

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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2022

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

For the transition period from _____ to _____

Commission File Number: 001-11595



Astec Industries, Inc.

(Exact name of registrant as specified in its charter)

Tennessee

62-0873631

State or other jurisdiction of incorporation or organization

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

1725 Shepherd Road

Chattanooga, TN

(Address of principal executive offices)

37421

(Zip Code)

(423) 899-5898

Registrant's telephone number, including area code

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	ASTE	The Nasdaq Stock Market LLC

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

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

Large Accelerated Filer
Non-accelerated filer

Accelerated Filer
Smaller Reporting Company
Emerging Growth Company

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

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

As of June 30, 2022, the aggregate market value of the registrant's voting and non-voting common stock held by non-affiliates of the registrant was approximately \$682.5 million based upon the closing sales price as reported on the Nasdaq National Market System.

As of February 24, 2023, there were 22,648,684 shares of Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement to be filed with the Securities and Exchange Commission within 120 days after the end of the registrant's fiscal year ended December 31, 2022 are incorporated by reference into Part III of this Annual Report on Form 10-K where indicated.

ASTEC INDUSTRIES, INC.
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For the Year Ended December 31, 2022

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GENERAL

Unless otherwise indicated by the context, all references in this Annual Report on Form 10-K to "we," "us," "our," or the "Company" refer to Astec Industries, Inc. and our subsidiaries. References to "Parent Company" in this Annual Report on Form 10-K refer to Astec Industries, Inc. only.

TRADEMARKS AND TRADE NAMES

Except when discussing competitors and their products herein, the trademarks and trade names used in this Annual Report on Form 10-K are the property of Astec Industries, Inc. or its subsidiaries, as the case may be.

SAFE HARBOR STATEMENTS UNDER THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995

This Annual Report on Form 10-K, particularly "Management's Discussion and Analysis of Financial Condition and Results of Operations," contains forward-looking statements within the meaning of the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995. Such statements relate to, among other things, income, earnings, cash flows, changes in operations, operating improvements, businesses in which we operate and the United States and global economies. Statements in this Annual Report on Form 10-K that are not historical are hereby identified as "forward-looking statements" and may be indicated by words or phrases such as "anticipates," "supports," "plans," "projects," "expects," "believes," "should," "would," "could," "forecast," "management is of the opinion," use of the future tense and similar words or phrases.

These forward-looking statements are based largely on management's expectations, which are subject to a number of known and unknown risks, uncertainties and other factors discussed in this Annual Report on Form 10-K, including those risks described in Part I, Item 1A. Risk Factors hereof, and in other documents filed by us with the Securities and Exchange Commission, which may cause actual results, financial or otherwise, to be materially different from those anticipated, expressed or implied by the forward-looking statements. All forward-looking statements included in this document are based on information available to us on the date hereof, and we assume no obligation to update any such forward-looking statements to reflect future events or circumstances, except as required by law.

PART I

ITEM 1. BUSINESS

Our Company

We design, engineer, manufacture and market equipment and components used primarily in road building and related construction activities, as well as other products discussed below. Our products are used in each phase of road building, from quarrying and crushing the aggregate to application of the road surface for both asphalt and concrete. We also manufacture certain equipment and components unrelated to road construction, including equipment for the mining, quarrying, construction, demolition, land clearing and recycling industries and port and rail yard operators; industrial heat transfer equipment; commercial whole-tree pulpwood chippers; horizontal grinders; blower trucks; commercial and industrial burners; and combustion control systems.

Our products are marketed both domestically and internationally primarily to asphalt producers; highway and heavy equipment contractors; utility contractors; sand and gravel producers; construction, demolition, recycle and crushing contractors; forestry and environmental recycling contractors; mine and quarry operators; port and inland terminal authorities; power stations and domestic and foreign government agencies. In addition to equipment sales, we manufacture and sell replacement parts for equipment in each of our product lines and replacement parts for some competitors' equipment. The distribution and sale of replacement parts is an integral part of our business.

Corporate Strategic Objectives

Beginning in late 2019, we initiated a strategic transformation focused on implementing new business strategies and a new operating structure. This transformation was focused on aligning our operations under the OneASTEC business model with the strategic pillars of Simplify, Focus and Grow.

Simplify

As part of our strategic transformation, we have focused on optimizing our organizational structure and operations to execute our profitable growth strategy by:

- Centralizing our organization into sites with common platforms and operating models that support organic sales growth to make it easier for our customers, partners, employees and shareholders to understand and interact with us.
- Focusing on productivity gains and cost reductions across our business through reducing complexity in our organization structure to drive greater efficiencies across our operations while maintaining strong customer relationships.
- Simplifying our product offerings through the development of a rationalized global product portfolio executed through manufacturing centers of excellence.

Since the inception of these initiatives, we have consolidated five sites, including our Tacoma site in the first quarter of 2022.

Additionally, we are in the process of a multi-year phased implementation of a standardized enterprise resource planning ("ERP") system across our global organization, which will replace much of our existing disparate core financial systems. The upgraded ERP will initially convert our internal operations, manufacturing, finance, human capital resources management and customer relationship systems to cloud-based platforms. This new ERP system will provide for standardized processes and integrated technology solutions that enable us to better leverage automation and process efficiency, transforming how we connect people, products and processes to operate as OneASTEC. We have materially completed the ERP global design in 2022, launched the human capital resources module throughout our domestic sites in January 2023 and expect to convert the operations of one manufacturing site along with Corporate in 2023 to set the foundation before accelerating the implementation at additional manufacturing sites.

Focus

We believe enhanced efficiencies across the Astec organization will result from utilizing our OneASTEC business model to concentrate resources on excellence initiatives, including:

- Driving commercial excellence and providing a holistic set of solutions to strengthen our relationships with customers and dealers while maintaining our market leadership positions.
- Streamlining operational excellence processes through the implementation of lean principles in our operations and incorporate production systems that embed continuous improvement into the culture of our manufacturing processes.
- Aligning key performance metrics and incentives to enhance accountability across the business and drive a performance-based culture.
- Targeting recently completed acquisitions to ensure comprehensive integration of operations and realization of anticipated synergies to support sales and profit growth.

The customer relationship and human capital resources components of our ERP implementation discussed above are anticipated to support the excellence initiatives of our OneASTEC business model.

In addition, in the first quarter of 2022, a lean manufacturing initiative at one of our largest sites was initiated and is expected to drive improvement in gross margin at that site. We substantially completed the design efforts for this project during 2022. We also began executing investments to acquire and install manufacturing equipment intended to drive increased efficiencies in our production processes. We plan to continue these capital investments during 2023, which are anticipated to be completed by the end of the year. Gross margin improvements are expected to be realized with the project completion in early to mid-2024. This improvement is intended to serve as the optimal blueprint for our other manufacturing facilities.

Grow

We are focused on growing sales and profits organically as well as selectively pursuing strategic acquisitions and partnerships within the "Rock to Road" value chain, including by:

- Focusing on innovation with a new product development approach that increases our market competitiveness over time.
- Leveraging technology and digital connectivity to enhance the customer experience through controls and automation and other technologies.
- Identifying potential targets for strategic acquisitions and partnerships globally to establish a presence in attractive new markets, supplement our current product offerings or accelerate technologies or other enhancements that leverage our existing product portfolio.
- Strengthening our capabilities to deliver an enhanced aftermarket experience that best meets our customers' needs while creating scalable growth.

Since 2020, we have completed four acquisitions, strengthening our concrete production equipment and controls and automation offerings. A further discussion of these acquisitions is included in Part II, Item 8. Financial Statements and Supplementary Data of this Annual Report on Form 10-K.

Business Segments

We operate manufacturing sites and sites that operate as sales and service offices for our manufacturing locations. Our two reportable business segments, Infrastructure Solutions and Materials Solutions, comprise sites based upon the nature of the products produced or services provided, the type of customer for the products, the similarity of economic characteristics, the manner in which management reviews results and the nature of the production process, among other considerations.

The Corporate and Other category consists primarily of the parent company, Astec Insurance Company ("Astec Insurance" or the "captive"), a captive insurance company, and the controls and automation business, which do not meet the requirements for separate disclosure as an operating segment or inclusion in one of the other reporting segments.

We evaluate performance and allocate resources to our operating segments based on Segment Operating Adjusted EBITDA. Segment Operating Adjusted EBITDA, a non-GAAP financial measure, is defined as net income or loss before the impact of interest income or expense, income taxes, depreciation and amortization and certain other adjustments that are not considered in the evaluation of ongoing operating performance. The Company's presentation of Segment Operating Adjusted EBITDA may not be comparable to similar measures used by other companies and is not necessarily indicative of the results of operations that would have occurred had each reportable segment been an independent, stand-alone entity during the periods presented.

Infrastructure Solutions Segment

Overview

The Infrastructure Solutions segment designs, engineers, manufactures and markets a complete line of asphalt plants, concrete plants and their related components and ancillary equipment as well as supplying asphalt road construction equipment, industrial thermal systems and other heavy equipment.

The Infrastructure Solutions segment was operated from the following sites in 2022:

Site	Location	Site	Location
Australia	Brisbane, Australia	EUG-Airport Rd	Oregon, United States
Blair	Nebraska, United States	India	Ahmedabad, India
Burlington	Wisconsin, United States	LatAm	Santiago, Chile
CHA-Jerome Ave	Tennessee, United States	Parsons	Kansas, United States
CHA-Manufacturers Rd	Tennessee, United States	St-Bruno	Quebec, Canada
CHA-Wilson Rd	Tennessee, United States		

The sites based in North America within the Infrastructure Solutions segment are primarily manufacturing operations while those located outside of North America generally market, service and install equipment and provide parts in the regions in which they operate for many of the products produced by all of our manufacturing sites.

Based on an internal review of our operations, beginning January 1, 2022, the India site, which was previously incorporated into the Materials Solutions segment, is reported in the Infrastructure Solutions segment while the Thailand site, which was previously included in the Infrastructure Solutions segment, is reported in the Materials Solutions segment.

Products and Services

The primary products produced by the Infrastructure Solutions segment include:

Asphalt plants and related components	Heaters	Concrete dust control systems
Asphalt pavers	Vaporizers	Concrete material handling systems
Screeds	Heat recovery units	Paste back-fill plants
Asphalt storage tanks	Hot oil heaters	Bagging plants
Fuel storage tanks	Industrial and asphalt burners and systems	Blower trucks and trailers
Material transfer vehicles	Soil stabilizing/reclaiming machinery	Wood chippers and grinders
Milling machines	Soil remediation plants	Control systems
Pump trailers	Concrete batch plants	Service, construction and retrofits
Liquid terminals	Storage equipment and related parts	Engineering and environmental permitting services
Polymer plants	Concrete mixers	

A typical asphalt mixing plant consists of heating and storage equipment for liquid asphalt; cold feed bins for blending aggregates; a counter-flow continuous type unit (Astec Double Barrel) for drying, heating and mixing; a baghouse composed of air filters and other pollution control devices; hot storage bins or silos for temporary storage of hot-mix asphalt; and a control house. We introduced the concept of high plant portability for asphalt plants in 1979. Our current generation of portable asphalt plants is marketed as the Six Pack and consists of six or more portable components designed to be easily transported from one construction site to another, thereby reducing relocation expenses and interruption of operations. High plant portability is an industry innovation that we have developed and successfully market.

The components in our asphalt mixing plants are fully automated and use both microprocessor-based and programmable logic control systems for efficient operation. The plants are manufactured to meet or exceed federal and state clean air standards. We also build batch type asphalt plants and have developed specialized asphalt recycling equipment for use with our hot-mix asphalt plants.

We engineer and develop new products and product enhancements dedicated to improving customers' productivity and profitability. Our products share environmentally conscious designs and are crafted from quality materials by an expert staff of dedicated professionals. Our new National Type Evaluation Program Certified Self-Erect Storage Silo offers overnight storage capabilities with options that allow for longer-term storage. The silo and drag share a common chassis and are erected together using hydraulic cylinders, alleviating the need for a crane to enable our customers to save set up time and costs. In addition, the freshly redesigned versatile Astec Batch Tower offers a broad range of mixing capacity with varying volumes of hot bin storage and builds upon our legacy of delivering sound performance paired with exceptional technology.

We developed the patented water injection warm mix asphalt system, which allows the asphalt mix to be prepared and placed at lower temperatures than conventional systems and operates with a substantial reduction in emissions during paving and load-out. Previous technologies for warm mix production rely on expensive additives, procedures and/or special asphalt cement delivery systems that significantly increase the cost per ton of mix. Our multi-nozzle device eliminates the need for the expensive additives by mixing a small amount of water and asphalt cement together to create microscopic bubbles that reduce the viscosity of the liquid asphalt coating on the rock, thereby allowing the mix to be handled and worked at lower temperatures.

Sustainability is a key focus in our development considerations, and we are continuously exploring methods and practices that will contribute to sustainable infrastructure and a healthy environment for generations to come. Our team is constantly working to find solutions to help our asphalt plant customers reduce the environmental impact of asphalt mixing operations in user-friendly and budget-conscious ways. These innovations can be seen across our asphalt production equipment product line. Among our many leading products that can enhance the sustainability of an asphalt mixing operation are the Double Barrel XHR, the warm mix system, low emissions burners in the Phoenix burner line, vent condensers for asphalt storage tanks and blue smoke systems. During 2022, we joined The Road Forward, an industry-wide initiative of the National Asphalt Pavement Association, to engage, educate and empower the U.S. asphalt community to produce and construct net zero carbon emission asphalt.

pavements by 2050. We also joined the U.S. Department of Energy's Better Plants program that offers support to leading U.S. manufacturers in the form of technical advice, energy efficient training and data analysis to help reduce energy consumption.

Asphalt continues to be one of the most recycled products in the United States and the use of reclaimed asphalt pavement ("RAP") continues to remain highly used in new pavement. We continue to develop methods that make it feasible to produce quality asphalt mixes with up to 70% RAP content. We are focused on producing equipment with the most advanced mix recycling technology in the industry. More tons of RAP are available than are currently being utilized due to restrictions in the amount of RAP allowed by various governmental agencies. Our recycle technology, including the RAP Pre-Dryer System, is continuously being enhanced and is providing the science to alleviate the concerns driving such restrictions and to improve RAP utilization percentages in the asphalt industry.

Many of our highly technical, sophisticated large asphalt plants, while ideally suited for the North American market, are not as well suited in many international markets. As such, we have designed single-load and single-chassis portable plants that are better suited for the international markets. The Vantage 140 (the "Vantage") portable asphalt plant, which is based upon our proven Double Barrel drum mixer, has production capacity of 140 metric tons per hour and RAP mixing capabilities of 50%. The Vantage also provides full-size plant features in a compact highly-portable configuration. Additionally, the Ventura 140SL portable asphalt plant is also focused on satisfying needs of the international market and allows for a smaller, more mobile plant design with single-load capability.

Our pavers have been designed to minimize maintenance costs while exceeding road surface smoothness requirements. Generally, our equipment can be used in tandem with each other or separately with equipment already owned by the customer. Our RP-Series paver line has been updated with operator controls that provide improved functionality and a compact, modern feel. All highway class asphalt pavers are now outfitted with an innovative digital control system and easy-to-understand touch screen interface. These product updates deliver a balance of intuitive technology and simplified operation, providing the durability and serviceability our customers expect.

Our mobile, self-propelled material transfer vehicle ("Shuttle Buggy") allows continuous paving by separating truck unloading from the paving process while remixing the asphalt. A typical asphalt paver must stop paving to permit truck unloading of asphalt mix. By permitting continuous paving, the Shuttle Buggy allows the asphalt paver to produce a smoother road surface while reducing the time required to pave the road surface and the number of haul trucks required. Studies using infrared technology have revealed problems caused by differential cooling of the hot-mix during hauling, but the Shuttle Buggy remixes the material to a uniform temperature and gradation, thus eliminating these problems. The Shuttle Buggy includes the Guardian System that is designed to anticipate equipment maintenance needs resulting in more uptime reliability while also providing production and performance data as well as real-time location information to the owner. The SB3000 model incorporates features and technology to improve the user experience in terms of improved visibility, ground level operation, as well as improved material handling and vehicle transportability. Our Spray Paver model, which is recommended for use with the Shuttle Buggy, is also designed to carry and spray tack coat directly in front of the hot mix asphalt in a single process, thus eliminating the need for a separate tack truck.

Milling machines remove old asphalt from the road surface before new asphalt mix is applied. Our product line of milling machines, which are designed for larger jobs, are manufactured with a simplified control system, wide conveyors, direct drives and a wide range of horsepower and cutting capabilities to provide versatility in product application. In addition to the half-lane and larger highway class milling machines, we also manufacture a smaller, utility class machine for two-to-four foot cutting widths and a utility class cold planer model mounted on steel wheels.

Soil stabilizers are produced in multiple configurations and double as asphalt reclaiming machines for road rehabilitations, in addition to their primary purpose of stabilizing soil sub-grades with additives to provide an improved base on which to pave.

Our patented screeds use a hydraulic powered generator to electrify elements that heat a screed plate so asphalt will not stick to it while paving, attach to asphalt paving machines and place asphalt on the roadbed at a desired thickness and width while smoothing and compacting the surface. Our screeds can be configured to fit many types of asphalt paving machines, including machines manufactured by our competitors.

Concrete is one of the world's most used and durable construction materials. We manufacture industry leading portable and stationary concrete production equipment including transit and central mix concrete plants. Our portable concrete plants are known for quick set-up and tear down as well as exceptional reliability and longevity over numerous relocations. Our stationary concrete production plants are known for custom-engineered design flexibility suitable for various concrete production sites. Our concrete mixer designs include tilt mixers and horizontal reversing mixers. Both mixer types are available as stationary designs with optional mobile and self-erect features. The tilt mixer is our most popular mixer type for concrete paving and ready mix production while the horizontal reversing mixers are a low dust, low noise option primarily marketed to ready mix producers.

We produce a comprehensive portfolio of customized burners for industrial applications such as boilers, chemical plants, oil and gas refineries, offshore platforms, power generation plants, thermal fluid heaters and asphalt aggregate drying. We have recently invested in our burner technology specifically to develop burners that will enable our customers to achieve their carbon footprint reduction goals, lower energy consumption and reduce or eliminate dependence on fossil fuels. Our burners can use alternative

fuels such as renewable natural gas, hydrogen blended natural gas and biomass to liquid fuels. We are preparing to meet the demand for alternative fuels as the infrastructure and resources become available. Our versatile Versa Jet burner platform is developed for retrofit applications and has the capacity to fire at a range of rates. The adaptable design is compatible with virtually all drum designs and can be installed with minimal modifications needed to asphalt mixing plants produced by us as well as our competitors.

We also produce industry leading combustion products for a variety of industrial applications as new applications have grown rapidly. At the present time, our products, most of which are customized for a particular application, are used in a score of different industries and purposes including chemical plants, at oil-and-gas refineries, on off-shore platforms, on barges, at power generation plants, wood product manufacturers, food processors, textile factories, pharmaceutical producers and roofing manufacturers.

Marketing

We market our products domestically and internationally through direct and dealer support sales staff, domestic and international independent distributors and our international distribution sites in both of our reportable segments.

Asphalt and concrete plants and their related equipment are sold directly to asphalt or concrete producers, respectively, or domestic and foreign government agencies. Asphalt paving and road building equipment are sold to highway and heavy equipment contractors, utility contractors and domestic and foreign governmental agencies. Wood chippers, horizontal grinders and blower trucks are primarily sold to forestry and environmental recycling contractors.

Competition

This industry segment faces strong competition in price, service and product performance and competes with both large publicly-traded companies and various smaller manufacturers. The Infrastructure Solutions segment competitors include:

Product Categories	Primary Competitors
Asphalt plants and related components	Asphalt Drum Mixers Inc, Asphalt Equipment Company Inc. dba ALmix, Ammann Group, Wirtgen Group (a John Deere Company), Marini (part of Fayat Group), Gencor Industries, Inc. and local manufacturers
Concrete equipment	ERIE Strayer Company, Stephens Manufacturing and Vince Hagan Co.
Paving and related equipment	Bomag (part of Fayat Group), Caterpillar Paving Products (part of Caterpillar, Inc.), Dynapac (part of Fayat Group), LeeBoy, Wirtgen Group (a John Deere Company), Volvo Construction Equipment (part of Volvo Group) and Weiler Inc.
Milling equipment	Bomag (part of Fayat Group), Caterpillar Paving Products (part of Caterpillar, Inc.), CMI Roadbuilding, Dynapac (part of Fayat Group), Volvo Construction Equipment (part of Volvo Group AB) and Wirtgen Group (a John Deere Company)
Forestry and recycling equipment	Bandit Industries, Inc., Doppstadt, Morbark, Rotochopper Inc. and Vermeer Corporation

Backlog

The backlog for the Infrastructure Solutions segment at December 31, 2022 and 2021 was approximately \$567.1 million and \$449.3 million, respectively.

Materials Solutions Segment

Overview

The Materials Solutions segment designs and manufactures heavy processing equipment, in addition to servicing and supplying parts for the aggregate, metallic mining, recycling, ports and bulk handling markets.

The Materials Solutions segment was operated from the following sites in 2022:

Site	Location	Site	Location
AME	Johannesburg, South Africa	Sterling	Illinois, United States
Belo Horizonte	Belo Horizonte, Brazil	Thailand	Bangkok, Thailand
EUG-Franklin Blvd	Oregon, United States	Thornbury	Ontario, Canada
Johannesburg	Johannesburg, South Africa	Yankton	South Dakota, United States
Omagh	Omagh, United Kingdom		

The sites within the Materials Solutions segment primarily focus on manufacturing operations with the AME site functioning to market, service and install equipment and provide parts in the regions in which they operate for many of the products produced by all of our manufacturing sites. In addition to manufacturing core Materials Solutions products and asphalt plants, Belo Horizonte markets all our products to the Brazilian market. We plan to continue to expand manufacturing at Belo Horizonte to include other product lines. At December 31, 2022, we had an ownership interest of approximately 93% in Belo Horizonte. During the first quarter of 2022, we executed an agreement with the noncontrolling interest holder to acquire their outstanding interest in full. Completion of the transaction is subject to obtaining certain judicial approval in Brazil.

Based on an internal review of our operations, beginning January 1, 2022, the Thailand site, which was previously included in the Infrastructure Solutions segment, is reported in the Materials Solutions segment while the India site, which was previously incorporated into the Materials Solutions segment, is reported in the Infrastructure Solutions segment.

Products and Services

The primary products produced and services provided by the Materials Solutions segment include:

Crushing equipment	Mobile plants	Bulk material handling solutions
Vibrating equipment	Screening equipment	Electrical control centers
Modular plants and systems	Conveying equipment	Plant automation products
Portable plants	Mineral processing equipment	Consulting and engineering services

We manufacture comprehensive lines of crushing, screening, washing and classifying, material and bulk handling and rock breaking equipment in a variety of configurations including stationary, portable (wheeled) and mobile (track). In conjunction with the Materials Solutions products, we offer consulting and engineering services to provide complete "turnkey" processing systems, which often include electrical control centers and plant automation products that we produce.

Our complete line of primary, secondary, tertiary and quaternary crushers includes jaw crushers, horizontal shaft impactors, vertical shaft impactors, cone crushers and heavy-duty, mining-application crushers. These machines are used to crush large, over-sized material in mining, quarrying, sand and gravel and asphalt/concrete recycling applications. Once the material is crushed to size, it is utilized in a variety of products from road base to golf course sand. We offer cone crushers with both roller-bearing and bushing style cones to fit any customer's needs. Our industry-leading hydraulic-relief jaw crushers offer enhanced safety and easy maintenance. Our crushers are available as individual components, portable wheeled plants and mobile track plants.

We offer a wide variety of vibrating screens including incline, horizontal, high frequency, multi-frequency, combo and dewatering screens. Our high frequency screens utilize a high-speed vibration directly induced into the screen media to improve screening efficiency and production rates. The screens' unique rotary tensioning system allows for quick media changes. Our screens are available in multiple sizes with up to four decks and in a variety of configurations including stationary, portable and mobile. Our new High Frequency Portable Screening Plant is equipped with an 8-foot-wide high frequency screen, the first of its kind in the industry. This patent-pending screen design features externally-mounted vibrators at the ends of the tappets for a more aggressive screening action, which also allows for easier maintenance and adjustments. The screen is equipped with a hydraulic operating angle adjustment, a fines collection hopper, top- and bottom-deck discharge chutes and an aggregate spreader.

Our washing and classifying equipment is well-suited for a wide range of applications and production goals. Our expertly engineered components and plants help producers meet the most stringent material specifications and get the most out of their material, while significantly decreasing water usage. With complete lines of washing, classifying, fines recovery and water clarification plants and systems, we offer solutions for any operation in portable and stationary configurations.

Conveying equipment is designed to move or store aggregate and other bulk materials in radial cone-shaped or windrow stockpiles. Our SuperStacker telescoping conveyor and Wizard Touch automated controls are designed to add efficiency and accuracy to whatever the stockpile specifications require. Additionally, high-capacity rail and barge loading/unloading material handling systems are an important part of our product lines.

We design and manufacture a broad range of material and bulk handling products for all production goals. Our material handling products cover many applications and are designed for efficiency and high-capacity material transferring, moving and mixing. Our innovative line of material handling solutions includes radial and telescoping conveyors, truck unloaders, hopper feeders, mobile conveyors, pugmills, ship loaders and unloaders, bulk receptions feeders and stationary conveying systems. Our mobile bulk material handling solutions are designed to handle all free-flowing bulk materials, including but not limited to ores, coal, aggregates, fertilizers, grains, woodchips and pellets.

We have created our rock breaking equipment line for aggregate, mining, construction and demolition applications. Our comprehensive range of rock breaker boom systems are designed to break oversized material at large gyratories, grizzlies and primary/secondary crushing application sites. These systems include boom-mounted configurations, automatic greasing packages, motor starter panels, joystick controls and easy plant integration. Our newest mobile rock breaker, the BreakerBOSS

5D, is used for breaking oversized material in underground mines, typically broken at draw points and grizzly stations where rock must keep flowing.

Many of our facilities maintain internationally recognized industry standard quality, environmental and health and safety assurance accreditations.

Marketing

The principal purchasers of aggregate processing equipment include distributors, highway and heavy equipment contractors, sand and gravel producers, demolition, recycle and crushing contractors, open mine operators, quarry operators, port and inland terminal authorities, power stations and both domestic and foreign governmental agencies.

Materials Solutions equipment and aftermarket sales and service programs are primarily marketed through an extensive network of dealers via dealer support sales employees and domestic and international independent distributors.

Competition

The Materials Solutions segment faces strong competition in price, service and product performance. Materials Solutions equipment primary competitors include the following as well as smaller manufacturers, both domestic and international:

CDE Group	McCloskey International (part of Metso Outotec Corporation)	Terex Corporation
Deister Machine Company, Inc	McLanahan Corporation	Thor Manufacturing Ltd.
Epiroc	Metso Outotec Corporation	Weir Group
EDGE Innovate	Sandvik Group	Wirtgen Group (a John Deere Company)
Masaba, Inc.	Superior Industries, Inc.	

Backlog

At December 31, 2022 and 2021, the backlog for the Materials Solutions segment was approximately \$341.2 million and \$313.3 million, respectively.

Corporate and Other

The Corporate and Other category consists primarily of the parent company, the Company's captive insurance company, Astec Insurance, and the controls and automation business, which do not meet the requirements for separate disclosure as an operating segment or inclusion in one of the other reporting segments. The parent company and the captive insurance company provide support and corporate oversight for other sites. The controls and automation business manufactures hardware and software products that are marketed independently as well as included in certain products produced by our other segments.

Common to Both Reporting Segments

The following information applies to both the Infrastructure Solutions and the Materials Solutions reporting segments.

Manufacturing

We manufacture many of the component parts and related equipment for our products, while several large components of our products are purchased "ready-for-use", such purchased items include engines, axles, tires and hydraulics. In many cases, we design, engineer and manufacture custom component parts and equipment to meet the particular needs of individual customers. Our manufacturing operations consist primarily of fabricating steel components and the assembly and testing of our products to ensure that we achieve quality standards.

Raw Materials

We purchase raw materials and some manufactured components and replacement parts for our products from leading suppliers both domestically and internationally. Raw materials used in the manufacture of our products include carbon steel, pipe and various types of alloy steel, which are normally purchased from distributors and other sources. The majority of steel is scheduled on a just in time arrangement from suppliers to better manage inventory requirements at our manufacturing facilities. Based on market dynamics, we strategically and selectively order and inventory certain items beyond a just in time basis. Raw materials for manufacturing are normally readily available; however, certain highly customized components may require longer than normal lead times. In addition, we have been and continue to experience increased lead times for certain standard production materials and parts and supplies. Other components used in the manufacturing processes include engines, gearboxes, power transmissions, hydraulics and electronic systems.

Government Regulations

We are subject to various laws and governmental regulations concerning environmental matters and employee safety and health in the United States and other countries. The Environmental Protection Agency, the Occupational Safety & Health Administration, other federal agencies and certain state agencies have the authority to promulgate regulations that have an effect on our operations. Many of these federal and state agencies may seek fines and penalties for violations of these laws and regulations. We have been able to operate under these laws and regulations without any material adverse effect on our business.

None of our operations are within highly regulated industries. However, air pollution control equipment we manufacture, principally for hot-mix asphalt plants, must comply with certain performance standards promulgated by the Environmental Protection Agency under the Clean Air Act applicable to "new sources" or new plants. We believe our products meet all material requirements of such regulations, applicable state pollution standards and environmental protection laws.

In addition, due to the size and weight of certain equipment we manufacture, we and our customers may encounter various state regulations on maximum weights transportable on highways. Also, some states have regulations governing the operation of asphalt mixing plants, and most states have regulations relating to the accuracy of weights and measures, which affect some of the control systems we manufacture.

Compliance with these government regulations has not had a material effect on our capital expenditures, earnings or competitive position within the market to date.

Patents and Trademarks

We seek to obtain patents to protect the novel features of our products and processes. Our subsidiaries hold 113 United States patents and 120 foreign patents. Our subsidiaries have 12 United States and 31 foreign patent applications pending.

We have 81 trademarks registered in the United States, including logos for Astec, Carlson Paving, Heatec, KPI-JCI, Peterson Pacific, Power Flame, Roadtec and Teismith, and the names ASTEC, CARLSON, HEATEC, JCI, KOLBERG, PETERSON, POWER FLAME, ROADTEC and TELSMITH, as well as a number of other product names. We also have 129 trademarks registered in foreign jurisdictions, including Argentina, Australia, Brazil, Canada, China, the European Union, France, Germany, India, Italy, Kazakhstan, Mexico, New Zealand, Paraguay, Peru, Russia, South Africa, South Korea, Taiwan, Thailand, the United Kingdom, Ukraine, Uruguay and Vietnam. We have 13 United States and 17 foreign trademark registration applications pending.

Engineering and Product Development

We conduct research and development activities to develop new products and to enhance the functionality, effectiveness, ease of use and reliability of our existing products. We believe that our engineering and research and development efforts are key drivers of our success in the marketplace and dedicate substantial resources to engineering and product development activities including establishing an Innovation Services team. Our Innovation Services team has experts in advanced fields, such as simulation and digital twin creation, who support our development initiatives. In addition, we are focused on innovation in our products to support the "Rock to Road" value chain.

Seasonality and Backlog

Revenues have historically been strongest during the first, second and fourth quarters with the third quarter typically generating weaker results. Over the long-term, we expect future operations to be consistent with this trend, however, quarterly revenue performance in 2021 and 2022 has varied based on recent manufacturing challenges resulting from supply chain and logistics disruptions as well as labor shortages.

As of December 31, 2022 and 2021, we had a backlog for delivery of products at certain dates in the future of approximately \$912.7 million and \$762.6 million, respectively. Approximately \$146.3 million of the increase in backlog between periods relates to orders from domestic customers. Our contracts reflected in the backlog generally are not, by their terms, subject to termination.

Competition

Each business segment operates in domestic markets that are highly competitive with respect to price, service and product quality. While specific competitors are named within each business segment discussion above, imports do not generally constitute significant competition for us in the United States, except for milling machines and track-mounted crushers. In international sales, however, we often compete with foreign manufacturers that may have a local presence in the market we are attempting to penetrate.

In addition, asphalt and concrete are generally considered competitive products as a surface choice for new roads and highways. A portion of the interstate highway system is surfaced in concrete, but the significant majority of surfaced roads in the U.S. are

paved with asphalt. Although concrete is used for some new road surfaces, asphalt is used for most resurfacing. Our customers generally offer both asphalt and concrete surfacing options and our product portfolio enables us to be a singular provider to our customers for both asphalt and concrete equipment.

Human Capital Resources and Management

Our employees around the world are each guided by our purpose: Built to Connect, and our vision: To connect people, processes and products, advancing innovative solutions from "Rock to Road" as OneASTEC. Every employee is also guided by our values and our code of business conduct. In everyday work, our employees embody our core values of Safety, Devotion, Integrity, Respect and Innovation. They do so by living our winning behaviors of Open and Honest Communications, Drive Creativity, Customer Driven Innovation and OneASTEC in all they do. We strive to be an employer of choice, attracting and retaining top talent committed to creating a diverse, equitable and inclusive workplace where individuals are respected and valued for their diverse backgrounds and experiences. Through comprehensive compensation and benefits and a focus on safety, we strive to support our employees' overall well-being. Our sites have programs designed to upskill manufacturing employees in the areas specifically required for local production needs. In addition, we partner with national vendors specialized in skilled labor recruitment and many of our sites have relationships with local trade schools and community colleges to attract talent.

In 2022, we again engaged our employees through the Voice of OneASTEC survey. In total, 81% of our workforce responded and provided us with valuable feedback, a significant increase from the 73% participation in 2021. Throughout the year we have focused on the three main areas of opportunity identified: communication, performance management and diversity. We saw improvement in those focus areas with scores increasing by four to six percentage points compared to our prior year results.

Employee Profile

As of December 31, 2022, we employed 4,291 individuals, including 3,629 employees in the U.S. and Canada. We also retain consultants, independent contractors and temporary and part-time workers. As of December 31, 2022, the functional representation of our employees was as follows: 2,828 were engaged in manufacturing, 399 in engineering, including support staff, and 1,064 in selling, administrative and management functions.

Unions are certified as bargaining agents for approximately two percent of our U.S. direct employees. From time to time, our collective bargaining agreements expire and come up for renegotiation. Approximately 83 of our active U.S. employees are covered by a collective bargaining agreement with the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, AFL-CIO-CLC on behalf of its local affiliate Local Union No. 11-508-03, with an expiration date of December 11, 2025. Unions also represent approximately 18% of our employees at our manufacturing facilities outside the U.S. We consider our employee relations to be good.

Compensation and Benefits

As we strive to be an employer of choice, we provide competitive and robust compensation and benefits. We achieve this by regularly conducting market reviews and adjusting as needed. In addition to salaries, we provide regional programs, which can include annual bonuses, share-based compensation awards, a 401(k) plan with employee matching opportunities, healthcare and insurance benefits, health savings and flexible spending accounts, paid time off, family leave, family care resources, flexible work arrangements, employee assistance programs, tuition assistance and on-site services.

Health and Safety

The well-being and safety of our employees is paramount as is indicated in our core values. We manage safety at (and from) the highest levels, using the same tools we employ to measure and improve other aspects of business performance, such as continuous improvement, key performance indicators, scorecards and performance management. We undertake the following actions:

- provide mandatory safety trainings each month at our production facilities, which are designed to focus on empowering our employees with the knowledge and tools they need to make safe choices and to mitigate risks;
- track safety leading and lagging indicators, which includes focusing on near misses, first aids, unsafe work observations abatement within 24 hours of identification and safety training;
- local management cascades safety practices throughout the organization, including daily "safety huddles" for each work-shift;
- utilize safety scorecards, standardized signage, and visual management throughout our facilities, in addition to traditional safety training;
- conduct monthly safety calls to discuss and share best practices with our local safety managers;
- conduct weekly safety incident reviews with leadership; and
- distribute monthly employee newsletters and executive-led town hall meetings.

We believe in following a proactive approach to identify and mitigate safety issues. As such, our focus is monitoring, assessing and abating leading safety indicators through our Unsafe Work Observation program, thus preventing accidents before they happen or reducing the impact if they do occur. Abatement of safety issues in a timely fashion is incentivized through our annual incentive program, which is partially focused on this leading safety metric.

We aspire to reduce recordable injuries and lost time each year. During the year ended December 31, 2022, we had zero recordable injuries at four of our manufacturing sites. However, we experienced a 15% increase in our Occupational Safety and Health Administration Recordable Incident Rate for the year ended December 31, 2022, to 1.96 compared to 1.71 for the year ended December 31, 2021. Although we have seen an increase in the recordable incident rate, the incidents are concentrated in a limited number of sites. We have taken action to address these localized safety issues by increasing the number of corporate safety audits, providing thorough training at the site, realigning site safety focus, providing standardized safety policies and procedures and focusing on proactive injury prevention. We have also added safety resources at these sites and within our corporate structure to improve our safety program where we are continuing to focus on proactive, transparent and streamlined communications throughout the manufacturing sites for safety related information.

Talent Development, Diversity, Equity and Inclusion

Talent and Diversity are key components of our OneASTEC business model. We strive to create an environment that attracts top talent and where high performance is fostered and thrives, continuous learning is engrained, diverse experience is leveraged as a competitive advantage and careers are propelled forward.

In 2022, our High Performance Framework process ensured company-wide alignment to achieve company goals and targets. This new model includes values, professional development and cascaded common performance goals.

We provide all employees a wide range of professional development experiences, both formal and informal, at various stages in their careers. In addition, talent development and succession planning for critical roles is a cornerstone of our talent program. Development plans are created and monitored for critical roles to ensure progress is made along the established timelines.

One of our core values – Respect – reflects the behavior we strive to include in every aspect of the way we conduct business. We recognize that our best performance comes when our teams are diverse and inclusive. We continue to define our diversity, equity and inclusion strategy. These efforts touch all levels of our organization including our Board of Directors.

Corporate and Available Information

Astec Industries, Inc. is a Tennessee corporation which was incorporated in 1972. We make available, free of charge on or through our website (www.astecindustries.com), access to our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Proxy Statements on Schedule 14A, Section 16 reports, amendments to those reports and other documents filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after such material is filed with, or furnished to, the Securities and Exchange Commission ("SEC"). Information contained in our website is not part of, and is not incorporated into, this Annual Report on Form 10-K or any other report we file with or furnish to the SEC.

The SEC also maintains electronic versions of our reports on its website at www.sec.gov.

ITEM 1A. RISK FACTORS

The following risks are considered material to our business, operating results and financial condition based upon current knowledge, information and assumptions. This discussion of risk factors should be considered closely in conjunction with Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and the Consolidated Financial Statements and the accompanying notes thereto included in Part II, Item 8 of this Annual Report on Form 10-K. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us, or that we presently deem less significant, may also impair our business, operating results and financial condition. If any of the following risks actually occur, our business, operating results and financial condition could be materially adversely affected. The order of these risk factors does not reflect their relative importance or likelihood of occurrence. Some of these risks and uncertainties could affect particular lines of business, while others could affect all of our businesses. We, except as required by law, undertake no obligation to update or revise this risk factors discussion, whether as a result of new developments or otherwise.

Economic and Industry Risks

Downturns in the general economy or decreases in government infrastructure spending or commercial and residential construction spending may adversely affect our revenues and operating results.

General economic downturns, including downturns in government infrastructure spending and the commercial and residential construction industries, could result in a material decrease in our revenues and operating results. Sales of our products are sensitive to the specific locations and regional economies in which they are sold in general, and in particular, changes in

commercial construction spending and government infrastructure spending. In addition, many of our costs are fixed and cannot be quickly reduced in response to decreased demand. Several factors, including the following, could cause a downturn in the commercial and residential construction industries in which we operate:

- a decrease in the availability of funds for construction;
- declining economy domestically and internationally;
- labor disputes in the construction industry causing work stoppages;
- rising gas and oil prices;
- rising steel prices and steel surcharges;
- rising interest rates;
- energy or building materials shortages;
- natural disasters and inclement weather; and
- availability of credit for customers.

A decrease or delay in government funding of highway construction and maintenance may cause our revenues and profits to decrease.

Many of our customers depend on government funding of highway construction and maintenance and other infrastructure projects. Historically, much of the U.S. highway infrastructure market has been driven by government spending programs, and federal government funding of infrastructure projects has typically been accomplished through bills that establish funding over a multi-year period. For example, the U.S. government funds highway and road improvements through the Federal Highway Trust Fund Program. This program provides funding to improve the nation's roadway system. In November 2021, the U.S. government enacted the Infrastructure Investment and Jobs Act ("IIJA"). The IIJA allocates \$548 billion in government spending to new infrastructure over the five-year period concluding in 2026, with certain amounts specifically allocated to fund highway and bridge projects.

Governmental funding that is committed or earmarked for federal highway projects is always subject to political decision making that may result in repeal or reduction. Congress could pass legislation in future sessions that would allow for the diversion of previously appropriated highway funds for other national purposes, or it could restrict funding of infrastructure projects unless states comply with certain federal policies.

The cyclical nature of our industry and the customization of the equipment we sell may cause adverse fluctuations to our revenues and operating results.

We sell equipment primarily to contractors whose demand for equipment depends greatly upon the volume of road or utility construction projects underway or to be scheduled by both government and private entities. The volume and frequency of road and utility construction projects are cyclical; therefore, demand for many of our products is cyclical. The equipment we sell is durable and typically lasts for several years, which also contributes to the cyclical nature of the demand for our products. As a result, we may experience cyclical fluctuations to our revenues and operating results. Any difficulty in managing our manufacturing workflow during downturns in demand could adversely affect our financial results.

Changes in interest rates could reduce demand for our products.

Prior to 2022, global interest rates had been at or near historic lows resulting in historically low financing costs for construction projects. Beginning in 2022, interest rates have increased substantially and are expected to continue to increase. Rising interest rates could have a dampening effect on overall economic activity and/or the financial condition of our customers, either or both of which could negatively affect customer demand for our products and customers' ability to repay obligations to us. An increase in interest rates could also make it more difficult for customers to cost-effectively fund the purchase of new equipment, which could adversely affect our sales.

Market Conditions

Competition could reduce revenue from our products and services and cause us to lose market share, and our ability to compete in international jurisdictions is dependent upon trade policies, which are subject to change.

We currently face strong competition in product performance, price and service. Some of our domestic and international competitors have greater financial, product development and marketing resources than we have. If competition in our industry intensifies or if our current competitors enhance their products or lower their prices for competing products, we may lose sales or be required to lower the prices we charge for our products. This may reduce revenue from our products and services, lower our gross margins or cause us to lose market share. In addition to the general competitive challenges we face, international trade policies could negatively affect the demand for our products and services and reduce our competitive position in such markets. In addition, unfavorable currency fluctuations could result in our products and services being more expensive than local competitors. The implementation of more restrictive trade policies, such as higher tariffs, duties or charges, in countries where we operate could negatively impact our business, results of operations and financial condition.

Our operations in foreign countries, and continued expansion into additional international markets, could expose us to risks inherent in doing business outside of the United States.

In 2022, international sales represented approximately 20.4% of our total sales as compared to 23.1% in 2021. We plan to continue increasing our already significant sales and production efforts in international markets. Both the sales from international operations and export sales are subject in varying degrees to risks inherent in doing business outside of the United States. Such risks include the possibility of unfavorable circumstances arising from host country laws or regulations and general economic and political conditions in the countries we do business, which are typically more volatile than the U.S. economy and more vulnerable to geo-political conditions. In addition, the U.S. Government has established and, from time to time, revises sanctions that restrict or prohibit U.S. companies and their subsidiaries from doing business with certain foreign countries, entities and individuals. Doing business internationally also subjects us to numerous U.S. and foreign laws and regulations, including regulations relating to anti-bribery, privacy regulations and anti-boycott provisions. We incur meaningful costs complying with these laws and regulations. The continued expansion of our international operations could increase the risk of violations of these laws in the future. Significant violations of these laws, or allegations of such violations, could harm our reputation, disrupt our business and result in significant fines and penalties that could have a material adverse effect on our results of operations or financial condition.

Our ability to understand our customers' specific preferences and requirements, and to develop, manufacture and market products that meet customer demand as we expand into additional international markets, could significantly affect our business results.

Our ability to match new product offerings to diverse global customers' anticipated preferences for different types and sizes of equipment and various equipment features and functionality, at affordable prices, is critical to our success. This requires a thorough understanding of our existing and potential customers on a global basis, particularly in Asia, Middle East and Africa, and Latin America. Failure to deliver quality products that meet customer needs at competitive prices ahead of competitors could have a significant adverse effect on our business.

Our international sales and associated operating results are subject to currency exchange risk.

We are exposed to risk as a result of fluctuations in foreign currency exchange rates from transactions involving foreign operations and currencies. We derive significant revenue, earnings and cash flow from operations outside of the U.S., where business operations are transacted in local currencies. Our exposure to currency exchange rate fluctuations results primarily from the translation exposure associated with the preparation of our consolidated financial statements, as well as from transaction exposure associated with transactions and assets and liabilities denominated in currencies other than the respective subsidiaries' functional currencies. While our consolidated financial statements are reported in U.S. dollars, the financial statements of our international subsidiaries are prepared using their respective functional currency and translated into U.S. dollars by applying appropriate exchange rates. As a result, fluctuations in the exchange rate of the U.S. dollar relative to the local currencies could cause significant fluctuations in the value of our assets and liabilities, equity and operating results.

Additionally, our international sales involve some level of export from the U.S., either of components or completed products. Policies and geopolitical events affecting exchange rates could adversely affect the demand for construction equipment in many areas of the world. Further, any strengthening of the U.S. dollar or any other currency of a country in which we manufacture our products (e.g. the Brazilian real and the South African rand) and/or any weakening of local currencies can increase the cost of our products in foreign markets. Irrespective of any effect on the overall demand for construction equipment, the effect of these changes can make our products less competitive relative to local producing competitors or other non-U.S. competitors and, in extreme cases, can result in our products not being cost-effective for customers. As a result, our international sales and profit margins could decline.

Environmental, Social and Governance risks could adversely affect our reputation and shareholder, employee, customer and third party relationships and may negatively affect our stock price.

As a public company, we face increased public and investor scrutiny related to Environmental, Social and Governance ("ESG") activities. We risk damage to our brand and reputation if we fail to act responsibly in a number of areas, such as diversity, equity and inclusion, environmental stewardship, including with respect to climate change, human capital management, support for our local communities, corporate governance and transparency, or fail to consider ESG factors in our business operations.

Additionally, investors and shareholder advocates are placing ever increasing emphasis on how corporations address ESG issues in their business strategy when making investment decisions and when developing their investment theses and proxy recommendations. Furthermore, many of our peers have more resources to devote to ESG initiatives and may be further ahead than we are on their ESG efforts. We may incur meaningful costs with respect to our ESG efforts and if such efforts are negatively perceived, our reputation and stock price may suffer.

Manufacturing and Operations Risks

Our profitability may be negatively affected by changes in the availability and price of certain parts, components and raw materials.

We require access to various parts, components and raw materials at competitive prices in order to manufacture our products. Changes in the availability and price of these parts, components and raw materials (including steel) have changed significantly and rapidly at times. The availability and price of such items are affected by factors like demand, changes to international trade policies that may result in additional tariffs, duties or other charges, freight costs, global pandemics, shipping and container constraints and labor shortages and costs, each of which can significantly increase the costs of production. Due to price competition in the market for construction equipment and certain infrastructure products which have longer contract to completion cycles, we may not be able to recoup increases in these costs through price increases for our products, which would result in reduced profitability. Whether increased operating costs can be passed through to the customer depends on a number of factors, including the price of competing products and the nature of our customers' orders. Further, we rely on a limited number of suppliers for steel and certain other raw materials, parts and components in the manufacturing process. Disruptions or delays in supply or significant price increases from these suppliers could adversely affect our operations and profitability. Such disruptions, terminations or cost increases could result in cost inefficiencies, delayed sales or reduced sales.

We may be adversely affected by any natural or man-made disruptions to our distribution and manufacturing facilities, including, but not limited to, future pandemics, climate change and war.

We currently maintain a broad network of distribution and manufacturing facilities throughout the U.S. as well as internationally. Any widespread disruption to our facilities resulting from fire, earthquake, weather-related events (such as tornadoes, hurricanes, flooding and other storms), an act of terrorism or any other cause could damage a significant portion of our inventory and could materially impair our ability to distribute our products to customers. Moreover, we could incur significantly higher costs and longer lead times associated with distributing our products to our customers during the time that it takes for us to reopen or replace a damaged facility. If any of these events were to occur, our financial condition, operating results and cash flows could be materially adversely affected.

In addition, general weather patterns affect our operating results throughout the year, with adverse weather historically reducing construction activity in the first and fourth quarters in the U.S., our largest market. An increase of adverse weather events, including as a result of climate change, could generally reduce or delay construction activity, which could adversely impact our revenues.

The emergence of the COVID-19 pandemic has significantly impacted our operations. Throughout 2020, our operations were adversely affected by significantly weakened demand for our products given the global economic uncertainty resulting from the pandemic. While demand for our products has recovered, our operations continue to be adversely affected by the contributory effects of the pandemic, including supply chain disruptions, higher supply costs, including, in particular, higher steel costs, and labor shortages, disruptions and higher labor costs and longer contracting times. Future pandemics other than COVID-19 could further impact our operations and might have a material adverse effect on our financial condition, cash flows and results of operations. There is no certainty that current or future measures taken by governmental authorities will be sufficient to mitigate the risks posed by the coronavirus or other viruses, and our ability to perform critical functions could be harmed.

Strategic Performance Risks

We may not fully sustain targeted performance improvements and other benefits realized from our OneASTEC business model.

Our OneASTEC business model is designed around the strategic pillars of Simplify, Focus and Grow. This is a focused effort towards an operating model centered around continuous improvement. The OneASTEC business model was designed to better set strategic direction, define priorities and improve overall operating performance. Our future success is partly dependent upon successfully executing and realizing performance improvements, revenue gains, cost savings and other benefits from this initiative. It is possible that we may not fully realize, or sustain, the expected benefits from the OneASTEC business model. Furthermore, the implementation of the OneASTEC initiatives will result in an increase in near-term expenses and may negatively impact operational effectiveness and employee morale.

As an innovative leader in the industries in which we operate, we occasionally undertake the engineering, design, manufacturing, construction and installation of equipment systems that are new to the market. Estimating the costs of such innovative equipment can be difficult and could result in our realization of significantly reduced or negative margins on such projects. Additionally, if the newly designed equipment were not to function as expected, we could be responsible for reimbursing the customer for their financial losses, including, but not limited to, the possible refund of the purchase price.

Designing and developing innovative equipment to function as expected is inherently difficult and significant design phase, field testing and redesign costs are often incurred in connection with such design and development activities. The design and

development phase requires meaningful lead time before a product is ready for market, which often requires a significant investment prior to realizing any revenues associated with such new products. This also requires us to anticipate changing customer demands and if we are unable to accurately anticipate such customer demands we will likely incur losses associated with such product development. In addition, any number of unforeseen circumstances can impact actual project costs. Production delays, design changes, adverse weather conditions and other factors can also result in construction and testing delays, which can cause significant cost overruns or failure to meet required completion dates. In certain circumstances, we may incur contractual penalties as a result of such delays to bring a product to market or be unable to satisfy minimum production levels, and we may be liable to customers for other losses they incur in connection with such delays, including possible refund of the purchase price. At various times, we have experienced negative margins on certain large projects. These large projects have included both existing and innovative equipment designs, on-site construction and promised minimum production levels. We may not be able to sufficiently predict the extent of such unforeseen cost overruns and may experience significant losses on specialized projects in the future.

Failure to successfully complete restructuring activities could negatively affect our operations.

From time to time, we may wind down certain business activities, product lines, and/or perform other organizational restructuring projects in an effort to reduce costs and streamline operations. Such activities involve risks as they may divert management's attention from our core businesses, increase expenses on a short-term basis and lead to potential issues with employees, customers or suppliers. If these activities are not completed in a timely manner, anticipated cost savings, synergies and efficiencies are not realized, business disruption occurs during the pendency of or following such activities or unanticipated charges are incurred, particularly if material, there may be a negative effect on our business, results of operations and financial condition.

As part of our growth strategy, we may pursue acquisitions in the future and may not be successful in completing such acquisitions on favorable terms or be able to realize the anticipated benefits from such acquisitions.

We have historically grown, in large part, through strategic acquisitions, and our strategy is to continue to pursue attractive acquisition opportunities if and when they become available. Failure to identify and acquire suitable acquisition candidates on appropriate terms could adversely impact our growth strategy. In addition, although we have been successful in the past with the integration of numerous acquisitions, we may not be able to fully integrate the operations of any future acquired businesses with our own operations in an efficient and cost-effective manner or without significant disruption to our or the acquired companies' existing operations. Moreover, acquisitions involve significant risks and uncertainties, including uncertainties as to the future financial performance of the acquired business, the achievement of expected synergies, difficulties integrating acquired personnel and corporate cultures into our business, the potential loss of key employees, customers or suppliers, difficulties in integrating different computer and accounting systems, exposure to unforeseen liabilities of acquired companies and the diversion of management attention and resources from existing operations. We may be unable to successfully complete potential acquisitions due to multiple factors, such as issues related to regulatory review of the proposed transactions or obtaining favorable financing. We may also be required to incur additional debt or issue additional shares of our common stock in order to consummate acquisitions in the future. Potential new indebtedness may be substantial and may limit our flexibility in using our cash flow from operations. The issuance of new shares of our common stock could dilute the equity value of our existing shareholders. Our failure to fully integrate future acquired businesses effectively or to manage other consequences of our acquisitions, including increased indebtedness, could prevent us from remaining competitive and, ultimately, could adversely affect our financial condition, operating results and cash flows.

Financial Risks

We may be unsuccessful in complying with the financial ratio covenants or other provisions of our credit agreement.

As of December 31, 2022, we were in compliance with the financial covenants contained in our credit agreement. However, in the future we may be unable to comply with the financial covenants in our credit facility or to obtain waivers with respect to such financial covenants. If such violations occur, our creditors could elect to pursue their contractual remedies under the credit facility, including requiring immediate repayment in full of all amounts then outstanding and requiring cash collateral to support outstanding letters of credit. As of December 31, 2022, we had outstanding borrowings of \$78.0 million and an additional \$2.8 million in letters of credit outstanding under the credit agreement. We may also borrow additional amounts under the credit agreement in the future. Certain of our international subsidiaries in South Africa, Australia, Brazil, Canada and the United Kingdom have entered into their own independent loan agreements with the same lenders to our credit agreement as well as with other lending institutions.

We are subject to income taxes in the United States and certain foreign jurisdictions, and changes to the tax codes, effective tax rates and accounting principles related thereto could negatively impact our results of operations.

We are subject to income taxes in the United States and other jurisdictions. Our results of operations could be adversely affected by, among other things, changes in the effective tax rates in the U.S. and foreign jurisdictions, a change in the mix of earnings between U.S. and non-U.S. jurisdictions or among jurisdictions with differing tax rates, changes in tax laws or treaties and related changes in generally accepted accounting principles. Additionally, we typically incur substantial research and development costs

each year and have historically received significant research and development tax credits due to these expenditures. Congress could reduce or eliminate such tax credits in future years, which could have a material adverse effect on our operating results.

Goodwill and other intangible assets comprise a material portion of our total assets. We must test our goodwill for impairment at least annually and other intangible assets if events or circumstances indicate that the carrying amount of the asset may not be recoverable, which could result in a material, non-cash write-down of goodwill or intangible assets and could have a material adverse impact on our results of operations and shareholders' equity.

We have completed a number of acquisitions and expect to continue to complete selected acquisitions in the future as a component of our growth strategy. In connection with acquisitions, applicable accounting standards generally require the net tangible and intangible assets of the acquired business to be recorded in the balance sheet of the acquiring company at their fair values as of the date of acquisition. As a result, any excess in the purchase price paid by us over the fair value of net tangible and intangible assets of any acquired business is recorded as goodwill. Definite lived-intangible assets are required to be amortized over their estimated useful lives and this amortization expense may be significant. If it is later determined that the anticipated future cash flows from the acquired business may be less than the carrying values of the assets and goodwill of the acquired business, the assets, including both definite-lived and indefinite-lived intangible assets, or goodwill may be deemed to be impaired. If this occurs, we may be required under applicable accounting rules to write down the value of the assets or goodwill on our balance sheet to reflect the extent of any such impairment. Any such write-down of assets or goodwill would generally be recognized as a non-cash expense in our results of operations for the accounting period during which any such write down occurs.

Goodwill is subject to impairment assessments at least annually (or more frequently when events or changes in circumstances indicate that impairment may have occurred). Other intangible assets are subject to impairment assessments if conditions exist that indicate the carrying value may not be recoverable. At October 1, 2022, we performed a quantitative assessment of impairment, and our testing indicated no impairment had occurred at any of our four reporting units. However, the fair values of the Materials Solutions and Astec Digital reporting units exceeded their carrying values by 3.2% and 5.0%, respectively. Since the Materials Solutions and Astec Digital reporting units' fair values did not substantially exceed the carrying values, we may be at risk for an impairment loss in the future if forecasted trends assumed in the fair value calculation are not realized. As of December 31, 2022, there was \$19.4 million and \$8.7 million of goodwill recorded related to the Materials Solutions and Astec Digital reporting units, respectively. A decrease in our market capitalization, profitability or negative or declining cash flows increases the risk of goodwill or other intangible asset impairments. Future impairment charges could have a material adverse impact on our results of operations and shareholders' equity.

Human Capital Risks

Our performance could suffer if we cannot maintain our culture as well as attract, retain and engage our employees.

We believe our culture focused on safety, devotion, integrity, respect and innovation, is one of our strongest assets. Our strong culture positions us to recruit and retain top-level talent across our organization. We believe our employees and experienced leadership group are competitive advantages, as the best people, over time, produce the best results. Our ability to attract and retain qualified engineers, skilled manufacturing personnel and other professionals, either through direct hiring or acquisition of other businesses employing such professionals, will also be an important factor in determining our future success. The shrinking availability of qualified talent in these areas is a significant challenge in retaining and attracting sufficiently qualified personnel to enable us to meet customer demand efficiently resulting in longer lead times to convert backlog to revenue and materially and adversely impacting our margins. If we are unable to attract the most talented candidates, and cannot retain and engage additional highly qualified managerial, technical, manufacturing, and sales and marketing personnel by investing in their talent and personal development, our operational and financial performances could continue to suffer.

In addition, disputes with labor unions could potentially affect our ability to operate our facilities as well as our financial results. Any strike, work stoppage or other dispute with a labor union could materially adversely affect our business, results of operations and financial condition.

Our business operations are dependent upon the ability of our new employees to learn their new roles.

In connection with the transition of our business operations and implementation of the OneASTEC business model, we have replaced many employees in key functions, including in important management roles, and otherwise hired key personnel. Any significant management change involves inherent risk and any failure to ensure the effective transfer of knowledge and a smooth transition could hinder our strategic planning, execution and future performance. As new employees gain experience in their roles, we could experience inefficiencies or a lack of business continuity due to loss of historical knowledge and a lack of familiarity of new employees with business processes, operating requirements, policies and procedures, some of which are new, and key information technologies and related infrastructure used in our day-to-day operations and financial reporting. We may also experience additional costs as these new employees learn their roles and gain necessary experience. It is important to our success that these new employees quickly adapt to and excel in their new roles. If they are unable to do so, our business and financial results could be materially adversely affected. In addition, if we were to lose the services of any one or more key

employees, whether due to death, disability or termination of employment, our ability to successfully operate our business segments, financial plans, marketing and other objectives could be significantly impaired.

Failure to retain our key personnel or attract additional key personnel as required and the impact of our recent leadership changes may adversely impact our ability to implement our business plan and our results of operations could be materially and adversely affected.

We depend to a large extent on the abilities and continued participation of our executive officers and other key employees. We believe that as our activities increase and change in character, additional, experienced personnel will be required to implement our OneASTEC business model. Competition for such personnel is intense, and we cannot assure that they will be available when required, or that we will have the ability to attract and retain them. The loss of services of any one or more of these individuals may have a material and adverse effect on our Company and our business prospects.

Furthermore, we have had recent leadership changes and transitions involving our senior leadership team, including our CEO, as previously announced. Such leadership changes can be inherently difficult to manage, and an inadequate transition may cause disruption to our business, including to our relationships with our customers, suppliers, vendors and employees. It may also make it more difficult for us to hire and retain key employees. In addition, any failure to ensure the effective transfer of knowledge and a smooth transition could hinder our strategic planning, execution and future performance.

Legal, Regulatory and Compliance Risks

We are subject to an ongoing risk of product liability claims and other litigation arising in the ordinary course of business.

We manufacture heavy machinery, which is used by our customers at excavation and construction sites, ports and inland terminals and on high-traffic roads. Any defect in or improper operation of our equipment can result in personal injury and death, and damage to or destruction of property, any of which could cause product liability claims to be filed against us. The amount and scope of our insurance coverage may not be adequate to cover all losses or liabilities we may incur in the event of a product liability claim. We may not be able to maintain insurance of the types or at the levels we deem necessary or adequate or at rates we consider reasonable. A successful claim brought against us in excess of available insurance coverage or a requirement to participate in a product recall may have a material adverse effect on our business.

We are subject to significant governmental regulation and if we fail to comply with such regulation or if we become subject to increased regulation, we may incur significant costs related to penalties, remedial measures or increased compliance requirements.

We are subject to a wide range of government regulations, including the U.S. Foreign Corrupt Practices Act, other anti-corruption laws, regulations administered by the U.S. Department of Commerce's Bureau of Industry and Security, the U.S. Department of Treasury's Office of Foreign Assets Control and various non-U.S. government entities, including applicable export control regulations, economic sanctions on countries, entities and other persons, customs requirements, currency exchange regulations and transfer pricing regulations. While we maintain compliance programs to help ensure compliance with such regulations, there is no assurance that we will be effective in complying with all such regulations. Failure to comply with such regulations could subject us to criminal and civil penalties, disgorgement and other sanctions, remedial measures, legal expenses and reputational damage, all of which could have an adverse impact on our business, financial condition, results of operations and liquidity.

In addition, certain of our equipment is subject to rules limiting emissions and other climate related rules and regulation. In addition, several of our products contain components that must comply with environmental, health and safety laws or regulations, including performance standards, promulgated by the Environmental Protection Agency and other state regulatory agencies. These performance standards may change or become more stringent in the future. In addition, we may become subject to additional legislation, regulations or accords regarding climate change, and compliance with any new rules could be difficult and costly as a result of increased energy, environmental, and other costs and capital expenditures to comply with any such legislation, regulation or accord. Changes in these requirements could also cause us to undertake costly measures to redesign or modify our equipment or otherwise adversely affect the manufacturing processes of our products. Such changes could also impact operations of our suppliers and customers. In addition, we may incur material costs or liabilities in connection with other regulatory requirements applicable to our business, including, for example, state regulation of our component equipment, the accuracy of weights and measures and the maximum weight transportable on highways and roads.

We are subject to a variety of legal proceedings, the outcome of which may be unfavorable to us.

From time to time, we may be involved in various legal proceedings and subject to government investigations. We are unable to predict when claims or matters will arise and the extent to which they will affect our business, and the international nature of our business exposes us to legal and regulatory matters that arise in foreign jurisdictions as well. We could incur significant expenses to administer and defend such matters, and any judgments or fines imposed on us could significantly impact our financial condition. Our business may be adversely impacted by the outcome of legal proceedings and other contingencies that cannot be predicted with certainty. We estimate loss contingencies and establish reserves based on our assessment where

liability is deemed probable and reasonably estimable given the facts and circumstances known to us at a particular point in time. Subsequent developments may affect our assessment and estimates of the loss contingencies recognized as liabilities. These matters could also significantly divert the attention of our management.

If we are unable to protect our proprietary technology from infringement or if our technology infringes technology owned by others, then the demand for our products may decrease or we may be forced to modify our products, which could increase our costs.

We hold numerous patents covering technology and applications related to many of our products and systems, as well as numerous trademarks and trade names registered with the U.S. Patent and Trademark Office and in foreign countries. Our existing or future patents or trademarks may not adequately protect us against infringements, and pending patent or trademark applications may not result in issued patents or trademarks. Our patents, registered trademarks and patent applications, if any, may not be upheld if challenged, and competitors may develop similar or superior methods or products outside the protection of our patents. This could reduce demand for our products and materially decrease our revenues. If our products are deemed to infringe upon the patents or proprietary rights of others, we could be required to modify the design of our products, change the name of our products or obtain a license for the use of some of the technologies used in our products. We may be unable to do any of the foregoing in a timely manner, upon acceptable terms and conditions, or at all, and the failure to do so could cause us to incur additional costs or lose revenues.

Information Technology and Cybersecurity Risks

Our operations may be adversely affected by any disruption in our information technology systems.

Our operations are dependent upon our information technology systems, which encompass all of our major business functions. We rely upon our information technology systems to run critical functions, including accounting and financial information systems, process receivables, manage and replenish inventory, fill and ship customer orders on a timely basis and coordinate our sales activities across all products and services. A substantial disruption in our information technology systems for any prolonged time period could result in problems and delays in generating critical financial and operational information, processing receivables, receiving inventory and supplies, and filling customer orders. These disruptions could adversely affect our operations as well as our customer service and relationships. Our systems, or those of our significant customers or suppliers, might be damaged or interrupted by natural or man-made events or by computer viruses, physical or electronic break-ins or similar disruptions affecting the global Internet. In addition, we rely on a number of third-party service providers to execute certain business processes and maintain certain information technology systems and infrastructure, and any breach of security or disruption in their systems could impair our ability to operate effectively. Such disruptions, delays, problems or associated costs relating to our systems or those of our significant customers, suppliers or third-party providers could have a material adverse effect on our operations, operating results and financial condition.

Security breaches and other disruptions to our information technology infrastructure amid a general worldwide increase in threats and more sophisticated and targeted cybercrime could compromise our and our customers' and suppliers' information, exposing us to liability.

In the ordinary course of business, we rely upon information technology networks and systems to process, transmit and store electronic information and to manage or support a variety of business functions, including supply chain, manufacturing, distribution, invoicing and collection of payments. We use information technology systems to record, process and summarize financial information and results of operations for internal reporting purposes and to comply with regulatory financial reporting, legal and tax requirements. Additionally, we collect and store sensitive data, including intellectual property, proprietary business information and the proprietary business information of customers and suppliers, as well as personally identifiable information of customers and employees, in data centers and on information technology networks. The secure operation of these networks and the processing and maintenance of this information is critical to our business operations and strategy. Despite our efforts to protect our systems and confidential information, we have experienced cybercrime in the past and may be vulnerable to material security breaches, theft, misplaced, lost or corrupted data, programming errors, employee errors and/or malfeasance or other disruptions during the process of upgrading or replacing computer software or hardware, power outages, computer viruses, telecommunication or utility failures or natural disasters or other catastrophic events. The occurrence of any of these events could compromise our networks, and the information stored there could be accessed, publicly disclosed, modified, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability or regulatory penalties under laws protecting the privacy of personal information, disrupted operations, production downtimes and damage our reputation, any of which could have an adverse effect on our business. While we have not experienced any material losses relating to cybercrime or other information security breaches to date, there can be no assurance that we will not suffer such significant losses in the future.

We may not be able to successfully implement our strategic transformation initiatives, including our new enterprise resource planning system.

We have launched a multi-year phased implementation of a standardized enterprise resource planning ("ERP") system across our global organization, which will replace our existing disparate core financial systems. The upgraded ERP will convert our

internal operations, manufacturing, finance, human capital resources management and customer relationship systems to cloud-based platforms. This new ERP system will provide for standardized processes and integrated technology solutions that enable us to better leverage automation and process efficiency, transforming how we connect people, products and processes to operate as OneASTECC. An implementation of this scale is a major financial undertaking and has, and will continue to, require substantial time and attention of management and key employees. We may not be able to successfully implement our ERP system without delays related to resource constraints or challenges with the critical design phases of the implementation. Inefficiencies in our financial reporting processes due to the conversion to our new ERP could adversely affect our ability to produce accurate financial statements on a timely basis until the new ERP and processes have matured. Additionally, the effectiveness of our internal control over financial reporting could be adversely affected if the new ERP is not successfully implemented.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of December 31, 2022, our manufacturing, warehouse and office facilities total approximately 3.4 million square feet of space globally. We believe all properties to be well maintained and adequate for present use, with sufficient capacities for current needs as our business is presently conducted. As we continue to optimize our global footprint, we may identify properties or expansion opportunities at existing locations that provide growth opportunity or determine that certain of our current properties no longer meet our requirements. Such new properties may be leased or purchased, and current properties may be modified, sold, leased or utilized in another manner.

Our corporate headquarters are in owned offices located in Chattanooga, Tennessee. Additional administrative offices are located inside and outside the United States.

The following table lists the principal locations (defined as greater than 20,000 square feet) that are owned or leased by us, as denoted, and which are utilized in our continuing business operations:

Location	Segment	Facility Type/Use	Approximate Square Feet
United States			
Chattanooga, Tennessee ⁽¹⁾	Infrastructure Solutions	Manufacturing/rebuild, offices, training center, warehouse and storage	1,157,384
Yankton, South Dakota ⁽¹⁾	Materials Solutions	Manufacturing, warehouse and offices	367,292
Chattanooga, Tennessee ⁽¹⁾	Corporate and Other	Warehouse, hangar and offices	224,100
Eugene, Oregon	Materials Solutions	Manufacturing and offices	140,300
Eugene, Oregon	Infrastructure Solutions	Manufacturing and offices	135,920
Burlington, Wisconsin	Infrastructure Solutions	Manufacturing and offices	112,100
Prairie du Chien, Wisconsin	Infrastructure Solutions	Manufacturing	100,136
Parsons, Kansas	Infrastructure Solutions	Manufacturing and offices	91,600
Blair, Nebraska	Infrastructure Solutions	Manufacturing and offices	90,813
Sterling, Illinois	Materials Solutions	Manufacturing and offices	67,500
Rossville, Georgia	Infrastructure Solutions	Manufacturing	40,500
West Columbia, South Carolina ⁽¹⁾	Infrastructure Solutions	Distribution center	20,400
International			
Johannesburg, Gauteng, South Africa	Materials Solutions	Manufacturing and offices	229,000
Omagh, County Tyrone, United Kingdom	Materials Solutions	Manufacturing and offices	165,000
Vespasiano, Minas Gerais, Brazil	Materials Solutions	Manufacturing and offices	132,400
Thornbury, Ontario, Canada	Materials Solutions	Manufacturing and offices	60,500
Acacia Ridge, Queensland, Australia	Infrastructure Solutions	Offices, service, light fabrication, warehouse and storage	36,000
Marieville, Quebec, Canada ⁽¹⁾	Infrastructure Solutions	Manufacturing, warehouse, offices and storage	27,495
St-Bruno, Quebec, Canada ⁽¹⁾	Infrastructure Solutions	Warehouse and offices	21,800

⁽¹⁾ These facilities are partially leased.

ITEM 3. LEGAL PROCEEDINGS

We are involved in a number of legal proceedings arising in the ordinary course of our business. For a discussion of contingencies related to legal proceedings, see Note 16, Commitments and Contingencies of the Notes to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

ITEM 4. MINE SAFETY DISCLOSURES

None.

PART II

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

Common Stock

Our common stock is traded on the Nasdaq National Market under the ticker symbol "ASTE". As of February 24, 2023, there were 249 holders of record of our common stock.

Dividend Policy

We paid cash of \$11.2 million and \$10.2 million for dividends in 2022 and 2021, respectively. The following table details dividends paid per share during 2022 and 2021:

(in dollars)	2022	2021
First Quarter	\$ 0.12	\$ 0.11
Second Quarter	0.12	0.11
Third Quarter	0.12	0.11
Fourth Quarter	0.13	0.12
Total	<u>\$ 0.49</u>	<u>\$ 0.45</u>

Dividends are paid when, as and if declared at the discretion of our Board from funds legally available for that purpose. While our Board currently expects to continue regular quarterly cash dividends, any future determination relating to our dividend policy will be made at the Board's discretion and will depend on a number of factors including our earnings, financial condition, liquidity needs, capital requirements, regulatory and contractual restrictions, business plans and opportunities and other factors deemed relevant by our Board. In addition, our payment of dividends may be limited by restrictive covenants in our revolving credit facility agreement.

Issuer Purchases of Equity Securities

The following table provides information with respect to our purchases of our common stock during the three months ended December 31, 2022:

(in millions, except share and per share data)	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Programs ^(b)	Approximate Dollar Value of Shares That May Yet be Purchased Under the Plans or Programs
November 1, 2022 - November 30, 2022	90,642	\$ 44.15	90,642	115.7
Total	<u>90,642</u>		<u>90,642</u>	

^(a) The average price paid per share includes applicable broker's fees and commissions.

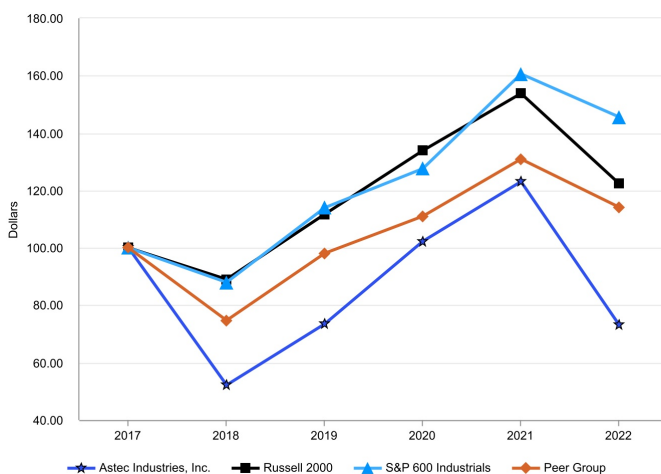
^(b) On July 30, 2018, we announced a share repurchase program authorizing the repurchase of up to \$150 million of our common stock. Under the authorization, repurchases may be made from time to time in open market transactions, including pursuant to trading plans adopted in accordance with Rule 10b5-1 of the Exchange Act, or in privately negotiated transactions. No time limit was set for completion of repurchases under the share repurchase program and the share repurchase program may be suspended or discontinued at any time.

Performance Graph

The stock performance graph below is intended to show our stock performance compared with that of comparable companies. The stock performance graph compares the cumulative five-year total return provided to shareholders of Astec Industries, Inc.'s common stock relative to the cumulative total returns of the Russell 2000 index, our broad equity market comparative index, the S&P 600 Industrials index and our defined peer group.

Historically, our second stock performance comparative has been our defined peer group representative of our definitive Proxy peer group ("Peer Group"), which we believe reflects industrial manufacturing companies of comparable size and complexity. The ticker symbol of the companies included in our Peer Group are: ALG, AIMC, B, GTLS, CIR, CMCO, CVGI, EPAC, NPO, FSS, GBX, HY, JBT, LNN, MTW, MWA, SHYF, SPXC, SXI and WNC. For 2022, we are revising our second comparative to the S&P 600 Industrials index as we believe that this published index is a closer approximation to our industry as a whole as opposed to a smaller selection of peer companies.

The graph assumes that the value of an investment in our common stock, in the Russell 2000 index, in the S&P 600 Industrials index and in the Peer Group was \$100 on December 31, 2017 and assumes reinvestment of all dividends as well as the relative performance of each through December 31, 2022.



(in dollars)	December 31,					
	2017	2018	2019	2020	2021	2022
Astec Industries, Inc.	100.00	52.06	73.36	102.18	123.09	73.05
Russell 2000	100.00	88.97	111.65	133.90	153.69	122.25
S&P 600 Industrials	100.00	87.85	113.89	127.52	160.55	145.46
Peer Group	100.00	74.66	98.10	110.99	130.89	114.07

ITEM 6. [RESERVED]

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and the related notes included in Item 8 of this Annual Report on Form 10-K for the year ended December 31, 2022. The results of operations and other information included herein are not necessarily indicative of the financial condition, results of operations and cash flows that may be expected in future periods. This Annual Report on Form 10-K, including matters discussed in this Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements relating to our plans, estimates and beliefs that involve important risks and uncertainties. See "Safe Harbor Statements Under the Private Securities Litigation Reform Act" and Part I, Item 1A, Risk Factors for a discussion of uncertainties and assumptions that may cause actual results to differ materially from those expressed or implied in the forward-looking statements.

This section of this Annual Report on Form 10-K generally discusses 2022 and 2021 items and year-to-year comparisons between 2022 and 2021. A similar discussion of 2020 items and year-to-year comparisons between 2021 and 2020 can be found

in Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations of our [Annual Report on Form 10-K for the year ended December 31, 2021](#).

The financial condition and results of operations discussed in this Management's Discussion and Analysis of Financial Condition and Results of Operations are those of Astec Industries, Inc. and its consolidated subsidiaries, collectively, the "Company," "Astec," "we," "our" or "us."

Business Overview

We design, engineer, manufacture and market equipment and components used primarily in road building and related construction activities, as well as certain other products. Our products are used in each phase of road building, from quarrying and crushing the aggregate to application of the road surface for both asphalt and concrete. We also manufacture certain equipment and components unrelated to road construction, including equipment for the mining, quarrying, construction and demolition industries and port and rail yard operators; industrial heat transfer equipment; commercial whole-tree pulpwood chippers; horizontal grinders; blower trucks; commercial and industrial burners; and combustion control systems.

Our products are marketed both domestically and internationally primarily to asphalt and concrete producers; highway and heavy equipment contractors; utility contractors; sand and gravel producers; construction, demolition, recycle and crushing contractors; forestry and environmental recycling contractors; mine and quarry operators; port and inland terminal authorities; power stations and domestic and foreign government agencies. In addition to equipment sales, we manufacture and sell replacement parts for equipment in each of our product lines and replacement parts for some competitors' equipment. The distribution and sale of replacement parts is an integral part of our business.

Executive Summary

Highlights of our financial results as of and for the year ended December 31, 2022 as compared to the prior year include the following:

- Net sales were \$1,274.5 million, an increase of 16.3%
- Gross profit was \$264.1 million, an increase of 5.9%
- Income from operations decreased \$12.4 million to \$7.5 million
- Net income attributable to Astec decreased to a loss of \$0.1 million
- Diluted earnings per share were zero, a decrease of 100.0%
- Backlog of \$912.7 million, an increase of 19.7%

Significant Items Impacting Financial Results in 2022

Simplify, Focus and Grow Strategic Transformation ("SFG")

Our ongoing strategic transformation initiative focused on implementing new business strategies and operating structure is concentrated on aligning our operations under the OneASTEC business model with the strategic pillars of Simplify, Focus and Grow. SFG is a multi-year program with the primary goals of optimizing our manufacturing footprint and centralizing our business into common platforms and operating models to reduce complexity and cost, improve productivity and embed continuous improvement in our processes. These efforts are considered critical to enabling us to operate competitively and supporting future growth, which are expected to broadly benefit our customers, partners, employees and shareholders. Currently, we have two elements of the SFG program in operation, which include the implementation of a standardized enterprise resource planning ("ERP") system and a gross margin-generating lean manufacturing initiative.

Our multi-year phased implementation of a standardized ERP system across our global organization will replace much of our existing disparate core financial systems. The upgraded ERP will initially convert our internal operations, manufacturing, finance, human capital resources management and customer relationship systems to cloud-based platforms. This new ERP system will provide for standardized processes and integrated technology solutions that enable us to better leverage automation and process efficiency, transforming how we connect people, products and processes to operate as OneASTEC. An implementation of this scale is a major financial undertaking and has required, and will continue to require, substantial time and attention of management and key employees. We have materially completed the ERP global design in 2022, launched the human capital resources module throughout our domestic sites in January 2023 and expect to convert the operations of one manufacturing site along with Corporate in 2023 to set the foundation before accelerating the implementation at additional manufacturing sites. We anticipate incurring total costs associated with the ERP implementation in the range of \$125 to \$150 million, with an estimated \$25 to \$30 million incurred per year beginning in 2022.

In addition, in the first quarter of 2022, a lean manufacturing initiative at one of our largest sites was initiated and is expected to drive improvement in gross margin at that site. We substantially completed the design efforts for this project during 2022. We also began executing investments to acquire and install manufacturing equipment intended to drive increased efficiencies in our production processes. We plan to continue these capital investments during 2023, which are anticipated to be completed by the end of the year. Gross margin improvements are expected to be realized with the project completion in early to mid-2024. This improvement is intended to serve as the optimal blueprint for our other manufacturing facilities.

Costs incurred during the year ended December 31, 2022 were \$25.5 million, which represent costs directly associated with the SFG initiatives and which cannot be capitalized in accordance with U.S. GAAP. These costs are included in "Selling, general and administrative expenses" in the Consolidated Statements of Operations. Additionally, at December 31, 2022, we have capitalized \$17.8 million in deferred implementation costs associated with the ERP implementation that will be amortized ratably over the remaining contract term once the ERP is ready for use, of which \$1.2 million and \$16.6 million were included in "Prepaid expenses and other assets" and "Other long-term assets" in the Consolidated Balance Sheets, respectively.

MINDS Acquisition

We entered into a Share Purchase Agreement, dated as of March 22, 2022, with MINDS Automation Group, Inc. ("MINDS"), a leader in plant automation control systems and cloud-based data management in the asphalt industry in Canada. The acquisition was completed on April 1, 2022 at a purchase price of \$19.3 million, which was paid in cash. This acquisition provides us with a broader line of controls and automation products designed to deliver enhanced productivity through improved equipment performance for our customers.

Share Repurchases

We completed a series of repurchases under our approved share repurchase program during 2022, acquiring 251,087 shares at an aggregate repurchase price of approximately \$10.1 million. As of December 31, 2022, \$115.7 million remains available for repurchase under the approved share repurchase program.

Closure of Tacoma Facility

In January 2021, we announced plans to close the Tacoma facility in order to simplify and consolidate operations. The Tacoma facility ceased manufacturing operations at the end of 2021. The transfer of the manufacturing and marketing of Tacoma product lines to other facilities within the Infrastructure Solutions segment was completed during the first quarter of 2022. The Tacoma facility's land, building and certain equipment assets of \$15.4 million, which are currently being actively marketed for sale, are included in "Assets held for sale" in the Consolidated Balance Sheets at December 31, 2022.

Leadership Change

As previously announced on January 6, 2023, Mr. Barry A. Ruffalo's employment as President and Chief Executive Officer was terminated and he was succeeded by Mr. Jaco van der Merwe. In accordance with the terms of Mr. Ruffalo's separation agreement, we recorded \$4.4 million of restructuring related costs in the fourth quarter of 2022. Additional costs are anticipated to be incurred in the first quarter of 2023 for this separation.

Management continually reviews our organizational structure and operations to ensure they are optimized and aligned with achieving our near-term and long-term operational and profitability targets. In connection with this review, in February 2023, we implemented a limited restructuring plan to right-size and reduce the fixed cost structure of our overhead departments. We anticipate charges of \$3.0 million to \$4.0 million for employee termination costs, excluding equity award modifications, to be incurred primarily in the first quarter of 2023. No further actions are currently planned. However, additional actions may be taken as a result of management's ongoing business reviews.

Industry and Business Condition

Our financial performance is affected by a number of factors, including the cyclical nature and varying conditions of the markets we serve. Demand in these markets fluctuates in response to overall economic conditions and is particularly sensitive to the amount of public sector spending on infrastructure development, privately funded infrastructure development and changes in the prices of liquid asphalt, oil, natural gas and steel. In addition, many of our markets are highly competitive, and our products compete worldwide with similar products produced and sold by a number of other manufacturers and dealers.

We ended 2021 with a strong backlog of orders, which continued to grow during 2022, but at a slower pace than we experienced during the prior year. The backlog of orders as of December 31, 2022 was \$912.7 million compared to \$762.6 million as of December 31, 2021, an increase of \$150.1 million or 19.7%. Increased orders were driven by higher demand from the continuation of dealer inventory replenishment and the infrastructure investment by the United States' government under the Infrastructure Investment and Jobs Act ("IIJA") enacted in November 2021. The higher demand has contributed to longer lead times. In addition, we are continuing to experience constrained production cycles due to increased lead times for certain

production materials, parts and supplies and manufacturing labor shortages which have and may continue to impact our ability to satisfy the orders in our backlog in a manner that meets the timelines of our customers.

Federal funding provides a significant portion of all highway, street, roadway and parking construction in the United States. We believe that federal highway funding influences the purchasing decisions of our customers, who are typically more amenable to making capital equipment purchases with long-term federal legislation in place. As noted above, the U.S. government enacted the IJA in November 2021. The IJA allocates \$548 billion in government spending to new infrastructure over the five-year period concluding in 2026, with certain amounts specifically allocated to fund highway and bridge projects. We believe that multi-year highway programs (such as the IJA) will have the greatest positive impact on the road construction industry and allow our customers to plan and execute longer-term projects.

Significant portions of our revenues from the Infrastructure Solutions segment relate to the sale of equipment involved in the production, handling, recycling or application of asphalt mix. Liquid asphalt is a by-product of oil refining. An increase or decrease in the price of oil impacts the cost of asphalt, which is likely to alter demand for asphalt and therefore affect demand for certain of our products. While increasing oil prices may have a negative financial impact on many of our customers, our equipment can use a significant amount of reclaimed asphalt pavement, thereby partially mitigating the effect of increased oil prices on the final cost of asphalt for the customer. We continue to develop products and initiatives to reduce the amount of oil and related products required to produce asphalt. Oil prices increased throughout 2021 and 2022, reaching a peak in the third quarter and subsequently stabilizing during the fourth quarter of 2022. Entering 2023, oil prices continue to remain at relatively high levels with price volatility making it difficult to predict the costs of oil-based products used in road construction such as liquid asphalt and gasoline. Oil prices have routinely fluctuated in recent years and are expected to continue to fluctuate in the future. Based on the current macroeconomic environment, including the ongoing impact of the conflict in Ukraine, we anticipate that oil prices will remain at relatively high levels in 2023.

Steel is a major component of our equipment. Driven by supply constraints, steel prices increased throughout the prior year, stabilizing at historically high levels at the end of 2022, which we expect to carry through 2023. During 2022, we have observed a slowing in market demand and reduced lead times as buyers are responding to recessionary pressures and continue to restrict purchases to immediate or near-term needs. However, we anticipate that steel demand will remain relatively strong in 2023, driven by the IJA domestically and impacted by international production capacity being restricted by the conflict in Ukraine. We continue to employ flexible strategies to ensure supply and minimize the impact of price volatility. Potential ongoing constraints in the supply of certain steel products may continue pressuring the availability of other components used in our manufacturing process. Furthermore, given the volatility of steel prices and the nature of our customers' orders, we may not be able to pass through all increases in steel costs to our customers, which negatively impacts our gross profit and margins.

We actively manage our global supply chain for any identified constraints and volatility. Supply chain constraints have eased recently, however we do see challenges related to vendor capacity continue to occur, albeit at a decreasing number of suppliers. As a result, we have experienced elevated lead times in certain components used in our manufacturing processes. We are continuing to focus on identifying and qualifying alternative suppliers wherever possible, which has helped alleviate the challenges in our supply chain. We also continually monitor potential future supply costs and availability in an effort to proactively address challenges that might occur. We cannot estimate the full impact that any future disruptions might have on our operations.

In addition, we have experienced a shortage of necessary production personnel and increasing labor costs to attract staff in our manufacturing operations. This has resulted in a variety of challenges in running our operations efficiently to meet strong customer demand. We continue to adjust our production schedules and manufacturing workload distribution, outsource components, implement efficiency improvements and actively modify our recruitment process and compensation and benefits to attract and retain production personnel in our manufacturing facilities.

Whenever possible, we attempt to cover increased costs of production by adjusting the prices of our products. Backlog fulfillment times from the initial order to completing the contracted sale vary and can extend past twelve months with the growth we have experienced in the backlog. For this reason, we have limitations on our ability to pass on cost increases to our customers on a short-term basis. In addition, the markets we serve are competitive in nature, and competition limits our ability to pass through cost increases in many cases. Through our operational excellence initiatives, we also strive to minimize the effect of inflation through cost reductions and improved manufacturing efficiencies.

Our business was significantly affected by the contributory effects of the COVID-19 pandemic such as fluctuations in demand for our products, material price increases, increased shipping costs and lead times from production materials, supplies and parts, labor shortages and increased labor costs throughout 2020 and 2021, with the impacts lessening throughout 2022. The future impact of COVID-19 or other health related emergencies on our operations and the markets we serve remains uncertain and cannot be accurately predicted. See Part I, Item 1A. Risk Factors in this Annual Report on Form 10-K for a discussion of the risks associated with the COVID-19 or future pandemics.

Results of Operations: 2022 vs. 2021

Net Sales

Net sales increased \$179.0 million or 16.3% to \$1,274.5 million in 2022 from \$1,095.5 million in 2021. The increase in net sales was primarily driven by changes in the volume, pricing and mix of sales that generated increases in (i) equipment sales of \$141.1 million, (ii) parts and component sales of \$34.6 million, (iii) service and equipment installation revenue of \$7.1 million and (iv) freight revenue of \$4.2 million partially offset by decreased used equipment sales of \$4.2 million and other revenue of \$3.8 million primarily driven by higher utilization of our interest subsidy programs offered to certain of our dealer customers. Included in these net increases is \$4.4 million of incremental net sales from an acquired business. Sales reported by our foreign subsidiaries in U.S. dollars for 2022 would have been \$18.6 million higher had foreign exchange rates been the same as the 2021 rates.

Domestic sales for 2022 were \$1,014.3 million or 79.6% of net sales compared to \$842.1 million or 76.9% of net sales for 2021, an increase of \$172.2 million or 20.4%. Domestic sales increased primarily due to: (i) \$144.3 million higher equipment sales (ii) \$25.6 million higher parts and component sales, (iii) \$4.7 million higher service and equipment installation revenue and (iv) \$4.7 million higher freight revenue. These increases were partially offset by decreased other revenue of \$3.6 million primarily driven by higher utilization of our interest subsidy programs offered to certain of our dealer customers and lower used equipment sales of \$3.5 million. Included in these net increases is \$2.3 million of incremental net sales from an acquired business.

International sales for 2022 were \$260.2 million or 20.4% of net sales compared to \$253.4 million or 23.1% of net sales for 2021, an increase of \$6.8 million or 2.7%. International sales increased primarily due to higher parts and component sales and service revenue of \$9.0 million and \$2.4 million, respectively. These increases were partially offset by \$3.2 million lower equipment sales. Included in these net increases is \$2.1 million of incremental net sales from an acquired business.

Gross Profit

Consolidated gross profit for 2022 was \$264.1 million or 20.7% of net sales as compared to \$249.5 million or 22.8% of net sales in 2021, an increase of \$14.6 million or 5.9%. The increase was primarily driven by the impact of net favorable volume, pricing and mix that generated \$131.8 million higher gross profit. These increases were partially offset by the impact of inflation on materials, labor and overhead of \$104.0 million and manufacturing inefficiencies of \$14.9 million largely due to logistics and manufacturing throughput disruptions.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for 2022 were \$216.1 million or 17.0% of net sales compared to \$200.6 million or 18.3% of net sales for 2021, an increase of \$15.5 million or 7.7%, primarily due to: (i) \$12.1 million increased costs related to our SFG transformation program, (ii) \$3.2 million of exhibit, promotional and travel costs due to the return of in-person industry conferences and business activities, (iii) \$2.8 million incremental expenses associated with MINDS, (iv) \$2.0 million of acquisition and integration related costs mainly associated with the acquisition of MINDS and (v) increased net payroll and employee benefit costs due to increased headcount throughout our organization partially offset by lower health insurance claims experience and reduced deferred compensation program costs associated with our stock price changes. These increases were partially offset by lower depreciation and amortization expense of \$3.7 million and reduced expenses related to closing a site location of \$2.1 million.

Research and Development Expenses

Research and development expenses increased \$5.0 million or 18.9% to \$31.5 million in 2022 from \$26.5 million in 2021. Increased research and development costs were primarily driven by higher prototype materials costs and increased personnel-related expenses.

Restructuring, Impairment and Other Asset Charges, Net

Restructuring, asset impairment charges and the net gain on the sale of property and equipment for the years ended December 31, 2022 and 2021 are presented below and relate primarily to our SFG initiatives and recent leadership change:

(in millions)	Years Ended December 31,	
	2022	2021
Restructuring charges:		
Costs associated with leadership change	\$ 4.4	\$ —
Costs associated with closing Enid	1.0	0.7
Costs associated with closing Tacoma	0.8	1.6
Costs associated with closing Mequon	—	0.6
Total restructuring related charges	6.2	2.9
Asset impairment charges:		
Other impairment charges	3.5	0.2
Total asset impairment charges	3.5	0.2
Gain on sale of property and equipment, net:		
Gain on sale of property and equipment, net	(0.7)	(0.6)
Total gain on sale of property and equipment, net	(0.7)	(0.6)
Restructuring, impairment and other asset charges, net	\$ 9.0	\$ 2.5

See Note 22, Strategic Transformation and Restructuring, Impairment and Other Asset Charges, of the Notes to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for discussion of the individual restructuring actions taken and the impairment charges recorded.

Income Tax Provision

Income tax expense for the year ended December 31, 2022 was \$5.0 million, reflecting a 113.6% effective tax rate compared to an income tax benefit of \$2.1 million for the year ended December 31, 2021, reflecting a (15.2)% effective tax rate. Our effective tax rates are affected by recurring items which are generally consistent from period to period, as well as discrete items that may occur but are not consistent from period to period.

The items having the most significant impact on the effective tax rate for 2022 include discrete tax expense for a foreign valuation allowance of \$5.5 million for net operating losses ("NOLs") at our Brazilian subsidiary partially offset by the net benefits of \$2.1 million for research and development tax credits and \$0.9 million from the foreign derived intangible income deduction. The items having the most significant impact on the effective tax rate for 2021 include a benefit from net releases of valuation allowances of \$8.1 million primarily related to NOLs at our Brazilian and German subsidiaries and a net benefit of \$2.3 million for research and development tax credits partially offset by a \$4.4 million provision from the dissolution of our Germany subsidiary. Future utilization of our NOLs and state tax credit carryforwards is evaluated on a periodic basis, and the valuation allowance is adjusted accordingly. There is no guarantee that we will not incur additional valuation allowances to our NOLs.

Backlog

The backlog of orders at December 31, 2022 was \$912.7 million compared to \$762.6 million at December 31, 2021, an increase of \$150.1 million or 19.7%. Domestic and international backlogs increased \$146.3 million or 23.3% and \$3.8 million or 2.8%, respectively. The backlog increased \$117.8 million to \$567.1 million in the Infrastructure Solutions segment and increased \$27.9 million to \$341.2 million in the Materials Solutions segment. The Corporate and Other backlog represents our controls and automation business and totaled \$4.4 million as of December 31, 2022. Increased orders were driven by higher demand from the continuation of dealer inventory replenishment and the infrastructure investment by the United States' government under the IJA enacted in November 2021. The higher demand has contributed to longer lead times.

Net Sales by Segment

(in millions)	Years Ended December 31,		\$ Change	% Change
	2022	2021		
Infrastructure Solutions	\$ 847.4	\$ 743.4	\$ 104.0	14.0 %
Materials Solutions	\$ 422.7	\$ 352.1	\$ 70.6	20.1 %
Corporate and Other	\$ 4.4	\$ —	\$ 4.4	100.0 %

Infrastructure Solutions

Sales in this segment were \$847.4 million for 2022 compared to \$743.4 million for 2021, an increase of \$104.0 million, or 14.0%. The increase was primarily driven by favorable net volume, pricing and the mix of sales that generated increased (i) new equipment sales of \$78.4 million, (ii) parts and component sales of \$20.3 million, (iii) service and equipment installation revenue of \$5.3 million and (iv) freight revenue of \$2.6 million. These increases were partially offset by lower used equipment sales of \$3.1 million.

Domestic sales for the Infrastructure Solutions segment increased by \$103.4 million, or 17.2%, for 2022 compared to 2021 primarily due to: (i) increased new equipment sales of \$80.1 million, (ii) increased parts and component sales of \$18.1 million, (iii) increased service and equipment installation sales of \$4.5 million and (iv) increased freight revenue of \$2.6 million. These increases were partially offset by lower used equipment sales of \$2.7 million.

International sales for the Infrastructure Solutions segment increased \$0.6 million, or 0.4%, for 2022 compared to 2021 primarily due to increased parts and component sales of \$2.2 million partially offset by lower equipment sales of \$1.7 million.

Materials Solutions

Sales in this segment were \$422.7 million for 2022 compared to \$352.1 million for 2021, an increase of \$70.6 million or 20.1%. The increase was primarily driven by favorable net volume, pricing and the mix of sales that generated increased new equipment and parts and component sales of \$59.1 million and \$14.1 million, respectively. These increases were partially offset by decreased other revenue of \$4.5 million primarily driven by increased utilization of our interest subsidy programs offered to some of our dealer customers.

Domestic sales for the Materials Solutions segment increased \$66.5 million or 27.7% for 2022 compared to 2021 driven by: (i) increased new equipment of \$62.1 million (ii) increased parts and component sales of \$7.4 million and (iii) increased freight revenue of \$2.1 million. These increases were partially offset by decreased other revenue of \$4.5 million primarily driven by increased utilization of our interest subsidy programs offered to certain of our dealer customers.

International sales for the Materials Solutions segment increased \$4.1 million or 3.7% for 2022 compared to 2021 primarily due to increased parts and component sales of \$6.7 million partially offset by lower new equipment sales of \$3.0 million.

Corporate and Other

Sales in this segment represent our controls and automation business acquired in April 2022.

Segment Operating Adjusted EBITDA

Segment Operating Adjusted EBITDA is the measure of segment profit or loss used by our Chief Executive Officer, whom is determined to be the chief operating decision maker ("CODM"), to evaluate performance and allocate resources to the operating segments. Segment Operating Adjusted EBITDA, a non-GAAP financial measure, is defined as net income or loss before the impact of interest income or expense, income taxes, depreciation and amortization and certain other adjustments that are not considered by the CODM in the evaluation of ongoing operating performance. This non-GAAP financial measure can be useful to investors in understanding operating results and the performance of our core business from management's perspective. Our presentation of Segment Operating Adjusted EBITDA may not be comparable to similar measures used by other companies and is not necessarily indicative of the results of operations that would have occurred had each reportable segment been an independent, stand-alone entity during the periods presented. See Note 19, Operations by Industry Segment and Geographic Area, of the Notes to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for a reconciliation of Segment Operating Adjusted EBITDA to total consolidated net income attributable to controlling interest.

(in millions)	Years Ended December 31,		\$ Change	% Change
	2022	2021		
Infrastructure Solutions	\$ 73.0	\$ 73.9	(0.9)	(1.2)%
Materials Solutions	\$ 44.5	\$ 39.1	5.4	13.8%
Corporate and Other	\$ (46.5)	\$ (48.2)	1.7	3.5%

Infrastructure Solutions

Segment Operating Adjusted EBITDA for the Infrastructure Solutions segment was \$73.0 million for 2022 compared to \$73.9 million for 2021, a decrease of \$0.9 million or 1.2%. The decrease in Segment Operating Adjusted EBITDA resulted primarily from: (i) the impact of higher inflation on materials, labor and overhead costs of \$66.7 million, (ii) increased general and administrative costs of \$8.3 million, (iii) manufacturing inefficiencies of \$5.3 million largely due to logistics and manufacturing throughput disruptions and (iv) increased research and development costs of \$4.2 million. Incorporated in these increased costs is a \$4.6 million impact of annual incentive compensation, which was recorded in Corporate and Other in the prior year period and has been reflected in the Infrastructure Solutions segment in the current year. These increased costs were partially offset by the impact of favorable net volume, pricing and mix that generated \$80.5 million higher gross profit and reduced expenses related to closed site locations of \$2.0 million.

Materials Solutions

Segment Operating Adjusted EBITDA for the Materials Solutions segment was \$44.5 million for 2022 compared to \$39.1 million for 2021, an increase of \$5.4 million or 13.8%. The increase in Segment Operating Adjusted EBITDA resulted primarily from the impact of favorable volume, pricing and mix that generated \$51.3 million higher gross profit partially offset by the impact of higher inflation on materials, labor and overhead costs of \$37.2 million and manufacturing inefficiencies \$7.9 million due to supply chain and logistics disruptions. Incorporated in these increased costs is a \$1.8 million impact of annual incentive compensation, which was recorded in Corporate and Other in the prior year period and has been reflected in the Materials Solutions segment in the current year.

Corporate and Other

Corporate and Other operations had net expenses of \$46.5 million for 2022 compared to \$48.2 million for 2021, a decrease of \$1.7 million or 3.5%. The decrease in expenses was primarily driven by: (i) lower net annual incentive compensation of \$2.0 million due to \$6.4 million that was recorded within Infrastructure Solutions and Materials Solutions in the current year as compared to within Corporate in the prior year period, (ii) reduced consulting fees of \$1.7 million and (iii) reduced deferred compensation program cost driven by our stock price changes of \$1.5 million. These decreases were partially offset by increases in internal headcount and share-based compensation expenses of \$2.8 million.

Liquidity and Capital Resources

Our primary sources of liquidity and capital resources are cash and cash equivalents on hand, borrowing capacity under a \$250.0 million revolving credit facility and cash flows from operations. As of December 31, 2022, our total liquidity was \$232.0 million, consisting of \$62.8 million of cash and cash equivalents available for operating purposes and \$169.2 million available for additional borrowings under our revolving credit facility, to the extent our compliance with financial covenants permits such borrowings. Our foreign subsidiaries held \$27.0 million of cash and cash equivalents available for operating purposes and is considered to be indefinitely invested in those jurisdictions.

In April 2022, we acquired MINDS with a total cash consideration paid to the selling shareholders of \$19.3 million funded from cash on hand. Our future cash requirements primarily include working capital needs, debt service obligations, capital expenditures, vendor hosted software arrangements including the related implementation costs, unrecognized tax benefits and operating lease payments. In addition, our variable cash uses may include the payment of our quarterly cash dividend, financing other strategic initiatives of our business, including, but not limited to, the SFG transformation, strategic acquisitions and share repurchases under our share repurchase authorization. We believe that our current working capital, cash flows generated from future operations and available capacity under our revolving credit facility will be sufficient to meet working capital and capital expenditure requirements for our existing business for at least the next 12 months.

On December 19, 2022, we entered into a new credit agreement (the "Credit Agreement") with Wells Fargo Bank, National Association, as administrative agent, and the lenders party thereto, which replaced the previously existing credit facility with a borrowing capacity of \$150.0 million and a maturity date of December 29, 2023 (the "Previous Credit Facility"). The Credit Agreement provides for (i) a revolving credit facility (consisting of revolving credit loans and swingline loans) and a letter of credit facility, in an aggregate amount of up to \$250.0 million, (ii) an incremental credit facility in an aggregate amount not to exceed \$125.0 million (the "Credit Facilities") and (iii) a maturity date of December 19, 2027.

We had \$78.0 million in outstanding borrowings under the Credit Facilities at December 31, 2022 and no outstanding borrowings on the Previous Credit Facility at December 31, 2021. Our outstanding letters of credit totaling \$2.8 million decreased borrowing availability to \$169.2 million under the revolving credit facility as of December 31, 2022. We anticipate continuing to utilize the Credit Facilities with more frequency in the near-term to support our domestic working capital needs in response to supply chain disruptions. The Credit Agreement contains certain financial covenants, including requirements related to our Consolidated Total Net Leverage Ratio and Consolidated Interest Coverage Ratio, each as defined in the agreement. Failure to satisfy these covenants could result in the accelerated repayment of our indebtedness. We were in compliance with the financial covenants of the Credit Facilities at December 31, 2022. Due to the increased borrowings under our Credit Facilities and higher interest rates, we expect our interest expense in 2023 to be significantly higher than in prior years.

Our Brazilian subsidiary maintains a separate term loan for working capital purposes with a bank in Brazil, which is secured by its manufacturing facility.

Certain of our international subsidiaries in South Africa, Australia, Brazil, Canada and the United Kingdom each have separate credit facilities with local financial institutions primarily to finance short-term working capital needs, as well as to cover foreign exchange contracts, performance letters of credit, advance payment and retention guarantees. In addition, the Brazilian subsidiary also enters into order anticipation agreements on a periodic basis. Both the outstanding borrowings under the credit facilities of the international subsidiaries and the order anticipation agreements are recorded in "Short-term debt" in our Consolidated Balance Sheets. Each of the credit facilities are generally guaranteed by Astec Industries, Inc. and/or secured with certain assets of the local subsidiary.

We regularly enter into agreements primarily to purchase inventory in the ordinary course of business. As of December 31, 2022, open purchase obligations totaled \$330.9 million, of which \$324.9 million are expected to be fulfilled within one year.

We estimate that our capital expenditures will be between \$25 and \$35 million for the year ending December 31, 2023, which may be impacted by general economic, financial or operational changes and competitive, legislative and regulatory factors, among other considerations.

Cash Flows

The following table summarizes cash flows during the years ended December 31, 2022 and 2021, respectively:

(in millions)	Years Ended December 31,	
	2022	2021
Net cash (used in) provided by operating activities	\$ (73.9)	\$ 7.4
Net cash used in investing activities	(53.2)	(18.4)
Net cash provided by (used in) financing activities	60.1	(12.1)
Effect of exchange rates on cash	(1.4)	(1.1)
Decrease in cash and cash equivalents and restricted cash	(68.4)	(24.2)
Cash, cash equivalents and restricted cash, end of period	\$ 66.0	\$ 134.4

Net cash (used in) provided by operating activities

Our operating activities were a \$73.9 million net use of cash during 2022 as compared to providing net cash of \$7.4 million during 2021. This decrease is primarily due to: (i) higher net cash usages in our operating assets and liabilities of \$49.1 million mainly driven by the increase of inventories on hand of \$44.9 million due to higher backlog and supply chain disruptions and (ii) lower net income adjusted for non-cash items of \$33.7 million.

Net cash used in investing activities

Net cash used in investing activities increased by \$34.8 million during 2022 as compared to 2021 primarily due to increased purchases of property and equipment of \$20.6 million in part due to our manufacturing facility transformation initiative and the acquisition of MINDS in the second quarter of 2022 at a purchase price of \$17.8 million, net of cash acquired. These cash outflows were partially offset by increased cash inflows of \$3.8 million from disposals of property and equipment.

Net cash provided by (used in) financing activities

Our financing activities provided net cash of \$60.1 million during 2022 as opposed to a net use of \$12.1 million in cash during 2021 primarily due to increased net proceeds from borrowings of \$83.5 million partially offset by repurchases of stock under our share repurchase program of \$10.1 million in 2022.

Financial Condition

Our current assets increased to \$696.4 million at December 31, 2022 from \$636.0 million at December 31, 2021, an increase of \$60.4 million or 9.5%. The increase is due primarily to increased inventories of \$94.7 million driven by supply chain disruptions resulting in maintaining elevated inventory levels, increased trade and other net receivables and contract assets of \$28.4 million, the recording of \$15.4 million of assets at our closed Tacoma site as held for sale and increased prepaid expenses and other assets of \$4.7 million. These increases were partially offset by decreased cash, cash equivalents and restricted cash of \$68.4 million, the net sale of short-term trading securities of \$4.7 million and decreased prepaid and refundable income taxes of \$4.6 million. Accounts receivable days outstanding decreased from 50.3 in 2021 to 44.5 in 2022.

Our current liabilities increased to \$274.0 million at December 31, 2022 from \$223.3 million at December 31, 2021, an increase of \$50.7 million or 22.7%. The increase is primarily due to increased accounts payable of \$25.0 million, increased customer deposits of \$9.3 million, additional net borrowings of \$6.8 million on short-term debt facilities in order to meet working capital needs at certain of our international sites, increased accrued employee related liabilities of \$4.7 million and increased other current liabilities of \$3.4 million.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with U.S. generally accepted accounting principles. Application of these principles requires us to make estimates and judgments that affect the amounts as reported in the consolidated financial statements. Accounting policies that are critical to aid in understanding and evaluating the results of operations and financial position include the following:

Inventory Valuation: Inventories are valued at the lower of first-in first-out cost or net realizable value. The most significant component of our inventories is steel. Open market prices and tariffs are subject to volatility and determine our cost of steel. During periods when open market prices decline, we may need to reduce the carrying value of the inventory. In addition, certain items in inventory become obsolete over time, and we reduce the carrying value of these items to their net realizable value. These reductions are determined by management based on estimates, assumptions and judgments made from the information available at that time. See Note 2, Basis of Presentation and Significant Accounting Policies, of the Notes to Consolidated Financial Statements included in this Annual Report on Form 10-K, for a description of our process used to value inventories at the lower of first-in first-out cost or net realizable value. We do not believe it is reasonably likely that the inventory values will materially change in the near future.

Revenue Recognition: Revenue is generally recognized when we satisfy a performance obligation by transferring control of goods or providing services. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. We generally obtain purchase authorizations from our customers for a specified amount of product at a specified price with specified delivery terms. A significant portion of our equipment sales represents equipment produced in our plants under short-term contracts for a specific customer project or equipment designed to meet a customer's specific requirements. Most of the equipment sold by us is based on standard configurations, some of which are modified to meet customer needs or specifications. We provide customers with technical design and performance specifications and perform pre-shipment testing to ensure the equipment performs according to design specifications, regardless of whether we provide installation services in addition to selling the equipment. Significant down payments are required on many equipment orders with other terms allowing for payment shortly after shipment, typically 30 days. Taxes assessed by a governmental authority that are directly imposed on revenue-producing transactions between us and our customers, such as sales, use, value-added and some excise taxes, are excluded from revenue. Costs of obtaining sales contracts with an expected duration of one year or less are expensed as incurred. As contracts are typically paid within one year from the date of the contract fulfillment, revenue adjustments for a potential financing component or the costs to obtain the contract are not made.

Depending on the terms of the arrangement with the customer, recognition of a portion of the consideration received may be deferred and recorded as a contract liability if we have to satisfy a future obligation, such as to provide installation assistance, service work to be performed in the future without charge, floor plan interest to be reimbursed to our dealer customers, payments for extended warranties, for annual rebates given to certain high volume customers or for obligations for future estimated returns to be allowed based upon historical trends. Other contract assets and liabilities are typically not material as a percentage of total assets or total liabilities, respectively.

Certain contracts include terms and conditions through which we recognize revenues upon completion of equipment production, which is subsequently stored at one of our plants at the customer's request. Revenue is recorded on such contracts upon the customer's assumption of title and transfer of control and when collectibility is probable. In addition, there must be a fixed schedule of delivery of the goods consistent with the customer's business practices, we must not have retained any specific performance obligations such that the earnings process is not complete, and the goods must have been segregated from our inventory prior to revenue recognition.

We have certain sales containing multiple performance obligations, whereby revenue attributable to the sale of a product is recognized when the product is shipped, and the revenue attributable to services provided with respect to the product (such as installation services) is recognized when the service is performed. Consideration is allocated to deliverables using observable

market prices from stand-alone performance obligations or a cost plus margin approach when one is not available. Otherwise, we use third-party evidence of selling price or our best estimate of the selling price for the deliverables. We evaluate sales with multiple performance obligations to determine whether revenue related to individual elements should be recognized separately or as a combined unit. In addition to the previously mentioned general revenue recognition criteria, we only recognize revenue on individual delivered elements when there is objective and reliable evidence that the delivered element has a determinable value to the customer on a standalone basis and there is no right of return.

We have certain sales orders on which we record revenue over time based upon the ratio of costs incurred to estimated total costs.

Goodwill and Other Intangible Assets: Goodwill is tested for impairment annually on October 1, or more frequently, if events or circumstances indicate that the carrying amount of the asset may not be recoverable. Goodwill is allocated to, and evaluated for impairment at, four identified reporting units. A reporting unit is an operating segment or, under certain circumstances, a component of an operating segment that constitutes a business, has available discrete financial information, and whose operating results are regularly reviewed by management. We combine and aggregate components of an operating segment as a single reporting unit if the components have similar economic characteristics.

Goodwill is tested for impairment by either performing a qualitative evaluation or a quantitative test. The qualitative evaluation is an assessment of factors that includes, but is not limited to, the macroeconomic conditions, industry and competitive environment conditions, overall financial performance, business specific events and market considerations to determine whether it is more likely than not that a reporting unit's fair value is less than its carrying amount. We may elect not to perform the qualitative assessment for some or all reporting units and perform the quantitative impairment test. The quantitative goodwill impairment test requires us to compare the carrying value of the reporting unit's net assets to the fair value of the reporting unit. We determine fair values of each reporting unit using an equally weighted combination of the discounted cash flow method, a form of the income approach, and the guideline public company method, a form of the market approach. This analysis requires significant assumptions, including projected net sales, projected earnings before interest, tax, depreciation and amortization, terminal growth rates, the cost of capital, the selection of appropriate guideline companies and related valuation multiples. Our estimates are subject to change given the inherent uncertainty in predicting future results. Additionally, the discount rate and the terminal growth rate are based on our judgment of the rates that would be utilized by a hypothetical market participant.

We performed a quantitative analysis during 2022 on our four reporting units whereby the fair values of each reporting unit exceeded its carrying value and therefore no indicators of impairment existed. However, the fair values of the Materials Solutions and Astec Digital reporting units exceeded their carrying values by 3.2% and 5.0%, respectively. Since the Materials Solutions and Astec Digital reporting units' fair values did not substantially exceed the carrying values, we may be at risk for an impairment loss in the future if forecasted trends assumed in the fair value calculation are not realized. As of December 31, 2022, there was \$19.4 million and \$8.7 million of goodwill recorded related to the Materials Solutions and Astec Digital reporting units, respectively.

No goodwill impairment charges were recognized in 2022 or 2021. Goodwill impairment charges of \$1.6 million were recognized in 2020. See Note 2, Basis of Presentation and Significant Accounting Policies, and Note 7, Goodwill, of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K, for a detail of the testing management performed for goodwill impairment, goodwill reported by segment and impairment charges recorded.

Intangible assets with definite lives are tested for impairment if conditions exist that indicate the carrying value may not be recoverable. Risk factors that may be considered include an economic downturn in the general economy, a geographic market or the commercial and residential construction industries, a change in the assessment of future operations as well as the cyclical nature of our industry and the customization of the equipment we sell, each of which may cause adverse fluctuations in operating results. Other risk factors considered would be an increase in the price or a decrease in the availability of oil that could reduce the demand for our products in addition to the significant fluctuations in the purchase price of raw materials not recoverable through selling price increases that could have a negative impact on the cost of production and gross profit as well as others more fully described in the Part I, Item 1A, Risk Factors section of this Annual Report on Form 10-K. An impairment charge is recorded when the carrying value of the definite lived intangible asset is not recoverable by the cash flows generated from the use of the asset. Some of the inputs used in the impairment testing are highly subjective and are affected by changes in business factors and other conditions. Changes in any of the inputs could have an effect on future tests and result in impairment charges.

The useful lives of identifiable intangible assets are determined after considering the specific facts and circumstances related to each intangible asset. Factors considered when determining useful lives include the contractual term of any agreement, the history of the asset, our long-term strategy for the use of the asset, any laws or other local regulations which could impact the useful life of the asset, and other economic factors, including competition and specific market conditions. Intangible assets that are deemed to have definite lives are amortized, generally on a straight-line basis, over their useful lives, ranging from 3 to 19 years.

Income Taxes: Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss

and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. We periodically assess the need to establish valuation allowances against our deferred tax assets to the extent we no longer believe it is more-likely-than-not that the tax assets will be fully utilized. Judgment is required in determining the provision for income taxes, deferred tax assets and liabilities and the valuation allowance recorded against net deferred tax assets. Liabilities for uncertain income tax positions are based on a two-step process. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more-likely-than-not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step requires an estimate and measurement of the tax benefit as the largest amount that is more than 50% likely to be realized upon ultimate settlement. It is inherently difficult and subjective to estimate such amounts, as we must determine the probability of various possible outcomes. We reevaluate these uncertain tax positions on a quarterly basis or when new information becomes available. These reevaluations are based on factors including, but not limited to, changes in facts or circumstances, changes in tax law, successfully settled issues under audit, expirations due to statutes and new audit activity. Such a change in recognition or measurement could result in the recognition of a tax benefit or an increase to accrued taxes.

Recent Accounting Changes and Pronouncements

See Note 2, Basis of Presentation and Significant Accounting Policies of the Notes to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for discussion of recently issued accounting pronouncements applicable to us and the impact of those standards on our consolidated financial statements and related disclosures.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk and Risk Management Policies

Interest Rate Risk

We are exposed to changes in interest rates, primarily from our domestic Credit Facilities and our international credit facilities and term loan. Our domestic Credit Facilities include a \$250.0 million revolving credit facility, which bears interest based on market rates plus an applicable margin as defined in the Credit Agreement. Based on the outstanding balance on our domestic Credit Facilities of \$78.0 million as of December 31, 2022, a hypothetical 100 basis point increase in the interest rates would have a \$0.8 million impact on our annualized interest expense. We had no borrowings outstanding on our prior credit facility as of December 31, 2021. We do not hedge variable interest.

Foreign Exchange Risk

We are subject to foreign exchange risk at our foreign operations. Foreign operations represent 26.9% and 23.7% of total assets at December 31, 2022 and 2021, respectively, and 17.1% and 17.2% of total net sales for the years ended December 31, 2022 and 2021, respectively. Each period, the balance sheets and related results of operations of our subsidiaries that are denominated in non-U.S. dollar currencies are translated from their functional foreign currency into U.S. dollars for reporting purposes. As the U.S. dollar strengthens against those foreign currencies, the foreign denominated net assets and operating results become less valuable in our reporting currency. When the U.S. dollar weakens against those currencies, the foreign denominated net assets and operating results become more valuable in our reporting currency. At each reporting date, the fluctuation in the value of the net assets and operating results due to foreign exchange rate changes is recorded as an adjustment to "Accumulated other comprehensive loss" in the Consolidated Balance Sheets. We view our investments in foreign subsidiaries as long-term and do not hedge the net investments in foreign subsidiaries.

From time to time, our foreign subsidiaries enter into transactions not denominated in their functional currency. In these situations, we evaluate the need to hedge those transactions against foreign currency rate fluctuations. When we determine a need to hedge a transaction, the subsidiary enters into a foreign currency exchange contract. We do not apply hedge accounting to these contracts and, therefore, recognize the fair value of these contracts in the Consolidated Balance Sheets and the change in the fair value of the contracts in current earnings.

Due to the limited exposure to foreign exchange rate risk, a 10% fluctuation in the foreign exchange rates at December 31, 2022 or 2021 would not have a material impact on our consolidated financial statements.

Commodity Risk

We purchase raw materials and some manufactured components and replacement parts for our products from leading suppliers both domestically and internationally. Raw materials used in the manufacture of our products include carbon steel, pipe and various types of alloy steel, which are normally purchased from distributors and other sources. The majority of steel is scheduled on a just in time arrangement from suppliers to better manage inventory requirements at our manufacturing facilities. Based on market dynamics, we strategically and selectively order and inventory certain items beyond a just in time basis. The most significant component of our inventory is steel. Significant increases in the market price of steel can negatively impact our gross profit as we are often unable to pass along all of these price increases to our customers. A significant decline in the market price

of steel could result in a decline in the market value of our equipment or parts. We utilize strategies that include forward-looking contracts and advanced steel purchases to ensure supply and minimize the impact of price volatility.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Index to Consolidated Financial Statements and Supplementary Data:

[Report of Independent Registered Public Accounting Firm](#)

[Consolidated Balance Sheets](#)

[Consolidated Statements of Operations](#)

[Consolidated Statements of Comprehensive \(Loss\) Income](#)

[Consolidated Statements of Cash Flows](#)

[Consolidated Statements of Equity](#)

[Notes to Consolidated Financial Statements](#)

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

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Astec Industries, Inc.:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of Astec Industries, Inc. and subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive (loss) income, cash flows and equity for each of the years in the three-year period ended December 31, 2022, and the related notes (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or

disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Evaluation of the sufficiency of audit evidence over inventories and net sales

As disclosed in Notes 4 and 18 to the Company's consolidated financial statements, and disclosed in the consolidated balance sheet and consolidated statement of operations, the Company recorded \$393.4 million in inventories and \$1,274.5 million in net sales as of December 31, 2022 and for the year then ended, respectively. Inventories are primarily comprised of raw materials, work-in-process, and finished goods that are physically located at each of the Company's sites. Net sales are recognized primarily from the sale of equipment and replacement parts from each of the Company's sites.

We identified the evaluation of the sufficiency of audit evidence over inventories and net sales as a critical audit matter. Evaluating the sufficiency of the audit evidence obtained required especially subjective auditor judgment because of the decentralized structure and geographic dispersion of the Company's manufacturing locations. This included determining the sites for which procedures were performed.

The following are the primary procedures we performed to address this critical audit matter. We used our judgment to determine the nature and extent of procedures to be performed over inventories and net sales, including the determination of the sites for which those procedures were performed. For certain sites where procedures were performed, we evaluated the design and tested the operating effectiveness of certain internal controls over the Company's inventories and net sales processes, including controls over the amounts recorded in inventories and the amounts recorded in net sales. We assessed the recorded inventories for each site where procedures were performed by participating in a physical inventory count and observed a sample of inventories on hand and compared the cost recorded for a sample of inventories on hand to underlying documentation. We assessed recorded net sales for each site where procedures were performed by selecting a sample of net sales transactions and comparing the amount recognized to underlying documentation, such as contracts with customers and shipping documentation. We evaluated the overall sufficiency of audit evidence obtained by assessing the results of procedures performed over inventories and net sales.

Goodwill impairment analysis for the Material Solutions reporting unit

As discussed in Notes 2 and 7 to the consolidated financial statements, the Company tests goodwill for impairment annually, or more frequently if circumstances change or events occur that would more-likely-than-not reduce the fair value of a reporting unit below its carrying value. During the year ended December 31, 2022, the Company performed a quantitative impairment analysis and determined fair values of each of its reporting units using an equally weighted combination of the discounted cash flow method and the guideline public company method. The Company did not record any impairment of goodwill as the fair value of each reporting unit exceeded its carrying amount. As of December 31, 2022, goodwill allocated to the Materials Solutions reportable segment was \$19.4 million.

We identified the evaluation of the goodwill impairment analysis for the Materials Solutions reporting unit as a critical audit matter. Evaluating the estimated fair value of the reporting unit involved a high degree of subjective auditor judgment. Specifically, the revenue growth rates, gross margins, and discount rate assumptions used in estimating the fair value of the reporting unit were challenging to evaluate as changes to those assumptions could have had a significant effect on the Company's assessment of the impairment of goodwill of that reporting unit.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company's goodwill impairment assessment process. This included controls related to the determination of the revenue growth rates, gross margins, and discount rate assumptions. We involved valuation professionals with specialized skills and knowledge, who assisted in:

- evaluating the discount rate by comparing it to a discount rate range that was independently developed using publicly available market data for comparable entities
- evaluating the revenue growth rates and gross margins by comparing them to the reporting unit's historical performance, to publicly available data for comparable companies, and to the Company's analyst reports
- assessing the estimated fair value using the reporting unit's cash flow assumptions and an independently developed discount rate and comparing the result to the Company's fair value estimate.

/s/ KPMG LLP

We have served as the Company's auditor since 2015.

Atlanta, Georgia
March 1, 2023

ASTEC INDUSTRIES, INC.
Consolidated Balance Sheets
(In millions, except share and per share data)

	December 31,	
	2022	2021
ASSETS		
Current assets:		
Cash, cash equivalents and restricted cash	\$ 66.0	\$ 134.4
Investments	3.9	8.6
Trade receivables and contract assets, net	167.1	141.7
Other receivables, net	6.5	3.5
Inventories	393.4	298.7
Prepaid and refundable income taxes	15.9	20.5
Prepaid expenses and other assets	28.2	23.5
Assets held for sale	15.4	5.1
Total current assets	696.4	636.0
Property and equipment, net	173.6	171.7
Investments	15.1	12.2
Goodwill	45.2	38.6
Intangible assets, net	22.5	22.7
Deferred income tax assets	32.1	16.2
Other long-term assets	29.5	8.4
Total assets	\$ 1,014.4	\$ 905.8
LIABILITIES AND EQUITY		
Current liabilities:		
Current maturities of long-term debt	\$ 0.2	\$ 0.1
Short-term debt	9.4	2.6
Accounts payable	107.2	82.2
Customer deposits	69.5	60.2
Accrued product warranty	11.9	10.5
Accrued employee related liabilities	35.3	30.6
Accrued loss reserves	1.9	1.9
Other current liabilities	38.6	35.2
Total current liabilities	274.0	223.3
Long-term debt	78.1	0.2
Deferred income tax liabilities	2.1	1.4
Other long-term liabilities	33.3	29.6
Total liabilities	387.5	254.5
Commitments and contingencies (Note 16)		
Shareholders' equity:		
Preferred stock – authorized 2,000,000 shares of \$1.00 par value; none issued	—	—
Common stock – authorized 40,000,000 shares of \$0.20 par value; issued and outstanding – 22,624,031 in 2022 and 22,767,052 in 2021	4.5	4.5
Additional paid-in capital	135.8	130.6
Accumulated other comprehensive loss	(40.1)	(32.4)
Company stock held by deferred compensation programs, at cost	(1.1)	(1.2)
Retained earnings	527.8	549.3
Shareholders' equity	626.9	650.8
Noncontrolling interest	—	0.5
Total equity	626.9	651.3
Total liabilities and equity	\$ 1,014.4	\$ 905.8

The accompanying notes are an integral part of these consolidated financial statements.

ASTEC INDUSTRIES, INC.
Consolidated Statements of Operations
(In millions, except share and per share data)

	Years Ended December 31,		
	2022	2021	2020
Net sales	\$ 1,274.5	\$ 1,095.5	\$ 1,024.4
Cost of sales	1,010.4	846.0	786.8
Gross profit	264.1	249.5	237.6
Selling, general and administrative expenses	216.1	200.6	166.9
Research and development expenses	31.5	26.5	22.1
Restructuring, impairment and other asset charges, net	9.0	2.5	8.1
Income from operations	7.5	19.9	40.5
Other (expenses) income, net:			
Interest expense	(2.5)	(1.1)	(0.7)
Interest income	1.0	0.5	0.8
Other (expenses) income, net	(1.6)	(5.5)	3.9
Income before income taxes	4.4	13.8	44.5
Income tax provision (benefit)	5.0	(2.1)	(1.5)
Net (loss) income	(0.6)	15.9	46.0
Net loss (income) attributable to noncontrolling interest	0.5	(0.1)	—
Net (loss) income attributable to controlling interest	\$ (0.1)	\$ 15.8	\$ 46.0
Per share data:			
Earnings per common share - Basic	\$ —	\$ 0.70	\$ 2.04
Earnings per common share - Diluted	\$ —	\$ 0.69	\$ 2.01
Weighted average shares outstanding - Basic	22,790,717	22,726,767	22,585,515
Weighted average shares outstanding - Diluted	22,790,717	22,948,632	22,877,743

The accompanying notes are an integral part of these consolidated financial statements.

ASTEC INDUSTRIES, INC.
Consolidated Statements of Comprehensive (Loss) Income
(In millions)

	Years Ended December 31,		
	2022	2021	2020
Net (loss) income	\$ (0.6)	\$ 15.9	\$ 46.0
Other comprehensive (loss) income:			
Foreign currency translation adjustments	(7.7)	(2.1)	(1.8)
Change in unrecognized pension and postretirement benefit costs	—	3.1	0.1
Other comprehensive (loss) income	(7.7)	1.0	(1.7)
Comprehensive loss attributable to noncontrolling interest	0.5	—	—
Comprehensive (loss) income attributable to controlling interest	\$ (7.8)	\$ 16.9	\$ 44.3

The accompanying notes are an integral part of these consolidated financial statements.

ASTEC INDUSTRIES, INC.
Consolidated Statements of Cash Flows
(In millions)

	Years Ended December 31,		
	2022	2021	2020
Cash flows from operating activities			
Net (loss) income	\$ (0.6)	\$ 15.9	\$ 46.0
Adjustments to reconcile net (loss) income to net cash (used in) provided by operating activities:			
Depreciation and amortization	27.9	30.2	26.9
Provision for credit losses	1.2	1.4	0.9
Provision for warranties	12.6	10.9	9.8
Deferred compensation (benefit) expense	(0.9)	0.5	0.7
Share-based compensation	6.8	6.0	5.1
Deferred tax (benefit) provision	(17.1)	(1.3)	8.6
Gain on disposition of property and equipment	(0.7)	(0.6)	(6.2)
Non-cash curtailment and settlement loss (gain) on pension and postretirement benefits, net	—	3.2	(0.5)
Gain on disposition of subsidiary	—	—	(1.6)
Asset impairment charges, net	3.5	0.2	4.4
Distributions to deferred compensation programs' participants	(1.0)	(2.5)	(1.4)
Change in operating assets and liabilities, excluding the effects of acquisitions:			
Sale (purchase) of trading securities, net	0.7	(3.1)	0.2
Receivables and other contract assets	(28.0)	(28.4)	12.2
Inventories	(96.4)	(51.5)	45.9
Prepaid expenses	(2.8)	(6.2)	—
Other assets	(16.2)	1.5	(0.2)
Accounts payable	25.5	29.5	(8.6)
Accrued retirement benefit costs	—	(0.1)	—
Accrued loss reserves	(0.1)	(1.3)	0.3
Accrued employee related liabilities	4.3	10.0	1.6
Other accrued liabilities	2.6	(8.4)	3.1
Accrued product warranty	(11.1)	(10.7)	(10.2)
Customer deposits	9.9	26.5	(11.2)
Income taxes payable/prepaid	6.0	(14.3)	15.7
Net cash (used in) provided by operating activities	<u>(73.9)</u>	<u>7.4</u>	<u>141.5</u>
Cash flows from investing activities:			
Acquisitions, net of cash acquired	(17.8)	0.1	(32.5)
(Price adjustment on prior) proceeds from sale of subsidiary	—	(1.1)	9.1
Expenditures for property and equipment	(40.7)	(20.1)	(15.4)
Proceeds from sale of property and equipment	5.7	1.9	17.7
Purchase of investments	(1.0)	(1.0)	(1.1)
Sale of investments	0.6	1.8	1.3
Net cash used in investing activities	<u>(53.2)</u>	<u>(18.4)</u>	<u>(20.9)</u>

(Continued)

ASTEC INDUSTRIES, INC.
Consolidated Statements of Cash Flows (Continued)
(In millions)

	Years Ended December 31,		
	2022	2021	2020
Cash flows from financing activities:			
Payment of dividends	(11.2)	(10.2)	(10.0)
Proceeds from borrowings on credit facilities and bank loans	223.0	7.2	6.0
Repayments of borrowings on credit facilities and bank loans	(138.5)	(6.2)	(5.9)
Payment of debt issuance costs	(1.5)	—	—
Sale of Company stock by deferred compensation programs, net	0.2	0.6	0.3
Withholding tax paid upon vesting of share-based compensation awards	(1.8)	(3.5)	(0.8)
Repurchase of Company stock	(10.1)	—	—
Net cash provided by (used in) financing activities	<u>60.1</u>	<u>(12.1)</u>	<u>(10.4)</u>
Effect of exchange rates on cash	(1.4)	(1.1)	(0.5)
(Decrease) increase in cash and cash equivalents and restricted cash	<u>(68.4)</u>	<u>(24.2)</u>	<u>109.7</u>
Cash, cash equivalents and restricted cash, beginning of period	134.4	158.6	48.9
Cash, cash equivalents and restricted cash, end of period	<u>\$ 66.0</u>	<u>\$ 134.4</u>	<u>\$ 158.6</u>
Supplemental Cash Flow Information			
Cash paid during the year for:			
Interest, net of capitalized interest	\$ 1.1	\$ 0.3	\$ 0.3
Income taxes paid (refunded), net	\$ 17.7	\$ 10.0	\$ (20.2)
Supplemental disclosures of non-cash items			
Non-cash investing activities:			
Capital expenditures in accounts payable	\$ 1.5	\$ 1.4	\$ 0.7
Non-cash financing activities:			
Additions to right-of-use assets and lease liabilities	\$ 7.3	\$ 1.8	\$ 1.5
Liability award converted to equity	\$ —	\$ —	\$ 0.8

The accompanying notes are an integral part of these consolidated financial statements.

ASTEC INDUSTRIES, INC.
Consolidated Statements of Equity
(In millions, except share and per share data)

	Common Stock Shares	Common Stock Amount	Additional Paid-in-Capital	Accumulated Other Comprehensive Loss	Company Shares Held by Deferred Compensation Programs, at Cost	Retained Earnings	Non-controlling Interest	Total Equity
Balance, December 31, 2019	22,551,183	\$ 4.5	\$ 122.6	\$ (31.8)	\$ (1.7)	\$ 507.7	\$ 0.5	\$ 601.8
Net income	—	—	—	—	—	46.0	—	46.0
Other comprehensive loss	—	—	—	(1.7)	—	—	—	(1.7)
Dividends (\$0.44 per share)	—	—	—	—	—	(10.0)	—	(10.0)
Share-based compensation	—	—	5.1	—	—	—	—	5.1
Conversion of liability awards to equity	—	—	0.8	—	—	—	—	0.8
Issuance of common stock under incentive plan	60,793	—	—	—	—	—	—	—
Withholding tax paid upon equity award vesting	—	—	(0.8)	—	—	—	—	(0.8)
Deferred compensation programs' transactions, net	—	—	0.1	—	0.2	—	—	0.3
Balance, December 31, 2020	22,611,976	\$ 4.5	\$ 127.8	\$ (33.5)	\$ (1.5)	\$ 543.7	\$ 0.5	\$ 641.5
Net income	—	—	—	—	—	15.8	0.1	15.9
Other comprehensive income (loss)	—	—	—	1.1	—	—	(0.1)	1.0
Dividends (\$0.45 per share)	—	—	—	—	—	(10.2)	—	(10.2)
Share-based compensation	—	—	6.0	—	—	—	—	6.0
Issuance of common stock under incentive plan	155,076	—	—	—	—	—	—	—
Withholding tax paid upon equity award vesting	—	—	(3.5)	—	—	—	—	(3.5)
Deferred compensation programs' transactions, net	—	—	0.3	—	0.3	—	—	0.6
Balance, December 31, 2021	22,767,052	\$ 4.5	\$ 130.6	\$ (32.4)	\$ (1.2)	\$ 549.3	\$ 0.5	\$ 651.3
Net loss	—	—	—	—	—	(0.1)	(0.5)	(0.6)
Other comprehensive loss	—	—	—	(7.7)	—	—	—	(7.7)
Dividends (\$0.49 per share)	—	—	0.2	—	—	(11.4)	—	(11.2)
Share-based compensation	—	—	6.8	—	—	—	—	6.8
Issuance of common stock under incentive plan	108,066	0.1	(0.1)	—	—	—	—	—
Withholding tax paid upon equity award vesting	—	—	(1.8)	—	—	—	—	(1.8)
Deferred compensation programs' transactions, net	—	—	0.1	—	0.1	—	—	0.2
Share repurchases	(251,087)	(0.1)	—	—	—	(10.0)	—	(10.1)
Balance, December 31, 2022	22,624,031	\$ 4.5	\$ 135.8	\$ (40.1)	\$ (1.1)	\$ 527.8	\$ —	\$ 626.9

The accompanying notes are an integral part of these consolidated financial statements.

ASTEC INDUSTRIES, INC.
Notes to Consolidated Financial Statements

1. Business and Organization

Description of Business

Astec Industries, Inc. is a Tennessee corporation which was incorporated in 1972. The Company designs, engineers, manufactures and markets equipment and components used primarily in road building and related construction activities, as well as other products discussed below. The Company's products are used in each phase of road building, from quarrying and crushing the aggregate to application of the road surface for both asphalt and concrete. The Company also manufactures certain equipment and components unrelated to road construction, including equipment for the mining, quarrying, construction, demolition, land clearing and recycling industries and port and rail yard operators; industrial heat transfer equipment; commercial whole-tree pulpwood chippers; horizontal grinders; blower trucks; concrete plants; commercial and industrial burners; and combustion control systems.

The Company's products are marketed both domestically and internationally primarily to asphalt producers; highway and heavy equipment contractors; utility contractors; sand and gravel producers; construction, demolition, recycle and crushing contractors; forestry and environmental recycling contractors; mine and quarry operators; port and inland terminal authorities; power stations and domestic and foreign government agencies. In addition to equipment sales, the Company manufactures and sells replacement parts for equipment in each of its product lines and replacement parts for some competitors' equipment. The distribution and sale of replacement parts is an integral part of the Company's business.

The Company operates in two reportable segments (plus Corporate and Other) - Infrastructure Solutions and Materials Solutions. The Company's two reportable business segments comprise sites based upon the nature of the products produced or services provided, the type of customer for the products, the similarity of economic characteristics, the manner in which management reviews results and the nature of the production process, among other considerations.

The Corporate and Other category consists primarily of the parent company, Astec Insurance Company ("Astec Insurance" or the "captive"), a captive insurance company, and the controls and automation business, which do not meet the requirements for separate disclosure as an operating segment or inclusion in one of the other reporting segments.

2. Basis of Presentation and Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Astec Industries, Inc. and its subsidiaries and have been prepared by the Company, pursuant to the rules and regulations of the U.S. Securities and Exchange Commission ("SEC"). The Company prepares its consolidated financial statements in accordance with U.S. generally accepted accounting principles ("U.S. GAAP"). All intercompany balances and transactions between the Company and its affiliates have been eliminated in consolidation.

Noncontrolling interest in the Company's consolidated financial statements represents the 7% interest in a consolidated subsidiary which is not owned by the Company. Since the Company controls this subsidiary, the subsidiary's financial statements are consolidated with those of the Company, and the noncontrolling owner's 7% share of the subsidiary's net assets and results of operations is deducted and reported as "Noncontrolling interest" in the Consolidated Balance Sheets and as "Net loss (income) attributable to noncontrolling interest" in the Consolidated Statements of Operations. The Company executed an agreement in February 2022 with the noncontrolling interest holder, which is undergoing a judicial reorganization in Brazil, to acquire their outstanding interest in full for R\$10.0M (approximately \$2.0 million, subject to the effect of exchange rates). Completion of the transaction is subject to obtaining certain judicial approval in Brazil.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported and disclosed in the consolidated financial statements and accompanying notes. Significant items subject to such estimates and assumptions include excess and obsolete inventory, inventory net realizable value, product warranty obligations, self-insurance loss reserves, capitalization of internal use software, goodwill impairment and the measurement of income tax assets and liabilities. The Company bases its estimates on historical experience and on various other assumptions that the Company believes to be reasonable under the circumstances. On an ongoing basis, the Company evaluates these assumptions, judgments and estimates. Actual results could differ from those estimates.

All dollar amounts, except share and per share amounts, are in millions of dollars unless otherwise indicated.

Significant Accounting Policies

Cash, Cash Equivalents and Restricted Cash - All highly liquid investments with an original maturity of three months or less when purchased are considered to be cash equivalents. The Company maintains cash balances with high credit quality institutions, the balances of which may exceed federally insured limits.

The Company had \$25.9 million and \$117.0 million in a government money market fund at December 31, 2022 and 2021, respectively, which is included in "Cash, cash equivalents and restricted cash" in the Consolidated Balance Sheets.

The Company had cash of \$3.2 million and \$0.3 million at December 31, 2022 and 2021, respectively, that is restricted as to withdrawal or use, which is included in "Cash, cash equivalents and restricted cash" in the Consolidated Balance Sheets.

Investments - Investments consist primarily of investment-grade marketable securities. All investments held at December 31, 2022 are classified as trading securities and are carried at fair value, with unrealized holding gains and losses included in "Other (expenses) income, net" in the Consolidated Statements of Operations. Realized gains and losses are accounted for on the specific identification method. Purchases and sales are recorded on a trade-date basis. Management determines the appropriate classification of its investments at the time of acquisition and reevaluates such determination at each balance sheet date.

Accounts Receivable - The Company sells products to a wide variety of customers. Accounts receivable are carried at their outstanding principal amounts, less an allowance for credit losses. The Company extends credit to its customers based on an evaluation of the customers' financial condition generally without requiring collateral, although the Company normally requires advance payments or letters of credit on large equipment orders.

Allowance for Credit Losses - The Company measures its credit losses on receivables using an expected loss model. The Company currently monitors credit levels and financial conditions of customers on a continuing basis. After considering historical trends for uncollectible accounts, current economic conditions and specific customer recent payment history and financial stability. An allowance for credit losses is maintained in "Trade receivables and contract assets, net" in the Consolidated Balance Sheets at a level which management believes is sufficient to cover all probable future credit losses as of the balance sheet date based on a rolling twelve-month "look-back", specific reserves and an expectation of future economic conditions that might impact customers. The corresponding provision for credit losses is recorded in "Selling, general and administrative expenses" in the Consolidated Statements of Operations.

Amounts are deemed past due when they exceed the payment terms agreed to by the customer in the sales contract. Past due amounts are charged off when reasonable collection efforts have been exhausted and the amounts are deemed uncollectible by management. The majority of the Company's receivables are related to equipment that requires significant down payment with other terms allowing for payment shortly after shipment, typically 30 days, which the Company believes is short-term in nature.

The following table represents a rollforward of the allowance for credit losses for the years ended December 31, 2022, 2021 and 2020:

(in millions)	Years Ended December 31,		
	2022	2021	2020
Allowance balance, beginning of year	\$ 2.3	\$ 1.7	\$ 1.4
Provision	1.2	0.7	0.9
Write offs	(1.2)	(0.4)	(0.6)
Recoveries and other	—	0.3	—
Allowance balance, end of year	\$ 2.3	\$ 2.3	\$ 1.7

In addition, an allowance for credit losses related to an outstanding note receivable of \$0.7 million is included in "Other receivables, net" in the Consolidated Balance Sheets for the years ended December 31, 2022 and 2021.

Inventories - The Company's inventory is comprised of raw materials and parts, work-in-process, finished goods and used equipment.

Raw material and parts inventory comprises purchased steel and other purchased items for use in the manufacturing process or held for sale for the after-market parts business. The category also includes the manufacturing cost of completed equipment sub-assemblies produced for either integration into equipment manufactured at a later date or for sale in the Company's after-market parts business.

Work-in-process inventory consists of the value of materials, labor and overhead incurred to date in the manufacturing of incomplete equipment or incomplete equipment sub-assemblies being produced.

Finished goods inventory consists of completed equipment manufactured for sale to customers.

Used equipment inventory consists of equipment accepted in trade or purchased on the open market. This category also includes equipment rented to prospective customers on a short-term or month-to-month basis. Used equipment is valued at the lower of acquired or trade-in cost or net realizable value determined on each separate unit. Each unit of rental equipment is valued at the lower of original manufacturing, acquired or trade-in cost or net realizable value.

Inventories are valued at the lower of cost (first-in, first-out) or net realizable value, which requires the Company to make specific estimates, assumptions and judgments in determining the amount, if any, of reductions in the valuation of inventories to their net realizable values. The net realizable values of the Company's products are impacted by a number of factors, including changes in the price of steel, competitive sales pricing, quantities of inventories on hand, the age of the individual inventory items, market acceptance of the Company's products, the Company's normal gross margins, actions by the Company or its competitors, the condition of its used and rental equipment inventory and general economic factors. Once an inventory item's value has been deemed to be less than cost, a net realizable value allowance is calculated and a new cost basis for that item is effectively established. This new cost is retained for that item until such time as the item is disposed of or the Company determines that an additional write-down is necessary. Additional write-downs may be required in the future based upon changes in assumptions due to general economic downturns in the markets in which the Company operates, changes in competitor pricing, new product design or other technological advances introduced by the Company or its competitors and other factors unique to individual inventory items.

The most significant component of the Company's inventory is steel. A significant decline in the market price of steel could result in a decline in the market value of the Company's equipment or parts. During periods of significant declining steel prices, the Company reviews the valuation of its inventories to determine if reductions are needed in the recorded value of inventory on hand to its net realizable value.

The Company reviews the individual items included in its finished goods, used equipment and rental equipment inventory on a model-by-model or unit-by-unit basis to determine if any item's net realizable value is below its carrying value. This analysis is expanded to include items in work-in-process and raw material inventory if factors indicate those items may also be impacted. In performing this review, judgments are made and, in addition to the factors discussed above, additional consideration is given to the age of the specific items of used or rental equipment inventory, prior sales offers or lack thereof, the physical condition of the specific items and general market conditions for the specific items. Additionally, an analysis of raw material inventory is performed to calculate reserves needed for slow-moving or obsolete inventory based upon quantities of items on hand, the age of those items and their recent and expected future usage or sale.

When the Company determines that the value of inventory has become impaired through damage, deterioration, obsolescence, changes in price levels, excessive levels of inventory or other causes, the Company reduces the carrying value to the net realizable value based on estimates, assumptions and judgments made from the information available at that time. Abnormal amounts of idle facility expense, freight, handling cost and wasted materials are recognized as current period charges.

Assets Held for Sale – Assets are classified as held for sale when any ongoing operations have ceased, and the Company has committed to a plan to sell the assets in their current condition at a price that is reasonable in relation to the current fair value of the assets. Assets held for sale are generally expected to be sold within one year of meeting the designation criteria. Upon designation as held for sale, the assets are recorded at the lower of their carrying value or fair value, less costs to sell and related depreciation and amortization is ceased. The held for sale designation and carrying value of assets held for sale is periodically reviewed and adjusted as facts and circumstances indicate that a change may be necessary. As of December 31, 2022, the Company recorded assets held for sale of \$15.4 million related to land and building assets of its former site in Tacoma, which are being marketed for sale. The Company accounted for certain Enid land and building assets as assets held for sale as of December 31, 2021. The sale of the Enid land and building was completed in the fourth quarter of 2022. See Note 22, Strategic Transformation and Restructuring, Impairment and Other Asset Charges for additional discussion of the transactions related to these assets.

Property and Equipment - Property and equipment is stated at cost. Expenditures for maintenance, repairs and minor renewals are charged against earnings as incurred. Expenditures for major renewals and improvements that substantially extend the capacity or useful life of an asset are capitalized and are then depreciated. The cost and accumulated depreciation for property and equipment sold, retired or otherwise disposed of are relieved from the accounts and resulting gains or losses are reflected in earnings.

Property and equipment are depreciated over the estimated useful lives of the assets using the straight-line depreciation method for financial reporting and on accelerated methods for income tax purposes. Land is recorded at historical cost and is not depreciated. The useful lives are estimated based on historical experience with similar assets, considering anticipated technological or other changes. The Company periodically reviews these lives relative to physical factors and industry trends. If there are changes in the planned use of property or equipment or if technological changes were to occur more rapidly than anticipated, the useful lives assigned to these assets may need to be shortened, resulting in the recognition of accelerated depreciation expense in future periods.

Property and equipment are primarily depreciated over the following useful lives:

	Years
Buildings and improvements	5 - 40
Airplanes and aviation equipment	5 - 20
Machinery, equipment and tooling	3 - 10
Furniture and fixtures	5 - 10
Computer hardware and software	3 - 5

Impairment of Long-Lived Assets - In the event that facts and circumstances indicate the carrying amounts of long-lived assets may be impaired, an evaluation of recoverability is performed. If an evaluation is required, the estimated future undiscounted cash flows associated with the asset are compared to the carrying amount for each asset (or group of assets) to determine if a write-down is required. If this review indicates that the assets will not be recoverable, the carrying values of the impaired assets are reduced to their estimated fair value. Fair value is estimated using discounted cash flows, prices for similar assets or other valuation techniques.

Leases - The Company leases certain real estate, material handling equipment, automobiles and other equipment. The Company determines if a contract is a lease (or contains an embedded lease) at the inception of the agreement. For a contract to be determined to be a lease or contain a lease, it must include explicitly or implicitly identified assets where the Company has the right to substantially all of the economic benefits of the assets and has the ability to direct how and for what purpose the assets are used during the lease term. Leases are classified as either operating or finance. For operating leases, the Company recognizes a lease liability equal to the present value of the remaining lease payments, and a right-of-use ("ROU") asset equal to the lease liability, subject to certain adjustments, such as prepaid rent. ROU assets represent the right to use an underlying asset for the lease term, and lease liabilities represent the Company's obligation to make lease payments arising from the lease. As of December 31, 2022 and 2021, the Company did not have any finance leases.

The Company uses its incremental borrowing rate to determine the present value of the lease payments. The Company's incremental borrowing rate is the rate of interest that it would incur to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment. The Company determines the incremental borrowing rates based upon secured borrowing rates quoted by the Company's banks for loans of a corresponding length to the lease.

The lease term at the lease commencement date is determined based on the non-cancellable period for which the Company has the right to use the underlying asset, together with any periods covered by an option to extend the lease if the Company is reasonably certain to exercise that option, periods covered by an option to terminate the lease if the Company is reasonably certain not to exercise that option and periods covered by an option to extend (or not to terminate) the lease in which the exercise of the option is controlled by the lessor. The Company considers a number of factors when evaluating whether the options in its lease contracts are reasonably certain of exercise, such as length of time before an option exercise, expected value of the leased asset at the end of the initial lease term, importance of the lease to the Company's operations, costs to negotiate a new lease and any contractual or economic penalties.

The Company does not recognize ROU assets or lease liabilities for leases with a term of 12 months or less.

Goodwill and Other Intangible Assets - Goodwill represents the excess of the purchase price over the fair value of identifiable net assets of businesses acquired. Goodwill is not amortized but is tested at the reporting unit level for impairment annually on October 1, or more frequently, as events dictate. A reporting unit is an operating segment or, under certain circumstances, a component of an operating segment that constitutes a business, has available discrete financial information, and whose operating results are regularly reviewed by management. Components of an operating segment are combined and aggregated as a single reporting unit if the components have similar economic characteristics.

Goodwill is tested for impairment by either performing a qualitative evaluation or a quantitative test. The qualitative evaluation is an assessment of factors that includes, but is not limited to, the macroeconomic conditions, industry and competitive environment conditions, overall financial performance, business specific events and market considerations to determine whether it is more likely than not that a reporting unit's fair value is less than its carrying amount. The Company may elect not to perform the qualitative assessment for some or all reporting units and perform the quantitative impairment test. The quantitative goodwill impairment test requires the comparison the carrying value of the reporting unit's net assets to the fair value of the reporting unit. The Company determines fair values of each reporting unit using an equally weighted combination of the discounted cash flow method, a form of the income approach, and the guideline public company method, a form of the market approach. This analysis requires significant assumptions, including projected net sales, projected earnings before interest, tax, depreciation and amortization, terminal growth rates, the cost of capital, the selection of appropriate guideline companies and related valuation multiples. Management's estimates are subject to change given the inherent uncertainty in predicting future results. Additionally, the discount rate and the terminal growth rate are based on management's judgment of the rates that would be utilized by a hypothetical market participant.

The Company's intangible assets have definite lives and are subject to amortization. Intangible assets are tested for impairment whenever events or changes in circumstances indicate that their carrying values may not be recoverable. The Company determines the useful lives of identifiable intangible assets after considering the specific facts and circumstances related to each intangible asset. Factors considered when determining useful lives include the contractual terms of agreements, the history of the asset, the Company's long-term strategy for the use of the asset, any laws or other local regulations which could impact the useful life of the asset and other economic factors, including competition and specific market conditions.

The Company tests intangible assets with definite lives for impairment if conditions exist that indicate the carrying value may not be recoverable. Such conditions may include an economic downturn in a geographic market or a change in the assessment of future operations. An impairment charge is recorded when the carrying value of the definite lived intangible asset is not recoverable by the future undiscounted cash flows expected to be generated from the use of the asset, which are evaluated at the asset group level.

Intangible assets with definite lives are amortized on a straight-line basis over the following estimated useful lives:

	Years
Dealer network and customer relationships	8 - 18
Trade names	3
Other	3 - 19

Product Warranty Reserve - The Company accrues for the estimated cost of product warranties at the time revenue is recognized. Warranty obligations by product line or model are evaluated based on historical warranty claims experience. For equipment, the Company's standard product warranty terms generally include post-sales support and repairs of products at no additional charge for periods ranging from three months to two years or up to a specified number of hours of operation. For parts from component suppliers, the Company relies on the original manufacturer's warranty that accompanies those parts. Generally, Company fabricated parts are not covered by specific warranty terms. Although failure of fabricated parts due to material or workmanship is rare, if it occurs, the Company's policy is to replace fabricated parts at no additional charge.

Estimated warranty obligations are based upon warranty terms, product failure rates, repair costs and current period machine shipments. If actual product failure rates, repair costs, service delivery costs or post-sales support costs differ from the Company's estimates, revisions to the estimated warranty liability may be required.

Income Taxes - Income taxes are based on pre-tax financial accounting income. Deferred tax assets and liabilities are recognized for the expected tax consequences of temporary differences between the tax bases of assets and liabilities and their reported amounts. The Company periodically assesses the need to establish valuation allowances against its deferred tax assets to the extent the Company no longer believes it is more-likely-than-not that the tax assets will be fully utilized.

The Company evaluates a tax position to determine whether it is more-likely-than-not that the tax position will be sustained upon examination, based upon the technical merits of the position. A tax position that meets the more-likely-than-not recognition threshold is subject to a measurement assessment to determine the amount of benefit to recognize and the appropriate reserve to establish, if any. If a tax position does not meet the more-likely-than-not recognition threshold, no benefit is recognized. The Company is periodically audited by U.S. federal and state as well as foreign tax authorities. While it is often difficult to predict a final outcome or timing of resolution of any particular tax matter, the Company believes its reserve for uncertain tax positions is adequate to reduce the uncertain positions to the greatest amount of benefit that is more-likely-than-not realizable.

Self-Insurance Reserves - The Company retains the risk for a portion of its workers' compensation claims and general liability claims by way of a captive insurance company, Astec Insurance. The objectives of Astec Insurance are to improve control over and reduce the cost of claims; to improve focus on risk reduction with the development of a program structure which rewards proactive loss control; and to ensure management participation in the defense and settlement process for claims.

For general liability claims, the captive is liable for the first \$1.0 million per occurrence. The Company carries general liability, excess liability and umbrella policies for claims in excess of amounts covered by the captive.

For workers' compensation claims, the captive is liable for the first \$0.35 million per occurrence. The Company utilizes a large national insurance company as third-party administrator for workers' compensation claims and carries insurance coverage for claims liabilities in excess of amounts covered by the captive.

The financial statements of the captive are included in the consolidated financial statements of the Company. The short-term and long-term reserves for claims and potential claims related to general liability and workers' compensation under the captive are included in "Accrued loss reserves" or "Other long-term liabilities" in the Consolidated Balance Sheets depending on the expected timing of future payments. The undiscounted reserves are actuarially determined to cover the ultimate cost of each claim based on the Company's evaluation of the type and severity of individual claims and historical information, primarily its own claims experience, along with assumptions about future events. Changes in assumptions, as well as changes in actual

experience, could cause these estimates to change in the future. However, the Company does not believe it is reasonably likely that the reserve level will materially change in the foreseeable future.

The Company is self-insured for health and prescription claims under its Group Health Insurance Plan for all of the Company's domestic employees. The Company carries reinsurance coverage to limit its exposure for individual health claims above certain limits. Third parties administer health claims and prescription medication claims. The Company maintains a reserve for the self-insured health plan which is included in "Accrued loss reserves" in the Company's Consolidated Balance Sheets. This reserve includes both unpaid claims and an estimate of claims incurred but not reported, based on historical claims and payment experience. Historically, the reserves have been sufficient to provide for claims payments. Changes in actual claims experience or payment patterns could cause the reserve to change, but the Company does not believe it is reasonably likely that the reserve level will materially change in the near future.

Employees of the Company's foreign subsidiaries are insured under separate health plans. No reserves are necessary for these fully-insured health plans.

Revenue Recognition - Revenue is generally recognized when the Company satisfies a performance obligation by transferring control of goods or providing services. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring goods or providing services. The Company generally obtains purchase authorizations from its customers for a specified amount of products at a specified price with specific delivery terms. A significant portion of the Company's equipment sales represents equipment produced in the Company's manufacturing facilities under short-term contracts for a customer's project or equipment designed to meet a customer's requirements. Most of the equipment sold by the Company is based on standard configurations, some of which are modified to meet customer's needs or specifications. The Company provides customers with technical design and performance specifications and typically performs pre-shipment testing, when feasible, to ensure the equipment performs according to the customer's need, regardless of whether the Company provides installation services in addition to selling the equipment. Significant down payments are required on many equipment orders with other terms allowing for payment shortly after shipment, typically 30 days. Taxes assessed by a governmental authority that are directly imposed on revenue-producing transactions between the Company and its customers, such as sales, use, value-added and some excise taxes, are excluded from revenue. The Company offers extended warranties for sale on certain equipment sold to its customers. Costs of obtaining sales contracts with an expected duration of one year or less are expensed as incurred. As contracts are typically paid within one year from the date of the contract fulfillment, revenue adjustments for a potential financing component or the costs to obtain the contract are not made.

Depending on the terms of the arrangement with the customer, recognition of a portion of the consideration received may be deferred and recorded as a contract liability if the Company has to satisfy a future obligation, such as to provide installation assistance, service work to be performed in the future without charge, floor plan interest to be reimbursed to the Company's dealer customers, payments for extended warranties or for obligations for future estimated returns to be allowed based upon historical trends.

Certain contracts include terms and conditions pursuant to which the Company recognizes revenues upon the completion of production, and the equipment is subsequently stored at the Company's plant at the customer's request. Revenue is recorded on such contracts upon the customer's assumption of title and risk of ownership, which transfers control of the equipment, and when collectibility is probable. In addition, there must be a fixed schedule of delivery of the goods consistent with the customer's business practices, the Company must not have retained any specific performance obligations such that the earnings process is not complete; and the goods must have been segregated from the Company's inventory prior to revenue recognition.

The Company had orders totaling \$20.7 million and \$29.3 million in 2022 and 2021 respectively, and nominal orders in 2020 on which revenue was recorded over time based upon the ratio of costs incurred to estimated total costs.

Service and Equipment Installation Revenue – Purchasers of certain of the Company's equipment often contract with the Company to provide installation services. Installation is typically separately priced in the contract based upon observable market prices for stand-alone performance obligations or a cost plus margin approach when one is not available. The Company may also provide future services on equipment sold at the customer's request, which may be for equipment repairs after the warranty period expires. Service is billed on a cost plus margin approach or at a standard rate per hour.

Used Equipment Sales – Used equipment is typically obtained by trade-in on new equipment sales or as a separate purchase in the open market. Revenues from the sale of used equipment are recognized upon transfer of control to the customer at agreed upon pricing.

Freight Revenue – The Company records revenues earned for shipping and handling as revenue at the time of shipment, regardless of whether or not it is identified as a separate performance obligation. The cost of shipping and handling is classified as cost of goods sold concurrently.

Other Revenues – Miscellaneous revenues and offsets not associated with one of the above classifications include rental revenues, extended warranty revenues, early pay discounts and floor plan interest reimbursements.

Advertising Expense - The cost of advertising is expensed as incurred. The Company incurred \$2.1 million, \$1.5 million and \$2.6 million in advertising costs during 2022, 2021 and 2020, respectively, which are included in "Selling, general and administrative expenses" in the Consolidated Statements of Operations.

Share-based Compensation - The grant date fair value of share-based compensation awards is based upon the closing market price of the Company's common stock on the day prior to the grant date, except for performance stock awards with a total shareholder return ("TSR") market metric for which the Company estimates fair value using a Monte-Carlo simulation model. The Company recognizes compensation expense for all awards over the requisite service period. Forfeitures are recognized as they occur. Compensation expense is based on the grant date fair value as described above, except for performance stock awards with a return on invested capital ("ROIC") performance metric. For these awards, compensation expense is based on the probable outcome of achieving the specified performance conditions. The Company reassesses whether achievement of the ROIC performance metric is probable at each reporting date. The Company's equity awards are further described in Note 17, Share-Based Compensation.

Acquisitions - The Company accounts for business combinations using the acquisition method. Accordingly, intangible assets are recorded apart from goodwill if they arise from contractual or legal rights or if they are separable from goodwill. Acquisition costs are expensed as incurred and contingent consideration, if applicable, is booked at its fair value as part of the purchase price. See Note 3, Acquisitions for additional information on the Company's acquisitions.

Derivatives and Hedging Activities - The Company recognizes all derivatives in the Consolidated Balance Sheets at their fair value. Derivatives that are not hedges are adjusted to fair value through income. If the derivative is a hedge, depending on the nature of the hedge, changes in the fair value of derivatives are either offset against the change in fair value of assets, liabilities or firm commitments through income or recognized in other comprehensive income (loss) until the hedged item is recognized in income. The ineffective portion of a derivative's change in fair value is immediately recognized in income. From time to time, the Company's foreign subsidiaries enter into foreign currency exchange contracts to mitigate exposure to fluctuation in currency exchange rates.

The Company is exposed to certain risks relating to its ongoing business operations. The primary risk managed by using derivative instruments is foreign currency risk. The fair value of the derivative financial instrument is recorded in the Consolidated Balance Sheets and is adjusted to fair value at each measurement date. The changes in fair value are recognized in the Consolidated Statements of Operations in the current period. The Company does not engage in speculative transactions, nor does it hold or issue derivative financial instruments for trading purposes. The average U.S. dollar equivalent notional amount of outstanding foreign currency exchange contracts was \$10.3 million during 2022. The Company reported nominal derivative assets at December 31, 2022 and \$0.1 million of derivative assets in "Prepaid expenses and other assets" at December 31, 2021. The Company held nominal derivative liabilities at December 31, 2022 or 2021.

The Company recognized, as a component of "Other (expenses) income, net", a net loss on the change in fair value of derivative instruments of \$0.5 million for the year ended December 31, 2022 and a net gain of \$0.8 million and \$0.2 million for the years ended December 31, 2021 and 2020, respectively. There were no derivatives that were designated as hedges at December 31, 2022 or 2021.

Foreign Currency - Subsidiaries located in Australia, Belgium, Brazil, Canada, Chile, France, India, South Africa, Thailand and the United Kingdom operate primarily using local functional currencies. Accordingly, assets and liabilities of these subsidiaries are translated using exchange rates in effect at the end of the period, and revenues and costs are translated using average exchange rates in effect during the period. The resulting adjustments are presented as a separate component of "Accumulated other comprehensive loss". Foreign currency transaction gains and losses, net are included in "Other (expenses) income, net" and amounted to losses of \$0.4 million and \$1.3 million in 2022 and 2021, respectively, and a gain of \$1.1 million in and 2020.

Earnings Per Share - Basic earnings per share is computed by dividing "Net (loss) income attributable to controlling interest" by the weighted average number of shares outstanding during the reported period. Deferred stock units are fully vested and, as such, are included in basic earnings per share. Diluted earnings per share includes the dilutive effect of common stock equivalents consisting of restricted stock units, performance stock units, related dividend equivalents and stock held in the Company's deferred compensation programs, using the treasury stock method. Potential common shares that have an antidilutive effect (i.e. those that increase income per share or decrease loss per share) are excluded from the calculation of diluted earnings per share. Performance stock units, which are considered contingently issuable, are considered dilutive when the related performance criterion has been met.

The following table sets forth a reconciliation of the number of shares used in the computation of basic and diluted earnings per share:

	Years Ended December 31,		
	2022	2021	2020
Denominator:			
Denominator for basic earnings per share	22,790,717	22,726,767	22,585,515
Effect of dilutive securities:			
Restricted stock units	—	150,754	185,965
Unvested performance share units	—	35,747	65,404
Deferred compensation programs	—	35,364	40,859
Denominator for diluted earnings per share	22,790,717	22,948,632	22,877,743
Antidilutive securities excluded from the calculation of diluted earnings per share	255,738	75,451	6,184

Adjustments and Reclassifications

During the first quarter of 2022, the Company identified errors in its previously issued financial statements related to an overstatement of work-in-process inventory that mainly accumulated over the periods from 2018 through 2021 thereby understating "Cost of sales" in those periods and an overstatement of "Net sales" and "Cost of sales" as well as impacts to certain consolidated balance sheet financial statement line items as a result of over-time revenue recognition calculation errors at one of the Company's sites which impacted the second, third and fourth quarters of 2021.

The Company assessed the materiality of these misstatements both quantitatively and qualitatively and determined the correction of these errors to be immaterial to the prior period consolidated financial statements taken as a whole. To reflect the correction of the above errors, the Company is revising the previously issued consolidated financial statements for the years ended and as of December 31, 2021 and 2020 in this Form 10-K. The Company is also disclosing the impact of the revisions on the previously filed audited Consolidated Balance Sheet as of December 31, 2021 and the opening balance sheet equity impact for December 31, 2020. As a result, the Company has corrected the misstatements as disclosed in the following tables for all impacted financial statement line items in prior periods.

In addition, certain reclassifications have been made to the prior period financial information to conform to the presentation used in the financial statements for the year ended December 31, 2022.

- The Company reclassified certain accrued liability balances from "Other current liabilities" to "Accrued employee related liabilities" to more appropriately reflect the nature of such accrued balances.
- The Company elected to present gains and losses recognized on the change in fair value of derivative instruments and foreign currency transaction gains and losses, net in "Other (expenses) income, net". These amounts were previously included in "Cost of sales".

There was no change to previously reported "Total current liabilities" or "Net (loss) income attributable to controlling interest" related to these reclassifications.

The Company recorded a \$1.5 million out-of-period expense during the first quarter of 2021 in "Selling, general and administrative expenses" for certain vendor hosted software licensing fees for contract costs incurred in the fourth quarter of 2020, which is not reflected as an adjustment in the tables below.

Balance Sheet

(in millions)	December 31, 2021			
	As Previously Reported	Adjustment	Reclassification	As Revised / Reclassified
Trade receivables and contract assets, net	\$ 144.1	\$ (2.4)	\$ —	\$ 141.7
Inventories	303.0	(4.3)	—	298.7
Prepaid and refundable income taxes	19.5	1.0	—	20.5
Total current assets	641.7	(5.7)	—	636.0
Deferred income tax assets	16.0	0.2	—	16.2
Total assets	911.3	(5.5)	—	905.8
Accounts payable	83.5	(1.3)	—	82.2
Accrued employee related liabilities	23.6	—	7.0	30.6
Other current liabilities	42.9	(0.7)	(7.0)	35.2
Total current liabilities	225.3	(2.0)	—	223.3
Total liabilities	256.5	(2.0)	—	254.5
Retained earnings	552.8	(3.5)	—	549.3
Shareholders' equity	654.3	(3.5)	—	650.8
Total equity	654.8	(3.5)	—	651.3
Total liabilities and equity	911.3	(5.5)	—	905.8

Statement of Operations

(in millions, except per share data)	Year Ended December 31, 2021			
	As Previously Reported	Adjustment	Reclassification	As Revised / Reclassified
Net sales	\$ 1,097.2	\$ (1.7)	\$ —	\$ 1,095.5
Cost of sales	845.5	1.0	(0.5)	846.0
Gross profit	251.7	(2.7)	0.5	249.5
Income (loss) from operations	22.1	(2.7)	0.5	19.9
Other income (expenses), net	(5.0)	—	(0.5)	(5.5)
Income (loss) before income taxes	16.5	(2.7)	—	13.8
Income tax provision (benefit)	(1.4)	(0.7)	—	(2.1)
Net (loss) income	17.9	(2.0)	—	15.9
Net (loss) income attributable to controlling interest	17.8	(2.0)	—	15.8
Per share data:				
(Loss) earnings per common share - Basic	0.78	(0.08)	—	0.70
(Loss) earnings per common share - Diluted	0.78	(0.09)	—	0.69

	Year Ended December 31, 2020			
	As Previously Reported	Adjustment	Reclassification	As Revised / Reclassified
Cost of sales	\$ 784.3	\$ 1.2	\$ 1.3	\$ 786.8
Gross profit	240.1	(1.2)	(1.3)	237.6
Income (loss) from operations	43.0	(1.2)	(1.3)	40.5
Other income (expenses), net	2.6	—	1.3	3.9
Income (loss) before income taxes	45.7	(1.2)	—	44.5
Income tax provision (benefit)	(1.2)	(0.3)	—	(1.5)
Net (loss) income	46.9	(0.9)	—	46.0
Net (loss) income attributable to controlling interest	46.9	(0.9)	—	46.0
Per share data:				
(Loss) earnings per common share - Basic	2.08	(0.04)	—	2.04
(Loss) earnings per common share - Diluted	2.05	(0.04)	—	2.01

Statements of Comprehensive Income

(in millions)	Year Ended December 31, 2021		
	As Previously Reported	Adjustment	As Revised / Reclassified
Net (loss) income	\$ 17.9	\$ (2.0)	\$ 15.9
Comprehensive income (loss) attributable to controlling interest	18.9	(2.0)	16.9

(in millions)	Year Ended December 31, 2020		
	As Previously Reported	Adjustment	As Revised / Reclassified
Net (loss) income	\$ 46.9	\$ (0.9)	\$ 46.0
Comprehensive income (loss) attributable to controlling interest	45.2	(0.9)	44.3

Statement of Cash Flows

(in millions)	Year Ended December 31, 2021			
	As Previously Reported	Adjustment	Reclassification	As Revised / Reclassified
Net (loss) income	\$ 17.9	\$ (2.0)	\$ —	\$ 15.9
Receivables and other contract assets	(30.8)	2.4	—	(28.4)
Inventories	(53.8)	2.3	—	(51.5)
Accounts payable	30.8	(1.3)	—	29.5
Accrued employee related liabilities	3.0	—	7.0	10.0
Other accrued liabilities	(0.7)	(0.7)	(7.0)	(8.4)
Income taxes payable/prepaid	(13.6)	(0.7)	—	(14.3)

(in millions)	Year Ended December 31, 2020			
	As Previously Reported	Adjustment	Reclassification	As Revised / Reclassified
Net (loss) income	\$ 46.9	\$ (0.9)	\$ —	\$ 46.0
Inventories	44.7	1.2	—	45.9
Accrued employee related liabilities	(5.1)	—	6.7	1.6
Other accrued liabilities	9.8	—	(6.7)	3.1
Income taxes payable/prepaid	16.0	(0.3)	—	15.7

Statement of Equity

(in millions)	Year Ended December 31, 2020		
	As Previously Reported	Adjustment	As Revised / Reclassified
Balance, December 31, 2020			
Retained Earnings	\$ 545.2	\$ (1.5)	\$ 543.7
Total Equity	643.0	(1.5)	641.5
Balance, December 31, 2021			
Retained Earnings	552.8	(3.5)	549.3
Total Equity	654.8	(3.5)	651.3

Recently Adopted Accounting Pronouncements

In December 2019, the Financial Accounting Standards Board issued Accounting Standards Update 2019-12, "Income Taxes (Topic 740), Simplifying the Accounting for Income Taxes", which eliminates certain exceptions related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. The new guidance also simplifies aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. The Company adopted this new standard effective January 1, 2021. The adoption of this standard had an immaterial impact on the Company's financial position, results of operations or cash flows.

In October 2021, the FASB issued ASU 2021-08, "Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers", which requires entities to recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with ASC 2014-09, Revenue from Contracts with Customers (Topic 606). The update will generally result in an entity recognizing contract assets and contract liabilities at amounts consistent with those recorded by the acquiree immediately before the acquisition date rather than at fair value. The new standard is effective on a prospective basis for fiscal years beginning after December 15, 2022, with early adoption permitted. The Company elected to early adopt this guidance on April 1, 2022. The adoption of this new standard did not have a material impact on its financial position, results of operations, cash flows or disclosures.

In November 2021, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2021-10, "Government Assistance (Topic 832)", which aims to increase the transparency of government assistance including the disclosure of the types of assistance, an entity's accounting for the assistance and the effect of the assistance on an entity's financial statements. The new guidance requires expanded disclosure about transactions with a government that are accounted for by applying a grant or contribution accounting model by analogy. This new standard was effective for the Company on January 1, 2022. Availability of government assistance has typically been limited. The Company did not receive government assistance in 2022.

Recent accounting guidance not discussed above is not applicable, did not have, or is not expected to have a material impact on the Company.

3. Acquisitions

MINDS Acquisition - The Company entered into a Share Purchase Agreement, dated as of March 22, 2022, by and between MINDS Automation Group, Inc., a leader in plant automation control systems and cloud-based data management in the asphalt industry in Canada. The acquisition was completed on April 1, 2022 at a purchase price of \$19.3 million, which was paid in cash. The Company's allocation of the purchase price resulted in the recognition of \$9.3 million of goodwill and \$9.3 million of intangible assets primarily consisting of customer relationships (9 year life) and developed technology (7 year life). Significant inputs and assumptions used in determining the fair values of these intangible assets include management's forecasts of future revenues, earnings and cash flows, a discount rate based on the median weighted average cost of capital of the Company and select market competitors, and proportion of intangible assets acquired in relation to tangible assets. Goodwill acquired is attributable to future growth opportunities provided by the acquired intellectual capital and the ability to generate cross-selling synergies. The acquisition provides the Company with a broader line of controls and automation products designed to deliver enhanced productivity through improved equipment performance. Results of operations have been consolidated from the date of acquisition. The goodwill is not deductible for income tax purposes. Proforma financial information is not included since not significant.

Acquisition and integration costs of \$1.2 million were expensed as incurred during the year ended December 31, 2022 for this acquisition. These costs are recorded in "Selling, general and administrative expenses" in the Consolidated Statements of Operations.

The following table summarizes the allocations of the total purchase price:

(in millions)	Amount
Cash	\$ 1.5
Trade receivables	2.7
Inventories	0.7
Prepaid expenses and other assets	0.4
Property and equipment	0.2
Goodwill	9.3
Intangible assets	9.3
Other long-term assets	0.5
Total assets acquired	\$ 24.6
Accounts payable	(0.7)
Accrued payroll and related liabilities	(0.8)
Other current liabilities	(1.1)
Deferred income tax liabilities	(2.4)
Other long-term liabilities	(0.3)
Total liabilities assumed	(5.3)
Total purchase price	\$ 19.3

CON-E-CO Acquisition - The Company entered into a Stock Purchase Agreement, dated as of July 20, 2020, by and between Oshkosh Corporation for the purchase of the CON-E-CO concrete equipment company in Nebraska. The purchase price was \$13.8 million, after adjustments, and was paid in cash. The acquisition provides the Company with a broader line of concrete batch plant manufacturing, which will strengthen the Infrastructure Solutions segment. Results of operations have been consolidated from the date of acquisition.

BMH Systems Acquisition - The Company entered into a Share Purchase Agreement, dated as of August 3, 2020, by and between BMH Systems Corporation ("St-Bruno") for the purchase of the concrete equipment company in Quebec, Canada. The purchase price was \$15.6 million, after adjustments, and was paid in cash. The acquisition provides the Company with a broader line of concrete batch plant manufacturing, which will strengthen the Infrastructure Solutions segment. Results of operations have been consolidated from the date of acquisition.

Grathwol Asset Acquisition - On November 2, 2020, the Company closed a transaction pursuant to which it purchased certain assets of Grathwol Automation, LLC ("Grathwol"). Grathwol is engaged in the business of developing and providing advanced telematics and remote diagnostics for construction equipment and related products and services. Assets purchased primarily comprise technology assets. The total purchase price was \$6.0 million, of which \$1.8 million was deferred and will be recognized as expense and be paid out in two equal annual installments on the anniversary date of the acquisition.

4. Inventories

Inventories consist of the following:

(in millions)	December 31,	
	2022	2021
Raw materials and parts	\$ 302.9	\$ 216.1
Work-in-process	57.3	50.4
Finished goods	32.1	28.9
Used equipment	1.1	3.3
Total	\$ 393.4	\$ 298.7

During the year ended December 31, 2020, in conjunction with exiting the oil and gas drilling product lines, Enid's inventories were written down by \$4.4 million, which was reported within "Cost of sales" in the Company's Consolidated Statements of Operations.

5. Fair Value Measurements

The Company has various financial instruments that must be measured at fair value on a recurring basis, including marketable debt and equity securities held by Astec Insurance and marketable equity securities held in the Company's deferred compensation programs. The Company's deferred compensation programs include a non-qualified Supplemental Executive Retirement Plan ("SERP") and a separate non-qualified Deferred Compensation Plan. Although the deferred compensation programs' investments are allocated to individual participants and investment decisions are made solely by those participants, they are non-qualified plans. Consequently, the Company owns the assets and the related offsetting liability for disbursement until such time as a participant makes a qualifying withdrawal. The deferred compensation programs' assets and related offsetting liability are recorded in non-current "Investments" and "Other long-term liabilities", respectively, in the Consolidated Balance Sheets. The Company's subsidiaries also occasionally enter into foreign currency exchange contracts to mitigate exposure to fluctuations in currency exchange rates.

The carrying amount of cash, cash equivalents and restricted cash, trade receivables and contract assets, other receivables, accounts payable, short-term debt and long-term debt approximates their fair value because of their short-term nature and/or interest rates associated with the instruments. Investments are carried at their fair value based on quoted market prices for identical or similar assets or, where no quoted prices exist, other observable inputs for the asset. The fair values of foreign currency exchange contracts are based on quotations from various banks for similar instruments using models with market-based inputs.

Financial assets and liabilities are categorized based upon the level of judgment associated with the inputs used to measure their fair value. The inputs used to measure the fair value are identified in the following hierarchy:

- Level 1 - Unadjusted quoted prices in active markets for identical assets or liabilities.
- Level 2 - Unadjusted quoted prices in active markets for similar assets or liabilities; or unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active; or inputs other than quoted prices that are observable for the asset or liability.
- Level 3 - Inputs reflect management's best estimate of what market participants would use in pricing the asset or liability at the measurement date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

As indicated in the tables below, the Company has determined that all of its financial assets and liabilities as of December 31, 2022 and 2021 are Level 1 and Level 2 in the fair value hierarchy as defined above:

(in millions)	December 31, 2022		
	Level 1	Level 2	Total
Financial assets:			
Trading equity securities:			
Deferred compensation programs' mutual funds	\$ 4.4	\$ —	\$ 4.4
Preferred stocks	0.3	—	0.3
Equity funds	0.6	—	0.6
Trading debt securities:			
Corporate bonds	5.0	—	5.0
Municipal bonds	—	0.3	0.3
Floating rate notes	0.2	—	0.2
U.S. government securities	0.8	—	0.8
Asset-backed securities	—	5.4	5.4
Other	1.3	0.7	2.0
Total financial assets	\$ 12.6	\$ 6.4	\$ 19.0
Financial liabilities:			
Deferred compensation programs' liabilities	\$ —	\$ 5.7	\$ 5.7
Total financial liabilities	\$ —	\$ 5.7	\$ 5.7

(in millions)	December 31, 2021		
	Level 1	Level 2	Total
Financial assets:			
Trading equity securities:			
Deferred compensation programs' mutual funds	\$ 4.9	\$ —	\$ 4.9
Preferred stocks	0.3	—	0.3
Equity funds	3.0	—	3.0
Trading debt securities:			
Corporate bonds	3.3	—	3.3
Municipal bonds	—	0.2	0.2
Floating rate notes	0.4	—	0.4
U.S. government securities	1.1	—	1.1
Asset-backed securities	—	3.5	3.5
Other	3.1	1.0	4.1
Derivative financial instruments	—	0.1	0.1
Total financial assets	\$ 16.1	\$ 4.8	\$ 20.9
Financial liabilities:			
Deferred compensation programs' liabilities	\$ —	\$ 7.2	\$ 7.2
Total financial liabilities	\$ —	\$ 7.2	\$ 7.2

6. Investments

The Company's trading securities consist of the following:

(in millions)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value (Net Carrying Amount)
December 31, 2022				
Trading equity securities	\$ 5.9	\$ 0.1	\$ 0.7	\$ 5.3
Trading debt securities	14.3	—	0.6	13.7
Total	\$ 20.2	\$ 0.1	\$ 1.3	\$ 19.0
December 31, 2021				
Trading equity securities	\$ 7.8	\$ 0.4	\$ —	\$ 8.2
Trading debt securities	12.6	0.1	0.1	12.6
Total	\$ 20.4	\$ 0.5	\$ 0.1	\$ 20.8

Trading equity investments are valued at their estimated fair value based on their quoted market prices, and trading debt securities are valued based upon a mix of observable market prices and model driven prices derived from a matrix of observable market prices for assets with similar characteristics obtained from a nationally recognized third-party pricing service. Additionally, a significant portion of the trading equity securities are in mutual funds and also comprise a portion of the Company's liability under its deferred compensation programs. See Note 14, Employee Benefit Plans, for additional information on these investments and the deferred compensation programs.

Trading debt securities are comprised of marketable debt securities held by Astec Insurance. Astec Insurance has an investment strategy that focuses on providing regular and predictable interest income from a diversified portfolio of high-quality fixed income securities.

7. Goodwill

The Company tests goodwill for impairment annually on October 1, 2022, or more frequently should circumstances change or events occur that would more-likely-than-not reduce the fair value of a reporting unit below its carrying value between annual impairment tests. The goodwill impairment test is performed for each of the Company's four reporting units which have goodwill recorded.

Management elected to perform a quantitative assessment for the October 1, 2022 annual impairment analysis based on its decline in operating performance, declines in the Company's stock price and the overall macroeconomic environment. The

Company determined fair values of each reporting unit using an equally weighted combination of the discounted cash flow method, a form of the income approach, and the guideline public company method, a form of the market approach. The significant assumptions used under the discounted cash flow method are projected net sales, projected earnings before interest, tax, depreciation and amortization ("EBITDA"), terminal growth rates, and the cost of capital. Projected net sales, projected EBITDA and terminal growth rates were determined to be significant assumptions because they are primary drivers of the projected cash flows in the discounted cash flow fair value model. Cost of capital was also determined to be a significant assumption as it is the discount rate used to calculate the current fair value of those projected cash flows. For the guideline public company method, significant assumptions relate to the selection of appropriate guideline companies and related valuation multiples used in the market analysis. Based on the Company's quantitative impairment test, no impairment at any of its reporting units was identified.

Although the Company believes the assumptions and estimates made are reasonable and appropriate, different assumptions and estimates could materially impact its reported financial results. In addition, sustained declines in operating performance in certain reporting units or the Company's stock price and related market capitalization could impact key assumptions in the overall estimated fair values of its reporting units and could result in non-cash impairment charges that could be material to the Company's Consolidated Balance Sheets or Statements of Operations. Should the carrying value of a reporting unit be in excess of the estimated fair value of that reporting unit, an impairment charge would be recorded to reduce the reporting unit to fair value.

Management performed a qualitative assessment for the annual tests of goodwill impairment performed on October 1, 2021 and October 31, 2020, the Company's prior annual goodwill impairment testing date, and concluded that there was no impairment of goodwill. These reviews included the Company's evaluation of relevant events and circumstances in totality that affect the fair value of the reporting units. These events and circumstances include, but were not limited to, macroeconomic conditions, industry and competitive environment conditions, overall financial performance, business specific events and market considerations.

The Company completed the acquisition of MINDS Automation Group, Inc. during the year ended December 31, 2022, which increased goodwill \$9.3 million.

In the first quarter of 2020, as part of the Company's ongoing assessment to consider whether events or circumstances had occurred that could more likely than not reduce the fair value of a reporting unit below its carrying value, the Company performed an interim goodwill impairment test as of March 31, 2020 over the mobile asphalt equipment reporting unit. Based on the results of this testing, the Company recorded a \$1.6 million pre-tax non-cash impairment charge in the Infrastructure Solutions segment to fully impair the mobile asphalt equipment reporting unit's goodwill in the first quarter of 2020. This impairment charge was reflected as a component of "Restructuring, impairment and other asset charges, net" for the year ended December 31, 2020.

The changes in the carrying amount of goodwill and accumulated impairment losses by reporting segment during the years ended December 31, 2022 and 2021 are as follows:

(in millions)	Infrastructure Solutions	Materials Solutions	Corporate and Other	Total
Balance, December 31, 2020:				
Goodwill	\$ 39.4	\$ 33.3	\$ —	\$ 72.7
Accumulated impairment losses	(21.8)	(12.2)	—	(34.0)
Net	<u>\$ 17.6</u>	<u>\$ 21.1</u>	<u>\$ —</u>	<u>\$ 38.7</u>
2021 Activity:				
Foreign currency translation	\$ 0.1	\$ (0.1)	\$ —	\$ —
Acquisitions	(0.1)	—	—	(0.1)
Total 2021 activity	<u>\$ —</u>	<u>\$ (0.1)</u>	<u>\$ —</u>	<u>\$ (0.1)</u>
Balance, December 31, 2021:				
Goodwill	\$ 39.4	\$ 33.2	\$ —	\$ 72.6
Accumulated impairment	(21.8)	(12.2)	—	(34.0)
Net	<u>\$ 17.6</u>	<u>\$ 21.0</u>	<u>\$ —</u>	<u>\$ 38.6</u>
2022 Activity:				
Foreign currency translation	\$ (0.5)	\$ (1.6)	\$ (0.6)	\$ (2.7)
Acquisitions	—	—	9.3	9.3
Total 2022 activity	<u>\$ (0.5)</u>	<u>\$ (1.6)</u>	<u>\$ 8.7</u>	<u>\$ 6.6</u>
Balance, December 31, 2022:				
Goodwill	\$ 38.9	\$ 31.6	\$ 8.7	\$ 79.2
Accumulated impairment	(21.8)	(12.2)	—	(34.0)
Net	<u>\$ 17.1</u>	<u>\$ 19.4</u>	<u>\$ 8.7</u>	<u>\$ 45.2</u>

8. Intangible Assets

Intangible assets consisted of the following at December 31, 2022 and 2021:

(in millions)	2022			2021		
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Dealer network and customer relationships	\$ 41.7	\$ 26.0	\$ 15.7	\$ 37.1	\$ 22.9	\$ 14.2
Trade names	10.2	10.0	0.2	10.2	7.8	2.4
Other	15.7	9.1	6.6	13.5	7.4	6.1
Total	<u>\$ 67.6</u>	<u>\$ 45.1</u>	<u>\$ 22.5</u>	<u>\$ 60.8</u>	<u>\$ 38.1</u>	<u>\$ 22.7</u>

Amortization expense on intangible assets was \$8.5 million, \$10.1 million and \$6.1 million for 2022, 2021 and 2020, respectively.

Future annual expected amortization expense on intangible assets as of December 31, 2022 are as follows (in millions):

2023	\$ 5.4
2024	4.5
2025	3.0
2026	2.4
2027	2.1
2028 and thereafter	5.1

9. Property and Equipment

Property and equipment at cost, less accumulated depreciation, is as follows:

(in millions)	December 31,	
	2022	2021
Land	\$ 12.4	\$ 13.9
Building and land improvements	140.8	154.3
Construction in progress	19.7	7.6
Manufacturing and office equipment	230.0	239.2
Aviation equipment	4.5	4.7
Less accumulated depreciation	(233.8)	(248.0)
Total	\$ 173.6	\$ 171.7

Depreciation expense was \$19.4 million, \$20.1 million and \$20.8 million for the years ended December 31, 2022, 2021 and 2020, respectively.

10. Leases

The Company records its operating lease ROU assets in "Other long-term assets" and its operating lease liabilities in "Other current liabilities" and "Other long-term liabilities". As of December 31, 2022 and 2021, the Company did not have any finance leases.

Additional information related to the Company's operating leases is reflected in the tables below:

(in millions)	Years Ended December 31,		
	2022	2021	2020
Operating lease expense	\$ 2.8	\$ 2.3	\$ 2.6
Short-term lease expense	2.9	1.5	1.0
Cash paid for operating leases included in operating cash flows	2.5	2.5	2.7

(in millions)	December 31,	
	2022	2021
Operating lease right-of-use asset	\$ 10.8	\$ 5.8
Operating lease short-term liability	2.7	1.6
Operating lease long-term liability	8.3	4.2
Weighted average remaining lease term (in years)	5.07	6.15
Weighted average discount rate used in calculating right-of-use asset	4.61 %	3.49 %

Future annual minimum lease payments as of December 31, 2022 are as follows (in millions):

2023	\$ 3.1
2024	2.3
2025	2.0
2026	1.9
2027	1.7
2028 and thereafter	1.3
Total lease payments	\$ 12.3
Less: Interest	(1.3)
Operating lease liabilities	\$ 11.0

11. Debt

In February 2019, the Company and certain of its subsidiaries amended the 2012 amended and restated credit agreement with Wells Fargo Bank, N.A. (the "Previous Credit Facility") whereby the lender increased the Company's unsecured line of credit to \$150.0 million, including a sub-limit for letters of credit of up to \$30.0 million, and extended the maturity date to December 29, 2023. Borrowings under the agreement were subject to an interest rate equal to the daily one-month LIBOR rate plus a 0.75%

margin. The unused facility fee was 0.125%. The Previous Credit Facility contained certain financial covenants, including provisions concerning required levels of annual net income and minimum tangible net worth.

On December 19, 2022, the Company and certain of its subsidiaries entered into a new credit agreement (the "Credit Agreement") with Wells Fargo Bank, National Association, as administrative agent, and the lenders party thereto. The Credit Agreement provides for (i) a revolving credit facility (consisting of revolving credit loans and swingline loans) and a letter of credit facility, in an aggregate amount of up to \$250.0 million, (ii) an incremental credit facility in an aggregate amount not to exceed \$125.0 million (the "Credit Facilities") and (iii) a maturity date of December 19, 2027. Loans under the incremental credit facility shall have a maturity date as specified in the relevant incremental credit facility documentation. In connection with the entry into the Credit Facilities, the Company repaid all outstanding borrowings under the Previous Credit Facility. The Company recorded total debt issuance costs for the Credit Facilities of \$1.5 million of which \$0.3 million are included in "Prepaid expenses and other assets" and \$1.2 million are included in "Other long-term assets" in the Company's Consolidated Balance Sheets at December 31, 2022. Debt issuance costs are amortized on a straight-line basis to "Interest expense" over the term of the Credit Facilities.

At the Company's election, revolving credit loans and incremental term loans advanced under the Credit Agreement shall bear interest at (i) adjusted term Secured Overnight Financing Rate ("SOFR") for one-, three- or six-month periods, as selected by the Company, plus an applicable margin ranging between 1.175% and 2.175% per annum, or (ii) the highest of the Wells Fargo Bank, National Association prime rate, the Federal Funds rate plus 0.50%, and an adjusted term SOFR for a one month tenor in effect on such day plus 1.00%, plus an applicable margin ranging between 0.175% and 1.175% per annum. Swingline loans shall bear interest at the highest of the Wells Fargo Bank, National Association prime rate, the Federal Funds rate plus 0.50%, and an adjusted term SOFR for a one-month tenor in effect on such day plus 1.00%, plus an applicable margin ranging between 0.175% and 1.175% per annum.

The Company also pays a commitment fee ranging from 0.150% to 0.250% per annum to the lenders under the revolving credit facility on the average amount by which the aggregate commitments of the lenders exceed utilization of the revolving credit facility. The applicable margins and the commitment fee are determined based on the Company's Consolidated Total Net Leverage Ratio, as defined by the Credit Agreement, at the relevant time.

The obligations of the Company in respect of the Credit Facilities are secured and guaranteed by the U.S. domestic subsidiaries of the Company, subject to customary exceptions.

The Credit Agreement includes certain affirmative and negative covenants that impose restrictions on the Company's financial and business operations, including limitations on liens, indebtedness, investments, dispositions of assets, dividends, distributions and other restricted payments, fundamental changes or changes in the nature of the Company's business. These limitations are subject to customary exceptions. The Company is also required to maintain a (i) Consolidated Total Net Leverage Ratio of not more than 3.50 to 1.00 as of the last day of any fiscal quarter which may be increased to 4.00 to 1.00 in connection with a permitted acquisition and subject to the terms of the Credit Agreement and (ii) Consolidated Interest Coverage Ratio of at least 2.50 to 1.00 as of the last day of any fiscal quarter. The Company was in compliance with all covenants as of December 31, 2022.

The Credit Agreement contains events of default customary for this type of financing, including a cross default and cross acceleration provision to certain other material indebtedness of the Company and its subsidiaries. Upon the occurrence of an event of default, the outstanding obligations under the Credit Agreement may be accelerated and become due and payable immediately. In addition, if certain change of control events occur with respect to the Company, the Company is required to repay the loans outstanding under the Credit Facilities.

The Company's Brazilian subsidiary maintains a separate term loan for working capital purposes with a bank in Brazil, which is secured by its manufacturing facility ("Term Loan").

Certain of the Company's international subsidiaries in Australia, Brazil, Canada, South Africa and the United Kingdom each have separate credit facilities with local financial institutions primarily to finance short-term working capital needs, as well as to cover foreign exchange contracts, performance letters of credit, advance payment and retention guarantees. In addition, the Brazilian subsidiary also enters into order anticipation agreements on a periodic basis. Both the outstanding borrowings under the credit facilities of the international subsidiaries and the order anticipation agreements are recorded in "Short-term debt" in the Company's Consolidated Balance Sheets. Each of the credit facilities are generally guaranteed by Astec Industries, Inc. and/or secured with certain assets of the local subsidiary.

Additional details for the Company's Credit Facilities, Previous Credit Facility, term loan and international credit facilities are summarized in total below:

(in millions, except maturity dates and interest rates)	December 31, 2022		December 31, 2021	
Credit Facilities and Previous Credit Facility, respectively				
Line of credit - maximum	\$	250.0	\$	150.0
Letters of credit - maximum		30.0		30.0
Borrowings outstanding		78.0		—
Amount of letters of credit outstanding		2.8		2.5
Line of credit, additional borrowing capacity		169.2		147.5
Term Loan				
Current maturities	\$	0.2	\$	0.1
Long-term maturities		0.1		0.2
Interest rate		10.37 %		10.37 %
Maturity date		April 15, 2024		April 15, 2024
International Credit Facilities and Short-Term Debt				
Total credit line	\$	15.3	\$	12.3
Available credit line		5.7		9.7
Letters of credit - maximum		7.0		6.6
Amount of letters of credit outstanding		0.7		1.6
Short-term debt		9.4		2.6
Weighted average interest rate		10.51%		5.33%

Debt maturities for the Company's short-term and long-term debt are expected to be as follows (in millions):

2023	\$	9.6
2024		0.1
2025		—
2026		—
2027		78.0

12. Product Warranty Reserves

The Company warrants its products against manufacturing defects and performance to specified standards. The warranty period and performance standards vary by product but generally range from three months to two years or up to a specified number of hours of operation. The Company estimates the costs that may be incurred under its warranties and records a liability at the time product sales are recorded. The warranty liability is primarily based on historical claim rates, nature of claims and the associated costs.

Changes in the Company's product warranty liability during 2022, 2021 and 2020 are as follows:

(in millions)	2022		2021		2020	
Reserve balance, January 1	\$	10.5	\$	10.3	\$	10.3
Warranty liabilities accrued		12.6		10.9		9.8
Warranty liabilities settled		(11.1)		(10.7)		(10.2)
Other		(0.1)		—		0.4
Reserve balance, December 31	\$	11.9	\$	10.5	\$	10.3

13. Accrued Loss Reserves

The Company accrues reserves for losses related to known workers' compensation and general liability claims that have been incurred but not yet paid or are estimated to have been incurred but not yet reported to the Company. The undiscounted reserves are actuarially determined based on the Company's evaluation of the type and severity of individual claims and historical

information, primarily its own claims experience, along with assumptions about future events. Changes in assumptions, as well as changes in actual experience, could cause these estimates to change in the future. Total accrued loss reserves were \$5.8 million, of which \$3.9 million were included in "Other long-term liabilities" in the Consolidated Balance Sheets at both December 31, 2022 and 2021.

14. Employee Benefit Plans

Deferred Compensation Programs

The Company's deferred compensation programs include a non-qualified SERP and a separate non-qualified Deferred Compensation Plan.

Supplemental Executive Retirement Plan

The Company maintains a SERP for certain of its executive officers. The SERP has been closed to new entrants since December 2020. This plan is a non-qualified deferred compensation plan administered by the Board of Directors of the Company, pursuant to which the Company makes quarterly cash contributions of a certain percentage of executive officers' compensation. Investments are self-directed by participants and can include Company stock. Upon retirement or termination, participants receive their apportioned share of the plan assets in the form of cash based on a pre-determined schedule of distributions.

Deferred Compensation Plan

The Company implemented a Deferred Compensation Plan for certain of its executive officers during 2021. This plan is a non-qualified deferred compensation plan administered by the Board of Directors of the Company, pursuant to which eligible employees can defer the receipt of base and bonus compensation to a future date. Investments are self-directed by participants and can include Company stock. Upon retirement or termination, participants receive their apportioned share of the plan assets in the form of cash based on a pre-determined schedule of distributions.

Assets of the Deferred Compensation Programs consist of the following:

(in millions)	December 31, 2022		December 31, 2021	
	Cost	Market	Cost	Market
Money market fund	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1
Company stock	1.1	1.2	1.2	2.2
Equity securities	5.0	4.4	4.5	4.9
Total	\$ 6.2	\$ 5.7	\$ 5.8	\$ 7.2

The Company periodically adjusts the deferred compensation liability related to the Deferred Compensation Programs such that the balance of the liability equals the total fair market value of all assets held by the trusts established under the programs. Such liabilities are included in "Other long-term liabilities" in the Consolidated Balance Sheets. The money market fund is included in "Cash, cash equivalents and restricted cash" in the Consolidated Balance Sheets. The equity securities are included in "Investments" in the Consolidated Balance Sheets and classified as trading equity securities. See Note 6, Investments, for additional information. The cost of the Company stock held by the plan is included in "Company stock held by deferred compensation programs, at cost" in the Consolidated Balance Sheets.

The change in the fair market value of Company stock held in the programs results in a charge or credit to "Selling, general and administrative expenses" in the Consolidated Statements of Operations because the acquisition cost of the Company stock in the programs is recorded in "Company stock held by deferred compensation programs, at cost" and is not adjusted to fair market value; however, the related liability is adjusted to the fair market value of the stock as of each period end. The Company recognized income of \$0.9 million in 2022 and expense of \$0.5 million and \$0.6 million in 2021 and 2020, respectively, related to the change in the fair value of the Company stock held in the Deferred Compensation Programs.

Other Employee Benefit Plan

401(k) Plan

The Company sponsors a 401(k) defined contribution plan to provide eligible employees with additional income upon retirement. The Company's contributions to the plan are based on employee contributions. The Company's contributions totaled \$7.7 million, \$7.2 million and \$6.9 million in 2022, 2021 and 2020, respectively.

Pension Plan

Prior to December 31, 2003, all employees of the Company's Kolberg-Pioneer, Inc. subsidiary, which is included in the Company's Materials Solutions reportable segment, were covered by a defined pension plan (the "Pension Plan"). After December 31, 2003, all benefit accruals under the plan ceased and no new employees could become participants in the plan. Benefits paid under this plan were based on years of service multiplied by a monthly amount. The Company's funding policy for the plan was to make at least the minimum annual contributions required by applicable regulations.

The Company's investment strategy for the plan was to earn a rate of return sufficient to match or exceed the long-term growth of pension liabilities. The investment policy stated that the Plan Committee in its sole discretion determined the allocation of plan assets among the following four asset classes: cash equivalents, fixed-income securities, domestic equities and international equities. The Plan Committee attempted to ensure adequate diversification of the invested assets through investment in an exchange traded mutual fund that invests in a diversified portfolio of stocks, bonds and money market securities.

In October 2021, the Company settled its obligations under the Pension Plan by providing \$5.5 million in lump sum payments to eligible participants who elected to receive them and through the purchase of annuity contracts from a highly rated insurance company for \$12.2 million. The settlement of the plan resulted in excess plan assets of approximately \$1.5 million, which was subject to a 50% excise tax. A charge of \$5.2 million, including excise tax, was recognized in the fourth quarter of 2021 in "Other (expenses) income, net" in the Consolidated Statements of Operations. Details related to the Pension Plan through its termination date are presented herein.

Historically, the determination of obligations and expenses under the Company's pension plan was dependent on the Company's selection of certain assumptions used by independent actuaries in calculating such amounts. Those assumptions included, among others, the discount rate, expected return on plan assets and the expected mortality rates. Actual results that differ from assumptions were accumulated and amortized over future periods and therefore, generally affected the recognized expense in such periods.

The Company recognized the overfunded or underfunded status of its pension plan as an asset or liability. Actuarial gains and losses were recognized through "Other comprehensive (loss) income" in the year in which the changes occurred. The Company measured the funded status of its pension plan as of the date of the Company's fiscal year-end.

The following provides information regarding benefit obligations, plan assets and the funded status of the plan as of December 31, 2021:

(in millions)	Pension Benefits	
	2021	
Change in benefit obligation:		
Benefit obligation, beginning of year	\$	18.4
Interest cost		0.4
Actuarial (gain) loss		(0.3)
Benefits paid		(0.8)
Pension settlement		(17.7)
Benefit obligation, end of year		—
Accumulated benefit obligation		—
Change in plan assets:		
Fair value of plan assets, beginning of year		19.4
Actual gain on plan assets		0.6
Excess plan assets returned		(1.5)
Benefits paid		(0.8)
Pension settlement		(17.7)
Fair value of plan assets, end of year		—
Funded status, end of year	\$	—
Amounts recognized in the consolidated balance sheets:		
Long-term asset	\$	—
Net amount recognized	\$	—
Amounts recognized in accumulated other comprehensive loss consist of:		
Net loss	\$	—
Net amount recognized	\$	—
Weighted average assumptions used to determine the benefit obligation:		
Discount rate		N/A
Rate of compensation increase		N/A

Net periodic benefit cost for 2021 and 2020 included the following components:

(in millions)	Pension Benefits	
	2021	2020
Components of net periodic benefit cost (income):		
Interest cost	\$ 0.4	\$ 0.5
Expected return on plan assets	(1.0)	(1.0)
Amortization of actuarial loss	0.4	0.4
Pension settlement	4.5	—
Net periodic benefit cost (income)	\$ 4.3	\$ (0.1)
Other changes in plan assets and benefit obligations recognized in other comprehensive (loss) income:		
Net actuarial loss (gain) for the year	\$ —	\$ 0.4
Amortization of net loss	(0.4)	(0.4)
Pension settlement	(4.5)	—
Total recognized in other comprehensive (loss) income	(4.9)	—
Total recognized in net periodic benefit cost and other comprehensive (loss) income	\$ (0.6)	\$ (0.1)
Weighted average assumptions used to determine net periodic benefit cost for years ended December 31:		
Discount rate	N/A	3.10 %
Expected return on plan assets	N/A	6.00 %
Rate of compensation increase	N/A	N/A

To develop the expected long-term rate of return on assets assumptions, the Company considered the historical returns and future expectations for returns in each asset class, as well as targeted asset allocation percentages within the asset portfolios.

15. Income Taxes

For financial reporting purposes, income before income taxes includes the following components:

(in millions)	Years Ended December 31,		
	2022	2021	2020
United States	\$ 8.5	\$ 12.8	\$ 40.9
Foreign	(4.1)	1.0	3.6
Income before income taxes	\$ 4.4	\$ 13.8	\$ 44.5

The provision (benefit) for income taxes consists of the following:

(in millions)	Years Ended December 31,		
	2022	2021	2020
Current provision (benefit):			
Federal	\$ 17.4	\$ (0.4)	\$ (14.2)
State	2.4	(0.7)	2.3
Foreign	2.3	0.3	1.8
Total current provision (benefit)	22.1	(0.8)	(10.1)
Deferred (benefit) provision:			
Federal	(18.3)	(0.1)	12.3
State	(1.0)	1.1	(1.4)
Foreign	2.2	(2.3)	(2.3)
Total deferred (benefit) provision	(17.1)	(1.3)	8.6
Total provision (benefit):			
Federal	(0.9)	(0.5)	(1.9)
State	1.4	0.4	0.9
Foreign	4.5	(2.0)	(0.5)
Total income tax provision (benefit)	\$ 5.0	\$ (2.1)	\$ (1.5)

The Company's "Income tax provision (benefit)" is computed based on the domestic and foreign federal statutory rates and the average state statutory rates, net of related federal benefit.

The provision (benefit) for income taxes differs from the amount computed by applying the statutory federal income tax rate to income before income taxes. On March 27, 2020, the Coronavirus Aid, Relief and Economic Security ("CARES") Act was passed which modified the net operating loss ("NOL") carryback provisions allowing the Company to carryback its 2018 NOL to prior years. The tax provision for the year ended December 31, 2020 includes a \$9.5 million tax benefit related to the NOL carryback which occurred due to a change in rates from 35% to 21%. A reconciliation of the provision (benefit) for income taxes at the statutory federal income tax rate to the amount provided is as follows:

(in millions)	Years Ended December 31,		
	2022	2021	2020
Tax expense at the statutory federal income tax rate	\$ 0.9	\$ 2.9	\$ 9.3
State income tax, net of federal income tax	0.6	1.3	0.3
Research and development tax credits	(3.3)	(4.1)	(4.3)
FIN 48 impact	1.2	1.8	4.0
FIN 48 impact - liquidation of subsidiary	—	(0.7)	—
Change in foreign subsidiary net operating loss carryforward	—	4.4	(0.3)
Valuation allowance impact	6.0	(8.1)	(1.0)
Changes in tax rates	0.2	0.7	0.3
Effects of Cares Act - 2018 NOL carryback	—	—	(9.5)
Share-based compensation	0.4	0.4	0.3
Foreign-derived intangible income deduction	(0.9)	—	—
Other items	(0.1)	(0.7)	(0.6)
Total income tax provision (benefit)	\$ 5.0	\$ (2.1)	\$ (1.5)

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

Significant components of the Company's deferred tax assets and liabilities are as follows:

(in millions)	December 31,	
	2022	2021
Deferred tax assets:		
Amortization of research and experimental expenditures	\$ 18.4	\$ —
Inventory reserves	4.7	3.7
Warranty reserves	2.2	2.0
Credit loss reserves	0.6	0.5
State tax loss carryforwards	11.6	11.9
Accrued vacation	1.6	1.4
Deferred compensation	1.1	1.4
Share-based compensation	4.4	2.0
Goodwill	1.8	2.0
Foreign net operating loss	7.2	4.4
Lease obligation	1.8	0.4
Employee & insurance accruals	1.0	0.8
Domestic credit carryforwards	1.5	1.5
Deferred revenue	1.7	1.3
Deferred payroll tax - CARES Act	—	1.1
Valuation allowances	(11.9)	(5.9)
Other	0.9	1.5
Total deferred tax assets	48.6	30.0
Deferred tax liabilities:		
Property and equipment	13.6	13.0
Intangibles	2.7	1.1
Right-of-use assets	1.8	0.5
Post-retirement benefits	0.5	0.6
Total deferred tax liabilities	18.6	15.2
Total net deferred assets	\$ 30.0	\$ 14.8

Beginning in 2022, the Tax Cuts and Jobs Act of 2017 eliminated the option to deduct research and experimental ("R&E") expenditures immediately in the year incurred and requires taxpayers to instead capitalize and amortize such expenditures over a period of five years for U.S. activity and 15 years for foreign activity. Taxpayers cannot recover R&E costs before the end of the amortization period even if sold or abandoned. The Company has a deferred tax asset of \$18.4 million for R&E expenditures as of December 31, 2022.

As of December 31, 2022, the Company had gross state NOL carryforwards of \$227.8 million and gross foreign NOL carryforwards of approximately \$23.8 million, which are available to offset future taxable income. If not used, these carryforwards will expire between 2023 and 2034. The Company does not have a federal net operating loss carryforward.

A significant portion of the valuation allowance for deferred tax assets relates to the future utilization of state and foreign net operating loss and state tax credit carryforwards. Future utilization of these net operating loss and state tax credit carryforwards is evaluated by the Company on a periodic basis, and the valuation allowance is adjusted accordingly. In 2022, the valuation allowance on these carryforwards increased by \$6.0 million, of which \$5.5 million relates to a valuation allowance on the deferred tax assets of the Company's Brazilian subsidiary as the NOLs are not expected to be fully utilized. The remaining change in valuation allowances is due to the unrealizable portion of certain entities' state and foreign net operating loss carryforwards and certain other deferred tax assets in foreign jurisdictions.

The following table represents a rollforward of the deferred tax asset valuation allowance for the years ended December 31, 2022, 2021 and 2020:

(in millions)	Years Ended December 31,		
	2022	2021	2020
Allowance balance, beginning of year	\$ 5.9	\$ 14.0	\$ 14.6
Provision	6.0	0.6	1.5
Reversals	—	(8.1)	(1.5)
Other	—	(0.6)	(0.6)
Allowance balance, end of year	\$ 11.9	\$ 5.9	\$ 14.0

Undistributed foreign earnings are considered to be indefinitely reinvested outside the U.S. as of December 31, 2022. Because those earnings are considered to be indefinitely reinvested, no deferred income taxes have been provided thereon. If the Company were to make a distribution of any portion of those earnings in the form of dividends or otherwise, any such amounts would be subject to withholding taxes payable to various foreign jurisdictions; however, the amounts would not be subject to any additional U.S. income tax. As of December 31, 2022, the cumulative amount of undistributed U.S. GAAP earnings for the Company's foreign subsidiaries was \$57.7 million.

The Company files income tax returns in the U.S. federal jurisdiction, and in various state and foreign jurisdictions. The Company is currently under examination for 2018 with taxing authorities in the United States. The Company is no longer subject to U.S. federal income tax examinations by authorities for years prior to 2014. With few exceptions, the Company is no longer subject to state and local or non-U.S. income tax examinations by authorities for years prior to 2018.

The Company has a liability for unrecognized tax benefits of \$12.0 million and \$10.8 million (excluding accrued interest and penalties) as of December 31, 2022 and 2021, respectively. The Company recognizes interest and penalties accrued related to unrecognized tax benefits in tax expense. The Company did not recognize any tax benefits for interest and penalties related to amounts that were settled for less than previously accrued in 2022 or 2021. The net total amount of unrecognized tax benefits that, if recognized, would affect the Company's effective tax rate is \$13.7 million and \$11.9 million at December 31, 2022 and 2021, respectively. The Company does not expect a significant increase or decrease to the total amount of unrecognized tax benefits within the next twelve months.

A reconciliation of the beginning and ending unrecognized tax benefits excluding interest and penalties is as follows:

(in millions)	Years Ended December 31,		
	2022	2021	2020
Balance, beginning of year	\$ 10.8	\$ 9.7	\$ 5.7
Additions for tax positions taken in current year	1.2	1.0	0.5
Additions for tax positions taken in prior period	—	0.8	3.5
Decreases related to sustained tax positions	—	(0.7)	—
Balance, end of year	\$ 12.0	\$ 10.8	\$ 9.7

The tax positions in the December 31, 2022 balance of unrecognized tax benefits are expected to reverse through income in future years.

16. Commitments and Contingencies

Certain customers have financed purchases of Company products through arrangements with third-party financing institutions in which the Company is contingently liable for customer debt of \$2.4 million at both December 31, 2022 and 2021, respectively. These arrangements expire at various dates through September 2025. Additionally, the Company is also contingently liable for 1.75% of the unpaid balance, determined as of December 31 of the prior year (or approximately \$0.2 million for 2022), on certain past customer equipment purchases that were financed by an outside finance company. The agreements provide that the Company will receive the lender's full security interest in the equipment financed if the Company is required to fulfill its contingent liability under these arrangements. The Company has recorded a liability of \$1.0 million and \$1.1 million related to these guarantees, which were included in "Other current liabilities" in the Consolidated Balance Sheets as of December 31, 2022 and 2021, respectively.

The Company reviews off-balance sheet guarantees individually and at the loss pool level based on one agreement. Prior history is considered with respect to the Company having to perform on any off-balance sheet guarantees, as well as future projections of individual customer credit worthiness with respect to assessing credit losses related to off-balance sheet guarantees.

In addition, the Company is contingently liable under letters of credit issued under its Credit Facilities totaling \$2.8 million as of December 31, 2022. The outstanding letters of credit expire at various dates through November 2023. The maximum potential

amount of future payments under letters of credit issued under the Credit Facilities for which the Company could be liable is \$30.0 million as of December 31, 2022. As of December 31, 2022, the Company's foreign subsidiaries are contingently liable for a total of \$3.2 million in performance letters of credit, advance payments and retention guarantees, of which \$0.7 million is secured by separate credit facilities with local financial institutions. The maximum potential amount of future payments under these letters of credit and guarantees for which the Company could be liable is \$9.5 million as of December 31, 2022.

The Company and certain of its former executive officers were named as defendants in a putative shareholder class action lawsuit filed on February 1, 2019, as amended on August 26, 2019, in the United States District Court for the Eastern District of Tennessee. The action is styled City of Taylor General Employees Retirement System v. Astec Industries, Inc., et al., Case No. 1:19-cv-24-CEA-CHS. The complaint generally alleges that the defendants violated the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Rule 10b-5 promulgated thereunder by making allegedly false and misleading statements and that the individual defendants were control persons under Section 20(a) of the Exchange Act. The complaint is filed on behalf of shareholders who purchased stock of the Company between July 26, 2016 and October 22, 2018 and seeks monetary damages on behalf of the purported class. On October 25, 2019, the defendants filed a Motion to Dismiss. On February 19, 2021, the Motion to Dismiss was granted with prejudice and judgment was entered for the defendants. On March 19, 2021, plaintiff filed a Motion to Alter or Amend the Judgment and For Leave to File the Proposed Amended Complaint, which was denied on May 5, 2021. Plaintiff appealed the Motion to Dismiss and denial of its Motion to Alter or Amend the Judgment and For Leave to File the Proposed Amended Complaint to the United States Court of Appeals for the Sixth Circuit. On March 31, 2022, the United States Court of Appeals for the Sixth Circuit issued an opinion reversing the dismissal of the Company and one former executive officer, affirming the dismissal of certain other former executive officers and remanding the action to the United States District Court for the Eastern District of Tennessee for proceedings consistent with the opinion. On July 11, 2022 Defendants filed an answer to the complaint, and the action is now in discovery.

The Company's GEFCO subsidiary has been named a defendant in a lawsuit originally filed on August 16, 2018 with an amended complaint filed on January 25, 2019, in the United States District Court for the Western District of Oklahoma. The action is styled VenVer S.A. and Americas Coil Tubing LLP v. GEFCO, Inc., Case No. CIV-18-790-SLP. The complaint alleges breaches of warranty and other similar claims regarding equipment sold by GEFCO in 2013. In addition to seeking a rescission of the purchase contract, the plaintiff is seeking special and consequential damages. The original purchase price of the equipment was approximately \$8.5 million. GEFCO disputes the plaintiff's allegations and intends to defend this lawsuit vigorously. On July 7, 2020, the plaintiffs filed a separate lawsuit directly against Astec Industries, Inc. that generally mirrored the allegations in the GEFCO suit. In January 2023, the court allowed Astec Industries, Inc. to be added as a defendant to the GEFCO suit and, as a result, the separate suit against Astec Industries, Inc. was dismissed. The Company disputes the plaintiffs' allegations and is vigorously defending the GEFCO suit. The Company is unable to determine whether or not a future loss will be incurred due to this litigation or estimate the possible loss or range of loss, if any, at this time.

In addition to the two matters noted above, the Company is currently a party to various other claims and legal proceedings that have arisen in the ordinary course of business. If management believes that a loss arising from any claims and legal proceedings is probable and can reasonably be estimated, the Company records the amount of the loss (excluding estimated legal fees) or the minimum estimated liability when the loss is estimated using a range and no point within the range is more probable than another. As management becomes aware of additional information concerning such contingencies, any potential liability related to these matters is assessed and the estimates are revised, if necessary. If management believes that a loss arising from such claims and legal proceedings is either: (i) probable but cannot be reasonably estimated or (ii) reasonably estimable but not probable, the Company does not record the amount of the loss but does make specific disclosure of such matter.

Based upon currently available information and with the advice of counsel, management believes that the ultimate outcome of its current claims and legal proceedings, individually and in the aggregate, will not have a material adverse effect on the Company's financial position, cash flows or results of operations. However, claims and legal proceedings are subject to inherent uncertainties and rulings unfavorable to the Company could occur. If an unfavorable ruling were to occur, there exists the possibility of a material adverse effect on the Company's financial position, cash flows or results of operations.

17. Share-Based Compensation

Prior to its expiration on February 25, 2021, the Company's 2011 Incentive Plan ("2011 Plan") provided for the grant of share-based awards to employees, officers, directors and consultants. The 2011 Plan authorized the grant of options, share appreciation rights, restricted stock, restricted stock units, deferred stock units, performance awards, dividend equivalents and other share-based and cash awards. Under the 2011 Plan, the Company has outstanding restricted stock units, performance stock units and deferred stock units none of which participate in Company-paid dividends.

On April 27, 2021 ("Plan Effective Date"), the Company's shareholders approved the 2021 Equity Incentive Plan ("2021 Plan"), which is administered by the Company's Compensation Committee of the Board of Directors (the "Compensation Committee"). The 2021 Plan provides for a total of 1,280,000 shares to be reserved and available for issuance pursuant to the grant of new awards under the 2021 Plan. To the extent that all or a portion of an award (or, after December 31, 2020, an award granted under the 2011 Plan) is canceled, terminates, expires, is forfeited or lapses for any reason (including by reason of failure to meet time-based and/or performance-based vesting requirements), any unissued or forfeited shares originally subject to the award will be added back to the 2021 Plan share reserve and again be available for issuance pursuant to awards granted under the 2021

Plan. The 2021 Plan authorizes the grant of options, share appreciation rights, restricted stock, restricted stock units, deferred stock units, performance awards, dividend equivalents and other share-based and cash awards. Awards granted under the 2021 Plan may provide for dividend equivalents, which are subject to the same forfeiture, transfer restrictions and deferral terms as apply to the award to which they relate.

Share-based compensation expense of \$6.8 million, \$6.0 million and \$5.1 million was recorded in the years ended December 31, 2022, 2021 and 2020, respectively, and recognized in "Selling, general and administrative expenses" in the Consolidated Statements of Operations.

Restricted Stock Units ("RSUs")

Prior to 2020, key members of management were awarded with restricted stock units ("RSUs") each year based upon the financial performance of the Company and its subsidiaries. Beginning in 2020, awards were determined based on a predetermined award value of the base salary of eligible employees aligned to a total compensation program.

Restricted stock unit awards generally vest ratably, at the end of each 12-month period, over a three-year service period. A participant generally must be employed by the Company on the vesting date of each award, however, awards will vest if employment terminates earlier on account of a qualifying employment termination event such as death, disability and retirement at age 65. Additional RSUs are granted on an annual basis to the Company's outside directors under the Company's Non-Employee Directors Compensation Plan generally with a one-year vesting period.

Changes in restricted stock units during the year ended December 31, 2022 are as follows:

(in thousands, except weighted average grant date fair value)	Restricted Stock Units	Weighted Average Grant Date Fair Value
Unvested as of January 1, 2022	187	\$ 48.88
Granted	147	\$ 47.11
Vested	(108)	\$ 45.87
Forfeited	(11)	\$ 52.06
Unvested as of December 31, 2022	215	\$ 48.89

The following additional activity occurred for the Company's restricted stock units:

(in millions, except weighted average grant date fair value per award granted)	Years Ended December 31,		
	2022	2021	2020
Weighted average grant date fair value per award	\$ 47.11	\$ 77.38	\$ 34.99
Fair value of awards vested and issued	\$ 4.7	\$ 9.3	\$ 3.8
Tax (expense) benefit for restricted stock compensation expense	\$ (0.1)	\$ 3.8	\$ (0.4)

As of December 31, 2022, the Company had \$6.3 million of unrecognized compensation expense before tax related to restricted stock units, which is expected to be recognized over a weighted average period of 1.8 years.

Performance Stock Units ("PSUs")

Beginning in 2020, PSUs were granted to officers and other key employees. Vesting is subject to both the continued employment of the participant with the Company and the achievement of certain performance metrics established by the Compensation Committee. A participant generally must be employed by the Company on the vesting date of each award, however, a portion of a participant's awards will vest if employment terminates earlier on account of a qualifying employment termination event such as death, disability and retirement at age 65.

PSUs granted in 2020 were divided into three equal tranches with cliff vesting periods of one year, two years and three years. Awards granted beginning in 2021 generally cliff vest three years from the date of grant. The number of PSUs that vest may range from zero to 200% of the target shares granted and is determined for each tranche based on the achievement of two equally weighted performance criteria: ROIC and TSR. The PSUs are settled in common stock of the Company, with holders receiving one common share for each PSU that vests.

Changes in PSUs during the year ended December 31, 2022 are as follows:

(in thousands, except weighted average grant date fair value)	Performance Stock Units	Weighted Average Grant Date Fair Value
Unvested as of January 1, 2022	99	\$ 63.16
Granted	87	\$ 51.56
Vested*	(25)	\$ 34.78
Forfeited	(10)	\$ 63.13
Unvested as of December 31, 2022	151	\$ 61.24

* The vested PSUs presented are based on the target amount of the award for the second tranche of the 2020 awards. In accordance with the terms of the underlying award agreements, the actual shares earned and distributed for the two-year performance period ended during 2022 was 121% of the target shares granted, rounded up the nearest whole share.

The following additional activity occurred for the Company's performance stock units:

(in millions, except weighted average grant date fair value per award granted)	Years Ended December 31,		
	2022	2021	2020
Weighted average grant date fair value per award	\$ 51.56	\$ 92.98	\$ 34.66
Fair value of awards vested and issued	\$ 1.7	\$ 4.5	\$ —
Tax benefit for performance stock compensation expense	\$ 0.2	\$ 2.3	\$ —

As of December 31, 2022, the Company had \$4.1 million of unrecognized compensation expense before tax related to PSUs, which is expected to be recognized over a weighted average period of 1.9 years.

Deferred Stock Units ("DSUs")

The Non-Employee Directors Compensation Plan allows for deferred delivery of shares granted as payment of directors' annual retainer. As of December 31, 2022, there were 28,427 fully vested deferred stock units, which were excluded from the tables above. The aggregate fair value of these units at December 31, 2022 was \$1.2 million.

The 2021 Plan and the 2011 Equity Incentive Plan allow for certain participants to elect to receive vested units on a deferred basis. As of December 31, 2022, there were 10,383 fully vested deferred stock units, which are excluded from the unvested balances as of December 31, 2022 in the tables above. The aggregate fair value of these units at December 31, 2022 was \$0.4 million.

18. Revenue Recognition

The following tables disaggregate the Company's revenue by major source for the periods ended December 31, 2022, 2021 and 2020 (excluding intercompany sales):

(in millions)	For the Year Ended December 31, 2022			
	Infrastructure Solutions	Materials Solutions	Corporate and Other	Total
Net Sales-Domestic:				
Equipment sales	\$ 454.9	\$ 219.7	\$ 2.1	\$ 676.7
Parts and component sales	198.3	85.1	0.1	283.5
Service and equipment installation revenue	21.5	0.7	—	22.2
Used equipment sales	6.7	—	—	6.7
Freight revenue	23.5	8.0	—	31.5
Other	0.2	(6.6)	0.1	(6.3)
Total domestic revenue	705.1	306.9	2.3	1,014.3
Net Sales-International:				
Equipment sales	92.8	69.0	1.5	163.3
Parts and component sales	42.7	39.9	0.1	82.7
Service and equipment installation revenue	3.9	3.1	0.4	7.4
Used equipment sales	0.5	2.2	—	2.7
Freight revenue	2.4	1.3	—	3.7
Other	—	0.3	0.1	0.4
Total international revenue	142.3	115.8	2.1	260.2
Total net sales	\$ 847.4	\$ 422.7	\$ 4.4	\$ 1,274.5

(in millions)	For the Year Ended December 31, 2021			
	Infrastructure Solutions	Materials Solutions	Corporate and Other	Total
Net Sales-Domestic:				
Equipment sales	\$ 374.8	\$ 157.6	\$ —	\$ 532.4
Parts and component sales	180.2	77.7	—	257.9
Service and equipment installation revenue	17.0	0.5	—	17.5
Used equipment sales	9.4	0.8	—	10.2
Freight revenue	20.9	5.9	—	26.8
Other	(0.6)	(2.1)	—	(2.7)
Total domestic revenue	601.7	240.4	—	842.1
Net Sales-International:				
Equipment sales	94.5	72.0	—	166.5
Parts and component sales	40.5	33.2	—	73.7
Service and equipment installation revenue	3.1	1.9	—	5.0
Used equipment sales	0.9	2.5	—	3.4
Freight revenue	2.4	1.8	—	4.2
Other	0.3	0.3	—	0.6
Total international revenue	141.7	111.7	—	253.4
Total net sales	\$ 743.4	\$ 352.1	\$ —	\$ 1,095.5

(in millions)	For the Year Ended December 31, 2020			
	Infrastructure Solutions	Materials Solutions	Corporate and Other	Total
Net Sales-Domestic:				
Equipment sales	\$ 354.1	\$ 152.0	\$ —	\$ 506.1
Parts and component sales	172.8	69.2	—	242.0
Service and equipment installation revenue	21.0	1.2	—	22.2
Used equipment sales	19.3	2.1	—	21.4
Freight revenue	19.7	5.1	—	24.8
Other	1.8	(1.3)	—	0.5
Total domestic revenue	588.7	228.3	—	817.0
Net Sales-International:				
Equipment sales	78.3	57.8	—	136.1
Parts and component sales	29.1	29.4	—	58.5
Service and equipment installation revenue	2.4	1.7	—	4.1
Used equipment sales	2.4	2.2	—	4.6
Freight revenue	2.0	1.6	—	3.6
Other	0.2	0.3	—	0.5
Total international revenue	114.4	93.0	—	207.4
Total net sales	\$ 703.1	\$ 321.3	\$ —	\$ 1,024.4

As of December 31, 2022, the Company had contract assets of \$3.8 million and contract liabilities, excluding customer deposits, of \$5.5 million, of which \$2.9 million was deferred revenue related to extended warranties. As of December 31, 2021, the Company had contract assets of \$3.2 million and contract liabilities, excluding customer deposits, of \$5.6 million, of which \$2.7 million was deferred revenue related to extended warranties. Total extended warranty sales were \$1.1 million, \$1.5 million and \$1.7 million in 2022, 2021 and 2020, respectively.

19. Operations by Industry Segment and Geographic Area

The Company has two reportable segments, each of which comprise sites based upon the nature of the products produced or services provided, the type of customer for the products, the similarity of economic characteristics, the manner in which management reviews results and the nature of the production process, among other considerations. Based on a review of these factors, the Company's India and Thailand sites changed reportable segments beginning January 1, 2022. The India site was previously incorporated into the Materials Solutions segment and has moved to the Infrastructure Solutions segment while the Thailand site, which was previously included in the Infrastructure Solutions segment, has moved to the Materials Solutions segment.

Beginning January 1, 2022, the measure of segment profit or loss used by the Company's Chief Executive Officer, who is determined to be the chief operating decision maker ("CODM"), to evaluate performance and allocate resources to the operating segments changed to Segment Operating Adjusted EBITDA. Segment Operating Adjusted EBITDA, a non-GAAP financial measure, is defined as net income or loss before the impact of interest income or expense, income taxes, depreciation and amortization and certain other adjustments that are not considered by the CODM in the evaluation of ongoing operating performance. The Company's presentation of Segment Operating Adjusted EBITDA may not be comparable to similar measures used by other companies and is not necessarily indicative of the results of operations that would have occurred had each reportable segment been an independent, stand-alone entity during the periods presented.

Prior periods have been revised to reflect both the segment composition change and the segment profit or loss metric noted above for comparability.

During the first quarter of 2022, the Company revised the allocation of certain of its functional expenses between the Corporate and Other category and the reportable segments primarily related to the Company's annual incentive compensation. Prior periods have not been revised for this change.

A brief description of each segment is as follows:

Infrastructure Solutions – Sites within the Infrastructure Solutions segment design, engineer, manufacture and market a complete line of asphalt plants, concrete plants and their related components and ancillary equipment as well as supplying asphalt road construction equipment, industrial thermal systems and other heavy equipment. The sites based in North America within the Infrastructure Solutions segment are primarily manufacturing operations while those located outside of North America, service and install equipment and provide parts in the regions in which they operate for many of the products produced by all of the Company's manufacturing sites. The primary purchasers of the products produced by this segment are asphalt and concrete producers, highway and heavy equipment contractors, utility contractors, forestry and environmental recycling contractors and domestic and foreign governmental agencies.

Materials Solutions – Sites within the Materials Solutions segment design and manufacture heavy processing equipment, in addition to servicing and supplying parts for the aggregate, metallic mining, recycling, ports and bulk handling markets. The sites within the Materials Solutions segment are primarily manufacturing operations with the AME site functioning to market, service and install equipment and provide parts in the regions in which they operate for many of the products produced by all of the Company's manufacturing sites. Additionally, the Materials Solutions segment offers consulting and engineering services to provide complete "turnkey" processing systems. The principal purchasers of aggregate processing equipment include distributors, highway and heavy equipment contractors, sand and gravel producers, demolition, recycle and crushing contractors, open mine operators, quarry operators, port and inland terminal authorities, power stations and foreign and domestic governmental agencies.

Corporate and Other – The Corporate and Other category consists primarily of the parent company, the Company's captive insurance company, Astec Insurance, and the controls and automation business, which do not meet the requirements for separate disclosure as an operating segment or inclusion in one of the other reporting segments. The parent company and the captive insurance company provide support and corporate oversight for other sites. The controls and automation business manufactures hardware and software products that are marketed independently as well as included in certain products of the Company's other segments.

The accounting policies of the reportable segments are the same as those described in Note 2, Basis of Presentation and Significant Accounting Policies. Intersegment sales and transfers between foreign subsidiaries are valued at prices comparable to those for unrelated parties.

Segment information for 2022:

(in millions)	Infrastructure Solutions	Materials Solutions	Corporate and Other	Total
Revenues from external customers	\$ 847.4	\$ 422.7	\$ 4.4	\$ 1,274.5
Intersegment revenues	8.9	47.2	—	56.1
Segment Operating Adjusted EBITDA	73.0	44.5	(46.5)	71.0
Assets	1,016.3	719.5	676.8	2,412.6
Capital expenditures	28.9	11.1	0.7	40.7

Segment information for 2021:

(in millions)	Infrastructure Solutions	Materials Solutions	Corporate and Other	Total
Revenues from external customers	\$ 743.4	\$ 352.1	\$ —	\$ 1,095.5
Intersegment revenues	4.2	30.4	—	34.6
Segment Operating Adjusted EBITDA	73.9	39.1	(48.2)	64.8
Assets	989.6	668.8	649.7	2,308.1
Capital expenditures	12.2	5.6	2.3	20.1

Segment information for 2020:

(in millions)	Infrastructure Solutions	Materials Solutions	Corporate and Other	Total
Revenues from external customers	\$ 703.1	\$ 321.3	\$ —	\$ 1,024.4
Intersegment revenues	33.5	40.7	—	74.2
Segment Operating Adjusted EBITDA	79.9	39.6	(38.9)	80.6
Assets	937.4	638.7	535.8	2,111.9
Capital expenditures	7.9	4.8	2.7	15.4

The totals of segment information for all reportable segments reconciles to consolidated totals as follows:

(in millions)	Years Ended December 31,		
	2022	2021	2020
Net (loss) income attributable to controlling interest			
Segment Operating Adjusted EBITDA	\$ 71.0	\$ 64.8	\$ 80.6
Adjustments			
Transformation program	(25.5)	(13.4)	—
Curtailment and settlement (loss) gain on pension and postretirement benefits, net	—	(4.7)	0.5
Restructuring and other related charges	(6.2)	(2.9)	(14.3)
Asset impairment	(3.5)	(0.2)	(4.4)
Gain on sale of property, equipment and business, net	0.7	0.6	7.8
Transaction costs	(2.0)	—	—
Interest expense, net	(1.5)	(0.6)	0.1
Depreciation and amortization	(27.9)	(30.2)	(26.9)
Income tax provision (benefit)	(5.0)	2.1	1.5
Net loss (income) attributable to noncontrolling interest	0.5	(0.1)	—
(Elimination) recapture of intersegment profit	(0.7)	0.4	1.1
Net (loss) income attributable to controlling interest	\$ (0.1)	\$ 15.8	\$ 46.0
Assets			
Total segment assets	\$ 2,412.6	\$ 2,308.1	\$ 2,111.9
Elimination of intercompany profit in inventory	(3.0)	(2.4)	(2.8)
Elimination of intercompany receivables	(883.5)	(921.0)	(906.2)
Elimination of investment in subsidiaries	(481.2)	(456.8)	(329.6)
Other	(30.5)	(22.1)	(26.6)
Total consolidated assets	\$ 1,014.4	\$ 905.8	\$ 846.7

Sales into major geographic regions were as follows:

(in millions)	Years Ended December 31,		
	2022	2021	2020
United States	\$ 1,014.3	\$ 842.1	\$ 817.0
Canada	63.0	68.1	57.9
Australia and Oceania	46.7	43.4	28.5
Africa	36.1	33.9	22.4
Other European Countries	28.0	32.7	23.2
Brazil	24.8	21.5	20.4
South America (excluding Brazil)	20.0	15.2	21.9
Mexico	10.7	13.5	2.9
Central America (excluding Mexico)	10.7	3.9	1.3
Other Asian Countries	10.2	5.0	2.7
Middle East	3.1	2.9	3.2
India	2.9	2.7	0.5
Post-Soviet States (excluding Russia)	2.7	3.6	3.1
Japan and Korea	0.4	2.7	8.1
West Indies	0.4	1.3	6.1
Russia	0.3	2.6	4.0
China	0.1	0.4	1.2
Other	0.1	—	—
Total foreign	260.2	253.4	207.4
Total consolidated sales	\$ 1,274.5	\$ 1,095.5	\$ 1,024.4

Property and equipment, net by major geographic region is as follows:

(in millions)	December 31,	
	2022	2021
United States	\$ 142.4	\$ 140.3
United Kingdom	10.3	11.7
Brazil	6.9	5.6
Canada	5.2	5.3
Australia	4.4	4.6
South Africa	4.1	3.9
Chile	0.2	0.3
Other	0.1	—
Total foreign	31.2	31.4
Total property and equipment, net	\$ 173.6	\$ 171.7

20. Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss is comprised of foreign currency translation adjustments of \$40.1 million and \$32.4 million as of December 31, 2022 and 2021, respectively.

21. Other Expenses and Income

Other (expenses) income, net, consists of the following:

(in millions)	Years Ended December 31,		
	2022	2021	2020
Foreign exchange (losses) gains, net	\$ (0.9)	\$ (0.5)	\$ 1.3
Investment loss, net	(0.9)	(0.3)	—
Curtailed and settlement (loss) gain on pension and postretirement benefits, net	—	(4.7)	0.5
Gain on disposal of subsidiary	—	—	1.6
Other, net	0.2	—	0.5
Total	\$ (1.6)	\$ (5.5)	\$ 3.9

22. Strategic Transformation and Restructuring, Impairment and Other Asset Charges

The Company's Simplify, Focus and Grow Strategic Transformation ("SFG") initiative, which began in 2019, generally includes facility rationalization, asset impairment, workforce reduction, the associated costs of organizational integration activities and strategic transformational initiatives. As part of the SFG initiative several strategic decisions have been made to divest of underperforming manufacturing sites or product lines, including to close certain subsidiaries, close and sell manufacturing sites and relocate the product lines manufactured at each of these sites to other Company locations, exit the oil, gas and water well product lines; and sell certain assets, which are included in "Restructuring, impairment and other asset charges, net" on the Company's Consolidated Statements of Operations.

The Company also has a multi-year phased implementation of a standardized enterprise resource planning ("ERP") system across the global organization underway, which will replace much of the existing disparate core financial systems. The upgraded ERP will initially convert internal operations, manufacturing, finance, human capital resources management and customer relationship systems to cloud-based platforms. This new ERP system will provide for standardized processes and integrated technology solutions that enable the Company to better leverage automation and process efficiency. An implementation of this scale is a major financial undertaking and requires substantial time and attention of management and key employees.

In addition, in the first quarter of 2022, a lean manufacturing initiative at one of the Company's largest sites was initiated and is expected to drive improvement in gross margin at that site. This improvement is intended to serve as the optimal blueprint for the Company's other manufacturing facilities.

Costs incurred related to these strategic transformational initiatives were \$25.5 million and \$13.4 million in 2022 and 2021, respectively, and are recorded in "Selling, general and administrative expenses" in the Consolidated Statements of Operations. Deferred implementation costs associated with the ERP implementation total \$17.8 million, of which \$1.2 million and \$16.6 million were included in "Prepaid expenses and other assets" and "Other long-term assets" in the Consolidated Balance Sheets as of December 31, 2022, respectively. Deferred implementation costs totaled \$1.3 million and were included in "Other long-term assets" in the Consolidated Balance Sheets as of December 31, 2021. These deferred implementation costs will be amortized ratably over the remaining contract term once the ERP is ready for use.

In addition, the Company periodically sells or disposes of its assets in the normal course of its business operations as they are no longer needed or used and may incur gains or losses on these disposals. Certain of the costs associated with these decisions are separately identified as restructuring. The Company reports asset impairment charges and gains or losses on the sales of property and equipment collectively, with restructuring charges in "Restructuring, impairment and other asset charges, net" in the Consolidated Statements of Operations to the extent they are experienced.

The restructuring, asset impairment charges and net gain on sale of property and equipment incurred in 2022, 2021 and 2020 are as follows:

(in millions)	Years Ended December 31,		
	2022	2021	2020
Restructuring related charges:			
Costs associated with leadership change	\$ 4.4	\$ —	\$ —
Costs associated with closing Enid	1.0	0.7	2.5
Costs associated with closing Tacoma	0.8	1.6	0.9
Costs associated with closing Mequon	—	0.6	3.3
Costs associated with closing Albuquerque	—	—	1.3
Costs associated with closing AMM	—	—	0.3
Workforce reductions at multiple sites	—	—	1.3
Other restructuring charges	—	—	0.3
Total restructuring related charges	6.2	2.9	9.9
Asset impairment charges:			
Airplane impairment charges	—	—	2.3
Goodwill impairment charges	—	—	1.6
Other impairment charges	3.5	0.2	0.5
Total asset impairment charges	3.5	0.2	4.4
Gain on sale of property and equipment, net:			
Gain on sale of property and equipment, net	(0.7)	(0.6)	(6.2)
Total gain on sale of property and equipment, net	(0.7)	(0.6)	(6.2)
Restructuring, impairment and other asset charges, net	\$ 9.0	\$ 2.5	\$ 8.1

Restructuring charges by segment are as follows:

(in millions)	Years Ended December 31,		
	2022	2021	2020
Infrastructure Solutions	\$ 1.8	\$ 2.4	\$ 6.2
Materials Solutions	—	0.5	3.6
Corporate and Other	4.4	—	0.1
Total restructuring related charges	\$ 6.2	\$ 2.9	\$ 9.9

Impairment charges by segment are as follows:

(in millions)	Years Ended December 31,		
	2022	2021	2020
Infrastructure Solutions	\$ 2.5	\$ —	\$ 1.9
Materials Solutions	—	0.2	(0.2)
Corporate and Other	1.0	—	2.7
Total impairment charges	\$ 3.5	\$ 0.2	\$ 4.4

The net gain on sale of property and equipment by segment are as follows:

(in millions)	Years Ended December 31,		
	2022	2021	2020
Infrastructure Solutions	\$ (0.7)	\$ (0.5)	\$ (1.5)
Materials Solutions	—	(0.1)	(4.7)
Total gain on sale of property and equipment, net	\$ (0.7)	\$ (0.6)	\$ (6.2)

Restructuring charges accrued, but not paid, were \$4.7 million and \$1.2 million as of December 31, 2022 and December 31, 2021, respectively.

In late 2019, the oil and gas drilling product lines produced at the Enid, Oklahoma location ("Enid") were impaired and discontinued. Additional restructuring costs of \$1.0 million, \$0.7 million and \$2.5 million were incurred during 2022, 2021 and 2020, respectively. Enid's land and building assets totaling \$5.1 million were included in "Assets held for sale" in the Consolidated Balance Sheets as of December 31, 2021. An impairment charge of \$0.4 million was incurred during 2022 to record these assets at fair value less costs to sell. The property sold in the fourth quarter of 2022 for approximately \$4.7 million.

In October 2020, the Company closed a transaction for the sale of Enid's water well assets, which included equipment, inventories and intangible assets. The purchase price for this transaction was approximately \$6.9 million, net of purchase price adjustments completed in January 2021 whereby the Company had an obligation to pay the buyer \$1.1 million. This obligation was settled in the first quarter of 2021.

In June 2020, the Company announced the closing of the Mequon site in order to simplify and consolidate operations. The Mequon facility ceased production operations in August 2020, and the sale of the land and building for \$8.5 million was completed in December 2020. The Company recorded a gain on the sale of \$4.7 million, which was recorded in "Restructuring, impairment and other asset charges, net" in the Consolidated Statements of Operations during the fourth quarter of 2020. Charges primarily related to production facility transition activities of \$0.6 million were incurred during 2021.

In January 2021, the Company announced plans to close the Tacoma facility in order to simplify and consolidate operations. The Tacoma facility ceased manufacturing operations at the end of 2021. The transfer of the manufacturing and marketing of Tacoma product lines to other facilities within the Infrastructure Solutions segment was completed during the first quarter of 2022. In conjunction with this action, the Company recorded \$0.8 million, \$1.6 million and \$0.9 million of restructuring related charges during 2022, 2021 and 2020, respectively, in "Restructuring, impairment and other asset charges, net" in the Consolidated Statements of Operations. The Tacoma facility's land, building and certain equipment assets of \$15.4 million, which are currently being actively marketed for sale, are recorded as held for sale in its Consolidated Balance Sheets at December 31, 2022.

During the second quarter of 2022, the Company determined that certain manufacturing equipment contracted to be constructed by a third-party vendor, which had been prepaid, would not be recovered. Impairment charges of \$2.1 million were recorded in "Restructuring, impairment and other asset charges, net" in the Consolidated Statements of Operations during the three months ended June 30, 2022. An additional \$0.9 million of impairment charges were incurred related to abandoned in-process internally developed software that was determined to be impaired during the second quarter of 2022.

Effective as of January 6, 2023, Mr. Barry A. Ruffalo's employment as President and Chief Executive Officer was terminated. In connection with his separation, the Company entered into an agreement with Mr. Ruffalo (the "Separation Agreement") pursuant to which, Mr. Ruffalo is entitled to certain severance payments and benefits. For the year ended December 31, 2022, there were \$4.4 million of restructuring costs incurred related to Mr. Ruffalo's separation in "Restructuring, impairment and other asset charges, net" in the Consolidated Statements of Operations. The Separation Agreement also includes a release and waiver by Mr. Ruffalo and other customary provisions. Additional costs are anticipated to be incurred in the first quarter of 2023 for this separation related to the modification of Mr. Ruffalo's equity awards as well as third-party transition support costs.

Management continually reviews the Company's organizational structure and operations to ensure they are optimized and aligned with achieving near-term and long-term operational and profitability targets. In connection with this review, in February 2023, the Company implemented a limited restructuring plan to right-size and reduce the fixed cost structure of certain overhead departments. Charges of \$3.0 million to \$4.0 million for employee termination costs, excluding equity award modifications, are anticipated to be incurred primarily in the first quarter of 2023.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management has established and maintains disclosure controls and procedures that are designed to ensure that the information required to be disclosed by us in reports that we file or submit under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Management carried out an evaluation, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of December 31, 2022, the Company's disclosure controls and procedures were effective.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as such term is defined in Exchange Act Rule 13a-15(f) and 15d-15(f) under the Exchange Act). The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, management carried out an evaluation of the effectiveness of the Company's internal control over financial reporting as of December 31, 2022, based on the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control—Integrated Framework (2013) ("COSO"). Based on that evaluation, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2022.

The effectiveness of our internal control over financial reporting as of December 31, 2022 has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their report, which is set forth in Part II, Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There have been no changes in the Company's internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) during the three month period ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Our Board of Directors has approved a Code of Conduct and Ethics that applies to our employees, directors and officers (including our principal executive officer, principal financial officer and principal accounting officer). The Code of Conduct and Ethics is available on our website at www.astecindustries.com/investors/. We intend to satisfy any disclosure requirements under Item 5.05 of Form 8-K regarding an amendment to, or waiver from, a provision of this Code of Conduct and Ethics by posting such information on our website at the address specified above.

The remaining information required by this Item 10 will be included in our 2023 Definitive Proxy Statement for our Annual Meeting of Shareholders (the "Proxy Statement") and is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required to be disclosed by this Item 11 will be included in the Proxy Statement and is incorporated herein by reference.

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

The information required to be disclosed by this Item 12 will be included in the Proxy Statement and is incorporated herein by reference.

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

The information required to be disclosed by this Item 13 will be included in the Proxy Statement and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Our independent registered public accounting firm is KPMG LLP, Atlanta, Georgia, Auditor Firm ID: 185

The information required to be disclosed by this Item 14 will be included in the Proxy Statement and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1) The following financial statements and the other information listed below appear in Part II, Item 8, Financial Statements and Supplementary Data to this Report and are filed as a part hereof:

- Reports of Independent Registered Public Accounting Firm
- Consolidated Balance Sheets as of December 31, 2022 and 2021
- Consolidated Statements of Operations for the Years Ended December 31, 2022, 2021 and 2020
- Consolidated Statements of Comprehensive (Loss) Income for the Years Ended December 31, 2022, 2021 and 2020
- Consolidated Statements of Cash Flows for the Years Ended December 31, 2022, 2021 and 2020
- Consolidated Statements of Equity for the Years Ended December 31, 2022, 2021 and 2020
- Notes to Consolidated Financial Statements

(a)(2) Financial Statement Schedules are not filed with this Report because the Schedules are either inapplicable or the required information is presented in the Consolidated Financial Statements or Notes thereto.

(b) The following Exhibits are incorporated by reference into or are filed with this Report:

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference		
			Form	Period Ended	Filing Date
3.1	Amended and Restated Charter of the Company		10-Q	9/30/2011	11/9/2011
3.2	Amended and Restated Bylaws of the Company		8-K	12/21/2022	12/27/2022
4.1	Description of the Registrant's securities registered pursuant to Section 12 of the Securities Exchange Act of 1934	X			
10.1	Credit Agreement, dated as of December 19, 2022, between Astec Industries, Inc. and Certain of its Subsidiaries and Wells Fargo Bank, National Association, as administrative agent, and the lenders party thereto		8-K	12/19/2022	12/20/2022
10.2	Astec Industries, Inc. 2011 Incentive Plan*		DEF 14A		3/4/2011
10.3	Astec Industries, Inc. 2021 Equity Incentive Plan*		DEF 14A		3/18/2021
10.4	Astec Industries, Inc. Executive Change in Control Severance Plan, effective July 28, 2016*	X			
10.5	Severance Agreement between Astec Industries, Inc. and Barry A. Ruffalo dated as of December 31, 2021*		10-Q	3/31/2022	5/5/2022
10.6	Form of Severance Agreement between Astec Industries, Inc. and Certain Officers other than the President & Chief Executive Officer dated as of December 31, 2021*		10-Q	3/31/2022	5/5/2022
10.7	Trust under Astec Industries, Inc. Supplemental Retirement Plan, dated January 1, 1996*		10-K	12/31/1995	3/15/1996
10.8	Astec Industries, Inc. Supplemental Executive Retirement Plan, as amended and restated through January 1, 2009*		10-K	12/31/2008	2/27/2009
10.9	Astec Industries, Inc. Amended and Restated Non-Employee Directors Compensation Plan, original effective April 23, 1998 with amended and restated provisions effective April 29, 2016*		10-K	12/31/2016	3/1/2017
10.10	Astec Industries, Inc. Deferred Compensation Plan effective January 1, 2021*		10-Q	3/31/2021	5/6/2021
10.11	Form of Restricted Stock Unit Award Agreement under the Astec Industries, Inc. 2021 Equity Incentive Plan*		10-Q	3/31/2021	5/6/2021
10.12	Form of Performance Stock Unit Award Agreement under the Astec Industries, Inc. 2021 Equity Incentive Plan*		10-Q	3/31/2021	5/6/2021
21	Subsidiaries of the Registrant	X			
23	Consent of Independent Registered Public Accounting Firm	X			
31.1	Certification of Chief Executive Officer of Astec Industries, Inc. pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			
31.2	Certification of Chief Financial Officer of Astec Industries, Inc. pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			
32.1	Certification of Chief Executive Officer of Astec Industries, Inc. pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X			

32.2	Certification of Chief Financial Officer of Astec Industries, Inc. pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act Of 2002	X
101	The following materials from the Company's Annual Report on Form 10-K for the year ended December 31, 2022 formatted in Inline Extensible Business Reporting Language ("iXBRL"): (i) the Consolidated Statements of Operations, (ii) the Consolidated Statements of Comprehensive Income (Loss), (iii) the Consolidated Balance Sheets, (iv) the Consolidated Statements of Cash Flows, (v) the Consolidated Statements of Equity and (vi) related notes, tagged as blocks of text and including detailed tags.	X
104	Cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2022, formatted in iXBRL (included as Exhibit 101). *Management contract or compensatory plan or arrangement	X

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

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

Date: March 1, 2023

ASTEC INDUSTRIES, INC.
(Registrant)

/s/ Jaco van der Merwe
Jaco van der Merwe, President and Chief Executive Officer

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

SIGNATURE	TITLE	DATE
<u>/s/ Jaco van der Merwe</u> Jaco van der Merwe	President and Chief Executive Officer and Director (Principal Executive Officer)	March 1, 2023
<u>/s/ Rebecca A. Weyenberg</u> Rebecca A. Weyenberg	Chief Financial Officer (Principal Financial Officer)	March 1, 2023
<u>/s/ Jamie E. Palm</u> Jamie E. Palm	Vice President, Chief Accounting Officer and Corporate Controller (Principal Accounting Officer)	March 1, 2023
<u>/s/ William D. Gehl</u> William D. Gehl	Director and Chairman of the Board	March 1, 2023
<u>/s/ James B. Baker</u> James B. Baker	Director	March 1, 2023
<u>/s/ Tracey H. Cook</u> Tracey H. Cook	Director	March 1, 2023
<u>/s/ William G. Dorey</u> William G. Dorey	Director	March 1, 2023
<u>/s/ Mark Giebe</u> Mark Giebe	Director	March 1, 2023
<u>/s/ Mary L. Howell</u> Mary L. Howell	Director	March 1, 2023
<u>/s/ Nalin Jain</u> Nalin Jain	Director	March 1, 2023
<u>/s/ Linda I. Knoll</u> Linda I. Knoll	Director	March 1, 2023
<u>/s/ Charles F. Potts</u> Charles F. Potts	Director	March 1, 2023
<u>/s/ William Bradley Southern</u> William Bradley Southern	Director	March 1, 2023
<u>/s/ Glen E. Tellock</u> Glen E. Tellock	Director	March 1, 2023

**DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE
SECURITIES EXCHANGE ACT OF 1934**

This description of the common stock, par value \$0.20 per share (the "common stock"), of Astec Industries, Inc. (the "Company," "we," "us," or "our") is a summary, does not purport to be complete and is in all respects subject to, and qualified in its entirety by references to, the relevant provisions of our restated charter (as amended, supplemented or otherwise modified from time to time, the "Charter"), our amended and restated bylaws (as amended, supplemented or otherwise modified from time to time, the "Bylaws"), and applicable provisions of Tennessee law. Our Charter and our Bylaws are included as exhibits to the Annual Report on Form 10-K of which this exhibit is a part.

DESCRIPTION OF COMMON STOCK

General; Authorized Common Stock

We are currently authorized under the Charter to issue up to 40,000,000 shares of common stock, par value \$0.20 per share, and up to 2,00,000 shares of preferred stock, par value of \$1.00 per share. No shares of preferred stock have been issued by the Company. All outstanding shares of common stock are validly issued, fully paid and non-assessable.

The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of any series of preferred stock that we may designate and issue in the future.

Dividend Rights

Holders of common stock are entitled to receive dividends ratably if, as and when dividends are declared from time to time by our Board of Directors out of funds legally available for that purpose, after the payment of any dividends required to be paid on any outstanding preferred stock, if any.

Voting Rights; Classified Board

Holders of common stock are entitled to one vote per share on all matters submitted for action by the shareholders. Whenever any corporate action, other than the election of Directors, is to be taken by vote of the shareholders, it shall be taken if a quorum is present and if the votes cast within the voting group in favor of the action exceed the votes cast opposing the action. Directors shall be elected by the affirmative vote of the holders of a majority of the total issued and outstanding shares of the Company's stock represented at a meeting of the shareholders and entitled to vote in the election of Directors at which a quorum is present. Our Charter provides that our Board of Directors is divided into three classes, consisting, as nearly as may be possible, of one-third of the total number of directors constituting the entire Board of Directors, with each class elected for staggered three-year terms expiring in successive years. Our Charter does not provide for cumulative voting for election of Directors.

Liquidation Rights

Upon our liquidation, dissolution or winding up, the holders of common stock are entitled to receive ratably the assets available for distribution to the shareholders after payment of liabilities and accumulated and unpaid dividends and liquidation preferences on outstanding preferred stock, if any.

Preemptive or Conversion Rights; Further Calls or Assessments; Redemption or Sinking Fund Provisions

Holders of common stock have no preemptive or conversion rights and, absent an individual agreement with us, are not subject to further calls or assessment by us. There are no redemption or sinking fund provisions applicable to our common stock.

No Restrictions on Transfer

Neither our Charter nor our Bylaws contain any restrictions on the transfer of our common stock. In the case of any transfer of shares, there may be restrictions imposed by applicable securities laws.

Listing

Our common stock is listed on the Nasdaq National Market System ("NASDAQ") under the symbol "ASTE."

Transfer Agent and Registrar

Computershare is the transfer agent and registrar for our common stock.

Authorized but Unissued Shares

Tennessee law generally does not require shareholder approval for any issuance of authorized shares. However, the listing requirements of NASDAQ, which will apply as long as our common stock is listed on NASDAQ, require shareholder approval of certain issuances equal to or exceeding 20% of the then outstanding voting power or then outstanding number of shares of common stock. These additional shares may be used for a variety of corporate purposes, including future public offerings, to raise additional capital or to facilitate acquisitions.

One of the effects of the existence of unissued and unreserved common stock or preferred stock may be to enable our Board of Directors to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of our company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of our management and possibly deprive the shareholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

Removal of Directors; Vacancies

Our Charter and Bylaws provide that the entire Board of Directors or any individual Director may be removed from office only for cause by the affirmative vote of the holders of at least two-thirds (2/3) of the total issued and outstanding shares of the Company's stock entitled to vote in the election of Directors at any meeting of the shareholders in which notice of such purpose has been given. Our Charter and Bylaws provide that any vacancies on the board may be filled, until the next election of Directors by the shareholders, by the affirmative vote of at least two-thirds (2/3) of the total number of Directors then remaining in office.

Calling of Special Meetings of Shareholders

Our Bylaws provide that special meetings of our shareholders may be called only (i) by the Chairman of the Board of Directors, by the President or Corporate Secretary, or upon a resolution by or affirmative vote of the Board of Directors, or (ii) upon written request received by the Corporate Secretary from one or more holders of record or beneficial owners (a) representing at least 10% of all votes entitled to be cast on any issue proposed to be considered at the proposed special meeting, provided that such requesting shareholder(s) own such shares at the time of the request and continue to own such shares through the date of the special meeting and (b) that have complied in full with the requirements set forth in our Bylaws, as amended from time to time.

Advance Notice Requirements for Shareholder Proposals and Director Nominations

Our Bylaws provide that shareholders seeking to nominate candidates for election as Directors or to bring business before an annual or special meeting of shareholders must provide timely notice of their proposal in writing to the Corporate Secretary and otherwise comply with the advance notice provisions as set forth in our Bylaws. Generally, to be timely, a shareholder's notice must be received by our Corporate Secretary at our principal executive offices and within the following time periods:

- in the case of an annual meeting of shareholders, no later than the close of business on the ninetieth (90th) day nor earlier than the one hundred twentieth (120th) day prior to the anniversary of the date of the immediately preceding annual meeting of the shareholders; provided, however, that in the event that the date of the annual meeting is advanced by more than thirty (30) days or delayed (other than as a result of adjournment) by more than sixty (60) days from the anniversary date of the immediately preceding annual meeting of the shareholders, such notice must be so received no later than the close of business on the later of the ninetieth (90th) day prior to such annual meeting or the tenth (10th) day following the day on which public announcement of the date of such meeting is first made; and
- in the case of a special meeting of shareholders in advance of which (i) the Board of Directors has determined that Directors are to be elected and (ii) one or more Director elections are included in the Company's notice of meeting, not more than one hundred and twenty (120) days prior to the date of the meeting and not later than the close of business on the later of the ninetieth (90th) day prior to the meeting or the tenth (10th) day following the last to occur of (x) the day on which public disclosure of the date of such special meeting was first made by the Company and (y) the day on which public disclosure of the nominees proposed by the Board of Directors to be elected at such meeting was first made by the Company. In addition, in the case of a shareholder requested special meeting, no shareholder may propose any business to be considered at the shareholder requested special meeting, except pursuant to the shareholder special meeting request delivered pursuant to Section 1.2 of our Bylaws.

Tennessee Anti-Takeover Statutes

Under the Tennessee Business Combination Act and subject to certain exceptions, corporations subject to the Tennessee Business Combination Act may not engage in any "business combination" with an "interested shareholder" for a period of five years after the date on which the person became an interested shareholder unless the "business combination" or the transaction which resulted in the shareholder becoming an "interested shareholder" is approved by the corporation's Board of Directors prior to the date the "interested shareholder" attained that status.

"Business combinations" for this purpose generally include:

- mergers, consolidations, or share exchanges;

- sales, leases, exchanges, mortgages, pledges, or other transfers of assets representing 10% or more of the aggregate market value of consolidated assets, the aggregate market value of our outstanding shares, or our consolidated net income;
- issuances or transfers of shares from us to the interested shareholder;
- plans of liquidation or dissolution proposed by the interested shareholder;
- transactions in which the interested shareholder's proportionate share of the outstanding shares of any class of securities is increased; or
- financing arrangements pursuant to which the interested shareholder, directly or indirectly, receives a benefit, except proportionately as a shareholder.

Subject to certain exceptions, an "interested shareholder" generally is a person who, together with his or her affiliates and associates, owns, or within five years did own, 10% or more of our outstanding voting stock.

After the five-year moratorium, a corporation subject to the foregoing may complete a business combination if the transaction complies with all applicable charter and bylaw requirements and applicable Tennessee law and:

- is approved by the holders of at least two-thirds of the outstanding voting stock not beneficially owned by the interested shareholder; or
- meets certain fair price criteria including, among others, the requirement that the per share consideration received in any such business combination by each of the shareholders is equal to the highest of (a) the highest per share price paid by the interested shareholder during the preceding five-year period for shares of the same class or series plus interest thereon from such date at a treasury bill rate less the aggregate amount of any cash dividends paid and the market value of any dividends paid other than in cash since such earliest date, up to the amount of such interest, (b) the highest preferential amount, if any, such class or series is entitled to receive on liquidation, dissolution, or winding up, plus dividends declared or due as to which such class or series is entitled prior to payment of dividends on some other class or series (unless such dividends are included in such preferential amount), or (c) the market value of the shares on either the date the business combination is announced or the date when the interested shareholder reaches the 10% threshold, whichever is higher, plus interest thereon less dividends as noted above.

We are subject to the Tennessee Business Combination Act. We can give no assurance that we will or will not elect, through a charter or bylaw amendment, to cease to be governed by the Tennessee Business Combination Act in the future.

In addition, we have elected to be governed by the Tennessee Control Share Acquisition Act, which prohibits certain shareholders from exercising in excess of 20% of the voting power in a corporation acquired in a "control share acquisition" unless such voting rights have been previously

approved by the disinterested shareholders. We can give no assurance that we will or will not elect, through a charter or bylaw amendment, to cease to be governed by the Tennessee Control Share Acquisition Act in the future.

The Tennessee Greenmail Act prohibits us from purchasing or agreeing to purchase any of our securities, at a price in excess of fair market value, from a holder of 3% or more of our securities who has beneficially owned such securities for less than two years, unless the purchase has been approved by a majority of the outstanding shares of each class of our voting stock or we make an offer of at least equal value per share to all holders of shares of such class. The Tennessee Greenmail Act may make a change of control more difficult.

The Tennessee Investor Protection Act applies to tender offers directed at corporations, such as the Company, that have "substantial assets" in Tennessee and that are either incorporated in or have a principal office in Tennessee. Pursuant to the Tennessee Investor Protection Act, an offeror making a tender offer for an offeree company who beneficially owns 5% or more of any class of equity securities of the offeree company, any of which was purchased within one year prior to the proposed tender offer, is required to file a registration statement with the Tennessee Commissioner of Commerce and Insurance (the "Commissioner"). When the offeror intends to gain control of the offeree company, the registration statement must indicate any plans the offeror has for the offeree. The Commissioner may require additional information concerning the takeover offer and may call for hearings. The Tennessee Investor Protection Act does not apply to an offer that the offeree company's Board of Directors recommends to shareholders.

In addition to requiring the offeror to file a registration statement with the Commissioner, the Tennessee Investor Protection Act requires the offeror and the offeree company to deliver to the Commissioner all solicitation materials used in connection with the tender offer. The Tennessee Investor Protection Act prohibits fraudulent, deceptive, or manipulative acts or practices by either side and gives the Commissioner standing to apply for equitable relief to the Chancery Court of Davidson County, Tennessee, or to any other chancery court having jurisdiction whenever it appears to the Commissioner that the offeror, the offeree company or any of their respective affiliates has engaged in or is about to engage in a violation of the Tennessee Investor Protection Act. Upon proper showing, the chancery court may grant injunctive relief. The Tennessee Investor Protection Act further provides civil and criminal penalties for violations.

ASTEC INDUSTRIES, INC.
EXECUTIVE CHANGE IN CONTROL
SEVERANCE PLAN

ARTICLE 1
PURPOSE AND TERM

1.1 **Purpose.** Astec Industries, Inc. (the "**Company**") established this Astec Industries, Inc. Executive Change in Control Severance Plan (the "**Plan**") in order to ensure continuity of management leading up to and following a potential Change in Control transaction, by mitigating the uncertainty an executive may have regarding his or her future employment due to a Change in Control, thereby encouraging executives responsible for negotiating potential transactions to do so with independence and objectivity. The Plan supersedes all written or unwritten severance plans, notice plans, practices or programs offered or established to participants by the Company providing severance pay or similar benefits. The Company intends that this Plan qualify as and come within the various exceptions and exemptions under the Employee Retirement Income Security Act of 1974 ("**ERISA**"), as amended, for an unfunded plan maintained primarily for a select group of management or highly compensated employees, and any ambiguities in this Plan shall be construed to effect that intent.

1.2 **Term.** The Plan shall generally be effective as of the Effective Date, subject to amendment from time to time in accordance with Section 8.2. The Plan shall continue until terminated pursuant to Article 8 of the Plan.

ARTICLE 2
DEFINITIONS

As used herein, the following words and phrases shall have the following meanings:

2.1 "**Affiliate**" means Astec Industries, Inc. and any other corporation or entity (including, but not limited to, a partnership or a limited liability company) that is affiliated with the Company through stock or equity ownership or otherwise, and is designated as an Affiliate for purposes of this Plan by the Committee.

2.2 "**Base Salary**" means the amount a Participant is entitled to receive as wages or salary on an annualized basis as in effect from time to time, without reduction for any pre-tax contributions to benefit plans. Base Salary does not include bonuses, commissions, overtime pay or income from stock options, stock grants or other incentive compensation.

2.3 "**Board**" means the Board of Directors of the Company.

2.4 “Cause” as a reason for a Participant’s termination of employment shall have the meaning assigned such term in the employment, severance or similar agreement, if any, between such Participant and the Company or an Affiliate, provided, however that if there is no such employment, severance or similar agreement in which such term is defined, “Cause” shall mean any of the following acts by the Participant, as determined by the Committee: gross neglect of duty, prolonged absence from duty without the consent of the Company, material breach by the Participant of any published Company code of conduct or code of ethics; intentionally engaging in activity that is in conflict with or adverse to the business or other interests of the Company; or willful misconduct, misfeasance or malfeasance of duty which is reasonably determined to be detrimental to the Company. The determination of the Committee as to the existence of “Cause” shall be conclusive on the Participant and the Company.

2.5 “Change in Control” means the occurrence of any of the following events:

(a) during any consecutive 12-month period, individuals who, at the beginning of such period, constitute the Board of Directors of the Company (the “Incumbent Directors”) cease for any reason to constitute at least a majority of such Board, provided that any person becoming a director after the beginning of such 12-month period and whose election or nomination for election was approved by a vote of at least a majority of the Incumbent Directors then on the Board shall be an Incumbent Director; provided, however, that no individual initially elected or nominated as a director of the Company as a result of an actual or threatened election contest with respect to the election or removal of directors (“Election Contest”) or other actual or threatened solicitation of proxies or consents by or on behalf of any Person other than the Board (“Proxy Contest”), including by reason of any agreement intended to avoid or settle any Election Contest or Proxy Contest, shall be deemed an Incumbent Director; or

(b) any Person becomes a Beneficial Owner, directly or indirectly, of either (A) 35% or more of the then-outstanding shares of common stock of the Company (“Company Common Stock”) or (B) securities of the Company representing 35% or more of the combined voting power of the Company’s then outstanding securities eligible to vote for the election of directors (the “Company Voting Securities”); provided, however, that for purposes of this subsection (ii), the following acquisitions of Company Common Stock or Company Voting Securities shall not constitute a Change in Control: (w) an acquisition directly from the Company, (x) an acquisition by the Company or a Subsidiary, (y) an acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Company or any Subsidiary, or (z) an acquisition pursuant to a Non-Qualifying Transaction (as defined in subsection (c) below); or

(c) the consummation of a reorganization, merger, consolidation, statutory share exchange or similar form of corporate transaction involving the Company or a Subsidiary (a “Reorganization”), or the sale or other disposition of all or substantially all of the Company’s assets (a “Sale”) or the acquisition of assets or

stock of another corporation or other entity (an "Acquisition"), unless immediately following such Reorganization, Sale or Acquisition: (A) all or substantially all of the individuals and entities who were the Beneficial Owners, respectively, of the outstanding Company Common Stock and outstanding Company Voting Securities immediately prior to such Reorganization, Sale or Acquisition beneficially own, directly or indirectly, more than 35% of, respectively, the then outstanding shares of common stock and the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors, as the case may be, of the entity resulting from such Reorganization, Sale or Acquisition (including, without limitation, an entity which as a result of such transaction owns the Company or all or substantially all of the Company's assets or stock either directly or through one or more subsidiaries, the "Surviving Entity") in substantially the same proportions as their ownership, immediately prior to such Reorganization, Sale or Acquisition, of the outstanding Company Common Stock and the outstanding Company Voting Securities, as the case may be, and (B) no Person (other than (x) the Company or any Subsidiary, (y) the Surviving Entity or its ultimate parent entity, or (z) any employee benefit plan (or related trust) sponsored or maintained by any of the foregoing) is the Beneficial Owner, directly or indirectly, of 35% or more of the total common stock or 35% or more of the total voting power of the outstanding voting securities eligible to elect directors of the Surviving Entity, and (C) at least a majority of the members of the board of directors of the Surviving Entity were Incumbent Directors at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization, Sale or Acquisition (any Reorganization, Sale or Acquisition which satisfies all of the criteria specified in (A), (B) and (C) above shall be deemed to be a "Non-Qualifying Transaction"); or

(d) approval by the shareholders of the Company of a complete liquidation or dissolution of the Company.

2.6 "Code" means the Internal Revenue Code of 1986, as amended from time to time, and includes a reference to the underlying proposed or final regulations.

2.7 "Committee" means the Compensation Committee of the Board.

2.8 "Company," means Astec Industries, Inc., or its successor as provided in Section 10.7.

2.9 "Disability," of a Participant means that the Participant (i) is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than 12 months, or (ii) is, by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than 12 months, receiving income replacement benefits for a period of not less than three months under an accident and health plan covering employees of the Participant's employer. In the event of a

dispute, the determination of whether a Participant is Disabled will be made by the Committee and may be supported by the advice of a physician competent in the area to which such Disability relates.

2.10 "Effective Date" means July 28, 2016.

2.11 "Employee" means any regular, full-time or part-time employee of the Company or any Affiliate. Where the context requires in connection with a Participant who is employed directly by an Affiliate, the term "Company" as used herein includes such Affiliate.

2.12 "ERISA" means the Employee Retirement Income Security Act of 1974, as amended.

2.13 "Good Reason" means, as a reason for a Participant's resignation from employment, the occurrence of any of the following without the consent of the Participant: (a) a material reduction by the Company or an Affiliate in the Participant's Base Salary or Target Annual Bonus as in effect on the Effective Date or as the same may be increased from time to time (other than an overall reduction in salaries of 10% or less that affects substantially all of the Company's full-time employees); (b) a material diminution in the Participant's authority, duties or responsibilities; (c) the relocation of the Participant's principal office to a facility or location more than fifty (50) miles away from the Participant's principal place of work immediately prior to the relocation; or (d) any failure by the Company to comply with Section 10.7 of this Agreement. A termination by a Participant shall not constitute termination for Good Reason unless the Participant shall first have delivered to the Company, not later than 90 days after the initial occurrence of an event deemed to give rise to a right to terminate for Good Reason, written notice setting forth with specificity the occurrence of such event, and there shall have passed a reasonable time (not less than 30 days) within which the Company may take action to correct, rescind or otherwise substantially reverse the occurrence supporting termination for Good Reason as identified by the Participant.

2.14 "Participant" means any Employee designated by the Committee as a participant in the Plan. Each Participant shall be designated as a Tier I, Tier II or Tier III Participant, as specified in Exhibit A hereto, as amended by the Board from time to time.

2.15 "Payment Multiple" means 3.0 for Tier I Participants, 2.0 for Tier II Participants and 1.5 for Tier III Participants.

2.16 "Plan" means this Astec Industries, Inc. Executive Change in Control Severance Plan.

2.17 "Target Annual Bonus" means, with respect to any Participant, the Participant's target bonus opportunity under the annual incentive plan applicable to the Participant.

2.18 "Termination Date" means the date of the termination of a Participant's

employment with the Company as determined in accordance with Article 7.

**ARTICLE 3
ELIGIBILITY**

3.1 Participation. The Committee or the Board shall designate from time to time those Employees or classes of Employees who are Participants in the Plan. In the event the Committee or the Board designates certain Participants by job title, position, function or responsibilities, an Employee who is appointed to such a position after the Effective Date of this Plan shall be a Participant upon the date he or she begins his or her duties in such position, unless otherwise determined by the Committee or the Board. Exhibit A, attached hereto and made a part hereof, sets forth the initial Participants, which may be amended by the Committee or the Board at any time prior to a Change in Control to add or remove individual Participants or classes of Participants; provided, however, that the removal of individual Participants or classes of Participants from the Plan shall not be effective for at least 12 months after notification to the Participants of such Committee or Board action. If a Change in Control occurs during such 12-month period, any such action to remove individual Participants or classes of Participants shall be null and void.

3.2 Duration of Participation. Subject to Article 4 and Article 8, an Employee shall cease to be a Participant in the Plan if (i) his or her employment is terminated under circumstances in which he or she is not entitled to Severance Benefits under the terms of this Plan, or (ii) prior to a Change in Control, he or she is removed as a Participant or ceases to be among the class of employees designated by the Committee or the Board as Participants. Notwithstanding the foregoing, a Participant who has terminated employment and is entitled to Severance Benefits under Article 4 shall remain a Participant in the Plan until the full amount of the Change in Control Severance Benefits, as applicable, and any other amounts payable under the Plan have been paid to the Participant.

**ARTICLE 4
SEVERANCE BENEFITS**

4.1 Right to Severance Benefits.

(a) A Participant shall be entitled to receive from the Company Severance Benefits in the amount provided in Section 4.2 if, within the 24-month period following a Change in Control (in the case of a Tier I Participant or Tier II Participant), or the 12-month period following a Change in Control (in the case of a Tier III Participant), (i) the Participant's employment with the Company or any Affiliate is terminated by the Company without Cause (other than by reason of the Participant's death or Disability) or (ii) the Participant's employment is terminated by the Participant for Good Reason within a period of 180 days after the occurrence of the event giving rise to Good Reason.

(b) If a Participant's employment is terminated by the Company or an Affiliate without Cause prior to the occurrence of a Change in Control and if it can reasonably be shown that the Participant's termination (i) was at the direction or request of a third party

that had taken steps reasonably calculated to effect a Change in Control after such termination, or (ii) otherwise occurred in anticipation of a Change in Control, and in either case a Change in Control does, in fact, occur, then the Participant shall have the rights described in the Plan as if the Change in Control had occurred on the date immediately preceding the Termination Date.

(c) Notwithstanding anything to the contrary, no Severance Benefits shall be provided to a Participant unless the Participant has executed and not revoked, within forty-five (45) days after the Termination Date, a separation agreement, including a general release of claims, in form and substance reasonably acceptable to the Company (the "Release").

4.2 Amount of Change in Control Severance Benefits. If a Participant's employment is terminated in circumstances entitling him or her to Severance Benefits as provided in Section 4.1, then, subject to Articles 5 and 6:

(a) the Company shall pay to the Participant in a single lump sum cash payment on the 60th day after the Termination Date (or such later date as may be required by Section 9.3 of the Plan), the aggregate of the following amounts:

(i) a pro rata annual bonus equal to the product of (A) the higher of Participant's Target Annual Bonus for the year in which the Change in Control occurs or Participant's Target Annual Bonus for the year in which the Termination Date occurs, and (B) a fraction, the numerator of which is the number of days in the current fiscal year through the Termination Date, and the denominator of which is 365;

(ii) a severance payment equal to the applicable Payment Multiple times the sum of (x) the Participant's Base Salary (at the highest rate in effect for any period within three years prior to the Termination Date) and (y) the higher of Participant's Target Annual Bonus for the year in which the Change in Control occurs or Participant's Target Annual Bonus for the year in which the Termination Date occurs; and

(iii) a lump sum cash payment equal to the monthly cost to provide group medical, dental, vision and/or prescription drug plan benefits sponsored by the Company and maintained by the Participant as of the date of the Participant's Termination Date, multiplied by (i) 36, in the case of a Tier I Participant, or (ii) 24, in the case of a Tier II Participant, or (iii) 18, in the case of a Tier III Participant. For purposes of this Section 4.2(a)(iii), the cost of such benefits will be calculated based on the "applicable premium" determined in accordance with Code Section 4980B(f)(4) and the regulations issued thereunder (less the 2% administrative fee and less the active-employee rate for such coverage) for the year in which the Termination Date occurs;

- (b) all of the Participant's outstanding stock options, restricted stock units and other time-vesting equity awards shall become fully exercisable, and all time-based vesting restrictions on outstanding awards shall lapse;
 - (c) all of the Participant's outstanding performance-based equity awards shall be deemed to have been fully earned as of the Termination Date based upon an assumed achievement of all relevant performance goals at the "target" level, and there shall be a full, non-prorated payout to the Participant within sixty (60) days following the Termination Date (unless a later date is required by Article 9 hereof);
 - (d) for 12 months following the Termination Date, the Participant shall be eligible for reimbursement for up to \$25,000 of outplacement services and/or financial planning services, payable by the Company promptly following delivery to the Company of an invoice, receipt or other supporting documentation relating to such services as reasonably requested by the Company; and
 - (e) to the extent not theretofore paid or provided, the Company shall timely pay or deliver, as appropriate, the Participant's Base Salary and any accrued vacation pay through the Termination Date and all other benefits due to the Participant pursuant to any employee benefit plans or incentive plans maintained by the Company with respect to services rendered by the Participant prior to the Termination Date.
- 4.3 Full Settlement; No Mitigation. The Company's obligation to make the payments provided for under this Plan and otherwise to perform its obligations hereunder shall not be affected by any set-off, counterclaim, recoupment, defense or other claim, right or action which the Company may have against the Participant or others. In no event shall the Participant be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Participant under any of the provisions of this Agreement and such amounts shall not be reduced whether or not the Participant obtains other employment.

ARTICLE 5
EFFECT OF SECTIONS 280G AND 4999 OF THE CODE

5.1 Mandatory Reduction of Payments in Certain Events.

- (a) Notwithstanding any other contrary provisions in any plan, program or policy of the Company, if all or any portion of the benefits payable under this Plan, either alone or together with other payments and benefits which a Participant receives or is entitled to receive from the Company, would constitute a "parachute payment" within the meaning of Section 280G of the Code, the Company shall reduce the Participant's payments and benefits payable under this Plan to the extent necessary so that no portion thereof shall be subject to the excise tax imposed by Section 4999 of the Code ("Excise Tax"), but only if, by reason of such reduction, the net after-tax benefit shall exceed the net after-tax benefit if such reduction were not made. "Net after-tax benefit" for these purposes shall mean the sum of (i) the total amount payable to the Participant under the Plan, plus

(ii) all other payments and benefits which the Participant receives or is then entitled to receive from the Company that, alone or in combination with the payments and benefits payable under the Plan, would constitute a “parachute payment” within the meaning of Section 280G of the Code, less (iii) the amount of federal income taxes payable with respect to the foregoing calculated at the maximum marginal income tax rate for each year in which the foregoing shall be paid to the Participant (based upon the rate in effect for such year as set forth in the Code at the time of the payment under the Plan), less (iv) the amount of Excise Tax imposed with respect to the payments and benefits described in (i) and (ii) above. The reduction of payments due hereunder, if applicable, shall be made by first reducing cash payments and then, to the extent necessary, reducing those payments having the next highest ratio of Parachute Value to actual present value of such payments as of the date of the Change in Control, as determined by the Determination Firm (as defined in Section 5.1(b) below). For purposes of this Article 5, present value shall be determined in accordance with Section 280G(d)(4) of the Code. For purposes of this Article 5, the “Parachute Value” of a payment means the present value as of the date of the Change in Control of the portion of such payment that constitutes a “parachute payment” under Section 280G(b)(2) of the Code, as determined by the Determination Firm for purposes of determining whether and to what extent the Excise Tax will apply to such payment.

(b) All determinations required to be made under this Article 5 shall be made by the accounting firm that was the Company’s independent auditor prior to the Change in Control or any other independent, nationally recognized accounting firm or compensation consulting firm mutually acceptable to the Company and the Participant (the “Determination Firm”). The Determination Firm shall provide detailed supporting calculations both to the Company and the Participant. All fees and expenses of the Determination Firm shall be borne solely by the Company. Absent manifest error, any determination by the Determination Firm shall be binding upon the Company and the Participant. As a result of the uncertainty in the application of Section 4999 of the Code at the time of the initial determination by the Determination Firm hereunder, it is possible that payments to which the Participant was entitled, but did not receive pursuant to Section 5(a), could have been made without the imposition of the Excise Tax (“Underpayment”). In such event, the Determination Firm shall determine the amount of the Underpayment that has occurred and any such Underpayment shall be promptly paid by the Company to or for the benefit of the Participant but no later than March 15 of the year after the year in which the Underpayment is determined to exist, which is when the legally binding right to such Underpayment arises.

(c) For purposes of determining whether and the extent to which any payments would constitute a “parachute payment” (i) no portion of any payments or benefits that the Participant shall have waived at such time and in such manner as not to constitute a “payment” within the meaning of Section 280G(b) of the Code shall be taken into account, (ii) no portion of the payments shall be taken into account which, in the opinion of tax counsel (“Tax Counsel”) reasonably acceptable to the Participant and selected by the Determination Firm, does not constitute a “parachute payment” within the meaning of Section 280G(b)(2) of the Code (including by reason of Section 280G(b)(4)(A) of the

Code) and, in calculating the excise tax, no portion of such payments shall be taken into account which, in the opinion of Tax Counsel, constitutes reasonable compensation for services actually rendered, within the meaning of Section 280G(b)(4)(B) of the Code, in excess of the "base amount" (within the meaning set forth in Section 280G(b)(3) of the Code) allocable to such reasonable compensation, and (iii) the value of any non-cash benefit or any deferred payment or benefit included in the payments shall be determined by the Determination Firm in accordance with the principles of Sections 280G(d)(3) and (4) of the Code.

(d) In the event that the provisions of Code Section 280G and 4999 or any successor provisions are repealed without succession, this Article 5 shall be of no further force or effect.

ARTICLE 6 RESTRICTIVE COVENANTS

6.1 Restrictive Covenant Agreement. Any amounts or benefits payable pursuant to this Plan (except for any payment pursuant to Section 4.2(e) of the Plan) shall only be payable if the Participant executes, delivers to the Company and does not revoke a restrictive covenant agreement in a form acceptable to the Company (which may be contained in the same agreement as the Release required by Section 4.1(e)), which agreement will contain, at a minimum, restrictive covenants substantially similar to the provisions contained in this Article 6.

6.2 Definitions. The following capitalized terms used in this Section 6 shall have the meanings assigned to them below:

(a) "Competitive Services" means the lines of business and services with which a Participant is actively involved in conducting business on behalf of the Company at the time of the Participant's Termination Date, to be stated with more specificity in the restrictive covenant agreement required by Section 6.1.

(b) "Confidential Information" means any and all data and information relating to the Company, its activities, business, or clients that (A) is or has been disclosed to the Participant or of which the Participant becomes or has become aware as a consequence of his employment with the Company; (B) has value to the Company; and (C) is not generally known outside of the Company. "Confidential Information" shall include, but is not limited to the following types of information regarding, related to, or concerning the Company: trade secrets (as defined by Tenn. Code Ann. § 47-25-1702); financial plans and data; management planning information; business plans; operational methods; market studies; marketing plans or strategies; pricing information; product development techniques or plans; customer lists; customer files, data and financial information; details of customer contracts; current and anticipated customer requirements; identifying and other information pertaining to business referral sources; past, current and planned research and development; computer aided systems, software, strategies and programs; business acquisition plans; management organization and related information (including, without

limitation, data and other information concerning the compensation and benefits paid to officers, directors, employees and management); personnel and compensation policies; new personnel acquisition plans; and other similar information. "Confidential Information" also includes combinations of information or materials which individually may be generally known outside of the Company, but for which the nature, method, or procedure for combining such information or materials is not generally known outside of the Company. In addition to data and information relating to the Company, "Confidential Information" also includes any and all data and information relating to or concerning a third party that otherwise meets the definition set forth above, that was provided or made available to the Company by such third party, and that the Company has a duty or obligation to keep confidential. This definition shall not limit any definition of "confidential information" or any equivalent term under state or federal law. "Confidential Information" shall not include information that has become generally available to the public by the act of one who has the right to disclose such information without violating any right or privilege of the Company.

(c) "Material Contact" means contact between the Participant and a customer or potential customer of the Company (A) with whom or which the Participant has or had dealings on behalf of the Company; (B) whose dealings with the Company are or were coordinated or supervised by the Participant; (C) about whom the Participant obtains Confidential Information in the ordinary course of business as a result of his employment with the Company; or (D) who receives products or services of the Company, the sale or provision of which results or resulted in compensation, commissions, or earnings for Participant within the two (2) years prior to the Participant's Termination Date.

(d) "Person" means any individual or any corporation, partnership, joint venture, limited liability company, association or other entity or enterprise.

(e) "Principal or Representative" means a principal, owner, partner, shareholder, joint venturer, investor, member, trustee, director, officer, manager, employee, agent, representative or consultant.

(f) "Protected Customer" means any Person to whom the Company has sold its products or services or actively solicited to sell its products or services, and with whom the Participant has had Material Contact on behalf of the Company during his employment with the Company.

(g) "Protected Work" means any and all ideas, inventions, formulas, Confidential Information, source codes, object codes, techniques, processes, concepts, systems, programs, software, software integration techniques, hardware systems, schematics, flow charts, computer data bases, client lists, trademarks, service marks, brand names, trade names, compilations, documents, data, notes, designs, drawings, technical data and/or training materials, including improvements thereto or derivatives therefrom, whether or not patentable, and whether or not subject to copyright or trademark or trade secret protection, conceived, developed or produced by the Participant, or by others working with the Participant or under his direction, during the period of his employment or

service, or conceived, produced or used or intended for use by or on behalf of the Company or its customers.

(h) "Restricted Period" means any time during the Participant's employment with the Company, and if the Participant's employment is terminated for any reason during the Term or if the Participant has given notice to the Company under Section 2 hereof to cause the Term to cease to extend automatically, the Restricted Period shall mean during the Participant's employment plus (i) twelve (12) months following the Termination Date, in the case of a Tier I Participant or (ii) eight (8) months following the Termination Date, in the case of a Tier II Participant or Tier III Participant.

(i) "Restricted Territory" means the territory in which a Participant is conducting business on behalf of the Company at the time of the Participant's Termination Date, to be stated with more specificity in the restrictive covenant agreement required by Section 6.1.

(j) "Restrictive Covenants" means the restrictive covenants contained in Sections 6.3 through 6.8 of this Article 6.

6.3 Restriction on Disclosure and Use of Confidential Information. The Participant agrees that the Participant shall not, directly or indirectly, use any Confidential Information on the Participant's own behalf or on behalf of any Person other than Company, or reveal, divulge, or disclose any Confidential Information to any Person not expressly authorized by the Company to receive such Confidential Information. This obligation shall remain in effect for as long as the information or materials in question retain their status as Confidential Information. The Participant further agrees that he shall fully cooperate with the Company in maintaining the Confidential Information to the extent permitted by law. The parties acknowledge and agree that this Agreement is not intended to, and does not, alter either the Company's rights or the Participant's obligations under any state or federal statutory or common law regarding trade secrets and unfair trade practices. Anything herein to the contrary notwithstanding, the Participant shall not be restricted from disclosing information that is required to be disclosed by law, court order or other valid and appropriate legal process; provided, however, that in the event such disclosure is required by law, the Participant shall provide the Company with prompt notice of such requirement so that the Company may seek an appropriate protective order prior to any such required disclosure by the Participant.

6.4 Non-Competition. The Participant agrees that during the Restricted Period, he will not, without prior written consent of the Company, directly or indirectly (i) carry on or engage in Competitive Services within the Restricted Territory on his own or on behalf of any Person or any Principal or Representative of any Person, or (ii) own, manage, operate, join, control or participate in the ownership, management, operation or control, of any business, whether in corporate, proprietorship or partnership form or otherwise where such business is engaged in the provision of Competitive Services within the Restricted Territory. The Participant acknowledges that the Restricted Territory is reasonable.

6.5 Non-Solicitation of Protected Customers. The Participant agrees that during the Restricted Period, he shall not, without the prior written consent of the Company, directly or indirectly, on his own behalf or as a Principal or Representative of any Person, solicit, divert, take away, or attempt to solicit, divert, or take away a Protected Customer for the purpose of engaging in, providing, or selling Competitive Services.

6.6 Non-Recruitment of Employees. The Participant agrees that during the Restricted Period, he shall not, directly or indirectly, whether on his own behalf or as a Principal or Representative of any Person, solicit or induce or attempt to solicit or induce any employee of the Company to terminate his employment relationship with the Company or to enter into employment with the Participant or any other Person.

6.7 Proprietary Rights.

(a) Ownership and Assignment of Protected Works. The Participant agrees that any and all Confidential Information and Protected Works are the sole property of the Company, and that no compensation in addition to the Participant's base salary is due to the Participant for development or transfer of such Protected Works. The Participant agrees that he shall promptly disclose in writing to the Company the existence of any Protected Works. The Participant hereby assigns all of his rights, title and interest in any and all Protected Works, including all patents or patent applications, and all copyrights therein, to the Company. The Participant shall not be entitled to use Protected Works for his own benefit or the benefit of anyone except the Company without written permission from the Company and then only subject to the terms of such permission. The Participant further agrees that he will communicate to the Company any facts known to him and testify in any legal proceedings, sign all lawful papers, make all rightful oaths, execute all divisionals, continuations, continuations-in-part, foreign counterparts, or reissue applications, all assignments, all registration applications, and all other instruments or papers to carry into full force and effect the assignment, transfer, and conveyance hereby made or to be made and generally do everything possible for title to the Protected Works and all patents or copyrights or trademarks or service marks therein to be clearly and exclusively held by the Company. The Participant agrees that he will not oppose or object in any way to applications for registration of Protected Works by the Company or others designated by the Company. The Participant agrees to exercise reasonable care to avoid making Protected Works available to any third party and shall be liable to the Company for all damages and expenses, including reasonable attorneys' fees, if Protected Works are made available to third parties by him without the express written consent of the Company.

Anything herein to the contrary notwithstanding, the Participant will not be obligated to assign to the Company any Protected Work for which no equipment, supplies, facilities, or Confidential Information of the Company was used and which was developed entirely on the Participant's own time, unless (a) the invention relates (i) directly to the business of the Company, or (ii) to the Company's actual or demonstrably anticipated research or development; or (b) the invention results from any work performed by the Participant for the Company. The Participant likewise will not be obligated to assign to the Company any Protected Work that is conceived by the Participant after the Participant

leaves the employ or service of the Company, except that the Participant is so obligated if the same relates to or is based on Confidential Information to which the Participant had access by virtue of his employment with the Company. Similarly, the Participant will not be obligated to assign any Protected Work to the Company that was conceived and reduced to practice prior to his employment, regardless of whether such Protected Work relates to or would be useful in the business of the Company. The Participant acknowledges and agrees that there are no Protected Works conceived and reduced to practice by him prior to his employment with the Company.

(b) Works Made for Hire. The Company and the Participant acknowledge that in the course of his employment with the Company, the Participant may from time to time create for the Company copyrightable works. Such works may consist of manuals, pamphlets, instructional materials, computer programs, software, software integration techniques, software codes, and data, technical data, photographs, drawings, logos, designs, artwork or other copyrightable material, or portions thereof, and may be created within or without the Company's facilities and before, during or after normal business hours. All such works related to or useful in the business of the Company are specifically intended to be works made for hire by the Participant, and the Participant shall cooperate with the Company in the protection of the Company's copyrights in such works and, to the extent deemed desirable by the Company, the registration of such copyrights.

6.8 Return of Materials. The Participant agrees that he will not retain or destroy (except as set forth below), and will immediately return to the Company on or prior to the Termination Date, or at any other time the Company requests such return, any and all property of the Company that is in his possession or subject to his control, including, but not limited to, keys, credit and identification cards, personal items or equipment, customer files and information, papers, drawings, notes, manuals, specifications, designs, devices, code, email, documents, diskettes, CDs, tapes, keys, access cards, credit cards, identification cards, computers, mobile devices, other electronic media, all other files and documents relating to the Company and its business (regardless of form, but specifically including all electronic files and data of the Company), together with all Protected Works and Confidential Information belonging to the Company or that the Participant received from or through his employment or service with the Company. The Participant will not make, distribute, or retain copies of any such information or property.

6.9 Enforcement of Restrictive Covenants.

(a) Rights and Remedies Upon Breach. The parties specifically acknowledge and agree that the remedy at law for any breach of the Restrictive Covenants will be inadequate, and that in the event the Participant breaches, or threatens to breach, any of the Restrictive Covenants, the Company shall have the right and remedy, without the necessity of proving actual damage or posting any bond, to enjoin, preliminarily and permanently, the Participant from violating or threatening to violate the Restrictive Covenants and to have the Restrictive Covenants specifically enforced by any court of competent jurisdiction, it being agreed that any breach or threatened breach of the Restrictive

Covenants would cause irreparable injury to the Company and that money damages would not provide an adequate remedy to the Company. The Participant understands and agrees that if he violates any of the obligations set forth in the Restrictive Covenants, the period of restriction applicable to each obligation violated shall cease to run during the pendency of any litigation over such violation, provided that such litigation was initiated during the period of restriction. Such rights and remedies shall be in addition to, and not in lieu of, any other rights and remedies available to the Company at law or in equity. The Participant understands and agrees that, if the Parties become involved in legal action regarding the enforcement of the Restrictive Covenants and if the Company prevails in such legal action, the Company will be entitled, in addition to any other remedy, to recover from the Participant its reasonable costs and attorneys' fees incurred in enforcing such covenants. The Company's ability to enforce its rights under the Restrictive Covenants or applicable law against the Participant shall not be impaired in any way by the existence of a claim or cause of action on the part of the Participant based on, or arising out of, this Agreement or any other event or transaction.

(b) Severability and Modification of Covenants. The Participant acknowledges and agrees that each of the Restrictive Covenants is reasonable and valid in time and scope and in all other respects. The parties agree that it is their intention that the Restrictive Covenants be enforced in accordance with their terms to the maximum extent permitted by law. Each of the Restrictive Covenants shall be considered and construed as a separate and independent covenant. Should any part or provision of any of the Restrictive Covenants be held invalid, void, or unenforceable, such invalidity, voidness, or unenforceability shall not render invalid, void, or unenforceable any other part or provision of this Agreement or such Restrictive Covenant. If any of the provisions of the Restrictive Covenants should ever be held by a court of competent jurisdiction to exceed the scope permitted by the applicable law, such provision or provisions shall be automatically modified to such lesser scope as such court may deem just and proper for the reasonable protection of the Company's legitimate business interests and may be enforced by the Company to that extent in the manner described above and all other provisions of this Agreement shall be valid and enforceable.

ARTICLE 7 TERMINATION OF EMPLOYMENT

7.1 Written Notice Required. Any purported termination of employment, whether by the Company or by the Participant, shall be communicated by written notice to the other (a "Notice of Termination").

7.2 Termination Date. In the case of the Participant's death, the Participant's Termination Date shall be his or her date of death. In all other cases, the Participant's Termination Date shall be the date of receipt of the Notice of Termination or any later date specified therein within 60 days after receipt of the Notice of Termination.

**ARTICLE 8
DURATION, AMENDMENT AND TERMINATION, CLAIMS**

8.1 Duration. The Plan shall become effective as of the Effective Date, and shall continue until terminated by the Committee or the Board. Subject to Section 8.2, the Committee or the Board may terminate the Plan as of any date that is at least 12 months after the date of the Committee's or the Board's action. If any Participants become entitled to any payments or benefits hereunder during such 12-month period, this Plan shall continue in full force and effect and shall not terminate or expire with respect to such Participants until after all such Participants have received such payments and benefits in full.

8.2 Amendment and Termination. Subject to the following sentence, the Plan may be amended from time to time in any respect by the Committee or the Board; provided, however, that any amendment that would adversely affect the rights or potential rights of Participants shall not be effective for at least 12 months after the date of the Committee's or the Board's action; and, provided further, in the event that a Change in Control occurs within 12 months following an amendment to the Plan that would adversely affect the rights or potential rights of Participants, the amendment will not be effective. In anticipation of or in connection with or within three years following a Change in Control, the Plan shall not be subject to amendment, change, substitution, deletion, revocation or termination in any respect which adversely affects the rights of Participants without the consent of each Participant so affected. For the avoidance of doubt, removal of a Participant as a Participant (other than as a result of the Participant ceasing to be an Employee) or any reduction in payments or benefits shall be deemed to be an amendment of the Plan which adversely affects the rights of the Participant.

8.3 Form of Amendment. The form of any amendment or termination of the Plan shall be a written instrument signed by a duly authorized officer or officers of the Company, certifying that the amendment or termination has been approved by the Committee or the Board. Subject to Sections 8.1 and 8.2 above (i) an amendment of the Plan in accordance with the terms hereof shall automatically effect a corresponding amendment to all Participants' rights and benefits hereunder, and (ii) a termination of the Plan shall in accordance with the terms hereof automatically effect a termination of all Participants' rights and benefits hereunder.

8.4 Claims Procedure.

(a) A Participant may file a claim with respect to amounts asserted to be due hereunder by filing a written claim with the Committee specifying the nature of such claim in detail. The Committee shall notify the claimant within 60 days as to whether the claim is allowed or denied, unless the claimant receives written notice from the Committee prior to the end of the 60 day period stating that special circumstances require an extension of time for a decision on the claim, in which case the period shall be extended by an additional 60 days. Notice of the Committee's decision shall be in writing, sent by mail to the Participant's last known address and, if the claim is denied, such notice shall (i) state

the specific reasons for denial, (ii) refer to the specific provisions of the Plan upon which such denial is based, and (iii) if applicable, describe any additional information or material necessary to perfect the claim, an explanation of why such information or material is necessary, and an explanation of the review procedure in Section 8.4(b).

(b) A claimant is entitled to request a review of any denial of his claim under Section 8.4(a). The request for review must be submitted to the Committee in writing within 60 days of mailing by the Committee of notice of the denial. Absent a request for review within the 60 day period, the claim will be deemed conclusively denied. The claimant or his representative shall be entitled to review all pertinent documents, and to submit issues and comments orally and in writing to the Committee. The review shall be conducted by the Committee, which shall afford the claimant a hearing and which shall render a decision in writing within 60 days of a request for a review, provided that, if the Committee determines prior to the end of such 60 day review period that special circumstances require an extension of time for the review and decision of the denial, the period for review and decision on the denial shall be extended by an additional 60 days. The claimant shall receive written notice of the Committee's review decision, together with specific reasons for the decision and reference to the pertinent provisions of the Plan.

ARTICLE 9
CODE SECTION 409A

9.1 General. This Plan shall be interpreted and administered in a manner so that any amount or benefit payable hereunder shall be paid or provided in a manner that is either exempt from or compliant with the requirements Section 409A of the Code and applicable Internal Revenue Service guidance and Treasury Regulations issued thereunder (and any applicable transition relief under Section 409A of the Code). Nevertheless, the tax treatment of the benefits provided under the Plan is not warranted or guaranteed. Neither the Company nor its directors, officers, employees or advisers shall be held liable for any taxes, interest, penalties or other monetary amounts owed by the Participant as a result of the application of Section 409A of the Code.

9.2 Definitional Restrictions. Notwithstanding anything in this Plan to the contrary, to the extent that any amount or benefit that would constitute non-exempt "deferred compensation" for purposes of Section 409A of the Code ("Non-Exempt Deferred Compensation") would otherwise be payable or distributable hereunder, or a different form of payment of such Non-Exempt Deferred Compensation would be effected, by reason of a Change in Control or a Participant's termination of employment, such Non-Exempt Deferred Compensation will not be payable or distributable to the Participant, and/or such different form of payment will not be effected, by reason of such circumstance unless the circumstances giving rise to such Change in Control or termination of employment, as the case may be, meet any description or definition of "change in control event" or "separation from service", as the case may be, in Section 409A of the Code and applicable regulations (without giving effect to any elective provisions that may be available under such definition). This provision does not prohibit the *vesting* of any Non-Exempt Deferred Compensation upon a Change in Control or termination of employment.

however defined. If this provision prevents the payment or distribution of any Non-Exempt Deferred Compensation, such payment or distribution shall be made on the date, if any, on which an event occurs that constitutes a Section 409A-compliant "change in control event" or "separation from service", as the case may be, or such later date as may be required by Section 9.3. If this provision prevents the application of a different form of payment of any amount or benefit, such payment shall be made in the same form as would have applied absent such designated event or circumstance.

9.3 Six-Month Delay Under Certain Circumstances. Notwithstanding anything in this Plan to the contrary, if any amount or benefit that would constitute non-exempt "deferred compensation" for purposes of Section 409A of the Code would otherwise be payable or distributable under this Plan by reason of a Participant's separation from service during a period in which he is a Specified Employee (as defined below), then, subject to any permissible acceleration of payment by the Company under Treas. Reg. Section 1.409A-3(j)(4)(ii) (domestic relations order), (j)(4)(iii) (conflicts of interest), or (j)(4)(vi) (payment of employment taxes):

(a) if the payment or distribution is payable in a lump sum, the Participant's right to receive payment or distribution of such non-exempt deferred compensation will be delayed until the earlier of the Participant's death or the first day of the seventh month following the Participant's separation from service; and

(b) if the payment or distribution is payable over time, the amount of such non-exempt deferred compensation that would otherwise be payable during the six-month period immediately following the Participant's separation from service will be accumulated and the Participant's right to receive payment or distribution of such accumulated amount will be delayed until the earlier of the Participant's death or the first day of the seventh month following the Participant's separation from service, whereupon the accumulated amount will be paid or distributed to the Participant and the normal payment or distribution schedule for any remaining payments or distributions will resume.

For purposes of this Agreement, the term "Specified Employee" has the meaning given such term in Code Section 409A and the final regulations thereunder, provided, however, that, as permitted in such regulations, the Company's Specified Employees and its application of the six-month delay rule of Code Section 409A(a)(2)(B)(i) shall be determined in accordance with rules adopted by the Board of Directors, which shall be applied consistently with respect to all nonqualified deferred compensation arrangements of the Company, including this Plan.

9.4 Treatment of Installment Payments. Each payment of termination benefits under Sections 4.3 or 4.4 of this Plan, including, without limitation, each installment payment, shall be considered a separate payment, as described in Treas. Reg. Section 1.409A-2(b)(2), for purposes of Section 409A of the Code.

9.5 Timing of Release of Claims. Whenever in this Plan a payment or benefit is

conditioned on the Participant's execution of a release of claims, such release must be executed and all revocation periods shall have expired within forty-five (45) days after the Termination Date; failing which such payment or benefit shall be forfeited. If such payment or benefit is exempt from Section 409A of the Code, the Company may elect to make or commence payment at any time during such 45-day period. If such payment or benefit constitutes Non-Exempt Deferred Compensation, then, (i) if such 45-day period begins and ends in a single calendar year, the Company may make or commence payment at any time during such period at its discretion, and (ii) if such 45-day period begins in one calendar year and ends in the next calendar year, the payment shall be made or commence during the second such calendar year, even if such signing and non-revocation of the release occur during the first such calendar year included within such 45-day period. In other words, a Participant is not permitted to influence the calendar year of payment of Non-Exempt Deferred Compensation based on the timing of signing the release.

9.6 Timing of Reimbursements and In-kind Benefits. If the Participant is entitled to be paid or reimbursed for any taxable expenses under this Plan, and such payments or reimbursements are includible in the Participant's federal gross taxable income, the amount of such expenses reimbursable in any one calendar year shall not affect the amount reimbursable in any other calendar year, and the reimbursement of an eligible expense must be made no later than December 31 of the year after the year in which the expense was incurred. No right of the Participant to reimbursement of expenses under any Section of this Plan shall be subject to liquidation or exchange for another benefit.

9.7 Permitted Acceleration. The Company shall have the sole authority to make any accelerated distribution permissible under Treas. Reg. Section 1.409A-3(j)(4) to the Participant of deferred amounts, provided that such distribution meets the requirements of Treas. Reg. Section 1.409A-3(j)(4).

ARTICLE 10 MISCELLANEOUS

10.1 Legal Fees and Expenses. The Company shall reimburse all legal fees and related expenses (including the costs of experts, evidence and counsel) reasonably and in good faith incurred by a Participant if the Participant prevails on a material issue with respect to his or her claim for relief in an action by the Participant to obtain or enforce any right or benefit provided by this Plan. If a Participant is entitled to recover fees and expenses under this Section 10.1, the reimbursement of an eligible expense shall be made within 10 business days after delivery of the Participant's respective written requests for payment accompanied with such evidence of fees and expenses incurred as the Company reasonably may require, but in no event later than March 15 of the year after the year in which such rights are established.

10.2 Employment Status. This Plan does not constitute a contract of employment or impose on the Participant or the Company any obligation to retain the Participant as an Employee, to change the status of the Participant's employment, or to change the

Company's policies regarding termination of employment.

10.3 Nature of Plan and Benefits. Participants and any other person who may have rights hereunder shall be mere unsecured general creditors of the Company with respect to Severance Benefits due hereunder, and all amounts (other than fully insured benefits) shall be payable from the general assets of the Company.

10.4 Withholding of Taxes. The Company may withhold from any amount payable or benefit provided under this Plan such Federal, state, local, foreign and other taxes as are required to be withheld pursuant to any applicable law or regulation.

10.5 No Effect on Other Benefits. Severance Benefits shall not be counted as compensation for purposes of determining benefits under other benefit plans, programs, policies and agreements, except to the extent expressly provided therein or herein.

10.6 Validity and Severability. The invalidity or unenforceability of any provision of the Plan shall not affect the validity or enforceability of any other provision of the Plan, which shall remain in full force and effect, and any prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.

10.7 Successors. This Plan shall bind any successor of or to the Company, its assets or its businesses (whether direct or indirect, by purchase, merger, consolidation or otherwise), in the same manner and to the same extent that the Company would be obligated under this Plan if no succession had taken place. In the case of any transaction in which a successor would not by the foregoing provision or by operation of law be bound by this Plan, the Company shall require such successor expressly and unconditionally to assume and agree to perform the Company's obligations under this Plan, in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place. The term "Company," as used in this Plan, shall mean the Company as hereinbefore defined and any successor or assignee to the business or assets which by reason hereof becomes bound by this Plan.

10.8 Assignment. This Plan shall inure to the benefit of and shall be enforceable by a Participant's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees. If a Participant should die while any amount is still payable to the Participant under this Plan had the Participant continued to live, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Plan to the Participant's estate. A Participant's rights under this Plan shall not otherwise be transferable or subject to lien or attachment.

10.9 Enforcement. This Plan is intended to constitute an enforceable contract between the Company and each Participant subject to the terms hereof.

10.10 Governing Law. To the extent not preempted by ERISA, the validity, interpretation, construction and performance of the Plan shall in all respects be governed

by the laws of Tennessee, without reference to principles of conflict of law.

10.11 Arbitration. Any dispute or controversy arising under or in connection with this Plan that cannot be mutually resolved by the Company and a Participant and their respective advisors and representatives shall be settled exclusively by arbitration in Chattanooga, Tennessee, in accordance with the rules of the American Arbitration Association before one arbitrator of exemplary qualifications and stature, who shall be selected jointly by an individual to be designated by the Company and an individual to be selected by the Participant, or if such two individuals cannot agree on the selection of the arbitrator, who shall be selected by the American Arbitration Association. The Company shall reimburse the Participant's reasonable legal fees if he prevails on a material issue in arbitration.

**SUBSIDIARIES OF ASTEC INDUSTRIES, INC.
AS OF MARCH 1, 2023**

Exhibit 21

Subsidiary Name	Percentage Owned	State or Other Jurisdiction of Incorporation
Astec Equipment India LLP	100	India
Allinov Inc.	100	Quebec, Canada
Astec Asia Pacific Ltd.	99.997	Thailand
Astec Australia Pty Ltd.	100	Australia
Astec Digital Belgium BV	100	Belgium
Astec Digital Canada Inc.	100	Quebec, Canada
Astec Digital Holdings, LLC	100	Delaware
Astec Digital IP Holding, Inc.	100	British Columbia, Canada
Astec Digital Minds Group Inc.	100	British Columbia, Canada
Astec Digital U.S. Inc.	100	Tennessee
Astec do Brasil Fabricacao de Equipamentos Ltda.	92.9	Brazil
Astec, Inc.	100	Tennessee
Astec Industries Holdings, LLC	100	Delaware
Astec Industries LatAm SpA	100	Chile
Astec Insurance Company	100	Vermont
Astec Industries Africa Middle East (Pty) Ltd.	100	South Africa
Astec Industries SA Holdings (Pty) Ltd.	100	South Africa
Astec Industries South Africa (Pty) Ltd.	100	South Africa
Astec Mobile Screens, Inc.	100	Nevada
Audobon Manufacturing Corporation	100	Iowa
B.M.H. Systems Corporation	100	Delaware
B.M.H. Systems Inc.	100	Quebec, Canada
Breaker Technology, Inc.	100	Tennessee
Breaker Technology Ltd.	100	Ontario, Canada
Carlson Paving Products, Inc.	100	Washington
CEI Enterprises, Inc.	100	Tennessee
Concrete Equipment Company, Inc.	100	Nebraska
GEFCO, Inc.	100	Tennessee
Heatec, Inc.	100	Tennessee
Johnson Crushers International, Inc.	100	Tennessee
Kolberg-Pioneer, Inc.	100	Tennessee
Mill Row Limited	100	Northern Ireland
Minds Automation Systems LTD	100	England and Wales
Peterson Pacific Corp.	100	Oregon
Power Flame Incorporated	100	Tennessee
RexCon, Inc.	100	Tennessee
Roadtec, Inc.	100	Tennessee
SARL ERMIS	100	France
Telesack Ltd	100	Northern Ireland
Telesmith, Inc.	100	Delaware

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Astec Industries, Inc.:

We consent to the incorporation by reference in the registration statements (No. 333-124420, 333-133013, 333-176177, and 333-255536) on Form S-8 of our report dated March 1, 2023, with respect to the consolidated financial statements of Astec Industries, Inc. and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

Atlanta, Georgia
March 1, 2023

Certification pursuant to Rule 13a-14(a)/15d-14(a),
as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Jaco van der Merwe, certify that:

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

Date: March 1, 2023

/s/ Jaco van der Merwe
Jaco van der Merwe
President and Chief Executive Officer
(Principal Executive Officer)

Certification pursuant to Rule 13a-14(a)/15d-14(a),
as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Rebecca A. Weyenberg, certify that:

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

Date: March 1, 2023

/s/ Rebecca A. Weyenberg

Rebecca A. Weyenberg
Chief Financial Officer
(Principal Financial Officer)

**Certification pursuant to 18 U.S.C. Section 1350, as adopted
pursuant to Section 906 Of The Sarbanes-Oxley Act Of 2002**

In connection with the Annual Report of Astec Industries, Inc. (the "Company") on Form 10-K for the period ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jaco van der Merwe, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 1, 2023

/s/ Jaco van der Merwe
Jaco van der Merwe
President and Chief Executive Officer
(Principal Executive Officer)

**Certification pursuant to 18 U.S.C. Section 1350, as adopted
pursuant to Section 906 Of The Sarbanes-Oxley Act Of 2002**

In connection with the Annual Report of Astec Industries, Inc. (the "Company") on Form 10-K for the period ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Rebecca A. Weyenberg, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 1, 2023

/s/ Rebecca A. Weyenberg
Rebecca A. Weyenberg
Chief Financial Officer
(Principal Financial Officer)