

MULTI-MODAL Transportation Connections for Wichita State Innovation Campus



June 5, 2015
DUNS: 043063460
City of Wichita, Kansas



WICHITA STATE
UNIVERSITY



Primary Project Type: Road

Secondary Project Type: Transit-Bus

Location: City of Wichita, Sedgwick County, Kansas
Congressional District 4, an urban area

Total Project Cost: 27,925,000

TIGER Grant Funds Requested: \$18,845,000

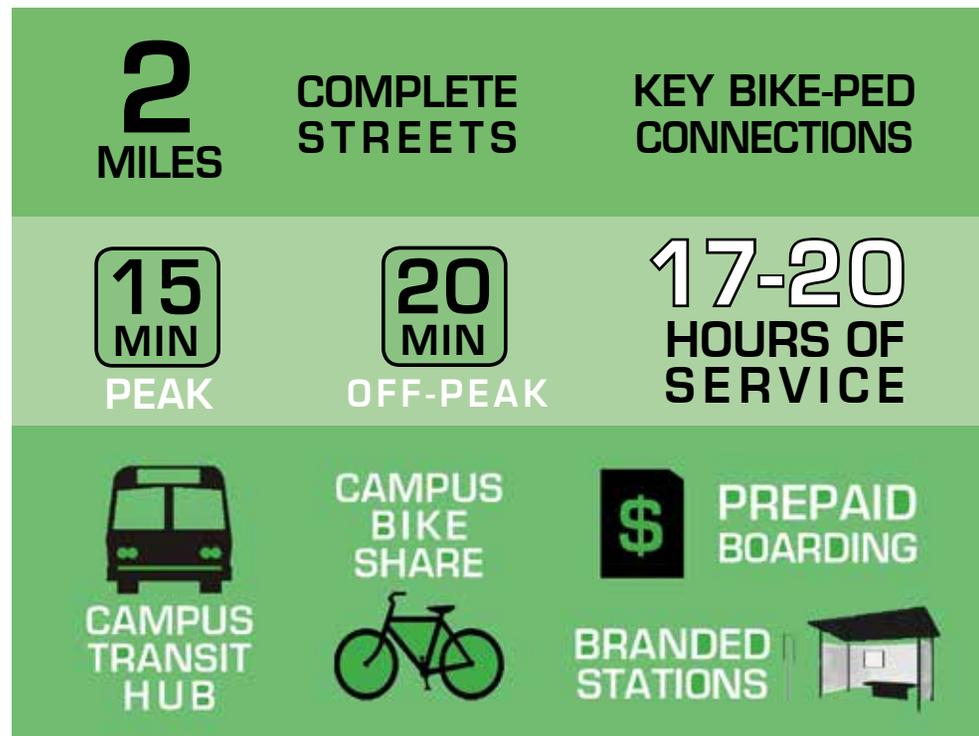
Local Cash Match: \$9,080,000*

* \$10M in pre-application; \$920,000 is pre-expended funds.

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<http://www.wichita.gov/Government/Departments/Planning/Pages/Tiger.aspx>



2,335



5,700



\$550 MILLION



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2015 TIGER Grant Application

Multi-Modal Transportation Connections for Wichita State Innovation Campus

a. Project Description

i. Use of TIGER Funds

The project will provide multi-modal transportation connections for the new Wichita State University Innovation Campus. TIGER funds will be used to construct complete street projects along Oliver Avenue and 17th Street North adjacent to the Innovation Campus. A new bus route will be added to connect the Innovation campus to Wichita State's new Old Town Campus in downtown Wichita as well as to major employment, shopping centers, and park and ride locations. A transit hub will be constructed on campus that includes bike share. Bicycle and pedestrian improvements will be constructed to connect the Innovation Campus to the existing city-wide pathway system.

Project Component	Cost
Oliver Avenue Complete Street	\$11,630,000
17th Street North Complete Street	\$6,200,000
40-foot Diesel Buses (8)	\$4,068,000
Level 1 Transit Stops (28)	\$1,512,000
Level 2 Transit Stops (17)	\$1,330,000
Campus Transit Hub	\$2,000,000
Campus Bike Share Stations (8)	\$400,000
Bike-Ped Connections to Pathway System	\$785,000
	\$27,925,000

Project Funding

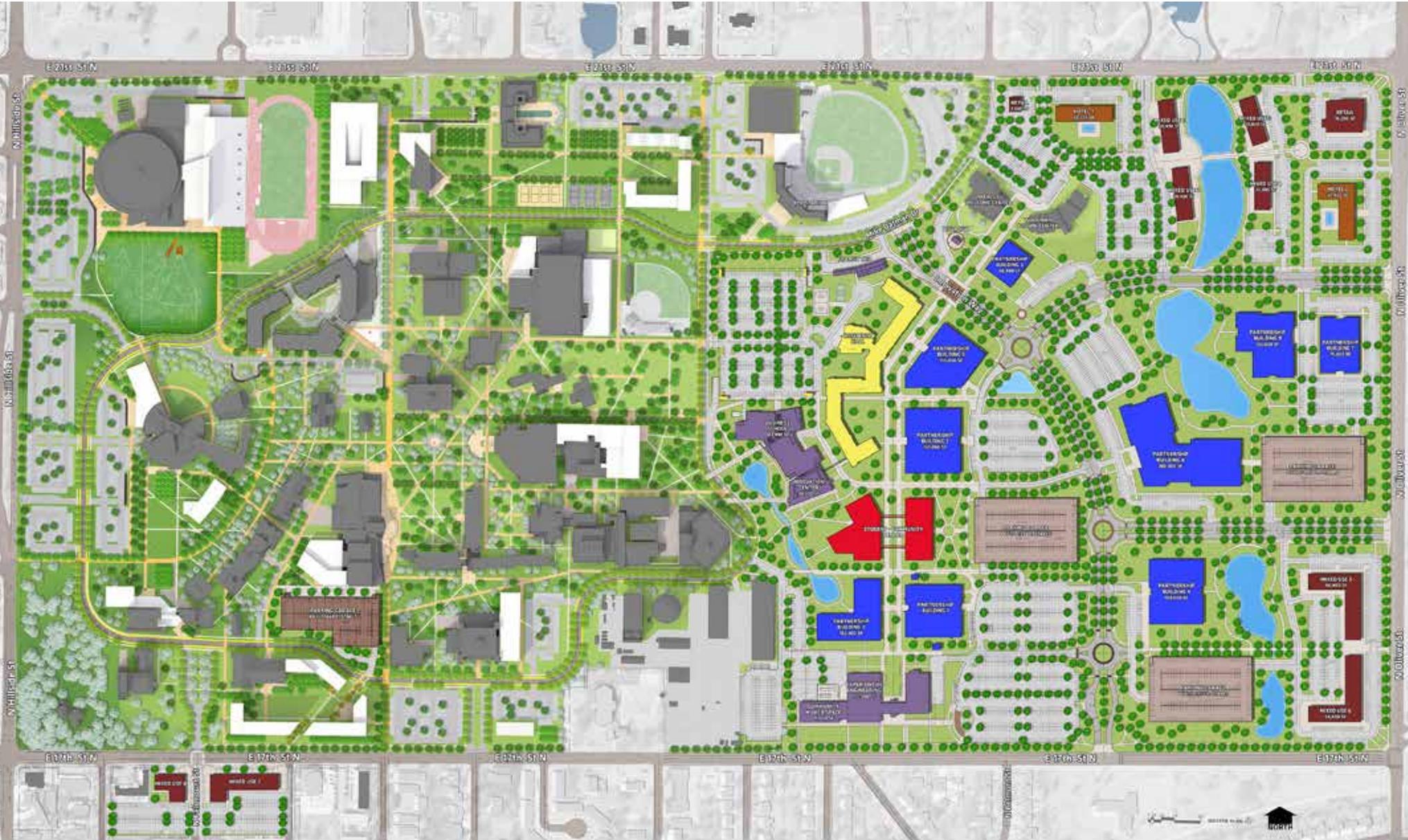
TIGER Funds Requested	\$18,845,000
Local Cash Match	\$9,080,000

ii. Project Beneficiaries

Wichita State University (WSU) students and employees are the most direct beneficiaries of the project, as the project is designed to connect the main WSU campus to the existing Metroplex Campus, the new Innovation Campus, and to the new Old Town Campus. To ensure the most benefit, the WSU cost-share for operations and maintenance of the transit component of the project would provide system-wide transit access, thus expanding transit choice to include access to all destinations served by the Wichita Transit system. Presently, there are approximately 18,400 WSU students and employees. Over the 20-year project life, the number of students and employees is estimated to grow to over 27,000, including the new Innovation Campus.

The new 120-acre Innovation Campus (see page 2) is a \$550 million project that will bring over 5,700 new employees to the area in over 2.9 million square feet of new development consisting of:

- ▶ An Experiential Engineering Building with engineering laboratories and a maker space;
- ▶ Ten Partnership Buildings, constructed with private funds by developers who will lease space to companies that want to work with WSU students and faculty on research and development;
- ▶ A new home for the W. Frank Barton School of Business, with an adjacent Innovation Center;
- ▶ A new residence hall;
- ▶ A community outreach center;
- ▶ Eight mixed-use buildings in urban villages built by private developers along Oliver and 17th Street that include retail stores and restaurants on the first level and apartments on upper levels; and
- ▶ Two hotels, built by a private developer, near the southwest corner of 21st and Oliver.



INNOVATION CAMPUS MASTER PLAN

OPTION - 11



Neighborhood residents also will benefit greatly from the project. One of every eight households in the project impact area do not have access to a vehicle, and current transit, bicycle, and pedestrian connections to jobs, education, and services have significant gaps. The project will provide an additional bus line that connects the neighborhood with downtown, an employment center with over 26,000 existing jobs; the new Innovation Campus, with 5,700 new jobs; Wichita State University; Wichita Area Technical College; a regional medical center; two grocery stores; and several commercial areas with shopping, medical offices, and other services. Bicycle and pedestrian connections to the city-wide pathway system also will connect the neighborhood to these same destinations.

In *“The Rise of Innovation Districts: A New Geography of Innovation in America”* (see [Appendix A](#)) the Brookings Institution’s Metropolitan Policy Program notes that a new urban development model called “innovation districts” is a leading-edge approach to economic development. The Wichita State University Innovation Campus will use this model to locate leading-edge anchor institutions on the Innovation Campus to connect with Wichita State students and faculty involved in applied research and development that fosters inventions, patents, product development, business start-ups, entrepreneurship, and overall economic growth of the region and country. The Innovation Campus will be physically compact, connected to the greater community by all modes of transportation, and offer mixed-use office, retail, and housing.

iii. Transportation Challenges Addressed

Wichita State University has a main campus and a Metroplex campus with a park and ride facility that are located about one mile apart and connected by a university-operated bus system. The new Innovation Campus will be located adjacent to the main campus, which will nearly double the physical size of the University. Additionally, the University is adding a new Old Town campus in downtown Wichita located about 3.5 miles from the main campus. The project



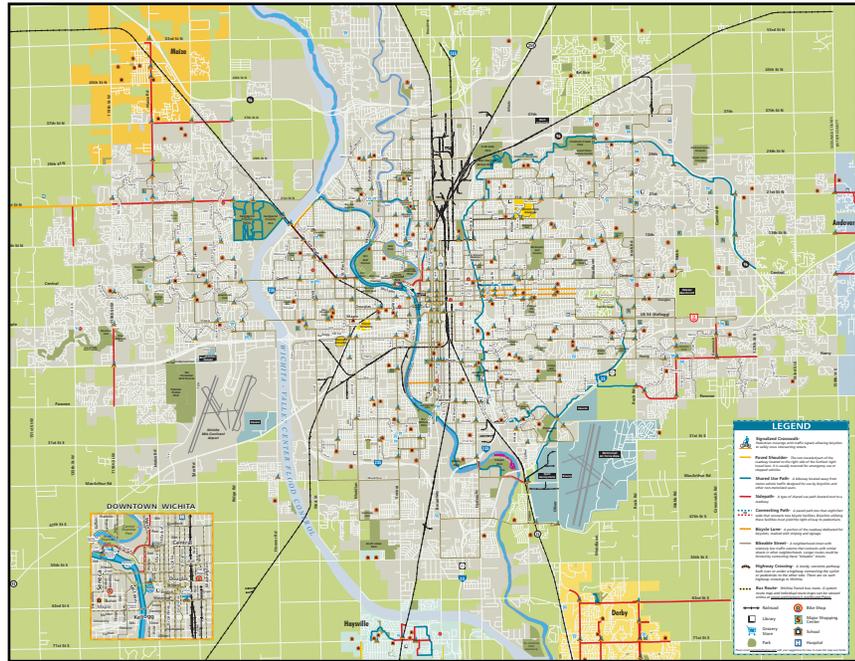
Experiential Engineering Building

“WSU’s Innovation Campus has the unique potential to spur productive, sustainable, and inclusive economic development.”

John W. Bardo
President, Wichita State University



Wichita State Old Town Campus



Greater Wichita Bike Map

will replace the university-operated bus system with a new Wichita Transit bus line that connects the main campus with the Metroplex, the Innovation Campus, and the Old Town Campus.

The City of Wichita has an existing 70-mile bicycle-pedestrian pathway system that connects many destinations through the community (including the eastern edge of the Innovation Campus) and is being expanded each year in accordance with adopted bicycle and pedestrian master plans. The project will connect Wichita State’s main campus and the Innovation Campus to the pathway system to the north, south, and west via a combination of on-street bicycle lanes, bicycle boulevards (including traffic calming), and sidewalks. This connectivity will be expanded with a bike share program to be implemented by the project on Wichita State’s main campus and the Innovation Campus.

The majority of off-campus student housing located adjacent to Wichita State is in the Fairmount neighborhood south of campus across 17th Street North. Currently, 17th Street is a four-lane arterial street and there is a single mid-block pedestrian crossing to the neighborhood, even though the neighborhood and Wichita State University share a mile-long border. The project will reconstruct 17th Street as a complete street by implementing a road diet to convert the street to three lanes with on-street bicycle lanes. A center landscaped median will be added as a pedestrian refuge and multiple mid-block crossings with traffic calming features will be constructed. Wide landscaped sidewalks with lighting and street furniture also will be constructed.

The new Innovation Campus has been designed to direct vehicular traffic to Oliver Avenue on the eastern edge of the campus. The project will reconstruct Oliver as a complete street between 13th Street North and 21st Street North. Both 13th Street and 21st Street have interchanges with Interstate 135 west of campus. The Oliver complete street project will direct high volumes of vehicular traffic



Wichita Transit System Map

“The City of Wichita demonstrates a clear history of building strong cross-sectoral collaborative teams that can plan and implement active transportation infrastructure.”

*Steve Coen
President & CEO, Kansas Health Foundation*

around existing neighborhoods to the recently improved 13th Street and 21st Street corridors in order to preserve the enhanced neighborhood connectivity along 17th Street. The project will incorporate features such as wide sidewalks, lighting, traffic calming, and signalized pedestrian crossings along Oliver to ensure multi-modal connections are safe and convenient.

iv. Ladders of Opportunity

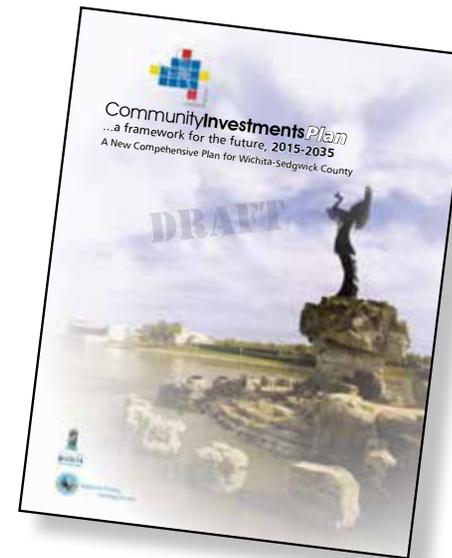
Wichita State University is surrounded by neighborhoods where more than one in five households is living below the poverty level and almost 60% are low- to moderate-income households. Through the development of the Innovation Campus and growth of the main campus, more than 6,300 new jobs will be created at Wichita State, thus providing significant new job opportunities to neighborhood residents.

The Kansas Health Institute in collaboration with the University of Kansas School of Medicine and the Hugo Wall School of Urban and Public Affairs at Wichita State University recently completed a Health Impact Assessment (see [Appendix B](#)) of changes to the Wichita Transit bus system. The assessment found that improvements to the bus system such as the new route provided by the project will improve access to jobs, education, food, recreation, and health care. This improved access is particularly beneficial to residents of the

project impact area who are more than twice as likely to not have access to a vehicle as other residents in the region.

The Health Impact Assessment also found that improvements to the bus system such as the new route provided by the project will improve air quality, physical activity, and safety for residents in the project impact area, thus helping to address environmental justice issues for the area.

The City of Wichita has recently completed a draft Community Investments Plan 2015-2035 (see [Appendix C](#)) that contains an

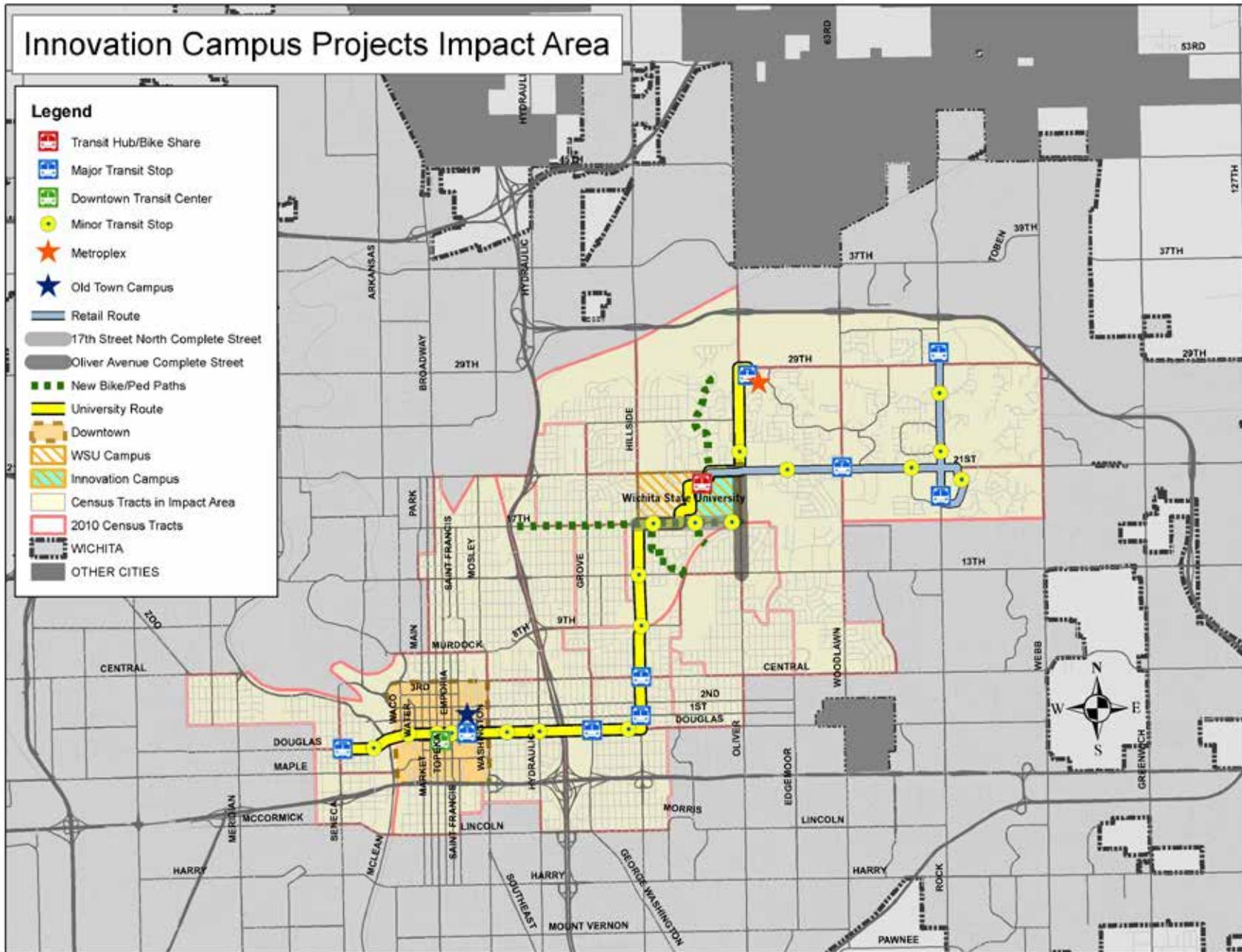


infill strategy focused on policy development to encourage greater infill development and less suburban fringe development. One of the policies focuses on leveraging transportation investments like those included by the project to foster infill development on vacant and underutilized sites. The City of Wichita has applied to the Building Blocks for Sustainable Communities for technical assistance with Infill Development in Distressed Communities. The area of focus for the technical assistance will be the project impact area in

order to establish strategies for developing affordable housing, retail, service, and employment opportunities for neighborhood residents on infill sites along the transportation corridors.

Much of the project impact area is a Small Business Administration Historically Underutilized Business Zone (HUB Zone). The project will improve transportation connections for this area, which will both encourage new small businesses to locate in the area as well as provide transportation options to their employees that live in the area.

Map of Project and Transportation Connections



b. Project Location

i. Demographics of the Region

The project is located in the Wichita, Kansas Metropolitan Statistical Area. The Wichita MSA had a 2010 population of 630,919. The project impact area is the Census Tracts served by the transportation investments. Almost one in eight residents of the Wichita MSA will directly benefit from the project.

iii. Demographics of Project Beneficiaries

	Wichita MSA	Innovation Campus Project Impact Area
2010 Total Population	630,919	71,781
% of Total Population	-	11.4%
Minority	26.3%	53.8%
Median Household Income	\$46,131	\$30,321
HUD Low to Moderate Income	36.0%	56.8%
Household Below Poverty	13.8%	22.5%
Renter Occupied Housing Units	33.0%	54.1%
Vacant Housing Units	9.7%	13.4%
Household Without a Vehicle	5.8%	12.4%

As shown in the table comparing the project impact area to the Wichita Metropolitan Statistical Area, more than half of the households in the project impact area are minority, a rate almost twice that of the Wichita MSA. More than one in five households of the project impact area is living below the poverty level, and more than half of the households have low to moderate income with a median household income that is over one-third less than the Wichita MSA. One in eight households in the project impact area do not have access to a vehicle, a rate more than twice that of the Wichita MSA.



Custom bus shelter near WSU

“This exciting multi-modal transportation project will promote infill development and foster growth and development of our community in innovative ways.”

*Jeff Longwell
Mayor, City of Wichita*



Custom bus shelter along Douglas Ave.

c. Project Parties

i. Grant Recipient

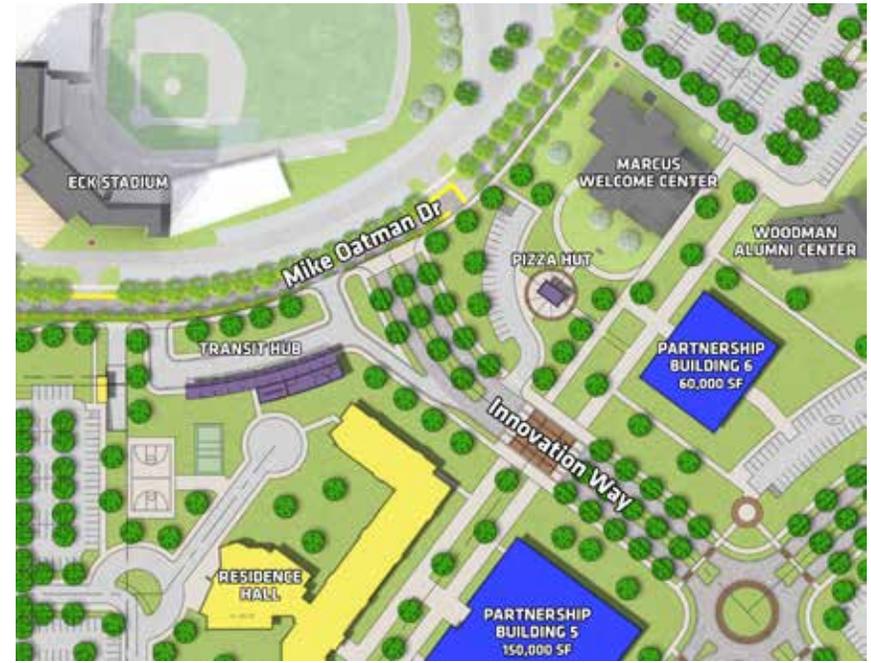
The City of Wichita, Kansas is the grant applicant and will be responsible for administering the grant award and completing all project components.

ii. Project Partner

Wichita State University is partnering in the project with the City of Wichita and will develop the \$550 million Innovation Campus. Wichita State University also will provide right-of-way for the Oliver and 17th Street complete street projects and locations on campus for the transit hub and bike share program.

iii. Project Supporters

The project has received broad community support, as evidenced by the 26 letters of support in [Appendix D](#). Senator Jerry Moran, Senator Pat Roberts, and Governor Sam Brownback support the project. Project supporters also include regional economic development organizations such as the South Kansas Investing in Manufacturing Communities Partnership, the Regional Economic Area Partnership, the Blueprint for Regional Economic Growth, Kansas Global Trade Services, the Workforce Alliance of South Central Kansas, the Metropolitan Area Planning Commission, the Wichita Downtown Development Corporation, and the Wichita Metro Chamber of Commerce. Advocates for active, multi-modal approaches to transportation also support the project, including the Kansas Department of Transportation, the Wichita Area Metropolitan Planning Organization, the Wichita Transit Advisory Board, the Kansas Health Foundation, Bike Walk Wichita, Inc., the Wichita Parks Foundation, the Wichita Community Foundation, and Alpha Kappa Psi. The project also has been received from private industry such Airbus Americas Engineering, Cox Communications, Advanced Guard Conservation, MWCB LLC, Spirit Aerosystems and NetApp.



Transit Hub Site Plan



TRANSIT HUB



d. Sources and Uses of Project Funds

The total project cost is \$32,345,000. The total project cost includes pre-expended project costs by the City of Wichita totaling \$4,420,000. The pre-expended project costs consist of \$3,500,000 for water and sewer lines \$920,000 for engineering designs for the Oliver and 17th Street complete street projects. The total amount of TIGER funds requested is \$18,845,000, which is 67% of the project costs eligible for TIGER funding. The City of Wichita is providing \$9,080,000 in local cash match, which is 33% of the project costs eligible for TIGER funding. Including pre-expended funds, the City of Wichita is funding 42% of total project costs.

“ This project will create a one-of-a kind state-of-the-art research and innovation campus at Wichita State University that will not only meet, but exceed the goals of the TIGER Grant Program. ”

Mike King

Secretary, Kansas Department of Transportation

Sources/Uses of Project Funds (in millions)

Project Component	TIGER Funds Requested	Local Cash Match	TIGER Eligible Costs	Pre-expended Funds	Total Project Costs
Oliver Complete Street	\$7,792	\$3,838	\$11,630	\$620*	\$12,250
17th St. Complete Street	\$4,154	\$2,046	\$6,200	\$300*	\$6,500
40-foot Diesel Buses (9)	\$2,726	\$1,342	\$4,068	--	\$4,068
Level 1 Transit Stops (28)	\$1,013	\$499	\$1,512	--	\$1,512
Level 2 Transit Stops (17)	\$891	\$439	\$1,330	--	\$1,330
Campus Transit Hub	\$1,340	\$660	\$2,000	--	\$2,000
Bike Share Stations (8)	\$268	\$132	\$400	--	\$400
Bike-Ped Connections	\$661	\$124	\$785	--	\$785
Water and Sewer Lines	--	--	--	\$3,500	\$3,500
Total	\$18,845	\$9,080	\$27,925	\$4,420	\$32,345

*Shown as local match in pre-application

e. Selection Criteria

i. Primary Selection Criteria

a) State of Good Repair

i) Transformational Improvements to Existing Systems

After receiving technical assistance on complete streets through Building Blocks for Sustainable Communities, the City of Wichita embarked on an ambitious effort to develop a Bicycle Master Plan (see [Appendix E](#)), a Pedestrian Master Plan (see [Appendix F](#)), and a Multi-Modal Policy and Street Design Guidelines (see [Appendix G](#)) with funding from an Energy Efficiency and Conservation Block Grant from the Department of Energy and a Community Transformation Grant from the Centers for Disease Control. As result, the City is undertaking a 10-year effort to construct critical connecting link projects in its bicycle and pedestrian pathway system. TIGER funding would be used to construct three of these connecting links to the north, south, and west sides of the Wichita State campus. These connecting links will supplement the link currently under construction using a Transportation Alternatives grant that connects to the east side of campus.



The recently adopted Multi-Modal Policy and Street Design Guidelines indicates that the City of Wichita will consider multiple modes of transportation and the context of the improvements when undertaking

street projects. While most of the impact of the new Innovation Campus could be addressed with the construction of additional travel lanes and turning lanes along with traffic signal improvements, such an approach ignores the context in which Innovation Campus is being developed. Instead, complete street projects are proposed along 17th Street and Oliver that provide wide sidewalks, pedestrian crossings, bicycle lanes/paths, and traffic calming features to provide multi-modal transportation connections to the nearby neighborhoods.

Transit is the other transportation mode that needs to be considered with the development of the Innovation Campus. Wichita State's private bus system currently connects the main campus with the Metroplex and its park and ride facility. The Wichita Transit bus route that serves the main campus provides indirect access through a centralized transit center and infrequent service during limited hours. Through TIGER funding, a bus route will be added



17th Street Mixed Use Urban Village
Aerial View from 17th and Oliver



W. Frank Barton School of Business

that connects Wichita State's main campus with the Metroplex, Innovation Campus, and Old Town campus. The route will operate on the Douglas Avenue transit-oriented development corridor, which recently has been improved through a Federal Transit Administration Bus and Bus Facilities Livability Grant. The route will operate at increased frequencies for extended hours and will provide direct connections to jobs, educational facilities, shopping, and services. Through a system-wide access arrangement with Wichita State University, the route will provide fare-free access to the entire Wichita Transit system for all students, faculty, and staff.

ii) Network Efficiency and Reliability

The streets next to the new Innovation Campus are in serviceable condition for existing needs. However, the Vehicular Traffic Impact and Pedestrian and Bicycle Studies (see [Appendix H](#)) conducted by MKEC Engineering Consultants estimates that increased traffic from the Innovation Campus will result in significant decreases in transportation network efficiency, including peak hour congestion. Without improvements, development of the Innovation Campus will threaten efficient transportation operations.

“ This grant will help further connect trails and trail users to Wichita State University. ”

Kim Neufeld
President
Bike Walk Wichita, Inc.

iii) Asset Management

The City of Wichita will provide the local matching funds from its Capital Improvement Program. Once constructed, the street, bicycle, and pedestrian improvements will be added to the City of Wichita's pavement management system and receive scheduled on-going maintenance treatments as well as any necessary emergency repairs. The buses for the new route will be maintained at Wichita Transit's in-house, six-bay maintenance facility.

iv) Operations and Maintenance

The City of Wichita general fund provides a sustainable source of revenue to support operations and maintenance of the street, bicycle, and pedestrian improvements. The Congestion Mitigation and Air Quality Improvement Program (CMAQ) is proposed to fund up to 50% of the first five years of transit operations costs. Wichita State University will use student fees to fund a major portion of the local match requirement for the CMAQ Program. Wichita Transit will use fare box revenue, which typically recovers about 18% of transit operations costs, to provide the remainder of the local match requirement for CMAQ. The City of Wichita general fund will be used to offset any

shortfalls in fare box revenue. During the first five years of operations, in-depth operational studies will be undertaken to calibrate bus service in the area and develop a long-term sustainable approach to fund operations costs of the new bus line.

v) Climate Change

The project will provide a new bus route with greater service frequencies and extended hours of service. The increased transit access is estimated to increase ridership in the area by over 200%. Additionally, the on-street bicycle lanes, bicycle boulevards, and sidewalks constructed by the project as well as the on-campus bike share program will provide enhanced bicycle and pedestrian connections. These enhanced transportation alternatives will help reduce greenhouse gas emissions by reducing reliance on the personal automobile for travel in the area.

“The strategies are timely and critical to our global competitiveness.”

*John S. Tomblin
Vice President for Research and
Technology Transfer
Wichita State University*

b) **Economic Competitiveness**

i) Disadvantaged Populations

Over 20% of the households served by the project are below the poverty level and more than one in eight of these households lack access to a vehicle. The project will provide a new bus route with greater service frequencies and extended hours of service. Additionally, the on-street bicycle lanes, bicycle boulevards, and sidewalks constructed by the project will provide enhanced bicycle and pedestrian connections. The additional transit, bicycle, and pedestrian connections

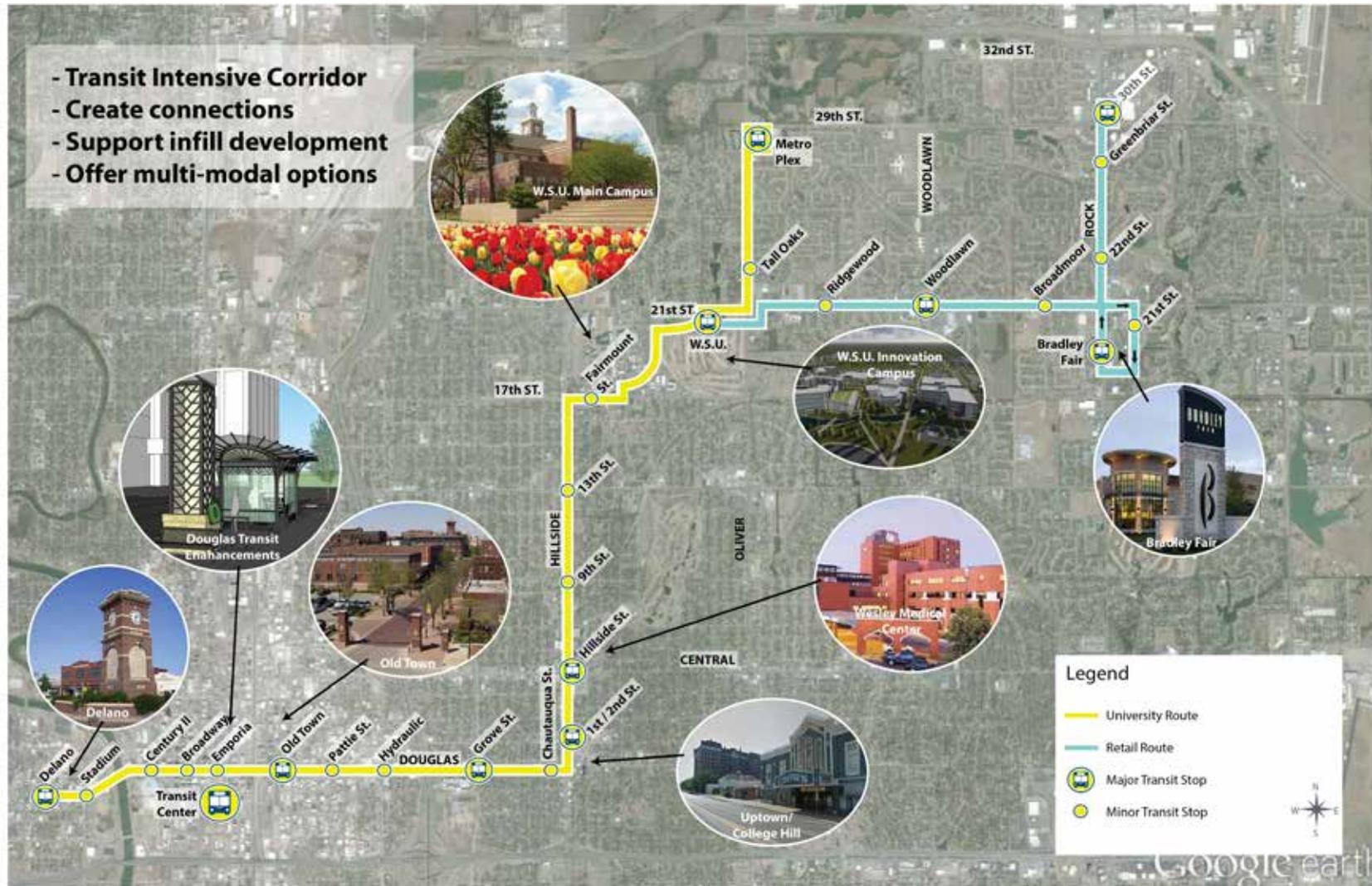
will provide disadvantaged populations significantly improved transportation access to downtown, an employment center with over 26,000 existing jobs; the new Innovation Campus, with 5,700 new jobs; Wichita State University; Wichita Area Technical College; a regional medical center; two grocery stores; and several commercial areas with shopping, medical offices, and other services.

ii) Transportation Efficiencies

Current bus transportation service to Wichita State provides approximately 360,000 annual rides. With increased service frequency and hours and more direct connections, the proposed new bus route is estimate to increase ridership by over 200% to almost 1.1 million riders annually. (see next page)



Partnership Building



15 MIN PEAK	20 MIN OFF-PEAK	OPERATING HOURS 17 MON-THURS 20 FRI-SAT	ANNUAL RIDERSHIP 731,232 2018/19 1,095,558 2035
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Student Community Center
View from the West

The complete streets projects for 17th Street and Oliver will construct travel and turn lane improvements needed to support the increased levels of employment at the Innovation Campus. These



improvements will provide efficient operation of the transportation system and minimize traffic congestion that would affect all modes of travel in the area.

iii) Economic Productivity

The new 120-acre Innovation Campus will bring over \$550 million in capital investment and 5,700 new employees to the area in over 2.9 million square feet of new development on a former golf course adjacent to Wichita State’s main campus. The Innovation Campus will combine a research institution, innovative firms, and business incubators with the benefits of compact, amenity-rich living by creating mixed-used urban villages in the core of Wichita. The Innovation Campus will spur productive, sustainable, and inclusive economic development by locating key facilities close to other firms, research labs, and university students and faculty so that they can share ideas and practice “open innovation.”

The City of Wichita has an urban infill strategy that calls for tripling the amount of development located on infill sites over the next

20 years. Affordable housing, retail, service, and employment opportunities for neighborhood residents will be developed on infill sites along the transportation corridors using transit-oriented development approaches.

iv) Job Creation

The new Innovation Campus is estimated to bring over 5,700 new employment opportunities to the area. Additionally, the Innovation Campus will have educational opportunities and maker spaces to foster entrepreneurship. A community outreach center will be located on the Innovation Campus to ensure that these opportunities particularly benefit the disadvantage populations that live in the neighborhoods around Wichita State.

“The Wichita region is one of twenty metros in the nation with a robust export plan.”

*Karyn Page
President/CEO
Kansas Global Trade Services*

v) Global Economic Competition

Wichita’s regional economic and job growth rate is similar to that of other regions that have been heavily dependent on a single industry. The region’s economic and job growth rate lags behind that of other regions that have diversified their economy

through industry cluster initiatives. To that end, the City of Wichita, Wichita State, and other regional partners have initiated the Blueprint for Regional Economic Growth which has determined that the region's innovation capabilities are steadily growing but lag that of other regions. The Innovation Campus and its transportation connections provided through TIGER funding are critical to realizing the region's potential for economic and job growth through innovation.

Because of its dependence on the volatile global aviation industry, the Wichita region has been at the mercy of significant economic and employment shifts. To address this volatility, the region developed the Wichita-South Central Kansas Regional Export Plan (see [Appendix I](#)) to address changes in the aviation industry and lead underachieving sectors into the global marketplace. Developed by the Global Cities Initiative, a partnership of the Brookings Institution and JP Morgan Chase, the Regional Export Plan calls for investing in infrastructure related to transportation and skilled workers. The transportation investments through TIGER funding support

“The initiative fits into REAP's work, bringing cooperation and innovation to items of regional significance in South Central Kansas.”

*Kelly Bergeron
Executive Director
Regional Economic Area Partnership*

the Innovation Campus and are directly tied to this regional economic initiative.

The Regional Export Plan was developed through the South Kansas Investing in Manufacturing Communities Partnership (IMCP) (see [Appendix J](#)). South Kansas led by Wichita State University was named by the Obama Administration as one of the nation's first 12 IMCP regions to spur investment and create jobs through integrated, long-term economic development strategies that strengthen competitive advantages in attracting global manu-

facturers. South Kansas is leveraging shared research and innovation facilities to compete on the frontier of advanced materials used in planes, cutting-edge machinery, and refineries, and the new Wichita State Innovation Campus is key to those efforts.

c) Quality of Life

i) Transportation Choices

The project will provide a new bus route with greater service frequencies and extended hours of service. The increased transit access



Experiential Engineering and Maker Space

is estimated to increase ridership in the area by over 200%. Additionally, the on-street bicycle lanes, bicycle boulevards, and sidewalks constructed by the project as well as the on-campus bike share program will provide enhanced bicycle and pedestrian connections, particularly to the existing bicycle and pedestrian pathway system that is planned for significant expansion over the next 10 years.

ii) Access to Essential Services

The additional transit, bicycle, and pedestrian connections will provide disadvantaged populations significantly improved transportation access to downtown, an employment center with over 26,000 existing jobs; the new Innovation Campus, with 5,700 new jobs; Wichita State University; Wichita Area Technical College; a regional medical center; two grocery stores; and several commercial areas with shopping, medical offices, and other services.

iii) Other Livability Principles

According to the Housing and Transportation Affordability Index, housing costs in the project impact area are below the regional average, but transportation costs are at or above the regional average. Improving transportation access in the area should lower transportation costs, as significant benefit existing households, more than half of which are low- to moderate-income. Additionally, the new bus route will facilitate the community revitalization through the construction of location-efficient infill housing and mixed-used development using transit-oriented development principles.

TIGER funding of City of Wichita transportation improvements to support Wichita State University's Innovation Campus represents another collaboration among the federal, state, and local government agencies. This collaboration builds upon other collaborations such as the Community Transformation Grant, South Kansas Investing

in Manufacturing Communities Partnership, the Building Blocks for Sustainable Communities, Bus Livability Initiative, and the Regional Planning Grant.

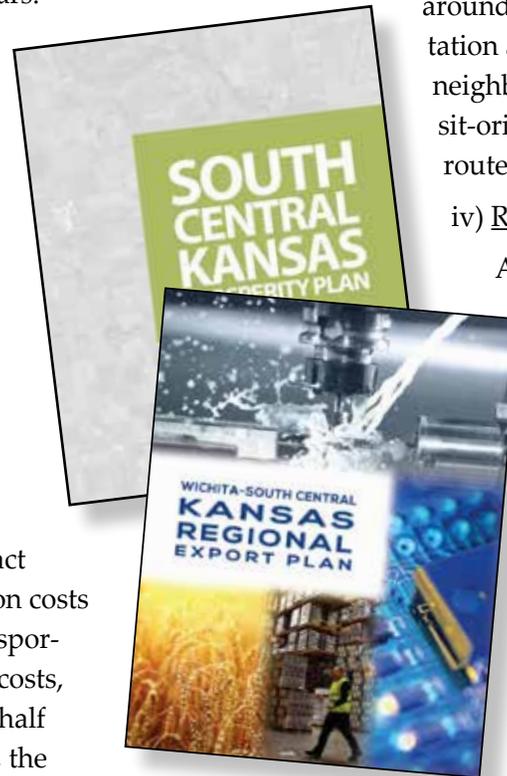
The bicycle and pedestrian improvements included in the project will significantly enhance the safety and walkability of neighborhoods around the Innovation Campus and provide healthy transportation alternatives. The health, safety, and walkability of the neighborhoods will continue to be enhanced through transit-oriented, mixed-use infill development along the new bus route.

iv) Regional Planning Grant

Another example of collaborative effort among federal, state, and local partners is the South Central Kansas Prosperity Plan (see [Appendix K](#)) that was developed by the Regional Economic Area Partnership of South Central Kansas developed through a Regional Planning Grant from the U.S. Department of Housing and Urban Development. The plan has two strategies that directly linked the TIGER funded transportation investments to support the Innovation Campus. First, the plan calls for building on the region's history of entrepreneurial spirit to spark job creation through economic diversification and the growth of local, start-up businesses. Second, the plan calls for coordinating resources to invest in infrastructure, conduct workforce training, and develop marketing and support strategies to attract, retain, and expand businesses.

v) U.S. Economic Development Administration Grants

Wichita State University has been awarded a nearly \$1.9 million grant from the U.S. Economic Development Administration to purchase laboratory equipment for the experiential engineering building, the first



planned building on the Innovation Campus. The funding will be used to purchase equipment for a state-of-the-art laboratory to allow manufacturers, entrepreneurs and designers to simulate and perform multi-robotic additive manufacturing, allowing them to test production process before committing to large-scale capital investments.

Wichita State University also has been notified of a \$1.0 million grant award from the U.S. Economic Development Administration to fund street, parking, and utility improvements for the first phase of construction of the Innovation Campus. The improvements will connect the Innovation Campus to the 17th Street complete street to be funded by TIGER.

vi) Technical Assistance Programs

The City of Wichita received technical assistance regarding complete streets through the Building Blocks for Sustainable Communities. The technical assistance led to the development and adoption of a Bicycle Master Plan, a Pedestrian Master Plan, and a Multi-Modal Policy and Street Design Guidelines that will guide the projects funded

“ Making strategic long-term investments will enable our vision to out-innovate the rest of the world and spur the development of twenty-first century jobs and industries. ”

John O'Leary
Vice President
Airbus Americas Engineering

through TIGER. Additionally, the City of Wichita has applied for technical assistance regarding infill development through the Building Blocks for Sustainable Communities. This technical assistance will focus on the area in which TIGER funded transportation improvements will be made to develop strategies for transit-oriented, mixed-use development.

d) Environmental Sustainability

i) Reduce Energy Use and Air Pollution

Current bus transportation service to Wichita State provides approximately 360,000 annual rides. With increased service frequency and hours and more direct connections, the proposed

new bus route is estimate to increase ridership by over 200% to almost 1.1 million riders annually. The increased ridership will reduce energy used for transportation in the area. Additionally, the Health Impact Assessment indicates that increased service frequency and hours of service will improve overall air quality in Wichita.

The project will reduce daily vehicle hours traveled by almost 2,800 hours and daily vehicle miles traveled by almost 80,000 miles on av-



Innovation Center - View from the South



Hotel and 21st Street Mixed Use Urban Village
Central Plaza

erage over the life the project. In addition to reducing emissions, the overall reduction in vehicle use results in economic competitiveness gains valued at over \$380 million over the life of the project according to the Benefit-Cost Analysis.

ii) Avoidance of Environmental Impacts

The Benefit-Cost Analysis estimates the economic value of emissions and the social cost of carbon at over \$1.5 million and \$5.5 million, respectively, over the life of the project.

iii) Green Infrastructure

The 17th Street complete street project will be used to pilot “green” storm water management techniques such a bio-retention and permeable pavement. Lessons learned from this project and others that are currently being piloted will be used to expand “green” storm water techniques to other areas of the City of Wichita.

e) **Safety**

i) Accident Reduction

The project contains numerous transportation safety features that will reduce accidents in the project area. The Benefit-Cost Analysis estimates the economic impact of accident reduction at almost \$60 million over the life of the project.

ii) Multi-modal Accessibility and Connectivity

The project will foster a safe, connected, accessible transportation system focused on all modes of travel. Complete streets projects on Oliver and 17th Street will enhance safety by providing wide sidewalks, lighting, and pedestrian crossings. The new bus route is estimated to increased ridership by over 200% and will provide a new transportation alternative that provides safe and accessible connections to jobs, education, health care, shopping, and services. The improved bicycle and pedestrian facilities will provide safe and accessible connections to these same destinations.

ii. **Secondary Selection Criteria**

a) **Innovation**

i) Technology

The Innovation Campus will have an experiential engineering building with a state-of-the-art laboratory to allow manufacturers, entrepreneurs and designers to simulate and perform multi-robotic additive manufacturing, allowing them to test production processes before committing to large-scale capital investments. A new home for the W. Frank Barton School of Business, also will be located on

the Innovation Campus that will have an adjacent Innovation Center, open to students around the clock for working with state-of-the-art technology.

The on-campus transit hub and major stops along the new bus route will have displays with real-time bus information to assist riders. These locations also will have kiosks for fare payment prior to boarding to assist with transportation system efficiency.

ii) Funding

TIGER funding of the transportation infrastructure for the Innovation Campus is an innovative partnership among federal, state, and local governments. Federal funding will be used for a major share of the initial capital expense with local match provided by the City of Wichita and Wichita State University. Wichita State University will develop a new Innovation Campus with an additional federal partnership through EDA grants and bring 5,700 new jobs to the area and support significant regional economic growth opportunities. The CMAQ Program is proposed to be used to for initial funding of the new bus route with matching funds provided by Wichita State University and the City of Wichita, representing yet another innovation partnership in transportation finance.

iii) Safety

Vehicular traffic generated by the Innovation Campus will be directed around existing neighborhoods along Oliver to the recently improved 13th Street and 21st Street corridors in order to preserve the enhanced neighborhood connectivity along 17th Street provided by a center landscaped median and mid-block pedestrian crossings. The project will incorporate features such as wide sidewalks, lighting, traf-

fic calming, and signalized pedestrian crossings along Oliver to ensure multi-modal connections are safe and convenient.

b) Partnership

i) Jurisdictional and Stakeholder Collaboration

The project to develop the Innovation Campus and the multi-modal transportation connections is a partnership among TIGER grant program, the City of Wichita, and Wichita State University. Additionally, private companies, led by Airbus, will be locating research and devel-

opment facilities on the Innovation Campus, and private developers will be developing the mixed-use urban villages that are key to the success of the Innovation Campus, while providing an amenity-rich environment for the surrounding neighborhoods.

ii) Disciplinary Integration

The project includes a new bus route to connect Wichita State's main campus with the Metroplex, Innovation Campus, and Old Town Campus. Wichita State will fund a portion of the transit operations costs through student fees. Correspondingly, Wichita Transit will provide fare-free system-wide access to Wichita State

students, faculty, and staff.

The City of Wichita has an urban infill strategy that calls for tripling the amount of development located on infill sites over the next 20 years. Affordable housing, retail, service, and employment opportunities for neighborhood residents will be developed on infill sites along the transportation corridors using transit-oriented development approaches.

The South Central Kansas Prosperity Plan was developed by the Regional Economic Area Partnership of South Central Kansas devel-

“The City of Wichita’s TIGER grant application is directly aligned with the vision, core community values, and guiding principles espoused by the Community Investments Plan.”

*Matt Goolsby
Chair, Metropolitan Area
Planning Commission*

oped through a Regional Planning Grant from the U.S. Department of Housing and Urban Development. The plan calls for building on the region's history of entrepreneurial spirit to spark job creation through economic diversification and the growth of local, start-up businesses and coordinating resources to invest in infrastructure to attract, retain, and expand businesses.

Building Blocks for Sustainable Communities technical assistance for complete streets and resulting local policies will guide the design of transportation investments funded by TIGER. If received, Building Blocks for Sustainable Communities technical assistance for will focus on developing transit-oriented development strategies that leverages the TIGER investments to support mixed-use urban infill development.

TIGER investment in transportation infrastructure to support the Wichita State Innovation Campus is consistent with existing economic development plans such as the Blueprint for Regional Economic Growth, the Wichita-South Central Kansas Regional Export Plan, and the South Kansas Investing in Manufacturing Communities Partnership.

“ We write in support of the 2015 TIGER federal grant application submitted by the City of Wichita, Kansas. ”

Senator Pat Roberts

Senator Jerry Moran

“ I am pleased to write a letter supporting the City of Wichita's application for a TIGER grant to fund its multi-modal transportation connectivity proposal. ”

Sam Brownback

Governor

State of Kansas



Residence Hall

f. Benefit-Cost Analysis

The Center for Economic Development and Business Research, part of the W. Frank Barton School of Business at Wichita State University, completed the Benefit-Cost Analysis to determine the possible benefit cost ratios of proposed street, bicycle, pedestrian, and transit improvements providing the multi-modal transportation connections for the Innovation Campus. The baseline projections are estimated with the expansion of the Innovation Campus without the transportation improvements. The projections were then re-estimated to include the transportation improvements. The difference between these two scenarios is the basis for the estimated benefits of the improvements.

The analysis results in a positive return on investment using both a three percent and seven percent discount over a 20-year period. This is based on undiscounted costs of \$83.4 million over 20-years including capital improvements and operation and maintenance costs. There are undiscounted benefits of \$448 million over 20-years. The benefit cost ratio is 6.25 discounted at three percent and 7.23 discounted at seven percent.

The majority of the benefits, approximately 85 percent, are accounted for by improvements in economic competitiveness, both travel time savings and mode shift savings. The remaining benefits are from safe-

	3% Discount	7% Discount
Total Benefits	\$409,049,279	\$363,915,560
Total Costs	\$65,473,627	\$50,311,619
Benefit Cost Ratio	6.25	7.23

ty improvements, state of good repair and environmental sustainability, at 13 percent, 0.3 percent and 1.7 percent, respectively.

The Excel spreadsheet contained in [Appendix L](#) provides the detailed cost calculations for the Benefit-Cost Analysis summarized above.

The methodology used in preparing the Benefit-Cost Analysis is described in detail in [Appendix M](#).

“Increased access to and expanded capacity of the Innovation Campus will be of value to employers and job seekers.”

*Keith Lawing
President & CEO
Workforce Alliance of
South Central Kansas*

Summary of Benefits

(in millions of \$)

Type of Impact	Benefit	Value @ 3% Discount	Value @ @ 7% Discount
Economic	Travel time savings	\$164.01	\$144.60
Competitiveness	Travel cost savings	\$183.46	\$164.42
Safety	Reduced miles traveled	\$53.34	\$47.20
Environment	Reduced miles traveled	\$7.15	\$6.46
State of Good Repair	Improved quality of roadways	\$1.10	\$0.73
Total Benefits		\$409.05	\$363.41

g. Project Readiness

i. Technical Feasibility

The City of Wichita's Multi-Modal Policy and Street Design Guidelines have been used to develop design concepts for the complete street on Oliver and 17th Street. Engineering design of these projects is underway with completion of construction documents on schedule for December 2015.

The design of on-street bicycle lanes, bicycles boulevards, and sidewalks that will connect the Innovation Campus to the existing bicycle and pedestrian pathway system will be guided by the Wichita Bicycle Master Plan and Wichita Pedestrian Plan. While engineering design has not begun on these projects, the City of Wichita has in-house engineering staff with capacity to design the projects within a few months of grant award.

Design concepts have been developed for the on-campus transit hub. Completion of construction documents from the design concepts should only take a few months. In-house City of Wichita staff have the capacity to design the transit shelters and associated equipment within a few months of grant award.

ii. Financial Feasibility

The City of Wichita's local cash match will be provided from the Capital Improvement Program. The Wichita City Council has approved a resolution (see [Appendix N](#)) authorizing the local match upon receipt of a grant award.

The City of Wichita general fund provides a sustainable source of revenue to support operations and maintenance of the street, bicycle, and pedestrian improvements. The Congestion Mitigation and Air Quality Improvement Program (CMAQ) is proposed to fund up to 50% of the first five years of transit operations costs. Wichita State will use student fees to fund a major portion the local match requirement of the CMAQ Program. Wichita Transit will use fare box revenue, which

typically recovers about 18% of transit operations costs, to provide the remainder of the local match requirement for CMAQ. The City of Wichita general fund will be used to offset any shortfalls in fare box revenue. During the first five years of operations, in-depth operational studies will be undertaken to calibrate bus service in area and develop a long-term sustainable approach to fund operations costs of the new bus line.



17th Street Mixed Use - North View



Innovation Campus - South View

h. Project Schedule

Project planning is complete and construction of the Innovation Campus has been initiated. Design concept development for the TIGER project components has begun and will be completed by June 30, 2015. Preliminary engineering will begin in July 2015 and will be completed by March 2016. Design and construction documents will begin in January 2016 and will be completed by March 2017. A categorical exclusion is anticipated; however, if an environmental assessment is needed, it will be completed by March 2017. TIGER funds will be obligated no later than June 30, 2017, and an earlier obligation is anticipated, as construction has already begun on the Innovation Campus. Construction of all components of the TIGER project will be completed by the end of 2018.

“ This proposal is in alignment with the objectives of our BREG transportation and logistics cluster, the DOT TIGER goals, and the South Kansas Investing in Manufacturing Communities regional strategy. ”

*Charlie Chandler
Co-Chair
Blue Print for Regional
Economic Growth*

Project Timeline by Quarter

Project Component	2015		2016				2017				2018			
	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Preliminary Engineering														
Grant Agreement														
Design & NEPA Review														
Obligation of TIGER Funds														
Project Bid & Construction														
-Oliver Complete Street														
-17th St. Complete Street														
-Diesel Busses														
-Transit Stops														
-Campus Transit Hub														
-Bike Share Stations														
-Bike-Ped Connections														

i. Required Approvals

a) Environmental Permits and Reviews

i) NEPA Status

No significant impacts on the environment are anticipated. The City of Wichita consulted with the Kansas Division of the Federal Highway Administration (FHWA). Based on the project description, the FHWA field office indicated that the project is most likely eligible for a categorical exclusion and will not require environmental assessment of environmental impact statement under the National Environmental Policy Act (NEPA).

ii) Reviews by Other Agencies

The project does not require reviews or approvals by non-Federal agencies.

iii) Environmental Studies

Wichita State University completed an Environmental Narrative Report (see [Appendix O](#)) for the Innovation Campus for the U.S. Economic Development Administration grants. The report found that there are no anticipated significant direct or indirect adverse effects from the WSU InnovationCampus project.

b) Legislative Approvals

On June 2, 2015, the Wichita City Council approved the application for TIGER funding of transportation investments to support the Wichita State Innovation Campus and authorized the local match upon receipt of a grant award.

c) State and Local Planning

The Wichita Area Metropolitan Planning Organization (WAMPO) has included the project in the draft metropolitan transportation plan MOVE 2040. The MOVE 2040 plan is scheduled for adoption in July 2015, and the project will be included in the follow quarter's amend-

ment of the transportation improvement program (TIP). The State of Kansas has indicated that the state transportation improvement program (STIP) will be amended to include the project upon receipt of a WAMPO TIP that includes the project.

i. Assessment of Project Risks and Mitigation Strategies

The only identified risk is a determination that the project is not eligible for a Categorical Exclusion and an environmental assessment or environmental impact statement is required. To mitigate this risk, sufficient time has been included in the project schedule shown above to allow for these activities and still allow grant funds to be obligated by June 30, 2017.

ii. Federal Wage Certification

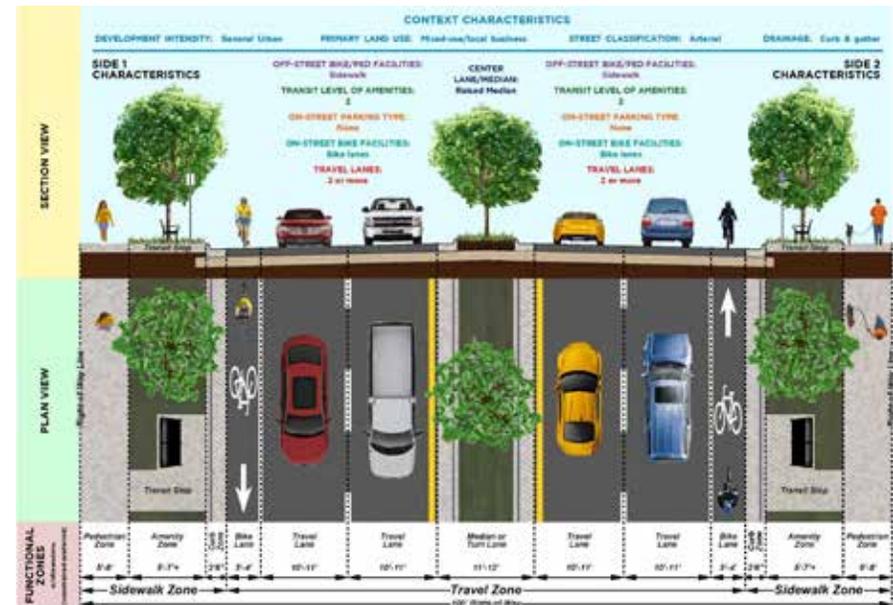
The required Federal Wage Certification is included in [Appendix P](#).



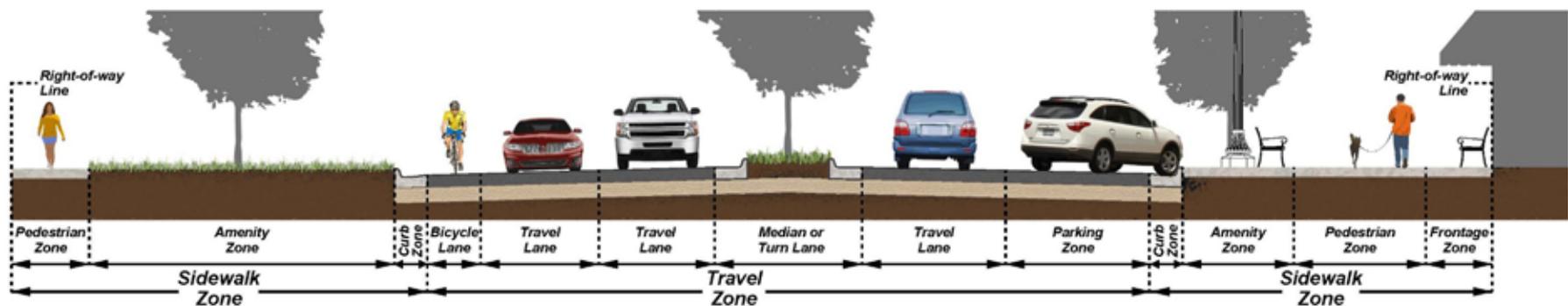
Downtown Transit Hub

Appendices

- Appendix A- The Rise of Innovation Districts
- Appendix B- Health Impact Assessment
- Appendix C- Community Investments Plan 2015-2035
- Appendix D- Letters of Support
- Appendix E- Bicycle Master Plan
- Appendix F- Pedestrian Master Plan
- Appendix G- Multi-Modal Policy & Street Design Guidelines
- Appendix H- Traffic Impact Study
- Appendix I- Wichita-South Central Kansas Regional Export Plan
- Appendix J- South Kansas IMCP Designation Letter
- Appendix K- South Central Kansas Prosperity Plan
- Appendix L- Benefit-Cost Analysis Calculations
- Appendix M- Benefit-Cost Analysis Methodology
- Appendix N- Wichita City Council Resolution
- Appendix O- Environmental Narrative Report
- Appendix P- Federal Wage Certification



Complete Street General Urban Example, Wichita Street Design Guidelines



Complete Street Functional Zones, Wichita Street Design Guidelines