An Analysis of Construction Spending in the Pharmaceutical & Biotech Industry, *2019-2024*

Presented by:

PILMA
Pharmaceutical Industry Labor-Management Association

ICERES
Institute for Construction Employment Research

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May 2025

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Supporting Organizations

Pharmaceutical Industry Labor-Management Association (PILMA)

http://www.pilma.org/

For nearly 20 years, the Pharmaceutical Industry Labor-Management Association has united the biopharmaceutical industry and union workers with the dual goals of fostering innovation of life-saving cures and securing high-quality union construction jobs. As the partnership has grown over the years, so has its impact. Labor and industry recognize the strength in their partnership: strong industry naturally leads to good jobs and a vibrant economy.

The pharmaceutical industry members of PILMA recognize that the most highly skilled workers are needed to construct and maintain the highest quality research and manufacturing facilities. Following each new drug trial, research facilities must be wiped clean—entire systems must be changed, surfaces must be sterilized and other equipment replaced. This requires highly skilled reliable labor that the industry can depend on to do the job right. North America's Building Trades Unions spend $1.6 billion training their members each year. With state-of-the-art training facilities all over the country the building trades are ready to meet the needs of today and the challenges of tomorrow.

Institute for Construction Employment Research (ICERES)

http://iceres.org/

The Institute for Construction Employment Research (ICERES) is a non-profit network of academic faculty and other scholars across the United States and Canada interested in conducting, collaborating on, and facilitating academic-quality research on construction labor issues. ICERES is committed to being an independent, non-partisan voice on labor market and public policy issues affecting the construction industry with the goal of finding and disseminating pragmatic solutions to problems affecting construction owners, developers, contractors and workers.

Executive Summary

Recent political dialogue has centered on two important issues: increasing the competitiveness of American industries abroad and the need to generate good-paying jobs for blue-collar workers in this country. What has been lost in this dialogue, at times, has been that the United States already has many thriving, cutting-edge industries that are among the world's leading exporters and have long supported thousands of good-paying American jobs. One of these sectors is the pharmaceutical and biotech industry, as American companies have long been among the world's leaders in researching, developing, manufacturing, and exporting innovative life-saving and life-enhancing medications. Credit for decades of American leadership in global health is deserved by many—especially the world-renowned scientists and researchers at the heart of medical breakthroughs in the United States—but the success of the country's pharmaceutical and biotech industry has always been dependent on more than the knowledge and skills of scientists: it is also the result of world-class research facilities, laboratories and manufacturing plants.

Developing state-of-the-art pharmaceutical and biotech facilities in the United States relies on several critical elements. While state and federal governments have historically provided critical support, the private sector independently invests billions of dollars annually in pharmaceutical and biotech infrastructure. But none of this money would be sufficient without skilled construction tradespeople who are capable of building and maintaining high-tech facilities that meet exacting standards. This has led to a unique partnership between the pharmaceutical and biotech industry and the highly skilled tradespeople of America's construction labor unions.

Beyond its importance for public health, the long-standing partnership between the pharmaceutical and biotech industry and construction unions has also had substantial economic benefits for local workers, families, and communities. The employment of union construction workers provides good jobs for thousands of local residents, including family-supporting wages, health insurance, and pension benefits. The decision to hire union workers and contractors also sustains skilled craft worker training and apprenticeship programs, strengthening workforce development for a region while promoting a pathway to the middle class for its blue-collar workers. All of this is done without a nickel of student debt or a dime of taxpayers' money.

To demonstrate the impact that the pharmaceutical and biotech industry has on the construction labor market—and regional economies as a whole—this report will examine privately-funded construction on major research, manufacturing, and distribution projects ($5+ million) for 18 states between 2019 and 2024. To focus on private-sector investment in the infrastructure needed for pharmaceutical and biotech advancement, the projects included in this study intentionally feature a narrow focus: where possible, this study excludes government-sponsored projects, hospitals, veterinary-use projects, and facilities producing supplements or cannabis. The states included in this report were selected by the Pharmaceutical Industry Labor-Management Association (PILMA), a coalition of labor organizations and companies in the pharmaceutical industry with dual goals of fostering medical innovation and promoting high-quality construction jobs.

Relying almost exclusively on data from Industrial Info Resources (IIR), a well-respected global consulting firm, this report concludes the following:

Table ES. Summary of Pharmaceutical and Biotech Industry Construction, 18 States, 2019-2024

	PROJECTS		SPENDING	UNION CONSTRUCTION LABOR		
STATE	NO. OF PROJECTS ($5M+)	TOTAL VALUATION ($ MILLION)	TOTAL SPENDING ($ MILLION)	TOTAL LABOR HOURS	ESTIMATED UNION LABOR HOURS	ESTIMATED UNION WAGES
California	237	$18,778.1	$14,708.5	29,557,642	14,978,257	$588,210,680
Colorado	29	$2,138.5	$1,751.5	3,503,764	439,813	$13,447,802
Connecticut	21	$290.0	$440.1	895,366	448,661	$16,110,306
Delaware	6	$846.0	$625.4	1,252,369	335,425	$14,456,570
Illinois	15	$2,192.0	$1,331.5	2,676,051	2,045,016	$85,181,664
Indiana	85	$12,421.9	$6,663.0	13,391,633	5,235,476	$183,075,641
Maryland	50	$2,864.4	$2,835.2	5,704,950	1,353,157	$55,171,731
Massachusetts	197	$19,622.3	$13,085.1	26,214,107	11,338,069	$526,008,261
Michigan	26	$1,816.1	$1,828.0	3,673,839	1,902,595	$64,872,582
Minnesota	16	$646.5	$490.1	988,543	563,530	$23,226,610
Missouri	18	$964.0	$991.1	2,001,925	1,176,875	$37,495,462
New Jersey	71	$3,950.6	$4,030.5	8,102,297	5,730,508	$258,416,456
New York	67	$5,863.2	$6,054.1	12,148,331	7,556,497	$299,296,459
Ohio	38	$2,506.8	$2,175.0	4,373,398	1,643,410	$55,569,722
Oregon	14	$454.0	$523.9	1,053,715	490,883	$21,456,546
Pennsylvania	95	$6,967.5	$5,926.0	13,623,355	7,779,348	$309,785,930
Virginia	26	$1,703.1	$1,827.2	3,670,784	271,959	$7,585,134
Washington	37	$2,481.2	$1,733.0	3,472,292	1,740,477	$78,802,824
TOTAL	**1,048**	**$86,506.2**	**$67,019.2**	**136,304,360**	**65,029,957**	**$2,638,170,379**

Source: Industrial Info Resources, Current Population Survey, Quarterly Census of Employment and Wages

- There were 1,048 major ($5+ million) pharmaceutical and biotech projects that were privately funded and under construction at any point between 2019 and 2024 as identified by IIR for the 18 states studied. These projects represent a combined $86.5 billion in infrastructure investment by the industry. Major pharmaceutical and biotech projects were most prevalent in Massachusetts (197 projects, $19.6 billion) and California (237 projects, $18.8 billion), however projects totaling over $2 billion were identified in 11 of the 18 states. Further, there was at least $290 million in private-sector projects active at any point between 2019 and 2024 in all 18 states analyzed.

- Major pharmaceutical and biotech R&D and manufacturing projects active between 2019 and 2024 were heavily concentrated in major metropolitan cities and along the two coasts, specifically the Northeast Corridor (especially in Greater Boston), Southern California, the Bay Area and Seattle. However, there were other noticeable concentrations of projects in the Midwest and Great Plains, including Chicago, Columbus, Denver, Indianapolis, and St. Louis.

- In terms of total investment, IIR estimates that the private sector of the pharmaceutical and biotech industry spent $67.0 billion on infrastructure spending across the 18-state sample exclusively between 2019 and 2024. This number also includes projects less than $5 million and an adjustment for projects not identified by IIR. This six-year spending number ($67.0 billion) is considerably different from the value of major projects active at any point between 2019 and 2024 ($86.5 billion) largely because the latter includes construction value installed before 2019 or to be erected after 2024.

- Private-sector construction spending by the pharmaceutical and biotech industry increased sharply from 2019 ($6.7 billion) to 2024 ($14.4 billion). After adjusting for inflation between the two years, this equates to a growth rate of over 70% over a six-year period. While a full accounting of the reasons for this growth rests outside the scope of this study, some likely explanations include the development and manufacture of COVID-19 vaccines, the “Ozempic Revolution” and interest in GLP-1 medications, and a surge of investment by real estate development companies and private equity firms.

- In terms of state construction environments, this report highlights that all 18 states featured at least $440 million in private-sector pharmaceutical and biotech infrastructure spending between 2019 and 2024. This was led by California ($14.7 billion) and Massachusetts ($13.1); meanwhile, four other states (Indiana, New York, Pennsylvania, and New Jersey) also had construction spending of at least $4 billion over that time.

- Annual data provided by IIR reveals that year-over-year growth in private-sector infrastructure investment between 2019 and 2024 was highly disparate across the 18 states featured in this study. Investment growth was especially strong in Colorado and Indiana, where spending increased nearly tenfold over the time analyzed in this report. Not coincidentally, these two states are the home of two of the largest projects identified by IIR: a $784 million project by Agilent Technologies Incorporated in Frederick, Colo., and a $7.7 billion project by Eli Lilly & Company at its facility in Lebanon, Ind.

- From 2019 to 2024, the pharmaceutical and biotech industry required 136.3 million labor hours from construction workers on research and manufacturing facilities across these 18 states among the 14 trades examined by IIR. Electricians, instrumentation techs, and plumbers and pipefitters accounted for slightly more than 60% of this total. Substantial employment also occurred among operating engineers, carpenters, laborers, millwrights, and ironworkers, as pharmaceutical and biotech industry construction accounted for more than 4.5 million labor hours in each of those trades across the six years identified in this study.

- Trends in construction employment mirror those of spending, as the number of construction labor hours required by the pharmaceutical and biotech industry increased sharply from 2019 (13.6 million) to 2024 (29.0 million) across the 18 states analyzed in this study. Assuming astandard 2,000-hour work year, IIR data suggests that the pharmaceutical and biotech projects employed 14,481 full-time construction workers in 2024 in this 18-state area.

- While IIR data do not distinguish between union and non-union labor hours, a conservative estimate of union construction work indicates that the pharmaceutical and biotech industry required at least 65.0 million labor hours by union workers in these 18 states during this six-year period. The conservative nature of these estimates is due to statistical limitations; as outlined in this report, the full impact of the industry on union construction employment is likely to be substantially higher than the above projections.

- Multiplying this conservative estimate of union labor hours by the average union construction wage in each state between 2019 and 2024 leads to the conclusion that the pharmaceutical and biotech industry paid at least $2.6 billion in wages to union construction workers across these 18 states during this six-year period. This number likely underrepresents the economic impact of the employment of union workers: it does not include additional tens of millions of dollars in health insurance and pension contributions, nor does it factor in the indirect economic benefits to a region resulting from increased spending in the community (i.e., the "multiplier effect.")

- The pharmaceutical and biotech industry has helped create a financially self-sufficient pipeline of skilled labor in the construction industry. Union apprenticeship programs are largely funded by per-hour contributions by active tradespeople. Assuming conservative estimates of 65.0 million union labor hours and a contribution of $0.30 per hour, the pharmaceutical and biotech industry was responsible for a minimum of $19.5 million in funding for union apprenticeship programs in these 18 states between 2019 and 2024. These funds promote a pathway to the middle-class for blue-collar workers while strengthening a region's workforce development, all without a nickel of student debt or a dime of taxpayer money.

The medical breakthroughs advanced by renowned American scientists and researchers have long benefited from—and in some cases have been dependent upon—the world-class research, development, and manufacturing facilities that are economic engines in cities and towns across the United States. While the Federal government has historically supported these scientific and medical advances, a considerable amount of America's state-of-the-art science and medical infrastructure is the result of billions of dollars of private-sector investment and the unique partnership between the pharmaceutical and biotech industry and the highly-skilled tradespeople of America's construction unions.