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As we reflect on 2021, I am proud of how our people continued to overcome the challenges of the COVID pandemic. They looked out for one another and stayed safe and healthy. They served our customers who are advancing critical public infrastructure and private construction projects. And they welcomed 3,000 employees of U.S. Concrete, a leading supplier of aggregates and ready-mixed concrete with highly complementary assets, to the Vulcan family.

Together, our people, culture and strategy are a powerful force that enabled us to achieve another year of strong results for our shareholders.

2021 Financial Overview

In 2021. Vulcan delivered a 14% increase in total revenues, a 15% increase in net earnings attributable to Vulcan, and a 10% increase in adjusted earnings before interest, taxes, depreciation and amortization (Adjusted EBITDA) versus 2020. We have improved our trailing-twelve months aggregates unit profitability for 14 straight quarters. In 2021, our aggregates gross profit per ton increased by 4% and aggregates cash gross profit per ton increased by 5% through price growth and effective cost control, despite the headwinds of higher energy costs and continued labor constraints.

We maintained our disciplined capital stewardship, ending the year with a net debt to Adjusted EBITDA ratio of 2.5 times and excellent liquidity to support the continued long-term growth of the business. We delivered on our commitment to drive value for shareholders by returning \$196 million through dividends.

In August, we completed the acquisition of U.S. Concrete, which significantly enhanced our aggregates business in several high-growth areas and expanded our footprint. Our talented teams have been hard at work integrating U.S. Concrete into Vulcan and are focused on realizing the increased value of the combined organization.

Our strong financial performance – despite economy-wide supply chain issues, inflationary pressures and pandemic-related challenges – is a testament to the quality of our world-class team, to our operational execution and to our focus on controlling what we can control

Continued Focus on the Safety and Growth of our People

At Vulcan, our people are our core strength. Each day, our goal is to ensure everyone goes home as safe and as healthy as they arrived. I am proud of our people for delivering a top-tier safety performance across all of our business lines in 2021, in addition to an excellent operating performance and strong financial results. Our aggregates business safety performance was world-class, with an MSHA injury rate of 0.98.

We challenge ourselves to continuously improve at Vulcan, and nowhere is that objective more important than in safety.

We believe it is possible to eliminate all injuries on the job. In the spring, we further strengthened our efforts to prevent serious injuries and fatalities with a systematic approach to ensure that we are engaging all of our employees – from the newest hire to the most seasoned veteran – to help eliminate hazards and engineer the risks out of tasks across 14 high-risk activities.

Our commitment to the health and safety of our people goes beyond our industryleading operational safety efforts. During the past year, we continued to take significant steps to help protect our employees – as well as their families, our customers and our suppliers against COVID-19. We adjusted travel and meeting protocols, workplace cleaning routines, pandemic work-fromhome policies and personal protective equipment requirements throughout the year, consistent with CDC guidelines and best practices. We also conducted a highly successful vaccination campaign across the company, providing information, education, access to medical experts and incentive payments for vaccinated individuals and teams.

Vulcan cares for the long-term development and fulfillment of our employees as well as providing attractive current financial compensation and retirement benefits. In 2021, we advanced new initiatives focused on improving onboarding to enable new employees to hit the ground running, defining clear professional growth trajectories and offering training and development opportunities throughout an employee's career at the company. We also supported our employees and their families with a new financial





A RETURN

ON INVESTED

14.2% FOR 2021."

CAPITAL OF

wellness program and expanded mental health initiatives and resources. These efforts, and our long-term, proven commitment to our people, have helped us acquire and retain the best and most diverse talent.

Clear Path for Growth

Our focus on fundamentals, and on controlling what we can control, have allowed us to deliver strong results despite economic challenges. The path to continued growth is clear, and we have three engines to deliver it: organic growth, mergers and acquisitions (M&A) and greenfield development.

Organic Growth

Organic growth provides the most attractive and compelling value proposition on a risk-adjusted basis. Our unique asset base includes the most attractive growth markets in the United States. Delivering on the full value potential of our portfolio and driving earnings growth and cash generation are core to the value we create. Our team and our four strategic disciplines—Operational Excellence, Commercial Excellence, Logistics Innovation and Strategic Sourcing—enabled Vulcan to generate a return on invested capital of 14.2% for 2021.

Our focus on organic growth and our industry-leading track record of unit profitability expansion are key to overcoming economic headwinds when they occur and capturing market opportunities as they arise. Our strong and well-capitalized balance sheet also provides us with the capacity to reinvest in the business to enable us to generate future growth.

In 2021, we strengthened our platform through projects that were previously

delayed due to the pandemic and improvements to our logistics and distribution network, as well as the opening of new quarries and capacity expansion at existing ones. We will continue to pursue a disciplined approach to capital allocation aimed at ensuring our long-term market fundamentals continue to be strong and allow us to remain competitive.

M&A

We employ a strategic and disciplined approach to pursuing M&A, with a particular focus on identifying opportunities that complement our aggregates business and have the potential to generate the greatest amount of long-term value. Since 2014, we have completed more than two dozen value-enhancing acquisitions in the country's fastest-growing markets and have seamlessly integrated all of them into our operations and structures.

Our recent acquisition of U.S. Concrete is a perfect example of our approach to M&A. The acquisition of this complementary business increased our service capabilities, gave us access to high-quality aggregates reserves, strengthened our existing aggregates and concrete businesses in California, Texas and Virginia and gave us a platform for expansion in New York and New Jersey. Through our extensive due diligence and conversations with U.S. Concrete's leadership, it was clear that they shared our entrepreneurial and growth-focused mindset and were looking for the right partners to take what they had built to the next level. We moved immediately following the acquisition to begin securing cost savings and synergy opportunities. The integration is going well. Our joint teams

have been working well together and the businesses and management teams have blended seamlessly.

With a strong balance sheet and investment-grade credit rating, we are ideally positioned to continue our disciplined M&A efforts to drive future growth and value creation. The M&A pipeline continues to be strong and active. We are regularly evaluating opportunities to strengthen our core business and to expand our presence and offerings. We only act on opportunities that fit within our strategic focus on aggregates, enhance our business with complementary operations and are financially compelling.

Greenfields

The third part of our growth strategy is the development of new quarries and distribution yards. These greenfield opportunities help keep Vulcan's growth potential stable and sustainable.

Our ability to establish greenfield sites is particularly advantageous when an acquisition target is not available or attractive. We also appreciate the flexibility that greenfields provide in terms of timing and the pace of capital spending. Their successful development requires great skill and patience to see a project to success, and our team is experienced at maximizing the potential of greenfields.

Throughout over six decades, we have developed a national asset base with land and mining rights that are irreplaceable. We will continue to prudently pursue greenfield opportunities to ensure we always have an additional lever to access further growth, on top of our organic growth and M&A strategies. Vulcan's market position, the result of

long-term planning and well-executed strategy, is truly unique. We are excited about how well-positioned we are to deliver growth for years to come.

Positioned for 2022 and Beyond

Overall, we enter 2022 in a position of strength, and we are excited by the tailwinds that support our outlook as we head into 2022. We see positive demand in all four end uses for the first time since the Great Recession ended in 2009. There is rising demand for housing and residential construction. Private nonresidential construction is growing. The inclusion of a long-term reauthorization of federal highway programs as part of the bipartisan infrastructure bill provides a 38%¹ increase in core federal highway investment from federal fiscal year 2021 to 2022 along with one-time supplemental funding for highways, roads and bridges. Of course, the passage of the Infrastructure Investment and Jobs Act (IIJA) will also boost public infrastructure investment in airports, ports, railroads and drinking and water systems, as well as in less aggregates-intensive energy and broadband infrastructure.

In our 65 years as a publicly traded company, we have been guided by doing the right thing, the right way, at the right time, which we call The Vulcan Way. We are committed to our people, the environment and our communities. Vulcan prides itself on having the best assets and the best people in the industry. We have a deep responsibility to care for and grow them while also ensuring we're doing right by the communities we serve.



¹ From ARTBA IIJA Publication located at artba.org/government-affairs/



Consistent with our focus on doing right for all of our stakeholders, over the last year, we built a robust internal governance process for overseeing and managing environmental, social and governance (ESG) matters. I invite you to review our 2021 Environmental, Social and Governance Report, which describes our ambitions and our progress related to climate change and building a diverse and inclusive workforce.

I am extremely proud of what we achieved last year, and the strong finish to 2021 allows us to carry considerable momentum into 2022. We are already hard at work driving superior shareholder value in 2022. As always, we deeply appreciate your continued support of Vulcan Materials Company.

Tom Hill

Chairman, President and Chief Executive Officer

Ilomes Hill



Vulcan Career Development and Support Programs

PROVIDING A TUITION
REIMBURSEMENT
PROGRAM THAT PAYS UP TO
100% OF TUITION COSTS
BASED ON ACADEMIC
PERFORMANCE

ENCOURAGING PERSONAL AND PROFESSIONAL GROWTH THROUGH OUR VULCAN MENTORSHIP PROGRAM

ESTABLISHMENT OF EMPLOYEE RESOURCE GROUPS

EDUCATING FUTURE
SENIOR-LEVEL LEADERS
THROUGH THE
VULCAN LEADERSHIP
DEVELOPMENT
PROGRAM, CONDUCTED
IN PARTNERSHIP WITH THE
KENAN-FLAGLER SCHOOL
OF BUSINESS, UNIVERSITY
OF NORTH CAROLINA,
CHAPEL HILL

ENCOURAGING EMPLOYEES
TO BE ACTIVELY **ENGAGED**IN THEIR COMMUNITIES
THROUGH SERVICE TO
CHARITABLE, CIVIC
AND EDUCATIONAL
ORGANIZATIONS

TRAINING AND CONTINUING EDUCATION PROGRAMS

Leadership Updates



In February 2022, we announced **Suzanne Wood's** decision to retire as our Chief Financial Officer and Senior Vice President. She will remain with the Company as Chief Financial Officer through the end of August, and in a consulting capacity until the end of 2022. Her leadership has played an important role in our continued success, and our strong financial position reflects her outstanding contributions to Vulcan over the years. We are very grateful for her service to Vulcan and wish her and her family the very best for the future.

As part of this transition, the
Board of Directors appointed Mary
Andrews Carlisle, Vulcan's Vice
President – Finance, as Ms. Wood's
successor effective September 1, 2022.
Ms. Carlisle has been an integral part
of our finance team for more than
16 years, and has worked closely with
Ms. Wood in the planning and execution
of our financial strategy.

Also in February 2022, we announced the appointment of **Darren Hicks**, Vulcan's Vice President – Human Resources, to the newly-created role of Senior Vice President and Chief Human Resources Officer (CHRO). He brings 27 years of experience at Vulcan to his new role. As CHRO, Mr. Hicks will oversee human resources strategies that support

Vulcan's overall business plan and strategic direction, with a focus on talent management, leadership development and diversity and inclusion.

In August 2021, we were pleased to welcome **Ronnie Pruitt**, who had served as CEO of U.S. Concrete, as Senior Vice President of Vulcan's Southwest and Western Divisions and U.S. Concrete Operations. In his new role, Mr. Pruitt is leveraging his decades of industry expertise to align the right people, with the right leadership skills, in the right roles to best execute our strategy of sustained growth and enhanced customer service.

Vulcan has a deep bench of talented leaders who are leading our teams, delivering for customers and supporting us in building the best company for the future. Our philosophy of empowering employees enables them to take pride and ownership in their work and drive continued growth of the business and value for stakeholders. We focus on developing and retaining talent across our organization through our training programs and initiatives that support our employees' wellness and career growth.

Our team has the expertise, experience and commitment to successfully execute on our strategy for years to come.

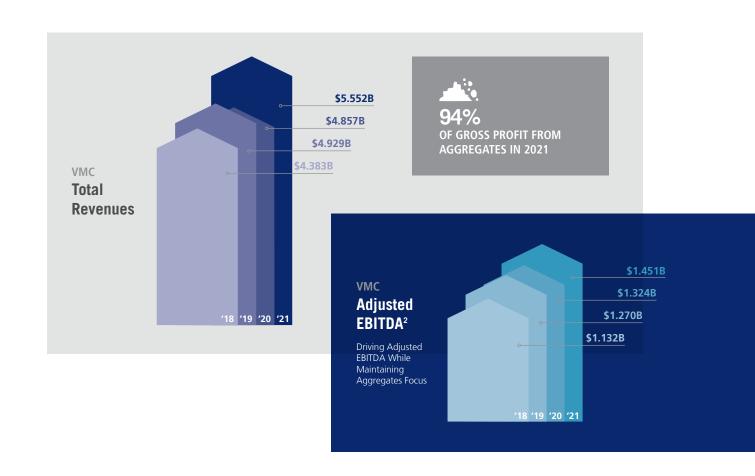


U.S. Concrete Acquisition

Over the course of our 65-year history, we have built the most valuable aggregates franchise in the United States, and we are always looking to grow, enhance value and reinforce our industry leadership. Through our August 2021 acquisition of U.S. Concrete, we have added a complementary business with key strategic benefits for Vulcan.

U.S. Concrete's complementary portfolio gives us access to high-quality aggregates reserves in key growth areas across Texas and California. It adds exposure with new, attractive geographies in New York and New Jersey. The successful integration strengthens our presence, scale, product and service offerings, and capabilities in our existing footprint.

Like Vulcan, U.S. Concrete had a culture that values people, technology, operating disciplines, customer service, safety and the entrepreneurial spirit. We are very excited about executing in 2022 as one, united Vulcan.



Adjusted EBITDA is a non-GAAP financial measure. Net earnings attributed to Vulcan were \$0.671B in 2021, \$0.584B in 2020, \$0.618B in 2019 and \$0.516B in 2018.



Strong Funding for Infrastructure

Vulcan plays an essential role in our nation's infrastructure. We are proud to be advancing projects that serve millions of Americans. Throughout the COVID-19 pandemic, we supplied vital materials for much-needed infrastructure projects that kept people employed and addressed important needs in a challenging period.

In November 2021, Congress passed and President Biden signed the historic Infrastructure Investment and Jobs Act (IIJA). Over the next five years, approximately 76%3 of the money in the IIJA will be distributed to the states via formula. The funds for the federalaid highway apportioned programs, bridge replacement and repair, water infrastructure improvement and airport infrastructure development are among the most aggregates-intensive, formulabased distributions in the IIJA – all key areas of strength for Vulcan. We also see significant opportunities in rising public infrastructure spending by highgrowth states including California, Texas and Virginia, among others, and continue to benefit from the estimated

TRANSPORTATION FUNDING

MEASURES PRIMARILY DEDICATED

TO ROADS, STREETS AND BRIDGES.

\$3.3 billion in local transportation funding measures primarily dedicated to roads, streets and bridges that were approved in elections held in Vulcanserved areas in November 2021.

The passage of the IIJA has unlocked opportunities for Vulcan that will help drive our growth for years to come, and we look forward to working together to deliver the aggregates and construction materials needed to improve our transportation systems, cities and neighborhoods.

Best Long-term Public Infrastructure Funding Picture in Decades

2021 Infrastructure Investment and Jobs Act (IIJA) provides the largest increase in federal highway, road and bridge funding in more than six decades.

~\$350B

OVER FIVE YEARS FOR HIGHWAY PROGRAM FUNDING UNDER IIJA

~\$3.3B
IN STATE/LOCAL
REVENUE MEASURES
AND BOND PROCEEDS
PRIMARILY FOR
ROADS, STREETS AND
BRIDGES APPROVED IN
VULCAN-SERVED AREAS
APPROVED IN 2021



Vulcan-Served
States to Benefit
from Billions in
Formula-Based
IIJA Funding Over
Next Five Years

65%
OF FEDERAL-AID
HIGHWAY
APPORTIONED
PROGRAM FUNDING

63%
OF BRIDGE REPAIR
AND REPLACEMENT
MONEY

60%
OF WATER
INFRASTRUCTURE
IMPROVEMENT
RESOURCES

OF AIRPORT INFRASTRUCTURE DEVELOPMENT GRANTS



ESG Commitment

WE USE RECYCLED ASPHALT PAVEMENT (RAP) AS A SUPPLEMENTAL FEEDSTOCK IN **ASPHALT PLANTS. IT PROVIDES QUALITY AGGREGATE AND VALUABLE HEAT CONTENT.**

Vulcan is committed to being an industry leader on environmental, social and governance (ESG) matters. Our steadfast commitment to ESG drives sustainable, long-term shareholder value and advances our mission to build the best future for the company and all our stakeholders. It's a mission shared across all levels of Vulcan, from our operators in the aggregates, asphalt and concrete lines of business all the way to our Board's Governance Committee, which closely oversees our ESG initiatives.

Environmental Focus: Climate Change

Vulcan has a long history and excellent record of ensuring we are stewards of the environment in which we live and work. As our ESG program has matured, we have expanded the scope of our environmental efforts. In the last few years, identifying, quantifying and assessing opportunities to reduce our Scope 1 and 2 greenhouse gas emissions has been the emphasis of our environmental efforts.

In our upcoming 2021 ESG report, we will set targets for Scope 1 and 2 emissions reductions. These targets will be achieved by expanding our purchases of energy based on renewable resources, building on our pilot projects to install renewable energy generation on our own properties, and increasing energy

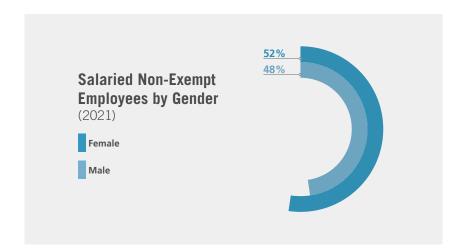
efficiency as part of our operational excellence disciplines.

By the end of 2022, we will identify our Scope 3 greenhouse gas (GHG) sources and complete a Scope 3 inventory. This will enable us to set science-based targets that encompass our entire greenhouse gas emissions footprint and further evaluate different ways to shape our business as we prepare Vulcan for a net-zero future.

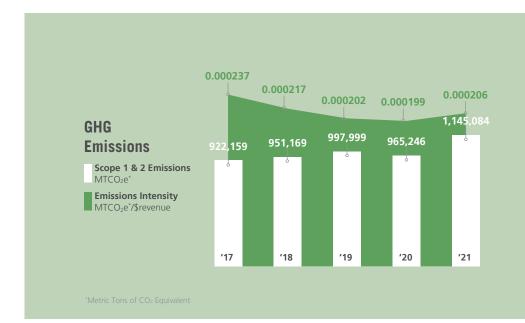
Social Spotlight: Workforce

The ability to recruit and retain the best people in the business is essential to our success today and our sustainability as a business in the years to come. We focus on three areas when it comes to our people:

- 1. Finding the talent. Hiring and retaining the best and most diverse talent - diverse not only with regard to gender and ethnicity, but also with diversity of experiences, thoughts and backgrounds.
- 2. Keeping them safe and healthy. Ensuring everyone goes home the same as they arrived each day.
- 3. Keeping them in the Vulcan family. Implementing strong employee inclusion, engagement and retention strategies.









By using the CarbonCure technology that provides capture and sequestration of carbon dioxide within ready-mixed concrete, we reduce the demand for cement and other cement-related materials, which reduces the supply side carbon footprint. The resulting concrete is also stronger than it would have been without the use of this technology.



Investing in a More Efficient, Sustainable Future

>50%
OF OFF-ROAD FLEET'S WORK IN 2021 WERE PERFORMED BY TIER IV MACHINES, WHICH POSITIVELY IMPACTS ALL AIR EMISSIONS IN ADDITION TO HAVING AN IMPACT ON GHG EMISSIONS

>1.9M
GALLONS OF USED
OIL RECYCLED SINCE
2017 (INCLUDING 0.4M
GALLONS IN 2021)
RESULTING IN BOTH A
COST SAVINGS TO US
AND A REDUCTION IN
THE AMOUNT OF NEW
FOSSIL FUELS REQUIRED

1.7M
TONS OF RECYCLED
ASPHALT PAVEMENT
REUSED DURING
2021, PROVIDING
QUALITY AGGREGATES
AND VALUABLE
HEAT CONTENT

2.4M
TONS OF CONCRETE
RECYCLED DURING
2021 BY CRUSHING AND
SCREENING PLANTS TO
PRODUCE AGGREGATESCONTAINING RECYCLED
CONCRETE PRODUCTS

Shareholder Information

Vulcan Materials Company and Subsidiary Companies

Shareholder Services

Our transfer agent and registrar, Computershare Shareowner Services LLC (Computershare), has a direct response system for handling shareholders' inquiries about change of address, account balances, recent dividend information, dividend checks, reportable income and dividend reinvestment.

Telephone:

(866) 886-9902 (toll-free inside the U.S. and Canada)

(201) 680-6578 (outside the U.S. and Canada, may call collect) (800) 231-5469

(TDD, hearing impaired)

Mail:

Vulcan Materials Company c/o Computershare PO Box 30170 College Station, TX 77842-3170

Web:

www.computershare.com/investor

Investor Relations

Mark D. Warren

Telephone: (205) 298-3220 **E-mail:** ir@vmcmail.com

Community & Governmental Relations

Janet F. Kavinoky Telephone: (205) 298-3220 E-mail: cr@vmcmail.com

E-mail: cr@vmcmail.com

Vulcan Materials Company Online

Web: www.vulcanmaterials.com

This website includes general Company information, Securities and Exchange Commission filings, investor information and an archive of recent news releases.

Corporate Headquarters Address

Vulcan Materials Company

1200 Urban Center Drive Birmingham, Alabama 35242-2545

Telephone: (205) 298-3000

Fax: (205) 298-2963

New York Stock Exchange (NYSE) Assertions

Our common stock is listed and traded on the NYSE under the symbol VMC.

On June 9, 2021, J. Thomas Hill, Chairman, President and Chief Executive Officer, submitted to the NYSE the Written Affirmation required by the rules of the NYSE certifying that he was not aware of any violations by Vulcan Materials Company of NYSE Corporate Governance listing standards.

The certifications of Mr. Hill and Suzanne H. Wood, Senior Vice President and Chief Financial Officer, made pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, have been filed as exhibits to our 2021 Annual Report on Form 10-K.

Notice of Annual Meeting

The annual meeting of shareholders will be held virtually via the web on Friday, May 13, 2022, at 9:00 a.m., Central Daylight Time. A formal notice of the meeting and proxy materials accompany this report.

Electronic Deposit of Dividends

Registered holders of our common stock may have their quarterly dividends deposited to their checking or savings account free of charge. Contact Computershare personnel to sign up for this service.

Telephone: (866) 886-9902

Web: www.computershare.com/investor

Direct Stock Purchase and Dividend Reinvestment Plan

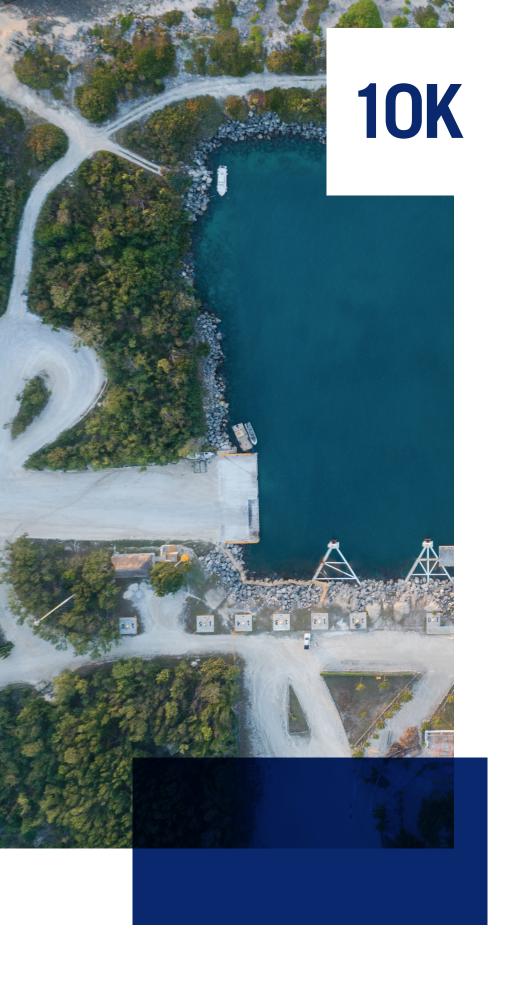
The Computershare CIP direct purchase and dividend reinvestment plan offers both existing registered shareholders and first-time investors an affordable alternative for investing in the Company, including the ability to purchase additional shares of our common stock. A brochure describing this service may be obtained by calling or visiting:

Telephone: (866) 886-9902

Web: www.computershare.com/investor

Independent Auditors

Deloitte & Touche LLP Birmingham, Alabama



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, 2021 TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the Transition Period From Commission file number: 001-33841 VULCAN MATERIALS COMPANY (Exact Name of Registrant as Specified in Its Charter) 20-8579133 **New Jersey** (State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification No.) 1200 Urban Center Drive, Birmingham, Alabama 35242 (Address of Principal Executive Offices) (Zip Code) (205) 298-3000 (Registrant's telephone number, including area code) Securities registered pursuant to Section 12(b) of the Act: Title of each class Trading Symbol Name of each exchange on which registered **New York Stock Exchange** Common Stock, \$1 par value VMC 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 during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). 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 ☑ Accelerated filer □ Non-accelerated filer □ Smaller reporting company □ Emerging growth company □ If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes ☐ No 🗹

Aggregate market value of voting and non-voting common stock held by non-affiliates as of June 30, 2021:

\$23,045,807,043

Number of shares of common stock, \$1.00 par value, outstanding as of February 15, 2022:

132,792,275

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's annual proxy statement for the annual meeting of its shareholders to be held on May 13, 2022, are incorporated by reference into Part III of this Annual Report on Form 10-K.

ANNUAL REPORT ON FORM 10-K FISCAL YEAR ENDED DECEMBER 31, 2021

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PARTI

"SAFE HARBOR" STATEMENT UNDER THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995

Certain of the matters and statements made herein or incorporated by reference into this report constitute forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934. All such statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements reflect our intent, belief or current expectation. Often, forward-looking statements can be identified by the use of words, such as "anticipate," "may," "believe," "estimate," "project," "expect," "intend" and words of similar import. In addition to the statements included in this report, we may from time to time make other oral or written forward-looking statements in other filings under the Securities Exchange Act of 1934 or in other public disclosures. Forward-looking statements are not guarantees of future performance, and actual results could differ materially from those indicated by the forward-looking statements. All forward-looking statements involve certain assumptions, risks and uncertainties that could cause actual results to differ materially from those included in or contemplated by the statements. These assumptions, risks and uncertainties include, but are not limited to:

- general economic and business conditions
- a pandemic, epidemic or other public health emergency, such as the COVID-19 outbreak
- our dependence on the construction industry, which is subject to economic cycles
- the timing and amount of federal, state and local funding for infrastructure
- changes in the level of spending for private residential and private nonresidential construction
- changes in our effective tax rate
- the increasing reliance on information technology infrastructure, including the risks that the infrastructure does not work as intended, experiences technical difficulties or is subjected to cyber-attacks
- the impact of the state of the global economy on our businesses and financial condition and access to capital markets
- international business operations and relationships, including recent actions taken by the Mexican government with respect to our operations in that country
- the highly competitive nature of the construction industry
- the impact of future regulatory or legislative actions, including those relating to climate change, wetlands, greenhouse gas emissions, the definition of minerals, tax policy or international trade
- the outcome of pending legal proceedings
- pricing of our products
- weather and other natural phenomena, including the impact of climate change and availability of water
- availability and cost of trucks, railcars, barges and ships, as well as their licensed operators, for transport of our materials
- energy costs
- costs of hydrocarbon-based raw materials
- healthcare costs
- labor shortages and constraints
- the amount of long-term debt and interest expense we incur
- changes in interest rates
- · volatility in pension plan asset values and liabilities, which may require cash contributions to the pension plans
- the impact of environmental cleanup costs and other liabilities relating to existing and/or divested businesses
- our ability to secure and permit aggregates reserves in strategically located areas
- our ability to manage and successfully integrate acquisitions
- the effect of changes in tax laws, guidance and interpretations
- significant downturn in the construction industry may result in the impairment of goodwill or long-lived assets
- changes in technologies, which could disrupt the way we do business and how our products are distributed

- the risks set forth in Item 1A "Risk Factors," Item 3 "Legal Proceedings," Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations," and Note 12 "Commitments and Contingencies" to the consolidated financial statements in Item 8 "Financial Statements and Supplementary Data," all as set forth in this report
- other assumptions, risks and uncertainties detailed from time to time in our filings made with the Securities and Exchange Commission

All forward-looking statements are made as of the date of filing or publication. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except to the extent required by law. Investors are cautioned not to rely unduly on such forward-looking statements when evaluating the information presented in our filings, and are advised to consult any of our future disclosures in filings made with the Securities and Exchange Commission and our press releases with regard to our business and consolidated financial position, results of operations and cash flows.

OUR MISSION

We are the company we are today thanks to the positive actions of our nearly 12,000 employees. We believe that doing the right thing is good for our business, our environment and our society. That's our commitment.

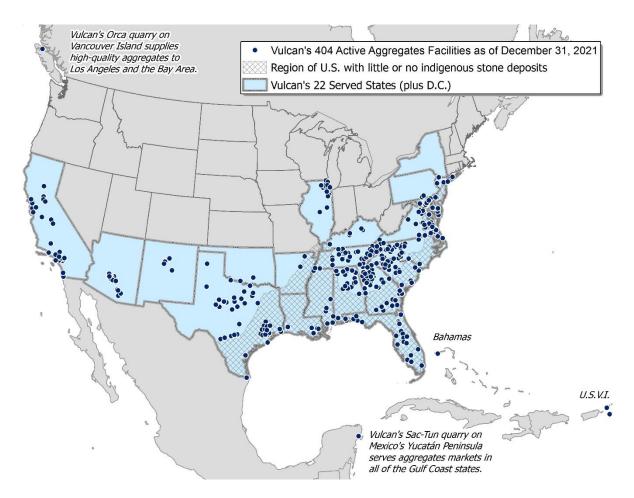
Our Mission

Provide quality products and services that consistently exceed our customers' expectations. Be responsible stewards with respect to safety and the environmental impact of our operations and products. Drive value and superior returns for our customers, employees, communities and shareholders.

- We maintain the highest degree of respect for people for their dignity, talents and interests. We believe that empowering, mentoring, training and rewarding our people helps create a highly engaged workforce, happy people and sustainable, long-term value.
- We act fairly and honorably to earn the respect and trust of all parties with whom we interact. We hold ourselves to high
 ethical standards, including abiding by both the letter and spirit of the laws and regulations related to our business.
- We are committed to excellence in all of our activities. We value innovation. We strive to maintain a position of leadership
 in all of our businesses.

DOING THE RIGHT THING, THE RIGHT WAY, AT THE RIGHT TIME. IT'S THE VULCAN WAY.

Vulcan Materials Company operates primarily in the U.S. and is the nation's largest supplier of construction aggregates (primarily crushed stone, sand and gravel), a major producer of asphalt mix and ready-mixed concrete, and a supplier of construction paving services. We provide the basic materials for the infrastructure needed to maintain and expand the U.S. economy. Delivered by trucks, ships, barges and trains, our products are the indispensable materials building homes, offices, places of worship, schools, hospitals and factories, as well as vital infrastructure including highways, bridges, roads, ports and harbors, water systems, campuses, dams, airports and rail networks. As of December 31, 2021, we had 404 active aggregates facilities as shown below.



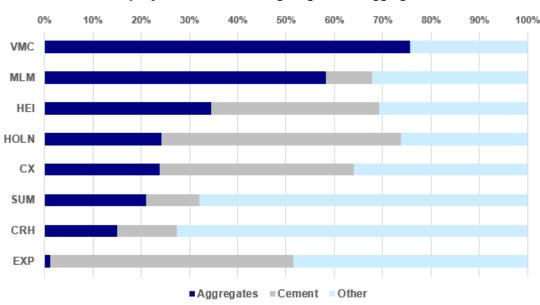
While aggregates is our focus and primary business, as of December 31, 2021, we further served our customers through our 69 asphalt facilities and 173 concrete facilities located in Alabama, Arizona, California, Maryland, New Jersey, New Mexico, New York, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia, the U.S. Virgin Islands, Washington D.C. and the Bahamas.

BUSINESS STRATEGY

Our strategy and competitive advantage are based on our strength in aggregates, which are used in most types of construction and in the production of asphalt mix and ready-mixed concrete. Our strategy for long-term value creation is built on: (1) an aggregates-focused business, (2) a disciplined approach to growth management and capital allocation, (3) a focus on continuous compounding improvement in profitability, (4) a holistic approach to land management, and (5) our commitment to safety, health and the environment.

1. AGGREGATES FOCUS

Aggregates are used in virtually all types of public and private construction, practically no substitutes for quality aggregates exist, and significant barriers to entry exist in most markets. Vulcan is uniquely positioned as the largest aggregates supplier in the U.S. and the most aggregates-focused public company.



Public Company Revenue Mix Among Largest U.S. Aggregates Producers

Source: 2020 reported financial information and Company estimates. VMC excludes U.S. Concrete, which was acquired in August 2021.

Given our focus on aggregates, we:

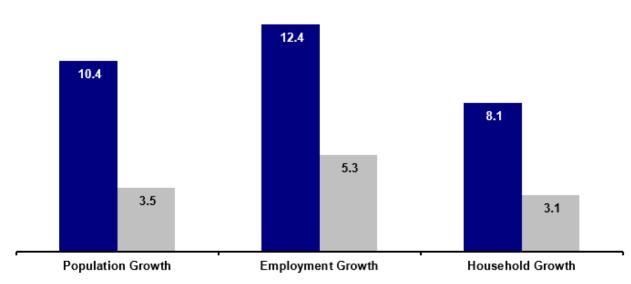
- TAKE ADVANTAGE OF SIZE AND SCALE: While certain aspects of each aggregates operation are unique, such as its location within a local market and its particular geological characteristics, every operation uses a similar group of assets to produce saleable aggregates and provide customer service. Our 404 active aggregates facilities as of December 31, 2021 provide opportunities to share and scale best practices across our operations and to procure equipment (fixed and mobile), parts, supplies and services in an efficient and cost-effective manner, both regionally and nationally. Additionally, we are able to share best practices across the organization and leverage our size for administrative support, customer service, accounting, procurement, technical support and engineering.
- BUILD AND HOLD SUBSTANTIAL RESERVES: Our reserves are critical to our long-term success. We currently have 15.6 billion tons of proven and probable aggregates reserves. They are strategically located throughout the United States in high-growth areas that are expected to require large amounts of aggregates to meet future construction demand. Moreover, there are significant barriers to entry in many metropolitan markets due to stringent zoning and permitting regulations. These restrictions curtail expansion in certain areas, but they also increase the value of our reserves at existing locations.

2. GROWTH MANAGEMENT AND CAPITAL ALLOCATION

GROWTH MANAGEMENT: Demand for our products is dependent on construction activity and correlates positively with changes in population growth, household formation and employment. As such, we have pursued a strategy to increase our presence in U.S. metropolitan areas that are expected to grow the most rapidly and to divest assets that are no longer considered part of our long-term growth strategy. During the period 2020 - 2030, Moody's Analytics projects that 75% of the U.S. population growth, 72% of household formation and 70% of new jobs will occur in Vulcan-served states. Our coast-to-coast footprint serves 20 of the top 25 highest-growth metropolitan statistical areas in 22 states plus the U.S. Virgin Islands and Washington D.C. The close proximity of our aggregates reserves and our production facilities to this projected population growth creates many opportunities to invest capital in high-return projects.

Projected Demographic Growth, 2020 to 2030





Source: Moody's Analytics as of December 10, 2021

Our top ten revenue producing states accounted for 88% of our 2021 revenues while our top five accounted for 61%.

VULCAN'S TOP TEN REVENUE PRODUCING STATES IN 2021

1. Texas	6. Florida
2. California	7. Alabama
3. Georgia	8. Arizona
4. Tennessee	9. North Carolina
5. Virginia	10. South Carolina

Since becoming a public company in 1956, Vulcan has principally grown by mergers and acquisitions. In 1999, we acquired CalMat Co., thereby expanding our aggregates operations into California and Arizona and making us one of the nation's leading producers of asphalt mix. In 2007, we acquired Florida Rock Industries, Inc., expanding our aggregates business in Florida and our aggregates and ready-mixed concrete businesses in other Mid-Atlantic and Southeastern states. In 2017, we acquired Aggregates USA, greatly expanding our ability to serve customers in Florida, Georgia and South Carolina. In 2021, we acquired U.S. Concrete, enhancing and expanding our aggregates-led business in attractive growing metropolitan areas.

While an aggregates-focused business, we selectively make investments in downstream products that drive local market profitability. Our downstream businesses (asphalt and concrete) use Vulcan-produced aggregates almost exclusively. In 2017, we entered the asphalt market in Tennessee through the acquisition of several asphalt mix operations and a construction paving business. In 2018, we entered the asphalt mix and construction paving markets in Alabama and expanded our asphalt operations and service offerings in Texas through the acquisition of several asphalt mix operations and construction paving businesses. Through our 2021 acquisition of U.S. Concrete, we entered the Oklahoma, New Jersey, New York, Pennsylvania and U.S. Virgin Islands concrete markets and expanded our California, Texas and Washington D.C. concrete markets.

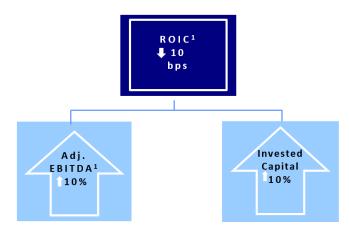
Additionally, throughout our history, we have completed many bolt-on aggregates and downstream acquisitions that have contributed significantly to our growth. From 2019 to 2021, we invested over \$1,758.1 million in acquisitions as outlined in Note 19 "Acquisitions and Divestitures" in Item 8 "Financial Statements and Supplementary Data."

CAPITAL ALLOCATION: Our long-term capital allocation strategy is focused on the following priorities:

- Operating Capital (maintain and grow the value of our franchise)
- Growth Capital (including greenfields and acquisitions)
- Dividend Growth (with a keen focus on sustainability)
- Return Excess Cash to Shareholders (primarily via share repurchases)

During 2021, we reinvested \$451.3 million into core operating & maintenance capital and internal growth capital, in addition to \$362.2 million and \$384.1 million reinvested in 2020 and 2019, respectively. These investments are fundamental actions that sustain and strengthen the business. They improve the longer-term efficiency, capacity and flexibility of our production, and they support our strong commitment to superior customer service.

As illustrated below, our annual Return on Invested Capital (ROIC) decreased 0.1 percentage points (10 basis points) in 2021. While Adjusted EBITDA increased 10% in 2021 (net earnings attributable to Vulcan increased 15% in 2021), invested capital also increased by 10%, primarily as a result of the U.S. Concrete acquisition. We remain committed to driving improvement in our ROIC through solid operating earnings growth coupled with disciplined capital management.



¹ ROIC and Adjusted EBITDA are Non-GAAP financial measures. Non-GAAP financial measures are defined and reconciled within Item 7 under the caption Reconciliation of Non-GAAP Financial Measures.

3. COMPOUNDING IMPROVEMENT IN PROFITABILITY

Our focus on the following four strategic disciplines has made us one of the most profitable public companies in the industry (as measured by aggregates gross profit per ton).

- Operational Excellence Continuous and sustainable improvements in both our operating disciplines and our industry-leading safety performance coupled with better asset utilization through improved availability and throughput leads to effective cost control.
- Strategic Sourcing Leveraging common practices and innovation leads to more time in our plants and with our suppliers to deliver the right parts and services at the right time and optimize the total cost of ownership.
- Commercial Excellence Clearly defined roles and responsibilities together with access to real time, forward-looking
 metrics lead to our sales teams spending less time on non-selling activities and more time responding to our customers'
 needs.
- Logistics Innovation Partnering with our customers (truck drivers and contractors) to provide a bundled logistics solution with digital shipping records and on-site, mobile visibility leads to streamlined scheduling, speed and accuracy of delivery, and efficient back-office processes.

We manage these disciplines locally and align our talent and incentives accordingly. Our knowledgeable and experienced workforce and our flexible production capabilities allow us to manage operational and overhead costs aggressively. As a result, aggregates gross profit per ton has improved from \$5.32 in 2019 to \$5.81 in 2021.

4. LAND MANAGEMENT

With more than 240,000 acres in our land portfolio, a long-term holistic approach to preserving land and water is integral to sustaining our success. From pre-mining to mining to reclamation, we are actively managing the entire life cycle of our land, creating maximum value for the business, our shareholders and our communities.

We are putting land to use before we mine by creating opportunities for agriculture and timber development. After mining, our land and water assets will be converted to other valuable uses including drinking water reservoirs, aquifer recharge basins, public parks, habitat mitigation banks, wetlands, productive farmland and residential and commercial developments. In 2021, we sold previously mined land in Southern California that we had reclaimed for commercial and retail development for net proceeds of \$182.3 million resulting in a pretax net gain of \$114.7 million.

Because of the evolving needs of our communities, we listen to and collaborate with our neighbors to prepare the land for its highest and best use after mining is complete. Our work with state, regional and local governments to develop solutions today will benefit future generations.

5. SAFETY, HEALTH AND THE ENVIRONMENT

A strategy for sustainable, long-term value creation must include doing right by your employees, your neighbors and the environment in which you operate.

Our leadership recognized decades ago the significance and importance of leadership in the Safety, Health and Environmental areas. The Safety, Health and Environmental Affairs Committee of our Board of Directors, along with the full Board, has oversight responsibility for our environmental, safety and health programs and results. Our Safety, Health & Environmental Management Committee, made up of the senior leadership team along with other key senior personnel from cross-functional operations and staff disciplines, has the ongoing management responsibility for all of our safety, health and environmental initiatives. We are a leader in our industry in safety performance by applying the shared experiences, expertise and resources at each of our locally led sites with an emphasis on taking care of one another. In 2021, we achieved an overall Mine Safety and Health Administration (MSHA) safety performance of 0.98 injuries per 200,000 employee hours worked, which is both industry-leading and considered world-class.

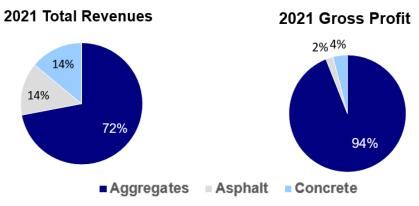
Our community relations programs serve our neighbors while ensuring that we grow and thrive in the communities where we operate. We leveraged our charitable foundation and company funds to support food banks, healthcare services, childhood education remote learning programs and other initiatives designed to lessen the difficulties experienced in many of our communities. Our charitable foundation alone has provided more than \$60 million in support over the past 20 years to essential charitable, civic and educational organizations that strengthen and enrich our communities.

We focus on our environmental stewardship programs with the same intensity that we bring to our health and safety initiatives. Our environmental stewardship commitment is designed to protect plant and animal species and habitats, as well as the air we breathe, the water we use and the planet we all share. In all parts of our company, from local operations to our corporate and regional offices to our international business and ocean-going shipping, we are focused on ensuring that our operations are efficient in ways that are economically and environmentally sustainable. We are proud to maintain the third largest number of Certified Wildlife Habitat sites of any industrial company in the U.S. for 2021, in partnership with the international Wildlife Habitat Council. For a discussion of our energy management and greenhouse gas emissions initiatives, see the Climate Change section later within this Item 1 under Other Business-Related Items.

PRODUCT LINES

Our products are used to build the roads, tunnels, bridges, railroads and airports that connect us, and to build the hospitals, schools, shopping centers, factories and places of worship that are essential to our lives, our communities and the economy. We have four operating (and reportable) segments (Aggregates, Asphalt, Concrete and Calcium) organized around our principal product lines. As of December 31, 2021, we had 404 active aggregates facilities, 69 asphalt facilities, 173 concrete facilities and 1 calcium facility.

Our 2021 total revenues and gross profit by segment are illustrated as follows (Calcium revenues and gross profit were less than one percent):



For actual amounts, see Note 15 "Segment Reporting" in Item 8 "Financial Statements and Supplementary Data."

We generally ship our products upon receipt of a purchase order or in some cases simply a price quote. Therefore, we do not have a significant order backlog.

1. AGGREGATES

Our construction aggregates are used in a number of ways:

- as a base material underneath highways, walkways, airport runways, parking lots and railroads
- to aid in water filtration, purification and erosion control
- as a raw material used in combination with other resources to construct many of the items we rely on to sustain our quality of life, including:
 - houses and apartments
 - roads, bridges and parking lots
 - schools and hospitals
 - commercial buildings and retail space
 - sewer systems
 - power plants
 - airports and runways

AGGREGATES INDUSTRY

Factors that affect the U.S. aggregates industry and our business include:

- LOCATION AND TRANSPORTATION OF RESERVES: Aggregates have a high weight-to-value ratio and, in most cases, must be produced near where they are used; if not, transportation can cost more than the materials, rendering them uncompetitive compared to locally produced materials. Where practical, we have operations located close to our local markets because the cost of trucking materials long distances is prohibitive. Approximately 82% of our total aggregates shipments are delivered exclusively from the producing location to the customer by truck.
 - Exceptions to this typical market structure include areas along the U.S. Gulf Coast and the Eastern Seaboard where there are limited supplies of locally available, high-quality aggregates. We serve these markets from quarries that have access to cost-effective long-haul transportation shipping by barge and rail and from our quarry on Mexico's Yucatan Peninsula with our fleet of Panamax-class, self-unloading ships. Additionally, as a result of our 2021 acquisition of U.S. Concrete, we serve markets in California and Hawaii from our quarry in British Columbia, Canada by means of a long-term marine shipping agreement with CSL Americas. Approximately 17% of our total aggregates shipments are delivered by truck to the customer after reaching a sales yard by rail or water. The remaining 1% of aggregates shipments are delivered directly to the customer by rail or water.
- LIMITED PRODUCT SUBSTITUTION: There are limited substitutes for quality aggregates. Recycled concrete and asphalt have certain applications as a lower-cost alternative to virgin aggregates. However, many types of construction projects cannot be served by recycled concrete and require the use of virgin aggregates to meet technical specifications and performance-based criteria for durability, strength and other qualities. Likewise, the amount of recycled asphalt included in asphalt mix as a substitute for aggregates is limited due to specifications.
- HIGHLY FRAGMENTED INDUSTRY: The U.S. aggregates industry is composed of over 5,500 companies that manage close to 11,000 operations. This fragmented structure provides many opportunities for consolidation. Companies in the industry commonly enter new markets or expand positions in existing markets through the acquisition of existing facilities.
 - Through strategic acquisitions and investments, we have developed an unmatched coast-to-coast footprint of strategically located permitted reserves concentrated in and serving the nation's key growth centers. We have over 20,000 customers in 22 states, the U.S. Virgin Islands, Washington D.C., the Bahamas, British Columbia (Canada), and Quintana Roo (Mexico).
- FLEXIBLE PRODUCTION CAPABILITIES: The production of aggregates is a mechanical process in which stone is crushed and, through a series of screens, separated into various sizes depending on how it will be used. Direct production costs of aggregates primarily include: a) wages and fringe benefits; b) depreciation, depletion, accretion and amortization of capital (or long-term) assets; c) operating parts and supplies; d) repair and maintenance; e) outside services and f) energy (primarily electricity and diesel). Production capacity is flexible by adjusting operating hours to meet changing market demand. We are currently operating considerably below full capacity, making us extremely well positioned to further benefit from economies of scale when additional growth materializes.
- RAW MATERIAL INPUTS LARGELY CONTROLLED: Unlike typical industrial manufacturing industries, the aggregates
 industry does not require the input of raw material beyond owned or leased aggregates reserves. Stone, sand and gravel
 are naturally occurring resources. However, production does require the use of explosives, hydrocarbon fuels and electric
 power.
- DEMAND CYCLES: Long-term growth in demand for aggregates is largely driven by growth in population, jobs and households. While short-term and medium-term demand for aggregates fluctuates with economic cycles, declines have historically been followed by strong recoveries.

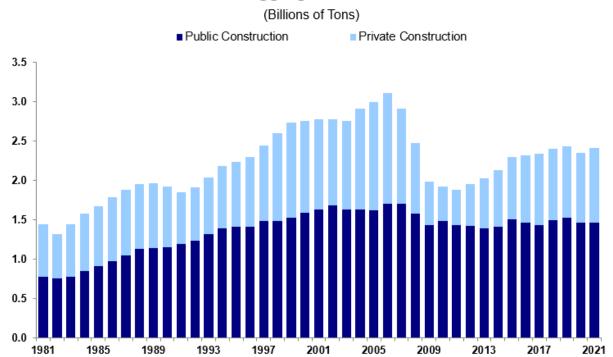
The drivers underpinning long-term demand and sustained pricing growth remain firmly in place in both the public and private sectors of the economy. They include: population growth; gains in total employment (short-term disruption due to COVID-19 pandemic) and in household income and wages; a continuing increase in household formations; the growing need for additional housing stock and housing demand; a multi-year federal transportation law in place and continuing increases in transportation funding at state and local levels; stable state tax receipts; public investment in infrastructure that is still well below the long-term trend-line; and a multi-year federal infrastructure investment law and continued political awareness and focus on the need to invest in infrastructure.

AGGREGATES MARKETS

We focus on the U.S. markets with above-average long-term expected population growth and where construction is expected to expand. Because transportation is a significant part of the delivered cost of aggregates, our facilities are typically located in the markets they serve or have access to economical transportation via rail, barge or ship to a particular end market. We serve both the public and the private sectors.

Public sector construction activity has historically been more stable and less cyclical than privately-funded construction, and it generally requires more aggregates per dollar of construction spending. Private sector construction (primarily residential and nonresidential buildings) typically is more affected by general economic cycles than publicly-funded projects (particularly highways, roads and bridges), which tend to receive more consistent levels of funding throughout economic cycles.

U.S. Aggregates Demand



Source: Company estimates

PUBLIC SECTOR CONSTRUCTION MARKET

Public sector construction includes spending by federal, state and local governments for highways, bridges, buildings, airports, schools, prisons, sewer and waste disposal systems, water supply systems, dams, reservoirs and other public construction projects. Construction for power plants and other utilities is funded from both public and private sources. In 2021, publicly-funded construction accounted for approximately 42% of our total aggregates shipments, and approximately 22% of our aggregates sales by volume were used in highway construction projects.

- PUBLIC SECTOR FUNDING: Generally, public sector construction spending is more stable than private sector construction spending; public sector spending is less sensitive to interest rates and has historically been supported by multi-year laws, which provide certainty in funding amounts, program structures, rules and regulations. Federal spending is governed by authorization, budget and appropriations laws. The level of state and local spending on infrastructure varies across the United States and depends on individual state needs and economies.
 - STATE AND LOCAL TRANSPORTATION FUNDING: Since 2012, 32 states have increased or adjusted taxes on motor fuel to increase revenues available for transportation investment. Most recently, in 2020 the Virginia legislature raised its statewide gas tax, and voters in Arkansas renewed a ½ cent sales tax measure originally approved in 2012, to provide significant revenue for highway construction and maintenance through motor fuel tax increases. Other states have increased revenues outside of fuel taxes or made one-time increases. Since 2012, eleven Vulcanserved states representing 88% of our 2021 total revenues have averaged a 69% increase in their states' revenues for highways.

Several states also index their gas taxes to a measure of inflation, including Alabama, California, Florida, Georgia, Illinois, Maryland and North Carolina.

In addition, we benefit from state and local transportation funding ballot measures. Across the U.S., voters in 17 states approved 87% of 323 measures in 2021, which will generate \$7.6 billion in new and recurring transportation investment. This continues a trend in which voters have approved 84% of 2,608 transportation investment ballot measures since 2010. Major transportation funding measures in Vulcan-served areas approved in 2021 are estimated to result in \$3.3 billion in revenues and bond proceeds primarily dedicated to roads, streets and bridges.

• FEDERAL HIGHWAY FUNDING: In November 2021, President Biden signed a historic, bi-partisan infrastructure bill, the Infrastructure Investment and Jobs Act (IIJA), into law.

The IIJA provides the largest increase in federal highway, road and bridge funding in more than six decades with a five-year reauthorization of Federal-Aid Highway Program funding. The total Federal-Aid Highway Program obligation limitation under IIJA starts at \$66.9 billion in FFY 2022 and increases to \$72.1 billion in FFY 2026, for a total of nearly \$350 billion.

These numbers include one-time additional funding for large road and bridge projects, such as \$40 billion for bridge repair, replacement and rehabilitation. Of the bridge money, approximately \$16.5 billion is earmarked for projects in Vulcan-served states.

The long-term nature of the highway program reauthorization in the IIJA is important. The Federal-Aid Highway Program is the largest component of the law and has provided, on average, 50% of all state capital investment in roads and bridges over the last 10 years. This multi-year authorization and the associated dedicated funding provides state departments of transportation with the ability to plan and execute long-range, complex highway projects. In states where we operate, we are well positioned to serve the large general contractors who will compete for new freight and other major capacity projects that will move forward with IIJA and policy implementation.

Importantly, building on improvements in the two prior reauthorization laws — The Fixing America's Surface Transportation Act (FAST Act) and Moving Ahead for Progress in the 21st Century Act (MAP-21) — the IIJA further streamlines project delivery and environmental approval advancements.

Project financing remains an important additional component of overall surface transportation spending. The IIJA expands access to private activity bonds for highway and intermodal projects, and sets the Transportation Infrastructure Finance & Innovation Act (TIFIA) program authorized at \$250 million per year.

- ADDITIONAL FEDERAL INFRASTUCTURE INVESTMENTS UNDER THE IIJA: The IIJA allocates a total of approximately \$1.2 trillion in federal funds for infrastructure investment, including almost \$550 billion in new spending. A little more than half of the new money is dedicated to transportation sector projects. Beyond highway infrastructure, Vulcan could benefit from IIJA-funded, aggregates-intensive infrastructure projects, such as railroads, airports, seaports, and drinking and wastewater systems.
- FEDERAL WATER RESOURCES INFRASTRUCTURE: In December 2020, President Trump signed the Water Resources Development Act of 2020 (WRDA 2020) into law, enacting the fourth consecutive biennial authorization for the U.S. Army Corps of Engineers (Army Corps) since 2014. WRDA 2020 reauthorizes needed investment in America's ports, channels, locks, dams, and other infrastructure that supports the maritime and waterways transportation system and provides flood protection for communities. It also improves the United States Environmental Protection Agency's (EPA) programs for storm water, water recycling, and sewer overflow projects. The FFY 2021 appropriations for the Army Corps, also passed as part of the year-end legislative package, funds for the first time the Army Corps Water Infrastructure Financing Program (CWIFP), which was authorized in the Water Resources Reform and Development Act of 2014 (WRRDA 2014). Modeled after the highly popular TIFIA program in the surface transportation sector, CWIFP will accelerate non-federal investments in water resources infrastructure by providing long-term, low-cost loans to creditworthy borrowers.

PRIVATE SECTOR CONSTRUCTION MARKET

The private sector construction markets include both nonresidential building construction and residential construction and are considerably more cyclical than public construction. In 2021, privately-funded construction accounted for approximately 58% of our total aggregates shipments.

- NONRESIDENTIAL CONSTRUCTION: Private nonresidential building construction includes a wide array of projects. Such projects generally are more aggregates intensive than residential construction. Overall demand in private nonresidential construction generally is driven by job growth, vacancy rates, private infrastructure needs and demographic trends. The growth of the private workforce creates demand for offices, hotels and restaurants. Likewise, population growth generates demand for stores, shopping centers, warehouses and parking decks as well as hospitals, places of worship and entertainment facilities. Large industrial projects, such as a new manufacturing facility, can increase the need for other manufacturing plants to supply parts and assemblies. Construction activity in this end market is influenced by a firm's ability to finance a project and the cost of such financing. This end market also includes capital investments in public nonresidential facilities to meet the needs of a growing population.
- RESIDENTIAL CONSTRUCTION: Household formations in Vulcan-served states continue to outpace household formations in the rest of the United States. The majority of residential construction is for single-family housing with the remainder consisting of multi-family construction (i.e., two family houses, apartment buildings and condominiums). Public housing comprises only a small portion of housing demand. Construction activity in this end market is influenced by the cost and availability of mortgage financing and builders' ability to maintain skilled labor.
 - U.S. housing starts, as measured by Dodge Data & Analytics data, peaked in early 2006 at over 2 million units annually. By the end of 2009, total housing starts had declined to less than 0.6 million units, well below prior historical lows of approximately 1 million units annually. In 2021, total annual housing starts in the U.S. reached 1.75 million units.

ADDITIONAL AGGREGATES PRODUCTS AND MARKETS

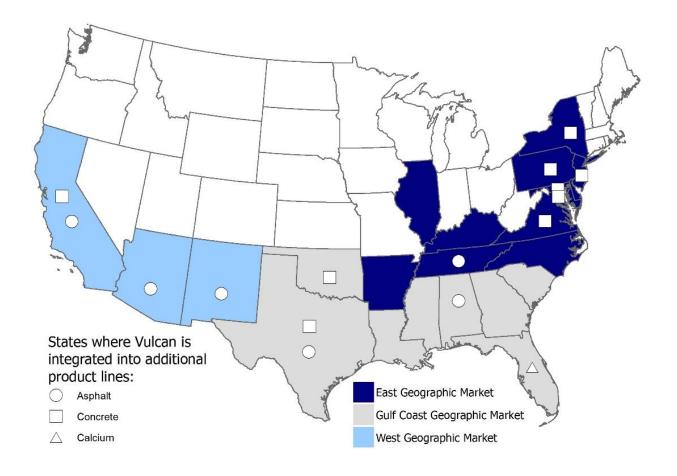
We sell aggregates that are used as ballast for construction and maintenance of railroad tracks. We also sell riprap and jetty stone for erosion control along roads and waterways. In addition, stone can be used as a feedstock for cement and lime plants and for making a variety of adhesives, fillers and extenders. Coal-burning power plants use limestone in scrubbers to reduce harmful emissions. Limestone that is crushed to a fine powder can be sold as agricultural lime.

We sell a relatively small amount of construction aggregates outside of the United States, principally in the areas surrounding our large quarry on the Yucatan Peninsula in Mexico and our quarry in British Columbia, Canada. Nondomestic sales and long-lived assets outside the United States are reported in Note 15 "Segment Reporting" in Item 8 "Financial Statements and Supplementary Data."

VERTICAL INTEGRATION

While aggregates is our focus and primary business, we believe vertical integration between aggregates and downstream products, such as asphalt mix and ready-mixed concrete, can be managed effectively in certain markets to generate attractive financial returns and enhance financial returns in our core Aggregates segment. We produce and sell asphalt mix and/or ready-mixed concrete within each of our three geographic markets, as noted below. We also provide construction paving services (included in our Asphalt segment) in Alabama, Tennessee and Texas.

Aggregates comprise approximately 95% of asphalt mix by weight and 80% of ready-mixed concrete by weight. In both of these downstream businesses, aggregates are primarily supplied from our operations.



2. ASPHALT

We produce and sell asphalt mix in Alabama, Arizona, California, New Mexico, Tennessee and Texas. In October 2020, we strengthened our asphalt position in Texas by acquiring additional asphalt operations. For additional details, see Note 19 "Acquisitions and Divestitures" in Item 8 "Financial Statements and Supplementary Data."

This segment relies on our reserves of aggregates, functioning essentially as a customer to our aggregates operations. Aggregates are a major component in asphalt mix, comprising approximately 95% by weight of this product. We meet the aggregates requirements for our Asphalt segment primarily through our Aggregates segment. These product transfers are made at local market prices for the particular grade and quality of material required.

Because asphalt mix hardens rapidly, delivery typically is within close proximity to the producing facility. The asphalt mix production process requires liquid asphalt cement, which we purchase from third-party producers. We do not anticipate any significant difficulties in obtaining the raw materials necessary for this segment to operate. We serve our Asphalt segment customers directly from our local production facilities.

3. CONCRETE

We produce and sell ready-mixed concrete in California, Maryland, New Jersey, New York, Oklahoma, Pennsylvania, Texas, Virginia, the U.S. Virgin Islands, and Washington D.C. In August 2021, through our acquisition of U.S. Concrete, we entered the New Jersey, New York, Oklahoma, Pennsylvania and U.S. Virgin Islands concrete markets and expanded our service of the California, Texas and Washington D.C. concrete markets. In April 2020, we exited the New Mexico ready-mixed concrete market (we retained the concrete plants and mobile fleet which are leased to the buyer and obtained a 20-year aggregates supply agreement). In October 2019, we expanded our ready-mixed concrete operations in Virginia via an acquisition. For additional details see Note 19 "Acquisitions and Divestitures" in Item 8 "Financial Statements and Supplementary Data."

This segment relies on our reserves of aggregates, functioning essentially as a customer to our aggregates operations. Ready-mixed concrete consists of cement and other cement-related materials (such as fly ash and slag), aggregates (crushed stone and sand), chemical admixtures and water and is measured in cubic yards. Aggregates are a major component in ready-mixed concrete, comprising approximately 80% by weight of this product. We meet the aggregates requirements of our Concrete segment primarily through our Aggregates segment. These product transfers are made at local market prices for the particular grade and quality of material required.

Cement is the binding agent used to bind water, crushed stone and sand in the production of ready-mixed concrete. Other industrial byproducts, such as fly ash from coal burning power plants and slag from the manufacture of iron and silica fume, have cement-related properties that allow them to be used as substitutes for cement depending on the specifications. We purchase cement-related materials from a few suppliers in each of our major geographic markets. Chemical admixtures are generally purchased from suppliers under national purchasing agreements.

With the exception of chemical admixtures, each ready-mix facility typically maintains an inventory level of these raw materials sufficient to satisfy its operating needs for a few days. Inventory levels do not decline significantly or comparatively with declines in revenue during seasonally lower periods. We generally maintain inventory at specified levels to maximize purchasing efficiencies and to be able to respond guickly to customer demand.

Because ready-mixed concrete hardens rapidly, delivery typically is within close proximity to the producing facility. Ready-mixed concrete production also requires cement which we purchase from third-party producers. We do not anticipate any significant difficulties in obtaining the raw materials necessary for this segment to operate. We serve our Concrete segment customers from our local production facilities or by truck.

4. CALCIUM

Our Calcium segment is composed of a single calcium operation in Brooksville, Florida. This facility produces calcium products for the animal feed, plastics and water treatment industries with high-quality calcium carbonate material mined at the Brooksville quarry.

OTHER BUSINESS-RELATED ITEMS

SEASONALITY AND CYCLICAL NATURE OF OUR BUSINESS

Almost all of our products are produced and consumed outdoors. Seasonal changes and other weather-related conditions can affect the production and sales volumes of our products. Therefore, the financial results for any quarter do not necessarily indicate the results expected for the year. Normally, the highest sales and earnings are in the third quarter and the lowest are in the first quarter. Furthermore, our sales and earnings are sensitive to national, regional and local economic conditions, demographic and population fluctuations, and particularly to cyclical swings in construction spending, primarily in the private sector.

COMPETITORS

We operate in a fragmented industry with a large number of small, privately-held companies. We estimate that the ten largest aggregates producers accounted for 33% of the total U.S. aggregates production in 2021. Despite being the industry leader, Vulcan's total U.S. market share is less than 10% (exclusive of our recent U.S. Concrete acquisition). Other publicly traded companies among the ten largest U.S. aggregates producers include the following:

- Arcosa, Inc.
- Cemex S.A.B. de C.V.
- CRH plc
- HeidelbergCement AG
- Holcim
- Martin Marietta Materials, Inc.
- Summit Materials, Inc.

Because the U.S. aggregates industry is highly fragmented, with over 5,500 companies managing close to 11,000 operations during 2021, many opportunities for consolidation exist. Therefore, companies in the industry tend to grow by acquiring existing facilities to enter new markets or extend their existing market positions.

CUSTOMERS

No material part of our business depends upon any single customer whose loss would have a significant adverse effect on our business. In 2021, our five largest customers accounted for 8% of our total revenues, and no single customer accounted for more than 2% of our total revenues. Although approximately 45% to 55% of our aggregates shipments have historically been used in publicly-funded construction, such as highways, airports and government buildings, a relatively small portion of our sales are made directly to federal, state, county or municipal governments/agencies. Therefore, although reductions in state and federal funding can curtail publicly-funded construction, the vast majority of our business is not directly subject to renegotiation of profits or termination of contracts with local, state or federal governments. In addition, our sales to government entities span several hundred entities coast-to-coast, ensuring that negative changes to various government budgets would have a muted impact across such a diversified set of government customers.

CLIMATE CHANGE

Climate change, or long-term changes in global temperature and other characteristics of the atmosphere, is a global concern. Impacts of climate change are seen in the forms of increased global temperatures and more frequent and intense droughts, heat waves, wildfires and storms, which can destroy habitats, affect livelihoods and communities, and disrupt the economy. These severe impacts have been felt across our footprint as exemplified by the recent drought, wildfires and flooding in California; the number and severity of hurricanes in our Gulf Coast states; and flooding in our mid-Atlantic states.

The United Nations Climate Change Conference in Glasgow (COP26) stressed the urgency of taking action to keep global temperature from exceeding 1.5 degrees Celsius above pre-industrial levels. Due to human influence on the climate from carbon-based energy use and unsustainable natural resource management, the Earth is now about 1.1 degrees Celsius warmer than it was in the 1800s.

Vulcan's carbon footprint is small: in 2021, our total Scope 1 and 2 greenhouse gas (GHG) emissions were 1.1 million tons of CO₂e. On a per-operation basis, our industrial operations are well below the EPA's threshold for reporting and permitting of GHG emissions. Even with this small footprint, beginning in 2018, Vulcan chose to report GHG emissions via the Carbon Disclosure Project. In 2022, we will establish goals and targets related to Scope 1 and 2 emissions and will calculate our Scope 3 emissions, which result from activities of assets not owned or controlled by Vulcan but that we indirectly impact in our value chain. We intend to disclose science-based targets aligned with holding warming to 1.5 degrees Celsius in 2023.

As an industry leader, we are committed to doing our part to strengthen the sustainability of our products and operations and to reduce our impact on the environment through initiatives that favorably impact climate change, such as: managing energy and operational efficiency to reduce GHG emissions and recycling.

MANAGING ENERGY AND OPERATIONAL EFFICIENCY TO REDUCE GHG EMISSIONS: Environmental stewardship
 — including our efforts to manage energy and increase efficiencies — is embedded into our business strategy and
 culture. Energy management, operational efficiency and the purchase of renewable energy have reduced our Scope 1
 and Scope 2 GHG emissions per ton of production and per dollar of revenue compared to 2015, as noted below:

			Metric Tons of	_	Metric Tons of	
	Scope 1& 2	Change vs	CO ₂ e/	Change vs	CO ₂ e/	Change vs
Year 1	Emissions	2015	\$Revenue	2015	Ton Shipped	2015
2015	852,118		0.000249		0.00439	
2016	888,798	4.30%	0.000247	-0.7%	0.00450	2.6%
2017	922,159	8.22%	0.000237	-4.8%	0.00457	4.1%
2018	951,169	11.62%	0.000217	-12.9%	0.00433	-1.3%
2019	997,999	17.12%	0.000202	-18.7%	0.00425	-3.1%
2020	965,246	13.28%	0.000199	-20.2%	0.00427	-2.7%
2021	1,145,084	34.38%	0.000206	-17.2%	0.00477	8.7%

¹ We exited the cement business in 2014. Therefore, we use 2015 as the baseline for measuring GHG emission over time in order to provide a more accurate measure of our progress.

We manage energy use carefully. We routinely conduct energy audits of our operations to identify areas for operational efficiency improvements and energy savings. Some of the opportunities identified during these audits that are being implemented include: replacement of older motors with new ultra-high efficiency motors to power plant processing equipment; improvements in water handling systems to reduce water pumping needed; optimizing process equipment flow to maximize efficiency; use of LED lighting; and optimization of air conditioning and lighting control to reduce energy consumption.

We continue to increase the fuel efficiencies of our off-road fleet vehicles. Tier IV machines performed over 50% of the off-road fleet's work in 2021, which positively impacts all air emissions in addition to having an impact on GHG emissions.

Additionally, our Concrete segment has licensed the CarbonCure technology that provides capture and sequestration of carbon dioxide within ready-mixed concrete. The carbon dioxide becomes chemically bound within the concrete matrix and is not released into the air, even when the concrete is recycled following use. This technology also reduces the demand for cement and other cement-related materials which reduces the supply side carbon footprint. The resulting concrete is also stronger than it would have been without use of the technology.

We are actively assessing the scope and scale of potential opportunities to reduce future GHG emissions. Future Scope 1 and Scope 2 reductions will come by means of continuing heavy equipment replacement with higher efficiency models, seeking production efficiencies and procuring energy from renewable sources.

We are confident that there are many more opportunities to reduce the carbon footprint of our operations, distribution and transport networks, and the projects in which our products are used. An example of an additional opportunity that we are exploring is the installation of battery storage for electricity at multiple locations so that energy can be stored during off peak periods to run the plant equipment, thereby minimizing peak load usage. This has significant implications for the ability of the utility company to meet peak demands and to reduce their use of older power plants that burn coal or oil and emit greater concentrations of GHG emissions.

■ RECYCLING: Ensuring proper management of waste materials to prevent the release of contaminants to the environment is good environmental stewardship and good risk management. Recycling of certain items also reduces our impact on climate change. Since 2017, we have recycled more than 1.9 million gallons of used oil (including 0.4 million gallons in 2021) resulting in both a cost savings to us and a reduction in the amount of new fossil fuels required.

The recycling of aggregates-containing construction materials including concrete and recycled asphalt pavement (RAP) is an important part of our business. The sources of these materials are highway and infrastructure projects and other demolition projects where concrete structures or asphalt paving is being removed.

- RAP is used as a supplemental feedstock for the asphalt plants as it provides quality aggregates and valuable heat content (from asphaltic cement) to replace some of the virgin aggregates and asphaltic cement (asphalt oil) that would otherwise be used during 2021, we reused 1.7 million tons of RAP.
- Concrete is reprocessed through crushing and screening plants to produce aggregates-containing recycled concrete products — during 2021, we recycled 2.4 million tons of concrete.

The recycling of these aggregates-containing construction materials reduces carbon emissions that impact climate change while providing a valuable service to our customers and communities, extending the life of our aggregates reserves and helping us manage the cost of production.

ENVIRONMENTAL COSTS AND GOVERNMENTAL REGULATION

We are subject to a wide variety of federal, state and local laws and regulations in the communities where we conduct business. Compliance with these laws and regulations often requires the time and effort of our employees, as well as financial resources. The following describes certain significant regulations that may impact our business. For additional information about our risks related to government regulations, see Item 1A "Risk Factors."

Our operations are subject to numerous laws and regulations relating to the protection of the environment and worker health and safety; including regulation of facility air emissions and water discharges, waste management, protection of wetlands, listed and threatened species, noise and dust exposure control for workers, and safety regulations under both Mine Safety and Health Administration (MSHA) and Occupational Safety and Health Administration (OSHA). Compliance with these various regulations requires capital investment and ongoing expenditures for the operation and maintenance of systems and implementation of programs. These anticipated investments and expenditures are not material to our earnings or competitive position.

We have received notices from the EPA or similar state or local agencies that we are considered a potentially responsible party (PRP) at a limited number of sites under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) or similar state and local environmental laws. Generally, we share the cost of remediation at these sites with other PRPs or alleged PRPs in accordance with negotiated or prescribed allocations. There is inherent uncertainty in determining the potential cost of remediating a given site and in determining any individual party's share of that cost. As a result, estimates can change substantially as additional information becomes available about the nature or extent of site contamination, remediation methods, other PRPs and their probable level of involvement, and actions by or against governmental agencies or private parties.

Frequently, we are required by state and local regulations or contractual obligations to reclaim our former mining sites. These reclamation liabilities are recorded at fair value in our financial statements at the time the obligation arises. To determine the fair value, we estimate the cost for a third party to perform the legally required reclamation, which is adjusted for inflation and risk and includes a reasonable profit margin. Reclaimed quarries often have potential for use in commercial or residential development or as reservoirs or landfills. However, no projected cash flows from these anticipated uses have been considered to offset or reduce the estimated reclamation liability.

For additional information about environmental matters and reclamation obligations, see Notes 12 and 17, respectively, to the consolidated financial statements in Item 8 "Financial Statements and Supplementary Data."

HUMAN CAPITAL

As of January 1, 2022, we employed 11,437 people in the United States. Of these employees, 1,602 are represented by labor unions. Also, as of that date, we employed 401 people in Mexico, 73 people in Canada and 1 person in the Bahamas, and of these employees, 325 are represented by labor unions. We have not experienced a strike or significant work stoppage in the past 10 years, and we do not anticipate any significant issues with any unions in 2022.

Vulcan's commitment to our people has played a key role in the ongoing success and growth of our company throughout our long history. We are dedicated to fostering a culture of mutual respect, integrity, teamwork and trust among our workforce. Our people share a competitive drive to be the best they can be and do the right thing, which benefits all our stakeholders.

Diversity and inclusion are important values at Vulcan. Our continued investment in people and strong commitment to diversity and inclusion will help us attract, grow and retain the best talent possible. In 2015, we escalated and formalized our efforts in this area with the launch of our Diversity and Inclusion Council to promote an open workplace where everyone, regardless of background, race, or other factors, is free to contribute and grow. In 2019, we signed the CEO Action for Diversity & InclusionTM pledge, and we forged a long-term partnership with Historically Black Colleges and Universities (HBCUs) to support our future leaders in our communities and on our team. In 2020, we established diversity and inclusion (D&I) councils in our divisions to support targeted D&I opportunities in their local communities. In 2021, we launched Employee Resource Groups (ERGs) and included quarterly D&I topics and updates in our Vulcan University Pop-Up Training Series.

Diversity and inclusion is also part of employee training. All employees completed D&I awareness training in 2016; all new hires complete D&I awareness training within their first 90 days. The unconscious bias training launched in 2021 will be completed by all employees by the end of 2022.

As a result of our commitment to diversity and inclusion we have:

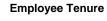
- Cultivated a diverse talent pipeline of next generation leaders through our operations/sales trainee program
- Expanded the diversity of our workforce at middle management and higher levels
- Increased the number of female hires and promotions in senior leadership roles
- Developed a five-year strategy through our Diversity and Inclusion Council
- Built partnerships with HBCUs to recruit talented minority students for internships and management training roles

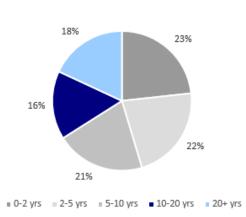
Our Board of Directors is 36% diverse (three board members are women and one board member is Black); and, we earned recognition in 2017 by 2020 Women on Boards for having 20% or more of our board seats held by women.

We believe that learning is fundamental to every job, and we encourage our people to expand and explore their capabilities for continued growth. Our industry-leading training and development programs encourage collaboration and enable people to innovate and flourish on the job and in the community. These programs:

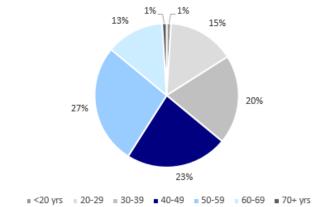
- Provide our employees with a Tuition Reimbursement Program, which pays up to 100% of tuition costs based on academic performance
- Encourage personal and professional growth through our mentoring program, which has graduated more than 1,906 employees
- Prepare future senior-level leaders through our Leadership 2022 series in partnership with the University of North Carolina, Chapel Hill
- Offer mini MBA programs and other continuing education opportunities

The result is strong employee engagement that puts Vulcan in the top 10% in our most recent McKinsey & Company's Organizational Health Index cycle (2017), which benchmarked Vulcan against over 5 million respondents from 1,700 companies.

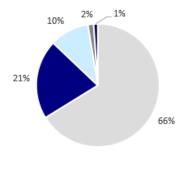




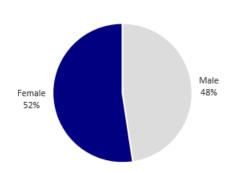
Employees by Age Group



Workforce Racial/Ethnic Diversity



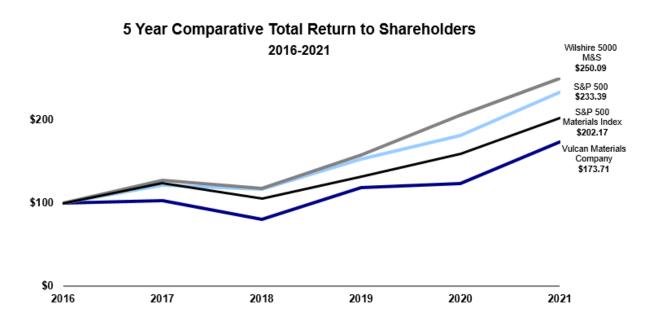
Salaried Non-Exempt Employees by Gender



■ White ■ Hispanic/Latino ■ Black ■ Asian ■ Other/Not Reported

SHAREHOLDER RETURN PERFORMANCE

Below is a graph comparing the performance of our common stock, with dividends reinvested, to that of the Standard & Poor's 500 Stock Index (S&P 500), the S&P 500 Materials Index (S&P 500 Materials) and the Materials and Services Sector of the Wilshire 5000 Index (Wilshire 5000 M&S) from December 31, 2016 to December 31, 2021. In 2021, we added the S&P 500 Materials Index with the intention of replacing the Wilshire 5000 M&S Index to more closely align our comparative shareholder return performance with that of our competitors.



	2016	2017	2018	2019		019 2020		2021
Comparative Total Return ¹								
Vulcan Materials Company	\$ 100.00	\$ 103.40	\$ 80.38	\$	118.21	\$	123.09	\$ 173.71
S&P 500	\$ 100.00	\$ 121.83	\$ 116.49	\$	153.16	\$	181.35	\$ 233.39
S&P 500 Materials	\$ 100.00	\$ 123.80	\$ 105.60	\$	131.58	\$	158.82	\$ 202.17
Wilshire 5000 M&S	\$ 100.00	\$ 127.58	\$ 118.02	\$	157.36	\$	205.76	\$ 250.09

¹ Assumes an initial investment at December 31, 2016 of \$100 in each stock/index, with quarterly reinvestment of dividends.

INVESTOR INFORMATION

We make available on our website, www.vulcanmaterials.com, free of charge, copies of our:

- Annual Report on Form 10-K
- Quarterly Reports on Form 10-Q
- Current Reports on Form 8-K

Our website also includes amendments to those reports filed with or furnished to the Securities and Exchange Commission (SEC) pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as well as all Forms 3, 4 and 5 filed with the SEC by our executive officers and directors, as soon as the filings are made publicly available by the SEC on its EDGAR database (*www.sec.gov*).

In addition to accessing copies of our reports online, you may request a copy of our Annual Report on Form 10-K, including financial statements, by writing to Denson N. Franklin III, Senior Vice President, General Counsel and Secretary, Vulcan Materials Company, 1200 Urban Center Drive, Birmingham, Alabama 35242.

We have a:

- Business Conduct Policy applicable to all employees and directors
- Code of Ethics for the CEO and Senior Financial Officers

Copies of the Business Conduct Policy and the Code of Ethics are available on our website under the heading "Corporate Governance" under the "Investor Relations" tab. If we make any amendment to, or waiver of, any provision of the Code of Ethics, we will disclose such information on our website as well as through filings with the SEC.

Our Board of Directors has also adopted:

- Corporate Governance Guidelines
- Charters for our Audit, Compensation, Executive, Finance, Governance and Safety, Health & Environmental Affairs Committees

These documents meet all applicable SEC and New York Stock Exchange (NYSE) regulatory requirements.

The Charters of the Audit, Compensation and Governance Committees are available on our website under the heading "Corporate Governance" under the "Investor Relations" tab, or you may request a copy of any of these documents by writing to Denson N. Franklin III, Senior Vice President, General Counsel and Secretary, Vulcan Materials Company, 1200 Urban Center Drive, Birmingham, Alabama 35242.

Information included on our website is not incorporated into, or otherwise made a part of, this report.

CERTIFICATIONS AND ASSERTIONS

The certifications of our Chief Executive Officer and Chief Financial Officer made pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 are included as exhibits to this Annual Report on Form 10-K. Additionally, on June 9, 2021 our Chief Executive Officer submitted to the NYSE the annual written affirmation required by the rules of the NYSE certifying that he was not aware of any violations of Vulcan Materials Company of NYSE corporate governance listing standards.

The following risks could materially and adversely affect our business, financial condition and results of operations, and cause the trading price of our common stock to decline. These risk factors do not identify all risks that we face; our operations could also be affected by factors that are not presently known to us or that we currently consider to be immaterial to our operations. Due to risks and uncertainties, known and unknown, our past financial results may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. You should also refer to the other information set forth in this Annual Report on Form 10-K, including Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Item 8 "Financial Statements and Supplementary Data."

ECONOMIC/POLITICAL RISKS

Our business is dependent on the construction industry and is subject to economic cycles — Our products are principally sold to the U.S. construction industry. Because our business is dependent on spending in both the public and private sector construction markets, our profits are sensitive to the underlying national, regional, and local economic conditions. Construction spending, which is cyclical, is affected by general economic conditions, changes in interest rates, demographic shifts, industry cycles, employment levels, inflation and other business, economic and financial factors that are beyond our control. A downturn in construction activities or spending in Vulcan-served markets, particularly in our top revenue-generating markets, could have a material adverse effect on our business, financial condition, and results of operations.

A pandemic, epidemic or other public health emergency, such as the ongoing coronavirus (COVID-19) pandemic, could have a material adverse effect on our business, results of operations, financial condition and cash flows — Our operations expose us to risks associated with pandemics, epidemics or other public health emergencies, such as the COVID-19 pandemic. This pandemic has resulted in governments around the world implementing or reimplementing strict measures to help control the spread of the virus, including quarantines, "shelter in place" and "stay at home" orders, travel restrictions, business curtailments, school closures, and other measures. In addition, governments and central banks in several parts of the world have enacted fiscal and monetary stimulus measures to counteract the impacts of the COVID-19 pandemic and may take further action as circumstances warrant.

Consistent with federal guidelines and with state and local orders to date, we currently continue to operate across our footprint. Notwithstanding our continued operations and an economic environment that has shown signs of improvement, the COVID-19 pandemic has had and may have further negative impacts on our operations, supply chain, transportation networks and customers, which may lower our revenues and EBITDA, including as a result of preventative and precautionary measures that we, other businesses and governments are taking. The COVID-19 pandemic is a widespread public health crisis that is adversely affecting the economies and financial markets of many countries. Any resulting economic downturn could adversely affect demand for our products and contribute to volatile supply and demand conditions affecting prices and volumes in the markets for our products and services. The progression of this matter has and may continue to negatively impact our business or results of operations by affecting the health of our employees and through the temporary closure of our operating locations or those of our customers or suppliers. The extent to which the COVID-19 outbreak impacts our business, results of operations, financial condition or cash flows will depend on future developments, which remain highly uncertain and cannot be predicted, including, but not limited to, the duration and geographic spread of the outbreak, its severity, the actions to contain the virus or treat its impact including the reimplementation of restrictions on economic activity following new outbreaks, the availability, durability and efficacy of vaccines, the long-term impacts of the virus on transportation revenues, government budgets and other funding priorities and the extent and pace at which normal economic and operating conditions can resume. There can be no assurance that we will not be impacted by adverse consequences that may be brought about by pandemics on global financial markets, which may reduce resources, share prices and financial liquidity and may severely limit the availability of financing capital.

Changes in legal requirements and governmental policies concerning zoning, land use, environmental and other areas of the law may result in additional liabilities, a reduction in operating hours and additional capital expenditures — Our operations are affected by numerous federal, state and local laws and regulations, including those related to zoning, land use and environmental matters. Despite our compliance efforts, we have an inherent risk of liability in the operation of our business. These potential liabilities could have an adverse impact on our operations and profitability. In addition, our operations require numerous governmental approvals and permits, which often require us to make significant capital and operating expenditures to comply with the applicable requirements. Stricter laws and regulations, or more stringent interpretations of existing laws or regulations, may impose new liabilities, taxes or tariffs on us; reduce operating hours; require additional investment by us in pollution control equipment; create restrictions on our products; impede our access to reserves or hamper the opening of new or expansion of existing plants or facilities.

Our business is dependent on the timing and amount of federal, state and local funding for infrastructure — Our products are used in a variety of public infrastructure projects that are funded and financed by federal, state and local governments. In 2021, voters in local jurisdictions in Arizona, Georgia, Texas and Virginia, among others, approved bond and revenue-raising measures to provide additional resources for transportation projects. In 2020, Virginia passed new long-term highway funding legislation and voters in Arkansas made permanent a ½ cent gas tax increase first approved in 2012. In November 2021, the federal Infrastructure Investment and Jobs Act (IIJA), which included a five year road, bridge and public transportation program reauthorization at record levels, was signed into law. The highway programs, as well as funding for other aggregates-intensive public infrastructure, will provide assistance to state departments of transportation, federal, state and local agencies, and metro areas for several years to come. However, given the time to set up new federal programs, varying state and local budgetary situations and the stages of projects, we cannot be entirely assured of the existence, amount and timing of appropriations for future public infrastructure projects.

Climate change and climate change legislation or regulations may adversely impact our business — A number of governmental bodies have introduced or are contemplating legislative and regulatory change in response to the potential impacts of climate change. Such legislation or regulation, if enacted, potentially could include provisions for a "cap and trade" system of allowances and credits or a carbon tax, among other provisions.

Other potential impacts of climate change include physical impacts, such as disruption in production and product distribution due to impacts from major storm events, shifts in regional weather patterns and intensities, availability of water and potential impacts from sea level changes. There is also a potential for climate change legislation and regulation to adversely impact the cost of purchased energy and electricity. A number of our facilities are located in desert climates, and while we have not experienced any significant shortages of energy or water in the past, we cannot guarantee that we will not in the future. Furthermore, public expectations for reductions in greenhouse gas emissions could result in increased energy, transportation and raw material costs, and may require us to make additional investments in facilities and equipment.

The impacts of climate change on our operations and the company overall are highly uncertain and difficult to estimate. However, climate change legislation and regulation concerning greenhouse gases could have a material adverse effect on our future financial position, results of operations or cash flows.

We are subject to various risks arising from our international business operations and relationships, which could adversely affect our business — We have international operations and are subject to both the risks of conducting international business and the requirements of the Foreign Corrupt Practices Act of 1977 (the FCPA). We face political and other risks, including legal risks for failure to comply with the FCPA, associated with our international operations, including our largest aggregates production facility located in Playa del Carmen, Mexico and our newly acquired aggregates production facility in British Columbia, Canada. These risks have included and may in the future include changes in international trade policies, such as the United States - Mexico - Canada Agreement (USMCA), imposition of duties, taxes or government royalties, arbitrary changes to permits, zoning classifications or operating agreements, or overt acts by foreign governments, including expropriations and other forms of takings of property. Recently, the Mexican government has taken actions that adversely affect our operations in that country, including delays in issuing a historically routine three-year customs permit for our deep-water port. Mexico instead issued a short-term customs permit that must be renewed after two months. While we continue to negotiate with the Mexican authorities to reach an agreeable and mutually beneficial solution, failure by the Mexican government to issue future customs permits or its taking of any other measures that force us to cease our operations in Mexico would have an adverse effect on our ability to supply customers.

GROWTH AND COMPETITIVE RISKS

Within our local markets, we operate in a highly competitive industry which may negatively impact prices, volumes and costs — The construction aggregates industry is highly fragmented with a large number of independent local producers in a number of our markets. Additionally, in most markets, we also compete against large private and public companies, some of which are significantly vertically integrated. Therefore, there is intense competition in a number of markets in which we operate. This significant competition could lead to lower prices and lower sales volumes in some markets, negatively affecting our earnings and cash flows.

The expanded use of aggregates substitutes could have a material adverse effect on our business, financial condition and results of operations — Recycled concrete and asphalt are increasingly being used in a number of our markets, particularly urban markets, as a substitute for aggregates. The expanded use of recycled concrete and asphalt could cause a significant reduction in the demand for aggregates.

Our long-term success depends upon securing and permitting aggregates reserves in strategically located areas. If we are unable to secure and permit such reserves it could negatively affect our future earnings — Construction aggregates are bulky and heavy and, therefore, difficult to transport efficiently. Because of the nature of the products, the freight costs can quickly surpass the production costs. Therefore, except for geographic regions that do not possess commercially viable deposits of aggregates and are served by rail, barge or ship, the markets for our products tend to be localized around our quarry sites and are served by truck. New quarry sites often take years to develop; therefore, our strategic planning and new site development must stay ahead of actual growth. Additionally, in a number of urban and suburban areas in which we operate, it is increasingly difficult to permit new sites or expand existing sites due to community resistance. Therefore, our future success is dependent, in part, on our ability to accurately forecast future areas of high growth in order to locate optimal facility sites and on our ability to secure operating and environmental permits to operate at those sites.

Our future growth depends in part on acquiring other businesses in our industry and successfully integrating them with our existing operations. If we are unable to integrate acquisitions successfully, it could lead to higher costs and could negatively affect our earnings — The expansion of our business is dependent in part on the acquisition of existing businesses that own or control aggregates reserves. Disruptions in the availability of financing could make it more difficult to capitalize on potential acquisitions. Additionally, with regard to the acquisitions we are able to complete, our future results will depend in part on our ability to successfully integrate these businesses with our existing operations.

FINANCIAL/ACCOUNTING RISKS

Our industry is capital intensive, resulting in significant fixed and semi-fixed costs. Therefore, our earnings are highly sensitive to changes in product shipment volumes — Due to the high levels of fixed capital required for extracting and producing construction aggregates, our profits are negatively affected by significant decreases in shipment volumes.

Significant downturn in the construction industry may result in an impairment of our goodwill — We test goodwill for impairment on an annual basis or more frequently if events or circumstances change in a manner that would more likely than not reduce the fair value of a reporting unit below its carrying value. While we have not identified any events or changes in circumstances since our annual impairment test on November 1, 2021 that indicate the fair value of any of our reporting units is below its carrying value, a significant downturn in the construction industry may have a material effect on the fair value of our reporting units. A significant decrease in the estimated fair value of one or more of our reporting units could result in the recognition of a material, noncash write-down of goodwill.

A deterioration in our credit ratings and/or the state of the capital markets could negatively impact the cost and/or availability of financing — We currently have \$3.95 billion of debt with maturities between 2022 and 2048. We expect to finance acquisitions with a combination of cash flows from existing operations, additional debt and/or additional equity. The mix of financing sources for acquisitions will be situationally dependent.

A deterioration in our credit ratings, regardless of the cause, could limit our debt financing options and increase the cost of such debt financing. While we do not anticipate a credit ratings downgrade, and plan to manage our capital structure consistent with investment-grade credit metrics, we cannot assure our current credit ratings.

A deterioration in the state of the capital markets, regardless of our credit ratings, could impact our access to and cost of, new debt or equity capital.

We use estimates in accounting for a number of significant items. Changes in our estimates could adversely affect our future financial results — As discussed more fully in "Critical Accounting Policies" under Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations," we use significant judgment in accounting for:

- goodwill impairment
- impairment of long-lived assets excluding goodwill
- business combinations and purchase price allocation
- pension and other postretirement benefits
- environmental compliance costs
- claims and litigation including self-insurance
- income taxes

These assumptions and estimates could change significantly in the future and could adversely affect our financial position, results of operations, or cash flows.

An increase in our effective tax rate could negatively affect our earnings and net cash provided by operating activities — Factors that may increase our future effective tax rate include, but are not limited to: governmental authorities increasing statutory income tax rates or eliminating deductions or credits; the mix of jurisdictions in which our earnings are taxed; changes in the valuation of our deferred tax assets and liabilities; the effect our stock price has with regard to excess tax benefits from share-based compensation; adjustments to estimated taxes upon finalization of various income tax returns; the resolution of issues arising from income tax audits with various tax authorities; and the interpretation of income tax laws and/or administrative practices.

PERSONNEL RISKS

Our future success greatly depends upon attracting and retaining qualified personnel, particularly in sales and operations — A significant factor in our future profitability is our ability to attract, develop and retain qualified personnel. Our success in attracting qualified personnel, particularly in the areas of sales and operations, is affected by changing demographics of the available pool of workers with the training and skills necessary to fill the available positions, the impact on the labor supply due to general economic conditions, and our ability to offer competitive compensation and benefit packages.

Disputes with organized labor could disrupt our business operations — Labor unions represent approximately 16% of our workforce. Disputes with our trade unions, or the inability to renew our labor agreements, may lead to strikes or other actions that could disrupt our business operations leading to higher costs and/or reduced revenues.

GENERAL RISK FACTORS

A significant interruption of our information technology systems (our own and that of our service providers such as Amazon Web Services) or the loss of confidential or other sensitive data (whether our own, our employees', our suppliers', or our customers') could have a material adverse impact on our operations and financial results — We have a dedicated information security team that executes, and updates as warranted based on emerging risk and new risk management technology, our information security program. The Audit Committee, which has oversight responsibility for our information security program, is briefed on such program at least twice annually, and our Chief Financial Officer is briefed on such program at least quarterly. While we have invested in the protection of our data and information technology and routinely test the security of our information systems network, we cannot be assured that our efforts will prevent breakdowns or breaches in our systems that could adversely affect our business.

Weather can materially affect our operating results — Almost all of our products are consumed outdoors in the public or private construction industry, and our production and distribution facilities are located outdoors. Inclement weather affects both our ability to produce and distribute our products and affects our customers' short-term demand because their work also can be hampered by weather.

Our products are transported by truck, rail, barge or ship, often by third-party providers. Significant delays or increased costs affecting these transportation methods could materially affect our operations and earnings — Our products are distributed either by truck to local markets or by rail, barge or oceangoing vessel to remote markets. The costs of transporting our products could be negatively affected by factors outside of our control, including rail service interruptions or rate increases, tariffs, rising fuel costs, truck/railcar/barge shortages, truck driver and rail crew shortages, capacity constraints and minimum tonnage requirements. Additionally, inclement weather, including hurricanes, tornadoes and other weather events, can negatively impact our distribution network.

We use large amounts of electricity, diesel fuel, liquid asphalt and other petroleum-based resources that are subject to potential supply constraints and significant price fluctuation, which could affect our operating results and profitability — In our production and distribution processes, we consume significant amounts of electricity, diesel fuel, liquid asphalt and other petroleum-based resources. The availability and pricing of these resources are subject to market forces that are beyond our control. Our suppliers contract separately for the purchase of such resources, and our sources of supply could be interrupted should our suppliers not be able to obtain these materials due to higher demand or other factors that interrupt their availability. Variability in the supply and prices of these resources could materially affect our operating results from period to period, and rising costs could erode our profitability.

Aggregates resources and reserves calculations are estimates only and are subject to uncertainty due to factors including the inherent variability of the deposit and recoverability of saleable material in the mining process — The calculation of mineral resources and reserves are estimates and depend upon geological interpretation and statistical inferences or assumptions drawn from drilling and sampling analysis, which may prove to be unpredictable. Until mineral reserves are actually mined and processed, the quantity must be considered as an estimate only.

We are involved in a number of legal proceedings. We cannot predict the outcome of litigation and other contingencies with certainty — We are involved in several complex litigation proceedings, some arising from our previous ownership and operation of a Chemicals business. Although we divested the Chemicals business in June 2005, we retained certain liabilities related to the business. As required by generally accepted accounting principles (GAAP), we establish reserves when a loss is determined to be probable and the amount can be reasonably estimated. Our assessment of probability and loss estimates are based on the facts and circumstances known to us at a particular point in time. Subsequent developments in legal proceedings may affect our assessment and estimates of a loss contingency and could result in an adverse effect on our financial position, results of operations or cash flows. For a description of our current significant legal proceedings see Note 12 "Commitments and Contingencies" in Item 8 "Financial Statements and Supplementary Data."

Our construction paving business may subject us to contractually imposed penalties or lost profits — We operate construction paving businesses in Alabama, Tennessee and Texas. In some instances, including many of our fixed price paving contracts, we agree to complete a project by a certain date. If we fail to complete the project as scheduled, we may be held responsible for costs resulting from the delay. Consequently, the total project cost could exceed our original estimate, and we could experience reduced profits or even a loss on the project.

We are involved in certain environmental matters. We cannot predict the outcome of these contingencies with certainty — We are involved in environmental investigations and cleanups at sites that we own or owned, where we operate or have operated or where we sent materials for recycling or disposal, as well as related offsite investigations and cleanups. As required by GAAP, we establish reserves when a loss is determined to be probable and the amount can be reasonably estimated. Our assessment of probability and loss estimates are based on the facts and circumstances known to us at a particular point in time. Subsequent developments related to these matters may affect our assessment and estimates of loss contingency, and could result in an adverse effect on our financial position, results of operations or cash flows. For a description of our current significant environmental matters see Note 12 "Commitments and Contingencies" in Item 8 "Financial Statements and Supplementary Data."

ITEM 1B

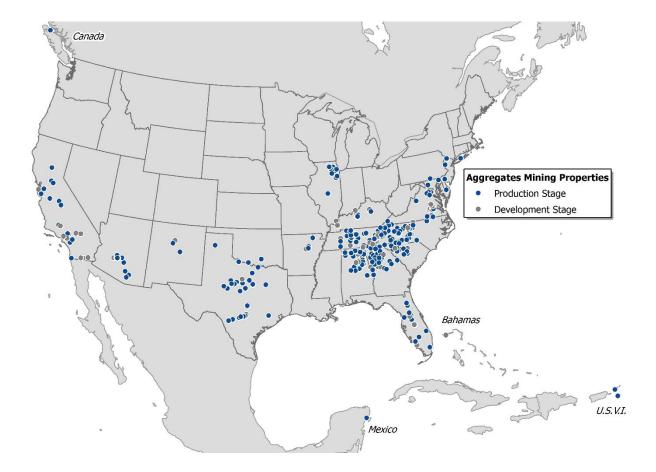
UNRESOLVED STAFF COMMENTS

We have not received any written comments from the Securities and Exchange Commission staff regarding our periodic or current reports under the Exchange Act of 1934 that remain unresolved.

AGGREGATES

As the largest U.S. supplier of construction aggregates, we have mining properties across the U.S. and in the Bahamas, Canada and Mexico. We principally serve markets in twenty-two states, the U.S. Virgin Islands, Washington D.C., and the local markets surrounding our operations in British Columbia, Canada and Quintana Roo, Mexico. Our primary focus is serving states and metropolitan markets in the U.S. that are expected to experience the most significant growth in population, households and employment. These three demographic factors are significant drivers of demand for aggregates.

Our mining properties are categorized as follows: (1) Production Stage – properties with reported proven or probable reserves where we are actively mining aggregates, (2) Development Stage – properties with reported proven or probable reserves where we are not actively mining aggregates, and (3) Exploration Stage – properties with no reported reserves. The following map illustrates the location of our 228 aggregates production stage properties and 71 development stage properties. Our 34 aggregates exploration stage properties are excluded from this map.



Active aggregates facilities generally include one or more scale houses, office buildings, maintenance shops and processing plants.

Our aggregates resources and reserves are our foundation and fundamental to our success. However, no individual mining property is individually material to our business. As of December 31, 2021, we directly operated substantially all of our aggregates production facilities.

Our aggregates resources and reserves estimates are calculated in accordance with subpart 1300 of Regulation S-K under the Exchange Act. Our proven and probable aggregates reserves may not be comparable to similar information regarding aggregates reserves disclosed in accordance with the guidance of other countries. We conduct ongoing studies of our deposits to optimize economic values and to manage risk.

We revise our mine plans and estimates of proven and probable aggregates reserves as required and in accordance with the latest available studies. Once mine plans are initially established, the ongoing viability of the plan is reviewed regularly with the benefit of hindsight. Discussions between mine planning, operations, and management determine the need for adjustments, additional resources, drilling information, or other key information. While construction aggregates reserves and resources are relatively consistent, conditions can change with time that require a newly tailored solution. Examples of changes include fluctuations in physical or chemical parameters of the product, sales product shifts, overburden removal or placement management, structural changes, entitlement changes and land additions.

Our estimates of proven and probable aggregates reserves are prepared by and are the responsibility of our employees. The methodology employed takes a systematic approach to collecting sufficient information to estimate the reserves and resources. Each of our reserve and resource bearing properties is evaluated with supporting information to identify its geological, mining and economic viability. The supporting information includes aerial photography, topography, geologic maps, aggregates rock quality information (including core drilling, hand samples, and bulk sample testing, and/or geophysical data), hydrology, archaeology, biology, property boundary information, zoning information, relevant municipal and environmental permitting information. The information is collected by experienced mining engineers and geologists who determine the extent of a resource using a combination of methods including ordinary planimetric based measurements to computer aided design 3-dimensional models.

The results of the supporting information are reviewed by various levels of management, including our "qualified person" (as defined by subpart 1300). This qualified person then verifies that the information adheres to regulatory mandated quantification methods. The economic viability of our reserves is evaluated taking into account historical performance of relevant operations and sales forecasts, among other factors.

Measurements of our proven and probable aggregates reserves have inherent risks. These risks include the accuracy and completeness of geologic information, the interpretation of the data, operational execution, market shifts, structural events and the uncertainty of uncovered material. Management and the qualified person work together to assess these risks regularly and amend the reserves assessments with new information as appropriate. New information can yield site changes that require capital expenditures or cause production performance changes that have financial impacts.

AGGREGATES RESOURCES

Mineral resources are defined as a concentration or occurrence of material of economic interest in or on the earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for its economic extraction. Mineral resources are classified into three categories, in decreasing level of confidence, as follows:

- Measured based on conclusive geological evidence and sampling, meaning that evidence is sufficient to test and
 confirm geological and grade or quality continuity. After applying modifying factors (as noted in the Aggregates Reserves
 section below), measured resources may be converted to either proven or probable reserves
- Indicated based on adequate geological evidence and sampling, meaning that evidence is sufficient to establish
 geological and grade or quality continuity with reasonable certainty. After applying modifying factors, indicated resources
 may be converted to probable reserves
- Inferred based on limited geological evidence and sampling, meaning that evidence is only sufficient to establish that
 geological and grade or quality continuity is more likely than not. Inferred resources may not be converted to reserves

Our reported aggregates resources do not include amounts that have been identified as mineral reserves. Our 2021 measured, indicated and inferred aggregates resources are based on an initial assessment using an average sales price assumption ranging from \$5.00 to \$20.00 per ton depending on the location/market. The table below presents, by division, the tons of measured, indicated and inferred aggregates resources and the percentage of aggregates resources by commodity as of December 31, 2021.

		(millions of tons)				ge of Aggregates	Resources by Co	ommodity
		Aggregates	Resources				Sand &	_
Division ¹	Measured (M)	Indicated (I)	Total (M) + (I)	Inferred	Limestone	Granite	Gravel	Other 2
Central	556.4	1,144.1	1,700.5	362.9	16.0%	0.0%	0.1%	0.0%
International	144.2	757.2	901.4	0.0	0.0%	0.6%	0.5%	5.9%
Mideast	2,133.7	132.0	2,265.7	6.2	0.0%	6.0%	0.1%	11.7%
Mountain West	30.1	0.4	30.5	31.5	0.0%	0.1%	0.4%	0.0%
Southeast	2,009.8	1,205.1	3,214.9	671.9	1.8%	0.7%	1.2%	26.8%
Southern Gulf Coast	667.5	129.2	796.7	177.7	6.8%	0.4%	0.3%	0.1%
Southwest	449.6	31.6	481.2	500.0	7.7%	0.0%	0.0%	0.0%
Western	69.0	1,183.8	1,252.8	275.2	0.0%	3.0%	9.0%	0.0%
U.S. Concrete	94.4	0.0	94.4	0.0	0.0%	0.0%	0.2%	0.6%
Total	6,154.7	4,583.4	10,738.1	2,025.4	32.2%	10.8%	11.8%	45.2%

¹ The divisions are defined by states/countries as follows:

Central Division — Illinois, Kentucky and Tennessee

International Division — Quintana Roo (Mexico), the U.S. Virgin Islands and British Columbia (Canada)

Mideast Division — Delaware, Maryland, North Carolina, Pennsylvania, Virginia and Washington D.C.

Mountain West Division — Arizona and New Mexico

Southeast Division — Florida (excluding panhandle), Georgia and South Carolina

Southern Gulf Coast Division — Alabama, Arkansas, Florida Panhandle, Louisiana and Mississippi

Southwest Division — Oklahoma and Texas

Western Division — California

U.S. Concrete — Aggregates facilities are located in New Jersey, New York, Oklahoma, and Texas. Excludes the U.S. Virgin Islands and British Columbia (Canada) which are included in the International Division

² Other: amphibolite, argillite, gneiss, marble, sandstone and quartzite

AGGREGATES RESERVES

Mineral reserves are defined as the economically mineable part of a measured or indicated mineral resource. Mineral reserves are classified into two categories, in decreasing level of confidence, as follows:

- Proven those reserves for which the quantity is computed from dimensions revealed by drill data, together with other direct and measurable observations, such as outcrops, trenches and quarry faces. The grade and quality of those reserves are computed from the results of detailed sampling, and the sampling and measurement data are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well established
- Probable those reserves for which quantity, grade and quality are computed partly from specific measurements and partly from projections based on reasonable, though not drilled, geologic evidence. The degree of assurance, although lower than that for proven reserves, is high enough to assume continuity between points of observation

Reported proven and probable reserves include only quantities that are owned in fee or under lease and for which all appropriate zoning and permitting have been obtained through permit, contract or grandfathered status. We apply modifying factors to establish the economic viability of the reserves, as follows:

- Contractual and governmental regulations (for example, leases, zoning, permits and reclamation plans) often set limits on the areas, depths and lengths of time allowed for mining, stipulate setbacks and slopes that must be left in place, and designate which areas may be used for surface facilities, berms, and overburden or waste storage, among other requirements and restrictions
- Technical and economic factors affect the estimates of reported reserves regardless of what might otherwise be considered proven or probable based on a geologic analysis. For example, excessive overburden or weathered rock, rock quality issues, excessive mining depths, groundwater issues, overlying wetlands, endangered species habitats, and rights of way or easements may effectively limit the quantity of reserves considered proven and probable
- Mining and processing waste are also factored in our computations for proven and probable reserves

Our 2021 proven and probable aggregates reserves were estimated by internal experts (i.e. geologists or engineers). The economic viability of our reserves were determined using average aggregates prices ranging from \$5.00 to \$20.00 per ton depending on the location/market.

The tables below present by reserve classification — proven, probable and total proven & probable (P&P) — and by division, the tons of aggregates reserves as of December 31, 2021 and the percentages by commodity type. The third (proven & probable) table also notes the 2021 production.

	(millions of tons)	Percentage of Proven Aggregates Reserves by Commodity						
	Aggregates Reserves			Sand &				
Division ¹	Proven	Limestone	Granite	Gravel	Other 3			
Central	2,015.1	17.2%	0.0%	0.1%	0.0%			
International	499.2	3.5%	0.0%	0.8%	0.0%			
Mideast	2,317.5	3.8%	2.9%	0.5%	12.7%			
Mountain West	234.6	0.0%	0.3%	1.3%	0.4%			
Southeast 4	2,888.6	3.0%	1.0%	1.7%	19.2%			
Southern Gulf Coast	1,734.5	13.6%	0.9%	0.0%	0.5%			
Southwest	1,230.4	9.8%	0.8%	0.0%	0.0%			
Western	715.1	0.0%	3.8%	2.3%	0.0%			
U.S. Concrete	0.0	0.0%	0.0%	0.0%	0.0%			
Total Proven Reserves	11,635.0	50.9%	9.7%	6.7%	32.7%			

	(millions of tons)	Percentage o	of Probable Aggrega	obable Aggregates Reserves by Commodity				
	Aggregates Reserves		Sand &					
Division ¹	Probable	Limestone	Granite	Gravel	Other 3			
Central	1,038.3	25.9%	0.0%	0.1%	0.0%			
International	29.1	0.0%	0.7%	0.0%	0.0%			
Mideast	960.3	6.1%	4.7%	0.4%	12.8%			
Mountain West	98.8	0.0%	0.5%	2.0%	0.0%			
Southeast ⁴	880.3	1.6%	1.4%	0.7%	18.4%			
Southern Gulf Coast	46.7	1.2%	0.0%	0.0%	0.0%			
Southwest	105.0	2.6%	0.0%	0.0%	0.0%			
Western	688.9	0.0%	8.4%	8.8%	0.0%			
U.S. Concrete	143.9	0.3%	0.0%	3.0%	0.4%			
Total Probable Reserves	3,991.3	37.6%	15.8%	15.0%	31.6%			

	(millions of tons	s)	Percentage of Total P&P Aggregates Reserves by Commodity					
	Aggregates Reserves	2021 ²	Sand &					
Division ¹	Total Proven & Probable	Production	Limestone	Granite	Gravel	Other ³		
Central	3,053.4	33.8	19.4%	0.0%	0.1%	0.0%		
International	528.3	10.2	2.6%	0.2%	0.6%	0.0%		
Mideast	3,277.8	38.6	4.4%	3.4%	0.5%	12.7%		
Mountain West	333.4	8.8	0.0%	0.3%	1.5%	0.3%		
Southeast ⁴	3,768.9	56.1	2.6%	1.1%	1.4%	19.0%		
Southern Gulf Coast	1,781.2	25.7	10.4%	0.7%	0.0%	0.3%		
Southwest	1,335.4	24.7	7.9%	0.6%	0.0%	0.0%		
Western	1,404.0	20.7	0.0%	5.0%	4.0%	0.0%		
U.S. Concrete	143.9	4.2	0.1%	0.0%	0.8%	0.1%		
Total P&P Reserves	15,626.3	222.8	47.5%	11.3%	8.8%	32.4%		

¹ The divisions are defined geographically in the first table within this Item 2 - Properties.

² Production totals for the two prior years were as follows: 2020 – 203.1 million tons and 2019 – 217.0 million tons.

³ Other: amphibolite, argillite, gneiss, marble, sandstone and quartzite.

⁴ Includes a maximum of 300.3 million tons of reserves encumbered by volumetric production payments as defined in Note 2 "Revenues" in Item 8 "Financial Statements and Supplementary Data."

Our current estimate of 15.6 billion tons of proven and probable aggregates reserves reflects a decrease of 0.3 billion tons from the prior year's estimate. Approximately 0.3 billion tons were added as a result of 2021 acquisitions. Estimates of reserves are of recoverable stone, sand and gravel of suitable quality for economic extraction, based on drilling and studies by our geologists and engineers, recognizing reasonable economic and operating constraints as to maximum depth of overburden and stone excavation, and subject to permit or other restrictions.

Of the 15.6 billion tons of estimated proven and probable aggregates reserves reported at the end of 2021, 13.2 billion tons or 86% are located on production stage properties and 2.2 billion tons or 14% are located on development stage properties. We do not report aggregates reserves for exploration stage sites.

Of the 15.6 billion tons of aggregates reserves at December 31, 2021, 9.1 billion tons or 58% are located on owned land and 6.5 billion tons or 42% are located on leased land. Our land portfolio consists of more than 240,000 acres.

In addition to our aggregates mining properties we operate aggregates sales yards and recycled concrete plants. The table below presents, by division, the count of active aggregates facilities as of December 31, 2021 and the types of facilities operated.

	Count of Active Aggregates Operating Facilities							
	Production	n Stage Mining Pro	perties 1	Sales	Recycled	Total		
Division ²	Stone	Sand & Gravel	Total	Yards	Plants			
Central	48	3	51	5	10	66		
International	3	1	4	0	0	4		
Mideast	33	4	37	24	19	80		
Mountain West	2	10	12	2	4	18		
Southeast	43	8	51	25	3	79		
Southern Gulf Coast	25	0	25	22	3	50		
Southwest	17	0	17	24	1	42		
Western	7	8	15	1	11	27		
U.S. Concrete	3	13	16	8	0	24		
Total	181	47	228	111	51	390		

¹ The facility counts above only include mining properties with production in the current year (excludes for example, mining properties with sales from existing stockpiles with no current year production).

² The divisions are defined geographically in the first table within this Item 2 - Properties.

ASPHALT, CONCRETE AND CALCIUM

As of December 31, 2021, we operated a number of facilities producing asphalt mix, ready-mixed concrete and calcium in several of our divisions as reflected in the table below:

Division ¹	Asphalt ² Facilities	Concrete ³ Facilities	Calcium ⁴ Facilities
Central	10	0	0
Mideast	0	33	0
Mountain West	20	0	0
Southeast	0	0	1
Southern Gulf Coast	2	0	0
Southwest	16	7	0
Western	21	3	0
U.S. Concrete	0	130	0
Total	69	173	1

¹ The divisions are defined geographically in the first table within this Item 2 - Properties. Our International Division has no asphalt, concrete or calcium facilities. U.S. Concrete — Concrete facilities are located in California, New Jersey, New York, Oklahoma, Pennsylvania, Texas, the U.S. Virgin Islands and Washington D.C.

The asphalt and concrete facilities are able to meet their needs for raw material inputs with a combination of internally sourced and purchased raw materials.

Our Calcium segment operates a quarry at Brooksville, Florida that provides feedstock for the ground calcium operation. The Brooksville quarry is not individually material to our business. Calcium resources and reserves are outlined in the table below:

		(millions of tons) Calcium Resources						
Location	Measured (M)	Indicated (I)	Total (M) + (I)	Inferred				
Brooksville	0.0	0.0	0.0	0.0				
		(millio	ns of tons)					
		Calcium Reserve	s	2021 1				
Location	Proven	Probable	Total	Production				
Brooksville	4.2	7.2	11.4	0.3				

¹ Production totals for the two prior years were as follows: 2020 – 0.3 million tons and 2019 – 0.3 million tons.

Our production stage, leased Brooksville limestone quarry produces a supplement for end-use products, such as animal feed and plastics. High purity limestone is inert and relatively inexpensive compared to the other components used in these end-use products. The Brooksville limestone quarry has an average calcium carbonate (CaCO₃) content of 97%.

² Asphalt facilities for the Central, Southern Gulf Coast and Southwest Divisions are comprised of asphalt mix facilities and construction paving businesses.

³ In addition to the concrete facilities above, U.S. Concrete operated a fleet of approximately 90 volumetric mixer trucks (which are effectively mobile mini-plants) serving major markets in Texas, and is one of the largest volumetric operations in the U.S. Volumetric ready-mixed concrete trucks mix concrete to the customer's specification on the job site, better serving smaller jobs and specialized applications, and allowing flexibility for servicing remote job locations. Because of their versatility, these trucks offer the contractor multiple options for a single job without the inconvenience or added costs typically associated with standard ready-mix trucks delivering special or short-loads to a job site. Because of their unique on-demand production capabilities, these trucks minimize the amount of wasted concrete, which improves margins and reduces environmental impact.

⁴ Comprised of a ground calcium plant in Brooksville, Florida.

HEADQUARTERS

Our headquarters are located in an office complex in Birmingham, Alabama. The office space consists of approximately 184,410 square feet and is leased through December 31, 2038. The annual rental cost for the current term of the lease is approximately \$3.8 million.

ITEM 3

LEGAL PROCEEDINGS

We are subject to occasional governmental proceedings and orders pertaining to occupational safety and health or to protection of the environment, such as proceedings or orders relating to noise abatement, air emissions or water discharges. As part of our continuing program of stewardship in safety, health and environmental matters, we have been able to resolve such proceedings and to comply with such orders without any material adverse effects on our business.

We are a defendant in various lawsuits in the ordinary course of business. It is not possible to determine with precision the outcome of, or the amount of liability, if any, under these lawsuits, especially where the cases involve possible jury trials with as yet undetermined jury panels.

We were not subject to any penalties in 2021 for failure to disclose transactions identified by the Internal Revenue Service as abusive under Internal Revenue Code Section 6707A.

See Note 12 "Commitments and Contingencies" in Item 8 "Financial Statements and Supplementary Data" for a discussion of our material legal proceedings.

ITEM 4

MINE SAFETY DISCLOSURES

The information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K is included in Exhibit 95 of this report.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The names, positions and ages, as of February 20, 2022, of our executive officers are as follows:

Name	Position	- Age
J. Thomas Hill	Chairman, President and Chief Executive Officer	62
Suzanne H. Wood	Senior Vice President and Chief Financial Officer	61
Stanley G. Bass	Chief Strategy Officer	60
Thompson S. Baker II	Chief Operating Officer	63
David P. Clement	Senior Vice President, Central Division, Operations Support, Procurement & Environmental	61
Denson N. Franklin III	Senior Vice President, General Counsel and Secretary	58
Jerry F. Perkins Jr.	Senior Vice President, Southern & Gulf Coast and Mountain West Divisions, Commercial Excellence	52
Ronnie Pruitt	Senior Vice President, U.S. Concrete, and Western and Southwest Divisions	51
Jason P. Teter	Senior Vice President, Mideast and Southeast Divisions	47
Randy L. Pigg	Vice President, Controller and Principal Accounting Officer	49

The principal occupations of the executive officers during the past five years are set forth below:

J. Thomas Hill was elected Chairman of the Board of Directors effective January 1, 2016 and President and Chief Executive Officer in July 2014. Previously, he served as Executive Vice President and Chief Operating Officer from January 2014 to July 2014, and Senior Vice President — South Region from December 2011 to December 2013. Prior to that, he served in a number of positions with Vulcan including President, Florida Rock Division from September 2010 to December 2011.

Suzanne H. Wood was elected Senior Vice President, Chief Financial Officer effective September 2018 and also served as Secretary from September 2019 to December 2019. From 2012 to 2018, she served as Group Finance Director and Chief Financial Officer of Ashtead Group plc, a FTSE 50 international equipment rental company serving the construction industry and other markets. Prior to that, she was Executive Vice President and Chief Financial Officer of Sunbelt Rentals, Inc., the North American subsidiary of Ashtead Group plc. A certified public accountant, she also previously held Chief Financial Officer positions at Tultex Corporation and Oakwood Homes Corporation. She currently serves on the board of directors and is chair of the audit committee of RELX Group, a FTSE 50 global professional information and analytics company. She also serves on the board of directors, audit committee and nominations committee of Ferguson plc, the FTSE 100 leading distributor of plumbing and heating products.

Stanley G. Bass was elected Chief Strategy Officer in March 2021 after serving as Chief Growth Officer since February 2016. He served as Senior Vice President — Western and Mountain West Divisions from January 2015 to February 2016, and Senior Vice President — West Region from September 2013 to December 2014. Prior to that, he served as Senior Vice President — Central and West Regions from February 2013 to September 2013 and Senior Vice President — Central Region from December 2011 to February 2013. Prior to that, he served in a number of positions with Vulcan including President, Midsouth and Southwest Divisions from September 2010 to December 2011.

Thompson S. Baker II was appointed Chief Operating Officer effective May 2019. He previously served as Senior Vice President from March 2017 to April 2019. Prior to that, he served in a number of positions with Vulcan, including President — Florida Rock Division, before serving as Chief Executive Officer of FRP Holdings, Inc. from October 2010 to March 2017 and President and Chief Executive Officer of Patriot Transportation Holding, Inc. from December 2014 to March 2017.

David P. Clement was appointed Senior Vice President Central Division, Operations Support, Procurement & Environmental in September 2021. He previously served as Senior Vice President of the Central Division since August 2021 and, prior to that role, served as Senior Vice President of the Mountain West and Western Divisions since March 2020. He first joined the organization as an operations management trainee in 1983 and progressed to the position of area production manager in 1993. After spending a few years at Pioneer Mid-Atlantic and working as a consultant, he rejoined Vulcan in 2004 as Vice President and General Manager of the Midwest Division. He has held the positions of Vice President of Operations for the Midwest Division, Vice President and General Manager of the Central Region, Senior Vice President of the Central Region, and most recently as President of the Central Division.

Denson N. Franklin III joined us in December 2019 as Senior Vice President, General Counsel and Secretary. Prior to that he was a partner at Bradley Arant Boult Cummings LLP, a law firm based in Birmingham, Alabama. While at Bradley, he served as Vulcan's primary outside counsel for more than 20 years and advised other companies in the construction materials, building and engineering industries.

Jerry F. Perkins Jr. was appointed Senior Vice President Southern & Gulf Coast and Mountain West Divisions, Commercial Excellence in September 2021. He previously served as Senior Vice President of the Southern & Gulf Coast and Mountain West Divisions since August 2021 and, prior to that role, served as Senior Vice President of the Southern & Gulf Coast and Southwest Divisions since March 2020. Prior to that role, he was President of the Southern and Gulf Coast Division. He also served as General Counsel and Corporate Secretary and held various legal leadership roles for Vulcan. Before joining Vulcan in 2002, he worked as a certified public accountant (CPA) at a global accounting firm and was an attorney with Burr & Forman LLP in Birmingham, Alabama.

Ronnie Pruitt is Senior Vice President of U.S. Concrete and the Western and Southwest Divisions. He joined Vulcan as part of Vulcan's August 2021 acquisition of U.S. Concrete, Inc. He held various leadership roles at U.S. Concrete, including President and Chief Executive Officer from April 2020 to August 2021, President and Chief Operating Officer from April 2019 to April 2020, and Senior Vice President and Chief Operating Officer from October 2015 to April 2019. Prior to joining U.S. Concrete in 2015, he served as the Vice President of Cement Sales of Martin Marietta Materials, Inc. and held various positions at Texas Industries, Inc.

Jason P. Teter was appointed Senior Vice President of the Mideast and Southeast Divisions in March 2020. Prior to his current position, he was President of the Southeast Division. He joined Vulcan in 2013 as Vice President of Business Development. He also served as Vice President of Finance for Vulcan and President of the Southern and Gulf Coast Division. Before joining Vulcan, he spent ten years in various finance, business development and general management positions with Lafarge North America.

Randy L. Pigg was elected Vice President, Controller and Principal Accounting Officer in April 2018. He served as Vice President, Accounting since June 2016, and prior to that served as Director, Financial Shared Services since April 2014. Prior to that, he served in a number of positions with Vulcan, including Manager Financial Research & Reporting and Finance Director — Central Region.

ITEM 5

MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS

AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is traded on the New York Stock Exchange (ticker symbol VMC). As of February 15, 2022, the number of shareholders of record was 2,277.

ISSUER PURCHASES OF EQUITY SECURITIES

Purchases of our equity securities during the quarter ended December 31, 2021 are summarized below.

				Total Number of Shares	Maximum Number of
	Total			Purchased as	Shares that May
	Number of	Number of Average			Yet Be Purchased
	Shares	Price Paid Per Share		Announced Plans	Under the Plans
Period	Purchased			or Programs	or Programs 1
2021					
Oct 1 - Oct 31	0	\$	0.00	0	8,064,851
Nov 1 - Nov 30	0	\$	0.00	0	8,064,851
Dec 1 - Dec 31	0	\$	0.00	0_	8,064,851
Total	0	\$	0.00	0	

¹ In February 2017, our Board of Directors authorized us to purchase up to 10,000,000 shares of our common stock. As of December 31, 2021, there were 8,064,851 shares remaining under this authorization. Depending upon market, business, legal and other conditions, we may purchase shares from time to time through the open market (including plans designed to comply with Rule 10b5-1 of the Securities Exchange Act of 1934) and/or through privately negotiated transactions. The authorization has no time limit, does not obligate us to purchase any specific number of shares, and may be suspended or discontinued at any time.

We did not have any unregistered sales of equity securities during the fourth quarter of 2021.

The objective of our management's discussion and analysis is to help investors understand our operations and current business environment from the perspective of our management. The following discussion should be read in conjunction with the consolidated financial statements and the accompanying notes contained in this Annual Report. The following generally includes a comparison of our results of operations and liquidity and capital resources for 2021 and 2020. For the discussion of changes from 2019 to 2020 and other financial information related to 2019, refer to Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, of our Form 10-K for the year ended December 31, 2020 filed with the Securities and Exchange Commission on February 25, 2021.

EXECUTIVE SUMMARY

FINANCIAL SUMMARY FOR 2021 (compared to 2020)

- Total revenues increased \$695.4 million, or 14%, to \$5,552.2 million
- Gross profit increased \$91.9 million, or 7%, to \$1,373.4 million
- Aggregates segment sales increased \$400.7 million, or 10%, to \$4,345.0 million
- Aggregates segment freight-adjusted revenues increased \$306.3 million, or 10%, to \$3,313.9 million
 - Shipments increased 7%, or 14.6 million tons, to 222.9 million tons
 - Same-store shipments increased 5%, or 10.2 million tons, to 218.5 million tons
 - Freight-adjusted sales price increased 3.0%, or \$0.43 per ton to \$14.87
 - Same-store freight-adjusted sales price also increased 3.0% to \$14.87 per ton
- Aggregates segment gross profit increased \$136.5 million, or 12%, to \$1,295.7 million
 - Unit profitability (as measured by gross profit per ton) increased 4% to \$5.81 per ton
 - Same-store unit profitability (as measured by gross profit per ton) increased 7% to \$5.95 per ton
- Asphalt, Concrete and Calcium segment gross profit decreased \$44.6 million, or 36%, to \$77.7 million, collectively
- Selling, administrative and general (SAG) expenses increased 16% to \$417.6 million and increased 0.1 percentage point (10 basis points) as a percentage of total revenues
- Operating earnings increased \$115.1 million, or 13%, to \$1,010.8 million
- Earnings attributable to Vulcan from continuing operations were \$5.05 per diluted share, compared to \$4.41
 - Discrete items in 2021 include:
 - \$13.7 million of tax charges related to an increase in the Alabama NOL carryforward valuation allowance
 - pretax net gain of \$114.7 million related to the sale of a reclaimed quarry in Southern California
 - pretax charges of \$1.5 million for divested operations
 - pretax charges of \$39.0 million associated with non-routine business development
 - pretax charges of \$13.4 million for COVID-19 pandemic direct incremental costs
 - pretax charge of \$12.1 million for pension settlement
 - pretax charges of \$15.0 million for managerial restructuring
 - pretax interest charges of \$9.4 million related to financing the acquisition of U.S. Concrete
 - Discrete items in 2020 include:
 - pretax charges of \$6.9 million for divested operations
 - pretax charges of \$7.3 million associated with non-routine business development
 - pretax charges of \$10.2 million for COVID-19 pandemic direct incremental costs
 - pretax charges of \$22.7 million for pension settlement
 - pretax charges of \$1.3 million for restructuring
- Adjusted (for the discrete pretax items noted above) earnings attributable to Vulcan from continuing operations were \$5.04 per diluted share, compared to \$4.68 per diluted share
- Net earnings attributable to Vulcan were \$670.8 million, an increase of \$86.3 million, or 15%
- Adjusted EBITDA was \$1,451.3 million, an increase of \$127.8 million, or 10%
- Returned capital to shareholders via dividends of \$196.4 million @ \$1.48 per share versus \$180.2 million @ \$1.36 per share

Our teams finished the year strong, despite ongoing challenges from inflationary pressures and labor constraints. We expanded our industry-leading unit profitability by continuing to focus on our operating disciplines and taking pricing actions where necessary to mitigate these headwinds. We continue to make excellent progress integrating the U.S. Concrete operations into our business. This acquisition extends our growth platform in certain existing markets as well as new geographies. These results demonstrate our ability to execute on Vulcan's four strategic disciplines — Operational Excellence, Strategic Sourcing, Commercial Excellence and Logistics Innovation (as outlined in Item 1 "Business" under the "Business Strategy" heading) — and enhance our operating leverage moving forward. We are well positioned to capitalize on the positive demand trends we see developing in 2022 and beyond.

As demand and the pricing environment continue to strengthen, we expect healthy growth in unit profitability again in 2022. Robust growth in aggregates pricing and continued focus on operational excellence will more than offset anticipated inflationary pressures. In our asphalt business, we expect recent pricing efforts to begin to mitigate higher liquid asphalt costs and lead to gross profit margin improvement beginning in the second half of 2022. In our concrete business, improvement in private nonresidential construction activity will help drive earnings growth in 2022.

At year end 2021, total debt to Adjusted EBITDA was 2.7x (2.5x on a net debt basis). We remain committed to our stated long-term target leverage range of 2.0x to 2.5x total debt to Adjusted EBITDA.

Return on invested capital was 14.2% and we remain committed to driving further improvement through solid operating earnings growth coupled with disciplined capital management.

CAPITAL ALLOCATION

Our balanced approach to capital allocation remains unchanged. Through economic cycles we intend to balance reinvestment in our business, growth through acquisitions, and return of capital to shareholders while maintaining financial strength and flexibility evidenced by our strong balance sheet and investment-grade credit ratings. Our capital allocation priorities are as follows:

- 1. Operating Capital (maintain and grow the value of our franchise)
- 2. Growth Capital (including greenfields and acquisitions)
- 3. Dividend Growth (with a keen focus on sustainability)
- 4. Return Excess Cash to Shareholders (primarily via share repurchases)

Our first priority is to maintain and protect our valuable franchise by keeping our operations in good working order to ensure the production of high quality materials and timely delivery of goods and services to our customers. This capital requirement expands and contracts as production and shipment levels change. During 2021, we invested \$281.7 million to replace or improve existing property, plant & equipment.

Our second priority is to grow our franchise through internal growth projects and business acquisitions. Internal growth projects have generally been among our highest returning projects. During 2021, we invested \$169.6 million in internal growth projects to secure new aggregates reserves, develop new production and/or distribution sites, enhance our distribution capabilities and support the targeted growth of our asphalt and concrete operations. For business acquisitions, we tend to look for bolt-on acquisitions which are easy to integrate and will pursue large business combinations that are the right fit and the right price. During August 2021, we closed on one such large business combination (U.S. Concrete) for \$1,634.5 million. We use strategic and returns-based criteria to price potential acquisitions and are disciplined in our approach. We look at a lot of potential acquisitions and only make offers on a few. We closed two business acquisitions (including U.S. Concrete) during 2021 for total consideration of \$1,639.4 million.

Our third priority is growing the dividend with a keen focus on sustainability through the economic cycle. During 2021, we paid a dividend per share of \$1.48 and paid total dividends of \$196.4 million.

And finally, if there is excess cash after fulfilling the prior capital allocation priorities, we will consider returning cash to shareholders via share repurchases. During 2021, we made no share repurchases.

For a detailed discussion of our acquisitions and divestitures, see Note 19 "Acquisitions and Divestitures" in Item 8 "Financial Statements and Supplementary Data."

MARKET DEVELOPMENTS AND OUTLOOK

We carry considerable momentum into the new year. Our markets are poised to outperform other parts of the country as demand continues to improve and our industry-leading unit profitability increases with each passing quarter. We will continue to drive substantial value through the combination of our legacy business and the acquisition of U.S. Concrete. Residential construction remains strong, and contract awards for private nonresidential buildings are growing again. On the public side, infrastructure investment is moving forward, and we are well positioned in attractive growth markets where the need is greatest. The recently enacted Infrastructure Investment and Jobs Act is certainly a positive for our industry; it will add to existing demand as well as elongate the cycle. However, we do not expect it to have a significant impact in 2022. That said, labor shortages and supply chain disruptions are expected to continue to limit shipment growth in 2022. We expect the favorable pricing dynamics that improved throughout 2021 to be even better in 2022 and lead to attractive growth in aggregates unit profitability. Growing our aggregates unit profitability consistently during the last two years of pandemic-related disruptions demonstrates the resiliency of our business and our ability to capitalize on any changes in the macro environment.

Management expectations for 2022 include:

- Net earnings attributable to Vulcan of between \$800 to \$890 million
- Adjusted EBITDA of between \$1,720 to \$1,820 million
- High single-digit growth in Aggregates cash gross profit per ton (\$7.43 in 2021)
 - Total shipment growth of 5% to 7% (222.9 million tons in 2021)
 - Freight-adjusted price increase of 6% to 8% (\$14.87 per ton in 2021)
 - Mid-single digit increase in freight-adjusted cash cost (freight-adjusted sales price less segment cash gross profit per ton; \$7.44 per ton in 2021) due to higher energy-related costs (mostly diesel fuel) and continued inflationary pressures in other areas
- Cash gross profit of \$300 to \$325 million in Asphalt, Concrete and Calcium, collectively
 - Concrete segment expected to account for approximately 75% of the total due to a full year of results from U.S.
 Concrete operations as well as margin improvement in our legacy operations
 - Asphalt segment earnings improvement driven by volume growth and price improvement. Higher prices for asphalt
 mix in the second half of 2022 are expected to reduce the earnings impact of higher liquid asphalt costs and natural
 gas used in production
- SAG expenses of \$485 to \$495 million, including a full year of U.S. Concrete
- Interest expense of approximately \$150 million
- Depreciation, depletion, accretion, and amortization expense of approximately \$540 million
- An effective tax rate of 21% to 22%

As previously noted, 2022 sales volumes may be affected by labor shortages and supply chain disruptions. If these constraints do continue well into 2022, it is important to remember that the work is still there; it may just proceed at a slower pace, effectively extending the recovery and allowing us the opportunity to compound our unit margins.

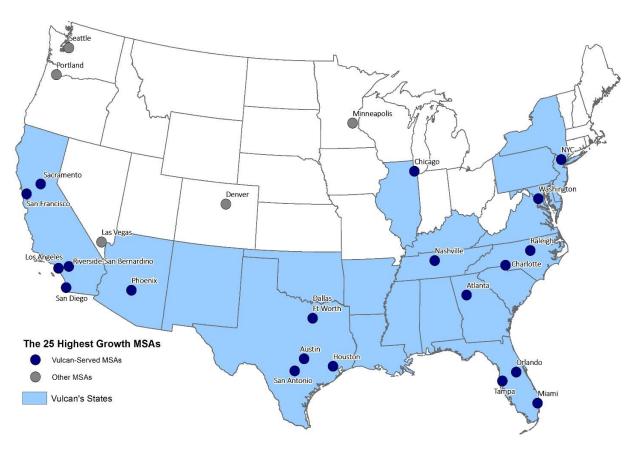
Additionally, we expect to spend \$600 million to \$650 million on capital expenditures, including growth and capacity-adding projects. We will continue to review our plans and will adjust as needed, while being thoughtful about preserving liquidity.

COMPETITIVE ADVANTAGES

AGGREGATES FOOTPRINT

Over time, we have strategically and systematically built one of the most valuable aggregates franchises in the U.S. with a footprint that is impossible to replicate. Zoning and permitting regulations have made it increasingly difficult to expand existing quarries or to develop new quarries. Such regulations, while curtailing expansion, also increase the value of our reserves that were zoned and permitted decades ago.

Demand for aggregates correlates positively with changes in population growth, household formation and employment. We have a coast-to-coast footprint that serves 20 of the top 25 highest-growth metropolitan statistical areas (MSAs) and states where 75% of U.S. population growth from 2020 to 2030 is projected to occur. As state and federal spending increases, Vulcan is poised to benefit greatly from growing private and public demand for aggregates, thereby delivering significant long-term value for our shareholders.



Source: Woods & Poole CEDDS 2021 Based on people added from 2020 to 2030

COMPOUNDING IMPROVEMENT IN PROFITABILITY

We have continued to deliver strong financial performance over time and through business cycles. Through our aggregates-led strategy and focus on our four strategic disciplines — operational excellence, strategic sourcing, commercial excellence and logistics innovation (as outlined in Item 1 "Business" under the "Business Strategy" heading) — we have created one of the most profitable public companies in our industry as measured by aggregates gross profit per ton.

Vulcan Aggregates Gross Profit Per Ton Growth



We are currently operating considerably below full capacity making us extremely well positioned to further benefit from economies of scale as markets continue to recover from the COVID-19 pandemic.

SAFETY, HEALTH AND ENVIRONMENTAL PERFORMANCE

A strategy for sustainable, long-term value creation must include doing right by your employees, your neighbors and the environment in which you operate. Over our more than six decades as a public company, we have built a strong, resilient and vital business on this foundation of doing things the right way.

We are a leader in our industry in safety, health and environmental performance, with a safety record substantially better than the industry average. We apply the shared experiences, expertise and resources at each of our locally led sites, with an emphasis on taking care of one another. The result is a record of safety excellence that consistently outperforms the industry.

Vulcan MSHA Injury Rate Compared to Aggregates Industry

Number of Injuries per 200,000 Hours Worked



Source: Mine Safety and Health Administration (MSHA) records and Internal Vulcan Data.

^{*} The aggregates industry MSHA injury rate for 2021 was not available as of the filing of this report.

We focus on our environmental stewardship programs with the same intensity that we bring to our health and safety initiatives resulting in 98.6% citation-free inspections out of all 2021 federal and state environmental inspections. As an industry leader, our aim has always been to meet — and strive to exceed — all federal, state and local environmental regulations. However, environmental sustainability means looking beyond what is required of a company by governments and regulators. We continue to make progress on reducing our carbon footprint, increasing our energy efficiency, measuring and reducing our water use, and managing our land with biodiversity in mind. It's the right thing to do for society, for our business and our stakeholders.

Our environmental stewardship commitment is designed to protect plant and animal species and habitats, as well as the air we breathe, the water we use and the planet we all share. Our environmental stewardship is reflected in our business strategy. In all parts of our company, from local operations to our corporate and regional offices to our international business and ocean-going shipping, we are focused on ensuring that our operations are efficient in ways that are economically and environmentally sustainable.

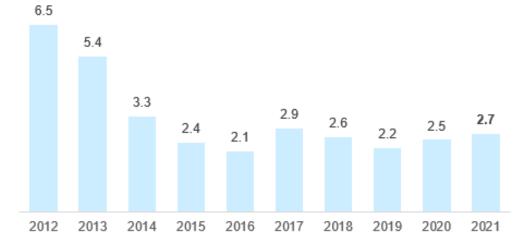
We lead community relations programs that serve our neighbors while ensuring that we grow and thrive in the communities where we operate. During 2021, we operated 40 certified wildlife habitat sites, the third largest number of sites in the nation, as certified by the Wildlife Habitat Council. We provided over 175 scholarships to students nationwide and emphasized COVID-19 support as well as diversity and inclusion in our community outreach and contributions.

We recognize that the aggregates mining in which we engage is an interim use of the more than 240,000 acres of land in our portfolio. Our land and water assets will be converted to other valuable uses at the end of mining. Effective management throughout the life cycle of our land — from pre-mining utilization as agriculture and timber development, to post-mining development as water reservoirs or residential and commercial development — not only generates significant additional value for our shareholders but greatly benefits the communities in which we operate.

STRONG FINANCIAL FOUNDATION

Our financial position is strong as evidenced by our investment-grade credit ratings (Fitch BBB/Moody's Baa2/Standard & Poor's BBB+). At December 31, 2021, our available liquidity was \$1,175.4 million, including \$241.5 million of cash on hand, significantly higher than our liquidity needs. Our leverage ratio, as measured by total debt to Adjusted EBITDA, has improved from 6.5x at December 31, 2012 to 2.7x at December 31, 2021 (our net debt to Adjusted EBITDA at December 31, 2021 was 2.5x), nearly within our stated leverage target of 2.0 to 2.5x. Over that same period, we also improved the structure of our debt (average maturity from 7 years to 11 years) and reduced the cost of the debt (weighted average interest rate from 7.55% to 3.68%).

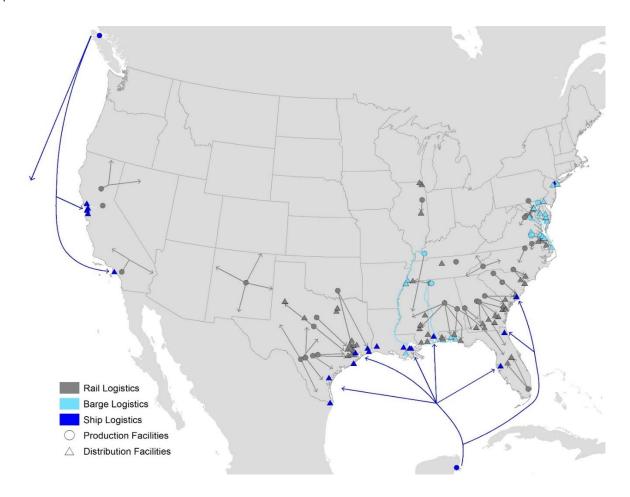




CUSTOMER SERVICE

More than an aggregates supplier, we are a business dedicated to customer service and finding creative solutions to meet our customers' needs. Being a valued partner and trusted supplier means that we are providing the right product, with the right specifications, that is the right quality, delivered the right way — on time and safely. Our *One-Vulcan, Locally Led* approach, in which our employees work together to leverage the size and strengths of Vulcan as a whole, while running their operations with a strong entrepreneurial spirit and sense of ownership, allows us to deliver market-leading services to our customers.

Transportation costs are passed along to our customers, and because aggregates have a very high weight-to-value ratio, those costs can add up quickly when transporting aggregates long distances. Having the most extensive distribution network of any aggregates producer sets us apart. Combining our trucking, rail, barge and ocean vessel shipping logistics capabilities allows us to provide better customer solutions and create a seamless customer experience at a competitive price.



As an approximation, a truck has a capacity of 20-25 tons of aggregates; a railcar has a capacity of 4-5 truckloads; a barge has a capacity of 65 truckloads and our ocean vessels have the capacity of 2,500 truckloads.

RESULTS OF OPERATIONS

Total revenues are primarily derived from our product sales of aggregates, asphalt mix and ready-mixed concrete, and include freight & delivery costs that we pass along to our customers to deliver these products. We also generate service revenues from our asphalt construction paving business and services related to our aggregates business. We present separately our discontinued operations, which consists of our former Chemicals business.

The following table highlights significant components of our consolidated operating results including EBITDA and Adjusted EBITDA.

CONSOLIDATED OPERATING RESULTS HIGHLIGHTS

Total revenues	For the years ended December 31		2021		2020		2019
Cost of revenues 4,178.8 3,575.3 3,673.2 Gross profit \$ 1,373.4 \$ 1,281.5 \$ 1,255.9 Gross profit margin 24.7% 26.4% 25.5% Selling, administrative and general expenses (SAG) \$ 417.6 \$ 359.8 \$ 370.5 SAG as a percentage of total revenues 7.5% 7.4% 7.5% Gain on sale of property, plant & equipment and businesses \$ 120.1 \$ 4.0 \$ 23.8 Operating earnings \$ 1,010.8 \$ 895.7 \$ 877.5 Interest expense \$ 149.3 \$ 136.0 \$ 130.2 Earnings from continuing operations before income taxes \$ 873.8 \$ 743.8 \$ 757.7 Income tax expense \$ 200.1 \$ 155.8 \$ 135.2 Effective tax rate from continuing operations \$ 673.7 \$ 588.0 \$ 622.5 Earnings from continuing operations, net of income taxes (3.3) (3.5) (4.8) Loss and discontinued operations, net of income taxes (3.3) (3.5) (4.8) Loss attributable to Vulcan \$ 670.8 \$ 584.5 \$ 617.7 <	in millions, except unit and per share data						
Gross profit Gross profit margin \$ 1,373.4 \$ 1,281.5 \$ 1,255.9 Selling, administrative and general expenses (SAG) \$ 417.6 \$ 359.8 \$ 370.5 SAG as a percentage of total revenues 7.5% 7.4% 7.5% Gain on sale of property, plant & equipment and businesses \$ 120.1 \$ 4.0 \$ 23.8 Operating earnings \$ 1,010.8 \$ 895.7 \$ 877.5 Interest expense \$ 149.3 \$ 136.0 \$ 130.2 Earnings from continuing operations before income taxes \$ 873.8 \$ 743.8 \$ 757.7 Income tax expense \$ 200.1 \$ 155.8 \$ 135.2 Effective tax rate from continuing operations \$ 673.7 \$ 588.0 \$ 622.5 Loss on discontinued operations, net of income taxes (3.3) (3.5) (4.8) Loss attributable to noncontrolling interest 0.4 0.0 0.0 Net earnings attributable to Vulcan \$ 670.8 \$ 584.5 \$ 617.7 Diluted earnings (loss) per share attributable to Vulcan \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations (0.03) (0.02)	Total revenues	\$	5,552.2	\$	4,856.8	\$	4,929.1
Gross profit margin 24.7% 26.4% 25.5% Selling, administrative and general expenses (SAG) \$ 417.6 \$ 359.8 \$ 370.5 SAG as a percentage of total revenues 7.5% 7.4% 7.5% Gain on sale of property, plant & equipment and businesses 120.1 \$ 4.0 \$ 23.8 Operating earnings \$ 1,010.8 895.7 \$ 877.5 Interest expense \$ 149.3 \$ 136.0 \$ 130.2 Earnings from continuing operations before income taxes \$ 873.8 \$ 743.8 \$ 757.7 Income tax expense \$ 200.1 \$ 155.8 \$ 135.2 Effective tax rate from continuing operations \$ 673.7 \$ 588.0 \$ 622.5 Loss on discontinued operations, net of income taxes (3.3) (3.5) (4.8) Loss attributable to noncontrolling interest 0.4 0.0 0.0 Net earnings attributable to Vulcan \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations \$ 0.03 (0.02) (0.04) Diluted n	Cost of revenues		4,178.8		3,575.3		3,673.2
Selling, administrative and general expenses (SAG) \$ 417.6 \$ 359.8 \$ 370.5 SAG as a percentage of total revenues 7.5% 7.4% 7.5% Gain on sale of property, plant & equipment and businesses \$ 120.1 \$ 4.0 \$ 23.8 Operating earnings \$ 1,010.8 \$ 895.7 \$ 877.5 Interest expense \$ 149.3 \$ 136.0 \$ 130.2 Earnings from continuing operations before income taxes \$ 873.8 \$ 743.8 \$ 757.7 Income tax expense \$ 200.1 \$ 155.8 \$ 135.2 Effective tax rate from continuing operations \$ 22.9% 20.9% 17.8% Earnings from continuing operations \$ 673.7 \$ 588.0 \$ 622.5 Loss on discontinued operations, net of income taxes \$ 673.7 \$ 588.0 \$ 622.5 Loss attributable to noncontrolling interest \$ 0.4 \$ 0.0 \$ 0.0 Net earnings attributable to Vulcan \$ 670.8 \$ 584.5 \$ 617.7 Diluted earnings (loss) per share attributable to Vulcan \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations \$ 5.02 \$ 4.39 \$ 4.63 EBITDA \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Aggregates \$ 10.00 \$ 20.00 Tons (thousands) \$ 222,863 \$ 208,295 \$ 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	·	\$	-	\$		\$	
SAG as a percentage of total revenues 7.5% 7.4% 7.5% Gain on sale of property, plant & equipment and businesses \$ 120.1 \$ 4.0 \$ 23.8 Operating earnings \$ 1,010.8 \$ 895.7 \$ 877.5 Interest expense \$ 149.3 \$ 136.0 \$ 130.2 Earnings from continuing operations before income taxes \$ 873.8 \$ 743.8 \$ 757.7 Income tax expense \$ 200.1 \$ 155.8 \$ 135.2 Effective tax rate from continuing operations \$ 673.7 \$ 588.0 \$ 622.5 Loss on discontinued operations, net of income taxes (3.3) (3.5) (4.8) Loss attributable to noncontrolling interest 0.4 0.0 0.0 Net earnings attributable to Vulcan \$ 670.8 \$ 584.5 \$ 617.7 Diluted earnings (loss) per share attributable to Vulcan \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations \$ 0.03 (0.02) (0.04) Diluted net earnings per share attributable to Vulcan \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations \$ 0.03 (0.02) (0.04	•					•	
Compariting earnings Signature Signa	• • • • • • • • • • • • • • • • • • • •	\$		\$		\$	
Interest expense	Gain on sale of property, plant & equipment and businesses	\$	120.1	\$	4.0	\$	23.8
Earnings from continuing operations before income taxes \$873.8 \$743.8 \$757.7	Operating earnings	\$	1,010.8	\$	895.7	\$	877.5
Income tax expense	Interest expense	\$	149.3	\$	136.0	\$	130.2
Effective tax rate from continuing operations 22.9% 20.9% 17.8% Earnings from continuing operations \$ 673.7 \$ 588.0 \$ 622.5 Loss on discontinued operations, net of income taxes (3.3) (3.5) (4.8) Loss attributable to noncontrolling interest 0.4 0.0 0.0 Net earnings attributable to Vulcan \$ 670.8 \$ 584.5 \$ 617.7 Diluted earnings (loss) per share attributable to Vulcan \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations (0.03) (0.02) (0.04) Diluted net earnings per share attributable to Vulcan \$ 5.02 \$ 4.39 \$ 4.63 EBITDA 1 \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA 1 \$ 1,451.3 \$ 1,323.5 \$ 1,270.0 Average Sales Price and Unit Shipments Aggregates Tons (thousands) 222,863 208,295 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	Earnings from continuing operations before income taxes	\$	873.8	\$	743.8	\$	757.7
Earnings from continuing operations \$ 673.7 \$ 588.0 \$ 622.5 Loss on discontinued operations, net of income taxes (3.3) (3.5) (4.8) Loss attributable to noncontrolling interest 0.4 0.0 0.0 Net earnings attributable to Vulcan \$ 670.8 \$ 584.5 \$ 617.7 Diluted earnings (loss) per share attributable to Vulcan \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations (0.03) (0.02) (0.04) Diluted net earnings per share attributable to Vulcan \$ 5.02 \$ 4.39 \$ 4.63 EBITDA 1 \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA 1 \$ 1,451.3 \$ 1,323.5 \$ 1,270.0 Average Sales Price and Unit Shipments Aggregates Tons (thousands) 222,863 208,295 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	Income tax expense	\$	200.1	\$	155.8	\$	135.2
Loss on discontinued operations, net of income taxes (3.3) (3.5) (4.8) Loss attributable to noncontrolling interest 0.4 0.0 0.0 Net earnings attributable to Vulcan \$ 670.8 \$ 584.5 \$ 617.7 Diluted earnings (loss) per share attributable to Vulcan \$ 5.05 \$ 4.41 \$ 4.67 Continuing operations (0.03) (0.02) (0.04) Diluted net earnings per share attributable to Vulcan \$ 5.02 \$ 4.39 \$ 4.63 EBITDA 1 \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA 1 \$ 1,451.3 \$ 1,323.5 \$ 1,270.0 Average Sales Price and Unit Shipments Aggregates 222,863 208,295 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	Effective tax rate from continuing operations		22.9%		20.9%		17.8%
Loss attributable to noncontrolling interest 0.4 0.0 0.0 Net earnings attributable to Vulcan \$ 670.8 \$ 584.5 \$ 617.7 Diluted earnings (loss) per share attributable to Vulcan \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations (0.03) (0.02) (0.04) Diluted net earnings per share attributable to Vulcan \$ 5.02 \$ 4.39 \$ 4.63 EBITDA ¹ \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA ¹ \$ 1,451.3 \$ 1,323.5 \$ 1,270.0 Average Sales Price and Unit Shipments Tons (thousands) 222,863 208,295 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	Earnings from continuing operations	\$	673.7	\$	588.0	\$	622.5
Net earnings attributable to Vulcan \$ 670.8 \$ 584.5 \$ 617.7 Diluted earnings (loss) per share attributable to Vulcan \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations (0.03) (0.02) (0.04) Diluted net earnings per share attributable to Vulcan \$ 5.02 \$ 4.39 \$ 4.63 EBITDA ¹ \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA ¹ \$ 1,451.3 \$ 1,323.5 \$ 1,270.0 Average Sales Price and Unit Shipments Aggregates 222,863 208,295 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	Loss on discontinued operations, net of income taxes		(3.3)		(3.5)		(4.8)
Diluted earnings (loss) per share attributable to Vulcan \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations (0.03) (0.02) (0.04) Diluted net earnings per share attributable to Vulcan \$ 5.02 \$ 4.39 \$ 4.63 EBITDA ¹ \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA ¹ \$ 1,451.3 \$ 1,323.5 \$ 1,270.0 Average Sales Price and Unit Shipments Aggregates 222,863 208,295 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	Loss attributable to noncontrolling interest		0.4		0.0		0.0
Continuing operations \$ 5.05 \$ 4.41 \$ 4.67 Discontinued operations (0.03) (0.02) (0.04) Diluted net earnings per share attributable to Vulcan \$ 5.02 \$ 4.39 \$ 4.63 EBITDA ¹ \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA ¹ \$ 1,451.3 \$ 1,323.5 \$ 1,270.0 Average Sales Price and Unit Shipments Aggregates Tons (thousands) 222,863 208,295 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	Net earnings attributable to Vulcan	\$	670.8	\$	584.5	\$	617.7
Discontinued operations (0.03) (0.02) (0.04) Diluted net earnings per share attributable to Vulcan \$ 5.02 \$ 4.39 \$ 4.63 EBITDA ¹ \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA ¹ \$ 1,451.3 \$ 1,323.5 \$ 1,270.0 Average Sales Price and Unit Shipments Aggregates Tons (thousands) 222,863 208,295 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	Diluted earnings (loss) per share attributable to Vulcan						
Diluted net earnings per share attributable to Vulcan \$ 5.02 \$ 4.39 \$ 4.63 EBITDA ¹ \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA ¹ \$ 1,451.3 \$ 1,323.5 \$ 1,270.0 Average Sales Price and Unit Shipments Aggregates 222,863 208,295 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99		\$		\$		\$	
EBITDA ¹ \$ 1,484.9 \$ 1,275.0 \$ 1,261.3 Adjusted EBITDA ¹ \$ 1,451.3 \$ 1,323.5 \$ 1,270.0 Average Sales Price and Unit Shipments Aggregates 222,863 208,295 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	Discontinued operations		(0.03)		(0.02)		(0.04)
Adjusted EBITDA ¹ \$ 1,451.3 \$ 1,323.5 \$ 1,270.0 Average Sales Price and Unit Shipments Aggregates 222,863 208,295 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	Diluted net earnings per share attributable to Vulcan	\$	5.02	\$	4.39	\$	4.63
Average Sales Price and Unit Shipments Aggregates 222,863 208,295 215,465 Freight-adjusted sales price 14.87 14.44 13.99	EBITDA ¹	\$	1,484.9	\$	1,275.0	\$	1,261.3
Aggregates 222,863 208,295 215,465 Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	Adjusted EBITDA ¹	\$	1,451.3	\$	1,323.5	\$	1,270.0
Tons (thousands) 222,863 208,295 215,465 Freight-adjusted sales price 14.87 14.44 13.99	Average Sales Price and Unit Shipments						
Freight-adjusted sales price \$ 14.87 \$ 14.44 \$ 13.99	Aggregates						
	,						
Asphalt Mix		\$	14.87	\$	14.44	\$	13.99
- (i) 1.			44.000				
Tons (thousands) 11,392 11,835 12,665 Average sales price \$ 58.83 \$ 57.97 \$ 57.79	· ·	•		Φ.		Φ.	
, and the second process of the second proce	-	Ф	30.03	Ф	57.97	Ф	57.79
Ready-mixed concrete Cubic varies (they condo) 2 051 2 104			E 616		2.054		2 104
Cubic yards (thousands) 5,616 2,951 3,104 Average sales price \$ 135.79 \$ 128.93 \$ 126.38	· · · · · · · · · · · · · · · · · · ·	¢		¢		¢	
Average sales price \$ 135.79 \$ 128.93 \$ 126.38 Calcium	•	Ψ	133.13	Φ	120.93	Φ	120.30
Tons (thousands) 246 282 294			246		282		294
Average sales price \$ 28.16 \$ 27.32 \$ 27.85	· ·	\$		\$		\$	

Non-GAAP measures are defined and reconciled within this Item 7 under the caption Reconciliation of Non-GAAP Financial Measures.

Net earnings attributable to Vulcan for 2021 were \$670.8 million (\$5.02 per diluted share) compared to \$584.5 million (\$4.39 per diluted share) in 2020. Each year's results were impacted by discrete items, as follows:

Net earnings attributable to Vulcan for 2021 include:

- \$13.7 million of tax charges related to an increase in the Alabama NOL carryforward valuation allowance
- pretax net gain of \$114.7 million related to the sale of a reclaimed quarry in Southern California
- pretax charges of \$1.5 million associated with divested operations
- pretax charges of \$39.0 million associated with non-routine business development
- pretax charges of \$13.4 million for COVID-19 pandemic direct incremental costs
- pretax charges of \$12.1 million for pension settlement (see Note 10 "Benefit Plans" in Item 8 "Financial Statements and Supplementary Data")
- pretax charges of \$15.0 million for managerial restructuring (related to U.S. Concrete)
- pretax interest charges of \$9.4 million related to financing the U.S. Concrete acquisition

Net earnings attributable to Vulcan for 2020 include:

- pretax charges of \$6.9 million associated with divested operations
- pretax charges of \$7.3 million associated with non-routine business development
- pretax charges of \$10.2 million for COVID-19 pandemic direct incremental costs
- pretax charges of \$22.7 million for pension settlement (see Note 10 "Benefit Plans" in Item 8 "Financial Statements and Supplementary Data")
- pretax charges of \$1.3 million for restructuring

Adjusted for these discrete items, earnings attributable to Vulcan from continuing operations (Adjusted Diluted EPS) was \$5.04 per diluted share for 2021 compared to \$4.68 per diluted share for 2020.

EARNINGS FROM CONTINUING OPERATIONS BEFORE INCOME TAXES

Year-over-year changes in earnings from continuing operations before income taxes are summarized below:

in millions				
	2019	\$ 757.7	2020	\$ 743.8
Higher aggregates gross profit		12.6		136.5
Higher (lower) asphalt gross profit		12.2		(54.0)
Higher concrete gross profit		1.0		10.1
Lower calcium gross profit		(0.2)		(0.7)
Lower (higher) selling, administrative and general expenses		10.7		(57.8)
Higher (lower) gain on sale of property, plant & equipment and businesses		(19.8)		116.1
Higher interest expense		(5.8)		(13.3)
Pension settlement charge		(22.7)		(12.1)
U.S. Concrete acquisition related expenses		0.0		(22.0)
All other		(1.9)		27.2
	2020	\$ 743.8	2021	\$ 873.8

OPERATING RESULTS BY SEGMENT

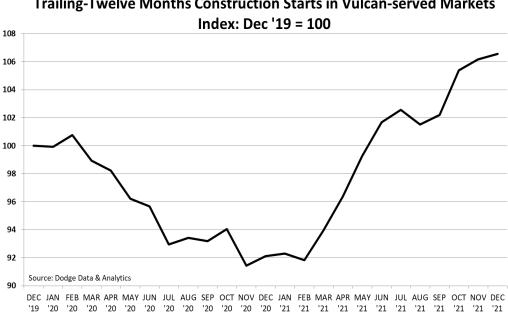
We present our results of operations by segment at the gross profit level. We have four operating (and reportable) segments organized around our principal product lines: (1) Aggregates, (2) Asphalt, (3) Concrete and (4) Calcium. Management reviews earnings for our reporting segments principally at the gross profit level.

1. AGGREGATES

Our year-over-year aggregates shipments:

- increased 7% in 2021 ¹
- decreased 3% in 2020
- increased 7% in 2019

Total aggregates shipments increased 7% (5% on a same-store basis), reflecting improving demand across most endmarkets.



Trailing-Twelve Months Construction Starts in Vulcan-served Markets

Our year-over-year freight-adjusted selling price¹ for aggregates:

- increased 3.0% in 2021
- increased 3.2% in 2020
- increased 5.6% in 2019

¹ Of the 7% increase in 2021 shipments, 2% was attributable to the August 26, 2021 acquisition of U.S. Concrete.

¹ We routinely arrange the delivery of our aggregates to the customer. Additionally, we incur freight costs to move aggregates from the production site to remote distribution sites. These costs are passed on to our customers in the aggregates price. We remove these pass-through freight & delivery revenues (and any other aggregates-derived revenues, such as landfill tipping fees) from the freight-adjusted selling price for aggregates. See the Reconciliation of Non-GAAP Financial Measures within this Item 7 for a reconciliation of freight-adjusted revenues.

As demand visibility improved, the pricing environment continued to strengthen and the rate of pricing growth improved sequentially each quarter this year. Freight-adjusted pricing increased 3.0% (same-store increased 3.0% and same-store mix-adjusted increased 3.2%) with the growth widespread across geographies.



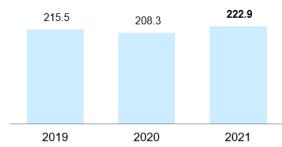
AGGREGATES GROSS PROFIT AND **CASH GROSS PROFIT** in millions





AGGREGATES UNIT SHIPMENTS

tons, in millions 215.5 208.3



AGGREGATES SELLING PRICE AND **CASH GROSS PROFIT PER TON**

Freight-adjusted average sales price per ton 1



¹ Freight-adjusted sales price is calculated as freight-adjusted revenues divided by aggregates unit shipments

Aggregates segment gross profit increased 12% to \$1,295.7 million, or \$5.81 per ton. Cash gross profit per ton improved 5% from the prior year to \$7.43. The earnings improvement was widespread across our footprint and resulted from both volume and price growth, as well as effective cost control. This year's results include a \$10.7 million unfavorable impact from selling acquired inventory after its markup to fair value as part of the U.S. Concrete acquisition and a \$41.4 million unfavorable impact from significantly higher diesel fuel costs.

On a same-store basis, unit gross profit increased 7% to \$5.95 per ton and cash gross profit per ton improved 5% from the prior year to \$7.48. This improvement was driven by 5% same-store volume growth, 3.0% price growth and an increase in freight-adjusted cash costs of less than 1% despite a more than 50% increase in diesel fuel prices.

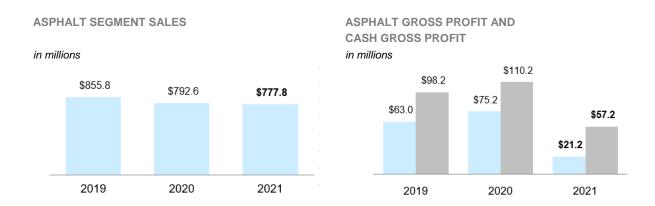
Solid operational execution mostly offset higher costs for diesel fuel, inflation for certain parts and supplies, and operational disruptions caused by labor shortages. Freight-adjusted unit cost of sales increased only 2% despite the significant increase in diesel fuel prices. Positive pricing opportunities and improved operating efficiencies are expected to continue to help offset some of the cost inflation going forward.

2. ASPHALT

Our year-over-year asphalt mix shipments:

- decreased 4% in 2021
- decreased 7% in 2020
- increased 12% in 2019

Asphalt segment gross profit decreased from \$75.2 million in the prior year to \$21.2 million. The decrease in gross profit was primarily due to sharply higher costs for liquid asphalt (\$41.2 million impact) and a rise in natural gas prices (\$6.4 million impact). Asphalt volumes decreased 4% from the prior year. Volume growth in California, our largest asphalt market, was more than offset by lower volumes in Arizona, our second largest market. Efforts to mitigate the earnings impact of energy inflation will continue with positive results expected to contribute to unit profitability improvement in 2022.

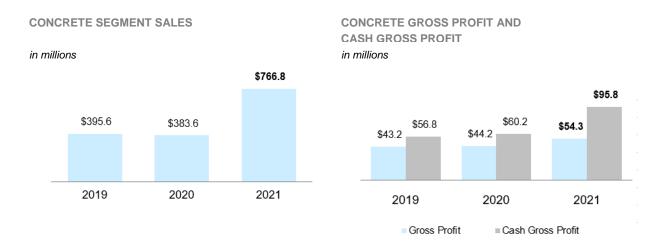


3. CONCRETE

Our year-over-year ready-mixed concrete shipments:

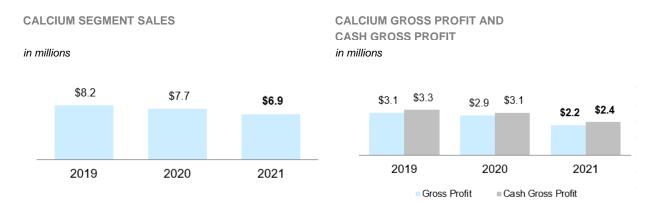
- increased 90% in 2021 ¹
- decreased 5% in 2020
- decreased 4% in 2019

Concrete segment gross profit increased \$10.1 million to \$54.3 million. Earnings contributions from the U.S. Concrete operations more than offset the earnings impact from lower volumes in our legacy Virginia operations. The lower volumes were due mostly to the timing of several large projects that were completed in the prior year. Material margins increased in our legacy operations despite lower volumes.



4. CALCIUM

Calcium segment gross profit decreased \$0.7 million from 2020 to \$2.2 million.



In total, the 2021 gross profit contribution from our three non-aggregates (Asphalt, Concrete and Calcium) segments was \$77.7 million, a \$44.6 million or 36% decrease from 2020.

¹ Excluding the August 26, 2021 acquisition of U.S. Concrete, ready-mixed concrete shipments decreased 7%.

SELLING, ADMINISTRATIVE AND GENERAL (SAG) EXPENSES

in millions



As a percentage of total revenues, SAG expense was:

- 7.5% in 2021 increased 0.10 percentage points (10 basis points)
- 7.4% in 2020 decreased 0.10 percentage points (10 basis points)
- 7.5% in 2019 decreased 0.10 percentage points (10 basis points)

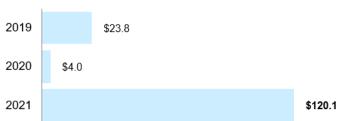
Our comparative total company employment levels at year end:

- increased 26% in 2021
- decreased 2% in 2020
- increased 6% in 2019

The 2021 increase in our employment level was primarily the result of our August 2021 acquisition of U.S. Concrete (see Note 19 "Acquisitions and Divestitures" in Item 8 "Financial Statements and Supplementary Data"). As noted above, 2021 SAG expenses were \$417.6 million or 7.5% as a percentage of total revenues, up from 7.4% in 2020. The current year includes overhead expenses associated with the U.S. Concrete business that were not in the prior year. Additionally, increased routine business development activities and more normalized travel expenses, due in part to integration activities, contributed to the increase. We remain focused on further leveraging our overhead cost structure.

GAIN ON SALE OF PROPERTY, PLANT & EQUIPMENT AND BUSINESSES

in millions



The 2021 gain on sale of property, plant & equipment and businesses of \$120.1 million includes a net pretax gain of \$114.7 from the sale of Southern California real estate (previously mined land that we reclaimed for commercial and retail development). We remain focused on our efforts to maximize the value of our portfolio of quarry operations as they move through their life-cycle of land management. The 2020 gain on sale of property, plant & equipment and businesses of \$4.0 million includes a net immaterial pretax loss from ready-mixed concrete divestitures. See Note 19 "Acquisitions and Divestitures" in Item 8 "Financial Statements and Supplementary Data."

OTHER OPERATING EXPENSE, NET

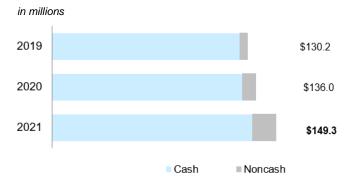
Other operating expense, which has an approximate run-rate of \$12.0 million a year (exclusive of discrete items), is composed primarily of idle facilities expense, environmental remediation costs, property abandonments and gain (loss) on settlement of AROs. Total other operating expense and significant discrete items included in the total were:

- \$65.1 million in 2021 includes discrete items as follows:
 - \$1.5 million of charges associated with divested operations
 - \$28.3 million of non-routine business development charges
 - \$13.4 million of charges related to COVID-19 pandemic direct incremental costs
 - \$15.0 million of managerial restructuring charges
- \$30.0 million in 2020 includes discrete items as follows:
 - \$6.9 million of charges associated with divested operations, composed entirely of environmental liability accruals associated with previously divested properties
 - \$7.3 million of non-routine business development charges
 - \$10.2 million of charges related to COVID-19 pandemic direct incremental costs

OTHER NONOPERATING INCOME (EXPENSE), NET

Other nonoperating income (expense) (2021 — \$10.7 million, 2020 — \$(17.5) million and 2019 — \$9.2 million) is composed primarily of pension and postretirement benefit costs (excluding service costs), foreign currency transaction gains/losses, Rabbi Trust gains/losses and net earnings/losses of nonconsolidated equity method investments. Additionally, during 2021 and 2020, we incurred \$12.1 million and \$22.7 million, respectively, of non-cash pension settlement charges — these partial settlements will benefit future expense and funding requirements (see Note 10 "Benefit Plans" in Item 8 "Financial Statements and Supplementary Data").

INTEREST EXPENSE



Interest expense was \$149.3 million in 2021 compared to \$136.0 million in 2020. This increase resulted primarily from an additional \$9.4 million of interest expense related to financing the acquisition of U.S. Concrete. See Note 6 "Debt" in Item 8 "Financial Statements and Supplementary Data" for additional discussion.

INCOME TAXES

Our income tax expense from continuing operations for the years ended December 31 is shown below:

dollars in millions	2021		2020		2019	
Earnings from continuing operations before income taxes	¢	873.8	¢	742.0	c	757.7
Income tax expense	\$ \$	200.1	\$ \$	743.8 155.8	\$ \$	135.2
Effective tax rate		22.9%	·	20.9%		17.8%

The \$44.3 million increase in our 2021 income tax expense was primarily due to an increase in earnings from continuing operations and the increase of our Alabama net operating loss (NOL) valuation allowance. The \$20.6 million increase in our 2020 income tax expense was primarily related to a decrease in excess tax benefits from share-based compensation and a smaller research & development tax credit.

In February 2021, the Alabama Business Competitiveness Act was signed into law. This Act contained a provision requiring most taxpayers to change from a three-factor, double-weighted sales method to a single-sales factor method to apportion income to Alabama. This provision had the effect of significantly reducing our apportionment of income to Alabama, thereby further inhibiting our ability to utilize our Alabama NOL carryforward. As a result, in the first quarter of 2021, we increased the valuation allowance by \$13.7 million. No other material tax impacts resulted from the enactment of this Act.

See Note 9 "Income Taxes" in Item 8 "Financial Statements and Supplementary Data."

DISCONTINUED OPERATIONS

Pretax loss from discontinued operations were:

- \$(4.5) million in 2021
- \$(4.7) million in 2020
- \$(6.5) million in 2019

Pretax loss from discontinued operations for 2021, 2020 and 2019, resulted primarily from general and product liability costs, including legal defense costs and environmental remediation costs associated with our former Chemicals business. For additional information about discontinued operations, see Note 1 "Summary of Significant Accounting Policies" in Item 8 "Financial Statements and Supplementary Data" under the caption Discontinued Operations.

KNOWN TRENDS OR UNCERTAINTIES

As described above in the Executive Summary, inflationary pressures and labor constraints were trends impacting our operations in 2021. Although inflationary pressures can create short- to medium-term headwinds, the combination of inflation and improving visibility of demand has created and may continue to create a favorable environment for price increases. Additionally, labor constraints (especially truck drivers) have caused delays and inefficiencies in our operations as well as those of our customers. If labor constraints continue and demand remains strong, our operations may proceed at a slower pace, which may effectively extend the recovery while allowing us the opportunity to compound price, control costs and grow earnings. Further, recently, the Mexican government has taken actions that adversely affect our operations in that country, including delays in issuing a historically routine three-year customs permit for our deep-water port. Mexico instead issued a short-term customs permit that must be renewed after two months. While we continue to negotiate with the Mexican authorities to reach a mutually agreeable and beneficial solution, failure by the Mexican government to issue future customs permits or its taking of any other measures that force us to cease our operations in Mexico would have an adverse effect on our ability to supply customers.

RECONCILIATION OF NON-GAAP FINANCIAL MEASURES

SAME-STORE

We have provided certain information on a same-store basis. When discussing our financial results in comparison to prior periods, we may exclude the operating results of recently acquired/divested businesses that do not have comparable results in the periods being discussed. These recently acquired/divested businesses are disclosed in Note 19 "Acquisitions and Divestitures" in Item 8 "Financial Statements and Supplementary Data." This approach allows us to evaluate the performance of our operations on a comparable basis. We believe that measuring performance on a same-store basis is useful to investors because it enables evaluation of how our operations are performing period over period without the effects of acquisition and divestiture activity. Our same-store information may not be comparable to similar measures used by other companies.

AGGREGATES SEGMENT FREIGHT-ADJUSTED REVENUES

Aggregates segment freight-adjusted revenues is not a Generally Accepted Accounting Principle (GAAP) measure and should not be considered as an alternative to metrics defined by GAAP. We present this measure as it is consistent with the basis by which we review our operating results. We believe that this presentation is consistent with our competitors and meaningful to our investors as it excludes revenues associated with freight & delivery, which are pass-through activities. It also excludes other revenues related to services, such as landfill tipping fees, that are derived from our aggregates business. Additionally, we use this metric as the basis for calculating the average sales price of our aggregates products. Reconciliation of this metric to its nearest GAAP measure is presented below:

in millions, except per ton data	2021		2020		2019
Aggregates segment					
Segment sales	\$ 4,345.0	\$	3,944.3	\$	3,990.3
Less					
Freight & delivery revenues 1	952.1		877.0		921.1
Other revenues	79.0		59.7		55.0
Freight-adjusted revenues	\$ 3,313.9	\$	3,007.6	\$	3,014.2
Unit shipments - tons	222.9		208.3		215.5
Freight-adjusted sales price	\$ 14.87	\$	14.44	\$	13.99

¹ At the segment level, freight & delivery revenues include intersegment freight & delivery (which are eliminated at the consolidated level) and freight to remote distribution sites.

AGGREGATES SEGMENT INCREMENTAL GROSS PROFIT

Aggregates segment incremental gross profit flow-through rate is not a GAAP measure and represents the year-over-year change in gross profit divided by the year-over-year change in segment sales excluding freight & delivery (revenues and costs). This metric should not be considered as an alternative to metrics defined by GAAP. We present this metric as it is consistent with the basis by which we review our operating results. We believe that this presentation is consistent with our competitors and meaningful to our investors as it excludes revenues associated with freight & delivery, which are pass-through activities. Reconciliation of this metric to its nearest GAAP measure is presented below:

MARGIN IN ACCORDANCE WITH GAAP

dollars in millions		2021	2020		2019		
Aggregates segment							
Gross profit	\$	1,295.7	\$	1,159.2	\$ 1,146.6		
Segment sales	\$	4,345.0	\$	3,944.3	\$ 3,990.3		
Gross profit margin		29.8%		29.4%	28.7%		
Incremental gross profit margin ¹		34.1%		N/A			

FLOW-THROUGH RATE (NON-GAAP)

dollars in millions	2021		2020
Aggregates segment			
Gross profit	\$ 1,295.7	\$	1,159.2
Less: Contribution from acquisitions (same-store)	(4.3)		0.0
Same-store gross profit	\$ 1,300.0	\$	1,159.2
Segment sales	\$ 4,345.0	\$	3,944.3
Less: Freight & delivery revenues ²	952.1		877.0
Segment sales excluding freight & delivery	\$ 3,392.9	\$	3,067.3
Less: Contribution from acquisitions (same-store)	78.0		0.0
Same-store segment sales excluding freight & delivery	\$ 3,314.9	\$	3,067.3
Gross profit margin excluding freight & delivery	38.2%		37.8%
Same-store gross profit margin excluding freight & delivery	39.2%		37.8%
Incremental gross profit flow-through rate	41.9%	•	
Same-store incremental gross profit flow-through rate	56.9%		

¹ Not applicable (N/A) due to the decrease in segment sales.

² At the segment level, freight & delivery revenues include intersegment freight & delivery (which are eliminated at the consolidated level) and freight to remote distribution sites.

CASH GROSS PROFIT

GAAP does not define "cash gross profit," and it should not be considered as an alternative to earnings measures defined by GAAP. We and the investment community use this metric to assess the operating performance of our business. Additionally, we present this metric as we believe that it closely correlates to long-term shareholder value. We do not use this metric as a measure to allocate resources. Cash gross profit adds back noncash charges for depreciation, depletion, accretion and amortization to gross profit. Aggregates segment cash gross profit per ton is computed by dividing Aggregates segment cash gross profit by tons shipped. Reconciliation of this metric to its nearest GAAP measure is presented below:

in millions, except per ton data	2021	2020		2019
Aggregates segment Gross profit Depreciation, depletion, accretion and amortization	\$ 1,295.7 360.4	\$ 1,159.2 321.1	\$	1,146.6 305.1
Aggregates segment cash gross profit	\$ 1,656.1	\$ 1,480.3	\$	1,451.7
Unit shipments - tons	222.9	208.3		215.5
Aggregates segment gross profit per ton	\$ 5.81	\$ 5.57	\$	5.32
Aggregates segment cash gross profit per ton	\$ 7.43	\$ 7.11	\$	6.74
Aggregates segment (same-store) Gross profit Depreciation, depletion, accretion and amortization	\$ 1,300.0 334.6			
Aggregates segment (same-store) cash gross profit	\$ 1,634.6			
Unit shipments (same-store) - tons	218.5			
Aggregates segment (same-store) gross profit per ton	\$ 5.95			
Aggregates segment (same-store) cash gross profit per ton	\$ 7.48			
Asphalt segment Gross profit Depreciation, depletion, accretion and amortization	\$ 21.2 36.0	\$ 75.2 35.0	\$	63.0 35.2
Asphalt segment cash gross profit	\$ 57.2	\$ 110.2	\$	98.2
Concrete segment Gross profit Depreciation, depletion, accretion and amortization	\$ 54.3 41.5	\$ 44.2 16.0	\$	43.2 13.6
Concrete segment cash gross profit	\$ 95.8	\$ 60.2	\$	56.8
Calcium segment Gross profit Depreciation, depletion, accretion and amortization	\$ 2.2 0.2	\$ 2.9 0.2	\$	3.1 0.2
Calcium segment cash gross profit	\$ 2.4	\$ 3.1	\$	3.3

NET DEBT TO ADJUSTED EBITDA

Net debt to Adjusted EBITDA is not a GAAP measure and should not be considered as an alternative to metrics defined by GAAP. We, the investment community and credit rating agencies use this metric to assess our leverage. Net debt subtracts cash and equivalents and restricted cash from total debt. Reconciliation to its nearest GAAP measure is presented below:

in millions	2021	2020
Debt		
Current maturities of long-term debt	\$ 5.	2 \$ 515.4
Long-term debt	3,874.	8 2,772.2
Total debt	\$ 3,880	0 \$ 3,287.6
Less: Cash and cash equivalents and restricted cash	241.	5 1,198.0
Net debt	\$ 3,638	5 \$ 2,089.6
Adjusted EBITDA	\$ 1,451.	3 \$ 1,323.5
Total debt to Adjusted EBITDA	2.	7x 2.5x
Net debt to Adjusted EBITDA	2.5	5x 1.6x

EBITDA AND ADJUSTED EBITDA

GAAP does not define "Earnings Before Interest, Taxes, Depreciation and Amortization" (EBITDA), and it should not be considered as an alternative to earnings measures defined by GAAP. We use this metric to assess the operating performance of our business and as a basis for strategic planning and forecasting as we believe that it closely correlates to long-term shareholder value. We do not use this metric as a measure to allocate resources. We adjust EBITDA for certain items to provide a more consistent comparison of earnings performance from period to period. Reconciliation of this metric to its nearest GAAP measure is presented below (numbers may not foot due to rounding):

in millions	2021		2020		2019	
Net earnings attributable to Vulcan	\$	670.8	\$	584.5	\$	617.7
Income tax expense		200.1		155.8		135.2
Interest expense, net of interest income		147.7		134.4		129.0
Loss on discontinued operations, net of tax		3.3		3.5		4.8
EBIT		1,021.9		878.2		886.7
Depreciation, depletion, accretion and amortization		463.0		396.8		374.6
EBITDA	\$	1,484.9	\$	1,275.0	\$	1,261.3
Gain on sale of real estate and businesses, net	\$	(114.7)	\$	0.0	\$	(13.4)
Property donation		0.0		0.0		10.8
Charges associated with divested operations		1.5		6.9		3.0
Business development ¹		39.0		7.3		1.7
COVID-19 direct incremental costs ²		13.4		10.2		0.0
Pension settlement charge		12.1		22.7		0.0
Restructuring charges		15.0		1.3		6.5
Adjusted EBITDA	\$	1,451.3	\$	1,323.5	\$	1,270.0
Depreciation, depletion, accretion and amortization ¹		463.0		396.8	•	374.6
Adjusted EBIT	\$	988.3	\$	926.7	\$	895.4

¹ Represents non-routine charges or gains associated with acquisitions and dispositions. Costs in 2021 include U.S. Concrete acquisition related expenses of \$22.0 million and the cost impact of purchase accounting inventory valuations of \$10.7 million.

ADJUSTED DILUTED EPS ATTRIBUTABLE TO VULCAN FROM CONTINUING OPERATIONS

Similar to our presentation of Adjusted EBITDA, we present Adjusted diluted earnings per share (EPS) attributable to Vulcan from continuing operations to provide a more consistent comparison of earnings performance from period to period. This metric is not defined by GAAP and should not be considered as an alternative to earnings measures defined by GAAP. Reconciliation of this metric to its nearest GAAP measure is presented below:

	2021		2020		2019	
Diluted Earnings Per Share						_
Net earnings attributable to Vulcan	\$	5.02	\$	4.39	\$	4.63
Less: Discontinued operations		(0.03)		(0.02)		(0.04)
Diluted EPS attributable to Vulcan from continuing operations	\$	5.05	\$	4.41	\$	4.67
Items included in Adjusted EBITDA above		(0.16)		0.27		0.03
Acquisition financing interest costs		0.05		0.00		0.00
NOL carryforward valuation allowance		0.10		0.00		0.00
Adjusted diluted EPS attributable to Vulcan						
from continuing operations	\$	5.04	\$	4.68	\$	4.70

² The 2021 costs include \$5.1 million related to our COVID-19 vaccination incentive program.

2022 PROJECTED EBITDA

The following reconciliation to the mid-point of the range of 2022 Projected EBITDA excludes adjustments (as noted in Adjusted EBITDA above) as they are difficult to forecast (timing or amount). Due to the difficulty of forecasting such adjustments, we are unable to estimate their significance. This metric is not defined by GAAP and should not be considered as an alternative to earnings measures defined by GAAP. Reconciliation of this metric to its nearest GAAP measure is presented below:

	2022 Proje	cted ¹
in millions	Mid-poi	int
Net earnings attributable to Vulcan	\$	845
Income tax expense		235
Interest expense, net of interest income		150
Depreciation, depletion, accretion and amortization		540
Projected EBITDA	\$	1,770

¹ See the Market Developments and Outlook section (earlier within this Item 7) for the assumptions used to build this projection.

RETURN ON INVESTED CAPITAL

We define "Return on Invested Capital" (ROIC) as Adjusted EBITDA for the trailing-twelve months divided by average invested capital (as illustrated below) during the trailing 5-quarters. Our calculation of ROIC is considered a non-GAAP financial measure because we calculate ROIC using the non-GAAP metric EBITDA. We believe that our ROIC metric is meaningful because it helps investors assess how effectively we are deploying our assets. Although ROIC is a standard financial metric, numerous methods exist for calculating a company's ROIC. As a result, the method we use to calculate our ROIC may differ from the methods used by other companies. This metric is not defined by GAAP and should not be considered as an alternative to earnings measures defined by GAAP. Reconciliation of this metric to its nearest GAAP measure is presented below (numbers may not foot due to rounding):

dollars in millions	2021	2020		2019	
Adjusted EDITDA	\$ 1,451.3	\$	1,323.5	\$	1,270.0
Average invested capital ¹					
Property, plant & equipment, net	\$ 4,849.7	\$	4,374.0	\$	4,281.3
Goodwill	3,377.6		3,170.1		3,165.7
Other intangible assets	1,382.0		1,104.0		1,084.1
Fixed and intangible assets	\$ 9,609.3	\$	8,648.1	\$	8,531.1
Current assets	\$ 1,977.1	\$	1,845.7	\$	1,224.3
Less: Cash and cash equivalents	687.1		698.9		93.5
Less: Current tax	32.9		18.5		12.6
Adjusted current assets	1,257.1		1,128.3		1,118.2
Current liabilities	771.8		833.6		599.3
Less: Current maturities of long-term debt	112.8		305.0		0.0
Less: Short-term debt	0.0		0.0		89.7
Adjusted current liabilities	659.0		528.6		509.6
Adjusted net working capital	\$ 598.1	\$	599.7	\$	608.6
Average invested capital	\$ 10,207.4	\$	9,247.8	\$	9,139.7
Return on invested capital	14.2%		14.3%		13.9%

¹ Average invested capital is based on a trailing 5-quarters.

LIQUIDITY AND FINANCIAL RESOURCES

Our primary sources of liquidity are cash provided by our operating activities and a substantial, committed bank line of credit. Additional sources of capital include access to the capital markets, the sale of surplus real estate, and dispositions of nonstrategic operating assets. We believe these financial resources are sufficient to fund our business requirements for 2022, including:

- contractual obligations
- debt service obligations
- capital expenditures
- potential acquisitions
- dividend payments
- potential share repurchases

During 2022, we expect to spend between \$600 million and \$650 million on capital expenditures, including growth and capacity-adding projects. Excluding future cash requirements for capital expenditures, our obligations to make future contractual payments as of December 31, 2021 are summarized in the table below:

	Note	Payments Due by Year					by Year	ar		
in millions	Reference	erence 2022		2023-2026		Thereafter		Total		
Contractual Obligations										
Bank line of credit										
Principal payments	Note 6	\$	0.0	\$	0.0	\$	0.0	\$	0.0	
Interest payments and fees 1	Note 6		1.7		5.1		0.0		6.8	
Term debt										
Principal payments	Note 6		5.2		1,504.2		2,440.2		3,949.6	
Interest payments	Note 6		140.1		509.1		1,312.9		1,962.1	
Operating leases ²	Note 7		65.9		190.3		248.2		504.4	
Finance leases ²	Note 7		33.8		64.0		0.0		97.8	
Mineral royalties	Note 12		26.2		65.4		162.2		253.8	
Unconditional purchase obligations										
Capital	Note 12		18.2		0.0		0.0		18.2	
Noncapital ³	Note 12		22.1		35.4		10.0		67.5	
Benefit plans ⁴	Note 10		8.2		32.7		46.8		87.7	
Total contractual obligations 5		\$	321.4	\$	2,406.2	\$	4,220.3	\$	6,947.9	

¹ Includes fees for unused borrowing capacity and fees for standby letters of credit. The figures for all years assume that the amount of unused borrowing capacity and the amount of standby letters of credit do not change from December 31, 2021, and borrowing costs reflect a rising LIBOR.

As of December 31, 2021, we were contingently liable for \$860.2 million within 558 surety bonds underwritten by various surety companies. These bonds guarantee our performance and are required primarily by states and municipalities and their related agencies. The top five in amount totaled \$206.0 million (24%) and were for certain construction contracts and

² The above table excludes lease renewal options which are included in the table labeled Maturity of Lease Liabilities in Note 7 "Leases" in Item 8 "Financial Statements and Supplementary Data."

³ Noncapital unconditional purchase obligations relate primarily to transportation and electricity contracts.

⁴ Payments in "Thereafter" column for benefit plans are for the years 2027-2031. The future contributions are based on current economic conditions and may vary based on future interest rates, asset performance, participant longevity and other plan experience.

⁵ The above table excludes discounted asset retirement obligations in the amount of \$315.2 million at December 31, 2021, the majority of which have an estimated settlement date beyond 2026 (see Note 17 "Asset Retirement Obligations" in Item 8 "Financial Statements and Supplementary Data").

reclamation obligations. We have agreed to indemnify the underwriting companies against any exposure under the surety bonds. No material claims have been made against our surety bonds.

We have no material off-balance sheet arrangements, such as financing or unconsolidated variable interest entities.

Our balanced approach to capital deployment remains unchanged. We intend to balance reinvestment in our business, growth through acquisitions and return of capital to shareholders, while sustaining financial strength and flexibility.

We actively manage our capital structure and resources in order to balance the cost of capital and the risk of financial stress. We seek to meet these objectives by adhering to the following principles:

- maintain substantial bank line of credit borrowing capacity
- proactively manage our debt maturity schedule such that repayment/refinancing risk in any single year is low
- maintain an appropriate balance of fixed-rate and floating-rate debt
- minimize financial and other covenants that limit our operating and financial flexibility

As the impact of the COVID-19 pandemic on the economy and our operations evolves, we will continue to assess our liquidity sources and needs and take appropriate actions.

CASH

Included in our December 31, 2021 cash and cash equivalents and restricted cash balances of \$241.5 million is \$6.5 million of restricted cash (see Note 1 "Summary of Significant Accounting Policies" in Item 8 "Financial Statements and Supplementary Data" under the caption Restricted Cash).

CASH FROM OPERATING ACTIVITIES

in millions



Net cash provided by operating activities is derived primarily from net earnings before noncash deductions for depreciation, depletion, accretion and amortization.

in millions	20	2021 2020			20	019
Net earnings	\$	670.4	\$	584.5	\$	617.7
Depreciation, depletion, accretion						
and amortization (DDA&A)		463.0		396.8		374.6
Noncash operating lease expense		49.0		38.3		35.3
Net gain on sale of PP&E and businesses		(120.1)		(4.0)		(23.8)
Contributions to pension plans		(8.0)		(8.8)		(8.9)
Deferred tax expense		66.8		62.0		76.0
Other operating cash flows, net ¹		(109.2)		1.6		(86.8)
Net cash provided by operating activities	\$	1,011.9	\$	1,070.4	\$	984.1

¹ Primarily reflects changes to working capital balances.

2021 VERSUS 2020 — Net cash provided by operating activities was \$1,011.9 million during 2021, a \$58.5 million decrease compared to 2020. This decrease primarily resulted from a net increase in working capital compared to the prior year period.

Days sales outstanding, a measurement of the time it takes to collect receivables, were 47.6 days at December 31, 2021 compared to 44.9 days at December 31, 2020. Additionally, our over 90 day balance of \$46.0 million at December 31, 2021 was up significantly from \$15.5 million at December 31, 2020. Excluding customer receivables from the recent U.S. Concrete acquisition, both days sales outstanding (44.4 days) and over 90 day balances (\$8.5 million) were favorable compared to the prior year. All customer accounts are actively managed and no losses in excess of amounts reserved are currently expected.

CASH FROM INVESTING ACTIVITIES

in millions



2021 VERSUS 2020 — Net cash used for investing activities was \$1,874.1 million during 2021, a \$1,492.6 million increase compared to 2020. During 2021, we invested \$451.3 million in our existing operations, an \$89.1 million increase compared to 2020. Of this \$451.3 million, \$169.6 million was invested in internal growth projects to enhance our distribution capabilities, develop new production sites and enhance existing production facilities and other growth opportunities. Proceeds from the sale of property, plant & equipment were up \$205.0 million from 2020 primarily reflecting the sale of reclaimed real estate in Southern California. Additionally, during 2021 we acquired businesses for \$1,639.4 million of cash consideration (including \$1,634.5 million for U.S. Concrete) as compared to \$43.2 million of cash consideration for businesses in 2020 (see Note 19 "Acquisitions and Divestitures" in Item 8 "Financial Statements and Supplementary Data").

CASH FROM FINANCING ACTIVITIES

in millions



2021 VERSUS 2020 — Net cash used for financing activities in 2021 was \$94.3 million, compared to \$234.6 million provided in 2020. The 2021 activities include: a) cash paid to retire the \$500.0 million floating rate notes due March 2021, b) \$13.3 million of financing costs for a new bridge facility and delayed draw term loan facility (see Note 6 "Debt" in Item 8 "Financial Statements and Supplementary Data"), c) initial proceeds of \$1,600.0 million from the August draw on the delayed draw term loan facility, d) the subsequent pay down of \$500.0 million on the delayed draw term loan facility, and e) \$434.5 million of cash paid in September to retire U.S. Concrete's outstanding notes assumed in the acquisition. The 2020 activity includes: a) net cash proceeds of \$734.6 million for the issuance of new debt, b) cash paid to retire the \$250.0 million floating rate notes due 2020 and c) \$19.9 million of cash paid to settle interest rate derivatives.

Additionally, capital returned to our shareholders decreased by \$9.9 million as higher dividends of \$16.2 million (\$1.48 per share compared to \$1.36 per share) were offset by lower share repurchases of \$26.1 million (no shares repurchased compared to 214,338 shares @ \$121.92 per share).

DEBT

Certain debt measures as of December 31 are outlined below:

dollars in millions	2021	2020
Debt		
Current maturities of long-term debt	\$ 5.2	\$ 515.4
Short-term debt	0.0	0.0
Long-term debt	3,874.8	2,772.2
Total debt	\$ 3,880.0	\$ 3,287.6
Capital		
Total debt	\$ 3,880.0	\$ 3,287.6
Total equity	6,567.7	6,027.3
Total capital	\$ 10,447.7	\$ 9,314.9
Total Debt as a Percentage of Total Capital	37.1%	35.3%
Weighted-average Effective Interest Rates		
Delayed draw term loan ¹	1.00%	n/a
Line of credit ¹	1.125%	1.25%
Term debt	4.63%	4.10%
Fixed versus Floating Interest Rate Debt		
Fixed-rate debt	72.1%	85.1%
Floating-rate debt	27.9%	14.9%

¹ Reflects the margin above LIBOR for LIBOR-based borrowings; we also paid upfront fees that are amortized to interest expense and pay fees for unused borrowing capacity and standby letters of credit.

At December 31, 2021, total debt to 2021 adjusted EBITDA was 2.7 times or 2.5 times on a net debt basis reflecting \$241.5 million of cash on hand. Our weighted-average debt maturity was 11.3 years, and the effective weighted-average interest rate was 3.68%.

BRIDGE FACILITY, DELAYED DRAW TERM LOAN AND LINE OF CREDIT

In June 2021, concurrent with the announcement of the pending acquisition of U.S. Concrete (see Note 19 "Acquisitions and Divestitures" in Item 8 "Financial Statements and Supplementary Data" for additional information), we obtained a \$2,200.0 million bridge facility commitment from Truist Bank. Later, in June 2021, we entered into a \$1,600.0 million delayed draw term loan with a subset of the banks that provide our line of credit and terminated the bridge facility commitment. The delayed draw term loan was drawn in August 2021 for \$1,600.0 million in connection with the acquisition of U.S. Concrete and was paid down to \$1,100.0 million in September 2021. Amounts repaid are no longer available for borrowing and any outstanding borrowings are due August 2024. The delayed draw term loan contains covenants customary for an unsecured investment-grade facility and mirror those in our line of credit. As of December 31, 2021, we were in compliance with the delayed draw term loan covenants. Borrowings, cost ranges and other details are described in Note 6 "Debt" in Item 8 "Financial Statements and Supplementary Data." Financing costs for the bridge facility commitment and the delayed draw term loan facility totaled \$13.3 million, \$9.4 million of which was recognized as interest expense in 2021.

In September 2020, we executed a new five-year unsecured line of credit of \$1,000.0 million, incurring \$4.6 million of deferred transaction costs. Covenants, borrowings, cost ranges and other details are described in Note 6 "Debt" in Item 8 "Financial Statements and Supplementary Data." As of December 31, 2021, we were in compliance with the line of credit covenants, the credit margin for LIBOR borrowings was 1.125%, the credit margin for base rate borrowings was 0.125%, and the commitment fee for the unused portion was 0.100%.

As of December 31, 2021, our available borrowing capacity under the line of credit was \$940.4 million. Utilization of the borrowing capacity was as follows:

- none was borrowed
- \$59.6 million was used to provide support for outstanding standby letters of credit

TERM DEBT

Essentially all of our \$3,949.6 million (face value) of term debt (which includes the \$1,100.0 million delayed draw term loan) is unsecured. \$2,840.2 million of such debt is governed by two essentially identical indentures that contain customary investment-grade type covenants. As of December 31, 2021, we were in compliance with all term debt covenants.

In August 2021, we assumed \$434.5 million (fair value) of senior notes due 2029 in connection with the acquisition of U.S. Concrete and retired these notes in September 2021.

In May 2020, we issued \$750.0 million of 3.50% senior notes due 2030. Total proceeds were \$741.4 million (net of discounts and transaction costs). \$250.0 million of the proceeds were used to retire the \$250.0 million floating rate notes due June 2020. The remainder of the proceeds, together with cash on hand, was used to retire the \$500.0 million floating rate notes due in March 2021.

For additional information regarding term debt, see Note 6 "Debt" in Item 8 "Financial Statements and Supplementary Data."

DEBT PAYMENTS AND MATURITIES

Scheduled debt payments during 2021 included the aforementioned \$500.0 million to retire the floating rate notes due in March, \$9.4 million in July and \$6.0 million in October. Scheduled debt payments during 2020 were \$250.0 million in June.

As of December 31, 2021, maturities for the next four quarters and for the next five years are as follows (excluding any borrowings on the line of credit):

	20	22		Debt
in millions	Debt M	aturities	in millions	Maturities
First quarter	\$	2.3	2022	\$
Second quarter		1.1	2023	
Third quarter		1.2	2024	1,10
Fourth quarter		0.6	2025	40
•			2026	

For additional information regarding debt payments and maturities, see Note 6 "Debt" in Item 8 "Financial Statements and Supplementary Data."

DEBT RATINGS

Our debt ratings and outlooks as of December 31, 2021 are as follows:

	Rating/Outlook	Date	Description
Senior Unsecured Term Debt			
Fitch	BBB/stable	2/22/2021	rating revised
Moody's	Baa2/stable	11/9/2020	rating revised
Standard & Poor's	BBB+/stable	2/28/2020	rating revised

LIBOR TRANSITION

The London Interbank Offered Rate (LIBOR), historically quoted in five currencies (including U.S. dollar) and seven tenors (from overnight to 12 months), is used extensively globally as a reference rate for financial contracts (e.g., corporate bonds and loans) and commercial contracts (e.g., real estate leases). In July 2017, the United Kingdom's Financial Conduct Authority (FCA), which regulates LIBOR, announced its intention to cease publishing LIBOR at year end 2021. In March 2021, FCA and ICE Benchmark Administration (IBA), the administrator of LIBOR, announced that publication of LIBOR would cease at year end 2021, except for U.S. dollar LIBOR in five tenors that will be published through June 2023.

The expected discontinuation of LIBOR led to the formation of working groups in the U.S. and elsewhere to recommend alternative reference rates. The U.S. working group is the Alternative Reference Rates Committee (ARRC) convened by the Federal Reserve Board and the Federal Reserve Bank of New York. The ARRC has selected the Secured Overnight Financing Rate (SOFR) as the preferred alternative to LIBOR and helped establish standard language for credit agreements to address the pending change from LIBOR to SOFR (Transition Language). The Transition Language includes credit spread adjustment language intended to, based on the historical relationship of 1- month LIBOR and SOFR, make the transition indifferent to both lenders and borrowers.

As of December 31, 2021, we had two material debt instruments with LIBOR as a reference rate: 1) our \$1,000.0 million line of credit (\$0.0 million outstanding) and 2) our delayed draw term loan facility (\$1,100.0 million outstanding). These two instruments contain the Transition Language, and we expect our borrowing costs to change immaterially when these two instruments move from LIBOR to SOFR.

EQUITY

The number of our common stock issuances and purchases are as follows:

in millions	2021	2020	2019
Common stock shares at January 1, issued and outstanding	132.5	132.4	131.8
Common Stock Issuances Share-based compensation plans	0.2	0.3	0.6
Common Stock Purchases			
Purchased and retired	0.0	(0.2)	0.0
Common stock shares at December 31,			
issued and outstanding	132.7	132.5	132.4

As of December 31, 2021, there were 8,064,851 shares remaining under the February 2017 authorization by our Board of Directors. Depending upon market, business, legal and other conditions, we may purchase shares from time to time through the open market (including plans designed to comply with Rule 10b5-1 of the Securities Exchange Act of 1934) and/or privately negotiated transactions. The authorization has no time limit, does not obligate us to purchase any specific number of shares, and may be suspended or discontinued at any time.

The detail of our common stock purchases (all of which were open market purchases) are as follows:

in millions, except average cost	202	21	2020			2019
Shares Purchased and Retired						_
Number		0.0		0.2		0.0
Total purchase price	\$	0.0	\$	26.1	\$	2.6
Average cost per share	\$	0.00	\$	121.92	\$	139.90

There were no shares held in treasury as of December 31, 2021, 2020 and 2019.

STANDBY LETTERS OF CREDIT

For a discussion of our standby letters of credit see Note 6 "Debt" in Item 8 "Financial Statements and Supplementary Data."

CRITICAL ACCOUNTING POLICIES

We follow certain significant accounting policies when preparing our consolidated financial statements. A summary of these policies is included in Note 1 "Summary of Significant Accounting Policies" in Item 8 "Financial Statements and Supplementary Data."

We prepare these financial statements to conform with accounting principles generally accepted in the United States of America. These principles require us to make estimates and judgments that affect reported amounts of assets, liabilities, revenues and expenses, and the related disclosures of contingent assets and contingent liabilities at the date of the financial statements. We base our estimates on historical experience, current conditions and various other assumptions we believe reasonable under existing circumstances and evaluate these estimates and judgments on an ongoing basis. The results of these estimates form the basis for our judgments about the carrying values of assets and liabilities as well as identifying and assessing the accounting treatment with respect to commitments and contingencies. Our actual results may materially differ from these estimates.

We believe the following critical accounting policies require the most significant judgments and estimates used in the preparation of our consolidated financial statements:

- 1. Goodwill impairment
- 2. Impairment of long-lived assets excluding goodwill
- 3. Business combinations and purchase price allocation
- 4. Pension and other postretirement benefits
- 5. Environmental compliance costs
- 6. Claims and litigation including self-insurance
- 7. Income taxes

1. GOODWILL IMPAIRMENT

Goodwill represents the excess of the cost of net assets acquired in business combinations over the fair value of the identifiable tangible and intangible assets acquired and liabilities assumed in a business combination. Goodwill impairment exists when the fair value of a reporting unit is less than its carrying amount. Goodwill is tested for impairment on an annual basis or more frequently whenever events or changes in circumstances would more likely than not reduce the fair value of a reporting unit below its carrying amount. The impairment evaluation is a critical accounting policy because goodwill is material to our total assets (as of December 31, 2021, goodwill represents 27% of total assets), and the evaluation involves the use of significant estimates, assumptions and judgment.

HOW WE TEST GOODWILL FOR IMPAIRMENT

Goodwill is tested for impairment at the reporting unit level, one level below our operating segments. We have identified 19 reporting units (of which 11 carry goodwill) based primarily on geographic location. We have the option of either assessing qualitative factors to determine whether it is more likely than not that the carrying value of our reporting units exceeds their respective fair value or proceeding directly to a quantitative test. We elected to perform the quantitative impairment test for all years presented.

The quantitative impairment test compares the fair value of a reporting unit to its carrying value, including goodwill. If the fair value exceeds its carrying value, the goodwill of the reporting unit is not considered impaired. However, if the carrying value of a reporting unit exceeds its fair value, we recognize an impairment loss equal to that excess.

HOW WE DETERMINE CARRYING VALUE AND FAIR VALUE

We determine the carrying value of each reporting unit by assigning assets and liabilities, including goodwill, to those units as of the measurement date. We estimate the fair values of the reporting units using both an income approach (which involves discounting estimated future cash flows) and a market approach (which involves the application of revenue and EBITDA multiples of comparable companies). We consider market factors when determining the assumptions and estimates used in our valuation models. Finally, to assess the reasonableness of the reporting unit fair values, we compare the total of the reporting unit fair values to our market capitalization.

OUR FAIR VALUE ASSUMPTIONS

We base our fair value estimates on market participant assumptions we believe to be reasonable at the time, but such assumptions are subject to inherent uncertainty and actual results may differ. Changes in key assumptions or management judgment with respect to a reporting unit or its prospects may result from a change in market conditions, market trends, interest rates or other factors outside of our control, or underperformance relative to historical or projected operating results. These conditions could result in a significantly different estimate of the fair value of our reporting units, which could result in an impairment charge in the future.

The significant assumptions in our discounted cash flow models include our estimate of future profitability, capital requirements and the discount rate. The profitability estimates used in the models were derived from internal operating budgets and forecasts for long-term demand and pricing in our industry. Estimated capital requirements reflect replacement capital estimated on a per ton basis and, if applicable, acquisition capital necessary to support growth estimated in the models. The discount rate was derived using a capital asset pricing model.

RESULTS OF OUR IMPAIRMENT TESTS

The results of our annual impairment tests for 2019 through 2021 indicated that the fair values of all reporting units with goodwill substantially exceeded (in excess of 100%) their carrying values. Allocation of the purchase price for the U.S. Concrete acquisition (see Note 19 "Acquisitions and Divestitures" in Item 8 "Financial Statements and Supplementary Data") has not been finalized and therefore these operations were excluded from our goodwill impairment tests.

For additional information about goodwill, see Note 18 "Goodwill and Intangible Assets" in Item 8 "Financial Statements and Supplementary Data."

2. IMPAIRMENT OF LONG-LIVED ASSETS EXCLUDING GOODWILL

We evaluate the carrying value of long-lived assets, including intangible assets subject to amortization, when events and circumstances indicate that the carrying value may not be recoverable. The impairment evaluation is a critical accounting policy because long-lived assets are material to our total assets (as of December 31, 2021, net property, plant & equipment represents 41% of total assets, while net other intangible assets represents 13% of total assets), and the evaluation involves the use of significant estimates, assumptions and judgment. The carrying value of long-lived assets is considered impaired when the estimated undiscounted cash flows from such assets are less than their carrying value. In that event, we recognize a loss equal to the amount by which the carrying value exceeds the fair value.

Fair value is estimated primarily by using a discounted cash flow methodology that requires considerable judgment and assumptions. Our estimate of net future cash flows is based on historical experience and assumptions of future trends, which may be different from actual results. We periodically review the appropriateness of the estimated useful lives of our long-lived assets.

We test long-lived assets for impairment at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets. As a result, our long-lived asset impairment test is at a significantly lower level than the level at which we test goodwill for impairment. In markets where we do not produce downstream products (e.g., asphalt mix and ready-mixed concrete), the lowest level of largely independent identifiable cash flows is at the individual aggregates operation or a group of aggregates operations collectively serving a local market. Conversely, in vertically integrated markets, the cash flows of our downstream and upstream businesses are not largely independently identifiable as the selling price of the upstream products (aggregates) impacts the profitability of the downstream businesss.

During 2021, 2020 and 2019, we recorded no material losses on impairment of long-lived assets.

We maintain certain long-lived assets that are not currently being used in our operations. These assets totaled \$516.2 million at December 31, 2021, representing an 11% increase from December 31, 2020. Of the total \$516.2 million, approximately 40% relates to real estate held for future development and expansion of our operations. In addition, approximately 15% is comprised of real estate (principally former mining sites) pending development as commercial or residential real estate, reservoirs or landfills. The remaining 45% is composed of aggregates, asphalt and concrete operating assets idled temporarily. We evaluate the useful lives and the recoverability of these assets whenever events or changes in circumstances indicate that carrying amounts may not be recoverable.

For additional information about long-lived assets and intangible assets, see Note 4 "Property, Plant & Equipment" and Note 18 "Goodwill and Intangible Assets" in Item 8 "Financial Statements and Supplementary Data."

3. BUSINESS COMBINATIONS AND PURCHASE PRICE ALLOCATION

Our strategic long-term plans include potential investments in value-added acquisitions of related or similar businesses. When an acquisition is completed, our consolidated statements of comprehensive income includes the operating results of the acquired business starting from the date of acquisition, which is the date that control is obtained.

HOW WE DETERMINE AND ALLOCATE THE PURCHASE PRICE

The purchase price is determined based on the fair value of consideration transferred to and liabilities assumed from the seller as of the date of acquisition. We allocate the purchase price to the fair values of the tangible and identifiable intangible assets acquired and liabilities assumed as of the date of acquisition. Goodwill is recorded for the excess of the purchase price over the net fair value of the identifiable assets acquired and liabilities assumed. The purchase price allocation is a critical accounting policy because the estimation of fair values of acquired assets and assumed liabilities is judgmental and requires various assumptions. Additionally, the amounts assigned to depreciable and amortizable assets compared to amounts assigned to goodwill, which is not amortized, can significantly affect our results of operations.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction and therefore represents an exit price. A fair value measurement assumes the highest and best use of the asset by market participants. The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as described below:

- Level 1: Quoted prices in active markets for identical assets or liabilities
- Level 2: Inputs that are derived principally from, or corroborated by, observable market data
- Level 3: Inputs that are unobservable and significant to the overall fair value measurement

Level 1 fair values are used to value investments in publicly-traded entities and assumed obligations for publicly-traded long-term debt.

Level 2 fair values are typically used to value acquired machinery and equipment, land, buildings, and assumed liabilities for asset retirement obligations, environmental remediation and compliance obligations. Additionally, Level 2 fair values are typically used to value assumed contracts at other-than-market rates.

Level 3 fair values are used to value acquired mineral reserves as well as leased mineral interests (referred to in our financial statements as contractual rights in place) and other identifiable intangible assets. We determine the fair values of owned mineral reserves and leased mineral interests using a lost profits approach and/or an excess earnings approach. These valuation techniques require management to estimate future cash flows. The estimate of future cash flows is based on available historical information and future expectations and assumptions determined by management, but is inherently uncertain. Key assumptions in estimating future cash flows include sales price, shipment volumes, production costs and capital needs. The present value of the projected net cash flows represents the fair value assigned to mineral reserves and mineral interests. The discount rate is a significant assumption used in the valuation model and is based on the required rate of return that a hypothetical market participant would assume if purchasing the acquired business, with an adjustment for the risk of these assets not generating the projected cash flows.

Other identifiable intangible assets may include, but are not limited to, noncompetition agreements. The fair values of these assets are typically determined by an excess earnings method, a replacement cost method or a market approach.

MEASUREMENT PERIOD ADJUSTMENTS

We may adjust the amounts recognized in an acquisition during a measurement period after the acquisition date. Any such adjustments are the result of subsequently obtaining additional information that existed at the acquisition date regarding the assets acquired or the liabilities assumed. Measurement period adjustments are generally recorded as increases or decreases to goodwill, if any, recognized in the transaction. The cumulative impact of measurement period adjustments on depreciation, amortization and other income statement items are recognized in the period the adjustment is determined. The measurement period ends once we have obtained all necessary information that existed as of the acquisition date, but does not extend beyond one year from the date of acquisition. Any adjustments to assets acquired or liabilities assumed beyond the measurement period are recorded through earnings.

4. PENSION AND OTHER POSTRETIREMENT BENEFITS

Accounting for pension and other postretirement benefits requires that we use assumptions for the valuation of projected benefit obligations (PBO) and the performance of plan assets. Each year, we review our assumptions for discount rates (used for PBO, service cost, and interest cost calculations) and the expected return on plan assets. Due to plan changes made in 2013, annual pay increases do not materially impact plan obligations.

- DISCOUNT RATES We use a high-quality bond full yield curve approach (specific spot rates for each annual expected cash flow) to establish the discount rates at each measurement date.
- EXPECTED RETURN ON PLAN ASSETS Our expected return on plan assets is: (1) a long-term view based on our current asset allocation, and (2) a judgment informed by consultation with our retirement plans' consultant and our pension plans' actuary.
- RATE OF INCREASE IN THE PER CAPITA COST OF COVERED HEALTHCARE BENEFITS We project the expected
 increases in the cost of covered healthcare benefits.

See Note 10 "Benefit Plans" in Item 8 "Financial Statements and Supplementary Data" for the discount rates used for PBO, service cost, and interest cost calculations; the expected return on plan assets; and the rate of increase in the per capita cost of healthcare benefits.

Changes to the assumptions listed above would have an impact on the PBO and the annual net benefit cost. The following table reflects the favorable and unfavorable outcomes associated with a change in certain assumptions:

		(Favorable) Unfavorable										
	0	.5 Percentag	e Point In	crease	0.3	5 Percentag	e Point De	crease				
	Inc	(Dec) in	Inc ((Dec) in	Inc	(Dec) in	Inc (Dec)	in				
in millions	Benefi	t Obligation	Annual E	Benefit Cost	Benefit Obligation		Annual B	enefit Cost				
Actuarial Assumptions												
Discount rates												
Pension	\$	(51.1)	\$	0.0	\$	56.3	\$	0.7				
Other postretirement benefits		(1.7)		(0.1)		1.9		0.1				
Expected return on plan assets	not	applicable		(4.2)	not	applicable		4.2				

As of the December 31, 2021 measurement date, the fair value of our pension plan assets decreased from \$944.3 million for the prior year-end to \$860.5 million due primarily to the purchase of an irrevocable group annuity contract from an insurance company (annuity lift-out), partially offset by favorable market performance. Our postretirement plans are unfunded.

The discount rate is the weighted-average of the spot rates for each cash flow on the yield curve for high-quality bonds as of the measurement date. As of the December 31, 2021 measurement date, the PBO of our pension plans decreased from \$1,059.5 million to \$915.5 million. This decrease was primarily due to an increase in discount rates for the plans (approximately 0.3 to 0.6 percentage points) and the annuity lift-out. The PBO of our postretirement plans increased from \$33.9 million to \$46.0 million. This increase was primarily due to a change in plan design. Effective October 1, 2021, the retiree medical plans were updated for non-grandfathered participants to provide a subsidy equal to 70% of the Gold PPO premium.

During 2022, we expect to recognize net pension expense of \$1.9 million and net postretirement expense of \$1.3 million compared to expense of \$3.1 million (which includes a \$12.1 million settlement charge) and income of \$1.2 million, respectively, in 2021. Excluding the settlement charge, the expected increase in pension expense is primarily due to a reduction in the long-term return on asset assumption from 5.25% to 4.00%. The increase in postretirement expense is primarily due to increased benefits for non-grandfathered participants as described above.

We do not anticipate that contributions to the funded pension plans will be required during 2022, and we do not anticipate making a discretionary contribution. We currently do not anticipate that the funded status of any of our plans will fall below statutory thresholds requiring accelerated funding or constraints on benefit levels or plan administration.

For additional information about pension and other postretirement benefits, see Note 10 "Benefit Plans" in Item 8 "Financial Statements and Supplementary Data."

5. ENVIRONMENTAL COMPLIANCE COSTS

Our environmental compliance costs include the cost of ongoing monitoring programs, the cost of remediation efforts and other similar costs. Our accounting policy for environmental compliance costs is a critical accounting policy because it involves the use of significant estimates and assumptions and requires considerable management judgment.

HOW WE ACCOUNT FOR ENVIRONMENTAL COSTS

To account for environmental costs, we:

- expense or capitalize environmental costs consistent with our capitalization policy
- expense costs for an existing condition caused by past operations that do not contribute to future revenues
- accrue costs for environmental assessment and remediation efforts when we determine that a liability is probable and we
 can reasonably estimate the cost

At the early stages of a remediation effort, environmental remediation liabilities are not easily quantified due to the uncertainties of various factors. The range of an estimated remediation liability is defined and redefined as events in the remediation effort occur, but generally liabilities are recognized no later than completion of the remedial feasibility study. When we can estimate a range of probable loss, we accrue the most likely amount. If no amount in the range of probable loss is considered most likely, the minimum loss in the range is accrued. As of December 31, 2021, the difference between the amount accrued and the maximum loss in the range for all sites for which a range can be reasonably estimated was \$3.1 million — this amount does not represent our maximum exposure to loss for all environmental remediation obligations as it excludes those sites for which a range of loss cannot be reasonably estimated at this time. Our environmental remediation obligations are recorded on an undiscounted basis.

Accrual amounts may be based on technical cost estimations or the professional judgment of experienced environmental managers. Our Safety, Health and Environmental Affairs Management Committee routinely reviews cost estimates and key assumptions in response to new information, such as the kinds and quantities of hazardous substances, available technologies and changes to the parties participating in the remediation efforts. However, a number of factors, including adverse agency rulings and unanticipated conditions as remediation efforts progress, may cause actual results to differ materially from accrued costs.

For additional information about environmental compliance costs, see Note 8 "Accrued Environmental Remediation Costs" in Item 8 "Financial Statements and Supplementary Data."

6. CLAIMS AND LITIGATION INCLUDING SELF-INSURANCE

We are involved with claims and litigation, including items covered under our self-insurance program. We are self-insured for losses related to workers' compensation up to \$2.0 million per occurrence and automotive and general/product liability up to \$10.0 million per occurrence. We have excess coverage on a per occurrence basis beyond these retention levels.

Under our self-insurance program, we aggregate certain claims and litigation costs that are reasonably predictable based on our historical loss experience and accrue losses, including future legal defense costs, based on actuarial studies. Certain claims and litigation costs, due to their unique nature, are not included in our actuarial studies. For matters not included in our actuarial studies, legal defense costs are accrued when incurred.

Our accounting policy for claims and litigation including self-insurance is a critical accounting policy because it involves the use of significant estimates and assumptions and requires considerable management judgment.

HOW WE ASSESS THE PROBABILITY OF LOSS

We use both internal and outside legal counsel to assess the probability of loss, and we establish an accrual when the claims and litigation represent a probable loss and the cost can be reasonably estimated. Significant judgment is used in determining the timing and amount of the accruals for probable losses, and the actual liability could differ materially from the accrued amounts.

For additional information about claims and litigation including self-insurance, see Note 1 "Summary of Significant Accounting Policies" in Item 8 "Financial Statements and Supplementary Data" under the caption Claims and Litigation Including Self-insurance.

7. INCOME TAXES

VALUATION OF OUR DEFERRED TAX ASSETS

We file federal, state and foreign income tax returns and account for the current and deferred tax effects of such returns using the asset and liability method. We recognize deferred tax assets and liabilities (which reflect our best assessment of the future taxes we will pay) based on the differences between the book basis and tax basis of assets and liabilities. Deferred tax assets represent items to be used as a tax deduction or credit in future tax returns while deferred tax liabilities represent items that will result in additional tax in future tax returns.

Significant judgments and estimates are required in determining our deferred tax assets and liabilities. These estimates are updated throughout the year to consider income tax return filings, our geographic mix of earnings, legislative changes and other relevant items. We are required to account for the effects of changes in income tax rates on deferred tax balances in the period in which the legislation is enacted.

Each quarter we analyze the likelihood that our deferred tax assets will be realized. Realization of the deferred tax assets ultimately depends on the existence of sufficient taxable income of the appropriate character in either the carryback or carryforward period. A valuation allowance is recorded if, based on the weight of all available positive and negative evidence, it is more likely than not (a likelihood of more than 50%) that some portion, or all, of a deferred tax asset will not be realized. A summary of our deferred tax assets is included in Note 9 "Income Taxes" in Item 8 "Financial Statements and Supplementary Data."

LIABILITY FOR UNRECOGNIZED TAX BENEFITS

We recognize a tax benefit associated with a tax position when we judge it is more likely than not that the position will be sustained based upon the technical merits of the position. For a tax position that meets the more likely than not recognition threshold, we measure the income tax benefit as the largest amount that we judge to have a greater than 50% likelihood of being realized. A liability is established for the unrecognized portion of any tax position. Our liability for unrecognized tax benefits is adjusted periodically due to changing circumstances, such as the progress of tax audits, case law developments and new or emerging legislation.

Generally, we are not subject to significant changes in income taxes by any taxing jurisdiction for the years before 2018. While it is often difficult to predict the final outcome or the timing of resolution of any particular tax matter, we believe our liability for unrecognized tax benefits is appropriate.

We consider a tax position to be resolved at the earlier of the issue being "effectively settled," settlement of an examination, or the expiration of the statute of limitations. Upon resolution of a tax position, any liability for unrecognized tax benefits will be released.

Our liability for unrecognized tax benefits is generally presented as noncurrent. However, if we anticipate paying cash within one year to settle an uncertain tax position, the liability is presented as current. We classify interest and penalties associated with our liability for unrecognized tax benefits as income tax expense.

NEW ACCOUNTING STANDARDS

For a discussion of accounting standards recently adopted or pending adoption and the effect such accounting changes will have on our results of operations, financial position or liquidity, see Note 1 "Summary of Significant Accounting Policies" in Item 8 "Financial Statements and Supplementary Data" under the caption New Accounting Standards.

FORWARD-LOOKING STATEMENTS

The foregoing discussion and analysis, as well as certain information contained elsewhere in this Annual Report, contain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and are intended to be covered by the safe harbor created thereby. See the discussion in Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995 in Part I, above.

MARKET RISK

We are exposed to certain market risks arising from transactions that are entered into in the normal course of business. To manage these market risks, we may use derivative financial instruments. We do not enter into derivative financial instruments for trading or speculative purposes.

As discussed in the Liquidity and Financial Resources section of Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations," we actively manage our capital structure and resources to balance the cost of capital and risk of financial stress. Such activity includes balancing the cost and risk of interest expense. In addition to floating-rate borrowings, we at times use interest rate swaps to manage the mix of fixed-rate and floating-rate debt.

At December 31, 2021, the estimated fair value of our long-term debt including current maturities was \$4,423.7 million compared to a face value of \$3,949.6 million. The estimated fair value was determined by averaging several asking price quotes for the publicly traded notes and assuming par value for the remainder of the debt. The fair value estimate is based on information available as of the balance sheet date. The effect of a decline in interest rates of one percentage point would increase the fair value of our debt by approximately \$380.9 million.

We are exposed to certain economic risks related to the costs of our pension and other postretirement benefit plans. These economic risks include changes in the discount rate for high-quality bonds and the expected return on plan assets. The impact of a change in these assumptions on our annual pension and other postretirement benefits costs is discussed in greater detail within the Critical Accounting Policies section of this Annual Report.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Vulcan Materials Company:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Vulcan Materials Company and subsidiaries (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of comprehensive income, equity, and cash flows, for each of the three years in the period ended December 31, 2021, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with accounting principles generally accepted in the United States of America.

We have also 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, 2021, based on the criteria established in *Internal Control* — *Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 25, 2022 expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's 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 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 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 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 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 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 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 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.

Acquisitions - U.S. Concrete - Refer to Note 19 to the consolidated financial statements

Critical Audit Matter Description

The Company completed the acquisition of U.S. Concrete, Inc. ("USCR"), a leading supplier of aggregates and ready-mixed concrete, for total consideration of \$1.63 billion on August 26, 2021. The Company accounted for the business combination under the acquisition method of accounting. Accordingly, the purchase price was allocated to the assets acquired and liabilities assumed based on their respective fair values, resulting in recorded goodwill of approximately \$525 million. Management determined the fair value of acquired intangible assets and property, plant & equipment to be approximately \$674 million and \$1.11 billion, respectively. Management estimated the fair value of the intangible assets and property, plant & equipment using techniques that required management to make significant estimates and assumptions including those related to future cash flows, current market pricing of similar assets, and the selection of discount rates.

We identified the acquisition of USCR as a critical audit matter because of the subjectivity inherent in the estimates and assumptions management made in the determination of fair value of the aforementioned acquired assets. Performing audit procedures to evaluate the reasonableness of future cash flows, discount rates and market pricing inputs required a high degree of auditor judgment and an increased extent of effort, including the need to involve internal fair value specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the estimates of fair value, including future cash flows, consisted of the following, among others:

- We tested the effectiveness of controls over the purchase price allocation, including management's controls over forecasts of future cash flows and the selection of the discount rate utilized to value the amortizable intangible assets acquired. We also tested the effectiveness of management's controls over the selection of market pricing inputs for the valuation of property, plant & equipment assets.
- With the assistance of internal fair value specialists, we:
 - Evaluated the reasonableness of the selected valuation methodologies and the application of those methodologies;
 - Tested the source information underlying the determination of the discount rates and tested the mathematical accuracy
 of the fair value models;
 - Compared market pricing inputs to applicable external market sources.
- We evaluated the reasonableness of management's forecasts of future cash flows by comparing the assumptions used in the projections to external market sources, historical data, and results from other areas of the audit.

Hewitt Landfill Environmental Matter - Refer to Note 12 to the consolidated financial statements

Critical Audit Matter Description

The Company is subject to governmental proceedings and orders pertaining to the protection of the environment. Specific to the Hewitt Landfill Environmental Matter, management is engaged in groundwater testing, certain remedial procedures and ongoing dialogue with federal and local agencies such as the Environmental Protection Agency (EPA), Los Angeles Regional Water Quality Control Board (RWQCB) and the Los Angeles Department of Water and Power (LADWP) as well as other interested parties. The testing and dialogue is related to the Company's potential contribution to soil, soil vapor and/or groundwater contamination in the former Hewitt Landfill in Los Angeles and the potential contribution of the Hewitt Landfill to groundwater contamination in the North Hollywood Operable Unit (NHOU) of the San Fernando Valley Superfund Site.

The groundwater treatment system for the Hewitt Landfill on-site remediation is fully operational as of December 31, 2021. The incurred and anticipated costs have been fully accrued for based on facts and circumstances known to the Company at this time. The Company has disclosed facts and circumstances that led to the accrual and the inherent uncertainty that exists in the timing and recognition of potential incremental responsibility or share of costs for the Hewitt Landfill on-site remediation or the NHOU. Due to these uncertainties, future amounts recorded related to the ultimate resolution of claims and assessments could cause actual losses to differ materially from accrued costs.

We identified the Hewitt Landfill and NHOU (collectively the Hewitt Landfill Environmental Matter) as a critical audit matter because evaluating the estimate of the liability and the extent and sufficiency of related disclosures is subjective in nature and as such requires an increased extent of effort, involves especially subjective auditing judgments, and requires the involvement of our environmental specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the uncertainty in the timing, recognition and disclosure of the Company's responsibility and potential share of remediation costs, specifically as they relate to the Hewitt Landfill Environmental Matter include the following, among others:

- We tested the operating effectiveness of controls over the identification and evaluation of information available to assess potential responsibility or share of remediation costs for the Hewitt Landfill Environmental Matter, as well as controls over the adequacy of the related financial statement footnote disclosures.
- With the assistance of our environmental specialists, we evaluated the accuracy and completeness of management's recorded liabilities for the Hewitt Landfill Environmental Matter by:
 - Obtaining letters from internal and external counsel as to the matter's status, probability of an unfavorable outcome, and the amount or range of potential loss should the outcome be unfavorable.
 - Independently obtaining and reading correspondence from the EPA, RWQCB and LADWP regarding the Hewitt Landfill Environmental Matter.
 - Obtaining an understanding of the change in estimate of remediation costs, as applicable, and performing
 procedures to evaluate the appropriateness and sufficiency of the estimate at year-end.
- We read and compared the Company's footnote disclosure to evidential matter obtained during our audit.

/s/ DELOITTE & TOUCHE LLP Birmingham, Alabama February 25, 2022

We have served as the Company's auditor since 1956.

VULCAN MATERIALS COMPANY AND SUBSIDIARY COMPANIES CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	2021		2020	2019
For the years ended December 31				
in millions, except per share data				
Total revenues	\$ 5,552.2	\$	4,856.8	\$ 4,929.1
Cost of revenues	4,178.8		3,575.3	3,673.2
Gross profit	1,373.4		1,281.5	1,255.9
Selling, administrative and general expenses	417.6		359.8	370.5
Gain on sale of property, plant & equipment and businesses	120.1		4.0	23.8
Other operating expense, net	(65.1)		(30.0)	(31.7)
Operating earnings	1,010.8		895.7	877.5
Other nonoperating income (expense), net	10.7		(17.5)	9.2
Interest income	1.6		1.6	1.2
Interest expense	149.3		136.0	130.2
Earnings from continuing operations before income taxes	873.8		743.8	757.7
Income tax expense				
Current	133.5		93.9	58.9
Deferred	66.6		61.9	76.3
Total income tax expense	200.1		155.8	135.2
Earnings from continuing operations	673.7		588.0	622.5
Loss on discontinued operations, net of tax	(3.3)		(3.5)	(4.8)
Net earnings	670.4		584.5	617.7
Loss attributable to noncontrolling interest	0.4		0.0	0.0
Net earnings attributable to Vulcan	\$ 670.8	\$	584.5	\$ 617.7
Other comprehensive income (loss), net of tax				
Deferred loss on interest rate derivative	0.0		(14.7)	0.0
Amortization of prior interest rate derivative loss	1.5		1.7	0.2
Adjustment for funded status of benefit plans	13.4		6.4	(26.9)
Amortization of actuarial loss and prior service cost for benefit plans	13.7		23.0	1.2
Other comprehensive income (loss)	28.6		16.4	(25.5)
Comprehensive income	699.0		600.9	592.2
Comprehensive loss attributable to noncontrolling interest	0.4		0.0	0.0
Comprehensive income attributable to Vulcan	\$ 699.4	\$	600.9	\$ 592.2
Basic earnings (loss) per share attributable to Vulcan				
Continuing operations	\$ 5.08	\$	4.44	\$ 4.71
Discontinued operations	(0.03)		(0.03)	(0.04)
Net earnings	\$ 5.05	\$	4.41	\$ 4.67
Diluted earnings (loss) per share attributable to Vulcan				
Continuing operations	\$ 5.05	\$	4.41	\$ 4.67
Discontinued operations	(0.03)	•	(0.02)	(0.04)
Net earnings	\$ 5.02	\$	4.39	\$ 4.63
Weighted-average common shares outstanding				
Basic	132.8		132.6	132.3
Assuming dilution	133.5		133.2	133.4

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

VULCAN MATERIALS COMPANY AND SUBSIDIARY COMPANIES CONSOLIDATED BALANCE SHEETS

	2021		2020
As of December 31			·
in millions			
Assets			
Cash and cash equivalents	·	5.0 \$	1,197.1
Restricted cash		6.5	0.9
Accounts and notes receivable			
Customers, less allowance for credit losses			
2021 — \$10.3; 2020 — \$2.6	78	3.2	512.9
Other		5.5	43.4
Inventories	52	1.3	448.6
Other current assets	9	5.1	74.3
Total current assets	1,69	6.6	2,277.2
Investments and long-term receivables	3	4.1	34.3
Property, plant & equipment, net	5,54	8.6	4,426.0
Operating lease right-of-use assets, net	69	1.4	423.1
Goodwill	3,69	6.7	3,172.1
Other intangible assets, net	1,74	9.0	1,123.5
Other noncurrent assets	26	8.0	230.7
Total assets	\$ 13,68	2.6 \$	11,686.9
Liabilities			
Current maturities of long-term debt		5.2	515.4
Trade payables and accruals	36	5.5	273.1
Accrued salaries, wages and management incentives	12	0.5	91.7
Accrued interest	1	9.6	19.9
Other current liabilities	25	8.5	147.8
Total current liabilities	76	9.3	1,047.9
Long-term debt	3,87	4.8	2,772.2
Deferred income taxes, net	1,00	5.9	706.1
Pension and other postretirement benefits	10	6.3	136.6
Asset retirement obligations	31	5.2	283.2
Deferred revenue	16	7.1	174.0
Noncurrent operating lease liabilities	64	2.5	399.6
Other noncurrent liabilities	23	3.8	140.0
Total liabilities	\$ 7,11	4.9 \$	5,659.6
Other commitments and contingencies (Note 12)			
Equity			
Common stock, \$1 par value, Authorized 480.0 shares,			
Outstanding 132.7 and 132.5 shares, respectively	13	2.7	132.5
Capital in excess of par value	2,81		2,802.0
Retained earnings	3,74		3,274.1
Accumulated other comprehensive loss	(15		(181.3)
Total shareholders' equity	6,54		6,027.3
Noncontrolling interest	·	2.7	0.0
Total equity	6,56		6,027.3
Total liabilities and equity	\$ 13,68		11,686.9
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The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

VULCAN MATERIALS COMPANY AND SUBSIDIARY COMPANIES CONSOLIDATED STATEMENTS OF CASH FLOWS

	2021	2020	2019	
For the years ended December 31				
in millions	_			
Operating Activities				
Net earnings	\$ 670.4	\$ 584.5	\$ 617.7	
Adjustments to reconcile net earnings to net cash provided by operating activities				
Depreciation, depletion, accretion and amortization	463.0	396.8	374.6	
Noncash operating lease expense	49.0	38.3	35.3	
Net gain on sale of property, plant & equipment and businesses	(120.1)	(4.0)	(23.8)	
Contributions to pension plans	(8.0)	(8.8)	(8.9)	
Share-based compensation expense	34.7	33.0	31.8	
Deferred tax expense	66.8	62.0	76.0	
(Increase) decrease in assets excluding the initial effects of business				
acquisitions and dispositions				
Accounts and notes receivable	(42.0)	13.4	(29.7)	
Inventories	8.3	9.8	(28.3)	
Prepaid expenses	(14.2)	2.6	6.0	
Other assets	(29.8)	(14.4)	(61.2)	
Increase (decrease) in liabilities excluding the initial effects of business				
acquisitions and dispositions				
Accrued interest and income taxes	(0.4)	0.8	(4.6)	
Trade payables and other accruals	(23.3)	(6.9)	21.8	
Other noncurrent liabilities	(78.9)	(44.9)	(51.2)	
Other, net	36.4	8.2	28.6	
Net cash provided by operating activities	\$ 1,011.9	\$ 1,070.4	\$ 984.1	
Investing Activities				
Purchases of property, plant & equipment	(451.3)	(362.2)	(384.1)	
Proceeds from sale of property, plant & equipment	216.5	11.5	22.7	
Proceeds from sale of businesses	0.0	1.0	1.7	
Payment for businesses acquired, net of acquired cash	(1,639.4)	(43.2)	(44.2)	
Other, net	0.1	11.4	(11.9)	
Net cash used for investing activities	\$ (1,874.1)	\$ (381.5)	\$ (415.8)	
Financing Activities				
Proceeds from short-term debt	0.0	0.0	366.9	
Payment of short-term debt	0.0	0.0	(499.9)	
Payment of current maturities and long-term debt	(1,451.7)	(250.0)	0.0	
Proceeds from issuance of long-term debt	1,600.0	750.0	0.0	
Debt issuance and exchange costs	(13.3)	(15.4)	0.0	
Payment of finance leases	(13.5)	(1.6)	0.0	
Settlements of interest rate derivatives	0.0	(19.9)	0.0	
Purchases of common stock	0.0	(26.1)	(2.6)	
Dividends paid	(196.4)	(180.2)	(164.0)	
Share-based compensation, shares withheld for taxes	(19.1)	(22.1)	(38.5)	
Other, net	(0.3)	(0.1)	(0.1)	
Net cash provided by (used for) financing activities	\$ (94.3)	\$ 234.6	\$ (338.2)	
Net increase (decrease) in cash and cash equivalents and restricted cash	(956.5)	923.5	230.1	
Cash and cash equivalents and restricted cash at beginning of year	1,198.0	274.5	44.4	
Cash and cash equivalents and restricted cash at end of year	\$ 241.5	\$ 1,198.0	\$ 274.5	

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

VULCAN MATERIALS COMPANY AND SUBSIDIARY COMPANIES CONSOLIDATED STATEMENTS OF EQUITY

		non Stock		-	Capital in Excess of		Retained	Coi	ocumulated Other mprehensive	Sh	Total nareholders'	con	Non- trolling		
in millions	Shares	Amo		\$	Par Value	Φ	Earnings		come (Loss)	<u></u>	Equity		terest	\$	Total 5.202.9
Balances at December 31, 2018	131.8	\$ 1.		Ф	2,798.4	Ф	2,444.9	Ф	(172.2)	Ф	5,202.9	Ф		Ф	
Net earnings	0.0		0.0		0.0		617.7		0.0		617.7		0.0		617.7
Share-based compensation plans,	0.6		0.6		(20.0)		0.0		0.0		(20.4)		0.0		(20.4)
net of shares withheld for taxes	0.6		0.6		(39.0)		0.0		0.0		(38.4)		0.0		(38.4)
Purchase and retirement of	0.0		0.0		0.0		(2.6)		0.0		(2.6)		0.0		(2.6)
common stock	0.0		0.0		0.0		(2.0)		0.0		(2.0)		0.0		(2.0)
Share-based compensation	0.0		0.0		31.8		0.0		0.0		31.8		0.0		31.8
expense Cash dividends on common stock	0.0		0.0		0.0		(164.0)		0.0		(164.0)		0.0		(164.0)
Other comprehensive loss	0.0		0.0		0.0		0.0		(25.5)		(25.5)		0.0		(25.5)
Other	0.0		0.0		0.0		(0.1)		0.0		0.0		0.0		0.0
Balances at December 31, 2019	132.4	\$ 13	32.4	\$	2,791.3	\$	2,895.9	\$	(197.7)	\$	5,621.9	\$		\$	5,621.9
Net earnings	0.0	Ť	0.0		0.0		584.5		0.0	Ť	584.5	Ť	0.0	<u> </u>	584.5
Share-based compensation plans,	0.0		0.0		0.0		001.0		0.0		001.0		0.0		001.0
net of shares withheld for taxes	0.3		0.3		(22.4)		0.0		0.0		(22.1)		0.0		(22.1)
Purchase and retirement of					(==: -)				• • •		()				()
common stock	(0.2)		(0.2)		0.0		(25.9)		0.0		(26.1)		0.0		(26.1)
Share-based compensation	,		,				,				,				, ,
expense	0.0		0.0		33.0		0.0		0.0		33.0		0.0		33.0
Cash dividends on common stock	0.0		0.0		0.0		(180.2)		0.0		(180.2)		0.0		(180.2)
Other comprehensive income	0.0		0.0		0.0		0.0		16.4		16.4		0.0		16.4
Other	0.0		0.0		0.1		(0.2)		0.0		(0.1)		0.0		(0.1)
Balances at December 31, 2020	132.5	\$ 13	32.5	\$	2,802.0	\$	3,274.1	\$	(181.3)	\$	6,027.3	\$	0.0	\$	6,027.3
Net earnings	0.0		0.0		0.0		670.8		0.0		670.8		(0.4)		670.4
Share-based compensation plans,															
net of shares withheld for taxes	0.2		0.2		(20.3)		0.0		0.0		(20.1)		0.0		(20.1)
Share-based compensation															
expense	0.0		0.0		34.7		0.0		0.0		34.7		0.0		34.7
Cash dividends on common stock	0.0		0.0		0.0		(196.4)		0.0		(196.4)		0.0		(196.4)
Other comprehensive income	0.0		0.0		0.0		0.0		28.6		28.6		0.0		28.6
Acquisition of noncontrolling															
interests	0.0		0.0		0.0		0.0		0.0		0.0		23.1		23.1
Other	0.0		0.0		0.1		0.0		0.0		0.1		0.0		0.1
Balances at December 31, 2021	132.7	\$ 13	32.7	\$	2,816.5	\$	3,748.5	\$	(152.7)	\$	6,545.0	\$	22.7	\$	6,567.7

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

NATURE OF OPERATIONS

Vulcan Materials Company (the "Company," "Vulcan," "we," "our"), a New Jersey corporation, is the nation's largest supplier of construction aggregates (primarily crushed stone, sand and gravel), a major producer of asphalt mix and ready-mixed concrete, and a supplier of construction paving services.

We operate primarily in the United States and our principal product — aggregates — is used in virtually all types of public and private construction projects and in the production of asphalt mix and ready-mixed concrete. We serve aggregates markets in twenty-two states, the U.S. Virgin Islands, Washington D.C., and the local markets surrounding our operations in Quintana Roo, Mexico and British Columbia, Canada. Our primary focus is serving metropolitan markets in the United States that are expected to experience the most significant growth in population, households and employment. These three demographic factors are significant drivers of demand for aggregates. While aggregates is our focus and primary business, we produce and sell asphalt mix and/or ready-mixed concrete in our Alabama, Arizona, California, Maryland, New Jersey, New Mexico, New York, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia, the U.S. Virgin Islands, Washington D.C., and the Bahamas markets.

Year-over-year comparisons are significantly impacted by our August 2021 acquisition of U.S. Concrete (see Note 19).

Due to the 2005 sale of our Chemicals business as described below, the results of the Chemicals business are presented as discontinued operations in the accompanying Consolidated Statements of Comprehensive Income.

DISCONTINUED OPERATIONS

In 2005, we sold substantially all the assets of our Chemicals business to Basic Chemicals, a subsidiary of Occidental Chemical Corporation. The financial results of the Chemicals business are classified as discontinued operations in the accompanying Consolidated Statements of Comprehensive Income for all periods presented. Results from discontinued operations are as follows:

in millions	2021		2020		20	019
Discontinued Operations						_
Pretax loss	\$	(4.5)	\$	(4.7)	\$	(6.5)
Income tax benefit		1.2		1.2		1.7
Loss on discontinued operations, net of tax	\$	(3.3)	\$	(3.5)	\$	(4.8)

Our discontinued operations include charges related to general and product liability costs, including legal defense costs, and environmental remediation costs associated with our former Chemicals business (including certain matters as discussed in Note 12). There were no revenues from discontinued operations for the years presented.

PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include the accounts of Vulcan Materials Company and all our majority or wholly-owned subsidiary companies. Partially-owned affiliates are either consolidated or accounted for at cost or as equity investments depending on the level of ownership interest or our ability to exercise control over the affiliates' operations. All intercompany transactions and accounts have been eliminated in consolidation.

NONCONTROLLING INTEREST

In August 2021, we obtained (via the U.S. Concrete acquisition, see Note 19) an 88% controlling interest in the Orca Sand and Gravel Limited Partnership (Orca). Orca was formed to develop the Orca quarry in British Columbia, Canada, with the remaining 12% noncontrolling interest held by the Namgis First Nation (Namgis). Noncontrolling interest consists of the Namgis' share of the fair value equity in the partnership offset by capital contributions loaned to the Namgis by us. Our consolidated financial statements recognize the full fair value of all of the subsidiary's assets and liabilities offset by the noncontrolling interest in total equity.

USE OF ESTIMATES IN THE PREPARATION OF FINANCIAL STATEMENTS

The preparation of these financial statements in conformity with accounting principles generally accepted (GAAP) in the United States of America requires us to make estimates and judgments that affect reported amounts of assets, liabilities, revenues and expenses, and the related disclosures of contingent assets and contingent liabilities at the date of the financial statements. We evaluate these estimates and judgments on an ongoing basis and base our estimates on historical experience, current conditions and various other assumptions that are believed to be reasonable under the circumstances. The results of these estimates form the basis for our judgments about the carrying values of assets and liabilities as well as identifying and assessing the accounting treatment with respect to commitments and contingencies. Actual results may differ materially from these estimates. The most significant estimates included in the preparation of these financial statements are related to goodwill and long-lived asset impairments, business combinations and purchase price allocation (see Note 19 for our 2021 acquisition of U.S. Concrete), pension and other postretirement benefits, environmental compliance, claims and litigation including self-insurance, and income taxes. Events and changes in circumstances arising after December 31, 2021, including those resulting from the impacts of the COVID-19 pandemic as construction activity continues to be impacted by capacity constraints (supply chain bottlenecks, labor shortages and transportation availability) and cost inflation, will be reflected in management's estimates for future periods.

BUSINESS COMBINATIONS

We account for business combinations under the acquisition method of accounting. The purchase price of an acquisition is allocated to the underlying identifiable assets acquired and liabilities assumed based on their respective fair values. The purchase price is determined based on the fair value of consideration transferred to and liabilities assumed from the seller as of the date of acquisition. We allocate the purchase price to the fair values of the tangible and identifiable intangible assets acquired and liabilities assumed as of the date of acquisition. Goodwill is recorded for the excess of the purchase price over the net fair value of the identifiable assets acquired and liabilities assumed.

Determining the fair values of assets acquired and liabilities assumed requires judgment and often involves the use of significant estimates and assumptions. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction, and therefore represents an exit price. A fair value measurement assumes the highest and best use of the asset by market participants.

We may adjust the amounts recognized in an acquisition during a measurement period after the acquisition date. Any such adjustments are the result of subsequently obtaining additional information that existed at the acquisition date regarding the assets acquired or the liabilities assumed. Measurement period adjustments are generally recorded as increases or decreases to goodwill, if any, recognized in the transaction. The cumulative impact of measurement period adjustments on depreciation, amortization and other income statement items are recognized in the period the adjustment is determined.

In August 2021, we acquired a material business, U.S. Concrete, Inc., as presented in Note 19.

FOREIGN CURRENCY TRANSACTIONS

The U.S. dollar is the functional currency for all of our operations, as the primary economic environment in which we transact business is the United States. For our non-U.S. subsidiaries, local currency inventories and long-term assets such as property, plant & equipment and intangibles are remeasured into U.S. dollars at approximate rates prevailing when acquired; all other assets and liabilities are remeasured at year-end exchange rates. Inventories charged to cost of sales and depreciation are remeasured at historical rates; all other income and expense items are remeasured at average exchange rates prevailing during the year. Gains and losses which result from remeasurement are included in other nonoperating income/expense in the accompanying Consolidated Statements of Comprehensive Income and are not material for the years presented.

CASH EQUIVALENTS

We classify as cash equivalents all highly liquid securities with a maturity of three months or less at the time of purchase. The carrying amount of these securities approximates fair value due to their short-term maturities.

RESTRICTED CASH

Restricted cash primarily consists of cash proceeds from the sale of property held in escrow for the acquisition of replacement property under like-kind exchange agreements. The escrow accounts are administered by an intermediary. Cash restricted pursuant to like-kind exchange agreements remains restricted for a maximum of 180 days from the date of the property sale pending the acquisition of replacement property. Restricted cash may also include cash reserved by other contractual agreements (such as asset purchase agreements) for a specified purpose and therefore is not available for use for other purposes. Restricted cash is included with cash and cash equivalents in the accompanying Consolidated Statements of Cash Flows.

ACCOUNTS AND NOTES RECEIVABLE

Accounts and notes receivable from customers result from our extending credit to trade customers for the purchase of our products. The terms generally provide for payment within 15 days of the month following invoice. On occasion, when necessary to conform to regional industry practices, we sell product under extended payment terms, which may result in either secured or unsecured short-term notes; or, on occasion, notes with durations of less than one year are taken in settlement of existing accounts receivable. Other accounts and notes receivable result from short-term transactions (less than one year) other than the sale of our products, such as interest receivable, insurance claims, freight claims, bid deposits or rents receivable.

Allowance for credit losses is based on our assessment of the collectability of customer accounts. We regularly review the allowance by considering factors such as historical experience, credit quality, the age of the accounts receivable balances, and current economic conditions that may affect a customer's ability to pay. Bad debt expense (included in selling, administrative and general expense) for the years ended December 31 was as follows: 2021 — \$1.3 million, 2020 — \$1.1 million and 2019 — \$1.4 million.

INVENTORIES

Inventories and supplies are stated at the lower of cost or net realizable value. We use the last-in, first-out (LIFO) method of valuation for most of our inventories because it results in a better matching of costs with revenues. Such costs include fuel, parts and supplies, raw materials, direct labor and production overhead. An actual valuation of inventory under the LIFO method can be made only at the end of each year based on the inventory levels and costs at that time. Accordingly, interim LIFO calculations are based on our estimates of expected year-end inventory levels and costs and are subject to the final year-end LIFO inventory valuation. Substantially all operating supplies inventory is carried at average cost.

For additional information about inventories see Note 3.

PROPERTY, PLANT & EQUIPMENT

Property, plant & equipment are carried at cost less accumulated depreciation, depletion and amortization.

For assets sold or otherwise disposed of, the cost and related accumulated depreciation are removed, and any related gain or loss is reflected in income.

For additional information about our property, plant & equipment see Note 4.

REPAIR AND MAINTENANCE

Repair and maintenance costs generally are charged to operating expense as incurred. Renewals and betterments that add materially to the utility or useful lives of property, plant & equipment are capitalized and subsequently depreciated. Actual costs for planned major maintenance activities, related primarily to periodic overhauls on our aircrafts and oceangoing vessels, are capitalized and amortized to the next overhaul.

LEASES

Our nonmineral leases with initial terms in excess of one year are recognized on the balance sheet as right-of-use (ROU) assets and lease liabilities. Mineral leases are exempt from balance sheet recognition.

ROU assets represent our right to use an underlying asset for the lease term, and lease liabilities represent our obligation to make lease payments arising from the leases. ROU assets and lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. The lease term only includes options to extend or terminate the lease when it is reasonably certain that we will exercise that option. As our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. ROU assets are adjusted for any prepaid lease payments and lease incentives. Except for equipment with monthly monitoring service where the service component accounts for a majority of the lease cost, the non-lease components of our lease agreements are not separated from the lease components.

For additional information about leases see Note 7.

DEPRECIATION, DEPLETION, ACCRETION AND AMORTIZATION

Depreciation is generally computed by the straight-line method at rates based on the estimated service lives of the various classes of assets, which include machinery and equipment (3 to 35 years), buildings (7 to 20 years) and land improvements (3 to 20 years). Finance leases are amortized over varying periods not in excess of applicable lease terms or estimated useful lives. Capitalized software costs are included in machinery and equipment and are depreciated on a straight-line basis beginning when the software project is substantially complete.

Cost depletion on depletable land is computed by the unit-of-sales method based on estimated recoverable units.

Accretion reflects the period-to-period increase in the carrying amount of the liability for asset retirement obligations. It is computed using the same credit-adjusted, risk-free rate used to initially measure the liability at fair value.

Leaseholds are amortized over varying periods not in excess of applicable lease terms or estimated useful lives.

Amortization of intangible assets subject to amortization is computed based on the estimated life of the intangible assets. A significant portion of our intangible assets is contractual rights in place associated with zoning, permitting and other rights to access and extract aggregates reserves. Contractual rights in place associated with aggregates reserves are amortized using the unit-of-sales method based on estimated recoverable units. Other intangible assets are amortized principally by the straight-line method.

Depreciation, depletion, accretion and amortization expense for the years ended December 31 is outlined below:

in millions		2021	2	020	2019	
Depreciation, Depletion, Accretion and Amortization						
Depreciation	\$	343.4	\$	315.2	\$	300.6
Depletion		31.2		21.0		22.4
Accretion		13.1		12.4		11.0
Amortization of finance leases		7.1		1.6		0.1
Amortization of intangibles		68.2		46.6		40.5
Total	\$	463.0	\$	396.8	\$	374.6

DERIVATIVE INSTRUMENTS

During the normal course of operations, we are exposed to market risks including interest rates, foreign currency exchange rates and commodity prices. From time to time, and consistent with our risk management policies, we use derivative instruments to balance the cost and risk of such expenses. We do not use derivative instruments for trading or other speculative purposes.

The accounting for gains and losses that result from changes in the fair value of derivative instruments depends on whether the derivatives have been designated and qualify as hedging instruments and the type of hedging relationship. Changes in the fair value of interest rate swap fair value hedges are recorded as interest expense consistent with the change in the fair value of the hedged item attributable to the risk being hedged. Changes in the fair value of interest rate swap cash flow hedges are recorded in accumulated other comprehensive income (AOCI) and are reclassified into interest expense in the same period the hedged items affect earnings. We may also enter into contracts that qualify for the normal purchases and normal sales (NPNS) exception. When a contract meets the criteria to qualify as NPNS, we apply such exception. Income recognition and realization related to NPNS contracts generally coincide with the physical delivery of the commodity. For contracts qualifying for the NPNS exception, no recognition of the contract's fair value in the consolidated financial statements is required until settlement of the contract as long as the transaction remains probable of occurring.

For additional information about derivative instruments see Note 5.

FAIR VALUE MEASUREMENTS

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as described below:

- Level 1: Quoted prices in active markets for identical assets or liabilities
- Level 2: Inputs that are derived principally from or corroborated by observable market data
- Level 3: Inputs that are unobservable and significant to the overall fair value measurement

Our assets at December 31 subject to fair value measurement on a recurring basis are summarized below:

	Level 1	Fair Value
in millions	2021	2020
Fair Value Recurring		
Rabbi Trust		
Mutual funds	\$ 34.7	\$ 28.1
Total	\$ 34.7	\$ 28.1

	Level 2 Fair Value			
in millions	2021	2020		
Fair Value Recurring				
Rabbi Trust				
Money market mutual fund	\$ 0.	\$ 0.8		
Total	\$ 0.	\$ 0.8		

We have two Rabbi Trusts for the purpose of providing a level of security for the employee nonqualified retirement and deferred compensation plans and for the directors' nonqualified deferred compensation plans. The fair values of these investments are estimated using a market approach. The Level 1 investments include mutual funds for which quoted prices in active markets are available. Level 2 investments are stated at estimated fair value based on the underlying investments in the fund (high-quality, short-term, U.S. dollar-denominated money market instruments).

Net gains of the Rabbi Trusts' investments were \$6.1 million, \$4.5 million and \$4.0 million for the years ended December 31, 2021, 2020 and 2019, respectively. The portions of the net gains related to investments still held by the Rabbi Trusts at December 31, 2021, 2020 and 2019 were \$5.3 million, \$4.1 million and \$3.7 million, respectively.

Interest rate swaps are measured at fair value using quoted market prices or pricing models that use prevailing market interest rates as of the measurement date. These interest rate swaps are more fully described in Note 5.

The carrying values of our cash equivalents, restricted cash, accounts and notes receivable, short-term debt, trade payables and accruals, and all other current liabilities approximate their fair values because of the short-term nature of these instruments. Additional disclosures for derivative instruments and interest-bearing debt are presented in Notes 5 and 6, respectively.

GOODWILL IMPAIRMENT

Goodwill represents the excess of the cost of net assets acquired in business combinations over the fair value of the identifiable tangible and intangible assets acquired and liabilities assumed in a business combination. Goodwill impairment exists when the fair value of a reporting unit is less than its carrying amount. As of December 31, 2021, goodwill totaled \$3,696.7 million as compared to \$3,172.1 million at December 31, 2020. Goodwill represents 27% of total assets at December 31, 2021 and 27% at December 31, 2020.

Goodwill is tested for impairment annually, as of November 1, or more frequently whenever events or changes in circumstances would more likely than not reduce the fair value of a reporting unit below its carrying amount. Goodwill is tested for impairment at the reporting unit level, one level below our operating segments. We have four operating segments organized around our principal product lines: Aggregates, Asphalt, Concrete and Calcium. Within these four operating segments, we have identified 19 reporting units (of which 11 carry goodwill) based primarily on geographic location. We have the option of either assessing qualitative factors to determine whether it is more likely than not that the carrying value of our reporting units exceeds their respective fair value or proceeding directly to a quantitative test. We elected to perform the quantitative impairment test for all years presented.

The quantitative impairment test compares the fair value of a reporting unit to its carrying value, including goodwill. If the fair value exceeds its carrying value, the goodwill of the reporting unit is not considered impaired. However, if the carrying value of a reporting unit exceeds its fair value, we recognize an impairment loss equal to that excess.

The results of the annual impairment tests performed as of November 1, 2021, 2020 and 2019 indicated that the fair values of all reporting units with goodwill substantially exceeded their carrying values. Accordingly, there were no charges for goodwill impairment in the years ended December 31, 2021, 2020 or 2019. Allocation of the purchase price for the U.S. Concrete acquisition (see Note 19) has not been finalized and therefore these operations were excluded from our goodwill impairment tests.

We estimate the fair values of the reporting units using both an income approach (which involves discounting estimated future cash flows) and a market approach (which involves the application of revenue and EBITDA multiples of comparable companies). Determining the fair value of our reporting units involves the use of significant estimates and assumptions and considerable management judgment. We base our fair value estimates on assumptions we believe to be reasonable at the time, but such assumptions are subject to inherent uncertainty and actual results may differ. Changes in key assumptions or management judgment with respect to a reporting unit or its prospects, which may result from a change in market conditions, market trends, interest rates or other factors outside of our control, or underperformance relative to historical or projected operating results, could result in a significantly different estimate of the fair value of our reporting units, which could result in an impairment charge in the future.

For additional information about goodwill see Note 18.

IMPAIRMENT OF LONG-LIVED ASSETS EXCLUDING GOODWILL

We evaluate the carrying value of long-lived assets, including intangible assets subject to amortization, when events and circumstances indicate that the carrying value may not be recoverable. The carrying value of long-lived assets is considered impaired when the estimated undiscounted cash flows from such assets are less than their carrying value. In that event, we recognize a loss equal to the amount by which the carrying value exceeds the fair value. Fair value is determined primarily by using a discounted cash flow methodology that requires considerable judgment and assumptions. Our estimate of net future cash flows is based on historical experience and assumptions of future trends, which may be different from actual results. We periodically review the appropriateness of the estimated useful lives of our long-lived assets.

We test long-lived assets for impairment at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets. As a result, our long-lived asset impairment test is at a significantly lower level than the level at which we test goodwill for impairment. In markets where we do not produce downstream products (e.g., asphalt mix and ready-mixed concrete), the lowest level of largely independent identifiable cash flows is at the individual aggregates operation or a group of aggregates operations collectively serving a local market. Conversely, in vertically integrated markets, the cash flows of our downstream and upstream businesses are not largely independently identifiable as the selling price of the upstream products (aggregates) determines the profitability of the downstream businesss.

As of December 31, 2021, net property, plant & equipment represents 41% of total assets, while net other intangible assets represents 13% of total assets. During 2021, 2020 and 2019, we recorded no material losses on impairment of long-lived assets.

For additional information about long-lived assets and intangible assets see Notes 4 and 18, respectively.

REVENUES AND REVENUE RECOGNITION

Total revenues include sales of product and services to customers, net of any discounts and taxes, and freight and delivery revenues billed to customers. Freight and delivery generally represent pass-through transportation we incur (including our administrative costs) and pay to third-party carriers to deliver our products to customers. The cost related to freight and delivery is included in cost of revenues.

Revenues for product sales are recognized when control passes to the customer (typically occurs when finished products are shipped/delivered). Construction paying revenues are recognized using the percentage-of-completion method.

For additional information regarding revenues and revenue recognition see Note 2.

STRIPPING COSTS

In the mining industry, the costs of removing overburden and waste materials to access mineral deposits are referred to as stripping costs.

Stripping costs incurred during the production phase are considered costs of extracted minerals under our inventory costing system, inventoried, and recognized in cost of sales in the same period as the revenue from the sale of the inventory. The production stage is deemed to begin when the activities, including removal of overburden and waste material that may contain incidental saleable material, required to access the saleable product are complete. Stripping costs considered as production costs and included in the costs of inventory produced were \$90.7 million in 2021, \$90.4 million in 2020 and \$86.1 million in 2019.

Conversely, stripping costs incurred during the development stage of a mine (pre-production stripping) are excluded from our inventory cost. Pre-production stripping costs are capitalized and reported within other noncurrent assets in our accompanying Consolidated Balance Sheets. Capitalized pre-production stripping costs are expensed over the productive life of the mine using the unit-of-sales method. Pre-production stripping costs included in other noncurrent assets were \$95.6 million as of December 31, 2021 and \$92.9 million as of December 31, 2020.

RECLAMATION COSTS

Reclamation costs resulting from normal use of long-lived assets are recognized over the period the asset is in use when there is a legal obligation to incur these costs upon retirement of the assets. Additionally, reclamation costs resulting from normal use under a mineral lease are recognized over the lease term when there is a legal obligation to incur these costs upon expiration of the lease. The obligation, which cannot be reduced by estimated offsetting cash flows, is recorded at fair value as a liability at the obligating event date and is accreted through charges to operating expenses. This fair value is also capitalized as part of the carrying amount of the underlying asset and depreciated over the estimated useful life of the asset. If the obligation is settled for other than the carrying amount of the liability, a gain or loss is recognized on settlement.

To determine the fair value of the obligation, we estimate the cost (including a reasonable profit margin) for a third party to perform the legally required reclamation tasks. This cost is then increased for both future estimated inflation and an estimated market risk premium related to the estimated years to settlement. Once calculated, this cost is discounted to fair value using present value techniques with a credit-adjusted, risk-free rate commensurate with the estimated years to settlement.

In estimating the settlement date, we evaluate the current facts and conditions to determine the most likely settlement date. If this evaluation identifies alternative estimated settlement dates, we use a weighted-average settlement date considering the probabilities of each alternative.

We review reclamation obligations at least annually for a revision to the cost or a change in the estimated settlement date. Additionally, reclamation obligations are reviewed in the period that a triggering event occurs that would result in either a revision to the cost or a change in the estimated settlement date. Examples of events that would trigger a change in the cost include a new reclamation law or amendment of an existing mineral lease. Examples of events that would trigger a change in the estimated settlement date include the acquisition of additional reserves or the closure of a facility.

The carrying value of these obligations was \$315.2 million as of December 31, 2021 and \$283.2 million as of December 31, 2020. For additional information about reclamation obligations (referred to in our financial statements as asset retirement obligations) see Note 17.

ENVIRONMENTAL COMPLIANCE

Our environmental compliance costs are undiscounted and include the cost of ongoing monitoring programs, the cost of remediation efforts and other similar costs. We accrue costs for environmental assessment and remediation efforts when we determine that a liability is probable and we can reasonably estimate the cost. At the early stages of a remediation effort, environmental remediation liabilities are not easily quantified due to the uncertainties of various factors. The range of an estimated remediation liability is defined and redefined as events in the remediation effort occur, but generally liabilities are recognized no later than the completion of the remedial feasibility study.

When we can estimate a range of probable loss, we accrue the most likely amount. If no amount in the range of probable loss is considered most likely, the minimum loss in the range is accrued. As of December 31, 2021, the spread between the amount accrued and the maximum loss in the range for all sites for which a range can be reasonably estimated was \$3.1 million — this amount does not represent our maximum exposure to loss for all environmental remediation obligations as it excludes those sites for which a range of loss cannot be reasonably estimated at this time. Accrual amounts may be based on technical cost estimations or the professional judgment of experienced environmental managers. Our Safety, Health and Environmental Affairs Management Committee routinely reviews cost estimates and key assumptions in response to new information, such as the kinds and quantities of hazardous substances, available technologies and changes to the parties participating in the remediation efforts. However, a number of factors, including adverse agency rulings and encountering unanticipated conditions as remediation efforts progress, may cause actual results to differ materially from accrued costs.

For additional information about environmental compliance costs see Note 8.

CLAIMS AND LITIGATION INCLUDING SELF-INSURANCE

We are involved with claims and litigation, including items covered under our self-insurance program. We are self-insured for losses related to workers' compensation up to \$2.0 million per occurrence and automotive and general/product liability up to \$10.0 million per occurrence. We have excess coverage on a per occurrence basis beyond these retention levels. Under our self-insurance program, we aggregate certain claims and litigation costs that are reasonably predictable based on our historical loss experience and accrue losses, including future legal defense costs, based on actuarial studies. Certain claims and litigation costs, due to their unique nature, are not included in our actuarial studies. We use both internal and outside legal counsel to assess the probability of loss and establish an accrual when the claims and litigation represent a probable loss and the cost can be reasonably estimated. For matters not included in our actuarial studies, legal defense costs are accrued when incurred. The following table outlines our self-insurance program at December 31:

dollars in millions	20	21	2020	
Self-insurance Program				
Self-insured liabilities (undiscounted)	\$	137.7	\$	75.6
Insured liabilities (undiscounted)		3.6		3.7
Discount rate		1.10%		0.30%
Amounts Recognized in Consolidated				
Balance Sheets				
Other accounts and notes receivable	\$	0.0	\$	0.6
Investments and long-term receivables		3.4		3.6
Other current liabilities		(50.7)		(20.7)
Other noncurrent liabilities		(83.2)		(57.6)
Net insurance liabilities (discounted)	\$	(130.5)	\$	(74.1)

The significant increases presented in the table above are primarily due to the acquisition of U.S. Concrete (see Note 19).

Estimated payments (undiscounted and excluding the impact of related receivables) under our self-insurance program for the five years subsequent to December 31, 2021 are as follows:

in millions	
Estimated Payments under Self-insurance Program	
2022	\$ 51.7
2023	32.6
2024	26.8
2025	7.0
2026	3.8

Significant judgment is used in determining the timing and amount of the accruals for probable losses, and the actual liability could differ materially from the accrued amounts.

For additional information about claims and litigation, see Note 12 under the caption Litigation and Environmental Matters.

SHARE-BASED COMPENSATION

All of our share-based compensation awards are classified as equity awards. We measure share-based compensation awards using fair-value-based measurement methods. This results in the recognition of compensation expense for all share-based compensation awards based on their fair value as of the grant date with adjustments for performance, as applicable. Compensation cost is recognized over the requisite service period. Forfeitures are recognized as they occur.

A summary of the estimated future compensation cost (unrecognized compensation expense) as of December 31, 2021 related to share-based awards granted to employees under our long-term incentive plans is presented below:

	Unrecog	Unrecognized	
	Compen	Weighted-average	
dollars in millions	Expe	Expense	
Share-based Compensation			
SOSARs ¹	\$	1.2	1.3
Performance shares		10.5	1.7
Restricted shares		8.5	1.7
Total/weighted-average	\$	20.2	1.7

¹ Stock-Only Stock Appreciation Rights (SOSARs)

Pretax compensation expense related to our employee share-based compensation awards and related income tax benefits for the years ended December 31 are summarized below:

in millions	2021		2020		2019	
Employee Share-based Compensation Awards						
Pretax compensation expense	\$	32.5	\$	31.4	\$	30.1
Income tax benefits		4.7		5.0		7.7

We receive an income tax deduction for share-based compensation equal to the excess of the market value of our common stock on the date of exercise or issuance over the exercise price. Tax benefits resulting from tax deductions in excess of the compensation cost recognized (excess tax benefits) are reflected as discrete income tax benefits in the period of exercise or issuance.

For additional information about share-based compensation, see Note 11 under the caption Share-based Compensation Plans.

PENSION AND OTHER POSTRETIREMENT BENEFITS

Accounting for pension and other postretirement benefits requires that we use assumptions for the valuation of projected benefit obligations (PBO) and the performance of plan assets. Each year, we review our assumptions for discount rates (used for PBO, service cost, and interest cost calculations) and the expected return on plan assets. Due to plan changes made in 2013, annual pay increases do not materially impact plan obligations.

- DISCOUNT RATES We use a high-quality bond full yield curve approach (specific spot rates for each annual expected cash flow) to establish the discount rates at each measurement date.
- EXPECTED RETURN ON PLAN ASSETS Our expected return on plan assets is: (1) a long-term view based on our current asset allocation, and (2) a judgment informed by consultation with our retirement plans' consultant and our pension plans' actuary.
- RATE OF INCREASE IN THE PER CAPITA COST OF COVERED HEALTHCARE BENEFITS We project the expected
 increases in the cost of covered healthcare benefits.

Accounting standards provide for the delayed recognition of differences between actual results and expected or estimated results. This delayed recognition of actual results allows for a smoothed recognition in earnings of changes in benefit obligations and asset performance. The differences between actual results and expected or estimated results are recognized in full in other comprehensive income. Amounts recognized in other comprehensive income are reclassified to earnings in a systematic manner over the average remaining service period of participants for our active plans or the average remaining lifetime of participants for our inactive plans.

We present the service cost component of net periodic benefit cost in cost of revenues and selling, administrative and general expense consistent with employee compensation costs. The other components of net periodic benefit cost are reported within other nonoperating income in our accompanying Consolidated Statements of Comprehensive Income.

For additional information about pension and other postretirement benefits see Note 10.

INCOME TAXES

We file federal, state and foreign income tax returns and account for the current and deferred tax effects of such returns using the asset and liability method. We recognize deferred tax assets and liabilities (which reflect our best assessment of the future taxes we will pay) based on the differences between the book basis and tax basis of assets and liabilities. Deferred tax assets represent items to be used as a tax deduction or credit in future tax returns while deferred tax liabilities represent items that will result in additional tax in future tax returns.

Significant judgments and estimates are required in determining our deferred tax assets and liabilities. These estimates are updated throughout the year to consider income tax return filings, our geographic mix of earnings, legislative changes and other relevant items. We are required to account for the effects of changes in income tax rates on deferred tax balances in the period in which the legislation is enacted.

Each quarter we analyze the likelihood that our deferred tax assets will be realized. Realization of the deferred tax assets ultimately depends on the existence of sufficient taxable income of the appropriate character in either the carryback or carryforward period. A valuation allowance is recorded if, based on the weight of all available positive and negative evidence, it is more likely than not (a likelihood of more than 50%) that some portion, or all, of a deferred tax asset will not be realized. A summary of our deferred tax assets is included in Note 9.

We recognize a tax benefit associated with a tax position when, in our judgment, it is more likely than not that the position will be sustained based upon the technical merits of the position. For a tax position that meets the more likely than not recognition threshold, we measure the income tax benefit as the largest amount that we judge to have a greater than 50% likelihood of being realized. A liability is established for the unrecognized portion of any tax position. Our liability for unrecognized tax benefits is adjusted periodically due to changing circumstances, such as the progress of tax audits, case law developments and new or emerging legislation.

Generally, we are not subject to significant changes in income taxes by any taxing jurisdiction for the years before 2018. While it is often difficult to predict the final outcome or the timing of resolution of any particular tax matter, we believe our liability for unrecognized tax benefits is appropriate.

We consider a tax position to be resolved at the earlier of the issue being "effectively settled," settlement of an examination, or the expiration of the statute of limitations. Upon resolution of a tax position, any liability for unrecognized tax benefits will be released.

Our liability for unrecognized tax benefits is generally presented as noncurrent. However, if we anticipate paying cash within one year to settle an uncertain tax position, the liability is presented as current. We classify interest and penalties associated with our liability for unrecognized tax benefits as income tax expense.

Our largest permanent item in computing both our taxable income and effective tax rate is the deduction allowed for statutory depletion. The impact of statutory depletion on the effective tax rate is presented in Note 9. The deduction for statutory depletion does not necessarily change proportionately to changes in pretax earnings.

COMPREHENSIVE INCOME

We report comprehensive income in our Consolidated Statements of Comprehensive Income and Consolidated Statements of Equity. Comprehensive income comprises two subsets: net earnings and other comprehensive income (OCI). OCI includes adjustments to cash flow hedges, as well as actuarial gains or losses and prior service costs related to pension and postretirement benefit plans.

For additional information about comprehensive income see Note 14.

EARNINGS PER SHARE (EPS)

Earnings per share are computed by dividing net earnings by the weighted-average common shares outstanding (basic EPS) or weighted-average common shares outstanding assuming dilution (diluted EPS), as set forth below:

in millions	2021	2020	2019
Weighted-average common shares outstanding Dilutive effect of	132.8	132.6	132.3
SOSARs	0.3	0.3	0.6
Other stock compensation plans	0.4	0.3	0.5
Weighted-average common shares outstanding,			
assuming dilution	133.5	133.2	133.4

All dilutive common stock equivalents are reflected in our earnings per share calculations. In periods of loss, shares that otherwise would have been included in our diluted weighted-average common shares outstanding computation would be excluded.

Antidilutive common stock equivalents are not included in our earnings per share calculations. The number of antidilutive common stock equivalents for which the exercise price exceeds the weighted-average market price for the years ended December 31 is as follows:

in millions	2021	2020	2019
Antidilutive common stock equivalents	0.0	0.1	0.1

RECLASSIFICATIONS

Certain items previously reported in specific financial statement captions have been reclassified to conform to the 2021 presentation. Such reclassifications had no impact on our prior results of operations, financial position or cash flows.

NEW ACCOUNTING STANDARDS

ACCOUNTING STANDARDS RECENTLY ADOPTED

INCOME TAXES During the first quarter of 2021, we adopted Accounting Standards Update (ASU) 2019-12, "Simplifying the Accounting for Income Taxes," which added new guidance to simplify the accounting for income taxes and changed the accounting for certain income tax transactions. The adoption of this standard did not materially impact our consolidated financial statements.

CONVERTIBLE INSTRUMENTS During the first quarter of 2021, we adopted ASU 2020-06, "Accounting for Convertible Instruments and Contracts in an Entity's Own Equity." This ASU reduced the number of models used to account for convertible instruments and modified the diluted earnings per share calculations for convertible instruments. This ASU also amended the accounting for certain contracts in an entity's own equity that are currently accounted for as derivatives. The adoption of this standard did not materially impact our consolidated financial statements.

ACCOUNTING STANDARDS PENDING ADOPTION

None

NOTE 2: REVENUES

Revenues are measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. Sales and other taxes we collect are recorded as liabilities until remitted and thus are excluded from revenues. Costs to obtain and fulfill contracts (primarily asphalt construction paving contracts) are immaterial and are expensed as incurred when the expected amortization period is one year or less.

Total revenues are primarily derived from our product sales of aggregates (crushed stone, sand and gravel, sand and other aggregates), asphalt mix and ready-mixed concrete, and include freight & delivery costs that we pass along to our customers to deliver these products. We also generate service revenues from our asphalt construction paving business and service revenues related to our aggregates business, such as landfill tipping fees. Our total service revenues were as follows: 2021 — \$221.4 million (4.0% of total revenues), 2020 — \$214.3 million (4.4% of total revenues) and 2019 — \$234.1 million (4.7% of total revenues).

Our products typically are sold to private industry and not directly to governmental entities. Although approximately 45% to 55% of our aggregates shipments have historically been used in publicly-funded construction, such as highways, airports and government buildings, relatively insignificant sales are made directly to federal, state, county or municipal governments/agencies. Therefore, although reductions in state and federal funding can curtail publicly-funded construction, the vast majority of our aggregates business is not directly subject to renegotiation of profits or termination of contracts with state or federal governments.

Our segment total revenues by geographic market (excluding the U.S. Concrete acquisition which is only presented by segment) for the years ended December 31, 2021, 2020 and 2019 are disaggregated as follows:

		For the Year Ended December 31, 2021									
in millions	A	Aggregates		s Asphalt		Concrete		Calcium		Total	
Total Revenues by Geographic Market ¹											
East	\$	1,283.7	\$	142.4	\$	243.4	\$	0.0	\$	1,669.5	
Gulf Coast		2,350.5		179.6		75.4		6.9		2,612.4	
West		597.8		455.8		47.0		0.0		1,100.6	
U.S. Concrete		113.0		0.0		401.0		0.0		514.0	
Segment sales	\$	4,345.0	\$	777.8	\$	766.8	\$	6.9	\$	5,896.5	
Intersegment sales		(344.3)		0.0		0.0		0.0		(344.3)	
Total revenues	\$	4,000.7	\$	777.8	\$	766.8	\$	6.9	\$	5,552.2	

		For the Year Ended December 31, 2020										
in millions		Aggregates		Asphalt		Concrete		Calcium		Total		
Total Revenues by Geographi	c Market 1											
East	\$	1,198.1	\$	142.2	\$	263.7	\$	0.0	\$	1,604.0		
Gulf Coast		2,165.2		178.5		71.1		7.7		2,422.5		
West		581.0		471.9		48.8		0.0		1,101.7		
Segment sales	\$	3,944.3	\$	792.6	\$	383.6	\$	7.7	\$	5,128.2		
Intersegment sales		(271.4)		0.0		0.0		0.0		(271.4)		
Total revenues	\$	3,672.9	\$	792.6	\$	383.6	\$	7.7	\$	4,856.8		

		For the Year Ended December 31, 2019										
in millions	A	Aggregates		Aggregates Asphalt		Asphalt	Concrete		Calcium			Total
Total Revenues by Geographic	: Market 1											
East	\$	1,254.8	\$	166.5	\$	261.2	\$	0.0	\$	1,682.5		
Gulf Coast		2,117.5		194.4		66.6		8.2		2,386.7		
West		618.0		494.9		67.8		0.0		1,180.7		
Segment sales	\$	3,990.3	\$	855.8	\$	395.6	\$	8.2	\$	5,249.9		
Intersegment sales		(320.8)		0.0		0.0		0.0		(320.8)		
Total revenues	\$	3,669.5	\$	855.8	\$	395.6	\$	8.2	\$	4,929.1		

The geographic markets are defined by states as follows:

East market — Arkansas, Delaware, Illinois, Kentucky, Maryland, North Carolina, Pennsylvania, Tennessee, Virginia, and Washington D.C.

Gulf Coast market — Alabama, Florida, Georgia, Louisiana, Mississippi, Oklahoma, Quintana Roo (Mexico), South Carolina and Texas

West market — Arizona. California and New Mexico

U.S. Concrete — British Columbia (Canada), California, Hawaii, New Jersey, New York, Oklahoma, Pennsylvania, Texas, the U.S. Virgin Islands and Washington D.C.

PRODUCT REVENUES

Revenue is recognized when obligations under the terms of a contract with our customer are satisfied; generally this occurs at a point in time when our aggregates, asphalt mix and ready-mixed concrete are shipped/delivered and control passes to the customer. Revenue for our products is recorded at the fixed invoice amount and payment is due by the 15th day of the following month — we do not offer discounts for early payment.

Freight & delivery generally represents pass-through transportation we incur (including our administrative costs) and pay to third-party carriers to deliver our products to customers and are accounted for as a fulfillment activity. Likewise, the cost related to freight & delivery are included in cost of revenues.

Freight & delivery revenues are as follows:

in millions	2021		2020		2	2019
Freight & Delivery Revenues		-				
Total revenues	\$	5,552.2	\$	4,856.8	\$	4,929.1
Freight & delivery revenues ¹		(768.3)		(738.5)		(747.9)
Total revenues excluding freight & delivery	\$	4,783.9	\$	4,118.3	\$	4,181.2

¹ Includes freight & delivery to remote distribution sites.

CONSTRUCTION PAVING SERVICE REVENUES

Revenue from our asphalt construction paving business is recognized over time using the percentage-of-completion method under the cost approach. The percentage of completion is determined by costs incurred to date as a percentage of total costs estimated for the project. Under this approach, recognized contract revenue equals the total estimated contract revenue multiplied by the percentage of completion. Our construction contracts are unit priced, and an account receivable is recorded for amounts invoiced based on actual units produced. Contract assets for estimated earnings in excess of billings, contract assets related to retainage provisions and contract liabilities for billings in excess of costs are immaterial. Variable consideration in our construction paving contracts is immaterial and consists of incentives and penalties based on the quality of work performed. Our construction paving contracts may contain warranty provisions covering defects in equipment, materials, design or workmanship that generally run from nine months to one year after project completion. Due to the nature of our construction paving projects, including contract owner inspections of the work during construction and prior to acceptance, we have not experienced material warranty costs for these short-term warranties.

VOLUMETRIC PRODUCTION PAYMENT DEFERRED REVENUES

In 2013 and 2012, we sold a percentage interest in certain future aggregates production for net cash proceeds of \$226.9 million. These transactions, structured as volumetric production payments (VPPs):

- relate to eight quarries in Georgia and South Carolina
- provide the purchaser solely with a nonoperating percentage interest in the subject quarries' future aggregates production
- contain no minimum annual or cumulative guarantees by us for production or sales volume, nor minimum sales price
- are both volume and time limited (we expect the transactions will last approximately 25 years, limited by volume rather than time)

We are the exclusive sales agent for, and transmit quarterly to the purchaser the proceeds from the sale of, the purchaser's share of aggregates production. Our consolidated total revenues exclude the revenue from the sale of the purchaser's share of aggregates.

The proceeds we received from the sale of the percentage interest were recorded as deferred revenue on the balance sheet. We recognize revenue on a unit-of-sales basis (as we sell the purchaser's share of production) relative to the volume limitations of the transactions. Given the nature of the risks and potential rewards assumed by the buyer, the transactions do not reflect financing activities.

Reconciliation of the VPP deferred revenue balances (current and noncurrent) is as follows:

in millions	2021 2020			020	2019	
Deferred Revenue						
Balance at beginning of year	\$	178.0	\$	185.3	\$	192.8
Revenue recognized from deferred revenue		(7.9)		(7.3)		(7.5)
Balance at end of year	\$	170.1	\$	178.0	\$	185.3

Based on expected sales from the specified quarries, we expect to recognize \$7.5 million of VPP deferred revenue as income in 2022 (reflected in other current liabilities in our December 31, 2021 Consolidated Balance Sheet).

NOTE 3: INVENTORIES

Inventories at December 31 are as follows:

in millions	202	21	2020		
Inventories					
Finished products ¹	\$	418.0	\$	378.4	
Raw materials		59.9		33.8	
Products in process		4.2		4.5	
Operating supplies and other		39.2		31.9	
Total	\$	521.3	\$	448.6	

¹ Includes inventories encumbered by volumetric production payments (see Note 2), as follows: December 31, 2021 — \$2.8 million and December 31, 2020 — \$2.4 million.

In addition to the inventory balances presented above, as of December 31, 2021 and December 31, 2020, we have \$8.5 million and \$11.0 million, respectively, of inventory classified as long-term assets (other noncurrent assets) as we do not expect to sell the inventory within one year of their respective balance sheet dates.

We use the LIFO method of valuation for most of our inventories as it results in a better matching of costs with revenues. Inventories valued under the LIFO method total \$290.2 million at December 31, 2021 and \$307.7 million at December 31, 2020. During 2021, 2020 and 2019, inventory reductions resulted in liquidations of LIFO inventory layers carried at costs prevailing in prior years as compared to current-year costs. The effect of the LIFO liquidation on 2021 results was to decrease cost of revenues by \$0.6 million and increase net earnings by \$0.4 million. The effect of the LIFO liquidation on 2020 results was to decrease cost of revenues by \$0.9 million and increase net earnings by \$0.6 million. The effect of the LIFO liquidation on 2019 results was to decrease cost of revenues by \$1.1 million and increase net earnings by \$0.9 million.

Estimated current cost exceeded LIFO cost at December 31, 2021 and 2020 by \$199.7 million and \$193.0 million, respectively. In periods of increasing costs, LIFO generally results in higher cost of revenues than under FIFO. In periods of decreasing costs, the results are generally the opposite. We provide supplemental income disclosures to facilitate comparisons with companies not on LIFO. The supplemental income calculation is derived by tax-affecting the change in the LIFO reserve for the periods presented. If all inventories valued at LIFO cost had been valued under first-in, first-out (FIFO) method, the approximate effect on net earnings would have been an increase of \$5.3 million in 2021, an increase of \$7.3 million in 2020 and an increase of \$5.5 million in 2019.

NOTE 4: PROPERTY, PLANT & EQUIPMENT

Balances of major classes of assets and allowances for depreciation, depletion and amortization at December 31 are as follows:

in millions	20	021	2	020
Property, Plant & Equipment				
Land and land improvements ¹	\$	3,631.7	\$	3,013.3
Buildings		182.9		145.4
Machinery and equipment		6,109.2		5,517.9
Finance leases (see Note 7)		36.3		7.8
Deferred asset retirement costs (see Note 17) ²		182.5		240.8
Construction in progress		301.8		176.9
Total, gross	\$	10,444.4	\$	9,102.1
Less allowances for depreciation, depletion				
and amortization		4,897.6		4,676.1
Total, net	\$	5,546.8	\$	4,426.0

¹ Includes depletable land as follows: December 31, 2021 — \$2,238.4 million and December 31, 2020 — \$1,712.1 million.

Capitalized interest costs with respect to qualifying construction projects and total interest costs incurred before recognition of the capitalized amount for the years ended December 31 are as follows:

in millions	2021		2020		20	19
Capitalized interest cost	\$	4.2	\$	3.5	\$	3.9
Total interest cost incurred before recognition						
of the capitalized amount		153.5		139.5		134.1

Capitalized software costs of \$14.7 million (including \$13.2 million of capitalized software obtained via the U.S. Concrete acquisition) and \$2.1 million are reflected in net property, plant & equipment as of December 31, 2021 and 2020, respectively. We capitalized software costs for the years ended December 31 as follows: 2021 — \$2.7 million, 2020 — \$1.1 million and 2019 — \$1.5 million.

NOTE 5: DERIVATIVE INSTRUMENTS

During the normal course of operations, we are exposed to market risks including interest rates, foreign currency exchange rates and commodity prices. From time to time, we use derivative instruments to balance the cost and risk of such expenses. We do not use derivative instruments for trading or other speculative purposes.

In 2007, 2018 and 2020, we entered into interest rate locks of future debt issuances to hedge the risk of higher interest rates. These interest rate locks were designated as cash flow hedges. The gain/loss upon settlement of these cash flow hedges is deferred (recorded in accumulated other comprehensive income (AOCI)) and amortized to interest expense over the term of the related debt.

This amortization was reflected in the accompanying Consolidated Statements of Comprehensive Income for the years ended December 31 as follows:

in millions	Location on Statement	2	2021	2	020	2019	
Cash Flow Hedges							
Loss reclassified from AOCI	Interest expense	\$	(2.0)	\$	(2.3)	\$	(0.3)

For the 12-month period ending December 31, 2022, we estimate that \$2.1 million of the \$22.5 million net of tax loss in AOCI will be reclassified to interest expense.

² This significant decrease is due to the write-off of assets with a corresponding write-off of allowances for depreciation.

NOTE 6: DEBT

Debt at December 31 is detailed as follows:

	Effective				
in millions	Interest Rates	2	2021	2	2020
Short-term Debt					
Bank line of credit expires 2025 ¹		\$	0.0	\$	0.0
Total short-term debt		\$	0.0	\$	0.0
Long-term Debt					
Bank line of credit expires 2025 ¹		\$	0.0	\$	0.0
Delayed draw term loan expires 2024	1.22%		1,100.0		0.0
Floating-rate notes due 2021			0.0		500.0
8.85% notes due 2021			0.0		6.0
4.50% notes due 2025	4.65%		400.0		400.0
3.90% notes due 2027	4.00%		400.0		400.0
3.50% notes due 2030	3.94%		750.0		750.0
7.15% notes due 2037	8.05%		129.2		129.2
4.50% notes due 2047	4.59%		700.0		700.0
4.70% notes due 2048	5.42%		460.9		460.9
Other notes	2.35%		9.5		11.7
Total long-term debt - face value		\$	3,949.6	\$	3,357.8
Unamortized discounts and debt issuance costs			(69.6)		(70.2)
Total long-term debt - book value		\$	3,880.0	\$	3,287.6
Less current maturities			5.2		515.4
Total long-term debt - reported value		\$	3,874.8	\$	2,772.2
Estimated fair value of long-term debt		\$	4,418.5	\$	3,443.2

¹ Borrowings on the bank line of credit are classified as short-term if we intend to repay within twelve months and as long-term if we have the intent and ability to extend payment beyond twelve months.

Discounts and debt issuance costs are amortized using the effective interest method over the terms of the respective notes resulting in \$13.9 million and \$7.2 million, respectively, of net interest expense for these items for 2021 and 2020.

BRIDGE FACILITY, DELAYED DRAW TERM LOAN AND LINE OF CREDIT

In June 2021, concurrent with the announcement of the pending acquisition of U.S. Concrete (see Note 19 for additional information), we obtained a \$2,200.0 million bridge facility commitment from Truist Bank. Later, in June 2021, we entered into a \$1,600.0 million delayed draw term loan with a subset of the banks that provide our line of credit and terminated the bridge facility commitment. The delayed draw term loan was drawn in August 2021 for \$1,600.0 million upon the acquisition of U.S. Concrete and was paid down to \$1,100.0 million in September 2021. Amounts repaid are no longer available for borrowing and outstanding borrowings are due August 2024. The delayed draw term loan contains covenants customary for an unsecured investment-grade facility and mirror those in our line of credit. As of December 31, 2021, we were in compliance with the delayed draw term loan covenants.

Financing costs for the bridge facility commitment and the delayed draw term loan totaled \$13.3 million, \$9.4 million of which was recognized as interest expense in 2021. Borrowings on the delayed draw term loan bear interest, at our option, at either LIBOR plus a credit margin ranging from 0.875% to 1.375%, or Truist Bank's base rate (generally, its prime rate) plus a credit margin ranging from 0.000% to 0.375%. The credit margins and commitment fee are determined by our credit ratings. As of December 31, 2021, the credit margin for LIBOR borrowings was 1.000% and the credit margin for base rate borrowings was 0.000%.

In September 2020, we executed a new five-year unsecured line of credit of \$1,000.0 million, incurring \$4.6 million of transaction costs. The line of credit contains covenants customary for an unsecured investment-grade facility. As of December 31, 2021, we were in compliance with the line of credit covenants.

Borrowings on the line of credit bear interest, at our option, at either LIBOR plus a credit margin ranging from 1.000% to 1.625%, or Truist Bank's base rate (generally, its prime rate) plus a credit margin ranging from 0.000% to 0.625%. The credit margin for both LIBOR and base rate borrowings is determined by our credit ratings. Standby letters of credit, which are issued under the line of credit and reduce availability, are charged a fee equal to the credit margin for LIBOR borrowings plus 0.175%. We also pay a commitment fee on the daily average unused amount of the line of credit that ranges from 0.090% to 0.225% determined by our credit ratings. As of December 31, 2021, the credit margin for LIBOR borrowings was 1.125%, the credit margin for base rate borrowings was 0.125%, and the commitment fee for the unused amount was 0.100%.

As of December 31, 2021, our available borrowing capacity under the line of credit was \$940.4 million. Utilization of the borrowing capacity was as follows:

- none was borrowed
- \$59.6 million was used to provide support for outstanding standby letters of credit

TERM DEBT

Essentially all of our \$3,949.6 million (face value) of term debt (which includes the \$1,100.0 million delayed draw term loan) is unsecured. \$2,840.2 million of such debt is governed by two essentially identical indentures that contain customary investment-grade type covenants. As of December 31, 2021, we were in compliance with all term debt covenants.

In August 2021, we assumed \$434.5 million (fair value) of senior notes due 2029 in connection with the acquisition of U.S. Concrete and retired these notes in September 2021.

In May 2020, we issued \$750.0 million of 3.50% senior notes due 2030. Total proceeds were \$741.4 million (net of discounts and transaction costs). \$250.0 million of the proceeds were used to retire the \$250.0 million floating rate notes due June 2020. The remainder of the proceeds, together with cash on hand, were used to retire the \$500.0 million floating rate notes due March 2021.

The total scheduled (principal and interest) debt payments, excluding the line of credit, for the five years subsequent to December 31, 2021 are as follows:

in millions	Total		Principal		Int	erest
Scheduled Debt Payments (excluding the line of credit)						
2022	\$	145.3	\$	5.2	\$	140.1
2023		151.5		2.3		149.2
2024		1,243.3		1,100.9		142.4
2025		513.8		400.5		113.3
2026		104.7		0.4		104.3

STANDBY LETTERS OF CREDIT

We provide, in the normal course of business, certain third-party beneficiaries with standby letters of credit to support our obligations to pay or perform according to the requirements of an underlying agreement. Such letters of credit typically have an initial term of one year, typically renew automatically, and can only be modified or canceled with the approval of the beneficiary. Except for \$24.8 million of risk management insurance letters of credit that expire in July 2022, our standby letters of credit are issued by banks that participate in our \$1,000.0 million line of credit and reduce the borrowing capacity thereunder. Our standby letters of credit as of December 31, 2021 are summarized by purpose in the table below:

in millions	
Standby Letters of Credit	
Risk management insurance	\$ 76.0
Reclamation/restoration requirements	8.4
Total	\$ 84.4

NOTE 7: LEASES

Our portfolio of nonmineral leases is composed of leases for real estate (including office buildings, aggregates sales yards and terminals, and concrete and asphalt sites) and equipment (including railcars and rail track, barges, and office, plant and mobile equipment).

Lease right-of-use (ROU) assets and liabilities reflected on our December 31 balance sheets and the weighted-average lease term and discount rate are as follows:

dollars in millions	dollars in millions Classification on the Balance Sheet			2	020
Assets					
Operating lease ROU assets		\$	771.1	\$	482.5
Accumulated amortization			(79.7)		(59.4)
Operating leases, net	Operating lease right-of-use assets, net		691.4		423.1
Finance lease assets			129.2		7.8
Accumulated amortization			(8.8)		(1.6)
Finance leases, net	Property, plant & equipment, net		120.4		6.2
Total lease assets		\$	811.8	\$	429.3
Liabilities					
Current					
Operating	Other current liabilities	\$	49.2	\$	37.0
Finance	Other current liabilities		35.4		2.0
Noncurrent					
Operating	Noncurrent operating lease liabilities		642.5		399.6
Finance	Other noncurrent liabilities		60.5		4.1
Total lease liabilities		\$	787.6	\$	442.7
Lease Term and Discount Rate	•				
Weighted-average remaining lea	se term (years)				
Operating leases			21.0		9.5
Finance leases			3.3		4.2
Weighted-average discount rate					
Operating leases			3.8%		3.6%
Finance leases			1.3%		1.4%

The increases in ROU assets and liabilities presented above primarily relate to the acquisition of U.S. Concrete (see Note 19 for additional information). Our lease agreements do not contain residual value guarantees, restrictive covenants or early termination options that we deem material. We have not sought or been granted any material lease concessions as a result of the COVID-19 pandemic.

Our building leases have remaining noncancelable periods of 0 - 17 years and lease terms (including options to extend) of 0 - 25 years. Key factors in determining the certainty of lease renewals include the location of the building, the value of leasehold improvements and the cost to relocate. Rental payments for certain of our building leases are periodically adjusted for inflation, and this variable component is recognized as expense when incurred. Many of our building leases contain common area maintenance charges which we include in the calculation of our lease liability (the lease consideration is not allocated between the lease and non-lease components).

Our aggregates sales yard leases have remaining noncancelable periods of 0 - 27 years and lease terms of 0 - 77 years. The key factor in determining the certainty of lease renewals is the financial impact of extending the lease, including the reserve life of the sourcing aggregates quarry. Certain aggregates sales yard lease agreements include rental payments based on a percentage of sales over contractual levels or the number of shipments received into the sales yard. Variable payments for these sales yards comprise a majority of the overall variable lease cost presented in the table below.

Our concrete and asphalt site leases have remaining noncancelable periods of 0 - 18 years and lease terms of 0 - 77 years. The key factor in determining the certainty of lease renewals is the financial impact of extending the lease, including the reserve life of the sourcing aggregates quarry. Rental payments are generally fixed for our concrete and asphalt sites.

Our rail (car and track) leases have remaining noncancelable periods of 0 - 4 years and lease terms of 0 - 63 years. Key factors in determining the certainty of lease renewals include the market rental rate for comparable assets and, in some cases, the cost incurred to restore the asset. Rental payments are fixed for our rail leases. The majority of our rail leases contain substitution rights that allow the supplier to replace damaged equipment. Because these rights are generally limited to either replacing railcars or moving our placement on rail track for purposes of repair or maintenance, we do not consider these substitution rights to be substantive and have recorded a lease liability and ROU asset for all leased rail.

Our barge leases have remaining noncancelable periods of 0 - 6 years and lease terms of 0 - 13 years. Key factors in determining the certainty of lease renewals include the market rental rate for comparable assets and, in some cases, the cost incurred to restore the asset. Rental payments are fixed. Like our rail leases, our barge leases contain non-substantive substitution rights that are limited to replacing barges in need of repair or maintenance.

Office, plant and mobile equipment leases have remaining noncancelable periods of 0 - 5 years and lease terms of 0 - 5 years. The key factor in determining the certainty of lease renewals is the market rental rate for comparable assets. Rental payments are generally fixed for our equipment leases with terms greater than 1 year. The significant majority of our short-term lease cost presented in the table below is derived from office and plant equipment leases with terms of 1 year or less.

The components of lease expense for the years ended December 31, 2021, 2020 and 2019 are as follows:

in millions	2021		2020		2019
Lease Cost					
Finance lease cost					
Amortization of right-of-use assets	\$	7.1	\$	1.6	\$ 0.1
Interest on lease liabilities		0.6		(0.1)	0.0
Operating lease cost		71.0		58.5	56.5
Short-term lease cost 1		27.3		30.5	35.4
Variable lease cost		10.6		12.9	13.7
Sublease income		(3.1)		(2.7)	(3.0)
Total lease cost	\$	113.5	\$	100.7	\$ 102.7

Our short-term lease cost includes the cost of leases with an initial term of one month or less.

Cash paid for operating leases was \$64.4 million for 2021 and \$54.9 million for 2020. Cash paid for finance leases was \$14.0 million for 2021 and \$1.7 million for 2020.

Maturity analysis on an undiscounted basis of our lease liabilities (see Note 12 for mineral lease payments) as of December 31, 2021 is as follows:

in millions	Op L	Finance Leases		
Maturity of Lease Liabilities				
2022	\$	72.5	\$	33.9
2023		66.0		27.1
2024		63.3		19.7
2025		61.0		12.2
2026		56.3		5.3
Thereafter		797.2		0.0
Total minimum lease payments	\$	1,116.3	\$	98.2
Less: Lease payments representing interest		424.6		2.3
Present value of future minimum lease payments	\$	691.7	\$	95.9
Less: Current obligations under leases		49.2		35.4
Long-term lease obligations	\$	642.5	\$	60.5

NOTE 8: ACCRUED ENVIRONMENTAL REMEDIATION COSTS

Our Consolidated Balance Sheets as of December 31 include accrued environmental remediation costs (measured on an undiscounted basis) as follows:

in millions	2021	1	202	20
Accrued Environmental Remediation Costs				
Continuing operations	\$	23.2	\$	25.5
Retained from former Chemicals business		10.7		11.0
Total	\$	33.9	\$	36.5

The long-term portion of the accruals noted above is included in other noncurrent liabilities in the accompanying Consolidated Balance Sheets and amounted to \$15.9 million at December 31, 2021 and \$12.9 million at December 31, 2020. The short-term portion of these accruals is included in other current liabilities in the accompanying Consolidated Balance Sheets.

The accrued environmental remediation costs in continuing operations relate primarily to the former Florida Rock, Tarmac, and CalMat facilities acquired in 2007, 2000 and 1999, respectively. The balances noted above for the former Chemicals business relate to retained environmental remediation costs from the 2003 sale of the Performance Chemicals business and the 2005 sale of the Chloralkali business. Refer to Note 12 for additional discussion of contingent environmental matters.

NOTE 9: INCOME TAXES

The components of earnings from continuing operations before income taxes are as follows:

in millions	2021		2020		2	019
Earnings from Continuing Operations before Income Taxes						
Domestic	\$	871.6	\$	733.0	\$	734.0
Foreign		2.2		10.8		23.7
Total	\$	873.8	\$	743.8	\$	757.7

Income tax expense (benefit) from continuing operations consists of the following:

in millions	2021		2020		20	019
Income Tax Expense (Benefit) from Continuing Operations						
Current		400.0	•		•	
Federal	\$	103.9	\$	69.2	\$	31.2
State and local		34.6		23.8		24.4
Foreign		(5.0)		0.9		3.3
Total	\$	133.5	\$	93.9	\$	58.9
Deferred						
Federal	\$	39.2	\$	50.9	\$	67.8
State and local		26.5		10.8		8.7
Foreign		0.9		0.2		(0.2)
Total	\$	66.6	\$	61.9	\$	76.3
Total expense	\$	200.1	\$	155.8	\$	135.2

Income tax expense (benefit) differs from the amount computed by applying the federal statutory income tax rate to earnings from continuing operations before income taxes. The sources and tax effects of the differences are as follows:

dollars in millions	2021 2020			2019				
Income tax expense at the federal	-	Ī			_			
statutory tax rate	\$ 183.5	21.0%	\$	156.2	21.0%	\$	159.1	21.0%
Expense (Benefit) from								
Income Tax Differences								
Statutory depletion	(28.3)	-3.2%		(24.7)	-3.3%		(23.0)	-3.0%
State and local income taxes, net of federal								
income tax benefit	34.7	4.0%		27.4	3.7%		26.1	3.4%
Share-based compensation	(6.1)	-0.7%		(6.9)	-0.9%		(17.2)	-2.3%
Uncertain tax positions	2.5	0.3%		1.4	0.2%		1.8	0.2%
AL NOL valuation allowance	13.7	1.6%		0.0	0.0%		0.0	0.0%
Research and development credit	(2.7)	-0.3%		(2.7)	-0.4%		(9.5)	-1.3%
Other, net	2.8	0.2%		5.1	0.6%		(2.1)	-0.2%
Total income tax expense/								
Effective tax rate	\$ 200.1	22.9%	\$	155.8	20.9%	\$	135.2	17.8%

Deferred taxes on the balance sheet result from temporary differences between the amount of assets and liabilities recognized for financial reporting and tax purposes. The components of the net deferred income tax liability at December 31 are as follows:

in millions	202	21	20)20
Deferred Tax Assets Related to				
Employee benefits	\$	11.8	\$	21.9
Incentive compensation		62.5		58.2
Asset retirement obligations & other reserves		77.9		58.3
State net operating losses		75.0		67.7
Other		59.1		25.4
Total gross deferred tax assets	\$	286.3	\$	231.5
Valuation allowance		(53.3)		(32.5)
Total net deferred tax asset	\$	233.0	\$	199.0
Deferred Tax Liabilities Related to		_		_
Property, plant & equipment	\$	794.3	\$	622.9
Goodwill/other intangible assets		380.2		252.2
Other		64.4		30.0
Total deferred tax liabilities	\$	1,238.9	\$	905.1
Net deferred tax liability	\$	1,005.9	\$	706.1

As of December 31, 2021 and 2020, we have gross deferred tax assets of \$176.7 million and \$111.5 million, respectively, related to operating lease liabilities, and gross deferred tax liabilities of \$176.7 million and \$108.1 million, respectively, related to ROU assets. These amounts are presented net in Other deferred tax assets.

In February 2021, the Alabama Business Competitiveness Act (ABC Act) was signed into law. The ABC Act contained a provision requiring most taxpayers to change from a three-factor, double-weighted sales method to a single-sales factor method to apportion income to Alabama. This provision had the effect of significantly reducing our apportionment of income to Alabama, thereby further inhibiting our ability to utilize our Alabama net operating loss (NOL) carryforward. As a result, we recorded a charge in the first quarter of 2021 to increase the valuation allowance by \$13.7 million. No other material tax impacts resulted from the enactment of the ABC Act.

Each quarter we analyze the likelihood that our deferred tax assets will be realized. A valuation allowance is recorded if, based on the weight of all available positive and negative evidence, it is more likely than not (a likelihood of more than 50%) that some portion, or all, of a deferred tax asset will not be realized. At December 31, 2021, we have Alabama state NOL carryforward deferred tax assets of \$63.2 million, against which we have a valuation allowance of \$42.9 million (after considering the ABC Act above). Almost all of the Alabama NOL carryforward would expire between 2023 and 2029 if not utilized.

Changes in our liability for unrecognized tax benefits for the years ended December 31 are as follows:

in millions	20	21	20	20	2019	
Unrecognized tax benefits as of January 1	\$	6.8	\$	5.4	\$	3.7
Increases for tax positions related to						
Prior years		0.5		0.4		0.2
Current year		3.9		1.9		3.2
Decreases for tax positions related to						
Prior years		0.0		0.0		0.0
Expiration of applicable statute of limitations		(0.4)		(0.9)		(1.7)
Unrecognized tax benefits as of December 31	\$	10.8	\$	6.8	\$	5.4

We classify interest and penalties recognized on the liability for unrecognized tax benefits as income tax expense. Interest and penalties recognized as income tax expense were \$0.2 million in 2021, \$0.0 million in 2020 and \$0.0 million in 2019. The balance of accrued interest and penalties included in our liability for unrecognized tax benefits as of December 31 was \$0.8 million in 2021, \$0.3 million in 2020 and \$0.3 million in 2019. Our liability for unrecognized tax benefits at December 31 in the table above includes \$10.3 million in 2021, \$6.6 million in 2020 and \$5.3 million in 2019 that would affect the effective tax rate if recognized. We anticipate no single tax position generating a significant increase or decrease in our liability for unrecognized tax benefits within 12 months of this reporting date.

As of December 31, 2021, income tax receivables of \$5.0 million and \$0.6 million are included in other accounts and notes receivable and other current assets, respectively, in the accompanying Consolidated Balance Sheet. There were similar receivables of \$5.3 million and \$0.9 million recorded in other accounts and notes receivable and other current assets, respectively, as of December 31, 2020.

NOTE 10: BENEFIT PLANS

PENSION PLANS

We sponsor two qualified, noncontributory defined benefit pension plans, the Vulcan Materials Company Pension Plan (VMC Pension Plan) and the CMG Hourly Pension Plan (CMG Pension Plan). The VMC Pension Plan has been closed to new entrants since 2007 and benefit accruals ceased in 2005 for hourly participants and 2013 for salaried participants. The CMG Pension Plan is closed to new entrants other than through one small union, and benefits continue to accrue equal to a flat dollar amount for each year of service. In addition to these qualified plans, we sponsor three unfunded, nonqualified pension plans. The projected benefit obligation (PBO) presented in the table below includes \$59.2 million and \$67.2 million related to these unfunded, nonqualified pension plans for 2021 and 2020, respectively.

During October 2021, we purchased (using pension plan assets) an irrevocable group annuity contract from an insurance company to transfer \$87.2 million of our outstanding PBO, representing approximately 10% of the total PBO as of the purchase date (remeasured at October 31). As a result of this transaction: 1) we incurred a settlement charge of \$12.1 million, 2) we were relieved of all responsibility for these pension obligations, and 3) the insurance company is now required to pay and administer the retirement benefits owed to 2,764 U.S. retirees and beneficiaries (representing approximately 50% of retirees currently in payment status), with no change to the amount, timing or form of retirement benefit payments.

At November 30, 2020, the plans were remeasured to reflect settlement accounting for the CMG Pension Plan and the VMC Pension Plan as a result of voluntary lump sum distributions to certain fully vested plan participants (resulting in a \$22.7 million settlement charge). The following table sets forth the combined funded status of the plans and their reconciliation with the related amounts recognized in our consolidated financial statements at December 31:

in millions	2021			020
Change in Benefit Obligation Projected benefit obligation at beginning of year	\$	1,059.5	\$	1,090.9
Service cost	Ψ	4.8	Ф	4.9
Interest cost		19.7		29.3
Actuarial (loss) gain		(25.0)		89.1
Benefits paid		(56.4)		(154.7)
Annuity purchase		(87.2)		0.0
Projected benefit obligation at end of year	\$	915.4	\$	1,059.5
Change in Fair Value of Plan Assets				
Fair value of assets at beginning of year	\$	944.2	\$	949.0
Actual return on plan assets		51.9		141.1
Employer contribution		8.0		8.8
Benefits paid		(56.4)		(154.7)
Annuity purchase		(87.2)		0.0
Fair value of assets at end of year	\$	860.5	\$	944.2
Funded status		(54.9)		(115.3)
Net amount recognized	\$	(54.9)	\$	(115.3)
Amounts Recognized in the Consolidated				
Balance Sheets				
Noncurrent assets	\$	18.2	\$	0.0
Current liabilities		(8.2)		(8.1)
Noncurrent liabilities		(64.9)		(107.2)
Net amount recognized	\$	(54.9)	\$	(115.3)
Amounts Recognized in Accumulated				
Other Comprehensive Income				
Net actuarial loss	\$	176.4	\$	230.5
Prior service cost		3.8		5.1
Total amount recognized	\$	180.2	\$	235.6

The decrease in actuarial loss as of December 31, 2021 was primarily attributable to an increase in the discount rates for the plans (approximately 0.3 to 0.6 percentage points) compared with the prior year.

The following table sets forth the pension plans for which their accumulated benefit obligation (ABO) or projected benefit obligation (PBO) exceeds the fair value of their respective plan assets at December 31:

in millions	202	21	20	020
Pension plans with ABO in excess of plan assets Accumulated benefit obligation	¢	249.2	¢	1.058.6
<u> </u>	Ф		φ	,
Fair value of assets		176.6		944.3
Pension plans with PBO in excess of plan assets				
Projected benefit obligation	\$	249.7	\$	1,059.5
Fair value of assets		176.6		944.3

The following table sets forth the components of net periodic benefit cost, amounts recognized in other comprehensive income and weighted-average assumptions of the plans at December 31:

dollars in millions	2	2021	2020		2020 20		019
Components of Net Periodic Pension Benefit Cost							
Service cost	\$	4.8	\$	4.9	\$	5.0	
Interest cost	•	19.7	*	29.3	Ψ	37.6	
Expected return on plan assets		(42.8)		(48.6)		(47.7)	
Settlement charge		12.1		22.7		0.0	
Amortization of prior service cost		1.3		1.4		1.4	
Amortization of actuarial loss		8.0		11.9		5.4	
Net periodic pension benefit cost	\$	3.1	\$	21.6	\$	1.7	
Changes in Plan Assets and Benefit							
Obligations Recognized in Other							
Comprehensive Income							
Net actuarial loss (gain)	\$	(34.0)	\$	(3.4)	\$	33.7	
Reclassification of prior service cost		(1.3)		(1.4)		(1.4)	
Reclassification of actuarial loss		(20.1)		(34.6)		(5.4)	
Amount recognized in other comprehensive							
income	\$	(55.4)	\$	(39.4)	\$	26.9	
Amount recognized in net periodic pension							
benefit cost and other comprehensive							
income	\$	(52.3)	\$	(17.8)	\$	28.6	
Assumptions							
Weighted-average assumptions used to							
determine net periodic benefit cost for							
years ended December 31							
Discount rate — PBO		2.63%		3.22%		4.39%	
Discount rate — service cost ¹	2.9	4% / 3.21%	3.49	% / 2.89%		4.59%	
Discount rate — interest cost		1.90%		2.78%		4.02%	
Expected return on plan assets ²	5.2	5% / 3.75%	5.75	% / 5.25%		5.75%	
Weighted-average assumptions used to							
determine benefit obligation at							
December 31							
Discount rate		2.91%		2.57%		3.28%	

¹ As a result of remeasurements, the 2021 service cost discount rates were revised from 2.94% at 12/31/2020 to 3.21% at 10/31/2021 and the 2020 service cost discount rates were revised from 3.49% at 12/31/2019 to 2.89% at 11/30/2020.

² As a result of remeasurements, the 2021 expected return on plan assets were revised from 5.25% at 12/31/2020 to 3.75% at 10/31/2021 and the 2020 expected return on plan assets were revised from 5.75% at 12/31/2019 to 5.25% at 11/30/2020.

Plan assets are invested according to an investment policy that allocates investments to return seeking assets and liability hedging assets based on the plans' funded ratio (fair value of assets/PBO). At December 31, 2021 and 2020, the total pension asset allocation was approximately 20% return seeking and 80% liability hedging. Return seeking assets include index and actively managed mutual funds and collective investment trusts that hold public equity securities (less than 1% of the plans' assets are in private equity and debt securities via private partnerships). Liability hedging assets include money market securities, inflation linked debt securities, public corporate debt securities, and government debt securities that are actively managed to match the duration of the plans' liabilities.

At each measurement date, we estimate the net asset values and fair values of our pension assets using various valuation techniques. For certain investments, we use the net asset value (NAV) as a practical expedient to estimating fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as described below:

- Level 1: Quoted prices in active markets for identical assets or liabilities
- Level 2: Inputs that are derived principally from or corroborated by observable market data
- Level 3: Inputs that are unobservable and significant to the overall fair value measurement

The fair values and net asset values of our pension plan assets at December 31, 2021 and 2020 are in the tables below. The assets in the common/collective trusts and in the private partnerships consist of both return seeking and liability hedging investments.

FAIR VALUE MEASUREMENTS AT DECEMBER 31, 2021

in millions	Lev	rel 1	Le	evel 2	Lei	/el 3	7	Γotal
Asset Category Debt funds Equity funds	\$	0.0 0.1	\$	662.9 59.0	\$	0.0	\$	662.9 59.1
Investments in the fair value hierarchy	\$	0.1	\$	721.9	\$	0.0	\$	722.0
Interest in common/collective trusts (at NAV) Private partnerships (at NAV)								134.3 4.2
Total pension plan assets							\$	860.5

FAIR VALUE MEASUREMENTS AT DECEMBER 31, 2020

in millions	Lev	rel 1	Le	evel 2	Lei	/el 3	-	Total
Asset Category Debt funds Equity funds	\$	0.0 0.0	\$	456.2 115.8	\$	0.0	\$	456.2 115.8
Investments in the fair value hierarchy	\$	0.0	\$	572.0	\$	0.0	\$	572.0
Interest in common/collective trusts (at NAV) Private partnerships (at NAV)								367.1 5.1
Total pension plan assets							\$	944.2

The following describes the types of investments included in each asset category listed in the tables above and the valuation techniques we used to determine the fair values or net asset values as of December 31, 2021 and 2020.

The debt funds category consists of U.S. federal, state and local government debt securities, corporate debt securities, foreign government debt securities, and asset-backed securities. The fair values of U.S. government and corporate debt securities are based on current market rates and credit spreads for debt securities with similar maturities. The fair values of debt securities issued by foreign governments are based on prices obtained from broker/dealers and international indices. The fair values of asset-backed securities are priced using prepayment speed and spread inputs that are sourced from the new issue market.

The equity funds category consists primarily of a mutual fund investing in non-domestic equities. For investment funds publicly traded on a national securities exchange, the fair value is based on quoted market prices. For investment funds not traded on an exchange, the total fair value of the underlying securities is used to determine the net asset value for each unit of the fund held by the pension fund. The estimated fair values of the underlying securities are generally valued based on quoted market prices. For securities without quoted market prices, other observable market inputs are used to determine the fair value.

Common/collective trust fund investments consist of index funds for domestic equities, an actively managed fund for international equities, and a short-term investment fund for highly liquid, short-term debt securities. Investments are valued at the NAV of units of a bank collective trust. The NAV is based on the fair value of the underlying investments held by the fund less its liabilities. This practical expedient is not used when it is determined to be probable that the fund will sell the investment for an amount different than the reported NAV.

The private partnerships category consists of various venture capital funds, mezzanine debt funds and leveraged buyout funds. The NAV of these investments has been estimated based on methods employed by the general partners, including reference to third-party transactions and valuations of comparable companies.

Total employer contributions to the pension plans are presented below:

in millions	Pension
Employer Contributions	
2019	\$ 8.9
2020	8.8
2021	8.0
2022 (estimated)	8.2

For our qualified pension plans, we made no contributions during 2021, 2020 and 2019. We do not anticipate making contributions to our qualified pension plans in 2022. For our nonqualified pension plans, we contributed \$8.0 million, \$8.8 million and \$8.9 million during 2021, 2020 and 2019, respectively, and expect to contribute \$8.2 million during 2022.

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid:

in millions	Pension	
Estimated Future Benefit Payments 2022 2023 2024		
2022	\$ 49.9	
2023	50.9	
2024	51.3	
2025	49.0	
2026	49.7	
2027-2031	251.	

We contribute to a number of multiemployer defined benefit pension plans under the terms of collective-bargaining agreements for union-represented employees. The risks of participating in multiemployer plans differ from single employer plans as follows:

- assets contributed to a multiemployer plan by one employer may be used to provide benefits to employees of other participating employers
- if a participating employer stops contributing to the plan, the unfunded obligations of the plan may be borne by the remaining participating employers
- if we cease to have an obligation to contribute to one or more of the multiemployer plans to which we contribute, we may be required to pay those plans an amount based on the underfunded status of the plan, referred to as a withdrawal liability

None of the multiemployer pension plans that we participate in are individually significant. Our contributions to individual multiemployer pension plans did not exceed 5% of the plans' total contributions in the three years ended December 31, 2021, 2020 and 2019. Total contributions to multiemployer pension plans were \$16.9 million in 2021, \$10.3 million in 2020 and \$10.4 million in 2019.

As of December 31, 2021, a total of 16.2% of our domestic hourly labor force was covered by collective-bargaining agreements. Of such employees covered by collective-bargaining agreements, 47.8% were covered by agreements that expire in 2022. We also employed 325 union employees in Mexico who are covered by a collective-bargaining agreement that will expire in 2022. None of our union employees in Mexico participate in multiemployer pension plans.

In addition to the pension plans noted above, we had one unfunded supplemental retirement plan as of December 31, 2021 and 2020. The accrued costs for the supplemental retirement plan were \$1.1 million at December 31, 2021 and \$2.5 million at December 31, 2020.

POSTRETIREMENT PLANS

In addition to pension benefits, we provide certain healthcare and life insurance benefits for some retired employees. In 2021, we amended our postretirement healthcare plan to increase our employer contribution rate from the previously capped level to a higher level effective 2022. This will serve as a cost reduction for retirees in 2022 that will carry forward as we use this new benchmark for future employer contributions. Previously (in 2012), we amended our postretirement healthcare plan to cap our employer portion of the medical coverage cost at the 2015 level.

Substantially all our salaried employees and, where applicable, certain of our hourly employees may become eligible for these benefits if they reach a qualifying age and meet certain service requirements. Generally, Company-provided healthcare benefits end when covered individuals become eligible for Medicare benefits, become eligible for other group insurance coverage or reach age 65, whichever occurs first.

The following table sets forth the combined funded status of the plans and their reconciliation with the related amounts recognized in our consolidated financial statements at December 31:

in millions	2	021	20	20
Change in Benefit Obligation				
Projected benefit obligation at beginning of year	\$	33.9	\$	41.2
Service cost		1.3		1.5
Interest cost		0.5		1.0
Plan amendments		14.9		0.0
Actuarial (gain) loss		0.9		(5.1)
Benefits paid		(5.5)		(4.7)
Projected benefit obligation at end of year	\$	46.0	\$	33.9
Change in Fair Value of Plan Assets				_
Fair value of assets at beginning of year	\$	0.0	\$	0.0
Actual return on plan assets		0.0		0.0
Fair value of assets at end of year	\$	0.0	\$	0.0
Funded status	\$	(46.0)	\$	(33.9)
Net amount recognized	\$	(46.0)	\$	(33.9)
Amounts Recognized in the Consolidated				
Balance Sheets				
Current liabilities	\$	(4.6)	\$	(4.5)
Noncurrent liabilities		(41.4)		(29.4)
Net amount recognized	\$	(46.0)	\$	(33.9)
Amounts Recognized in Accumulated				_
Other Comprehensive Income				
Net actuarial gain	\$	(16.7)	\$	(19.0)
Prior service cost (credit)		12.8		(3.7)
Total amount recognized	\$	(3.9)	\$	(22.7)

The decrease in actuarial gain as of December 31, 2021 was primarily attributable to less favorable demographic experience and higher benefit payments than expected compared with the prior year.

The following table sets forth the components of net periodic benefit cost, amounts recognized in other comprehensive income, weighted-average assumptions and assumed trend rates of the plans at December 31:

dollars in millions	20)21	20	020	20	019
Components of Net Periodic Postretirement Benefit Cost						
Service cost	\$	1.2	\$	1.5	\$	1.3
Interest cost		0.5		1.0		1.4
Amortization of prior service credit		(1.5)		(3.9)		(3.9)
Amortization of actuarial gain		(1.4)		(8.0)		(1.3)
Net periodic postretirement benefit credit	\$	(1.2)	\$	(2.2)	\$	(2.5)
Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income						
Net actuarial (gain) loss	\$	0.9	\$	(5.1)	\$	2.7
Prior service cost		14.9		0.0		0.0
Reclassification of prior service credit Reclassification of actuarial gain		1.5 1.4		3.9		3.9 1.3
		1.4		0.8		1.3
Amount recognized in other comprehensive	\$	18.7	\$	(0.4)	\$	7.9
Income	Ψ	10.7	Ψ	(0.4)	Ψ	7.9
Amount recognized in net periodic postretirement benefit cost and other						
comprehensive income	\$	17.5	\$	(2.6)	\$	5.4
Assumptions	Ψ	17.0	Ψ	(2.0)	Ψ	0.4
Assumed Healthcare Cost Trend Rates						
at December 31						
Healthcare cost trend rate assumed						
for next year (Pre-65/Post-65)	6.60	% / 6.50%		n/a		n/a
Rate to which the cost trend rate gradually						
declines		4.50%		n/a		n/a
Year that the rate reaches the rate it is						
assumed to maintain		2028		n/a		n/a
Weighted-average assumptions used to determine net periodic benefit cost for						
years ended December 31		2 4204				
Discount rate — PBO		2.19%		2.84%		4.01%
Discount rate — service cost ¹	2.45	% / 2.84% 1.60%		3.09% 2.42%		4.23%
Discount rate — interest cost		1.00%		2.4270		3.63%
Weighted-average assumptions used to						
determine benefit obligation at December 31						
Discount rate		2.59%		2.09%		2.84%
Discount rate		2.00 /0		2.00/0		Z.UT /0

¹ As a result of remeasurements, the 2021 service cost discount rates were revised from 2.45% at 12/31/2020 to 2.84% at 9/30/2021.

Total employer contributions to the postretirement plans are presented below:

in millions	Postretirement	
Employer Contributions		
2019	\$ 5	5.0
2020	4	1.7
2021	5	5.5
2022 (estimated)	4	4.6

The employer contributions shown above are equal to the cost of benefits during the year. The plans are not funded and are not subject to any regulatory funding requirements.

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid:

in millions	Postretiremen	t
Estimated Future Benefit Payments		
2022	\$	4.6
2023		4.7
2024		4.5
2025		4.5
2026		4.2
2027–2031		17.7

Contributions by participants to the postretirement benefit plans for the years ended December 31 are as follows:

in millions	Postretirement	t
Participants Contributions		
2019	\$	2.2
2020		2.6
2021		2.3

PENSION AND OTHER POSTRETIREMENT BENEFITS ASSUMPTIONS

Each year, we review our assumptions for discount rates (used for PBO, service cost, and interest cost calculations), the per capita cost of healthcare benefits and the expected return on plan assets. Due to plan changes made in 2013, annual pay increases do not materially impact plan obligations.

We use a high-quality bond full yield curve approach (specific spot rates for each annual expected cash flow) to establish the discount rates at each measurement date. At December 31, 2021, the discount rates used were as follows:

- PBO for various plans ranged from 2.09% to 3.07% (December 31, 2020 ranged from 1.55% to 2.72%)
- Service cost weighted average of 2.99% and 2.55%, respectively, for our pension plans and our other postretirement plans (2020 figures were 2.92% and 3.09%, respectively)
- Interest cost weighted average of 1.90% and 1.60%, respectively, for our pension plans and our other postretirement plans (2020 figures were 2.78% and 2.42%, respectively)

In selecting the rate of increase in the per capita cost of covered healthcare benefits, we consider past performance and forecast of future healthcare cost trends. At December 31, 2021, our assumed rate of increase in the per capita cost of covered healthcare benefits was 6.60% for pre-65 coverage and 6.50% for post-65 coverage for 2022, with both rates decreasing each year until reaching 4.50% in 2028 and remaining level thereafter.

Our expected return on plan assets is: (1) a long-term view based on our current asset allocation, and (2) a judgment informed by consultation with our retirement plans' consultant and our pension plans' actuary. As a result of remeasurements, the 2021 expected return on plan assets was revised from 5.25% at 12/31/2020 to 3.75% at 10/31/2021 and the 2020 expected return on plan assets was revised from 5.75% at 12/31/2019 to 5.25% at 11/30/2020. For 2022, we set the expected return on plan assets to 4.00%.

DEFINED CONTRIBUTION PLANS

In addition to our pension and postretirement plans, we sponsor five defined contribution plans including three plans related to the U.S. Concrete acquisition. Substantially all salaried and nonunion hourly employees are eligible to be covered by one of these plans. Under these plans, we match employees' eligible contributions at established rates. Expense recognized in connection with these matching obligations totaled \$67.5 million in 2021, \$50.8 million in 2020 and \$53.9 million in 2019.

NOTE 11: INCENTIVE PLANS

SHARE-BASED COMPENSATION PLANS

Our 2016 Omnibus Long-term Incentive Plan (Plan) authorizes the granting of performance shares, restricted shares, Stock-Only Stock Appreciation Rights (SOSARs) and other types of share-based awards to key salaried employees and nonemployee directors. The maximum number of shares that may be issued under the Plan is 8,000,000, of which 5,935,934 shares remain under this authorization as of December 31, 2021.

PERFORMANCE SHARES — Each performance share unit is equal to and paid in one share of our common stock, but carries no voting rights. The number of units ultimately paid for performance share awards may range from 0% to 200% of the number of units awarded on the date of grant. Payment is based upon the outcome of performance and/or market conditions. Awards vest on December 31 of the third year after date of grant. Vesting is accelerated upon death, disability, or change of control and the awards become non-forfeitable upon reaching retirement age — all as defined in the award agreement. Nonvested units are forfeited upon termination for any other reason. Expense provisions referable to performance share awards amounted to \$18.2 million in 2021, \$17.8 million in 2020 and \$18.2 million in 2019.

The fair value of performance shares is estimated as of the date of grant using a Monte Carlo simulation model. The following table summarizes the activity for nonvested performance share units during the year ended December 31, 2021:

	Target Number of Shares	Weighted- Grant I Fair V	Date
Performance Shares			
Nonvested at January 1, 2021	243,859	\$	121.53
Granted	112,070		164.38
Vested	(125,551)		110.41
Canceled/forfeited	(9,390)		136.81
Nonvested at December 31, 2021	220,988	\$	148.93

During 2020 and 2019, the weighted-average grant date fair value of performance shares granted was \$133.95 and \$110.39, respectively.

The aggregate values for distributed performance share awards are based on the closing price of our common stock as of the distribution date. The aggregate values of distributed performance shares for the years ended December 31 are as follows:

in millions	2021		20.	20	2019		
Aggregate value of distributed	_	Ī				_	
performance shares	\$	19.6	\$	38.8	\$	33.2	

RESTRICTED SHARES — Each restricted share unit is equal to and paid in one share of our common stock, but carries no voting rights. Awards vest on the third anniversary of the grant date. Vesting is accelerated upon reaching retirement age, death, disability, or change of control, all as defined in the award agreement. Nonvested units are forfeited upon termination for any other reason. Expense provisions referable to restricted share awards amounted to \$10.4 million in 2021, \$9.8 million in 2020 and \$7.8 million in 2019.

The fair value of restricted shares is estimated as of the date of grant based on the stock price adjusted for dividends foregone. The following table summarizes the activity for nonvested restricted share units during the year ended December 31, 2021:

	Number of Shares	Weighted- Grant I Fair Va	Date
Restricted Stock Units			
Nonvested at January 1, 2021	200,153	\$	121.11
Granted	68,980		164.38
Vested	(57,230)		120.70
Canceled/forfeited	(6,623)		136.70
Nonvested at December 31, 2021	205,280	\$	135.26

During 2020 and 2019, the weighted-average grant date fair value of restricted shares granted was \$133.95 and \$110.39, respectively.

The aggregate values for distributed restricted share awards are based on the closing price of our common stock as of the distribution date. The aggregate values of distributed restricted shares for the years ended December 31 are as follows:

in millions	2021		20	20	201	9
Aggregate value of distributed						
restricted shares	\$	9.0	\$	12.2	\$	2.4

STOCK-ONLY STOCK APPRECIATION RIGHTS (SOSARs) — SOSARs granted have an exercise price equal to the market value of our underlying common stock on the date of grant. The SOSARs vest ratably over 3 years and expire 10 years subsequent to the date of grant. Vesting is accelerated upon reaching retirement age, death, disability, or change of control, all as defined in the award agreement. Nonvested awards are forfeited upon termination for any other reason.

The fair value of SOSARs is estimated as of the date of grant using the Black-Scholes option pricing model. Compensation cost for SOSARs is based on this grant date fair value and is recognized for awards that ultimately vest. The following table presents the weighted-average fair value and the weighted-average assumptions used in estimating the fair value of grants during the years ended December 31:

	20	021	2	020	2019	
SOSARs						
Fair value	\$	52.19	\$	40.91	\$	38.90
Risk-free interest rate		1.18%		1.50%		2.62%
Dividend yield		0.62%		0.71%		0.87%
Volatility		27.33%		25.74%		27.23%
Expected term (years)		9.00		9.00		9.00

The risk-free interest rate is based on the yield at the date of grant of a U.S. Treasury security with a maturity period approximating the SOSARs expected term. The dividend yield assumption is based on our historical dividend payouts adjusted for current expectations of future payouts. The volatility assumption is based on the historical volatility and expectations about future volatility of our common stock over a period equal to the SOSARs expected term. The expected term is based on historical experience and expectations about future exercises and represents the period of time that SOSARs granted are expected to be outstanding.

A summary of our SOSAR activity as of December 31, 2021 and changes during the year are presented below:

	Number of Shares	Weighted-average Exercise Price		Weighted-average Remaining Contractual Life (Years)	Intrii	ggregate nsic Value millions)
SOSARs						
Outstanding at January 1, 2021	788,436	\$	90.72			
Granted	68,700		164.38			
Exercised	(229,809)		71.99			
Forfeited or expired	(3,183)		147.41			
Outstanding at December 31, 2021	624,144	\$	105.43	5.17	\$	63.2
Exercisable at December 31, 2021	484,140	\$	94.00	4.22	\$	54.5

The aggregate intrinsic values in the table above represent the total pretax intrinsic value (the difference between our stock price on the last trading day of 2021 and the exercise price, multiplied by the number of in-the-money SOSARs) that would have been received by the option holders had all SOSARs been exercised on December 31, 2021. These values change based on the fair market value of our common stock. The aggregate intrinsic values of SOSARs exercised for the years ended December 31 are as follows:

in millions	20.		20	20	2019		
Aggregate intrinsic value of SOSARs exercised	\$	24.9	\$	22.3	\$	74.8	

The following table presents cash and stock consideration received and tax benefit realized from SOSAR exercises and compensation cost recorded referable to SOSARs for the years ended December 31:

in millions	2021		202	20	2019	
SOSARs						
Cash and stock consideration received						
from exercises	\$	0.0	\$	0.0	\$	0.0
Tax benefit from exercises		6.3		5.7		29.0
Compensation cost		3.9		3.9		4.0

NONEMPLOYEE DIRECTOR AWARDS — In addition to the share-based compensation plans for employees discussed above, we issue a limited number of stock units to our nonemployee directors annually. Expense provisions referable to nonemployee director stock units amounted to \$2.2 million in 2021, \$1.6 million in 2020 and \$1.8 million in 2019.

CASH-BASED COMPENSATION PLANS

We have incentive plans under which cash awards may be made annually. Expense provisions under these plans referable to awards to officers and certain employees amounted to \$42.2 million in 2021, \$42.1 million in 2020 and \$40.8 million in 2019.

NOTE 12: COMMITMENTS AND CONTINGENCIES

We have commitments in the form of unconditional purchase obligations as of December 31, 2021. These include commitments for the purchase of property, plant & equipment of \$18.2 million and commitments for noncapital purchases of \$67.5 million. These commitments are due as follows:

	Unconditional Purchase			
in millions	Obligati	ons		
Property, Plant & Equipment				
2022	\$	18.2		
Thereafter		0.0		
Total	\$	18.2		
Noncapital (primarily transportation and electricity contracts)				
2022	\$	22.1		
2023–2024		32.2		
2025–2026		3.2		
Thereafter		10.0		
Total	\$	67.5		

Expenditures for noncapital purchases totaled \$53.4 million in 2021, \$87.4 million in 2020 and \$87.0 million in 2019.

We have commitments in the form of minimum royalties under mineral leases as of December 31, 2021 in the amount of \$253.8 million, due as follows:

in millions	Minera Leases	
Minimum Royalties		
2022	\$	26.2
2023–2024		39.2
2025–2026		26.2
Thereafter		162.2
Total	\$	253.8

Expenditures for royalties under mineral leases totaled \$90.4 million in 2021, \$81.5 million in 2020 and \$84.8 million in 2019.

Certain of our aggregates reserves are burdened by volumetric production payments (nonoperating interest) as described in Note 2. As the holder of the working interest, we have responsibility to bear the cost of mining and producing the reserves attributable to this nonoperating interest.

As described in Note 1 under the caption Claims and Litigation Including Self-Insurance, our net liabilities for our self-insurance program totaled \$130.5 million as of December 31, 2021.

As summarized by purpose in Note 6, our standby letters of credit totaled \$84.4 million as of December 31, 2021.

As outlined in Note 7, our present value of future minimum (nonmineral) lease payments totaled \$787.6 million as of December 31, 2021.

As described in Note 9, our liability for unrecognized tax benefits is \$10.8 million as of December 31, 2021.

As described in Note 17, our asset retirement obligations totaled \$315.2 million as of December 31, 2021.

LITIGATION AND ENVIRONMENTAL MATTERS

We are subject to occasional governmental proceedings and orders pertaining to occupational safety and health or to protection of the environment, such as proceedings or orders relating to noise abatement, air emissions or water discharges. As part of our continuing program of stewardship in safety, health and environmental matters, we have been able to resolve such proceedings and to comply with such orders without any material adverse effects on our business.

We have received notices from the United States Environmental Protection Agency (EPA) or similar state or local agencies that we are considered a potentially responsible party (PRP) at a limited number of sites under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) or similar state and local environmental laws. Generally we share the cost of remediation at these sites with other PRPs or alleged PRPs in accordance with negotiated or prescribed allocations. There is inherent uncertainty in determining the potential cost of remediating a given site and in determining any individual party's share in that cost. As a result, estimates can change substantially as additional information becomes available regarding the nature or extent of site contamination, remediation methods, other PRPs and their probable level of involvement, and actions by or against governmental agencies or private parties.

We have reviewed the nature and extent of our involvement at each Superfund site, as well as potential obligations arising under other federal, state and local environmental laws. While ultimate resolution and financial liability is uncertain at a number of the sites, in our opinion based on information currently available, the ultimate resolution of claims and assessments related to these sites will not have a material effect on our consolidated results of operations, financial position or cash flows, although amounts recorded in a given period could be material to our results of operations or cash flows for that period. Amounts accrued for environmental matters are presented in Note 8.

We are a defendant in various lawsuits in the ordinary course of business. It is not possible to determine with precision the outcome, or the amount of liability, if any, under these lawsuits, especially where the cases involve possible jury trials with as yet undetermined jury panels.

In addition to these lawsuits in which we are involved in the ordinary course of business, certain other material legal proceedings are specifically described below.

■ LOWER PASSAIC RIVER STUDY AREA (DISCONTINUED OPERATIONS and SUPERFUND SITE) — The Lower Passaic River Study Area is part of the Diamond Shamrock Superfund Site in New Jersey. Vulcan and approximately 70 other companies are parties (collectively the Cooperating Parties Group, CPG) to a May 2007 Administrative Order on Consent (AOC) with the EPA to perform a Remedial Investigation/Feasibility Study (draft RI/FS) of the lower 17 miles of the Passaic River (River). The draft RI/FS was submitted recommending a targeted hot spot remedy; however, the EPA issued a record of decision (ROD) in March 2016 that calls for a bank-to-bank dredging remedy for the lower 8 miles of the River. The EPA estimates that the cost of implementing this proposal is \$1.38 billion. In September 2016, the EPA entered into an Administrative Settlement Agreement and Order on Consent with Occidental Chemical Corporation (Occidental) in which Occidental agreed to undertake the remedial design for this bank-to-bank dredging remedy and to reimburse the United States for certain response costs.

Efforts to investigate and remediate the River have been underway for many years and have involved hundreds of entities that have had operations on or near the River at some point during the past several decades. We formerly owned a chemicals operation near the mouth of the River, which was sold in 1974. The major risk drivers in the River have been identified to include dioxins, PCBs, DDx and mercury. We did not manufacture any of these risk drivers and have no evidence that any of these were discharged into the River by Vulcan.

In August 2017, the EPA informed certain members of the CPG, including Vulcan and others, that it planned to use the services of a third-party allocator with the expectation of offering cash-out settlements to some parties in connection with the bank-to-bank remedy identified in the ROD. This voluntary allocation process established an impartial third-party expert recommendation for use by the government and the participants as the basis for possible settlements, including settlements related to future remediation actions. The final allocation recommendations, which are subject to confidentiality provisions, were submitted to the EPA for its review and consideration in late December 2020. Certain PRPs, including Vulcan, thereafter received a joint confidential settlement demand from the EPA/Department of Justice (DOJ). In early February 2022, Vulcan and certain of the other PRPs that received the joint confidential settlement demand (the Settling Defendants) reached an agreement in principle with the EPA/DOJ. The Settling Defendants and the governmental agencies intend to negotiate a consent decree. If the consent decree is approved by the court, Vulcan's portion of the settlement would be within the immaterial loss recorded for this matter in 2015.

In July 2018, Vulcan, along with more than one hundred other defendants, was sued by Occidental in United States
District Court for the District of New Jersey, Newark Vicinage. Occidental is seeking cost recovery and contribution under
CERCLA. It is unknown at this time how the proposed settlement with the EPA/DOJ would affect the Occidental lawsuit.

■ TEXAS BRINE MATTER (DISCONTINUED OPERATIONS) — During the operation of its former Chemicals Division, Vulcan secured the right to mine salt out of an underground salt dome formation in Assumption Parish, Louisiana from 1976 - 2005. Throughout that period, the Texas Brine Company (Texas Brine) was the operator contracted by Vulcan (and later Occidental Chemical Company (Occidental)) to mine and deliver the salt. We sold our Chemicals Division in 2005 and transferred our rights and interest related to the salt and mining operations to the purchaser, a subsidiary of Occidental, and we have had no association with the leased premises or Texas Brine since that time. In August 2012, a sinkhole developed in the vicinity of the Texas Brine mining operations, and numerous lawsuits were filed in state court in Assumption Parish, Louisiana. Other lawsuits, including class action litigation, were also filed in federal court before the Eastern District of Louisiana in New Orleans.

There have been numerous defendants, including Texas Brine and Occidental, to the litigation in state and federal court. Vulcan was first brought into the litigation as a third-party defendant in August 2013 by Texas Brine. We have since been added as a direct and third-party defendant by other parties, including a direct claim by the state of Louisiana. Damage categories encompassed within the litigation include, but are not limited to, individual plaintiffs' claims for property damage; a claim by the state of Louisiana for response costs and civil penalties; claims by Texas Brine for past and future response costs, lost profits and investment costs, indemnity payments, attorneys' fees, other litigation costs and judicial interests; claims for physical damages to nearby oil and gas pipelines and storage facilities (pipelines); and business interruption claims.

In addition to the plaintiffs' claims, we were also sued for contractual indemnity and comparative fault by both Texas Brine and Occidental. It is alleged that the sinkhole was caused, in whole or in part, by our negligent or fraudulent actions or failure to act. It is also alleged that we breached the salt lease with Occidental, as well as an operating agreement and related contracts with Texas Brine; that we were strictly liable for certain property damages in our capacity as a former lessee of the salt lease; and that we violated certain covenants and conditions in the agreement under which we sold our Chemicals Division to Occidental. We likewise made claims for contractual indemnity and on a basis of comparative fault against Texas Brine and Occidental. Vulcan and Occidental have since dismissed all of their claims against one another. Texas Brine has claims that remain pending against Vulcan and against Occidental.

A joint bench trial (judge only) began in September 2017 and ended in October 2017 in the pipeline cases. The trial was limited in scope to the allocation of comparative fault or liability for causing the sinkhole, with a second trial phase addressed to contract and damages to be held at a later date. In December 2017, the judge issued a ruling on the allocation of fault among the three defendants as follows: Occidental 50%, Texas Brine 35% (and its wholly-owned subsidiary) and Vulcan 15%. This ruling was appealed by the parties in each of the pipeline cases. In December 2020, the Louisiana Court of Appeal, First Circuit issued its Notice of Judgment and Disposition in one of the pipeline cases reversing in part and amending the trial court judgment to reallocate 20% of the fault from Occidental to Texas Brine, with the result that 30% of the fault is now allocated to Occidental and 55% of the fault is now allocated to Texas Brine (and its wholly-owned subsidiary). The Court of Appeal affirmed the 15% fault allocation to Vulcan. The Court of Appeal made various other findings, including findings related to the arbitrability of certain claims between Occidental and Texas Brine. In May 2021, the Court of Appeal issued a judgment in a second pipeline case, assigning the same allocation of fault between the parties. Vulcan and Texas Brine applied to the Louisiana Supreme Court seeking review of these judgments. Those applications were denied, resulting in final judgments regarding fault allocations in two of the three pipeline cases. The appeal in the third pipeline case remains pending.

We have settled claims by all plaintiffs except in two outstanding cases, and our insurers to date have funded these settlements in excess of our self-insured retention amount. The remaining cases involve Texas Brine and the State of Louisiana. Discovery remains ongoing, and we cannot reasonably estimate a range of liability pertaining to these open cases at this time.

- NEW YORK WATER DISTRICT CASES (DISCONTINUED OPERATIONS) During the operation of our former Chemicals Division, which was divested to Occidental in 2005, Vulcan manufactured a chlorinated solvent known as 1,1,1-trichloroethane. We are a defendant in 27 cases allegedly involving 1,1,1-trichloroethane. All of the cases are filed in the United States District Court for the Eastern District of New York. According to the various complaints, the plaintiffs are public drinking water providers who serve customers in seven New York counties (Nassau, Orange, Putnam, Sullivan, Ulster, Washington and Westchester). It is alleged that our 1,1,1-trichloroethane was stabilized with 1,4-dioxane and that various water wells of the plaintiffs are contaminated with 1,4-dioxane. The plaintiffs are seeking unspecified compensatory and punitive damages. We will vigorously defend the cases. At this time we cannot determine the likelihood, or reasonably estimate a range of loss, if any, pertaining to the cases.
- HEWITT LANDFILL MATTER (SUPERFUND SITE) In September 2015, the Los Angeles Regional Water Quality Control Board (RWQCB) issued a Cleanup and Abatement Order directing Vulcan to assess, monitor, cleanup and abate wastes that have been discharged to soil, soil vapor, and/or groundwater at the former Hewitt Landfill in Los Angeles.

Following an onsite and offsite investigation and pilot scale testing, the RWQCB approved a corrective action that includes leachate recovery, storm water capture and conveyance improvements, and a groundwater pump, treat and reinjection system. Certain on-site source control measures have been implemented, and the new treatment system is fully operational. Currently-anticipated costs of these on-site source control activities have been fully accrued.

We are also engaged in an ongoing dialogue with the EPA, Honeywell, and the Los Angeles Department of Water and Power (LADWP) regarding the potential contribution of the Hewitt Landfill to groundwater contamination in the North Hollywood Operable Unit (NHOU) of the San Fernando Valley Superfund Site.

The EPA and Vulcan entered into an AOC and Statement of Work having an effective date of September 2017 for the design of two extraction wells south of the Hewitt Landfill to protect the North Hollywood West (NHW) well field located within the NHOU. In November 2017, we submitted a Pre-Design Investigation (PDI) Work Plan to the EPA, which sets forth the activities and schedule for collection of data in support of our evaluation of the need for an offsite remedy. In addition, this evaluation was expanded as part of the PDI to include the evaluation of a remedy in light of a new project by LADWP at the Rinaldi-Toluca (RT) wellfield. PDI investigative activities were completed between the first and third guarters of 2018, and in December 2018 we submitted a Draft PDI Evaluation Report to the EPA. The PDI Evaluation Report summarizes data collection activities conducted pursuant to the Draft PDI Work Plan and provides model updates and evaluation of remediation alternatives for offsite areas. The EPA provided an initial set of comments on the Draft PDI Evaluation Report in May 2019 and a final set of comments in October 2020. The final set of comments includes a request for Vulcan to revise and develop a Final PDI Evaluation Report. The final comments further provide, if Vulcan agrees, a proposal for an alternative approach for offsite remediation (as opposed to installation of offsite extraction wells) and development of a Supplemental PDI Evaluation Report that would require the EPA to modify the remedy in the 2009 ROD as it relates to the Hewitt Landfill. In December 2020, Vulcan submitted the Final PDI Evaluation Report, which includes edits to the Draft PDI Evaluation Report and responses to the EPA's comments. Until the EPA's review and approval of the Final PDI Evaluation Report and any Supplemental PDI Evaluation Report on remedial alternative(s) is complete and an effective remedy has been selected by the EPA or agreed upon, we cannot identify any further remedial action that may be required. Given the various stakeholders involved and the uncertainties relating to remediation alternatives, we cannot reasonably estimate a loss pertaining to Vulcan's responsibility for future remedial action required by the EPA.

In December 2019, Honeywell agreed with LADWP to build a water treatment system (often referred to as the Cooperative Containment Concept or CCC or the second interim remedy) that will provide treated groundwater in the NHOU to LADWP for public water supply purposes. Honeywell contends that some of the contamination to be remediated by the system it will build originated from the Hewitt Landfill, and that Vulcan should fund some portion of the costs that Honeywell has incurred and will incur in developing the second interim remedy. During the fourth quarter of 2021, Vulcan completed a partial settlement with Honeywell related to certain of the costs that Honeywell has incurred for an immaterial amount. We are also gathering and analyzing data and developing technical information to determine the extent of possible contribution by the Hewitt Landfill to the groundwater contamination in the area. This work is also intended to assist in identification of other PRPs that may have contributed to groundwater contamination in the area. At this time, we cannot reasonably estimate a range of an additional loss to Vulcan pertaining to this contribution claim.

Further, LADWP has announced plans to install new treatment capabilities at two City wellfields located near the Hewitt Landfill — the NHW wellfield and the RT wellfield. LADWP has alleged that the Hewitt Landfill is one of the primary PRPs for the contamination at the NHW wellfield and is one of many PRPs for the contamination at the RT wellfield. We are gathering and analyzing data and developing technical information to determine the extent of possible contribution by the Hewitt Landfill to the groundwater contamination in the area, consistent with the parallel request by the EPA. This work is also intended to assist in identification of other PRPs that may have contributed to groundwater contamination in the area. Vulcan is also seeking access to LADWP's list of PRPs. At this time, we cannot reasonably estimate a range of a loss to Vulcan pertaining to this contribution claim.

NAFTA ARBITRATION — In September 2018, our subsidiary Legacy Vulcan, LLC (Legacy Vulcan), on its own behalf, and on behalf of our Mexican subsidiary Calizas Industriales del Carmen, S.A. de C.V. (Calica), served the United Mexican States (Mexico) a Notice of Intent to Submit a Claim to Arbitration under Chapter 11 of the North American Free Trade Agreement (NAFTA). Our NAFTA claim relates to the treatment of a portion of our quarrying operations in Playa del Carmen (Cancun), Mexico, arising from, among other measures, Mexico's failure to comply with a legally binding zoning agreement and relates to other unfair, arbitrary and capricious actions by Mexico's environmental enforcement agency. We assert that these actions are in breach of Mexico's international obligations under NAFTA and international law.

As required by Article 1118 of NAFTA, we sought to settle this dispute with Mexico through consultations. Notwithstanding our good faith efforts to resolve the dispute amicably, we were unable to do so and filed a Request for Arbitration with the International Centre for Settlement of Investment Disputes (ICSID) in December 2018. In January 2019, ICSID registered our Request for Arbitration.

A hearing on the merits took place in July 2021, and we expect that the NAFTA arbitration tribunal will issue a decision in the second half of 2022. While we await the final resolution from the tribunal, we have continued to engage with government officials to pursue an amicable resolution of the dispute. Recently, however, the Mexican government has taken additional actions that adversely affect our operations in that country, including delays in issuing a historically routine three-year customs permit for our deep-water port. Mexico has issued a short-term customs permit that must be renewed after two months. Failure by the Mexican government to issue the customary three-year customs permit or its taking of other measures that force us to cease or that otherwise impede our operations in Mexico would have an adverse effect on our ability to supply customers.

At this time, there can be no assurance whether we will be successful in our NAFTA claim, and we cannot quantify the amount we may recover, if any, under this arbitration proceeding if we are successful. We continue to negotiate with the Mexican authorities to reach a mutually agreeable and beneficial solution.

It is not possible to predict with certainty the ultimate outcome of these and other legal proceedings in which we are involved, and a number of factors, including developments in ongoing discovery or adverse rulings, or the verdict of a particular jury, could cause actual losses to differ materially from accrued costs. No liability was recorded for claims and litigation for which a loss was determined to be only reasonably possible or for which a loss could not be reasonably estimated. Legal costs incurred in defense of lawsuits are expensed as incurred. In addition, losses on certain claims and litigation described above may be subject to limitations on a per occurrence basis by excess insurance, as described in Note 1 under the caption Claims and Litigation Including Self-insurance.

NOTE 13: EQUITY

Our capital stock consists solely of common stock, par value \$1.00 per share, of which 480,000,000 shares may be issued. Holders of our common stock are entitled to one vote per share. We may also issue 5,000,000 shares of preferred stock, but no shares have been issued. The terms and provisions of such shares will be determined by our Board of Directors upon any issuance of preferred shares in accordance with our Certificate of Incorporation.

There were no shares held in treasury as of December 31, 2021, 2020 and 2019.

Our common stock purchases (all of which were open market purchases) and subsequent retirements for the years ended December 31 are summarized below:

in millions, except average cost	2021	2020	2019		
Shares Purchased and Retired					
Number	0.0	0.2		0.0	
Total purchase price	\$ 0.0	\$ 26.1	\$	2.6	
Average cost per share	\$ 0.00	\$ 121.92	\$	139.90	

As of December 31, 2021, 8,064,851 shares may be purchased under the current authorization of our Board of Directors.

Dividends for the years ended December 31 were as follows:

in millions, except per share data	2021		2021 2020		2019	
Dividends		Ī				_
Cash dividends	\$	196.4	\$	180.2	\$	164.0
Cash dividends per share	\$	1.48	\$	1.36	\$	1.24

Total equity as presented in the consolidated financial statements for the year ended December 31, 2021 includes a noncontrolling interest of \$22.7 million, representing the unowned portion of a subsidiary. See Note 1 under the heading "Noncontrolling Interest" for additional discussion.

NOTE 14: OTHER COMPREHENSIVE INCOME

Comprehensive income comprises two subsets: net earnings and other comprehensive income (OCI). The components of OCI are presented in the accompanying Consolidated Statements of Comprehensive Income and Consolidated Statements of Equity, net of applicable taxes.

Amounts in accumulated other comprehensive income (AOCI), net of tax, at December 31, are as follows:

in millions	2021		2020		2019	
AOCI						
Interest rate hedges	\$	(22.5)	\$	(24.0)	\$	(11.0)
Pension and postretirement plans		(130.2)		(157.3)		(186.7)
Total	\$	(152.7)	\$	(181.3)	\$	(197.7)

Changes in AOCI, net of tax, for the three years ended December 31, 2021 are as follows:

in millions	 Interest Rate Hedges		Pension and Postretirement Benefit Plans		Total	
AOCI Balances at December 31, 2018	\$ (11.2)	\$	(161.0)	\$	(172.2)	
Other comprehensive income (loss) before reclassifications Amounts reclassified from AOCI	0.0 0.2		(26.9) 1.2		(26.9) 1.4	
Net OCI changes	0.2		(25.7)		(25.5)	
Balances at December 31, 2019	\$ (11.0)	\$	(186.7)	\$	(197.7)	
Other comprehensive income (loss) before reclassifications Amounts reclassified from AOCI	(14.7) 1.7		6.4 23.0		(8.3) 24.7	
Net OCI changes	(13.0)		29.4		16.4	
Balances at December 31, 2020	\$ (24.0)	\$	(157.3)	\$	(181.3)	
Other comprehensive income (loss) before reclassifications Amounts reclassified from AOCI	0.0 1.5		13.4 13.7		13.4 15.2	
Net OCI changes	1.5		27.1		28.6	
Balances at December 31, 2021	\$ (22.5)	\$	(130.2)	\$	(152.7)	

Amounts reclassified from AOCI to earnings are as follows:

in millions	20	2021		2020		019
Amortization of Interest Rate Hedge Losses						
Interest expense	\$	2.0	\$	2.3	\$	0.3
Benefit from income taxes		(0.5)		(0.6)		(0.1)
Total	\$	1.5	\$	1.7	\$	0.2
Amortization of Pension and Postretirement Plan Actuarial Loss and Prior Service Cost						
Other nonoperating expense	\$	18.5	\$	31.2	\$	1.6
Benefit from income taxes		(4.8)		(8.2)		(0.4)
Total	\$	13.7	\$	23.0	\$	1.2
Total reclassifications from AOCI to earnings	\$	15.2	\$	24.7	\$	1.4

NOTE 15: SEGMENT REPORTING

We have four operating (and reportable) segments organized around our principal product lines: Aggregates, Asphalt, Concrete and Calcium. Management reviews earnings from these reporting segments principally at the gross profit level.

The Aggregates segment produces and sells aggregates (crushed stone, sand and gravel, sand, and other aggregates) and related products and services. During 2021, the Aggregates segment principally served markets in twenty-two states, the U.S. Virgin Islands, Washington D.C., the Bahamas, British Columbia (Canada) and Quintana Roo (Mexico) with a full line of aggregates, and eleven additional states with railroad ballast. The 2021 acquisition of U.S. Concrete expanded our full line aggregates markets by two states (New Jersey and New York), the U.S. Virgin Islands, British Columbia, Canada, and direct shipments to Hawaii. Customers use aggregates primarily in the construction and maintenance of highways, streets and other public works and in the construction of housing and commercial, industrial and other nonresidential facilities. Customers are served by truck, rail and water distribution networks from our production facilities and sales yards. Due to the high weight-to-value ratio of aggregates, markets generally are local in nature. Quarries located on waterways and rail lines allow us to serve remote markets where local aggregates reserves may not be available.

The Asphalt segment produces and sells asphalt mix in six states: Alabama, Arizona, California, New Mexico, Tennessee and Texas, and includes asphalt construction paving in three states: Alabama, Tennessee and Texas.

The Concrete segment produces and sells ready-mixed concrete in eight states: California, Maryland, New Jersey, New York, Oklahoma, Pennsylvania, Texas and Virginia, in addition to the U.S. Virgin Islands and Washington D.C. In 2021, through our acquisition of U.S. Concrete, we entered the New Jersey, New York, Oklahoma, Pennsylvania and U.S. Virgin Islands concrete markets and expanded our existing markets in California, Texas and Washington D.C. In 2020, we exited the New Mexico ready-mixed concrete market through a divestiture (see Note 19).

The Calcium segment consists of a Florida facility that mines, produces and sells calcium products.

Aggregates comprise approximately 95% of asphalt mix by weight and 80% of ready-mixed concrete by weight. Our Asphalt and Concrete segments are primarily supplied with their aggregates requirements from our Aggregates segment. These intersegment sales are made at local market prices for the particular grade and quality of product used in the production of asphalt mix and ready-mixed concrete and are excluded from total revenues. Customers for our Asphalt and Concrete segments are generally served locally at our production facilities or by truck. Because asphalt mix and ready-mixed concrete harden rapidly, delivery is time constrained and generally confined to a radius of approximately 20 to 25 miles from the producing facility.

The vast majority of our activities are domestic. We sell a relatively small amount of construction aggregates outside the United States. Total domestic revenues were \$5,532.0 million in 2021, \$4,845.9 million in 2020 and \$4,913.0 million in 2019. Nondomestic Aggregates segment revenues were \$20.2 million in 2021, \$11.0 million in 2020 and \$16.1 million in 2019; there were no significant nondomestic revenues in our Asphalt, Concrete or Calcium segments. Long-lived assets outside the United States, which consist primarily of property, plant & equipment, were \$459.5 million in 2021, \$261.6 million in 2020 and \$274.4 million in 2019. Equity method investments of \$26.5 million in 2021, \$26.5 million in 2020 and \$50.6 million in 2019 are included below in the identifiable assets for the Aggregates segment and in investments and long-term receivables on the accompanying Consolidated Balance Sheets.

SEGMENT FINANCIAL DISCLOSURE

in millions	2021	2020	2019
Total Revenues			
Aggregates ¹	\$ 4,345.0	\$ 3,944.3	\$ 3,990.3
Asphalt ²	777.8	792.6	855.8
Concrete	766.8	383.6	395.6
Calcium	6.9	7.7	8.2
Segment sales	\$ 5,896.5	\$ 5,128.2	\$ 5,249.9
Aggregates intersegment sales	(344.3)	(271.4)	(320.8)
Total revenues	\$ 5,552.2	\$ 4,856.8	\$ 4,929.1
Gross Profit			
Aggregates	\$ 1,295.7	\$ 1,159.2	\$ 1,146.6
Asphalt	21.2	75.2	63.0
Concrete	54.3	44.2	43.2
Calcium	2.2	2.9	3.1
Total	\$ 1,373.4	\$ 1,281.5	\$ 1,255.9
Depreciation, Depletion, Accretion & Amortization (DDA&A)			
Aggregates	\$ 360.4	\$ 321.1	\$ 305.1
Asphalt	36.0	35.0	35.2
Concrete	41.5	16.0	13.6
Calcium	0.2	0.2	0.2
Other	24.9	24.5	20.5
Total	\$ 463.0	\$ 396.8	\$ 374.6
Capital Expenditures ³			
Aggregates	\$ 423.1	\$ 331.9	\$ 383.4
Asphalt	9.3	19.8	9.1
Concrete	18.1	11.7	11.6
Calcium	0.0	0.0	0.0
Corporate	0.0	0.0	0.2
Total	\$ 450.5	\$ 363.4	\$ 404.3
Identifiable Assets ^{4, 5}			
Aggregates	\$ 10,917.8	\$ 9,459.2	\$ 9,334.2
Asphalt	602.0	573.1	558.4
Concrete	1,680.2	305.5	325.1
Calcium	4.0	3.3	3.7
Total identifiable assets	\$ 13,204.0	\$ 10,341.1	\$ 10,221.4
General corporate	237.1	147.8	152.9
Cash and cash equivalents and restricted cash	241.5	1,198.0	274.5
Total assets	\$ 13,682.6	\$ 11,686.9	\$ 10,648.8

¹ Includes product sales, as well as freight & delivery costs that we pass along to our customers, and service revenues (see Note 2) related to aggregates.

² Includes product sales, as well as service revenues (see Note 2) from our asphalt construction paving business.

³ Capital expenditures include capitalized replacements of and additions to property, plant & equipment, including renewals and betterments. Capital expenditures exclude property, plant & equipment obtained by business acquisitions.

⁴ Certain temporarily idled assets are included within a segment's Identifiable Assets but the associated DDA&A is shown within Other in the DDA&A section above as the related DDA&A is excluded from segment gross profit.

⁵ The 2021 increases in Aggregates, Concrete and General corporate Identifiable Assets are largely attributable to the U.S. Concrete acquisition (see Note 19).

NOTE 16: SUPPLEMENTAL CASH FLOW INFORMATION

Supplemental information referable to the Consolidated Statements of Cash Flows is summarized below:

in millions	2	2021	2	2020	2019	
Cash Payments Interest (exclusive of amount capitalized)	\$	138.0	\$	129.2	\$	129.2
Income taxes		127.9		95.9		56.8
Noncash Investing and Financing Activities						
Accrued liabilities for purchases of property,						
plant & equipment	\$	71.4	\$	55.9	\$	57.3
Recognition of new and revised asset retirement						
obligations (AROs) ¹		17.1		73.2		(13.9)
Recognition of new and revised right-of-use (ROU) assets for ¹						
Operating lease liabilities		106.9		49.6		444.5
Finance lease liabilities		13.3		6.6		1.2
Amounts referable to business acquisitions						
Debt assumed		443.7		0.0		0.0
Other liabilities assumed		243.8		5.9		4.4
Consideration payable to seller		0.0		9.0		0.0
Fair value of noncash assets and liabilities exchanged		0.0		21.2		0.0
Debt issued for purchases of property, plant & equipment		0.0		2.6		0.0

¹ Excludes amounts acquired in business acquisitions. Additionally, the 2019 lease amount includes the initial right-of-use assets resulting from our adoption of ASU 2016-02, "Leases."

NOTE 17: ASSET RETIREMENT OBLIGATIONS

Asset retirement obligations (AROs) are legal obligations associated with the retirement of long-lived assets resulting from the acquisition, construction, development and/or normal use of the underlying assets, including legal obligations for land reclamation. Recognition of a liability for an ARO is required in the period in which it is incurred at its estimated fair value. The associated asset retirement costs are capitalized as part of the carrying amount of the underlying asset and depreciated over the estimated useful life of the asset. The liability is accreted through charges to operating expenses. If the ARO is settled for other than the carrying amount of the liability, we recognize a gain or loss on settlement.

For the years ended December 31, ARO operating costs related to accretion of the liabilities and depreciation of the assets are as follows:

in millions	2	021	2020		2	019
ARO Operating Costs						
Accretion	\$	13.1	\$	12.4	\$	11.0
Depreciation		10.6		8.6		7.1
Total	\$	23.7	\$	21.0	\$	18.1

ARO operating costs are reported in cost of revenues. AROs are reported within other noncurrent liabilities in our accompanying Consolidated Balance Sheets.

Reconciliations of the carrying amounts of our AROs for the years ended December 31 are as follows:

in millions	20	21	20	20	
Asset Retirement Obligations					
Balance at beginning of year	\$	283.2	\$	210.3	
Liabilities incurred		19.2		0.4	
Liabilities settled		(11.0)		(12.8)	
Accretion expense		13.1		12.4	
Revisions, net		10.7		72.9	
Balance at end of year	\$	315.2	\$	283.2	

ARO liabilities incurred during 2021 primarily relate to those assumed in the acquisition of U.S. Concrete (see Note 19). ARO revisions during 2020 primarily include increases in estimated costs at two aggregates locations, including reclamation activities required under a development agreement at an aggregates site on owned property in Southern California. The reclamation required under the development agreement will result in the restoration of previously mined property to conditions suitable for retail and commercial development.

NOTE 18: GOODWILL AND INTANGIBLE ASSETS

Acquired identifiable intangible assets are classified into three categories: (1) goodwill, (2) intangible assets with finite lives subject to amortization and (3) intangible assets with indefinite lives. Goodwill and intangible assets with indefinite lives are not amortized; rather, they are reviewed for impairment at least annually.

GOODWILL

Goodwill is recognized when the consideration paid for a business exceeds the fair value of the tangible and identifiable intangible assets acquired. Goodwill is allocated to reporting units for purposes of testing goodwill for impairment. There were no charges for goodwill impairment in the years ended December 31, 2021, 2020 and 2019. Accumulated goodwill impairment losses amount to \$252.7 million (year 2008) in our former Cement segment.

We have four reportable segments organized around our principal product lines: Aggregates, Asphalt, Concrete and Calcium. Changes in the carrying amount of goodwill by reportable segment for the three years ended December 31, 2021 are shown below:

in millions	Αg	ggregates	,	Asphalt	C	Concrete	Calcium	Total
Goodwill								
Totals at December 31, 2019	\$	3,075.4	\$	91.6	\$	0.0	\$ 0.0	\$ 3,167.0
Goodwill of acquired businesses 1		5.1		0.0		0.0	0.0	5.1
Totals at December 31, 2020	\$	3,080.5	\$	91.6	\$	0.0	\$ 0.0	\$ 3,172.1
Goodwill of acquired businesses ¹		236.1		0.0		288.5	0.0	524.6
Totals at December 31, 2021	\$	3,316.6	\$	91.6	\$	288.5	\$ 0.0	\$ 3,696.7

¹ See Note 19 for a summary of recent acquisitions.

We test goodwill for impairment on an annual basis or more frequently if events or circumstances change in a manner that would more likely than not reduce the fair value of a reporting unit below its carrying value. A decrease in the estimated fair value of one or more of our reporting units could result in the recognition of a material, noncash write-down of goodwill.

INTANGIBLE ASSETS

Intangible assets consist of contractual rights in place (primarily permitting and zoning rights), noncompetition agreements, customer relationships and trade names and trademarks. Intangible assets acquired in business combinations are stated at their fair value determined as of the date of acquisition. Intangible assets acquired individually or otherwise obtained outside a business combination consist primarily of permitting, permitting compliance and zoning rights and are stated at their historical cost less accumulated amortization. Costs incurred to renew or extend the life of existing intangible assets are capitalized. These capitalized renewal/extension costs were immaterial for the years presented.

See Note 19 for the details of the intangible assets acquired in business acquisitions during 2021, 2020 and 2019. Amortization of finite-lived intangible assets is computed based on the estimated life of the intangible assets. Contractual rights in place associated with aggregates reserves are amortized using the unit-of-sales method based on estimated recoverable units. Other intangible assets are amortized principally by the straight-line method. Intangible assets are reviewed for impairment when events or circumstances indicate that the carrying amount may not be recoverable. There were no material charges for impairment of intangible assets in 2021, 2020 and 2019.

The gross carrying amount and accumulated amortization by major intangible asset class for the years ended December 31 are summarized below:

in millions	2	2021		2020
Gross Carrying Amount Contractual rights in place Permitting, permitting compliance and zoning rights Other ¹	\$	1,765.0 156.5 115.0	\$	1,159.0 138.9 57.6
Total gross carrying amount	\$	2,036.5	\$	1,355.5
Accumulated Amortization Contractual rights in place Permitting, permitting compliance and zoning rights Other 1	\$	(230.9) (39.1) (17.5)	\$	(188.9) (30.2) (12.9)
Total accumulated amortization	\$	(287.5)	\$	(232.0)
Total Intangible Assets Subject to Amortization, net	\$	1,749.0	\$	1,123.5
Intangible Assets with Indefinite Lives		0.0		0.0
Total Intangible Assets, net		1,749.0		1,123.5
Amortization Expense for the Year	\$	68.2	\$	46.6

¹ Includes noncompetition agreements, patents, customer relationships, tradenames and trademarks.

Estimated amortization expense for the five years subsequent to December 31, 2021 is as follows:

in millions	
Estimated Amortization Expense for Five Subsequent Years	
2022	\$ 79.5
2023	77.7
2024	75.9
2025	75.6
2026	75.1

NOTE 19: ACQUISITIONS AND DIVESTITURES

BUSINESS ACQUISITIONS

2021 BUSINESS ACQUISITIONS — On August 26, 2021, we purchased the following operations in connection with the acquisition of U.S. Concrete, Inc. for total consideration of \$1,634.5 million, net of cash acquired:

- British Columbia, Canada aggregates and aggregates blue-water transportation operations
- California aggregates distribution terminals and concrete operations
- New Jersey aggregates and concrete operations
- New York aggregates and concrete operations
- Oklahoma aggregates and concrete operations
- Pennsylvania concrete operations
- Texas aggregates and concrete operations
- U.S. Virgin Islands aggregates and concrete operations
- Washington, D.C. concrete operations

The amounts of total revenues and net earnings attributable to Vulcan from the U.S. Concrete acquisition are included in our Consolidated Statement of Comprehensive Income for the year ended December 31, 2021 as follows:

in millions	20	021
Actual Results		
Total revenues	\$	466.3
Net loss attributable to Vulcan		(19.7)

The unaudited pro forma financial information in the table below summarizes the results of operations for Vulcan and U.S. Concrete as if they were combined as of January 1, 2020. The pro forma financial information does not reflect any cost savings, operating efficiencies or synergies as a result of this combination. Consistent with the assumed acquisition date of January 1, 2020, the pro forma information excludes transactions between Vulcan and U.S. Concrete. The following pro forma information also includes: 1) charges directly attributable to the acquisition, including acquisition related expenses of \$22.0 million, 2) cost of sales related to the sale of acquired inventory marked up to fair value, 3) depreciation, depletion, amortization & accretion expense related to the mark up to fair value of acquired assets, and 4) interest expense and debt retirement costs reflecting the new debt structure:

in millions	2021	2020
Supplemental Pro Forma Results		
Total revenues	\$ 6,361.5	\$ 6,182.8
Net earnings attributable to Vulcan	688.6	551.9

The unaudited pro forma results above may not be indicative of the results that would have been obtained had this acquisition occurred at the beginning of 2020, nor does it intend to be a projection of future results.

The fair value of consideration transferred for the U.S. Concrete acquisition and the preliminary amounts (pending final appraisals of intangible assets and property, plant & equipment and related deferred taxes) of assets acquired and liabilities assumed are summarized below:

	Dece	mber 31
in millions	2	2021
Fair Value of Purchase Consideration		
Cash ¹	\$	1,634.5
Total fair value of purchase consideration	\$	1,634.5
Identifiable Assets Acquired and Liabilities Assumed		
Accounts and notes receivable, net	\$	240.4
Inventories		80.6
Other current assets		8.6
Property, plant & equipment		1,105.3
Operating lease right-of-use assets		215.9
Intangible assets		
Contractual rights in place		616.0
Other intangibles		57.9
Other noncurrent assets		5.3
Deferred income taxes, net		(222.8)
Debt assumed		(443.7)
Other liabilities assumed		(531.3)
Noncontrolling interest		(22.3)
Net identifiable assets acquired	\$	1,109.9
Goodwill	\$	524.6

¹ Includes \$1,268.5 million paid to acquire all issued and outstanding shares of U.S. Concrete common stock and \$384.4 million of U.S. Concrete obligations paid on the acquisition date, less \$18.4 million of cash acquired.

Additionally, during 2021 we purchased concrete operations in California for total consideration of \$4.9 million.

As a collective result of the 2021 acquisitions, we recognized \$676.6 million of amortizable intangible assets and \$524.6 million of goodwill. The amortizable intangible assets will be amortized against earnings over a weighted-average period in excess of 15 years. The \$524.6 million of goodwill recognized represents deferred tax liabilities generated from carrying over the seller's tax basis in the assets acquired and synergies expected to be realized from acquiring an established business with assets that have been assembled over a long period of time — the collection of those assets combined with our assets can earn a higher rate of return than either individually. Of the total goodwill recognized, \$115.6 million will be deductible for income tax purposes.

2020 BUSINESS ACQUISITIONS — During 2020, we purchased the following operations for total consideration of \$73.4 million (\$43.2 million cash and \$30.2 million noncash):

- business to support our aggregates operations across most of our footprint
- Texas asphalt mix and recycle operations

The 2020 acquisitions listed above are reported in our consolidated financial statements as of their respective acquisition dates. None of these acquisitions were material to our results of operations or financial position either individually or collectively.

As a result of the 2020 acquisitions, we recognized \$65.5 million of amortizable intangible assets and \$5.1 million of goodwill. The amortizable intangible assets will be amortized against earnings (\$65.5 million - straight-line basis over a weighted-average 20.0 years) and \$25.7 million will be deductible for income tax purposes over 15 years. The goodwill represents the balance of deferred tax liabilities generated from carrying over the seller's tax basis in the assets acquired and is not deductible for income tax purposes.

2019 BUSINESS ACQUISITIONS — During 2019, we purchased the following operations for total cash consideration of \$45.3 million:

- Tennessee aggregates operations
- Virginia ready-mixed concrete operations

The 2019 acquisitions listed above are reported in our consolidated financial statements as of their respective acquisition dates. None of these acquisitions were material to our results of operations or financial position either individually or collectively.

As a result of the 2019 acquisitions, we recognized \$25.4 million of amortizable intangible assets (contractual rights in place). The contractual rights in place will be amortized against earnings on a straight-line basis over a weighted-average 19.5 years and will be deductible for income tax purposes over 15 years.

DIVESTITURES AND PENDING DIVESTITURES

In 2021, we sold:

• First quarter — a reclaimed quarry in Southern California resulting in a pretax gain of \$114.7 million (net of a \$12.9 million contingency and other directly related obligations)

In 2020, we sold:

- Fourth quarter a Virginia ready-mixed concrete business, resulting in an immaterial loss. We retained all real property
 which is being leased to the buyer and obtained a 20-year aggregates supply agreement
- Second quarter our New Mexico ready-mixed concrete business, resulting in an immaterial gain. We retained the
 concrete plants and mobile fleet and are leasing those assets to the buyer. Additionally, we obtained a 20-year
 aggregates supply agreement

In 2019, we sold:

 First quarter — two aggregates operations in Georgia and reversed a contingent payable related to the fourth quarter 2017 Department of Justice required divestiture of former Aggregates USA operations, resulting in a pretax gain of \$4.1 million

No material assets met the criteria for held for sale at December 31, 2021, 2020 or 2019.

CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A

CONTROLS AND PROCEDURES

DISCLOSURE CONTROLS AND PROCEDURES

We maintain a system of controls and procedures designed to ensure that information required to be disclosed in reports we file with the SEC is recorded, processed, summarized and reported within the time periods specified by the SEC's rules and forms. These disclosure controls and procedures (as defined in the Securities Exchange Act of 1934 Rules 13a - 15(e) or 15d - 15(e)), include, without limitation, controls and procedures designed to ensure that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure. Our Chief Executive Officer and Chief Financial Officer, with the participation of other management officials, evaluated the effectiveness of the design and operation of the disclosure controls and procedures as of December 31, 2021. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of December 31, 2021.

Excluding the U.S. Concrete acquisition noted below, no material changes were made during the fourth quarter of 2021 to our internal controls over financial reporting, nor have there been other factors that materially affect these controls.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining an adequate system of internal control over financial reporting as required by the Sarbanes-Oxley Act of 2002 and as defined in Securities Exchange Act Rule 13a-15(f).

Under management's supervision, an evaluation of the design and effectiveness of our internal control over financial reporting was conducted based on the framework in *Internal Control* — *Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2021.

We completed our acquisition of U.S. Concrete on August 26, 2021 and have not yet included U.S. Concrete in management's assessment of the effectiveness of our internal controls over financial reporting. We are currently integrating U.S. Concrete into our operations and internal control processes. Accordingly, pursuant to the SEC's general guidance that an assessment of a recently acquired business may be omitted from the scope of an assessment for one year following the acquisition, the scope of management's assessment of the effectiveness of our disclosure controls and procedures does not include U.S. Concrete. U.S. Concrete constituted approximately 10% of our total assets as of December 31, 2021 and approximately 8% of our total revenues for the year ended December 31, 2021.

Deloitte & Touche LLP, an independent registered public accounting firm, as auditors of our consolidated financial statements, has issued an attestation report on the effectiveness of our internal control over financial reporting as of December 31, 2021. Deloitte & Touche LLP's report, which expresses an unqualified opinion on the effectiveness of our internal control over financial reporting, follows this report.

LIMITATIONS OF EFFECTIVENESS OF CONTROLS AND PROCEDURES

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM – INTERNAL CONTROL OVER FINANCIAL REPORTING

To the shareholders and Board of Directors of Vulcan Materials Company:

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Vulcan Materials Company and subsidiaries (the "Company") as of December 31, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2021, of the Company and our report dated February 25, 2022, expressed an unqualified opinion on those financial statements.

As described in Item 9A, Controls and Procedures, management excluded from its assessment the internal control over financial reporting at U.S. Concrete, which was acquired on August 26, 2021, and whose financial statements constitute 10% of total assets and 8% of total revenues of the consolidated financial statement amounts as of and for the year ended December 31, 2021. Accordingly, our audit did not include the internal control over financial reporting at U.S. Concrete.

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 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 the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit 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, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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

/s/ DELOITTE & TOUCHE LLP Birmingham, Alabama February 25, 2022

ITEM 9B

OTHER INFORMATION

None.

ITEM 9C

DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

ITEM 10

DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

On or about March 28, 2022, we expect to file a definitive proxy statement with the Securities and Exchange Commission pursuant to Regulation 14A (our "2022 Proxy Statement"). The information under the headings "Proposal 1 - Election of Directors," "Corporate Governance – Director Nomination Process," "Corporate Governance – Committees of the Board of Directors" and "Delinquent Section 16(a) Reports" (to the extent reported therein) included in our 2022 Proxy Statement is incorporated herein by reference. See also the information about our executive officers and governance policies set forth above in Part I of this report.

ITEM 11

EXECUTIVE COMPENSATION

The information under the headings "Compensation Discussion and Analysis," "Director Compensation," "Executive Compensation," "Corporate Governance – Compensation Committee Interlocks and Insider Participation," and "Compensation Committee Report" included in our 2022 Proxy Statement is incorporated herein by reference.

ITEM 12

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information under the headings "Security Ownership of Certain Beneficial Owners and Management," and "Equity Compensation Plans" included in our 2022 Proxy Statement is incorporated herein by reference.

ITEM 13

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information under the headings "Corporate Governance – Director Independence," and "Corporate Governance – Transactions with Related Persons" included in our 2022 Proxy Statement is incorporated herein by reference.

ITEM 14

PRINCIPAL ACCOUNTING FEES AND SERVICES

The information under the heading "Independent Registered Public Accounting Firm" included in our 2022 Proxy Statement is incorporated herein by reference.

EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) (1) Financial statements

The following financial statements are included herein on the pages shown below:

	Page in Report
Report of Independent Registered Public Accounting Firm (PCAOB ID 34)	73 – 75
Consolidated Statements of Comprehensive Income	76
Consolidated Balance Sheets	77
Consolidated Statements of Cash Flows	78
Consolidated Statements of Equity	79
Notes to Consolidated Financial Statements	80 – 128

(a) (2) Financial statement schedules

Financial statement schedules are omitted because of the absence of conditions under which they are required or because the required information is provided in the financial statements or notes thereto.

Financial statements (and summarized financial information) of 50% or less owned entities accounted for by the equity method have been omitted because they do not, considered individually or in the aggregate, constitute a significant subsidiary.

(a) (3) Exhibits

Exhibit 2(a)	Agreement and Plan of Merger, dated as of June 6, 2021, by and among Vulcan Materials Company, Grizzly Merger Sub I, Inc. and U.S. Concrete, Inc., filed as Exhibit 2.1 to the Company's Current Report on Form 8-K filed on June 7, 2021 1
Exhibit 3(a)	Certificate of Incorporation (Restated 2007) of the Company (formerly known as Virginia Holdco, Inc.), filed as Exhibit 3.1 to the Company's Current Report on Form 8-K on November 16, 2007 ¹
Exhibit 3(b)	Amended and Restated By-Laws of the Company (as amended through March 23, 2020) filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed on March 25, 2020 ¹
Exhibit 4(a)	Senior Debt Indenture, dated as of December 11, 2007, between the Company and Wilmington Trust Company, as Trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K on December 11, 2007 1
Exhibit 4(b)	First Supplemental Indenture, dated as of December 11, 2007, between Vulcan Materials Company and Wilmington Trust Company, as Trustee, to that certain Senior Debt Indenture, dated as of December 11, 2007, between the Company and Wilmington Trust Company, as Trustee, filed as Exhibit 4.2 to the Company's Current Report on Form 8-K on December 11, 2007 1
Exhibit 4(c)	Second Supplemental Indenture, dated June 20, 2008 between the Company and Wilmington Trust Company, as Trustee, to that certain Senior Debt Indenture dated as of December 11, 2007, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on June 20, 2008 1
Exhibit 4(d)	Third Supplemental Indenture, dated February 3, 2009, between the Company and Wilmington Trust Company, as Trustee, to that certain Senior Debt Indenture dated as of December 11, 2007 filed as Exhibit 10(f) to the Company's Annual Report on Form 10-K filed on March 2, 2009 ¹

Exhibit 4(e)	Fourth Supplemental Indenture, dated June 14, 2011, between the Company and Wilmington Trust Company, as Trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on June 15, 2011 ¹
Exhibit 4(f)	Fifth Supplemental Indenture, dated March 30, 2015, between the Company and Regions Bank, as Trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on March 30, 2015 ¹
Exhibit 4(g)	Sixth Supplemental Indenture, dated March 14, 2017, between the Company and Regions Bank, as Trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on March 14, 2017 ¹
Exhibit 4(h)	Seventh Supplemental Indenture, dated as of June 15, 2017, between Vulcan Materials Company and Regions Bank, as Trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on June 15, 2017
Exhibit 4(i)	Eighth Supplemental Indenture, dated as of February 23, 2018, between Vulcan Materials Company and Regions Bank, as Trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on February 23, 2018 ¹
Exhibit 4(j)	Ninth Supplemental Indenture, dated as of May 18, 2020, between Vulcan Materials Company and Regions Bank as Trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on May 18, 2020 ¹
Exhibit 4(k)	Indenture, dated as of May 1, 1991, by and between Legacy Vulcan Corp. (formerly Vulcan Materials Company) and First Trust of New York (as successor trustee to Morgan Guaranty Trust Company of New York) filed as Exhibit 4 to the Form S-3 on May 2, 1991 (Registration No. 33-40284) ¹
Exhibit 4(I)	Supplemental Indenture No. 1, dated as of November 16, 2007, among the Company, Legacy Vulcan Corp. and The Bank of New York, as Trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 21, 2007 ¹
Exhibit 4(m)	Supplemental Indenture No. 2, dated as of June 30, 2015, between Legacy Vulcan, LLC and The Bank of New York Mellon Trust Company, N.A., as Trustee, filed as Exhibit 4(a) to the Company's Quarterly Report on Form 10-Q filed on August 5, 2015 ¹
Exhibit 4(n)	Indenture, dated as of February 23, 2018, between Vulcan Materials Company and Regions Bank, as Trustee, filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on February 26, 2018 1
Exhibit 4(o)	Description of Securities, filed as Exhibit 4(r) to the Company's Annual Report on Form 10-K filed on February 26, 2020 ¹
Exhibit 10(a)	Second Amendment to Credit Agreement, dated April 10, 2020, among Vulcan Materials Company, each of the Guarantors, the Lenders party thereto, and Truist Bank successor by merger to SunTrust Bank, as Administrative Agent, filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed on August 5, 2020 1
Exhibit 10(b)	364-Day Credit Agreement, dated April 10, 2020, among Vulcan Materials Company, Truist Bank, as Administrative Agent, and the Lenders and other parties named therein, filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 13, 2020 1
Exhibit 10(c)	Credit Agreement, dated as of September 10, 2020, among Vulcan Materials Company, Truist Bank, as Administrative Agent, and the Lenders and other parties named therein, filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on September 11, 2020 ¹
Exhibit 10(d)	<u>Unfunded Supplemental Benefit Plan for Salaried Employees, as amended, filed as Exhibit 10.4 to the Company's Current Report on Form 8-K filed on December 17, 2008 1.2</u>

Exhibit 10(e)	Amendment No. 1 to the Unfunded Supplemental Benefit Plan for Salaried Employees filed as Exhibit 10.1 to the Company's Current Report on Form 8-K on January 7, 2014 1,2
Exhibit 10(f)	<u>Deferred Compensation Plan for Directors Who Are Not Employees of the Company, as amended, filed as Exhibit 10.5 to the Company's Current Report on Form 8-K filed on December 17, 2008 1.2</u>
Exhibit 10(g)	The 2006 Omnibus Long-Term Incentive Plan of the Company filed as Appendix C to Legacy Vulcan Corp.'s 2006 Proxy Statement on Schedule 14A filed on April 13, 2006 1,2
Exhibit 10(h)	Amendment to the 2006 Omnibus Long-Term Incentive Plan of the Company filed as Appendix A to the Company's 2011 Proxy Statement on Schedule 14A filed March 31, 2011 1,2
Exhibit 10(i)	Amendment to the 2006 Omnibus Long-Term Incentive Plan of the Company dated February 9, 2012, filed as Exhibit 10(I) to the Company's Annual Report on Form 10-K for the year ended December 31, 2011 filed on February 29, 2012 1,2
Exhibit 10(j)	Restricted Stock Plan for Nonemployee Directors of the Company, as amended, filed as Exhibit 10.6 to the Company's Current Report on Form 8-K filed on December 17, 2008 1,2
Exhibit 10(k)	Executive Deferred Compensation Plan, as amended, filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 17, 2008 1.2
Exhibit 10(I)	Form of Change of Control Employment Agreement dated January 1, 2016, filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 7, 2016 1,2
Exhibit 10(m)	<u>Vulcan Materials Company Change of Control Severance Plan for Senior Officers, effective</u> <u>January 1, 2016, filed as Exhibit 10(m) to the Company's Annual Report on Form 10-K filed on February 25, 2016 ^{1,2}</u>
Exhibit 10(n)	Executive Incentive Plan of the Company, as amended, filed as Exhibit 10.2 to the Company's Current Report on Form 8-K filed on December 17, 2008 1,2
Exhibit 10(o)	Supplemental Executive Retirement Agreement filed as Exhibit 10 to Legacy Vulcan Corp.'s Quarterly Report on Form 10-Q for the quarter ended September 30, 2001 filed on November 2, 2001 1,2
Exhibit 10(p)	Form of Stock Option Agreement filed as Exhibit 10(o) to Legacy Vulcan Corp.'s Report on Form 8-K filed on December 20, 2005 1,2
Exhibit 10(q)	Form of Director Deferred Stock Unit Agreement filed as Exhibit 10.9 to the Company's Current Report on Form 8-K filed on December 17, 2008 1,2
Exhibit 10(r)	Form of Performance Share Unit Agreement filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 11, 2010 1.2
Exhibit 10(s)	Form of Performance Share Unit Agreement (2012) filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 14, 2012 1.2
Exhibit 10(t)	Form of Stock-Only Stock Appreciation Rights Agreement filed as Exhibit 10(q) to Legacy Vulcan Corp.'s Report on Form 10-K filed on February 26, 2007 1,2
Exhibit 10(u)	Stock-Only Stock Appreciation Rights Agreement between the Company and John R. McPherson dated November 9, 2011, filed as Exhibit 10(a) to the Company's Current Report on Form 8-K filed on November 15, 2011 1,2
Exhibit 10(v)	Form of Employee Deferred Stock Unit Amended Agreement filed as Exhibit 10.7 to the Company's Current Report on Form 8-K filed on December 17, 2008 1.2
Exhibit 10(w)	<u>Vulcan Materials Company 2016 Omnibus Long-Term Incentive Plan, filed as Exhibit 99 to the Company's Registration Statement on Form S-8 (File No. 333-211349) filed on May 13, 2016 ^{1,2}</u>

Exhibit 10(x)	Form of Non-Employee Director Deferred Stock Unit Agreement under the Vulcan Materials Company 2016 Omnibus Long-Term Incentive Plan, filed as Exhibit 10(y) to the Company's Quarterly Report on Form 10-Q filed on August 3, 2016 1,2
Exhibit 10(y)	Form of Stock-Only Stock Appreciation Rights Award Agreement under the Vulcan Materials Company 2016 Omnibus Long-Term Incentive Plan, filed as Exhibit 10(z) to the Company's Quarterly Report on Form 10-Q filed on August 3, 2016 1.2
Exhibit 10(z)	Form of Restricted Stock Unit Award Agreement under the Vulcan Materials Company 2016 Omnibus Long-Term Incentive Plan, filed as Exhibit 10(aa) to the Company's Quarterly Report on Form 10-Q filed on August 3, 2016 1,2
Exhibit 10(aa)	Form of Performance Share Unit Award Agreement under the Vulcan Materials Company 2016 Omnibus Long-Term Incentive Plan, filed as Exhibit 10(bb) to the Company's Quarterly Report on Form 10-Q filed on August 3, 2016 1,2
Exhibit 10(bb)	Offer Letter, dated as of June 19, 2018, by and between Suzanne H. Wood and Vulcan Materials Company, filed as Exhibit 10.2 to the Company's Current report on Form 8-K filed on July 10, 2018 1.2
Exhibit 10(cc)	Form of Performance Share Unit Award Agreement (2019) under the Vulcan Materials Company 2016 Omnibus Long-Term Incentive Plan, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on May 3, 2019 1,2
Exhibit 10(dd)	Form of Performance Share Unit Award Agreement (2020) under the Vulcan Materials Company 2016 Omnibus Long-Term Incentive Plan, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on May 6, 2020 1,2
Exhibit 10(ee)	Form of Stock-Only Appreciation Rights Award Agreement (2020) under the Vulcan Materials Company 2016 Omnibus Long-Term Incentive Plan, filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed on May 6, 2020 1.2
Exhibit 10(ff)	Form of Restricted Stock Unit Award Agreement (2020) under the Vulcan Materials Company 2016 Omnibus Long-Term Incentive Plan, filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed on May 6, 2020 1,2
Exhibit 10(gg)	Form of Non-Employee Director Restricted Stock Unit Award Agreement under the Vulcan Materials Company 2016 Omnibus Long-Term Incentive Plan filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed on August 5, 2020 1,2
Exhibit 10(hh)	Credit Agreement, dated June 30, 2021, among Vulcan Materials Company, Truist Bank, as Administrative Agent, and the Lenders and other parties named therein, filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on July 1, 2021 1
Exhibit 10(ii)	First Amendment to Credit Agreement, dated June 30, 2021, among Vulcan Materials Company, Truist Bank, as Administrative Agent, and the Lenders and other parties named therein, filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed on August 5, 2021 ¹
Exhibit 10(jj)	First Amendment to Credit Agreement, dated August 16, 2021, by and between Vulcan Materials Company and Truist Bank, as Administrative Agent, filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on November 5, 2021 ¹
Exhibit 10(kk)	Second Amendment to Credit Agreement, dated August 16, 2021, by and between Vulcan Materials Company and Truist Bank, as Administrative Agent, filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed on November 5, 2021 1
Exhibit 21	List of the Company's material subsidiaries as of December 31, 2021
Exhibit 23	Consent of Deloitte & Touche LLP, Independent Registered Public Accounting Firm

Exhibit 24	Powers of Attorney
Exhibit 31(a)	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
Exhibit 31(b)	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
Exhibit 32(a)	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
Exhibit 32(b)	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
Exhibit 95	MSHA Citations and Litigation
Exhibit 101	The following financial information from this Annual Report on Form 10-K for the year ended December 31, 2021 are formatted in iXBRL (Inline eXtensible Business Reporting Language): (i) the Consolidated Statements of Comprehensive Income, (ii) the Consolidated Balance Sheets, (iii) the Consolidated Statements of Cash Flows, (iv) the Consolidated Statements of Equity and (v) the Notes to Consolidated Financial Statements.
Exhibit 104	Cover Page Interactive Data File – the cover page from this Annual Report on Form 10-K for the year ended December 31, 2021 is formatted in iXBRL (contained in Exhibit 101).

¹ Incorporated by reference.

Our SEC file number for documents filed with the SEC pursuant to the Securities Exchange Act of 1934, as amended, is 001-33841.

² Management contract or compensatory plan.

We have chosen not to include an optional summary of the information required by this Form 10-K.

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on February 25, 2022.

VULCAN MATERIALS COMPANY

J. Thomas Hill

- Mum Il

Chairman, President and Chief Executive Officer

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

Signature	Title	Date
J. Thomas Hill	Chairman, President and Chief Executive Officer (Principal Executive Officer)	February 25, 2022
Suzanne H. Wood	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 25, 2022
Randy L. Pigg	Vice President, Controller (Principal Accounting Officer)	February 25, 2022

The following directors:

Director Melissa H. Anderson Thomas A. Fanning Director Director O. B. Grayson Hall, Jr. Cynthia L. Hostetler Director Richard T. O'Brien Director James T. Prokopanko Director Kathleen L. Quirk Director David P. Steiner Director Lee J. Styslinger, III Director George Willis Director

February 25, 2022

Denson N. Franklin III Attorney-in-Fact

Denson M. Frank on

	State or Other Jurisdiction of Incorporation or Organization	% Owned Directly or Indirectly by Vulcan
Aggregates USA, LLC	Delaware	100
Aggregates USA (Augusta), LLC	Delaware	100
Aggregates USA (Macon), LLC	Delaware	100
Aggregates USA (Savannah), LLC	Delaware	100
Aggregates USA (Sparta), LLC	Delaware	100
Arundel Company, LLC	Delaware	100
Atlantic Granite Company, LLC	South Carolina	100
Azusa Rock, LLC	Delaware	100
Black Point Aggregates, Inc.	Nova Scotia	100
Calizas Industriales del Carmen, S.A. de C.V.	Mexico	100
CalMat Co.	Delaware	100
Central Concrete Supply Co. Inc.	California	100
Chem-Marine of South Carolina	South Carolina	100
Colonial Concrete Co.	New York	100
Coram Materials Corp.	New Jersey	100
·	Delaware	100
Eagle Rock Aggregates, Inc.	New Jersey	100
Eastern Concrete Materials, Inc. Florida Rock Industries, Inc.	New Jersey Florida	100
,	Bahamas	
Freeport Aggregates Limited		100
FRI Bahamas Ltd.	Bahamas	100
Harper Brothers, LLC	Delaware	100
Heavy Materials, LLC	U.S. Virgin Islands	100
Heritage Logistics, LLC	Delaware	100
Ingram Concrete, LLC	Texas	100
Legacy Vulcan, LLC	Delaware	100
Maryland Rock Industries, LLC	Delaware	100
Maryland Stone, LLC	Delaware	100
Mideast Division Logistics, LLC	Delaware	100
Mountain West Logistics, LLC	Delaware	100
NorCal Materials, Inc.	California	100
North American Recycling and Crushing, LLC	Delaware	100
Orca Sand & Gravel Limited Partnership	British Columbia	88
Polaris Materials Corporation	British Columbia	100
Rancho Piedra Caliza, S.A. de C.V.	Mexico	100
Rapica Servicios Tecnicos Y Administrativos, S.A. de C.V.	Mexico	100
R. C. Smith Companies, LLC	Delaware	100
RECO Transportation, LLC	Delaware	100
Redi-Mix, LLC	Texas	100
Right Away Ready Mix Incorporated	California	100
S & G Concrete Company, LLC	Delaware	100
Salisbury Towing, LLC	Delaware	100
Servicios Integrales, Gestoria Y Administracion, S.A. de C. V.	Mexico	100
Shamrock Building Materials, LLC	Delaware	100
Soportes Tecnicos Y Administrativos, S.A. de C.V.	Mexico	100
Southeast Division Logistics, LLC	Delaware	100
Southern Gulf Coast Division Logistics, LLC	Delaware	100
Statewide Transport, LLC	Delaware	100
Stone Creek Mira Mesa LLC	California	100
Superior Concrete Materials, Inc.	District of Columbia	100
TCS Materials, LLC	Delaware	100
Triangle Rock Products, LLC	Delaware	100
U.S. Concrete, Inc.	Delaware	100
USC Atlantic, Inc.	Delaware	100
VGCM, B.V.	Netherlands	100
Virginia Concrete Company, LLC	Delaware	100
Vulcan Aggregates Company, LLC	Delaware	100
Vulcan Asphalt, LLC	Delaware	100

	State or Other Jurisdiction of Incorporation or Organization	% Owned Directly or Indirectly by Vulcan
Vulcan Beaches, LLC	Delaware	100
Vulcan Concrete, LLC	Delaware	100
Vulcan Construction Materials, LLC	Delaware	100
Vulcan Gulf Coast Materials, LLC	North Carolina	100
Vulcan International, B.V.	Netherlands	100
Vulcan Lands, Inc.	New Jersey	100
Vulcan Logistics, LLC	Delaware	100
Vulica Shipping Company, Limited	Bahamas	100

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-254226 on Form S-3 and Registration Statements No. 333-211349, 333-182498, 333-160302, 333-148993, 333-148238, 333-147450, and 333-147449 on Form S-8 of our reports dated February 25, 2022, relating to the consolidated financial statements of Vulcan Materials Company and subsidiaries (the "Company"), and the effectiveness of the Company's internal control over financial reporting appearing in this Annual Report on Form 10-K for the year ended December 31, 2021.

/s/ DELOITTE & TOUCHE LLP

Birmingham, Alabama February 25, 2022 The undersigned director of Vulcan Materials Company, a New Jersey corporation, hereby nominates, constitutes and appoints Denson N. Franklin III and C. Samuel Todd and each of them, the true and lawful attorneys of the undersigned to sign the name of the undersigned as director to the Annual Report on Form 10-K for the year ended December 31, 2021 of said corporation to be filed with the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended, and to any and all amendments to said report.

The undersigned hereby grants to said attorneys full power of substitution, resubstitution and revocation, all as fully as the undersigned could do if personally present, hereby ratifying all that said attorneys or their substitutes may lawfully do by virtue hereof.

IN WITNESS WHEREOF, the undersigned director of Vulcan Materials Company has executed this Power of Attorney this 11th day of February, 2022.

/s/ Melissa H. Anderson
Melissa H. Anderson
/s/ Thomas A. Fanning
Thomas A. Fanning
/s/ O. B. Grayson Hall, Jr.
O. B. Grayson Hall, Jr.
/s/ Cynthia L. Hostetler
Cynthia L. Hostetler
/s/ Richard T. O'Brien
Richard T. O'Brien
/s/ James T. Prokopanko
James T. Prokopanko
/s/ Kathleen L Quirk
Kathleen L. Quirk
/s/ David P. Steiner
David P. Steiner
/s/ Lee J. Styslinger, III
Lee J. Styslinger, III
/s/ George Willis
George Willis

- I, J. Thomas Hill, certify that:
- I have reviewed this annual report on Form 10-K of Vulcan Materials Company;
- Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a
 material fact necessary to make the statements made, in light of the circumstances under which such statements
 were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - 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;
 - Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - 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 February 25, 2022

J. Thomas Hill

Jellum Il

Chairman, President and Chief Executive Officer

- I, Suzanne H. Wood, certify that:
- 1. I have reviewed this annual report on Form 10-K of Vulcan Materials Company;
- 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;
- Based on my knowledge, the financial statements, and other financial information included in this report, fairly
 present in all material respects the financial condition, results of operations and cash flows of the registrant as of,
 and for the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - 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;
 - Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report
 our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period
 covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - 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 February 25, 2022

Suzanne H. Wood

As Jan Aller

Senior Vice President and Chief Financial Officer

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

OF

VULCAN MATERIALS COMPANY PURSUANT TO 18 U.S.C. SECTION 1350

AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES OXLEY ACT OF 2002

I, J. Thomas Hill, Chairman, President and Chief Executive Officer of Vulcan Materials Company, certify that the Annual Report on Form 10-K (the "report") for the year ended December 31, 2021, filed with the Securities and Exchange Commission on the date hereof:

- (i) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and
- (ii) the information contained in the report fairly presents, in all material respects, the financial condition and results of operations of Vulcan Materials Company.

J. Thomas Hill

Chairman, President and Chief Executive Officer

- Mum Wd

February 25, 2022

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to Vulcan Materials Company and will be retained by Vulcan Materials Company and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 32(b)

CERTIFICATION OF CHIEF FINANCIAL OFFICER

VULCAN MATERIALS COMPANY PURSUANT TO 18 U.S.C. SECTION 1350

AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES OXLEY ACT OF 2002

I, Suzanne H. Wood, Senior Vice President and Chief Financial Officer of Vulcan Materials Company, certify that the Annual Report on Form 10-K (the "report") for the year ended December 31, 2021, filed with the Securities and Exchange Commission on the date hereof:

- fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and
- the information contained in the report fairly presents, in all material respects, the financial (ii) condition and results of operations of Vulcan Materials Company.

Suzanne H. Wood

Senior Vice President and Chief Financial Officer

February 25, 2022

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to Vulcan Materials Company and will be retained by Vulcan Materials Company and furnished to the Securities and Exchange Commission or its staff upon request.

On July 21, 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the Dodd-Frank Act) was enacted. Section 1503 of the Dodd-Frank Act requires companies that are "operators" (as such term is defined in the Federal Mine Safety and Health Act of 1977 (the Mine Act)) to disclose certain mine safety information in each periodic report to the Securities and Exchange Commission. This information is related to the enforcement of the Mine Act by the Mine Safety and Health Administration (MSHA).

The Dodd-Frank Act and the subsequent implementing regulation issued by the SEC require disclosure of the following categories of violations, orders and citations: (1) Section 104 S&S Citations, which are citations issued for violations of mandatory health or safety standards that could significantly and substantially contribute to the cause and effect of a mine safety or health hazard; (2) Section 104(b) Orders, which are orders issued upon a follow up inspection where the inspector finds the violation previously cited has not been totally abated in the prescribed time period; (3) Section 104(d) Citations and Orders, which are issued upon violations of mandatory health or safety standards caused by an unwarrantable failure of the operator to comply with the standards; (4) Section 110(b)(2) Violations, which result from the reckless and repeated failure to eliminate a known violation; (5) Section 107(a) Orders, which are given when MSHA determines that an imminent danger exists and results in an order of immediate withdrawal from the area of the mine affected by the condition; and (6) written notices from MSHA of a pattern of violations of mandatory health or safety standards that are of such nature as could have significantly and substantially contributed to the cause and effect of mine health or safety hazards under Section 104(e). In addition, the Dodd-Frank Act requires the disclosure of the total dollar value of proposed assessments from MSHA under the Mine Act and the total number of mining related fatalities.

The following disclosures are made pursuant to Section 1503.

During the twelve months ended December 31, 2021, none of our operations: (i) received any orders under Section 104(b), which are issued upon a follow up inspection where the inspector finds the violation previously cited has not been totally abated in the prescribed time period; (ii) had any flagrant violations under Section 110(b)(2); (iii) received notice from MSHA of a pattern of violations of mandatory health or safety standards under Section 104(e); or (iv) had any mining related fatalities.

CALENDAR YEAR 2021

The table below sets forth, by mine, the total number of citations and/or orders issued by MSHA during the period covered by this report under the indicated provisions of the Mine Act, together with the total dollar value of proposed assessments, if any, from MSHA, received during the twelve months ended December 31, 2021. Of our 282 active MSHA-regulated facilities during the year, we received 497 federal mine safety inspections at 233 facilities during the reporting period. Of our inspected facilities, 200 did not receive any reportable citations or orders.

Name of Operation	Number of	Total Number of S&S Citations	Mine Act § 104(b) Orders	Mine Act § 104(d) Citations and Orders	Mine Act § 110(b)(2) Violations	Mine Act § 107(a) Orders	Total Dollar Value of Proposed MSHA Assessments (dollars in thousands)	Total Number of Mining Related Fatalities	Received Written Notice under Mine Act § 104(e) (yes/no)
1604 CLEAN. TX	3	9	Orders 0	Orders	0	0 Orders	\$0.0	0	No
BARIN, GA	4	1	0	0	0	0	\$0.0	0	No
BARTLETT. IL	4	2	0	0	0	0	\$0.3	0	No
BRISTOL. TN	3	1	0	0	0	0	\$0.8	0	No
BRONTE QUARRY, TX	1	1	0	0	0	0	\$0.0	0	No
BROOKMAN QUARRY, USVI	1	2	0	0	0	0	\$0.0	0	No
CENTRAL, KY	6	1	0	0	0	0	\$0.0	0	No
COLUMBIA SED, SC	3	1	0	0	0	0	\$0.0	0	No
DIXIE LEE, TN	4	1	0	0	0	0	\$1.0	0	No
FRIENDSHIP QUARRY, GA	2	1	0	0	0	0	\$0.0	0	No
FT MYERS, FL	3	1	0	0	0	0	\$1.1	0	No
GRAND RIVERS, KY	3	2	0	0	0	0	\$0.0	0	No
HUNTSVILLE NORTH, AL	2	2	0	0	0	0	\$0.0	0	No
KENNESAW, GA	2	1	0	0	0	0	\$0.0	0	No
KNIPPA, TX	4	1	0	0	0	0	\$0.0	0	No
LAGRANGE, GA	2	1	0	0	0	0	\$0.0	0	No
LAKESHORE, AL	3	1	0	0	0	0	\$0.0	0	No
LEMONT, IL	4	1	0	0	0	0	\$0.9	0	No
LEXINGTON COUNTY, SC	2	2	0	0	0	0	\$0.0	0	No
LITHONIA, GA	2	1	0	0	0	0	\$0.3	0	No
MACON SED, GA	3	2	0	0	0	0	\$0.0	0	No
MANTENO, IL	3	1	0	0	0	0	\$0.0	0	No
MCCOOK, IL	3	7	0	0	0	0	\$5.5	0	No
NORTH TROY, OK	2	1	0	0	0	0	\$0.0	0	No
OHATCHEE, AL	2	1	0	0	0	0	\$0.2	0	No
PLACITAS, NM	2	2	0	0	0	0	\$0.6	0	No
QUINTON, NJ	1	1	0	0	0	0	\$0.0	0	No
RED RIVER, OK	1	1	0	0	0	0	\$0.0	0	No
RICHMOND ROAD, TN	5	3	0	0	0	0	\$1.8	0	No
SAN EMIDIO, CA	2	1	0	0	0	0	\$0.5	0	No
TORRANCE, NM	3	1	0	0	0	0	\$0.4	0	No
WANTAGE, NJ	1	1	0	0	0	0	\$0.0	0	No
WILSON CO, TN	5	1	0	0	0	0	\$0.4	0	No
OTHER OPERATIONS - 200	406	0	0	0	0	0	\$0.0	0	No
Total	497	56	0	0	0	0	\$13.8	0	

The total dollar value of proposed assessments received during the twelve months ended December 31, 2021 for all other citations, as well as proposed assessments received during the reporting period for citations previously issued, is \$37,808.

The table below sets forth, by mine, category of legal action and number of legal actions pending before the Federal Mine Safety and Health Review Commission as of December 31, 2021.

	Number of Legal Actions		
	Com		
	Contest	Contest	Discharge,
Name of Operation	Penalty	Citations	Discrimination
WILSON COUNTY QUARRY, TN	0	0	1

The table below sets forth, by mine, category of legal action and number of legal actions filed before the Federal Mine Safety and Health Review Commission during the twelve months ended December 31, 2021.

	Number of Legal Actions		
			Complaint of
	Contest	Contest	Discharge,
Name of Operation	Penalty	Citations	Discrimination
1604 QUARRY, TX	2	0	0
WILSON COUNTY QUARRY, TN	1	0	0
WILSON COUNTY QUARRY, TN	0	0	1

The table below sets forth, by mine, category of legal action and number of legal actions resolved by the Federal Mine Safety and Health Review Commission during the twelve months ended December 31, 2021.

	Number of Legal Actions		
			Complaint of
	Contest	Contest	Discharge,
Name of Operation	Penalty	Citations	Discrimination
AUGUSTA PLANT, VA	1	0	0
BARTLETT UNDERGROUND QUARRY, IL	2	0	0
BLAIRSVILLE QUARRY, GA	1	0	0
GRAHAM-VIRGINIA, VA	1	0	0
HUNTSVILLE NORTH QUARRY, AL	2	0	0
JACK PLANT, VA	1	0	0
SOUTH RUSSELLVILLE QUARRY, AL	2	0	0
SPRUCE PINE, NC	2	0	0
YORK PLANT, PA	1	0	0

