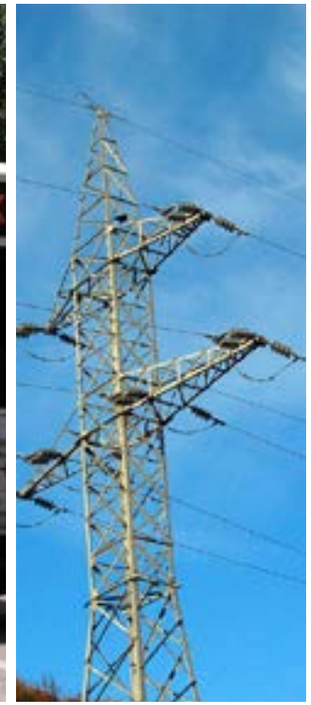
10. INFRASTRUCTURE





VISION

Bloomington's public infrastructure will provide a solid foundation for the City's quality of life and economic prosperity.

Infrastructure is the core of what cities provide for their residents – streamlined access to their everyday needs. Clean water, power and fuel, movement from place to place and other services are usually provided so seamlessly that only their rare absence reminds us of the complexity of the systems that bring them to our homes and respond when we flip a switch or open a tap.

Supporting its people, Bloomington is a many-layered construct of interlaced cables, pipes, wires, streets, tiles, drains, filters, buildings, open spaces and electromagnetic waves, some provided directly by the City and others operated by public utilities or private corporations. Much of this network is usually invisible to residents. Generally, underground systems such as water mains, sanitary and storm sewers, fuel and power lines and telecommunications equipment is installed long before residents move into their new neighborhoods. The condition and performance of very visible elements of city infrastructure, such as streets, sidewalks and surface stormwater detention facilities, often generate substantial resident concerns.

Public infrastructure is as costly as it is omnipresent, and demands significant and continuing investment to remain functional. As is true for government at all levels across the country, Bloomington is confronting the budgetary demands of current infrastructure needs as well as the immense reinvestment needed to upgrade deteriorating systems and maintain them at acceptable levels of service. The Department of Public Works has advised that significant funding will be needed simply to bring existing infrastructure to appropriate levels of repair; this applies to multiple systems such as sewers, streets and stormwater management. Preparing for future water needs will also require major investments at the local and regional level.

The critical component of infrastructure investment is ongoing costs. Each investment must be considered in terms not only of the initial cost of construction or installation, but also the continuing costs of maintaining and upgrading required over the service life of the investment. While creating new infrastructure is often regarded as a form of economic development, this type of development imposes long-term and unavoidable costs to the City. Such investments should be carefully evaluated, and the initial and ongoing costs weighted against reasonable expectations of benefits to be realized, a process discussed in greater detail in Chapter 3.

The installation and ongoing management of these systems requires continuing regional consultation and cooperation among governmental agencies and private entities. For example, while the City of Bloomington handles sanitary and storm sewers that serve the City, staff must constantly communicate with the Bloomington-Normal Water Reclamation District, whose facilities are impacted by the sewer system's output, as they are by the Town of Normal.

Because infrastructure impacts the City both in what it provides and how much it costs, this plan considers the subject in three sub-groups listed below, each of which had a working group assigned to consider issues and needs in greater detail:

- **Utilities**
- **Transportation**
- **Community Facilities**

During the working group deliberations, some concerns common to all types of infrastructure emerged. In some instances, goals and objectives important for all infrastructure have been identified with one or more sub-groups as appropriate to their content. Definitions of these subject groups and the specific issues arising from them are discussed below.

Primary concerns regarding infrastructure focus on preserving existing facilities rather than extending systems, cost management and equity. Residents responding

EXISTING CONDITIONS

- The City currently has 250 miles of sanitary sewer, 83.2 miles of combination sewers, 77 miles of drain tile, 240 miles of storm, 12 miles of force drain and 1.7 miles of paved ditch.
- 323 miles of City maintained streets; approximately 60 miles of Highways and Interstates.
- 25 miles of alleys
- Approximately 300 miles of water distribution systems
- 37 miles of Constitution Trail (25 miles in Bloomington)
- 423 miles of sidewalks of which 15 miles are rated below 5
- There are two critical cost issues in infrastructure management – the initial cost of construction/installation and continuing maintenance and upgrade cost for the life of the facility.
- Bloomington must push forward in the regional effort to locate and develop new sources for municipal water.
- The master plan documents for the sanitary sewer and stormwater systems estimate costs for maintenance and improvement at $136 million dollars over 20 years.
- Improvement of streets to a condition rating of "good" would require $60 million over five years; the City Council has ordered a repair and maintenance program to aim for an overall rating of "fair."
- Bloomington has good telecommunications infrastructure, and benefits from the Central Illinois Regional Broadband Network (CIRBN).

GUIDING THEMES

- Bloomington will grow responsibly with careful consideration of the long-term benefits and costs of the public infrastructure.
- Bloomington will be proactive in assessing water requirements now and in the future.
- Ongoing investment in sanitary and storm sewers will provide systems which function efficiently and protect the local environment.
- Bloomington residents benefit from a wide array of community facilities that offer recreation, entertainment, sports, city events and cultural resources for the entire community.
- Bloomington's state of the art transportation network will provide residents access to all their needs and enhance the region's economic competitiveness.
- Bloomington will become more accessible through an expanded public transportation system.
- Bloomington recognizes the challenge of evolving energy resources and supports the use of energy alternatives.

to the community survey and working group members want to see established needs, moderation and cost-consciousness as standards for evaluating infrastructure improvements. In particular, survey respondents and working group members want growth and development targeted in areas already served rather than defaulting to undeveloped areas requiring new public infrastructure. This approach leverages the benefits of investment already made, rather than demanding additional spending. The goals for infrastructure also focus on community equity with the aim to distribute infrastructure improvements throughout Bloomington, so that all sections of the City benefit in equal measure from public expenditures.

Infrastructure goals and objectives also address the question of systems management in our digital age. The comprehensive plan supports the continued use of the regional Geographic Information System (McGIS) to monitor and manage the complex interactions of infrastructure through the community and the region. In an ongoing process, the McLean County Regional Planning Commission manages and local governments contribute to a database of infrastructure elements which incorporates their location, size, function, age and other characteristics. This information can be analyzed in conjunction with other GIS data sets including property boundaries, natural features such as lakes and streams, elevation, land use, population and many others. This information allows City staff and local and regional interests to quickly understand infrastructure resources and conflicts. Much of this data is available for public access through a web-based mapping utility provided by the McLean County GIS at the Regional Planning Commission.

Throughout the discussion of infrastructure issues, working groups noted the variety of expertise on very complicated issues available in the community. Group members acknowledged high levels of technical expertise and observations brought to the working groups by members active in the management of utilities and other infrastructure systems. These included City staff from various departments as well as participants from other organizations.

The contributions of these experts prompted the goal that community input, awareness and education on infrastructure and related matters should include a city forum for infrastructure innovation and management. This is envisioned as a web-based interface between City staff and the public and other stakeholders, serving as a designated point of contact for questions, comments and suggestions for service improvements, cost considerations and ideas for innovation flowing between all interested parties. This goal was articulated in slightly different forms with respect to different categories of infrastructure but the central concept was consistent throughout. Bloomington residents want ongoing communication with and information from the City about services and an opportunity to bring their own knowledge, expertise and concerns to bear on solutions to infrastructure challenges confronting the City.

Working groups also discussed creating equitable rate structures for certain utilities, notably with respect to water. Generally, consideration should be given to income-based pricing for utility services on a sliding scale. This would allow for economically disadvantaged households to provide a share of the costs without putting residency in Bloomington out of their reach. Other rate structure changes could include charges based on distance so that residents of core areas are not burdened for the continuing costs of providing services to outlying neighborhoods. Infrastructure objectives encourage creative thinking and innovative solutions for managing the costs and financing of utilities infrastructure as well as for its design, construction and maintenance.

UTILITIES

Some utilities infrastructure is directly owned and managed by the City, while others are public utilities designated by the state, or private companies subject to state and federal regulations. City utilities include water, sanitary sewer and storm sewers. Others include energy providers, including electric and gas companies, and telecommunications providers, such as telephone companies, cable communications and internet services.

Public Utilities

Management of City-owned utility infrastructure must meet the challenge of aging systems needing aggressive repair and maintenance combined with limited public funds with which to address those needs. This concern is also an issue for regional utility providers. Portions of Bloomington's water system rely on century-old pipe networks, and the water supply is contained in surface reservoirs that are subject to drought and other environmental and engineering pressures. Similarly, sections of the sanitary sewer system in the City's historic core still combine sanitary and storm drainage functions. Coping with the consequences of that outdated system is a continuing drain on City resources. The public response to outreach regarding the comprehensive plan included considerable comment on the condition of streets and sidewalks and the need for repairs that are immediate and lasting.

Although residents understand that repair rather than reconstruction of aging facilities is done due to budgetary pressure, there is concern that this approach will be more costly over time. As is true across the country, years and decades of minimal investment in critical infrastructure have reached a point where substantial investment is needed to correct earlier neglect and prepare for future needs. This concrete crisis is magnified by the constrained fiscal resources available. Having failed to maintain essential infrastructure demands during decades of growth and affluence, Bloomington's bill comes due at a time when the City is less prepared to manage the maintenance backlog. In the midst of these issues, the Department of Public Works engages in a notable example of program transparency through publication on its website of discussion and details regarding many of the issues with City infrastructure, planning efforts, budget considerations and specific work carried out.

Sanitary Sewer and Stormwater Management

Bloomington manages a sewer system that spans decades in operation. As illustrated in the City sewer map, much of the sewer operating in the older core of the City is combined sewer, which carries both sanitary sewer outflow and stormwater to treatment plants. During periods of high stormwater flow, such as during prolonged or heavy rainstorms, the combined output of the system can exceed the capacity of the treatment plants to process. In those circumstances, wastewater overflow, including untreated waste, toxic materials and debris, can be released directly into surface water such as streams through what are termed combined sewer overflows (CSOs). This is undesirable and subject to regulation and remediation but less so than the possibility of sanitary sewers backing up into homes and businesses. Such point-source water pollution is regulated under the Clean Water Act, through the Illinois Environmental Protection Agency, which has issued permits to Bloomington for the operation of five current CSOs. Both Bloomington and the Bloomington-Normal Water Reclamation District (BNWRD) are obligated to report CSO events to the public.

Bloomington has undertaken an ongoing program to eliminate the remaining CSOs, an expensive process in which a parallel sanitary sewer is built and the existing combined sewer is converted to use for stormwater. As of mid-2015, two CSOs are being remediated at a cost of approximately $10 million, and three remain to be addressed. The City has also developed master plans for management of sanitary and storm sewers. The goals for sewer management were developed with expert guidance from the staffs of the Bloomington Department of Public Works and the Bloomington-Normal Water Reclamation Dis-

Figure 10-1. Department of Public Works project at a combined sewer overflow location
Source: City of Bloomington Department of Public Works

trict. The goals focus on adoption and regular updating of the master plans, continued cooperation between the City and BNWRD, and regulatory compliance and system monitoring. The City has primary responsibility for some goals and BNWRD for others as part of their regional efforts. All rely on close coordination between Bloomington, Normal and BNWRD.

A major goal of the comprehensive plan is to revitalize the established older neighborhoods in the core of Bloomington including the Downtown. The established areas have older infrastructure including some installations more than a century old. These areas are more likely to experience service failures, lessening their appeal for revitalization. Upgrading and maintaining the infrastructure in older neighborhoods is a key element in achieving the goal of revitalizing them. Although potentially very costly, as in the case of CSO mitigation, infrastructure improvements in these areas are essential underpinnings to attracting private sector participation and successfully recapturing these neighborhoods in the City's core.

Water

A sufficient supply of safe water is essential – without water a community cannot survive. We are fortunate our area is not experiencing the cycle of historic droughts and floods which continue to devastate agriculture, industry and economic conditions for millions in the Southwest and California. Bloomington's Water Department manages the infrastructure which delivers potable water from the treatment facility at Lake Bloomington to users within the City and in other areas which have contracted for City water service. As with other public infrastructure, particularly systems which operate partially underground, there are ongoing maintenance and upgrading requirements. As with the sanitary and storm sewers, expansion of the City's service area adds initial costs for new installation and the aggregated continuing cost of maintaining the overall water system.

As with other infrastructure, these costs are somewhat mitigated by adherence to compact development principles and practices that fully use the existing system and reduce the demand for new installations that will serve only a limited number of residents. In addition to considering the water system impact on City finances, the goals and objectives regarding water service also consider the cost to City water users. Because water is an essential service, consideration should be given to income-based pricing for water service so that economically disadvantaged households are not burdened with excessive costs for a necessary commodity.

The working group for utilities also examined issues relating to future water demand and sourcing as did the Natural Environment Working Group. Please see Chapter 8 for more discussion of future water supply needs and resources.

OTHER UTILITIES

The core services provided by the City are joined by private-sector providers and public utilities managed at the state level, each adding to the mix of wires, pipes, conduits, switches and other equipment required to sustain modern life.

Communications

In recent years the dividing line between some types of providers has blurred, particularly in telecommunications services. As needs for data exchange have increased, priorities for communications customers have shifted away from traditional telephone service and towards packages that include voice and data transmission combined with broadcast and cable programming and internet streaming capabilities. The one certainty for these utilities and their customers is that services and delivery mechanisms will continue to change and evolve. Recognizing that fact, goals for such utilities focus on broadening access to state-of-the-art telecommunications services throughout the community ensuring that all Bloomington residents enjoy the educational, economic and personal benefits these technologies offer.

Energy

Energy providers also confront a new world of services and expectations. Currently, Ameren Illinois and Corn Belt Energy provide electric power services in Bloomington, while Nicor Gas provides natural gas. These companies, and others serving smaller niche energy markets, maintain substantial local infrastructure networks which require investment and maintenance, and affect energy costs for consumers. Goals and objectives with regard to energy concentrate on improving energy efficiency, controlling costs and increasing use of renewable energy sources for all uses.

The preference for alternative energy and cost controls reflects in the City's 100% renewable power purchase through electricity aggregation. These objectives apply to energy consumption by the City and efforts by the City to encourage residents and businesses to improve their energy efficiency. Bloomington and Normal contracted with the Ecology Action Center to study greenhouse gas emissions and contributing activities, such as energy generations and use, including use by the municipal governments. The initial report, the Bloomington-Normal Greenhouse Gas Inventory, established baseline data for 2008. While the per capita emissions for Bloomington-Normal are lower than state and national averages in 2008, the report identifies existing community initiatives that contributed to that result. It also notes steps that can further improve air quality, including energy and transportation management.

UEW-1. Provide quality public infrastructure within the City to protect public health, safety and the environment.

UEW-1.1 Maintain the existing City operated infrastructure in good condition.

METRICS

- Rate Study
- GIS inventory of all City infrastructure
- Risk Assessments of all infrastructure (PASER for Streets and sidewalks) (PACP for Sewers) (Flow Rating for water distribution systems)

UEW-1.1a Continue prioritization of maintenance and expansion of the existing infrastructure over building new. Develop an infrastructure assessment and inventory procedure to guide maintenance/upgrades and expansion. *City of Bloomington, ongoing*

UEW-1.1b Provided a framework for implementing operations and maintenance best practices, and maximizing the usable life of City assets. *City of Bloomington, short-medium*

UEW-1.1c Define the enabling factors for operation and maintenance such as funding, capabilities and governance. *City of Bloomington, short/ongoing*

UEW-1.1d Implement rates and fees for all City operated infrastructure structured to recover costs (including construction, operation and maintenance). - Conduct a rate study -Follow the industry standard benchmarks (such as AWWA for water) for targets over cash to debt ratio, months of operating fund reserves, etc. - Investigate sliding scale for utility payments to factor in both usage as well as ability to pay. *City of Bloomington, short-medium*

PARTNER AGENCIES

Local engineering firms, Developers, BNAR

UEW-1.2 Expand City's infrastructure, as needed, while supporting the overall goal of compact growth and vibrant urban core.

METRICS

- Density (pop/sq. miles) ↑
- # of developments within the service area of existing systems ↑
- # of developments outside the service area of existing systems ↓
- Infrastructure capital investments, maintenance and emergencies tracked by ward

UEW-1.2a Ensure that all areas of the City are equitably served by the City's infrastructure. Implement cost sharing programs/up sizing assistance for infill development. Investigate a sliding tap on fee based on distance to the edge of the system (the farther a development from the existing system, the more they pay). *City of Bloomington, short-medium*

UEW-1.2b Prioritize new development where City services are available or can be extended efficiently and economically. This can be done through annexation policies and development review process. *City of Bloomington, ongoing*

UEW-1.2c Promote compact and orderly development of infrastructure consistent with the overall goals of this comprehensive plan. *City of Bloomington, ongoing*

PARTNER AGENCIES

Developers, BNAR, Habitat For Humanity, WBRP, Neighborhood organizations in the Regeneration and Preservation areas

PACP Pipe Rating

The National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program (PACP) established methods to rate the condition of gravity pipelines. The methods utilize the PACP system of scoring defects or observations through closed-circuit television (CCTV) inspection of pipelines.

Structural defects and operation and maintenance (O&M) defects or observations are identified and assigned a grade. Per the PACP Condition Grading System, condition grades range from a scale of 1 to 5 based on the severity of the defects.

The City's draft sewer and storm water master plan recommends the City develop a Business Rate Exposure (BRE) rating that takes into account Consequence of Failure (COF) and Probability of Failure (POF). COF takes into account the criticality of systems function. Example: systems serving hospitals or running under major highways are rated higher. POF takes into account the age, material, structural and other factors into consideration. BRE rating helps the City with prioritization of maintenance, repair and replacement actions.

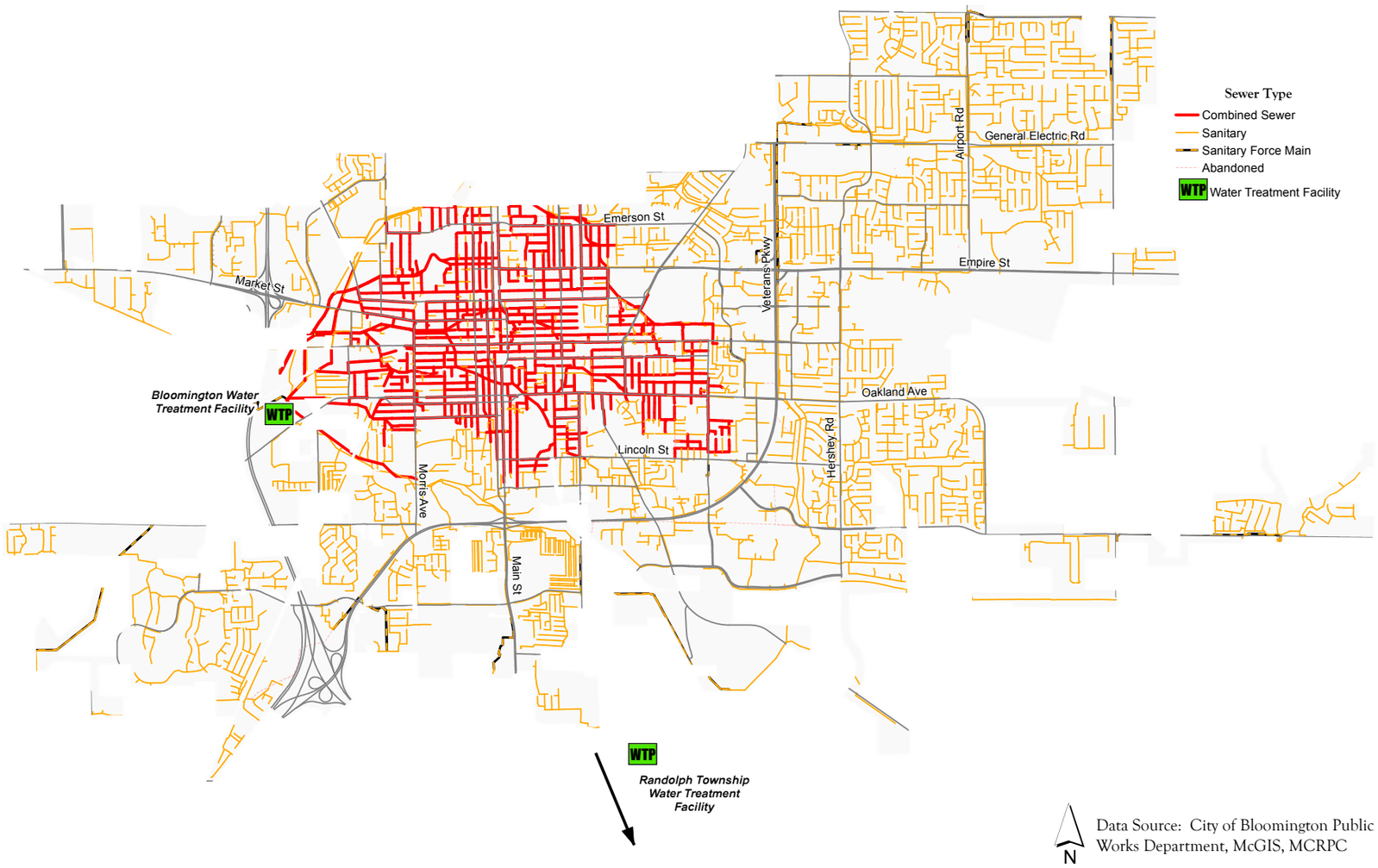


Figure 10-2. Residential Sanitary Sewer System

UEW-1.3 Work cooperatively with other public and private utility service providers operating in the City to address mutual concerns and needs.

METRICS

- # of co-location opportunities explored ↑
- # co-located ↑

PARTNER AGENCIES

Ameren, Corn Belt, Nicor, BNWRD, MCSWCD, Comcast, Frontier, other telco providers, MCRPC, City of Bloomington

UEW-1.3a The City shall continue to encourage, where feasible, the co-location of public and private utility distribution facilities. *City of Bloomington, ongoing*

UEW-1.3b Coordinate with internal and external utility service providers through regular information exchange and cooperative planning of utility infrastructure where feasible. Schedule infrastructure repair with other utilities to promote efficiency and minimize service disruption. This model currently exists between the City departments. Example: Public works and water departments coordinate water main replacement and street repair projects when and where feasible. Extend this model to work with other utility providers when feasible. *City of Bloomington, ongoing*

UEW-1.3c Continue coordination between Public Works and non-municipal utilities regarding facility installation, above and below ground. *City of Bloomington, ongoing*

UEW-1.3d Integrate utilities plans and facilities access in the development review process where feasible. *City of Bloomington, short*

UEW-1.3e Work closely with the utility providers where feasible to provide standard levels of services sufficient for existing development and future growth. *City of Bloomington, short/ongoing*

UEW-1.3f Work closely with all utilities to promote the use and design of energy efficient practices such as the use of energy efficient street lighting. *City of Bloomington, ongoing*

UEW-1.3g Coordinate with natural gas utilities regarding management of their facilities in City jurisdiction including management of maintenance and service extension requirements. *City of Bloomington, short/ongoing*

UEW-1.3h Continue to maintain GIS dataset for municipal and other utility facilities and equipment locations, where feasible, coordinated with the MCRPC regional GIS government-access intranet (government-access) mapping application. *MCRPC, ongoing*

UEW-1.3i Increase coordination between the City and the private utility companies to locate the utilities underground where feasible and cost effective. *City of Bloomington, short*

UEW-1.4 Encourage increased accessibility to state-of-the-art telecommunications and broadband networks.

METRICS

- Broadband coverage ↑
- Broadband costs ↓
- # of service providers ↑
- # of types of providers ↑
- # of provider agreements for equipment co-location ↑
- City code revision to include location guidelines and requirements

PARTNER AGENCIES

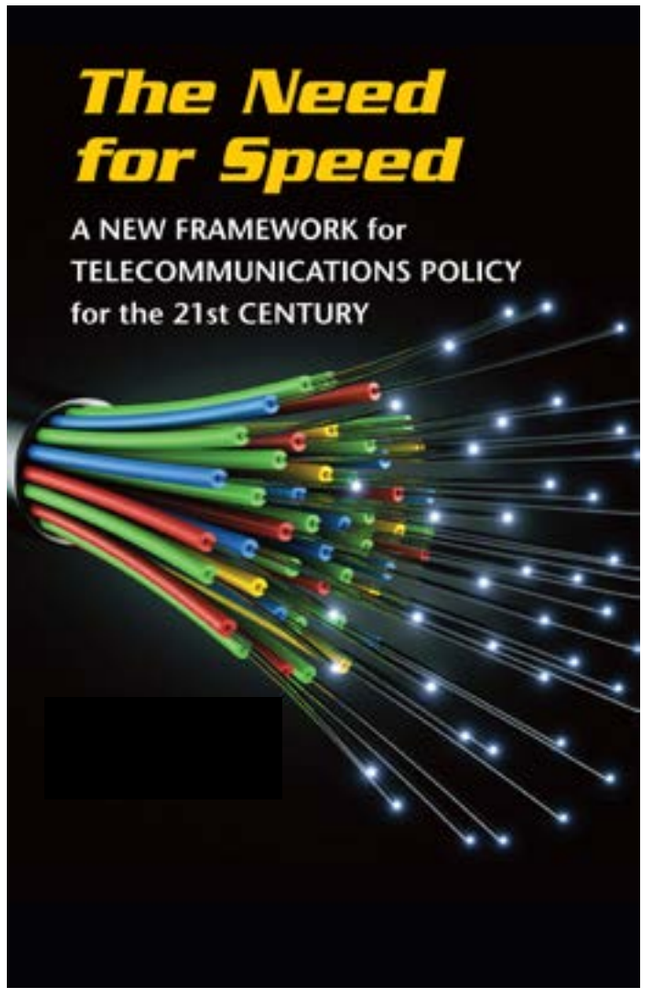
Frontier, Comcast, CIRBN, other telco providers, Illinois Commerce Commission

UEW-1.4a Require cooperation between telecommunications providers, including location of nodes and transmitters in accordance with State & Federal regulations. Stipulate wireless & WiFi broadcasting that does not interfere with other bands, including safety and law enforcement, common devices or sight lines. Create a regional telecom/broadband plan to proactively address the issue. *City of Bloomington, short*

UEW-1.4b Stipulate easement/right of way location for new construction and upgraded infrastructure for provisioning of existing and proposed telecommunications & broadband services. Include access for existing and proposed services in all new construction. *City of Bloomington, short-medium*

UEW-1.4c Periodically review and enforce permits/contracts/franchise agreements with the service providers. *City of Bloomington, ongoing*

UEW-1.4d Encourage competition for telecommunications and broadband services by prohibiting exclusionary contracts. *City of Bloomington, short-medium*



UEW-1.5 Reliable water supply and distribution system that meets the needs of the current and future residents.

METRICS

- Gallons of non-revenue water ↓
- Per capita water usage ↓
- Business water usage ↓
- Water plan updated every five years
- Adoption of variable water rate structures

PARTNER AGENCIES

BNWRD, EAC, Regional Greenways Committee, Urban Watershed Committee

UEW-1.5a Update the City's water master plan periodically to account for changing economics, population growth and technological advances. *Bloomington Water Department, ongoing*

UEW-1.5b Continue leak detection program for distribution system and continue installation of compound meters where appropriate to minimize non-revenue water. *Bloomington Water Department, ongoing*

UEW-1.5c Upgrade and maintain the water supply, storage and distribution system. *Bloomington Water Department, short-medium*

UEW-1.5d Maximize efficiency of water usage from all municipal sources and maintain data regarding water usage. *Bloomington Water Department, short-medium*

UEW-1.5e Promote and support water conservation efforts. Investigate and implement rate structures that cover the utility's fixed cost while providing a detectable conservation price signal. Consider sliding rate structure based on usage for residential and non-residential (with tailored exceptions for businesses where water usage is critical for operations such as nurseries). *Bloomington Water Department, ongoing*

UEW-1.6 Continue to participate in regional efforts to establish a sustainable and responsible water supply.

See Healthy Community - Natural Environment Subsection

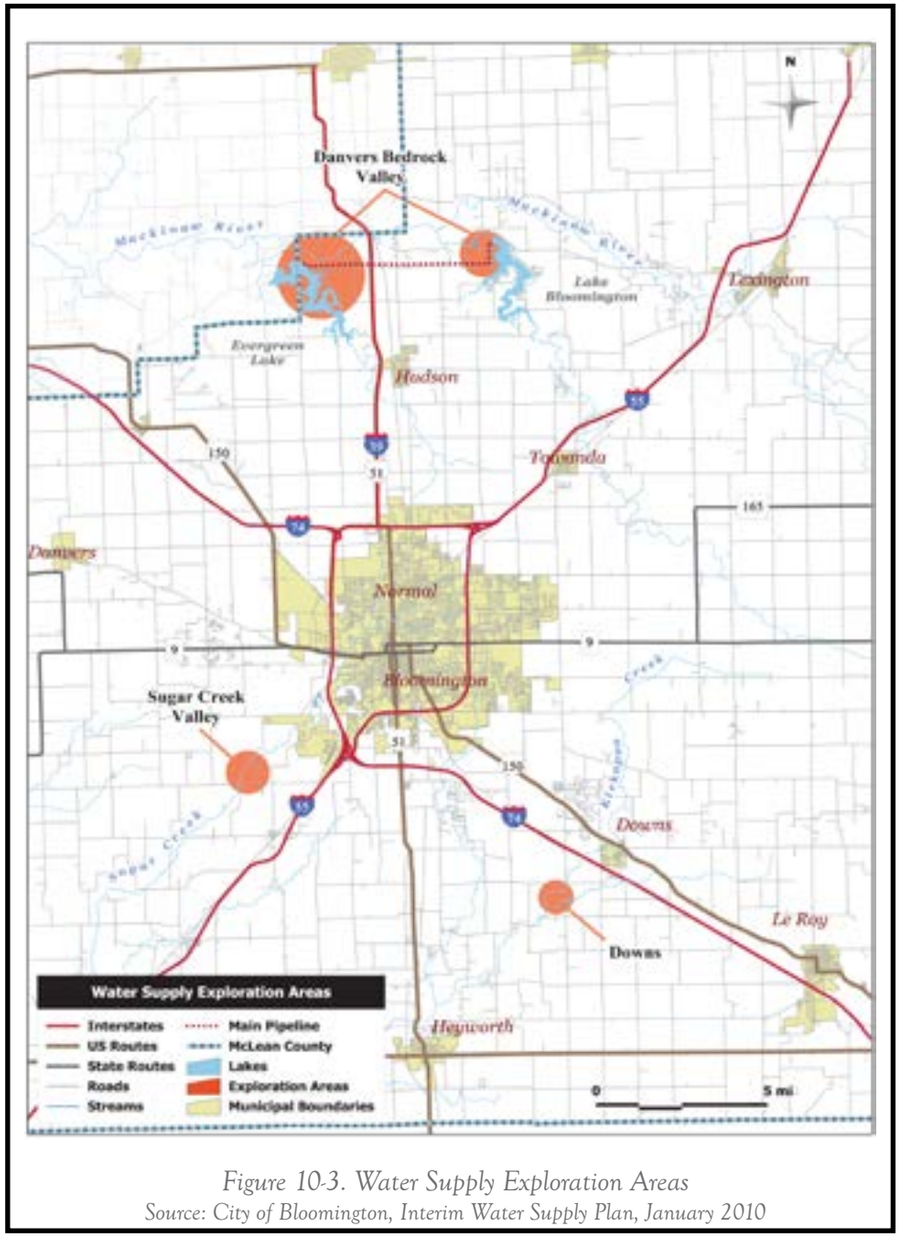


Figure 10-3. Water Supply Exploration Areas
Source: City of Bloomington, Interim Water Supply Plan, January 2010

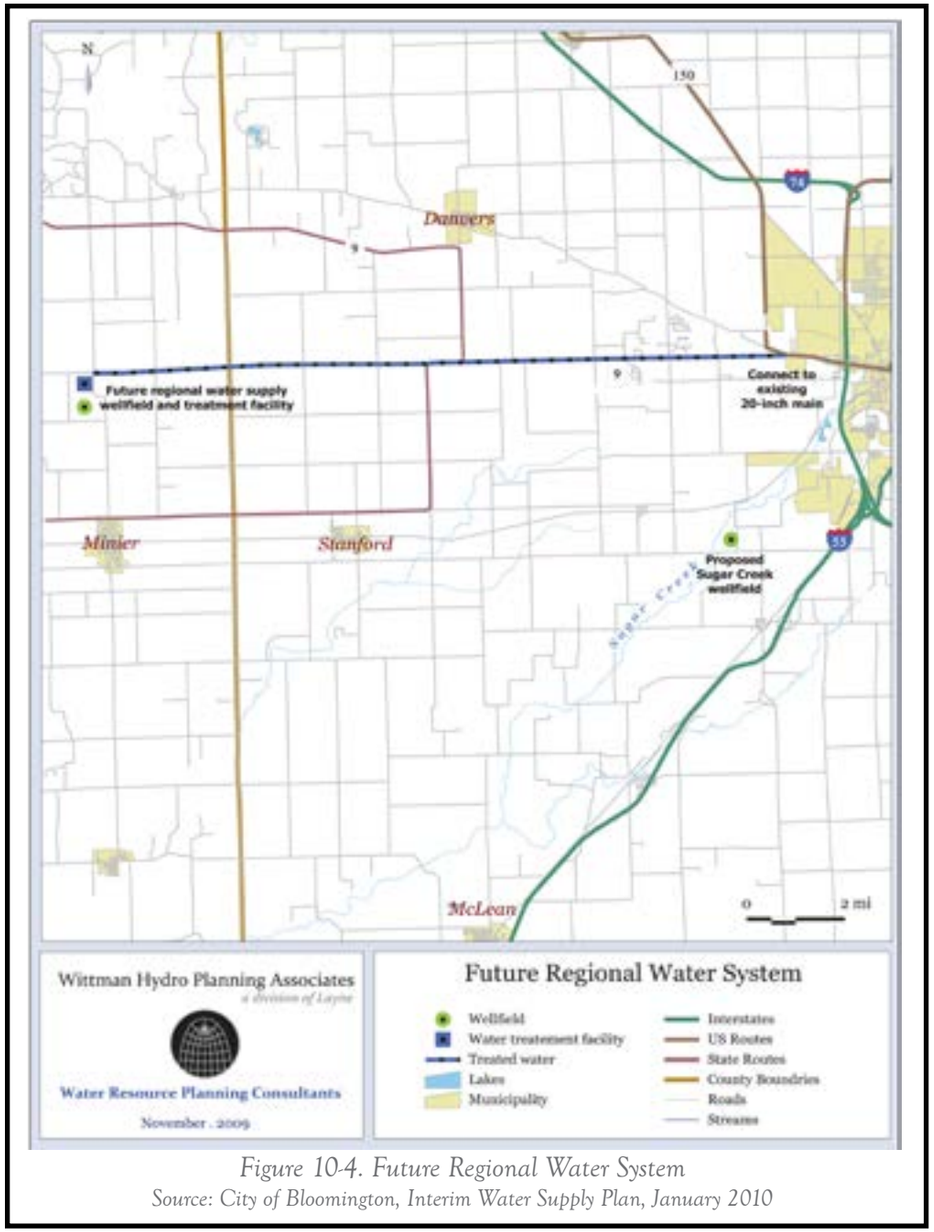


Figure 10-4. Future Regional Water System
Source: City of Bloomington, Interim Water Supply Plan, January 2010

UEW-1.7 Reliable and efficient collections systems (sanitary sewer, combined sewer, and storm sewer systems) to protect public health, safety and the environment.

METRICS

- Full compliance with NPDES
- Miles of stream bank restored ↑
- Nutrient loss ↓

PARTNER AGENCIES

BNWRD, Town of Normal, Village of Downs, McLean County, CIRA

UEW-1.7a The City shall actively work with BNWRD and adjoining local jurisdictions to manage, regulate and maintain the regional sewer and storm-water system with continued adherence to USEPA guidance and permit requirements. *City of Bloomington, ongoing*

UEW-1.7b Adopt and implement City's sewer and stormwater master plans. Periodically review and update the sewer and stormwater master plans. *City of Bloomington, short-ongoing*

UEW-1.7c Assess reduction of hydraulic capacity @ SEWWTP, potential for SSO events (illegal as per Clean Water Act), growth limitations on east side due to collection system capacity being consumed by I/I. *City of Bloomington, ongoing*

UEW-1.7d Mitigate impacts of excessive infiltration and inflow (I/I) on separate sanitary sewer system including source reduction. Carefully evaluate the results of the City's source reduction pilot program near Arcadia Drive to evaluate the costs and benefits to our region. *City of Bloomington, ongoing*

UEW-1.7e Ensure capacity for combined sewer system service area to handle infill growth. *City of Bloomington, ongoing*

UEW-1.7f Continue mitigation of CSO outfalls where engineering design change is possible. A successful example in our community is the CSO lagoon, a joint funded project between the City and BNWRD. *City of Bloomington, ongoing*

UEW-1.7g Continue maintenance of existing detention basins, and in the future, implement regional stormwater detention facilities for the longterm fiscal sustainability. *City of Bloomington, ongoing*

UEW-1.7h Monitor and mitigate urban stream-bank erosion. *City of Bloomington, ongoing*

UEW-1.7i Protect against erosion and nutrient losses. *City of Bloomington, ongoing*

UEW-1.7j Continue work to eliminate Maize Field CSO's. *City of Bloomington,short-medium*

UEW-1.7k Explore options to provide stormwater detention for areas at the south end of downtown. *City of Bloomington, short-medium*

UEW-1.7l Continue to separate sanitary and stormwater flows. *City of Bloomington, ongoing*

UEW-1.7m Continue monitoring private stormwater systems for maintenance and integration with City stormwater management. *City of Bloomington, ongoing*

UEW-1.7n Follow the FAA guidelines for location of detention basins around the airport. The City should work closely to ensure no new wet-bottom detention basins are installed within 10,000 feet of airport property. This can be included as a regulation in the airport overlay zoning. *City of Bloomington, short*

UEW-2. Promote and facilitate energy conservation and alternate energy generation and resources.

UEW-2.1 Reduce municipal and community energy use by at least 20% by 2035.

METRICS

- Per capita energy usage ↓

UEW-2.1a Continue to adopt building codes that include high energy efficiency requirements. *City of Bloomington, ongoing*

UEW-2.1b The City shall encourage economically feasible diversity among energy sources to avoid over-reliance on any single source. *City of Bloomington, short*

UEW-2.1c Encourage the exploration of innovative and alternative technologies regarding energy generation and conservation (i.e. waste to energy, urban wind, solar, bio). *City of Bloomington, short-medium*

PARTNER AGENCIES

EAC, Ameren, Corn Belt

UEW-2.2 Ensure at least 25% of energy use comes from renewable energy sources.

METRICS

- Percentage of total energy consumption from renewable energy sources ↑

UEW-2.2a Continue to purchase 100% green energy through the municipal aggregation contracts when economically feasible. *City of Bloomington, ongoing*

UEW-2.2b Investigate and pursue green energy purchase for the City facilities aggregation contract when economically feasible. *City of Bloomington, short*

UEW-2.2c Create programs to promote alternate energy generation such as community solar and PACE programs. *City of Bloomington, short*

UEW-2.2d Encourage conversion of the landfill site into a solar park after its closure in 2017. *City of Bloomington, short*

UEW-2.2e Encourage the use of alternate energy during any brownfield redevelopment. *City of Bloomington, short/ongoing*

PARTNER AGENCIES

EAC, Homefield Energy (Aggregation Energy Provider), Ameren, Corn Belt, Wind farms, Landfill owners

UEW-3. Education and increased public awareness regarding utility, energy and water issues.

UEW-3.1 Provide educational and engagement opportunities.

METRICS

- Information forum established

UEW-3.1a Establish an innovation forum for information exchange regarding utilities, energy and water concerns. *City of Bloomington, short*

UEW-3.1b Continue to educate the community on energy, water and utility related issues. *EAC, ongoing*

PARTNER AGENCIES

MCRPC, EAC, Utilities, Town of Normal

Information Forum As Envisioned by the Working Group

Vision: When citizens imagine innovative solutions, they need a forum within City government where they can work with City planners to create the processes whereby new ways can effectively integrate themselves with existing Utilities, Energy and Water systems and governing methods. The Information Forum would encourage new, private and novel methods that could support:

- The desire of citizens to employ cost-effective, creative and safe methods to improve how, when and where they use utilities, energy and/or water.
- The goal of the city to better manage sewer and stormwater collection.
- The community's goal to become ever more efficient in its use of energy.
- The goals of citizens, businesses and City government to make available more effective local communication technology without introducing inordinate costs.

Mission: The Information Forum needs to find the right balance of city employees or departments and knowledgeable community experts who could support the desire of citizens, or a citizen group, to implement their plans for an alternative energy, water harvesting, or wastewater handling designs. This city department should resolve to say, "Let's figure out if and how we can do what you propose," rather than saying, "That's not how we do things," or "That's never been done before."

TRANSPORTATION

Few aspects of infrastructure are as exposed and utilized as the components of the transportation system. The comprehensive plan looks at the user's experience of transportation in Bloomington, as well as technical issues and standards that provide guidance in evaluating how well transportation works. In the public outreach process, participants were especially vocal in their demand for maintenance of streets and sidewalks. Bloomington residents and businesses also have concerns regarding air and rail travel and especially the future of the public transit system, Connect Transit. Concerns include service issues, increasing costs and financing barriers.

There are many ways to measure the performance of the transportation system and evaluate its condition. The task for City staff and other agencies is identifying the most reliable information and reviewing and analyzing it consistently and continuously. One important goal is the development of data-driven policy and implementation carried out so results can be tested and compared. This applies to methods of management, use of materials, assessment of transportation demand and other aspects of the system. The City has begun this process through the development of master plans for streets, sidewalks and bicycle facilities, as well as plans for special concerns such as brick street preservation and management. The comprehensive plan does not replicate the work done on these master plans but incorporates them and encourages adoption of those still pending and full implementation of their recommendations. Similarly, the comprehensive plan aligns with regional transportation plans that deal with the transportation systems throughout McLean County.

Transportation does not stop at the city limits and can only work well when movement between places is transparent for the user. The plan recognizes and promotes the ongoing process of coordination and cooperation between the City and the Town of Normal, McLean County, Connect Transit, CIRA, and state and federal level transportation agencies, facilitated through the Regional Planning Commission. Among other results, this process allows the local governments to access federal and state funding for transportation improvements for

Functional Classification of Streets and Roads

Functional classification is a tool developed by the U.S. Department of Transportation to sort sections of the street network based on how many vehicles they carry, posted speed limit, and access to other routes, or to destinations. A street's function is also reflected in its design characteristics, such as the number of lanes, whether it has curbs and gutters, or other features that support its function such as turn lanes with signals. As a general rule, arterials provide maximum travel efficiency or mobility while collectors and local streets provide direct access to adjacent land.

Table 10-1. Functional Classification, General Characteristics, and Use in Bloomington

Classification	Characteristics	Local Example
Interstate/Other Freeways and Expressways	High speed travel with controlled access, no signals, wide lanes; freeways and expressways may have slightly greater direct access	Interstate 55/74; U.S. 51 South to Decatur
Principal Arterial	Provide rapid travel through metro areas, serve major activity centers, connect with interchanges and intersections	Veterans Parkway
Minor Arterials	Serve trips of moderate length within an area, preferably spaced between 1/8 to ½ mile apart at lower speeds	Oakland Avenue, Towanda Avenue
Major Collector	Serves both mobility and land access in higher density areas, providing connections through portions of the city but also direct land access to commercial and residential uses with signalized intersections	Clearwater Avenue, West Washington Street
Minor Collector	Serves mobility and density in lower density areas	None in City of Bloomington
Local Street	Provides access to individual properties and uses, generally do not provide through travel	Residential streets

Some work on the classified roads and streets is eligible for funding through various federal grant programs administered by the Federal Highway Administration. Such funding has been used throughout Bloomington, including projects on Hamilton Road, the Morris-Veterans Parkway intersection, the streetscape improvements in the Downtown Area, and many others. Details of funding commitments are published annually in the Transportation Improvement Program developed by the McLean County Regional Planning Commission.

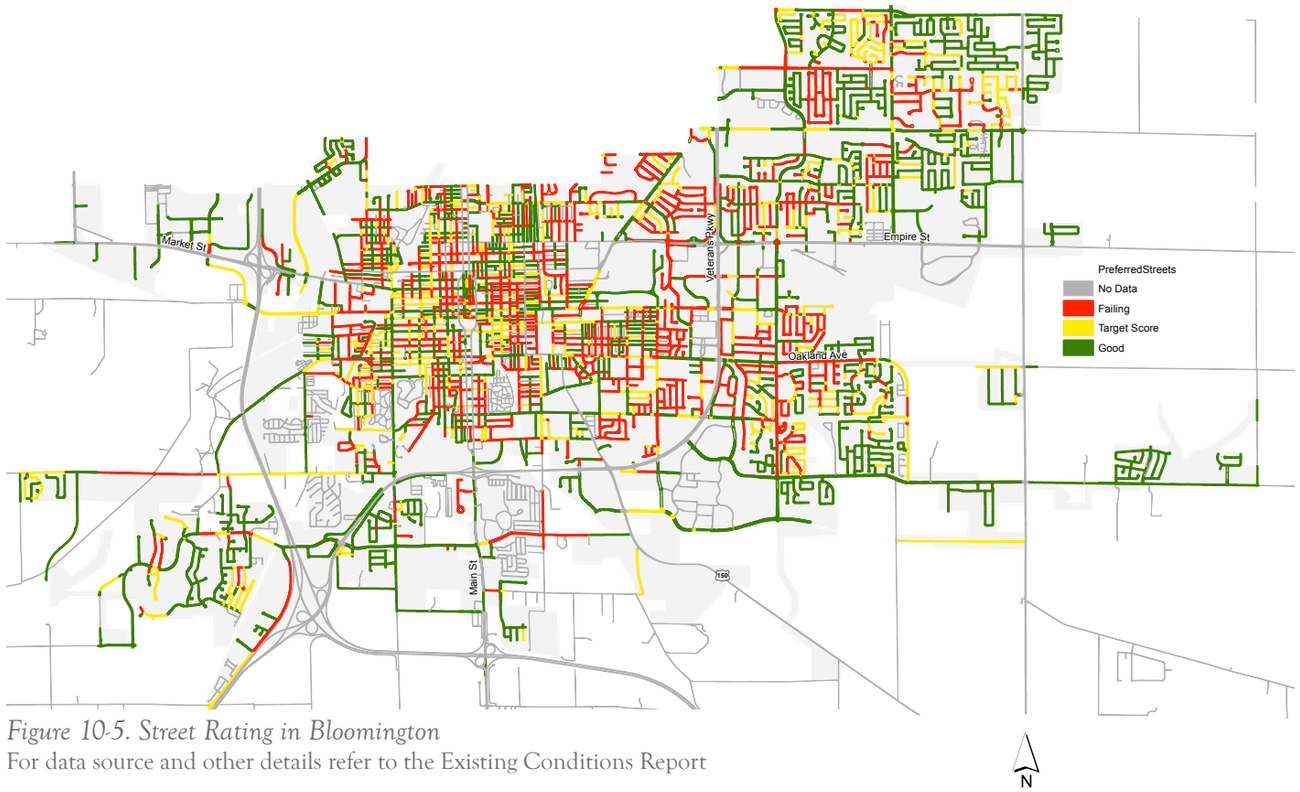


Figure 10-5. Street Rating in Bloomington
For data source and other details refer to the Existing Conditions Report

PASER RATING

The PASER scale is a 1-10 rating system for road pavement condition developed by the University of Wisconsin-Madison Transportation Information Center. PASER uses visual inspection to evaluate pavement surface conditions. When assessed correctly, PASER ratings provide a basis for comparing the quality of roadway segments. A primary advantage to this method is roads may be assessed quickly, possibly even by "windshield survey."

Bloomington Public Works uses this rating system to rate their streets and sidewalks. Public Works strives to maintain their streets at the rating of five or above (a "fair" rating). Approximately 30% of the City streets and 15% of the sidewalks are below this rating. Public Works estimated a minimum of $6.5 million per year to maintain the streets at five or better.

Street Rating	Sidewalk Rating
	
8	10
	
5	5
	
2	1

certain streets as well as funding for transit and bicycle and pedestrian facilities. The intergovernmental coordination process is also important in coordinating with other agencies such as police, fire and emergency management, to ensure the transportation system allows for access in emergency situations. Planning for and implementing transportation projects is a continuing exercise in balancing current system conditions and future demand for expensive and complex infrastructure.

The transportation system is also a readily identifiable source of emissions that reduce air quality. This is a regional concern and one that will be pursued directly in ongoing regional transportation planning.

Public Transit

Public transit service provided by Connect Transit is of great concern for many residents of Bloomington. The comprehensive plan supports the transit system goals of increased frequency of service, wider availability of service and greater mobility through transit for everyone.

Connect Transit is the primary agency for transit goals, assisted by the City, the Town of Normal, the Illinois Department of Transportation and the Federal Transit Administration. As noted in the box at right, federal funding for transit derives from the Highway Trust Fund and thus a solution returning the Trust Fund to solvency will benefit Connect Transit.

Among the operation goals for transit is the improvement of transfer areas and information distribution to riders. Connect Transit is seeking funding to initiate a Downtown Bloomington transfer center improvement project to address this goal. Connect Transit is also pursuing plans to create bus stop locations, enhanced where possible with shelters and other amenities and to increase and modernize the fleet to enable expansion of services throughout Bloomington-Normal.

Goals also include increasing coordination between the City and Connect Transit regarding proposed development at an early stage in the development review process. City staff would benefit from ongoing notification by Connect Transit regarding operational changes, such as route revisions and site selection for bus stops and transfer centers. Early and substantive coordination between the City and public transit

State and Federal Funding Challenges

Many of Bloomington's streets are functionally classified through the Illinois Department of Transportation and the Federal Highway Administration and thus are eligible to use federal transportation dollars for improvements. Unfortunately, eligibility does not guarantee funding, and the process for awarding funding is increasingly competitive.

Various agencies with in the U.S. Department of Transportation administer funding allocated to states, population centers and transportation facilities. The last fifteen years have seen tens of millions of dollars in federal investment in local alternative transportation termini, including the Central Illinois Regional Airport and the multimodal rail and transit center in Uptown Normal. Federal transportation policy is explicit in supporting projects that improve the transportation system but which also boost economic development in the region. These investments are the result of coordinated effort on the part of the local governments to bring transportation funding to Bloomington-Normal.

In some instances, state funding may also be allocated for projects in our area, usually for projects on facilities over which the state has jurisdiction, such as Veterans Parkway, and U.S. Highways 51 and 150, and Illinois Route 9.

Federal grants for highways, streets and mass transit are distributed from the Highway Trust Fund, established by Congress in 1956. The Trust Fund is financed from federal fuel tax revenues. The national gas tax has not been raised since 1993, and in recent years Congress has had to authorize the transfer of general revenue funds in the Highway Trust Fund to carry out the obligations it approved in federal transportation programs. Although many assume increased fuel prices mean higher revenues from fuel tax, the fuel tax is a flat sum per gallon rather than a percentage of the sale and does not rise with prices. However, higher fuel prices mean fewer miles driven, further reducing available revenue.

In addition, changing driving habits, improved fuel efficiency and the growing use of alternative fuels not subject to the tax have reduced Trust Fund revenues. For several years, Congress has investigated alternative ways to inject revenue into the Highway Trust Fund. As of mid-2015 Congress has not found an approach that is technologically possible and publicly acceptable.

Funding continues to be allocated through various programs, and Bloomington continues to use this resource for projects in the City. The current iteration of the federal transportation funding authorization is known as MAP-21 (Moving Ahead for Progress in the 21st Century), currently being extended by Congress and awaiting reauthorization. Programs noted in Table 10-2 are authorized through MAP-21. As of July 2015, Congress was continuing extensions of MAP-21 while considering both short and long-term reauthorization.

can also foster development of transit-oriented development using the Bloomington zoning code provision for Traditional Neighborhood Districts. Transit-oriented development (TOD) employs many of the defining characteristics of traditional neighborhood development (TND) while facilitating access to transit service.

Aviation

The Central Illinois Regional Airport (CIRA) joins with Bloomington and Normal in continuing to build the airport as the aviation connection of choice in the region. CIRA is especially interested in pursuing the goal of extensive and ongoing coordination with the City to forestall development activity that impinges on airport operations. This includes restricting temporary or permanent construction or equipment which exceeds height limitations required by the Federal Aviation Administration, and the design and management of wildlife attractants such as detention basins within 10,000 feet of CIRA's operations.

CIRA currently has some 700 acres of land ready for commercial development, including land

Table 10-2. Selected Federal Transportation Funds, Federal Transit Administration and Federal Highway Administration

MAP-21 Program Name	Acronym/ Section #	Program Activities
Surface Transportation Program – Urban	STP-U	Construction, reconstruction, rehabilitation, resurfacing, restoration, preservation, or operational improvements for highways, bridges, tunnels, alternative fuels, umbrella for other specific programs
Transportation Alternatives Program (formerly ITEP)	TAP	Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, safety improvements for non-drivers, community improvement, Safe Routes to School
Highway Safety Improvement Program	HSIP	Any strategy, activity or project on a public road consistent with the State Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature or addresses a highway safety problem.
National Highway Performance Program	NHPP	Construction, reconstruction, resurfacing, restoration, rehabilitation, preservation, or operational improvements of National Highway System segments.
Transportation Infrastructure Finance and Innovation Act	TIFIA	Designed to fill market gaps and leverage substantial private co-investment by providing projects with supplemental or subordinate debt.
Congestion Mitigation and Air Quality Improvement Program	CMAQ	Transportation projects likely to contribute to the attainment or maintenance of a national ambient air quality standard
Bus and Bus Facilities Program	§5339	Provides funding to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities
Urbanized Area Formula Grants	§5307	Provides grants to urbanized areas to support public transportation. Funding is distributed by formula based on the level of transit service provision, population, and other factors; includes former JARC program
Enhanced Mobility of Seniors and Individuals with Disabilities	§5310	Provides formula funding to increase the mobility of seniors and persons with disabilities; includes former New Freedom program

suitably positioned for aviation-related uses such as the FedEx hub. Given the restrictions on adjacent uses to airport operations and the potential for disrupting the airport, new development projects, or both, CIRA involvement in the City's review of development proposals in these areas is essential.

Since the spring 2015 opening of the FedEx freight hub at CIRA, the airport has entered a new era of air freight operations. Cooperation with Bloomington in monitoring surface traffic generated by the hub and future freight operations will aid in ensuring that CIRA remains easily accessible for all users far into the future.

Pedestrians and Bicycle Users

Goals and objectives for transportation infrastructure serving pedestrians and bicycle users include the ongoing implementation of the Bicycle Master Plan adopted by the City in spring 2015. That plan establishes a network of bicycle facilities and routes throughout Bloomington to promote commuter as well as recreational bicycle use in the City. The comprehensive plan supports implementation of these objectives and specifically provides guidance for expanding the network of complete streets in the community.

For both pedestrians and bicyclists, the comprehensive plan goals focus on developing the transportation network to improve access and safety. Enabling walking and biking in Bloomington as broadly as possible also contributes to goals set forth in Chapters 4 and 11.

The goals and objectives for transportation address all transportation modes and the ways in which they interact, with support for multimodal transportation and intermodal facilities such as CIRA. The plan considers transportation for freight as well as people and how demand may change over time as new technologies arise. The goals for transportation in Bloomington direct the City towards wise and proactive stewardship of the existing transportation system and careful decisions for future expansion that exemplify imagination as well as restraint in the use of public resources.

Major Planned Transportation Projects in Bloomington

Planning for new streets and roads is a complicated and lengthy process. Like all new infrastructure, streets are expensive and must meet safety standards, use appropriate and tested materials and construction methods, and must be able to function under a wide range of conditions. Before building major streets or highways, studies are often done to be sure the facility is designed and positioned correctly and will not trigger unexpected safety or travel consequences. Large-scale transportation projects must be planned far in advance of construction due to their complexity and cost. The planning process includes an assessment of need for the project and criteria for establishing that the need is current and properly defined.

Bloomington has a number of potential projects programmed with designs and funding complete. There are also planned projects that do not yet have funding and may require further study, and potential projects that require coordination with state and federal transportation agencies to initiate evaluation and study.

The projects below range from current to very long-range, and at some level, each has been found to meet a community need. Very complex projects are described in stages, reflecting how eventual construction might proceed. Many of these projects remain in planning stages and may not be built, built as described, or as shown in Figure 10-6.

1. South Hershey Road
Southern extension to Morrissey Drive/U.S. 150, south to Old Colonial Road; intersects near Unit 5 Evans Jr. High; requires agreement to be negotiated with Norfolk Southern Rail for crossing; construction may be phased.

2. East Hamilton Road
Eastern extension of Hamilton Road to Cheneys Grove Road; this is contingent on the completion of Hamilton Road across southern Bloomington from Veterans Parkway to Towanda-Barnes Road. This extension will also cross the Norfolk Southern rail line.

3. Mitsubishi Motorway/U.S. 150
- Extension from West Market Street/IL Route 9 to County Highway 32; extends Mitsubishi Motorway along the western edge of Bloomington.
- Southern extension from County Highway 32 to Shirley I-55 interchange 154; creates a western expressway between I-74 interchange 125 to I-55 interchange 154.

4. East Side Highway
Please note that none of the initial stages of an East Side Highway phased construction are within the current incorporated area of Bloomington, nor are they currently funded for design or construction.
- Interchange at I-74 and expressway to U.S. 150; in the initial phase of this project in proximity to Bloomington, an interchange on I-74 and travel lanes to U.S. 150 will be built.
- Interchange at U.S. 150; the next phase is the construction of an interchange at Morrissey/U.S. 150 and travel lanes to Hamilton Road.
- Interchange/intersection at the extended Hamilton Road; this phase would connect Interstate 74 to Towanda-Barnes Road.

5. West Oakland Avenue
This project is conceptual and has not yet been programmed for a study of feasibility.
- Realignment at I-55/74; this project would re-align West Oakland Avenue to permit the construction of an interchange on I-55/74
- Interchange with I-55/74; this project would construct a full-access interchange with West Oakland Avenue.

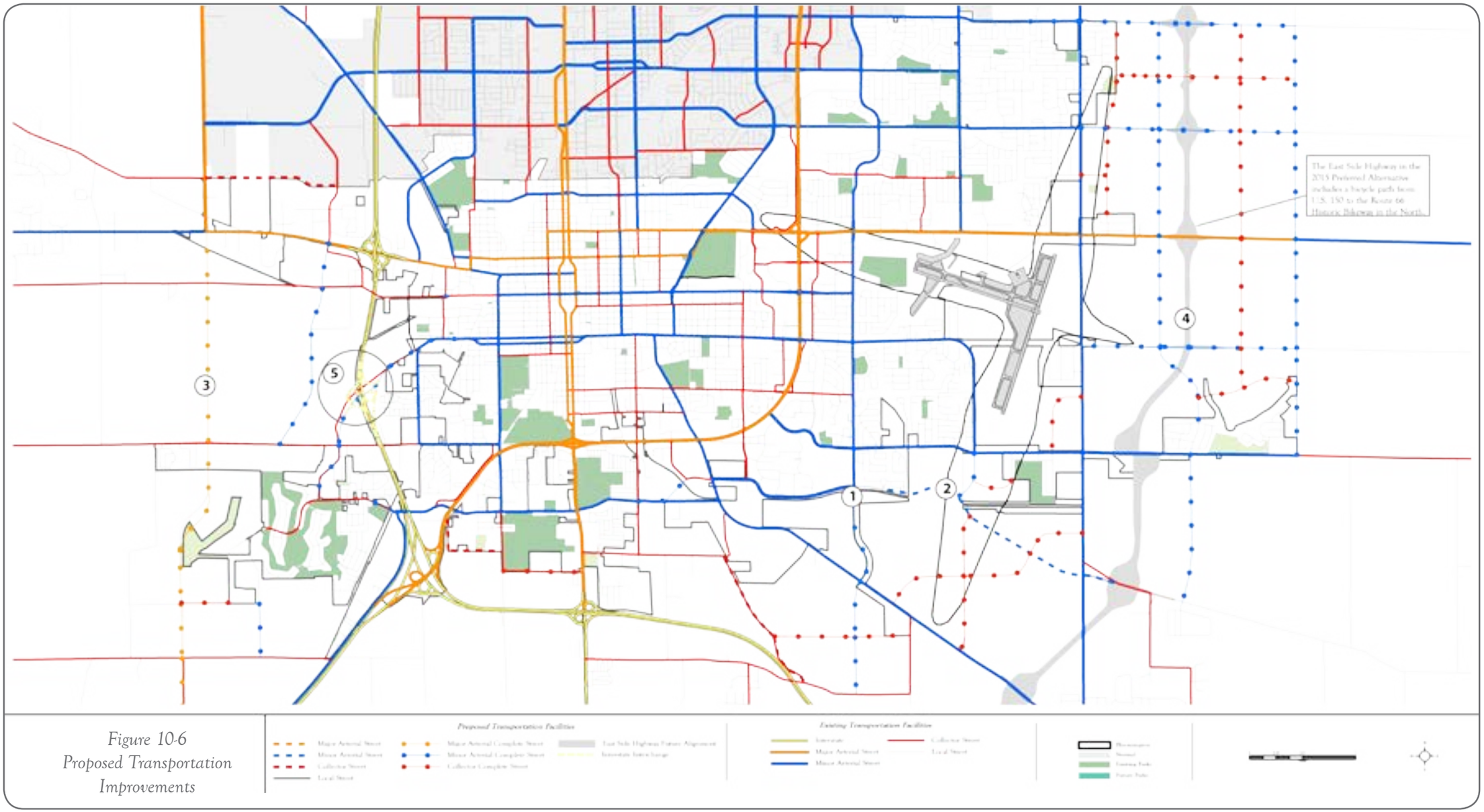


Figure 10-6
Proposed Transportation Improvements

TAQ-1. A safe and efficient network of streets, bicycle-pedestrian facilities and other infrastructure to serve users in any surface transportation mode.

TAQ-1.1 Maintenance and development of a continuous network of arterial, collector and local streets that provides for safe and efficient movement of people, goods and services between existing and proposed residential areas and major activity centers, maximizes walkability, and provides multimodal linkages to the state and interstate highway system.

METRICS

- Improved roadway Level of Service
- # of strategic street connections to improve the overall network completed as identified in Figure 10.6 ↑
- # of new bridges with bike/ped improvements ↑
- PASER rating of arterial, collector and local streets ↑
- Bicycle level of service on local streets ↑
- Creative financing mechanisms
- Subdivision codes revised to promote connectivity as needed
- Adopted regional Complete Streets policy
- # of miles of Complete Streets ↑
- # of miles of Complete Streets on classified system ↑
- PASER rating on sidewalks ↑
- Mileage of sidewalks ↑

PARTNER AGENCIES

IDOT, Town of Normal, McLean County, City of Bloomington, MCRPC, developers, Friends of Constitution Trail, Bicycle advocacy groups

TAQ-1.1a Install street systems accommodating alternative modes of transportation whenever practical. *Bloomington Public Works, short/ongoing*

TAQ-1.1b Implement cost-sharing arrangements among public and private entities to distribute the economic burden of infrastructure improvements, including acquisition of right-of-way. *City of Bloomington, ongoing*

TAQ-1.1c Continue and document cooperation and coordination on transportation infrastructure management among governments, nonprofits, and businesses across the region. *MCRPC, ongoing*

TAQ-1.1d Obtain federal and state funding to support maintenance and expansion of streets. *City of Bloomington, ongoing*

TAQ-1.1e Participate in ongoing regional advocacy for sustainable funding sources for transportation infrastructure. *MCRPC, ongoing*

TAQ-1.1f Promote the use of connectivity in the local street network. *City of Bloomington, ongoing*

TAQ-1.1g Formulate and adopt a regional complete streets policy consistent with the land use plan and adopted regional transportation plans. *MCRPC, short*

TAQ-1.1h Continue implementation of design standards for local street alignment and configuration that sustain neighborhood character, improve safety, and incorporates passive disincentives for diversion from collector and arterial streets. *City of Bloomington, ongoing*

TAQ-1.1i Ensure that private streets meet City code requirements including those in Planned Unit Developments. *City of Bloomington, short*

TAQ-1.1j Engage the public through organized walking and biking activities including commuter challenges, alternate modes use tracking and educational resources regarding transportation alternatives. *MCRPC, short/ongoing*

TAQ-1.1k Establish bicycle-related traffic violation code and ticket diversion program. *City of Bloomington, ongoing*

TAQ-1.1l Incorporate sidewalks and other infrastructure into the classified system. *City of Bloomington, short/ongoing*

TAQ-1.2 Data-driven transportation infrastructure policy and management.

METRICS

- Data gathering mechanism established to gather data on the alternate modes usage
- # of transportation modes represented in regional travel demand modeling ↑
- # of educational events/materials on transportation ↑
- Point-of-contact established in the Public Works Dept. for investigating emerging technologies in transportation and infrastructure
- Accidents ↓

PARTNER AGENCIES

IDOT, Town of Normal, McLean County, City of Bloomington, MCRPC, Developers, Friends of Constitution Trail, Bicycle advocacy groups

TAQ-1.2a Educate public officials and the public regarding transportation system infrastructure costs, maintenance requirements and program funding. *City of Bloomington, ongoing*

TAQ-1.2b Create a City staff information forum/point of contact regarding investigation of emerging technologies and impact of transportation. *City of Bloomington, short/ongoing*

TAQ-1.2c Conduct and expand transportation modeling across multiple modes to enable better transportation policy and execution. *MCRPC, ongoing*

TAQ-1.2d Collect data to support the transportation modeling scope and capability, employing emerging data collection technology. *MCRPC, ongoing*

Travel Demand Modeling

The McLean County Regional Planning Commission manages a traffic volume projection system called a travel demand model for the urbanized area in McLean County, including Bloomington, Normal and their surroundings. This system correlates traffic volumes, trip origin and destination data, population density and the location of primary destinations with a real or proposed street network configuration, and using the Geographic Information System as a platform, predicts how the network will perform. The model output data establishes the Level of Service for streets and an index of how well the street achieves its task in the network. Using this model, engineers and planners can assess alternatives before expensive road work is done.

Traditionally, travel demand models have concentrated on motor vehicles. In recent years a better understanding of the connections between types of transportation has come to the fore. Models now reflect transit, pedestrians, freight traffic and other travel modes. To better reflect local travel behavior and needs, plan goals include augmenting the regional model with the capacity to model alternative travel modes.

TAQ-1.3 Safe and efficient off-road bicycle trails integrated with direct on-road routes, connecting residential areas to activity centers, developing areas and all other modes of transportation. (See Figure 10-6 Bike Infrastructure, page 204)

METRICS

- Resource allocation in Capital Improvement Program for bicycle improvements
- # of miles of off street bicycle facilities ↑
- # of miles of Complete Streets ↑
- Way-finding signage installations
- # of educational and engagement opportunities, such as Good To Go commuter challenge ↑
- Trail counts ↑
- # and percent of accidents involving bicycles ↓
- Vehicle miles traveled ↓
- Travel in single occupancy vehicles ↓

TAQ-1.3a Allocate resources for implementation of the recommendations in the City's bicycle master plan regarding both on-street routes and trail/sidepaths. *City of Bloomington, short*

TAQ-1.3b As specified in the Bicycle Master Plan, implement expansion of the pedestrian-bicycle trail system to provide greater access and interconnection with other travel modes and report to BPC. *City of Bloomington, short/ongoing*

TAQ-1.3c Install a network of way-finding signage. *City of Bloomington, ongoing*

PARTNER AGENCIES

IDOT, Town of Normal, McLean County, City of Bloomington, MCRPC, Developers, Friends of Constitution Trail, Bicycle advocacy groups

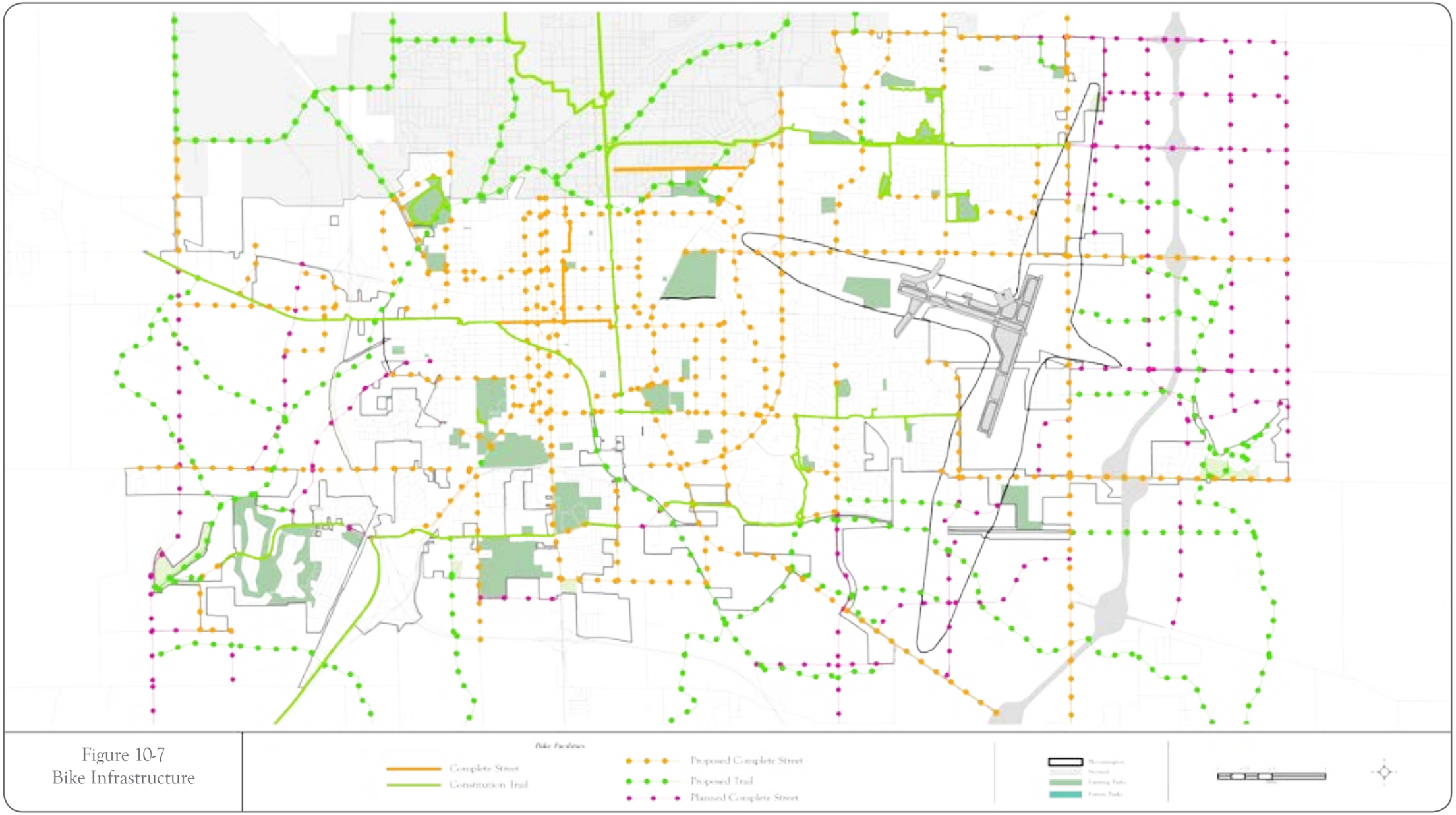


Figure 10-7
Bike Infrastructure

TAQ-1.4 Pedestrian safety for users of all transportation facilities.

METRICS

- Adoption of the City's sidewalk master plan
- Resource allocation in the CIP for pedestrian improvements
- PASER rating of sidewalks in the vicinity of schools and parks
- # of miles of sidewalks in the vicinity of schools and parks ↑
- ADA accessibility of sidewalks
- Pedestrian connectivity analysis included in development review process

TAQ-1.4a Adopt and implement the Sidewalk Master Plan. *City of Bloomington, short*

TAQ-1.4b Provide a sidewalk system that provides safe routes to schools. *City of Bloomington, short/ongoing*

TAQ-1.4c Provide pedestrians with safe access throughout the transportation network, facilitating access to facilities such as transit, businesses, parks and neighborhood centers. *City of Bloomington, ongoing*

PARTNER AGENCIES

IDOT, Town of Normal, McLean County, City of Bloomington, MCRPC, Friends of Constitution Trail, bicycle advocacy groups, Connect Transit, District 87, Unit 5

What are "Complete Streets"?

Complete Streets serve everyone, whether walking, cycling, riding public transit or driving a motorized vehicle. Complete Streets should be designed and used to enable safe access for everyone, either on the street itself or while using sidewalks, paths or trails within the transportation right-of-way. Complete Streets should serve users of any age, ability or preferred type of transportation.

The Illinois Department of Transportation supports the use of Complete Streets and leaves local communities options in creating them. Bloomington can implement the goal of Complete Streets suited to local conditions. Figure 10-6 identifies the current, proposed and planned complete streets.

- *Current Complete Streets: Streets that currently accommodate all modes of travel*
- *Proposed Complete Streets: Currently a street segment exists but bike facilities and/or sidewalks are needed*
- *Planned Complete Streets: When a street is built, it should be designed to accommodate all modes of travel.*

Accommodating bicycle users is typical in a Complete Street, and the Bloomington Bicycle Master Plan provides multiple ways of achieving this for existing and future streets. Bicycle use of streets can take the form of bike routes, bike lanes, sidepaths, shared lane markings and combinations of these approaches, all supplemented by off-street trails. Please see the Bicycle Master Plan at the "Bicycling in Bloomington" page in the Public Works section of www.cityblm.org.

TAQ-1.5 Plan for appropriate and safe access to major surface transportation facilities, including arterial and collector streets.

METRICS

- Adoption of the access management plan
- Access management included in development review process

TAQ-1.5a Update and adopt existing draft access management ordinance. *City of Bloomington, short*

TAQ-1.5b Incorporate access management regulations into transportation network design and implementation process. *City of Bloomington, short*

TAQ-1.5c Implement access management regulations and principles into development review process. *City of Bloomington, short/ongoing*

PARTNER AGENCIES

IDOT, Town of Normal, McLean County, City of Bloomington, MCRPC

TAQ-1.6 A transportation network that facilitates prompt emergency response and management.

METRICS

- # of traffic preemption units ↑
- Response times of fire and police calls ↓

TAQ-1.6a Coordinate surface infrastructure design and implementation between the Public Works and Fire departments. *City of Bloomington, short/ongoing*

TAQ-1.6b Use facility design that maximizes emergency access, including design and placement of traffic calming devices and provides access to emergency and medical facilities. *Bloomington Public Works, ongoing*

TAQ-1.6c Use traffic preemption on major thoroughfares for emergency vehicles to facilitate emergency response; adaptive transportation technology and traffic management. *Bloomington Public Works, short-medium/ongoing*

PARTNER AGENCIES

IDOT, Town of Normal, McLean County, City of Bloomington, MCRPC, Developers, Friends of Constitution Trail, Bicycle advocacy groups, Connect Transit, District 87, Unit 5, McLean County EMA, hospitals

TAQ-2. Transit development provides an alternative of choice for the general population and support for the transit-dependent.

TAQ-2.1 Expanded urban transit system to provide improved route coverage, more frequent route service (headways), extended service hours and schedules, accessible for transit-dependent riders and those with special needs and challenges, including the economically disadvantaged, persons without access to automobiles, the elderly, people with disabilities and regional access to urban area services.

METRICS

- Ridership ↑
- # of transit bus stops ↑
- # of households within 1/4th mile of a bus stop ↑
- Frequency of service on transit routes ↑
- Longer Connect Transit service hours
- Sunday transit service
- Transit connectivity analysis included in development review process
- # Connect transit funding ↑
- # multimodal hubs completed ↑
- # of transit-oriented development projects implemented ↑
- Data inventory regarding mobility needs
- Database of community facilities that can benefit from transit access, ex: social services
- # of multimodal improvements ↑
- # of transit multimodal connections created ↑

PARTNER AGENCIES

IDOT, Town of Normal, McLean County, City of Bloomington, MCRPC, Connect Transit

TAQ-2.1a Support and participate in continuing Connect Transit route development and bus stop location consistent with the land use plan and adjacent land uses. *City of Bloomington, short/ongoing*

TAQ-2.1b Reduce route headways, expand service hours, including Sunday service. *Connect Transit, ongoing*

TAQ-2.1c Implement route extensions to serve broader geographic areas of the City. *Connect Transit, ongoing*

TAQ-2.1d Include Connect Transit in development review to promote transit service awareness and access to new development. *City of Bloomington, ongoing*

TAQ-2.1e Include transit operational requirements (i.e. bus stop locations and shelters, street configuration) in development review process. *City of Bloomington, ongoing*

TAQ-2.1f Explore alternate funding models and sources to support service expansion. *Connect Transit, ongoing*

TAQ-2.1g Develop multimodal transit hubs. *Connect Transit, short*

TAQ-2.1h Implement transit-oriented development. *City of Bloomington, ongoing*

TAQ-2.1i Continue participation in the human services transportation planning process. *City of Bloomington, ongoing*

TAQ-2.1j Collect and analyze data regarding demand for paratransit and other mobility services to improve transit service for the transit-dependent. *Connect Transit, ongoing*

TAQ-2.1k Institute multi-modal transportation improvements, including transit options to support and complement planned areas of development. *Connect Transit, ongoing*

TAQ-2.1l Facilitate communication between urban and rural transit systems. *MCRPC, ongoing*

TAQ-2.1m Facilitate Connect Transit multimodal connections. *City of Bloomington, ongoing*

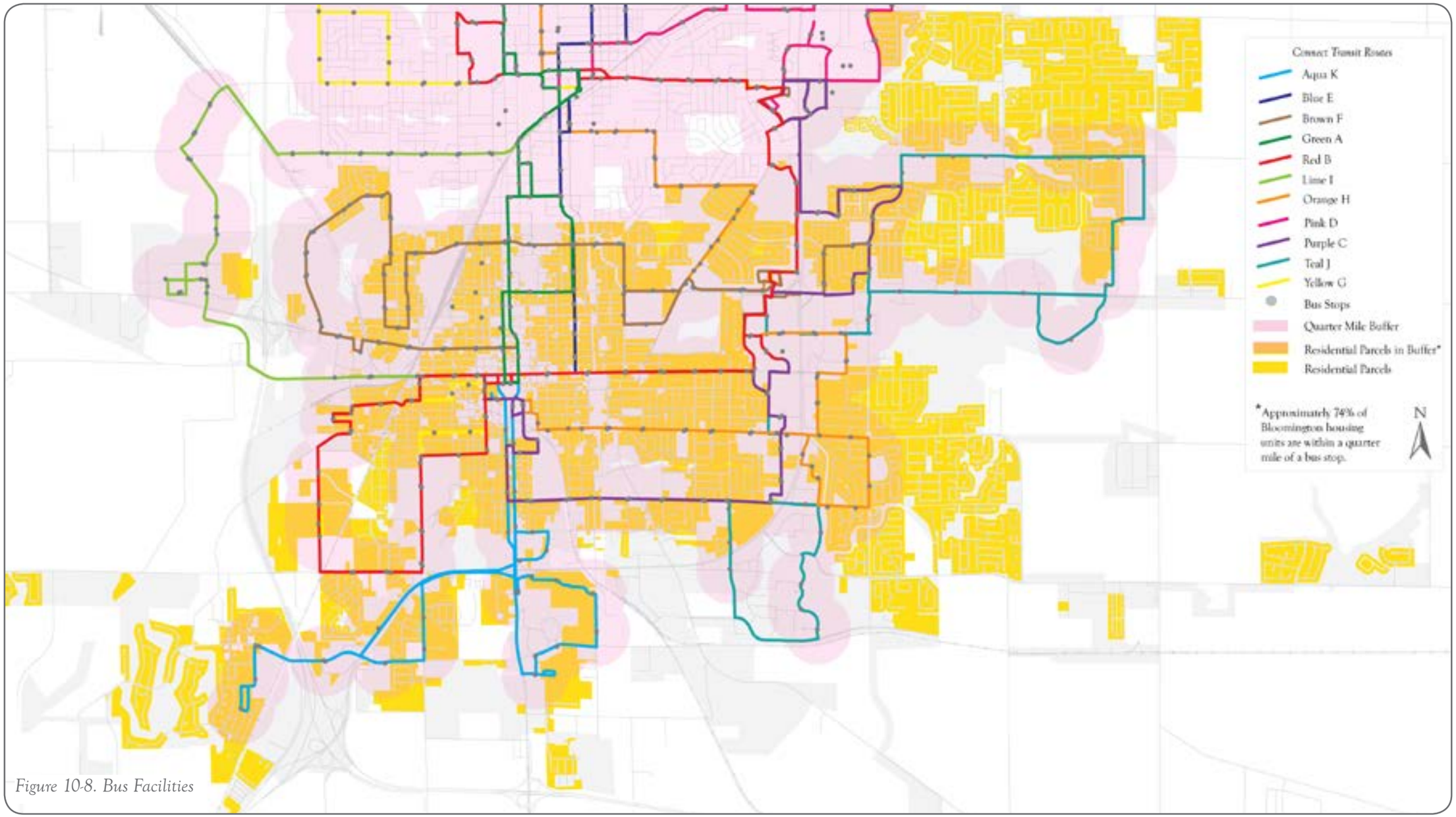


Figure 10-8. Bus Facilities

TAQ-3. Air transportation serves the needs of local and regional residents and businesses to connect regionally, nationally and internationally.

TAQ-3.1 Central Illinois Regional Airport is the primary air transportation center for passengers in the region.

METRICS

- # of flight connections available through CIRA ↑
- # of passengers using CIRA annually ↑
- Adoption of an airport overlay zone
- Inclusion of CIRA land use limitations in development review

TAQ-3.1a Continue to support CIRA maintenance and expansion of service availability for passengers. *City of Bloomington, ongoing*

TAQ-3.1b Use development review to coordinate with CIRA regarding transportation and land use conflicts. *City of Bloomington, short/ongoing*

PARTNER AGENCIES

IDOT, Town of Normal, McLean County, City of Bloomington, MCRPC, CIRA

TAQ-4. Rail transportation serves passenger needs for local and regional residents and businesses to connect regionally, nationally and internationally.

TAQ-4.1 Passenger rail connections to other cities that provide optimum safety, mobility, convenience and efficiency.

METRICS

- # of high-speed rail stops in B-N annually ↑
- Ridership ↑

TAQ-4.1a Continue coordination and cooperation with implementation of high speed passenger rail service. *City of Bloomington, ongoing*

TAQ-4.1b Integrate passenger rail facilities in land use and municipal transportation planning. *City of Bloomington, ongoing*

PARTNER AGENCIES

IDOT, Town of Normal, MCRPC

TAQ-4.2 A safe and efficient regional commuter system that connects Bloomington and other central Illinois communities in order to provide viable alternative transportation between communities.

METRICS

- Regional commuter rail feasibility study
- # of intercity bus trips and connections annually ↑
- Ridership ↑

TAQ-4.2a Evaluate recommendations of Peoria-Bloomington-Normal commuter light rail report including route and station locations. *City of Bloomington, short*

TAQ-4.2b A safe, economical and efficient intercity bus transportation system that connects existing and potential bus users with major and minor destinations. *IDOT, ongoing*

TAQ-4.2c Participate in further regional study of a central Illinois commuter system. *MCRPC, medium*

PARTNER AGENCIES

IDOT, Town of Normal, MCRPC, Tri-County Regional Planning Commission

TAQ-5. Safe and efficient movement of freight by motor vehicle, rail and air, in the community and serving local, state, national, and international markets.

TAQ-5.1 Maximize efficient freight movement and intermodal capacity to serve local and regional users.

METRICS

- Biennial report of freight inventory
- Biennial analysis of freight capacity requirement
- Assessment of freight management impacts in City development review
- Inclusion of CIRA freight capacity in City street improvement program

TAQ-5.1a Create an ongoing inventory of freight traffic by mode and capacity of intermodal transfer nodes. *MCRPC, short term/ongoing*

TAQ-5.1b Evaluate anticipated freight capacity requirements. *MCRPC, ongoing*

TAQ-5.1c Coordinate freight management facilities with land use in development review. *City of Bloomington, ongoing*

TAQ-5.1d Use development review to coordinate with CIRA regarding air freight demands for surface transportation capacity. *City of Bloomington, ongoing*

PARTNER AGENCIES

IDOT, Town of Normal, McLean County, City of Bloomington, MCRPC, developers, CIRA

TAQ-6. Reduce air pollutants and other impacts produced by transportation.

TAQ-6.1 Ongoing reductions in greenhouse gas emissions from transportation sources.

METRICS

- Annual greenhouse gas emissions produced by City ↓
- City use of renewable energy for transportation ↑
- Participation in regional air quality improvement program ↑
- Single-occupant vehicles on arterial routes ↓

TAQ-6.1a In cooperation with regional partners, adopt and implement a transportation greenhouse gas reduction program. *MCRPC, short/ongoing*

TAQ-6.1b Reduce the use of fossil fuel and support renewable energy use in City vehicles and transportation facilities. *City of Bloomington, short/ongoing*

TAQ6.1c Through intergovernmental coordination, reduce the use of fossil fuel and support renewable energy use in Connect Transit vehicles and facilities. *City of Bloomington, short/ongoing*

TAQ6.1d Encourage use of renewable energy in all transportation modes to reduce emissions. *City of Bloomington, ongoing*

TAQ6.1e Promote public understanding of and discourage single-occupacy vehicle use. *MCRPC, short/ongoing*

PARTNER AGENCIES

IDOT, Town of Normal, McLean County, City of Bloomington, MCRPC, developers, Friends of Constitution Trail, bicycle advocacy groups, Connect Transit, District 87, Unit 5, McLean County EMA, hospitals,CVB, EDC, CIRA, EAC

COMMUNITY FACILITIES

Understanding the goals for Bloomington's community facilities requires a definition of the concept at hand – the collection of buildings, open spaces and service areas that comprise the City's public service infrastructure, as well as the special-purpose facilities that provide entertainment, educational opportunities and improved quality of life for everyone.

Publicly available spaces the City of Bloomington employs to carry out City operations and provide services and programs include:

- facilities owned or controlled by the City
- those to which the City has access through agreements with other public and private entities
- facilities which serve multiple functions that include providing services and programs
- buildings and open-air spaces such as parks

City-owned facilities include workaday venues such as City Hall and the Government Center, emergency response headquarters and stations for fire and police, operations facilities for City departments such as Public Works and Water, and community gathering places such as the Bloomington Public Library, Bloomington Center for the Performing Arts and U.S. Cellular Coliseum. Bloomington also owns numerous parks, golf courses, recreational facilities, community centers and unique locations like Davis Lodge at Lake Bloomington. Each of these places makes its contribution to the quality of life enjoyed by Bloomington's residents and provides a base for the people who provide City services.

The plan also considers the role of venues not owned by the City but used for public events or programs that Bloomington participates in or sponsors. Foremost among these are the school properties of District 87 and Unit 5, which serve important functions in their neighborhoods and for the community as a whole. When paired with playgrounds, sports fields or City parks, schools are a catalyst for neighborhood activities and development that create new choices for residents and create the flourishing atmosphere that enhances a sense of place. The plan calls for out-of-the-box thinking and heightened coordination between City departments, school districts, social service agencies and other organizations whose activities serve community needs or blend with community activities.

Other public spaces provide community enrichment as well, as exemplified by the McLean County Museum of History, the facilities at Illinois Wesleyan University, the YWCA and YMCA, Western Avenue Community Center and the McLean County Health Department. Each of these locations contributes to Bloomington's well-being and vitality through their cooperation in City programs and initiatives.

The evaluation of community facilities includes appropriate locations for diverse types of facilities. Those which serve the entire community, such as the Bloomington Public Library, should be located in the City core, preferably in the Downtown district. This area of Bloomington is accessible, and the concentration of facilities intended for all community members increases their ease of use. Facilities intended to function at a neighborhood scale should be distributed across the City in an equitable manner so all residents can make use of them wherever they may live in Bloomington.

The primary focus of the goals for community facilities is maintaining a balance between providing the services and facilities needed in Bloomington and the cost of such services. A balance must be struck between facilities serving existing developed areas and provision for new facilities to serve future growth. The City has an obligation to provide community facilities equitably to all its residents. In so doing, there must be equity in the distribution of the costs generated.

Responding to these concerns requires a mix of funding instruments and tools, consistent with the City's budget constraints and general priorities. Facilities which contribute to the welfare of all can reasonably be provided for through general revenue, while more localized facilities, such as neighborhood parks, may be supported by impact fees assessed on new development. In some instances the assessment of user fees for certain facilities or activities (such as golf courses) may bridge the gap between economic reality and community wishes.

Goals for community facilities include direct attention to maintaining an appropriate cost-benefit ratio between community services and the revenue required to sustain services. The plan recommends serious examination of available resources and establishing the most cost-effective approach to providing and maintaining community facilities. Balanced investment in facilities should also acknowledge that some, such as police and fire services, are vital to public safety and health and have priority. Objectives to support other public facilities may include greater use of public-private partnerships to better balance public investment with private interests.

Funding for community facilities must combine with other City needs in a financially sustainable capital improvement plan. Many factors drive the capital funding process beyond simply the total budget available. The City must consider setting project priorities within the constraints of total funding as well as funding sources limited to particular uses. Priority may be given to investments which expand the lifespan or benefit from existing facilities, such as co-locating a park or community center with a public school. Undertaking a major street project may reduce fire and police response times in the area, creating multiple improvements with one investment.

Designing shared locations for facilities, such as combining a school with a park, community center, library branch or health care facility can substantially improve the cost-benefit ratio of the facility and services provided. Taking a regional approach to community facilities through sharing locations and facilities offers benefits to all participating communities. For example, emergency response could be improved through the use of fire stations in certain locations operated on a shared basis by Bloomington and Normal. Capital improvement may also take advantage of tools for project and financial management which maximize the return on public investment in facilities. Shared facilities, or those in close proximity, may also benefit from TIF districts or economic empowerment zones.

Greater efficiency in developing community facilities present the opportunity for additional efficiencies in energy use. As we have discussed with respect to all infrastructure planning, long-term investments require consideration of initial costs but even more critically the impact of use and maintenance over time. Facilities planning and investment should look to reduction in energy usage and costs for the facility itself and consider the possibilities found in energy technologies. Facility location should be considered by proximity to existing infrastructure and facilities with coordinating uses and by responsible use of land with minimized environmental impact.

A counter-example to the benefits of facility co-location is the demonstrated cost of development that is not compact and contiguous to existing development and infrastructure. Prior experience in Bloomington has shown sprawl development produces costs that are unlikely to be recaptured. As with rising price tags for streets and sewers in outlying areas, this principle applies to community facilities as well. Compact development practices and a focus on infill leverages previous investments and increases the utility of new facilities.

As with the transportation system, especially public transit, and as shown by the cooperation between the City and other entities in past development and infrastructure projects, providing community facilities that both meet the public need and protect the public purse is best managed at the regional level. Costs shared are costs reduced, and there are many opportunities for cooperation in this area. Among the most popular community facilities in Bloomington-Normal is Constitution Trail, which is developed and managed in cooperation between the two municipalities with input from passionately engaged citizens and general public support. As Bloomington grows and adapts to new economic conditions and constraints, the goal of regional partnership in developing community facilities offers broader benefits and shared responsibilities. Ultimately, any decision to expand community facilities must weigh whether the investment is justified if existing unmet needs persist in the community.

Funding Mechanisms That Facilitate Equitable Distribution of Community Facilities

Impact fees seek to compensate for the fiscal burden created by new development, such as an increase in a neighborhood's school enrollment resulting from new residential development. Land dedication from a development area helps reduce the cost of providing services or needs generated by new development, such as the construction of a fire station or school. These tools help redress the imbalance between City investment to support new development and maintain its infrastructure and eventual returns through tax and other revenues generated from the development.

Instituting impact fees for development and requiring land dedication within development projects for parks or schools has been a controversial topic in Bloomington-Normal for many years. In 2015 we have the benefit of years of experience with these cost management tools in both Bloomington and Normal.

A ***special service area (SSA)*** is a taxing mechanism that can be used to fund a wide range of special or additional services and/or physical improvements in a defined geographic area within a municipality or jurisdiction. This type of district allows local governments to establish such areas without incurring debt or levying a tax on the entire municipality. An SSA allows local governments to tax for and deliver services to limited geographic areas within their jurisdictions. In Illinois law, a "Special Service Area" is defined as "a contiguous area within a municipality or county in which special governmental services are provided in addition to those services provided generally throughout the municipality or county, the cost of the special services to be paid from revenues collected from taxes levied or imposed upon property within that area."

CF-1. Continue to provide quality public facilities and services.

CF-1.1 Provide adequate City services for current and new annexations.

METRICS

- Direct service provision departments and related facilities are adequately funded and staffed according to industry standards
- Level of service for various neighborhoods identified ↑

CF-1.1a Ensure City services such as police, fire and public works maintain adequate service levels within existing corporate boundaries. *City of Bloomington, short-medium*

CF-1.1b Set realistic expectations of the level of service that can be provided in the "sprawl areas" and new annexations. *City of Bloomington, short-medium*

CF-1.1c Approach community facility maintenance, upgrades, replacements and relocations with considerations of overall cost effectiveness. *City of Bloomington, ongoing*

PARTNER AGENCIES

Developers, Realtors, Local engineering firms, Unit 5

CF-1.2 Ensure the community facilities provide the greatest cost-benefit ratio to the population served.

METRICS

- Documented guidance on cost-benefit analysis
- Capital costs to service new developments ↓
- Operating costs to service new developments ↓

CF-1.2a Ensure new development occurs first in those locations where city services and facilities can be economically and efficiently provided, and prevent premature development of areas which are more difficult to serve. Develop cost-benefit analysis guidance for developers and require such analyses as part of the development process. *City of Bloomington, ongoing*

CF-1.2b Analyze the City's ability to effectively and economically serve the community. *City of Bloomington, ongoing*

CF-1.2c Identify and communicate the true costs and benefits of building and maintaining new community facilities. *City of Bloomington, ongoing*

CF-1.2d Identify the costs and benefits (fiscal and social) of all community facilities and take appropriate action on facilities whose costs outweigh the benefits. *City of Bloomington, short-medium*

PARTNER AGENCIES

Unit 5, Developers, MCRPC

CF-1.3 Place emphasis on facilities that encourage the development of a vibrant core.

METRICS

- Concentration of community facilities in the Core ↑

CF-1.3a Encourage the community facilities that are currently located in Downtown to remain and/or expand in that location, where cost effective. *City of Bloomington, ongoing*

CF-1.3b Seek partnerships with other private and not-for-profit entities to locate their facilities in Downtown (ex: YMCA, Green Top, year-round farmers' market). *City of Bloomington, ongoing*

PARTNER AGENCIES

BPL, McLean County, McLean County Museum of History, Downtown Bloomington Association, Other community anchors looking to locate in the vicinity of Downtown (at the time of this plan, those were YMCA, Green Top Grocery, Boys and Girls Club)

CF-1.4 Focus resources on maintaining and developing facilities that support the goal of contiguous and compact growth.

CF-1.4a Ensure that new development in Emerging Areas accommodates community facilities such as parks and schools within its center or edge to promote compact development. *City of Bloomington, ongoing*

METRICS

- # of new neighborhoods supporting the compact walkable neighborhood model. ↑
- # of new housing units within 6 minute response zone of an existing fire station. ↑
- # of housing units within 1/4 mile of the parks. ↑
- # of housing units within 1 mile of a school. ↑

CF-1.4b Prioritize capital improvements to spur new developments in areas that can leverage existing community facilities such as fire stations. *City of Bloomington, ongoing*

PARTNER AGENCIES

Developers, Unit 5

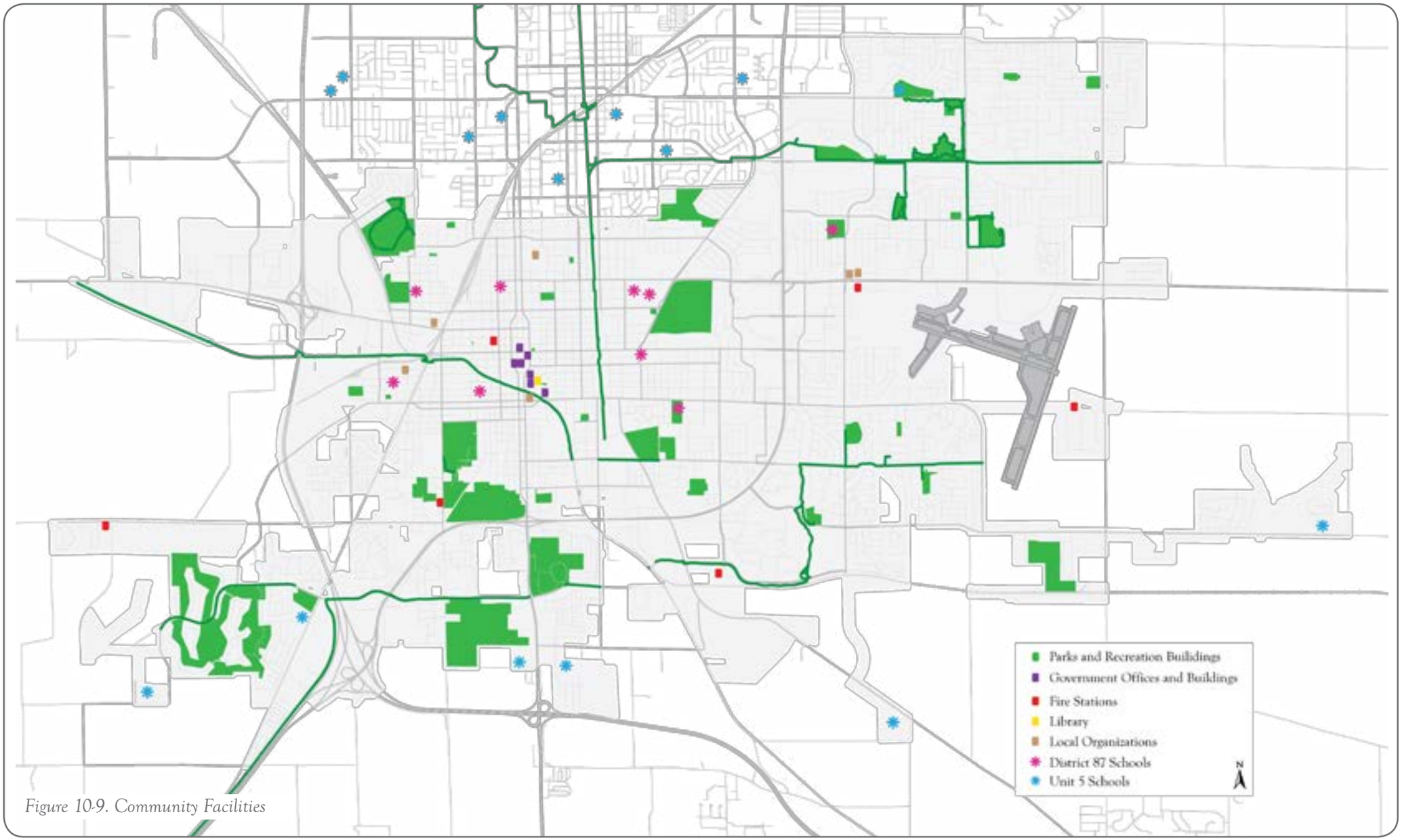


Figure 10-9. Community Facilities

CF-1.5 Develop a City facilities master plan.

METRICS

- City facilities master plan created
- City facilities master plan adopted
- Resources allocated for capital improvements ↑

CF-1.5a Identify facilities most in need of repair, upgrades, expansion, replacements or building new. *City of Bloomington, short-medium*

CF-1.5b Develop a sustainable and long-term budget plan to address the needs identified in the aforementioned master plan. *City of Bloomington, medium-long*

PARTNER AGENCIES

Developers, Unit 5

CF-2. Provide public services in a fiscally, socially and environmentally responsible manner.

CF-2.1 Seek opportunities to co-locate community facilities to maximize efficiencies in service provision and reduce capital and operating costs.

METRICS

- # of co-locations between agencies ↑
- # of resources saved by co-locating (dollars, staff or other) ↑

CF-2.1a Explore the merits and demerits of joint fire/EMS facility for the City of Bloomington and Town of Normal on the northeast side of the community. *City of Bloomington, medium-long*

CF-2.1b The City and the school districts should engage in joint planning for capital improvements (parks, schools, infrastructure improvements, etc.). *City of Bloomington, medium-long*

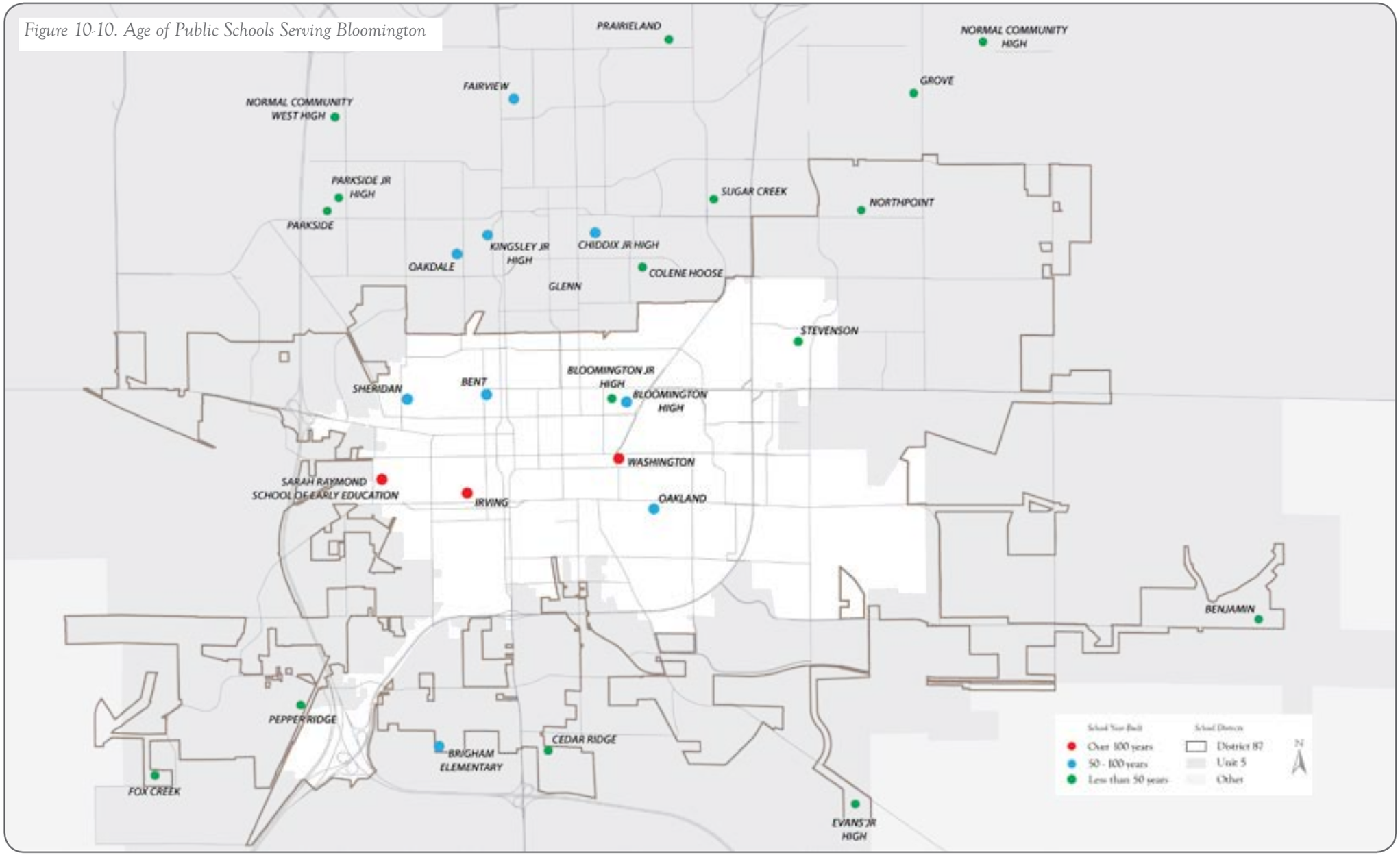
CF-2.1c Gather input from interested parties (public, private and not-for-profit) to ensure all options for currently unavailable services be considered for inclusion in expansion of any community facility. ex: Library and/or BCPA expansion. *City of Bloomington, ongoing*

CF-2.1d Ensure that any community facility expansion project includes a review of potential additional services which could be made available through that facility where fiscally, socially and environmentally appropriate. *City of Bloomington, ongoing*

PARTNER AGENCIES

Town of Normal, District 87, Unit 5, Bloomington Public Library, Connect Transit, McLean County, McLean County Museum of History, Local not-for-profits

Figure 10-10. Age of Public Schools Serving Bloomington



CF-2.2 Reduce City facilities' environmental footprint.

METRICS

- Usage of overall energy, gas, and harmful chemicals ↓
- Alternative energy use per capita ↑
- # of recycling programs in community facilities ↑
- Recycling in all community facilities

PARTNER AGENCIES

BPL, contractors

CF-2.2a Ensure new buildings adhere to common standards for energy efficiency, balancing cost-effectiveness with environmental stewardship. *City of Bloomington, ongoing*

CF-2.2b Emphasize usage of the native plants and trees on public grounds. *City of Bloomington, ongoing*

CF-2.2c Seek ways to reduce usage of harmful chemicals in public buildings and on public grounds. *City of Bloomington, ongoing*

CF-2.2d Facilitate recycling in all community facilities. *City of Bloomington, short-long*

CF-2.2e Track energy use and costs for major municipal facilities. *City of Bloomington, medium-long*

CF-2.2f Investigate the merits and demerits of Energy Performance Contracting to improve energy efficiency and reduce energy costs for all City facilities. *City of Bloomington, short*

CF-2.2g Carefully consider energy efficiency, alternative energies, and reduction of maintenance costs when expanding, remodeling, or building new community facilities. *City of Bloomington, ongoing*

CF-2.2h Carefully consider re-use of existing materials during expansion of community facilities. *City of Bloomington, ongoing*

CF-2.2i Use life-cycle costing in purchasing decisions made by the City. *City of Bloomington, ongoing*

Energy Performance Contracting (EPC)

EPC is a turnkey service sometimes compared to design/build construction contracting that provides customers with a comprehensive set of energy efficiency, renewable energy and distributed generation measures and often is accompanied with guarantees the savings produced by a project will be sufficient to finance the full cost of the project. A typical EPC project is delivered by an Energy Service Company (ESCO) and consists of the following elements:

- Turnkey Service – The ESCO provides all of the services required to design and implement a comprehensive project at the customer facility from the initial energy audit through long-term Monitoring and Verification (M&V) of project savings.
- Comprehensive Measures – The ESCO tailors a comprehensive set of measures to fit the needs of a particular facility and can include energy efficiency, renewables, distributed generation, water conservation and sustainable materials and operations.
- Project financing – The ESCO arranges for long-term project financing that is provided by a third-party financing company. Financing is typically in the form of an operating lease or municipal lease.
- Project Savings Guarantee – The ESCO provides a guarantee that the savings produced by the project will be sufficient to cover the cost of project financing for the life of the project.

CF-2.3 Ensure universal access to facilities that are open to the public.

METRICS

- # of ADA-accessible facilities ↑

CF-2.3a Make sure that community facilities conform to ADA and other universal design standards. *City of Bloomington, short-medium*

CF-2.3b When co-locating services in structures not controlled by the City, ensure universal access and the health and safety of occupants. *City of Bloomington, short-long*

PARTNER AGENCIES

All agencies providing public access

CF-3. Pursue solutions for unmet and emerging community needs.

CF-1.1 Take a regional approach whenever feasible.

From the viewpoint of many residents, the twin cities of Bloomington and Normal function as a unified community. Residents of this community do not notice the political boundaries. Throughout the outreach process, many respondents expressed interest in heightened coordination between these communities, the County, school districts and other taxing bodies.

The working group addressing this topic intentionally left the action items from this goal open. Regional thinking and efficient use of public dollars should be part of every major capital investment. Providing community facilities that both meet the public need and protect the public purse is best managed at the regional level. Costs shared are costs reduced, and many opportunities arise for such cooperation. Public officials and policy makers should not only be receptive to those but constantly seek those opportunities.

Government Center in Downtown Bloomington that houses the City and the County offices. It is an example of facility co-location and regionalism.