

ABM INDUSTRIES INC /DE/
Form 10-K
December 21, 2018

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

FORM 10-K
(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended October 31, 2018

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: 1-8929

ABM INDUSTRIES INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware 94-1369354

(State or other jurisdiction of (I.R.S. Employer
incorporation or organization) Identification No.)

One Liberty Plaza, 7th Floor
New York, New York 10006
(Address of principal executive offices)

(212) 297-0200
(Registrant's telephone number, including area code)

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

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

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

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

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

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 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 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, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

Aggregate market value of the registrant's common stock held by non-affiliates of the registrant, based upon the closing price of a share of the registrant's common stock on April 30, 2018 as reported on the New York Stock Exchange on that date: \$2,031,249,279

Number of shares of the registrant's common stock outstanding as of December 20, 2018: 66,029,479

DOCUMENTS INCORPORATED BY REFERENCE

Certain parts of the registrant's Definitive Proxy Statement relating to the registrant's 2019 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report on Form 10-K.

ABM INDUSTRIES INCORPORATED AND SUBSIDIARIES

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K for ABM Industries Incorporated and its subsidiaries (collectively referred to as “ABM,” “we,” “us,” “our,” or the “Company”) contains both historical and forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties. We make forward-looking statements related to future expectations, estimates, and projections that are uncertain and often contain words such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” “intend,” “likely,” “may,” “outlook,” “plan,” “predict,” “show,” or similar words or phrases. These statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and assumptions that are difficult to predict. Factors that might cause such differences include, but are not limited to, those discussed in Part 1 of this Form 10-K under Item 1A., “Risk Factors,” and we urge readers to consider these risks and uncertainties in evaluating our forward-looking statements. We caution readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events, or otherwise, except as required by law.

PART I

ITEM 1. BUSINESS.

General

ABM Industries Incorporated, which operates through its subsidiaries (collectively referred to as “ABM,” “we,” “us,” “our,” or the “Company”), is a leading provider of integrated facility solutions with a mission to make a difference, every person, every day. Our history dates back to 1909, when American Building Maintenance Company began as a window washing company in San Francisco with one employee. In 1985, we were incorporated in Delaware under the name American Building Maintenance Industries, Inc., as the successor to the business originally founded in 1909. In 1994, we changed our name to ABM Industries Incorporated. Over the past ten years, we have grown into a multi-segment facility solutions company, increasing our revenue from \$3 billion to \$6 billion, particularly through new service offerings and strategic acquisitions.

The acquisition of OneSource in 2007 bolstered ABM as a leader in the janitorial market, while the Linc Group acquisition in 2010 established ABM as a “facility solutions” company with new service offerings, including lighting, mechanical, and electrical “technical solutions.” With demand increasing for industry-specific service providers, in 2012 we purchased Air Serv and established our first industry group, “aviation.” In recent years, we have strategically acquired companies in the United Kingdom, particularly with the GBM and Westway acquisitions, which expanded our janitorial and technical solutions businesses overseas. In 2017, we completed the acquisition of GCA Services Group (“GCA”), a provider of integrated facility services to educational institutions and commercial facilities, for approximately \$1.3 billion, the largest acquisition in ABM history. As a result of this acquisition, we are now a leading facility solutions provider in the education market. In recent years, we also evaluated all of our service offerings and sold our Security and Government Services businesses, which did not align with ABM’s long-term industry-group focus.

As a result of these strategic changes, we have strengthened our ability to offer janitorial, facilities engineering, parking, and specialized mechanical and electrical technical solutions, on a standalone basis or in combination, positioning ourselves as a leading integrated facilities management company. Unless otherwise indicated, all references to years are to our fiscal year, which ends on October 31.

2020 Vision

In September 2015, we announced a comprehensive transformation initiative (“2020 Vision”) intended to drive long-term, profitable growth through an industry-based go-to-market approach. In connection with our 2020 Vision, we have achieved savings through the realignment of our organization by industry group, divested businesses that were not at the core of our strategy, centralized key functional areas, strengthened our sales capabilities, initiated investments in service delivery tools and processes, improved our employee engagement programs, and added to our position as a leading integrated service provider through the acquisition of GCA. We continue focusing on several key initiatives across our organization to sustain our 2020 Vision strategy and profitably deliver leading industry-based facility solutions. For additional information on our 2020 Vision, see Item 7., “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Contract Types

We generate revenues under several types of contracts, as explained below. Generally, the type of contract is determined by the nature of the services. Although many of our service agreements are cancelable on short notice, we have historically had a high rate of client retention and expect to continue maintaining long-term relationships with our clients.

Contract Type	Description
Monthly Fixed-Price	These arrangements are contracts in which the client agrees to pay a fixed fee every month over a specified contract term. A variation of a fixed-price arrangement is a square-foot arrangement, under which monthly billings are based on the actual square footage serviced. Janitorial contracts are commonly structured as fixed-price arrangements.
Cost-Plus	These arrangements are contracts in which the clients reimburse us for the agreed-upon amount of wages and benefits, payroll taxes, insurance charges, and other expenses associated with the contracted work, plus a profit margin. Facilities engineering, janitorial, and catering services are commonly structured as cost-plus arrangements.
Tag Services	Tag work generally consists of supplemental services requested by clients outside of the standard service specification. This contract type is commonly used in janitorial services and includes cleanup after tenant moves, construction cleanup, flood cleanup, and snow removal.
Transaction-Price	These are agreements in which the clients are billed for each transaction performed on a monthly basis (e.g., wheelchair passengers served or planes cleaned).
Hourly	These arrangements are contracts in which the client is billed a set hourly rate for each labor hour provided. Certain Aviation contracts are structured as hourly arrangements.
Management Reimbursement	Under these parking arrangements, we manage a parking facility for a management fee and pass through the revenue and expenses associated with the facility to the owner.
Leased Location	Under these parking arrangements, we generally pay to the property owner a fixed amount of rent plus a percentage of revenues derived from monthly and transient parkers. We retain all revenues and we are responsible for most operating expenses incurred.
Allowance	Under these parking arrangements, we are paid a fixed or hourly fee to provide parking services, and we are responsible for certain operating expenses, as specified in the contract.
Energy Savings Contracts and Fixed-Price Repair and Refurbishment	Under these arrangements, we agree to develop, design, engineer, and construct a project and guarantee that the project will satisfy agreed-upon performance standards.
Franchise	We franchise certain engineering services through individual and area franchises under the Linc Service and TEGG brands, which are part of ABM Technical Solutions.

Segment and Geographic Financial Information

Effective November 1, 2017, we reorganized our reportable segments to reflect the integration of GCA into our industry group model. Our reportable segments consist of Business & Industry (“B&I”), Aviation, Technology & Manufacturing (“T&M”), Education, Technical Solutions, and Healthcare. Our principal operations are in the United States, and in 2018 our U.S. operations generated approximately 93% of our revenues. For segment and geographic financial information, see Note 18, “Segment and Geographic Information,” in the Notes to Consolidated Financial Statements.

REPORTABLE SEGMENTS AND DESCRIPTIONS

B&I, our largest reportable segment, encompasses janitorial, facilities engineering, and parking services for commercial real estate properties and sports and entertainment venues. B&I also provides vehicle maintenance and other services to rental car providers (“Vehicle Services Contracts”). We typically provide services in this segment pursuant to monthly fixed-price arrangements and cost-plus arrangements that are obtained through a competitive bid process as well as through tag services.

Aviation supports airlines and airports with services ranging from parking and janitorial to passenger assistance, catering logistics, air cabin maintenance, and transportation. We typically provide services to clients in this segment under master services agreements. These agreements are typically re-bid upon renewal and are generally structured as fixed-price arrangements, parking reimbursement contracts, transaction-price arrangements, and hourly arrangements. Two clients accounted for approximately 31% of revenues for this segment in 2018.

T&M combines our legacy Industrial & Manufacturing business, which was previously included in our B&I segment, with our legacy High Tech industry group, which was previously reported as part of our legacy Emerging Industries Group. T&M provides janitorial, facilities engineering, and parking services. We typically provide these services pursuant to monthly fixed-price and cost-plus arrangements that are obtained through a competitive bid process. Education delivers janitorial, custodial, landscaping and grounds, facilities engineering, and parking services for public school districts, private schools, colleges, and universities. These services are typically provided pursuant to monthly fixed-price and cost-plus arrangements that are obtained through either a competitive bid process or re-bid upon renewal. This business was previously reported as part of our legacy Emerging Industries Group.

Technical Solutions specializes in mechanical and electrical services. These services can also be leveraged for cross-selling across all of our industry groups, both domestically and internationally. Contracts for this segment are structured as cost-plus arrangements, fixed-price arrangements, energy savings contracts, and franchise arrangements. Healthcare offers janitorial, facilities management, clinical engineering, food and nutrition, laundry and linen, parking and guest services, and patient transportation services at traditional hospitals and non-acute facilities. We typically provide these services, which are obtained through a competitive bid process, pursuant to monthly fixed-price and cost-plus arrangements, as well as parking reimbursement contracts. This business was previously reported as part of our legacy Emerging Industries Group.

Service Marks, Trademarks, and Trade Names

We hold various service marks, trademarks, and trade names, such as “ABM,” “ABM Building Value,” “ABM Greencare,” “MPOWER,” “Linc Service,” “OmniServ,” and “TEGG,” which we deem important to our marketing activities, to our business, and, in some cases, to the franchising activities conducted by our Technical Solutions segment.

Dependence on Significant Client

No client accounted for more than 10% of our consolidated revenues during 2018, 2017, or 2016.

Competition

We believe that each aspect of our business is highly competitive and that such competition is based primarily on price, quality of service, efficiency enhancements, adapting to changing workplace conditions, and ability to anticipate and respond to industry changes. A majority of our revenue is derived from projects requiring competitive bids; however, an invitation to bid is often conditioned upon prior experience, industry expertise, and financial strength. The low cost of entry in the facility services business results in a very competitive market. We mainly compete with regional and local owner-operated companies that may have more acute vision into local markets and significantly lower labor and overhead costs, providing them with competitive advantages in those regards. We also compete indirectly with companies that can perform for themselves one or more of the services we provide.

Sales and Marketing

Our sales and marketing activities include digital engagement and direct interactions with prospective and existing clients, pricing, proposal management, and customer relationship management by dedicated business development teams, operations personnel, and management. These activities are executed by branch and regional sales, marketing, and operations teams assigned to our industry groups and are supported by centralized sales support teams, inside sales teams, corporate marketing personnel, and our Center of Excellence teams. These sales and marketing teams perform lead acquisition, lead nurturing, and lead management as well as training in sales tools and proposal systems, all governed by standard operating procedures.

Regulatory Environment and Environmental Compliance

Our operations are subject to various federal, state, and/or local laws regulating the discharge of materials into the environment or otherwise relating to the protection of the environment, such as discharge into soil, water, and air, and the generation, handling, storage, transportation, and disposal of waste and hazardous substances. From time to time we are involved in environmental matters at certain of our locations or in connection with our operations. Historically, the cost of complying with environmental laws or resolving environmental issues relating to locations or operations in the United States or abroad has not had a material adverse effect on our financial position, results of operations, or cash flows.

Employees

As of October 31, 2018, we employed approximately 140,000 persons, of which approximately 48,000, or 34%, were subject to various local collective bargaining agreements.

Available Information

We are required to file Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and other information with the Securities and Exchange Commission (“SEC”). The public may read and copy any materials that we file with the SEC at the SEC’s Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, proxy statements, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 are also available free of charge on our Internet site at www.abm.com as soon as reasonably practicable after such reports are electronically filed with or furnished to the SEC. We provide references to our website for your convenience, but our website does not constitute, and should not be viewed as, a part of this Annual Report, and our website is not incorporated into this or any of our other filings with the SEC.

Executive Officers of Registrant

Executive Officers on December 21, 2018

Name	Age	Principal Occupations and Business Experience
Scott Salmirs	56	President and Chief Executive Officer of ABM since March 2015; Executive Vice President of ABM from September 2014 to March 2015, with global responsibility for ABM's Aviation division and all international activities; Executive Vice President of ABM's Onsite Services division focused on the Northeast from 2003 to September 2014; Member of the Board of Directors of ABM since January 2015.
D. Anthony Scaglione	46	Executive Vice President and Chief Financial Officer of ABM since April 2015; Senior Vice President, Treasurer, and Head of Mergers and Acquisitions of ABM from January 2012 to April 2015; Vice President and Treasurer of ABM from June 2009 to January 2012; Chairman of the Board of the Association for Financial Professionals (AFP), the professional society that represents finance executives across the globe, from November 2014 to October 2016.
Scott Giacobbe	56	Chief Operating Officer of ABM since November 2017; President of ABM's U.S. Technical Solutions from November 2010 to November 2017.
Andrea R. Newborn	55	Executive Vice President, General Counsel, and Corporate Secretary of ABM since July 2017; Executive Vice President and General Counsel for TravelClick, Inc. from July 2014 to June 2017; Senior Vice President, General Counsel, and Secretary of The Reader's Digest Association, Inc. from March 2007 to February 2014.
Dean A. Chin	50	Senior Vice President, Chief Accounting Officer, and Corporate Controller of ABM since June 2010; Vice President and Assistant Controller of ABM from June 2008 to June 2010.
Andrew D. Block	50	Executive Vice President and Chief Human Resources Officer of ABM since June 2018; Senior Vice President, Talent and Organizational Performance (Chief HR Officer) of Buffalo Wild Wings, Inc. from April 2010 to June 2018; Director of Human Resources of C.H. Robinson Worldwide, Inc. from December 2002 to April 2010.
Rene Jacobsen	57	President of ABM's Business & Industry Group since February 2016; Executive Vice President of ABM's West Region from April 2012 to February 2016; Executive Vice President and Chief Operating Officer of Temco Service Industries from November 2007 to April 2012.

ITEM 1A. RISK FACTORS.

We may not realize the full extent of growth opportunities or potential synergies anticipated from the acquisition of GCA.

The benefits that we expected to result from the acquisition of GCA will depend, in part, on our ability to realize the full extent of the anticipated growth opportunities and to maintain synergies from the acquisition. Our success in realizing these growth opportunities and synergies, and the timing of this realization, depends on a number of factors. There is a significant degree of difficulty and management distraction inherent in the process of integrating an acquisition as sizable as GCA. While we have completed a significant portion of the integration, the ongoing process of integrating operations could cause an interruption of, or loss of momentum in, the activities of our business, including the GCA legacy business. In addition, time and distraction relating to the integration of GCA could detract from our ability to achieve the benefits anticipated with respect to our 2020 Vision. There can be no assurance that we will complete the GCA integration successfully or in a cost efficient manner, and the failure to do so could have a material adverse effect on our business, financial condition, or results of operations.

Even if we are able to complete the GCA integration successfully, this integration may not result in the full realization of the growth opportunities and synergies we anticipated and currently expect from this integration, and we cannot guarantee these benefits will be achieved within anticipated timeframes or at all. In addition, the overall integration may result in unanticipated problems, expenses, liabilities, competitive responses, loss of client and other relationships, or loss of key employees, any of which may adversely affect our results of operations and may cause our stock price to decline.

We incurred a substantial amount of debt to complete the acquisition of GCA. To service our debt, we will require a significant amount of cash. Our ability to generate cash depends on many factors beyond our control. We also depend on the profitability of our subsidiaries to satisfy our cash needs. If we cannot generate the required cash, we may not be able to make the necessary payments required to service our indebtedness or we may be required to suspend certain discretionary payments, including our dividend.

In connection with the acquisition of GCA, we refinanced and replaced our existing credit facility with a new syndicated secured credit facility (the "Credit Facility") consisting of a \$900 million revolving line of credit and an \$800 million amortizing term loan with a five-year term. Although we have paid down portions of this indebtedness, our future ability to make payments on our debt, fund our other liquidity needs, and make planned capital expenditures will depend on our ability to generate cash. Our ability to generate cash, to a certain extent, is subject to general economic, financial, competitive, and other factors that are beyond our control. We cannot guarantee that our business will generate sufficient cash flow from our operations or that future borrowings will be available to us in an amount sufficient to enable us to make payments on our debt, fund other liquidity needs, make planned capital expenditures, or continue our dividend.

The degree to which we are currently leveraged could have important consequences for shareholders. For example, it could: require us to dedicate a substantial portion of our cash flows from operations to the payment of debt service, reducing the availability of our cash flow to fund working capital, share repurchases, capital expenditures, acquisitions, and other general corporate purposes; limit our availability to obtain additional financing in the future to enable us to react to changes in our business; and place us at a competitive disadvantage compared to businesses in our industry that have less debt.

Additionally, increased borrowings increase our interest expense, which could negatively impact our profitability. Because current interest rates on our credit facility are variable, an increase in prevailing rates would increase our interest costs. Further, our credit facility contains both financial covenants and other covenants that limit our ability to engage in specific transactions. Any failure to comply with covenants in the credit facility could result in an event of default that, if not cured or waived, would have a material adverse effect on us.

Changes to our businesses, operating structure, financial reporting structure, or personnel relating to the implementation of our 2020 Vision strategic transformation initiative, together with process and technology initiatives following the acquisition of GCA, may not have the desired effects on our financial condition and results of operations.

During the fourth quarter of 2015, we announced our 2020 Vision, which is intended to differentiate ABM in the marketplace, accelerate revenue growth for certain industry groups, and improve our margin profile. While we have

made progress in implementing this initiative, we may not be able to fully execute on this strategy to the extent expected within the anticipated timeframe as a result of numerous factors, such as client resistance to an integrated

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approach, inability to deliver requested end-to-end services, and difficulty penetrating certain markets. Moreover, although we may be able to leverage scale to manage costs more efficiently and effectively, the realignment of our business operations may not provide us with the anticipated competitive advantage or revenue growth.

In connection with our 2020 Vision and following the acquisition of GCA, we are making significant investments in information technology, but there can be no assurance these investments will have the desired results in improving the delivery of our services. In addition, planned changes to our business systems and processes may not create the operational efficiencies or cost benefits that we expect and could result in unanticipated consequences, including substantial disruption to our back-office operations and service delivery.

In addition, the planned move of GCA's back-office functions to the ABM enterprise service center may create risks relating to the processing of transactions and recording of financial information. During the transition period, we could experience a lapse in the operation of internal controls due to turnover, lack of legacy knowledge, or inappropriate training, which could result in significant deficiencies or material weaknesses.

Our success depends on our ability to gain profitable business despite competitive pressures and on our ability to preserve long-term client relationships.

We believe that each aspect of our business is highly competitive and that such competition is based primarily on price, quality of service, and ability to anticipate and respond to industry changes. A majority of our revenue is derived from projects requiring competitive bids. The low cost of entry in the facility services business results in a very competitive market. We mainly compete with regional and local owner-operated companies that may have more acute vision into local markets and significantly lower labor and overhead costs, providing them with a competitive advantage in those regards. We also compete indirectly with companies that can perform for themselves one or more of the services we provide. Additionally, many of our contracts provide that our clients pay certain costs at specified rates, such as insurance, healthcare costs, salary and salary-related expenses, petroleum, and other costs. We may experience higher operating costs related to changes in laws and regulations regarding employee benefits, minimum wage, and other entitlements promulgated by federal, state, or local governments or as a result of increased local wages necessary to attract employees due to changes in the unemployment rate. If actual costs exceed the rates specified in the contracts, our profitability may be negatively impacted. Further, if we are unable to respond adequately to changing technology, we may lose existing clients and fail to win future business opportunities. These strong competitive pressures could inhibit our success in bidding for profitable business and our ability to increase prices as costs rise, thereby reducing margins.

We primarily provide services pursuant to agreements that are cancelable by either party upon 30–90 days' notice. As we generally incur higher initial costs on new contracts until the labor management and facilities operations normalize, our business associated with long-term client relationships is generally more profitable than short-term client relationships. If we lose a significant number of long-term clients, our profitability could be negatively impacted, even if we gain equivalent revenues from new clients.

We depend to a large extent on our relationships with clients and our reputation for quality integrated facility solutions. Maintaining our existing client relationships, including retaining GCA clients as we complete the rebranding of the GCA entities, is an important factor contributing to our business success. Among other things, adverse publicity stemming from an accident or other incident involving our facility operations or employees related to injury, illness, death, or alleged criminal activity could harm our reputation, result in the cancellation of contracts or inability to retain clients, and expose us to significant liability.

Our business success depends on our ability to attract and retain qualified personnel and senior management.

Our future performance depends on the continuing services and contributions of our senior management and on our continued ability to attract and retain qualified personnel. Any unplanned turnover in senior management or inability to attract and retain qualified personnel could have a negative effect on our results of operations. We employ approximately 140,000 persons, and our operations depend on the services of a large and diverse workforce. We must attract, train, and retain a large and growing number of qualified employees while controlling related labor costs. Our ability to control labor and benefit costs is subject to numerous internal and external factors, including changes in the unemployment rate, changes in immigration policy, regulatory changes, prevailing wage rates, and competition we face from other companies for qualified employees. There is no assurance that we will be able to attract or retain qualified employees in the future, which could have a material adverse effect on our business, financial condition, and

results of operations.

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Our use of subcontractors or joint venture partners to perform work under customer contracts exposes us to liability and financial risk.

We depend on subcontractors or other parties, such as joint venture partners, to perform work in situations in which we are not able to self-perform the work involved. Such arrangements may involve subcontracts or joint venture relationships where we do not have direct control over the performing party. A failure, for whatever reason, by one or more of our subcontractors or joint venture partners to perform, or the alleged negligent performance of, the agreed-upon services may expose us to liability. Although we have in place controls and programs to monitor the work of our subcontractors and our joint venture partners, there can be no assurance that these controls or programs will have the desired effect, and we may incur significant liability as a result of the actions or inactions of one or more of our subcontractors or joint venture partners.

Our international business involves risks different from those we face in the United States that could have an effect on our results of operations and financial condition.

We have business operations in jurisdictions outside of the United States, most significantly in the United Kingdom (“U.K.”). Our international operations are subject to risks that are different from those we face in the United States and subject us to complex and frequently changing laws and regulations, including differing labor laws and regulations relating to the protection of certain information that we collect and maintain about our employees, clients, and other third parties. Among these laws is the U.K. Modern Slavery Act, the U.K. Bribery Act, and the European Union General Data Protection Regulation (the “GDPR”), which took effect in May 2018. The failure to comply with these laws or regulations could subject us to significant litigation, monetary damages, regulatory enforcement actions, or fines in one or more jurisdictions. More generally, the economic, political, monetary, and operational impacts of Brexit, including unanticipated impacts to the U.K. real estate market and general economic conditions in the United Kingdom, could negatively impact our U.K. business, including reducing our margins.

In addition, when we participate in joint ventures that operate outside of the United States where we are not a controlling party, we may have limited control over the joint venture. Any improper actions by our joint venture employees, partners, or agents, including but not limited to failure to comply with the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, and/or laws relating to human trafficking, could result in civil or criminal investigations, monetary and non-monetary penalties, or other consequences, any of which could have an adverse effect on our financial position as well as on our reputation and ability to conduct business.

Additionally, the operating results of our non-U.S. subsidiaries are translated into U.S. dollars, and those results are affected by movements in foreign currencies relative to the U.S. dollar. There can be no assurance that the foregoing factors will not have a material adverse effect on our international operations or on our consolidated financial condition and results of operations.

Unfavorable developments in our class and representative actions and other lawsuits alleging various claims could cause us to incur substantial liabilities.

Our business involves employing tens of thousands of employees, many of whom work at our clients’ facilities. We incur risks relating to our employment of these workers, including but not limited to: claims of misconduct or negligence on the part of our employees; claims related to the employment of unlicensed personnel; and claims by our employees of discrimination, harassment, violations of wage and hour requirements, or violations of other federal, state, or local laws. We also incur risks and claims related to the imposition on our employees of policies or practices of our clients that may be different from our own. Some or all of these claims may lead to litigation, including class action litigation, and these matters may cause us to incur negative publicity with respect to alleged claims.

Additionally, there are risks to all employers in some states, such as California, resulting from new and unanticipated judicial interpretations of existing laws and the application of those new interpretations against employers on a retroactive basis. It is not possible to predict the outcome of these lawsuits or any other proceeding, and our insurance may not cover all claims that may be asserted against us. These lawsuits and other proceedings may consume substantial amounts of our financial and managerial resources. An unfavorable outcome with respect to these lawsuits and any future lawsuits could, individually or in the aggregate, cause us to incur substantial liabilities that could have a material adverse effect upon our business, reputation, financial condition, or results of operations.

We insure our insurable risks through a combination of insurance and self-insurance, and we retain a substantial portion of the risk associated with expected losses under these programs, which exposes us to volatility associated with those risks, including the possibility that changes in estimates of ultimate insurance losses could result in material charges against our earnings.

We use a combination of insured and self-insurance programs to cover workers' compensation, general liability, automobile liability, property damage, and other insurable risks. We are responsible for claims both within and in excess of our retained limits under our insurance policies, and while we endeavor to purchase insurance coverage that is appropriate to our assessment of risk, we are unable to predict with certainty the frequency, nature, or magnitude of claims for direct or consequential damages. If our insurance coverage proves to be inadequate or unavailable, our business may be negatively impacted.

The determination of required insurance reserves is dependent upon significant actuarial judgments. We use the results of actuarial studies to estimate insurance rates and insurance reserves for future periods and to adjust reserves, if appropriate, for prior years. Actual experience related to our insurance reserves can cause us to change our estimates for reserves and any such changes may materially impact results, causing significant volatility in our operating results. We have previously experienced material negative trends in our actuarial estimates and may continue to experience these and other material negative trends in future periods.

Should we be unable to renew our excess, umbrella, or other commercial insurance policies at competitive rates, it could have a material adverse impact on our business, as would the incurrence of catastrophic uninsured claims or the inability or refusal of our insurance carriers to pay otherwise insured claims. Further, to the extent that we self-insure our losses, deterioration in our loss control and/or our continuing claim management efforts could increase the overall cost of claims within our retained limits. A material change in our insurance costs due to changes in the frequency of claims, the severity of the claims, the costs of excess/umbrella premiums, or regulatory changes could have a material adverse effect on our financial position, results of operations, or cash flows.

In 2015, we formed a wholly-owned captive insurance company, IFM Assurance Company ("IFM"), which we believe has provided us with increased flexibility in the end-to-end management of our insurance program. There can be no assurance that IFM will continue to bring about the intended benefits or the desired flexibility in the management of our insurance programs, because we may experience unanticipated events that will reduce or eliminate expected benefits, including anticipated savings related to coverage provided by IFM to our subsidiaries.

Our risk management and safety programs may not have the intended effect of reducing our liability for personal injury or property loss.

We attempt to mitigate risks relating to personal injury or property loss through the implementation of company-wide safety and loss control efforts designed to decrease the incidence of accidents or events that might increase our liability. It is expected that any such decrease would also have the effect of reducing our insurance costs for our casualty programs. However, incidents involving personal injury or property loss often are caused by multiple factors, a significant number of which are beyond our control. Therefore, there can be no assurance that our risk management and safety programs will have the desired effect of controlling costs and liability exposure.

Impairment of goodwill and long-lived assets could have a material adverse effect on our financial condition and results of operations.

We evaluate goodwill for impairment annually, in the fourth quarter, or more often if impairment indicators exist. We also review long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. If the fair value of one of our reporting units is less than its carrying value, or if as a result of a recoverability test we conclude that the projected undiscounted cash flows are less than the carrying amount, we would record an impairment charge related to goodwill or long-lived assets, respectively. The assumptions used to determine impairment require significant judgment and the amount of the impairment could have a material adverse effect on our reported financial results for the period in which the charge is taken.

Changes in general economic conditions, including changes in energy prices, government regulations, and changing consumer preferences, could reduce the demand for facility services and, as a result, reduce our earnings and adversely affect our financial condition.

In certain geographic areas and service lines, our most profitable revenues are related to supplemental services requested by clients outside of the standard service specification ("tag work"). This contract type is commonly used in

janitorial services and includes cleanup after tenant moves, construction cleanup, flood cleanup, and snow removal.

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A decline in occupancy rates could result in a decline in scope of work, including tag work, and depressed prices for our services. Slow domestic and international economic growth or other negative changes in global, national, and local economic conditions could have a negative impact on our business. Specifically, adverse economic conditions may result in clients cutting back on discretionary spending. Additionally, since a significant portion of our aviation services and parking revenues are tied to the number of airline passengers, hotel guests, and sports arena attendees, results for these businesses could be adversely affected by curtailment of business, personal travel, or discretionary spending. The use of ride sharing services and car sharing services may also lead to a decline in parking demand at airports and in urban areas.

Energy efficiency projects are designed to reduce a client's overall consumption of commodities such as electricity and natural gas. As such, downward fluctuations in commodity prices may reduce client demand for our services. We also depend, in part, on federal and state legislation and policies that support energy efficiency projects. If current legislation or policies are amended, eliminated, or not extended beyond their current expiration dates, or if funding for energy incentives is reduced or delayed, it could also adversely affect our ability to obtain new business. In some instances, we offer certain of these clients guaranteed energy savings on installed equipment. In the event those guaranteed savings are not achieved, we may be required to pay liquidated or other damages. All of these factors could have an adverse effect on our financial position, results of operations, and cash flows.

Our business may be materially affected by changes to fiscal and tax policies. Negative or unexpected tax consequences could adversely affect our results of operations.

The Tax Cuts and Jobs Act of 2017 made significant changes to the U.S. Internal Revenue Code that will go into effect over several years. Such changes include a reduction in the corporate tax rate as well as limitations on certain corporate deductions and credits that could have a negative impact on our business. In addition, adverse changes in the underlying profitability and financial outlook of our operations or changes in tax law could lead to changes in our valuation allowances against deferred tax assets on our consolidated balance sheets, which could materially affect our results of operations. Furthermore, we are subject to tax audits by governmental authorities, primarily in the United States and United Kingdom. If we experience unfavorable results from one or more such tax audits, there could be an adverse effect on our tax rate and therefore on our net income.

We may experience breaches of, or disruptions to, our information technology systems or those of our third-party providers or clients, or other compromises of our data that could adversely affect our business.

Our information technology systems and those of our third-party providers or clients could be the target of cyber attacks, hacking, unauthorized access, computer viruses, malware, or other intrusions, which could result in operational disruptions or information misappropriation, such as theft of intellectual property or inappropriate disclosure of confidential, proprietary, or personal information. We maintain confidential, proprietary, and personal information relating to our current, former, and prospective employees, clients, and other third parties in our information technology systems and in systems of third-party providers. We have experienced certain data and security breaches in the past and could experience future data or security breaches stemming from the intentional or negligent acts of our employees or other third parties. Furthermore, while we continue to devote significant resources to monitoring and updating our systems and implementing information security measures to protect our systems, there can be no assurance that any controls and procedures that we have in place will be sufficient to protect us from future security breaches. As cyber threats are continually evolving, our controls and procedures may become inadequate and we may be required to devote additional resources to modifying or enhancing our systems in the future. We may also be required to expend resources to remediate cyber-related incidents or to enhance and strengthen our cyber security. Any such disruptions to our information technology systems, breaches or compromises of data, and/or misappropriation of information could result in lost sales, negative publicity, litigation, violation of privacy and other laws, or business delays that could have a material adverse effect on our business.

A significant number of our employees are covered by collective bargaining agreements that could expose us to potential liabilities in relationship to our participation in multiemployer pension plans, requirements to make contributions to other benefit plans, and the potential for strikes, work slowdowns or similar activities, and union-organizing drives.

We participate in various multiemployer pension plans that provide defined pension benefits to employees covered by collective bargaining agreements. Because of the nature of multiemployer pension plans, there are risks associated

with participation in these plans that differ from single-employer plans. Assets contributed by an employer to a multiemployer pension plan are not segregated into a separate account and are not restricted to provide benefits only to employees of that contributing employer. In the event another participating employer in a multiemployer pension

plan no longer contributes to the plan, the unfunded obligations of the plan may be borne by the remaining participating employers, including us. In the event of the termination of a multiemployer pension plan or a complete or partial withdrawal from a multiemployer pension plan, under applicable law we could incur material withdrawal liabilities. We further discuss our participation in multiemployer pension and postretirement plans in Note 13, "Employee Benefit Plans," in the Notes to Consolidated Financial Statements. In addition, the terms of collective bargaining agreements require us to contribute to various fringe benefit plans, including health and welfare, pension, and training plans, all of which require us to have appropriate systems in place to assure timely and accurate payment of contributions. The failure to make timely and accurate contributions as a result of a systems failure could have a negative impact on our financial position.

At October 31, 2018, approximately 34% of our employees were subject to various local collective bargaining agreements, some of which will expire or become subject to renegotiation during 2019. In addition, at any given time we may face union organizing activity. When one or more of our major collective bargaining agreements becomes subject to renegotiation or when we face union organizing drives, we and the union may disagree on important issues that could lead to a strike, work slowdown, or other job actions at one or more of our locations. In a market where we are unionized but competitors are not unionized, we could lose clients to such competitors. A strike, work slowdown, or other job action could disrupt our services, resulting in reduced revenues or contract cancellations. Moreover, negotiating a first time collective bargaining agreement or renegotiating an existing agreement could result in a substantial increase in labor and benefits expenses that we may be unable to pass through to clients.

If we fail to maintain proper and effective internal control over financial reporting in the future, our ability to produce accurate and timely financial statements could be negatively impacted, which could harm our operating results and investor perceptions of our Company and as a result may have a material adverse effect on the value of our common stock.

Pursuant to Section 404 of the Sarbanes Oxley Act of 2002 and related rules, our management is required to report on, and our independent registered public accounting firm is required to attest to, the effectiveness of our internal control over financial reporting. The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing, and possible remediation. We have acquired entities that had no publicly traded debt or equity and therefore were not required to conform to the rules and regulations of the SEC, especially as it relates to internal control structure. When we acquire such entities, they may not have in place all the necessary controls as required by the Public Company Accounting Oversight Board. Integrating acquired entities into our internal control over financial reporting has required and will continue to require significant time and resources from our management and other personnel and increases our compliance costs. We are required to include our assessment of the effectiveness of the internal controls over financial reporting of entities we acquire in our overall assessment. We plan to complete the evaluation and integration of internal controls over financial reporting and report our assessment within the required time frame.

In addition, with the increasing frequency of cyber-related frauds perpetrated to obtain inappropriate payments, we need to ensure our internal controls related to authorizing the transfer of funds and changing our vendor master files are adequate. Failure to maintain an effective internal control environment could have a material adverse effect on our ability to accurately report our financial results, the market's perception of our business, and our stock price.

Our business may be negatively impacted by adverse weather conditions.

Weather conditions such as snow storms, heavy flooding, hurricanes, and fluctuations in temperatures can negatively impact portions of our business. Within our Technical Solutions segment, cooler than normal temperatures in the summer could reduce the need for servicing of air conditioning units, resulting in reduced revenues and profitability. Within Parking and Aviation services, snow can lead to reduced travel activity, as well as increases in certain costs, both of which negatively affect gross profit. On the other hand, the absence of snow during the winter could cause us to experience reduced revenues in our B&I segment, as many of our contracts specify additional payments for snow-related services.

Catastrophic events, disasters, and terrorist attacks could disrupt our services.

We may encounter disruptions involving power, communications, transportation or other utilities, or essential services depended upon by us or by third parties with whom we conduct business. This could include disruptions as the result of natural disasters, pandemics, weather-related or similar events (such as fires, hurricanes, blizzards, earthquakes, and

floods), political instability, labor strikes, or war (including acts of terrorism or hostilities) that could impact our markets. If a disruption occurs in one location and persons in that location are unable to communicate with or travel to or work from other locations, our ability to service and interact with our clients and others may suffer, and

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we may not be able to successfully implement contingency plans that depend on communications or travel. These events may increase the volatility of financial results due to unforeseen costs with partial or no corresponding compensation from clients. There also can be no assurance that the disaster recovery and crisis management procedures we employ will suffice in any particular situation to avoid a significant loss. In addition, to the extent centralized administrative locations are disabled for a long period of time, key business processes, such as accounts payable, information technology, payroll, and general management operations, could be interrupted.

Actions of activist investors could disrupt our business.

Public companies have been the target of activist investors. In the event that a third party, such as an activist investor, proposes to change our governance policies, board of directors, or other aspects of our operations, our review and consideration of such proposals may create a significant distraction for our management and employees. This could negatively impact our ability to execute our 2020 Vision and may require management to expend significant time and resources responding to such proposals. Such proposals may also create uncertainties with respect to our financial position and operations and may adversely affect our ability to attract and retain key employees.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

None.

ITEM 2. PROPERTIES.

Our principal executive office is located at One Liberty Plaza, 7th Floor, New York, New York 10006. As part of our 2020 Vision, in 2016 we began consolidating our operations to increase efficiency and effectiveness.

Principal Properties as of October 31, 2018

Location	Character of Office	Approximate Square Feet	Lease Expiration Date, Unless Owned	Segment
Alpharetta, Georgia	IT Datacenter and Technical Solutions Headquarters	25,000	Owned	All
Atlanta, Georgia	Operations Support	37,000	10/31/2027	All
Cleveland, Ohio	Legacy GCA Headquarters	32,400	1/31/2024	Education, T&M, and Corporate
New York, New York	Corporate Headquarters	44,000 ⁽¹⁾	1/3/2032	Corporate and B&I
Sugar Land, Texas	Enterprise Services	62,500	3/31/2028	All
Tustin, CA	Operations Support	40,000	7/31/2029	B&I and Technical Solutions

⁽¹⁾ Approximately 10,000 square feet are sublet.

In addition to the above properties, we have other offices, warehouses, and parking facilities in various locations, primarily in the United States. We believe that these properties are well maintained, in good operating condition, and suitable for the purposes for which they are used.

ITEM 3. LEGAL PROCEEDINGS.

We are a party to a number of lawsuits, claims, and proceedings incident to the operation of our business, including those pertaining to labor and employment, contracts, personal injury, and other matters, some of which allege substantial monetary damages. Some of these actions may be brought as class actions on behalf of a class or purported class of employees. While the results of these lawsuits, claims, and proceedings cannot be predicted with any certainty, our management believes that the final outcome of these matters will not have a material adverse effect on our financial position, results of operations, or cash flows.

Certain Legal Proceedings

Certain lawsuits to which we are a party are discussed below. In determining whether to include any particular lawsuit or other proceeding, we consider both quantitative and qualitative factors. These factors include, but are not limited to: the amount of damages and the nature of any other relief sought in the proceeding; if such damages and other relief are specified, our view of the merits of the claims; whether the action is or purports to be a class action, and our view of the likelihood that a class will be certified by the court; the jurisdiction in which the proceeding is pending; and the potential impact of the proceeding on our reputation.

The Consolidated Cases of Bucio and Martinez v. ABM Janitorial Services filed on April 7, 2006, in the Superior Court of California, County of San Francisco (the “Bucio case”)

The Bucio case is a class action pending in San Francisco Superior Court that alleges we failed to provide legally required meal periods and make additional premium payments for such meal periods, pay split shift premiums when owed, and reimburse janitors for travel expenses. There is also a claim for penalties under the California Labor Code Private Attorneys General Act (“PAGA”). On April 19, 2011, the trial court held a hearing on plaintiffs’ motion to certify the class. At the conclusion of that hearing, the trial court denied plaintiffs’ motion to certify the class. On May 11, 2011, the plaintiffs filed a motion to reconsider, which was denied. The plaintiffs appealed the class certification issues. The trial court stayed the underlying lawsuit pending the decision in the appeal. The Court of Appeal of the State of California, First Appellate District (the “Court of Appeal”), heard oral arguments on November 7, 2017. On December 11, 2017, the Court of Appeal reversed the trial court’s order denying class certification and remanded the matter for certification of a meal period, travel expense reimbursement, and split shift class. The case was remitted to the trial court for further proceedings on class certification, discovery, dispositive motions, and trial.

On September 20, 2018, the trial court entered an order defining four certified subclasses of janitors who were employed by the legacy ABM janitorial companies in California at any time between April 7, 2002 and April 30, 2013, on claims based on previous auto deduction practices for meal breaks, unpaid meal premiums, unpaid split shift premiums, and unreimbursed business expenses, such as mileage reimbursement for use of personal vehicles to travel between worksites. The period of time covered by the PAGA claim will also be considered by the court shortly. This matter has not been set for trial. Prior to trial, we will have the opportunity to move for summary judgment, seek decertification of the classes, or mediate, if we deem such actions appropriate.

Hussein and Hirsi v. Air Serv Corporation filed on January 20, 2016, pending in the United States District Court for the Western District of Washington at Seattle (the “Hussein case”) and

Isse et al. v. Air Serv Corporation filed on February 7, 2017, in the Superior Court of Washington for King County (the “Isse case”)

The Hussein case was a certified class action involving a class of certain hourly Air Serv employees at Seattle-Tacoma International Airport in SeaTac, Washington. The plaintiffs alleged that Air Serv violated a minimum wage requirement in an ordinance applicable to certain employers in the local city of SeaTac (the “Ordinance”). Plaintiffs sought retroactive wages, double damages, interest, and attorneys’ fees. This matter was removed to federal court. In a separate lawsuit brought by Filo Foods, LLC, Alaska Airlines, and several other employers at SeaTac Airport, the King County Superior Court (the “Superior Court”) issued a decision that invalidated the Ordinance as it applied to workers at SeaTac Airport. Subsequently, the Washington Supreme Court reversed the Superior Court’s decision. On February 7, 2017, the Isse case was filed against Air Serv on behalf of 60 individual plaintiffs (who would otherwise be members of the Hussein class), who alleged failure to comply with both the minimum wage provision and the sick and safe time provision of the Ordinance. The Isse plaintiffs sought retroactive wages and sick benefits, double damages for wages and sick benefits, interest, and attorneys’ fees. The Isse case later expanded to approximately 220 individual plaintiffs.

In mediations on November 2 and 3, 2017, and without admitting liability in either matter, we agreed to settle the Hussein and Isse cases for a combined total of \$8.3 million, inclusive of damages, interest, attorneys' fees, and employer payroll taxes. Eligible employees will be able to participate in either the Hussein or Isse settlements, but cannot recover in both settlements. The settlements in both cases require court approval because of the nature of the claims being released. On December 8, 2017, the Superior Court approved the settlement agreement for the 220 Isse plaintiffs, and we subsequently made a settlement payment of \$4.5 million to the Isse plaintiffs in January 2018. \$3.8 million remains accrued for the Hussein case.

On July 30, 2018, the United States District Court for the Western District of Washington at Seattle preliminarily approved the settlement in the Hussein case. At the final approval hearing on December 4, 2018, the court (i) accepted opt-out notices from 78 Hussein class members (the "opt-out members") indicating their intent to participate in separate lawsuits (leaving 386 class members in the Hussein class), (ii) directed the parties to recalculate the settlement amount by deducting the settlement funds attributable to the 78 opt-out members, and (iii) requested other minor changes, but indicated that the court intended to grant final approval of the settlement with these changes. On December 20, 2018, the court issued its order granting final approval of the class action settlement. The Hussein settlement funds will be paid in February 2019, provided there are no appeals or requests for review of the final approval order. The amount of the settlement funds attributable to the 78 opt-out members is approximately \$0.9 million.

Castro and Marmolejo v. ABM Industries, Inc., et al., filed on October 24, 2014, pending in the United States District Court for the Northern District of California (the "Castro case")

On October 24, 2014, Plaintiff Marley Castro filed a class action lawsuit alleging that ABM did not reimburse janitorial employees in California for using their personal cell phones for work-related purposes, in violation of California Labor Code section 2802. On January 23, 2015, Plaintiff Lucia Marmolejo was added to the case as a named plaintiff. On October 27, 2017, plaintiffs moved for class certification seeking to represent a class of all employees who were, are, or will be employed by ABM in the State of California with the Employee Master Job Description Code "Cleaner" (hereafter referred to as "Cleaner Employees") beginning from October 24, 2010. ABM filed its opposition to class certification on November 27, 2017. On January 26, 2018, the district court granted plaintiffs' motion for class certification. The court rejected plaintiffs' proposed class, instead certifying three classes that the court formulated on its own: (1) all employees who were, are, or will be employed by ABM in the State of California as Cleaner Employees who used a personal cell phone to punch in and out of the EPAY system and who (a) worked at an ABM facility that did not provide a biometric clock and (b) were not offered an ABM-provided cell phone during the period beginning on January 1, 2012, through the date of notice to the Class Members that a class has been certified in this action; (2) all employees who were, are, or will be employed by ABM in the State of California as Cleaner Employees who used a personal cell phone to report unusual or suspicious circumstances to supervisors and were not offered (a) an ABM-provided cell phone or (b) a two-way radio during the period beginning four years prior to the filing of the original complaint, October 24, 2014, through the date of notice to the Class Members that a class has been certified in this action; and (3) all employees who were, are, or will be employed by ABM in the State of California as Cleaner Employees who used a personal cell phone to respond to communications from supervisors and were not offered (a) an ABM-provided cell phone or (b) a two-way radio during the period beginning four years prior to the filing of the original complaint, October 24, 2014, through the date of notice to the Class Members that a class has been certified in this action.

On February 9, 2018, ABM filed a petition for permission to appeal the district court's order granting class certification with the United States Court of Appeals for the Ninth Circuit, which was denied on April 30, 2018. On March 20, 2018, ABM moved to compel arbitration of the claims of certain class members pursuant to the terms of three collective bargaining agreements. In response to that motion, on May 14, 2018, the district court modified the class definition to exclude all claims arising after the operative date(s) of the applicable collective bargaining agreements (which is June 1, 2016 for one agreement and May 1, 2016 for the other two agreements). However, the district court denied the motion to compel arbitration as to claims that arose prior to the operative date(s) of the applicable collective bargaining agreements. ABM has appealed to the Ninth Circuit the district court's order denying the motion to compel arbitration with respect to the periods preceding the operative dates of the collective bargaining agreements.

After a court-ordered mediation held on October 15, 2018, the parties agreed to a class action settlement of \$5.4 million, subject to court approval. We anticipate the plaintiffs' motion for preliminary approval will be filed with the court in the first quarter of fiscal year 2019, and a hearing on the motion is expected in the first or second quarter of fiscal year 2019.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

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PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.

Market Information and Dividends

Our common stock is listed on the New York Stock Exchange (NYSE: ABM). The following table sets forth the high and low sales prices of our common stock on the New York Stock Exchange and quarterly cash dividends declared on shares of common stock for the periods indicated.

(in dollars)	Fiscal Quarter			
	First	Second	Third	Fourth
Fiscal Year 2018				
Price range of common stock				
High	\$44.70	\$38.37	\$32.90	\$35.16
Low	\$36.61	\$31.07	\$28.17	\$29.48
Dividends declared per share	\$0.175	\$0.175	\$0.175	\$0.175
Fiscal Year 2017				
Price range of common stock				
High	\$45.03	\$44.68	\$44.93	\$45.12
Low	\$38.04	\$39.41	\$40.36	\$37.12
Dividends declared per share	\$0.170	\$0.170	\$0.170	\$0.170

We have paid cash dividends every quarter since 1965. Future dividends will be determined based on our earnings, capital requirements, financial condition, and other factors considered relevant by our Board of Directors.

Common Stock Repurchases

On September 2, 2015, our Board of Directors authorized a program to repurchase up to \$200.0 million of our common stock. Purchases may take place on the open market or otherwise, and all or part of the repurchases may be made pursuant to Rule 10b5-1 plans or in privately negotiated transactions. The timing of repurchases is at our discretion and will depend upon several factors, including market and business conditions, future cash flows, share price, and share availability. Repurchased shares are retired and returned to an authorized but unissued status. The repurchase program may be suspended or discontinued at any time without prior notice. We did not repurchase any shares during the fourth quarter of 2018. At October 31, 2018, authorization for \$134.1 million of repurchases remained under our share repurchase program.

Stockholders

At December 20, 2018, there were 3,053 registered holders of our common stock.

Performance Graph

The following graph compares the five-year cumulative total return for our common stock against the Standard & Poor's 500 Index ("S&P 500") and the Standard & Poor's SmallCap 600 Index ("S&P 600"). As our competitors are principally privately held, we do not believe it is feasible to construct a peer group comparison on an industry or line-of-business basis.

INDEXED RETURNS

Years Ended October 31,

Company / Index	2013	2014	2015	2016	2017	2018
ABM Industries Incorporated	\$ 100	\$ 102.9	\$ 108.0	\$ 151.4	\$ 165.3	\$ 123.7
S&P 500 Index	100	117.3	123.4	128.9	159.4	171.1
S&P SmallCap 600 Index	100	109.3	112.4	119.5	152.9	161.5

This performance graph shall not be deemed to be "soliciting material" or "filed" with the Securities and Exchange Commission, or subject to Regulation 14A or 14C, or subject to the liabilities of Section 18 of the Securities Exchange Act of 1934, as amended. The comparisons in the performance graph are based on historical data and are not indicative of, or intended to forecast, the possible future performance of our common stock.

ITEM 6. SELECTED FINANCIAL DATA.

The following selected financial data should be read in conjunction with Item 7., “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and Item 8., “Financial Statements and Supplementary Data.” Unless otherwise indicated, all references to years are to our fiscal year, which ends on October 31.

	Years Ended October 31,				
	2018	2017	2016	2015	2014
(in millions, except per share amounts)					
Statements of Comprehensive Income Data					
Revenues ⁽¹⁾	\$6,442.2	\$5,453.6	\$5,144.7	\$4,897.8	\$4,649.7
Operating profit ⁽²⁾	138.6	101.9	54.7	73.6	114.8
Income from continuing operations	95.9	78.1	62.3	54.1	66.9
Income (loss) from discontinued operations, net of taxes ⁽³⁾	1.8	(74.3)	(5.1)	22.2	8.7
Per Share Data					
Net income per common share — Basic					
Income from continuing operations	\$1.45	\$1.35	\$1.11	\$0.95	\$1.19
Net income	\$1.48	\$0.07	\$1.02	\$1.35	\$1.35
Net income per common share — Diluted					
Income from continuing operations	\$1.45	\$1.34	\$1.09	\$0.94	\$1.17
Net income	\$1.47	\$0.07	\$1.01	\$1.33	\$1.32
Weighted-average common and common equivalent shares outstanding					
Basic					
	66.1	57.7	56.3	56.7	56.1
Diluted					
	66.4	58.3	56.9	57.4	57.1
Dividends declared per common share					
	\$0.700	\$0.680	\$0.660	\$0.640	\$0.620
Statements of Cash Flow Data					
Net cash provided by operating activities of continuing operations	\$299.7	\$101.7	\$110.5	\$145.5	\$115.6
Income tax (refunds) payments, net ⁽⁴⁾	(1.0)	11.8	12.6	23.7	32.9

	At October 31,				
	2018	2017	2016	2015	2014
(in millions)					
Balance Sheet Data					
Total assets	\$3,627.5	\$3,812.6	\$2,278.8	\$2,130.7	\$2,176.5
Trade accounts receivable, net of allowances ⁽⁵⁾	1,014.1	1,038.1	803.7	742.9	687.3
Goodwill ⁽⁶⁾	1,834.8	1,864.2	912.8	867.5	854.7
Other intangible assets, net of accumulated amortization ⁽⁷⁾	355.7	430.1	103.8	111.4	127.5
Long-term debt, net ⁽⁸⁾	902.0	1,161.3	268.3	158.0	319.8
Insurance claims	510.3	495.4	423.8	387.4	349.7

⁽¹⁾ Revenues in 2018 included \$858.1 million of incremental revenue from acquisitions, primarily \$855.7 million related to the acquisition of GCA Services Group (“GCA”). Revenues in 2017 included \$208.1 million of incremental revenue from acquisitions, including \$169.7 million related to GCA.

⁽²⁾ Factors affecting comparability of operating profit consisted of the following:

Operating profit in 2018 was positively impacted by \$67.6 million of incremental operating profit resulting from the GCA acquisition and an \$11.8 million lower self-insurance adjustment, partially offset by \$34.4 million of higher amortization expense and impairment charges of \$26.5 million. Additionally, 2018 benefited from the absence of \$24.2 million of transaction expenses related to the GCA acquisition incurred in 2017, partially offset by a \$17.4 million impairment recovery recorded in 2017 related to our Government Services business.

Operating profit in 2017 benefited from a \$17.4 million impairment recovery, a \$10.9 million lower self-insurance adjustment, a reduction in restructuring and related expenses, and procurement and organizational savings from our 2020 Vision initiatives, all offset by \$24.2 million of transaction expenses related to the GCA acquisition.

Operating profit in 2016 was negatively impacted by insurance expense of \$49.6 million, consisting of a \$32.9 million unfavorable self-insurance adjustment related to prior year claims and \$16.7 million of higher insurance expense due to an increase in the rate used to record our insurance reserves during 2016. Operating profit was also unfavorably impacted by \$29.0 million of 2020 Vision restructuring and related charges and a \$22.5 million impairment charge for our Government Services business, consisting of both goodwill and long-lived asset charges. Operating profit in 2016 was favorably impacted by approximately \$22 million in savings from our 2020 Vision initiatives.

Operating profit in 2015 was negatively impacted by a \$35.9 million unfavorable self-insurance adjustment related to prior year claims.

(3) We had income from discontinued operations in 2018 of \$1.8 million due to an insurance reimbursement on a legal settlement and collection of previously written off receivables, partially offset by union audit settlements. The loss from discontinued operations in 2017 included legal settlements associated with our former Security business of \$120.0 million. Income from discontinued operations for 2015 reflected the \$14.4 million after-tax gain on the sale of the Security business.

(4) Net income tax payments were lower by \$19.4 million during 2018 due to a refund received for prior year legal settlements. Additionally, we had cash tax savings of approximately \$7 million for 2018 and \$10 million for both 2017 and 2016 related to coverage provided by IFM Assurance Company, our wholly-owned captive insurance company. During 2014, net income tax payments increased as certain tax assets were substantially utilized.

(5) Trade accounts receivable, net of allowances, increased by \$118.1 million on September 1, 2017 as a result of the GCA acquisition.

(6) Goodwill decreased in 2018 due to an impairment charge of \$20.3 million related to the acquisition of Westway Services Holdings (2014) Ltd. (“Westway”) and to a \$7.0 million adjustment to the final GCA purchase price allocation. Goodwill increased by \$933.9 million on September 1, 2017 as a result of the GCA acquisition and by \$53.8 million on December 1, 2015 due to the Westway acquisition.

(7) In 2018, other intangible assets, net of accumulated amortization, was reduced by an impairment charge of \$6.2 million related to the Westway acquisition and a \$1.0 million adjustment to the final GCA purchase price allocation. During 2017, we recorded \$349.0 million of other intangible assets as a result of the GCA acquisition.

(8) On September 1, 2017, we refinanced and replaced our existing \$800.0 million credit facility with a new secured \$1.7 billion credit facility, which we used to partially fund the GCA acquisition. During 2015, we used the cash proceeds from the sale of the Security business to pay down a portion of our line of credit.

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

The following Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is intended to facilitate an understanding of the results of operations and financial condition of ABM Industries Incorporated and its subsidiaries (collectively referred to as "ABM," "we," "us," "our," or the "Company"). This MD&A is provided as a supplement to, and should be read in conjunction with, our consolidated financial statements and the accompanying notes ("Financial Statements"). This MD&A contains both historical and forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties. We make forward-looking statements related to future expectations, estimates, and projections that are uncertain and often contain words such as "anticipate," "believe," "could," "estimate," "expect," "forecast," "intend," "likely," "may," "outlook," "should," "target," or other similar words or phrases. These statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and assumptions that are difficult to predict. Factors that might cause such differences include, but are not limited to, those discussed in Part 1. of this Form 10-K under Item 1A., "Risk Factors," which are incorporated herein by reference. Our future results and financial condition may be materially different from those we currently anticipate.

Throughout the MD&A, amounts and percentages may not recalculate due to rounding. In addition, we have revised our prior period segment information to reflect changes to our operating structure following the integration of GCA Services Group ("GCA"). These changes had no impact on our previously reported consolidated balance sheets, statements of comprehensive income (loss), or statements of cash flows. Unless otherwise indicated, all information in the MD&A and references to years are based on our fiscal year, which ends on October 31.

Business Overview

ABM is a leading provider of integrated facility solutions, customized by industry, with a mission to make a difference, every person, every day.

2020 Vision

In September 2015, we announced a comprehensive transformation initiative ("2020 Vision") intended to drive long-term, profitable growth through an industry-based go-to-market approach. In connection with our 2020 Vision, we have achieved savings through the realignment of our organization by industry group, divested businesses that were not at the core of our strategy, centralized key functional areas, strengthened our sales capabilities, initiated investments in service delivery tools and processes, improved our employee engagement programs, and added to our position as a leading integrated service provider through the acquisition of GCA. We continue focusing on several key initiatives across our organization to sustain our 2020 Vision strategy and profitably deliver leading industry-based facility solutions.

Systems and Technology Transformation

Following the acquisition and integration of GCA, we are targeting significant investments in our information technology infrastructure. We have begun to upgrade several key platforms, including our human resources information systems, enterprise resource planning system, and labor management system. We are also utilizing technology to help improve processes company-wide, including account planning, labor management, payroll, and procurement. To further improve work order management, we have also launched a "Tag Pricer" tool that allows us to capture work orders more efficiently. We believe these improvements will help simplify our operating environment, drive productivity, and create consistency and efficiency across our organization.

Strategic Growth

We are focused on long-term, profitable growth related to both new and existing clients across and within our industry groups. We believe operational leverage from our strategic growth initiatives, combined with our continued focus on operational efficiency, will increase profitability.

Cost Optimization

We continue to centralize many of our back-office functions through our Enterprise Services Center in Sugar Land, Texas to help drive consistency in practice and support operating efficiency. In addition, by consolidating purchasing activities we have been able to leverage our scale, increase our purchasing power, and identify preferred suppliers, which has enabled cost saving opportunities in supplies and materials procurement.

Developments and Trends

Economic Labor Outlook

The U.S. economy continues to demonstrate positive underlying fundamentals, with expanding gross domestic product growth and improving employment conditions, which have led to historically low levels of both unemployment and underemployment across the country. These factors have contributed to the lower availability of qualified labor for our business and higher turnover in certain markets, as our employees have more job opportunities both inside and outside our industry. This in turn has caused, and may continue to cause, higher labor and related personnel costs.

United States Tax Reform

The Tax Cuts and Jobs Act (the “Tax Act”), which was enacted on December 22, 2017, represents the most significant overhaul of the U.S. tax code in more than 30 years. Among other provisions, the Tax Act provides for a reduction of the federal corporate income tax rate from 35% to 21% and a “transition tax” to be levied on the deemed repatriation of indefinitely reinvested earnings of international subsidiaries. Since we have an October 31 fiscal year-end, the lower corporate income tax rate was phased in, resulting in a U.S. statutory federal rate of 23.3% for fiscal 2018 and 21% for subsequent fiscal years. Other provisions under the Tax Act become effective for us in fiscal 2019, including limitations on deductibility of interest and executive compensation, as well as a new minimum tax on Global Intangible Low-Taxed Income (“GILTI”). As a result, in 2019 we expect our effective tax rate to increase from the 2018 rate. The impact of the Tax Act, as summarized below for the year ended October 31, 2018, is further described in Note 17, “Income Taxes,” in the Financial Statements.

(in millions)	Year Ended October 31, 2018
Remeasurement of U.S. deferred tax assets and liabilities	\$ 27.7
Transition tax on non-U.S. subsidiaries’ earnings	(4.5)
Total impact of the Tax Act on the benefit for income taxes	\$ 23.2

Due to the complexities of implementing the provisions of the Tax Act, the staff of the U.S. Securities and Exchange Commission issued Staff Accounting Bulletin 118 (“SAB 118”), which provides guidance on accounting for tax effects of the Tax Act and permits a measurement period not to exceed one year from the enactment date for companies to complete the required analyses and accounting. As permitted under SAB 118, the adjustments we recorded due to the Tax Act, including the remeasurement of deferred tax assets and liabilities and the transition tax, were based on reasonable estimates and were considered provisional during the year. As of October 31, 2018, the one-time impact of the change in tax rate on our deferred tax assets and liabilities is complete. Additionally, we have completed our assessment of GILTI and have established a policy to account for this tax on a period basis beginning in fiscal year 2019. We have also completed our analysis of the one-time transition tax and recorded the impact.

Acquisition of GCA during 2017

On September 1, 2017 (the “Acquisition Date”), we acquired GCA, a provider of integrated facility services to educational institutions and commercial facilities, for approximately \$1.3 billion, consisting of \$837.5 million in cash (revised during the second quarter of 2018 to reflect a post-closing purchase price adjustment related to a net working capital settlement) and approximately 9.4 million shares of ABM common stock with a fair value of \$421.3 million at closing. Refer to Note 3, “Acquisitions,” in the Financial Statements for more information on this transaction.

Our consolidated statements of comprehensive income and statements of cash flows include GCA’s results of operations in 2018, but exclude GCA’s results of operations in the comparative years prior to the Acquisition Date. During the year ended October 31, 2018, we recognized total revenue from GCA of \$1.0 billion, including incremental revenues of \$855.7 million, as detailed in the table below.

	Year Ended October 31, 2018	Year Ended October 31, 2017
(in millions)		
Education	\$ 571.9	\$ 94.9
Technology & Manufacturing	238.5	39.6
Business & Industry	170.3	27.4
Healthcare	29.3	5.0
Aviation	18.1	2.8
Total	\$ 1,028.2	\$ 169.7

Following this acquisition, we initiated a restructuring program to achieve cost synergies from our combined operations. We include these costs within corporate expenses. We do not expect to incur significant severance expenses related to GCA restructuring in the future.

	Year Ended October 31, 2018	Cumulative
(in millions)		
Employee Severance	\$ 11.8	\$ 13.5
Other Project Fees	7.9	7.9
External Support Fees	2.0	2.0
Total	\$ 21.7	\$ 23.3

Insurance

The adequacy of our reserves for workers' compensation, general liability, automobile liability, and property damage insurance claims is based upon known trends and events and the actuarial estimates of required reserves considering the most recently completed actuarial reports. We use all available information to develop our best estimate of insurance claims reserves as information is obtained. The results of actuarial studies are used to estimate our insurance rates and insurance reserves for future periods and to adjust reserves, if appropriate, for prior years. The actuarial studies indicated the changes we have made to our risk management program have reduced the frequency of claims; however, we are experiencing adverse developments that impact claim costs relating to prior periods. Claim management initiatives include programs to identify claims that have the potential to develop adversely earlier in the claims cycle and ensure the establishment of reserves consistent with known fact patterns. However, with respect to claims related to certain prior fiscal years, the actuarial studies showed unfavorable developments in our estimates of ultimate losses related to general liability, property damage, workers' compensation, and automobile liability claims. Additionally, we increased our estimate of ultimate losses for workers' compensation claims, primarily related to claims in California, due to increases in projected costs and severity of claims in certain prior fiscal years, as well as statutory, regulatory, and legal developments.

Based on the results of the actuarial studies performed during 2018, which included analyzing recent loss development patterns, comparing the loss development against benchmarks, and applying actuarial projection methods to determine the estimate of ultimate losses, we increased our total reserves for known claims as well as our estimate of the loss amounts associated with incurred but not reported claims ("IBNR Claims") for years prior to 2018 by \$10.2 million during 2018. This adjustment was \$11.8 million lower than the total adjustment of \$22.0 million related to prior year claims in 2017.

Government Services Business

At October 31, 2016, the assets and liabilities of our former Government Services business were classified as held for sale, at which time we wrote down goodwill and long-lived assets of this business by \$22.5 million to reflect our best estimate of fair value less costs to sell, using all information available at that time. During the second quarter of 2017, we received an offer from a strategic buyer to purchase this business for approximately \$35.0 million, which was higher than our previous estimate of fair value less costs to sell. As a result, we recorded a \$17.4 million impairment recovery to adjust the fair value of certain previously impaired assets to the valuation of the assets as implied by the agreed-upon sales price, less estimated costs to sell. We sold this business on May 31, 2017 for \$35.5 million and recorded a pre-tax gain of \$1.2 million. The reported results for this business are through the date of sale and future results could include run-off costs. As this business has been sold and is no longer part of our ongoing operations, we have excluded a discussion of its results for the periods in this report.

Key Financial Highlights

- Revenues increased by \$988.6 million, or 18.1%, during 2018, as compared to 2017. This included \$855.7 million of incremental revenues from the September 1, 2017 acquisition of GCA.
- Operating profit increased by \$36.7 million, or 36.1%, during 2018, as compared to 2017. The increase in operating profit is primarily attributable to \$67.6 million of incremental operating profit resulting from the GCA acquisition and an \$11.8 million lower self-insurance adjustment, partially offset by \$34.4 million of higher amortization expense and impairment charges of \$26.5 million. Additionally, 2018 benefited from the absence of \$24.2 million of transaction expenses related to the GCA acquisition incurred in 2017, partially offset by a \$17.4 million impairment recovery recorded in 2017 related to our Government Services business.
- Interest expense increased by \$34.9 million during 2018, as compared to 2017, primarily related to increased indebtedness incurred to fund the GCA acquisition and higher relative interest rates under our credit facility, partially offset by amortization of \$2.5 million related to the gain realized on our interest rate swaps.
- Our income taxes from continuing operations for 2018 were favorably impacted by a net tax benefit of \$23.2 million related to the Tax Act.
- Net cash provided by operating activities of continuing operations was \$299.7 million during 2018.
- Dividends of \$46.0 million were paid to shareholders, and dividends totaling \$0.700 per common share were declared during 2018.
- At October 31, 2018, total outstanding borrowings under our credit facility were \$949.0 million, and we had up to \$467.3 million of borrowing capacity under our credit facility; however, covenant restrictions limited our actual borrowing capacity to \$441.3 million.

Results of Operations

The Year Ended October 31, 2018 Compared with the Year Ended October 31, 2017

Consolidated

(\$ in millions)	Years Ended October		Increase / (Decrease)	
	2018	2017		
Revenues	\$6,442.2	\$5,453.6	\$988.6	18.1%
Operating expenses	5,747.4	4,881.2	866.2	17.7%
Gross margin	10.8	% 10.5	% 29 bps	
Selling, general and administrative expenses	438.0	436.6	1.4	0.3%
Restructuring and related expenses	25.7	20.9	4.8	23.1%
Amortization of intangible assets	66.0	31.6	34.4	NM*
Impairment loss (recovery)	26.5	(18.5)	45.0	NM*
Operating profit	138.6	101.9	36.7	36.1%
Income from unconsolidated affiliates, net	3.2	4.2	(1.0)	(23.9)%
Interest expense	(54.1)	(19.2)	(34.9)	NM*
Income from continuing operations before income taxes	87.7	86.9	0.8	1.0%
Income tax benefit (provision)	8.2	(8.8)	17.0	NM*
Income from continuing operations	95.9	78.1	17.8	22.9%
Income (loss) from discontinued operations, net of taxes	1.8	(74.3)	76.1	NM*
Net income	97.8	3.8	94.0	NM*
Other comprehensive income (loss)				
Interest rate swaps	21.9	2.7	19.2	NM*
Foreign currency translation	(4.7)	9.7	(14.4)	NM*
Income tax provision	(5.9)	(1.1)	(4.8)	NM*
Comprehensive income	\$109.0	\$15.2	\$93.8	NM*

* Not meaningful

Revenues

Revenues increased by \$988.6 million, or 18.1%, during 2018, as compared to 2017. The increase in revenues was primarily attributable to \$858.1 million of incremental revenues from acquisitions, mainly GCA, as well as organic growth in B&I, T&M, Technical Solutions, and Aviation. This increase was partially offset by the sale of our Government Services business on May 31, 2017.

Operating Expenses

Operating expenses increased by \$866.2 million, or 17.7%, during 2018, as compared to 2017. The increase was primarily attributable to \$763.1 million of incremental operating expenses from the GCA acquisition and an increase in wages and related personnel costs due to a tight labor market. Gross margin increased by 29 bps in 2018, as compared to 2017. The increase in gross margin was primarily associated with a lower self-insurance adjustment related to prior year claims as a result of actuarial studies, favorable margins in our U.S. Technical Solutions business, and the termination of an unprofitable Aviation contract in the third quarter of 2017, all partially offset by lower profit margins on certain B&I accounts.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased by \$1.4 million, or 0.3%, during 2018, as compared to 2017. The increase in selling, general and administrative expenses was primarily related to:

- \$32.9 million of incremental expenses related to the GCA acquisition;
- \$6.4 million increase in technology investments and related support;

the absence of a \$3.2 million reimbursement of previously expensed fees associated with a concluded internal investigation into a foreign entity formerly affiliated with a joint venture during the prior year; and

- a \$3.2 million increase in expenses related to certain incentive plans due to the timing of awards.

This increase was partially offset by:

- the absence of \$24.2 million of transaction expenses related to the GCA acquisition;
- a \$3.4 million adjustment to decrease our medical and dental insurance reserves as a result of actuarial evaluations performed in 2018;
- a \$2.7 million decrease in rental expense due to office consolidations in the prior year;
- a \$2.5 million decrease in travel and entertainment expenses;
- a \$2.1 million decrease in legal settlement costs, net of a \$7.0 million reimbursement of previously expensed legal settlement costs;
- \$1.9 million of lower compensation and related expenses; and
- a \$1.5 million decrease in bad debt expense.

Restructuring and Related Expenses

Restructuring and related expenses increased by \$4.8 million, or 23.1%, during 2018, as compared to 2017, as a result of restructuring related to the GCA acquisition, partially offset by the completion of our 2020 Vision organizational realignment.

Amortization of Intangible Assets

Amortization of intangible assets increased by \$34.4 million, during 2018, as compared to 2017, as a result of the amortization of acquired intangible assets associated with the GCA acquisition.

Impairment Loss (Recovery)

During 2018, we recorded impairment charges on goodwill and customer relationships related to our U.K. Technical Solutions business totaling \$26.5 million. In 2018, declining operating performance of this business primarily reflected the adverse impact of Brexit and the resulting impact on microeconomic conditions in the U.K. retail sector. On May 31, 2017, we sold our Government Services business for \$35.5 million. Based on the initial offer of \$35.0 million received during the second quarter of 2017, we recorded a \$17.4 million impairment recovery to adjust the fair value of certain previously impaired assets. In connection with the sale, during the third quarter of 2017 we recorded a pre-tax gain of approximately \$1.2 million due to a working capital settlement.

Interest Expense

Interest expense increased by \$34.9 million, during 2018, as compared to 2017, primarily related to increased indebtedness incurred to fund the GCA acquisition and higher relative interest rates under our credit facility, partially offset by amortization of \$2.5 million related to the interest rate swap gain.

Income Taxes from Continuing Operations

During 2018, we had an income tax benefit of \$8.2 million, compared to a provision of \$8.8 million in 2017. Our income taxes in 2018 benefited from: a net tax benefit of \$23.2 million related to the enactment of the Tax Act; \$5.8 million, including interest of \$1.0 million, related to expiring statutes of limitations for uncertain tax positions; \$3.4 million of excess tax benefits related to the vesting of share-based compensation awards; and \$2.8 million related to tax deductions for energy efficient government buildings. These benefits were partially offset by a \$1.0 million reduction in certain tax credits, including the prior year WOTC for new hires. Comparatively, 2017 was favorably impacted by: a benefit of \$17.8 million, including interest of \$1.2 million, related to expiring statutes of limitations for uncertain tax positions; \$3.6 million of excess tax benefits related to the vesting of share-based compensation awards; \$1.9 million of tax deductions for energy efficient government buildings; and the 2017 WOTC for new hires.

Discontinued Operations, Net of Taxes

During 2018, we had income from discontinued operations, net of taxes, of \$1.8 million, compared with a loss from discontinued operations, net of taxes, of \$74.3 million during 2017, a change of \$76.1 million. This change was due to an insurance reimbursement on a legal settlement and collection of previously written off receivables, partially offset by union audit settlements during 2018, compared with a legal reserve established in the prior year in connection with certain legal settlement agreements.

Interest Rate Swaps

During April 2018, we elected to terminate all of our interest rate swaps for cash proceeds of \$25.9 million. The resulting gain is being amortized from AOCI to interest expense over the term of our Credit Facility.

Foreign Currency Translation

During 2018, we recognized as a component of our comprehensive income a foreign currency translation loss of \$4.7 million compared to a gain of \$9.7 million during 2017. This change was related to the U.S. Dollar (“USD”) strengthening against the Great Britain Pound (“GBP”) during 2018. Future gains and losses on foreign currency translation will be dependent upon changes in the relative value of foreign currencies to the USD and the extent of our foreign assets and liabilities.

Segment Information

Our reportable segments consist of Business & Industry (“B&I”), Aviation, Technology & Manufacturing (“T&M”), Education, Technical Solutions, and Healthcare. Refer to Note 2, “Basis of Presentation and Significant Accounting Policies,” in the Notes to Consolidated Financial Statements for information related to our former Government Services business.

Financial Information for Each Reportable Segment

(\$ in millions)	Years Ended October 31,			
	2018	2017	Increase / (Decrease)	
Revenues				
Business & Industry	\$2,917.6	\$2,629.1	\$288.5	11.0%
Aviation	1,023.8	990.4	33.4	3.4%
Technology & Manufacturing	924.5	697.4	227.1	32.6%
Education	837.5	363.1	474.4	NM*
Technical Solutions	465.6	439.6	26.0	5.9%
Healthcare	273.3	247.5	25.8	10.4%
Government Services	—	86.5	(86.5)	NM*
	\$6,442.2	\$5,453.6	\$988.6	18.1%
Operating profit (loss)				
Business & Industry	\$154.6	\$135.6	\$19.0	14.0%
Operating profit margin	5.3	% 5.2	% 14 bps	
Aviation	23.2	25.3	(2.1)	(8.5)%
Operating profit margin	2.3	% 2.6	% (29) bps	
Technology & Manufacturing	67.4	47.8	19.6	40.8%
Operating profit margin	7.3	% 6.9	% 43 bps	
Education	43.8	18.0	25.8	NM*
Operating profit margin	5.2	% 5.0	% 27 bps	
Technical Solutions	16.5	37.6	(21.1)	(56.0)%
Operating profit margin	3.6	% 8.5	% (499) bps	
Healthcare	8.8	10.6	(1.8)	(17.4)%
Operating profit margin	3.2	% 4.3	% (108) bps	
Government Services	(0.8)	21.8	(22.6)	NM*
Operating profit margin	NM*	25.2	% NM*	
Corporate	(168.8)	(189.0)	20.2	10.7%
Adjustment for income from unconsolidated affiliates, net, included in Aviation and Government Services	(3.2)	(4.1)	0.9	21.1%
Adjustment for tax deductions for energy efficient government buildings, included in Technical Solutions	(2.8)	(1.9)	(0.9)	(48.1)%
	\$138.6	\$101.9	\$36.7	36.1%

* Not meaningful

Business & Industry

	Years Ended October 31,			
(\$ in millions)	2018	2017	Increase	
Revenues	\$2,917.6	\$2,629.1	\$288.5	11.0%
Operating profit ⁽¹⁾	154.6	135.6	19.0	14.0%
Operating profit margin	5.3	% 5.2	% 14 bps	

⁽¹⁾ 2018 and 2017 include \$7.5 million and \$1.3 million, respectively, of amortization expense related to the GCA acquisition.

B&I revenues increased by \$288.5 million, or 11.0%, during 2018, as compared to 2017. The increase was primarily attributable to incremental revenues of \$143.0 million from the GCA acquisition and to organic net new business, primarily new contract wins in the United Kingdom, as well as targeted expansion of key clients within the United States. Management reimbursement revenues for this segment totaled \$257.1 million and \$234.1 million during 2018 and 2017, respectively.

Operating profit increased by \$19.0 million, or 14.0%, during 2018, as compared to 2017. Operating profit margin increased by 14 bps to 5.3% in 2018 from 5.2% in 2017. Operating profit margin was positively impacted by the management of selling, general and administrative expenses and higher margins on certain accounts. The improvement was partially offset by lower margins on certain accounts and an increase in amortization expense related to the GCA acquisition. While labor challenges are present in certain areas of our B&I business, it is our most mature business and has the highest proportion of unionized labor.

Aviation

	Years Ended October 31,			
(\$ in millions)	2018	2017	Increase / (Decrease)	
Revenues	\$1,023.8	\$990.4	\$33.4	3.4%
Operating profit	23.2	25.3	(2.1)	(8.5)%
Operating profit margin	2.3	% 2.6	% (29) bps	

Aviation revenues increased by \$33.4 million, or 3.4%, during 2018, as compared to 2017. The increase was primarily attributable to higher management reimbursement revenue and organic growth in catering logistics, cabin cleaning, and transportation services, as well as incremental revenues of \$14.5 million from the GCA acquisition. This increase was partially offset by the loss of certain passenger services, facility services, and janitorial accounts. Management reimbursement revenues for this segment totaled \$99.9 million and \$80.4 million during 2018 and 2017, respectively. Operating profit decreased by \$2.1 million, or 8.5%, during 2018, as compared to 2017. Operating profit margin decreased by 29 bps to 2.3% in 2018 from 2.6% in 2017. This decrease in operating profit margin was primarily attributable to lower margins and operational pressures on certain accounts and a provision for the settlement of a union wage and benefits audit. This decrease was partially offset by the termination of an unprofitable contract in the third quarter of 2017.

Technology & Manufacturing

	Years Ended October 31,			
(\$ in millions)	2018	2017	Increase	
Revenues	\$924.5	\$697.4	\$227.1	32.6%
Operating profit ⁽¹⁾	67.4	47.8	19.6	40.8%
Operating profit margin	7.3	% 6.9	% 43 bps	

⁽¹⁾ 2018 and 2017 include \$10.6 million and \$1.9 million, respectively, of amortization expense related to the GCA acquisition.

T&M revenues increased by \$227.1 million, or 32.6%, during 2018, as compared to 2017. The increase was primarily attributable to incremental revenues from the GCA acquisition of \$198.1 million, expansion of existing accounts, and

net new business.

Operating profit increased by \$19.6 million, or 40.8%, during 2018, as compared to 2017. Operating profit margin increased by 43 bps to 7.3% in 2018 from 6.9% in 2017. Operating profit margin was positively impacted by

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certain higher margin acquired contracts, partially offset by higher amortization expense related to the GCA acquisition and an increase in wages and related personnel costs in certain markets.

Education

(\$ in millions)	Years Ended		Increase
	October 31,		
	2018	2017	
Revenues	\$837.5	\$363.1	\$474.4 NM*
Operating profit ⁽¹⁾	43.8	18.0	25.8 NM*
Operating profit margin	5.2	% 5.0	% 27 bps

*Not meaningful

⁽¹⁾ 2018 and 2017 include \$26.1 million and \$4.6 million, respectively, of amortization expense related to the GCA acquisition.

Education revenues increased by \$474.4 million during 2018, as compared to 2017. The increase was primarily attributable to incremental revenues from the GCA acquisition of \$475.5 million.

Operating profit increased by \$25.8 million during 2018, as compared to 2017. Operating profit margin increased by 27 bps to 5.2% in 2018 from 5.0% in 2017. The increase in operating profit margin was primarily due to certain higher margin contracts and the reversal of certain reserves, partially offset by higher amortization expense related to the GCA acquisition and an increase in wages and related personnel costs in certain markets.

Technical Solutions

(\$ in millions)	Years Ended		Increase / (Decrease)
	October 31,		
	2018	2017	
Revenues	\$465.6	\$439.6	\$26.0 5.9%
Operating profit	16.5	37.6	(21.1) (56.0)%
Operating profit margin	3.6	% 8.5	% (499) bps

Technical Solutions revenues increased by \$26.0 million, or 5.9%, during 2018, as compared to 2017. The increase was primarily attributable to higher bundled energy solutions project revenues in our U.S. business due to the timing of new projects.

Operating profit decreased by \$21.1 million, or 56.0%, during 2018, as compared to 2017. Operating profit margin decreased by 499 bps to 3.6% in 2018 from 8.5% in 2017. The decrease in operating profit margin was primarily attributable to impairment charges on goodwill and customer relationships related to our U.K. business totaling \$26.5 million during 2018, as well as the loss of certain higher margin contracts in our U.K. business, partially offset by favorable margins on certain projects in our U.S. business and higher tax deductions for energy efficient government building projects.

Healthcare

(\$ in millions)	Years Ended		Increase / (Decrease)
	October 31,		
	2018	2017	
Revenues	\$273.3	\$247.5	\$25.8 10.4%
Operating profit	8.8	10.6	(1.8) (17.4)%
Operating profit margin	3.2	% 4.3	% (108) bps

Healthcare revenues increased by \$25.8 million, or 10.4%, during 2018, as compared to 2017. This increase was primarily attributable to incremental revenues from the GCA acquisition of \$24.6 million and net new business. Operating profit decreased by \$1.8 million, or 17.4%, during 2018, as compared to 2017. Operating profit margin decreased by 108 bps to 3.2% in 2018 from 4.3% in 2017. This decrease was primarily attributable to lower margin new business, partially offset by the management of selling, general and administrative expenses and the absence of a

specific reserve for a client receivable.

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Corporate

(\$ in millions)	Years Ended		Decrease
	2018	2017	
Corporate expenses	\$168.8	\$189.0	\$(20.2) (10.7)%

Corporate expenses decreased by \$20.2 million, or 10.7%, during 2018, as compared to 2017. The decrease in corporate expenses was primarily related to:

- the absence of \$24.2 million of transaction expenses related to the GCA acquisition;
- an \$11.8 million lower adjustment to self-insurance reserves related to prior year claims;
- a \$3.4 million adjustment to decrease our medical and dental insurance reserves as a result of actuarial evaluations performed in 2018; and
- a \$2.0 million decrease in legal settlement costs, net of a \$7.0 million reimbursement of previously expensed legal settlement costs.

This decrease was partially offset by:

- a \$6.4 million increase in technology investments and related support;
- a \$4.8 million increase in restructuring and related costs as a result of the GCA acquisition;
- the absence of a \$3.2 million reimbursement of previously expensed fees associated with a concluded internal investigation into a foreign entity formerly affiliated with a joint venture during the prior year;
- a \$3.2 million increase in expenses related to certain incentive plans due to the timing of awards; and
- \$1.5 million higher compensation and related expenses primarily related to hiring additional personnel to support our 2020 Vision initiatives, as well as incremental expenses related to the GCA acquisition.

The Year Ended October 31, 2017 Compared with the Year Ended October 31, 2016
Consolidated

(\$ in millions)	Years Ended October 31,		Increase / (Decrease)	
	2017	2016		
Revenues	\$5,453.6	\$5,144.7	\$308.9	6.0%
Operating expenses	4,881.2	4,603.4	277.8	6.0%
Gross margin	10.5	% 10.5	% —	
Selling, general and administrative expenses	436.6	410.1	26.5	6.5%
Restructuring and related expenses	20.9	29.0	(8.1)	(28.1)%
Amortization of intangible assets	31.6	25.0	6.6	26.5%
Impairment (recovery) loss	(18.5)	22.5	(41.0)	NM*
Operating profit	101.9	54.7	47.2	86.2%
Income from unconsolidated affiliates, net	4.2	7.6	(3.4)	(44.6)%
Interest expense	(19.2)	(10.4)	(8.8)	(84.3)%
Income from continuing operations before income taxes	86.9	51.9	35.0	67.3%
Income tax (provision) benefit	(8.8)	10.4	(19.2)	NM*
Income from continuing operations	78.1	62.3	15.8	25.3%
Loss from discontinued operations, net of taxes	(74.3)	(5.1)	(69.2)	NM*
Net income	3.8	57.2	(53.4)	(93.3)%
Other comprehensive income (loss)				
Interest rate swaps and other	2.7	(0.1)	2.8	NM*
Foreign currency translation	9.7	(26.3)	36.0	NM*
Income tax provision	(1.1)	(0.1)	(1.0)	NM*
Comprehensive income	\$15.2	\$30.7	\$(15.5)	(50.5)%

*Not meaningful

Revenues

Revenues increased by \$308.9 million, or 6.0%, during 2017, as compared to 2016. The increase in revenues was primarily attributable to \$208.1 million of incremental revenues from acquisitions, including GCA, and organic growth of \$120.7 million in Aviation and \$39.6 million in B&I. This increase was partially offset by the sale of our Government Services business on May 31, 2017, the loss of certain contracts in T&M, and the completion of a large energy savings performance contract (“ESPC”).

Operating Expenses

Operating expenses increased by \$277.8 million, or 6.0%, during 2017, as compared to 2016. Gross margin remained flat at 10.5% in 2017 and 2016. Gross margin was positively impacted by a lower self-insurance adjustment related to prior year claims and savings from our 2020 Vision initiatives. However, gross margin was negatively impacted by a contract termination within our Aviation business and the loss of a multi-location janitorial account in T&M.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased by \$26.5 million, or 6.5%, during 2017, as compared to 2016.

The increase in selling, general and administrative expenses was primarily related to:

• \$24.2 million of transaction expenses related to the GCA acquisition;

• an \$8.1 million increase in costs associated with 2020 Vision technology investments;

\$5.8 million of higher compensation and related expenses primarily related to hiring additional personnel to support our 2020 Vision initiatives, which was reduced by a reversal of certain expenses related to incentive plans; \$4.1 million of incremental selling, general and administrative expenses related to the GCA acquisition; and a \$2.3 million increase in legal expenses.

This increase was partially offset by:

an \$8.8 million reduction in bad debt expense primarily associated with the absence of specific reserves for certain client receivables that were recorded in 2016;

a \$3.2 million reimbursement during 2017 of previously expensed fees associated with a concluded internal investigation into a foreign entity formerly affiliated with a joint venture;

a \$2.7 million decrease in sales tax reserve compared with the sales tax reserve in 2016; and

organizational savings from our 2020 Vision initiatives.

Restructuring and Related Expenses

Restructuring and related costs decreased by \$8.1 million, or 28.1%, during 2017, as compared to 2016, as a result of the completion of our 2020 Vision organizational realignment and related employee severance in 2016.

Impairment (Recovery) Loss

On May 31, 2017, we sold our Government Services business for \$35.5 million. Based on the initial offer of \$35.0 million received during the second quarter of 2017, we recorded a \$17.4 million impairment recovery to adjust the fair value of certain previously impaired assets. In connection with the sale, we recorded a pre-tax gain of approximately \$1.2 million, which is reflected as part of impairment (recovery) loss in the results of operations table above.

Interest Expense

Interest expense increased by \$8.8 million, or 84.3%, during 2017, as compared to 2016, primarily related to increased indebtedness incurred to fund the GCA acquisition and higher relative interest rates under our credit facility.

Income Taxes

During 2017, we had an income tax provision of \$8.8 million, compared with an income tax benefit of \$10.4 million in the prior year. In 2017 we benefited from \$17.8 million related to expiring statutes of limitations for uncertain tax positions, compared with \$20.8 million in 2016. The 2017 period also benefited from \$3.6 million of excess tax benefits related to the vesting of share-based compensation awards and \$1.9 million of tax deductions on energy efficient government buildings, compared with \$2.2 million and \$1.2 million in 2016, respectively. Additionally, in 2016 we benefited from WOTC of \$5.1 million from the retroactive reinstatement of the WOTC for calendar year 2015. Both periods benefited from in-year WOTC.

Loss from Discontinued Operations, Net of Taxes

Loss from discontinued operations, net of taxes was \$74.3 million during 2017 related to a legal reserve established in connection with certain settlement agreements.

Foreign Currency Translation

During 2017 we recognized as a component of our comprehensive income a foreign currency translation gain of \$9.7 million compared with a loss of \$26.3 million during 2016. This change was related to the USD weakening against the GBP during 2017. Future gains and losses on foreign currency translation will be dependent upon changes in the relative value of foreign currencies to the USD and the extent of our foreign assets and liabilities.

Segment Information

Financial Information for Each Reportable Segment

(\$ in millions)	Years Ended October 31,		Increase / (Decrease)	
	2017	2016		
Revenues				
Business & Industry	\$2,629.1	\$2,557.1	\$72.0	2.8%
Aviation	990.4	851.5	138.9	16.3%
Technology & Manufacturing	697.4	679.3	18.1	2.7%
Education	363.1	272.1	91.0	33.5%
Technical Solutions	439.6	425.3	14.3	3.4%
Healthcare	247.5	242.7	4.8	2.0%
Government Services	86.5	116.7	(30.2)	(25.8)%
	\$5,453.6	\$5,144.7	\$308.9	6.0%
Operating profit (loss)				
Business & Industry	\$135.6	\$111.6	\$24.0	21.5%
Operating profit margin	5.2	% 4.4	% 79 bps	
Aviation	25.3	27.7	(2.4)	(8.6)%
Operating profit margin	2.6	% 3.3	% (70) bps	
Technology & Manufacturing	47.8	54.8	(7.0)	(12.7)%
Operating profit margin	6.9	% 8.1	% (121) bps	
Education	18.0	17.4	0.6	3.7%
Operating profit margin	5.0	% 6.4	% (143) bps	
Technical Solutions	37.6	28.9	8.7	29.9%
Operating profit margin	8.5	% 6.8	% 175 bps	
Healthcare	10.6	12.7	(2.1)	(16.2)%
Operating profit margin	4.3	% 5.2	% (93) bps	
Government Services	21.8	(23.4)	45.2	NM*
Operating profit margin	25.2	% (20.1)%	% NM*	
Corporate	(189.0)	(167.2)	(21.8)	(13.0)%
Adjustment for income from unconsolidated affiliates, net, included in Aviation and Government Services	(4.1)	(6.5)	2.4	37.3%
Adjustment for tax deductions for energy efficient government buildings, included in Technical Solutions	(1.9)	(1.2)	(0.7)	(52.9)%
	\$101.9	\$54.7	\$47.2	86.2%

*Not meaningful

Business & Industry

	Years Ended October 31,		
(\$ in millions)	2017	2016	Increase
Revenues	\$2,629.1	\$2,557.1	\$72.0 2.8%
Operating profit	135.6	111.6	24.0 21.5%
Operating profit margin	5.2	% 4.4	% 79 bps

B&I revenues increased by \$72.0 million, or 2.8%, during 2017, as compared to 2016. The increase was primarily attributable to new janitorial business, including new contract wins in the United Kingdom and additional tag revenue, as well as expansion of existing facility services accounts, and \$27.4 million of incremental revenues from the GCA acquisition. Management reimbursement revenues for this segment totaled \$234.1 million and \$227.8 million during 2017 and 2016, respectively.

Operating profit increased by \$24.0 million, or 21.5%, during 2017, as compared to 2016. Operating profit margin increased by 79 bps to 5.2% in 2017 from 4.4% in 2016. The increase in operating profit margin was primarily associated with higher margin revenues, cost control savings from our 2020 Vision initiatives, and lower legal settlement costs. This increase was partially offset by reserves recorded for multiemployer union benefit obligations from previous years and by lower profit margins associated with certain leased location arrangements.

Aviation

	Years Ended October 31,		
(\$ in millions)	2017	2016	Increase / (Decrease)
Revenues	\$990.4	\$851.5	\$138.9 16.3%
Operating profit	25.3	27.7	(2.4) (8.6)%
Operating profit margin	2.6	% 3.3	% (70) bps

Aviation revenues increased by \$138.9 million, or 16.3%, during 2017, as compared to 2016. The increase was primarily attributable to organic growth in parking, transportation, passenger services, cabin cleaning, and facility services. Management reimbursement revenues for this segment totaled \$80.4 million and \$78.2 million during 2017 and 2016, respectively.

Operating profit decreased by \$2.4 million, or 8.6%, during 2017, as compared to 2016. Operating profit margin decreased by 70 bps to 2.6% in 2017 from 3.3% in 2016. The decrease in operating profit margin was primarily attributable to a contract termination during 2017 and operational issues in certain geographic markets. This decrease was partially offset by lower allocated costs from our 2020 Vision initiatives and the absence of both a penalty imposed by a regulatory agency and a specific reserve established for a client receivable in 2016.

Technology & Manufacturing

	Years Ended October 31,		
(\$ in millions)	2017	2016	Increase / (Decrease)
Revenues	\$697.4	\$679.3	\$18.1 2.7%
Operating profit	47.8	54.8	(7.0) (12.7)%
Operating profit margin	6.9	% 8.1	% (121) bps

T&M revenues increased by \$18.1 million, or 2.7%, during 2017, as compared to 2016. The increase was primarily related to incremental revenues from the GCA acquisition of \$39.6 million, partially offset by the loss of certain accounts.

Operating profit decreased by \$7.0 million, or 12.7%, during 2017, as compared to 2016. Operating profit margin decreased by 121 bps to 6.9% in 2017 from 8.1% in 2016. The decrease in operating profit margin was primarily

attributable to lower contribution margin from certain contracts, including the loss of a multi-location janitorial account, and higher amortization expense from the GCA acquisition.

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Education

(\$ in millions)	Years Ended October 31,		Increase / (Decrease)
	2017	2016	
Revenues	\$363.1	\$272.1	\$91.0 33.5%
Operating profit	18.0	17.4	0.6 3.7%
Operating profit margin	5.0	% 6.4	% (143) bps

Education revenues increased by \$91.0 million, or 33.5%, during 2017, as compared to 2016. The increase was primarily attributable to incremental revenues from the GCA acquisition of \$94.9 million.

Operating profit increased by \$0.6 million, or 3.7%, during 2017, as compared to 2016. Operating profit margin decreased by 143 bps to 5.0% in 2017 from 6.4% in 2016. The decrease in operating profit margin was primarily attributable to the loss of certain higher margin contracts and higher amortization expense from the GCA acquisition.

Technical Solutions

(\$ in millions)	Years Ended October 31,		Increase
	2017	2016	
Revenues	\$439.6	\$425.3	\$14.3 3.4%
Operating profit	37.6	28.9	8.7 29.9%
Operating profit margin	8.5	% 6.8	% 175 bps

Technical Solutions revenues increased by \$14.3 million, or 3.4%, during 2017, as compared to 2016. The increase was primarily attributable to incremental revenues from acquisitions of \$18.1 million and higher project revenues, partially offset by the completion of a large ESPC project.

Operating profit increased by \$8.7 million, or 29.9%, during 2017, as compared to 2016. Operating profit margin increased by 175 bps to 8.5% in 2017 from 6.8% in 2016. The increase in operating profit margin was primarily attributable to the completion of a relatively lower margin ESPC project that started in 2016, the management of our selling, general and administrative expenses, a reduction in bad debt, and higher operational tax credits for energy efficient government building projects.

Healthcare

(\$ in millions)	Years Ended October 31,		Increase / (Decrease)
	2017	2016	
Revenues	\$247.5	\$242.7	\$4.8 2.0%
Operating profit	10.6	12.7	(2.1) (16.2)%
Operating profit margin	4.3	% 5.2	% (93) bps

Healthcare revenues increased by \$4.8 million, or 2.0%, during 2017, as compared to 2016. This increase was primarily attributable to incremental revenues from the GCA acquisition of \$5.0 million.

Operating profit decreased by \$2.1 million, or 16.2%, during 2017, as compared to 2016. Operating profit margin decreased by 93 bps to 4.3% in 2017 from 5.2% in 2016. This decrease was primarily attributable to lower margin new business and a specific reserve established for a client receivable.

Corporate

(\$ in millions)	Years Ended		Increase
	2017	2016	
Corporate expenses	\$189.0	\$167.2	\$21.8 13.0%

Corporate expenses increased by \$21.8 million, or 13.0%, during 2017, as compared to 2016. The increase in corporate expenses was primarily related to:

- \$24.2 million of transaction expenses related to the GCA acquisition;
- an \$8.1 million increase in costs associated with 2020 Vision technology investments;
- a \$5.8 million increase in other costs to support our 2020 Vision initiatives;
- a \$5.1 million increase in legal settlement costs, including a settlement relating to a case alleging certain minimum wage violations;
- \$4.0 million of incremental expenses related to the GCA acquisition; and
- a \$2.3 increase in legal expenses.

This increase was partially offset by:

- a \$10.9 million decrease in self-insurance expense related to prior year claims as a result of an actuarial evaluation completed during 2017;
- a \$7.8 million decrease in restructuring and related costs as a result of the completion of our 2020 Vision organizational realignment;
- the absence of a \$5.2 million specific reserve established during 2016 for a portion of a client receivable that is the subject of ongoing litigation;
- a \$3.2 million reimbursement during 2017 of previously expensed fees associated with a concluded internal investigation into a foreign entity formerly affiliated with a joint venture; and
- a \$1.9 million decrease in sales tax reserve.

Liquidity and Capital Resources

Our primary sources of liquidity are operating cash flows and borrowing capacity under our credit facility. We assess our liquidity in terms of our ability to generate cash to fund our short- and long-term cash requirements. As such, we project our anticipated cash requirements as well as cash flows generated from operating activities to meet those needs.

In addition to normal working capital requirements, we anticipate that our short- and long-term cash requirements will include funding legal settlements, insurance claims, dividend payments, capital expenditures, and integration costs related to the GCA acquisition. We anticipate long-term cash uses may also include strategic acquisitions and share repurchases.

We believe that our operating cash flows and borrowing capacity under our credit facility are sufficient to fund our cash requirements for the next twelve months. In the event that our plans change or our cash requirements are greater than we anticipate, we may need to access the capital markets to finance future cash requirements. However, there can be no assurance that such financing will be available to us should we need it or, if available, that the terms will be satisfactory to us and not dilutive to existing shareholders.

On a long-term basis, we will continue to rely on our credit facility for any long-term funding not provided by operating cash flows. In addition, we anticipate that future cash generated from operations will be augmented by working capital improvements driven by our 2020 Vision, such as the management of costs through consolidated procurement.

IFM Assurance Company (“IFM”) is a wholly-owned captive insurance company that we formed in 2015. IFM is part of our enterprise-wide, multi-year insurance strategy that is intended to better position our risk and safety programs and provide us with increased flexibility in the end-to-end management of our insurance programs. IFM began providing coverage to us as of January 1, 2015. We had accelerated cash tax savings related to coverage provided by IFM of approximately \$7 million in 2018 and \$10 million in both 2017 and 2016. We project accelerated cash tax savings for 2019 to be approximately \$6 million.

Credit Facility

On September 1, 2017, we refinanced and replaced our then-existing \$800.0 million credit facility with a new senior, secured five-year syndicated credit facility (the “Credit Facility”), consisting of a \$900.0 million revolving line of credit and an \$800.0 million amortizing term loan, scheduled to mature on September 1, 2022. In accordance with the terms of the Credit Facility, the line of credit was reduced to \$800.0 million on September 1, 2018. Initial borrowings under the Credit Facility were used to finance, in part, the cash portion of the purchase price related to the GCA acquisition, to refinance certain existing indebtedness of ABM, and to pay transaction costs.

Our ability to draw down available capacity under the Credit Facility is subject to, and limited by, compliance with certain financial covenants, which include a minimum fixed charge coverage ratio of 1.50 to 1.0 and a maximum leverage ratio that was 4.75 to 1.0 through April 2018 and steps down to 3.50 to 1.0 by July 2020. On September 5, 2018, we amended our Credit Facility to increase the maximum leverage ratio for fiscal quarters commencing July 31, 2018 through April 30, 2021 by 25 basis points for such quarters. Other covenants under the Credit Facility include limitations on liens, dispositions, fundamental changes, investments, and certain transactions and payments. At October 31, 2018, we were in compliance with these covenants and expect to be in compliance in the foreseeable future.

During the first quarter of 2018, we made \$20.0 million of principal payments under the Credit Facility. At October 31, 2018, the total outstanding borrowings under our Credit Facility in the form of cash borrowings and standby letters of credit were \$949.0 million and \$152.9 million, respectively. At October 31, 2018, we had up to \$467.3 million of borrowing capacity under the Credit Facility; however, covenant restrictions limited our actual borrowing capacity to \$441.3 million.

Reinvestment of Foreign Earnings

We plan to reinvest our foreign earnings to fund future non-U.S. growth and expansion, and we do not anticipate remitting such earnings to the United States. While U.S. federal tax expense has been recognized as a result of the Tax Act, no deferred tax liabilities with respect to federal and state income taxes or foreign withholding taxes have been recognized. We believe that our cash on hand in the United States, along with our Credit Facility and future domestic cash flows, are sufficient to satisfy our domestic liquidity requirements.

Proceeds from Federal Energy Savings Performance Contracts

As part of our Technical Solutions business, we enter into ESPCs with the federal government pursuant to which we agree to develop, design, engineer, and construct a project and guarantee that the project will satisfy agreed-upon performance standards. Proceeds from ESPC projects are generally received in advance of construction through agreements to sell the ESPC receivables to unaffiliated third parties. We use the advances from the third parties under these agreements to finance the projects, which are recorded as cash flows from financing activities. The use of the cash received under these arrangements to pay project costs is classified as operating cash flows.

Effect of Inflation

The rates of inflation experienced in recent years have not had a material impact on our financial statements. We attempt to recover increased costs by increasing prices for our services, to the extent permitted by contracts and competition.

Regulatory Environment and Environmental Compliance

Our operations are subject to various federal, state, and/or local laws regulating the discharge of materials into the environment or otherwise relating to the protection of the environment, such as discharge into soil, water, and air, and the generation, handling, storage, transportation, and disposal of waste and hazardous substances. In addition, from time to time we are involved in environmental matters at certain of our locations or in connection with our operations. Historically, the cost of complying with environmental laws or resolving environmental issues relating to locations or operations in the United States or abroad has not had a material adverse effect on our financial position, results of operations, or cash flows. We do not believe that the resolution of matters known at this time will be material.

Cash Flows

In addition to revenues and operating profit, our management views operating cash flows as a good indicator of financial performance, because strong operating cash flows provide opportunities for growth both organically and through acquisitions. Net cash provided by operating activities of continuing operations was \$299.7 million during 2018. Operating cash flows primarily depend on: revenue levels; the quality and timing of collections of accounts receivable; the timing of payments to suppliers and other vendors; the timing and amount of income tax payments; and the timing and amount of payments on insurance claims and legal settlements.

(in millions)	Years Ended October 31,		
	2018	2017	2016
Net cash provided by operating activities of continuing operations	\$299.7	\$101.7	\$110.5
Net cash provided by (used in) operating activities of discontinued operations	21.2	(96.1)	(27.0)
Net cash provided by operating activities	320.9	5.6	83.5
Net cash used in investing activities of continuing operations	(48.1)	(871.8)	(131.7)
Net cash used in investing activities of discontinued operations	—	—	(3.1)
Net cash used in investing activities	(48.1)	(871.8)	(134.8)
Net cash (used in) provided by financing activities	(295.8)	874.0	52.6

Operating Activities of Continuing Operations

Net cash provided by operating activities of continuing operations increased by \$198.0 million during 2018, as compared to 2017. The increase was primarily related to the timing of client receivable collections, including collections from acquired GCA accounts, as well as proceeds from the termination of our interest rate swaps and a year-over-year reduction of required cash insurance deposits included in other assets. This increase was partially offset by the timing of vendor payments.

Net cash provided by operating activities of continuing operations decreased by \$8.8 million during 2017, as compared to 2016. The decrease was primarily related to the timing of client receivable collections and income taxes payable, but was partially offset by the timing of vendor payments.

Operating Activities of Discontinued Operations

Net cash provided by operating activities of discontinued operations was \$21.2 million during 2018, as compared to net cash used in operating activities of discontinued operations of \$96.1 million in 2017, a change of \$117.3 million, primarily attributable to the payment of a \$120.0 million legal settlement during 2017.

Net cash used in operating activities of discontinued operations increased by \$69.1 million during 2017, as compared to 2016. This increase was primarily attributable to \$120.0 million of legal settlement payments in 2017, compared to the \$20.0 million in taxes paid related to the sale of the Security business in 2016.

Investing Activities of Continuing Operations

Net cash used in investing activities of continuing operations decreased by \$823.7 million during 2018, as compared to 2017. The decrease was primarily due to an \$853.6 million year-over-year decrease in cash paid, net of cash acquired, for acquisitions, partially offset by the absence of \$35.5 million of cash proceeds from the sale of our Government Services business in 2017.

Net cash used in investing activities of continuing operations increased by \$740.1 million during 2017, as compared to 2016. The increase was primarily related to a \$757.6 million year-over-year increase in cash paid, net of cash acquired, for acquisitions, largely due to the GCA acquisition.

Investing Activities of Discontinued Operations

Net cash used in investing activities of discontinued operations decreased by \$3.1 million during 2017, as compared to 2016, due to the absence of the final working capital adjustment from the sale of the Security business paid in 2016.

Financing Activities

Net cash used in financing activities was \$295.8 million during 2018, as compared to net cash provided by financing activities of \$874.0 million during 2017, primarily due to higher repayments of our borrowings in 2018.

Net cash provided by financing activities increased by \$821.4 million during 2017, as compared to 2016, primarily related to an increase in net borrowings in the fourth quarter of 2017 to fund the GCA acquisition and \$38.7 million in lower common stock repurchases, partially offset by \$18.7 million of deferred financing costs paid on the new credit facility and \$15.8 million of lower proceeds from ESPC projects during 2017.

Dividends

On December 18, 2018, we announced a quarterly cash dividend of \$0.180 per share on our common stock, payable on February 4, 2019. We declared a quarterly cash dividend on our common stock every quarter during 2018, 2017, and 2016. We paid total annual dividends of \$46.0 million, \$39.5 million, and \$36.9 million during 2018, 2017, and 2016, respectively.

Contractual Obligations

(in millions)

Contractual Obligations	Commitments Due By Period				
	Total	2019	2020-2021	2022-2023	Thereafter
Contractual Obligations					
Borrowings under term loan ⁽¹⁾	\$780.0	\$40.0	\$ 180.0	\$ 560.0	\$ —
Borrowings under line of credit ⁽¹⁾	169.0	—	—	169.0	—
Fixed interest related to interest rate swaps ⁽²⁾	41.3	12.5	23.8	5.0	—
Operating leases and other similar commitments ⁽³⁾	367.6	80.7	113.9	87.5	85.5
Capital leases ⁽³⁾	10.9	3.3	5.8	1.8	—
Information technology service agreements ⁽⁴⁾	69.2	23.2	30.3	14.7	1.0
Benefit obligations ⁽⁵⁾	27.7	4.8	5.4	4.7	12.8
Total	\$1,465.7	\$164.6	\$ 359.1	\$ 842.7	\$ 99.3

⁽¹⁾ Borrowings under our term loan and line of credit are presented at face value.

⁽²⁾ Our estimates of future interest payments are calculated based on our hedged borrowings under our Credit Facility, using the fixed rates under our interest rate swap agreements for the applicable notional amounts. See Note 12, "Credit Facility," in the Financial Statements for additional disclosure related to our interest rate swaps. We exclude interest payments on our remaining borrowings from this table because the cash outlay for the interest is unknown. The interest payments on the borrowings under the Credit Facility will be determined based upon the average outstanding balance of our borrowings and the prevailing interest rate during that time.

⁽³⁾ Reflects our contractual obligations to make future payments under non-cancelable operating leases, capital lease agreements, and other similar commitments for various facilities, vehicles, and other equipment.

⁽⁴⁾ Reflects our contractual obligations to make future payments for outsourced services and licensing costs pursuant to our information technology agreements.

⁽⁵⁾ Reflects future expected payments relating to our defined benefit, postretirement, and deferred compensation plans. These amounts are based on expected future service and were calculated using the same assumptions used to measure our benefit obligation at October 31, 2018.

In addition to our company sponsored plans, we participate in certain multiemployer pension and other postretirement plans. The cost of these plans is equal to the annual required contributions determined in accordance with the provisions of negotiated collective bargaining arrangements. During 2018, 2017, and 2016, contributions made to these plans were \$339.3 million, \$316.4 million, and \$290.4 million, respectively; however, our future contributions to the multiemployer plans are dependent upon a number of factors, including the funded status of the plans, the ability of other participating companies to meet ongoing funding obligations, and the level of our ongoing participation in these plans. As the amount of future contributions that we would be contractually obligated to make pursuant to these plans cannot be reasonably estimated, such amounts have been excluded from the above table. See Note 13, "Employee Benefit Plans," in the Financial Statements for more information.

At October 31, 2018, our total liability for unrecognized tax benefits was \$16.9 million. The resolution or settlement of these tax positions with the taxing authorities is subject to significant uncertainty, and therefore we are unable to make a reliable estimate of the amount or timing of cash that may be required to settle these matters. In addition, certain of these matters may not require cash settlements due to the exercise of credits and net operating loss carryforwards as well as other offsets, including the indirect benefit from other taxing jurisdictions that may be available.

We have no off-balance sheet arrangements other than unrecorded standby letters of credit and surety bonds. We use letters of credit and surety bonds in the ordinary course of business to ensure the performance of contractual obligations and to collateralize self-insurance obligations in the event we are unable to meet our claim payment obligations. As we already have reserves on our books for the claims costs, these do not represent additional liabilities. The bonds typically remain in force for one to five years and may include optional renewal periods. As of October 31, 2018, these letters of credit and surety bonds totaled \$152.9 million and \$475.3 million, respectively. Included in the total amount of surety bonds is \$1.8 million of bonds with an effective date starting after October 31, 2018. Neither of these arrangements has a material current effect, or is reasonably likely to have a material future effect, on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures, or capital resources.

Critical Accounting Policies and Estimates

The preparation of consolidated financial statements in accordance with United States generally accepted accounting principles requires our management to make certain estimates that affect the reported amounts. We base our estimates on historical experience, known or expected trends, independent valuations, and various other assumptions that we believe to be reasonable under the circumstances. As future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates. We believe the following critical accounting policies govern the more significant judgments and estimates used in the preparation of our financial statements.

Description	Judgments and Uncertainties	Effect if Actual Results Differ from Assumptions
Customer Relationships		
When we acquire a company, we determine the fair value on the acquisition date of assets acquired and liabilities assumed.		We have not made any changes in the accounting methodology used to determine the fair value of customer relationships during the last three years.
We anticipate that for most acquisitions we will exercise significant judgment in estimating the fair value of intangible assets.	The customer attrition rate and expected revenue growth are two significant estimates used to derive the projected revenues and profitability in the customer relationships valuation. Both of these estimates are influenced by many factors, including historical financial information, estimated retention rates, and management's expectations for future customer growth as a combined company.	If the subsequent actual results and updated projections of the underlying business activity change compared with the assumptions and projections used to develop the values of the identifiable intangible assets, we may be required to record material impairment losses.
In a typical acquisition, customer relationships are our most significant definite-lived intangible asset. In valuing these relationships, we engage a third-party valuation expert to calculate the fair value of these assets using a version of the income approach known as the "excess earnings method."	Another estimate that impacts the valuation is the contributory charge for the acquired workforce, which involves management assumptions based on historical experience, including interview time and new hire productivity.	With other assumptions held constant, a 10% increase in the calculated fair value of the GCA customer relationships would have increased the annual amortization expense by \$4.2 million in 2018.
This method uses a discounted cash flow approach that is derived from historical information, future revenue and operating profit margins, contributory asset charges, and the selection of an appropriate discount rate.	The estimated life is determined by calculating the number of years necessary to obtain 90% of the value of the discounted cash flows of the relationships and is directly tied to the accuracy of the above assumptions.	See the "Valuation of Long-Lived Assets" critical accounting policy, below, for information about impairment evaluations.
We consider this approach the most appropriate valuation technique because the inherent value of these assets is their ability to generate current and future income.		

Description	Judgments and Uncertainties	Effect if Actual Results Differ from Assumptions
Valuation of Long-Lived Assets		
<p>We evaluate our fixed assets and amortizable intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. These events and circumstances include, but are not limited to: higher than expected attrition for customer relationships; a current expectation that a long-lived asset will be disposed of significantly before the end of its previously estimated useful life, such as when we classify a business as held for sale; a significant adverse change in the extent or manner in which we use a long-lived asset; or a change in the physical condition of a long-lived asset.</p>	<p>Our impairment evaluations require us to apply judgment in determining whether a triggering event has occurred, including the evaluation of whether it is more likely than not that a long-lived asset will be disposed of significantly before the end of its previously estimated useful life. Incorrect estimation of useful lives may result in inaccurate depreciation and amortization charges over future periods leading to future impairment.</p>	<p>During the last three years, we have not made any changes in the accounting methodology used to evaluate the impairment of long-lived assets or to estimate the useful lives of our long-lived assets.</p> <p>Additionally, we have not made any changes in the accounting methodology used to evaluate impairment of goodwill during the last three years, other than adopting Accounting Standards Update 2017-04, Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment in 2017.</p>
<p>Undiscounted cash flow analyses are used to determine if impairment exists; if impairment is determined to exist, the loss is calculated based on estimated fair value.</p>	<p>Our impairment loss calculations contain uncertainties because they require management to make assumptions and to apply judgment to estimate future cash flows and asset fair values, including forecasting useful lives of the assets and selecting the discount rate that reflects the risk inherent in future cash flows.</p>	<p>In performing our annual goodwill impairment analysis on August 1, 2018, we recorded an impairment charge of \$20.3 million on goodwill and \$6.2 million on customer relationships for one of our reporting units within the Technical Solutions segment. In 2018, this reporting unit's performance primarily reflected the adverse impact of Brexit and the resulting impact on microeconomic conditions in the U.K. retail sector and the anticipated loss of a significant customer contract. In performing our annual goodwill impairment analysis, we determined there was a revised future outlook for this business, including reduced expectations of future sales, operating margins, and cash flows. In analyzing our other goodwill reporting units, we concluded that goodwill related to these other reporting units was not impaired. A 10% decrease in the estimated fair value of any of our reporting units would not have resulted in a different conclusion.</p>
<p>Goodwill is not amortized but rather tested at least annually for impairment, or more often if events or changes in circumstances indicate it is more-likely-than-not that the carrying amount of the asset may not be recoverable. Goodwill is tested for impairment at the reporting unit level, which represents an operating segment or a component of an operating segment. Goodwill is tested for impairment by either performing a qualitative evaluation or a quantitative test. The qualitative evaluation is an assessment of factors to determine whether it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, including goodwill. We may elect not to perform the qualitative assessment for some or all of our reporting units and instead perform a</p>	<p>We estimate the fair value of each reporting unit using a combination of the income approach and the market approach.</p> <p>The income approach incorporates the use of a discounted cash flow method in which the estimated future cash flows and terminal value are calculated for each reporting unit and then discounted to present value using an</p>	<p>A goodwill impairment analysis was performed for each of our reporting units on November 1, 2017 when we reorganized our reportable segments and reporting units following the integration of GCA into our industry group model. We performed a qualitative goodwill impairment test immediately before and after the segment</p>

quantitative impairment test.

appropriate discount rate.

realignment by analyzing the results of operations and business conditions of the reporting units and we determined the likelihood of a goodwill impairment did not reach the more-likely-than-not threshold specified in U.S. GAAP. Accordingly, we concluded that goodwill related to those reporting units was not impaired and further quantitative testing was not required.

The valuation of our reporting units requires significant judgment in evaluation of recent indicators of market activity and estimated future cash flows, discount rates, and other factors. Our impairment analyses contain inherent uncertainties due to uncontrollable events that could positively or negatively impact anticipated future economic and operating conditions.

During 2016, when we classified our Government Services business as held for sale, we were required to measure that business at the lower of its carrying value or fair value less estimated costs to sell. As a result of significant underperformance relative to expected operating results, we determined the fair value of this business was less than the carrying amount, resulting in impairment charges of \$15.3 million on long-lived assets and \$6.0 million on goodwill. During the second quarter of 2017, we received an offer from a strategic buyer to purchase this business for approximately \$35.0 million, which was higher than our estimate of fair value less costs to sell. As a result, we recorded a \$17.4 million impairment recovery to adjust the fair value of certain previously impaired assets to the valuation of the assets as implied by the agreed-upon sales price, less estimated costs to sell. We completed the sale for \$35.5 million, therefore we did not recognize a material gain on sale.

In making these estimates, the weighted-average cost of capital is utilized to calculate the present value of future cash flows and terminal value. Many variables go into estimating future cash flows, including estimates of our future revenue growth and operating results. When estimating our projected revenue growth and future operating results, we consider industry trends, economic data, and our competitive advantage.

The market approach estimates fair value of a reporting unit by using market comparables for reasonably similar public companies.

Description	Judgments and Uncertainties	Effect if Actual Results Differ from Assumptions
Insurance Reserves		
<p>We use a combination of insured and self-insurance programs to cover workers' compensation, general liability, automobile liability, property damage, and other insurable risks.</p>	<p>Our self-insurance liabilities contain uncertainties due to assumptions required and judgment used.</p>	<p>We have not made any changes in the accounting methodology used to establish our self-insurance liabilities during the past three years.</p>
<p>Insurance claim liabilities represent our estimate of retained risks without regard to insurance coverage. We retain a substantial portion of the risk related to certain workers' compensation and medical claims. Liabilities associated with these losses include estimates of both claims filed and IBNR Claims.</p>	<p>Costs to settle our obligations, including legal and healthcare costs, could fluctuate and cause estimates of our self-insurance liabilities to change.</p>	<p>After analyzing the recent loss development patterns, comparing the loss development patterns against benchmarks, and applying actuarial projection methods to estimate the ultimate losses, we increased our total reserves for known claims as well as our estimate of the loss amounts associated with IBNR Claims for prior years by \$10.2 million, \$22.0 million, and \$32.9 million during 2018, 2017, and 2016, respectively.</p>
<p>With the assistance of third-party actuaries, we periodically review our estimate of ultimate losses for IBNR Claims and adjust our required self-insurance reserves as appropriate. As part of this evaluation, we review the status of existing and new claim reserves as established by our third-party claims administrators.</p>	<p>Incident rates, including frequency and severity, could fluctuate and cause the estimates in our self-insurance liabilities to change.</p>	<p>It is possible that actual results could differ from recorded self-insurance liabilities. A 10% change in our projected ultimate losses would have affected net income by approximately \$30.5 million for 2018.</p>
<p>The third-party claims administrators establish the case reserves based upon known factors related to the type and severity of the claims, demographic data, legislative matters, and case law, as appropriate.</p>	<p>These estimates are subject to: changes in the regulatory environment; fluctuations in projected exposures, including payroll, revenues, and the number of vehicle units; and the frequency, lag, and severity of claims.</p>	
<p>We compare actual trends to expected trends and monitor claims developments.</p>	<p>The full extent of certain claims, especially workers' compensation and general liability claims, may not be fully determined for several years.</p>	
<p>The specific case reserves estimated by the third-party administrators are provided to an actuary who assists us in projecting an actuarial estimate of the overall ultimate losses for our self-insured or high deductible programs, which includes the case reserves plus an actuarial estimate of reserves required for additional developments, including IBNR Claims.</p>	<p>In addition, if the reserves related to self-insurance or high deductible programs from acquired businesses are not adequate to cover damages resulting from future accidents or other incidents, we may be exposed to substantial losses arising from future developments of the claims.</p>	

We utilize the results of actuarial studies to estimate our insurance rates and insurance reserves for future periods and to adjust reserves, if appropriate, for prior years.

Description	Judgments and Uncertainties	Effect if Actual Results Differ from Assumptions
Contingencies and Litigation		
<p>We are a party to a number of lawsuits, claims, and proceedings incident to the operation of our business, including those pertaining to labor and employment, contracts, personal injury, and other matters, some of which allege substantial monetary damages. Some of these actions may be brought as class actions on behalf of a class or purported class of employees.</p>	<p>Litigation outcomes are difficult to predict and are often resolved over long periods of time.</p>	<p>We have not made any changes in the accounting methodology used to establish our loss contingencies during the past three years.</p>
<p>We accrue for loss contingencies when losses become probable and are reasonably estimable. If the reasonable estimate of the loss is a range and no amount within the range is a better estimate, the minimum amount of the range is recorded as a liability.</p>	<p>Estimating probable and reasonably possible losses requires the analysis of multiple possible outcomes that often depend on judgments about potential actions by third parties, such as future changes in facts and circumstances, differing interpretations of the law, assessments of the amount of damages, and other factors beyond our control. There is the potential for a material adverse effect on our financial statements if one or more matters are resolved in a particular period in an amount materially in excess of what we anticipated.</p>	<p>Our management currently estimates the range of loss for all reasonably possible losses for which a reasonable estimate of the loss can be made is between zero and \$4 million. Factors underlying this estimated range of loss may change from time to time, and actual results may vary significantly from this estimate.</p>
<p>We do not accrue for contingent losses that, in our judgment, are considered to be reasonably possible but not probable.</p>	<p>In addition, in some cases, although a loss is probable or reasonably possible, we cannot reasonably estimate the maximum potential losses for probable matters or the range of losses for reasonably possible matters. Therefore, our accrual for probable losses and our estimated range of loss for reasonably possible losses do not represent our maximum possible exposure.</p>	

Recent Accounting Pronouncements

Accounting Standard	Description	Effective Date/Method of Adoption	Effect on the Financial Statements
In November 2018, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2018-18—Collaborative Arrangements (Topic 808)—Clarifying the Interaction between Topic 808 and Topic 606.	This ASU provides guidance on whether certain transactions between collaborative arrangement participants should be accounted for as revenue under Topic 606. It specifically addresses when the participant is a customer in the context of a unit of account, adds unit of account guidance in Topic 808 to align with guidance in Topic 606, and precludes presenting the collaborative arrangement transaction together with revenue recognized under Topic 606 if the collaborative arrangement participant is not a customer.	November 1, 2020, applied retrospectively.	We are currently evaluating the impact of implementing this guidance on our financial statements.
In October 2018, the FASB issued ASU 2018-17—Consolidation (Topic 810): Targeted Improvements to Related Party Guidance for Variable Interest Entities.	This ASU provides that indirect interest held through related parties in common control arrangements should be considered on a proportional basis for determining whether fees paid to decision makers and service providers are variable interest.	November 1, 2020	We are currently evaluating the impact of implementing this guidance on our financial statements.
In October 2018, the FASB issued ASU 2018-16—Derivatives and Hedging (Topic 815): Inclusion of the Secured Overnight Financing Rate (“SOFR”) Overnight Index Swap (“OIS”) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes.	This ASU adds the OIS rate based on SOFR (a swap rate based on the underlying overnight SOFR rate) as an eligible benchmark interest rate for purposes of applying hedge accounting. SOFR is a volume-weighted median interest rate that is calculated daily based on overnight transactions from the prior day’s trading activity in specified segments of the U.S. Treasury repo market. SOFR was selected by the Alternative Reference Rates Committee as its preferred alternative reference rate to LIBOR.	Since we early adopted ASU 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities, which simplified hedge accounting, this update will be effective for us on November 1, 2020 on a prospective basis.	We are currently evaluating the impact of implementing this guidance on our financial statements.
In August 2018, the FASB issued ASU 2018-15, Intangibles—Goodwill and Other—Internal-Use Software (Topic 350).	This ASU aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software.	November 1, 2020	We are currently evaluating the impact of implementing this guidance on our financial statements.
		November 1, 2020	

In August 2018, the FASB issued ASU 2018-14, Compensation—Retirement Benefits—General (Topic 715).	This ASU modifies the disclosure requirements on company-sponsored defined benefit plans.	We are currently evaluating the impact of implementing this guidance on our financial statements.
In August 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework.	This ASU modifies the disclosure requirements on fair value measurements by removing certain disclosure requirements related to the fair value hierarchy, modifying existing disclosure requirements related to measurement uncertainty, and adding new disclosure requirements.	We are currently evaluating the impact of implementing this guidance on our financial statements.

November 1, 2020

Accounting Standard	Description	Effective Date/Method of Adoption	Effect on the Financial Statements
In March 2018, the FASB issued ASU 2018-05, Income Taxes (Topic 740).	This ASU incorporates the provisions of SAB 118 into the accounting standards codification. SAB 118 provides guidance on accounting for tax effects of the Tax Act and permits a measurement period not to exceed one year from the enactment date for companies to complete the required analyses and accounting.	This standard became effective upon issuance.	We applied SAB 118 to our financial statements upon its original issuance in December 2017, prior to the codification in ASC 740. Refer to Note 17, "Income Taxes," in the Financial Statements for a discussion of the impacts of the Tax Act on our consolidated financial statements.
In March 2018, the FASB issued ASU 2018-04, Investments—Debt Securities (Topic 320) and Regulated Operations (Topic 980): Amendments to SEC Paragraphs Pursuant to SAB No. 117 and SEC Release No. 33-9273.	This ASU deletes ASC 320-10-S99-1, which had codified SAB Topic 5.M, and also removes special requirements in SEC Regulation S-X Rule 3A-05 for public utility holding companies. In November 2017, the SEC issued SAB 117 to bring its existing guidance into conformity with Topic 321, Investments—Equity Securities. SAB 117 states that SAB Topic 5.M, Other Than Temporary Impairment of Certain Investments in Equity Securities, is no longer applicable upon adoption of ASC 321.	November 1, 2018	The adoption of this guidance is not expected to have a material impact on our consolidated financial statements.
In February 2018, the FASB issued ASU 2018-02, Income Statement—Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income.	This ASU permits an entity to reclassify the income tax effects of the Tax Act on items within accumulated other comprehensive income into retained earnings.	We anticipate adopting this standard in the first quarter of 2019.	We are currently evaluating the impact of implementing this guidance on our consolidated financial statements.
In August 2017, the FASB issued ASU 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities.	This ASU better aligns accounting rules with a company's risk management activities; better reflects economic results of hedging in financial statements; and simplifies hedge accounting treatment.	November 1, 2019	We are currently evaluating the impact of this guidance on our consolidated financial statements.
In May 2017, the FASB issued ASU 2017-10, Service Concession Arrangements (Topic 853):	This ASU provides clarity on determining the customer in a service concession arrangement.	November 1, 2018 We will adopt this standard in	The anticipated effect of adoption is described in Note 2, "Basis of Presentation," in the

<p>Determining the Customer of the Operation Services.</p>		<p>conjunction with ASU 2014-09, as described below.</p>	<p>Financial Statements.</p>
<p>In May 2017, the FASB issued ASU 2017-09, Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting.</p>	<p>This ASU clarifies which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting.</p>	<p>November 1, 2018 Adoption of this standard will be applied prospectively to awards modified on or after the adoption date.</p>	<p>The impact of this new standard will depend on the extent and nature of future changes to the terms of our share-based payment awards. Historically, we have not had significant changes to our share-based payment awards and therefore do not expect adoption of this guidance to have a material impact on our consolidated financial statements.</p>
<p>In March 2017, the FASB issued ASU 2017-07, Compensation—Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.</p>	<p>To align with the presentation of compensation costs arising from services rendered by employees, this ASU requires classification of the service cost component of pension expense as an operating expense. The other components of pension expense, such as interest cost, amortization of prior service cost, and gains or losses, are required to be presented outside of operating expenses. This ASU also allows the service cost component to be eligible for capitalization, when applicable.</p>	<p>November 1, 2018 Adoption of this standard will be applied retrospectively for the classification requirements and prospectively for the capitalization of the service cost component requirement.</p>	<p>As ABM’s defined benefit and postretirement benefit plans were previously amended to preclude new participants, the adoption of this guidance will not have a material impact on our consolidated financial statements.</p>

Accounting Standard	Description	Effective Date/Method of Adoption	Effect on the Financial Statements
In November 2016, the FASB issued ASU 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash.	This ASU provides guidance on the presentation of restricted cash or restricted cash equivalents in the statement of cash flows.	November 1, 2018 Adoption of this standard will be applied using a retrospective transition method to each period presented.	The adoption of this guidance is not expected to have a material impact on our consolidated statements of cash flows.
In October 2016, the FASB issued ASU 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other than Inventory.	This ASU requires the tax effects of intercompany transactions, other than sales of inventory, to be recognized when the transfer occurs, instead of deferred until the transferred asset is sold to a third party or otherwise recovered through use of the asset.	November 1, 2018 This standard will be applied using a modified retrospective adoption approach with a cumulative-effect adjustment to retained earnings as of the beginning of the year of adoption.	We are currently evaluating the impact of implementing this guidance on our consolidated financial statements.
In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments.	This ASU provides eight targeted changes to how cash receipts and cash payments are presented and classified in the statement of cash flows.	November 1, 2018 Adoption of this standard will be applied using a retrospective transition method to each period presented.	The adoption of this guidance is not expected to have a material impact on our consolidated statements of cash flows.
In June 2016, the FASB issued ASU 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Statements.	This ASU replaces the existing incurred loss impairment model with a methodology that incorporates all expected credit loss estimates, resulting in more timely recognition of losses.	November 1, 2020 This standard will be applied using a modified retrospective adoption approach with a cumulative-effect adjustment to retained earnings as of the beginning of the year of adoption, except for certain provisions that are required to be applied prospectively.	We are currently evaluating the impact of implementing this guidance on our consolidated financial statements.
In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). The FASB has issued several updates to ASU 2016-02, including ASU 2018-11, Leases (Topic 842): Targeted Improvements, and ASU 2018-10, Codification	ASU 2016-02 improves transparency and comparability among organizations by requiring lessees to recognize lease assets and lease liabilities on the balance sheet and to disclose key information	November 1, 2019 This guidance may be applied through a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the	We are currently evaluating the impact of implementing this guidance on our consolidated financial statements.

<p>Improvements to Topic 842, Leases, that were issued in July 2018.</p>	<p>about leasing arrangements. ASU 2018-11 and ASU 2018-10 amend various aspects of Topic 842, including an additional transition method.</p>	<p>financial statements with certain practical expedients available. Alternatively, this guidance may also be applied at the adoption date by recognizing a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption.</p>	
<p>In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers (Topic 606).</p>	<p>This ASU introduces a new principles-based framework for revenue recognition and disclosure. The core principle of the standard is when an entity transfers goods or services to customers it will recognize revenue in an amount that reflects the consideration the entity expects to be entitled to for those goods or services.</p>	<p>November 1, 2018 This standard will be applied using a modified retrospective adoption approach with a cumulative-effect adjustment to retained earnings as of the beginning of the year of adoption.</p>	<p>The anticipated effect of adoption is described in Note 2, “Basis of Presentation,” in the Financial Statements.</p>

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

We have market risk exposure related to interest rates and foreign currency exchange rates. Market risk is measured as the potential negative impact on earnings, cash flows, or fair values resulting from a hypothetical change in interest rates or foreign currency exchange rates.

Interest Rate Risk

We are primarily exposed to interest rate risk through our variable rate borrowings under our Credit Facility. At October 31, 2018, we had total outstanding borrowings of \$949.0 million. To limit exposure to upward movements in interest rates, we entered into interest rate swap agreements to fix the interest rates on a substantial portion of our outstanding borrowings. At October 31, 2017, we had interest rate swaps with an underlying notional amount of \$105.0 million and a fixed interest rate of 1.05%. We entered into three additional forward-starting interest rate swap agreements that became effective in November 2017 with an underlying aggregate notional amount of \$500.0 million and fixed interest rates of 1.65% and 1.69%. During April 2018, we elected to terminate all of our interest rate swaps then in effect. We subsequently entered into new forward-starting interest rate swaps that became effective on November 1, 2018 with an underlying aggregate notional amount of \$440.0 million and fixed interest rates of 2.83%, 2.84%, and 2.86%. There are no other material changes related to market risk from the disclosures in this Annual Report on Form 10-K for the year ended October 31, 2018.

Based on our average borrowings, interest rates, and interest rate swaps effective in November 2018, a 100 basis point increase in LIBOR would decrease our future earnings and cash flows by \$5.4 million. For 2017, our market risk exposure related to interest rate fluctuations was \$6.5 million. As actual interest rate movements over time are uncertain, our swaps pose potential interest rate risks if interest rates decrease. As of October 31, 2018, the fair value of our interest rate swap agreements was an asset of \$1.3 million.

Foreign Currency Exchange Rate Risk

We are primarily exposed to the impact of foreign exchange rate risk through our U.K. operations where the functional currency is the Great Britain Pound. As we intend to remain permanently invested in these foreign operations, we do not utilize hedging instruments to mitigate foreign currency exchange risks. If we change our intent with respect to such international investment, we would expect to implement strategies designed to manage those risks in an effort to mitigate the effect of foreign currency fluctuations on our earnings and cash flows.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors

ABM Industries Incorporated:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of ABM Industries Incorporated and subsidiaries (the “Company”) as of October 31, 2018 and 2017, the related consolidated statements of comprehensive income, stockholders’ equity, and cash flows for each of the years in the three year period ended October 31, 2018, and the related notes and financial statement Schedule II (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of October 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three year period ended October 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the Company’s internal control over financial reporting as of October 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated December 21, 2018 expressed an unqualified opinion on the effectiveness of the Company’s internal control over financial reporting.

Basis for Opinion

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

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

/s/ KPMG LLP

We have served as the Company’s auditor since 1980.

New York, New York

December 21, 2018

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors

ABM Industries Incorporated:

Opinion on Internal Control Over Financial Reporting

We have audited ABM Industries Incorporated and subsidiaries' (the "Company") internal control over financial reporting as of October 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of October 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of the Company as of October 31, 2018 and 2017, the related consolidated statements of comprehensive income, stockholders' equity, and cash flows for each of the years in the three year period ended October 31, 2018, and the related notes and financial statement Schedule II (collectively, the consolidated financial statements) and our report dated December 21, 2018 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting 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.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ KPMG LLP

New York, New York

December 21, 2018

ABM INDUSTRIES INCORPORATED AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	October 31,	
	2018	2017
(in millions, except share and per share amounts)		
ASSETS		
Current assets		
Cash and cash equivalents	\$39.1	\$62.8
Trade accounts receivable, net of allowances of \$19.2 and \$25.5 at October 31, 2018 and 2017, respectively	1,014.1	1,038.1
Prepaid expenses	80.8	101.8
Other current assets	37.0	32.8
Total current assets	1,171.0	1,235.5
Other investments	16.3	17.6
Property, plant and equipment, net of accumulated depreciation of \$153.9 and \$136.4 at October 31, 2018 and 2017, respectively	140.1	143.1
Other intangible assets, net of accumulated amortization of \$250.4 and \$189.1 at October 31, 2018 and 2017, respectively	355.7	430.1
Goodwill	1,834.8	1,864.2
Other noncurrent assets	109.6	122.1
Total assets	\$3,627.5	\$3,812.6
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Current portion of long-term debt, net	\$37.0	\$16.9
Trade accounts payable	221.9	230.8
Accrued compensation	172.1	159.9
Accrued taxes—other than income	56.0	52.5
Insurance claims	149.5	112.5
Income taxes payable	3.2	13.4
Other accrued liabilities	152.7	171.8
Total current liabilities	792.5	757.8
Long-term debt, net	902.0	1,161.3
Deferred income tax liability, net	37.8	57.3
Noncurrent insurance claims	360.8	382.9
Other noncurrent liabilities	62.9	61.3
Noncurrent income taxes payable	16.9	16.3
Total liabilities	2,172.9	2,436.9
Commitments and contingencies		
Stockholders' Equity		
Preferred stock, \$0.01 par value; 500,000 shares authorized; none issued	—	—
Common stock, \$0.01 par value; 100,000,000 shares authorized; 66,004,361 and 65,502,568 shares issued and outstanding at October 31, 2018 and 2017, respectively	0.7	0.7
Additional paid-in capital	691.8	675.2
Accumulated other comprehensive loss, net of taxes	(9.0)	(20.3)
Retained earnings	771.2	720.1
Total stockholders' equity	1,454.6	1,375.7
Total liabilities and stockholders' equity	\$3,627.5	\$3,812.6
See accompanying notes to consolidated financial statements.		

ABM INDUSTRIES INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in millions, except per share amounts)	Years Ended October 31,		
	2018	2017	2016
Revenues	\$6,442.2	\$5,453.6	\$5,144.7
Operating expenses	5,747.4	4,881.2	4,603.4
Selling, general and administrative expenses	438.0	436.6	410.1
Restructuring and related expenses	25.7	20.9	29.0
Amortization of intangible assets	66.0	31.6	25.0
Impairment loss (recovery)	26.5	(18.5)	) 22.5
Operating profit	138.6	101.9	54.7
Income from unconsolidated affiliates, net	3.2	4.2	7.6
Interest expense	(54.1)	) (19.2)	) (10.4)
Income from continuing operations before income taxes	87.7	86.9	51.9
Income tax benefit (provision)	8.2	(8.8)	) 10.4
Income from continuing operations	95.9	78.1	62.3
Income (loss) from discontinued operations, net of taxes	1.8	(74.3)	) (5.1)
Net income	97.8	3.8	57.2
Other comprehensive income (loss)			
Interest rate swaps	21.9	2.7	(0.1)
Foreign currency translation	(4.7)	) 9.7	(26.3)
Income tax provision	(5.9)	) (1.1)	) (0.1)
Comprehensive income	\$109.0	\$15.2	\$30.7
Net income per common share — Basic			
Income from continuing operations	\$1.45	\$1.35	\$1.11
Income (loss) from discontinued operations	0.03	(1.29)	) (0.09)
Net income	\$1.48	\$0.07	\$1.02
Net income per common share — Diluted			
Income from continuing operations	\$1.45	\$1.34	\$1.09
Income (loss) from discontinued operations	0.03	(1.27)	) (0.09)
Net income	\$1.47	\$0.07	\$1.01
Weighted-average common and common equivalent shares outstanding			
Basic	66.1	57.7	56.3
Diluted	66.4	58.3	56.9
Dividends declared per common share	\$0.700	\$0.680	\$0.660

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See accompanying notes to consolidated financial statements.

ABM INDUSTRIES INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in millions)	Years Ended October 31,					
	2018		2017		2016	
	Share	Amount	Shares	Amount	Shares	Amount
Common Stock						
Balance, beginning of year	65.5	\$0.7	55.6	\$0.6	56.1	\$0.6
Stock issued in GCA acquisition, net of shares withheld for taxes	—	—	9.4	0.1	—	—
Stock issued under employee stock purchase and share-based compensation plans	0.5	—	0.7	—	0.9	—
Repurchase of common stock	—	—	(0.2)	—	(1.4)	—
Balance, end of year	66.0	0.7	65.5	0.7	55.6	0.6
Additional Paid-in Capital						
Balance, beginning of year	675.2		248.6		275.5	
Stock issued in GCA acquisition, net of shares withheld for taxes	—		421.2		—	
(Taxes withheld) stock issued under employee stock purchase and share-based compensation plans, net	(0.4)	)	(0.1)	)	5.7	
Share-based compensation expense	17.0		13.3		14.0	
Repurchase of common stock	—		(7.9)	)	(46.6))
Balance, end of year	691.8		675.2		248.6	
Accumulated Other Comprehensive Loss, Net of Taxes						
Balance, beginning of year	(20.3)	)	(31.6)	)	(5.1))
Other comprehensive income (loss)	11.3		11.3		(26.5))
Balance, end of year	(9.0)	)	(20.3)	)	(31.6))
Retained Earnings						
Balance, beginning of year	720.1		756.4		736.5	
Net income	97.8		3.8		57.2	
Dividends						
Common stock	(46.0)	)	(39.5)	)	(36.9))
Stock issued under share-based compensation plans	(0.6)	)	(0.6)	)	(0.4))
Balance, end of year	771.2		720.1		756.4	
Total Stockholders' Equity	\$1,454.6		\$1,375.7		\$974.0	

See accompanying notes to consolidated financial statements.

ABM INDUSTRIES INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in millions)	Years Ended		
	October 31,		
	2018	2017	2016
Cash flows from operating activities			
Net income	\$97.8	\$3.8	\$57.2
(Income) loss from discontinued operations, net of taxes	(1.8)	74.3	5.1
Income from continuing operations	95.9	78.1	62.3
Adjustments to reconcile income from continuing operations to net cash provided by operating activities of continuing operations			
Depreciation and amortization	112.5	70.1	57.5
Proceeds from termination of interest rate swaps	25.9	—	—
Impairment loss (recovery)	26.5	(18.5)	22.5
Deferred income taxes	(23.7)	(6.1)	(3.7)
Share-based compensation expense	17.0	13.3	14.0
Provision for bad debt	6.4	4.1	12.9
Discount accretion on insurance claims	0.8	0.2	0.3
Loss (gain) on sale of assets	0.5	(2.7)	(0.2)
Income from unconsolidated affiliates, net	(3.2)	(4.2)	(7.6)
Distributions from unconsolidated affiliates	1.9	5.7	8.2
Changes in operating assets and liabilities, net of effects of acquisitions			
Trade accounts receivable	16.0	(115.7)	(80.9)
Prepaid expenses and other current assets	2.4	(6.4)	—
Other noncurrent assets	11.3	(7.6)	(29.5)
Trade accounts payable and other accrued liabilities	(1.5)	74.4	15.4
Insurance claims	13.9	33.5	33.6
Income taxes payable	0.7	(22.5)	0.5
Other noncurrent liabilities	(3.7)	6.0	5.2
Total adjustments	203.7	23.6	48.2
Net cash provided by operating activities of continuing operations	299.7	101.7	110.5
Net cash provided by (used in) operating activities of discontinued operations	21.2	(96.1)	(27.0)
Net cash provided by operating activities	320.9	5.6	83.5
Cash flows from investing activities			
Additions to property, plant and equipment	(50.9)	(57.2)	(44.0)
Proceeds from sale of assets	2.3	4.0	3.3
(Adjustments to) and proceeds from sale of business	(1.9)	35.5	—
Purchase of businesses, net of cash acquired	—	(853.6)	(96.0)
Proceeds from redemption of auction rate security	2.9	—	5.0
Investments in unconsolidated affiliates	(0.4)	(0.4)	—
Net cash used in investing activities of continuing operations	(48.1)	(871.8)	(131.7)
Net cash used in investing activities of discontinued operations	—	—	(3.1)
Net cash used in investing activities	(48.1)	(871.8)	(134.8)
Cash flows from financing activities			
(Taxes withheld) and proceeds from issuance of share-based compensation awards, net	(1.0)	(0.7)	5.3
Repurchases of common stock	—	(7.9)	(46.6)
Dividends paid	(46.0)	(39.5)	(36.9)
Deferred financing costs paid	(0.1)	(18.7)	(0.1)
Borrowings from credit facility	1,184.2	1,880.1	1,052.3
Repayment of borrowings from credit facility	(1,426)	(4957.2)	(942.0)

Changes in book cash overdrafts	(8.5)	15.8	0.7
Financing of energy savings performance contracts	5.4	6.8	22.6
Payment of contingent consideration	—	(3.8)	(1.5)
Repayment of capital lease obligations	(3.3)	(0.9)	(1.2)
Net cash (used in) provided by financing activities	(295.8)	874.0	52.6
Effect of exchange rate changes on cash and cash equivalents	(0.7)	1.5	(3.3)
Net (decrease) increase in cash and cash equivalents	(23.7)	9.3	(2.0)
Cash and cash equivalents at beginning of year	62.8	53.5	55.5
Cash and cash equivalents at end of year	\$39.1	\$62.8	\$53.5

ABM INDUSTRIES INCORPORATED AND SUBSIDIARIES
 CONSOLIDATED STATEMENTS OF CASH FLOWS

(continued)

(in millions)	Years Ended		
	October 31,		
	2018	2017	2016
Supplemental cash flow information			
Income tax (refunds) payments, net	\$(1.0)	\$11.8	\$12.6
Interest paid on credit facility	49.6	8.1	4.4
Non-cash investing and financing activities			
Stock issued in GCA acquisition, net of shares withheld for taxes	\$—	421.3	—
See accompanying notes to consolidated financial statements.			

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ABM INDUSTRIES INCORPORATED AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. THE COMPANY AND NATURE OF OPERATIONS

ABM Industries Incorporated, which operates through its subsidiaries (collectively referred to as “ABM,” “we,” “us,” “our,” or the “Company”), is a leading provider of integrated facility solutions with a mission to make a difference, every person, every day. We are organized into five industry groups and one Technical Solutions segment:

Through these groups, we offer janitorial, facilities engineering, parking, and specialized mechanical and electrical technical solutions, on a standalone basis or in combination with other services.

2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The consolidated financial statements and accompanying notes (the “Financial Statements”) have been prepared in accordance with United States generally accepted accounting principles (“U.S. GAAP”) and with the rules and regulations of the Securities and Exchange Commission (“SEC”), specifically Regulation S-X and the instructions to Form 10-K. Unless otherwise indicated, all references to years are to our fiscal year, which ends on October 31.

The Financial Statements include the accounts of ABM and all of our consolidated subsidiaries. We account for ABM’s investments in unconsolidated affiliates under the equity method of accounting. We include the results of acquired businesses in the consolidated statements of comprehensive income from their respective acquisition dates. All intercompany accounts and transactions have been eliminated in consolidation.

The preparation of consolidated financial statements in accordance with U.S. GAAP requires our management to make certain estimates that affect the reported amounts. We base our estimates on historical experience, known or expected trends, independent valuations, and various other assumptions that we believe to be reasonable under the circumstances. As future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates.

We round amounts in the Financial Statements to millions and calculate all percentages and per-share data from the underlying whole-dollar amounts. Thus, certain amounts may not foot, crossfoot, or recalculate based on reported numbers due to rounding.

Acquisition of GCA Services Group

On September 1, 2017 (the “Acquisition Date”), we completed the acquisition of GCA Services Group (“GCA”). Accordingly, our consolidated statements of comprehensive income and statements of cash flows include GCA’s results of operations in 2018, but exclude GCA’s results of operations in the comparative years prior to the Acquisition Date. See Note 3, “Acquisitions,” for further information on the acquisition of GCA.

Government Services

At October 31, 2016, the assets and liabilities of our former Government Services business were classified as held for sale, at which time we wrote down goodwill and long-lived assets of this business by \$22.5 million to reflect our best estimate of fair value less costs to sell, using all information available at that time. During the second quarter of 2017, we received an offer from a strategic buyer to purchase this business for approximately \$35.0 million, which was higher than our previous estimate of fair value less costs to sell. As a result, we recorded a \$17.4 million impairment recovery to adjust the fair value of certain previously impaired assets to the valuation of the assets as implied by the

agreed-upon sales price, less estimated costs to sell. We sold this business on May 31, 2017 for \$35.5 million and recorded a pre-tax gain of \$1.2 million. The impairment charges, subsequent recovery, and gain on sale are reflected in impairment loss (recovery) in the accompanying consolidated statements of comprehensive income. The reported results for this business are through the date of sale and future results could include run-off costs.

Prior Year Reclassifications

Effective November 1, 2017, we made changes to our operating structure as a result of the GCA acquisition. To reflect these changes, certain prior year amounts, including operating segment data, have been reclassified to conform with our fiscal 2018 presentation. These changes had no impact on our previously reported consolidated balance sheets, statements of comprehensive income, or statements of cash flows. See Note 18, "Segment and Geographic Information," for further details.

Cash and Cash Equivalents

We consider all highly liquid securities with an original maturity of three months or less to be cash and cash equivalents. As part of our cash management system, we use "zero balance" accounts to fund our disbursements. Under this system, at the end of each day the bank balance is zero, while the book balance is usually a negative amount due to reconciling items, such as outstanding checks. We report the changes in these book cash overdrafts as cash flows from financing activities.

Trade Accounts Receivable

Trade accounts receivable arise from services provided to our clients and are usually due and payable on varying terms from receipt of the invoice to net ninety days, with the exception of certain Technical Solutions project receivables that may have longer collection periods. These receivables are recorded at the invoiced amount and normally do not bear interest. In addition, our trade accounts receivable include unbilled receivables that can include costs and estimated earnings in excess of billings on uncompleted contracts, as well as invoices for services that have been provided but are not yet billed.

Allowance for Doubtful Accounts

We determine the allowance for doubtful accounts based on historical write-offs, known or expected trends, and the identification of specific balances deemed uncollectible. For the specifically identified balances, we establish the reserve upon the earlier of a client's inability to meet its financial obligations or after a period of twelve months, unless our management believes such amounts will ultimately be collectible.

Sales Allowance

In connection with our service contracts, we periodically issue credit memos to our clients that are recorded as a reduction in revenues and an increase to the allowance for billing adjustments. These credits can result from client vacancy discounts, job cancellations, property damage, and other items. We estimate our potential future losses on these client receivables based on an analysis of the historical rate of sales adjustments (credit memos, net of re-bills) and known or expected trends.

Other Current Assets

At October 31, 2018 and 2017, other current assets primarily consisted of other receivables and short-term insurance recoverables.

Other Investments

At October 31, 2018 and 2017, other investments primarily consisted of investments in unconsolidated affiliates and in auction rate securities.

Investments in Unconsolidated Affiliates

We own non-controlling interests (generally 20% to 50%) in certain affiliated entities that predominantly provide facility solutions to governmental and commercial clients, primarily in the United States and the Middle East. We account for such investments under the equity method of accounting. We evaluate our equity method investments for impairment whenever events or changes in circumstances indicate that the carrying amounts of such investments may not be recoverable. An impairment loss is recognized to the extent that the estimated fair value of the investment is less than its carrying amount and we determine that the impairment is other-than-temporary. At October 31, 2018,

2017, and 2016, our investments in unconsolidated affiliates were \$11.3 million, \$9.3 million, and \$17.1 million, respectively. At October 31, 2016, a portion of these investments were classified as held for sale, as they related to our Government Services business. In connection with the held-for-sale classification, we recognized an impairment charge of \$5.0 million to write down these investments to their estimated fair value in 2016, which we subsequently recovered in 2017. We did not recognize any impairment charges on these investments in 2018 or 2017.

Investments in Auction Rate Securities

Our investments in auction rate securities are classified as available-for-sale. Accordingly, auction rate securities are presented at fair value with unrealized gains and losses recorded in accumulated other comprehensive income (loss), net of taxes (“AOCI”). On a quarterly basis, we analyze all auction rate securities that have unrealized losses for impairment consideration and assess the intent to sell such securities. If such intent exists, impaired securities are considered other-than-temporarily impaired and we recognize the entire difference between the auction rate security’s amortized cost and its fair value in earnings. We also consider if we may be required to sell the securities prior to the recovery of amortized cost, which may trigger an impairment charge. If these securities are considered impaired, we assess whether the amortized costs of the securities can be recovered by reviewing several factors, including credit risks associated with the issuer. If we do not expect to recover the entire amortized cost of the security, we consider the security to be other-than-temporarily impaired, and record the difference between the security’s amortized costs and its recoverable amount in earnings and the difference between the security’s amortized cost and fair value in AOCI.

Property, Plant and Equipment

We record property, plant and equipment at cost. Repairs and maintenance expenditures are expensed as incurred. In contrast, we capitalize major renewals or replacements that substantially extend the useful life of an asset. We determine depreciation for financial reporting purposes using the straight-line method over the following estimated useful lives:

Category	Years
Computer equipment and software	3–5
Machinery and other equipment	3–5
Transportation equipment	1.5–10
Buildings	10–40
Furniture and fixtures	5

In addition, we depreciate assets under capital leases and leasehold improvements over the shorter of their estimated useful lives or the remaining lease term. Upon retirement or sale of an asset, we remove the cost and accumulated depreciation from our consolidated balance sheets. When applicable, we record corresponding gains or losses within the accompanying consolidated statements of comprehensive income.

Leases

We enter into various noncancelable lease agreements for premises and equipment used in the normal course of business. We evaluate the lease agreement at the inception of the lease to determine whether the lease is an operating lease or capital lease.

We account for rent expense under noncancelable operating leases with escalation clauses on a straight-line basis over the initial lease term. A deferred liability is recorded for the amount of the excess of straight-line rent expense over scheduled payments. We do not assume renewals in our determination of the lease term unless the renewals are deemed to be reasonably assured at lease inception. We may also be required to make additional payments to reimburse the lessors for operating expenses such as real estate taxes, maintenance, utilities, and insurance, which are expensed as incurred. We enter into leases of parking lots and garages that contain contingent payment provisions. Under these provisions, we pay contingent amounts in addition to base rent, primarily based on percentages of the gross receipts or other financial parameters attributable to the related facilities. We record contingent rent as it becomes probable that specified targets will be met.

We record each capital lease as an asset and an obligation at an amount that is equal to the present value of the minimum lease payments over the lease term.

Goodwill and Other Intangible Assets

Goodwill represents the excess purchase price of acquired businesses over the fair value of the assets acquired and liabilities assumed. We have elected to make the first day of our fourth quarter, August 1st, the annual impairment assessment date for goodwill. However, we could be required to evaluate the recoverability of goodwill more often if impairment indicators exist. Goodwill is tested for impairment at a “reporting unit” level by performing either a qualitative evaluation or a quantitative test. The qualitative evaluation is an assessment of factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. We may elect not to perform the qualitative assessment for some or all reporting units and perform a quantitative test instead, under which fair value is determined based on discounted cash flow analyses. The discounted estimates of future cash flows include significant management assumptions, such as revenue growth rates, operating margins, weighted average cost of capital, and future economic and market conditions. In 2017, we adopted Accounting Standards Update 2017-04, which allows us to test goodwill for impairment by comparing the fair value of a reporting unit to its carrying amount. If the fair value of a reporting unit is less than its carrying value, an impairment charge will be recorded for the difference between the fair value and carrying value, but it is limited to the carrying value of the reporting unit’s goodwill.

Other intangible assets primarily consist of acquired customer contracts and relationships that are amortized using the sum-of-the-years-digits method over their useful lives, consistent with the estimated useful life considerations used in the determination of their fair values. This accelerated method of amortization reflects the pattern in which the economic benefits from the intangible assets of customer contracts and relationships are expected to be realized. We amortize other non-customer acquired intangibles using a straight-line method of amortization. We evaluate other intangible assets, as well as our long-lived assets, for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. When this occurs, a recoverability test is performed that compares the projected undiscounted cash flows from the use and eventual disposition of an asset or asset group to its carrying amount. If the projected undiscounted cash flows are less than the carrying amount, we calculate an impairment loss. The impairment loss calculation compares the fair value, which is based on projected discounted cash flows, to the carrying value.

See Note 10, “Goodwill and Other Intangible Assets,” for further information on goodwill, other intangible assets, and impairment charges.

Other Noncurrent Assets

At October 31, 2018 and 2017, other noncurrent assets primarily consisted of long-term insurance recoverables, deferred charges, insurance and other long-term deposits, prepayments to carriers for future insurance claims, and federal energy savings performance contract receivables.

Federal Energy Savings Performance Contract Receivables

As part of our Technical Solutions business, we enter into energy savings performance contracts (“ESPCs”) with the federal government pursuant to which we agree to develop, design, engineer, and construct a project and guarantee that the project will satisfy agreed-upon performance standards. ESPC receivables represent the amount to be paid by various federal government agencies for work we have satisfactorily performed under specific ESPCs. We assign certain of our rights to receive those payments to unaffiliated third parties that provide construction financing, which we record as a liability, for such contracts. This construction financing is recorded as cash flows from financing activities, while the use of the cash received under these arrangements to pay project costs is classified as operating cash flows. The ESPC receivable is recognized as revenue as each project is constructed. Upon completion and acceptance of the project by the government and upon satisfaction of true sale criteria, the assigned ESPC receivable from the government and corresponding ESPC liability are eliminated from our consolidated financial statements.

Fair Value of Financial Instruments

Fair value is the price we would receive to sell an asset or pay to transfer a liability in an orderly transaction with a market participant at the measurement date. In the absence of active markets for the identical assets or liabilities, such measurements involve developing assumptions based on market observable data and, in the absence of such data, internal information that is consistent with what market participants would use in a hypothetical transaction that occurs at the measurement date.

Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect our market assumptions. Preference is given to observable inputs. These two types of inputs create the following fair value hierarchy:

Level 1 – Quoted prices for identical instruments in active markets;

Level 2 – Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations whose inputs are observable or whose significant value drivers are observable; and

Level 3 – Significant inputs to the valuation model are unobservable.

We evaluate assets and liabilities subject to fair value measurements on a recurring and non-recurring basis to determine the appropriate level at which to classify them for each reporting period. Some non-financial assets are measured at fair value on a non-recurring basis only in certain circumstances, including the event of impairment. See Note 7, “Fair Value of Financial Instruments,” for the fair value hierarchy table and for details on how we measure fair value for our assets and liabilities.

Acquisitions

We expense acquisition-related costs as incurred. On the date of the acquisition, we allocate the purchase price to the assets acquired and liabilities assumed at their estimated fair values. Goodwill on the acquisition date is measured as the excess of the purchase price over the fair values of assets acquired and liabilities assumed. While we use our best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date as well as contingent consideration, where applicable, our estimates are subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we record adjustments to the assets acquired and liabilities assumed with corresponding adjustments to goodwill. We recognize subsequent changes in the estimate of the amount to be paid under contingent consideration arrangements in the accompanying consolidated statements of comprehensive income.

Discontinued Operations

In order to be reported within discontinued operations, our disposal of a component or a group of components must represent a strategic shift that will have a major effect on our operations and financial results. We aggregate the results of operations for discontinued operations within a single line item on the income statement. General corporate overhead is not allocated to discontinued operations. We disclose any gain or loss that is recognized upon the disposition of a discontinued operation. Prior to disposition, we aggregate the assets and liabilities of discontinued operations and report the amounts on separate line items within the balance sheet.

Assets and Liabilities Held for Sale

Upon a business being classified as held for sale, we cease all depreciation and amortization related to the assets of the business and record them at the lower of their carrying amount or fair value less estimated costs to sell. The assets and related liabilities of the business are separately presented on the consolidated balance sheets. We review all assets held for sale each reporting period to determine whether the existing carrying amounts are fully recoverable in comparison to estimated fair values.

Insurance Reserves

We use a combination of insured and self-insurance programs to cover workers' compensation, general liability, automobile liability, property damage, and other insurable risks. Insurance claim liabilities represent our estimate of retained risks without regard to insurance coverage. We retain a substantial portion of the risk related to certain workers' compensation and medical claims. Liabilities associated with these losses include estimates of both claims filed and claims incurred but not reported ("IBNR Claims").

With the assistance of third-party actuaries, we periodically review our estimate of ultimate losses for IBNR Claims and adjust our required self-insurance reserves as appropriate. As part of this evaluation, we review the status of existing and new claim reserves as established by third-party claims administrators. The third-party claims administrators establish the case reserves based upon known factors related to the type and severity of the claims, demographic factors, legislative matters, and case law, as appropriate. We compare actual trends to expected trends and monitor claims developments. The specific case reserves estimated by the third-party administrators are provided to an actuary who assists us in projecting an actuarial estimate of the overall ultimate losses for our self-insured or high deductible programs, which includes the case reserves plus an actuarial estimate of reserves required for additional developments, such as IBNR Claims. We utilize the results of actuarial studies to estimate our insurance rates and insurance reserves for future periods and to adjust reserves, if appropriate, for prior years.

In general, our insurance reserves are recorded on an undiscounted basis. We allocate current-year insurance expense to our operating segments based upon their underlying exposures, while actuarial adjustments related to prior year claims are recorded within Corporate expenses. We classify claims as current or long-term based on the expected settlement date. Estimated insurance recoveries related to recorded liabilities are reflected as assets in our consolidated balance sheets when we believe that the receipt of such amounts is probable.

Other Accrued Liabilities

At October 31, 2018 and 2017, other accrued liabilities primarily consisted of employee benefits, deferred revenue, progress billings in excess of costs, legal fees and settlements, dividends payable, current capital leases, insurance claims, interest, rent payable, severance, and other accrued expenses.

Other Noncurrent Liabilities

At October 31, 2018 and 2017, other noncurrent liabilities primarily consisted of deferred rent, retirement plan liabilities, deferred compensation, long-term capital leases, and ESPC liabilities.

Revenue Recognition

We earn revenue under various types of service contracts. In all forms of service we provide, revenue is recognized when persuasive evidence of an arrangement exists, services have been rendered, the fee is fixed or determinable, and collectability is reasonably assured. The various types of service contracts are described below.

Contract Type	Description
Monthly Fixed-Price	These arrangements are contracts in which the client agrees to pay a fixed fee every month over a specified contract term. A variation of a fixed-price arrangement is a square-foot arrangement, under which monthly billings are based on the actual square footage serviced.
Cost-Plus	These arrangements are contracts in which the clients reimburse us for the agreed-upon amount of wages and benefits, payroll taxes, insurance charges, and other expenses associated with the contracted work, plus a profit margin.
Tag Services	Tag work generally consists of supplemental services requested by clients outside of the standard service specification and includes cleanup after tenant moves, construction cleanup, flood cleanup, and snow removal.
Transaction-Price	These are agreements in which the clients are billed for each transaction performed on a monthly basis (e.g., wheelchair passengers served or planes cleaned).
Hourly	These arrangements are contracts in which the client is billed a set hourly rate for each labor hour provided.
Management Reimbursement	Under these parking arrangements, we manage a parking facility for a management fee and pass through the revenue and expenses associated with the facility to the owner. These revenues and expenses are reported in equal amounts as costs reimbursed from our managed locations.
Leased Location	Under these parking arrangements, we generally pay to the property owner a fixed amount of rent plus a percentage of revenues derived from monthly and transient parkers. We retain all revenues and we are responsible for most operating expenses incurred.
Allowance	Under these parking arrangements, we are paid a fixed or hourly fee to provide parking services, and we are responsible for certain operating expenses, as specified in the contract.
Energy Savings Contracts and Fixed-Price Repair and Refurbishment	Under these arrangements, we agree to develop, design, engineer, and construct a project and guarantee that the project will satisfy agreed-upon performance standards. We recognize revenue under certain of these contracts using the percentage-of-completion method of accounting, most often based on the cost-to-cost method, under which revenues are recognized as the work progresses.
Franchise	We franchise certain engineering services through individual and area franchises under the Linc Service and TEGG brands, which are part of ABM Technical Solutions.

Impact of Accounting Standards Codification Topic 606, Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2014-09, Revenue from Contracts with Customers (Topic 606). Since the release of ASU 2014-09, the FASB issued the following additional ASUs further updating Topic 606:

• In August 2015, ASU 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date

• In March 2016, ASU 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)

• In April 2016, ASU 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing

• In May 2016, ASU 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients

In December 2016, ASU 2016-20, Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers

Additionally, in May 2017, the FASB issued ASU 2017-10, Service Concession Arrangements (Topic 853): Determining the Customer of the Operation Services, which clarifies how operating entities should determine the customer of operation services for transactions within the scope of this guidance. US GAAP does not currently address how an operating entity should determine the customer of the operation services for transactions within the scope of Topic 853. The amendment eliminates diversity in practice by clarifying that the grantor is the customer of the operation services in all cases for those arrangements. We determined that revenue we generate from service concession arrangements, primarily from certain parking arrangements, will be accounted for under this guidance. We adopted the amendments in this update in conjunction with the adoption of Topic 606, as discussed below, and prior period financial statements will not be adjusted.

Collectively these ASUs introduce a new principles-based framework for revenue recognition and disclosure. The core principle of the standard is when an entity transfers goods or services to customers it will recognize revenue in an amount that reflects the consideration it expects to be entitled to for those goods or services. The standard also expands the required disclosures to include the disaggregation of revenue from contracts with customers into categories that depict how the nature, timing, and uncertainty of revenue and cash flows are affected by economic factors. We adopted this standard on November 1, 2018 and are using a modified retrospective adoption approach with a cumulative-effect adjustment to retained earnings as of the beginning of 2019; prior period financial statements will not be adjusted. The standard will be applied to contracts that have not been completed at November 1, 2018 and will not be applied to contracts that were modified before the beginning of the earliest reporting period presented.

Effect on the Financial Statements

To assess the impact of this standard, we established a cross-functional implementation team consisting of representatives from all of our operating segments. The implementation team has completed analyzing our contract portfolio to identify potential differences that result from applying the requirements of this new standard. In addition, we have identified the appropriate changes to our business processes and controls to support revenue recognition and disclosure under this new standard. We expect adoption of this standard will have an impact on the timing of revenue recognition related to certain lines of business and our financial statement line item reporting of certain items. Additionally, the accounting for certain direct and incremental contract costs is significantly different from our current capitalization policy.

Our process for implementing Topic 606 included, but was not limited to, identifying contracts within the scope of the standard, identifying distinct performance obligations within each contract, and applying the new guidance for measuring and recognizing revenue to each performance obligation.

We are finalizing our analysis of adopting Topics 606 and 853 and do not believe there are any remaining significant implementation matters that have not yet been addressed.

We do not expect adopting Topic 606 will materially impact our consolidated balance sheets and do not anticipate an impact on our consolidated statements of cash flows. We anticipate a pre-tax net increase of \$9.1 million to our opening retained earnings as a result of adopting Topic 606, primarily related to changes in accounting for commission costs and project type contracts. Specific impacts include:

\$15.1 million of commission costs incremental to successful sales will be deferred and recognized over the expected customer relationship period. Currently, commission costs are expensed as incurred.

Historically, we have recognized revenue and margin on uninstalled materials associated with project type contracts, generally energy savings performance contracts and fixed-price repair and refurbishment projects, consistent with other project costs under the percentage-of-completion method. Under the new standard, uninstalled materials will be excluded from the measure of progress, revenue for uninstalled materials is recognized at cost, and the associated margin is deferred until installation is substantially complete. Accordingly, we expect a reduction of \$4.4 million to previously recognized revenue and related margin for uninstalled materials.

Initial fees from sales of franchise licenses, currently recognized in the year of sale, of \$1.6 million will be deferred and recognized over the terms of the initial franchise agreements.

In accordance with Topic 853, rent expense related to service concession arrangements of approximately \$48 million, which was previously classified as operating expenses, will be classified as a reduction of revenues.

Management Reimbursement Revenue by Segment

	Years Ended October		
	31,		
(in millions)	2018	2017	2016
Business & Industry	\$257.1	\$234.1	\$227.8
Aviation	99.9	80.4	78.2
Healthcare	19.5	18.7	17.6
Total	\$376.4	\$333.2	\$323.4

Restructuring and Related Expenses

Restructuring and related expenses include employee severance, lease exit costs, external support fees, and other costs. Our methodology to record these costs is described below.

Severance

As we do not have a past history of consistently providing severance benefits, we recognize severance costs for employees who do not have formal employment agreements when management has committed to a restructuring plan and communicated those actions to impacted employees, such that the employee is able to determine the type and amount of benefits that they will receive upon termination. In addition, if the employees are required to render service beyond the minimum retention period until they are terminated in order to receive the benefits, a liability is recognized ratably over the future service period. For employees with employment agreements, we accrue for these severance liabilities when it is probable that the impacted employee will be entitled to the benefits and the amount can be reasonably estimated.

Noncancelable Leases and Contractual Obligations

We record liabilities when we terminate a contract in accordance with the contract terms or when we exit the leased space. The expense for noncancelable leases is determined based on the fair value of remaining lease payments reduced by the fair value of estimated sublease income that could reasonably be obtained for the property, estimated using a present value technique.

Other

For other costs associated with exit and disposal activities, we recognize an expense at fair value in the period in which the liability is incurred.

Advertising

Advertising costs are expensed as incurred. During 2018, 2017, and 2016, advertising expense was \$2.3 million, \$2.2 million, and \$2.1 million, respectively.

Share-Based Compensation

Our current share-based awards principally consist of restricted stock units (“RSUs”) and various performance share awards. We recognize compensation costs associated with these awards in selling, general and administrative expenses. For RSUs and certain performance share awards, the amount of compensation cost is measured based on the grant-date fair value of the equity instruments issued. Since our total shareholder return (“TSR”) performance share awards are performance awards with a market condition, the compensation costs associated with these awards are determined using a Monte Carlo simulation valuation model. For RSUs and TSR awards, compensation cost is recognized over the period that an employee provides service in exchange for the award. We recognize compensation cost associated with other performance share awards over the requisite service period based on the probability of achievement of performance criteria.

Taxes Collected from Clients and Remitted to Governmental Agencies

We record taxes on client transactions due to governmental agencies as receivables and liabilities on the consolidated balance sheets.

Net Income Per Common Share

Basic net income per common share is net income divided by the weighted-average number of common shares outstanding during the period. Diluted net income per common share is based on the weighted-average number of common shares outstanding during the period, adjusted to include the potential dilution from the conversion of RSUs, vesting of performance shares, and exercise of stock options.

Contingencies and Litigation

We are a party to a number of lawsuits, claims, and proceedings incident to the operation of our business, including those pertaining to labor and employment, contracts, personal injury, and other matters, some of which allege substantial monetary damages. Some of these actions may be brought as class actions on behalf of a class or purported class of employees. We accrue for loss contingencies when losses become probable and are reasonably estimable. If the reasonable estimate of the loss is a range and no amount within the range is a better estimate, the minimum amount of the range is recorded as a liability. We recognize legal costs as an expense in the period incurred.

Income Taxes

We account for income taxes using the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between the financial statement carrying amount of existing assets and liabilities and their respective tax bases. We measure deferred tax assets and liabilities using enacted tax rates expected to be applied to taxable income in the years in which those temporary differences are expected to be recovered. Deferred tax assets are reviewed for recoverability on a quarterly basis. A valuation allowance is recorded to reduce the carrying amount of a deferred tax asset to its realizable value unless it is more likely than not that such asset will be realized. We recognize accrued interest and penalties related to unrecognized tax benefits in income tax expense in our consolidated statements of comprehensive income.

3. ACQUISITIONS

Acquisition of GCA during 2017

On September 1, 2017, we acquired all of the outstanding stock of GCA, a provider of integrated facility services to educational institutions and commercial facilities, for a purchase price of approximately \$1.3 billion. As described in Note 18, "Segment and Geographic Information," we integrated GCA's operations into our industry group model effective November 1, 2017. As a result of the acquisition, we are now a leading facilities services provider in the education market.

Consideration Transferred

(in millions, except per share data)

Shares of ABM common stock, net of shares withheld for taxes	9.4
ABM common stock closing market price at acquisition date	\$44.63
Fair value of ABM common stock at closing	421.3
Cash consideration ⁽¹⁾	837.5
Total consideration transferred	\$1,258.8

⁽¹⁾ Revised during the second quarter of 2018 to reflect a post-closing purchase price adjustment related to a net working capital settlement.

Purchase Price Allocation

(in millions)	As reported at October 31, 2017	Adjustments	As reported at October 31, 2018
Cash and cash equivalents	\$ 2.5	\$ (2.3)	\$ 0.2
Trade accounts receivable ⁽¹⁾	118.1	(1.8)	116.3
Prepaid expenses and other current assets	10.3	1.7	12.0
Property, plant and equipment	41.4	(4.1)	37.3
Customer relationships ⁽²⁾	340.0	—	340.0
Trade names ⁽²⁾	9.0	(1.0)	8.0
Goodwill ⁽³⁾	933.9	(7.0)	926.9
Other assets	4.2	(0.2)	4.0
Trade accounts payable	(9.1)	(0.4)	(9.6)
Insurance reserves	(35.5)	0.3	(35.2)
Income taxes payable	(16.5)	7.9	(8.6)
Accrued liabilities	(36.5)	(2.3)	(38.8)
Deferred income tax liability, net	(92.6)	7.0	(85.6)
Other liabilities	(8.1)	—	(8.1)
Net assets acquired	\$ 1,261.3	\$ (2.4)	\$ 1,258.8

⁽¹⁾ The gross amount of trade accounts receivable was \$121.9 million, of which \$5.6 million is deemed uncollectible.

⁽²⁾ The amortization periods for the acquired intangible assets are 15 years for customer relationships and 2 years for trade names.

⁽³⁾ Goodwill is largely attributable to value we expect to obtain from long-term business growth, the established workforce, and buyer-specific synergies. This goodwill is not deductible for income tax purposes.

Financial Information

During the year ended October 31, 2018, we recorded revenue related to GCA of \$1.0 billion and operating profit of \$33.8 million. The following table presents our unaudited pro forma results for October 31, 2017 and 2016 as though the GCA acquisition occurred on November 1, 2015. These results include adjustments for the estimated amortization of intangible assets, interest expense, and the income tax impact of the pro forma adjustments at the statutory rate of 41%. These results were adjusted to exclude \$24.2 million of acquisition-related costs incurred during 2017, which are included in selling, general and administrative expenses in the accompanying consolidated statements of comprehensive income. In addition, they do not reflect the cost of integration activities or benefits from expected revenue enhancements and synergies. Accordingly, the unaudited pro forma information is not necessarily indicative of the results that would have been achieved if the acquisition had been effective on November 1, 2015.

(in millions)	Years Ended	
	October 31,	
	2017	2016
Pro forma revenue	\$6,293.0	\$6,153.6
Pro forma income from continuing operations	95.5	1.1

Other 2017 Acquisitions

Effective December 1, 2016, we acquired all of the outstanding stock of Mechanical Solutions, Inc. (“MSI”), a provider of specialized HVAC, chiller, and plumbing services, for a purchase price of \$12.6 million. The purchase price includes up to \$1.0 million of undiscounted contingent consideration that is based on the expected achievement of certain pre-established revenue goals. See Note 7, “Fair Value of Financial Instruments,” regarding our valuation of contingent consideration liabilities. As of December 1, 2016, the operations of MSI are included in our Technical Solutions segment.

Effective December 1, 2016, we also acquired all of the outstanding stock of OFJ Connections Ltd (“OFJ”), a provider of airport transportation services in the United Kingdom, for a purchase price of \$6.3 million. As of December 1, 2016, the operations of OFJ are included in our Aviation segment.

2016 Acquisitions

Effective September 30, 2016, we acquired all of the outstanding stock of BRBIBR Limited, a company that held all of the outstanding shares of 8 Solutions Ltd. (“8 Solutions”), a provider of technical cleaning services to data centers in the United Kingdom and certain other locations, for a purchase price of \$16.1 million. As of September 30, 2016, the operations of 8 Solutions are included in our Business & Industry segment, and 8 Solutions has been renamed “ABM Critical Solutions Limited.”

Effective December 1, 2015, we acquired all of the outstanding stock of Westway Services Holdings (2014) Ltd. (“Westway”), a provider of technical services to clients in the United Kingdom, for a purchase price of \$81.0 million. This acquisition expanded the geographical reach of our technical solutions business to the United Kingdom, resulting in the allocation of a significant portion of the purchase price to goodwill. As such, we recorded goodwill and intangible assets of \$53.8 million and \$22.5 million, respectively. The goodwill associated with this acquisition is not deductible for tax purposes. See Note 10, “Goodwill and Other Intangible Assets,” for information related to impairment charges we recorded during 2018. As of December 1, 2015, the operations of Westway are included in our Technical Solutions segment.

Pro Forma and Other Financial Information

Except for GCA, we do not present pro forma and other financial information for our other acquisitions, as they are not considered material business combinations individually or on a combined basis.

4. RESTRUCTURING AND RELATED COSTS

GCA Restructuring

During the first quarter of 2018, we initiated a restructuring program to achieve cost synergies following the acquisition of GCA. We incurred the majority of our anticipated severance expense associated with this restructuring program in the first half of 2018. We expect to incur additional charges related to other project fees and rebranding activities in 2019.

2020 Vision Restructuring

During the fourth quarter of 2015, our Board of Directors approved a comprehensive strategy intended to have a positive transformative effect on ABM (the “2020 Vision”). As part of the 2020 Vision, we identified key priorities to differentiate ABM in the marketplace, accelerate revenue growth for certain industry groups, and improve our margin profile. We incurred additional expenses primarily related to external support fees and other project fees during 2018 relating to this strategy. We do not expect to incur significant 2020 Vision restructuring and related expenses in the future, other than in connection with the continued consolidation of our real estate leases.

Rollforward of Restructuring and Related Liabilities

(in millions)	External Support Fees	Employee Severance	Other Project Fees	Lease Exit Costs	Asset Impairment	Total
Balance, October 31, 2014	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Costs recognized ⁽¹⁾	4.6	4.7	0.8	—	2.6	12.7
Payments	(2.5)	(0.4)	(0.4)	—	—	(3.3)
Non-cash items	—	—	(0.2)	—	(2.6)	(2.8)
Balance, October 31, 2015	\$ 2.1	\$ 4.3	\$ 0.2	\$ —	\$ —	\$ 6.6
Costs recognized ⁽¹⁾	11.3	8.6	3.9	3.2	2.1	29.0
Payments	(12.2)	(9.1)	(3.6)	(0.3)	—	(25.2)
Non-cash items	—	—	—	(0.4)	(2.1)	(2.5)
Balance, October 31, 2016	\$ 1.2	\$ 3.8	\$ 0.5	\$ 2.5	\$ —	\$ 8.0
Costs recognized ⁽¹⁾	12.1	2.2	5.7	2.6	—	22.6
Payments	(10.8)	(3.3)	(5.8)	(3.1)	—	(23.0)
Non-cash items	—	—	—	0.9	—	0.9
Balance, October 31, 2017	\$ 2.5	\$ 2.7	\$ 0.4	\$ 2.8	\$ —	\$ 8.4
Costs recognized ⁽¹⁾	4.0	11.0	8.2	2.0	0.6	25.7
Payments	(6.5)	(9.9)	(6.7)	(1.5)	—	(24.7)
Non-cash items	—	—	—	(0.2)	(0.6)	(0.7)
Balance, October 31, 2018	\$ —	\$ 3.8	\$ 1.8	\$ 3.1	\$ —	\$ 8.6

⁽¹⁾ We include these costs within corporate expenses.

Cumulative Restructuring and Related Charges

(in millions)	External Support Fees	Employee Severance	Other Project Fees	Lease Exit Costs	Asset Impairment	Total
GCA	\$ 2.0	\$ 13.5	\$ 7.9	\$ —	\$ —	\$ 23.3
2020 Vision	30.0	13.0	10.7	7.7	5.2	66.5
Total	\$ 32.0	\$ 26.5	\$ 18.5	\$ 7.7	\$ 5.2	\$ 89.9

5. DISCONTINUED OPERATIONS

On October 26, 2015, in connection with our 2020 Vision, we sold substantially all of the assets of our Security business to Universal Protection Service, L.P. for cash proceeds of \$131.0 million, subject to a working capital adjustment. In connection with the sale, we recorded a \$23.6 million gain, which was subsequently reduced by a \$3.1 million working capital adjustment in 2016. Following the sale, we record all costs associated with this former business in discontinued operations. Such costs generally relate to litigation we retained and insurance reserves. In 2017, we incurred a net loss from discontinued operations of \$74.3 million (a pretax loss of \$123.7 million) primarily due to legal settlements. In 2018, we had net income from discontinued operations of \$1.8 million (pretax income of \$2.6 million) due to an insurance reimbursement on a legal settlement and collection of previously written off receivables, partially offset by union audit settlements.

6. NET INCOME PER COMMON SHARE

Basic and Diluted Net Income Per Common Share Calculations

(in millions, except per share amounts)	Years Ended		
	October 31,		
	2018	2017	2016
Income from continuing operations	\$95.9	\$78.1	\$62.3
Income (loss) from discontinued operations, net of taxes	1.8	(74.3)	(5.1)
Net income	\$97.8	\$3.8	\$57.2
Weighted-average common and common equivalent shares outstanding — Basic	66.1	57.7	56.3
Effect of dilutive securities			
RSUs	0.1	0.3	0.3
Stock options	0.1	0.2	0.2
Performance shares	—	0.1	0.1
Weighted-average common and common equivalent shares outstanding — Diluted	66.4	58.3	56.9
Net income per common share — Basic			
Income from continuing operations	\$1.45	\$1.35	\$1.11
Income (loss) from discontinued operations	0.03	(1.29)	(0.09)
Net income	\$1.48	\$0.07	\$1.02
Net income per common share — Diluted			
Income from continuing operations	\$1.45	\$1.34	\$1.09
Income (loss) from discontinued operations	0.03	(1.27)	(0.09)
Net income	\$1.47	\$0.07	\$1.01

Anti-Dilutive Outstanding Stock Awards Issued Under Share-Based Compensation Plans

(in millions)	Years Ended		
	October 31,		
	2018	2017	2016
Anti-dilutive	0.4	—	0.1

7. FAIR VALUE OF FINANCIAL INSTRUMENTS

Fair Value Hierarchy of Our Financial Instruments

Financial Assets and Liabilities Measured at Fair Value on a Recurring Basis

(in millions)	Fair Value Hierarchy	As of October	
		2018	2017
Cash and cash equivalents ⁽¹⁾	1	\$39.1	\$ 62.8
Insurance deposits ⁽²⁾	1	0.6	11.2
Assets held in funded deferred compensation plan ⁽³⁾	1	2.7	4.6
Credit facility ⁽⁴⁾	2	949.0	1,191.2
Interest rate swaps ⁽⁵⁾	2	1.3	2.9
Investments in auction rate securities ⁽⁶⁾	3	5.0	8.0
Contingent consideration liability ⁽⁷⁾	3	—	0.9

⁽¹⁾ Cash and cash equivalents are stated at nominal value, which equals fair value.

⁽²⁾ Represents restricted deposits that are used to collateralize our insurance obligations and are stated at nominal value, which equals fair value. These insurance deposits are included in “Other noncurrent assets” on the accompanying consolidated balance sheets. See Note 11, “Insurance,” for further information.

⁽³⁾ Represents investments held in a Rabbi trust associated with one of our deferred compensation plans, which we include in “Other noncurrent assets” on the accompanying consolidated balance sheets. The fair value of the assets held in the funded deferred compensation plan is based on quoted market prices. See Note 13, “Employee Benefit Plans,” for further information.

⁽⁴⁾ Represents gross outstanding borrowings under our syndicated line of credit and term loan. Due to variable interest rates, the carrying value of outstanding borrowings under our line of credit and term loan approximates the fair value. See Note 12, “Credit Facility,” for further information.

⁽⁵⁾ Represents interest rate swap derivatives designated as cash flow hedges. The fair values of the interest rate swaps are estimated based on the present value of the difference between expected cash flows calculated at the contracted interest rates and the expected cash flows at current market interest rates using observable benchmarks for LIBOR forward rates at the end of the period. During April 2018, we elected to terminate our interest rate swaps and recognized a gain in AOCI. We subsequently entered into new forward starting interest rate swaps. See Note 12, “Credit Facility,” for further information. Our interest rate swaps are included in “Other noncurrent assets” on the accompanying consolidated balance sheets.

⁽⁶⁾ The fair value of investments in auction rate securities is based on discounted cash flow valuation models, primarily utilizing unobservable inputs, including assumptions about the underlying collateral, credit risks associated with the issuer, credit enhancements associated with financial insurance guarantees, and the possibility of the security being re-financed by the issuer or having a successful auction. These amounts are included in “Other investments” on the accompanying consolidated balance sheets. See Note 8, “Auction Rate Securities,” for further information.

⁽⁷⁾ Certain of our acquisitions involve the payment of contingent consideration. The fair value of these liabilities is based on the expected achievement of certain pre-established revenue goals. In connection with the MSI acquisition during 2017, we recorded one new contingent consideration liability. Based on the metrics of the underlying pre-established revenue goals, this contingent consideration liability was reduced to a nominal value at October 31, 2018. This contingent consideration liability is included on the accompanying consolidated balance sheets in “Other noncurrent liabilities” at October 31, 2017.

During 2018 and 2017, we had no transfers of assets or liabilities between any of the above hierarchy levels.

Non-Financial Assets Measured at Fair Value on a Non-Recurring Basis

In addition to assets and liabilities that are measured at fair value on a recurring basis, we are also required to measure certain items at fair value on a non-recurring basis.

During 2018, we recorded impairment charges on goodwill and customer relationships in connection with our annual assessment of goodwill. During 2016, we recorded impairment charges on both long-lived assets and goodwill

associated with the classification of the former Government Services business as held for sale. The impairment charges were recovered in 2017. See Note 10, “Goodwill and Other Intangible Assets,” for further information. Fair value of these items was determined based on unobservable Level 3 inputs. The fair value of customer relationships was determined based on discounted cash flows associated with the customer relationships that include significant management assumptions, including expected proceeds. The fair value of goodwill was determined based on discounted cash flow analyses that include significant management assumptions, such as revenue growth rates, operating margins, weighted average cost of capital, and future economic and market conditions.

8. AUCTION RATE SECURITIES

At October 31, 2017, we held investments in auction rate securities from two different issuers that had an aggregate original principal amount of \$10.0 million and an amortized cost and fair value of \$8.0 million. During the third quarter of 2018, we sold one of our auction rate securities with an original par value of \$5.0 million and an amortized cost basis of \$3.0 million for proceeds of \$2.9 million. The resulting loss is included in “Selling, general and administrative expenses” on the accompanying consolidated statements of comprehensive income. The total amount of other-than-temporary impairment credit loss previously recognized on this security investment and included in our retained earnings was \$2.0 million.

At October 31, 2018, the remaining auction rate security had an aggregate original principal amount, amortized cost, and fair value of \$5.0 million. This auction rate security is a debt instrument with a stated maturity in 2050. The interest rate for this security is designed to be reset through Dutch auctions approximately every thirty days; however, auctions for this security have not occurred since August 2007.

At October 31, 2018 and 2017, there were no unrealized gains or losses on our auction rate securities included in AOCI.

Significant Assumptions Used to Determine the Fair Values of Our Auction Rate Securities

Assumption	October 31, 2018	October 31, 2017
Discount rates	L + 0.37%	L + 0.42% and L + 0.79%
Yields	L + 2.00%	2.15%, L + 2.00%
Average expected lives	4 years	4 – 10 years
L – One Month LIBOR		

9. PROPERTY, PLANT AND EQUIPMENT

Property, Plant and Equipment

(in millions)	As of October 31,	
	2018	2017
Machinery and other equipment	\$94.0	\$89.5
Computer equipment and software	71.5	70.2
Leasehold improvements	54.6	47.1
Transportation equipment	49.7	48.0
Furniture and fixtures	14.9	13.6
Buildings	8.2	10.0
Land	1.0	1.2
	294.0	279.5
Less: Accumulated depreciation ⁽¹⁾	153.9	136.4
Total	\$140.1	\$143.1

⁽¹⁾ For 2018, 2017, and 2016, depreciation expense was \$46.5 million, \$38.5 million, and \$32.6 million, respectively.

Capital Leases Included in Property, Plant and Equipment

(in millions)	As of October 31,	
	2018	2017
Transportation equipment	\$20.7	\$19.4
Computer equipment and software	0.9	0.1
Machinery and other equipment	0.3	0.3
Furniture and fixtures	0.2	0.2
	22.1	20.0
Less: Accumulated depreciation	9.2	7.6
Total	\$12.9	\$12.4

10. GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill

(in millions)	Business & Industry	Aviation	Technology & Manufacturing	Education	Technical Solutions	Healthcare	Total
Balance at October 31, 2016	\$404.8	\$120.0	\$130.7	\$49.7	\$169.8	\$37.8	\$912.8
Acquisitions ⁽¹⁾	122.9	4.4	278.6	511.6	6.4	21.1	945.0
Foreign currency translation	2.2	0.4	—	—	3.8	—	6.4
Balance at October 31, 2017	\$529.9	\$124.8	\$409.3	\$561.3	\$180.0	\$58.9	\$1,864.2
Purchase price adjustments	(0.9)	0.4	(2.1)	(3.8)	0.4	(0.2)	(6.2)
Foreign currency translation	(1.1)	(0.2)	—	—	(1.5)	—	(2.8)
Impairment loss ⁽²⁾	—	—	—	—	(20.3)	—	(20.3)
Balance at October 31, 2018	\$527.9	\$124.9	\$407.2	\$557.4	\$158.7	\$58.7	\$1,834.8

⁽¹⁾ During 2017, goodwill primarily increased as a result of the GCA acquisition. See Note 3, "Acquisitions," for additional information.

⁽²⁾ Represents accumulated impairment charges at October 31, 2018.

During the fourth quarter of 2018, as part of our annual assessment of goodwill, we recorded a goodwill impairment charge of \$20.3 million for one of our reporting units within the Technical Solutions segment. In 2018, this reporting unit's performance primarily reflected the adverse impact of Brexit and the resulting impact on microeconomic conditions in the U.K. retail sector and the anticipated loss of a significant customer contract. The impairment was also attributable to a decline in profitability in the second half of 2018 and a revised future outlook for the business, including reduced expectations of future sales, operating margins, and cash flows.

In addition, on November 1, 2017, we reorganized our reportable segments and goodwill reporting units. In connection with this reorganization, we performed a qualitative goodwill impairment test immediately before and after the segment realignment. In analyzing the results of operations and business conditions of the goodwill reporting units, we determined the likelihood of a goodwill impairment did not reach the more-likely-than-not threshold specified in U.S. GAAP for any of the reporting units that were evaluated. Accordingly, we concluded that goodwill related to those reporting units was not impaired and further quantitative testing was not required.

During 2016, we recorded a goodwill impairment charge of \$6.0 million when we classified our Government Services business as held for sale, based upon the estimated fair value of the business at that time. During the second quarter of 2017 we received an offer from a strategic buyer to purchase this business for an amount in excess of our original estimate less costs to sell. As a result, we recorded a full impairment recovery of the aforementioned \$6.0 million goodwill impairment in 2017.

Other Intangible Assets

(in millions)	October 31, 2018			October 31, 2017		
	Gross Carrying Amount	Accumulated Amortization	Total	Gross Carrying Amount	Accumulated Amortization	Total
Customer contracts and relationships ⁽¹⁾	\$595.7	\$ (243.6)	\$352.2	\$607.9	\$ (186.3)	\$421.6
Trademarks and trade names	9.8	(6.4)	3.4	10.8	(2.4)	8.4
Contract rights and other	0.5	(0.4)	0.1	0.5	(0.4)	0.1
Total ⁽²⁾	\$606.0	\$ (250.4)	\$355.7	\$619.2	\$ (189.1)	\$430.1

⁽¹⁾ Reflects a net impairment charge of \$6.2 million recorded in 2018, consisting of a \$10.5 million reduction in the gross carrying amount of the underlying customer relationships less \$4.3 million of accumulated amortization.

⁽²⁾ These intangible assets are being amortized over the expected period of benefit, with a weighted average life of approximately 13 years.

Estimated Annual Amortization Expense For Each of the Next Five Years

(in millions)	2019	2020	2021	2022	2023
Estimated amortization expense ⁽¹⁾	\$58.5	\$49.3	\$43.8	\$38.2	\$33.6

⁽¹⁾ These amounts could vary as acquisitions of additional intangible assets occur in the future.

During 2018, we also recorded an impairment charge of \$6.2 million on customer relationships in the same reporting unit within the Technical Solutions segment due to the same factors discussed above.

During 2016, we recorded an impairment charge of \$4.4 million on certain intangible assets when we classified our Government Services business as held for sale, which was subsequently recovered in 2017 when we received an offer from a strategic buyer to purchase this business that was higher than our estimate of fair value less costs to sell.

The estimates of future cash flows used in determining the fair value of goodwill and other intangible assets involve significant management judgment and are based upon assumptions about expected future operating performance, economic conditions, market conditions, and cost of capital. Inherent in estimating the future cash flows are uncertainties beyond our control, such as changes in capital markets. The actual cash flows could differ materially from management's estimates due to changes in business conditions, operating performance, and economic conditions.

11. INSURANCE

We use a combination of insured and self-insurance programs to cover workers' compensation, general liability, automobile liability, property damage, and other insurable risks. For the majority of these insurance programs, we retain the initial \$1.0 million of exposure on a per-occurrence basis, either through deductibles or self-insured retentions. Beyond the retained exposures, we have varying primary policy limits ranging between \$1.0 million and \$5.0 million per occurrence. To cover general liability and automobile liability losses above these primary limits, we maintain commercial umbrella insurance policies that provide aggregate limits of \$200.0 million. Our insurance policies generally cover workers' compensation losses to the full extent of statutory requirements. Additionally, to cover property damage risks above our retained limits, we maintain policies that provide per occurrence limits of \$75.0 million. We are also self-insured for certain employee medical and dental plans. We maintain stop-loss insurance for our self-insured medical plan under which we retain up to \$0.4 million of exposure on a per-participant, per-year basis with respect to claims. Since September 1, 2017, GCA's workers' compensation, general liability, automobile liability, and other insurable risks have been covered under the ABM insurance policies.

The adequacy of our reserves for workers' compensation, general liability, automobile liability, and property damage insurance claims is based upon known trends and events and the actuarial estimates of required reserves considering the most recently completed actuarial reports. We use all available information to develop our best estimate of insurance claims reserves as information is obtained. The results of actuarial studies are used to estimate our insurance rates and insurance reserves for future periods and to adjust reserves, if appropriate, for prior years. During each of 2018 and 2017, we performed both an actuarial review and an actuarial update, as described below. As a result of these studies, we increased our reserves for claims related to prior periods by \$10.2 million and \$22.0 million during 2018 and 2017, respectively.

Insurance Reserve Adjustments

Actuarial Studies Performed During 2018

During 2018, we performed actuarial studies of our casualty insurance programs that considered changes in claim developments and claim payment activity for the period commencing May 1, 2017 and ending April 30, 2018 for all policy years in which open claims existed.

The actuarial studies indicated the changes we have made to our risk management program have reduced the frequency of claims; however, we are experiencing adverse developments that impact claim costs relating to prior periods. Claim management initiatives include programs to identify claims that have the potential to develop adversely earlier in the claims cycle and ensure the establishment of reserves consistent with known fact patterns. However, with respect to claims related to certain prior fiscal years, the actuarial studies showed unfavorable developments in our estimates of ultimate losses related to general liability, property damage, workers' compensation, and automobile liability claims, as described below.

The actuarial studies related to our general liability program indicated the total number of claims continues to show a pattern of decreasing losses, particularly with bodily injury claims. However, we experienced adverse developments with respect to claims related to certain prior fiscal years that are largely attributable to adjustments for certain alleged bodily injury claims and to losses for property damage.

Due to increases in projected costs and severity of claims in certain prior fiscal years, in 2018 we increased our estimate of ultimate losses for workers' compensation claims. Statutory, regulatory, and legal developments have also contributed to the increase in our estimated losses. Our workers' compensation estimate of ultimate losses was primarily impacted by increases in projected costs for a significant number of prior year claims in California.

Our automobile liability program covers our fleet of passenger vehicles, service vans, and shuttle buses, which are associated with our various transportation service contracts. Claim frequency and severity associated with our fleet operations developed unfavorably versus actuarial expectations, consistent with insurance trends exhibited in the broader insurance book of claims.

Based on the results of the actuarial studies performed during 2018, which included analyzing recent loss development patterns, comparing the loss development against benchmarks, and applying actuarial projection methods to estimate ultimate losses, we increased our total reserves for known claims as well as our estimate of the loss amounts associated with IBNR Claims for prior periods by \$10.2 million during 2018. This adjustment was \$11.8 million

lower than the total adjustment related to prior year claims of \$22.0 million in 2017.

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Insurance Related Balances and Activity

(in millions)	October 31, October 31,	
	2018	2017
Insurance claim reserves, excluding medical and dental	\$ 501.4	\$ 485.6
Medical and dental claim reserves	8.9	9.8
Insurance recoverables	73.7	73.1

At October 31, 2018 and 2017, insurance recoverables are included in both “Other current assets” and “Other noncurrent assets” on the accompanying consolidated balance sheets.

Casualty Program Insurance Reserves Rollforward

(in millions)	Years Ended October 31,		
	2018	2017	2016
Net balance at beginning of year	\$412.5	\$348.2	\$312.7
Change in case reserves plus IBNR Claims — current year	131.4	112.2	104.5
Change in case reserves plus IBNR Claims — prior years	10.2	23.1	35.8
Claims paid	(126.5)	(105.2)	(104.8)
GCA acquisition	0.1	34.1	—
Net balance, October 31 ⁽¹⁾	427.7	412.5	348.2
Recoverables	73.7	73.1	69.7
Gross balance, October 31	\$501.4	\$485.6	\$417.9

⁽¹⁾ Includes reserves related to discontinued operations of approximately \$3 million for 2018, \$10 million for 2017, and \$12 million for 2016.

Instruments Used to Collateralize Our Insurance Obligations

(in millions)	As of	
	2018	2017
Standby letters of credit	\$144.1	\$137.6
Surety bonds	89.2	77.5
Restricted insurance deposits	0.6	11.2
Total	\$233.9	\$226.3

12. CREDIT FACILITY

On September 1, 2017, we refinanced and replaced our then-existing \$800.0 million credit facility with a new senior, secured five-year syndicated credit facility (the "Credit Facility"), consisting of a \$900.0 million revolving line of credit and an \$800.0 million amortizing term loan, scheduled to mature on September 1, 2022. In accordance with the terms of the Credit Facility, the line of credit was reduced to \$800.0 million on September 1, 2018. The Credit Facility also provides for the issuance of up to \$300.0 million for standby letters of credit and the issuance of up to \$75.0 million in swingline advances. The obligations under the Credit Facility are secured on a first-priority basis by a lien on substantially all of our assets and properties, subject to certain exceptions.

Borrowings under the Credit Facility bear interest at a rate equal to 1-month LIBOR plus a spread that is based upon our leverage ratio. The spread ranges from 1.00% to 2.25% for Eurocurrency loans and 0.00% to 1.25% for base rate loans. At October 31, 2018, the weighted average interest rate on our outstanding borrowings was 4.34%. We also pay a commitment fee, based on our leverage ratio and payable quarterly in arrears, ranging from 0.200% to 0.350% on the average daily unused portion of the line of credit. For purposes of this calculation, irrevocable standby letters of credit, which are issued primarily in conjunction with our insurance programs, and cash borrowings are included as outstanding under the line of credit.

The Credit Facility contains certain covenants, including a minimum fixed charge coverage ratio of 1.50 to 1.0, a maximum leverage ratio, as well as other financial and non-financial covenants. The maximum leverage ratio was 4.75 to 1.0 through April 2018 and steps down to 3.50 to 1.0 by July 2020. On September 5, 2018, we amended our Credit Facility to increase the maximum leverage ratio for fiscal quarters commencing July 31, 2018 through April 30, 2021 by 25 basis points for such quarters. In the event of a material acquisition, as defined in the Credit Facility, we may elect to increase the leverage ratio to 3.75 to 1.0 for a total of four fiscal quarters, provided the leverage ratio had already been reduced to 3.50 to 1.0. Our borrowing capacity is subject to, and limited by, compliance with the covenants described above. At October 31, 2018, we were in compliance with these covenants.

The Credit Facility also includes customary events of default, including failure to pay principal, interest, or fees when due, failure to comply with covenants, the occurrence of certain material judgments, or a change in control of the Company. If certain events of default occur, including certain cross-defaults, insolvency, change in control, or violation of specific covenants, the lenders can terminate or suspend our access to the Credit Facility and declare all amounts outstanding (including all accrued interest and unpaid fees) to be immediately due and payable, and require that we cash collateralize the outstanding standby letters of credit.

Total deferred financing costs related to the Credit Facility were \$18.7 million, consisting of \$13.4 million related to the term loan and \$5.2 million related to the line of credit, which are being amortized to interest expense over the term of the Credit Facility.

Credit Facility Information

(in millions)	October 31, 2018	October 31, 2017
Current portion of long-term debt		
Gross term loan	\$ 40.0	\$ 20.0
Unamortized deferred financing costs	(3.0)	(3.1)
Current portion of term loan	\$ 37.0	\$ 16.9
Long-term debt		
Gross term loan	\$ 740.0	\$ 780.0
Unamortized deferred financing costs	(6.9)	(9.9)
Total noncurrent portion of term loan	733.1	770.1
Line of credit ⁽¹⁾⁽²⁾	169.0	391.2
Long-term debt	\$ 902.0	\$ 1,161.3

⁽¹⁾ Standby letters of credit amounted to \$152.9 million at October 31, 2018.

⁽²⁾ At October 31, 2018, we had borrowing capacity of \$467.3 million; however, covenant restrictions limited our borrowing capacity to \$441.3 million.

Term Loan Maturities

During the first quarter of 2018, we made \$20.0 million of principal payments. At October 31, 2018, the following principal payments are required under the term loan.

(in millions)	2019	2020	2021	2022
Debt maturities	\$40.0	\$60.0	\$120.0	\$560.0

Interest Rate Swaps

We enter into interest rate swaps to manage the interest rate risk associated with our floating-rate, LIBOR-based borrowings under the Credit Facility. Under these arrangements, we typically pay a fixed interest rate in exchange for LIBOR-based variable interest throughout the life of the agreement. We initially report the mark-to-market gain or loss on a derivative as a component of AOCI and subsequently reclassify the gain or loss into earnings when the hedged transactions occur and affect earnings. Interest payables and receivables under the swap agreements are accrued and recorded as adjustments to interest expense. All of our interest rate swaps have been designated and accounted for as cash flow hedges from inception. See Note 7, "Fair Value of Financial Instruments," regarding the valuation of our interest rate swaps.

During April 2018, we elected to terminate all of our interest rate swaps and received cash proceeds of \$25.9 million from the swap counterparties upon termination. We classified the cash proceeds as an operating activity on our consolidated statements of cash flows. We subsequently entered into new forward-starting interest rate swaps, as summarized below.

Notional Amount	Fixed Interest Rate	Effective Date	Maturity Date
\$ 90.0 million	2.83%	November 1, 2018	April 30, 2021
\$ 90.0 million	2.84%	November 1, 2018	October 31, 2021
\$ 130.0 million	2.86%	November 1, 2018	April 30, 2022
\$ 130.0 million	2.84%	November 1, 2018	September 1, 2022

At October 31, 2018, the amount recorded in AOCI for interest rate swaps was \$17.8 million, net of taxes of \$7.1 million. This amount included the gain realized upon termination, which will be amortized to interest expense as interest payments are made over the term of our Credit Facility. During 2018, we amortized \$1.8 million of this gain, net of taxes of \$0.7 million, to interest expense. Additionally, at October 31, 2018, the amount expected to be reclassified from AOCI to earnings during the next twelve months, including amounts from our new interest rate swaps, was \$4.4 million, net of taxes of \$1.7 million. At October 31, 2017, amounts recorded in AOCI were \$1.7 million, net of taxes of \$1.2 million.

13. EMPLOYEE BENEFIT PLANS

Defined Benefit Plans

We provide benefits to certain employees under various defined benefit and postretirement benefit plans (collectively, the “Plans”). The Plans were previously amended to preclude new participants. All but one of the Plans are unfunded. Information for the Plans

	As of	
	October	
	31,	
(in millions)	2018	2017
Net obligations	\$7.4	\$7.5
Projected benefit obligations	15.0	15.7
Fair value of assets	7.6	8.2

At October 31, 2018, assets of the Plans were invested 48% in equities, 47% in fixed income, and 5% in cash. The expected return on assets was \$0.4 million during each of 2018 and 2017 and \$0.5 million during 2016. The aggregate net periodic benefit cost for all Plans was \$0.2 million for each of 2018, 2017, and 2016. Future benefit payments in the aggregate are expected to be \$13.8 million.

Deferred Compensation Plans

We maintain deferred compensation plans that permit eligible employees and directors to defer a portion of their compensation. At October 31, 2018 and 2017, the total liability of all deferred compensation was \$13.9 million and \$17.6 million, respectively, and these amounts are included in “Other accrued liabilities” and “Other noncurrent liabilities” on the accompanying consolidated balance sheets. Under one of our deferred compensation plans, a Rabbi trust was created to fund the obligations, and we are required to contribute a portion of the deferred compensation contributions for eligible participants. The assets held in the Rabbi trust are not available for general corporate purposes. At October 31, 2018 and 2017, the fair value of these assets was \$2.7 million and \$4.6 million, respectively, and these amounts are included in “Other noncurrent assets” on the accompanying consolidated balance sheets. Aggregate expense recognized under these deferred compensation plans was \$0.4 million for each of 2018, 2017, and 2016.

Defined Contribution Plans

We sponsor four defined contribution plans covering certain employees that are subject to the applicable provisions of the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code (“IRC”). Certain plans permit a company match of a portion of the participant’s contributions or a discretionary contribution after the participant has met the eligibility requirements set forth in the plan. During 2018, 2017, and 2016, we made matching contributions required by the plans of \$21.6 million, \$13.7 million, and \$11.7 million, respectively.

Multiemployer Pension and Postretirement Plans

We participate in various multiemployer pension plans under union and industry-wide agreements that provide defined pension benefits to employees covered by collective bargaining agreements. Because of the nature of multiemployer plans, there are risks associated with participation in these plans that differ from single-employer plans. Assets contributed by an employer to a multiemployer plan are not segregated into a separate account and are not restricted to provide benefits only to employees of that contributing employer. In the event another participating employer in a multiemployer plan no longer contributes to the plan, the unfunded obligations of the plan may be borne by the remaining participating employers, including us. In the event of the termination of a multiemployer pension plan or a withdrawal from a multiemployer pension plan, we could incur material liabilities under applicable law.

Key Information for Individually Significant Multiemployer Defined Benefit Pension Plans⁽¹⁾

(in millions)	Pension Fund	EIN/PN ⁽²⁾	Pension Protection Act Zone Status ⁽³⁾		FIP/RP Status ⁽⁴⁾	Contributions by ABM			Surcharge Imposed ⁽⁵⁾	Expiration Dates of Collective Bargaining Agreements
			2018	2017		2018	2017	2016		
Building Service 32BJ Pension Fund	13-1879376	/001	Red 6/30/2017	Red 6/30/2016	Implemented	\$19.9	\$20.1	\$17.0	No	12/31/2019
Central Pension Fund of the IUOE & Participating Employers	36-6052390	/001	Green 1/31/2018	Green 1/31/2017	N/A*	11.0	10.7	11.0	N/A*	12/31/2018 - 12/31/2021
S.E.I.U. National Industry Pension Fund	52-6148540	/001	Red 12/31/2017	Red 12/31/2016	Implemented	8.7	7.2	6.8	Yes	2/14/2019 - 1/31/2023
Local 25 SEIU & Participating Employers Pension Trust	36-6486542	/001	Green 9/30/2017	Green 9/30/2016	N/A*	5.8	6.0	6.2	N/A*	4/4/2021
IUOE Stationary Engineers Local 39 Pension Plan	94-6118939	/001	Green 12/31/2017	Green 12/31/2016	N/A*	5.2	4.8	5.2	N/A*	2/28/2019 - 8/31/2023
Western Conference of Teamsters Pension Plan	91-6145047	/001	Green 12/31/2017	Green 12/31/2016	N/A*	3.1	3.5	0.9	N/A*	11/30/2018 - 12/31/2021
Local 68 Engineers Union Pension Plan	51-0176618	/001	Red 6/30/2017	Green 6/30/2016	Implemented	3.0	2.8	2.8	No	4/30/2019 - 9/30/2021
All Other Plans:						8.5	8.0	9.4		
Total Contributions						\$65.3	\$63.1	\$59.3		

*Not applicable

⁽¹⁾ To determine individually significant plans, we evaluated several factors, including our total contributions to the plan, our significance to the plan in terms of participating employees and contributions, and the funded status of the plan.

⁽²⁾ The “EIN/PN” column provides the Employer Identification Number and the three-digit plan number assigned to the plan by the Internal Revenue Service (“IRS”).

⁽³⁾ The Pension Protection Act Zone Status columns provide the two most recently available Pension Protection Act zone statuses from each plan. The zone status is based on information provided to us and other participating employers and is certified by each plan’s actuary. Among other factors, plans in the red zone are generally less than 65% funded, plans in the yellow zone are less than 80% funded, and plans in the green zone are at least 80% funded.

⁽⁴⁾ Indicates whether a Financial Improvement Plan (“FIP”) for yellow zone plans or a Rehabilitation Plan (“RP”) for red zone plans is pending or implemented.

⁽⁵⁾ Indicates whether our contribution in 2018 included an amount in addition to the contribution rate specified in the applicable collective bargaining agreement as imposed by a plan in the red zone.

Multiemployer Pension Plans for which ABM is a Significant Contributor

Pension Fund	Contributions to the plan exceeded more than 5% of total contributions per most currently available Forms 5500 (as of the plan's year end)
Building Service 32BJ Pension Fund	6/30/2017, 6/30/2016, and 6/30/2015
Building Service Pension Plan*	4/30/2017, 4/30/2016, and 4/30/2015
Contract Cleaners Service Employees' Pension Plan*	12/31/2017, 12/31/2016, and 12/31/2015
Firemen & Oilers Pension Plan of SEIU Local 1*	7/31/2017
IUOE Stationary Engineers Local 39 Pension Plan	12/31/2017 and 12/31/2016
Local 25 SEIU & Participating Employers Pension Trust	9/30/2017, 9/30/2016, and 9/30/2015
Massachusetts Service Employees Pension Plan*	12/31/2017, 12/31/2016, and 12/31/2015
S.E.I.U. National Industry Pension Fund	12/31/2017, 12/31/2016, and 12/31/2015
Service Employees International Union Local 1 Cleveland Pension Plan*	12/31/2017, 12/31/2016, and 12/31/2015
Service Employees International Union Local 32BJ, District 36 Building Operators Pension Trust Fund*	12/31/2017, 12/31/2016, and 12/31/2015
Teamsters Local 617 Pension Fund*	2/28/2018, 2/28/2017, and 2/29/2016
Teamsters Local Union No. 727 Pension Plan*	2/28/2018, 2/28/2017, and 2/29/2016

* These plans are not separately listed in our multiemployer table as they represent an insignificant portion of our total multiemployer pension plan contributions.

There have been no significant changes that affect the comparability of total contributions for any of the periods presented.

Multiemployer Defined Contribution Plans

In addition to contributions noted above, we also make contributions to multiemployer defined contribution plans. During 2018, 2017, and 2016, our contributions to the defined contribution plans were \$10.6 million, \$5.4 million, and \$6.6 million, respectively.

Other Multiemployer Postretirement Benefit Plans

We also contribute to several multiemployer postretirement health and welfare plans based on obligations arising under collective bargaining agreements covering union-represented employees. These plans may provide medical, pharmacy, dental, vision, mental health, and other benefits to employees as determined by the trustees of each plan. The majority of our contributions benefit active employees and, as such, may not constitute contributions to a postretirement benefit plan. However, since we are unable to separate contribution amounts to postretirement benefit plans from contribution amounts paid to benefit active employees, we categorize all such amounts as contributions to postretirement benefit plans. During 2018, 2017, and 2016, our contributions to such plans were \$263.4 million, \$247.9 million, and \$224.5 million, respectively. There have been no significant changes that affect the comparability of total contributions for any of the periods presented.

14. COMMITMENTS AND CONTINGENCIES

Lease and Other Similar Commitments

Future Minimum Payments

(in millions)	Capital	Operating and Other ⁽¹⁾
October 31, 2019	\$ 3.3	\$ 80.7
October 31, 2020	3.2	59.7
October 31, 2021	2.6	54.2
October 31, 2022	1.2	49.0
October 31, 2023	0.5	38.5
Thereafter	—	85.5
Total	\$ 10.9	\$ 367.6

⁽¹⁾ Includes total estimated sublease rental income of \$19.5 million.

Rental and Other Expense

(in millions)	Years Ended October 31,		
	2018	2017	2016
Minimum rental and other	\$ 133.3	\$ 121.5	\$ 118.0
Contingent rental and other	26.8	34.3	31.3
Total	\$ 160.1	\$ 155.8	\$ 149.3

Letters of Credit and Surety Bonds

We use letters of credit and surety bonds to secure certain commitments related to insurance programs and for other purposes. As of October 31, 2018, these letters of credit and surety bonds totaled \$152.9 million and \$475.3 million, respectively. Included in the total amount of surety bonds is \$1.8 million of bonds with an effective date starting after October 31, 2018.

Guarantees

In some instances, we offer clients guaranteed energy savings under certain energy savings contracts. At October 31, 2018 and 2017, total guarantees were \$171.7 million and \$157.9 million, respectively, and these guarantees extend through 2038 for both periods. We accrue for the estimated cost of guarantees when it is probable that a liability has been incurred and the amount can be reasonably estimated. Historically, we have not incurred any material losses in connection with these guarantees.

In connection with an unconsolidated joint venture in which one of our subsidiaries has a 33% ownership interest, that subsidiary and the other joint venture partners have each jointly and severally guaranteed the obligations of the joint venture to perform under certain contracts extending through 2019. Annual revenues relating to the underlying contracts are approximately \$35 million. Should the joint venture be unable to perform under these contracts, the joint venture partners would be jointly and severally liable for any losses incurred by the client due to the failure to perform.

Indemnifications

We are party to a variety of agreements under which we may be obligated to indemnify the other party for certain matters. These agreements are primarily standard indemnification arrangements entered into in our ordinary course of business. Pursuant to these arrangements, we may agree to indemnify, hold harmless, and reimburse the indemnified parties for losses suffered or incurred by the indemnified party, generally our clients, in connection with any claims arising out of the services that we provide. We also incur costs to defend lawsuits or settle claims related to these indemnification arrangements, and in most cases these costs are paid from our insurance program. Although we attempt to place limits on such indemnification arrangements related to the size of the contract, the maximum

obligation may not be explicitly stated and, as a result, the maximum potential amount of future payments we could be required to make under these arrangements is not determinable.

Our certificate of incorporation and bylaws may require us to indemnify our directors and officers for certain liabilities that were incurred as a result of their status or service to ABM as a director or officer. The amount of these obligations cannot be reasonably estimated.

Sales Tax Audits

We collect sales tax from clients and remit those collections to the applicable states. When clients fail to pay their invoices, including the amount of any sales tax that we paid on their behalf, in some cases we are entitled to seek a refund of that amount of sales tax from the applicable state. Sales tax laws and regulations enacted by the various states are subject to interpretation, and our compliance with such laws is routinely subject to audit and review by such states. Audit risk is concentrated in several states, and these states are conducting ongoing audits. The outcomes of ongoing and any future audits and changes in the states' interpretation of the sales tax laws and regulations could materially adversely impact our results of operations.

Legal Matters

We are a party to a number of lawsuits, claims, and proceedings incident to the operation of our business, including those pertaining to labor and employment, contracts, personal injury, and other matters, some of which allege substantial monetary damages. Some of these actions may be brought as class actions on behalf of a class or purported class of employees.

At October 31, 2018, the total amount accrued for all probable litigation losses where a reasonable estimate of the loss could be made was \$12.6 million. This \$12.6 million includes accruals of \$3.8 million in connection with the Hussein case and \$5.4 million in connection with the Castro case, which are discussed below.

Litigation outcomes are difficult to predict and the estimation of probable losses requires the analysis of multiple possible outcomes that often depend on judgments about potential actions by third parties. If one or more matters are resolved in a particular period in an amount in excess of, or in a manner different than, what we anticipated, this could have a material adverse effect on our financial position, results of operations, or cash flows.

We do not accrue for contingent losses that, in our judgment, are considered to be reasonably possible but not probable. The estimation of reasonably possible losses also requires the analysis of multiple possible outcomes that often depend on judgments about potential actions by third parties. Our management currently estimates the range of loss for all reasonably possible losses for which a reasonable estimate of the loss can be made is between zero and \$4 million. Factors underlying this estimated range of loss may change from time to time, and actual results may vary significantly from this estimate.

In some cases, although a loss is probable or reasonably possible, we cannot reasonably estimate the maximum potential losses for probable matters or the range of losses for reasonably possible matters. Therefore, our accrual for probable losses and our estimated range of loss for reasonably possible losses do not represent our maximum possible exposure.

While the results of these lawsuits, claims, and proceedings cannot be predicted with any certainty, our management believes that the final outcome of these matters will not have a material adverse effect on our financial position, results of operations, or cash flows.

Certain Legal Proceedings

Certain lawsuits to which we are a party are discussed below. In determining whether to include any particular lawsuit or other proceeding, we consider both quantitative and qualitative factors. These factors include, but are not limited to: the amount of damages and the nature of any other relief sought in the proceeding; if such damages and other relief are specified, our view of the merits of the claims; whether the action is or purports to be a class action, and our view of the likelihood that a class will be certified by the court; the jurisdiction in which the proceeding is pending; and the potential impact of the proceeding on our reputation.

The Consolidated Cases of Bucio and Martinez v. ABM Janitorial Services filed on April 7, 2006, in the Superior Court of California, County of San Francisco (the “Bucio case”)

The Bucio case is a class action pending in San Francisco Superior Court that alleges we failed to provide legally required meal periods and make additional premium payments for such meal periods, pay split shift premiums when owed, and reimburse janitors for travel expenses. There is also a claim for penalties under the California Labor Code Private Attorneys General Act (“PAGA”). On April 19, 2011, the trial court held a hearing on plaintiffs’ motion to certify the class. At the conclusion of that hearing, the trial court denied plaintiffs’ motion to certify the class. On May 11, 2011, the plaintiffs filed a motion to reconsider, which was denied. The plaintiffs appealed the class certification issues. The trial court stayed the underlying lawsuit pending the decision in the appeal. The Court of Appeal of the State of California, First Appellate District (the “Court of Appeal”), heard oral arguments on November 7, 2017. On December 11, 2017, the Court of Appeal reversed the trial court’s order denying class certification and remanded the matter for certification of a meal period, travel expense reimbursement, and split shift class. The case was remitted to the trial court for further proceedings on class certification, discovery, dispositive motions, and trial.

On September 20, 2018, the trial court entered an order defining four certified subclasses of janitors who were employed by the legacy ABM janitorial companies in California at any time between April 7, 2002 and April 30, 2013, on claims based on previous auto deduction practices for meal breaks, unpaid meal premiums, unpaid split shift premiums, and unreimbursed business expenses, such as mileage reimbursement for use of personal vehicles to travel between worksites. The period of time covered by the PAGA claim will also be considered by the court shortly. This matter has not been set for trial. Prior to trial, we will have the opportunity to move for summary judgment, seek decertification of the classes, or mediate, if we deem such actions appropriate.

Hussein and Hirsi v. Air Serv Corporation filed on January 20, 2016, pending in the United States District Court for the Western District of Washington at Seattle (the “Hussein case”) and

Isse et al. v. Air Serv Corporation filed on February 7, 2017, in the Superior Court of Washington for King County (the “Isse case”)

The Hussein case was a certified class action involving a class of certain hourly Air Serv employees at Seattle-Tacoma International Airport in SeaTac, Washington. The plaintiffs alleged that Air Serv violated a minimum wage requirement in an ordinance applicable to certain employers in the local city of SeaTac (the “Ordinance”). Plaintiffs sought retroactive wages, double damages, interest, and attorneys’ fees. This matter was removed to federal court. In a separate lawsuit brought by Filo Foods, LLC, Alaska Airlines, and several other employers at SeaTac Airport, the King County Superior Court (the “Superior Court”) issued a decision that invalidated the Ordinance as it applied to workers at SeaTac Airport. Subsequently, the Washington Supreme Court reversed the Superior Court’s decision. On February 7, 2017, the Isse case was filed against Air Serv on behalf of 60 individual plaintiffs (who would otherwise be members of the Hussein class), who alleged failure to comply with both the minimum wage provision and the sick and safe time provision of the Ordinance. The Isse plaintiffs sought retroactive wages and sick benefits, double damages for wages and sick benefits, interest, and attorneys’ fees. The Isse case later expanded to approximately 220 individual plaintiffs.

In mediations on November 2 and 3, 2017, and without admitting liability in either matter, we agreed to settle the Hussein and Isse cases for a combined total of \$8.3 million, inclusive of damages, interest, attorneys’ fees, and employer payroll taxes. Eligible employees will be able to participate in either the Hussein or Isse settlements, but cannot recover in both settlements. The settlements in both cases require court approval because of the nature of the claims being released. On December 8, 2017, the Superior Court approved the settlement agreement for the 220 Isse plaintiffs, and we subsequently made a settlement payment of \$4.5 million to the Isse plaintiffs in January 2018. \$3.8 million remains accrued for the Hussein case.

On July 30, 2018, the United States District Court for the Western District of Washington at Seattle preliminarily approved the settlement in the Hussein case. At the final approval hearing on December 4, 2018, the court (i) accepted opt-out notices from 78 Hussein class members (the “opt-out members”) indicating their intent to participate in separate lawsuits (leaving 386 class members in the Hussein class), (ii) directed the parties to recalculate the settlement amount by deducting the settlement funds attributable to the 78 opt-out members, and (iii) requested other minor changes, but indicated that the court intended to grant final approval of the settlement with these changes. On December 20, 2018, the court issued its order granting final approval of the class action settlement. The Hussein settlement funds will be

paid in February 2019, provided there are no appeals or requests for review of the final approval order. The amount of the settlement funds attributable to the 78 opt-out members is approximately \$0.9 million.

Castro and Marmolejo v. ABM Industries, Inc., et al., filed on October 24, 2014, pending in the United States District Court for the Northern District of California (the “Castro case”)

On October 24, 2014, Plaintiff Marley Castro filed a class action lawsuit alleging that ABM did not reimburse janitorial employees in California for using their personal cell phones for work-related purposes, in violation of California Labor Code section 2802. On January 23, 2015, Plaintiff Lucia Marmolejo was added to the case as a named plaintiff. On October 27, 2017, plaintiffs moved for class certification seeking to represent a class of all employees who were, are, or will be employed by ABM in the State of California with the Employee Master Job Description Code “Cleaner” (hereafter referred to as “Cleaner Employees”) beginning from October 24, 2010. ABM filed its opposition to class certification on November 27, 2017. On January 26, 2018, the district court granted plaintiffs’ motion for class certification. The court rejected plaintiffs’ proposed class, instead certifying three classes that the court formulated on its own: (1) all employees who were, are, or will be employed by ABM in the State of California as Cleaner Employees who used a personal cell phone to punch in and out of the EPAY system and who (a) worked at an ABM facility that did not provide a biometric clock and (b) were not offered an ABM-provided cell phone during the period beginning on January 1, 2012, through the date of notice to the Class Members that a class has been certified in this action; (2) all employees who were, are, or will be employed by ABM in the State of California as Cleaner Employees who used a personal cell phone to report unusual or suspicious circumstances to supervisors and were not offered (a) an ABM-provided cell phone or (b) a two-way radio during the period beginning four years prior to the filing of the original complaint, October 24, 2014, through the date of notice to the Class Members that a class has been certified in this action; and (3) all employees who were, are, or will be employed by ABM in the State of California as Cleaner Employees who used a personal cell phone to respond to communications from supervisors and were not offered (a) an ABM-provided cell phone or (b) a two-way radio during the period beginning four years prior to the filing of the original complaint, October 24, 2014, through the date of notice to the Class Members that a class has been certified in this action.

On February 9, 2018, ABM filed a petition for permission to appeal the district court’s order granting class certification with the United States Court of Appeals for the Ninth Circuit, which was denied on April 30, 2018. On March 20, 2018, ABM moved to compel arbitration of the claims of certain class members pursuant to the terms of three collective bargaining agreements. In response to that motion, on May 14, 2018, the district court modified the class definition to exclude all claims arising after the operative date(s) of the applicable collective bargaining agreements (which is June 1, 2016 for one agreement and May 1, 2016 for the other two agreements). However, the district court denied the motion to compel arbitration as to claims that arose prior to the operative date(s) of the applicable collective bargaining agreements. ABM has appealed to the Ninth Circuit the district court’s order denying the motion to compel arbitration with respect to the periods preceding the operative dates of the collective bargaining agreements.

After a court-ordered mediation held on October 15, 2018, the parties agreed to a class action settlement of \$5.4 million, subject to court approval. We anticipate the plaintiffs’ motion for preliminary approval will be filed with the court in the first quarter of fiscal year 2019, and a hearing on the motion is expected in the first or second quarter of fiscal year 2019.

15. PREFERRED AND COMMON STOCK

Preferred Stock

We are authorized to issue 500,000 shares of preferred stock. None of these preferred shares are issued.

Common Stock

On September 2, 2015, our Board of Directors authorized a program to repurchase up to \$200.0 million of our common stock. Purchases may take place on the open market or otherwise, and all or part of the repurchases may be made pursuant to Rule 10b5-1 plans or in privately negotiated transactions. The timing of repurchases is at our discretion and will depend upon several factors, including market and business conditions, future cash flows, share price, and share availability. Repurchased shares are retired and returned to an authorized but unissued status. The repurchase program may be suspended or discontinued at any time without prior notice. At October 31, 2018, authorization for \$134.1 million of repurchases remained under our share repurchase program.

Repurchase Activity

	Years Ended October 31,	
(in millions, except per share amounts)	2017	2016
Total number of shares purchased	—0.2	1.4
Average price paid per share	\$—40.07	\$33.48
Total cash paid for share repurchases	\$—7.9	\$46.6

16. SHARE-BASED COMPENSATION PLANS

We use various share-based compensation plans to provide incentives for our key employees and directors. Currently, these incentives primarily consist of RSUs, performance shares, and stock options.

On May 2, 2006, our stockholders approved the 2006 Equity Incentive Plan (the “2006 Equity Plan”). The 2006 Equity Plan is an omnibus plan that provides for a variety of equity and equity-based award vehicles, including stock options, stock appreciation rights, RSUs, performance shares, and other share-based awards. Shares subject to awards that terminate without vesting or exercise are available for future awards under the 2006 Equity Plan. Certain of the awards under the 2006 Equity Plan may qualify as “performance-based” compensation under the IRC.

The 2006 Equity Plan was amended in March 2018 to increase the total shares of common stock authorized for issuance from 11,679,265 to 13,475,265, and at October 31, 2018, there were 3,288,635 shares of common stock available for grant for future equity-based compensation awards. In addition, there are certain plans under which we can no longer issue awards, although awards outstanding under these plans may still vest and be exercised.

We also maintain an employee stock purchase plan, which our stockholders approved on March 9, 2004 (the “2004 Employee Stock Purchase Plan”). The 2004 Employee Stock Purchase Plan was amended in March 2016 to increase the total shares of common stock authorized for issuance to 4,000,000. Effective May 1, 2006, the 2004 Employee Stock Purchase Plan is no longer considered compensatory and the values of the awards are no longer treated as share-based compensation expense. Additionally, as of that date, the purchase price became 95% of the fair value of our common stock price on the last trading day of the month. Employees may designate up to 10% of their compensation for the purchase of stock, subject to a \$25,000 annual limit. Employees are required to hold their shares for a minimum of six months from the date of purchase. At October 31, 2018, there were 827,304 remaining unissued shares under the 2004 Employee Stock Purchase Plan.

Compensation Expense by Type of Award and Related Income Tax Benefit

(in millions)	Years Ended		
	October 31,		
	2018	2017	2016
RSUs	\$9.3	\$7.2	\$7.1
Performance shares	7.7	6.1	6.7
Stock options	—	—	0.3
Share-based compensation expense before income taxes	17.0	13.3	14.0
Income tax benefit	(5.1)	(5.4)	(6.0)
Share-based compensation expense, net of taxes	\$11.8	\$7.9	\$8.0

RSUs and Dividend Equivalent Rights

We award RSUs to eligible employees and our directors (each, a “Grantee”) that entitle the Grantee to receive shares of our common stock as the units vest. RSUs granted to eligible employees generally vest with respect to 50% of the underlying award on the second and fourth anniversary of the award. RSUs granted to directors vest over three years. In general, the receipt of RSUs is subject to the Grantee’s continuing employment or service as a director.

RSUs are credited with dividend equivalent rights that are converted to RSUs at the fair market value of our common stock on the dates the dividend payments are made and are subject to the same terms and conditions as the underlying award.

RSU Activity

	Number of Shares (in millions)	Weighted-Average Grant Date Fair Value per Share
Outstanding at October 31, 2017	0.9	\$ 34.18
Granted	0.3	37.98
Vested (including 0.1 shares withheld for income taxes)	(0.3)	29.10
Forfeited	(0.1)	37.16
Outstanding at October 31, 2018	0.8	\$ 36.61

At October 31, 2018, total unrecognized compensation cost, net of estimated forfeitures, related to RSUs was \$17.3 million, which is expected to be recognized ratably over a weighted-average vesting period of 2.6 years. In 2018, 2017, and 2016, the weighted-average grant date fair value per share of awards granted was \$37.98, \$41.79, and \$35.62, respectively. In 2018, 2017, and 2016, the total grant date fair value of RSUs vested and converted to shares of ABM common stock was \$7.4 million, \$9.4 million, and \$7.2 million, respectively.

Performance Shares, Including TSR Performance Shares

Performance shares consist of a contingent right to receive shares of our common stock based on performance targets adopted by our Compensation Committee. Performance shares are credited with dividend equivalent rights that will be converted to performance shares at the fair market value of our common stock beginning after the performance targets have been satisfied and are subject to the same terms and conditions as the underlying award.

For certain performance share awards, the number of performance shares that will vest is based on pre-established internal financial performance targets and typically a three-year service and performance period. The number of TSR awards that will vest is based on our total shareholder return relative to the S&P 600 at the time of grant over the respective three-year performance period. Vesting of 0% to 150% of the awards originally granted may occur depending on the respective performance metrics under both award types.

Performance Share Activity

	Number of Shares (in millions)	Weighted-Average Grant Date Fair Value per Share
Outstanding at October 31, 2017	0.8	\$ 32.83
Granted	0.4	38.53
Vested (including 0.1 shares withheld for income taxes)	(0.2)	30.38
Performance adjustments	—	37.93
Forfeited	(0.1)	36.74
Outstanding at October 31, 2018	0.8	\$ 35.96

At October 31, 2018, total unrecognized compensation cost related to performance share awards was \$13.7 million, which is expected to be recognized ratably over a weighted-average vesting period of 1.9 years. Except for TSR performance shares, these costs are based on estimated achievement of performance targets and estimated costs are periodically reevaluated. For our TSR performance shares, these costs are based on the fair value of awards at the grant date and are recognized on a straight-line basis over the service period of three years.

In 2018, 2017, and 2016, the weighted-average grant date fair value per share of awards granted was \$38.53, \$39.21, and \$28.99, respectively. In 2018, 2017, and 2016, the total grant date fair value of performance shares vested and converted to shares of ABM common stock was \$7.3 million, \$7.0 million, and \$6.6 million, respectively.

In 2018, 2017, and 2016, we used the Monte Carlo simulation valuation technique to estimate the fair value of TSR performance share grants, which used the assumptions in the table below.

Monte Carlo Assumptions

	2018	2017	2016
Expected life ⁽¹⁾	2.81	2.14	2.13
	years	years	years
Expected stock price volatility ⁽²⁾	21.6 %	21.4 %	19.0 %
Risk-free interest rate ⁽³⁾	2.0 %	1.3 %	0.8 %
Stock price ⁽⁴⁾	\$39.02	\$40.21	\$38.65

⁽¹⁾ The expected life represents the remaining performance period of the awards.

⁽²⁾ The expected volatility for each grant is determined based on the historical volatility of our common stock over a period equal to the remaining term of the performance period from the date of grant for all awards.

⁽³⁾ The risk-free interest rate is based on the continuous compounded yield on U.S. Treasury Constant Maturity Rates with varying remaining terms; the yield is determined over a time period commensurate with the performance period from the grant date.

⁽⁴⁾ The stock price is the closing price of our common stock on the valuation date.

Stock Options

Typically, stock options vest and become exercisable at a rate of 25% per year beginning one year after the date of grant. However, terms of stock options can vary, and certain stock options granted on January 10, 2011 vested on the fifth anniversary of the award. During 2018, 2017, and 2016, no stock options were granted, and we have not granted stock options since 2013. All option grants provide for an option exercise price equal to the closing market value of the common stock on the date of grant. Options typically expire 7 years after the date of grant.

Stock Option Activity

	Number of Shares (in millions)	Weighted-Average Exercise Price per Share	Weighted-Average Remaining Contractual Term (in years) ⁽¹⁾	Aggregate Intrinsic Value (in millions) ⁽²⁾
Outstanding at October 31, 2017	0.2	\$ 16.29		
Forfeited or expired	—	14.19		
Exercised	(0.1)	18.71		
Outstanding at October 31, 2018	0.2	\$ 16.09	1.4	\$ 2.5
Exercisable at October 31, 2018	0.1	\$ 18.41	1.4	\$ 1.2

⁽¹⁾ Excludes contractual terms associated with plans prior to the 2006 Equity Plan due to the uncertainty of expiration.

⁽²⁾ Amount by which the current market price of our common stock on October 31, 2018 exceeds the exercise price.

At October 31, 2018, we had no unrecognized compensation cost related to stock option grants. For 2018, 2017, and 2016, the total intrinsic value of stock options exercised was \$0.6 million, \$2.6 million, and \$3.4 million, respectively. In 2018 no stock options vested. In 2017 and 2016, the total grant date fair value of stock options vested was \$0.2 million and \$1.7 million, respectively.

Employee Stock Purchase Plan

(in millions, except per share amounts)	Years Ended October 31,		
	2018	2017	2016
Weighted-average fair value of granted purchase rights per share	\$1.70	\$2.11	\$1.63
Common stock issued	0.1	0.1	0.2
Fair value of common stock issued per share	\$32.34	\$40.07	\$30.94
Aggregate purchases	\$4.7	\$4.7	\$4.7

17. INCOME TAXES

Geographic Sources of Income from Continuing Operations Before Income Taxes

(in millions)	Years Ended		
	October 31,		
	2018	2017	2016
United States	\$94.8	\$76.1	\$45.1
Foreign	(7.1)	10.8	6.8
Income from continuing operations before income taxes	\$87.7	\$86.9	\$51.9

Components of Income Tax Benefit (Provision)

(in millions)	Years Ended October		
	31,		
	2018	2017	2016
Current:			
Federal	\$(4.3)	\$(5.9)	\$17.5
State	(7.3)	(6.0)	(9.3)
Foreign	(3.9)	(3.0)	(1.5)
Deferred:			
Federal	21.8	5.0	3.6
State	0.2	0.3	(0.5)
Foreign	1.7	0.8	0.6
Income tax benefit (provision)	\$8.2	\$(8.8)	\$10.4

Reconciliation of the U.S. Statutory Tax Rate to Annual Effective Tax (Benefit) Rate

	Years Ended October 31,		
	2018	2017	2016
U.S. statutory rate	23.3 %	35.0 %	35.0 %
State and local income taxes, net of federal tax benefit	6.9	5.5	7.8
Federal and state tax credits	(7.8)	(7.5)	(22.7)
Impact of foreign operations	1.3	(2.7)	(5.0)
Changes in uncertain tax positions	(6.7)	(19.7)	(40.0)
Incremental tax benefit from share-based compensation awards	(3.9)	(4.2)	(4.2)
Tax credits for energy efficient government buildings	(3.2)	(2.2)	(2.4)
Impact from goodwill impairment	4.4	—	—
Transition tax on foreign earnings	5.1	—	—
Remeasurement of U.S. deferred taxes	(31.5)	—	—
Nondeductible expenses	2.4	5.7	7.7
Other, net	0.3	0.1	3.8
Effective tax (benefit) rate	(9.4)%	10.1 %	(20.0)%

The Tax Cuts and Jobs Act (the “Tax Act”), which was enacted on December 22, 2017, provides for a reduction of the federal corporate income tax rate from 35% to 21% and a “transition tax” to be levied on the deemed repatriation of indefinitely reinvested earnings of international subsidiaries. Since we have an October 31 fiscal year-end, the lower corporate income tax rate was phased in, resulting in a U.S. statutory federal rate of 23.3% for fiscal 2018 and 21% for subsequent fiscal years. Other provisions under the Tax Act become effective for us in fiscal 2019, including limitations on deductibility of interest and executive compensation, as well as a new minimum tax on Global Intangible Low-Taxed Income (“GILTI”).

During 2018 we remeasured certain deferred tax assets and liabilities based on the new tax rates at which they are expected to reverse in the future and recorded a one-time tax benefit of \$29.6 million. In addition, we recorded an expense of \$4.5 million for the one-time transition tax on the deemed repatriation of indefinitely reinvested earnings of our international subsidiaries. We plan to reinvest our foreign earnings to fund future non-U.S. growth and expansion,

and we do not anticipate remitting such earnings to the United States. While U.S. federal tax expense has been recognized as a result of the Tax Act, no deferred tax liabilities with respect to federal and state income taxes or foreign withholding taxes have been recognized.

Due to the complexities of implementing the provisions of the Tax Act, the staff of the U.S. Securities and Exchange Commission issued Staff Accounting Bulletin 118 (“SAB 118”), which provides guidance on accounting for tax effects of the Tax Act and permits a measurement period not to exceed one year from the enactment date for companies to complete the required analyses and accounting. As permitted under SAB 118, the adjustments we recorded due to the Tax Act, including the remeasurement of deferred tax assets and liabilities and the transition tax, were based on reasonable estimates and were considered provisional during the year. As of October 31, 2018, the one-time impact of the change in tax rate on our deferred tax assets and liabilities is complete. Additionally, we have completed our assessment of GILTI and have established a policy to account for this tax on a period basis beginning in fiscal year 2019. We have also completed our analysis of the one-time transition tax and recorded the impact.

Our income taxes for 2018 were favorably impacted by: a net tax benefit of \$23.2 million related to the impact of the Tax Act, including \$1.9 million of adjustments that subsequently reduced the amounts discussed above; \$5.8 million, including interest of \$1.0 million, related to the expiring statutes of limitations for uncertain tax positions; \$3.4 million of excess tax benefits related to the vesting of share-based compensation awards; and \$2.8 million related to tax deductions for energy efficient government buildings. These benefits were partially offset by a \$1.0 million reduction in certain tax credits, including prior year Work Opportunity Tax Credits (“WOTC”) for new hires.

Our income taxes for 2017 were favorably impacted by a benefit of \$17.8 million, including interest of \$1.2 million, related to expiring statutes of limitations for uncertain tax positions. In addition, in 2017 we also benefited from \$3.6 million of excess tax benefits related to the vesting of share-based compensation awards, \$1.9 million of tax credits for energy efficient government buildings, and the 2017 WOTC.

Components of Deferred Tax Assets and Liabilities

(in millions)	As of October	
	2018	2017
Deferred tax assets attributable to:		
Self-insurance claims (net of recoverables)	\$83.5	\$124.4
Deferred and other compensation	22.7	34.7
Accounts receivable allowances	6.5	8.9
Settlement liabilities	3.3	6.5
Other accruals	(0.3)	3.5
Other comprehensive income	(5.7)	0.4
State taxes	0.5	0.8
State net operating loss carryforwards	15.9	12.3
Federal net operating loss carryforwards	5.4	19.9
Tax credits	21.7	19.9
Unrecognized tax benefits	2.4	7.2
Other	1.7	3.1
Gross deferred tax assets	157.6	241.5
Valuation allowance	(12.0)	(7.7)
Total deferred tax assets	145.7	233.8
Deferred tax liabilities attributable to:		
Property, plant and equipment	(4.2)	(5.9)
Goodwill and other acquired intangibles	(179.2)	(282.0)
Equity in earnings of foreign investments	—	(3.2)
Total deferred tax liabilities	(183.4)	(291.1)
Net deferred tax liabilities	\$(37.8)	\$(57.3)

Tax Loss Carryforwards and Tax Credits

State tax loss carryforwards totaling \$255.0 million at October 31, 2018 are being carried forward in several state jurisdictions where we are permitted to use tax losses from prior periods to reduce future taxable income. These losses will expire between 2019 and 2038. Federal loss carryforwards totaling \$25.7 million at October 31, 2018 are available to reduce future taxable income and will expire in 2037. Federal and state tax credits totaling \$24.6 million are available to reduce future cash taxes and will expire between 2021 and 2038.

The valuation allowance represents the amount of tax benefits related to state net operating loss carryforwards that are not likely to be realized. We believe the remaining net deferred tax assets are more likely than not to be realizable based on estimates of future taxable income.

Changes to the Deferred Tax Asset Valuation Allowance

(in millions)	Years Ended		
	October 31,		
	2018	2017	2016
Valuation allowance at beginning of year	\$7.7	\$5.4	\$5.5
GCA acquisition	2.4	4.1	—
Other, net	1.8	(1.8)	(0.1)
Valuation allowance at end of year	\$12.0	\$7.7	\$5.4

Unrecognized Tax Benefits

At October 31, 2018, 2017, and 2016, there were \$35.8 million, \$50.5 million, and \$52.0 million, respectively, of unrecognized tax benefits that if recognized in the future would impact our effective tax rate. We estimate that a decrease in unrecognized tax benefits of up to approximately \$5.6 million is reasonably possible over the next twelve months due to the resolution of certain tax matters. At October 31, 2018 and 2017, accrued interest and penalties were \$1.0 million and \$1.9 million, respectively. For interest and penalties, we recognized a benefit of \$1.0 million, \$0.5 million, and \$0.9 million in 2018, 2017, and 2016, respectively.

Reconciliation of Total Unrecognized Tax Benefits

(in millions)	Years Ended October		
	31,		
	2018	2017	2016
Balance at beginning of year	\$53.4	\$57.2	\$82.5
Additions for tax positions related to the current year	0.2	—	—
Additions for tax positions related to prior years	—	16.4	—
Reductions for tax positions related to prior years	(9.0)	(0.1)	(3.2)
Reductions for lapse of statute of limitations	(8.7)	(19.7)	(21.9)
Settlements	(0.1)	(0.3)	(0.2)
Balance at end of year	\$35.8	\$53.4	\$57.2

Jurisdictions

We conduct business in all 50 states, significantly in California, Texas, and New York, as well as in various foreign jurisdictions. Our most significant income tax jurisdiction is the United States.

Tax Years Open for Examination, by Entity

Entity	Open by Statute
ABM state tax returns ⁽¹⁾	10/31/2014 – 10/31/2018
ABM federal tax returns	10/31/2015 – 10/31/2018
GCA state tax returns	12/31/2014 – 9/1/2017
GCA federal tax returns	12/31/2015 – 9/1/2017

⁽¹⁾ We are currently being examined by the state tax authorities of California, Florida, Massachusetts, New Jersey, New York, and North Carolina.

Reinvestment of Foreign Earnings

We plan to reinvest our foreign earnings to fund future non-U.S. growth and expansion. As a result, we do not anticipate remitting such earnings to the United States and have not provided for federal and state income taxes or foreign withholding taxes that may result if such earnings of our foreign subsidiaries are remitted to the United States.

18. SEGMENT AND GEOGRAPHIC INFORMATION

Segment Information

Effective November 1, 2017, we reorganized our reportable segments to reflect the integration of GCA into our industry group model. Our reportable segments consist of Business & Industry (“B&I”), Aviation, Technology & Manufacturing (“T&M”), Education, Technical Solutions, and Healthcare, as further described below. Refer to Note 2, “Basis of Presentation and Significant Accounting Policies,” for information related to our former Government Services business.

REPORTABLE SEGMENTS AND DESCRIPTIONS

B&I	B&I, our largest reportable segment, encompasses janitorial, facilities engineering, and parking services for commercial real estate properties and sports and entertainment venues. B&I also provides vehicle maintenance and other services to rental car providers (“Vehicle Services Contracts”).
Aviation	Aviation supports airlines and airports with services ranging from parking and janitorial to passenger assistance, catering logistics, air cabin maintenance, and transportation.
T&M	T&M combines our legacy Industrial & Manufacturing business, which was previously included in our B&I segment, with our legacy High Tech industry group, which was previously reported as part of our legacy Emerging Industries Group. T&M provides janitorial, facilities engineering, and parking services.
Education	Education delivers janitorial, custodial, landscaping and grounds, facilities engineering, and parking services for public school districts, private schools, colleges, and universities. This business was previously reported as part of our legacy Emerging Industries Group.
Technical Solutions	Technical Solutions specializes in mechanical and electrical services. These services can also be leveraged for cross-selling across all of our industry groups, both domestically and internationally.
Healthcare	Healthcare offers janitorial, facilities management, clinical engineering, food and nutrition, laundry and linen, parking and guest services, and patient transportation services at traditional hospitals and non-acute facilities. This business was previously reported as part of our legacy Emerging Industries Group.

The accounting policies for our segments are the same as those disclosed within our significant accounting policies in Note 2, “Basis of Presentation and Significant Accounting Policies.” Our management evaluates the performance of each reportable segment based on its respective operating profit results, which include the allocation of certain centrally incurred costs. Corporate expenses not allocated to segments include certain CEO and other finance and human resource departmental expenses, certain information technology costs, share-based compensation, certain legal costs and settlements, restructuring and related costs, certain adjustments resulting from actuarial developments of self-insurance reserves, and direct acquisition costs. Management does not review asset information by segment, therefore we do not present assets in this note.

Financial Information by Reportable Segment

(in millions)	Years Ended October 31,		
	2018	2017	2016
Revenues			
Business & Industry	\$2,917.6	\$2,629.1	\$2,557.1
Aviation	1,023.8	990.4	851.5
Technology & Manufacturing	924.5	697.4	679.3
Education	837.5	363.1	272.1
Technical Solutions	465.6	439.6	425.3
Healthcare	273.3	247.5	242.7
Government Services	—	86.5	116.7
	\$6,442.2	\$5,453.6	\$5,144.7
Operating profit (loss)			
Business & Industry	\$154.6	\$135.6	\$111.6
Aviation	23.2	25.3	27.7
Technology & Manufacturing	67.4	47.8	54.8
Education	43.8	18.0	17.4
Technical Solutions	16.5	37.6	28.9
Healthcare	8.8	10.6	12.7
Government Services	(0.8)	21.8	(23.4)
Corporate	(168.8)	(189.0)	(167.2)
Adjustment for income from unconsolidated affiliates, net, included in Aviation and Government Services	(3.2)	(4.1)	(6.5)
Adjustment for tax deductions for energy efficient government buildings, included in Technical Solutions	(2.8)	(1.9)	(1.2)
	138.6	101.9	54.7
Income from unconsolidated affiliates, net	3.2	4.2	7.6
Interest expense	(54.1)	(19.2)	(10.4)
Income from continuing operations before income taxes	\$87.7	\$86.9	\$51.9
Depreciation and amortization ⁽¹⁾			
Business & Industry	\$21.3	\$14.5	\$14.4
Aviation	13.1	13.4	12.2
Technology & Manufacturing	15.6	7.0	4.2
Education	37.1	8.4	2.1
Technical Solutions	10.2	12.5	12.3
Healthcare	2.8	2.3	2.5
Government Services	—	—	1.6
Corporate	12.4	11.8	8.2
	\$112.5	\$70.1	\$57.5

⁽¹⁾ Excludes amortization related to income from unconsolidated affiliates.

Geographic Information Based on the Country in Which the Sale Originated⁽¹⁾

(in millions)	Years Ended October 31,		
	2018	2017	2016
Revenues			
United States	\$5,997.4	\$5,126.8	\$4,845.3
All other countries	444.8	326.8	299.4
	\$6,442.2	\$5,453.6	\$5,144.7

⁽¹⁾ Substantially all of our long-lived assets are related to United States operations.

19. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

(in millions, except per share amounts)	Fiscal Quarter			
	First	Second	Third	Fourth
Year ended October 31, 2018				
Revenues	\$1,588.3	\$1,580.8	\$1,624.3	\$1,648.8
Gross profit	159.0	175.0	177.6	183.1
Income from continuing operations	28.0	25.4	33.7	8.9
(Loss) income from discontinued operations, net of taxes	(0.1)	1.2	(0.1)	0.8
Net income	\$27.8	⁽¹⁾ \$26.6	\$33.6	\$9.7 ⁽²⁾
Net income per common share — Basic				
Income from continuing operations	\$0.42	\$0.38	\$0.51	\$0.13
Income from discontinued operations	—	0.02	—	0.01
Net income	\$0.42	\$0.40	\$0.51	\$0.15
Net income per common share — Diluted				
Income from continuing operations	\$0.42	\$0.38	\$0.51	\$0.13
Income from discontinued operations	—	0.02	—	0.01
Net income	\$0.42	⁽¹⁾ \$0.40	\$0.51	\$0.15 ⁽²⁾
Year ended October 31, 2017				
Revenues	\$1,326.7	\$1,310.5	\$1,318.4	\$1,497.9
Gross profit	131.6	145.9	134.0	160.9
Income (loss) from continuing operations	16.1	31.6	32.9	(2.5)
Loss from discontinued operations, net of taxes	(72.9)	(0.4)	—	(1.1)
Net (loss) income	\$(56.8)	\$31.3	\$32.9	\$(3.6) ⁽³⁾
Net (loss) income per common share — Basic				
Income (loss) from continuing operations	\$0.29	\$0.56	\$0.59	\$(0.04)
Loss from discontinued operations	(1.30)	(0.01)	—	(0.02)
Net (loss) income	\$(1.01)	\$0.56	\$0.59	\$(0.06)
Net (loss) income per common share — Diluted				
Income (loss) from continuing operations	\$0.28	\$0.56	\$0.58	\$(0.04)
Loss from discontinued operations	(1.28)	(0.01)	—	(0.02)
Net (loss) income	\$(1.00)	\$0.55	\$0.58	\$(0.06) ⁽³⁾

⁽¹⁾ Includes a one-time net tax benefit of \$22.6 million, or \$0.34 per diluted share, related to the Tax Act.

⁽²⁾ Includes goodwill and asset impairment charges of \$26.5 million, or \$0.40 per diluted share.

⁽³⁾ Includes transaction expenses of \$22.0 million, or \$0.38 per diluted share, related to the GCA acquisition.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES.

a. Disclosure Controls and Procedures.

As of the end of the period covered by this report, our Principal Executive Officer and Principal Financial Officer evaluated our disclosure controls and procedures, as such term is defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act. Based upon that evaluation, our Principal Executive Officer and Principal Financial Officer concluded that as of the end of the period covered by this report, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in reports we file or submit under the Exchange Act is (1) recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission, and (2) accumulated and communicated to our management, including our Principal Executive Officer and Principal Financial Officer, to allow timely decisions regarding required disclosure.

b. Management's Report on Internal Control Over Financial Reporting.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act. Under the supervision and with the participation of our management, including our Principal Executive Officer and Principal Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based upon the framework in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, our management concluded that our internal control over financial reporting was effective as of October 31, 2018.

Audit Report on Internal Controls over Financial Reporting of the Registered Public Accounting Firm KPMG LLP, an independent registered public accounting firm, has audited the consolidated financial statements included in this Annual Report on Form 10-K and, as part of their audit, has issued their report, included herein, on the effectiveness of our internal control over financial reporting.

c. Changes in Internal Control Over Financial Reporting.

We continue to migrate many of our financial reporting and other processes to the ABM enterprise service center along with integrating GCA. These are enhancements of ongoing activities to support the growth of our financial shared service capabilities and standardize our financial systems. We also continue to update several key platforms, including our human resources information systems, enterprise resource planning system, and labor management system. Both the migration of GCA's back-office functions to the ABM enterprise service center and the implementation of several key platforms involves changes in the systems that include internal controls. Although the transitions have proceeded to date without material adverse effects, the possibility exists that it could adversely affect our internal controls over financial reporting and procedures.

There were no changes in our internal control over financial reporting during the fourth fiscal quarter of 2018 identified in connection with the evaluation required by Rules 13a-15(d) and 15d-15(d) of the Exchange Act that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

New Form of Indemnification Agreement for Directors

On December 18, 2018, each of our directors entered into a new indemnification agreement with ABM that replaces the existing indemnification agreement for directors, which form agreement had been put in place in September of 2015.

In general, the director indemnification agreement provides that, subject to the procedures, limitations, and exceptions set forth therein, ABM will indemnify and hold harmless the applicable director indemnitee against all expenses, damages, losses, liabilities, judgments, fines, penalties, and other charges relating to, arising out of, or resulting from: (1) any actual, alleged, or suspected act or failure to act by the indemnitee in his or her capacity as a director, officer, employee, or agent of ABM or as a director, officer, employee, member, manager, trustee, or agent of any other entity as to which the indemnitee is or was serving at the request of the Company; (2) any actual, alleged, or suspected act or failure to act by the indemnitee in respect of any business, transaction, communication, filing, disclosure, or other activity of ABM or any other entity referred to in clause (1) of this sentence; or (3) the indemnitee's status as a current or former director, officer, employee, or agent of ABM or as a current or former director, officer, employee, member, manager, trust, or agent of ABM or any other entity referred to in clause (1) of this sentence or any actual, alleged, or suspected act or failure to act by the indemnitee in connection with any obligation or restriction imposed upon the indemnitee by reason of such status.

Each director indemnitee will also have the right to advancement by ABM of any and all reasonable expenses relating to, arising out of, or resulting from any claim covered by the director indemnification agreement paid or incurred by the indemnitee or which the indemnitee determines in good faith are reasonably likely to be paid or incurred.

The foregoing description of the director indemnification agreement does not purport to be complete and is qualified in its entirety by reference to the form director indemnification agreement, which is filed as Exhibit 10.9 hereto and incorporated herein by reference.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

Information about our executive officers is found in Part I, Item 1 of this Annual Report on Form 10-K under “Executive Officers of Registrant.” Additional information required by this Item will be set forth under the captions “Proposal No. 1—Election of Directors,” “Corporate Governance and Board Matters,” “Audit-Related Matters,” and “Section 16(a) Beneficial Ownership Reporting Compliance” in our Definitive Proxy Statement for our 2019 Annual Meeting of Stockholders (the “2019 Proxy Statement”). Such information is incorporated herein by reference. Our 2019 Proxy Statement will be filed with the Securities and Exchange Commission within 120 days after the conclusion of our fiscal year ended October 31, 2018.

On March 28, 2018, we filed our Annual CEO Certification as required by Section 303A.12 of the NYSE Listed Company Manual.

Code of Business Conduct

We have adopted and posted on our website (www.abm.com) the ABM Code of Business Conduct. Our Code of Business Conduct qualifies as a “code of ethics” within the meaning of Item 406 of Regulation S-K. Our Code of Business Conduct applies to all of our directors, officers, and employees, including our Principal Executive Officer, Principal Financial Officer, and Principal Accounting Officer. If any amendments are made to the Code of Business Conduct or if any waiver, including any implicit waiver, from a provision of the Code of Business Conduct is granted to our Principal Executive Officer, Principal Financial Officer, or Principal Accounting Officer, we will disclose the nature of such amendment or waiver on our website at the address specified above.

ITEM 11. EXECUTIVE COMPENSATION.

Information with respect to executive compensation required by this Item will be set forth under the captions “Director Compensation for Fiscal Year 2018,” “Executive Compensation,” and “Corporate Governance and Board Matters—Compensation Committee Interlocks and Insider Participation” in our 2019 Proxy Statement and is incorporated herein by reference.

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

Information with respect to security ownership of certain beneficial owners and management and equity compensation plan information and related stockholder matters required by this Item will be set forth under the captions “General Information—Security Ownership of Certain Beneficial Owners,” “General Information—Security Ownership of Directors and Executive Officers,” and “General Information—Equity Compensation Plan Information” in our 2019 Proxy Statement and is incorporated herein by reference.

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

Information with respect to certain relationships and related transactions and with respect to director independence required by this Item will be set forth under the captions “General Information—Certain Relationships and Transactions with Related Persons” and “Corporate Governance and Board Matters” in our 2019 Proxy Statement and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.

Information with respect to our Audit Committee’s pre-approval policy for audit services and our principal accounting fees and services required by this Item will be set forth under the caption “Audit-Related Matters” in our 2019 Proxy Statement and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES.

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

1. Financial Statements: Index to Consolidated Financial Statements	
Report of Independent Registered Public Accounting Firm	<u>50</u>
Consolidated Balance Sheets at October 31, 2018 and 2017	<u>52</u>
Consolidated Statements of Comprehensive Income for the Years Ended October 31, 2018, 2017, and 2016	<u>53</u>
Consolidated Statements of Stockholders' Equity for the Years Ended October 31, 2018, 2017, and 2016	<u>54</u>
Consolidated Statements of Cash Flows for the Years Ended October 31, 2018, 2017, and 2016	<u>55</u>
2. Exhibits	
See Exhibit Index immediately following the signature page of this Annual Report on Form 10-K.	<u>101</u>
3. Financial Statement Schedule	
Valuation and Qualifying Accounts for the Years Ended October 31, 2018, 2017, and 2016	<u>105</u>

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.

ABM Industries Incorporated

By: /s/ Scott Salmirs

Scott Salmirs

President and Chief Executive Officer and Director

December 21, 2018

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

By: /s/ Scott Salmirs

Scott Salmirs

President and Chief Executive Officer and Director

(Principal Executive Officer)

December 21, 2018

/s/ D. Anthony Scaglione

D. Anthony Scaglione

Executive Vice President and Chief
Financial Officer

(Principal Financial Officer)

December 21, 2018

/s/ Dean A. Chin

Dean A. Chin

Senior Vice President, Chief Accounting Officer, and Corporate Controller

(Principal Accounting Officer)

December 21, 2018

/s/ Sudhakar Kesavan

Sudhakar Kesavan

Chairman of the Board and Director

December 21, 2018

/s/ LeighAnne G. Baker

Chavez

LeighAnne G. Baker, Director

December 21, 2018

/s/ Linda Chavez

Linda Chavez, Director

December 21, 2018

/s/ Donald F. Colleran

Donald F. Colleran, Director

December 21, 2018

/s/ J. Philip Ferguson

J. Philip Ferguson, Director

December 21, 2018

/s/ Anthony G. Fernandes

Anthony G. Fernandes, Director

December 21, 2018

/s/ Art A. Garcia

Art A. Garcia, Director

December 21, 2018

/s/ Thomas M. Gartland

Thomas M. Gartland, Director

December 21, 2018

/s/ Lauralee E. Martin

Lauralee E. Martin, Director

December 21, 2018

/s/ Filippo Passerini

Filippo Passerini, Director

December 21, 2018

/s/ Winifred M. Webb

Winifred M. Webb, Director

December 21, 2018

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EXHIBIT INDEX

Exhibit No.	Exhibit Description	Incorporated by Reference		
		Form	File No.	Exhibit Filing Date
1.1	<u>Underwriting Agreement, dated March 14, 2018, among ABM Industries Incorporated, Goldman Sachs & Co LLC, and UBS Securities LLC</u>	8-K	001-08929	1.1 March 19, 2018
2.1	<u>Agreement and Plan of Merger, dated July 11, 2017, among GCA Holding Corp., ABM Industries Incorporated, Grade Sub One, Inc., Grade Sub Two, LLC and Thomas H. Lee Equity Fund VII, L.P. and Broad Street Principal Investments Holdings, L.P., acting jointly as the Securityholder Representative</u>	8-K	001-08929	2.1 July 14, 2017
3.1	<u>Restated Certificate of Incorporation of ABM Industries Incorporated, dated November 25, 2003</u>	10-K	001-08929	3.1 January 14, 2004
3.2	<u>Amended and Restated Bylaws of ABM Industries Incorporated, dated December 4, 2018</u>	8-K	001-08929	3.1 December 10, 2018
10.1	<u>Shareholders' Agreement, dated September 1, 2017, among ABM Industries Incorporated, Thomas H. Lee Equity Fund VII, L.P., Thomas H. Lee Parallel Fund VII, L.P., Thomas H. Lee Parallel (Cayman) Fund VII, L.P., THL Executive Fund VII, L.P., THL Fund VII Coinvestment Partners, L.P., Broad Street Principal Investments Holdings, L.P., Bridge Street 2015, L.P., MBD 2015, L.P., Stone Street 2015, L.P., 2015 Employee Offshore Aggregator, L.P., and Goldman Sachs & Co. LLC</u>	8-K	001-08929	10.1 September 8, 2017
10.2	<u>Credit Agreement, dated as of September 1, 2017, by and among ABM Industries Incorporated, a Delaware corporation, certain subsidiaries of ABM Industries Incorporated from time to time party thereto, the lenders from time to time party thereto and Bank of America, N.A., as administrative agent</u>	8-K	001-08929	10.2 September 8, 2017
10.3	<u>Letter Agreement, dated November 6, 2017, between ABM Industries Incorporated and Bank of America, N.A., as Swingline Lender with respect to the Credit Agreement dated as of September 1, 2017, among ABM Industries Incorporated, the Designated Borrowers party thereto, the Lenders party thereto and Bank of America, N.A., as administrative agent</u>	10-K	001-08929	10.3 December 22, 2017
10.4	<u>First Amendment, dated as of July 3, 2018, to the Credit Agreement dated September 1, 2017, by and among ABM Industries Incorporated, a Delaware corporation, the Designated Borrowers identified on the signature pages thereto, the Guarantors identified on the signature pages thereto, the Lenders identified on the signature pages thereto, and Bank of America, N.A., as administrative agent</u>	10-Q	001-08929	10.1 September 7, 2018

10.5	<u>Second Amendment, dated as of September 5, 2018, to the Credit Agreement dated September 1, 2017, by and among ABM Industries Incorporated, a Delaware corporation, the Designated Borrowers identified on the signature pages thereto, the Guarantors identified on the signature pages thereto, the Lenders identified on the signature pages thereto, and Bank of America, N.A., as administrative agent</u>	10-Q	001-08929	10.2	September 7, 2018
10.6*	<u>ABM Executive Retiree Healthcare and Dental Plan</u>	10-K	001-08929	10.17	January 14, 2005
10.7*	<u>Director Retirement Plan Distribution Election Form, as revised June 16, 2006</u>	10-Q	001-08929	10.1	September 8, 2006
10.8*	<u>Deferred Compensation Plan for Non-Employee Directors, as amended and restated December 13, 2010</u>	10-K	001-08929	10.7	December 23, 2010
10.9*†	<u>Form of Director's Indemnification Agreement</u>				
10.10*	<u>ABM Executive Officer Incentive Plan, as amended and restated June 3, 2008</u>	10-Q	001-08929	10.6	September 8, 2008
10.11*	<u>2006 Equity Incentive Plan, as amended and restated March 7, 2018</u>	8-K	001-08929	10.1	March 8, 2018
10.12*	<u>Statement of Terms and Conditions Applicable to Options, Restricted Stock and Restricted Stock Units and Performance Shares Granted to Employees Pursuant to the 2006 Equity Incentive Plan, as amended and restated December 9, 2013</u>	8-K	001-08929	10.1	December 12, 2013
10.13*	<u>Statement of Terms and Conditions Applicable to Options, Restricted Stock and Restricted Stock Units and Performance Shares Granted to Employees Pursuant to the 2006 Equity Incentive Plan, for Awards Granted on or after March 4, 2015</u>	10-Q	001-08929	10.2	June 3, 2015
10.14*	<u>Statement of Terms and Conditions Applicable to Options, Restricted Stock and Restricted Stock Units Granted to Directors Pursuant to the 2006 Equity Incentive Plan, as amended and restated December 9, 2013</u>	10-K	001-08929	10.16	December 18, 2013
10.15*	<u>Statement of Terms and Conditions Applicable to Options, Restricted Stock and Restricted Stock Units Granted to Directors Pursuant to the 2006 Equity Incentive Plan, for Awards Granted on or after March 4, 2015</u>	10-Q	001-08929	10.3	June 3, 2015
10.16*	<u>Statement of Terms and Conditions Applicable to Restricted Stock Units Granted Pursuant to the 2006 Equity Incentive Plan to Directors Who Elect to Relinquish Their Benefits Effective November 1, 2006, as amended and restated September 8, 2010</u>	10-K	001-08929	10.13	December 23, 2010
10.17*	<u>Form of Non-Qualified Stock Option Agreement - 2006 Equity Plan</u>	10-Q	001-08929	10.4	June 4, 2010
10.18*	<u>Form of Restricted Stock Unit Agreement - 2006 Equity Plan</u>	10-Q	001-08929	10.5	June 4, 2010
10.19*	<u>Form of Performance Share Agreement - 2006 Equity Plan</u>	10-K	001-08929	10.20	December 18, 2013
10.20*	<u>Form of Performance Share Agreement for Awards to Certain Executive Officers</u>	8-K	001-08929	10.5	January 16, 2015

10.21*	<u>Executive Stock Option Plan (aka Age-Vested Career Stock Option Plan), as amended and restated June 4, 2012</u>	10-Q	001-08929	10.1	September 6, 2012
10.22*	<u>Deferred Compensation Plan for Executives, amended and restated October 25, 2010</u>	10-K	001-08929	10.22	December 23, 2010
10.23*	<u>Form of Stock Option Agreement dated March 31, 2010 for Awards to Certain Executive Officers</u>	8-K	001-08929	10.3	April 2, 2010
10.24*	<u>Supplemental Executive Retirement Plan, as amended and restated June 3, 2008</u>	10-Q	001-08929	10.4	September 8, 2008
10.25*	<u>Service Award Benefit Plan, as amended and restated June 3, 2008</u>	10-Q	001-08929	10.5	September 8, 2008
10.26*	<u>Executive Severance Pay Policy, as amended and restated March 7, 2011</u>	10-Q	001-08929	10.1	March 10, 2011
10.27*	<u>Form of Executive Employment Agreement (with term)</u>	8-K	001-08929	10.1	October 22, 2014
10.28*	<u>Form of Executive Employment Agreement (without term)</u>	10-K	001-08929	10.34	December 20, 2012
10.29*	<u>Form of Amended and Restated Executive Change in Control Agreement with James P. McClure</u>	8-K	001-08929	10.1	December 31, 2008
10.30*	<u>Form of Amended Executive Employment Agreement with James P. McClure</u>	8-K	001-08929	10.4	January 16, 2015
10.31*	<u>Amended and Restated Executive Employment Agreement, dated as of September 22, 2017, by and between ABM Industries Incorporated and Scott Salmirs</u>	10-K	001-08929	10.28	December 22, 2017
10.32*	<u>Amended and Restated Change in Control Agreement, dated as of September 22, 2017, by and between ABM Industries Incorporated and Scott Salmirs</u>	10-K	001-08929	10.29	December 22, 2017
10.33*	<u>Amended Executive Employment Agreement, dated as of January 13, 2015, by and between ABM Industries Incorporated and James P. McClure</u>	10-Q	001-08929	10.2	March 4, 2015
10.34*	<u>Retirement and Release Agreement, dated as of September 1, 2017, by and between ABM Industries Incorporated and James P. McClure</u>	10-K	001-08929	10.32	December 22, 2017
10.35*	<u>Executive Employment Agreement, dated as of November 1, 2017, by and between ABM Industries Incorporated and Scott Giacobbe</u>	10-Q	001-08929	10.1	March 7, 2018
10.36*	<u>Change in Control Agreement, dated as of November 1, 2017, by and between ABM Industries Incorporated and Scott Giacobbe</u>	10-Q	001-08929	10.2	March 7, 2018
10.37*	<u>Amended and Restated Executive Employment Agreement, dated as of September 22, 2017, by and between ABM Industries Incorporated and D. Anthony Scaglione</u>	10-K	001-08929	10.33	December 22, 2017
10.38*	<u>Amended and Restated Change in Control Agreement, dated as of September 22, 2017, by and between ABM Industries Incorporated and D. Anthony Scaglione</u>	10-K	001-08929	10.34	December 22, 2017
10.39*	<u>Executive Employment Agreement, dated as of January 1, 2018, by and between ABM Industries Incorporated and Rene Jacobsen</u>	10-Q	001-08929	10.3	March 7, 2018

10.40*	<u>Change in Control Agreement, dated as of January 1, 2018, by and between ABM Industries Incorporated and Rene Jacobsen</u>	10-Q	001-08929	10.4	March 7, 2018
21.1‡	<u>Subsidiaries of the Registrant</u>				
23.1‡	<u>Consent of Independent Registered Public Accounting Firm Certification of Chief Executive Officer pursuant to Securities Exchange Act of 1934 Rule 13a-14(a) or 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>				
31.1‡	<u>Certification of Chief Financial Officer pursuant to Securities Exchange Act of 1934 Rule 13a-14(a) or 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>				
31.2‡	<u>Certifications pursuant to Securities Exchange Act of 1934 Rule 13a-14(b) or 15d-14(b) and 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>				
32.1†	<u>Certifications pursuant to Securities Exchange Act of 1934 Rule 13a-14(b) or 15d-14(b) and 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>				
101.INS ‡	XBRL Report Instance Document				
101.SCH ‡	XBRL Taxonomy Extension Schema Document				
101.CAL ‡	XBRL Taxonomy Calculation Linkbase Document				
101.LAB ‡	XBRL Taxonomy Label Linkbase Document				
101.PRE ‡	XBRL Presentation Linkbase Document				
101.DEF ‡	XBRL Taxonomy Extension Definition Linkbase Document				

*Indicates management contract or compensatory plan, contract, or arrangement

‡Indicates filed herewith

†Indicates furnished herewith

ABM INDUSTRIES INCORPORATED AND SUBSIDIARIES
 SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS

(in millions)	Balance Beginning of Year	Charges to Costs and Expenses	Write-offs ⁽¹⁾ Allowance Taken	Balance End of Year
Accounts receivable and sales allowances				
2018	\$ 25.5	57.4	(63.6)	\$ 19.2
2017	18.1	(2) 47.4	(40.0)	25.5
2016	8.6	29.1	(19.6)	18.1 (2)

⁽¹⁾ Write-offs are net of recoveries.

⁽²⁾ Includes amounts that were classified as held for sale.