Performance Unit Award Agreement for Section 16 Officers under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.5 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.
†10.29	Amended Form of Performance Unit Award Agreement for Key Leaders under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.6 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.
†10.30	Form of Performance Unit Award Agreement for Non-Employee Directors under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.20 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.31	Form of Stock Appreciation Right Agreement for Employees under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.21 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.

EXHIBIT INDEX

Exhibit Number	Description of Exhibits
†10.32	Form of Stock Appreciation Right Agreement for Section 16 Officers under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.22 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.33	Form of Stock Appreciation Right Agreement for Key Leaders under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.23 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.34	Form of Stock Appreciation Right Agreement for Non-Employee Directors under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.24 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.35	Form of Other Stock Based Award Agreement under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.25 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on April 29, 2014, and incorporated herein by reference.
†10.36	Amended Form of Annual Incentive Award Agreement under the Quanex Building Products Corporation 2008 Omnibus Incentive Plan, as amended, filed as Exhibit 10.7 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on December 7, 2015, and incorporated herein by reference.
†10.37	Agreement between Quanex Building Products Corporation and Scott Zuehlke, effective November 1, 2019, filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on November 1, 2019, and incorporated herein by reference.
†10.38	Change in Control Agreement between Quanex Building Products Corporation and Scott Zuehlke, effective January 25, 2016, filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on January 27, 2016, and incorporated herein by reference.
†10.39	Indemnity Agreement between Quanex Building Products Corporation and Scott Zuehlke, effective January 25, 2016, the form of which is filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 29, 2008, and incorporated herein by reference.
10.40	Lease dated February 9, 2016, between Garner Properties Ltd. and HL Plastics Limited, filed as Exhibit 10.44 to the Registrant's Annual Report on Form 10-K (Reg. No. 001-33913) for the year ended October 31, 2016, as filed with the Securities and Exchange Commission on December 16, 2016, and incorporated herein by reference.
10.41	Amended and Completely Restated Lease Agreement dated August 25, 2016, between Lauren Real Estate Holding LLC and Quanex IG Systems, Inc., filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 26, 2016, and incorporated herein by reference.
†10.42	Amended and Restated Employee Stock Purchase Plan, as amended and restated effective April 1, 2017, filed as Annex A to the Registrant's Definitive Proxy Statement on Schedule 14A for its 2017 Annual Meeting of Stockholders (Reg. No 001-33919), as filed with the Securities and Exchange Commission on January 31, 2017, and incorporated herein by reference.
†10.43	Agreement between Quanex Building Products Corporation and George Wilson, effective August 1, 2017, filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33919) as filed with the Securities and Exchange Commission on July 27, 2017.
†10.44	Change in Control Agreement between Quanex Building Products Corporation and George Wilson, effective August 1, 2017, filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33919) as filed with the Securities and Exchange Commission on July 27, 2017.
†10.45	Form of Indemnity Agreement between Quanex Building Products Corporation and George Wilson, effective August 1, 2017, in the form filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 29, 2008, and incorporated herein by reference.

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Exhibit Number	Description of Exhibits
†10.46	Form of Key Leader Stock Settled Performance Restricted Stock Units Award Agreement filed as Exhibit 10.50 to the Registrant's Annual Report on Form 10-K (Reg. No. 001-33913) for the year ended October 31, 2017, as filed with the Securities and Exchange Commission on December 12, 2017, and incorporated herein by reference.
†10.47	Form of Section 16 Officer Stock Settled Performance Restricted Stock Units Award Agreement filed as Exhibit 10.51 to the Registrant's Annual Report on Form 10-K (Reg. No. 001-33913) for the year ended October 31, 2017, as filed with the Securities and Exchange Commission on December 12, 2017, and incorporated herein by reference.
10.48	Share Repurchase Agreement by and among Praesidium Investment Management Company LLC, Quanex Building Products Corporation, Kevin Oram and Peter Uddo, effective October 9, 2018, filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913) as filed with the Securities and Exchange Commission on October 12, 2018, and incorporated herein by reference.
*†10.49	Agreement between Quanex Building Products Corporation and Mark A. Livingston, effective January 30, 2019.
†10.50	Agreement between Quanex Building Products Corporation and Mark Livingston, effective November 1, 2019, filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on November 1, 2019, and incorporated herein by reference.
†10.51	Indemnity Agreement between Quanex Building Products Corporation and Mark Livingston, effective November 1, 2019, the form of which is filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 29, 2008, and incorporated herein by reference.
†10.52	Agreement between Quanex Building Products Corporation and Paul Cornett, effective November 1, 2019, filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on November 1, 2019, and incorporated herein by reference.
†10.53	Indemnity Agreement between Quanex Building Products Corporation and Paul Cornett, effective November 1, 2019, the form of which is filed as Exhibit 10.2 of the Registrant's Current Report on Form 8-K (Reg. No. 001-33913), as filed with the Securities and Exchange Commission on August 29, 2008, and incorporated herein by reference.
*21.1	Subsidiaries of the Registrant.
*23.1	Consent of Grant Thornton LLP.
*31.1	Certification by chief executive officer pursuant to Rule 13a-14(a)/15d-14(a).
*31.2	Certification by chief financial officer pursuant to Rule 13a-14(a)/15d-14(a).
*32	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
*101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
*101.SCH	XBRL Taxonomy Extension Schema Document
*101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
*101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
*101.LAB	XBRL Taxonomy Extension Label Linkbase Document
*101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith
† Management Compensation or Incentive Plan

EXHIBIT INDEX

Exhibit Number	Description of Exhibits

As permitted by Item 601(b)(4)(iii)(A) of Regulation S-K, the Registrant has not filed with this Annual Report on Form 10-K certain instruments defining the rights of holders of long-term debt of the Registrant and its subsidiaries because the total amount of securities authorized under any of such instruments does not exceed 10% of the total assets of the Registrant and its subsidiaries on a consolidated basis. The Registrant agrees to furnish a copy of any such agreements to the Securities and Exchange Commission upon request.

Quanex
building products

January 30, 2019

Mr. Mark Livingston
6702 Woodbend Park N.
Houston, TX 77055

Dear Mark,

We are pleased to offer you the position of Controller with Quanex Building Products Corporation ("Company"), effective February 4, 2019, ("Effective Date") reporting directly to me.

The offer is contingent upon passing a pre-employment drug test and a satisfactory background check (employment, criminal and credit). The pre-employment drug test must be completed by you within 3 business days of the acceptance date of this offer.

Below is a summary of your compensation and benefits you will receive in connection with your employment with the Company:

1. **Base Salary.** Your annual base salary will be $225,000, less applicable withholdings. It will be paid biweekly at a rate of $8,653.85, less applicable withholdings.

2. **Management Incentive Program**. You will be eligible to participate in the Quanex Building Products Management Incentive Program (MIP). Payments are made per the MIP policy. The award amounts are based upon your eligible wages and the Company's financial/operational results for the fiscal year. The current MIP target award level for your position is 50% of your base salary with a max of 100%, and subject to periodic review.

3. **Initial Restricted Stock Grant.** You will receive 4,500 shares of Restricted Stock on the Effective Date of your employment. This stock will cliff vest on December 4, 2021. However in the event of a change in control, as defined in the 2008 Quanex Building Products Omnibus Incentive Plan, you will become fully vested in your restricted stock award.

4. **Long Term Incentive Awards.** You will also be eligible to receive an annual Long Term Incentive Award based upon approval of the Compensation and Management Development Committee typically at the Company's Q4 Board meeting. The current target award level for your position is $70,000 in restricted stock (3 year cliff vest), subject to periodic review by the Compensation and Management Development Committee.

5. **Vacation.** You will receive four weeks of vacation, which will be prorated based on your start date for the remainder of 2019, and the full 4 week allowance starts in calendar year 2020. Vacation is to be used in accordance with the Company's Vacation Policy.

6. **Benefits.** You will be eligible to participate in the Quanex Building Products Group Benefits Plan beginning on the first day of the month following 30 days of employment. It is a flexible cafeteria plan that offers a variety of benefit choices from which you can select that will best meet the needs of you and your family. Additionally, the Company provides certain benefits that are employer-paid (i.e. short-term disability, long-term disability, basic life insurance, and AD&D benefits).

7. **401(k) Plan.** You will be eligible to participate in the Quanex Building Products Salaried and Nonunion Employee 401(k) Plan beginning the first day of employment. You may contribute up to a maximum of 50% of your eligible compensation up to the government mandated maximum. Currently, Quanex will match $0.50 for each dollar you contribute up to a maximum of 5% of your eligible compensation. There is a five year vesting schedule on the Company match. In addition, you may elect to save on a before-tax or after-tax basis, or a combination of the two.

8. **Pension.** You will be eligible for pension benefits under the Quanex Building Products Salaried and Nonunion Employee Pension Plan, (the "Pension Plan") provided you meet the vesting requirements of the Plan. The Pension plan consists of a notional account balance in your name. Currently, the account will receive annual benefit credit of 4% based on your base pay plus bonus paid during the year, in addition to annual interest credits based on the 30 year Treasury (rate is established each August for the next year). The benefit is portable once you are vested (100% after three years of vesting service), you can take it with you if you leave Quanex.

9. **Executive Severance Provision.** The purpose of this provision is to establish a severance provision for you that recognizes the relatively more difficult employment transition that occurs upon the termination of employment of higher paid individuals. Therefore, in the event that your employment is terminated by the Company during your first two years of employment for a reason other than for cause or material violation of the Company's Code of Business Conduct & Ethics, you shall be entitled to the following benefits:

    a. **Base Salary for One Year.** Annualized base salary as in effect immediately before the date of termination of employment, paid bi-weekly for a period of 12 months starting on the date of termination of employment.

    b. **Continuation of Welfare Benefits.** The Company, at its expense, will pay COBRA (Consolidated Omnibus Reconciliation Act) premiums for the Company's group health plan coverage (i.e. medical, dental, vision, life, disability and any other company welfare plans in which you participate) for up to 12 months following the termination of your employment. However, if during the 12 month period you become gainfully employed, the COBRA benefits shall cease and be terminated.

    In the event your termination is for cause or for a material violation of the Company's Code of Business Conduct and Ethics, you will not be entitled to the severance terms as set forth above.

    In the event your termination occurs after your second anniversary with the Company, you will receive the then-standard severance provision of the Company.

    Notwithstanding any provision herein to the contrary, payment or provision of your benefits under this paragraph shall commence provided that you have delivered to the Company an executed and irrevocable full and complete Release of Claims against the Company, its affiliates, officers and directors in such form as is satisfactory to the Company ("Release of Claims"). You shall forfeit any and all of the payments, reimbursement and benefits payable under this agreement if you do not provide the Company a Release of Claims.

10. **Principal Office.** The Quanex Building Products Corporation offices located at 1800 West Loop South, Suite 1500 in Houston, TX will be your principal reporting office.

Your entitlement to any of the benefits outlined herein is contingent on your continued employment at the time. The above benefit(s) and/or compensation information is subject to change without notice per the terms, policies and/or practices of the Company.

Your acceptance below is acknowledgment and agreement on your part to the offer of employment by the Company. Your acceptance of this offer does not modify the at-will employment relationship you enjoy with the Company, meaning either you or the Company may terminate the employment relationship at any time, with or without notice.

Please sign your acceptance in the space below and return it to me no later than
Thursday, January 31, 2019.

Feel free to call me at any time.

Sincerely,

/s/ Brent Korb

Brent Korb

ACCEPTANCE OF OFFER

/s/ Mark Livingston January 31, 2019

Mark Livingston Date

EXHIBIT 21.1

SUBSIDIARIES OF QUANEX BUILDING PRODUCTS CORPORATION	LOCATION OF INCORPORATION
Quanex North American Fenestration, Inc.	Ohio
Quanex North American Cabinet Components, Inc.	Delaware
Quanex Homeshield LLC	Delaware
Mikron Industries, Inc.	Washington
Mikron Washington LLC	Washington
Quanex IG Systems, Inc.	Ohio
Edgetech Europe GmbH	Germany
Quanex Screens LLC	Delaware
Edgetech (UK) LTD.	United Kingdom and Wales
Flamstead Holdings Limited	United Kingdom and Wales
HL Plastics Ltd.	United Kingdom and Wales
Woodcraft Industries, Inc.	Minnesota
Brentwood Acquisition Corp.	Minnesota
Primewood, Inc.	North Dakota

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our reports dated December 12, 2019, with respect to the consolidated financial statements and internal control over financial reporting included in the Annual Report of Quanex Building Products Corporation on Form 10-K for the year ended October 31, 2019. We hereby consent to the incorporation by reference of said reports in the Registration Statements of Quanex Building Products Corporation on Forms S-8 (File No. 333-150392, File No. 333-173245, File No. 333-194812 and File No. 333-217118).

/s/ GRANT THORNTON LLP

Houston, Texas
December 12, 2019

Exhibit 31.1

CHIEF EXECUTIVE OFFICER CERTIFICATION

I, William C. Griffiths, certify that:

1. I have reviewed this annual report on Form 10-K of Quanex Building Products Corporation (the Registrant);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;
4. The Registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures [as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)] and internal control over financial reporting [as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)] for the Registrant and have:
   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c. Evaluated the effectiveness of the Registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d. Disclosed in this report any change in the Registrant’s internal control over financial reporting that occurred during the Registrant’s most recent fiscal quarter (the Registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant’s internal control over financial reporting; and
5. The Registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant’s auditors and the audit committee of Registrant’s board of directors (or persons performing the equivalent functions):
   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant’s ability to record, process, summarize and report financial information; and
   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant’s internal control over financial reporting.

December 12, 2019

/s/ WILLIAM C. GRIFFITHS

WILLIAM C. GRIFFITHS

Chairman of the Board, President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CHIEF FINANCIAL OFFICER CERTIFICATION

I, Scott M. Zuehlke, certify that:

1. I have reviewed this annual report on Form 10-K of Quanex Building Products Corporation (the Registrant);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;
4. The Registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures [as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)] and internal control over financial reporting [as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)] for the Registrant and have:
   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c. Evaluated the effectiveness of the Registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d. Disclosed in this report any change in the Registrant’s internal control over financial reporting that occurred during the Registrant’s most recent fiscal quarter (the Registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant’s internal control over financial reporting; and
5. The Registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant’s auditors and the audit committee of Registrant’s board of directors (or persons performing the equivalent functions):
   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant’s ability to record, process, summarize and report financial information; and
   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant’s internal control over financial reporting.

December 12, 2019

/S/ Scott M. Zuehlke

Scott M. Zuehlke
Senior Vice President - Chief Financial Officer and Treasurer (Principal Financial Officer)

Exhibit 32

Certification Pursuant To Section 906
of the Sarbanes-Oxley Act of 2002
(18 U.S.C. SECTION 1350)

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) (the Act), William C. Griffiths, President and Chief Executive Officer of Quanex Building Products Corporation (the Company) and Scott M. Zuehlke, Senior Vice President – Chief Financial Officer and Treasurer of the Company, each hereby certify that, to the best of their knowledge:

(a) the Company's Annual Report on Form 10-K for the fiscal year ended October 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the Report), fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(b) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

December 12, 2019

/S/ WILLIAM C. GRIFFITHS	/S/ SCOTT M. ZUEHLKE
WILLIAM C. GRIFFITHS	SCOTT M. ZUEHLKE
Chairman of the Board, President and Chief Executive Officer	*Senior Vice President—Chief Financial Officer and Treasurer*

A signed original of this written statement required by Section 906 has been provided to Quanex Building Products Corporation and will be retained by Quanex Building Products Corporation and furnished to the Securities and Exchange Commission or its staff upon request.