

FEDERAL SIGNAL CORP /DE/  
Form 10-Q  
November 01, 2016  
Table of Contents

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, 2016

OR

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number: 1-6003

---

FEDERAL SIGNAL CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

36-1063330

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

1415 West 22nd Street,

60523

Oak Brook, Illinois

(Address of principal executive offices) (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 and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

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

Large accelerated filer  Accelerated filer

Non-accelerated filer  Smaller reporting company  (Do not check if a smaller reporting company)

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 September 30, 2016, the number of shares outstanding of the registrant's common stock was 59,905,222.

---

Table of Contents

## FEDERAL SIGNAL CORPORATION

## TABLE OF CONTENTS

PART I. FINANCIAL INFORMATION

	Page
Item 1. <u>Financial Statements (Unaudited)</u>	<u>2</u>
<u>Condensed Consolidated Statements of Operations for the Three and Nine Months Ended September 30, 2016 and 2015</u>	<u>2</u>
<u>Condensed Consolidated Statements of Comprehensive Income for the Three and Nine Months Ended September 30, 2016 and 2015</u>	<u>3</u>
<u>Condensed Consolidated Balance Sheets as of September 30, 2016 and December 31, 2015</u>	<u>4</u>
<u>Condensed Consolidated Statements of Cash Flows for the Nine Months Ended September 30, 2016 and 2015</u>	<u>5</u>
<u>Condensed Consolidated Statements of Stockholders' Equity for the Nine Months Ended September 30, 2016 and 2015</u>	<u>6</u>
<u>Notes to Condensed Consolidated Financial Statements</u>	<u>7</u>
<u>Note 1 – Summary of Significant Accounting Policies</u>	<u>7</u>
<u>Note 2 – Acquisitions</u>	<u>10</u>
<u>Note 3 – Inventories</u>	<u>12</u>
<u>Note 4 – Goodwill and Other Intangible Assets</u>	<u>12</u>
<u>Note 5 – Debt</u>	<u>13</u>
<u>Note 6 – Income Taxes</u>	<u>15</u>
<u>Note 7 – Pensions</u>	<u>15</u>
<u>Note 8 – Commitments and Contingencies</u>	<u>16</u>
<u>Note 9 – Earnings Per Share</u>	<u>20</u>
<u>Note 10 – Stock-Based Compensation</u>	<u>21</u>
<u>Note 11 – Stockholders' Equity</u>	<u>21</u>
<u>Note 12 – Segment Information</u>	<u>24</u>
<u>Note 13 – Restructuring</u>	<u>25</u>
<u>Note 14 – Fair Value Measurements</u>	<u>26</u>
<u>Note 15 – Discontinued Operations</u>	<u>27</u>
Item 2. <u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>31</u>
Item 3. <u>Quantitative and Qualitative Disclosures About Market Risk</u>	<u>44</u>
Item 4. <u>Controls and Procedures</u>	<u>44</u>
<u>PART II. OTHER INFORMATION</u>	
Item 1. <u>Legal Proceedings</u>	<u>45</u>
Item 1A. <u>Risk Factors</u>	<u>45</u>
Item 2. <u>Unregistered Sales of Equity Securities and Use of Proceeds</u>	<u>45</u>
Item 3. <u>Defaults Upon Senior Securities</u>	<u>45</u>
Item 4. <u>Mine Safety Disclosures</u>	<u>45</u>
Item 5. <u>Other Information</u>	<u>45</u>
Item 6. <u>Exhibits</u>	<u>46</u>
<u>Signatures</u>	<u>47</u>

Table of Contents

**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” 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, 2015, which was filed with the SEC on February 29, 2016. 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.federal signal.com](http://www.federal signal.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. In addition, the SEC maintains a website at [www.sec.gov](http://www.sec.gov) that contains reports, proxy and information statements and other information regarding issuers that file electronically. All materials that we file with, or furnish to, the SEC may also be read or copied at the SEC’s Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330.

Table of Contents

## PART I. FINANCIAL INFORMATION

## Item 1. Financial Statements (Unaudited).

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

	Three Months		Nine Months	
	Ended		Ended	
	September 30,		September 30,	
(in millions, except per share data)	2016	2015	2016	2015
Net sales	\$186.7	\$179.7	\$531.8	\$581.6
Cost of sales	141.4	125.0	394.1	411.3
Gross profit	45.3	54.7	137.7	170.3
Selling, engineering, general and administrative expenses	31.1	29.5	91.0	91.0
Acquisition and integration related expenses	0.3	—	1.2	—
Restructuring	0.4	—	1.6	0.4
Operating income	13.5	25.2	43.9	78.9
Interest expense	0.6	0.6	1.4	1.8
Debt settlement charges	—	—	0.3	—
Other (income) expense, net	(0.3 )	0.3	(1.3 )	1.5
Income from continuing operations before income taxes	13.2	24.3	43.5	75.6
Income tax expense	(5.7 )	(8.5 )	(16.2 )	(27.2 )
Income from continuing operations	7.5	15.8	27.3	48.4
Gain from discontinued operations and disposal, net of income tax (benefit) expense of \$(1.0), \$1.8, \$3.1 and \$1.7, respectively	1.0	3.0	3.9	3.6
Net income	\$8.5	\$18.8	\$31.2	\$52.0
Basic earnings per share:				
Earnings from continuing operations	\$0.12	\$0.25	\$0.45	\$0.77
Gain from discontinued operations and disposal, net of tax	0.02	0.05	0.06	0.06
Net earnings per share	\$0.14	\$0.30	\$0.51	\$0.83
Diluted earnings per share:				
Earnings from continuing operations	\$0.12	\$0.25	\$0.45	\$0.76
Gain from discontinued operations and disposal, net of tax	0.02	0.05	0.06	0.06
Net earnings per share	\$0.14	\$0.30	\$0.51	\$0.82
Weighted average common shares outstanding:				
Basic	59.8	62.3	60.7	62.4
Diluted	60.6	63.3	61.5	63.4
Cash dividends declared per common share	\$0.07	\$0.06	\$0.21	\$0.18

See notes to condensed consolidated financial statements.

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (Unaudited)

	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
(in millions)	2016	2015	2016	2015
Net income	\$ 8.5	\$ 18.8	\$ 31.2	\$ 52.0
Other comprehensive (loss) income:				
Change in foreign currency translation adjustment	(0.9 )	(2.0 )	5.1	(9.3 )
Change in unrecognized net actuarial losses related to pension benefit plans, net of income tax expense of \$0.7, \$0.8, \$2.2 and \$2.1, respectively		1.8	5.1	4.0
Change in unrealized net gain on derivatives, net of income tax	—	—	(0.1 )	—
Total other comprehensive (loss) income	0.4	(0.2 )	10.1	(5.3 )
Comprehensive income	\$ 8.9	\$ 18.6	\$ 41.3	\$ 46.7

See notes to condensed consolidated financial statements.

Table of ContentsFEDERAL SIGNAL CORPORATION AND SUBSIDIARIES  
CONDENSED CONSOLIDATED BALANCE SHEETS

	September 30, 2016	December 31, 2015
(in millions, except per share data)		
	(Unaudited)	
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 50.8	\$ 76.0
Accounts receivable, net of allowances for doubtful accounts of \$1.3 and \$0.8, respectively	87.6	73.0
Inventories	115.8	87.2
Prepaid expenses and other current assets	6.6	15.1
Current assets of discontinued operations	—	63.8
Total current assets	260.8	315.1
Properties and equipment, net of accumulated depreciation of \$104.1 and \$100.2, respectively	44.8	45.0
Rental equipment, net of accumulated depreciation of \$6.8 and \$2.6, respectively	84.5	7.9
Goodwill	238.3	231.6
Intangible assets, net of accumulated amortization of \$0.5 and \$0.4, respectively	10.5	0.2
Deferred tax assets	3.5	20.1
Deferred charges and other assets	4.0	3.3
Long-term assets of discontinued operations	2.2	43.3
Total assets	\$ 648.6	\$ 666.5
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Current portion of long-term borrowings and capital lease obligations	\$ 0.5	\$ 0.4
Accounts payable	37.7	38.0
Customer deposits	5.4	3.7
Accrued liabilities:		
Compensation and withholding taxes	14.1	18.6
Other current liabilities	31.6	27.9
Current liabilities of discontinued operations	2.6	28.6
Total current liabilities	91.9	117.2
Long-term borrowings and capital lease obligations	65.1	43.7
Long-term pension and other postretirement benefit liabilities	47.5	55.2
Deferred gain	11.2	12.6
Other long-term liabilities	28.1	16.9
Long-term liabilities of discontinued operations	3.3	15.3
Total liabilities	247.1	260.9
Stockholders' equity:		
Common stock, \$1 par value per share, 90.0 shares authorized, 65.4 and 64.8 shares issued, respectively	65.4	64.8
Capital in excess of par value	198.8	195.6
Retained earnings	293.3	274.9
Treasury stock, at cost, 5.5 and 2.6 shares, respectively	(77.3)	(40.9)
Accumulated other comprehensive loss	(78.7)	(88.8)
Total stockholders' equity	401.5	405.6
Total liabilities and stockholders' equity	\$ 648.6	\$ 666.5

See notes to condensed consolidated financial statements.

4

---

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

	Nine Months Ended	
	September 30,	
	2016	2015
(in millions)		
Operating activities:		
Net income	\$31.2	\$52.0
Adjustments to reconcile net income to net cash provided by operating activities:		
Gain from discontinued operations and disposal	(3.9 )	(3.6 )
Depreciation and amortization	13.0	9.1
Deferred financing costs	0.5	0.3
Deferred gain	(1.4 )	(1.5 )
Stock-based compensation expense	3.4	4.8
Excess tax benefit from stock-based compensation	—	(0.5 )
Pension expense, net of funding	(4.2 )	(3.4 )
Provision for doubtful accounts	0.3	0.5
Deferred income taxes	9.6	20.3
Changes in operating assets and liabilities, net of effects of acquisitions and discontinued operations	(31.4 )	(17.6 )
Net cash provided by continuing operating activities	17.1	60.4
Net cash provided by discontinued operating activities	0.8	7.5
Net cash provided by operating activities	17.9	67.9
Investing activities:		
Purchases of properties and equipment	(4.8 )	(7.7 )
Payments for acquisitions, net of cash acquired	(102.6)	—
Other, net	(0.5 )	0.1
Proceeds from escrow receivable	—	4.0
Collection of cash provided to customer	6.0	—
Net cash used for continuing investing activities	(101.9)	(3.6 )
Net cash provided by (used for) discontinued investing activities	88.0	(1.0 )
Net cash used for investing activities	(13.9 )	(4.6 )
Financing activities:		
Increase in revolving lines of credit, net	64.8	—
Payments on long-term borrowings	(43.4 )	(2.9 )
Payments of debt financing fees	(1.1 )	—
Purchases of treasury stock	(33.8 )	(10.6 )
Redemptions of common stock to satisfy withholding taxes related to stock-based compensation	(2.6 )	(3.2 )
Cash dividends paid to stockholders	(12.8 )	(11.3 )
Proceeds from stock-based compensation activity	0.4	0.9
Excess tax benefit from stock-based compensation	—	0.5
Other, net	(0.4 )	(0.4 )
Net cash used for continuing financing activities	(28.9 )	(27.0 )
Net cash provided by discontinued financing activities	0.7	—
Net cash used for financing activities	(28.2 )	(27.0 )
Effects of foreign exchange rate changes on cash and cash equivalents	(1.0 )	(0.5 )
(Decrease) increase in cash and cash equivalents	(25.2 )	35.8
Cash and cash equivalents at beginning of year	76.0	30.4
Cash and cash equivalents at end of period	50.8	66.2



Less: Cash and cash equivalents of discontinued operations at end of period	—	(8.2 )
Cash and cash equivalents of continuing operations at end of period	\$50.8	\$58.0

See notes to condensed consolidated financial statements.

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Unaudited)

(in millions)	Common Stock	Capital in		Retained Earnings	Treasury Stock	Accumulated		Total
		Par Value	Excess of			Other Comprehensive Loss		
Balance at January 1, 2016	\$ 64.8	\$ 195.6	\$ 274.9	\$ (40.9 )	\$ (88.8 )			\$ 405.6
Net income			31.2					31.2
Total other comprehensive income						10.1		10.1
Cash dividends declared			(12.8 )					(12.8 )
Stock-based payments:								
Stock-based compensation		2.9						2.9
Stock option exercises and other	0.2	0.7		(0.2 )				0.7
Performance share unit transactions	0.4	(0.4 )		(2.4 )				(2.4 )
Stock repurchase program				(33.8 )				(33.8 )
Balance at September 30, 2016	\$ 65.4	\$ 198.8	\$ 293.3	\$ (77.3 )	\$ (78.7 )			\$ 401.5

(in millions)	Common Stock	Capital in		Retained Earnings	Treasury Stock	Accumulated		Total
		Par Value	Excess of			Other Comprehensive Loss		
Balance at January 1, 2015		\$ 64.2	\$ 187.0	\$ 227.0	\$ (27.1 )	\$ (79.5 )		\$ 371.6
Net income				52.0				52.0
Total other comprehensive loss						(5.3 )		(5.3 )
Cash dividends declared				(11.3 )				(11.3 )
Stock-based payments:								
Stock-based compensation			4.3					4.3
Stock option exercises and other		0.1	1.1		(0.5 )			0.7
Performance share unit transactions		0.5	(0.5 )		(2.7 )			(2.7 )
Excess tax benefit from stock-based compensation			0.5					0.5
Stock repurchase program					(10.6 )			(10.6 )
Balance at September 30, 2015		\$ 64.8	\$ 192.4	\$ 267.7	\$ (40.9 )	\$ (84.8 )		\$ 399.2

See notes to condensed consolidated financial statements.

Table of Contents

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 major 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 12 – 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 are adequate to ensure the information presented is not misleading. 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, 2015, and should be read in conjunction with those consolidated financial statements and the notes thereto. As discussed in Note 15 – Discontinued Operations, on January 29, 2016, the Company completed the sale of its Bronto Skylift® business (“Bronto”) that represented its Fire Rescue Group. The consolidated financial statements for all periods presented have been recast to present the operating results of previously divested or exited businesses as discontinued operations, including the Fire Rescue Group. See Note 15 – Discontinued Operations for further details.

In addition, as discussed in Note 2 – Acquisitions, on June 3, 2016, the Company completed the acquisition of substantially all of the assets and operations of Joe Johnson Equipment, Inc. and Joe Johnson Equipment (USA), Inc. (collectively, “JJE”), a Canadian-based distributor of maintenance equipment for municipal and industrial markets. The Condensed Consolidated Balance Sheet as of September 30, 2016 includes preliminary fair values assigned to the assets acquired and liabilities assumed in connection with the acquisition, whereas the Condensed Consolidated Statements of Operations for the three and nine months ended September 30, 2016 include the post-acquisition operating results of JJE.

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 the current year presentation. These include adjustments to present the Fire Rescue Group as a discontinued operation, as well as certain reclassifications made to prior-year balance sheet information to conform to the current-year presentation, after giving effect to the JJE acquisition.

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 ASC 605, Revenue Recognition. This ASU 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. The ASU 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

7

---

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

recognized from costs incurred to obtain or fulfill a contract. The ASU allows either a “full retrospective” adoption, in which the standard is applied to all periods presented in the financial statements, or a “modified retrospective” adoption, in which the guidance is applied retrospectively only to the most current period presented in the financial statements, with the cumulative effect of initially applying the new standard being recognized as an adjustment to the opening balance of retained earnings. As originally proposed, this guidance was effective for annual reporting periods beginning on or after December 15, 2016, including interim periods within that reporting period, and early adoption was not permitted. In August 2015, the FASB issued ASU 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date, which deferred the effective date of the new revenue recognition requirements to annual reporting periods beginning on or after December 15, 2017, including interim periods within that reporting period. Under ASU 2015-14, companies are permitted to adopt the guidance early, but no earlier than the original effective date outlined in ASU 2014-09. The Company expects to apply the “modified retrospective” method of adoption, and is continuing to evaluate the impact that the adoption of this guidance will have on its consolidated financial statements.

In April 2015, the FASB issued ASU No. 2015-03, Interest – Imputation of Interest (Subtopic 835-30), Simplifying the Presentation of Debt Issuance Costs, which requires that debt issuance costs be presented in the balance sheets as a direct deduction from the carrying amount of the related debt liability. The new requirement is effective for fiscal years beginning on or after December 15, 2015, and for interim periods within those fiscal years. Retrospective presentation is required for all comparable periods presented. The Company’s adoption of this guidance on January 1, 2016 did not have a material impact on its consolidated financial statements.

In July 2015, the FASB issued ASU No. 2015-15, Interest – Imputation of Interest (Subtopic 855-30), Presentation and Subsequent Measurement of Debt Issuance Costs Associated with Line-of-Credit Arrangements, which presents the SEC staff’s opinion, in response to ASU No. 2015-03, that debt issuance costs associated with line-of-credit arrangements may be deferred, presented as an asset, and subsequently amortized ratably over the respective term, regardless of whether there are any outstanding borrowings on the line-of-credit arrangement. The effective date of this guidance, and the expected impact upon adoption, is consistent with that discussed above with respect to ASU No. 2015-03. The Company’s adoption of this guidance on January 1, 2016 did not have a material impact on its consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which requires organizations that are lessees in operating leases to recognize right-of-use assets and lease liabilities on the balance sheet and requires disclosure of key qualitative and quantitative information about leasing agreements by both lessors and lessees. For a lease to meet the requirements for accounting under a sale-leaseback transaction, it must meet the criteria for a sale in ASC 606, Revenue from Contracts with Customers. Entities are required to recognize and measure operating leases at the beginning of the earliest period presented using a modified retrospective approach. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted. The Company is currently evaluating the impact that the adoption of this guidance will have on its consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, Compensation – Stock Compensation (Topic 718), Improvements to Employee Share-Based Payment Accounting, which impacts amounts recorded in the statements of operations, the classification of awards as equity or liability on the balance sheets, and the classification of related activities on the statement of cash flows. The ASU requires that all excess tax benefits and tax deficiencies (including tax benefits of dividends on share-based payment awards) be recognized as income tax expense or benefit in the income statement and are to be recognized regardless of whether the benefit reduces taxes payable in the current period. The tax effects of exercised or vested awards are to be treated as discrete items in the reporting period in which they occur. The Company may now elect to account for award forfeitures as they occur rather than as part of the compensation expense as the awards are vesting. The requirements for withholding now allow withholding at the maximum statutory tax rate of the beneficiary’s jurisdiction. On the statement of cash flows, excess tax benefits are to be classified under

operating activities and shares withheld for tax-withholding purposes are to be classified as a financing activity. These new requirements and options are effective for fiscal years beginning on or after December 15, 2016. Amendments related to the timing of when excess tax benefits are recognized, minimum statutory withholding requirements, forfeitures, and intrinsic value are to be applied using a modified retrospective transition method by means of a cumulative-effect adjustment to equity as of the beginning of the period in which the guidance is adopted. Amendments related to the presentation of employee taxes paid on the statement of cash flows when an employer withholds shares to meet the minimum statutory withholding requirement are to be applied retrospectively. Amendments requiring recognition of excess tax benefits and tax deficiencies in the income statement are to be applied prospectively. An entity may elect to apply the amendments related to the presentation of excess tax benefits on the statement of cash flows using either a prospective transition method or a retrospective transition method. The Company is currently evaluating the impact that the adoption of this guidance will have on its consolidated financial statements.

Table of Contents

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

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. Early adoption is permitted, including adoption in an interim period. If an entity early adopts the amendments in an interim period, any adjustments should be reflected as of the beginning of the fiscal year that includes that interim period. An entity that elects early adoption must adopt all of the amendments in the same period. The amendments should be applied using a retrospective transition method to each period presented. If this approach is impracticable, the amendments would be applied prospectively as of the earliest date practicable. The Company is currently evaluating the impact that the adoption of this guidance will have on its consolidated financial statements but does not expect it will have a material impact on the Company's historical cash flow presentation.

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.

As described in Note 2 – Acquisitions, amounts allocated to certain assets acquired and liabilities assumed in connection with the acquisition of JJE are considered preliminary as of September 30, 2016 and are subject to change during the measurement period.

Significant Accounting Policies

There have been no 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, 2015, with the exception of the following accounting policies associated with the acquisition of substantially all of the assets and operations of JJE:

Rental Equipment

The Company enters into lease agreements with customers related to the rental of certain equipment. All of these leasing agreements are classified as operating leases, and are for periods generally not to exceed 5 years. In accounting for these leases, the cost of the equipment purchased or manufactured by the Company is recorded as an asset, and is depreciated over its estimated useful life. Rental income is recognized ratably over the term of the underlying leases. Rental equipment is depreciated to an estimated residual value on a straight line basis over the estimated useful lives and is reviewed for potential impairment whenever an event occurs or circumstances change that indicate the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset or asset group to be tested for possible impairment, the Company first compares non-discounted cash flows expected to be generated by that asset group to its carrying amount. If the carrying amount of the long-lived asset or asset group is not recoverable on a non-discounted cash flow basis, an impairment is recognized to the extent that the carrying amount exceeds fair value. Fair value is determined through various valuation techniques including discounted cash flow models, quoted market values and third-party independent appraisals, as considered necessary.

Rental equipment includes certain equipment that is manufactured by the Company and subsequently transferred to the rental fleet, as well as equipment purchased from third-party manufacturers, for the purpose of renting to end-customers. The related cash flow activity associated with these transactions is reflected within operating activities on the Condensed Consolidated Statements of Cash Flows. The rental income associated with this activity, which is

included as a component of net sales on the Condensed Consolidated Statements of Operations, was \$6.4 million and \$2.2 million for the three months ended September 30, 2016 and 2015, respectively, and \$12.1 million and \$6.1 million for the nine months ended September 30, 2016 and 2015, respectively.



Table of Contents

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

Intangible Assets

Definite-lived intangible assets are amortized on a straight line basis over the estimated useful lives and are tested for impairment if indicators exist in a manner similar to that described above for Rental Equipment.

Indefinite-lived intangible assets are tested for impairment on an annual basis at year-end, or more frequently if an event occurs or circumstances change that indicate the fair value of an indefinite-lived intangible asset could be below its carrying amount. The impairment test consists of comparing the fair value of the indefinite-lived intangible asset, determined using the relief from royalty method, with its carrying amount. An impairment loss would be recognized for the carrying amount in excess of its fair value.

NOTE 2 – ACQUISITIONS

Acquisition of Westech Vac Systems Ltd.

On January 5, 2016, the Company completed the acquisition of 100% of the stock of Westech Vac Systems, Ltd. (“Westech”), a Canadian manufacturer of high-quality, rugged vacuum trucks, from Advance Engineered Products Ltd. The Company expects that Westech will provide an efficient entry into a new line of product offerings and access to new markets. As the acquisition closed on January 5, 2016, the assets and liabilities of Westech have been consolidated into the Condensed Consolidated Balance Sheet as of September 30, 2016, while the post-acquisition results of operations have been included in the Condensed Consolidated Statements of Operations, within the Environmental Solutions Group.

Cash consideration paid by the Company to acquire Westech was approximately \$6.0 million. The assets acquired and liabilities assumed in the Westech acquisition have been measured at their fair values at the acquisition date, resulting in an assignment of \$1.7 million to goodwill, which is not deductible for tax purposes, and \$1.4 million to intangible assets. As of September 30, 2016, the Company’s purchase price allocation is considered to be final.

The acquisition was not, and would not have been, material to the Company’s results of operations, financial condition or cash flow during any period presented. Accordingly, the Company’s consolidated results from operations do not differ materially from historical performance as a result of the acquisition, and therefore, pro-forma results are not presented.

Acquisition of JJE

On June 3, 2016, the Company completed the acquisition of substantially all of the assets and operations of JJE, a Canadian-based distributor of maintenance equipment for municipal and industrial markets. The Company expects that JJE will facilitate sales of its existing products into new markets, expand the Company’s product and service offerings and increase the Company’s footprint across North America. As the acquisition closed on June 3, 2016, the assets and liabilities of JJE have been consolidated into the Condensed Consolidated Balance Sheet as of September 30, 2016, while the post-acquisition results of operations have been included in the Condensed Consolidated Statements of Operations, within the Environmental Solutions Group.

The initial cash consideration paid by the Company to acquire JJE was approximately \$96.6 million, inclusive of a payment of a working capital adjustment, which was finalized subsequent to the end of the third quarter without requiring any additional payment from either party. In addition, there is a deferred payment of C\$8.0 million (approximately \$6.1 million) and a contingent earn-out payment of up to C\$10.0 million (approximately \$7.6 million). The earn-out payment is contingent upon the achievement of certain financial targets and objectives. The deferred payment, and any contingent earn-out payment, are due to be paid in June 2019.

The acquisition is being accounted for in accordance with Accounting Standards Codification (“ASC”) 805, Business Combinations. Accordingly, the total purchase price has been allocated on a preliminary basis to assets acquired and liabilities assumed in connection with the acquisition based on their estimated fair values as of the completion of the acquisition. A single estimate of fair value results from a complex series of judgments about future events and uncertainties and relies heavily on estimates and assumptions. The Company’s judgments used to determine the estimated fair value assigned to each class of assets acquired and liabilities assumed, as well as asset lives, can materially impact the Company’s results of operations. The Company’s purchase price allocation as of September 30,

2016 reflects various provisional estimates that were based on the information that was available as of the acquisition date and up to the subsequent filing date of this Form 10-Q. The Company believes that information provides a reasonable basis for estimating the fair values of assets acquired and liabilities assumed, however the determination of those fair values is not yet finalized. Thus, the preliminary measurements of fair value set forth in

10

---

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

the table below are subject to change during the measurement period as valuations are finalized. The Company expects to finalize the valuation and complete the purchase price allocation by the end of the fourth quarter. The following table summarizes the preliminary fair value of assets acquired and liabilities assumed as of the acquisition date:

(in millions)

Purchase price, inclusive of working capital adjustment <sup>(a)</sup>	\$96.6
Estimated fair value of additional consideration <sup>(b)</sup>	10.3
Settlement of pre-existing contractual relationship <sup>(c)</sup>	11.4
Total consideration	118.3

Accounts receivable	12.2
Inventories	28.8
Prepaid expenses and other current assets	0.8
Rental equipment	75.9
Properties and equipment	2.0
Intangible assets <sup>(d)</sup>	8.4
Capital lease obligations	(0.5 )
Accounts payable <sup>(c)</sup>	(11.5 )
Customer deposits	(0.8 )
Accrued liabilities	(2.0 )
Net assets acquired	113.3

Goodwill <sup>(e)</sup> \$5.0

(a) The initial purchase price was funded with existing cash on hand and borrowings under the Company's revolving credit facility.

Includes estimated fair value of contingent earn-out payment (\$4.9 million) and the deferred payment (\$5.4 million) as of the acquisition date. Included as a component of Other long-term liabilities on the Condensed

(b) Consolidated Balance Sheet. See Note 14 – Fair Value Measurements for discussion of the methodology used to determine the fair value of the contingent earn-out payment.

Represents the non-cash settlement of accounts receivable due from JJE to the Company as of the acquisition date.

(c) Corresponding amount payable by JJE to the Company is not included in accounts payable assumed in the table above, and the amount was settled at fair value with no impact on the Condensed Consolidated Statement of Operations.

(d) Represents the preliminary fair value assigned to the JJE trade name, which is considered to be an indefinite-lived intangible asset.

(e) The majority of goodwill is expected to be deductible for tax purposes.

Under ASC 805-10, acquisition related costs (i.e., advisory, legal, valuation and other professional fees) are not included as a component of consideration transferred, but are accounted for as expenses in the periods in which the costs are incurred. The Company incurred \$0.9 million of acquisition related costs in the nine months ended September 30, 2016, which have been recorded in Acquisition and integration related expenses on the Condensed Consolidated Statement of Operations.

As further explained in Note 14 – Fair Value Measurements, in the three and nine months ended September 30, 2016, the Company recognized expenses of \$0.2 million and \$0.2 million, respectively, associated with the change in the fair value of the contingent consideration liability. In addition, in the three and nine months ended September 30, 2016, the Company recognized expenses of \$0.1 million and \$0.1 million, respectively, relation to the accretion of the discount on the deferred payment obligation. These expenses have been included as a component of Acquisition and

integration related expenses on the Condensed Consolidated Statement of Operations.

In the period between the June 3, 2016 closing date and September 30, 2016, on a standalone basis, JJE generated \$49.5 million of net sales and \$0.7 million of operating income, after recognizing expenses of \$3.0 million and \$0.3 million relating to purchase accounting and acquisition-related effects, respectively. The Company has included the operating results of JJE within the Environmental Solutions Group in its condensed consolidated financial statements since the closing date.

In connection with the acquisition of JJE, the Company entered into lease agreements for two facilities owned by affiliates of the sellers of JJE. Both agreements include an annual rent that is considered to be market-based, and are for an initial lease term of five years, with options to renew. In the three and nine months ended September 30, 2016, total rent paid under these agreements to the former shareholders of JJE, some of whom are now employees of the Company, was approximately \$0.1 million.

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

The Company's net sales to JJE prior to the acquisition were \$21.6 million and \$41.8 million for the nine months ended September 30, 2016 and 2015, respectively, and \$12.1 million in the three months ended September 30, 2015. The Company has not presented unaudited pro forma combined results of operations of the Company and JJE for the three and nine months ended September 30, 2016 and 2015, because it is considered impracticable to do so, primarily because of the revenue and profit deferral impacts associated with the Company's historical sales to JJE. Under common ownership, the timing of revenue and profit recognition will change, in that revenue and profit will no longer be recognized on sales from the Company to JJE when delivery has occurred, and all other revenue recognition criteria have been satisfied, as was the case prior to the acquisition. Quantification of the revenue and profit deferral impacts of such historical sales and reflecting pro forma combined results assuming the transaction occurred on January 1, 2016 and 2015 with any reasonable level of accuracy is considered impracticable as it would require significant estimates, including estimating the mix of such historical sales (i.e. sales of units to JJE that were subsequently sold to end customers, sales of units to JJE that were not yet sold through to end customers or sales of units to JJE that were placed in the rental fleet), as well as estimating the timing and amounts of any of JJE's subsequent sale or rental activity.

## NOTE 3 – INVENTORIES

The following table summarizes the components of Inventories:

(in millions)	September 30, 2016	December 31, 2015
Finished goods	\$ 75.7	\$ 45.2
Raw materials	33.6	35.3
Work in process	6.5	6.7
Total inventories	\$ 115.8	\$ 87.2

## NOTE 4 – GOODWILL AND OTHER INTANGIBLE ASSETS

The following table summarizes the carrying amount of goodwill, and the changes in the carrying amount of goodwill in the nine months ended September 30, 2016, by segment:

(in millions)	Environmental Solutions	Safety & Security Systems	Total
Balance at December 31, 2015	\$ 120.4	\$ 111.2	\$231.6
Translation adjustments	(0.2)	0.2	—
Acquisitions	6.7	—	6.7
Balance at September 30, 2016	\$ 126.9	\$ 111.4	\$238.3

The following table summarizes the gross carrying amount and accumulated amortization of intangible assets for each major class of intangible assets:

(in millions)	September 30, 2016			December 31, 2015		
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Definite-lived intangible assets:						
Customer relationships <sup>(a)</sup>	\$0.8	\$ —	\$ 0.8	\$—	\$ —	\$ —
Other <sup>(a)</sup>	1.1	(0.5)	0.6	0.6	(0.4)	0.2
Total definite-lived intangible assets	1.9	(0.5)	1.4	0.6	(0.4)	0.2
Indefinite-lived intangible assets:						
Trade name	9.1	—	9.1	—	—	—
Total indefinite-lived intangible assets	9.1	—	9.1	—	—	—
Total intangible assets	\$11.0	\$ (0.5)	\$ 10.5	\$0.6	\$ (0.4)	\$ 0.2

(a) Average useful life of customer relationships and other definite-lived intangible assets is estimated at 10 years.

12

---

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

The table above includes preliminary estimates of the fair value and useful lives of certain definite and indefinite-lived intangible assets related to the JJE acquisition, which was completed during the second quarter of 2016. As further described in Note 2 – Acquisitions, the preliminary measurements of fair value included in the table above are subject to change during the measurement period as valuations are finalized.

Amortization expense for the three and nine months ended September 30, 2016 and 2015 was immaterial. The Company currently estimates that aggregate amortization expense will not exceed \$0.2 million in any future year.

## NOTE 5 – DEBT

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

(in millions)	September 30, 2016	December 31, 2015
2016 Credit Agreement:		
Revolving credit facility	\$ 64.7	\$ —
2013 Credit Agreement:		
Term loan	—	43.4
Capital lease obligations	0.9	0.7
Total long-term borrowings and capital lease obligations, including current portion	65.6	44.1
Less: Current capital lease obligations	0.5	0.4
Total long-term borrowings and capital lease obligations, net	\$ 65.1	\$ 43.7

As more fully described within Note 14 – 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 financial instruments:

(in millions)	September 30, 2016	December 31, 2015
	Notional Amount	Notional Amount
	Fair Value	Fair Value
Long-term borrowings <sup>(a)</sup>	\$65.6	\$44.1

<sup>(a)</sup> Long-term borrowings includes current portions of long-term debt and current portions of capital lease obligations of \$0.5 million and \$0.4 million as of September 30, 2016 and December 31, 2015, respectively.

On January 27, 2016, the Company entered into an Amended and Restated Credit Agreement (the “2016 Credit Agreement”), by and among the Company and certain of its foreign subsidiaries (collectively, the “Borrowers”), Wells Fargo Bank, National Association, as administrative agent, swingline lender and issuing lender, JPMorgan Chase Bank, N.A. as syndication agent, KeyBank National Association, as documentation agent, Wells Fargo Securities, LLC and J.P. Morgan Securities LLC, as joint lead arrangers and joint bookrunners, and the other lenders and parties signatory thereto.

The 2016 Credit Agreement is a \$325.0 million revolving credit facility, maturing on January 27, 2021, that provides for borrowings in the form of loans or letters of credit up to the aggregate availability under the facility, with a sub-limit of \$50.0 million for letters of credit. The 2016 Credit Agreement allows for the Borrowers to borrow in denominations of U.S. Dollars, Canadian Dollars (up to a maximum of C\$85.0 million) or euros (up to a maximum of €20.0 million). In addition, the Company may cause the commitments to increase by up to an additional \$75.0 million, subject to the approval of the applicable lenders providing such additional financing. Borrowings under the 2016 Credit Agreement may be used for working capital and general corporate purposes, including permitted acquisitions. The Company's domestic subsidiaries provide guarantees for all obligations of the Borrowers under the 2016 Credit Agreement, which is secured by a first priority security interest in all now or hereafter acquired domestic property and

assets and the stock or other equity interests in each of the domestic subsidiaries and 65% of the outstanding voting capital stock of certain first-tier foreign subsidiaries, subject to certain exclusions.

Borrowings under the 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



Table of Contents

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

0.30% per annum on the unused portion of the \$325.0 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 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, 2016. The 2016 Credit Agreement also includes a “covenant holiday” period, which allows for the temporary increase of the minimum leverage ratio following the completion of a permitted acquisition, or a series of permitted acquisitions, when the total consideration exceeds a specified threshold. In addition, the 2016 Credit Agreement includes customary negative covenants, subject to certain exceptions, restricting or limiting the Company’s and its subsidiaries’ ability to, among other things: (i) make non-ordinary course dispositions of assets, (ii) make certain fundamental business changes, such as merge, consolidate or enter into any similar combination, (iii) make restricted payments, including dividends and stock repurchases, (iv) incur indebtedness, (v) make certain loans and investments, (vi) create liens, (vii) transact with affiliates, (viii) enter into sale/leaseback transactions, (ix) make negative pledges and (x) modify subordinated debt documents.

Under the 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 2016 Credit Agreement. If its 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 officer, directors, employees and consultants and (iii) an incremental \$30.0 million of other cash payments.

The 2016 Credit Agreement contains customary events of default. If an event of default occurs and is continuing, the Borrowers may be required immediately to repay all amounts outstanding under the 2016 Credit Agreement and the commitments from the lenders may be terminated.

The 2016 Credit Agreement amends and restates the Company’s March 13, 2013 Credit Agreement (the “2013 Credit Agreement”), which provided the Company with a \$225.0 million senior secured credit facility comprised of a five-year fully funded term loan of \$75.0 million and a five-year \$150.0 million revolving credit facility.

Under the terms of the 2013 Credit Agreement, the Company was required to make quarterly installment payments against the \$75.0 million term loan, with any remaining balance due on the maturity date of March 13, 2018. As a result of executing the 2016 Credit Agreement subsequent to December 31, 2015, but prior to the issuance of the financial statements for the year then ended, the \$6.9 million current portion of term loan debt outstanding as of December 31, 2015 was reflected as a component of long-term borrowings and capital lease obligations on the Condensed Consolidated Balance Sheets. Under the 2013 Credit Agreement, the Company was allowed to prepay the term loan in whole or in part prior to maturity without premium or penalty. In the first quarter of 2016, the Company repaid the remaining \$43.4 million of principal outstanding under the 2013 Credit Agreement.

In the first quarter of 2016, approximately \$0.3 million of unamortized deferred financing fees associated with the 2013 Credit Agreement were written off in connection with executing the 2016 Credit Agreement. The Company incurred \$1.1 million of debt issuance costs in connection with the execution of the 2016 Credit Agreement. Such fees have been deferred and are being amortized over the five-year term.

As of September 30, 2016, there was \$64.7 million of cash drawn and \$19.4 million of undrawn letters of credit under the 2016 Credit Agreement, with \$240.9 million of net availability for borrowings. As of December 31, 2015, there was no cash drawn and \$19.2 million of undrawn letters of credit under the \$150.0 million revolving credit facility portion of the 2013 Credit Agreement, with \$130.8 million of net availability for borrowings.

As of September 30, 2016 and December 31, 2015, there were no borrowings against the Company’s non-U.S. lines of credit which provide for borrowings of up to \$0.2 million.

For the nine months ended September 30, 2016, gross borrowings and gross payments under the 2016 Credit Agreement were \$69.8 million and \$5.0 million, respectively. For the nine months ended September 30, 2015, there

were no gross borrowings or gross payments under the Company's domestic revolving credit facility portion of the 2013 Credit Agreement.

14

---

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

## NOTE 6 – INCOME TAXES

The Company recognized income tax expense of \$5.7 million and \$8.5 million for the three months ended September 30, 2016 and 2015, respectively. The decrease in tax expense in the current-year quarter is largely due to lower pre-tax income levels. The effective tax rate for the three months ended September 30, 2016 increased to 43.2%, compared to 35.0% in the prior-year quarter, primarily due to additional valuation allowance being recorded in Canada.

At September 30, 2016 and December 31, 2015, the Company recorded gross deferred tax assets associated with its Canadian operations of \$4.7 million and \$3.5 million, respectively, offset by a full valuation allowance. These assets primarily relate to Canadian net operating loss carryforwards that were largely generated by the discontinued North American refuse truck body business. These net operating loss carryforwards begin to expire in 2026. As the Company is currently in a three-year cumulative loss position in Canada, inclusive of transitory purchase accounting expense effects associated with current-year acquisitions, a full valuation allowance has been recorded against these deferred tax assets. As such, the net deferred tax assets associated with the Company's Canadian operations are zero at September 30, 2016 and December 31, 2015.

Due to the current cumulative loss position in Canada, the Company continues to adjust its valuation allowance as deferred tax assets increase or decrease, which resulted in effectively no tax benefit being recorded on any Canadian losses in the three months ended September 30, 2016. However, an income tax provision (or benefit) is still required in jurisdictions where the Company is not in a valuation allowance position, which is the case for the majority of the Company's operations, including the U.S. operations.

As a result of tax planning strategies, acquisitions or the generation of pre-tax profits, the Canadian deferred tax assets may be realized as part of the Company's continuing operations in future periods. Management has concluded that it is premature to release the valuation allowance against the net deferred tax assets in Canada in the three months ended September 30, 2016, primarily because of the aggregate year-to-date operating losses of current-year acquisitions. The current-year operating losses largely result from the recognition of higher cost of sales associated with sales of acquired equipment, which were increased to fair value in connection with purchase accounting for the acquisition of JJE. While these purchase accounting expense effects are expected to continue for several quarters, the impact on future quarterly operating results is expected to be less significant than in the three months ended September 30, 2016. Management will continue to evaluate whether sufficient positive evidence exists to support the future realization of the Canadian deferred tax assets, such that some, or all, of the valuation allowance might be released in the fourth quarter of 2016, or in a subsequent period.

For the nine months ended September 30, 2016 and 2015, the Company recognized income tax expense of \$16.2 million and \$27.2 million, respectively. The decrease in tax expense in the nine months ended September 30, 2016 is largely due to lower pre-tax income levels. The effective tax rate was 37.2% and 36.0% for the nine months ended September 30, 2016 and 2015, respectively.

## NOTE 7 – PENSIONS

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

	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,	
(in millions)	2016	2015	2016	2015	2016	2015	2016	2015
Service cost	\$—	\$—	\$—	\$—	\$—	\$0.1	\$0.1	\$0.2
Interest cost	1.9	1.9	5.8	5.7	0.4	0.6	1.4	1.6
Amortization of actuarial loss	1.4	1.7	4.2	5.1	0.2	0.1	0.5	0.5
Expected return on plan assets	(2.6)	(2.6)	(7.8)	(7.7)	(0.5)	(0.7)	(1.8)	(2.1)

Net postretirement pension expense \$0.7 \$1.0 \$2.2 \$3.1 \$0.1 \$0.1 \$0.2 \$0.2

In the nine months ended September 30, 2016 and 2015, the Company contributed \$5.6 million and \$5.5 million to its U.S. defined benefit plan, respectively, and \$1.0 million and \$1.1 million to its non-U.S. defined benefit plan, respectively.

During the remainder of 2016, the Company expects to make additional contributions of up to \$0.4 million to the non-U.S. benefit plan but does not expect to make any further contributions to the U.S benefit plan.

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

In the nine months ended September 30, 2015, the Company repurchased all of the remaining shares of its common stock from its U.S benefit plan for a total cost of \$3.6 million. The repurchases were made under the stock repurchase program discussed further in Note 11 – Stockholders’ Equity.

In connection with the completion of the sale of Bronto, the Company recognized \$0.4 million of actuarial losses in the first quarter of 2016, which were previously included in Accumulated other comprehensive loss, as a component of the calculation of the gain on disposal recorded in the nine months ended September 30, 2016.

## NOTE 8 – 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, 2016, the Company had outstanding performance and financial standby letters of credit, as well as outstanding bid and performance bonds, aggregating \$23.7 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.

In addition, prior to the June 3, 2016 acquisition date, JJE entered into certain transactions involving the sale of equipment to certain of its customers which included (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, 2016, the single year and maximum potential cash payments the Company could be required to make to repurchase equipment under these agreements were \$1.5 million and \$3.6 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. In addition, the former owners of JJE have agreed to reimburse the Company for certain losses incurred resulting from the requirement to repurchase any such equipment. Any such reimbursement would be withheld from the C\$8.0 million deferred payment to be made on the third anniversary of the acquisition date. In the preliminary purchase price allocation, described further in Note 2 – Acquisitions, the Company has included an immaterial accrual for potential losses related to the repurchase exposures associated with JJE’s historical practices. The Company’s repurchase accrual represents the expected losses that could result from obligations to repurchase products, after giving effect to proceeds anticipated to be received from the resale of those products to alternative customers, as well as to the reimbursement of any losses incurred. The Company has recorded its estimated net liability associated with losses from these guarantee and repurchase obligations on its Consolidated Balance Sheet based on historical experience and current facts and circumstances. 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 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.

The following table summarizes the changes in the Company’s warranty liabilities:

(in millions)	2016	2015
Balance at January 1	\$7.4	\$7.7
Provisions to expense	4.0	4.5
Payments	(4.7 )	(4.6 )

Balance at September 30 \$6.7 \$7.6

16

---

Table of Contents

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

Environmental Liabilities

Reserves of \$0.6 million and \$0.9 million related to the environmental remediation of the Pearland, Texas facility are included in liabilities of discontinued operations on the Condensed Consolidated Balance Sheets at September 30, 2016 and December 31, 2015, respectively. The facility was previously used by the Company's discontinued Pauluhn business and manufactured marine, offshore and industrial lighting products. The Company sold the facility in May 2012 and while the Company has not finalized its plans, it is probable that the site will require remediation. The recorded reserves are based on an undiscounted estimate of the range of costs to remediate the site, depending upon the remediation approach and other factors. The Company's estimate may change in the near-term as more information becomes available; however, the costs are not expected to have a material adverse effect on the Company's results of operations, financial position or cash flow.

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, 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,



Table of Contents

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

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. Plaintiffs have indicated that they will now file motions to certify classes in these cases. On April 24, 2015, the cases were transferred to Cook County chancery court, which will decide all class certification issues. The Company intends to continue its objections to any attempt at certification. The Company also has filed motions to dismiss cases involving firefighters located outside of Cook County based on improper venue. Plaintiffs have requested discovery from the Company related to these venue motions. The Court has scheduled oral argument on these venue motions for December 5, 2016.

The Company has also been sued on this issue outside of the Cook County, Illinois venue. Many of these cases have involved lawsuits filed by a single attorney in the Court of Common Pleas, Philadelphia County, Pennsylvania. During 2007 and through 2009, this attorney filed a total of 71 lawsuits involving 71 plaintiffs in this jurisdiction. 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.

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, as amended, 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.

Table of Contents

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

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. 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 have filed a notice of appeal regarding this decision. 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 April through July 2013, additional cases were filed in Allegheny County, Pennsylvania. These cases involve 247 plaintiff firefighters from Pittsburgh and various defendants, including the Company. After the Company filed pretrial motions, the Court dismissed claims of 55 Pittsburgh firefighter plaintiffs. The first trials of these Pittsburgh firefighters were scheduled to occur in May, September and November 2016. Each trial will involve eight firefighters. On April 14, 2016, the Court granted the Company's motion for summary judgment regarding strict liability claims asserted by all plaintiff firefighters involved in the initial trial scheduled for May 2016. The Company also has moved to dismiss remaining negligence claims asserted by these firefighters. It is anticipated that the Court will rule on this motion sometime during 2016. The next trial involving six Pittsburgh firefighters has been scheduled to start on November 7, 2016. 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. 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. Several product manufacturers, including the Company, have been named as defendants in these cases. All of the cases filed in Erie County, New York have been removed to federal court in the Western District of New York. 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 has been transferred to federal court in the Northern District of New York. Plaintiffs agreed to voluntarily dismiss this case during May 2016. The Company also is aware that a lawsuit involving eight New York City firefighters was filed in New York County, New York, on April 24, 2015. The Company has not yet been served in that case. During November 2015 through January 2016, 28 new cases involving a total of 227 firefighters were filed in various counties in the New York City area. A total of 428 firefighters are currently 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. A total of 104 firefighters are currently involved in cases filed in New Jersey. 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

Table of Contents

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

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, 2016 and 2015, the Company recorded \$0.2 million and \$0.2 million of reimbursements from CNA related to legal costs, respectively.

**Latvian Commercial Dispute**

On June 12, 2014, a Latvian trial court issued a summary ruling against the Company's former Bronto subsidiary in a lawsuit relating to a commercial dispute. The dispute involves a transaction for the 2008 sale of three Bronto units that were purchased by a financing company for lease to a Latvian fire department. The lessor and the Latvian fire department sought to rescind the contract after delivery, despite the fact that an independent third party, selected by the lessor, had certified that the vehicles satisfied the terms of the contract. The adverse judgment required Bronto to refund the purchase price and pay interest and attorneys' fees. The trial court denied the lessor's claim against Bronto for alleged damages relating to lost lease income.

Believing that the claims against Bronto were invalid and that Bronto fully satisfied the terms of the subject contract, on July 10, 2014, the Company filed an appeal with the Civil Chamber of the Supreme Court of Latvia seeking a reversal of the trial court's ruling.

At December 31, 2015, the Company had not accrued any liability within its consolidated financial statements for this lawsuit. In evaluating whether a charge to record a reserve was previously necessary, the Company analyzed all of the available information, including the legal reasoning applied by the judge of the trial court in reaching its decision. Based on the Company's analysis, and consultations with external counsel, the Company assessed the likelihood of a successful appeal to be more likely than not and therefore did not believe that a probable loss had been incurred. In connection with the sale of Bronto to Morita Holdings Corporation ("Morita"), discussed further in Note 15 – Discontinued Operations, the Company and Morita agreed that the Company would remain in control of negotiations and proceedings relating to the appeal and fund the legal costs associated therewith. The Company also agreed to compensate Morita for 50% of any liability resulting from a final and non-appealable decision of a court of competent jurisdiction, net of any actual income tax benefit to Bronto as a result of the judgment, and less 50% of legal fees incurred by the Company, relating to the defense of this matter, subsequent to the January 29, 2016 closing date of the sale.

In April 2016, the Civil Chamber of the Supreme Court of Latvia heard the Company's appeal and upheld the trial court's ruling against Bronto. As the Company's appeal of the trial judgment was unsuccessful, a charge of \$1.5 million was recorded as a component of Gain from discontinued operations and disposal, net of tax in the nine months ended September 30, 2016, to reflect the Company's share of the liability. The Company has decided not to further appeal the Supreme Court's ruling and expects to pay the aforementioned compensation to Morita during the fourth quarter of 2016.

**NOTE 9 – 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, 2016 and 2015 were insignificant and did not materially impact the calculation of basic or diluted EPS.

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.

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

For the three and nine months ended September 30, 2016, options to purchase 1.3 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, 2015, options to purchase 0.8 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. The following table reconciles Net income to basic and diluted EPS:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in millions, except per share data)	2016	2015	2016	2015
Income from continuing operations	\$7.5	\$15.8	\$27.3	\$48.4
Gain from discontinued operations and disposal, net of tax	1.0	3.0	3.9	3.6
Net income	\$8.5	\$18.8	\$31.2	\$52.0
Weighted average shares outstanding – Basic	59.8	62.3	60.7	62.4
Dilutive effect of common stock equivalents	0.8	1.0	0.8	1.0
Weighted average shares outstanding – Diluted	60.6	63.3	\$61.5	\$63.4
Basic earnings per share:				
Earnings from continuing operations	\$0.12	\$0.25	\$0.45	\$0.77
Gain from discontinued operations and disposal, net of tax	0.02	0.05	0.06	0.06
Net earnings per share	\$0.14	\$0.30	\$0.51	\$0.83
Diluted earnings per share:				
Earnings from continuing operations	\$0.12	\$0.25	\$0.45	\$0.76
Gain from discontinued operations and disposal, net of tax	0.02	0.05	0.06	0.06
Net earnings per share	\$0.14	\$0.30	\$0.51	\$0.82

## NOTE 10 – STOCK-BASED COMPENSATION

On December 31, 2015 and 2014, performance share units (“PSUs”) granted in 2013 and 2012, respectively, became fully vested. The EPS threshold associated with each of these awards was achieved at the maximum level, and 200% of the target shares were earned. In addition, during the nine months ended September 30, 2016 and 2015, various restricted stock awards granted in 2013 and 2012, respectively, became fully vested. These vested PSUs and restricted stock awards were net share settled. In connection with the issuance of the shares underlying these PSUs during the nine months ended September 30, 2016 and 2015, and with the vesting of restricted stock, the Company transferred 0.2 million and 0.2 million shares, respectively, into Treasury stock, based upon the Company's closing stock price on the vesting date, to satisfy the employees' minimum statutory withholding obligation for applicable income and other employment taxes. The Company then remitted the equivalent cash value to the appropriate taxing authorities. Total payments for the employees' tax obligations to the relevant taxing authorities were \$2.6 million and \$3.2 million for the nine months ended September 30, 2016 and 2015, respectively, and are reflected as a financing activity within the Condensed Consolidated Statements of Cash Flows.

## NOTE 11 – STOCKHOLDERS' EQUITY

## Dividends

On February 9, 2016, the Company's Board of Directors (the “Board”) declared a quarterly cash dividend of \$0.07 per common share. The dividend totaled \$4.3 million and was distributed on March 17, 2016 to holders of record at the close of business on March 1, 2016.

On April 26, 2016, the Board declared a quarterly cash dividend of \$0.07 per common share. The dividend totaled \$4.3 million and was distributed on June 7, 2016 to holders of record at the close of business on May 17, 2016.

On July 26, 2016, the Board declared a quarterly cash dividend of \$0.07 per common share. The dividend totaled \$4.2 million and was distributed on August 26, 2016 to holders of record at the close of business on August 16, 2016. During the three and nine months ended September 30, 2015, dividends of \$3.8 million and \$11.3 million, respectively, were paid to stockholders.



Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

On October 25, 2016, the Board declared a quarterly cash dividend of \$0.07 per common share payable on December 6, 2016 to holders of record at the close of business on November 15, 2016.

**Stock Repurchase Program**

In April 2014, the Board authorized a stock repurchase program (the “April 2014 program”) of up to \$15.0 million of the Company’s common stock. The April 2014 program was intended primarily to facilitate a reduction in the investment in Company stock within the Company’s U.S. defined benefit pension plan portfolio and to reduce dilution resulting from issuances of stock under the Company’s employee equity incentive programs.

In November 2014, the Board authorized an additional stock repurchase program (the “November 2014 program”) of up to \$75.0 million of the Company’s common stock. The November 2014 program is intended primarily to facilitate opportunistic purchases of Company stock as a means to provide cash returns to stockholders, enhance stockholder returns and manage the Company’s capital structure.

During the three and nine months ended September 30, 2015, the Company repurchased 394,430 and 724,792 shares for a total of \$5.6 million and \$10.6 million, respectively, under the authorized stock repurchase programs. During the second quarter of 2015, cumulative stock repurchases under the April 2014 program reached the maximum authorized level of \$15.0 million. Since that time, no additional stock repurchases have been, or will be, made under that program.

During the three and nine months ended September 30, 2016, the Company repurchased 50,882 and 2,631,607 shares for a total of \$0.7 million and \$33.8 million, respectively, under the November 2014 program.

Under its stock repurchase programs, the Company is authorized to repurchase, from time to time, shares of its outstanding common stock in the open market or through privately negotiated transactions. Stock repurchases by the Company are subject to market conditions and other factors and may be commenced, suspended or discontinued at any time.

**Accumulated Other Comprehensive Loss**

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

(in millions) <sup>(a)</sup>	Actuarial Losses <sup>(b)</sup>	Foreign Currency Translation <sup>(c)</sup>	Unrealized Gain on Derivatives	Total
Balance at July 1, 2016	\$ (71.8 )	\$ (7.3 )	\$ —	—\$(79.1)
Other comprehensive income (loss) before reclassifications	0.3	(0.9 )	—	(0.6 )
Amounts reclassified from accumulated other comprehensive loss	1.0	—	—	1.0
Net current-period other comprehensive income (loss)	1.3	(0.9 )	—	0.4
Balance at September 30, 2016	\$ (70.5 )	\$ (8.2 )	\$ —	—\$(78.7)
(in millions) <sup>(a)</sup>	Actuarial Losses	Foreign Currency Translation	Unrealized Gain on Derivatives	Total
Balance at July 1, 2015	\$ (77.6 )	\$ (7.1 )	\$ 0.1	\$(84.6)
Other comprehensive income (loss) before reclassifications	0.6	(2.0 )	—	(1.4 )
Amounts reclassified from accumulated other comprehensive loss	1.2	—	—	1.2
Net current-period other comprehensive income (loss)	1.8	(2.0 )	—	(0.2 )
Balance at September 30, 2015	\$ (75.8 )	\$ (9.1 )	\$ 0.1	\$(84.8)

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

(in millions) <sup>(a)</sup>	Actuarial Losses <sup>(b)</sup>	Foreign Currency Translation <sup>(c)</sup>	Unrealized Gain on Derivatives	Total
Balance at January 1, 2016	\$ (75.6 )	\$ (13.3 )	\$ 0.1	\$(88.8)
Other comprehensive income (loss) before reclassifications	1.7	(2.3 )	—	(0.6 )
Amounts reclassified from accumulated other comprehensive loss	3.4	7.4	(0.1 )	10.7
Net current-period other comprehensive income (loss)	5.1	5.1	(0.1 )	10.1
Balance at September 30, 2016	\$ (70.5 )	\$ (8.2 )	\$ —	\$(78.7)

(in millions) <sup>(a)</sup>	Actuarial Losses	Foreign Currency Translation	Unrealized Gain on Derivatives	Total
Balance at January 1, 2015	\$ (79.8 )	\$ 0.2	\$ 0.1	\$(79.5)
Other comprehensive income (loss) before reclassifications	0.4	(9.3 )	—	(8.9 )
Amounts reclassified from accumulated other comprehensive loss	3.6	—	—	3.6
Net current-period other comprehensive income (loss)	4.0	(9.3 )	—	(5.3 )
Balance at September 30, 2015	\$ (75.8 )	\$ (9.1 )	\$ 0.1	\$(84.8)

(a) Amounts in parenthesis indicate debits.

In connection with the sale of Bronto, the Company recognized an actuarial loss of \$0.4 million attributable to

(b) Bronto's defined benefit plan and included it in the calculation of the associated gain on disposal in the nine months ended September 30, 2016.

The Company recognized a foreign currency translation loss of \$7.1 million in the nine months ended September 30, 2016, in connection with the sale of Bronto. The recognition of the translation gain (loss), which represented (c) the cumulative translation effects attributable to the Fire Rescue Group, was included in Gain (loss) from discontinued operations and disposal for the applicable period.

The following table summarizes the amounts reclassified from Accumulated other comprehensive loss, net of tax, in the three months ended September 30, 2016 and 2015 and the affected line item in the Condensed Consolidated Statements of Operations:

Details about Accumulated Other Comprehensive Loss Components	Amount Reclassified from		Affected Line Item in Condensed Consolidated Statements of Operations <sup>(a)</sup>
	Accumulated Other Comprehensive Loss 2016	2015	
	(in millions) <sup>(b)</sup>		
Amortization of actuarial losses of defined benefit pension plans	\$ (1.6 )	\$ (1.8 )	(c)
Total before tax	(1.6 )	(1.8 )	
Income tax benefit	0.6	0.6	Income tax expense
Total reclassifications for the period, net of tax	\$ (1.0 )	\$ (1.2 )	

(a) Continuing operations only.

(b) Amount in parenthesis indicate debits to profit/loss.

(c) The actuarial loss components of Accumulated other comprehensive loss are included in the computation of net periodic pension cost for the three months ended September 30, 2016 and 2015, as disclosed in Note 7 – Pensions.



Table of Contents

## 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 nine months ended September 30, 2016 and 2015 and the affected line item in the Condensed Consolidated Statements of Operations:

Details about Accumulated Other Comprehensive Loss Components	Amount Reclassified from		Affected Line Item in Condensed Consolidated Statements of Operations <sup>(a)</sup>
	Accumulated Other Comprehensive Loss 2016	2015	
Amortization of actuarial losses of defined benefit pension plans	\$(4.7 )	\$(5.6 )	(c)
Recognition of deferred gain on interest rate swap	0.1	—	Other (income) expense, net
Total before tax	(4.6 )	(5.6 )	
Income tax benefit	1.6	2.0	Income tax expense
Total reclassifications for the period, net of tax	\$(3.0 )	\$(3.6 )	

(a) Continuing operations only.

(b) Amount in parenthesis indicate debits to profit/loss.

(c) The actuarial loss components of Accumulated other comprehensive loss are included in the computation of net periodic pension cost for the nine months ended September 30, 2016 and 2015, as disclosed in Note 7 – Pensions.

## NOTE 12 – SEGMENT INFORMATION

The Company has two operating segments as defined under ASC Topic 280, Segment Reporting (“ASC 280”). The Company’s reportable segments are consistent with its 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. 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 and high-performance waterblasting equipment. The Group manufactures vehicles and equipment in the U.S. and Canada that are sold under the Elgin®, Vactor®, Guzzler®, Westech™ and Jetstream™ brand names. 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. The acquisition of JJE extends the Environmental Solutions Group’s existing sales channel and increases the number of service centers through which the Company can expand its parts and service offerings to current and potential customers. The acquisition also broadens the Environmental Solutions Group’s product offerings to include other products, such as refuse and recycling collection vehicles, camera systems, ice-making equipment and snow-removal equipment.

**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. Operating segment depreciation expense, identifiable assets and capital expenditures relate to those assets that are utilized by the respective operating segment. Corporate assets consist principally of cash and cash equivalents, deferred tax assets and fixed assets. The accounting policies of each operating segment are 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, 2015, in addition to those updates described in Note 1 – Summary of Significant Accounting Policies of this Form 10-Q. The results for the interim periods are not necessarily indicative of results for a full year.

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

As discussed in Note 2 – Acquisitions, the assets and liabilities of JJE and Westech have been consolidated into the Condensed Consolidated Balance Sheet as of September 30, 2016, while the post-acquisition results of operations have been included in the Condensed Consolidated Statements of Operations subsequent to their respective closing dates. JJE and Westech are included within the Environmental Solutions Group. The following tables summarize the Company's continuing operations by segment, including Net sales, Operating income (loss), and Total assets:

(in millions)	Three Months		Nine Months	
	Ended		Ended	
	September 30,		September 30,	
	2016	2015	2016	2015
Net sales:				
Environmental Solutions	\$134.3	\$123.0	\$369.1	\$409.8
Safety and Security Systems	52.4	56.7	162.7	171.8
Total net sales	\$186.7	\$179.7	\$531.8	\$581.6
Operating income (loss):				
Environmental Solutions	\$12.5	\$21.5	\$43.9	\$74.6
Safety and Security Systems	6.5	9.3	18.0	23.2
Corporate and eliminations	(5.5 )	(5.6 )	(18.0 )	(18.9 )
Total operating income	13.5	25.2	43.9	78.9
Interest expense	0.6	0.6	1.4	1.8
Debt settlement charges	—	—	0.3	—
Other (income) expense, net	(0.3 )	0.3	(1.3 )	1.5
Income from continuing operations before income taxes	\$13.2	\$24.3	\$43.5	\$75.6

(in millions)	As of	As of
	September 30, 2016	December 31, 2015
Total assets:		
Environmental Solutions	\$ 391.2	\$ 250.6
Safety and Security Systems	205.6	209.6
Corporate and eliminations	49.6	99.2
Total assets of continuing operations	646.4	559.4
Total assets of discontinued operations	2.2	107.1
Total assets	\$ 648.6	\$ 666.5

## NOTE 13 – RESTRUCTURING

The Company continues to review its businesses for opportunities to reduce operating expenses and focus on executing its strategy based on core competencies and cost efficiencies.

During the three and nine months ended September 30, 2016, the Company recorded expenses of \$0.4 million and \$1.6 million, respectively, related to severance costs incurred in connection with a cost reduction plan within the Safety and Security Systems Group. The Company expects to incur up to \$1.5 million of additional restructuring charges throughout the remainder of 2016 in completing this plan.

In the nine months ended September 30, 2015, the Company recorded expenses of \$0.4 million related to severance costs incurred in connection with the completion of a voluntary reduction-in-force within the Safety and Security Systems Group.

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

The following tables summarize the changes in the Company's restructuring reserves, which are included within other current liabilities on the Company's Consolidated Balance Sheets:

	2016	2015
Balance at January 1	\$—	\$—
Charge to expense	1.2	—
Cash payments	(0.2 )	—
Balance at March 31	\$1.0	\$—
Charge to expense	—	0.4
Cash payments	(0.8 )	(0.1 )
Balance at June 30	\$0.2	\$0.3
Charge to expense	0.4	\$—
Cash payments	(0.2 )	\$(0.2)
Balance at September 30	\$0.4	\$0.1

## NOTE 14 – 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.

## 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 \$7.6 million).





Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

The following tables summarize the Company's assets and liabilities that are measured at fair value on a recurring basis as of September 30, 2016:

(in millions)	Fair Value Measurement at Reporting Date Using			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents	\$31.5	\$	—\$	—\$31.5

## Liabilities:

Contingent consideration —	—	—	5.1	5.1
----------------------------	---	---	-----	-----

The following table provides a roll-forward of the fair value of recurring Level 3 fair value measurements for the three and nine months ended September 30, 2016:

(in millions)	Three	Nine
	Months	Months
	Ended	Ended
	September	September
	30, 2016	30, 2016
Contingent consideration liability, at beginning of period	\$ 5.0	\$ —
Issuance of contingent consideration in connection with acquisitions	—	4.9
Settlements of contingent consideration liabilities	—	—
Foreign currency translation	(0.1 )	—
Total losses (gains) included in earnings <sup>(a)</sup>	0.2	0.2
Contingent consideration liability, at end of period	\$ 5.1	\$ 5.1

<sup>(a)</sup> 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.

## NOTE 15 – DISCONTINUED OPERATIONS

The Company recorded a net gain from discontinued operations and disposal of \$1.0 million in the three months ended September 30, 2016, primarily related to adjustments of uncertain tax position reserves following the expiration of statute of limitations.

In the three months ended September 30, 2015, the Company received the last remaining \$4.0 million of escrow funds from the 2012 sale of the former Federal Signal Technologies Group. This income was recorded, net of \$1.6 million of tax expense, as a component of Gain from discontinued operations and disposal, net of tax within its Condensed Consolidated Statement of Operations for the three and nine months ended September 30, 2015. Also contributing to the \$3.0 million net gain from discontinued operations and disposal reported in the three months ended September 30, 2015 was \$0.6 million of net income generated by the operations of the Fire Rescue Group.

The Company recorded a net gain from discontinued operations and disposal of \$3.9 million in the nine months ended September 30, 2016, primarily driven by the \$4.0 million net gain on disposal of the Fire Rescue Group, which was discontinued in 2015, partially offset by the \$0.6 million net loss that the Fire Rescue Group realized in its 2016 operations up to the January 29, 2016 sale completion date. The net gain on disposal includes a \$1.5 million charge to recognize a liability in connection with a Latvian commercial dispute. Also contributing to the net gain in the nine months ended September 30, 2016 was a reduction in uncertain tax position reserves of approximately \$1.0 million. In the nine months ended September 30, 2015, the Company recorded a net gain from discontinued operations and disposal of \$3.6 million, primarily driven by \$1.2 million of net income generated by the operations of the Fire Rescue Group, as well as the aforementioned net income associated with the receipt of the escrow funds.

The activity of the Company's discontinued operations in the three and nine months ended September 30, 2016 and 2015 is described further below:

Fire Rescue Group

On January 29, 2016, the Company completed the sale of Bronto to Morita, initially receiving proceeds of €76 million in cash at closing (approximately \$82.3 million), with an additional €5.1 million in cash (approximately \$5.7 million) being received in connection with the payment of the final working capital and net debt adjustments in the second quarter of 2016.

27

---

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

Prior to sale, Bronto was the only remaining operation in the Company's Fire Rescue Group, which was previously identified as an operating segment of the Company as defined under ASC 280. Upon completion of the transaction, the Company will no longer operate the Fire Rescue Group, which the Company considers a significant strategic shift in the Company's operations. The Fire Rescue Group is being presented as a discontinued operation in the Company's condensed consolidated financial statements.

Under the terms of the sale, the Company and Morita agreed that the Company will remain in control of negotiations and proceedings relating to the appeal of the ruling issued in the Latvian commercial dispute, discussed further in Note 8 – Commitments and Contingencies, and also fund the legal costs associated therewith. The Company also agreed to compensate Morita for 50% of any liability resulting from a final and non-appealable decision of a court of competent jurisdiction, net of any actual income tax benefit to Bronto as a result of the judgment, and less 50% of legal fees incurred by the Company between the January 29, 2016 date of sale and the date of receiving such non-appealable decision. The Company's appeal of the initial judgment, heard in April 2016, was unsuccessful, and a charge of \$1.5 million was recorded as a component of Gain from discontinued operations and disposal, net of tax in the nine months ended September 30, 2016 to reflect the Company's share of the liability. The Company has decided not to further appeal the Supreme Court's ruling and expects to pay the aforementioned compensation to Morita during the fourth quarter of 2016.

On December 16, 2015, the Company entered into a foreign currency forward contract with a notional contract value of €76.0 million to mitigate its foreign exchange exposure related to the receipt of the euro-denominated sales proceeds. Prior to its settlement on January 29, 2016, the derivative was being marked-to-market, with related gains or losses reported in the Company's Consolidated Statement of Operations. The forward contract had a fair value of \$0.9 million on settlement, and a gain of \$0.3 million was recorded as a component of Other (income) expense, net in the Condensed Consolidated Statement of Operations for the nine months ended September 30, 2016. The forward contract had a fair value of \$0.6 million at December 31, 2015. An asset of \$0.6 million was included as a component of Prepaid expenses and other current assets on the Condensed Consolidated Balance Sheets as of December 31, 2015. The fair value of the forward contract was determined using readily available pricing sources for comparable instruments (Level 2 input).

In accordance with ASC 740, a tax liability should be recognized for the excess of the financial reporting basis over the tax basis (or the tax benefit when the tax basis exceeds the financial reporting basis) of an investment in a subsidiary (outside basis difference) when it is apparent that the temporary differences will reverse in the foreseeable future. In connection with presenting the Fire Rescue Group as a discontinued operation as of December 31, 2015, the Company was required to re-evaluate its position related to the recognition of a deferred tax asset or liability for the outside basis differences of the Bronto entities being sold to Morita. In prior years, deferred taxes for such outside basis differences had not been recognized, either because of the Company's assertion of permanent reinvestment, or because recognition was not required applying one of the exceptions provided for in ASC 740. Due to the pending sale, these exceptions no longer applied at December 31, 2015, as the outside basis differences were expected to reverse in the foreseeable future. As a result, a net deferred tax liability of \$6.3 million was recorded as a component of long-term liabilities of discontinued operations on the Condensed Consolidated Balance Sheets as of December 31, 2015. Upon completion of the sale in the first quarter of 2016, this net deferred tax liability was recognized as a component of the tax expense on the gain on disposal.

After recognition of the accumulated foreign currency translation loss attributable to the Fire Rescue Group, as described in Note 11 – Stockholders' Equity, the actuarial losses described in Note 7 – Pensions, the \$1.5 million liability recorded in connection with the Latvian commercial dispute, as well as \$4.6 million of net income tax expense, the Company recognized a net gain of \$4.0 million on disposal of the Fire Rescue Group upon completion of the sale in the nine months ended September 30, 2016.



Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

The following table presents the operating results of the Company's discontinued Fire Rescue Group for the three months ended September 30, 2015 and the nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30, 2015	Nine Months Ended September 30, 2016 <sup>(a)</sup>	2015
(in millions)			
Net sales	\$ 26.1	\$4.2	\$76.6
Cost of sales	21.2	3.9	62.4
Gross profit	4.9	0.3	14.2
Selling, engineering, general and administrative expenses	3.9	1.1	12.9
Restructuring	0.3	—	0.3
Operating (loss) income	0.7	(0.8 )	1.0
Interest (income) expense, net	(0.1 )	—	(0.1 )
Other (income) expense, net	—	—	(0.2 )
Income (loss) before income taxes	0.8	(0.8 )	1.3
Income tax expense (benefit)	0.2	(0.2 )	0.1
Net income (loss) from operations	\$ 0.6	\$(0.6)	\$1.2

(a) Only includes activity in the period up to the completion of the sale on January 29, 2016.

Table of Contents

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

## Assets and liabilities of discontinued operations

The following table presents the assets and liabilities of the Company's discontinued operations, which include the Fire Rescue Group, as well as other operations discontinued in prior periods, as of September 30, 2016 and December 31, 2015:

(in millions)	September 30, 2016			December 31, 2015		
	Fire Rescue	Other	Total	Fire Rescue	Other	Total
Cash and cash equivalents	\$—	\$—	\$—	\$5.0	\$—	\$5.0
Accounts receivable, net	—	—	—	15.5	—	15.5
Inventories	—	—	—	40.4	—	40.4
Prepaid expenses	—	—	—	2.7	—	2.7
Other current assets	—	—	—	0.2	—	0.2
Current assets of discontinued operations	\$—	\$—	\$—	\$63.8	\$—	\$63.8
Properties and equipment, net	\$—	\$—	\$—	\$13.4	\$—	\$13.4
Goodwill	—	—	—	28.3	—	28.3
Deferred tax assets	0.7	1.5	2.2	—	1.6	1.6
Long-term assets of discontinued operations	\$0.7	\$ 1.5	\$ 2.2	\$41.7	\$ 1.6	\$43.3
Accounts payable	\$—	\$—	\$—	\$7.3	\$—	\$7.3
Customer deposits	—	—	—	10.6	—	10.6
Accrued liabilities:						
Compensation and withholding taxes	—	—	—	4.3	—	4.3
Other current liabilities	1.5	1.1	2.6	4.0	2.4	6.4
Current liabilities of discontinued operations	\$1.5	\$ 1.1	\$ 2.6	\$26.2	\$ 2.4	\$28.6
Long-term pension and other post-retirement benefit liabilities	\$—	\$—	\$—	\$0.7	\$—	\$0.7
Other long-term liabilities	0.7	2.6	3.3	5.5	9.1	14.6
Long-term liabilities of discontinued operations	\$0.7	\$ 2.6	\$ 3.3	\$6.2	\$ 9.1	\$15.3

The Company retains certain liabilities for other operations discontinued in prior periods, primarily for environmental remediation and product liability. Included in liabilities of discontinued operations at September 30, 2016 and December 31, 2015 is \$0.6 million and \$0.9 million, respectively, related to environmental remediation at the Pearland, Texas facility, and \$2.3 million and \$2.3 million, respectively, relating to estimated product liability obligations of the discontinued North American refuse truck body business.

Table of Contents

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, 2015. 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) sewer cleaners, vacuum trucks, street sweepers and other environmental vehicles and equipment and (ii) safety, security and communication equipment. We also are a designer and supplier of technology-based products and services for the public safety market. 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 nine manufacturing facilities in four 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 12 – 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.

On June 3, 2016, the Company completed the acquisition of JJE. The Company expects that JJE will facilitate sales of its existing products into new markets, expand the Company's product and service offerings and increase the Company's footprint across North America. With the acquisition of JJE, the Company's product offerings has expanded to include other products, including those not manufactured by the Company, including refuse and recycling collection vehicles, camera systems, ice-making equipment and snow-removal equipment.

Net sales increased by \$7.0 million, or 4%, in the three months ended September 30, 2016 as compared to the prior-year quarter. Our Environmental Solutions Group reported a net sales increase of \$11.3 million, or 9%, largely due to \$31.0 million of incremental net sales resulting from the JJE acquisition, largely offset by lower shipments of vacuum trucks and street sweepers in the U.S. and reduced international sales of street sweepers and sewer cleaners. Within our Safety and Security Systems Group, net sales decreased by \$4.3 million, or 8%, largely due to lower sales into global industrial markets, partially offset by improved sales into U.S. public safety markets. Net sales in our Safety and Security Systems Group in the prior-year period also benefited from the receipt of a large order cancellation fee.

For the nine months ended September 30, 2016, net sales decreased by \$49.8 million, or 9%, largely due to a \$40.7 million net sales decrease within our Environmental Solutions Group, resulting from lower sales of vacuum trucks and street sweepers in the U.S., as well as fewer international shipments of street sweepers and sewer cleaners. Largely offsetting these reductions were \$35.0 million of incremental net sales resulting from the JJE acquisition. In the Safety and Security Systems Group, net sales decreased by \$9.1 million, or 5%, primarily due to lower sales into global industrial markets, partially offset by improved sales into domestic public safety markets.

Operating income decreased by \$11.7 million, or 46%, to \$13.5 million in the three months ended September 30, 2016 as compared to the prior-year quarter, primarily driven by a \$9.0 million decline within our Environmental Solutions Group associated with changes in sales mix, with fewer sales into industrial markets and a higher percentage of sales of products manufactured by other companies, which tend to carry a lower margin, as well as negative operating leverage, additional operating expenses incurred in support of current-year acquisitions, the inclusion of \$2.5 million of expense relating to JJE purchase accounting effects and \$0.3 million of acquisition-related expenses. Also contributing to the lower operating income in the current-year quarter was a \$2.8 million decrease in operating income within our Safety and Security Systems Group, inclusive of a \$0.4 million restructuring charge. In the prior-year period, our Safety and Security Systems Group's operating income benefited from the receipt of the \$1.8 million order cancellation fee. Consolidated operating margin for the three months ended September 30, 2016, inclusive of purchase

accounting effects, restructuring charges and acquisition costs, was 7.2%, down from 14.0% in the prior year. For the nine months ended September 30, 2016, operating income decreased by \$35.0 million, or 44%, primarily driven by a \$30.7 million reduction within our Environmental Solutions Group, associated with negative operating leverage resulting from lower sales volumes, unfavorable sales mix effects, with fewer sales into industrial markets and a higher percentage of sales of products manufactured by other companies, which tend to carry a lower margin, as well as additional operating expenses



Table of Contents

incurred in support of current-year acquisitions, the inclusion of \$3.0 million of expense relating to JJE purchase accounting effects and \$0.3 million of acquisition-related expenses. Also contributing to the lower operating income in the current-year quarter was a \$5.2 million decrease in operating income within our Safety and Security Systems Group, inclusive of a \$1.2 million increase in restructuring expenses. Partially offsetting the operating income reductions in each of our groups was a \$0.9 million reduction in Corporate operating expenses, in spite of a \$0.9 million increase in expenses associated with acquisition and integration-related activity. Consolidated operating margin for the nine months ended September 30, 2016, inclusive of the aforementioned purchase accounting effects, restructuring charges and acquisition costs, was 8.3%, down from 13.6% in the prior year.

Income before income taxes decreased by \$11.1 million, or 46%, to \$13.2 million for the three months ended September 30, 2016 as compared to the prior-year quarter. The decrease resulted from the reduced operating income, partially offset by a \$0.6 million favorable change in other (income) expense.

For the nine months ended September 30, 2016, income before income taxes decreased by \$32.1 million as compared to the prior-year period. The decrease resulted from the reduced operating income, as well as a \$0.3 million write-off of deferred financing fees resulting from the debt refinancing completed in the nine months ended September 30, 2016, partially offset by a \$2.8 million favorable change in other (income) expense, net and a \$0.4 million reduction in interest expense.

Net income from continuing operations for the three and nine months ended September 30, 2016 also benefited from reductions in income tax expense of \$2.8 million and \$11.0 million, respectively, largely due to lower pre-tax income levels. The effective tax rate for the three months ended September 30, 2016 was 43.2%, compared to 35.0% in the prior-year quarter. The effective tax rate was 37.2% and 36.0% for the nine months ended September 30, 2016 and 2015, respectively.

Total orders for the three months ended September 30, 2016 increased by \$17.9 million, or 11%, compared to the prior-year quarter. Orders in our Environmental Solutions Group increased by \$27.5 million, mostly due to increased Canadian orders following the acquisition of JJE in the second quarter of 2016. Orders in our Safety and Security Systems Group were down \$9.6 million, primarily due to lower orders from public safety markets, as well as reduced orders from industrial markets.

For the nine months ended September 30, 2016, total orders increased by \$2.3 million as compared to the prior-year period, largely due to a \$25.5 million improvement in orders within our Environmental Solutions Group that was largely offset by a \$23.2 million order reduction in the Safety and Security Systems Group. Within our Environmental Solutions Group, increased orders from Canada, inclusive of orders acquired in, and received subsequent to, the JJE acquisition, were largely offset by reduced domestic orders for vacuum trucks, sewer cleaners, street sweepers and waterblasting equipment. The decrease in orders within our Safety and Security Systems Group was primarily due to lower orders from global industrial markets, reflective of reduced demand from oil and gas markets.

Our consolidated backlog at September 30, 2016 was \$148.7 million, about even with the second quarter of 2016, but down \$30.6 million, from \$179.3 million at September 30, 2015.

Table of Contents

## 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			Nine Months Ended		
	September 30,			September 30,		
	2016	2015	Change	2016	2015	Change
Net sales	\$186.7	\$179.7	\$7.0	\$531.8	\$581.6	\$(49.8)
Cost of sales	141.4	125.0	16.4	394.1	411.3	(17.2 )
Gross profit	45.3	54.7	(9.4 )	137.7	170.3	(32.6 )
Selling, engineering, general and administrative expenses	31.1	29.5	1.6	91.0	91.0	—
Acquisition and integration related expenses	0.3	—	0.3	1.2	—	1.2
Restructuring	0.4	—	0.4	1.6	0.4	1.2
Operating income	13.5	25.2	(11.7 )	43.9	78.9	(35.0 )
Interest expense	0.6	0.6	—	1.4	1.8	(0.4 )
Debt settlement charges	—	—	—	0.3	—	0.3
Other (income) expense, net	(0.3 )	0.3	(0.6 )	(1.3 )	1.5	(2.8 )
Income from continuing operations before income taxes	13.2	24.3	(11.1 )	43.5	75.6	(32.1 )
Income tax expense	(5.7 )	(8.5 )	2.8	(16.2 )	(27.2 )	11.0
Income from continuing operations	7.5	15.8	(8.3 )	27.3	48.4	(21.1 )
Gain from discontinued operations and disposal, net of tax	1.0	3.0	(2.0 )	3.9	3.6	0.3
Net income	\$8.5	\$18.8	\$(10.3)	\$31.2	\$52.0	\$(20.8)
Operating data:						
Operating margin	7.2	% 14.0	% (6.8 )	% 8.3	% 13.6	% (5.3 )
Diluted earnings per share – Continuing operations	\$0.12	\$0.25	\$(0.13)	\$0.45	\$0.76	\$(0.31)
Total orders	186.1	168.2	17.9	509.1	506.8	2.3
Backlog	148.7	179.3	(30.6 )	148.7	179.3	(30.6 )
Depreciation and amortization	5.8	2.9	2.9	13.0	9.1	3.9

## Net sales

Net sales increased by \$7.0 million, or 4%, in the three months ended September 30, 2016 as compared to the prior-year quarter. The Environmental Solutions Group reported a net sales increase of \$11.3 million, or 9%, largely due to \$31.0 million of incremental net sales resulting from the JJE acquisition, largely offset by lower shipments of vacuum trucks and street sweepers in the U.S. and reduced international sales of street sweepers and sewer cleaners. In the Safety and Security Systems Group, net sales decreased by \$4.3 million, or 8%, largely due to lower sales into global industrial markets, partially offset by improved sales into U.S. public safety markets. Net sales in the Safety and Security Systems Group in the prior-year period also benefited from the receipt of an order cancellation fee of approximately \$1.8 million.

For the nine months ended September 30, 2016, net sales decreased by \$49.8 million, or 9%, largely due to a \$40.7 million net sales decrease within the Environmental Solutions Group, resulting from lower sales of vacuum trucks and street sweepers in the U.S, as well as fewer international shipments of street sweepers and sewer cleaners. Largely offsetting these reductions were \$35.0 million of incremental net sales resulting from the JJE acquisition. In the Safety and Security Systems Group, net sales decreased by \$9.1 million, or 5%, primarily due to lower sales into global industrial markets, partially offset by improved sales into domestic public safety markets.

## Cost of sales

Cost of sales increased by \$16.4 million, or 13%, for the three months ended September 30, 2016 compared to the prior-year quarter, largely due to an increase of \$17.9 million, or 20%, within the Environmental Solutions Group,

primarily driven by increased sales volumes, as well as the recognition of approximately \$2.5 million of expense associated with purchase

33

---

Table of Contents

accounting effects, associated with the JJE acquisition. This increase was partially offset by a decrease in cost of sales of \$1.5 million, or 4%, within the Safety and Security Systems Group, largely driven by lower sales volume.

For the nine months ended September 30, 2016, cost of sales decreased by \$17.2 million, or 4%, largely due to a decrease of \$13.6 million, or 4%, within the Environmental Solutions Group. The reduction was primarily driven by lower sales of vacuum trucks and street sweepers in the U.S, as well as fewer international shipments of street sweepers and sewer cleaners, partially offset by unfavorable mix effects and the recognition of the approximately \$3.0 million of expense associated with purchase accounting effects resulting from the acquisition. This increase was partially offset by a decrease in cost of sales of \$3.6 million, or 3%, within the Safety and Security Systems Group, largely driven by lower sales volume.

**Gross profit**

Gross profit decreased by \$9.4 million, or 17%, for the three months ended September 30, 2016, compared to the prior-year quarter, consisting of reductions within the Environmental Solutions Group and the Safety and Security Systems Group of \$6.6 million and \$2.8 million, respectively. Gross margin for the three months ended September 30, 2016 decreased to 24.3%, from 30.4% in the prior-year quarter, largely due to purchase accounting expense effects, reduced operating leverage, with lower absorption of manufacturing costs, as well as unfavorable sales mix, with fewer sales into industrial markets and a higher percentage of sales of products manufactured by other companies, which tend to carry a lower margin, within the Environmental Solutions Group. In addition, gross margin in the prior-year quarter included the effects of receiving a large order cancellation fee within the Safety and Security Systems Group.

For the nine months ended September 30, 2016, gross profit decreased by \$32.6 million, or 19%, consisting of reductions within the Environmental Solutions Group and the Safety and Security Systems Group of \$27.1 million and \$5.5 million, respectively. Gross margin for the nine months ended September 30, 2016 decreased to 25.9%, from 29.3% in the prior-year quarter, largely due to purchase accounting expense effects, reduced operating leverage due to lower volumes, as well as unfavorable sales mix, with fewer sales into industrial markets and a higher concentration of sales of products manufactured by other companies, within the Environmental Solutions Group. In addition, gross margin in the prior-year period included the effects of receiving a large order cancellation fee within the Safety and Security Systems Group.

**Selling, engineering, general and administrative expenses**

Selling, engineering, general and administrative (“SEG&A”) expenses for the three months ended September 30, 2016 increased by \$1.6 million, or 5%, compared to the prior-year quarter, largely due to a \$2.1 million increase within the Environmental Solutions Group, partially offset by decreases of \$0.4 million and \$0.1 million within the Safety and Security Systems Group and Corporate, respectively. The increase in SEG&A expenses within the Environmental Solutions Group was largely the result of the addition of expenses of businesses acquired in the current year, whereas the reductions within the Safety and Security Systems Group and Corporate primarily related to lower employee costs. For the nine months ended September 30, 2016, SEG&A expenses were flat, with decreases of \$1.8 million and \$1.5 million within Corporate and the Safety and Security Systems Group, respectively, being offset by a \$3.3 million increase within the Environmental Solutions Group. The decreases in SEG&A expenses within the Safety and Security Systems Group and Corporate were inclusive of lower employee costs, whereas the increase in SEG&A expenses within the Environmental Solutions Group was largely the result of the addition of expenses of businesses acquired in the current year.

**Operating income**

Operating income decreased by \$11.7 million, or 46%, to \$13.5 million in the three months ended September 30, 2016 as compared to the prior-year quarter, primarily driven by a \$9.0 million decline within the Environmental Solutions Group associated with changes in sales mix, with fewer sales into industrial markets and a higher percentage of sales of products manufactured by other companies, which tend to carry a lower margin, as well as negative operating leverage, additional operating expenses incurred in support of current-year acquisitions, the inclusion of \$2.5 million of expense relating to JJE purchase accounting effects and \$0.3 million of acquisition-related expenses. Also contributing to the lower operating income in the current-year quarter was a \$2.8 million decrease in operating income

within the Safety and Security Systems Group, inclusive of a \$0.4 million restructuring charge. In the prior-year period, the Safety and Security Systems Group's operating income benefited from the receipt of the \$1.8 million order cancellation fee. Consolidated operating margin for the three months ended September 30, 2016, inclusive of purchase accounting effects, restructuring charges and acquisition costs, was 7.2%, down from 14.0% in the prior year. For the nine months ended September 30, 2016, operating income decreased by \$35.0 million, or 44%, primarily driven by a \$30.7 million reduction within the Environmental Solutions Group, associated with negative operating leverage resulting from lower sales volumes, unfavorable sales mix effects, with fewer sales into industrial markets and a higher percentage of sales of

Table of Contents

products manufactured by other companies, which tend to carry a lower margin, as well as additional operating expenses incurred in support of current-year acquisitions, the inclusion of \$3.0 million of expense relating to JJE purchase accounting effects and \$0.3 million of acquisition-related expenses. Also contributing to the lower operating income in the current-year quarter was a \$5.2 million decrease in operating income within the Safety and Security Systems Group, inclusive of a \$1.2 million increase in restructuring expenses. Partially offsetting the operating income reductions in each of our groups was a \$0.9 million reduction in Corporate operating expenses, in spite of a \$0.9 million increase in expenses associated with acquisition and integration-related activity. Consolidated operating margin for the nine months ended September 30, 2016, inclusive of the aforementioned purchase accounting effects, restructuring charges and acquisition costs, was 8.3%, down from 13.6% in the prior year.

**Interest expense**

Interest expense for the three months ended September 30, 2016 was flat when compared to the same period of the prior year. For the nine months ended September 30, 2016, interest expense decreased by \$0.4 million, largely due to reductions in the average debt levels in the respective periods.

**Other (income) expense, net**

For the three months ended September 30, 2016, other (income) expense, net, totaled \$0.3 million of income, and largely related to interest income on a loan provided to a customer, whereas for the three months ended September 30, 2015, \$0.3 million of expense was reported, represented primarily by realized losses from foreign currency transactions.

For the nine months ended September 30, 2016, other (income) expense, net, totaled \$1.3 million of income, and largely related to a gain on the settlement of a foreign currency forward contract and interest income on a loan provided to a customer, whereas for the nine months ended September 30, 2015, \$1.5 million of expense was reported, represented primarily by realized losses from foreign currency transactions.

**Income tax expense**

The Company recognized income tax expense of \$5.7 million and \$8.5 million for the three months ended September 30, 2016 and 2015, respectively. The decrease in tax expense in the current-year quarter is largely due to lower pre-tax income levels. The effective tax rate for the three months ended September 30, 2016 increased to 43.2%, compared to 35.0% in the prior-year quarter, primarily due to additional valuation allowance being recorded in Canada.

At September 30, 2016 and December 31, 2015, the Company recorded gross deferred tax assets associated with its Canadian operations of \$4.7 million and \$3.5 million, respectively, offset by a full valuation allowance. These assets primarily relate to Canadian net operating loss carryforwards that were largely generated by the discontinued North American refuse truck body business. These net operating loss carryforwards begin to expire in 2026. As the Company is currently in a three-year cumulative loss position in Canada, inclusive of transitory purchase accounting expense effects associated with current-year acquisitions, a full valuation allowance has been recorded against these deferred tax assets. As such, the net deferred tax assets associated with the Company's Canadian operations are zero at September 30, 2016 and December 31, 2015.

Due to the current cumulative loss position in Canada, the Company continues to adjust its valuation allowance as deferred tax assets increase or decrease, which resulted in effectively no tax benefit being recorded on any Canadian losses in the three months ended September 30, 2016. However, an income tax provision (or benefit) is still required in jurisdictions where the Company is not in a valuation allowance position, which is the case for the majority of the Company's operations, including the U.S. operations.

As a result of tax planning strategies, acquisitions or the generation of pre-tax profits, the Canadian deferred tax assets may be realized as part of the Company's continuing operations in future periods. Management has concluded that it is premature to release the valuation allowance against the net deferred tax assets in Canada in the three months ended September 30, 2016, primarily because of the aggregate year-to-date operating losses of current-year acquisitions. The current-year operating losses largely result from the recognition of higher cost of sales associated with sales of acquired equipment, which were increased to fair value in connection with purchase accounting for the acquisition of JJE. While these purchase accounting expense effects are expected to continue for several quarters, the impact on future quarterly operating results is expected to be less significant than in the three months ended September 30, 2016.

Management will continue to evaluate whether sufficient positive evidence exists to support the future realization of the Canadian deferred tax assets, such that some, or all, of the valuation allowance might be released in the fourth quarter of 2016, or in a subsequent period.

For the nine months ended September 30, 2016 and 2015, the Company recognized income tax expense of \$16.2 million and \$27.2 million, respectively. The decrease in tax expense in the nine months ended September 30, 2016 is largely

35

---

Table of Contents

due to lower pre-tax income levels. The effective tax rate was 37.2% and 36.0% for the nine months ended September 30, 2016 and 2015, respectively.

Income from continuing operations

Income from continuing operations for the three months ended September 30, 2016 decreased by \$8.3 million compared to the prior-year period, largely due to the reduced operating income, partially offset by the \$2.8 million decrease in income tax expense, and the \$0.6 million favorable change in other (income) expense, net, described above.

For the nine months ended September 30, 2016, income from continuing operations decreased by \$21.1 million compared to the same period of the prior year, largely due to the reduced operating income, as well as a \$0.3 million write-off of deferred financing fees, partially offset by decreases in income tax and interest expense of \$11.0 million and \$0.4 million, respectively, as well as the \$2.8 million favorable change in other (income) expense, net, described above.

Gain from discontinued operations and disposal, net of tax

The Company recorded a net gain from discontinued operations and disposal of \$1.0 million in the three months ended September 30, 2016, primarily related to adjustments of uncertain tax position reserves following the expiration of statute of limitations.

In the three months ended September 30, 2015, the Company received the last remaining \$4.0 million of escrow funds from the 2012 sale of the former Federal Signal Technologies Group. This income was recorded, net of \$1.6 million of tax expense, as a component of Gain from discontinued operations and disposal, net of tax within its Condensed Consolidated Statement of Operations for the three and nine months ended September 30, 2015. Also contributing to the \$3.0 million net gain from discontinued operations and disposal reported in the three months ended September 30, 2015 was \$0.6 million of net income generated by the operations of the Fire Rescue Group.

The Company recorded a net gain from discontinued operations and disposal of \$3.9 million in the nine months ended September 30, 2016, primarily driven by the \$4.0 million net gain on disposal of the Fire Rescue Group, which was discontinued in 2015, partially offset by the \$0.6 million net loss that the Fire Rescue Group realized in its 2016 operations up to the January 29, 2016 sale completion date. The net gain on disposal includes a \$1.5 million charge to recognize a liability in connection with a Latvian commercial dispute. Also contributing to the net gain in the nine months ended September 30, 2016 was a reduction in uncertain tax position reserves of approximately \$1.0 million. In the nine months ended September 30, 2015, the Company recorded a net gain from discontinued operations and disposal of \$3.6 million, primarily driven by \$1.2 million of net income generated by the operations of the Fire Rescue Group, as well as the aforementioned net income associated with the receipt of the escrow funds.

Orders

The Company's historical order information presented herein includes orders received from JJE. Subsequent to the completion of the acquisition of JJE, orders from JJE are no longer included in the Company's total orders. Instead, subsequent to the completion of the acquisition of JJE, total orders will include orders that JJE receives from end customers. These orders may include orders for products manufactured or supplied by the Company's Environmental Solutions Group, as well as for products manufactured or supplied by third-party vendors.

During the nine months ended September 30, 2016, orders that were received from JJE prior to the acquisition date, which were included in total orders, totaled \$3.7 million. During the three and nine months ended September 30, 2015, orders that were received from JJE prior to the acquisition date, and were included in total orders reported in each of those periods, totaled \$17.9 million and \$42.2 million, respectively.

As of the June 3, 2016 acquisition date, the Company's backlog included \$6.9 million of orders from JJE. These orders are no longer reported in the Company's backlog as of September 30, 2016 and have been presented as a reduction of total orders for the nine months ended September 30, 2016.

On the date of acquisition, JJE had a backlog of orders from its end customers of \$43.3 million. These acquired orders were included in total orders reported for the nine months ended September 30, 2016. Total orders reported in the three months ended September 30, 2016 includes an adjustment of \$9.9 million to increase the previously-reported acquired backlog. Any orders included in the acquired backlog that had not shipped prior to the end of the third



quarter are included in reported backlog as of September 30, 2016.

36

---

Table of Contents

Three months ended September 30, 2016 vs. three months ended September 30, 2015

Total orders increased by \$17.9 million, or 11%, for the three months ended September 30, 2016, largely driven by a \$27.5 million increase in orders in the Environmental Solutions Group, mostly due to increased Canadian orders following the acquisition of JJE in the second quarter of 2016, partially offset by lower international orders of sewer cleaners and vacuum trucks. Orders in the Safety and Security Systems Group decreased by \$9.6 million, largely due to lower orders from domestic and international public safety markets.

U.S. municipal and governmental orders increased by 4%, primarily due to a \$4.5 million improvement in municipal orders within the Environmental Solutions Group, inclusive of a \$3.4 million increase in orders for sewer cleaners, as well as slightly higher orders for street sweepers. These improvements were partially offset by a \$1.8 million decline in orders within the Safety and Security Systems Group, largely driven by the timing of orders received from public safety markets.

U.S. industrial orders increased by 9%, largely driven by a \$4.8 million increase within the Environmental Solutions Group, primarily related to orders of newly acquired product lines, including orders for rental equipment and refuse trucks, which improved by \$8.8 million in the aggregate, largely resulting from the JJE acquisition. This improvement was partially offset by reductions in orders for waterblasting equipment and vacuum trucks of \$2.7 million and \$2.3 million, respectively, both of which were associated with softness in oil and gas, and other industrial markets.

Non-U.S. orders increased by 24%, largely due to an \$18.0 million increase within the Environmental Solutions Group, reflective of increased Canadian orders received following the acquisition of JJE in the second quarter of 2016. Within the Safety and Security Systems Group, non-U.S. orders decreased by \$6.9 million, primarily due to lower orders from international public safety markets, coupled with a decline in orders from global industrial markets.

Nine months ended September 30, 2016 vs. nine months ended September 30, 2015

Total orders increased by \$2.3 million for the nine months ended September 30, 2016, due to a \$25.5 million improvement in orders within the Environmental Solutions Group that was largely offset by a \$23.2 million order reduction in the Safety and Security Systems Group. Within the Environmental Solutions Group, there was a significant increase in orders from Canada, largely due to the acquisition of \$36.4 million of net orders in connection with the JJE acquisition, as well as orders received subsequent to the acquisition. That improvement was largely offset by lower domestic orders for vacuum trucks, sewer cleaners, street sweepers and waterblasting equipment. The decrease in orders within the Safety and Security Systems Group was primarily due to lower orders from global industrial markets, reflective of reduced demand from oil and gas markets.

U.S. municipal and governmental orders increased by 2%, primarily due to a \$5.0 million improvement in orders within the Environmental Solutions Group, largely attributable to a \$4.7 million increase in orders for sewer cleaners, as well as orders relating to the acquisition of JJE, partially offset by lower orders for street sweepers.

U.S. industrial orders decreased by 7%, largely driven by a \$7.5 million reduction within the Environmental Solutions Group due to declines in orders for vacuum trucks and waterblasting equipment of \$8.8 million and \$4.5 million, respectively. These decreases were partially offset by orders of newly acquired product lines, including orders for rental equipment and refuse trucks. Industrial orders in the Safety and Security Systems Group decreased by \$2.1 million.

Non-U.S. orders increased by 5%, primarily due to a \$27.8 million improvement within the Environmental Solutions Group that was largely offset by a \$20.5 million decline in orders within the Safety and Security Systems Group. Within the Environmental Solutions Group, a substantial increase in Canadian orders was reflective of orders acquired in, and received subsequent to, the JJE acquisition, largely offset by declines in orders of vacuum trucks and sewer cleaners and a \$6.4 million decrease in orders for street sweepers and waterblasting equipment in the Middle East. Within the Safety and Security Systems Group, the decrease was primarily due to lower orders from industrial markets, including international oil, gas and coal markets, as well as a reduced orders from international public safety markets.

Backlog

Backlog was \$148.7 million at September 30, 2016 compared to \$179.3 million at September 30, 2015. The decrease of \$30.6 million, or 17%, was due to reductions in backlog of \$19.3 million at the Environmental Solutions Group and

\$11.3 million at the Safety and Security Systems Group. Lower backlog within the Environmental Solutions Group is largely driven by reduced demand for vacuum trucks, including the impacts from soft oil and gas markets and from excess amounts of used equipment that reduce demand for new equipment in adjacent industrial markets. It also reflects a lower backlog for street sweepers and sewer cleaners, as a result of higher levels of fleet orders that were represented in backlog during the prior year. These decreases were largely offset by the acquisition of \$36.4 million of net orders in connection with the JJE acquisition, as well as orders received subsequent to the acquisition. While total orders have improved in recent quarters, mostly due to the effects of the JJE acquisition, a higher percentage of the recent order intake is represented by orders of products manufactured by other

Table of Contents

companies, which tend to carry a lower gross margin. As such, backlog within the Environmental Solutions Group as of September 30, 2016 includes a less favorable mix of orders than in the prior-year, from a gross margin perspective. Decreased backlog within the Safety and Security Systems Group was primarily due to lower orders of industrial products.

**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, 2016 and 2015:

(\$ in millions)	Three Months Ended			Nine Months Ended		
	September 30,			September 30,		
	2016	2015	Change	2016	2015	Change
Net sales	\$134.3	\$123.0	\$11.3	\$369.1	\$409.8	\$(40.7)
Operating income	12.5	21.5	(9.0 )	43.9	74.6	(30.7 )
Operating data:						
Operating margin	9.3 %	17.5 %	(8.2 )%	11.9 %	18.2 %	(6.3 )%
Total orders	\$136.0	\$108.5	\$27.5	\$354.5	\$329.0	\$25.5
Backlog	118.2	137.5	(19.3 )	118.2	137.5	(19.3 )
Depreciation and amortization	4.7	1.7	3.0	9.6	5.5	4.1

**Three months ended September 30, 2016 vs. three months ended September 30, 2015**

Total orders increased by \$27.5 million, or 25%, for the three months ended September 30, 2016. U.S. orders increased by \$9.5 million, largely due to improvements in orders for rental equipment, refuse trucks, and used equipment of \$4.9 million, \$3.0 million, and \$1.2 million, respectively. The improvements in U.S. orders were largely related to the JJE acquisition. Non-U.S. orders increased by \$18.0 million for the three months ended September 30, 2016, primarily attributable to an \$18.9 million net increase in Canadian orders, which was inclusive of the receipt of post-acquisition orders of new product lines acquired, including orders for refuse trucks, snow removal and rental equipment. The improvement in non-U.S. orders also includes an adjustment of \$9.9 million to increase the previously-reported backlog acquired in connection with the JJE acquisition, and was partially offset by decreased orders of sewer cleaners and vacuum trucks in Canada of \$6.6 million.

Net sales increased by \$11.3 million, or 9%, for the three months ended September 30, 2016. U.S. sales decreased by \$4.5 million, or 4%, primarily due to reductions in sales of vacuum trucks, street sweepers and waterblasting equipment of \$6.8 million, \$6.0 million and \$2.6 million, respectively. Partially offsetting these declines were increases in used equipment sales, sewer cleaner shipments and equipment rentals of \$3.1 million, \$2.9 million and \$1.8 million, respectively. Lower sales of vacuum truck and waterblasting equipment are directly related to the ongoing softness in oil and gas markets, while the decrease in street sweeper sales into our municipal markets was primarily due to fewer fleet order shipments when compared with the prior-year quarter. Non-U.S. sales increased by \$15.8 million for the three months ended September 30, 2016, primarily as a result of the JJE acquisition, with higher shipments of newly acquired product lines within Canada, inclusive of refuse trucks and snow removal equipment, and increased equipment rental revenue, being partially offset by lower sales of street sweepers and sewer cleaners into the Middle East.

Cost of sales increased by \$17.9 million, or 20%, for the three months ended September 30, 2016, primarily attributable to higher sales volumes, as well as the recognition of approximately \$2.5 million of expense associated with purchase accounting effects. In connection with the acquisition of JJE, acquired equipment was adjusted to fair value, which resulted in an increase in the valuation. Upon subsequent sale of the acquired equipment, the Company is recognizing increased cost of sales based on these higher valuations. Gross margin decreased to 19.4% from 26.6% in the prior-year quarter, largely due to purchase accounting expense effects, reduced operating leverage, with lower absorption of manufacturing costs, as well as unfavorable sales mix, with fewer sales into industrial markets and a higher concentration of sales of products manufactured by other companies, which tend to carry a lower margin. SEG&A expenses increased by \$2.1 million for the three months ended September 30, 2016, largely due to expenses associated with our current-year acquisitions of JJE and Westech.

Operating income for the three months ended September 30, 2016 decreased by \$9.0 million, largely due to a \$6.6 million decrease in gross profit, inclusive of the aforementioned purchase accounting expense effects, the \$2.1 million increase in SEG&A expenses and the inclusion of \$0.3 million of acquisition and integration related expenses.

Table of Contents

Nine months ended September 30, 2016 vs. nine months ended September 30, 2015

Total orders increased by \$25.5 million, or 8%, for the nine months ended September 30, 2016. U.S. orders decreased by \$2.4 million, largely due to decreased orders for waterblasting equipment, street sweepers and vacuum trucks of \$4.5 million, \$4.4 million and \$4.1 million, respectively. Partially offsetting these decreases were improvements in orders of refuse trucks and rental equipment \$5.9 million and \$4.6 million, respectively, which largely resulted from the JJE acquisition. The reduction in orders for waterblasting equipment and vacuum trucks is reflective of softness in oil and gas markets, while street sweeper orders from our municipal markets decreased primarily due to fewer fleet orders when compared with the prior-year period. Non-U.S. orders increased by \$27.9 million for the nine months ended September 30, 2016, driven by a \$36.7 million net increase in orders from Canada, which was inclusive of orders acquired in connection with the JJE acquisition and the receipt of post-acquisition orders of new product lines, including orders for refuse trucks, snow removal and rental equipment. This increase was largely offset by a combined \$14.9 million decrease in Canadian orders for vacuum trucks and sewer cleaners. Orders in the Middle East and Mexico also declined \$6.4 million and \$2.9 million, respectively.

Net sales decreased by \$40.7 million, or 10%, for the nine months ended September 30, 2016. U.S. sales decreased by \$50.6 million, or 15%, primarily due to reductions in sales of vacuum trucks, street sweepers and waterblasting equipment of \$40.5 million, \$17.0 million and \$5.1 million, respectively. Partially offsetting these reductions was a \$5.6 million improvement in sewer cleaner sales and a \$2.4 million increase in equipment rental revenue. Non-U.S. sales increased by \$9.9 million, or 13%, for the nine months ended September 30, 2016 primarily due to a \$21.8 million increase in Canadian sales, inclusive of the effects of the JJE acquisition, which has resulted in higher sales of newly-acquired product lines. Partially offsetting the sales improvement in Canada were reductions in sales of street sweepers and sewer cleaners in the Middle East and Mexico of \$6.2 million and \$1.6 million, respectively.

Cost of sales decreased by \$13.6 million, or 4%, for the nine months ended September 30, 2016, primarily driven by lower sales of vacuum trucks and street sweepers in the U.S, as well as fewer international shipments of street sweepers and sewer cleaners, partially offset by unfavorable mix effects and the recognition of the approximately \$3.0 million of expense associated with purchase accounting effects resulting from the recognition of higher cost of sales associated with sales of acquired equipment, which were increased to fair value in connection with the JJE acquisition. Gross margin decreased to 21.8% from 26.2% in the prior-year period, largely due to reduced operating leverage due to lower volumes, unfavorable sales mix, with fewer sales into industrial markets and a higher concentration of sales of products manufactured by other companies, which tend to carry a lower margin, as well as purchase accounting expense effects.

SEG&A expenses increased by \$3.3 million for the nine months ended September 30, 2016, largely due to expenses associated with our current-year acquisitions of JJE and Westech.

Operating income for the nine months ended September 30, 2016 decreased by \$30.7 million, largely due to a \$27.1 million decrease in gross profit, inclusive of the aforementioned purchase accounting expense effects, the \$3.3 million increase in SEG&A expenses and the inclusion of \$0.3 million of acquisition and integration related expenses.

Backlog was \$118.2 million at September 30, 2016 compared to \$137.5 million at September 30, 2015. Declines in backlog for vacuum trucks reflect the direct impact from soft oil and gas markets and the impact of used equipment reducing demand for new equipment in adjacent industrial markets. The reduction also reflects lower backlog for street sweepers and sewer cleaners as a result of higher levels of fleet orders in the prior year. These decreases were partially offset by the addition of \$43.3 million of acquired backlog as of the date of the JJE acquisition, as well as incremental post-acquisition orders at JJE.

#### 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, 2016 and 2015:

(\$ in millions)	Three Months Ended			Nine Months Ended		
	September 30, 2016	September 30, 2015	Change	September 30, 2016	September 30, 2015	Change
Net sales	\$52.4	\$56.7	\$(4.3)	\$162.7	\$171.8	\$(9.1)

Edgar Filing: FEDERAL SIGNAL CORP /DE/ - Form 10-Q

Operating income	6.5	9.3	(2.8 )	18.0	23.2	(5.2 )
Operating data:						
Operating margin	12.4 %	16.4 %	(4.0 )%	11.1 %	13.5 %	(2.4 )%
Total orders	\$50.1	\$59.7	\$(9.6)	\$154.6	\$177.8	\$(23.2)
Backlog	30.5	41.8	(11.3 )	30.5	41.8	(11.3 )
Depreciation and amortization	1.1	1.2	(0.1 )	3.3	3.5	(0.2 )

39

---

Table of Contents

## Three months ended September 30, 2016 vs. three months ended September 30, 2015

Total orders decreased by \$9.6 million or 16%, for the three months ended September 30, 2016. U.S. orders decreased by \$2.7 million, or 7%, primarily due to reductions in orders for public safety and industrial products of \$1.6 million and \$1.2 million, respectively. The decrease in public safety is primarily due to the timing of a \$1.8 million order within our police markets from a major municipality received in the third quarter of 2015. The decrease in industrial orders is reflective of lower demand from domestic oil and gas markets. Non-U.S. orders decreased by \$6.9 million, or 31%, largely due to a \$5.0 million reduction in orders from international public safety markets. The prior-year quarter included significant orders from customers in Asia and Europe that did not repeat in the current year. In addition, orders for industrial products decreased by \$2.1 million, primarily due to softness in international oil and gas markets. Net sales decreased by \$4.3 million, or 8%, for the three months ended September 30, 2016. U.S. sales increased by \$1.2 million, largely due to a \$2.8 million increase in sales into domestic public safety markets, inclusive of sales to major municipalities. This increase was partially offset by a \$1.6 million reduction in sales of industrial products into domestic oil and gas markets. Non-U.S. sales decreased by \$5.5 million, principally due to a \$3.3 million reduction in sales of industrial products into international oil and gas markets, as well as the absence of a \$1.8 million order cancellation fee received in the prior-year quarter.

Cost of sales decreased by \$1.5 million, or 4%, for the three months ended September 30, 2016, largely due to the effects of lower sales volume. Gross margin for the three months ended September 30, 2016 decreased to 36.6% compared to 38.8% in the prior-year period, largely due to the receipt of the order cancellation fee in the prior-year quarter.

SEG&A expenses for the three months ended September 30, 2016 were \$0.4 million lower than the prior-year quarter, largely due to lower employee costs, inclusive of the effects of previously implemented restructuring activity.

Operating income decreased by \$2.8 million for the three months ended September 30, 2016, largely due to a \$2.8 million decrease in gross profit compared to the prior-year quarter, which included an order cancellation fee of approximately \$1.8 million. There was also a \$0.4 million reduction in SEG&A expenses, that was offset by \$0.4 million of restructuring charges representing severance costs incurred in connection with a cost reduction plan in the U.S.

## Nine months ended September 30, 2016 vs. nine months ended September 30, 2015

Total orders decreased by \$23.2 million or 13%, for the nine months ended September 30, 2016. In the aggregate, U.S. orders were down \$2.7 million compared to the prior-year period, with decreases in orders of industrial products and outdoor warning systems of \$3.8 million and \$2.2 million, respectively, being partially offset by a \$3.4 million improvement in orders from public safety markets. Non-U.S. orders decreased by \$20.5 million, or 28%, primarily due to a \$16.4 million decrease in orders from industrial markets, including international oil, gas and coal markets, as well as a \$6.8 million reduction in orders from international public safety markets. Partially offsetting these decreases was a \$2.7 million improvement in international orders for outdoor warning systems, largely due to a significant order received from the Middle East.

Net sales decreased by \$9.1 million, or 5%, for the nine months ended September 30, 2016. U.S. sales increased by \$3.8 million, driven by a \$9.0 million improvement in sales into public safety markets, inclusive of a number of large sales to major municipalities, combined with a \$0.9 million increase in sales of outdoor warning systems. Partially offsetting these increases was a \$6.0 million reduction in sales into industrial markets. Non-U.S. sales decreased by \$12.9 million, or 19%, primarily due to a \$13.0 million decrease in sales into international industrial markets, inclusive of the absence of a large order cancellation fee received in the prior-year period.

Cost of sales decreased by \$3.6 million, or 3%, for the nine months ended September 30, 2016, largely due to the effects of lower sales volumes, partially offset by an unfavorable sales mix impact of \$1.2 million associated with lower sales of products into industrial markets. Gross margin for the nine months ended September 30, 2016 was 35.2% compared to 36.6% in the prior-year period, largely due to the unfavorable sales mix effects and the inclusion of the aforementioned order cancellation fee in the prior-year period.

SEG&A expenses for the nine months ended September 30, 2016 were \$1.5 million lower than the prior-year quarter, largely due to lower employee costs, inclusive of the effects of previously implemented restructuring activities.



Operating income decreased by \$5.2 million for the nine months ended September 30, 2016, largely due to a \$5.5 million decrease in gross profit. The \$1.5 million reduction in SEG&A expenses was partially offset by \$1.2 million of restructuring charges representing severance costs incurred in the U.S.

Backlog was \$30.5 million at September 30, 2016 compared to \$41.8 million at September 30, 2015. The decrease was primarily due to lower orders of industrial products.

Table of Contents

Corporate Expenses

Corporate operating expenses for the three months ended September 30, 2016 were \$5.5 million, compared to \$5.6 million in the prior-year quarter, largely due to lower employee incentive compensation costs.

For the nine months ended September 30, 2016, corporate operating expenses were \$18.0 million, compared to \$18.9 million in the prior-year period, largely due to lower employee incentive compensation costs, offset by a \$0.9 million increase in professional service and legal fees incurred in connection with acquisition and integration related activity.

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. The Company tends to have lower sales in the first calendar quarter of each year compared to other quarters as a result of these factors.

Financial Condition, Liquidity and Capital Resources

The Company uses its cash flow from operations to fund growth and to make capital investments that sustain its operations, reduce costs, or both. Beyond these uses, remaining cash is used to pay down debt, repurchase shares, fund dividend payments and make pension contributions. The Company may also choose to invest in the acquisition of businesses. 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 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. Subsequent to the acquisition of JJE, such net cash flows may become more significant, and as such, cash flow from operating activities may not be directly comparable with amounts reported in periods prior to the acquisition.

The Company's cash and cash equivalents totaled \$50.8 million and \$76.0 million as of September 30, 2016 and December 31, 2015, respectively. As of September 30, 2016, \$14.5 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.

As discussed further in Note 15 – Discontinued Operations to the accompanying condensed consolidated financial statements, the Company recorded a net deferred tax liability of \$6.3 million at December 31, 2015 associated with recognizing the outside basis differences of entities being sold in connection with the sale of Bronto. The deferred tax liability recorded at December 31, 2015 included a liability for U.S. income tax effects associated with the repatriation of the related sales proceeds. The initial sales proceeds of €76 million (approximately \$82.3 million) were received on January 29, 2016, with an additional €5.1 million in cash (approximately \$5.7 million) being received in connection with the payment of the final working capital and net debt adjustments in the second quarter of 2016.

Net cash of \$17.1 million and \$60.4 million was provided by continuing operating activities in the nine months ended September 30, 2016 and 2015, respectively. The reduction in cash generated by continuing operating activities in the nine months ended September 30, 2016 compared to the same period of the prior year was largely the result of lower earnings. The operating cash flow in both current-year periods was also lower by approximately \$11 million as a result of the non-cash settlement, in connection with the acquisition, of accounts receivable due from JJE.

Net cash of \$101.9 million and \$3.6 million was used for continuing investing activities in the nine months ended September 30, 2016 and 2015, respectively. Capital expenditures in the nine months ended September 30, 2016 and 2015 were \$4.8 million and \$7.7 million, respectively. As discussed in Note 2 – Acquisitions, in the nine months ended September 30, 2016, the Company paid an initial \$96.6 million to acquire substantially all the assets and operations of JJE, and also used \$6.0 million to acquire Westech. In addition, during the nine months ended September 30, 2016, the Company also received \$6.0 million from a customer as full repayment of a loan that was originally provided in

the fourth quarter of 2015. In the prior-year period, the Company received \$4.0 million from the escrow associated with the FSTech Group divestiture. Net cash provided by discontinued investing activities totaled \$88.0 million in the nine months ended September 30, 2016, which represents the net proceeds from the sale of Bronto.

Net cash of \$28.9 million was used for continuing financing activities in the nine months ended September 30, 2016, compared with \$27.0 million in the prior year. In the nine months ended September 30, 2016, the Company borrowed \$64.8 million

Table of Contents

against its revolving credit facility, funded cash dividends of \$12.8 million, repurchased \$33.8 million of treasury stock, and redeemed \$2.6 million of stock in order to remit funds to tax authorities to satisfy employees' minimum tax withholdings following the vesting of stock-based compensation. The Company also paid the remaining \$43.4 million of term loan debt outstanding under the 2013 Credit Agreement and spent \$1.1 million on fees in connection with its debt refinancing. In the prior-year period, the Company paid down \$2.9 million of term loan debt, funded cash dividends of \$11.3 million, repurchased \$10.6 million of treasury stock, and redeemed \$3.2 million of stock in order to remit funds to tax authorities to satisfy employees' minimum tax withholdings following the vesting of stock-based compensation.

The Company uses the ratio of total debt to adjusted EBITDA as one measure of its long-term financial stability. The ratio of debt to adjusted EBITDA is a non-GAAP measure that represents total debt divided by the trailing 12-month total of income from continuing operations before interest expense, debt settlement charges, acquisition and integration related expenses, restructuring charges, purchase accounting effects, other (income) expense, income tax expense, and depreciation and amortization expense. The Company uses the ratio to calibrate the magnitude of its debt and its debt capacity against adjusted EBITDA, which is used as an operating performance measure. We believe that investors use a version of this ratio in a similar manner. In addition, financial institutions (including the Company's lenders) use the ratio in connection with debt agreements to set pricing and covenant limitations. For these reasons, the Company believes that the ratio is a meaningful metric to investors in evaluating the Company's long-term financial performance and stability. Other companies may use different methods to calculate total debt to EBITDA. The following table summarizes the Company's ratio of total debt to adjusted EBITDA and reconciles income from continuing operations to adjusted EBITDA as of and for the trailing 12-month periods ended September 30, 2016 and 2015:

(in millions)	Trailing Twelve Months Ending September 30,	
	2016	2015
Total debt	\$65.6	\$47.0
Income from continuing operations	44.7	68.3
Add:		
Interest expense	1.9	2.6
Debt settlement charges	0.3	—
Acquisition and integration related expenses	1.2	—
Restructuring	1.6	0.4
Purchase accounting effects	3.0	—
Other (income) expense, net	(1.8 )	2.5
Income tax expense	23.1	31.2
Depreciation and amortization	16.2	12.1
Adjusted EBITDA	\$90.2	\$117.1
Total debt to adjusted EBITDA ratio	0.7	0.4

On January 27, 2016, the Company entered into an Amended and Restated Credit Agreement (the "2016 Credit Agreement"), by and among the Company and certain of its foreign subsidiaries (collectively, the "Borrowers"), Wells Fargo Bank, National Association, as administrative agent, swingline lender and issuing lender, JPMorgan Chase Bank, N.A. as syndication agent, KeyBank National Association, as documentation agent, Wells Fargo Securities, LLC and J.P. Morgan Securities LLC, as joint lead arrangers and joint bookrunners, and the other lenders and parties signatory thereto.

The 2016 Credit Agreement is a \$325.0 million revolving credit facility, maturing on January 27, 2021, that provides for borrowings in the form of loans or letters of credit up to the aggregate availability under the facility, with a sub-limit of \$50.0 million for letters of credit. The 2016 Credit Agreement allows for the Borrowers to borrow in denominations of U.S. Dollars, Canadian Dollars (up to a maximum of C\$85.0 million) or euros (up to a maximum of €20.0 million). In addition, the Company may cause the commitments to increase by up to an additional \$75.0 million, subject to the approval of the applicable lenders providing such additional financing. Borrowings under the 2016 Credit Agreement may be used for working capital and general corporate purposes, including permitted acquisitions. The Company's domestic subsidiaries provide guarantees for all obligations of the Borrowers under the 2016 Credit Agreement, which is secured by a first priority security interest in all now or hereafter acquired domestic property and assets and the stock or other equity interests in each of the domestic subsidiaries and 65% of the outstanding voting capital stock of certain first-tier foreign subsidiaries, subject to certain exclusions.

Table of Contents

Borrowings under the 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 \$325.0 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 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, 2016. The 2016 Credit Agreement also includes a "covenant holiday" period, which allows for the temporary increase of the minimum leverage ratio following the completion of a permitted acquisition, or a series of permitted acquisitions, when the total consideration exceeds a specified threshold. In addition, the 2016 Credit Agreement includes customary negative covenants, subject to certain exceptions, restricting or limiting the Company's and its subsidiaries' ability to, among other things: (i) make non-ordinary course dispositions of assets, (ii) make certain fundamental business changes, such as merge, consolidate or enter into any similar combination, (iii) make restricted payments, including dividends and stock repurchases, (iv) incur indebtedness, (v) make certain loans and investments, (vi) create liens, (vii) transact with affiliates, (viii) enter into sale/leaseback transactions, (ix) make negative pledges and (x) modify subordinated debt documents.

Under the 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 2016 Credit Agreement. If its 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 officer, directors, employees and consultants and (iii) an incremental \$30.0 million of other cash payments.

The 2016 Credit Agreement contains customary events of default. If an event of default occurs and is continuing, the Borrowers may be required immediately to repay all amounts outstanding under the 2016 Credit Agreement and the commitments from the lenders may be terminated.

The 2016 Credit Agreement amends and restates the Company's March 13, 2013 Credit Agreement (the "2013 Credit Agreement"), which provided the Company with a \$225.0 million senior secured credit facility comprised of a five-year fully funded term loan of \$75.0 million and a five-year \$150.0 million revolving credit facility.

Under the terms of the 2013 Credit Agreement, the Company was required to make quarterly installment payments against the \$75.0 million term loan, with any remaining balance due on the maturity date of March 13, 2018. As a result of executing the 2016 Credit Agreement subsequent to December 31, 2015, but prior to the issuance of the financial statements for the year then ended, the \$6.9 million current portion of term loan debt outstanding as of December 31, 2015 was reflected as a component of long-term borrowings and capital lease obligations on the Condensed Consolidated Balance Sheets. Under the 2013 Credit Agreement, the Company was allowed to prepay the term loan in whole or in part prior to maturity without premium or penalty. In the nine months ended September 30, 2016, the Company repaid the remaining \$43.4 million of principal outstanding under the 2013 Credit Agreement. In the nine months ended September 30, 2016, approximately \$0.3 million of unamortized deferred financing fees associated with the 2013 Credit Agreement were written off in connection with executing the 2016 Credit Agreement. The Company incurred \$1.1 million of debt issuance costs in connection with the execution of the 2016 Credit Agreement. Such fees have been deferred and are being amortized over the five-year term.

As of September 30, 2016, there was \$64.7 million of cash drawn and \$19.4 million of undrawn letters of credit under the 2016 Credit Agreement, with \$240.9 million of net availability for borrowings. As of December 31, 2015, there was no cash drawn and \$19.2 million of undrawn letters of credit under the \$150.0 million revolving credit facility portion of the 2013 Credit Agreement, with \$130.8 million of net availability for borrowings.

As of September 30, 2016 and December 31, 2015, there were no borrowings against the Company's non-U.S. lines of credit which provide for borrowings of up to \$0.2 million.

For the nine months ended September 30, 2016, gross borrowings and gross payments under the 2016 Credit Agreement were \$69.8 million and \$5.0 million, respectively. For the nine months ended September 30, 2015, there were no gross borrowings or gross payments under the Company's domestic revolving credit facility portion of the 2013 Credit Agreement.

The Company anticipates that capital expenditures for 2016 will be less than \$10 million.

Table of Contents

Contractual Obligations and Off-Balance Sheet Arrangements

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, 2015, with the exception of purchase obligations, as described below.

Following the acquisition of JJE, the Company's purchase obligations, which primarily relate to commercial chassis, vehicle bodies and other contracts in the ordinary course of business, have increased from the \$55.0 million reported in the Company's Annual Report on Form 10-K for the year ended December 31, 2015. As of September 30, 2016, purchase obligations totaled \$82.8 million, with \$76.5 million in payments due in less than one year and \$6.3 million in payments due in two to three years.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

The Company is subject to market risk associated with changes in interest rates and foreign exchange rates. To mitigate this risk, the Company may utilize derivative financial instruments, including interest rate swaps and foreign currency forward contracts. The Company does not hold or issue derivative financial instruments for trading or speculative purposes and is not party to leveraged derivatives contracts.

Interest Rate Risk

See Item 7A, Quantitative and Qualitative Disclosures about Market Risk, of our Annual Report on Form 10-K for the year ended December 31, 2015. During the nine months ended September 30, 2016, there have been no material changes in our market risk associated with movements in interest rates.

Foreign Exchange Rate Risk

Although the majority of the Company's sales, expenses and cash flow are transacted in U.S. dollars, the Company has exposure to changes in foreign exchange rates, primarily the Canadian Dollar, Euro and British pound. The impact of currency movements on our financial results is largely mitigated by natural hedges in our operations. As discussed in Note 2— Acquisitions to the accompanying condensed consolidated financial statements, the Company completed the acquisition of substantially all of the assets and operations of JJE during the nine months ended September 30, 2016. The Canadian operations of JJE primarily conduct business in Canadian dollars. Almost all other sales of product from the U.S. to other parts of the world are denominated in U.S. dollars. Sales from and within other currency zones are predominantly transacted in the currency of the country sourcing the product or service. Management estimates that a 10% appreciation of the U.S. dollar against other currencies would reduce full-year net sales and operating income by less than 1%.

The Company may also have foreign currency exposures related to buying and selling in currencies other than the local currency in which it operates and to certain balance sheet positions. If such transactional or balance sheet exposures are material, the Company may enter into matching foreign currency forward contracts from time to time to protect against variability in exchange rates.

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, 2016. 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, 2016.

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. SEC guidance permits management to omit an assessment of internal control over financial reporting for an acquired business from management's assessment of internal control over financial reporting for a period not to exceed one year from the date of the acquisition. During the second quarter of 2016, the Company completed the acquisition of JJE. As of September 30, 2016, management has not yet fully assessed JJE's internal control over financial reporting. Excluding the acquisition of JJE, 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, 2016.

Table of Contents

## PART II. OTHER INFORMATION

## Item 1. Legal Proceedings.

The information set forth under the heading “Legal Proceedings” in Note 8 – 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, 2015.

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

## Restrictions upon the Payment of Dividends

Under the terms of the 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 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

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 <sup>(a)</sup> <sub>(b)</sub>
July 2016 (7/3/16 – 8/6/16)	—	\$ —	—	\$36,044,042
August 2016 (8/7/16 – 9/3/16)	50,882	12.4279	50,882	35,411,686
September 2016 (9/4/16 – 10/1/16)	—	—	—	35,411,686

(a) On April 22, 2014, the Board authorized a stock repurchase program of up to \$15.0 million of the Company’s common stock. During the second quarter of 2015, cumulative stock repurchases under the April 2014 program reached the maximum authorized level of \$15.0 million. No additional stock repurchases will be made under that program.

(b) On November 4, 2014, the Board authorized an additional 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.

## Departure of Directors or Certain Officers

Effective December 31, 2016, Dennis J. Martin will retire from the position of Executive Chairman of the Company. Mr. Martin will continue to serve on the Board as its Non-Executive Chairman.

Mr. Martin joined the Board in March 2008 and was appointed as the Company’s President and Chief Executive Officer on October 30, 2010. Mr. Martin was named Executive Chairman of the Company on January 1, 2016, when Jennifer L. Sherman succeeded Mr. Martin as the Company’s President and Chief Executive Officer.

A copy of the Company's press release announcing these matters is attached hereto as Exhibit 99.1 to this Form 10-Q and the information contained therein is incorporated by reference.

45

---

Table of Contents

Other Events

On November 1, 2016, the Company issued a press release announcing its financial results for the three and nine months ended September 30, 2016. The full text of the third quarter financial results press release is attached hereto as Exhibit 99.2 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 Press Release Announcing Retirement of Executive Chairman, Dated October 25, 2016.
- 99.2 Third Quarter Financial Results Press Release, Dated November 1, 2016.
- 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.

Table of Contents

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 1, 2016 /s/ Brian S. Cooper

Brian S. Cooper

Senior Vice President and Chief Financial Officer

(Principal Financial Officer)