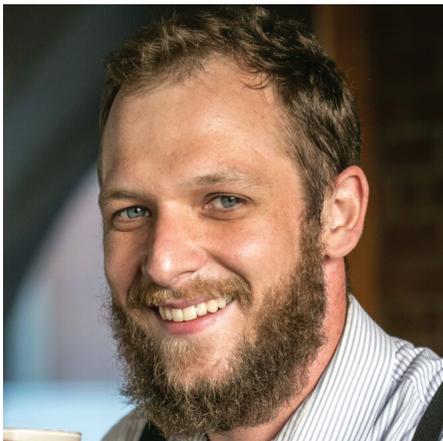




WORCESTER
MASSACHUSETTS

amazon proposal



birthplace of the smiley face | home to many smiling faces





WORCESTER
MASSACHUSETTS

amazon proposal

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Edward M. Augustus, Jr.
City Manager



Joseph M. Petty
Mayor

CITY OF WORCESTER

October 19, 2017

Jeffrey Bezos
Chief Executive Officer
Amazon
410 Terry Ave. North
Seattle, WA 98109

Dear Mr. Bezos:

As the Mayor and City Manager of the City of Worcester and with the support of the Economic Development Coordinating Council including the Worcester Regional Chamber of Commerce, Worcester Business Development Corporation and Massachusetts Biomedical Initiatives, we ask for your consideration in locating Amazon HQ2 in Worcester, Massachusetts.

Centered in the Heart of the Commonwealth, Worcester combines the warmth of a small town with the vibrancy of a thriving metropolis. A center of commerce, industry, healthcare and education, the city of Worcester is undergoing an economic resurgence and has repositioned itself in recent years to accommodate the needs of a dynamic economy. Our city has successfully demonstrated its ability to adapt quickly to a competitive and innovative marketplace. Today, Worcester is the focus of \$2.6 billion in private and public investment including Gateway Park, City Square, Mercantile Center and the Canal and Theatre Districts.

Worcester is enjoying a world-class restaurant scene, a burgeoning reputation as a hub for the arts and a rapidly developing downtown. Worcester is home to 35,000 college students, and increasingly they are choosing to live, work, and play locally. Young entrepreneurs are creating innovative maker spaces, simulation technology companies and sustainable business enterprises as well as opening breweries, cafes, and boutiques. They're starting families and working to make Worcester an even better place to live.

The second largest city in New England, Worcester is also a leader in biotechnology, advanced manufacturing, information technology, health care, medical research, robotics and video game design. These industries are supported by institutions like Worcester Polytechnic Institute, the College of the Holy Cross, UMass Medical School, and AbbVie.

Worcester's recent growth can also be attributed to the affordable cost of living, accessibility, and quality of life. These characteristics are the reason why businesses



OFFICE OF THE CITY MANAGER, CITY HALL, WORCESTER, MA 01608
TELEPHONE 508-799-1175 / FAX 508-799-1208
EMAIL: citymanager@worcesterma.gov



like the Hanover Insurance Group, Polar Beverages and Table Talk Pies operate in Worcester. In addition, approximately 8.5 million people live within a 60-mile radius of Worcester and 135 colleges, universities and institutes are located within an hour's drive and provide a highly-skilled workforce. Area transportation infrastructure includes major interstate highways, commuter rail to Boston as well as Worcester Regional Airport, Boston Logan International Airport, T.F. Green Airport and Bradley International Airport. This combination of assets provides unique opportunities for dynamic business growth.

The Economic Development Coordinating Council and the City of Worcester stand ready to assist Amazon in all elements of the development process including identifying potential sites, securing the required local and state permits and approvals expeditiously, and providing financial assistance programs and incentives.

Worcester, Massachusetts is in the midst of a renaissance. Once a manufacturing powerhouse that saw the rise of the industrial revolution, we have returned to our roots and built an economy based on innovation and entrepreneurship. The revitalized mill and factory buildings dotting our landscape maintain our historic integrity. Amazon HQ2 will help define our future as well as Amazon's.

Sincerely,



Joseph M. Petty
Mayor



Edward M. Augustus, Jr.
City Manager

JAMES P. MCGOVERN
2ND DISTRICT, MASSACHUSETTS

COMMITTEE ON RULES

COMMITTEE ON AGRICULTURE

SENIOR DEMOCRATIC WHIP

Congress of the United States
House of Representatives

Washington, DC 20515-2102

<http://www.mcgovern.house.gov>

October 13, 2017

438 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-2102
(202) 225-6101

DISTRICT OFFICES:
12 EAST WORCESTER STREET, SUITE 1
WORCESTER, MA 01604
(508) 831-7356

94 PLEASANT STREET
NORTHAMPTON, MA 01060
(413) 341-8700

24 CHURCH STREET, ROOM 27
LEOMINSTER, MA 01453
(978) 466-3552

Jeffrey Bezos, Chief Executive Officer
Amazon
410 Terry Avenue, North
Seattle, WA 98109

Dear Mr. Bezos:

I am writing on behalf of the City of Worcester's application to serve as the home of Amazon HQ2. I am proud to call Worcester my hometown. Worcester is a city with rich history and culture; a city that is rapidly changing from its industrial past to a center of technology and innovation.

Twenty years ago, many of us shared a bold vision for the City of Worcester. Much of that vision is a reality today because of the power of public-private partnerships and the determination of the people of Worcester. Those partnerships transformed an underutilized parcel of land into a thriving center of research, innovation, and commerce; created affordable housing units for families from all socio-economic backgrounds; and undertook an aggressive effort to expand access to commuter rail spurring unprecedented investment in downtown Worcester near historic Union Station. Today, when I look at Worcester, I see a great city – a world class city; a city that knows what it is and where it is going; a city that has fully embraced the power of partnerships to shape its bright future. It is my hope that Amazon will become an important partner in the City of Worcester to make our bright future even brighter.

Many of our businesses and institutions are leaders in their respective fields: from biotechnology and advanced manufacturing to health care and medical research. Worcester is centrally located with easy access to interstate highways, commuter and freight rail lines, and four major airports. Some 35,000 college students call Worcester their home and many are choosing to stay here after graduation because of the affordable housing stock and our unique and growing restaurant, cafe, boutique, and arts scene.

As you can tell, I am proud of all Worcester has to offer. Worcester is a proud city, and I am certain Amazon would be proud to call Worcester its home too. If I can be of any help in this process please do not hesitate to contact me.

Sincerely,



James P. McGovern
Member of Congress

JPM/sn



COMMONWEALTH OF MASSACHUSETTS
THE GENERAL COURT

STATE HOUSE, BOSTON 02133-1053

October 5, 2017

To Whom It May Concern:

The Worcester, Massachusetts delegation is proud to support the city's application to Amazon to locate HQ2 in Worcester. Worcester is a unique city with a vibrant energy and culture that drives growth and characterizes livability. The City is welcoming to businesses and families alike. Worcester is proud of its strong roots and past but also its progressive and innovative future.

Worcester is undergoing a renaissance not seen since the turn of the 20th century. A revitalized and developing downtown, a world-class art and restaurant scene, and a thriving creative economy built on entrepreneurship all have made Worcester a destination city.

As the second largest city in New England, Worcester has transformed itself into a leader in biotechnology, advanced manufacturing, information technology, health care, medical research, and video gaming and design. With its 184,000 residents and central location within the state, Worcester combines the warmth of a small town and the liveliness of a thriving city.

Worcester is home to nine colleges and universities (a half-dozen more in neighboring communities), including the University of Massachusetts Medical School, Worcester Polytechnic Institute, College of the Holy Cross, Clark University, MCPHS University and Tufts Cummings School of Veterinary Medicine. The 35,000 college students are graduating with an entrepreneurial mindset, creating innovative maker spaces, simulation technology companies, and sustainable business enterprises, as well as opening restaurants, cafes, and boutiques.

Worcester's recent growth can also be attributed to the affordable cost of housing, its high quality of life, ease of accessibility, and growing knowledge-based economy. Add roughly 8.5 million people living within a 60-mile radius of Worcester, a skilled workforce educated by more than 135 colleges and institutes located within an hour's drive, and strong existing infrastructure with easy access to major interstate highways, commuter rail to Boston, and major airports, including Worcester Regional Airport, Logan International Airport, T.F. Green Airport, and Bradley International Airport, and unique opportunities exist for dynamic business growth. Worcester should be the home of Amazon HQ2.

The Worcester delegation is proud to support and champion the Amazon application and stands ready to assist in bringing Amazon to Worcester. There is no better choice than Worcester and Massachusetts. Thank you for your consideration.

Sincerely,

Handwritten signature of Michael O. Moore in blue ink.

MICHAEL O. MOORE
State Senator
Second Worcester District

Handwritten signature of Harriette L. Chandler in blue ink.

HARRIETTE L. CHANDLER
State Senator
First Worcester District



JAMES J. O'DAY
State Representative
Fourteenth Worcester District



DANIEL M. DONAHUE
State Representative
Sixteenth Worcester District



KATE D. CAMPANALE
State Representative
Seventeenth Worcester District



JOHN J. MAHONEY
State Representative
Thirteenth Worcester District



MARY S. KEEFE
State Representative
Fifteenth Worcester District

a message from the **WORCESTER** economic development coordinating council

The economic development leadership in Worcester, Massachusetts is collaborative and ready to respond to Amazon’s needs and requirements. We work closely with the city council, state officials and legislators, developers, presidents of area colleges and universities, the Central Massachusetts Workforce Investment Board, and many other stakeholders.

We have a proven history of responding to new employers’ site requirements, connecting companies with available tax incentives, and creating training programs to prepare Worcester residents for any workforce needs or skills gaps.

We would welcome the opportunity to discuss our city’s suitability for Amazon’s second headquarters.

Sincerely,

EDCC Executive Committee

economic development team



Edward M. Augustus, Jr.
City Manager
City of Worcester
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CityManager@worcesterma.gov
www.worcesterma.gov



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President and CEO
Worcester Regional Chamber of Commerce
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www.massbiomed.org

WORCESTER AT A GLANCE MASSACHUSETTS

New England's second largest city is centrally located in the heart of Massachusetts and the region.



city BY THE NUMBERS

Population (2016) | **184,500**

Population within 60 Miles | **8.5 Million**

Median Age of Worcester Residents | **33.8**

Immigrants | **37,970** from Countries | **85**

Languages Spoken in Public Schools | **90+**

Land Area | **38.6 Miles**

FY17 Area Median Family Income | **\$85,700**

Class A Office Rents | **\$21 - \$45 Per SF**

Number of Hotel Rooms in Worcester | **1,136**

Number of Hotel Rooms in Worcester Area | **2,500**

Colleges in Worcester | **9**

College Students in Worcester | **35,000+**

Colleges / Training Institutes within 50 Miles | **135**

MBTA Commuter Trains to Boston | **20 Round Trips Daily**

MBTA Passengers to Boston | **1,500 Daily**

WRTA Annual Passenger Trips (Bus Service) | **3.8 Million**

Average Sale Price (Single Family) | **\$234,000**

Median Rent Price | **\$1,400**

Arts & Cultural Organizations | **70+**

Worcester City Parks | **62**

Acres of Parklands | **1,215**

“ I decided to invest in Worcester because of the combination of the tangibles which include location, workforce, affordable housing, infrastructure and healthcare and the intangibles which include the passion of the residents, cooperation of city officials to get things done, and the desire to help this great community achieve its potential. ”

– Cliff Rucker, Owner
Worcester Railers Hockey Club
Worcester Ice Center
Worcester Real Estate Developer

QUALITY OF LIFE



WORCESTER
MASSACHUSETTS

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a livable **THRIVING** CITY

A Community Where Your Employees Will Want to Be



Arts, Entertainment, Nightlife – it's all here!

Restaurants

Worcester's restaurant scene is booming—garnering attention from the Boston Globe and Providence Journal. Last year, more than 55 new restaurants opened in the city.

Breweries

Worcester has become a hot spot for craft breweries and the beer business, including: Wormtown Brewery, Flying Dreams Brewing, 3cross Brewing and Greater Good Imperial Brewing.

Performing Arts

Worcester offers off-Broadway shows, world-renowned art galleries, dance, music and concert halls, and public art.

- Worcester Art Museum
- DCU Center - Arena and Convention Center
- The Hanover Theatre for the Performing Arts
- The Worcester Palladium
- Mechanics Hall

PAGE 2 **quality** of **LIFE** in WORCESTER

Worcester is a family friendly city



Sports Entertainment

Worcester is home to the Worcester Bravehearts, a Futures League baseball team and the Worcester Railers ECHL hockey team affiliated with the NHL N.Y. Islanders.

Shopping

New shops and boutiques, such as those found at the Crompton Collective, offer a variety of handcrafted or locally-sourced goods.

Festivals and Events including:

- St. Patrick's Day Parade
- Farmers Markets
- Latin American Festival
- Worcester Caribbean American Carnival
- Festival of Lights
- Worcester Pride Festival
- New England VegFest
- stART on the Street



quality of

LIFE in WORCESTER

Affordable with access to big city amenities

housing costs

AVG. PROPERTY	AVG. PRICE
Single-Family Home	\$234,000
1 Bedroom	\$1,010
2 Bedroom	\$1,260
3 Bedroom	\$1,500
4 Bedroom	\$1,650

(source: MLS, 2017)

*So far in 2017, the most expensive home sold in Worcester was less than \$700,000. In Boston, more than half are being sold above \$1 million. (Source: MLS and Boston Globe).

Residential Tax Rate

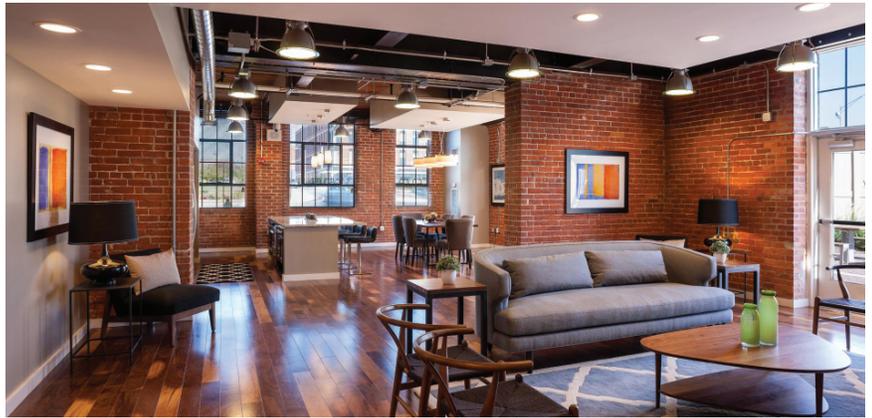
- \$19.22 per \$1,000 of value
- Average 2016 Residential Tax Bill: \$3,871
- Average commute time: Less than 20 minutes
- Local Sales Tax: None
- Local Income Tax: None



cost of living indices

	SEATTLE	WORCESTER
Overall	176.5	106.8
Food	110.2	96.4
Housing	314.5	107.1
Utilities	94.0	116.8
Transportation	113.3	108.5
Health	116.2	122.8
Miscellaneous	113.1	104.3

100=national average



\$575K in Worcester, MA v. Seattle, WA Source: Realtor.com



\$575,000

6832 25th Ave. NE, Seattle, WA

2 bed
1 bath
770 sq. ft.
5,227 sq. ft. lot



\$579,900

6 Surrey Lane, Worcester, MA

5 bed
3 full & 2 half baths
3,224 sq. ft.
0.78 acres

quality of **LIFE** in WORCESTER



WHAT YOUR MONEY BUYS | SEATTLE, WA & WORCESTER, MA

A salary of \$50,000 in Seattle, Washington could decrease to \$30,255 in Worcester, Massachusetts due to cheaper cost of living.

COMPARISON HIGHLIGHTS

- Worcester is 39% cheaper than Seattle.
- Housing is the biggest factor in the cost of living difference.
- Housing is 65% cheaper in Worcester.
- 100=national average

Worcester has recreation opportunities for young, old, and furry!

The City has a free city-wide program Recreation Worcester, operating at 10 parks across the City, Monday - Friday from 9 a.m. to 5:30 p.m. throughout the summer. Recreation Worcester youth participate in a number of positive, healthy, educational activities. In 2016, Recreation Worcester served more than 1,700 youth.

Worcester has 62 parks including splash pads, disc golf, a new multigenerational park and universally accessible playground, public 18-hole golf course, and more. Worcester is also home to the Greater Worcester Land Trust and Mass Audubon, providing almost 3,000 acres of land and trails in the area. Worcester's first dog park opened in 2017, with four additional neighborhood-based dog parks opening by 2020.

*Best state
in the U.S.*

– U.S. News &
World Report,
2017

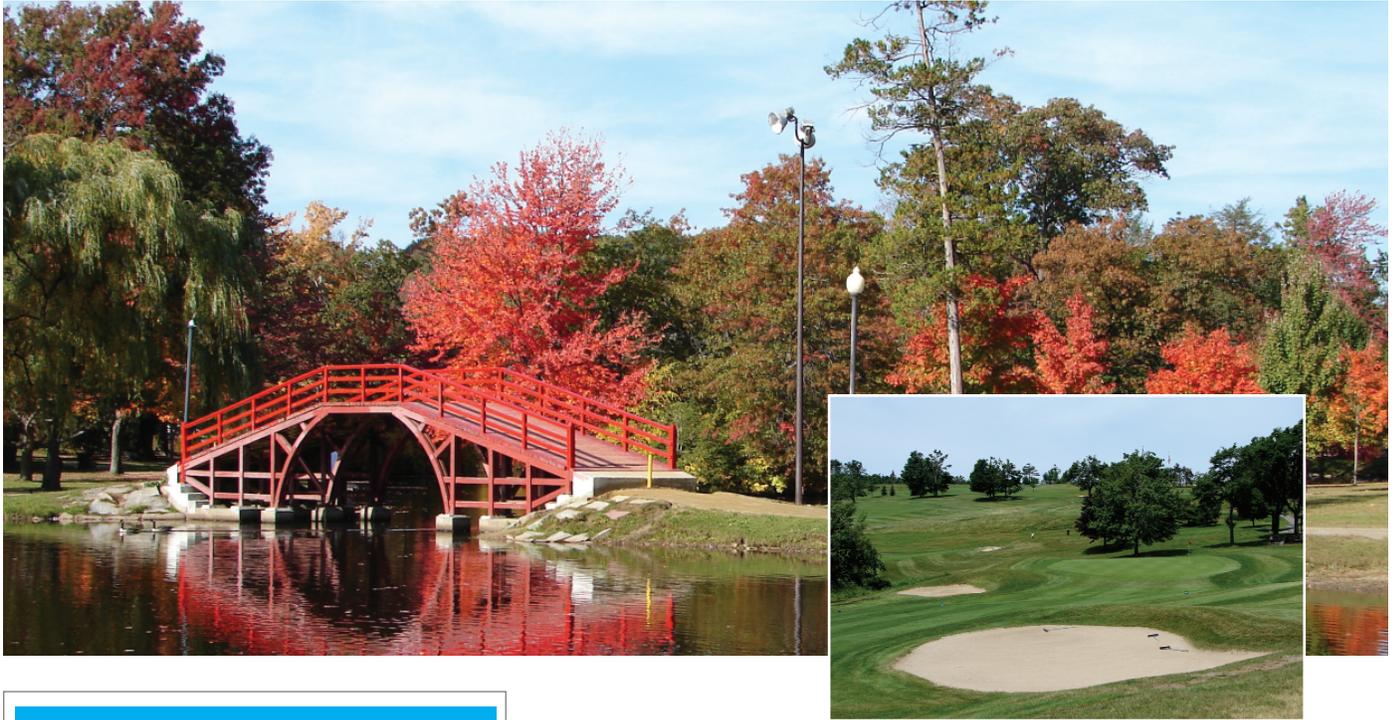
– and –

*#1 in health-
care access*

– U.S. News &
World Report,
2017



quality of **LIFE** in WORCESTER



parks & recreation

Number of Parks	62
Number of Playgrounds	34
Number of Fields for Sports	124
Swimming Beaches, Pools, Spray Parks	7
Total Park Acreage	1,320
Percentage of Total Acreage in City	6.3%
Number of State Parks	1

5 TIME All-American City Award Winner, the most in U.S.
- National Civic League

Top 10 City for Families - Parenting Magazine, 2014

#1 for Young Singles - Zillow, 2013

#16 in U.S. as Safest Place for Kids - Value Penguin, 2017

Safety

In providing the citizens of the City of Worcester a safer community, the dedication and commitment of the men and women of the Worcester Police Department is unmatched. WPD promotes the highest level of public safety and quality of life, through exceptional police services to city residents, businesses and visitors.

Worcester Police Mounted Patrol made its first public appearance in the summer of 2017.

Worcester ranked in the top 20 of a recent study on the safest metropolitan areas in the country. (Value Penguin 2017)



WORCESTER **CANVAS** as a

Pow! Wow! Worcester is 10-day festival celebration where artists from around the world are invited to leave their talent on display by painting large-scale murals across the city. Worcester was the first city on the U.S. eastern coast to host the international festival.



TRANSPORTATION



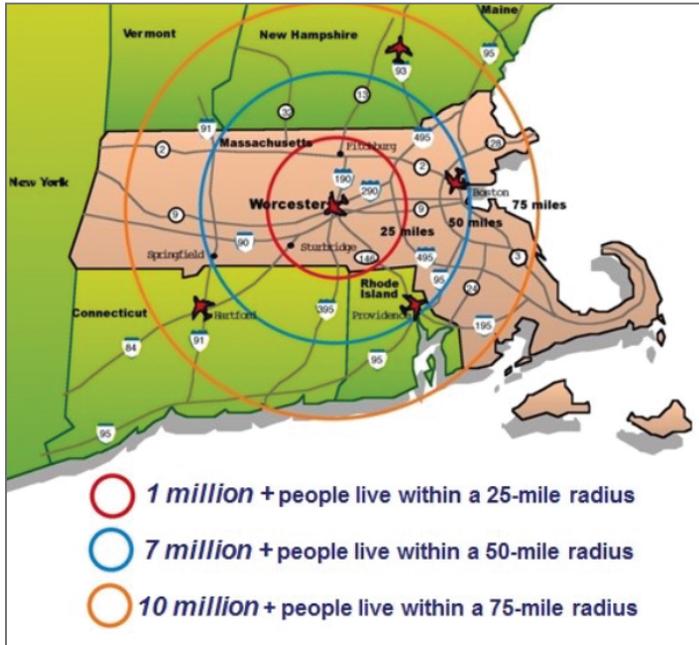
WORCESTER
MASSACHUSETTS

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TRANSPORTATION & **logistics**

GETTING TO AND FROM WORCESTER

Planes, Trains, and Automobiles...and Buses & Bikes



Located in the heart of the Commonwealth, Worcester is 45 minutes west of Boston, MA and north of Providence, RI.

The Massachusetts Turnpike (I-90) offers direct connection to the City from the east and west and Route 146 connects from the south.



Worcester is serviced by 5 regional, national and international airports, including:

air travel

AIRPORT	CITY	DISTANCE
Worcester Regional (ORH)	Worcester, MA	5 miles
Logan International (BOS)	Boston, MA	46 miles
T.F. Green (PVD)	Providence, RI	53 miles
Bradley International (BDL)	Hartford, CT	60 miles
Manchester Regional (MHT)	Manchester, NH	70 miles

By Air

The Worcester Regional Airport (ORH) is owned and operated by Massport and is home to:

- JetBlue provides daily commercial service to Florida and JFK-NYC.
- Rectrix Cape Cod shuttle passenger service.
- Rectrix charter flights, with approximately 50,000 square feet of hangar and office space, is capable of accommodating any large corporate aircraft. Rectrix is looking to construct additional hangar space within the next 5 - 7 years in conjunction with anticipated growth at Worcester Regional Airport (ORH).



TRANSPORTATION & logistics

GETTING TO AND FROM WORCESTER

BY CAR

Worcester has an extensive highway network including four interstate highways and five major state highways.

- Massachusetts Turnpike (I-90)
- Route 146
- I-290
- I-190
- Route 9
- Route 122
- I-395
- Route 20
- Route 12

Within the city, taxis, liveries, Uber and Lyft are all available, as well as Worcester's new bike share, ofo.



BY RAIL

Worcester's historic and beautifully restored Union Station is serviced by:

- Massachusetts Bay Transportation Authority (MBTA) commuter rail, which runs 20 times daily to Boston.
- The MBTA express trains go from Worcester to Boston in less than one hour.
- Amtrak daily service to and from Albany, Chicago, New York and Washington, D.C.

BY BUS

Union Station, in the heart of downtown, is served by several bus lines, including:

- Greyhound and Peter Pan, connecting to destinations throughout New England and beyond.
- The Worcester Regional Transit Authority, with bus service throughout the city and 37 regional communities.



EMPLOYMENT BY INDUSTRY



WORCESTER
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labor & wage **RATE** INFORMATION

Overview of all Talent Levels in the MSA*

Among the largest cities in New England, Worcester has the 2nd highest percentage of adults with a bachelor's degree.

The largest industries in Worcester

Education and Healthcare

The education and healthcare sector **grew by 35.5%** between 2000 and 2010 in the City of Worcester and by 2010, represented the single largest employment base in the city with 28,956 employees.

Similarly, in 2010, this sector represented the largest employment base in Worcester County with 71,277 people working in education and healthcare across the county.

Listed below are the average salaries for these two subsectors:

Healthcare | \$46,647

Educational Services | \$33,670

Due to the astronomical growth in this sector over the last decade, and the anticipated nationwide growth in the healthcare sector, it is reasonable to assume that the education and healthcare sector will remain strong and present growth opportunity for the region.



Professional, Scientific and Technical

*Between 2000 and 2010, the professional, scientific and technical sector **grew by 32.6%** or 3,498 employees in Worcester County. In particular, the scientific research and development subsector grew employment by 37.7% and the Computer Systems Design and Related Services subsector, which includes video game design, grew employment by 46.3% across the County.*

Average annual salary in Worcester County (2010):

Professional, Scientific and Technical Services | \$68,805

This sector thrives on clusters, which exist and are growing in Worcester County thanks to the region's unique resources such as the Massachusetts Digital Game Institute (MassDiGI), University of Massachusetts Medical School, a thriving biotech incubator at the Massachusetts BioMedical Initiatives (MBI), and Gateway Park, Worcester Polytechnic Institute's Center that hosts early stage science and engineering companies.

Through continued collaboration, investment and focus on growing these existing clusters, it is expected that the sector will continue to expand in the future.

*Metropolitan Statistical Area

labor & wage **RATE** INFORMATION

Manufacturing

In 2010, Manufacturing in Worcester was the strongest sector in comparison to Boston. Across Worcester County, 31,279 people were employed in manufacturing in 2010, and nearly 10,000 people were employed in manufacturing in the City of Worcester. The average annual wage across the sector in Worcester County was \$55,879 in 2010. There is evidence that the Manufacturing sector is poised for significant growth statewide and the Greater Worcester Region is uniquely positioned to realize significant industry growth.

employment by industry, CITY OF WORCESTER						
	2001	PERCENT OF TOTAL (2001)	2011	PERCENT OF TOTAL (2011)	PERCENTAGE CHANGE, 2001-2011	TOTAL CHANGE
Total, All Industries	100,977	100%	96,671	100.00%	-4.26%	-4,306
Goods-Producing Domain	14,674	14.53%	9,878	10.22%	-32.68%	-4,796
Construction	4,025	3.99%	3,094	3.20%	-23.13%	-9.31
Manufacturing	10,626	10.52%	6,780	7.01%	-36.19%	-3,846
Natural Resources and Mining	23	0.02%	N/A	N/A	-100.00%	-23.00%
Service-Providing Domain	86,303	85.47%	86,793	89.78%	0.57%	490
Trade, Transportation and Utilities	13,452	13.32%	12,239	12.66%	-9.02%	-1,213
Information	1,796	1.78%	1,559	1.61%	-13.20%	-237.00%
Financial Activities	7,999	7.92%	6,496	6.72%	-18.79%	-1,503
Professional and Business Services	12,765	12.62%	8,760	9.06%	-31.37%	-4,005
Education and Health Services	36,186	35.84%	43,324	44.82%	19.73%	7,138
Leisure and Hospitality	6,712	6.65%	7,018	7.26%	4.56%	306
Other Services	4,108	4.07%	4,293	4.44%	4.50%	185
Public Administration	3,285	3.25%	3,104	3.21%	-5.51%	-181

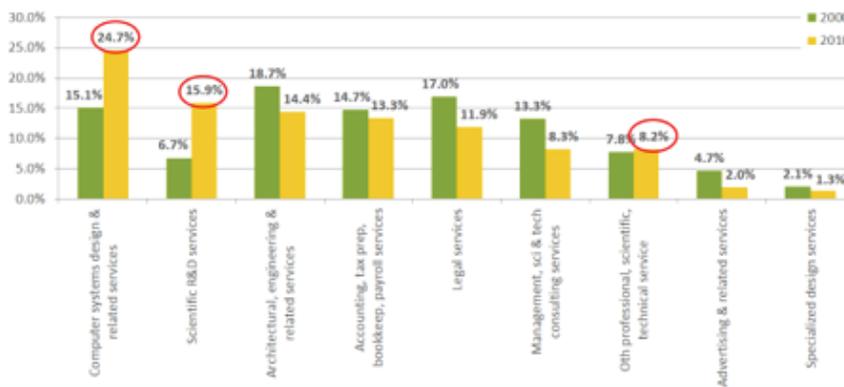
A large majority of companies that chose Massachusetts as a place to expand their business would do it again, primarily based on its innovative economy, industry clusters, and skilled workforce, according to "Choosing Massachusetts for Business: Key Factors in Location Decision-Making," an 18-month study commissioned by MassEcon, the nonpartisan economic development organization, and conducted by the UMass Donahue Institute's Economic and Public Policy Research Group (2017).



PAGE 3 labor & wage **RATE** INFORMATION

Information for Executive/Management, Engineering (software development engineers), Legal, Accounting, and Administrative

PROFESSIONAL, SCIENTIFIC & TECHNICAL SUBSECTORS, EMPLOYMENT
WORCESTER COUNTY, 2000 TO 2010



Top 10 City
for Families

– Parenting
Magazine, 2014

Ability to Attract Talent Regionally

We know access to talent is perhaps the most important factor in a business location decision. That's the Worcester advantage.

- Lower cost of living than Boston and other major metropolitan areas
- Quality of life attractive for people relocating and talent retention
- Proximity to over 100 colleges and universities within 50 miles

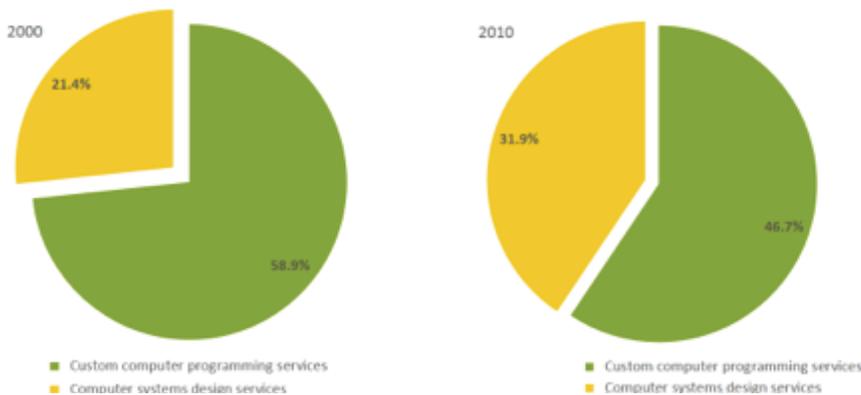
In Worcester, there is the ability to partner with area colleges and universities for a talent pipeline. Many area college graduates remain within the region with 39% of the class of 2015 currently living in Worcester and Worcester County, up from 32% in 2005 (Talent Retention 2016, WRRB). Students in the study revealed they would stay in Worcester if offered a job, with 77% of the respondents saying that job prospects were "extremely important."

A population migration study showed that the Worcester metropolitan area fares well in terms of attracting educated talent with a 2012 net gain of over 600 new residents with graduate or professional degrees, over 100 new residents with bachelor's degrees, and nearly 75 new residents with associate's degrees settling in the region. (Ibid)

Opportunities to Hire Software Development Engineers

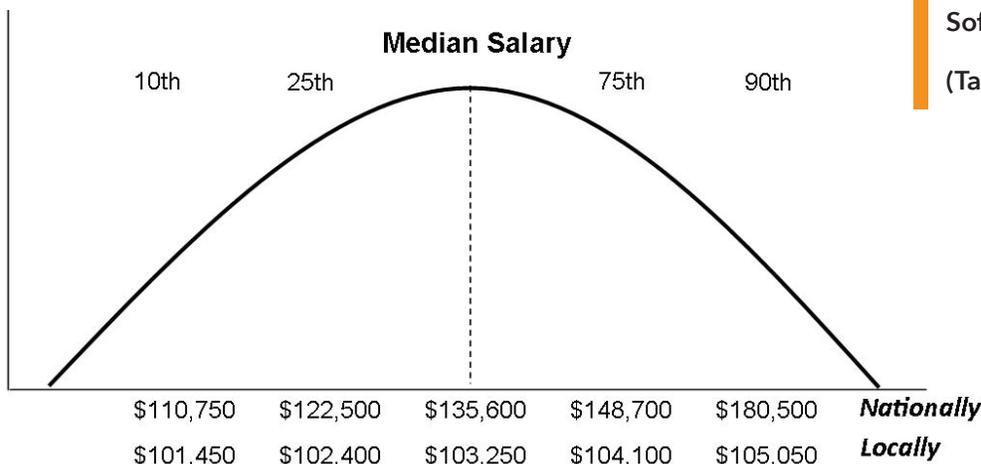
When Worcester’s area college students graduate, they overwhelmingly prefer to stay in Massachusetts over any other location. Of WPI’s approximately 35,000 alumni who are living in the United States, almost half live in Massachusetts. This is a highly skilled workforce that shows a clear preference to stay in Massachusetts. As new and pending graduates start their professional careers, many see Amazon as an employer of choice.

Computer Systems Design and Related Services, Worcester County, 2000 - 2010



#1 for Young Singles - Zillow, 2013

market salary



Software Developers, Applications; Software Developers, Systems Software in Worcester MSA (TalentNeuron 2017)

average weekly wage by industry, CITY OF WORCESTER						
	NOMINAL WAGE 2001	REAL WAGE 2001	NOMINAL WAGE 2011	REAL WAGE 2011	REAL PERCENTAGE CHANGE, 2001 - 11	REAL WAGE 2001 - 2011 CHANGE
Total, All Industries	\$725	\$409	\$982	\$423	3.42%	\$14
Goods-Producing Domain	\$888	\$501	\$1,215	\$524	4.59%	\$23
Construction	\$942	\$531	\$1,146	\$494	-6.67%	-\$37
Manufacturing	\$870	\$491	\$1,247	\$538	9.57%	\$47
Natural Resources and Mining	\$244	\$138	N/A	N/A	-100.00%	-\$138
Service-Providing Domain	\$698	\$394	\$956	\$412	4.57%	\$18
Trade, Transportation and Utilities	\$594	\$335	\$694	\$299	-10.75%	-\$36
Information	\$869	\$490	\$1,874	\$808	64.90%	\$318
Financial Activities	\$1,048	\$591	\$1,400	\$604	2.20%	\$13
Professional and Business Services	\$753	\$425	\$1,089	\$470	10.59%	\$45
Education and Health Services	\$721	\$407	\$1,028	\$443	8.85%	\$36
Leisure and Hospitality	\$291	\$164	\$354	\$153	-6.71%	\$11
Other Services	\$417	\$235	\$454	\$196	-16.60%	\$39
Public Administration	\$888	\$501	\$1,271	\$548	9.38%	\$47

“With multiple operations across the country, Polar Beverages continues to invest and grow in Worcester because of a hardworking and healthy workforce. Moreover, Worcester’s central location and access via multiple transportation modes to all of New England and New York is a strategic asset. Lastly, a collaborative spirit exists between business and government that allows Worcester to be both nimble and responsive in seeking out opportunities.”

– Ralph D. Crowley, Jr., President, Polar Beverages

labor & wage **RATE** INFORMATION

average weekly wage by industry, COMMONWEALTH OF MASSACHUSETTS

	NOMINAL WAGE 2001	REAL WAGE 2001	NOMINAL WAGE 2011	REAL WAGE 2011	REAL PERCENTAGE CHANGE, 2001 - 11	REAL WAGE 2001 - 2011 CHANGE
Total, All Industries	\$865	\$488	\$1,147	\$495	1.43%	\$7
Goods-Producing Domain	\$1,018	\$574	\$1,394	\$601	4.70%	\$27
Construction	\$963	\$543	\$1,205	\$520	-4.24%	-\$23
Manufacturing	\$1,047	\$591	\$1,495	\$645	9.14%	\$54
Natural Resources and Mining	\$662	\$373	\$1,042	\$449	20.38%	\$76
Service-Providing Domain	\$834	\$470	\$1,114	\$480	2.13%	\$10
Trade, Transportation and Utilities	\$707	\$399	\$857	\$370	-7.27%	-\$29
Information	\$1,244	\$702	\$1,767	\$762	8.55%	\$60
Financial Activities	\$1,515	\$854	\$2,100	\$906	6.09%	\$52
Professional and Business Services	\$1,114	\$628	\$1,624	\$700	11.46%	\$72
Education and Health Services	\$715	\$403	\$1,022	\$441	9.43%	\$38
Leisure and Hospitality	\$347	\$196	\$427	\$184	-6.12%	-\$12
Other Services	\$477	\$269	\$545	\$235	-12.64%	-\$34
Public Administration	\$861	\$486	\$1,221	\$527	8.44%	\$41



INTELLECTUAL CAPITAL



WORCESTER
MASSACHUSETTS

amazon proposal

overview of HIGHER EDUCATION

"The innovation economy is part of the fabric of Massachusetts, Worcester, and WPI. We share many common interests and strengths with Amazon, and we have the potential and the expertise needed to help them thrive. WPI would relish the opportunity to provide them with access to - and development of - top talent, and to connect them to our amazing students and alumni."

- President Laurie Leshin, Worcester Polytechnic Institute

Every great American city has at least one college or university, Worcester has nine. Combined with three additional area colleges, the schools comprise the Higher Education Consortium of Central Massachusetts. Worcester's colleges and universities consistently appear in the U.S. News & World Report rankings as well as the Princeton Review.

Vital to the city's economy, the area's colleges and universities and their students bring a wealth of opportunity to the region, through academic collaborations, internships, research, and employment. As a consortium, local colleges and universities represent one of the area's largest employers with approximately 16,000 employees and over 35,000 students.



Worcester is proud of its incredibly diverse academic community ranging from UMass Medical, a top medical school; to Clark University, a regional leader in educating global citizens; and Becker College, with a leading program in interactive media design.

Worcester is home to a nationally ranked engineering school. WPI's 14 academic departments offer more than 50 undergraduate and graduate degree programs in science, engineering, technology, business, social sciences, and humanities and arts, leading to bachelor's, master's, and doctoral degrees. The university's curriculum features a flexible, rigorous program that is project-based and globally engaged, aimed at providing a quality experience and a positive impact for the communities it partners with. And in the past 10 years, WPI has increased its combined undergraduate and graduate student population by 68%, making it one of the fastest growing universities in the nation. In the most recent academic year, WPI granted 987 Bachelor's degrees, 626 Master's, and 45 PhD's. The vast majority of these degrees were awarded in STEM fields, with computer science related degrees accounting for more than half of all graduates.

Worcester Region AN EDUCATION HUB

Number of Graduates in Relevant Degrees Over the Past Three Years

The Worcester metropolitan statistical area (MSA), graduated 2,232 students with degrees in business, management, finance, accounting, computer science, engineering, and legal services in 2015, and employed 202,800 people with occupations reflective of relevant degrees in 2015.

Beyond Worcester, the three major MSAs in a 45-mile radius around the city graduated 17,527 students with relevant degrees and employed 1,870,000 people in relevant occupations in 2015. The graduate pool and workforce, outlined in the tables below, both showed positive growth rates in Worcester and in the regions surrounding Worcester.

Focusing on specific opportunities to hire software development engineers in the 45-mile radius of Worcester, 2,637 students graduated with degrees in and related to computer science, and computer technology. Applied math positions employed 162,000 people in 2015. The tables show three years of data on computer science related degrees and occupations.



relevant degrees*

CITY	2013	2014	2015	GROWTH
Worcester	1,931	1,979	2,232	13%
Boston	9,404	9890	10,270	8%
Providence	3,070	3100	3,160	13%
Springfield	1,618	1725	1,865	3%
45-mile radius	16,023	16,694	17,527	9%

*Relevant Degrees include: business and management, finance and accounting, computer science, electrical and computer engineering, and legal studies.

relevant jobs*

CITY	2013	2014	2015	GROWTH
Worcester	200,600	208,700	202,800	1%
Boston	1,170,400	1,187,100	1,204,000	3%
Providence	321,700	325,000	339,600	5%
Springfield	116,300	117,030	123,600	6%
45-mile radius	1,809,000	1,837,830	1,870,000	3%

*Relevant Jobs include professions in management, accounting and financial operations, computer science and applied math, business administration, engineering, and sales.

computer science degrees

CITY	2013	2014	2015	GROWTH
Worcester	162	155	245	34%
Boston	1,219	1,510	1,708	29%
Providence	338	366	419	19%
Springfield	183	204	265	31%
45-mile radius	1,902	2,235	2,637	28%

computer science jobs

CITY	2013	2014	2015	GROWTH
Worcester	16,100	16,410	15,300	-5%
Boston	104,900	112,600	123,800	15%
Providence	19,500	18,600	17,500	-11%
Springfield	5,600	6,500	5,900	5%
45-mile radius	146,100	154,110	162,500	10%

Worcester Region AN EDUCATION HUB

Within 50 miles of Worcester, there are 135 institutions of higher education, with a total enrollment of over 500,000 students. Some of the notable schools in the area: Harvard University, MIT, Tufts University, Brown University, Northeastern University, and 15 community colleges. Worcester is not only in close proximity to Boston and Providence, but also within an hour drive of Western MA, where there is another higher education cluster, including UMass Amherst, Smith College and others. The high concentration of educational institutions means that Worcester can offer employers a young, highly educated workforce.

WORCESTER AREA COLLEGES AND UNIVERSITIES



just a few of the region's accolades

- MA #1 in Education, U.S. News & World Report, 2017
- Holy Cross Ranked #2 Best Roman Catholic College in U.S., USA Today, 2017
- UMass Medical School #1 in New England for Primary Care, US News & World Report, 2017
- Assumption College Ranked Top 20 Best Value, U.S. News & World Report
- Holy Cross Ranked #5 Best Colleges in Massachusetts, USA Today, 2017

WPI ACCOLADES

WPI TOP 10 Colleges for Women in STEM fields. Research and Teaching

- Best Colleges Online, 2016

WPI #7 computer science major in the nation

- College Factual, 2015

WPI and Becker College both rank **Top 25** for Digital Game Design
- Gamedesigning.org, 2017

WPI #1 College Combining Research and Teaching
- Wall Street Journal, 2016

WPI #5 in U.S. for Career Services
- Princeton Review 2017-2018

achievements HIGHER EDUCATION

NOTABLE WORCESTER ALUMNI IN BUSINESS

Assumption College

- Donald D'Amour, Chairman/CEO, Big Y Foods, Inc.

Becker College

- Colleen Barrett, President Emeritus, Southwest Airlines

Clark University

- Hugh Panero, CEO, XM Radio
- Fred Rosen, former CEO, Ticketmaster
- Jeffrey Lurie, Owner, Philadelphia Eagles
- Ron Shaich, Founder/Chairman, Panera Bread

College of the Holy Cross

- James Burke, former CEO, Johnson & Johnson
- John Hamill, former Chairman, Sovereign Bank
- Pedro Heilbron, CEO, Copa Airlines
- F. Donald Kennedy, Chairman, Goldman Sachs
- Brian Kelley, CEO of Keurig Green Mountain Coffee
- James W. Keyes, Former Chairman/CEO, Blockbuster, Inc.
- Victor Luis, President, Coach, Inc.
- James David Power III, founder, J.D. Power & Associates
- David A. Spina, former Chairman/CEO, State Street Corp.

WPI

- Joe Quinlivan, President/COO, Amazon Robotics
- Robert Stempel, former Chairman/CEO, General Motors
- Paul Allaire, former CEO, Xerox
- Curtis Carlson, President/CEO, SRI International
- Don Peterson, Chairman/CEO, Avaya Technologies
- Dean Kamen, Founder/CEO, DEKA (inventor of Segway)
- Eric Hahn, Former CTO, Netscape
- Naveen Selvadurai, Co-Founder, Foursquare

Nearly 40% of Worcester residents between the ages of 25 to 34 hold a Bachelor's degree or higher, more than most major United States cities.



existing and potential **programs & partnerships**

HIGHER EDUCATION

The potential for partnerships is endless.

Worcester's leadership across industry, higher education, k-12, workforce training and government is extremely collaborative and continuously work together to address workforce gaps and training needs. **The Central Massachusetts STEM Network** recently inventoried the regional STEM programs and pathways and identified over 100 offerings from K-12, public libraries, community-based organizations, higher education institutions and industry. The Central Worcester County STEM organizations have been collaborating for 30 years.

WPI offers one of the nation's preeminent university-based K-12 STEM outreach programs to elementary, middle, and high school students. Each year, WPI hosts over 2,000 children and young adults to campus in a variety of programs, including the **Frontiers** program, a two-week long residential program during the summer that offer high school students classes in software development and cyber security.

The Aisiku Center for STEM Research and Education, at Worcester State University, is in place to enhance student learning and success in the STEM fields through facilitating interdisciplinary collabora-

tion and initiatives, connecting students with research opportunities, internships, and field experiences.

The Massachusetts Academy of Math and Science at WPI (Mass Academy/MAMS/MAMAS) was founded in 1992 by the Massachusetts State Legislature as a public, non-residential magnet school to serve academically advanced youth in grades eleven and twelve in math, science, and technology.



The Academy is a collaborative effort among the Commonwealth of Massachusetts, Worcester Polytechnic Institute, and the high schools of Massachusetts. In addition to passing all classes, the Academy also requires that all students complete 50 hours of community service per year. Since its inception in 1992, over 1,000 students have graduated from the Academy.



PAGE 6 **local & regional** **K-12** programs related to **COMPUTER SCIENCE**

Feeding into these successful colleges are strong K-12 programs available in the 47 public schools and 20 private, parochial, and charter schools in Worcester.

Worcester Public School System offers 109 sessions of 10 different computer science courses from Advanced Placement Computer Science to general computer programming courses. These classes enrolled 2,200 students in 2017.

Other notable high schools in the city, University Park Campus School and Massachusetts Academy for Math and Science (MAMS), feature strong STEM curriculum. MAMS was founded in 1992 by the Massachusetts State Legislature as a public, non-residential magnet school to serve academically advanced youth in grades eleven and twelve in math, science, and technology. The school emphasizes math and science within a comprehensive, interactive program. The rigor of the junior year classes exceeds high school honors and AP programs, with more than 1200 hours of instruction. Seniors complete a year of college, taking the same classes as other students at Worcester Polytechnic Institute. The Academy is a collaborative effort among the Commonwealth of Massachusetts, Worcester Polytechnic Institute, and the high schools of Massachusetts.



Welcome Mr. President

Notably, Worcester Technical High School, a 2013 National Blue Ribbon High School from the US Department of Education, was the only high school to have President Obama give the commencement address in 2014.

Within 45 miles of Worcester, there are 9 public technical high schools.





HECCMA

HIGHER EDUCATION CONSORTIUM OF CENTRAL MASSACHUSETTS

October 11, 2017

Amazon
Office of Economic Development
c/o Site Manager Golden
2121 7th Avenue
Seattle, WA 98121

Dear Site Manager Golden and Members of the Amazon Site Selection Team,

As representatives of the higher education community, we are pleased to write this letter in support of the city of Worcester's proposal to host Amazon's second headquarters. As you search for a location with a pipeline of talented potential employees in a community that is both affordable and thriving, you need not look any further than our city.

Worcester is home to innovators. From the entrepreneurs who built a strong industrial economy to Robert Goddard, the father of the first liquid-fueled rocket that helped launch the space age, Worcester is proud of its history as the birthplace and workplace of creative, forward-thinking leaders in science, business, and technology, among other fields. We are also home to creative thinkers, writers, and artists who made our city a cultural destination and are vital to any flourishing society.

While we celebrate our past with pride, we also look to a bright future paved by the gifted students and faculty members who study and conduct innovative research in our institutions. As such, our institutions attracted \$329M in research dollars during the last fiscal year. Our 35,000 students consist of future leaders in the STEM fields, as well as business and finance. Our regional colleges and universities boast unique academic programs in robotics, game design, drones, and logistics/supply chain management, to name just a few.

Our faculty members are celebrated academic leaders who contribute to significant advancements in their chosen fields. They consist of world-renowned scientists, including recipients of the Nobel Prize and other distinguished achievements. They are also gifted writers and critical thinkers who consistently ask how they can best use their talents to serve their community and lead a fulfilling life. An easy commute from Boston and its suburbs, many of our faculty members and former students live in Worcester, recognizing its affordability, diversity, and business friendly environment that has both the benefits of a big city but the sense of community often only found in smaller settings. They are proud, active members of the Worcester community, volunteering in our schools and non-profits, guided by the belief that we all have a stake in the success of our neighbors.

As leaders in Worcester's higher education community, we work collaboratively with our city's leaders, who provide the thoughtful stewardship that underscores the belief that Worcester's best days are yet to come. The active construction projects underway in our city are testimony to its continued growth and attractiveness to established businesses as well as new entrepreneurs looking for a welcoming environment with plenty of room to grow. We feel that Worcester is a prime location for your next home and we look forward to welcoming you.



H E C C M A

HIGHER EDUCATION CONSORTIUM OF CENTRAL MASSACHUSETTS

Sincerely,

Mary Lou Retelle
President, Anna Maria College

Francesco C. Cesareo

Francesco Cesareo, Ph.D.
President, Assumption College

Nancy Crimmin, Ed.D.
President, Becker College

David P. Angel

David P. Angel, Ph.D.
President, Clark University

Philip L. Boroughs, S.J.

The Rev. Philip L. Boroughs, S.J., Ph.D.
President, College of the Holy Cross

Richard Lessard
Interim President, MCPHS University

Luis Pedraja, Ph.D.
President, Quinsigamond Community College

Deborah Kochevar, D.V.M., Ph.D.
Dean, Cummings School of Veterinary Medicine,
Tufts University

Michael F. Collins, M.D.
Chancellor, University of Massachusetts Medical
School

Laurie Leshin, Ph.D.
President, Worcester Polytechnic Institute

Barry M. Maloney
President, Worcester State University

Jeanine B. Went, Ph.D.
Executive Director, Higher Education Consortium
of Central Massachusetts, Inc.



Association of Independent
Colleges and Universities
in Massachusetts

11 Beacon Street, Suite 1224 | Boston, Massachusetts 02108-3016
617.742.5147 | Fax 617.742.3089 | www.aicum.org

- Amherst College
- Anna Maria College
- Assumption College
- Babson College
- Bay Path University
- Becker College
- Bentley University
- Berklee College of Music
- Boston Architectural College
- Boston Baptist College
- Boston College
- Boston University
- Brandeis University
- Cambridge College
- Clark University
- College of the Holy Cross
- Curry College
- Dean College
- Eastern Nazarene College
- Elms College
- Emerson College
- Emmanuel College
- Endicott College
- Fisher College
- Gordon College
- Hampshire College
- Harvard University
- Labouré College
- Lasell College
- Lesley University
- Massachusetts Institute of Technology
- MCPHS University
- Merrimack College
- MGH Institute of Health Professions
- Mount Holyoke College
- Mount Ida College
- New England College of Optometry
- Newbury College
- Nichols College
- Northeastern University
- Olin College of Engineering
- Pine Manor College
- Regis College
- Simmons College
- Smith College
- Springfield College
- Stonehill College
- Suffolk University
- Tufts University
- Urban College of Boston
- Wellesley College
- Wentworth Institute of Technology
- Western New England University
- Wheaton College
- Wheelock College
- William James College
- Williams College
- Worcester Polytechnic Institute

October 10, 2017

Amazon.com
Office of Economic Development
C/O Holly Sullivan
2121 7th Ave
Seattle, WA 98121

Dear Ms. Sullivan,

Massachusetts’ supercluster of world-renowned colleges and universities – as well as the thriving innovation ecosystem sustained by these institutions – makes Massachusetts the ideal location for Amazon’s second corporate headquarters (HQ2). On behalf of the Association of Independent Colleges and Universities in Massachusetts (AICUM), I urge you and the team at Amazon to give your strongest consideration of sites within the Commonwealth for locating HQ2.

Amazon’s HQ2 RFP identified numerous “decision drivers” for selecting the location for HQ2, including the need to be close to excellent institutions of higher education, a highly educated workforce, educational opportunities, and an overall high quality of life. The Commonwealth of Massachusetts can far outpace any other state or region in meeting each of these requirements.

Massachusetts is rightly known around the world as the hub of higher education. It is home to 124 colleges and universities, and as such it is uniquely-positioned to leverage its highly educated workforce in partnering with Amazon. The research taking place on these campuses serves as a magnet for federal research dollars (highest per capita recipient of NIH funding), venture capital funding, and exceptionally talented students, faculty and researchers from across the nation and around the world. In fact, each year Massachusetts attracts and educates more than 60,000 international students.

Massachusetts is proud of the fact that we have the highest percentage (50.2%) of adults with a B.A. or above. More significantly, the talent pipeline flowing from our campuses every year is primed to provide Amazon with the highly educated workers it needs to continue its phenomenal growth. Last year, Massachusetts 4-year colleges and universities enrolled over 504,000 students and awarded over 106,000 bachelors and advanced degrees. **These degree awards included 4,248 in computer science – a 91 percent increase in computer science degrees over the past five years - and 7,373 degrees in engineering.**

Massachusetts is also home to an incredibly robust and passionate startup community, powered by organizations such as MassChallenge and Greentown Labs, as well as by incubators and accelerators located on college and university campuses from Boston to Worcester to Springfield. The *Massachusetts Green High Performance Computing Center* is a perfect example of the infinite possibilities of scientific and engineering breakthroughs that can occur when industry and higher education partner to support research. Fostering the startup community is part of the Massachusetts DNA, and it is exactly the creative and “big” thinking environment that Amazon requires to feed its passion for invention.

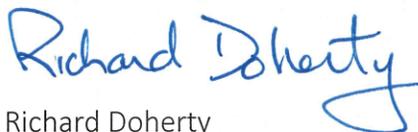
Our college and university campuses are also a crucial part of the cultural fabric that makes Massachusetts such a great place to live, work and raise a family. Many campuses are top tourist attractions in their own right. From museums to concerts to political debates to public policy lectures, all of our campuses add to the vibrancy of the local community.

Finally, last year, Massachusetts was again ranked the number one state on the Bloomberg U.S. State Innovation Index - largely on the strength of its higher education institutions and the partnerships formed between higher education and the R&D companies headquartered in Massachusetts. We have seen company after company choose to relocate to or expand in Massachusetts – seeking to capitalize on the educated workforce and collaborative nature between business, government and our collection of nonprofits, including higher education. Leadership strategies from the Baker-Polito administration, the Massachusetts Legislature, and our municipal leaders are built upon input they’ve solicited directly from the business community and our higher education community, all of which provide for a thriving business environment.

I am confident that if Amazon selects Massachusetts to locate HQ2, similar partnerships will quickly be established between Amazon and the innovation community throughout the Commonwealth. I again urge you to consider Massachusetts as the second home of Amazon and hope that our colleges and universities can partner with Amazon in the coming years.

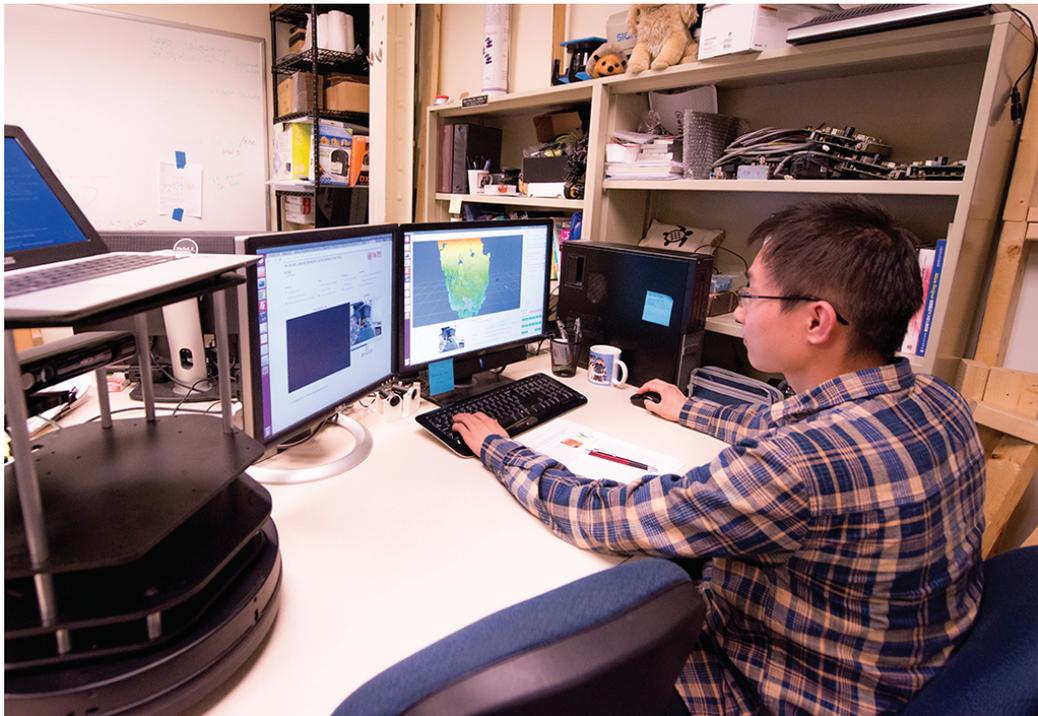
Please do not hesitate to contact me if I can be of any assistance during your deliberative process.

Very truly yours,



Richard Doherty
President

TECHNOLOGY & INNOVATION



WORCESTER
MASSACHUSETTS

amazon proposal

TECHNOLOGY & innovation

Worcester shares Amazon's passion for invention.

Robotics

WPI was the first college or university in the nation to offer an undergraduate degree and first in the nation to offer Master's and PhD in Robotics.

 **Joe Quinlivan**, President & COO of **Amazon Robotics**, received his master's degrees in business management and computer science from WPI, and now serves on the board of WPI's robotics program.

The Accreditation Board for Engineering and Technology (ABET)—the world's leading accreditation organization—recently awarded the WPI Robotics program the inaugural ABET Innovation Award for developing and implementing the first ABET-accredited undergraduate Robotics Engineering program in the United States. ABET accredits a total of 3,709 programs at 752 colleges and universities in 30 countries.

Autonomous Vehicles

WPI continues to expand their innovative, interdisciplinary curriculum as an academic leader for the emerging technology for autonomous vehicles. Alexander Wyglinski, associate professor of electrical and computer engineering, served as co-chair of the 82nd IEEE Vehicular Technology Conference in 2015.

UMass Medicine Science Park

The UMass Medicine Science Park is a 470,000 square-foot campus provides research and laboratory space for dozens of biotechnology companies. The park's location alongside UMass Medical School provides unique opportunities for collaboration between industry and academia. A world leader in biotechnology, Worcester is home to many industry leaders as well as budding ventures, including Abbott Laboratories (now Abbvie), the makers of Humira.

Worcester's Innovations Changing the World

- First Liquid-fueled Rocket
- First Pressurized Space Suit
- First anti-gravity suit
- First Practical Typewriter (chirographer)
- Monkey Wrench
- Envelope Folding Machine
- Birth Control Pill
- Touch-color for the Blind
- Steam Calliope
- Commercialized Valentine Card

Massachusetts is **#1** in
Technology & Innovation
Research and Teaching

- CNBC, 2017



TECHNOLOGY & innovation



Professor Craig Mello, PhD, UMass Medical School

2006 Nobel Prize winner in Physiology or Medicine for discovering a new way to control the flow of genetic information.

UMass Medical School ranked 4th among the top 100 research institutions for the number of citations on third-party patents according to Nature, an international journal of science.

Gateway Park

"Gateway Park, once a decaying relic of the city's industrial past, has, through WPI's leadership, become a center of innovation and economic development in such 21st industries as biotechnology, chemical biology, and biomedicine."

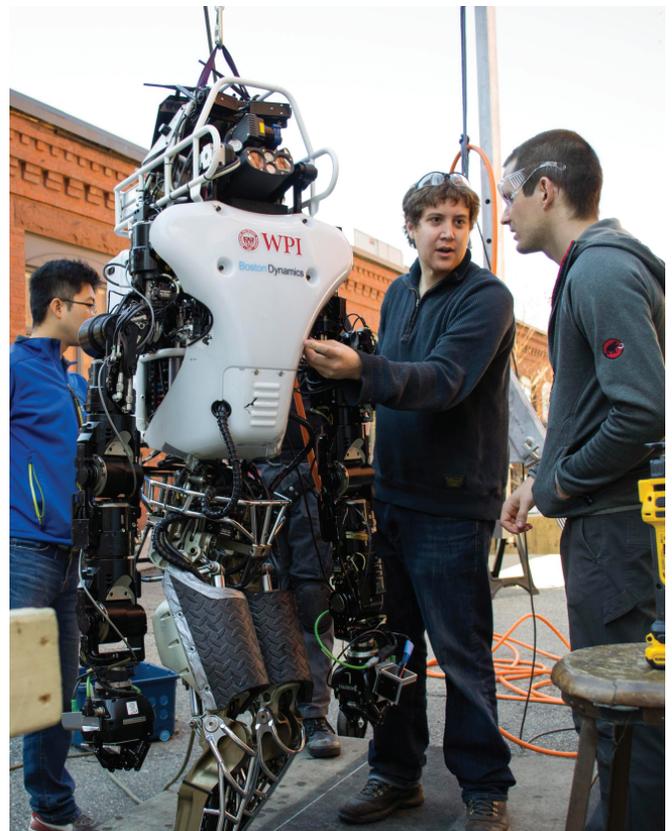
– WPI Provost Bruce Bursten

Gateway Park creates an environment for thriving partnerships among academia and industry. In 2007, Gateway Park was awarded the Phoenix Award from the U.S. Department of Commerce.

**Massachusetts is #2
in patent creation.**

– U.S. News & World Report, 2017

More than 5,500 U.S. Patents have included inventors from Worcester and WPI's Office of Intellectual Property and Innovation has handled more than 45 projects in the last year.



ENTREPRENEURSHIP



WORCESTER
MASSACHUSETTS

amazon proposal

entrepreneurship & Start-Ups

Worcester is one of the top 10 emerging startup hubs in the U.S.

- Progressive Policy Institute, 2016

Entrepreneurial Ecosystem

Area colleges and universities help fuel the innovation and entrepreneurial ecosystem with their focus on incubation and an entrepreneurial mindset. Local programs include:

MassDiGI, the Massachusetts Digital Games Institute, is housed at Becker College. Between Becker and WPI, Worcester has the largest concentration of game design students in North America.

Tech Advisors Network, one of the cornerstones of the innovation and ecosystem at WPI is this virtual incubator. Over 80 advisors offer advice on business plans, marketing strategies, and leads on potential partners—and funding to students, faculty, and alumni aiming to turn ideas into commercial ventures.

Clark University's **Innovation & Entrepreneurship Program** sponsors an annual U-reka! Big Idea Challenge helping students bring business plans to life.



Becker College is the home to the first **Muhammad Yunus Social Business Centre** in the United States which incubates social business and entrepreneurial ideas and concepts into real world examples of social business and social entrepreneurship.

UMass Medical School's **Office of Innovation & Business Development** and the **Office of Technology Management** builds and executes a comprehensive business strategy that promotes innovation and entrepreneurship.

The **Center for Social Innovation** at Worcester State University seeks to create a culture of social innovation that tackles deep-rooted social problems.



MassDiGI 2012 Game Challenge Winners

PAGE 2

ADDITIONAL entrepreneurial ASSETS

**37% of Worcester businesses
are minority-owned**

A variety of services and organizations support and foster the startup culture that has taken root in Central Massachusetts as the region's innovation network has rapidly expanded.

Small Business Development Center at Clark University

Free and confidential business assistance in partnership with the U.S. SBA, Mass Office of Business Development and Clark University. Since 1980 they have worked with 20,000+ entrepreneurs and assisted in raising \$380+ million in financing for them.

Mass Biomedical Initiatives

To further strengthen this industry in Worcester, Mass Biomedical Initiatives (MBI) helps create private-public partnerships and provides a nurturing environment for early-stage companies. MBI has incubated more than 115 companies with 84% staying in Mass. and creating 500+ jobs.

StartUp Worcester

Partnership between the Worcester Regional Chamber of Commerce, The Venture Forum, and Worcester Clean Tech Incubator providing mentorship and memberships for local entrepreneurs.

Worcester Idea Lab

Incubator space for companies, organizations and individuals including private offices and a wide variety of programming for the entrepreneurial and startup communities.

Technocopia

Makerspace complete with an education center, professional wood and metal shops, as well as prototyping support for makers and artisans.

Mass Manufacturing Extension Partnership

Support services for scale-up manufacturing companies teaching innovative growth solutions and how to successfully align people, processes and best practices to develop customized strategies.

**Worcester is #1 city in New
England for starting a business.**

- Wallet Hub, 2016

Worcester Business Resource Alliance (WBRA)

This network includes representatives from most of the organizations listed and aggregates and disseminates valuable information about small business and entrepreneur training opportunities, events, resources, and funding.

The Venture Forum (TVF)

TVF learning and networking community for tech entrepreneurs at any stage.

Center for Women & Enterprise

Helps startups and business owners become economically prosperous through entrepreneurship by offering educational programs, classes, consulting and network opportunities.



SUSTAINABILITY



WORCESTER
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a leader in SUSTAINABILITY

MASSACHUSETTS is #2 GREENEST STATE (Wallet Hub, 2017)

#1 STATE FOR LEED CERTIFIED BUILDINGS (USGBC, 2017)

Sustainability is a core value for Worcester. Designated a Green Community in 2008 by the Massachusetts Green Communities Act, Worcester has taken on a number of projects to further the goal of creating a sustainable, green community.



Greenwood Street Landfill Solar Project

This solar array is both a productive reuse of a former landfill and a future revenue stream, with an anticipated 6-year payback on the initial investment. The project is the **largest municipal solar array in New England** to date, producing electricity equivalent to powering 1,340 homes per year, while generating \$60 million in cost savings by way of energy credits over its 30 years of expected life.

LED Lighting Initiative

Approximately 14,000 municipal streetlights will be replaced with energy-efficient LED fixtures, with intelligent controls, dimming capabilities, and individual meters. The lighting retrofit is expected to save over \$900,000 a year in electrical costs – a reduction of 60%. In addition, the municipally-owned DCU Center (arena and convention center) was retrofitted with LED, equating to annual CO2 emissions for 194 homes; a carbon reduction equal to 1,243 acres of forests; and the reduction of greenhouse gas emissions equal to 277 cars being driven for a year.

a leader in SUSTAINABILITY

Worcester Clean Tech Incubator

Founded and operated by the Institute for Energy and Sustainability, WCTI is a community in the heart of central Massachusetts dedicated to building change. Over 10,000 square feet, consisting of private offices, co-working space, conference rooms, event space, and prototyping labs, offering startups the space they need to establish and grow.



Worcester Sustainability Hub

National Grid's Sustainability Hub provides hands-on education about energy efficiency and emerging technologies for National Grid's customers and the community at large. The 2,220 square foot interactive space was donated by Clark University and is an integral part of National Grid's Smart Energy Solutions Program, **the largest and most comprehensive smart grid pilot in Massachusetts.**



"Worcester's receptiveness to station-free bike-sharing is proof of the city's forward-thinking approach and ability to grow and evolve. After Seattle, we selected Worcester as our second U.S. city because of the city's eagerness to explore an alternative way of commuting and transportation that promotes sustainability, access for residents, and a healthy lifestyle."

– Grace Lin, Vice President, Ofo U.S.

Beyond Energy Sustainability

Worcester seeks to lead as an example Green Community by viewing sustainability as a mindset necessary to ensure healthy long-term growth with a minimal carbon footprint and an equitable community. A number of organizations work closely with community members to help Worcester position itself to reach long-term sustainability goals, including the Regional Environmental Council and Greater Worcester Land Trust.

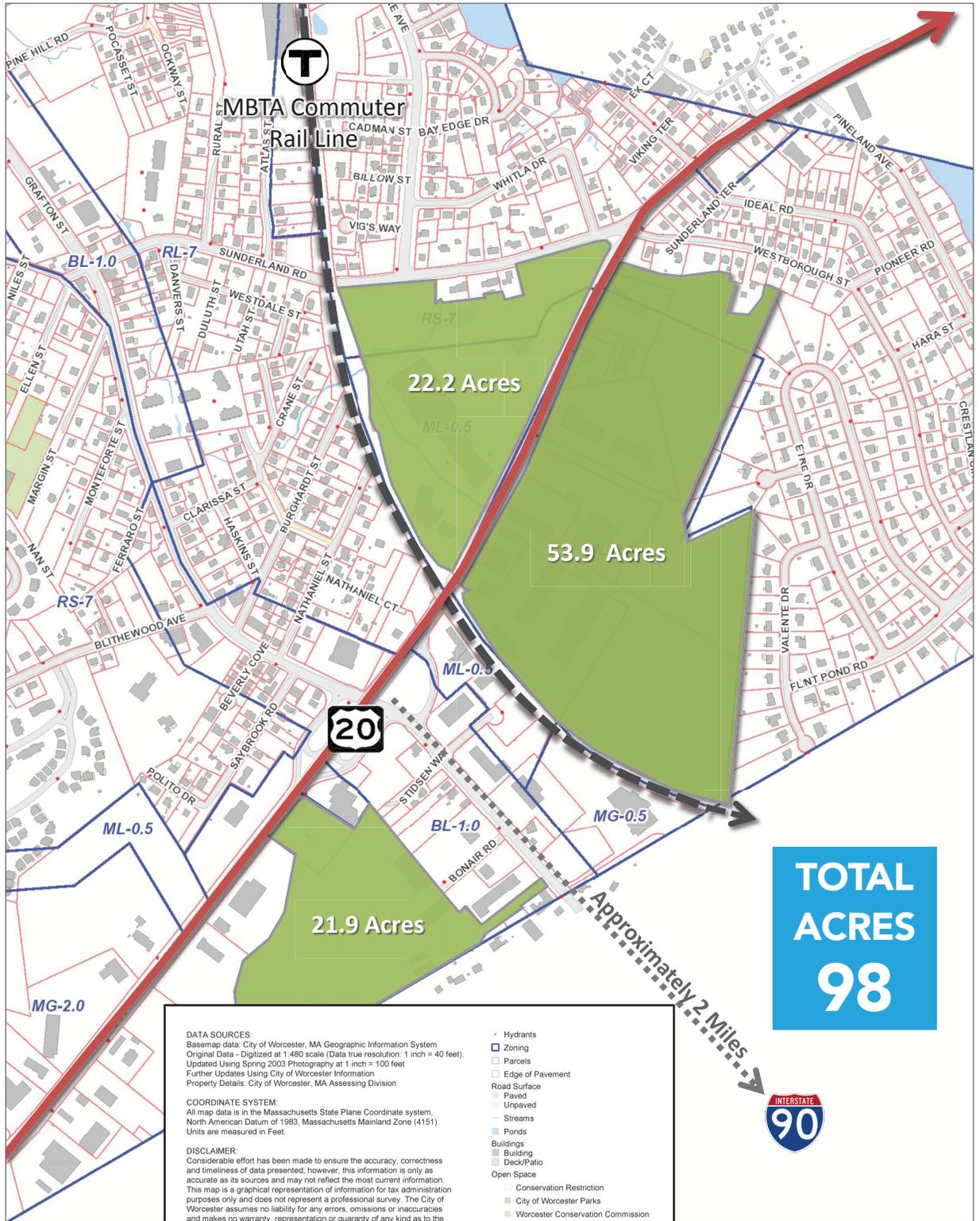
PROPOSED SITE



WORCESTER
MASSACHUSETTS

amazon proposal

proposed WORCESTER **SITE** property map



DATA SOURCES:
 Basemap data: City of Worcester, MA Geographic Information System
 Original Data - Digitized at 1:480 scale (Data true resolution: 1 inch = 40 feet)
 Updated Using Spring 2003 Photography at 1 inch = 100 feet
 Further Updates Using City of Worcester Information
 Property Details: City of Worcester, MA Assessing Division

COORDINATE SYSTEM:
 All map data is in the Massachusetts State Plane Coordinate system,
 North American Datum of 1983, Massachusetts Mainland Zone (4151).
 Units are measured in Feet.

DISCLAIMER:
 Considerable effort has been made to ensure the accuracy, correctness
 and timeliness of data presented; however, this information is only as
 accurate as its sources and may not reflect the most current information.
 This map is a graphical representation of information for tax administration
 purposes only and does not represent a professional survey. The City of
 Worcester assumes no liability for any errors, omissions or inaccuracies
 and makes no warranty, representation or guaranty of any kind as to the
 content or for any decisions made or actions taken or not taken by the
 user based upon any information provided on this map.

- Hydrants
- Zoning
- Parcels
- Edge of Pavement
- Road Surface
 - Paved
 - Unpaved
- Streams
- Ponds
- Buildings
 - Building
 - Deck/Patio
- Open Space
 - Conservation Restriction
 - City of Worcester Parks
 - Worcester Conservation Commission
 - Greater Worcester Land Trust
 - Massachusetts Audubon Society
 - Commonwealth of Massachusetts
 - Other (school, cemetery, private)
- City

PAGE 2 proposed ROUTE 20 SITE property overview



On the nation’s longest road, in the heart of New England, close to major highways and the MBTA.

The proposed site is comprised of three adjacent areas totaling approximately 98 acres of land along Route 20, the country’s longest road that extends across Massachusetts to Oregon. The site has easy, direct access to Interstate 90 and Route 146.

In addition, the Massachusetts Transit Bay Authority utilizes existing rail lines that abut the site providing 20 round trip daily commuter trains to Boston.

The land is presently zoned for manufacturing use, but can be rezoned for business uses at floor area ratios of 3.0 or higher, which will accommodate the required office demand.

Property Specifications

OWNERSHIP	Multiple Private Owners
LAND AVAILABLE	98+ Acres
CURRENT ZONING	Manufacturing Limited
UTILITIES	Gas, Electric, Phone, City Water & Sewer
FIBER CONNECTIVITY	Lightower Fiber Networks
CELLULAR SERVICE	Multiple Providers



rates

COMMERCIAL TAX RATE	\$32.93 per \$1,000 of Assessed Value
PERSONAL PROPERTY TAX RATE	\$32.93 per \$1,000 of Assessed Value
CITY WATER RATE	\$3.67 per Hundred Cubic Feet of Usage
CITY SEWER RATE	\$7.08 per Hundred Cubic Feet of Usage
EXCISE TAX	\$25.00 per \$1,000 of Vehicle Value

about electricity in massachusetts

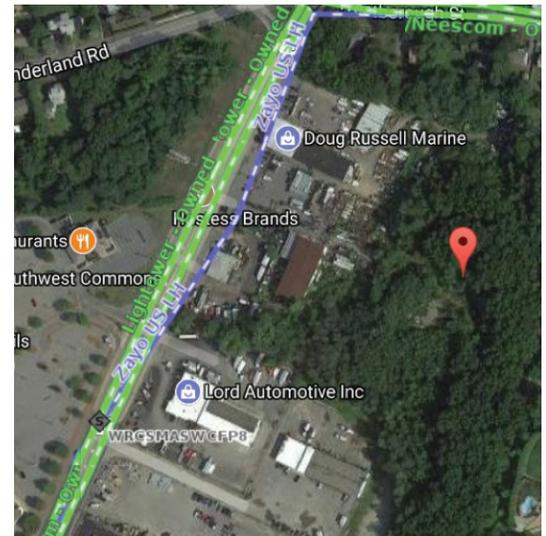
Massachusetts is an energy deregulated market allowing businesses to purchase electricity from a third-party vendor resulting in a more cost-effective and predictable bottom line.

SITE CONNECTIVITY & coverage

Worcester is Wired: The key elements necessary to support high-tech businesses are already part of the infrastructure.

Fiber Optic Network

The proposed location on Route 20 has existing dark fiber network connectivity on the correct side of the street. The map below is a snapshot from Lighttower Fiber Networks, a Massachusetts based fiber network company, showing dark fiber lines (purple dashed lines) at the site.



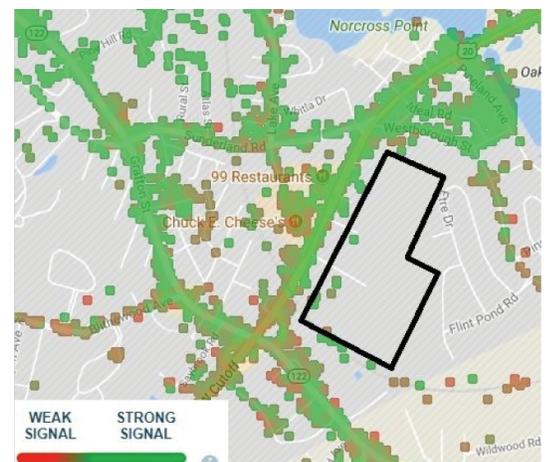
About Worcester's Fiber Network

- Redundant and diverse long-haul fiber optic network connectivity.
- Several long-haul, and local service providers.
- Excellent metropolitan fiber network density.
- A carrier hotel in the center of the city.
- Direct fiber connections to Boston, Hartford, and New York City.
- Eight data centers within 20 miles.



Cell Coverage

Shown in the map below, the proposed site has strong cell coverage for all major carriers with Verizon performing the best. The green shading concentrated along the road represents the signal strength of cell customers that live and work in that area. Latency speeds of Verizon users have been recorded as fast as 79ms.



PAGE 4 additional sites IN NEIGHBORING AUBURN

The Town of Auburn (pop. 16,516) is located in Central Massachusetts within Worcester County. It is a direct suburb to the south of the City of Worcester containing approximately 15.4 square miles of land area with a median household income of \$72,695.

Crossroads of Central Massachusetts

Auburn, federally designated within the John H. Chafee Blackstone River Valley National Heritage Corridor, is widely known as the crossroads of Central Massachusetts, as major Interstates I-90, I-290 and I-395 and state route 12 and 20 bisect in the center of the town, making Auburn a popular destination for commerce, shopping, working and living.

A Sustainable Community

Auburn was designated by the Commonwealth of Massachusetts as a Green Community in 2012 and has undertaken several energy efficiency projects and initiatives to reduce energy consumption by the municipality and the community.

Site of the First Rocket Launch

Auburn is home to the birth of modern rocketry as Dr. Robert Goddard launched the first successful liquid-fueled rocket in Auburn on March 16, 1926. The actual launch site of Goddard's rocket is located on the town-owned and operated Pakachoag Golf Course where the site of the launch was declared a National Historic Landmark in 1966. That spirit of innovation exists today as Auburn has a strong commercial/industrial base consisting of diverse industry sectors including warehousing, distribution, and light manufacturing and is also home to a significant retail industry and service related businesses.

Zoned for Business

This suburban community has several commercial, retail and industrial zoned areas with growth opportunities along its Route 12 and Route 20 corridors. Auburn has several industrial and business parks, multiple commercial clusters and a major regional retail shopping mall.

Auburn's Workforce

Auburn imports labor from other communities to fill jobs created by local industry resulting in a larger day time than evening population. Auburn's day time population swells to more than double that of its resident population, with an estimated 32,498 people in the Town during the day.

Utilities and Government

There are three public water utility providers in Auburn, and public sewer is easily available along the major business corridors. Auburn's form of government is representative town meeting with a town manager as the CEO.



PAGE 5 additional sites IN NEIGHBORING AUBURN

As part of a multi-year strategy begun in Fiscal Year 2009, in FY17 the Board of Selectmen voted again to reduce the tax differential and approved a factor of 1.20 in an effort to move Auburn closer towards a single tax rate. The CIP split of 1.20 is a significant movement towards a single tax rate as the split was 1.58 in FY08.

Auburn's Economy

As of 2015, Auburn is estimated to have 10,511 jobs in 650 establishments, generating almost \$491 million in wages according to the Massachusetts Executive Office of Labor and Workforce Development. Retail trade is Auburn's largest industry in terms of jobs and establishments, providing almost 25% of all jobs in town.

Business Development

A Strategic Economic Development Plan was completed in April 2017 which identifies Auburn as the ideal New En-

gland location for distribution and warehousing. It also includes target industry strategies for professional office market opportunities on key undeveloped prime real estate parcels. The following parcels have been identified as favorable for new business:

<u>614 Southbridge Street</u>					
Acres: 16.74	Public Sewer/Water: both				
Frontage: 310 ft +/-	Ownership: Private				
Zoning: Highway Business	Previous Use: Hotel (demolished in 2010)				
Distance to I-90: 0.1 miles	Condition: vacant, asphalt and foundation scars				
Distance to I-290/395: 0.4 miles	Notes: property abuts former toll plaza at I-90 exit 10				
<u>190 Washington Street</u>					
Acres: 56	Public Sewer/Water: both				
Frontage: 725ft +/-	Ownership: Private				
Zoning: Industrial (IP)	Previous Use: none				
Distance to I-90: 1.7 miles	Condition: undeveloped heavily wooded lot				
Distance to I-290/395: 4.5 miles	Notes: less than 1 mile from Worcester line				
<u>317 Washington Street</u>					
Acres: 8.85	Public Sewer/Water: both				
Frontage: 870 ft +/-	Ownership: Private				
Zoning: Industrial (GI)	Previous Use: none				
Distance to I-90: 2.9 miles	Condition: undeveloped lot, lightly wooded				
Distance to I-290/395: 1.3 miles	owns multiple lots in town				



INCENTIVES



WORCESTER
MASSACHUSETTS

amazon proposal

city & STATE INCENTIVES

The City and State stand ready to assist Amazon in all elements of the development process, including securing the required local and state permits and approvals and providing financial assistance and workforce training programs and incentives.

Worcester is the clear choice. We are prepared to offer Amazon:

- Up To \$500 million in Local Real Estate Tax Savings
- 100% Personal Property Tax Exemption Over Twenty Years
- An Investment Tax Credit Through The Commonwealth Of Massachusetts
- Research and Development Tax Credits
- \$1 million in Job Creation Grant Funds
- District Improvement Financing Funding
- Massworks Infrastructure Program Funding
- Workforce Central Career Center Business Services
- A Quick and Streamlined Permitting Approval Process



Worcester, Massachusetts as Your Partner

The City is fully prepared to work with Amazon as a partner to ensure that every tool in the Commonwealth's cache is at your disposal.

The following is an overview of the programs and incentives available to Amazon in Worcester:

I. Job Creation and Investment Incentives

A. Economic Development Incentive Program (EDIP)

Through the EDIP, the City of Worcester, in partnership with the Commonwealth, can provide 1) real estate property tax exemptions, 2) personal property tax exemptions, and 3) investment tax credits to businesses locating to or expanding in the city. The EDIP is a three-way partnership among the state, a municipality, and the participating job-creating business.

PAGE 2 **city** & STATE **INCENTIVES**

EDIP - Potential Savings

- **Real Estate Property Tax Exemption Savings** – As Amazon develops new office space along Route 20 in Worcester which results in an increased value of the properties and creates new jobs for Worcester residents, the City is prepared to provide Amazon a Tax Increment Financing (TIF) Plan consisting of local real estate property tax relief in an amount of up to \$500 million over a twenty year period.
- **Personal Property Tax Savings** – Amazon will also qualify for a 100% exemption on personal property taxes over the life of the TIF Plan.
- **Investment Tax Credit** – The EDIP also has the potential to yield a substantial Investment Tax Credit to Amazon that can be utilized during the entire term of the TIF Plan between Amazon and the City of Worcester, plus an additional five years.

B. Research & Development (R&D) Tax Credit

Through the Commonwealth of Massachusetts, Amazon could be eligible for a tax incentive for research and development investment. Any costs that qualify for the federal R&D tax credit are also eligible for the Commonwealth's 10% R&D tax credit.

C. Job Creation Grant Funds

The City of Worcester administers a HUD Section 108 Loan Guarantee program to promote growth in both emerging and maturing industries as well as small business start-ups and expansions. Approved uses of the loan funds include working capital and the purchase of equipment and inventory. In order to be eligible for funding, each applicant must qualify as meeting one of the national objectives of the CDBG program: benefiting low- and moderate-income persons; preventing or eliminating slums or blight; or meeting an urgent need. The City of Worcester is prepared to provide Amazon with a deferred HUD Section 108 Loan in the amount of \$1 million if Amazon creates a minimum of 100, new permanent full-time jobs that are made available to or taken by low- to moderate-income Worcester residents within the first three years of its Worcester operation, the loan will be forgiven as a \$1 million job creation grant.

II. Infrastructure Improvement Funding

A. District Improvement Financing Program

The City of Worcester is committed to establishing a development district pursuant to Massachusetts General Laws Chapter 40Q to create a District Improvement Financing (DIF) program for the Route 20 headquarters. Under such a program, the city undertakes public infrastructure improvements that are necessary to enable the development of Amazon's second headquarters within the designated district and those improvements are paid for by the increased real property tax revenue raised within the district.

B. MassWorks Infrastructure Program

Through the MassWorks Infrastructure Program, the state provides a one-stop shop for municipalities and other eligible public entities seeking funding that supports and accelerates housing and job growth in the Commonwealth of Massachusetts. The Program provides grant funding for the construction, reconstruction and expansion of publicly owned infrastructure including, but not limited to sewers, utility extensions, streets,

PAGE 3 city & STATE INCENTIVES

roads, traffic signalization, curb-cuts, parking facilities, water treatment systems, and pedestrian and bicycle accommodation. The City of Worcester will seek MassWorks funding to complete infrastructure improvements that best satisfy Amazon's needs for the Route 20 site.

III. Workforce Training

With 8.5 million people living within a 60-mile radius, nine public and private colleges in the city and an additional 135 colleges and institutes within an hour's drive, and a \$90 million state-of-the-art technical high school that opened in 2006, the Worcester area boasts a diverse workforce that can continue to fulfill Amazon's needs.

The Central Massachusetts Workforce Investment Board (CMWIB) led a \$2 million United States Department of Labor grant to develop career pathways in Science, Technology, Engineering, and Mathematics (STEM) through expanded training and coordination of STEM related activities and resources at their One-Stop Career Centers. Although the grant recently concluded, the One-Stop Career Centers will continue to offer job seekers interested in STEM careers access to coaches who will assist them in developing a career plan and connecting with STEM industry employers. The nationally-recognized www.STEMPower.org website, a virtual career portal for STEM job seekers and employers, will also continue functioning after the end of the grant.

A. Workforce Central Career Center - Business Services

Workforce Central is a locally managed Massachusetts One-Stop Career Center with offices in Worcester. The following services can be offered to Amazon at no cost:

- Listing job openings locally, statewide, and nationally
- Job matching of qualified applicants
- On-site recruitment services at Workforce Central, including job fairs
- Access to federal Work Opportunity Tax Credits for pending new hires
- Connections to State programs, labor market, and other workforce development information

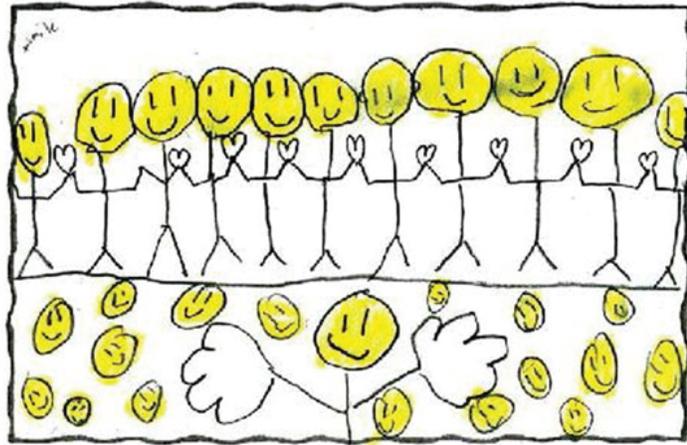
B. Workforce Training Fund (WTF)

Depending on funding availability, the Massachusetts Business Resource Team can assist Amazon in applying for workforce training grants via the Massachusetts WTF. The WTF provides grants to train new employees and/or to upgrade the skills of existing employees. The WTF has no income requirements and companies applying to the program for the first time receive preference. Companies can receive multiple grants. This flexible program requires a company match that can be met by "in-kind" costs incurred in providing the training.

IV. Streamlined Permitting Process

Through the Interdepartmental Review Team, which consists of City administrators and staff who review development projects with the proponents, the City can provide technical assistance to Amazon and its team to ensure all local and state permits and/or approvals are secured in an efficient and timely manner.

WHAT PEOPLE ARE SAYING



Zeke P., age 9, Midland Street School



WORCESTER
MASSACHUSETTS

amazon proposal

What people **love** about **WORCESTER** m a s s a c h u s e t t s

Kelly Square
smells like pie.
I <3 Worcester!

Julianne, 38

Worcester is on the rise and the possibilities are endless; it's a blank canvas propped up on an easel of rich history and good people.

Suzi, 32



I love the diversity and the new art and murals.

McKenzie, 22



I like the people
in Worcester.

Jenny, 10

Worcester is a welcoming, diverse city. It's also blessed by geography with its favorable location as the nexus of New England.

Cory, 20

Worcester is a city on the rise.

Every day there is something else popping up whether it's beautiful housing, a great new restaurant, or new small businesses that make living here a true experience.

Amazon would be a great addition and Worcester as a home would only give them the ability to attract millennials and keep them here in our vibrant college town.

Ryan, 31

Small town feel (affordable, great neighborhoods, parking) with all the benefits of a city (restaurants, transportation, industry, schools, entertainment) and none of the hassle (parking, costs, etc).

Colleen, 37

What I love about Worcester is the foliage this time of year [autumn] – it's beautiful.

Nicole, 44



What people *love* about WORCESTER m a s s a c h u s e t t s

I like the new bike path and the housing opportunity here.

Stephanie, 37



Being born and raised in Worcester I have seen our city grow and flourish to become an incubator for innovation, creative talent, and small businesses which will greatly compliment a company such as Amazon.

Derek, 34

I love all of the new restaurants and improvements.

Siobhan, 26

Worcester's community brings people together no matter where you from what language you speak or the color of the skin you'll always feel safe.

Yazin, 18

I like the things we are able to afford.

Evelyn, 10



I like that the city offers good education.

Ramon, 44



I love the service at the Dive Bar; the ribs at Deadhorse Hill and the empanadas at Sazon Latino; the views from Bancroft Tower and College Hill; the hidden gem that is the Antiquarian Society; and those murals everywhere.

Che, 28

I love the City Parks with one of the best being Green Hill Park. Where else but Worcester can you have a beautiful park with a free barnyard zoo that is open to the public year round?

Deb, 48

What people **love** about WORCESTER m a s s a c h u s e t t s

Worcester is an affordable, centrally located city that offers a great deal to residents and businesses with its many restaurants, museums, universities and entertainment.

Nick, 30



I like that there's nice people, and schools. It is the best city ever!

Sadia, 8

I love Worcester's affordability, its many festivals, central location near highways, vibrant art and culture scene, its universities, and its museums.

Jenn, 38



Worcester has everything you would ever need!

Kim, 26



I like the parks that we have. There's South Worcester Sports Center where we can do sports instead of doing bad things.

Wilberto, 11



What I love most is Worcester's diversity. It gives me great pride and joy to know that we're a welcoming city where we can all learn from and respect our cultural differences and similarities.

Lindiana, 34

Coming from a rural community, I love that the community in Worcester is diverse and has many cultures. I love that everyone is supportive of the many cultures in the City.

Leandra, 32

I like public transportation that allows me to go everywhere.

Aura, 51