

# ECONOMIC IMPACT: BAYER’S BIOPHARMACEUTICAL CAMPUS IN BERKELEY

Since 1992, global pharmaceutical giant, Bayer, has produced essential medicines for the treatment of hemophilia A at its campus in west Berkeley, helping thousands of people in more than 50 countries.

Now, Bayer wants to diversify that focus to help millions more people fight a broad range of diseases through innovative product development and manufacturing of new medicines.

Bayer has submitted an application for a 30-year extension of its Development Agreement (DA) to the City of Berkeley that would transform their campus, adding 1,000 employees and more than 900,000 square feet of new lab, production and office space. These new facilities would be used to support staff developing the processes for new large scale manufacturing technologies needed to produce cutting edge cell and gene therapies, and ultimately to manufacture these products for late-stage clinical trials and commercial launches in therapeutic areas ranging from cancer to Parkinson’s and to cardiovascular disease.

THE ECONOMIC IMPACT

A new economic impact report from the Bay Area Council Economic Institute (BACEI) underlines the economic value of Bayer’s plans.



CONCEPTUAL RENDERING OF THE BAYER SITE MASTER PLAN AT FULL BUILD OUT IN 2052

BY 2052 BAYER’S NEW CAMPUS IS PROJECTED TO

▶ Add 1,000 jobs to employ 2,000 people in west Berkeley	▶ Construct more than 900,000 square feet of new lab, production, warehouse and office space	▶ Triple open space and green perimeters along neighboring roads	▶ Produce innovative new therapies for diseases like cancer and Parkinson’s	▶ Contribute \$613 million annually to the SF Bay Area economy jobs, wages and spending	▶ Increase of 97% in economic impact in the City of Berkeley
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BACEI calculated the current and projected economic impact of Bayer’s Berkeley operations, tracking the value of the jobs, wages and spending as they filtered into the wider community. Their data shows significant multiplier effects for the city of Berkeley, East Bay and Bay Area economies. Bayer’s new master plan and proposed DA extension would create jobs and economic opportunity across the region for years to come.

“Part of the importance of this report is to show that, yes, Bayer creates jobs, but it creates all types of other impacts,” said Jeff Bellisario, BACEI executive director. “A large employer has connections in its local community and we see this grow as Bayer’s presence in Berkeley is enhanced. This impact extends well beyond Berkeley given the regional nature of where Bayer’s employees live, its network of suppliers and vendors, and its impact on the construction sector.”

WHY MANUFACTURING MATTERS

Manufacturing lies at the heart of the Bayer campus. Jobs in this sector are transformative with huge potential for career progression and often come with lower educational barriers to entry. Manufacturing jobs are stable, well paid and enable social mobility.

The manufacturing sector has not been immune to job loss during the COVID-19 pandemic, but it has been relatively resilient. Between December 2019 and December 2020, the East Bay (Oakland-Hayward-Berkeley metropolitan area) saw a 2.3% loss in manufacturing employment. Bayer’s hiring trend, however, has moved in the opposite direction, as it increased employment between 2019 and 2020.

Many of the jobs at Bayer’s west Berkeley campus in the future will continue to be in manufacturing, ranging from producing its current hemophilia therapy portfolio to scaling up and manufacturing novel cell and gene therapies. And because of manufacturing’s supply chain structure, jobs in this sector have some of the strongest multiplier effects in the current labor market.

As a fundamental component of the region’s economy, manufacturing will be

key for the region’s recovery. The jobs that Bayer provides now and into the future are critical in creating economic opportunities at multiple wage levels.

A 2019 report from the Economic Policy Institute found that for every one manufacturing job a further 5.14 jobs are supported nationally. By 2052, 35% of the 2,000 employees working on campus are projected to be in advanced manufacturing roles.

GENERATING FAMILY-SUSTAINING JOBS

Nearly all Bayer employees make at least \$65k per year and 1/3 of all Bayer jobs pay between 65-100k per year. In the Bay Area, the family-sustaining annual wage threshold for families with children is around \$75,000 according to The Brookings Institution, whereas the Living Wage ordinance in Berkeley is around \$35k per year based on a 40-hour work week.

COMMUNITY BENEFITS

As part of its current DA, Bayer has made more than \$37 million (inflation adjusted) in development agreement payments and in-kind support to date. This total includes both mitigations (for example, transportation infrastructure) and community benefits (for example biotech career technical education, affordable housing, other community programs).

Perhaps most well known among it’s community benefit initiatives is Biotech Partners, an independent nonprofit created under the original DA.

Biotech Partners has helped more than 3,100 students from underserved communities gain education and professional experience in the biotech sector. Many graduates are now employed on the Bayer campus with several in senior positions.

Bayer is negotiating a new package of community benefits with the City of Berkeley as part of the proposed extension of its DA. But as the BACEI report shows, the transformative power of this redevelopment is multifaceted with value added at every stage.

“Biotech is transforming medicine with the advent of cell and gene therapies addressing some of the most devastating health conditions today. Our scientists and engineers are creating the future of biotech manufacturing to make these therapies accessible to patients around the world.”



JENS VOGEL  
SVP/Global Head of Biotech, Bayer

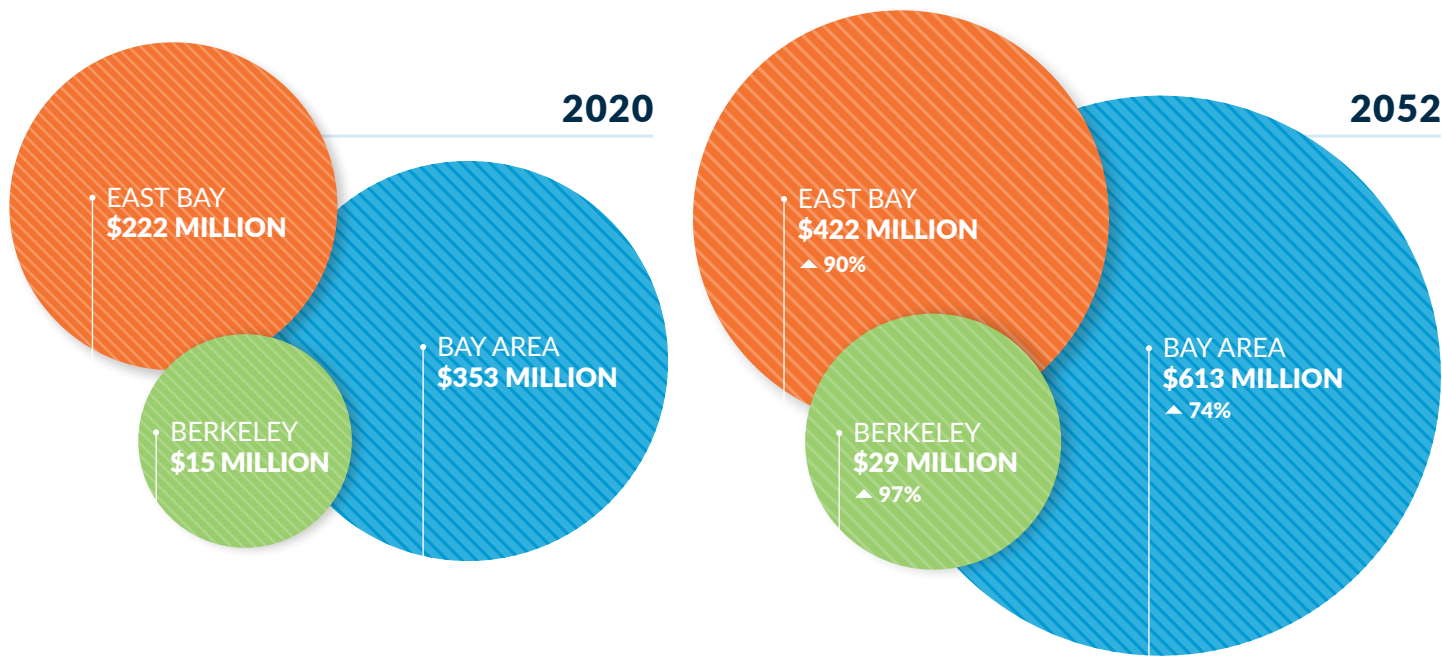


The jobs that Bayer projects to grow provide opportunities for a large swath of the Bay Area population -- particularly in the East Bay. The company offers family-sustaining wages across education and training levels with the opportunity for career mobility.



**RHONDA BOYKIN**  
Interim Director,  
Alameda County Workforce Development Board

PROJECTED AVERAGE ANNUAL ECONOMIC IMPACT  
IN 2020 DOLLARS



FROM BERKELEY TO THE WORLD

The Bayer campus sits on approximately 46 acres in west Berkeley. The campus includes two primary areas, the North and South Properties, operated as one but governed by two separate City entitlements.

Bayer signed a DA for the North Properties in 1992 and later acquired the South Properties that are governed by a 2000 Use Permit. The extended DA would bring both the North and South properties under the same entitlement allowing for more streamlined administration over the next 30 years.

Currently, the campus has approximately 30 buildings, ranging in height from 14 feet to the 100-foot former Colgate Palmolive tower, and totalling approximately 1,087,000 square feet. There are currently 1,100 parking spaces across eight surface parking lots.

BUILDING A BETTER FUTURE

The vision of Bayer's new master plan is a campus which minimizes building footprints and maximizes collaborative space. The design seeks to adhere to modern land use principles that encourage establishing a sense of purpose and community. By leveraging novel technologies and flexible facilities, Bayer also aims to reduce the time needed to develop and launch new drug therapies by several years.

The Development Agreement extension proposes a reduction of 148,000 square feet when compared to the existing development rights and Bayer's master plan envisions removal of approximately 267,000 square feet of aging infrastructure in the next ten years. Over the next 30 years Bayer plans to construct 918,000 new square feet of modernized and environmentally friendly buildings. New buildings will range from 25-80 feet in height over a phased construction program that will build new space

for production, laboratory and administrative use. Two proposed parking structures and integrated parking within some new buildings would replace most surface lots. Other buildings for manufacturing, warehousing and maintenance would be renovated or expanded.

Open space on the campus triples from three to nine acres, including green perimeter space and additional setbacks. Included in this is an expanded, publicly accessible entry plaza on 7th Street. And existing view corridors on Dwight Way, Parker Street and Carleton Street would be preserved.

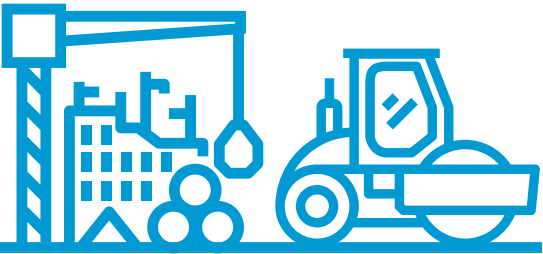
THE POWER OF DIVERSITY

Much like the overall employee profile of the Bayer campus in Berkeley shown earlier in this report, these construction jobs would provide opportunities to a diverse workforce. Of East Bay residents that work in the construction sector, 45% identify as Latinx, 9% as

EXISTING AND PROPOSED BUILDING BUILDOUT BY SQ.FT.

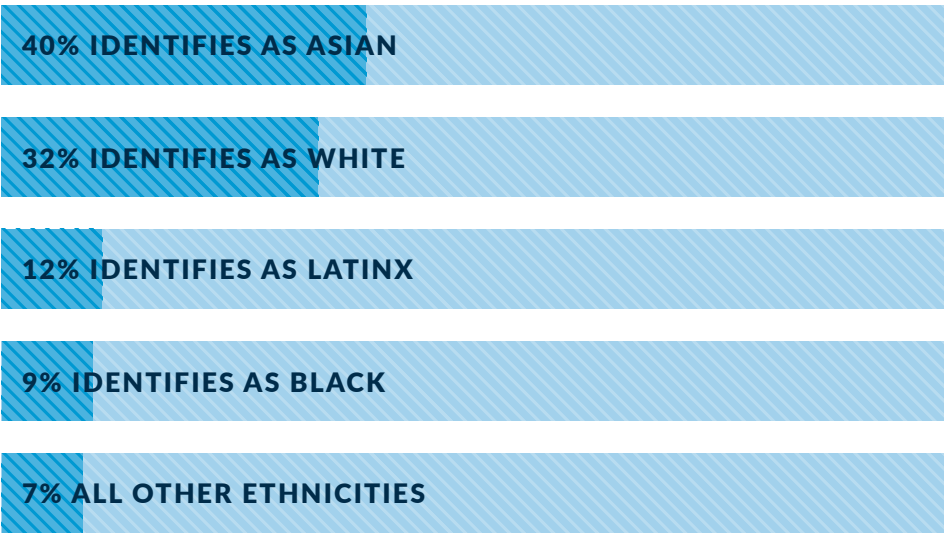
Existing Buildings	1,087,000
Proposed Buildings for Demolition	- 267,000
Existing Buildings to be Retained	820,000
Proposed New Construction*	+ 918,000
Proposed maximum construction	1,738,000
Maximum Current Development Limits	- 1,886,000
Proposed change to development limits	-148,000

\* Does not include parking garage.



BAYER AND BIOTECH INDUSTRY DIVERSITY DATA

BAYER BERKELEY EMPLOYEE ETHNIC DIVERSITY | 2020



BIO REPORT: MEASURING DIVERSITY IN THE BIOTECH INDUSTRY



Published January 2020 (full report available at [www.bio.org](http://www.bio.org)).

CONSTRUCTION JOBS ETHNIC DIVERSITY

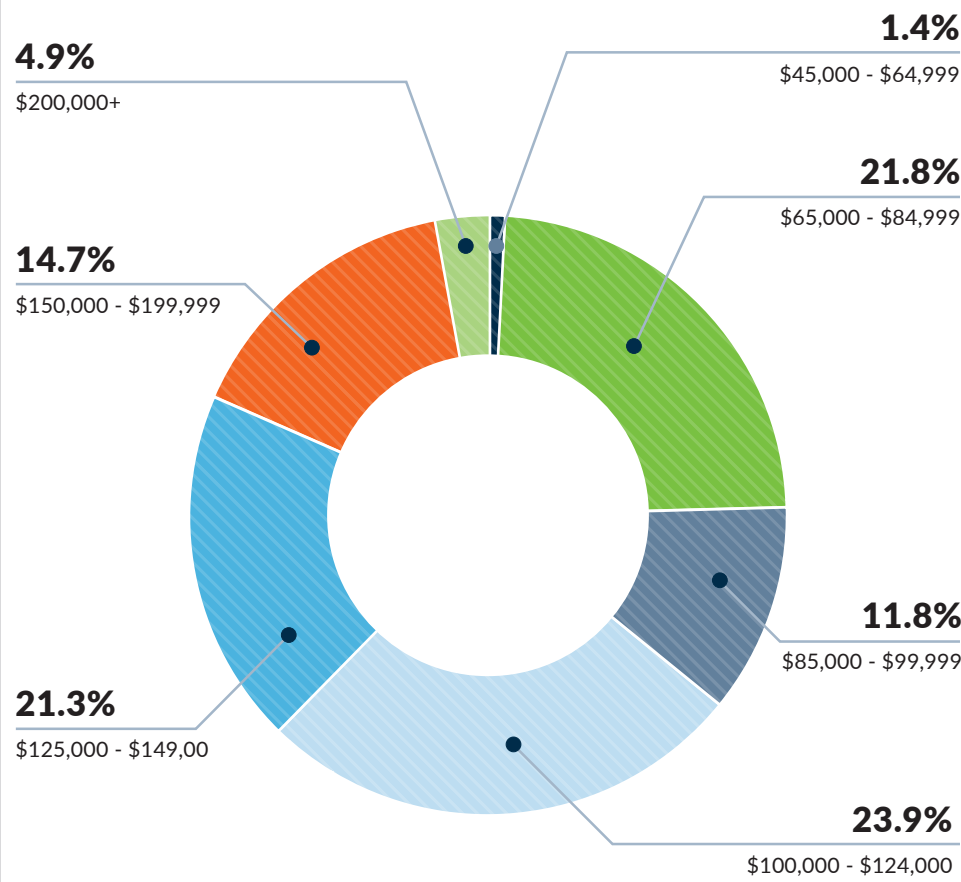


NEW CONSTRUCTION CREATES JOBS AND INCREASES FUTURE PROPERTY TAX REVENUE

Construction creates employment and business opportunities at every stage of campus development. From design through construction to the end use, there are salaries and spending that cycle back into the economy. The public purse benefits as projects contribute city, county, state and national tax revenue.

The Bayer master plan has two construction phases. Firstly between 2022 and 2032, and then extending through 2052. This is not a flash in the pan development but a multifaceted phased project that will create employment as it progresses. BACEI modeling found that construction on the Bayer site would support 1,698 full-time equivalent job-years through 2052 and represents an infrastructure investment of about \$1.2 billion.

BAYER EMPLOYEE ANNUAL SALARIES | 2019  
FOR BERKELEY CAMPUS ONLY



Source: Bayer Analyst; Bay Area Council Economic Institute

Asian/Pacific Islander, and 5% as Black. In 2019, the average annual wage for a construction worker across the two East Bay counties was \$85,000.

NEW ADVANCES IN CELL & GENE THERAPY

Bayer is planning a campus that will bring the latest approaches to medicine -- cell and gene therapies -- to reality for patient care. Scientific breakthroughs at the research lab bench are only feasible when new medicines can be produced at large enough scales to serve the needs of patients around the world.

Developing the processes to scale up manufacturing in these new scientific platforms and bring new treatments for cancer, cardiovascular disease and Parkinsons is incredibly complex. The company is at the forefront of the industry in breaking the bottleneck of manufacturing science and capacity for a growing pipeline of potential therapies across the industry.

"Bayer's investment in a cell and gene therapy and manufacturing facility is exciting news, not just for Berkeley, but for the field of regenerative medicine as a whole," said Dr. Maria T. Millan, President and CEO of the California Institute

for Regenerative Medicine (CIRM).

"It's particularly encouraging that among the early projects Bayer is targeting are neurological conditions like Parkinson's disease. This past November, CIRM was reauthorized with an additional \$5.5 billion in bond funding to advance the field of regenerative medicine with \$1.5 billion earmarked for neurologic conditions. We are on the cusp of an expansion in the field of regenerative medicine, with more cell and gene therapy products making their way to approval. There will be a growing demand for specialized manufacturing in order to deliver these promising treatments to the millions of patients with unmet medical needs."

Bayer is investing significantly in cell and gene therapies through recent acquisitions of BlueRock Therapeutics and Ask-Bio alongside ongoing in-licensing and collaborations. The Berkeley site, with its proximity to a world-class university and situated among one of the biggest biotech communities in the world, offers local innovators with a front-door entry to Bayer for engagement.

Bayer's spirit of open innovation at the west Berkeley campus could help develop therapies that reach millions of people around the world.



“At Bayer we have a diverse workforce but we also, importantly, have an inclusive culture. These unique perspectives really create better science and ultimately better medicine because we seek to include different ideas and ways of approaching problems.”



**JACQUELINE MINAS**

Process Engineer and Co-Chair of Inclusion and Diversity Business Community, Bayer Berkeley

### BAYER SUPPORT IN REGION GOES BEYOND ECONOMICS AND COMMUNITY BENEFITS -- MEET THE BAYER FUND

Over the last year, the company's philanthropic arm, the Bayer Fund, has invested more than \$1 million in Bay Area non-profits. Among these was more than \$600,000 to the Alameda County Community Food Bank and Berkeley Food Network for COVID relief and an innovative food distribution program, and more than \$300,000 to Berkeley Unified Schools and Berkeley Schools Foundation to expand STEM education at the middle school level. The company also donated more than \$450,000 in the Bay Area, including \$250,000 for the Berkeley Relief Fund and smaller contributions to nearly 30 organizations predominantly in Berkeley.



### Q&A WITH JEFF BELLISARIO

Jeff Bellisario, executive director of the Bay Area Council Economic Institute, led the research into the economic impact of Bayer's proposed master plan and extension of its development agreement for their west Berkeley campus.

BACEI data shows that this project is a win-win for the city of Berkeley, the East Bay and wider Bay Area. For every new job or square foot of lab space added at the campus there are direct and indirect economic benefits for the region.

### How important is Bayer to the local economy?

“Having 1,000 people on campus makes Bayer Berkeley's largest private sector employer and that truly is a magnet. First, it helps attract other biotech operations to this region -- bringing well-paid jobs in a growing industry. If you look at the region today there are other real estate developments targeted at growing a biotech sector -- and having Bayer really helps attract this type of invest-

## Q & A with JEFF BELLISARIO Bay Area Council Economic Institute



ment and ultimately other companies to this region. Second, having a large corporate presence of a global enterprise really puts Berkeley on the map outside the region. Third, without Bayer, you would really have a large hole in private sector employment in the city.”

### What benefits could Bayer's plans bring to the Berkeley, the East Bay and wider Bay Area economies?

“When we look ahead, you're talking about effectively a doubling of the footprint of Bayer in Berkeley, both in terms of its size of employment and its square footage. Those employees spend their money in the local economy. Those dollars have multiplying effects in East Bay small businesses and the healthcare system and education. Those people are buying and renting homes. So there are all the effects of those initial wages and company spending cycling through the economy into medium sized and smaller businesses.”

### What benefits could construction bring?

“If Bayer is going to double its square footage, it's going to construct all kinds of new buildings. So that also brings construction spending into Berkeley and our region. That'll bring in contractors and different types of workers to work on those buildings. Over the course of 30 years, those people come from across the Bay Area and the city of Berkeley. When we model new projects, just the building itself creates an economic impact from the construction and the materials and the sourcing of those. Then when people work in those buildings they are paid wages. And then there is an additional effect of those wages cycling through the economy.”

### What is significant about the diversity of jobs on the Bayer campus?

“These jobs are not just people with PhDs, they're not people just in lab coats, there's a big warehousing presence here, there's a presence in the laboratory, there's the manufacturing presence . . . When you look across Bayer's existing employment counts they have immense racial and ethnic diversity, there's diversity in educational backgrounds, and there's diversity across the wage levels that are being paid. Importantly, the wages that are being paid are family-sustaining wages within most parts of the Bay Area.”

### What can that mean in terms of social mobility?

“These are the types of jobs that allow for an upward career trajectory. That allow for wage growth but without an excessive amount of educational attainment behind them. These are high value jobs that are accessible to many people in the region. The ability to learn on the job and work your way up is really important. Even if you don't have an advanced degree, you can gain that experience while working on the job. Those are the types of roles that provide the most value regionally and locally. Having a large anchor, private sector employer like Bayer can provide these types of jobs. It is also important that the city looks 10, 20, 30 years down the road and puts policies in place to make sure more Bayer employees can live nearby.”

### How far could the benefits from Bayer's campus redevelopment reach?

“There are impacts that reach far outside of the walls, particularly as Bayer employs people, those wages go back into the local community where those people are living. And as a large global company, they have a very large supplier and vendor network, and many of those vendor companies are small. They're located across California and across the East Bay and across the Bay Area. And those dollars are going directly then into local companies. So I think it's important for people to understand that as you see the Berkeley campus evolving over the next 30 years, all of that change and growth will also lead to growth outside of those four walls as well.”

## FIND OUT MORE!

Read the full BACEI Economic Impact Report at:

[www.bayareaeconomy.org/report/economic-impact-of-bayer/](http://www.bayareaeconomy.org/report/economic-impact-of-bayer/)

Learn more about Bayer's Berkeley campus master plan and its Biotech operations at:

[www.bayer.com/berkeley](http://www.bayer.com/berkeley)

