

**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, 2021

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

(State or other jurisdiction of incorporation or organization)

62-0873631

(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, 2021, the aggregate market value of the registrant's voting and non-voting common stock held by non-affiliates of the registrant was approximately \$1.1 billion based upon the closing sales price as reported on the Nasdaq National Market System.

As of February 24, 2022, there were 22,767,568 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, 2021 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, 2021

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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," "hope," "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 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 producers; highway and heavy equipment contractors; utility contractors; sand and gravel producers; construction, demolition, recycle and crushing 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.

COVID-19 Pandemic

The COVID-19 pandemic has caused significant disruptions to national and global economies and to our business. While our businesses have generally remained operational throughout the pandemic, with temporary closures in the United Kingdom and South Africa early in the pandemic, we have been significantly affected by the contributory effects of the pandemic such as decreased demand for our products in 2020, material price increases, increased lead times from production materials, supplies and parts and labor shortages. These trends continue to impact our business today and may continue to impact our business in the near-term.

We have also taken precautions to protect our employees and their families and our customers and suppliers from COVID-19 and continually monitor the markets in which we operate for the effects of COVID-19 and the related actions of governments and other authorities to contain COVID-19.

The COVID-19 pandemic may continue to negatively disrupt our business and results of operations in the future. The ongoing impact of the COVID-19 pandemic on our operations and the markets we serve remains uncertain due to constantly evolving developments including, but not limited to, government directives, treatment availability and acceptance, vaccine mandates and the spread of new variants, such as the Delta and Omicron variants, and cannot be accurately predicted. See Part I, Item 1A. Risk Factors in this Annual Report on Form 10-K.

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 OneASTECH 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.

- Centralizing our organization into sites with common platforms and operating models supports organic sales growth as it is easier for our customers, partners, employees and shareholders to understand and interact with us.
- We are focused on productivity gains and cost reductions across our business through reducing complexity in our organization structure and plan to continue to leverage our global footprint consolidation actions to drive greater efficiencies across our operations while maintaining strong customer relationships.
- Efforts are directed toward product simplification through the development of a rationalized global product portfolio executed through manufacturing centers of excellence.
- We strive to optimize the supply chain through leveraging the size and scale of our global operations to improve lead times, lower logistics costs and introduce localized product support.

Since the inception of these initiatives, we have consolidated four sites and are currently in the process of consolidating our Tacoma site, which is expected to be completed during early 2022.

In addition, in late 2020 we launched 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.

Focus

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

- We are focused on driving commercial excellence and providing a holistic set of solutions to strengthen our relationships with customers and maintain our market leadership positions.
- We intend to streamline our 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.
- With aligned key performance indicators and incentives, we intend to enhance accountability across the business and drive a performance-based culture.

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.

- Organic growth will be focused on reinvigorating innovation with a new product development approach that increases our vitality index over time.
- Through controls and automation as well as other technologies, we expect to leverage technology and digital connectivity to enhance the customer experience.
- We seek to identify, analyze and assess 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 can be leveraged in our existing product portfolio.

Since the inception of our growth initiatives, we have completed three acquisitions. 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 offices for our manufacturing locations. During the first quarter of 2020, we completed an internal reorganization from a decentralized management structure to a matrix organizational management structure with major directives and decisions being made at the segment and/or parent company level and, as a result, realigned our reportable segments moving from three to two reportable segments (plus Corporate) - Infrastructure Solutions and Materials Solutions. Our two reportable business segments comprise sites based upon the nature of the products or services produced, 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 category consists primarily of our parent company and Astec Insurance Company ("Astec Insurance"), a captive insurance company, 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 profit or loss from operations before United States ("U.S.") federal income taxes, state deferred taxes and corporate overhead and, thus, these costs are included in the Corporate category.

Amounts previously reported under the previous segment structure have been restated to conform to the new segment structure. Additionally, in both internal and external communications, we have transitioned references to each individual site by a name associated with its location, as compared to previous references to the individual subsidiary company name.

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 other heavy equipment.

The Infrastructure Solutions segment was operated from the following sites in 2021:

Site	Location	Site	Location
Australia	Brisbane, Australia	EUG-Airport Rd	Oregon, United States
Blair	Nebraska, United States	LatAm	Santiago, Chile
Burlington	Wisconsin, United States	Parsons	Kansas, United States
CHA-Jerome Ave	Tennessee, United States	St-Bruno	Quebec, Canada
CHA-Manufacturers Rd	Tennessee, United States	Tacoma ⁽¹⁾	Washington, United States
CHA-Wilson Rd	Tennessee, United States	Thailand	Bangkok, Thailand

¹In January 2021, management announced plans to close the Tacoma facility. The Tacoma facility ceased manufacturing operations at the end of 2021. The transfer of the manufacturing and marketing of the Tacoma product lines to other facilities within the Infrastructure Solutions segment is expected to be completed during early 2022.

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. Our Thailand site is in the start-up phase of new sales operations.

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 developed and successfully marketed by us.

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.

Our new Versa Jet burner versatile 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.

In addition, 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.

We are focused on producing equipment with the most advanced mix recycling technology in the industry. More tons of reclaimed asphalt pavement ("RAP") are available than are currently being utilized due to restrictions in the amount of RAP allowed by various governmental agencies. Our recycle technology 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. Our latest system improvement, the RAP Pre-Dryer System, was successfully field prototyped in 2018 and is now available to the industry.

Many of our highly technical, sophisticated large asphalt plants, while ideally suited for the United States domestic market, are not as well suited in many international markets. In 2019, we completed testing of our Vantage 140 portable asphalt plant designed specifically for the international market. The Vantage design is based upon our proven Double Barrel drum mixer and 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, we have expanded our mobile plant offering with the newly designed Ventura 140. The Ventura is designed with a counter-flow drying drum that feeds an external coater and provides production rates up to 140 metric tons per hour of virgin mix and is used where recycled material is not available. The Ventura 140SL portable asphalt plant is also focused on satisfying needs of the international market and introduces a smaller, more mobile plant design with single-load capability. We have also developed the new, hybrid-powered FT4250 mobile impactor plant. Hybrid power allows operators flexible power options using either line power or a genset that allows for reduced noise levels, no engine emissions and the ability to run indoors.

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 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. As a result of the pavement smoothness achieved with this machine, certain states now require the use of the Shuttle Buggy. 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 introduced to the market in 2020, 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. The RX-505, our newest cold planer, is equipped with two new safety features that allow for safe cutter drum access and maintenance and obstacle detection while the machine is in reverse.

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 us as well as our competitors.

Concrete is one of the world's most used and durable construction materials. Concrete production equipment is primarily manufactured at three facilities: Blair, Burlington and St-Bruno. Together, these three sites produce a market leading product portfolio. The Blair and St-Bruno sites were acquired in 2020 and joined the Burlington location to expand our concrete product line.

We manufacture 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 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.

We engineer and develop new products 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.

Marketing

The primary purchasers of the products produced by this segment are asphalt producers, highway and heavy equipment contractors, ready mix concrete producers, contractors in the construction and demolition recycling markets and domestic and foreign governmental agencies.

We market our hot-mix asphalt products domestically and internationally primarily under the Astec trademark. Asphalt plants and related equipment are sold directly to asphalt producers or domestic and foreign government agencies through our domestic and international sales departments.

Our concrete products are marketed domestically and internationally under the RexCon, CON-E-CO and BMH trademarks. Our concrete plants and related equipment are sold directly to concrete producers and foreign agencies through our domestic and international sales departments. The BMH and CON-E-CO products are also marketed through dealers domestically and internationally.

We market our asphalt paving equipment under the Roadtec and Carlson trademarks both domestically and internationally to highway and heavy equipment contractors, utility contractors and domestic and foreign governmental agencies both directly and through dealers. Mobile construction equipment and factory authorized machine rebuild services are marketed both directly and through dealers.

This segment's products are marketed by direct and dealer support sales staff and domestic and international independent distributors, including our Australia, AME and Thailand sites.

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	ADM, Almix, Ammann, Benninghoven (part of Deere & Company), Marini (part of Fayat Group), Gencor Industries, Inc. and local manufacturers
Concrete equipment	Erie-Strayer, Stephens Manufacturing and Vince Hagan
Paving and related equipment	Bomag (part of Fayat Group), Caterpillar Paving Products (part of Caterpillar, Inc.), Dynapac (part of Fayat Group), Lee Boy, Vogele (part of Deere & Company), Volvo Construction Equipment (part of Volvo Group AB) and Weiler
Milling equipment	Bomag (part of Fayat Group), Caterpillar Paving Products (part of Caterpillar, Inc.), CMI, Dynapac (part of Fayat Group), Volvo Construction Equipment (part of Volvo Group AB) and Wirtgen (part of Deere & Company)
Forestry and recycling equipment	Bandit, Doppstadt, Morbark, Rotochopper and Vermeer

Backlog

The backlog for the Infrastructure Solutions segment at December 31, 2021 and 2020 was approximately \$449.3 million and \$218.2 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 2021:

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

The sites within the Materials Solutions segment are primarily manufacturing operations with the AME and India sites 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. Belo Horizonte manufactures asphalt plants in addition to certain core products produced in the Materials Solutions segment. Belo Horizonte also markets products in the Brazilian market that are produced by all of our manufacturing sites. Our India site is in the start-up phase of new sales operations.

Belo Horizonte was a start-up in 2014 and delivered its first asphalt plant in early 2016; however, sales in the South American market have continued to be hampered by the economic downturn in South America and more specifically in Brazil. We plan to position ourselves to significantly increase the production and sales volumes by Belo Horizonte and have begun manufacturing other product lines at the facility. At December 31, 2021, we had an ownership interest of approximately 93% in Belo Horizonte.

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

In conjunction with the Materials Solutions products we manufacture, we offer consulting and engineering services to provide complete "turnkey" processing systems, which often include electrical control centers and plant automation products we produce.

We are a world leader in the development of hydraulic relief jaw crushers having patented our first model in 2002. Hydraulic relief jaw crushers are a significant improvement in safety, adjustment and clearing of material in jaw crushers. In addition, we offer a range of cone crushers to meet critical aggregate or mining needs, which include technology features that deliver a distinct performance advantage, such as hydraulic overload protection, chamber clearing, push button adjustment and a proprietary anti-spin system.

Our vibrating screen line features multiple sizes of single deck to quadruple deck screens and contains the "Neverwear" sealing system guaranteed to keep lubricants in and to never wear out.

We manufacture a complete line of primary, secondary, tertiary and quaternary crushers, including jaw, horizontal shaft impactor, vertical shaft impactor and cone rock crushers as well as industry related washing and conveying equipment, mobile screening plants, portable and stationary screen structures and vibrating and high frequency screens. These rock crushers are used by mining, quarrying and sand and gravel producers to crush oversized aggregate to salable size, in addition to their use for recycled concrete and asphalt. This equipment can be purchased as individual components, as portable plants for flexibility or as completely engineered systems for both portable, stationary and RAP applications. We offer the highly-portable Fast Pack System, featuring quick setup and teardown, thereby maximizing production time and minimizing downtime. We also offer portable fully self-contained and self-propelled Fast Trax track-mounted jaw, cone, vertical shaft impactors and horizontal shaft crushers, which are ideal for either recycle or hard rock applications, allowing the producer to move the equipment to the material. The expanded GT line of track-mounted crushing and screening plants focuses more specifically on the needs of global markets.

Portable plants combine various combinations of crushing, screening and conveying equipment mounted on tow away chassis and track chassis configurations. Due to high transportation costs of construction materials, many producers use portable equipment to process materials they need in close proximity to their job sites. Portable plants allow aggregate producers the ability to quickly and efficiently move equipment from one location to another as their jobs necessitate. The portable track plants are fully self-contained and allow operators to be producing materials within minutes of unloading equipment off of their transport trucks. Track-mounted crushing and screening plants enable contractors to perform jobs that in the past were not economically feasible and also allow our dealers to compete in the large track-mounted rental market.

Sand classifying and washing equipment is designed to clean, separate and re-blend material from sand deposits to meet the size specifications for critical applications. Products offered include fine and coarse material washers, log washers, blade mills, sand classifying tanks, cyclones, dewatering screens, density classifiers, sieve bend screens and attrition cells. Additional portable and stationary plants are also offered to handle the growing needs in construction sands, specialty sands and fines recovery. Screening plants are available in both stationary and highly portable models and are complemented by a full line of radial stacking and overland belt conveyors. Screening plants also serve the recycle, crushed stone, industrial and general construction industries.

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.

Our complete line of industry leading rock breaker systems for the mining, quarry and recycling markets provide large-scale stationary rock breakers for open pit mining, as well as mid-sized stationary rock breakers for underground applications. In addition, we offer a full line of smaller rock breaker systems for mobile track and portable primary crushing plants as well as a full line of four-wheel drive articulated production and utility vehicles, scalars and rock breakers for underground mining and a complete line of hydraulic breakers, compactors and demolition attachments for the North American construction and demolition markets.

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 and are sold globally.

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, recycle and crushing contractors, open mine operators, quarry operators, port and inland terminal authorities, power stations and domestic and foreign governmental agencies.

Materials Solutions' equipment and aftermarket sales and service program are primarily marketed through an extensive network of dealers by 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 competitors include the following as well as smaller manufacturers, both domestic and international:

CDE Global	McCloskey	Terex
Deister	McLanahan	Thor
Epiroc	Metso Minerals	Weir Minerals (Trio)
Edge Innovate	Sandvik Mining and Construction	Kleemann (part of Deere & Company)
Masaba	Superior Industries	

Backlog

At December 31, 2021 and 2020, the backlog for the Materials Solutions Group was approximately \$313.3 million and \$142.3 million, respectively.

Corporate

The Corporate category consists of our parent company and our captive insurance company, Astec Insurance, which do not meet the requirements for separate disclosure as an operating segment or inclusion in one of the other reporting segments. Our parent company and our captive insurance company provide support and corporate oversight for all the sites. We record U.S. federal income tax expenses and state deferred taxes for all business segments on the parent company's books; therefore, these taxes are included in the Corporate category for segment reporting.

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 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. Manufacturing operations during 2021 took place through 16 of our sites. 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. Most steel is delivered on a "just-in-time" arrangement from the supplier to reduce inventory requirements at the manufacturing facilities, but is occasionally inventoried after purchase. Raw materials for manufacturing are normally readily available; however, certain highly customized components may require longer than normal lead times. In addition, we have experienced challenges related to our supply chain attributable to the ongoing impact of the COVID-19 pandemic. Other components used in the manufacturing processes include engines, gearboxes, power transmissions 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 reporting 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 116 United States patents and 142 foreign patents. Our subsidiaries have 16 United States and 40 foreign patent applications pending.

We have 83 trademarks registered in the United States, including logos for Astec, Carlson Paving, Heatec, KPI-JCI, Peterson Pacific, Power Flame, Roadtec and Telsmith, 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 126 trademarks registered in foreign jurisdictions, including Argentina, Australia, Brazil, Canada, China, European Union, France, Germany, India, Italy, Kazakhstan, Mexico, New Zealand, Paraguay, Peru, Russia, South Africa, South Korea, Taiwan, Thailand, United Kingdom, Ukraine, Uruguay and Vietnam. We have 13 United States and 24 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 typically are strongest during the first, second and fourth quarters with the third quarter consistently generating weaker results. We expect future operations in the near term to be typical of this historical trend.

As of December 31, 2021 and 2020, we had a backlog for delivery of products at certain dates in the future of approximately \$762.6 million and \$360.5 million, respectively. Approximately \$346.4 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 over 90% of all 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. Our investment in concrete batch plants in 2020 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 OneASTE^C. 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 OneASTE^C in all we 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.

In 2021, we executed our first global employee engagement survey. In total, 73% of our workforce responded and provided us with valuable feedback. Throughout the year we have focused on the three main areas of opportunity identified: communication, performance management and diversity.

Employee Profile

As of December 31, 2021, we employed 4,041 individuals, including 3,437 employees in the U.S. and Canada. We also retain consultants, independent contractors and temporary and part-time workers. As of December 31, 2021, the functional representation of our employees was as follows: 2,646 were engaged in manufacturing, 393 in engineering, including support staff, and 1,002 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 82 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 8, 2022. Unions also represent approximately 25% 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, that 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 schedules, adoption and surrogacy assistance, employee assistance programs, tuition assistance and on-site services.

Health and Safety

The well-being and safety of our employees is a paramount value for us and this is consistent with 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. More particularly, 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;
- local management cascades safety practices throughout the organization, including daily "safety huddles" for each work-shift;
- we use safety scorecards, standardized signage, and visual management throughout our facilities, in addition to traditional safety training;
- regularly conduct monthly safety calls to discuss and share best practices with the local safety managers; and
- distribute monthly employee newsletters and executive-led town hall meetings.

We aspire to reduce lost time and recordable injuries each year. During the year ended December 31, 2021, we had zero recordable injuries at five of our sites. However, we experienced a 23% increase in our recordable injuries across all sites compared to the year ended December 31, 2020. Our Occupational Safety and Health Administration Incident Rate experienced an increase from 1.39 for the year ended December 31, 2020 to 1.71 for the year ended December 31, 2021.

In response to the COVID-19 pandemic, we implemented significant changes that we determined were in the best interest of our employees, partners and the communities in which we operate, and which complied with government orders. This included having those employees who could, work from home and implementing additional safety measures for our production and other employees continuing critical on-site work. Closely following the recommendations of the World Health Organization, the U.S. Centers for Disease Control and local governments, we took numerous actions to ensure the health and safety of our employees.

As a result of the effects of the COVID-19 pandemic, 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 as well as meeting manufacturing 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.

Talent Development, Diversity, Equity and Inclusion

Talent and Diversity are key components of our OneASTECH 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 2021, we developed and implemented a new Performance Management model and process company-wide to align our efforts 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, which is currently comprised of 20% women.

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.

Risks Related to the COVID-19 Pandemic

The COVID-19 pandemic continues to present risks that have and could continue to materially and adversely affect our business, financial condition, results of operations and/or cash flows.

The emergence of the COVID-19 pandemic has significantly impacted our operations. Throughout 2020, our operations were adversely effected by significantly weakened demand for our products given the global economic uncertainty resulting from the pandemic. While demand for our products has recovered throughout the pandemic, 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. Furthermore, any future governmental measures taken in response to the pandemic, including travel bans and restrictions, quarantines, shelter in place orders and business closures or vaccine mandates, could further impact our operations as well as demand for our products. Restrictions on access to our manufacturing facilities or on the support operations or workforce, or similar limitations for suppliers and dealers, as well as restrictions or disruptions of transportation, port closures, increased border controls or closures, and material and component supply shortages have limited and could continue to limit our ability to meet customer demand, which could 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 virus, and our ability to perform critical functions could be harmed.

Uncertainties related to the continuing impact of the COVID-19 pandemic on our business include: the duration and impact of the resurgence in COVID-19 cases (including as a result of new variants of the virus) and the efficacy of the COVID-19 vaccination program in any country, state, or region; prolonged reduction or closure of our operations, or a delayed recovery in our operations; additional closures as mandated or otherwise made necessary or advisable by governmental authorities; disruptions in the supply chain and a prolonged delay in resumption of operations by one or more key suppliers, or the failure of any key suppliers to deliver products; our ability to meet commitments to our customers on a timely basis as a result of increased costs and supply challenges; the ability to receive goods on a timely basis and at anticipated costs; increased logistics costs; delays in our strategic initiatives as a result of reduced spending on research and development; additional operating costs and inefficiencies due to remote working arrangements, adherence to social distancing guidelines and other pandemic related workplace challenges; absence of employees due to illness; the impact of the pandemic on our customers and dealers business operations, and their delays in their plans to invest in new equipment; requests by our customers or dealers for payment deferrals and contract modifications; the impact of disruptions in the global capital markets and/or declines in our financial performance, outlook or credit ratings, which could impact our ability to obtain funding in the future; currency fluctuations and volatility resulting from economic uncertainty due to the pandemic's global impacts; and the impact of the pandemic on demand for our products and services. All of these factors could materially and adversely affect our business, liquidity, results of operations and financial position and the ultimate magnitude of COVID-19 related effects is dependent on these uncertainties. As a result, we cannot at this time predict the impact of the COVID-19 pandemic, but it could have a continuing material and adverse effect on our business, financial condition, results of operations and/or cash flows. Furthermore, the COVID-19 pandemic could heighten the other risks and uncertainties set forth in the risk factors below. Please also see the discussion on our response to COVID-19 in Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations of this report and Item 1. Business of this report, "Human Capital Resources and Management".

Economic and Industry Risks

Downturns in the general economy or decreases in commercial and residential construction spending or government infrastructure 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.

Global interest rates have recently been at or near historic lows resulting in historically low financing costs for construction projects. While we expect rates to remain relatively low in the near-term, 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 2021, international sales represented approximately 23.3% of our total sales as compared to 20.2% in 2020. 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.

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 and outbreaks and shipping and container constraints, 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. The aforementioned risks have been, and may continue to be, exacerbated by the impact of COVID-19.

We may be adversely affected by any natural or man-made disruptions to our distribution and manufacturing facilities.

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.

Strategic Performance Risks

We may not fully sustain targeted performance improvements and other benefits realized from our recently announced OneASTE C business model.

In March 2020, we launched our OneASTE C business model, with the strategic pillars of Simplify, Focus and Grow. This is a focused effort towards an operating model centered around continuous improvement. The OneASTE C business model was designed to better set strategic direction, define priorities and improve overall operating performance, as described in greater detail in the section titled "Corporate Strategic Objectives" in Item 1. Business. 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 OneASTE C business model. Furthermore, the implementation of the OneASTE C initiatives may result in an increase in near-term expenses and negatively impact operational effectiveness and employee morale.

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.

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.

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. Designing innovative equipment to function as expected is inherently difficult and significant additional design phase, field testing and redesign costs may be incurred. 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 or the failure 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. 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.

Financial Risks

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

As of December 31, 2021, we were in compliance with the financial covenants contained in our credit agreement with Wells Fargo Bank, N.A. 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, 2021, we had no borrowings, but did have \$2.5 million in letters of credit outstanding under the Wells Fargo 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 and the United Kingdom have entered into their own independent loan agreements with other lending institutions.

The expected phase out of LIBOR could impact the interest rates paid on our variable rate indebtedness and customer financing subsidy arrangements and cause our interest expense to increase.

The ICE Benchmark Administration Limited, the authorized administrator of LIBOR, has confirmed its intention to cease the publication of the one month and three month USD LIBOR after June 30, 2023. The U.S. Federal Reserve, in conjunction with the Alternative Reference Rates Committee, a steering committee comprised of large U.S. financial institutions, has endorsed replacing LIBOR with the Secured Overnight Financing Rate ("SOFR"), a new index calculated based on transactions in the market for short-term treasury securities. Our borrowings under the Wells Fargo credit agreement reference one month USD LIBOR. As of December 31, 2021, we had no borrowings but did have \$2.5 million in letters of credit outstanding under the Wells Fargo credit agreement. We may also borrow additional amounts under the credit agreement in the future. Additionally, we pay subsidies that are, or were, based on the one month or three month USD LIBOR to third party finance companies that reduce the borrowing rate for our customers that choose to finance the purchase of our products. We have amended some of the arrangements mentioned above to reference SOFR instead of LIBOR and plan to amend the remaining such arrangements before June 30, 2023. We are not able to predict whether SOFR will become a widely accepted benchmark in place of LIBOR or what the impact of such a possible transition to SOFR may be on our financial condition.

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 and other intangible assets for impairment at least annually, 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 and indefinite-lived intangible assets are subject to impairment assessments at least annually (or more frequently when events or changes in circumstances indicate that impairment may have occurred). At October 1, 2021, our testing indicated no impairment had occurred. 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 collaboration, 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 contributory effects of the COVID-19 pandemic have resulted in significant challenges 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, while we strive to reduce the impact of the departure of high performing employees, we could be impacted by the loss of employees, particularly when departures involve groups of employees. Our ability to meet our business objectives may be affected by the departure of employees. Further, the departure of groups of employees could increase the risk of claims or litigation from former employees. 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 OneASTECH 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.

Our management has very minimal unencumbered equity ownership in us. If we are not able to retain our key personnel or attract additional key personnel as required, we may not be able 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 OneASTECH 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.

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.

If we become subject to increased governmental regulation, we may incur significant costs.

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 that arise in the ordinary course of our business. 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 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. 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, 2021, our manufacturing, warehouse and office facilities total approximately 3.5 million square feet of space globally. We believe all properties to be well maintained and adequate for present use, with sufficient capacities for current and business 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	Infrastructure Solutions	Manufacturing/rebuild, offices, training center and storage	999,000
Yankton, South Dakota	Materials Solutions	Manufacturing and offices	344,995
Eugene, Oregon	Materials Solutions	Manufacturing and offices	140,300
Eugene, Oregon	Infrastructure Solutions	Manufacturing and offices	135,000
Tacoma, Washington ⁽²⁾	Infrastructure Solutions	Manufacturing and offices	120,234
Burlington, Wisconsin	Infrastructure Solutions	Manufacturing and offices	112,100
Chattanooga, Tennessee ⁽¹⁾	Infrastructure Solutions	Warehouse	110,000
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	60,000
Rossville, Georgia	Infrastructure Solutions	Manufacturing	40,500
Yankton, South Dakota ⁽¹⁾	Materials Solutions	Warehouse	22,297
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 either partially or fully leased.

⁽²⁾ Plans have been announced to exit this facility.

ITEM 3. LEGAL PROCEEDINGS

Currently, we are involved in a number of legal proceedings. 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 SHAREHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Common Stock and Cash Dividends

Our common stock is traded on the Nasdaq National Market under the ticker symbol "ASTE".

Holders

As of February 24, 2022, there were 259 holders of record of our common stock.

Dividend Policy

We paid quarterly dividends of \$0.11 per common share to shareholders in the first, second and third quarters of 2021 and the first, second, third and fourth quarters 2020. Our Board of Directors ("Board") increased the dividend payment \$0.01 to a total of \$0.12 per common share to shareholders for the fourth quarter of 2021. We paid cash of \$10.2 million and \$10.0 million for dividends in 2021 and 2020, respectively. 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, the declaration and amount of future cash dividends are subject to the Board's sole discretion and their periodic review of our dividend policy and will depend upon our earnings, financial condition, liquidity needs, business plans and opportunities and other factors in making and setting dividend policy.

Issuer Purchases of Equity Securities

As announced to the public in a Form 8-K filing on July 30, 2018, we approved a share repurchase program, which authorizes us to repurchase up to \$150.0 million of our common stock. As of December 31, 2021, the maximum dollar value of shares available for repurchase under the plan is approximately \$126.0 million. No shares were repurchased under the plan during 2021.

Performance Graph

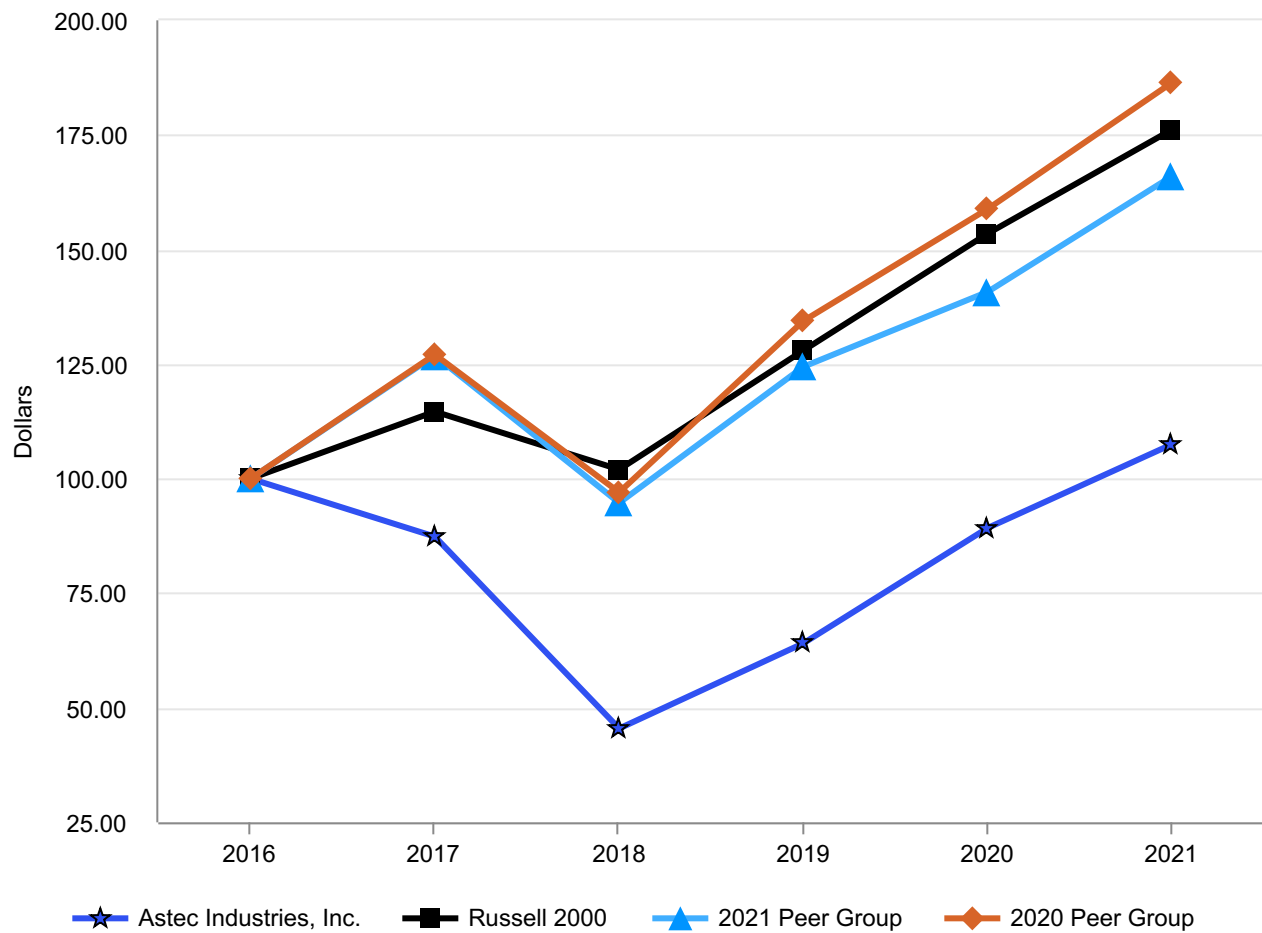
The stock performance graph below compares the cumulative five-year total return provided to shareholders of Astec Industries, Inc.'s common stock relative to the cumulative total returns of the Russell 2000 index, our updated peer group ("2021 Peer Group") and our previous peer group ("2020 Peer Group"). The companies included in the 2021 Peer Group and the 2020 Peer Group are representative of our definitive Proxy peer group, which we believe reflects industrial manufacturing companies of comparable size and complexity for the corresponding period and are reviewed annually and revised as necessary.

The ticker symbol of the companies included in our each of our peer groups are as follows:

2021 Peer Group: ALG, AIMC, B, GTLS, CIR, CMCO, CVGI, EPAC, NPO, FSS, GBX, HY, JBT, LNN, MTW, MWA, SHYF, SPXC, SXI and WNC

2020 Peer Group: ALG, AIMC, CIR, CMCO, CVGI, EPAC, NPO, FSS, GBX, LNN, MTW, NDSN, SHYF, SPXC, SXI, TTC and WNC

The graph assumes that the value of an investment in our common stock, in the Russell 2000 index, in the 2021 Peer Group and in the 2020 Peer Group was \$100 on December 31, 2016 and assumes reinvestment of all dividends as well as the relative performance of each through December 31, 2021.



(in dollars)	December 31,					
	2016	2017	2018	2019	2020	2021
Astec Industries, Inc.	100.00	87.35	45.47	64.08	89.25	107.52
Russell 2000	100.00	114.63	101.99	127.98	153.49	176.18
2021 Peer Group	100.00	126.84	94.70	124.42	140.77	166.01
2020 Peer Group	100.00	127.07	97.01	134.43	158.87	186.45

ITEM 6. SELECTED FINANCIAL DATA

Not applicable.

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, 2021. 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 2021 and 2020 items and year-to-year comparisons between 2021 and 2020. Discussions of 2019 items and year-to-year comparisons between 2020 and 2019 that are not included in this Annual Report on Form 10-K 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, 2020](#).

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 producers; highway and heavy equipment contractors; utility contractors; sand and gravel producers; construction, demolition, recycle and crushing 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, 2021 as compared to the same period of the prior year include the following:

- Net sales were \$1,097.2 million, an increase of 7.1%
- Gross profit was \$251.7 million, an increase of 4.8%
- Income from operations decreased \$20.9 million to \$22.1 million
- Net income attributable to Astec decreased to \$17.8 million, or 62.0%
- Diluted earnings per share were \$0.78, a decrease of 62.0%

Significant Items Impacting Operations in 2021

COVID-19 Pandemic

The COVID-19 pandemic has caused significant disruptions to national and global economies and to our business. While our businesses have generally remained operational throughout the pandemic, with temporary closures in the United Kingdom and South Africa early in the pandemic, our business has been significantly affected by the contributory effects of the pandemic such as decreased demand for our products in 2020, material price increases, increased lead times from production materials, supplies and parts and labor shortages. These trends continue to impact our business today and may continue to impact our business in the near-term.

We have also taken precautions to protect our employees and their families and our customers and suppliers from COVID-19 and continually monitor the markets in which we operate for the effects of COVID-19 and the related actions of governments and other authorities to contain COVID-19.

The COVID-19 pandemic may continue to negatively disrupt our business and results of operations in the future. The ongoing impact of the COVID-19 pandemic on our operations and the markets we serve remains uncertain due to constantly evolving developments including, but not limited to, government directives, treatment availability and acceptance, vaccine mandates and the spread of new variants, such as the Delta and Omicron variants, and cannot be accurately predicted. See Part I, Item 1A. Risk Factors in this Annual Report on Form 10-K.

Closure of Tacoma Facility

In January 2021, management announced plans to close the Tacoma facility. The Tacoma facility ceased manufacturing operations at the end of 2021. The transfer of the manufacturing and marketing of the Tacoma product lines to other facilities within the Infrastructure Solutions segment is expected to be completed during early 2022.

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

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

Since initiating SFG, we have consolidated certain of our sites as a key part of these initiatives. Site consolidation costs including headcount reductions, inventory movement and facility shut-down costs are included in "Restructuring, impairment and other asset charges, net" in the Consolidated Statements of Operations.

In addition, in late 2020 we launched 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. An implementation of this scale is a major financial undertaking and will require substantial time and attention of management and key employees. Costs incurred during 2021 were \$13.4 million, which represent costs directly associated with the SFG initiative 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.

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 a number of other manufacturers and dealers that produce and sell similar products.

We ended 2020 with a strong backlog of orders, which has grown throughout 2021 across our global organization as well as in both the Infrastructure Solutions and Materials Solutions segments. The backlog of orders as of December 31, 2021 was \$762.6 million compared to \$360.5 million as of December 31, 2020, an increase of \$402.1 million or 111.5%. Increased orders were driven by pent-up demand, both customer retail and dealer inventory replenishment, following economic uncertainty in 2020 as a result of COVID-19 as well as in anticipation of future infrastructure investment by the United States' government under the Infrastructure Investment and Jobs Act ("IIJA") enacted in November 2021. Additionally, 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. Federal transportation funding under the Fixing America's Surface Transportation Act expired December 3, 2021. As noted above, the U.S. government enacted the IIJA in November 2021. 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. We believe that multi-year highway programs (such as the IIJA) 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. While oil prices have increased throughout 2021, its price volatility makes 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, we expect prices will continue to increase into 2022.

Steel is a major component of our equipment. With a drop in supply, similar to oil, steel prices began increasing in the latter part of 2020 and have continued to increase throughout the year. As a result, we have experienced a rising cost of steel throughout 2021. We anticipate that steel demand will remain strong into 2022, bolstered by the IJJA. However, we expect new steelmaking capacity to enter the market in 2022 moving us towards a more historical balance of supply and demand, thus slowing the pace of price inflation we experienced in 2021. In response to these factors, we continue to employ flexible strategies to ensure supply and minimize the impact of price volatility. Ongoing constraints in the supply of certain steel products will continue pressuring the availability of other components used in our manufacturing process. Furthermore, given the recent volatility of steel prices and the nature of our customers' orders, we are often not able to pass through all of the increases in steel costs to our customers, which negatively impacts our gross profit.

We actively manage our global supply chain for any identified constraints and volatility. Challenges related to our supply chain, including potential labor shortages at our vendors and logistics partners and the availability of shipping containers, cargo ships and unloading space, have continued to drive increased lead times for certain components used in our manufacturing processes. We cannot estimate the full impact that any future disruptions might have on our operations. We will continue to monitor potential future supply costs and availability.

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. 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.

Results of Operations: 2021 vs. 2020

Net Sales

Net sales increased \$72.8 million or 7.1% to \$1,097.2 million in 2021 from \$1,024.4 million in 2020. The increase was primarily driven by changes in the volume, pricing and mix of sales that generated increases in equipment and parts and component sales of \$45.2 million and \$29.8 million, respectively, partially offset by decreases in used equipment and service and equipment installation sales of \$7.3 million and \$3.4 million, respectively. Additionally, we recognized \$33.1 million of net incremental sales from acquired businesses partially offset by reduced sales from the exit of our Enid oil and gas drilling product lines of \$25.0 million. Sales reported by our foreign subsidiaries in U.S. dollars for 2021 would have been \$11.6 million lower had exchange foreign exchange rates been the same as 2020 rates.

Domestic sales for 2021 were \$842.1 million or 76.7% of net sales compared to \$817.0 million or 79.8% of net sales for 2020, an increase of \$25.1 million or 3.1%. Domestic sales increased primarily due to: (i) net incremental sales of \$26.0 million from acquired businesses, (ii) \$19.1 million higher equipment sales, and (iii) \$14.6 million of higher parts and components sales. These increases were partially offset by: (i) reduced sales from the exit of our Enid oil and gas drilling product lines of \$24.0 million, (ii) lower used equipment sales of \$6.2 million and (iii) reduced service and equipment installation sales of \$4.2 million.

International sales for 2021 were \$255.1 million or 23.3% of net sales compared to \$207.4 million or 20.2% of net sales for 2020, an increase of \$47.7 million or 23.0%. International sales increased primarily due to: (i) \$26.1 million higher equipment sales mainly from COVID-19 related temporary site closures in the prior year, (ii) \$15.2 million of higher parts and components sales and (iii) net incremental sales of \$7.1 million from acquired businesses.

Gross Profit

Consolidated gross profit for 2021 was \$251.7 million or 22.9% of net sales as compared to \$240.1 million or 23.4% of net sales in 2020, an increase of \$11.6 million or 4.8%. The increase was primarily driven by: (i) the impact of net favorable volume, pricing and mix that generated \$39.8 million higher gross profit, (ii) \$16.8 million in manufacturing efficiencies, (iii) net incremental gross profit of \$5.6 million from acquired businesses and (iv) reduced costs from the exit of our Enid oil and gas drilling product lines of \$2.9 million. These increases were partially offset by the impact of inflation on materials, labor and overhead of \$53.5 million.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for 2021 were \$200.6 million or 18.3% of net sales compared to \$166.9 million or 16.3% of net sales for 2020, an increase of \$33.7 million or 20.2%, primarily due to: (i) increased costs for centralization and infrastructure efforts associated with our transformation initiatives, (ii) \$12.9 million of higher technology and software licensing costs, (iii) \$5.4 million of incremental expenses for acquired businesses and (iv) \$2.1 million of higher amortization expense. These increases were partially offset by decreases of \$7.1 million for reduced expenses associated with closed locations and \$4.9 million of lower trade show and promotional expenses.

Research and Development Expenses

Research and development expenses increased \$4.4 million or 19.9% to \$26.5 million in 2021 from \$22.1 million in 2020. During 2021, we increased efforts related to research and development of new products and improvements to existing product lines as well as adaptation of those products to other markets as compared to prior year that experienced COVID-19 constraints and restructuring.

Restructuring, Impairment and Other Asset Charges, Net

We are in the process of a strategic transformation under which we have completed various restructuring and right-sizing actions. Restructuring, asset impairment charges and the net gain on the sale of property and equipment for the year ended December 31, 2021 and 2020 are presented below:

(in millions)	Years Ended December 31,	
	2021	2020
Restructuring charges:		
Costs associated with closing Tacoma	\$ 1.6	\$ 0.9
Costs associated with closing Enid	0.7	2.5
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	2.9	9.9
Asset impairment charges:		
Airplane impairment charges	—	2.3
Goodwill impairment charges	—	1.6
Other impairment charges	0.2	0.5
Total asset impairment charges	0.2	4.4
Gain on sale of property and equipment, net:		
Gain on sale of property and equipment, net	(0.6)	(6.2)
Total gain on sale of property and equipment, net	(0.6)	(6.2)
Restructuring, impairment and other asset charges, net	\$ 2.5	\$ 8.1

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 benefit for the year ended December 31, 2021 was \$1.4 million compared to income tax benefit of \$1.2 million for 2020. The effective tax rates for 2021 and 2020 were (8.5)% and (2.6)%, respectively. Our tax rates are affected by recurring items which are generally consistent from period to period, as well as discrete items that may occur in any given period but are not consistent from period to period. 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 net operating losses ("NOLs"), where deductions exceed taxable income, at our Brazilian subsidiary, the dissolution of Astec Mobile Machinery GmbH ("AMM") during the year and a benefit of \$4.1 million for research and development tax credits. These benefits were partially offset by a \$4.4 million change in the NOLs of our foreign entities. Significantly impacting the 2020 income tax benefit was a net discrete tax benefit of \$9.5 million resulting from provisions of the Coronavirus Aid, Relief and Economic Security Act ("CARES Act"). Among other provisions, the CARES Act modified the NOL carryback provisions, which allowed us to carryback its 2018 NOL to prior tax years. This change not only favorably impacted the timing of the NOL benefit, but also increased the tax benefit amount as the federal tax rates in the prior years (35%) were higher than the current federal tax rate (21%).

Backlog

The backlog of orders at December 31, 2021 was \$762.6 million compared to \$360.5 million at December 31, 2020, an increase of \$402.1 million or 111.5%. Domestic and international backlogs increased \$346.4 million or 123.4% and \$55.7 million or 69.7%, respectively. The backlog increased \$231.1 million to \$449.3 million in the Infrastructure Solutions segment and increased \$171.0 million to \$313.3 million in the Materials Solutions segment. Increased orders were driven by pent-up demand, both customer retail and dealer inventory replenishment, following economic uncertainty in 2020 as a result of COVID-19 as well as in anticipation of future infrastructure investment by the United States' government combined with slower production cycles due to increased lead times for certain production materials, parts and supplies and manufacturing labor shortages.

Net Sales by Segment

(in millions)	Years Ended December 31,		\$ Change	% Change
	2021	2020		
Infrastructure Solutions	\$ 748.0	\$ 702.8	\$ 45.2	6.4 %
Materials Solutions	\$ 349.2	\$ 321.6	\$ 27.6	8.6 %

Infrastructure Solutions

Sales in this segment were \$748.0 million for 2021 compared to \$702.8 million for 2020, an increase of \$45.2 million or 6.4%. The increase was primarily driven by a positive impact of changes in the volume, pricing and mix of sales that generated increases in equipment and parts and components sales of \$28.8 million and \$18.0 million respectively, partially offset by decreases in used equipment and service and equipment installation sales of \$6.3 million and \$2.8 million, respectively. Additionally, we recognized \$33.1 million of net incremental sales from acquired businesses partially offset by reduced sales from the exit of our Enid oil and gas drilling product lines of \$25.0 million.

Domestic sales for the Infrastructure Solutions segment increased by \$13.0 million or 2.2% for 2021 compared to 2020 primarily due to (i) \$26.0 million of net incremental sales from acquired businesses, (ii) increased equipment sales of \$14.2 million and (iii) increased parts and component sales of \$6.1 million. These increases were partially offset by: (i) reduced sales from the exit of our Enid oil and gas drilling product lines of \$24.0 million, (ii) \$4.8 million of lower used equipment sales and (iii) \$3.5 million of lower service and equipment installation sales.

International sales for the Infrastructure Solutions segment increased \$32.2 million or 28.2% for 2021 compared to 2020 driven by: (i) increased equipment sales of \$14.6 million, (ii) increased parts and component sales of \$11.9 million and (iii) \$7.1 million of net incremental sales from acquired businesses.

Materials Solutions

Sales in this segment were \$349.2 million for 2021 compared to \$321.6 million for 2020, an increase of \$27.6 million or 8.6% driven by the favorable impact of changes in volume, pricing and mix of sales that generated increases in equipment and parts and components sales of \$16.4 million and \$11.8 million, respectively.

Domestic sales for the Materials Solutions segment increased \$12.1 million or 5.3% for 2021 compared to 2020 primarily due to increased parts and component sales of \$8.5 million and increased equipment sales of \$5.0 million partially offset by lower used equipment sales.

International sales for the Materials Solutions segment increased \$15.5 million or 16.6% for 2021 compared to 2020 primarily due to increased equipment sales of \$11.4 million and increased parts and component sales of \$3.3 million related to the recovery from COVID-19 related temporary site closures in the prior year.

Segment Profit (Loss)

(in millions)	Years Ended December 31,		\$ Change	% Change
	2021	2020		
Infrastructure Solutions	\$ 53.0	\$ 53.8	\$ (0.8)	(1.5)%
Materials Solutions	\$ 29.3	\$ 32.1	\$ (2.8)	(8.7)%
Corporate	\$ (64.8)	\$ (40.1)	\$ (24.7)	(61.6)%

Infrastructure Solutions

Segment profit for the Infrastructure Solutions segment was \$53.0 million for 2021 compared to \$53.8 million for 2020, a decrease of \$0.8 million or 1.5%. The decrease in segment profit resulted primarily from the impact of higher inflation on materials, labor and overhead costs of \$33.1 million and increased general and administrative costs of \$6.6 million. These increased costs were partially offset by: (i) the impact of favorable volume, pricing and mix that generated \$25.1 million higher gross profit, (ii) reduced losses from divested businesses of \$7.0 million, (iii) \$4.0 million of increased manufacturing efficiencies and (iv) \$3.1 million in decreased restructuring costs.

Materials Solutions

Segment profit for the Materials Solutions segment was \$29.3 million for 2021 compared to \$32.1 million for 2020, a decrease of \$2.8 million or 8.7%. The decrease in segment profits resulted primarily from: (i) the impact of higher inflation on materials, labor and overhead costs of \$20.5 million, (ii) increased general and administrative costs of \$7.3 million, (iii) a settlement loss on pension termination of \$5.2 million and (iv) increased research and development expenses of \$3.0 million. These increased costs were partially offset by: (i) the impact of favorable volume, pricing and mix that generated \$14.7 million higher gross profit, (ii) \$11.5 million in manufacturing efficiencies, (iii) \$5.5 million reduced income tax expense and (iv) reduced expenses associated with closed locations of \$4.1 million.

Corporate

Corporate operations incurred expenses of \$64.8 million for 2021 compared to expenses of \$40.1 million for 2020, an unfavorable change of \$24.7 million or 61.6%. The increase in expenses resulted primarily from: (i) increased costs related to centralization and infrastructure efforts associated with our transformation initiatives, (ii) the net change in income tax benefit and expense of \$4.3 million and (iii) increased research and development expenses of \$2.7 million. These increased costs were partially offset by non-recurring impairment charges incurred in the prior year of \$2.7 million primarily related to a Company airplane that was subsequently sold in the first quarter of 2021.

Liquidity and Capital Resources

Our primary sources of liquidity and capital resources are cash and cash equivalents on hand, borrowing capacity under a \$150.0 million revolving credit facility (the "Credit Facility") and cash flows from operations. We had \$134.1 million of cash and cash equivalents available for operating purposes as of December 31, 2021, of which \$21.7 million was held by our foreign subsidiaries. We did not have any outstanding borrowings on the Credit Facility at December 31, 2021 or 2020. In addition, no borrowings were made under the Credit Facility during 2021 or 2020. Our outstanding letters of credit totaling \$2.5 million decreased borrowing availability to \$147.5 million under the revolving credit facility as of December 31, 2021. The revolving credit facility agreement contains certain financial covenants, including provisions concerning required levels of annual net income and minimum tangible net worth. We were in compliance with the financial covenants of the Credit Facility at December 31, 2021.

Certain of our international subsidiaries in South Africa, Australia, Brazil and the United Kingdom each have separate credit facilities with local financial institutions 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 maintains an independent credit facility at a separate financial institution and 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.

Material cash requirements as of December 31, 2021 include working capital needs, capital expenditures, vendor hosted software arrangements including the related implementation costs, unrecognized tax benefits and operating lease payments.

We regularly enter into agreements primarily to purchase inventory in the ordinary course of business. As of December 31, 2021, open purchase obligations totaled \$243.0 million, of which \$231.3 million are expected to be fulfilled within one year.

We estimate that our capital expenditures will be between \$30 and \$40 million for the year ending December 31, 2022, which may be impacted by general economic, financial or operational changes, including the impact of COVID-19 on our operating results, and competitive, legislative and regulatory factors, among other considerations.

In late 2020 and early 2021, we entered into certain vendor hosted software arrangements in conjunction with our transformation initiatives to convert our internal operations, manufacturing and finance systems to cloud-based platforms globally. These agreements include software-related payments of \$45.9 million to be paid through September 2027. Payments of \$5.8 million will be made during 2022, \$16.9 million during the years 2023 to 2024, \$16.7 million during the years 2025 to 2026 and \$6.5 million after 2026. These cash payments are exclusive of the separately contracted implementation costs that are project-based and are committed at each phase of the implementation.

Our liability for unrecognized tax benefits totaled \$10.8 million at December 31, 2021 for which the timing of cash settlements to the respective taxing authorities, if any, cannot be reliably predicted.

As of December 31, 2021, our short and long-term operating lease liabilities are \$1.8 million and \$4.7 million, respectively. These balances represent our contractual obligation to make future payments on our leases, discounted to reflect our cost of borrowing. See Note 10, Leases, for information regarding our leases, including obligations by fiscal year.

Beginning in 2022, the Tax Cuts and Jobs Act of 2017 eliminates the option to deduct research and development expenditures in the year incurred and requires taxpayers to amortize domestic expenditures over five years and foreign expenditures over 15 years. If this component of the legislation is not deferred, repealed or modified, operating cash flows will be materially decreased beginning in 2022.

Cash Flows from Operating Activities

(in millions)	Years Ended December 31,		Increase / Decrease
	2021	2020	
Net income	\$ 17.9	\$ 46.9	\$ (29.0)
Deferred tax (benefit) provision	(1.3)	8.6	(9.9)
Gain on disposition of property and equipment	(0.6)	(6.2)	5.6
Non-cash curtailment and settlement loss (gain) on pension and postretirement benefits, net	3.2	(0.5)	3.7
Asset impairment charges, net	0.2	4.4	(4.2)
(Purchase) sale of trading securities, net	(3.1)	0.2	(3.3)
(Increase) decrease in receivables and other contract assets	(30.8)	12.2	(43.0)
(Increase) decrease in inventories	(53.8)	44.7	(98.5)
Increase in prepaid expenses	(6.2)	—	(6.2)
Increase (decrease) in accounts payable	30.8	(8.6)	39.4
Increase (decrease) in accrued payroll and related expenses	3.0	(5.1)	8.1
Increase (decrease) in customer deposits	26.5	(11.2)	37.7
Income taxes payable/prepaid	(13.6)	16.0	(29.6)
Other, net	35.2	40.1	(4.9)
Net cash provided by operating activities	<u>\$ 7.4</u>	<u>\$ 141.5</u>	<u>\$ (134.1)</u>

Net cash provided by operating activities decreased \$134.1 million in 2021 compared to 2020. The primary drivers of the decrease in operating cash flows were the increase of inventories on hand due to higher backlog and supply chain logistics challenges of \$98.5 million, the timing of receivables and other contract assets of \$43.0 million and payable/prepaid income taxes of \$29.6 million and lower net income of \$29.0 million. These decreases were partially offset by increases related to the timing of accounts payable payments of \$39.4 million and higher customer deposits of \$37.7 million associated with higher backlog amounts in the current year.

Cash Flows from Investing Activities

(in millions)	Years Ended December 31,		Increase / Decrease
	2021	2020	
Acquisitions, net of cash acquired	\$ 0.1	\$ (32.5)	\$ 32.6
(Price adjustment on prior) proceeds from sale of subsidiary	(1.1)	9.1	(10.2)
Expenditures for property and equipment	(20.1)	(15.4)	(4.7)
Proceeds from sale of property and equipment	1.9	17.7	(15.8)
Purchase of investments	(1.0)	(1.1)	0.1
Sale of investments	1.8	1.3	0.5
Net cash used in investing activities	<u>\$ (18.4)</u>	<u>\$ (20.9)</u>	<u>\$ 2.5</u>

Net cash used in investing activities decreased by \$2.5 million in 2021 as compared to 2020 primarily due to acquisitions occurring in the prior year that did not recur in 2021 partially offset by higher proceeds from the sale of property and equipment and divestiture activity in 2020 that did not recur in 2021 combined with increased property and equipment expenditures in 2021.

Cash Flows from Financing Activities

(in millions)	Years Ended December 31,		Increase / Decrease
	2021	2020	
Payment of dividends	\$ (10.2)	\$ (10.0)	\$ (0.2)
Borrowings, net under bank loans	1.0	0.1	0.9
Withholding tax paid upon vesting of share-based compensation awards	(3.5)	(0.8)	(2.7)
Other, net	0.6	0.3	0.3
Net cash used in financing activities	<u>\$ (12.1)</u>	<u>\$ (10.4)</u>	<u>\$ (1.7)</u>

Net cash used in financing activities increased by \$1.7 million in 2021 as compared to 2020 primarily due to higher withholding tax payments on the vesting of share-based compensation awards.

Financial Condition

Our current assets increased to \$641.7 million at December 31, 2021 from \$565.8 million at December 31, 2020, an increase of \$75.9 million or 13.4%. The increase is due primarily to increases in inventories of \$53.3 million, increases in trade receivables and contract assets, net of \$28.2 million, increases in prepaid and refundable income taxes of \$10.7 million and increases in prepaid expenses and other assets of \$6.0 million partially offset by decreases in cash, cash equivalents and restricted cash of \$24.2 million. Accounts receivable days outstanding increased from 45.3 in 2020 to 50.3 in 2021.

Our current liabilities increased to \$225.3 million at December 31, 2021 from \$170.3 million at December 31, 2020, an increase of \$55.0 million or 32.3%. The increase is primarily due to increases in accounts payable of \$30.8 million, increases in customer deposits of \$26.0 million and increases in accrued payroll and related liabilities of \$2.8 million partially offset by decreases in other accrued liabilities of \$4.8 million.

Contingencies

Management has reviewed all claims and lawsuits and has made adequate provision for any losses that are probable and can be reasonably estimated. Based upon currently available information and with the advice of counsel, management believes that the ultimate outcome of our current claims and legal proceedings, individually and in the aggregate, will not have a material adverse effect on our financial position, cash flows or results of operations. However, claims and legal proceedings are subject to inherent uncertainties and rulings unfavorable to us could occur. If an unfavorable ruling were to occur, there exists the possibility of a material adverse effect on our financial position, cash flows or results of operations.

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 for discussion of contingent liabilities for customer purchases, various guarantees including letters of credit, advance payments and retention guarantees as well as contingencies related to legal proceedings in which we are involved.

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. Other contract assets and liabilities are typically not material as a percentage of total assets or total liabilities, respectively.

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.

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 not amortized but is tested for impairment annually or more frequently if events or circumstances indicate that such goodwill might be impaired. 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 in 2020.

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 2 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 Facility and our international term loan and credit facilities. A hypothetical 100 basis point increase in the interest rates would not have materially affected interest expense for the years ended December 31, 2021 and 2020 due to low outstanding balances and borrowings during the respective periods. We do not hedge variable interest.

Foreign Exchange Risk

We are subject to foreign exchange risk at our foreign operations. Foreign operations represent 18.9% and 22.2% of total assets at December 31, 2021 and 2020, respectively, and 14.7% and 12.1% of total net sales for the years ended December 31, 2021 and 2020, respectively. Each period, the balance sheets and related results of operations of our foreign subsidiaries 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 other comprehensive income in equity. 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, 2021 or 2020 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. Most steel is delivered on a "just-in-time" arrangement from the supplier to reduce inventory requirements at the manufacturing facilities but is occasionally inventoried after purchase. 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

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

[Consolidated Balance Sheets](#)

[Consolidated Statements of Operations](#)

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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.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Astec Industries, Inc. and subsidiaries (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income, equity, and cash flows for each of the years in the three-year period ended December 31, 2021, 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, 2021, based on *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, 2021 and 2020, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2021, 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, 2021 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 audit 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 audit 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 Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates 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 a critical audit matter 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

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 \$303.0 million in inventories and \$1,097.2 million in net sales as of December 31, 2021 and for the year then ended, respectively. Inventories are 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 at 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.

/s/ KPMG LLP

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

Atlanta, Georgia
February 28, 2022

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

	December 31,	
	2021	2020
ASSETS		
Current assets:		
Cash, cash equivalents and restricted cash	\$ 134.4	\$ 158.6
Investments	8.6	4.3
Trade receivables and contract assets, net	144.1	115.9
Other receivables, net	3.5	4.7
Inventories	303.0	249.7
Prepaid and refundable income taxes	19.5	8.8
Prepaid expenses and other assets	23.5	17.5
Assets held for sale	5.1	6.3
Total current assets	641.7	565.8
Property and equipment, net	171.7	172.8
Investments	12.2	13.7
Goodwill	38.6	38.7
Intangible assets, net	22.7	31.2
Deferred income tax assets	16.0	15.0
Other long-term assets	8.4	11.0
Total assets	\$ 911.3	\$ 848.2
LIABILITIES AND EQUITY		
Current liabilities:		
Current maturities of long-term debt	\$ 0.1	\$ 0.2
Short-term debt	2.6	1.4
Accounts payable	83.5	52.7
Customer deposits	60.2	34.2
Accrued product warranty	10.5	10.3
Accrued payroll and related liabilities	23.6	20.8
Accrued loss reserves	1.9	3.0
Other current liabilities	42.9	47.7
Total current liabilities	225.3	170.3
Long-term debt	0.2	0.4
Deferred income tax liabilities	1.4	0.5
Other long-term liabilities	29.6	34.0
Total liabilities	256.5	205.2
Commitments and contingencies (Note 16)		
Shareholders' equity:		
Preferred stock – authorized 4,000,000 shares of \$1.00 par value; none issued	—	—
Common stock – authorized 40,000,000 shares of \$0.20 par value; issued and outstanding – 22,767,052 in 2021 and 22,611,976 in 2020	4.5	4.5
Additional paid-in capital	130.6	127.8
Accumulated other comprehensive loss	(32.4)	(33.5)
Company stock held by deferred compensation programs, at cost	(1.2)	(1.5)
Retained earnings	552.8	545.2
Shareholders' equity:	654.3	642.5
Noncontrolling interest	0.5	0.5
Total equity	654.8	643.0
Total liabilities and equity	\$ 911.3	\$ 848.2

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,		
	2021	2020	2019
Net sales	\$ 1,097.2	\$ 1,024.4	\$ 1,169.6
Cost of sales	845.5	784.3	930.2
Gross profit	251.7	240.1	239.4
Selling, general and administrative expenses	200.6	166.9	183.9
Research and development expenses	26.5	22.1	27.2
Restructuring, impairment and other asset charges, net	2.5	8.1	3.2
Income from operations	22.1	43.0	25.1
Other income:			
Interest expense	(1.1)	(0.7)	(1.4)
Interest income	0.5	0.8	1.2
Other (expenses) income, net	(5.0)	2.6	0.3
Income from operations before income taxes	16.5	45.7	25.2
Income tax (benefit) provision	(1.4)	(1.2)	3.0
Net income	17.9	46.9	22.2
Net (income) loss attributable to noncontrolling interest	(0.1)	—	0.1
Net income attributable to controlling interest	\$ 17.8	\$ 46.9	\$ 22.3
Per share data:			
Earnings per common share - Basic	\$ 0.78	\$ 2.08	\$ 0.99
Earnings per common share - Diluted	\$ 0.78	\$ 2.05	\$ 0.98
Weighted average shares outstanding - Basic	22,726,767	22,585,515	22,515,161
Weighted average shares outstanding - Diluted	22,948,632	22,877,743	22,674,182

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

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

	Years Ended December 31,		
	2021	2020	2019
Net income	\$ 17.9	\$ 46.9	\$ 22.2
Other comprehensive income (loss):			
Change in unrecognized pension and postretirement benefit costs	3.1	0.1	1.0
Tax expense on change in unrecognized pension and postretirement benefit costs	—	—	(0.2)
Foreign currency translation adjustments	(2.1)	(1.8)	2.0
Other comprehensive income (loss)	1.0	(1.7)	2.8
Comprehensive loss attributable to noncontrolling interest	—	—	0.1
Comprehensive income attributable to controlling interest	<u>\$ 18.9</u>	<u>\$ 45.2</u>	<u>\$ 25.1</u>

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,		
	2021	2020	2019
Cash flows from operating activities			
Net income	\$ 17.9	\$ 46.9	\$ 22.2
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation	20.1	20.8	21.4
Amortization	10.1	6.1	4.8
Provision for credit losses	1.4	0.9	1.2
Provision for warranties	10.9	9.8	9.8
Deferred compensation expense	0.5	0.7	0.6
Share-based compensation	6.0	5.1	2.6
Deferred tax (benefit) provision	(1.3)	8.6	1.7
(Gain) loss on disposition of property and equipment	(0.6)	(6.2)	0.3
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	0.2	4.4	0.3
Distributions to deferred compensation programs participants	(2.5)	(1.4)	(2.2)
Change in operating assets and liabilities, excluding the effects of acquisitions:			
(Purchase) sale of trading securities, net	(3.1)	0.2	(0.9)
Receivables and other contract assets	(30.8)	12.2	7.5
Inventories	(53.8)	44.7	61.3
Prepaid expenses	(6.2)	—	(2.3)
Other assets	1.5	(0.2)	0.2
Accounts payable	30.8	(8.6)	(13.0)
Accrued retirement benefit costs	(0.1)	—	(1.3)
Accrued loss reserves	(1.3)	0.3	(1.1)
Accrued payroll and related expenses	3.0	(5.1)	0.7
Other accrued liabilities	(0.7)	9.8	1.3
Accrued product warranty	(10.7)	(10.2)	(10.5)
Customer deposits	26.5	(11.2)	(5.3)
Income taxes payable/prepaid	(13.6)	16.0	12.2
Other	—	—	1.1
Net cash provided by operating activities	<u>7.4</u>	<u>141.5</u>	<u>112.6</u>
Cash flows from investing activities:			
Acquisitions, net of cash acquired	0.1	(32.5)	—
(Price adjustment on prior) proceeds from sale of subsidiary	(1.1)	9.1	—
Expenditures for property and equipment	(20.1)	(15.4)	(23.4)
Proceeds from sale of property and equipment	1.9	17.7	0.5
Purchase of investments	(1.0)	(1.1)	(0.6)
Sale of investments	1.8	1.3	1.9
Net cash used in investing activities	<u>\$ (18.4)</u>	<u>\$ (20.9)</u>	<u>\$ (21.6)</u>

(Continued)

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

	Years Ended December 31,		
	2021	2020	2019
Cash flows from financing activities:			
Payment of dividends	\$ (10.2)	\$ (10.0)	\$ (10.0)
Borrowings under bank loans	7.2	6.0	166.0
Repayments of bank loans	(6.2)	(5.9)	(224.0)
Sale of Company stock by deferred compensation programs, net	0.6	0.3	0.3
Withholding tax paid upon vesting of share-based compensation awards	(3.5)	(0.8)	(0.4)
Net cash used in financing activities	<u>(12.1)</u>	<u>(10.4)</u>	<u>(68.1)</u>
Effect of exchange rates on cash	(1.1)	(0.5)	0.2
(Decrease) increase in cash and cash equivalents and restricted cash	(24.2)	109.7	23.1
Cash and cash equivalents and restricted cash, beginning of period	158.6	48.9	25.8
Cash and cash equivalents and restricted cash, end of period	<u>\$ 134.4</u>	<u>\$ 158.6</u>	<u>\$ 48.9</u>
Supplemental Cash Flow Information			
Cash paid during the year for:			
Interest, net of capitalized interest	<u>\$ 0.3</u>	<u>\$ 0.3</u>	<u>\$ 1.8</u>
Income taxes paid (refunded), net	<u>\$ 10.0</u>	<u>\$ (20.2)</u>	<u>\$ (11.3)</u>
Supplemental disclosures of non-cash items			
Non-cash investing activities:			
Capital expenditures in accounts payable	<u>\$ 1.4</u>	<u>\$ 0.7</u>	<u>\$ 2.0</u>
Non-cash financing activities:			
Additions to right-of-use assets and lease liabilities	<u>\$ 1.8</u>	<u>\$ 1.5</u>	<u>\$ 3.2</u>
Liability award converted to equity	<u>\$ —</u>	<u>\$ 0.8</u>	<u>\$ —</u>

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

ASTECH 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, 2018	22,513,015	\$ 4.5	\$ 120.6	\$ (33.9)	\$ (1.9)	\$ 495.3	\$ 0.6	\$ 585.2
Net income (loss)	—	—	—	—	—	22.3	(0.1)	22.2
Other comprehensive income	—	—	—	2.8	—	—	—	2.8
Dividends (\$0.44 per share)	—	—	—	—	—	(10.0)	—	(10.0)
Share-based compensation	2,910	—	2.3	—	—	—	—	2.3
Issuance of common stock under incentive plan	35,258	—	—	—	—	—	—	—
Withholding tax paid upon equity award vesting	—	—	(0.4)	—	—	—	—	(0.4)
SERP transactions, net	—	—	0.1	—	0.2	—	—	0.3
Cumulative impact of ASU No. 2018-02	—	—	—	(0.7)	—	0.7	—	—
Balance, December 31, 2019	<u>22,551,183</u>	<u>\$ 4.5</u>	<u>\$ 122.6</u>	<u>\$ (31.8)</u>	<u>\$ (1.7)</u>	<u>\$ 508.3</u>	<u>\$ 0.5</u>	<u>\$ 602.4</u>
Net income	—	—	—	—	—	46.9	—	46.9
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)
SERP transactions, net	—	—	0.1	—	0.2	—	—	0.3
Balance, December 31, 2020	<u>22,611,976</u>	<u>\$ 4.5</u>	<u>\$ 127.8</u>	<u>\$ (33.5)</u>	<u>\$ (1.5)</u>	<u>\$ 545.2</u>	<u>\$ 0.5</u>	<u>\$ 643.0</u>
Net income	—	—	—	—	—	17.8	0.1	17.9
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	<u>22,767,052</u>	<u>\$ 4.5</u>	<u>\$ 130.6</u>	<u>\$ (32.4)</u>	<u>\$ (1.2)</u>	<u>\$ 552.8</u>	<u>\$ 0.5</u>	<u>\$ 654.8</u>

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. The Company also manufactures 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; 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; 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 manufacturing sites and sites that operate as sales offices for the Company's manufacturing locations. During the first quarter of 2020, management completed an internal reorganization focused on transitioning from a decentralized management structure to a more centralized structure with major directives and decisions being made at the segment and/or parent company level. As a result of this reorganization, the Company's reportable segments were realigned moving from three to two reportable segments (plus Corporate) - Infrastructure Solutions and Materials Solutions. The Company's two reportable business segments comprise sites based upon the nature of the products or services produced, 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 category consists primarily of the parent company and Astec Insurance Company ("Astec Insurance" or the "captive"), a captive insurance company, which do not meet the requirements for separate disclosure as an operating segment or inclusion in one of the other reporting segments. Management evaluates performance and allocates resources to the operating segments based on profit or loss from operations before United States ("U.S.") federal income taxes, state deferred taxes and corporate overhead and, thus, these costs are included in the Corporate category.

Amounts previously reported under the previous segment structure have been restated to conform to the new segment structure.

COVID-19 Pandemic

The COVID-19 pandemic has caused significant disruptions to national and global economies. Since its identification in March 2020, the COVID-19 pandemic has negatively disrupted the Company's business and results of operations and may continue to do so in the future. The full extent of the COVID-19 pandemic on the Company's operations and the markets it serves remains uncertain due to constantly evolving developments including, but not limited to, government directives, treatment availability and acceptance, vaccine mandates and the spread of new variants, such as the Delta and Omicron variants, and cannot be accurately predicted.

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 (income) loss 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 inventory obsolescence costs, warranty costs, inventory net realizable value, self-insurance loss reserves, share-based compensation 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 \$117.0 million and \$137.0 million in a government money market fund at December 31, 2021 and December 31, 2020, respectively, which is included in "Cash, cash equivalents and restricted cash" in the Consolidated Balance Sheets.

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

Investments - Investments consist primarily of investment-grade marketable securities. Trading securities 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 adopted the provisions of Accounting Standards Update ("ASU") No. 2016-13, "Financial Instruments – Credit Losses (Topic 326)" on January 1, 2020 and, accordingly, measures its credit losses on receivables using an expected loss model. See additional disclosure of this adoption below in Recently Adopted Accounting Pronouncements.

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 recorded 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, which would currently include the impact of COVID-19.

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, 2021, 2020 and 2019:

(in millions)	Years Ended December 31,		
	2021	2020	2019
Allowance balance, beginning of year	\$ 1.7	\$ 1.4	\$ 1.2
Provision	0.7	0.9	1.2
Write offs	(0.4)	(0.6)	(1.0)
Allowance balance, end of year	<u>\$ 2.3</u>	<u>\$ 1.7</u>	<u>\$ 1.4</u>

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 year ended December 31, 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 – As of December 31, 2021, the Company recorded assets held for sale of \$5.1 million related to land and building assets of its former Enid business, which are being marketed for sale. The Company accounted for the Enid land and building and one of the Company's planes as assets held for sale as of December 31, 2020. The sale of the plane was completed in the first quarter of 2021.

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, offices, 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.

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 for impairment annually in the fourth quarter, or more frequently, as events dictate. Beginning in 2021, the Company changed its annual goodwill impairment testing date from October 31 to October 1 to better align the testing date with its financial planning process and alleviate resource constraints. The Company would not expect a materially different outcome in any given year as a result of testing on October 1 as compared to October 31.

Goodwill impairment is the excess of the carrying amount of a reporting unit (that includes goodwill) over its fair value. Impairment is limited to the carrying amount of goodwill allocated to the reporting unit. The Company first assesses qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount as a basis for determining whether it is necessary to perform a quantitative goodwill impairment test. The more likely than not threshold is defined as having a likelihood of more than 50 percent. If, after assessing the totality of events or circumstances, management determines that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then performing the quantitative impairment test is unnecessary and the goodwill is considered to be unimpaired. However, if based on the qualitative assessment management concludes that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, the Company will proceed with performing the quantitative evaluation process.

The quantitative evaluation compares the carrying value of each reporting unit that has goodwill with the estimated fair value of the respective reporting unit. Should the carrying value of a reporting unit be in excess of the estimated fair value of that reporting unit, a goodwill impairment charge will be recognized in the amount by which the reporting unit's carrying amount exceeds its fair value, but not to exceed the total goodwill assigned to the reporting unit. The determination of the fair value of the Company's reporting units is based on a combination of a market approach, that considers benchmark company market multiples, and an income approach, that utilizes discounted cash flows for each reporting unit. The cash flows used to determine fair value are dependent on a number of significant management assumptions such as expectations of future performance and the expected future economic environment, which are partly based upon historical experience. 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. As part of the goodwill impairment testing, management also considers the Company's market capitalization in assessing the reasonableness of the combined fair values estimated for its reporting units. While management believes such assumptions and estimates are reasonable, the actual results may differ materially from the projected amounts.

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	2 - 4
Other	3 - 19

Pension and Retirement Plans - In October 2021, the Company settled its obligations under its defined benefit pension plan. 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 are described in Note 14, Employee Benefit Plans and include 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 income (loss)" 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.

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 consolidated into 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 at all of the Company's domestic manufacturing subsidiaries. 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, for annual rebates given to certain high volume customers 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 \$29.3 million in 2021 and nominal orders in 2020 and 2019 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 \$1.5 million, \$2.6 million and \$3.7 million in advertising costs during 2021, 2020 and 2019, 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 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 \$7.8 million during 2021. The Company reported \$0.1 million of derivative assets in "Prepaid expenses and other assets" at both December 31, 2021 and December 31, 2020. The Company held no derivative liabilities at December 31, 2021 and \$0.5 million of derivative liabilities reported in "Other current liabilities" at December 31, 2020.

The Company recognized, as a component of "Cost of sales", a net gain on the change in fair value of derivative instruments of \$0.8 million and \$0.2 million for the years ended December 31, 2021 and 2020, respectively. The Company recognized a net loss of \$0.1 million for the year ended December 31, 2019. There were no derivatives that were designated as hedges at December 31, 2021 or 2020.

Foreign Currency - Subsidiaries located in Australia, Brazil, Canada, Chile, India, the United Kingdom, South Africa and Thailand 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 for 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 "Cost of sales" and amounted to a loss of \$1.3 million in 2021, a gain of \$1.1 million in 2020 and a loss of \$0.6 million in 2019.

Earnings Per Share - Basic earnings per share is computed by dividing "Net 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 and stock held in the Company's deferred compensation programs, using the treasury stock method. 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,		
	2021	2020	2019
Denominator:			
Denominator for basic earnings per share	22,726,767	22,585,515	22,515,161
Effect of dilutive securities:			
Restricted stock units	150,754	185,965	110,974
Unvested performance share units	35,747	65,404	—
Deferred compensation programs	35,364	40,859	48,047
Denominator for diluted earnings per share	<u>22,948,632</u>	<u>22,877,743</u>	<u>22,674,182</u>

Reclassifications and Adjustments

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.

Recently Adopted Accounting Pronouncements

In June 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-13, "Financial Instruments – Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments" including subsequent amendments issued thereafter (collectively "Topic 326"). The standard changes how credit losses are measured for most financial assets and certain other instruments that currently are not measured through net income (loss). The standard requires an expected loss model for instruments measured at amortized cost as opposed to the current incurred loss approach. In valuing available for sale debt securities, allowances will be required to be recorded, rather than the current approach of reducing the carrying amount, for other than temporary impairments. A cumulative adjustment to retained earnings was to be recorded as of the beginning of the period of adoption to reflect the impact of applying the provisions of the standard. The standard was effective for public companies for periods beginning after December 15, 2019, and the Company adopted the new standard as of January 1, 2020. As the Company's credit losses are typically minimal, the adoption of the new standard did not have a significant impact on the Company's financial position, results of operations or cash flows and no cumulative adjustment to retained earnings was recorded.

In February 2018, the FASB issued ASU No. 2018-2, "Income Statement – Reporting Comprehensive Income (Topic 220), Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income", which permits companies to reclassify tax effects stranded in accumulated other comprehensive income ("OCI") as a result of U.S. tax reform impacting tax rates or other items, such as changing from a worldwide tax system to a territorial system, from OCI to retained earnings. Other tax effects stranded in OCI due to other reasons, such as prior changes in tax laws or changes in valuation allowances, may not be reclassified. The new standard was effective for fiscal years beginning after December 15, 2018, and the Company adopted its provisions as of January 1, 2019. As a result of adopting this new standard, the Company reclassified \$0.7 million of previously stranded tax effects from "Accumulated other comprehensive loss" to "Retained earnings" as shown in the Consolidated Statements of Equity for the year ended December 31, 2019.

In August 2018, the FASB issued ASU 2018-15, Intangibles-Goodwill and Other-Internal-Use-Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract. This ASU aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software, with amortization expense being recorded in the same income statement expense line as the hosted service costs and over the expected term of the hosting arrangement. This ASU is effective for fiscal years, and interim periods, beginning after December 15, 2019. The Company adopted the provisions of this standard as of January 1, 2020, and it has been applied prospectively for applicable implementation costs incurred subsequent to the effective date. The adoption of this new standard did not have a material impact on its financial position, results of operations, cash flows or disclosures.

In August 2018, the FASB issued ASU No. 2018-13, "Fair Value Measurement (Topic 820): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement" which aims to improve the overall usefulness of disclosures to financial statement users and reduce unnecessary costs to companies when preparing fair value measurement disclosures. The standard is effective for annual and interim periods beginning after December 15, 2019 with early adoption permitted. The Company adopted this new standard effective January 1, 2020. The adoption of this new standard did not have a material impact on its financial position, results of operations, cash flows or disclosures.

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.

Recently Issued Accounting Pronouncements Not Yet Adopted

In March 2020, the FASB issued ASU 2020-04, "Reference Rate Reform (Topic 848)", which provides optional guidance for a limited period of time to ease the potential burden in accounting (or recognizing the effects of) reference rate reform on financial reporting. This was in response to stakeholders raising certain operational challenges likely to arise in accounting for contract modifications and hedge accounting because of reference rate reform. Some of those challenges relate to the significant volume of contracts and other arrangements, such as debt agreements, lease agreements and derivative instruments, which will be modified to replace references to discontinued rates with references to replacement rates. For accounting purposes, such contract modifications are required to be evaluated in determining whether the modifications result in the establishment of new contracts or the continuation of existing contracts. Stakeholders indicated that due to the significant volume of affected contracts and other arrangements, together with a compressed time frame for making contract modifications, the application of existing accounting standards on assessing modifications versus extinguishments could be costly and burdensome. In addition, stakeholders indicated that financial reporting results should reflect the intended continuation of such contracts and arrangements during the period of the market-wide transition to alternative reference rates. This new standard is optional and may be elected effective through December 31, 2022. The Company has limited contracts or other arrangements impacted by

the use of LIBOR. The most significant of these is the \$150.0 million revolving credit facility discussed in Note 11, Debt, for which no amounts have been drawn in 2021 or 2020. As such, this standard, if adopted, is not expected to have a material impact on the Company's financial position or disclosures.

In November 2021, the FASB issued 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 is effective for annual periods beginning after December 15, 2021. Availability of government assistance has typically been limited. The Company will continue to evaluate the impact on its disclosures based on government assistance received in future periods.

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

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 Company's allocation of the purchase price, net of the adjustments in the first and second quarters of 2021 discussed below, resulted in the recognition of \$4.3 million of intangible assets primarily consisting of customer relationships (eight year life) and trade name (three 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. 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.

In the first quarter of 2021, the Company recorded a \$0.4 million adjustment related to a refined valuation of deferred tax liabilities, which was offset in intangible assets. In the second quarter of 2021, the Company recorded a \$0.3 million adjustment related to right-of-use lease assets, which was offset in accounts payable and other.

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

(in millions)	Amount
Accounts receivable	\$ 2.3
Inventories	8.1
Other assets	6.3
Intangible assets	4.3
Total assets acquired	<u>\$ 21.0</u>
Accounts payable and other	(4.4)
Advance customer deposits	(2.8)
Total liabilities assumed	(7.2)
Total purchase price	<u><u>\$ 13.8</u></u>

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 Company's allocation of the purchase price resulted in the recognition of \$6.3 million of goodwill and \$5.7 million of other intangible assets primarily consisting of customer relationships (nine year life) and of trade name (15 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. 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. The goodwill is not deductible for income tax purposes.

In the first quarter of 2021, a working capital adjustment was made that resulted in the decrease of goodwill of \$0.1 million.

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

(in millions)	Amount
Cash	\$ 1.2
Accounts receivable and contract assets	6.4
Inventories	2.0
Goodwill	6.3
Other assets	3.8
Intangible assets	5.7
Total assets acquired	\$ 25.4
Total liabilities assumed	(9.8)
Total purchase price	\$ 15.6

Proforma financial information is not included since not significant.

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,	
	2021	2020
Raw materials and parts	\$ 216.1	\$ 154.6
Work-in-process	54.0	57.3
Finished goods	29.6	34.0
Used equipment	3.3	3.8
Total	\$ 303.0	\$ 249.7

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.

In the fourth quarter of 2019, through the Company's assessment of the age, quantities on hand, market acceptance of the equipment, the Company's exit of the Enid oil and gas drilling product lines and other related factors, it was determined that various specific equipment models at each of the Company's sites and certain other inventories required adjustments to their net realizable values. As such, during the fourth quarter of 2019, the Company recorded an inventory write-down of \$32.6 million within "Cost of sales" in the 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; marketable equity securities held in a non-qualified Supplemental Executive Retirement Plan ("SERP") and a separate non-qualified Deferred Compensation Plan (collectively, the "Deferred Compensation Programs"). 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 liabilities 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, 2021 and 2020 are Level 1 and Level 2 in the fair value hierarchy as defined above:

(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

(in millions)	December 31, 2020		
	Level 1	Level 2	Total
Financial assets:			
Trading equity securities:			
Deferred compensation programs money market fund	\$ 0.2	\$ —	\$ 0.2
Deferred compensation programs mutual funds	4.8	—	4.8
Preferred stocks	0.3	—	0.3
Equity funds	1.7	—	1.7
Trading debt securities:			
Corporate bonds	4.8	—	4.8
Municipal bonds	—	0.9	0.9
Floating rate notes	0.4	—	0.4
U.S. government securities	1.8	—	1.8
Asset-backed securities	—	2.1	2.1
Other	—	1.0	1.0
Derivative financial instruments	—	0.1	0.1
Total financial assets	\$ 14.0	\$ 4.1	\$ 18.1
Financial liabilities:			
Derivative financial instruments	\$ —	\$ 0.5	\$ 0.5
Deferred compensation programs liabilities	—	7.3	7.3
Total financial liabilities	\$ —	\$ 7.8	\$ 7.8

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, 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
December 31, 2020				
Trading equity securities	\$ 6.4	\$ 0.6	\$ —	\$ 7.0
Trading debt securities	10.8	0.3	0.1	11.0
Total	\$ 17.2	\$ 0.9	\$ 0.1	\$ 18.0

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 mainly 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 in the fourth quarter, 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. Management performed a qualitative assessment for the October 1, 2021 annual impairment analysis, which indicated no impairment. This review 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 are not limited to, macroeconomic conditions (including the impact of the COVID-19 pandemic), industry and competitive environment conditions, overall financial performance, business specific events and market considerations. The majority of the Company's goodwill were generated on a legacy basis and as a result have fair values that sufficiently exceed their underlying carrying values.

For the annual test of goodwill performed as of October 31, 2020, management performed a qualitative assessment as described above and concluded that there was no impairment of goodwill. Management performed a quantitative valuation for the October 31, 2019 annual impairment analysis, which indicated no impairment.

The Company completed the acquisitions of CON-E-CO and BMH Systems during the year ended December 31, 2020, which increased goodwill \$6.3 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, 2021 and 2020 are as follows:

(in millions)	Infrastructure Solutions	Materials Solutions	Total
Balance, December 31, 2019:			
Goodwill	\$ 32.7	\$ 32.8	\$ 65.5
Accumulated impairment losses	(20.2)	(12.2)	(32.4)
Net	<u>\$ 12.5</u>	<u>\$ 20.6</u>	<u>\$ 33.1</u>
2020 Activity:			
Foreign currency translation	\$ 0.3	\$ 0.5	\$ 0.8
Acquisitions	6.4	—	6.4
Impairment	(1.6)	—	(1.6)
Total 2020 activity	<u>\$ 5.1</u>	<u>\$ 0.5</u>	<u>\$ 5.6</u>
Balance, December 31, 2020:			
Goodwill	\$ 39.4	\$ 33.3	\$ 72.7
Accumulated impairment	(21.8)	(12.2)	(34.0)
Net	<u>\$ 17.6</u>	<u>\$ 21.1</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>\$ (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>\$ 38.6</u>

8. Intangible Assets

Intangible assets consisted of the following at December 31, 2021 and 2020:

(in millions)	2021			2020		
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Dealer network and customer relationships	\$ 37.1	\$ 22.9	\$ 14.2	\$ 39.2	\$ 20.9	\$ 18.3
Trade names	10.2	7.8	2.4	10.8	4.8	6.0
Other	13.5	7.4	6.1	12.5	5.6	6.9
Total	<u>\$ 60.8</u>	<u>\$ 38.1</u>	<u>\$ 22.7</u>	<u>\$ 62.5</u>	<u>\$ 31.3</u>	<u>\$ 31.2</u>

Amortization expense on intangible assets was \$10.1 million, \$6.1 million and \$4.4 million for 2021, 2020 and 2019, respectively.

Future annual expected amortization expense on intangible assets as of December 31, 2021 are as follows (in millions):

2022	\$ 8.1
2023	4.3
2024	3.5
2025	1.8
2026	1.3
2027 and thereafter	3.7

9. Property and Equipment

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

(in millions)	December 31,	
	2021	2020
Land	\$ 13.9	\$ 15.6
Building and land improvements	154.3	148.3
Construction in progress	7.6	3.1
Manufacturing and office equipment	239.2	238.7
Aviation equipment	4.7	4.7
Less accumulated depreciation	(248.0)	(237.6)
Total	<u>\$ 171.7</u>	<u>\$ 172.8</u>

Depreciation expense was \$20.1 million, \$20.8 million and \$21.4 million for the years ended December 31, 2021, 2020 and 2019, 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, 2021, none of the Company's leases were deemed to be finance leases.

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

(in millions)	Years Ended December 31,		
	2021	2020	2019
Operating lease expense	\$ 2.3	\$ 2.6	\$ 2.6
Short-term lease expense	1.5	1.0	1.3
Cash paid for operating leases included in operating cash flows	2.5	2.7	2.7

(in millions)	December 31,	
	2021	2020
Operating lease right-of-use asset	\$ 5.8	\$ 6.6
Operating lease short-term liability	1.6	1.9
Operating lease long-term liability	4.2	4.7
Weighted average remaining lease term (in years)	6.15	6.55
Weighted average discount rate used in calculating right-of-use asset	3.49 %	3.66 %

Future annual minimum lease payments as of December 31, 2021 are as follows (in millions):

2022	\$ 1.8
2023	1.1
2024	0.8
2025	0.5
2026	0.5
2027 and thereafter	1.8
Total lease payments	\$ 6.5
Less: Interest	(0.7)
Operating lease liabilities	\$ 5.8

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 "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. Other significant terms were left unchanged. Borrowings under the agreement are subject to an interest rate equal to the daily one-month LIBOR rate plus a 0.75% margin. The unused facility fee is 0.125%. The Credit Facility contains certain financial covenants, including provisions concerning required levels of annual net income and minimum tangible net worth.

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.

Certain of the Company's international subsidiaries in South Africa, Australia, Brazil and the United Kingdom each have separate credit facilities with local financial institutions to finance short-term working capital needs, as well as to cover foreign exchange contracts, performance letters of credit, advance payment and retention guarantees. The Brazilian subsidiary maintains an independent credit facility at a separate financial institution and 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 Facility, term loan and credit facilities are summarized in total below:

(in millions, except maturity dates and interest rates)	December 31, 2021		December 31, 2020	
Credit Facility				
Unsecured line of credit - maximum	\$	150.0	\$	150.0
Letters of credit - maximum		30.0		30.0
Borrowings outstanding		—		—
Amount of letters of credit outstanding		2.5		7.6
Line of credit, additional borrowing capacity		147.5		142.4
Term Loan				
Current maturities	\$	0.1	\$	0.2
Long-term maturities		0.2		0.4
Interest rate		10.37 %		10.37 %
Maturity date		April 15, 2024		April 15, 2024
International Credit Facilities and Short-Term Debt				
Total credit line	\$	12.3	\$	12.8
Available credit line		9.7		11.4
Letters of credit - maximum		6.6		7.3
Amount of letters of credit outstanding		1.6		2.6
Short-term debt		2.6		1.4
Interest rate range		1.77% - 6.75%		2.40% - 6.75%

Debt maturities for the Company's short-term and long-term debt are expected to be \$2.7 million, \$0.1 million and \$0.1 million in the years ending December 31, 2022, 2023 and 2024, respectively.

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 2021, 2020 and 2019 are as follows:

(in millions)	2021		2020		2019	
Reserve balance, January 1	\$	10.3	\$	10.3	\$	10.9
Warranty liabilities accrued		10.9		9.8		9.8
Warranty liabilities settled		(10.7)		(10.2)		(10.5)
Other		—		0.4		0.1
Reserve balance, December 31	\$	10.5	\$	10.3	\$	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 and \$7.2 million at December 31, 2021 and 2020, respectively, of which \$3.9 million and \$4.2 million were included in "Other long-term liabilities" in the Consolidated Balance Sheets at December 31, 2021 and 2020, respectively.

14. Employee Benefit Plans

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 shall determine 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 is 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.

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

(in millions)	Pension Benefits	
	2021	2020
Change in benefit obligation:		
Benefit obligation, beginning of year	\$ 18.4	\$ 17.1
Interest cost	0.4	0.5
Actuarial (gain) loss	(0.3)	1.6
Benefits paid	(0.8)	(0.8)
Pension settlement	(17.7)	—
Benefit obligation, end of year	—	18.4
Accumulated benefit obligation	—	18.4
Change in plan assets:		
Fair value of plan assets, beginning of year	19.4	18.0
Actual gain on plan assets	0.6	2.2
Excess plan assets returned	(1.5)	—
Benefits paid	(0.8)	(0.8)
Pension settlement	(17.7)	—
Fair value of plan assets, end of year	—	19.4
Funded status, end of year	\$ —	\$ 1.0
Amounts recognized in the consolidated balance sheets:		
Long-term asset	\$ —	\$ 1.0
Net amount recognized	\$ —	\$ 1.0
Amounts recognized in accumulated other comprehensive loss consist of:		
Net loss	\$ —	\$ 4.9
Net amount recognized	\$ —	\$ 4.9
Weighted average assumptions used to determine the benefit obligation:		
Discount rate	N/A	2.30 %
Rate of compensation increase	N/A	N/A

The primary driver of the actuarial loss in the Company's Pension Plan in 2020 within the change in benefit obligation is a result of a decrease in the discount rate assumption.

All assets in the plan were invested in an exchange-traded mutual fund (Level 1 in the fair value hierarchy) at December 31, 2020 and through the date of settlement. The allocation of assets within the mutual fund as of December 31, 2020 and the target asset allocation ranges by asset category were as follows:

Asset Category	Actual Allocation	Target Allocation Ranges
Equity Securities	48.4%	40% - 65%
Debt Securities	41.0%	30% - 50%
Cash and Cash Equivalents	10.6%	0% - 15%
Total	100.0%	

Net periodic benefit cost for 2021, 2020 and 2019 included the following components:

(in millions)	Pension Benefits		
	2021	2020	2019
Components of net periodic benefit cost (income):			
Interest cost	\$ 0.4	\$ 0.5	\$ 0.6
Expected return on plan assets	(1.0)	(1.0)	(0.8)
Amortization of actuarial loss	0.4	0.4	0.5
Pension settlement	4.5	—	—
Net periodic benefit cost (income)	\$ 4.3	\$ (0.1)	\$ 0.3
Other changes in plan assets and benefit obligations recognized in other comprehensive income (loss):			
Net actuarial loss (gain) for the year	\$ —	\$ 0.4	\$ (0.3)
Amortization of net loss	(0.4)	(0.4)	(0.5)
Pension settlement	(4.5)	—	—
Total recognized in other comprehensive income (loss)	(4.9)	—	(0.8)
Total recognized in net periodic benefit cost and other comprehensive income (loss)	\$ (0.6)	\$ (0.1)	\$ (0.5)
Weighted average assumptions used to determine net periodic benefit cost for years ended December 31:			
Discount rate	N/A	3.10%	4.10%
Expected return on plan assets	N/A	6.00%	6.00%
Rate of compensation increase	N/A	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.

Deferred Compensation Programs

Supplemental Executive Retirement Plan

The Company maintains a SERP for certain of its executive officers. The 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, participants receive their apportioned share of the plan assets in the form of cash.

Deferred Compensation Plan

The Company implemented a Deferred Compensation Plan for certain of its executive officers during 2021. The 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 distribution, participants receive their apportioned share of the plan assets in the form of cash.

Assets of the Deferred Compensation Programs consist of the following:

(in millions)	December 31, 2021		December 31, 2020	
	Cost	Market	Cost	Market
Money market fund	\$ 0.1	\$ 0.1	\$ —	\$ —
Company stock	1.2	2.2	1.5	2.3
Equity securities	4.5	4.9	4.5	5.0
Total	<u>\$ 5.8</u>	<u>\$ 7.2</u>	<u>\$ 6.0</u>	<u>\$ 7.3</u>

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 expense of \$0.5 million, \$0.6 million and \$0.6 million in 2021, 2020 and 2019, 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 \$7.2 million, \$6.9 million and \$7.0 million in 2021, 2020 and 2019, respectively.

15. Income Taxes

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

(in millions)	Years Ended December 31,		
	2021	2020	2019
United States	\$ 14.1	\$ 42.1	\$ 26.7
Foreign	2.4	3.6	(1.5)
Income before income taxes	<u>\$ 16.5</u>	<u>\$ 45.7</u>	<u>\$ 25.2</u>

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

(in millions)	Years Ended December 31,		
	2021	2020	2019
Current (benefit) provision:			
Federal	\$ (0.2)	\$ (14.0)	\$ (0.5)
State	(0.6)	2.4	0.8
Foreign	0.7	1.8	1.0
Total current (benefit) provision	(0.1)	(9.8)	1.3
Deferred (benefit) provision:			
Federal	(0.1)	12.3	2.8
State	1.1	(1.4)	(1.0)
Foreign	(2.3)	(2.3)	(0.1)
Total deferred (benefit) provision	(1.3)	8.6	1.7
Total (benefit) provision:			
Federal	(0.3)	(1.7)	2.3
State	0.5	1.0	(0.3)
Foreign	(1.6)	(0.5)	0.9
Total income tax (benefit) provision	\$ (1.4)	\$ (1.2)	\$ 3.0

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

The (benefit) provision for income taxes differs from the amount computed by applying the statutory federal income tax rate to income before income taxes. A reconciliation of the (benefit) provision for income taxes at the statutory federal income tax rate to the amount provided is as follows:

(in millions)	Years Ended December 31,		
	2021	2020	2019
Tax expense at the statutory federal income tax rate	\$ 3.5	\$ 9.6	\$ 5.3
State income tax, net of federal income tax	1.4	0.3	(2.3)
Research and development tax credits	(4.1)	(4.3)	(6.7)
FIN 48 impact	1.8	4.0	3.2
Liquidation of subsidiary	(0.8)	—	(0.9)
Change in foreign subsidiary net operating loss carryforward	4.4	(0.3)	(1.4)
Valuation allowance impact	(8.1)	(1.0)	5.8
Changes in tax rates	0.7	0.3	0.1
Effects of Cares Act - 2018 NOL carryback	—	(9.5)	—
Share-based compensation	0.4	0.3	1.2
Other items	(0.6)	(0.6)	(1.3)
Total income tax (benefit) provision	\$ (1.4)	\$ (1.2)	\$ 3.0

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,	
	2021	2020
Deferred tax assets:		
Inventory reserves	\$ 3.7	\$ 3.2
Warranty reserves	2.0	2.0
Credit loss reserves	0.5	0.3
State tax loss carryforwards	11.9	11.6
Accrued vacation	1.4	1.4
Deferred compensation	1.4	1.5
Share-based compensation	2.0	1.5
Goodwill	2.0	2.1
Outside basis difference	—	4.7
Foreign net operating loss	4.3	9.5
Lease obligation	0.4	0.9
Employee & insurance accruals	0.8	0.7
Domestic credit carryforwards	1.4	1.6
Deferred revenue	1.3	1.2
Deferred payroll tax - CARES Act	1.1	2.4
Pension and post-employment benefits	—	1.0
Valuation allowances	(6.0)	(14.1)
Other	1.6	0.8
Total deferred tax assets	29.8	32.3
Deferred tax liabilities:		
Property and equipment	13.0	14.7
Intangibles	1.1	0.9
Right-of-use assets	0.5	0.9
Pension	0.6	1.3
Total deferred tax liabilities	15.2	17.8
Total net deferred assets	\$ 14.6	\$ 14.5

As of December 31, 2021, the Company has gross state NOL carryforwards of \$235.4 million and has gross foreign NOL carryforwards of approximately \$13.0 million, which will be available to offset future taxable income. If not used, these carryforwards will expire between 2022 and 2033. The Company does not have a federal net operating loss carryforward.

On March 27, 2020, the Coronavirus Aid, Relief and Economic Security ("CARES") Act was passed which modified the 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 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 2021, the valuation allowance on these carryforwards decreased by \$8.1 million mainly due to the release of the \$3.4 million valuation allowance as the NOLs are expected to be fully utilized by the Company's Brazilian subsidiary and the release of the \$3.8 million valuation allowance associated with AMM whose dissolution was completed during 2021. 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, 2021, 2020 and 2019:

(in millions)	Years Ended December 31,		
	2021	2020	2019
Allowance balance, beginning of year	\$ 14.1	\$ 14.6	\$ 8.5
Provision	0.6	1.5	5.8
Reversals	(8.1)	(1.5)	—
Other	(0.6)	(0.5)	0.3
Allowance balance, end of year	<u>\$ 6.0</u>	<u>\$ 14.1</u>	<u>\$ 14.6</u>

Undistributed foreign earnings are considered to be indefinitely reinvested outside the U.S. as of December 31, 2021. 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, 2021, the cumulative amount of undistributed U.S. GAAP earnings for the Company's foreign subsidiaries was \$52.2 million.

The Company files income tax returns in the U.S. federal jurisdiction, and in various state and foreign jurisdictions. 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 2017.

The Company has a liability for unrecognized tax benefits of \$10.8 million and \$9.7 million (excluding accrued interest and penalties) as of December 31, 2021 and 2020, 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 penalties and interest related to amounts that were settled for less than previously accrued in 2021 or 2020. The net total amount of unrecognized tax benefits that, if recognized, would affect the Company's effective tax rate is \$11.9 million and \$10.5 million at December 31, 2021 and 2020, 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,		
	2021	2020	2019
Balance, beginning of year	\$ 9.7	\$ 5.7	\$ 2.1
Additions for tax positions taken in current year	1.0	0.5	3.0
Additions for tax positions taken in prior period	0.8	3.5	0.7
Decreases related to sustained tax positions	(0.7)	—	(0.1)
Balance, end of year	<u>\$ 10.8</u>	<u>\$ 9.7</u>	<u>\$ 5.7</u>

The tax positions in the December 31, 2021 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 and \$2.9 million at December 31, 2021 and 2020, respectively. These arrangements expire at various dates through July 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 \$0.4 million for 2021), 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 \$1.1 million and \$2.0 million related to these guarantees, which were included in "Other current liabilities" in the Consolidated Balance Sheets as of December 31, 2021 and 2020, respectively.

The Company reviews off-balance sheet guarantees individually and at the loss pool level based on one agreement. Prior history is considered in regard to the Company having to perform on any off-balance sheet guarantees, as well as future projections of individual customer credit worthiness including consideration of the implications of COVID-19 in regard 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 Facility totaling \$2.5 million as of December 31, 2021. The outstanding letters of credit expire at various dates through June 2023. The maximum potential amount of future payments under letters of credit issued under the Credit Facility for which the Company could be liable is \$30.0 million as of December 31, 2021. As of December 31, 2021, the Company's foreign subsidiaries are contingently liable for a total of \$1.6 million in performance letters of credit, advance payments and retention guarantees. The maximum potential amount of future payments under these letters of credit and guarantees for which the Company could be liable is \$6.6 million as of December 31, 2021.

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 was 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 alleged 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 was filed on behalf of shareholders who purchased stock of the Company between July 26, 2016 and October 22, 2018 and sought monetary damages on behalf of the purported class. The Company disputed these allegations and filed a motion to dismiss the lawsuit on October 25, 2019. 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. On June 4, 2021, plaintiff filed a notice of appeal to the United States Court of Appeals for the Sixth Circuit, which is pending.

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. Besides a new claim based on fraudulent transfer, the allegations essentially mirror the GEFCO suit. Astec Industries, Inc. is vigorously defending this suit as well. 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.

The Company is currently a party to various claims and legal proceedings that have arisen in the ordinary course of business. If management believes that a loss arising from such 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 its 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 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, less one share for every one share subject to an award granted under the 2011 Plan after December 31, 2020 and prior to the Plan Effective Date. No new awards were granted between December 31, 2020 and the Plan Effective Date. 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 (or, after December 31, 2020, an award granted under the 2011 Plan) 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. In addition, the 2021 Plan allows for participants to elect to receive vested units on a deferred basis. Awards granted under the 2021 Plan are entitled to dividend equivalents, which are subject to the same forfeiture, transfer restrictions and deferral terms as apply to the award to which they relate. The Company's annual grants of restricted stock units and performance stock units typically awarded in the first quarter of the year were delayed until April 2021 following the shareholder approval of the 2021 Plan.

Each of the above incentive plans are administered by the Company's Compensation Committee of the Board of Directors.

Share-based compensation expense of \$6.0 million, \$5.1 million and \$2.6 million was recorded in the years ended December 31, 2021, 2020 and 2019, 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 granted in 2016 and prior vest at the end of five years from the date of grant, while awards granted in 2017 and 2018 vest three years from the date of grant. RSUs granted in 2019, 2020 and 2021 vest ratably, at the end of each 12-month period, over a three-year 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 with a one-year vesting period.

Changes in restricted stock units during the year ended December 31, 2021 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, 2021	279	\$ 37.72
Granted	66	\$ 77.38
Vested	(132)	\$ 41.03
Forfeited	(26)	\$ 41.16
Unvested as of December 31, 2021	187	\$ 48.88

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,		
	2021	2020	2019
Weighted average grant date fair value per award	\$ 77.38	\$ 34.99	\$ 34.57
Fair value of awards vested	\$ 9.3	\$ 3.8	\$ 1.6
Tax benefit (expense) for restricted stock compensation expense	\$ 3.8	\$ (0.4)	\$ 0.7

As of December 31, 2021, the Company had \$4.9 million of unrecognized compensation expense before tax related to restricted stock, 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, adjusted 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 in 2021 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, 2021 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, 2021	87	\$ 35.41
Granted	51	\$ 92.98
Vested*	(29)	\$ 36.08
Forfeited	(10)	\$ 53.44
Unvested as of December 31, 2021	99	\$ 63.16

* The vested PSUs presented are based on the target amount of the award for the first tranche of the 2020 awards. In accordance with the terms of the underlying award agreements, the actual shares earned and distributed for the one-year performance period ended during 2021 was 200% 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,	
	2021	2020
Weighted average grant date fair value per award	\$ 92.98	\$ 34.66
Fair value of awards vested	\$ 4.5	\$ —
Tax benefit for performance stock compensation expense	\$ 2.3	\$ —

As of December 31, 2021, the Company had \$3.9 million of unrecognized compensation expense before tax related to PSUs, which is expected to be recognized over a weighted average period of 2.2 years.

Deferred Stock Units ("DSUs")

The 2011 Plan and the Non-Employee Directors Compensation Plan each allow for deferred delivery of shares as received including at vesting. As of December 31, 2021, there were 34,949 fully vested deferred stock units, which were excluded from the tables above. The aggregate fair value of these units at December 31, 2021 was \$2.4 million.

18. Revenue Recognition

The following tables disaggregates the Company's revenue by major source for the periods ended December 31, 2021, 2020 and 2019 (excluding intercompany sales):

(in millions)	For the Year Ended December 31, 2021			
	Infrastructure Solutions	Materials Solutions	Corporate	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	98.5	69.7	—	168.2
Parts and component sales	41.1	32.6	—	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	146.3	108.8	—	255.1
Total net sales	\$ 748.0	\$ 349.2	\$ —	\$ 1,097.2

(in millions)	For the Year Ended December 31, 2020			
	Infrastructure Solutions	Materials Solutions	Corporate	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	78.0	58.1	—	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	114.1	93.3	—	207.4
Total net sales	\$ 702.8	\$ 321.6	\$ —	\$ 1,024.4

(in millions)	For the Year Ended December 31, 2019			
	Infrastructure Solutions	Materials Solutions	Corporate	Total
Net Sales-Domestic:				
Equipment sales	\$ 413.6	\$ 166.9	\$ —	\$ 580.5
Pellet plant sales	20.0	—	—	20.0
Parts and component sales	169.0	74.5	—	243.5
Service and equipment installation revenue	19.2	8.0	—	27.2
Used equipment sales	11.4	1.2	—	12.6
Freight revenue	18.0	6.3	—	24.3
Other	3.3	(2.9)	—	0.4
Total domestic revenue	654.5	254.0	—	908.5
Net Sales-International:				
Equipment sales	70.4	95.5	—	165.9
Parts and component sales	28.6	47.0	—	75.6
Service and equipment installation revenue	6.2	2.0	—	8.2
Used equipment sales	2.2	3.3	—	5.5
Freight revenue	2.5	3.0	—	5.5
Other	0.2	0.2	—	0.4
Total international revenue	110.1	151.0	—	261.1
Total net sales	\$ 764.6	\$ 405.0	\$ —	\$ 1,169.6

As of December 31, 2021, the Company had contract assets of \$5.5 million and contract liabilities, excluding customer deposits, of \$6.3 million, of which \$2.7 million was deferred revenue related to extended warranties. As of December 31, 2020, the Company had contract assets of \$4.3 million and contract liabilities, excluding customer deposits, of \$8.9 million, of which \$2.9 million was deferred revenue related to extended warranties. Total extended warranty sales were \$1.5 million and \$1.7 million in 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 or services produced, 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. A brief description of each segment is as follows:

Infrastructure Solutions – The Infrastructure Solutions segment comprises 12 sites and designs, engineers, manufactures and markets a complete line of asphalt plants, concrete plants and their related components and ancillary equipment as well as supplying 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 producers, highway and heavy equipment contractors, ready mix concrete producers, contractors in the construction and demolition recycling markets and domestic and foreign governmental agencies.

Materials Solutions – The Materials Solutions segment comprises nine sites and 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 sites within the Materials Solutions segment are primarily manufacturing operations with the AME and India sites 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, recycle and crushing contractors, open mine operators, quarry operators, port and inland terminal authorities, power stations and foreign and domestic governmental agencies.

Corporate – The Corporate category consists primarily of the parent company and the captive insurance company, Astec Insurance, 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 all of the sites. The Company evaluates performance and allocates resources to its operating segments based on profit or loss from operations before U.S. federal income taxes, state deferred taxes and corporate overhead and thus these costs are included in the Corporate category.

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 are valued at prices comparable to those for unrelated parties.

Segment information for 2021:

(in millions)	Infrastructure Solutions	Materials Solutions	Corporate	Total
Revenues from external customers	\$ 748.0	\$ 349.2	\$ —	\$ 1,097.2
Intersegment revenues	47.5	58.0	—	105.5
Restructuring and asset impairment charges	1.9	0.6	—	2.5
Interest expense	0.1	0.5	0.5	1.1
Interest income	—	0.2	0.3	0.5
Depreciation and amortization	20.8	8.0	1.4	30.2
Income taxes	1.4	(4.3)	1.5	(1.4)
Profit (loss)	53.0	29.3	(64.8)	17.5
Assets	996.9	667.8	648.9	2,313.6
Capital expenditures	12.2	5.6	2.3	20.1

Segment information for 2020:

(in millions)	Infrastructure Solutions	Materials Solutions	Corporate	Total
Revenues from external customers	\$ 702.8	\$ 321.6	\$ —	\$ 1,024.4
Intersegment revenues	33.5	40.7	—	74.2
Restructuring and asset impairment charges	6.6	(1.3)	2.8	8.1
Interest expense	—	0.2	0.5	0.7
Interest income	0.1	0.3	0.4	0.8
Depreciation and amortization	17.8	7.9	1.2	26.9
Income taxes	0.4	1.2	(2.8)	(1.2)
Profit (loss)	53.8	32.1	(40.1)	45.8
Assets	938.8	639.3	535.3	2,113.4
Capital expenditures	7.9	4.8	2.7	15.4

Segment information for 2019:

(in millions)	Infrastructure Solutions	Materials Solutions	Corporate	Total
Revenues from external customers	\$ 764.6	\$ 405.0	\$ —	\$ 1,169.6
Intersegment revenues	29.2	22.2	—	51.4
Restructuring and asset impairment charges	2.9	0.3	—	3.2
Interest expense	—	0.3	1.1	1.4
Interest income	—	0.6	0.6	1.2
Depreciation and amortization	16.9	8.2	1.1	26.2
Income taxes	0.8	0.6	1.6	3.0
Profit (loss)	33.8	22.8	(35.6)	21.0
Assets	865.8	608.4	420.9	1,895.1
Capital expenditures	14.2	7.4	1.0	22.6

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

(in millions)	Years Ended December 31,		
	2021	2020	2019
Net income (loss) attributable to controlling interest			
Total profit for reportable segments	\$ 82.3	\$ 85.9	\$ 56.6
Corporate expenses, net	(64.8)	(40.1)	(35.6)
Net (income) loss attributable to noncontrolling interest	(0.1)	—	0.1
Recapture of intersegment profit	0.4	1.1	1.2
Total consolidated net income attributable to controlling interest	<u>\$ 17.8</u>	<u>\$ 46.9</u>	<u>\$ 22.3</u>
Assets			
Total assets for reportable segments	\$ 1,664.7	\$ 1,578.1	\$ 1,474.2
Corporate assets	648.9	535.3	420.9
Elimination of intercompany profit in inventory	(2.4)	(2.8)	(3.8)
Elimination of intercompany receivables	(921.0)	(906.2)	(767.9)
Elimination of investment in subsidiaries	(456.8)	(329.6)	(296.7)
Other	(22.1)	(26.6)	(26.2)
Total consolidated assets	<u>\$ 911.3</u>	<u>\$ 848.2</u>	<u>\$ 800.5</u>

Sales into major geographic regions were as follows:

(in millions)	Years Ended December 31,		
	2021	2020	2019
United States	\$ 842.1	\$ 817.0	\$ 908.5
Canada	69.8	57.9	66.8
Australia and Oceania	43.4	28.5	42.3
Africa	33.9	22.4	44.7
Other European Countries	32.7	23.2	32.2
Brazil	21.5	20.4	11.6
South America (excluding Brazil)	15.2	21.9	17.9
Mexico	13.5	2.9	5.3
Other Asian Countries	5.0	2.7	6.5
Central America (excluding Mexico)	3.9	1.3	4.9
Post-Soviet States (excluding Russia)	3.6	3.1	7.3
Middle East	2.9	3.2	2.6
Japan and Korea	2.7	8.1	3.6
India	2.7	0.5	1.0
Russia	2.6	4.0	5.1
West Indies	1.3	6.1	6.4
China	0.4	1.2	2.2
Other	—	—	0.7
Total foreign	<u>255.1</u>	<u>207.4</u>	<u>261.1</u>
Total consolidated sales	<u>\$ 1,097.2</u>	<u>\$ 1,024.4</u>	<u>\$ 1,169.6</u>

Long-lived assets by major geographic region are as follows:

(in millions)	December 31,	
	2021	2020
United States	\$ 140.3	\$ 140.3
United Kingdom	11.7	11.9
Brazil	5.6	6.3
Canada	5.3	4.8
Australia	4.6	5.1
South Africa	3.9	4.0
Chile	0.3	0.4
Total foreign	31.4	32.5
Total consolidated assets	\$ 171.7	\$ 172.8

20. Accumulated Other Comprehensive Loss

The after-tax components comprising "Accumulated other comprehensive loss" are summarized below:

(in millions)	December 31,	
	2021	2020
Foreign currency translation adjustment	\$ (32.4)	\$ (30.4)
Unrecognized pension and postretirement benefits cost, net of tax of \$1.3 in 2020	—	(3.1)
Accumulated other comprehensive loss	\$ (32.4)	\$ (33.5)

See Note 14, Employee Benefit Plans, for discussion of the amounts recognized in "Accumulated other comprehensive loss" related to the Company's defined pension plan.

21. Other Expenses and Income

Other income consists of the following:

(in millions)	Years Ended December 31,		
	2021	2020	2019
Investment (loss) income	\$ (0.3)	\$ —	\$ 0.2
Gain on disposal of subsidiary	—	1.6	—
Curtailment and settlement (loss) gain on pension and postretirement benefits, net	(4.7)	0.5	—
Other	—	0.5	0.1
Total	\$ (5.0)	\$ 2.6	\$ 0.3

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

In 2018, the Company made several strategic decisions to divest of underperforming manufacturing sites or product lines, including to close certain of its subsidiaries, close and sell its 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. These actions, which have subsequently been incorporated into the Company's Simplify, Focus and Grow Strategic Transformation ("SFG") initiative beginning in 2019, generally include facility rationalization, asset impairment, workforce reduction and the associated costs of organizational integration activities. The Company has incurred \$13.4 million of incremental costs for the SFG initiative in 2021, which are recorded in "Selling, general and administrative expenses" in the Consolidated Statements of Operations. 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. The Company incurred costs for these activities of \$2.5 million, \$8.1 million and \$3.2 million in 2021, 2020 and 2019, respectively.

The restructuring, asset impairment charges and net gain on sale of property and equipment incurred in 2021, 2020 and 2019 are as follows:

(in millions)	Years Ended December 31,		
	2021	2020	2019
Restructuring related charges:			
Costs associated with closing Tacoma	\$ 1.6	\$ 0.9	\$ —
Costs associated with closing Enid	0.7	2.5	—
Costs associated with closing Mequon	0.6	3.3	—
Costs associated with closing Albuquerque	—	1.3	—
Costs associated with closing AMM	—	0.3	1.3
Costs associated with exiting the wood pellet business	—	—	0.5
Workforce reductions at multiple sites	—	1.3	1.1
Other restructuring charges	—	0.3	—
Total restructuring related charges	<u>2.9</u>	<u>9.9</u>	<u>2.9</u>
Asset impairment charges:			
Airplane impairment charges	—	2.3	0.3
Goodwill impairment charges	—	1.6	—
Other impairment charges	0.2	0.5	—
Total asset impairment charges	<u>0.2</u>	<u>4.4</u>	<u>0.3</u>
Gain on sale of property and equipment, net:			
Gain on sale of property and equipment, net	(0.6)	(6.2)	—
Total gain on sale of property and equipment, net	<u>(0.6)</u>	<u>(6.2)</u>	<u>—</u>
Restructuring, impairment and other asset charges, net	<u>\$ 2.5</u>	<u>\$ 8.1</u>	<u>\$ 3.2</u>

Restructuring charges by segment are as follows:

(in millions)	Years Ended December 31,		
	2021	2020	2019
Infrastructure Solutions	\$ 2.4	\$ 6.2	\$ 2.9
Materials Solutions	0.5	3.6	—
Corporate	—	0.1	—
Total restructuring related charges	<u>\$ 2.9</u>	<u>\$ 9.9</u>	<u>\$ 2.9</u>

Impairment charges by segment are as follows:

(in millions)	Years Ended December 31,		
	2021	2020	2019
Infrastructure Solutions	\$ —	\$ 1.9	\$ —
Materials Solutions	0.2	(0.2)	0.3
Corporate	—	2.7	—
Total impairment charges	<u>\$ 0.2</u>	<u>\$ 4.4</u>	<u>\$ 0.3</u>

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

(in millions)	Years Ended December 31,		
	2021	2020	2019
Infrastructure Solutions	\$ (0.5)	\$ (1.5)	\$ —
Materials Solutions	(0.1)	(4.7)	—
Total gain on sale of property and equipment, net	<u>\$ (0.6)</u>	<u>\$ (6.2)</u>	<u>\$ —</u>

Restructuring charges accrued, but not paid, were \$1.2 million and \$1.1 million as of December 31, 2021 and December 31, 2020, respectively.

In late 2018, it was determined that AMM did not meet the desired performance metrics, and the decision was made to close this site. Documents were filed by the Company in the German court system in December 2018 to begin the process of liquidating AMM. Essentially all of the assets were liquidated prior to December 31, 2019, with the exception of the sale of its land and building, which were included in assets held for sale and valued at \$0.3 million in the Consolidated Balance Sheets at December 31, 2019 and sold in January 2020. Losses on the liquidation are included in "Restructuring, impairment and other asset charges, net" in the Consolidated Statement of Operations for the year ended December 31, 2020. The sale of AMM's land and building was completed in January 2020 and the resulting gain on sale of fixed assets of \$0.7 million was recorded in "Restructuring, impairment and other asset charges, net" in the Consolidated Statements of Operations during the first quarter of 2020.

On October 21, 2019, the Company announced the closing of its Albuquerque, New Mexico location. The decision to close the site was based in part on market conditions and manufacturing facility underutilization. The marketing and manufacturing of products previously produced by the site were transferred to other Company facilities. The site was closed as of March 31, 2020. The site's land, building and leasehold improvements, which were included in assets held for sale and valued at \$2.8 million in the Consolidated Balance Sheets as of December 31, 2019, were sold in the third quarter of 2020 for \$3.2 million. The resulting \$0.4 million gain was recorded in "Restructuring, impairment and other asset charges, net" in the Consolidated Statements of Operations during the third quarter of 2020.

In late 2019, the oil and gas drilling product lines produced at the Enid, Oklahoma location were impaired and discontinued. The remaining assets were sold in the third quarter of 2020 for \$1.1 million, which is reported in "Other (expenses) income, net" in the Consolidated Statements of Operations. Additional restructuring costs of \$0.7 million were incurred during 2021. Enid's land and building assets totaling \$5.1 million are included in "Assets held for sale" in the Consolidated Balance Sheets at December 31, 2021 and December 31, 2020.

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 October 2020, the Company closed a transaction for the sale of water well assets of the Company's Enid location, 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 is included in "Other current liabilities" in the Consolidated Balance Sheets at December 31, 2020. The Company recorded a \$0.5 million gain on the sale of this business in the fourth quarter of 2020 in "Other (expenses) income, net" in the Consolidated Statements of Operations.

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 the Tacoma product lines to other facilities within the Infrastructure Solutions segment is expected to be completed during early 2022. In conjunction with this action, the Company recorded \$0.9 million of restructuring related charges during the fourth quarter of 2020 in "Restructuring, impairment and other asset charges, net" in the Consolidated Statements of Operations. Additional restructuring charges of \$1.6 million were incurred during 2021 primarily associated with severance and retention costs.

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, 2021, 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, 2021, 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, 2021.

The effectiveness of our internal control over financial reporting as of December 31, 2021 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, 2021 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 2022 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 ACCOUNTING 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, 2021 and 2020
- Consolidated Statements of Operations for the Years Ended December 31, 2021, 2020 and 2019
- Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2021, 2020 and 2019
- Consolidated Statements of Cash Flows for the Years Ended December 31, 2021, 2020 and 2019
- Consolidated Statements of Equity for the Years Ended December 31, 2021, 2020 and 2019
- 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, adopted on April 28, 1986 and amended on September 7, 1988, May 31, 1989 and January 15, 1999		10-Q	9/30/2011	11/9/2011
3.2	Amended and Restated Bylaws of the Company, adopted on March 14, 1990 and amended on July 29, 1993, July 26, 2007, July 23, 2008 and July 25, 2019		10-Q	6/30/2019	8/7/2019
10.1	Amended and Restated Credit Agreement, dated as of April 12, 2012, between Astec Industries, Inc. and Certain of its Subsidiaries and Wells Fargo Bank, National Association		10-Q	3/31/2012	5/10/2012
10.2	First Amendment to Amended and Restated Credit Agreement, dated as of April 12, 2017, between Astec Industries, Inc. and Certain of its Subsidiaries and Wells Fargo Bank, National Association		10-Q	3/31/2017	5/8/2017
10.3	Second Amendment to Amended and Restate Credit Agreement, effective February 26, 2019		10-K	12/31/2018	3/18/2019
10.4	Astec Industries, Inc. 1998 Long-Term Incentive Plan*		DEF 14A		3/23/1998
10.5	Astec Industries, Inc. 2011 Incentive Plan*		DEF 14A		3/4/2011
10.6	Astec Industries, Inc. 2021 Equity Incentive Plan*		DEF 14A		3/18/2021
10.7	Astec Industries, Inc. Executive Change in Control Severance Plan, effective July 28, 2016*		10-Q	6/30/2016	8/5/2016
10.8	Form of Severance Agreement between Astec Industries, Inc. and President & Chief Executive Officer*		8-K	1/5/2022	1/5/2022
10.9	Form of Severance Agreement between Astec Industries, Inc. and Certain Officers other than the President & Chief Executive Officer*		8-K	1/5/2022	1/5/2022
10.10	Trust under Astec Industries, Inc. Supplemental Retirement Plan, dated January 1, 1996*		10-K	12/31/1995	3/15/1996
10.11	Astec Industries, Inc. Supplemental Executive Retirement Plan, as amended and restated through January 1, 2009*		10-K	12/31/2008	2/27/2009
10.12	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
10.13	Astec Industries, Inc. Deferred Compensation Plan effective January 1, 2021*		10-Q	3/31/2021	5/6/2021
10.14	Form of Restricted Stock Unit Award Agreement under the Astec Industries, Inc. 2021 Equity Incentive Plan*		10-Q	3/31/2021	5/6/2021
10.15	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			

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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, 2021 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, 2021, formatted in iXBRL (included as Exhibit 101).	X

*Management contract or compensatory plan or arrangement

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: February 28, 2022

ASTEC INDUSTRIES, INC.
(Registrant)

/s/ Barry A. Ruffalo

Barry A. Ruffalo, 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:

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ Barry A. Ruffalo</u> Barry A. Ruffalo	President and Chief Executive Officer and Director (Principal Executive Officer)	February 28, 2022
<u>/s/ Rebecca A. Weyenberg</u> Rebecca A. Weyenberg	Chief Financial Officer (Principal Financial Officer)	February 28, 2022
<u>/s/ Jamie E. Palm</u> Jamie E. Palm	Vice President, Chief Accounting Officer and Corporate Controller (Principal Accounting Officer)	February 28, 2022
<u>/s/ William D. Gehl</u> William D. Gehl	Director and Chairman of the Board	February 28, 2022
<u>/s/ James B. Baker</u> James B. Baker	Director	February 28, 2022
<u>/s/ Tracey H. Cook</u> Tracey H. Cook	Director	February 28, 2022
<u>/s/ William G. Dorey</u> William G. Dorey	Director	February 28, 2022
<u>/s/ Mary L. Howell</u> Mary L. Howell	Director	February 28, 2022
<u>/s/ Charles F. Potts</u> Charles F. Potts	Director	February 28, 2022
<u>/s/ William B. Sansom</u> William B. Sansom	Director	February 28, 2022
<u>/s/ William Bradley Southern</u> William Bradley Southern	Director	February 28, 2022
<u>/s/ Glen E. Tellock</u> Glen E. Tellock	Director	February 28, 2022