

ACEC Private Industry Brief

K-12 & Higher Education

Fall 2021

Market Scope

Design and construction spending in the education market sector totaled \$107 billion in 2020, according to the U.S. Bureau of the Census, making it the second largest market for engineering firms after transportation. It is for this reason that **K-12 & Higher Education** is the newest market focus in ACEC's award-winning *Private Industry Briefs* series. Much of the funding for this market is public, but in the spirit of the briefs covering "vertical" markets, it is one we could not ignore. The **K-12 & Higher Education** client-base has had significant challenges due to COVID-19, however this market remains key due to its large size, and critical role in educating the next generation.

Top Clients

Key clients for engineering firms are private developers and concessionaires that enter into public-private-partnership (P3) contracts with colleges and universities. The list below highlights these leading prime contractors, categorized by project type (source: The 2020 *P3 EDU 100 Directory*).

University Real Estate Redevelopment: Balfour Beatty Campus Solutions, CA Ventures, Edgemoor Infrastructure & Real Estate, Fairmount Properties, Kiewit, Oak View Group, Plenary Group USA, Public Facilities Group, Skanska, and Wexford Science & Technology.

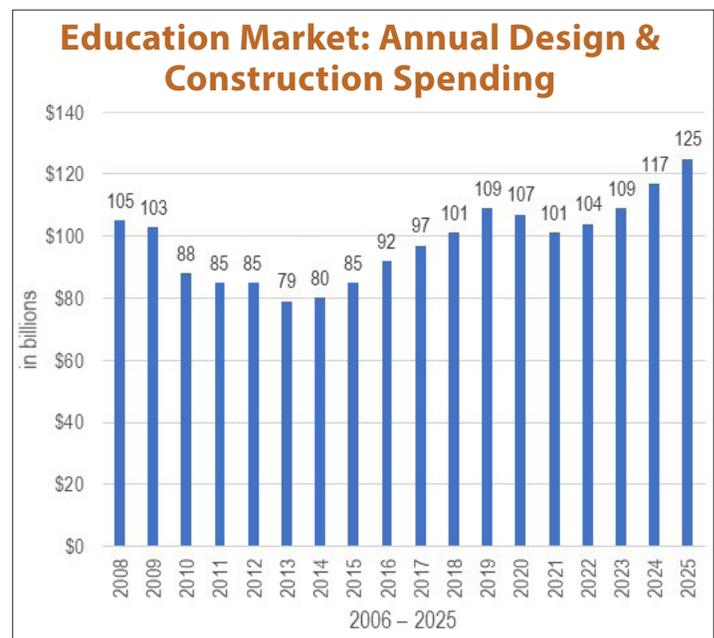
Student Housing: American Campus Communities, Capstone Development Partners, Corvias, Gilbane Development Company, Greystar Real Estate Partners, Harrison Street, Lendlease, Michaels Student Living, RISE: A Real Estate Company, and Servitas.

Non-Academic & Utilities: Ameresco, Blue Sky Power, Clearway Energy Group, Con Edison Solutions, DCO Energy, Engie North America, Johnson Controls, LAZ Parking, NextEra Energy, SP Plus Parking, and Waldron Engineering and Construction.

5 Current Market Trends

► **1. Demographics Lead to Market Demand:** Public school enrollment in elementary and secondary schools rose 28 percent, from 39.4 million to 50.6 million, between 1985 and 2019, including rising 3 percent between 2009-2019, according to the National Center for Education Statistics (NCES). Private school enrollment, which accounts for about 10 percent of K-12, has decreased slightly from a high of 12 percent in 1985. The map on page 4 of this brief highlights the fastest growing states over the last 10 years, and also notes the largest public school districts in the nation. The need for design services within this market has also steadily grown. GovWin, a product of Deltek, reported in its recent publication *Education Contract Analysis: Selling to K-12 and Higher Education Markets*, that bids and requests for proposals from independent school districts rose to 53,864 in 2019, up from around 45,000

Continued on next page



Source: U.S. Census Bureau & FMI

Current Market Trends, *continued*

in 2014, which is a 3.6 percent annual growth rate. The same growth pattern was not shared by higher education clients. The GovWin report noted an average decline of 2.3 percent between 2014-2019, largely credited to downward trends in enrollment, and more fiscal stress being felt at the university level.

► **2. University P3 Projects Continue Evolution:** P3 contracts are not new for universities, which have been procuring student housing using this method for many years, but what is increasingly different are the varied types of projects—both revenue and non-revenue producing—that are now being done under P3 arrangements. Universities are partnering with developers and other firms on all aspects of the campus including: science facilities, student unions, dining centers, parking facilities, central utility plants and other energy infrastructure. A 2019 survey conducted by the *Chronicle of Higher Education* and P3 EDU reflected this, with three of the top four areas of interest from university clients considering P3s being: Development of campus facilities/infrastructure; leveraging current assets, such as energy and parking; and student housing.

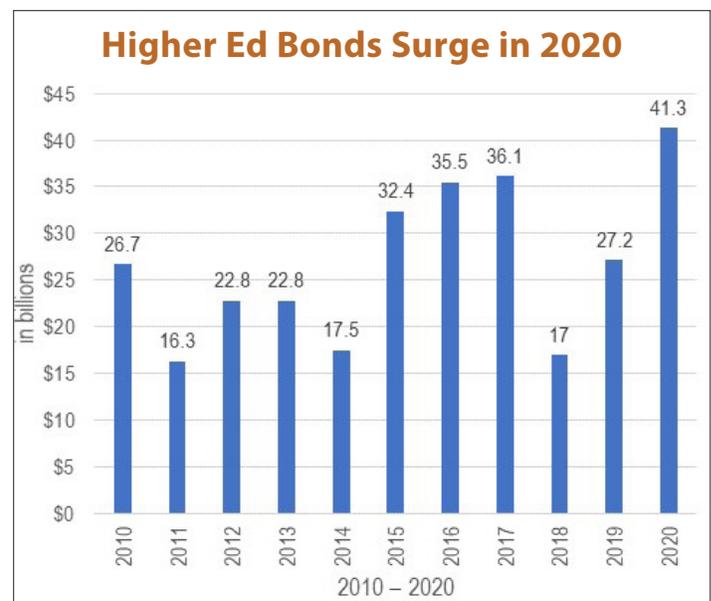
► **3. Health Care within Higher Education Institutions is a Valuable Asset:** Public and private colleges and universities with medical schools and research institutions—including affiliation with health care systems—derive between 40-70 percent of their total revenue from health-care related operations and research, according to S&P Global. In addition to science-related streams of funding, such as from the National Institutes of Health (NIH), many of these

Rank	University - NIH Funding Recipient	FY2020 NIH Funding
1	Johns Hopkins University	\$807 M
2	University of California, San Francisco	\$686 M
3	University of California, Los Angeles	\$673 M
4	University of Michigan, Ann Arbor	\$642 M
5	Duke University (NC)	\$607 M
6	University of Pennsylvania	\$594 M
7	University of Pittsburgh	\$570 M
8	Stanford University	\$561 M
9	Columbia University Health Sciences	\$559 M
10	Yale University	\$551 M

Source: NIH

higher education institutions also had access to federal stimulus monies to support public health during the COVID-19 pandemic. For engineering firms, targeting university clients with resources (i.e. see table bottom left providing top 10 universities for NIH funding) may be a favorable business development tactic.

► **4. Universities Issue a Record Number of Bonds in 2020:** Colleges and universities, both in the United States and around the world, issued a record number of bonds in 2020, according to the *Wall Street Journal* (WSJ) as universities faced uncertainties around COVID-19 and lower revenues from tuition and fees—particularly from international students who could not travel to the United States. Tracking bonds, both for university as well as public K-12 school districts, is a strategic tactic for engineering firms who want to understand which education clients will have resources to dedicate to capital programs.



Source: WSJ & Barclays

► **5. Sustainability Goals Focus on Renewable Energy:** Often in connection with P3s, higher education institutions are turning to renewable energy sources to meet sustainability goals. According to Brailsford & Dunlavey there have been 25 District Energy Projects closed or in the pipeline since 2017, as well as sharp growth in solar power purchase agreements (PPAs). In 2015 the National Renewable Energy Laboratory reported that about 60 universities had signed PPAs; however that number now tops 200 as universities are increasingly turning to third-party funded solar developments (both on and off-campus) to power facilities with renewable energy.

How is Education Funded?

Understanding funding streams can help engineering firms "follow the money"

For K-12 public schools in the United States, funding mainly comes from local and state sources. At the local level, funding is mainly allocated from revenue generated by property taxes. At the state level, funding comes from sales and income taxes, as well as lotteries and casino/gaming activities. Federal funds make up only about 10 percent of education funding.

Private elementary and secondary schools are typically funded by a combination of tuition, gifts, and endowments—similar to colleges and universities.

According to NASBO, elementary and secondary education is the second highest allocation of states' budgets (after Medicaid), making up an average of 19 percent of states' total spending in FY2020.

State higher education spending supports public university systems, community colleges, and career and technical education institutions. Higher education spending averaged 9.7 percent of total state spending in FY2020, according to NASBO.

State expenditures for higher education-related construction was estimated at \$12.9 billion in FY2020, up from \$12.0 billion in both FY2019 and FY2018, says NASBO.

Additional forms of revenue for higher education (for both public and private institutions) include tuition and fees, research grants, and the issuance of bonds.

Business Development Insight

Innovation districts increasingly key, particularly for urban campuses

Innovation districts are increasingly important development tools for universities in a post-COVID-19 economy, as the collaborative partnerships resulting from the districts provide new sources of funding.

These developments aim to be hubs for startup and technology-focused companies looking to partner with universities to develop new research—generally in science, technology, engineering, and math-related fields. According to Brookings' *The Rise of Innovation Districts: A New Geography of Innovation in America* (2014), they are also "physically compact, transit accessible, and technically wired, and offer mixed-use housing, office, and retail."

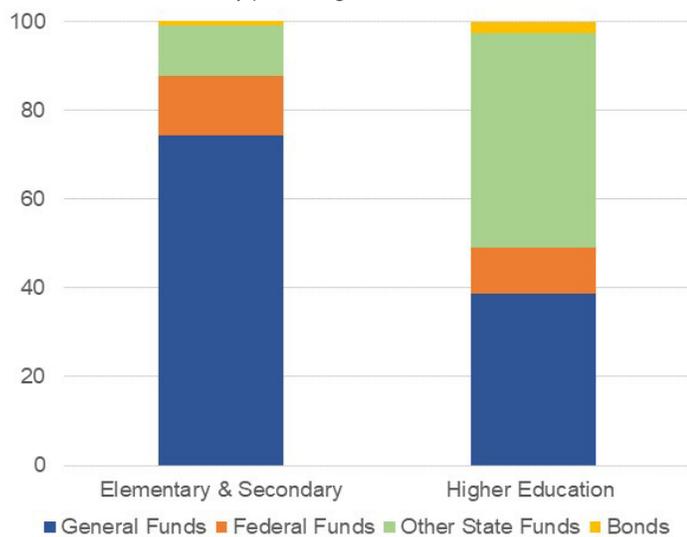
In particular, urban universities value the unique opportunity innovation districts represent and are working with stakeholders to reshape urban real estate and create buzzworthy adjacent or satellite campuses. Urban universities rank as the largest employers in two thirds of America's 100 largest cities, as detailed in Curbed (*Universities, Chasing the Startup Economy, Reshape Urban Real Estate*, 2018). In New York City—a global capital of business—universities and academic medical centers make up five of the top 10 private employers, according to Slate (*City Planning 101: Why Universities Became Big-Time Real Estate Developers*, 2018).

Fulfilling a role as a real estate developer is not new for universities—however, the reasons why universities are developing innovation districts is different. For universities, innovation districts create funding streams through the innovation hubs and corresponding partnerships and research endeavors. A 2017 Brookings Institution study, *Hidden in Plain Sight: The Oversized Impact of Downtown Universities*, found that research universities are economic development engines for this innovation hub activity due largely to the patents and licensing deals that result from the research. Urban universities in particular thrive under this model: "These institutions were responsible for 37 percent of startups and patents, 43 percent of invention disclosures, and 52 percent of licensing income," detailed the report.

Shifts in the economy and in revenue streams—made even more dire during COVID-19—have left many universities seeking such financial partners.

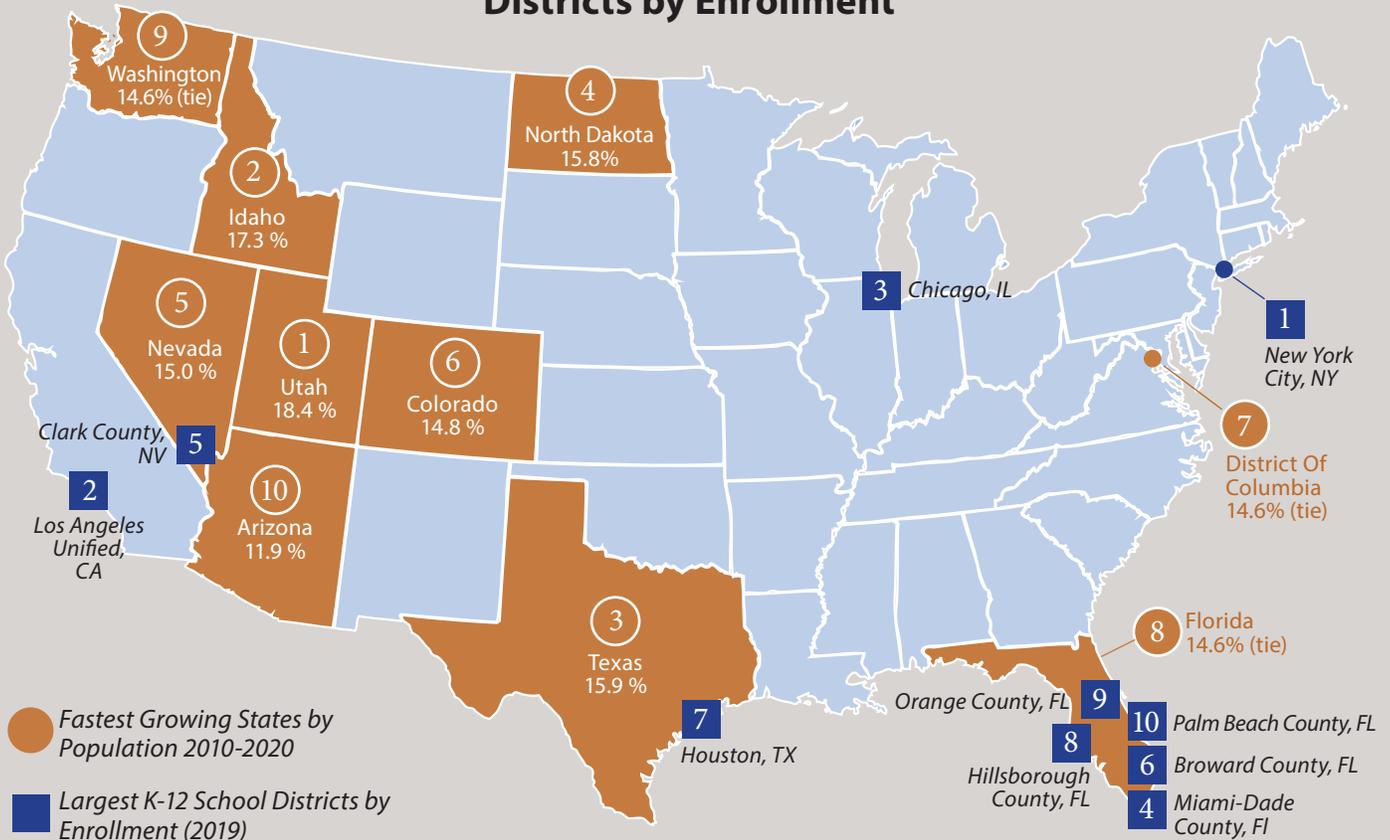
Average State Expenditures for Public Education by Funding Source

(by percentage for FY2020)



Source: National Association of State Budget Officers

Fastest Growing States by Population and Largest K-12 School Districts by Enrollment



Source: U.S. Census Bureau

Private Market Symposiums:

Kicking off in December 2021

Kicking off in December 2021, ACEC's new Private Market Symposiums will convene clients, economists, policy makers and engineering leaders in different cities throughout the country for an in-depth look into each private market. Register today!

Intermodal & Logistics -

December 2-3, 2021 in Charleston, SC

The intermodal and logistics market is a dynamic and growing one, with various types of facilities, including marine terminals, rail terminals, depots and container yards, inland ports, freight airport terminals, and industrial real estate located adjacent to intermodal facilities. Link to register: <https://programs.acec.org/private-market-symposiums/>

Commercial & Residential Real Estate -

March 3-4, 2022 in Scottsdale, AZ

Health Care & Science+Technology -

April 28-29, 2022 in Boston (Cambridge), MA

ACEC's Private Industry Briefs

Focusing on five key market areas, ACEC's Private Industry Briefs are available via free subscription.

Visit: <https://programs.acec.org/industrybrief/>



Diana Alexander is ACEC's director of private market resources. She can be reached at: dalexander@acec.org



Erin McLaughlin is ACEC's vice president of private market resources. She can be reached at: emclaughlin@acec.org

To check out all of ACEC's private market resources, please visit: <https://www.acec.org/publications/private-market-resources/>