

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

FORM 10-K

- ☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2020
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 No. 001-34220



3D SYSTEMS CORPORATION
(Exact name of Registrant as specified in its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

95-4431352
(I.R.S. Employer
Identification No.)

333 Three D Systems Circle
Rock Hill, South Carolina 29730
(Address of Principal Executive Offices and Zip Code)

(Registrant's Telephone Number, Including Area Code): (803) 326-3900

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value \$0.001 per share	DDD	New York Stock Exchange

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

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

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

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

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

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Securities 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 Exchange Act.) Yes ☐ No ☒

The aggregate market value of the registrant's Common Stock held by non-affiliates of the registrant on June 30, 2020 was \$868,521,480. For purposes of this computation, it has been assumed that the shares beneficially held by directors and executive officers of the registrant were "held by affiliates." This assumption is not to be deemed an admission by these persons that they are affiliates of the registrant.

The number of shares of the registrant's Common Stock outstanding as of February 22, 2021: 124,128,509

DOCUMENTS INCORPORATED BY REFERENCE: Portions of the registrant's definitive proxy statement for its 2021 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K.

3D SYSTEMS CORPORATION
Annual Report on Form 10-K
For the Year Ended December 31, 2020

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This Annual Report on Form 10-K ("Form 10-K") contains forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties. Many of the forward-looking statements are located in Part II, Item 7 of this Form 10-K under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations." Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from historical results or from any future results expressed or implied by such forward-looking statements. In many cases, you can identify forward-looking statements by terms such as "believes," "belief," "expects," "may," "will," "estimates," "intends," "anticipates," or "plans" or the negative of these terms or other comparable terminology. Forward-looking statements are based upon management's beliefs, assumptions and current expectations concerning future events and trends, using information currently available, and are necessarily subject to uncertainties, many of which are outside our control. Although we believe that the expectations reflected in the forward-looking statements are reasonable, forward-looking statements are not, and should not be relied upon as a guarantee of future performance or results, nor will they necessarily prove to be accurate indications of the times at or by which any such performance or results will be achieved. A number of important factors could cause actual results to differ materially from those expressed in or implied by the forward-looking statements. Factors that could cause such differences include, but are not limited to, those discussed in Part I, Item 1A of this Form 10-K under the heading "Risk Factors." All subsequent written and oral forward-looking statements attributable to the Company or to individuals acting on our behalf are expressly qualified in their entirety by this discussion. The Company assumes no obligation to revise or update any forward-looking statements for any reason, except as required by law.

PART I

Item 1. Business

General

3D Systems Corporation ("3D Systems" or the "Company" or "we" or "us") markets our products and services through subsidiaries in North America and South America (collectively referred to as "Americas"), Europe and the Middle East (collectively referred to as "EMEA") and the Asia Pacific region ("APAC"). We provide comprehensive 3D printing and digital manufacturing solutions, including 3D printers for plastics and metals, materials, software, on demand manufacturing services and digital design tools. Our solutions support advanced applications in two key industry verticals: Healthcare (which includes dental, medical devices and personalized health services) and Industrial (which includes aerospace, defense, transportation and general manufacturing).

Customers can use our 3D solutions to design and manufacture complex and unique parts, eliminate expensive tooling, consolidate multiple parts into a single assembly, reduce product weight, produce parts locally or in small batches and reduce lead times and time to market. A growing number of customers are shifting from prototyping applications to also using 3D printing for production. We believe this shift will be further driven by our continued advancement and innovation of 3D printing solutions that improve durability, reliability, repeatability and total cost of operations.

Our Healthcare solutions capabilities include simulation; Virtual Surgical Planning (VSP®)("VSP"), with associated accessories, software and data visualization tools; and printing of medical and dental devices, models, and surgical guides and instruments.

We have over 30 years of experience and expertise which have proven vital to our development of an ecosystem and end-to-end digital workflow solutions which enable customers to optimize product designs, transform workflows, bring innovative products to market and drive new business models.

In August 2020, we announced a new strategic focus to accelerate the adoption of additive manufacturing solutions for applications in growing markets that demand high reliability products. We focus on markets and applications where a premium is placed upon performance and reliability; with engineering/technology cultures that seek product innovation as a means of delivering value to their customers; and with processes that tend to be highly controlled. Thanks to our unique offering of hardware, software, materials and services, combined with our leadership in application knowledge, we believe we are best-positioned to provide additive manufacturing solutions for specific, high-value applications in growing markets like healthcare, transportation, aerospace and defense. We have a demonstrated capability to be successful in these markets, with our technologies and process knowledge today enabling more than a half-million production parts to be made through additive manufacturing each day.

To accelerate value creation for our customers, we simplified and focused our organization by realigning the Company's breadth of capabilities into two key market verticals - Healthcare and Industrial. The Healthcare and Industrial vertical teams drive application specific solutions within their market verticals and focused sub-segments. For Healthcare, these sub-segments include dental, medical devices, simulations and surgical planning. For Industrial, key sub-segments include Aerospace & Defense, Transportation & Motorsports, Energy, Semiconductor, Service Bureaus, Investment Castings, Jewelry and Consumer Durables.

We work with customers as a full solution provider. In this regard, we offer an integrated set of capabilities to enable customers to adopt additive manufacturing into their prototyping or production workflows. These capabilities include a range of 3D printer hardware with multiple additive manufacturing technologies that address differing application needs. In addition, we have a portfolio of materials that are developed with varying performance characteristics to address a breadth of customer application requirements. Our software offerings are a key component of our solutions and enable customers to manage their print process and production workflows. Supporting our printer, materials and software are services capabilities including application engineers that support application development, advanced manufacturing and customer innovation centers to help customers adopt production workflows, quality and regulatory experts for specific industries, and service technicians that provide post-purchase maintenance and support.

Products

We offer a comprehensive range of 3D printers, materials, software, haptic design tools, 3D scanners and virtual surgical simulators.

3D Printers and Materials

Our 3D printers transform digital data input generated by 3D design software, Computer Aided Design ("CAD") software or other 3D design tools, into printed parts using several unique print engines that employ proprietary, additive layer by layer building processes with a variety of materials. As part of our solutions oriented strategy, we offer a broad range of 3D printing technologies including Stereolithography ("SLA"), Selective Laser Sintering ("SLS"), Direct Metal Printing ("DMP"), MultiJet Printing ("MJP") and ColorJet Printing ("CJP"), which are discussed in more detail below.

Our printers utilize a wide range of materials, the majority of which are proprietary materials that we develop, blend and market. Our comprehensive range of materials includes plastic, nylon, metal, composite, elastomeric, wax, polymeric dental materials and bio-compatible materials. We augment and complement our portfolio of engineered materials with materials that we purchase or develop with third parties under private label and distribution arrangements.

We work closely with our customers to optimize the performance of our materials in their applications. Our expertise in materials science and formulation, combined with our processes, software and equipment, enables us to provide unique solutions and help our customers select the material that best meets their needs with optimal cost and performance results.

As part of our solutions approach, our currently offered printers, with the exception of direct metal printers, have built-in intelligence to make them integrated, closed systems. For these integrated printers, we furnish materials specifically designed for use in those printers, which are packaged in smart cartridges and utilize material delivery systems. These integrated materials are designed to enhance system functionality, productivity, reliability and materials shelf life, in addition to providing our customers with a built-in quality management system and a fully integrated workflow solution.

SLA Printers

Our SLA 3D printers cure liquid resin materials with light or a laser to produce durable plastic parts with surface smoothness, high resolution, edge definition and tolerances that rival the accuracy of machined or molded plastic parts. We offer SLA printers with a wide range of materials, sizes and price points, which are designed for prototyping, end-use part production, casting patterns, molds, tooling, fixtures and medical models.

Figure 4™, a light-based SLA platform, also sometimes referred to as digital light processing ("DLP"), is an ultra-fast additive manufacturing technology with a discrete module design. This design allows a range of products and configurations to meet customer needs from a stand-alone product to modular products to fully-automated solutions. Figure 4 is capable of manufacturing parts in hybrid materials (multi-mode polymerization) that offer toughness, durability, biocompatibility, high temperature deflection and elastomeric properties. Figure 4 is also the first additive manufacturing product which can achieve six sigma repeatability. These capabilities enable new end-use applications in healthcare, dental, durable goods, automotive, aerospace and other verticals.

For SLA printers, we offer a variety of liquid resin materials, primarily under the Accura® brand name. The resins are designed to mimic specific, engineered thermoplastics and provide a wide range of characteristics, including tough, durable, clear, castable, polypropylene-like, ABS-like, high-temperature resistant and bio-compatible materials. We also offer dental materials for light-based SLA 3D printers under our NextDent™ brand name.

SLS Printers

Our SLS 3D printers use a laser beam to melt and fuse powder-based nylon, engineered plastic and composite materials to produce very strong and durable parts. Customer uses of our SLS printers include functional test models and end-use parts, such as housings, machinery components, ducting, tooling, jigs and fixtures, medical devices and personalized surgery kits and guides.

Our proprietary SLS materials include a range of flexible and rigid plastics, nylons and composite materials marketed under the DuraForm®, LaserForm® and CastForm™ brand names. These materials are available in a variety of lightweight, tough, versatile, high temperature, flexible, biocompatible and durable formulations.

DMP Printers

Our DMP solutions use a laser beam to sinter powders in a variety of metals to produce fully dense parts with outstanding purity, surface finish and resolution. We offer DMP solutions that can process a wide range of materials and powders, including materials with very fine granularity and proven manufacturing applications. We sell DMP systems in various sizes and configurations. Certain models are optimized for specific metals, including titanium, stainless steel and nickel super alloys. Our DMP printers are used in medical and dental implants, aerospace, automotive, semiconductor, and other hi-tech and industrial applications, such as conformal cooling, enhanced fluid flow and other complex, lightweight parts.

We offer metal powder materials for our DMP printers, including titanium, stainless steels, tool steels, super alloys, non-ferrous alloys, precious metals and aluminum.

MJP Printers

Our MJP 3D printers utilize jetting head technology to deliver precise, tough parts with exceptional resolution in plastic, wax, elastomeric, biocompatible and engineered materials that we sell under the VisiJet® brand name. Our MJP printers offer the capability to print in real wax as well as rigid and flexible plastics and multiple materials in one build, making them ideal for mechanical functional testing, rapid tooling, jigs and fixtures, casting and foundry patterns and medical models.

CJP Printers

Our CJP 3D printers produce parts using our VisiJet branded, powder-based ceramic-like materials. CJP printers build high-definition, full-color parts that can be sanded, drilled, infiltrated, painted and electroplated, which further expands the options available for finished part characteristics. CJP printers are ideal for producing models used in mechanical design, healthcare, architecture, education, entertainment and packaging applications.

Software and Related Products

We provide digital design tools, including software, scanners and haptic devices. We offer solutions for product design, mold and die design, 3D scan-to-print, reverse engineering, production machining, metrology and inspection. These products are designed to enable a seamless workflow for customers, and are marketed under brand names such as Geomagic®. We also offer 3D Sprint and 3DXpert, proprietary software to prepare and optimize CAD data and manage the additive manufacturing processes. These software products provide automated support building and placement, build platform management and print queue management capabilities. The outcome is the ability to improve the quality of prints, optimize design structure, shorten design to manufacturing lead time and minimize manufacturing costs.

Other Products

We offer 3D virtual reality simulators and simulator modules for medical applications. These 3D simulators are sold under our Simbionix™ brand name and offer clinicians a realistic, hands-on experience to master critical skills, prepare for upcoming procedures and create patient specific simulations and operating room environments through augmented reality and virtual reality. We also provide digitizing scanners for medical and mechanical applications.

Services

Maintenance and Training Services

We provide a variety of customer services, local application support and field support on a worldwide basis for our products, including installation of new printers at customers' sites, maintenance agreements, periodic hardware upgrades and software updates. We also provide services to assist our customers and partners in developing new applications for our technologies, to facilitate the use of our technology for specific applications, to train customers on the use of our printers and to maintain our printers at customers' sites.

We provide these services, spare parts and field support either directly or through a network of reseller partners. We employ customer-support sales engineers to support our worldwide customer base, and we seek to continue to strengthen and enhance our partner network and service offerings.

Our 3D printers are sold with a warranty period ranging from 90 days to one year. After the warranty period, we generally offer service contracts that enable our customers to continue service and maintenance coverage. These service contracts are offered with various levels of support and options, and are priced accordingly. Our service engineers provide regularly scheduled preventive maintenance visits to customer sites, we provide training to our partners to enable them to perform these services, and we are adding remote monitoring and maintenance capabilities through our 3DConnect software.

From time to time, we also offer upgrade kits for certain of our printers that enable our existing customers to take advantage of new or enhanced printer capabilities. In some cases, we have discontinued upgrade support and maintenance agreements for certain of our older legacy printers.

On Demand Solutions

We provide on demand manufacturing services through facilities worldwide in the Americas and EMEA regions. We provide a broad range of prototyping, production and finishing capabilities for precision plastic and metal parts and tooling with a wide range of additive and traditional manufacturing processes.

In addition to the sales of parts to customers, we, and our partners, utilize our on demand services as a sales and lead generation tool. Third-party preferred service providers also use our on demand manufacturing service as their comprehensive order-fulfillment center, and customers can use our facilities as fulfillment centers in disaster recovery plans.

Advanced Manufacturing

As part of our strategy to help customers adopt additive manufacturing, we offer advanced manufacturing services through facilities in the Americas and EMEA regions. These facilities, which include our Customer Innovation Centers, supplement customer manufacturing environments by allowing them to test and ramp production using our solutions before transitioning production to their environment. This allows us to provide application and production expertise and refine the production process as part of our solutions approach. As the process is validated and volumes ramp, customers may choose to move production to their facilities using equipment, materials, software and services that they purchase from us. These facilities operate under stringent quality systems and are also utilized by customers in regulated industries such as healthcare and aerospace & defense for sustained outsourced production of hundreds of thousands of parts per year.

Software Services

In addition to our software license products described above, we offer software maintenance, which includes updates and support for our software products. Our software is sold with maintenance service that generally covers a period of one year. After this initial period, we offer single and multi-year maintenance contracts that enable our customers to continue coverage. These software service contracts typically include free software updates and various levels of technical support.

Healthcare Services

As part of our precision healthcare services, we provide surgical planning, modeling, prototyping and manufacturing services. We offer printing and finishing of medical and dental devices, anatomical models and surgical guides and tools, as well as modeling, design and planning services, including VSP™. We also provide service and maintenance for our surgical simulator products.

Global Operations

We operate in the Americas, EMEA and APAC regions, and market our products and services in those areas as well as to other parts of the world.

In maintaining operations outside the United States (the “U.S.”), we expose our business to risks inherent in such operations, including currency exchange rate fluctuations. Information on foreign exchange risk appears in Part I, Item 1A, “Risk Factors,” Part II, Item 7A, “Quantitative and Qualitative Disclosures about Market Risk” and Part II, Item 8, “Financial Statements and Supplementary Data,” of this Form 10-K.

Marketing and Customers

Our sales and marketing strategy focuses on an integrated approach that is directed at providing comprehensive solutions designed to meet customer needs. We use a full range of marketing and lead generation tools to promote our products and services on a worldwide basis. Our marketing department supports our global sales organization and distribution channels by providing marketing materials, targeted marketing campaigns, sales leads and demand generation activities.

We sell our solutions globally through a direct sales force, partner channel and in certain geographies, appointed distributors. Our go-to-market and sales organization includes regional general managers, channel managers, direct sales people and application engineers and other support staff throughout the Americas, EMEA and APAC regions, who are responsible for the sale of products and services and for the management of our network of channel partners.

Additionally, our application engineers provide pre-sales and post-sales support, assist customers with leveraging our latest solutions and production techniques and help identify new applications and sales opportunities. Our on demand and advanced manufacturing service also expands our customer relationships and enables lead generation for future sales.

Our customers include major companies as well as small and midsize businesses in a broad range of industries, including medical, dental, automotive, aerospace, durable goods, government, defense, technology, jewelry, electronics, education, consumer goods, energy and others. For the years ended December 31, 2020, 2019, and 2018, one customer accounted for approximately 13%, 11% and 13% of our consolidated revenue, respectively. We expect to maintain our relationship with this customer.

Production and Suppliers

We outsource our 3D printer assembly and refurbishment activities to selected design, engineering and manufacturing companies in the U.S., Switzerland and Belgium. We purchase finished printers from these suppliers pursuant to forecasts and customer orders that we supply to them. These suppliers also carry out quality control procedures on our printers prior to their shipment to customers. As part of these activities, these suppliers have responsibility for procuring the components and sub-assemblies either from us or third-party suppliers. While the outsourced suppliers of our printers have responsibility for the supply chain and inventory of components for the printers they assemble, the components, parts and sub-assemblies that are used in our printers are generally available from several potential suppliers. We produce our Symbionix branded 3D simulators in Airport City, Israel.

We produce materials at our facilities in Rock Hill, South Carolina, Marly, Switzerland and Soesterberg, Netherlands. We also have arrangements with third parties who blend certain materials according to our specifications that we sell under our own brand names, and we purchase certain materials from third parties for resale to our customers.

Our equipment assembly and materials blending activities, on demand and advanced manufacturing services and certain research and development activities are subject to compliance with applicable federal, state and local provisions regulating the storage, use and discharge of materials into the environment. We believe that we are in compliance, in all material respects, with such regulations as currently in effect, and we expect continued compliance with them will not have a material adverse effect on our capital expenditures, results of operations or consolidated financial position.

As a company with global operations, we are subject to the laws of the U.S. and multiple foreign jurisdictions in which we operate and the rules and regulations of various governing bodies, which may differ among jurisdictions. Compliance with these laws, rules and regulations has not had, and is not expected to have, a material effect on our capital expenditures, results of operations or competitive position as compared to prior periods.

Research and Development

The 3D printing industry continues to experience rapid technological change and developments in hardware, software and materials. Consequently, we have ongoing research and development programs to develop new products and to enhance our portfolio of products and services, as well as to improve and expand the capabilities of our solutions. Our efforts are often augmented by development arrangements with research institutions, customers, suppliers, assembly and design firms, engineering companies, materials companies and other partners.

In addition to our internally developed technology platforms, we have acquired products and technologies developed by others by acquiring business entities that held ownership rights to such products and technologies. In other instances, we have licensed or purchased the intellectual property rights of technologies developed by third parties through agreements that may obligate us to pay a license fee or royalty, typically based upon a dollar amount per unit or a percentage of the revenue generated by such products.

Intellectual Property

We regard our technology platforms and materials as proprietary and seek to protect them through copyrights, patents, trademarks and trade secrets. At December 31, 2020 and 2019 we held 1,269 and 1,256 patents worldwide, respectively. At December 31, 2020 and 2019, we had 312 and 322 pending patent applications worldwide, respectively. The principal issued patents covering aspects of our various technologies will expire at varying times through the year 2034.

In addition, we are a party to various licenses that have had the effect of broadening the range of the patents, patent applications and other intellectual property available to us.

We have also entered into licensing or cross-licensing arrangements with various companies in the U.S. and other countries that enable those companies to utilize our technologies in their products or that enable us to use their technologies in our products. Under certain of these licenses, we are entitled to receive, or we are obligated to pay, royalties for the sale of licensed products in the U.S. or in other countries. The amount of such royalties was not material to our results of operations or financial position for the three-year period ended December 31, 2020.

We believe that, while our patents and licenses provide us with a competitive advantage, our success also depends on our marketing, business development, applications know-how and ongoing research and development efforts. Accordingly, we believe the expiration of any of the patents, patent applications or licenses discussed above would not be material to our business or financial position.

Competition

We compete with other suppliers of 3D printers, materials, software and healthcare solutions as well as with suppliers of conventional manufacturing solutions. We compete with these suppliers for customers as well as channel partners for certain of our products. We also compete with businesses and service bureaus that use such equipment to produce models, prototypes, molds and end-use parts. Development of new technologies or techniques not encompassed by the patents that we own or license may result in additional future competition.

Our competitors operate both globally and regionally, and many of them have well-recognized brands and product lines. Additionally, certain of our competitors are well established and may have greater financial resources than us.

We believe principal competitive factors include technology capabilities, materials, process and application know-how, total cost of operation of solution, product reliability and the ability to provide a full range of products and services to meet customer needs. We believe that our future success depends on our ability to provide high quality solutions, introduce new products and services to meet evolving customer needs and market opportunities, and extend our technologies to new applications. Accordingly, our ongoing research and development programs are intended to enable us to continue technology advancement and develop innovative new solutions for the marketplace.

Human Capital Resources

At December 31, 2020, we had 1,995 full-time and part-time employees, compared to 2,472 at December 31, 2019. None of our U.S. employees are covered by collective bargaining agreements, however, some of our employees outside the U.S. are subject to local statutory employment and labor arrangements. We have not experienced any material work stoppages and believe that our relations with our employees are satisfactory.

Through our operating history and experience with technological innovation, we appreciate the importance of retention, growth and development of our employees. We believe we offer competitive compensation (including salary, incentive bonus and equity) and benefits packages at each of our locations around the globe. Further, we have development programs and on-demand opportunities to cultivate talent throughout the Company. We believe that conducting business with integrity, valuing diversity in people and ideas, and being a positive force for action in our Company and communities are vital to our success and the right thing to do. We are focused on our values to grow profitability and win, deliver "extraordinary" to our customers, innovate with purpose, trust and empower, and build great teams. These values articulate what we do to achieve meaningful results and make a difference to our customers, stakeholders and each other.

In 2020 we announced the launch of our global responsibility and sustainability initiative dedicated to environmental responsibility, social responsibility and responsible practices and governance (ESG).

Available Information

Our website address is www.3DSystems.com. The information contained on our website is neither a part of, nor incorporated by reference into, this Form 10-K or any other document that we file with or furnish to the Securities and Exchange Commission ("SEC"). We make available free of charge through our website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, amendments to those reports and other documents that we file with the SEC, as soon as reasonably practicable after we electronically file them with, or furnish them to, the SEC.

Many of our corporate governance materials, including our Code of Conduct, Code of Ethics for Senior Financial Executives and Directors, Corporate Governance Guidelines, current charters of each of the standing committees of the Board of Directors and our corporate charter documents and by-laws are available on our website.

Information about our Executive Officers

The information appearing in the table below sets forth the position or positions held by each of our executive officers and his age as of March 5, 2021. All of our executive officers serve at the pleasure of the Board of Directors. There are no family relationships among any of our executive officers or directors.

Name and Current Position	Age as of March 5, 2021
Jeffrey A. Graves President and Chief Executive Officer	59
Jagtar Narula Executive Vice President and Chief Financial Officer	50
Jeff Blank Executive Vice President, Engineering and Product Development	52
Charles W. Hull Executive Vice President and Chief Technology Officer	81
Andrew M. Johnson Executive Vice President, Chief Legal Officer and Secretary	46
Menno Ellis Executive Vice President, Healthcare Solutions	48
Reji Puthenveetil Executive Vice President, Industrial Solutions	52

Jeffrey A. Graves, *President and Chief Executive Officer*. Dr. Graves was appointed the Company's President and Chief Executive Officer in May 2020. Prior to joining the Company, from 2012 to May 2020, Dr. Graves served as Chief Executive Officer, President and Director of MTS Systems Corporation, a global supplier of test, simulation, and measurement systems. From 2005 until 2012, Dr. Graves served as President and Chief Executive Officer of C&D Technologies, Inc. Dr. Graves also held leadership roles with Kemet Corporation as Chief Operating Officer (2001-2003) and Chief Executive Officer (2003-2005). Previously, he held a number of leadership and technical roles with General Electric, Rockwell Automation and Howmet Corporation. In addition to serving on the Company's Board of Directors, Dr. Graves serves on the board of directors of FARO Technologies and Hexcel Corporation.

Jagtar Narula, *Executive Vice President and Chief Financial Officer*. Mr. Narula was appointed the Company's Executive Vice President and Chief Financial Officer in September 2020. Prior to joining the Company, Mr. Narula served as Senior Vice President of Corporate Strategy and Business Development for Blackbaud, Inc. where he also previously led investor relations and financial planning. Additionally, he held finance leadership positions of increasing responsibility at Xerox, General Electric and with private equity.

Jeff Blank, *Executive Vice President, Engineering and Product Development*. Mr. Blank has served as Executive Vice President, Engineering and Product Development since January 2021. He joined the Company in January 2014 as Vice President New Business Development. He also served as Senior Vice President Product Development of the Plastics Business Unit. Prior joining the Company, Mr. Blank spent more than 19 years as an engineering leader at Xerox and Tektronix delivering highly complex and reliable 2D printing products, and more than 4 years at Sandia National Laboratories. He received a bachelor's degree in Mechanical Engineering from Oregon State University, a master's in Mechanical Engineering from Stanford University, and a Masters of Business Administration from University of Portland.

Charles W. Hull, *Executive Vice President, Chief Technology Officer*. Mr. Hull is a founder of the Company and has served on our Board of Directors since 1993. He has served as Chief Technology Officer since 1997 and as Executive Vice President since 2000. Mr. Hull has also previously served in various other executive capacities at the Company since 1986, including Chief Executive Officer, Vice Chairman of the Board of Directors and President and Chief Operating Officer.

Andrew M. Johnson, *Executive Vice President, Chief Legal Officer and Secretary*. Mr. Johnson has served as Executive Vice President and Chief Legal Officer since November 2014. He served as Interim President and Chief Executive Officer, Chief Legal Officer and Secretary from October 2015 to April 2016 and as Vice President, General Counsel and Secretary from April 2012 to November 2014. Previously, he served as Assistant General Counsel and Assistant Secretary.

Menno Ellis, *Executive Vice President, Healthcare Solutions*. Mr. Ellis has served as Executive Vice President, Healthcare Solutions since July 2020. He joined the Company in December 2016 as Senior Vice President Strategy and Vertical Markets. He served as Senior Vice President and General Manager of the Plastics Business Unit, and is now responsible for the Healthcare Solutions group, which encompasses Dental, Medical and Simulations businesses. Prior to joining the Company, he spent 20 years in management and business consulting services with an emphasis on sustainable, long-term revenue growth.

Reji Puthenveetil, *Executive Vice President, Industrial Solutions*. Mr. Puthenveetil has served as Executive Vice President, Industrial Solutions since July 2020. Prior to joining the Company, Mr. Puthenveetil spent 25 years as a management consultant helping companies across multiple industries design a clear strategy for growth and ensuring organizational capability and alignment for execution.

Item 1A. Risk Factors

You should carefully read the following discussion of significant factors, events and uncertainties when evaluating our business and the forward-looking information contained in this Form 10-K. The events and consequences discussed in these risk factors could materially and adversely affect our business, operating results, liquidity and financial condition. While we believe we have identified and discussed below the key risk factors affecting our business, these risk factors do not identify all the risks we face, and there may be additional risks and uncertainties that we do not presently know or that we do not currently believe to be significant that may have a material adverse effect on our business, performance or financial condition in the future.

Operational & Financial Risk Factors

Our uneven sales cycle makes planning and inventory management difficult and future financial results less predictable.

Our quarterly sales often have reflected a pattern in which a disproportionate percentage of each quarter's total sales occur towards the end of the quarter, in particular for sales of hardware. This uneven sales pattern makes predicting net revenue, earnings, cash flow from operations and working capital for each financial period difficult, increases the risk of unanticipated variations in our quarterly results and financial condition and places pressure on our inventory management and logistics systems. If predicted demand is substantially greater than orders, there may be excess inventory. Alternatively, if orders substantially exceed predicted demand, we may not be able to fulfill all of the orders received in each quarter and such orders may be canceled. Depending on when they occur in a quarter, developments such as an information systems failure, component pricing movements, component shortages or global logistics disruptions could adversely impact our inventory levels and results of operations in a manner that is disproportionate to the number of days in the quarter affected.

The variety of products that we sell could cause significant quarterly fluctuations in our gross profit margins, and those fluctuations in margins could cause fluctuations in operating income or loss and net income or loss.

We continuously work to expand and improve our products, materials and services offerings, geographic areas in which we operate and the distribution channels we use to reach various target product applications and customers. This variety of products, applications, channels and regions involves a range of gross profit margins that can cause substantial quarterly fluctuations in gross profit and gross profit margins depending upon the mix of product shipments from quarter to quarter. Additionally, the introduction of new products or services may further heighten quarterly fluctuations in gross profit and gross profit margins due to manufacturing ramp-up and start-up costs. We may experience significant quarterly fluctuations in gross profit margins or operating income or loss due to the impact of the mix of products, channels or geographic areas in which we sell our products from period to period.

Our products and services may experience quality problems from time to time that can result in decreased sales and operating margin, product returns, product liability, warranty or other claims that could result in significant expenses and harm to our reputation.

We sell complex hardware and software products, materials and services that can contain undetected design and manufacturing defects or errors when first introduced or as enhancements are released that, despite testing, are not discovered until after the product has been installed and used by customers. Sophisticated software and applications, such as those sold by us, may contain "bugs" that can unexpectedly interfere with the software's intended operation. Defects may also occur in components and products we purchase from third parties. There can be no assurance we will be able to detect and fix all defects in the hardware, software, materials and services we sell. Failure to do so could result in lost revenue, product returns, product liability, delayed market acceptance of those products and services, claims from distributors, end-users or others, increased end-user service and support costs, and significant warranty claims and other expenses to correct the defects, diversion of management time and attention and harm to our reputation.

Changes in, or interpretation of, tax rules and regulations may impact our effective tax rate and future profitability.

We are a U.S. based, multinational company subject to taxation in multiple U.S. and foreign tax jurisdictions. Our future effective tax rates could be adversely affected by changes in statutory tax rates or interpretation of tax rules and regulations in jurisdictions in which we do business, changes in the amount of revenue or earnings in the countries with varying statutory tax rates, or by changes in the valuation of deferred tax assets and liabilities. The U.S. Tax Cuts and Jobs Act is one such example of legislation that impacts our effective tax rate and tax posture. For additional details see Note 21 to the consolidated financial statements in Item 8 of this Form 10-K.

In addition, we are subject to audits and examinations of previously filed income tax returns by the Internal Revenue Service and other domestic and foreign tax authorities. We regularly assess the potential impact of such examinations to determine the adequacy of our provision for income taxes and have reserved for potential adjustments that we expect may result from the current examinations. We believe such estimates to be reasonable; however, there is no assurance that the final determination of any examination will not have an adverse effect on our operating results and financial position.

Changes in business conditions may cause goodwill and other intangible assets to become impaired.

Goodwill and other intangible assets are subject to an impairment test on an annual basis and when circumstances indicate that an impairment is more likely than not. Such circumstances include a significant adverse change in the business climate or a decision to dispose of a business or product line. We face some uncertainty in our business environment due to a variety of challenges, including changes in customer demand. While we recorded an impairment to our goodwill in 2020, we may experience additional unforeseen circumstances that adversely affect the value of our goodwill or intangible assets and trigger an evaluation of the amount of the recorded goodwill and intangible assets. Future write-offs of goodwill or other intangible assets as a result of an impairment in the business could materially adversely affect our results of operations and financial condition.

The COVID-19 pandemic could materially adversely affect our financial condition and results of operations.

The novel strain of the coronavirus identified in China in late 2019 (COVID-19) has globally spread throughout other areas such as Asia, Europe, the Middle East, and North America and has resulted in authorities imposing, and businesses and individuals implementing, numerous unprecedented measures to try to contain the virus, such as travel bans and restrictions, quarantines, shelter-in-place/stay-at-home and social distancing orders, and shutdowns. These measures have impacted and may further impact our workforce and operations, the operations of our customers, and those of our respective vendors, suppliers, and partners. Each of the countries in which we operate has been affected by the outbreak and taken measures to try to contain it. The ultimate impact and efficacy of government measures and potential future measures is currently unknown.

There is continued uncertainty regarding the business impacts from such measures and potential future measures. While we have been able to continue our operations through a combination of work-from-home and social distancing policies implemented to protect employees, these measures have resulted in reduced workforce availability at some of our sites. Restrictions on our access to customer facilities may impact our ability to meet customer demand and could have a material adverse effect on our financial condition and results of operations, particularly if prolonged. Our customers have experienced, and may continue to experience, disruptions in their operations, which can result in delayed, reduced, or canceled orders, or collection risks, and which may adversely affect our results of operations.

The pandemic has significantly increased economic and demand uncertainty. It is possible that the current outbreak and continued spread of COVID-19 will continue to cause an economic slowdown. There is a significant degree of uncertainty and lack of visibility as to the extent and duration of any such slowdown or recession. Risks related to a slowdown or recession may harm our long-term ability to do business, adversely affect our sales, costs, results of operations and cash flow. Given the significant economic uncertainty and volatility created by the pandemic, it is difficult to predict the nature and extent of impacts on demand for our products and services. These expectations are subject to change without warning and investors are cautioned not to place undue reliance on them.

The pandemic led to increased disruption and volatility in capital markets and credit markets. We implemented temporary salary decreases for executives, 2-week furloughs for non-essential employees, and suspension of all non-essential capital expenditures measures to strengthen our liquidity position given the uncertainty regarding the length and severity of the pandemic and ongoing economic uncertainty. Unanticipated consequences of the pandemic and resulting economic uncertainty could result in a breach of the debt financial covenant, thus adversely affecting our liquidity and capital resources in the future, as well as incurring additional costs if an amendment to the credit agreement is required.

The spread of COVID-19 has caused us to modify our business practices (including employee travel, employee work locations, cancellation of physical participation in meetings, events and conferences, and social distancing measures), and we may take further actions as may be required by government authorities or that we determine are in the best interests of our employees, customers, partners, vendors, and suppliers. Work-from-home and other measures introduce additional operational risks, including cybersecurity risks, and have affected the way we conduct our product development and testing, customer support, and other activities, which could have an adverse effect on our operations. There is no certainty that such measures will be sufficient to mitigate the risks posed by the virus, and illness and workforce disruptions could lead to unavailability of key personnel and harm our ability to perform critical functions.

We depend on outsourcing partners for assembly of our 3D printers and our supply chain for spare parts and for raw materials used in our materials. The ongoing COVID-19 pandemic has caused supply and logistical disruptions for both our outsourcing partners and supply chain partners. If these relationships were to terminate or these disruptions worsen, our business could be disrupted while we locate alternative suppliers and our expenses may increase.

We have outsourced selected design and manufacturing companies to assemble our printers. In carrying out these outsourcing activities, we face a number of risks, including, among others, the following:

- The risk that the parties that we retain to perform assembly activities may not perform in a satisfactory manner;
- The risk of disruption in the supply of printers or other products to our customers if such third parties either fail to perform in a satisfactory manner or are unable to supply us with the quantity of printers or other products that are needed to meet then current customer demand;
- The risk of work delays or supply chain disruptions stemming from governmental efforts to contain the COVID-19; and
- The risk of insolvency of suppliers, as well as the risks that we face, as discussed below, in dealing with a limited number of suppliers.

We purchase components and sub-assemblies for our printers from third-party suppliers that we provide to our customers as spare parts. Additionally, we purchase raw materials that are used in our materials, as well as certain of those materials, from third-party suppliers.

While there are several potential suppliers of parts for our products, we currently choose to use only one or a limited number of suppliers for several of these items, including our lasers, materials and certain jetting components. Our reliance on a single or limited number of suppliers involves many risks, including, among others, the following:

- Potential shortages of some key components;
- Disruptions in the operations of these suppliers;
- Product performance shortfalls; and
- Reduced control over delivery schedules, assembly capabilities, quality and costs.

The recent situation brought on by COVID-19 pandemic has created minor delays on the inbound supply chain at our partners and our own facilities. Additional delays on both inbound and outbound logistics have also created challenges. We have been able to identify alternative solutions such that none of the issues have had a material impact on our ability to fulfill demand.

While we believe that, if necessary, we can obtain all the components necessary for our spare parts and materials from other manufacturers, we require any new supplier to become “qualified” pursuant to our internal procedures, which could involve evaluation processes of varying durations. Our spare parts and raw materials used in our materials production are subject to various lead times. In addition, at any time, certain suppliers may decide to discontinue production of a part or raw material that we use. Any unanticipated change in the sources of our supplies, or unanticipated supply limitations, could increase production or related costs and consequently reduce margins.

If our forecasts exceed actual orders, we may hold large inventories of slow-moving or unusable parts, which could have an adverse effect on our cash flow, profitability and results of operations. Inversely, we may lose orders if our forecast is low and we are unable to meet demand. There is considerable uncertainty on the business impact from current measures and potential future measures to contain the spread of the COVID-19 pandemic on our vendors, suppliers, and partners, especially if such measures are in effect for an extended period of time. If disruptions to global businesses from the pandemic continue or worsen, our business could face greater supply chain delays and difficulty shipping or receiving products and materials, which could have a material adverse effect on our financial condition and results of operations.

Our restructuring activities may result in disruption to our business, we may not fully realize the expected benefits of our restructuring plans or other operating or cost-saving initiatives and the cost of the restructuring activities may be more than anticipated.

On August 5, 2020, we announced a plan to restructure our businesses to streamline the company’s operations to align our cost structure to the current level of revenues. The restructuring plan includes, in conjunction with other cost reduction measures, a reduction of annualized costs by approximately \$80 million by the end of 2021, with additional savings of approximately \$20 million dependent on potential divestitures. Other cost reduction efforts include reducing the number of facilities and examining every aspect of the company’s manufacturing and operating costs. The company incurred certain incremental costs such as severance, facility closing and other restructuring costs, primarily in the second half of 2020. The company may incur additional charges in 2021 as it finalizes all the actions to be taken.

These restructuring activities may yield unintended consequences and costs, such as attrition beyond our intended reduction in force, the distraction of our employees, additional charges for severance and severance-related costs and the loss of in-house knowledge in connection with the planned reduction in our workforce. This type of restructuring activity also may result in business disruptions and may not produce the full efficiency and cost reduction benefits anticipated. Further, the benefits may be realized later than expected and the cost of implementing these measures may be greater than anticipated. If these measures are not successful, we may need to undertake additional cost reduction efforts, which could result in future charges. Moreover, the restructuring plan may cause business disruptions with customers and elsewhere if our cost reduction efforts prove ineffective, and our business may not be more efficient or effective than prior to implementation of the plan. Our restructuring activities, including the related charges and the impact of the related workforce reduction, could have a material adverse effect on our business, operating results and financial condition.

The loss of, continued reduction or substantial decline in revenue from larger clients could have a material adverse effect on our revenues, profitability and liquidity.

We experience revenue concentration with a large customer that represents over 10% of our consolidated revenue. Generally, our contracts do not contain guarantees of minimum duration, revenue levels, or profitability. This customer may terminate their contracts or materially reduce their requested levels of service at any time. The loss of, deterioration of the financial condition of, or a significant change to the business of this customer could have a material adverse effect on our business, financial condition, and results of operations. Additionally, this concentration exposes us to concentrated credit risk, as a significant portion of our accounts receivable may be from a single customer. If we are unable to collect our receivables, or are required to take additional reserves, our results and cash flows will be adversely affected.

Business Strategy Risk Factors

We have made, and may make in the future, strategic acquisitions and divestitures that may involve significant risks and uncertainties. We may not realize the anticipated benefits of past or future acquisitions and integration of these acquisitions may disrupt our business and divert management attention. Likewise, our potential future divestitures may be unsuccessful and negatively impact our business.

From time to time, we evaluate acquisition candidates that fit our business objectives. Acquisitions involve certain risks and uncertainties, including, among others, the following:

- Difficulty in integrating newly acquired businesses and operations in an efficient and cost-effective manner, which may also impact our ability to realize the potential benefits associated with the acquisition;
- The risk that significant unanticipated costs or other problems associated with integration may be encountered;
- The challenges in achieving strategic objectives, cost savings and other anticipated benefits;
- The risk that our marketplaces do not evolve as anticipated and that the technologies acquired do not prove to be those needed to be successful in the marketplaces that we serve;
- The risk that we assume significant liabilities that exceed the limitations of any applicable indemnification provisions or the financial resources of any indemnifying party;
- The inability to maintain a relationship with key customers, vendors and other business partners of the acquired businesses;
- The difficulty in maintaining controls, procedures and policies during the transition and integration;
- The potential loss of key employees of the acquired businesses;
- The risk of diverting management attention from our existing operations;
- Difficulties in coordinating geographically disparate organizations and corporate cultures and integrating management personnel with different business backgrounds;
- The potential failure of the due diligence process to identify significant problems, liabilities or other challenges of an acquired company or technology;
- The risk that we incur significant costs associated with such acquisition activity that may negatively impact our operating results before the benefits of such acquisitions are realized, if at all;
- The entry into marketplaces where we have no or limited direct prior experience and where competitors have stronger marketplace positions;
- The exposure to litigation or other claims in connection with our assuming claims or litigation risks from terminated employees, customers, former shareholders or other third parties; and
- The risk that historical financial information may not be representative or indicative of our results as a combined company.

Historically, we have grown organically and from acquisitions, and we intend to continue to grow. Our infrastructure will require, among other things, continued development of our financial and management controls and management information systems, management of our sales channel, continued capital expenditures, the ability to attract and retain qualified management personnel and the training of new personnel. We cannot be sure that our infrastructure, systems, procedures, business processes and managerial controls will be adequate to support the growth in our operations. Any delays in, or problems associated with, implementing, or transitioning to, new or enhanced systems, procedures, or controls to accommodate and support the requirements of our business and operations and to effectively and efficiently integrate acquired operations may adversely affect our ability to meet customer requirements, manage our product inventory, and record and report financial and management information on a timely and accurate basis. These potential negative effects could prevent us from realizing the benefits of an acquisition transaction or other growth opportunity.

Likewise, we have in the past, and may in the future, divest certain business operations. Divestitures involve a number of risks, including the diversion of management's attention, significant costs and expenses, goodwill and other intangible asset impairment charges, the loss of customer relationships and cash flow, and the disruption of operations in the affected business. Failure to timely complete or consummate a divestiture may negatively affect valuation of the affected business or result in restructuring charges.

In the event an unsuccessful acquisition or divestiture, our competitive position, revenues, results of operations and financial condition could be adversely affected.

Regulatory, Legislative and Legal Risk Factors

We are subject to U.S. and other anti-corruption laws, trade controls, economic sanctions and similar laws and regulations. Our failure to comply with these laws and regulations could subject us to civil, criminal and administrative penalties and harm our reputation.

Doing business on a worldwide basis requires us to comply with the laws and regulations of the U.S. government and various foreign jurisdictions. These laws and regulations place restrictions on our operations, trade practices, partners and investments.

In particular, our operations are subject to U.S. and foreign anti-corruption and trade control laws and regulations, such as the Foreign Corrupt Practices Act ("FCPA") and United Kingdom Bribery Act (the "Bribery Act"), export controls and economic sanctions programs, including those administered by the U.S. Treasury Department's Office of Foreign Assets Control ("OFAC"), the State Department's Directorate of Defense Trade Controls ("DDTC") and the Bureau of Industry and Security ("BIS") of the Department of Commerce. As a result of doing business in foreign countries and with foreign customers, we are exposed to a heightened risk of violating anti-corruption and trade control laws and sanctions regulations.

As part of our business, we may deal with state-owned business enterprises, the employees of which are considered foreign officials for purposes of the FCPA's prohibition on providing anything of value to foreign officials for the purposes of obtaining or retaining business or securing any improper business advantage. In addition, the provisions of the Bribery Act extend beyond bribery of foreign public officials and also apply to transactions with individuals that a government does not employ. Some of the international locations in which we operate lack a developed legal system and have higher than normal levels of corruption. Our continued expansion outside the U.S., including in Brazil, China, India and developing countries, and our development of new partnerships worldwide, could increase the risk of FCPA, OFAC or Bribery Act violations in the future.

As an exporter, we must comply with various laws and regulations relating to the export of products and technology from the U.S. and other countries having jurisdiction over our operations. In the U.S., these laws include the International Traffic in Arms Regulations ("ITAR") administered by the DDTC, the Export Administration Regulations ("EAR") administered by the BIS and trade sanctions against embargoed countries and destinations administered by OFAC. The EAR governs products, parts, technology and software which present military or weapons proliferation concerns, so-called "dual use" items, and ITAR governs military items listed on the United States Munitions List. Prior to shipping certain items, we must obtain an export license or verify that license exemptions are available. Any failures to comply with these laws and regulations could result in fines, adverse publicity and restrictions on our ability to export our products, and repeat failures could carry more significant penalties.

Violations of anti-corruption and trade control laws and sanctions regulations are punishable by civil penalties, including fines, denial of export privileges, injunctions, asset seizures, debarment from government contracts and revocations or restrictions of licenses, as well as criminal fines and imprisonment and could harm our reputation, create negative shareholder sentiment and affect our share value. We have established policies and procedures designed to assist our compliance with applicable U.S. and international anti-corruption and trade control laws and regulations, including the FCPA, the Bribery Act and trade controls and sanctions programs administered by OFAC, the DDTC and BIS, and have trained our employees to comply with these laws and regulations. However, there can be no assurance that all of our employees, consultants, agents or other associated persons will not take actions in violation of our policies and these laws and regulations. Additionally, there can be no assurance that our policies and procedures will effectively prevent us from violating these regulations in every transaction in which we may engage or provide a defense to any alleged violation. In particular, we may be held liable for the actions that our joint venture partners take inside or outside of the United States, even though our partners may not be subject to these laws. Such a violation, even if our policies prohibit it, could have an adverse effect on our reputation, business, financial condition and results of operations. In addition, various state and municipal governments, universities and other investors maintain prohibitions or restrictions on investments in companies that do business with sanctioned countries, persons and entities, which could adversely affect our reputation, business, financial condition and results of operations.

We disclosed potential violations of U.S. export controls laws to the U.S. federal government that resulted in multiple investigations. We have implemented compliance processes and procedures to identify and prevent potential future violations of export control laws, trade sanctions, and government contracting laws and regulations, and continue to review our government contracting compliance risks and potential violations. Based on the disclosures and investigations, the U.S. Air Force temporarily suspended us from certain new federal contracts and orders in July 2019 and lifted that suspension in September 2019 following the execution of an Administrative Agreement with the Company. Failure to comply with the terms of the Administrative Agreement or the commencement of a separate action by another governmental agency would result in decreased revenues and additional harm to our reputation and otherwise adversely affect our business, operating results and financial condition.

In October 2017, we received an administrative subpoena from BIS requesting the production of records in connection with possible violations of U.S. export control laws, including with regard to our Quickparts.com, Inc. subsidiary. In addition, while collecting information responsive to the above-referenced subpoena, our internal investigation identified potential violations of ITAR administered by DDTC and potential violations of the Export Administration Regulations administered by BIS.

On June 8, 2018 and thereafter, we submitted voluntary disclosures to BIS and DDTC identifying numerous potentially unauthorized exports of technical data. As part of our ongoing review of trade compliance risks and our cooperation with the government, on November 20, 2019, we submitted to the U.S. Treasury Department's Office of Foreign Assets Control ("OFAC") an initial notice of voluntary disclosure regarding potential violations of economic sanctions related to Iran. We continued to investigate this issue and filed a final disclosure with OFAC on May 20, 2020. We have and will continue to implement compliance enhancements to our export controls, trade sanctions, and government contracting compliance program to address the issues identified through our ongoing internal investigation and will cooperate with DDTC and BIS, as well as the U.S. Departments of Justice, Defense, Homeland Security and Treasury in their ongoing reviews of these matters. In connection with these ongoing reviews, in August 2020, the Company received two federal grand jury subpoenas issued by the U.S. District Court for the Northern District of Texas. The Company responded to these two subpoenas and will continue to fully cooperate with the U.S. Department of Justice in the related investigation.

In addition, on July 19, 2019, we received a notice of immediate suspension of federal contracting from the United States Air Force, pending the outcome of an ongoing investigation. The suspension applied to 3D Systems, its subsidiaries and affiliates, and was related to export controls violations involving 3D Systems' On Demand manufacturing business described above. Under the suspension, we were generally prohibited from receiving new federal government contracts or subcontracts from any executive branch agency as described in the provisions of 48 C.F.R. Subpart 9.4 of the Federal Acquisition Regulation. The suspension allowed us to continue to perform current federal contracts, and also to receive awards of new subcontracts for items under \$35,000 and for items considered commercially available off-the-shelf items. The Air Force lifted the suspension on September 6, 2019 following the execution of a two-year Administrative Agreement with the Company. The Company is now eligible to obtain and perform U.S. government contracts and subcontracts without restrictions. Under the Administrative Agreement, the Company will be monitored and evaluated by independent monitors who will report to the Air Force on the Company's compliance with the terms of the Company's Ethics & Compliance Program, including its overall culture, government contracting compliance program, and export controls compliance program. The Company's failure to comply fully with the terms of the Administrative Agreement or the commencement of separate actions by other agencies of the federal government could result in reinstatement of the suspension or debarment from future federal contracting, which would result in decreased revenues and additional harm to our reputation and otherwise adversely affect our business, operating results and financial condition.

Although we cannot predict the ultimate resolution of these matters, we have incurred and expect to continue to incur significant legal costs and other expenses in connection with responding to the U.S. government agencies.

Since 2018, we have implemented new compliance procedures to identify and prevent potential violations of export controls laws, trade sanctions, and government contracting laws and regulations and created a Compliance Committee of the Board of Directors to further enhance board oversight of compliance risks. As we continue to implement additional compliance enhancements, we may discover additional potential violations of export controls laws, trade sanctions, and/or government contracting laws in the future. If we identify any additional potential violations, we will submit voluntary disclosures to the relevant agencies and cooperate with such agencies on any related investigations. Independent monitors will observe and evaluate the Company's continued compliance with its Ethics & Compliance Program during the term of the Administrative Agreement.

If the U.S. government finds that we have violated one or more export controls laws, trade sanctions, or government contracting laws, we could be subject to various civil or criminal penalties. By statute, these penalties can include but are not limited to fines, which by statute may be significant, denial of export privileges, and suspension or debarment from participation in U.S. government contracts. We may also be subject to contract claims based upon such violations. Any assessment of penalties or other liabilities incurred in connection with these matters could harm our reputation and customer relationships, create negative investor sentiment, and affect our share value. In connection with any resolution, we may also be required to undertake additional remedial compliance measures and program monitoring. We cannot at this time predict when the U.S. government agencies will conclude their investigations or determine an estimated cost, if any, or range of costs, for any penalties, fines or other liabilities to third parties that may be incurred in connection with these matters.

We derive a significant portion of our revenue from business conducted outside the U.S. and are subject to the risks of doing business outside the U.S.

We face many risks inherent in conducting business activities outside the U.S. that, unless managed properly, may adversely affect our profitability, including our ability to collect amounts due from customers. While most of our operations outside the U.S. are conducted in highly developed countries, our operations could be adversely affected by, among others, the following:

- Unexpected changes in laws, regulations and policies of non-U.S. governments relating to investments and operations, as well as U.S. laws affecting the activities of U.S. companies abroad;
- Changes in regulatory requirements, including export controls, tariffs and embargoes, other trade restrictions, competition, corporate practices and data privacy concerns;
- Political policies, political or civil unrest, terrorism or epidemics and other similar outbreaks;
- Fluctuations in currency exchange rates;
- Limited protection for the enforcement of contract and intellectual property rights in some countries;
- Difficulties in staffing and managing foreign operations;
- Operating in countries with a higher incidence of corruption and fraudulent business practices;
- Effects of the implementation of the U.K.'s departure from the European Union, known as Brexit;
- Potentially adverse changes in taxation;
- The impact of public health epidemics on employees and the global economy; and
- Other factors, depending upon the specific country in which we conduct business.

These uncertainties may make it difficult for us and our customers to accurately plan future business activities and may lead our customers in certain countries to delay purchases of our products and services. More generally, these geopolitical, social and economic conditions could result in increased volatility in global financial markets and economies.

The consequences of terrorism or armed conflicts are unpredictable, and we may not be able to foresee events that could have an adverse effect on our market opportunities or our business. We are uninsured for losses and interruptions caused by terrorism, acts of war and similar events.

While the geographic areas outside the U.S. in which we operate are generally not considered to be highly inflationary, our foreign operations are sensitive to fluctuations in currency exchange rates arising from, among other things, certain intercompany transactions that are generally denominated, for example, in U.S. dollars rather than their respective functional currencies.

Moreover, our operations are exposed to market risk from changes in interest rates and foreign currency exchange rates and commodity prices, which may adversely affect our results of operations and financial condition. We seek to minimize these risks through regular operating and financing activities and, when we consider it to be appropriate, through the use of derivative financial instruments. However, our efforts to minimize our exposure to market risks from changes in interest rates, foreign currency exchange rates and commodity prices may prove to be insufficient or unsuccessful.

We may incur substantial costs enforcing or acquiring intellectual property rights and defending against third-party claims as a result of litigation or other proceedings.

In connection with the enforcement of our own intellectual property rights, the acquisition of third-party intellectual property rights or disputes related to the validity or alleged infringement of third-party intellectual property rights, including patent rights, we have been, and may in the future be, subject to claims, negotiations or complex, protracted litigation. Intellectual property disputes and litigation may be costly and can be disruptive to our business operations by diverting attention and energies of management and key technical personnel, and by increasing our costs of doing business. Although we have successfully defended or resolved past litigation and disputes, we may not prevail in any ongoing or future litigation and disputes, which could adversely affect our results of operations and financial condition.

Third-party intellectual property claims asserted against us could subject us to significant liabilities, require us to enter into royalty and licensing arrangements on unfavorable terms, prevent us from assembling or licensing certain of our products, subject us to injunctions restricting our sale of products, cause severe disruptions to our operations or the marketplaces in which we compete or require us to satisfy indemnification commitments with our customers, including contractual provisions under various license arrangements. In addition, we may incur significant costs in acquiring the necessary third-party intellectual property rights for use in our products. Any of these could seriously harm our business.

We may not be able to protect our intellectual property rights and confidential information, including our digital content, from third-party infringers or unauthorized copying, use or disclosure.

Although we defend our intellectual property rights and endeavor to combat unlicensed copying and use of our digital content and intellectual property rights through a variety of techniques, preventing unauthorized use or infringement of our rights ("piracy attacks") is inherently difficult. If our intellectual property becomes subject to piracy attacks, our business may be harmed.

Additionally, we endeavor to protect the secrecy of our digital content, confidential information and trade secrets. If unauthorized disclosure of our trade secrets occurs, we could potentially lose trade secret protection. The loss of trade secret protection could make it easier for third parties to compete with our products by copying previously confidential features, which could adversely affect our business, results of operations, revenue and operating margins. We also seek to protect our confidential information and trade secrets through the use of non-disclosure agreements. However, there is a risk that our confidential information and trade secrets may be disclosed or published without our authorization, and in these situations it may be difficult and/or costly for us to enforce our rights.

Material weaknesses in our internal control over financial reporting could result in material misstatements in our financial statements not being prevented or detected, which could affect investor confidence in the accuracy and completeness of our financial statements and could negatively impact on our stock price and financial condition.

As a public company, we are required to comply with Section 404 of the Sarbanes-Oxley Act. If we fail to abide by the applicable requirements of Section 404, regulatory authorities, such as the SEC, could subject us to sanctions or investigation, and our independent registered public accounting firm may not be able to certify as to the effectiveness of our internal control over financial reporting pursuant to an audit of our controls. Even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. Accordingly, our internal control over financial reporting may not prevent or detect misstatements because of their inherent limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud.

During the preparation of our financial statements for the period ended December 31, 2020, management identified two material weaknesses in our internal control over financial reporting related to a lack of certain controls, or improper execution of designed control procedures, (1) for certain non-standard contracts and non-standard contract terms and (2) over the review of internally prepared reports and analyses utilized in the financial closing process. These control deficiencies were partially related to employee turnover, resulting in a temporary shortage of personnel with appropriate knowledge or skills to perform an effective review during our financial statement close process. In addition, certain control deficiencies related to the completeness and review of transactions that were infrequent in nature. These control deficiencies could have resulted in a misstatement of accounts and disclosures that could have resulted in a material misstatement of our annual or interim consolidated financial statements that would not have been prevented or detected. Accordingly, management has determined that these control deficiencies constitute material weaknesses.

As further described in Item 9A, Management's Report on Internal Control over Financial Reporting, we are working to remediate the material weaknesses through the development and implementation of more formal policies, processes and documentation procedures relating to our financial reporting, the hiring of additional accounting personnel and the training of new personnel and existing personnel in new roles on proper execution of designed control procedures. In addition, we may engage outside consultants to advise on changes in the design of our controls and procedures or to advise on technical accounting matters.

While we believe our remediation plans described above should remediate the material weaknesses, we cannot provide assurance of when the material weaknesses will be remediated, nor can we be certain of whether additional actions will be required or the costs of any such actions. Moreover, we cannot provide assurance that additional material weaknesses will not arise in the future. While the material weaknesses discussed in Item 9A, Management's Report on Internal Control over Financial Reporting, did not result in material misstatements of our annual or interim consolidated financial statements, any failure to remediate the material weaknesses, or the identification of new material weaknesses in our internal control over financial reporting, could result in material misstatements in our financial statements that may continue undetected, negatively impacting the public perception of the Company and our securities and cause us to fail to meet our reporting and financial obligations or incur significant additional costs to remediate the material weaknesses, each of which could negatively affect our stock price, harm our ability to raise capital on favorable terms in the future or otherwise have a negative impact on our financial condition.

General Risk Factors

We believe that our future success depends on our ability to deliver products and services that meet changing technology and customer needs.

Our business may be affected by rapid technological change, changes in user and customer requirements and preferences, frequent new product and service introductions embodying new technologies and the emergence of new standards and practices, any of which could render our existing products and proprietary technology obsolete. Accordingly, our ongoing research and development programs are intended to enable us to maintain technological leadership. We believe that to remain competitive we must continually enhance and improve the functionality and features of our products, services and technologies. However, there is a risk that we may not be able to:

- Develop or obtain leading technologies useful in our business;
- Enhance our existing products;
- Develop new products, services and technologies that address the increasingly sophisticated and varied needs of prospective customers, particularly in the area of printer speeds and materials functionality;
- Respond to technological advances and emerging industry standards and practices on a cost-effective and timely basis; or
- Recruit or retain key technology employees.

If we are unable to meet changing technology and customer needs, our competitive position, revenue, results of operations and financial condition could be adversely affected.

If we do not generate net cash flow from operations and if we are unable to raise additional capital, our financial condition could be adversely affected and we may not be able to execute our growth strategy.

We cannot assure you that we will generate cash from operations or other potential sources to fund future working capital needs and meet capital expenditure requirements.

If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring or incurring additional debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to obtain additional capital or refinance any indebtedness will depend on, among other things, the capital markets, our financial condition at such time and the terms and conditions of any such financing or indebtedness. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

The lack of additional capital resulting from any inability to generate cash flow from operations or to raise equity or debt financing could force us to substantially curtail or cease operations and would, therefore, have an adverse effect on our business and financial condition. Furthermore, we cannot assure you that any necessary funds, if available, would be available on attractive terms or that they would not have a significantly dilutive effect on our existing stockholders. If our financial condition were to worsen and we become unable to attract additional equity or debt financing or enter into other strategic transactions, we would not be able to execute our growth strategy and we could become insolvent or be forced to declare bankruptcy.

Our business could be adversely impacted in the event of a failure of our information technology infrastructure or adversely impacted by a successful cyber-attack.

We have experienced cyber security threats, threats to our information technology infrastructure and unauthorized attempts to gain access to our sensitive information. Prior cyber-attacks directed at us have not had a material impact on our business or financial results; however, this may not continue to be the case in the future. Cyber security assessment analyses undertaken by us have identified and prioritized steps to fortify our cyber security safeguards. We have and will continue to implement additional security measures and processes which enhance our ability to detect and respond to a cyber-attack. We have increased our cyber breach insurance and implemented company-wide cyber security awareness training as well as dedicated certain personnel to address this threat. Despite the implementation of these new safeguards, there can be no assurance that we will adequately protect our information or that we will not experience any future successful attacks. The threats we face vary from attacks common to most industries to more advanced and persistent, highly organized adversaries who target us because of the products and services we provide. If we are unable to protect sensitive information, our customers or governmental authorities could question the adequacy of our threat mitigation and detection processes and procedures. Due to the evolving nature of these security threats, however, the impact of any future incident cannot be predicted.

We may need to expend significant additional resources to modify our cyber security protective measures, to investigate and remediate vulnerabilities or other exposures or to make required notifications, and we may be subject to litigation and financial losses. These costs related to cyber or other security threats or disruptions may not be fully insured or indemnified by other means. Occurrence of any of these events could adversely affect our internal operations, the services we provide to our customers, our financial results or our reputation; or such events could result in the loss of competitive advantages derived from our research and development efforts or other intellectual property or early obsolescence of our products and services.

Our operations could suffer if we are unable to attract and retain key management or other key employees.

Our success depends upon the performance of our senior management and other key personnel. Our senior executive team is critical to the management of our business and operations, as well as to the development and execution of our strategy. When changes occur at our senior management level, as well as for key personnel, we typically incur incremental costs including search costs and relocation costs. High demand exists for senior management and other key personnel (including scientific, technical and sales personnel) in the 3D printing industry, and there can be no assurance that we will be able to attract and retain such personnel. We experience intense competition for qualified personnel.

While we intend to continue to provide competitive compensation packages to attract and retain key personnel and engage in regular succession planning for these positions, some of our competitors for these employees have greater resources and more experience, making it difficult for us to compete successfully for key personnel. If we cannot attract and retain sufficiently qualified technical employees for our research and development and manufacturing operations, we may be unable to develop and commercialize new products or new applications for existing products. Furthermore, possible shortages of key personnel, including engineers, in the regions surrounding our facilities could require us to pay more to hire and retain key personnel, thereby increasing our costs.

Our common stock price has been and may continue to be volatile.

The market price of our common stock has experienced, and may continue to experience, considerable volatility. Between January 1, 2019 and December 31, 2020, the trading price of our common stock has ranged from a low of \$4.60 per share to a high of \$14.50 per share. Numerous factors could have a significant effect on the price of our common stock, including those described or referred to in this “Risk Factors” section of this Form 10-K, as well as, among other things:

- Our perceived value in the securities markets;
- Overall trends in the stock market;
- Announcements of changes in our forecasted operating results or the operating results of one or more of our competitors;
- Compliance with the terms of our Administrative Agreement with the U.S. Air Force;
- The impact of changes in our results of operations, our financial condition or our prospects;
- Market conditions for providers of products and services such as ours;
- Executive level management uncertainty or change;
- Changes in recommendations or revenue or earnings estimates by securities analysts; and
- Announcements of acquisitions by us or one of our competitors.

Item 1B.Unresolved Staff Comments

None.

Item 2. Properties

Our headquarters are located in Rock Hill, South Carolina. As of December 31, 2020, we owned minimal facilities and we leased approximately 1.0 million square feet in the U.S (624 thousand square feet), EMEA (302 thousand square feet) and APAC (28 thousand square feet).

Our headquarters also serve as a research and development site. Other major research and development locations include Cary, North Carolina; San Diego, California; Seoul, South Korea; Tel Aviv, Israel; Valencia, California, Leuven Belgium and Wilsonville, Oregon. We believe our existing facilities and equipment are in good operating condition and are suitable for our business in the manner that it is currently conducted. We expect to continue to make investments in capital equipment as needed to meet anticipated demand for our products and evaluate our existing real estate portfolio for potential consolidation and efficiencies. See “Item 1. Business – Production and Supplies” of this Form 10-K for further discussion of our facilities.

Item 3. Legal Proceedings

Information relating to legal proceedings is included under the header "Litigation" in Note 22 to the consolidated financial statements in Item 8 of this Form 10-K, which is incorporated by reference into this Item 3.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is listed on the New York Stock Exchange (“NYSE”) under the trading symbol “DDD.”

As of February 22, 2021, our outstanding common stock was held by approximately 1,113 stockholders of record. This figure does not reflect the beneficial ownership of shares held in the nominee name.

Dividends

We do not currently pay, and have not paid, any dividends on our common stock, and we currently intend to retain any future earnings for use in our business. Any future determination as to the declaration of dividends on our common stock will be made at the discretion of the Board of Directors and will depend on our earnings, operating and financial condition, capital requirements and other factors deemed relevant by the Board of Directors, including the applicable requirements of the Delaware General Corporation Law, which provides that dividends are payable only out of surplus or current net profits.

The payment of dividends on our common stock may be restricted by the provisions of credit agreements or other financing documents that we may enter into or the terms of securities that we may issue from time to time. Currently, no such agreements or documents limit our declaration of dividends or payments of dividends, other than our \$200.0 million 5-year term and revolving senior secured credit facility, which limits the amount of cash dividends that we may pay in any one fiscal year to \$30.0 million.

Issuance of Unregistered Securities and Issuer Purchases of Equity Securities

We did not repurchase any of our equity securities in the open market during the year ended 2020, however, shares of common stock were surrendered to us for payment of tax withholding obligations in connection with the vesting of restricted stock awards pursuant to our 2015 Incentive Stock Plan. For information regarding the securities authorized for issuance under our equity compensation plans, see “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters—Equity Compensation Plans” in Item 12 of this Form 10-K. Also see Note 16 to the consolidated financial statements in Item 8 of this Form 10-K. We did not engage in any unregistered sales of equity securities in 2020.

Issuer purchases of equity securities

	Total number of shares (or units) purchased	Average price paid per share (or unit)
October 1, 2020 - October 31, 2020	—	\$ —
November 1, 2020 - November 30, 2020	3,158	7.12
December 1, 2020 - December 31, 2020	7,619	10.40
Total	10,777 ^a	\$ 9.44 ^b

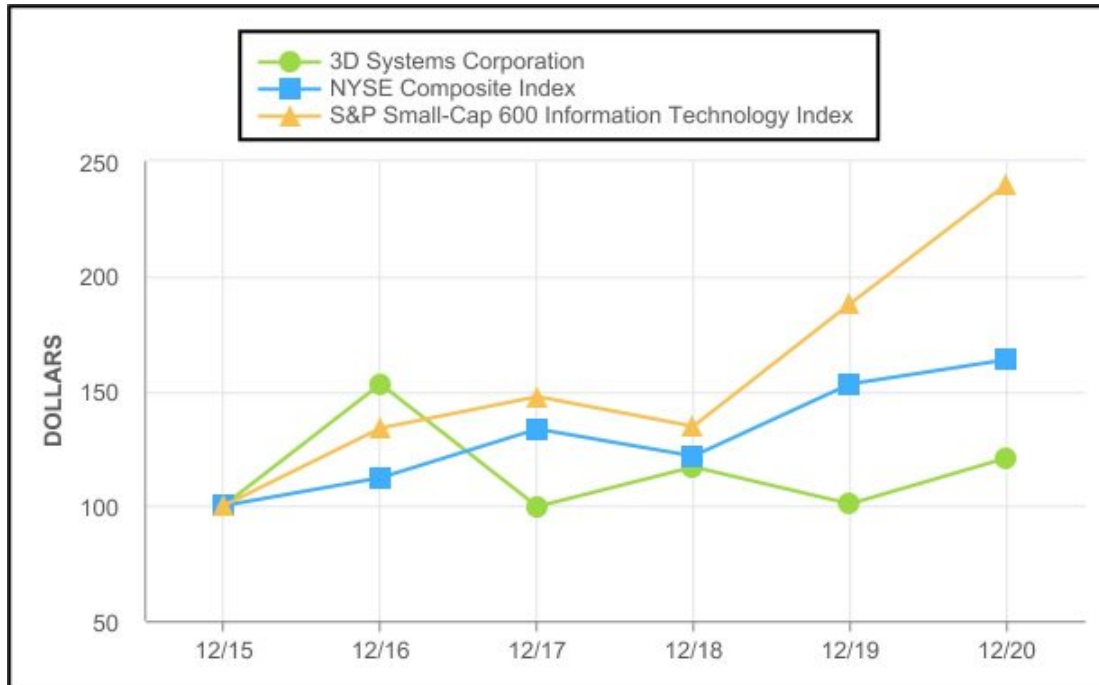
- a. Represents shares of common stock surrendered to us for payment of tax withholding obligations in connection with the vesting of restricted stock.
b. The average price paid reflects the average market value of shares withheld for tax purposes.

Stock Performance Graph

The graph below shows, for the five years ended December 31, 2020, the cumulative total return on an investment of \$100 assumed to have been made on December 31, 2015 in our common stock. For purposes of the graph, cumulative total return assumes the reinvestment of all dividends. The graph compares such return with those of comparable investments assumed to have been made on the same date in (a) the NYSE Composite Index, and (b) the S&P Small-Cap 600 Information Technology Index which are published market indices with which we are sometimes compared.

Although total return for the assumed investment assumes the reinvestment of all dividends on December 31 of the year in which such dividends were paid, we paid no cash dividends on our common stock during the periods presented.

COMPARISON OF 5-YEAR CUMULATIVE TOTAL RETURN



	December 31, 2015	December 31, 2016	December 31, 2017	December 31, 2018	December 31, 2019	December 31, 2020
3D Systems Corporation	\$ 100	\$ 153	\$ 99	\$ 117	\$ 101	\$ 121
NYSE Composite Index	100	112	133	122	153	164
S&P Small-Cap 600 Information Technology Index	100	134	148	134	188	240

Item 6. Selected Financial Data

None.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis should be read together with the selected consolidated financial data and our consolidated financial statements and notes thereto included in Item 8 of this Form 10-K. Certain statements contained in this discussion may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements involve a number of risks, uncertainties and other factors that could cause actual results to differ materially from those reflected in any forward-looking statements, as discussed more fully in this Form 10-K. See "Forward-Looking Statements" and "Risk Factors" in Part I, Item 1A.

For discussion related to the results of operations and changes in financial condition for fiscal 2019 compared to fiscal 2018, refer to Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in our fiscal 2019 Form 10-K, which was filed with the SEC on February 26, 2020.

Overview and Strategy

We combine customer collaboration and innovation with the expertise of our people to execute on a strategy of providing digital manufacturing solutions. These ongoing efforts resulted in the creation of nearly 130 million production parts by our customers in 2020.

We architect solutions specific to customers' needs through a combination of materials, hardware platforms, software and professional services – creating a path to integrating additive into traditional production environments. As a result, manufacturers achieve design freedom, increase agility, scale production and improve overall total cost of operation.

Digital Manufacturing Solutions for a Breadth of Industries

Our digital manufacturing solutions customers span a range of industries including Aerospace and Defense, Automotive, Dental, Durable Goods and Healthcare.

- *Industrial Solutions*
 - *Aerospace and Defense*: Aerospace and defense customers use our solutions to achieve manufacturing productivity improvements such as increased speed and reliability of quality assurance and validation processes, lowered fuel costs through lightweighting and parts consolidation, increased manufacturing productivity through innovative 3D printed casting patterns, 3D data recovery, injection-mold design and direct metal printing of airworthy parts.
 - *Automotive*: Our production solutions are used by automotive manufacturers to develop lighter weight parts to drive down manufacturing costs, design and produce innovative assemblies that reduce part counts, provide greater strength and efficiency and create realistic prototypes that reduce time from the product development process.
 - *Durable Goods*: Manufacturers of durable goods use our solutions to increase factory automation and connectivity, create greater product personalization and achieve just-in-time manufacturing. Our products and services help reduce mass production, one-size-fits-all manufacturing, long lead time and large inventories for our durable goods customers.
- *Healthcare Solutions*
 - *Dental*: We offer a broad range of clinically validated digital dentistry technologies and materials that allow dental labs to access advanced digital workflows, driving speed, efficiency and precision of a range of indications delivered to patients.
 - *Healthcare*: We partner with surgeons, healthcare professionals and medical device manufacturers to offer a range of precision healthcare solutions, including 3D printed anatomical models, VSP and patient-specific surgical guides, instrumentation and implants.

Accelerating Additive Manufacturing Adoption

We partner with our customers in their progression in the use of additive manufacturing to help accelerate the adoption of additive manufacturing within their existing production environments. This process focuses on the customer's desired application in order to design the solutions to achieve their needs and address challenges. Customers regularly engage with one of our Customer Innovation Centers (CIC), where a customized production workflow solution is designed to accelerate the development of advanced applications by providing customers with access to solutions, domain expertise and state-of-the-art technology. The process often includes our software as the core to the overall solution. Customers are able to scan and digitize solutions when digital files do not exist, and then prepare their CAD file for 3D printing. This preparation includes importing part data, orienting the part on the build plate, optimizing the geometry and creating supports to ensure the final part matches the design intent. The part is then created using our additive manufacturing hardware platforms. After printing, the part is post-processed and our software provides inspection capabilities.

On Demand Solutions Provide Supply Chain Flexibility

Our On Demand solutions facilitate supply chain flexibility by leveraging the same production solutions available direct to customers. Our On Demand solutions can provide single part production, or hundreds of parts, within days. Customers have access to a global network of facilities and nearly four decades of experience in 3D printing and advanced manufacturing solutions.

Digital Factory Software

Our extensive software portfolio allows manufacturers to deliver physical products with digital precision and speed. We provide manufacturers with access to additive technologies to create their products, streamlining manufacturing processes from digitization and design to manufacturing, inspection and production management.

Integrated Production Solutions

Our additive manufacturing solutions can complement our customers' traditional workflows to create a competitive advantage. Our strategic partnership with GF Machining Solutions is designed to help more manufacturers take advantage of additive technology. This partnership combines our innovation and expertise in additive manufacturing with GF Machining Solutions' leadership in precision machining, enabling manufacturers to combine additive and subtractive technologies to more efficiently produce complex metal parts within tight tolerances, and reduce total cost of operation.

COVID-19 Pandemic Response

We continue to closely monitor the COVID-19 pandemic and our top priority remains the health and safety of our employees and their families and communities. Our Crisis Response Steering Committee regularly reviews and adapts our protocols based on evolving research and guidance related to the virus. While essential operations continue, we continue to restrict travel and meetings, publish pertinent information, and adapt to a world where many in our workforce are remote and those coming on-site are following new safety measures. We have a multi-phase plan to return to working on-site, and remain committed to protecting our employees, delivering for our customers and supporting our communities.

2020 Summary

Consolidated revenue for the year ended December 31, 2020 decreased by 12.4%, or \$79.1 million, to \$557.2 million, compared to \$636.4 million for the year ended December 31, 2019. Current year revenue was adversely impacted by COVID-19, the effects of which occurred most severely at the onset of the pandemic, in the latter part of the first quarter and into the second quarter, as many of our customers were shutdown or on a significantly reduced level of activity. The third quarter experienced a partial return in activity, though levels remained lower than that of prior year. The fourth quarter experienced a stronger return in activity, with results surpassing that of the prior year quarter by 2.6%.

Revenue from Healthcare increased 9.1% to \$245.4 million for the year ended December 31, 2020, compared to \$224.8 million for the year ended December 31, 2019, driven by stronger sales to the dental market. Industrial sales decreased 24.2% to \$311.9 million for the year ended December 31, 2020, compared to \$411.5 million for the year ended December 31, 2019; decreases were in all products and services across all geographies.

For the year ended December 31, 2020, total software revenue from products and services decreased by 12.7% to \$86.0 million, 15.4% of total revenue, compared to \$98.5 million, 15.5% of total revenue, for the year ended December 31, 2019.

Gross profit for the year ended December 31, 2020 decreased by 20.4%, or \$57.2 million, to \$223.4 million, compared to \$280.5 million for the year ended December 31, 2019. Gross profit margin for the years ended December 31, 2020 and 2019 was 40.1% and 44.1%, respectively. Gross profit margin decreased primarily due to lower sales volume and the under absorption of supply chain overhead resulting from lower production.

Operating expenses for the year ended December 31, 2020 increased by 1.4%, or \$4.7 million, to \$342.3 million, compared to \$337.6 million for the year ended December 31, 2019. Selling, general and administrative expenses for the year ended December 31, 2020 decreased by 13.5%, or \$34.5 million, to \$219.9 million, compared to \$254.4 million for the year ended December 31, 2019. Research and development expenses for the year ended December 31, 2020 decreased by 11.0%, or \$9.1 million, to \$74.1 million, compared to \$83.3 million for the year ended December 31, 2019. In the third quarter of 2020, we recorded a non-cash goodwill impairment charge of \$48.3 million. See Note 9 to the consolidated financial statements in Item 8 of this Form 10-K for additional discussion. No similar charge was recorded in the prior year. Excluding the goodwill impairment charge, our lower operating expenses reflect reduced hiring and lower travel expenses incurred in the current year, resulting from the COVID-19 pandemic, as well as savings achieved in the current year from cost restructuring activities, including personnel and marketing activities; partially offset by costs associated with restructuring efforts including employee severance and facility closings and related impairment charges.

Our operating loss for the year ended December 31, 2020 was \$119.0 million, compared to an operating loss of \$57.1 million for the year ended December 31, 2019.

For the year ended December 31, 2020, we used \$20.1 million of cash from operations. For the year ended December 31, 2019, we generated \$31.6 million of cash from operations. In total, our unrestricted cash balance at December 31, 2020 and December 31, 2019, was \$75.0 million and \$133.7 million, respectively. The lower cash balance primarily resulted from \$20.1 million for operations, \$26.8 million for repayments of debt, \$12.5 million for payments to purchase noncontrolling interests and \$13.6 million for capital expenditures, offset by net proceeds of \$24.7 million from third quarter common stock issuances under our At-the-Market equity offering program ("ATM Program") pursuant to which we could issue and sell, from time to time, shares of our common stock up to an aggregate gross sales price of \$150 million. See Note 18 and Note 26 to the consolidated financial statements in Item 8 of this Form 10-K for additional discussion.

On August 5, 2020, we announced, in connection with the new strategic focus and organizational realignment, a restructuring plan intended to align our operating costs with current revenue levels and better position the Company for future sustainable and profitable growth. See Note 24 in Item 8 of this Form 10-K.

Results of Operations for 2020 and 2019

Comparison of revenue

Current year revenue was adversely impacted by COVID-19, as many of our customers were shutdown or on a significantly reduced level of activity for a portion of the year. Excluding impacts due to the pandemic, due to the relatively high price of certain 3D printers and a corresponding lengthy selling cycle as well as relatively low unit volume of the higher priced printers in any particular period, a shift in the timing and concentration of orders and shipments from one period to another can affect reported revenue in any given period.

In addition to changes in sales volumes, there are two other primary drivers of changes in revenue from one period to another: (1) the combined effect of changes in product mix and average selling prices and (2) the impact of fluctuations in foreign currencies. As used in this Management's Discussion and Analysis, the price and mix effects relate to changes in revenue that are not able to be specifically related to changes in unit volume.

We earn revenue from the sale of products and services. The products category includes 3D printers and corresponding materials, healthcare simulators and digitizers, software licenses, 3D scanners and haptic devices. The majority of materials used in our 3D printers are proprietary. The services category includes maintenance contracts and services on 3D printers and simulators, software maintenance, on demand solutions and healthcare services.

The following table sets forth changes in revenue for the years ended December 31, 2020 and 2019.

Table 1

<i>(Dollars in thousands)</i>	Products		Services		Total	
Revenue — 2019	\$ 389,337	61.2 %	\$ 247,017	38.8 %	\$ 636,354	100.0 %
Change in revenue:						
Volume	(56,395)	(14.5)%	(20,238)	(8.2)%	(76,633)	(12.0)%
Price/Mix	(222)	(0.1)%	1	— %	(221)	— %
Foreign currency translation	79	— %	(2,339)	(0.9)%	(2,260)	(0.4)%
Net change	(56,538)	(14.5)%	(22,576)	(9.1)%	(79,114)	(12.4)%
Revenue — 2020	\$ 332,799	59.7 %	\$ 224,441	40.3 %	\$ 557,240	100.0 %

Consolidated revenue decreased 12.4%, predominantly due to lower products volume, driven by decreased sales of printers and corresponding materials, and lower on demand volume. The lower demand was due to COVID-19, as many of our customers were shutdown or on a significantly reduced level of activity starting in the latter part of the first quarter.

For the year ended December 31, 2020 and 2019, revenue from printers contributed \$99.2 million and \$123.9 million, respectively. Software revenue included in the products category contributed \$43.7 million and \$53.7 million for the year ended December 31, 2020 and 2019, respectively. Materials revenue included in the products category contributed \$157.1 million and \$169.1 million for the year ended December 31, 2020 and 2019, respectively.

Revenue from services decreased 9.1%, or \$22.6 million, as compared to the year ended December 31, 2019. The decrease was primarily comprised of a 20.3%, or \$18.8 million, decline in our on demand manufacturing services. The remaining decrease resulted from maintenance contracts and services on printers and simulators, software maintenance and healthcare services.

For the years ended December 31, 2020 and 2019, revenue from operations outside the U.S. was 50.6% and 51.3% of total revenue, respectively.

Gross profit and gross profit margins

The following table sets forth gross profit and gross profit margins for the years ended December 31, 2020 and 2019.

Table 2

<i>(Dollars in thousands)</i>	Year Ended December 31,				Change in Gross Profit		Change in Gross Profit Margin	
	2020		2019					
	Gross Profit	Gross Profit Margin	Gross Profit	Gross Profit Margin	\$	%	Percentage Points	%
Products	\$ 105,118	31.6 %	\$ 154,756	39.7 %	\$ (49,638)	(32.1)%	(8.1)	(20.4)%
Services	118,257	52.7 %	125,785	50.9 %	(7,528)	(6.0)%	1.8	3.5 %
Total	\$ 223,375	40.1 %	\$ 280,541	44.1 %	\$ (57,166)	(20.4)%	(4.0)	(9.1)%

The decrease in total consolidated gross profit was predominantly due to the lower sales volume as previously discussed, as well as end-of-life inventory charges of \$12.4 million. Excluding the end-of-life inventory charge, total gross profit margin would have been 42.3%. See Note 6 to the consolidated financial statements in Item 8 of this Form 10-K for additional discussion.

Products gross profit decreased primarily due to the lower sales volume, as previously discussed, and the under absorption of supply chain overhead resulting from lower production, as well as an end-of-life inventory charge of \$12.4 million, partially offset by savings achieved in the current year from cost restructuring activities. Excluding the end-of-life inventory charge, products gross profit margin would have been 35.3%. See Note 6 to the consolidated financial statements in Item 8 of this Form 10-K for additional discussion.

Operating expenses

The following table sets forth the components of operating expenses for the years ended December 31, 2020 and 2019.

Table 3

(Dollars in thousands)	Year Ended December 31,				Change	
	2020		2019		\$	%
	Amount	% Revenue	Amount	% Revenue		
Selling, general and administrative expenses	\$ 219,895	39.5 %	\$ 254,355	40.0 %	\$ (34,460)	(13.5)%
Research and development expenses	74,143	13.3 %	83,290	13.1 %	(9,147)	(11.0)%
Impairment of goodwill	48,300	8.7 %	—	— %	48,300	100.0 %
Total operating expenses	\$ 342,338	61.4 %	\$ 337,645	53.1 %	\$ 4,693	1.4 %

Selling, general and administrative expenses decreased due to an employee furlough program in the second quarter of 2020; reduced hiring and lower travel expenses incurred in the current year, resulting from the COVID-19 pandemic; savings achieved in the current year from cost restructuring activities, including personnel and marketing activities; reduced litigation and legal fees incurred in the current year; and the run-out of certain intangible amortization. These savings were partially offset by restructuring efforts, predominantly employee severance and facility closings, and related impairment charges. See Note 24 to the consolidated financial statements in Item 8 of this Form 10-K for additional discussion regarding restructuring charges. See Note 7 to the consolidated financial statements in Item 8 of this Form 10-K for additional discussion regarding facility closings and related impairment charges.

Research and development expenses decreased due to an employee furlough program in the second quarter of 2020, current year savings achieved from cost restructuring activities, including personnel, originating in 2019, as well as lower overall program spend; partially offset by an increase in materials spend.

For the year ended December 31, 2020, we recorded a non-cash goodwill impairment charge of \$48.3 million, related to the EMEA reporting unit, that was ultimately due to the negative impact on the business environment as a result of the COVID-19 pandemic. See Note 9 to the consolidated financial statements in Item 8 of this Form 10-K for additional discussion.

Loss from operations

The following table sets forth loss from operations for the years ended December 31, 2020, and 2019.

Table 4

(Dollars in thousands)	Year Ended December 31,	
	2020	2019
Loss from operations:	\$ (118,963)	\$ (57,104)

See “Revenue,” “Gross profit and gross profit margins” and “Operating expenses” above.

Interest and other expense, net

The following table sets forth the components of interest and other expense, net, for the years ended December 31, 2020 and 2019.

Table 5

<i>(Dollars in thousands)</i>	Year Ended December 31,	
	2020	2019
Interest and other expense, net		
Foreign exchange loss	\$ (4,762)	\$ (2,287)
Interest expense, net	(3,991)	(3,233)
Other expense, net	(15,694)	(2,476)
Total interest and other expense, net	<u>\$ (24,447)</u>	<u>\$ (7,996)</u>

Total interest and other expense, net, for the year ended December 31, 2020 as compared to the year ended December 31, 2019 resulted in additional expense due to withholding taxes related to the Cimatron divestiture, loss on the divestiture of our Australia ODM and Wuxi Easyway businesses, as well as amounts previously recognized in Accumulated Other Comprehensive Loss ("AOCL") were released in the second quarter of 2020 and reclassified to "Interest and other expense, net," as a result of the reduction in the interest rate swap. See Note 13 to the consolidated financial statements in Item 8 of this Form 10-K for additional discussion. For the years ended December 31, 2020 and 2019, losses on equity investments were recorded in both periods to "Other expense, net".

Benefit and provision for income taxes

We recorded a \$6.2 million and a \$4.5 million provision for income taxes for the years ended December 31, 2020 and 2019, respectively.

In 2020, our provision reflected \$1.8 million in U.S. tax expense and \$4.4 million of tax expense in foreign jurisdictions. In 2019, our provision reflected \$0.3 million in U.S. tax benefit and \$4.9 million of tax expense in foreign jurisdictions.

During 2020 and 2019, we concluded that it is more likely than not that our deferred tax assets will not be realized in certain jurisdictions, including the U.S. and certain foreign jurisdictions; therefore, we have a valuation allowance recorded against our deferred tax assets on our consolidated balance sheets totaling \$123.1 million and \$109.6 million as of December 31, 2020 and 2019, respectively.

For further discussion, see Note 2 and Note 21 to the consolidated financial statements in Item 8 of this Form 10-K.

Net loss attributable to 3D Systems

The following table sets forth the primary components of net loss attributable to 3D Systems for the years ended December 31, 2020 and 2019.

Table 6

<i>(Dollars in thousands)</i>	Year Ended December 31,		Change
	2020	2019	
Loss from operations	\$ (118,963)	\$ (57,104)	\$ (61,859)
Other non-operating items:			
Interest and other expense, net	(24,447)	(7,996)	(16,451)
Provision for income taxes	(6,184)	(4,532)	(1,652)
Net loss	(149,594)	(69,632)	(79,962)
Less: net income attributable to noncontrolling interests	—	248	(248)
Net loss attributable to 3D Systems Corporation	\$ (149,594)	\$ (69,880)	\$ (79,714)
Weighted average shares, basic and diluted	117,579	113,811	
Loss per share, basic and diluted	\$ (1.27)	\$ (0.61)	

The increase in net loss for the year ended December 31, 2020, as compared to the year ended December 31, 2019, was primarily driven by an increase in loss from operations. See “*Gross profit and gross profit margins*” and “*Operating expenses*” above.

Liquidity and Capital Resources

Table 7

<i>(Dollars in thousands)</i>	December 31, 2020	December 31, 2019	Change	
			\$	%
Cash and cash equivalents	\$ 75,010	\$ 133,665	\$ (58,655)	(43.9)%
Accounts receivable, net	114,254	109,408	4,846	4.4 %
Inventories	116,667	111,106	5,561	5.0 %
	305,931	354,179	(48,248)	
Less:				
Current portion of long term debt	2,051	2,506	(455)	(18.2)%
Current right of use liabilities	9,534	9,569	(35)	(0.4)%
Accounts payable	45,174	49,851	(4,677)	(9.4)%
Accrued and other liabilities	69,812	63,095	6,717	10.6 %
	126,571	125,021	1,550	
Operating working capital	\$ 179,360	\$ 229,158	\$ (49,798)	(21.7)%

We assess our liquidity in terms of our ability to generate cash to fund our operating, investing and financing activities. In doing so, we review and analyze our current cash on hand, the number of days our sales are outstanding, inventory turns, capital expenditure commitments and accounts payable turns. Our cash requirements primarily consist of funding working capital and capital expenditures.

Cash flow from operations, cash and cash equivalents, and other sources of liquidity such as bank credit facilities and issuing equity or debt securities, are expected to be available and sufficient to meet foreseeable cash requirements. We hold a 5-year \$100.0 million senior secured term loan facility (the “Term Facility”) and a 5-year \$100.0 million senior secured revolving credit facility (the “Revolving Facility,” and, together with the Term Facility, the “Senior Credit Facility”) to support working capital and general corporate purposes. As of December 31, 2020, we have availability under the Revolving Facility of \$62.0 million, and an outstanding balance on the Term Facility of \$21.4 million. For additional information on the Senior Credit Facility, see Note 12 to the consolidated financial statements in Item 8 of this Form 10-K.

On January 1, 2021, the Company completed the sale of 100% of the issued and outstanding equity interests of Cimatron Ltd., the subsidiary that operated the Company’s Cimatron integrated CAD/CAM software for tooling business and its GibbsCAM CNC programming software business, for approximately \$64.2 million, after certain adjustments and excluding \$9.2 million of cash amounts transferred to the purchaser. See Note 26 to the consolidated financial statements in Item 8 of this Form 10-K. A portion of the proceeds from the sale were used to repay the outstanding balance on the Term Facility

Cash held outside the U.S. at December 31, 2020 was \$49.7 million, or 66.2% of total cash and cash equivalents, compared to \$75.7 million, or 56.5% of total cash and cash equivalents at December 31, 2019. As our previously unremitted earnings have been subjected to U.S. federal income tax, we expect any repatriation of these earnings to the U.S. would not incur significant federal and state taxes. However, these dividends are subject to foreign withholding taxes that are estimated to result in the Company incurring tax costs in excess of the cost to obtain cash through other means. Cash equivalents are comprised of funds held in money market instruments and are reported at their current carrying value, which approximates fair value due to the short term nature of these instruments. We strive to minimize our credit risk by investing primarily in investment grade, liquid instruments and limit exposure to any one issuer depending upon credit quality. See “*Cash flow*” discussion below.

Days sales outstanding (DSO) was 69 at December 31, 2020, compared to 67 days for the year at December 31, 2019. Accounts receivable more than 90 days past due decreased to 6.9% of gross receivables at December 31, 2020, from 12.1% at December 31, 2019. We review specific receivables periodically to determine the appropriate reserve for accounts receivable.

The majority of our inventory consists of finished goods, including products, materials and service parts. Inventory also consists of raw materials for certain printers and service products. Inventory balances may fluctuate during cycles of new product launch, commercialization and timing of ramp up of production and sales of products.

The changes that make up the other components of working capital not discussed above resulted from the ordinary course of business. Differences between the amounts of working capital item changes in the cash flow statement and the balance sheet changes for the corresponding items are primarily the result of foreign currency translation adjustments.

Cash flow

Cash flow from operations

Cash used in operating activities for the year ended December 31, 2020 was \$20.1 million and cash provided by operating activities for the year ended December 31, 2019 was \$31.6 million. Excluding non-cash charges from depreciation and amortization of \$44.6 million, stock-based compensation of \$17.7 million and other expenses of \$73.6 million, the net loss used cash of \$13.7 million and provided cash of \$6.3 million for the years ended December 31, 2020 and December 31, 2019, respectively. Non-cash charges generally consist of depreciation, amortization, inventory obsolescence, stock-based compensation and goodwill impairment.

Working capital requirements used cash of \$6.5 million for the year ended December 31, 2020 and working capital improvements provided cash of \$25.3 million for the year ended December 31, 2019. For the year ended December 31, 2020, drivers of working capital related to cash outflows were an increase in inventory and prepaid expenses and other current assets and a decrease in accounts payable; partially offset by an increase in accrued and other liabilities and deferred revenue and customer deposits.

Cash flow from investing activities

The primary outflow of cash from investing activities for the years ended December 31, 2020 and 2019 relate to purchases of noncontrolling interests and capital expenditures. Purchases of noncontrolling interests were \$10.0 million, related to Robtec, and \$2.5 million, related to Wuxi Easyway, for the year ended December 31, 2020. See Note 19 to the consolidated financial statements in Item 8 of this Form 10-K for additional discussion. Capital expenditures were \$13.6 million and \$24.0 million for the years ended December 31, 2020 and 2019, respectively. The lower expenditures in 2020 reflect the reduced spending due to the lower revenue volume because of the pandemic.

Cash flow from financing activities

Cash used in financing activities was \$7.0 million for the year ended December 31, 2020, while cash provided by financing activities was \$18.7 million for the year ended December 31, 2019. The primary outflow of cash for the year ended December 31, 2020 relates to repayment of the Term Facility and settlements of stock-based compensation, partially offset by net proceeds from issuances of common stock under our ATM Program and proceeds from an inventory financing agreement. The primary source of cash for the year ended December 31, 2019 relates to borrowing on the Term Facility, partially offset by repayments under the Prior Credit Agreement and Term Facility and settlement of stock-based compensation.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements and do not utilize any “structured debt,” “special purpose” or similar unconsolidated entities for liquidity or financing purposes.

Contractual Obligations and Commercial Commitments

The table below summarizes our contractual obligations as of December 31, 2020.

Table 9

<i>(Dollars in thousands)</i>	Payments Due by Period					Total
	Less than 1 year	1-3 years	4-5 years	After 5 years		
Long-term debt obligations	\$ 2,051	6,740	\$ 12,601	\$ —	\$	21,392
Operating lease obligations ^a	11,206	16,528	11,552	19,801		59,087
Finance lease obligations ^a	1,624	3,242	2,998	6,845		14,709
Purchase commitments ^b	55,317	—	—	—		55,317
Total	<u>\$ 70,198</u>	<u>\$ 26,510</u>	<u>\$ 27,151</u>	<u>\$ 26,646</u>	<u>\$</u>	<u>150,505</u>

a. We lease certain facilities under non-cancelable operating and finance agreements. The leases are generally on a net-rent basis, under which we pay taxes, maintenance and insurance. For further discussion, see Note 5 to the consolidated financial statements in Item 8 of this Form 10-K.

b. Includes amounts committed under legally enforceable agreements for goods and services with defined terms as to quantity, price and timing of delivery. For further discussion, see Note 22 to the consolidated financial statements in Item 8 of this Form 10-K.

Other Contractual Commitments

Credit facilities

On February 27, 2019, we entered into the Senior Credit Facility, which replaced the Prior Credit Agreement. Borrowings under the Senior Credit Facility were used to refinance the existing indebtedness under the Prior Credit Agreement and were used to support working capital and for general corporate purposes. For further discussion of the Senior Credit Facility, see Note 12 to the consolidated financial statements in Item 8 of this Form 10-K.

We were in compliance with all covenants as of December 31, 2020 and December 31, 2019.

Indemnification

In the normal course of business we periodically enter into agreements to indemnify customers or suppliers against claims of intellectual property infringement made by third parties arising from the use of our products. Historically, costs related to these indemnification provisions have not been significant. We are unable to estimate the maximum potential impact of these indemnification provisions on our future results of operations.

To the extent permitted under Delaware law, we indemnify our directors and officers for certain events or occurrences while the director or officer is, or was, serving at our request in such capacity, subject to limited exceptions. The maximum potential amount of future payments we could be required to make under these indemnification obligations is unlimited; however, we have directors' and officers' insurance coverage that may enable us to recover future amounts paid, subject to a deductible and to the policy limits.

Financial Instruments

We conduct business in various countries using both the functional currencies of those countries and other currencies to effect cross border transactions. As a result, we are subject to the risk that fluctuations in foreign exchange rates between the dates that those transactions are entered into and their respective settlement dates will result in a foreign exchange gain or loss. When practicable, we endeavor to match assets and liabilities in the same currency on our balance sheet and those of our subsidiaries in order to reduce these risks. We also, when we consider it to be appropriate, enter into foreign currency contracts to hedge exposures arising from those transactions. We had \$101.8 million and \$102.4 million in notional foreign exchange contracts outstanding as of December 31, 2020 and 2019, respectively. The fair value of these contracts was not material. For our hedges of foreign exchange rates, we have elected to not prepare and maintain the documentation to qualify for hedge accounting treatment under ASC 815, "Derivatives and Hedging," and therefore, changes in fair value are recognized in interest and other expense, net in the consolidated statements of operations and comprehensive loss and, depending on the fair value at the end of the reporting period, derivatives are recorded either in prepaid and other current assets or in accrued liabilities in the consolidated balance sheets.

We use derivative financial instruments to manage our exposure to changes in interest rates on outstanding debt instruments. For those instruments that qualify and where we elect to prepare and maintain the documentation to qualify for hedge accounting treatment under ASC 815, "Derivatives and Hedging," related gains and losses (realized or unrealized) related to derivative instruments are recognized in accumulated other comprehensive income (loss) and are reclassified into earnings when the underlying transaction is recognized in net earnings and, depending on the fair value at the end of the reporting period, derivatives are recorded either in prepaid and other current assets or in accrued liabilities in the consolidated balance sheets.

We do not hedge for trading or speculative purposes, and our foreign currency contracts are generally short-term in nature, typically maturing in 90 days or less.

See Note 13 to the consolidated financial statements in Item 8 of this Form 10-K for further discussion.

Critical Accounting Policies and Significant Estimates

We prepare our consolidated financial statements in accordance with U.S. Generally Accepted Accounting Principles (GAAP). In doing so, we have to make estimates and assumptions that affect our reported amounts of assets, liabilities, revenues, expenses, gains and losses, as well as related disclosure of contingent assets and liabilities. In some cases, we could reasonably have used different accounting policies and estimates. In some cases, changes in the accounting estimates are reasonably likely to occur from period to period. Accordingly, actual results could differ materially from our estimates. To the extent that there are material differences between these estimates and actual results, our financial condition or results of operations will be affected. We base our estimates on past experience and other assumptions that we believe are reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. We refer to accounting estimates of this type as critical accounting policies and estimates, which we discuss further below. We have reviewed our critical accounting policies and estimates with the audit committee of our board of directors.

Please see Note 2 to the consolidated financial statements in Item 8 of this Form 10-K for a summary of significant accounting policies and the effect on our financial statements.

Revenue recognition

Revenue is recognized when control of the promised products or services is transferred to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. A majority of our revenue is recognized at the point in time when products are shipped or services are delivered to customers.

We enter into contracts that can include various combinations of products and services, which are generally capable of being distinct and accounted for as separate performance obligations. Many of its contracts with customers include multiple performance obligations. For such arrangements, we allocate revenue to each performance obligation based on its relative standalone selling price (“SSP”). Judgment is required to determine the SSP for each distinct performance obligation in a contract. For the majority of items, we estimate SSP using historical transaction data. We use a range of amounts to estimate SSP when we sell each of the products and services separately and need to determine whether there is a discount to be allocated based on the relative SSP of the various products and services. In instances where SSP is not directly observable, such as when the product or service is not sold separately, we determine the SSP using information that may include market conditions and other observable inputs.

In some circumstances, we have more than one SSP for individual products and services due to the stratification of those products and services by customers, geographic region or other factors. In these instances, we may use information such as the size of the customer and geographic region in determining the SSP.

The determination of SSP is an ongoing process and information is reviewed regularly in order to ensure SSP reflects the most current information or trends.

The nature of our marketing incentives may lead to consideration that is variable. Judgment is exercised at contract inception to determine the expected value of the contract and resulting transaction price. Ongoing assessments are performed to determine if updates are needed to the original estimates.

See Note 2 and Note 4 to the consolidated financial statements in Item 8 of this Form 10-K for further discussion.

Allowance for doubtful accounts

In evaluating the collectability of our accounts receivable, we assess a number of factors, including specific customers’ abilities to meet their financial obligations to us, the length of time receivables are past due and historical collection experience. Based on these assessments, we may record a reserve for specific customers, as well as a general reserve and allowance for returns and discounts. If circumstances related to specific customers change, or economic conditions deteriorate such that our past collection experience is no longer relevant, our estimate of the recoverability of our accounts receivable could be further reduced from the levels provided for in the consolidated financial statements.

We evaluate specific accounts for which we believe a customer may have an inability to meet their financial obligations (for example, aging over 90 days past due or bankruptcy). In these cases, we use our judgment, based on available facts and circumstances, and record a specific reserve for that customer to reduce the receivable to an amount we expect to collect. These specific reserves are re-evaluated and adjusted as additional information is received that impacts the amount reserved.

Income taxes

We are subject to income taxes in the U.S. and foreign jurisdictions. Significant judgment is required in evaluating our uncertain tax positions and determining our provision for income taxes.

Although we believe we have adequately reserved for our uncertain tax positions, no assurance can be given that the final tax outcome of these matters will not be different. We adjust these reserves in light of changing facts and circumstances, such as the closing of a tax audit or the refinement of an estimate. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will affect the provision for income taxes and the effective tax rate in the period in which such determination is made.

The provision for income taxes includes the effect of reserve provisions and changes to reserves that are considered appropriate as well as the related net interest and penalties. In addition, we are subject to the continuous examination of our income tax returns by the Internal Revenue Services (“IRS”) and other tax authorities which may assert assessments against us. We regularly assess the likelihood of adverse outcomes resulting from these examinations and assessments to determine the adequacy of our provision for income taxes.

Inventories

Inventories are stated at the lower of cost or net realizable value, with cost being determined using the first-in, first-out method.

The inventory reserve is a critical estimate as there is rapid technological change in our industry impacting the market for our products and there is significant judgment in estimating the amount of spare parts to keep on hand to service previously sold printers for periods of up to 10 or more years.

See Note 6 to the consolidated financial statements in Item 8 of this Form 10-K for further discussion.

Goodwill

We review long-lived assets, including intangible assets subject to amortization, for impairment whenever events or changes in circumstances indicate that the carrying value of the asset may not be recoverable. We assess the recoverability of the carrying value of assets held for use based on a review of undiscounted projected cash flows. Impairment losses, where identified, are measured as the excess of the carrying value of the long-lived asset over its estimated fair value as determined by discounted projected cash flows.

Goodwill represents the purchase price paid in excess of the fair value of net tangible and intangible assets acquired in a business combination. We review goodwill for impairment annually or when circumstances indicate that the likelihood of an impairment is greater than 50%. Such circumstances include a significant adverse change in the business climate for one of our reporting units or a decision to dispose of a reporting unit or a significant portion of a reporting unit. The test for goodwill impairment compares the fair value of each of reporting unit to its respective carrying value. The process requires a significant level of estimation and use of judgment by management, particularly the estimate of the fair value of our reporting units. Our reporting units are Americas, EMEA and APAC.

We estimate the fair value of our reporting units based primarily on the discounted projected cash flows of the underlying operations, which requires us to make assumptions about estimated cash flows, including profit margins, long-term forecasts, discount rates and terminal growth rates. We developed these assumptions based on the market and geographic risks unique to each reporting unit.

Our EMEA, APAC and Americas reporting units carry approximately \$127.6 million, \$34.2 million and zero of goodwill, respectively, as of December 31, 2020. Goodwill in the Americas region was written off in 2015. The net carrying values of our long-lived assets in the EMEA, APAC, and Americas regions are approximately \$49.2 million, \$5.5 million, and \$48.8 million, respectively.

As of September 30, 2020, we experienced a triggering event due to a drop in our stock price, which ultimately had been negatively impacted by the business environment as a result of the COVID-19 pandemic, and performed a quantitative analysis for potential impairment of our goodwill and long-lived asset balances. Based on available information and analysis as of September 30, 2020, we determined the carrying value of the EMEA reporting unit exceeded its fair value and recorded a non-cash goodwill impairment charge of \$48.3 million. We determined the fair value of the Americas and APAC reporting units exceeded their carrying values and the carrying value of our long-lived assets is recoverable for all reporting units.

Fair value was determined using a combination of an income approach, which estimates fair value based upon projections of future revenues, expenses, and cash flows discounted to its present value, and a market approach. The valuation methodology and underlying financial information included in the Company's determination of fair value required significant judgments by management. The principal assumptions used in the Company's discounted cash flow analysis consisted of (a) the long-term projections of future financial performance and (b) the weighted-average cost of capital of market participants, adjusted for the risk attributable to the Company and the industry in which it operates. Under the market approach, the principal assumption included an estimate for a control premium.

We conducted our annual impairment testing for the years ended December 31, 2020 and 2019 as of November 30, 2020 and 2019, respectively. There was no additional goodwill impairment for the years ended December 31, 2020 and 2019.

Contingencies

We record an estimated loss from a contingency when information indicates that it is probable that an asset has been impaired or a liability has been incurred at the date of the financial statements and the amount of the loss can be reasonably estimated. Accounting for contingencies requires us to use our judgment and the ultimate resolution of our exposure related to these matters may change as further facts and circumstances become known.

See Note 22 to the consolidated financial statements in Item 8 of this Form 10-K for further discussion.

Recent Accounting Pronouncements

See Note 2 to the consolidated financial statements in Item 8 of this Form 10-K for recently issued accounting standards, including the expected dates of adoption and expected impact to the consolidated financial statements upon adoption.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risks from fluctuations in interest rates, foreign currency exchange rates and commodity prices, which may adversely affect our results of operations and financial condition. We seek to minimize these risks through regular operating and financing activities and, when we consider it to be appropriate, through the use of derivative financial instruments. We do not purchase, hold or sell derivative financial instruments for trading or speculative purposes.

Interest rates

Our earnings exposure related to movements in interest rates is primarily derived from variable interest rate borrowings. At December 31, 2020, we had \$21.4 million in variable-rate debt, of which \$6.4 million was not subject to interest rate swap agreements. A hypothetical interest rate change of 10% would not have a material impact on annualized interest expense.

Foreign exchange rates

Because we conduct our operations in many areas of the world involving transactions denominated in a variety of currencies, our results of operations as expressed in U.S. dollars may be significantly affected by fluctuations in rates of exchange between currencies. These fluctuations could be significant. In 2020, approximately 50.6% of our net sales and a significant portion of our costs were denominated in currencies other than the dollar. We generally are unable to adjust our non-dollar local currency sales prices to reflect changes in exchange rates between the dollar and the relevant local currency. As a result, changes in exchange rates between the euro, Japanese yen, British pound, South Korean won or other currencies in which we receive sale proceeds and the dollar have a direct impact on our operating results. There is normally a time lag between our sales and collection of the related sales proceeds, exposing us to additional currency exchange rate risk.

When practicable, we endeavor to match assets and liabilities in the same currency on our U.S. balance sheet and those of our subsidiaries in order to reduce these risks. We also, when we consider it appropriate, enter into foreign currency contracts to hedge exposures arising from those transactions.

At December 31, 2020, a hypothetical change of 10% in foreign currency exchange rates would cause a change in revenue of approximately \$24.1 million, assuming all other variables remained constant.

We enter into foreign currency forward contracts to reduce the effect of fluctuating foreign currencies. At December 31, 2020, we had notional forward exchange contracts outstanding of \$101.8 million. We believe these foreign currency forward contracts and the offsetting underlying commitments, when taken together, do not create material market risk.

Commodity prices

We are exposed to price volatility related to raw materials and energy products in conjunction with our printer assembly and print materials blending processes. Generally, we acquire such components at market prices and do not use financial instruments to hedge commodity prices. At December 31, 2020, a hypothetical 10% change in commodity prices for raw materials would cause a change to cost of sales of approximately \$5.1 million.

Item 8. Financial Statements and Supplementary Data

Our consolidated financial statements and the related notes, together with the Report of Independent Registered Public Accounting Firm thereon, are set forth below beginning on page F-1 and are incorporated herein by reference.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of our disclosure controls and procedures, pursuant to Exchange Act Rule 13a-15(e), as of December 31, 2020. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded as of December 31, 2020 that our disclosure controls and procedures were not effective at the reasonable assurance level because of material weaknesses described below.

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control framework and processes were designed to provide reasonable assurance to management and the Board of Directors regarding the reliability of financial reporting and the preparation of our consolidated financial statements for external purposes in accordance with GAAP. Our internal control over financial reporting includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;
- Provide reasonable assurance that transactions are recorded properly to allow for the preparation of financial statements in accordance with GAAP and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the consolidated financial statements.

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Further, because of changing conditions, effectiveness of internal control over financial reporting may vary over time.

Management assessed the effectiveness of our internal control over financial reporting based on the framework described in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Because of the material weaknesses described below, our management believes that, as of December 31, 2020, our internal control over financial reporting was not effective.

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis.

During the preparation and audit of our financial statements for the period ended December 31, 2020, we and our independent registered public accounting firm identified two material weaknesses in our internal control over financial reporting related to a lack of certain controls, or improper execution of designed control procedures, (1) for certain non-standard contracts and non-standard contract terms and (2) over the review of internally prepared reports and analyses utilized in the financial closing process. These control deficiencies were partially related to employee turnover, resulting in a temporary shortage of personnel with appropriate knowledge or skills to perform an effective review during our financial statement close process. In addition, certain control deficiencies related to the completeness and review of transactions that were infrequent in nature.

While these control deficiencies did not result in material misstatements of our annual or interim consolidated financial statements, they did result in immaterial out-of-period adjustments that were recorded in the quarter ended December 31, 2020. Material weaknesses create a reasonable possibility that a material misstatement of account balances or disclosures in annual or interim consolidated financial statements may not be prevented or detected in a timely manner. Accordingly, our management concluded that the control deficiencies represent material weaknesses in our internal control over financial reporting and, therefore, our internal control over financial reporting was not effective as of December 31, 2020.

The Company's independent registered public accounting firm, BDO USA, LLP, which audited the 2020 consolidated financial statements included in this Form 10-K, has expressed an adverse opinion on the operating effectiveness of the Company's internal control over financial reporting. BDO USA, LLP's report appears on pages F-2 to F-6 of this Form 10-K.

Remediation Plan

We are working to remediate the material weaknesses through the development and implementation of more formal policies, processes and documentation procedures relating to our financial reporting as well as the hiring of additional accounting personnel and the training of new personnel and existing personnel in new roles on proper execution of designed control procedures. In addition, we may engage outside consultants to advise on changes in the design of our controls and procedures or to advise on technical accounting matters. We believe that our remediation plan will be sufficient to remediate the identified material weaknesses and strengthen our internal control over financial reporting. However, as we continue to evaluate, and work to improve, our internal control over financial reporting, management may determine that additional measures to address control deficiencies or modifications to the remediation plan are necessary. Therefore, we cannot assure you when the Company will remediate such weaknesses, nor can we be certain that additional actions will not be required or the costs of any such additional actions. Moreover, we cannot assure you that additional material weaknesses will not arise in the future.

Changes in Internal Controls over Financial Reporting

The material weaknesses described above were identified after December 31, 2020. The Company is in the process of implementing certain changes in its internal controls to remediate the material weaknesses described above. The implementation of the material aspects of this remediation began in the first quarter of fiscal year 2021; therefore, there were no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2020 that have materially affected, or are reasonably likely to materially effect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required in response to this Item will be set forth in our Proxy Statement for our 2021 Annual Meeting of Stockholders (“Proxy Statement”) under the captions “Proposal One: Election of Directors,” “Corporate Governance Matters,” “Delinquent Section 16(a) Reports,” “Corporate Governance Matters—Code of Conduct and Code of Ethics,” “Corporate Governance Matters—Corporate Governance and Nominating Committee,” and “Corporate Governance Matters—Audit Committee.”

Item 11. Executive Compensation

The information in response to this Item will be set forth in our Proxy Statement under the captions “Director Compensation,” “Executive Compensation,” “Corporate Governance Matters—Compensation Committee,” and “Executive Compensation—Compensation Committee Report.”

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Except as set forth below, the information required in response to this Item will be set forth in our Proxy Statement under the caption “Security Ownership of Certain Beneficial Owners and Management.”

Equity Compensation Plans

The following table summarizes information about the equity securities authorized for issuance under our compensation plans as of December 31, 2020. For a description of these plans, please see Note 16 to the consolidated financial statements in Item 8 of this Form 10-K.

<i>(in thousands, except exercise price)</i>	Number of securities to be issued upon exercise of outstanding stock options, warrants and rights	Weighted average exercise price of outstanding options, warrants and rights ^a	Number of securities remaining available for future issuance under equity compensation plans ^b
Equity compensation plans approved by stockholders:			
Stock options	420	\$ 13.26	
Restricted stock units	1,100		
Total	1,520		6,312

a. The weighted-average exercise price is only applicable to stock options.

b. The number of securities remaining available for future issuance for stock options, restricted stock units, and stock awards for non-employee directors is approved in total and not individually with respect to these items.

Item 13. Certain Relationships and Related Transactions and Director Independence

The information required in response to this Item will be set forth in our Proxy Statement under the captions “Corporate Governance Matters—Director Independence” and “Corporate Governance Matters—Related Party Transaction Policies and Procedures.”

Item 14. Principal Accounting Fees and Services

The information in response to this Item will be set forth in our Proxy Statement under the caption “Proposal Three: Ratification of Selection of Independent Registered Accounting Firm—Fees of Independent Registered Public Accounting Firm.”

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a)(3)

Exhibits

The following exhibits are included as part of this filing and incorporated herein by this reference:

- [2.1](#) Share Purchase Agreement, dated November 2, 2020, by and among 3D Systems, Inc., 3D Systems Corporation and ST Acquisition Co. (Incorporated by reference to Exhibit 2.1 of the Registrant's Current Report on Form 8-K filed November 4, 2020.)
- [2.2](#) First Amendment to Share Purchase Agreement, dated December 31, 2020, by and among ST Acquisition Co., 3D Systems, Inc. and 3D Systems Corporation (Incorporated by reference to Exhibit 2.1 to Registrant's Current Report on Form 8-K, filed January 4, 2021.)
- 3.1 Certificate of Incorporation of Registrant. (Incorporated by reference to Exhibit 3.1 to Registrant's Form 8-B filed on August 16, 1993, and the amendment thereto, filed on Form 8-B/A on February 4, 1994.)
- 3.2 Amendment to Certificate of Incorporation filed on May 23, 1995. (Incorporated by reference to Exhibit 3.2 to Registrant's Registration Statement on Form S-2/A, filed on May 25, 1995.)
- [3.3](#) Certificate of Amendment of Certificate of Incorporation filed with Secretary of State of Delaware on May 19, 2004. (Incorporated by reference to Exhibit 3.1 to Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2004, filed on August 5, 2004.)
- [3.4](#) Certificate of Amendment of Certificate of Incorporation filed with Secretary of State of Delaware on May 17, 2005. (Incorporated by reference to Exhibit 3.1 to Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2005, filed on August 1, 2005.)
- [3.5](#) Certificate of Amendment of Certificate of Incorporation filed with the Secretary of State of Delaware on October 7, 2011. (Incorporated by reference to Exhibit 3.1 to Registrant's Current Report on Form 8-K filed on October 7, 2011.)
- [3.6](#) Certificate of Amendment of Certificate of Incorporation filed with the Secretary of State of Delaware on May 21, 2013. (Incorporated by reference to Exhibit 3.1 to Registrant's Current Report on Form 8-K filed on May 22, 2013.)
- [3.7](#) Amended and Restated By-Laws. (Incorporated by reference to Exhibit 3.1 to Registrant's Current Report on Form 8-K, filed on March 15, 2018.)
- [4.1](#) Specimen Common Stock Certificate. (Incorporated by reference to Exhibit 4.1 to Registrant's Registration Statement on Form S-3 (Registration No. 333-182065), filed on June 12, 2012.)
- [4.2](#) Description of Common Stock. (Incorporated by reference to Exhibit 4.2 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2020, filed on February 26, 2020.)
- [4.3*](#) Amended and Restated 2015 Incentive Plan of 3D Systems Corporation effective September 3, 2020. (Incorporated by reference to Exhibit 4.1 to Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020, filed on November 5, 2020.)
- [4.4*](#) Appendix A to the 2015 Incentive Plan of 3D Systems Corporation effective May 19, 2015. (Incorporated by reference to Exhibit 10.3 to Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015, filed on August 6, 2015.)
- [4.5*†](#) Form of Restricted Stock Award Agreement under the Amended and Restated 2015 Incentive Plan.
- [4.6*†](#) Form of Restricted Stock Unit Award Agreement under the Amended and Restated 2015 Incentive Plan.
- [4.7*](#) Form of Stock Option Award Agreement under the Amended and Restated 2015 Incentive Plan. (Incorporated by reference to Exhibit 4.10 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2020, filed on February 26, 2020.)
- [4.8*](#) Form of Restricted Stock Award Agreement with Share Price Vesting Conditions (Incorporated by reference to Exhibit 4.17 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2016, filed on February 28, 2017.)

4.9*	Form of Performance-Based Restricted Stock Unit Award Agreement under the Amended and Restated 2015 Incentive Plan. (Incorporated by reference to Exhibit 4.12 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2020, filed on February 26, 2020.)
4.10*†	Revised Form of Performance-Based Restricted Stock Unit Award Agreement under the Amended and Restated 2015 Incentive Plan.
10.1	Lease Agreement dated February 8, 2006 between the Registrant and KDC-Carolina Investments 3, LP. (Incorporated by reference to Exhibit 99.1 to Registrant's Current Report on Form 8-K, filed on February 10, 2006.)
10.2	First Amendment to Lease Agreement dated August 7, 2006 between the Registrant and KDC-Carolina Investments 3, LP. (Incorporated by reference to Exhibit 10.1 to Registrant's Current Report on Form 8-K, filed on August 14, 2006.)
10.3	Second Amendment to Lease Agreement effective as of October 6, 2006 to Lease Agreement dated February 8, 2006 between 3D Systems Corporation and KDC-Carolina Investments 3, LP. (Incorporated by reference to Exhibit 10.1 to Registrant's Current Report on Form 8-K, filed on October 10, 2006.)
10.4	Third Amendment to Lease Agreement effective as of December 18, 2006 to Lease Agreement dated February 8, 2006 between 3D Systems Corporation and KDC-Carolina Investments 3, LP. (Incorporated by reference to Exhibit 10.1 to Registrant's Current Report on Form 8-K, filed on December 20, 2006.)
10.5	Fourth Amendment to Lease Agreement effective as of February 26, 2007 to Lease Agreement dated February 8, 2006 between 3D Systems Corporation and KDC-Carolina Investments 3, LP. (Incorporated by reference to Exhibit 10.1 to Registrant's Current Report on Form 8-K, filed on March 1, 2007.)
10.6	Fifth Amendment to Lease Agreement effective as of March 17, 2011 to Lease Agreement dated February 8, 2006 between 3D Systems Corporation and KDC-Carolina Investments 3, LP. (Incorporated by reference to Exhibit 10.1 to Registrant's Form 8-K, filed on March 21, 2011.)
10.7†	Amended and Restated Lease Agreement dated February 25, 2021 between 3D Systems Corporation and 3D Fields, LLC.
10.8	Credit Agreement, dated as of October 10, 2014, among 3D Systems Corporation, the Guarantors party thereto, PNC Bank, National Association, as Administrative Agent, PNC Capital Markets LLC, as Sole Lead Arranger and Sole Bookrunner, HSBC Bank USA, N.A., as Syndication Agent, and the other lenders party thereto. (Incorporated by reference to Exhibit 10.1 to Registrant's Current Report on Form 8-K, filed on October 14, 2014.)
10.9	Credit Agreement, dated February 27, 2019, among 3D Systems Corporation, HSBC Bank USA, National Association, as Administrative Agent, Sole Lead Arranger and Sole Bookrunner, the guarantors party thereto, and the other lenders party thereto. (Incorporated by reference to Exhibit 10.10 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018, filed on February 28, 2019).
10.10	Security Agreement, dated February 27, 2019, among 3D Systems Corporation, 3D Holdings, LLC, 3D Systems, Inc., and HSBC Bank USA, National Association, as Administrative Agent. (Incorporated by reference to Exhibit 10.11 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018, filed on February 28, 2019).
10.11	First Amendment, dated September 30, 2019, to the Credit Agreement, dated February 27, 2019, among 3D Systems Corporation, HSBC Bank USA, National Association, as Administrative Agent, Sole Lead Arranger and Sole Bookrunner, the guarantors party thereto, and the other lenders party thereto. (Incorporated by reference to Exhibit 10.2 of the Registrant's Annual Report on Form 10-Q for the quarter ended September 30, 2019, filed on October 30, 2019).
10.12	Second Amendment, dated October 9, 2020, to the Credit Agreement, dated February 27, 2019, among 3D Systems Corporation, HSBC Bank USA, National Association, as Administrative Agent, Swing Loan Lender and Issuing Lender, the guarantors party thereto, and the other lenders party thereto (Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed October 14, 2020.)
10.13*	Charles W. Hull Consulting Arrangement (Incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010, filed on July 29, 2010.)
10.14*	Employment Agreement, dated August 4, 2016, between 3D Systems Corporation and Charles W. Hull. (Incorporated by reference to Exhibit 10.1 to Registrant's Current Report on Form 8-K, filed August 8, 2016.)

<u>10.15*</u>	Employment Agreement, dated April 1, 2016, between 3D Systems Corporation and Vyomesh I. Joshi. (Incorporated by reference to Exhibit 10.1 to Registrant's Current Report on Form 8-K, filed on April 4, 2016.)
<u>10.16*</u>	Advisory Agreement, dated February 6, 2020 between 3D Systems Corporation and Vyomesh I. Joshi. (Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed February 6, 2020.)
<u>10.17*</u>	Employment Agreement between 3D Systems Corporation and Todd Booth, dated August 15, 2019. (Incorporated by reference to Exhibit 10.1 to Registrant's Current Report on Form 8-K, filed on August 19, 2019.)
<u>10.18*</u>	Employment Agreement, dated June 15, 2016, between 3D Systems Corporation and Andrew M. Johnson. (Incorporated by reference to Exhibit 10.2 to Registrant's Current Report on Form 8-K, filed on June 16, 2016.)
<u>10.19*</u>	Employment Agreement, dated September 5, 2016, between 3D Systems SA and Herbert Koeck. (Incorporated by reference to exhibit 10.24 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018, filed on February 28, 2019).
<u>10.20*</u>	Letter of Secondment, dated March 5, 2018, between 3D Systems Corporation and Herbert Koeck. (Incorporated by reference to exhibit 10.25 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018, filed on February 28, 2019).
<u>10.21*</u>	Second Letter of Secondment, dated January 8, 2020, between 3D Systems Corporation and Herbert Koeck. (Incorporated by reference to Exhibit 10.19 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2020, filed on February 26, 2020.)
<u>10.22</u>	Amendment to the Second Letter of Secondment, dated August 13, 2020, between 3D Systems Corporation and Herbert Koeck (Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K/A filed August 17, 2020.)
<u>10.23*</u>	Employment Agreement, dated August 24, 2016, between 3D Systems Corporation and Philip Schultz. (Incorporated by reference to exhibit 10.26 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018, filed on February 28, 2019).
<u>10.24*</u>	3D Systems Corporation Change of Control Severance Policy (Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed February 23, 2018.)
<u>10.25*</u>	Employment Agreement, dated May 11, 2020, between 3D Systems Corporation and Dr. Jeffrey A. Graves (Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed May 14, 2020.)
<u>10.26*</u>	Executive Services Agreement, dated May 19, 2020, between 3D Systems Corporation and Wayne Pensky (Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed May 19, 2020.)
<u>10.27*</u>	Employment Agreement, dated August 21, 2020, between 3D Systems Corporation and Jagtar Narula (Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed August 26, 2020.)
<u>10.28*</u>	Employment Agreement, dated November 21, 2016, between 3D Systems Corporation and Menno Ellis (Incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020, filed November 5, 2020.)
<u>10.29*</u>	Employment Agreement, dated October 1, 2020, between 3D Systems Corporation and Reji Puthenveetil (Incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020, filed November 5, 2020.)
<u>10.30*†</u>	Amendment No. 1 to the Employment Agreement, dated February 22, 2021, between 3D Systems Corporation and Reji Puthenveetil.
<u>10.31*</u>	Consulting Agreement, dated October 1, 2020, between 3D Systems Corporation and Reji Puthenveetil (Incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020, filed November 5, 2020.)
<u>10.32*†</u>	Amended and Restated Employment Agreement, dated January 1, 2021, between 3D Systems Corporation and Jeff Blank.
<u>10.33</u>	Equity Distribution Agreement, dated August 5, 2020, by and among 3D Systems Corporation and Truist Securities, Inc. and HSBC Securities (USA) Inc. (Incorporated by reference to Exhibit 1.1 of Registrant's Current Report on Form 8-K filed on August 5, 2020.)

21.1†	Subsidiaries of Registrant.
23.1†	Consent of Independent Registered Public Accounting Firm.
31.1†	Certification of Principal Executive Officer filed pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 dated March 5, 2021.
31.2†	Certification of Principal Financial Officer filed pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 dated March 5, 2021.
32.1†	Certification of Principal Executive Officer filed pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 dated March 5, 2021.
32.2†	Certification of Principal Financial Officer filed pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 dated March 5, 2021.
101.INS†	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data file because the its XBRL tags are embedded within the Inline XBRL document.In
101.SCH†	Inline XBRL Taxonomy Extension Scheme Document
101.CAL†	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF†	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB†	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE†	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File - this data file does not appear in the Interactive Data file because its XBRL tags are embedded within the Inline XBRL document.

* Management contract or compensatory plan or arrangement

† Exhibits filed herein. All exhibits not so designated are incorporated by reference to a prior filing, as indicated.

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, the Registrant has duly caused this report to be signed on our behalf by the undersigned, thereunto duly authorized.

3D Systems Corporation
By: /s/ DR. JEFFREY A. GRAVES
Dr. Jeffrey A. Graves
President, Chief Executive Officer and Director
Date: March 5, 2021

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

Signature	Title	Date
<u>/s/ DR. JEFFREY A. GRAVES</u> Dr. Jeffrey A. Graves	Chief Executive Officer, President and Director (principal executive officer)	March 5, 2021
<u>/s/ JAGTAR NARULA</u> Jagtar Narula	Executive Vice President and Chief Financial Officer (principal financial officer)	March 5, 2021
<u>/s/ CHARLES W. HULL</u> Charles W. Hull	Executive Vice President, Chief Technology Officer and Director	March 5, 2021
<u>/s/ ANTHONY J. GRABENAU</u> Anthony J. Grabenau	Vice President, Global Corporate Controller (principal accounting officer)	March 5, 2021
<u>/s/ CHARLES G. MCCLURE, JR</u> Charles G. McClure, Jr.	Chairman of the Board of Directors	March 5, 2021
<u>/s/ MALISSIA R. CLINTON</u> Malissia R. Clinton	Director	March 5, 2021
<u>/s/ WILLIAM E. CURRAN</u> William E. Curran	Director	March 5, 2021
<u>/s/ THOMAS W. ERICKSON</u> Thomas W. Erickson	Director	March 5, 2021
<u>/s/ WILLIAM D. HUMES</u> William D. Humes	Director	March 5, 2021
<u>/s/ JIM D. KEVER</u> Jim D. Kever	Director	March 5, 2021
<u>/s/ KEVIN S. MOORE</u> Kevin S. Moore	Director	March 5, 2021
<u>/s/ VASANT PADMANABHAN</u> Vasant Padmanabhan	Director	March 5, 2021
<u>/s/ JOHN J. TRACY</u> Dr. John J. Tracy	Director	March 5, 2021
<u>/s/ JEFFREY WADSWORTH</u> Dr. Jeffrey Wadsworth	Director	March 5, 2021

3D Systems Corporation
Index to Consolidated Financial Statements

Consolidated Financial Statements

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Report of Independent Registered Public Accounting Firm

Report of Independent Registered Public Accounting Firm

Shareholders and Board of Directors
3D Systems Corporation
Rock Hill, South Carolina

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of 3D Systems Corporation (the “Company”) as of December 31, 2020 and 2019, the related consolidated statements of operations, comprehensive loss, stockholders’ equity, and cash flows for each of the three years in the period ended December 31, 2020, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) and our report dated March 5, 2021 expressed an adverse opinion thereon.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Assessment of Goodwill Recoverability

As described in Notes 2 and 9 to the Company's consolidated financial statements, goodwill totaled \$161.8 million as of December 31, 2020. The carrying values of goodwill for the Europe and Middle East ("EMEA"), Asia Pacific ("APAC"), and Americas reporting units were \$127.6 million, \$34.2 million, and \$0, respectively, as of December 31, 2020. The Company performs an annual assessment of the recoverability of its goodwill during the fourth quarter, and also performs an assessment on an interim basis when events or changes in circumstances indicate that the carrying value of a reporting unit may exceed its fair value. As a result of triggering events identified by the Company during the first and third quarters of 2020, including the impact of COVID-19 pandemic on its revenue and earnings, the Company performed interim goodwill impairment tests in each of these quarterly periods. One of the valuation methods utilized by the Company to estimate the fair value of its reporting units is based on the discounted projected cash flows of the underlying operations. At September 30, the Company recognized a non-cash impairment charge of \$48.3 million reducing the carrying value of goodwill in the EMEA reporting unit as a result of an interim goodwill impairment assessment performed during the third quarter of the fiscal year.

We identified the evaluation of goodwill for impairment for the EMEA reporting unit as of March 31 and as of September 30 as a critical audit matter. The determination of the fair value of the reporting unit requires management to estimate the future cash flows which include significant judgments about revenues, profit margins, long-term operating forecasts, country-specific risk premiums, terminal growth rates, and discount rates. These judgments are subject to inherent economic and other uncertainties, including the projected impact from the COVID-19 pandemic, and changes in the mix of sales and ordering patterns from certain enterprise customers. Auditing management's significant assumptions used in the assessment of the recoverability of goodwill involved especially challenging and subjective auditor judgment due to the nature and extent of audit effort required to address these matters, including the extent of specialized skill or knowledge needed.

The primary procedures we performed to address this critical audit matter included:

- Testing the design and operating effectiveness of controls related to management's forecasting process, including controls over the data, inputs, and assumptions utilized to determine the fair value of the EMEA reporting unit, including the assessment of historical information utilized, revenues, profit margins, long-term operating forecasts, terminal growth rates, and discount rates.
- Evaluating management's ability to forecast and the reasonableness of management's assumptions used to develop cash flow forecasts and projections by comparing them to prior period forecasts, historical operating performance, internal and external communications made by the Company, guidance released by customers and competitors, and forecasted information included in industry reports, including external reports related to forecasted economic recovery from COVID-19 related business disruptions.
- Testing the completeness, accuracy, and relevance of the underlying data used in the discounted cash flow analysis.
- Performing sensitivity analyses to assess the impact that fluctuations in the projected growth rates might have on the estimated fair value of the reporting unit.
- Utilizing professionals with specialized skills and knowledge in valuation to assist in evaluating the appropriateness of the country-specific risk premium, terminal growth rate, and discount rate assumptions used to estimate the fair value of the EMEA reporting unit.

Revenue from Collaboration and Licensing Agreements

As described in Note 4 to the consolidated financial statements, the Company recognizes revenue when control of the promised products or services is transferred to customers in an amount that reflects the consideration the Company expects to receive in exchange for those products or services. The Company recognized approximately \$6.9 million related to collaboration arrangements with customers for the year ended December 31, 2020. The nature of the activities performed, and consideration exchanged through the Company's collaborative agreements, varies such that certain agreements meet the definition of customer relationships for which revenue is recorded, while others do not meet this definition. The Company's collaborative revenue contracts may contain multiple performance obligations and may contain fees for licensing, research and development services, contingent milestone payments upon achievement of developmental contractual criteria, and/or royalty fees based on the licensees' product revenue.

We identified revenue recognition from collaborative agreements with customers as a critical audit matter. Management makes significant judgments in identifying customer relationships and in determining revenue recognition for its collaborative agreements with customers, including the evaluation of distinct performance obligations, the identification and evaluation of material rights, the estimation of variable consideration, and the determination of the pattern of transfer of control for each distinct performance obligation. Auditing management's judgments and estimates required significant audit effort and auditor subjectivity and in addition, as described in the "Opinion on Internal Control over Financial Reporting" section above, a material weakness was identified that encompasses this matter.

The primary procedures we performed to address this critical audit matter included:

- Assessing the completeness of collaboration arrangements that require assessment for proper accounting treatment by inspecting Company press releases, Committee meeting minutes, and credits within Research & Development expense general ledger accounts.
- Evaluating the reasonableness of management's judgments to determine whether customer relationships exist in its collaborative arrangements.
- Examining a sample of revenue contracts and other source documents to test management's identification of significant terms for completeness and assessing the appropriateness of the treatment for such terms, including the identification of distinct performance obligations, material rights, and variable consideration.
- Evaluating the reasonableness of management's judgments and estimates to calculate variable consideration, and the timing of recognizing the related revenue subject to any constraints.
- Evaluating the appropriateness of management's determination of whether identified performance obligations meet the criteria for over-time revenue recognition.
- Evaluating the appropriateness of the method used to recognize revenue and testing the relevant inputs and assumptions to the revenue recognition calculations.

We have served as the Company's auditor since 2003.

/s/ BDO USA, LLP

Charlotte, North Carolina

March 5, 2021

Report of Independent Registered Public Accounting Firm

Report of Independent Registered Public Accounting Firm

Shareholders and Board of Directors
3D Systems Corporation
Rock Hill, South Carolina

Opinion on Internal Control over Financial Reporting

We have audited 3D System Corporation's (the "Company's") internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "COSO criteria"). In our opinion, the Company did not maintain, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on the COSO criteria.

We do not express an opinion or any other form of assurance on management's statements referring to any corrective actions taken by the Company after the date of management's assessment.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of the Company as of December 31, 2020 and 2019, the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2020, and the related notes (collectively referred to as "the financial statements") and our report dated March 5, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Item 9A, Management's Report on Internal Control over Financial Reporting". Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit of internal control over financial reporting in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis. Material weaknesses regarding management's failure to design and maintain controls over the identification and review of contracts with financial accounting implications and the financial reporting and close process have been identified and described in management's assessment. These material weaknesses were considered in determining the nature, timing, and extent of audit tests applied in our audit of the 2020 financial statements, and this report does not affect our report dated March 5, 2021 on those financial statements.

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ BDO USA, LLP

Charlotte, North Carolina

March 5, 2021

3D SYSTEMS CORPORATION
CONSOLIDATED BALANCE SHEETS

(In thousands, except par value)

	<u>December 31, 2020</u>	<u>December 31, 2019</u>
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 75,010	\$ 133,665
Accounts receivable, net of reserves — \$4,392 (2020) and \$8,762 (2019)	114,254	109,408
Inventories	116,667	111,106
Prepaid expenses and other current assets	33,145	18,991
Current assets held for sale	18,439	—
Total current assets	357,515	373,170
Property and equipment, net	75,356	92,940
Intangible assets, net	28,083	48,338
Goodwill	161,765	223,176
Right of use assets	48,620	36,890
Deferred income tax asset	6,247	5,408
Assets held for sale	31,684	—
Other assets	23,785	27,390
Total assets	<u>\$ 733,055</u>	<u>\$ 807,312</u>
LIABILITIES AND EQUITY		
Current liabilities:		
Current portion of long term debt	\$ 2,051	\$ 2,506
Current right of use liabilities	9,534	9,569
Accounts payable	45,174	49,851
Accrued and other liabilities	69,812	63,095
Customer deposits	7,750	5,712
Deferred revenue	30,302	32,231
Current liabilities held for sale	11,107	—
Total current liabilities	175,730	162,964
Long-term debt, net of deferred financing costs	19,218	45,215
Long-term right of use liabilities	48,469	35,402
Deferred income tax liability	4,716	4,027
Liabilities held for sale	2,952	—
Other liabilities	51,247	45,808
Total liabilities	302,332	293,416
Commitments and contingencies (Note 22)		
Stockholders' equity:		
Common stock, \$0.001 par value, authorized 220,000 shares; issued 127,626 (2020) and 121,266 (2019)	128	120
Additional paid-in capital	1,404,964	1,371,564
Treasury stock, at cost — 3,494 shares (2020) and 3,670 shares (2019)	(22,590)	(18,769)
Accumulated deficit	(943,303)	(793,709)
Accumulated other comprehensive loss	(8,476)	(37,047)
Total 3D Systems Corporation stockholders' equity	430,723	522,159
Noncontrolling interests	—	(8,263)
Total stockholders' equity	430,723	513,896
Total liabilities, redeemable noncontrolling interests and stockholders' equity	<u>\$ 733,055</u>	<u>\$ 807,312</u>

See accompanying notes to consolidated financial statements.

3D SYSTEMS CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS

<i>(in thousands, except per share amounts)</i>	Year Ended December 31,		
	2020	2019	2018
Revenue:			
Products	\$ 332,799	\$ 389,337	\$ 433,100
Services	224,441	247,017	258,445
Total revenue	557,240	636,354	691,545
Cost of sales:			
Products	227,681	234,581	233,678
Services	106,184	121,232	133,473
Total cost of sales	333,865	355,813	367,151
Gross profit	223,375	280,541	324,394
Operating expenses:			
Selling, general and administrative	219,895	254,355	272,287
Research and development	74,143	83,290	95,298
Impairment of goodwill	48,300	—	—
Total operating expenses	342,338	337,645	367,585
Loss from operations	(118,963)	(57,104)	(43,191)
Interest and other expense, net	(24,447)	(7,996)	(37)
Loss before income taxes	(143,410)	(65,100)	(43,228)
Provision for income taxes	(6,184)	(4,532)	(2,035)
Net loss	(149,594)	(69,632)	(45,263)
Less: net income attributable to noncontrolling interests	—	248	242
Net loss attributable to 3D Systems Corporation	\$ (149,594)	\$ (69,880)	\$ (45,505)
Net loss per share available to 3D Systems Corporation common stockholders - basic and diluted	\$ (1.27)	\$ (0.61)	\$ (0.41)

See accompanying notes to consolidated financial statements.

3D SYSTEMS CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

<i>(in thousands, except per share amounts)</i>	Year Ended December 31,		
	2020	2019	2018
Net loss	\$ (149,594)	\$ (69,632)	\$ (45,263)
Other comprehensive income (loss), net of taxes:			
Pension adjustments	783	(1,060)	(92)
Derivative financial instruments	(403)	(318)	—
Foreign currency translation	28,752	2,996	(17,068)
Total other comprehensive income (loss), net of taxes:	29,132	1,618	(17,160)
Total comprehensive loss, net of taxes	(120,462)	(68,014)	(62,423)
Comprehensive income attributable to noncontrolling interests	—	191	524
Comprehensive loss attributable to 3D Systems Corporation	<u>\$ (120,462)</u>	<u>\$ (68,205)</u>	<u>\$ (62,947)</u>

See accompanying notes to consolidated financial statements.

3D SYSTEMS CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)	Year Ended December 31,		
	2020	2019	2018
Cash flows from operating activities:			
Net loss	\$ (149,594)	\$ (69,632)	\$ (45,263)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:			
Depreciation and amortization	44,595	50,396	59,293
Stock-based compensation	17,725	23,587	29,253
Provision for inventory obsolescence and revaluation	12,373	—	—
Loss on hedge accounting de-designation	1,235	—	—
Provision for bad debts	457	1,308	1,824
Loss on the disposition of property, equipment and other assets	5,274	2,282	—
Provision for deferred income taxes	(1,206)	(3,354)	(2,990)
Impairment of assets	55,484	1,728	1,998
Changes in operating accounts:			
Accounts receivable	(6,052)	15,071	599
Inventories	(9,901)	18,447	(34,035)
Prepaid expenses and other current assets	(16,218)	9,150	40,922
Accounts payable	(6,653)	(16,846)	11,559
Deferred revenue and customer deposits	3,231	677	(2,383)
Accrued and other liabilities	28,286	(1,346)	(57,212)
All other operating activities	843	113	1,231
Net cash (used in) provided by operating activities	(20,121)	31,581	4,796
Cash flows from investing activities:			
Purchases of property and equipment	(13,643)	(23,985)	(40,694)
Proceeds from sale of assets	1,554	1,620	333
Purchase of noncontrolling interest	(12,500)	(2,500)	—
Other investing activities	356	(2,007)	(1,466)
Net cash used in investing activities	(24,233)	(26,872)	(41,827)
Cash flows from financing activities:			
Proceeds from revolving credit facilities	20,000	—	—
Payments on revolving credit facilities	(20,000)	—	—
Proceeds from borrowings	—	100,000	25,000
Repayment of borrowings/long term debt	(26,840)	(76,768)	—
Proceeds from issuance of common stock	24,702	—	—
Payments related to net-share settlement of stock based compensation	(5,138)	(3,194)	(7,367)
Payments on earnout consideration	—	—	(2,675)
Other financing activities	296	(1,338)	(694)
Net cash (used in) provided by financing activities	(6,980)	18,700	14,264
Effect of exchange rate changes on cash, cash equivalents and restricted cash	1,428	289	(3,145)
Net increase (decrease) in cash, cash equivalents and restricted cash	(49,906)	23,698	(25,912)
Cash, cash equivalents and restricted cash at the beginning of the period ^a	134,617	110,919	136,831
Cash, cash equivalents and restricted cash at the end of the period ^a	\$ 84,711	\$ 134,617	\$ 110,919

Supplemental cash flow information

Lease assets obtained in exchange for new lease liabilities (excludes adoption)	\$ 23,309	\$ 8,662	\$ —
Cash interest payments	\$ 2,109	\$ 3,715	\$ 542
Cash income tax payments, net	\$ 3,706	\$ 10,722	\$ 8,964
Transfer of equipment from inventory to property and equipment, net ^b	\$ 1,055	\$ 3,187	\$ 5,612
Transfer of equipment to inventory from property and equipment, net ^c	\$ —	\$ 32	\$ 2,563

Noncash financing activity

Purchase of noncontrolling interest ^d	\$ —	\$ (11,000)	\$ —
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- (a) The amounts for cash and cash equivalents shown above include restricted cash of \$540, \$952 and \$921 as of December 31, 2020, 2019 and 2018, respectively, which were included in Other assets, net, and \$9,161 as of December 31, 2020, which was included in Current assets held for sale in the consolidated balance sheets.
- (b) Inventory is transferred from inventory to property and equipment at cost when we require additional machines for training or demonstration or for placement into on demand manufacturing services locations.
- (c) In general, an asset is transferred from Property and equipment, net, into inventory at its net book value when we have identified a potential sale for a used machine.
- (d) Purchase of noncontrolling interest to be paid in installments over a four-year period recorded to Accrued and other liabilities and Other liabilities on the consolidated balance sheets.

See accompanying notes to consolidated financial statements.

3D SYSTEMS CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
Years Ended December 31, 2020, 2019 and 2018

	<u>Common Stock</u>				Accumulated Other Comprehensive Income (Loss)	Total 3D Systems Corporation Stockholders' Equity	Equity Attributable to Noncontrolling Interests	Total Stockholders' Equity
<i>(in thousands, except par value)</i>	Par Value \$0.001	Additional Paid In Capital	Treasury Stock	Accumulated Deficit				
December 31, 2017	\$ 115	\$ 1,326,250	\$ (8,203)	\$ (677,772)	\$ (21,536)	\$ 618,854	\$ (2,906)	\$ 615,948
Issuance (repurchase) of stock	2	—	(7,369)	—	—	(7,367)	—	(7,367)
Cumulative impact of change in accounting policy	—	—	—	576	—	576	—	576
Stock-based compensation expense	—	29,253	—	—	—	29,253	—	29,253
Net income (loss)	—	—	—	(45,505)	—	(45,505)	242	(45,263)
Pension adjustment	—	—	—	—	(92)	(92)	—	(92)
Foreign currency translation adjustment	—	—	—	—	(17,350)	(17,350)	282	(17,068)
December 31, 2018	117	1,355,503	(15,572)	(722,701)	(38,978)	578,369	(2,382)	575,987
Issuance (repurchase) of stock	3	—	(3,197)	—	—	(3,194)	—	(3,194)
Acquisition of non-controlling interest	—	(7,526)	—	—	256	(7,270)	(6,072)	(13,342)
Adjustment of RNCI carrying value	—	—	—	(1,128)	—	(1,128)	—	(1,128)
Stock-based compensation expense	—	23,587	—	—	—	23,587	—	23,587
Net income (loss)	—	—	—	(69,880)	—	(69,880)	248	(69,632)
Pension adjustment	—	—	—	—	(1,060)	(1,060)	—	(1,060)
Derivative financial instrument adjustment	—	—	—	—	(318)	(318)	—	(318)
Foreign currency translation adjustment	—	—	—	—	3,053	3,053	(57)	2,996
December 31, 2019	120	1,371,564	(18,769)	(793,709)	(37,047)	522,159	(8,263)	513,896
Issuance (repurchase) of stock	8	23,377	(3,821)	—	—	19,564	—	19,564
Acquisition of non-controlling interest	—	(7,702)	—	—	(561)	(8,263)	8,263	—
Stock-based compensation expense	—	17,725	—	—	—	17,725	—	17,725
Net loss	—	—	—	(149,594)	—	(149,594)	—	(149,594)
Pension adjustment	—	—	—	—	783	783	—	783
Derivative financial instrument loss	—	—	—	—	(1,638)	(1,638)	—	(1,638)
De-designation of derivative instrument	—	—	—	—	1,235	1,235	—	1,235
Foreign currency translation adjustment	—	—	—	—	28,752	28,752	—	28,752
December 31, 2020	<u>\$ 128</u>	<u>\$ 1,404,964</u>	<u>\$ (22,590)</u>	<u>\$ (943,303)</u>	<u>\$ (8,476)</u>	<u>\$ 430,723</u>	<u>\$ —</u>	<u>\$ 430,723</u>

See accompanying notes to consolidated financial statements.

(1) Basis of Presentation

The consolidated financial statements include the accounts of 3D Systems Corporation and all majority-owned subsidiaries and entities in which a controlling interest is maintained ("3D Systems" or the "Company" or "we" or "us"). A non-controlling interest in a subsidiary is considered an ownership interest in a majority-owned subsidiary that is not attributable to the parent. We include noncontrolling interests as a component of total equity in the consolidated balance sheets and the net income (loss) attributable to noncontrolling interests is presented as an adjustment from net loss used to arrive at net loss attributable to 3D Systems Corporation in the consolidated statements of operations and comprehensive loss. Our annual reporting period is the calendar year.

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP"). All significant intercompany accounts and transactions have been eliminated in consolidation. Certain prior period amounts have been reclassified to conform to the current year presentation.

Our operations in North America and South America (collectively referred to as "Americas"), Europe and the Middle East (collectively referred to as "EMEA") and the Asia Pacific region ("APAC") expose us to risks associated with public health crises and epidemics/pandemics, such as the COVID-19 pandemic. While the COVID-19 pandemic has impacted the Company's reported results for the year ended December 31, 2020, we are unable to predict the longer-term impact that the pandemic may have on our business, results of operations, financial position or cash flows. The extent to which our operations may be impacted by the dynamic nature of the COVID-19 pandemic will depend largely on future developments, which are highly uncertain and cannot be accurately predicted, including new information which may emerge concerning the severity of the outbreak and actions by government authorities to contain the outbreak or treat its impact. Furthermore, the impacts of a potential worsening of global economic conditions and the continued disruptions to, and volatility in, the financial markets remain unknown.

All dollar amounts presented in the accompanying footnotes are presented in thousands, except for per share information.

(2) Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. We base our estimates on historical experience, currently available information and various other assumptions that we believe are reasonable under the circumstances. Actual results could differ from these estimates.

Revenue Recognition

We account for revenue in accordance with Accounting Standard Codification ("ASC") Topic 606, "*Revenue from Contracts with Customers*," which we adopted on January 1, 2018, using the modified-retrospective method. Collaborative revenue contracts in which the collaboration partner meets the definition of a customer are recorded in accordance with ASC Topic 606, otherwise recorded in accordance with ASC 808. See Note 4 for further discussion.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash and temporary investments with maturities of three months or less when acquired.

Cash and cash equivalents by geographic region for the years ended December 31, 2020, and 2019 were as follows:

(in thousands)	Year Ended December 31,	
	2020	2019
Americas	\$ 27,562	\$ 63,374
EMEA	24,875	\$ 44,283
APAC	22,573	\$ 26,008
Total	\$ 75,010	\$ 133,665

Investments

Investments in non-consolidated affiliates (20-50 percent owned companies and joint ventures) are accounted for using the equity method. Investments through which we are not able to exercise significant influence over the investee and which we do not have readily determinable fair values are generally accounted for under the cost method. We did not hold any equity method investments at December 31, 2020 or 2019.

We assess declines in the fair value of investments to determine whether such declines are other-than-temporary. Other-than-temporary impairments of investments are recorded to interest and other expense, net, in the period in which they become impaired.

For the years ended December 31, 2020 and 2019, we recorded impairment charges of \$2,361 and \$927, respectively, related to certain cost-method investments. The aggregate carrying amount of all investments accounted for under the cost method totaled \$5,016 and \$8,327 at December 31, 2020 and 2019, respectively, and is included in other assets, net, on our consolidated balance sheets.

Accounts Receivable and Allowances for Doubtful Accounts

Trade accounts receivable are recorded at the invoiced amount and do not bear interest. In evaluating the collectability of accounts receivable, we assess a number of factors, including specific customers' ability to meet their financial obligations to us, the length of time receivables are past due and historical collection experience. Based on these assessments, we may record a reserve for specific customers, as well as a general reserve and allowance for returns and discounts. If circumstances related to specific customers change, or economic conditions deteriorate such that our past collection experience is no longer relevant, our estimate of the recoverability of accounts receivable could be further reduced from the levels provided for in the consolidated financial statements.

The following presents the changes in the balance of our allowance for doubtful accounts:

Year Ended	Item	Balance at beginning of year	Additions charged to expense	Other	Balance at end of year
2020	Allowance for doubtful accounts	\$ 8,762	\$ 457	\$ (4,827)	\$ 4,392
2019	Allowance for doubtful accounts	8,423	1,308	(969)	8,762
2018	Allowance for doubtful accounts	10,258	1,824	(3,659)	8,423

Inventories

Inventories are stated at the lower of cost or net realizable value, with cost being determined using the first-in, first-out method.

Long-Lived Assets and Goodwill

We review long-lived assets, including intangible assets subject to amortization, for impairment whenever events or changes in circumstances indicate that the carrying value of the asset may not be recoverable. Recoverability is assessed for the carrying value of assets held for use based on a review of undiscounted projected cash flows. Impairment losses, where identified, are measured as the excess of the carrying value of the long-lived asset over its estimated fair value as determined by discounted projected cash flows. No impairment charges for intangible assets with finite lives were recorded for the years ended December 31, 2020 and 2019.

Goodwill is the excess of cost of an acquired entity over the amounts assigned to assets acquired and liabilities assumed in a business combination. Goodwill is not amortized. Goodwill is tested for impairment annually on November 30 of each year, and is tested for impairment between annual tests if an event occurs or circumstances change that would indicate the carrying amount may be impaired. Impairment testing for goodwill is done at a reporting unit level, with all goodwill assigned to a reporting unit.

Our reporting units are Americas, EMEA and APAC. We completed the required annual goodwill impairment test as of November 30, 2020. The goodwill impairment test compared the fair value of each reporting unit to their carrying value. We estimated the fair value of our reporting units based primarily on the discounted projected cash flows of the underlying operations. The estimated fair value for each of our reporting units was in excess of their respective carrying values as of December 31, 2020.

For a summary of our goodwill by reporting unit and discussion of goodwill impairment in 2020, see Note 9.

Assets and Liabilities Held for Sale

Once management has committed to disposal of a component of the Company and it is probable of being completed within one year, the assets and liabilities are reclassified as held for sale and net income continues to be reported as from continuing operations, unless it meets requirements to be reclassified as a discontinued operation. See Note 3.

Contingencies

We follow the provisions of ASC 450, “*Contingencies*,” which requires that an estimated loss from a loss contingency be accrued by a charge to income if it is both probable that an asset has been impaired or that a liability has been incurred and that the amount of the loss can be reasonably estimated.

Foreign Currency Translation

Local currencies generally are considered the functional currencies outside the United States. Assets and liabilities for operations in local-currency environments are translated at month-end exchange rates of the period reported. Income and expense items are translated at average exchange rates of each applicable month. Cumulative translation adjustments are recorded as a component of accumulated other comprehensive income (loss) in shareholders’ equity.

Derivative Financial Instruments

We are exposed to market risk from changes in interest rates, foreign currency exchange rates and commodity prices, which may adversely affect our results of operations and financial condition. We seek to minimize these risks through regular operating and financing activities and, when we consider it to be appropriate, through the use of derivative financial instruments. We do not purchase, hold or sell derivative financial instruments for trading or speculative purposes.

We use derivative financial instruments to manage our exposure to changes in interest rates on outstanding debt instruments. For those instruments that qualify and where we elect to prepare and maintain the documentation to qualify for hedge accounting treatment under ASC 815, “*Derivatives and Hedging*,” related gains and losses (realized or unrealized) related to derivative instruments are recognized in accumulated other comprehensive income (loss) and are reclassified into earnings when the underlying transaction is recognized in net earnings and, depending on the fair value at the end of the reporting period, derivatives are recorded either in prepaid and other current assets or in accrued liabilities in the consolidated balance sheets.

We and our subsidiaries conduct business in various countries using both their functional currencies and other currencies to effect cross border transactions. As a result, we and our subsidiaries are subject to the risk that fluctuations in foreign exchange rates between the dates that those transactions are entered into and their respective settlement dates will result in a foreign exchange gain or loss. When practicable, we endeavor to match assets and liabilities in the same currency on our U.S. balance sheet and those of our subsidiaries in order to reduce these risks. We, when we consider it to be appropriate, enter into foreign currency contracts to hedge the exposure arising from those transactions. See Note 13. For our hedges of foreign exchange rates and commodity prices, we have elected to not prepare and maintain the documentation to qualify for hedge accounting treatment under ASC 815, “*Derivatives and Hedging*,” and therefore, changes in fair value are recognized in interest and other expense, net in the consolidated statements of operations and comprehensive loss and, depending on the fair value at the end of the reporting period, derivatives are recorded either in prepaid and other current assets or in accrued liabilities in the consolidated balance sheets.

We are exposed to credit risk if the counterparties to such transactions are unable to perform their obligations. However, we seek to minimize such risk by entering into transactions with counterparties that are believed to be creditworthy financial institutions.

Research and Development Costs

Research and development costs are expensed as incurred.

Earnings (Loss) per Share

Basic earnings (loss) per share are calculated on the weighted-average number of common shares outstanding during each period. Diluted earnings per share include shares issuable upon exercise of outstanding stock options and stock-based awards where the conversion of such instruments would be dilutive. See Note 18.

Advertising Costs

Advertising costs are expensed as incurred. Advertising costs, including trade shows, were \$7,561, \$13,732 and \$13,562 for the years ended December 31, 2020, 2019 and 2018, respectively.

Pension costs

We sponsor a retirement benefit for one of our non-U.S. subsidiaries in the form of a defined benefit pension plan. Accounting standards require the cost of providing this pension benefit be measured on an actuarial basis. Actuarial gains and losses resulting from both normal year-to-year changes in valuation assumptions and differences from actual experience are deferred and amortized. The application of these accounting standards require us to make assumptions and judgements that can significantly affect these measurements. Our critical assumptions in performing these actuarial valuations include the selection of the discount rate to determine the present value of the pension obligations that affects the amount of pension expense recorded in any given period. Changes in the discount rate could have a material effect on our reported pension obligations and related pension expense. See Note 17.

Equity Compensation Plans

We recognize compensation expense for our stock-based compensation programs, which include stock options, restricted stock, restricted stock units (“RSU”) and performance shares. For service-based awards, stock-based compensation is estimated at the grant date based on the fair value of the awards expected to vest and recognized as expense ratably over the requisite service period of the award. For stock options and awards with market conditions, compensation cost is determined at the individual tranche level. We recognize forfeitures when they occur.

Income Taxes

We and the majority of our domestic subsidiaries file a consolidated U.S. federal income tax return, while four of our domestic entities file separate U.S. federal income tax returns. Our non-U.S. subsidiaries file income tax returns in their respective jurisdictions.

Income taxes are accounted for under the asset and liability method. Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and tax benefit carryforwards. Deferred income tax liabilities and assets at the end of each period are determined using enacted tax rates.

We establish a valuation allowance for those jurisdictions in which the expiration date of tax benefit carryforwards or projected taxable earnings leads us to conclude that it is “more likely than not” that a deferred tax asset will not be realized. The evaluation process includes the consideration of all available evidence regarding historical results and future projections including the estimated timing of reversals of existing taxable temporary differences and potential tax planning strategies. Once a valuation allowance is established, it is maintained until a change in factual circumstances gives rise to sufficient income of the appropriate character and timing that will allow a partial or full utilization of the deferred tax asset.

In accordance with ASC 740, “*Income Taxes*,” the impact of an uncertain tax position on our income tax returns is recognized at the largest amount that is more likely than not to be required to be recognized upon audit by the relevant taxing authority.

We include interest and penalties accrued in the consolidated financial statements as a component of income tax expense.

See Note 21 for further discussion.

Operating and Finance Leases

We determine if an arrangement contains a lease at inception. Some leases include the options to purchase, terminate or extend for one or more years; these options are included in the right of use (“ROU”) asset and liability lease term when it is reasonably certain an option will be exercised. Our leases do not contain any material residual value guarantees or material restrictive covenants.

Most of our leases do not provide an implicit rate, therefore we use our incremental borrowing rate based on the information available at the commencement date to determine the present value of the future lease payments.

Certain of our leases include variable costs. Variable costs include non-lease components that were incurred based upon actual terms rather than contractually fixed amounts. In addition, variable costs are incurred for lease payments that are indexed to a change in rate or index. Because the ROU asset recorded on the balance sheet was determined based upon factors considered at the commencement date, subsequent changes in the rate or index that were not contemplated in the ROU asset balances recorded on the balance sheet result in variable expenses being incurred when paid during the lease term. See Note 5.

Recent Accounting Pronouncements

Recently Adopted Accounting Standards

In June 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-13, “*Measurement of Credit Losses on Financial Instruments*” (“ASU 2016-13”), as revised in July 2018, which provides guidance regarding the measurement of credit losses for financial assets and certain other instruments that are not accounted for at fair value through net income, including trade and other receivables, debt securities, net investment in sales type and direct financing leases, and off-balance sheet credit exposures. The new guidance requires companies to replace the current incurred loss impairment methodology with a methodology that measures all expected credit losses for financial assets based on historical experience, current conditions, and reasonable and supportable forecasts. The Company adopted this guidance during the first quarter of 2020. The implementation did not have a material effect on our financial position or results of operations.

In January 2017, the FASB issued ASU No. 2017-04, “*Intangibles - Goodwill and Other (Topic 350), Simplifying the Test for Goodwill Impairment*” (“ASU 2017-04”), which eliminates the performance of Step 2 from the goodwill impairment test. In performing its annual or interim impairment testing, an entity will instead compare the fair value of the reporting unit with its carrying amount and recognize any impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value. Additionally, an entity should consider income tax effects from any tax-deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss. The Company adopted this guidance during the first quarter of 2020.

In November 2018, the FASB issued ASU 2018-18, "Collaborative Arrangements (ASC 808), Clarifying the Interaction between ASC 808 and ASC 606" ("ASU 2018-18"). This ASU clarified when transactions between collaborative participants are in the scope of ASC 606. The ASU also provides some guidance on presentation of transactions not in the scope of ASC 606. After adoption during the fourth quarter of 2020 the Company determined it was appropriate to recast the presentation of our previously reported statement of operations for the years ended December 31, 2019 and 2018. The Company acknowledges this standard should have been adopted January 1, 2020. The adoption of this standard did not change the Company's previously reported net loss or loss from operations for the years ended December 31, 2019 or 2018 or any individual quarter therein and the effect on the individual quarters in 2020 was immaterial. The following schedule depicts the annual effect of the adoption on our previously reported statements of operations:

	Year Ended December 31,					
	2019			2018		
	As reported	Change	Revised	As reported	Change	Revised
Revenue:						
Products	\$ 384,577	\$ 4,760	\$ 389,337	\$ 429,215	\$ 3,885	\$ 433,100
Services	244,517	2,500	247,017	258,445	—	258,445
Total revenue	629,094	7,260	636,354	687,660	3,885	691,545
Cost of sales:						
Products	229,821	4,760	234,581	229,793	3,885	233,678
Services	121,232	—	121,232	133,473	—	133,473
Total cost of sales	351,053	4,760	355,813	363,266	3,885	367,151
Gross profit	278,041	2,500	280,541	324,394	—	324,394
Operating expenses:						
Selling, general and administrative	254,355	—	254,355	272,287	—	272,287
Research and development	80,790	2,500	83,290	95,298	—	95,298
Total operating expenses	335,145	2,500	337,645	367,585	—	367,585
Loss from operations	(57,104)	—	(57,104)	(43,191)	—	(43,191)

Recently Issued Accounting Standards

In December 2019, the FASB issued ASU 2019-12, "Income Taxes (Topic 740) - Simplifying the Accounting for Income Taxes," which simplifies the accounting for income taxes by eliminating some exceptions to the general approach in ASC 740, Income Taxes. It also clarifies certain aspects of the existing guidance to promote more consistent application. This standard is effective for calendar-year public business entities in 2021 and interim periods within that year, and early adoption is permitted. We are in the process of evaluating the impact the new standard will have on our consolidated financial statements.

No other new accounting pronouncements, issued or effective during 2020, have had or are expected to have a significant impact on our consolidated financial statements.

(3) Dispositions

In November 2020, we sold our Australia ODM business in an asset sale for \$685. The carrying value of the assets, including net working capital and allocable goodwill, was \$1,482. In December 2020, we sold our Wuxi Easyway business in an asset sale for \$79. The carrying value of the assets, including net working capital and allocable goodwill, was \$3,806. Recognized losses of \$4,524 were included in interest and other expense, net on the consolidated statement of operations.

On January 1, 2021, the Company completed the sale of 100% of the issued and outstanding equity interests of Cimatron Ltd. ("Cimatron"), the subsidiary that operated the Company's Cimatron integrated CAD/CAM software for tooling business and its GibbsCAM CNC programming software business for approximately \$64,200, after certain adjustments and excluding \$9,161 of cash amounts transferred to the purchaser. The assets and liabilities of Cimatron were reclassified to held for sale on the consolidated balance sheet as of December 31, 2020. See Note 26.

The components of Cimatron's assets and liabilities recorded as held for sale on the consolidated balance sheet at December 31, 2020 were as follows:

<i>(in thousands)</i>	December 31, 2020
Assets	
Cash and cash equivalents	\$ 9,161
Accounts receivable, net of reserves of \$1,154	5,361
Inventories	155
Prepaid expenses and other current assets	3,762
Total current assets held for sale	18,439
Property and equipment, net	202
Intangible assets, net	6,642
Goodwill	21,385
Right of use assets	898
Deferred income tax asset	560
Other assets	1,997
Total assets held for sale	\$ 50,123
Liabilities	
Current right of use liabilities	\$ 445
Accounts payable	654
Accrued and other liabilities	5,631
Customer deposits	25
Deferred revenue	4,352
Total current liabilities held for sale	11,107
Long-term right of use liabilities	518
Other liabilities	2,434
Total liabilities held for sale	\$ 14,059

(4) Revenue

We account for revenue in accordance with ASC Topic 606, "*Revenue from Contracts with Customers*," which we adopted on January 1, 2018, using the modified-retrospective method.

Performance Obligations

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer, and is the unit of account in ASC Topic 606. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied.

At December 31, 2020, we had \$111,833 of outstanding performance obligations. We expect to recognize approximately 94 percent of our remaining performance obligations as revenue within the next twelve months, an additional 4 percent by the end of 2022 and the balance thereafter.

Revenue Recognition

Revenue is recognized when control of the promised products or services is transferred to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. We enter into contracts that can include various combinations of products and services, which are generally capable of being distinct and accounted for as separate performance obligations. Many of our contracts with customers include multiple performance obligations. For such arrangements, we allocate revenue to each performance obligation based on its relative stand-alone selling price (“SSP”). Revenue is recognized net of allowances for returns and any taxes collected from customers, which are subsequently remitted to governmental authorities. The amount of consideration received and revenue recognized may vary based on changes in marketing incentive programs offered to our customers. Our marketing incentive programs take many forms, including volume discounts, trade-in allowances, rebates and other discounts.

A majority of our revenue is recognized at the point in time when products are shipped or services are delivered to customers. Please see below for further discussion.

Hardware and Materials

Revenue from hardware and material sales is recognized when control has transferred to the customer, which typically occurs when the goods have been shipped to the customer, risk of loss has transferred to the customer and we have a present right to payment for the hardware. In limited circumstances, when printer or other hardware sales include substantive customer acceptance provisions, revenue is recognized either when customer acceptance has been obtained, customer acceptance provisions have lapsed, or we have objective evidence that the criteria specified in the customer acceptance provisions have been satisfied.

Printers and certain other products include a warranty under which we provide maintenance for periods up to one year. For these initial product warranties, estimated costs are accrued at the time of the sale of the product. These cost estimates are established using historical information on the nature, frequency and average cost of claims for each type of printer or other product as well as assumptions about future activity and events. Revisions to expense accruals are made as necessary based on changes in these historical and future factors.

Software

We also market and sell software tools that enable our customers to capture and customize content using our printers, design optimization and simulation software, and reverse engineering and inspection software. Software does not require significant modification or customization and the license provides the customer with a right to use the software as it exists when made available. Revenue from these software licenses is recognized either upon delivery of the product or of a key code which allows the customer to download the software. Customers may purchase post-sale support. Generally, the first year is included but subsequent years are optional. This optional support is considered a separate obligation from the software and is deferred at the time of sale and subsequently recognized ratably over future periods.

Collaboration and Licensing Agreements

We enter into collaboration and licensing agreements with third parties. The nature of the activities to be performed and the consideration exchanged under the agreements varies on a contract by contract basis. We evaluate these agreements to determine whether they meet the definition of a customer relationship for which revenue is recorded. These contracts may contain multiple performance obligations and may contain fees for licensing, research and development services, contingent milestone payments upon the achievement of developmental contractual criteria and/or royalty fees based on the licensees’ product revenue. We determine the revenue to be recognized for these agreements based on an evaluation of the distinct performance obligations, the identification and evaluation of material rights, the estimation of variable consideration and the determination of the pattern on transfer of control for each distinct performance obligation. The Company recognized \$6,953, \$7,260 and \$3,885 in revenue related to collaboration arrangements with customers for the years ended December 31, 2020, 2019, and 2018, respectively.

Services

We offer training, installation and non-contract maintenance services for our products. Additionally, we offer maintenance contracts customers can purchase at their option. For maintenance contracts, revenue is deferred at the time of sale based on the stand-alone selling prices of these services and costs are expensed as incurred. Deferred revenue is recognized ratably over the term of the maintenance period on a straight-line basis. Revenue from training, installation and non-contract maintenance services is recognized at the time of performance of the service.

On demand manufacturing and healthcare service sales are included within services revenue and revenue is recognized upon shipment or delivery of the parts or performance of the service, based on the terms of the arrangement.

Terms of sale

Shipping and handling activities are treated as fulfillment costs rather than as an additional promised service. We accrue the costs of shipping and handling when the related revenue is recognized. Our incurred costs associated with shipping and handling are included in product cost of sales.

Credit is extended, and creditworthiness is determined, based on an evaluation of each customer's financial condition. New customers are generally required to complete a credit application and provide references and bank information to facilitate an analysis of creditworthiness. Customers with a favorable profile may receive credit terms that differ from our general credit terms. Creditworthiness is considered, among other things, in evaluating our relationship with customers with past due balances.

Our terms of sale generally provide payment terms that are customary in the countries where we transact business. To reduce credit risk in connection with certain sales, we may, depending upon the circumstances, require significant deposits or payment in full prior to shipment. For maintenance services, we either bill customers on a time-and-materials basis or sell maintenance contracts that provide for payment in advance on either an annual or other periodic basis.

Significant Judgments

Our contracts with customers often include promises to transfer multiple products and services to a customer. For such arrangements, we allocate revenues to each performance obligation based on its relative SSP.

Judgment is required to determine the SSP for each distinct performance obligation in a contract. For the majority of items, we estimate SSP using historical transaction data. We use a range of amounts to estimate SSP when we sell each of the products and services separately and need to determine whether there is a discount to be allocated based on the relative SSP of the various products and services. In instances where SSP is not directly observable, such as when the product or service is not sold separately, we determine the SSP using information that may include market conditions and other observable inputs.

In some circumstances, we have more than one SSP for individual products and services due to the stratification of those products and services by customers, geographic region or other factors. In these instances, it may use information such as the size of the customer and geographic region in determining the SSP.

The determination of SSP is an ongoing process and information is reviewed regularly in order to ensure SSP reflects the most current information or trends.

The nature of our marketing incentives may lead to consideration that is variable. Judgment is exercised at contract inception to determine the most likely outcome of the contract and resulting transaction price. Ongoing assessments are performed to determine if updates are needed to the original estimates.

Contract Balances

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer deposits and deferred revenues (contract liabilities) on the consolidated balance sheets. Timing of revenue recognition may differ from the timing of invoicing to customers. We record a receivable when revenue is recognized at the time of invoicing, or unbilled receivables when revenue is recognized prior to invoicing. For most of our contracts, customers are invoiced when products are shipped or when services are performed resulting in billed accounts receivables for the remainder of the owed contract price. Unbilled receivables generally result from items being shipped where the customer has not been charged, but for which revenue had been recognized. In our on demand manufacturing business, customers may be required to pay in full before work begins on their orders, resulting in customer deposits. We typically bill in advance for installation, training and maintenance contracts as well as extended warranties, resulting in deferred revenue. Changes in contract asset and liability balances were not materially impacted by any other factors for the period ended December 31, 2020.

Through December 31, 2020, we recognized revenue of \$30,635 related to our contract liabilities at December 31, 2019. Through December 31, 2019, we recognized revenue of \$26,486 related to our contract liabilities at December 31, 2018. Through December 31, 2018, we recognized revenue of \$37,206 related to our contract liabilities at January 1, 2018.

Practical Expedients and Exemptions

We generally expense sales commissions when incurred because the amortization period would be one year or less. These costs are recorded within selling, general and administrative expenses.

Revenue and Asset Concentrations

We operate as one segment and conduct our business through various offices and facilities located throughout the Americas region (United States, Canada, Brazil, Mexico and Uruguay), EMEA region (Belgium, France, Germany, Israel, Italy, the Netherlands, Switzerland and the United Kingdom), and APAC region (Australia, China, India, Japan and Korea). The Americas, EMEA and APAC regions have been our reporting units for the purposes of testing the recoverability of goodwill. This test is performed on an annual basis each November 30 and more often in the occurrence of a triggering event.

Concurrent with our new strategic focus announced in August 2020, we have begun to undertake initiatives to simplify our organization by realigning the Company's breadth of capabilities into two key market verticals. This realignment continues to evolve, and as of December 31, 2020 we continue to pursue initiatives that will provide reliable and complete information to our chief operating decision maker to allow him to make operational decisions around the allocation of resources and assessing performance for these key market verticals. As of December 31, 2020, we continue to operate in one reportable segment.

Revenue by geographic region for the years ended December 31, 2020, 2019, and 2018 were as follows:

(in thousands)	Year Ended December 31,		
	2020	2019	2018
Americas	\$ 280,028	\$ 323,085	\$ 344,650
EMEA	213,575	240,403	237,462
APAC	63,637	72,866	109,433
Total	\$ 557,240	\$ 636,354	\$ 691,545
United States (Included in Americas above)	\$ 275,145	\$ 313,910	\$ 336,496

For the years ended December 31, 2020, 2019, and 2018, one customer accounted for approximately 13%, 11% and 13% of our consolidated revenue, respectively. We expect to maintain our relationship with this customer.

Assets by geographic region for the years ended December 31, 2020, and 2019 were as follows:

(in thousands)	Year Ended December 31,	
	2020	2019
Americas	\$ 251,456	\$ 263,758
EMEA	394,868	447,810
APAC	86,731	95,744
Total	\$ 733,055	\$ 807,312

(5) Leases

We have various lease agreements for our facilities, equipment and vehicles with remaining lease terms ranging from one to sixteen years.

Components of lease cost (income) were as follows:

(in thousands)	Year Ended December 31, 2020	Year Ended December 31, 2019
Operating lease cost	\$ 13,937	\$ 14,743
Finance lease cost - amortization expense	937	737
Finance lease cost - interest expense	664	477
Short-term lease cost	159	114
Variable lease cost	1,363	245
Sublease income	(615)	(84)
Total	\$ 16,445	\$ 16,232

Rent expense for the year ended December 31, 2018, accounted for under the previous guidance at ASC 840 *Leases*, was \$15,809.

Balance sheet classifications at December 31, 2020 and 2019 are summarized below:

(in thousands)	December 31, 2020			December 31, 2019		
	Right of use assets	Current right of use liabilities	Long-term right of use liabilities	Right of use assets	Current right of use liabilities	Long-term right of use liabilities
Operating Leases	\$ 40,586	\$ 8,562	\$ 38,296	\$ 28,571	\$ 9,231	\$ 24,835
Finance Leases	8,034	972	10,173	8,319	338	10,567
Total	\$ 48,620	\$ 9,534	\$ 48,469	\$ 36,890	\$ 9,569	\$ 35,402

On September 1, 2020, we closed two facilities in connection with our restructuring plan. These facilities occupied leased office space that terminates in 2024. In conjunction with these closings, we recorded impairment charges totaling \$1,627 related to our ROU assets and impairment charges totaling \$1,953 related to leasehold improvements.

During the 2020 fourth quarter, we recorded ROU assets and liabilities related to lease extensions and renewals that were entered into during the 2019 fourth quarter, 2020 second quarter and 2020 third quarter of approximately \$1,469, \$2,021, and \$3,467, respectively. There was not a material income statement impact from recording these lease extensions and renewals during the 2020 fourth quarter.

Our future minimum lease payments as of December 31, 2020 under operating lease and finance leases, with initial or remaining lease terms in excess of one year, were as follows:

<i>(in thousands)</i>	December 31, 2020	
	Operating Leases	Finance Leases
Years ending December 31:		
2021	\$ 11,206	\$ 1,624
2022	9,046	1,625
2023	7,482	1,617
2024	6,570	1,544
2025	4,982	1,454
Thereafter	19,801	6,845
Total lease payments	59,087	14,709
Less: imputed interest	(12,229)	(3,564)
Present value of lease liabilities	\$ 46,858	\$ 11,145

Supplemental cash flow information related to our operating leases for the years ending December 31, 2020, and 2019 was as follows:

<i>(in thousands)</i>	December 31, 2020	December 31, 2019
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash outflow from operating leases	\$ 13,151	\$ 15,602
Operating cash outflow from finance leases	\$ 661	\$ 456
Financing cash outflow from finance leases	\$ 496	\$ 725

Weighted-average remaining lease terms and discount rate for our operating leases for the year ending December 31, 2020, were as follows:

	December 31, 2020	
	Operating	Financing
Weighted-average remaining lease term	7.5 years	9.4 years
Weighted-average discount rate	6.10 %	5.92 %

(6) Inventories

Components of inventories at December 31, 2020 and 2019 are summarized as follows:

<i>(in thousands)</i>	2020	2019
Raw materials	\$ 23,762	\$ 42,066
Work in process	5,912	5,496
Finished goods and parts	86,993	63,544
Inventories	\$ 116,667	\$ 111,106

We record a reserve to the carrying value of our inventory to reflect the rapid technological change in our industry that impacts the market for our products. The inventory reserve was \$20,125 and \$12,812 as of December 31, 2020 and 2019, respectively.

In June 2020, as part of our assessment of prospective sales and evaluation of inventory, we determined the end-of-life for certain product lines. The end-of-life determination for these products reflects management's plans to focus our resources that are better aligned with our new strategic focus, as further discussed in Note 24. As a result, for year ended December 31, 2020, we recorded a charge of \$10,894 to products costs of sales, primarily attributable to inventory, accessories and inventory commitments for these products. We have ceased production for these items.

(7) Property and Equipment

Property and equipment at December 31, 2020 and 2019 are summarized as follows:

<i>(in thousands)</i>	2020	2019	Useful Life (in years)
Land	\$ 541	\$ 541	N/A
Building	5,422	5,093	25-30
Machinery and equipment	163,688	158,753	2-7
Capitalized software	24,814	22,928	3-5
Office furniture and equipment	5,106	4,618	1-5
Leasehold improvements	32,349	33,444	Life of lease ^a
Construction in progress	4,910	9,944	N/A
Total property and equipment	236,830	235,321	
Less: Accumulated depreciation and amortization	(161,474)	(142,381)	
Total property and equipment, net	<u>\$ 75,356</u>	<u>\$ 92,940</u>	

- a. Leasehold improvements are amortized on a straight-line basis over the shorter of (i) their estimated useful life, or (ii) the estimated or contractual life of the related lease.

We include all depreciation from assets attributable to the generation of revenue in the cost of sales line item in the Statement of Operations. Depreciation related to assets that are not attributable to the generation of revenue are included in the research and development and selling and general administrative line items in the Statement of Operations. Depreciation expense on property and equipment for the years ended December 31, 2020, 2019 and 2018 was \$28,397, \$29,982 and \$29,302, respectively.

For the years ended December 31, 2020, 2019 and 2018, we recognized impairment charges of \$3,406, \$181 and \$625, respectively, on property and equipment, net included in the selling and general administrative line item in the Statement of Operations.

(8) Intangible Assets

Intangible assets, net, other than goodwill, at December 31, 2020 and 2019 are summarized as follows:

<i>(in thousands)</i>	2020			2019			Weighted Average Useful Life Remaining (in years)
	Gross ^a	Accumulated Amortization	Net	Gross ^a	Accumulated Amortization	Net	
Intangible assets with finite lives:							
Customer relationships	\$ 71,123	\$ (56,682)	\$ 14,441	\$ 103,661	\$ (77,021)	\$ 26,640	2.4
Acquired technology	42,472	(41,201)	1,271	54,378	(51,875)	2,503	5.6
Trade names	17,477	(16,506)	971	23,907	(19,133)	4,774	1.1
Patent costs	19,828	(10,999)	8,829	11,760	(9,535)	2,225	4.0
Trade secrets	20,188	(18,216)	1,972	19,494	(15,714)	3,780	1.5
Acquired patents	16,317	(15,723)	594	16,215	(14,706)	1,509	2.6
Other	19,793	(19,788)	5	26,256	(19,349)	6,907	0.0
Total intangible assets	<u>\$ 207,198</u>	<u>\$ (179,115)</u>	<u>\$ 28,083</u>	<u>\$ 255,671</u>	<u>\$ (207,333)</u>	<u>\$ 48,338</u>	2.8

- a. Change in gross carrying amounts consists primarily of charges for license and patent costs and foreign currency translation.

Amortization expense related to intangible assets was \$15,810, \$20,312 and \$29,722 for the years ended December 31, 2020 2019 and 2018, respectively.

Annual amortization expense for intangible assets is expected to be \$11,475 in 2021, \$7,278 in 2022, \$2,143 in 2023, \$1,487 in 2024 and \$1,460 in 2025.

(9) Goodwill

The following are the changes in the carrying amount of goodwill by reporting unit:

<i>(in thousands)</i>	Americas	EMEA	APAC	Total
Balance at December 31, 2018	\$ —	\$ 184,020	\$ 37,314	\$ 221,334
Effect of foreign currency exchange rates	—	2,675	(833)	1,842
Balance at December 31, 2019	—	186,695	36,481	223,176
Dispositions and impairments ^a	—	(69,685)	(4,699)	(74,384)
Effect of foreign currency exchange rates	—	10,582	2,391	12,973
Balance at December 31, 2020	\$ —	\$ 127,592	\$ 34,173	\$ 161,765

- a. Includes \$21,385 of goodwill held for sale related to Cimatron in EMEA and \$4,699 of goodwill related to the sale of our Australia ODM and Wuxi Easyway businesses in APAC. See Note 3.

The effect of foreign currency exchange in this table reflects the impact on goodwill of amounts recorded in currencies other than the U.S. dollar on the financial statements of subsidiaries in these geographic areas resulting from the yearly effect of foreign currency translation between the applicable functional currency and the U.S. dollar.

As of September 30, 2020, we experienced a triggering event due to a drop in our stock price, which ultimately had been negatively impacted by the business environment as a result of the COVID-19 pandemic, and performed a quantitative analysis for potential impairment of our goodwill and long-lived asset balances. Based on available information and analysis as of September 30, 2020, we determined the carrying value of the EMEA reporting unit exceeded its fair value and recorded a non-cash goodwill impairment charge of \$48,300. We determined the fair value of the Americas and APAC reporting units exceeded their carrying values and the carrying value of our long-lived assets is recoverable for all reporting units.

Goodwill was recorded at fair value on a non-recurring basis using level 3 inputs and was determined using a combination of an income approach, which estimates fair value based upon projections of future revenues, expenses, and cash flows discounted to its present value, and a market approach. The valuation methodology and underlying financial information included in the Company's determination of fair value required significant judgments by management. The principal assumptions used in the Company's discounted cash flow analysis consisted of (a) the long-term projections of future financial performance and (b) the weighted-average cost of capital of market participants, adjusted for the risk attributable to the Company and the industry in which it operates. Under the market approach, the principal assumption included an estimate for a control premium.

We completed our annual test of goodwill as of November 30, 2020 and determined the fair value exceeded the carrying value for all reporting units.

(10) Employee Benefits

We sponsor a Section 401(k) plan (the "Plan") covering substantially all our eligible U.S. employees. The Plan entitles eligible employees to make contributions to the Plan after meeting certain eligibility requirements. Contributions are limited to the maximum contribution allowances permitted under the Internal Revenue Code. We match 50.0% of contributions on the first 6.0% of the participant's eligible compensation.

For the years ended December 31, 2020, 2019 and 2018, we expensed \$2,456, \$2,688 and \$2,606, respectively, for matching contributions to the defined contribution plan.

(11) Accrued and Other Liabilities

Accrued liabilities at December 31, 2020 and 2019 are summarized as follows:

<i>(in thousands)</i>	2020	2019
Compensation and benefits	\$ 24,629	\$ 21,139
Accrued taxes	14,952	9,840
Vendor accruals	18,762	9,734
Payable to owners of redeemable noncontrolling interests	—	10,000
Arbitration awards	—	2,256
Product warranty liability	2,348	2,908
Accrued other	6,138	4,223
Accrued professional fees	1,773	1,545
Royalties payable	1,210	1,450
Total	<u>\$ 69,812</u>	<u>\$ 63,095</u>

Other liabilities at December 31, 2020 and 2019 are summarized as follows:

<i>(in thousands)</i>	2020	2019
Long term employee indemnity	\$ 12,228	\$ 14,408
Long term tax liability	15,532	5,011
Defined benefit pension obligation	10,228	10,357
Long term deferred revenue	6,163	7,370
Other long term liabilities	7,096	8,662
Total	<u>\$ 51,247</u>	<u>\$ 45,808</u>

Changes in product warranty obligations, including deferred revenue on extended warranty contracts, for the years ended December 31, 2020, 2019 and 2018, are summarized below:

<i>(in thousands)</i>	Beginning Balance	Additional Accrual/ Revenue Deferred	Costs Incurred/ Deferred Revenue Amortization	Ending Balance
Year Ended December 31,				
2020	\$ 6,192	\$ 6,454	\$ (6,266)	\$ 6,380
2019	7,660	8,124	(9,592)	6,192
2018	10,202	9,347	(11,889)	7,660

(12) Borrowings

Credit Facility

We hold a 5-year \$100,000 senior secured term loan facility (the “Term Facility”) and a 5-year \$100,000 senior secured revolving credit facility (the “Revolving Facility” and, together with the Term Facility, the “Senior Credit Facility”) to support working capital and general corporate purposes. The Senior Credit Facility is guaranteed by certain of our subsidiaries. The guarantors guarantee, among other things, all our obligations and each other guarantor's obligations under the Senior Credit Facility. From time to time, we may be required to cause additional domestic subsidiaries to become guarantors under the Senior Credit Facility. The Senior Credit Facility is scheduled to mature on February 26, 2024, at which time all amounts outstanding thereunder will be due and payable. However, the maturity date of the Revolving Facility may be extended at our election with the consent of the lenders subject to the terms set forth in the Senior Credit Facility. The Senior Credit Facility contains customary covenants, some of which require us to maintain certain financial ratios that determine the amounts available and terms of borrowings and events of default. We were in compliance with all covenants at December 31, 2020 and 2019.

The payment of dividends on our common stock is restricted under provisions of the Senior Credit Facility, which limits the amount of cash dividends that we may pay in any one fiscal year to \$30,000. We currently do not pay, and have not paid, any dividends on our common stock, and currently intend to retain any future earnings for use in our business.

Borrowings under the Senior Credit Facility are subject to interest at varying spreads above quoted market rates and a commitment fee is paid on the total unused commitment. At December 31, 2020, our floating interest rate was 1.90% and commitment fees for the years ended December 31, 2020 and 2019 were \$325 and \$374, respectively. Subject to certain terms and conditions contained in the Revolving Facility, we have the right to request up to four increases to the amount of the Revolving Facility in an aggregate amount not to exceed \$100,000. As of December 31, 2020, there was \$10,000 of outstanding letters of credit and \$62,000 of available borrowings under the Revolving Facility.

At December 31, 2020, we had a balance of \$21,392 outstanding on the Term Facility, whereby future payments under the Term Facility are expected to be \$2,051 in 2021, \$3,223 in 2022, \$3,517 in 2023 and \$12,601 in 2024. Unamortized deferred financing costs were \$123. In January 2021, the Company paid off the remaining outstanding balances under the Term Facility with proceeds from the sale of Cimatron Ltd. See Note 26.

As a result of the Term Facility, we have exposure to floating interest rates. To manage interest expense, we entered into a floating to fixed interest rate swap to reduce exposure to changes in floating interest rates on the Term Facility. The interest rate swap has a notional value of \$15.0 million and will expire on February 26, 2024, concurrent with the Term Facility. The notional value will decline over the term of the interest rate swap as amortization payments reduce the principal amount of the Term Facility. As a result of the interest rate swap, the percentage of total principal debt (excluding capital leases) that is subject to floating interest rates is approximately 30%. Due to an amendment to the swap on June 30, 2020, the swap is no longer designated as a cash flow hedge for accounting treatment purposes. See Note 13 for additional information. In January 2021, the Company terminated this agreement in connection with repayment of the Term Facility. See Note 26.

Interest Income and Expense

Interest income totaled \$400, \$1,209 and \$789 for the years ended December 31, 2020, 2019 and 2018, respectively.

Interest expense totaled \$4,391, \$4,442 and \$1,188 for the years ended December 31, 2020, 2019 and 2018, respectively.

(13) Hedging Activities and Financial Instruments

Derivatives Designated as Hedging Instruments

On July 8, 2019, we entered into a \$50,000 interest rate swap contract, designated as a cash flow hedge, to minimize the risk associated with the variability of cash flows in interest payments from variable-rate debt due to fluctuations in the one-month USD-LIBOR, subject to a 0% floor, through February 26, 2024. Changes in the interest rate swap are expected to offset the changes in cash flows attributable to fluctuations of the one-month USD-LIBOR for the interest payments associated with our variable-rate debt.

On June 30, 2020, we executed an amendment to the swap which reduced the notional amount to \$15,000 and resulted in the de-designation as a cash flow hedge. The reduction required a mark-to-market settlement of \$1,253 paid in July 2020. Amounts previously recognized in Accumulated Other Comprehensive Loss ("AOCL") of \$1,235 were released and reclassified into Interest and other expense, net on the accompanying consolidated statements of operations and comprehensive loss for the year ended December 31, 2020. Subsequent to June 2020, changes in the swap's fair value are recognized currently in earnings and included in the line item Interest and other expense, net and the remaining \$721 in AOCL as of December 31, 2020 will be amortized to Interest and other expense, net when those future cash flows are expected to occur.

The notional amount and fair value of the derivative on our balance sheet at December 31, 2020 are disclosed below:

<i>(in thousands)</i>	Balance Sheet location	Notional amount	Fair value
December 31, 2020			
Interest rate swap contract	Other liabilities	\$ 15,000	\$ (700)
December 31, 2019			
Interest rate swap contract	Other liabilities	\$ 40,000	\$ (318)

Amounts released from AOCL and reclassified into Interest and other expense, net did not have a material impact on our consolidated statements of operations and comprehensive loss for the years ended December 31, 2020 and 2019. The net amount of AOCL expected to be reclassified to earnings in the next 12 months is \$721, as January 2021, the Company terminated this agreement in connection with repayment of the Term Facility. See Note 26.

Derivatives Not Designated as Hedging Instruments

We conduct business in various countries using both the functional currencies of those countries and other currencies to effect cross border transactions. As a result, we are subject to the risk that fluctuations in foreign exchange rates between the dates that those transactions are entered into and their respective settlement dates will result in a foreign exchange gain or loss. When practicable, we endeavor to match assets and liabilities in the same currency on our balance sheet and those of our subsidiaries in order to reduce these risks. When appropriate, we enter into foreign currency contracts to hedge exposures arising from those transactions. We have elected not to prepare and maintain the documentation to qualify for hedge accounting treatment under ASC 815, “*Derivatives and Hedging*,” and therefore, all gains and losses (realized or unrealized) are recognized in Interest and other expense, net in the consolidated statements of operations and comprehensive loss. Depending on their fair value at the end of the reporting period, derivatives are recorded either in prepaid expenses and other current assets or in accrued liabilities on the consolidated balance sheet.

We had \$101,781 and \$102,407 in notional foreign exchange contracts outstanding as of December 31, 2020 and 2019, respectively. The fair values of these contracts were not material.

We translate foreign currency balance sheets from each international businesses’ functional currency (generally the respective local currency) to U.S. dollars at end-of-period exchange rates and statements of earnings at average exchange rates for each period. The resulting foreign currency translation adjustments are a component of other comprehensive income (loss). We do not hedge the fluctuation in reported revenue and earnings resulting from the translation of these international operations’ results into U.S. dollars.

(14) Inventory Financing Agreements

On December 1, 2018 and January 17, 2020, we entered into a Manufacturing Services Agreement and Amendment One to Manufacturing Services Agreement (together, the “Agreement”), with an assembling manufacturer to produce products on behalf of 3D Systems Corporation. During the quarter ended March 31, 2020, as part of the Agreement, we sold \$12,100 of inventory to the assembling manufacturer that we have an obligation to repurchase. At December 31, 2020, our obligation to repurchase inventory, included in Accrued and other liabilities on our consolidated balance sheets, was \$287, relating to the initial sale of inventory to the assembly manufacturer and adjusted for transactions. The inventory sold consisted of raw materials, packaging materials and consumables representing stock on hand related to certain product families for which the manufacturing has been outsourced to the assembling manufacturer. Although the assembling manufacturer holds legal title, we account for the inventory similar to a product financing arrangement; therefore, the inventories sold to the assembling manufacturer will continue to be included in Inventories on our consolidated balance sheets until processed into finished goods and sold back to us. At December 31, 2020, inventory held at assemblers was \$3,889.

Additionally, as part of the Agreement, we have a commitment to purchase certain materials and supplies that the assembling manufacturer purchased from third parties. At December 31, 2020, we had a commitment of \$4,199 with the assembling manufacturer.

(15) Preferred Stock

We had 5,000 shares of preferred stock that were authorized but unissued at December 31, 2020 and 2019.

(16) Stock-Based Compensation

Effective May 19, 2004, we adopted our approved 2004 Restricted Stock Plan for Non-Employee Directors, as further amended and restated on April 1, 2013 (the “Director Plan”). On May 19, 2015, our stockholders approved the 2015 Incentive Plan of 3D Systems Corporation and further amended and restated it on May 19, 2020 to, among other things, increase the number of shares reserved for issuance by 4,860 shares (as amended and restated, the “2015 Plan”).

The 2015 Plan authorizes shares of restricted stock, RSUs, stock appreciation rights, cash incentive awards and the grant of options to purchase shares of our common stock. The 2015 Plan also designates measures that may be used for performance awards. The Director Plan authorizes shares of restricted stock for our non-employee directors.

Generally, awards granted vest one third each year over 3 years.

Stock-based compensation expense (income) is included in selling, general and administrative expenses in the consolidated statements of operations and comprehensive income (loss). The following table details the components of stock-based compensation expense (income) recognized in net earnings in each of the past three years:

(in thousands)	Year Ended December 31,		
	2020	2019	2018
Restricted Stock	\$ 24,088	\$ 25,154	\$ 24,933
Stock Options	(6,363)	(1,567)	4,320
Total stock-based compensation expense	\$ 17,725	\$ 23,587	\$ 29,253

Restricted Stock

We determine the fair value of restricted stock and RSUs based on the closing price of our stock on the date of grant. We generally recognize compensation expense related to restricted stock and RSUs on a straight-line basis over the period during which the restriction lapses. Forfeitures are recognized in the period in which they occur. A summary of restricted stock and RSU activity during December 31, 2020 follows:

(in thousands, except per share amounts)	Number of Shares/Units	Weighted Average Grant Date Fair Value
Outstanding at beginning of period — unvested	4,582	\$ 11.42
Granted	4,228	7.57
Canceled	(1,859)	10.30
Vested	(3,411)	9.56
Outstanding at end of period — unvested	3,540	\$ 8.81

Included in the outstanding balance above are 100 shares of restricted stock that vest under specified market conditions and 374 shares of restricted stock that vest under specified Company performance measures. The specified market condition shares were awarded to certain employees in 2016 and were generally awarded in two equal tranches of market condition restricted stock that immediately vests when our common stock trades at either \$30 or \$40 per share for ninety consecutive calendar days.

Some RSUs are granted with a performance measure derived from non-GAAP-based management targets. Depending on our performance with respect to this metric, the number of RSUs earned may be less than, equal to or greater than the original number of RSUs awarded, subject to a payout range.

At December 31, 2020, there was no unrecognized pre-tax stock-based compensation expense related to non-vested restricted stock awards with market conditions.

At December 31, 2020, there was \$21,020 of unrecognized pre-tax stock-based compensation expense related to all other non-vested restricted stock award shares and units, which we expect to recognize over a weighted-average period of 1.8 years.

Stock Options

During the year ended December 31, 2016, we awarded certain employees market condition stock options under the 2015 Plan, included in the activity above, that vest under specified market conditions. Each employee was generally awarded two equal tranches of market condition stock options that immediately vest when our common stock trades at either \$30 or \$40 per share for ninety consecutive calendar days.

We recognize compensation expense related to stock options on a straight-line basis over the derived term of the awards. Forfeitures are recognized in the period in which they occur. The fair value of stock options with market conditions is estimated using a binomial lattice Monte Carlo simulation model.

Stock option activity for the year ended December 31, 2020 was as follows:

<i>(in thousands, except per share amounts)</i>	Year Ended December 31, 2020			
	Number of Shares	Weighted Average Exercise	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Stock option activity:				
Outstanding at beginning of period	1,240	\$ 14.43	6.5	—
Granted	—	—	—	—
Exercised	—	—	—	—
Forfeited and expired	(820)	15.03	—	—
Outstanding at end of period	420	\$ 13.26	5.7	—

In the table above, intrinsic value is calculated as the excess, if any, between the market price of our stock on the last trading day of the year and the exercise price of the options. Because the market price was lower than the exercise price, the intrinsic value is zero.

At December 31, 2020, there was no of unrecognized pre-tax stock-based compensation expense related to stock options.

(17) International Retirement Plan

We sponsor a non-contributory defined benefit pension plan for certain employees of a non-U.S. subsidiary initiated by a predecessor of the subsidiary. We maintain insurance contracts that provide an annuity that is used to fund the current obligations under this plan. The following table provides a reconciliation of the changes in the projected benefit obligation for the years ended December 31, 2020 and 2019:

<i>(in thousands)</i>	2020	2019
Reconciliation of benefit obligations:		
Obligations as of January 1	\$ 10,497	\$ 8,658
Service cost	204	166
Interest cost	84	151
Actuarial loss (gain)	(1,222)	1,815
Benefit payments	(151)	(139)
Effect of foreign currency exchange rate changes	979	(154)
Benefit obligations as of December 31	10,391	10,497
Fair value of assets as of December 31 ^a	3,844	3,343
Funded status as of December 31, net of tax benefit	\$ (6,547)	\$ (7,154)

a. No change in underlying asset value for the periods.

We recognized the following amounts in the consolidated balance sheets at December 31, 2020 and 2019:

<i>(in thousands)</i>	2020	2019
Other assets	\$ 3,844	\$ 3,343
Accrued liabilities	(163)	(140)
Other liabilities	(10,228)	(10,357)
Net liability	\$ (6,547)	\$ (7,154)

The following projected benefit obligation and accumulated benefit obligation were estimated as of December 31, 2020 and 2019:

<i>(in thousands)</i>	2020	2019
Projected benefit obligation	\$ 10,391	\$ 10,497
Accumulated benefit obligation	\$ 9,343	\$ 9,351

The following table shows the components of net periodic benefit costs and the amounts recognized in “Accumulated other comprehensive income (loss)” as of December 31, 2020, 2019 and 2018:

<i>(in thousands)</i>	2020	2019	2018
Net periodic benefit cost:			
Service cost	\$ 204	\$ 166	\$ 155
Interest cost	84	151	148
Amortization of actuarial loss	351	200	177
Total net periodic pension cost	639	517	480
Other changes in plan assets and benefit obligations recognized in other comprehensive income:			
Net loss (gain)	(1,223)	1,815	453
Amortization of prior years' unrecognized loss	(351)	(200)	(177)
Tax (benefit) provision	791	(555)	(88)
Total recognized as accumulated other comprehensive income (loss)	(783)	1,060	188
Total expense recognized in net periodic benefit cost and other comprehensive income	<u>\$ (144)</u>	<u>\$ 1,577</u>	<u>\$ 668</u>

The following assumptions are used to determine benefit obligations as of December 31, 2020 and 2019:

	2020	2019
Discount rate	1.3%	0.8%
Rate of compensation	3.0%	3.0%

The following benefit payments, including expected future service cost, are expected to be paid:

<i>(in thousands)</i>	
Estimated future benefit payments:	
2021	\$ 190
2022	196
2023	200
2024	202
2025	204
2026-2030	1,557

(18) Net Loss Per Share

We compute basic loss per share using net loss attributable to 3D Systems Corporation and the weighted average number of common shares outstanding during the applicable period. Diluted loss per share incorporates the additional shares issuable upon assumed exercise of stock options and the release of restricted stock and RSUs, except in such case when their inclusion would be anti-dilutive.

<i>(in thousands, except per share amounts)</i>	Year Ended December 31,		
	2020	2019	2018
Numerator for basic and diluted net loss per share:			
Net loss attributable to 3D Systems Corporation	\$ (149,594)	\$ (69,880)	\$ (45,505)
Denominator for basic and diluted net loss per share:			
Weighted average shares	117,579	113,811	112,327
Net loss per share - basic and diluted	<u>\$ (1.27)</u>	<u>\$ (0.61)</u>	<u>\$ (0.41)</u>

For the years ended December 31, 2020, 2019 and 2018 the effect of dilutive securities, including non-vested stock options and restricted stock awards/units, was excluded from the denominator for the calculation of diluted net loss per share because we recognized a net loss for the period and their inclusion would be anti-dilutive. Dilutive securities excluded were 3,960, 5,822 and 5,015 shares for the years ended December 31, 2020, 2019 and 2018, respectively.

On August 5, 2020, we entered into an Equity Distribution Agreement for an At-The-Market equity offering program (“ATM Program”) where we may issue and sell, from time to time, shares of our common stock. Our ATM Program allowed for an aggregate gross sales price of up to a total of \$150,000, depending upon market conditions and our liquidity requirements, through Truist Securities, Inc. and HSBC Securities (USA) Inc. For the year ended December 31, 2020, we sold 4,616 shares of our common stock under our ATM Program for net proceeds of \$24,664, net of \$849 in fees, commissions and other costs. As of December 31, 2020, we had \$124,487 in availability remaining under the ATM Program, however, on January 6, 2021, we terminated the ATM Program. See Note 26.

(19) Noncontrolling Interests

As of December 31, 2020, we owned 100% of the capital and voting rights of Robtec, a service bureau and distributor of 3D printing and scanning products in Brazil. Approximately 70% of the capital and voting rights of Robtec was acquired on November 25, 2014. On January 7, 2020, we made a payment equal to the redemption price of \$10,000 and acquired the remaining 30% of the capital and voting rights.

(20) Fair Value Measurements

Fair value is the exchange price to sell an asset or transfer a liability (an exit price) in an orderly transaction between market participants at the measurement date. Fair value measurements use market data or assumptions market participants would use in pricing the asset or liability, including assumptions about risk and the risks inherent in the inputs to the valuation technique. These inputs may be readily observable, corroborated by market data, or generally unobservable. Valuation techniques maximize the use of observable inputs and minimize use of unobservable inputs.

Cash equivalents, Israeli severance funds and derivatives are valued utilizing the market approach to measure fair value for financial assets and liabilities. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities.

Assets and liabilities measured at fair value on a recurring basis are summarized below:

(in thousands)	Fair Value Measurements as of December 31, 2020			
	Level 1	Level 2	Level 3	Total
Description				
Cash equivalents ^a	\$ 199	\$ —	\$ —	\$ 199
Israeli severance funds ^b	\$ —	\$ 6,422	\$ —	\$ 6,422
Derivative financial instruments ^c	\$ —	\$ (700)	\$ —	\$ (700)

(in thousands)	Fair Value Measurements as of December 31, 2019			
	Level 1	Level 2	Level 3	Total
Description				
Cash equivalents ^a	\$ 20,869	\$ —	\$ —	\$ 20,869
Israeli severance funds ^b	\$ —	\$ 7,449	\$ —	\$ 7,449
Derivative financial instruments ^c	\$ —	\$ (318)	\$ —	\$ (318)

- Cash equivalents include funds held in money market instruments and are reported at their current carrying value, which approximates fair value due to the short-term nature of these instruments and are included in cash and cash equivalents in the consolidated balance sheet.
- We partially fund a liability for our Israeli severance requirement through monthly deposits into fund accounts, the value of these contributions are recorded to non-current assets on the consolidated balance sheet.
- Derivative instruments are reported based on published market prices for similar assets or are estimated based on published market prices for similar assets or are estimated based on observable inputs such as interest rates, yield curves, credit risks, spot and future commodity prices and spot and future exchange rates. See Note 13 for additional information on our derivative financial instruments.

We did not have any transfers of assets and liabilities between Level 1, Level 2 and Level 3 of the fair value measurement hierarchy during the year ended December 31, 2020.

In addition to the assets and liabilities included in the above table, certain of our assets and liabilities are to be initially measured at fair value on a non-recurring basis. This includes goodwill and other intangible assets measured at fair value for impairment assessment. For further discussion on the valuation techniques and inputs used in the fair value measurement of goodwill and other intangible assets, see Notes 2, 8 and 9.

(21) Income Taxes

The components of our income before income taxes are as follows:

	2020	2019	2018
Income (Loss) before income taxes:			
Domestic	\$ (45,973)	\$ (79,821)	\$ (59,233)
Foreign	(97,437)	14,721	16,005
Total	<u>\$ (143,410)</u>	<u>\$ (65,100)</u>	<u>\$ (43,228)</u>

The components of income tax provision for the years ended December 31, 2020, 2019 and 2018 are as follows:

	2020	2019	2018
Current:			
U.S. federal	\$ 1,294	\$ (135)	\$ (5,882)
State	451	801	286
Foreign	5,645	7,220	10,621
Total	7,390	7,886	5,025
Deferred:			
U.S. federal	67	(1,008)	(322)
State	—	—	3
Foreign	(1,273)	(2,346)	(2,671)
Total	(1,206)	(3,354)	(2,990)
Total income tax provision	\$ 6,184	\$ 4,532	\$ 2,035

The overall effective tax rate differs from the statutory federal tax rate for the years ended December 31, 2020, 2019 and 2018 as follows:

	% of Pretax Loss		
	2020	2019	2018
Tax provision based on the federal statutory rate	21.0 %	21.0 %	21.0 %
Increase in valuation allowances	(8.5)	(21.3)	(34.8)
Dividends Not Taxable	9.5	—	—
Net Operating Loss Carryback Claim	6.2	—	—
Change in Carryforward Attributes	(3.2)	—	—
Global intangible low-taxed income inclusion	(0.3)	(7.0)	(6.6)
One-Time transition tax	—	—	(2.8)
Nondeductible expenses	(13.5)	(1.8)	(2.3)
Taxes related to distributions	—	(0.8)	(2.3)
Foreign income tax rate differential	(3.3)	1.0	(1.5)
Deemed income related to foreign operations	(1.6)	(0.5)	(1.5)
Tax rate change	(0.3)	(1.1)	(1.4)
Employee share-based payments	(1.4)	—	0.1
Other	(0.4)	(0.9)	0.6
Deferred and payable adjustments	(2.6)	3.3	0.9
ASU 842 Adoption	—	(0.1)	—
State taxes, net of federal benefit, before valuation allowance	0.5	2.8	2.4
Return to provision adjustments	0.9	(2.5)	2.7
Other tax credits	0.2	(1.9)	5.1
U.S. Tax Cuts and Jobs Act - rate change adjustment	—	—	6.4
Uncertain tax positions and audit settlements	(7.5)	2.8	9.4
Effective tax rate	(4.3)%	(7.0)%	(4.6)%

The difference between our effective tax rate for 2020 and the federal statutory rate was 25.3 percentage points. The difference in the effective rate is primarily due to valuation allowance changes, nondeductible impairment charges, dividends not taxable, net operating loss carryback claim, and adjustments to uncertain tax positions.

The difference between our effective tax rate for 2019 and the federal statutory rate was 28.0 percentage points. The difference in the effective rate is primarily due to valuation allowance changes, provisions for GILTI, prior period adjustments and adjustments to uncertain tax positions.

The difference between our effective tax rate for 2018 and the federal statutory rate was 25.6 percentage points. The difference in the effective rate is primarily due to the impact of the Tax Act, including adjustments related to the Tax Act, the new provisions for GILTI, tax credits, adjustments to uncertain tax positions related to statute of limitations expiration and change in valuation allowances. For the report year ending December 31, 2018, we had completed our accounting for all of the enactment date income tax effects of the Tax Act, and we recorded an adjustment of a \$1,524 tax benefit, which was offset by an adjustment to our valuation allowance of \$1,524 tax expense.

In 2020, 2019 and 2018, there were no significant changes to our valuation allowance assertions. We continue to review results of operations and forecast estimates to determine if it is more likely than not that the deferred tax assets will be realized.

The components of our net deferred income tax assets and net deferred income tax (liabilities) at December 31, 2020 and 2019 are as follows:

<i>(in thousands)</i>	2020	2019
Deferred income tax assets:		
Intangibles	\$ 17,395	\$ 20,624
Stock options and restricted stock awards	2,544	6,065
Reserves and allowances	10,450	11,959
Net operating loss carryforwards	67,025	57,782
Tax credit carryforwards	18,813	12,749
Accrued liabilities	6,077	3,218
Deferred revenue	4,637	3,940
Lease Tax Asset	8,343	5,970
163(j) Limitation Carryforward	2,854	1,519
Valuation allowance	(123,113)	(109,643)
Total deferred income tax assets	15,025	14,183
Deferred income tax liabilities:		
Intangibles	2,548	4,495
Property, plant and equipment	2,662	3,282
Lease Tax Liability	6,379	4,195
Liabilities related to distributions	—	—
Other	1,345	830
Total deferred income tax liabilities	12,934	12,802
Deferred income tax asset held for sale	\$ 560	\$ —
Net deferred income tax assets	\$ 1,531	\$ 1,381

At December 31, 2020, \$67,025 of our deferred income tax assets was attributable to \$417,802 of gross net operating loss carryforwards, which consisted of \$223,724 of loss carryforwards for U.S. federal income tax purposes, \$155,366 of loss carryforwards for U.S. state income tax purposes and \$38,713 of loss carryforwards for foreign income tax purposes.

The net operating loss carryforwards for U.S. federal income tax purposes begin to expire in 2035. The net operating loss carryforwards for U.S. state income tax purposes began to expire in 2018. In addition, certain loss carryforwards for foreign income tax purposes begin to expire in 2020 and certain other loss carryforwards for foreign purposes do not expire.

At December 31, 2020, tax credit carryforwards included in our deferred income tax assets consisted of \$6,359 of research and experimentation credit carryforwards for U.S. federal income tax purposes, \$4,037 of research and experimentation tax credit carryforwards for U.S. state income tax purposes, \$6,629 of foreign tax credits for U.S. federal income tax purposes, \$1,059 of research and experimentation tax credit carryforwards for foreign income tax purposes and \$729 of other state tax credits. Certain state research and experimentation and other state credits begin to expire in 2021. We have recorded a valuation allowance related to the U.S. federal and state tax credits.

Due to the one time transition tax, our previously unremitted earnings have been subjected to U.S. federal income tax, although, other additional taxes such as, withholding tax, could be applicable. We intend to permanently reinvest its earnings outside the U.S. and as such, have not provided for any additional taxes on approximately \$189,699 of unremitted earnings. We believe the unrecognized deferred tax liability related to these earnings is approximately \$7,114.

Including interest and penalties, we decreased our unrecognized benefits by \$788 for the year ended December 31, 2020 and increased our unrecognized tax benefits by \$11,223 for the year ended December 31, 2020. The decrease was primarily related to the release of unrecognized tax benefits due to the expiration of statute of limitations. The increase was primarily related to the net operating loss carryback claim. We do not anticipate any additional unrecognized tax benefits during the next 12 months that would result in a material change to its consolidated financial position. The total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate is \$15,380. We include interest and penalties in the consolidated financial statements as a component of income tax expense. On February 2, 2021, the Company received two private letter rulings from the IRS, which triggered the release of a reserve for uncertain tax position of \$8,900 in the first quarter of 2021. See Note 26.

(in thousands)	Unrecognized Tax Benefits*		
	2020	2019	2018
Balance at January 1	\$ (15,467)	\$ (13,031)	\$ (18,310)
Increases related to prior year tax positions	(10,426)	(2,684)	(1,400)
Decreases related to prior year tax positions	788	857	8,272
Increases related to current year tax positions	(797)	(609)	(1,593)
Balance at December 31	<u>\$ (25,902)</u>	<u>\$ (15,467)</u>	<u>\$ (13,031)</u>

* The unrecognized tax benefit balance includes an insignificant amount of interest and penalties.

Tax years 2013 through 2019 remain subject to examination by the U.S. Internal Revenue Service ("IRS"). State income tax returns are generally subject to examination for a period of three to four years after filing the respective tax returns. The tax years 2015 through 2019 remain open to examination by the various foreign taxing jurisdictions to which the Company is subject.

The following presents the changes in the balance of our deferred income tax asset valuation allowance:

Year Ended	Item	Balance at beginning of year	Additions (reductions) charged to expense	Other	Balance at end of year
2020	Deferred income tax asset valuation allowance	\$ 109,643	\$ 13,470	\$ —	\$ 123,113
2019	Deferred income tax asset valuation allowance	95,398	14,245	—	109,643
2018	Deferred income tax asset valuation allowance	80,796	14,602	—	95,398

(22) Commitments and Contingencies

We lease certain of our facilities and equipment under non-cancelable operating and finance leases. See Note 5.

We have an inventory purchase commitment with an assembling manufacturer. See Note 14.

Supply commitments totaled \$55,317 and \$53,562 as of December 31, 2020 and 2019, respectively. Commitments for printer assemblies and inventory items at December 31, 2020 and 2019 were \$27,030 and \$34,570, respectively. Commitments for operating costs and capital expenditures at December 31, 2020 and 2019 were \$28,287 and \$18,992, respectively.

Indemnification

In the normal course of business, we periodically enter into agreements to indemnify customers or suppliers against claims of intellectual property infringement made by third parties arising from the use of our products. Historically, costs related to these indemnification provisions have not been significant, and we are unable to estimate the maximum potential impact of these indemnification provisions on its future results of operations.

To the extent permitted under Delaware law, we indemnify our directors and officers for certain events or occurrences while the director or officer is, or was, serving at our request in such capacity, subject to limited exceptions. The maximum potential amount of future payments we could be required to make under these indemnification obligations is unlimited; however, we have directors and officers insurance coverage that may enable us to recover future amounts paid, subject to a deductible and the policy limits. There is no assurance that the policy limits will be sufficient to cover all damages, if any.

Litigation

Export Controls and Government Contracts Compliance Matter

In October 2017, we received an administrative subpoena from the Bureau of Industry and Security of the Department of Commerce (“BIS”) requesting the production of records in connection with possible violations of U.S. export control laws, including with regard to our Quickparts.com, Inc. subsidiary. In addition, while collecting information responsive to the above-referenced subpoena, our internal investigation identified potential violations of the International Traffic in Arms Regulations (“ITAR”) administered by the Directorate of Defense Trade Controls of the Department of State (“DDTC”) and potential violations of the Export Administration Regulations administered by the BIS.

On June 8, 2018 and thereafter, we submitted voluntary disclosures to BIS and DDTC identifying numerous potentially unauthorized exports of technical data. As part of our ongoing review of trade compliance risks and our cooperation with the government, on November 20, 2019, we submitted to the U.S. Treasury Department’s Office of Foreign Assets Control (“OFAC”) an initial notice of voluntary disclosure regarding potential violations of economic sanctions related to Iran. We continued to investigate this issue and filed a final disclosure with OFAC on May 20, 2020. We have and will continue to implement compliance enhancements to our export controls, trade sanctions, and government contracting compliance program to address the issues identified through our ongoing internal investigation and will cooperate with DDTC and BIS, as well as the U.S. Departments of Justice, Defense, Homeland Security and Treasury in their ongoing reviews of these matters. In connection with these ongoing reviews, in August 2020, the Company received two federal grand jury subpoenas issued by the U.S. District Court for the Northern District of Texas. The Company responded to these two subpoenas and will continue to fully cooperate with the U.S. Department of Justice in the related investigation.

In addition, on July 19, 2019, we received a notice of immediate suspension of federal contracting from the United States Air Force, pending the outcome of an ongoing investigation. The suspension applied to 3D Systems, its subsidiaries and affiliates, and was related to the potential export controls violations involving our On Demand manufacturing business described above. Under the suspension, we were generally prohibited from receiving new federal government contracts or subcontracts from any executive branch agency as described in the provisions of 48 C.F.R Subpart 9.4 of the Federal Acquisition Regulation. The suspension allowed us to continue to perform current federal contracts, and also to receive awards of new subcontracts for items under \$35 and for items considered commercially available off-the-shelf items. The Air Force lifted the suspension on September 6, 2019 following the execution of a two-year Administrative Agreement with us. We are now eligible to obtain and perform U.S. government contracts and subcontracts without restrictions. Under the Administrative Agreement, we will be monitored and evaluated by independent monitors who will report to the Air Force on our compliance with the terms of the Company’s Ethics & Compliance Program, including its overall culture, government contracting compliance program, and export controls compliance program.

Although we cannot predict the ultimate resolution of these matters, we have incurred and expect to continue to incur significant legal costs and other expenses in connection with responding to the U.S. government agencies.

Other

We are involved in various other legal matters incidental to our business. Although we cannot predict the results of the litigation with certainty, we believe that the disposition of all these various other legal matters will not have a material adverse effect, individually or in the aggregate, on our consolidated results of operations, consolidated cash flows or consolidated financial position.

(23) Accumulated Other Comprehensive Loss

The changes in the balances of accumulated other comprehensive loss by component are as follows:

<i>(in thousands)</i>	Foreign currency translation adjustment	Defined benefit pension plan	Derivative financial instruments	Liquidation of non-US entity and purchase of non-controlling interests	Total
Balance at December 31, 2018	\$ (36,669)	\$ (2,647)	\$ —	\$ 338	\$ (38,978)
Other comprehensive income (loss)	3,053	(1,060)	(318)	256	1,931
Balance at December 31, 2019	(33,616)	(3,707)	(318)	594	(37,047)
Other comprehensive income (loss)	28,752	783	(1,638)	(561)	27,336
Amounts reclassified from accumulated other comprehensive income (loss) ^a	—	—	1,235	—	1,235
Balance at December 31, 2020	<u>\$ (4,864)</u>	<u>\$ (2,924)</u>	<u>\$ (721)</u>	<u>\$ 33</u>	<u>\$ (8,476)</u>

a. Amount reclassified into Interest and other expense, net on the statement of operations. See Note 13.

The amounts presented in the table above are in other comprehensive loss and are net of taxes. For additional information about foreign currency translation and derivative financial instruments, see Note 13. For additional information about the pension plan, see Note 17.

(24) Restructuring and Exit Activity Costs

On August 5, 2020, we announced, in connection with the new strategic focus and organizational realignment, a restructuring plan intended to align our operating costs with current revenue levels and better position the Company for future sustainable and profitable growth. The restructuring plan includes a reduction of nearly 20% of our workforce, with the majority of the workforce reduction completed by December 31, 2020. We expect that the restructuring plan, in conjunction with other cost reduction measures, will reduce our annualized costs by approximately \$80,000 by the end of December 31, 2021, with additional savings of approximately \$20,000 dependent on potential divestitures. Cost reduction efforts include reducing the number of facilities and examining every aspect of our manufacturing and operating costs. We incurred cash charges for severance, facility closing and other costs, primarily in the second half of 2020. We may incur additional charges in 2021 as we finalize all the actions to be taken. Non-cash charges related to these actions are expected to be \$6,400 and are included in facility closing costs. We are also evaluating the divestiture of parts of the business that do not align with this strategic focus. See Note 3 and Note 26.

In connection with the restructuring plan, we recorded pre-tax costs during the year ended December 31, 2020, included within selling, general and administrative in the consolidated statement of operations, and expect to incur total costs as follows:

	Total Costs Expected to be Incurred	Costs Incurred during the year ended December 31, 2020
Severance, termination benefits and other employee costs	\$ 21,200	\$ 12,914
Facility closing costs	9,700	6,470
Other costs	2,500	668
Total	<u>\$ 33,400</u>	<u>\$ 20,052</u>

The liabilities at December 31, 2020 related to these costs were principally recorded in accrued expenses in the consolidated balance sheets and were as follows:

	Liability at December 31, 2019	Costs Incurred during 2020	Costs Paid During 2020	Non-cash adjustments	Liability at December 31, 2020
Severance, termination benefits and other employee costs	\$ —	\$ 12,914	\$ (5,741)	\$ —	\$ 7,173
Facility closing costs	—	6,470	(265)	(6,205)	—
Other costs	—	668	(668)	—	—
Total	\$ —	\$ 20,052	\$ (6,674)	\$ (6,205)	\$ 7,173

(25) Selected Quarterly Financial Data (unaudited)

The following tables set forth unaudited selected quarterly financial data:

2020					
Quarter Ended					
	December 31	September 30	June 30	March 31	
<i>(in thousands, except per share amounts)</i>					
Consolidated revenue ^a	\$ 172,652	\$ 136,176	\$ 112,777	\$ 135,635	
Gross profit	72,449	58,627	35,167	57,132	
Total operating expenses	71,718	126,231	69,039	75,350	
Income (loss) from operations	731	(67,604)	(33,872)	(18,218)	
Benefit (provision) for income taxes	(3,712)	(2,866)	(1,464)	1,858	
Net loss attributable to 3D Systems	(19,830)	(72,889)	(37,951)	(18,924)	
Basic and diluted net loss per share	\$ (0.16)	\$ (0.61)	\$ (0.33)	\$ (0.17)	

2019					
Quarter Ended					
	December 31	September 30	June 30	March 31	
<i>(in thousands, except per share amounts)</i>					
Consolidated revenue ^a	\$ 168,215	\$ 156,248	\$ 158,627	\$ 153,263	
Gross profit ^a	74,256	67,281	73,299	65,705	
Total operating expenses ^a	78,955	79,215	92,465	87,010	
Loss from operations	(4,699)	(11,934)	(19,166)	(21,305)	
Benefit (provision) for income taxes	1,260	(2,010)	(1,938)	(1,844)	
Net loss attributable to 3D Systems	(4,714)	(16,843)	(23,929)	(24,394)	
Basic and diluted net income (loss) per share	\$ (0.04)	\$ (0.15)	\$ (0.21)	\$ (0.22)	

2018					
Quarter Ended					
	December 31	September 30	June 30	March 31	
<i>(in thousands, except per share amounts)</i>					
Consolidated revenue ^a	\$ 181,892	\$ 165,493	\$ 177,800	\$ 166,362	
Gross profit	82,553	77,810	86,162	77,869	
Total operating expenses	89,572	88,794	93,884	95,335	
Loss from operations	(7,019)	(10,984)	(7,722)	(17,466)	
Provision for income taxes	4,051	(1,593)	(2,539)	(1,954)	
Net loss attributable to 3D Systems	(4,136)	(11,550)	(8,862)	(20,957)	
Basic and diluted net income (loss) per share	\$ (0.04)	\$ (0.10)	\$ (0.08)	\$ (0.19)	

- a. Upon adoption of ASU 2018-08 we determined it was appropriate to recast the presentation of our previously reported statement of operations and the effect on the individual quarters in 2020 was immaterial. See Note 2.

The sum of per share amounts for each of the quarterly periods presented does not necessarily equal the total presented for the year because each quarterly amount is independently calculated at the end of each period based on the net income (loss) available to common stockholders for such period and the weighted average shares of outstanding common stock for such period.

(26) Subsequent Events

On January 1, 2021, the Company completed the sale of 100% of the issued and outstanding equity interests of Cimatron Ltd., the subsidiary that operated the Company's Cimatron integrated CAD/CAM software for tooling business and its GibbsCAM CNC programming software business for approximately \$64,200, after certain adjustments and excluding \$9,161 of cash amounts transferred to the purchaser.

Using a portion of the proceeds from the sale, the Company paid off the remaining outstanding balances under its Term Facility, \$21,392. The Company also terminated the ATM Program.

In January 2021, the Company terminated the interest rate swap agreement in connection with repayment of the Term Facility.

On February 2, 2021, the Company received two private letter rulings from the IRS, which triggered the release of a reserve for uncertain tax position of \$8,900 in the first quarter of 2021.

On February 25, 2021, the Company entered into an agreement to amend its lease for its corporate office and extended the term. As part of this amendment, the Company entered into a lease agreement for a new building, containing approximately 80,000 to 100,000 rentable square feet, to be constructed adjacent to our corporate office. The initial lease terms for both the existing building and the expansion site extend through August 2036.

RESTRICTED STOCK AWARD AGREEMENT

This RESTRICTED STOCK AWARD AGREEMENT (this “Agreement”), upon acceptance by the recipient of the Award Shares (the “Participant”) within 60 days of [the date of grant as stated on the Notice of Award (the “Award Date”) through the acknowledgement procedures of the Computershare Employee Online portal (<https://www-us.computershare.com/EmployeePortal/>) (“Computershare”)], between 3D SYSTEMS CORPORATION, a Delaware corporation (the “Company”), and the Participant is effective as of the Award Date.

The 2015 Incentive Plan of 3D Systems Corporation (the “Plan”) is designed to assist the Company and its subsidiaries and affiliates in attracting and retaining employees and consultants of outstanding competence by providing an incentive that permits the persons responsible for the Company’s growth to share directly in that growth and to further the identity of their interests with the interests of the Company’s stockholders. The Participant is eligible to receive grants of shares of the Company’s common stock, \$0.001 par value per share (“Common Stock”), under Section 7 of the Plan.

NOW, THEREFORE, the Company and the Participant mutually agree as follows:

Section 1. Award of Restricted Stock

Subject to the terms and conditions hereinafter set forth [and as set forth on the Participant’s Notice of Award from Computershare], the Company hereby grants to the Participant the shares of Common Stock [*number of shares*] (the “Award Shares”). The Participant will receive evidence of ownership of such shares of Common Stock within a reasonable time after acceptance of the Award Shares [and the terms and conditions of this Agreement through the Computershare online acknowledgement procedures].

Section 2. Terms and Conditions of Plan

The Participant agrees that the Award Shares shall be held in accordance with the terms and conditions of the Plan. The authority of the Company to enter into this Agreement and to issue shares of Common Stock pursuant hereto is derived exclusively from the Plan. If any terms or conditions of this Agreement conflict with any terms or conditions of the Plan, the terms and conditions of the Plan shall control. Any capitalized terms not defined herein shall have the meaning assigned to such term in the Plan. The Participant acknowledges that a copy of the Plan has been made available to the Participant.

Section 3. Restriction on Transfer

Until the Participant’s interest in the Award Shares become vested and nonforfeitable under Section 4 of this Agreement and except as permitted by Section 4 of this Agreement and Section 10 of the Plan, none of the Award Shares, or any interest therein, shall be sold, transferred, pledged, encumbered or otherwise disposed of by the Participant so long as the

Participant shall remain a Participant of the Company, except that such restrictions may expire earlier as provided by Section 9 of the Plan.

Section 4. Vesting; Forfeiture and Period of Restriction

Subject to the satisfaction of any and all of the conditions set forth in this Agreement, including the requirement to accept the Award Shares and the terms of this Agreement [pursuant to the Computershare acknowledgement procedures] within 60 days of the Award Date, the Participant's interest in the Award Shares shall be vested and nonforfeitable on [the first anniversary of the Award Date set forth on the Notice of Award] if the Participant remains in the continuous employ of the Company, a Subsidiary or an Affiliate from Award Date until such first anniversary.

Any Award Shares that have not become vested and nonforfeitable on or before the date of a termination of the Participant's employment (for any reason) shall be forfeited on the date that the Participant is no longer employed by the Company, a Subsidiary or an Affiliate.

Notwithstanding anything contained in Section 7 of the Plan to the contrary, the Compensation Committee of the Board of Directors of the Company (the "Committee") may, in its sole discretion, waive the forfeiture period and any other conditions set forth in this Agreement under appropriate circumstances (including, but not limited to, the death, Disability or Retirement of the Participant or a material change in circumstances arising after the date of an Award) and subject to such terms and conditions (including forfeiture of a proportionate number of the Award Shares) as the Committee shall deem appropriate.

Section 5. Undertakings of Participant

The Participant represents and agrees that he or she will comply with the Securities Act of 1933, as amended (the "Securities Act"), and the Securities Exchange Act of 1934, as amended (the "Securities Exchange Act"), with respect to the Award Shares, and he or she will indemnify the Company for any costs, liabilities and expenses that it may sustain by reason of any violation of the Securities Act or the Securities Exchange Act caused by any act or omission on his or her part with respect to the Award Shares.

Section 6. Restrictive Legends and Stop-Transfer Instructions

The obligation of the Company to issue Common Stock upon execution of this Agreement shall be subject to all applicable laws, rules and regulations and to such approvals by governmental agencies as may be required. Stock certificates evidencing Common Stock issued under this Agreement may bear such restrictive legends and/or appropriate stop transfer instructions may be issued to the Company's transfer agent as the Company and the Company's counsel deem necessary under applicable law or pursuant to this Agreement.

Section 7. Registration of Shares

The Company shall use its reasonable commercial efforts to cause the shares of Common Stock issuable in connection with the Plan to be registered under the Securities Act, but shall otherwise be under no obligation to register any shares of Common Stock issued under the Plan under the Securities Act or otherwise. If, at the time any shares of Common Stock are issued pursuant to the Plan, there shall not be on file with the Securities and Exchange Commission an effective Registration Statement under the Securities Act covering such shares of Common Stock, the Participant to whom such shares are to be issued will execute and deliver to the Company upon receipt by him or her of any such shares an undertaking, in form and substance satisfactory to the Company, that (i) such Participant has had access or will, by reason of such person's employment or service with the Company, or otherwise, have access to sufficient information concerning the Company to enable him or her to evaluate the merits and risks of the acquisition of shares of the Company's Common Stock pursuant to the Plan, (ii) such Participant has such knowledge and experience in financial and business matters that such person is capable of evaluating such acquisition, (iii) it is the intention of such Participant to acquire and hold such shares for investment and not for the resale or distribution thereof, (iv) such Participant will comply with the Securities Act and the Exchange Act with respect to such shares, and (v) such Participant will indemnify the Company for any cost, liability and expense that the Company may sustain by reason of any violation of the Securities Act or the Exchange Act occasioned by any act or omission on his or her part with respect to such shares.

Section 8. No Rights in Common Stock

The prospective recipient of a Restricted Stock award shall not have any right with respect to such award, unless and until the recipient has agreed to be bound by this agreement by acknowledging acceptance of the award and otherwise complied with the terms and conditions of such award and of Section 7 of the Plan, and then only from the date such person becomes the record owner of the shares of Restricted Stock. Once the conditions in the foregoing sentence have been satisfied, and except as provided in Section 4 of this Agreement, the Participant shall have with respect to an award of Restricted Stock all the rights of a stockholder of the Company, including the right to vote and to receive cash dividends (if any). The Committee, in its sole discretion, as determined at the time of the award, may permit or require such cash dividends (if any) to be reinvested in additional Restricted Stock, provided that sufficient shares of Common Stock are available under Section 3 of the Plan for such reinvestment (taking into account then outstanding awards under the Plan). Stock dividends issued with respect to Restricted Stock shall be treated as additional shares of Restricted Stock that are subject to the same restrictions and other terms and conditions that apply to the shares with respect to which such dividends are issued.

Section 9. Notices

Any notice that either party hereto may be required or permitted to give to the other shall be in writing and, except as otherwise required herein, may be delivered personally or by mail to the Company at 333 Three D Systems Circle, Rock Hill, South Carolina 29730, attention of the

Secretary of the Company, or to the Participant at the address set forth below or at such other address as either party may designate by notice to the other.

Section 10. Adjustments

The number of Award Shares of Common Stock subject to the award under this Agreement and the terms of this Agreement shall be subject to adjustment in accordance with Section 3(a) of the Plan.

Section 11. Successors

The provisions of the Plan shall be binding upon and inure to the benefit of all successors of any person receiving Common Stock of the Corporation pursuant to the Plan, including, without limitation, the estate of such person and the executors, administrators or trustees thereof, the heirs and legatees of such person, and any receiver, trustee in bankruptcy or representative of creditors of such person.

Section 12. Company's Right to Terminate Retention; Exclusivity

Nothing contained in the Plan shall prevent the Board from adopting other or additional compensation arrangements or modifying existing compensation arrangements for Participants, subject to stockholder approval if such approval is required by applicable statute, rule or regulation; and such arrangements either may be generally applicable or applicable only in specific cases. Neither the adoption of the Plan nor the grant to the Participant of the Award Shares shall confer upon any Participant any right to continued employment or service with the Company, a Subsidiary or an Affiliate.

Section 13. Payment of Withholding Tax

The Participant undertakes to comply with any appropriate requests that may be made by the Company in respect of the withholding of any federal, state or local taxes and any other charges that may be required by law to be withheld by reason of a grant or the issuance of shares of Award Shares.

Section 14. Applicable Law

This Agreement shall be governed and construed in accordance with the laws of the State of Delaware.

Section 15. Severability

If any provision of this Agreement is held to be illegal, void or unenforceable for any reason, it shall be adjusted rather than voided, if possible, in order to achieve the intent of the parties to the extent possible. In any event, all other provisions of this Agreement shall be deemed valid and enforceable to the fullest extent possible.

Section 16. Appendix

Notwithstanding any provision in this Agreement, the award under this Agreement shall be subject to any special terms and conditions set forth in any Appendix to the Agreement for your country of residence. Moreover, if you relocate to one of the countries included in the Appendix, the special terms and conditions for such country will apply to you, to the extent the Company determines that the application of such terms and conditions is necessary or advisable in order to comply with local law or facilitate the administration of the Plan. The Appendix constitutes part of this Agreement.

Section 17. Electronic Delivery

The Company may, in its sole discretion, decide to deliver any documents related to your current or future participation in the Plan by electronic means or to request your consent to participate in the Plan by electronic means, including through the Terms and Conditions page of the Computershare Employee Portal. You hereby consent to receive such documents by electronic delivery and agree to participate in the Plan through an online or electronic system established and maintained by the Company or a third party designated by the Company, including Computershare.

[Signature Page to Follow.]

RESTRICTED STOCK AWARD AGREEMENT

This RESTRICTED STOCK AWARD AGREEMENT (this “Agreement”), upon acceptance by the recipient of the Award Shares (the “Participant”) within 60 days of [the date of grant as stated on the Notice of Award (the “Award Date”) through the acknowledgement procedures of the Computershare Employee Online portal (<https://www-us.computershare.com/EmployeePortal/>) (“Computershare”)], between 3D SYSTEMS CORPORATION, a Delaware corporation (the “Company”), and the Participant is effective as of the Award Date.

The 2015 Incentive Plan of 3D Systems Corporation (the “Plan”) is designed to assist the Company and its subsidiaries and affiliates in attracting and retaining employees and consultants of outstanding competence by providing an incentive that permits the persons responsible for the Company’s growth to share directly in that growth and to further the identity of their interests with the interests of the Company’s stockholders. The Participant is eligible to receive grants of shares of the Company’s common stock, \$0.001 par value per share (“Common Stock”), under Section 7 of the Plan.

NOW, THEREFORE, the Company and the Participant mutually agree as follows:

Section 1. Award of Restricted Stock

Subject to the terms and conditions hereinafter set forth [and as set forth on the Participant’s Notice of Award from Computershare], the Company hereby grants to the Participant the shares of Common Stock [*number of shares*] (the “Award Shares”). The Participant will receive evidence of ownership of such shares of Common Stock within a reasonable time after acceptance of the Award Shares [and the terms and conditions of this Agreement through the Computershare online acknowledgement procedures].

Section 2. Terms and Conditions of Plan

The Participant agrees that the Award Shares shall be held in accordance with the terms and conditions of the Plan. The authority of the Company to enter into this Agreement and to issue shares of Common Stock pursuant hereto is derived exclusively from the Plan. If any terms or conditions of this Agreement conflict with any terms or conditions of the Plan, the terms and conditions of the Plan shall control. Any capitalized terms not defined herein shall have the meaning assigned to such term in the Plan. The Participant acknowledges that a copy of the Plan has been made available to the Participant.

Section 3. Restriction on Transfer

Until the Participant’s interest in the Award Shares become vested and nonforfeitable under Section 4 of this Agreement and except as permitted by Section 4 of this Agreement and Section 10 of the Plan, none of the Award Shares, or any interest therein, shall be sold, transferred, pledged, encumbered or otherwise disposed of by the Participant so long as the

Participant shall remain a Participant of the Company, except that such restrictions may expire earlier as provided by Section 9 of the Plan.

Section 4. Vesting; Forfeiture and Period of Restriction

Subject to the satisfaction of any and all of the conditions set forth in this Agreement, including the requirement to accept the Award Shares and the terms of this Agreement [pursuant to the Computershare acknowledgement procedures] within 60 days of the Award Date, the Participant's interest in the Award Shares shall be vested and nonforfeitable on [the first anniversary of the Award Date set forth on the Notice of Award] if the Participant remains in the continuous employ of the Company, a Subsidiary or an Affiliate from Award Date until such first anniversary.

Any Award Shares that have not become vested and nonforfeitable on or before the date of a termination of the Participant's employment (for any reason) shall be forfeited on the date that the Participant is no longer employed by the Company, a Subsidiary or an Affiliate.

Notwithstanding anything contained in Section 7 of the Plan to the contrary, the Compensation Committee of the Board of Directors of the Company (the "Committee") may, in its sole discretion, waive the forfeiture period and any other conditions set forth in this Agreement under appropriate circumstances (including, but not limited to, the death, Disability or Retirement of the Participant or a material change in circumstances arising after the date of an Award) and subject to such terms and conditions (including forfeiture of a proportionate number of the Award Shares) as the Committee shall deem appropriate.

Section 5. Undertakings of Participant

The Participant represents and agrees that he or she will comply with the Securities Act of 1933, as amended (the "Securities Act"), and the Securities Exchange Act of 1934, as amended (the "Securities Exchange Act"), with respect to the Award Shares, and he or she will indemnify the Company for any costs, liabilities and expenses that it may sustain by reason of any violation of the Securities Act or the Securities Exchange Act caused by any act or omission on his or her part with respect to the Award Shares.

Section 6. Restrictive Legends and Stop-Transfer Instructions

The obligation of the Company to issue Common Stock upon execution of this Agreement shall be subject to all applicable laws, rules and regulations and to such approvals by governmental agencies as may be required. Stock certificates evidencing Common Stock issued under this Agreement may bear such restrictive legends and/or appropriate stop transfer instructions may be issued to the Company's transfer agent as the Company and the Company's counsel deem necessary under applicable law or pursuant to this Agreement.

Section 7. Registration of Shares

The Company shall use its reasonable commercial efforts to cause the shares of Common Stock issuable in connection with the Plan to be registered under the Securities Act, but shall otherwise be under no obligation to register any shares of Common Stock issued under the Plan under the Securities Act or otherwise. If, at the time any shares of Common Stock are issued pursuant to the Plan, there shall not be on file with the Securities and Exchange Commission an effective Registration Statement under the Securities Act covering such shares of Common Stock, the Participant to whom such shares are to be issued will execute and deliver to the Company upon receipt by him or her of any such shares an undertaking, in form and substance satisfactory to the Company, that (i) such Participant has had access or will, by reason of such person's employment or service with the Company, or otherwise, have access to sufficient information concerning the Company to enable him or her to evaluate the merits and risks of the acquisition of shares of the Company's Common Stock pursuant to the Plan, (ii) such Participant has such knowledge and experience in financial and business matters that such person is capable of evaluating such acquisition, (iii) it is the intention of such Participant to acquire and hold such shares for investment and not for the resale or distribution thereof, (iv) such Participant will comply with the Securities Act and the Exchange Act with respect to such shares, and (v) such Participant will indemnify the Company for any cost, liability and expense that the Company may sustain by reason of any violation of the Securities Act or the Exchange Act occasioned by any act or omission on his or her part with respect to such shares.

Section 8. No Rights in Common Stock

The prospective recipient of a Restricted Stock award shall not have any right with respect to such award, unless and until the recipient has agreed to be bound by this agreement by acknowledging acceptance of the award and otherwise complied with the terms and conditions of such award and of Section 7 of the Plan, and then only from the date such person becomes the record owner of the shares of Restricted Stock. Once the conditions in the foregoing sentence have been satisfied, and except as provided in Section 4 of this Agreement, the Participant shall have with respect to an award of Restricted Stock all the rights of a stockholder of the Company, including the right to vote and to receive cash dividends (if any). The Committee, in its sole discretion, as determined at the time of the award, may permit or require such cash dividends (if any) to be reinvested in additional Restricted Stock, provided that sufficient shares of Common Stock are available under Section 3 of the Plan for such reinvestment (taking into account then outstanding awards under the Plan). Stock dividends issued with respect to Restricted Stock shall be treated as additional shares of Restricted Stock that are subject to the same restrictions and other terms and conditions that apply to the shares with respect to which such dividends are issued.

Section 9. Notices

Any notice that either party hereto may be required or permitted to give to the other shall be in writing and, except as otherwise required herein, may be delivered personally or by mail to the Company at 333 Three D Systems Circle, Rock Hill, South Carolina 29730, attention of the

Secretary of the Company, or to the Participant at the address set forth below or at such other address as either party may designate by notice to the other.

Section 10. Adjustments

The number of Award Shares of Common Stock subject to the award under this Agreement and the terms of this Agreement shall be subject to adjustment in accordance with Section 3(a) of the Plan.

Section 11. Successors

The provisions of the Plan shall be binding upon and inure to the benefit of all successors of any person receiving Common Stock of the Corporation pursuant to the Plan, including, without limitation, the estate of such person and the executors, administrators or trustees thereof, the heirs and legatees of such person, and any receiver, trustee in bankruptcy or representative of creditors of such person.

Section 12. Company's Right to Terminate Retention; Exclusivity

Nothing contained in the Plan shall prevent the Board from adopting other or additional compensation arrangements or modifying existing compensation arrangements for Participants, subject to stockholder approval if such approval is required by applicable statute, rule or regulation; and such arrangements either may be generally applicable or applicable only in specific cases. Neither the adoption of the Plan nor the grant to the Participant of the Award Shares shall confer upon any Participant any right to continued employment or service with the Company, a Subsidiary or an Affiliate.

Section 13. Payment of Withholding Tax

The Participant undertakes to comply with any appropriate requests that may be made by the Company in respect of the withholding of any federal, state or local taxes and any other charges that may be required by law to be withheld by reason of a grant or the issuance of shares of Award Shares.

Section 14. Applicable Law

This Agreement shall be governed and construed in accordance with the laws of the State of Delaware.

Section 15. Severability

If any provision of this Agreement is held to be illegal, void or unenforceable for any reason, it shall be adjusted rather than voided, if possible, in order to achieve the intent of the parties to the extent possible. In any event, all other provisions of this Agreement shall be deemed valid and enforceable to the fullest extent possible.

Section 16. Appendix

Notwithstanding any provision in this Agreement, the award under this Agreement shall be subject to any special terms and conditions set forth in any Appendix to the Agreement for your country of residence. Moreover, if you relocate to one of the countries included in the Appendix, the special terms and conditions for such country will apply to you, to the extent the Company determines that the application of such terms and conditions is necessary or advisable in order to comply with local law or facilitate the administration of the Plan. The Appendix constitutes part of this Agreement.

Section 17. Electronic Delivery

The Company may, in its sole discretion, decide to deliver any documents related to your current or future participation in the Plan by electronic means or to request your consent to participate in the Plan by electronic means, including through the Terms and Conditions page of the Computershare Employee Portal. You hereby consent to receive such documents by electronic delivery and agree to participate in the Plan through an online or electronic system established and maintained by the Company or a third party designated by the Company, including Computershare.

[Signature Page to Follow.]

**PERFORMANCE-BASED
RESTRICTED STOCK UNIT AGREEMENT**

(February 2021) This PERFORMANCE-BASED RESTRICTED STOCK UNIT AWARD AGREEMENT (this “Agreement”), upon acceptance by the recipient of the Award Units (the “Participant”) within 60 days of _____ (the “Award Date”) through the acknowledgement procedures provided, between 3D SYSTEMS CORPORATION, a Delaware corporation (the “Company”), and the Participant is effective as of the Award Date.

The 2015 Incentive Plan (the “Plan”) of 3D Systems Corporation is designed to assist the Company and its subsidiaries and affiliates in attracting and retaining employees and consultants of outstanding competence by providing an incentive that permits the persons responsible for the Company’s growth to share directly in that growth and to further the identity of their interests with the interests of the Company’s stockholders. The Participant is eligible to receive an Award of performance-based Restricted Stock Units (“Restricted Stock Units”), each unit of which is a notional bookkeeping entry representing the equivalent of a share of Common Stock under Section 7 of the Plan.

NOW, THEREFORE, the Company and the Participant mutually agree as follows:

Section 1. Restricted Stock Units; Performance Conditions

Subject to the terms and conditions hereinafter set forth, the Company hereby grants to the Participant a target number of _____ () Restricted Stock Units (the “Award Units”).

The target number of Award Units shall be adjusted based on the Company’s performance during the period commencing on the Award Date and ending on the third anniversary of the Award Date for the following metric: Total Shareholder Return (“TSR”), defined as the percentage growth in stock price, plus dividends and adjusted for events such as stock splits, with percentage growth calculated as (closing stock price / Initial Stock Price) – 1. The Initial Stock Price value equals the _____ () trading day trailing average closing price of the Company’s Common Stock ended on trading date immediately preceding the Award Date. TSR results are measured at the end of each trading day and results must be maintained for a minimum of _____ () consecutive trading days for the result (threshold, target or maximum) to be achieved.

The target Award Units for TSR will be adjusted for performance by multiplying the target by the performance adjustment percentage indicated below based on actual performance results for the year. The performance-adjusted Award Units are referred to as the “Performance-Adjusted Units.” The Performance-Adjusted Units become earned subject to the remaining terms and conditions of this Agreement, including the service-based vesting conditions set forth in Section 4 of this Agreement.

The performance targets and adjustments for TSR are as follows:

TSR Growth

Achievement	Results	Performance Adjustment
Below Threshold	Less than __%	0%
Threshold	__%	50%
Target	__%	100%
Maximum	__% and above	150%

Results between threshold and target or between target and maximum shall be interpolated on a straight-line basis. Any fractional Performance-Adjusted Unit shall be rounded up to the nearest whole unit. If performance is below threshold, the Award shall be canceled and all Award Units immediately forfeited. Final performance results are subject to certification by the Compensation Committee of the Board of Directors of the Company (the “Committee”) by no later than March 15, _____. Decisions by the Committee regarding performance results shall be final and binding on all parties.

Section 2. Terms and Conditions of Plan

The Participant agrees that all the Award Units are granted subject to and in accordance with the terms and conditions of the Plan. The authority of the Company to enter into this Agreement and to issue the Award Units pursuant hereto is derived exclusively from the Plan. If any terms or conditions of this Agreement conflict with any terms or conditions of the Plan, the terms and conditions of the Plan shall control. Any capitalized terms not defined herein shall have the meaning assigned to such term in the Plan. The Participant acknowledges that a copy of the Plan has been made available to the Participant.

Section 3. Restriction on Transfer

Until the Participant’s interest in the Award Units becomes vested and nonforfeitable under Sections 1 and 4 of this Agreement and except as permitted in Section 10 of the Plan, no Award Units, or any interest therein, shall be sold, transferred, pledged, encumbered or otherwise disposed of by the Participant so long as the Participant shall remain a Participant of the Company, except that such restrictions may expire earlier as provided by Section 9 of the Plan.

Section 4. Forfeiture and Period of Restriction

(a) Subject to the satisfaction of any and all of the conditions set forth in this Agreement, including the requirement to accept the Award Units and the terms of this Agreement within 60 days of the Award Date, the Participant’s interest in that number of whole Restricted Stock Units that equals the Performance-Adjusted Units shall be vested and nonforfeitable on the later of (A) the third anniversary of the Award Date or (B) the date that the Committee certifies the

performance results under Section 1, in either case if the Participant remains in the continuous employ of the Company, a Subsidiary or an Affiliate from the Award Date until such date.

Any Award Units that have not become vested and nonforfeitable on or before the date of a termination of the Participant's employment (for any reason) shall be forfeited on the date that the Participant is no longer employed by the Company, a Subsidiary or an Affiliate.

(b) Notwithstanding anything contained in Section 7 of the Plan to the contrary, the Committee may, in its sole discretion, waive the performance, vesting and forfeiture requirements and any other conditions set forth in this Agreement under appropriate circumstances (including, but not limited to, the death, Disability or Retirement of the Participant or a material change in circumstances arising after the date of an Award) and subject to such terms and conditions (including forfeiture or a proportionate number of the Award Units) as the Committee shall deem appropriate.

Section 5. Settlement of Award Units

Upon the vesting of the Award Units as provided in Sections 1 and 4 above without a forfeiture and the satisfaction of or release from any other conditions set forth in this Agreement, or at such earlier time as provided under Section 4 above, the restrictions applicable to the Restricted Stock Units shall lapse. As promptly as administratively feasible thereafter, subject to the requirements of Section 14 of this Agreement and Section 13 of the Plan (regarding tax withholding), but no later than sixty (60) days following such event, the Company shall deliver to the Participant or, in case of the Participant's death, to the Participant's Beneficiary, (1) a cash payment equal to the number of Award Units as to which such restrictions have lapsed multiplied by the Fair Market Value of a share of Common Stock as of the date the restrictions lapsed, (2) solely in the Committee's discretion, one or more share certificates registered in the name of the Participant, for the appropriate number of shares of Common Stock, or a statement from the Company representing that such shares have been issued, are in book entry form and are free of all restrictions, except for any restrictions that may be imposed by law, or (3) any combination of cash and shares of Common Stock.

Section 6. Undertakings of Participant

The Participant represents and agrees that he or she will comply with the Securities Act of 1933, as amended (the "Securities Act"), and the Securities Exchange Act of 1934, as amended (the "Securities Exchange Act"), with respect to the Award Units and any shares issued under Section 5, and he or she will indemnify the Company for any costs, liabilities and expenses that it may sustain by reason of any violation of the Securities Act or the Securities Exchange Act caused by any act or omission on his or her part with respect to the Award Units or such shares.

Section 7. Registration of Shares

The Company shall use its reasonable commercial efforts to cause the shares of Common Stock issuable in connection with the Plan to be registered under the Securities Act, but shall otherwise be under no obligation to register any shares of Common Stock issued under the Plan under the Securities Act or otherwise. If, at the time any shares of Common Stock are issued pursuant to the Plan, there shall not be on file with the Securities and Exchange Commission an effective Registration Statement under the Securities Act covering such shares of Common Stock, the Participant to whom such shares are to be issued will execute and deliver to the Company upon receipt by him or her of any such shares an undertaking, in form and substance satisfactory to the Company, that (i) such Participant has had access or will, by reason of such person's employment or service with the Company, or otherwise, have access to sufficient information concerning the Company to enable him or her to evaluate the merits and risks of the acquisition of shares of the Company's Common Stock pursuant to the Plan, (ii) such Participant has such knowledge and experience in financial and business matters that such person is capable of evaluating such acquisition, (iii) it is the intention of such Participant to acquire and hold such shares for investment and not for the resale or distribution thereof, (iv) such Participant will comply with the Securities Act and the Exchange Act with respect to such shares, and (v) such Participant will indemnify the Company for any cost, liability and expense that the Company may sustain by reason of any violation of the Securities Act or the Exchange Act occasioned by any act or omission on his or her part with respect to such shares.

Section 8. Rights of Holders of Restricted Stock Units

(a) Until the lapse or release of the restrictions applicable to the Award Units, no shares of Common Stock shall be issued in respect of such Award Units. Holders of Award Units shall not have rights as stockholders of the Company, with respect to the shares of Common Stock covered by such Award Units or otherwise, and shall not have the right to vote such shares or the right to receive dividends until, and then to the extent that, shares of Common Stock are issued in settlement of the Award Units.

(b) A holder of Award Units shall have no rights other than those of a general creditor of the Company. The Award Units represent an unfunded and unsecured obligation of the Company, subject to the terms and conditions of this Agreement.

Section 9. Restrictive Legends and Stop-Transfer Instructions

Certificates evidencing shares of Common Stock issued pursuant to Award Units may bear such restrictive legends and /or appropriate stop-transfer instructions may be issued to the Company's transfer agent as the Company and the Company's counsel deem necessary under applicable law or pursuant to this Agreement.

Section 10. Notices

Any notice that either party hereto may be required or permitted to give to the other shall be in writing and, except as otherwise required herein, may be delivered personally or by mail to the Company at 333 Three D Systems Circle, Rock Hill, South Carolina 29730, attention of the Secretary of the Company, or to the Participant at the address designated with the Company's equity plan administrator or at such other address as either party may designate by notice to the other.

Section 11. Adjustments

The number of Award Units and the terms of this Agreement shall be subject to adjustment in accordance with Section 3(a) of the Plan.

Section 12. Successors

The provisions of the Plan shall be binding upon and inure to the benefit of all successors of any person receiving Common Stock of the Company pursuant to the Plan, including, without limitation, the estate of such person and the executors, administrators or trustees thereof, the heirs and legatees of such person, and any receiver, trustee in bankruptcy or representative of creditors of such person.

Section 13. Company's Right to Terminate Retention; Exclusivity

Nothing contained in the Plan shall prevent the Board from adopting other or additional compensation arrangements or modifying existing compensation arrangements for Participants, subject to stockholder approval if such approval is required by applicable statute, rule or regulation; and such arrangements either may be generally applicable or applicable only in specific cases. Neither the adoption of the Plan nor the issuance of the Award Units shall confer upon the Participant any right to continued employment or service with the Company, a Subsidiary or an Affiliate.

Section 14. Responsibility for Taxes

(a) Regardless of any action the Company or the subsidiary or affiliate that employs the Participant (the "Employer") takes with respect to any or all income tax, social insurance, payroll tax, fringe benefits tax, payment on account, or other tax-related items related to the Participant's participation in the Plan and legally applicable to the Participant ("Tax-Related Items"), the Participant acknowledges that the ultimate liability for all Tax-Related Items owed by the Participant is and remains the Participant's responsibility and that such amount may exceed the amount actually withheld by the Company and/or the Employer. The Participant further acknowledges that the Company and/or the Employer (i) makes no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Award, including the grant or vesting of the Award Units, the issuance of shares of Common

Stock upon settlement of the Units, and the subsequent sale of shares of Common Stock; and (ii) does not commit and is under no obligation to structure the terms of the grant or any aspect of the Award to reduce or eliminate the Participant's liability for Tax-Related Items or achieve any particular tax result. Further, if the Participant becomes subject to tax in more than one jurisdiction, the Participant acknowledges that the Company and/or the Employer (or former Employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

(b) Prior to vesting of the Award Units, the Participant shall pay or make adequate arrangements satisfactory to the Company to satisfy all withholding obligations of the Company. In this regard, the Participant authorizes the Company to withhold all applicable Tax-Related Items legally payable by the Participant (i) from the Participant's wages or other cash compensation paid to the Participant by the Company; (ii) from proceeds of the sale of the shares of Common Stock, either through a voluntary sale or through a mandatory sale arranged by the Company (on the Participant's behalf pursuant to this authorization without further consent); and/or (iii) by the Company retaining a portion of the vested Award Units to be settled.

(c) The Participant shall pay to the Company any amount of Tax-Related Items that the Company may be required to withhold as a result of the Participant's participation in the Plan that cannot be satisfied by the means previously described. The Company may refuse to issue and deliver shares of Common Stock in payment of any earned and vested Award Units if the Participant fails to comply with the Participant's obligations in connection with the Tax-Related Items as described in this Section 14.

Section 15. Applicable Law; Venue

This Agreement shall be governed and construed in accordance with the laws of the State of Delaware. Any arbitration, legal or equitable action or any proceeding arising directly, indirectly, or otherwise in connection with, out of, related to or from this Award or the Plan or Agreement, or any provision thereof, shall exclusively be filed and adjudicated in York County, South Carolina and no other venue.

Section 16. Severability

If any provision of this Agreement is held to be illegal, void or unenforceable for any reason, it shall be adjusted rather than voided, if possible, in order to achieve the intent of the parties to the extent possible. In any event, all other provisions of this Agreement shall be deemed valid and enforceable to the fullest extent possible.

Section 17. Further Assurances

The Participant agrees, upon demand of the Company or the Committee, to do all acts and execute, deliver and perform all additional documents, instruments and agreements which

may be reasonably required by the Company or the Committee, as the case may be, to implement the provisions and purposes of this Agreement and the Plan.

Section 18. Recovery of Compensation

In accordance with Section 21 of the Plan, the Award is subject to the requirements of (i) Section 954 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (regarding recovery of erroneously awarded compensation) and any implementing rules and regulations thereunder, (ii) the Company's compensation recovery (clawback) requirements set forth in the Company's Corporate Governance Guidelines, and (iii) any policies adopted by the Company to implement such requirements, all to the extent determined by the Company to be applicable to the Participant.

Section 19. Appendix

Notwithstanding any provision in this Agreement, the award under this Agreement shall be subject to any special terms and conditions set forth in any Appendix to the Agreement for your country of residence. Moreover, if you relocate to one of the countries included in the Appendix, the special terms and conditions for such country will apply to you, to the extent the Company determines that the application of such terms and conditions is necessary or advisable in order to comply with local law or facilitate the administration of the Plan. The Appendix constitutes part of this Agreement.

Section 20. Electronic Delivery

The Company may, in its sole discretion, decide to deliver any documents related to your current or future participation in the Plan by electronic means or to request your consent to participate in the Plan by electronic means. You hereby consent to receive such documents by electronic delivery and agree to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

AMENDED AND RESTATED LEASE AGREEMENT

Between

3D FIELDS, LLC

(Landlord)

and

3D SYSTEMS CORPORATION

(Tenant)

Dated February 25, 2021

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EXHIBITS

- Exhibit A-1 The Original Land
 - Exhibit A-2 The Expansion Land
 - Exhibit A-3 The Waterford I Land
 - Exhibit B Waterford I Additional Improvements
 - Exhibit C-1 Preliminary Waterford II Building Plans
 - Exhibit C-2 Final Waterford II Plans
 - Exhibit D Development Budget
 - Exhibit E Form of Tenant Acknowledgement Letter
 - Exhibit F Form of Subordination, Non-Disturbance and Attornment Agreement
 - Exhibit G Form of Tenant Estoppel
 - Exhibit H Tenant Incentives (Fee In Lieu of Tax and Incentive Agreement)
-

LEASE AGREEMENT

THIS AMENDED AND RESTATED LEASE AGREEMENT (this “**Lease**”) is made as of February 25, 2021 (the “**Effective Date**”), by and between 3D FIELDS, LLC, a South Carolina limited liability company (“**Landlord**”), and 3D SYSTEMS CORPORATION, a Delaware corporation (“**Tenant**”).

RECITALS:

- A. Tenant and Landlord, as successor-in-interest to Lex Rock Hill L.P., as successor-in-interest to KDC-Carolina Investments 3, LP, are parties to that certain Lease Agreement dated February 8, 2006 (the “**Original Lease**”), as amended by that certain First Amendment to Lease Agreement dated August 7, 2006 and effective June 15, 2006 (the “**First Amendment**”), Second Amendment to Lease Agreement dated October 6, 2006 (the “**Second Amendment**”), Third Amendment to Lease Agreement dated December 18, 2006 (the “**Third Amendment**”), Fourth Amendment to Lease Agreement dated February 26, 2007 (the “**Fourth Amendment**”), and Fifth Amendment to Lease Agreement dated March 17, 2011 (the “**Fifth Amendment**”).
- B. Pursuant to the Original Lease, Landlord leased to Tenant that certain tract or parcel of land (the “**Original Land**”) located in the Waterford Business Park in the City of Rock Hill, York County, South Carolina, more particularly described on **Exhibit A-1** hereto, and Landlord developed, constructed and leased to Tenant the building thereon (the “**Waterford I Building**”) containing approximately 80,028 rentable square feet (the “**Waterford I Square Footage**”), the interior tenant improvements within the Waterford I Building (the “**Waterford I Tenant Improvements**”), and other improvements (the Waterford I Building, the Waterford I Tenant Improvements and all other improvements are sometimes referred to collectively as the “**Waterford I Improvements**,” and the Waterford I Improvements together with the Waterford I Land (defined below) are collectively referred to herein as the “**Waterford I Premises**”).
- C. Pursuant to a purchase option set forth in Section 36 of the Original Lease, on or about March 18, 2011, Tenant purchased from Landlord that certain real property described on **Exhibit A-2** attached hereto (the “**Expansion Land**”). At such time, Landlord and Tenant entered into the Fifth Amendment, pursuant to which the Original Land description was revised to reflect the removal of the Expansion Land and was replaced with the metes and bounds description attached as **Exhibit A-3** hereto (the “**Waterford I Land**”).
- D. Landlord and Tenant have entered into that certain Purchase and Sale Agreement dated February 25, 2021 (the “**Purchase Agreement**”), pursuant to which Landlord has agreed to purchase the Expansion Land back from Tenant simultaneously with the execution of this Lease and then to lease the Expansion Land to Tenant in accordance with the terms of this Lease.
- E. Tenant desires to make additional improvements to the Waterford I Premises, and Landlord has agreed to provide a tenant improvement allowance and to advance additional funds for such improvements, all as described in this Lease.
- F. Landlord desires to develop, fund, and lease, and Tenant desires to construct, a shell building containing between 80,000 and 100,000 rentable square feet with approximately

30 foot high ceilings, potential for approximately 25,000-30,000 rentable square feet of mezzanine space, an enclosed pedway connecting the new building to the existing Waterford I Building, and site improvements, including, but not limited to, parking spaces, driveways, sidewalks, landscaping, and all other related site and infrastructure work (the “**Waterford II Building**”), interior tenant improvements within the Waterford II Building (the “**Waterford II Tenant Improvements**”) and other improvements (the Waterford II Building, the Waterford II Tenant Improvements and all other improvements are sometimes referred to collectively as the “**Waterford II Improvements**”), on the Expansion Land, all in accordance with the terms and subject to the conditions of this Lease (the Expansion Land and the Waterford II Improvements are collectively referred to herein as the “**Waterford II Premises**”).

- G. The interior tenant improvements within a building are referred to herein as “**Tenant Improvements**.” After Substantial Completion of the Waterford II Building, the Waterford I Building and the Waterford II Building shall collectively be referred to herein as the “**Buildings**.” The Waterford I Improvements and the Waterford II Improvements are collectively referred to herein as the “**Improvements**.” The Waterford I Premises and the Waterford II Premises are collectively referred to herein as the “**Premises**.” The Waterford I Land and the Expansion Land are collectively referred to as the “**Land**.”
- H. Tenant desires to lease the Premises on the terms and conditions hereinafter provided. This Lease shall amend and restate the Original Lease, as amended by the First Amendment, the Second Amendment, the Third Amendment, the Fourth Amendment, and the Fifth Amendment. In the event of any inconsistency between this Lease and the foregoing, the provisions of this Lease shall prevail.

Landlord and Tenant (sometimes referred to jointly as the “parties” or individually as a “party”) agree as follows:

Section 1. Lease of Premises. Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, the Waterford I Premises and, upon the Waterford II Commencement Date (as herein defined), the Waterford II Premises.

Section 2. Waterford I Improvements

- (a) Landlord agrees to provide Tenant with a tenant improvement allowance for certain improvements to the Waterford I Premises, not to exceed \$500,000 (the “**Waterford I TI Allowance**”) as more particularly described on Exhibit B attached hereto.
- (b) In addition to the Waterford I TI Allowance, Landlord agrees to provide Tenant up to \$2,000,000 (the “**Waterford I Additional Improvement Funds**”) for use by Tenant to make additional improvements to the Waterford I Premises, all to be approved in advance by Landlord (the “**Waterford I Additional Improvements**”) as more particularly described on Exhibit B attached hereto.

Section 3. Waterford II Improvements

- (a) Tenant desires to develop and construct, and Landlord desires to fund and lease, the Waterford II Improvements on the Expansion Land. The Waterford II Improvements are comprised of two parts: (i) the Waterford II Building; and (ii) the Waterford II Tenant Improvements within the Waterford II Building.
- (b) Landlord has agreed to advance funds in the aggregate maximum amount of thirteen million dollars (\$13,000,000.00) to fund the purchase, development, and construction of the Waterford II Premises in accordance with the terms hereof and all Legal Requirements (as hereinafter defined). All advances shall be deemed part of the Total Project Cost (as hereinafter defined) and such funds shall be available to Tenant through October 31, 2022.
- (c) Tenant shall hire Oak Engineering (“**Engineer**”) to evaluate the Expansion Land and determine the feasibility of constructing the Waterford II Improvements on the Expansion Land. Tenant shall enter into a contract with Engineer, and a true and complete copy of such contract (and all subsequent amendments thereto) shall be delivered by Tenant to Landlord promptly following the execution thereof. Tenant shall assign to Landlord, or provide that Landlord is a third-party beneficiary of, Tenant’s rights under such contract. Following Engineer’s evaluation of the Expansion Land, which shall include, but not be limited to, an analysis of topography, soil borings and testing, environmental issues, zoning, and preparation of an ALTA survey, Engineer shall prepare a concept site plan with projected specifications for the Waterford II Building (the “**Preliminary Waterford II Site Plan**”) and a Basis of Design (“**BOD**”), which shall be used to procure bids from qualified design build contractors for the Waterford II Building. Landlord and Tenant hereby acknowledge and agree that the Waterford II Building shall contain a minimum of 80,000 rentable square feet. Engineer’s Preliminary Waterford II Site Plan and BOD shall collectively be referred to herein as the “**Preliminary Waterford II Building Plans**.” Tenant shall deliver the Preliminary Waterford II Building Plans to Landlord for Landlord’s review and written approval as soon as reasonably practicable. Landlord shall have seven (7) business days following receipt of such Preliminary Waterford II Building Plans to approve or reject the Preliminary Waterford II Building Plans. Landlord’s failure to approve the Preliminary Waterford II Building Plans within such seven (7) business day period shall be deemed to be an approval thereof by Landlord. If Landlord rejects the Preliminary Waterford II Building Plans (in whole or in part), Landlord shall specify in sufficient detail the reason(s) for Landlord’s rejection (or partial rejection, as applicable). If Landlord responds to such Preliminary Waterford II Building Plans, then such portion thereof not rejected by Landlord shall be deemed to be approved. In the event Tenant thereafter modifies or objects to any portion of the Preliminary Waterford II Building Plans previously approved by Landlord, Tenant shall revise the proposed Preliminary Waterford II Building Plans, and resubmit such plans for Landlord’s written approval,

provided that Landlord shall only have five (5) business days to review and approve any revised Preliminary Waterford II Building Plans, and should Landlord fail to respond within such five (5) business day period, such revised Preliminary Waterford II Building Plans shall be deemed approved. Landlord and Tenant intend to work collaboratively to develop final plans and specifications for the Waterford II Building in accordance with the provisions of this Section 3. The parties acknowledge that certain milestones must be met in the plan development process to achieve Tenant's desired date for Substantial Completion (as hereinafter defined). The time frames set forth in this Section are intended to facilitate the parties' progress towards such date.

- (d) Following mutual written approval of the Preliminary Waterford II Building Plans, Landlord and Tenant shall amend this Lease to attach the Preliminary Waterford II Building Plans as **Exhibit C-1** to this Lease. Tenant shall use the Preliminary Waterford II Building Plans to conduct a bidding process to hire a qualified design build contractor to construct the Waterford II Building, all as more fully described in Section 4 below. Such design build contractor shall also be responsible for constructing and installing the Waterford II Tenant Improvements.
- (e) Tenant shall work collaboratively with its design build contractor to engage a project architect (the "**Project Architect**") to prepare final Waterford II building plans ("**Final Waterford II Building Plans**") and plans and specification for the Waterford II Tenant Improvements (the "**Waterford II Tenant Improvement Plans**"). Collectively, the Final Waterford II Building Plans and the Waterford II Tenant Improvement Plans shall be referred to herein as the "**Final Waterford II Plans.**" Tenant shall submit each component of the Final Waterford II Plans to Landlord for Landlord's written approval as soon as reasonably practicable. Landlord shall have seven (7) business days following receipt of the Final Waterford II Plans (or any part thereof) to approve or reject such proposed Final Waterford II Plans. Landlord's failure to approve the proposed Final Waterford II Plans (or any part thereof) within such seven (7) business day period shall be deemed to be an approval thereof by Landlord. If Landlord rejects the proposed Final Waterford II Plans (in whole or in part), Landlord shall specify in sufficient detail the reason(s) for Landlord's rejection (or partial rejection, as applicable). If Landlord responds to such Final Waterford II Plans (or any part thereof), then such portion thereof not rejected by Landlord shall be deemed to be approved. In the event Tenant thereafter modifies or objects to any portion of the Final Waterford II Plans previously approved by Landlord, Tenant shall revise such portion of the Final Waterford II Plans, and resubmit such plans for Landlord's written approval, provided that Landlord shall only have five (5) business days to review and approve any revised portion of the Final Waterford II Plans, and should Landlord fail to respond within such five (5) business day period, such revised portion of the Final Waterford II Plans shall be deemed approved. Upon mutual written approval of the entire Final Waterford II Plans, Landlord and Tenant shall

amend this Lease to attach the Final Waterford II Plans as **Exhibit C-2** to this Lease.

- (f) Only the signature or initials of an authorized representative of Landlord referenced in Section 4(b) and an authorized representative of Tenant referenced in Section 4(b) will evidence approval of the Final Waterford II Plans. Landlord may appoint a representative (if not an authorized representative of Landlord referenced in Section 4(b)) to review the Final Waterford II Plans that Tenant proposes for adoption so as not to unreasonably delay the completion of the Waterford II Improvements. Landlord's review and approval of the Final Waterford II Plans, shop drawings, samples or other construction related items will create no responsibility or liability whatsoever on Landlord's part for their completeness, sufficiency for their intended purpose, or degree of compliance with Legal Requirements (hereinafter defined).
- (g) Notwithstanding the fact that Tenant shall construct the Waterford II Improvements, Landlord and Tenant hereby acknowledge and agree that Landlord shall own the Expansion Land and all Waterford II Improvements.

Section 4. Construction of Waterford II Improvements

- (a) Landlord and Tenant shall submit the Preliminary Waterford II Building Plans to three or four qualified design build contractors for bids. The design build contractor for the Waterford II Building shall be mutually agreed to by Landlord and Tenant in their respective reasonable discretion. Such design build contractor shall also be responsible for constructing all Waterford II Tenant Improvements. Upon agreeing to a design build contractor, Tenant shall enter into a construction contract with the selected design build contractor for all Waterford II Improvements using an applicable AIA form, which contract shall be subject to the prior written approval of Landlord. A true and complete copy of such construction contract (and all subsequent amendments thereto) shall be delivered by Tenant to Landlord promptly following the execution thereof. Tenant shall assign to Landlord, or provide that Landlord is a third-party beneficiary of, Tenant's rights under the design build contractor agreement and agreements with all design professionals (including any architects, engineers, designers, or otherwise). Thereafter, Tenant shall cause the selected design build contractor to complete construction and equipping of the Waterford II Improvements, free of mechanic's liens or other liens, and provided Landlord advances funds in accordance with the terms of this Lease, Tenant shall defend, indemnify and hold Landlord harmless from and against all claims, actions, losses, costs, damages, expenses, liabilities and obligations, including, without limitation, reasonable legal fees and costs, resulting from (A) the assertion or filing of any claim for amounts alleged to be due to the claimant for labor, services, materials, supplies, machinery, fixtures or equipment furnished in connection with the construction of the Waterford II Improvements, (B) the foreclosure of any mechanic's or materialmen's lien that allegedly secures the amounts

allegedly owed to the claimant, or (C) any other legal proceedings initiated in connection with that claim.

- (b) Landlord appoints Steven Fields and Kim B. Fields as its representatives and Tenant appoints Allen Latty, Senior Vice President, People and Culture as its representatives to act on its behalf in dealings with the other party, and both parties appoint _____ to act on their joint behalf as project manager in matters relating to the construction of the Waterford II Improvements. Landlord and Tenant each may replace its representative(s) with other representative(s) at its discretion; and Landlord and Tenant shall advise the other party of such substitution.
- (c) Tenant shall cause its design build contractor to construct, and Landlord shall fund, the Waterford II Improvements in substantial accordance with the Final Waterford II Plans, the Development Budget (as specified in **Exhibit D** attached to this Lease), and all Legal Requirements. In no event shall Landlord be responsible for Total Project Costs (as defined below) in excess of thirteen million dollars (\$13,000,000.00) for the Waterford II Premises, and Tenant shall pay any and all such excess costs.
- (d) Tenant shall cause its design build contractor to commence construction of the Waterford II Improvements as soon as practicable after receipt of appropriate permits from applicable governmental authorities. The commencement of site grading or site excavation will constitute the commencement of construction for purposes of the foregoing requirement. Tenant shall cause its design build contractor to diligently proceed with the construction of the Waterford II Improvements and shall use commercially reasonable efforts to cause its design build contractor to Substantially Complete (as below defined) the Waterford II Improvements on or before January 15, 2022. “**Substantial Completion**” or “**Substantially Complete**” shall mean that (i) the Waterford II Improvements are substantially completed in accordance with the Final Waterford II Plans, except for minor details of construction, decoration or mechanical adjustments which do not materially interfere with Tenant’s access to or use of the Waterford II Improvements and (ii) a temporary or conditional certificate of occupancy or its equivalent permitting full use and occupancy of the Waterford II Building has been obtained. Notwithstanding anything in this Lease to the contrary, a certificate of occupancy from the applicable governmental authority and a certificate from the Project Architect that the Waterford II Improvements have been completed in substantial compliance with the Final Waterford II Plans shall confirm that Substantial Completion of the Waterford II Improvements has occurred, absent manifest error. The date Substantial Completion occurs shall be referred to as the “**Substantial Completion Date.**”
- (e) Landlord and Tenant shall conduct a joint inspection of the Waterford II Premises within three (3) business days following the Substantial Completion Date and identify in writing all punch list items (“**Punch List Items**”). Tenant shall use commercially reasonable efforts to cause all

Punch List Items to be addressed and completed within sixty (60) days after the establishment of the list of such Punch List Items or within such longer period of time following the delivery of such punch list as may be reasonably required to accomplish completion of such item(s) if Tenant promptly commences completion of such Punch List Items and diligently pursues completion thereof.

- (f) Tenant shall cause the design build contractor to make the Waterford II Building available for entry by Tenant and Tenant's employees and contractors at least 30 days prior to the Waterford II Rent Commencement Date (as defined below) for the purpose of installing Tenant's machinery and equipment. Tenant shall ensure that its employees and contractors do not interfere with the completion of the construction of the Waterford II Improvements. Tenant shall indemnify, defend, and hold Landlord harmless from and against any damage or delay caused by Tenant's early entry. Entry by Tenant's employees and contractors for this limited purpose will not constitute Tenant's acceptance of the Waterford II Improvements or give rise to any obligation to pay Waterford II Base Rent.
- (g) Intentionally Deleted.
- (h) Tenant's design build contractor shall incorporate only new materials and equipment into the construction of the Waterford II Improvements. Tenant shall cause its design build contractor to warrant all Waterford II Improvements including, without limitation, the foundations, slab, structural frame, roof, exterior walls of the Waterford II Building, and any site improvements, landscaping or other elements of the Waterford II Improvements against defective design, workmanship, and materials, latent or otherwise, for a period of one year from the date of Substantial Completion (the "**Warranty Period**"). Tenant shall use commercially reasonable efforts to cause its design build contractor to repair or replace at such design build contractor's sole cost and expense any defective item of Waterford II Improvements occasioned by defective design, workmanship, or materials that Landlord or Tenant discovers during the Warranty Period. Upon the expiration of the Warranty Period, Tenant shall cause all remaining material and labor warranties for the design build contractor, the roof on the Waterford II Building, the window glazing, and all mechanical or other systems, including HVAC, electric, plumbing and sewer systems, to be assigned to Landlord. In addition, Tenant shall deliver to Landlord all other remaining assignable guaranties and warranties received by Tenant in connection with the construction of the Waterford II Improvements and, thereafter, Tenant shall perform (or cause the performance of) for the benefit of Landlord, at Landlord's expense, any continuing, non-assignable guaranties and warranties. Notwithstanding the foregoing, Tenant has no obligation to assign any warranty or guaranty to Landlord if Tenant is obligated to maintain an item covered by the warranty or guaranty pursuant to Section 10 of this Lease. From and after the expiration of the Warranty Period, Tenant shall cooperate with Landlord in Landlord's enforcement, at Landlord's sole

cost and expense, of any express warranties or guaranties of workmanship or materials for the Waterford II Improvements given by subcontractors, architects, draftsmen, or materialmen that guarantee or warrant against defective design, workmanship, or materials for a period of time in excess of the Warranty Period, provided that the foregoing shall be at Tenant's sole cost and expense if Tenant is obligated to maintain such item pursuant to Section 10 of this Lease. The obligations Tenant undertakes under the terms of this subsection are in addition to the maintenance and repair obligations that Tenant undertakes under other terms of this Lease.

- (i) Tenant shall afford Landlord access to the Waterford II Improvements at any reasonable time during normal business hours upon reasonable notice during construction for the purposes of inspecting the Waterford II Improvements.
- (j) Following Substantial Completion, the Project Architect shall measure the rentable area of the Waterford II Building (the "**Waterford II Building Square Footage**"), which measurement shall be final and binding upon the parties. Tenant shall provide Landlord with as-built drawings of the Waterford II Building and other Waterford II Improvements within 90 days after the date of Substantial Completion as well as all instructions and operator's manuals pertaining to any building systems (excluding Tenant's trade fixtures installed by Tenant, Tenant's design build contractor, or any other contractor, subcontractor, employee, or agent) within the Waterford II Building within 10 business days after the date of Substantial Completion.
- (k) Landlord reserves the right to grant easements and other development related encumbrances covering the Land as reasonably determined necessary or desirable by Landlord with Tenant's consent (not to be unreasonably withheld or delayed) in connection with the development of the Waterford II Improvements. Landlord also reserves the right to place non-monetary encumbrances on the portion of the Land owned by Landlord at other times; provided, however, in no event shall Landlord, without the prior consent of Tenant, place any encumbrance on the Land that would unreasonably affect or otherwise adversely impact Tenant's occupancy and/or use of the Premises.
- (l) Throughout the period between the date on which Tenant's design build contractor commences construction of the Waterford II Improvements and the Substantial Completion Date, Landlord shall, at Tenant's sole cost and expense, maintain in force with respect to the Waterford II Improvements an all-risk builder's risk insurance policy on a completed value basis in an amount equal to the full replacement cost of the Waterford II Improvements, which policy shall name Tenant and Tenant's design build contractor as additional insureds. The premium for such policy shall be paid directly by Landlord and included in the Total Project Cost (as defined in Section 6 of this Lease). In the event of a casualty, Tenant shall pay to Landlord the lesser of the amount of the deductible or the full amount of the loss in the case of a loss in an amount less than the

deductible, which payment shall be deemed Additional Rent hereunder and shall be due and payable by Tenant upon the later of: (i) within thirty (30) days of the date of the casualty, and (ii) with Tenant's next installment of monthly Rent immediately following Landlord's written request therefor. Tenant and its design build contractor shall each maintain general liability insurance (in form and amounts reasonably satisfactory to Landlord) naming Landlord (and its lender, if applicable) as additional insured(s) on additional insured endorsement GC 2010-1185 (or its equivalent). In addition, Tenant shall cause Tenant's design build contractor to maintain workers' compensation insurance required by applicable law and shall promptly provide to Landlord reasonable documentary evidence of such insurance coverage(s). Each party shall deliver certificates of insurance to the other evidencing such policies, and such policies shall provide that no cancellation, surrender or material change will become effective unless each additional insured receives written notice at least 30 days in advance of the time at which such cancellation, surrender or material change becomes effective. All insurance required to be maintained pursuant to this Section must be maintained with insurers authorized to do business in the State of South Carolina and having an A.M. Best Rating of A- and VIII or higher. Prior to commencing any work, each named insured shall deliver to the additional insured(s) such certificates as may be reasonably required to establish that the insurance coverage required by this Section is in effect from time to time, and that the insurer(s) have agreed to give the other party at least 30 days' notice prior to any cancellation of, or material modification to, the required coverage.

Section 5. Term of Lease

- (a) The initial term ("**Initial Term**") for the Waterford I Premises commenced November 22, 2006 (the "**Waterford I Commencement Date**") and is set to expire August 31, 2021. Landlord and Tenant hereby acknowledge and agree that (i) the Initial Term for the Waterford I Premises shall be extended to 11:59 p.m. (Rock Hill, South Carolina local time) August 31, 2036; (ii) the commencement date for the Waterford II Premises (the "**Waterford II Commencement Date**") shall be the Substantial Completion Date; and (iii) the Initial Term for both the Waterford I Premises and the Waterford II Premises shall expire simultaneously at 11:59 p.m. (Rock Hill, South Carolina local time) August 31, 2036 (the "**Expiration Date**").
- (b) Tenant has the right to renew the term of this Lease, as set forth in Section 7 below, and the Initial Term and any Renewal Terms with respect to which Tenant exercises that option in accordance with Section 7 are collectively called the "**Term**" in this Lease.
- (c) Within 30 days after the Substantial Completion Date, the parties will execute an "**Acknowledgment Letter**" substantially in the form of Exhibit E attached hereto.

- (d) Tenant shall have the right to terminate this Lease as of August 31, 2031 (the “**Early Termination Date**”) with respect to either the Waterford I Premises or the Waterford II Premises, or both, by providing written notice of termination to Landlord no later than August 31, 2030 and upon giving such notice, Tenant shall pay to Landlord an early termination fee as follows:

Waterford I Premises - \$350,000

Waterford II Premises - \$700,000

Waterford I Premises and Waterford II Premises - \$1,050,000

Section 6. Base Rent and Additional Rent

- (a) **Waterford I Base Rent:** Tenant shall pay to Landlord base annual rent for the Waterford I Premises (“**Waterford I Base Rent**”) in monthly installments in advance, as follows:

Lease Period		Waterford I Annual Base Rent	Waterford I Monthly Base Rent
Effective Date	August 31, 2021	\$ 709,305.36	\$ 59,108.78
September 1, 2021	August 31, 2022	\$ 840,294.00	\$ 70,024.50
September 1, 2022	August 31, 2023	\$ 852,898.41	\$ 71,074.87
September 1, 2023	August 31, 2024	\$ 865,691.89	\$ 72,140.99
September 1, 2024	August 31, 2025	\$ 878,677.26	\$ 73,223.10
September 1, 2025	August 31, 2026	\$ 891,857.42	\$ 74,321.45
September 1, 2026	August 31, 2027	\$ 905,235.28	\$ 75,436.27
September 1, 2027	August 31, 2028	\$ 918,813.81	\$ 76,567.82
September 1, 2028	August 31, 2029	\$ 932,596.02	\$ 77,716.33
September 1, 2029	August 31, 2030	\$ 946,584.96	\$ 78,882.08
September 1, 2030	August 31, 2031	\$ 960,783.74	\$ 80,065.31
September 1, 2031	August 31, 2032	\$ 975,195.49	\$ 81,266.29
September 1, 2032	August 31, 2033	\$ 989,823.42	\$ 82,485.29
September 1, 2033	August 31, 2034	\$ 1,004,670.78	\$ 83,722.51
September 1, 2034	August 31, 2035	\$ 1,019,740.84	\$ 84,978.40
September 1, 2035	August 31, 2036	\$ 1,035,036.95	\$ 86,253.08

- (b) **Waterford I Additional Rent:** Tenant shall pay to Landlord Additional Rent based on the Final Waterford I AIF Amount described in Exhibit B hereto (the “**Waterford I AIF Additional Rent**”) calculated as follows: the annual amount of the Waterford I AIF Additional Rent shall equal the sum of (i) 9.70% of the first \$1,000,000 of the Final Waterford I AIF Amount, plus (ii) 10.50% of the Final Waterford I AIF Amount in excess of \$1,000,000. The Waterford I AIF Additional Rent shall be paid in monthly installments, together with the Waterford I Base Rent, beginning July 1, 2022 and continuing through the expiration of the Term, including any Renewal Terms.

- (c) **Waterford II Base Rent:** Tenant shall pay to Landlord base annual rent (“**Waterford II Base Rent**”) for the Waterford II Premises in monthly installments in advance beginning on the Waterford II Commencement Date (the “**Waterford II Rent Commencement Date**”). For purposes of clarity, the Substantial Completion Date, the Waterford II Commencement Date, and the Waterford II Rent Commencement Date shall all be the same date. Upon completion of the Waterford II Improvements, Landlord shall calculate the Total Project Cost as follows:

“**Total Project Cost**” shall refer to all advances by Landlord to Tenant to acquire, develop and construct the Waterford II Premises, including, but not limited to, land acquisition costs, site work, all hard and soft construction costs (excluding Landlord’s time, travel and financing costs), costs to connect the Waterford II Premises with the Waterford I Premises (including a potential enclosed pedway between the Buildings), all leasing and brokerage commissions, carry costs, utility costs, real estate taxes, insurance costs, legal fees and costs, closing costs, and any other costs whatsoever, plus interest accruals on all Landlord advances at the rate of eight percent (8%) per annum from the date of each such advance through the Waterford II Rent Commencement Date.

The Waterford II Base Rent shall be based on the final Total Project Cost and shall be equal to the sum of the following (or part thereof):

	Total Project Cost	Rate	Waterford II Annual Base Rent	Waterford II Monthly Base Rent
First	\$9,000,000	8.00%	\$ 720,000.00	\$ 60,000.00
Plus Next	\$1,000,000	8.75%	\$ 87,500.00	\$ 7,291.67
Plus Next	\$1,000,000	9.75%	\$ 97,500.00	\$ 8,125.00
Plus Next	\$1,000,000	10.50%	\$ 105,000.00	\$ 8,750.00
Plus Next	\$1,000,000	11.50%	\$ 115,000.00	\$ 9,583.33
		Total	\$ 1,125,000.00	\$ 93,750.00

In the event that the Total Project Cost is not final and determinable as of the Substantial Completion Date, Landlord shall calculate the Total Project Cost and the Waterford II Base Rent based upon the known Total Project Cost as of the Substantial Completion Date and a reasonable estimate of any additional costs expected to be incurred, and Tenant shall timely pay such Waterford II Base Rent as required herein; provided, however, that the Total Project Cost and the Waterford II Base Rent (both past and future payments) may be adjusted thereafter (if appropriate) following the final determination of the Total Project Cost, which determination shall be made no later than ninety (90) days after Substantial Completion.

Beginning with the first calendar month following the date which is twelve (12) months after the Waterford II Rent Commencement Date and continuing each year thereafter, the Waterford II Base Rent shall increase

by one and one-half percent (1.50%) per annum over the Waterford II Base Rent payable during the preceding year.

Landlord and Tenant shall acknowledge and agree to the Waterford II Base Rent in the Acknowledgement Letter attached hereto as Exhibit E once the Waterford II Rent Commencement Date is determined, the Total Project Cost is finalized, and the Waterford II Base Rent is computed.

- (d) If the Waterford II Rent Commencement Date occurs on a day other than the first day of a calendar month, then the Waterford II Base Rent for the month in which the Waterford II Rent Commencement Date occurs will be equal to the monthly installment amount specified above multiplied by a fraction, the numerator of which is the number of days remaining in the period commencing with the Waterford II Rent Commencement Date and ending on the last day of that month, and the denominator of which is the total number of days in that month. Subsequent installments of Waterford II Base Rent following the Waterford II Rent Commencement Date shall be due and payable by Tenant in advance on the first day of each calendar month during the Term.
- (e) If a termination of this Lease occurs prior to the Expiration Date for reasons other than Tenant's default (including but not limited to a termination by Tenant pursuant to Section 19 hereof) and if the effective date of termination is other than the last day of a calendar month, the parties will prorate the Rent (as hereinafter defined) payable with respect to the calendar month in which the effective date of termination occurs based on the number of days in that month, and Landlord shall promptly refund to Tenant, without demand, setoff or deduction, any previously paid Rent attributable to any period of time following the termination date.
- (f) Tenant shall promptly pay when due to the applicable taxing authority any fee-in-lieu of taxes and all taxes, assessments (including any added or special assessments), water and sewer rents, rates and charges, transit taxes, charges for public utilities, excises, levies, vaults and all other licenses and permit fees and other governmental charges, general and special, ordinary and extraordinary, unforeseen and foreseen, of any kind and nature whatsoever (including without limitation all penalties and interest thereon by reason of Tenant's failure to pay Impositions (as defined herein) unless Landlord has not directed the taxing authority to deliver tax statements directly to Tenant such that the failure to timely pay any such Imposition results solely from the failure by Landlord to deliver the statement regarding any such Imposition(s) to Tenant at least 15 business days prior to the same becoming due and payable, in which event Landlord shall be responsible for any such penalties and interest) which at any time prior to or during the Term may be assessed, levied, confirmed, imposed upon or grow or become due and payable out of or in respect of or become a lien on (i) the Premises or any part thereof or any appurtenance thereto, (ii) any Rent reserved or payable hereunder or any other sums payable by Tenant hereunder, (iii) this Lease or the leasehold estate hereby created or the operation, possession, occupancy or use of the

Premises, (iv) any document to which Tenant is a party creating or transferring an interest or estate in the Premises (all of which are hereinafter called “**Impositions**”). Notwithstanding the aforementioned, so long as this Lease is in full force and effect and Tenant is not in default beyond all applicable grace, notice and cure periods in respect of the performance of any of Tenant’s obligation hereunder, Tenant shall get the benefit of any and all tax incentives, deductions and/or reductions applicable to the Premises and Landlord and Tenant’s improvement thereof, including, without limitation, any incentives from any Fee in Lieu of Property Taxes (“**FILOT**”) program. Otherwise, all benefits shall accrue to Landlord.

- (g) Landlord shall file a request with all taxing authorities that issue tax bills or tax statements for Impositions on the Premises to deliver the tax bills or tax statements directly to Tenant. Promptly following request from the Landlord, Tenant shall promptly deliver to Landlord copies of all tax bills and tax statements Tenant receives directly from the taxing authorities. Tenant shall pay all such tax bills or tax statements prior to delinquency. At least 15 business days prior to the date each such tax bill or tax statement would become delinquent, Tenant, upon request by Landlord, shall deliver to Landlord a copy of a paid receipt that the taxing authority issues or a Certificate of No Tax Due issued by a reputable title insurance company, at Tenant’s expense, demonstrating the payment of that Imposition. If Tenant does not timely provide proof of the payment of any Imposition as required in the prior sentence within 5 business days following request therefor by Landlord, Landlord may pay the Imposition and bill Tenant therefor. Except as otherwise set forth in Section 6(f) above, Tenant will be responsible for any interest or penalties that accrue with respect to all Impositions not timely paid by Tenant under this Section 6(g).
- (h) The foregoing will not require Tenant to pay any municipal, state or federal income, net profit, excess profits or similar taxes assessed against Landlord or any of its partners, members or holders of its equity securities, or any municipal, state or federal capital levy, estate, succession, inheritance, transfer or similar taxes of Landlord or any of its partners, members or holders of its equity securities, or corporation or other franchise taxes imposed upon the owner of the fee of the Premises. Moreover, with respect to Impositions that may lawfully be paid in installments over a period of years, with or without interest, the foregoing will not require Tenant to pay any portion of those installments or interest that become due to the taxing authority after the Expiration Date, as extended. With respect to the Impositions levied in respect of any period of time within which the Expiration Date occurs, Tenant shall only be obligated to pay a proportionate part of those Impositions, which part will bear the same ratio to the total amount of those Impositions as the number of days in the period between the beginning of that period of time and the Expiration Date bears to the total number of days in that period of time.

- (i) Notwithstanding anything in this Section 6 to the contrary, Tenant may contest in good faith and at its expense the amount or validity of any Imposition that it is obligated to pay in accordance with the foregoing and is entitled to any refund paid as a result of that contest. Landlord shall join in any contest undertaken by Tenant in accordance with the foregoing at Tenant's expense if the provisions of any law, rule or regulation at the time in effect require that the proceedings be brought by or in the name of Landlord. Notwithstanding anything in this Lease to the contrary, during any tax contest, Tenant agrees to comply with any jurisdictional requirements relating to payment before contest necessary to prevent a tax foreclosure.
- (j) For purposes of this Lease, (i) Waterford I Base Rent and Waterford II Base Rent (together "**Base Rent**"), and (ii) Waterford I AIF Additional Rent and any other amounts due from Tenant to Landlord under this Lease (herein sometimes referred to as "**Additional Rent**"), are herein collectively referred to as the "**Rent**." All Rent is due and payable without notice, demand, abatement, deduction, or setoff on the first day of each calendar month at the address specified in Section 38(j) or at such other address as Landlord may from time to time designate. Subject to any contrary instructions to which Tenant shall be subject pursuant to this Lease or any Exhibit hereto, at Landlord's request Tenant shall pay Rent to an account designated by Landlord. Following the Effective Date, Tenant's obligation to pay Base Rent and other amounts under this Lease, is independent of the performance by Landlord of its obligations under this Lease; provided, nothing in this sentence affects Tenant's rights to set off under Section 26.

Section 7. Renewal of the Term

- (a) Tenant may renew the Term for two successive 5-year renewal terms ("**Renewal Terms**") so long as this Lease is in full force and effect and Tenant is not in default beyond all applicable grace, notice and cure periods in respect of the performance of any obligation it undertakes under the terms of this Lease both at the time that Tenant exercises such renewal option and at the time such Renewal Term commences. Tenant will exercise each renewal option, if at all, by delivering written notice (the "**Option Notice**") to Landlord not less than 12 months prior to the Expiration Date of the current Term. The provisions of this Lease will govern the relationship between the parties during each Renewal Term, except that the Base Rent for each Renewal Term will be determined as provided below.
- (b) The annual Base Rent payable during each Renewal Term will be equal to the product of 95% of the Fair Market Rent (as defined below and as determined in accordance with the procedures described in this Section 7(b)) as of the date Tenant exercises its option to renew the Term for the ensuing Renewal Term, multiplied by the sum of the Waterford I Building Square Footage and the Waterford II Building Square Footage. In the event that Tenant desires to renew the Lease solely with respect to one

Building, Tenant shall notify Landlord of such in the Option Notice, and the Fair Market Rent shall be based on the particular attributes and square footage of the Building Tenant desires to lease. Initially Landlord will determine the Fair Market Rent by using its good faith judgment. Landlord will use due diligence and commercially reasonable efforts to provide written notice of its determination in that regard within 15 days after the date Tenant sends the Option Notice, but in no event later than 30 days after that date. Tenant will have a period (the “**Tenant Review Period**”) of 30 days following the date Tenant receives Landlord’s notice regarding Landlord’s proposed Fair Market Rent within which to accept Landlord’s proposal or to provide Landlord with Tenant’s objections to Landlord’s proposal. If Tenant objects to Landlord’s initial proposal or fails to affirmatively accept that proposal in writing, the parties will use due diligence and commercially reasonable efforts to reach agreement with respect to the Fair Market Rent, but, if the parties fail to agree within 15 days after the expiration of the Tenant Review Period, determination of the Fair Market Rent will be made in accordance with the terms of Subsections 7(b)(i) through 7(b)(v) below. If Landlord fails to provide Tenant written notice of its initial proposal with respect to the Fair Market Rent within the 30-day period set forth above, Tenant may commence negotiations by providing the initial notice, in which event Landlord will have a period (the “**Landlord Review Period**”) of 30 days following the date of its receipt of Tenant’s proposed Fair Market Rent within which to accept Tenant’s proposal or to provide Tenant Landlord’s objections to Tenant’s proposal. If Landlord objects to Tenant’s initial proposal or fails to affirmatively accept that proposal in writing, the parties will use duly diligent and commercially reasonable efforts to reach agreement with respect to the Fair Market Rent, but, if the parties fail to agree within 15 days after the expiration of the Landlord Review Period, determination of the Fair Market Rent will be made in accordance with the terms of Subsections 7(b)(i) through 7(b)(v) below. If determination of the Fair Market Rent in accordance with the following procedures becomes necessary, each party will place in a separate sealed envelope its final proposal as to the Fair Market Rent that will apply during the ensuing Renewal Term.

- (i) The parties will meet within five business days after the expiration of the Tenant Review Period or the Landlord Review Period, whichever is applicable, exchange the sealed envelopes and open those envelopes in the presence of each other. If the parties do not agree upon the Fair Market Rent within 30 days following the date on which the exchange and opening of the envelopes occur, Tenant may rescind its exercise of the option to renew the Term by the delivery of written notice to Landlord prior to the expiration of that 30-day period. If the parties do not agree upon the Fair Market Rent within that 30-day period and if Tenant fails to rescind its exercise of the option to renew the Term in accordance with the foregoing terms of this subsection (i), then the parties will jointly appoint a single arbitrator within the period that expires 40 days following the date on which the exchange and opening of the

envelopes occur. The arbitrator must be a real estate broker who, as his or her primary livelihood, has been active in the leasing of commercial properties in the Greater Charlotte, North Carolina area (including the Rock Hill, South Carolina area), during the 10-year period preceding the date of his or her appointment. Neither Tenant nor Landlord may select as an arbitrator any broker or firm to whom it has paid commissions or fees in the three-year period prior to the proposed engagement. Prior to the arbitrator's appointment, neither party will reveal to prospective arbitrators under consideration by the parties its opinion or the opinion of the other party regarding the Fair Market Rent. The sole issue submitted to the arbitrator for determination will be which party's final proposal regarding the Fair Market Rent is closest to the actual Fair Market Rent, as independently determined by the arbitrator.

- (ii) Within 30 days after the date of his or her appointment, the arbitrator will give the parties written notice of its determination as to which of the parties' final proposals regarding the Fair Market Rent will apply during the ensuing Renewal Term.
 - (iii) The decision of the arbitrator is final and binding on the parties.
 - (iv) If the parties fail to agree upon the appointment of an arbitrator within the time specified above, that appointment will be made by the Charlotte, North Carolina Office of the American Arbitration Association.
 - (v) The party whose proposal for Fair Market Rent is not selected shall bear the entire cost of the arbitrator.
- (c) Fair Market Rent means the annual rental rate per square foot for new tenants for comparable buildings located in the Rock Hill, South Carolina area and that are comparable in size, design, and quality to the Buildings in comparable transactions involving a tenant whose creditworthiness is comparable to that of Tenant and whose other obligations under the lease would be comparable to those undertaken by Tenant in this Lease. In any evaluation of comparable transactions, the arbitrator will consider the annual rental rates per square foot, the use to which the tenant puts the leased premises, the extent of the tenant's liability for the performance of the covenants set forth in the lease, abatement provisions reflecting free rent or no rent during the period of construction or subsequent to the commencement date as to the building in question, a tenant improvement allowance for redecorating, brokerage commissions, if any, that would be payable by the landlord, length of the lease term, size and location of premises being leased, building standard work letter or tenant improvement allowances, if any, and other generally applicable conditions of tenancy for those comparable transactions. The intent is that Tenant will obtain the same rent and other economic benefits that a landlord would otherwise give in a comparable transaction and that Landlord will make

and receive the same economic payments and concessions that other landlords would otherwise make and receive in comparable transactions.

Section 8. Use

Tenant may use the Premises for any lawful use, except that Tenant shall not use or occupy the Premises, or any part thereof, nor permit or allow the Premises or any part thereof to be used or occupied, for (i) any purpose or in any manner which is in violation of the environmental provisions set forth in Section 21 or any other Legal Requirements (as defined below), or (ii) in any manner which will violate any certificate of occupancy for the Premises or make void or voidable any insurance then in force with respect thereto as is required pursuant to this Lease. It is intended that Tenant will use the Premises for general office purposes, research and development, light manufacturing, and storage, including storage related to Tenant's tank farm, or other purposes consistent with the character of the Buildings and for lawful purposes related to Tenant's business (the "**Intended Use**") and in compliance with all federal, state, local and other laws, ordinances, principles of common law, regulations, codes and orders (collectively, "**Legal Requirements**"). Tenant shall not be required to continuously operate from the Premises.

Section 9. Alterations

- (a) During the Term, Tenant shall not make any alterations, additions or improvements to the Premises ("**Alterations**") without first obtaining the prior written consent of Landlord, which consent shall not be unreasonably withheld; provided, however, that Landlord's prior written consent shall not be required for any Alterations: (i) that cost less than \$250,000, including labor and materials, in the aggregate in any 12 month period; (ii) that are not structural exterior additions or alterations to the Premises; (iii) that are not reasonably likely to reduce the value of the Premises; (iv) that will not adversely affect the structural elements or roofs of the Buildings; and (v) that will not adversely affect the proper functioning of the Buildings' systems on a permanent basis. In seeking approval from Landlord for any Alterations, Tenant shall provide Landlord with full and complete drawings and plans for the proposed Alterations prepared by a licensed architect or engineer showing the location, specifications, method of installation and type of equipment to be installed. Tenant shall not have the right to seek any zoning changes or variances in connection with any Alterations, and Tenant shall procure all necessary governmental permits and approvals prior to commencing construction of any Alteration.
- (b) During the Term, subject to all Legal Requirements and Landlord's prior written consent, which shall not be unreasonably withheld, Tenant shall have the right, at its sole cost and expense, to install, relocate, and maintain for Tenant's exclusive use, mechanical, electrical, telecommunications, and other equipment in the Buildings (including on the roofs of the Buildings) and/or in the Premises. Such equipment shall include satellite dishes/antennas, generators, transformers, and supplemental HVAC equipment. Notwithstanding anything to the contrary herein, Tenant shall have the right to install, relocate, and maintain the above referenced equipment, at no additional charge to Tenant, provided

Tenant shall be responsible for restoring and repairing any damage caused by the installation, relocation, or removal of such equipment.

- (c) All Alterations shall be constructed by Tenant, without expense to Landlord, in a good and workmanlike manner, and in accordance with all applicable statutes and building codes, governmental rules, regulations and orders, including, but not limited to, all environmental rules, regulations, and ordinances, and the covenants, conditions and restrictions for the Waterford Business Park and other restrictive covenants applicable to the Premises. Promptly upon the completion of construction of any Alteration that is permanently affixed to the Premises, Tenant shall deliver to Landlord one complete set of “as built” drawings thereof (and if the Alterations involve any change to the footprint of any Building or the erection of a new building, an ALTA survey certified to Landlord and any mortgagee of the Premises), proof of payment for all labor and materials, and if and to the extent commercially obtainable, copies of warranties, if any, from all major contractors in favor of Landlord and Tenant (jointly and separately) against defects and deficiencies in materials and workmanship, and requiring the correction of the same upon demand of Landlord or Tenant at the expense of such contractor.
- (d) All Alterations, whether temporary or permanent in character, made in or upon the Premises either by Landlord or Tenant (other than furnishings, removable partitions, trade fixtures, equipment and other movable personal property installed by Tenant) shall be Landlord’s property upon the expiration or earlier termination of the Term, and will remain with the Premises without compensation to Tenant. Tenant’s trade fixtures, removable partitions, furnishings, equipment and other movable personal property in the Premises will remain Tenant’s property for all purposes, and Tenant may remove them at its option and expense at any time on or before the Expiration Date. Upon the expiration of the Term or any earlier termination of this Lease, Tenant shall surrender the Premises in good condition and repair, except for ordinary wear and tear, casualty damage, and damage that Landlord has the obligation to repair under the terms of this Lease. The foregoing covenant does not obligate Tenant to remove Alterations or other leasehold improvements made with respect to the Premises. All Tenant Improvements and other property of Tenant not timely removed from the Premises shall become part of the Premises and will remain with the Premises upon the expiration of the Term or any earlier termination of this Lease.
- (e) Tenant shall defend, indemnify, and save harmless Landlord against any and all mechanic’s and other liens filed or arising out of any work performed, materials furnished, or obligations incurred in connection with any Alterations. If Tenant does not procure the satisfaction or discharge of all liens for which Tenant is responsible hereunder as and when required by this Lease by bonding, payment or otherwise, Landlord may, upon 30 days’ prior written notice to Tenant, pay the amount of any lien or discharge the same by deposit or, alternatively, by bond or in any manner according to law, and the amount so paid by Landlord, together with

reasonable expenses incurred by Landlord, including all reasonable legal fees and such expenses shall be payable by Tenant as Additional Rent hereunder within 30 days after demand.

Section 10. Maintenance of Premises

- (a) During the Term, Landlord shall maintain only the following in good condition and repair at its expense: the structure of each Building, including, without limitation the roof, roof membrane, foundation, floor slab, and load-bearing and exterior walls (the “**Structural Components**”). If, in order for a Structural Component of the Building to remain in good condition, replacement of that component becomes necessary, Landlord’s obligation with respect to that Structural Component includes the obligation to replace it.
- (b) Landlord shall accomplish all maintenance for which it is responsible as soon as practicable following receipt of notice from Tenant. If a hazardous or emergency situation exists, however, Landlord shall have the maintenance performed as soon as possible.
- (c) Except as otherwise provided in this Lease, Tenant shall, during the Term, maintain in good condition and repair (ordinary wear and tear excepted) at all times at its expense the Premises and the systems serving the Premises. Moreover, during the entire Term, Tenant must keep the parking areas and all detention pond facilities clean and in good condition and repair, water the landscape plantings situated on the Land at suitable intervals, and either maintain in force service contracts providing for the routine repair and maintenance of the HVAC and other Building systems serving the Premises (each, a “**Maintenance Contract**”) or provide reasonable evidence to Landlord from time to time upon its request that the HVAC and other Building systems are being maintained in accordance with the manufacturers’ specifications under a regular maintenance program by a qualified maintenance technician. Promptly after receipt thereof, Tenant shall furnish to Landlord a copy of each Maintenance Contract (and each renewal thereof) and, upon request by Landlord, a copy of each service report received by Tenant under any Maintenance Contract. Tenant’s obligations include necessary replacements of the landscaping, as well as repairs and replacements regarding parking areas, driveways, sidewalks, detention pond facilities, stairs, elevators, loading docks, dock doors, levelers, and related facilities, and the HVAC and other systems serving the Premises and all Tenant Improvements.
 - (i) Tenant shall be responsible for the replacement of any portion of the heating, ventilating and air conditioning system in the Premises (the “**HVAC Replacement**”) which costs not more than \$10,000 per instance. Landlord shall be responsible for the cost of any HVAC Replacement in excess of \$10,000 per instance, subject to the following conditions:
 - 1. Tenant must have either obtained and continued in effect at all times during the Term a Maintenance Contract for the

HVAC system, or at all times maintained the HVAC System in accordance with the manufacturer's specifications under a regular maintenance program administered by a qualified service technician; and

2. Tenant must not be in default under this Lease beyond all applicable notice and cure period at the time of reimbursement.
- (ii) If Landlord is responsible for the cost of any HVAC Replacement and pays such cost, then Tenant shall pay to Landlord monthly, as Additional Rent, one percent (1%) of the cost of such HVAC Replacement for the remainder of the Term, including any Renewal Terms.
 - (d) At Tenant's request, Landlord agrees, with no out of pocket cost to Landlord, to assist Tenant in obtaining and coordinating maintenance providers for the Premises.
 - (e) Landlord or Tenant, after providing the other party not less than 30 days' prior written notice, may perform any obligation the other party (the "**Non-Performing Party**") is required to perform pursuant to this Section 10 but has failed to perform on behalf of such Non-Performing Party, and the Non-Performing Party shall pay to the party performing such obligation (the "**Performing Party**") within 30 days after the date of the Non-Performing Party's receipt of the Performing Party's invoice the full amount of the reasonable costs and expenses the Performing Party incurs to perform such obligations, together with the amount of any reasonable legal fees the Performing Party incurs in instituting, prosecuting or defending any action or proceeding by reason of any default in respect of any such obligation, except that the Performing Party shall have no right to perform such obligation if such obligation requires more than 30 days to perform and the Non-Performing Party has commenced performance of the obligation within the 30-day period and is diligently pursuing performance of that obligation. The foregoing in no way eliminates Landlord's obligation to promptly perform repairs involving hazardous or emergency situations, as further set forth in 10(b) above, and Tenant's corresponding right of self-help if Landlord fails to do so as more specifically provided in Section 26(a) below.

Section 11. Utilities

As of the Effective Date, Tenant shall provide or contract for and pay for all utilities and other services furnished to the Waterford I Premises, and as of the Waterford II Commencement Date, Tenant shall provide or contract for and pay for all utilities and other services furnished to the Waterford II Premises.

Section 12. Telecommunications and Other Equipment

Tenant has the right to use portions of the roof area of the Buildings, or such other locations on the Land, as Tenant may reasonably select and Landlord approves (provided

Landlord's approval shall not be unreasonably withheld, conditioned, or delayed) and as Legal Requirements permit, for the installation, operation, maintenance, security, repair, and replacement of antennae and satellite dishes and other telecommunications equipment and related cable connections, mechanical equipment, electrical equipment, generators, transformers and supplemental HVAC equipment (the "**Ancillary Equipment**"), as well as for access to risers. Tenant's use of the Premises in respect to the Ancillary Equipment is subject to the following conditions: (i) Tenant is solely responsible for the installation, maintenance, repair, operation, and replacement of the Ancillary Equipment, (ii) Tenant must install screening around the Ancillary Equipment to the extent required by Legal Requirements, and (iii) any roof penetrations necessary to install the Ancillary Equipment shall be made so as not to invalidate or void the roof warranty including using designated contractors, if required, as a condition of such compliance with the roof warranty. On or before the Expiration Date or within 30 days after the earlier termination of this Lease, Tenant shall remove the Ancillary Equipment and repair any damage to the Premises that the removal causes. Tenant shall pay Landlord within 30 days after Landlord's demand the cost of repairing any damage to the Premises arising from the removal and restoration.

Section 13. Signs

Tenant has the exclusive right to place exterior signs on the Premises subject only to any restrictions applicable by virtue of Legal Requirements, other than temporary for sale or for rent signs installed by Landlord during the last 12 months of the Term. Tenant shall maintain its signs in good condition and shall remove them and repair any damage to the Premises the removal causes on or before the Expiration Date or within 30 days after any earlier termination of this Lease. Landlord shall, at Tenant's sole cost and expense, cooperate with Tenant in obtaining approval for any signage related to the Premises.

Section 14. Landlord's Right of Access

- (a) Landlord and its authorized representatives have the right to enter the Premises during Tenant's regular business hours for the purpose of (i) determining whether the Premises are in good condition and whether Tenant is complying with its obligations arising under the terms of this Lease, (ii) performing any maintenance or repairs for which Landlord is responsible under the terms of this Lease, and (iii) showing the Premises to prospective purchasers or lenders, and during the last twelve (12) months of the Term or after an Event of Default (as hereinafter defined), showing the Premises to potential tenants. Landlord has the right to enter the Premises at all times without notice in the event of an emergency or for the purpose of making emergency repairs; under other circumstances, Landlord must give Tenant reasonable advance written notice of Landlord's intended entry (which need not be more than 48 hours in advance of that entry). Tenant may condition access to designated areas of the Premises that contain confidential information upon the accessing party's execution of a confidentiality agreement reasonably acceptable to Tenant and to the right of Tenant to have a representative of Tenant accompany such party(ies); provided, however, that notwithstanding anything in this Lease to the contrary, in the event Tenant denies access to all or any portion of the Premises to any contractor or agent of Landlord seeking entry in the event of an emergency or for the purposes of making

repairs required of Landlord, Landlord shall have no liability to Tenant of any kind or character with regard to the items or matters sought to be remedied or otherwise addressed by the party or parties refused access by Tenant.

- (b) Landlord shall conduct its activities in the Premises in a manner that will cause minimum interference with Tenant's business operations.

Section 15. Tenant's Indemnity

EXCEPT AS PROVIDED IN SECTION 18, TENANT SHALL INDEMNIFY, DEFEND, AND HOLD LANDLORD HARMLESS FROM AND AGAINST ALL CLAIMS, ACTIONS, DEMANDS, JUDGMENTS, DAMAGES, LIABILITIES AND EXPENSES, INCLUDING REASONABLE LEGAL FEES, THAT MAY BE ASSERTED AGAINST LANDLORD OR THAT LANDLORD MAY SUSTAIN BY VIRTUE OF THE OCCURRENCE OF THE DEATH OF OR BODILY INJURY TO ANY PERSON OR THE LOSS OF, DAMAGE TO, OR DESTRUCTION OF, ANY PROPERTY ARISING FROM (I) TENANT'S USE OF THE PREMISES, (II) THE NEGLIGENCE OR WILLFUL MISCONDUCT OF TENANT, OR ANY OF ITS REPRESENTATIVES, AGENTS, EMPLOYEES, CONTRACTORS OR INVITEES, OR (III) TENANT'S BREACH OF THIS LEASE, EXCEPT TO THE EXTENT THE CLAIMS, ACTIONS, DEMANDS, JUDGMENTS, DAMAGES, LIABILITIES OR EXPENSES ARISE FROM THE (I) NEGLIGENCE OR WILLFUL MISCONDUCT OF LANDLORD, OR ANY OF ITS REPRESENTATIVES, AGENTS, EMPLOYEES, CONTRACTORS OR INVITEES, OR (II) LANDLORD'S BREACH OF THIS LEASE. TENANT'S OBLIGATIONS UNDER THIS SECTION 15 APPLY REGARDLESS OF WHETHER LANDLORD WAS CONCURRENTLY NEGLIGENT (WHETHER ACTIVE OR PASSIVE), IT BEING AGREED BY THE PARTIES THAT IN THE EVENT OF CONCURRENT NEGLIGENCE, TENANT'S RESPECTIVE LIABILITY WILL BE DETERMINED IN ACCORDANCE WITH PRINCIPLES OF COMPARATIVE NEGLIGENCE.

Section 16. Landlord's Indemnity

EXCEPT AS PROVIDED IN SECTION 18, LANDLORD SHALL INDEMNIFY, DEFEND, AND HOLD TENANT HARMLESS FROM AND AGAINST ALL CLAIMS, ACTIONS, DEMANDS, JUDGMENTS, DAMAGES, LIABILITIES AND EXPENSES, INCLUDING REASONABLE LEGAL FEES, THAT MAY BE ASSERTED AGAINST TENANT OR THAT TENANT MAY SUSTAIN BY VIRTUE OF THE OCCURRENCE OF THE DEATH OF OR BODILY INJURY TO ANY PERSON OR THE LOSS OF, DAMAGE TO, OR DESTRUCTION OF ANY PROPERTY ARISING FROM (I) ANY LATENT OR PATENT DEFECT IN THE CONDITION OF THE WATERFORD I PREMISES EXISTING AS OF THE WATERFORD I COMMENCEMENT DATE, (II) THE NEGLIGENCE OR WILLFUL MISCONDUCT OF LANDLORD, OR ANY OF ITS REPRESENTATIVES, AGENTS, EMPLOYEES, CONTRACTORS OR INVITEES, OR (II) LANDLORD'S BREACH OF THIS LEASE, EXCEPT TO THE EXTENT THE CLAIMS, ACTIONS, DEMANDS, JUDGMENTS, DAMAGES, LIABILITIES OR EXPENSES ARISE FROM THE (I) NEGLIGENCE OR WILLFUL MISCONDUCT OF TENANT, OR ANY OF ITS REPRESENTATIVES, AGENTS, EMPLOYEES, CONTRACTORS OR INVITEES, OR (II) TENANT'S BREACH OF THIS LEASE. LANDLORD'S OBLIGATIONS UNDER THIS SECTION 16 APPLY REGARDLESS OF WHETHER TENANT WAS CONCURRENTLY NEGLIGENT (WHETHER ACTIVE OR PASSIVE), IT BEING AGREED BY THE PARTIES

THAT IN THE EVENT OF CONCURRENT NEGLIGENCE LANDLORD'S RESPECTIVE LIABILITY WILL BE DETERMINED IN ACCORDANCE WITH PRINCIPLES OF COMPARATIVE NEGLIGENCE.

Section 17. Insurance

- i. Commencing with the Waterford I Commencement Date with respect to the Waterford I Premises and the Waterford II Commencement Date with respect to the Waterford II Premises, and continuing for the balance of the Term, Landlord shall, at Tenant's sole cost and expense, provide and maintain a "special form" insurance policy (including fire and standard extended coverage perils, leakage from fire protective devices and other water damage, excluding flood) covering loss or damage to the Improvements (including, without limitation, the Waterford I Premises and the Waterford II Premises and any alterations made to the Premises from time to time) on a full replacement cost basis and providing for a deductible of no greater than \$50,000. Such insurance shall include an agreed amount endorsement and no coinsurance provisions and contain no exclusions for vandalism, malicious mischief, sprinkler leakage, or "act of terrorism" (as such term is defined in the Terrorism Risk Insurance Act of 2002). Boiler and Machinery Coverage shall be procured either by endorsement to the property policy or under a separate placement in an amount no less than 100% of the replacement cost or as otherwise approved by Landlord. The property insurance shall (1) have an extended period of indemnity of not less than 6 months; and (2) cover "acts of terrorism" (as such term is defined in the Terrorism Risk Insurance Act of 2002), unless otherwise agreed to in writing. The cost for all coverages described herein shall be deemed Additional Rent and shall be due and payable by Tenant within thirty (30) days following Landlord's written request therefor. In the event of a casualty, Tenant shall pay to Landlord the lesser of the amount of the deductible or the full amount of the loss in the case of a loss in an amount less than the deductible, which payment shall be deemed Additional Rent and shall be due and payable by Tenant upon the later of: (i) within thirty (30) days of the date of the casualty, and (ii) with Tenant's next installment of monthly Rent immediately following Landlord's written request therefor.
- ii. Commencing with the Waterford I Commencement Date with respect to the Waterford I Premises and the Waterford II Commencement Date with respect to the Waterford II Premises, and continuing for the balance of the Term, Tenant shall, at its sole cost and expense, provide and maintain the following insurance, in the amounts specified below:
 - a. property insurance covering Tenant's machinery, equipment, furniture, fixtures, personal property (including property under the care, custody, or control of Tenant) and business interests which may be located in, upon or about the Premises in such amounts as Tenant may from time to time deem prudent.
 - b. business interruption insurance in an amount sufficient to provide for the payment of Rent during the continuation of any interruption

of the Tenant's business for a period of at least 12 months. Upon any casualty to the Premises allowing Tenant to terminate this Lease pursuant to Section 19 hereof, Landlord shall have no claim against the business interruption insurance proceeds of Tenant after the date of termination.

- c. bodily injury and property damage liability insurance, with a limit of not less than \$2,000,000 per occurrence and \$4,000,000 in the aggregate; such insurance will be on commercial general liability form 001 (or its equivalent) including, without limitation, personal injury and assumed contractual liability with regard to the indemnity agreements of Tenant set forth in Section 15; Tenant shall cause Landlord and its lender to be named as additional insureds under such liability insurance, as their interests may appear, and shall cause such coverage to include cross liability and severability of interests clauses and, unless otherwise approved in writing by Landlord, to have a deductible of \$25,000 or less and no retention or self-insurance provision;
- d. worker's compensation insurance insuring against and satisfying Tenant's obligations and liabilities under the worker's compensation laws of the State of South Carolina and employers' liability insurance in the limit of \$500,000/500,000/500,000 (provided that such limits may be adjusted if required by law and Tenant may self-insure this obligation pursuant to a program of self-insurance if permissible under applicable law);
- e. if Tenant operates owned, hired or non-owned vehicles on the Premises, comprehensive automobile liability will be carried at a limit of liability not less than \$1,000,000 combined bodily injury and property damage; and
- f. umbrella or excess liability insurance written on an occurrence basis and covering claims in excess of the underlying insurance described in the foregoing subsections (iii), (iv) and (v) above, with a \$15,000,000 minimum limit per occurrence. Such insurance shall contain a provision that it will not be more restrictive than the primary insurance and shall drop down as primary insurance in the event the underlying insurance policy aggregate is exhausted.

Each coverage in this Section 17(b) shall include a waiver of subrogation endorsement in favor of Landlord and Landlord's lender.

- iii. All insurance required to be maintained by Tenant pursuant to this Section 17 must be maintained with insurers licensed to do business in the State of South Carolina and having an A.M. Best Rating of at least A- and VIII.
- iv. Tenant may provide the insurance required by virtue of the terms of this Lease by means of a combination of primary and excess or umbrella coverage and by means of a policy or policies of blanket insurance so long as (i) the amount of the total insurance allocated to the Premises under the

terms of the blanket policy or policies furnishes protection equivalent to that of separate policies in the amounts required by the terms of this Lease, and (ii) the blanket policy or policies comply in all other respects with the other requirements of this Lease.

- v. The required deductibles, limits and coverages of all insurance set forth in this Section 17 may be adjusted from time to time by Landlord (but not more frequently than once every 5 years) to conform with customary and prevailing insurance policies at the time in the city in which the Premises are located or of securitized mortgage lending.
- vi. Within five (5) days of the Effective Date with respect to the Waterford I Premises, prior to the Waterford II Commencement Date, and at least 5 days prior to each policy anniversary, Tenant shall furnish Landlord and its lenders with certificates of insurance or binders, in a form reasonably acceptable to Landlord and its lenders, evidencing that all of the insurance required by the provisions of this Lease for the benefit of Landlord and its lenders, and required to be in force by the provisions of this Lease are in effect and that the insurer(s) have agreed to give the other party at least 30 days' notice prior to any cancellation of, or any material modification to, the required coverage. Such certificates of insurance/binders shall be executed by each insurer or by an authorized representative of each insurer where it is not practical for such insurer to execute the certificate itself. Such certificates of insurance/binders shall identify underwriters, the type of insurance, the insurance limits and deductibles and the policy term and shall specifically list the special provisions enumerated for such insurance required by this Lease. Concurrently with the renewal of each policy, Tenant shall furnish Landlord with a report of an independent broker stating that the insurance required under this Section 17 is in effect, that all premiums have been paid, and attaching an updated copy of the schedule of insurance. Landlord and Tenant shall cooperate with each other in the collection of any insurance proceeds which may be payable in the event of any loss, including the execution and delivery of any proof of loss or other actions required to effect recovery. Tenant shall cause all commercial general liability and property policies maintained by Tenant to be written as primary policies, not contributing with and not supplemental to any coverage that Landlord may carry.

Notwithstanding anything herein to the contrary, in the event any of the insurance coverage set forth herein as required coverage to be maintained by Tenant becomes unavailable, or if available but only at such rates as to be commercially unreasonable and are no longer typically required to be carried regarding premises comparable to the Premises, Landlord and Tenant shall cooperate in good faith to revise the applicable insurance coverage requirements to reflect then current market considerations. Tenant acknowledges that Landlord's lender must approve any such revision of applicable insurance coverages.

Section 18. Waiver of Subrogation

Notwithstanding anything to the contrary set forth in this Lease, neither Landlord nor Tenant shall be liable (by way of subrogation or otherwise) to the other party (or to any

insurance company insuring the other party) for any loss or damage to the property of the releasing party to the extent the loss or damage is covered by property insurance carried or required by this Lease to be carried by the releasing party **even though such loss might have been occasioned by the negligence or willful acts or omissions of Landlord or Tenant or their respective employees, agents, contractors or invitees.** Landlord and Tenant shall give each insurance company which issues policies of insurance, with respect to the items covered by this waiver, written notice of the terms of this mutual waiver, and shall have such insurance policies properly endorsed, if necessary, to prevent the invalidation of any of the coverage provided by such insurance policies by reason of such mutual waiver. For the purpose of the foregoing waiver, the amount of any deductible or self-insured retention applicable to any loss or damage shall be deemed covered by, and recoverable by the insured under the insurance policy to which such deductible or self-insured retention relates.

Section 19. Casualty

- vii. If damage caused by a fire or other casualty renders a Building fully or partially untenable, subject to Tenant's rights to terminate this Lease as set forth in this Section 19, neither the Base Rent nor any other amounts payable under this Lease will abate for the period during which the Building is wholly or partially untenable.
- viii. If a fire or other casualty renders the Premises untenable, in whole or in part, and the estimated time for the restoration of the Improvements exceeds the period that will expire on the date that is 270 days after the date of the occurrence of the fire or casualty, Tenant may terminate this Lease by the delivery of written notice to Landlord within 15 days following the date on which Landlord notifies Tenant of the estimated time for the restoration of the Improvements. Landlord must provide that estimate within 60 days following the date of the casualty. If a termination of this Lease does not occur in accordance with the foregoing provisions of this Section 19(b), but Landlord fails to complete the restoration of the Improvements by the date that is 60 days after the date of the expiration of the period within which Landlord estimated the restoration would be completed, Tenant may, notwithstanding anything in this Lease to the contrary, terminate this Lease by the delivery of written notice to Landlord at any time following the expiration of that 60-day period, but prior to the date on which Landlord completes the restoration of the Improvements. Upon any casualty to the Premises allowing Tenant to terminate this Lease pursuant to this Section 19, Landlord shall have no claim against the business interruption insurance proceeds of Tenant after the date of termination. Excusable Delays shall not extend any of the time periods set forth in this Section 19(b) for more than one hundred eighty (180) days in the aggregate.
- ix. If fire or other casualty damages the Premises and a termination of this Lease does not occur under subparagraph (b) of this Section 19, Tenant shall pay to Landlord the lesser of the amount of the deductible or the full amount of the loss in the case of a loss in an amount less than the deductible (which payment shall be due and payable by Tenant as Additional Rent hereunder upon the later of: (i) within thirty (30) days of

the date of the casualty, and (ii) with Tenant's next installment of monthly Rent immediately following Landlord's written request therefor), and so long as Tenant is not in default beyond all applicable grace, notice and cure periods under the terms of this Lease, Landlord shall restore the Improvements to substantially the condition that existed prior to the occurrence of the fire or other casualty; provided, however, that with respect to the Tenant Improvements, Tenant shall be obligated to restore all items covered by Tenant's property insurance, including, but not limited to, Tenant's machinery, equipment, furniture, fixtures, and personal property, and Landlord shall only be obligated to restore the Tenant Improvements to the condition reflected in the most recent as-built plans for the Tenant Improvements in Landlord's possession; and provided further, that if the casualty arises during the Waterford I Additional Improvements or the Waterford II Improvements, Tenant and Landlord shall work together cooperatively to restore the Improvements in substantial accordance with the Final Waterford I Improvement Plans and the Final Waterford II Plans. Landlord and Tenant shall each pursue the restoration required by this subparagraph (c) of this Section 19 with diligence and continuity upon and subject to receipt of the insurance proceeds covering such casualty. In completing the restoration, Landlord and Tenant shall each comply with all applicable Legal Requirements. In performing their respective restoration obligations, Landlord and Tenant must each restore their respective portions of the Premises so that they comply with Legal Requirements applicable at the time of the restoration and not just the Legal Requirements that were applicable at the time of original construction of the Premises. If the aggregate amount of those insurance proceeds allocable to the Improvements exceeds the aggregate amount of the costs Landlord reasonably incurs in connection with the restoration of the Improvements, Landlord is entitled to the excess. Tenant is responsible for any excess costs incurred by Landlord in restoring the Improvements.

Section 20. Condemnation

- x. If any part of the Premises or all legal access to the Premises is taken for public use by condemnation, eminent domain or other similar action and the taking materially and adversely affects Tenant's operations in the Buildings, Tenant may immediately terminate this Lease by delivering notice to Landlord. Upon such termination, Tenant shall after termination have no further obligation to pay Rent to Landlord and Landlord shall look to the proceeds of the condemnation, eminent domain or other similar action for compensation for such taking.
- xi. If any part of the Premises is taken and Tenant does not terminate this Lease, Base Rent will be equitably adjusted, and Landlord shall restore the remainder of the Premises at its expense as necessary to render them suitable for Tenant's use, so long as Tenant is not in default under the terms of this Lease.

- xii. The entire award with respect to any taking shall be paid to Landlord, except that Tenant shall be entitled to any award which the condemning authority may make, and which shall be provided for by law, specifically for Tenant's moving expenses and business dislocation damages and the value of Tenant's fixtures, alterations, installations and improvements which do not become part of the Premises or property of Landlord, provided that same are not deducted from the award otherwise payable to Landlord.

Section 21. Compliance with Environmental Laws

- xiii. Tenant shall timely comply at its sole cost and expense with all rules, requirements, orders, directives, ordinances and regulations applicable to Tenant's use, occupancy and maintenance of the Premises, including, without limitation, all applicable environmental laws, rules, requirements, orders, directives, ordinances and regulations of the United States of America or any state, city or municipal government or other lawful authority having jurisdiction over the Premises (collectively "**the Environmental Laws**"), and shall defend, indemnify and hold Landlord and its members, managers, lenders, and their respective members, managers, directors, officers, shareholders, agents, employees, and contractors harmless from and against all claims, obligations, demands, actions, proceedings, judgments, losses, damages, liabilities, fines, penalties and expenses (including, without limitation, sums paid on settlement of claims, reasonable legal fees, and reasonable consultant and expert fees and expenses) that any one or more of them may sustain by virtue of any environmental condition that Tenant's use, occupancy, and maintenance of the Premises causes and the continued existence of which violates the Environmental Laws.
- xiv. The provisions of this Section 21 survive the expiration of the Term or the earlier termination of this Lease.
- xv. Except as used by Tenant in the ordinary course of Tenant's business, including, without limitation, uses for general offices, research and development, light manufacturing, telecommunications, storage, or other purposes consistent with the character of the Buildings, and any such use by Tenant being in accordance with applicable Legal Requirements (the foregoing uses not requiring Landlord's consent), Tenant shall not cause or permit any Hazardous Substances (as defined below) to be brought upon, kept or used in or about the Premises or the Building, without the prior written consent of Landlord.
- xvi. Hazardous Substance(s) shall mean any and all substances (whether solid, liquid or gas) defined, listed, or otherwise classified as pollutants, hazardous wastes, hazardous substances, hazardous materials, extremely hazardous wastes, or words of similar meaning or regulatory effect under any present Environmental Laws including but not limited to petroleum and petroleum products, asbestos and asbestos-containing materials, polychlorinated biphenyls, lead, radon, radioactive materials, flammables and explosives.

Section 22. Intentionally Deleted

Section 23. Intentionally Deleted

Section 24. Tenant's Default

The occurrence of any one or more of the following events (inclusive of any applicable notice and cure period(s) hereinafter referred to as "**Event(s) of Default**") will constitute a default and breach of this Lease by Tenant:

- xvii. Tenant's failure to pay any Base Rent or Additional Rent (including, without limitation, the Impositions) when due and the continuance of that failure for more than 5 business days after the date on which Landlord gives Tenant written notice of the delinquency, provided that Landlord is required to give notice of such failure only twice in any 12-month period and Landlord is not required to give Tenant notice of default for the third and subsequent Rent and other payment defaults during any 12-month period so that for those defaults, an Event of Default occurs if Tenant fails to pay any Rent when due and the failure continues for a period of five (5) business days;
- xviii. Tenant's failure to observe or perform any of the covenants, conditions or provisions of this Lease that Tenant must observe or perform, other than the payment of Base Rent or Additional Rent or as specified in Section 24(c), where the failure continues for a period of 30 days after Tenant's receipt of written notice from Landlord; but if the nature of the obligation that Tenant has failed to perform is such that more than 30 days are reasonably required for its rectification, then an Event of Default will not occur so long as Tenant commences the rectification within the initial 30-day period and diligently and continuously prosecutes the rectification to completion; or
- xix. Tenant's failure to maintain the insurance required pursuant to Section 17 within five (5) business days after written notice from Landlord to Tenant.

If Landlord and Tenant are in dispute over whether Tenant is in default (which for purposes of this paragraph only shall be before any applicable notice and cure period) of a nonmonetary obligation and no emergency condition requiring immediate action exists as a result of, or directly or indirectly related to, the alleged default, the parties' respective representatives with authority to settle the matter shall meet within 2 business days after request by either party in order to attempt to resolve the dispute. Unless otherwise agreed by Landlord and Tenant, the meeting shall take place at the Premises. Notwithstanding anything herein to the contrary, in the event it is determined pursuant to such resolution discussions that Tenant is in default of any such nonmonetary matter, such matter shall not constitute an Event of Default if Tenant subsequently remedies such default within the time frame(s) set forth in Section 24(b) above following such determination.

Section 25. Landlord's Remedies

- xx. At any time after the occurrence of an Event of Default, with or without additional notice or demand, Landlord may do one of the following:

- g. terminate Tenant's right to possession of the Premises and repossess the Premises by any lawful means without terminating this Lease and relet, upon reasonable terms, all or a portion of the Premises (if Landlord elects to enter and relet the Premises, Landlord may at any time thereafter elect to terminate this Lease). For the purposes of re-letting, Landlord may repair, remodel, or alter the Premises. If Landlord fails to re-let the Premises, then Tenant shall pay to Landlord the Base Rent and Additional Rent reserved in this Lease for the balance of the Term as those amounts become due in accordance with the terms of this Lease. If Landlord re-lets the Premises but fails to realize a sufficient sum from the re-letting to pay the full amount of Base Rent and Additional Rent reserved in this Lease for the balance of the Term as those amounts become due in accordance with the terms of this Lease, then Tenant shall pay to Landlord the amount of any deficiency within 30 days of Tenant's receipt of Landlord's demand;
 - h. terminate this Lease and repossess the Premises by any lawful means. In that event, Landlord may recover from Tenant as damages (i) all Base Rent and Additional Rent (plus the cost necessary to satisfy Tenant's obligation to maintain and insure the Premises, as set forth under Sections 10 and 17, respectively, of this Lease) that became due prior to the termination and that remains unpaid, (ii) the discounted present value (determined based on then commercially reasonable rates) of the amount, if any, by which (I) the Base Rent reserved under the terms of this Lease for the balance of the Term that remained as of the effective date of the termination exceeds (II) the fair market rent (but not less than the amount for which the Premises has been relet) for the Premises for the balance of the Term after deduction of all anticipated reasonable expenses of reletting for that period, and (iii) all reasonable costs and expenses Landlord reasonably incurs in connection with the enforcement of Tenant's obligation to pay those damages, including, without limitation, reasonable legal fees and costs. If the amount described in clause (II) above exceeds the amount described in clause (I) above, then Landlord has no obligation to pay Tenant any part of the excess or to credit any part of the excess against any other sums or damages for which Tenant may be liable to Landlord at the time of the termination;
 - i. in the case of an Event of Default under Section 24(c) above, obtain the required insurance for Tenant, and Tenant shall be liable for the reasonable cost thereof; or
 - j. pursue any other remedy available to Landlord under the laws of the State in which the Premises are located.
- xxi. Unless required by applicable law, Landlord shall have no obligation to mitigate damages upon the occurrence of an Event of Default by Tenant. However, if Landlord is required by applicable law to mitigate Tenant's

damages, Landlord's obligation shall be satisfied in full if Landlord undertakes to lease the Premises to another tenant (a "**Substitute Tenant**") in accordance with the following criteria: (1) Landlord shall have no obligation to solicit or entertain negotiations with any other prospective tenants for the Premises until Landlord obtains full and complete possession of the Premises, including, without limitation, the final and unappealable legal right to relet the Premises free of any claim of Tenant; (2) Landlord shall not be obligated to lease or show the Premises, on a priority basis, or offer the Premises to a prospective tenant when other premises in any other building owned by Landlord within a 3 mile radius of the Building suitable for that prospective tenant's use are (or soon will be) available; (3) Landlord shall not be obligated to lease the Premises to a Substitute Tenant for a rent less than the current fair market rent then prevailing for similar uses in comparable buildings in the Rock Hill, South Carolina area; (4) Landlord shall not be obligated to enter into a lease with a Substitute Tenant whose use would: (i) adversely affect the reputation of the Building; or (ii) be incompatible with the operation of the Building; and (5) Landlord shall not be obligated to enter into a lease with any proposed Substitute Tenant which does not have, in Landlord's reasonable opinion, sufficient financial resources to operate the Premises in a first class manner and to fulfill all of the obligations in connection with the lease thereof as and when the same become due.

- xxii. Pursuit of any of the above stated remedies by Landlord after an Event of Default by Tenant shall not preclude pursuit of any other remedy provided in this Lease or law or equity, nor shall pursuit of any remedy constitute forfeiture or waiver of any payment due to Landlord. No waiver by Landlord of any violation or breach of any of the terms, provisions and covenants herein contained shall be deemed or construed to constitute a waiver of any other violation or breach of any of the terms, provisions and covenants herein contained. Forbearance by Landlord to enforce one or more of the remedies herein provided upon an Event of Default by Tenant shall not be deemed or construed to constitute a waiver of any other violation or default.

Section 26. Landlord's Default and Tenant's Remedies

- xxiii. If Landlord defaults in the performance of any of Landlord's obligations set forth in this Lease, and if (i) Landlord's default creates or increases the risk of imminent danger of bodily injury to or death of persons or damage to or destruction of property, including, without limitation, the Buildings or Tenant's property, and either Landlord does not commence the rectification of its default promptly upon Tenant's delivery of oral or written notice of the default to Landlord or Landlord fails to pursue the rectification of its default with diligence and continuity or (ii) Landlord's default does not create or increase the risk of imminent danger of bodily injury to or death of persons or damage to or destruction of property, including, without limitation, the Buildings or Tenant's property and Landlord fails to rectify its default within 30 days after Tenant's delivery of written notice of the default to Landlord or within such longer period of

time following the delivery of that notice as may be reasonably required to accomplish the rectification of the default through the exercise of prompt, diligent and continuous efforts, then Tenant may perform the obligation on behalf of Landlord. Landlord shall pay to Tenant within 30 days after the date of Landlord's receipt of Tenant's invoice the full amount of the reasonable cost and expense Tenant incurs in performing the obligation on behalf of Landlord, together with the amount of any reasonable legal fees Tenant incurs in instituting, prosecuting or defending any action or proceeding by reason of any default in respect of any obligation Landlord has undertaken under the terms of this Lease.

- xxiv. If Landlord does not pay any amounts owing to Tenant under Section 10(e) or Section 26(a) and Tenant obtains a final, non-appealable judgment against Landlord in a court of competent jurisdiction, then Tenant may set off the amount of the judgment, including, without limitation, reasonable legal fees and court costs included in the judgment, against the next installments of Base Rent coming due under this Lease.

Section 27. Late Payments; Interest on Late Payments

If Tenant becomes delinquent with respect to the payment of any Rent becoming due under the terms of this Lease and the default continues for more than five (5) days after the due date, then Tenant shall pay to Landlord with the late payment a late fee equal to 4% of the amount of the payment; provided, however that such late fee shall not be due the first time such delinquency occurs during any successive twelve (12) month period. Any past due payment of Rent under this Lease will bear interest from the date due until the date paid at the rate of ten percent (10.0%) per annum (the "**Default Rate**"). Any amount with respect to which Landlord becomes delinquent in making payment to Tenant as required by this Lease will also bear interest from the date due until the date paid at the Default Rate.

Section 28. Quiet Enjoyment

Landlord warrants that, so long as Tenant pays all Base Rent and Additional Rent that becomes due under the terms of this Lease and is not otherwise in default beyond any applicable cure period in respect of the performance of any obligation it undertakes under the terms of this Lease, Tenant may peaceably and quietly enjoy the Premises at all times during the Term without disturbance by anyone claiming by, through or under Landlord (including, without limitation, any applicable mortgagee of Landlord's interest in the Lease or the Premises).

Section 29. Subordination, Attornment & Non-Disturbance

At Landlord's request, and subject to the immediately succeeding sentence, Tenant shall subordinate its rights under this Lease to the lien of any first mortgage or first deed of trust hereinafter executed in favor of any bank, insurance company or other lending institution against the Premises. As a condition to any subordination that Landlord requests, the mortgage holder must execute an agreement in substantially the form attached to this Lease as **Exhibit F**. Simultaneously with the execution of this Lease by Landlord, Landlord shall deliver to Tenant a Subordination, Non-Disturbance and Attornment Agreement ("**SNDA**") in the form of **Exhibit F** executed by the holder of any mortgage encumbering the Premises as of the Effective Date. Landlord agrees to deliver to Tenant a SNDA from any mortgage of the Premises existing after the Effective Date.

Section 30. Landlord's Sale of Premises

Provided the Improvements have been completed and delivered to Tenant as herein provided and the Waterford II Commencement Date shall have occurred, if Landlord subsequently sells the Premises, the purchaser shall expressly assume the obligations Landlord undertakes under the terms of this Lease and Landlord shall thereupon be relieved from liability arising under the terms of this Lease by reason of any act, occurrence or omission occurring after the consummation of the sale. The parties do not intend the foregoing to relieve Landlord from those obligations that the terms of this Lease require Landlord to perform prior to the sale.

Section 31. Broker's Commissions

Each party represents to the other that the only broker used in connection with this Lease is Cresa Global, Inc., whose commission Landlord shall pay, pursuant to a separate written agreement, provided that such commission shall be included in the Total Project Cost. Each party shall defend and indemnify the other from and against any claims, demands and actions brought by any broker or other finder to recover a brokerage commission or any other damages on the basis of alleged dealings with the indemnifying party contrary to the foregoing representation.

Section 32. Estoppel Certificate

Within 20 days after a party's receipt of a written request from the other party, the requested party shall execute and deliver to the requesting party a statement in substantially the form of the attached **Exhibit G** that (i) certifies that this Lease is unmodified and in full force and effect (or, if modified, states the nature of the modification and certifies that this Lease as so modified is in full force and effect) and the date to which Base Rent is paid in advance, if any, and (ii) acknowledges that, to the requested party's knowledge, there are no uncured defaults on the part of either party or specifies such defaults if the requested party claims any.

Section 33. Holding Over

Except as set forth below, if Tenant continues to occupy the Premises after the expiration or other termination of this Lease or the termination of Tenant's right of possession, such occupancy shall be that of a tenancy at sufferance. Tenant shall, throughout the entire holdover period, be subject to all the terms and provisions of this Lease (other than provisions relating to length of the Term) at a Base Rent equal to 150% of the Base Rent payable during the month in which the Expiration Date occurs. Except as set forth below, no holding over by Tenant or payments of money by Tenant to Landlord after the expiration of the Term shall be construed to extend the Term or prevent Landlord from recovery of immediate possession of the Premises by summary proceedings or otherwise. Notwithstanding the foregoing provisions of this Section, if Tenant should find it necessary to hold over, Tenant may give written notice (the "**Hold Over Notice**") to Landlord that it intends to hold over not less than 9 months prior to the expiration or termination of the Term. If Tenant timely provides the Hold Over Notice, Tenant may hold over and continue to occupy the Premises for the period of 3 months at the Base Rent payable during the month in which the Expiration Date occurs.

Section 34. Assignment and Subletting

So long as the Premises are used for the Intended Use, Tenant may transfer or assign its interest in this Lease and may sublet all or a portion of the Premises without first obtaining Landlord's written consent. If Tenant desires to assign this Lease or sublet all or a

portion of the Premises to an entity or person that intends to use the Premises for other than the Intended Use, then Tenant must obtain Landlord's written consent prior to such assignment or sublease. Landlord may not unreasonably withhold, condition, or delay its consent. No subletting, assignment of rights, or delegation of duties that Tenant may make will relieve Tenant from liability for the performance of the obligations Tenant undertakes under the terms of this Lease, unless Landlord, in its sole discretion, grants such relief. Landlord has no recapture rights in connection with any assignment or sublease.

Section 35. Intentionally Deleted

Section 36. Intentionally Deleted

Section 37. Intentionally Deleted

Section 38. Miscellaneous

- xxv. This Lease inures to the benefit of and binds each of the parties and their respective successors and assigns.
- xxvi. All section headings and captions used in this Lease are purely for convenience and do not affect the interpretation of this Lease.
- xxvii. All Exhibits referenced in this Lease are incorporated in and made a part of this Lease, even if they are not physically attached to this Lease.
- xxviii. This Lease will be governed by and interpreted in accordance with the laws of the State where the Premises are located, and the parties submit to the jurisdiction of any appropriate state court within that State for adjudication of disputes arising from this Lease.
- xxix. Except as otherwise provided, the parties may amend this Lease only by means of written agreements signed on behalf of Tenant and Landlord by their respective authorized signatories.
- xxx. This Lease supersedes all prior understandings, representations, negotiations, and correspondence between the parties and constitutes the entire agreement between them with respect to the matters described in this instrument. No course of dealing, course of performance, or usage of trade will modify or affect this Lease.
- xxxi. The invalidity, illegality, or unenforceability of any provision of this Lease will not affect or impair the validity, legality, and enforceability of the remaining provisions.
- xxxii. The failure of either party at any time to require performance by the other of any provision of this Lease will not affect that party's right to enforce that provision, nor will the waiver by either party of any breach of any provision of this Lease constitute a waiver of any further breach of the same provision or any other provision.
- xxxiii. The parties may execute this Lease in any number of counterparts and all those counterparts taken together will constitute a single agreement.

Emailed pdf signatures provided by any party to this Lease will be treated as original signatures of the party providing the pdf signature.

- xxxiv. All notices, demands, requests, approvals, or other communications required or permitted under this Agreement must be in writing, and unless personal delivery is effected earlier, will be deemed delivered: (i) three business days after deposit in the United States Mail, postage prepaid, registered or certified mail, return receipt requested, on a business day; or (ii) one business day after delivery to any nationally-recognized overnight delivery service on a business day for prepaid delivery on the next business day; or (iii) on the business day sent, if sent by e-mail prior to 4:00 p.m., Rock Hill, South Carolina time, with a confirming copy being sent by one of the other specified methods on the same business day; in each case addressed as follows:

If to Landlord:

3D Fields, LLC
c/o Fields-Realty, LLC
550 SE 5th Avenue, Apt. 304S
Boca Raton, Florida 33432
Attention: Steven Fields and Kim B. Fields
E-mail: steve@fields-realty.com and kim@fields-realty.com
with a copy to:

Alexander Ricks PLLC
1420 E. 7th Street, Suite 100
Charlotte, NC 28204
Attention: Thomas D. Ricks
Fax: (704) 365-3676
E-mail: tom@alexanderricks.com
If to Tenant:

3D Systems Corporation
333 Three D Systems Circle
Rock Hill, South Carolina 29730
Attention: Andrew M. Johnson, Executive Vice President,
Chief Legal Officer and Secretary
Fax: (803) 326-4796
E-mail: andrew.johnson@3dsystems.com
And

Hunton Andrews Kurth LLP

200 Park Avenue
New York, New York 10166-0005
Attention: J.C. Chenault
Fax: (804) 344-7999

E-mail: jchenault@HuntonAK.com
With a copy to:

3D Systems, Inc.
c/o SRS-Cresa Lease Administration
15660 N. Dallas Parkway, Suite 1200
Dallas, Texas 75248

A party may change the address to which it wishes notices to be sent by delivering notice of the change of address to the other party in accordance with the terms of this Section 38(j).

- xxxv. Except as provided below, Tenant may not seek to satisfy any judgment that Tenant obtains against Landlord by reason of the negligence of Landlord or any of its members, managers, shareholders, partners, directors, officers, agents, employees, or contractors or Landlord's failure to perform any of the obligations it has undertaken under the terms of this Lease from any source other than Landlord's interest in the Premises including all insurance and condemnation proceeds and the revenue generated by the operation of the Premises and no asset of any member, manager, shareholder, director, officer, employee, or agent of Landlord or any of the successors or assigns of any of the foregoing will be subject to attachment or execution to satisfy the judgment. Notwithstanding any provision of this Lease apparently to the contrary, Tenant may also satisfy any final, non-appealable judgment against Landlord related to this Lease by setting off the amount of the judgment against Base Rent.
- xxxvi. If Landlord or Tenant is a corporation, partnership, or limited liability company, each individual executing this Lease on behalf of that party represents and warrants that that party is a duly formed and existing entity qualified to do business in South Carolina, that that party has full right and authority to execute and deliver this Lease, that each person signing on behalf of that party is authorized to do so, and that all necessary corporate or partnership action has been taken.
- xxxvii. Whenever necessary or appropriate, the neuter gender as used herein shall be deemed to include the masculine and feminine; the masculine to include the feminine and neuter; the feminine to include the masculine and neuter; the singular to include the plural; and the plural to include the singular.
- xxxviii. This Lease may be executed in one or more counterparts, each of which shall constitute an original, but all of which, taken together, shall be considered one and the same agreement.
- xxxix. **TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAWS, EACH PARTY KNOWINGLY, VOLUNTARILY, AND INTENTIONALLY WAIVES THE RIGHT TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION BASED ON THIS LEASE, ARISING OUT OF, UNDER, OR IN CONNECTION WITH THIS LEASE, OR ANY COURSE OF CONDUCT, COURSE OF**

DEALING, STATEMENT (WHETHER VERBAL OR WRITTEN), OR ACTION BETWEEN THE PARTIES OR ANY EXERCISE BY ANY PARTY OF ANY OF ITS RESPECTIVE RIGHTS UNDER THIS LEASE OR IN ANY WAY RELATING TO THE PREMISES. THIS WAIVER IS A MATERIAL INDUCEMENT FOR THE PARTIES TO ENTER INTO THIS LEASE. THIS WAIVER SURVIVES THE EXPIRATION OR TERMINATION OF THIS LEASE.

- xl. The term “business day” when used herein shall mean all calendar days other than Saturdays, Sundays and any days on which banks in Charlotte, North Carolina are not open to transact business with customers.

Section 39. Time of Essence

Time is of the essence with respect to this Lease. If the final day of any period of time described in this Lease is a Saturday, Sunday or a legal holiday under the laws of the United States or the State where the Premises are located, that period is extended to the next day that is not a Saturday, Sunday or legal holiday.

Section 40. Validity of Agreement

This Lease will not be valid or bind Landlord or Tenant unless an authorized signatory of Landlord or Tenant has signed it on behalf of the respective party.

Section 41. Incentives

Tenant may receive certain economic and/or entitlements (collectively, the “**Incentives**”) from the State of South Carolina, the City of Rock Hill, South Carolina, York County, South Carolina and from perhaps other sources as well, in connection with the construction of the Waterford II Premises and the location of Tenant’s business within the City of Rock Hill, South Carolina, and as between Tenant and Landlord, so long as this Lease is in full force and effect and Tenant is not in default beyond all applicable grace, notice and cure periods in respect of the performance of any obligation it undertakes under the terms of this Lease, Tenant shall be entitled to the sole and exclusive benefit of each of such incentives and entitlements. Otherwise, Landlord shall be entitled to such benefits. Landlord shall cooperate to the extent Tenant reasonably requests and at no cost to Landlord, with Tenant, the RHEDC, the City, the County and the State in order to satisfy any reasonable condition established in connection with Tenant’s receipt of the benefit of the Incentives, including, without limitation, entering into any required agreements (subject to Landlord’s reasonable consent), supplying any necessary non-confidential information, executing required forms, and any other actions that are reasonably required to enable Tenant to receive the benefit thereof. Tenant agrees to pay any and all amounts due under any such agreements, comply with all obligations imposed on Landlord under such agreements, to indemnify, defend, and hold harmless Landlord from any cost, expense, loss or liability whatsoever that Landlord may incur by reason of assisting Tenant in securing the Incentives, and Tenant shall promptly pay Landlord’s reasonable legal fees and costs associated therewith. The parties intend that so long as this Lease is in full force and effect and Tenant is not in default beyond all applicable grace, notice and cure periods in respect of the performance of any obligation it undertakes under the terms of this Lease, Tenant and not Landlord will receive all economic benefits derived from participation in such programs, both in connection with the initial development of the Improvements as well as from any future

expansion thereof. Otherwise, Landlord shall be entitled to such benefits. A listing of certain of the possible sources of such Incentives and/or entitlements is set forth in Exhibit H attached hereto.

[Signature pages follow.]

The parties have signed this Lease on the date first above written.

LANDLORD:

3D FIELDS, LLC,

a South Carolina limited liability company

By: Fields-Realty, LLC, its Manager

By: _____

Kim B. Fields, Authorized Member

TENANT:

3D SYSTEMS CORPORATION,

a Delaware corporation

By: _____

Name: Andrew M. Johnson

Title: Executive Vice President, Chief Legal Officer, and Secretary

EXHIBIT A-1**THE ORIGINAL LAND**

All that certain piece, parcel or tract of land lying and being situated in the City of Rock Hill, York County, South Carolina and being more fully described as follows:

Beginning at a corner on the northern right of way of S.C. Highway No. 161, also being on the south end of a sight triangle with Overview Road, thence along the right of way of S.C. Highway No. 161, N 52°07'00" W, 525.10 feet to a #4 Rebar Found, thence leaving said right of way along a common line with The Links at Waterford LLC property N 01°25'36" E, 573.51 feet to a #4 Rebar Found, thence N 18°08'27" W, 381.33 feet to a #4 Rebar Found, thence N 12°51'15" E, 62.13 feet to a #4 Rebar Found, thence N 58°12'58" E, 480.00 feet to a #4 Rebar Found, thence S 43°42'44" E, 594.87 feet to a #4 Rebar Set, thence S 58°07'31" E, 440.71 feet to a #4 Rebar Found, thence S 34°12'26" W, 169.41 feet to a #4 Rebar Found on the right of way of Overview Drive, thence with said right of way S 33°52'56" W, 370.64 feet to a Nail in Concrete Found, thence S 85°48'52" W, 44.85 feet to a #4 Rebar Found, thence S 34°36'37" W, 66.05 feet to a #4 Rebar Found, thence S 05°52'44" E, 46.10 feet to a #4 Rebar Found, thence S 34°35'19" W, 62.10 feet to a Nail in Concrete Found, thence S 37°28'42" W, 200.00 feet to a Nail in Concrete Found, thence S 34°37'49" W, 174.91 feet to a #4 Rebar Found at the beginning of a sight triangle with S.C. Highway No. 161, thence with the sight triangle S 85°53'07" W, 52.64 feet to the Point of Beginning.

Said Tract containing 1,074,111 Square Feet, 24.66 Acres.

EXHIBIT A-2**THE EXPANSION LAND**

All that certain piece, parcel or tract of land lying and being situated in the City of Rock Hill, York County, South Carolina and being more fully described as follows:

Commencing at a corner on the northern right of way of S.C. Highway No. 161, also being on the south end of a sight triangle with Overview Road, thence along the right of way of S.C. Highway No. 161, N52-06-40W 365.68 feet to a #4 Rebar Set being the Point of Beginning;

Beginning at a #4 Rebar Set on the northern right of way of SC Hwy 161 thence along said right of way N52-06-36 W 159.62 feet to a #4 Rebar Found, thence leaving said right of way along a common line with The Links at Waterford LLC property N01-25-36E 573.58 feet to a #4 Rebar Found, thence N18-08-02 W 381.30 feet to a #4 Rebar Found, thence N12-50-25 E 62.16 feet to a #4 Rebar Set, thence N58-12-43E 480.15 feet to a #4 Rebar Found; thence S43-40-59E 594.75 feet to a #4 Rebar Found, thence leaving said line of The Links at Waterford and being the new division line between Tract 1 and Tract 2 S88-48-54E 56.70 feet to a #4 Rebar Set, S48-23-34W 44.99 feet to a #4 Rebar Set; thence S03-24-33W 22.48 feet to a #4 Rebar Set; thence N86-36-26W 127.04 feet to a #4 Rebar Set; thence S03-29-55W 145.05 feet to a #4 Rebar Set; thence N86-30-05W 61.73 feet to a #4 Rebar Set; thence S03-20-09W 49.85 feet to a #4 Rebar Set; thence N87-04-07W 109.02 feet to a #4 Rebar Set; thence S03-34-06W 90.22 feet to a #4 Rebar Set; thence S86-59-15E 43.88 feet to a #4 Rebar Set; thence S03-21-24W 115.79 feet to a #4 Rebar Set; thence N85-56-17W 30.00 feet to a #4 Rebar Set; thence S03-21-24W 30.50 feet to a #4 Rebar Set; thence N85-56-17W 178.34 feet to a #4 Rebar Set; thence S03-59-28W 332.89 feet to a #4 Rebar Set; thence S52-05-10E 31.33 feet to a #4 Rebar Set; S07-05-10E 70.71 feet to a #4 Rebar Set; thence S37-54-50W 54.84 feet to a #4 Rebar being the Point of Beginning.

Said Tract contains 10.84 Acres.

Derivation: Deed recorded February 9, 2006 in Book 7787 at ~~88888888~~ Page 258.

EXHIBIT A-3**THE WATERFORD I LAND**

All that certain piece, parcel or tract of land lying and being situated in the City of Rock Hill, York County, South Carolina and being more fully described as follows:

Beginning at a corner on the northern right of way of S.C. Highway No. 161, also being on the south end of a sight triangle with Overview Road, thence along the right of way of S.C. Highway No. 161, N 52-06-40 W. 365.68 feet to a # 4 Rebar Set, thence leaving said right of way along a division line with Tract 2 N37-54-50E 54.84 feet to a # 4 Rebar Set, thence N07-05-10W 70.71 feet to a # 4 Rebar Set, thence N52-05-10W 31.33 feet to a # 4 Rebar Set, thence N03-59-28E 332.89 feet to a # 4 Rebar Set, thence S85-56-17E 178.34 feet to a # 4 Rebar Set, thence N03-21-24E 30.50 feet to a # 4 Rebar Set, thence S85-56-17E 30.00 feet to a # 4 Rebar Set, thence N03-21-24E 115.79 feet to a # 4 Rebar Set, thence N86-59-15W 43.88 feet to a # 4 Rebar Set, thence N03-34-06E 90.22 feet to a # 4 Rebar Set, thence S87-04-07E 109.02 feet to a # 4 Rebar Set, thence N03-20-09E 49.85 feet to a # 4 Rebar Set, thence S86-30-05E 61.73 feet to a # 4 Rebar Set, thence N03-29-55E 145.05 feet to a # 4 Rebar Set, thence S86-36-26E 127.04 feet to a # 4 Rebar Set, thence N03-24-33E 22.48 feet to a # 4 Rebar Set, thence N48-23-34E 44.99 feet to a # 4 Rebar Set, thence S88-48-54E 56.70 feet to a # 4 Rebar Found also being a corner of The Links at Waterford, thence with the line of The Links at Waterford S58-08-28E 441.05 feet to a # 4 Rebar Found being a common corner with The Links at Waterford and Rock Hill Economic Development Corporation, thence S34-15-15W 169.42 feet to a # 4 Rebar Found on the right of way Overview Drive, thence with the right of way of Overview Drive the following 5 Courses: S33-53-46W 370.74 feet, S85-48-41W 44.90 feet to a Nail in the Concrete Found, thence S34-35-45W 66.05 feet to a # 4 Rebar Found, thence S05-51-26E 46.08 feet, **thence S34-30-06W 62.14 feet to a # 4 Rebar Found**, thence S37-30-09W 200.01 feet to a Nail in the Concrete Found, thence S34-37-46W 174.90 feet to a # 4 Rebar Found at the beginning of a sight triangle with S.C. Highway No. 161, thence with the sight triangle S85-40-43W 52.53 feet to the Point of Beginning.

Said tract contains 13.82 Acres.

EXHIBIT B**WATERFORD I ADDITIONAL IMPROVEMENTS**

1. **Plans and Specifications.** As soon as reasonably practicable following the Effective Date, Tenant shall engage properly licensed architects, civil engineers and any other engineers or consultants necessary and appropriate to design, construct and install the Waterford I Additional Improvements. Tenant shall proceed, at Tenant's sole cost and expense (subject to reimbursement from the Waterford I TI Allowance), to prepare a draft of the improvements that Tenant desires to perform to the Waterford I Premises and shall deliver a complete copy of such draft plans and specifications to Landlord for Landlord's review and written approval. Landlord shall review the draft plans and specifications and shall notify Tenant within seven (7) business days after Landlord's receipt of the same as to whether Landlord approves the draft plans and specifications; if Landlord does not approve the draft plans and specifications, such notice from Landlord to Tenant shall provide Landlord's specific and detailed comments and suggestions which, if incorporated in the draft plans and specifications, would render the draft plans and specifications acceptable to Landlord. Landlord and Tenant shall cooperate with one another in good faith to reach agreement regarding the draft plans and specifications as soon as reasonably practicable using good faith and diligent efforts; provided, that Landlord shall only have five (5) business days to review and approve any revised plans or specifications, and should Landlord fail to respond within such five (5) business day period, such plans and specifications shall be deemed approved. The final, mutually approved plans and specifications are referred to herein as the "**Waterford I Improvement Plans.**" The work which is described on such Waterford I Improvement Plans is referred to herein as the "**Waterford I Additional Improvements.**"

2. **Construction of Waterford I Additional Improvements.**

- (a) Tenant shall submit the Waterford I Improvement Plans to three or four South Carolina licensed and qualified general contractors for bids and then select a general contractor, which shall be reasonably acceptable to Landlord. Tenant may also pursue a Design-Build solution. The following terms and provisions shall apply with regard to Tenant's general contractor and the qualifications of Tenant's general contractor:
 - (i) The terms of any agreement to install the Waterford I Additional Improvements shall be governed by a separate construction contract signed by Tenant and Tenant's general contractor, the construction contract shall be prepared using an applicable AIA contract form for such project, and the construction contract shall be subject to the prior written approval of Landlord, which shall not be unreasonably withheld or delayed. A true and complete copy of such construction contract (and all subsequent amendments thereto) shall be delivered by Tenant to Landlord promptly following the execution thereof. Tenant shall assign to Landlord, or provide that Landlord is a third-party beneficiary of, Tenant's rights under the construction agreement described herein and any agreements with design professionals (including any architects, engineers, designers or otherwise).
 - (ii) Tenant shall not commence (or cause or permit to be commenced) the construction of the Waterford I Additional Improvements until all aspects of the Waterford I Improvement Plans have been approved in writing by

Landlord (such approval not to be unreasonably withheld, conditioned or delay). Throughout the entire period between the date on which Tenant's general contractor commences construction of the Waterford I Improvements and date of completion of the Waterford I Improvements, Landlord shall maintain in force with respect to the Waterford I Improvements an all-risk builder's risk insurance policy on a completed value basis in an amount equal to the full replacement cost of the Waterford I Improvements, which policy shall name Tenant and Tenant's general contractor as additional insureds and have a deductible of no more than \$50,000. The premium for such policy shall be paid directly by Landlord and included in the Total Project Cost (as defined in Section 6 of this Lease). In the event of a casualty, Tenant shall pay to Landlord the lesser of the amount of the deductible or the full amount of the loss in the case of a loss in an amount less than the deductible, which payment shall be deemed Additional Rent hereunder and shall be due and payable by Tenant upon the later of: (i) within thirty (30) days of the date of the casualty, and (ii) with Tenant's next installment of monthly Rent immediately following Landlord's written request therefor. Tenant and its general contractor shall each maintain general liability insurance (in form and amounts reasonably satisfactory to Landlord) naming Landlord (and its lender, if applicable) as additional insured(s) on additional insured endorsement GC 2010-1185 (or its equivalent). In addition, Tenant shall cause Tenant's general contractor to maintain workers' compensation insurance and all other insurance coverages (if any) that are required by applicable law and shall promptly provide to Landlord reasonable documentary evidence of such additional insurance coverage(s). Each party shall deliver certificates of insurance to the other evidencing such policies, and such policies shall provide that no cancellation, surrender or material change will become effective unless each additional insured receives written notice at least 30 days in advance of the time at which such cancellation, surrender or material change becomes effective. All insurance required to be maintained pursuant to this Section must be maintained with insurers authorized to do business in the State of South Carolina and having an A.M. Best Rating of A- and VIII or higher. Prior to commencing any work, each named insured shall deliver to the additional insured(s) such certificates as may be reasonably requested to establish that the insurance coverage required by this Section is in effect from time to time and that the insurer(s) have agreed to give the other party at least 30 days' notice prior to any cancellation of, or material modification to, the required coverage.

- (iii) Tenant shall complete the Waterford I Additional Improvements free of all mechanic's liens and any other liens, and Tenant shall defend, indemnify and hold Landlord harmless from and against any claims, actions, losses, costs, damages, expenses, liabilities and obligations whatsoever, including, without limitation, reasonable legal fees resulting from (A) the assertion or filing of any claim for amounts alleged to be due to the claimant for labor, services, materials, supplies, machinery, fixtures or equipment furnished in connection with the construction of the Waterford I Additional Improvements, (B) the foreclosure of any mechanic's or

materialmen's lien that allegedly secures the amounts allegedly owed to the claimant, or (C) any other legal proceedings initiated in connection with that claim.

- (b) The Waterford I Additional Improvements shall be diligently constructed and installed (i) using new materials of good quality and (ii) in a professional and good workmanlike manner, all in accordance with the approved Waterford I Improvement Plans and applicable Legal Requirements. Tenant shall be responsible, at Tenant's sole cost and expense, for obtaining all required permits and approvals related to the Waterford I Additional Improvements, and Tenant shall not commence the Waterford I Additional Improvements until Tenant has received all applicable governmental approvals (necessary for such work to be commenced). Landlord and Landlord's representatives shall be entitled to enter the Waterford I Premises at reasonable times during normal business hours upon reasonable advanced notice during the installation of the Waterford I Additional Improvements for the purpose of inspecting the same and confirming compliance by Tenant with the terms and provisions of this Lease.

3. Payment for Waterford I Additional Improvements.

- (a) Waterford I TI Allowance. Landlord shall contribute a sum not to exceed \$500,000.00 (the "**Waterford I TI Allowance**") toward the reasonable, out-of-pocket "hard" and "soft" costs incurred by Tenant in performing the Waterford I Additional Improvements. Within fifteen (15) days following Landlord's receipt from Tenant of a request for payment, together with all relevant invoices, a certification signed by an authorized representative of Tenant referenced in Section 4(b) of this Lease certifying that the Waterford I Additional Improvements work is complete and satisfactory to Tenant, and unconditional lien releases from all applicable contractors, Landlord shall pay each respective contractor requested by Landlord to be paid for Waterford I Additional Improvements up to the amount of the Waterford I TI Allowance.
- (b) If the amount remaining of the Waterford I TI Allowance is less than the final cost of any Waterford I Additional Improvements, Tenant shall be responsible for any excess costs. Landlord's obligation to provide the Waterford I TI Allowance shall expire on June 30, 2022.
- (c) Waterford I Additional Improvement Funds. In addition to the Waterford I TI Allowance, Landlord agrees to provide Tenant up to \$2,000,000 (the "**Waterford I Additional Improvement Funds**") for use by Tenant to make additional improvements to the Waterford I Premises, all in accordance with the terms and subject to the conditions of the Lease. Any costs for Waterford I Additional Improvements in excess of the Waterford I TI Allowance shall be requested by Tenant of Landlord in the manner described in Section 3(a) of this Exhibit B. Following receipt of Tenant's request and all required documentation, Landlord shall pay each respective contractor, and each such payment shall be deemed Waterford I Additional Improvement Funds. Each disbursement of Waterford I Additional Improvement Funds shall accrue interest at a rate of 8.0% per annum from the date of such disbursement. Landlord's obligation to provide the Waterford I Additional Improvement Funds shall expire on June 30, 2022. On or before July 1, 2022, Landlord will calculate the aggregate Waterford I Additional

Improvement Funds advanced and the accrued interest thereon (the “**Final Waterford I AIF Amount**”), and commencing July 1, 2022, Tenant shall pay Waterford I AIF Additional Rent in accordance with Section 6(b) of this Lease.

EXHIBIT C-1

Preliminary waterford ii building plans

EXHIBIT C-2

FINAL WATERFORD II PLANS

EXHIBIT D

DEVELOPMENT BUDGET

Upon final determination of the Development Budget and the Total Project Costs for the Waterford II Premises, Landlord and Tenant will execute an amendment to this Lease setting forth the Development Budget on this **Exhibit D** and the Total Project Costs on **Exhibit E**.

EXHIBIT E**FORM OF TENANT ACKNOWLEDGMENT LETTER**

3D Fields, LLC
 c/o Fields-Realty, LLC
 550 SE 5th Avenue, Apt. 304S
 Boca Raton, Florida 33432
 Attn: Steven Fields and Kim Fields

Re: Acknowledgment Letter with respect to that certain Amended and Restated Lease Agreement (the “**Lease**”) dated February 25, 2021, by and between 3D Fields, LLC (“**Landlord**”) and 3D Systems Corporation (“**Tenant**”)

Ladies and Gentlemen:

This letter constitutes the Acknowledgement Letter required under Section 5(c) of the Lease. All capitalized terms used but not otherwise defined in this Acknowledgment Letter have the meanings assigned to them in the Lease.

Tenant accepts the condition of the Premises in accordance with the Lease, and Tenant hereby certifies to Landlord, as follows:

1. The Waterford II Commencement Date is ____, 2022.
2. The total amount of the Total Project Costs is \$_____.
3. The initial annual Waterford II Base Rent is \$_____.
4. The Lease is unmodified and in full force and effect and there are no outstanding notices of default to Tenant’s obligations or Landlord’s obligations under the Lease. To the best knowledge of Tenant, there is no default under the Lease and no event has occurred, which with the giving of notice or the passage of time, or both, will become such a default, or, if any, except as follows: (If none, so state)
5. Tenant has not assigned, pledged, hypothecated or otherwise transferred the Lease, except as follows: (If none, so state.)
6. As of the date hereof, Tenant currently has no known claim against Landlord for any right of offset, deferment, abatement, or default or right of counterclaim or defense to the payment of Base Rent or any other monies due under the Lease, except as follows: (If none, so state.)
7. There are currently no known disputes under or in connection with the Lease between Landlord and Tenant, except as follows: (If none, so state.)

EXECUTED as of the date first above written.

3D SYSTEMS CORPORATION

By: _____

Name: _____

Title: _____

AGREED AND ACCEPTED this
_____ day of _____, 2022:

3D FIELDS, LLC,
a South Carolina limited liability company

By: Fields-Realty, LLC, its Manager

By: _____
Kim Fields, Authorized Member

EXHIBIT F

FORM OF SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT AGREEMENT

EXHIBIT G**FORM OF TENANT ESTOPPEL**

LANDLORD: _____

TENANT: 3 D Systems Corporation, a Delaware Corporation

LEASE: Lease Agreement dated February 8, 2006 (the "**Original Lease**"), as amended by that certain First Amendment to Lease Agreement dated August 7, 2006 and effective June 15, 2006 (the "**First Amendment**"), Second Amendment to Lease Agreement dated October 6, 2006 (the "**Second Amendment**"), Third Amendment to Lease Agreement dated December 18, 2006 (the "**Third Amendment**"), Fourth Amendment to Lease Agreement dated February 26, 2007 (the "**Fourth Amendment**"), Fifth Amendment to Lease Agreement dated March 17, 2011 (the "**Fifth Amendment**"), as amended and restated by that certain Amended and Restated Lease Agreement dated February 25, 2021 (the "**Amended and Restated Lease**"), as amended and supplemented from time to time (collectively, the "**Lease**")

PREMISES: 333 Three D Systems Circle, Rock Hill, South Carolina 29730

As of the date of this Estoppel Certificate, Tenant hereby certifies to _____, a _____ (together with its successors and assigns) the following:

1. Any capitalized terms not otherwise defined herein shall have the meaning ascribed to such terms in the Lease.
2. The Lease is in full force and effect in accordance with its terms and constitutes the entire agreement with respect to the subject matter thereof.
3. The Initial Term for the Waterford I Premises commenced November 22, 2006 and the Waterford II Commencement Date is _____, 202_. The current Term for both the Waterford I Premises and the Waterford II Premises shall expire _____. Tenant has the right to renew the Term for __ 5-year Renewal Terms.
4. The security deposit held by Landlord is: _____.
5. No Base Rent has been paid more than thirty (30) days in advance. The monthly Base Rent currently paid by Tenant to Landlord is: _____.
6. Landlord is not in default under the Lease nor does Tenant have any offsets, counterclaims or defenses against Landlord.
7. Tenant has no option to purchase nor right of first refusal with respect to the Premises.
8. Notwithstanding anything contained in this Estoppel Certificate to the contrary, Tenant expressly reserves all rights and remedies under the Lease, and nothing contained herein shall be construed as a waiver by the undersigned of any rights under the Lease which have not expired as of the date hereof.

Effective as of the _____ day of _____, 20__.

3D SYSTEMS CORPORATION,
a Delaware corporation

By: _____

Name:

Title:

EXHIBIT H

TENANT incentives

(Fee In Lieu of Tax and Incentive Agreement)

**Amendment No. 1 to
Employment Agreement**

THIS AMENDMENT NO. 1 to EMPLOYMENT AGREEMENT (the “**Amendment**”) is entered into and effective this 22nd day of February, 2021, by and between 3D Systems Corporation, (“**Company**”), and Mr. Reji Puthenveetil (“**Executive**” and, together with the Company, the “**Parties**”).

WHEREAS, the Company and Executive entered into that certain Employment Agreement (the “**Agreement**”) dated as of October 1, 2020, and

WHEREAS, the Parties desire to amend Section 2 of the Agreement in the manner reflected herein,

NOW THEREFORE, based on the foregoing and in consideration of the mutual promises and covenants set forth herein, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. The final sentence of Section 2 of the Agreement is hereby deleted and replaced in its entirety with the following (with all capitalized terms having the meaning originally ascribed thereto in the Agreement):

“In the event the Employment Period is terminated (i) by the Company, other than for Cause as described in Section 4.2 below, prior to March 31, 2024 or (ii) by Executive after October 1, 2022, but before March 31, 2024, Executive shall become a consultant to the Company pursuant to the terms of the Consulting Agreement attached hereto as Exhibit A.”

2. This Amendment may be executed in one or more facsimile, electronic or original counterparts, each of which shall be deemed an original and both of which together shall constitute the same instrument.
3. All terms and provisions of the Agreement not amended hereby, either expressly or by necessary implication, shall remain in full force and effect. From and after the date of this Amendment, all references to the term “Agreement” in this Amendment or the original Agreement shall include the terms contained in this Amendment.

[Signatures on following page]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment No. 1 to Employment Agreement as of the date and year first above written.

3D SYSTEMS CORPORATION

EXECUTIVE

By: /s/Andrew M. Johnson

/s/Reji Puthenveetil

Name: Andrew M. Johnson

Reji Puthenveetil

Title: Executive Vice President,
Chief Legal Officer and Secretary

3D SYSTEMS CORPORATION**AMENDED AND RESTATED EMPLOYMENT AGREEMENT**

THIS AMENDED AND RESTATED EMPLOYMENT AGREEMENT (this “**Agreement**”) is made as of this 1st day of January, 2021 (the “**Effective Date**”), by and between 3D Systems Corporation, a corporation organized and existing under the laws of the State of Delaware (“**Company**”), and Jeffrey Blank (“**Executive**”). This Agreement amends and restates that certain Employment Agreement between Company and Executive dated October 3, 2020.

RECITALS

WHEREAS, Company desires to employ Executive’s employment as Executive Vice President, Engineering & Development, subject to the terms and conditions of this Agreement; and

WHEREAS, Executive desires to be employed by Company in the aforesaid capacity subject to the terms and conditions of this Agreement.

NOW THEREFORE, in consideration of the foregoing premises, of the mutual agreements and covenants contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows, effective as of the Effective Date:

AGREEMENT**1. Employment.**

Company hereby agrees to employ Executive, and Executive hereby accepts employment, as Executive Vice President, Engineering & Development, or such other position as mutually agreed to between Executive and the Company pursuant to the terms of this Agreement. Executive shall have the duties and responsibilities and perform such administrative and managerial services of that position as shall be reasonably delegated or assigned to Executive by the Company from time to time. Executive shall carry out Executive’s responsibilities hereunder on a full-time basis for and on behalf of Company; provided that Executive shall be entitled to devote time to outside boards of directors, personal investments, civic and charitable activities, and personal education and development, so long as such activities do not interfere with or conflict with Executive’s duties hereunder in any material respect, and provided that Executive notifies the Corporate Governance and Nominating Committee (the “**Governance Committee**”) of the Board of Directors of Company (the “**Board**”) of any outside boards of directors on which Executive intends to serve, and the Governance Committee consents to such service, which consent may be granted or withheld in the sole discretion of the Governance Committee. Notwithstanding the foregoing, Executive agrees that, during the term of this Agreement, Executive shall not act as an officer or employee of any for profit business other than Company without the prior written consent of Company.

2. Term.

The term of Executive's employment by Company under this Agreement (the "**Employment Period**") shall commence on the Effective Date and shall continue in effect through the second (2nd) anniversary of the Effective Date, unless earlier terminated as provided herein. Thereafter, unless Company or Executive shall elect not to renew the Employment Period upon the expiration of the initial term or any renewal term, which election shall be made by providing written notice of nonrenewal to the other party at least thirty (30) days prior to the expiration of the then current term, the Employment Period shall be extended for an additional twelve (12) months. If Company elects not to renew the Employment Period at the end of the initial term or any renewal term, such nonrenewal shall be treated as a termination of the Employment Period and Executive's employment without Cause by Company for the limited purpose of determining the payments and benefits available to Executive under this Agreement (e.g., Executive shall be entitled to the severance benefits set forth in Section 4.5.1). If Executive elects not to renew the Employment Period, such nonrenewal shall constitute a termination of Executive's employment and the Employment Period by Executive without Constructive Discharge, and Executive shall only be entitled to the payments and benefits set forth in Section 4.5.2.

3. Compensation and Benefits.

In consideration for the services Executive shall render under this Agreement, Company shall provide or cause to be provided to Executive the following compensation and benefits:

a. **Base Salary.** During the Employment Period Company shall pay to Executive an annual base salary, which at the Effective Date is \$330,000.00 per annum, subject to all appropriate federal and state withholding taxes and which shall be payable in accordance with Company's normal payroll practices and procedures. Executive's base salary shall be reviewed annually and may be increased in the sole discretion of Company, based on Executive's performance during the preceding calendar year. Executive's base salary, as such base salary may be increased hereunder, is hereinafter referred to as the "**Base Salary**."

b. **Performance Bonuses.** Executive shall be eligible to receive cash bonuses in accordance with this Section 3.2 (each a "**Performance Bonus**"). Payment of any Performance Bonus will be subject to the sole discretion of the Compensation Committee of the Board (the "**Compensation Committee**"), and such Performance Bonus shall be determined in the sole discretion of the Compensation Committee. Subject to the foregoing exercise of discretion, Executive's annual target Performance Bonus shall be not less than 60% of Executive's Base Salary (the "**Target Performance Bonus**"), provided that the actual Performance Bonus shall be based on performance, which may be less than or exceed the Target Performance Bonus. Performance Bonuses, if any, shall be paid according to the terms of the bonus plan or program in which Executive participates from time to time. Subject to Section 4.5.1 and Section 4.5.3 below, Executive must be employed to be entitled to any portion of any Performance Bonus, and the Performance Bonus shall not be considered earned under this Agreement until such Bonus is paid.

c. **Benefits**. During the Employment Period and as otherwise provided hereunder, Executive shall be entitled to the following:

i. **Vacation**. Executive shall be entitled to participate in the Company's vacation policy for similarly-situated executives of the Company.

ii. **Participation in Benefit Plans**. Executive shall be entitled to health and/or dental benefits, including immediate coverage for Executive and Executive's eligible dependents, which are generally available to Company's executive employees and as provided by Company, subject to the terms of its group health insurance plan. In addition, Executive shall be entitled to participate in any profit sharing plan, retirement plan, group life insurance plan or other insurance plan or medical expense plan maintained by Company for its executives generally, in accordance with the general eligibility criteria therein and subject to the terms of any applicable plan. Nothing in this Agreement shall be construed as a promise to provide any particular benefit, should the Company decide to discontinue or amend any particular benefit plan for other executives.

iii. **Perquisites**. Executive shall be entitled to such other benefits and perquisites that are generally available to Company's executive employees and as provided in accordance with Company's plans, practices, policies and programs for executive employees of Company.

d. **Expenses**. Company shall reimburse Executive for proper and necessary expenses incurred by Executive in the performance of Executive's duties under this Agreement from time to time upon Executive's submission to Company of invoices of such expenses in reasonable detail and subject to all standard policies and procedures of Company with respect to such expenses.

e. **Stock Awards**. Executive shall be eligible to participate in any applicable stock bonus, restricted stock award, performance share award, restricted stock unit, stock option, or similar plan, if any, implemented by Company and generally available to its executive employees. The amount of the awards, if any, made thereunder shall be in the sole discretion of the Board or Compensation Committee. Any such award that may be granted shall be subject to the terms of any applicable plan or agreement, and Executive shall not be entitled to any award if Executive does not sign, or comply with, the terms of any plan or agreement required for the award.

4. **Termination of Services Prior To Expiration of Agreement.**

Executive's employment and the Employment Period may be terminated at any time as follows (the effective date of such termination hereinafter referred to as the "**Termination Date**"):

a. **Termination upon Death or Disability of Executive.**

i. Executive's employment and the Employment Period shall terminate immediately upon the death of Executive. In such event, all rights of Executive and/or Executive's estate (or

named beneficiary) shall cease except for the right to receive payment of the amounts set forth in Section 4.5.3 of the Agreement.

ii..Company may terminate Executive's employment and the Employment Period upon the disability of Executive. For purposes of this Agreement, Executive shall be deemed to be "**disabled**" if Executive, as a result of illness or incapacity, shall be unable to perform substantially Executive's required duties for a period of three (3) consecutive months or for any aggregate period of three (3) months in any six (6) month period. In the event of a dispute as to whether Executive is disabled, Company may refer Executive to a licensed practicing physician who is mutually acceptable to Executive and Company, and Executive agrees to submit to such tests and examination as such physician shall deem appropriate to determine Executive's capacity to perform the services required to be performed by Executive hereunder. In such event, the parties hereby agree that the decision of such physician as to the disability of Executive shall be final and binding on the parties. Any termination of the Employment Period under this Section 4.1.2 shall be effected without any adverse effect on Executive's rights to receive benefits under any disability policy of Company, but shall not be treated as a termination without Cause and Executive shall be entitled to no further benefits or compensation under this Agreement.

b. **Termination by Company for Cause.** Company may terminate Executive's employment and the Employment Period for Cause (as defined herein) upon written notice to Executive, which termination shall be effective on the date specified by Company in such notice; provided, however, that in respect of Sections 4.2.1 and 4.2.4 only, Executive shall have a period of ten (10) days after the receipt of the written notice from Company to cure the particular action or inaction, to the extent a cure is possible. For purposes of this Agreement, the term "**Cause**" shall mean:

i..The willful failure by Executive to perform Executive's duties and obligations hereunder in any material respect, as determined by the Chief Executive Officer of Company in his reasonable judgment, other than any such failure resulting from the disability of Executive;

ii..Executive's commission of a crime or offense involving the property of Company, or any crime or offense constituting a felony or involving fraud or moral turpitude;

iii..Executive's violation of any law, which violation is materially injurious or could reasonably be expected to be materially injurious to the operations, prospects or reputation of Company;

iv..Executive's material violation of this Agreement or any generally recognized policy of Company or Executive's refusal to follow Company's reasonable and lawful instructions;

v..Executive's commission, by act or omission, of any material act of dishonesty in performing employment duties; or

vi..Executive's use of alcohol or illegal drugs that interferes with performing employment duties, as determined by Company.

Any notice of termination for Cause provided to Executive pursuant to Sections 4.2.1, 4.2.4 or 4.2.5 shall specify in reasonable detail specific facts regarding any such assertion.

c. Termination by Company without Cause; Termination by Executive without Constructive Discharge. Executive may terminate Executive's employment and the Employment Period at any time for any reason upon thirty (30) days' prior written notice to Company. Company may terminate Executive's employment and the Employment Period without Cause effective immediately upon written notice to Executive. Upon termination of Executive's employment with Company for any reason, Executive shall be deemed to have resigned from all positions with the Company and each of its subsidiaries and shall take all appropriate steps and cooperate with Company to effect such terminations (provided, that any such deemed resignations shall not affect Executive's entitlement (if any) to severance pay and benefits hereunder).

d. Termination by Executive for Constructive Discharge.

i. Executive may terminate Executive's employment and the Employment Period, in accordance with the process set forth below, as a result of a Constructive Discharge. For purposes of this Agreement "**Constructive Discharge**" shall mean the occurrence of any of the following:

(i) a failure of Company to meet its obligations in any material respect under this Agreement, including, without limitation, any failure to pay the Base Salary (other than the inadvertent failure to pay a de minimis amount of the Base Salary, which payment is immediately made by Company upon notice from Executive); or

(ii) a material diminution in or other substantial adverse alteration in the nature or scope of Executive's responsibilities, authority, or duties with Company from those in effect on the Effective Date.

In the event of the occurrence of a Constructive Discharge, Executive shall have the right to terminate Executive's employment hereunder and receive the benefits set forth in Section 4.5.1 below, upon delivery of written notice to Company no later than the close of business on the sixtieth (60th) day following the effective date of the Constructive Discharge; provided, however, that such termination shall not be effective until the expiration of thirty (30) days after receipt by Company of such written notice if Company has not cured such Constructive Discharge within the 30-day period. If Company so effects a cure, the Constructive Discharge notice shall be deemed rescinded and of no force or effect. Notwithstanding the foregoing, such notice and lapse of time shall not be required with respect to any event or circumstance which is the same or substantially the same as an event or circumstance with respect to which notice and an opportunity to cure has been given within the previous six (6) months. The Termination Date due to Constructive Discharge shall be the date of Executive's "separation from service" (within the meaning of Treas. Reg. Section 1.409A1(h)).

e. Rights upon Termination. Upon termination of Executive's employment and the Employment Period, the following shall apply:

i. Termination by Company Without Cause or for Constructive Discharge. If Company terminates Executive's employment and the Employment Period without Cause, or if Executive terminates Executive's employment and the Employment Period as a result of a Constructive Discharge, Executive shall be entitled to receive payment of any Base Salary amounts that have accrued but have not been paid as of the Termination Date, and the unpaid Performance Bonus, if any, with respect to the calendar year preceding the calendar year in which the Termination Date occurs (such Performance Bonus, if any, to be determined in the manner that it would have been determined, and payable at the time it would have been payable, under Section 3.2 had there been no termination of the Employment Period). In addition, subject to Sections 4.5.2 and 4.7, below, Company shall, subject to Sections 8.13, 8.14 and 8.15, be obligated to pay Executive (or provide Executive with) the following benefits as severance:

(1) an amount equal to 100% of Base Salary, payable in twelve (12) equal monthly installments commencing on the Termination Date, such amount to be payable regardless of whether Executive obtains other employment and is compensated therefor (but only so long as Executive is not in violation of any provision of Section 5) (with the first two (2) installments to be paid on the sixtieth (60th) day following the Termination Date and the remaining ten (10) installments being paid on the ten (10) following monthly anniversaries of such date);

(2) any unused vacation time accrued in the calendar year in which the Termination Date occurs, but only to extent Company policy mandates the accrual of vacation time; and

(3) if Executive elects to continue Executive's then current enrollment (including family enrollment, if applicable) in the health and/or dental insurance benefits set forth in Section 3.3.2 in accordance with COBRA, then for a period of up to twelve (12) months following the Termination Date, the Company will continue to pay a portion of the premiums such that Executive's contribution to such plans will remain the same as if Executive were employed by Company, such contributions to be paid by Executive in the same period (e.g., monthly, bi-weekly, etc.) as all other employees of Company (but deductions from Executive's monthly severance payments may be deemed acceptable for this purpose in the discretion of Company); provided, however that Company may terminate such coverage if payment from Executive is not made within ten (10) days of the date on which Executive receives written notice from Company that such payment is due; and provided, further, that such benefits shall be discontinued earlier to the extent that Executive is no longer eligible for COBRA continuation coverage. In addition, this benefit is contingent upon timely election of COBRA continuation coverage and will run concurrent with the COBRA period. Executive acknowledges and agrees that the amount of any such premiums paid by the Company will constitute taxable wages for income and employment tax purposes.

For purposes of Section 409A of the Code (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), Executive's right to receive the foregoing payments shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment shall at all times be considered a separate and distinct payment.

ii. Termination With Cause by Company or Without Constructive Discharge by Executive. If Company terminates Executive's employment and the Employment Period with Cause, or if Executive terminates Executive's employment and the Employment Period other than as a result of a Constructive Discharge, (i) Company shall be obligated to pay Executive any Base Salary amounts that have accrued but have not been paid as of the Termination Date, (ii) any unpaid Performance Bonus to which Executive otherwise would be entitled shall be forfeited, and (iii) any unused vacation time accrued in the calendar year in which the Termination Date occurs, but only to extent that Company policy mandates the accrual of vacation time.

iii. Termination Upon Death or Disability. If Executive's employment and the Employment Period are terminated because of the death of Executive or because Executive is disabled, Company shall, subject to Sections 8.13 and 8.14, be obligated to pay Executive or, if applicable, Executive's estate, the following amounts: (i) earned but unpaid Base Salary; (ii) the unpaid Performance Bonus, if any, with respect to the calendar year preceding the calendar year in which the Termination Date occurs (such Performance Bonus, if any, to be determined in the manner it would have been determined, and payable at the time it would have been payable, under Section 3.2 had there been no termination of the Employment Period); and (iii) any unused vacation time accrued in the calendar year in which the Termination Date occurs, but only to extent that Company policy mandates the accrual of vacation time.

f. Effect of Notice of Termination. Any notice of termination by Company, in the discretion of the Company, whether for Cause or without Cause, may specify that, during the notice period, Executive need not attend to any business on behalf of Company.

g. Requirement of a Release; Exclusivity of Severance Payments under this Agreement. As a condition to the receipt of the severance payments and termination benefits to be provided to Executive pursuant to this Section 4 upon termination of Executive's employment without Cause or with Constructive Discharge, Executive shall execute and deliver to Company (without revoking during any applicable revocation period specified in the release) a general release of claims against Company and its affiliates in a customary form reasonably satisfactory to Company within forty-five (45) days following the Termination Date, which shall be in form and substance satisfactory to the Company (provided, that Executive shall not be required to release any rights under this Agreement or any other agreement with the Company or any of its affiliates with respect to any payments or obligations of the Company or such affiliates that under the terms of the applicable agreement are to be made or satisfied after the Termination Date, any rights to insurance coverage or any rights under benefit plans that by their terms survive the termination of Executive's employment, or any indemnification or related rights under Company's certificate of incorporation or Bylaws or under any indemnification agreement between Company and Executive or any rights under any director and officer liability insurance policy maintained by Company for the benefit of Executive). In addition, the severance payments and termination benefits to be provided to Executive pursuant to this Section 4 upon termination of Executive's employment shall constitute the exclusive payments in the nature of severance or termination pay or salary continuation which shall be due to Executive upon a termination of employment and shall be in lieu of any other such payments under any severance plan, program, policy or other arrangement which has heretofore been or shall hereafter be

established by Company or any of its affiliates, other than payments to Executive under any indemnification or related rights under Company's certificate of incorporation or Bylaws or under any indemnification agreement between Company and Executive or under any director and officer liability insurance policy maintained by Company for the benefit of Executive. Without limiting Executive's obligations under Section 5.10, Executive shall furthermore agree, as a condition to Company's obligation to pay severance payments and termination benefits, to return any and all Company property and to abide by any existing restrictive covenant obligations set forth in this Agreement that survive the termination of this Agreement.

5. Restrictive Covenants.

The growth and development of Company and its affiliates and subsidiaries (collectively, "**3D Systems**") depends to a significant degree on the possession and protection of its customer list, customer information and other confidential and proprietary information relating to 3D Systems' products, services, methods, pricing, costs, research and development and marketing. All 3D Systems employees and others engaged to perform services for 3D Systems have a common interest and responsibility in seeing that such customer information and other Confidential Information, as that term is defined in Section 5.6 below, is not disclosed to any unauthorized persons or used other than for 3D Systems' benefit. This Section 5 expresses a common understanding concerning Company's and Executive's mutual responsibilities. Therefore, in consideration for Company's agreement to employ or continue to employ Executive and grant Executive access to its Confidential Information, trade secrets, customer relationships and business goodwill, and for other good and valuable consideration from Company, including, without limitation, compensation, benefits, raises, bonus payments or promotions, the receipt and sufficiency of which are hereby acknowledged, and the severance benefits payable pursuant to Section 4.5, Executive covenants and agrees as follows, which covenant and agreement is essential to this Agreement and Executive's employment with Company:

a. Non-Solicitation. Executive acknowledges that the identity and particular needs of 3D Systems' customers are not generally known and were not known to Executive prior to Executive's employment with 3D Systems; that 3D Systems has relationships with, and a proprietary interest in the identity of, its customers and their particular needs and requirements; and that documents and information regarding 3D Systems' pricing, sales, costs and specialized requirements of 3D Systems' customers are highly confidential and constitute trade secrets. Accordingly, Executive covenants and agrees that during the Employment Period and for a period of twelve (12) months after the Termination Date, regardless of the reason for such termination, Executive will not, except on behalf of 3D Systems during and within the authorized scope of Executive's employment with 3D Systems, directly or indirectly: (i) call on, sell to, solicit or otherwise deal with any accounts, customers or prospects of 3D Systems which Executive called upon, contacted, solicited, sold to, or about which Executive learned Confidential Information (as defined herein) while employed by 3D Systems, for the purpose of soliciting, selling and/or providing, to any such account, customer or prospect, any products or services similar to or in competition with any products or services then being sold by 3D Systems; or (ii) solicit the services of any person who is an employee of 3D Systems; or (iii)

solicit, induce or entice any employee of 3D Systems to terminate employment with 3D Systems, or work for anyone in competition with 3D Systems or its subsidiaries.

b. Non-Interference with Business Relationships. Executive covenants and agrees that during the Employment Period and for a period of twenty-four (24) months after the Termination Date, regardless of the reason for such termination, Executive will not interfere with the relationship or prospective relationship between 3D Systems and any person or entity with which 3D Systems has a business relationship, or with which 3D Systems is preparing to have a business relationship.

c. Non-Competition.

Executive agrees that during the Employment Period and for a period of twelve (12) months after the Termination Date, regardless of the reason for such termination, Executive shall not, directly or indirectly, for Executive's own benefit or for the benefit of others, render services for a Competing Organization in connection with Competing Products or Services anywhere within the Restricted Territory. These prohibitions shall apply regardless of where such services physically are rendered.

For purposes of this Agreement, "**Competing Products or Services**" means products, processes, or services of any person or organization other than 3D Systems, in existence or under development, which are substantially the same, may be substituted for, or applied to substantially the same end use as any product, process, or service of 3D Systems with which Executive works or worked during the time of Executive's employment with 3D Systems or about which Executive acquires or acquired Confidential Information through Executive's work with 3D Systems and in any event includes, but is not limited to, providing 3D or additive manufacturing content-to-print solutions including 3D printers, print materials, on-demand custom parts services and 3D software solutions.

For purposes of this Agreement, "**Competing Organization**" means persons or organizations, including Executive, engaged in, or about to become engaged in research or development, production, distribution, marketing, providing or selling of a Competing Product or Service.

Executive agrees that, because 3D Systems' business is commonly conducted via the Internet and telephone, and because 3D Systems' customers are located across the United States and the world, an effort to narrowly limit the geographic scope of the noncompetition provision would render it ineffective. Accordingly, for purposes of this Agreement, "**Restricted Territory**" shall mean:

i. All markets in the United States and the world in which 3D Systems has conducted business or directed material resources in soliciting business in the prior twenty-four (24) month period.

ii. In the event the preceding subsection 5.3.1 shall be determined by judicial action to be unenforceable, the "Restricted Territory" shall be within the United States (including its

territories) and within any other country that at any time was within the scope of Executive's employment and duties with 3D Systems.

iii..In the event the preceding subsection 5.3.2 shall be determined by judicial action to be unenforceable, the "Restricted Territory" shall be within the United States (including its territories) and within any other country that at any time during the last two (2) years of Executive's employment with 3D Systems was within the scope of Executive's employment and duties for 3D Systems.

iv..In the event the preceding subsection 5.3.3 shall be determined by judicial action to be unenforceable, the "Restricted Territory" shall be within any geographic region(s) that at any time during the last two (2) years of Executive's employment with 3D Systems was within the scope of Executive's employment and duties for 3D Systems.

v..In the event the preceding subsection 5.3.4 shall be determined by judicial action to be unenforceable, the "Restricted Territory" shall be within any state in the United States that at any time during the last two (2) years of Executive's employment with 3D Systems was within the scope of Executive's employment and duties for 3D Systems.

Executive agrees that in the event a court determines the length of time or the geographic area or the activities prohibited under this Section 5 are too restrictive to be enforceable, the court may reduce the scope of the restriction or may sever the unenforceable provision in accordance with Section 8.4 below to the extent necessary to make the restriction enforceable.

d. **Reasonableness of Restriction.** Executive acknowledges that the foregoing nonsolicitation, non-competition and non-interference restrictions placed upon Executive are necessary and reasonable to avoid the improper disclosure or use of Confidential Information, and that it has been made clear to Executive that Executive's compliance with Section 5 of this Agreement is a material condition to Executive's employment by Company. Executive further acknowledges and agrees that, if Executive breaches any of the requirements of Sections 5.1, 5.2 or 5.3, the restricted periods set forth therein shall be tolled during the time of such breach, but not for longer than the length of the restricted periods set forth therein.

Executive further acknowledges and agrees that 3D Systems has attempted to impose the restrictions contained hereunder only to the extent necessary to protect 3D Systems from unfair competition and the unauthorized use or disclosure of Confidential Information. However, should the scope or enforceability of any restrictive covenant be disputed at any time, Executive specifically agrees that a court may modify or enforce the covenant to the full extent it believes to be reasonable under the circumstances existing at the time.

e. **Non-Disclosure.** Executive further agrees that, other than as needed to fulfill the authorized scope of Executive's duties with 3D Systems, Executive will not during the Employment Period or thereafter use for Executive's benefit or for others or divulge or convey to any other person (except those persons designated by 3D Systems) any Confidential Information obtained by Executive during the period of Executive's employment with 3D Systems. Executive agrees to observe all Company policies and procedures concerning such Confidential Information. Executive agrees that, except as may be permitted by written Company policies,

Executive will not remove from Company's premises any of such Confidential Information without the written authorization of Company. Executive's obligations under this Agreement will continue with respect to Confidential Information until such information becomes generally available from public sources through no fault of Executive's. During the Employment Period and thereafter Executive shall not disclose to any person the terms and conditions of Executive's employment by 3D Systems, except: (i) to close family members, (ii) to legal and accounting professionals who require the information to provide a service to Executive, (iii) as required by law or (iv) to the extent necessary to inform a prospective or actual subsequent employer of Executive's duties and obligations under this Agreement. If Executive is requested, becomes legally compelled by subpoena or otherwise, or is required by a regulatory body to make any disclosure that is prohibited by this Section 5.5, Executive will, except to the extent prohibited by law, promptly notify Company so that 3D Systems may seek a protective order or other appropriate remedy if 3D Systems deems such protection or remedy necessary under the circumstances. Subject to the foregoing, Executive may furnish only that portion of Confidential Information that Executive is legally compelled or required to disclose. The restrictions set forth herein are in addition to and not in lieu of any obligations Executive may have by law with respect to Confidential Information, including any obligations Executive may have under the Uniform Trade Secrets Act and/or similar statutes as applicable in the state of Executive's residence and/or the state of Executive's primary work location. Despite the foregoing, nothing in this Agreement shall be deemed to restrict Executive from communicating with any member of the United States Congress, from giving truthful testimony in any legal proceeding instituted or maintained, or from fully and candidly cooperating in connection with any investigation, inquiry or proceeding undertaken by, any agency or representative of the United States government, any State, or any of their respective political subdivisions having authority over any aspect of Company's business operations, nor shall any such provision be deemed to require any party to seek the authority of the other in connection therewith.

f. Definition of Confidential Information. As used herein, "Confidential Information" shall include, but is not limited to, the following categories of information, knowledge, or data currently known or later developed or acquired relating to 3D Systems' business or received by 3D Systems in confidence from or about third parties, in each case when the same is not in the public domain or otherwise publicly available (other than as result of a wrongful act of an agent or employee of 3D Systems):

i. Any information concerning 3D Systems' products, business, business relationships, business plans or strategies, marketing plans, contract provisions, actual or prospective suppliers or vendors, services, actual or anticipated research or development, new product development, inventions, prototypes, models, solutions, discussion guides, documentation, techniques, actual or planned patent applications, technological or engineering data, formulae, processes, designs, production plans or methods, or any related technical or manufacturing know-how or other information;

ii. Any information concerning 3D Systems' financial or profit data, pricing or cost formulas, margins, marketing information, sales representative or distributor lists, or any information relating to corporate developments (including possible acquisitions or divestitures);

iii..Any information concerning 3D Systems' current or prospective customer lists or arrangements, equipment or methods used or preferred by 3D Systems' customers, or the customers or patients of customers;

iv..Any information concerning 3D Systems' use of computer software, source code, object code, or algorithms or architecture retained in or related to 3D Systems' computer or computer systems;

v..Any personal or performance information about any 3D Systems' employee;

vi..Any information supplied to or acquired by 3D Systems under an obligation to keep such information confidential, including without limitation Protected Health Information (PHI) as that term is defined by the Health Insurance Portability and Accountability Act (HIPAA);

vii..Any information, whether or not designated as confidential, obtained or observed by Executive or other 3D Systems employees during training sessions related to Executive's work for 3D Systems; and

viii..Any other information treated as trade secrets or otherwise confidential by 3D Systems.

Executive hereby acknowledges that some of this information may not be a "trade secret" under applicable law. Nevertheless, Executive agrees not to disclose it.

g. Inventions, Discoveries, and Work for Hire. Executive recognizes and agrees that all ideas, works of authorship, inventions, patents, copyrights, designs, processes (e.g., development processes), methodologies (e.g., development methodologies), machines, manufactures, compositions of matter, enhancements, and other developments or improvements and any derivative works based thereon, including, without limitation, potential marketing and sales relationships, research, plans for products or services, marketing plans, computer software (including source code and object code), computer programs, original works of authorship, characters, know-how, trade secrets, information, data, developments, discoveries, improvements, modifications, technology and algorithms, whether or not subject to patent or copyright protection (the "**Inventions**") that (i) were made, conceived, developed, authored or created by Executive, alone or with others, during the time of Executive's employment, whether or not during working hours, that relate to the business of 3D Systems or to the actual or demonstrably anticipated research or development of 3D Systems, (ii) were used by Executive or other personnel of 3D Systems during the time of Executive's employment, even if such Inventions were made, conceived, developed, authored or created by Executive prior to the start of Executive's employment, (iii) are made, conceived, developed, authored or created by Executive, alone or with others, within one (1) year from the Termination Date and that relate to the business of 3D Systems or to the actual or demonstrably anticipated research or development of 3D Systems, or (iv) result from any work performed by Executive for 3D Systems (collectively with (i)-(iii), the "**Company Inventions**") are the sole and exclusive property of Company.

Notwithstanding the foregoing, Company Inventions do not include any Inventions made, conceived, developed, authored or created by Executive, alone or with others, for which no equipment, supplies, facility or trade secret information of 3D Systems was used and which were developed entirely on Executive's own time, unless (1) the Invention relates (A) to the business of 3D Systems, or (B) to the actual or demonstrably anticipated research or development of 3D Systems, or (2) the Company Invention results from any work performed by Executive for 3D Systems.

For the avoidance of doubt, Executive expressly disclaims any and all right title and interest in and to all Company Inventions. Executive acknowledges that Executive has and shall forever have no right, title or interest in or to any patents, copyrights, trademarks, industrial designs or other rights in connection with any Company Inventions.

Executive hereby assigns to Company all present and future right, title and interest Executive has or may have in and to the Company Inventions. Executive further agrees that (i) Executive will promptly disclose all Company Inventions to 3D Systems; and (ii) all of the Company Inventions, to the extent protectable under copyright laws, are "works made for hire" as that term is defined by the Copyright Act, 17 U.S.C. § 101, *et seq.*

At the request of and without charge to Company, Executive will do all things deemed by Company to be reasonably necessary to perfect title to the Company Inventions in Company and to assist in obtaining for Company such patents, copyrights or other protection in connection therewith as may be provided under law and desired by Company, including but not limited to executing and signing any and all relevant applications, assignments, or other instruments. Executive further agrees to provide, at Company' request, declarations or affidavits and to give testimony, in depositions, hearings or trials, in support of inventorship. These obligations continue even after the Termination Date. Company agrees that Executive will be reimbursed for reasonable expenses incurred in providing such assistance to Company. In the event Company is unable, after reasonable effort, to secure Executive's signature on any document or documents needed to apply for or prosecute any patent, copyright or other right or protection relating to any Company Invention, for any reason whatsoever, Executive hereby irrevocably designates and appoints Company and its duly authorized officers and agents as Executive's agent and attorney-in-fact to act for and on Executive's behalf to execute and file any such application or other document and to do all other lawfully permitted acts to further the prosecution and issuance of patents, copyrights, or similar protections thereon with the same legal force and effect as if executed by Executive.

For purposes of this Agreement, a Company Invention shall be deemed to have been made during Executive's employment if, during such period, the Company Invention was conceived, in part or in whole, or first actually reduced to practice or fixed in a tangible medium during Executive's employment with Company. Executive further agrees and acknowledges that any patent or copyright application filed within one (1) year after the Termination Date shall be presumed to relate to a Company Invention made during the term of Executive's employment unless Executive can provide evidence to the contrary.

h. Covenants Are Independent Elements. The parties acknowledge that the restrictive covenants contained in this Section 5 are essential independent elements of this

Agreement and that, but for Executive agreeing to comply with them, Company would not continue to employ Executive and would not provide the compensation herein. Accordingly, the existence or assertion of any claim by Executive against Company, whether based on this Agreement or otherwise, shall not operate as a defense to Company's enforcement of the covenants this Section 5. An alleged or actual breach of the Agreement by the Company will not be a defense to enforcement of the provisions of Section 5 or other obligations of Executive to the Company.

i. **Prior Employment.** Executive hereby agrees that during the course and scope of the employment relationship with Company, Executive shall neither disclose nor use any confidential information, invention, or work of authorship derived from, developed or obtained in any prior employment relationship, and understands that any such disclosure or use would be injurious to the economic and legal interests of Company. Executive represents that Executive has informed Company of any non-competition, non-solicitation, confidentiality, work-for-hire or similar agreements to which Executive is subject or may be bound, and has provided Company with copies of any such non-competition and non-solicitation agreements.

j. **Return of Data.** In the event of the termination of Executive's employment with Company for any reason whatsoever, Executive agrees to deliver promptly to Company all formulas, correspondence, reports, computer programs and similar items, customer lists, marketing and sales data and all other materials pertaining to Confidential Information, and all copies thereof, obtained by Executive during the period of Executive's employment with Company which are in Executive's possession or under his control. Executive further agrees that Executive will not make or retain any copies of any of the foregoing and will so represent to Company upon termination of his employment.

k. **Non-Disparagement.** Executive agrees that during the Employment Period and at all times thereafter, Executive will not make any statement, nor imply any meaning through Executive's action or inaction, if such statement or implication would be adverse to the interests of 3D Systems, its customers or its vendors or may reasonably cause any of the foregoing embarrassment or humiliation; nor will Executive otherwise cause or contribute to any of the foregoing being held in disrepute by the public or any other 3D Systems customer(s), vendor(s) or employee(s). Company agrees to instruct its officers, directors and agents speaking regarding Executive with the prior knowledge and the express approval of an executive officer or director of the Company not to disparage Executive to future employers of the Executive or others; provided, however, that nothing contained in this Section 5.11 will restrict or impede Company from (i) complying with any applicable law, legal process, regulation or stock exchange requirement, including disclosure obligations under securities laws and regulations, or a valid order of a court of competent jurisdiction or an authorized government agency or entity; (ii) making any statement required or reasonably desirable in connection with the enforcement or defense of any claim, legal proceeding or investigation involving Executive or the Company or any of their respective Affiliates; or (iii) providing information to any future employer or prospective employer of Executive regarding Executive's obligations under this Agreement or any other agreement to which Executive is a party. Nothing herein prevents disclosure, in the sole discretion of the Company and its employees, of this Agreement, or discussion of Executive's employment with, and separation of employment from, the Company, by and among

employees and other agents of Company with a business need to know such information. The restrictions of this Section 5.11 shall apply to, but are not limited to, communication via the Internet, any intranet, or other electronic means, such as social media web sites, electronic bulletin boards, blogs, email messages, text messages or any other electronic message. The restrictions of this Section 5.11 shall not be construed to prohibit or limit Executive, Company or any other Person from testifying truthfully in any proceeding, arbitration or governmental investigation.

l. Injunctive Relief and Additional Remedies for Breach. Executive further expressly acknowledges and agrees that any breach or threatened breach of the provisions of this Section 5 shall entitle 3D Systems, in addition to any other legal remedies available to it, to obtain injunctive relief, to prevent any violation of this Section 5 without the necessity of 3D Systems posting bond or furnishing other security and without proving special damages or irreparable injury. Executive recognizes, acknowledges and agrees that such injunctive relief is necessary to protect 3D Systems' interest. Executive understands that in addition to any other remedies available to 3D Systems at law or in equity or under this Agreement for violation of this Agreement, other agreements or compensatory or benefit arrangements Executive has with 3D Systems may include provisions that specify certain consequences thereunder that will result from Executive's violation of this Agreement, which consequences may include repaying 3D Systems or foregoing certain equity awards or monies, and any such consequences shall not be considered by Executive or any trier of fact as a forfeiture, penalty, duplicative remedy or exclusive remedy. Notwithstanding Section 8.9, the exclusive venue for any action for injunctive or declaratory relief with respect to this Section 5 shall be the state or federal courts located in York County, South Carolina. Company and Executive hereby irrevocably consent to any such courts' exercise of jurisdiction over them for such purpose.

m. Notification to Third Parties. Company may, at any time during or after the termination of Executive's employment with Company, notify any person, corporation, partnership or other business entity employing or engaging Executive or evidencing an intention to employ or engage Executive as to the existence and provisions of this Agreement.

n. Cooperation. The parties agree that certain matters in which the Executive will be involved during the Employment Period may necessitate the Executive's cooperation in the future. Accordingly, following the termination of the Executive's employment for any reason, to the extent reasonably requested by Company, the Executive shall cooperate with the Company in connection with matters arising out of the Executive's service to the Company; provided that, the Company shall make reasonable efforts to minimize disruption of the Executive's other activities. The Company shall reimburse the Executive for reasonable expenses incurred in connection with such cooperation and, to the extent that the Executive is required to spend substantial time on such matters, the Company shall compensate the Executive at an hourly rate based on the Executive's Base Salary on the Termination Date.

6. No Mitigation.

In no event shall Executive be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to Executive under any of the provisions of

this Agreement and, except as otherwise provided herein, such amounts shall not be reduced whether or not Executive obtains other employment.

7. Clawback.

All incentive compensation paid to Executive pursuant to this Agreement or otherwise in connection with Executive's employment with Company shall be subject to forfeiture, recovery by Company or other action pursuant to any clawback or recoupment policy which Company may adopt from time to time.

8. Miscellaneous.

a. Valid Obligation. This Agreement has been duly authorized, executed and delivered by Company and has been duly executed and delivered by Executive and is a legal, valid and binding obligation of Company and of Executive, enforceable in accordance with its terms.

b. No Conflicts. Executive represents and warrants that the performance by Executive of the duties that are reasonably expected to be performed hereunder will not result in a material breach of any agreement to which Executive is a party.

c. Applicable Law. This Agreement shall be construed in accordance with the laws of the State of South Carolina (the "**Applicable State Law**"), without reference to South Carolina's choice of law statutes or decisions.

d. Severability. The provisions of this Agreement shall be deemed severable, and the invalidity or unenforceability of any one or more of the provisions hereof shall not affect the validity or enforceability of any other provision. If any provision of this Agreement shall be prohibited by or invalid under the Applicable State Law, the prohibited or invalid provision(s) shall be deemed severed herefrom and shall be unenforceable to the extent of such prohibition or invalidity without invalidating the remainder of such provision or the remaining provisions of this Agreement. In the event any clause of this Agreement is deemed to be invalid, the parties shall endeavor to modify that clause in a manner which carries out the intent of the parties in executing this Agreement.

e. No Waiver. The waiver of a breach of any provision of this Agreement by any party shall not be deemed or held to be a continuing waiver of such breach or a waiver of any subsequent breach of any provision of this Agreement or as nullifying the effectiveness of such provision, unless agreed to in writing by the parties.

f. Notices. All demands, notices, requests, consents and other communications required or permitted under this Agreement shall be in writing and shall be personally delivered or sent by facsimile machine (with a confirmation copy sent by one of the other methods authorized in this Section), or by commercial overnight delivery service, to the parties at the addresses set forth below:

To Company: 3D Systems Corporation

333 Three D Systems Circle
 Rock Hill, South Carolina 29730
 Attention: Chief Legal Officer

To Executive: At the address and/or fax number most recently contained in Company's records

Notices shall be deemed given upon the earliest to occur of (i) receipt by the party to whom such notice is directed, if hand delivered; (ii) if sent by facsimile machine, on the day (other than a Saturday, Sunday or legal holiday in the jurisdiction to which such notice is directed) such notice is sent if sent (as evidenced by the facsimile confirmed receipt) prior to 5:00 p.m. Central Time and, if sent after 5:00 p.m. Central Time, on the day (other than a Saturday, Sunday or legal holiday in the jurisdiction to which such notice is directed) after which such notice is sent; or (iii) on the first business day (other than a Saturday, Sunday or legal holiday in the jurisdiction to which such notice is directed) following the day the same is deposited with the commercial carrier if sent by commercial overnight delivery service. Each party, by notice duly given in accordance therewith may specify a different address for the giving of any notice hereunder.

g. Assignment of Agreement. This Agreement shall be binding upon and inure to the benefit of Executive and Company, their respective successors and permitted assigns and Executive's heirs and personal representatives. Executive may not assign any rights or obligations hereunder to any person or entity without the prior written consent of Company. This Agreement shall be personal to Executive for all purposes.

h. Entire Agreement; Amendments. Except as otherwise provided herein, this Agreement contains the entire understanding between the parties, and there are no other agreements or understandings between the parties with respect to Executive's employment by Company and Executive's obligations thereto other than Executive's indemnification or related rights under Company's certificate of incorporation or Bylaws or under any indemnification agreement between Company and Executive and Executive's rights under any equity incentive plans or bonus plans of Company. Executive acknowledges that Executive is not relying upon any representations or warranties concerning Executive's employment by Company except as expressly set forth herein. No amendment or modification to the Agreement shall be valid except by a subsequent written instrument executed by the parties hereto.

i. Dispute Resolution and Arbitration. The following procedures shall be used in the resolution of disputes:

i. Dispute. In the event of any dispute or disagreement between the parties under this Agreement (excluding an action for injunctive or declaratory relief as provided in Section 5.12), the disputing party shall provide written notice to the other party that such dispute exists. The parties will then make a good faith effort to resolve the dispute or disagreement. If the dispute is not resolved upon the expiration of fifteen (15) days from the date a party receives such notice of dispute, the entire matter shall then be submitted to arbitration as set forth in Section 8.9.2.

ii. Arbitration. Should any legal claim (other than those excepted below) arising out of or in any way relating to this Agreement or Executive's employment or the termination of

Executive's employment not be resolved by negotiation or mediation, it shall be subject to binding and final arbitration in Rock Hill, South Carolina, which is in York County. The fees of the arbitrator and any other fees for the administration of the arbitration that would not normally be incurred if the action were brought in a court of law shall be paid by Company. However, Executive shall be required to pay the amount of those fees equal to that which Executive would have been required to pay to file a lawsuit in court. Any demand for arbitration shall be in writing and must be communicated to the other party prior to the expiration of the applicable statute of limitations. Unless otherwise provided herein, the arbitration shall be conducted by a single arbitrator in accordance with the Employment Arbitration Rules and Mediation Procedures published by the American Arbitration Association. If the arbitrator selected as set forth herein determines that this location constitutes a significant hardship on the Executive and constitutes an impermissible barrier to Executive's efforts to enforce Executive's statutory or contractual rights, such arbitration may be conducted in some other place determined to be reasonable by the arbitrator. The arbitrator shall be selected by mutual agreement of the parties. If the parties cannot agree on an arbitrator within thirty (30) days after written request for arbitration is made by one party to the controversy, a neutral arbitrator shall be appointed according to the procedures set forth in the American Arbitration Association Employment Arbitration Rules and Mediation Procedures. In rendering the award, the arbitrator shall have the authority to resolve only the legal dispute between the parties, shall not have the authority to abridge or enlarge substantive rights or remedies available under existing law, and shall determine the rights and obligations of the parties according to the substantive laws of the Applicable State Law and any applicable federal law. In addition, the arbitrator's decision and award shall be in writing and signed by the arbitrator, and accompanied by a concise written explanation of the basis of the award. The award rendered by the arbitrator shall be final and binding, and judgment on the award may be entered in any court having jurisdiction thereof. The arbitrator is authorized to award any party a sum deemed proper for the time, expense, and trouble of arbitration, including arbitration fees and attorneys' fees.

iii.Types of Claims. All legal claims brought by Executive or Company related to this Agreement, the employment relationship, terms and conditions of Executive's employment, and/or termination from employment are subject to this dispute resolution procedure. These include, by way of example and without limitation, any legal claims based on alleged discrimination or retaliation on the basis of race, sex (including sexual harassment), religion, national origin, age, disability or other protected classification, whether based on state or federal law; payment of wages, bonuses, or commissions; workers' compensation retaliation; defamation; invasion of privacy; infliction of emotional distress and/or breach of an express or implied contract. Disputes and actions excluded from Section 8.9 are: (1) claims for workers' compensation or unemployment benefits; (2) claims for benefits under a Company plan or program that provides its own process for dispute resolution; (3) claims for declaratory or injunctive relief (any such proceedings will be without prejudice to the parties' rights under Section 8.9 to obtain additional relief in arbitration with respect to such matters); (4) claims for unfair labor practices filed with the National Labor Relations Board; and (5) actions to compel arbitration or to enforce or vacate an arbitrator's award under Section 8.9, such action to be governed by the Federal Arbitration Act ("FAA") and the provisions of Section 8.9. Nothing in this Agreement shall be interpreted to mean that Executive is precluded from filing complaints with the Equal Employment Opportunity Commission, the National Labor Relations Board or

any similar state or federal agency. Any controversy over whether a dispute is arbitrable or as to the interpretation of Section 8.9 with respect to such arbitration will be determined by the arbitrator.

j. Survival. For avoidance of doubt, the provisions of Sections 4.5, 5, 7 and 8 of this Agreement shall survive the expiration or earlier termination of the Employment Period.

k. Headings. Section headings used in this Agreement are for convenience of reference only and shall not be used to construe the meaning of any provision of this Agreement.

l. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but both of which together shall constitute one and the same instrument. Signatures delivered via facsimile or electronic file shall be the same as original signatures.

m. Taxes. Executive shall be solely responsible for taxes imposed on Executive by reason of any compensation and benefits provided under this Agreement and all such compensation and benefits shall be subject to applicable withholding.

n. Section 409A of the Code. It is intended that this Agreement will comply with Section 409A of the Code (and any regulations and guidelines issued thereunder) to the extent the Agreement is subject thereto, and the Agreement shall be interpreted on a basis consistent with such intent. If an amendment of the Agreement is necessary in order for it to comply with Section 409A, the parties hereto will negotiate in good faith to amend the Agreement in a manner that preserves the original intent of the parties to the extent reasonably possible. No action or failure by Company in good faith to act, pursuant to this Section 8.14, shall subject Company to any claim, liability, or expense, and Company shall not have any obligation to indemnify or otherwise protect Executive from the obligation to pay any taxes pursuant to Section 409A of the Code.

In addition, notwithstanding any provision to the contrary in this Agreement, if Executive is deemed on the date of Executive's "**separation from service**" (within the meaning of Treas. Reg. Section 1.409A1(h)) to be a "**specified employee**" (within the meaning of Treas. Reg. Section 1.409A1(i)), then with regard to any payment that is required to be delayed pursuant to Section 409A(a)(2)(B) of the Code (the "**Delayed Payments**"), such payment shall not be made prior to the earlier of (i) the expiration of the six (6) month period measured from the date of Executive's "separation from service" and (ii) the date of Executive's death. Any payments due under this Agreement other than the Delayed Payments shall be paid in accordance with the normal payment dates specified herein. In no case will the delay of any of the Delayed Payments by Company constitute a breach of Company's obligations under this Agreement. For the provision of payments and benefits under this Agreement upon termination of employment, reference to Executive's "termination of employment" (and corollary terms) with Company shall be construed to refer to Executive's "separation from service" from Company (as determined under Treas. Reg. Section 1.409A1(h), as uniformly applied by Company) in tandem with Executive's termination of employment with Company.

In addition, to the extent that any reimbursement or in-kind benefit under this Agreement or under any other reimbursement or in-kind benefit plan or arrangement in which Executive participates during the term of Executive's employment under this Agreement or thereafter provides for a "deferral of compensation" within the meaning of Section 409A of the Code, (i) the amount eligible for reimbursement or in-kind benefit in one calendar year may not affect the amount eligible for reimbursement or in-kind benefit in any other calendar year (except that a plan providing medical or health benefits may impose a generally applicable limit on the amount that may be reimbursed or paid), (ii) the right to reimbursement or an in-kind benefit is not subject to liquidation or exchange for another benefit, and (iii) subject to any shorter time periods provided herein, any such reimbursement of an expense or in-kind benefit must be made on or before the last day of the calendar year following the calendar year in which the expense was incurred.

If the sixty (60)-day period following a "separation from service" begins in one calendar year and ends in a second calendar year (a "**Crossover 60-Day Period**"), then any severance payments that would otherwise occur during the portion of the Crossover 60-Day Period that falls within the first year will be delayed and paid in a lump sum during the portion of the Crossover 60-Day Period that falls within the second year.

o. Limitation on Payments.

i. Parachute Payments. In the event that the payments and benefits provided for in this Agreement or other payments and benefits payable or provided to Executive (i) constitute "parachute payments" within the meaning of Section 280G of the Code and (ii) but for this Section 8.15, would be subject to the excise tax imposed by Section 4999 of the Code, then Executive's payments and benefits under this Agreement and other payments or benefits (the "**280G Amounts**") will be either:

(1) delivered in full, or

(2) delivered as to such lesser extent which would result in no portion of such payments or benefits being subject to excise tax under Section 4999 of the Code,

whichever of the foregoing amounts, taking into account the applicable federal, state and local income taxes and the excise tax imposed by Section 4999, results in the receipt by Executive on an after-tax basis, of the greatest amount of 280G Amounts, notwithstanding that all or some portion of the 280G Amounts may be taxable under Section 4999 of the Code.

ii. Reduction Order. In the event that a reduction of 280G Amounts is being made in accordance with Section 8.15.1, the reduction will occur, with respect to the 280G Amounts considered parachute payments within the meaning of Section 280G of the Code, in the following order:

i. reduction of cash payments in reverse chronological order (that is, the cash payment owed on the latest date following the occurrence of the event triggering the excise tax will be the first cash payment to be reduced);

ii.cancellation of equity awards that were granted “contingent on a change in ownership or control” within the meaning of Code Section 280G in the reverse order of date of grant of the awards (that is, the most recently granted equity awards will be cancelled first);

iii.reduction of the accelerated vesting of equity awards in the reverse order of date of grant of the awards (that is, the vesting of the most recently granted equity awards will be cancelled first); and

iv.reduction of employee benefits in reverse chronological order (that is, the benefit owed on the latest date following the occurrence of the event triggering the excise tax will be the first benefit to be reduced).

In no event will Executive have any discretion with respect to the ordering of payments.

iii..Accounting or Valuation Firm. Unless the Company and Executive otherwise agree in writing, any determination required under this Section 8.15 will be made in writing by a nationally recognized accounting or valuation firm (the “**Firm**”) selected by the Company, whose determination will be conclusive and binding upon Executive and the Company for all purposes. For purposes of making the calculations required by this Section 8.15, the Firm may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code. The Company and Executive will furnish to the Firm such information and documents as the Firm may reasonably request in order to make a determination under this Section 8.15. The Company will bear all costs and make all payments for the Firm’s services relating to any calculations contemplated by this Section 8.15.

p. Payment by Subsidiaries. Executive acknowledges and agrees that Company may satisfy its obligations to make payments to Executive under this Agreement by causing one or more of its subsidiaries to make such payments to Executive. Executive agrees that any such payment made by any such subsidiary shall fully satisfy and discharge Company’s obligation to make such payment to Executive hereunder (but only to the extent of such payment).

[*Signature Page to Follow*]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date and year first above written, to be effective at the Effective Date.

EXECUTIVE

/s/Jeffrey Blank

Jeffrey Blank

3D Systems Corporation

/s/Andrew M. Johnson

By: Andrew M. Johnson

Title: Executive Vice President, Chief Legal Officer and Secretary

SUBSIDIARIES AND OTHER INVESTMENTS OF THE COMPANY

The following table sets forth the name and state or other jurisdiction of incorporation of our subsidiaries as of December 31, 2020. Except as otherwise indicated, each subsidiary is owned, directly or indirectly, by us. Some subsidiaries have been dissolved or merged during the year.

Name	Jurisdiction of Incorporation
3D Canada Company	Canada
3D Holdings, LLC	Delaware
3D Systems S.A.	Switzerland
3D Systems, Inc.	California
3D European Holdings Ltd.	United Kingdom
3D Latam LLC	Delaware
3D Systems Asia-Pacific Pty Ltd	Australia
3D Systems Benelux B.V.	The Netherlands
3D Systems Corporation	Delaware
3D Systems Europe Ltd.	United Kingdom
3D Systems France SARL	France
3D Systems GmbH	Germany
3D Systems Hong Kong Co., Limited	Hong Kong
3D Systems India, Inc.	Delaware
3D Systems Italia S.r.l.	Italy
3D Systems Industria E Comercio LTDA	Brazil
3D Systems Japan K.K.	Japan
3D Systems Korea, Inc.	Korea
3D Systems Software GmbH	Germany
3D Systems Software srl	Italy
3D Systems, S.A. de C.V.	Mexico
3DS Additive Israel Ltd	Israel
AMT, Inc.	Delaware
Beijing Suntop Technology Co., Ltd.	China
Cimatron Ltd.	Israel
Cimatron (Beijing) Technologies Co. Ltd.	China
Cimatron Technologies India Pvt. Ltd.	India
Cimatron Technologies, Inc. (Canada)	Canada
Cimatron Technologies, Inc. (USA)	Michigan
Cimatron Gibbs LLC	California
Cimatron SARL	France
Geomagic (Shanghai) Software Co., Ltd.	Shanghai, China
Geomagic, Inc.	Delaware

LayerWise NV	Belgium
LayerWise, Inc.	Delaware
Medical Modeling Inc.	Colorado
NextDent B.V.	The Netherlands
OptoForm LLC(a)	Delaware
Phenix Systems	France
Product Development Group LLC	Delaware
Quickparts.com, Inc.	Delaware
Rapidform, Inc.	California
Robtec Ltda	Uruguay
Shanghai Forever Technology & Development Co., Ltd.	China
Simbionix Ltd.	Israel
Simbionix USA Corporation	Ohio
Sint-Tech	France
Three D Sycode India Private Limited	India
Vertex-Dental B.V.	The Netherlands
Vertex-Dental Asia PTE Ltd	The Netherlands
Vertex-Global Holding B.V.	The Netherlands
Vertex International B.V.	The Netherlands
VIDAR Systems LLC	Virginia
Wuxi Easyway Model Design & Manufacture Co, Ltd.	China
Wuxi Hengxinda Science and Technology Development Co., Ltd.	China
Z Corporation	Massachusetts

(a) We directly or indirectly own 60% of the outstanding interests.

Consent of Independent Registered Public Accounting Firm

3D Systems Corporation
Rock Hill, South Carolina

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-239803) and Form S-8 (No. 333-115642, No. 333-204305, No. 333-219222 and No. 333-238794) of 3D Systems Corporation of our reports dated March 5, 2021, relating to the consolidated financial statements, and the effectiveness of 3D Systems Corporation's internal control over financial reporting, which appears in the Annual Report to Shareholders, which is incorporated by reference in this Annual Report on Form 10-K. Our report on the effectiveness of internal control over financial reporting expresses an adverse opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2020.

/s/ BDO USA, LLP
Charlotte, North Carolina

March 5, 2021

Exhibit 31.1

**Certification of
Principal Executive Officer of
3D Systems Corporation**

I, Dr. Jeffrey A. Graves, certify that:

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

Date: March 5, 2021

By: /s/ Dr. Jeffrey A. Graves
Dr. Jeffrey A. Graves
Title: President, Chief Executive Officer and Director
(principal executive officer)

Exhibit 31.2

**Certification of
Principal Executive Officer of
3D Systems Corporation**

I, Jagtar Narula, certify that:

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

Date: March 5, 2021

By: /s/ Jagtar Narula
Jagtar Narula
Title: Chief Financial Officer
(principal financial officer)

Exhibit 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

This certification is provided pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and accompanies the Annual Report on Form 10-K (the “Form 10-K”) for the year ended December 31, 2020 of 3D Systems Corporation (the “Issuer”).

I, Dr. Jeffrey A. Graves, President, Chief Executive Officer and Director (principal executive officer) of the Issuer, certify that, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge:

- (i) the Form 10-K fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934; and
- (ii) The information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Issuer.

Date: March 5, 2021

/s/ Dr. Jeffrey A. Graves

Name: Dr. Jeffrey A. Graves
(principal executive officer)

Exhibit 32.2

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

This certification is provided pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and accompanies the Annual Report on Form 10-K (the “Form 10-K”) for the year ended December 31, 2020 of 3D Systems Corporation (the “Issuer”).

I, Jagtar Narula, the Chief Financial Officer (principal financial officer) of the Issuer, certify that, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge:

- (i) the Form 10-K fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934; and
- (ii) The information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Issuer.

Date: March 5, 2021

/s/ Jagtar Narula

Name: Jagtar Narula

(principal financial officer)