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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 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: 1-6003



FEDERAL SIGNAL CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

36-1063330

(I.R.S. Employer Identification No.)

**1415 West 22nd Street,
Oak Brook, Illinois**

(Address of principal executive offices)

60523

(Zip code)

Registrant's telephone number including area code: (630) 954-2000

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 every Interactive Data File required to be submitted 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 such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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 Exchange Act). Yes No

As of October 31, 2018, the number of shares outstanding of the registrant's common stock was 60,242,420.

FEDERAL SIGNAL CORPORATION**TABLE OF CONTENTS****PART I. FINANCIAL INFORMATION**

	Page
Item 1. Financial Statements (Unaudited)	2
Condensed Consolidated Statements of Operations for the Three and Nine Months Ended September 30, 2018 and 2017	2
Condensed Consolidated Statements of Comprehensive Income for the Three and Nine Months Ended September 30, 2018 and 2017	3
Condensed Consolidated Balance Sheets as of September 30, 2018 and December 31, 2017	4
Condensed Consolidated Statements of Cash Flows for the Nine Months Ended September 30, 2018 and 2017	5
Condensed Consolidated Statements of Stockholders' Equity for the Nine Months Ended September 30, 2018 and 2017	6
Notes to Condensed Consolidated Financial Statements	7
Note 1 – Summary of Significant Accounting Policies	7
Note 2 – Revenue	10
Note 3 – Inventories	12
Note 4 – Debt	12
Note 5 – Income Taxes	13
Note 6 – Pensions	14
Note 7 – Commitments and Contingencies	14
Note 8 – Earnings Per Share	19
Note 9 – Stockholders' Equity	20
Note 10 – Segment Information	22
Note 11 – Fair Value Measurements	24
Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations	26
Item 3. Quantitative and Qualitative Disclosures About Market Risk	36
Item 4. Controls and Procedures	36
<u>PART II. OTHER INFORMATION</u>	
Item 1. Legal Proceedings	37
Item 1A. Risk Factors	37
Item 2. Unregistered Sales of Equity Securities and Use of Proceeds	37
Item 3. Defaults Upon Senior Securities	37
Item 4. Mine Safety Disclosures	37
Item 5. Other Information	37
Item 6. Exhibits	38
Signatures	39

FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q (“Form 10-Q”) is being filed by Federal Signal Corporation and its subsidiaries (referred to collectively as the “Company,” “we,” “our” or “us” herein, unless the context otherwise indicates) with the United States (“U.S.”) Securities and Exchange Commission (the “SEC”), and includes comments made by management that may contain words such as “may,” “will,” “believe,” “expect,” “anticipate,” “intend,” “plan,” “project,” “estimate” and “objective” or similar terminology, or the negative thereof, concerning the Company’s future financial performance, business strategy, plans, goals and objectives. These expressions are intended to identify forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the Private Securities Litigation Reform Act of 1995. Forward-looking statements include information concerning the Company’s possible or assumed future performance or results of operations and are not guarantees. While these statements are based on assumptions and judgments that management has made in light of industry experience as well as perceptions of historical trends, current conditions, expected future developments and other factors believed to be appropriate under the circumstances, they are subject to risks, uncertainties and other factors that may cause the Company’s actual results, performance or achievements to be materially different.

These risks and uncertainties, some of which are beyond the Company’s control, include the risk factors described under Part I, Item 1A, *Risk Factors*, of the Company’s Annual Report on Form 10-K for the year ended December 31, 2017, which was filed with the SEC on February 28, 2018. These factors may not constitute all factors that could cause actual results to differ materially from those discussed in any forward-looking statement. The Company operates in a continually changing business environment and new factors emerge from time to time. The Company cannot predict such factors, nor can it assess the impact, if any, of such factors on its results of operations, financial condition or cash flow. Accordingly, forward-looking statements should not be relied upon as a predictor of actual results. The Company disclaims any responsibility to update any forward-looking statement provided in this Form 10-Q.

ADDITIONAL INFORMATION

The Company is subject to the reporting and information requirements of the Exchange Act and, as a result, is obligated to file Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other reports and information with the SEC, as well as amendments to those reports. The Company makes these filings available free of charge through our website at www.federalsignal.com as soon as reasonably practicable after such materials are filed with, or furnished to, the SEC. Information on our website does not constitute part of this Form 10-Q.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited).

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

(in millions, except per share data)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net sales	\$ 269.4	\$ 248.7	\$ 810.1	\$ 650.9
Cost of sales	200.4	187.4	600.0	491.3
Gross profit	69.0	61.3	210.1	159.6
Selling, engineering, general and administrative expenses	38.2	38.2	120.7	104.4
Acquisition and integration-related expenses	0.4	0.7	1.3	2.2
Restructuring	—	0.1	—	0.5
Operating income	30.4	22.3	88.1	52.5
Interest expense	2.2	2.7	7.2	4.6
Other (income) expense, net	—	(0.4)	0.5	(0.7)
Income before income taxes	28.2	20.0	80.4	48.6
Income tax expense	6.5	7.5	18.9	17.4
Net income	\$ 21.7	\$ 12.5	\$ 61.5	\$ 31.2
Earnings per share:				
Basic	\$ 0.36	\$ 0.21	\$ 1.03	\$ 0.52
Diluted	\$ 0.36	\$ 0.21	\$ 1.01	\$ 0.52
Weighted average common shares outstanding:				
Basic	60.0	59.8	59.9	59.7
Diluted	61.1	60.6	61.0	60.4
Cash dividends declared per common share	\$ 0.08	\$ 0.07	\$ 0.23	\$ 0.21

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (Unaudited)

(in millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net income	\$ 21.7	\$ 12.5	\$ 61.5	\$ 31.2
Other comprehensive (loss) income:				
Change in foreign currency translation adjustment	(0.4)	3.3	(3.6)	9.5
Change in unrecognized net actuarial losses related to pension benefit plans, net of income tax expense of \$0.2, \$0.2, \$0.6 and \$0.7, respectively	1.0	(0.1)	2.8	—
Change in unrealized net gain on derivatives, net of income tax expense of \$0.0, \$0.0, \$0.3 and \$0.2, respectively	0.1	0.2	1.1	0.4
Total other comprehensive income	0.7	3.4	0.3	9.9
Comprehensive income	\$ 22.4	\$ 15.9	\$ 61.8	\$ 41.1

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS

(in millions, except per share data)	September 30, 2018	December 31, 2017
	(Unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 35.0	\$ 37.5
Accounts receivable, net of allowances for doubtful accounts of \$1.4 and \$1.1, respectively	117.8	118.2
Inventories	153.6	137.2
Prepaid expenses and other current assets	8.0	10.9
Total current assets	314.4	303.8
Properties and equipment, net of accumulated depreciation of \$116.6 and \$108.9, respectively	61.1	60.1
Rental equipment, net of accumulated depreciation of \$26.9 and \$20.0, respectively	98.8	87.2
Goodwill	375.8	377.3
Intangible assets, net of accumulated amortization of \$11.5 and \$5.5, respectively	145.6	151.8
Deferred tax assets	4.8	6.2
Deferred charges and other assets	8.3	5.4
Long-term assets of discontinued operations	0.5	0.5
Total assets	<u>\$ 1,009.3</u>	<u>\$ 992.3</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term borrowings and capital lease obligations	\$ 0.3	\$ 0.3
Accounts payable	66.0	51.5
Customer deposits	8.5	6.5
Accrued liabilities:		
Compensation and withholding taxes	26.4	22.2
Other current liabilities	53.4	36.1
Current liabilities of discontinued operations	0.5	0.5
Total current liabilities	155.1	117.1
Long-term borrowings and capital lease obligations	221.9	277.4
Long-term pension and other postretirement benefit liabilities	49.1	56.6
Deferred gain	7.3	8.7
Deferred tax liabilities	46.9	45.4
Other long-term liabilities	15.8	28.2
Long-term liabilities of discontinued operations	1.4	1.5
Total liabilities	497.5	534.9
Stockholders' equity:		
Common stock, \$1 par value per share, 90.0 shares authorized, 66.3 and 66.1 shares issued, respectively	66.3	66.1
Capital in excess of par value	214.9	207.7
Retained earnings	394.3	346.6
Treasury stock, at cost, 6.1 and 6.1 shares, respectively	(87.1)	(86.1)
Accumulated other comprehensive loss	(76.6)	(76.9)
Total stockholders' equity	511.8	457.4
Total liabilities and stockholders' equity	<u>\$ 1,009.3</u>	<u>\$ 992.3</u>

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

(in millions)	Nine Months Ended September 30,	
	2018	2017
Operating activities:		
Net income	\$ 61.5	\$ 31.2
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	27.0	21.3
Deferred financing costs	0.3	0.2
Deferred gain	(1.4)	(1.5)
Stock-based compensation expense	5.8	3.5
Pension expense, net of funding	(7.6)	(4.2)
Changes in fair value of contingent consideration and deferred payment	0.8	0.8
Deferred income taxes	1.8	3.3
Changes in operating assets and liabilities	(16.3)	(2.5)
Net cash provided by continuing operating activities	71.9	52.1
Net cash used for discontinued operating activities	(0.1)	(0.5)
Net cash provided by operating activities	71.8	51.6
Investing activities:		
Purchases of properties and equipment	(10.1)	(5.3)
Proceeds from (payments for) acquisition-related activity	3.0	(269.2)
Other, net	—	0.2
Net cash used for continuing investing activities	(7.1)	(274.3)
Net cash used for discontinued investing activities	—	(1.1)
Net cash used for investing activities	(7.1)	(275.4)
Financing activities:		
(Decrease) increase in revolving lines of credit, net	(53.6)	214.1
Payments of debt financing fees	—	(0.2)
Redemptions of common stock to satisfy withholding taxes related to stock-based compensation	(0.4)	(2.5)
Cash dividends paid to stockholders	(13.8)	(12.6)
Proceeds from stock-based compensation activity	1.1	1.5
Other, net	0.1	(0.3)
Net cash (used for) provided by continuing financing activities	(66.6)	200.0
Net cash used for discontinued financing activities	—	—
Net cash (used for) provided by financing activities	(66.6)	200.0
Effects of foreign exchange rate changes on cash and cash equivalents	(0.6)	1.3
Decrease in cash and cash equivalents	(2.5)	(22.5)
Cash and cash equivalents at beginning of year	37.5	50.7
Cash and cash equivalents at end of period	<u>\$ 35.0</u>	<u>\$ 28.2</u>

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Unaudited)

(in millions)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
Balance at January 1, 2018	\$ 66.1	\$ 207.7	\$ 346.6	\$ (86.1)	\$ (76.9)	\$ 457.4
Net income			61.5			61.5
Total other comprehensive income					0.3	0.3
Cash dividends declared			(13.8)			(13.8)
Stock-based payments:						
Stock-based compensation		5.1				5.1
Stock option exercises and other	0.2	2.1		(1.0)		1.3
Balance at September 30, 2018	<u>\$ 66.3</u>	<u>\$ 214.9</u>	<u>\$ 394.3</u>	<u>\$ (87.1)</u>	<u>\$ (76.6)</u>	<u>\$ 511.8</u>
(in millions)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
Balance at January 1, 2017	\$ 65.4	\$ 200.3	\$ 301.8	\$ (81.4)	\$ (92.0)	\$ 394.1
Net income			31.2			31.2
Total other comprehensive income					9.9	9.9
Cash dividends declared			(12.6)			(12.6)
Stock-based payments:						
Stock-based compensation		2.9				2.9
Stock option exercises and other	0.4	2.7		(1.5)		1.6
Performance share unit transactions	0.2	(0.2)		(1.9)		(1.9)
Balance at September 30, 2017	<u>\$ 66.0</u>	<u>\$ 205.7</u>	<u>\$ 320.4</u>	<u>\$ (84.8)</u>	<u>\$ (82.1)</u>	<u>\$ 425.2</u>

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization and Description of the Business

Federal Signal Corporation was founded in 1901 and was reincorporated as a Delaware corporation in 1969. References herein to the “Company,” “we,” “our” or “us” refer collectively to Federal Signal Corporation and its subsidiaries.

Products manufactured and supplied, and services rendered by the Company are divided into two operating segments: the Environmental Solutions Group and the Safety and Security Systems Group. The individual operating businesses are organized as such because they share certain characteristics, including technology, marketing, distribution and product application, which create long-term synergies. The Company’s reportable segments are consistent with its operating segments. These segments are discussed in Note 10 – Segment Information.

Basis of Presentation and Consolidation

The accompanying unaudited condensed consolidated financial statements represent the consolidation of Federal Signal Corporation and its subsidiaries included herein and have been prepared by the Company pursuant to the rules and regulations of the United States (“U.S.”) Securities and Exchange Commission (the “SEC”). Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. generally accepted accounting principles (“GAAP”) have been condensed or omitted pursuant to such rules and regulations, although the Company believes that the disclosures presented herein are adequate to ensure the information presented is not misleading. Except as otherwise noted, these condensed consolidated financial statements have been prepared in accordance with the Company’s accounting policies described in the Company’s Annual Report on Form 10-K for the year ended December 31, 2017, and should be read in conjunction with those consolidated financial statements and the notes thereto.

These condensed consolidated financial statements include all normal and recurring adjustments that we considered necessary to present a fair statement of our results of operations, financial condition and cash flow. Intercompany balances and transactions have been eliminated in consolidation. In addition, certain prior year amounts have been reclassified to conform to current year presentation.

The results reported in these condensed consolidated financial statements should not be regarded as necessarily indicative of results that may be expected for the entire year. While we label our quarterly information using a calendar convention whereby our first, second and third quarters are labeled as ending on March 31, June 30 and September 30, respectively, it is our longstanding practice to establish interim quarterly closing dates based on a 13-week period ending on a Saturday, with our fiscal year ending on December 31. The effects of this practice are not material and exist only within a reporting year.

Recent Accounting Pronouncements and Accounting Changes

In May 2014, the Financial Accounting Standards Board (the “FASB”) issued Accounting Standards Update (“ASU”) No. 2014-09, *Revenue from Contracts with Customers* (“Topic 606”), which supersedes the revenue recognition requirements in Accounting Standards Codification (“ASC”) 605, *Revenue Recognition*. Topic 606 is based on the principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Topic 606 also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments, and assets recognized from costs incurred to obtain or fulfill a contract. The Company adopted this guidance effective January 1, 2018 using the modified retrospective transition method. See Note 2 – Revenue Recognition for further details.

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (“Topic 842”), which supersedes the lease accounting requirements in ASC 840, *Leases* (“Topic 840”). Topic 842 requires organizations that are lessees in operating lease arrangements to recognize right-of-use assets and lease liabilities on the balance sheet and requires disclosure of key qualitative and quantitative information about leasing arrangements by both lessors and lessees. Topic 842 is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted. As originally issued, entities would have been required to recognize and measure operating leases at the beginning of the earliest period presented using a modified retrospective approach. In July 2018, the FASB issued ASU No. 2018-11, *Leases (Topic 842): Targeted Improvements*, which provides entities with an alternative transition method that permits application of the new

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

guidance at the beginning of the period of adoption, with comparative periods continuing to be reported under Topic 840. The Company plans to adopt the new lease accounting standard effective January 1, 2019, following this alternative transition method.

The Company established a project management team responsible for the implementation of Topic 842. The project management team has substantially completed its lease analysis and is evaluating practical expedient and accounting policy elections and finalizing its assessment of the impact that the adoption of this guidance will have on the Company's consolidated financial statements. In addition, the Company is in the process of implementing internal controls over gathering and reporting the information required to support the expanded disclosure requirements. Based on the implementation procedures performed to date, in addition to the expanded disclosure requirements, the Company currently anticipates the most significant adoption impacts will include (i) the recognition of right-of-use assets and lease liabilities on its Consolidated Balance Sheets, and (ii) the recognition of the remaining deferred gain associated with the sale-leaseback transactions that the Company entered into in July 2008 for its Elgin, Illinois and University Park, Illinois plant locations as a cumulative effect adjustment to opening retained earnings. As disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2017, the deferred gain as of December 31, 2017 totaled \$10.6 million and is currently being amortized over the 15-year life of the respective leases.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Payments*, which provides additional guidance on the financial statement presentation of certain activities in the statement of cash flows. The activities addressed by this guidance that may be relevant to the Company include cash payments for debt prepayment or debt extinguishment costs, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims and proceeds from the settlement of corporate-owned life insurance policies, and the application of the predominance principle. The amendments in this ASU are effective for fiscal years beginning after December 15, 2017 and interim periods within those fiscal years. The amendments in this ASU should be applied using a retrospective transition method to each period presented. If it is impracticable to apply the amendments retrospectively for some of the issues, the amendments for those issues would be applied prospectively as of the earliest date practicable. The Company adopted this guidance effective January 1, 2018 and concluded that it did not have a material impact on its historical cash flow presentation.

In October 2016, the FASB issued ASU No. 2016-16, *Income Taxes (Topic 740), Intra-Entity Transfers of Assets Other Than Inventory*. This guidance requires the income tax consequences of an intra-entity transfer of an asset other than inventory to be recognized when the transfer occurs, instead of when the asset is sold to an outside party. The pronouncement is effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within those annual reporting periods, with early adoption permitted. The amendments in this ASU should be applied on a modified retrospective basis, with an adjustment reflecting the cumulative effect of adoption being recorded directly to retained earnings as of the beginning of the period of adoption. The Company adopted this guidance effective January 1, 2018 and concluded that it did not have a material impact on its consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles – Goodwill and Other (Topic 350), Simplifying the Test for Goodwill Impairment*, which eliminates the second step of the two-step quantitative approach for testing goodwill for potential impairment. An entity will therefore perform the goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount, and recognize an impairment charge for the amount by which the carrying amount exceeds the fair value, not to exceed the total amount of goodwill allocated to the reporting unit. An entity still has the option to perform a qualitative assessment to determine if the quantitative impairment test is necessary. ASU 2017-04 is effective for fiscal years beginning after December 15, 2019 on a prospective basis, with early adoption permitted. The Company adopted this guidance effective January 1, 2018, and will be applying the revised guidance prospectively to future goodwill impairment tests.

In March 2017, the FASB issued ASU No. 2017-07, *Compensation – Retirement Benefits (Topic 715), Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. This guidance requires that entities present the service cost component of net periodic pension expense in the same income statement line items as other employee compensation costs. All other components of net periodic pension cost should be reported separately from the service cost component and outside a subtotal of operating income. The Company adopted this guidance effective January 1, 2018 following the retrospective method of adoption. The Condensed Consolidated Statements of Operations have been recast to present components of net periodic pension cost other than service cost within Other (income) expense, net.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

The following table summarizes the impact of ASU 2017-07 on the Company's previously reported Condensed Consolidated Statements of Operations:

(in millions)	Three Months Ended September 30, 2017			Nine Months Ended September 30, 2017		
	As Reported	Impact of Adoption	As Adjusted	As Reported	Impact of Adoption	As Adjusted
Selling, engineering, general and administrative expenses	\$ 38.3	\$ (0.1)	\$ 38.2	\$ 104.7	\$ (0.3)	\$ 104.4
Other (income) expense, net	(0.5)	0.1	(0.4)	(1.0)	0.3	(0.7)

In August 2017, the FASB issued ASU No. 2017-12, *Derivatives and Hedging (Topic 815), Targeted Improvements to Accounting for Hedging Activities*, which intends to better align risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and presentation of hedge results. The amendments also make certain targeted improvements to simplify the application of the hedge accounting guidance by easing certain documentation and assessment requirements. ASU 2017-12 is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted. The amendments in this ASU should be applied on a modified retrospective or prospective basis, depending on the area covered by the update. The Company adopted this guidance effective January 1, 2018 and concluded that it did not have a material impact on its consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-02, *Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, that permits entities to reclassify tax effects stranded in accumulated other comprehensive income as a result of the Tax Cuts and Jobs Act (the “2017 Tax Act”) to retained earnings. ASU 2018-12 is effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted. The amendments in this ASU may be applied retrospectively or in the period of adoption. The Company is currently evaluating the impact that the adoption of this guidance will have on its consolidated financial statements.

In March 2018, the FASB issued ASU No. 2018-05, *Income Taxes (Topic 740): Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118 (“SAB 118”)*, which provides guidance on the accounting for the tax impact of the 2017 Tax Act. Under SAB 118, a company that has not completed its accounting for the effects of the 2017 Tax Act by its financial reporting deadline may report provisional amounts based on reasonable estimates for items for which the accounting is incomplete. Those amounts will be subject to adjustment during a measurement period of up to one year. As discussed in Note 5 – Income Taxes, the condensed consolidated financial statements for the three and nine months ended September 30, 2018 include the Company's provisional estimates of the impact of the 2017 Tax Act, in accordance with SAB 118. The Company may adjust the provisional amounts throughout the measurement period as the Company's calculations are refined and additional interpretive guidance becomes available.

No other new accounting pronouncements issued, but not yet adopted, are expected to have a material impact on the Company's results of operations, financial position or cash flow.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect (i) the reported amounts of assets and liabilities, (ii) the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and (iii) the reported amounts of revenues and expenses during the reporting period. Significant estimates and assumptions are used for, but are not limited to, revenue recognition, workers' compensation and product liability reserves, asset impairment, pension and other post-retirement benefit obligations, income tax contingency accruals and valuation allowances, and litigation-related accruals. Actual results could differ from those estimates.

Significant Accounting Policies

As described in Note 2 – Revenue Recognition, the Company's revenue recognition accounting policy has been updated to reflect the adoption of Topic 606 on January 1, 2018. There have been no other changes to the Company's significant accounting policies as disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2017.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

NOTE 2 – REVENUE RECOGNITION*Impact of the Adoption of Topic 606*

On January 1, 2018, the Company adopted Topic 606 following the modified retrospective method of adoption applied to those contracts that were not completed as of the date of adoption. In accordance with the Topic 606 transition guidance, the financial information in the comparative periods presented herein has not been restated and continues to be reported under the accounting standards in effect for those periods.

The adoption of Topic 606 did not have a material impact on the Company's financial position, results of operations or cash flows. However, the Company's Condensed Consolidated Statements of Operations for both the three and nine months ended September 30, 2018 include a reduction in Net sales of approximately 1% within the Environmental Solutions Group based on a revised "Principal vs. Agent" analysis resulting in a change from gross to net presentation, with a corresponding reduction in Cost of sales.

The following table summarizes the impact of the adoption of Topic 606 on the Company's Condensed Consolidated Statements of Operations for the three and nine months ended September 30, 2018:

(in millions)	Three Months Ended September 30, 2018			Nine Months Ended September 30, 2018		
	As Reported	Balances Without Adoption of Topic 606	Effect of Change	As Reported	Balances Without Adoption of Topic 606	Effect of Change
Net sales	\$ 269.4	\$ 272.9	\$ (3.5)	\$ 810.1	\$ 821.1	\$ (11.0)
Cost of sales	200.4	203.9	(3.5)	600.0	611.0	(11.0)
Gross profit	\$ 69.0	\$ 69.0	\$ —	\$ 210.1	\$ 210.1	\$ —

Revenue Recognition

Revenue is recognized when performance obligations under the terms of a contract with the customer are satisfied; generally this occurs at a point in time, with the transfer of control of the Company's products or services to customers. For most of the Company's product sales, these criteria are met at the time the product is shipped; however, occasionally control passes later or earlier than shipment due to customer contract or letter of credit terms. In circumstances where credit is extended, payment terms generally range from 30 to 120 days and customer deposits may be required.

Revenue is measured as the amount of consideration the Company expects to be entitled to in exchange for transferring products or providing services. Expected returns and allowances are estimated and recognized based primarily on an analysis of historical experience, with Net sales presented net of such returns and allowances.

The Company enters into sales arrangements that may provide for multiple performance obligations to a customer. These arrangements may include software and non-software components that function together to deliver the products' essential functionality. The Company identifies all performance obligations that are to be delivered separately under the sales arrangement and allocates revenue to each performance obligation based on its relative standalone selling price. The Company uses an observable price to determine the standalone selling price or a cost plus margin approach when one is not available. In general, performance obligations include hardware, integration and installation services. The allocated revenue for each performance obligation is recognized as such performance obligations are satisfied.

Net sales include sales of products and billed freight related to product sales. Freight has not historically comprised a material component of Net sales. The Company has elected to account for such shipping and handling activities as a fulfillment cost and not as a separate performance obligation. Taxes collected from customers and remitted to governmental authorities are recorded on a net basis and are excluded from Net sales.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

The following table presents the Company's Net sales disaggregated by geographic region, based on the location of the end customer, and by major product line:

(in millions)	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2018
<u>Geographic Region:</u>		
U.S.	\$ 215.2	\$ 632.5
Canada	34.5	112.7
Europe/Other	19.7	64.9
Total net sales	<u>\$ 269.4</u>	<u>\$ 810.1</u>
<u>Major Product Line:</u>		
<i>Environmental Solutions</i>		
Vehicles and equipment ^(a)	\$ 170.9	\$ 511.7
Parts	30.0	92.2
Rental income ^(b)	11.2	30.6
Other ^(c)	4.2	11.7
Total	<u>216.3</u>	<u>646.2</u>
<i>Safety and Security Systems</i>		
Public safety and security equipment	29.7	97.0
Industrial signaling equipment	13.2	39.9
Warning systems	10.2	27.0
Total	<u>53.1</u>	<u>163.9</u>
Total net sales	<u>\$ 269.4</u>	<u>\$ 810.1</u>

(a) Includes net sales from the sale of new and used vehicles and equipment, including sales of rental equipment.

(b) Represents income from vehicle and equipment lease arrangements with customers, recognized in accordance with Topic 840.

(c) Primarily includes revenues from services such as maintenance and repair work and the sale of extended warranty contracts.

Contract Balances

The Company recognizes contract liabilities when cash payments, such as customer deposits, are received in advance of the Company's satisfaction of the related performance obligations. Contract liabilities are recognized as Net sales when the related performance obligations are satisfied, which generally occurs within three to six months of the cash receipt. Contract liability balances are not materially impacted by any other factors. The Company's contract liabilities were \$10.9 million and \$8.9 million, as of September 30, 2018 and December 31, 2017, respectively. Contract assets, such as unbilled receivables, were not material as of any of the periods presented herein.

Practical Expedients

As the Company's standard payment terms are less than a year, the Company has elected the practical expedient under ASC 606-10-32-18 to not assess whether a contract has a significant financing component.

The Company has also elected the practical expedient under ASC 340-40-25-4 and recognizes the incremental costs of obtaining a contract, such as sales commissions, as expense when incurred as the amortization period of the asset that otherwise would have been recognized is one year or less.

Further, as permitted by ASC 606-10-50-14, the Company does not disclose the value of its remaining performance obligations for contracts with an original expected duration of one year or less.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

NOTE 3 – INVENTORIES

The following table summarizes the components of Inventories:

(in millions)	September 30, 2018	December 31, 2017
Finished goods	\$ 78.4	\$ 74.3
Raw materials	62.3	52.6
Work in process	12.9	10.3
Total inventories	<u>\$ 153.6</u>	<u>\$ 137.2</u>

NOTE 4 – DEBT

The following table summarizes the components of Long-term borrowings and capital lease obligations:

(in millions)	September 30, 2018	December 31, 2017
Amended 2016 Credit Agreement ^(a)	\$ 221.4	\$ 277.0
Capital lease obligations	0.8	0.7
Total long-term borrowings and capital lease obligations, including current portion	222.2	277.7
Less: Current capital lease obligations	0.3	0.3
Total long-term borrowings and capital lease obligations	<u>\$ 221.9</u>	<u>\$ 277.4</u>

(a) Defined as the Amended and Restated Credit Agreement, dated January 27, 2016, as amended on June 2, 2017.

As more fully described within Note 11 – Fair Value Measurements, the Company uses a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. The fair value of long-term debt is based on interest rates that we believe are currently available to us for issuance of debt with similar terms and remaining maturities (Level 2 input).

The following table summarizes the carrying amounts and estimated fair values of the Company's long-term borrowings:

(in millions)	September 30, 2018		December 31, 2017	
	Notional Amount	Fair Value	Notional Amount	Fair Value
Long-term borrowings ^(a)	\$ 222.2	\$ 222.2	\$ 277.7	\$ 277.7

(a) Long-term borrowings includes current portions of long-term debt and current portions of capital lease obligations of \$0.3 million and \$0.3 million as of September 30, 2018 and December 31, 2017, respectively.

Borrowings under the Amended 2016 Credit Agreement bear interest, at the Company's option, at a base rate or a LIBOR rate, plus, in each case, an applicable margin. The applicable margin ranges from 0.00% to 1.25% for base rate borrowings and 1.00% to 2.25% for LIBOR borrowings. The Company must also pay a commitment fee to the lenders ranging between 0.15% to 0.30% per annum on the unused portion of the \$400 million revolving credit facility along with other standard fees. Letter of credit fees are payable on outstanding letters of credit in an amount equal to the applicable LIBOR margin plus other customary fees.

The Company is subject to certain leverage ratio and interest coverage ratio financial covenants under the Amended 2016 Credit Agreement that are to be measured at each fiscal quarter-end. The Company was in compliance with all such covenants as of September 30, 2018.

As of September 30, 2018, there was \$221.4 million of cash drawn and \$12.3 million of undrawn letters of credit under the Amended 2016 Credit Agreement, with \$166.3 million of net availability for borrowings. As of December 31, 2017, there was \$277.0 million cash drawn and \$17.1 million of undrawn letters of credit under the Amended 2016 Credit Agreement, with \$105.9 million of net availability for borrowings.

As of September 30, 2018 and December 31, 2017, there were no borrowings against the Company's non-U.S. lines of credit which provide for borrowings of up to \$0.1 million.

For the nine months ended September 30, 2018, gross borrowings under the Amended 2016 Credit Agreement were \$8.0 million, while there were \$61.6 million of gross payments. For the nine months ended September 30, 2017, gross borrowings and gross payments were \$250.7 million and \$36.6 million, respectively.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

Interest Rate Swap

On June 2, 2017, the Company entered into an interest rate swap (the “Swap”) with a notional amount of \$150.0 million, as a means of fixing the floating interest rate component on \$150.0 million of its variable-rate debt. The Swap is designated as a cash flow hedge, with a termination date of June 2, 2020. As a result of the application of hedge accounting treatment, all unrealized gains and losses related to the derivative instrument are recorded in Accumulated other comprehensive loss and are reclassified into operations in the same period in which the hedged transaction affects earnings. Hedge effectiveness is assessed quarterly. We do not use derivative instruments for trading or speculative purposes.

As more fully described within Note 11 – Fair Value Measurements, the Company uses a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. The fair value of the Swap is derived from a discounted cash flow analysis based on the terms of the contract and the interest rate curve (Level 2 inputs) and measured on a recurring basis in our Consolidated Balance Sheets. At September 30, 2018, the fair value of the Swap, included in Deferred charges and other assets on the Condensed Consolidated Balance Sheets, was \$3.0 million. During the three and nine months ended September 30, 2018, unrealized pre-tax gains of \$0.1 million and \$1.4 million, respectively, were recorded in Accumulated other comprehensive loss. During the three and nine months ended September 30, 2017, unrealized pre-tax gains of \$0.2 million and \$0.6 million, respectively, were recorded in Accumulated other comprehensive loss.

NOTE 5 – INCOME TAXES

The Company recognized income tax expense of \$6.5 million and \$7.5 million for the three months ended September 30, 2018 and 2017, respectively. The reduction in tax expense in the current-year quarter is largely due to the impact of the lower U.S. federal corporate tax rate following the enactment of the 2017 Tax Act and the absence of \$0.6 million of discrete tax expense recognized in the prior-year quarter in connection with state tax rate changes, partially offset by higher pre-tax income levels. The Company’s effective tax rate for the three months ended September 30, 2018 was 23.0%, compared to 37.5% in the prior-year quarter, reflecting the lower U.S. federal corporate tax rate.

For the nine months ended September 30, 2018 and 2017, the Company recognized income tax expense of \$18.9 million and \$17.4 million, respectively. The increase in tax expense in the current year is largely due to higher pre-tax income levels, offset by the impact of the lower U.S. federal corporate tax rate following the enactment of the 2017 Tax Act, the recognition of a \$0.6 million excess tax benefit from stock compensation activity and the absence of \$0.6 million of discrete tax expense recognized in the prior-year period in connection with state tax rate changes. The Company’s effective tax rate for the nine months ended September 30, 2018 was 23.5%, compared to 35.8% in the prior-year period, reflecting the lower U.S. federal corporate tax rate and the excess tax benefit.

As discussed in Note 1 – Summary of Significant Accounting Policies, the condensed consolidated financial statements for the three and nine months ended September 30, 2018 include the Company’s provisional estimates of the impact of the 2017 Tax Act, in accordance with SAB 118. The Company may adjust the provisional amounts throughout the measurement period as the Company’s calculations are refined and additional interpretive guidance becomes available. During the three and nine months ended September 30, 2018, there have been no significant adjustments to the provisional amounts recorded at December 31, 2017.

Effective January 1, 2018, the 2017 Tax Act subjects a U.S. entity to tax on global intangible low-taxed income (“GILTI”) earned by certain foreign subsidiaries. The FASB Staff Q&A, Topic 740, No. 5, Accounting for Global Intangible Low-Taxed Income, states that an entity can make an accounting policy election to either recognize deferred taxes for temporary basis differences expected to reverse as GILTI in future years or provide for the tax expense related to GILTI in the year the tax is incurred as a period expense only. Given the complexity of the GILTI provisions, the Company is continuing to evaluate the effects of the GILTI provisions and has not yet determined its related accounting policy. As of September 30, 2018, the Company has included a provisional estimate of the GILTI related to current-year operations in its estimated annual effective tax rate.

The 2017 Tax Act also provides a one-time “transition tax” on untaxed post-1986 accumulated earnings and profits (“E&P”) of a company’s controlled foreign corporations (“CFCs”) determined as of November 2, 2017 or December 31, 2017 (whichever date on which there is more deferred E&P). Cash and cash equivalents are taxed at an effective rate of 15.5% and earnings in excess of the cash position are taxed at an effective rate of 8%. The 2017 Tax Act permits the netting of positive earnings of one CFC against deficits of others. At both November 2, 2017 and December 31, 2017, the accumulated undistributed earnings of the Company’s foreign subsidiaries aggregated to an overall E&P deficit. Therefore, the Company estimates that no transition tax will be payable under the provisions of the 2017 Tax Act. As with other tax calculations surrounding the 2017 Tax Act, the

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

Company's estimate of its transition tax liability as of September 30, 2018 is provisional due to complexities inherent in the computations that it expects to be addressed in whole, or in part, by regulations issued during 2018.

NOTE 6 – PENSIONS

The following table summarizes the components of net postretirement pension expense (benefit):

(in millions)	U.S. Benefit Plan				Non-U.S. Benefit Plan			
	Three Months Ended September 30,		Nine Months Ended September 30,		Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017	2018	2017	2018	2017
Service cost	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 0.1	\$ 0.1
Interest cost	1.6	1.8	4.8	5.6	0.3	0.3	1.0	1.0
Amortization of actuarial loss	0.8	0.7	2.3	1.9	0.2	0.2	0.5	0.5
Expected return on plan assets	(2.2)	(2.4)	(6.6)	(7.2)	(0.5)	(0.5)	(1.7)	(1.5)
Net postretirement pension expense (benefit)	\$ 0.2	\$ 0.1	\$ 0.5	\$ 0.3	\$ —	\$ —	\$ (0.1)	\$ 0.1

In the nine months ended September 30, 2018 and 2017, the Company contributed \$7.0 million and \$3.9 million to its U.S. defined benefit plan, respectively, and \$1.0 million and \$0.7 million to its non-U.S. defined benefit plan, respectively.

During the remainder of 2018, the Company expects to make additional contributions of up to \$0.3 million to the non-U.S. benefit plan.

NOTE 7 – COMMITMENTS AND CONTINGENCIES*Financial Commitments*

The Company provides indemnifications and other guarantees in the ordinary course of business, the terms of which range in duration and often are not explicitly defined. Specifically, the Company is occasionally required to provide letters of credit and bid and performance bonds to various customers, principally to act as security for retention levels related to casualty insurance policies and to guarantee the performance of subsidiaries that engage in export and domestic transactions. At September 30, 2018, the Company had outstanding performance and financial standby letters of credit, as well as outstanding bid and performance bonds, aggregating to \$17.0 million. If any such letters of credit or bonds are called, the Company would be obligated to reimburse the issuer of the letter of credit or bond. The Company believes the likelihood of any currently outstanding letter of credit or bond being called is remote.

The Company has transactions involving the sale of equipment to certain of its customers which include (i) guarantees to repurchase the equipment for a fixed price at a future date and (ii) guarantees to repurchase the equipment from the third-party lender in the event of default by the customer. As of September 30, 2018, the single year and maximum potential cash payments the Company could be required to make to repurchase equipment under these agreements were \$3.7 million and \$4.7 million, respectively. The Company's risk under these repurchase arrangements would be partially mitigated by the value of the products repurchased as part of the transaction. Further, pursuant to the terms of the June 3, 2016 acquisition of substantially all of the assets and operations of Joe Johnson Equipment, Inc. and Joe Johnson Equipment (USA), Inc. (collectively, "JJE"), the former owners of JJE have agreed to reimburse the Company for certain losses incurred resulting from the requirement to repurchase equipment that was sold prior to the acquisition date. Any such reimbursement would be withheld from the C\$8.0 million deferred payment to be made to the former owners of JJE on the third anniversary of the acquisition date. Historical cash requirements and losses associated with these obligations have not been significant, but could increase if customer defaults exceed current expectations.

Product Warranties

The Company issues product performance warranties to customers with the sale of its products. The specific terms and conditions of these warranties vary depending upon the product sold and country in which the Company does business, with warranty periods generally ranging from one to five years. The Company estimates the costs that may be incurred under its basic limited warranty and records a liability in the amount of such costs at the time the sale of the related product is recognized. Factors that affect the Company's warranty liability include (i) the number of units under warranty, (ii) historical

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

and anticipated rates of warranty claims and (iii) costs per claim. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary.

During the year ended December 31, 2017, the Company recognized an estimated liability within the Environmental Solutions Group in connection with a specific warranty matter. Although there were no significant changes to the liability during the three and nine months ended September 30, 2018, it is reasonably possible that the Company's estimate may change in the near term as more information becomes available; however, the ultimate resolution of this matter is not expected to have a material adverse effect on the Company's results of operations, financial position or cash flow.

The following table summarizes the changes in the Company's warranty liabilities during the nine months ended September 30, 2018 and 2017:

(in millions)	2018	2017
Balance at January 1	\$ 8.4	\$ 6.4
Provisions to expense	5.3	4.3
Acquisitions	—	1.4
Payments	(4.8)	(4.7)
Balance at September 30	<u>\$ 8.9</u>	<u>\$ 7.4</u>

Liabilities of Discontinued Operations

The Company retains certain liabilities for operations discontinued in prior periods, primarily for environmental remediation and product liability. Included in liabilities of discontinued operations on the Condensed Consolidated Balance Sheets as of September 30, 2018 and December 31, 2017, were reserves of \$0.4 million and \$0.5 million, respectively, related to environmental remediation at the Pearland, Texas facility previously used by the Company's discontinued Pauluhn business, and \$1.4 million related to estimated product liability obligations of the discontinued North American refuse truck body business.

Legal Proceedings

The Company is subject to various claims, including pending and possible legal actions for product liability and other damages, and other matters arising in the ordinary course of the Company's business. On a quarterly basis, the Company reviews uninsured material legal claims against the Company and accrues for the costs of such claims as appropriate in the exercise of management's best judgment and experience. However, due to a lack of factual information available to the Company about a claim, or the procedural stage of a claim, it may not be possible for the Company to reasonably assess either the probability of a favorable or unfavorable outcome of the claim or to reasonably estimate the amount of loss should there be an unfavorable outcome. Therefore, for many claims, the Company cannot reasonably estimate a range of loss.

The Company believes, based on current knowledge and after consultation with counsel, that the outcome of such claims and actions will not have a material adverse effect on the Company's results of operations or financial condition. However, in the event of unexpected future developments, it is possible that the ultimate resolution of such matters, if unfavorable, could have a material adverse effect on the Company's results of operations, financial condition or cash flow.

Hearing Loss Litigation

The Company has been sued for monetary damages by firefighters who claim that exposure to the Company's sirens has impaired their hearing and that the sirens are therefore defective. There were 33 cases filed during the period of 1999 through 2004, involving a total of 2,443 plaintiffs, in the Circuit Court of Cook County, Illinois. These cases involved more than 1,800 firefighter plaintiffs from locations outside of Chicago. In 2009, six additional cases were filed in Cook County, involving 299 Pennsylvania firefighter plaintiffs. During 2013, another case was filed in Cook County involving 74 Pennsylvania firefighter plaintiffs.

The trial of the first 27 of these plaintiffs' claims occurred in 2008, whereby a Cook County jury returned a unanimous verdict in favor of the Company.

An additional 40 Chicago firefighter plaintiffs were selected for trial in 2009. Plaintiffs' counsel later moved to reduce the number of plaintiffs from 40 to nine. The trial for these nine plaintiffs concluded with a verdict against the Company and for the plaintiffs in varying amounts totaling \$0.4 million. The Company appealed this verdict. On September 13, 2012, the Illinois Appellate Court rejected this appeal. The Company thereafter filed a petition for rehearing with the Illinois Appellate Court,

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

which was denied on February 7, 2013. The Company sought further review by filing a petition for leave to appeal with the Illinois Supreme Court on March 14, 2013. On May 29, 2013, the Illinois Supreme Court issued a summary order declining to accept review of this case. On July 1, 2013, the Company satisfied the judgments entered for these plaintiffs, which has resulted in final dismissal of these cases.

A third consolidated trial involving eight Chicago firefighter plaintiffs occurred during November 2011. The jury returned a unanimous verdict in favor of the Company at the conclusion of this trial.

Following this trial, on March 12, 2012 the trial court entered an order certifying a class of the remaining Chicago Fire Department firefighter plaintiffs for trial on the sole issue of whether the Company's sirens were defective and unreasonably dangerous. The Company petitioned the Illinois Appellate Court for interlocutory appeal of this ruling. On May 17, 2012, the Illinois Appellate Court accepted the Company's petition. On June 8, 2012, plaintiffs moved to dismiss the appeal, agreeing with the Company that the trial court had erred in certifying a class action trial in this matter. Pursuant to plaintiffs' motion, the Illinois Appellate Court reversed the trial court's certification order.

Thereafter, the trial court scheduled a fourth consolidated trial involving three firefighter plaintiffs, which began in December 2012. Prior to the start of this trial, the claims of two of the three firefighter plaintiffs were dismissed. On December 17, 2012, the jury entered a complete defense verdict for the Company.

Following this defense verdict, plaintiffs again moved to certify a class of Chicago Fire Department plaintiffs for trial on the sole issue of whether the Company's sirens were defective and unreasonably dangerous. Over the Company's objection, the trial court granted plaintiffs' motion for class certification on March 11, 2013 and scheduled a class action trial to begin on June 10, 2013. The Company filed a petition for review with the Illinois Appellate Court on March 29, 2013 seeking reversal of the class certification order.

On June 25, 2014, a unanimous three-judge panel of the First District Illinois Appellate Court issued its opinion reversing the class certification order of the trial court. Specifically, the Appellate Court determined that the trial court's ruling failed to satisfy the class-action requirements that the common issues of the firefighters' claims predominate over the individual issues and that there is an adequate representative for the class. During a status hearing on October 8, 2014, plaintiffs represented to the Court that they would again seek to certify a class of firefighters on the issue of whether the Company's sirens were defective and unreasonably dangerous. On January 12, 2015, plaintiffs filed motions to amend their complaints to add class action allegations with respect to Chicago firefighter plaintiffs as well as the approximately 1,800 firefighter plaintiffs from locations outside of Chicago. On March 11, 2015, the trial court granted plaintiff's motions to amend their complaints. On April 24, 2015, the cases were transferred to Cook County chancery court, which will decide all class certification issues. On March 23, 2018, plaintiffs filed a motion to certify as a class all firefighters from the Chicago Fire Department who have filed lawsuits in this matter. The Company has served discovery upon plaintiffs related to this motion and intends to continue its objections to any attempt at certification. A further status hearing on class certification issues has been scheduled for December 4, 2018.

The Company has also filed motions to dismiss cases involving firefighters who worked for fire departments located outside of the state of Illinois based on improper venue. On February 24, 2017, the Circuit Court of Cook County entered orders dismissing the cases of 1,770 such firefighter plaintiffs from the jurisdiction of the State of Illinois. Pursuant to these orders, these plaintiffs had six months thereafter to refile their cases in jurisdictions where these firefighters are located. Prior to this six-month deadline, attorneys representing some of these plaintiffs contacted the Company regarding possible settlement of their cases. During the year ended December 31, 2017, the Company entered into a global settlement agreement with two attorneys who represented approximately 1,090 of these plaintiffs. Under the terms of the settlement agreement, the Company offered \$700 per plaintiff to settle these cases and 717 plaintiffs accepted this offer as a final settlement. The attorneys representing these plaintiffs agreed to withdraw from representing plaintiffs who did not respond to the settlement offer. It is the Company's position that the non-settling plaintiffs who failed to timely refile their cases following the February 2017 dismissal by the Circuit Court of Cook County are now barred from doing so by the statute of limitations. The Company also has filed a venue motion seeking to transfer to DuPage County cases involving 10 plaintiffs who reside and work in Illinois but outside of Cook County. The Court granted this motion on June 28, 2017.

The Company has also been sued on this issue outside of the Cook County, Illinois venue. In 2007 and through 2009, a total of 71 lawsuits involving 71 plaintiffs were filed in the Court of Common Pleas, Philadelphia County, Pennsylvania. Three of these cases were dismissed pursuant to pretrial motions filed by the Company. Another case was voluntarily dismissed. Prior to trial in four cases, the Company paid nominal sums to obtain dismissals.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

Three trials occurred in Philadelphia involving these cases filed in 2007 through 2009. The first trial involving one of these plaintiffs occurred in 2010, when the jury returned a verdict for the plaintiff. In particular, the jury found that the Company's siren was not defectively designed, but that the Company negligently constructed the siren. The jury awarded damages in the amount of \$0.1 million, which was subsequently reduced to \$0.08 million. The Company appealed this verdict. Another trial, involving nine Philadelphia firefighter plaintiffs, also occurred in 2010 when the jury returned a defense verdict for the Company as to all claims and all plaintiffs involved in that trial. The third trial, also involving nine Philadelphia firefighter plaintiffs, was completed during 2010 when the jury returned a defense verdict for the Company as to all claims and all plaintiffs involved in that trial.

Following defense verdicts in the last two Philadelphia trials, the Company negotiated settlements with respect to all remaining filed cases in Philadelphia at that time, as well as other firefighter claimants represented by the attorney who filed the Philadelphia cases. On January 4, 2011, the Company entered into a Global Settlement Agreement (the "Settlement Agreement") with the law firm of the attorney representing the Philadelphia claimants, on behalf of 1,125 claimants the firm represented (the "Claimants") and who had asserted product claims against the Company (the "Claims"). Three hundred eight of the Claimants had lawsuits pending against the Company in Cook County, Illinois.

The Settlement Agreement provided that the Company pay a total amount of \$3.8 million (the "Settlement Payment") to settle the Claims (including the costs, fees and other expenses of the law firm in connection with its representation of the Claimants), subject to certain terms, conditions and procedures set forth in the Settlement Agreement. In order for the Company to be required to make the Settlement Payment: (i) each Claimant who agreed to settle his or her claims had to sign a release acceptable to the Company (a "Release"), (ii) each Claimant who agreed to the settlement and who was a plaintiff in a lawsuit, had to dismiss his or her lawsuit with prejudice, (iii) by April 29, 2011, at least 93% of the Claimants identified in the Settlement Agreement must have agreed to settle their claims and provide a signed Release to the Company and (iv) the law firm had to withdraw from representing any Claimants who did not agree to the settlement, including those who filed lawsuits. If the conditions to the settlement were met, but less than 100% of the Claimants agreed to settle their Claims and sign a Release, the Settlement Payment would be reduced by the percentage of Claimants who did not agree to the settlement.

On April 22, 2011, the Company confirmed that the terms and conditions of the Settlement Agreement had been met and made a payment of \$3.6 million to conclude the settlement. The amount was based upon the Company's receipt of 1,069 signed releases provided by Claimants, which was 95.02% of all Claimants identified in the Settlement Agreement.

The Company generally denies the allegations made in the claims and lawsuits by the Claimants and denies that its products caused any injuries to the Claimants. Nonetheless, the Company entered into the Settlement Agreement for the purpose of minimizing its expenses, including legal fees, and avoiding the inconvenience, uncertainty and distraction of the claims and lawsuits.

During April through October 2012, 20 new cases were filed in the Court of Common Pleas, Philadelphia County, Pennsylvania. These cases were filed on behalf of 20 Philadelphia firefighters and involve various defendants in addition to the Company. Five of these cases were subsequently dismissed. The first trial involving these 2012 Philadelphia cases occurred during December 2014 and involved three firefighter plaintiffs. The jury returned a verdict in favor of the Company. Following this trial, all of the parties agreed to settle cases involving seven firefighter plaintiffs set for trial during January 2015 for nominal amounts per plaintiff.

In January 2015, plaintiffs' attorneys filed two new complaints in the Court of Common Pleas, Philadelphia, Pennsylvania on behalf of approximately 70 additional firefighter plaintiffs. The vast majority of the firefighters identified in these complaints are located outside of Pennsylvania. One of the complaints in these cases, which involves 11 firefighter plaintiffs from the District of Columbia, was removed to federal court in the Eastern District of Pennsylvania. Plaintiffs voluntarily dismissed all claims in this case on May 31, 2016. The Company thereafter moved to recover various fees and costs in this case, asserting that plaintiffs' counsel failed to properly investigate these claims prior to filing suit. The Court granted this motion on April 25, 2017, awarding \$0.1 million to the Company. After plaintiffs appealed this Order, the United States Court of Appeals for the Third Circuit affirmed the lower court decision awarding fees and costs to the Company.

With respect to claims of other out-of-state firefighters involved in these two cases, the Company moved to dismiss these claims as improperly filed in Pennsylvania. The Court granted this motion and dismissed these claims on November 5, 2015. During August through December 2015, another nine new cases were filed in the Court of Common Pleas, Philadelphia County, Pennsylvania. These cases involve a total of 193 firefighters, most of whom are located outside of Pennsylvania. The Company again moved to dismiss all claims filed by out-of-state firefighters in these cases as improperly filed in Pennsylvania. On May 24, 2016, the Court granted this motion and dismissed these claims. Plaintiffs appealed this decision and, on September 25,

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

2018, the appellate court reversed this dismissal. The Company has filed a petition with the appellate court requesting that the court reconsider its ruling. On May 13, 2016, four new cases were filed in Philadelphia state court, involving a total of 55 Philadelphia firefighters who live in Pennsylvania. During August 2016, the Company settled a case involving four Philadelphia firefighters that had been set for trial in Philadelphia state court during September 2016. During 2017, plaintiffs filed additional cases in the Court of Common Pleas, Philadelphia County, involving over 100 Philadelphia firefighter plaintiffs. During January 2017, plaintiffs filed a motion to consolidate and bifurcate, similar to a motion filed in the Pittsburgh hearing loss cases, as described below. The Company has filed an opposition to this motion. These cases were then transferred to the mass tort program in Philadelphia for pretrial purposes. Plaintiffs' counsel thereafter dismissed several plaintiffs. During November 2017, a trial involving one Philadelphia firefighter occurred. The jury returned a verdict in favor of the Company in this trial. Prior to a dismissal of these cases pursuant to the Tolling Agreement, discussed below, there was a total of 75 firefighters involved in cases pending in the Philadelphia mass tort program.

During April through July 2013, additional cases were filed in Allegheny County, Pennsylvania on behalf of 247 plaintiff firefighters from Pittsburgh and against various defendants, including the Company. During May 2016, two additional cases were filed against the Company in Allegheny County involving 19 Pittsburgh firefighters. After the Company filed pretrial motions, the Court dismissed claims of 55 Pittsburgh firefighter plaintiffs. The Court scheduled trials for May, September and November 2016, for eight firefighters per trial. Prior to the first scheduled trial in Pittsburgh, the Court granted the Company's motion for summary judgment and dismissed all claims asserted by plaintiff firefighters involved in this trial. Following an appeal by the plaintiff firefighters, the appellate court affirmed this dismissal. The next trial for six Pittsburgh firefighters started on November 7, 2016. Shortly after this trial began, plaintiffs' counsel moved for a mistrial because a key witness suddenly became unavailable. The Court granted this motion and rescheduled this trial for March 6, 2017. During January 2017, plaintiffs also moved to consolidate and bifurcate trials involving Pittsburgh firefighters. In particular, plaintiffs sought one trial involving liability issues which will apply to all Pittsburgh firefighters who filed suit against the Company. The Company filed an opposition to this motion. On April 18, 2017, the trial court granted plaintiffs' motion to bifurcate the next Pittsburgh trial. Pursuant to a motion for clarification filed by the Company, the Court ruled that the bifurcation order would only apply to six plaintiffs who were part of the next trial group in Pittsburgh. The Company thereafter sought an interlocutory appeal of the Court's bifurcation order. The appellate court declined to accept the appeal at that time. A bifurcated trial began on September 27, 2017 in Allegheny County, Pennsylvania. Prior to and during trial, two plaintiffs were dismissed, resulting in four plaintiffs remaining for trial. After approximately two weeks of trial, the jury found that the Company's siren product was not defective or unreasonably dangerous and rendered a verdict in favor of the Company. A second trial involving Pittsburgh firefighters began during January 2018. At the outset of this trial, plaintiffs' attorneys requested that the Company consider settlement of various cases. This trial was continued to allow the parties to further discuss possible settlement.

During March 2018, the parties agreed in principle on a framework to resolve hearing loss claims and cases in all jurisdictions involved in the hearing loss litigation except in Cook County, Lackawanna County, and excluding one case involving one firefighter in New York City. The firefighters excluded from this settlement framework are represented by different attorneys. Pursuant to this settlement framework, the Company would pay \$700 to each firefighter who has filed a lawsuit and is eligible to be part of the settlement. The Company would pay \$300 to each firefighter who has not yet filed a case and is eligible to be part of the settlement. To be eligible for settlement, among other things, firefighters must provide proof that they have high frequency noise-induced hearing loss. There are approximately 3,700 firefighters whose claims may be considered as part of this settlement, including approximately 1,320 firefighters who have ongoing filed lawsuits. The parties are in the process of determining how many of these firefighters will be eligible to participate in the settlement. In order to minimize the parties' respective legal costs and expenses during this settlement process, on July 5, 2018, the parties entered into a tolling agreement (the "Tolling Agreement"). Pursuant to the Tolling Agreement, counsel for the settling firefighters agreed to dismiss the pending lawsuits in all jurisdictions except for the Alleghany County (Pittsburgh), Pennsylvania cases, and the Company agreed to a tolling of any statute of limitations applicable to the dismissed cases until December 31, 2018. The settlement framework will require plaintiffs' attorneys to withdraw from representing firefighters who elect not to participate in this settlement.

As of September 30, 2018, the Company has recognized an estimated liability for the potential settlement amount. While it is reasonably possible that the ultimate resolution of this matter may result in a loss in excess of the amount accrued, the incremental loss is not expected to be material.

During March 2014, an action also was brought in the Court of Common Pleas of Erie County, Pennsylvania on behalf of 61 firefighters. This case likewise involves various defendants in addition to the Company. After the Company filed pretrial motions, 33 Erie County firefighter plaintiffs voluntarily dismissed their claims. During August 2017, five cases involving 70 firefighter plaintiffs were filed in Lackawanna County, Pennsylvania. These cases involve firefighter plaintiffs who originally

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

filed in Cook County and were dismissed pursuant to the Company's forum nonconveniens motion. As of September 30, 2018, a total of 263 firefighters are involved in cases filed in Allegheny and Lackawanna counties in Pennsylvania.

On September 17, 2014, 20 lawsuits, involving a total of 193 Buffalo Fire Department firefighters, were filed in the Supreme Court of the State of New York, Erie County. All of the cases filed in Erie County, New York have been removed to federal court in the Western District of New York. Plaintiffs have filed a motion to consolidate and bifurcate these cases, similar to the motion filed in the Pittsburgh hearing loss cases, as described above. The Company has filed an opposition to the motion. During February 2015, a lawsuit involving one New York City firefighter plaintiff was filed in the Supreme Court of the State of New York, New York County. The plaintiff named the Company as well as several other parties as defendants. That case subsequently was transferred to federal court in the Northern District of New York and thereafter dismissed. During April 2015 through January 2016, 29 new cases involving a total of 235 firefighters were filed in various counties in the New York City area. During December 2016 through October 2017, additional cases were filed in these jurisdictions. On February 5, 2018, the Company was served with a complaint in an additional case filed in Kings County, New York. This case involves one plaintiff. Prior to a dismissal of these cases pursuant to the Tolling Agreement, there was a total of 536 firefighters involved in cases filed in the State of New York.

During November 2015, the Company was served with a complaint filed in Union County, New Jersey state court, involving 34 New Jersey firefighters. This case has been transferred to federal court in the District of New Jersey. During the period from January through May 2016, eight additional cases were filed in various New Jersey state courts. Most of the firefighters in these cases reside in New Jersey and work or worked at New Jersey fire departments. During December 2016, a case involving one New Jersey firefighter was filed in the United States District Court of New Jersey. Prior to a dismissal of these cases pursuant to the Tolling Agreement, there was a total of 61 firefighters involved in cases filed in New Jersey. On May 2, 2017, plaintiffs filed a motion to consolidate and bifurcate in the pending federal court case in New Jersey. This motion is similar to bifurcation motions filed by plaintiffs in Pittsburgh, Buffalo and Philadelphia. The Court has denied this motion as premature. Pursuant to a petition filed by both parties, all New Jersey state court cases had been consolidated for pretrial purposes.

During May through October 2016, nine cases were filed in Suffolk County, Massachusetts state court, naming the Company as a defendant. These cases involve 194 firefighters who lived and worked in the Boston area. During August 2017, plaintiffs filed additional cases in Suffolk County court. The Company has moved to transfer various cases filed in Suffolk County to other counties in Massachusetts where plaintiffs reside and work. Prior to a dismissal of these cases pursuant to the Tolling Agreement, there was a total of 218 firefighters involved in cases filed in Massachusetts.

During August and September 2017, plaintiffs' attorneys filed additional hearing loss cases in Florida. The Company is the only named defendant. These cases have been filed in several different counties in Florida, including Tampa, Miami and Orlando municipalities. Plaintiffs have agreed to stipulate that they will not seek more than \$75,000 in damages in any individual plaintiff case. Prior to a dismissal of these cases pursuant to the Tolling Agreement, there was a total of 166 firefighters involved in cases filed in Florida.

From 2007 through 2009, firefighters also brought hearing loss claims against the Company in New Jersey, Missouri, Maryland and Kings County, New York. All of those cases, however, were dismissed prior to trial, including four cases in the Supreme Court of Kings County, New York that were dismissed upon the Company's motion in 2008. On appeal, the New York appellate court affirmed the trial court's dismissal of these cases. Plaintiffs' attorneys have threatened to file additional lawsuits. The Company intends to vigorously defend all of these lawsuits, if filed.

The Company's ongoing negotiations with its insurer, CNA, over insurance coverage on these claims have resulted in reimbursements of a portion of the Company's defense costs. These reimbursements are recorded as a reduction of corporate operating expenses. For the nine months ended September 30, 2018 and 2017, the Company recorded \$0.2 million and \$0.4 million of reimbursements from CNA related to legal costs, respectively.

NOTE 8 – EARNINGS PER SHARE

The Company computes earnings per share ("EPS") in accordance with ASC 260, *Earnings per Share*, which requires that non-vested restricted stock containing non-forfeitable dividend rights should be treated as participating securities pursuant to the two-class method. Under the two-class method, net income is reduced by the amount of dividends declared in the period for common stock and participating securities. The remaining undistributed earnings are then allocated to common stock and participating securities as if all of the net income for the period had been distributed. The amounts of distributed and undistributed earnings allocated to participating securities for the three and nine months ended September 30, 2018 and 2017 were insignificant and did not materially impact the calculation of basic or diluted EPS.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

Basic EPS is computed by dividing income or loss available to common stockholders by the weighted average number of shares of common stock and non-vested restricted stock awards outstanding for the period.

Diluted EPS is computed using the weighted average number of shares of common stock and non-vested restricted stock awards outstanding for the year plus the effect of dilutive potential common shares outstanding during the period. The dilutive effect of common stock equivalents is determined using the more dilutive of the two-class method or alternative methods. The Company uses the treasury stock method to determine the potentially dilutive impact of our employee stock options and restricted stock units, and the contingently issuable method for our performance-based restricted stock unit awards.

For the three and nine months ended September 30, 2018, options to purchase 0.3 million shares of the Company's common stock had an anti-dilutive effect on EPS, and accordingly, are excluded from the calculation of diluted EPS. For the three and nine months ended September 30, 2017, options to purchase 0.4 million and 0.8 million shares, respectively, of the Company's common stock had an anti-dilutive effect on EPS, and accordingly, are excluded from the calculation of diluted EPS.

The following table reconciles Net income to basic and diluted EPS:

(in millions, except per share data)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net income	\$ 21.7	\$ 12.5	\$ 61.5	\$ 31.2
Weighted average shares outstanding – Basic	60.0	59.8	59.9	59.7
Dilutive effect of common stock equivalents	1.1	0.8	1.1	0.7
Weighted average shares outstanding – Diluted	61.1	60.6	61.0	60.4
Earnings per share:				
Basic	\$ 0.36	\$ 0.21	\$ 1.03	\$ 0.52
Diluted	0.36	0.21	1.01	0.52

NOTE 9 – STOCKHOLDERS' EQUITY

Dividends

On February 19, 2018, the Company's Board of Directors (the "Board") declared a quarterly cash dividend of \$0.07 per common share. The dividend totaled \$4.2 million and was distributed on March 19, 2018 to holders of record at the close of business on March 5, 2018.

On May 1, 2018, the Board declared a quarterly cash dividend of \$0.08 per common share payable. The dividend totaled \$4.8 million and was distributed on May 29, 2018 to holders of record at the close of business on May 15, 2018.

On July 31, 2018, the Board declared a quarterly cash dividend of \$0.08 per common share payable. The dividend totaled \$4.8 million and was distributed on August 28, 2018 to holders of record at the close of business on August 14, 2018.

During the three and nine months ended September 30, 2017, dividends of \$4.2 million and \$12.6 million, respectively, were paid to stockholders.

On October 30, 2018, the Board declared a quarterly cash dividend of \$0.08 per common share payable on November 27, 2018 to holders of record at the close of business on November 13, 2018.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

Accumulated Other Comprehensive Loss

The following tables summarize the changes in each component of Accumulated other comprehensive loss, net of tax:

(in millions) ^(a)	Actuarial Losses	Foreign Currency Translation	Unrealized Gain on Derivatives	Total
Balance at July 1, 2018	\$ (73.6)	\$ (5.7)	\$ 2.0	\$ (77.3)
Other comprehensive income (loss) before reclassifications	0.2	(0.4)	0.3	0.1
Amounts reclassified from accumulated other comprehensive loss	0.8	—	(0.2)	0.6
Net current-period other comprehensive income (loss)	1.0	(0.4)	0.1	0.7
Balance at September 30, 2018	<u>\$ (72.6)</u>	<u>\$ (6.1)</u>	<u>\$ 2.1</u>	<u>\$ (76.6)</u>

(in millions) ^(a)	Actuarial Losses	Foreign Currency Translation	Unrealized Gain on Derivatives	Total
Balance at July 1, 2017	\$ (78.9)	\$ (6.8)	\$ 0.2	\$ (85.5)
Other comprehensive (loss) income before reclassifications	(0.7)	3.3	0.2	2.8
Amounts reclassified from accumulated other comprehensive loss	0.6	—	—	0.6
Net current-period other comprehensive (loss) income	(0.1)	3.3	0.2	3.4
Balance at September 30, 2017	<u>\$ (79.0)</u>	<u>\$ (3.5)</u>	<u>\$ 0.4</u>	<u>\$ (82.1)</u>

(in millions) ^(a)	Actuarial Losses	Foreign Currency Translation	Unrealized Gain on Derivatives	Total
Balance at January 1, 2018	\$ (75.4)	\$ (2.5)	\$ 1.0	\$ (76.9)
Other comprehensive income (loss) before reclassifications	0.6	(3.6)	1.4	(1.6)
Amounts reclassified from accumulated other comprehensive loss	2.2	—	(0.3)	1.9
Net current-period other comprehensive income (loss)	2.8	(3.6)	1.1	0.3
Balance at September 30, 2018	<u>\$ (72.6)</u>	<u>\$ (6.1)</u>	<u>\$ 2.1</u>	<u>\$ (76.6)</u>

(in millions) ^(a)	Actuarial Losses	Foreign Currency Translation	Unrealized Gain on Derivatives	Total
Balance at January 1, 2017	\$ (79.0)	\$ (13.0)	\$ —	\$ (92.0)
Other comprehensive (loss) income before reclassifications	(1.6)	9.5	0.4	8.3
Amounts reclassified from accumulated other comprehensive loss	1.6	—	—	1.6
Net current-period other comprehensive income	—	9.5	0.4	9.9
Balance at September 30, 2017	<u>\$ (79.0)</u>	<u>\$ (3.5)</u>	<u>\$ 0.4</u>	<u>\$ (82.1)</u>

(a) Amounts in parentheses indicate losses.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

The following table summarizes the amounts reclassified from Accumulated other comprehensive loss, net of tax, in the three months ended September 30, 2018 and 2017 and the affected line item in the Condensed Consolidated Statements of Operations:

Details about Accumulated Other Comprehensive Loss Components	Amount Reclassified from Accumulated Other Comprehensive Loss		Affected Line Item in Condensed Consolidated Statements of Operations
	2018	2017	
(in millions)^(a)			
Amortization of actuarial losses of defined benefit pension plans	\$ (1.0)	\$ (0.9)	Other (income) expense, net
Interest rate swap	0.2	—	Interest expense
Total before tax	(0.8)	(0.9)	
Income tax benefit	0.2	0.3	Income tax expense
Total reclassifications for the period, net of tax	\$ (0.6)	\$ (0.6)	

(a) Amounts in parentheses indicate losses.

The following table summarizes the amounts reclassified from Accumulated other comprehensive loss, net of tax, in the nine months ended September 30, 2018 and 2017 and the affected line item in the Condensed Consolidated Statements of Operations:

Details about Accumulated Other Comprehensive Loss Components	Amount Reclassified from Accumulated Other Comprehensive Loss		Affected Line Item in Condensed Consolidated Statements of Operations
	2018	2017	
(in millions)^(a)			
Amortization of actuarial losses of defined benefit pension plans	\$ (2.8)	\$ (2.4)	Other (income) expense, net
Interest rate swap	0.4	—	Interest expense
Total before tax	(2.4)	(2.4)	
Income tax benefit	0.5	0.8	Income tax expense
Total reclassifications for the period, net of tax	\$ (1.9)	\$ (1.6)	

(a) Amounts in parentheses indicate losses.

NOTE 10 – SEGMENT INFORMATION

The Company has two operating segments, and the Company's reportable segments are consistent with those operating segments. Business units are organized under each segment because they share certain characteristics, such as technology, marketing, distribution and product application, which create long-term synergies. On June 2, 2017, the Company completed the acquisition of all of the shares of capital stock of GenNx/TBEI Intermediate Co. (collectively with its subsidiaries, "TBEI"). The Company expects that the acquisition will enable it to strengthen the Environmental Solutions Group's market position as a specialty vehicle manufacturer in maintenance and infrastructure end-markets, leveraging its expertise in building chassis-based vehicles. The Company has presented the financial statements of TBEI within the Environmental Solutions Group since the closing date and is in the process of determining the impact, if any, that the TBEI acquisition may have on its reportable segments.

The principal activities of the Company's operating segments are as follows:

Environmental Solutions — Our Environmental Solutions Group is a leading manufacturer and supplier of a full range of street sweeper vehicles, sewer cleaner and vacuum loader trucks, hydro-excavation trucks, high-performance waterblasting equipment, dump truck bodies and trailers. The Group manufactures vehicles and equipment in the U.S. and Canada that are sold under the Elgin[®], Vactor[®], Guzzler[®], Westech[™], Jetstream[®], Ox Bodies[®], Crysteel[®], J-Craft[®], Duraclass[®], Rugby[®] and Travis[®] brand names. Product offerings also include certain products manufactured by other companies, such as refuse and recycling collection vehicles, camera systems, ice resurfacing equipment and snow-removal equipment. Products are sold to both municipal and industrial customers either through a dealer network or direct sales to service customers generally depending on the type and geographic location of the customer. In addition to vehicle and equipment sales, the Group also engages in the sale of parts, service and repair, equipment rentals and training as part of a complete offering to its current and potential customers through its service centers located across North America.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

Safety and Security Systems — Our Safety and Security Systems Group is a leading manufacturer and supplier of comprehensive systems and products that law enforcement, fire rescue, emergency medical services, campuses, military facilities and industrial sites use to protect people and property. Offerings include systems for campus and community alerting, emergency vehicles, first responder interoperable communications and industrial communications, as well as command and municipal networked security. Specific products include vehicle lightbars and sirens, public warning sirens, general alarm systems, public address systems and public safety software. Products are sold under the Federal Signal™, Federal Signal VAMA® and Victor® brand names. The Group operates manufacturing facilities in the U.S., Europe and South Africa.

Corporate contains those items that are not included in our operating segments.

Net sales by operating segment reflect sales of products and services to external customers, as reported in the Company's Consolidated Statements of Operations. Intersegment sales are insignificant. The Company evaluates performance based on operating income of the respective segment. Operating income includes all revenues, costs and expenses directly related to the segment involved. In determining operating segment income, neither corporate nor interest expenses are included.

As described in Note 2 – Revenue Recognition, the Company's revenue recognition accounting policy has been updated to reflect the adoption of Topic 606 on January 1, 2018. The financial information in the comparative periods presented herein has not been restated and continues to be reported under the accounting standards in effect for those periods. Refer to Note 2 – Revenue Recognition for further discussion regarding the impact of the adoption of Topic 606 on Net sales reported by the Environmental Solutions Group. The accounting policies of each operating segment are otherwise the same as those described in Note 1 – Summary of Significant Accounting Policies in the Company's Annual Report on Form 10-K for the year ended December 31, 2017. The results for the interim periods are not necessarily indicative of results for a full year.

The following tables summarize the Company's continuing operations by segment, including Net sales, Operating income (loss), and Total assets:

(in millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net sales:				
Environmental Solutions	\$ 216.3	\$ 198.5	\$ 646.2	\$ 500.6
Safety and Security Systems	53.1	50.2	163.9	150.3
Total net sales	<u>\$ 269.4</u>	<u>\$ 248.7</u>	<u>\$ 810.1</u>	<u>\$ 650.9</u>
Operating income (loss):				
Environmental Solutions	\$ 28.3	\$ 21.2	\$ 86.1	\$ 52.5
Safety and Security Systems	8.0	6.1	22.3	18.1
Corporate and eliminations	(5.9)	(5.0)	(20.3)	(18.1)
Total operating income	<u>30.4</u>	<u>22.3</u>	<u>88.1</u>	<u>52.5</u>
Interest expense	2.2	2.7	7.2	4.6
Other (income) expense, net	—	(0.4)	0.5	(0.7)
Income before income taxes	<u>\$ 28.2</u>	<u>\$ 20.0</u>	<u>\$ 80.4</u>	<u>\$ 48.6</u>
(in millions)			As of September 30, 2018	As of December 31, 2017
Total assets:				
Environmental Solutions			\$ 772.8	\$ 746.4
Safety and Security Systems			210.4	211.8
Corporate and eliminations			25.6	33.6
Total assets of continuing operations			<u>1,008.8</u>	<u>991.8</u>
Total assets of discontinued operations			0.5	0.5
Total assets			<u>\$ 1,009.3</u>	<u>\$ 992.3</u>

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

NOTE 11 – FAIR VALUE MEASUREMENTS

The Company uses a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy maximizes the use of observable inputs and minimizes the use of unobservable inputs. Observable inputs are developed based on market data obtained from independent sources, while unobservable inputs reflect the Company's assumptions about valuation based on the best information available in the circumstances. The three levels of inputs are classified as follows:

- Level 1 — quoted prices in active markets for identical assets or liabilities;
- Level 2 — observable inputs, other than quoted prices included in Level 1, such as quoted prices for markets that are not active, or other inputs that are observable or can be corroborated by observable market data; and
- Level 3 — unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities, including certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

In determining fair value, the Company uses various valuation approaches within the fair value measurement framework. The valuation methodologies used for the Company's assets and liabilities measured at fair value and their classification in the valuation hierarchy are summarized below:

Cash Equivalents

Cash equivalents primarily consist of time-based deposits and interest-bearing instruments with maturities of three months or less. The Company classified cash equivalents as Level 1 due to the short-term nature of these instruments and measured the fair value based on quoted prices in active markets for identical assets.

Interest Rate Swap

As described in Note 4 – Debt, the Company entered into an interest rate swap as a means of fixing the floating interest rate component on a portion of its floating-rate debt. The Company classified the interest rate swap as Level 2 due to the use of a discounted cash flow model based on the terms of the contract and the interest rate curve (Level 2 inputs) to calculate the fair value of the swap.

Contingent Consideration

The Company has a contingent obligation to transfer cash to the former owners of JJE if specified financial results are met over future reporting periods (i.e., an earn-out). Liabilities for contingent consideration are measured at fair value each reporting period, with the acquisition-date fair value included as part of the consideration transferred. Subsequent changes in fair value are recorded as a component of Acquisition and integration-related expenses on the Condensed Consolidated Statements of Operations.

The Company uses an income approach to value the contingent consideration obligation based on future financial performance, which is determined based on the present value of expected future cash flows. Due to the lack of relevant observable market data over fair value inputs, the Company has classified the contingent consideration liability within Level 3 of the fair value hierarchy outlined in ASC 820, *Fair Value Measurements*. Increases in the expected payout under a contingent consideration arrangement contribute to increases in the fair value of the related liability. Conversely, decreases in the expected payout under a contingent consideration arrangement contribute to decreases in the fair value of the related liability. Changes in assumptions could have an impact on the fair value of the contingent consideration, which has a maximum payout of C\$10.0 million (approximately \$7.7 million).

The following table summarizes the Company's assets and liabilities that are measured at fair value on a recurring basis as of September 30, 2018:

(in millions)	Fair Value Measurement at Reporting Date Using			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents	\$ 4.3	\$ —	\$ —	\$ 4.3
Interest rate swap	—	3.0	—	3.0
Liabilities:				
Contingent consideration	—	—	6.9	6.9

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

The following table provides a roll-forward of the fair value of recurring Level 3 fair value measurements in the three months ended September 30, 2018 and 2017:

(in millions)	2018	2017
Contingent consideration liability, at July 1	\$ 6.5	\$ 5.7
Foreign currency translation	0.1	0.4
Total losses included in earnings ^(a)	0.3	0.1
Contingent consideration liability, at September 30	<u>\$ 6.9</u>	<u>\$ 6.2</u>

(a) Changes in the fair value of contingent consideration liabilities are included as a component of Acquisition and integration-related expenses within the Condensed Consolidated Statements of Operations.

The following table provides a roll-forward of the fair value of recurring Level 3 fair value measurements in the nine months ended September 30, 2018 and 2017:

(in millions)	2018	2017
Contingent consideration liability, at January 1	\$ 6.3	\$ 5.1
Foreign currency translation	(0.1)	0.5
Total losses included in earnings ^(a)	0.7	0.6
Contingent consideration liability, at September 30	<u>\$ 6.9</u>	<u>\$ 6.2</u>

(a) Changes in the fair value of contingent consideration liabilities are included as a component of Acquisition and integration-related expenses within the Condensed Consolidated Statements of Operations.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is designed to provide information that is supplemental to, and should be read together with, the condensed consolidated financial statements and the accompanying notes contained in this Form 10-Q, as well as the Company's Annual Report on Form 10-K for the year ended December 31, 2017. Information in MD&A is intended to assist the reader in obtaining an understanding of (i) the condensed consolidated financial statements, (ii) the Company's business segments and how the results of those segments impact the Company's results of operations and financial condition as a whole and (iii) how certain accounting principles affect the Company's condensed consolidated financial statements. The Company's results for interim periods are not necessarily indicative of annual operating results.

Executive Summary

The Company is a leading global manufacturer and supplier of (i) vehicles and equipment for maintenance and infrastructure end-markets, including sewer cleaners, vacuum trucks, street sweepers, dump truck bodies and trailers and (ii) safety, security and communication equipment, such as lights, sirens and warning systems. The Company also distributes and re-sells products manufactured by other companies, which include refuse and recycling collection vehicles, camera systems, ice resurfacing equipment and snow-removal equipment. In addition, we sell parts and provide service, repair, equipment rentals and training as part of a comprehensive offering to our customer base. We operate 14 manufacturing facilities in five countries around the world and provide products and integrated solutions to municipal, governmental, industrial and commercial customers in all regions of the world.

As described in Note 10 – Segment Information to the accompanying condensed consolidated financial statements, the Company's business units are organized and managed in two operating segments: the Environmental Solutions Group and the Safety and Security Systems Group.

Net sales increased by \$20.7 million, or 8%, in the three months ended September 30, 2018 as compared to the prior-year quarter. Our Environmental Solutions Group reported a net sales increase of \$17.8 million, or 9%, largely due to increases in shipments of vacuum trucks, sewer cleaners and dump truck bodies, as well as higher aftermarket revenue, represented by increases in rental income, used equipment sales and parts and service revenues. These improvements were partially offset by lower refuse truck sales. Within our Safety and Security Systems Group, net sales increased by \$2.9 million, or 6%, primarily due to higher global sales of public safety products and improved international sales of warning systems.

For the nine months ended September 30, 2018, net sales increased by \$159.2 million, or 24%, as compared to the corresponding period of the prior year. Within our Environmental Solutions Group, net sales improved by \$145.6 million, or 29%, largely due to \$94.1 million of incremental net sales from TBEI, associated with the inclusion of nine months of activity in 2018, compared to only four months in the prior-year period, as well as increased shipments of vacuum trucks, sewer cleaners and street sweepers, as well as higher aftermarket revenue, represented by increases in rental income, used equipment sales and parts and service revenues. These improvements were partially offset by lower sales of products manufactured by other companies, such as refuse trucks. In our Safety and Security Systems Group, net sales increased by \$13.6 million, or 9%, primarily due to higher global sales of public safety products, improved international sales of warning systems and favorable foreign currency translation effects.

Operating income increased by \$8.1 million, or 36%, to \$30.4 million in the three months ended September 30, 2018 as compared to the prior-year quarter, primarily driven by a \$7.1 million increase within our Environmental Solutions Group associated with increased sales volumes and improved operating leverage. Operating income in the three months ended September 30, 2018 within our Safety and Security Systems Group increased by \$1.9 million, while corporate expenses increased by \$0.9 million. Consolidated operating margin for the three months ended September 30, 2018 was 11.3%, up from 9.0% in the prior-year quarter.

For the nine months ended September 30, 2018, operating income increased by \$35.6 million as compared to the corresponding period of the prior year. Within our Environmental Solutions Group, operating income for the nine months ended September 30, 2018 increased by \$33.6 million, or 64%, with higher sales volumes, improved operating leverage and an incremental operating income contribution of \$9.5 million from TBEI, associated with including nine months of activity in 2018, compared to only four months in the prior-year period. TBEI's operating income contribution in the first nine months of 2018 included the effects of amortization expense on intangible assets acquired, which contributed to an increase in depreciation and amortization expense of \$6.0 million. Within our Safety and Security Systems Group, operating income in the nine months ended September 30, 2018 increased by \$4.2 million, while corporate expenses increased by \$2.2 million. Consolidated operating margin for the nine months ended September 30, 2018 was 10.9%, compared to 8.1% in the prior-year period.

Income before income taxes increased by \$8.2 million, or 41%, to \$28.2 million for the three months ended September 30, 2018 as compared to the prior-year quarter. The increase resulted from the higher operating income and a \$0.5 million decrease in interest expense, partially offset by a \$0.4 million decrease in other income. For the nine months ended September 30, 2018, income before income taxes increased by \$31.8 million, or 65%, as compared to the prior-year period, primarily due to the increase in operating income, partially offset by a \$2.6 million increase in interest expense and a \$1.2 million decrease in other income.

Net income for the three months ended September 30, 2018 benefited from a \$1.0 million reduction in income tax expense, largely due to the impact of the lower U.S. federal corporate tax rate following the enactment of the 2017 Tax Act and the absence of \$0.6 million of discrete tax expense recognized in the prior-year quarter in connection with state tax rate changes, partially offset by higher pre-tax income levels. For the nine months ended September 30, 2018, income tax expense increased by \$1.5 million, largely due to higher pre-tax income levels, partially offset by the lower U.S. corporate tax rate following the enactment of the 2017 Tax Act. The effective tax rate for the three months ended September 30, 2018 was 23.0%, compared to 37.5% in the prior-year quarter, while the effective tax rate for the nine months ended September 30, 2018 was 23.5%, compared to 35.8% in the prior-year period. We currently expect our full-year effective tax rate to be approximately 24%.

Total orders for the three months ended September 30, 2018 were \$268.1 million, an increase of \$38.5 million, or 17%, as compared to the prior-year quarter. Our Environmental Solutions Group reported total orders of \$214.5 million in the third quarter of 2018, an increase of \$36.3 million, or 20%, compared to the prior-year quarter, primarily represented by improved orders for vacuum trucks, inclusive of higher demand from customers for our safe digging equipment, higher aftermarket demand and improvements in orders for sewer cleaners, street sweepers and dump truck bodies. Orders in the three months ended September 30, 2018 within our Safety and Security Systems Group were up \$2.2 million, or 4%, primarily due to improved domestic orders for public safety products and industrial signaling equipment.

For the nine months ended September 30, 2018, total orders were \$875.4 million, an increase of \$160.1 million, or 22%, compared to the prior-year period. Our Environmental Solutions Group reported total orders of \$706.2 million in the nine months ended September 30, 2018, an increase of \$146.7 million, or 26%, compared to the prior-year period. The improvement was driven by the effects of the inclusion of TBEI orders for nine months in 2018, higher aftermarket demand and improved orders for vacuum trucks and sewer cleaners, partially offset by lower orders for refuse trucks. Orders in the nine months ended September 30, 2018 within our Safety and Security Systems Group were up \$13.4 million, or 9%, primarily due to improved orders for public safety products and favorable foreign currency translation effects.

Our consolidated backlog at September 30, 2018 was \$320.6 million, up \$116.9 million, or 57%, compared to \$203.7 million at September 30, 2017, largely as a result of the increase in orders for vacuum trucks and sewer cleaners received in the nine months ended September 30, 2018.

Results of Operations

The following table summarizes our Condensed Consolidated Statements of Operations and illustrates the key financial indicators used to assess our consolidated financial results:

(\$ in millions, except per share data)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2018	2017	Change	2018	2017	Change
Net sales	\$ 269.4	\$ 248.7	\$ 20.7	\$ 810.1	\$ 650.9	\$ 159.2
Cost of sales	200.4	187.4	13.0	600.0	491.3	108.7
Gross profit	69.0	61.3	7.7	210.1	159.6	50.5
Selling, engineering, general and administrative expenses	38.2	38.2	—	120.7	104.4	16.3
Acquisition and integration-related expenses	0.4	0.7	(0.3)	1.3	2.2	(0.9)
Restructuring	—	0.1	(0.1)	—	0.5	(0.5)
Operating income	30.4	22.3	8.1	88.1	52.5	35.6
Interest expense	2.2	2.7	(0.5)	7.2	4.6	2.6
Other (income) expense, net	—	(0.4)	0.4	0.5	(0.7)	1.2
Income before income taxes	28.2	20.0	8.2	80.4	48.6	31.8
Income tax expense	6.5	7.5	(1.0)	18.9	17.4	1.5
Net income	\$ 21.7	\$ 12.5	\$ 9.2	\$ 61.5	\$ 31.2	\$ 30.3
Operating data:						
Operating margin	11.3%	9.0%	2.3%	10.9%	8.1%	2.8%
Diluted earnings per share	\$ 0.36	\$ 0.21	\$ 0.15	\$ 1.01	\$ 0.52	\$ 0.49
Total orders	268.1	229.6	38.5	875.4	715.3	160.1
Backlog	320.6	203.7	116.9	320.6	203.7	116.9
Depreciation and amortization	9.4	9.0	0.4	27.0	21.3	5.7

Net sales

Net sales increased by \$20.7 million, or 8%, in the three months ended September 30, 2018 as compared to the prior-year quarter. Our Environmental Solutions Group reported a net sales increase of \$17.8 million, or 9%, largely due to increases in shipments of vacuum trucks, sewer cleaners and dump truck bodies, as well as higher aftermarket revenue, represented by increases in rental income, used equipment sales and parts and service revenues. These improvements included benefits from pricing actions and were partially offset by lower refuse truck sales. Within our Safety and Security Systems Group, net sales increased by \$2.9 million, or 6%, primarily due to higher global sales of public safety products and improved international sales of warning systems.

For the nine months ended September 30, 2018, net sales increased by \$159.2 million, or 24%, as compared to the corresponding period of the prior year. Within our Environmental Solutions Group, net sales improved by \$145.6 million, or 29%, largely due to \$94.1 million of incremental net sales from TBEI, associated with the inclusion of nine months of activity in 2018, compared to only four months in the prior-year period, as well as increased shipments of vacuum trucks, sewer cleaners and street sweepers, as well as higher aftermarket revenue, represented by increases in rental income, used equipment sales and parts and service revenues. These improvements included benefits from pricing actions and were partially offset by lower sales of products manufactured by other companies, such as refuse trucks. In our Safety and Security Systems Group, net sales increased by \$13.6 million, or 9%, primarily due to higher global sales of public safety products, improved international sales of warning systems and favorable foreign currency translation effects.

Cost of sales

Cost of sales increased by \$13.0 million, or 7%, for the three months ended September 30, 2018 compared to the prior-year quarter, largely due to an increase of \$11.5 million, or 7%, within the Environmental Solutions Group, primarily driven by increased sales volumes, higher material costs and a \$0.6 million increase in depreciation expense, partially offset by a \$1.3 million reduction in purchase accounting expenses. Within the Safety and Security Systems Group, cost of sales increased by \$1.5 million, or 5%, driven by higher sales volumes.

For the nine months ended September 30, 2018, cost of sales increased by \$108.7 million, or 22%, largely due to an increase of \$99.2 million, or 25%, within the Environmental Solutions Group, primarily driven by increased sales volumes, the effects of nine months of TBEI activity in the current-year period compared with four months in the prior-year period, higher material costs and a \$2.7 million increase in depreciation expense, partially offset by a \$3.3 million reduction in purchase accounting expenses. Within the Safety and Security Systems Group, cost of sales increased by \$9.5 million, or 10%, largely driven by higher sales volumes and unfavorable foreign currency translation effects.

Gross profit

Gross profit increased by \$7.7 million, or 13%, for the three months ended September 30, 2018, compared to the prior-year quarter, primarily due to improvements of \$6.3 million and \$1.4 million within the Environmental Solutions Group and the Safety and Security Systems Group, respectively. Gross margin for the three months ended September 30, 2018 improved to 25.6%, from 24.6% in the prior-year quarter, primarily driven by a 110 basis point gross margin improvement within the Environmental Solutions Group, associated with improved operating leverage, benefits from pricing actions taken in response to higher material costs in comparison to the prior-year quarter and the reduction in purchase accounting expenses, partially offset by the higher depreciation expense.

For the nine months ended September 30, 2018, gross profit increased by \$50.5 million, or 32%, primarily due to improvements of \$46.4 million and \$4.1 million within the Environmental Solutions Group and the Safety and Security Systems Group, respectively. Gross margin for the nine months ended September 30, 2018 was 25.9%, compared to 24.5% in the prior-year period, primarily driven by a 250 basis point gross margin improvement within the Environmental Solutions Group, associated with improved operating leverage, benefits from actions taken in response to higher commodity costs, favorable sales mix and the aforementioned reduction in purchase accounting expenses, partially offset by the higher depreciation expense.

Selling, engineering, general and administrative expenses

Selling, engineering, general and administrative (“SEG&A”) expenses for the three months ended September 30, 2018 were largely unchanged compared to the prior-year quarter. Reductions in SEG&A expenses within the Environmental Solutions Group and Safety and Security Systems Group of \$0.8 million and \$0.4 million, respectively, were largely offset by a \$1.2 million increase in corporate SEG&A expenses. As a percentage of net sales, SEG&A expenses decreased from 15.4% in the prior-year quarter, to 14.2% in the current-year quarter.

For the nine months ended September 30, 2018, SEG&A expenses increased by \$16.3 million, or 16%, primarily represented by a \$12.6 million increase within the Environmental Solutions Group, largely the result of the addition of expenses of associated with the TBEI acquisition, including an increase in amortization expense of \$3.0 million. SEG&A expenses within the Safety and Security Systems Group increased by \$0.4 million, primarily due to increased expenses associated with new product development and other growth initiatives, while corporate SEG&A expenses increased by \$3.3 million. As a percentage of net sales, SEG&A expenses decreased from 16.0% in the prior-year period, to 14.9% in the current-year period.

Operating income

Operating income increased by \$8.1 million, or 36%, to \$30.4 million in the three months ended September 30, 2018 as compared to the prior-year quarter, primarily driven by a \$7.1 million increase within our Environmental Solutions Group associated with increased sales volumes and improved operating leverage. Operating income in the three months ended September 30, 2018 within our Safety and Security Systems Group increased by \$1.9 million, while corporate expenses increased by \$0.9 million. Consolidated operating margin for the three months ended September 30, 2018 was 11.3%, up from 9.0% in the prior-year quarter.

For the nine months ended September 30, 2018, operating income increased by \$35.6 million as compared to the corresponding period of the prior year. Within our Environmental Solutions Group, operating income for the nine months ended September 30, 2018 increased by \$33.6 million, or 64%, with higher sales volumes, improved operating leverage and an incremental operating income contribution of \$9.5 million from TBEI, associated with including nine months of activity in 2018, compared to only four months in the prior-year period. TBEI’s operating income contribution in the first nine months of 2018 included the effects of amortization expense on intangible assets acquired, which contributed to an increase in depreciation and amortization expense of \$6.0 million. Within our Safety and Security Systems Group, operating income in the nine months ended September 30, 2018 increased by \$4.2 million, while corporate expenses increased by \$2.2 million, primarily due to higher stock compensation and employee incentive costs, partially offset by a \$1.1 million decrease in acquisition and integration-related expenses. Consolidated operating margin for the nine months ended September 30, 2018 was 10.9%, compared to 8.1% in the prior-year period.

Interest expense

Interest expense for the three months ended September 30, 2018 decreased by \$0.5 million in comparison to the prior-year quarter, largely due to lower average debt levels in the third quarter of this year when compared to same period of last year. For the nine months ended September 30, 2018 interest expense increased by \$2.6 million compared to the corresponding period of the prior year, largely due to higher average debt levels following the acquisition of TBEI, which was completed in June 2017.

Other (income) expense, net

For the three months ended September 30, 2018, other expense was insignificant, with nominal foreign currency transaction gains being offset by pension expense, whereas in the prior-year period, other income of \$0.4 million was realized, representing foreign currency transaction gains that were partially offset by \$0.1 million of pension expense. For the nine months ended September 30, 2018, other expense totaled \$0.5 million and was primarily related to foreign currency transaction losses and pension expense, whereas in the prior-year period, other income of \$0.7 million was realized, representing foreign currency transaction gains that were partially offset by \$0.3 million of pension expense.

Income tax expense

The Company recognized income tax expense of \$6.5 million and \$7.5 million for the three months ended September 30, 2018 and 2017, respectively. The reduction in tax expense in the current-year quarter is largely due to the impact of the lower U.S. federal corporate tax rate following the enactment of the 2017 Tax Act and the absence of \$0.6 million of discrete tax expense recognized in the prior-year quarter in connection with state tax rate changes, partially offset by higher pre-tax income levels. The effective tax rate for the three months ended September 30, 2018 was 23.0%, compared to 37.5% in the prior-year quarter, reflecting the lower U.S. federal corporate tax rate.

For the nine months ended September 30, 2018 and 2017, the Company recognized income tax expense of \$18.9 million and \$17.4 million, respectively. The increase in tax expense in the current year is largely due to higher pre-tax income levels, offset by the impact of the lower U.S. federal corporate tax rate following the enactment of the 2017 Tax Act, the recognition of a \$0.6 million excess tax benefit from stock compensation activity and the absence of \$0.6 million of discrete tax expense recognized in the prior-year period in connection with state tax rate changes. The effective tax rate for the nine months ended September 30, 2018 was 23.5%, compared to 35.8% in the prior-year period, reflecting the lower U.S. federal corporate tax rate and the excess tax benefit.

Net income

Net income for the three months ended September 30, 2018 increased by \$9.2 million compared to the prior-year period, largely due to the aforementioned increase in operating income, lower interest expense and \$1.0 million reduction in income tax expense, partially offset by the decrease in other income.

For the nine months ended September 30, 2018, net income increased by \$30.3 million compared to the corresponding period of the prior year, largely due to the aforementioned increase in operating income, partially offset by the increase in interest expense, the decrease in other income and the \$1.5 million increase in income tax expense.

Orders

On the date of acquisition, TBEI had a backlog of orders from its end customers of \$44.8 million. These acquired orders were included in total orders reported for the nine months ended September 30, 2017.

Three Months Ended September 30, 2018 vs. three months ended September 30, 2017

Total orders for the three months ended September 30, 2018 were \$268.1 million, an increase of \$38.5 million, or 17%, as compared to the prior-year quarter. Our Environmental Solutions Group reported total orders of \$214.5 million in the third quarter of 2018, an increase of \$36.3 million, or 20%, compared to the prior-year quarter, primarily represented by improved orders for vacuum trucks, inclusive of higher demand from customers for our safe digging equipment, higher aftermarket demand and improvements in orders for sewer cleaners, street sweepers and dump truck bodies. Orders in the three months ended September 30, 2018 within our Safety and Security Systems Group were up \$2.2 million, or 4%, primarily due to improved domestic orders for public safety products and industrial signaling equipment.

U.S. municipal and governmental orders increased by \$11.3 million, or 14%, primarily due to an \$11.9 million increase within the Environmental Solutions Group, largely represented by an \$8.1 million increase in orders for sewer cleaners and higher orders for street sweepers and vacuum trucks. Within the Safety and Security Systems Group, municipal orders decreased by

\$0.6 million, with reductions in orders for warning systems being partially offset by higher demand for public safety equipment.

U.S. industrial orders increased by \$20.1 million, or 20%, primarily due to a \$17.3 million increase within the Environmental Solutions Group, largely represented by a \$14.0 million increase in orders for vacuum trucks, higher aftermarket demand and improved orders for dump truck bodies. The Safety and Security Systems Group reported a \$2.8 million increase in industrial orders, primarily due to improved orders for industrial signaling equipment and warning systems.

Non-U.S. orders increased by \$7.1 million, or 14%, primarily due to a \$7.1 million improvement within the Environmental Solutions Group, associated with improved orders for sewer cleaners, street sweepers and vacuum trucks, partially offset by a decrease in orders for snow-removal equipment and refuse trucks.

Nine months ended September 30, 2018 vs. nine months ended September 30, 2017

Total orders for the nine months ended September 30, 2018 were \$875.4 million, an increase of \$160.1 million, or 22%, compared to the prior-year period. Our Environmental Solutions Group reported total orders of \$706.2 million in the nine months ended September 30, 2018, an increase of \$146.7 million, or 26%, compared to the prior-year period. The improvement was driven by the effects of the inclusion of TBEI orders for nine months in 2018, higher aftermarket demand and improved orders for vacuum trucks and sewer cleaners, partially offset by lower orders of products manufactured by other companies, such as refuse trucks. Orders in the nine months ended September 30, 2018 within our Safety and Security Systems Group were up \$13.4 million, or 9%, primarily due to improved orders for public safety products and favorable foreign currency translation effects.

U.S. municipal and governmental orders increased by \$28.1 million, or 11%, primarily due to a \$26.8 million increase within the Environmental Solutions Group, associated with a \$20.4 million increase in orders for sewer cleaners, higher aftermarket demand and improved street sweeper orders. Within the Safety and Security Systems Group, municipal orders increased by \$1.3 million, largely driven by higher orders for public safety products, partially offset by fewer warning system orders.

U.S. industrial orders increased by \$115.1 million, or 39%, primarily due to a \$110.8 million increase within the Environmental Solutions Group, largely driven by the acquisition of TBEI, which added \$67.1 million of incremental industrial orders, a \$45.7 million increase in vacuum truck orders and higher aftermarket demand. The Safety and Security Systems Group reported a \$4.3 million increase in industrial orders, primarily due to improvements in orders for industrial signaling equipment and warnings systems.

Non-U.S. orders increased by \$16.9 million, or 10%. Within the Environmental Solutions Group, non-U.S. orders increased by \$9.1 million, primarily due to improved aftermarket demand, as well as increased orders for sewer cleaners, vacuum trucks, waterblasting equipment and street sweepers. These improvements were partially offset by fewer refuse truck orders. Within the Safety and Security Systems Group, non-U.S. orders increased by \$7.8 million, largely driven by increases in orders for public safety products and warning systems, in addition to favorable foreign currency translation effects, partially offset by a reduction in orders for industrial signaling equipment.

Backlog

Backlog was \$320.6 million at September 30, 2018 compared to \$203.7 million at September 30, 2017. The increase of \$116.9 million, or 57%, was primarily due to a \$111.9 million increase in backlog within the Environmental Solutions Group, largely due to higher backlog for sewer cleaners and vacuum trucks as a result of the strong orders received in the nine months ended September 30, 2018. Backlog within the Safety and Security Systems Group was also up \$5.0 million, primarily due to increased orders for public safety products and warning systems.

Environmental Solutions

The following table summarizes the Environmental Solutions Group's operating results as of and for the three and nine months ended September 30, 2018 and 2017:

(\$ in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2018	2017	Change	2018	2017	Change
Net sales	\$ 216.3	\$ 198.5	\$ 17.8	\$ 646.2	\$ 500.6	\$ 145.6
Operating income	28.3	21.2	7.1	86.1	52.5	33.6
Operating data:						
Operating margin	13.1%	10.7%	2.4%	13.3%	10.5%	2.8%
Total orders	\$ 214.5	\$ 178.2	\$ 36.3	\$ 706.2	\$ 559.5	\$ 146.7
Backlog	289.6	177.7	111.9	289.6	177.7	111.9
Depreciation and amortization	8.4	7.9	0.5	24.1	18.1	6.0

Three Months Ended September 30, 2018 vs. three months ended September 30, 2017

Total orders increased by \$36.3 million, or 20%, for the three months ended September 30, 2018. U.S. orders increased by \$29.2 million, or 20%, primarily due to increases in orders for vacuum trucks, sewer cleaners and dump truck bodies of \$14.5 million, \$5.9 million and \$3.6 million, respectively. In addition, aftermarket demand, representing orders for parts, service, used and rental equipment, improved by \$3.2 million. Non-U.S. orders increased by \$7.1 million, or 23%, primarily due to improvements in orders of sewer cleaners, street sweepers, and vacuum trucks of \$4.8 million, \$3.9 million and \$0.9 million, respectively, partially offset by a \$2.9 million decrease in orders of products manufactured by other companies, such as snow-removal equipment and refuse trucks.

Net sales increased by \$17.8 million, or 9%, for the three months ended September 30, 2018. U.S. sales increased by \$23.0 million, or 15%, primarily due to increases in shipments of vacuum trucks, sewer cleaners, street sweepers and dump truck bodies of \$9.3 million, \$4.7 million, \$4.1 million and \$2.4 million, respectively. In addition, rental income and sales of used equipment increased by \$1.5 million and \$1.4 million, respectively. Non-U.S. sales decreased by \$5.2 million, or 13%, primarily due to a \$6.8 million reduction in sales of products manufactured by other companies, such as refuse trucks, and a \$2.6 million decrease in street sweeper sales, partially offset by a \$2.0 million increase in sales of vacuum trucks and a \$2.6 million improvement in aftermarket revenue, represented by improvements in parts and service revenues, rental income and used equipment sales.

Cost of sales increased by \$11.5 million, or 7%, for the three months ended September 30, 2018, primarily attributable to increased sales volumes, higher material costs and a \$0.6 million increase in depreciation expense, partially offset by a \$1.3 million reduction in purchase accounting expenses. Gross margin improved to 22.7% from 21.6% in the prior-year quarter, primarily due to improved operating leverage, benefits from pricing actions taken in response to higher material costs in comparison to the prior-year quarter and the reduction in purchase accounting expenses, partially offset by the higher depreciation expense.

SEG&A expenses decreased by \$0.8 million for the three months ended September 30, 2018, largely due to a \$0.2 million reduction in amortization expense and favorable product liability experience. As a percentage of net sales, SEG&A expenses decreased from 10.7% in the prior-year quarter, to 9.5% in the current-year quarter.

Operating income for the three months ended September 30, 2018 increased by \$7.1 million, largely due to a \$6.3 million increase in gross profit and the \$0.8 million reduction in SEG&A expenses.

Nine months ended September 30, 2018 vs. nine months ended September 30, 2017

Total orders increased by \$146.7 million, or 26%, for the nine months ended September 30, 2018. U.S. orders increased by \$137.6 million, or 31%, largely due to the prior-year acquisition of TBEI, which contributed an increase in orders of \$67.3 million. The organic growth in the U.S. was largely due to improvements in orders for vacuum trucks and sewer cleaners of \$46.6 million and \$16.8 million, respectively. In addition, aftermarket demand, representing orders for parts, service, used and rental equipment, improved by \$7.0 million. Non-U.S. orders increased by \$9.1 million, or 8%, primarily attributable to a \$6.5 million improvement in aftermarket orders, as well as increases in orders for sewer cleaners, vacuum trucks, waterblasting equipment and street sweepers of \$4.6 million, \$3.8 million, \$3.8 million and \$3.7 million, respectively. The acquisition of TBEI also contributed \$1.1 million of incremental orders. Partially offsetting these improvements was a \$15.4 million decrease in refuse truck orders.

Net sales increased by \$145.6 million, or 29%, for the nine months ended September 30, 2018. U.S. sales increased by \$145.2 million, or 38%, primarily due to the inclusion of five more months of TBEI activity in the current-year period, accounting for \$93.1 million of the sales increase, as well as increases in shipments of vacuum trucks, sewer cleaners, and street sweepers of \$25.5 million, \$17.2 million and \$5.3 million, respectively. In addition, rental income increased by \$3.1 million and sales of used equipment and parts improved by \$2.2 million and \$0.6 million, respectively. Non-U.S. sales increased by \$0.4 million, primarily due to increases in shipments of vacuum trucks and snow-removal equipment of \$7.0 million and \$4.0 million, respectively. Parts and service revenues, rental income and used equipment sales also increased by \$5.3 million, \$3.0 million and \$1.5 million, respectively. Partially offsetting these improvements was a reduction in sales of refuse trucks and sewer cleaners of \$17.2 million and \$1.6 million, respectively.

Cost of sales increased by \$99.2 million, or 25%, for the nine months ended September 30, 2018, primarily attributable to increased sales volumes, the effects of nine months of TBEI activity in the current-year compared with four months in the prior-year period, higher material costs and a \$2.7 million increase in depreciation expense, partially offset by a \$3.3 million reduction in purchase accounting expenses. Gross margin increased to 23.2% from 20.7% in the prior-year period, primarily due to improved operating leverage, benefits from actions taken in response to higher commodity costs, favorable sales mix and the reduction in purchase accounting expenses, partially offset by the higher depreciation expense.

SEG&A expenses increased by \$12.6 million for the nine months ended September 30, 2018, largely due to the addition of expenses associated with the TBEI acquisition, including an increase in amortization expense of \$3.0 million. As a percentage of net sales, SEG&A expenses decreased from 10.0% in the prior-year period, to 9.7% in the current-year period.

Operating income for the nine months ended September 30, 2018 increased by \$33.6 million, largely due to a \$46.4 million increase in gross profit, partially offset by the \$12.6 million increase in SEG&A expenses and a \$0.2 million increase in acquisition-related expenses.

Backlog was \$289.6 million at September 30, 2018, up 63% compared to \$177.7 million at September 30, 2017. The increase was largely a result of the increase in orders for vacuum trucks and sewer cleaners received in the nine months ended September 30, 2018.

Safety and Security Systems

The following table summarizes the Safety and Security Systems Group's operating results as of and for the three and nine months ended September 30, 2018 and 2017:

(\$ in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2018	2017	Change	2018	2017	Change
Net sales	\$ 53.1	\$ 50.2	\$ 2.9	\$ 163.9	\$ 150.3	\$ 13.6
Operating income	8.0	6.1	1.9	22.3	18.1	4.2
Operating data:						
Operating margin	15.1%	12.2%	2.9%	13.6%	12.0%	1.6%
Total orders	\$ 53.6	\$ 51.4	\$ 2.2	\$ 169.2	\$ 155.8	\$ 13.4
Backlog	31.0	26.0	5.0	31.0	26.0	5.0
Depreciation and amortization	0.9	1.1	(0.2)	2.8	3.1	(0.3)

Three Months Ended September 30, 2018 vs. three months ended September 30, 2017

Total orders increased by \$2.2 million, or 4%, for the three months ended September 30, 2018. In the aggregate, U.S. orders increased by \$2.2 million, or 7%, primarily driven by improvements in orders for public safety products and industrial signaling equipment of \$1.8 million and \$1.3 million, respectively, partially offset by a \$1.0 million reduction in orders for warning systems. Non-U.S. orders, in the aggregate, were generally consistent with orders received in the prior-year quarter. Orders for warning systems improved by \$0.8 million, but were largely offset by reductions in orders for public safety products and industrial signaling equipment of \$0.5 million and \$0.3 million, respectively.

Net sales increased by \$2.9 million, or 6%, for the three months ended September 30, 2018. U.S. sales increased by \$0.8 million, or 2%, primarily due to increases in sales of public safety products and industrial signaling equipment of \$0.6 million and \$0.3 million, respectively. Non-U.S. sales increased by \$2.1 million, or 12%, primarily due to increases in sales of warning systems and public safety products of \$1.4 million and \$1.0 million, respectively.

Cost of sales increased by \$1.5 million, or 5%, for the three months ended September 30, 2018, largely due to higher sales volumes. Gross margin for the three months ended September 30, 2018 improved to 37.5%, compared to 36.9% in the prior-year quarter.

SEG&A expenses for the three months ended September 30, 2018 decreased by \$0.4 million, or 3%. As a percentage of net sales, SEG&A expenses decreased from 24.5% in the prior-year quarter, to 22.4% in the current-year quarter.

Operating income increased by \$1.9 million for the three months ended September 30, 2018. The increase was primarily attributable to the \$1.4 million improvement in gross profit, the \$0.4 million reduction in SEG&A expenses and a \$0.1 million decrease in restructuring charges.

Nine months ended September 30, 2018 vs. nine months ended September 30, 2017

Total orders increased by \$13.4 million or 9%, for the nine months ended September 30, 2018. In the aggregate, U.S. orders increased by \$5.6 million, or 6%, primarily driven by improvements in orders for domestic public safety products, industrial signaling equipment and warning systems of \$4.3 million, \$0.7 million and \$0.6 million, respectively. Non-U.S. orders increased by \$7.8 million, or 14%, largely due to improvements in orders for public safety products and warning systems of \$5.4 million and \$0.6 million, respectively, in addition to a \$2.6 million favorable foreign currency translation impact, partially offset by a \$0.8 million reduction in orders for industrial signaling equipment.

Net sales increased by \$13.6 million, or 9%, for the nine months ended September 30, 2018. U.S. sales increased by \$4.1 million, or 4%, primarily due to a \$5.2 million increase in sales of public safety products, partially offset by reductions in sales of warning systems and industrial signaling equipment of \$0.8 million and \$0.3 million, respectively. Non-U.S. sales increased by \$9.5 million, or 19%, primarily due to increases in sales of public safety products and warning systems of \$4.5 million and \$1.9 million, respectively, as well as a \$2.1 million favorable foreign currency translation impact. In addition, sales into international coal markets increased by \$0.9 million compared to the prior-year period.

Cost of sales increased by \$9.5 million, or 10%, for the nine months ended September 30, 2018, largely due to higher sales volumes and an unfavorable foreign currency translation impact of \$1.6 million. Gross margin for the nine months ended September 30, 2018 was 36.7%, compared to 37.3% in the prior-year period, driven by unfavorable mix experienced in the first quarter of 2018 in comparison to the same period of the prior-year.

SEG&A expenses for the nine months ended September 30, 2018 increased by \$0.4 million, or 1%, primarily due to increased expenses associated with new product development and other growth initiatives. As a percentage of net sales, SEG&A expenses decreased from 25.0% in the prior-year period, to 23.1% in the current-year period.

Operating income increased by \$4.2 million for the nine months ended September 30, 2018. The increase was primarily attributable to the \$4.1 million increase in gross profit and a \$0.5 million reduction in restructuring charges, partially offset by the \$0.4 million increase in SEG&A expenses.

Backlog was \$31.0 million at September 30, 2018, up 19% from \$26.0 million at September 30, 2017, primarily due to increased orders for public safety products and warning systems.

Corporate Expenses

Corporate operating expenses for the three months ended September 30, 2018 were \$5.9 million, compared to \$5.0 million in the prior-year quarter. The increase was primarily driven by higher stock compensation and employee incentive costs, which were partially offset by a \$0.3 million reduction in acquisition and integration-related expenses.

Corporate operating expenses for the nine months ended September 30, 2018 were \$20.3 million, compared to \$18.1 million in the prior-year period. The increase was primarily driven by higher stock compensation and employee incentive costs, partially offset by a \$1.1 million decrease in acquisition and integration-related expenses.

Seasonality of Company's Business

Certain of the Company's businesses are susceptible to the influences of seasonal factors, including buying patterns, delivery patterns and productivity influences from holiday periods and weather. In general, the Company tends to have lower equipment sales in the first calendar quarter of each year compared to other quarters as a result of these factors. In addition, rental income and parts sales are generally higher in the second and third quarters of the year, because many of the Company's products are used for maintenance activities in North America, where usage is typically lower during periods of harsher weather conditions.

Financial Condition, Liquidity and Capital Resources

The Company uses its cash flow from operations to fund growth, make capital investments that sustain its operations, reduce costs, or both, and make pension contributions. Beyond these uses, remaining cash may be used to fund additional strategic acquisitions of businesses, pay down debt, repurchase shares, or fund dividend payments. In the absence of significant unanticipated cash demands, we believe that the Company's existing cash balances, cash flow from operations and borrowings available under the Amended 2016 Credit Agreement, will provide funds sufficient for these purposes. The net cash flows associated with the Company's rental equipment transactions are included in cash flow from operating activities.

The Company's cash and cash equivalents totaled \$35.0 million and \$37.5 million as of September 30, 2018 and December 31, 2017, respectively. As of September 30, 2018, \$20.9 million of cash and cash equivalents was held by foreign subsidiaries. Cash and cash equivalents held by subsidiaries outside the U.S. typically are held in the currency of the country in which it is located. This cash is used to fund the operating activities of our foreign subsidiaries and for further investment in foreign operations. Generally, we consider such cash to be permanently reinvested in our foreign operations and our current plans do not demonstrate a need to repatriate such cash to fund U.S. operations. However, in the event that these funds were needed to fund U.S. operations or to satisfy U.S. obligations, they generally could be repatriated. The repatriation of these funds may then cause us to incur additional U.S. income tax expense, which would be dependent on income tax laws and other circumstances at the time any such amounts were repatriated. The 2017 Tax Act provides a one-time "transition tax" on E&P of a company's CFC determined as of November 2, 2017 or December 31, 2017 (whichever date on which there is more deferred E&P). The Company's accumulated undistributed earnings of foreign subsidiaries aggregated to an overall E&P deficit. Therefore, the Company estimates that no transition tax will be payable under the provisions of the 2017 Tax Act. As with other tax calculations surrounding the 2017 Tax Act, the Company's estimate of its transition tax liability as of September 30, 2018 is provisional due to complexities inherent in the computations that it expects to be addressed in whole, or in part, by regulations issued during 2018. The Company will continue to evaluate its U.S. and foreign cash needs and, as circumstances change, may change its assertion related to all or a portion of its undistributed foreign earnings.

Net cash of \$71.9 million was generated by continuing operating activities in the nine months ended September 30, 2018, up \$19.8 million, or 38%, from \$52.1 million in the prior-year period, primarily due to higher earnings and additional cash generated by TBEI in nine months of activity this year compared to four months in the prior-year period. These improvements were partially offset by increases in pension contributions and income tax payments of \$3.4 million and \$2.9 million, respectively, as well as higher incentive compensation payments in comparison to the prior year.

Net cash of \$7.1 million was used for continuing investing activities in the nine months ended September 30, 2018, compared with \$274.3 million in the prior-year period. In the nine months ended September 30, 2017, the Company paid an initial \$269.2 million (net of cash acquired) to acquire TBEI. During the nine months ended September 30, 2018, the Company received \$3.0 million as part of the finalization of certain post-closing adjustments in connection with the acquisition of TBEI. Capital expenditures in the nine months ended September 30, 2018 and 2017 were \$10.1 million and \$5.3 million, respectively.

Net cash of \$66.6 million was used for continuing financing activities in the nine months ended September 30, 2018, whereas in the prior-year period, \$200.0 million of cash was provided by continuing financing activities. In the nine months ended September 30, 2018, the Company paid down \$53.6 million of debt and funded cash dividends of \$13.8 million. In the nine months ended September 30, 2017, in connection with the funding of the acquisition of TBEI, the Company borrowed \$243.0 million against its revolving credit facility. Prior to September 30, 2017, approximately \$29 million of those borrowings were paid down. In addition, the Company funded cash dividends of \$12.6 million and redeemed \$2.5 million of stock in order to remit funds to tax authorities to satisfy employees' tax withholdings following the vesting of stock-based compensation.

The Company is subject to certain leverage ratio and interest coverage ratio financial covenants under the Amended 2016 Credit Agreement that are to be measured at each fiscal quarter-end. The Company was in compliance with all such covenants as of September 30, 2018.

As of September 30, 2018, there was \$221.4 million of cash drawn and \$12.3 million of undrawn letters of credit under the Amended 2016 Credit Agreement, with \$166.3 million of net availability for borrowings. As of September 30, 2018, there were no borrowings against the Company's non-U.S. lines of credit which provide for borrowings of up to \$0.1 million.

The Company anticipates that capital expenditures for 2018 will be approximately \$15 million.

Contractual Obligations and Off-Balance Sheet Arrangements

During the nine months ended September 30, 2018, there have been no material changes in the Company's contractual obligations and off-balance sheet arrangements as described in Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations*, of the Company's Annual Report on Form 10-K for the year ended December 31, 2017.

Item 3. *Quantitative and Qualitative Disclosures about Market Risk.*

See Item 7A, *Quantitative and Qualitative Disclosures about Market Risk*, of the Company's Annual Report on Form 10-K for the year ended December 31, 2017. During the nine months ended September 30, 2018, there have been no significant changes in our exposure to market risk.

Item 4. *Controls and Procedures.*

As required by Rule 13a-15 under the Exchange Act, the Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) or Rule 15d-15(e) under the Exchange Act) as of September 30, 2018. Based on that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of September 30, 2018.

As a matter of practice, the Company's management continues to review and document internal control and procedures for financial reporting. From time to time, the Company may make changes aimed at enhancing the effectiveness of the controls and ensuring that the systems evolve with the business. There were no changes in the Company's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting during the three months ended September 30, 2018.

PART II. OTHER INFORMATION

Item 1. *Legal Proceedings.*

The information set forth under the heading “Legal Proceedings” in Note 7 – Commitments and Contingencies to the accompanying condensed consolidated financial statements as included in Part I of this Form 10-Q is incorporated herein by reference.

Item 1A. *Risk Factors.*

There have been no material changes in the Company’s risk factors as described in Item 1A, *Risk Factors*, of the Company’s Annual Report on Form 10-K for the year ended December 31, 2017.

Item 2. *Unregistered Sales of Equity Securities and Use of Proceeds.*

Restrictions upon the Payment of Dividends

Under the terms of the Company’s Amended 2016 Credit Agreement, restricted payments, including dividends and stock repurchases, shall be permitted if (i) the Company’s leverage ratio is less than or equal to 2.50, (ii) the Company is in compliance with all other financial covenants and (iii) there are no existing defaults under the Amended 2016 Credit Agreement. If the leverage ratio is more than 2.50, the Company is still permitted to fund (i) up to \$30.0 million of dividend payments, (ii) stock repurchases sufficient to offset dilution created by the issuance of equity as compensation to its officers, directors, employees and consultants and (iii) an incremental \$30.0 million of other cash payments.

The Company is able to declare dividends at current levels under the restricted payment guidelines set forth above.

Purchases of Equity Securities

The following table provides a summary of the Company’s repurchase activity for its common stock during the three months ended September 30, 2018:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs ^(a)
July 2018 (7/1/18 – 8/4/18)	—	\$ —	—	\$ 31,395,802
August 2018 (8/5/18 – 9/1/18)	—	—	—	31,395,802
September 2018 (9/2/18 – 9/29/18)	—	—	—	31,395,802

(a) On November 4, 2014, the Board authorized a stock repurchase program of up to \$75.0 million of the Company’s common stock.

Item 3. *Defaults upon Senior Securities.*

None.

Item 4. *Mine Safety Disclosures.*

Not applicable.

Item 5. *Other Information.*

Other Events

On November 6, 2018, the Company issued a press release announcing its financial results for the three and nine months ended September 30, 2018. The presentation slides for the third quarter 2018 earnings call were also posted on the Company’s website at that time. The full text of the third quarter financial results press release and earnings presentation are attached hereto as Exhibits 99.1 and 99.2, respectively, to this Form 10-Q.

Item 6. Exhibits.

- 3.1 [Restated Certificate of Incorporation of the Company. Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed April 30, 2010.](#)
- 3.2 [Amended and Restated By-laws of the Company. Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed February 9, 2016.](#)
- 31.1 [CEO Certification under Section 302 of the Sarbanes-Oxley Act.](#)
- 31.2 [CFO Certification under Section 302 of the Sarbanes-Oxley Act.](#)
- 32.1 [CEO Certification of Periodic Report under Section 906 of the Sarbanes-Oxley Act.](#)
- 32.2 [CFO Certification of Periodic Report under Section 906 of the Sarbanes-Oxley Act.](#)
- 99.1 [Third Quarter Financial Results Press Release, Dated November 6, 2018.](#)
- 99.2 [Third Quarter Earnings Call Presentation Slides.](#)
- 101.INS XBRL Instance Document.
- 101.SCH XBRL Taxonomy Extension Schema Document.
- 101.CAL XBRL Taxonomy Calculation Linkbase Document.
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document.
- 101.LAB XBRL Taxonomy Label Linkbase Document.
- 101.PRE XBRL Taxonomy Presentation Linkbase Document.

SIGNATURE

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.

Federal Signal Corporation

Date: November 6, 2018

/s/ Ian A. Hudson

Ian A. Hudson

*Senior Vice President and Chief Financial Officer
(Principal Financial Officer)*

CEO Certification under Section 302 of the Sarbanes-Oxley Act

I, Jennifer L. Sherman, certify that:

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

Date: November 6, 2018

/s/ Jennifer L. Sherman

Jennifer L. Sherman

President and Chief Executive Officer

(Principal Executive Officer)

CFO Certification under Section 302 of the Sarbanes-Oxley Act

I, Ian A. Hudson, certify that:

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

Date: November 6, 2018

/s/ Ian A. Hudson

Ian A. Hudson

*Senior Vice President and Chief Financial Officer
(Principal Financial Officer)*

**CERTIFICATION PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)**

In connection with the Quarterly Report of Federal Signal Corporation (the "Company") on Form 10-Q for the period ended September 30, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jennifer L. Sherman, President and Chief Executive Officer of the Company, certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (15 U.S.C. 78m or 78o (d)); and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 6, 2018

/s/ Jennifer L. Sherman

Jennifer L. Sherman

President and Chief Executive Officer

(Principal Executive Officer)

This certification accompanies the Report pursuant to § 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section. This certification shall also not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange act of 1934, as amended, except to the extent that the Company specifically incorporates it by reference.

**CERTIFICATION PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)**

In connection with the Quarterly Report of Federal Signal Corporation (the “Company”) on Form 10-Q for the period ended September 30, 2018 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Ian A. Hudson, Senior Vice President and Chief Financial Officer of the Company, certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (15 U.S.C. 78m or 78o (d)); and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 6, 2018

/s/ Ian A. Hudson

Ian A. Hudson

*Senior Vice President and Chief Financial Officer
(Principal Financial Officer)*

This certification accompanies the Report pursuant to § 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section. This certification shall also not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange act of 1934, as amended, except to the extent that the Company specifically incorporates it by reference.

News From



FEDERAL SIGNAL

Protecting people and our planet

REGENCY TOWERS, 1415 W. 22ND ST., OAK BROOK, ILLINOIS 60523

FOR IMMEDIATE RELEASE

Federal Signal Raises Full-Year Outlook after Outstanding Third Quarter

Oak Brook, Illinois, November 6, 2018 — Federal Signal Corporation (NYSE:FSS), a leader in environmental and safety solutions, today reported results for the third quarter ended September 30, 2018.

- Orders of \$268 million, up \$39 million, or 17%, from last year
- Net sales of \$269 million, up \$21 million, or 8%, from last year
- GAAP EPS of \$0.36, up from \$0.21 last year
- Adjusted EPS of \$0.36, up from \$0.24 last year
- Raising full-year adjusted EPS* outlook to a range of \$1.33 to \$1.36, which equates to year-over-year improvement of between 56% and 60%

Consolidated net sales for the third quarter were \$269.4 million, up \$20.7 million, or 8% versus the same quarter a year ago. Third quarter net income was \$21.7 million, equal to \$0.36 per diluted share, compared to \$12.5 million, equal to \$0.21 per share, in the prior-year quarter.

The Company also reported adjusted net income for the third quarter of \$22.1 million, equal to \$0.36 per diluted share, compared to \$14.4 million, or \$0.24 per diluted share, in the same quarter a year ago. The Company is reporting adjusted results to facilitate comparisons of underlying performance on a year-over-year basis. A reconciliation of these and other non-GAAP measures is provided at the conclusion of this news release.

Outstanding Q3 Results Exceed Expectations; Reflect Significant Increases in Sales and Income

“Our third quarter results were again outstanding, with significant increases in both the top and bottom line,” commented Jennifer L. Sherman, President and Chief Executive Officer. “Our 8% organic sales growth included the effects of continued momentum on our aftermarket and safe-digging initiatives, and the success of our new product introductions. The execution against these strategic goals also contributed to a 17% year-over-year organic order improvement. Adjusted EBITDA margin for the quarter was up significantly in each of our groups, as we realized benefits from higher volumes, improved pricing, favorable sales mix and operational efficiencies, despite the impact of higher commodity costs, which we had anticipated. On a consolidated basis, our adjusted EBITDA margin for the quarter was nearly 15%.”

In the Environmental Solutions Group, net sales were up \$17.8 million, or 9%, primarily due to increases in shipments of vacuum trucks, sewer cleaners and dump truck bodies, as well as higher aftermarket revenue, represented by increases in rental income, used equipment sales and parts and service revenues. Sales in the Safety and Security Systems Group increased by \$2.9 million, or 6%, primarily due to higher global sales of public safety products and improved international sales of warning systems.

Consolidated third quarter operating income was \$30.4 million, up \$8.1 million, or 36%, compared to the prior-year quarter, primarily driven by increases of \$7.1 million and \$1.9 million within the Environmental Solutions Group and Safety and Security Systems Group, respectively. Consolidated operating margin was 11.3%, up from 9.0% in the prior-year quarter.

Consolidated adjusted earnings before interest, tax, depreciation and amortization (“adjusted EBITDA”) for the third quarter of 2018 was \$40.2 million, up \$6.8 million, or 20%, compared to the prior-year quarter, and consolidated adjusted EBITDA margin was 14.9%, compared to 13.4% last year.

Adjusted EBITDA in the Environmental Solutions Group was up \$6.3 million, or 21%, to \$37.0 million, and its adjusted EBITDA margin was 17.1%, up from 15.5% last year. Within the Safety and Security Systems Group, adjusted EBITDA was \$8.9 million, up from \$7.3 million last year, and its adjusted EBITDA margin was 16.8%, compared to 14.5% last year.

Consolidated orders were \$268.1 million for the third quarter of 2018, up \$38.5 million, or 17%, compared to the prior-year quarter. The Environmental Solutions Group reported orders of \$214.5 million, an increase of \$36.3 million, or 20%, compared to the prior-year quarter, and orders within the Safety and Security Systems Group improved by \$2.2 million, or 4%. Consolidated backlog at September 30, 2018 was \$321 million, up \$117 million, or 57%, compared to last year.

Strong Cash Flow Generation Facilitates Additional Debt Reduction and Cash Returns to Shareholders

Net cash of \$34.1 million was provided by continuing operating activities in the third quarter of 2018, compared to \$6.3 million in the prior-year quarter. The improvement in operating cash flow facilitated additional debt repayments of \$27 million during the quarter. At September 30, 2018, consolidated debt was \$222 million, total cash and cash equivalents were \$35 million and the Company had \$166 million of availability for borrowings under its credit facility.

“With the 38% year-over-year improvement in operating cash flow in the first nine months of 2018, we have been able to pay down approximately \$54 million of borrowings. That brings the total amount of debt paid down since we completed the TBEI acquisition in June last year to approximately \$88 million, lowering our debt leverage ratio at the end of the quarter to 1.5 times adjusted EBITDA,” said Sherman. “Our strong financial position allows us to continue to pursue strategic acquisitions, invest in new product development initiatives, and fund cash returns to shareholders.”

The Company also funded dividends of \$4.8 million during the third quarter, reflecting a dividend of \$0.08 per share, and the Board of Directors recently declared a similar dividend that will be payable in the fourth quarter.

Outlook

“With the outstanding performance in the third quarter, our current backlog, favorable conditions in our end markets and continued traction on our organic growth initiatives, we are increasing our full-year 2018 adjusted EPS* outlook to a new range of between \$1.33 and \$1.36,” Sherman noted. “This would represent an improvement of between 56% and 60% over last year.”

* Adjusted EPS is a non-GAAP measure, which includes certain adjustments to reported GAAP net income and diluted EPS. Our outlook assumes certain adjustments to exclude the impact of acquisition and integration-related expenses, purchase accounting effects and hearing loss settlement charges, where applicable. In 2017, we also made adjustments to exclude the impact of restructuring activity, executive severance costs, pension settlement charges, and special tax items, where applicable. Should any similar items occur during 2018, we would expect to exclude them from the determination of adjusted EPS. However, because of the underlying uncertainty in quantifying amounts which may not yet be known, a reconciliation of our Adjusted EPS outlook to the most applicable GAAP measure is excluded based on the unreasonable efforts exception in Item 10(e)(1)(i)(B).

CONFERENCE CALL

Federal Signal will host its third quarter conference call on Tuesday, November 6, 2018 at 10:00 a.m. Eastern Time. The call will last approximately one hour. The call may be accessed over the internet through Federal Signal’s website at <http://www.federsignal.com> or by dialing phone number 1-800-289-0438 and entering the pin number 7563351. A replay will be available on Federal Signal’s website shortly after the call.

About Federal Signal

Federal Signal Corporation (NYSE: FSS) provides products and services to protect people and our planet. Founded in 1901, Federal Signal is a leading global designer, manufacturer and supplier of products and total solutions that serve municipal, governmental, industrial and commercial customers. Headquartered in Oak Brook, Ill., with manufacturing facilities worldwide, the Company operates two groups: Environmental Solutions and Safety and Security Systems. For more information on Federal Signal, visit: <http://www.federsignal.com>.

“Safe Harbor” Statement under the Private Securities Litigation Reform Act of 1995

This release contains unaudited financial information and various forward-looking statements as of the date hereof and we undertake no obligation to update these forward-looking statements regardless of new developments or otherwise. Statements in this release that are not historical are forward-looking statements. Such statements are subject to various risks and uncertainties that could cause actual results to vary materially from those stated. Such risks and uncertainties include but are not limited to: economic conditions in various regions; product and price competition; supplier and raw material prices; risks associated with acquisitions such as integration of operations and achieving anticipated revenue and cost benefits; foreign currency exchange rate changes; interest rate changes; increased legal expenses and litigation results; legal and regulatory developments and other risks and uncertainties described in filings with the Securities and Exchange Commission.

Contact: Ian Hudson, Chief Financial Officer, +1-630-954-2000, ihudson@federsignal.com

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

(in millions, except per share data)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net sales	\$ 269.4	\$ 248.7	\$ 810.1	\$ 650.9
Cost of sales	200.4	187.4	600.0	491.3
Gross profit	69.0	61.3	210.1	159.6
Selling, engineering, general and administrative expenses	38.2	38.2	120.7	104.4
Acquisition and integration-related expenses	0.4	0.7	1.3	2.2
Restructuring	—	0.1	—	0.5
Operating income	30.4	22.3	88.1	52.5
Interest expense	2.2	2.7	7.2	4.6
Other (income) expense, net	—	(0.4)	0.5	(0.7)
Income before income taxes	28.2	20.0	80.4	48.6
Income tax expense	6.5	7.5	18.9	17.4
Net income	\$ 21.7	\$ 12.5	\$ 61.5	\$ 31.2
Earnings per share:				
Basic	\$ 0.36	\$ 0.21	\$ 1.03	\$ 0.52
Diluted	\$ 0.36	\$ 0.21	\$ 1.01	\$ 0.52
Weighted average common shares outstanding:				
Basic	60.0	59.8	59.9	59.7
Diluted	61.1	60.6	61.0	60.4
Cash dividends declared per common share	\$ 0.08	\$ 0.07	\$ 0.23	\$ 0.21
Operating data:				
Operating margin	11.3%	9.0%	10.9%	8.1%
Adjusted EBITDA	\$ 40.2	\$ 33.4	\$ 117.5	\$ 81.4
Adjusted EBITDA margin	14.9%	13.4%	14.5%	12.5%
Total orders	\$ 268.1	\$ 229.6	\$ 875.4	\$ 715.3
Backlog	320.6	203.7	320.6	203.7
Depreciation and amortization	9.4	9.0	27.0	21.3

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS

(in millions, except per share data)	September 30, 2018	December 31, 2017
	(Unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 35.0	\$ 37.5
Accounts receivable, net of allowances for doubtful accounts of \$1.4 and \$1.1, respectively	117.8	118.2
Inventories	153.6	137.2
Prepaid expenses and other current assets	8.0	10.9
Total current assets	<u>314.4</u>	<u>303.8</u>
Properties and equipment, net of accumulated depreciation of \$116.6 and \$108.9, respectively	61.1	60.1
Rental equipment, net of accumulated depreciation of \$26.9 and \$20.0, respectively	98.8	87.2
Goodwill	375.8	377.3
Intangible assets, net of accumulated amortization of \$11.5 and \$5.5, respectively	145.6	151.8
Deferred tax assets	4.8	6.2
Deferred charges and other assets	8.3	5.4
Long-term assets of discontinued operations	0.5	0.5
Total assets	<u>\$ 1,009.3</u>	<u>\$ 992.3</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term borrowings and capital lease obligations	\$ 0.3	\$ 0.3
Accounts payable	66.0	51.5
Customer deposits	8.5	6.5
Accrued liabilities:		
Compensation and withholding taxes	26.4	22.2
Other current liabilities	53.4	36.1
Current liabilities of discontinued operations	0.5	0.5
Total current liabilities	<u>155.1</u>	<u>117.1</u>
Long-term borrowings and capital lease obligations	221.9	277.4
Long-term pension and other postretirement benefit liabilities	49.1	56.6
Deferred gain	7.3	8.7
Deferred tax liabilities	46.9	45.4
Other long-term liabilities	15.8	28.2
Long-term liabilities of discontinued operations	1.4	1.5
Total liabilities	<u>497.5</u>	<u>534.9</u>
Stockholders' equity:		
Common stock, \$1 par value per share, 90.0 shares authorized, 66.3 and 66.1 shares issued, respectively	66.3	66.1
Capital in excess of par value	214.9	207.7
Retained earnings	394.3	346.6
Treasury stock, at cost, 6.1 and 6.1 shares, respectively	(87.1)	(86.1)
Accumulated other comprehensive loss	(76.6)	(76.9)
Total stockholders' equity	<u>511.8</u>	<u>457.4</u>
Total liabilities and stockholders' equity	<u>\$ 1,009.3</u>	<u>\$ 992.3</u>

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

(in millions)	Nine Months Ended September 30,	
	2018	2017
Operating activities:		
Net income	\$ 61.5	\$ 31.2
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	27.0	21.3
Deferred financing costs	0.3	0.2
Deferred gain	(1.4)	(1.5)
Stock-based compensation expense	5.8	3.5
Pension expense, net of funding	(7.6)	(4.2)
Changes in fair value of contingent consideration and deferred payment	0.8	0.8
Deferred income taxes	1.8	3.3
Changes in operating assets and liabilities	(16.3)	(2.5)
Net cash provided by continuing operating activities	71.9	52.1
Net cash used for discontinued operating activities	(0.1)	(0.5)
Net cash provided by operating activities	71.8	51.6
Investing activities:		
Purchases of properties and equipment	(10.1)	(5.3)
Proceeds from (payments for) acquisition-related activity	3.0	(269.2)
Other, net	—	0.2
Net cash used for continuing investing activities	(7.1)	(274.3)
Net cash used for discontinued investing activities	—	(1.1)
Net cash used for investing activities	(7.1)	(275.4)
Financing activities:		
(Decrease) increase in revolving lines of credit, net	(53.6)	214.1
Payments of debt financing fees	—	(0.2)
Redemptions of common stock to satisfy withholding taxes related to stock-based compensation	(0.4)	(2.5)
Cash dividends paid to stockholders	(13.8)	(12.6)
Proceeds from stock-based compensation activity	1.1	1.5
Other, net	0.1	(0.3)
Net cash (used for) provided by continuing financing activities	(66.6)	200.0
Net cash used for discontinued financing activities	—	—
Net cash (used for) provided by financing activities	(66.6)	200.0
Effects of foreign exchange rate changes on cash and cash equivalents	(0.6)	1.3
Decrease in cash and cash equivalents	(2.5)	(22.5)
Cash and cash equivalents at beginning of year	37.5	50.7
Cash and cash equivalents at end of period	<u>\$ 35.0</u>	<u>\$ 28.2</u>

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

GROUP RESULTS (Unaudited)

The following tables summarize group operating results as of and for the three and nine months ended September 30, 2018 and 2017:

Environmental Solutions Group

(\$ in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2018	2017	Change	2018	2017	Change
Net sales	\$ 216.3	\$ 198.5	\$ 17.8	\$ 646.2	\$ 500.6	\$ 145.6
Operating income	28.3	21.2	7.1	86.1	52.5	33.6
Adjusted EBITDA	37.0	30.7	6.3	111.8	75.5	36.3
Operating data:						
Operating margin	13.1%	10.7%	2.4%	13.3%	10.5%	2.8%
Adjusted EBITDA margin	17.1%	15.5%	1.6%	17.3%	15.1%	2.2%
Total orders	\$ 214.5	\$ 178.2	\$ 36.3	\$ 706.2	\$ 559.5	\$ 146.7
Backlog	289.6	177.7	111.9	289.6	177.7	111.9
Depreciation and amortization	8.4	7.9	0.5	24.1	18.1	6.0

Safety and Security Systems Group

(\$ in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2018	2017	Change	2018	2017	Change
Net sales	\$ 53.1	\$ 50.2	\$ 2.9	\$ 163.9	\$ 150.3	\$ 13.6
Operating income	8.0	6.1	1.9	22.3	18.1	4.2
Adjusted EBITDA	8.9	7.3	1.6	25.1	21.7	3.4
Operating data:						
Operating margin	15.1%	12.2%	2.9%	13.6%	12.0%	1.6%
Adjusted EBITDA margin	16.8%	14.5%	2.3%	15.3%	14.4%	0.9%
Total orders	\$ 53.6	\$ 51.4	\$ 2.2	\$ 169.2	\$ 155.8	\$ 13.4
Backlog	31.0	26.0	5.0	31.0	26.0	5.0
Depreciation and amortization	0.9	1.1	(0.2)	2.8	3.1	(0.3)

Corporate Expenses

Corporate operating expenses were \$5.9 million and \$5.0 million for the three months ended September 30, 2018 and 2017, respectively. For the nine months ended September 30, 2018 and 2017, corporate operating expenses were \$20.3 million and \$18.1 million, respectively.

SEC REGULATION G NON-GAAP RECONCILIATION

The financial measures presented below are unaudited and are not in accordance with U.S. generally accepted accounting principles (“GAAP”). The non-GAAP financial information presented herein should be considered supplemental to, and not a substitute for, or superior to, financial measures calculated in accordance with GAAP. The Company has provided this supplemental information to investors, analysts, and other interested parties to enable them to perform additional analyses of operating results, to illustrate the results of operations giving effect to the non-GAAP adjustments shown in the reconciliations below, and to provide an additional measure of performance which management considers in operating the business.

Adjusted net income and earnings per share (“EPS”):

The Company believes that modifying its 2018 and 2017 net income and diluted EPS provides additional measures which are representative of the Company’s underlying performance and improves the comparability of results across reporting periods. During the three and nine months ended September 30, 2018 and 2017 adjustments were made to reported GAAP net income and diluted EPS to exclude the impact of restructuring activity, executive severance costs, acquisition and integration-related expenses, purchase accounting effects, hearing loss settlement charges and special tax items, where applicable.

(in millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net income	\$ 21.7	\$ 12.5	\$ 61.5	\$ 31.2
Add:				
Income tax expense	6.5	7.5	18.9	17.4
Income before income taxes	28.2	20.0	80.4	48.6
Add:				
Restructuring	—	0.1	—	0.5
Executive severance costs	—	—	—	0.7
Acquisition and integration-related expenses	0.4	0.7	1.3	2.2
Purchase accounting effects ^(a)	0.1	1.3	1.1	4.3
Hearing loss settlement charges	—	—	0.4	—
Adjusted income before income taxes	28.7	22.1	83.2	56.3
Adjusted income tax expense ^(b)	(6.6)	(7.7)	(19.5)	(19.6)
Adjusted net income	\$ 22.1	\$ 14.4	\$ 63.7	\$ 36.7

(dollars per diluted share)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
EPS, as reported	\$ 0.36	\$ 0.21	\$ 1.01	\$ 0.52
Add:				
Income tax expense	0.10	0.12	0.31	0.28
Income before income taxes	0.46	0.33	1.32	0.80
Add:				
Restructuring	—	0.00	—	0.01
Executive severance costs	—	—	—	0.01
Acquisition and integration-related expenses	0.01	0.01	0.02	0.04
Purchase accounting effects ^(a)	0.00	0.02	0.02	0.07
Hearing loss settlement charges	—	—	0.00	—
Adjusted income before income taxes	0.47	0.36	1.36	0.93
Adjusted income tax expense ^(b)	(0.11)	(0.12)	(0.32)	(0.32)
Adjusted EPS	\$ 0.36	\$ 0.24	\$ 1.04	\$ 0.61

- (a) Purchase accounting effects relate to adjustments to exclude the step-up in the valuation of equipment acquired in connection with the TBEI and JJE acquisitions that was sold subsequent to the acquisition dates in the three and nine months ended September 30, 2018 and 2017, as well as to exclude the depreciation of the step-up in the valuation of the rental fleet acquired in the JJE transaction.
- (b) Adjusted income tax expense for the three and nine months ended September 30, 2018 and 2017 was recomputed after excluding the impact of restructuring activity, executive severance costs, acquisition and integration-related expenses, purchase accounting effects and hearing loss settlement

charges, where applicable. Adjusted income tax expense for the three and nine months ended September 30, 2017 also excludes \$0.6 million of tax expense associated with a change in the enacted state tax rate in Illinois.

Adjusted EBITDA:

The Company uses adjusted EBITDA and the ratio of adjusted EBITDA to net sales (“adjusted EBITDA margin”), at both the consolidated and segment level, as additional measures which are representative of its underlying performance and to improve the comparability of results across reporting periods. We believe that investors use versions of these metrics in a similar manner. For these reasons, the Company believes that adjusted EBITDA and adjusted EBITDA margin, at both the consolidated and segment level, are meaningful metrics to investors in evaluating the Company’s underlying financial performance.

Consolidated adjusted EBITDA is a non-GAAP measure that represents the total of net income, interest expense, hearing loss settlement charges, acquisition and integration-related expenses, restructuring activity, executive severance costs, purchase accounting effects, other income/expense, income tax expense, and depreciation and amortization expense. Consolidated adjusted EBITDA margin is a non-GAAP measure that represents the total of net income, interest expense, hearing loss settlement charges, acquisition and integration-related expenses, restructuring activity, executive severance costs, purchase accounting effects, other income/expense, income tax expense, and depreciation and amortization expense divided by net sales for the applicable period(s).

Segment adjusted EBITDA is a non-GAAP measure that represents the total of segment operating income, acquisition and integration-related expenses, restructuring activity, purchase accounting effects and depreciation and amortization expense, as applicable. Segment adjusted EBITDA margin is a non-GAAP measure that represents the total of segment operating income, acquisition and integration-related expenses, restructuring activity, purchase accounting effects and depreciation and amortization expense, as applicable, divided by net sales for the applicable period(s). Segment operating income includes all revenues, costs and expenses directly related to the segment involved. In determining segment income, neither corporate nor interest expenses are included. Segment depreciation and amortization expense relates to those assets, both tangible and intangible, that are utilized by the respective segment.

Other companies may use different methods to calculate adjusted EBITDA and adjusted EBITDA margin.

Consolidated

The following table summarizes the Company’s consolidated adjusted EBITDA and adjusted EBITDA margin and reconciles net income to consolidated adjusted EBITDA for the three and nine months ended September 30, 2018 and 2017:

(\$ in millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net income	\$ 21.7	\$ 12.5	\$ 61.5	\$ 31.2
Add:				
Interest expense	2.2	2.7	7.2	4.6
Hearing loss settlement charges	—	—	0.4	—
Acquisition and integration-related expenses	0.4	0.7	1.3	2.2
Restructuring	—	0.1	—	0.5
Executive severance costs	—	—	—	0.7
Purchase accounting effects*	—	1.3	0.7	4.2
Other (income) expense, net	—	(0.4)	0.5	(0.7)
Income tax expense	6.5	7.5	18.9	17.4
Depreciation and amortization	9.4	9.0	27.0	21.3
Consolidated adjusted EBITDA	\$ 40.2	\$ 33.4	\$ 117.5	\$ 81.4
Net sales	\$ 269.4	\$ 248.7	\$ 810.1	\$ 650.9
Consolidated adjusted EBITDA margin	14.9%	13.4%	14.5%	12.5%

* Excludes purchase accounting expenses reflected in depreciation and amortization of \$0.1 million and \$0.0 million for the three months ended September 30, 2018 and 2017, and \$0.4 million and \$0.1 million for the nine months ended September 30, 2018 and 2017, respectively.

Environmental Solutions Group

The following table summarizes the Environmental Solutions Group’s adjusted EBITDA and adjusted EBITDA margin and reconciles operating income to adjusted EBITDA for the three and nine months ended September 30, 2018 and 2017:

(\$ in millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Operating income	\$ 28.3	\$ 21.2	\$ 86.1	\$ 52.5
Add:				
Acquisition and integration-related expenses	0.3	0.3	0.9	0.7
Purchase accounting effects*	—	1.3	0.7	4.2
Depreciation and amortization	8.4	7.9	24.1	18.1
Adjusted EBITDA	\$ 37.0	\$ 30.7	\$ 111.8	\$ 75.5
Net sales	\$ 216.3	\$ 198.5	\$ 646.2	\$ 500.6
Adjusted EBITDA margin	17.1%	15.5%	17.3%	15.1%

* Excludes purchase accounting expenses reflected in depreciation and amortization of \$0.1 million and \$0.0 million for the three months ended September 30, 2018 and 2017, and \$0.4 million and \$0.1 million for the nine months ended September 30, 2018 and 2017, respectively.

Safety and Security Systems Group

The following table summarizes the Safety and Security Systems Group's adjusted EBITDA and adjusted EBITDA margin and reconciles operating income to adjusted EBITDA for the three and nine months ended September 30, 2018 and 2017:

(\$ in millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Operating income	\$ 8.0	\$ 6.1	\$ 22.3	\$ 18.1
Add:				
Restructuring	—	0.1	—	0.5
Depreciation and amortization	0.9	1.1	2.8	3.1
Adjusted EBITDA	\$ 8.9	\$ 7.3	\$ 25.1	\$ 21.7
Net sales	\$ 53.1	\$ 50.2	\$ 163.9	\$ 150.3
Adjusted EBITDA margin	16.8%	14.5%	15.3%	14.4%