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

FORM 10-K

[X] Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the fiscal year ended December 31, 2016
or
[ ] Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the transition period from _____________ to _____________.

Commission File Number: 001-35930

PLY GEM HOLDINGS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**20-0645710**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
5020 Weston Parkway, Suite 400, Cary, North Carolina	**27513**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: 919-677-3900

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

Title of each class:	Name of each exchange on which registered:
Common Stock, par value $0.01 per share	New York Stock Exchange

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

Indicate by checkmark if the registrant is a well–known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes [ ] No [X]

Indicate by checkmark if the registrant is not required to file reports pursuant to Section 13 or 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes [X] No [ ]

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K [ ].

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.
Large accelerated filer [ ] Accelerated filer [X] Non-accelerated filer [ ] Smaller reporting company [ ]

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 stock held by non-affiliates of the registrant, as of July 2, 2016 , was approximately $328.4 million . Such aggregate market value was computed by reference to the closing price of the common stock as reported on the NYSE on July 2, 2016 . For purposes of making this calculation only, the registrant has defined affiliates as including only directors and executive officers and shareholders holding greater than 10% of the voting stock of the registrant as of July 2, 2016 .

The Company had 68,407,259 shares of common stock outstanding as of March 10, 2017 .

Documents incorporated by reference: The information required by Part III (Items 10, 11, 12, 13 and 14) of this form 10-K, to the extent not set forth herein, is incorporated herein by reference to the Registrant's definitive Proxy Statement for the 2017 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission no later than 120 days after December 31, 2016 .

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CAUTIONARY STATEMENT WITH RESPECT TO FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These statements relate to future events or our future financial performance. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “potential” or “continue,” the negative of such terms or other comparable terminology. These statements are only predictions. Actual events or results may differ materially.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. All written and oral forward-looking statements made in connection with this Annual Report on Form 10-K that are attributable to us or persons acting on our behalf are expressly qualified in their entirety by the "Risk Factors" and other cautionary statements included herein. We are under no duty to update any of the forward-looking statements after the date of this Annual Report on Form 10-K to conform such statements to actual results or to changes in our expectations, except as required by federal securities laws.

There can be no assurance that other factors will not affect the accuracy of these forward-looking statements or that our actual results will not differ materially from the results anticipated in such forward-looking statements. While it is impossible to identify all such factors, factors which could cause actual results to differ materially from those estimated by us include, but are not limited to, the following:

• downturns or negative trends in the home repair and remodeling or the new construction end markets, or the U.S. and Canadian economies or the availability of consumer credit;

• competition from other exterior building products manufacturers and alternative building materials;

• an inability to successfully develop new products or improve existing products;

• changes in the costs and availability of raw materials, especially polyvinyl chloride ("PVC") resin and aluminum;

• consolidation and further growth of our customers;

• loss of, or a reduction in orders from, any of our significant customers;

• inclement weather conditions;

• increases in the cost of labor, union organizing activity and work stoppages at our facilities or the facilities of our suppliers;

• our ability to attract, employ, train and retain qualified personnel at a competitive cost;

• failure to effectively manage labor inefficiencies associated with increased production and new employees added to the Company;

• claims arising from the operations of our various businesses prior to our acquisitions;

• products liability claims, including class action claims and warranties, relating to the products we manufacture;

• litigation costs of defense;

• loss of certain key personnel;

• interruptions in deliveries of raw materials or finished goods;

• changes in building codes that could increase the cost of our products or lower the demand for our products;

• environmental costs and liabilities;

• failure to successfully consummate and integrate acquisitions, including any future acquisitions;

• manufacturing or assembly realignments;

• threats to, or impairments of, our intellectual property rights;

• increases in transportation, freight and fuel costs;

• increases in foreign currency exchange and interest rates;

• material non-cash impairment charges;

• our significant amount of indebtedness;

• non-compliance with covenants in the credit agreement governing our senior secured asset-based revolving credit facility (the "ABL Facility"), the credit agreement governing our senior secured term loan facility (the "Term Loan Facility") and the indenture governing our 6.50% senior notes due 2022 (the "6.50% Senior Notes");

• failure to generate sufficient cash to service all of our indebtedness and make capital expenditures;

- limitations on our net operating losses and payments under the tax receivable agreement to our stockholders;
- exposure of systems and IT infrastructure to security breaches and other cyber security incidents; and
- control by the CI Partnerships (as defined below).

These and other factors are more fully discussed in the “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” sections and elsewhere in this Annual Report on Form 10-K. These risks could cause actual results to differ materially from those implied by forward-looking statements in this Annual Report on Form 10-K.

PART I

Item 1. BUSINESS

Company Overview

We are a leading manufacturer of exterior building products in North America, operating in two reportable segments: (i) Siding, Fencing, and Stone and (ii) Windows and Doors, which comprised approximately 46% and 54% of our sales, respectively, for the fiscal year ended December 31, 2016 . These two segments produce a comprehensive product line of vinyl siding, designer accents, cellular PVC trim, vinyl fencing, vinyl railing, stone veneer, roofing, and vinyl windows and doors used in both the new construction market and the home repair and remodeling market in the United States and Canada. Vinyl building products have the leading share of sales volume in siding and windows in the United States. We also manufacture vinyl and aluminum soffit and siding accessories, aluminum trim coil, wood windows, aluminum windows, vinyl and aluminum-clad windows and steel and fiberglass doors, enabling us to bundle complementary and color-matched products and accessories with our core products. We believe that our comprehensive product portfolio and geographically diverse, low cost manufacturing platform allow us to better serve our customers and provide us with a competitive advantage over other exterior building products suppliers.

Additional information concerning our business is set forth in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Item 7 of Part II of this report.

Unless the context indicates or requires otherwise, (i) the term “Ply Gem Holdings” refers to Ply Gem Holdings, Inc., (ii) the term “Ply Gem Industries” refers to Ply Gem Industries, Inc., our principal operating subsidiary, and (iii) the terms “we”, “our”, “us”, “Ply Gem”, and the “Company” refer collectively to Ply Gem Holdings and its subsidiaries. The use of these terms is not intended to imply that Ply Gem Holdings and Ply Gem Industries and its subsidiaries are not separate and distinct legal entities.

History

Ply Gem Holdings was incorporated as a wholly owned subsidiary of Ply Gem Investment Holdings, Inc. (“Ply Gem Investment Holdings”), on January 23, 2004 by affiliates of CI Capital Partners for the purpose of acquiring Ply Gem Industries from Nortek, Inc. (“Nortek”). The Ply Gem acquisition was completed on February 12, 2004. Prior to the Ply Gem acquisition, our business was known as the Windows, Doors and Siding division of Nortek, where the business operated as a holding company with a broad set of brands. Since the Ply Gem acquisition, we have acquired ten additional businesses to complement and expand our product portfolio and geographical diversity. Gary E. Robinette, our President, Chief Executive Officer and Chairman of the Board, joined Ply Gem in October 2006, and has employed the strategy of transitioning Ply Gem to an integrated and consolidated business model under the Ply Gem brand. On January 11, 2010, Ply Gem Investment Holdings was merged with and into Ply Gem Prime Holdings, Inc. (“Ply Gem Prime”), with Ply Gem Prime being the surviving corporation. As a result, Ply Gem Holdings was a wholly owned subsidiary of Ply Gem Prime. On May 23, 2013, Ply Gem Holdings issued 18,157,895 shares of common stock in an initial public offering ("IPO"), receiving net proceeds of approximately $353.8 million. In connection with and prior to the IPO, Ply Gem Holdings also issued 48,962,494 shares of common stock in connection with the merger of Ply Gem Prime with Ply Gem Holdings being the surviving entity.

The following is a summary of Ply Gem’s recent acquisition history:

- On April 9, 2013, Ply Gem acquired the capital stock of Gienow WinDoor Ltd. (which was amalgamated into Gienow Canada Inc. with our legacy Ply Gem Canada business effective January 2014) ("Gienow"), a manufacturer of windows and doors in Western Canada. Gienow is part of our Western Canadian windows business and is part of the Windows and Doors segment.

- On May 31, 2013, Ply Gem completed the acquisition of Mitten Inc. ("Mitten"), a manufacturer of vinyl siding and distributor of various other exterior building products in Canada. The majority of Mitten's operations are part of the Siding, Fencing and Stone segment.

- On September 19, 2014, Ply Gem acquired the capital stock of Fortune Brands Windows, Inc., and its direct and indirect wholly owned subsidiaries: Simonton Building Products LLC, Simonton Industries, Inc., Simonton Windows, Inc., and SimEx, Inc. (together "Simonton"). Simonton is a premier repair and remodeling window company with leading brand recognition and is part of the Windows and Doors segment.

- On May 29, 2015, Ply Gem acquired substantially all of the assets of Canyon Stone, Inc. (“Canyon Stone”), a manufacturer of stone veneer, for a purchase price of $21.0 million, subject to certain purchase price adjustments. Canyon Stone has manufacturing facilities in Olathe, Kansas and Youngsville, North Carolina. Canyon Stone is included in our Siding, Fencing, and Stone segment.

Access to Company Information

The Company maintains a website with the address www.plygem.com. The Company is not including the information contained on the Company’s website as a part of, or incorporating it by reference into, this Annual Report on Form 10-K. The Company makes available through its website its annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and proxy statements as soon as reasonably practicable after the Company electronically files such material with, or furnishes such material to, the Securities and Exchange Commission (“SEC”).

Business Strategy

We are pursuing the following business and growth strategies:

- *Capture Growth Related to Housing Market Continued Recovery* . As a leading manufacturer of exterior building products, we intend to capitalize on the continued recoveries in the new construction and the home repair and remodeling markets. The National Association of Home Builders’ (“NAHB”) 2016 estimate of single family housing starts were approximately 780,000, which was 25% below the 50-year average, representing a significant opportunity for growth as activity improves to rates that are more consistent with historical levels. Furthermore, we believe that the underinvestment in homes and the overall age of the U.S. housing stock will drive significant future spending for home repair and remodeling.

We expect homeowners' purchases to focus on items that provide the highest return on investment, have positive energy efficiency attributes and provide potential cost savings. Our broad product offering addresses expected demand growth from all of these key trends through our exposure to the new construction and the home repair and remodeling end markets, diverse price points, the high recovery value for home improvements derived from our core product categories and the ability to provide products that qualify for energy efficiency rebate and tax programs currently in effect or under consideration.

- *Continue to Increase Market Penetration* . We intend to increase the market penetration of our siding, fencing, and stone products and our window and door products by leveraging the breadth of our product offering and broad geographical footprint to serve customers across North America and by pursuing cross-selling opportunities. Additionally, our continued investments in product innovation and quality, coupled with strong customer service, further enhance our ability to capture increased sales in each of our core product categories. In 2016, our U.S. vinyl siding leading market position increased to approximately 39.8% from our 2015 market position of 38.8%. Beginning in 2013 and continuing through 2016, we expanded our repair and remodeling presence with the Simonton acquisition and expanded our entry into new product categories such as PVC trim and engineered slate roofing.

- *Building Brand Equity and Driving Growth through Innovative Product Solutions* . We are a leading building products manufacturer with a vision to provide sustainable and innovative solutions that help families and businesses realize their dreams through better homes and workplaces. We are committed to being the leading brand of choice in each market we serve. We create value for our stakeholders using a business model that combines a broad portfolio of high-quality sustainable products and services, efficient operations and unrelenting customer focus. As a leader in vinyl siding, aluminum accessories, vinyl and aluminum windows, we are committed to marketing research, product innovation and marketing support to drive growth across the breadth of categories.

  We utilize an integrated approach to leverage our investment across businesses with a goal of optimizing results. We have committed resources to advancements in digital marketing, search engine optimization, database management (including lead generation and nurturing) and website user experience to engage with our target audiences directly. Our social marketing efforts across Ply Gem brands gives us direct daily access to over 190,000 people. We are committed to building brand equity with a stronger master brand strategy for Ply Gem and continue to advertise using traditional media such as trade advertising, HGTV network programming, radio and digital. In 2016, we kicked off a unique purpose brand campaign to help raise awareness to the need for affordable housing. Our strategy is to build our brand awareness while doing good for those in need of affordable housing. We leverage celebrity artists Alan Jackson and Darius Rucker and Habitat for Humanity to build over 300 homes annually and engage customers, consumers and employees. Over the first year, this effort created over 500 million impressions for the Ply Gem brand.

  We remain focused on our customers and providing best in class product and customer marketing. We successfully launched Ply Gem Engineered Roofing in 2014 and cellular PVC Trim in 2013, and continue to develop innovative product solutions within our existing categories and explore new product solutions adjacent to our core categories. The 2016 launch of our "Insight Center" in Durham, North Carolina provides a dedicated resource for innovation and product development.

  The result of our commitment to product development and innovation has been demonstrated in the approximately $582.7 million of incremental annualized sales that we recognized for new products introduced from 2014 to 2016 excluding any cannibalization of sales of pre-existing products.

  We also invest in our future and further brand development by pursuing certain strategic acquisitions if they fit our strategic focus. For example, in April 2013 we acquired Gienow, a manufacturer of windows and doors in Western Canada, in May 2013 we acquired Mitten, a leading manufacturer of vinyl siding and accessories in Canada, in September 2014 we acquired Simonton, a premier repair and remodeling window company with leading brand recognition, and in May 2015 we acquired Canyon Stone, a manufacturer and distributor of stone veneer and accessories in the United States. These acquisitions provide us with access to new revenue streams and operating efficiencies to drive further market gains.

- *Drive Operational Leverage and Further Improvements* . While we reduced our production capacity during the housing downturn, we retained the flexibility and have brought back previously idled lines, facilities and production shifts in order to increase our production as market conditions continue to improve. This incremental capacity can be selectively restarted, providing us with the ability to match increasing customer demand levels as the housing market returns to historical levels of approximately one million or more single family housing starts without the need for significant capital investment. In our Windows and Doors segment, where we have historically focused on new construction, we have demonstrated that the Simonton acquisition and their presence in the repair and remodeling market enable us to drive increased volumes through these manufacturing facilities and enhance our operating margins.

  Over the past several years, we have significantly improved our manufacturing cost structure; however, there are opportunities for further improvements. We believe that the continued expansion of lean manufacturing and vertical integration in our manufacturing facilities, along with the further consolidation of purchases of key raw materials, supplies and services will continue to provide us with cost advantages compared to our competitors. In addition, the integration of our sales and marketing efforts across our product categories provides an ongoing opportunity to significantly improve our customer penetration and leverage the strength of our brands. Furthermore, we have centralized many back office functions into our corporate office in Cary, North Carolina and believe that additional opportunities remain. We believe all of these factors should drive continued growth in profitability while improving our cash flow and capital efficiency.

- *Continue to Improve Financial Leverage* . As a result of the ten strategic acquisitions that we have completed since 2004, we incurred significant amounts of indebtedness to finance these acquisitions. This acquisition strategy combined with a severe housing market recession during 2009-2011 ultimately increased our financial leverage to 8.9 during 2011. Over the last several years, we have focused on improving this financial leverage. As the housing market continued to improve so did our financial performance demonstrated by our significant cash flow generation over the last several years. During 2016, we voluntarily elected to pay down $160.0 million on the Term Loan Facility and decreased our financial leverage to 3.7 as of and for the year ended December 31, 2016.

Industry Overview

Demand for exterior building products, including siding, fencing, stone, windows and doors, is primarily driven by construction of new homes and repair and remodeling of existing homes, which are affected by changes in national and local economic and demographic conditions, employment levels, availability of financing, interest rates, consumer confidence and other economic factors.

New Home Construction

Management believes that a U.S. housing recovery will continue on a national basis, supported by favorable demographic trends, historically low interest rates and consumers who are increasingly optimistic about the U.S. housing market. New construction in the United States experienced strong growth from the early 1990s to 2006, with housing starts increasing at a compounded annual growth rate of 3.8%. However, according to the U.S Census Bureau, from 2006 to 2016, single family housing starts are estimated to have declined 47%. While the industry has experienced a period of severe correction, management believes that the long-term economic outlook for new construction in the United States is favorable and supported by an attractive interest rate environment, increasing consumer confidence, improving employment growth and strong demographics, as new household formations drive demand for starter homes. According to the Joint Center for Housing Studies of Harvard University, net new household formations between 2015 and 2025 are expected to be approximately 13.6 million units.

During 2016, single family housing starts are estimated to have increased 9.4% to approximately 780,000 compared to 2015. During 2015, single family housing starts increased 10.2% to 713,000 compared to 2014. The NAHB is currently forecasting single family housing starts to further increase in 2017 and 2018 by 9.7% and 12.4%, respectively.

Home Repair and Remodeling

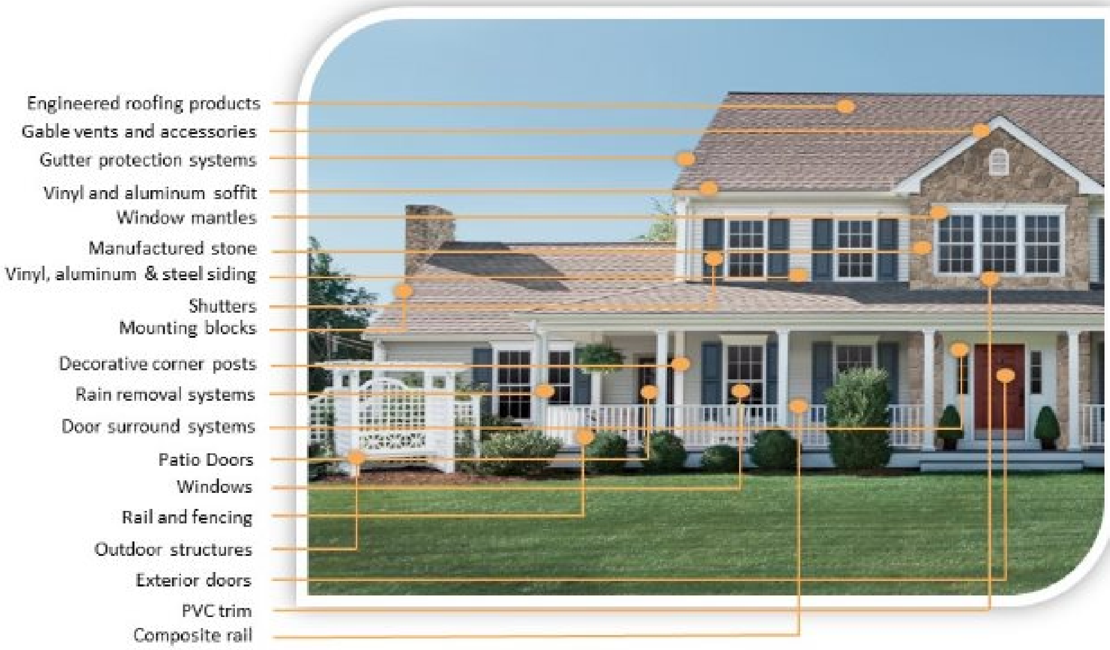
Management believes that the U.S. home repair and remodeling products market is poised for a recovery. Since the early 1990s and through 2006, demand for home repair and remodeling products in the United States increased at a compounded annual growth rate of 4.3%, according to the U.S. Census Bureau, as a result of strong economic growth, low interest rates and favorable demographics. However, beginning in 2007 the ability for homeowners to finance repair and remodeling expenditures, such as replacement windows or vinyl siding, has been negatively impacted by a general tightening of lending requirements by financial institutions and the significant decrease in home values, which limited the amount of home equity against which homeowners could borrow. Management believes that expenditures for home repair and remodeling products are also affected by consumer confidence, economic conditions, debt ceiling and national budget deliberations, and unemployment levels. Management believes the long-term economic outlook of the demand for home repair and remodeling products in the United States is favorable and supported by the move towards more energy-efficient products, recent underinvestment in home maintenance and repair, and an aging housing stock.

Description of Business

Financial information about our segments is included in the *Notes to Consolidated Financial Statements* and incorporated herein by reference.

Building Products

The breadth of building products offered by us provides a competitive advantage as we manufacture a wide assortment of products for the exterior of the home as illustrated below.



Siding, Fencing and Stone segment

Products

In our Siding, Fencing and Stone segment, our principal products include vinyl siding and skirting, steel siding, vinyl and aluminum soffit, aluminum trim coil, cellular PVC trim and mouldings, J-channels, wide crown molding, window and door trim, F-channels, H-molds, fascia, undersill trims, outside/inside corner posts, rain removal systems, injection molded designer accents such as shakes, shingles, scallops, shutters, vents and mounts, vinyl fence, vinyl railing and stone veneer in the United States and Canada. We sell our siding and accessories under our Variform ®, Napco ®, Mastic ® Home Exteriors, Mitten ®, Cellwood ®, and Durabuilt ® brand names and under the Georgia-Pacific brand name through a private label program. Our cellular PVC Trim products are sold under our Ply Gem ® Trim and Mouldings brand name. Our vinyl fencing and railing products are sold under the Ply Gem brand name. Our stone veneer products are sold under our Canyon Stone and Ply Gem Stone brand name. Our engineered slate and shake roofing products are sold under our Ply Gem Roofing brand name. Our gutter protection products are sold under our Leaf Relief ®, Leaf Relief ® Snap Tight, Leaf Smart ® and Leaf Logic ® brand names. A summary of our product lines is presented below according to price point:

	Mastic ® Home Exteriors	**Variform ®**	**Napco ®**	**Cellwood ®**	**Durabuilt ®**	**Georgia Pacific**	**Mitten ®**	**Ply Gem Fence/Rail**	**Ply Gem ® Stone**	**Canyon Stone (1)**	**Ply Gem ® Trim and Mouldings (2)**	**Ply Gem Roofing (3)**
Specialty/Super Premium	Cedar Discovery ® Structure ® Home Insulation System™	Heritage Cedar®™ Climaforce™	Cedar Select ® American Essence™	Cedar Dimensions™	670 Series™ Hand Split 650 Series™ Shingle Siding 660 Series™ Round Cut Siding 800 Series Insulated Siding	Cedar Spectrum™ Caliber™ High Performance Insulated Siding	InsulPlankII Grand River		Fieldstone Tuscan Fieldstone Shadow Ledgestone Cut Cobblestone Cobblestone Ridgestone Riverstone Brick Cascade Ledge True Stack Manorstone	Canyon Ledge Castle Cathedral Classic Cobblestone Country Ledge Fieldstone Limestone Manchester River Rock Timber Ledge Tuscan Field Stone Southern Ledge Strip Ledge Brick		
Premium	Quest® Barkwood ® Liberty Elite ® Board + Batten Designer Series™ Carvedwood 44®	Vortex Extreme™ Board & Batten Camden Pointe®	American Splendor ® American Accents Board & Batten™	Dimensions ® Board & Batten	480 Series™	Compass™ Board & Batten	Sentry Southern Beaded	Elegance Vinyl Fence			Trim Boards Corners Post Wraps Mouldings Beadboard Skirtboard Sheets J-Notch Trim Post Accents	Engineered Slate Polymer
Standard	Ovation™ Charleston Beaded ®	Nottingham ® Ashton Heights ® Victoria Harbor ®	American Herald ® American Tradition American 76 Beaded ®	Progressions ® Colonial Beaded	440 Series™ 450 Series™ Beaded	Forest Ridge ® Shadow Ridge ® Castle Ridge ® Somerset™ Coastal	Highland Oregon Pride	Performance Vinyl Fence and Rail				
Economy	Mill Creek® Eclipse™	Contractors Choice ®	American Comfort ®	Evolutions ®	410 Series™	Vision Pro ® Chatham Ridge® Parkside ® Oakside ®	Entree	Classic Vinyl Fence				

(1) The Canyon Stone product line was integrated in 2015 with the May 2015 acquisition of Canyon Stone Inc.
(2) The cellular PVC Trim product category launched during the first quarter of 2013.
(3) The Engineered Slate Roofing product category launched during the third quarter of 2014.

The breadth of our product lines and our multiple brand and price point strategy enable us to target multiple distribution channels (wholesale and specialty distributors, retailers and manufactured housing) and end users (new construction and home repair and remodeling).

Customers and distribution

We have a multi-channel distribution network that serves both the new construction and the home repair and remodeling sectors, which exhibit different, often counter-balancing, demand characteristics. In conjunction with our multiple brand and price point strategy, we believe our multi-channel distribution strategy enables us to increase our sales and sector penetration while minimizing channel conflict. We believe our strategy reduces our dependence on any one channel, which provides us with a greater ability to sustain our financial performance through economic fluctuations.

We sell our siding and accessories to specialty distributors (one-step distribution) and to wholesale distributors (two-step distribution). Our specialty distributors sell directly to remodeling contractors and builders. Our wholesale distributors sell to retail home centers and lumberyards who, in turn, sell to remodeling contractors, builders and consumers. In the specialty channel, we have developed an extensive network of approximately 800 independent distributors, serving over 22,000 contractors and builders nationwide. We are well-positioned in this channel as many of these distributors are both the largest and leading consolidators in the industry. In the wholesale channel, we are the sole supplier of vinyl siding and accessories to BlueLinx (formerly a distribution operation of the Georgia-Pacific Corporation), one of the largest building products distributors in the United States. Through BlueLinx, our Georgia-Pacific private label vinyl siding products are sold at major retail home centers, lumberyards and manufactured housing manufacturers. A portion of our siding and accessories is also sold directly to home improvement centers. Our growing customer base of fencing and railing consists of fabricators, distributors, retail home centers and lumberyards. Our customer base of stone veneer products consists of distributors, lumberyards, retailers, builders and contractors. Our customer base of roofing products consists of distributors, lumberyards, retailers and contractors. In Canada, our complete offering of vinyl siding, accessories, trim, and moldings, along with Ply Gem manufactured and third party sourced complimentary products are primarily distributed through our 18 Mitten branch locations, to retail home centers and lumberyards, and new construction and remodeling contractors.

Our largest customer, ABC Supply Co., Inc., comprised 17.1%, 16.9%, and 16.0% of the net sales of our Siding, Fencing, and Stone segment for the years ended December 31, 2016, 2015, and 2014, respectively.

Production and facilities

Vinyl siding, skirting, soffit and accessories are manufactured in our Martinsburg, West Virginia, Jasper, Tennessee, Stuarts Draft, Virginia, Kearney, Missouri, and Paris, Ontario facilities, while all metal products are produced in our Sidney, Ohio facility. The majority of our injection molded products such as shakes, shingles, scallops, shutters, vents and mounts are manufactured in our Gaffney, South Carolina facility. The cellular PVC trim and mouldings products are manufactured in Kearney, Missouri and St. Marys, West Virginia. The vinyl, metal, and injected molded plants have sufficient capacity to support planned levels of sales growth for the foreseeable future. Our fencing and railing products are currently manufactured at our York, Nebraska and Fair Bluff, North Carolina facilities. The fencing and railing plants have sufficient capacity to support our planned sales growth for the foreseeable future. Our stone veneer products are manufactured at our Middleburg, Pennsylvania, Olathe, Kansas and Youngsville, North Carolina facilities. Our engineered slate roofing products are currently manufactured at our Fair Bluff, North Carolina facility. Our manufacturing facilities are among the safest in all of North America with three of them having received the highest federal and/or state OSHA safety award and rating.

Raw materials and suppliers

PVC resin and aluminum are major components in the production of our Siding, Fencing, and Stone products. PVC resin and aluminum are commodity products and are available from both domestic and international suppliers. Changes in PVC resin and aluminum prices have a direct impact on our cost of products sold. Historically, we have been able to pass on the price increases to our customers. The results of operations for individual quarters can be negatively impacted by a delay between the time of raw material cost increases and price increases that we implement in our products, or conversely can be positively impacted by a delay between the time of a raw material price decrease and competitive pricing moves that we implement accordingly.

Recycled plastics are a major component in the production of our roofing products. The price of recycled plastics has risen above historical levels and is expected to remain high. The recycled plastic market is driven by supply and demand and therefore causes the recycled plastic market to be volatile.

Competition

We compete with other national and regional manufacturers of vinyl siding, aluminum, cellular PVC, fencing, and stone products. We believe we are currently the largest manufacturer of vinyl siding in North America. Our vinyl siding competitors include CertainTeed, Alside, Royal Building Products and smaller regional competitors. Based on our internal estimates and industry experience, we believe that we have a U.S. vinyl siding market position of 39.8% in 2016, and a Canadian market position of 31.5%. Our aluminum accessories competitors include Alsco, Gentek and other smaller regional competitors. Significant growth in vinyl fencing and railing has attracted many new entrants, and the sector today is fragmented with numerous competitors including U.S. Fence, Homeland, Westech, Bufftech, and Azek. Our cellular PVC trim and moulding competitors include Azek, Inteplast, Kommerling (KOMA), Jain (Excel), Wolfpac (Versatex), Tapco (Kleer), CertainTeed and Royal Building Products. Our stone veneer competitors include Boral (Cultured Stone), Eldorado Stone, Coronado Stone and smaller regional competitors. We generally compete on product quality, breadth of product offering, sales and service support. In addition to competition from other vinyl siding, fencing and stone products, our products face competition from alternative materials, such as wood, metal, fiber cement and masonry. Increases in competition from other exterior building products manufacturers and alternative building materials could cause us to lose customers and lead to net sales decreases.

Intellectual property

We possess a wide array of intellectual property rights, including patents, trademarks, tradenames, licenses, proprietary technology and know-how and other proprietary rights. In connection with the marketing of our products, we generally obtain trademark protection for our brand names in the Siding, Fencing, and Stone segment. Depending on the jurisdiction, trademarks are valid as long as they are in use and/or their registrations are properly maintained and they have not become generic. Registrations of trademarks can generally be renewed indefinitely as long as the trademarks are in use. With Mitten Building Products in the Canadian market, we license our Procanna Windows and Doors brand for the production of exclusive Mitten distributed products from contracted, regional third-party fabricators. We license the Georgia-Pacific trademark for our Georgia-Pacific private label vinyl siding products sold through BlueLinx. While we do not believe the Siding, Fencing, and Stone segment is dependent on any one of our trademarks, we believe that our trademarks are important to the development and conduct of our business as well as the marketing of our products. We vigorously protect all of our intellectual property rights.

Seasonality

Markets for our products are seasonal and can be affected by inclement weather conditions. Historically, our business has experienced increased sales in the second and third quarters of the year due to increased construction during those periods. Because a portion of our overhead and expenses are fixed throughout the year, our operating profits tend to be lower in the first and fourth quarters. Inclement weather conditions can affect the timing of when our products are applied or installed, causing delayed profit margins when such conditions exist.

We generally carry increased working capital during the first half of a fiscal year to support those months where customer demand exceeds production capacity. We believe that this is typical within the industry.

Backlog

Our Siding, Fencing, and Stone segment had a backlog of approximately $20.3 million at December 31, 2016, and a backlog of approximately $11.3 million at December 31, 2015. We filled 100% of the backlog at December 31, 2015 during 2016. We expect to fill 100% of the orders during 2017 that were included in our backlog at December 31, 2016.

Windows and Doors segment

Products

In our Windows and Doors segment, our principal products include vinyl, aluminum-clad vinyl, aluminum, wood and clad-wood windows and patio doors and steel, wood, and fiberglass entry doors that serve both the new construction and the home repair and remodeling sectors in the United States and Canada. Our products in our Windows and Doors segment are sold under the Ply Gem ® Windows, Simonton ® Windows, Great Lakes ® Window, and Ply Gem ® Canada brands. A summary of our current product lines is presented below according to price point:

	Ply Gem U.S. Windows		Great Lakes Window	Ply Gem Canada	Simonton	
	New Construction	*Replacement*	*Replacement*	*New Construction & Replacement*	*New Construction*	*Replacement*
Specialty/Super-Premium	Mira ® Premium Series		EcoSMART	Signature		Stormbreaker Plus VantagePointe ™ 6500
Premium	Mira ® Premium Series	Premium Series	Comfort Smart	Design Enviro Fiber Stain	ProFinish ® Brickmould 600	Reflections ® 5500 Daylight Max ™ Lumera ™ Madeira Impressions 9800 VantagePointe ™ 6400
Standard	Pro Series	Pro Series	HarborLight	Classic Comfort Fiber Tuff	Brickmould 300 ProFinish ® Contractor ProFinish ® Master	VantagePointe ™ 6100 VantagePointe ™ 6200 VantagePointe ™ 6060 ClearValue Verona Reflections ® 5050 Reflections ® 5300
Economy	Builder Series	Contractor Series		Vista Steel	ProFinish ® Builder	Asure ™

We continue introducing new products to the portfolio which allow us to enter or further penetrate new distribution channels and customers. The breadth of our product lines and our multiple price point strategy enable us to target multiple distribution channels (wholesale and specialty distributors, retailers and manufactured housing) and end user markets (new construction and home repair and remodeling).

Customers and distribution

We have a multi-channel distribution and product strategy that enables us to serve both the new construction and the home repair and remodeling markets. By offering this broad product offering and industry leading service, we are able to meet the local needs of our customers on a national scale. This strategy has enabled our customer base (existing and new) to simplify their supply chain by consolidating window suppliers. Our good, better, best product and price point strategy allows us to increase our sales and sector penetration while minimizing channel conflict. This strategy reduces our dependence on any one channel, providing us with a greater ability to sustain our financial performance through economic fluctuations.

The new construction product lines are sold for use in new residential and light commercial construction through a highly diversified customer base, which includes independent building material dealers, regional/national lumberyard chains, builder direct/OEMs and retail home centers. Our repair and remodeling window products are primarily sold through independent home improvement dealers, one-step distributors, and big box retail outlets. Dealers typically market directly to homeowners or contractors in connection with remodeling requirements while distributors concentrate on local independent retailers.

In Canada, sales of product lines for new construction are predominantly made through direct sales to builders and contractors, while sales for repair and remodeling are made primarily through retail lumberyards but also direct to contractors and direct to consumers through our supply and install services. Ply Gem Canada products are distributed through twelve Ply Gem distribution centers.

Our sales to our five largest window and door customers represented 37.6%, 32.4%, and 37.3% of the net sales of our Windows and Doors segment for the years ended December 31, 2016 , 2015 , and 2014 , respectively.

Production and facilities

Our window and door products leverage a network of vertically integrated production and distribution facilities located in Virginia, Ohio, North Carolina, Georgia, Texas, California, Washington, West Virginia, Illinois and Alberta, Canada. Our window and door manufacturing facilities have benefited from our continued investment and commitment to product development and product quality combined with increasing integration of best practices across our product offerings. In 2010, we began producing vinyl compound for our west coast facilities which improved our operating efficiency and resulted in lower production cost for these items. In 2010, we continued making upgrades to insulated glass production lines in anticipation of more stringent energy efficiency requirements driven by changes in building codes and consumer demand for Energy Star rated products.

While market conditions will dictate future capacity requirements, we have the ability to increase capacity in a cost effective manner by expanding production shifts and lines. Significant housing demand increases to historical levels may require additional capital investment in certain geographical areas to meet this increased demand. Any capacity increase may, however, initially be offset by labor inefficiencies or difficulties obtaining the appropriate labor force. Ongoing capital investments will focus on new product introductions and simplification, production automation, equipment maintenance and cost reductions.

During 2014, our Windows and Doors segment further streamlined its product offerings by realigning its SKUs to simplify the structure and manufacturing process while maximizing product features for our customers at competitive prices. During 2014, we consolidated Canadian production and distribution facilities, and rationalized and rebranded product lines. As a result, during 2014 and 2015 four redundant distribution facilities were closed, and manufacturing was largely consolidated.

Raw materials and suppliers

PVC compound, wood, aluminum and glass are major components in the production of our window and door products. These products are commodity products available from both domestic and international suppliers. Historically, changes in PVC compound, aluminum billet and wood cutstock prices have had the most significant impact on our material cost of products sold in our Windows and Doors segment. We are one of the largest consumers of PVC resin in North America and we continue to leverage our purchasing power on this key raw material. The PVC resin compound that is used in our window lineal production is produced internally. The leveraging of our PVC resin buying power and our PVC resin compounding capabilities benefits all of our window companies. Our window plants have consolidated glass purchases to take advantage of strategic sourcing savings opportunities. In addition, we have continued to vertically integrate aluminum extrusion in our window plants.

Competition

The window and patio door sector remains fragmented, comprised primarily of local and regional manufacturers with limited product offerings. The sector’s competitors in the United States include national brands, such as Jeld-Wen, Pella and Andersen, and numerous regional brands, including MI Home Products, Atrium, Weathershield and Milgard. Competitors in Canada include Jeld-Wen, All Weather, Durabuilt, and numerous regional brands. We generally compete on service, product performance, product offering, sales and support. We believe all of our products are competitively priced and that we are one of the only manufacturers to serve all end markets and price points.

Intellectual property

We possess a wide array of intellectual property rights, including patents, trademarks, tradenames, licenses, proprietary technology and know-how and other proprietary rights. In connection with the marketing of our products, we generally obtain trademark protection for our brand names in the Windows and Doors segment. Depending on the jurisdiction, trademarks are valid as long as they are in use and/or their registrations are properly maintained and they have not become generic. Registrations of trademarks can generally be renewed indefinitely as long as the trademarks are in use. While we do not believe the Windows and Doors segment is dependent on any one of our trademarks, we believe that our trademarks are important to the Windows and Doors segment and the development and conduct of our business as well as the marketing of our products. We vigorously protect all of our intellectual property rights.

Seasonality

Markets for our products are seasonal and can be affected by inclement weather conditions. Historically, our business has experienced increased sales in the second and third quarters of the year due to increased construction during those periods. Accordingly, our working capital is typically higher in the second and third quarters as well. Because much of our overhead and expense are fixed throughout the year, our operating profits tend to be lower in the first and fourth quarters. Inclement weather conditions can affect the timing of when our products are applied or installed, causing delayed profit margins when such conditions exist.

Because we have successfully implemented lean manufacturing techniques and many of our windows and doors are made to order, inventories in our Windows and Doors segment do not change significantly with seasonal demand.

Backlog

Our Windows and Doors segment had a backlog of approximately $45.1 million at December 31, 2016 and approximately $46.6 million at December 31, 2015 . We filled 100% of the backlog at December 31, 2015 during 2016. We expect to fill 100% of the orders during 2017 that were included in our backlog at December 31, 2016 .

Environmental and Other Regulatory Matters

We are subject to United States and Canadian federal, state, provincial and local laws and regulations relating to pollution and the protection of the environment, including those governing emissions to air, discharges to water, use, storage and transport of hazardous materials, storage, treatment and disposal of waste, remediation of contaminated sites, and protection of worker health and safety. From time to time, our facilities are subject to investigation by governmental regulators. In addition, we have been identified as one of many potentially responsible parties for contamination present at certain offsite locations to which we or our predecessors are alleged to have sent hazardous materials for recycling or disposal. We may be held liable, or incur fines or penalties, in connection with such requirements or liabilities for, among other things, releases of hazardous substances occurring on or emanating from current or formerly owned or operated properties or any associated offsite disposal location, or for known or newly-discovered contamination at any of our properties from activities conducted by us or previous occupants. The amount of any liability, fine or penalty may be material, and certain environmental laws impose strict, and under certain circumstances joint and several, liability for the cost of addressing releases of hazardous substances upon certain classes of persons, including site owners or operators and persons that disposed or arranged for the disposal of hazardous substances at contaminated sites.

MW Manufacturers Inc. (“MW”) entered into an Administrative Order on Consent (the “Consent Order”), effective September 12, 2011, with the United States Environmental Protection Agency (“EPA”), Region III, under Section 3008(h) of the Resource Conservation and Recovery Act ("RCRA"), with respect to its Rocky Mount, Virginia property. During 2011, as part of the Consent Order, MW provided the EPA, among other things, a RCRA Facility Investigation Workplan (the “Workplan”) as well as a preliminary cost estimate of approximately $1.8 million for the predicted assessment, remediation and monitoring activities to be conducted pursuant to the Consent Order over the remediation period, which is currently estimated through 2023. During 2012, the EPA approved the Workplan, and MW is currently implementing the Workplan. The Company has recorded approximately $0.3 million of this environmental liability within current liabilities and approximately $1.1 million and $1.2 million within other long-term liabilities in the Company’s consolidated balance sheets at December 31, 2016 and 2015 , respectively. The Company will adjust this environmental remediation liability in future periods, if necessary, as further information develops or circumstances change.

Certain liabilities with respect to this contamination relate to the previous closure of an underground storage tank and were assumed by U.S. Industries, Inc., pursuant to its indemnity obligation under the stock purchase agreement dated August 11, 1995, whereby U.S. Industries, Inc. sold the stock of MW to FPI Acquisition Corp. (“Fenway Partners”). As the successor-in-interest of Fenway Partners, we are similarly indemnified by U.S. Industries, Inc. Notwithstanding this indemnity, however, under applicable Federal and State laws, MW, and the Company as its parent, could be held liable for all or part of the costs associated with the matter under certain circumstances. Moreover, the Company’s ability to seek indemnification from U.S. Industries, Inc. is limited by the terms and limits of the indemnity as well as the strength of U.S. Industries, Inc.’s financial condition, which could change in the future. As of December 31, 2016, no recovery has been recognized on our consolidated balance sheet, but we will actively pursue this indemnity in future periods and will recognize future recoveries in the period in which they become probable.

The State of Nebraska is investigating certain groundwater contamination in northern York, Nebraska, comprised primarily of volatile organic compounds (VOC) (predominantly trichloroethene (TCE)). In December 2013, the EPA announced its proposal to add this groundwater contamination site to the Superfund National Priorities List (NPL) after it was referred to the EPA by the State of Nebraska. Sampling was conducted at the Kroy Building Products, Inc. ("Kroy") facility in York, Nebraska during the first quarter of 2010. In February 2015, the EPA sent a request for information pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and Kroy has responded to this request for information. Given the preliminary stage of this matter, the Company has not recorded a liability for this matter in its consolidated balance sheet as of December 31, 2016. Alcan Aluminum Corporation ("Alcan") has assumed the obligation to indemnify the Company with respect to certain liabilities for environmental contamination of the Kroy facility occurring prior to 1994. Notwithstanding this indemnity, however, under applicable Federal and State laws, Kroy, and the Company as its parent, could be held liable for all or part of the costs associated with the matter under certain circumstances. Moreover, the ability of Kroy and the Company to seek indemnification may be limited by the terms and limits of the indemnity as well as the strength of Alcan's financial condition, which could change in the future.

We are currently involved in environmental proceedings involving Gienow Canada Inc. (f/k/a Ply Gem Canada, Inc.) and Alberta Environment (arising from subsurface contamination discovered at our Calgary, Alberta property) for which the Company has a $0.1 million liability included in its consolidated balance sheet, and the Company may in the future be subject to environmental proceedings involving Thermal-Gard, Inc. (arising from groundwater contamination in Punxsutawney, Pennsylvania), Mastic Home Exteriors, Inc. ("MHE") (relating to a closed landfill site in Sidney, Ohio as well as participating as a potentially responsible party in nine contaminated sites in Indiana, Ohio and South Carolina), and Simonton (relating to closed lagoons and certain contamination in Paris, Illinois as well as certain contamination associated with certain 7-Eleven convenience food stores). Under the stock purchase agreement governing the MHE acquisition, Alcoa Securities Corporation and Alcoa, Inc. are to indemnify the Company for certain environmental liabilities in excess of $2.5 million , including liabilities relating to the landfill site in Sidney, Ohio and the nine contaminated sites in Indiana, Ohio and South Carolina. Under the stock purchase agreement governing the Simonton acquisition, Fortune Brands Windows & Doors, Inc., is to indemnify us for any environmental claims associated with the 7-Eleven convenience food stores. The Company's ability to seek indemnification or enforce these and other obligations is, however, limited by the strength of the financial condition of the indemnitor or responsible party, which could change in the future, as well as the terms and limits of any such indemnities or obligations.

Based on current information, we are not aware of any compliance obligations, claims, releases or investigations that will have a material adverse effect on our results of operations, cash flows or financial position except as otherwise disclosed in the Company's consolidated financial statements. However, there can be no guarantee that previously known or newly-discovered matters or any inability to enforce our available indemnification rights against previous owners of the Company, its subsidiaries, or their businesses or properties will not result in material costs or liabilities. While the purchase agreements governing certain of our acquisitions provide that the sellers will indemnify us, subject to certain limitations, for certain environmental liabilities, our ability to seek indemnification from the respective sellers is limited by various factors, including the financial condition of the indemnitor or responsible party as well as by the terms and limits of such indemnities or obligations. As a result, there can be no assurance that we could receive any indemnification from the sellers, and any related environmental liabilities, costs or penalties could have a material adverse effect on our financial condition and results of operations.

Employees

- As of December 31, 2016 , we had 8,975 full-time employees worldwide, of whom 7,905 were in the United States and 1,070 were in Canada. Employees at our Calgary, Alberta plant are currently our only employees with whom we have a collective bargaining agreement.
- Approximately 4.5% of our total employees are represented by the United Brotherhood of Carpenters and Joiners of America. These Canadian employees remain subject to the terms of the Collective Bargaining Agreement ("CBA") which expires in June 2017.

Financial Information about Geographic Areas

All of the Company's operations are located in the United States and Canada.

Revenue from external customers for the year ended December 31, 2016 consisted of:

- $1,741.2 million from United States customers
- $166.5 million from Canadian customers
- $4.1 million from all other foreign customers

Revenue from external customers for the year ended December 31, 2015 consisted of:

- $1,642.2 million from United States customers
- $192.5 million from Canadian customers
- $5.0 million from all other foreign customers

Revenue from external customers for the year ended December 31, 2014 consisted of:

- $1,304.6 million from United States customers
- $250.8 million from Canadian customers
- $11.2 million from all other foreign customers

At December 31, 2016, 2015, and 2014, long-lived assets totaled approximately $55.8 million, $57.7 million, and $73.4 million, respectively, in Canada, and $751.6 million, $718.0 million, and $719.0 million, respectively, in the United States. We are exposed to risks inherent in any foreign operation, including foreign exchange rate fluctuations.

Item 1A. RISK FACTORS

Risks Associated with Our Business

Downturns or negative trends in the home repair or the remodeling and new construction end markets, or the U.S. and Canadian economies or the availability of consumer credit, could adversely impact our end users and lower the demand for, and pricing of, our products, which in turn could cause our net sales and net income to decrease.

Our performance is dependent to a significant extent upon the levels of home repair and remodeling and new construction spending, which declined significantly beginning in 2008 and continued through 2013 with recovery commencing in 2014. Housing levels remained depressed in 2016 compared to historical levels, despite the recovery the last few years, and are affected by such factors as interest rates, inflation, consumer confidence, unemployment and the availability of consumer credit.

Our performance is also dependent upon consumers having the ability to finance home repair and remodeling projects and/or the purchase of new homes. The ability of consumers to finance these purchases is affected by such factors as new and existing home prices, homeowners' equity values, interest rates and home foreclosures, which in turn could result in a tightening of lending standards by financial institutions and reduce the ability of some consumers to finance home purchases or repair and remodeling expenditures. Trends such as declining home values, increased home foreclosures and tightening of credit standards by lending institutions, negatively impacted the home repair and remodeling and the new construction sectors during the recession which began in 2008. Despite the recent abatement of these negative market factors, any recurrence or worsening of these items may adversely affect our net sales and net income.

We face competition from other exterior building products manufacturers and alternative building materials. If we are unable to compete successfully, we could lose customers and our sales could decline.

We compete with other national and regional manufacturers of exterior building products. Some of these companies are larger and have greater financial resources than we do. Accordingly, these competitors may be better equipped to withstand changes in conditions in the industries in which we operate and may have significantly greater operating and financial flexibility than we do. Competitors could take a greater share of sales and cause us to lose business from our customers. Additionally, our products face competition from alternative materials, such as wood, metal, fiber cement, masonry and composites in siding, and wood, composites and fiberglass in windows. An increase in competition from other exterior building products manufacturers and alternative building materials could cause us to lose our customers and lead to decreases in net sales.

An inability to successfully develop new products or improve existing products could negatively impact our ability to attract new customer and/or retain existing customers.

Our success depends on meeting consumer needs and anticipating changes in consumer preferences with successful new products and product improvements. We aim to introduce products and new or improved production processes proactively to offset obsolescence and decreases in sales of existing products. While we devote significant focus to the development of new products, we may not be successful in product development and our new products may not be commercially successful. In addition, it is possible that competitors may improve their products more rapidly or effectively, which could adversely affect our sales. Furthermore, market demand may decline as a result of consumer preferences trending away from our categories or trending down within our brands or product categories, which could adversely impact our results of operations, cash flows and financial condition.

Changes in the costs and availability of raw materials, especially PVC resin and aluminum, can decrease our profit margins by increasing our costs.

Our principal raw materials, PVC resin and aluminum, have been subject to rapid price changes in the past. While we have historically been able to substantially pass on significant PVC resin and aluminum cost increases through price increases to our customers, our results of operations for individual quarters can be and have been hurt by a delay between the time of PVC resin and aluminum cost increases and price increases in our products. While we expect that any significant future PVC resin and aluminum cost increases will be offset in part or whole over time by price increases to our customers, we may not be able to pass on any future price increases.

Certain of our customers have been expanding and may continue to expand through consolidation and internal growth, which may increase their buying power, which could materially and adversely affect our sales, results of operations and financial position.

Certain of our important customers are large companies with significant buying power. In addition, potential further consolidation in the distribution channels could enhance the ability of certain of our customers to seek more favorable terms, including pricing, for the products that they purchase from us. Accordingly, our ability to maintain or raise prices in the future may be limited, including during periods of raw material and other cost increases. If we are forced to reduce prices or to maintain prices during periods of increased costs, or if we lose customers because of pricing or other methods of competition, our sales, operating results and financial position may be materially and adversely affected.

Because we depend on a core group of significant customers, our sales, cash flows from operations and results of operations may decline if our key customers reduce the amount of products that they purchase from us.

Our top ten customers accounted for approximately 46.7% of our net sales in the year ended December 31, 2016. Our largest customer for the fiscal year ended December 31, 2016, ABC Supply Co., Inc., distributes our products within its building products distribution business, and accounted for approximately 13.1% of our consolidated 2016 net sales. We expect a small number of customers to continue to account for a substantial portion of our net sales for the foreseeable future.

The loss of, or a significant adverse change in our relationships with, our largest customer or any other major customer, or loss of market position of any major customer, could cause a material decrease in our net sales. The loss of, or a reduction in orders from, any significant customers, losses arising from customers' disputes regarding shipments, fees, merchandise condition or performance or related matters, or our inability to collect accounts receivable from any major customer could cause a decrease in our net income and our cash flow. In addition, revenue from customers that have accounted for significant revenue in past periods, individually or as a group, may not continue, or if continued, may not reach or exceed historical levels in any period.

Our business is seasonal and can be affected by inclement weather conditions that could affect the timing of the demand for our products and cause reduced profit margins when such conditions exist.

Markets for our products are seasonal and can be affected by inclement weather conditions. Historically, our business has experienced increased sales in the second and third quarters of the year due to increased construction during those periods. Because much of our overhead and operating expenses are spread ratably throughout the year, our operating profits tend to be lower in the first and fourth quarters. Inclement weather conditions can affect the timing of when our products are applied or installed, causing reduced profit margins when such conditions exist. For example, unseasonably cold weather or extraordinary amounts of rainfall may decrease construction activity.

Increases in union organizing activity and work stoppages at our facilities or the facilities of our suppliers could delay or impede our production, reduce sales of our products and increase our costs.

Our financial performance is affected by the cost of labor. As of December 31, 2016, approximately 4.5% of our employees were represented by labor unions. We are subject to the risk that strikes or other types of conflicts with personnel may arise or that we may become a subject of union organizing activity. Furthermore, some of our direct and indirect suppliers have unionized work forces. Strikes, work stoppages or slowdowns experienced by these suppliers could result in slowdowns or closures of facilities where components of our products are manufactured. Any interruption in the production or delivery of our products could reduce sales of our products and increase our costs.

Our ability to operate and our growth potential could be materially and adversely affected if we cannot employ, train and retain qualified personnel at a competitive cost.

Many of the products that we manufacture and assemble require manual processes in plant environments. We believe that our success depends upon our ability to attract, employ, train and retain qualified personnel with the ability to design, manufacture and assemble these products. In addition, our ability to expand our operations depends in part on our ability to increase our skilled labor force as the housing market continues to recover in the United States and Canada. A significant increase in the wages paid by competing employers could result in a reduction of our qualified labor force, increases in the wage rates that we must pay, or both. In addition, we believe that our success depends in part on our ability to quickly and effectively train additional workforce to handle the increased volume and production while minimizing labor inefficiencies and maintaining product quality in a housing market recovery. If either of these events were to occur, our cost structure could increase, our margins could decrease, and any growth potential could be impaired.

We may be subject to claims arising from the operations of our various businesses arising from periods prior to the dates we acquired them. Our ability to seek indemnification from the former owners of our subsidiaries may be limited, in which case, we would be liable for these claims.

We have acquired all of our subsidiaries, including Ply Gem Industries, MWM Holding, AWC Holding Company, MHE, Pacific Windows, Gienow, Mitten, Simonton, and substantially all of the assets of Ply Gem Stone, Canyon Stone, and Greendeck Products, LLC, in the last several years. We may be subject to claims or liabilities arising from the ownership or operation of our subsidiaries for the periods prior to our acquisition of them, including environmental liabilities. These claims or liabilities could be significant. Our ability to seek indemnification from the former owners of our subsidiaries for these claims or liabilities is limited by various factors, including the specific limitations contained in the respective acquisition agreements and the financial ability of the former owners to satisfy such claims or liabilities. If we are unable to enforce any indemnification rights we may have against the former owners or if the former owners are unable to satisfy their obligations for any reason, including because of their current financial position, or if we do not have any right to indemnification, we could be held liable for the costs or obligations associated with such claims or liabilities, which could adversely affect our operating performance.

We could face potential product liability claims, including class action claims and warranties, relating to products we manufacture.

We face an inherent business risk of exposure to product liability claims, including class action claims and warranties, in the event that the use of any of our products results in personal injury or property damage. In the event that any of our products is defective or proves to be defective, among other things, we may be responsible for damages related to any defective products and we may be required to cease production, recall or redesign such products. Because of the long useful life of our products, it is possible that latent defects might not appear for several years. Any insurance we maintain may not continue to be available on terms acceptable to us or such coverage may not be adequate for liabilities actually incurred. Further, any claim or product discontinuance, recall or redesign could result in adverse publicity against us, which could cause our sales to decline, or increase our warranty costs.

We could face other types of litigation outside of product liability claims that could result in costly defense efforts.

We are from time to time involved in various claims, litigation matters and regulatory proceedings that arise in the ordinary course of our business which could have a material adverse effect on us. These matters may include contract disputes, workers compensation and other personal injury claims, warranty disputes, other tort claims, employment and tax matters and other proceedings and litigation, including class action lawsuits. We have generally denied liability and have vigorously defended these cases. Due to their scope and complexity, however, these lawsuits can be particularly costly to defend and resolve, and we have and may continue to incur significant costs as a result of these types of lawsuits. Although we intend to defend all claims and litigation matters vigorously, given the inherently unpredictable nature of claims and litigation, we cannot predict with certainty the outcome or effect of any claim or litigation matter. We maintain insurance against some, but not all, of these risks of loss resulting from claims and litigation. The levels of insurance we maintain may not be adequate to fully cover any and all losses or liabilities. If any significant accident, judgment, claim or other event is not fully insured or indemnified against, it could have a material adverse impact on our business, financial condition and results of operations.

We are dependent on certain key personnel, the loss of whom could materially affect our financial performance and prospects.

Our continued success depends to a large extent upon the continued services of our senior management and certain key employees. To encourage the retention of certain key executives, we have entered into various equity-based compensation agreements with our senior executives, including Messrs. Robinette, Poe, and Wayne designed to encourage their retention. Each member of our senior management team has substantial experience and expertise in our industry and has made significant contributions to our growth and success. We do face the risk, however, that members of our senior management may not continue in their current positions and the loss of their services could cause us to lose customers and reduce our net sales, lead to employee morale problems and/or the loss of key employees, or cause disruptions to our production. Also, we may be unable to find qualified individuals to replace any of the senior executive officers who leave our company.

Interruptions in deliveries of raw materials or finished goods could adversely affect our production and increase our costs, thereby decreasing our profitability.

Our dependency upon regular deliveries from suppliers means that interruptions or stoppages in such deliveries could adversely affect our operations until arrangements with alternate suppliers could be made. If any of our suppliers were unable to deliver materials to us for an extended period of time, as the result of financial difficulties, catastrophic events affecting their facilities or other factors beyond our control, or if we were unable to negotiate acceptable terms for the supply of materials with these or alternative suppliers, our business could suffer. We may not be able to find acceptable alternatives, and any such alternatives could result in increased costs for us. Even if acceptable alternatives were found, the process of locating and securing such alternatives might be disruptive to our business. Extended unavailability of a necessary raw material or finished goods could cause us to cease manufacturing one or more of our products for a period of time.

Changes in building codes and standards could increase the cost of our products, lower the demand for our products, or otherwise adversely affect our business.

Our products and markets are subject to extensive and complex local, state, federal, and foreign statutes, ordinances, rules, and regulations. These mandates, including building design and safety and construction standards and zoning requirements, affect the cost, selection, and quality requirements of building components like windows and siding.

These statutes, ordinances, rules, and regulations often provide broad discretion to governmental authorities as to the types and quality specifications of products used in new residential and non-residential construction and home renovations and improvement projects, and governmental authorities can impose different standards. Compliance with these standards and changes in such statutes, ordinances, rules, and regulations may increase the costs of manufacturing our products or may reduce the demand for certain of our products in the affected geographical areas or product markets. Conversely, a decrease in product safety standards could reduce demand for our more modern products if less expensive alternatives that did not meet higher standards became available for use in that market. All or any of these changes could have a material adverse effect on our business, financial condition, and results of operations.

Environmental requirements may impose significant costs and liabilities on us.

Our facilities are subject to numerous United States and Canadian federal, state, provincial and local laws and regulations relating to pollution and the protection of the environment, including those governing emissions to air, discharges to water, use, storage and transport of hazardous materials, storage, treatment and disposal of waste, remediation of contaminated sites and protection of worker health and safety. From time to time, our facilities are subject to investigation by governmental regulators. In addition, we have been identified as one of many potentially responsible parties for contamination present at certain offsite locations to which we or our predecessors are alleged to have sent hazardous materials for recycling or disposal. We may be held liable, or incur fines or penalties in connection with such requirements or liabilities for, among other things, hazardous substances used in or released from our current or former operations or products, releases of hazardous substances occurring on or emanating from current or formerly owned or operated properties or any associated offsite disposal location, or for known or newly-discovered contamination at any of our properties from activities conducted by previous occupants. The amount of such liability, fine or penalty may be material. For example, MW, a subsidiary of MWM Holding, entered into an Administrative Order on Consent with the EPA, Region III, under Section 3008(h) of RCRA, primarily relating to contamination associated with an underground storage tank formerly located at its Rocky Mount, Virginia property. Certain environmental laws impose strict, and under certain circumstances joint and several, liability for the cost of addressing releases of hazardous substances upon certain classes of persons, including site owners or operators and persons that disposed or arranged for the disposal of hazardous substances at contaminated sites.

In addition, changes in environmental laws and regulations or in their enforcement, the discovery of previously unknown contamination or other liabilities relating to our properties and operations or the inability to enforce the indemnification obligations of the previous owners of our subsidiaries could result in significant environmental liabilities that could adversely impact our operating performance. In addition, we might incur significant capital and other costs to comply with increasingly stringent United States or Canadian environmental laws or enforcement policies that would decrease our cash flow.

Finally, while the stock purchase agreements governing certain of our acquisitions provide that the sellers will indemnify us, subject to certain limitations, for certain environmental liabilities, our ability to seek indemnification from the respective sellers is limited by various factors, including the financial condition of the indemnitor or responsible party as well as by the terms and limits of such indemnities or obligations. As a result, there can be no assurance that we could receive any indemnification from the sellers, and any related environmental liabilities, costs or penalties could have a material adverse effect on our financial condition and results of operations.

Our ability to consummate and effectively integrate future acquisitions, if any, will be critical to maintaining and improving our operating performance.

We will continue to pursue strategic acquisitions into our business if they provide future financial and operational benefits. Successful completion of any strategic transaction depends on a number of factors that are not entirely within our control, including our ability to negotiate acceptable terms, conclude satisfactory agreements and obtain all necessary regulatory approvals. There can be no assurance that we will consummate future acquisitions. In addition, our ability to effectively integrate these acquisitions into our existing business and culture may not be successful which could jeopardize future operational performance for the combined businesses.

Manufacturing or assembly realignments may result in a decrease in our short-term earnings, until the expected cost reductions are achieved, due to the costs of implementation.

We continually review our manufacturing and assembly operations and sourcing capabilities. Effects of periodic manufacturing realignment, cost savings programs, and labor ramp-up costs could result in a decrease in our short-term earnings until the expected cost reductions are achieved and/or production volumes stabilize. Such programs may include the consolidation and integration of facilities, functions, systems and procedures. Such actions may not be accomplished as quickly as anticipated and the expected cost reductions may not be achieved or sustained.

We rely on a variety of intellectual property rights. Any threat to, or impairment of, these rights could cause us to incur costs to defend these rights.

As a company that manufactures and markets branded products, we rely heavily on trademark and service mark protection to protect our brands. We also have issued patents and rely on trade secret and copyright protection for certain of our technologies. These protections may not adequately safeguard our intellectual property and we may incur significant costs to defend our intellectual property rights, which may harm our operating results. There is a risk that third parties, including our current competitors, will infringe on our intellectual property rights, in which case we would have to defend these rights. There is also a risk that third parties, including our current competitors, will claim that our products infringe on their intellectual property rights. These third parties may bring infringement claims against us or our customers, which may harm our operating results.

We also rely on third party license agreements for certain trademarks and technologies we employ. There is a risk that third parties may modify or terminate such licenses, which may harm our operating results. While these license agreements generally provide that the licensors will indemnify us, subject to certain limitations, for certain infringement liabilities, our ability to seek indemnification from the respective licensors is limited by various factors, including the financial condition of the licensor as well as by the terms and limits of such indemnities or obligations. As a result, there can be no assurance that we could receive any indemnification from licensors, and any related infringement liabilities, costs or penalties could have a material adverse effect on our financial condition and results of operations.

Increases in transportation, freight and fuel costs could cause our cost of products sold to increase and net income to decrease.

Increases in transportation, freight and fuel costs could negatively impact our cost to deliver our products to our customers and thus increase our cost of products sold. The Company estimates that a 10% increase in fuel costs for the year ended December 31, 2016 would have increased costs of products sold during such period by approximately $0.9 million. If we are unable to increase the selling price of our products to our customers to cover any increases in transportation and fuel costs, net income may be adversely affected.

Changes in foreign currency exchange and interest rates could have a material adverse effect on our operating results and liquidity.

We have operations in Canada that generated approximately 10.4% of our revenues in 2016. As such, our net sales, earnings and cash flow are exposed to risk from changes in foreign exchange rates, which can be difficult to mitigate. For example, during 2016 the U.S. dollar strengthened against the Canadian dollar by approximately 3.6%. Depending on the direction of changes relative to the U.S. dollar, Canadian dollar values can increase or decrease the reported values of our net assets and results of operations. The change in foreign currency exchange rates had a $6.9 million and $1.5 million net unfavorable translation impact on our net sales and gross profit, respectively, in 2016. In addition to the negative translation impact, we had a further unfavorable foreign currency impact of $5.4 million in 2016 related to purchasing raw materials in Canada at higher prices due to the exchange rates from domestic U.S. suppliers. We hedge this foreign currency exposure by evaluating the usage of certain derivative instruments which hedge certain, but not all, underlying economic exposures.

We are also exposed to changes in interest rates as the Term Loan and ABL Facility bear interest at variable interest rates. As a result, future interest rate increases will negatively impact our financial results. Our ability to access capital markets could also be impeded if adverse liquidity market conditions occur.

Declines in our business conditions may result in an impairment of our tangible and intangible assets, which could result in a material non-cash charge.

A negative long-term performance outlook could result in a net sales decrease, which could result in a decrease in operating cash flows, adversely impacting our business and results of operations, and have a material adverse effect on our financial condition. These declines could result in an impairment of our tangible and intangible assets which results when the carrying value of the assets exceed their fair value.

The significant amount of our indebtedness may limit the cash flow available to invest in the ongoing needs of our business.

Our indebtedness could have important consequences. For example, it could:

- require us to dedicate a substantial portion of our cash flow from operations to interest and principal payments on our indebtedness, reducing the availability of our cash flow for other purposes, such as capital expenditures, acquisitions and working capital;
- limit our flexibility in planning for, or reacting to, changes in our business, the industry in which we operate and the general economy;
- place us at a disadvantage compared to our competitors that have less debt;
- expose us to fluctuations in the interest rate environment because the interest rates of our ABL Facility and our Term Loan Facility are at variable rates; and
- limit our ability to borrow additional funds.

Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, and ability to satisfy our obligations under our indebtedness.

The terms of our debt covenants could limit how we conduct our business and our ability to raise additional funds.

The agreements that govern the terms of our debt, including the credit agreement that governs the ABL Facility, the credit agreement that governs the Term Loan Facility and the indenture governing the 6.50% Senior Notes, contain covenants that restrict our ability and the ability of our subsidiaries to:

- incur and guarantee indebtedness or issue equity interests of restricted subsidiaries;
- repay subordinated indebtedness prior to its stated maturity;
- pay dividends or make other distributions on or redeem or repurchase our stock;
- issue capital stock;
- make certain investments or acquisitions;
- create liens;
- sell certain assets or merge with or into other companies;
- enter into certain transactions with stockholders and affiliates;
- make capital expenditures; and
- pay dividends, distributions or other payments from our subsidiaries.

These restrictions may affect our ability to grow our business and take advantage of market and business opportunities or to raise additional debt or equity capital.

In addition, under the ABL Facility, if (a) our excess availability is less than the greater of (x) 10.0% of the lesser of the aggregate commitments and the borrowing base and (y) $25.0 million or (b) an event of default has occurred and is continuing, we will be required to comply with a minimum fixed charge coverage ratio test. Our ability to meet the required fixed charge coverage ratio can be affected by events beyond our control, and we cannot assure that we will meet this ratio. A breach of any of these covenants under the ABL Facility, Term Loan Facility or the indenture governing the 6.50% Senior Notes could result in an event of default under the ABL Facility, the Term Loan Facility, and/or the indenture. An event of default under any of our debt agreements would permit some of our lenders to declare all amounts borrowed from them to be due and payable and, in some cases, proceed against the collateral securing such indebtedness.

Moreover, the ABL Facility provides the lenders considerable discretion to impose reserves or availability blocks, which could materially impair the amount of borrowings that would otherwise be available to us. There can be no assurance that the lenders under the ABL Facility will not impose such actions during the term of the ABL Facility and further, were they to do so, the resulting impact of this action could materially and adversely impair our liquidity.

We may be unable to generate sufficient cash to service all of our indebtedness and may be forced to take other actions to satisfy our obligations under such indebtedness, which may not be successful. We may also be unable to generate sufficient cash to make required capital expenditures.

Our ability to make scheduled payments on or to refinance our debt obligations and to make capital expenditures depends on our financial condition and operating performance, which is subject to prevailing economic and competitive conditions and to financial, business and other factors. We will not be able to control many of these factors, such as economic conditions in the industry in which we operate and competitive pressures. We cannot assure that we will maintain a level of cash flows from operating activities sufficient to permit us to pay or refinance our indebtedness, including the 6.50% Senior Notes or our indebtedness under our ABL Facility or Term Loan Facility, or make required capital expenditures. If our cash flows and capital resources are insufficient to fund our debt service obligations, we and our subsidiaries could face substantial liquidity problems and may be forced to reduce or delay capital expenditures, sell assets, seek additional capital or restructure or refinance our indebtedness.

In addition, if we do not have, or are unable to obtain, adequate funds to make all necessary capital expenditures when required, or if the amount of future capital expenditures are materially in excess of our anticipated or current expenditures, our product offerings may become dated, our productivity may decrease and the quality of our products may decline, which, in turn, could reduce our sales and profitability.

We will be required to pay an affiliate of Ply Gem Holdings' stockholders for certain tax benefits, including net operating loss carryovers, we may claim, and the amounts we may pay could be significant.

In connection with Ply Gem Holdings' initial public offering, Ply Gem Holdings entered into a tax receivable agreement with an entity controlled by an affiliate of the CI Partnerships (the "Tax Receivable Entity"). This tax receivable agreement generally provides for the payment by us to the Tax Receivable Entity of 85% of the amount of cash savings, if any, in U.S. federal, state and local income tax that we actually realize in periods after the initial public offering as a result of (i) NOL carryovers from periods (or portions thereof) ending before January 1, 2013, (ii) deductible expenses attributable to the transactions related to the initial public offering and (iii) deductions related to imputed interest deemed to be paid by us as a result of or attributable to payments under the tax receivable agreement.

The amount and timing of any payments under the tax receivable agreement will vary depending upon a number of factors, including the amount and timing of the taxable income we generate in the future and the tax rate then applicable, our use of NOL carryovers and the portion of our payments under the tax receivable agreement constituting imputed interest.

The payments we will be required to make under the tax receivable agreement could be substantial. We expect that, as a result of the amount of the NOL carryovers from prior periods (or portions thereof), assuming no material changes in the relevant tax law and that we earn sufficient taxable income to realize in full the potential tax benefit described above, future payments under the tax receivable agreement, in respect of the federal and state NOL carryovers, would be approximately $84.4 million in the aggregate and may be paid within the next five years, assuming that utilization of such tax attributes is not subject to limitation under Section 382 of the Code as the result of an "ownership change" (within the meaning of Section 382 of the Code) of Ply Gem Holdings. These amounts reflect only the cash savings attributable to current tax attributes resulting from the NOL carryovers. It is possible that future transactions or events could increase or decrease the actual tax benefits realized and the corresponding tax receivable agreement payments from these tax attributes.

In addition, although we are not aware of any issue that would cause the U.S. Internal Revenue Service ("IRS") to challenge the benefits arising under the tax receivable agreement, the Tax Receivable Entity will not reimburse us for any payments previously made if such benefits are subsequently disallowed. As a result, in such circumstances, we could make payments under the tax receivable agreement that are greater than our actual cash tax savings and may not be able to recoup those payments, which could adversely affect our liquidity. However, any excess payments made to the Tax Receivable Entity will be netted against payments otherwise to be made, if any, after our determination of such excess.

Finally, because Ply Gem Holdings is a holding company with no operations of its own, its ability to make payments under the tax receivable agreement is dependent on the ability of Ply Gem Industries and its subsidiaries to make distributions to it. We may be required to make payments to Ply Gem Holdings to fund payments under the tax receivable agreement, and the indenture governing the notes will permit us to make such payments. To the extent that Ply Gem Holdings is unable to make payments under the tax receivable agreement for any reason, such payments will be deferred and will accrue interest until paid, which could adversely affect our results of operations and could also affect our liquidity in periods in which such payments are made.

In addition, the tax receivable agreement provides that, upon certain mergers, asset sales, or other forms of business combinations or certain other changes of control, Ply Gem Holdings' or its successor's obligations with respect to tax benefits would be based on certain assumptions, including that Ply Gem Holdings or its successor would have sufficient taxable income to fully utilize the NOL carryovers covered by the tax receivable agreement. As a result, upon a change of control, Ply Gem Holdings may be required to make payments under the tax receivable agreement that are greater than or less than the specified percentage of actual cash tax savings.

Our systems and IT infrastructure may be subject to security breaches and other cyber security incidents.

Purchase of our products may involve the transmission and/or storage of data, including in certain instances customers' business and personally identifiable information. Thus, maintaining the security of computers, computer networks and data storage resources is a critical issue for us and our customers, as security breaches could result in vulnerabilities and loss of and/or unauthorized access to confidential information. We may face attempts by experienced hackers, cybercriminals or others with authorized access to our systems to misappropriate our proprietary information and technology, interrupt our business, and/or gain unauthorized access to confidential information. The reliability and security of our information technology infrastructure and software, and our ability to expand and continually update technologies in response to our changing needs is critical to our business. To the extent that any disruptions or security breaches result in a loss or damage to our data, it could cause harm to our reputation or brand. This could lead some customers to stop purchasing our products and reduce or delay future purchases of our products or use competing products; state or federal enforcement action, which could result in fines, penalties and/or other liabilities and which may cause us to incur legal fees and costs, and/or additional costs associated with responding to a cyberattack. Increased regulation regarding cyber security may increase our costs of compliance, including fines and penalties, as well as costs of cyber security audits. Any of these actions could materially adversely impact our business and results of operations.

We have invested in industry appropriate protections and monitoring practices of our data and information technology to reduce these risks and continue to monitor our systems on an ongoing basis for any current or potential threats. There can be no assurance, however, that our efforts will prevent breakdowns or breaches to our third party providers' databases or systems that could adversely affect our business.

We are controlled by the CI Partnerships whose interest in our business may be different than yours.

The CI Partnerships own approximately 66.9% of the outstanding common stock of Ply Gem Holdings, the direct parent company of Ply Gem Industries. Ply Gem Holdings has entered into an amended and restated stockholders agreement with the CI Partnerships and certain of our members of management. Under the stockholders agreement, the CI Partnerships are currently entitled to nominate a majority of the members of Ply Gem Holdings' board of directors and all of the parties to the stockholders agreement have agreed to vote their shares of our common stock as directed by the CI Partnerships. Accordingly, the CI Partnerships will be able to exercise significant influence over our business policies and affairs. In addition, the CI Partnerships can control any action requiring the general approval of Ply Gem Holdings' stockholders, including the election of directors, the adoption of amendments to Ply Gem Holdings' certificate of incorporation or by-laws and the approval of mergers or sales of substantially all of our assets.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

Our corporate headquarters is located in Cary, North Carolina. We own and lease several additional properties in the United States and Canada. We operate the following facilities as indicated, and each facility is leased unless indicated with "Owned" under the Lease Expiration Date column below.

Location	Square Footage	Facility Use	Lease Expiration Date
Siding, Fencing, and Stone Segment			
Jasper, TN	270,000	Manufacturing and Administration	Owned
Fair Bluff, NC (1)	198,000	Manufacturing and Administration	9/30/2024
Kearney, MO (1)	175,000	Manufacturing and Administration	9/30/2024
Valencia, PA (2)	104,000	Manufacturing and Administration	9/30/2024
Martinsburg, WV (1)	163,000	Manufacturing and Administration	9/30/2024
Martinsburg, WV	195,000	Warehouse	11/30/2019
York, NE (1)	76,000	Manufacturing	9/30/2024
Stuarts Draft, VA	257,000	Manufacturing and Administration	Owned
Sidney, OH	819,000	Manufacturing and Administration	Owned
Gaffney, SC	259,000	Manufacturing and Administration	Owned
Harrisonburg, VA	358,000	Warehouse	2/28/2018
Kansas City, MO	36,000	Administration	12/31/2022

Selinsgrove, PA	87,000	Warehouse	5/31/2021
South Pittsburgh, TN	95,000	Warehouse	10/31/2018
Gaffney, SC	95,000	Warehouse	12/31/2017
Paris, ON, Canada	132,000	Manufacturing and Administration	Owned
Brantford, ON, Canada	225,000	Warehouse and Administration	1/31/2020
Brantford, ON, Canada	12,000	Warehouse	1/31/2020
Mount Pearl, NFLD, Canada	20,000	Warehouse	10/31/2019
Dartmouth, NS, Canada	16,000	Warehouse	2/28/2017
Dartmouth, NS, Canada	15,000	Warehouse	1/31/2019
Saint John, NB, Canada	14,000	Warehouse	3/31/2018
Moncton, NB, Canada	19,000	Warehouse	7/31/2018
Fredericton, NB, Canada	16,000	Warehouse	12/31/2020
Sherbrooke, QC, Canada	12,000	Warehouse	12/31/2017
Le Gardeur, QC, Canada	20,000	Warehouse	8/31/2019
St. Hubert, QC, Canada	9,000	Warehouse	3/31/2018
Ottawa, ON, Canada	23,000	Warehouse	12/31/2017
Scarborough, ON, Canada	20,000	Warehouse	2/28/2018
London, ON, Canada	19,000	Warehouse	4/30/2022
Winnipeg, MN, Canada	16,000	Warehouse	3/31/2017
Saskatoon, SK, Canada	15,000	Warehouse	4/30/2017
Calgary, AB, Canada	41,000	Warehouse and Administration	8/31/2024
Edmonton, AB, Canada	37,000	Warehouse	12/31/2018
Langley, BC, Canada	17,000	Warehouse	2/28/2018
Olathe, KS	80,000	Manufacturing and Administration	5/29/2025
Youngsville, NC	50,000	Manufacturing and Administration	5/29/2025
Apopka, FL	18,000	Warehouse and Administration	5/30/2019
Windows and Doors Segment			
Calgary, AB, Canada (1)	301,000	Manufacturing and Administration	9/30/2024
Walbridge, OH (1)	250,000	Manufacturing and Administration	9/30/2024
Walbridge, OH	20,000	Warehouse	5/30/2017
Rocky Mount, VA (1)	600,000	Manufacturing and Administration	9/30/2024
Rocky Mount, VA	163,000	Manufacturing	5/31/2023
Rocky Mount, VA	180,000	Manufacturing	12/31/2023
Rocky Mount, VA	70,000	Warehouse	1/31/2022
Rocky Mount, VA	80,000	Warehouse	12/31/2023
Rocky Mount, VA	120,000	Warehouse	12/31/2023
Fayetteville, NC	56,000	Warehouse	Owned
Peachtree City, GA	148,000	Manufacturing and Administration	8/20/2024
Peachtree City, GA	40,000	Manufacturing and Administration	Owned
Dallas, TX	213,000	Manufacturing and Administration	2/17/2019
Bryan, TX	273,000	Manufacturing and Administration	8/20/2024
Bryan, TX	75,000	Manufacturing	8/31/2019
Auburn, WA	262,000	Manufacturing and Administration	10/31/2017
Corona, CA	128,000	Manufacturing and Administration	12/30/2017
Sacramento, CA	234,000	Manufacturing and Administration	9/12/2019
Tualatin, OR	9,000	Warehouse	Month-to-month
Edmonton, AB, Canada	29,000	Warehouse	4/30/2021
Red Deer, AB, Canada	7,000	Warehouse	4/30/2018
Medicine Hat, AB, Canada	9,000	Warehouse	12/31/2017
Regina, SK, Canada	19,000	Warehouse	3/31/2021
Saskatoon, SK, Canada	17,000	Warehouse	Owned
Calgary, AB, Canada	359,000	Manufacturing and Administration	10/30/2022
Kelowna, BC, Canada	15,000	Warehouse	6/30/2021
Prince George, BC, Canada	7,000	Warehouse	5/31/2021

Vancouver, BC, Canada	17,000	Warehouse	10/31/2021
Edmonton, AB, Canada	18,000	Warehouse	4/30/2018
Lethbridge, AB, Canada	3,000	Warehouse	12/31/2018
Winnipeg, MB, Canada	9,000	Warehouse	3/31/2017
Clairmont, AB, Canada	4,000	Warehouse	12/31/2018
Vacaville, CA	193,000	Manufacturing and Administration	9/12/2019
St. Marys, WV	198,000	Manufacturing and Administration	Owned
Ellenboro, WV	200,000	Manufacturing and Administration	Owned
Harrisville, WV	55,000	Manufacturing	Owned
Pennsboro, WV	101,000	Manufacturing and Administration	Owned
Paris, IL	224,000	Manufacturing and Administration	Owned
Vienna, WV	131,000	Warehouse	6/30/2018
Paris, IL	120,000	Warehouse	3/31/2025
Columbus, OH	25,000	Administration	5/31/2021
Corporate			
Cary, NC	38,000	Administration	10/31/2020
Durham, NC	56,000	Research & Development	12/31/2022

(1) These properties are included in a long-term lease entered into as a result of a sale/leaseback agreement entered into in August 2004.
(2) This property was subleased to a third party starting in 2010.

Item 3. LEGAL PROCEEDINGS

From time to time, we may be involved in legal proceedings and litigation arising out of our operations and businesses that cover a wide range of matters, including, among others, environmental, contract, employment, intellectual property, securities, personal injury, property damage, product liability, warranty, and modification, adjustment or replacement of component parts or units sold, which may include product recalls.

Environmental

We are subject to United States and Canadian federal, state, provincial and local laws and regulations relating to pollution and the protection of the environment, including those governing emissions to air, discharges to water, use, storage and transport of hazardous materials, storage, treatment and disposal of waste, remediation of contaminated sites, and protection of worker health and safety. From time to time, our facilities are subject to investigation by governmental regulators. In addition, we have been identified as one of many potentially responsible parties for contamination present at certain offsite locations to which it or its predecessors are alleged to have sent hazardous materials for recycling or disposal. We may be held liable, or incur fines or penalties, in connection with such requirements or liabilities for, among other things, releases of hazardous substances occurring on or emanating from current or formerly owned or operated properties or any associated offsite disposal location, or for known or newly-discovered contamination at any of our properties from activities conducted by us or previous occupants. The amount of any liability, fine or penalty may be material, and certain environmental laws impose strict, and under certain circumstances joint and several, liability for the cost of addressing releases of hazardous substances upon certain classes of persons, including site owners or operators and persons that disposed or arranged for the disposal of hazardous substances at contaminated sites.

MW Manufacturers Inc. (“MW”) entered into an Administrative Order on Consent (the “Consent Order”), effective September 12, 2011, with the United States Environmental Protection Agency (“EPA”), Region III, under Section 3008(h) of the Resource Conservation and Recovery Act ("RCRA"), with respect to its Rocky Mount, Virginia property. During 2011, as part of the Consent Order, MW provided the EPA, among other things, a RCRA Facility Investigation Workplan (the “Workplan”) as well as a preliminary cost estimate of approximately $1.8 million for the predicted assessment, remediation and monitoring activities to be conducted pursuant to the Consent Order over the remediation period, which is currently estimated through 2023. During 2012, the EPA approved the Workplan, and MW is currently implementing the Workplan. The Company has recorded approximately $0.3 million of this environmental liability within current liabilities and approximately $1.1 million and $1.2 million within other long-term liabilities in the Company’s consolidated balance sheets at December 31, 2016 and 2015 , respectively. The Company will adjust this environmental remediation liability in future periods, if necessary, as further information develops or circumstances change.

Certain liabilities with respect to this contamination relate to the previous closure of an underground storage tank and were assumed by U.S. Industries, Inc., pursuant to its indemnity obligation under the stock purchase agreement dated August 11, 1995, whereby U.S. Industries, Inc. sold the stock of MW to FPI Acquisition Corp. (“Fenway Partners”). As the successor-in-interest of Fenway Partners, we are similarly indemnified by U.S. Industries, Inc. Notwithstanding this indemnity, however, under applicable Federal and State laws, MW, and the Company as its parent, could be held liable for all or part of the costs associated with the matter under certain circumstances. Moreover, the Company’s ability to seek indemnification from U.S. Industries, Inc. is limited by the terms and limits of the indemnity as well as the strength of U.S. Industries, Inc.’s financial condition, which could change in the future. As of December 31, 2016, no recovery has been recognized on our consolidated balance sheet, but we will actively pursue this indemnity in future periods and will recognize future recoveries in the period in which they become probable.

The State of Nebraska is investigating certain groundwater contamination in northern York, Nebraska, comprised primarily of volatile organic compounds (VOC) (predominantly trichloroethene (TCE)). In December 2013, the EPA announced its proposal to add this groundwater contamination site to the Superfund National Priorities List (NPL) after it was referred to the EPA by the State of Nebraska. Sampling was conducted at the Kroy Building Products, Inc. (“Kroy”) facility in York, Nebraska during the first quarter of 2010. In February 2015, the EPA sent a request for information pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and Kroy has responded to this request for information. Given the preliminary stage of this matter, the Company has not recorded a liability for this matter in its consolidated balance sheet as of December 31, 2016. Alcan Aluminum Corporation (“Alcan”) has assumed the obligation to indemnify the Company with respect to certain liabilities for environmental contamination of the Kroy facility occurring prior to 1994. Notwithstanding this indemnity, however, under applicable Federal and State laws, Kroy, and the Company as its parent, could be held liable for all or part of the costs associated with the matter under certain circumstances. Moreover, the ability of Kroy and the Company to seek indemnification may be limited by the terms and limits of the indemnity as well as the strength of Alcan’s financial condition, which could change in the future.

We are currently involved in environmental proceedings involving Gienow Canada Inc. (f/k/a Ply Gem Canada, Inc.) and Alberta Environment (arising from subsurface contamination discovered at our Calgary, Alberta property) for which the Company has a $0.1 million liability included in its consolidated balance sheet, and the Company may in the future be subject to environmental proceedings involving Thermal-Gard, Inc. (arising from groundwater contamination in Punxsutawney, Pennsylvania), Mastic Home Exteriors, Inc. ("MHE") (relating to a closed landfill site in Sidney, Ohio as well as participating as a potentially responsible party in nine contaminated sites in Indiana, Ohio and South Carolina), and Simonton (relating to closed lagoons and certain contamination in Paris, Illinois as well as certain contamination associated with certain 7-Eleven convenience food stores). Under the stock purchase agreement governing the MHE acquisition, Alcoa Securities Corporation and Alcoa, Inc. are to indemnify the Company for certain environmental liabilities in excess of $2.5 million , including liabilities relating to the landfill site in Sidney, Ohio and the nine contaminated sites in Indiana, Ohio and South Carolina. Under the stock purchase agreement governing the Simonton acquisition, Fortune Brands Windows & Doors, Inc., is to indemnify us for any environmental claims associated with the 7-Eleven convenience food stores. The Company's ability to seek indemnification or enforce these and other obligations is, however, limited by the strength of the financial condition of the indemnitor or responsible party, which could change in the future, as well as the terms and limits of any such indemnities or obligations.

Based on current information, we are not aware of any compliance obligations, claims, releases or investigations that will have a material adverse effect on our results of operations, cash flows or financial position except as otherwise disclosed in the Company's consolidated financial statements. However, there can be no guarantee that previously known or newly-discovered matters or any inability to enforce our available indemnification rights against previous owners of the Company, its subsidiaries, or their businesses or properties will not result in material costs or liabilities. While the purchase agreements governing certain of our acquisitions provide that the sellers will indemnify us, subject to certain limitations, for certain environmental liabilities, our ability to seek indemnification from the respective sellers is limited by various factors, including the financial condition of the indemnitor or responsible party as well as by the terms and limits of such indemnities or obligations. As a result, there can be no assurance that we could receive any indemnification from the sellers, and any related environmental liabilities, costs or penalties could have a material adverse effect on our financial condition and results of operations.

Self-insured risks

The Company maintains a broad range of insurance policies which include general liability insurance coverage and workers compensation. These insurance policies protect the Company against a portion of the risk of loss from claims. However, the Company retains a portion of the overall risk for such claims through its self-insured per occurrence and aggregate retentions, deductibles, and claims in excess of available insurance policy limits. The Company's general liability insurance includes coverage for certain damages arising out of product design and manufacturing defects. The Company's insurance coverage is generally subject to a per occurrence retention.

The Company reserves for costs associated with claims, as well as incurred but not reported losses ("IBNR"), based on an outside actuarial analysis of its historical claims. These estimates make up a significant portion of the Company's liability and are subject to a high degree of uncertainty due to a variety of factors, including changes in type of claims, claims reporting and resolution patterns, frequency and timing of claims, third party recoveries, estimates of claim values, claims management expenses (including legal fees and expert fees), insurance industry practices, the regulatory environment, and legal precedent. Adjustments to estimated reserves are recorded in the period in which the change in estimate occurs.

Litigation

During the past several years, the Company incurred increased litigation expense primarily related to the claims discussed below. The Company believes it has valid defenses to the outstanding claims discussed below and will vigorously defend all such claims; however, litigation is subject to many uncertainties and there cannot be any assurance that the Company will ultimately prevail or, in the event of an unfavorable outcome or settlement of litigation, that the ultimate liability would not be material and would not have a material adverse effect on the business, results of operations, cash flows or financial position of the Company.

In *John Gulbankian v. MW Manufacturers, Inc.* ("Gulbankian"), a purported class action filed in March 2010 in the United States District Court for the District of Massachusetts, plaintiffs, on behalf of themselves and all others similarly situated, alleged damages as a result of the defective design and manufacture of certain MW vinyl clad windows. In *Eric Hartshorn and Bethany Perry v. MW Manufacturers, Inc.* ("Hartshorn"), a purported class action filed in July 2012 in the District Court, plaintiffs, on behalf of themselves and all others similarly situated, alleged damages as a result of the defective design and manufacture of certain MW vinyl clad windows. In April 2014, plaintiffs in both the Gulbankian and Hartshorn cases filed a Consolidated Amended Class Action Complaint, making similar claims against all MW vinyl clad windows.

MW entered into a settlement agreement with plaintiffs as of April 2014 to settle both the Gulbankian and Hartshorn cases on a nationwide basis (the "Vinyl Clad Settlement Agreement"). The Vinyl Clad Settlement Agreement provides that this settlement applies to any and all MW vinyl clad windows manufactured from January 1, 1987 through May 23, 2014, and provides for a cash payment for eligible consumers submitting qualified claims showing, among other requirements, certain damage to their MW vinyl clad windows. The period for submitting qualified claims is the later of: (i) May 28, 2016, or (ii) the last day of the warranty period for the applicable window. On December 29, 2014, the District Court granted final approval of this settlement, as well as MW's payment of attorneys' fees and costs to plaintiffs' counsel in the amount of $2.5 million . The Company and MW deny all liability in the settlements with respect to the facts and claims alleged. The Company, however, is aware of the substantial burden, expense, inconvenience and distraction of continued litigation, and therefore agreed to settle these matters.

As a result of the Vinyl Clad Settlement Agreement, the Company recognized a $5.0 million expense during the year ended December 31, 2014 within selling, general, and administrative expenses in the Company's consolidated statement of operations in the Windows and Doors segment. It is possible that the Company may incur costs in excess of the recorded amounts; however, the Company currently expects that the total net cost will not exceed $5.0 million . As of December 31, 2016 , approximately $1.4 million of this liability is currently outstanding, with $0.7 million as a current liability within accrued expenses and $0.7 million as a noncurrent liability within other long-term liabilities in the Company's consolidated balance sheet as of December 31, 2016.

In *Anthony Pagliaroni et al. v. Mastic Home Exteriors, Inc. and Deceuninck North America, LLC* , a purported class action filed in January 2012 in the United States District Court for the District of Massachusetts, plaintiffs, on behalf of themselves and all others similarly situated, allege damages as a result of the defective design and manufacture of Oasis composite deck and railing, which was manufactured by Deceuninck North America, LLC ("Deceuninck") and sold by Mastic Home Exteriors, Inc. ("MHE"). The plaintiffs seek a variety of relief, including (i) economic and compensatory damages, (ii) treble damages, (iii) punitive damages, and (iv) attorneys' fees and costs of litigation. The damages sought in this action have not yet been quantified. The hearing regarding plaintiffs' motion for class certification was held on March 10, 2015, and the District Court denied plaintiffs' motion for class certification on September 22, 2015. On October, 6, 2015, plaintiffs filed a petition for interlocutory appeal of the denial of class certification to the U.S. Court of Appeals for the First Circuit, and on April 12, 2016, the Court of Appeals denied this petition for appeal. Deceuninck, as the manufacturer of Oasis deck and railing, has agreed to indemnify MHE for certain liabilities related to this claim pursuant to the sales and distribution agreement, as amended, between Deceuninck and MHE. MHE's ability to seek indemnification from Deceuninck is, however, limited by the terms and limits of the indemnity as well as the strength of Deceuninck's financial condition, which could change in the future.

In re Ply Gem Holdings, Inc. Securities Litigation is a purported federal securities class action filed on May 19, 2014 in the United States District Court for the Southern District of New York against Ply Gem Holdings, Inc., several of its directors and officers, and the underwriters associated with the Company's initial public offering ("IPO"). It is filed on behalf of all persons or entities, other than the defendants, who purchased the common shares of the Company pursuant and/or traceable to the Company's IPO and seeks remedies under Sections 11 and 15 of the Securities Act of 1933, alleging that the Company's Form S-1 registration statement was negligently prepared and materially inaccurate, containing untrue statements of material fact and omitting material information which was required to be disclosed. The plaintiffs seek a variety of relief, including (i) damages together with interest thereon and (ii) attorneys' fees and costs of litigation. On October 14, 2014, Strathclyde Pension Fund was certified as lead plaintiff, and class counsel was appointed. On February 13, 2015, the defendants filed their motion to dismiss the complaint. On September 29, 2015, the District Court granted defendants' motion to dismiss, but ruled that plaintiff could file an amended complaint. On November 6, 2015, plaintiff filed an amended complaint, and on January 13, 2016, the defendants filed their motion to dismiss this amended complaint. On September 23, 2016, the District Court granted in part and denied in part this motion to dismiss. The damages sought in this action have not yet been quantified. Pursuant to the Underwriting Agreement, dated May 22, 2013, entered into in connection with the IPO, the Company has agreed to reimburse the underwriters for the legal fees and other expenses reasonably incurred by the underwriters' law firm in its representation of the underwriters in connection with this matter. Pursuant to Indemnification Agreements, dated as of May 22, 2013, between the Company and each of the directors and officers named in this action, the Company has agreed to assume the defense of such directors and officers. We believe the purported federal securities class action is without merit and will vigorously defend the lawsuit.

In *Raul Carrillo-Hueso and Chec Xiong v. Ply Gem Industries, Inc. and Ply Gem Pacific Windows Corporation* , a purported class action filed on November 25, 2015 in the Superior Court of the State of California, County of Alameda, plaintiffs, on behalf of themselves and all others similarly situated, allege damages as a result of, among other things, the defendants' failure to provide (i) statutorily required meal breaks at the Sacramento, California facility, (ii) accurate wage statements to employees in California, and (iii) all wages due on termination in California. The plaintiffs seek a variety of relief, including (i) economic and compensatory damages, (ii) statutory damages, (iii) penalties, (iv) pre- and post-judgment interest, and (v) attorneys' fees and costs of litigation. On January 7, 2017, the parties agreed to settle this matter for approximately $1.0 million , subject to certain conditions including approval by the Court. The Company has accrued for this amount in accrued expenses as of December 31, 2016 in the Company's consolidated balance sheet.

In *Tina Morgan v. Ply Gem Industries, Inc. and Simonton Industries, Inc.* , a purported class action filed on December 11, 2015 in the Superior Court of the State of California, County of Solano, plaintiff, on behalf of herself and all others similarly situated, alleges damages as a result of, among other things, the defendants' failure at the Vacaville, California facility to (i) pay overtime wages, (ii) provide statutorily required meal breaks, (iii) provide accurate wage statements, and (iv) pay all wages owed upon termination. The plaintiff seeks a variety of relief, including (i) economic and compensatory damages, (ii) statutory damages, (iii) penalties, (iv) pre- and post-judgment interest, and (v) attorneys' fees and costs of litigation. On December 9, 2016, the parties agreed to settle this matter for approximately $0.9 million , subject to certain conditions including approval by the Court. The Company has accrued for this amount in accrued expenses as of December 31, 2016 in the Company's consolidated balance sheet.

In *Kiefer et al. v. Simonton Building Products, LLC et al.* , a purported class action filed on October 17, 2016 in the United States District Court for the District of Minnesota, plaintiffs, on behalf of themselves and all others similarly situated, allege damages as a result of, among other things, the defective design and manufacture of certain Simonton windows containing two-pane insulating glass units. The plaintiffs seek a variety of relief, including (i) economic and compensatory damages, (ii) punitive or other exemplary damages, (iii) pre- and post-judgment interest, and (iv) attorneys' fees and costs of litigation. On December 23, 2016, the defendants filed their motion to dismiss the complaint. A hearing on this motion was held on February 17, 2017, and the District Court has not yet ruled on this motion. The damages sought in this action have not yet been quantified.

Other contingencies

The Company is subject to other contingencies, including legal proceedings and claims arising out of its operations and businesses that cover a wide range of matters, including, among others, environmental, contract, employment, intellectual property, securities, personal injury, property damage, product liability, warranty, and modification, adjustment or replacement of component parts or units sold, which may include product recalls. Product liability, environmental and other legal proceedings also include matters with respect to businesses previously owned. The Company has used various substances in products and manufacturing operations, which have been or may be deemed to be hazardous or dangerous, and the extent of its potential liability, if any, under environmental, product liability and workers' compensation statutes, rules, regulations and case law is unclear. Further, due to the lack of adequate information and the potential impact of present regulations and any future regulations, there are certain circumstances in which no range of potential exposure may be reasonably estimated. Also, it is not possible to ascertain the ultimate legal and financial liability with respect to certain contingent liabilities, including lawsuits, and therefore no such estimate has been made as of December 31, 2016.

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

Market Information

Our common stock is listed and traded on the New York Stock Exchange under the symbol "PGEM". The following table sets forth, for our fiscal quarters indicated, high and low sale prices for a share of our common stock on the NYSE, as reported by the NYSE:

Year	High	Low
2016:		
Fourth Quarter	$ 16.90	$ 12.85
Third Quarter	16.09	12.96
Second Quarter	15.72	13.22
First Quarter	14.66	8.58
2015:		
Fourth Quarter	$ 13.51	$ 11.01
Third Quarter	15.30	11.47
Second Quarter	14.82	11.27
First Quarter	14.70	10.65

Stock Performance Graph

The following graph shows a comparison from May 23, 2013 (the date our common stock commenced trading on the NYSE) through December 31, 2016 of the cumulative return for our common stock (PGEM), the Standard & Poor's 500 Stock Index (S&P 500), and the Standard & Poor's Industrials Index (S&P Industrials Index). The graph assumes that $100 was invested at the market close on May 23, 2013 in the common stock of Ply Gem Holdings, Inc., the S&P 500 Index and the S&P Industrials Index, and assumes reinvestments of dividends, if any. The stock price performance of the following graph is not necessarily indicative of future stock price performance.

Holders

As of March 10, 2017, there were approximately 7 stockholders of record of our common stock, one of which was Cede & Co., a nominee for The Depository Trust Company. All of our common stock held by brokerage firms, banks and other financial institutions as nominees for beneficial owners are considered to be held of record by Cede & Co., who is considered to be one stockholder of record. A substantially greater number of holders of our common stock are “street name” or beneficial holders, whose shares of common stock are held of record by banks, brokers and other financial institutions. Because such shares of common stock are held on behalf of stockholders, and not by the stockholders directly, and because a stockholder can have multiple positions with different brokerage firms, banks and other financial institutions, we are unable to determine the total number of stockholders we have.

Unregistered Sales of Equity Securities and Use of Proceeds

No securities of ours which were not registered under the Securities Act of 1933 were issued or sold by us during the three months ended December 31, 2016.

Purchases of Equity Securities by the Issuer

There were no purchases by the Company of our common stock during the three months ended December 31, 2016.

Dividends

Ply Gem Holdings has paid no dividends in the years ended December 31, 2016 and 2015 .

The indenture for the 6.50% Senior Notes, the Term Loan Facility and the ABL Facility restrict the ability of Ply Gem Industries and its subsidiaries to make certain payments and transfer assets to Ply Gem Holdings. In addition, the ABL Facility imposes restrictions on the ability of Ply Gem Holdings to make certain dividend payments.

Item 6.   SELECTED FINANCIAL DATA

The financial data set forth below is for the five-year period ended December 31, 2016 .   The data should be read in conjunction with Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and the consolidated financial statements, related notes and other financial information included elsewhere in this report.

(Amounts in thousands, except per share data)	For the year ended December 31, 2016	2015 (1)	2014 (2)	2013 (3)	2012
Statement of operations data:					
Net sales	$ 1,911,844	$ 1,839,726	$ 1,566,643	$ 1,365,581	$ 1,121,301
Cost of products sold	1,449,570	1,420,014	1,258,842	1,106,911	877,102
Gross profit	462,274	419,712	307,801	258,670	244,199
Operating expenses:					
Selling, general and administrative expenses	268,714	271,874	224,163	187,131	147,242
Amortization of intangible assets	25,064	25,306	22,140	20,236	26,937
Initial public offering costs	—	—	—	23,527	—
Total operating expenses	293,778	297,180	246,303	230,894	174,179
Operating earnings	168,496	122,532	61,498	27,776	70,020
Foreign currency gain (loss)	299	(3,166)	(992)	(1,533)	409
Interest expense	(72,718)	(74,876)	(71,269)	(92,046)	(103,133)
Interest income	36	57	83	362	91
Tax receivable agreement liability adjustment	(60,874)	(12,947)	670	5,167	—
Loss on modification or extinguishment of debt	(11,747)	—	(21,364)	(18,948)	(3,607)
Income (loss) before provision (benefit) for income taxes	23,492	31,600	(31,374)	(79,222)	(36,220)
Provision (benefit) for income taxes	(51,995)	(688)	(105)	298	2,835
Net income (loss)	$ 75,487	$ 32,288	$ (31,269)	$ (79,520)	$ (39,055)
Per basic common share:					
Net income (loss) applicable to common shares	$ 1.11	$ 0.47	$ (0.46)	$ (1.32)	$ (0.80)
Per diluted common share:					
Net income (loss) applicable to common shares	$ 1.10	$ 0.47	$ (0.46)	$ (1.32)	$ (0.80)
Total assets (4)	$ 1,257,741 (5)	$ 1,266,572	$ 1,232,711	$ 1,025,836	$ 860,015
Long-term debt, less current maturities (4)	$ 836,086	$ 975,531	$ 967,053	$ 801,890	$ 942,549

(1) Includes the results of Canyon Stone from the date of acquisition, May 29, 2015.
(2) Includes the results of Simonton from the date of acquisition, September 19, 2014.
(3) Includes the results of Gienow from the date of acquisition, April 9, 2013 and Mitten from the date of acquisition, May 31, 2013.
(4) In accordance with ASU No. 2015-03 *Interest-Imputed Interest: Simplifying the Presentation of Debt Issuance Costs* , the Company reclassified $19.3 million in 2015, $21.9 million in 2014, $15.1 million in 2013, and $21.8 million in 2012 of debt issuance costs to long-term debt. Total assets and total liabilities were each reduced by these amounts with no impact to net income (loss) or total shareholders' equity (deficit) previously reported.
(5) The Company elected to prospectively adopt ASU No. 2015-17 *Income taxes (Topic 740): Balance Sheet Classification of Deferred Taxes* , during the year ended December 31, 2016. The impact of this adoption was a reclassification of current deferred tax assets to noncurrent deferred tax assets, prior years were not retrospectively adjusted.

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations is intended to clarify the results of our operations, certain changes in our financial position, liquidity, capital structure and business developments for the periods covered by the consolidated financial statements included in this Annual Report on Form 10-K. This discussion should be read in conjunction with, and is qualified by reference to, the other related information including, but not limited to, the audited consolidated financial statements (including the notes thereto and the independent registered public accounting firm's reports thereon), and the description of our business, all as set forth in this Annual Report on Form 10-K, as well as the risk factors discussed below and in Item 1A.

Certain statements in this "Management's Discussion and Analysis of Financial Condition and Results of Operations" are "forward-looking statements." See "Cautionary Statement with Respect to Forward-Looking Statements" and "Risk Factors."

General

We are a leading manufacturer of exterior building products in North America, operating in two reportable segments: (i) Siding, Fencing, and Stone and (ii) Windows and Doors, which comprised approximately 46% and 54% of our sales, respectively, for the fiscal year ended December 31, 2016 . These two segments produce a comprehensive product line of vinyl siding, designer accents, cellular PVC trim, vinyl fencing, vinyl and composite railing, stone veneer and vinyl windows and doors used in both the new construction market and the home repair and remodeling market in the United States and Canada. Vinyl building products have the leading share of sales volume in siding and windows in the United States. We also manufacture vinyl and aluminum soffit and siding accessories, aluminum trim coil, wood windows, aluminum windows, vinyl and aluminum-clad windows and steel and fiberglass doors, enabling us to bundle complementary and color-matched products and accessories with our core products. We believe that our comprehensive product portfolio and geographically diverse, low cost manufacturing platform allow us to better serve our customers and provide us with a competitive advantage over other exterior building products suppliers.

The following is a summary of Ply Gem's recent acquisition history:

- On September 19, 2014, Ply Gem completed an acquisition for cash consideration of approximately $130.0 million to acquire the capital stock of Fortune Brands Windows, Inc., and its direct and indirect wholly owned subsidiaries Simonton Building Products LLC, Simonton Industries, Inc., Simonton Windows, Inc., and SimEx, Inc. Simonton is a premier repair and remodeling window company with leading brand recognition and is part of the Windows and Doors segment.

- On May 29, 2015, Ply Gem acquired substantially all of the assets of Canyon Stone, Inc. ("Canyon Stone"), a manufacturer of stone veneer, for a purchase price of $21.0 million, subject to certain purchase price adjustments. Canyon Stone is included in our Siding, Fencing, and Stone segment.

Prior to January 11, 2010, Ply Gem Holdings was a wholly owned subsidiary of Ply Gem Investment Holdings, which was a wholly owned subsidiary of Ply Gem Prime. On January 11, 2010, Ply Gem Investment Holdings was merged with and into Ply Gem Prime, with Ply Gem Prime being the surviving corporation. In May 2013, the Company issued 18,157,895 shares of common stock in an initial public offering (“IPO”) and received gross proceeds of approximately $381.3 million in the IPO. The shares began trading on The New York Stock Exchange on May 23, 2013 under the symbol "PGEM". Immediately prior to the closing of the IPO, Ply Gem Prime merged with and into Ply Gem Holdings, with Ply Gem Holdings being the surviving entity. In the merger, all of the preferred stock of Ply Gem Prime (including the subordinated debt of Ply Gem Prime that was converted into preferred stock in connection with the IPO) was converted into a number of shares of the Company's common stock based on the IPO price of the common stock and the liquidation value of and the maximum dividend amount in respect of the preferred stock.

We are a holding company with no operations or assets of our own other than the capital stock of our subsidiaries. The terms of Ply Gem Industries' $350.0 million ABL Facility and the credit agreement governing the terms of its $430.0 million Term Loan Facility place restrictions on the ability of Ply Gem Industries and our other subsidiaries to pay dividends and otherwise transfer assets to us. Further, the terms of the indenture governing Ply Gem Industries' $650.0 million 6.50% Senior Notes place restrictions on the ability of Ply Gem Industries and our other subsidiaries to pay dividends and otherwise transfer assets to us.

Financial statement presentation

Net sales. Net sales represent the fixed selling price of our products plus certain shipping charges less applicable provisions for discounts and allowances. Allowances include cash discounts, volume rebates and returns among others.

Cost of products sold. Cost of products sold includes direct material and manufacturing costs, manufacturing depreciation, third-party and in-house delivery costs and product warranty expense.

Selling, general and administrative expense. Selling, general and administrative expense (“SG&A expense”) includes all non-product related operating expenses, including selling, marketing, research and development costs, information technology, and other general and administrative expenses.

Operating earnings (loss). Operating earnings (loss) represents net sales less cost of products sold, SG&A expense, and amortization of intangible assets.

Impact of commodity pricing

PVC resin and aluminum are major components in the production of our products and changes in PVC resin and aluminum prices have a direct impact on our cost of products sold. Historically, we have been able to pass on a substantial portion of significant price increases to our customers. The results of operations for individual quarters can be negatively impacted by a delay between the time of raw material cost increases and price increases that we implement in our products, or conversely can be positively impacted by a delay between the time of a raw material price decrease and competitive pricing moves that we implement accordingly.

Impact of weather

Since our building products are intended for exterior use, our sales and operating earnings tend to be lower during periods of inclement weather. Weather conditions in the first and fourth quarters of each calendar year historically result in these quarters producing significantly less sales revenue than our second and third quarters of the year. As a result, we have historically had lower profits or higher losses in the first and fourth quarters of each calendar year. Our results of operations for individual quarters in the future may be impacted by adverse weather conditions. In addition, favorable or unfavorable weather conditions may influence the comparability of our results from year to year or from quarter to quarter.

Critical accounting policies

The following discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. Certain of our accounting policies require the application of judgments in selecting the appropriate assumptions for calculating financial estimates. By their nature, these judgments are subject to an inherent degree of uncertainty. We periodically evaluate the judgments and estimates used for our critical accounting policies to ensure that such judgments and estimates are reasonable for our interim and year-end reporting requirements. These judgments and estimates are based upon our historical experience, current trends and information available from other sources, as appropriate. If different conditions occur compared to our assumptions and judgments, the results could be materially different from our estimates. Management also believes that the nine areas where different assumptions could result in materially different reported results are (1) goodwill and intangible asset impairment tests, (2) accounts receivable related to the estimation of allowances for doubtful accounts, (3) inventories in estimating reserves for obsolete and excess inventory, (4) warranty reserves, (5) insurance reserves, (6) income taxes including the tax receivable agreement, (7) rebates, (8) pensions, and (9) environmental accruals and other contingencies. Although we believe the likelihood of a material difference in these areas is low based upon our historical experience, a 10% change in our allowance for doubtful accounts, inventory reserve estimates, and warranty reserve at December 31, 2016 would result in an approximate $0.3 million , $0.8 million , and $7.7 million impact on expenses, respectively. Additionally, we have included in the discussion that follows our estimation methodology for both accounts receivable and inventories. While all significant policies are important to our consolidated financial statements, some of these policies may be viewed as being critical. Our critical accounting policies include:

Revenue Recognition. We recognize sales based upon shipment of products to our customers net of applicable provisions for discounts and allowances. Generally, the customer takes title upon shipment and assumes the risks and rewards of ownership of the product. For certain products, it is industry standard that customers take title to products upon delivery, at which time revenue is then recognized by the Company. Revenue includes the selling price of the product and all shipping costs paid by the customer. Revenue is reduced at the time of sale for estimated sales returns and all applicable allowances and discounts based on historical experience. We also provide for estimates of warranty, bad debts, shipping costs and certain sales-related customer programs at the time of sale. Shipping and warranty costs are included in cost of products sold. Bad debt expense and certain marketing expenses are included in SG&A expense. We believe that our procedures for estimating such amounts are reasonable and historically have not resulted in material adjustments in subsequent periods when the estimates are reconciled to the actual amounts.

Accounts Receivable. We maintain an allowance for doubtful accounts for estimated losses from the inability of our customers to make required payments, which is provided for in bad debt expense. We determine the adequacy of this allowance by regularly reviewing our accounts receivable aging and evaluating individual customers' receivables, considering customers' financial condition, credit history and other current economic conditions. If a customer's financial condition was to deteriorate, which might impact its ability to make payment, then additional allowances may be required.

Inventories. Inventories in the accompanying consolidated balance sheets are valued at the lower of cost or market. We record provisions, as appropriate, to write-down obsolete and excess inventory to estimated net realizable value. The process for evaluating obsolete and excess inventory often requires subjective judgments and estimates concerning future sales levels, quantities and prices at which such inventory will be sold in the normal course of business. Accelerating the disposal process or incorrect estimates of future sales potential may cause actual results to differ from the estimates at the time such inventory is disposed or sold.

Goodwill Impairment . We perform an annual test for goodwill impairment during the fourth quarter of each year (November 26th for 2016) and also at any other date when events or changes in circumstances indicate that the carrying value of these assets may exceed their fair value. We use the two-step method to determine goodwill impairment. If the carrying amount of a reporting unit exceeds its fair value (Step One Analysis), we measure the possible goodwill impairment based upon a hypothetical allocation of the fair value estimate of the reporting unit to all of the underlying assets and liabilities of the reporting unit, including previously unrecognized intangible assets (Step Two Analysis). The excess of the reporting unit's fair value over the amounts assigned to its assets and liabilities is the implied fair value of goodwill. An impairment loss is recognized to the extent that a reporting unit's recorded goodwill exceeds the implied fair value of goodwill.

To evaluate goodwill impairment, we estimate the fair value of reporting units considering such factors as discounted cash flows and valuation multiples for comparable publicly traded companies. A significant reduction in projected sales and earnings which would lead to a reduction in future cash flows could indicate potential impairment.

A summary of the key assumptions utilized in the goodwill impairment analysis at November 26, 2016, November 28, 2015, and November 22, 2014, as it relates to the Step One fair values and the sensitivities for these assumptions follows:

	Siding, Fencing, and Stone		
	As of November 26, 2016	As of November 28, 2015	As of November 22, 2014
Assumptions:			
Income approach:			
Estimated housing starts in terminal year	1,100,000	1,100,000	1,100,000
Terminal growth rate	3.0%	3.0%	3.0%
Discount rate	11.0%	11.5%	11.0%
Market approach:			
Control premiums	5.0%	5.0%	10.0%
Sensitivities:			
(Amounts in thousands)			
Estimated fair value decrease in the event of a			
1% decrease in the terminal year growth	$ 116,628	$ 104,863	$ 101,916
Estimated fair value decrease in the event of a			
1% increase in the discount rate	203,838	189,363	178,819
Estimated fair value decrease in the event of a			
1% decrease in the control premium	17,363	16,790	15,440

As of November 26, 2016, we maintained the terminal year estimated housing starts assumption consistent with 2015 and 2014 at 1,100,000, which reflects a normalized housing start level. We estimate that normalized recurring housing starts will be in a range of 1,000,000 to 1,200,000 to keep up with U.S. population growth according to the Joint Center for Housing Studies of Harvard University. We also maintained our terminal growth rate assumption at 3.0% for the three-year period, which is 0.5% lower than the assumption utilized in the Windows and Doors analysis due to Windows and Doors' higher correlation with the new construction market, which provides higher growth levels as we return to a normalized housing market. As of November 26, 2016, we decreased Siding, Fencing, and Stone’s discount rate by 0.5% to 11.0%, due to the consistent profitable financial performance demonstrated by Siding, Fencing, and Stone increasing their operating earnings $22.4 million or 16.6% during 2016. As of November 28, 2015, we increased Siding, Fencing, and Stone’s discount rate by 0.5% to 11.5%, due to anticipated new product growth included in our long-term forecasts, which offer more uncertainty than the existing revenue stream for Siding, Fencing, and Stone.

	Windows and Doors		
	As of November 26, 2016	As of November 28, 2015	As of November 22, 2014
Assumptions:			
Income approach:			
Estimated housing starts in terminal year	1,100,000	1,100,000	1,100,000
Terminal growth rate	3.5%	3.5%	3.5%
Discount rate	16.0%	17.0%	19.0%
Market approach:			
Control premiums	10.0%	10.0%	5.0%
Sensitivities:			
(Amounts in thousands)			
Estimated fair value decrease in the event of a			
1% decrease in the terminal year growth	$ 14,695	$ 12,554	$ 10,110
Estimated fair value decrease in the event of a			
1% increase in the discount rate	37,662	35,285	30,660
Estimated fair value decrease in the event of a			
1% decrease in the control premium	4,885	4,451	4,362

As of November 26, 2016, we maintained our terminal year assumption for estimated housing starts at 1,100,000, which is consistent with 2015 and 2014. As of November 26, 2016, we decreased the Windows and Doors' discount rate by 1.0% to 16.0% as a reflection of the improved operating performance of the Windows and Doors reporting unit which increased their operating earnings by $25.4 million or 139.5% during the year ended December 31, 2016 due to improved gross profit margins resulting from higher selling prices and favorable material costs. As of November 28, 2015, we decreased the Windows and Doors' discount rate by 2.0% to 17.0% as a reflection of the improved operating performance of the Windows and Doors reporting unit which increased their operating earnings by $45.9 million during the year ended December 31, 2015 due to improved gross profit margins from higher selling prices and favorable commodity costs.

As of November 26, 2016, we maintained the Windows and Doors' control premium at 10.0%, consistent with the prior year due to the consistent performance of the business during 2016. As of November 28, 2015, we increased the Windows and Doors' control premium to 10.0% from 5.0% in 2014, primarily due to improved internal financial performance within the reporting unit as well as an improvement in market comparisons companies and overall market conditions and growth.

Overall, we utilize the same key assumptions in preparing the prospective financial information ("PFI") utilized in the discounted cash flow test for the Siding, Fencing, and Stone and Windows and Doors reporting units. However, each reporting unit is impacted differently by industry trends, how market factors are influencing the reporting units' expected performance, competition, and other unique business factors as mentioned above. The Windows and Doors reporting unit has more exposure to the new construction market which experienced depressed housing market conditions during 2009-2011, which ultimately decreased operating performance for this reporting unit. Siding, Fencing, and Stone's performance has been more consistent and profitable resulting in less risk in the PFI.

(Amounts in thousands)	As of November 26, 2016	As of November 28, 2015	As of November 22, 2014
Estimated Windows and Doors reporting unit fair value increase in the event of a 10% increase in the weighting of the market multiples method	$ 4,000	$ 3,000	$ 5,000
Estimated Siding, Fencing, and Stone reporting unit fair value increase in the event of a 10% increase in the weighting of the market multiples method	3,000	2,000	15,000

We provide no assurance that: (1) valuation multiples will not decline, (2) discount rates will not increase, or (3) the earnings, book values or projected earnings and cash flows of our reporting units will not decline. We will continue to analyze changes to these assumptions in future periods. We will continue to evaluate goodwill during future periods and future declines in the residential housing and remodeling markets could result in future goodwill impairments.

Income Taxes. We utilize the asset and liability method in accounting for income taxes, which requires that the deferred tax consequences of temporary differences between the amounts recorded in our consolidated financial statements and the amounts included in our federal, state, and foreign income tax returns be recognized in the consolidated balance sheet. The amount recorded in our consolidated financial statements reflects estimates of final amounts due to timing of completion and filing of actual income tax returns. Estimates are required with respect to, among other things, the appropriate state income tax rates used in the various states in which we and our subsidiaries are required to file, the potential utilization of operating and capital loss carry-forwards for federal, state, and foreign income tax purposes and valuation allowances required, if any, for tax assets that may not be realized in the future. We establish reserves when, despite our belief that our tax return positions are fully supportable, certain positions could be challenged, and the positions may not be fully sustained. We have executed a tax sharing agreement with Ply Gem Holdings and Ply Gem Investment Holdings pursuant to which tax liabilities for each respective party are computed on a stand-alone basis. The tax sharing agreement was amended in 2013 to reflect the merger of Ply Gem Prime Holdings with and into Ply Gem Holdings. Our U.S. subsidiaries file a consolidated federal income tax return, unitary, combined, or separate state income tax returns. Gienow Canada and Mitten file separate Canadian income tax returns.

During the year ended December 31, 2016, we determined that a valuation allowance was no longer required against our net federal deferred tax assets and a portion of our net state deferred tax assets. As a result, we released approximately $86.5 million of our valuation allowance since positive evidence outweighed negative evidence thereby allowing us to achieve the “more likely than not” realization threshold. Of the total valuation allowance reversal of $86.5 million, $31.3 million was offset against current year tax expense with the remaining $55.2 million representing the discrete valuation allowance release. We still remain in a valuation allowance position at December 31, 2016 against our deferred tax assets for certain state and Canadian jurisdictions as it is currently deemed “more likely than not” that the benefit of such net tax assets will not be utilized as the Company continues to be in a three-year cumulative loss position for these states and Canadian jurisdictions. Refer to Note 10 *Income Taxes* to the consolidated financial statements for additional information regarding income taxes.

Tax Receivable Agreement (“TRA”) Liability . The TRA liability generally provides for our payment to the Tax Receivable Entity of 85% of the amount of cash savings, if any, in the U.S. federal, state and local income tax that we actually realize in periods ending after the IPO as a result of (i) net operating loss carryovers ("NOLs") from periods ending before January 1, 2013, (ii) deductible expenses attributable to the IPO and (iii) deductions related to imputed interest. Since the inception of the TRA liability with the 2013 IPO, we have historically had a full valuation allowance for federal purposes and had partial valuation allowances on certain state and Canadian jurisdictions. As a result of the tax valuation allowance position for federal and state purposes, we historically calculated the TRA liability considering (i) current year taxable income only (due to the uncertainty of future taxable income associated with the Company’s previous cumulative loss position) and (ii) future income due to the expected reversal of deferred tax liabilities. During the year ended December 31, 2016, we released our discrete valuation allowance on our federal deferred tax assets and certain state deferred tax assets of approximately $55.2 million, due to positive factors outweighing negative evidence thereby allowing us to achieve the “more likely than not” realization threshold. The factors surrounding the release of this valuation allowance thereby eliminated any uncertainty as to future taxable income. Consequently, for purposes of calculating the TRA liability, we utilized future forecasts of taxable income beyond the 2016 tax year to determine the TRA liability. Our future taxable income estimate was used to determine the cumulative NOLs that are expected to be utilized and the TRA liability was accordingly adjusted using the 85% TRA rate as we retain the benefit of 15% of the tax savings.

Results of Operations

The following table summarizes net sales and net income (loss) by segment and is derived from the accompanying consolidated statements of operations included in this report.

	Year ended December 31,		
(Amounts in thousands)	2016	2015	2014
Net Sales			
Siding, Fencing, and Stone	$ 886,851	$ 840,118	$ 801,601
Windows and Doors	1,024,993	999,608	765,042
Operating earnings (loss)			
Siding, Fencing, and Stone	157,058	134,654	113,089
Windows and Doors	43,579	18,195	(27,660)
Unallocated	(32,141)	(30,317)	(23,931)
Foreign currency gain (loss)			
Siding, Fencing, and Stone	204	(954)	(427)
Windows and Doors	95	(2,212)	(565)
Interest income (expense), net			
Siding, Fencing, and Stone	16	22	(5)
Windows and Doors	12	17	48
Unallocated	(72,710)	(74,858)	(71,229)
Income tax benefit			
Unallocated	51,995	688	105
Loss on modification or extinguishment of debt			
Unallocated	(11,747)	—	(21,364)
Tax receivable agreement liability adjustment			
Unallocated	(60,874)	(12,947)	670
Net income (loss)	$ 75,487	$ 32,288	$ (31,269)

The following tables set forth our results of operations based on the amounts and the percentage relationship of the items listed to net sales for the periods indicated. However, our results of operations set forth in the tables below may not necessarily be representative of our future operating results.

This review of performance is organized by business segment, reflecting the way we manage our business. Each business group leader is responsible for operating results down to operating earnings (loss). We use operating earnings as a performance measure as it captures the income and expenses within the management control of our business leaders. Corporate management is responsible for making all financing decisions. Therefore, each segment discussion focuses on the factors affecting operating earnings, while interest expense and income taxes and certain other unallocated expenses are separately discussed at the corporate level.

Siding, Fencing, and Stone Segment

	Year ended December 31,								
(Amounts in thousands)	2016			2015			2014		
Statement of operations data:									
Net sales	$	886,851	100.0%	$	840,118	100.0 %	$	801,601	100.0 %
Gross profit		259,485	29.3%		238,326	28.4 %		209,288	26.1 %
SG&A expense		89,704	10.1%		90,760	10.8 %		83,135	10.4 %
Amortization of intangible assets		12,723	1.4%		12,912	1.5 %		13,064	1.6 %
Operating earnings		157,058	17.7%		134,654	16.0 %		113,089	14.1 %
Currency transaction gain (loss)		204	—%		(954)	(0.1)%		(427)	(0.1)%

Net Sales

Net sales for the year ended December 31, 2016 increased $46.7 million or 5.6% compared to the year ended December 31, 2015. The net sales increase resulted from a $52.0 million net sales increase or 7.1% in the U.S. market partially offset by a net sales decrease of $5.3 million or 4.9% for the Canadian market. In the U.S. market, the 7.1% net sales increase for the year ended December 31, 2016 was primarily driven by improved U.S. market demand for our products, new business wins of approximately $34.0 million, and $11.7 million of net sales attributed to our Canyon Stone acquisition, which was completed on May 29, 2015. Excluding Canyon Stone, our net sales in the U.S. market would have increased 5.5% for the year ended December 31, 2016 compared to the year ended December 31, 2015. Our net sales growth in the U.S. market resulted from increased unit sales of approximately 10.6% partially offset by lower average selling prices of approximately 4.4% that were reduced in response to lower raw material input costs experienced during the year ended December 31, 2016 as compared to the year ended December 31, 2015. The lower average selling prices for our products negatively impacted our net sales by approximately $35.2 million during the year ended December 31, 2016 as compared to the year ended December 31, 2015. The positive demand factors in the U.S. market were partially offset by continued weaker market demand in Canada which when combined with $3.8 million of negative foreign currency resulted in the $5.3 million Canadian net sales decrease. Market demand in Canada has been negatively impacted by the 2016 decline in energy prices, particularly in Western Canada, where housing starts have declined significantly in Alberta (21.0%).

Our building products are typically installed on a new construction home 90 to 120 days after the start of the home, therefore, single family housing starts commencing in the period from September 2015 to September 2016 directly impacts the demand for our products for the year ended December 31, 2016. According to the U.S. Census Bureau, single family housing starts increased 9.0% during this lag affected time period reflecting the improved market conditions. In addition to the new construction market improvement, remodeling activity, according to the Leading Indicator of Remodeling Activity (“LIRA”), reflected the 2016 trailing twelve months increasing 6.0% compared to the 2015 period. However, due to the relative higher dollar value or “big ticket” nature of our replacement products, we believe that true remodeling market demand for our big ticket exterior products actually increased 3.0% to 4.0%. Since our Siding, Fencing, and Stone segment is heavily weighted to the repair and remodeling market, we estimate the weighted average U.S. market repair and remodeling increase to be 5.4% for 2016. Our U.S. unit sales increase of 10.6% outperformed the estimated market increase but was partially offset by our lower average selling prices. The improvement in single family housing starts and remodeling expenditures as well as our ability to exceed these market indicators on a unit basis is evidenced by the Vinyl Siding Institute reporting that U.S. vinyl siding industry shipments increased 5.2% while shipments in Canada decreased 8.5% for 2016 relative to 2015 compared to our vinyl industry shipments increase of 8.1% in the U.S. and our 4.5% decrease in Canada.

The improved U.S. market conditions drove our 5.6% net sales increase during the year ended December 31, 2016; however our sales also benefited from new business wins of $34.0 million which we believe is demonstrated by the improvement in our U.S. market position in vinyl siding which increased from 38.8% to 39.8% for the year ended December 31, 2016 relative to the year ended December 31, 2015, while our share of the Canadian vinyl siding market improved from 30.2% to 31.5% for the year ended December 31, 2016 compared to the year ended December 31, 2015.

For the years ended December 31, 2016 and December 31, 2015, the percentage of net sales in vinyl siding and metal accessories represented approximately 58.0% and 24.7% and 60.1% and 24.5%, respectively, with our net sales of other products comprising approximately 17.3% and 15.4%. The net sales decrease in vinyl siding on a percentage basis was due in part to a sales increase of our manufactured stone product as a result of our Canyon Stone acquisition which was completed on May 29, 2015.

Net sales for the year ended December 31, 2015 increased from the year ended December 31, 2014 by approximately $38.5 million or 4.8%. The net sales increase for the year ended December 31, 2015 was primarily related to our Canyon Stone acquisition, which was completed on May 29, 2015, and accounted for increased net sales of $17.6 million during the year ended December 31, 2015. Excluding Canyon Stone, our net sales increased $20.9 million or 2.6% during the year ended December 31, 2015. The net sales increase resulted predominantly from higher net sales in the United States of approximately $32.7 million partially offset by lower net sales in Canada of approximately $11.8 million. The 2.6% net sales increase resulted primarily from improved market conditions reflected in industry metrics for both the new construction and repair and remodeling markets. Our building products are typically installed on a new construction home 90 to 120 days after the start of the home, therefore single family housing starts commencing in the period from September of 2014 to September of 2015 directly impacts the demand for our products in the year ended December 31, 2015. According to the U.S. Census Bureau, single family housing starts increased 10.0% during this lag affected time period reflecting improved market conditions while heavy vinyl siding markets in the Northeast and Midwest only increased 2.6% on a lag effected basis. In addition to the new construction market improvement, remodeling activity, according to the LIRA, increased 5.6% during the year ended December 31, 2015 compared to the year ended December 31, 2014. The improved U.S. market conditions were partially offset by declining industry conditions in Canada where the deteriorating Canadian dollar negatively impacted our net sales by approximately $17.8 million during the year ended December 31, 2015. Excluding the negative foreign currency impact, our net sales in Canada through Mitten would have increased $6.0 million for the year ended December 31, 2015 compared to the year ended December 31, 2014. During the year ended December 31, 2015, the Canadian dollar deteriorated 15.7% relative to the year ended December 31, 2014.

Despite this negative foreign currency impact, the improved U.S. industry conditions of 2.6% for new construction and 5.6% for repair and remodeling resulted in increased net sales of approximately $27.1 million for our combined vinyl siding, metal accessory, and PVC trim products that fully offset the negative currency impact. We experienced increased PVC trim sales during the year ended December 31, 2015 relative to the year ended December 31, 2014 as this new product gained traction during 2015 after its market introduction in 2013. Our vinyl siding and metal accessory net sales increases resulted from new business wins and improved industry conditions. For the years ended December 31, 2015 and 2014, the percentage of net sales in vinyl siding and metal accessories represented approximately 60.1% and 24.5% and 62.2% and 24.3%, respectively, with our net sales of other products comprising approximately 15.4% and 13.5%. The net sales increase in other products resulted from the acquisition of Canyon Stone, which specializes in the manufactured stone category.

The improved U.S. market conditions which accounted for the majority of the 2.6% net sales increase during the year ended December 31, 2015 are further evidenced by the Vinyl Siding Institute reporting that U.S. vinyl siding industry shipments increased 1.6% during the year ended December 31, 2015 while shipments in Canada decreased 2.9% for the year ended December 31, 2015 compared to the year ended December 31, 2014. The Canadian decrease reflected the challenging economic conditions that exist for Canada. Including Mitten, our U.S. market position in vinyl siding for the years ended December 31, 2015 and December 31, 2014 was 38.8% and 38.8%, respectively, while our combined share of the Canadian vinyl siding market was 30.2% and 27.0%, respectively.

Gross Profit

Gross profit for the year ended December 31, 2016 increased $21.2 million or 8.9% compared to the year ended December 31, 2015. The gross profit increase for the year ended December 31, 2016 primarily resulted from the 5.6% net sales increase and included approximately $3.4 million of gross profit from our Canyon Stone acquisition, which was completed on May 29, 2015. Excluding Canyon Stone, our gross profit increase would have been $17.8 million or 7.4% for the year ended December 31, 2016 as compared to the year ended December 31, 2015.

Overall, the higher sales volumes experienced during 2016 in the U.S. market of 5.5% enabled us to increase our operating leverage and gross profit relative to 2015. In addition, we experienced favorable material cost pricing during the year ended December 31, 2016 relative to the year ended December 31, 2015 specifically for aluminum and PVC resin. This favorable net material cost pricing favorably impacted gross profit by approximately $33.5 million during the year ended December 31, 2016 relative to the year ended December 31, 2015, but was offset by $35.2 million of lower net selling prices that were reduced as a result of lower material costs. In addition, our Canadian gross profit declined 12.7% or $4.2 million during the year ended December 31, 2016 relative to the year ended December 31, 2015 primarily as a result of an unfavorable foreign currency impact of $3.0 million as well as the declining Canadian economic conditions prevalent in Western Canada which are heavily dependent on energy prices to sustain their economy partially offset by favorable material costing of $0.9 million.

As a percentage of net sales, gross profit increased from 28.4% for the year ended December 31, 2015 to 29.3% for the year ended December 31, 2016 excluding the impact of the Canyon Stone acquisition. The 90 basis point increase for the year ended December 31, 2016 resulted mainly from improved operating leverage from the 5.6% net sales increase as well as favorable material cost pricing and freight expense partially offset by lower average sales prices, an unfavorable foreign currency impact from a weakening Canadian dollar as well as weakening demand in Canada due to the economic slowdown.

Gross profit for the year ended December 31, 2015 increased from the year ended December 31, 2014 by approximately $29.0 million or 13.9%. Excluding the impact of the Canyon Stone acquisition, which was completed on May 29, 2015 and contributed increased gross profit of approximately $5.0 million, our gross profit increased $24.0 million or 11.5%. The gross profit increase resulted from the 2.6% net sales increase primarily resulting from improved market and weather conditions in the United States partially offset by the weakening Canadian dollar. The higher volumes experienced during the year ended December 31, 2015 enabled us to increase our operating leverage and cover fixed manufacturing costs relative to the lower volumes experienced during the year ended December 31, 2014. This operating leverage combined with lower freight expenses and favorable material cost pricing experienced during the year ended December 31, 2015 relative to the year ended December 31, 2014 increased our gross profit. For material costs, PVC resin decreased 3.8% during the year ended December 31, 2015 relative to the year ended December 31, 2014. In addition, the Midwest Ingot price of aluminum decreased 16.1% during the year ended December 31, 2015 relative to the year ended December 31, 2014. This favorable material cost pricing increased gross profit by approximately $26.7 million during the year ended December 31, 2015 relative to the year ended December 31, 2014. In addition, our freight expense on a volume adjusted basis was favorable by approximately $5.1 million as a result of declining fuel prices.

As a percentage of net sales, gross profit increased from 26.1% for the year ended December 31, 2014 to 28.4% for the year ended December 31, 2015 excluding the impact of Canyon Stone. The 230 basis point increase for the year ended December 31, 2015 resulted primarily from improved operating leverage from the 2.6% net sales increase as well as favorable material cost pricing and favorable freight expense partially offset by unfavorable foreign currency impact from a weakening Canadian dollar.

SG&A Expense

SG&A expense for the year ended December 31, 2016 decreased from the year ended December 31, 2015 by approximately $1.1 million or 1.2%. Excluding the impact of the Canyon Stone acquisition which was completed on May 29, 2015 and incurred SG&A expense of approximately $2.6 million, SG&A expense for the year ended December 31, 2016 decreased $3.7 million or 4.0% compared to the year ended December 31, 2015. SG&A expense decreased primarily due to lower sales and marketing spending that resulted from our initiative to better leverage our marketing resources. The success of these initiatives is demonstrated with the SG&A expense reduction while achieving $34.0 million in market share gains during 2016.

As a percentage of net sales excluding Canyon Stone, SG&A expense decreased from 10.8% for the year ended December 31, 2015 to 10.0% for the year ended December 31, 2016. The decrease reflects improved leverage on the fixed component of our SG&A expenses relative to the net sales increase as well as the impact of certain sales and marketing cost initiatives which resulted in our sales and marketing expenses decreasing $3.6 million during the year ended December 31, 2016 relative to the year ended December 31, 2015.

SG&A expense for the year ended December 31, 2015 increased from the year ended December 31, 2014 by approximately $7.6 million or 9.2%. Excluding the Canyon Stone acquisition, which was completed on May 29, 2015 and incurred SG&A expense of $3.2 million, SG&A expense increased $4.4 million or 5.3% during the year ended December 31, 2015 compared to the year ended December 31, 2014. The SG&A expense increase was predominantly caused by higher incentive compensation of $3.0 million, increased sales and marketing expenses of $0.7 million related to the 2.6% net sales increase, higher legal expenses of $0.4 million, and increased product development expenses of $0.4 million during the year ended December 31, 2015 relative to the year ended December 31, 2014. As a percentage of net sales excluding Canyon Stone, SG&A expense remained consistent at approximately 10.6% during the year ended December 31, 2015 as compared to 10.4% for the year ended December 31, 2014.

Amortization of Intangible Assets

Amortization expense for the year ended December 31, 2016 was consistent with the year ended December 31, 2015 at approximately $12.7 million and 1.4% of net sales relative to $12.9 million and 1.5% of net sales, respectively.

Amortization expense for the year ended December 31, 2015 was consistent with the year ended December 31, 2014 decreasing a nominal $0.2 million or 1.2%. Excluding the Canyon Stone acquisition, which was completed on May 29, 2015 and caused increased amortization expense of $0.8 million, amortization expense decreased by approximately $1.0 million or 7.4%. The decreased resulted from the negative 15.7% movement in the Canadian dollar relative to the U.S. dollar during the year ended December 31, 2015 which resulted in lower amortization expense in Canada. As a percentage of net sales, amortization expense was 1.5% for the year ended December 31, 2015, excluding Canyon Stone, as compared to 1.6% for the year ended December 31, 2014.

Currency Transaction Gain (Loss)

A currency transaction impact was established in 2013 with the acquisition of Mitten within the Siding, Fencing, and Stone segment. The currency transaction gain for the year ended December 31, 2016 was $0.2 million. The currency transaction loss for the years ended December 31, 2015, and 2014 was $1.0 million and $0.4 million, respectively, related to the Mitten entity. The $1.2 million increase in the foreign currency gain for the year ended December 31, 2016 was due to the positive movement in the Canadian dollar relative to the U.S. dollar during the year ended December 31, 2016.

Windows and Doors Segment

	Year ended December 31,					
(Amounts in thousands)	2016		2015		2014	
Statement of operations data:						
Net sales	$ 1,024,993	100.0%	$ 999,608	100.0 %	$ 765,042	100.0 %
Gross profit	202,789	19.8%	181,386	18.1 %	98,513	12.9 %
SG&A expense	146,869	14.3%	150,797	15.1 %	117,097	15.3 %
Amortization of intangible assets	12,341	1.2%	12,394	1.2 %	9,076	1.2 %
Operating earnings (loss)	43,579	4.3%	18,195	1.8 %	(27,660)	(3.6)%
Currency transaction gain (loss)	95	—%	(2,212)	(0.2)%	(565)	(0.1)%

Net Sales

Net sales for the year ended December 31, 2016 increased $25.4 million or 2.5% compared to the year ended December 31, 2015. The net sales increase for the year ended December 31, 2016 can be attributed to the improved U.S. market conditions favorably impacting both our new construction business as well as our repair and remodeling business. For the year ended December 31, 2016 compared to the year ended December 31, 2015, our new construction business increased $38.7 million or 6.7% while our repair and remodeling business increased $6.1 million or 2.0%. This U.S. net sales increase was partially offset by a $19.4 million net sales decline or 17.0% of our Canadian net sales for the year ended December 31, 2016 relative to the year ended December 31, 2015 due to a weakening Canadian market.

The net sales increase for the U.S. market can be attributed to improved market conditions as evidenced by the U.S. Census Bureau reporting that single family housing starts increased 9.0% during the lag effected period which resulted in higher net sales for our new construction products. Our building products are typically installed on a new construction home 90 to 120 days after the start of the home, therefore single family starts commencing in the period from September 2015 to September 2016 directly impacts the demand for our products for the year ended December 31, 2016. As previously mentioned, we believe that true market demand for big ticket repair and remodeling products increased 3.0% to 4.0%. Our net sales for new construction and repair and remodeling were lower than the demand market indicators for the year ended December 31, 2016 due primarily to lower sales in certain geographical areas, namely Texas, specifically Houston, due to extraordinary high levels of rainfall which negatively impacted the construction industry and economic conditions in the Houston market related to the oil and gas industry. Our net sales of window products in the Houston market declined $7.9 million during the year ended December 31, 2016 compared to the year ended December 31, 2015. In addition to Houston, we incurred lost sales in our repair and remodeling business of $11.3 million and $2.2 million in our new construction business from competitive price action taken by certain competitors in other geographic regions in which we maintained our pricing discipline in the marketplace.

Despite these lower net sales amounts relative to demand market indicators for the year ended December 31, 2016 compared to the year ended December 31, 2015, we achieved higher average selling prices of 3.3% for the year ended December 31, 2016 compared to the year ended December 31, 2015. These higher average selling prices increased our U.S. net sales by approximately $26.2 million for the year ended December 31, 2016 compared to the year ended December 31, 2015. The overall U.S. net sales increase of $44.8 million was partially offset by a $19.4 million or 17.0% net sales decline for our Western Canadian business which endured challenging market conditions negatively impacted by demand softness due to declining energy prices and poor economic growth as well as a negative foreign currency impact of $3.1 million.

Net sales for the year ended December 31, 2015 increased compared to the year ended December 31, 2014 by approximately $234.6 million or 30.7%. The net sales increase for the year ended December 31, 2015 was predominantly related to our Simonton acquisition, which was completed on September 19, 2014, and accounted for increased net sales of $231.9 million for the year ended December 31, 2015. Excluding Simonton, our Windows and Doors' net sales increased $2.7 million or 0.4% during the year ended December 31, 2015 compared to the year ended December 31, 2014. The net sales increase mainly resulted from higher net sales in the United States for our U.S. window products of approximately $52.3 million partially offset by lower net sales for Simonton of approximately $5.9 million in the 2015 and 2014 comparable ownership period and lower net sales for our Western Canadian business of approximately $43.7 million for the year ended December 31, 2015 as compared to the year ended December 31, 2014.

The U.S. window net sales increase primarily resulted from improved market conditions reflected in industry metrics. According to the U.S. Census Bureau, single family housing starts increased 10.0% on a lag effected basis during the year ended December 31, 2015 compared to the year ended December 31, 2014. The lag effect is created by our building products being typically installed on a new construction residential home 90 to 120 days after the start of the home. In addition to the improved industry conditions in the United States with the 10.0% new construction market increase, our selling prices increased for our U.S. window products from price increases that we have implemented and favorable product mix that resulted from a higher proportion of our window sales being derived from our vinyl windows which typically carry a higher selling price than our aluminum windows. The impact of higher selling prices that resulted from our price increases and favorable product mix is estimated to have increased our average selling price for our U.S. window products by 5.8% which contributed higher net sales of approximately $29.7 million for the year ended December 31, 2015 relative to the year ended December 31, 2014. This increase was partially offset in the U.S. by lower Simonton net sales which resulted from the timing of the Company's fiscal calendar which provided Simonton four less shipping days during the comparable ownership period for the three months ended December 31, 2015 and the three months ended December 31, 2014. This net sales increase in the U.S. market was partially offset by a 27.7% decrease in net sales in our Western Canadian business during the year ended December 31, 2015 compared to the year ended December 31, 2014. The housing market conditions within the prairie provinces of Western Canada, in which a majority of our Western Canadian business' net sales are generated, has experienced demand softness due to declining world oil prices on this heavily dependent energy industrial area. In addition, the weakening of the Canadian dollar negatively impacted our net sales by approximately $15.4 million during the year ended December 31, 2015 compared to the year ended December 31, 2014. During the year ended December 31, 2015, the Canadian dollar weakened 15.7% against the U.S. dollar relative to the year ended December 31, 2014.

Gross Profit

Gross profit for the year ended December 31, 2016 increased $21.4 or 11.8% compared to the year ended December 31, 2015. The gross profit increase for the year ended December 31, 2016 primarily resulted from the continued improvement in our new construction and repair and remodeling businesses partially offset by the negative impact from lower net sales in Canada. Gross profit for our U.S. new construction and repair and remodeling business increased $16.1 million and $6.9 million, respectively, during the year ended December 31, 2016 compared to the year ended December 31, 2015. The gross profit improvement for our U.S. businesses was driven by increased selling prices of 3.3%, favorable product mix and lower raw material costs and cost savings and synergies that were realized from our Simonton acquisition. These favorable factors were partially offset by higher costs in our U.S. new construction window business related to labor and freight. These overall net gross profit improvements in the U.S. were partially offset by a gross profit decrease of $1.6 million for our Western Canadian business which experienced weaker market demand due to depressed economic conditions including a negative foreign currency impact of $4.0 million during the year ended December 31, 2016 compared to the year ended December 31, 2015.

As a percentage of net sales, gross profit increased from 18.1% for the year ended December 31, 2015 to 19.8% for the year ended December 31, 2016. The 170 basis point gross profit increase reflects improvements for both our U.S. new construction and repair and remodeling window businesses from improved demand levels, higher average selling prices, and favorable material costs partially offset by a decrease for our Canadian business driven by the 17.0% net sales decrease which decreased operating leverage during the year ended December 31, 2016 as compared to the year ended December 31, 2015.

Gross profit for the year ended December 31, 2015 increased compared to the year ended December 31, 2014 by approximately $82.9 million, or 84.1%. Our gross profit was favorably impacted by the Simonton acquisition, which was completed on September 19, 2014 and contributed increased gross profit of approximately $60.1 million for the year ended December 31, 2015. Adjusting for the Simonton acquisition, our gross profit for the year ended December 31, 2015 increased by approximately $22.8 million or 23.6%. This gross profit increase can be attributed to the continued improvement in our U.S. windows business, which was driven by improved net pricing and favorable product mix that resulted in a 5.8% increase in average selling price during the year ended December 31, 2015. In addition to the average sales price improvement, we have improved our operational efficiencies as a result of our “enterprise lean” initiative which continues to streamline our window product offering by providing additional manufacturing flexibility as well as our improved sales and operations planning process that is intended to provide better resource planning which will help to minimize ramp up costs that result from spikes in demand within a geographical area. Overall, our gross profit increased approximately $25.3 million for our U.S. windows business partially offset by a decrease of approximately $5.5 million for our Western Canadian business during the year ended December 31, 2015 compared to the year ended December 31, 2014. The decrease in our Canadian gross profit is attributed to the negative impact of foreign currency resulting from the weakening of the Canadian dollar as well as a softening in the Western Canadian market due to depressed oil prices. Finally, our gross profit for Simonton increased approximately $3.0 million mainly due to a 3.7% increase in average selling prices for the comparable three month period ended December 31, 2015 relative to the three months ended December 31, 2014.

As a percentage of net sales, gross profit excluding the impact of Simonton for both years, increased from 12.8% for the year ended December 31, 2014 to 15.7% for the year ended December 31, 2015. The 290 basis point net increase in gross profit was driven by a 350 basis point improvement in U.S. windows gross profit performance primarily resulting from improved net pricing and operational efficiencies and a 140 basis point increase for Western Canada driven by favorable gross profit performance during 2015 despite lower sales during the year and the negative foreign currency impact from a weakening Canadian dollar. This favorable gross profit performance was achieved in Western Canada by improving our selling prices despite the difficult conditions and decreased volumes.

SG&A Expense

SG&A expense for the year ended December 31, 2016 decreased $3.9 million or 2.6% compared to the year ended December 31, 2015. The SG&A expense decrease was attributable primarily to 2015 activity for acquisition integration and restructuring activities related to our repair and remodeling window acquisition which originally occurred in September 2014 as well as combining our Canadian window manufacturing facilities into a single facility. Specifically, our U.S. window repair and remodeling business incurred lower severance expenses of $1.3 million during the year ended December 31, 2016 compared to the year ended December 31, 2015. In addition, our U.S. window businesses experienced $5.0 million in lower management incentive compensation and lower sales and marketing expenses during the year ended December 31, 2016 compared to the year ended December 31, 2015 partially offset by increased legal fees of approximately $2.8 million primarily related to legal settlements completed in December 2016 and January 2017 as well as increased legal expense associated with the 2015 resolution of class action litigation for our new construction business of $3.2 million. Our Canadian window business experienced lower restructuring and integration charges of $2.2 million, as well as lower personnel costs of $1.7 million during the year ended December 31, 2016 compared to the year ended December 31, 2015 due to the economic slowdown with lower demand levels as well as integration activities that occurred during 2015 finalizing our combination of our Western Canadian manufacturing facilities into a single location in Alberta.

As a percentage of net sales, SG&A expense decreased from 15.1% for the year ended December 31, 2015 to 14.3% for the year ended December 31, 2016. The 80 basis point decrease primarily resulted from lower severance expense for our U.S. repair and remodeling window business, lower management compensation expense, lower selling and marketing expenses partially offset by increased legal expenses for the year ended December 31, 2016 compared to the year ended December 31, 2015. In addition, our Canadian window business incurred lower restructuring and personnel expenses during the year ended December 31, 2016 compared to the year ended December 31, 2015 from integration activities that were incurred during 2015 finalizing our combination our manufacturing operations into a single location in Alberta.

SG&A expense for the year ended December 31, 2015 increased compared to the year ended December 31, 2014 by approximately $33.7 million, or 28.8%. The SG&A expense increase relates to the Simonton acquisition, which was completed on September 19, 2014 and contributed increased SG&A expense of $50.3 million for the year ended December 31, 2015. Excluding Simonton, our Windows and Doors SG&A expense decreased $16.6 million or 14.3%. This SG&A expense decrease was related to a $5.0 million expense recognized in connection with a preliminary settlement of class action lawsuits during the year ended December 31, 2014 which was offset by a $3.2 million insurance recovery during the year ended December 31, 2015. Excluding the impact of Simonton and the class action litigation, SG&A expense decreased $8.4 million or 7.6% during the year ended December 31, 2015 as compared to the year ended December 31, 2014. This SG&A expense decrease was related to $8.4 million lower SG&A expense for Western Canada as a result of the weakening Canadian dollar which lowered SG&A expense by $3.4 million, lower sales and marketing expenses of $1.4 million based on the net sales decrease, and from the elimination of $3.6 million of one-time restructuring and integration costs related to the integration of our Western Canadian businesses that occurred during the year ended December 31, 2014. SG&A expenses for U.S. windows, excluding the impact of the class action litigation, remained flat overall reflecting higher incentive compensation offset by lower legal expenses for the year ended December 31, 2015 compared to the year ended December 31, 2014.

Excluding Simonton and the impact of the class action litigation, SG&A expense as a percentage of net sales decreased from 14.6% for the year ended December 31, 2014 to 13.5% for the year ended December 31, 2015. The decrease can be attributed to $3.6 million lower restructuring and integration costs for Western Canada as well as gaining leverage on the fixed component of SG&A expense with the additional sales volume experienced in the U.S.

Amortization of Intangible Assets

Amortization expense for the year ended December 31, 2016 was consistent with the year ended December 31, 2015 at $12.3 million and 1.2% of net sales and $12.4 million and 1.2% of net sales, respectively.

Amortization expense for the year ended December 31, 2015 increased $3.3 million or 36.6% compared to the year ended December 31, 2014. The increase in amortization expense for the year ended December 31, 2015 is due to the additional intangible assets of $62.2 million acquired in the Simonton acquisition that was completed on September 19, 2014. As a percentage of net sales, amortization expense remained consistent at 1.2% for the year ended December 31, 2015 after excluding the impact of the Simonton acquisition for the year ended December 31, 2015 compared to 1.2% for the year ended December 31, 2014.

Currency Transaction Gain (Loss)

The currency transaction gain for the year ended December 31, 2016 was $0.1 million increasing $2.3 million from a loss of $2.2 million for the year ended December 31, 2015 as a result of the fluctuation in the Canadian dollar as compared to the U.S. dollar for 2016. The currency transaction loss for the year ended December 31, 2015 increased $1.6 million or 291.5% as compared to the year ended December 31, 2014 as a result of the fluctuation in the Canadian dollar as compared to the U.S. dollar for 2015. Our Gienow acquisition during the year ended December 31, 2013, increased our transactional exposure to the Canadian currency. Management continues to evaluate methodologies to effectively hedge this foreign currency risk.

Unallocated Operating Earnings, Interest, and Benefit for Income Taxes

	Year ended December 31,		
(Amounts in thousands)	2016	2015	2014
Statement of operations data:			
SG&A expense	$ (32,141)	$ (30,317)	$ (23,931)
Operating loss	(32,141)	(30,317)	(23,931)
Interest expense	(72,716)	(74,863)	(71,234)
Interest income	6	5	5
Tax receivable agreement liability adjustment	(60,874)	(12,947)	670
Loss on modification or extinguishment of debt	(11,747)	—	(21,364)
Benefit for income taxes	$ 51,995	$ 688	$ 105

Operating loss/SG&A Expense

Unallocated SG&A expense includes items which are not directly attributed to or allocated to either of our reporting segments. Such items include legal costs, corporate payroll, and unallocated finance and accounting expenses. The unallocated operating loss for the year ended December 31, 2016 increased by $1.8 million or 6.0% compared to the same period in 2015 due primarily to increased centralization of certain functional areas such as research and development ($1.0 million), marketing ($1.0 million), and information technology ($0.7 million) along with increased incentive compensation of approximately $0.4 million partially offset by decreases in stock compensation expense of $0.9 million and various other professional fees and personnel expenses of $0.4 million. One element that drove the increased research and development expense within the unallocated segment was the opening of the Insight Center in Durham, NC during 2016, a facility that supports product development and innovation.

The unallocated operating loss for the year ended December 31, 2015 increased by $6.4 million or 26.7% compared to the same period in 2014 due primarily to increased incentive compensation of approximately $4.8 million, increased executive retention expense of $1.2 million, and an increase in other professional fees of $1.6 million partially offset by decreases in various other personnel expenses.

Interest expense

Interest expense for the year ended December 31, 2016 decreased by approximately $2.1 million or 2.9% compared to the same period in 2015 as a result of the reduction in the Term Loan Facility principal balance year over year and lower average borrowings on the ABL Facility year over year. During 2016, we made $160.0 million of voluntary payments on the Term Loan Facility in addition to our normal quarterly amortization payments of $1.1 million, or $4.3 million annually, which reduced our outstanding borrowings and our quarterly interest expense.

Interest expense for the year ended December 31, 2015 increased by approximately $3.6 million or 5.1% compared to the year ended December 31, 2014 as a result of the additional $150.0 million debt incurred for the Simonton acquisition completed in September 2014 partially offset by the impact of the January 2014 debt refinancing. The increase is primarily due to the $150.0 million in Senior Tack-on Notes being outstanding for the full year ended December 31, 2015 and not the full year ended December 31, 2014 since the Simonton acquisition closed in September of 2014. In January 2014, we refinanced our 8.25% Senior Secured Notes due 2018 (the "8.25% Senior Secured Notes") and 9.375% Senior Notes due 2017 (the "9.375% Senior Notes") with the entry into the Term Loan Facility and 6.50% Senior Notes. The 6.50% Senior Notes and Term Loan Facility have lower interest rates on a weighted average basis of approximately 300 basis points and consequently reduced interest expense during the year ended December 31, 2015 compared to the same period in 2014.

Interest income

Interest income for the year ended December 31, 2016 was consistent with the years ended December 31, 2015 and December 31, 2014.

Tax receivable agreement liability adjustment

Since the inception of the TRA liability with the Company's 2013 initial public offering, we have historically been in a full valuation allowance for federal purposes and a partial valuation allowance for certain state and Canadian jurisdictions. As a result of the Company's tax valuation allowance position for federal and state purposes, we historically calculated the TRA liability considering (i) current year taxable income only (due to the uncertainty of future taxable income associated with our previous cumulative loss position) and (ii) future income due to the expected reversals of deferred tax liabilities. During the year ended December 31, 2016, we released our discrete federal valuation allowance and a portion of our state valuation allowance for $55.2 million, due to positive factors outweighing negative evidence, specifically no longer being in a cumulative loss position. The factors surrounding the release of this valuation allowance thereby eliminated any uncertainty as to future taxable income. Consequently, we were able to utilize future forecasts of taxable income beyond the 2016 tax year to determine the TRA liability as of December 31, 2016. Our future taxable income estimates were used to determine the cumulative net operating loss carryforwards ("NOLs") that are expected to be utilized and the TRA liability was accordingly adjusted using the 85% TRA rate. As a result of including future taxable income beyond 2016, we recognized a $60.9 million adjustment to the TRA liability during the year ended December 31, 2016 bringing the total TRA liability to $79.7 million as of December 31, 2016. This amount represents the originally anticipated TRA liability at the initial public offering date with approximately $4.7 million remaining to be expensed through operations for state purposes as we remain in a state tax valuation allowance position as of December 31, 2016 for certain states. This remaining liability will be recognized as the state valuation allowances are released in future years.

The $47.9 million increase for the TRA liability adjustment for the year ended December 31, 2016 relative to the year ended December 31, 2015 resulted primarily from the $55.2 million discrete federal valuation allowance release along with our ability to utilize future forecasts of taxable income beyond the 2016 tax year to determine the TRA liability as of December 31, 2016, as described above.

The $12.9 million TRA liability adjustment for the year ended December 31, 2015 resulted from increases in taxable income estimates resulting from the reversal of deferred tax liabilities as well as increases in our 2015 taxable income compared to the 2014 period. The $115.9 million increase in our 2015 taxable income can be attributed to the following factors (i) the continued U.S. housing recovery which is estimated to have had a 10.0% year over year increase in single family housing starts according to the U.S. Census Bureau, (ii) improvements in the repair and remodeling market evidenced by the 5.6% increase in homeowner improvements during 2015 versus 2014 according to LIRA, (iii) the positive income contributions from our acquisition of Simonton which was completed in September 2014, and (iv) continued improvements in our existing operations specifically for our U.S. windows business which increased its operating earnings by approximately $45.9 million during the year ended December 31, 2015 compared to the year ended December 31, 2014. All of these items increased our taxable income estimate for the year ended December 31, 2015 and, as a result, our estimate of the TRA liability.

The $0.7 million tax receivable agreement liability adjustment for the year ended December 31, 2014 resulted from additional deferred tax liabilities assumed in the Simonton acquisition and changes in our deferred tax liabilities, partially offset by our 2014 taxable losses.

Loss on modification or extinguishment of debt

During 2016, we voluntarily paid $160.0 million on the Term Loan Facility to reduce our outstanding indebtedness as allowable under the terms of the Term Loan Facility. We performed an analysis to determine the proper accounting treatment for these voluntary payments by evaluating the change in cash flows and determining that there were no changes in the creditors as a result of the payment. Consequently, we recognized a loss on debt modification or extinguishment of approximately $11.7 million for the year ended December 31, 2016 consisting of the proportionate write off of the related debt issuance costs and debt discount.

As a result of the 6.50% Senior Notes and Term Loan Facility and the tender, redemption, and repurchase of the 8.25% Senior Secured Notes and the 9.375% Senior Notes as further described in the *Liquidity and Capital Resources* section below, we recognized a loss on modification or extinguishment of debt of approximately $21.4 million during the year ended December 31, 2014.

Income taxes

The income tax benefit for the year ended December 31, 2016 increased to an approximate $52.0 million tax benefit compared to an approximate $0.7 million tax benefit for the year ended December 31, 2015. The income tax benefit of approximately $52.0 million is comprised of $53.6 million of federal tax benefit, $2.6 million state tax expense, and $1.0 million foreign income tax benefit. The increase in tax benefit is primarily due to the release of the discrete valuation allowance of $55.2 million partially offset by state income tax, remaining valuation allowances, and foreign income taxes. Our pre-tax income for the year ended December 31, 2016 was approximately $23.5 million including the $60.9 million tax receivable agreement liability adjustment compared to pre-tax income of $31.6 million including the $12.9 million tax receivable agreement liability adjustment for the year ended December 31, 2015.

The income tax benefit for the year ended December 31, 2015 increased to an approximate $0.7 million tax benefit from a $0.1 million tax benefit for the year ended December 31, 2014. The income tax benefit of approximately $0.7 million was comprised of approximately $2.1 million of federal tax benefit, $1.9 million state tax expense, and approximately $0.5 million of foreign income tax benefit. The increase in tax benefit is primarily due to the $9.8 million valuation allowance that was initially recorded in 2014 on the deferred tax assets of our Western Canadian business and a decrease in state income tax expense partially offset by a decrease in the tax losses of Mitten and assumption of Simonton's deferred tax liabilities which resulted in a reversal of approximately $2.8 million of our valuation allowance during the year ended December 31, 2015.

Liquidity and Capital Resources

2015 Debt Transaction

On November 5, 2015, Ply Gem Industries entered into a second amended and restated ABL Facility. Among other things, the second amended and restated ABL Facility: (i) increased the overall facility to $350.0 million , (ii) provided an accordion feature of $50.0 million , and (iii) established the applicable margin for borrowings under the ABL Facility to a range of 1.25% to 2.00% for Eurodollar rate loans, depending on availability. All outstanding loans under the second amended and restated ABL Facility are due and payable in full on November 5, 2020.

2014 Debt Transactions

On January 30, 2014, Ply Gem Industries completed an offering of $500.0 million aggregate principal amount of 6.50% Senior Notes due 2022 (the "6.50% Senior Notes") and also entered into a $430.0 million senior secured term loan facility due 2021 (the "Term Loan Facility"). The approximate $927.9 million of net proceeds from the issuance of the 6.50% Senior Notes and the borrowings under the Term Loan Facility were used by Ply Gem Industries to purchase all of its 8.25% Senior Secured Notes due 2018 and 9.375% Senior Notes due 2017 tendered in the tender offers described below, to satisfy and discharge the remaining obligations under the indentures governing the 8.25% Senior Secured Notes and 9.375% Senior Notes and to pay related fees and expenses.

On January 30, 2014, Ply Gem Industries purchased approximately $705.9 million of the outstanding 8.25% Senior Secured Notes in a tender offer at a price of $1,067.50 per $1,000 principal amount, which included an early tender payment of $30.00 per $1,000 principal amount, plus accrued and unpaid interest. On January 30, 2014, Ply Gem Industries also purchased approximately $94.7 million of the outstanding 9.375% Senior Notes in a tender offer at a price of $1,108.36 per $1,000 principal amount, which included an early tender payment of $30.00 per $1,000 principal amount, plus accrued and unpaid interest. As a result, Ply Gem Industries paid aggregate consideration of approximately $780.2 million for the tendered 8.25% Senior Secured Notes, including a tender premium of approximately $47.6 million , and paid aggregate consideration of approximately $107.6 million for the tendered 9.375% Senior Notes, including a tender premium of approximately $10.3 million . On March 1, 2014, pursuant to the terms of the indenture governing the 8.25% Senior Secured Notes, Ply Gem Industries redeemed the remaining approximate $50.1 million principal amount of the outstanding 8.25% Senior Secured Notes at a redemption price equal to 106.188% of the principal amount thereof, plus accrued and unpaid interest. On February 16, 2014, pursuant to the terms of the indenture governing the 9.375% Senior Notes, Ply Gem Industries redeemed the remaining approximate $1.3 million principal amount of the outstanding 9.375% Senior Notes at a redemption price equal to 100% of the principal amount plus the "make-whole" premium required under the indenture governing the 9.375% Senior Notes (which equated to 110.179% of the principal amount thereof), plus accrued and unpaid interest. As of March 1, 2014, there were no longer outstanding any 8.25% Senior Secured Notes. As of February 16, 2014, there were no longer outstanding any 9.375% Senior Notes.

On September 19, 2014, Ply Gem Industries issued an additional $150.0 million aggregate principal amount of its 6.50% Senior Notes (“Senior Tack-on Notes”). The net proceeds from the transaction were approximately $138.0 million after deducting $10.1 million for the debt discount and $1.9 million in transaction costs. The proceeds from the issuance of the Senior Tack-on Notes and approximately $3.1 million of cash on hand were used by Ply Gem Industries to fund Ply Gem Industries’ purchase of all the issued and outstanding shares of common stock of Simonton, to pay fees and expenses related to the offering of the Senior Tack-on Notes and the Simonton acquisition and for general corporate purposes, including the repayment of approximately $10.0 million of indebtedness under the ABL Facility. The additional $150.0 million of Senior Tack-on Notes have the same terms and covenants as the original $500.0 million of Senior Notes. The 6.50% Senior Notes originally issued in January 2014 and the Senior Tack-on Notes issued in September 2014 (collectively, the "6.50% Senior Notes") will mature on February 1, 2022 and bear interest at the rate of 6.50% .

In November 2014, the Company exercised a portion of the accordion feature under the ABL Facility for $50.0 million, or 50% of the eligible accordion, increasing the ABL Facility from $250.0 million to $300.0 million to primarily account for the additional borrowing base acquired from Simonton.

General cash flow movements

During the year ended December 31, 2016 , cash and cash equivalents decreased to $51.6 million compared to approximately $109.4 million as of December 31, 2015 . The decrease in cash was driven by the $160.0 million in voluntary payments on the Term Loan Facility and capital expenditures of $36.0 million partially offset by $145.0 million of operating cash flow driven by the $46.0 million improvement in operating earnings year over year. This improved operating performance was offset by a $40.1 million increase in working capital during the year ended December 31, 2016 relative to the year ended December 31, 2015 . Accounts receivable increased by $10.1 million and inventory increased by $41.5 million offset by a $11.5 million improvement in trade payables during the year ended December 31, 2016 compared to year ended December 31, 2015 . The approximate $41.5 million inventory increase from December 31, 2015 to December 31, 2016 resulted from successful management of inventory levels in connection with higher sales demands at year end December 31, 2015, compared to higher inventory levels at December 31, 2016 in anticipation of higher sales volumes in 2017. During the year ended December 31, 2015 , cash and cash equivalents increased from approximately $33.2 million to $109.4 million as of December 31, 2015 .

Our business is seasonal because inclement weather during the winter months reduces the level of building and remodeling activity in both the home repair and remodeling and the new home construction sectors, especially in the Northeast and Midwest regions of the United States and Canada. As a result, our liquidity typically increases during the second and third quarters as our borrowing base increases under the ABL Facility reaching a peak early in the fourth quarter, and decreases late in the fourth quarter and throughout the first quarter.

Our primary cash needs are for working capital, capital expenditures and debt service. Our annual cash interest charges for debt service, including the ABL Facility, are estimated to be approximately $54.7 million for fiscal year 2017. As of December 31, 2016 , we did not have any scheduled debt maturities until 2020. The specific debt instruments and their corresponding terms and due dates are described in the following sections. Our capital expenditures have historically averaged approximately 1.5% to 2.0% of net sales on an annual basis. For the year ending December 31, 2017, we estimate that our capital expenditures will be in a range from 2.00% to 2.25% of net sales. We finance these cash requirements through internally generated cash flow and funds borrowed under Ply Gem Industries’ ABL Facility.

Ply Gem’s specific cash flow movement for the year ended December 31, 2016 is summarized below:

Cash provided by (used in) operating activities

Net cash provided by operating activities for the year ended December 31, 2016 was approximately $145.0 million. Net cash provided by operating activities for the year ended December 31, 2015 was approximately $139.4 million, and net cash used in operating activities for the year ended December 31, 2014 was approximately $15.2 million.

The relative consistency in net cash provided by operating activities between 2016 and 2015 was primarily driven by the $43.2 million increase in net income during the year ended December 31, 2016 compared to the year ended December 31, 2015 partially offset by the $40.1 million working capital increase.

The increase in cash provided by operating activities for the year ended December 31, 2015 compared to the year ended December 31, 2014 was impacted by the increase in operating earnings of approximately $61.0 million which was driven by improved operating performance for our Windows and Doors segment and Siding, Fencing and Stone segment of approximately $45.9 million and $21.6 million, respectively for the year ended December 31, 2015. In addition to the improvement in operating earnings, we also had improved working capital metrics during the year ended December 31, 2015 relative to the year ended December 31, 2014 of approximately $71.1 million related to improved accounts receivable and inventory as we experienced improved collection rates on receivables and managed our seasonal inventory build more effectively.

Cash used in investing activities

Net cash used in investing activities for the years ended December 31, 2016, 2015, and 2014 was approximately $35.8 million, $54.7 million, and $153.7 million, respectively. The cash used in investing activities during 2016 was primarily for capital expenditures on numerous ongoing capital projects across all business segments. Capital expenditures for 2016 were approximately 1.9% of net sales, consistent with our historical average.

The cash used in investing activities in 2015 was primarily for the acquisition of Canyon Stone and capital expenditures on various ongoing capital projects. The Canyon Stone acquisition was approximately $21.0 million net of cash acquired. Capital expenditures for 2015 were approximately 1.8% of net sales, consistent with our historical average.

The cash used in investing activities in 2014 was primarily for the acquisition of Simonton and capital expenditures on various ongoing capital projects. The Simonton acquisition was approximately $130.9 million net of cash acquired. Capital expenditures for 2014 were approximately 1.5% of net sales, consistent with our historical average.

Cash provided by (used in) financing activities

Net cash used in financing activities for the year ended December 31, 2016 was approximately $168.2 million, primarily from the three separate voluntary Term Loan Facility payments that totaled $160.0 million and the 1.0% principal repayment of $4.3 million required by the Term Loan Facility and the tax receivable agreement payment of $5.0 million. These payments were offset by $1.1 million in cash provided by the exercise of stock options.

Net cash used in financing activities for the year ended December 31, 2015 was approximately $3.6 million, primarily related to the 1.0% principal repayment of $4.3 million required by the Term Loan Facility and the payment of $1.4 million in debt issuance costs. These payments were offset by $2.2 million in cash provided by the exercise of stock options.

Net cash provided by financing activities for the year ended December 31, 2014 was approximately $135.5 million, primarily from the issuance of an additional $150.0 million in 6.50% Senior Notes, which net of fees was utilized for the Simonton acquisition. The long term debt refinancing in the year ended December 31, 2014 that occurred in January 2014 was essentially cash neutral after considering the final debt structure and related premiums/discounts with proceeds of $927.9 million offset by debt payments on the 8.25% Senior Secured Notes and 9.375% Senior Notes of $855.2 million, $61.1 million of tender/call premiums, and $16.9 million of debt issuance costs. The issuance of an additional $150.0 million in 6.50% Senior Notes in the year ended December 31, 2014 resulted in net proceeds of approximately $137.8 million after deducting $10.1 million for the debt discount and approximately $2.1 million in transaction costs incurred.

Ply Gem’s specific debt instruments and terms are described below:

6.50% Senior Notes due 2022

On January 30, 2014, Ply Gem Industries issued $500.0 million aggregate principal amount of 6.50% Senior Notes at par. On September 19, 2014, Ply Gem Industries issued an additional $150.0 million aggregate principal amount of 6.50% Senior Notes (the "Senior Tack-on Notes") at an issue price of 93.25%. Interest accrues at 6.50% per annum and is paid semi-annually on February 1 and August 1 of each year. The 6.50% Senior Notes will mature on February 1, 2022.

Prior to February 1, 2017, Ply Gem Industries could have redeemed up to 40% of aggregate principal amount of the 6.50% Senior Notes with the net cash proceeds from certain equity offerings at a redemption price equal to 106.50% of the aggregate principal amount of the 6.50% Senior Notes to be redeemed, plus accrued and unpaid interest, if any, provided that at least 50% of the aggregate principal amount of the 6.50% Senior Notes remains outstanding after the redemption. Prior to February 1, 2017, Ply Gem Industries could have redeemed the 6.50% Senior Notes, in whole or in part, at a redemption price equal to 100% of the principal amount plus a “make-whole” premium plus accrued and unpaid interest, if any. At any time on or after February 1, 2017, Ply Gem Industries may redeem the 6.50% Senior Notes, in whole or in part, at declining redemption prices set forth in the indenture governing the 6.50% Senior Notes plus, in each case, accrued and unpaid interest, if any, to the redemption date. The effective interest rate for the 6.50% Senior Notes is 8.39% after considering each of the different interest expense components of this instrument, including the coupon payment and the deferred debt issuance costs.

The 6.50% Senior Notes are fully and unconditionally and jointly and severally guaranteed on a senior unsecured basis by Ply Gem Holdings and all of the wholly-owned domestic subsidiaries of Ply Gem Industries (the “Guarantors”). The indenture governing the 6.50% Senior Notes contains certain covenants that limit the ability of Ply Gem Industries and its restricted subsidiaries to incur additional indebtedness, pay dividends or make other distributions or repurchase or redeem their stock, make loans and investments, sell assets, incur certain liens, enter into agreements restricting their ability to pay dividends, enter into transactions with affiliates, and consolidate, merge or sell assets. In particular, Ply Gem Industries and its restricted subsidiaries may not incur additional debt (other than permitted debt (as defined in the indenture) in limited circumstances) unless, after giving effect to such incurrence, the consolidated interest coverage ratio of Ply Gem Industries would be at least 2.00 to 1.00. In the absence of satisfying the consolidated interest coverage ratio test, Ply Gem Industries and its restricted subsidiaries may only incur additional debt under certain circumstances, including, but not limited to, debt under credit facilities (as defined in the indenture) (x) in an amount not to exceed the greater of (a) $350.0 million and (b) the borrowing base (as defined in the indenture) and (y) in an amount not to exceed the greater of (A) $575.0 million and (B) the aggregate amount of indebtedness (as defined in the indenture) that that would cause the consolidated secured debt ratio (as defined in the indenture) to be equal to 4.00 to 1.00; purchase money indebtedness in an aggregate amount not to exceed the greater of (x) $35.0 million and (y) 10% of consolidated net tangible assets (as defined in the indenture) at any one time outstanding; debt of foreign subsidiaries in an aggregate amount not to exceed the greater of (x) $60.0 million and (y) 15% of consolidated net tangible assets (as defined in the indenture) at any one time outstanding; debt pursuant to a general basket in an aggregate amount at any one time outstanding not to exceed the greater of (x) $75.0 million and (y) 20% of consolidated net tangible assets; and the refinancing of debt under certain circumstances.

On September 5, 2014, Ply Gem Industries completed an exchange offer with respect to the 6.50% Senior Notes issued in January 2014 to exchange $500.0 million 6.50% Senior Notes registered under the Securities Act for $500.0 million of the issued and outstanding 6.50% Senior Notes. Upon completion of the exchange offer, all $500.0 million of issued and outstanding 6.50% Senior Notes were registered under the Securities Act. On January 23, 2015, Ply Gem Industries completed an exchange offer with respect to the Senior Tack-on Notes issued in September 2014 to exchange $150.0 million Senior Tack-on Notes registered under the Securities Act for $150.0 million of the issued and outstanding Senior Tack-on Notes. Upon completion of the exchange offer, all $150.0 million of issued and outstanding Senior Tack-on Notes were registered under the Securities Act.

Term Loan Facility due 2021

On January 30, 2014 , Ply Gem Industries entered into a credit agreement governing the terms of its $430.0 million Term Loan Facility. Ply Gem Industries originally borrowed $430.0 million under the Term Loan Facility on January 30, 2014 , with an original discount of approximately $2.2 million , yielding proceeds of approximately $427.9 million . The Term Loan Facility will mature on January 30, 2021 . The Term Loan Facility requires scheduled quarterly payments in an aggregate annual amount equal to 1.00% of the original aggregate principal amount of the Term Loan Facility with the balance due at maturity. Interest on outstanding borrowings under the Term Loan Facility is paid quarterly.

Borrowings under the Term Loan Facility bear interest at a rate equal to, at Ply Gem Industries’ option, either (a) a base rate determined by reference to the highest of (i) the prime rate of the administrative agent under the credit agreement, (ii) the federal funds rate plus 0.50% and (iii) the adjusted LIBO rate for a one-month interest period plus 1.00% or (b) a LIBO rate determined by reference to the cost of funds for eurocurrency deposits in dollars for the interest period relevant to such borrowing, adjusted for certain additional costs, subject to a 1.00% floor, plus, in each case, an applicable margin of 3.00% for any eurocurrency loan and 2.00% for any alternate base rate loan. As of December 31, 2016 , the Company's interest rate on the Term Loan Facility was 4.00% . The effective interest rate for the Term Loan is 8.78% after considering each of the different interest expense components of this instrument, including the coupon payment, the deferred debt issuance costs and the original issue discount.

The Term Loan Facility allows Ply Gem Industries to request one or more incremental term loan facilities in an aggregate amount not to exceed the greater of (x) $140.0 million and (y) an amount such that Ply Gem Industries' consolidated senior secured debt ratio (as defined in the credit agreement), on a pro forma basis, does not exceed 3.75 to 1.00, in each case, subject to certain conditions and receipt of commitments by existing or additional financial institutions or institutional lenders.

The Term Loan Facility requires Ply Gem Industries to prepay outstanding term loans, subject to certain exceptions, with: (i) 50% (which percentage will be reduced to 25% if our consolidated senior secured debt ratio is equal or less than 2.50 to 1.00 but greater than 2.00 to 1.00 and to 0% if our consolidated senior secured debt ratio is equal to or less than 2.00 to 1.00) of our annual excess cash flow (as defined in the credit agreement), to the extent such excess cash flow exceeds $15.0 million , commencing with the fiscal year ended December 31, 2015; (ii) 100% of the net cash proceeds of certain non-ordinary course asset sales or certain insurance and condemnation proceeds, in each case subject to certain exceptions and reinvestment rights; and (iii) 100% of the net cash proceeds of certain issuances of debt, other than proceeds from debt permitted under the Term Loan Facility. Ply Gem Industries may voluntarily repay outstanding loans under the Term Loan Facility at any time without premium or penalty, other than customary "breakage" costs with respect to LIBOR loans. As of and for the year ended December 31, 2016, the Company's consolidated senior secured debt ratio was 0.93 and as a result no excess cash flow payment under the Term Loan Facility will be required. However, the Company voluntarily elected on March 10, 2016 and August 4, 2016 to prepay $30.0 million on each date on the Term Loan Facility to reduce its outstanding indebtedness. The Company further elected on November 4, 2016 to voluntarily pay an additional $100.0 million on the Term Loan Facility to further reduce its outstanding indebtedness bringing our cumulative voluntary 2016 Term Loan Facility payments to $160.0 million .

The Term Loan Facility is secured on a first-priority lien basis by the stock of Ply Gem Industries and by substantially all of the assets (other than the assets securing the obligations under the ABL Facility, which primarily consist of accounts receivable, inventory, cash, deposit accounts, securities accounts, chattel paper, contract rights, instruments, documents related thereto and proceeds of the foregoing) of Ply Gem Industries and the Guarantors that are subsidiaries of Ply Gem Industries and on a second-priority lien basis by the assets that secure the ABL Facility.

The Term Loan Facility includes negative covenants, subject to certain exceptions, that are substantially the same as the negative covenants in the 6.50% Senior Notes but does not contain any restrictive financial covenants. The Term Loan Facility also restricts the ability of Ply Gem Industries' subsidiaries to enter into agreements restricting their ability to grant liens to secure the Term Loan Facility and contains a restriction on changes in fiscal year.

8.25% Senior Secured Notes due 2018

On February 11, 2011 , Ply Gem Industries issued $800.0 million of 8.25% Senior Secured Notes at par. Ply Gem Industries used the proceeds to purchase approximately $724.6 million principal amount of its outstanding 11.75% Senior Secured Notes in a tender offer, to redeem the remaining approximate $0.4 million principal amount of outstanding 11.75% Senior Secured Notes, and to pay related fees and expenses. A portion of the early tender premiums and the original unamortized discount on the 11.75% Senior Secured Notes was recorded as a discount on the $800.0 million of 8.25% Senior Secured Notes given that the 2011 transaction was predominately accounted for as a loan modification. On February 15, 2012, Ply Gem Industries issued an additional $40.0 million principal amount of its 8.25% Senior Secured Notes. The 8.25% Senior Secured Notes would have matured on February 15, 2018 and bore interest at the rate of 8.25% per annum. Interest was paid semi-annually on February 15 and August 15 of each year. The 8.25% Senior Secured Notes were fully and unconditionally and jointly and severally guaranteed on a senior secured basis by the Guarantors. The 8.25% Senior Secured Notes and the related guarantees were secured on a first-priority lien basis by substantially all of the assets (other than the assets securing our obligations under the ABL Facility, which consist of accounts receivable, inventory, cash, deposit accounts, securities accounts, chattel paper and proceeds of the foregoing and certain assets such as contract rights, instruments and documents related thereto) of Ply Gem Industries and the Guarantors and on a second-priority lien basis by the assets that secure the ABL Facility.

On January 30, 2014, Ply Gem Industries purchased approximately $705.9 million of its outstanding 8.25% Senior Secured Notes in a tender offer at a price of $1,067.50 per $1,000 principal amount, which included an early tender payment of $30.00 per $1,000 principal amount, plus accrued and unpaid interest. On January 30, 2014, Ply Gem Industries irrevocably deposited with the trustee for the 8.25% Senior Secured Notes an amount sufficient to satisfy and discharge its obligations under the 8.25% Senior Secured Notes and the indenture. On March 1, 2014, Ply Gem Industries redeemed the remaining outstanding principal amount of the 8.25% Senior Secured Notes at a redemption price equal to 106.188% of the principal amount thereof, plus accrued and unpaid interest to the redemption date. Following the redemption, there were no longer any 8.25% Senior Secured Notes outstanding.

Senior Secured Asset Based Revolving Credit Facility due 2020

On November 5, 2015, Ply Gem Holdings, Inc., Ply Gem Industries, Inc., Gienow Canada Inc., and Mitten Inc. (together with Gienow, the "Canadian Borrowers") entered into a second amended and restated credit agreement governing the ABL Facility. Among other things, the second amendment and restatement of the credit agreement governing the ABL Facility: (i) increased the overall facility to $350.0 million from $300.0 million , (ii) established an accordion feature of $50.0 million , (iii) reduced the applicable margin for borrowings under the ABL Facility to a range from 1.25% to 2.00% for Eurodollar rate loans, depending on availability, and (iv) extended the maturity until November 5, 2020 . Under the ABL Facility, $300.0 million is available to Ply Gem Industries and $50.0 million is available to the Canadian Borrowers. The following summary describes the ABL Facility after giving effect to the amendment and restatement. As a result of the ABL Facility amendment in which the loan syndication consisted of previous members who either maintained or increased their position as well as new syndication members, the Company capitalized new debt issuance costs of $1.5 million and will amortize these costs through 2020.

Borrowings under the ABL Facility bear interest at a rate per annum equal to, at Ply Gem Industries' option, either (a) a base rate determined by reference to the higher of (1) the corporate base rate of the administrative agent under the ABL Facility and (2) the federal funds rate plus 0.5% or (b) a Eurodollar rate determined by reference to the costs of funds for U.S. dollar deposits for the interest period relevant to such borrowing adjusted for certain additional costs, in each case plus an applicable margin. The initial applicable margin for borrowings under the ABL Facility was 0.50% for base rate loans and 1.50% for Eurodollar rate loans. The applicable margin for borrowings under the ABL Facility is subject to step ups and step downs based on average excess availability under the ABL Facility. Swingline loans bear interest at a rate per annum equal to the base rate plus the applicable margin.

In addition to paying interest on outstanding principal under the ABL Facility, Ply Gem Industries is required to pay a commitment fee in respect of the unutilized commitments thereunder, which fee will be determined based on utilization of the ABL Facility (increasing when utilization is low and decreasing when utilization is high) multiplied by a commitment fee rate determined by reference to average excess availability under the ABL Facility. The commitment fee rate during any fiscal quarter is 0.375% when average excess availability is greater than $100.0 million for the preceding fiscal quarter and 0.25% when average availability is less than or equal to $100.0 million for the preceding fiscal quarter. Ply Gem Industries must also pay customary letter of credit fees equal to the applicable margin on Eurodollar loans and agency fees. As of December 31, 2016 , the Company's interest rate on the ABL Facility was approximately 1.92% . The ABL Facility requires that if (a) excess availability is less than the greater of (x) 10.0% of the lower of the borrowing base and the aggregate commitments and (y) $25.0 million or (b) any event of default has occurred and is continuing, Ply Gem Industries must comply with a minimum fixed charge coverage ratio test of 1.0 to 1.0. If the excess availability under the ABL Facility is less than the greater of (a) 12.5% of the lesser of the borrowing base and the aggregate commitments and (b) $30.0 million ($27.5 million for the months of January, February, March and April) for a period of 5 consecutive days or an event of default has occurred and is continuing, all cash from Ply Gem Industries material deposit accounts (including all concentration accounts) will be swept daily into a collection account controlled by the administrative agent under the ABL Facility and used to repay outstanding loans and cash collateralize letters of credit.

All obligations under the ABL Facility are unconditionally guaranteed by Ply Gem Holdings and substantially all of Ply Gem Industries' existing and future, direct and indirect, wholly owned domestic subsidiaries. All obligations under the ABL Facility, and the guarantees of those obligations, are secured, subject to certain exceptions, by substantially all of the assets of Ply Gem Industries and the guarantors, including a first-priority security interest in personal property consisting of accounts receivable, inventory, cash, deposit accounts, and certain related assets and proceeds of the foregoing and a second-priority security interest in, and mortgages on, substantially all of Ply Gem Industries' and the Guarantors' material owned real property and equipment and all assets that secure the Term Loan Facility on a first-priority basis. In addition to being secured by the collateral securing the obligations of Ply Gem Industries under the domestic collateral package, the obligations of the Canadian Borrowers, which are borrowers under the Canadian sub-facility under the ABL Facility, are also secured by a first-priority security interest in substantially all of the assets of such Canadian subsidiaries, plus additional mortgages in Canada, and a pledge by Ply Gem Industries of the remaining 35% of the equity interests of the Canadian Borrowers pledged only to secure the Canadian sub-facility.

The ABL Facility contains certain covenants that limit Ply Gem Industries' ability and the ability of Ply Gem Industries' subsidiaries to incur additional indebtedness, pay dividends or make other distributions or repurchase or redeem their stock, make loans and investments, sell assets, incur certain liens, enter into transactions with affiliates, and consolidate, merge or sell assets.

As of December 31, 2016 , Ply Gem Industries had approximately $340.3 million of contractual availability and approximately $213.1 million of borrowing base availability under the ABL Facility, reflecting $0.0 million of borrowings outstanding and approximately $9.7 million of letters of credit and priority payables reserves.

9.375% Senior Notes due 2017

On September 27, 2012, Ply Gem Industries issued $160.0 million of 9.375% Senior Notes at par. Ply Gem Industries used the proceeds of the offering, together with cash on hand, to satisfy and discharge its obligations under the 13.125% Senior Subordinated Notes and the indenture governing the 13.125% Senior Subordinated Notes. The 9.375% Senior Notes would have matured on April 15, 2017 and bore interest at the rate of 9.375% per annum. Interest was paid semi-annually on April 15 and October 15 of each year. The 9.375% Senior Notes were unsecured and fully and unconditionally and jointly and severally guaranteed on a senior unsecured basis by the Guarantors.

On January 30, 2014, Ply Gem Industries purchased approximately $94.7 million of the outstanding 9.375% Senior Notes at a tender price of $1,108.36 per $1,000 principal amount, which included an early tender payment of $30.00 per $1,000 principal amount, plus accrued and unpaid interest. On January 30, 2014, Ply Gem Industries irrevocably deposited with the trustee for the 9.375% Senior Notes an amount sufficient to satisfy and discharge its obligations under the 9.375% Senior Notes and the indenture. On February 16, 2014, Ply Gem Industries redeemed the remaining outstanding principal amount of the 9.375% Senior Notes at a redemption price equal to 100% of the principal amount plus the “make-whole” premium required under the indenture (which equated to 110.179% of the principal amount thereof), plus accrued and unpaid interest. Following the redemption, there were no longer any 9.375% Senior Notes outstanding.

Loss on debt modification or extinguishment

During both March and August 2016, the Company made voluntarily payments of $30.0 million on the Term Loan Facility to reduce its outstanding indebtedness as allowable under the terms of the Term Loan Facility and further elected in November 2016 to voluntarily pay an additional $100.0 million on the Term Loan Facility bringing the cumulative 2016 voluntary payments to $160.0 million . The Company performed an analysis to determine the proper accounting treatment for each of these voluntary payments by evaluating the change in cash flows and determined that there were no changes in creditors as a result of the payments. Consequently, the Company recognized a loss on debt modification in the consolidated statement of operations of approximately $11.7 million for the year ended December 31, 2016, reflecting the proportionate write-off of the related debt discount ($9.4 million) and debt issuance costs ($2.4 million) associated with the $160.0 million in voluntary payments, as summarized in the table below.

As a result of the January 2014 issuance of the 6.50% Senior Notes and the entry into the Term Loan Facility and the tender, redemption, and repurchase of the 8.25% Senior Secured Notes and the 9.375% Senior Notes (the "January 2014 Refinancing") during the year ended December 31, 2014, the Company performed an analysis to determine the proper accounting treatment for the January 2014 refinancing. Specifically, the Company evaluated each creditor with ownership in both the 6.50% Senior Notes and/or Term Loan Facility debt instruments and the old 8.25% Senior Secured Notes and/or 9.375% Senior Notes to determine whether the transaction should be accounted for as a modification or an extinguishment of debt as it relates to each individual creditor. The Company had approximately $34.4 million of unamortized debt discount and $14.9 million of unamortized debt issuance costs associated with the 8.25% Senior Secured Notes and 9.375% Senior Notes, of which approximately $4.8 million and $2.1 million , respectively, were expensed as a loss on extinguishment of debt in the consolidated statement of operations for the year ended December 31, 2014 as a result of the January 2014 Refinancing.

The Company also incurred an early tender premium of approximately $61.1 million in conjunction with this transaction, of which approximately $52.6 million was recorded as a discount on the 6.50% Senior Notes and the Term Loan Facility and approximately $8.5 million was expensed as a loss on extinguishment of debt in the consolidated statement of operations for the year ended December 31, 2014. The Company also expensed approximately $0.3 million as a loss on modification of debt in the consolidated statement of operations for the third party fees for the 8.25% Senior Secured Notes and 9.375% Senior Notes as a result of the January 2014 refinancing for the year ended December 31, 2014. The Company also incurred approximately $14.7 million of costs associated with the 6.50% Senior Notes and Term Loan Facility, of which approximately $9.2 million was recorded as debt issuance costs and approximately $5.5 million was expensed as a loss on modification of debt in the consolidated statement of operations for the year ended December 31, 2014. Additionally, the Company incurred an original issue discount of approximately $2.2 million for the Term Loan Facility, of which approximately $1.9 million was recorded as a discount and approximately $0.3 million was expensed as a loss on extinguishment of debt in the consolidated statement of operations for the year ended December 31, 2014.

Based on these financing transactions, the Company recognized a loss on debt modification or extinguishment of approximately $11.7 million , $0.0 million and $21.4 million for the years ended December 31, 2016 , 2015 , and 2014 , respectively, as summarized in the table below.

(Amounts in thousands)	For the year ended		
	December 31, 2016	December 31, 2015	December 31, 2014
Loss on extinguishment of debt:			
8.25% Senior Secured Notes and 9.375% Senior Notes tender premium	$ —	$ —	$ (8,493)
8.25% Senior Secured Notes and 9.375% Senior Notes unamortized discount	—	—	(4,773)
8.25% Senior Secured Notes and 9.375% Senior Notes unamortized debt issuance costs	—	—	(2,067)
Term Loan Facility unamortized discount	—	—	(255)
	—	—	(15,588)
Loss on modification of debt:			
Term Loan Facility unamortized discount	(9,375)	—	—
Term Loan Facility unamortized debt issuance costs	(2,372)	—	—
Third party fees for 8.25% Senior Secured Notes and 9.375% Senior Notes	—	—	(302)
Third party fees for 6.50% Senior Notes and Term Loan Facility	—	—	(5,474)
	(11,747)	—	(5,776)
Total loss on modification or extinguishment of debt	$ (11,747)	$ —	$ (21,364)

Liquidity requirements

We intend to fund our ongoing capital and working capital requirements, including our internal growth, through a combination of cash flows from operations and, if necessary, from borrowings under our ABL Facility. We believe that we will continue to meet our liquidity requirements over the next 12 months. We believe that our operating units are positive cash flow generating units and will continue to sustain their operations without any significant liquidity concerns. The performance of these operating units is significantly impacted by the performance of the housing industry, specifically single family housing starts and the repair and remodeling activity. Any unforeseen or unanticipated downturn in the housing industry could have a negative impact on our liquidity position.

Management anticipates that our current liquidity position, as well as expected cash flows from our operations should be sufficient to meet ongoing operational cash flow needs, capital expenditures, debt service obligations, and other fees payable under other contractual obligations for the foreseeable future. As of December 31, 2016 , we had cash and cash equivalents of approximately $51.6 million , approximately $340.3 million of contractual availability under the ABL Facility and approximately $213.1 million of borrowing base availability.

In order to further supplement the Company's operating cash flow, the Company has from time to time opportunistically accessed capital markets based on prevailing economic and financial conditions. Based on market conditions, the Company may elect to pursue additional financing alternatives in the future.

Contractual Obligations

The following table summarizes our contractual cash obligations under financing arrangements and lease commitments, including interest amounts, as of December 31, 2016 . Interest on the 6.50% Senior Notes is fixed. Interest on the Term Loan Facility is variable and has been presented at the average rate of approximately 4.0% based on the current LIBOR rate and the 1.0% floor structure of the instrument. Interest on the ABL Facility is variable and has been presented at the average rate of approximately 1.9% using the average principal balance during 2016 as a projection for future years' average balances. Actual interest rates for future periods may differ from those presented here.

(Amounts in thousands)	Total Amount	Less Than 1 Year	1 - 3 Years	3 - 5 Years	More than 5 Years
Long-term debt (1)	$ 919,719	$ 4,300	$ 8,600	$ 256,819	$ 650,000
Interest payments (2)	274,086	52,734	104,952	95,275	21,125
Non-cancelable lease commitments (3)	120,874	28,887	40,842	25,890	25,255
Purchase obligations (4)	116,532	116,532	—	—	—
Other long-term liabilities (5)	17,530	1,753	3,506	3,506	8,765
	$ 1,448,741	$ 204,206	$ 157,900	$ 381,490	$ 705,145

(1) Long-term debt is shown before discount, and consists of our 6.50% Senior Notes, Term Loan Facility, and ABL Facility. This amount excludes any estimate for excess cash flow payments that may be required under the Term Loan Facility. For more information concerning the long-term debt, see " *Liquidity and Capital Resources* " above.
(2) Interest payments for variable interest debt are based on current interest rates.
(3) Non-cancelable lease commitments represent lease payments for facilities and equipment.
(4) Purchase obligations are defined as purchase agreements that are enforceable and legally binding and that specify all significant terms, including quantity, price and the approximate timing of the transaction. These obligations are related primarily to inventory purchases under a 2017 contract that was finalized during 2016.
(5) Other long term liabilities include pension obligations which are estimated based on our 2016 annual funding requirements. Because we are unable to reliably estimate the timing of future tax payments related to uncertain tax positions, certain tax related obligations of approximately $3.9 million, including interest and penalties of approximately $1.6 million, have been excluded from the table above. Additionally, because we are unable to reliably estimate the timing of future tax payments related to our tax receivable agreement, certain tax related obligations of approximately $79.7 million, have been excluded from the table above.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements.

Inflation; Seasonality

Our performance is dependent to a significant extent upon the levels of home repair and remodeling and new home construction spending, all of which are affected by such factors as interest rates, inflation, consumer confidence and unemployment. We do not believe that inflation has had a material impact on our business, financial condition or results of operations during the past three fiscal years.

The demand for our products is seasonal, particularly in the Northeast and Midwest regions of the United States and Canada where inclement weather conditions during the winter months usually reduces the level of building and remodeling activity in both the home repair and remodeling and the new home construction sectors. Our sales in both segments are usually lower during the first and fourth quarters. Since a portion of our manufacturing overhead and operating expenses are relatively fixed throughout the year, operating income and net earnings tend to be lower in quarters with lower sales levels. In addition, the demand for cash to fund our working capital is greater from late in the fourth quarter through the first quarter.

Recent Accounting Pronouncements

See Note 1 to our consolidated financial statements for recent accounting pronouncements, which are hereby incorporated by reference into this Part II, Item 7.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

Our principal interest rate exposures relates to the loans outstanding under our Term Loan Facility and our ABL Facility, which provides for borrowings of up to $430.0 million on the Term Loan and up to $350.0 million on the ABL, bearing interest at a variable rate, based on an adjusted LIBOR rate plus an applicable interest margin or the base rate plus an applicable interest margin. Assuming the Term Loan Facility is fully drawn, each quarter point increase or decrease in the interest rate would change our interest expense by approximately $1.1 million per year. Assuming the ABL Facility is fully drawn, each quarter point increase or decrease in the interest rate would change our interest expense by approximately $0.9 million per year. At December 31, 2016 , we were not party to any interest rate swaps to manage our interest rate risk. In the future, we may enter into interest rate swaps, involving the exchange of floating for fixed rate interest payments, to reduce our exposure to interest rate volatility.

Foreign Currency Risk

Our results of operations are affected by fluctuations in the value of the U.S. dollar as compared to the value of the Canadian dollar. In 2016, the net impact of foreign currency changes to our results of operations was a gain of $0.3 million. The impact of foreign currency changes related to translation resulted is an increase in stockholders' equity of approximately $3.0 million during the year ended December 31, 2016 . In addition to the translation impact, the Company's Canadian operations purchased approximately $50.7 million in U.S. dollars during 2016 to pay U.S. suppliers. As a result, a 10% deterioration in the Canadian dollar relative to the U.S. dollar would have increased the Company's cost of goods sold by approximately $5.1 million during the year ended December 31, 2016. During the year ended December 31, 2016, the Company realized $0.2 million of losses on the 2016 derivative contracts that were reclassified from accumulated other comprehensive income or loss to current period earnings and were included in cost of goods sold. During the years ended December 31, 2016 and 2015, we entered into a hedging contracts in order to mitigate the 2016 exposure risk of currency fluctuation against the Canadian dollar and hedged approximately $45.8 million of our 2016 non-functional currency inventory purchases. During September 2016, we entered into a hedging contract in order to mitigate the 2017 exposure risk of currency fluctuation against the Canadian dollar and hedged approximately $31.7 million of our 2017 non-functional currency inventory purchases. At December 31, 2016, our foreign currency hedging contract had a market value of approximately $1.0 million and is recorded as an increase to stockholders' equity for the year ended December 31, 2016.

Commodity Pricing Risk

We are subject to significant market risk with respect to the pricing of our principal raw materials, which include PVC resin, aluminum, and wood. If prices of these raw materials were to increase dramatically, we may not be able to pass such increases on to our customers and, as a result, gross margins could decline significantly. We manage the exposure to commodity pricing risk by continuing to diversify our product mix, strategic buying programs and vendor partnering. The Midwest ingot price of aluminum decreased approximately 8.7% for the year ended December 31, 2016 compared to the year ended December 31, 2015. While, according to market indices, the average market price for PVC resin was estimated to have increased approximately 5.1% for 2016 compared to 2015.

Inflation

We do not believe that inflation has had a material effect on our business, financial condition or results of operations. Our lease payments related to our sale/leaseback agreement include an annual increase based on the Consumer Price Index ("CPI"), which could expose us to potential higher costs in years with high inflation. The CPI increase for 2016 was approximately 2.1%.

Labor Force Risk

Our manufacturing process is highly engineered but involves manual assembly, fabrication, and manufacturing processes. We believe that our success depends upon our ability to employ, train, and retain qualified personnel with the ability to design, utilize, and enhance these services and products. In addition, our ability to expand our operations depends in part on our ability to increase our labor force as the U.S. housing market recovers and minimize labor inefficiencies. A significant increase in the wages paid by competing employers could result in a reduction of our labor force, increases in the wage rates that we must pay, or both. If either of these events were to occur, our cost structure could increase, our margins could decrease, and any growth potential could be impaired. Historically, we have believed that the lag period between breaking ground on a new housing start and the utilization of our products on the exterior of a home is between 90 to 120 days.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
of Ply Gem Holdings, Inc. and Subsidiaries

We have audited the accompanying consolidated balance sheet of Ply Gem Holdings, Inc. and subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity (deficit), and cash flows for the years ended December 31, 2016 and 2015. In connection with our audits of the consolidated financial statements, we also have audited the related financial statement Schedule II, Valuation and Qualifying Accounts, with respect to the balances for the years ended December 31, 2016 and 2015. These consolidated financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and schedule based on our audits.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinions.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Ply Gem Holdings, Inc. and subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for the years ended December 31, 2016 and 2015, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule with respect to the balances for the years ended December 31, 2016 and 2015, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Ply Gem Holdings, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated March 10, 2017 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP

Raleigh, North Carolina
March 10, 2017

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Ply Gem Holdings, Inc. and Subsidiaries

We have audited the consolidated statements of operations, comprehensive (loss) income, stockholders' equity (deficit), and cash flows of Ply Gem Holdings, Inc. and subsidiaries for the year ended December 31, 2014. Our audit also included the financial statement schedule listed in Item 15(a)(2), for the year ended December 31, 2014. These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated results of Ply Gem Holdings, Inc. and subsidiaries' operations and their cash flows for the year ended December 31, 2014, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, for the year ended December 31, 2014, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

/s/ Ernst & Young LLP

Raleigh, North Carolina
March 13, 2015

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

(Amounts in thousands, except share and per share data)	For the Year Ended December 31,		
	2016	2015	2014
Net sales	$ 1,911,844	$ 1,839,726	$ 1,566,643
Cost of products sold	1,449,570	1,420,014	1,258,842
Gross profit	462,274	419,712	307,801
Operating expenses:			
Selling, general and administrative expenses	268,714	271,874	224,163
Amortization of intangible assets	25,064	25,306	22,140
Total operating expenses	293,778	297,180	246,303
Operating earnings	168,496	122,532	61,498
Foreign currency gain (loss)	299	(3,166)	(992)
Interest expense	(72,718)	(74,876)	(71,269)
Interest income	36	57	83
Tax receivable agreement liability adjustment	(60,874)	(12,947)	670
Loss on modification or extinguishment of debt	(11,747)	—	(21,364)
Income (loss) before benefit from income taxes	23,492	31,600	(31,374)
Benefit from income taxes	(51,995)	(688)	(105)
Net income (loss)	$ 75,487	$ 32,288	$ (31,269)
Net income (loss) attributable to common shareholders:			
Basic	$ 1.11	$ 0.47	$ (0.46)
Diluted	$ 1.10	$ 0.47	$ (0.46)
Weighted average shares outstanding:			
Basic	68,176,801	68,003,564	67,819,046
Diluted	68,324,146	68,106,493	67,819,046

See accompanying notes to consolidated financial statements.

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Amounts in thousands)	For the Year Ended December 31,		
	2016	2015	2014
Net income (loss)	$ 75,487	$ 32,288	$ (31,269)
Other comprehensive (loss) income, net of tax:			
Currency translation	2,950	(14,690)	(9,681)
Unrealized gain (loss) on derivative instruments	29	(465)	1,294
Minimum pension liability for actuarial gain (loss)	295	(1,436)	(8,374)
Other comprehensive income (loss)	3,274	(16,591)	(16,761)
Comprehensive income (loss)	$ 78,761	$ 15,697	$ (48,030)

See accompanying notes to consolidated financial statements.

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PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(Amounts in thousands, except share amounts)		December 31, 2016		December 31, 2015
ASSETS				
Current Assets:				
Cash and cash equivalents	$	51,597	$	109,425
Accounts receivable, less allowances of $2,663 and $3,588, respectively		209,919		195,165
Inventories:		`		
Raw materials		69,639		64,002
Work in process		24,621		25,319
Finished goods		67,696		61,082
Total inventory		161,956		150,403
Prepaid expenses and other current assets		26,850		24,647
Deferred income taxes		—		11,261
Total current assets		450,322		490,901
Property and Equipment, at cost:				
Land		8,249		8,175
Buildings and improvements		67,951		66,321
Machinery and equipment		413,565		385,750
Total property and equipment		489,765		460,246
Less accumulated depreciation		(324,209)		(299,243)
Total property and equipment, net		165,556		161,003
Other Assets:				
Intangible assets, net		104,159		128,384
Goodwill		478,514		477,739
Deferred income taxes		50,347		—
Other		8,843		8,545
Total other assets		641,863		614,668
	$	1,257,741	$	1,266,572
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)				
Current Liabilities:				
Accounts payable	$	75,398	$	74,496
Accrued expenses		169,015		152,962
Current portion of payable to related parties pursuant to tax receivable agreement		25,383		3,005
Current portion of long term debt		4,300		4,300
Total current liabilities		274,096		234,763
Deferred income taxes		2,722		21,387
Long-term portion of payable to related parties pursuant to tax receivable agreement		54,336		20,811
Other long-term liabilities		86,395		90,893
Long-term debt		836,086		975,531
Commitments and contingencies				
Stockholders' Equity (Deficit)				
Preferred stock $0.01 par, 50,000,000 shares authorized, none issued and outstanding		—		—
Common stock $0.01 par, 250,000,000 shares authorized, 68,269,749 and 68,127,491 issued and outstanding, respectively		683		681
Additional paid-in-capital		751,452		749,296
Accumulated deficit		(714,737)		(790,224)
Accumulated other comprehensive loss		(33,292)		(36,566)
Total stockholders' equity (deficit)		4,106		(76,813)
	$	1,257,741	$	1,266,572

See accompanying notes to consolidated financial statements.

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(Amounts in thousands)	For the Year Ended December 31,		
	2016	2015	2014
Cash flows from operating activities:			
Net income (loss)	$ 75,487	$ 32,288	$ (31,269)
Adjustments to reconcile net income (loss) to cash			
provided by (used in) operating activities:			
Depreciation and amortization expense	56,403	58,400	48,463
Fair-value premium on purchased inventory	—	54	38
Fair-value decrease of contingent acquisition liability	—	—	(264)
Non-cash restructuring costs	427	704	3,275
Non-cash interest expense, net	13,710	13,380	14,948
(Gain) loss on foreign currency transactions	(299)	3,166	992
Non-cash litigation expense	1,875	—	4,573
Loss on modification or extinguishment of debt	11,747	—	21,364
Stock based compensation	1,067	1,960	2,246
Deferred income taxes	(57,989)	(4,901)	(2,373)
Tax receivable agreement liability adjustment	60,874	12,947	(670)
Increase (reduction) in tax uncertainty, net of valuation allowance	1,059	(199)	131
Other	(190)	(28)	(295)
Changes in operating assets and liabilities:			
Accounts receivable, net	(14,709)	(4,562)	(12,112)
Inventories	(11,542)	29,921	(26,745)
Prepaid expenses and other assets	(2,967)	6,729	(4,960)
Accounts payable	945	(10,563)	(17,404)
Accrued expenses	9,037	3,336	(9,752)
Cash payments on restructuring and integration liabilities	(540)	(1,645)	(4,969)
Other	647	(1,624)	(449)
Net cash provided by (used in) operating activities	145,042	139,363	(15,232)
Cash flows from investing activities:			
Acquisitions, net of cash acquired and outstanding checks assumed	—	(21,000)	(130,856)
Capital expenditures	(36,001)	(33,860)	(23,661)
Proceeds from sale of assets	183	122	823
Net cash used in investing activities	(35,818)	(54,738)	(153,694)
Cash flows from financing activities:			
Proceeds from long-term debt	—	—	1,067,725
Payments on long-term debt	(164,300)	(4,300)	(855,225)
Payment of early tender and call premiums	—	—	(61,142)
Proceeds from exercises of employee stock options	1,091	2,198	1,112
Cash payments on tax receivable agreement	(4,971)	(48)	—
Debt issuance costs paid	—	(1,412)	(16,947)
Net cash provided by (used in) financing activities	(168,180)	(3,562)	135,523
Impact of exchange rate movements on cash	1,128	(4,800)	(3,236)
Net increase (decrease) in cash and cash equivalents	(57,828)	76,263	(36,639)
Cash and cash equivalents at the beginning of the period	109,425	33,162	69,801
Cash and cash equivalents at the end of the period	$ 51,597	$ 109,425	$ 33,162
Supplemental Information			
Interest paid	$ 58,745	$ 60,070	$ 64,008
Income taxes paid, net	$ 7,024	$ 2,607	$ 1,676

See accompanying notes to consolidated financial statements.

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)

(Dollars in thousands)	Common Stock		Additional Paid-in-	Accumulated	Accumulated Other Comprehensive	Total Stockholders'
	Shares	Amount	Capital	Deficit	Income (Loss)	Equity (Deficit)
Balance, December 31, 2013	67,223,233	$ 672	$ 741,789	$ (791,243)	$ (3,214)	$ (51,996)
Comprehensive loss:						
Net loss	—	—	—	(31,269)	—	(31,269)
Other comprehensive loss	—	—	—	—	(16,761)	(16,761)
Stock compensation	—	—	2,246	—	—	2,246
Stock option exercises	654,354	7	1,105	—	—	1,112
Balance, December 31, 2014	67,877,587	$ 679	$ 745,140	$ (822,512)	$ (19,975)	$ (96,668)
Comprehensive income:						
Net income	—	—	—	32,288	—	32,288
Other comprehensive loss	—	—	—	—	(16,591)	(16,591)
Stock compensation	—	—	1,960	—	—	1,960
Stock option exercises	249,904	2	2,196	—	—	2,198
Balance, December 31, 2015	68,127,491	$ 681	$ 749,296	$ (790,224)	$ (36,566)	$ (76,813)
Comprehensive income:						
Net income	—	—	—	75,487	—	75,487
Other comprehensive income	—	—	—	—	3,274	3,274
Stock compensation	—	—	1,067	—	—	1,067
Stock option exercises	142,258	2	1,089	—	—	1,091
Balance, December 31, 2016	68,269,749	$ 683	$ 751,452	$ (714,737)	$ (33,292)	$ 4,106

See accompanying notes to consolidated financial statements.

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

Ply Gem Holdings, Inc. ("Ply Gem Holdings") and its wholly owned subsidiaries (individually and collectively, the "Company" or "Ply Gem") are diversified manufacturers of residential and commercial building products, operating with two segments: (i) Siding, Fencing and Stone and (ii) Windows and Doors. Through these segments, Ply Gem Industries, Inc. ("Ply Gem Industries") manufactures and sells, primarily in the United States and Canada, a wide variety of products for the residential and commercial construction, manufactured housing, and remodeling and renovation markets.

Ply Gem Holdings was incorporated as a wholly owned subsidiary of Ply Gem Investment Holdings, Inc. ("Ply Gem Investment Holdings"), on January 23, 2004 by affiliates of CI Capital Partners LLC ("CI Capital Partners") for the purpose of acquiring Ply Gem Industries from Nortek, Inc. ("Nortek"). On January 11, 2010, Ply Gem Investment Holdings was merged with and into Ply Gem Prime Holdings, Inc. ("Ply Gem Prime"), with Ply Gem Prime being the surviving corporation. As a result, Ply Gem Holdings was a wholly owned subsidiary of Ply Gem Prime.

The Ply Gem acquisition was completed on February 12, 2004, when Nortek sold Ply Gem Industries to Ply Gem Holdings, an affiliate of CI Capital Partners pursuant to the terms of the stock purchase agreement among Ply Gem Investment Holdings, Nortek, and WDS LLC dated as of December 19, 2003, as amended. Prior to February 12, 2004, the date of the Ply Gem acquisition, Ply Gem Holdings had no operations and Ply Gem Industries was wholly owned by a subsidiary of WDS LLC, which was a wholly owned subsidiary of Nortek.

Ply Gem is a diversified manufacturer of residential and commercial building products, which are sold primarily in the United States and Canada, and include a wide variety of products for the residential and commercial construction, the do-it-yourself and the professional remodeling and renovation markets. The demand for the Company's products is seasonal, particularly in the Northeast and Midwest regions of the United States and Canada where inclement weather during the winter months usually reduces the level of building and remodeling activity in both the home repair and remodeling and new home construction sectors. The Company's sales are usually lower during the first and fourth quarters.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Ply Gem Holdings and its subsidiaries, all of which are wholly owned. All intercompany accounts and transactions have been eliminated.

Accounting Policies and Use of Estimates

The preparation of these consolidated financial statements in conformity with accounting principles generally accepted in the United States involves estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of income and expense during the reporting periods. Certain of the Company's accounting policies require the application of judgment in selecting the appropriate assumptions for calculating financial estimates. By their nature, these judgments are subject to an inherent degree of uncertainty. The Company periodically evaluates the judgments and estimates used in their critical accounting policies to ensure that such judgments and estimates are reasonable. Such estimates include the allowance for doubtful accounts receivable, rebates, pensions, valuation reserve for inventories, warranty reserves, insurance reserves, legal contingencies, assumptions used in the calculation of income taxes and the tax receivable agreement, projected cash flows used in the goodwill and intangible asset impairment tests, and environmental accruals and other contingencies. These judgments are based on the Company's historical experience, current trends and information available from other sources, as appropriate and are based on management's best estimates and judgments. The Company adjusts such estimates and assumptions when facts and circumstances dictate. Illiquid credit markets, volatile equity, foreign currency, and depressed housing and remodeling markets combine to increase the uncertainty inherent in such estimates and assumptions. If different conditions result from those assumptions used in the Company's judgments, actual results could be materially different from the Company's estimates.

Reclassifications

Due to the adoption of ASU No. 2015-03, *Interest-Imputation of Interest* , certain balance sheet amounts in the prior fiscal year have been reclassified to conform to the presentation adopted in the current fiscal year, with no effect on net income or accumulated deficit. Refer to Note 5, *Long-Term Debt* , for the presentation impact on net debt. The Company also reclassed certain amounts in the consolidated statement of cash flows to conform to the presentation adopted in the current fiscal year with separate classification for payments on the tax receivable agreement.

Recognition of Sales and Related Costs, Incentives and Allowances

The Company recognizes sales upon the shipment of products, net of applicable provisions for discounts and allowances. Generally, the customer takes title upon shipment and assumes the risks and rewards of ownership of the product. For certain products, it is industry practice that customers take title to products upon delivery, at which time revenue is then recognized by the Company. Allowances for cash discounts, volume rebates and other customer incentive programs, as well as gross customer returns, among others, are recorded as a reduction of sales at the time of sale based upon the estimated future outcome. Cash discounts, volume rebates and other customer incentive programs are based upon certain percentages agreed upon with the Company's various customers, which are typically earned by the customer over an annual period.

The Company records periodic estimates for these amounts based upon the historical results to date, estimated future results through the end of the contract period and the contractual provisions of the customer agreements. Customer returns are recorded as a reduction to sales on an actual basis throughout the year and also include an estimate at the end of each reporting period for future customer returns related to sales recorded prior to the end of the period. The Company generally estimates customer returns based upon the time lag that historically occurs between the sale date and the return date while also factoring in any new business conditions that might impact the historical analysis such as new product introduction. The Company also provides for estimates of warranty and shipping costs at the time of sale. Shipping and warranty costs are included in cost of products sold. Bad debt provisions are included in selling, general and administrative expenses. The amounts recorded are generally based upon historically derived percentages while also factoring in any new business conditions that are expected to impact the historical analysis such as new product introduction for warranty and bankruptcies of particular customers for bad debt.

Cash Equivalents

Cash equivalents consist of short-term highly liquid investments with original maturities of three months or less which are readily convertible into cash.

Accounts receivable

Accounts receivable-trade are recorded at their net realizable value. The allowance for doubtful accounts was $2.7 million and $3.6 million at December 31, 2016 and 2015 , respectively. The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. The Company estimates the allowance for doubtful accounts based on a variety of factors including the length of time receivables are past due, the financial health of its customers, unusual macroeconomic conditions and historical experience. If the financial condition of its customers deteriorates or other circumstances occur that result in an impairment of customers' ability to make payments, the Company records additional allowances as needed. The Company writes off uncollectible trade accounts receivable against the allowance for doubtful accounts when collection efforts have been exhausted and/or any legal action taken by the Company has concluded.

Inventories

Inventories in the accompanying consolidated balance sheets are valued at the lower of cost or market and are determined by the first-in, first-out (FIFO) method. The Company records provisions, as appropriate, to write-down obsolete and excess inventory to estimated net realizable value. The process for evaluating obsolete and excess inventory often requires the Company to make subjective judgments and estimates concerning future sales levels, quantities and prices at which such inventory will be able to be sold in the normal course of business. Accelerating the disposal process or incorrect estimates of future sales potential may cause actual results to differ from the estimates at the time such inventory is disposed or sold. As of December 31, 2016 , the Company had inventory purchase commitments of approximately $116.5 million .

The inventory reserves were approximately $8.4 million at December 31, 2016 , increasing by approximately $0.1 million compared to the December 31, 2015 reserves of approximately $8.3 million .

Property and Equipment

Property and equipment are presented at cost. Depreciation of property and equipment are provided on a straight-line basis over estimated useful lives, which are generally as follows:

Buildings and improvements	10-37 years
Machinery and equipment, including leases	3-15 years
Leasehold improvements	Term of lease or useful life, whichever is shorter

Expenditures for maintenance and repairs are expensed when incurred. Expenditures for renewals and betterments are capitalized. When assets are sold, or otherwise disposed, the cost and related accumulated depreciation are eliminated and the resulting gain or loss is recognized in operations. Depreciation expense for the years ended December 31, 2016 , 2015 , and 2014 was approximately $31.3 million , $33.1 million , and $26.3 million , respectively.

Intangible Assets, Goodwill and Other Long-lived Assets

Long-lived assets

The Company reviews long-lived assets for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. The Company performs undiscounted operating cash flow analyses to determine if impairment exists. If an impairment is determined to exist, any related impairment loss is calculated based on the asset's fair value and the discounted cash flow.

The Company tests for long-lived asset impairment at the following asset group levels: (i) the combined U.S. Siding, Fencing and Stone companies in the Siding, Fencing and Stone segment ("Siding"), (ii) the combined U.S. Windows companies in the Windows and Doors segment ("US Windows"), (iii) the combined Simonton windows companies in the Windows and Doors segment, (iv) Gienow Canada Inc. ("Gienow Canada") (a combined Western Canadian company created by the January 2014 amalgamation of the Company's legacy Western Canadian business and the Gienow entity acquired in April 2013) in the Windows and Doors segment, and (v) Mitten (formerly known as Mitten, Inc.), acquired in May 2013, in the Siding, Fencing and Stone segment.

For purposes of recognition and measurement of an impairment loss, a long-lived asset or asset group should represent the lowest level for which an entity can separately identify cash flows that are largely independent of the cash flows of other assets and liabilities. There were no asset impairment charges for the years ended December 31, 2016, 2015 or 2014.

Goodwill

Acquisition accounting involves judgment with respect to the valuation of the acquired assets and liabilities in order to determine the final amount of goodwill. For significant acquisitions, the Company values items such as property and equipment and acquired intangibles based upon appraisals.

The Company evaluates goodwill for impairment on an annual basis and whenever events or business conditions warrant. All other intangible assets are amortized over their estimated useful lives. The Company assesses goodwill for impairment at the November month end each year (November 26 for 2016) and also at any other date when events or changes in circumstances indicate that the carrying value of these assets may exceed their fair value. To evaluate goodwill for impairment, the Company estimates the fair value of reporting units considering such factors as discounted cash flows and valuation multiples for comparable publicly traded companies. A significant reduction in projected sales and earnings which would lead to a reduction in future cash flows could indicate potential impairment. Refer to Note 3, *Goodwill* for additional considerations regarding the results of the impairment test in 2016 and 2015 .

Debt Issuance Costs

Debt issuance costs, composed of facility, agency, and certain legal fees associated with issuing new debt, are amortized over the contractual term of the related agreement using the effective interest method. Net debt issuance costs totaled approximately $16.5 million and $22.2 million as of December 31, 2016 and December 31, 2015 , respectively, and have been recorded within long-term debt ($14.2 million at December 31, 2016 and $19.3 million at December 31, 2015) and other non-current assets ($2.3 million at December 31, 2016 and $2.9 million at December 31, 2015) in the accompanying consolidated balance sheets. The debt issuance costs included in other long term assets relate to the Senior Secured Asset Based Revolving Credit Facility due 2020 ("ABL Facility"). Amortization of debt issuance costs for the years ended December 31, 2016 , December 31, 2015 and December 31, 2014 was approximately $3.3 million , $3.1 million , and $4.0 million , respectively. Amortization of debt issuance costs is recorded in interest expense in the accompanying consolidated statements of operations and comprehensive income (loss).

Share Based Compensation

Share-based compensation cost for the Company's stock option plan is measured at the grant date, based on the estimated fair value of the award, and is recognized over the requisite service period. The fair value of each option award is estimated on the grant date using a Black-Scholes option valuation model. Expected volatility is based on a review of several market indicators, including peer companies. The risk-free interest rate is based on U.S. Treasury issues with a term equal to the expected life of the option.

Insurance Liabilities

The Company is self-insured for certain casualty losses and medical liabilities. The Company records insurance liabilities and related expenses for health, workers' compensation, product and general liability losses and other insurance expenses in accordance with either the contractual terms of their policies or, if self-insured, the total liabilities that are estimable and probable as of the reporting date. Insurance liabilities are recorded as current liabilities to the extent they are expected to be paid in the succeeding year with the remaining requirements classified as long-term liabilities. The accounting for self-insured plans requires that significant judgments and estimates be made both with respect to the future liabilities to be paid for known claims and incurred but not reported claims as of the reporting date. The Company relies on historical trends when determining the appropriate incurred but not reported claims and health insurance reserves to record in its consolidated balance sheets. In certain cases where partial insurance coverage exists, the Company must estimate the portion of the liability that will be covered by existing insurance policies to arrive at the net expected liability to the Company.

Income Taxes

The Company utilizes the asset and liability method of accounting for income taxes which requires that deferred tax assets and liabilities be recorded to reflect the future tax consequences of temporary differences between the book and tax basis of various assets and liabilities. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect of changes in tax rates on deferred tax assets and liabilities are recognized as income or expense in the period in which the rate change occurs. A valuation allowance is established to offset any deferred tax assets if, based upon the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

During the year ended December 31, 2016, the Company determined that a valuation allowance was no longer required against its federal deferred tax assets and a portion of its state deferred tax assets. As a result, the Company released approximately $86.5 million of its valuation allowance since positive evidence outweighed negative evidence thereby allowing the Company to achieve the "more likely than not" realization threshold. Of the total valuation allowance release of $86.5 million, $31.3 million was offset against 2016 current year tax expense with the remaining $55.2 million representing the discrete valuation allowance release. The Company still remains in a valuation allowance position at December 31, 2016 against its deferred tax assets for certain state and Canadian jurisdictions as it is currently deemed "more likely than not" that the benefit of such net tax assets will not be utilized as the Company continues to be in a three-year cumulative loss position for these states and Canadian jurisdictions.

Estimates are required with respect to, among other things, the appropriate state income tax rates used in the various states that the Company and its subsidiaries are required to file, the potential utilization of operating and capital loss carry-forwards for federal, state, and foreign income tax purposes and valuation allowances required, if any, for tax assets that may not be realized in the future. The Company establishes reserves when, despite our belief that our tax return positions are fully supportable, certain positions could be challenged, and the positions may not be fully sustained. As a result of the 2013 Ply Gem Prime and Ply Gem Holdings merger, U.S. federal income tax returns are prepared and filed by Ply Gem Holdings on behalf of itself, Ply Gem Industries, Inc. (“Ply Gem Industries”), and its U.S. subsidiaries. The Company has executed a tax sharing agreement with Ply Gem Industries and Ply Gem Holdings pursuant to which tax liabilities for each respective party are computed on a stand-alone basis. The Company along with its U.S. subsidiaries file a consolidated federal income tax return, separate state income tax returns, combined state returns, and unitary state returns. Gienow Canada and Mitten both file separate Canadian federal income tax returns and separate provincial returns.

Tax receivable agreement ("TRA") liability

The TRA liability generally provides for the payment by the Company to the Tax Receivable Entity of 85% of the amount of cash savings, if any, in the U.S. federal, state and local income tax that the Company actually realizes in periods ending after the Company's initial public offering as a result of (i) net operating loss carryovers ("NOLs") from periods ending before January 1, 2013, (ii) deductible expenses attributable to the initial public offering and (iii) deductions related to imputed interest. Since the inception of the TRA liability with the Company’s 2013 initial public offering, the Company has been in a full valuation allowance for federal purposes and had partial valuation allowances on certain state and Canadian jurisdictions. As a result of the Company’s tax valuation allowance position for federal and state purposes, the Company historically calculated the TRA liability considering (i) current year taxable income only (due to the uncertainty of future taxable income associated with the Company’s cumulative loss position) and (ii) future income due to the expected reversals of deferred tax liabilities. During the year ended December 31, 2016, the Company released its discrete valuation allowance on its federal deferred tax assets and certain state deferred tax assets for approximately $55.2 million due to positive factors outweighing negative evidence thereby allowing the Company to achieve the “more likely than not” realization threshold. The factors surrounding the release of this valuation allowance thereby eliminated any uncertainty as to future taxable income. Consequently, for purposes of calculating the TRA liability, the Company for the year ended December 31, 2016 utilized future forecasts of taxable income beyond the 2016 tax year to determine the TRA liability. The Company’s future taxable income estimate was used to determine the cumulative NOLs that are expected to be utilized and the TRA liability was accordingly adjusted using the 85% TRA rate as the Company retains the benefit of 15% of the tax savings.

Sales Taxes

Sales taxes collected from customers are recorded as liabilities until remitted to taxing authorities and therefore are not reflected in the consolidated statements of operations.

Advertising Costs

Advertising costs are generally expensed as incurred. Advertising expense was $14.0 million , $15.1 million , and $15.3 million for the years ended December 31, 2016 , 2015 , and 2014 , respectively.

Commitments and Contingencies

The Company provides accruals for all direct costs associated with the estimated resolution of contingencies at the earliest date at which it is deemed probable that a liability has been incurred and the amount of such liability can be reasonably estimated. Costs accrued have been estimated based upon an analysis of potential results, assuming a combination of litigation and settlement strategies and outcomes. Insurance recoveries are recorded as assets when their receipt is deemed probable.

Environmental

The Company accrues for losses associated with environmental remediation obligations when such losses are probable and reasonably estimable. Environmental remediation obligation accruals are adjusted as further information develops or circumstances change. Costs of future expenditures for environmental remediation obligations are not discounted to their present value. Recoveries of environmental remediation costs from other parties are recorded as assets when their receipt is deemed probable.

Liquidity

The Company intends to fund its ongoing capital and working capital requirements, including its internal growth, through a combination of cash flows from operations and, if necessary, from borrowings under the revolving credit portion of its senior secured asset based revolving credit facility. As of December 31, 2016 , the Company had approximately $840.4 million of indebtedness, approximately $51.6 million of cash and cash equivalents, and approximately $213.1 million of borrowing base availability, reflecting $0.0 million of ABL borrowings and approximately $9.7 million of letters of credit and priority payable reserves issued under the ABL Facility.

Because of the inherent seasonality in the Company's business and the resulting working capital requirements, the Company's liquidity position fluctuates within a given year. The seasonal effect that creates the Company's greatest needs has historically been experienced during the first six months of the year and the Company anticipates borrowing funds under its ABL Facility to support this requirement. However, the Company anticipates the funds generated from operations combined with cash on hand and funds available under the ABL Facility will be adequate to finance its ongoing operational cash flow needs, capital expenditures, debt service obligations, management incentive expenses, tax receivable agreement payments, and other fees payable under other contractual obligations for the foreseeable future.

Foreign Currency

Gienow Canada and Mitten, the Company's Canadian subsidiaries, utilize the Canadian dollar as their functional currency. For reporting purposes, the Company translates the assets and liabilities of its foreign entity at the exchange rates in effect at year-end. Net sales and expenses are translated using average exchange rates in effect during the period. Gains and losses from foreign currency translation are credited or charged to accumulated other comprehensive income or loss in the accompanying consolidated balance sheets. Gains and losses arising from international intercompany transactions that are of a long-term investment nature are reported in the same manner as translation gains and losses. Realized exchange gains and losses are included in net income (loss) for the years presented.

The Company recorded a gain from foreign currency transactions of approximately $0.3 million , a loss of approximately $3.2 million , and a loss of approximately $1.0 million for the years ended December 31, 2016 , 2015 , and 2014 , respectively. During the years ended December 31, 2016 , 2015 , and 2014 , accumulated other comprehensive income (loss) included a currency translation adjustment of approximately $3.0 million , $(14.7) million , and $(9.7) million , respectively.

Derivative Financial Instruments

During the year ended December 31, 2016, the Company entered into a forward contract agreement to hedge approximately $31.7 million of its 2017 non-functional currency inventory purchases. During the years ended December 31, 2016 and 2015, the Company entered into forward contract agreements to hedge approximately $45.8 million of its 2016 non-functional currency inventory purchases (settled prior to December 31, 2016). These forward contracts were established to protect the Company from variability in cash flows attributable to changes in the U.S. dollar relative to the Canadian dollar.

The Company has designated the 2017, 2016, and 2015 forward contracts as cash flow hedges. As a cash flow hedge, unrealized gains are recognized as assets while unrealized losses are recognized as liabilities. The 2017, 2016, and 2015 forward contracts are highly correlated to the changes in foreign currency rates to which the Company is exposed. Unrealized gains and losses on these agreements are designated as effective or ineffective. The effective portion of such gains or losses is recorded as a component of accumulated other comprehensive income or loss, while the ineffective portion of such gains or losses is recorded as a component of cost of goods sold. Future realized gains and losses in connection with each inventory purchase will be reclassified from accumulated other comprehensive income or loss to cost of goods sold. The gains and losses on the derivative contract that are reclassified from accumulated other comprehensive income or loss to current period earnings are included in the line item in which the hedged item is recorded in the same period the forecasted transaction affects earnings. During the years ended December 31, 2016, 2015 and 2014, the Company realized a loss of approximately $0.2 million , a gain of approximately $5.5 million , and a loss of approximately $0.4 million , respectively, within cost of goods sold in the consolidated statement of operations based on these cash flow hedges.

The changes in fair values of derivatives that have been designated and qualify as cash flow hedges are recorded in accumulated other comprehensive income or loss and are reclassified into cost of goods sold in the same period the hedged item affects earnings. Due to the high degree of effectiveness between the hedging instruments and the underlying exposures being hedged, fluctuations in the value of the derivative instruments are generally offset by changes in the fair value or cash flows of the underlying exposures being hedged. The changes in the fair value of derivatives that do not qualify as effective are immediately recognized in earnings. As of December 31, 2016 , approximately $1.0 million of the deferred net gain on derivative instruments included in accumulated other comprehensive loss is expected to be reclassified to cost of goods sold during the next twelve months. This expectation is based on the expected timing of the occurrence of the hedged forecasted transactions.

The fair value of the foreign currency forward contract agreement is estimated using industry standard valuation models using market-based observable inputs, including spot rates, forward points, interest rates and volatility inputs (Level 2). A summary of the recorded asset included in the accompanying consolidated balance sheets is as follows:

(Amounts in thousands)	December 31, 2016	December 31, 2015
Foreign currency hedge (included in other assets)	$ 962	$ 829

Concentration of Credit Risk

The Company's largest customer, ABC Supply Co. Inc., accounted for approximately 13.1% , 11.6% , and 12.0% of consolidated net sales for the years ended December 31, 2016 , 2015 , and 2014 , respectively, and 14.4% and 14.3% of outstanding accounts receivable as of December 31, 2016 and 2015 , respectively.

Fair Value Measurement

The accounting standard for fair value discusses valuation techniques, such as the market approach (comparable market prices), the income approach (present value of future income or cash flows), and the cost approach (cost to replace the service capacity of an asset or replacement cost). The standard utilizes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The following is a brief description of those three levels:

- Level 1: Observable inputs such as quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.
- Level 3: Inputs that reflect the reporting entity's own assumptions.

The hierarchy requires the use of observable market data, when available, and to minimize the use of unobservable inputs when determining fair value. The Company's population of recurring financial assets and liabilities subject to fair value measurements and the necessary disclosures are as follows:

(Amounts in thousands) Description	Carrying Value	Fair Value Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Liabilities:					
Senior Notes-6.50%	$ 650,000	$ 676,000	$ 676,000	$ —	$ —
Term Loan Facility	258,175	260,757	—	260,757	—
As of December 31, 2016	$ 908,175	$ 936,757	$ 676,000	$ 260,757	$ —
Liabilities:					
Senior Notes-6.50%	$ 650,000	$ 585,000	$ 585,000	$ —	$ —
Term Loan Facility	422,475	411,913	—	411,913	—
As of December 31, 2015	$ 1,072,475	$ 996,913	$ 585,000	$ 411,913	$ —

The fair value of the long-term debt instruments was determined by utilizing available market information. The carrying value of the Company's other financial instruments approximates their fair value due to the short-term nature of these instruments. Refer to Note 6, *Defined Benefit Plans* for fair value disclosures related to the Company's pension assets.

Earnings (loss) per common share

Basic earnings (loss) per share ("EPS") is computed based upon weighted-average shares outstanding during the period. Dilutive earnings per share is computed consistently with the basic computation while giving effect to all dilutive potential common shares and common share equivalents that were outstanding during the period. Ply Gem Holdings uses the treasury stock method to reflect the potential dilutive effect of unvested stock awards and unexercised options.

The Company was in a net loss position for the year December 31, 2014 and therefore the impact of stock options and unvested restricted stock were excluded from the computation of diluted earnings (loss) per share, as the inclusion of such amounts would be anti-dilutive.

The computation of the dilutive effect of other potential common shares included options and unvested restricted stock representing approximately 0.1 million and 0.1 million shares of common stock for the years ended December 31, 2016 and December 31, 2015, respectively. The computation of the dilutive effect of other potential common shares excluded options and unvested restricted stock representing approximately 0.1 million shares of common stock for the year ended December 31, 2014. Under the treasury stock method, the inclusion of these stock awards would have been anti-dilutive for 2014.

Comprehensive (Loss) Income

The components of accumulated other comprehensive (loss) income are as follows:

(Amounts in thousands)	Foreign currency translation	Unrealized gain (loss) on derivative instruments	Minimum pension liability adjustments	Accumulated other comprehensive (loss) income
Balance, December 31, 2013	$ 2,950	$ —	$ (6,164)	$ (3,214)
Net current period change	(9,681)	1,294	(8,374)	(16,761)
Balance, December 31, 2014	(6,731)	1,294	(14,538)	(19,975)
Net current period change	(14,690)	(465)	(1,436)	(16,591)
Balance, December 31, 2015	(21,421)	829	(15,974)	(36,566)
Net current period change	2,950	29	295	3,274
Balance, December 31, 2016	$ (18,471)	$ 858	$ (15,679)	$ (33,292)

New Accounting Pronouncements

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* , which completes the joint effort by the FASB and the International Accounting Standards Board to clarify the principles for recognizing revenue and improve financial reporting by creating common revenue recognition guidance for U.S. generally accepted accounting principles ("GAAP") and International Financial Reporting Standards ("IFRS"). ASU 2014-09 provides enhancements to the quality and consistency of how revenue is reported while also improving comparability in the financial statements of companies reporting using IFRS and GAAP. The core principle of this update is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In July 2015, the FASB finalized a one-year deferral of the effective date of the new revenue recognition standard. The new standard will become effective for Ply Gem beginning with the first quarter of 2018 and can be adopted either retrospectively to each prior reporting period presented or as a cumulative effect adjustment as of the date of adoption. The method of adoption has not been determined yet by the Company. The Company has reviewed the revised guidance and assessed the potential impact on the consolidated financial statements. This new revenue guidance is not expected to change the Company's consolidated financial position, results of operations or cash flows.

In July 2015, the FASB issued ASU No. 2015-11, *Simplifying the Measurement of Inventory* , which requires measurement of in scope inventory at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. The change is effective for fiscal years, and interim reporting periods within those years, beginning on or after December 15, 2016, which means the first quarter of Ply Gem's fiscal year 2017. The amendment should be applied prospectively with earlier application permitted as of the beginning of an interim or annual reporting period. This new guidance is not expected to change the Company's consolidated financial position, results of operations or cash flows.

In November 2015, the FASB issued ASU No. 2015-17, *Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes* . This ASU requires reporting entities to classify deferred income taxes as non-current in the consolidated balance sheets. Deferred income taxes were previously required to be classified as current or non-current in the consolidated balance sheets. During the fourth quarter of 2016, the Company elected to prospectively early adopt this standard. Additional information regarding the impact of adoption of this standard is contained in Note 10 *Income Taxes* .

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* . The core principal of the guidance is that an entity should recognize assets and liabilities arising from a lease for both financing and operating leases, along with additional qualitative and quantitative disclosures. The standard will be effective for fiscal years beginning after December 15, 2018, including interim periods within such fiscal years. Early adoption is permitted. The guidance is to be applied using a modified retrospective transition method with the option to elect a package of practical expedients. The Company is currently evaluating the impact of the adoption of this accounting standard update on its internal processes, operating results and financial reporting. The impact is currently not known or reasonably estimable.

In March 2016, the FASB issued ASU No. 2016-08, *Revenue from Contracts with Customers (Topic 60* 6), Principal versus Agent Considerations (Reporting Revenue Gross versus Net). This update provides guidance on recording revenue on a gross basis versus a net basis based on the determination of whether an entity is a principal or an agent when another party is involved in providing goods or services to a customer. The amendments in this update affect the guidance in ASU No. 2014-09 and are effective in the same timeframe as ASU No. 2014-09 as discussed above.

In March 2016, the FASB issued ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting* . The amendments in this updated guidance include changes to simplify the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. This guidance is effective for fiscal years beginning after December 15, 2016, including interim periods within that reporting period. Early adoption is permitted. The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Classification of Certain Cash Receipts and Cash Payments* . ASU 2016-15 addresses how certain cash receipts and cash payments are presented and classified in the statement of cash flows under Topic 230, *Statement of Cash Flow, and Other Topics* . ASU 2016-15 is effective for annual reporting periods, and interim periods therein, beginning after December 15, 2017. The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles-Goodwill and other (Topic 350): Simplifying the test for goodwill impairment.* ASU 2017-04 simplifies the accounting for goodwill impairments and allows a goodwill impairment charge to be based on the amount of a reporting unit's carrying value in excess of its fair value. This will essentially eliminate what is known as "Step 2" under the current guidance. ASU 2017-04 is effective for annual reporting periods, and interim periods therein, beginning after December 15, 2019. The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

2. ACQUISITIONS

Canyon Stone

On May 29, 2015 , Ply Gem completed an acquisition for cash consideration of approximately $21.0 million to acquire substantially all of the assets of Canyon Stone Inc. ("Canyon Stone"), a manufacturer and distributor of stone veneer and accessories in the United States. Canyon Stone has manufacturing facilities in Olathe, Kansas and Youngsville, North Carolina. The purchase agreement also included contingent consideration in the form of potential earn-out payments of up to $1.0 million based on Canyon Stone's earnings for fiscal years 2015 through 2017. This acquisition expanded the Company's stone veneer manufacturing footprint across the United States as it complements the existing Ply Gem Stone manufacturing facility in Middleburg, Pennsylvania. The Company accounted for the transaction as an acquisition in accordance with the provisions of Accounting Standards Codification 805, *Business Combinations* , which results in a new valuation for the assets and liabilities of Canyon Stone based upon fair values as of the acquisition date.

The Company determined the fair value of the tangible and intangible assets and the liabilities acquired, and recorded goodwill based on the excess of fair value of the acquisition consideration over such fair values, as follows:

(Amounts in thousands)		
Accounts receivable	$	3,559
Inventories		712
Prepaid expenses and other current assets		41
Property and equipment		2,019
Intangible assets		9,300
Goodwill		7,642
Accounts payable, accrued expenses and other long-term liabilities		(2,273)
	$	21,000

The $7.6 million of goodwill was allocated to the Siding, Fencing and Stone segment and the goodwill is expected to be deductible for tax purposes. The Company has recognized a liability of approximately $0.8 million as of December 31, 2016 and December 31, 2015 for the estimated fair value of the earn-out. This amount is included within other long-term liabilities in the consolidated balance sheets. During the year ended December 31, 2015, the Company incurred a $0.1 million expense within selling, general and administrative expenses in the consolidated statement of operations for the change in the earn-out. Any future change in the fair value of the contingent consideration subsequent to the acquisition date will be recognized in earnings in the period of change.

For the year ended December 31, 2015, Canyon Stone contributed net sales of approximately $17.6 million , and net income of $0.8 million , which has been included within the Company’s consolidated statement of operations within the Siding, Fencing, and Stone segment. If the Canyon Stone acquisition had occurred at the beginning of 2015, the Company’s consolidated net sales and net income (loss) would have been:

(Amounts in thousands) (Unaudited)	December 31, 2015		December 31, 2014	
Net sales	$	1,850,993	$	1,590,669
Net income (loss)		32,712		(28,608)

During the year ended December 31, 2015, the Company incurred $0.3 million of acquisition-related costs for Canyon Stone. These expenses are included in selling, general, and administrative expenses in the Company’s consolidated statements of operations and comprehensive income (loss) within the Siding, Fencing and Stone segment.

Simonton

On September 19, 2014 , Ply Gem completed an acquisition for cash consideration of approximately $130.0 million to acquire the capital stock of Fortune Brands Windows, Inc. and its direct and indirect wholly owned subsidiaries Simonton Building Products LLC, Simonton Industries, Inc., Simonton Windows, Inc. and SimEx, Inc. Fortune Brand Windows’ name has subsequently been changed to Simonton Windows & Doors, Inc. (“Simonton”). Simonton is a premier repair and remodeling window company with leading brand recognition within this market providing the Company with long-term value. Simonton manufactures top quality vinyl windows and doors and provides industry-leading customization options, delivery times, and customer service. Simonton has manufacturing plant locations in California, Illinois, and West Virginia with administrative offices in Ohio. The Simonton acquisition balances the Company's end window market mix by moving our market exposure to approximately 68% and 32% for the new construction and repair and remodeling markets, respectively, as compared to the approximate 80% and 20% legacy split for the Company’s window business. By incorporating the Company’s siding net sales, the Company’s market exposure is expected to be approximately 54% and 46% for the new construction and repair and remodeling markets, respectively. Simonton strategically fits into the Company’s existing footprint and broadens its service offering to existing and new customers within the building product industry. The Company accounted for the transaction as an acquisition in accordance with the provisions of Accounting Standards Codification 805, *Business Combinations* , which results in a new valuation for the assets and liabilities of Simonton based upon fair values as of the acquisition date.

The Company determined the fair value of the tangible and intangible assets and the liabilities acquired, and recorded goodwill based on the excess of fair value of the acquisition consideration over such fair value, as follows:

(Amounts in thousands)	
Cash	$ (856)
Accounts receivable	37,134
Inventories	17,742
Prepaid expenses and other current assets	2,133
Property and equipment	53,655
Intangible assets	62,170
Goodwill	58,681
Other assets	426
Accounts payable and accrued expenses, including short-term warranty	(49,916)
Deferred income taxes	(10,462)
Long-term warranty and other liabilities	(40,707)
	$ 130,000

The $58.7 million of goodwill was allocated to the Windows and Doors segment and none of the goodwill is deductible for tax purposes. As of the acquisition date and as of December 31, 2016 and 2015, Simonton was in a net deferred tax liability position, which was evaluated with the Company's existing net deferred tax asset position as of December 31, 2016 and 2015 considering the Company's valuation allowance position. This resulted in a reversal of approximately $2.8 million and $7.5 million in the Company's valuation allowance during the years ended December 31, 2015 and 2014, respectively. The reversal was recorded in the Company's consolidated statement of operations within the benefit for income taxes.

For the year ended December 31, 2014, Simonton contributed net sales of approximately $91.1 million and a net loss of $1.5 million , which has been included within the Company's consolidated statement of operations. If the Simonton acquisition would have occurred at the beginning of 2013, the Company's consolidated net sales and net loss would have been:

(Amounts in thousands) (Unaudited)	December 31, 2014
Net sales	$ 1,793,502
Net loss	(29,625)

During the years ended December 31, 2015 and 2014, the Company incurred $0.1 million and $0.9 million of acquisition-related costs, respectively, for Simonton. These expenses are included in selling, general, and administrative expenses in the Company's consolidated statement of operations within the Windows and Doors segment.

3. GOODWILL

In applying the acquisition method of accounting, the Company determines the fair value of the tangible and intangible assets acquired, and the fair value of the liabilities assumed. The excess of the fair value of the consideration transferred and the fair value of the net assets acquired is recorded as goodwill. The Company performs an annual test for goodwill impairment at the November month end each year (November 26 for 2016) and also at any other date when events or changes in circumstances indicate that the carrying value of these assets may exceed their fair value. The Company has defined its reporting units and performs the impairment testing of goodwill at the operating segment level. The Company has two reporting units: 1) Siding, Fencing, and Stone and 2) Windows and Doors. Separate valuations are performed for each of these reporting units in order to test for impairment.

The Company uses the two-step method to determine goodwill impairment. If the carrying amount of a reporting unit exceeds its fair value ("Step One"), the Company currently measures the possible goodwill impairment based upon a hypothetical allocation of the fair value estimate of the reporting unit to all of the underlying assets and liabilities of the reporting unit, including previously unrecognized intangible assets ("Step Two"). The excess of the reporting unit's fair value over the amounts assigned to its assets and liabilities is the implied fair value of goodwill. An impairment loss is recognized to the extent that a reporting unit's recorded goodwill exceeds the implied fair value of goodwill.

To determine the fair value of its reporting units, the Company equally considers both the income and market valuation methodologies. The income valuation methodology uses the fair value of the cash flows that the reporting unit can be expected to generate in the future. This method requires management to project revenues, operating expenses, working capital investment, capital spending and cash flows for the reporting unit over a multi-year period as well as determine the weighted average cost of capital to be used as the discount rate. The Company also utilizes the market valuation method to estimate the fair value of the reporting units by utilizing comparable public company multiples. These comparable public company multiples are then applied to the reporting unit's financial performance. The market approach is more volatile as an indicator of fair value as compared to the income approach as internal forecasts and projections have historically been more stable. Since each approach has its merits, the Company equally weighs the approaches to balance the internal and external factors affecting the Company's fair value.

The Company's fair value estimates of its reporting units and goodwill are sensitive to a number of assumptions including discount rates, cash flow projections, operating margins, and comparable market multiples. In order to accurately forecast future cash flows, the Company estimated single family housing starts and the repair and remodeling market's growth rate through 2022. These assumptions modeled information published by the National Association of Home Builders ("NAHB"). The Company estimated single family housing starts increasing from approximately 780,000 in 2016 to approximately 1,100,000 in 2023 (terminal growth year) and estimated the repair and remodeling growth rate at approximately 3.0% in each year through 2023 . The 1,100,000 terminal housing starts figure represents a historical average that tracks domestic population growth. The forecasted sales growth and operating earnings increases coincided with the growth in these two key assumptions. The Company utilized its weighted average cost of capital and its long-term growth rate to derive the appropriate capitalization rate used in the terminal value calculation. The Company utilized these fair value estimate assumptions during the impairment analysis conducted during the years ended December 31, 2016 and 2015 .

The Company's annual goodwill impairment tests performed as of November 26 , 2016 and November 28 , 2015 indicated no impairment. The Windows and Doors, and Siding, Fencing, and Stone reporting units exceeded their 2016 carrying values by approximately 48% and 221% , respectively.

The Company provides no assurance that: 1) valuation multiples will not decline, 2) discount rates will not increase, or 3) the earnings, book values or projected earnings and cash flows of the Company's reporting units will not decline. The Company will continue to analyze changes to these assumptions in future periods. The Company will also continue to evaluate goodwill during future periods and declines in the residential housing and remodeling markets or unfavorable performance by the Company in these markets could result in future goodwill impairments.

The reporting unit goodwill balances were as follows as of December 31, 2016 and December 31, 2015 :

(Amounts in thousands)

	December 31, 2016	December 31, 2015
Siding, Fencing and Stone	$ 348,553	$ 347,958
Windows and Doors	129,961	129,781
	$ 478,514	$ 477,739

A rollforward of goodwill for 2016 and 2015 is included in the table below:

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(Amounts in thousands)	Windows and Doors		Siding, Fencing and Stone	
Balance as of January 1, 2015				
Goodwill	$	459,837	$	466,275
Accumulated impairment losses		(327,773)		(122,227)
	$	132,064	$	344,048
Currency translation adjustments		(1,772)		(3,732)
Simonton acquisition		(511)		—
Canyon Stone acquisition		—		7,642
Balance as of December 31, 2015				
Goodwill		457,554		470,185
Accumulated impairment losses		(327,773)		(122,227)
	$	129,781	$	347,958
Currency translation adjustments		180		595
Balance as of December 31, 2016				
Goodwill		457,734		470,780
Accumulated impairment losses		(327,773)		(122,227)
	$	129,961	$	348,553

The changes in the goodwill balances from January 1, 2015 to December 31, 2016 relate to currency translation adjustments and the acquisitions as described in Note 2 *Acquisitions* .

4. INTANGIBLE ASSETS

The following table presents the major components of intangible assets as of December 31, 2016 and 2015 :

(Amounts in thousands)	Average Amortization Period (in Years)		Cost		Accumulated Amortization		Net Carrying Value
As of December 31, 2016							
Patents	14	$	12,770	$	(12,078)	$	692
Trademarks/Tradenames	12		117,124		(82,723)		34,401
Customer relationships	13		217,861		(150,310)		67,551
Other	4		5,661		(4,146)		1,515
Total intangible assets	12	$	353,416	$	(249,257)	$	104,159
As of December 31, 2015							
Patents	14	$	12,770	$	(11,136)	$	1,634
Trademarks/Tradenames	12		116,965		(76,249)		40,716
Customer relationships	13		217,709		(133,532)		84,177
Other	5		5,360		(3,503)		1,857
Total intangible assets	12	$	352,804	$	(224,420)	$	128,384

Amortization expense related to these intangible assets for the years ended December 31, 2016 , 2015 , and 2014 was approximately $25.1 million , $25.3 million , and $22.1 million , respectively. Estimated amortization expense for fiscal years 2017 through 2021 is shown in the following table:

(Amounts in thousands)		Amortization expense
2017	$	20,703
2018		19,886
2019		15,784
2020		11,104
2021		6,707

5. LONG-TERM DEBT

Long-term debt in the accompanying consolidated balance sheets at December 31, 2016 and 2015 consists of the following:

(Amounts in thousands)		December 31, 2016		December 31, 2015
Senior secured asset based revolving credit facility	$	—	$	—
Term Loan due 2021, net of unamortized early tender premium, discount, and debt issuance costs of $17,854 and $35,106, respectively		240,321		387,369
6.50% Senior notes due 2022, net of unamortized early tender premium, discount, and debt issuance costs of $49,935 and $57,538, respectively		600,065		592,462
	$	840,386	$	979,831
Less current portion of long-term debt		(4,300)		(4,300)
	$	836,086	$	975,531

2015 Debt Transaction

On November 5, 2015, Ply Gem Industries entered into a second amended and restated ABL Facility. Among other things, the second amended and restated ABL Facility: (i) increased the overall facility to $350.0 million , (ii) provided an accordion feature of $50.0 million , and (iii) established the applicable margin for borrowings under the ABL Facility to a range of 1.25% to 2.00% for Eurodollar rate loans, depending on availability. All outstanding loans under the second amended and restated ABL Facility are due and payable in full on November 5, 2020.

2014 Debt Transactions

On January 30, 2014, Ply Gem Industries completed an offering of $500.0 million aggregate principal amount of 6.50% Senior Notes due 2022 and also entered into a $430.0 million senior secured term loan facility due 2021 (the “Term Loan Facility”). The approximate $927.9 million of net proceeds from the issuance of the 6.50% Senior Notes and the borrowings under the Term Loan Facility were used by Ply Gem Industries to purchase all of its 8.25% Senior Secured Notes due 2018 and 9.375% Senior Notes due 2017 tendered in the tender offers described below, to satisfy and discharge the remaining obligations under the indentures governing the 8.25% Senior Secured Notes and 9.375% Senior Notes and to pay related fees and expenses.

On January 30, 2014, Ply Gem Industries purchased approximately $705.9 million of the outstanding 8.25% Senior Secured Notes in a tender offer at a price of $1,067.50 per $1,000 principal amount, which included an early tender payment of $30.00 per $1,000 principal amount, plus accrued and unpaid interest. On January 30, 2014, Ply Gem Industries also purchased approximately $94.7 million of the outstanding 9.375% Senior Notes in a tender offer at a price of $1,108.36 per $1,000 principal amount, which included an early tender payment of $30.00 per $1,000 principal amount, plus accrued and unpaid interest. As a result, Ply Gem Industries paid aggregate consideration of approximately $780.2 million for the tendered 8.25% Senior Secured Notes, including a tender premium of approximately $47.6 million , and paid aggregate consideration of approximately $107.6 million for the tendered 9.375% Senior Notes, including a tender premium of approximately $10.3 million . On March 1, 2014, pursuant to the terms of the indenture governing the 8.25% Senior Secured Notes, Ply Gem Industries redeemed the remaining approximate $50.1 million principal amount of the outstanding 8.25% Senior Secured Notes at a redemption price equal to 106.188% of the principal amount thereof, plus accrued and unpaid interest. On February 16, 2014, pursuant to the terms of the indenture governing the 9.375% Senior Notes, Ply Gem Industries redeemed the remaining approximate $1.3 million principal amount of the outstanding 9.375% Senior Notes at a redemption price equal to 100% of the principal amount plus the “make-whole” premium required under the indenture governing the 9.375% Senior Notes (which equated to 110.179% of the principal amount thereof), plus accrued and unpaid interest. As of March 1, 2014, there were no longer outstanding any 8.25% Senior Secured Notes. As of February 16, 2014, there were no longer outstanding any 9.375% Senior Notes.

On September 19, 2014, Ply Gem Industries issued an additional $150.0 million aggregate principal amount of its 6.50% Senior Notes (“Senior Tack-on Notes”). The net proceeds from the transaction were approximately $138.0 million after deducting $10.1 million for the debt discount and $1.9 million in transaction costs. The proceeds from the issuance of the Senior Tack-on Notes and approximately $3.1 million of cash on hand were used by Ply Gem Industries to fund Ply Gem Industries’ purchase of all the issued and outstanding shares of common stock of Simonton, to pay fees and expenses related to the offering of the Senior Tack-on Notes and the Simonton acquisition and for general corporate purposes, including the repayment of approximately $10.0 million of indebtedness under the ABL Facility. The additional $150.0 million of Senior Tack-on Notes have the same terms and covenants as the original $500.0 million of Senior Notes. The 6.50% Senior Notes originally issued in January 2014 and the Senior Tack-on Notes issued in September 2014 (collectively, the "6.50% Senior Notes") will mature on February 1, 2022 and bear interest at the rate of 6.50% .

In November 2014, the Company exercised a portion of the accordion feature under the ABL Facility for $50.0 million , or 50% of the eligible accordion, increasing the ABL Facility from $250.0 million to $300.0 million to primarily account for the additional borrowing base acquired from Simonton.

6.50% Senior Notes due 2022

On January 30, 2014, Ply Gem Industries issued $500.0 million aggregate principal amount of 6.50% Senior Notes due 2022 at par. On September 19, 2014, Ply Gem Industries issued an additional $150.0 million aggregate principal amount of 6.50% Senior Notes at an issue price of 93.25%. Interest accrues at 6.50% per annum and is paid semi-annually on February 1 and August 1 of each year. The 6.50% Senior Notes will mature on February 1, 2022.

Prior to February 1, 2017, Ply Gem Industries could have redeemed up to 40% of aggregate principal amount of the 6.50% Senior Notes with the net cash proceeds from certain equity offerings at a redemption price equal to 106.50% of the aggregate principal amount of the 6.50% Senior Notes to be redeemed, plus accrued and unpaid interest, if any, provided that at least 50% of the aggregate principal amount of the 6.50% Senior Notes remains outstanding after the redemption. Prior to February 1, 2017, Ply Gem Industries could have redeemed the 6.50% Senior Notes, in whole or in part, at a redemption price equal to 100% of the principal amount plus a “make-whole” premium plus accrued and unpaid interest, if any. At any time on or after February 1, 2017, Ply Gem Industries may redeem the 6.50% Senior Notes, in whole or in part, at declining redemption prices set forth in the indenture governing the 6.50% Senior Notes plus, in each case, accrued and unpaid interest, if any, to the redemption date. The effective interest rate for the 6.50% Senior Notes is 8.39% after considering each of the different interest expense components of this instrument, including the coupon payment and the deferred debt issuance costs.

The 6.50% Senior Notes are fully and unconditionally and jointly and severally guaranteed on a senior unsecured basis by Ply Gem Holdings and all of the wholly-owned domestic subsidiaries of Ply Gem Industries (the "Guarantors"). The indenture governing the 6.50% Senior Notes contains certain covenants that limit the ability of Ply Gem Industries and its restricted subsidiaries to incur additional indebtedness, pay dividends or make other distributions or repurchase or redeem their stock, make loans and investments, sell assets, incur certain liens, enter into agreements restricting their ability to pay dividends, enter into transactions with affiliates, and consolidate, merge or sell assets. In particular, Ply Gem Industries and its restricted subsidiaries may not incur additional debt (other than permitted debt (as defined in the indenture) in limited circumstances) unless, after giving effect to such incurrence, the consolidated interest coverage ratio of Ply Gem Industries would be at least 2.00 to 1.00. In the absence of satisfying the consolidated interest coverage ratio test, Ply Gem Industries and its restricted subsidiaries may only incur additional debt under certain circumstances, including, but not limited to, debt under credit facilities (as defined in the indenture) (x) in an amount not to exceed the greater of (a) $350.0 million and (b) the borrowing base (as defined in the indenture) and (y) in an amount not to exceed the greater of (A) $575.0 million and (B) the aggregate amount of indebtedness (as defined in the indenture) that that would cause the consolidated secured debt ratio (as defined in the indenture) to be equal to 4.00 to 1.00; purchase money indebtedness in an aggregate amount not to exceed the greater of (x) $35.0 million and (y) 10% of consolidated net tangible assets (as defined in the indenture) at any one time outstanding; debt of foreign subsidiaries in an aggregate amount not to exceed the greater of (x) $60.0 million and (y) 15% of consolidated net tangible assets (as defined in the indenture) at any one time outstanding; debt pursuant to a general basket in an aggregate amount at any one time outstanding not to exceed the greater of (x) $75.0 million and (y) 20% of consolidated net tangible assets; and the refinancing of debt under certain circumstances.

On September 5, 2014, Ply Gem Industries completed an exchange offer with respect to the 6.50% Senior Notes issued in January 2014 to exchange $500.0 million 6.50% Senior Notes registered under the Securities Act for $500.0 million of the issued and outstanding 6.50% Senior Notes. Upon completion of the exchange offer, all $500.0 million of issued and outstanding 6.50% Senior Notes were registered under the Securities Act. On January 23, 2015, Ply Gem Industries completed an exchange offer with respect to the Senior Tack-on Notes issued in September 2014 to exchange $150.0 million Senior Tack-on Notes registered under the Securities Act for $150.0 million of the issued and outstanding Senior Tack-on Notes. Upon completion of the exchange offer, all $150.0 million of issued and outstanding Senior Tack-on Notes were registered under the Securities Act.

Term Loan Facility due 2021

On January 30, 2014 , Ply Gem Industries entered into a credit agreement governing the terms of its $430.0 million Term Loan Facility. Ply Gem Industries originally borrowed $430.0 million under the Term Loan Facility on January 30, 2014 , with an original discount of approximately $2.2 million , yielding proceeds of approximately $427.9 million . The Term Loan Facility will mature on January 30, 2021 . The Term Loan Facility requires scheduled quarterly payments in an aggregate annual amount equal to 1.00% of the original aggregate principal amount of the Term Loan Facility with the balance due at maturity. Interest on outstanding borrowings under the Term Loan Facility is paid quarterly.

Borrowings under the Term Loan Facility bear interest at a rate equal to, at Ply Gem Industries' option, either (a) a base rate determined by reference to the highest of (i) the prime rate of the administrative agent under the credit agreement, (ii) the federal funds rate plus 0.50% and (iii) the adjusted LIBO rate for a one-month interest period plus 1.00% or (b) a LIBO rate determined by reference to the cost of funds for eurocurrency deposits in dollars for the interest period relevant to such borrowing, adjusted for certain additional costs, subject to a 1.00% floor, plus, in each case, an applicable margin of 3.00% for any eurocurrency loan and 2.00% for any alternate base rate loan. As of December 31, 2016 , the Company's interest rate on the Term Loan Facility was 4.00% . The effective interest rate for the Term Loan is 8.78% after considering each of the different interest expense components of this instrument, including the coupon payment, the deferred debt issuance costs and the original issue discount.

The Term Loan Facility allows Ply Gem Industries to request one or more incremental term loan facilities in an aggregate amount not to exceed the greater of (x) $140.0 million and (y) an amount such that Ply Gem Industries' consolidated senior secured debt ratio (as defined in the credit agreement), on a pro forma basis, does not exceed 3.75 to 1.00, in each case, subject to certain conditions and receipt of commitments by existing or additional financial institutions or institutional lenders.

The Term Loan Facility requires Ply Gem Industries to prepay outstanding term loans, subject to certain exceptions, with: (i) 50% (which percentage will be reduced to 25% if the Company's consolidated senior secured debt ratio is equal or less than 2.50 to 1.00 but greater than 2.00 to 1.00 and to 0% if the Company's consolidated senior secured debt ratio is equal to or less than 2.00 to 1.00) of the Company's annual excess cash flow (as defined in the credit agreement), to the extent such excess cash flow exceeds $15.0 million , commencing with the fiscal year ended December 31, 2015; (ii) 100% of the net cash proceeds of certain non-ordinary course asset sales or certain insurance and condemnation proceeds, in each case subject to certain exceptions and reinvestment rights; and (iii) 100% of the net cash proceeds of certain issuances of debt, other than proceeds from debt permitted under the Term Loan Facility. Ply Gem Industries may voluntarily repay outstanding loans under the Term Loan Facility at any time without premium or penalty, other than customary “breakage” costs with respect to LIBOR loans. As of and for the year ended December 31, 2016, the Company's consolidated senior secured debt ratio was 0.93 and as a result no excess cash flow payment under the Term Loan Facility will be required. However, the Company voluntarily elected on March 10, 2016 and August 4, 2016 to prepay $30.0 million on each date on the Term Loan Facility to reduce its outstanding indebtedness. The Company further elected on November 4, 2016 to voluntarily pay an additional $100.0 million on the Term Loan Facility to further reduce its outstanding indebtedness bringing the Company's cumulative voluntary 2016 Term Loan Facility payments to $160.0 million .

The Term Loan Facility is secured on a first-priority lien basis by the stock of Ply Gem Industries and by substantially all of the assets (other than the assets securing the obligations under the ABL Facility, which primarily consist of accounts receivable, inventory, cash, deposit accounts, securities accounts, chattel paper, contract rights, instruments, documents related thereto and proceeds of the foregoing) of Ply Gem Industries and the Guarantors that are subsidiaries of Ply Gem Industries and on a second-priority lien basis by the assets that secure the ABL Facility.

The Term Loan Facility includes negative covenants, subject to certain exceptions, that are substantially the same as the negative covenants in the 6.50% Senior Notes but does not contain any restrictive financial covenants. The Term Loan Facility also restricts the ability of Ply Gem Industries’ subsidiaries to enter into agreements restricting their ability to grant liens to secure the Term Loan Facility and contains a restriction on changes in fiscal year.

8.25% Senior Secured Notes due 2018

On February 11, 2011 , Ply Gem Industries issued $800.0 million of 8.25% Senior Secured Notes at par. Ply Gem Industries used the proceeds to purchase approximately $724.6 million principal amount of its outstanding 11.75% Senior Secured Notes in a tender offer, to redeem the remaining approximate $0.4 million principal amount of outstanding 11.75% Senior Secured Notes, and to pay related fees and expenses. A portion of the early tender premiums and the original unamortized discount on the 11.75% Senior Secured Notes was recorded as a discount on the $800.0 million of 8.25% Senior Secured Notes given that the 2011 transaction was predominately accounted for as a loan modification. On February 15, 2012, Ply Gem Industries issued an additional $40.0 million principal amount of its 8.25% Senior Secured Notes. The 8.25% Senior Secured Notes would have matured on February 15, 2018 and bore interest at the rate of 8.25% per annum. Interest was paid semi-annually on February 15 and August 15 of each year. The 8.25% Senior Secured Notes were fully and unconditionally and jointly and severally guaranteed on a senior secured basis by the Guarantors. The 8.25% Senior Secured Notes and the related guarantees were secured on a first-priority lien basis by substantially all of the assets (other than the assets securing our obligations under the ABL Facility, which consist of accounts receivable, inventory, cash, deposit accounts, securities accounts, chattel paper and proceeds of the foregoing and certain assets such as contract rights, instruments and documents related thereto) of Ply Gem Industries and the Guarantors and on a second-priority lien basis by the assets that secure the ABL Facility.

On January 30, 2014, Ply Gem Industries purchased approximately $705.9 million of its outstanding 8.25% Senior Secured Notes in a tender offer at a price of $1,067.50 per $1,000 principal amount, which included an early tender payment of $30.00 per $1,000 principal amount, plus accrued and unpaid interest. On January 30, 2014, Ply Gem Industries irrevocably deposited with the trustee for the 8.25% Senior Secured Notes an amount sufficient to satisfy and discharge its obligations under the 8.25% Senior Secured Notes and the indenture. On March 1, 2014, Ply Gem Industries redeemed the remaining outstanding principal amount of the 8.25% Senior Secured Notes at a redemption price equal to 106.188% of the principal amount thereof, plus accrued and unpaid interest to the redemption date. Following the redemption, there were no longer any 8.25% Senior Secured Notes outstanding.

Senior Secured Asset Based Revolving Credit Facility due 2020

On November 5, 2015, Ply Gem Holdings, Inc., Ply Gem Industries, Inc., Gienow Canada Inc., and Mitten Inc. (together with Gienow, the "Canadian Borrowers") entered into a second amended and restated credit agreement governing the ABL Facility. Among other things, the second amendment and restatement of the credit agreement governing the ABL Facility: (i) increased the overall facility to $350.0 million from $300.0 million , (ii) established an accordion feature of $50.0 million , (iii) reduced the applicable margin for borrowings under the ABL Facility to a range from 1.25% to 2.00% for Eurodollar rate loans, depending on availability, and (iv) extended the maturity until November 5, 2020 . Under the ABL Facility, $300.0 million is available to Ply Gem Industries and $50.0 million is available to the Canadian Borrowers. The following summary describes the ABL Facility after giving effect to the amendment and restatement. As a result of the ABL Facility amendment in which the loan syndication consisted of previous members who either maintained or increased their position as well as new syndication members, the Company capitalized new debt issuance costs of $1.5 million and will amortize these costs through 2020.

Borrowings under the ABL Facility bear interest at a rate per annum equal to, at Ply Gem Industries' option, either (a) a base rate determined by reference to the higher of (1) the corporate base rate of the administrative agent under the ABL Facility and (2) the federal funds rate plus 0.5% or (b) a Eurodollar rate determined by reference to the costs of funds for U.S. dollar deposits for the interest period relevant to such borrowing adjusted for certain additional costs, in each case plus an applicable margin. The initial applicable margin for borrowings under the ABL Facility was 0.50% for base rate loans and 1.50% for Eurodollar rate loans. The applicable margin for borrowings under the ABL Facility is subject to step ups and step downs based on average excess availability under the ABL Facility. Swingline loans bear interest at a rate per annum equal to the base rate plus the applicable margin.

In addition to paying interest on outstanding principal under the ABL Facility, Ply Gem Industries is required to pay a commitment fee in respect of the unutilized commitments thereunder, which fee will be determined based on utilization of the ABL Facility (increasing when utilization is low and decreasing when utilization is high) multiplied by a commitment fee rate determined by reference to average excess availability under the ABL Facility. The commitment fee rate during any fiscal quarter is 0.375% when average excess availability is greater than $100.0 million for the preceding fiscal quarter and 0.25% when average availability is less than or equal to $100.0 million for the preceding fiscal quarter. Ply Gem Industries must also pay customary letter of credit fees equal to the applicable margin on Eurodollar loans and agency fees. As of December 31, 2016 , the Company's interest rate on the ABL Facility was approximately 1.92% . The ABL Facility requires that if (a) excess availability is less than the greater of (x) 10.0% of the lower of the borrowing base and the aggregate commitments and (y) $25.0 million or (b) any event of default has occurred and is continuing, Ply Gem Industries must comply with a minimum fixed charge coverage ratio test of 1.0 to 1.0. If the excess availability under the ABL Facility is less than the greater of (a) 12.5% of the lesser of the borrowing base and the aggregate commitments and (b) $30.0 million ($27.5 million for the months of January, February, March and April) for a period of 5 consecutive days or an event of default has occurred and is continuing, all cash from Ply Gem Industries material deposit accounts (including all concentration accounts) will be swept daily into a collection account controlled by the administrative agent under the ABL Facility and used to repay outstanding loans and cash collateralize letters of credit.

All obligations under the ABL Facility are unconditionally guaranteed by Ply Gem Holdings and substantially all of Ply Gem Industries' existing and future, direct and indirect, wholly owned domestic subsidiaries. All obligations under the ABL Facility, and the guarantees of those obligations, are secured, subject to certain exceptions, by substantially all of the assets of Ply Gem Industries and the guarantors, including a first-priority security interest in personal property consisting of accounts receivable, inventory, cash, deposit accounts, and certain related assets and proceeds of the foregoing and a second-priority security interest in, and mortgages on, substantially all of Ply Gem Industries' and the Guarantors' material owned real property and equipment and all assets that secure the Term Loan Facility on a first-priority basis. In addition to being secured by the collateral securing the obligations of Ply Gem Industries under the domestic collateral package, the obligations of the Canadian Borrowers, which are borrowers under the Canadian sub-facility under the ABL Facility, are also secured by a first-priority security interest in substantially all of the assets of such Canadian subsidiaries, plus additional mortgages in Canada, and a pledge by Ply Gem Industries of the remaining 35% of the equity interests of the Canadian Borrowers pledged only to secure the Canadian sub-facility.

The ABL Facility contains certain covenants that limit Ply Gem Industries' ability and the ability of Ply Gem Industries' subsidiaries to incur additional indebtedness, pay dividends or make other distributions or repurchase or redeem their stock, make loans and investments, sell assets, incur certain liens, enter into transactions with affiliates, and consolidate, merge or sell assets.

As of December 31, 2016 , Ply Gem Industries had approximately $340.3 million of contractual availability and approximately $213.1 million of borrowing base availability under the ABL Facility, reflecting $0.0 million of borrowings outstanding and approximately $9.7 million of letters of credit and priority payables reserves.

9.375% Senior Notes due 2017

On September 27, 2012, Ply Gem Industries issued $160.0 million of 9.375% Senior Notes at par. Ply Gem Industries used the proceeds of the offering, together with cash on hand, to satisfy and discharge its obligations under the 13.125% Senior Subordinated Notes and the indenture governing the 13.125% Senior Subordinated Notes. The 9.375% Senior Notes would have matured on April 15, 2017 and bore interest at the rate of 9.375% per annum. Interest was paid semi-annually on April 15 and October 15 of each year. The 9.375% Senior Notes were unsecured and fully and unconditionally and jointly and severally guaranteed on a senior unsecured basis by the Guarantors.

On January 30, 2014, Ply Gem Industries purchased approximately $94.7 million of the outstanding 9.375% Senior Notes at a tender price of $1,108.36 per $1,000 principal amount, which included an early tender payment of $30.00 per $1,000 principal amount, plus accrued and unpaid interest. On January 30, 2014, Ply Gem Industries irrevocably deposited with the trustee for the 9.375% Senior Notes an amount sufficient to satisfy and discharge its obligations under the 9.375% Senior Notes and the indenture. On February 16, 2014, Ply Gem Industries redeemed the remaining outstanding principal amount of the 9.375% Senior Notes at a redemption price equal to 100% of the principal amount plus the “make-whole” premium required under the indenture (which equated to 110.179% of the principal amount thereof), plus accrued and unpaid interest. Following the redemption, there were no longer any 9.375% Senior Notes outstanding.

Loss on debt modification or extinguishment

During both March and August 2016, the Company made voluntarily payments of $30.0 million on the Term Loan Facility to reduce its outstanding indebtedness as allowable under the terms of the Term Loan Facility and further elected in November 2016 to voluntarily pay an additional $100.0 million on the Term Loan Facility bringing the cumulative 2016 voluntary payments to $160.0 million . The Company performed an analysis to determine the proper accounting treatment for each of these voluntary payments by evaluating the change in cash flows and determined that there were no changes in creditors as a result of the payments. Consequently, the Company recognized a loss on debt modification in the consolidated statement of operations of approximately $11.7 million for the year ended December 31, 2016, reflecting the proportionate write-off of the related debt discount ($9.4 million) and debt issuance costs ($2.4 million) associated with the $160.0 million in voluntary payments, as summarized in the table below.

As a result of the January 2014 issuance of the 6.50% Senior Notes and the entry into the Term Loan Facility and the tender, redemption, and repurchase of the 8.25% Senior Secured Notes and the 9.375% Senior Notes (the "January 2014 Refinancing") during the year ended December 31, 2014, the Company performed an analysis to determine the proper accounting treatment for the January 2014 refinancing. Specifically, the Company evaluated each creditor with ownership in both the 6.50% Senior Notes and/or Term Loan Facility debt instruments and the old 8.25% Senior Secured Notes and/or 9.375% Senior Notes to determine whether the transaction should be accounted for as a modification or an extinguishment of debt as it relates to each individual creditor. The Company had approximately $34.4 million of unamortized debt discount and $14.9 million of unamortized debt issuance costs associated with the 8.25% Senior Secured Notes and 9.375% Senior Notes, of which approximately $4.8 million and $2.1 million , respectively, were expensed as a loss on extinguishment of debt in the consolidated statement of operations for the year ended December 31, 2014 as a result of the January 2014 Refinancing.

The Company also incurred an early tender premium of approximately $61.1 million in conjunction with this transaction, of which approximately $52.6 million was recorded as a discount on the 6.50% Senior Notes and the Term Loan Facility and approximately $8.5 million was expensed as a loss on extinguishment of debt in the consolidated statement of operations for the year ended December 31, 2014. The Company also expensed approximately $0.3 million as a loss on modification of debt in the consolidated statement of operations for the third party fees for the 8.25% Senior Secured Notes and 9.375% Senior Notes as a result of the January 2014 refinancing for the year ended December 31, 2014. The Company also incurred approximately $14.7 million of costs associated with the 6.50% Senior Notes and Term Loan Facility, of which approximately $9.2 million was recorded as debt issuance costs and approximately $5.5 million was expensed as a loss on modification of debt in the consolidated statement of operations for the year ended December 31, 2014. Additionally, the Company incurred an original issue discount of approximately $2.2 million for the Term Loan Facility, of which approximately $1.9 million was recorded as a discount and approximately $0.3 million was expensed as a loss on extinguishment of debt in the consolidated statement of operations for the year ended December 31, 2014.

Based on these financing transactions, the Company recognized a loss on debt modification or extinguishment of approximately $11.7 million , $0.0 million and $21.4 million for the years ended December 31, 2016 , 2015 , and 2014 , respectively, as summarized in the table below.

(Amounts in thousands)	For the year ended		
	December 31, 2016	December 31, 2015	December 31, 2014
Loss on extinguishment of debt:			
8.25% Senior Secured Notes and 9.375% Senior Notes tender premium	$ —	$ —	$ (8,493)
8.25% Senior Secured Notes and 9.375% Senior Notes unamortized discount	—	—	(4,773)
8.25% Senior Secured Notes and 9.375% Senior Notes unamortized debt issuance costs	—	—	(2,067)
Term Loan Facility unamortized discount	—	—	(255)
	—	—	(15,588)
Loss on modification of debt:			
Term Loan Facility unamortized discount	(9,375)	—	—
Term Loan Facility unamortized debt issuance costs	(2,372)	—	—
Third party fees for 8.25% Senior Secured Notes and 9.375% Senior Notes	—	—	(302)
Third party fees for 6.50% Senior Notes and Term Loan Facility	—	—	(5,474)
	(11,747)	—	(5,776)
Total loss on modification or extinguishment of debt	$ (11,747)	$ —	$ (21,364)

Debt maturities

The following table summarizes the Company’s long-term debt maturities due in each fiscal year after December 31, 2016 :

(Amounts in thousands)	As of December 31, 2016
2017	$ 4,300
2018	4,300
2019	4,300
2020	4,300
2021	4,300
Thereafter	886,675
	$ 908,175

The Company will not be required to make an excess cash flow payment under the Term Loan Facility in 2017 based on the Company's operating performance, voluntary payments on the Term Loan Facility, and capital expenditures in 2016. However, the Company may be required to make an excess cash flow payment under the Term Loan Facility in future years based on the Company's senior secured debt levels, future operating performance and capital expenditures which the Company cannot estimate with reasonable certainty at December 31, 2016.

6. DEFINED BENEFIT PLANS

The Company has two pension plans, the Ply Gem Group Pension Plan (the “Ply Gem Plan”) and the MW Manufacturers, Inc. Retirement Plan (the “MW Plan”). The plans are combined in the following discussion.

The table that follows provides a reconciliation of benefit obligations, plan assets, and funded status of the combined plans in the accompanying consolidated balance sheets at December 31, 2016 and 2015 :

(Amounts in thousands)	December 31, 2016	December 31, 2015
Change in projected benefit obligation		
Benefit obligation at beginning of year	$ 47,652	$ 48,263
Service cost	—	—
Interest cost	1,914	1,996
Actuarial (gain) loss	(227)	(618)
Benefits and expenses paid	(2,201)	(1,989)
Projected benefit obligation at end of year	$ 47,138	$ 47,652
Change in plan assets		
Fair value of plan assets at beginning of year	$ 31,972	$ 33,183
Actual return on plan assets	1,060	(975)
Employer and participant contributions	647	1,753
Benefits and expenses paid	(2,201)	(1,989)
Fair value of plan assets at end of year	$ 31,478	$ 31,972
Funded status and financial position:		
Fair value of plan assets	$ 31,478	$ 31,972
Benefit obligation at end of year	47,138	47,652
Funded status	$ (15,660)	$ (15,680)
Amount recognized in the balance sheet consists of:		
Current liability	$ (1,753)	$ (647)
Noncurrent liability	(13,907)	(15,033)
Liability recognized in the balance sheet	$ (15,660)	$ (15,680)

The accumulated benefit obligation for the combined plans was approximately $47.1 million and $47.7 million as of December 31, 2016 and 2015 , respectively.

Accumulated Other Comprehensive Loss

Amounts recognized in accumulated other comprehensive loss at December 31, 2016 and 2015 consisted of the following:

(Amounts in thousands)	December 31, 2016	December 31, 2015
Initial net asset (obligation)	$ —	$ —
Prior service credit (cost)	—	—
Net loss	18,817	19,271
Accumulated other comprehensive loss	$ 18,817	$ 19,271

These amounts do not include any amounts recognized in accumulated other comprehensive loss related to the nonqualified Supplemental Executive Retirement Plan.

Actuarial Assumptions

Plan assets consist of cash and cash equivalents, fixed income mutual funds, equity mutual funds, as well as other investments. The discount rate for the projected benefit obligation was chosen based upon rates of returns available for high-quality fixed-income securities as of the plan's measurement date. The Company reviewed several bond indices, comparative data, and the plan's anticipated cash flows to determine a single discount rate which would approximate the rate in which the obligation could be effectively settled. The expected long-term rate of return on assets is based on the Company’s historical rate of return. The weighted average rate assumptions used in determining pension costs and the projected benefit obligation for the periods indicated are as follows:

	For the year ended December 31,		
	2016	2015	2014
Discount rate for projected benefit obligation	3.97%	4.18%	3.80%
Discount rate for pension costs	4.18%	4.25%	4.75%
Expected long-term average return on plan assets	7.00%	7.00%	7.00%

Net Periodic Benefit Costs

The Company’s net periodic benefit expense for the combined plans for the periods indicated consists of the following components *:*

(Amounts in thousands)	For the year ended December 31,		
	2016	2015	2014
Service cost	$ —	$ —	$ —
Interest cost	1,914	1,996	1,914
Expected return on plan assets	(2,176)	(2,309)	(2,269)
Amortization of loss	1,348	1,192	491
Net periodic benefit expense	$ 1,086	$ 879	$ 136

Pension Assets

The weighted-average asset allocations at December 31, 2016 by asset category are as follows:

	Target Allocation	Actual allocation as of December 31, 2016	Weighted Average Expected Long-Term Rate of Return (1)
Asset Category			
U.S. Large Cap Funds	25.0%	21.6%	4.2%
U.S. Mid Cap Funds	5.0%	7.9%	0.7%
U.S. Small Cap Funds	3.0%	3.0%	0.5%
International Equity	15.0%	14.8%	1.0%
Fixed income	45.0%	44.3%	0.5%
Other investments	7.0%	8.4%	0.1%
	100.0%	100.0%	7.0%

(1) The weighted average expected long-term rate of return by asset category is based on the Company’s target allocation and historical results.

The weighted-average asset allocations at December 31, 2015 by asset category are as follows:

	Target Allocation	Actual allocation as of December 31, 2015	Weighted Average Expected Long-Term Rate of Return (1)
Asset Category			
U.S. Large Cap Funds	25.0%	21.5%	2.0%
U.S. Mid Cap Funds	5.0%	8.1%	0.5%
U.S. Small Cap Funds	3.0%	2.9%	0.3%
International Equity	15.0%	14.7%	1.3%
Fixed income	45.0%	44.9%	2.3%
Other investments	7.0%	7.9%	0.6%
	100.0%	100.0%	7.0%

(1) The weighted average expected long-term rate of return by asset category is based on the Company's target allocation and historical results.

The Company has established formal investment policies for the assets associated with the Company's pension plans. Policy objectives include maximizing long-term return at acceptable risk levels, diversifying among asset classes, if appropriate, and among investment managers, as well as establishing relevant risk parameters within each asset class. Investment policies reflect the unique circumstances of the respective plans and include requirements designed to mitigate risk including quality and diversification standards. Asset allocation targets are based on periodic asset reviews and/or risk budgeting study results which help determine the appropriate investment strategies for acceptable risk levels. The investment policies permit variances from the targets within certain parameters.

Factors such as asset class allocations, long-term rates of return (actual and expected), and results of periodic asset liability modeling studies are considered when constructing the long-term rate of return assumption for the Company's pension plans. While historical rates of return play an important role in the analysis, the Company also considers data points from other external sources if there is a reasonable justification to do so.

The plan assets are invested to maximize returns without undue exposure to risk. Risk is controlled by maintaining a portfolio of assets that is diversified across a variety of asset classes, investment styles and investment managers. The plan's asset allocation policies are consistent with the established investment objectives and risk tolerances. The asset allocation policies are developed by examining the historical relationships of risk and return among asset classes, and are designed to provide the highest probability of meeting or exceeding the return objectives at the lowest possible risk. The weighted average expected long-term rate of return by asset category is based on the Company's target allocation.

The following table summarizes the Company's plan assets measured at fair value on a recurring basis (at least annually) as of December 31, 2016 and 2015 :

(Amounts in thousands)	Fair value as of December 31, 2016	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Equity Securities (1)				
U.S. Large Cap Funds	$ 6,784	$ 6,784	$ —	$ —
U.S. Mid Cap Funds	2,477	1,226	1,251	—
U.S. Small Cap Funds	931	470	461	—
International Funds	4,662	4,662	—	—
Fixed Income				
Domestic Bond Funds (2)	13,954	—	13,954	—
Other Investments				
Commodity Funds (3)	1,584	—	1,584	—
Cash & Cash Equivalents	1,086	1,086	—	—
	$ 31,478	$ 14,228	$ 17,250	$ —

(Amounts in thousands)	Fair value as of December 31, 2015	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Equity Securities (1)				
U.S. Large Cap Funds	$ 6,877	$ 6,877	$ —	$ —
U.S. Mid Cap Funds	2,604	1,357	1,247	—
U.S. Small Cap Funds	938	467	471	—
International Funds	4,702	4,702	—	—
Fixed Income				
Domestic Bond Funds (2)	14,340	—	14,340	—
Other Investments				
Commodity Funds (3)	1,541	—	1,541	—
Cash & Cash Equivalents	970	970	—	—
	$ 31,972	$ 14,373	$ 17,599	$ —

(1) Equity securities are comprised of mutual funds valued at net asset value per share multiplied by number of shares at measurement date.
(2) Domestic bonds are comprised of mutual funds valued at net asset value per share multiplied by number of shares at measurement date.
(3) Commodity funds are comprised of two mutual funds which represent small market energy funds.

The Ply Gem Plan was frozen during 1998, and no further increases in benefits may occur as a result of increases in service years or compensation and no new participants can be added to the Plan.

The MW Plan was frozen for salaried participants during 2004, and no further increases in benefits for salaried participants may occur as a result of increases in service years or compensation. The MW Plan was frozen for non-salaried participants during 2005. No additional non-salaried participants may enter the plan, but increases in benefits as a result of increases in service years or compensation will still occur.

Benefit Plan Contributions

The Company made cash contributions to the combined plans of approximately $0.6 million and $1.8 million for the years ended December 31, 2016 and 2015 , respectively. During fiscal year 2017 , the Company expects to make cash contributions to the combined plans of approximately $1.8 million .

Benefit Plan Payments

The following table shows expected benefit payments for the next five fiscal years and the aggregate five years thereafter from the combined plans. These benefit payments consist of qualified defined benefit plan payments that are made from the respective plan trusts and do not represent an immediate cash outflow to the Company.

Fiscal Year	Expected Benefit Payments
(Amounts in thousands)	
2017	$ 2,252
2018	2,373
2019	2,451
2020	2,565
2021	2,624
2022-2026	14,028

Other Retirement Plans

The Company also has an unfunded nonqualified Supplemental Executive Retirement Plan for certain employees. The projected benefit obligation relating to this unfunded plan totaled approximately $319,000 and $323,000 at December 31, 2016 and 2015 , respectively. The Company has recorded this obligation in other long term liabilities in the consolidated balance sheets as of December 31, 2016 and 2015 . Pension expense for the plan was approximately $13,618 , $15,500 and $15,000 for the years ended December 31, 2016 , 2015 , and 2014 , respectively.

7. DEFINED CONTRIBUTION PLANS

The Company has a defined contribution 401(k) plan covering all eligible employees. The Company matches 50% of the first 6% of employee contributions. The Company also has the option of making discretionary contributions. The Company contributed approximately $3.7 million , $3.6 million , and $2.2 million for the years ended December 31, 2016 , December 31, 2015 and December 31, 2014 , respectively, which has been expensed within selling, general, and administrative expenses in the accompanying consolidated statement of operations.

8. COMMITMENTS AND CONTINGENCIES

Operating leases

At December 31, 2016 , the Company was obligated under lease agreements for the rental of certain real estate and machinery and equipment used in its operations. Future minimum rental obligations for non-cancellable lease payments total approximately $120.9 million at December 31, 2016 . The lease obligations, partially offset by sublease income, are payable as follows:

(Amounts in thousands)	Lease Commitments	Sublease Income
2017	$ 28,887	$ 396
2018	22,314	404
2019	18,528	412
2020	14,310	420
2021	11,580	428
Thereafter	25,255	1,337

Total rental expense for all operating leases was approximately $37.3 million , $37.6 million , and $34.6 million for the years ended December 31, 2016 , 2015 , and 2014 , respectively.

Indemnifications

In connection with the Ply Gem acquisition, in which Ply Gem Industries was acquired from Nortek in February 2004, Nortek has agreed to indemnify the Company for certain liabilities as set forth in the stock purchase agreement governing the Ply Gem acquisition. In the event Nortek is unable to satisfy amounts due under these indemnifications, the Company would be liable. The Company believes that Nortek has the financial capacity to honor its indemnification obligations and therefore does not anticipate incurring any losses related to liabilities indemnified by Nortek under the stock purchase agreement. A receivable related to this indemnification has been recorded in other long-term assets in the approximate amount of $1.4 million and $1.8 million at December 31, 2016 and 2015 , respectively. As of December 31, 2016 and 2015 , the Company has recorded liabilities related to these indemnifications of approximately $0.5 million and $0.5 million , respectively, in current liabilities and $0.9 million and $1.3 million , respectively, in long-term liabilities, consisting of the following:

(Amounts in thousands)	December 31, 2016	December 31, 2015
Product claim liabilities	$ 138	$ 138
Multiemployer pension plan withdrawal liability	808	960
Other	500	664
	$ 1,446	$ 1,762

The product claim liabilities of approximately $0.1 million at December 31, 2016 and 2015 , recorded in long term liabilities, represent the estimated costs to resolve the outstanding matters related to a former subsidiary of the Company, which is a defendant in a number of lawsuits alleging damage caused by alleged defects in certain pressure treated wood products. The Company had indemnified the buyer of the former subsidiary for all known liabilities and future claims relating to such matters and retained the rights to all potential reimbursements related to insurance coverage. Many of the suits have been resolved by dismissal or settlement with amounts being paid out of insurance proceeds or other third party recoveries. The Company and the former subsidiary continue to vigorously defend the remaining suits. Certain defense and indemnity costs are being paid out of insurance proceeds and proceeds from a settlement with suppliers of material used in the production of the treated wood products. The Company and the former subsidiary have engaged in coverage litigation with certain insurers and have settled coverage claims with several of the insurers.

The multiemployer pension plan withdrawal liability of approximately $0.8 million and $1.0 million recorded in long term liabilities at December 31, 2016 and 2015 , respectively, relate to liabilities assumed by the Company in 1998 when its former subsidiary, Studley Products, Inc. (“Studley”) was sold. In connection with the sale, Studley ceased making contributions to the Production Service and Sales District Council Pension Fund (the “Pension Fund”), and the Company assumed responsibility for all withdrawal liabilities to be assessed by the Pension Fund. Accordingly, the Company is making quarterly payments of approximately $0.1 million to the Pension Fund through 2018 based upon the assessment of withdrawal liability received from the Pension Fund. The multiemployer pension liability represents the present value of the quarterly payment stream as well as an estimate of additional amounts that may be assessed in the future by the Pension Fund under the contractual provisions of the Pension Fund.

Included in the indemnified items is approximately $0.5 million and $0.5 million for the year ended December 31, 2016 and 2015 , respectively, of accrued expenses to cover the estimated costs and expenses of defending known litigation claims, including the estimated cost of legal services incurred, that the Company is contesting.

Warranty claims

The Company sells a number of products and offers a number of warranties. The specific terms and conditions of these warranties vary depending on the product sold. The Company estimates the costs that may be incurred under warranties and records a liability for such costs at the time of sale. Factors that affect the Company’s warranty liabilities include the number of units sold, historical and anticipated rates of warranty claims, cost per claim and new product introduction. The Company assesses the adequacy of the recorded warranty claims and adjusts the amounts as appropriate. As of December 31, 2016 and 2015 , warranty liabilities of approximately $19.7 million and $16.6 million , respectively, have been recorded in current liabilities and approximately $57.6 million and $59.9 million , respectively, have been recorded in long term liabilities in the consolidated balance sheets. The increase in the warranty liabilities during 2014 relates to the Simonton acquisition which was completed in September 2014.

Changes in the Company’s short-term and long-term warranty liabilities are as follows:

	For the year ended December 31,		
(Amounts in thousands)	2016	2015	2014
Balance, beginning of period	$ 76,562	$ 84,423	$ 42,466
Acquisitions-Canyon Stone (2015) and Simonton (2014)	—	100	48,235
Warranty expense during period	22,266	21,264	15,177
Adjustments	—	(7,761)	(3,021)
Settlements made during period	(21,549)	(21,464)	(18,434)
Balance, end of period	$ 77,279	$ 76,562	$ 84,423

Environmental

The Company is subject to United States and Canadian federal, state, provincial and local laws and regulations relating to pollution and the protection of the environment, including those governing emissions to air, discharges to water, use, storage and transport of hazardous materials, storage, treatment and disposal of waste, remediation of contaminated sites, and protection of worker health and safety. From time to time, the Company's facilities are subject to investigation by governmental regulators. In addition, the Company has been identified as one of many potentially responsible parties for contamination present at certain offsite locations to which it or its predecessors are alleged to have sent hazardous materials for recycling or disposal. The Company may be held liable, or incur fines or penalties, in connection with such requirements or liabilities for, among other things, releases of hazardous substances occurring on or emanating from current or formerly owned or operated properties or any associated offsite disposal location, or for known or newly-discovered contamination at any of the Company's properties from activities conducted by us or previous occupants. The amount of any liability, fine or penalty may be material, and certain environmental laws impose strict, and under certain circumstances joint and several, liability for the cost of addressing releases of hazardous substances upon certain classes of persons, including site owners or operators and persons that disposed or arranged for the disposal of hazardous substances at contaminated sites.

MW Manufacturers Inc. (“MW”) entered into an Administrative Order on Consent (the “Consent Order”), effective September 12, 2011, with the United States Environmental Protection Agency (“EPA”), Region III, under Section 3008(h) of the Resource Conservation and Recovery Act ("RCRA"), with respect to its Rocky Mount, Virginia property. During 2011, as part of the Consent Order, MW provided the EPA, among other things, a RCRA Facility Investigation Workplan (the “Workplan”) as well as a preliminary cost estimate of approximately $1.8 million for the predicted assessment, remediation and monitoring activities to be conducted pursuant to the Consent Order over the remediation period, which is currently estimated through 2023. During 2012, the EPA approved the Workplan, and MW is currently implementing the Workplan. The Company has recorded approximately $0.3 million of this environmental liability within current liabilities and approximately $1.1 million and $1.2 million within other long-term liabilities in the Company’s consolidated balance sheets at December 31, 2016 and 2015 , respectively. The Company will adjust this environmental remediation liability in future periods, if necessary, as further information develops or circumstances change.

Certain liabilities with respect to this contamination relate to the previous closure of an underground storage tank and were assumed by U.S. Industries, Inc., pursuant to its indemnity obligation under the stock purchase agreement dated August 11, 1995, whereby U.S. Industries, Inc. sold the stock of MW to FPI Acquisition Corp. (“Fenway Partners”). As the successor-in-interest of Fenway Partners, the Company is similarly indemnified by U.S. Industries, Inc. Notwithstanding this indemnity, however, under applicable Federal and State laws, MW, and the Company as its parent, could be held liable for all or part of the costs associated with the matter under certain circumstances. Moreover, the Company’s ability to seek indemnification from U.S. Industries, Inc. is limited by the terms and limits of the indemnity as well as the strength of U.S. Industries, Inc.’s financial condition, which could change in the future. As of December 31, 2016, no recovery has been recognized on the Company’s consolidated balance sheet, but the Company will actively pursue this indemnity in future periods and will recognize future recoveries in the period in which they become probable.

The State of Nebraska is investigating certain groundwater contamination in northern York, Nebraska, comprised primarily of volatile organic compounds (VOC) (predominantly trichloroethene (TCE)). In December 2013, the EPA announced its proposal to add this groundwater contamination site to the Superfund National Priorities List (NPL) after it was referred to the EPA by the State of Nebraska. Sampling was conducted at the Kroy Building Products, Inc. (“Kroy”) facility in York, Nebraska during the first quarter of 2010. In February 2015, the EPA sent a request for information pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and Kroy has responded to this request for information. Given the preliminary stage of this matter, the Company has not recorded a liability for this matter in its consolidated balance sheet as of December 31, 2016. Alcan Aluminum Corporation (“Alcan”) has assumed the obligation to indemnify the Company with respect to certain liabilities for environmental contamination of the Kroy facility occurring prior to 1994. Notwithstanding this indemnity, however, under applicable Federal and State laws, Kroy, and the Company as its parent, could be held liable for all or part of the costs associated with the matter under certain circumstances. Moreover, the ability of Kroy and the Company to seek indemnification may be limited by the terms and limits of the indemnity as well as the strength of Alcan’s financial condition, which could change in the future.

The Company is currently involved in environmental proceedings involving Gienow Canada Inc. (f/k/a Ply Gem Canada, Inc.) and Alberta Environment (arising from subsurface contamination discovered at our Calgary, Alberta property) for which the Company has a $0.1 million liability included in its consolidated balance sheet, and the Company may in the future be subject to environmental proceedings involving Thermal-Gard, Inc. (arising from groundwater contamination in Punxsutawney, Pennsylvania), Mastic Home Exteriors, Inc. ("MHE") (relating to a closed landfill site in Sidney, Ohio as well as participating as a potentially responsible party in nine contaminated sites in Indiana, Ohio and South Carolina), and Simonton (relating to closed lagoons and certain contamination in Paris, Illinois as well as certain contamination associated with certain 7-Eleven convenience food stores). Under the stock purchase agreement governing the MHE acquisition, Alcoa Securities Corporation and Alcoa, Inc. are to indemnify the Company for certain environmental liabilities in excess of $2.5 million , including liabilities relating to the landfill site in Sidney, Ohio and the nine contaminated sites in Indiana, Ohio and South Carolina. Under the stock purchase agreement governing the Simonton acquisition, Fortune Brands Windows & Doors, Inc., is to indemnify the Company for any environmental claims associated with the 7-Eleven convenience food stores. The Company's ability to seek indemnification or enforce these and other obligations is, however, limited by the strength of the financial condition of the indemnitor or responsible party, which could change in the future, as well as the terms and limits of any such indemnities or obligations.

Based on current information, the Company is not aware of any compliance obligations, claims, releases or investigations that will have a material adverse effect on our results of operations, cash flows or financial position except as otherwise disclosed in the Company's consolidated financial statements. However, there can be no guarantee that previously known or newly-discovered matters or any inability to enforce our available indemnification rights against previous owners of the Company, its subsidiaries, or their businesses or properties will not result in material costs or liabilities. While the purchase agreements governing certain of our acquisitions provide that the sellers will indemnify us, subject to certain limitations, for certain environmental liabilities, our ability to seek indemnification from the respective sellers is limited by various factors, including the financial condition of the indemnitor or responsible party as well as by the terms and limits of such indemnities or obligations. As a result, there can be no assurance that we could receive any indemnification from the sellers, and any related environmental liabilities, costs or penalties could have a material adverse effect on our financial condition and results of operations.

Self-insured risks

The Company maintains a broad range of insurance policies which include general liability insurance coverage and workers compensation. These insurance policies protect the Company against a portion of the risk of loss from claims. However, the Company retains a portion of the overall risk for such claims through its self-insured per occurrence and aggregate retentions, deductibles, and claims in excess of available insurance policy limits. The Company's general liability insurance includes coverage for certain damages arising out of product design and manufacturing defects. The Company's insurance coverage is generally subject to a per occurrence retention.

The Company reserves for costs associated with claims, as well as incurred but not reported losses ("IBNR"), based on an outside actuarial analysis of its historical claims. These estimates make up a significant portion of the Company's liability and are subject to a high degree of uncertainty due to a variety of factors, including changes in type of claims, claims reporting and resolution patterns, frequency and timing of claims, third party recoveries, estimates of claim values, claims management expenses (including legal fees and expert fees), insurance industry practices, the regulatory environment, and legal precedent. Adjustments to estimated reserves are recorded in the period in which the change in estimate occurs.

Litigation

During the past several years, the Company incurred increased litigation expense primarily related to the claims discussed below. The Company believes it has valid defenses to the outstanding claims discussed below and will vigorously defend all such claims; however, litigation is subject to many uncertainties and there cannot be any assurance that the Company will ultimately prevail or, in the event of an unfavorable outcome or settlement of litigation, that the ultimate liability would not be material and would not have a material adverse effect on the business, results of operations, cash flows or financial position of the Company.

In *John Gulbankian v. MW Manufacturers, Inc.* (“Gulbankian”), a purported class action filed in March 2010 in the United States District Court for the District of Massachusetts, plaintiffs, on behalf of themselves and all others similarly situated, alleged damages as a result of the defective design and manufacture of certain MW vinyl clad windows. In *Eric Hartshorn and Bethany Perry v. MW Manufacturers, Inc.* (“Hartshorn”), a purported class action filed in July 2012 in the District Court, plaintiffs, on behalf of themselves and all others similarly situated, alleged damages as a result of the defective design and manufacture of certain MW vinyl clad windows. In April 2014, plaintiffs in both the Gulbankian and Hartshorn cases filed a Consolidated Amended Class Action Complaint, making similar claims against all MW vinyl clad windows.

MW entered into a settlement agreement with plaintiffs as of April 2014 to settle both the Gulbankian and Hartshorn cases on a nationwide basis (the “Vinyl Clad Settlement Agreement”). The Vinyl Clad Settlement Agreement provides that this settlement applies to any and all MW vinyl clad windows manufactured from January 1, 1987 through May 23, 2014, and provides for a cash payment for eligible consumers submitting qualified claims showing, among other requirements, certain damage to their MW vinyl clad windows. The period for submitting qualified claims is the later of: (i) May 28, 2016, or (ii) the last day of the warranty period for the applicable window. On December 29, 2014, the District Court granted final approval of this settlement, as well as MW’s payment of attorneys' fees and costs to plaintiffs' counsel in the amount of $2.5 million . The Company and MW deny all liability in the settlements with respect to the facts and claims alleged. The Company, however, is aware of the substantial burden, expense, inconvenience and distraction of continued litigation, and therefore agreed to settle these matters.

As a result of the Vinyl Clad Settlement Agreement, the Company recognized a $5.0 million expense during the year ended December 31, 2014 within selling, general, and administrative expenses in the Company’s consolidated statement of operations in the Windows and Doors segment. It is possible that the Company may incur costs in excess of the recorded amounts; however, the Company currently expects that the total net cost will not exceed $5.0 million . As of December 31, 2016 and December 31, 2015, approximately $1.4 million of this liability is currently outstanding, with $0.7 million as a current liability within accrued expenses and $0.7 million as a noncurrent liability within other long-term liabilities in the Company’s consolidated balance sheet as of December 31, 2016 and 2015.

In *Anthony Pagliaroni et al. v. Mastic Home Exteriors, Inc. and Deceuninck North America, LLC* , a purported class action filed in January 2012 in the United States District Court for the District of Massachusetts, plaintiffs, on behalf of themselves and all others similarly situated, allege damages as a result of the defective design and manufacture of Oasis composite deck and railing, which was manufactured by Deceuninck North America, LLC (“Deceuninck”) and sold by Mastic Home Exteriors, Inc. (“MHE”). The plaintiffs seek a variety of relief, including (i) economic and compensatory damages, (ii) treble damages, (iii) punitive damages, and (iv) attorneys' fees and costs of litigation. The damages sought in this action have not yet been quantified. The hearing regarding plaintiffs’ motion for class certification was held on March 10, 2015, and the District Court denied plaintiffs’ motion for class certification on September 22, 2015. On October, 6, 2015, plaintiffs filed a petition for interlocutory appeal of the denial of class certification to the U.S. Court of Appeals for the First Circuit, and on April 12, 2016, the Court of Appeals denied this petition for appeal. Deceuninck, as the manufacturer of Oasis deck and railing, has agreed to indemnify MHE for certain liabilities related to this claim pursuant to the sales and distribution agreement, as amended, between Deceuninck and MHE. MHE's ability to seek indemnification from Deceuninck is, however, limited by the terms and limits of the indemnity as well as the strength of Deceuninck's financial condition, which could change in the future.

In re Ply Gem Holdings, Inc. Securities Litigation is a purported federal securities class action filed on May 19, 2014 in the United States District Court for the Southern District of New York against Ply Gem Holdings, Inc., several of its directors and officers, and the underwriters associated with the Company's initial public offering ("IPO"). It is filed on behalf of all persons or entities, other than the defendants, who purchased the common shares of the Company pursuant and/or traceable to the Company's IPO and seeks remedies under Sections 11 and 15 of the Securities Act of 1933, alleging that the Company's Form S-1 registration statement was negligently prepared and materially inaccurate, containing untrue statements of material fact and omitting material information which was required to be disclosed. The plaintiffs seek a variety of relief, including (i) damages together with interest thereon and (ii) attorneys' fees and costs of litigation. On October 14, 2014, Strathclyde Pension Fund was certified as lead plaintiff, and class counsel was appointed. On February 13, 2015, the defendants filed their motion to dismiss the complaint. On September 29, 2015, the District Court granted defendants' motion to dismiss, but ruled that plaintiff could file an amended complaint. On November 6, 2015, plaintiff filed an amended complaint, and on January 13, 2016, the defendants filed their motion to dismiss this amended complaint. On September 23, 2016, the District Court granted in part and denied in part this motion to dismiss. The damages sought in this action have not yet been quantified. Pursuant to the Underwriting Agreement, dated May 22, 2013, entered into in connection with the IPO, the Company has agreed to reimburse the underwriters for the legal fees and other expenses reasonably incurred by the underwriters' law firm in its representation of the underwriters in connection with this matter. Pursuant to Indemnification Agreements, dated as of May 22, 2013, between the Company and each of the directors and officers named in this action, the Company has agreed to assume the defense of such directors and officers. We believe the purported federal securities class action is without merit and will vigorously defend the lawsuit.

In *Raul Carrillo-Hueso and Chec Xiong v. Ply Gem Industries, Inc. and Ply Gem Pacific Windows Corporation* , a purported class action filed on November 25, 2015 in the Superior Court of the State of California, County of Alameda, plaintiffs, on behalf of themselves and all others similarly situated, allege damages as a result of, among other things, the defendants' failure to provide (i) statutorily required meal breaks at the Sacramento, California facility, (ii) accurate wage statements to employees in California, and (iii) all wages due on termination in California. The plaintiffs seek a variety of relief, including (i) economic and compensatory damages, (ii) statutory damages, (iii) penalties, (iv) pre- and post-judgment interest, and (v) attorneys' fees and costs of litigation. On January 7, 2017, the parties agreed to settle this matter for approximately $1.0 million , subject to certain conditions including approval by the Court. The Company has accrued for this amount in accrued expenses as of December 31, 2016 in the Company's consolidated balance sheet and expensed this amount in selling, general, and administrative expenses in the Company's consolidated statement of operations and comprehensive income (loss) for the year ended December 31, 2016.

In *Tina Morgan v. Ply Gem Industries, Inc. and Simonton Industries, Inc.* , a purported class action filed on December 11, 2015 in the Superior Court of the State of California, County of Solano, plaintiff, on behalf of herself and all others similarly situated, alleges damages as a result of, among other things, the defendants' failure at the Vacaville, California facility to (i) pay overtime wages, (ii) provide statutorily required meal breaks, (iii) provide accurate wage statements, and (iv) pay all wages owed upon termination. The plaintiff seeks a variety of relief, including (i) economic and compensatory damages, (ii) statutory damages, (iii) penalties, (iv) pre- and post-judgment interest, and (v) attorneys' fees and costs of litigation. On December 9, 2016, the parties agreed to settle this matter for approximately $0.9 million , subject to certain conditions including approval by the Court. The Company has accrued for this amount in accrued expenses as of December 31, 2016 in the Company's consolidated balance sheet and expensed this amount in selling, general, and administrative expenses in the Company's consolidated statement of operations and comprehensive income (loss) for the year ended December 31, 2016.

In *Kiefer et al. v. Simonton Building Products, LLC et al.* , a purported class action filed on October 17, 2016 in the United States District Court for the District of Minnesota, plaintiffs, on behalf of themselves and all others similarly situated, allege damages as a result of, among other things, the defective design and manufacture of certain Simonton windows containing two-pane insulating glass units. The plaintiffs seek a variety of relief, including (i) economic and compensatory damages, (ii) punitive or other exemplary damages, (iii) pre- and post-judgment interest, and (iv) attorneys' fees and costs of litigation. On December 23, 2016, the defendants filed their motion to dismiss the complaint. A hearing on this motion was held on February 17, 2017, and the District Court has not yet ruled on this motion. The damages sought in this action have not yet been quantified.

Other contingencies

The Company is subject to other contingencies, including legal proceedings and claims arising out of its operations and businesses that cover a wide range of matters, including, among others, environmental, contract, employment, intellectual property, securities, personal injury, property damage, product liability, warranty, and modification, adjustment or replacement of component parts or units sold, which may include product recalls. Product liability, environmental and other legal proceedings also include matters with respect to businesses previously owned. The Company has used various substances in products and manufacturing operations, which have been or may be deemed to be hazardous or dangerous, and the extent of its potential liability, if any, under environmental, product liability and workers' compensation statutes, rules, regulations and case law is unclear. Further, due to the lack of adequate information and the potential impact of present regulations and any future regulations, there are certain circumstances in which no range of potential exposure may be reasonably estimated. Also, it is not possible to ascertain the ultimate legal and financial liability with respect to certain contingent liabilities, including lawsuits, and therefore no such estimate has been made as of December 31, 2016.

9. ACCRUED EXPENSES AND OTHER LONG-TERM LIABILITIES

Accrued expenses consist of the following at December 31, 2016 and December 31, 2015 :

(Amounts in thousands)	December 31, 2016	December 31, 2015
Insurance	$ 8,297	$ 9,347
Employee compensation and benefits	27,749	20,381
Sales and marketing	59,655	50,405
Product warranty	19,718	16,619
Accrued freight	2,146	1,445
Accrued interest	17,977	17,808
Accrued environmental liability	434	430
Accrued pension	1,753	647
Accrued sales returns and discounts	1,199	3,368
Accrued taxes	4,966	5,575
Litigation accrual	2,575	700
Other	22,546	26,237
	$ 169,015	$ 152,962

Other long-term liabilities consist of the following at December 31, 2016 and December 31, 2015 :

(Amounts in thousands)	December 31, 2016	December 31, 2015
Insurance	$ 605	$ 1,237
Pension liabilities	13,907	15,033
Multi-employer pension withdrawal liability	808	960
Product warranty	57,575	59,943
Long-term product claim liability	138	138
Long-term environmental liability	1,158	1,211
Liabilities for tax uncertainties	3,925	2,866
Litigation accrual	731	829
Other	7,548	8,676
	$ 86,395	$ 90,893

Long-term incentive plan

The Company maintains a long-term incentive plan ("LTIP") for certain employees which was implemented to retain and incentivize employees through the downturn in the housing market. During the years ended December 31, 2016 and December 31, 2015 , the Company recognized a net LTIP expense of $7.3 million and $3.9 million , respectively, which has been recorded within selling, general, and administrative expenses in the consolidated statement of operations and comprehensive income (loss). The LTIP liability is $10.0 million and $5.9 million as of December 31, 2016 and December 31, 2015 , respectively, of which $6.3 million and $3.1 million has been recorded within other current liabilities and $3.7 million and $2.8 million in other long-term liabilities in the consolidated balance sheets as of December 31, 2016 and December 31, 2015 , respectively.

Other liabilities

During the years ended December 31, 2016 , 2015 and 2014 , the Company made approximately $0.5 million , $1.6 million , and $5.0 million in cash payments for restructuring and integration efforts, respectively. These payments were for restructuring and integration programs implemented in Western Canada and general back office centralization efforts incurred as well as product simplification costs incurred for the entire Windows and Doors segment.

10. INCOME TAXES

The following is a summary of the components of income (loss) before benefit for income taxes:

	For the year ended December 31,		
(Amounts in thousands)	2016	2015	2014
Domestic	$ 35,258	$ 47,901	$ (9,685)
Foreign	(11,766)	(16,301)	(21,689)
	$ 23,492	$ 31,600	$ (31,374)

The following is a summary of the benefit for income taxes included in the accompanying consolidated statement of operations:

	For the year ended December 31,		
(Amounts in thousands)	2016	2015	2014
Federal:			
Current	$ 1,043	$ 692	$ —
Deferred	(54,692)	(2,833)	(6,962)
	(53,649)	(2,141)	(6,962)
State:			
Current	$ 4,674	$ 2,688	$ 2,354
Deferred	(2,020)	(779)	324
	2,654	1,909	2,678
Foreign:			
Current	$ 277	$ 833	$ (86)
Deferred	(1,277)	(1,289)	4,265
	(1,000)	(456)	4,179
Total	$ (51,995)	$ (688)	$ (105)

The table that follows reconciles the federal statutory income tax rate to the effective tax rate of approximately 221.3% for the year ended December 31, 2016 , 2.2% for the year ended December 31, 2015 , and 0.3% for the year ended December 31, 2014 .

(Amounts in thousands)	For the year ended December 31, 2016	2015	2014
Income tax provision (benefit) at the federal statutory rate	$ 8,222	$ 11,060	$ (10,981)
Net change from statutory rate:			
Valuation allowance-US	(88,653)	(30,446)	(1,851)
Valuation allowance-Canada	1,714	3,551	9,789
State income tax provision, net of federal income tax benefit	5,937	4,986	641
Taxes at non-U.S. statutory rate	348	(153)	(48)
Additional provisions/reversals of unrecognized tax benefits	187	(116)	131
Canadian rate differential	808	1,284	2,015
Attribute reduction	(3,118)	3,118	—
Tax Receivable Agreement	21,306	4,531	(220)
Alternative minimum tax	1,483	1,298	—
Minimum tax credit	(1,483)	(1,298)	—
Meals and entertainment	675	595	—
Executive compensation	599	—	—
Work opportunity tax credit	(438)	—	—
Other, net	418	902	419
	$ (51,995)	$ (688)	$ (105)

The tax effect of temporary differences, which gave rise to significant portions of deferred income tax assets and liabilities as of December 31, 2016 and 2015 are as follows:

(Amounts in thousands)	December 31, 2016	December 31, 2015
Deferred tax assets:		
Accounts receivable	$ 824	$ 1,075
Insurance reserves	3,302	3,925
Warranty reserves	26,826	26,397
Pension accrual	6,292	6,426
Deferred compensation	10,946	10,803
Inventories	4,898	4,473
Federal, net operating loss carry-forwards	48,732	78,900
State, net operating loss carry-forwards	10,496	13,507
Non-capital losses - foreign jurisdiction	11,743	9,514
Related party interest	18,055	32,820
Professional fees	2,031	1,550
Environmental reserves	576	591
Other assets, net	10,312	9,428
Valuation allowance	(22,889)	(109,361)
Total deferred tax assets	132,144	90,048
Deferred tax liabilities:		
Property and equipment, net	(27,589)	(24,387)
Intangible assets, net	(36,894)	(44,032)
Deferred financing	(18,063)	(25,964)
Attribute reduction	—	(3,456)
Other liabilities, net	(1,973)	(2,335)
Total deferred tax liabilities	(84,519)	(100,174)
Net deferred tax asset (liability)	$ 47,625	$ (10,126)

ASU 2015-17, *Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes,* was issued in November 2015 and it establishes simplification of the presentation of deferred income taxes. Under the new standard, both deferred tax liabilities and assets are required to be classified as noncurrent in a classified balance sheet. As of December 31, 2015, we had deferred taxes that were classified as current assets and noncurrent liabilities. During the fourth quarter of 2016, the Company elected to prospectively adopt this standard, thus reclassifying the current deferred tax assets to noncurrent (netted within noncurrent liabilities) on the accompanying consolidated balance sheet. The prior reporting period was not retrospectively adjusted. The adoption of this guidance had no impact on the Company's consolidated results of operations or cash flows .

Debt Transaction

On September 19, 2014, Ply Gem Industries issued $150.0 million aggregate principal amount of its 6.50% Senior Tack-on Notes with a $10.1 million debt discount. These Senior Tack-on Notes have the same terms and covenants as the original $500.0 million of 6.50% Senior Notes issued in January 2014 that were issued at par and will mature in 2022. These Senior Tack-on Notes are not considered Applicable High Yield Discount Obligation ("AHYDO"). The discount and deferred financing costs related to these notes will be amortized over the life of the notes utilizing the constant yield method.

Valuation allowance

During the year ended December 31, 2016, the Company determined that a valuation allowance was no longer required against its federal net deferred tax assets and a portion of its state deferred tax assets. As a result, the Company released $86.5 million of its total valuation allowance during the year ended December 31, 2016 since positive evidence outweighed negative evidence thereby allowing the Company to achieve the “more likely than not” realization threshold. Of the total valuation allowance reversal of $86.5 million , $31.3 million was offset against 2016 current year tax expense with the remaining $55.2 million representing the discrete valuation allowance release.

As of December 31, 2016, the Company was no longer in a three-year cumulative pre-tax loss position due to the significant improvement in the Company’s profitability from the housing market recovery. The housing market has experienced steady improvement from a demand perspective over the last several years which has benefited the Company’s financial performance and profitability for both new construction and repair and remodeling reflected in the Company’s net sales and earnings growth. This annual financial improvement was further evidenced by the Company continuing to have net sales and profitability growth in the Company’s second and third quarters which are traditionally the Company’s strongest financial quarters based on seasonality. Finally, the consensus expectation and outlook for both new construction and repair and remodeling both show positive growth rates over the next few years which result in future forecasted profitability for the Company. Based on the preponderance of these positive factors, the valuation allowance for federal and certain state NOL carry-forwards was released during the year ended December 31, 2016. The valuation allowance release is reflected within our benefit for income taxes in the accompanying consolidated statement of operations and comprehensive income (loss) during the year ended December 31, 2016.

As of December 31, 2016 , the Company had a full valuation allowance on its deferred tax assets for Gienow Canada of approximately $13.0 million as a result of its operating performance and challenges associated with combining two separate manufacturing facilities into a single facility. As a result of the Simonton acquisition on September 19, 2014, the Company evaluated Simonton's net deferred tax liability position with Ply Gem's full valuation allowance position, which resulted in a $7.5 million release of valuation allowance during the year ended December 31, 2014 and an additional release of $2.8 million for the year ended December 31, 2015.

The Company had book goodwill of approximately $28.0 million that was not amortized resulting in a deferred tax liability of approximately $6.7 million at December 31, 2015 . Therefore, the reversal of deferred tax liabilities related to this goodwill is not considered a source of future taxable income in assessing the realization of its deferred tax assets. The Company continues to evaluate the realizability of its net deferred tax assets and its estimates are subject to change.

The Company remains in a valuation allowance position against its deferred tax assets for certain state and Canadian jurisdictions as it is currently deemed "more likely than not" that the benefit of such net tax assets will not be utilized as the Company continues to be in a three-year cumulative loss position for these states and Canadian jurisdictions. The Company will continue to monitor the positive and negative factors for these jurisdictions and make further changes to the valuation allowances as necessary.

Other tax considerations

As of December 31, 2016 , the Company has approximately $175.4 million of federal gross operating loss carry-forwards which can be used to offset future taxable income. These federal carry-forwards will begin to expire in 2028 if not utilized. The Company has approximately $328.3 million of gross state NOL carry-forwards and $11.2 million (net of federal benefit) of deferred tax assets related to these state NOL carry-forwards which can be used to offset future state tax liabilities. The Company has established a valuation allowance which offsets the deferred tax asset associated with certain state NOL carry-forwards. Future tax planning strategies implemented by the Company could reduce or eliminate future NOL expiration.

As of December 31, 2016 , the Company has not established U.S. deferred taxes on unremitted earnings for the Company's foreign subsidiaries. Notwithstanding the provisions within the American Jobs Creation Act of 2004, the Company continues to consider these amounts to be permanently invested.

Unrecognized tax benefits

The Company records reserves for unrecognized tax benefits based on the likelihood of an unfavorable outcome. Of this amount, approximately $1.5 million , if recognized, would have an impact on the Company’s effective tax rate. As of December 31, 2016, the reserve was approximately $3.9 million which includes interest and penalties of approximately $1.6 million . As of December 31, 2015, the reserve was approximately $2.9 million which included interest and penalties of approximately $1.1 million . The difference between the total unrecognized tax benefits and the amount of the liability for unrecognized tax benefits represents unrecognized tax benefits that have been netted against deferred tax assets related to net operating losses in accordance with ASC 740 in addition to accrued penalties and interest.

The Company has elected to treat interest and penalties on unrecognized tax benefits as income tax expense in its consolidated statement of operations. Interest and penalty charges have been recorded in the contingency reserve account within other long term liabilities in the Company's consolidated balance sheet.

The following is a rollforward of unrecognized tax benefits from January 1, 2015 through December 31, 2016 .

Unrecognized tax benefits balance at January 1, 2015	$	16,518
Additions based on tax positions related to current year		415
Additions for tax positions of prior years		—
Reductions for tax positions of prior years		(859)
Settlement or lapse of applicable statutes		(164)
Unrecognized tax benefits balance at December 31, 2015		15,910
Additions based on tax positions related to current year		208
Additions for tax positions of prior years		603
Reductions for tax positions of prior years		(13)
Settlement or lapse of applicable statutes		(39)
Unrecognized tax benefits balance at December 31, 2016	$	16,669

Unrecognized tax benefits are reversed as a discrete event if an examination of applicable tax returns is not begun by a federal or state tax authority within the statute of limitations or upon effective settlement with federal or state tax authorities. During the year ended December 31, 2016 , the Company reversed approximately $0.1 million of unrecognized tax benefits due to the expiration of the statute of limitations in certain state jurisdictions. The Company's open tax years that are subject to federal examination are 2008 through 2016 .

During the year ended December 31, 2015, the Company also reversed approximately $0.2 million of unrecognized tax benefits due to the expiration of the statute of limitations for the tax year ended December 31, 2006.

During the next 12 months, the Company does not anticipate the reversal of any material tax contingency reserves.

Tax Receivable Agreement

On May 22, 2013, the Company entered into a Tax Receivable Agreement (the “Tax Receivable Agreement”) with PG ITR Holdco, L.P. (the “Tax Receivable Entity”). The Tax Receivable Agreement generally provides for the payment by the Company to the Tax Receivable Entity of 85% of the amount of cash savings, if any, in U.S. federal, state and local income tax that the Company actually realizes in periods ending after the IPO as a result of (i) net operating loss ("NOL") carryovers from periods (or portions thereof) ending before January 1, 2013, (ii) deductible expenses attributable to the transactions related to the IPO and (iii) deductions related to imputed interest deemed to be paid by the Company as a result of or attributable to payments under the Tax Receivable Agreement. The term of the Tax Receivable Agreement will continue until all such benefits have been utilized or expired. The Company will retain the benefit of the remaining 15% of these tax savings. The Tax Receivable Agreement will obligate the Company to make payments to the Tax Receivable Entity generally equal to 85% of the applicable cash savings that is actually realized as a result of utilizing NOL carryovers once the tax returns are filed for that respective tax year.

The Company estimates that the total anticipated amount of future payments under the Tax Receivable Agreement would be approximately $84.4 million assuming no material changes in the relevant tax law or federal rates, that the Company earns sufficient taxable income to utilize the net operating loss carry forwards, and that utilization of such tax attributes is not subject to limitation under Section 382 of the Internal Revenue Code of 1986, as amended (the "Code") as the result of an “ownership change”. It is possible that future transactions or events or changes in estimates could increase or decrease the actual tax benefits realized from these tax attributes and the corresponding Tax Receivable Agreement payments and liability. As of December 31, 2016 , the Company estimates the Tax Receivable Agreement liability to be approximately $79.7 million with the remaining $4.7 million estimated for the state NOLs associated with the Tax Receivable Agreement which have a valuation allowance. Future changes in the Company's state valuation allowance position including the reversal of all or a portion of the Company's remaining state valuation allowance may increase the Tax Receivable Agreement liability up to the $84.4 million estimate as the Company at that point in time will project future taxable income beyond the current fiscal year for certain state income tax purposes.

As of December 31, 2016 and 2015, the Company had a $79.7 million and $23.8 million liability, respectively, for the amount due pursuant to the Tax Receivable Agreement. The Company has $25.4 million and $3.0 million as current liabilities in the Company's consolidated balance sheets as of December 31, 2016 and December 31, 2015, respectively. The Company has $54.3 million and $20.8 million of this liability recorded as noncurrent as of December 31, 2016 and December 31, 2015, respectively, in the consolidated balance sheets as these amounts will not be paid in cash within the next 12 months. The $60.9 million Tax Receivable Agreement liability adjustment for the year ended December 31, 2016 resulted primarily from the $55.2 million discrete valuation allowance release. The factors surrounding the release of this valuation allowance thereby eliminated any uncertainty as to future taxable income. Consequently, for purposes of calculating the TRA liability, the Company during the year ended December 31, 2016 utilized future forecasts of taxable income beyond the 2016 tax year to determine the TRA liability. The $12.9 million tax receivable agreement liability adjustment for the year ended December 31, 2015 resulted from a $115.9 million increase in 2015 taxable income partially offset by the timing of reversals of deferred tax assets and liabilities.

11. STOCK-BASED COMPENSATION

Stock option plan

On February 12, 2004, Ply Gem Investment Holdings’ Board of Directors adopted the Ply Gem Investment Holdings 2004 Stock Option Plan (the “Plan”) allowing for grants of options to purchase shares of Ply Gem Investment Holdings common stock under nonqualified stock options or incentive stock options. Obligations under this Plan were subsequently assumed by Ply Gem Prime Holdings in 2006. Immediately prior to the closing of the IPO on May 23, 2013, Ply Gem Prime merged with and into Ply Gem Holdings, with Ply Gem Holdings being the surviving entity. As a result, all obligations under the Plan were converted at a ratio based on the IPO price of the common stock and the liquidation value of and the maximum dividend amount in respect of the Ply Gem Prime preferred stock and all subsequent grants were in Ply Gem Holdings' stock.

Employees, directors and consultants of Ply Gem Holdings or any of its majority-owned subsidiaries are eligible for options, as specified in the Plan. Ply Gem Holdings Board of Directors may, among other things, select recipients of options grants, determine whether options will be nonqualified or incentive stock options, set the number of shares that may be purchased pursuant to option exercise, and determine other terms and conditions of options. The exercise price of an option must be at least the estimated fair market value of a share of common stock as of the grant date. Options generally vest over 3 to 5 years from the date of grant, unless specified otherwise in any individual option agreement. Generally, options will expire on the tenth anniversary of the grant date or in connection with termination of employment. The Board of Directors has the discretion to accelerate the vesting and exercisability of outstanding options.

The fair value of each option is estimated on the date of grant using the Black-Scholes option pricing method. The assumptions used in the model for the years ended December 31, 2015 and December 31, 2014 (there were no option grants in 2016) are outlined in the following table:

	December 31, 2015	December 31, 2014
Weighted average fair value of options granted	$ 2.62	$ 4.91
Weighted average assumptions used:		
Expected volatility	34%	34%
Expected term (in years)	7.00	7.00
Risk-free interest rate	1.82%	0.63%
Expected dividend yield	—%	—%

A summary of changes in stock options outstanding during the years ended December 31, 2016 and December 31, 2015 is presented below:

	Stock Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
				(in thousands)
Balance at January 1, 2015	2,749,064	$ 13.38	5.50	3,373
Granted	287,808	$ 12.49	—	
Exercised	(225,960)	$ 9.75	—	
Forfeited or expired	(197,119)	$ 12.35	—	
Balance at December 31, 2015	2,613,793	$ 13.75	5.22	617
Granted	—	$ —	—	
Exercised	(116,594)	$ 9.35	—	
Forfeited or expired	(1,666)	$ 12.35	—	
Balance at December 31, 2016	2,495,533	$ 13.96	4.35	5,729

As of December 31, 2016 , 2,324,059 options were 100% vested with a weighted average exercise price of $13.95 . As of December 31, 2015 , 2,221,818 options were 100% vested with a weighted average exercise price of $13.75 . The total intrinsic value of options exercised during the years ended December 31, 2016 , and 2015 was $0.6 million and $0.9 million , respectively. At December 31, 2016 , the Company had approximately $0.5 million of total unrecognized compensation expense that will be recognized over a weighted average period of 1.09 years. At December 31, 2015 , the Company had approximately $1.2 million of total unrecognized compensation expense that will be recognized over a weighted average period of 1.80 years. The Company recorded compensation expense of $0.8 million , $1.7 million , and $2.0 million for the years ended December 31, 2016 , 2015 , and 2014 , respectively, related to the vesting of these options.

Restricted stock

During March 2014, the Company issued 3,523 restricted shares of common stock to each of three independent members of the Board of Directors. These shares vested over the approximate ten-month period to December 31, 2014 and the Company expensed these items ratably over the ten -month period up to the vesting date. One issuance of these shares, or 3,523 shares, became immediately fully vested during May 2014. Additionally during May 2014, the Company issued 5,240 restricted shares of common stock to each of the two new independent members of the Board of Directors. These shares vested over the approximate eight -month period to December 31, 2014 and the Company expensed these items ratably over the eight-month period up to the vesting date. During the year ended December 31, 2014, the Company expensed approximately $0.3 million related to all of these grants in selling, general, and administrative expenses within the consolidated statement of operations.

During December 2014, the Company issued an aggregate of 23,944 restricted shares of common stock in an equal number to each of the four independent members of the Board of Directors. These shares vested over the 2015 calendar period and the Company expensed $0.3 million as compensation expense in selling, general, and administrative expenses within the consolidated statement of operations.

During December 2015, the Company issued an aggregate of 25,664 restricted shares of common stock in an equal number to each of the four independent members of the Board of Directors. These shares vested over the 2016 calendar year and the Company expensed $0.3 million as compensation expense in selling, general, and administrative expenses within the consolidated statement of operations.

During December 2016, the Company issued an aggregate of 19,420 restricted shares of common stock in an equal number to each of the four independent members of the Board of Directors. These shares will vest over the 2017 calendar year and the Company will expense these items as compensation expense ratably during 2017.

12. SEGMENT INFORMATION

The Company defines operating segments as components of an enterprise about which separate financial information is available that is evaluated regularly by management in deciding how to allocate resources and in assessing performance. The Company has two reportable segments: 1) Siding, Fencing, and Stone and 2) Windows and Doors.

The income before income taxes of each segment includes the revenue generated on transactions involving products within that segment less identifiable expenses. Unallocated income and expenses include items which are not directly attributed to or allocated to either of the Company's reporting segments. Such items include interest, legal costs, corporate payroll, and unallocated finance, accounting expenses, and gain (loss) on modification or extinguishment of debt. Unallocated corporate assets include cash and certain receivables. Interest expense is presented net of interest income.

Following is a summary of the Company's segment information:

(Amounts in thousands)	For the year ended December 31, 2016	2015	2014
Net sales			
Siding, Fencing, and Stone	$ 886,851	$ 840,118	$ 801,601
Windows and Doors	1,024,993	999,608	765,042
	$ 1,911,844	$ 1,839,726	$ 1,566,643
Operating earnings (loss)			
Siding, Fencing, and Stone	$ 157,058	$ 134,654	$ 113,089
Windows and Doors	43,579	18,195	(27,660)
Unallocated	(32,141)	(30,317)	(23,931)
	$ 168,496	$ 122,532	$ 61,498
Interest (income) expense, net			
Siding, Fencing, and Stone	$ (16)	$ (22)	$ 5
Windows and Doors	(12)	(17)	(48)
Unallocated	72,710	74,858	71,229
	$ 72,682	$ 74,819	$ 71,186
Depreciation and amortization			
Siding, Fencing, and Stone	$ 25,723	$ 26,539	$ 25,255
Windows and Doors	30,516	31,549	22,510
Unallocated	164	312	698
	$ 56,403	$ 58,400	$ 48,463
Income tax benefit			
Unallocated	$ (51,995)	$ (688)	$ (105)
Capital expenditures			
Siding, Fencing, and Stone	$ 16,472	$ 11,816	$ 12,581
Windows and Doors	17,780	19,196	10,920
Unallocated	1,749	2,848	160
	$ 36,001	$ 33,860	$ 23,661

	As of December 31, 2016	2015
Total assets		
Siding, Fencing, and Stone	$ 691,930	$ 664,053
Windows and Doors	509,055	498,994
Unallocated	56,756	103,525
	$ 1,257,741	$ 1,266,572

Our Canadian subsidiaries, which had sales of approximately $198.7 million for the year ended December 31, 2016 , represent the majority of our sales to foreign customers. Other subsidiaries’ sales outside the United States are less than 1% of our total sales.

13. RELATED PARTY TRANSACTIONS

During the fourth quarter of 2011, the Company entered into an amendment to the employee agreement originally dated August 14, 2006 for the Company's Chief Executive Officer. In conjunction with the amendment to the employment agreement, the Company also entered into a retention agreement and stock repurchase agreement. These agreements, among other things, provided for: (i) the extension of the chief executive officer's term of employment for three years, (ii) the Company to make a retention payment of $2.0 million to the chief executive officer on December 31, 2014 if he remained employed by the Company on that date, (iii) the repurchase of 125,660 shares of common stock of Ply Gem Prime and (iv) the issuance of 150,000 stock options to the chief executive officer for non-voting Class C common stock of Ply Gem Prime (971,420 stock options in Ply Gem Holdings post IPO). The $12.6 million repurchase of common stock was made by Ply Gem Prime based on proceeds provided by the Company. The stock options granted to the chief executive officer vested 25% on each of the following dates: July 2012, July 2013, July 2014, and July 2015.

The Company also entered into a retention agreement with the Company's Chief Financial Officer which required the Company to make a retention payment of $0.7 million on December 31, 2014 if he remained employed by the Company on that date. The cumulative retention payments for executive officers of $2.7 million were paid in January 2015.

During March 2015, the Company entered into new retention agreements with the Company's Chief Executive Officer and Chief Financial Officer for $3.0 million and $1.3 million , respectively. These retention agreements incentivize these individuals for three years and require the Company to make cumulative payments of $4.3 million on December 31, 2017 if both individuals remain employed in their current positions on that date. As of December 31, 2016 and 2015, these retention payments have been accrued at $2.8 million and $1.4 million , respectively, in accrued expenses and other long-term liabilities, respectively, on the Company's consolidated balance sheets.

During the fourth quarter of 2016, the Company made an approximate $5.0 million payment to PG ITR Holdco, L.P. (the "Tax Receivable Entity") for the Tax Receivable Agreement in satisfaction of the amount due on this agreement related to the 2015 activity. During the fourth quarter of 2015, the Company made an approximate $48,000 payment to the Tax Receivable Entity for the Tax Receivable Agreement in satisfaction of the amount due on this agreement related to the 2014 activity.

14. QUARTERLY RESULTS OF OPERATIONS (UNAUDITED)

The following is a summary of the quarterly results of operations:

(Amounts in thousands, except per share data)	Quarter Ended December 31, 2016		Quarter Ended October 1, 2016		Quarter Ended July 2, 2016	Quarter Ended April 2, 2016	
Net sales	$ 462,293		$ 530,392		$ 510,545	$ 408,614	
Gross profit	103,484		136,800		135,289	86,701	
Net income (loss)	6,663	(2), (3)	54,755	(2)	41,646	(27,577)	(2)
Net income (loss) per share attributable to common shareholders:							
Basic (1)	$ 0.10		$ 0.80		$ 0.61	$ (0.40)	
Diluted (1)	$ 0.10		$ 0.80		$ 0.61	$ (0.40)	

(Amounts in thousands, except per share data)	Quarter Ended December 31, 2015	Quarter Ended October 3, 2015	Quarter Ended July 4, 2015	Quarter Ended April 4, 2015
Net sales	$ 430,460	$ 530,884	$ 502,334	$ 376,048
Gross profit	99,907	134,781	124,743	60,281
Net income (loss)	9,064	41,711	30,372	(48,859)
Net income (loss) per share attributable to common shareholders:				
Basic (1)	$ 0.13	$ 0.61	$ 0.45	$ (0.72)
Diluted (1)	$ 0.13	$ 0.61	$ 0.45	$ (0.72)

(1) The sum of the quarterly per share amounts may not equal per share amounts reported for year-to-date periods. This is due to changes in the number of weighted average shares outstanding and the effects of rounding for each period.

(2) The net income (loss) for the quarters ended April 2, 2016, October 1, 2016 and December 31, 2016 include an approximate $2.4 million , $2.3 million , and $7.1 million , loss on modification or extinguishment of debt, respectively. See Note 5 *Long-Term Debt* for description of loss on debt modification and extinguishment.

(3) During the three months ended December 31, 2016, the Company recognized a $5.1 million income tax benefit from the discrete release of the deferred income tax valuation allowance. See Note 10 *Income Taxes* for further description of the valuation allowance release.

15. GUARANTOR/NON-GUARANTOR

The 6.50% Senior Notes were issued by our direct 100% owned subsidiary, Ply Gem Industries, and are fully and unconditionally guaranteed on a joint and several basis by the Company and certain of Ply Gem Industries' 100% owned subsidiaries. Ply Gem Industries is a 100% owned subsidiary of Ply Gem Holdings. Accordingly, the following guarantor and non-guarantor information is presented as of December 31, 2016 and December 31, 2015 , and for the years ended December 31, 2016 , 2015 , and 2014 . The non-guarantor information presented represents our Canadian subsidiaries: Gienow and Mitten.

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS
For the year ended December 31, 2016

(Amounts in thousands)	Guarantor Ply Gem Holdings, Inc.	Issuer Ply Gem Industries, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiary	Consolidating Adjustments	Consolidated
Net sales	$ —	$ —	$ 1,713,112	$ 198,732	$ —	$ 1,911,844
Cost of products sold	—	—	1,298,281	151,289	—	1,449,570
Gross profit	—	—	414,831	47,443	—	462,274
Operating expenses:						
Selling, general and administrative expenses	—	32,141	190,444	46,129	—	268,714
Intercompany administrative charges	—	—	32,487	5,180	(37,667)	—
Amortization of intangible assets	—	—	20,707	4,357	—	25,064
Total operating expenses	—	32,141	243,638	55,666	(37,667)	293,778
Operating earnings (loss)	—	(32,141)	171,193	(8,223)	37,667	168,496
Foreign currency gain	—	—	—	299	—	299
Intercompany interest	—	63,716	(59,859)	(3,857)	—	—
Interest expense	—	(72,716)	—	(2)	—	(72,718)
Interest income	—	6	13	17	—	36
Tax receivable agreement liability adjustment	—	(60,874)	—	—	—	(60,874)
Loss on modification or extinguishment of debt	—	(11,747)	—	—	—	(11,747)
Intercompany administrative income	—	37,667	—	—	(37,667)	—
Income (loss) before equity in subsidiaries' income (loss)	—	(76,089)	111,347	(11,766)	—	23,492
Equity in subsidiaries' income (loss)	75,487	151,576	—	—	(227,063)	—
Income (loss) before benefit for income taxes	75,487	75,487	111,347	(11,766)	(227,063)	23,492
Benefit for income taxes	—	—	(50,995)	(1,000)	—	(51,995)
Net income (loss)	$ 75,487	$ 75,487	$ 162,342	$ (10,766)	$ (227,063)	$ 75,487
Other comprehensive income (loss):						
Foreign currency translation adjustments	—	—	—	2,950	—	2,950
Unrealized gain on derivative instruments	—	—	—	29	—	29
Minimum pension liability for actuarial gain	—	—	295	—	—	295
Total comprehensive income (loss)	$ 75,487	$ 75,487	$ 162,637	$ (7,787)	$ (227,063)	$ 78,761

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS
For the year ended December 31, 2015

(Amounts in thousands)	Guarantor Ply Gem Holdings, Inc.	Issuer Ply Gem Industries, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiary	Consolidating Adjustments	Consolidated
Net sales	$ —	$ —	$ 1,616,407	$ 223,319	$ —	$ 1,839,726
Cost of products sold	—	—	1,249,887	170,127	—	1,420,014
Gross profit	—	—	366,520	53,192	—	419,712
Operating expenses:						
Selling, general and						
administrative expenses	—	30,317	189,477	52,080	—	271,874
Intercompany administrative						
charges	—	—	28,704	5,943	(34,647)	—
Amortization of intangible assets	—	—	20,737	4,569	—	25,306
Total operating expenses	—	30,317	238,918	62,592	(34,647)	297,180
Operating earnings (loss)	—	(30,317)	127,602	(9,400)	34,647	122,532
Foreign currency loss	—	—	—	(3,166)	—	(3,166)
Intercompany interest	—	63,391	(59,641)	(3,750)	—	—
Interest expense	—	(74,863)	(4)	(9)	—	(74,876)
Interest income	—	5	28	24	—	57
Tax receivable agreement liability adjustment	—	(12,947)	—	—	—	(12,947)
Intercompany administrative income	—	34,647	—	—	(34,647)	—
Income (loss) before equity in						
subsidiaries' income (loss)	—	(20,084)	67,985	(16,301)	—	31,600
Equity in subsidiaries' income (loss)	32,288	52,372	—	—	(84,660)	—
Income (loss) before						
benefit for income taxes	32,288	32,288	67,985	(16,301)	(84,660)	31,600
Benefit for income taxes	—	—	(232)	(456)	—	(688)
Net income (loss)	$ 32,288	$ 32,288	$ 68,217	$ (15,845)	$ (84,660)	$ 32,288
Other comprehensive income (loss):						
Foreign currency translation adjustments	—	—	—	(14,690)	—	(14,690)
Unrealized loss on derivative instruments	—	—	—	(465)	—	(465)
Minimum pension liability for						
actuarial loss	—	—	(1,436)	—	—	(1,436)
Total comprehensive income (loss)	$ 32,288	$ 32,288	$ 66,781	$ (31,000)	$ (84,660)	$ 15,697

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS
For the year ended December 31, 2014

(Amounts in thousands)	Guarantor Ply Gem Holdings, Inc.	Issuer Ply Gem Industries, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiary	Consolidating Adjustments	Consolidated
Net sales	$ —	$ —	$ 1,287,810	$ 278,833	$ —	$ 1,566,643
Cost of products sold	—	—	1,039,502	219,340	—	1,258,842
Gross profit	—	—	248,308	59,493	—	307,801
Operating expenses:						
Selling, general and administrative expenses	—	23,931	135,434	64,798	—	224,163
Intercompany administrative charges	—	—	17,381	6,602	(23,983)	—
Amortization of intangible assets	—	—	16,806	5,334	—	22,140
Total operating expenses	—	23,931	169,621	76,734	(23,983)	246,303
Operating earnings (loss)	—	(23,931)	78,687	(17,241)	23,983	61,498
Foreign currency loss	—	—	—	(992)	—	(992)
Intercompany interest	—	60,442	(56,941)	(3,501)	—	—
Interest expense	—	(71,234)	(32)	(3)	—	(71,269)
Interest income	—	5	30	48	—	83
Tax receivable agreement liability adjustment	—	670	—	—	—	670
Loss on modification or extinguishment of debt	—	(21,364)	—	—	—	(21,364)
Intercompany administrative income	—	23,983	—	—	(23,983)	—
Income (loss) before equity in subsidiaries' income (loss)	—	(31,429)	21,744	(21,689)	—	(31,374)
Equity in subsidiaries' income (loss)	(31,269)	160	—	—	31,109	—
Income (loss) before provision (benefit) for income taxes	(31,269)	(31,269)	21,744	(21,689)	31,109	(31,374)
Provision (benefit) for income taxes	—	—	(4,284)	4,179	—	(105)
Net income (loss)	$ (31,269)	$ (31,269)	$ 26,028	$ (25,868)	$ 31,109	$ (31,269)
Other comprehensive income (loss):						
Foreign currency translation adjustments	—	—	—	(9,681)	—	(9,681)
Unrealized gain on derivative instruments	—	—	—	1,294	—	1,294
Minimum pension liability for actuarial loss	—	(3,504)	(4,870)	—	—	(8,374)
Total comprehensive income (loss)	$ (31,269)	$ (34,773)	$ 21,158	$ (34,255)	$ 31,109	$ (48,030)

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATING BALANCE SHEET
As of December 31, 2016

(Amounts in thousands)

ASSETS	Guarantor Ply Gem Holdings, Inc.	Issuer Ply Gem Industries, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiary	Consolidating Adjustments	Consolidated
Current Assets:						
Cash and cash equivalents	$ —	$ 50,035	$ (10,918)	$ 12,480	$ —	$ 51,597
Accounts receivable, net	—	—	189,983	19,936	—	209,919
Inventories:						
Raw materials	—	—	63,829	5,810	—	69,639
Work in process	—	—	23,007	1,614	—	24,621
Finished goods	—	—	54,346	13,350	—	67,696
Total inventory	—	—	141,182	20,774	—	161,956
Prepaid expenses and other current assets	—	1,276	21,940	3,634	—	26,850
Total current assets	—	51,311	342,187	56,824	—	450,322
Investments in subsidiaries	4,106	(231,236)	—	—	227,130	—
Property and Equipment, at cost:						
Land	—	—	7,487	762	—	8,249
Buildings and improvements	—	510	63,000	4,441	—	67,951
Machinery and equipment	—	1,675	392,068	19,822	—	413,565
	—	2,185	462,555	25,025	—	489,765
Less accumulated depreciation	—	(665)	(312,759)	(10,785)	—	(324,209)
Total property and equipment, net	—	1,520	149,796	14,240	—	165,556
Other Assets:						
Intangible assets, net	—	—	91,748	12,411	—	104,159
Goodwill	—	—	449,366	29,148	—	478,514
Deferred income taxes	—	—	50,347	—	—	50,347
Intercompany note receivable	—	1,135,073	—	—	(1,135,073)	—
Other	—	3,925	4,918	—	—	8,843
Total other assets	—	1,138,998	596,379	41,559	(1,135,073)	641,863
	$ 4,106	$ 960,593	$ 1,088,362	$ 112,623	$ (907,943)	$ 1,257,741
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)						
Current Liabilities:						
Accounts payable	$ —	$ 377	$ 64,206	$ 10,815	$ —	$ 75,398
Accrued expenses	—	29,812	124,723	14,480	—	169,015
Current portion of payable to related parties pursuant to tax receivable agreement	—	25,383	—	—	—	25,383
Current portion of long-term debt	—	4,300	—	—	—	4,300
Total current liabilities	—	59,872	188,929	25,295	—	274,096
Deferred income taxes	—	—	—	2,722	—	2,722
Intercompany note payable	—	—	1,026,657	108,416	(1,135,073)	—
Long-term portion of payable to related parties pursuant to tax receivable agreement	—	54,336	—	—	—	54,336
Other long-term liabilities	—	6,193	74,835	5,367	—	86,395
Long-term debt	—	836,086	—	—	—	836,086
Commitments and contingencies						
Stockholders' Equity (Deficit):						
Preferred stock	—	—	—	—	—	—
Common stock	683	683	—	—	(683)	683
Additional paid-in-capital	751,452	751,452	236,242	26,464	(1,014,158)	751,452

(Accumulated deficit) retained earnings	(714,737)	(714,737)	(422,622)	(36,312)	1,173,671	(714,737)
Accumulated other comprehensive loss	(33,292)	(33,292)	(15,679)	(19,329)	68,300	(33,292)
Total stockholder's equity (deficit)	4,106	4,106	(202,059)	(29,177)	227,130	4,106
	$ 4,106	$ 960,593	$ 1,088,362	$ 112,623	$ (907,943)	$ 1,257,741

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATING BALANCE SHEET
As of December 31, 2015

	Guarantor Ply Gem Holdings, Inc.	Issuer Ply Gem Industries, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiary	Consolidating Adjustments	Consolidated
ASSETS						
Current Assets:						
Cash and cash equivalents	$ —	$ 94,692	$ (4,944)	$ 19,677	$ —	$ 109,425
Accounts receivable, net	—	—	172,560	22,605	—	195,165
Inventories:						
Raw materials	—	—	58,400	5,602	—	64,002
Work in process	—	—	23,126	2,193	—	25,319
Finished goods	—	—	47,946	13,136	—	61,082
Total inventory	—	—	129,472	20,931	—	150,403
Prepaid expenses and other current assets	—	944	20,310	3,393	—	24,647
Deferred income taxes	—	—	11,255	6	—	11,261
Total current assets	—	95,636	328,653	66,612	—	490,901
Investments in subsidiaries	(76,813)	(245,265)	—	—	322,078	—
Property and Equipment, at cost:						
Land	—	—	7,436	739	—	8,175
Buildings and improvements	—	—	61,883	4,438	—	66,321
Machinery and equipment	—	4,813	364,093	16,844	—	385,750
	—	4,813	433,412	22,021	—	460,246
Less accumulated depreciation	—	(1,755)	(288,542)	(8,946)	—	(299,243)
Total property and equipment, net	—	3,058	144,870	13,075	—	161,003
Other Assets:						
Intangible assets, net	—	—	112,173	16,211	—	128,384
Goodwill	—	—	449,366	28,373	—	477,739
Intercompany note receivable	—	1,104,510	—	—	(1,104,510)	—
Other	—	4,831	3,714	—	—	8,545
Total other assets	—	1,109,341	565,253	44,584	(1,104,510)	614,668
	$ (76,813)	$ 962,770	$ 1,038,776	$ 124,271	$ (782,432)	$ 1,266,572
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)						
Current Liabilities:						
Accounts payable	—	$ 235	$ 60,655	$ 13,606	$ —	$ 74,496
Accrued expenses	—	24,512	113,051	15,399	—	152,962
Current portion of payable to related parties pursuant to tax receivable agreement	—	3,005	—	—	—	3,005
Current portion of long-term debt	—	4,300	—	—	—	4,300
Total current liabilities	—	32,052	173,706	29,005	—	234,763
Deferred income taxes	—	—	17,470	3,917	—	21,387
Intercompany note payable	—	—	1,002,447	102,063	(1,104,510)	—
Payable to related parties pursuant to tax receivable agreement	—	20,811	—	—	—	20,811
Other long-term liabilities	—	11,189	75,911	3,793	—	90,893
Long-term debt	—	975,531	—	—	—	975,531
Commitments and contingencies						
Stockholders' Equity (Deficit):						
Preferred stock	—	—	—	—	—	—
Common stock	681	681	—	—	(681)	681

Additional paid-in-capital	749,296	749,296	370,180	31,611	(1,151,087)	749,296
Accumulated deficit	(790,224)	(790,224)	(584,964)	(25,546)	1,400,734	(790,224)
Accumulated other comprehensive loss	(36,566)	(36,566)	(15,974)	(20,572)	73,112	(36,566)
Total stockholder's (deficit) equity	(76,813)	(76,813)	(230,758)	(14,507)	322,078	(76,813)
	$ (76,813)	$ 962,770	$ 1,038,776	$ 124,271	$ (782,432)	$ 1,266,572

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
For the year ended December 31, 2016

(Amounts in thousands)	Guarantor Ply Gem Holdings, Inc.	Issuer Ply Gem Industries, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiary	Consolidating Adjustments	Consolidated
Cash flows from operating activities:						
Net income (loss)	$ 75,487	$ 75,487	$ 162,342	$ (10,766)	$ (227,063)	$ 75,487
Adjustments to reconcile net income (loss) to cash provided by operating activities:						
Depreciation and amortization expense	—	164	49,484	6,755	—	56,403
Non-cash restructuring costs	—	—	—	427	—	427
Non-cash interest expense, net	—	13,710	—	—	—	13,710
Gain on foreign currency transactions	—	—	—	(299)	—	(299)
Non-cash litigation expense	—	—	1,875	—	—	1,875
Loss on modification or extinguishment of debt	—	11,747	—	—	—	11,747
Stock based compensation	—	1,067	—	—	—	1,067
Deferred income taxes	—	—	(56,712)	(1,277)	—	(57,989)
Tax receivable agreement liability adjustment	—	60,874	—	—	—	60,874
Increase in tax uncertainty, net of valuation allowance	—	—	1,059	—	—	1,059
Equity in subsidiaries' net income	(75,487)	(151,576)	—	—	227,063	—
Other	—	—	(190)	—	—	(190)
Changes in operating assets and liabilities:						
Accounts receivable, net	—	—	(18,122)	3,413	—	(14,709)
Inventories	—	—	(12,355)	813	—	(11,542)
Prepaid expenses and other current assets	—	(28)	(3,166)	227	—	(2,967)
Accounts payable	—	142	(2,449)	3,252	—	945
Accrued expenses	—	201	8,253	583	—	9,037
Cash payments on restructuring liabilities	—	—	(112)	(428)	—	(540)
Other	—	—	—	647	—	647
Net cash provided by operating activities	—	11,788	129,907	3,347	—	145,042
Cash flows from investing activities:						
Capital expenditures	—	(1,749)	(31,070)	(3,182)	—	(36,001)
Proceeds from sale of assets	—	—	55	128	—	183
Net cash used in investing activities	—	(1,749)	(31,015)	(3,054)	—	(35,818)
Cash flows from financing activities:						
Payments on long-term debt	—	(164,300)	—	—	—	(164,300)
Proceeds from intercompany investment	—	113,484	(104,866)	(8,618)	—	—
Proceeds from exercises of employee stock options	—	1,091	—	—	—	1,091
Cash payments on tax receivable agreement	—	(4,971)	—	—	—	(4,971)
Net cash provided used in financing activities	—	(54,696)	(104,866)	(8,618)	—	(168,180)
Impact of exchange rate movement						

on cash	—	—	—	1,128	—	1,128
Net decrease in cash						
and cash equivalents	—	(44,657)	(5,974)	(7,197)	—	(57,828)
Cash and cash equivalents at the						
beginning of the period	—	94,692	(4,944)	19,677	—	109,425
Cash and cash equivalents at the end						
of the period	$ —	$ 50,035	$ (10,918)	$ 12,480	$ —	$ 51,597

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
For the year ended December 31, 2015

(Amounts in thousands)	Guarantor Ply Gem Holdings, Inc.	Issuer Ply Gem Industries, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiary	Consolidating Adjustments	Consolidated
Cash flows from operating activities:						
Net income (loss)	$ 32,288	$ 32,288	$ 68,217	$ (15,845)	$ (84,660)	$ 32,288
Adjustments to reconcile net income (loss) to cash provided by operating activities:						
Depreciation and amortization expense	—	312	51,079	7,009	—	58,400
Fair-value premium on purchased inventory	—	—	54	—	—	54
Non-cash restructuring costs	—	—	—	704	—	704
Non-cash interest expense, net	—	13,380	—	—	—	13,380
Loss on foreign currency transactions	—	—	—	3,166	—	3,166
Stock based compensation	—	1,960	—	—	—	1,960
Deferred income taxes	—	—	(3,612)	(1,289)	—	(4,901)
Tax receivable agreement liability adjustment	—	12,947	—	—	—	12,947
Reduction in tax uncertainty, net of valuation allowance	—	—	(199)	—	—	(199)
Equity in subsidiaries' net loss (income)	(32,288)	(52,372)	—	—	84,660	—
Other	—	—	(28)	—	—	(28)
Changes in operating assets and liabilities:						
Accounts receivable, net	—	—	(10,949)	6,387	—	(4,562)
Inventories	—	—	27,963	1,958	—	29,921
Prepaid expenses and other current assets	—	1,165	5,348	216	—	6,729
Accounts payable	—	(4)	(11,712)	1,153	—	(10,563)
Accrued expenses	—	1,682	2,452	(798)	—	3,336
Cash payments on restructuring liabilities	—	—	(201)	(1,444)	—	(1,645)
Other	—	—	(1,624)	—	—	(1,624)
Net cash provided by operating activities	—	11,358	126,788	1,217	—	139,363
Cash flows from investing activities:						
Acquisitions, net of cash acquired and outstanding checks assumed	—	—	(21,000)	—	—	(21,000)
Capital expenditures	—	(2,848)	(28,181)	(2,831)	—	(33,860)
Proceeds from sale of assets	—	—	85	37	—	122
Net cash used in investing activities	—	(2,848)	(49,096)	(2,794)	—	(54,738)
Cash flows from financing activities:						
Payments on long-term debt	—	(4,300)	—	—	—	(4,300)
Proceeds from intercompany investment	—	66,189	(76,791)	10,602	—	—
Proceeds from exercises of employee stock options	—	2,198	—	—	—	2,198
Cash payments on tax receivable agreement	—	(48)	—	—	—	(48)
Debt issuance costs paid	—	(1,412)	—	—	—	(1,412)
Net cash provided by (used in) financing activities	—	62,627	(76,791)	10,602	—	(3,562)
Impact of exchange rate movement						

on cash	—	—	—	(4,800)	—	(4,800)
Net increase in cash						
and cash equivalents	—	71,137	901	4,225	—	76,263
Cash and cash equivalents at the						
beginning of the period	—	23,555	(5,845)	15,452	—	33,162
Cash and cash equivalents at the end						
of the period	$ —	$ 94,692	$ (4,944)	$ 19,677	$ —	$ 109,425

PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
For the year ended December 31, 2014

(Amounts in thousands)	Guarantor Ply Gem Holdings, Inc.	Issuer Ply Gem Industries, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiary	Consolidating Adjustments	Consolidated
Cash flows from operating activities:						
Net income (loss)	$ (31,269)	$ (31,269)	$ 26,028	$ (25,868)	$ 31,109	$ (31,269)
Adjustments to reconcile net income (loss) to cash provided by (used in) operating activities:						
Depreciation and amortization expense	—	698	39,399	8,366	—	48,463
Fair-value premium on purchased inventory	—	—	38	—	—	38
Fair-value decrease of contingent acquisition liability	—	—	(264)	—	—	(264)
Non-cash restructuring costs	—	—	—	3,275	—	3,275
Non-cash interest expense, net	—	14,948	—	—	—	14,948
Loss on foreign currency transactions	—	—	—	992	—	992
Non-cash litigation expense	—	—	4,573	—	—	4,573
Loss on modification or extinguishment of debt	—	21,364	—	—	—	21,364
Stock based compensation	—	2,246	—	—	—	2,246
Deferred income taxes	—	—	(6,638)	4,265	—	(2,373)
Tax receivable agreement liability adjustment	—	(670)	—	—	—	(670)
Increase in tax uncertainty, net of valuation allowance	—	—	131	—	—	131
Equity in subsidiaries' net income (loss)	31,269	(160)	—	—	(31,109)	—
Other	—	—	(295)	—	—	(295)
Changes in operating assets and liabilities:						
Accounts receivable, net	—	—	(5,087)	(7,025)	—	(12,112)
Inventories	—	—	(25,603)	(1,142)	—	(26,745)
Prepaid expenses and other current assets	—	(229)	(4,501)	(230)	—	(4,960)
Accounts payable	—	(362)	(13,648)	(3,394)	—	(17,404)
Accrued expenses	—	(4,285)	(4,454)	(1,013)	—	(9,752)
Cash payments on restructuring liabilities	—	—	(1,416)	(3,553)	—	(4,969)
Other	—	—	(449)	—	—	(449)
Net cash provided by (used in) operating activities	—	2,281	7,814	(25,327)	—	(15,232)
Cash flows from investing activities:						
Acquisitions, net of cash acquired	—	(130,856)	—	—	—	(130,856)
Capital expenditures	—	(160)	(20,918)	(2,583)	—	(23,661)
Proceeds from sale of assets	—	—	167	656	—	823
Net cash used in investing activities	—	(131,016)	(20,751)	(1,927)	—	(153,694)
Cash flows from financing activities:						
Proceeds from long-term debt	—	1,067,725	—	—	—	1,067,725
Payments on long-term debt	—	(855,225)	—	—	—	(855,225)
Proceeds from intercompany investment	—	(41,033)	12,062	28,971	—	—

Payment of early tender premium	—	(61,142)	—	—	—	(61,142)
Proceeds from exercises of employee stock options	—	1,112	—	—	—	1,112
Debt issuance costs paid	—	(16,947)	—	—	—	(16,947)
Net cash provided by						
financing activities	—	94,490	12,062	28,971	—	135,523
Impact of exchange rate movement						
on cash	—	—	—	(3,236)	—	(3,236)
Net decrease in cash						
and cash equivalents	—	(34,245)	(875)	(1,519)	—	(36,639)
Cash and cash equivalents at the						
beginning of the period	—	57,800	(4,970)	16,971	—	69,801
Cash and cash equivalents at the end						
of the period	$ —	$ 23,555	$ (5,845)	$ 15,452	$ —	$ 33,162

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not Applicable

Item 9A. CONTROLS AND PROCEDURES

Under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rule 13a-15(e) and 15d – 15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), as of the end of the period covered by this report. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures as of December 31, 2016 were effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission’s rules and forms and the information required to be disclosed by us is accumulated and communicated to our management to allow timely decisions regarding required disclosure. Management has concluded that the Company's consolidated financial statements for the periods covered by and included in this Annual Report on Form 10-K are fairly stated in all material respects in accordance with generally accepted accounting principles.

Management’s Report on Internal Control over Financial Reporting

Management of the Company (Ply Gem Holdings) is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Exchange Act. Internal control over financial reporting, no matter how well designed, has inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Further, because of changes in conditions, the effectiveness of internal control over financial reporting may vary over time. Under the supervision and with the participation of the Company’s management, including the Chief Executive Officer (principal executive officer) and the Chief Financial Officer (principal financial officer), the Company’s management conducted an evaluation of the effectiveness of the Company’s internal control over financial reporting as of December 31, 2016 as required by Rule 13a-15(c) under the Exchange Act. In making this assessment, the Company’s management used the criteria set forth in the framework in the Internal Control - Integrated Framework ("2013 Framework") issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation conducted under the framework in “Internal Control-Integrated Framework,” the Company’s management concluded that the Company’s internal control over financial reporting was effective as of December 31, 2016.

The effectiveness of our internal control over financial reporting as of December 31, 2016 has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their attestation report, which is included in this Annual Report.

Changes in Internal Control over Financial Reporting

There were no changes in our internal controls over financial reporting that occurred during the quarter ended December 31, 2016 that have materially affected, or are reasonable likely to materially affect, our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of
Ply Gem Holdings, Inc. and Subsidiaries

We have audited Ply Gem Holdings, Inc.'s (the Company) internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). 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 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of the Company as of December 31, 2016, and 2015, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity (deficit), and cash flows for the years ended December 31, 2016, and 2015, and our report dated March 10, 2017 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

Raleigh, North Carolina
March 10, 2017

Item 9B. OTHER INFORMATION

Not Applicable

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information contained under the following headings, "Corporate Governance", "Nominees for the Board of Directors", "Class II Directors", "Class III Directors", "Executive Officers", and "Section 16(a) Beneficial Ownership Reporting Compliance" in our definitive Proxy Statement for our 2017 Annual Meeting of Stockholders (the “2017 Proxy Statement”), to be filed with the SEC not later than 120 days after the end of our fiscal year covered by this report pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended, is incorporated herein by reference.

Item 11. EXECUTIVE COMPENSATION

The information contained under the heading “Executive Compensation” in our 2017 Proxy Statement is incorporated herein by reference.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information contained under the headings “Security Ownership of Certain Beneficial Owners and Management” and "Securities Authorized for Issuance Under equity Compensation Plans" in our 2017 Proxy Statement is incorporated herein by reference.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information contained under the headings “Certain Relationships and Related Party Transactions” and “Board of Directors and Committees” in our 2017 Proxy Statement is incorporated herein by reference.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information contained under the headings “Audit and Non-Audit Fees” and “Pre-Approval Policies and Procedures” in our 2017 Proxy Statement is incorporated herein by reference.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

1. Consolidated Financial Statements

The list of consolidated financial statements and related notes, together with the reports of KPMG LLP and Ernst & Young, LLP, appear in Part II, Item 8 “Financial Statements and Supplementary Data” of this Form 10-K and are hereby incorporated by reference.

2. Schedule II Valuation and Qualifying Accounts - Page 119

All other schedules have been omitted because they are not applicable, are insignificant or the required information is shown in the consolidated financial statements or notes thereto.

3. Exhibits files - See Exhibit Index

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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.

PLY GEM HOLDINGS, INC.
(Registrant)

Date: March 10, 2017

By: /s/ Gary E. Robinette
Gary E. Robinette
President, Chief Executive Officer, and Chairman of the Board

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

Signature	Title	Date
/s/ Gary E. Robinette Gary E. Robinette	President, Chief Executive Officer, and Chairman of the Board (Principal Executive Officer)	March 10, 2017
/s/ Shawn K. Poe Shawn K. Poe	Executive Vice President, Chief Financial Officer, and Secretary (Principal Financial and Accounting Officer)	March 10, 2017
/s/ Frederick J. Iseman Frederick J. Iseman	Lead Director	March 10, 2017
/s/ Michael P. Haley Michael P. Haley	Director	March 10, 2017
/s/ Jeffrey T. Barber Jeffrey T. Barber	Director	March 10, 2017
/s/ Mary K. Rhinehart Mary K. Rhinehart	Director	March 10, 2017
/s/ Janice E. Stipp Janice E. Stipp	Director	March 10, 2017
/s/ Timothy T. Hall Timothy T. Hall	Director	March 10, 2017
/s/ John Forbes John Forbes	Director	March 10, 2017
/s/ Joost F. Thesseling Joost F. Thesseling	Director	March 10, 2017

EXHIBIT INDEX

Exhibit Number		Description
2.1		Agreement and Plan of Merger, dated as of May 29, 2013, by and between Ply Gem Prime Holdings, Inc. and Ply Gem Holdings, Inc. (incorporated by reference from Exhibit 2.1 to the Company’s Form 8-K, dated May 29, 2013 (File No. 001-35930)).
2.2		Stock Purchase Agreement, dated as of August 19, 2014, by and among Ply Gem Industries, Inc., Fortune Brands Home & Security, Inc. and Fortune Brands Windows & Doors, Inc. (incorporated by reference from Exhibit 2.1 to the Company’s Form 10-Q, dated November 7, 2014 (File No. 001-35930)).
3.1		Amended and Restated Certificate of Incorporation (incorporated by reference from Exhibit 3.1 to the Company’s Form 8-K, dated May 29, 2013 (File No. 001-35930)).
3.2		Certificate of Amendment to the Amended and Restated Certificate of Incorporation (incorporated by reference from Exhibit 3.1 to the Company's Form 10-Q, dated August 10, 2015 (File No. 001-35930)).
3.3		Amended and Restated By-laws (incorporated by reference from Exhibit 3.2 to the Company’s Form 8-K, dated May 29, 2013 (File No. 001-35930)).
3.4		Certificate of Amendment to the Amended and Restated By-Laws (incorporated by reference from Exhibit 3.1 to the Company's Form 8-k, dated May 13, 2015 (File No. 001-35930)).
4.1		Indenture, dated as of January 30, 2014, among Ply Gem Industries, Inc., the Guarantors party thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference from Exhibit 4.1 to the Company’s Form 8-K, dated January 30, 2014 (File No. 001-35930)).
4.2		First Supplemental Indenture, dated as of October 3, 2014, among Ply Gem Industries, Inc., the Guarantors party thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference from Exhibit 4.5 to the Company’s Registration Statement on Form S-4, dated November 25, 2014 (File No. 333-200567)).
10.1	*	Ply Gem Holdings, Inc. 2004 Stock Option Plan (incorporated by reference from Exhibit 10.8 to the Company’s Form 8-K, dated May 29, 2013 (File No. 001-35930)).
10.2	*	Form of Incentive Stock Option Agreement for Ply Gem Holdings, Inc. 2004 Stock Option Plan. (incorporated by reference from Exhibit 10.5 to the Company’s Form 10-K, dated March 27, 2006 (File No. 333-114041-07)).
10.3	*	Ply Gem Holdings, Inc. Long Term Incentive Plan (incorporated by reference from Exhibit 10.9 to the Company’s Form 8-K, dated May 29, 2013 (File No. 001-35930)).
10.4	*	Form of Performance Unit Award Agreement for Ply Gem Holdings, Inc. Long Term Incentive Plan (incorporated by reference from Exhibit 10.8 to the Company’s Form 10-K dated March 16, 2012 (File No. 333-114041-07)).

10.5	*	Form of Restricted Unit Award Agreement for Ply Gem Holdings, Inc. Long Term Incentive Plan (incorporated by reference from Exhibit 10.9 to the Company's Form 10-K dated March 16, 2012 (File No. 333-114041-07)).
10.6	*	Form of Restricted Stock Award Agreement for Ply Gem Holdings, Inc. Long Term Incentive Plan (incorporated by reference from Exhibit 10.10 to the Company's Form 10-K dated March 16, 2012 (File No. 333-114041-07)).
10.7	*	Amended and Restated Retention Agreement with John C. Wayne, dated as of December 31, 2008 (incorporated by reference from Exhibit 10.13 to the Company's Form 10-K, dated March 30, 2009 (File No. 333-114041-07)).
10.8	*	Letter to John C. Wayne, dated as of December 31, 2016, regarding Renewal of Amended and Restated Retention Agreement.
10.9	*	Amended and Restated Retention Agreement with John Buckley, dated as of December 31, 2008 (incorporated by reference from Exhibit 10.21 to the Company's Form 10-K dated March 15, 2013 (File No. 333-114041-07)).
10.10	*	Letter to John Buckley, dated as of December 31, 2016, regarding Renewal of Amended and Restated Retention Agreement.
10.11	*	Amended and Restated Retention Agreement with David Schmoll, dated as of December 31, 2008 (incorporated by reference from Exhibit 10.17 to the Company's Form 10-K dated March 15, 2013 (File No. 333-114041-07)).
10.12	*	Letter to David Schmoll, dated as of December 31, 2016, regarding Renewal of Amended and Restated Retention Agreement.
10.13	*	Employment Agreement with Gary E. Robinette, dated as of August 14, 2006. (incorporated by reference from Exhibit 10.2 to the Company's Form 10-Q dated November 13, 2006 (File No. 333-114041-07)).
10.14	*	First Amendment to Employment Agreement with Gary E. Robinette, dated as of November 11, 2011(incorporated by reference from Exhibit 10.23 to the Company's Form 10-K dated March 16, 2012 (File No. 333-114041-07)).
10.15	*	Retention Bonus Award letter to Gary E. Robinette, dated as of November 11, 2011 (incorporated by reference from Exhibit 10.26 to the Company's Form 10-K dated March 16, 2012 (File No. 333-114041-07)).
10.16	*	Retention Bonus Award letter to Gary E. Robinette, dated as of March 11, 2015 (incorporated by reference from Exhibit 10.16 to the Company's Form 10-K dated March 13, 2015 (File No. 001-35930)).
10.17	*	Amended and Restated Retention Agreement with Shawn K. Poe, dated as of November 7, 2008 (incorporated by reference from Exhibit 10.1 to the Company's Form 10-Q, dated November 10, 2008 (File No. 333-114041-07)).
10.18	*	Letter to Shawn K. Poe, dated as of December 31, 2016, regarding Renewal of Amended and Restated Retention Agreement.
10.19	*	Retention Bonus Award letter to Shawn K. Poe, dated as of November 11, 2011 (incorporated by reference from Exhibit 10.29 to the Company's Form 10-K dated March 16, 2012 (File No. 333-114041-07)).

10.20	*	Retention Bonus Award letter to Shawn K. Poe, dated as of March 11, 2015 (incorporated by reference from Exhibit 10.20 to the Company's Form 10-K dated March 13, 2015 (File No. 001-35930)).
10.21	*	Repurchase Agreement, dated as of November 11, 2011, between Gary E. Robinette and Ply Gem Prime Holdings, Inc (incorporated by reference from Exhibit 10.30 to the Company's Form 10-K dated March 16, 2012 (File No. 333-114041-07)).
10.22		Second Amended and Restated Stockholders' Agreement, dated as of May 22, 2013, by and among Ply Gem Holdings, Inc., Ply Gem Prime Holdings, Inc., Caxton-Iseman (Ply Gem), L.P., Caxton-Iseman (Ply Gem) II, L.P., the management stockholders named therein and for purposes of certain sections only, Rajaconda Holdings, Inc. (incorporated by reference from Exhibit 10.1 to the Company's Form 8-K, dated May 29, 2013 (File No. 001-35930)).
10.23		Registration Rights Agreement, dated as of May 22, 2013, by and among Ply Gem Holdings, Inc., Caxton-Iseman (Ply Gem), L.P. and Caxton-Iseman (Ply Gem) II, L.P. and other parties named therein (incorporated by reference from Exhibit 10.2 to the Company's Form 8-K, dated May 29, 2013 (File No. 001-35930)).
10.24		Tax Receivable Agreement, dated as of May 22, 2013, by and among Ply Gem Holdings, Inc. and the Tax Receivable Entity (incorporated by reference from Exhibit 10.3 to the Company's Form 8-K, dated May 29, 2013 (File No. 001-35930)).
10.25		Third Amended and Restated Tax Sharing Agreement, dated as of May 23, 2013, between Ply Gem Holdings, Inc. and Ply Gem Industries, Inc. (incorporated by reference from Exhibit 10.4 to the Company's Form 8-K, dated May 29, 2013 (File No. 001-35930)).
10.26		Form of Transfer Restriction Agreement between Ply Gem Holdings, Inc. and the stockholder party thereto (incorporated by reference from Exhibit 10.48 to Amendment No. 5 to the Company's Registration Statement on Form S-1, dated May 13, 2013 (File No. 333-167193)).
10.27		Form of Indemnification Agreement (incorporated by reference from Exhibit 10.40 to Amendment No. 5 to the Company's Registration Statement on Form S-1, dated May 13, 2013 (File No. 333-167193)).
10.28		Amended and Restated Credit Agreement dated as of November 1, 2013, by and among Ply Gem Holdings, Inc., Ply Gem Industries, Inc., Ply Gem Canada, Inc., Gienow Canada, Inc., Mitten, Inc., the other borrowers named therein, each Lender from time to time party thereto, UBS AG, Stamford Branch, as U.S. Administrative Agent, as U.S. Collateral Agent, as U.S. Swing Line Lender and a U.S. L/C Issuer, Wells Fargo Capital Finance, LLC, as Co-Collateral Agent, Wells Fargo Bank, National Association, as a U.S. L/C Issuer, UBS AG Canada Branch, as Canadian Administrative Agent, as Canadian Collateral Agent, as Canadian Swing Line Lender, and as a Canadian L/C Issuer, Credit Suisse AG Cayman Islands Branch, as a U.S. L/C Issuer, Credit Suisse AG, Toronto Branch, as a Canadian L/C Issuer, UBS Securities LLC, as Joint Lead Arranger and Joint Bookrunner, and Wells Fargo Capital Finance, LLC, as Syndication Agent, Joint Lead Arranger and Joint Bookrunner (incorporated by reference from Exhibit 10.47 to the Company's Form 10-K/A dated March 14, 2014 (File No. 001-35930)).
10.29		Amendment to Amended and Restated Credit Agreement, dated as of April 7, 2014, by and among Ply Gem Industries, Inc., Ply Gem Canada, Inc., Gienow Canada Inc. and Mitten Inc., UBS AG, Stamford Branch, as U.S. Administrative Agent, and UBS AG Canada Branch, as Canadian Administrative Agent. (incorporated by reference from Exhibit 10.2 to the Company's Form 10-Q dated May 12, 2014 (File No. 001-35930)).

10.30	Amendment No. 2 and Incremental Assumption Agreement to Amended and Restated Credit Agreement, dated as of November 6, 2014, by and among Ply Gem Holdings, Inc., Ply Gem Industries, Inc., Gienow Canada Inc. and Mitten Inc., each other Loan Party signatory thereto, each Lender providing an increase to its Revolving Credit Commitment or a new Revolving Credit Commitment, as the case may be, and UBS AG, Stamford Branch, as U.S. Administrative Agent (incorporated by reference from Exhibit 10.1 to the Company's Registration Statement on Form S-4, dated November 25, 2014 (File No. 333-200567)).
10.31	Credit Agreement, dated as of January 30, 2014, by and among Ply Gem Holdings, Inc., Ply Gem Industries, Inc., the Lenders party thereto and Credit Suisse AG, as Administrative Agent and Collateral Agent (incorporated by reference from Exhibit 10.1 to the Company's Form 8-K, dated January 30, 2014 (File No. 001-35930)).
10.32	Second Amended and Restated Credit Agreement, dated as of November 5, 2015, by and among Ply Gem Holdings, Inc., Ply Gem Industries, Inc., Gienow Canada, Inc., Mitten, Inc., the other borrowers named therein, each Lender from time to time party thereto, UBS AG, Stamford Branch, as U.S. Administrative Agent, as U.S. Collateral Agent, as U.S. Swing Line Lender and a U.S. L/C Issuer, Wells Fargo Capital Finance, LLC, as Co-Collateral Agent, Wells Fargo Bank, National Association, as a U.S. L/C Issuer, UBS AG Canada Branch, as Canadian Administrative Agent, as Canadian Collateral Agent, as Canadian Swing Line Lender, and as a Canadian L/C Issuer, Credit Suisse AG Cayman Islands Branch, as a U.S. L/C Issuer, Credit Suisse AG, Toronto Branch, as a Canadian L/C Issuer, UBS Securities LLC, as Joint Lead Arranger and Joint Bookrunner, and Wells Fargo Capital Finance, LLC, as Syndication Agent, Joint Lead Arranger and Joint Bookrunner (incorporated by reference from Exhibit 10.1 to the Company's Form 8-K, dated November 5, 2015 (File No. 001-35930)).
21.1	List of Subsidiaries.
23.1	Consent of KPMG LLP, independent registered public accounting firm.
23.2	Consent of Ernst & Young LLP, independent registered public accounting firm.
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following financial statements from the Annual Report on Form 10-K for the fiscal year ended December 31, 2016, were formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Statements of Operations; (ii) Consolidated Statements of Comprehensive (Loss) Income; (iii) Consolidated Balance Sheets; (iv) Consolidated Statements of Cash Flows; (v) Consolidated Statements of Stockholder's Equity (Deficit); and (vi) Notes to Consolidated Financial Statements.

* Management Agreement

SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS
PLY GEM HOLDINGS, INC. AND SUBSIDIARIES
December 31, 2016

(Amounts in thousands)	Balance at Beginning of Year	Charged to Costs and Expenses	Charged to Other Accounts	Uncollectible accounts written off, net of recoveries	Balance at End of Year
Year ended December 31, 2016					
Allowance for doubtful accounts and sales allowances...........	$ 3,588	$ 573	$ —	$ (1,498)	$ 2,663
Year ended December 31, 2015					
Allowance for doubtful accounts and sales allowances...........	$ 4,164	$ 1,419	$ 19	$ (2,014)	$ 3,588
Year ended December 31, 2014					
Allowance for doubtful accounts and sales allowances...........	$ 4,453	$ 961	$ —	$ (1,250)	$ 4,164

See accompanying reports of independent registered public accounting firms.

December 31, 2016

Re: Renewal of Amended and Restated Retention Agreement

Dear John:

This letter is to serve as your notification that Ply Gem Industries, Inc. has elected to execute its Renewal Term right under your current Amended and Restated Retention Agreement dated December 31, 2008 for a period of one year. As such, all applicable rights and terms as outlined in your Amended and Restated Retention Agreement will remain in effect through December 31, 2017.

Please sign this letter in the space provided below as your acknowledgment and agreement of this Renewal Term agreement and return this original to me, and retain a copy for your own records.

Sincerely,

PLY GEM INDUSTRIES, INC.

By: /s/ Gary E. Robinette
Name: Gary E. Robinette
Title: President and Chief Executive Officer

Acknowledged and Agreed:

/s/ John C. Wayne

John C. Wayne

December 31, 2016

Re: Renewal of Amended and Restated Retention Agreement

Dear John:

This letter is to serve as your notification that Ply Gem Industries, Inc. has elected to execute its Renewal Term right under your current Amended and Restated Retention Agreement dated December 31, 2008 for a period of one year. As such, all applicable rights and terms as outlined in your Amended and Restated Retention Agreement will remain in effect through December 31, 2017.

Please sign this letter in the space provided below as your acknowledgment and agreement of this Renewal Term agreement and return this original to me, and retain a copy for your own records.

Sincerely,

PLY GEM INDUSTRIES, INC.

By: /s/ Gary E. Robinette
Name: Gary E. Robinette
Title: President and Chief Executive Officer

Acknowledged and Agreed:

/s/ John Buckley

John Buckley

December 31, 2016

Re: Renewal of Amended and Restated Retention Agreement

Dear David:

This letter is to serve as your notification that Ply Gem Industries, Inc. has elected to execute its Renewal Term right under your current Amended and Restated Retention Agreement dated December 31, 2008 for a period of one year. As such, all applicable rights and terms as outlined in your Amended and Restated Retention Agreement will remain in effect through December 31, 2017.

Please sign this letter in the space provided below as your acknowledgment and agreement of this Renewal Term agreement and return this original to me, and retain a copy for your own records.

Sincerely,

PLY GEM INDUSTRIES, INC.

By: /s/ Gary E. Robinette
Name: Gary E. Robinette
Title: President and Chief Executive Officer

Acknowledged and Agreed:

/s/ David N. Schmoll

David N. Schmoll

December 31, 2016

Re: Renewal of Amended and Restated Retention Agreement

Dear Shawn:

This letter is to serve as your notification that Ply Gem Industries, Inc. has elected to execute its Renewal Term right under your current Amended and Restated Retention Agreement dated November 7, 2008 for a period of one year. As such, all applicable rights and terms as outlined in your Amended and Restated Retention Agreement will remain in effect through December 31, 2017.

Please sign this letter in the space provided below as your acknowledgment and agreement of this Renewal Term agreement and return this original to me, and retain a copy for your own records.

Sincerely,

PLY GEM INDUSTRIES, INC.

By: /s/ Gary E. Robinette
Name: Gary E. Robinette
Title: President and Chief Executive Officer

Acknowledged and Agreed:

/s/ Shawn K. Poe

Shawn K. Poe

SUBSIDIARIES OF THE REGISTRANT

Name	State or other jurisdiction of incorporation or organization
Alenco Building Products Management, L.L.C.	Delaware
Alenco Extrusion GA, L.L.C.	Delaware
Alenco Extrusion Management, L.L.C.	Delaware
Alenco Holding Corporation	Delaware
Alenco Interests, L.L.C.	Delaware
Alenco Trans, Inc.	Delaware
Alenco Window GA, L.L.C.	Delaware
Aluminum Scrap Recycle, L.L.C.	Delaware
AWC Arizona, Inc.	Delaware
AWC Holding Company	Delaware
Foundation Labs by Ply Gem, LLC.	Delaware
Gienow Canada Inc.	Alberta, Canada
Glazing Industries Management, L.L.C.	Delaware
Great Lakes Window, Inc.	Ohio
Kroy Building Products, Inc.	Delaware
Mastic Home Exteriors, Inc.	Ohio
Mitten, Inc.	Ontario, Canada
MW Manufacturers Inc.	Delaware
MWM Holding, Inc.	Delaware
Napco, Inc.	Delaware
New Alenco Extrusion, Ltd.	Texas
New Alenco Window, Ltd.	Texas
New Glazing Industries, Ltd.	Texas
Ply Gem Industries, Inc.	Delaware
Ply Gem Pacific Windows Corporation	Delaware
Ply Gem Specialty Products, LLC	Delaware
Simex, Inc.	West Virginia
Simonton Building Products, L.L.C.	Delaware
Simonton Industries, Inc.	California
Simonton Windows, Inc.	West Virginia
Simonton Windows & Doors, Inc.	Delaware
Variform, Inc.	Missouri

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the registration statement (Nos. 333-213172) on Form S-3 and (Nos. 333-188916) on Form S-8 of Ply Gem Holdings, Inc. of our reports dated March 10, 2017, with respect to the consolidated balance sheet Ply Gem Holdings, Inc. as of December 31, 2016 and 2015, and the related consolidated financial statements of operations, comprehensive income (loss), stockholders' equity (deficit), and cash flows for the years ended December 31, 2016 and 2015, and the related financial statement schedule, and the effectiveness of internal control over financial reporting as of December 31, 2016, which reports appear in the December 31, 2016 annual report on Form 10-K of Ply Gem Holdings, Inc.

/s/ KPMG LLP

Raleigh, North Carolina

March 10, 2017

Exhibit 23.2

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-3 No. 333-213172) of Ply Gem Holdings, Inc., and
(2) Registration Statement (Form S-8 No. 333-188916) pertaining to the 2004 Stock Option Plan and the Long-Term Incentive Plan of Ply Gem Holdings, Inc.;

of our report dated March 13, 2015, with respect to the consolidated financial statements and schedule of Ply Gem Holdings, Inc. and subsidiaries for the year ended December 31, 2014, included in this Annual Report (Form 10-K) for the year ended December 31, 2016.

/s/ Ernst & Young LLP

Raleigh, North Carolina

March 10, 2017

Exhibit 31.1

Certification Pursuant To
Section 302 of the Sarbanes-Oxley Act of 2002

I, Gary E. Robinette, certify that:

1. I have reviewed this annual report on Form 10-K of Ply Gem Holdings, Inc.;

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 the 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.

Date: March 10, 2017

/s/ Gary E. Robinette

Name: Gary E. Robinette

Title: President, Chief Executive Officer, and Chairman of the Board

Exhibit 31.2

Certification Pursuant To
Section 302 of the Sarbanes-Oxley Act of 2002

I, Shawn K. Poe, certify that:

1. I have reviewed this annual report on Form 10-K of Ply Gem Holdings, Inc.;

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 the 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.

Date: March 10, 2017

	/s/ Shawn K. Poe
Name:	Shawn K. Poe
Title:	Executive Vice President, Chief Financial Officer and Secretary

Exhibit 32.1

Certification Pursuant to
18 U.S.C. Section 1350
As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the annual report on Form 10-K of Ply Gem Holdings, Inc., a Delaware corporation (the "Company"), for the year ended December 31, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

1. the Report fully complies, in all material respects, with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: March 10, 2017

/s/ Gary E. Robinette
Gary E. Robinette
President, Chief Executive Officer, and Chairman of the Board

Exhibit 32.2

Certification Pursuant to
18 U.S.C. Section 1350
As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the annual report on Form 10-K of Ply Gem Holdings, Inc., a Delaware corporation (the “Company”), for the year ended December 31, 2016, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

1. the Report fully complies, in all material respects, with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: March 10, 2017

/s/ Shawn K. Poe
Shawn K. Poe
Executive Vice President, Chief Financial Officer and Secretary