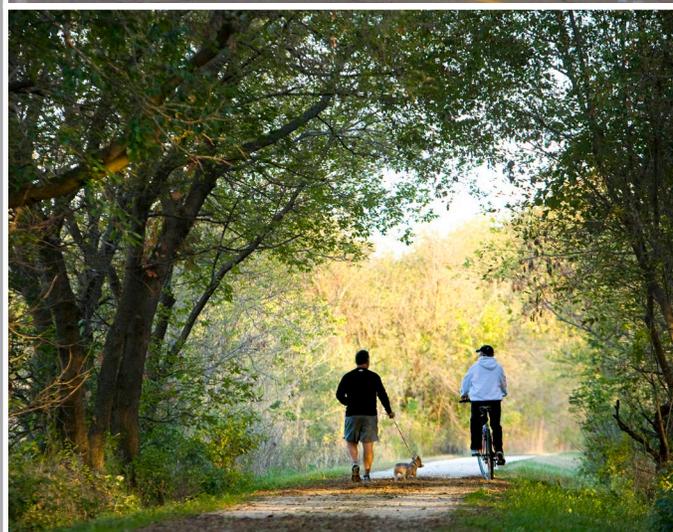


# RPA 8 2045 LONG RANGE TRANSPORTATION PLAN



East Central  
Intergovernmental Association  
7600 Commerce Park  
Dubuque, IA 52002

On the Cover. From the Top.

1. “Highway 52 South” by Phil Roeder <https://www.flickr.com/photos/tabor-roeder/> is licensed under CC BY 2.0, <https://creativecommons.org/licenses/by/2.0/>
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- 3 UP Ral Crossing, Low Moor. Photo Courtesy of ECIA.
4. Heritage Trail, Dyersville. Photo Courtesy of the Dubuque Chamber of Commerce.

## **REGIONAL PLANNING AFFILIATION 8**

### **2045 LONG RANGE TRANSPORTATION PLAN**

**ADOPTED JUNE 23, 2022**

This report was prepared in cooperation with the U.S. Department of Transportation, Federal Highway Administration, the Federal Transit Administration, and the Iowa Department of Transportation. The contents of this report reflect the views of the author who is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Iowa Department of Transportation or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation





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# 1

## INTRODUCTION

### RPA 8 ORGANIZATION AND MANAGEMENT

The East Central Intergovernmental Association Regional Planning Affiliation was established on February 2, 1994 through the adoption of Articles of Agreement by the participating organizations in the region. It is one of the 18 RPAs in the state that were formed as part of the Iowa Department of Transportation's implementation of Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), particularly in regard to meeting the statewide planning and programming aspects of the legislation.

This cooperative, comprehensive, and continuing transportation planning process was established by an agreement between the state and local governments in compliance with the provisions of the ISTEA. The planning process is implemented through a committee structure. Committees forward their recommendations to the Policy Board for consideration and final action. At this time, the only standing committee is the Technical Advisory Committee (TAC). The TAC was formed by the Policy Board at its first meeting on February 2, 1994.

The East Central Intergovernmental Association Regional Planning Affiliation (RPA) membership is made up of 56 local cities and counties in a four county area in eastern Iowa. All member jurisdictions have signed a 28E agreement to conduct transportation planning and the programming of federal transportation funds as determined by the Iowa Department of Transportation. The City of Dubuque and the surrounding area is excluded from the RPA, as it is part of a separate transportation planning area - the Dubuque Metropolitan Area Transportation Study (DMATS). The DMATS region includes the cities of Dubuque, Asbury, Sageville, Peosta, Centralia and Durango, as well as portions of Dubuque County.

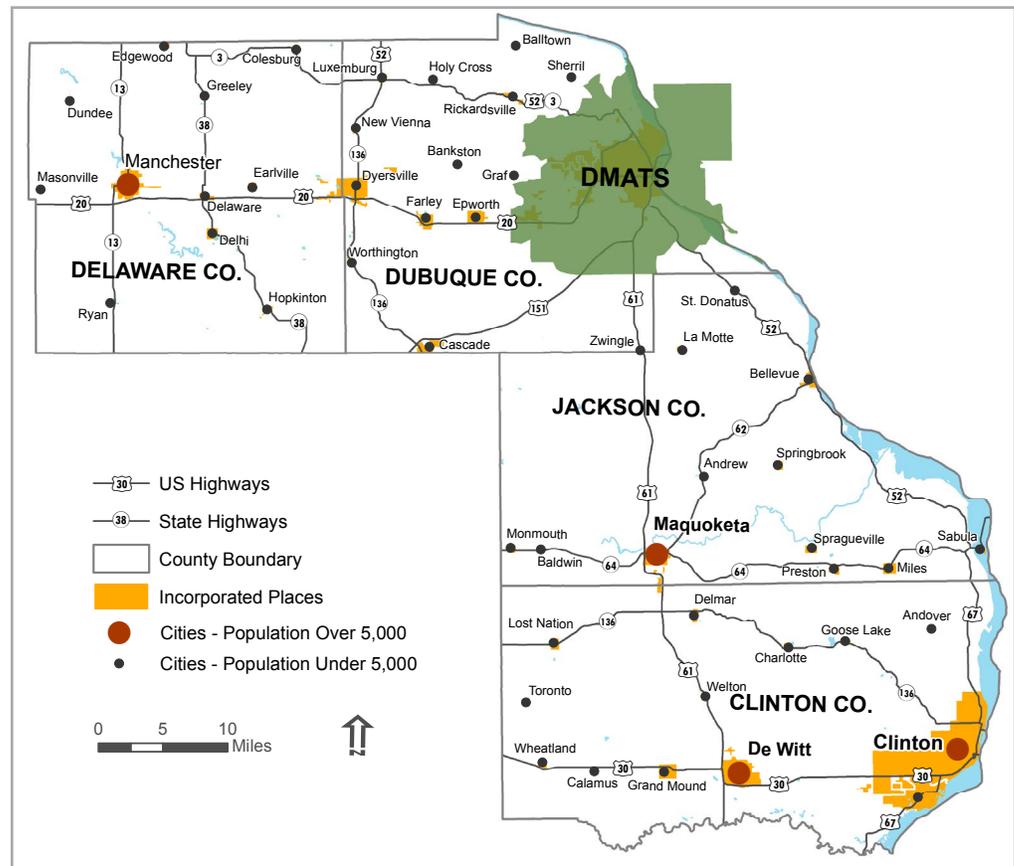
The RPA is staffed by the East Central Intergovernmental Association (ECIA), which has no formal membership on either the RPA Policy Board or the TAC. At their request, the Iowa Department of Transportation, Federal Transit Administration (FTA) and Federal Highway Administration (FHWA) are only advisory members of the RPA Policy Board and TAC. Figure 1.2 shows the region and 56 local jurisdictions.

The 56 member local jurisdictions include four counties and four urban areas (population greater than 5,000). The four urban areas are the Cities of Clinton, DeWitt, Manchester, and Maquoketa. Members of the RPA include:

CLINTON	DELAWARE	DUBUQUE	JACKSON
Andover	Colesburg	Balltown	Andrew
Calamus	Delaware	Bankston	Baldwin
Camanche	Delhi	Bernard	Bellevue
Charlotte	Dundee	Cascade	LaMotte
Clinton	Earlville	Dyersville	Maquoketa
Delmar	Edgewood	Epworth	Miles
DeWitt	Greeley	Farley	Monmouth
Goose Lake	Hopkinton	Graf	Preston
Grand Mound	Manchester	Holy Cross	St. Donatus
Lost Nation	Masonville	Luxemburg	Sabula
Low Moor	Ryan	New Vienna	Spragueville
Toronto		Rickardsville	Springbrook
Welton		Sherrill	
Wheatland		Worthington	
		Zwingle	

The purpose of the RPA is to enhance and improve the rural transportation planning consultation process between IADOT and those local governments responsible for transportation planning in the rural areas. The RPA gives the rural governments of the region a united voice in addressing safety issues, long range transportation needs and transit needs.

**Figure 1.2 RPA 8 Region**  
 Source: Iowa DOT, 2017



## **LONG RANGE TRANSPORTATION PLAN**

The long-range transportation plan (LRTP) is a statement of how RPA 8 intends to manage its transportation system for the next 20 years. The plan provides an overview of the current transportation system and identifies future needs for all transportation modes including: roads and bridges, bicycle and pedestrian, public transit, freight, and air travel. The LRTP establishes a vision and a set of goals and objectives that will guide future transportation investments. RPA 8 updates its LRTP every five years.

### **THE RPA 8 VISION**

To promote development of a coordinated multi-modal transportation system that preserves and enhances mobility, economic development and safety within the region.

The system is fiscally sustainable, driven by a collaboration of involvement by citizens and key stakeholders, promotes areas of concentrated growth, manages both demand and capacity, employs the best technology, and unites air, bicycle, pedestrian, rail, roadway, mass transit, and waterway facilities into one fully interconnected network.

### **GOALS, OBJECTIVES, AND PERFORMANCE MEASURES**

RPA 8 has identified, goals, objectives, and performance that will help the region achieve its vision for the future. These three items serve as the basic building blocks that LRTP is structure around. While they all sound somewhat similar, each has its own role in the federal transportation planning process.

Goals are broad statements that describe the way things should be. For example, if you were to say “I want to get better transportation system in RPA 8 area,” this would be a general description of how you want to improve transportation system in the future. You have not said how you are planning to do it and what the resources you need to do it are. The LRTP is built around five goals that, similarly, provide a general overall direction for the region’s transportation system.

Objectives are specific, measurable steps to be taken to reach a goal. An example would be saying “We will improve the system by coordinating signals.” This objective makes the abstract goal of “improvement” into something specific. Each of the LRTP’s goals has distinct, measurable objectives associated with it.

Performance Measures are the means by which progress will be gauged. Performance measures are quantifiable. In the case of improving signal coordination, the performance measure could be the travel delay through the signalized intersections by time of day. Each objective in the LRTP has a performance measure associated with it.

Taking into consideration the federal requirements outlined in FAST ACT, the local planning efforts described above, and feedback from the RPA 8 members and the public, the RPA 8 staff identified five goals for transportation investments in the RPA 8 region over the next 30 years. These goals are can be summarized in the following table.

**Priority: Transportation projects that place emphasis on maintaining and improving the existing transportation system rather than on expanding.**

Goal	Objective	Performance Measure	Current	Target
Strategically preserve existing infrastructure and focus future investment in areas that are already served by significant public infrastructure investments.	Preserve and maintain pavement.	Pavement Condition Index - Average	62.95	Increase
		Pavement Condition Index - Percent poor condition or below, PCI ≤ 40.	31.9%	Decrease
	Preserve and maintain bridges.	Percentage of Bridges in Good Condition	57.3%	Increase
		Percentage of Bridges in Poor Condition	2.2%	Decrease
		Percentage of Structurally Deficient Bridges	8.8%	Decrease
Increase the safety, security, and resiliency of the transportation system.	Reduce serious injuries and fatalities from vehicle crashes.	Number of Fatalities (5-year annual average)	13.2	Decrease
		Number of Serious Injuries (5-year annual average)	52.0	Decrease
	Reduce pedestrian and bicycle fatalities and serious injuries.	Number of Non-Motorized Fatalities (5-year annual average)	1.0	Decrease
		Number of Non-Motorized Serious Injuries (5-year annual average)	4.8	Decrease

**Priority: Transportation projects that support new development.**

Goal	Objective	Performance Measure	Current	Target
Support transportation Improvements and projects that promote existing and future economic development.	Identify potential connections to support existing and future business operations within and outside the RPA 8.	Annual transportation investment that is used to expand existing and attract new businesses - Annual RISE funds. - FY 2022	\$0	Increase
	Improve access to jobs for both residents and employers in RPA 8 region.	Annual transportation investment that is used to improve access to job sites - Annual RISE, STBG-BROS, and STBG funds - FY 2022	\$10.4 M	Increase

**Priority: Transportation projects that promote a multi-modal transportation system.**

Goal	Objective	Performance Measure	Current	Target
Provide a high degree of multi-modal accessibility and mobility for individuals. This should include better integration and connectivity between modes of travel.	Provide more on-road bicycle facilities throughout the community.	Total miles of on-road bicycle and pedestrian facilities	40.9 miles	Increase
	Provide more trails to connect destinations throughout the community, including the completion of existing regional and local trail systems.	Total miles of multi-use trails	75.4 miles	Increase
	Improve access to basic services and important destinations with transit.	Total transit ridership for Clinton MTA, RTA 8, and River Bend Transit in FY 2021	230,606	Increase
		Percentage of workers commuting by transit (ACS 5-Year Estimates 2019)	0.34%	Increase

**Priority: Projects that facilitate efficient movement of freight.**

Goal	Objective	Performance Measure	Current	Target
Support Efficient Freight system in the region	Maintain adequate infrastructure conditions on primary freight corridors	Average Pavement Condition Index on primary freight corridors	74.78	Increase
	Reduce delay on primary freight corridors.	Number of congested primary freight corridors.	0	Maintain

# 2

## HUMAN ENVIRONMENT

### INTRODUCTION

Understanding the transportation needs of a community requires an understanding of how community residents make travel decisions. Travel behavior is made up of thousands of decisions made by individuals on how, when, and where to travel. Individuals make these decisions based on many factors such as family size, work location, travel time, and available modes.

Chapter 2 of the RPA 8 LRTP focuses on building a community profile based on demographic and socioeconomic data that provides a general understanding of travel behavior in the RPA 8 area. The process of acquiring and checking this data involved coordinated efforts by all the transportation and planning departments in the region.

### POPULATION

RPA 8's four counties combined for a total population of 182,699 in the 2020 Census. Dubuque County has the largest population of the four; however, a large portion of that population resides within the DMATS MPO boundary. In 2020, 87,882 people, or about 89 percent of the total county population lived inside the DMATS boundary. Table 2.1 shows the 2020 Census population of the four RPA 8 counties.

### AGE

In the ten years between the 2010 and 2020 censuses, the population of the RPA 8 area became older on average, Dubuque being the exception. In 2010, the median age of RPA 8 counties ranged from 41.4 to 44 years. In 2020, the median age had increased to a range of 42.2 to 44.3 years. Table 2.2 contains the 2010 and 2020 median age by county.

The increase in median age is primarily the result of the aging of the baby boom generation. The United States saw a considerable increase in the birth rate in the years following World War II. Children born between 1946 and 1964 are now in their mid-fifties to early seventies. As this generation continues to age, their large numbers will continue to push the median age up over the next ten to twenty years. Figure 2.1 shows 2010 and 2020 population for the RPA 8 region broken into 13 age cohorts. The figure shows a decrease in ages 20-44 and increase in ages 57-75 that trend is partially associated with the baby boomers. As RPA 8 plans for the future, it should be aware of this age trend and its potential impacts on future transportation.

**Table 2.1. 2020 Census Population for RPA 8 Counties**

County	Population
Clinton	46,460
Delaware	17,488
Dubuque	99,266
Jackson	19,485
Total	182,699

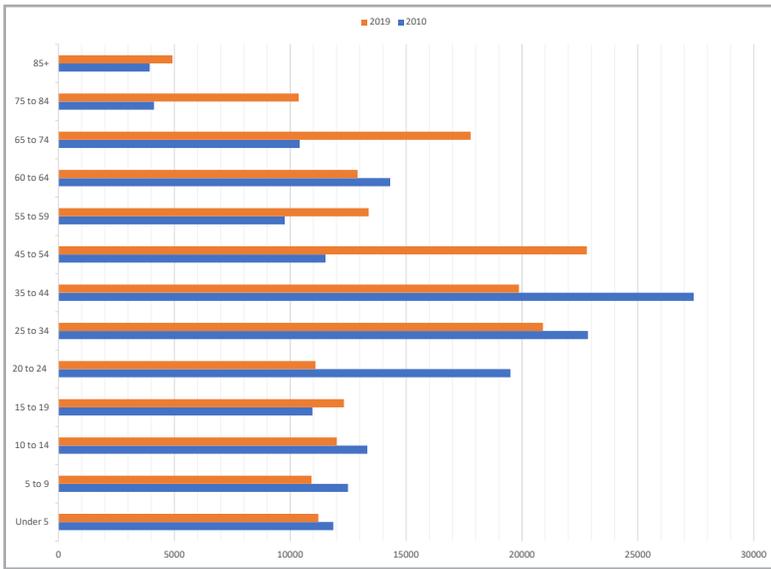
Source: US Census Bureau, 2020 Decennial Census.

**Table 2.2 Median Age**

County	2010	2020
Clinton	41.4	42.2
Delaware	42.1	43.8
Dubuque	38.6	38.6
Jackson	44	44.3

Source US Census Bureau, Decennial Census 2010 and 2020.

## RPA 8 POPULATION PROJECTION



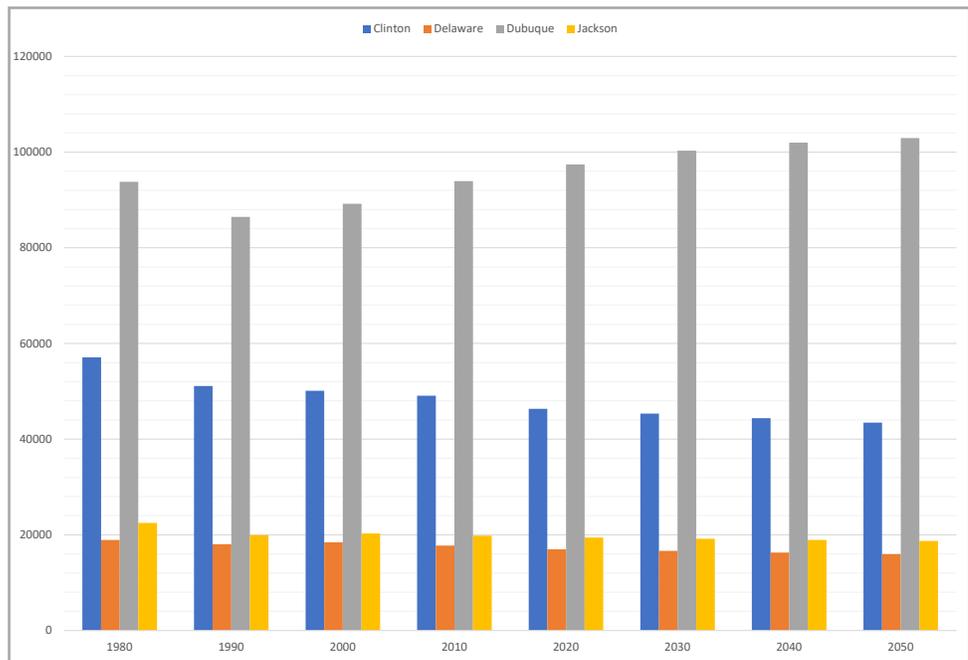
**Figure 2.1 Age**  
 Source: US Census Bureau, Decennial Census 2010 and 2020.

population of RPA 8 counties between 1970 and 2020.

The RPA 8 LRTP uses population forecasts created by the Iowa DOT for the Iowa Statewide Traffic Analysis Model (iTRAM). The 2020 Census population serves as the base for the projection. Figure 2.4 shows the historical population of RPA 8 counties between 1970 and 2020, and future population projections out to 2050. As seen in Figure 2.4, the combined population of the four counties remains stable over the coming years, growing to 181,088 by 2050 with much of the growth occurring in the DMATS area.

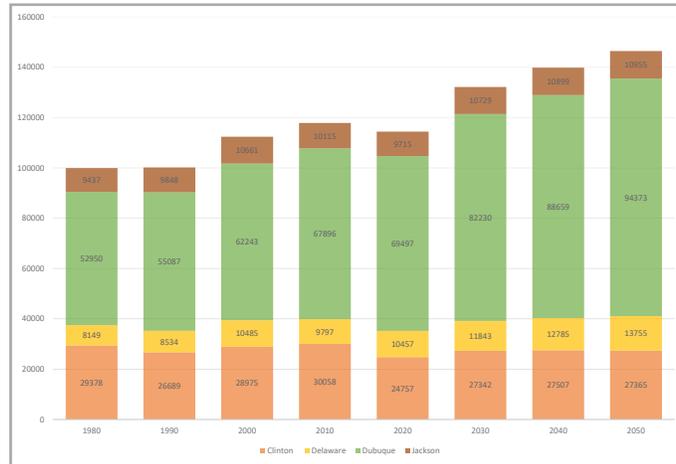
Accurate knowledge of past and future demographic conditions is vital to efficient distribution of transportation resources. Understanding population characteristics helps communities determine the adequacy of existing transportation facilities, land use patterns, economic arrangements, and community facilities. Between 1970 and 1980, the population of the RPA 8 region increased by over 5,000. Between 1980 and 1990 there was a significant decrease in population caused by poor economic conditions that affected many communities in Iowa. The region's population rebounded some in 2000 and decreased slightly in 2010. Figure 2.2 shows the historical

**Figure 2.2 Historical and Projected Future Populations for RPA 8 Counties**  
 Source: Woods and Poole Economics, Inc. via the State Data Center of Iowa and Iowa DOT, iTRAM Data.



## EMPLOYMENT

Monitoring the number and location of jobs in the RPA 8 area is critical to the long-range planning process. Commuting to and from work is one of the most common reasons for travel, so knowing the number of jobs and where they are located can help RPA 8 plan future transportation investments. Figure 2.3 charts historic and projected future employment for RPA 8 counties. The State Data Center of Iowa provided the historical employment data from Woods and Pool Economics. Future projections come from the Iowa DOT's iTRAM data. Dubuque County includes all county employment including jobs located in the DMATS area.



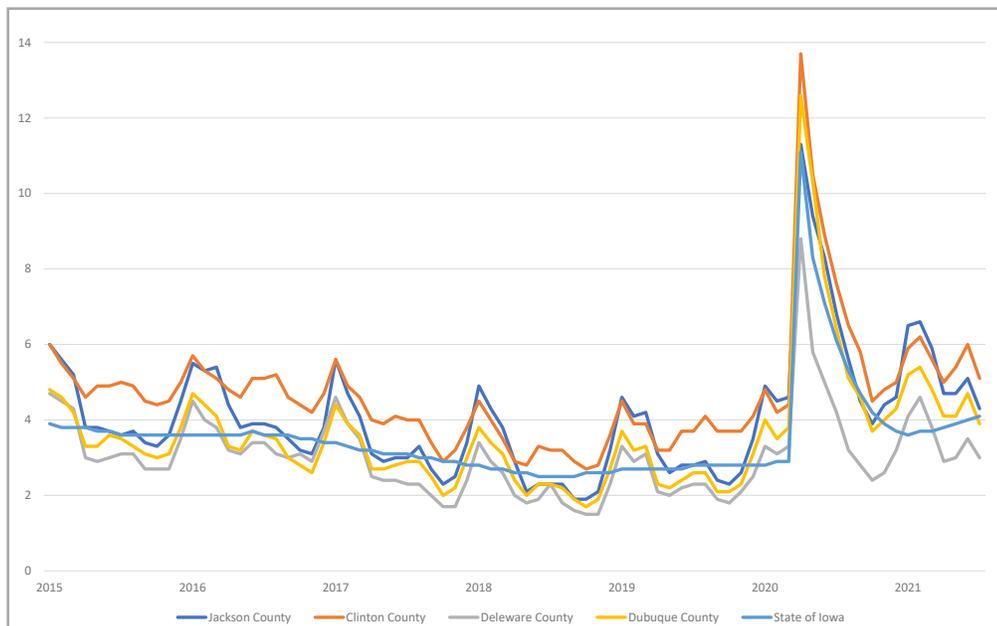
**Figure 2.3 Historical and Projected Future Employment for RPA 8 Counties**

Source: Woods and Poole Economics, Inc. via the State Data Center of Iowa and Iowa DOT, iTRAM Data.

The area's total employment has grown at a faster rate than its population. Future projections assume that this trend will continue. This trend is likely the result of several factors including an increased number of part time jobs, increased labor force participation by women, and increased commuting from outside the region for work.

## UNEMPLOYMENT RATE

Figure 2.4 charts the region's unemployment rate from January 2015 to September 2021. The monthly unemployment rate can help demonstrate seasonal changes in employment. All areas see an increase in unemployment in the winter months with seasonal workers being temporarily out of work. However, in Jackson and Clinton counties the winter unemployment increase is higher when compared to other areas. These seasonal unemployment changes likely result in some seasonal variation in traffic and public transit ridership and should be considered in the long-range planning process.



**Figure 2.4 Unemployment Rate**

Source: Iowa Workforce Development, Local Area Unemployment Statistics (LAUS), 2016

## INCOME

Income is one of the most important components of individual mobility. The personal vehicle is the most popular mode of transportation in the RPA 8 area, but for some, owning and operating a vehicle is too expensive. Low-income families are often dependent on public transportation, walking, and bicycling. With these unique transportation needs, understanding the size and location of the low-income population is important to the long-range planning process. Table 2.3 shows the median household income for RPA 8 counties and the State of Iowa in 2019 inflation adjusted dollars. The data shows slight increase in wages for most counties. There was also decline in Clinton County for the median household income since 1999.

**Table 2.3 RPA 8 Median Household Income in 2019 Dollars**

Source: US Census Bureau & 2015-2019 American Community Survey 5-Year Estimates

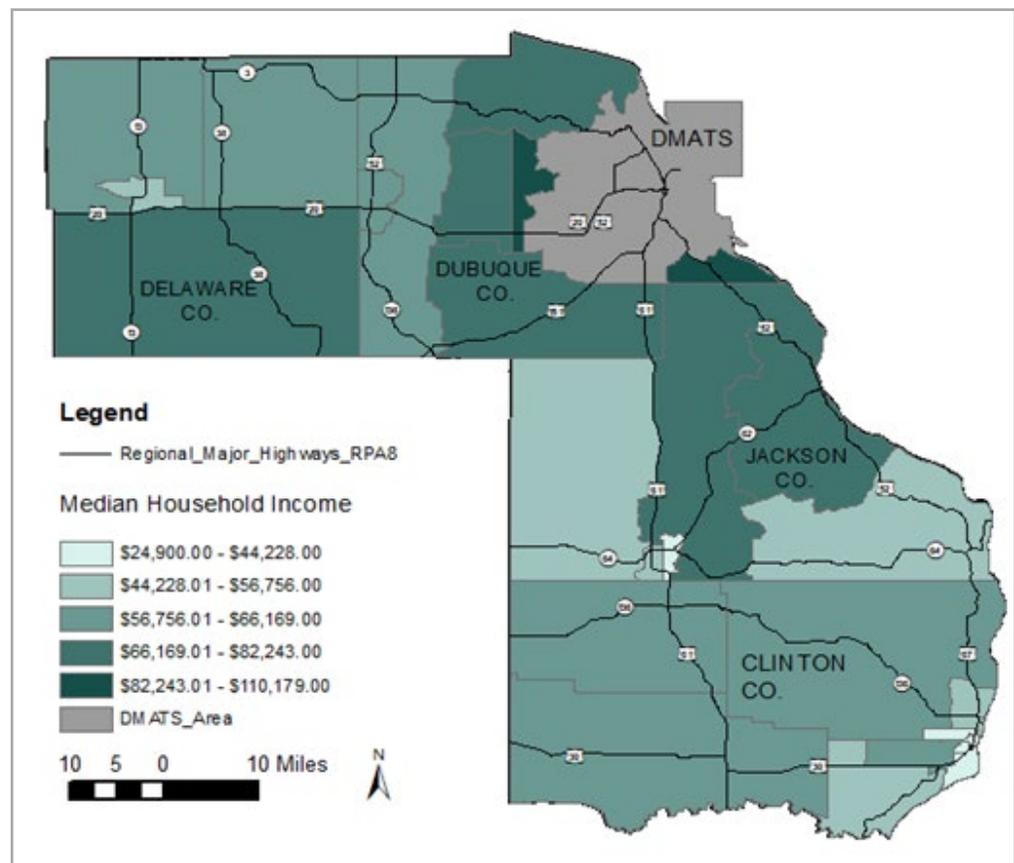
Year	Clinton	Delaware	Dubuque	Jackson	State of Iowa
1999	\$57,428	\$53,104	\$58,298	\$46,362	\$54,077
2010	\$54,132	\$57,036	\$60,740	\$52,986	\$60,567
2015	\$54,469	\$55,195	\$56,949	\$49,816	\$57,300
2019	\$51,688	\$63,750	\$63,031	\$55,967	\$61,691

\*Values Adjusted for inflation using the Consumer Price Index

Income can greatly affect people's ability to move around their community. Lower income households may not be able to afford a car and be more dependent on public transit to get to work or school. Figure 2.5 shows the distribution of household income across the RPA 8 area.

**Figure 2.5 RPA 8 Median Household Income**

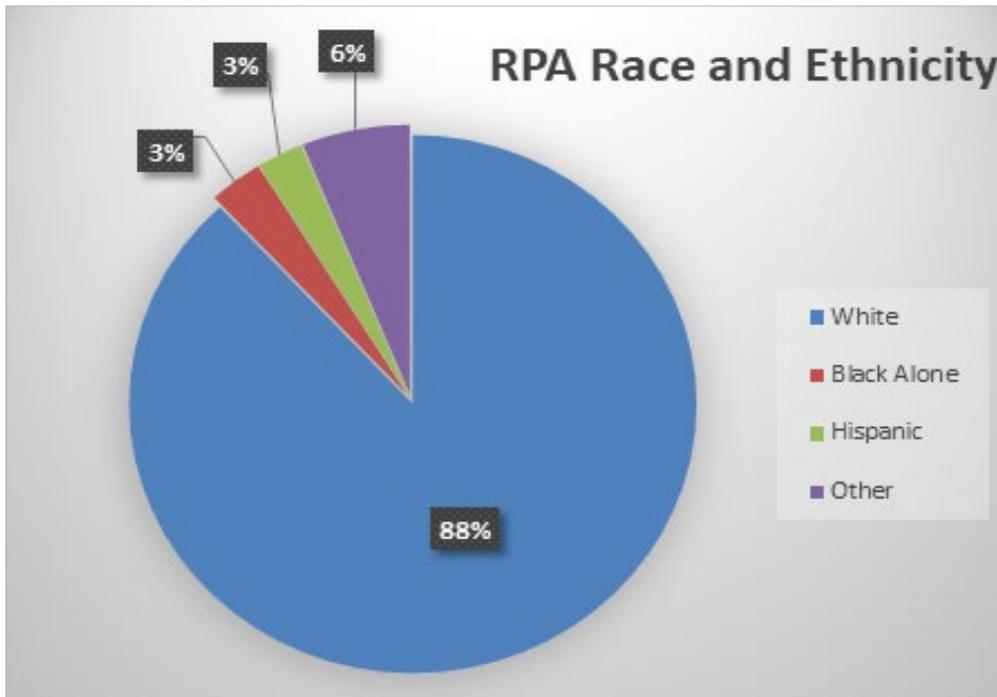
Source: 2015-2019 American Community Survey 5-Year Estimates



## RACE AND ETHNICITY

Historically, minority populations have made up a very small segment of the RPA 8 population, but recent census data shows an increasingly diverse population. In 2000, racial minorities accounted for 2.1% of the RPA 8 population, but by the 2019 Census, the percentage of racial minorities had grown to 12%.

The racial composition of RPA 8's population in 2019 is shown in Figure 2.6. The region is just over 88 percent White, with African-Americans making up 3% of the population and Hispanics making up another 3%. Figure 2.6 maps proportions of minority populations by census tract within the region. To estimate minority population numbers for the RPA 8 area in Dubuque County, staff subtracted population numbers from the cities of Dubuque, Asbury, and Peosta from the Dubuque County total.



**Figure 2.6 Race - Percent of Total RPA 8 Population**

Source: 2015-2019 American Community Survey 5-Year Estimates

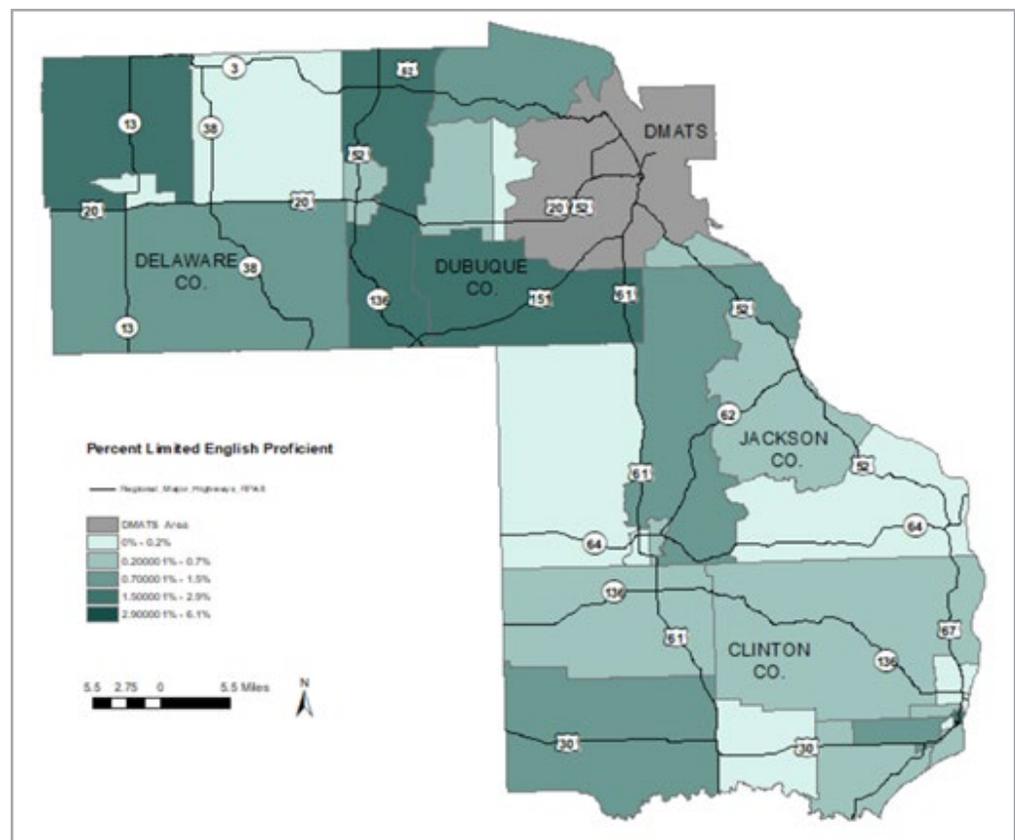
## LIMITED ENGLISH PROFICIENT POPULATION

People with limited English proficiency (LEP) often work in lower-wage jobs that require few communication skills, and rely on public transportation because they cannot afford a car. These populations may have difficulty learning about public transit options in their community if information is primarily communicated in English.

Mapping the location of LEP populations can help transportation officials target language services to the areas where they are most needed. According to FTA Circular C 4702.1B, “Limited English Proficient (LEP) persons refers to persons for whom English is not their primary language and who have a limited ability to read, write, speak, or understand English.”

Figure 2.7 shows the LEP population in the RPA 8 Area. Spanish is the most common language spoken by LEP populations in the RPA 8 area. RPA 8 does not have a defined LEP population above the Department of Justice’s Safe Harbor threshold. The Department of Justice defines the Safe Harbor threshold as, “1,000 persons OR 5% of the total population for a particular language, whichever is less, requiring vital document translation.” The highest concentration of LEP people in the RPA 8 area is Census Tract 4 in the City of Clinton, which has a 2.41% LEP population.

**Figure 2.7 Limited English Proficient Population**  
Source: 2015-2019 American Community Survey 5-Year Estimates



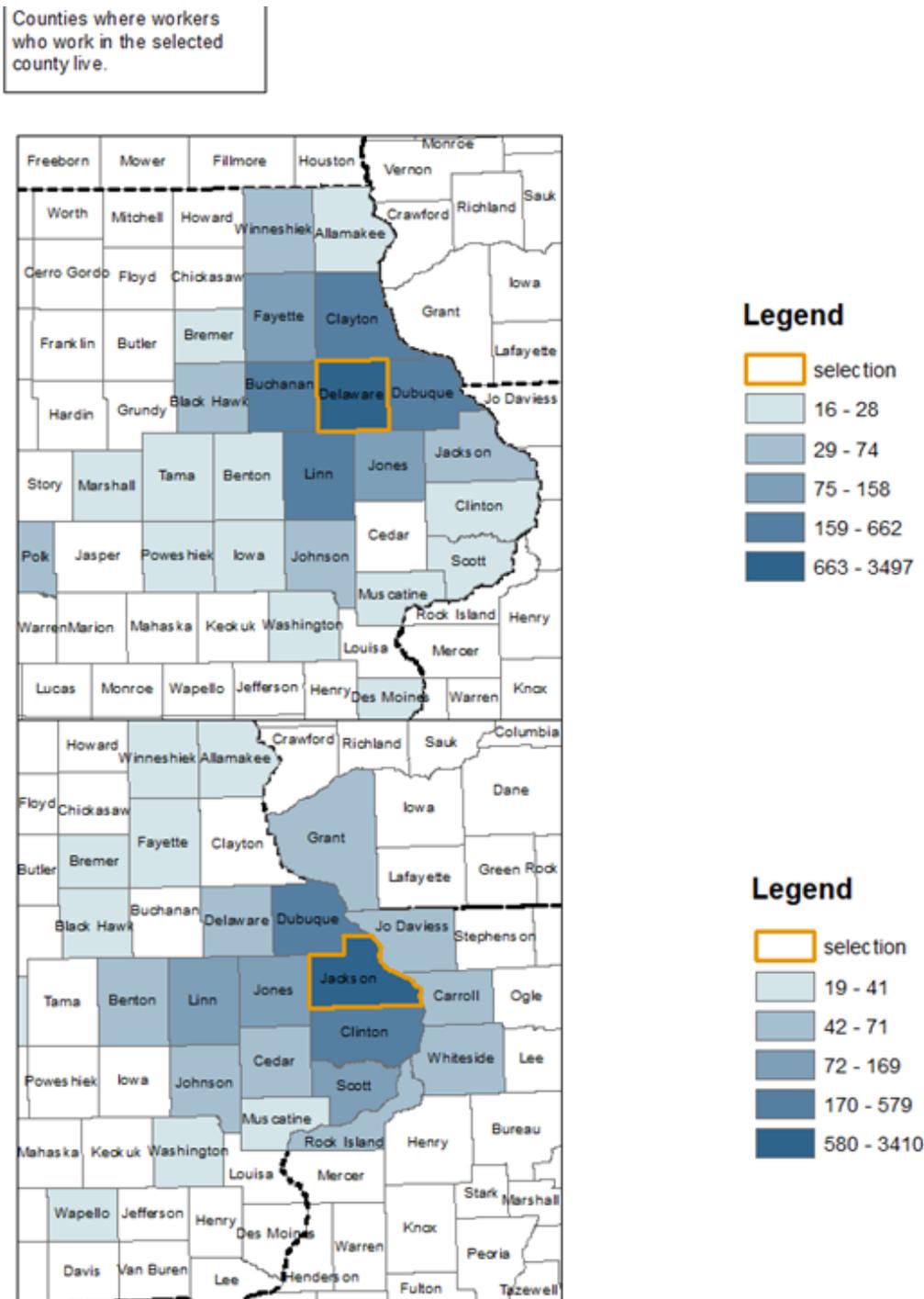
## COMMUTING PATTERNS

The RPA 8 area is made up of rural and urban areas. While the homes of the region's workers are spread across the area, the region's jobs area more concentrated in the urban areas and small cities. The region's economy relies on the transportation network to move workers safely and efficiently.

The commuting data mapped in figures 2.8 to 2.11 illustrates the importance of regional transportation planning. Figures 2.8 and 2.9 show inward commutes. The map shows counties where workers who work in the selected county live.

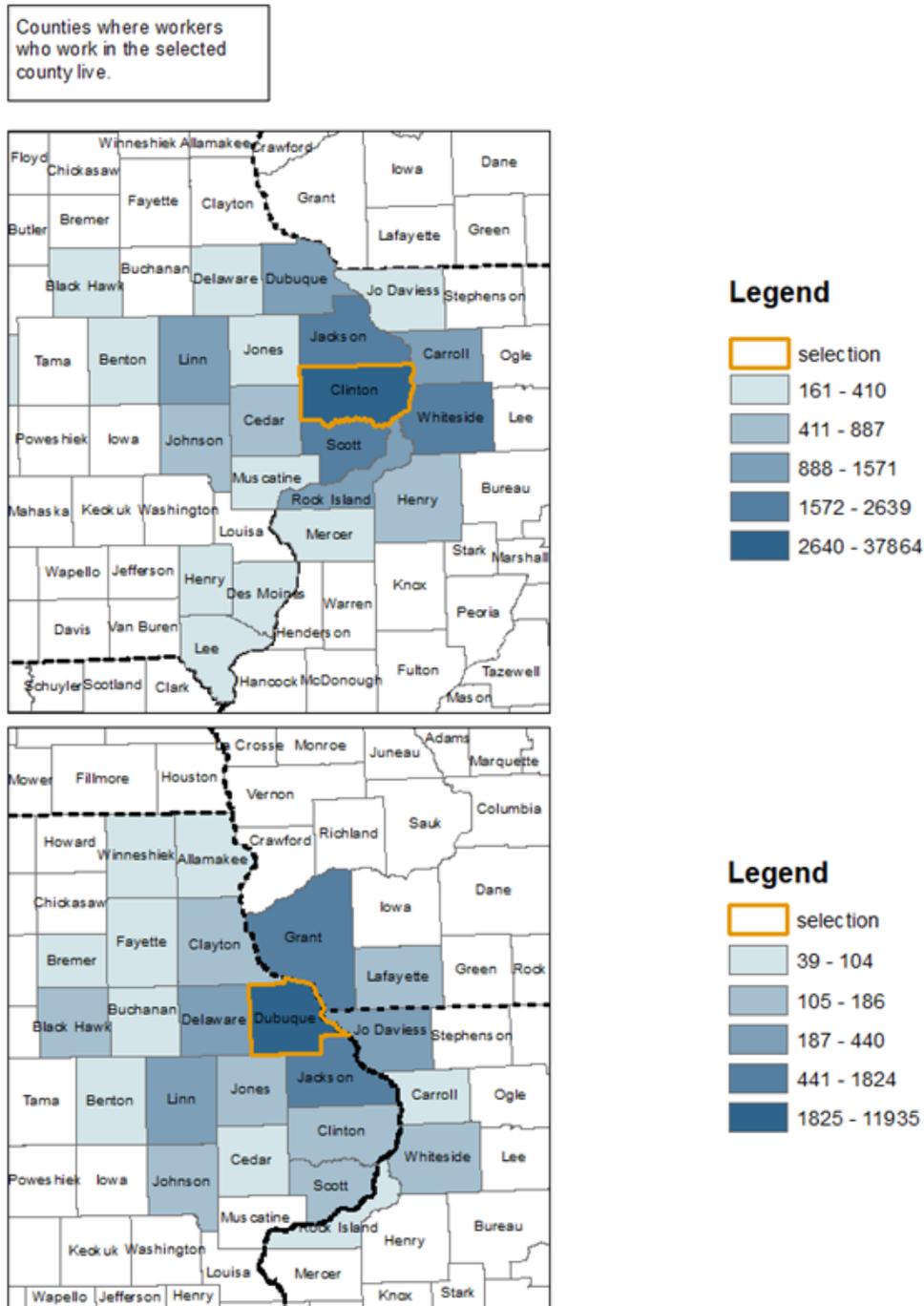
**Figure 2.8 Inward Commutes Delaware & Jackson Counties**

Source: U.S. Census Bureau, Center for Economic Studies, [www.http://onthemap.ces.census.gov/](http://onthemap.ces.census.gov/), 2021



**Figure 2.9 Inward Commutes Clinton & Dubuque Counties**

Source: U.S. Census Bureau, Center for Economic Studies, [www.http://onthemap.ces.census.gov/](http://onthemap.ces.census.gov/), 2021

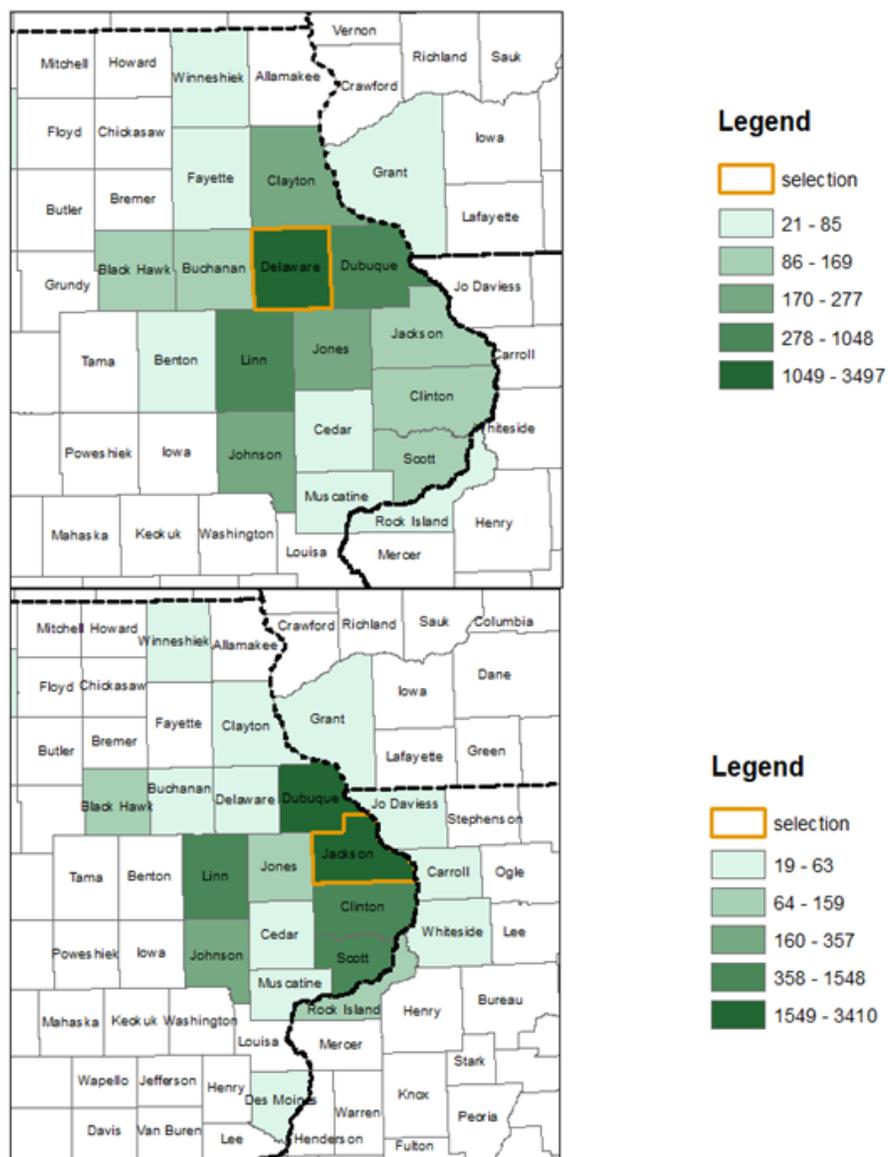


Figures 2.10 and 2.111 show outward commutes. The maps shows the counties where workers who live in the selected county work. Both maps illustrate the regional nature of the area’s workforce and a high level of commuting between counties.

**Figure 2.10 Outward Commutes Delaware & Jackson Counties**

Source: U.S. Census Bureau, Center for Economic Studies, [www.http://onthemap.ces.census.gov/](http://onthemap.ces.census.gov/), 2021

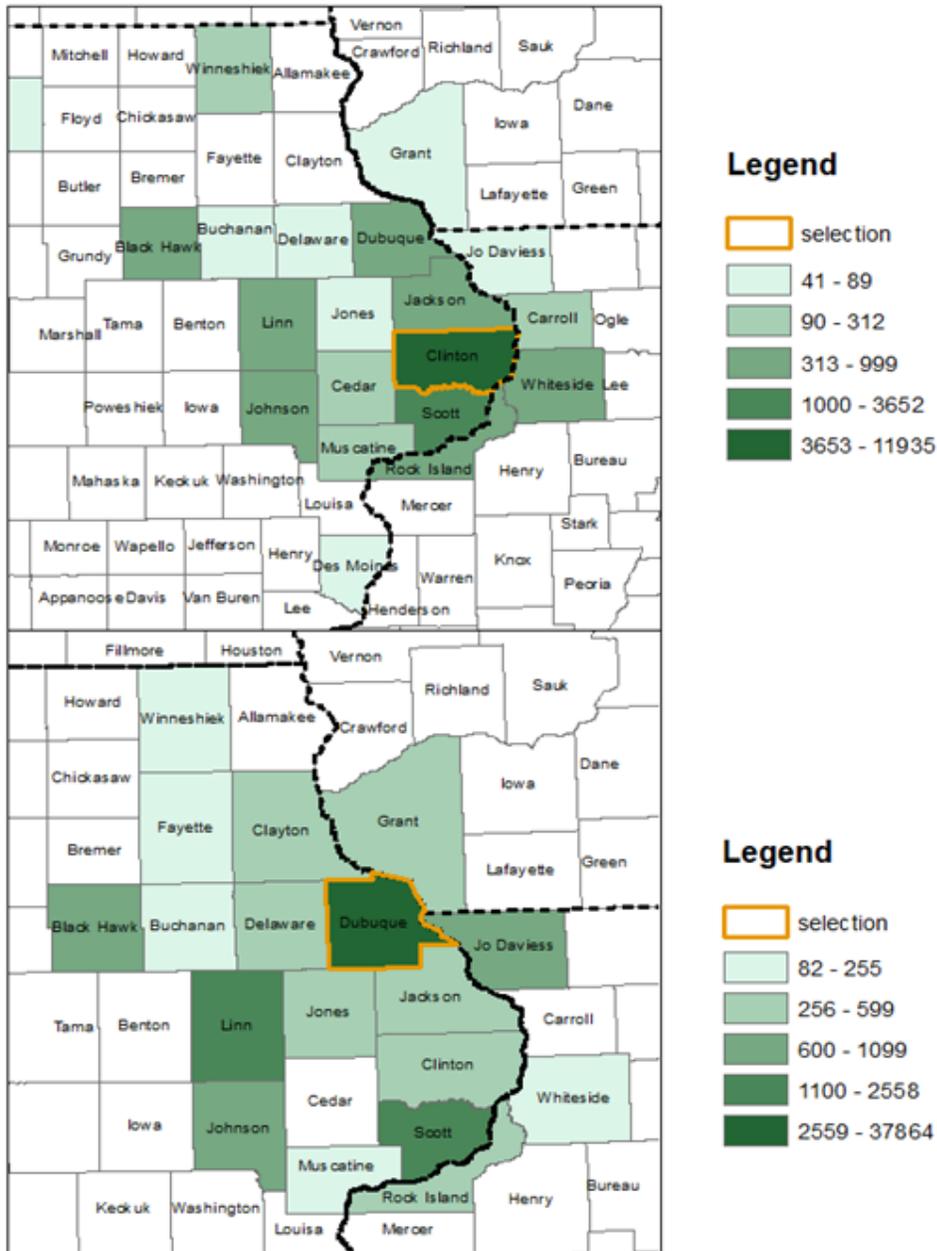
Counties where workers who live in the selected county work.



**Figure 2.11 Outward Commutes Clinton & Dubuque Counties**

Source: U.S. Census Bureau, Center for Economic Studies, [www.http://onthemap.ces.census.gov/](http://onthemap.ces.census.gov/), 2021

Counties where workers who live in the selected county work.



## MODE TO WORK

Most workers in the RPA 8 area drive themselves to work. The Census estimates most workers that live in the area drive alone to get to work. Table 2.4 charts means of transportation to work for RPA 8 counties and the State of Iowa. All RPA 8 Counties and the State have similar mode use patterns, with Driving Alone and Carpooling being the most popular. Mode share is an important factor in future transportation planning. While driving accounts for most of the area's trips, RPA 8 is committed to accommodating all modes of transportation in its planning process.

Means of Transportation	Iowa	Clinton County	Delaware County	Dubuque County	Jackson County
Car, truck, or Van	89.42%	90.44%	88.05%	90.88%	89.81%
Public Transportation	1.08%	0.59%	0.57%	1.00%	0.28%
Taxicab	0.08%	0.00%	0.00%	0.13%	0.00%
Motorcycle	0.14%	0.14%	0.00%	0.09%	0.13%
Bicycle	0.46%	0.18%	0.00%	0.26%	0.15%
Walked	3.25%	2.41%	2.27%	3.21%	2.69%
Other means	0.69%	0.83%	0.94%	0.46%	0.47%
Worked at home	4.89%	5.42%	8.17%	3.98%	6.49%
Drove alone	80.2%	82.8%	82.5%	83.1%	83.7%
Carpool	8.6%	7.7%	5.6%	7.8%	6.0%

**Table 2.4 Means of Transportation to Work for Workers 16 Years and Over**

Source: 2015-2019 American Community Survey 5-Year Estimates

## TRAVEL TIME TO WORK

Commute time to work is an important measure of the regional transportation system. Travel times vary across the RPA 8 counties. Table 2.5 shows the average travel time to work for workers 16 years and over who did not work at home. Travel times in the region's two more rural counties, Jackson and Delaware are a bit longer while travel times in Dubuque and Clinton are shorter. Rural residents are more likely to travel outside the immediate area for work, while urban residents may be more likely to live and work in the same community.

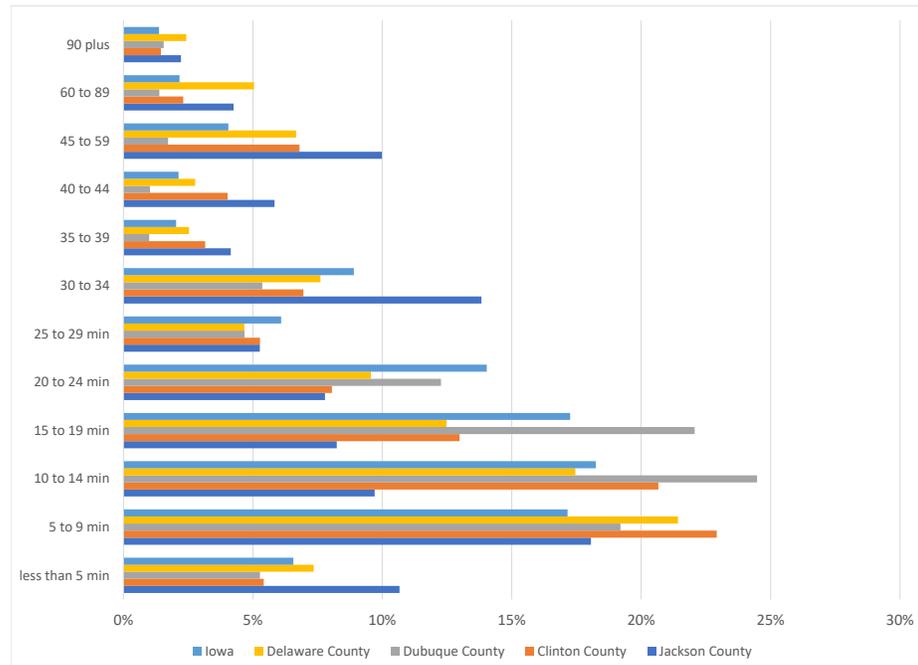
Area	Average Travel Time (Minutes)
Iowa	19.8
Clinton County	19.8
Delaware County	22.5
Dubuque County	16.7
Jackson County	24.4

**Table 2.5 Average Travel Time to Work**

Source: 2015-2019 American Community Survey 5-Year Estimates

Figure 2.12 charts the distribution of travel times for RPA 8 counties and the State of Iowa. Largely the distributions of commute time skew shorter, with most commute times in the 1-24 minute range.

**Figure 2.12 Travel Time to Work for Workers 16 Years and Over**  
 Source: 2015-2019 American Community Survey 5-Year Estimates

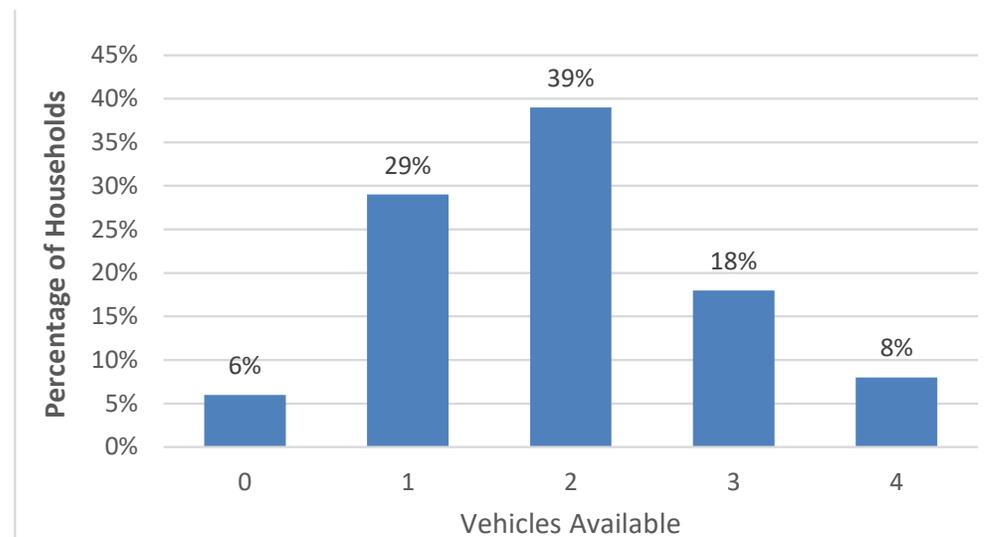


### NUMBER OF VEHICLES PER HOUSEHOLD

The number of vehicles available to households provides a means to estimate future travel demand, as 2017 research conducted by the U.S. Energy Information Administration has shown, households with more vehicles tend to generate more vehicle trips.<sup>1</sup> A high number of zero vehicle households could indicate the need for bicycle, pedestrian, or transit services. The American Community Survey asks respondents to specify the number of vehicles that are kept at home and available for the use of household members. Figure 2.13 shows the number of vehicles available to households in the RPA 8 area. The chart shows that 94% of households have at least one vehicle available.

<sup>1</sup> U.S. Energy Information Administration, based on U.S. Department of Transportation, Federal Highway Administration, 2017 National Household Survey

**Figure 2.13 Number of Vehicles Available to RPA 8 Households**  
 Source: 2015-2019 American Community Survey 5-Year Estimates



# 3

## ROADS AND BRIDGES

Chapter 3 provides an overview of the existing roads and bridges in the RPA 8 area. The chapter includes data on the road and bridge network including traffic volumes, level of congestion, and pavement and bridge conditions. The chapter also includes operation and maintenance cost estimates and a list of future network expansion projects.

### ROADS

The RPA 8 region's transportation system works extremely well for the majority of users. Most commuters in the planning area drive alone to work. Five major US highways, US 20, US 30, US 52, US 151 and US 61, pass through Clinton, Delaware, Dubuque, and Jackson counties. These facilities, supported by a network of state, county, and local roads, make it possible for travelers to get from one part of the region to the other efficiently. Freight transportation also benefits from the region's relatively uncongested highway facilities and other major roadways. The roads section of the chapter describes the roadway system in the RPA 8 area in terms of its functional classification, existing traffic volumes, congestion, and pavement conditions.

### FUNCTIONAL CLASSIFICATION

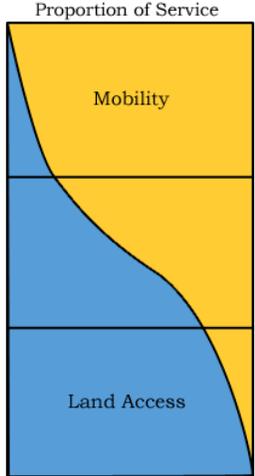
The RPA 8 region contains a number of individual streets and street types, each serving a different purpose within the transportation network. A Functional Classification system is used to group and describe roads according to the type of service they provide and their role in the network.

The functional classification for a given roadway is determined based on its setting (urban or rural) and whether its main role is providing connectivity, mobility, or accessibility. The number of vehicle miles traveled (VMT), average annual daily traffic (AADT), and adjoining land uses of a roadway are also considered. Traditionally, the roadway functional classification system has been used to describe how travel flows through the regional roadway network and to determine project eligibility for inclusion in different transportation planning projects and grants. The arterial roads form the backbone of the network. Local streets feed the collectors, which in turn feed the arterials.

The functional classification categories found in the RPA 8 area include Principal Arterial, Minor Arterials, Major Collectors, Minor Collectors, and local streets.

Principal Arterial roadways primarily serve a mobility function with minimal land access. The primary purpose of principal arterials is the rapid movement of people and goods for extended distances. Principal arterials are high capacity, high speed roadways with restricted access. US Highways 20, 30, 52, 61 and 151 are examples of a principal arterial in the RPA 8 area.

**Relationship of Functionally Classified Systems in Serving Traffic Mobility and Land Access**



Minor Arterials interconnect with and augment principal arterials. Minor arterials within urban areas serve inter-community trips of moderate length. Although the primary use of the minor arterial is mobility, this functional class provides more land access than a principal arterial. Iowa Highway 38 in Delaware County, Iowa Highway 136 in Dubuque County, and Iowa Highway 64 in Jackson County are some of the local examples of minor arterials.

Collector streets channel trips between the local street system and the arterials. Collectors serve a balance between mobility and land access. Parking and direct driveway access to the street are typically allowed on collectors. Collectors are usually wider, have higher capacity, and permit somewhat higher speeds than the local street network. Collectors are divided into two subcategories Major Collectors and Minor Collectors.

Classification	Lane Miles	Percent
Principal Arterials	788	9%
Minor Arterials	477	5%
Major Collectors	1,190	13%
Minor Collectors	1,346	15%
Local Streets	5,196	58%
Total	8,997	

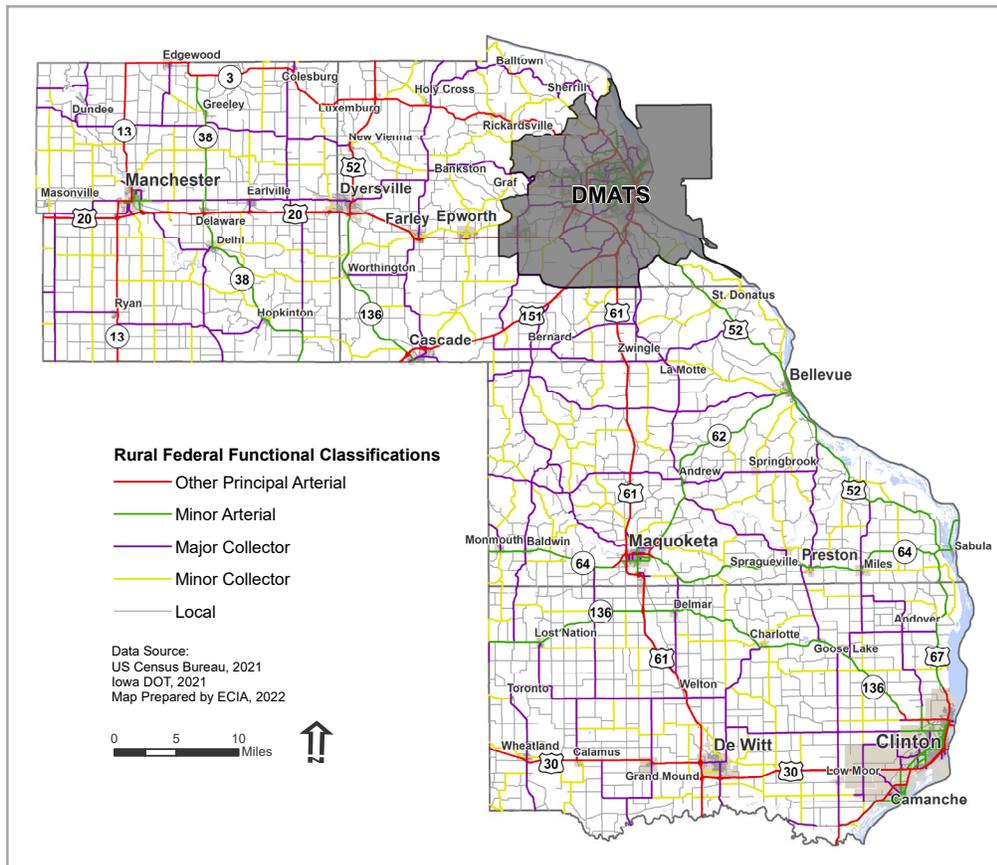
**Table 3.1: Roadway Lane Miles by Functional Classification**

Source: Iowa DOT, 2021

Local Streets primarily provide local land access and offer the lowest level of mobility. Characteristics of local streets include uncontrolled intersections, posted speed limits of 25 miles per hour or less, and few restrictions on parking. Local streets are not a significant consideration in regional planning and this plan does not address them in any systematic fashion.

The Federal Highway Administration uses functional classification to determine if a roadway is eligible for federal funds. Federal-aid eligible routes include: Principal Arterials, Minor Arterials, Major Collectors, and Urban Minor Collectors. Rural Minor Collectors and Local Streets are not Federal-aid eligible.

Over 27% of RPA 8 roadway lane miles are eligible to use federal funds. Table 3.1 breaks down RPA 8 area routes by classification, and Figure 3.1 maps the routes.



**Figure 3.1: Federal Functional Classification**

Source: Iowa DOT 2021

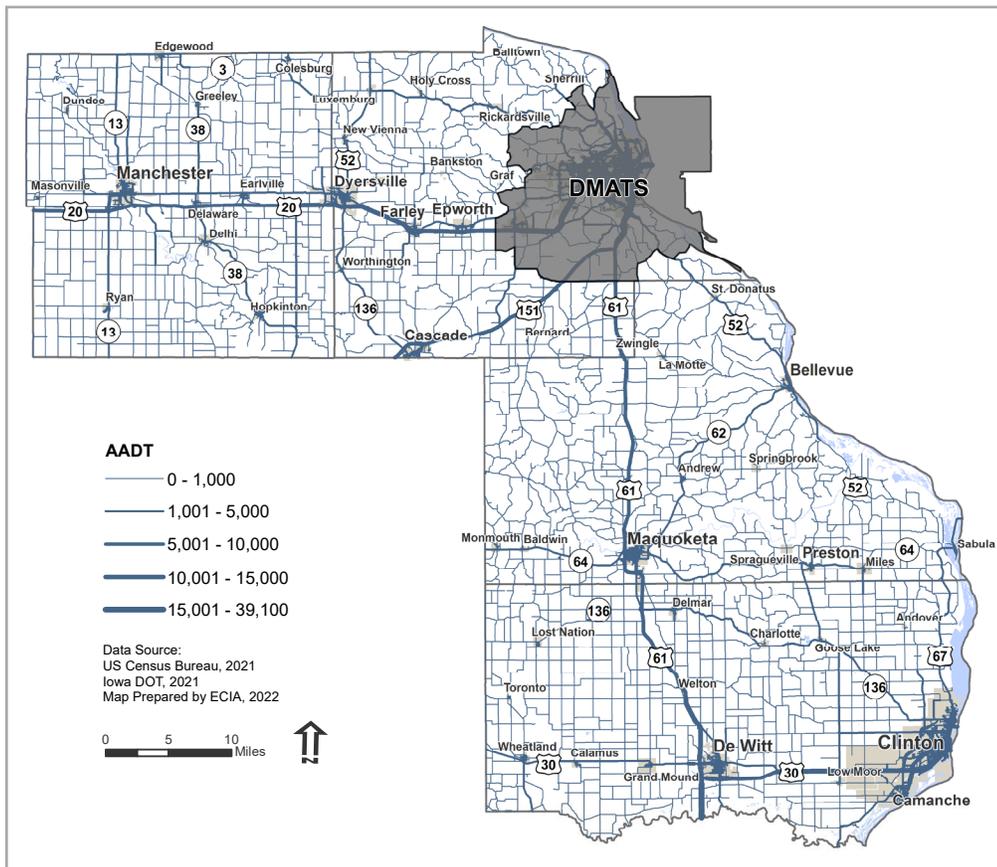
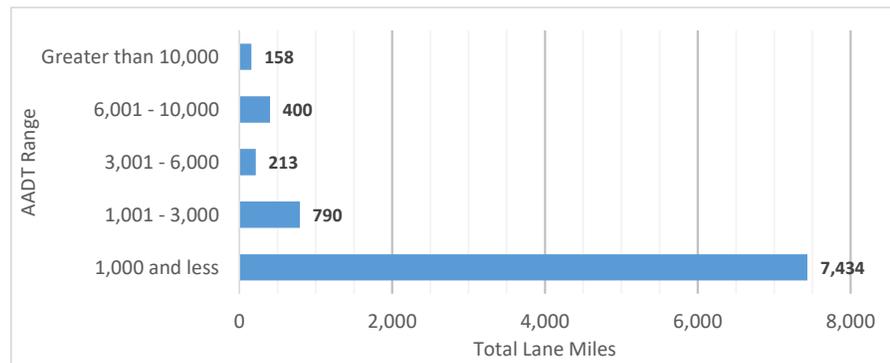
## TRAFFIC VOLUME

Traffic volume data helps to determine the number, movements, and classifications of roadway vehicles at a given location. This data can help identify critical flow time periods, determine the influence of large vehicles on vehicular traffic flow, or document traffic volume trends. Volume data is important in planning future updates to current roadways as well as designing new roads.

The measurement of traffic volume is one of the core functions of highway planning and management. Traffic counts provide the most commonly employed measure of roadway usage and are needed for the majority of traffic engineering analyses. A majority of roadway lane miles in RPA 8 carry less than 1,000 vehicles per day. Higher traffic volumes are typically found on the region's primary road system. AADT numbers are based on traffic counts that local and Iowa DOT engineers periodically collect on area roads. This plan reports most recent data provided by Iowa DOT. Figure 3.2 provides roadway lane miles by AADT. Figure 3.3 maps AADT on RPA 8 roadways.

**Figure 3.2: Roadway Lane Miles by Average Annual Daily Traffic**

Source: Iowa DOT, 2021



**Figure 3.3: Average Annual Daily Traffic**

Source: Iowa DOT, 2021

## CONGESTION

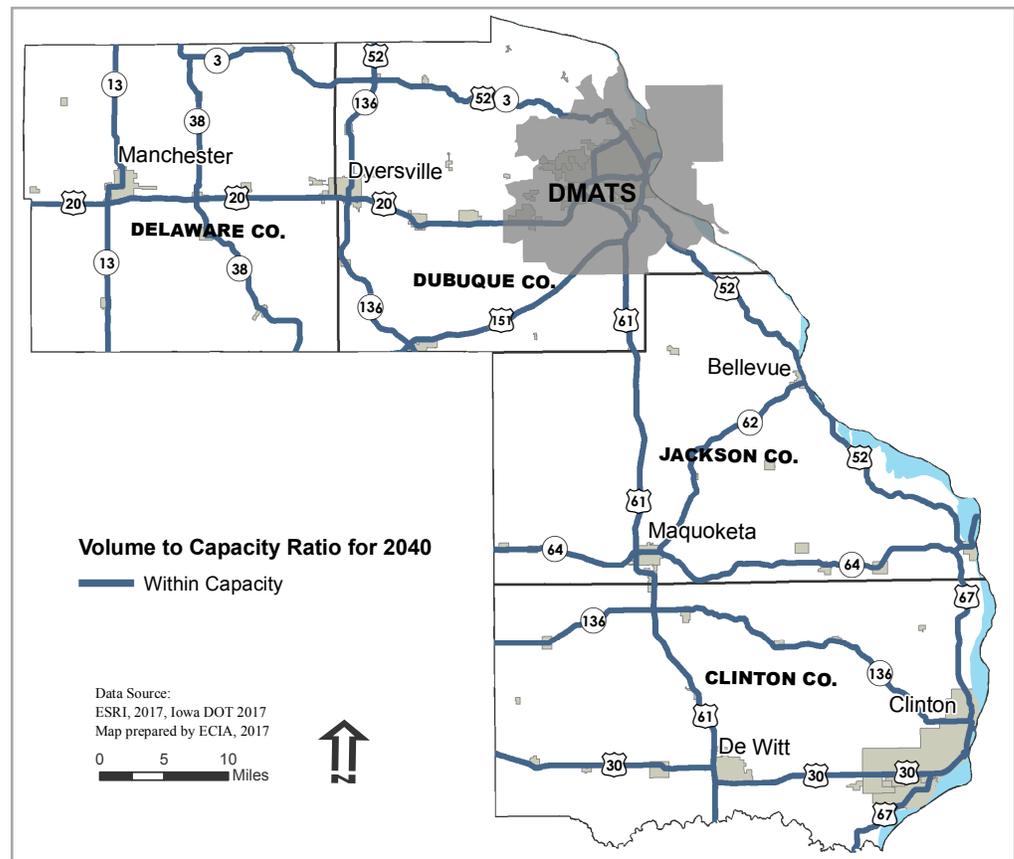
Monitoring traffic congestion is an essential component of planning process. Two variables commonly used measure congestion are Volume to Capacity Ratio (V/C) and Travel Time Index (TTI). V/C ratio is a measure of the average traffic volume compared to the service volume or capacity of a given facility. For example, a state highway is designed to carry more vehicles per hour, per lane, than a local street. The Iowa DOT's Iowa Traffic Analysis Model (iTRAM) has the ability to forecast future the V/C ratios on major arterials within the region. iTRAM forecasts that RPA 8 roadways will continue to have sufficient capacity to accommodate future traffic in out to the year 2040. Figure 3.4 maps the iTRAM 2040 V/C ratio on RPA 8 primary routes.

Travel Time Index (TTI) is the ratio of travel time during the peak periods to the time necessary to make the same trip at free-flow speeds. The TTI is a useful measurement because it provides an easily calculated and readily understandable congestion measure. Most RPA 8 roadways do not see much difference between peak and off peak travel times. Some urban areas may experience a small peak time delay, but these delays do not result in an TTI that meets the congestion threshold.

With little anticipated growth in future congestion levels, RPA 8 communities will likely direct the majority of available road and bridge funding to maintenance of existing facilities rather than adding additional capacity. However, targeted capacity improvements may be necessary to improve safety or address a traffic bottleneck. RPA 8 will continue to monitor and reevaluate congestion levels as needed.

**Figure 3.4: Volume to Capacity on Primary Routes for year 2040**

Source Iowa DOT  
iTrams Model, 2017.



## PAVEMENT

Rough roads are about more than just an uncomfortable ride. The roughness of a road is one indicator of how soon a road needs maintenance or reconstruction, which is tied to federal and state budget allocations. Furthermore, rougher roads can decrease the efficiency of a vehicle, increasing fuel use and greenhouse gas emissions. State and federal agencies regularly collect data on pavement condition and road roughness and use standardized indexes to compare data. Pavement Condition Index (PCI) and International Roughness Index (IRI) are two commonly used pavement scales.

RPA 8 uses pavement data presented in this section to provide a general assessment of the region's paved roads. RPA 8 has around 4,000 lane miles of paved roads including the primary system routes maintained by the Iowa DOT, secondary routes maintained by counties, and municipal routes maintained by cities. Road maintenance agencies can use pavement data, along with other factors like traffic volume, to prioritize roads for maintenance and distribute funding effectively.

### Pavement Data

The Iowa DOT maintains pavement data on the state's primary road system in the Pavement management Information System (PMIS.)

The Center for Transportation Research and Education (CTRE) at Iowa State University maintains a pavement database on the state's secondary and municipal roads through the Iowa Pavement Management Program (IPMP.)

### PAVEMENT CONDITION INDEX (PCI)

Pavement condition index (PCI) is a numerical index between 0 and 100, that is used to indicate the general condition of a pavement section. Table 3.2 provides the breakdown of RPA 8 road lane miles by PCI value. Figure 3.5 maps the PCI system rating of the RPA 8 roadway system. Overall, the PCI indicates satisfactory roadway conditions across most of the area with 86% of the region's roads rated fair or better.

**Table 3.2 RPA 8 Roadway Lane Miles by PCI**

Sources: Iowa DOT, PMIS, 2021

CTRE, IPMP, 2019

PCI	Category	Primary System		Secondary and Municipal Systems		Total	
		Lane Miles	%	Lane Miles	%	Lane Miles	%
< 20	Very Poor	3.9	0%	91.1	3%	95.0	2%
≥20 and <40	Poor	32.5	3%	427.7	15%	460.2	12%
≥40 and < 60	Fair	79.7	7%	864.8	30%	944.5	24%
≥60 and < 80	Good	566.8	52%	783.4	27%	1,350.2	34%
≥80 and ≤100	Excellent	411.3	38%	724.6	25%	1,135.9	28%
	No data	1.8	0%	14.0	0%	15.8	0%
<b>Total</b>		<b>1,096.0</b>		<b>2,905.6</b>		<b>4,001.6</b>	

### INTERNATIONAL ROUGHNESS INDEX (IRI)

The IRI is a standard measure of roadway roughness that is based on vehicle suspension movement. Roadways are divided into good, fair, and poor categories based on IRI values. Table 3.3 provides a breakdown of RPA 8 roadway lane miles by IRI. Figure 3.6 maps the primary road IRI ratings of the region's road system. Overall, drivers can expect smooth roads across the region, especially on the primary system where nearly 100 percent of the lane miles have an IRI of fair or better.

**Table 3.3 RPA 8 Roadway Lane Miles by IRI**

Sources: Iowa DOT, PMIS, 2021

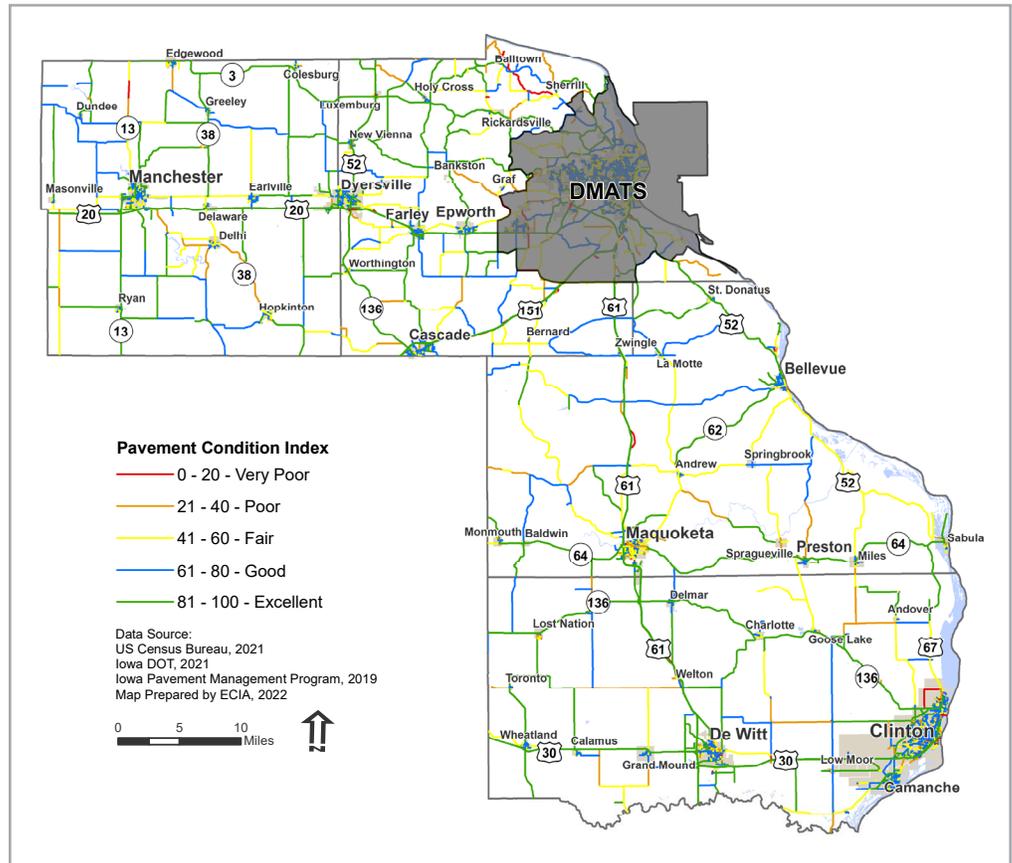
CTRE, IPMP, 2019

IRI	Category	Primary System		Secondary and Municipal Systems		Total	
		Lane Miles	%	Lane Miles	%	Lane Miles	%
<100	Good	657.8	60%	755.4	26%	1,413.2	35%
≥100 and < 250	Fair	433.7	40%	1,594.4	55%	2,028.1	51%
≥250	Poor	2.6	0%	555.8	19%	558.4	14%
No Data		1.8	0%	-	0	1.8	0%
<b>Total</b>		<b>1,095.9</b>		<b>2,905.6</b>	<b>0%</b>	<b>4,001.5</b>	

**Figure 3.5 Pavement Condition Index Map**

Sources: Iowa DOT, PMIS, 2021

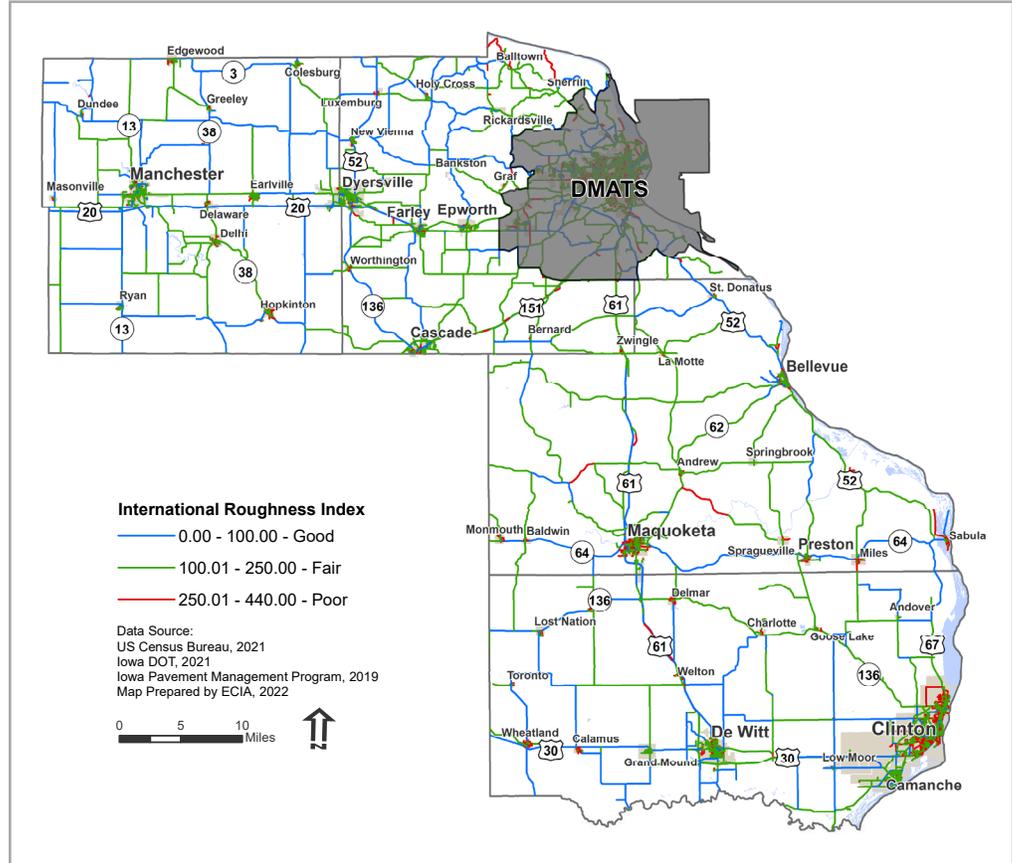
CTRE, IPMP, 2019



**Figure 3.6 International Roughness Index Map**

Sources: Iowa DOT, PMIS, 2021

CTRE, IPMP, 2019



## ROAD SYSTEM OPERATION & MAINTENANCE COSTS

RPA 8 has developed a method to estimate the operation and maintenance costs of a roadway over a 25-year period. The analysis uses methods and data from the Wisconsin Department of Transportation and the Iowa Department of Transportation. The analysis includes distribution functions for specific activities and per mile costs of individual maintenance activities. The frequency of occurrence is assigned for each activity. Activity unit costs and frequency are listed in Table 3.4.

The unit cost includes labor plus benefits, equipment and materials cost. The administrative costs were removed for this analysis. The cost for each activity is inflated at 4% per year to assess the future cost to conduct the activity. Bridge projects are estimated using cost per square foot. The analysis does not consider the AADT on each corridor as it is difficult to develop an algorithm that can create a correlation between AADT and O&M.

RPA 8 uses this cost estimation method to forecast future operation and maintenance costs for the LRTP. Based on this method, RPA 8 needs \$679 million to operate and maintain the federal aid system, excluding the primary road system. Table 3.5 provides cost of maintaining federal aid system excluding the primary road system within RPA 8.

Activity Group	Maintenance Activity Description	Cost	Units	Frequency
<b>Roadway Surface</b>				
Asphalt	Spot Repair / Pothole Repair/ Crack Filling	\$3,750	Lane Mile	Every 3 years
	3 in Milling & 3 in HMA resurfacing	\$187,500	Lane Mile	Every 15 years
	Pavement Replacement	\$750,000	Lane Mile	Every 60 years
Concrete	Full Depth Patch	\$6,250	Lane Mile	Every 5 years
	3" thick resurfacing	\$187,500	Lane Mile	Every 20 years
	Pavement Replacement	\$750,000	Lane Mile	Every 60 years
<b>Roadside Maintenance</b>				
Litter	Sweeping Pavement	\$73	Centerline mile	Every year
	Litter Pickup	\$317	Centerline mile	Every year
<b>Drainage</b>				
	Vegetation Control	\$105	Centerline mile	Every year
	Roadside Drainage	\$120	Centerline mile	Every year
<b>Sign Repair</b>				
	Sign Maintenance	\$625	Centerline mile	Every Year
<b>Traffic</b>				
	Pavement Marking	\$296	Lane Mile	Every 5 years
<b>Snow and Ice Control</b>				
	Phase I Snow and Ice Control	\$816	Lane Mile	Every year
	Phase II Snow and Ice Control	\$278	Lane Mile	Every year
	Abrasives and Chemicals	\$719	Lane Mile	Every year
	Equipment Cleanup and storm prep	\$146	Lane Mile	Every year
	Other Snow and Ice Activities	\$264	Lane Mile	Every year
	Anti-Icing	\$14	Lane Mile	Every year

**Table 3.4 Road System Maintenance Activities**

**Table 3.5 RPA  
8 Road System  
Operation and  
Maintenance Costs**

Year	Roadway Surface	Roadside Maintenance	Drainage	Sign Repair	Traffic	Snow and Ice Control
2021	\$0	\$0	\$0	\$0	\$0	\$0
2022	\$0	\$298,000	\$145,000	\$403,000	\$0	\$2,881,000
2023	\$3,058,000	\$323,000	\$157,000	\$435,000	\$0	\$3,116,000
2024	\$0	\$335,000	\$163,000	\$453,000	\$0	\$3,241,000
2025	\$3,904,000	\$349,000	\$170,000	\$471,000	\$446,000	\$3,371,000
2026	\$3,440,000	\$363,000	\$176,000	\$490,000	\$0	\$3,505,000
2027	\$0	\$377,000	\$183,000	\$509,000	\$0	\$3,646,000
2028	\$0	\$392,000	\$191,000	\$530,000	\$0	\$3,791,000
2029	\$3,870,000	\$408,000	\$198,000	\$551,000	\$0	\$3,943,000
2030	\$4,750,000	\$424,000	\$206,000	\$573,000	\$542,000	\$4,101,000
2031	\$0	\$441,000	\$215,000	\$596,000	\$0	\$4,265,000
2032	\$4,353,000	\$459,000	\$223,000	\$620,000	\$0	\$4,435,000
2033	\$0	\$477,000	\$232,000	\$644,000	\$0	\$4,613,000
2034	\$0	\$497,000	\$241,000	\$670,000	\$0	\$4,797,000
2035	\$255,492,000	\$516,000	\$251,000	\$697,000	\$660,000	\$4,989,000
2036	\$0	\$537,000	\$261,000	\$725,000	\$0	\$5,189,000
2037	\$0	\$559,000	\$272,000	\$754,000	\$0	\$5,396,000
2038	\$5,508,000	\$581,000	\$282,000	\$784,000	\$0	\$5,612,000
2039	\$0	\$604,000	\$294,000	\$815,000	\$0	\$5,837,000
2040	\$217,980,000	\$628,000	\$305,000	\$848,000	\$803,000	\$6,070,000
2041	\$6,195,000	\$653,000	\$318,000	\$882,000	\$0	\$6,313,000
2042	\$0	\$680,000	\$330,000	\$917,000	\$0	\$6,565,000
2043	\$0	\$707,000	\$344,000	\$954,000	\$0	\$6,828,000
2044	\$6,969,000	\$735,000	\$357,000	\$992,000	\$0	\$7,101,000
2045	\$8,555,000	\$764,000	\$372,000	\$1,032,000	\$977,000	\$7,385,000
<b>TOTAL</b>	<b>\$524,074,000</b>	<b>\$12,107,000</b>	<b>\$5,886,000</b>	<b>\$16,345,000</b>	<b>\$3,428,000</b>	<b>\$116,990,000</b>

## BRIDGES

The members of RPA 8 give high priority to the preservation and maintenance of the region's existing bridges. A good network of bridges is essential in facilitating residents' access to activities, goods, and services. Preservation, improvement, and expansion of bridges will bolster the region's economic development potential and the mobility of its residents. RPA 8 has 1,196 bridges of which, 50% are on local roads, 30% are on Collector streets, 6% are on Minor Arterial streets, and 14% are on Principal Arterials. 93% of RPA 8 bridges are located over waterways. Table 3.6 lists bridges by the type of service they provide.

The Federal Highway Administration (FHWA) requires all public bridge owners (state, city, and county) to inspect and report information on their bridges for inclusion in the National Bridge Inventory (NBI).

The FHWA uses the NBI for preparing the selection list of bridges both on the federal and non-federal system. A bridge sufficiency rating is calculated based 55% on structural evaluation, 30% on design obsolescence, and 15% on public importance. Rating formula provides a numeric value which is indicative of bridge sufficiency to remain in service. A bridge sufficiency rating of 100 represents an entirely sufficient bridge and zero represents an entirely insufficient or deficient bridge. Bridges with a rating less than 80 are eligible for repair funding. Bridges with a rating less than 50 are eligible for replacement funding.

Table 3.7 categorizes RPA 8 bridges based on bridge sufficiency rating and Figure 3.7 maps the bridge locations that are eligible for replacement or rehabilitation based on its rating. If the condition it is poor enough that a bridge can no longer carry its intended traffic loads, it may be weight-restricted or closed. Table 3.8 lists the areas bridges by its operational status and Figure 3.8 maps bridges across the RPA 8 area by operational status.

Sufficiency Rating	Category	Bridges	%
< 50	Eligible for Replacement Funding	71	6.2%
≥50 and < 80	Eligible for Repair Funding	201	17.6
≥ 80		853	74.9%
No data		14	1.2%
<b>Total</b>		<b>1,139</b>	

Status	Bridges	%
Closed	8	0.7%
Restricted (Posted)	107	9.4%
Open, Unrestricted	1,010	88.7%
No Data	14	1.2%
<b>Total</b>	<b>1,139</b>	

**Table 3.6 RPA 8 Bridges by Type of Service**

Service Under the Bridge		
Waterway	1,061	93.2%
Highway	40	3.5%
Railroad	14	1.2%
Railroad/ Waterway	5	0.4%
Highway/ Waterway	2	0.2%
Other	2	0.2%
Highway/ Waterway/ Railroad	1	0.1%
No Data	14	1.2
<b>Total</b>	<b>1,196</b>	

Service on the Bridge		
Highway	1,088	95.5%
Highway/ Pedestrian	19	1.7%
Overpass structure at an inter- change	18	1.6%
No Data	14	1.2%
<b>Total</b>	<b>1,139</b>	

Source: Iowa DOT, FHWA. National Bridge Inventory, 2021

**Table 3.7 Bridge Sufficiency Rating**

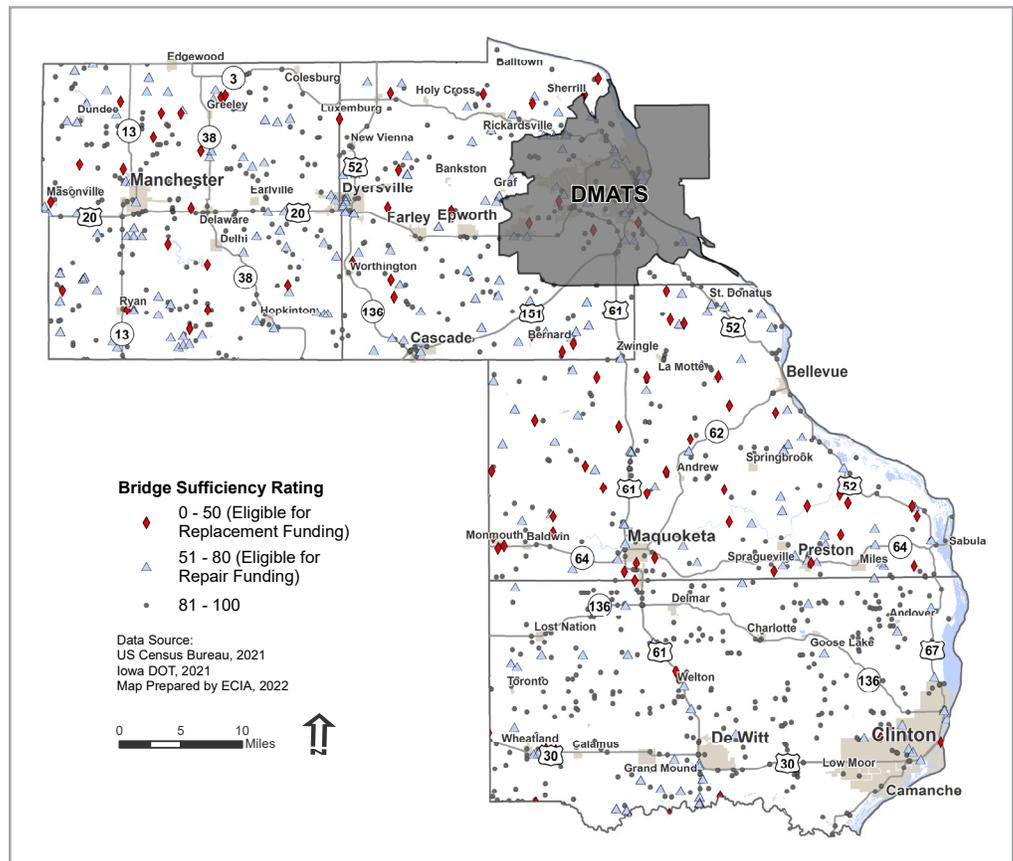
Source: Iowa DOT, FHWA. National Bridge Inventory, 2021

**Table 3.8 Bridge Status**

Source: Iowa DOT, FHWA. National Bridge Inventory, 2021

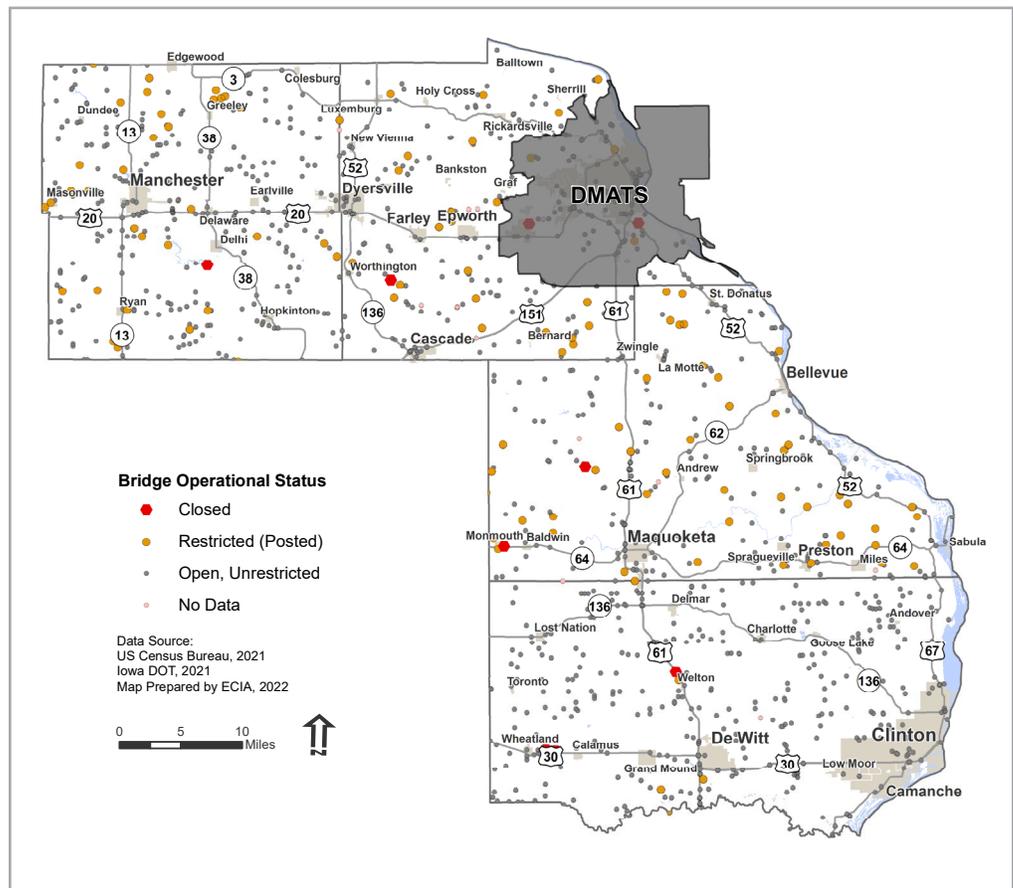
### Figure 3.7 Bridges Eligible for Replacement or Rehabilitation.

Source: Iowa DOT, FHWA, National Bridge Inventory, 2021



### Figure 3.8 Bridge Status.

Source: Iowa DOT, FHWA, National Bridge Inventory, 2021



## BRIDGE SYSTEM MAINTENANCE COSTS

RPA 8 has developed a method to estimate the operation and maintenance costs of bridges on federal aid system over a 25 year period. RPA 8 did not include local and primary system bridges as the funding analysis for future projections did not take into consideration funding spent on the local system.

The analysis uses data and methods from the Wisconsin Department of Transportation and the Iowa Department of Transportation. The data analysis includes distribution functions for specific activities and per square foot costs of individual maintenance activities. The frequency of occurrence is assigned for each activity. Cost per square foot and frequency of each activity are listed in Table 3.9.

The unit cost per square foot includes labor plus benefits, equipment and materials cost. The administrative costs were removed for this analysis. The cost for each activity is inflated at 4% per year to assess the future cost to conduct the activity. The analysis does not consider the AADT on each bridge as it is difficult to develop an algorithm that can create a correlation between AADT and O&M.

Based on the analysis, RPA 8 needs \$40 million to operate and maintain bridges on the federal aid system excluding bridges on the primary road system. Table 3.10 provides the cost of maintaining the federal aid system excluding primary road system within RPA 8.

Maintenance Activity Description	Cost	Units	Frequency
Deck Repair (Patching)	\$31	Per Sq ft	5-10 years
Repair Bridge Structure	\$220	Per Sq ft	Every 50 years
Intensive Bridge Inspection	\$1	Per Sq ft	Every year
Other Bridge Maintenance Activities	\$1	Per Sq ft	8-10 years

**Table 3.9 Bridge System Maintenance Activities**

Year	Deck Repair (Patching)	Repair Bridge Structure	Intensive Bridge Inspection	Other Bridge Maintenance Activities
2021	\$0	\$0	\$0	\$0
2022	\$0	\$0	\$181,000	\$0
2023	\$0	\$0	\$195,000	\$0
2024	\$0	\$0	\$203,000	\$0
2025	\$0	\$0	\$211,000	\$0
2026	\$0	\$0	\$220,000	\$0
2027	\$0	\$0	\$229,000	\$0
2028	\$0	\$0	\$238,000	\$0
2029	\$0	\$0	\$247,000	\$0
2030	\$12,858,000	\$0	\$257,000	\$309,000
2031	\$0	\$0	\$267,000	\$0
2032	\$0	\$0	\$278,000	\$0
2033	\$0	\$0	\$289,000	\$0
2034	\$0	\$0	\$301,000	\$0
2035	\$0	\$0	\$313,000	\$0
2036	\$0	\$0	\$325,000	\$0
2037	\$0	\$0	\$338,000	\$0
2038	\$0	\$0	\$352,000	\$0
2039	\$0	\$0	\$366,000	\$0
2040	\$19,033,000	\$0	\$381,000	\$457,000
2041	\$0	\$0	\$396,000	\$0
2042	\$0	\$0	\$412,000	\$0
2043	\$0	\$0	\$428,000	\$0
2044	\$0	\$0	\$445,000	\$0
2045	\$0	\$0	\$463,000	\$0
TOTAL	\$31,891,000	\$0	\$7,335,000	\$766,000

**Table 3.10 RPA 8 Bridge System Operation and Maintenance Costs**

## ROAD AND BRIDGE PROJECTS

Table 3.11 lists the the road and bridge projects that are programmed in the FY 2022-2025 Transportation Improvement Program (TIP).

**Table 3.11 RPA 8 Programmed Road and Bridge Projects**

TPMS No	Sponsor	Name	Location
<b>FY 2022</b>			
35332	Jackson Co	475th Ave (WASH-3562) Bridge replacement	On 475th Avenue, Bridge over Unnamed creek, S35 T86 R5E
48368	Camanche	US67 and 7th Ave - roundabout	In the city of Camanche, US Highway 67 & 7th Ave Roundabout
48369	Dyersville	If you BUILD it, they will come	In the city of Dyersville, On 1ST ST SW, Over SMALL STREAM
48370	De Witt	INDUSTRIAL STREET EXTENSION	In the city of De Witt, INDUSTRIAL STREET EXTENSION
36143	Clinton Co	W-0117	On Y52, Over DRAINAGE DITCH 5, S1 T80 RE2
44681	Clinton Co	F-12 Cape Seal	On 220th Street, from Y-70 to Z-24 double chip seal with microsurface
37916	Iowa DOT	US 30	US30: UP RR 5.8 MI E OF S JCT US 61 (EB & WB)
48486	Iowa DOT	IA 38	IA38: N OF HOPKINTON TO DELHI
48496	Iowa DOT	IA 38	IA38: NCL OF DELHI TO CO RD D22
48507	Iowa DOT	US 52	US52: IN THE CITY OF BELLEVUE
48514	Iowa DOT	US 20	US20: MAQUOKETA RIVER TO E OF IA 38
48515	Iowa DOT	US 61	US61: 0.3 MI N OF CO RD D41 TO LAKE ELEANOR RD
48553	Iowa DOT	US 67	US67: IN CLINTON, ON 3RD ST AND 4TH ST
37952	Iowa DOT	US 52	US52: MISSISSIPPI RIVER IN SABULA (STATE SHARE)
37917	Iowa DOT	IA 136	IA136: MISSISSIPPI RIVER IN CLINTON (STATE SHARE)
47215	Clinton Co	235th Street Overflow Bridge (Q-1238)	On 235th Street over Wapsi backwater, S12,T81,R1
45802	Maquoketa	Bridge on PRAIRIE CREEK	In the city of Maquoketa, On S MAIN ST, Over PRAIRIE CREEK, S25 T84 R02E
36146	Clinton Co	Z-40	Z-40 from E-50 to 50 feet south of Centennial Street in Miles
44638	Dubuque Co	Sundown Road Paving Project	On Sundown Road (Y21) from Old Highway Road North 2.7 miles to Asbury Road
35633	Clinton	Manufacturing Drive and Bluff Boulevard Reconstruction	In the city of Clinton, On Manufacturing Drive and Bluff Boulevard from US Highway 30 to 7th Avenue North
38255	Iowa DOT	IA 3	IA3: E JCT PFEILER RD TO 0.7 MI N OF BOY SCOUT RD
47197	Jackson Co	200th Ave (MAQ-3006) Bridge Replacement over Prairie Creek	On Y 53, Over PRAIRIE CREEK, S30 T84 R03E
45051	Jackson Co	On Z40 (500th Ave) from Clinton County line North 3900 ft	On Z 40, from Clinton County Line N 0.7 miles to Miles, Ia
37915	Iowa DOT	US 30	US30: MISSISSIPPI RIVER IN CLINTON (STATE SHARE)
38581	Maquoketa	Iowa 64 (Platt Street Corridor) Maquoketa Transformation	In the city of Maquoketa, On Platt St, from US 61 (Milepost 33.11) to to Iowa 62 (Milepost 34.89)

TPMS No	Sponsor	Name	Location
<b>FY 2023</b>			
37302	Dubuque Co	Clear Creek Road Bridge Replacement	On Clear Creek Road, in W1/4 S14 T90N R2W
37337	Delaware Co	130th Avenue Bridge Replacement	On 130th Avenue, in NW S15 T89N R6W
44629	Delaware Co	Robinson Road Paving	On Robinson Road (W63), from Linn County Line N 4.7 miles
36188	Clinton Co	Old Hwy 61 Overflow Bridge	On Y-68 over Wapsi backwater,S31,T81,R4E
35157	Clinton Co	K-2700	On 250 AVE, Over BLACK CREEK, S27 T82 RE3
48413	Iowa DOT	US 30	US30: UP RR 0.6 MI E OF CO RD Y4E
39204	Iowa DOT	US 30	US30: WAPSIPINICON RIVER 1.5 MI E OF CO RD Y4E
39209	Iowa DOT	IA 136	IA136: DEEP CREEK 0.2 MI S OF CO RD Z2E
39207	Iowa DOT	US 61	US61: N JCT US 30 IN DE WITT (NB & SB)
39263	Iowa DOT	IA 64	IA64: STREAM 0.1 MI W OF CO RD E29
39205	Iowa DOT	US 30	US30: MISSISSIPPI RIVER IN CLINTON
39208	Iowa DOT	IA 136	IA136: MISSISSIPPI RIVER IN CLINTON
39262	Iowa DOT	IA 64	IA64: PRAIRIE CREEK 0.4 MI E OF IA 62
39206	Iowa DOT	US 30	US30: AMES CREEK 3.5 MI E OF E JCT US 61 (EB & WB)
36548	Jackson Co	49th Street (MON-1845) Bridge replacement over Creek S18 T84 R1E	On 49th Street, Over Creek, S18 T84 R1
44629	Delaware Co	Robinson Road Paving	On Robinson Road (W63), from Linn County Line N 4.7 miles
<b>FY 2024</b>			
37309	Dubuque Co	Higginsport Road Paving	On Higginsport Road from Hwy 151 east 5.87 miles to Moloney Road
37106	Dubuque Co	Fishpond Road Bridge Replacement	On Fishpond Road, S3 T88N R1W
37304	Dubuque Co	Graf Road Bridge Replacement	On Graf Road, in NE S20 T89N R1E
44755	Delaware Co	140th St Bridge Replacement	On 140th Street, Over Rotherford Branch, S24 T90N R5W
35330	Jackson Co	On Z34 (435th Avenue) from Preston North to Maquoketa River	On Z34 (435th Ave), from Preston N 5 miles to Maquoketa River
45816	Clinton Co	F-12 CIR HMA	On F 12,from Z-24 E 5.0 miles to Z-36
45337	Iowa DOT	US 20	US20: N FORK MAQUOKETA RIVER 0.5 MI W OF IA 136 (EB)
45305	Iowa DOT	US 20	US20: IA 136 IN DYERSVILLE (EB & WB)
45307	Iowa DOT	US 20	US20: CO RD Y17 IN EPWORTH (EB & WB)
45318	Iowa DOT	US 30	US30: SILVER CREEK 0.7 MI E OF W JCT US 61 IN DE WITT (EB & WB)
45335	Iowa DOT	US 20	US20: CO RD Y13 IN FARLEY (EB & WB)
45327	Iowa DOT	US 20	US20: BRANCH PLUM CREEK 5.0 MI E OF IA 38 (EB)
45273	Iowa DOT	IA 136	IA13: HONEY CREEK 0.2 MI N OF CO RD D13 TO S JCT IA 3
49843	Clinton	Manufacturing Drive	In the city of Clinton, On MANUFACTURING DR, from US 30 NE 1.6 miles to College Avenue
49844	Clinton	South Bluff Boulevard / North Bluff Boulevard	In the city of Clinton, On South Bluff Boulevard / North Bluff Boulevard, from College Ave NE 2.2 miles to 7th Ave North
37751	Jackson Co	17th St. (IA-3320) Bridge replacement over Elk Creek S33 T84N R6E	On 17th Street, Over Elk Creek, S33 T84N R6E
37309	Dubuque Co	Higginsport Road Paving	On Higginsport Road from Hwy 151 east 5.87 miles to Moloney Road

TPMS No	Sponsor	Name	Location
<b>FY 2025</b>			
44756	Delaware Co	215th Ave Bridge Replacement	On 215th Avenue, Over Unnamed Stream, S24 T87N R5W
36148	Clinton Co	Q-1502	On Y4E, Over YANKEE RUN CREEK, S15 T81 RE1
48412	Iowa DOT	IA 136	IA136: DITCH 8.6 MI N OF US 61
48426	Iowa DOT	IA 136	IA136: ELWOOD CREEK 3.1 MI W OF US 61
48429	Iowa DOT	IA 136	IA136: BRANCH PRAIRIE CREEK 1.2 MI N OF US 61
48442	Iowa DOT	IA 136	IA136: MISSISSIPPI RIVER IN CLINTON (STATE SHARE)
48457	Iowa DOT	US 61	US61: TARECOD CREEK 1.4 MI N OF CO RD E17 (NB)
39259	Iowa DOT	US 52	US52: MISSISSIPPI RIVER BRIDGE TO N OF SABULA
48615	Iowa DOT	IA 136	IA136: BRANCH PRAIRIE CREEK 1.9 MI N OF US 61
48627	Iowa DOT	US 20	US20: MIDDLE BRANCH CATFISH CREEK & CC RR 0.6 MI E OF NW ARTERIAL IN DUBUQUE (WB)
48635	Iowa DOT	IA 136	IA136: BRANCH PRAIRIE CREEK 4.0 MI N OF US 61
39021	Jackson Co	362nd Ave. (BEL-2555) Bridge replacement over Duck creek S25 T86 R4E	On 362nd Avenue (Z15), Over Duck creek, S25 T86 R4E
35330	Jackson Co	On Z34 (435th Avenue) from Preston North to Maquoketa River	On Z34 (435th Ave), from Preston N 5 miles to Maquoketa River

## CONCLUSION

The operation and maintenance of roads and bridges within the RPA 8 region is very crucial for safety and future development in the region. RPA 8 needs \$719 million by year 2045 to meet the requirements of the existing system. Lack of funding was one of the top concerns for our communities and using federal funding on small scale projects is not deemed viable by communities because of the increase in cost of the project due to federal regulation.

# 4

## BICYCLE AND PEDESTRIAN

Walking and biking are important modes of transportation for the RPA 8 area. Walking or biking instead of driving can reduce traffic congestion, improve air quality, and improve physical health. Through its goals and objectives, the RPA 8 LRTP supports programs that increase the number of people walking and biking in the area by creating interconnected bicycle and pedestrian networks and making walking and biking safer and more convenient.

Walking and biking currently account for a small share of all trips in the RPA 8 area. While data is not available for all trips, the census provides data for work trips. 2015-2019 American Community Survey (ACS) data shows that across the RPA's counties, between 2.27% and 3.25% of residents currently walk to work. The ACS data shows that less than one percent of workers bicycle to work in the four RPA 8 counties. Table 4.1 shows the means of transportation to work for RPA 8 residents.

Mode	State of Iowa	Clinton County	Delaware County	Dubuque County	Jackson County
Bicycle	0.46%	0.18%	0.00%	0.26%	0.15%
Walked	3.25%	2.41%	2.27%	3.21%	2.69%

**Table 4.1 Means of Transportation to Work For RPA 8 Counties**

*U.S. Census Bureau, ACS 5-Year Estimates 2015-2019*

Existing bicycle and pedestrian facilities in the RPA 8 area fall into three main categories: off-street trails, on-street routes, and sidewalks. The following section provides a description of each category.

### OFF-STREET TRAILS

The RPA 8 region has several off-street trails. Most trails in the area are classified as multi-use trails. These trails typically are concrete, asphalt, or packed crushed rock and are usually between 8 feet and 10 feet wide. Multi-use trails are physically separated from motorized traffic by an open space or barrier and can be in an independent right of way or within a highway right-of-way. Multi-use trails usually accommodate both bicyclists and pedestrians and are suitable for most age groups and abilities.

In addition to multi-use trails, the RPA 8 region also has several trails that are geared to more specific types of uses including: hiking and mountain biking. These trails are usually unpaved, steeper, and narrower than a multi-use trail, and as a result may require a relatively higher level of physical ability.

## ON-STREET BICYCLE ROUTES

In addition to trails, the RPA 8 area has on-street bicycle routes. With an on-street route, bicyclists share the roadway with vehicle traffic. Street design can include specific design improvements to direct bicycles and vehicles and improve safety for all users. Design improvements include signage, sharrows, bicycle lanes, separated bicycle lanes, and protected bikeways. The design element used depends on vehicle speed, vehicle traffic volume, and space available in the right-of-way. Streets with higher vehicle speeds and volumes will usually call for elements like buffered bicycle lanes or separated bikeways that offer more protection to bicyclists. Streets with slower speeds and lower traffic volumes are generally safer for bicyclists and are good candidates for less protective elements such as bicycle signage or sharrows. In many cases, local streets are suitable for biking without any additional design elements. Local streets located in primarily residential neighborhoods with low traffic volume and low speeds could be good candidates for bicycle routes.

## SIDEWALKS

Sidewalks are an important part of the pedestrian network. Sidewalks provide necessary walking connections to homes, businesses, transit services, and other activities. Many streets in the region have sidewalks, but there are gaps in the sidewalk network. Unlike trails or on-street bicycle routes, private property owners usually maintain sidewalks. This can create challenges, as property owners can vary greatly in their ability or desire to maintain sidewalks. Street designers can also use design improvements to improve pedestrian safety. Design improvements include curb extensions, enhanced street crossings, and reduced vehicle lane width.

Together all three facility types make up the RPA 8 bicycle and pedestrian network. While trails may be the most desirable option for walkers and bikers, cost and available land will not allow a community to build a comprehensive network out of trails alone. Sidewalks and on-street bicycle routes are important facilities that can help fill in the gaps in the trail network and make sure that the entire region is connected to the bicycle and pedestrian network.

## FUTURE BICYCLE AND PEDESTRIAN

RPA 8 is committed to creating more opportunities for walking and biking by improving its bicycle and pedestrian network. Over the past several years, communities in the RPA area have continued to add to the regional network of on and off street walking, hiking, and biking routes. While the area has made progress, RPA 8 still has work to do to reach its goal of developing an integrated bicycle and pedestrian network. Through the LRTP RPA 8 has developed plans for future bicycle and pedestrian improvements. Future bicycle and pedestrian improvements fit into the following three priority areas:

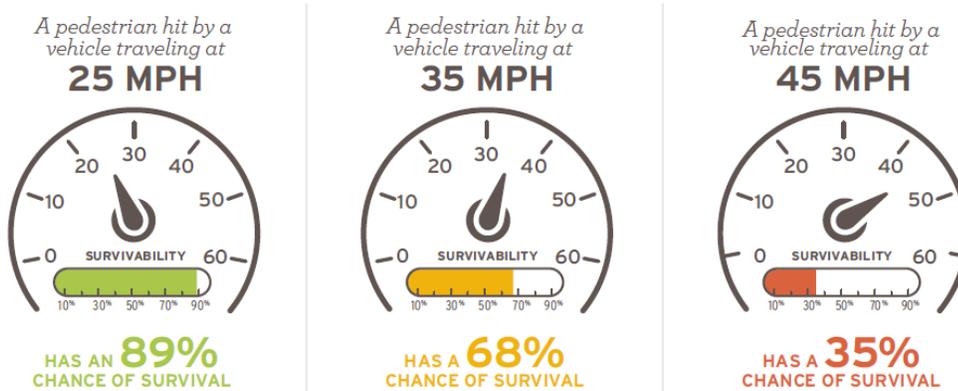
- Improve pedestrian safety
- Continue to expand the regional trails network
- Improve On-Street Bicycle Safety

## IMPROVE ON-STREET BICYCLE SAFETY

Improving safety for all users of the transportation system is one of the most important priorities established of the RPA 8 LRTP. On-street biking allows bicyclists to access destinations that they would not be able get to using the off-street trail system alone. However, safety is an important consideration with on-street bicycling. Bicyclists are more exposed and vulnerable to injury than people in cars, and are bicyclists are more likely to interact with cars when riding on streets. To improve bicycle safety, communities need to consider the needs of bicyclists in the transportation planning process and integrate design improvements into existing streets.

## IMPROVE PEDESTRIAN SAFETY

Like biking, walking is a transportation mode that combines mobility and physical activity. Walking is also the only means of transportation for many people who are unable to drive. But, pedestrians, like bicyclists, are also exposed and more vulnerable to injury if they are involved in a vehicle crash. To improve safety for pedestrians, communities can plan and design streets in ways that will improve safety for pedestrians. Figure 4.1 shows that the risk of pedestrian death increases with increasing vehicle speeds.



**Figure 4.2 Impact Speed and a Pedestrian's Risk of Injury or Death**

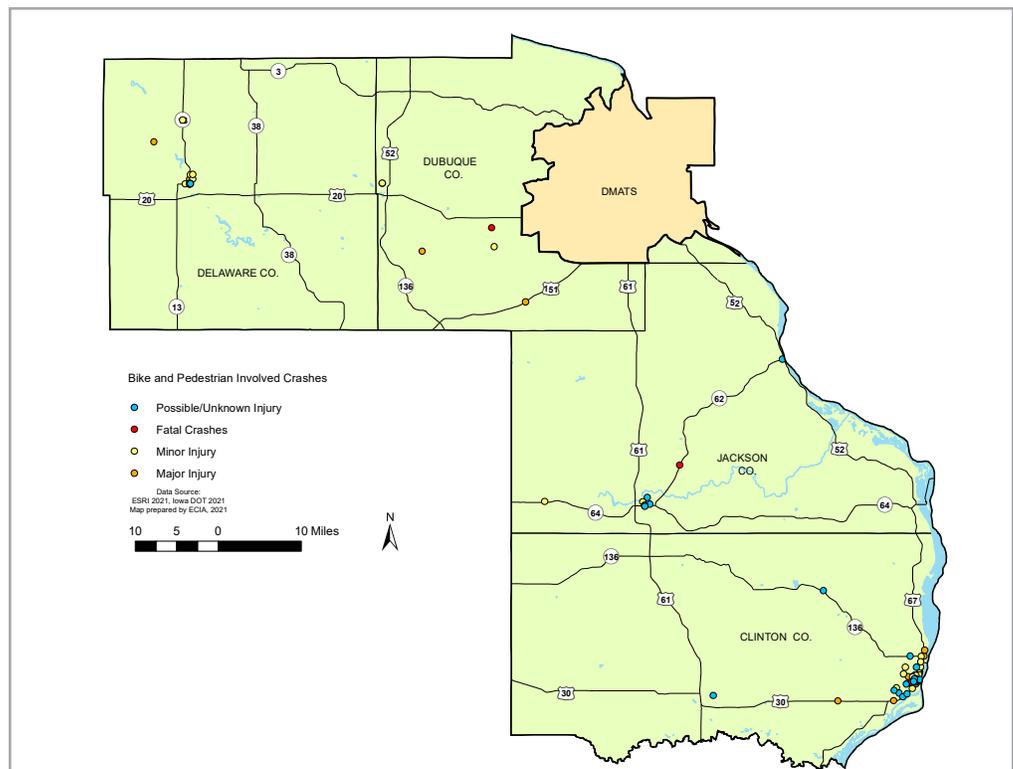
Source: Federal Highway Administration, "Small Town and Rural Multi Modal Networks" December 2016.

## BICYCLE AND PEDESTRIAN CRASHES

To illustrate the need for bicycle and pedestrian safety improvements, RPA staff mapped the locations of bicyclist and pedestrian injuries that resulted from a vehicle crash. From 2018 to Oct 2021, there were 73 bicyclists and pedestrians injured in vehicle crashes. The total injuries included 4 fatalities and 15 incapacitating injuries. Figure 4.3 shows the location and severity of the injuries. The location of pedestrian and bicycle crash injuries can provide information on where safety improvements are needed.

**Figure 4.3 Bicycle and Pedestrian Involved Crashes 2018-2021**

Source: Iowa Department of Transportation, 2021



## IMPROVEMENTS

Communities have many design options at their disposal for improving pedestrian and on-street bicycle safety. The design elements chosen for implementation will be unique to each street. Streets with more vehicle traffic and higher vehicle speed will require more protection to the bicyclist, while low speed, low volume streets may require no additional intervention. For pedestrians, sidewalks and crossings are important design elements.

*Example of a low volume low speed street. Source: ECIA Stock Photo*



The Federal Highway Administration has produced or recommended several design guidance documents that can help communities select the appropriate bicycle design elements.

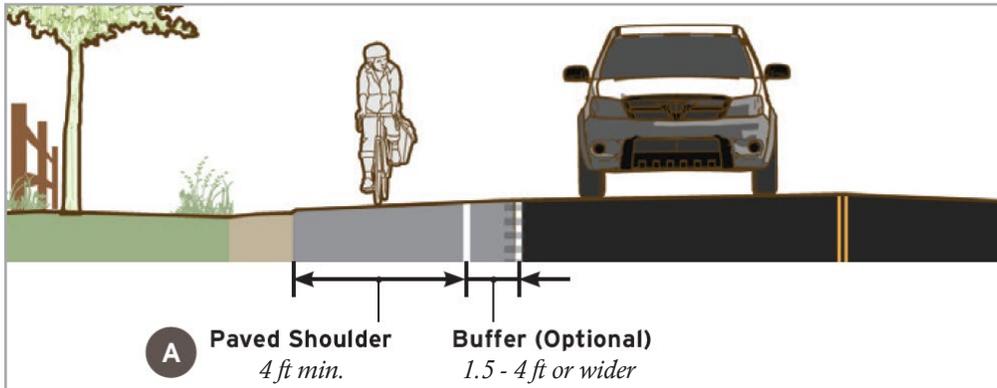
Guidance documents include the AASHTO Guide to Bikeway Facilities, the Manual on Uniform Traffic Devices (MUTCD), the Federal Highway Administration’s Small Town and Rural Multimodal Network Guide, and the National Association of Transportation Officials (NACTO) Urban Bikeway Design Guide, and Urban Street Design Guide. The following section provides a brief description of some possible improvements. The illustrations in figures 4.4 -4.6 are intended to provide examples of possible improvements. The actual design of facilities will depend on the context into which the facility is being installed.

## NO IMPROVEMENT NEEDED

Many streets with low traffic volumes and speeds do not require any safety improvements for bicyclists and pedestrians. Most bicyclists and pedestrians can typically share the roadway safely with vehicle traffic on streets with annual daily traffic of less than 1,000 and vehicle speeds less than 25 miles per hour.

## PAVED SHOULDER

Roadway shoulders can be enhanced to serve as space for pedestrians and bicyclists. Paved shoulders are appropriate on roads with moderate to high traffic volumes and speeds.

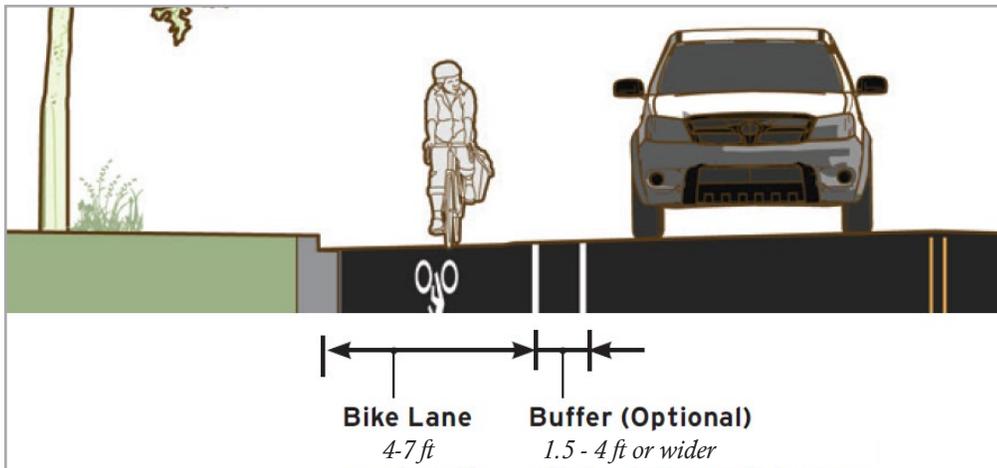


**Figure 4.4 Paved Shoulder**

Source: Federal Highway Administration, “Small Town and Rural Multi Modal Networks” December 2016. p. 3-5.

## BIKE LANE AND SEPARATED BIKE LANE

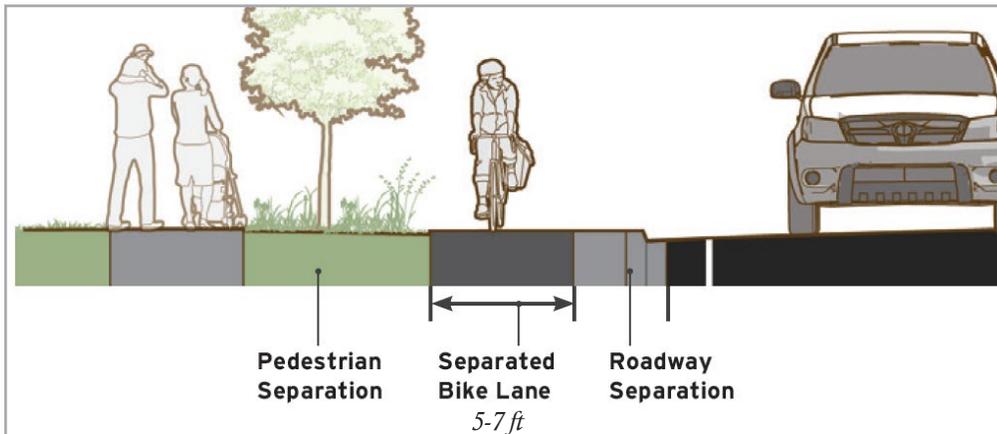
Bike lanes provide a dedicated space for bicyclists on the edge of a moderate to high speed and traffic volume roadway. Bike lanes are similar to paved shoulders. The difference is that bike lanes are intended for more urban applications and have additional pavement markings and signage.



**Figure 4.5 Standard Bike Lane**

Source: Federal Highway Administration, “Small Town and Rural Multi Modal Networks” December 2016. p. 3-13.

Sometimes referred to as protected bike lanes, separated bike lanes offer additional separation from vehicle traffic. Typically, the bike lane is separated by a vertical element such a curb, parked cars, decorative planting, or flex post.



**Figure 4.6 Separated Bike Lane**

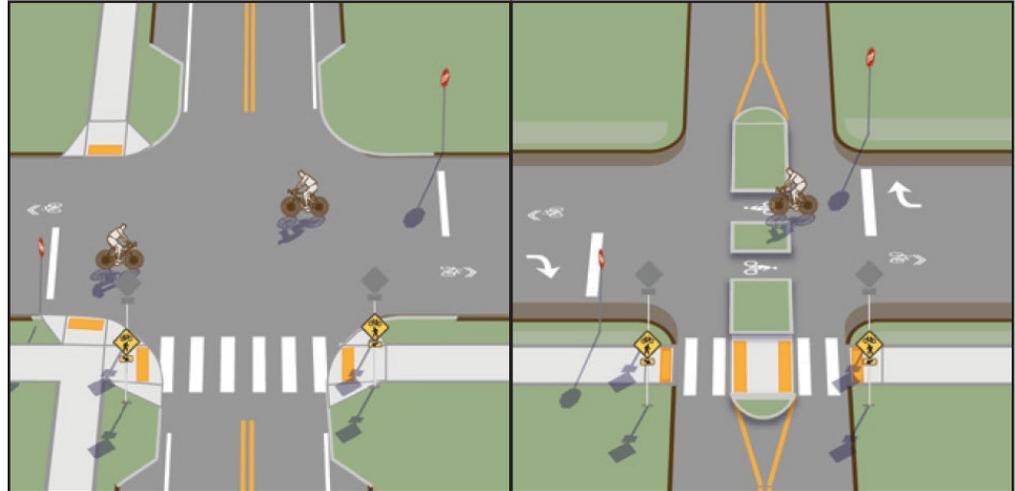
Source: Federal Highway Administration, “Small Town and Rural Multi Modal Networks” December 2016. p. 4-27.

## PEDESTRIAN CROSSING IMPROVEMENTS

Sidewalks are a great way to improve pedestrian safety. However, even when sidewalks are present, pedestrians can encounter dangerous situations when crossing the street. Improvements such as crosswalks, curb extensions, and median islands can help improve safety at pedestrian crossings.

**Figure 4.7**  
**Crosswalks, Curb Extensions, and Median Islands**

Source: Federal Highway Administration, "Small Town and Rural Multi Modal Networks" December 2016. p. 2-14..

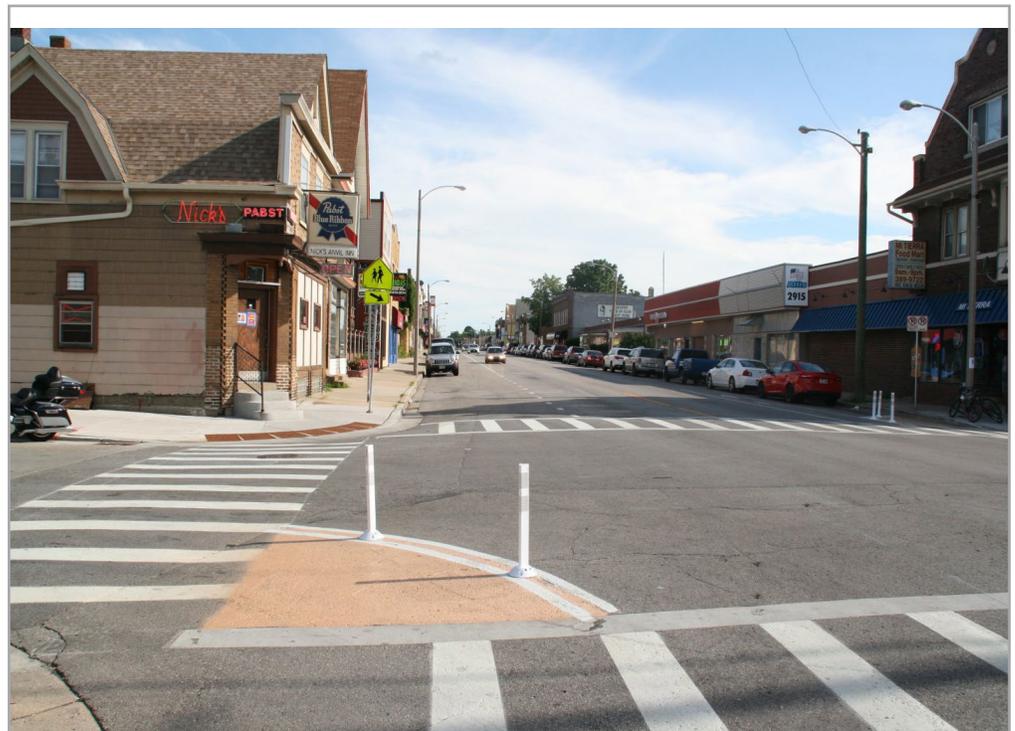


## INTERIM IMPROVEMENTS

Full reconstruction of a street can take several years from planning to final construction. A community may need to add safety improvements more quickly. Interim improvements use low cost, temporary materials to enable faster project delivery. The interim approach also allows the community to test the effectiveness of the improvement before committing to the full cost of reconstruction. Figure 4.8 an example of painted curbs installed by the city of Milwaukee to help improve pedestrian crossing safety.

**Figure 4.8**  
**Milwaukee Painted Curbs 2020**

Source: <https://urbanmilwaukee.com/2020/07/31/transportation-city-testing-strategies-to-protect-pedestrians-slow-motorists/nggallery/image/image-6177/>



## CONTINUE TO EXPAND THE REGIONAL TRAILS NETWORK

Off-street trails provide walking and biking based mobility and recreation. Off-street trails are also a good option when traffic volume and vehicle speed make on-street facilities too dangerous. RPA 8 communities have worked to expand the regional trail network over the past several years. The Heritage Trail, the Discovery Trail, the Jackson County Recreation Trail, the Copper Creek Trail, and the Manchester River Trail are a few examples of successful trail projects in the area. RPA 8 communities have made plans to expand the network and to improve existing trails by implementing projects such as adding additional amenities and improving wayfinding signage.

## PLANNED FACILITIES

RPA 8 members have used several criteria to locate areas of high demand for bike and pedestrian facilities, and to identify barriers to walking and biking. RPA 8 uses land use maps, commuter patterns, and crash data to develop a list of future projects.

Figures 4.9 – 4.12 show the existing and planned bike and pedestrian facilities in the RPA 8 area. All projects in the maps are regarded as illustrative, as none have a dedicated source of funding. For planned facilities, the planning process has been completed and the projects are awaiting funding.

The maps identify several orange highlighted priority routes. While all planned facilities included in the maps are important, RPA 8 communities have identified the priority routes as the most important. Priority routes provide key connections in the bike and pedestrian network and are good candidates for implementation in the next five years.

## CONCLUSION

Improving bicycle and pedestrian transportation is important to many residents of the area, and RPA 8 is working to create more opportunities for walking and biking by improving its bicycle and pedestrian network. Through the LRTP RPA 8 is working reach its goal of developing an integrated bicycle and pedestrian network.

Figure 4.9 Clinton County Existing and Future Bicycle and Pedestrian Facilities

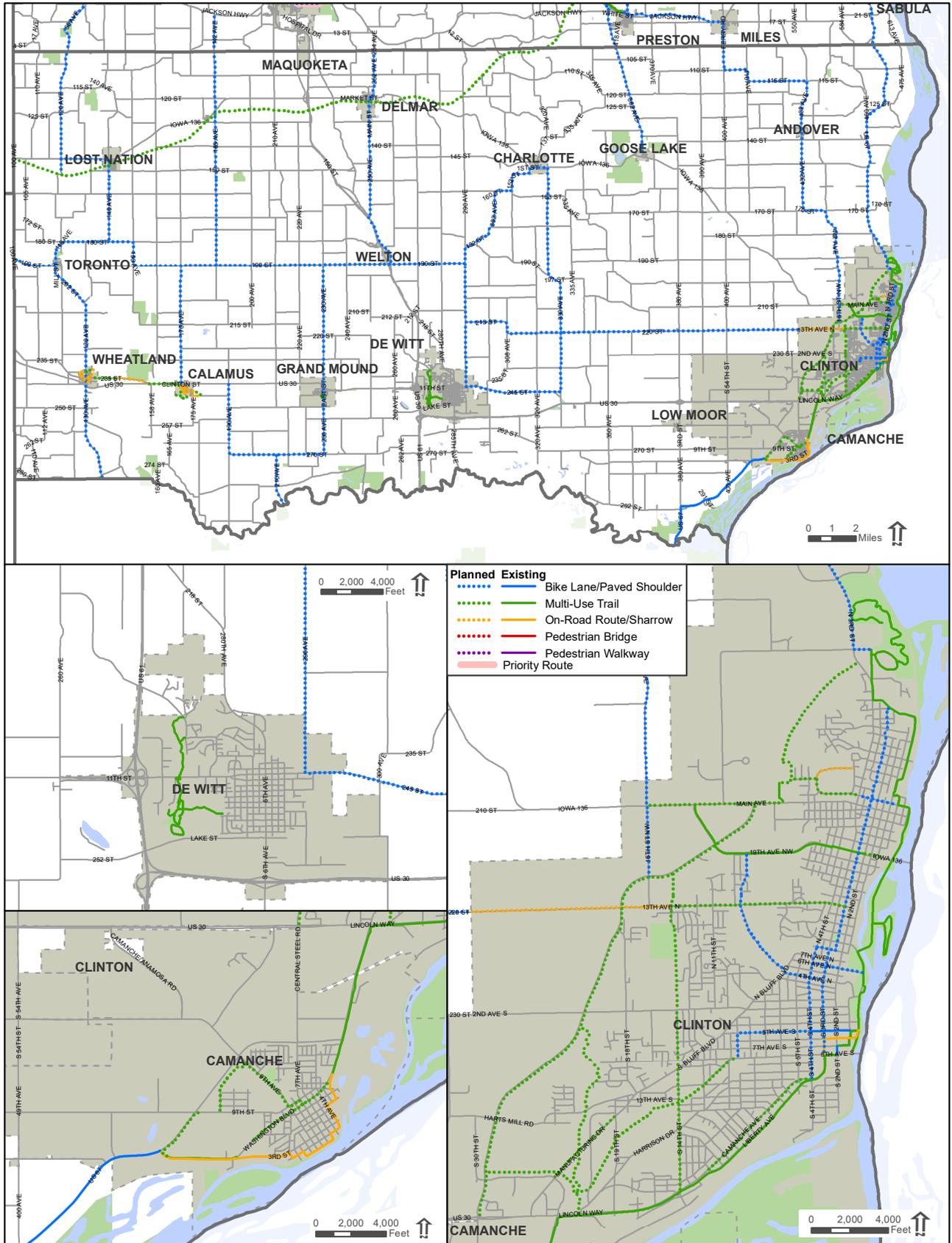


Figure 4.10 Delaware County Existing and Future Bicycle and Pedestrian Facilities

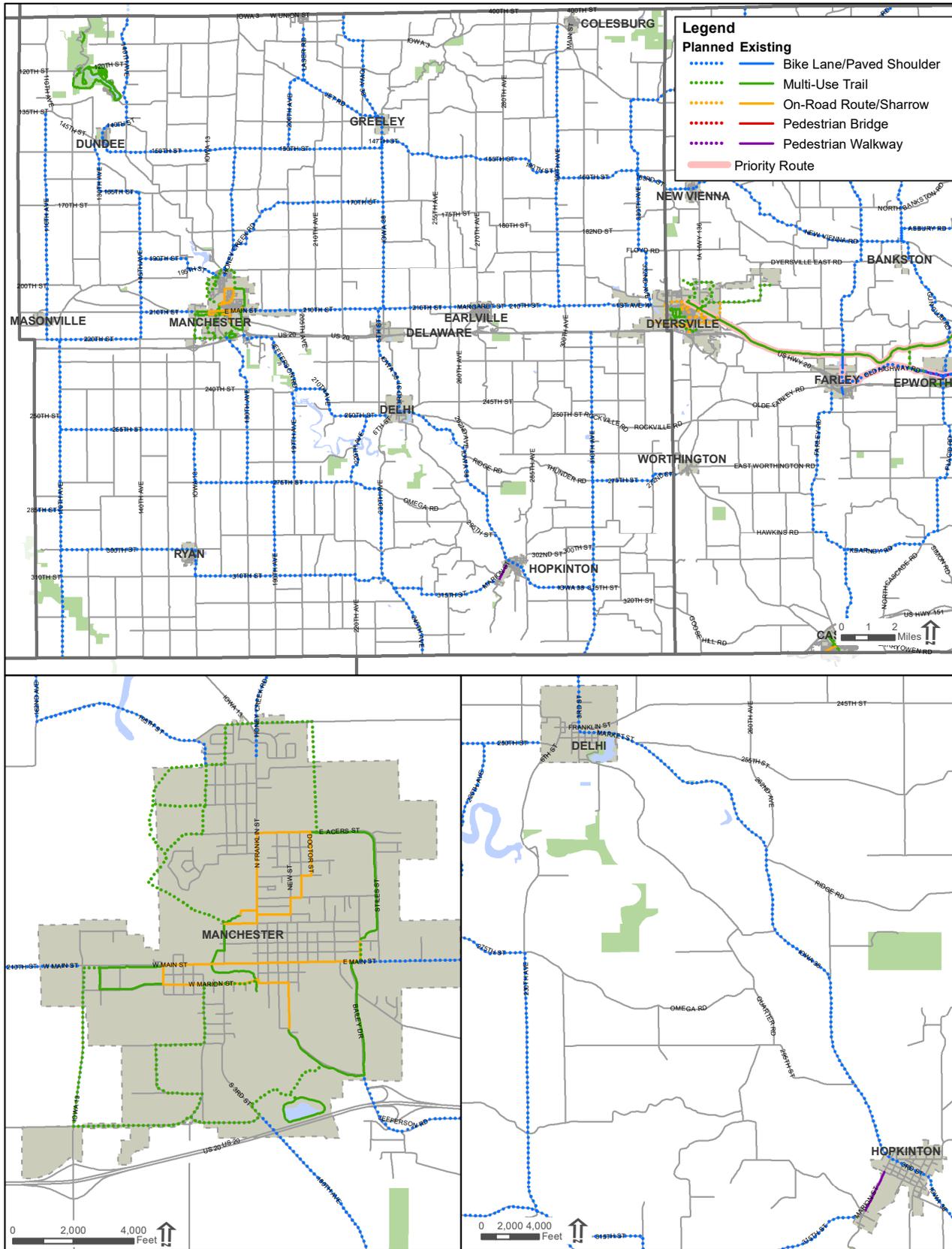


Figure 4.11 Dubuque County Existing and Future Bicycle and Pedestrian Facilities

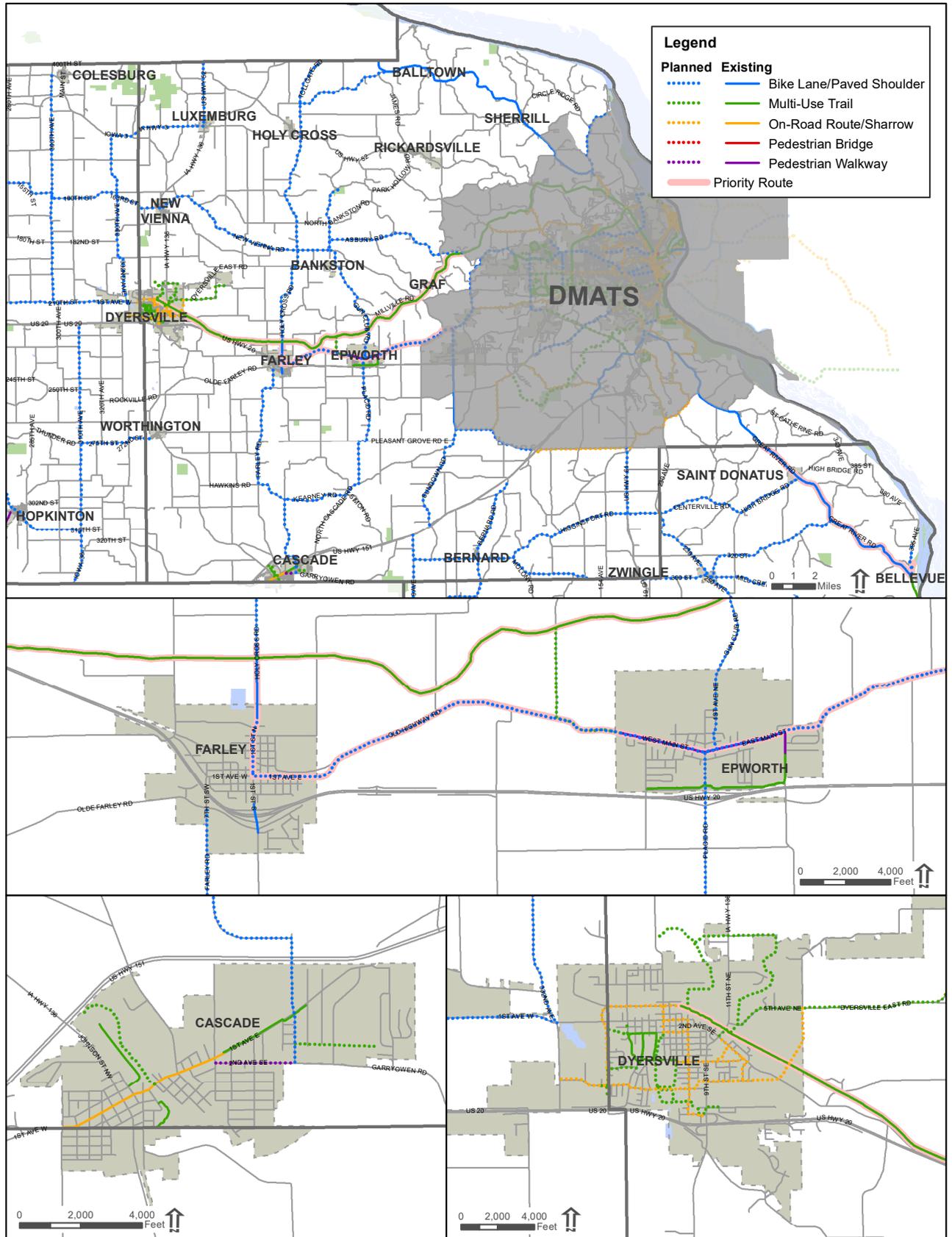
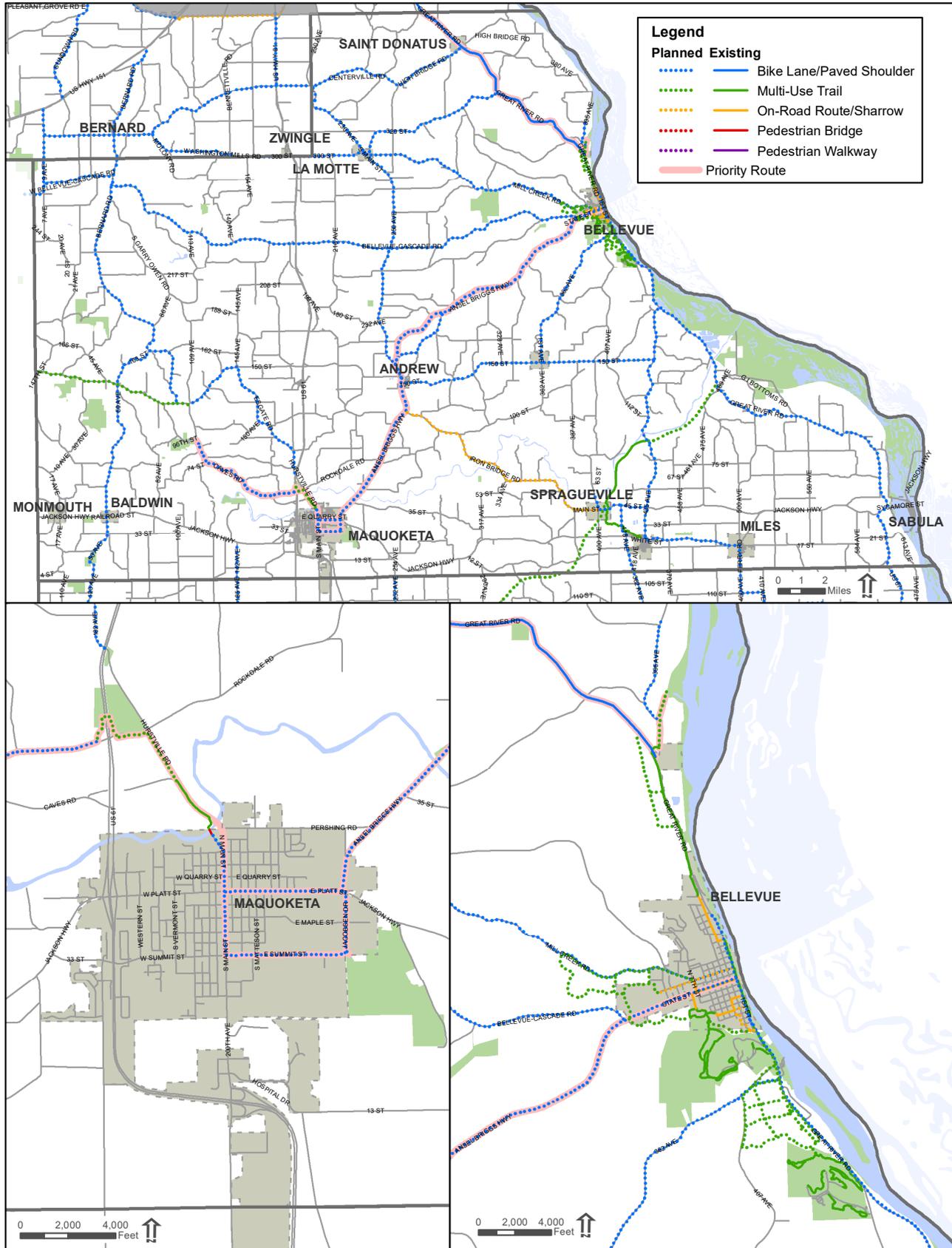


Figure 4.12 Jackson County Existing and Future Bicycle and Pedestrian Facilities



# 5

## TRANSIT

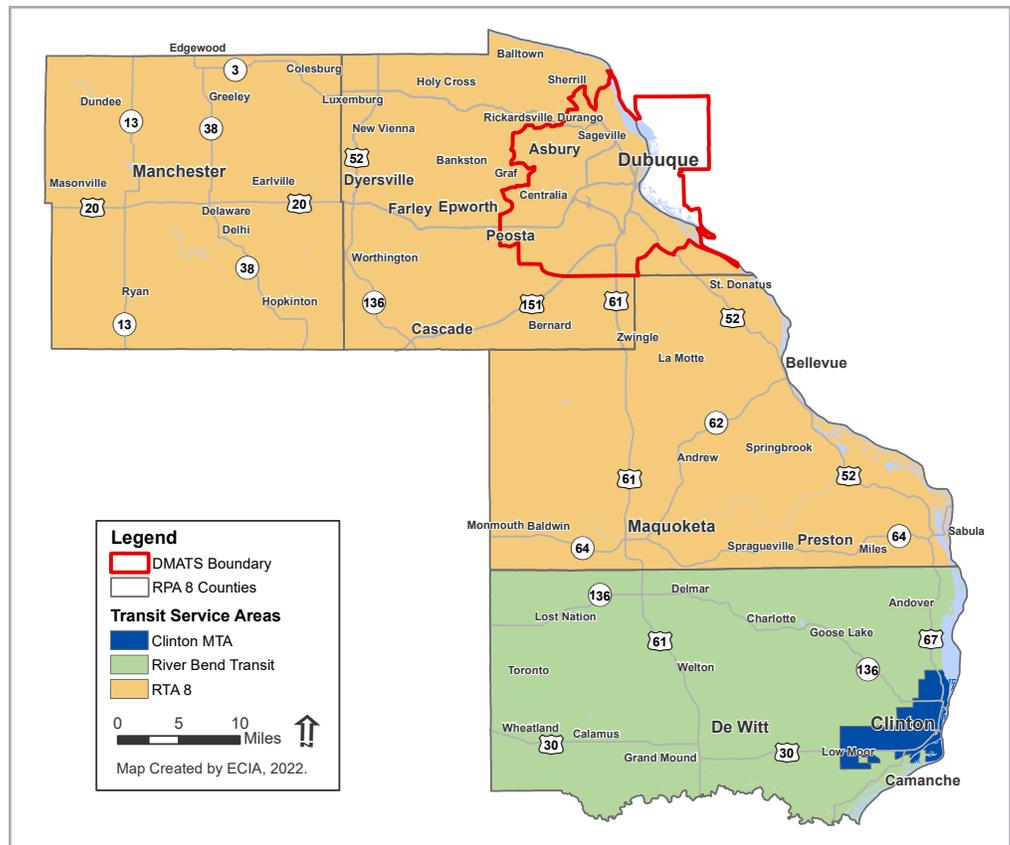
### INTRODUCTION

Public transit is an important component in the transportation network. Public transit providers within RPA 8 provide access to many opportunities for their citizens. The economic and social links provided by transit allows access to work, school, medical care, and leisure activities. It provides many individuals the mobility that allows them to continue their self-improvement, independence, and quality of life. Transit not only provides an alternative mode of transportation, but also provides the only available means of transportation to many youth, elderly, disabled, and economically disadvantaged citizens.

### RPA 8 TRANSIT PROVIDERS

RPA 8 is served by three transit systems: Regional Transit Authority 8 (RTA 8), Clinton Metropolitan Transit Authority (MTA), and River Bend Transit. Figure 5.1 maps each provider's service area.

**Figure 5.1 RPA 8 Transit Providers**  
*Source: RPA 8.*



## RTA 8

The RTA 8 provides accessible, safe, convenient, and efficient transportation for all residents in the cities, communities, and rural areas of Delaware, Dubuque, and Jackson Counties. RTA vehicles are ADA accessible and equipped to accommodate the general public, including children, the elderly, and people with disabilities.

The RTA 8 manages a fleet of thirty light duty buses and accessible minivans. On average, RTA 8 provides more than 138,000 annual passenger trips serving over 2,500 individuals in the three-county region. To expedite customer service, the RTA maintains garages in Dubuque, Manchester, Dyersville, and Maquoketa. Table 5.1 lists RTA’s service fares. The RTA employs three full-time drivers, twenty-seven part time drivers, and sixteen volunteer drivers. The RTA contracts with East Central Intergovernmental Association (ECIA) for management services and office space. Table 5.2 provides additional information on RTA 8’s vehicles and staff.

<b>Fares</b>	
<b>City of Manchester &amp; Maquoketa</b>	
In town	\$1.00
15 years and under	Free
<b>Delaware, Dubuque &amp; Jackson Counties</b>	
Within in County	\$2.00
15 years and under	Free
<b>City of Dubuque</b>	
In town	\$3.00
15 years and under	Free

**Table 5.1 RTA 8 Fares**

Source: RTA 8

<b>Number of Vehicles</b>	<b>30</b>
Number of Vehicles with Lifts or Ramps	30
Number of Vehicles to ADA Standards	30
Number of Full-Time Drivers	3
Number of Part-Time Drivers	27
Number of Volunteer Drivers	16

**Table 5.2 Vehicle Fleet and Staff**

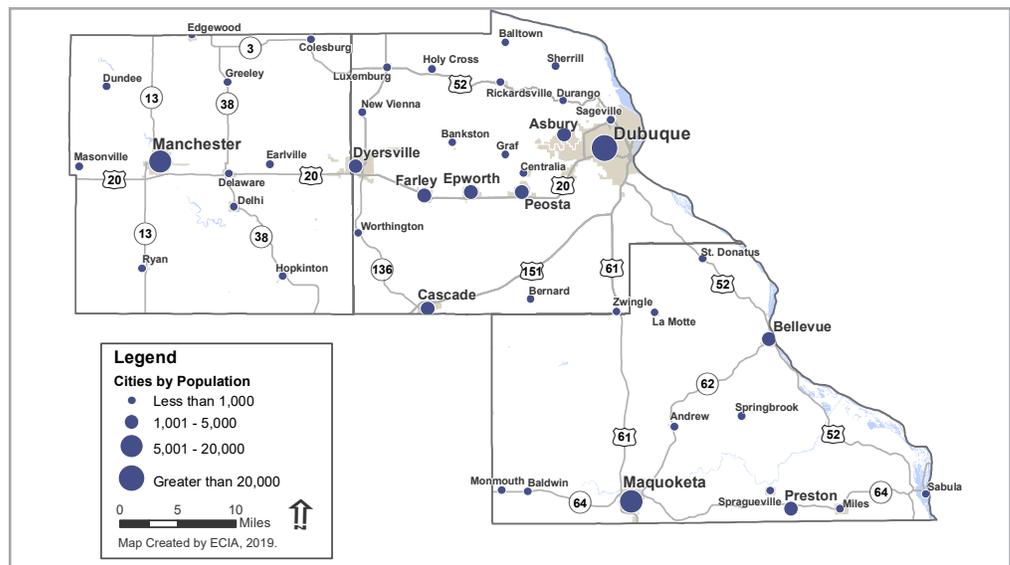
Source: RTA 8

The RTA provides transportation to a variety of destinations in Delaware, Dubuque, and Jackson counties. All services are based on the demand of clients and are open to the general public, including people with disabilities. Most RTA routes are door to door unless specified. Reservations for service are required 24 hours in advance, and dispatch hours are 5:00 a.m.-5:00 p.m. Figure 5.2 maps the RTA’s service area.

**Figure 5.2 RTA 8 Service Map**

Source: RTA 8

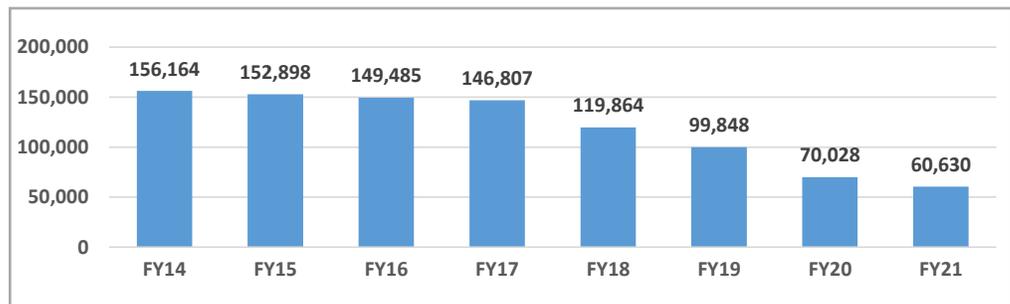
The map illustrates RTA 8's service area. The RTA does not operate fixed routes. All services are based on the demand of clients.



RTA 8 has averaged approximately 138,000 rides annually in each of the last six years. Figure 5.3 charts RTA 8's annual ridership.

**Figure 5.3 RTA 8 Annual Ridership**

Source: RTA 8



RPA 8 worked with RTA 8 staff and advisory groups including the regional Transit Action Group (TAG) to develop a list of future projects and priorities. The TAG is a community group, coordinated by RTA 8, that meets quarterly to address regional transportation issues. TAG membership is comprised of human service providers, transit providers, and transportation professionals. TAG members represent all communities served by RTA 8 in Delaware, Dubuque, and Jackson Counties.

**RTA 8 TOP PRIORITIES**

- Explore coordination opportunities between the Jule and RTA.
- Encourage employers to utilize current public transit systems.
- Provide services on an on call basis.
- Collaboration with human service agencies, dialysis, and Medicaid brokers.
- Expand hours to include late afternoons, evenings, weekends and holidays for all three counties.
- Recruitment and retention of drivers.
- Expand Travel Training Program.
- Transportation from Dubuque to Peosta.
- Reduce or eliminate fares
- Expand Mobility Management services.

## CLINTON MTA

The Clinton Municipal Transit Administration (MTA) is responsible for providing safe, accessible, economical, and efficient public transportation service to the citizens of the City of Clinton. MTA provides its own paratransit service. All routes are fully ADA accessible. Clinton MTA operates its fixed route service Monday – Friday from 6:00 a.m. to 6:00 p.m. and Saturday from 8:00 a.m. to 3:30 p.m. The City of Clinton Transportation Director is responsible for the transportation department. The Clinton City Council provides policy direction for the MTA. All services are open to the general public. The MTA offers fixed route for the general public and para transit door-to-door service for ADA eligible passengers. Table 5.3 lists MTA’s service fares. MTA has thirty full and part-time employees and a fleet of twenty-three vehicles.

Table 5.4 provides additional information on MTA’s vehicle fleet and staff. Clinton MTA operates six regular fixed routes. Figure 5.4 maps the Clinton MTA’s routes.

<b>Fares</b>	
Adult	\$1.00
Senior Citizens	\$0.75, free with purchase of a Senior ID.
Disabled	\$0.75
Students (k-12)	\$0.75, free with current school ID.
ADA eligible para transit	\$2.00
<b>Passes</b>	
Day Pass	\$3.00
Adult / Family Monthly	\$30.00
Disabled Monthly	\$25.00
Unemployed Monthly	\$20.00
<b>Punch Cards (21 rides)</b>	
College Monthly	\$20.00
Adult Punch Card	\$20.00
Senior / Disabled Punch Card	\$15.00
Para Punch Card (11 rides)	\$20.00

**Table 5.3 MTA Fares**

Source: Clinton MTA

<b>Number of Vehicles</b>	<b>22</b>
Number of Vehicles with Lifts or Ramps	18
Number of Vehicles to ADA Standards	18
Full-Time Employees	12
Part-Time Employees	18
Volunteers	0

**Table 5.4 MTA Vehicle Fleet and Staff**

Source: Clinton MTA

**Figure 5.4 Clinton MTA Routes**  
 Source Clinton MTA

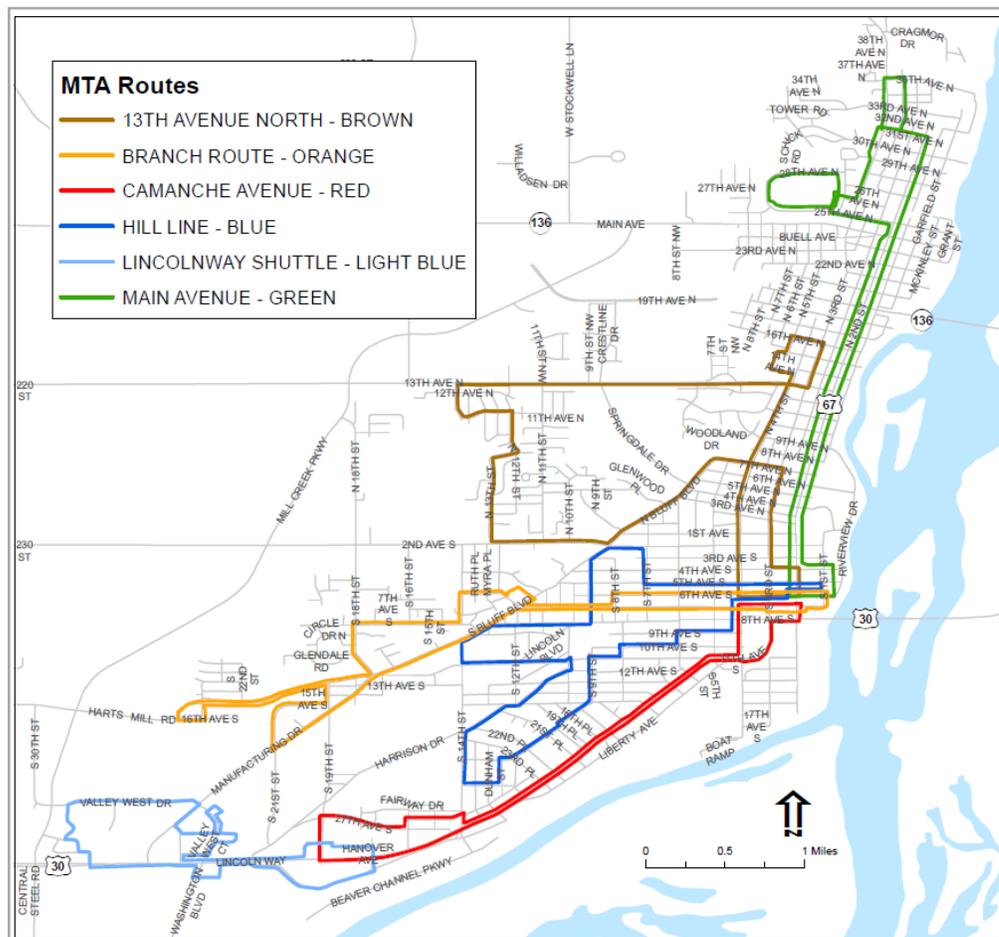
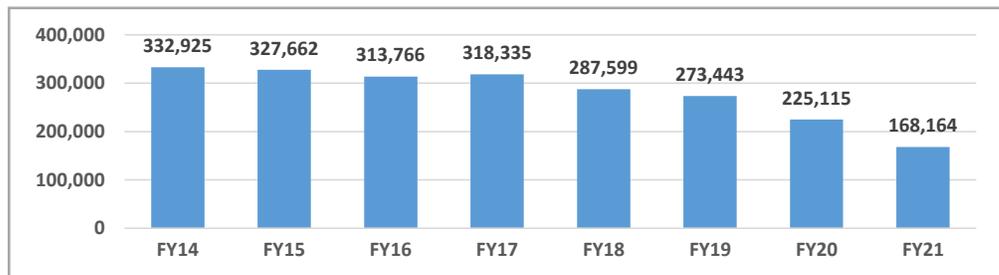


Figure 5.5 charts Clinton MTA’s annual ridership from 2014 to 2019.

**Figure 5.5 Clinton MTA Annual Ridership.**  
 Source Clinton MTA



**CLINTON MTA OBJECTIVES AND ACTION STEPS**

Clinton MTA has developed objectives and action steps for the future. A summary of the objectives and action steps is listed below.

- A. Running later on weekdays and Saturday
- B. Sunday service
- C. Service to Royal Pines
- D. 2nd and 3rd shift service
- E. Service to Camanche and Fulton
- F. Service to riverfront and west side
- G. Service to marina and hotels

## RIVER BEND TRANSIT

The Iowa DOT has designated River Bend Transit (RBT) (a not-for-profit corporation) as the regional public transit agency for Cedar, Clinton, Muscatine, and Scott counties. RBT was Iowa's first regional consolidated transit system, starting public transit operations in 1978. RBT is committed to breaking down transit barriers by providing dependable, friendly, efficient and safe transportation. RBT's services are open and available to the general public. RBT vehicles are fully equipped with lifts or ramps to assist entry, and are operated by courteous, experienced drivers who specialize in serving people with disabilities. RBT's regular demand-response service operating hours are 5:30 a.m. to 7:00 p.m.

RBT manages a fleet of 72 ADA cutaway buses and one non-ADA minivan vehicles. RBT reports more than 150,000 rides on its own, and over 200,000 rides with Davenport and Bettendorf Paratransit services combined. Table 5.5 summarizes RTA 8's vehicle fleet and staff.

Number of Vehicles	72
Number of Vehicles with Lifts or Ramps	72
Number of Vehicles to ADA Standards	72
Number of Full-Time Employees	10
Number of Part-Time Employees	85
Number of Volunteers	0

**Table 5.5 RBT Vehicle Fleet and Staff**

Source: RBT

Fares vary depending on which county the ride starts from and to where the rider is traveling, or if a rider is using a contracted service. Table 5.6 includes RBT's fares for Clinton County. Prices for seniors age 60+ and disabled individuals are lower than prices for the general public. RBT has identified specific days for each county to commute to desirable destinations. Figure 5.6 maps RBT's service area in the RPA 8 region.

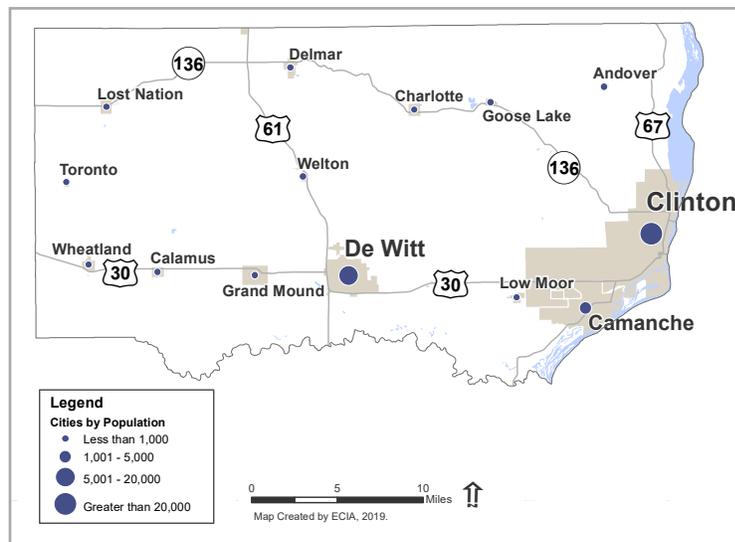
Service	Days	Seniors (60+) or persons with disabilities - Round Trip Suggested Donation	Established Fare for General Public
Iowa City	M	\$18.00	\$23.00
Davenport	T & F	\$6.50	\$11.50
DeWitt	W	\$3.00	\$8.00
Camanche and Clinton	Th	\$3.00	\$8.00
In-Town Service		\$1.50	\$6.50
County Service		\$3.00	\$8.00

**Table 5.6 RBT Clinton County Fares**

Source: RBT

## RIVER BEND TRANSIT TOP PRIORITY

- Replace aging buses



**Figure 5.6 RBT Service Area Within RPA 8**

Source: RBT

Figure 5.7 includes River Bend Transit’s annual Clinton County ridership in fiscal years 19, 20, and 21.



**Figure 5.7 River Bend Transit Annual Ridership in Clinton County.**

*Source River Bend Transit*

## TRANSIT RIDERSHIP TRENDS

Data from the RPA 8 region’s transit agencies reveals a downward trend in the number of transit rides provided each year. The coronavirus pandemic had a significant negative impact on transit ridership in fiscal years 2020 and 2021. While the transit agencies continued to provide service through most of the pandemic, closed businesses, canceled events, and locked-down facilities caused a sharp decline in the number of transit rides. Prior to the pandemic, a variety of factors contributed to transit ridership declines including changes to the Medicare system and the changing needs of local human service providers.

Fortunately, the transit agencies have adapted to these challenges. The agencies have sustained their operations using federal COVID-19 relief funds and transit ridership has started to tick back up in the first part of FY 2022. In future years, this continuously changing environment will require the region’s transit agencies to continue to adapt, adjusting services and identifying new funding sources as they work to provide essential transportation services to the region’s residents.



## TRANSIT OPERATIONS AND MAINTENANCE COSTS

RPA 8 has developed a method to estimate the operation and maintenance costs of the region's transit systems over a 25-year period. The analysis looks at the past five year's operations and maintenance and capital expenditures for RTA and Clinton MTA. The analysis projects these costs into the future using a 3 percent growth rate. Table 5.7 includes the historical expenditures, and Figure 5.8 includes the future projected costs.

**Table 5.7 Transit Historical Operations and Maintenance and Capital Costs**

Operations and Maintenance				Capital			
Year	MTA	RTA	Total	Year	MTA	RTA	Total
2016	\$1,629,222	\$1,807,294	\$3,436,516	2016	\$525,000	\$85,000	\$610,000
2017	\$1,698,523	\$2,135,855	\$3,834,378	2017	\$525,000	\$85,000	\$610,000
2018	\$1,796,079	\$1,778,601	\$3,574,680	2018	\$525,000	\$85,000	\$610,000
2019	\$1,892,706	\$1,837,191	\$3,729,897	2019	\$525,000	\$85,000	\$610,000
2020	\$1,815,255	\$1,507,490	\$3,322,745	2020	\$525,000	\$85,000	\$610,000
% Annual Growth	0.69%	-12.39%	-6.23%	% Annual Growth	0.00%	0.00%	0.00%
Average Annual	\$1,766,357	\$1,813,286	\$3,579,643	Average Annual	\$525,000	\$85,000	\$610,000

**Table 5.8 Transit Future Operations and Maintenance and Capital Costs**

Operations and Maintenance				Capital			
Year	MTA	RTA	Total	Year	MTA	RTA	Total
2022	\$1,820,000	\$1,868,000	\$3,688,000	2022	\$541,000	\$88,000	\$629,000
2023	\$1,873,000	\$1,923,000	\$3,796,000	2023	\$558,000	\$91,000	\$649,000
2024	\$1,926,000	\$1,978,000	\$3,904,000	2024	\$575,000	\$94,000	\$669,000
2025	\$1,979,000	\$2,033,000	\$4,012,000	2025	\$592,000	\$97,000	\$689,000
2026	\$2,032,000	\$2,088,000	\$4,120,000	2026	\$609,000	\$100,000	\$709,000
2027	\$2,085,000	\$2,143,000	\$4,228,000	2027	\$626,000	\$103,000	\$729,000
2028	\$2,138,000	\$2,198,000	\$4,336,000	2028	\$643,000	\$106,000	\$749,000
2029	\$2,191,000	\$2,253,000	\$4,444,000	2029	\$660,000	\$109,000	\$769,000
2030	\$2,244,000	\$2,308,000	\$4,552,000	2030	\$677,000	\$112,000	\$789,000
2031	\$2,297,000	\$2,363,000	\$4,660,000	2031	\$694,000	\$115,000	\$809,000
2032	\$2,350,000	\$2,418,000	\$4,768,000	2032	\$711,000	\$118,000	\$829,000
2033	\$2,403,000	\$2,473,000	\$4,876,000	2033	\$728,000	\$121,000	\$849,000
2034	\$2,456,000	\$2,528,000	\$4,984,000	2034	\$745,000	\$124,000	\$869,000
2035	\$2,509,000	\$2,583,000	\$5,092,000	2035	\$762,000	\$127,000	\$889,000
2036	\$2,562,000	\$2,638,000	\$5,200,000	2036	\$779,000	\$130,000	\$909,000
2037	\$2,615,000	\$2,693,000	\$5,308,000	2037	\$796,000	\$133,000	\$929,000
2038	\$2,668,000	\$2,748,000	\$5,416,000	2038	\$813,000	\$136,000	\$949,000
2039	\$2,721,000	\$2,803,000	\$5,524,000	2039	\$830,000	\$139,000	\$969,000
2040	\$2,774,000	\$2,858,000	\$5,632,000	2040	\$847,000	\$142,000	\$989,000
2041	\$2,827,000	\$2,913,000	\$5,740,000	2041	\$864,000	\$145,000	\$1,009,000
2042	\$2,880,000	\$2,968,000	\$5,848,000	2042	\$881,000	\$148,000	\$1,029,000
2043	\$2,933,000	\$3,023,000	\$5,956,000	2043	\$898,000	\$151,000	\$1,049,000
2044	\$2,986,000	\$3,078,000	\$6,064,000	2044	\$915,000	\$154,000	\$1,069,000
2045	\$3,039,000	\$3,133,000	\$6,172,000	2045	\$932,000	\$157,000	\$1,089,000
Total	\$58,308,000	\$60,012,000	\$118,320,000	Total	\$17,676,000	\$2,940,000	\$20,616,000

The operations and maintenance cost estimates do not include River Bend Transit as the majority the agency's service area falls outside the RPA 8 area. RPA 9, Bi-State Regional Commission conducts additional RBT planning activities. For more information of RBT, see the RPA 9 Long Range Transportation Plan and Passenger Transportation Plan.

## **INTERCITY BUS SERVICE**

Intercity bus service is an extremely valuable transportation resource for citizens who do not drive or choose not to drive. This service allows them to reach destinations across the country. Intercity buses can also reduce personal vehicle trips on the area's highways, playing a role in reducing congestion, pollution, and energy consumption. Burlington Trailways is the sole intercity bus service provider operating in the RPA 8 area, operating a route that follows US Highway 20. The Burlington Trailways terminal is located at the Dubuque Intermodal Transportation Center, 950 Elm Street, Dubuque, Iowa.

## **TRANSIT ACTION GROUP AND PASSENGER TRANSPORTATION PLAN**

In addition to the LRTP, RPA 8 develops plans for transit service in the region by working with the Transit Action Group (TAG) and through the development of the region's Passenger Transportation Plan (PTP)

The TAG is a community group comprised of human service providers, transit providers, and transportation professionals. The RTA 8 Mobility Coordinator facilitates the quarterly TAG meetings. RPA 8 works with the TAG to develop plans for the future of the region's transit system.

The PTP provides needs-based project justification for all transit programs within the Dubuque Metropolitan Area Transportation Study (DMATS) and Regional Planning Affiliation 8 (RPA 8). The PTP must be updated (at a minimum) every five years. The TAG must be consulted in the development and review of the PTP. The DMATS and RPA 8 Policy Boards must approve the PTP, as well as any amendments.

The PTP is the region's primary tool for implementing its top transit priorities. Through the TAG the transit agencies, human service providers, and transit riders work to design programs and projects that will address the region's transportation needs. The transit agencies then use the PTP as a guide when developing annual budgets, applying for grant funding, and designing services.

## **CONCLUSION**

RTA 8, Clinton MTA, and River Bend Transit provide critical transportation services for people in the RPA 8 region. The ongoing operation and maintenance of these transit systems will be important for the future development of passenger transportation in the region. Operating and maintaining the RTA 8 and Clinton MTA systems through 2045 will require \$118 million in operations and maintenance expenditures and \$20.6 million in capital expenditures.

# 6

## SAFETY

### INTRODUCTION

RPA 8 has identified improving safety by reducing transportation-related injuries and deaths as a key goal the Long-Range Transportation Plan. Chapter 6, the safety chapter, uses crash data to help identify locations with safety issues where transportation officials can implement specific countermeasures to reduce the number of crashes, injures, and deaths. The chapter also expands focus beyond specific locations to assess safety at a regional level. The chapter conducts a region-wide analysis of crashes that compares the RPA 8 area to state and national averages and studies the underlying causes of crashes. The chapter concludes with a collection of regional strategies that can be implemented to address the safety issues identified by the analysis.

### DATA AND ASSUMPTIONS

The analysis uses data gathered by the Iowa Department of Transportation (Iowa DOT) and the National Highway Traffic Safety Administration (NHTSA). The analysis covers the RPA 8 area that includes the portion of Dubuque County outside the DMATS planning area and all of Clinton, Delaware, Jackson, counties. The analysis does not contain information for each individual city as there are 56 in the RPA 8 region. RPA 8 has labeled all charts with their data source and the geographic area covered by the dataset.

### FATALITIES AND SERIOUS INJURIES TRENDS

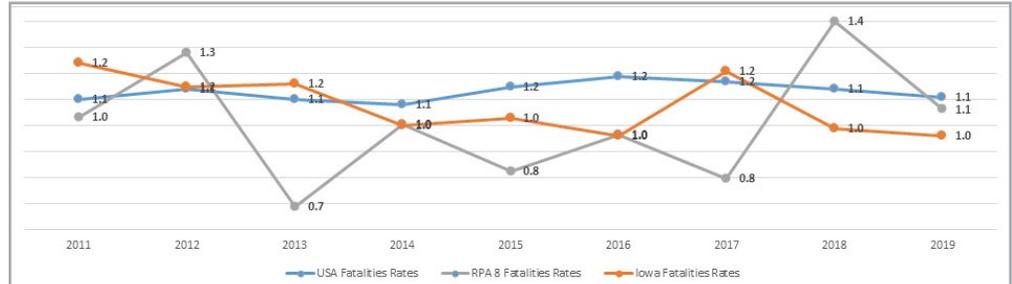
For the first level of safety analysis, RPA 8 compares fatality and serious injury rates with state and national averages. RPA 8 looks at three rates: fatalities per 100 million vehicle miles traveled (HVMVT), serious injuries per HVMVT and fatalities per 100,000 population. The rates allow RPA 8 to compare safety data from different geographic levels and across time while accounting for differences in population and miles driven. Tracking these rates over time allows RPA 8 to see if numbers trending in any particular direction. The result of the analysis shown in figures 6.1-6.3. Figure 6.1 charts fatalities per HVMVT. Figure 6.2 charts serious injuries per HVMVT, and Figure 6.3 charts fatalities per 100,000 population.

According to Figure 6.1, between 2011 and 2019 state and national fatality rates held steady at around 1.0 and 1.2 fatalities per HVMVT. Over the same time period, RPA 8 maintained a fatality rate below the state of Iowa and national rates, with the exception of 2012 and 2018 where the fatality rate went to 1.3 and 1.4 fatalities per HVMVT respectively.

In general, serious injury rates, shown in Figure 6.2 in Iowa have been trending downward over the previous decade, falling from 6.2 to 4.0 in 2019. As with the fatality rate, RPA 8's serious injury rate has been below the state rates with the exception of one year. In this case the exceedance occurred in 2012. The Safety analysts attribute this success to a number of factors, including increased seat belt use and fewer alcohol related crashes. High fuel prices and poor economic conditions have also led to a downturn in the number of vehicle miles traveled. According to early projections, the fatality rate, which takes into account the number of miles traveled, reached the lowest level ever recorded.

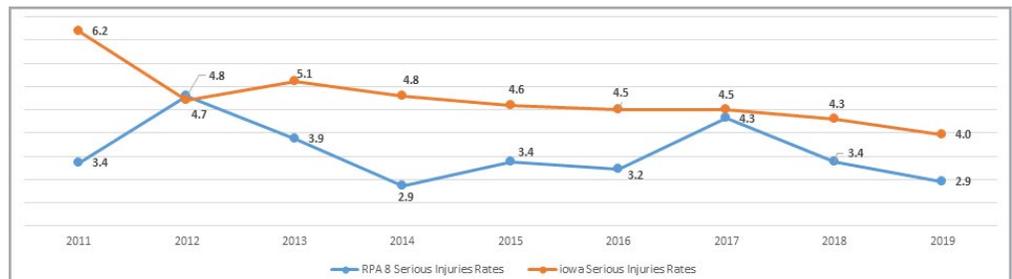
**Figure 6.1 Fatalities per 100 million vehicle miles traveled**

Source: National Highway Traffic Safety Administration. Dataset geography: RPA 8



**Figure 6.2 Serious injuries per 100 million vehicle miles traveled**

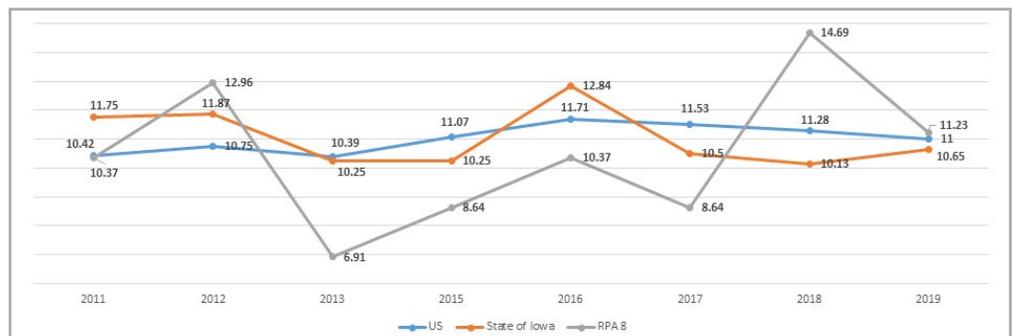
Source: Iowa DOT. Dataset geography: RPA 8



Looking at fatalities per 100,000 population in Figure 6.3, from 2011 to 2019 RPA 8 maintained a rate below the state and national averages except for three years. As with fatalities per HMVMT, RPA 8 recorded its highest fatalities per 100,000 population in the years 2012, 2018 and 2019. While these three years were above the state and national rates, the following years has a drastic drop in rates. In 2019, the most recent year where data was available, the RPA 8 dropped back to of 11.23 fatalities per 100,000 population which is drastic drop from 14.69 in 2018. To address the elevated fatality rates the RPA 8 policy board has elevated the importance of transportation safety within the regional transportation policy.

**Figure 6.3 Fatalities per 100,000 population**

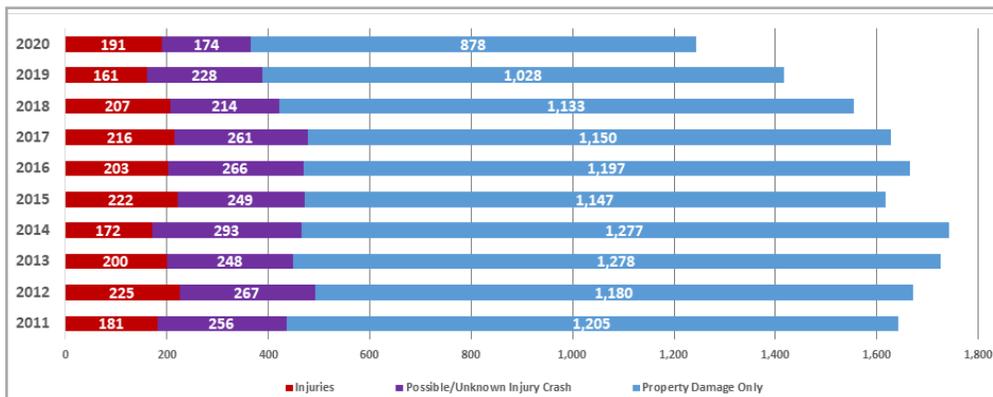
Source: National Highway Traffic Safety Administration. Dataset geography: RPA 8



## CRASH DATA EVALUATION

For the next phase of the safety analysis, RPA 8 used crash report data to track the total number of crashes in the Iowa and Illinois portions of the RPA 8 area. The crash report filled out by a law enforcement officer at the scene of a crash is the primary source for transportation safety data. The crash report summarizes the details of a crash including contributing factors or driver behaviors that caused the crash, location of the incident, driver characteristics, vehicle characteristics, and other relevant information. RPA 8 uses this data to identify issues that may require public education and specific demographics prone to collisions.

The Iowa Traffic Safety Department collects and distributes crash data for use by local public safety agencies. Figure 6.4 provides the total crashes between 2011 and 2020 in the RPA 8 Area. The State of Iowa data includes three crash types: injury crashes, unknown injuries, and property damage only.



**Figure 6.4. Total Crashes 2010 - 2019 in the Iowa portion of the RPA 8 area**

Source: Iowa DOT.  
Dataset geography: RPA 8 Area

Over the last ten years, the Iowa portion of the RPA 8 region on has averaged approximately 1,590 crashes per year. In the RPA 8 area between 2011 and 2020, motor vehicle crashes resulted in 118 fatalities, 422 major injuries, and 1,438 minor injuries. Over the decade, the region averaged approximately 12 deaths, 42 major injuries, and 144 minor injuries per year.

## CRASHES BY SYSTEM

RPA 8 uses crash data to evaluate vehicle crashes by roadway system. This analysis helps RPA 8 identify needs and allocate safety improvement resources at based on where crashes are occurring. The RPA 8 roadway network includes 1,592 miles of roadway and 346 bridges. This network is composed of a broad range of facility types, from multi-lane divided highways to gravel roads. Table 6.1 summarizes RPA 8 public roadway system by milage, bridges and vehicle miles traveled (VMT).

**Table 6.1 RPA 8 Roadway System**

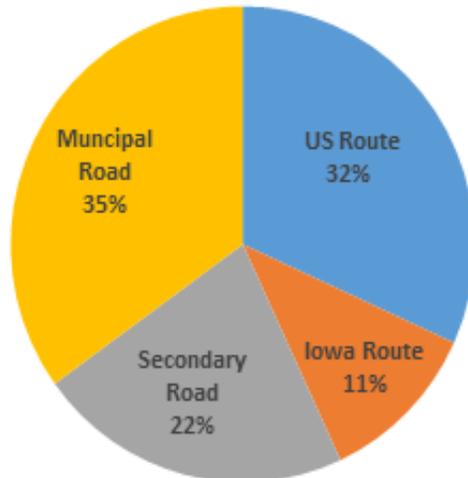
Source: Iowa DOT.  
Dataset geography: RPA 8 Area

System	Lane Miles	Percentage of total mileage	Number of bridges
Primary	1,568.5	13.1	247
Secondary (County)	9,013.1	75.1	883
Municipal (City)	1,420.1	11.8	48
Total	12,001.7		1,178

Figure 6.5 charts the percentage of crashes by system and Figure 6.6 provides percentage of crashes by urban and rural areas . In the RPA 8 area 35% of all crashes occurred in urban streets (Cities), 32% of crashes occurred on US route and 22% on secondary roads. Similarly, 57% of all crashes occurred on either the county system or municipal system, while the remaining 43% occurred on the primary highway system.

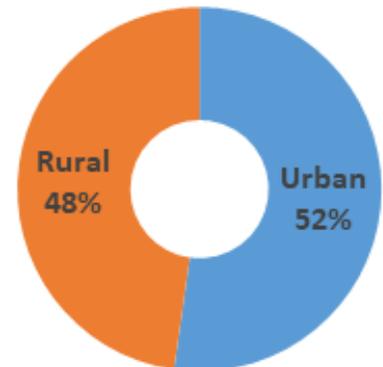
**Figure 6.5 2011-2020 Crashes by System**

Source: Iowa DOT.  
Dataset geography: RPA 8 Area



**Figure 6.6 2011-2020 Urban/Rural Crashes**

Source: Iowa DOT.  
Dataset geography: RPA 8 Area



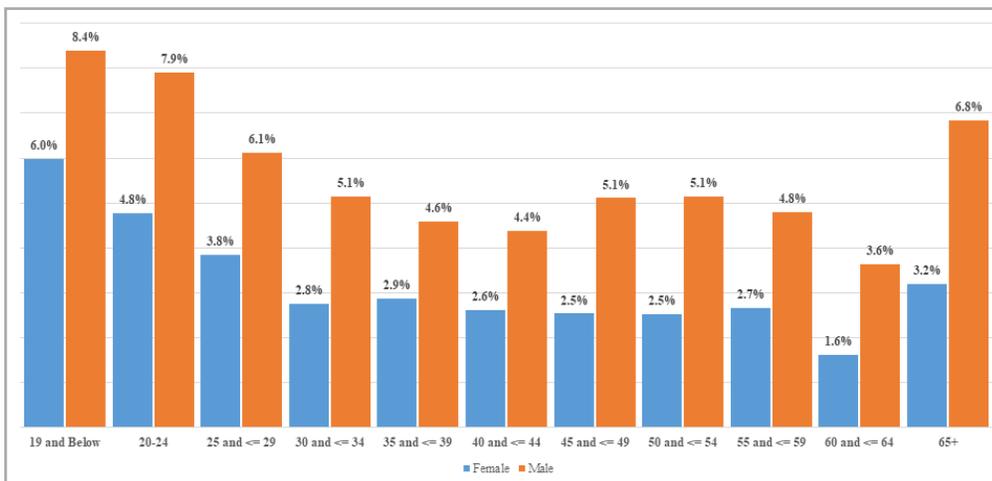
This data demonstrates that urban and rural areas within the RPA 8 region have equal amount of crashes. Far more crashes occur on the area’s primary and municipal networks. RPA 8 has set a goal to improve safety across the region and on all systems. However, based on this information, RPA 8 should continue to place special emphasis on reducing crashes on the area’s primary and municipal systems.

## CRASHES BY AGE AND GENDER

RPA 8 uses demographic data gleaned from crash reports to help its members effectively allocate their traffic safety education resources. Nationwide crash statistics show that older and younger drivers tend to be responsible for a higher proportion of crashes than other age groups. For younger drivers lack of driving experience likely leads to higher crash numbers. For older drivers, higher crash prevalence has been linked to the physical and mental changes associated with aging. Figures 6.7 charts crash data by age and gender. The figure shows higher proportions of crashes in the under 25 and over 65 age groups. The data also indicates that male drivers in every age group represent a disproportionately larger percentage of crashes. The data in both figures indicates that educational resources are needed for all age groups, but they are especially important for drivers under 25 years old and drivers over 65 years old.

**Figure 6.7**  
**Percentage of**  
**crashes by driver**  
**age and gender**  
**2011-2020**

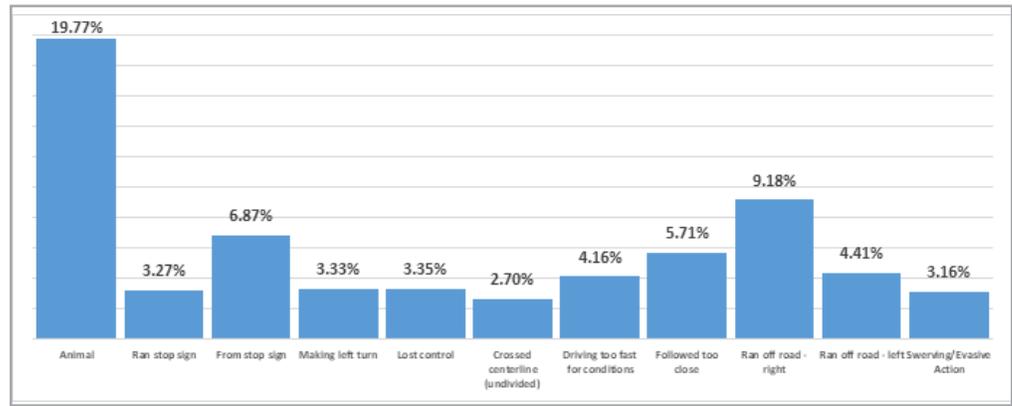
Source: Iowa DOT.  
 Dataset geography: RPA  
 8 Area



## MAJOR CAUSE OF CRASH

Crash reports identify a major cause of a collision, and RPA 8 uses the major cause data to identify areas of emphasis in its traffic safety efforts. Figure 6.8 illustrates major crash causes for RPA 8 from 2011 to 2020. The figure shows that animals, running off the road, following too close, running stop signs, and fast driving were the most frequent causes of crashes. These causes represented in over 50% of crashes in the RPA 8 area. The ranking of the crash causes has remained relatively consistent since the previous plan period. The safety emphasis areas of losing control, making left turns, and crossing the centerline (undivided) have risen in ranking.

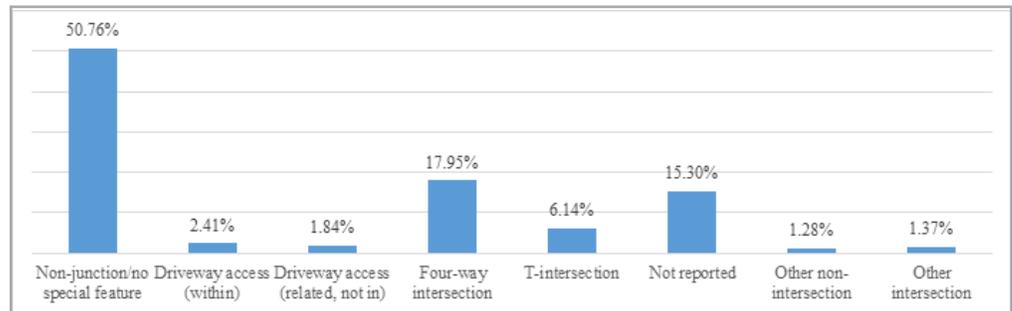
**Figure 6.8 Major Cause of Crash**  
 Source: Iowa DOT.  
 Dataset geography: RPA 8 Area



## MAJOR INCIDENT LOCATIONS

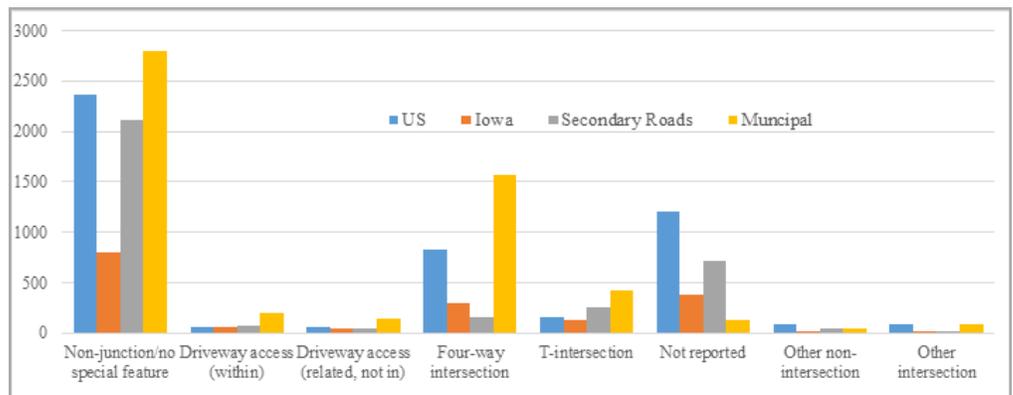
Crash reports identify a major incident location where the accidents took place, and RPA 8 uses the major incident location data to identify locations of emphasis in its traffic safety efforts. Figure 6.9 illustrates major crash incident locations for RPA 8 from 2011 to 2020. The figure shows that Non-junction/no special feature locations contributed to 51% of the accidents followed by four-way intersections at 18%, and T-intersections at 6.14%.

**Figure 6.9 Major Crash Incident Locations**  
 Source: Iowa DOT.  
 Dataset geography: RPA 8 Area



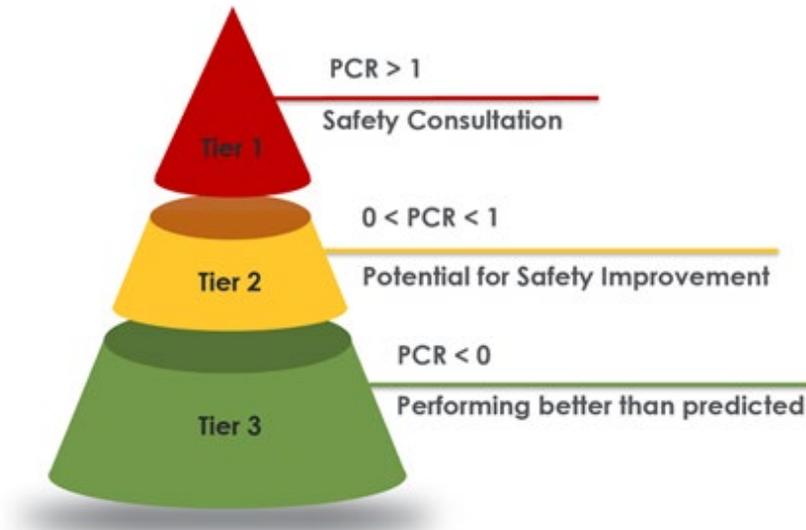
Majority of non-junction/no special feature and intersection related accidents occurred on municipal streets followed by US highways, county roads, and state highways. Figure 6.10 illustrates major crash incident locations by jurisdiction within RPA 8 from 2011 to 2020

**Figure 6.10 Major Crash Incident Locations by Jurisdiction**  
 Source: Iowa DOT.  
 Dataset geography: RPA 8 Area



## INTERSECTIONS THAT NEED IMPROVEMENT

RPA 8 developed a list of intersections that are in critical need of improvements to increase safety. These locations are determined by using data generated from Potential for Crash Reduction (PCR) of Intersections. The PCR divides intersections into three tiers following the FHWA's KABCO Injury Classification Scale. Tier I are intersections that need safety improvement and are eligible for safety funds. Tier II intersections have room for improvement but may not qualify for safety funds and Tier III intersections are performing better than predicted. Figure 6.11 provides the range of PCR scores for each Tier.



**Figure 6.11**  
**Breakdown of Tiers**  
**for all crashes**

*Source: Iowa DOT*

The RPA 8 has 2,000 intersections of which 10 qualify as Tier I inspections, 295 qualify as Tier II and 1,695 as Tier III interactions.

Figure 6.12 provides locations of Tier I intersections. Most of these intersections fall on the primary system and a majority of these intersections are in the City of Clinton.

**Figure 6.12 Tier I Intersections**

Source: Iowa DOT

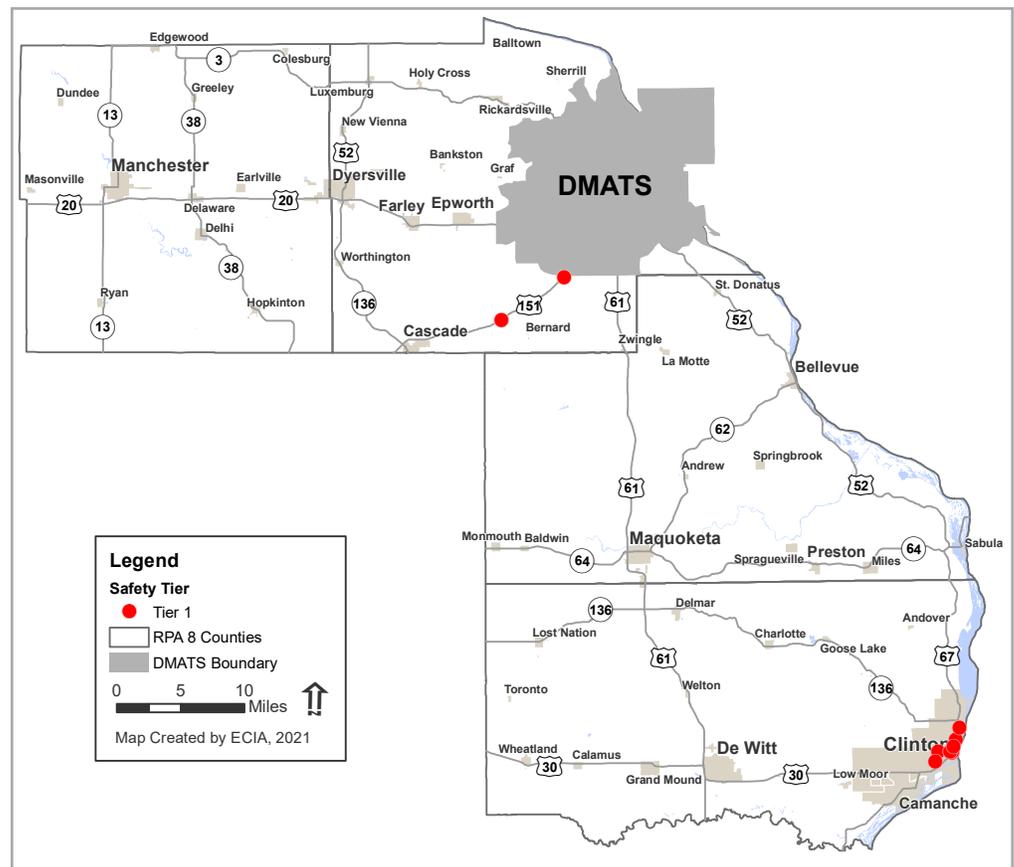


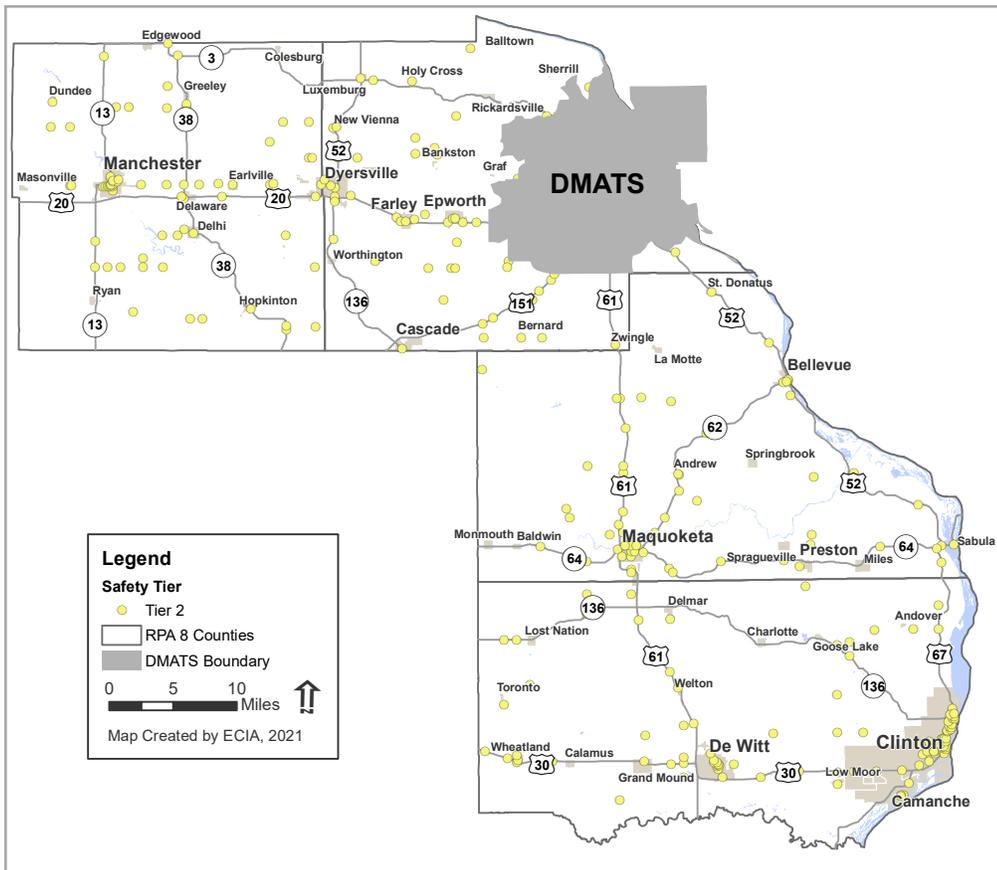
Table 6.2 provides the ten intersections that have a PCR score greater than 1.

**Table 6.2 Tier I Intersections**

Source: Iowa DOT.

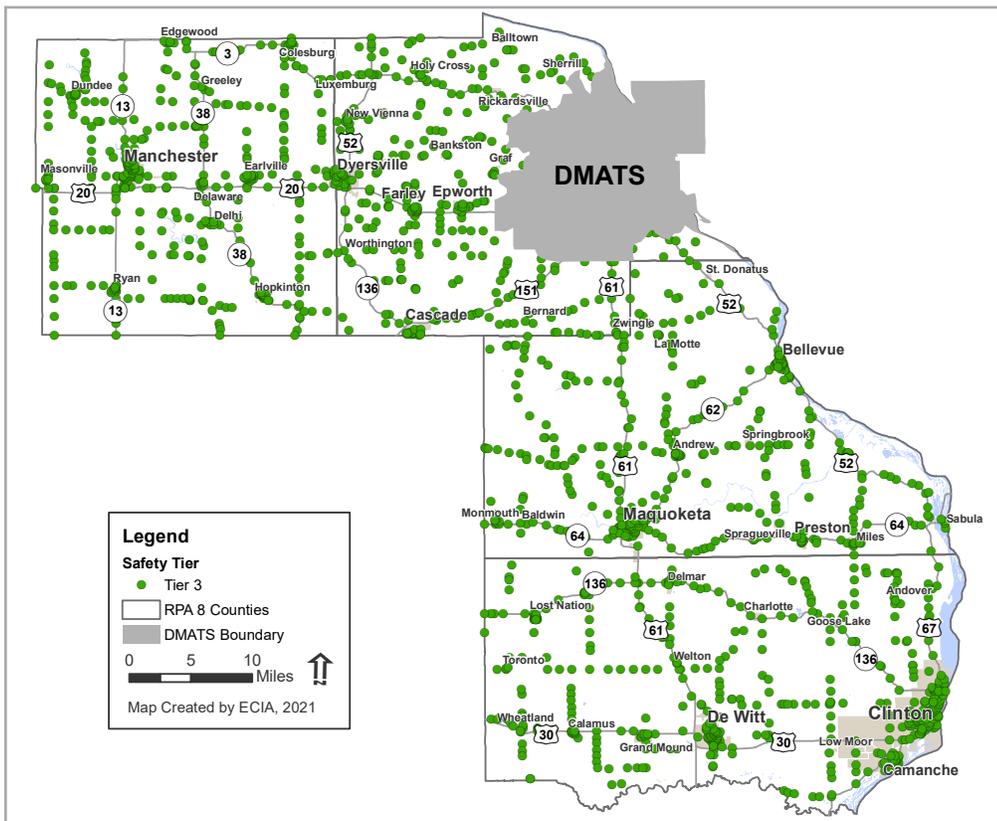
Intersection ID	Basic Road Description 1st Road	Basic Road Description 2nd Road	County	City
2017019301	US 30/8th Ave S/S 4th ST	US 67	Clinton	Clinton
2017019321	US 67	7th Ave/South 4th	Clinton	Clinton
2017019323	US 67	8th Ave N	Clinton	Clinton
2017019344	US 136	Roosevelt St	Clinton	Clinton
2017019791	S Bluff Blvd	7th Ave S & S 12th St	Clinton	Clinton
2017019799	Harrison Dr	S 14th St	Clinton	Clinton
2017019835	7th Ave S	S 5th St	Clinton	Clinton
2017019855	2nd Ave S	S 3rd St	Clinton	Clinton
2017026064	US 151	Y21/Sundown Rd/ Driscoll Rd	Dubuque	
2017026070	US 151	D41/Monastery Rd/ Skyline Rd	Dubuque	

Figure 6.13 provides locations for Tier II intersections. Most of these intersections fall on primary system with a majority of these intersections located within city limits.



**Figure 6.13 Tier II Intersections**  
 Source: Iowa DOT

Figure 6.14 provides locations for Tier II intersections. These intersections are located throughout the RPA 8 region.



**Figure 6.14 Tier III Intersections**  
 Source: Iowa DOT

## **SAFETY ANALYSIS - KEY FINDINGS**

The RPA 8 safety analysis yielded a several findings related to transportation safety in the RPA 8 area. Key findings of the analysis are summarized in the list below. RPA 8 has used these findings to target its future safety efforts.

- People under the age of 25 and over the age of 65 represented over 35% of the drivers involved in crashes. However, these two demographics have drastically different driving behaviors and transportation safety needs.
- Even though more travel occurs on the primary system, more fatalities and serious injuries occur on county and municipal systems.
- Even though area has more miles of rural road miles, it has less vehicles miles traveled and fewer crashes when compared to the urban system.
- The male drivers are over-represented in crashes when compared to their female counterparts in RPA 8 area.
- Most of the accidents happened due to loss of control, animal, ran stop signs, FTYROW: from stop sign, making left turn, ran off road – right, made improper turns etc.
- Most of the accidents happened at bon-junction/no special feature locations followed by the intersections.

## **RPA 8 TRANSPORTATION SAFETY EFFORTS**

RPA 8 implemented a number of safety efforts intended to address the key findings listed above. These efforts include establishing a Multi-Disciplinary Safety Team (MDST) to take the lead on the area's safety efforts, adopting safety goals and supporting strategies to guide regional safety efforts, and installing roundabouts to reduce crashes at unsignalized intersections. The following section describes these safety efforts.

### **MULTI-DISCIPLINARY SAFETY TEAMS**

Collaboration is critical to the implementation of a safe and efficient transportation system. Time, money and personnel are limited, and public safety agencies need to work together to eliminate duplication of services, and ensure that response efforts have the greatest impact on the region's transportation safety problems. In 2002 Dubuque County public safety agencies came together to form a Multi –Disciplinary Safety Teams (MDST) Clinton County formed an MDST in 2005. Both MDSTs have undertaken a variety of strategies to improve RPA 8 transportation safety.

It is the goal of the regions MDSTs to collaborate and cooperate with other agencies to improve safety in the region. The five areas the group focus on to improve safety are Education, Engineering, Enforcement, and Emergency Services.

## EDUCATION



Education involves informing users about unsafe behaviors and suggesting ways to improve safety when they use the transportation system. Police, fire, and engineering departments across the region use education as a transportation safety tool.

## ENGINEERING



Local public works departments or state departments of transportation often implement engineering strategies to improve roadway safety. In most cases, infrastructure solutions are low cost, reactionary improvements that focus on crash hot spots or corridors. However, engineers and planners are beginning to use a proactive approach to improve transportation safety. Under this approach, small safety improvements are implemented in the planning stages of a project. This proactive method takes a system wide approach to addressing transportation safety issues that will prevent accidents through incremental changes on a corridor level. A good safety plan will include a balance of reactionary and proactive improvements.

## ENFORCEMENT



Law enforcement officers play a valuable role in maintaining the region's transportation safety and security. Their presence can encourage appropriate driving behaviors, prevent motor vehicle collisions, and deter criminal acts. Enforcement officers also are the source of most transportation safety data — typically crash data. In addition, these individuals must coordinate traffic flow around incidents that may create congestion and motorist delays along the region's roadways.

## EMERGENCY SERVICES



Emergency services personnel help prevent additional deaths and injuries from occurring after an initial incident. This professional sector includes emergency medical services paramedics, first responders, trauma room nurses, and doctors. Other services such as motorist assist, which helps drivers with vehicle problems contribute to transportation safety by limiting the length of time vehicles are stopped on the highway. Their efforts, in coordination with regional transportation management systems, help prevent traffic delays and secondary crashes.

## EVERYONE



The significant challenge of reaching Zero Fatalities requires not only the dedication of committed professionals who represent the four E's of roadway safety, but also those who use Iowa's roadways. The National Highway Traffic Safety Administration (NHTSA) reports that for 94% of crashes nationwide the critical reason for the vehicle crash can be attributed to driver error. This finding suggests the important role that everyone plays in ensuring not only their safety but the safety of others traveling on the roadway. Further, this statistic also points to a broader need for Iowa to develop a culture of traffic safety.

## POLICY FRAMEWORK GOALS AND SUPPORTING STRATEGIES

RPA 8 will examine, evaluate, and implement the regional strategies contained in the Iowa Strategic Highway Safety Plan (SHSP). The SHSP addresses highway safety priorities and issues monitored by the State Safety Committee. In addition, appropriate actions will be taken to support the transportation system goals identified in SHSP. The Iowa DOT instructed RPA 8 staff to use the Iowa SHSP for the LRTP, because the majority of the area’s population lives in Iowa. RPA 8 staff used SHSP to address key findings within the region.

The Safety Strategies focuses on strategies that have the greatest potential to reduce fatalities, major injuries, minor injuries and unknown injuries on public roadways. These strategies will be implemented in locations chosen using criteria such as crash history, system characteristics, and population demographics.

### 1. People under the age of 25 and over the age of 65 represented over 35% of the drivers involved in crashes

- People under Age of 25

	Improve content and delivery of driver education curriculum
	Continue educating young drivers in school-based settings using various training techniques, including those that simulate impairment.
	Support a broad-based coalition to plan for addressing age-based transportation needs.
	Support young drivers to avoid distractions and impairment.

- People over Age of 65

	Support a broad-based coalition to plan for addressing age-based transportation needs.
	Provide educational and training opportunities for mature drivers that address driver safety, road engineering and signage, vehicle technology, driver licensing, health and vision concerns, and alternative transportation options.
	Update publications and web resources for older drivers and their families to include safety strategies, warning signs, and planning for driving retirement.
	Update procedures for assessing medical fitness to drive.
	Know when to put the keys down, or when to have a conversation with family members who may pose a hazard to others on the road.

**2. Reducing fatalities and serious injuries on county and municipal system**

	Increase safety at intersection by implementing roundabouts (see roundabouts section of this chapter more details) at heavily travelled intersection on municipal and county system.
	Provide education on using roundabouts.
	Develop educational resources informing the public of alternative intersection types, traffic signals, and laws.
	Conduct enforcement campaigns related to bicycle and pedestrian awareness at targeted intersections.
	Use systemic approaches to improve visibility and awareness of intersections.
	Implement alternative intersection designs that reduce conflict points and enhance safety and mobility.
	Develop an intersection configuration/evaluation tool to aid planners and designers in selecting appropriate intersection types.
	Approach intersections with caution and get familiar with new designs in your community.

**3. Reduce accidents due to loss of control, ran traffic signals and ran stop signs.**

	Educate drivers on the importance of controlling and managing vehicle speed.
	Identify corridors with a high frequency of speed related crashes and implement high-visibility enforcement campaigns.
	Evaluate and implement signing and geometric design strategies to moderate speeds and enhance safety
	Implement speed feedback signs at targeted locations.
	Give yourself enough time to reach your destination. Be patient, slow down, and do not engage with aggressive drivers

**4. Reduce accidents for ran off road – right, made improper turns**

	Evaluate high-friction surface treatments (HFST) at targeted locations on local systems.
	Evaluate high-friction surface treatments (HFST) at targeted locations on local systems.
	Place centerline and/or shoulder rumble strips on and local systems. Where necessary, install or widen paved shoulders.

## 5. Reduce accidents at Intersections

	Develop educational resources information the public of alternative intersection types, traffic signals, and laws.
	Conduct enforcement campaigns related to bicycle and pedestrian awareness at targeted intersection.
	Use systemic approaches to improve visibility and awareness of intersections.
	Implement alternative intersection designs that reduce conflict points and enhance safety and mobility.
	Develop an intersection configuration/evaluation tool to aid planners and designed in selecting appropriate intersection types.
	Approach intersections with caution and get familiar with new designs in your community.

## RPA 8 SAFETY PROJECTS

The following section lists key safety projects that areas that RPA 8 staff are working from the previous LRTP:

### ROADS AND BRIDGES

- Ensure that roads and bridges remain passable during an emergency. (Ongoing)
- Reduce the number of fatalities and decrease the economic impact from highway-related accidents (Ongoing)

### BICYCLE AND PEDESTRIAN

- Encourage cities and counties to implement bicycle and pedestrian improvements, services, and programs. (Ongoing)
- Encourage local government participation in safety outreach activities, and continue bicycle and pedestrian safety education.
- Encourage cities and counties to continue to implement bicycle parking and encourage its installation by developers, business owners, schools, and other institutions.
- Improve safety for children who walk and bike to school. (Ongoing)

### TRANSIT

- Review security measures against checklists developed by FTA and IPTA.
- Create an action plan with County Sheriff and City Police Department to request random patrols of transit systems headquarters, the bus depot, and “hot spots” on Friday and Saturday evenings.
- Work with MDST and County EMS regarding security and emergency preparedness plans, and ensure that all are familiar with the basic operation of a bus, and are aware of the bus depot’s layout.

- Define transit systems role in non-transit emergencies.
- Conduct at least one emergency exercise annually.
- Install cameras on buses that are equipped with a “panic button” that will capture a higher quality of video footage. (Done)
- Purchase newer buses to be equipped with full time cameras (Done)
- Equip buses with mobile data terminals and GPS systems. (Done)
- Install security cameras at transit offices and bus depots. (Done)
- Transit offices secured with passcard swipe locks. (Done)
- Encourage transit systems to secure funding for full-time cameras on all buses. (Done)
- Encourage transit systems to secure funding for automated vehicle locator system. (Done)
- Encourage transit systems to contact the fire department and county emergency management regarding security and emergency preparedness plans, and ensure that all are familiar with the basic operations of a bus and are aware of the bus depot’s layout.
- Encourage transit systems to develop and execute at least one emergency exercise annually.

## **RAIL**

- Work closely with the IADOT Rail Division on planning studies and project development activities for rail safety projects, including rail grade separations at targeted locations. (Ongoing)

## **REGION-WIDE SAFETY PROJECTS**

- Coordinate transportation and operational agencies with the county emergency and hazard mitigation plans.
- Ensure continued cooperation between transportation agencies and transit systems. (Ongoing)
- Train all personnel in emergency response procedures and protocols, and conduct annual refresher training. (Ongoing)
- Establish an ongoing means of communication with fire, sheriff, and police departments and the County EMS to ensure sharing of crime and security information among all concerned. (Ongoing)
- Work with safety teams and County EMS regarding security and emergency preparedness plans. (Ongoing)
- Continue use of incident management patrols, coordination with law enforcement agencies, and implementation of safety and mobility projects by the members to respond to safety and security trends and issues.
- Review evacuation plans in the region, focusing on transit security plans. Plan review will ensure compatibility and clarification regarding responsibility and procedures in the event of an incident. (Ongoing)

# 7

## FREIGHT

The efficient movement of goods is one of the keys to effective competition in the global economy. As a result, policy makers, industry specialists, and transportation planners have recognized that providing efficient systems for moving goods will help create a competitive advantage in the global market. In 2018, RPA 8 worked with surrounding counties in Iowa and Illinois to prepare a multimodal, intermodal freight plan for the eight county Blackhawk Hills & East Central Intergovernmental Association (ECIA) region. The Eight County Freight Plan will be referenced in this plan. The full Eight County Freight Plan is available at [www.eciatrans.org](http://www.eciatrans.org).

The Eight County Region is at the heart of major US manufacturing and agricultural activity, and is made up of the counties of Carroll, Jo Daviess, Stephenson, and Whiteside counties in Illinois, as well as Clinton, Delaware, Dubuque, and Jackson counties in Iowa. This region, shown in Figure 7.1, relies on the multimodal transportation system of roads, rails, air and water ports to both supply the inputs needed for production and to transport goods to consumers inside and outside of the Region – driving their local economies.

The efficiency of the transportation system affects the competitiveness and growth potential of the Region. In order to enable the competitiveness of existing, as well as attract new business, the Region must understand how the freight transportation system is linked to the local economy, identify needs on the transportation system and define opportunities to improve freight transportation in local planning and policy decisions.

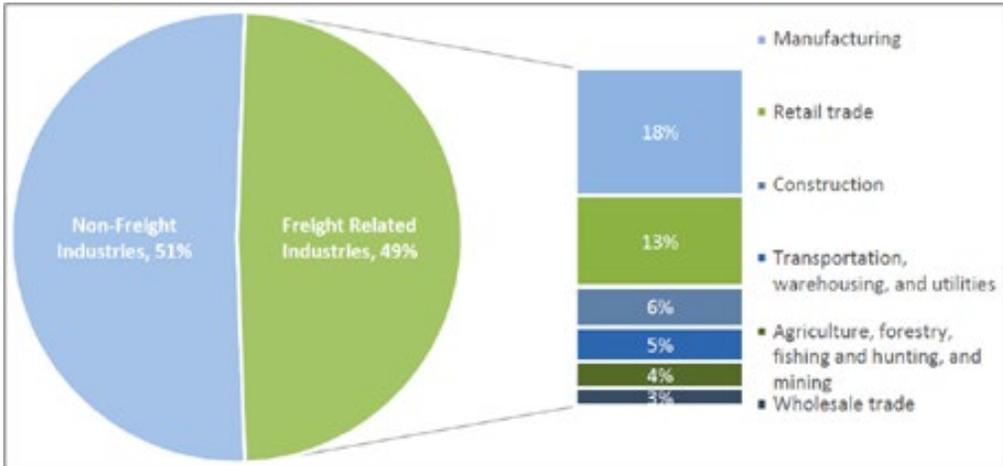
**Figure 7.1 The Eight County Region**

*Source: ECIA*



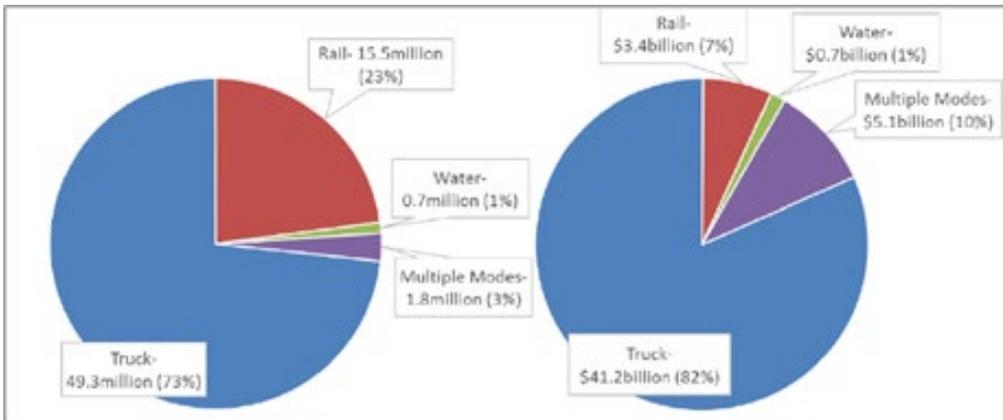
## KEY INDUSTRIES AND OUTPUT

This Region has a diverse population and economy in which freight transportation is extremely important. As shown in Figure 7.2, almost 50 percent of the Region’s workers are employed by firms that rely on the movement of freight to support their operations. Key freight-related industries for the region are agriculture, which generates large tonnages of freight (over 31.8 million tons in 2014), and manufacturing, which employs 18 percent of the Region’s workforce.



**Figure 7.2**  
**The Relative Employment by Industry**  
 Source: CPCS Analysis of 2015 American Community Survey Data, US Census Bureau

As a result of these local industries, in 2014, the Region’s freight system carried 67.3 million tons of freight worth \$50.4 billion. As shown in Figure 7.3, trucking was the most commonly-used mode, carrying 73 percent of the region’s freight by tonnage, and 82 percent of its freight by value. While trucks carry the majority of the freight in the Eight County Region in terms of both value and tonnage, the Region also has extensive rail lines and major barge facilities. Rail carried the second largest tonnage (23 percent), and multiple-mode shipments (such as truck to barge or truck to rail, or containerized shipments), carried the second largest share of value (10 percent).

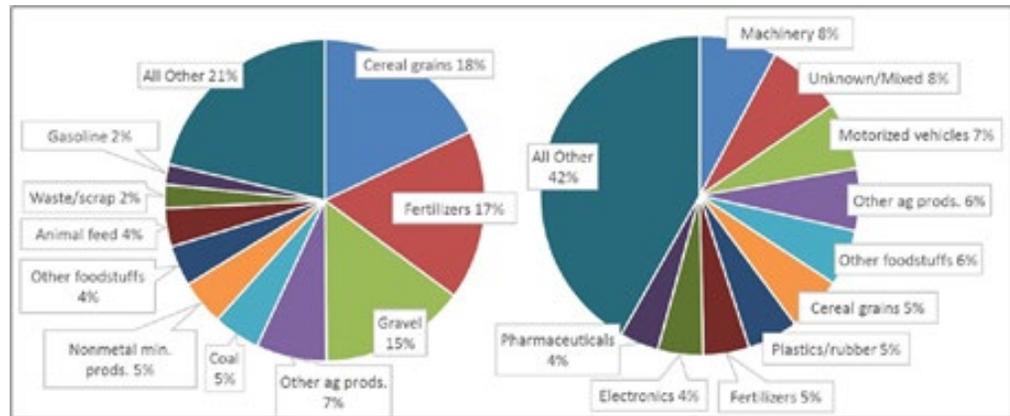


**Figure 7.3 Freight System Tonnage (left) and Value (right) by Mode (2014)**  
 Source: WSP | PB Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data. Preliminary.

In terms of specific commodities, bulk cereal grains (such as corn) are the number one commodity by tonnage (18 percent), and machinery is the number one commodity by value (eight percent). Figure 7.4 provides a visual of the top ten commodities by tonnage and value.

**Figure 7.4**  
**Freight System**  
**Tonnage (left) and**  
**Value (right) by**  
**Commodity (2014)**

Source: WSP | PB  
 Analysis of FHWA  
 Freight Analysis  
 Framework version 4  
 (FAF4) data. Preliminary



## INFRASTRUCTURE

In terms of freight system infrastructure, the Region’s road network is made up of different sub-networks including Interstate highways, national highways, state highways, and county roads. However, of note is the small number of Interstate miles in the Region (~46 miles), as compared to national highway system miles (~640 miles). This means trucks must rely on US and State Routes for connections to the broader national freight system.

A similar picture is true for rail infrastructure. The Region is served by five railroads and nine railyards, yet local firms have relatively limited rail access, as rail sidings are required for direct access, and most of the Region’s rail terminals are built for the transfer of bulk materials, such as grain or fertilizer. Because of this orientation towards bulk shipments, few rail connections are available for producers of non-bulk commodities such as manufactured goods. Firms looking to move their goods by rail may have to ship their products by truck to rail intermodal facilities.

The Mississippi River flows for 93 miles through the center of the Region, making it an ideal transportation corridor to the Gulf of Mexico and international markets. The Region is home to 21 groups of barge terminals in seven cities, with the majority clustered around Dubuque, IA and Clinton, IA. All terminals have a truck connection, and ten have rail connections.

The Region may lack its own access points for many mode/commodity combinations, but it benefits from the Midwest’s wealth of transportation assets, in particular the Mississippi River, and the intermodal yards and air-ports nearby in Rockford, Rochelle and greater Chicago.

## FUTURE OUTLOOK

The freight system (including the transportation network, shippers, carriers, etc.) operates within a dynamic environment that is continually changing and adapting to best meet current market demands. While it is difficult to pinpoint how this environment will change in the future, we do know that there are a number of external factors that will influence it and, in turn, how goods are moved in the Region.

This study does not focus on predicting how the system will change, as much as it considers how to make the Region’s freight transportation system resilient and adaptable to an unknown future.

**Figure 7.5 Eight**  
**County Region**  
**Strengths,**  
**Weaknesses,**  
**Threats and**  
**Opportunities**

Source: ECIA Eight  
 County Freight Study

Initial observations were made related to the Region’s strengths weaknesses, threats, and opportunities (SWOT). Figure 7.5 presents a summary of the SWOT as conducted related to the Region’s population, key industries, and transportation infrastructure. This preliminary assessment was built upon during the development of the Eight County Freight Plan.

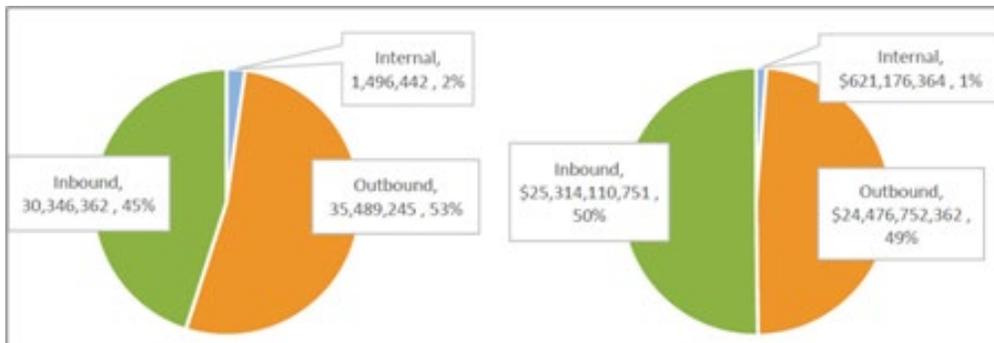
Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Relatively stable population</li> <li>• Steady increases in income</li> <li>• Diverse industrial base, including manufacturing and agriculture</li> <li>• Diverse manufacturing sector</li> <li>• Multimodal freight assets</li> <li>• Freight system designed to transport bulk goods</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of skilled and semi-skilled employees</li> <li>• Bridges, river crossings</li> <li>• Distance to major intermodal and transfer facilities</li> </ul>
Threats	Opportunities
<ul style="list-style-type: none"> <li>• Lower population growth compared to peer regions</li> <li>• Shrinking workforce</li> <li>• The importance of manufacturing for the Region appears to be decreasing</li> <li>• Automation (manufacturing-related)</li> <li>• Competitive global market for crops</li> <li>• Infrastructure failure – locks and dams</li> <li>• Unknown social, economic, and policy changes from the adoption of connected and autonomous vehicles</li> <li>• Sea level rise</li> </ul>	<ul style="list-style-type: none"> <li>• Postsecondary workforce programs</li> <li>• On- and Near-shoring</li> <li>• Value-added agriculture</li> <li>• Embrace technology</li> </ul>

**Figure 7.5 Eight County Region Strengths, Weaknesses, Threats and Opportunities**

Source: ECIA Eight County Freight Study

## EIGHT COUNTY REGION COMMODITY FLOWS BY TONNAGE AND VALUE

In 2014 the Eight County Region handled approximately 67.3 million tons of freight, worth approximately \$50.4 billion dollars, as in-bound-outbound-internal movements, including both domestic and inter-national freight. Figure 7.6 shows that both tonnage and value flows are extremely balanced between inbound and outbound directions. The tonnage and value moving within the Eight County Region is a very small share of total movement, indicating the Eight County Region economy is largely “outward facing.”



**Figure 7.6 Total Eight County Region Tonnage (left) and Value (right) by Direction, 2014**

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data.

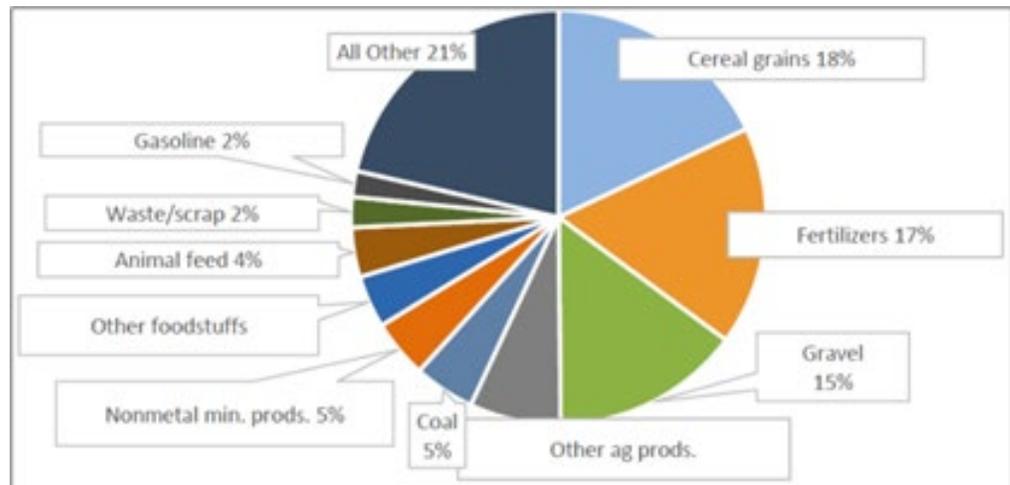
## BY COMMODITY TONNAGE AND VALUE

In 2014, the leading tonnage commodities for the Eight County Region included cereal grains, fertilizers, and gravel; these three commodities represented 50 percent of the region's tonnage. Other important tonnage commodities included: other agricultural products; coal; nonmetallic mineral products; other foodstuffs; animal feed, commodity waste/scrap; and gasoline.

The leading value commodities for the Eight County region in 2014 included: machinery; unknown/mixed (primarily containerized goods and mixed shipments of retail goods); motorized vehicles; other agricultural products; other foodstuffs; cereal grains; plastics/rubber; fertilizers; electronics; and pharmaceuticals. Value is broadly dispersed across a wide range of commodities, with none being dominant. Figures 7.7 and 7.8 summarize the region's commodity types by tonnage and value.

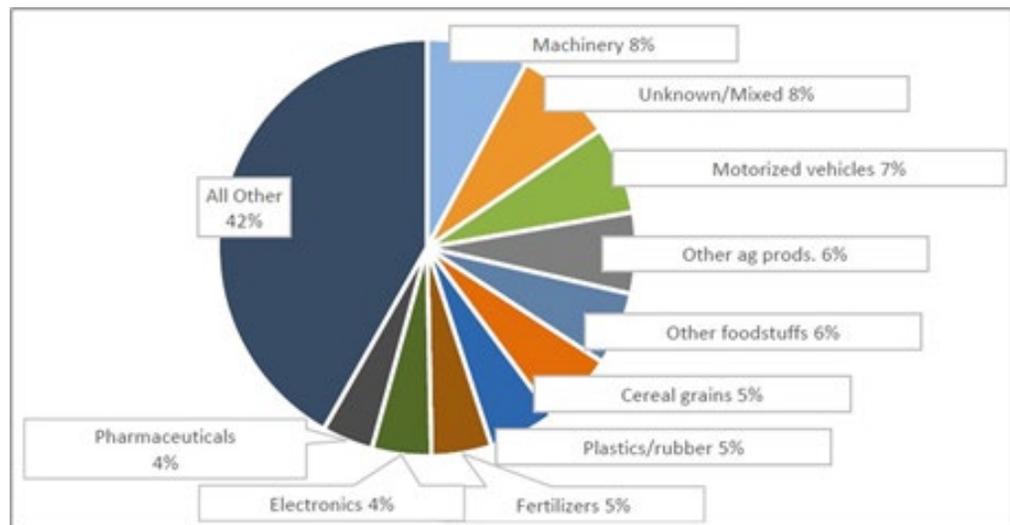
**Figure 7.7 Total Eight County Region Tonnage by Commodity Type, 2014**

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data.



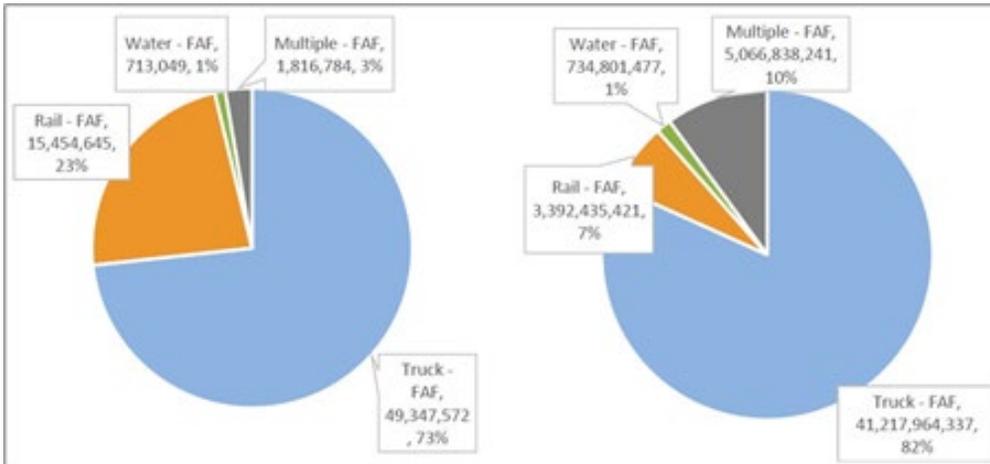
**Figure 7.8 Total Eight County Region Value by Commodity Type, 2014**

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data..



## BY MODAL TONNAGE AND VALUE

Looking at 2014 state-to-state freight transportation mode data in Figure 7.9, trucking represented 73 percent of Eight County Region tonnage and 82 percent of value; rail represented 23 percent of tonnage and 7 percent of value; multiple modes represented 3 percent of tonnage and 10 percent of value; and water represented 1 percent of tonnage and 1 percent of value. Each mode serves a distinct set of commodities and trading partners; the greatest tonnage and value was from trucking between the Eight County Region and the rest of Iowa and Illinois.



**Figure 7.9 Eight County Region Tonnage (left) and Value (\$) (right) by State-to-State Mode, 2014**

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data..

The share of freight value carried by truck (82 percent) was greater than the share of freight tonnage (73 percent), suggesting that trucks were being used to carry the Region's higher-value, lower weight manufactured goods. Rail served a different purpose, carrying 23 percent of the Region's tonnage, but only seven percent of its value, which suggests rail shipments were being used for relatively high-weight, low-value commodities like agricultural products. An interesting category is multiple-mode shipments, which carried only three percent of tonnage, but accounted for 10 percent of value. This category includes intermodal container shipments, which are often used to carry higher-value goods with low to medium weights.

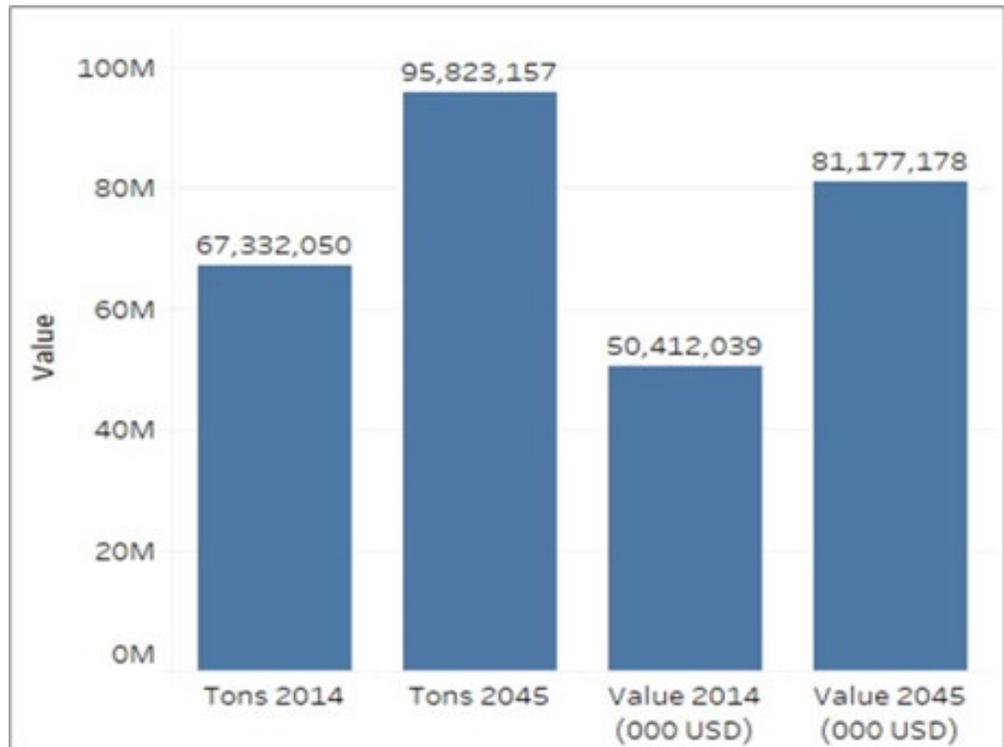
# EIGHT COUNTY REGION FUTURE COMMODITY FLOWS

## TONNAGE AND VALUE GROWTH

FAF data includes growth forecasts through the year 2045. The FAF forecast provides a useful picture of one possible “baseline scenario” future for the Eight County Region, where the Region and the rest of the country continue to follow historical trends. Between 2014 and 2045, the Eight County Region is projected to add 28.5 million tons of freight (a 42 percent total increase based on an average growth rate of 1.1 percent per year) worth almost \$30.8 billion dollars (a 61 percent total increase based on an average growth rate of 1.5 percent per year). In 2045, the region will handle nearly 96 million tons of freight worth over \$81 billion dollars. Figure 7.10 illustrates the projected change.

**Figure 7.10 Eight County Tonnage and Value (000 USD) Comparisons, 2014-2045**

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data..



## TONNAGE AND VALUE GROWTH BY COMMODITY

In 2014, the top five Eight County Region tonnage commodities were cereal grains, fertilizers, gravel, other agricultural products, and coal. In 2045, the leading tonnage commodities are forecast to be cereal grains, fertilizers, gravel, other agricultural products, and non-metallic mineral products. See Table 7.1

**Table 7.1 Eight County Commodities Ranked by 2045 Forecast Tonnage**

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data..

	Tons 2014	Tons 2045	Tons Added	Percent Growth	Tons CAGR
Cereal grains	12,114,601	17,464,810	5,350,209	44.2%	1.2%
Fertilizers	11,517,022	16,333,601	4,816,579	41.8%	1.1%
Gravel	9,926,427	14,412,942	4,486,515	45.2%	1.2%
Other ag prods.	4,792,338	6,833,904	2,041,566	42.6%	1.2%
Nonmetal min. prods.	3,064,298	5,837,700	2,773,402	90.5%	2.1%

In 2014, the top five Eight County Region value commodities were machinery, unknown/mixed commodities, motorized vehicles, other agricultural products, and other foodstuffs. In 2045, the leading tonnage commodities are forecast to be machinery, unknown/mixed (generally consisting of higher-value goods shipped in intermodal containers or truck vans), pharmaceuticals, motorized vehicles, and electronics. See Table 7.2.

	Value 2014 (USD)	Value 2045 (USD)	Value Added	% Growth	Value CAGR
Machinery	3,958,031,328	8,197,190,967	4,239,159,639	107.1%	2.4%
Unknown/Mixed	3,844,393,817	5,445,134,789	1,600,740,972	41.6%	1.1%
Pharmaceuticals	1,993,475,649	4,969,508,368	2,976,032,719	149.3%	3.0%
Motorized vehicles	3,429,676,018	4,802,950,395	1,373,274,377	40.0%	1.1%
Electronics	2,317,293,231	4,751,774,275	2,434,481,044	105.1%	2.3%

**Table 7.2**  
**Eight County**  
**Commodities**  
**Ranked by 2045**  
**Forecast Tonnage**

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data..

## TONNAGE AND VALUE GROWTH BY MODE

Between 2014 and 2045, all Eight County region freight modes are forecast to experience growth. State-to-state truck tonnage is projected to increase by 44.1 percent; rail tonnage is projected to increase by 32.0 percent; water tonnage is projected to increase by 42.2 percent; and multiple modes tonnage is projected to increase by 82.4 percent. The Eight County Region’s transportation system will need to accommodate and absorb these increases in freight tonnage while maintaining levels of performance that are acceptable to its freight shippers and receivers. See Table 7.3.

	Mode			
	Truck - FAF	Rail - FAF	Water - FAF	Multiple - FAF
Tons 2014	49,347,572	15,454,645	713,049	1,816,784
Tons 2045	71,095,638	20,400,234	1,014,143	3,313,142
Tons Added	21,748,066	4,945,589	301,094	1,496,358
Percent Growth Tons	44.1%	32.0%	42.2%	82.4%
Tons CAGR	1.2%	0.9%	1.1%	2.0%
Value 2014 (USD)	41,217,964,337	3,392,435,421	734,801,477	5,066,838,241
Value 2045 (USD)	63,794,940,850	5,657,484,319	914,339,365	10,810,413,400
Value Added	22,576,976,513	2,265,048,898	179,537,887	5,743,575,158
Percent Growth Value	54.8%	66.8%	24.4%	113.4%
Value CAGR	1.4%	1.7%	0.7%	2.5%

## LEADING OPPORTUNITIES

Opportunities identified in the Eight County Freight Study include:

- Build on core strengths in established commodity groups (cereal grains, fertilizers, gravel, other agricultural products, machinery, mixed goods, motorized vehicles, and other foodstuffs) and prepare to accommodate growing transportation needs associated with these commodities.
- Look to capture emerging fast-growing commodity groups (pharmaceuticals, precision instruments, plastics/rubber, and other known economic development targets) by providing sufficient and attractive (safe, reliable, cost-effective) freight transportation options and services.
- Focus – first and foremost – on truck corridors and connections linking the Eight County Region to the remainder of Iowa and Illinois. These are critical for today’s most important commodities, and for the commodities that are expected to see the most growth in the future.

- Maintain and enhance other modal options – including rail, water, and airport connections – and evaluate the potential for intermodal service improvements to best serve the region.

### **POTENTIAL RISKS**

- The FAF forecast is a model. Like all models, it is likely wrong in some respects. We believe it has a sound basis, but its findings and implications should be confirmed where possible with local economic development knowledge and industry input.
- There are larger uncertainties that are not reflected in the forecast. Compared to parts of the country that are heavily dependent on energy products (which are highly cyclic), or lack diversity in their economic and freight transportation profile, the Eight County Region is relatively fortunate – it is not exposed to energy uncertainty, and it has diversity in its economic base. However, changes in the production of grain, for example, could significantly affect both grain and fertilizer movements; if those movements decline, construction and industrial activity could decline, suppressing the need for gravel and machinery; and so on.
- From a transportation perspective, the biggest risk is associated with the potential inability or failure to provide competitive transportation services to freight shippers and receivers. Freight system users demand reliability, cost-effectiveness, speed, safety, and (increasingly) resiliency. Different users weigh these factors differently – for example, coal places a premium on low per-unit costs, while container shippers place the highest value on reliability and speed – but they matter to all stakeholders in the freight ecosystem. If the Eight County Region can identify and address existing freight transportation deficiencies, and build new advantages for freight shippers, it should be increasingly competitive for the retention, growth, and attraction of freight-dependent industries. If it does not do so, it risks limited growth and loses opportunities.

### **EIGHT COUNTY REGION BENCHMARKING: COMMODITIES, MODES, DISTANCES, AND COSTS**

In addressing the competitiveness of the Eight County Region in providing freight transportation services, it is useful to compare its performance to national-average benchmarks for truck, rail, water, and multiple modes tonnage in four areas: commodity shares; mode shares; trip distances; and freight transportation costs.

To examine commodities, FAF data was used to generate two sets of metrics:

- “Commodity Quotients” (CQ) calculated as the ratio of Eight County Region commodity tonnage shares to US commodity tonnage shares. Commodity Quotients greater than 1.0 reflect a strong concentration Eight County Region tonnage in a given commodity, compared to the national average.
- “Commodity Growth Quotients” (CGQ) calculated as the ratio of Eight County Region and US commodity tonnage growth percent-ages. Commodity Growth Quotients greater than 1.0 mean a commodity is faster growing in the Eight County Region than in the US as a whole, on a percentage basis.

	Eight County Region 2014 Tonnage Share	US Total Tonnage Share	Eight County "Commodity Quotient"	Eight County "Commodity Growth Quotient"
Cereal grains	18.0%	7.7%	2.34	1.12
Fertilizers	17.1%	1.6%	10.70	0.95
Gravel	14.7%	12.7%	1.16	1.07
Other ag prods.	7.1%	3.9%	1.84	0.90
Coal	4.8%	6.8%	0.70	0.56
Nonmetal min. prods.	4.6%	7.5%	0.61	1.17
Other foodstuffs	4.1%	4.9%	0.83	0.96
Animal feed	3.9%	2.3%	1.65	0.84
Waste/scrap	2.4%	4.6%	0.52	1.07
Gasoline	2.0%	5.4%	0.37	1.30

**Table 7.4**  
**Eight County Region CQ and CGQ for Ten Leading Tonnage Groups, 2014**

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data..

Table 7.4 lists the Region's CQ and CGQ values for the ten leading tonnage groups.

	Eight County Region 2014 Tonnage Share	US Total Tonnage Share	Eight County "Commodity Quotient"	Eight County "Commodity Growth Quotient"
Machinery	0.6%	0.9%	0.69	0.84
Unknown/Mixed	1.4%	2.7%	0.53	0.90
Motorized vehicles	0.6%	1.3%	0.45	0.97
Other ag prods.	7.1%	3.9%	1.84	0.90
Other foodstuffs	4.1%	4.9%	0.83	0.96
Cereal grains	18.0%	7.7%	2.34	1.12
Plastics/rubber	1.2%	1.7%	0.70	0.80
Fertilizers	17.1%	1.6%	10.70	0.95
Electronics	0.2%	0.5%	0.34	0.77
Pharmaceuticals	0.0%	0.1%	0.30	0.84

**Table 7.5**  
**Eight County Region CQ and CGQ for Ten Leading Value Groups, 2014**

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data..

Table 7.5 lists the Region's CQ and CGQ values for the ten leading value groups.

Regarding commodities, the 2014 data indicated that the region was more heavily concentrated in fertilizers, cereal grains, and other agricultural products than the nation as a whole; these groups were projected to grow at rates near or exceeding national averages. The region was less heavily concentrated in high-value goods (machinery, electronics, pharmaceuticals, etc.) but growth rates for these commodities were generally near national averages, suggesting the possibility of stronger roles in the regional economy. Overall, the region is expected to grow at the same rate as the nation as a whole.

Similar Modal Quotients (MQ) and Modal Growth Quotients (MGQ) were calculated to examine modes. Table 7.6. summarizes the calculations. The region is substantially more dependent on rail than the nation as a whole, and substantially less dependent on water. The region's use of trucking and multiple modes are slightly below national averages. All modes are expected to grow at roughly the national average rates.

**Table 7.6 Eight County Region MQ and MGQ, 2014**

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data..

	Eight County Region 2014 Tonnage Share	US Total Tonnage Share (excluding Air, Pipeline, Other)	Eight County "Modal Quotient"	Eight County "Modal Growth Quotient"
Truck	73.3%	79.6%	0.92	1.00
Rail	23.0%	12.4%	1.85	1.04
Multiple	2.7%	3.1%	0.88	1.00
Water	1.1%	5.0%	0.21	1.09

Compared to national averages, the region's average length of haul was longer for truck (even though the most significant truck trade is with Illinois and Iowa) and for water, and shorter for rail (much of the market is in the Midwestern states) and multiple modes. See Table 7.7 and 7.8.

**Table 7.7 Eight County Region and US Average Trip Lengths by Mode (Provisional), 2014**

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data.

	Eight County Region Average Miles per Trip	US Total Average Miles per Trip
Truck - FAF	265	177
Rail - FAF	399	802
Multiple - FAF	557	811
Water - FAF	540	453

**Table 7.8 Order-of-Magnitude Freight Transportation Costs for the Eight County Region, 2014**

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data..

	Rate per Ton-Mile	Ton-Miles, 2014	Estimated Transportation Cost
Truck	\$ 0.108	13,056,538,943	\$ 1,410,106,206
Rail	\$ 0.083	6,159,485,019	\$ 511,237,257
Multiple	\$ 0.097	1,012,159,822	\$ 98,179,503
Water	\$ 0.050	385,064,490	\$ 19,253,224
<b>Total</b>			<b>\$ 2,038,776,190</b>

# EIGHT COUNTY FREIGHT SYSTEM VISION AND GOALS

## FREIGHT SYSTEM VISION

In order to appropriately assess the needs of the Eight County Region, the freight plan must first define the overall vision for the transportation system. The vision is an aspirational future point for the transportation system, and guides the development of goals, performance measures and the assessment of transportation needs.

The goals are assigned performance measures that are used to assess the performance of the current freight transportation system and identify needs. Performance measures focus on variables that the freight plan can affect, therefore making the information derived from the performance assessment actionable.

## DEVELOPING THE FREIGHT SYSTEM VISION

An iterative process was used, informed by the Project Steering Committee, to develop the vision for the Eight County Region's freight transportation system. First, existing visions and goals in established Regional and national plans were examined, including those from BHRC and ECIA, Dubuque Metropolitan Area Transportation Study, ILDOT, IADOT, and Federal Legislation.

After identifying reoccurring themes in existing vision documents, an initial vision was developed to guide a discussion with the Project Steering Committee. The vision for the Region was developed using an iterative process of receiving Project Steering Committee comments, revising the vision and presenting the updated vision to the Project Steering Committee for further comment.

The output of the iterative development process is the vision statement shown below. The vision outlines both the desired outcomes used to define the goals (quality of life, growth, business retention, and business attraction) and categories for performance measures (safe, efficient, reliable and connected).

*Eight County Freight System Vision: The Eight County Multimodal Freight System supports quality of life, growth and enables business retention and attraction, by providing safe, efficient, and reliable connections to regional, national, and global markets today and in the future.*

## FREIGHT SYSTEM GOALS

The vision provides the ultimate point that the Region seeks to attain through the implementation of the freight plan recommendations. The vision identifies quality of life, growth, business retention, and business attraction as the goals for the freight plan. These goals provide intermediate targets to focus projects and policies that will advance the overall vision.

Figure 7.11 displays the goals of the Eight County Freight Plan. The goals identify that the freight transportation system should support economic activity and meet community needs in the Region.

**Figure 7.11 Eight County Freight Plan Goals**

Source: Eight County Freight Study.



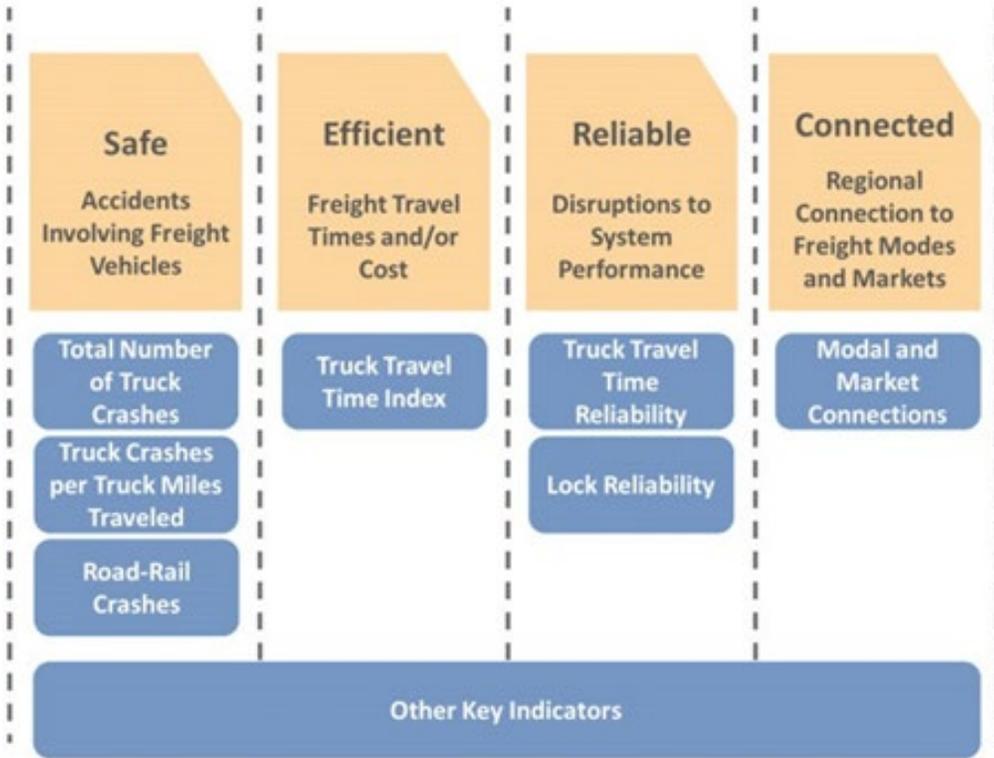
The goals for the Region are focused on outcomes or outputs. For example, providing freight investment and implementing policies that meet the needs of the community results in higher quality of life. Similarly, enabling a freight transportation system that provides competitive transportation options will aid current businesses and advance the Region's economy. The goals of the Region are clearly enabled by good transportation investment and policy, but since transportation demand is affected by other non-transportation variables, the investments and policies must fit the needs of system users to be effective.

## **FREIGHT SYSTEM PERFORMANCE MEASURES AND INDICATORS**

The approach to performance measures in the Eight County Freight Plan focuses on measuring transportation performance in line with attributes that matter to the Region by linking measures to the plan's goals. Additionally, the measures serve as a benchmark using available data, to the extent possible, allowing measures to be calculated on an ongoing basis. Benchmarking will allow the Region to identify changes in transportation system performance in the future, as well as assess the impact of emerging trends. The plan positions the Region for future collaboration with Illinois and Iowa DOTs on target setting and freight corridor identification. Additionally, the Region can use performance measures required by MAP-21 as a resource to monitor the performance of the transportation system in the future.

The performance measures used in this plan focus on fewer measures that provide the region with insights into key issues rather than focusing on many measures, some of which would not provide actionable information for decision making.

The vision of the Eight County Region Freight Plan sets the stage for identifying performance measures, by naming safety, efficiency, reliability and connectivity as key components of the future Eight County Transportation System. Safety, efficiency, reliability and connectivity were used as categories to define performance measures. Figure 7.12 displays the performance categories and the measures that will be calculated to assess the performance of the transportation system. Other key indicators have also been included to provide context to the performance measures and to be used to describe and promote the freight system in the Region.



**Figure 7.12**  
**Eight County**  
**Freight Performance**  
**Measures**

*Source: Eight County  
Freight Study.*

## FREIGHT STUDY RECOMMENDATIONS

The Eight County Freight Plan developed a slate of strategic recommendations for the freight system. These strategies will be generally grouped within the “4 P” categories of 1) projects, 2) programs, 3) policies, and 4) partnerships. As shown the top two most frequently cited improvements are project related – new/expanded roadways and pavement improvements.

As shown in Figure 7.13, a slate of strategic opportunities have been identified for the Eight County Region. While stakeholders often find project recommendations to be the most tangible, likely the most critically important category of opportunities is “partnerships.” So much of the multi-modal freight transportation system is outside of the public domain, and partnerships and collaboration will be critical to advancing any efforts off the highways system, and in most cases also those on the highway system due to the myriad jurisdictions that have ownership and operations roles in the Eight County Region.

**Figure 7.13**  
**Eight County**  
**Freight Study**  
**Recommendations**  
*Source: Eight County*  
*Freight Study.*

Projects	Programs
<ul style="list-style-type: none"> <li>• Spot highway improvements to address congestion and safety (next slide)</li> <li>• Pavement improvements</li> <li>• Bridge improvements</li> <li>• New/improved intermodal and/or port facilities</li> <li>• Transload/consolidation facilities</li> <li>• Lock and dam improvements</li> </ul>	<ul style="list-style-type: none"> <li>• Programs focused on highway and railway safety (including grade separations)</li> <li>• Programs focused on enhancing skills of local workforce</li> <li>• Programs focused on technology applications to the (freight) transportation system</li> <li>• Freight planning program to monitor needs, issues and progress</li> </ul>
Policies	Partnerships
<ul style="list-style-type: none"> <li>• Truck regulation harmonization between Iowa and Illinois</li> <li>• Illinois seasonal exemption for agricultural loads (up to 90,000 lbs.)</li> <li>• Truck route guidance</li> <li>• Freight-appropriate design standards</li> </ul>	<ul style="list-style-type: none"> <li>• State, county and local public agency partnerships</li> <li>• Federal transportation agencies, including USDOT and the USACE</li> <li>• Regional and local economic development agencies</li> <li>• Class I and short line railroads</li> <li>• Airports</li> <li>• Water ports</li> <li>• Other local private industry/businesses</li> </ul>

The Eight County Freight Plan identified locations needing improvements by mapping gaps in planned freight projects. Figure 7.14 maps the project gaps and Table 7.9 provides a list of project gaps.

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**Figure 7.14**  
**Project Gaps Shown**  
**with Safety and**  
**Congestion Data**  
*Source: Eight County*  
*Freight Study.*

Route	Location	"Gaps"
US-20	Old Castle Road to Old Hawkeye Road (Between Farley and Dyersville)	Safety
US-20	North Cascade (west end of Dubuque) to US-20 Frontage Road (East Dubuque)	Safety
US-20	N. Main Street to Franklin Street (North of Galena)	Safety, Congestion
US-20	Tapley Woods to IL-84 junction	Safety
US-20	Woodbine to S. Logemann Road	Safety
US-20	W. Salem Road to N. Bolton Road (Eleroy area)	Safety
US-20	Freeport Area (Includes IL-75)	Congestion
US-20	Farwell Bridge Road to Stephenson County Line	Safety
US-30	Grand Mound to DeWitt	Safety
US-30	Downtown Clinton	Safety, Congestion
US-30	IL-136 junction to IL-78 junction	Safety
US-30	Sterling Area (includes IL-2 and IL-40)	Congestion
US-151	Dubuque Area	Safety, Congestion
IA-136	Delmar to Charlotte	Congestion
IL-78	Lowden Road to IL-40 (Mount Carroll area)	Congestion
US-52	Mount Carroll to Lanark	Safety
IL-84	Savanna to Jo Daviess County Line	Safety
I-88	IL-78 to Lincoln Road	Safety

**Table 7.9**  
**Project Gaps listing**  
*Source: Eight County*  
*Freight Study..*

# 8

## ENVIRONMENTAL

Development of the LRTP gives RPA 8 the opportunity to consult with environmental agencies and analyze the potential environmental impacts that may result from the plan's project recommendations. The LRTP is an initial step in identifying impacted areas and adjusting project alignments to minimize impacts on natural resources. The LRTP also allows RPA 8, as the project sponsor, to make informed decisions when setting project priorities for the area. The result is a transportation plan that not only minimizes negative impacts on the natural environment, but that is ultimately more efficient, timely, and cost-effective.

### ENVIRONMENTAL JUSTICE

Federal Executive Order 12898 sets out requirements for transportation and Environmental Justice. The intent is to demonstrate that minority and low-income communities will not be disproportionately affected in an adverse manner under the transportation plan. Environmental justice requirements also address public involvement and the steps taken for the LRTP public involvement effort.

Environmental Justice is a concept intended to avoid the use of federal funds for projects, programs, or other activities that generate disproportionate or discriminatory adverse impacts on minority or low-income populations. This effort is consistent with Title VI of the 1964 Civil Rights Act and is promoted by the U.S. Department of Transportation (USDOT) as an integral part of the long-range transportation planning process. The environmental justice assessment incorporated in the LRTP is based on three basic principles, derived from guidance issued by the USDOT:

- The planning process should minimize, mitigate, or avoid environmental impacts (including economic, social, and human health impacts) that affect minority and low-income populations with disproportionate severity.
- The benefits intended to result from the transportation planning process should not be delayed, reduced, or denied to minority and low-income populations.
- Any community potentially affected by outcomes of the transportation planning process should be provided with the opportunity for complete and equitable participation in decision-making.

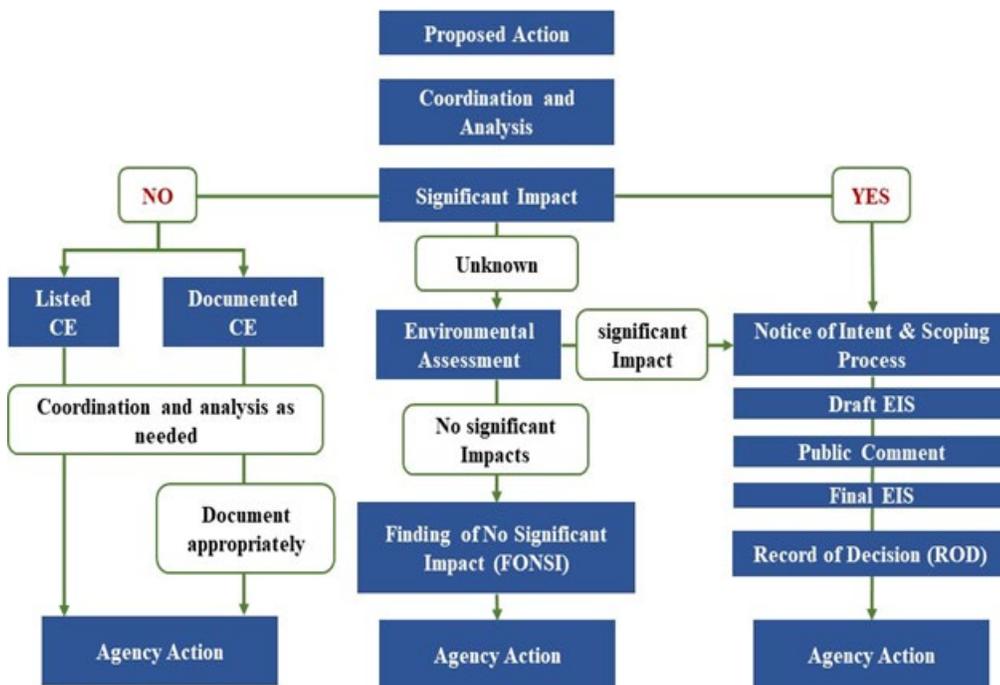
Environmental Justice principles apply to all programs, policies, and activities, including:

- Transportation planning decisions, including policy decisions and funding decisions.
- Environmental review associated with project development and the National Environmental Policy Act, or NEPA.
- Preliminary design and final design engineering of projects.
- Right-of-way, construction, and maintenance and operations.

Environmental Justice applies not only to Federal agencies, but to all agencies and sub-recipients that receive Federal funds, or have actions approved by the FHWA or FTA. As part of this LRTP update, RPA 8 staff identified the geographic distribution of low-income and minority populations in order to assess the effects of various transportation investments in the plan.

## NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA) is the project development process for federally funded projects that balance transportation decision making with the potential impacts on the human and natural environment and the public’s need for safe transportation. NEPA requires the examination and avoidance of potential impacts to the social and natural environment when considering approval of proposed transportation projects. All federal aid projects need to go through go through NEPA process and disclose any environmental consequences and evaluate alternatives that would avoid or lessen the project’s impacts. More details on NEPA can be found at <https://www.epa.gov/laws-regulations/summary-national-environmental-policy-act>



**Figure 8.1: NEPA Decision-Making Process.**

Source: U.S. Environmental Protection Agency

## LEVELS OF ENVIRONMENTAL ANALYSIS

Transportation projects vary in type, size, complexity, and potential to affect the environment. Transportation project effects can range from minor to significant impacts on the natural and human environment. To account for the variability of project impacts, three basic “classes of action” are allowed, which determine how compliance with NEPA is carried out and documented. This decision-making process is shown in Figure 8.1.

- An environmental impact statement (EIS) is prepared for projects where it is known the action will have a significant effect on the environment.
- An environmental assessment (EA) is prepared for actions for which the significance of the environmental impact is not clearly established. Should environmental analysis and interagency review during the EA process find a project to have no significant impacts on the quality of the environment, a finding of no significant impact (FONSI) is issued. If significant issues are found, an EIS is prepared.

Categorical exclusions are issued for actions that are not individually or cumulatively significantly affecting the environment.

## LINKING PLANNING AND NEPA

Transportation projects go through several steps from conception to implementation. The considerations and recommendations made during the planning process are preliminary in nature. Detailed environmental analysis conducted through the NEPA does not apply to long range transportation plans. With exceptions for regional ambient air quality, offsetting environmental impacts during the long-range planning process is not required.

While detailed environmental analysis is not required, it is important to consult with environmental resource agencies during the development of an LRTP. This interagency consultation provides an opportunity to compare transportation plans with environmental resource plans and develop a discussion on potential environmental mitigation activities, areas to provide the mitigation and activities that may have the greatest potential to restore and maintain the environment.

Detailed environmental analysis of individual transportation projects occurs later in the project development process as the improvement approaches the preliminary engineering stage. At this stage, project features may be narrowed and refined, and the environmental impacts and environmental mitigation strategies can be appropriately ascertained. Typically, a variety of environmental documentation, permit and mitigation needs are identified, and environmental findings are closely considered and evaluated. However, special environmental concerns may differ widely by project and location. As environmental studies are conducted and undergo public and interagency review, needed mitigation plans are specified and committed to within the environmental documents on a particular transportation project or activity. Environmental management systems are then used to monitor and ensure compliance with the environmental mitigation commitments.

## ENVIRONMENTAL IMPACT SCREENING

A preliminary environmental impact screening can identify potentially serious impacts that could delay or completely shut down a project. Identifying such issues in the early planning stages provides local governments with the opportunity to avoid or mitigate undesirable environmental impacts through modification or elimination of the project. Early “fatal flaw” analysis of this type helps reduce the possibility that subsequent, more detailed analyses will uncover unexpectedly serious environmental impacts. This approach helps reduce the risks that are inherent in transportation planning process and helps ensure that local governments do not waste time and resources unnecessarily.

Since the transportation planning activities of RPA 8 are regional in scope, this environmental mitigation discussion does not provide a detailed analysis of individual projects within the LRTP, but rather offers a summary of the potential impacts on environmentally sensitive areas. RPA 8 conducts this analysis to identify conflicts between planned projects and environmentally sensitive areas. The analysis process is an effort to minimize negative effects that a project can have on environmentally sensitive areas.

Once a few critical decisions are made, constraints on roadway cross-sections and alignments (due to safety factors and design criteria) limit opportunities to avoid or reduce these negative impacts.

Sidewalks and bicycle facilities are much more limited in the magnitude of their environmental and community impacts, due to smaller cross-sections and greater flexibility in design. Furthermore, pedestrian and bicycle facilities are most often built-in conjunction with roadway facilities and have only marginal environmental impacts beyond those of the roadway itself. Bicycle and pedestrian travel are inherently less disruptive to the environment than travel by automobile, especially with respect to air pollution, noise, and energy consumption.

Most of the transit elements in the RPA 8 are associated with bus route and service expansions, which typically involve no new construction and have minimal negative impacts on either natural or man-made environments. In general, transit impacts tend to be positive, in that increased service tends to reduce vehicle miles traveled (VMT) and typically improves accessibility in disadvantaged neighborhoods. It is difficult to identify environmental impacts for these facilities in the context of this RPA 8 update. Specific studies are needed to assess the impacts of these transit systems.

The following discussion is divided into two parts. The first focuses on overall impacts to the natural and social environments. The second section addresses specific issues related to environmental justice.

## ENVIRONMENTAL CONSULTATION & MITIGATION

RPA 8 is committed to minimizing and mitigating the negative effects of transportation projects on the natural and built environments in order to preserve our quality of life. In doing so, RPA 8 recognizes that every project will not require the same type or level of mitigation. Some projects, such as new roadways and roadway widening, involve major construction with considerable earth disturbance. Others, like intersection improvements, street lighting, and resurfacing projects, involve minor construction and minimal, if any, earth disturbance. The

mitigation efforts used for a project should depend on the severity of the expected impact on an environmentally sensitive area. RPA 8 uses the following three-step process to determine the type of mitigation strategy to apply for any given project:

- Identify and confirm environmentally sensitive areas throughout the project study area.
- Determine how and to what extent transportation projects will affect these environmentally sensitive areas.
- Develop and review appropriate mitigation strategies to lessen the impact of these projects on the environmentally sensitive areas.

To effectively mitigate environmental impacts, it is essential to know how federal regulations define mitigation:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments. (Source: 40 CFR 1508.20)

An ordered approach to mitigation, known as “sequencing,” involves understanding the affected environment and assessing transportation effects throughout project development. Effective mitigation starts at the beginning of the environmental process, not at the end. Mitigation must be included as an integral part of the alternative’s development and analysis process.

SEQUENCING:

- AVOID
- MINIMIZE
- REPAIR/RESTORE
- REDUCE OVER TIME
- COMPENSATE

FHWA’s mitigation policy states: “Measures necessary to mitigate adverse impacts will be incorporated into the action and are eligible for Federal funding when the Administration determines that:

- The impacts for which mitigation is proposed actually result from the Administration action; and
- “The proposed mitigation represents a reasonable public expenditure after considering the impacts of the action and the benefits of the proposed mitigation measures. In making this determination, the Administration will consid-

er, among other factors, the extent to which the proposed measures will assist in the compliance with a Federal statute, Executive Order, or Administration regulation or policy.” (Source: 23 CFR 771.105(d))

The Table 8.1 below details mitigation activities and measures that should be considered when dealing with environmental impacts. Many of the measures are considered by the RPA 8 during the project development phase. Measures considered include construction of sidewalks and bicycle lanes, design modifications to reduce community impacts, and request noise barriers and landscaping to reduce audio and visual impacts.

Impacts	Mitigation Measurers
Air Quality	<ul style="list-style-type: none"> <li>• Designate pedestrian/transit-oriented development areas</li> <li>• Develop project that will reduce delay and over all Vehicles hours Traveled (VHT) in the metro area</li> </ul>
Cultural Resources	<ul style="list-style-type: none"> <li>• Design modifications to avoid area</li> <li>• Relocation of historical property design modification</li> <li>• Landscaping to reduce visual impacts photo documentation</li> </ul>
Cultural Resources	<ul style="list-style-type: none"> <li>• Historic archival recording to present historic information to the public</li> </ul>
Neighborhoods and communities, cultural resources, homes, and businesses	<ul style="list-style-type: none"> <li>• Minimize noise impact with sound barriers</li> <li>• Prevent the spread of hazardous materials with soil testing, well water tests and treatment</li> <li>• Avoid or minimize impact altogether</li> </ul>
Environmental Justice Communities	<ul style="list-style-type: none"> <li>• Property owners paid fair market value for property acquired residential and commercial relocation</li> </ul>
Farmland	<ul style="list-style-type: none"> <li>• Protect one to one farmland acre for every acre converted</li> <li>• Agricultural conservation easement on farmland compensation</li> </ul>
Wetlands and water resources including streams, lakes, and watersheds	<ul style="list-style-type: none"> <li>• Realign roadway corridors to avoid aquatic resources. Replace or restore wetlands.</li> <li>• Bridge sensitive areas instead of laying pavement directly onto the ground. Improve storm water management for construction and operation of facilities and development associated with projects.</li> <li>• Make perpendicular crossings of streams and riparian buffers rather than lateral encroachments.</li> <li>• Restore streams and/or stream buffers. Protect, improve, and repair resources through preservation, enhancement and restoration programs and projects</li> </ul>
Endangered and threatened species	<ul style="list-style-type: none"> <li>• Time of year restrictions</li> <li>• Construction sequencing</li> <li>• Species research and/or fact sheets</li> <li>• Memorandum of agreement for species management</li> <li>• Bridge sensitive areas instead of laying pavement directly onto the ground</li> <li>• Design measures to minimize potential fragmenting of animal habitats</li> <li>• Enhancement or restoration of degraded habitat</li> <li>• Creation of new habitat</li> <li>• Establish buffer areas around exist inhabitants</li> <li>• Modifications of land use</li> <li>• Restrictions on land use</li> </ul>
Noise	<ul style="list-style-type: none"> <li>• Depressed roads</li> <li>• Noise barriers</li> <li>• Planting trees</li> </ul>
Park Impacts	<ul style="list-style-type: none"> <li>• Construct bike/pedestrian pathways</li> <li>• Replace impaired functions</li> </ul>

**Table 8.1  
Environmental  
Mitigation Activities**

**Definition of Minority:** A minority person is defined as a person who identifies with the following ethnic groups:

- Black (having origins in any of the black racial groups of Africa)
- Hispanic (of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race)
- Asian American (having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands)
- American Indian and Alaskan Native (having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).

**Definition of Low Income:** Title VI defines low-income as a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines. The guidelines are defined by household size.

**Definition of Limited English Proficiency:** Under Title VI of the Civil Rights Act of 1964, individuals who do not speak English as their primary language and have a limited ability to read, write, or speak English are entitled to language assistance where language barriers may otherwise prohibit people who are Limited English Proficient (LEP) from obtaining service or information relating to service and programs, and may limit participation in the transportation planning process.

Typical measures to assist those needing language assistance include but are not limited to providing translated documents, opportunities to have interpreters present at meetings and public hearings. RPA 8 projects should take into projects the impact of improvements on LEP population and make necessary agreements to update them and seek their input.

## ANALYSIS

RPA 8 staff performed a qualitative screening of assess the potential environmental impacts of the roadway projects recommended for inclusion in the RPA 8 2045 LRTP. This analysis consisted of overlaying project locations and sensitive natural and social resource locations. Any proposed project determined to encroach on a sensitive area is identified. The nature and degree of conflict determines the level of impact assessed. For example, a road widening is typically assumed to be less disruptive to the natural environment than a comparable project on new alignment. On the other hand, widening may be more disruptive than a new facility in terms of community impacts, which depend on available right-of-way, alignment, type of development, and other factors. RPA 8 staff assigned buffer distances to corridors based on the table 8.2 below.

**Table 8.2 Corridor Buffer Distance**

Corridor Type	Buffer Distance
Principal Arterials with posted speeds 40 mph or greater	600 ft
Principal Arterials with posted speeds less than 40 mph	400 ft
All other Corridors	200 ft

Since this is a system-wide, planning-level screening, no formal field investigation was conducted, and screening was performed on those features for which GIS coverage was available. The assessments also took into account any recent studies that had been done for individual projects. As project specific plans are further refined, more precise environmental assessments may be necessary. For some of the projects in the LRTP, environmental studies based on federal guidelines are already underway or completed.

Each matrix rates the impacts of every project completed in that time period. Impacts in the following categories are assessed, based on project and environmental features mapping:

#### Right of Way

- The amount of existing footprint used for the project. The Impact of the project will be minimal when the right of way requirements are minimal.

#### Environmental

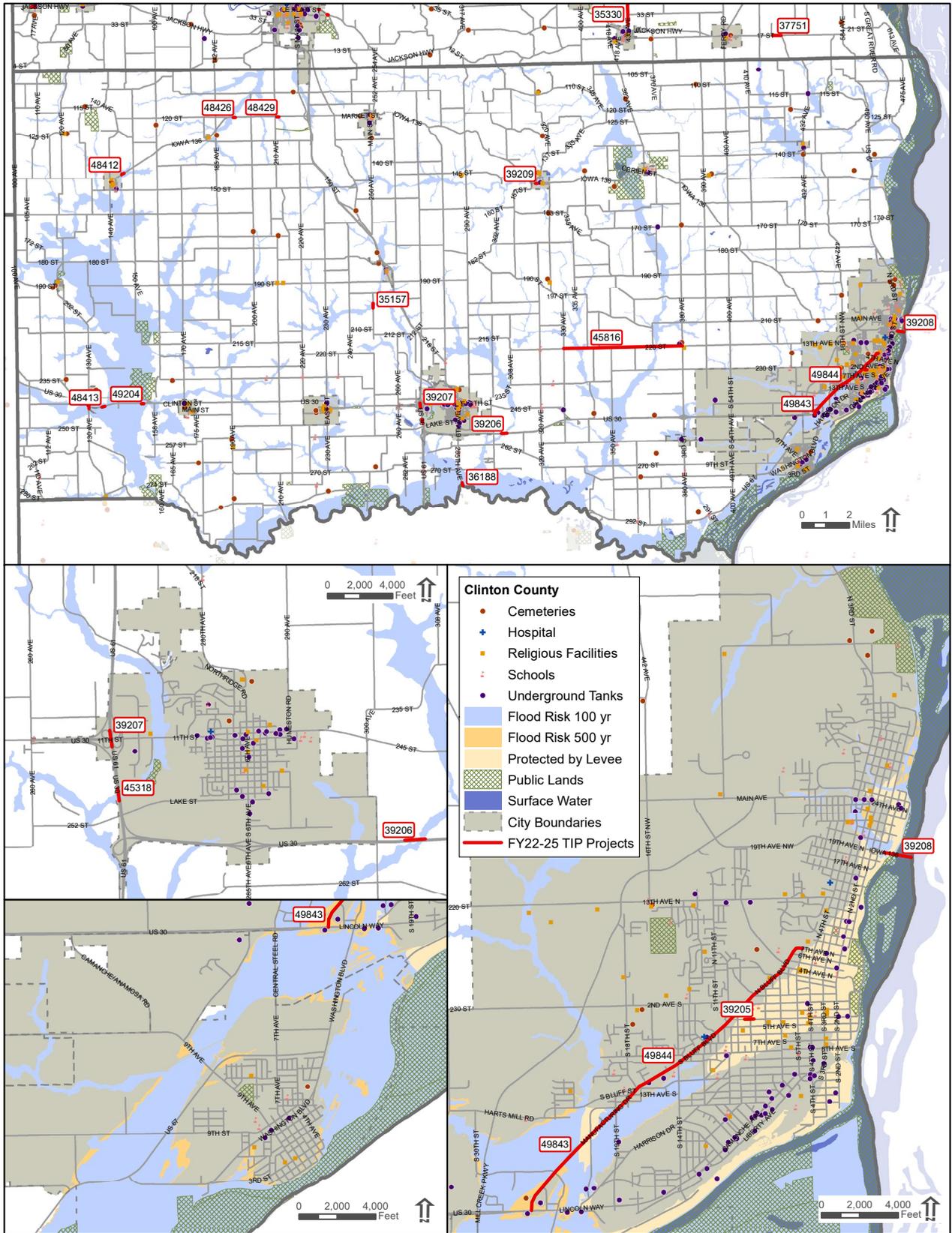
- 500 – Year – Flood Plain
- 100 – Year - Flood Plain
- Underground Storage Tanks
- Conservation Rec Lands / Parks

Figures 8.2 – 8.8 map the environmental analysis for transportation projects included in the fiscally constrained LRTP. This analysis is meant to provide an idea on environmental impacts in planning process. The NEPA process must be completed, and other applicable federal and state regulations must be met for each project before any federal funds for transportation improvements are expended for construction. Table 8.3 provides a planning level environmental analysis of LRTP projects.

**Table 8.4  
Environmental  
Analysis**

Figure No	Analysis	Elements	Impact
8.2-8.5	Floodplain	500-year Flood Plain	Resurfacing, Restoration, or Rehabilitation projects have a high chance of getting Categorical Exclusion (CE). Capacity Improvements need to go through NEPA process.
		100- year Flood Plain	
		Floodwall Protected	
	Environmental Sensitive Areas	Conservation Recreation lands & Public lands	Resurfacing, Restoration, or Rehabilitation projects have a high chance of getting Categorical Exclusion (CE). Capacity Improvements need to go through NEPA process.
		Underground Storage Tanks	
	Social Facilities	School	Resurfacing, Restoration, or Rehabilitation projects have a high chance of getting Categorical Exclusion (CE). Capacity Improvements need to go through NEPA process.
		Cemetery	
Hospital			
Religious Facilities			
8.6	Poverty	Household Income by block groups	The average Household size in the area is 2.51 person per household. The Very Low Income (VLI) for household size of 2.5 people to be eligible for vouchers the regional housing authority is \$35,500. The analysis considered households with income level less than \$40,000 as low income and poverty.
8.7	Minority Population	Percentage of Minority population within a block group.	The percentage of Minority population is calculated by block group. Projects in areas that has more than 10% minorities need to be given more attention and provide provision for seeking their input.
			Block groups with 10% or more minorities are located within the city of Clinton
8.8	Limited English Proficiency	Percentage of Minority population within a block group.	The percentage of Limited English Proficiency (LEP) population is calculated by block group. Projects in areas that has more than 5% LEP population need to do special accommodations to seeking their input.
			There are no block groups with 5% or more LEPs in the RPA area.

Figure 8.2 Clinton County Environmental



Data Source: Iowa DOT, 2021. Iowa DNR, 2021. FEMA, 2021. ESRI, 2021. RPA 8 TIP 2022

Figure 8.3 Delaware County Environmental

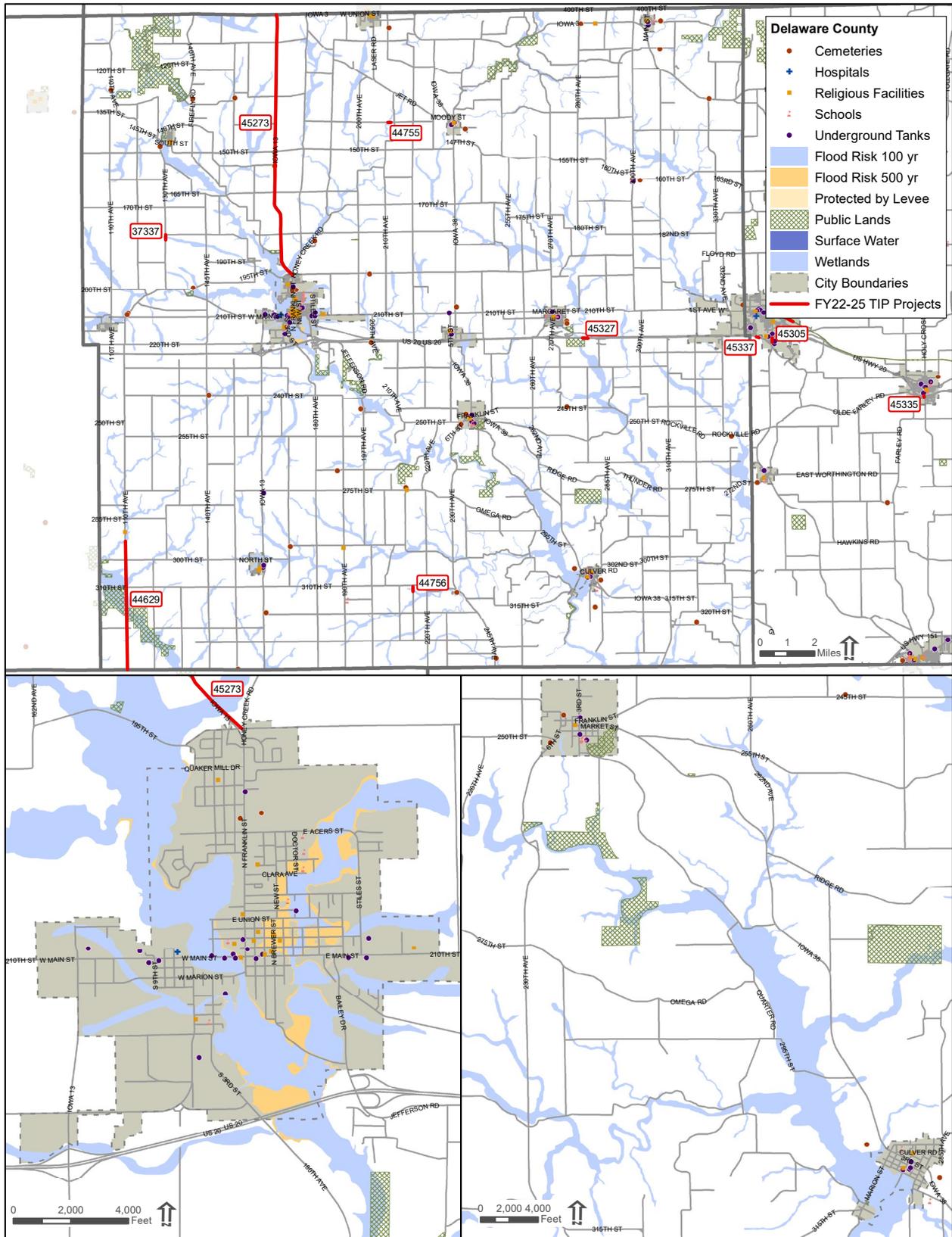
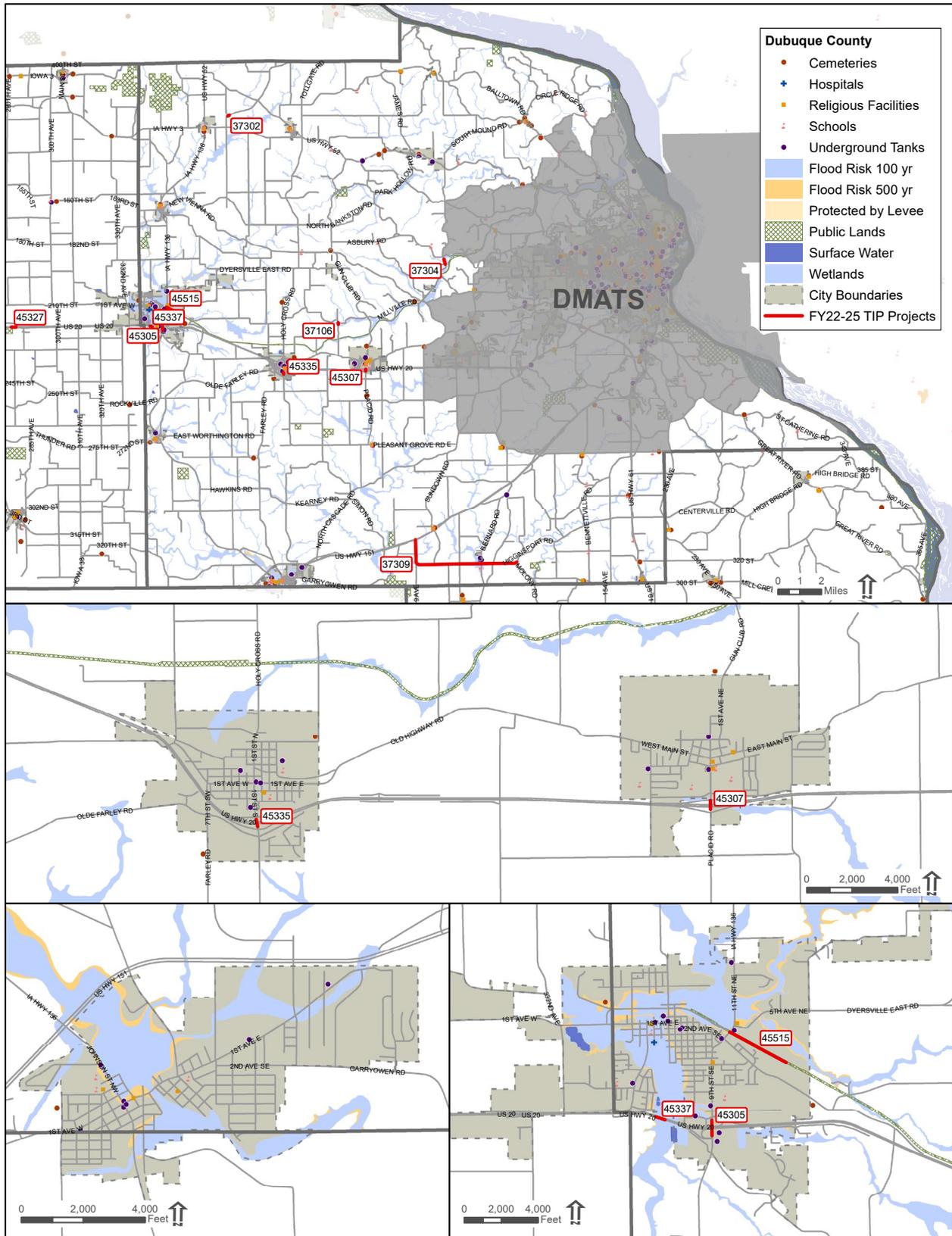
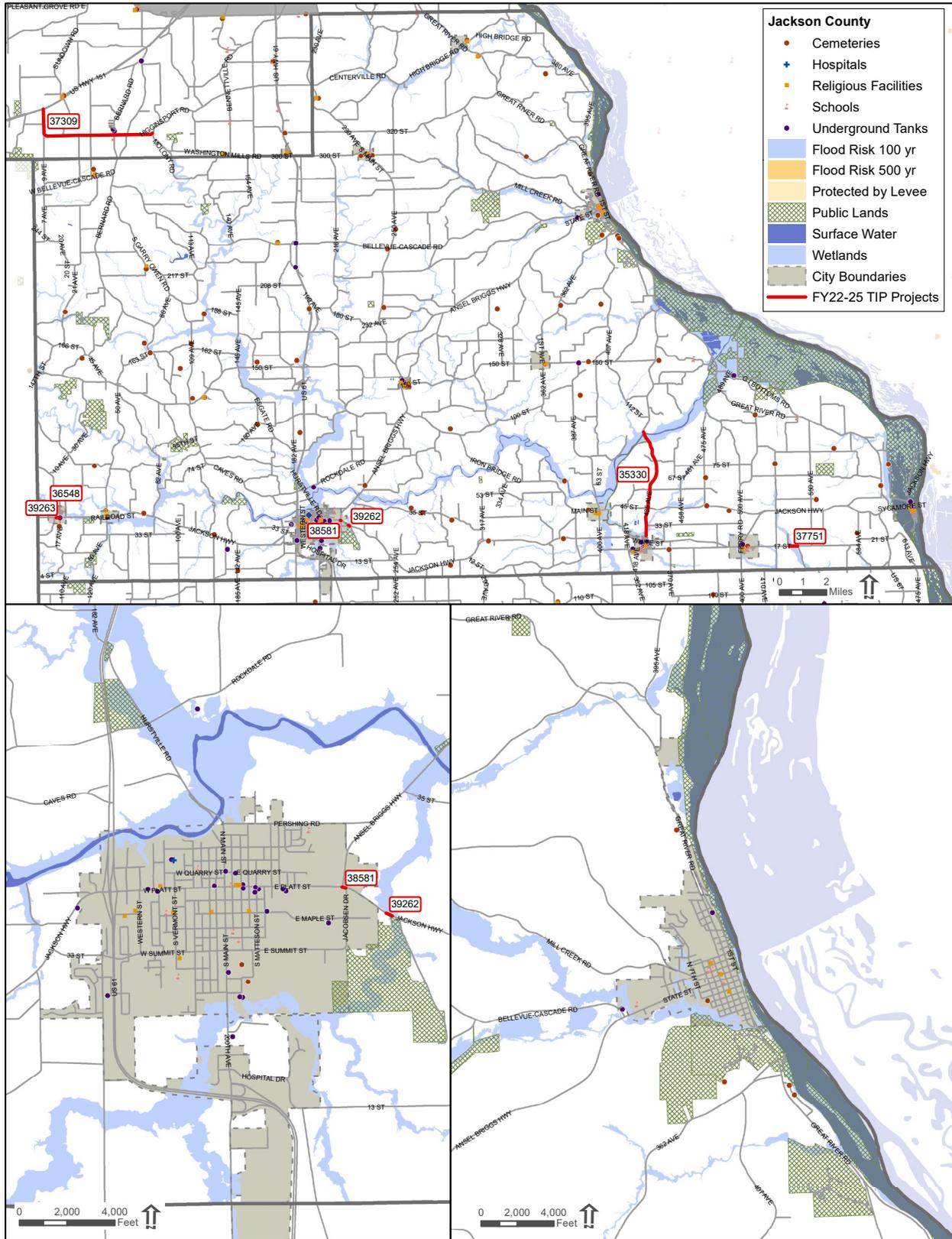


Figure 8.4 Dubuque County Environmental



Data Source: Iowa DOT, 2021. Iowa DNR, 2021. FEMA, 2021. RPA 8 TIP, 2022.

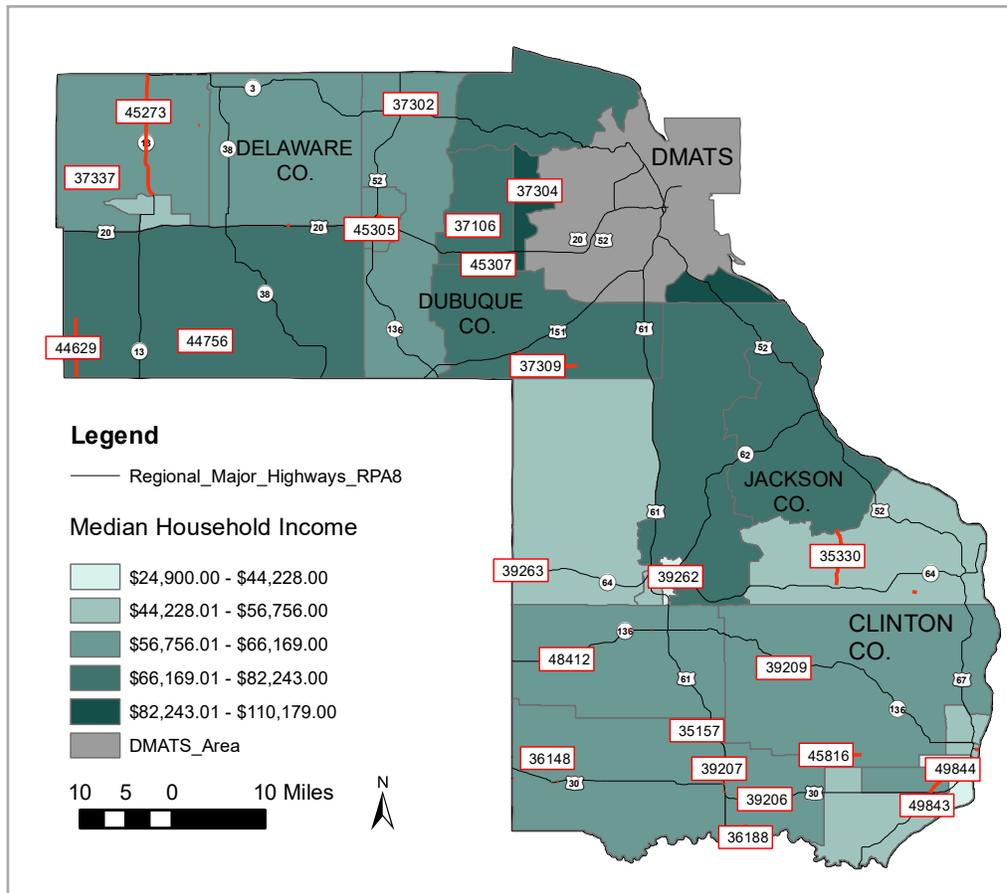
Figure 8.5 Jackson County Environmental



Data Source: Iowa DOT, 2021. Iowa DNR, 2021. FEMA, 2021. RPA 8 TIP 2022.

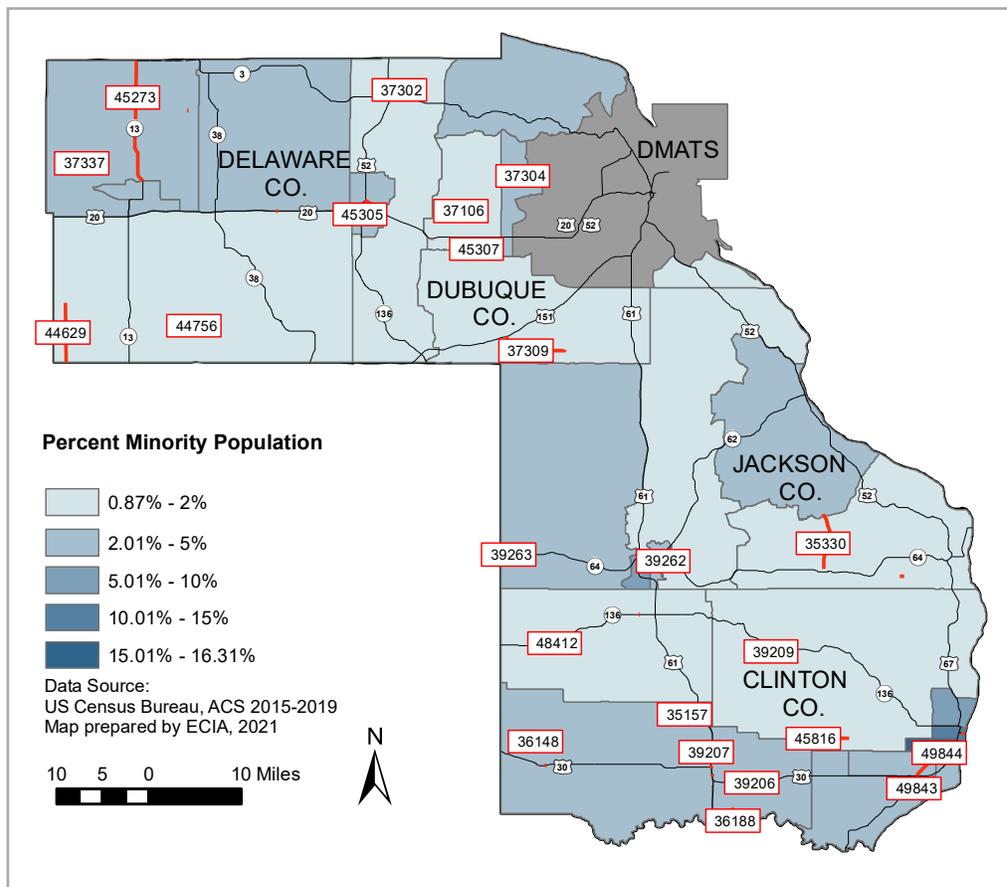
### Figure 8.6 Median Household Income

Source: 2015-2019 American Community Survey 5-Year Estimates

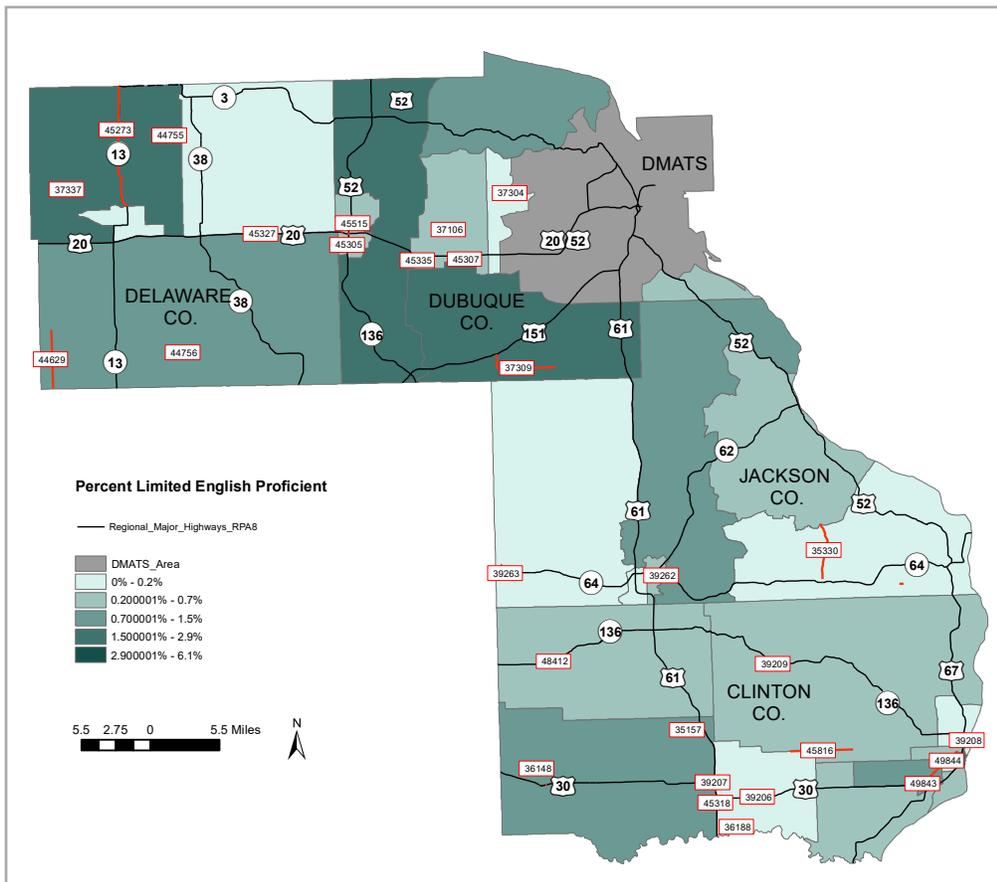


### Figure 8.7 Percent Minority Population

Source: 2015-2019 American Community Survey 5-Year Estimates



**Figure 8.7 Percent Minority Population**  
 Source: 2015-2019  
 American Community Survey 5-Year Estimates



## ANALYSIS RESULTS

Potential project impacts (if any) are classified as “Minor,” “Moderate,” or “Major” for each of the RPA 8 FY 2022-2025 Transportation Improvement Program Projects. This determination is based on a combination of objective and subjective criteria. For example, impacts are generally considered less severe if the project involves widening or other improvements along an existing roadway, as opposed to construction on new alignment. The following guidelines were used to rate project impacts in this screening process:

### Minor Impacts

- Road widening with single small creek crossing
- Road widening near sensitive area

### Moderate Impacts

- Road widening with multiple creek crossings
- Road widening through sensitive area
- New alignment with single small creek crossing
- New alignment near sensitive area

### Major Impacts

- New alignment along stream
- New alignment with multiple stream crossings
- New alignment through sensitive area
- Road widening or new alignment with numerous impacts

This analysis is used to adjust or refine proposed roadway alignments to minimize possible environmental impacts. The screening process allows early identification of impacts and areas of uncertainty that will need to be investigated more as a particular project moves forward through detailed planning and design. The data used for the screening analysis is obtained through Iowa DOT, RPA 8 members, and agency resource consultation. Table 8.4 includes the results of the environmental analysis for all projects programmed in the FY 2022-2025 RPA 8 TIP.

**Table 8.4 Environmental Analysis Results**

TPMS No	Sponsor	Name	Location	Impact
<b>FY 2022</b>				
45516	Maquoketa	Maquoketa South Main Street Connector Trail	In the city of Maquoketa, On ALLEN ST, S25 T84 R02E from E Summit St to 200 th Ave	Minor
35332	Jackson Co	475th Ave (WASH-3562) Bridge replacement	On 475th Avenue, Bridge over Unnamed creek, S35 T86 R5E	Moderate
48368	Camanche	US67 and 7th Ave - round-about	In the city of Camanche, US Highway 67 & 7th Ave Roundabout	Minor
48369	Dyersville	If you BUILD it, they will come	In the city of Dyersville, On 1ST ST SW, Over SMALL STREAM	Moderate
48370	De Witt	INDUSTRIAL STREET EXTENSION	In the city of De Witt, INDUSTRIAL STREET EXTENSION	Minor
36143	Clinton Co	W-0117	On Y52, Over DRAINAGE DITCH 5, S1 T80 RE2	Minor
44681	Clinton Co	F-12 Cape Seal	On 220th Street, from Y-70 to Z-24 double chip seal with microsurface	Minor
37916	Iowa DOT	US 30	US30: UP RR 5.8 MI E OF S JCT US 61 (EB & WB)	Minor
48486	Iowa DOT	IA 38	IA38: N OF HOPKINTON TO DELHI	Minor
48496	Iowa DOT	IA 38	IA38: NCL OF DELHI TO CO RD D22	Minor
48507	Iowa DOT	US 52	US52: IN THE CITY OF BELLEVUE	Minor
48514	Iowa DOT	US 20	US20: MAQUOKETA RIVER TO E OF IA 38	Minor
48515	Iowa DOT	US 61	US61: 0.3 MI N OF CO RD D41 TO LAKE ELEANOR RD	Minor
48553	Iowa DOT	US 67	US67: IN CLINTON, ON 3RD ST AND 4TH ST	Minor
37952	Iowa DOT	US 52	US52: MISSISSIPPI RIVER IN SABULA (STATE SHARE)	Minor
37917	Iowa DOT	IA 136	IA 136: MISSISSIPPI RIVER IN CLINTON (STATE SHARE)	Minor
47215	Clinton Co	235th Street Overflow Bridge (Q-1238)	On 235th Street over Wapsi backwater, S12,T81,R1	Minor
45802	Maquoketa	Bridge on PRAIRIE CREEK	In the city of Maquoketa, On S MAIN ST, Over PRAIRIE CREEK, S25 T84 R02E	Minor
36146	Clinton Co	Z-40	Z-40 from E-50 to 50 feet south of Centennial Street in Miles	Minor
44638	Dubuque Co	Sundown Road Paving Project	On Sundown Road (Y21) from Old Highway Road North 2.7 miles to Asbury Road	Minor
35633	Clinton	Manufacturing Drive and Bluff Boulevard Reconstruction	In the city of Clinton, On Manufacturing Drive and Bluff Boulevard from US Highway 30 to 7th Avenue North	Minor
38255	Iowa DOT	IA 3	IA3: E JCT PFEILER RD TO 0.7 MI N OF BOY SCOUT RD	Minor
47197	Jackson Co	200th Ave (MAQ-3006) Bridge Replacement over Prairie Creek	On Y 53, Over PRAIRIE CREEK, S30 T84 R03E	Moderate

TPMS No	Sponsor	Name	Location	Impact
45051	Jackson Co	On Z40 (500th Ave) from Clinton County line North 3900 ft	On Z 40, from Clinton County Line N 0.7 miles to Miles, Ia	Minor
37915	Iowa DOT	US 30	US30: MISSISSIPPI RIVER IN CLINTON (STATE SHARE)	Minor
38581	Maquoketa	Iowa 64 (Platt Street Corridor) Maquoketa Transformation	In the city of Maquoketa, On Platt St, from US 61 (Milepost 33.11) to to Iowa 62 (Milepost 34.89)	Minor
45515	Dyersville	Heritage Trail Paving	In the city of Dyersville, Heritage Trail Paving : From 11th ST SE to Heritage Trail	Minor
<b>FY 2023</b>				
37302	Dubuque Co	Clear Creek Road Bridge Replacement	On Clear Creek Road, in W1/4 S14 T90N R2W	Minor
37337	Delaware Co	130th Avenue Bridge Replacement	On 130th Avenue, in NW S15 T89N R6W	Minor
44629	Delaware Co	Robinson Road Paving	On Robinson Road (W63), from Linn County Line N 4.7 miles	Minor
36188	Clinton Co	Old Hwy 61 Overflow Bridge	On Y-68 over Wapsi backwater,S31,T81,R4E	Minor
35157	Clinton Co	K-2700	On 250 AVE, Over BLACK CREEK, S27 T82 RE3	Minor
48413	Iowa DOT	US 30	US30: UP RR 0.6 MI E OF CO RD Y4E	Minor
39204	Iowa DOT	US 30	US30: WAPSIPINICON RIVER 1.5 MI E OF CO RD Y4E	Minor
39209	Iowa DOT	IA 136	IA 136: DEEP CREEK 0.2 MI S OF CO RD Z2E	Minor
39207	Iowa DOT	US 61	US61: N JCT US 30 IN DE WITT (NB & SB)	Minor
39263	Iowa DOT	IA 64	IA64: STREAM 0.1 MI W OF CO RD E29	Minor
39205	Iowa DOT	US 30	US30: MISSISSIPPI RIVER IN CLINTON	Minor
39208	Iowa DOT	IA 136	IA 136: MISSISSIPPI RIVER IN CLINTON	Minor
39262	Iowa DOT	IA 64	IA64: PRAIRIE CREEK 0.4 MI E OF IA 62	Minor
39206	Iowa DOT	US 30	US30: AMES CREEK 3.5 MI E OF E JCT US 61 (EB & WB)	Minor
36548	Jackson Co	49th Street (MON-1845) Bridge replacement over Creek S18 T84 R1E	On 49th Street, Over Creek, S18 T84 R1	Minor
44629	Delaware Co	Robinson Road Paving	On Robinson Road (W63), from Linn County Line N 4.7 miles	Minor
<b>FY 2024</b>				
37309	Dubuque Co	Higginsport Road Paving	On Higginsport Road from Hwy 151 east 5.87 miles to Moloney Road	Minor
37106	Dubuque Co	Fishpond Road Bridge Replacement	On Fishpond Road, S3 T88N R1W	Minor
37304	Dubuque Co	Graf Road Bridge Replacement	On Graf Road, in NE S20 T89N R1E	Minor
44755	Delaware Co	140th St Bridge Replacement	On 140th Street, Over Rutherford Branch, S24 T90N R5W	Minor
35330	Jackson Co	On Z34 (435th Avenue) from Preston North to Maquoketa River	On Z34 (435th Ave), from Preston N 5 miles to Maquoketa River	Minor
45816	Clinton Co	F-12 CIR HMA	On F 12,from Z-24 E 5.0 miles to Z-36	Minor
45337	Iowa DOT	US 20	US20: N FORK MAQUOKETA RIVER 0.5 MI W OF IA 136 (EB)	Minor
45305	Iowa DOT	US 20	US20: IA 136 IN DYERSVILLE (EB & WB)	Minor
45307	Iowa DOT	US 20	US20: CO RD Y17 IN EPWORTH (EB & WB)	Minor

TPMS No	Sponsor	Name	Location	Impact
45318	Iowa DOT	US 30	US30: SILVER CREEK 0.7 MI E OF W JCT US 61 IN DE WITT (EB & WB)	Minor
45335	Iowa DOT	US 20	US20: CO RD Y13 IN FARLEY (EB & WB)	Minor
45327	Iowa DOT	US 20	US20: BRANCH PLUM CREEK 5.0 MI E OF IA 38 (EB)	Minor
45273	Iowa DOT	IA 136	IA13: HONEY CREEK 0.2 MI N OF CO RD D13 TO S JCT IA 3	Minor
49843	Clinton	Manufacturing Drive	In the city of Clinton, On MANUFACTURING DR, from US 30 NE 1.6 miles to College Avenue	Moderate
49844	Clinton	South Bluff Boulevard / North Bluff Boulevard	In the city of Clinton, On South Bluff Boulevard / North Bluff Boulevard, from College Ave NE 2.2 miles to 7th Ave North	Moderate
37751	Jackson Co	17th St. (IA-3320) Bridge replacement over Elk Creek S33 T84N R6E	On 17th Street, Over Elk Creek, S33 T84N R6E	Minor
37309	Dubuque Co	Higginsport Road Paving	On Higginsport Road from Hwy 151 east 5.87 miles to Moloney Road	Minor
<b>FY 2025</b>				
44756	Delaware Co	215th Ave Bridge Replacement	On 215th Avenue, Over Unnamed Stream, S24 T87N R5W	Minor
36148	Clinton Co	Q-1502	On Y4E, Over YANKEE RUN CREEK, S15 T81 RE1	Minor
48412	Iowa DOT	IA 136	IA136: DITCH 8.6 MI N OF US 61	Minor
48426	Iowa DOT	IA 136	IA136: ELWOOD CREEK 3.1 MI W OF US 61	Minor
48429	Iowa DOT	IA 136	IA136: BRANCH PRAIRIE CREEK 1.2 MI N OF US 61	Minor
48442	Iowa DOT	IA 136	IA136: MISSISSIPPI RIVER IN CLINTON (STATE SHARE)	Minor
48457	Iowa DOT	US 61	US61: TARECOD CREEK 1.4 MI N OF CO RD E17 (NB)	Minor
39259	Iowa DOT	US 52	US52: MISSISSIPPI RIVER BRIDGE TO N OF SABULA	Minor
48615	Iowa DOT	IA 136	IA136: BRANCH PRAIRIE CREEK 1.9 MI N OF US 61	Minor
48627	Iowa DOT	US 20	US20: MIDDLE BRANCH CATFISH CREEK & CC RR 0.6 MI E OF NW ARTERIAL IN DUBUQUE (WB)	Minor
48635	Iowa DOT	IA 136	IA136: BRANCH PRAIRIE CREEK 4.0 MI N OF US 61	Minor
39021	Jackson Co	362nd Ave. (BEL-2555) Bridge replacement over Duck creek S25 T86 R4E	On 362nd Avenue (Z15), Over Duck creek, S25 T86 R4E	Minor
35330	Jackson Co	On Z34 (435th Avenue) from Preston North to Maquoketa River	On Z34 (435th Ave), from Preston N 5 miles to Maquoketa River	Minor

## CONSULTATION

Several Federal, State, Tribal, and local government agencies were notified when the draft LRTP document was available for review and comment. Feedback on topics relevant to their field of expertise was requested.

Agencies notified include the following:

Clinton County conservation	Iowa Department of Veterans' Affairs
Clinton County Zoning	Iowa Department on Aging
Clinton County Emergency Management	Iowa Economic Development Authority
Clark University	Iowa Homeland Security and Emergency Management
Clinton Iowa Tourism	Iowa Northland Regional Transit Commission
Delaware County Zoning	Iowa Tourism Board
Delaware County Conservation	Iowa Utilities Board
Delaware County Emergency Management	Iowa Workforce Development
Dubuque County Zoning	Jackson County Zoning
Dubuque County Conservation	Jackson County Conservation
Dubuque County Emergency Management	Jackson County Emergency Management
Dubuque County REAP Committee	Loras Collage
Friends of Dubuque County Conservation Board	Northern Iowa Community College
Iowa Department for the Blind	Office of the State Archaeologist
Iowa Department of Agriculture and Land Stewardship	Sac & Fox Tribe of the Mississippi
Iowa Department of Cultural Affairs	State Historical Society of Iowa
Iowa Department of Education	Transit Advisory Committee
Iowa Department of Human Rights	Travel Dubuque
Iowa Department of Human Services	U.S. Army Corps of Engineers, Rock Island District
Iowa Department of Natural Resources	U.S. Department of Agriculture – Natural Resources Conservation Service
Iowa Department of Public Health	U.S. Department of the Interior Bureau of Indian Affairs, Midwest Regional Office
Iowa Department of Public Safety	U.S. Environmental Protection Agency, Region 7
Iowa Department of Transportation, District 2	U.S. Fish and Wildlife Service, Illinois-Iowa Field Office
Iowa Department of Transportation, Systems Planning Bureau	University of Dubuque

## CONCLUSION

RPA 8 is committed to avoiding and mitigating the negative transportation impacts on the natural environment. The goals objectives, and analysis included in the LRTP will help RPA 8 communities ensure that future generations are able to enjoy the region's abundant environmental resources.

# 9

## PUBLIC INPUT

Collecting public input is a crucial step in all RPA 8 planning activities including the Long Range Transportation Plan. Public participation is an integral part of the transportation planning process. The information and perspectives provided through public participation assist decision-makers and lead to a more meaningful and comprehensive planning process. Good public participation techniques allow planners to identify issues and understand aspects of the transportation system that may be missed when considering a project from a purely technical or political point of view. Effective transportation planning must include the participation of those whose everyday lives are affected by how they are able to get to work, home, school, stores, and services.

### RPA 8 PUBLIC INVOLVEMENT PLAN

The RPA 8 Public Involvement Plan (PIP) guides the public participation in the regional transportation planning process. The plan, updated in 2020, outlines recommended methods to engage the public during the transportation planning & decision making process and informs members of the public how they can be involved.

In keeping with the spirit of public involvement and participation, RPA 8 follows a systematic approach that allows the public to become involved in the transportation planning process. RPA 8 consistently adheres to established guidelines as a means of heightening public involvement. This includes the Title VI population, persons with a disability, the Limited English Proficiency (LEP) population, the Environmental Justice (EJ – low income and high minority) zone populations, and other traditionally underserved groups.

Utilizing various techniques to solicit public involvement has proven to be the most effective means by which to attract citizen involvement. RPA 8 remains committed to using a variety of resources to reach out to the public and attempt to encourage public participation. Figure 9.1 lists available participation methods.

Figure 9.1 Ways to Participate

	<b>Public Meetings</b> Attend and contribute at open public meetings (committees and community outreach events)
	<b>Call us</b> Call us at 563-556-4166 8:00 am - 5:00 pm Monday - Friday
	<b>Write to us</b> Dubuque Metropolitan Area Transportation Study 7600 Commerce Park, Dubuque, IA 52002
	<b>Review documents</b> Carnegie Stout Library, Dubuque County library and East Central Intergovernmental Association
	<b>Email us</b> cravada@ecia.org dfox@ecia.org
	<b>Visit our website</b> www.eciatrans.org
	<b>Visit us on socialmedia</b> Twitter.com/ECIATransport Facebook.com/ECIATransportation

RPA 8 is committed to the concept of public participation and will work to ensure that the public plays an active role in transportation planning. The hope is that public participation will reduce unfavorable public opinions of transportation projects by incorporating public sentiment into the planning process.

## **RPA 8 LRTP INPUT**

The RPA 8 is committed to providing citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, and other interested parties with reasonable opportunity to comment on the LRTP. The LRTP is a living document in that it is constantly under revision and being updated to reflect the area's needs for transportation planning. In the event of revisions, developments and updates to LRTP, RPA 8 provides 30 day comment period for the general public to voice any comments pertaining to the proposed changes.

## **DRAFT CHAPTER REVIEW AND COMMENT**

During the LRTP development process, RPA 8 provides opportunities for public review and comment on draft plan chapters. As draft chapters are developed, RPA 8 staff present the drafts at the RPA 8 Policy Board and Technical Advisory Committee meetings. All RPA 8 Policy Board and advisory committee meetings are open to the public, agendas are posted online prior to the meeting, and public comment opportunities are provided at those meetings. RPA 8 staff also publishes draft LRTP chapters on the organization's website and makes printed copies available on request. The public could also submit comments on draft LRTP chapters by email, phone, fax, in writing, or in person at the ECIA office.

## **PUBLIC HEARINGS AND FINAL ADOPTION**

The RPA 8 PIP requires the organization to hold at least one public hearing prior to the adoption of the LRTP. Notice of the meeting is published 4-20 days prior to the scheduled meeting and the hearing is typically held as part of a regularly scheduled RPA 8 meeting.

## **COVID-19 PANDEMIC**

RPA 8 altered its typical process to keep the community healthy and limit the spread of the virus, while continuing to provide everyone with the opportunity to participate in the development of the LRTP. During the LRTP development process, RPA 8 staff took mitigation steps including holding meetings virtually, when practical, and distributing information through the RPA 8 website. Staff monitored the Covid-19 situation throughout the LRTP development process and adjusted its mitigation strategies as needed. During the LRTP development process pandemic conditions generally improved, and While some meetings were still virtual, RPA 8 was able to hold many of its public meetings in-person.

## **RPA 8 LRTP INPUT MEETINGS**

The RPA 8 area is made up of distinct communities containing diverse populations that require different public services. To adequately serve the needs of these unique communities, and to ensure that all communities are represented in the LRTP, RPA 8 created a public input strategy where RPA 8 staff attended meetings of a variety of community groups including city councils and county boards of supervisors. Staff gave a short presentation on the LRTP and engaged in discussions with members of the group. City and County staff and elected officials attended several of the meetings and contributed to the discussion.

At the meetings, RPA 8 staff provided a presentation and a handout that included basic information about RPA 8 and the LRTP and directed people to additional sources of information including: staff email addresses and the RPA 8 website.

In all, RPA 8 staff collected input at eight meetings during the winter and spring 2022. Table 9.1 includes a list of the meetings attended.

**Table 9.1 Meetings**

Date	Meeting	Areas Covered
1/31/2022	Delaware County Board of Supervisors	Rural areas and small cities in Delaware County
2/14/2022	Dubuque County Board of Supervisors	Rural areas and small cities in Dubuque County
2/14/2022	Manchester City Council	City of Manchester
2/15/2022	Jackson County Board of Supervisors	Rural areas and small cities in Jackson County
2/21/2022	Maquoketa City Council	City of Maquoketa
2/22/2022	Clinton City Council	City of Clinton
2/28/2022	Clinton County Board of Supervisors	Rural areas and small cities in Clinton County
3/7/2022	DeWitt City Council	City of DeWitt

## INPUT SUMMARY

The list below summarizes the input collected during the public input process. The list includes a summarization of suggested polices and projects. Items are listed in alphabetical order. Appendix B includes a full listing of public input collected.

- Bicycle and pedestrian improvements at various locations
- Canadian Pacific Railroad merger concerns
- Four-lane US Highway 30
- Mississippi River road and rail bridge replacement in Clinton
- Safety improvements at various locations
- X-31 bridge replacement in Delaware County

## CONCLUSION

Public participation is an integral part of the transportation planning process. The information and perspectives provided through public participation assist decision-makers and lead to a more meaningful and comprehensive planning process. Input collected through the planning process was integrated into the LRTP’s Goals, Objectives, and Recommendations.

# 10

## FINANCIAL

This chapter includes historical analysis and future funding projections for road, bridge, transit, and trail projects. RPA 8 developed projections of future anticipated federal formula funds based on funding amounts authorized in the FAST Act and on past funding levels. These projections represent a conservative estimate of federal formula funding that the region can reasonably expect over the next 20 years. In addition, RPA 8 projected future state and local funds based on historical trends. Combined federal, state and local funds comprise the vast majority of revenues available to maintain and operate the federal-aid transportation system in the region.

### FUNDING OVERVIEW FOR ROADS, BRIDGES, AND TRAILS

RPA 8's transportation system improvements are funded through a combination of federal, state, and local funds. RPA 8 member governments and participating agencies utilize this combination of funds for demand management, operational management, and capital-intensive strategies. Federal funding for streets, highways, and bicycle and pedestrian facilities flow through RPA 8.

The following section lists the funding sources that can be used for projects within the region. The section includes the funding sources that the RPA 8 members receive every year and funding sources that are based on an application process.

### SURFACE TRANSPORTATION BLOCK GRANT PROGRAM (STBG)

STBG (formerly Surface Transportation Program STP) funds represent the main source of federal funding that can be committed by RPA 8 to transportation improvements. The funding can be used to:

- aid public road jurisdictions with funding for road or bridge projects;
- provide funding for transit capital improvements;
- provide funding for bicycle and pedestrian facilities; and
- provide funding for transportation planning activities.

A minimum of 20 percent non-federal match is required (80 percent federal funding). Road projects must be on federal-aid roads, which includes all federal functional class routes except local and rural minor collectors. Bridge projects may be on any public road.

**STBG Funding Estimate:** RPA 8 has STP funding history from 2010 to 2020. Future year of expenditure funding was based on linear regression between 2021 and 2045. (\$55.9 million – year of expenditure Dollars) with an annual average of \$1.86 million and a growth rate of 1.52%.

Transit capital improvement projects require adherence to approved transit procurement procedures and equipment specifications. Project candidates must be part of an approved five-year capital improvement program. Federally funded projects must comply with civil rights protection requirements.

### ADOT STBG- SWAP FUNDS

Iowa targets STBG funding to each of its 27 MPOs and RPAs on an annual basis for programming based on regional priorities. Iowa has implemented a Swap program that allows MPOs and RPAs, at their discretion, to swap targeted federal STBG funding for state Primary Road Fund dollars.

Iowa also targets a portion of its STBG funding directly to counties for use on county bridge projects. Iowa's swap program allows counties, at their discretion, to swap federal STBG funding for state Primary Road Fund dollars. These funds can be used on either on-system or off-system bridges, however off-system bridge investments must be continued to maintain the ability to transfer the federal STBG set-aside for off-system bridges.

The Iowa DOT does not require matching funds be utilized on Swap projects. MPOs and RPAs can require that project applicants provide matching funds by awarding funding in an amount less than the estimated total project cost, however, the Iowa DOT will not monitor or reimburse those MPO/RPA specific matching requirements.

STBG Swap funding has expended eligibilities over STBG funding and can be awarded on roads with a federal functional classification of Minor Collector or higher in rural areas, all Farm to Market routes, and Collector or higher in urban areas. MPOs and RPAs can be more restrictive in their project selection process regarding system eligibility.

### ADOPTED STBG -SWAP FUND DISTRIBUTION SYSTEM

At the October 19, 1999 meeting, the RPA Policy Board adopted a distribution system for uncommitted STBG funds. In this system, the funds are distributed by a sub-allocation process. Each jurisdiction's share of the funds will be determined by the Census population. The cities of Clinton, Manchester, Maquoketa and Dewitt will receive a share based on the population within the incorporated limits of the city. The four counties will each receive a share based on the population of the unincorporated area plus the population of all cities in the county under 5,000 population. Jurisdictions eligible for STBG funds that do not receive a sub-allocation will have the opportunity to request funding from the county as follows:

1. IA DOT is an eligible applicant for STBG-SWAP funds and can request funding.
2. Cities below 5,000 population, transit agencies can compete each year through an application process for 10% of the STBG funds set aside by RPA Policy board (Appendix D).
3. Transit agencies providing service within cities greater than 5,000 in population can request funds from the cities over 5,000 population.

### **STP-HBP Funding**

**Estimate:** The RPA 8 has BR funding history from 2010 to 2020. Future year of expenditure funding was based on linear regression between 2010 and 2020. (\$57.7 Million – Year of Expenditure Dollars) with an annual average of \$1.65 million and growth rate of 3.0 %.

### **TAP Funding Estimate:**

The RPA 8 has TAP/TE funding history from 2010 to 2020. Future year of expenditure funding is based on linear regression between 2021 and 2045. (\$6.4 Million – Year of Expenditure Dollars) with an annual average of \$163,500 and growth rate of 4.08 %.

## **STP HIGHWAY BRIDGE PROGRAM (STP-HBP)**

While the Highway Bridge Program was eliminated in MAP-21, a portion of Iowa's STP will continue to be targeted directly to counties and dedicated specifically to county bridge projects. The STP-HBP provides for the replacement or rehabilitation of structurally deficient or functionally obsolete public roadway bridges. A portion of these funds are required to be obligated for off-system bridges. The remaining funds can be used on either on-system or off-system bridges.

The funding requires a local match of 20 percent (80 percent federal funding). The bridge candidate must be classified as structurally deficient or functionally obsolete according to federal guidelines. Bridge replacement candidates must have a structure inventory and appraisal (SI&A) sufficiency rating of less than 50 and average daily traffic of at least 25 vehicles. Bridge rehabilitation candidates must have an SI&A sufficiency rating of 80 or less and average daily traffic of at least 25 vehicles.

## **TRANSPORTATION ALTERNATIVES PROGRAM (TAP)**

The Federal Transportation Alternatives Program (TAP) funds programs and projects defined as transportation alternatives, including: on- and off-road pedestrian and bicycle facilities; recreational trail projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former divided highways. TAP replaced funding from pre-MAP-21 programs including the Transportation Enhancement Program (TE), Safe Routes to School Program, and National Scenic Byways Program. Minimum 20 percent or more local match is required for regional TAP projects as determined by RPA 8 policy board.

## **OTHER FEDERAL PROGRAMS**

Projects identified in local TIPs utilize a number of different sources of federal funding. While some FHWA funds are distributed by statutory formulas, other funds are “discretionary” (congressionally earmarked). The primary sources of FHWA funding to Iowa, which are in part used to fund local efforts, include:

### **CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM (CMAQ)**

CMAQ provides flexible funding for transportation projects and programs tasked with helping to meet the requirements of the Clean Air Act. These projects can include those that reduce congestion and improve air quality.

### **DEMONSTRATION FUNDING (DEMO)**

Demonstration funding is a combination of different programs and sources. The FHWA administers discretionary programs through various offices representing special funding categories. An appropriation bill providing money to a discretionary program, through special congressionally directed appropriations, or through legislative acts such as the American Recovery and Reinvestment Act of 2009 (ARRA).

### **HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**

This is a core federal-aid program that funds projects with the goal of achieving a significant reduction in traffic fatalities and serious injuries on public roads.

Portions of these funds are set aside for use on high-risk rural roads and railway-highway crossings.

### **NATIONAL HIGHWAY PERFORMANCE PROGRAM (NHPP)**

NHPP funds are available to be used on projects that improve the condition and performance of the National Highway System (NHS) including some state and U.S. highways and interstates.

### **FEDERAL LANDS AND TRIBAL TRANSPORTATION PROGRAMS (FLHP)**

The Federal Lands Transportation Program and Federal Lands Access Program provide funding for projects that improve access within, and to, federal lands. Federal Lands Access Program funding will be distributed through a grant process where a group of FHWA, Iowa DOT, and local government representatives will solicit, rank, and select projects to receive funding. The Tribal Transportation Program continues the Indian Reservation Road program and will distribute funds based on formula comprised of tribal population, road mileage, and average funding under SAFETEA-LU.

### **STBG-TAP-FLEX**

Iowa DOT also made additional STBG funds, referred to as STBG-TAP-Flex funds, available to all TMAs, MPOs, and RPAs on a per capita basis. Each TMA, MPO, or RPA will decide how much, if any, of these STBG-TAP-Flex funds are rolled into the Local Projects TAP program administered by the agency or use funding on existing STBG program. RPA 8 decided to use the STBG-TAP-Flex on projects from small city STBG program.

## **STATE FUNDING PROGRAMS**

In addition to the distribution of Federal-aid formula funds, the Iowa Department of Transportation administers several grant programs through application processes that need to be documented in the TIP. They include the following:

### **CITY BRIDGE PROGRAM**

City Bridge Program portion of STBG funding dedicated to local bridge projects is set aside for the funding of bridge projects within cities. Eligible projects need to be classified as structurally deficient or functionally obsolete. Projects are rated and prioritized by the Office of Local Systems with awards based upon criteria identified in the application processes. Projects awarded grant funding are subject to a federal aid obligation limitation of \$1 million. Iowa has implemented a Swap program that allows cities, at their discretion, to swap federal STBG funding for state Primary Road fund dollars.

### **HIGHWAY SAFETY IMPROVEMENT PROGRAM – SECONDARY (HSIP SECONDARY).**

This program is funded using a portion of Iowa's Highway Safety Improvement Program apportionment and funds safety projects on rural roadways. Funding targeted towards these local projects is eligible to be swapped for Primary Road Fund dollars.

### **IOWA CLEAN AIR ATTAINMENT PROGRAM (ICAAP)**

The ICAAP funds projects that are intended to maximize emission reductions

through traffic flow improvements, reduced vehicle miles of travel, and reduced single occupancy vehicle trips. This program utilizes \$4 million of Iowa’s CMAQ apportionment. Funding targeted towards these local projects is eligible to be swapped for Primary Road Fund dollars.

### RECREATIONAL TRAIL PROGRAM

This program provides federal funding for both motorized and non-motorized trail projects and is funded through a takedown from Iowa’s TAP funding. The decision to participate in this program is made annually by the Iowa Transportation Commission. For more information on the Recreations Trail Program.

### IOWA'S TRANSPORTATION ALTERNATIVES PROGRAM

This program targets STBG funding to MPOs and RPAs to award to locally sponsored projects that expand travel choices and improve the motorized and non-motorized transportation experience.

### HISTORICAL REVENUE ANALYSIS FOR ROADS BRIDGES, AND TRAILS

Table 10.1 provides the historical funds received by RPA 8 for streets, highways and bridges from 2010 to 2020. The table does not include funding that RPA 8 is eligible for but did not receive. A growth rate has been assigned to each funding using linear regression method. The growth rate is used to project future funding for the area.

**Table 10.1 Historic Revenue Analysis for Street, Highways & Bridges**  
*Source: IADOT*

Fisical Year	Funding Sources		
	STBG	TAP & TAP Flex	HBP
2010	\$2,589,903	\$179,793	\$986,000
2011	\$2,628,540	\$190,358	\$1,826,000
2012	\$2,710,773	\$217,896	\$836,000
2013	\$2,587,600	\$206,415	\$1,943,000
2014	\$2,682,877	\$258,269	\$1,520,000
2015	\$2,634,434	\$260,243	\$2,320,000
2016	\$2,620,941	\$258,581	\$3,306,000
2017	\$2,698,058	\$263,199	\$3,472,000
2018	\$2,693,600	\$260,728	\$3,136,000
2019	\$2,905,815	\$261,108	\$4,100,000
2020	\$2,997,339	\$259,864	\$3,050,000

## RPA 8 NON-FEDERAL FUNDS

In addition to federal funds, there are a number of local and regional funding sources that are used for operating and maintaining the region's transportation system.

Non-federal funds can be used both on federal and non-federal aid route construction as well as system maintenance and preservation. The funds can also be used for other local usage. However, it is difficult to determine how much a community spent on federal and nonfederal aid routes in a specific year. Staff analyzed each member's financial profile and calculated the average amount of non-federal funding that each spends annually on a federal aid system. Staff then used these calculations as part of the RPA 8 future funding projection. The following sections present an overview of each member's revenues and expenditures. Appendix B includes detailed information on each member's past revenues and expenditures.

### Non-Federal Funding Sources

#### Cities:

- Road Use Tax Funds (RUTF)
- Other Road Monies Receipts
- Receipts, Debt Service

#### Dubuque County:

- Property Tax
- RUTF
- TJ Revenue
- FM Extension
- Time -21
- Misc. Receipts
- Farm to Market
- Local Option Sales Tax
- RISE

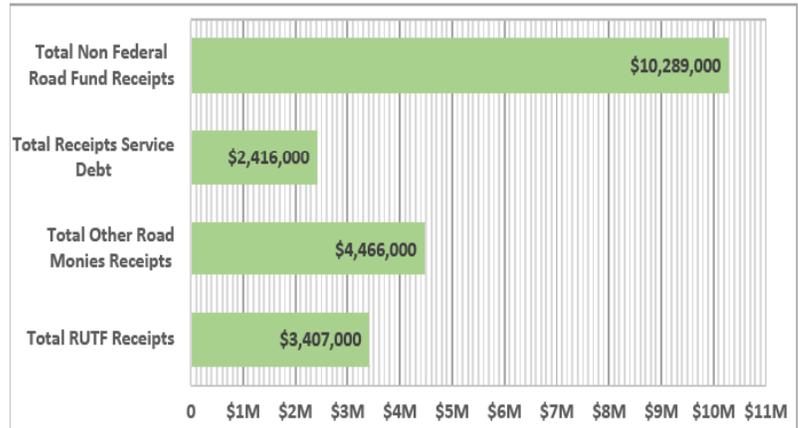
## CITY OF CLINTON

### REVENUE

With an average annual budget of \$20.6 million, the City of Clinton derives its revenues from several sources. Annual Road Use Tax Funds (RUTF) revenues averaged \$3.4 million.

Other road monies (local property tax support, grants, and other sources) averaged \$4.46 million. Receipts, debt service averaged \$2.4 million annually. On average, about 50 % of the City's funding comes from local property tax support, grants, and other sources; 16.56 % comes from State road use tax funds; and the rest from receipts, debt service.

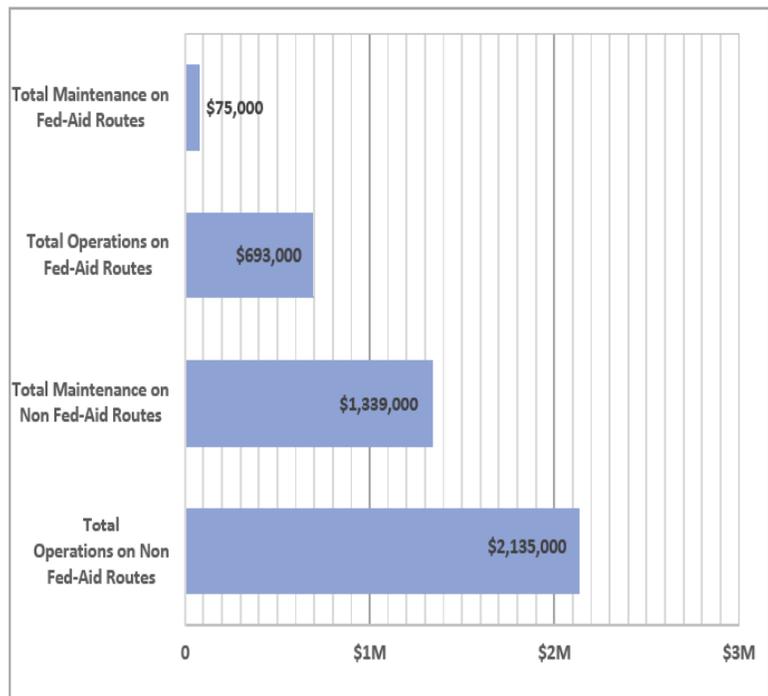
### Annual Average Revenue: \$20.57 Million



### EXPENDITURES

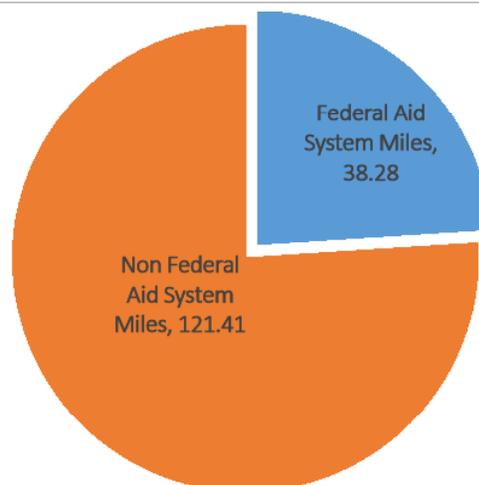
Annual City of Clinton expenditures for operating and maintaining road system is averaged at \$3.47 million. The City uses these funds to support the following activities: road maintenance, construction and reconstruction. The City's annual roadway operation expenditures averaged \$2.13 million and road way maintenance averaged \$1.3 million.

### Annual Average Expenditures on Road system : \$3.47 Million



### SPENDING ON THE FEDERAL AID SYSTEM

The City of Clinton has 159.69 lane miles of road, of which 38.28 miles (23.97%) is federal aid eligible routes and 121.41 miles (76.03%) are nonfederal aid eligible routes. The City spends 32.46 % of its operating budget and 5.6% of its maintenance budget on federal aid eligible routes.

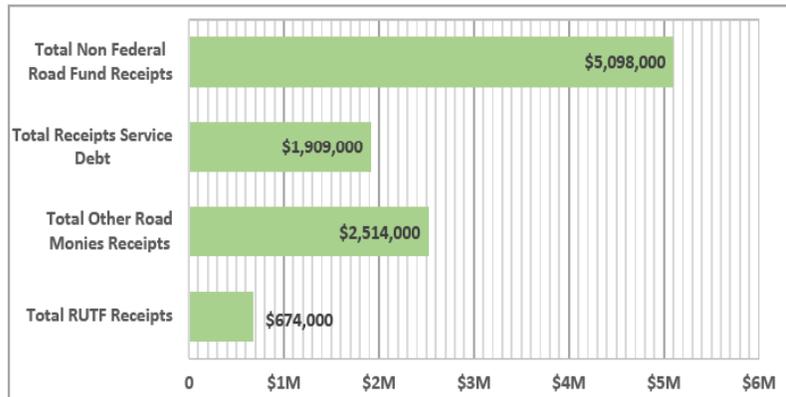


## CITY OF DEWITT

### REVENUE

With an average annual budget of \$10.2 million, the City of DeWitt derives its revenues from several sources. Annual Road Use Tax Funds (RUTF) revenues averaged \$674,000. Other road monies (local property tax support, grants, and other sources) averaged \$2.51 million. Receipts, debt service averaged \$1.9 million annually. On average, about 50 % of the City’s funding comes from local property tax support, grants, and other sources; 6.61% comes from State road use tax funds; and the rest from receipts, debt service.

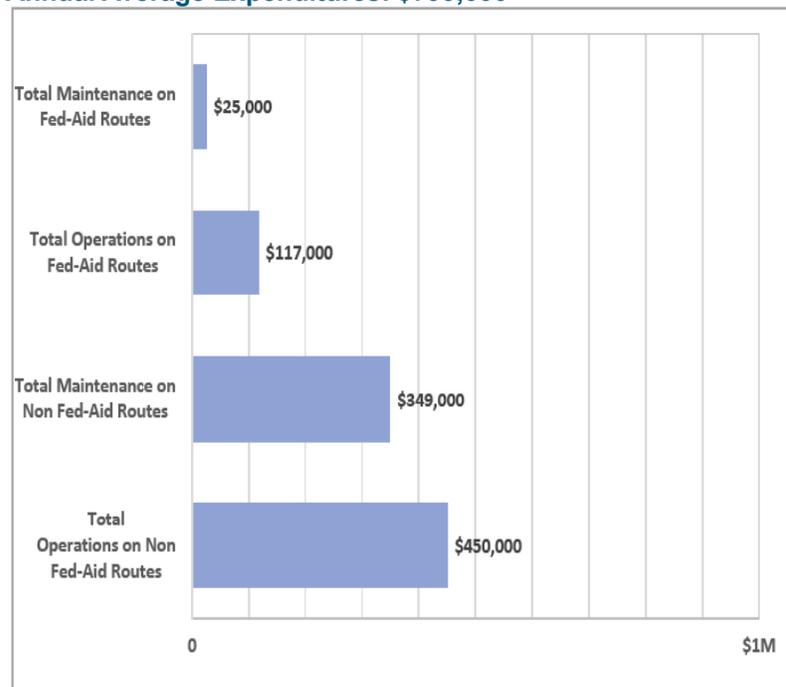
### Annual Average Revenue: \$10.2 Million



### EXPENDITURES

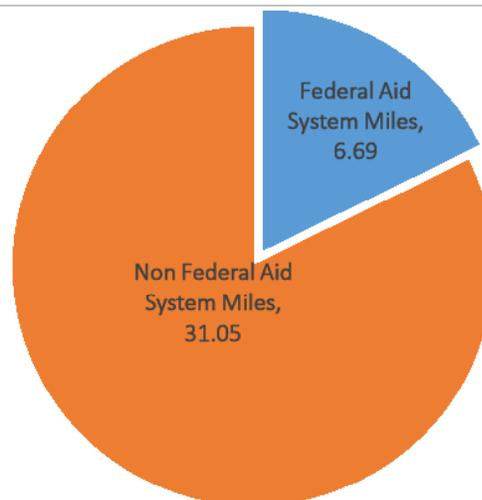
Annual City of DeWitt expenditures for operating and maintaining road system is averaged at \$799,000. The City uses these funds to support the following activities: road maintenance, construction and reconstruction. The City’s annual roadway operation expenditures averaged \$450,000 and road way maintenance averaged \$349,000.

### Annual Average Expenditures: \$799,000



### SPENDING ON THE FEDERAL AID SYSTEM

The City of DeWitt has 37.74 lane miles of road, of which 6.69 miles (17.73%) is federal aid eligible routes and 31.05 miles (82.27%) are nonfederal aid eligible routes. The City spends 26.0 % of its operating budget and 7.16% of its maintenance budget on federal aid eligible routes.



## CITY OF MANCHESTER

### REVENUE

With an average annual budget of \$4.97 million, the City of Manchester derives its revenues from several sources. Annual Road Use Tax Funds (RUTF) revenues averaged \$656,000. Other road monies (local property tax support, grants, and other sources) averaged \$1,23 million. Receipts, debt service averaged \$599,000 annually. On average, about 50 % of the City's funding comes from local property tax support, grants, and other sources; 13.18% comes from State road use tax funds; and the rest from receipts, debt service.

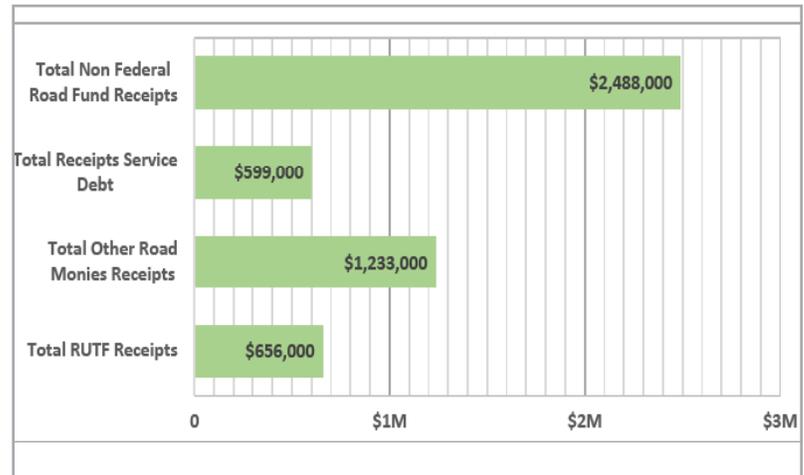
### EXPENDITURES

Annual City of Manchester expenditures for operating and maintaining road system is averaged at \$834,000. The City uses these funds to support the following activities: road maintenance, construction and reconstruction. The City's annual roadway operation expenditures averaged \$443,000 and road way maintenance averaged \$391,000.

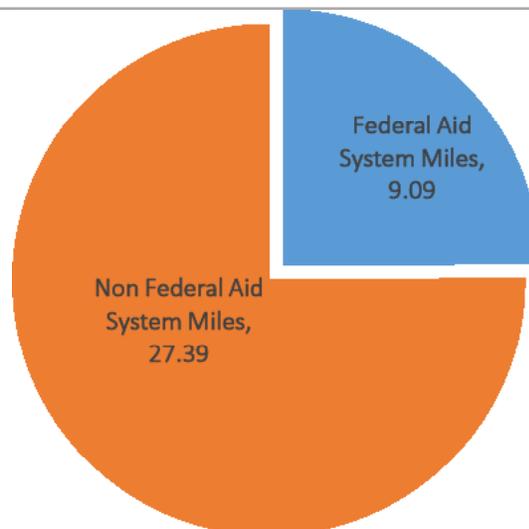
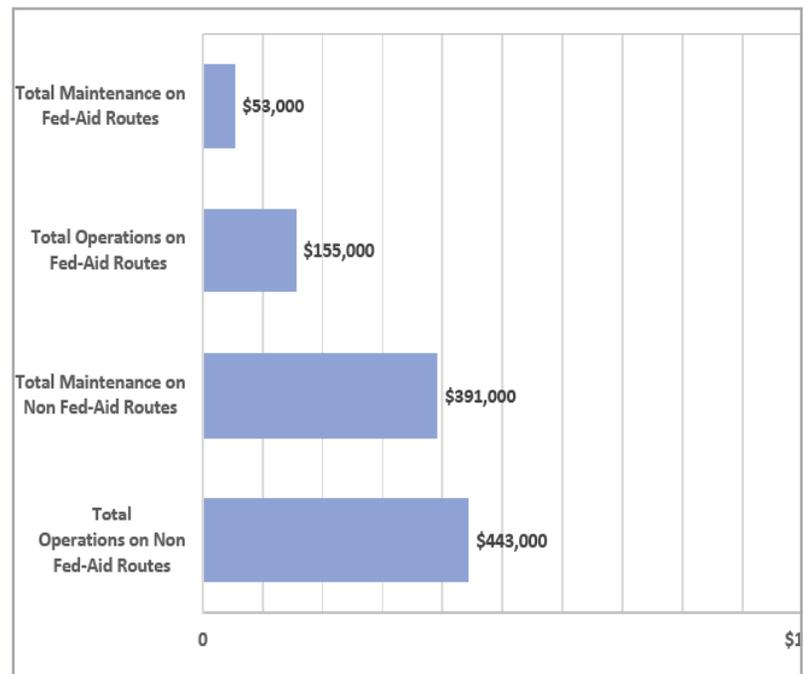
### SPENDING ON THE FEDERAL AID SYSTEM

The City of Manchester has 36.47 lane miles of road, of which 9.09 miles (24.91%) is federal aid eligible routes and 27.39 miles (75.09%) are nonfederal aid eligible routes. the City spends 35.0 % of it operating budget and 13.55% of its maintenance budget on federal aid eligible routes.

### Annual Average Revenue: \$4.97 Million



### Annual Average Expenditures: \$834,000

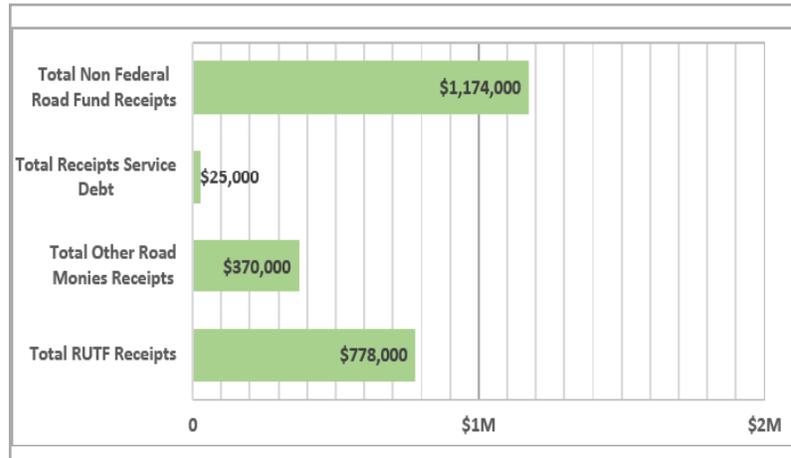


# CITY OF MAQUOKETA

## REVENUE

With an average annual budget of \$2.35 million, the City of Maquoketa derives its revenues from several sources. Annual Road Use Tax Funds (RUTF) revenues averaged \$778,000. Other road monies (local property tax support, grants, and other sources) averaged \$370,000. Receipts, debt service averaged \$25,000 annually. On average, about 50 % of the City’s funding comes from local property tax support, grants, and other sources; 33.15% comes from State road use tax funds; and the rest from receipts, debt service.

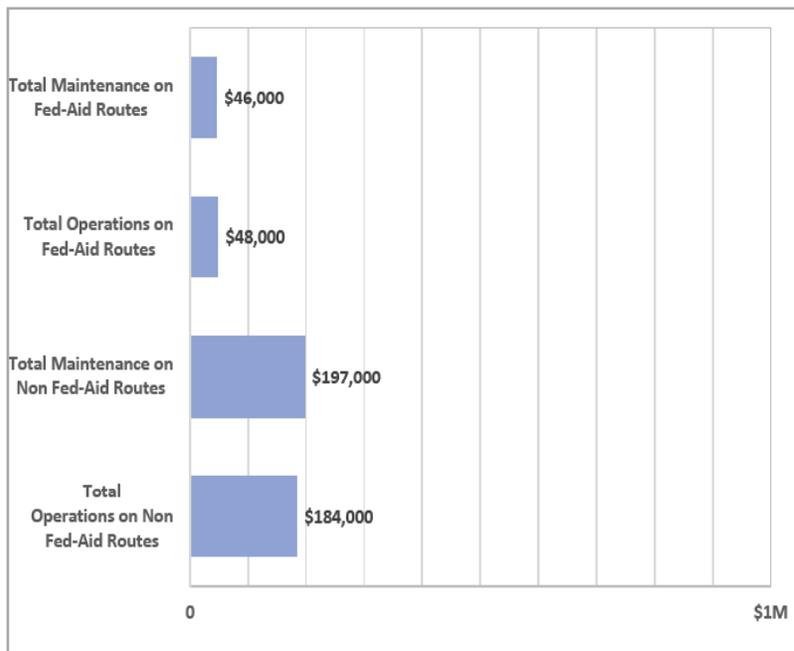
### Annual Average Revenue: \$2.35 Million



## EXPENDITURES

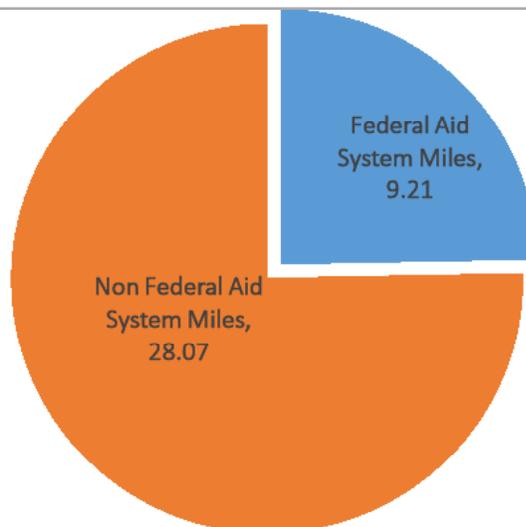
Annual City of Maquoketa expenditures for operating and maintaining road system is averaged at \$381,000. The City uses these funds to support the following activities: road maintenance, construction and reconstruction. The City’s annual roadway operation expenditures averaged \$184,000 and road way maintenance averaged \$197,000.

### Annual Average Expenditures: \$381,000



## SPENDING ON THE FEDERAL AID SYSTEM

The City of Maquoketa has 37.28 lane miles of road, of which 9.21 miles (24.70%) is federal aid eligible routes and 28.07 miles (75.30%) are nonfederal aid eligible routes. The City spends 26.0 % of its operating budget and 23.35% of its maintenance budget on federal aid eligible routes.

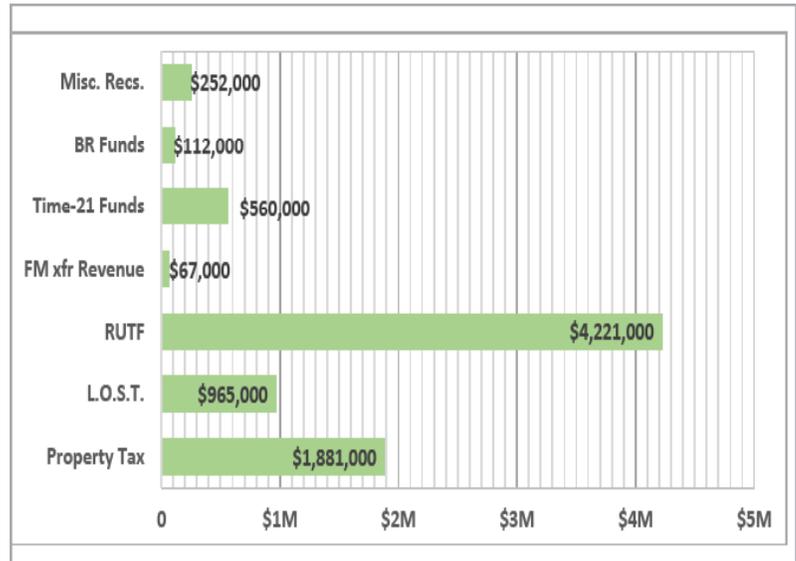


## CLINTON COUNTY

### REVENUE

With an average annual budget of \$8.06 million Clinton County derives its revenues from several sources. The County's property tax revenues averaged of \$1.89 million annually. Local Option Sales Tax (LOST) revenues had an annual average of \$965,000. Farm to Market (FM) revenues had an annual average of \$67,000. The Road Use Tax Fund (RUTF) revenue had an annual average of \$ 4.22 million. TIME-21 revenues had an annual average of \$560,000 average annual Bridge Funds of \$112,000, and other miscellaneous funds had an annual average of \$252,000.

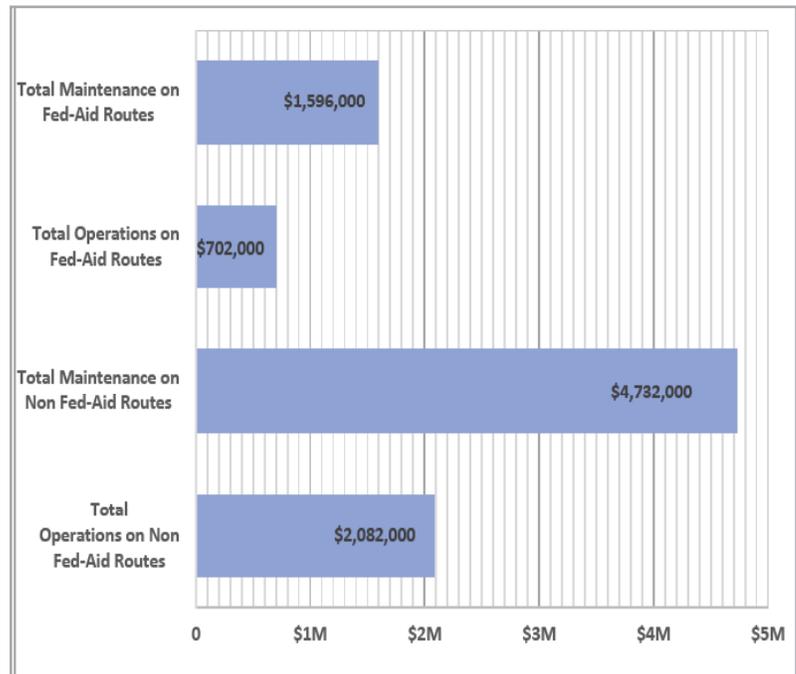
#### Annual Average Revenue: \$8.06 Million



### EXPENDITURES

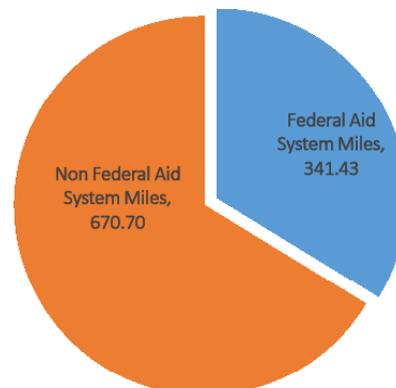
Annual Clinton County for operating and maintaining road system is averaged at \$6.81 The County uses these funds to support the following activities: road maintenance, construction and reconstruction. The County's annual roadway operation expenditures averaged \$2.08 million and road way maintenance averaged \$4.73 million.

#### Annual Average Expenditures: \$6.81 Million



### SPENDING ON FEDERAL AID SYSTEM

Clinton County has 1012.13 lane miles of road, of which 341.43 miles (33.73%) is federal aid eligible routes and 670.70 miles (66.27%) are non-federal aid eligible routes. the County spends 33.72 % of it operating budget and 33.73% of its maitenanace budget on federal aid eligible routes.

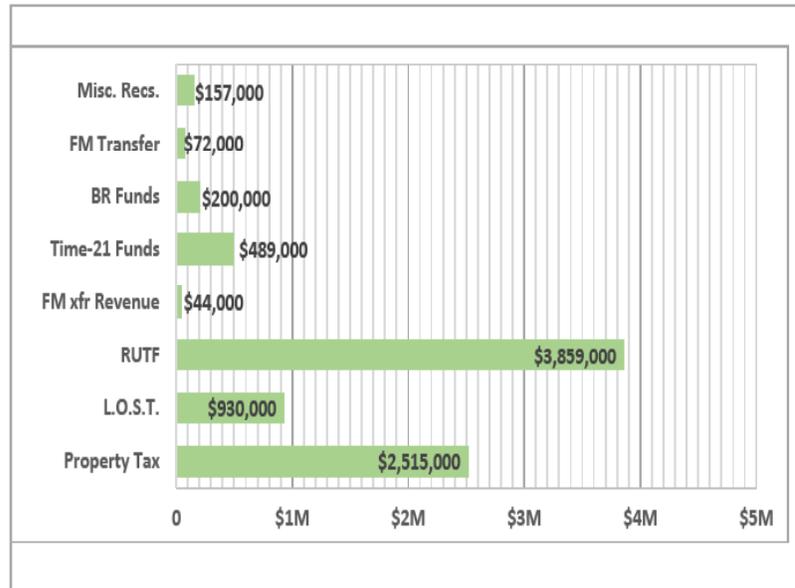


## DELAWARE COUNTY

### REVENUE

With an average annual budget of \$7.08 million Delaware County derives its revenues from several sources. The County's property tax revenues averaged \$2.5 million annually. Local Option Sales Tax (LOST) revenues had an annual average of \$930,000. Farm to Market (FM) revenues had an annual average of \$72,000. The Road Use Tax Fund (RUTF) revenue had an annual average of \$3.86 million. TIME-21 revenues had an annual average of \$489,000 average annual Bridge Funds of \$200,000, and other miscellaneous funds had an annual average of \$157,000.

### Annual Average Revenue: \$8.27 Million



### EXPENDITURES

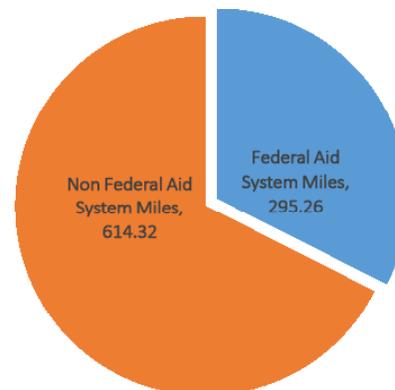
Annual Delaware County for operating and maintaining road system is averaged at \$6.22 million. The County uses these funds to support the following activities: road maintenance, construction and reconstruction. The County's annual roadway operation expenditures averaged \$1.91 million and road way maintenance averaged \$4.31 million.

### Annual Average Revenue: \$6.80 Million



### SPENDING ON FEDERAL AID SYSTEM

Delaware County has 909.58 lane miles of road, of which 295.26 miles (32.46%) is federal aid eligible routes and 614.32 miles (67.54%) are non-federal aid eligible routes. The County spends 32.46% of its operating budget and 32.47% of its maintenance budget on federal aid eligible routes.

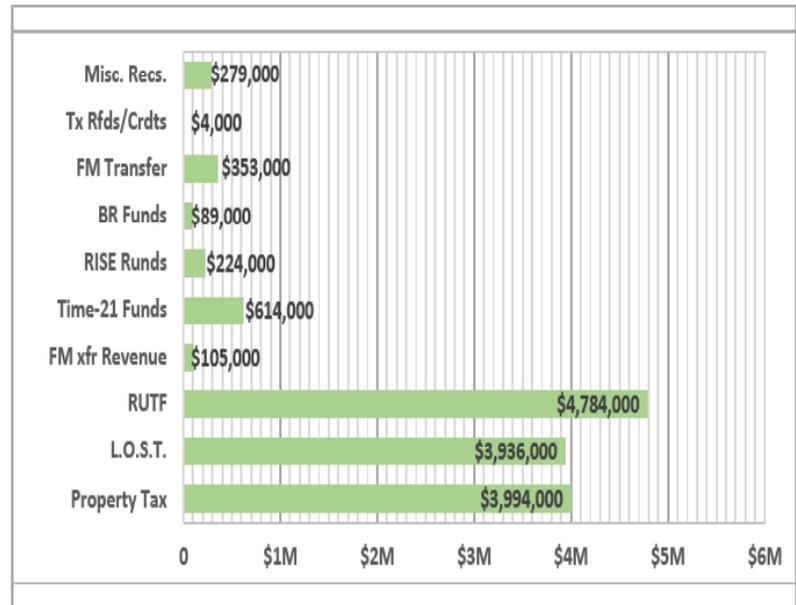


## DUBUQUE COUNTY

### REVENUE

With an average annual budget of \$14.38 million Dubuque County derives its revenues from several sources. The County's property tax revenues averaged of \$4.0 million annually. Local Option Sales Tax (LOST) revenues had an annual average of \$3.9 million. Farm to Market (FM) revenues had an annual average of \$105,000. The Road Use Tax Fund (RUTF) revenue had an annual average of \$ 4.78 million. TIME-21 revenues had an annual average of \$614,000, and other miscellaneous funds had an annual average of \$279,000.

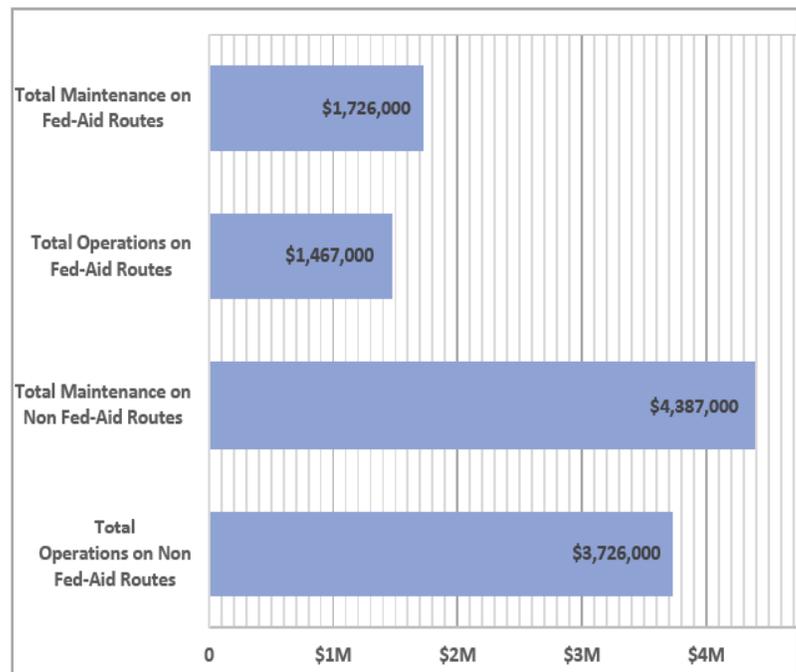
#### Annual Average Revenue: \$14.38 Million



### EXPENDITURES

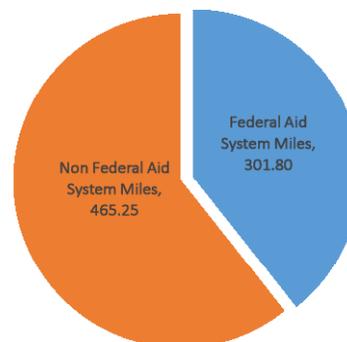
Annual Dubuque County for operating and maintaining road system is averaged at \$8.11 million. The County uses these funds to support the following activities: road maintenance, construction and reconstruction. The County's annual roadway operation expenditures averaged \$3.72 million and road way maintenance averaged \$4.38 million.

#### Annual Average Expenditure: \$10.69 Million



### SPENDING ON FEDERAL AID SYSTEM

Dubuque County has 767.05 lane miles of road, of which 301.80 miles (39.35%) is federal aid eligible routes and 465.25 miles (60.65%) are non-federal aid eligible routes. the County spends 39.37 % of it operating budget and 39.34% of its maitenanace budget on federal aid eligible routes.

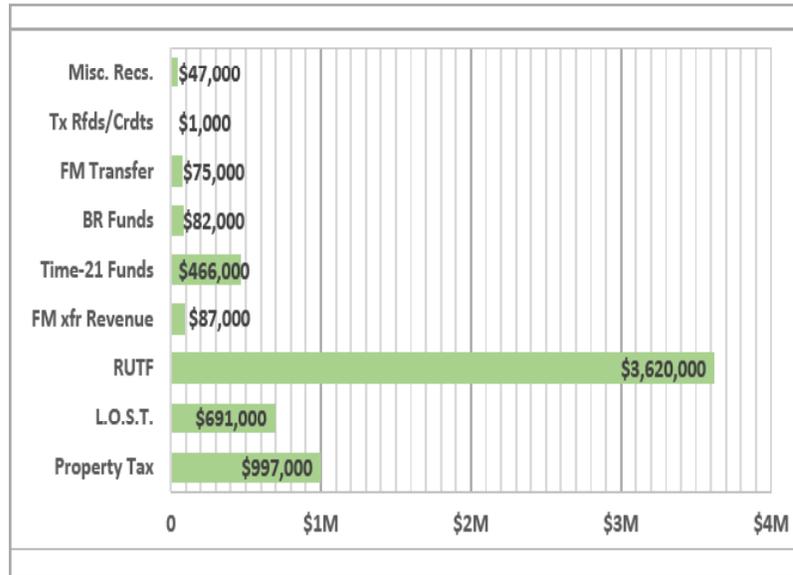


# JACKSON COUNTY

## REVENUE

With an average annual budget of \$6.1 million Jackson County derives its revenues from several sources. The County’s property tax revenues averaged of \$997,000 annually. Local Option Sales Tax (LOST) revenues had an annual average of \$691,000. Farm to Market (FM) revenues had an annual average of \$87,000. The Road Use Tax Fund (RUTF) revenue had an annual average of \$997,000. TIME-21 revenues had an annual average of \$466,000, and other miscellaneous funds had an annual average of \$47,000.

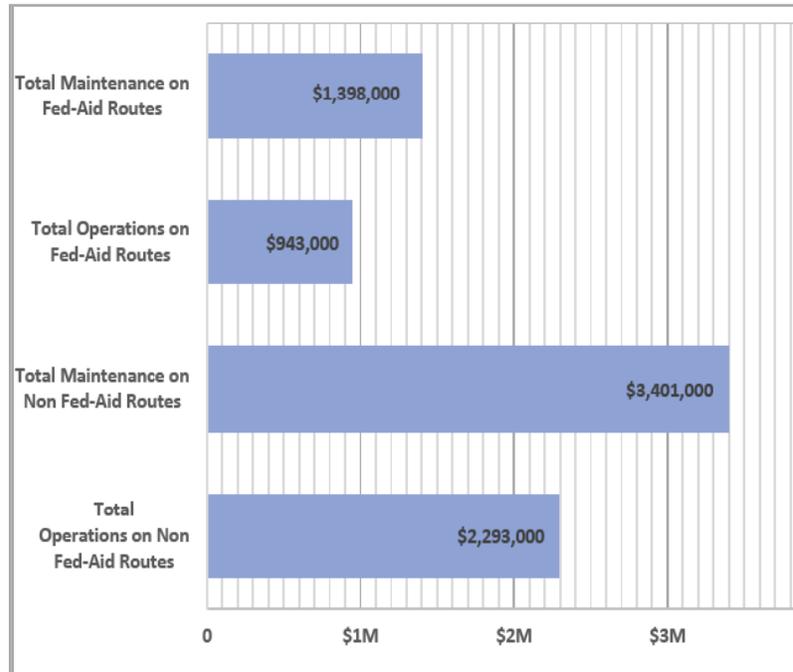
### Annual Average Revenue: 6.1 Million



## EXPENDITURES

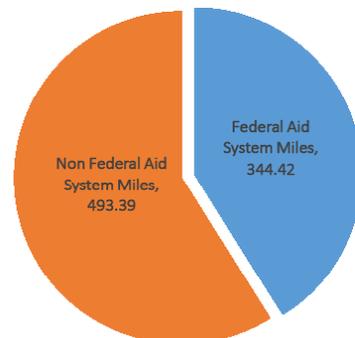
Annual Jackson County for operating and maintaining road system is averaged at \$5.69 million. The County uses these funds to support the following activities: road maintenance, construction and reconstruction. The County’s annual roadway operation expenditures averaged \$2.29 million and road way maintenance averaged \$3.4 million.

### Annual Average Expenditure: \$5.69 Million



## SPENDING ON FEDERAL AID SYSTEM

Jackson County has 837.81 lane miles of road, of which 344.42 miles (41.11%) is federal aid eligible routes and 493.39 miles (58.89%) are non-federal aid eligible routes. the County spends 41.13 % of it operating budget and 41.11% of its maitenanace budget on federal aid eligible routes.



## OVERALL HISTORICAL FUNDS SPENT ON THE FEDERAL AID SYSTEM WITHIN RPA 8

Table 10.2 below provides the amount spent for operations and maintenance by members in the RPA 8 area by using information from the city and county tables above. The growth rate for each member is determined using revenue growth from 2012 -2016. The members within RPA 8 spent \$11.1 million on average annually. The revenue growth for the City of Clinton, City of DeWitt, City of Manchester, City of Maquoketa, Clinton County, Delaware County, Dubuque County and Jackson County are taken into consideration to establish an average growth rate for future projects as they have the majority of the federal aid system. RPA 8 prefers a conservative approach for projecting future revenues and uses an annual growth rate of 3% for future years.

**Table 10.2 Average Historical Spending on Operations and Maintenance of Federal aid system (2016-2020)**

Name	Average Amount Spent	Average Revenue Growth from 2016-2020
City of Clinton	\$768,000	-0.87%
City of DeWitt	\$142,000	0.79%
City of Manchester	\$208,000	10.32%
City of Maquoketa	\$94,000	-5.64%
Clinton County	\$2,299,000	7.47%
Delaware County	\$2,020,000	9.71%
Dubuque County	\$3,193,000	0.49%
Jackson County	\$2,341,000	4.41%
<b>Total</b>	<b>\$11,065,000</b>	<b>3.34%</b>

## FUTURE FUNDING ANALYSIS FOR ROADS, BRIDGES, AND TRAILS

The RPA 8 LRTP financial estimates are derived from an economic climate that is neither stable nor predictable. Revenues for the long-range plan are estimated at a planning level, not the programmatic level, as with the Transportation Improvement Program (TIP). RPA 8 financial projections are reviewed and adjusted regularly to reflect future economic trends.

This analysis is subject to a number of inherent limitations:

- The projections are for a period of 30 years, during which time significant changes are possible in travel behavior and transportation finance.
- Financial estimates are based on future funding estimates, not project-specific estimates, as with the TIP's programmatic approach.
- The analysis lumps federal, state and local funding together and compares the total against the aggregate expenditures identified in the plan.
- Revenues from local sources are projected into future by historical trends and percentage growth. However, this may not account accurately for private-sector funding that could support transportation improvements.
- Projections of federal funding involve a great deal of uncertainty due to shifts in federal transportation budget and deficit-reduction policies and

because these funds are largely administered on a statewide basis.

- Ongoing maintenance costs were estimated by surveying state and local governments about current expenditures. Maintenance needs may be more accurately determined when region-wide pavement and bridge management/condition rating systems are in place.
- Cost estimates for many of the highway capacity projects may involve significant errors due to the long-range nature of the plan, the absence of detailed cost estimates based on actual design of the improvements, and the simplified methodology used to develop many of the estimates.

## PROCEDURE FOR FUTURE PROJECTIONS

Transportation revenues rely on taxes and generally reflect the circumstances of the regional economy, and therefore fluctuate from year to year. Currently, the RPA 8 2045 LRTP's financial estimates are derived from information that exists as of today. Over the 30-year time horizon for RPA 8 2045 LRTP, there will likely be variation in the annual transportation revenues available to the region. However, for the purposes of the long-range plan, this variation is impossible to accurately predict, and requires a conservative approach in anticipating gross-level forecasts needed to demonstrate fiscal constraint.

These forecasts assume constant growth in potential revenues for all sources of funds. Future growth rates are estimated based on historical analysis of past years funding. They also assume a constant rate of inflation calculated by using historical data obtained from cities, counties and other sources within RPA 8. The future projections are calculated using a linear regression method using an annual growth rate and average annual funding as inputs. The projections are done for 30 years — between 2022 and 2045.

Overall RPA 8 will have \$119,925,000 in federal and \$365,904,000 in local funds.

## FUTURE FEDERAL FUNDS

Table 10.3 provides future federal funds for RPA 8 region using information from historical trends from Table 10.1.

**Table 10.3 Future Federal Funds for the RPA 8 Region**

*Source: RPA 8*

Year	RPA 8 Funds			Total Revenue
	STP	HBP	TAP & TAP Flex	
2021	\$1,888,000	\$1,706,000	\$171,000	\$3,765,000
2022	\$1,917,000	\$1,756,000	\$178,000	\$3,851,000
2023	\$1,946,000	\$1,806,000	\$185,000	\$3,937,000
2024	\$1,975,000	\$1,856,000	\$192,000	\$4,023,000
2025	\$2,004,000	\$1,906,000	\$199,000	\$4,109,000
2026	\$2,033,000	\$1,956,000	\$206,000	\$4,195,000
2027	\$2,062,000	\$2,006,000	\$213,000	\$4,281,000
2028	\$2,091,000	\$2,056,000	\$220,000	\$4,367,000
2029	\$2,120,000	\$2,106,000	\$227,000	\$4,453,000
2030	\$2,149,000	\$2,156,000	\$234,000	\$4,539,000
2031	\$2,178,000	\$2,206,000	\$241,000	\$4,625,000
2032	\$2,207,000	\$2,256,000	\$248,000	\$4,711,000
2033	\$2,236,000	\$2,306,000	\$255,000	\$4,797,000
2034	\$2,265,000	\$2,356,000	\$262,000	\$4,883,000
2035	\$2,294,000	\$2,406,000	\$269,000	\$4,969,000
2036	\$2,323,000	\$2,456,000	\$276,000	\$5,055,000
2037	\$2,352,000	\$2,506,000	\$283,000	\$5,141,000
2038	\$2,381,000	\$2,556,000	\$290,000	\$5,227,000
2039	\$2,410,000	\$2,606,000	\$297,000	\$5,313,000
2040	\$2,439,000	\$2,656,000	\$304,000	\$5,399,000
2041	\$2,468,000	\$2,706,000	\$311,000	\$5,485,000
2042	\$2,497,000	\$2,756,000	\$318,000	\$5,571,000
2043	\$2,526,000	\$2,806,000	\$325,000	\$5,657,000
2044	\$2,555,000	\$2,856,000	\$332,000	\$5,743,000
2045	\$2,584,000	\$2,906,000	\$339,000	\$5,829,000
Total	\$55,900,000	\$57,650,000	\$6,375,000	\$119,925,000
2042	\$3,983,000	\$3,851,000	\$380,000	\$8,214,000
2043	\$4,050,000	\$3,915,000	\$387,000	\$8,352,000
2044	\$4,117,000	\$3,979,000	\$394,000	\$8,490,000
2045	\$4,184,000	\$4,043,000	\$401,000	\$8,628,000
Total	\$96,375,000	\$93,450,000	\$8,985,000	\$198,810,000

## FUTURE LOCAL REVENUES

Table 10.4 provides future local funds for RPA 8 region using information from historical trends of RPA 8 members and from Table 10.2.

**Table 10.4 Future Local Funds for the RPA 8 Region**

Year	City of Clinton	City of DeWitt	City of Manchester	City of Maquoketa	Clinton County	Delaware County	Dubuque County	Jackson County	Total
<b>Growth Rate</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	
2022	\$792,000	\$147,000	\$215,000	\$97,000	\$2,366,940	\$2,080,600	\$3,288,790	\$2,411,230	\$11,398,560
2023	\$816,000	\$152,000	\$222,000	\$100,000	\$2,435,880	\$2,141,200	\$3,384,580	\$2,481,460	\$11,733,120
2024	\$840,000	\$157,000	\$229,000	\$103,000	\$2,504,820	\$2,201,800	\$3,480,370	\$2,551,690	\$12,067,680
2025	\$864,000	\$162,000	\$236,000	\$106,000	\$2,573,760	\$2,262,400	\$3,576,160	\$2,621,920	\$12,402,240
2026	\$888,000	\$167,000	\$243,000	\$109,000	\$2,642,700	\$2,323,000	\$3,671,950	\$2,692,150	\$12,736,800
2027	\$912,000	\$172,000	\$250,000	\$112,000	\$2,711,640	\$2,383,600	\$3,767,740	\$2,762,380	\$13,071,360
2028	\$936,000	\$177,000	\$257,000	\$115,000	\$2,780,580	\$2,444,200	\$3,863,530	\$2,832,610	\$13,405,920
2029	\$960,000	\$182,000	\$264,000	\$118,000	\$2,849,520	\$2,504,800	\$3,959,320	\$2,902,840	\$13,740,480
2030	\$984,000	\$187,000	\$271,000	\$121,000	\$2,918,460	\$2,565,400	\$4,055,110	\$2,973,070	\$14,075,040
2031	\$1,008,000	\$192,000	\$278,000	\$124,000	\$2,987,400	\$2,626,000	\$4,150,900	\$3,043,300	\$14,409,600
2032	\$1,032,000	\$197,000	\$285,000	\$127,000	\$3,056,340	\$2,686,600	\$4,246,690	\$3,113,530	\$14,744,160
2033	\$1,056,000	\$202,000	\$292,000	\$130,000	\$3,125,280	\$2,747,200	\$4,342,480	\$3,183,760	\$15,078,720
2034	\$1,080,000	\$207,000	\$299,000	\$133,000	\$3,194,220	\$2,807,800	\$4,438,270	\$3,253,990	\$15,413,280
2035	\$1,104,000	\$212,000	\$306,000	\$136,000	\$3,263,160	\$2,868,400	\$4,534,060	\$3,324,220	\$15,747,840
2036	\$1,128,000	\$217,000	\$313,000	\$139,000	\$3,332,100	\$2,929,000	\$4,629,850	\$3,394,450	\$16,082,400
2037	\$1,152,000	\$222,000	\$320,000	\$142,000	\$3,401,040	\$2,989,600	\$4,725,640	\$3,464,680	\$16,416,960
2038	\$1,176,000	\$227,000	\$327,000	\$145,000	\$3,469,980	\$3,050,200	\$4,821,430	\$3,534,910	\$16,751,520
2039	\$1,200,000	\$232,000	\$334,000	\$148,000	\$3,538,920	\$3,110,800	\$4,917,220	\$3,605,140	\$17,086,080
2040	\$1,224,000	\$237,000	\$341,000	\$151,000	\$3,607,860	\$3,171,400	\$5,013,010	\$3,675,370	\$17,420,640
2041	\$1,248,000	\$242,000	\$348,000	\$154,000	\$3,676,800	\$3,232,000	\$5,108,800	\$3,745,600	\$17,755,200
2042	\$1,272,000	\$247,000	\$355,000	\$157,000	\$3,745,740	\$3,292,600	\$5,204,590	\$3,815,830	\$18,089,760
2043	\$1,296,000	\$252,000	\$362,000	\$160,000	\$3,814,680	\$3,353,200	\$5,300,380	\$3,886,060	\$18,424,320
2044	\$1,320,000	\$257,000	\$369,000	\$163,000	\$3,883,620	\$3,413,800	\$5,396,170	\$3,956,290	\$18,758,880
2045	\$1,344,000	\$262,000	\$376,000	\$166,000	\$3,952,560	\$3,474,400	\$5,491,960	\$4,026,520	\$19,093,440
<b>TOTAL</b>	<b>25,632,000</b>	<b>4,908,000</b>	<b>7,092,000</b>	<b>3,156,000</b>	<b>75,834,000</b>	<b>66,660,000</b>	<b>105,369,000</b>	<b>77,253,000</b>	<b>365,904,000</b>

## FUTURE COSTS

RPA 8 needs \$679 million to operate and maintain the federal aid system, excluding the primary road system. Table 3.5 in Chapter 3 Roads and Bridges provides detail breakdown of cost of maintaining federal aid system excluding the primary road system within RPA 8.

Needs \$40 million to operate and maintain bridges on the federal aid system excluding bridges on the primary road system. Table 3.10 in Chapter 3 Roads and Bridges provides the cost of maintaining the federal aid system excluding primary road system within RPA 8.

## FUNDING GAP

RPA 8 needs \$719 million by year 2045 to meet the requirements of the existing system. whereas RPA 8 is projecting to have \$119,925,000 in federal and \$365,904,000 in local fund. Lack of funding was one of the top concerns for our

communities and using federal funding on small scale projects is not deemed viable by communities because of the increase in cost of the project due to federal regulation.

## FUNDING OVERVIEW FOR TRANSIT

Transit systems in the RPA 8 area are funded through a combination of federal, state, and local funds. The RTA and Clinton MTA utilize this combination of funds for operational and capital strategies. Federal funding for transit programs and capital projects flow through RPA 8.

The FTA and Iowa DOT provide funding to, Iowa's MPOs and RPAs, and public transit providers to support public transit operations.

### CAPITAL INVESTMENT PROGRAM (SECTION 5309/5339)

Section 5309 is a discretionary funding source that supports transit capital needs that exceed what federal formula programs can support. This program got replaced with 5339. The 5339 program is designed to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities.

**Funding Estimate:** The local transit systems received \$1.47 million in section 5309/5339 funding for years 2016 to 2020. The system received an annual average of \$295,000. Staff used 3% as annual growth rate for future projections.

### SPECIAL NEEDS PROGRAM (SECTION 5311)

Section 5311 supports transit services in rural areas and communities with populations less than 50,000. These funds are allocated to Iowa based on the number of persons living outside urbanized areas.

**Funding Estimate:** The local transit systems received \$5.47 million in section 5311 funding from 2016 to 2020. The system received an annual average of \$1.09 million. Staff used 3% as annual growth rate for future projections.

### STATE TRANSIT ASSISTANCE (STA)

All public transit systems in Iowa are eligible for funding under the STA program. STA funding is derived from four percent of the fees for new registration collected on sales of motor vehicle and accessory equipment.

**Funding Estimate:** The local transit systems have STA funding history from 2016 to 2020. Future year of expenditure funding was based on linear regression between 2021 and 2045 with an annual average of \$560,000. Staff used 3% as annual growth rate for future projections.

### TRANSIT LEVY AND CONTRACTS

Iowa law authorizes municipalities to levy up to 95 cents per \$1,000 of assessed taxable property in order to support the cost of a public transit system. Most of Iowa's larger communities levy for support of their urban transit systems. A number of smaller communities use this authority to generate funding used to support services contracted from their designated regional transit system. Clinton MTA uses Transit Levy funds to fund capital improvements and operating expenses.

Most of the rural transit agencies do not have Transit Levy funds they generate their local funding through contract. most of these contract are with senior housing and assisted living agencies. RTA and Clinton MTA generate their local funds through contract.

**Funding Estimate:** The systems receive an average annual funding of \$403,600. Staff used 3% as annual growth rate for future projections.

## FARES

Fees paid by the passengers are one of the most common sources of local support. This can include monies collected on-board the transit vehicle (usually called “farebox receipts”), as well as prepaid fares from sale of passes or tickets, or fares billed to the passenger after the fact.

## HISTORICAL ANALYSIS OF TRANSIT REVENUE, OPERATIONS & MAINTENANCE COST

Table 10.5 provides the historical funds received by the Clinton MTA and RTA 8 from 2016 to 2020.

**Table 10.5 Historic Funds Received by the Clinton MTA and RTA**

<b>Funding Source RTA</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>Average Annual</b>
<b>Capital</b>						
Section 5339	\$0	\$0	\$0	\$298,010	\$521,518	\$163,906
Local	\$0	\$0	\$0	\$52,590	\$92,033	\$28,925
<b>Operations</b>						
Section 5311	\$403,107	\$416,053	\$434,200	\$436,467	\$508,723	\$439,710
STA	\$304,746	\$295,167	\$334,138	\$346,411	\$316,373	\$319,367
Passenger Revenue	\$47,869	\$58,137	\$73,767	\$76,549	\$36,474	\$58,559
Contracts	\$1,136,749	\$1,424,615	\$1,091,887	\$959,386	\$751,884	\$1,072,904
<b>Total</b>	<b>\$1,892,471</b>	<b>\$2,193,972</b>	<b>\$1,933,992</b>	<b>\$1,818,813</b>	<b>\$1,613,454</b>	<b>\$1,890,540</b>
<b>Funding Source MTA</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>Average Annual</b>
<b>Capital</b>						
Section 5339	\$0	\$0	\$0	\$236,215	\$419,305	\$131,104
Local	\$0	\$0	\$0	\$41,685	\$73,995	\$23,136
<b>Operations</b>						
Passenger Revenue	\$228,104	\$109,427	\$133,870	\$92,904	\$65,170	\$125,895
Contract and other revenue	\$93,931	\$374,902	\$378,378	\$443,258	\$347,114	\$327,517
Local Tax	\$486,840	\$359,856	\$395,123	\$404,506	\$371,952	\$403,655
Federal Transit Assistance (FTA)	\$602,123	\$613,105	\$627,863	\$683,958	\$744,729	\$654,356
State Transit Assistance (STA)	\$217,546	\$234,127	\$234,407	\$245,092	\$272,256	\$240,686
<b>Total</b>	<b>\$1,628,544</b>	<b>\$1,691,417</b>	<b>\$1,769,641</b>	<b>\$1,869,718</b>	<b>\$1,801,221</b>	

## FUTURE FUNDING ANALYSIS FOR TRANSIT

Table 10.6 provides future projections of transit system funding. Growth rate has been assigned to each funding using linear regression method. The growth rate is used to project future funding for the area. Overall, the local transit systems will have \$137.1 million for capital improvements, operation and maintenance between 2021 and 2045.

**Table 10.6 Future Projections for Clinton MTA and RTA**

Year	Capital		Operations			Total Revenue
	Section 5339	Local	Section 5311	STA	Contracts	
2021	\$304,000	\$60,000	\$1,127,000	\$577,000	\$1,988,000	\$4,056,000
2022	\$313,000	\$62,000	\$1,160,000	\$594,000	\$2,046,000	\$4,175,000
2023	\$322,000	\$64,000	\$1,193,000	\$611,000	\$2,104,000	\$4,294,000
2024	\$331,000	\$66,000	\$1,226,000	\$628,000	\$2,162,000	\$4,413,000
2025	\$340,000	\$68,000	\$1,259,000	\$645,000	\$2,220,000	\$4,532,000
2026	\$349,000	\$70,000	\$1,292,000	\$662,000	\$2,278,000	\$4,651,000
2027	\$358,000	\$72,000	\$1,325,000	\$679,000	\$2,336,000	\$4,770,000
2028	\$367,000	\$74,000	\$1,358,000	\$696,000	\$2,394,000	\$4,889,000
2029	\$376,000	\$76,000	\$1,391,000	\$713,000	\$2,452,000	\$5,008,000
2030	\$385,000	\$78,000	\$1,424,000	\$730,000	\$2,510,000	\$5,127,000
2031	\$394,000	\$80,000	\$1,457,000	\$747,000	\$2,568,000	\$5,246,000
2032	\$403,000	\$82,000	\$1,490,000	\$764,000	\$2,626,000	\$5,365,000
2033	\$412,000	\$84,000	\$1,523,000	\$781,000	\$2,684,000	\$5,484,000
2034	\$421,000	\$86,000	\$1,556,000	\$798,000	\$2,742,000	\$5,603,000
2035	\$430,000	\$88,000	\$1,589,000	\$815,000	\$2,800,000	\$5,722,000
2036	\$439,000	\$90,000	\$1,622,000	\$832,000	\$2,858,000	\$5,841,000
2037	\$448,000	\$92,000	\$1,655,000	\$849,000	\$2,916,000	\$5,960,000
2038	\$457,000	\$94,000	\$1,688,000	\$866,000	\$2,974,000	\$6,079,000
2039	\$466,000	\$96,000	\$1,721,000	\$883,000	\$3,032,000	\$6,198,000
2040	\$475,000	\$98,000	\$1,754,000	\$900,000	\$3,090,000	\$6,317,000
2041	\$484,000	\$100,000	\$1,787,000	\$917,000	\$3,148,000	\$6,436,000
2042	\$493,000	\$102,000	\$1,820,000	\$934,000	\$3,206,000	\$6,555,000
2043	\$502,000	\$104,000	\$1,853,000	\$951,000	\$3,264,000	\$6,674,000
2044	\$511,000	\$106,000	\$1,886,000	\$968,000	\$3,322,000	\$6,793,000
2045	\$520,000	\$108,000	\$1,919,000	\$985,000	\$3,380,000	\$6,912,000
Total	\$10,300,000	\$2,100,000	\$38,075,000	\$19,525,000	\$67,100,000	\$137,100,000

## FUTURE COSTS FOR TRANSIT

The Transit systems within RPA 8 needs \$139 million to operate and maintain existing systems. Table 5.8 in Chapter 5 Transit provides detail breakdown of cost of maintaining operation and maintenance costs of the region's transit systems over a 25-year period.

## FUNDING GAP

Transit systems with RPA 8 needs \$139 million by year 2045 to operate and maintain existing system. whereas RPA 8 is projecting to have \$137 million in federal and in local fund. Lack of funding was one of the top concerns for transit systems. Lack of funding was one of the top concerns for our

## **TRANSPORTATION IMPROVEMENT PROGRAM**

Transportation Improvement Program (TIP) is a four-year listing of federal aid eligible transportation projects selected by the various governmental agencies and RPA 8 Policy Board for implementation. All transportation projects in the RPA Region using federal funds are to be included in the TIP. The TIP is prepared annually for the RPA Policy Board with input from the Technical Advisory Committee, Iowa Department of Transportation, and the general public. Prioritization of projects within a project year is determined by the implementing agencies. Prioritization of Long-Range Transportation Plan projects on a year-to-year basis will be done by the RPA Policy Board in cooperation with the implementing agency.

## **CONCLUSION**

The public input process and projects programmed in RPA 8 Transportation Improvements program (TIP) for Federal Fiscal Year 2022-2025 shows that RPA 8 is more inclined to strategically preserve our existing infrastructure and focus future investment in maintaining areas that are already served by significant public infrastructure investments. The following pages include projects programmed in the FY 2022-2025 TIP

**2022 Statewide Transportation Improvement Program**

RPA 8  
DEMO

Project ID	Project Number	Approval Level	2022	2023	2024	2025	Totals
Sponsor	Location	Letting Date					
STIP ID	Work Codes						
44661	HDP-C023(124)--6B-23	FHWA Approved 8/17/2021	\$550,000				\$550,000
Clinton County	On 220th Street, from Y-70 to Z-24 double chip seal with microsurface		\$440,000				\$440,000
22010							

PA Note: Project awarded AID Demonstration funds

ILL

Project ID	Project Number	Approval Level	2022	2023	2024	2025	Totals
Sponsor	Location	Letting Date					
STIP ID	Work Codes						
48370	ILL-1855()-93-23	DOT Approved	\$4,351,500				\$4,351,500
De Witt	In the city of De Witt, INDUSTRIAL STREET EXTENSION Grade and Pave						
48369	ILL-2160()-93-31	DOT Approved	\$19,900,000				\$19,900,000
Dyersville	In the city of Dyersville, On 1ST ST SW, Over SMALL STREAM Pavement Widening, Bridge New						
36188	ILL-C023()-92-23	DOT Approved		\$1,375,000			\$1,375,000
Clinton County	On Y-68 over Wapsi backwater,S31,T81,RAE Bridge Replacement						

NHPP

Project ID	Project Number	Approval Level	2022	2023	2024	2025	Totals
Sponsor	Location	Letting Date					
STIP ID	Work Codes						
37916	BRF-30()--38-23	FHWA Approved	\$2,158,000				\$2,158,000
Iowa Department of Transportation	US30: UP RR 5.8 MI E OF S JCT US 61 (EB & WB) Bridge Deck Overlay		\$1,726,400				\$1,726,400
22120							
DOT Note: Project includes repurposed earmark funds from IA161							
48514	NHSX-20()--3H-28	FHWA Approved	\$1,800,000				\$1,800,000
Iowa Department of Transportation	US20: MAQUOKETA RIVER TO E OF IA 38 Pavement Rehab		\$1,440,000				\$1,440,000
22121							
38255	NHSX-3()--3H-31	FHWA Approved	\$11,778,000	\$343,000			\$12,121,000
Iowa Department of Transportation	IA3: E JCT PFEILER RD TO 0.7 MI N OF BOY SCOUT RD Grade and Pave, Erosion Control, Traffic Signs		\$9,422,400	\$274,400			\$9,696,800
22123							
48515	NHSX-61()--3H-31	FHWA Approved	\$4,155,000				\$4,155,000
Iowa Department of Transportation	US61: 0.3 MI N OF CO RD D41 TO LAKE ELEANOR RD Pavement Rehab		\$3,324,000				\$3,324,000
22122							
DOT Note: Project includes repurposed earmark funding ((IA148) of \$145,053.24							
48413	BRF-30()--38-23	FHWA Approved		\$5,000			\$5,014,000
Iowa Department of Transportation	US30: UP RR 0.6 MI E OF CO RD Y4E Bridge Replacement, Right of Way			\$4,000			\$4,011,200
22116							
39204	BRF-30()--38-23	FHWA Approved		\$6,000			\$5,244,000
Iowa Department of Transportation	US30: WAPSIPINICON RIVER 1.5 MI E OF CO RD Y4E Bridge Replacement, Right of Way			\$4,800			\$4,195,200
22118							
45273	NHSX-13()--3H-28	FHWA Approved			\$16,149,000		\$16,149,000
Iowa Department of Transportation	IA13: HONEY CREEK 0.2 MI N OF CO RD D13 TO S JCT IA 3 Grade and Pave, Right of Way				\$12,919,200		\$12,919,200
22124							
48412	BRF-136()--38-23	FHWA Approved				\$964,000	\$964,000
Iowa Department of Transportation	IA136: DITCH 8.6 MI N OF US 61 Bridge Replacement, Right of Way					\$771,200	\$771,200
22115							

NHPP

Project ID	Project Number	Approval Level	2022	2023	2024	2025	Totals
Sponsor	Location	Letting Date					
STIP ID	Work Codes						
48426	BRF-136()-38-23	FHWA Approved				\$1,908,000	\$1,908,000
Iowa Department of Transportation	IA136: ELWOOD CREEK 3.1 MI W OF US 61					\$1,526,400	\$1,526,400
22117	Bridge Replacement, Right of Way						
48429	BRF-136()-38-23	FHWA Approved				\$964,000	\$964,000
Iowa Department of Transportation	IA136: BRANCH PRAIRIE CREEK 1.2 MI N OF US 61					\$771,200	\$771,200
22119	Bridge Replacement, Right of Way						
48615	BRF-136()-38-23	FHWA Approved				\$964,000	\$964,000
Iowa Department of Transportation	IA136: BRANCH PRAIRIE CREEK 1.9 MI N OF US 61					\$771,200	\$771,200
22125	Bridge Replacement, Right of Way						
48635	BRF-136()-38-23	FHWA Approved				\$964,000	\$964,000
Iowa Department of Transportation	IA136: BRANCH PRAIRIE CREEK 4.0 MI N OF US 61					\$771,200	\$771,200
22127	Bridge Replacement, Right of Way						
48627	BRF-20()-38-31	FHWA Approved				\$4,012,000	\$4,012,000
Iowa Department of Transportation	US20: MIDDLE BRANCH CATFISH CREEK & CC RR 0.6 MI E OF NW ARTERIAL IN DUBUQUE (WB)					\$3,209,600	\$3,209,600
22126	Bridge Replacement, Right of Way						

PRF

Project ID	Project Number	Approval Level	2022	2023	2024	2025	Totals
Sponsor	Location	Letting Date					
STIP ID	Work Codes						
37917	BRFN-136()-39-23	DOT Approved	\$40,000	\$40,000	\$40,000	\$40,000	\$150,000
Iowa Department of Transportation	IA136: MISSISSIPPI RIVER IN CLINTON (STATE SHARE) Bridge Cleaning	Total					
		Federal Aid					
		Regional					
		Swap					
37915	BRFN-30()-39-23	DOT Approved	\$1,025,000	\$25,000	\$25,000	\$25,000	\$1,100,000
Iowa Department of Transportation	US30: MISSISSIPPI RIVER IN CLINTON (STATE SHARE) Bridge Rehabilitation, Bridge Cleaning	Total					
		Federal Aid					
		Regional					
		Swap					
37952	BRFN-52()-39-49	DOT Approved	\$25,000	\$25,000	\$25,000	\$25,000	\$100,000
Iowa Department of Transportation	US52: MISSISSIPPI RIVER IN SABULA (STATE SHARE) Bridge Cleaning	Total					
		Federal Aid					
		Regional					
		Swap					
48553	NHSN-67()-2R-23	DOT Approved	\$298,000				\$298,000
Iowa Department of Transportation	US67: IN CLINTON, ON 3RD ST AND 4TH ST Pave	Total					
		Federal Aid					
		Regional					
		Swap					
48507	STPN-52()-2J-49	DOT Approved	\$616,000				\$616,000
Iowa Department of Transportation	US52: IN THE CITY OF BELLEVUE Pavement Rehab	Total					
		Federal Aid					
		Regional					
		Swap					
39209	BRFN-136()-39-23	DOT Approved		\$401,000			\$401,000
Iowa Department of Transportation	IA136: DEEP CREEK 0.2 MI S OF CO RD ZZE Bridge Deck Overlay	Total					
		Federal Aid					
		Regional					
		Swap					
39206	BRFN-30()-39-23	DOT Approved		\$965,000			\$965,000
Iowa Department of Transportation	US30: AMES CREEK 3.5 MI E OF E JCT US 61 (EB & WB) Bridge Deck Overlay	Total					
		Federal Aid					
		Regional					
		Swap					
39207	BRFN-61()-39-23	DOT Approved		\$1,632,000			\$1,632,000
Iowa Department of Transportation	US61: N JCT US 30 IN DE WITT (NB & SB) Bridge Deck Overlay	Total					
		Federal Aid					
		Regional					
		Swap					
39263	BRFN-64()-39-49	DOT Approved		\$298,000			\$298,000
Iowa Department of Transportation	IA64: STREAM 0.1 MI W OF CO RD E29 Bridge Deck Overlay	Total					
		Federal Aid					
		Regional					
		Swap					

PRF

Project ID Sponsor STIP ID	Project Number Location Work Codes	Approval Level Letting Date	Year					Totals
			2022	2023	2024	2025	2026	
39262 Iowa Department of Transportation	BRFN-64()-39-49 IA64: PRAIRIE CREEK 0.4 MI E OF IA 62 Bridge Deck Overlay	DOT Approved	Total	\$742,000				\$742,000
			Federal Aid					
			Regional					
			Swap					
39208 Iowa Department of Transportation	STPN-136()-2J-23 IA136: MISSISSIPPI RIVER IN CLINTON Traffic Signs	DOT Approved	Total	\$100,000				\$100,000
			Federal Aid					
			Regional					
			Swap					
39205 Iowa Department of Transportation	STPN-30()-2J-23 US30: MISSISSIPPI RIVER IN CLINTON Traffic Signs	DOT Approved	Total	\$150,000				\$150,000
			Federal Aid					
			Regional					
			Swap					
45327 Iowa Department of Transportation	BRFN-20()-39-28 US20: BRANCH PLUM CREEK 5.0 MI E OF IA 38 (EB) Bridge Deck Overlay	DOT Approved	Total	\$150,000				\$150,000
			Federal Aid					
			Regional					
			Swap					
45337 Iowa Department of Transportation	BRFN-20()-39-31 US20: N FORK MAQUOKETA RIVER 0.5 MI W OF IA 136 (EB) Bridge Deck Overlay	DOT Approved	Total	\$368,000				\$368,000
			Federal Aid					
			Regional					
			Swap					
45305 Iowa Department of Transportation	BRFN-20()-39-31 US20: IA 136 IN DYERSVILLE (EB & WB) Bridge Deck Overlay	DOT Approved	Total	\$561,000				\$561,000
			Federal Aid					
			Regional					
			Swap					
45307 Iowa Department of Transportation	BRFN-20()-39-31 US20: CO RD Y17 IN EPWORTH (EB & WB) Bridge Deck Overlay	DOT Approved	Total	\$386,000				\$386,000
			Federal Aid					
			Regional					
			Swap					
45335 Iowa Department of Transportation	BRFN-20()-39-31 US20: CO RD Y13 IN FARLEY (EB & WB) Bridge Deck Overlay	DOT Approved	Total	\$366,000				\$366,000
			Federal Aid					
			Regional					
			Swap					
45318 Iowa Department of Transportation	BRFN-30()-39-23 US30: SILVER CREEK 0.7 MI E OF W JCT US 61 IN DE WITT (EB & WB) Bridge Deck Overlay	DOT Approved	Total	\$1,571,000				\$1,571,000
			Federal Aid					
			Regional					
			Swap					

PRF

Project ID	Project Number	Approval Level	2022	2023	2024	2025	Totals
Sponsor	Location	Letting Date					
STIP ID	Work Codes						
48442	BRFN-136()--39-23	DOT Approved				\$1,000,000	\$1,000,000
Iowa Department of Transportation	IA136: MISSISSIPPI RIVER IN CLINTON (STATE SHARE) Bridge Deck Overlay		Total	Federal Aid	Regional	Swap	
48457	BRFN-61()--39-49	DOT Approved				\$350,000	\$350,000
Iowa Department of Transportation	US61: TARECOD CREEK 1.4 MI N OF CO RD E17 (NB) Bridge Deck Overlay		Total	Federal Aid	Regional	Swap	
39259	STPN-52()--2J-49	DOT Approved				\$25,830,000	\$25,830,000
Iowa Department of Transportation	US52: MISSISSIPPI RIVER BRIDGE TO N OF SABULA Grade and Pave		Total	Federal Aid	Regional	Swap	

STBG

Project ID	Project Number	Approval Level	2022	2023	2024	2025	Totals
Sponsor	Location	Letting Date					
STIP ID	Work Codes						
478	RGPL-PA08(RTP)--ST-00	FHWA Approved	\$65,300	\$65,300	\$65,300	\$65,300	\$261,200
RPA 8	On ECIA Transportation Planning		Federal Aid	\$52,300	\$52,300	\$52,300	\$209,200
22301	Trans Planning		Regional	\$52,300	\$52,300	\$52,300	\$209,200
48486	STP-38()--2C-28	FHWA Approved	\$3,016,000				\$3,016,000
Iowa Department of Transportation	IA38: N OF HOPKINTON TO DELHI Pavement Rehab		Total	Federal Aid	Regional	Swap	
22302			\$2,412,800				\$2,412,800
48496	STP-38()--2C-28	FHWA Approved	\$2,000,000				\$2,000,000
Iowa Department of Transportation	IA38: NCL OF DELHI TO CO RD D22 Pavement Rehab		Total	Federal Aid	Regional	Swap	
22303			\$1,600,000				\$1,600,000
49727	STP-U-PA08()--70-49	TIP Approved	\$12,500	\$12,500	\$12,500	\$12,500	\$37,500
RPA 8	On Platt St, from US 61 E 1.7 miles to HYW 64		Total	Federal Aid	Regional	Swap	
	Trans Planning		\$10,000	\$10,000	\$10,000	\$10,000	\$30,000
			Regional	\$10,000	\$10,000	\$10,000	\$30,000
			Swap				\$30,000

STBG-TAP

Project ID	Sponsor	Project Number	Approval Level	2022	2023	2024	2025	Totals
STIP ID	Location	Work Codes	Letting Date					
45515	Dyersville	TAP-R-2160(617)--8T-31	FHWA Approved 4/19/2022	\$750,000				\$750,000
22393		Heritage Trail Paving and Trailhead Improvements: From 11th ST SE to Heritage Trail		\$242,111				\$242,111
		Ped/Bike Grade & Pavc, Ped/Bike Structures		\$242,111				\$242,111
45516	Maquoketa	TAP-U-4742(621)--8L-49	FHWA Approved 2/15/2022	\$577,952				\$577,952
22394		In the city of Maquoketa, On ALLEN ST, S25 T64 R02E from E Summit St to 200 th Ave		\$242,111				\$242,111
		Ped/Bike Grade & Pavc, Ped/Bike Miscellaneous		\$242,111				\$242,111

SWAP-HBP

Project ID	Project Number	Approval Level	2022	2023	2024	2025	Totals
Sponsor	Location	Letting Date					
STIP ID	Work Codes						
47215	BHOS-SWAP-C023(130)--FB-23 On 235th Street over Wapsi backwater, S12, T81, R1	DOT Approved 5/17/2022	Total Federal Aid Regional Swap \$1,500,000 \$500,000 \$1,500,000 \$230,000				\$1,500,000 \$500,000 \$1,500,000 \$230,000
36143	BHS-SWAP-C023(118)--FC-23 On Y52, Over DRAINAGE DITCH 5, S1, T80 RE2 Bridge Deck Overlay	DOT Approved 7/20/2021	Total Federal Aid Regional Swap \$230,000 \$528,000				\$230,000 \$528,000
47197	BRM-SWAP-4742(621)--SD-49 On Y 53, Over PRAIRIE CREEK, S30 T84 R03E	DOT Approved	Total Federal Aid Regional Swap \$528,000 \$1,500,000				\$528,000 \$1,500,000
45802	BRM-SWAP-4742(621)-49 In the city of Maquoketa, On S MAIN ST, Over PRAIRIE CREEK, S25 T84 R02E Bridge Replacement	TIP Approved 2/15/2022	Total Federal Aid Regional Swap \$1,000,000 \$350,000				\$1,000,000 \$350,000
35332	BROS-SWAP-C049(82)--FE-49 On 475th Avenue, Bridge over Unnamed creek, S35 T86 R5E Bridge Replacement	DOT Approved 12/21/2021	Total Federal Aid Regional Swap \$350,000				\$350,000
35157	BROS-SWAP-C023(0)--SE-23 On 250 AVE, Over BLACK CREEK, S27 T82 RE3 Bridge Replacement	DOT Approved	Total Federal Aid Regional Swap \$500,000 \$300,000 \$300,000 \$500,000				\$500,000 \$300,000 \$300,000 \$500,000
37337	BROS-SWAP-C028(0)--SE-28 On 130th Avenue, in NW S15 T89N R6W Bridge Replacement	DOT Approved	Total Federal Aid Regional Swap \$300,000 \$350,000				\$300,000 \$350,000
37302	BROS-SWAP-C031(0)--FE-31 On Clear Creek Road, in W1/4 S14 T90N R2W Bridge Replacement	DOT Approved	Total Federal Aid Regional Swap \$350,000 \$450,000				\$350,000 \$450,000
36548	BROS-SWAP-C049(86)--SE-49 On 49th Street, Over Creek, S18 T84 R1 Bridge Replacement	DOT Approved 12/20/2022	Total Federal Aid Regional Swap \$450,000				\$450,000

SWAP-HBP

Project ID	Sponsor	STIP ID	Project Number	Location	Work Codes	Approval Level	Letting Date	2022	2023	2024	2025	Totals
44755	Delaware County		BROS-SWAP-C028)--SE-28	On 140th Street, Over Rutherford Branch, S24 T90N R5W		DOT Approved				\$300,000		\$300,000
							Total					
							Federal Aid					
							Regional					
							Swap					\$300,000
37304	Dubuque County		BROS-SWAP-C031)--FE-31	On Graf Road, in NE S20 T89N R1E		DOT Approved				\$300,000		\$300,000
							Total					
							Federal Aid					
							Regional					
							Swap					\$350,000
37106	Dubuque County		BROS-SWAP-C031)--SE-31	On Fishpond Road, S3 T88N R1W		DOT Approved				\$300,000		\$300,000
							Total					
							Federal Aid					
							Regional					
							Swap					\$300,000
37751	Jackson County		BROS-SWAP-C049)--FE-49	On 17th Street, Over Elk Creek, S33 T84N R6E		DOT Approved				\$300,000		\$300,000
							Total					
							Federal Aid					
							Regional					
							Swap					\$400,000
36148	Clinton County		BHS-SWAP-C023)--FC-23	On Y4E, Over YANKEE RUN CREEK, S15 T81 R1E		DOT Approved					\$200,000	\$200,000
							Total					
							Federal Aid					
							Regional					
							Swap				\$200,000	\$200,000
44756	Delaware County		BROS-SWAP-C028)--SE-28	On 215th Avenue, Over Unnamed Stream, S24 T87N R5W		DOT Approved					\$225,000	\$225,000
							Total					
							Federal Aid					
							Regional					
							Swap				\$225,000	\$225,000
39021	Jackson County		BROS-SWAP-C049)--FE-49	On 362nd Avenue (Z15), Over Duck creek, S25 T86 R4E		DOT Approved					\$650,000	\$650,000
							Total					
							Federal Aid					
							Regional					
							Swap				\$225,000	\$225,000
							Total				\$650,000	\$650,000
							Federal Aid					
							Regional					
							Swap				\$650,000	\$650,000

SWAP-HSIP

Project ID	Sponsor	STIP ID	Project Number	Location	Work Codes	Approval Level	Letting Date	2022	2023	2024	2025	Totals
36146	Clinton County		HSIP-SWAP-C023(129)--FJ-23	Z-40 from E-50 to Hwy 64 in Miles		DOT Approved	3/15/2022	\$1,200,000				\$1,200,000
							Total					
							Federal Aid					
							Regional					
							Swap	\$200,000				\$200,000

SWAP-STBG

Project ID	Sponsor	STIP ID	Project Number	Location	Work Codes	Approval Level	Letting Date	2022	2023	2024	2025	Totals
48368	Camanche		STBG-SWAP-1040(610)--SG-23	In the city of Camanche, US Highway 67 & 7th Ave Roundabout	Pave	DOT Approved	3/15/2022	\$896,400				\$896,400
								\$100,000				\$100,000
								\$100,000				\$100,000
35633	Clinton		STBG-SWAP-1415(634)--SG-23	In the city of Clinton, On Manufacturing Drive , from Bluff Blvd to Rail road tracks	Pavement Rehab	DOT Approved	3/15/2022	\$3,900,000				\$3,900,000
								\$3,900,000				\$3,900,000
								\$3,900,000				\$3,900,000
44629	Delaware County		STBG-SWAP-C028()--FG-28	On Robinson Road (W63), from Linn County Line N 4.7 miles		DOT Approved			\$2,499,342			\$2,499,342
									\$1,499,342			\$1,499,342
									\$1,499,342			\$1,499,342
45816	Clinton County		STBG-SWAP-C023()--FG-23	On F 12, from Z-24 E 5.0 miles to Z-36		DOT Approved				\$2,835,000		\$2,835,000
										\$1,185,000		\$1,185,000
										\$1,185,000		\$1,185,000
37309	Dubuque County		STBG-SWAP-C031()--FG-31	On Higginsport Road from Hwy 151 east 5.87 miles to Moloney Road	Pavement Rehab	DOT Approved				\$2,042,528		\$2,042,528
										\$1,492,528		\$1,492,528
										\$1,492,528		\$1,492,528
35330	Jackson County		STBG-SWAP-C049()--FG-49	On Z34 (435th Ave), from Preston N 5 miles to Maquoketa River	Pavement Rehab	DOT Approved				\$1,700,000		\$1,700,000
										\$900,000		\$900,000
										\$900,000		\$900,000

# Approved 2022 Transit Program (Filtered)



# 11

## IMPLEMENTATION

Implementing the Long Range Transportation Plan is crucial part of the planning process. RPA 8 communities can implement the plan investing in projects and implementing the policies included in the plan. Plan implementation also involves routine tasks that can be considered on two levels: project-related implementation, and concept-related implementation. These tasks are as necessary as fulfilling the goals and objectives and constructing transportation projects. Projects selected to receive capital funds through the Transportation Improvement Program (TIP) must be aligned with the goals and objectives of the LRTP. Projects funded with TIP money will address the project related implementation. Tasks that are generated to address concept related implementation will help staff in developing Transportation Planning Work program (TPWP).

The recommendations of each element of the 2045 RPA 8 LRTP listed below will help in generating tasks that can help in project related and concept related implementation. Implementation of these recommendations will be contingent upon a wide range of external factors, including but not limited to: funding availability, socio-economic trends, emergent technologies, political decisions, and environmental impacts.

## RECOMMENDATIONS

### ROADWAY AND BRIDGES

- Operation and maintenance of roads and bridges is a priority.
- Apply context-sensitive design to reduce community impacts.
- Promote street connectivity.
- Continue to partner with Iowa DOT to construct projects identified in the LRTP to meet current and future travel demand.
- Continue to partner with Iowa DOT in the early development of environmental documents for projects identified in the LRTP.

### BICYCLE AND PEDESTRIAN

- Provide paved shoulders on roads with moderate to high traffic volumes and speeds.
- Continue to expand the regional trails network.
- Improve pedestrian safety.
- Improve On-Street Bicycle Safety.
- Expand bicycle route system to connect with surrounding counties.

- Cooperate with local partners (counties, cities and surrounding towns) to expand the use of shared use paths throughout the system.

### **TRANSIT - RTA**

- Explore coordination opportunities between the Jule and RTA.
- Encourage employers to utilize current public transit systems.
- Provide services on an on call basis.
- Collaboration with human service agencies, dialysis, and Medicaid brokers.
- Expand hours to include late afternoons, evenings, weekends and holidays for all three counties.
- Recruitment and retention of drivers.
- Expand Travel Training Program.
- Expand Mobility Management services.

### **TRANSIT – CLINTON MTA**

- Running later on weekdays and Saturday.
- Sunday service.
- Service to Royal Pines.
- 2nd and 3rd shift service.
- Service to Camanche and Fulton.
- Service to riverfront and west side.
- Service to marina and hotels.

### **SAFETY AND SECURITY**

- Sidewalk improvements
- Traffic calming efforts
- Speed reduction initiatives
- Pedestrian and bicycle crossing improvements
- On street/off street bicycle and pedestrian facilities
- Secure bike parking
- Traffic diversion programs around schools
- Educational programs in and around school systems
- Develop a strategic communication plan integrating the FHWA's Toward Zero Deaths initiative.
- Deliver safety messages to multimedia networks (television, radio, news-

paper, social media).

- Involve parents in driver education courses.
- Require more behind-the wheel instruction time.
- Require a diversity of driving conditions (all weather conditions, daytime and nighttime, all road surfaces).
- Support additional officer hours on roadways.
- Increase special enforcement campaigns.
- Use dynamic message signs to convey safety messages.
- Equip law enforcement with state-of-the-art technology for compliance.
- Promote technologies to gather commercial vehicle information.
- Expand law enforcement training to effectively identify impaired drivers.
- Launch a drowsy driving program within the Iowa DOT's Office of Motor Vehicle Enforcement.
- Centerline rumble strips.
- Shoulder/edgeline rumble strips.
- Curve delineation.
- Shoulder treatments.
- Cable barrier rail.
- Urban.
  - o Innovative intersection designs.
  - o Traffic signal modifications.
- Rural
  - o Intersection lighting.
  - o Stop controls.
- Work with the Multi-Disciplinary Safety Teams (MDST) to carry out safety strategies.
- Engage professionals across disciplines and systems to participate and create a unified message.
- Support primary seat belt legislation for all positions.
- Support inclusion of distracted driving as a primary offense.
- Support increased penalties for impaired driving violations.
- Expand statewide electronic crash reporting through Traffic and Criminal Software (TraCS).

- Develop a Web portal to increase safety data availability.
- Support creation of a web based analytical tool.

## **FREIGHT**

- Update 2045 Region 8 Long Range Transportation Plan with recommendations from Eight County Freight Study.
- Form an active freight committee with public and private sector members.
- Implement short and long range recommendations provide in Eight County Freight Plan
- Closely coordinate area roadway planning with freight objectives, including access and mobility in the context of other community planning objectives.

## **ENVIRONMENTAL**

- Coordinate with resource agencies throughout the development of transportation plans and documents.
- Minimize impacts to environmental resources and minority and low-income populations through systems-level.
- Work with statewide partners to support and develop a statewide data system.

## **FINANCIAL**

- Continue to monitor transportation funding needs.
- Identify shortfalls in funding sources and strategies to fill gaps.
- Seek alternatives and innovative ways to fund transportation improvements.
- Support efforts to increase federal and state revenue for transportation projects in the area.
- Continue to support local funding programs sufficient to obtain state and federal
- full-funding grant for planned projects.

## **CONCLUSION**

By investing in transportation projects that support the objectives of this LRTP, the RPA 8 region will offer residents additional means to travel within and beyond their neighborhoods by embracing options to walk, bike, ride, and drive. The infrastructure investment decisions made by RPA 8 will further strengthen our existing communities. Transportation infrastructure enhancements for all modes of travel will have a positive impact on quality of life and the character of our communities within RPA 8.