RPA 18

2050 LONG RANGE TRANSPORTATION PLAN

October 8, 2025

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Omaha-Council Bluffs Metropolitan Area Planning Agency

Title VI Coordinator

2222 Cuming Street

Omaha, NE 68102

Phone: (402) 444-6866

Email: civilrights@mapacog.org

Si necesita ayuda con la traducción, comuníquese con la oficina de MAPA utilizando la información de contacto a continuación.

Phone/Teléfono: 402-444-6866

Email/Correo electrónico: mapa@mapacog.org

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1| Introduction

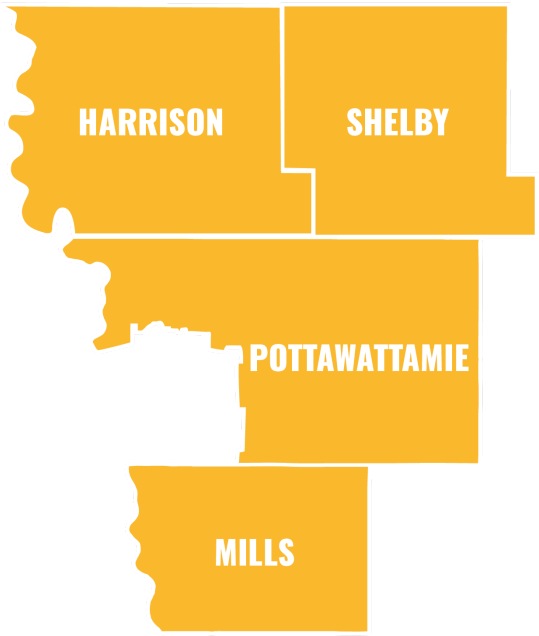
Transportation is the connection and movement of people, goods and services throughout an area. These functions often dictate the livelihood and vitality of a city or region. The types of functions that are performed, coupled with quality of life can be determined solely upon the movements and capabilities of its transportation network. Coordination of these transportation networks and systems is paramount in ensuring adequate connections, efficient movement, and a vibrant society.

The transportation system of the Regional Planning Affiliation 18 (RPA-18) region provides interconnectivity among people and places within this four-county region to resources and destinations beyond. This connectivity provides personal access to commercial centers, major employment centers, health services and other services found in larger metro areas– most notably Omaha and Council Bluffs. Economically, this robust transportation network provides access to agricultural markets from Iowa to places around the world, provides pivotal shipping and freight access for industrial functions, and serves as a catalyst for overall growth and development in the region.

This network also includes roads, trails, transit, and numerous freight modes—water, rail, and air—that allow people and goods to move freely throughout the region. This plan seeks to build upon this network while establishing clear expectations about the costs of maintaining the existing system.

1.1 | About RPA-18

Figure 1.1: Graphic of the RPA-18 Region



The Regional Planning Affiliation - Region 18 (RPA-18) is chartered by the Iowa Department of Transportation for the purposes of transportation planning. RPA-18 consists of local governments (cities and counties) in Harrison, Mills, and Shelby Counties in southwest Iowa, as well as the non-urbanized portion of Pottawattamie County (encompassing the eastern three-fourths and northwestern areas of the county). The remaining portion of Pottawattamie County—including the City of Council Bluffs and its surrounding area—is part of the Omaha metropolitan area and is served by MAPA under its purview as the Metropolitan Planning Organization (MPO). Accordingly, unless otherwise specified, the information presented in this document applies

exclusively to the RPA-18 portion of Pottawattamie County.

RPA-18 exists to establish a cooperative, continuous, and comprehensive planning process to prioritize the use of transportation funds sub-allocated to the region by the Iowa Department of Transportation. A breakdown of the responsibilities of key partners involved in RPA-18 are as follows:

Policy Board

The Policy Board guides and sets policy of the local transportation planning affiliation on matters necessary to comply with state and federal legislation. It annually adopts a four-year Transportation Improvement Program (TIP), Transportation Planning Work Program (TPWP) and Passenger Transportation Development Plan (PTP). The Policy Board periodically adopts a Long Range Transportation Plan (LRTP) and Public Participation Plan (PPP) in accordance with Federal and state transportation planning guidelines. The Policy Board also has the power to conduct comprehensive transportation studies and master plans to address transportation needs and support the growth and development of the region. The Policy Board allocates federal-aid funds to eligible projects within its service area.

- Angie Winquist — Mayor, City of Glenwood
- Gervas Mgonja — City Administrator, City of Harlan
- Turri Colglazier — City Administrator, City of Missouri Valley
- Tony Smith — Supervisor, Harrison County
- Richard Crouch — Supervisor, Mills County
- Susan Miller, Vice Chair — Supervisor, Pottawattamie County
- Charles Parkhurst, Chair — Supervisor, Shelby County

Technical Committee

The Technical Committee is directly responsible to the Policy Board for the initiation, review, and recommendations of transportation related activities.

- Jamey Clark — Public Works Director, City of Glenwood
- Jeff Musich — Street Superintendent, City of Harlan
- Richard Gochenour — Street Superintendent, City of Missouri Valley
- John Rasmussen — County Engineer, Harrison County
- Jacob Ferro, Chair — County Engineer, Mills County
- Andy Wicks — County Engineer, Pottawattamie County
- Chris Fredericksen, Vice Chair — County Engineer, Shelby County
- John McCurdy — Executive Director, SWIPCO
- Scott Suhr — District 4 Planner, Iowa DOT

Iowa Department of Transportation (Iowa DOT)

The Iowa Department of Transportation (Iowa DOT) provides technical assistance and guidance for the work carried out by RPA-18 and oversees the development of the region's Long Range Transportation Plan.

Metropolitan Area Planning Agency (MAPA)

The Omaha-Council Bluffs Metropolitan Area Planning Agency (MAPA) leads transportation planning for RPA-18, covering six counties in Nebraska (Washington, Douglas, Sarpy, and Cass Counties) and Iowa (Pottawattamie and Mills Counties.) MAPA works with local leaders and the public to shape long-range plans, meet federal requirements like the Infrastructure Investment and Jobs Act, and guide investments that keep the region moving.

1.2 | 2050 Long Range Transportation Plan Goals

The goals developed by the Policy Board and Technical Committees for this plan reflect the priorities of both community leaders and stakeholders engaged during the planning process. The table below outlines and provides a description of each one. These categories are listed at the beginning of each chapter to illustrate the alignment of the plan's content with the goals:

Safety and Security	Increase the safety and security of the transportation system for motorized and nonmotorized users
Transportation Options	Increase accessibility and mobility options available to people and freight; enhance the integration and connectivity of the transportation system across and between modes for people and freight; and support early, effective, and continuous public engagement to incorporate diverse viewpoints during decision-making
Preservation and Resilience	Ensure the preservation of the existing transportation system, including roads, bridges, trails and transit vehicles; improve the resilience and reliability of the transportation system; and mitigate stormwater impacts
Economic Vitality	Increase/maintain competitiveness, productivity, and efficiency; enhance travel and tourism; and maintain local control and regional benefit
Land Use and Growth & Sustainability	Promote consistency between transportation improvements and state and local planned growth and economic development patterns; improve quality of life in the region; promote efficient system management and operation; promote energy conservation; protect/enhance the environment; transition to clean energy; and coordinate economic, environmental, and social goals

1.3 | Federal Guidelines

The LRTP process is guided by a set of guidelines found in 23 U.S.C. 135 (d)(1). In general, each state shall carry out statewide transportation planning processes that provide for consideration and implementation of projects, strategies, and services that will:

1. Support the **economic vitality** of the United States, the States, nonmetropolitan areas, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the **safety** of the transportation system for motorized and nonmotorized users;
3. Increase the **security** of the transportation system for motorized and nonmotorized users;
4. Increase the **accessibility and mobility** of people and freight;
5. Protect and enhance the **environment**, promote **energy conservation**, improve the **quality of life**, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight;
7. Promote efficient **system management and operation**;
8. Emphasize the **preservation** of the existing transportation system;
9. Improve the **resiliency and reliability** of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
10. Enhance **travel and tourism**.

The following figure illustrates how the RPA-18 LRTP goals in Section 1.2 align with these federal planning emphasis areas, as well as key Iowa DOT plans and transit provider plans. This crosswalk demonstrates the comprehensive and coordinated nature of the LRTP and how each goal supports statewide and federal transportation priorities.

RPA-18 Long Range Transportation Goals						
		Safety & Security	Transportation Options	Preservation & Resilience	Economic Vitality	Land Use and Growth &
Planning Emphasis Areas	Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency	x	x		x	x
	Increase the safety of the transportation system for motorized and non-motorized users	x	x	x	x	x
	Increase the security of the transportation system for motorized and non-motorized users	x	x	x	x	
	Increase accessibility and mobility of people and freight	x	x		x	x
	Protect & enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between State and local transportation improvements, planned growth, and economic development patterns	x	x	x	x	x
	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight	x	x	x		x
	Promote efficient system management and operation	x	x	x	x	
	Emphasize the preservation of the existing transportation system	x	x	x		x
	Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation	x		x	x	x
	Enhance travel and tourism	x	x	x	x	x
DOT Plans	Transportation Asset Management Plans	x	x	x	x	x
	Strategic Highway Safety Plan	x	x		x	x
	State Freight Plan	x	x	x	x	
Transit Providers	Transit Asset Management Plans	x	x	x	x	
	Transit Safety Plan	x	x	x	x	

Figure 1.2: RPA-18 Long Range Transportation Goals

1.4 | Role of the LRTP in the Planning Process

The Long Range Transportation Plan (LRTP) serves as the foundation for transportation planning and investment in RPA-18. As a state-required, performance-based plan with a 20-year planning horizon, the LRTP establishes the regional vision, goals, and strategies that guide transportation decisions and programming activities. It evaluates demographic, economic, passenger, and freight trends to assess how anticipated changes in population and land use will influence future transportation needs.

Developed in coordination with regional, state, and local planning efforts, especially those detailed in Section 1.5, the LRTP integrates input from partner plans to ensure a consistent, collaborative approach and provides a framework for future programming and investment at the regional level.

The LRTP's primary purpose is to generate actionable outputs that link long-range planning with implementation. Chief among these is the Transportation Improvement Program (TIP), a four-year plan that programs specific projects for federal and state funding. The TIP serves as the mechanism for advancing the LRTP's vision through short-term, prioritized investments. The LRTP also guides other short- and medium-term plans, such as infrastructure studies, safety initiatives, and local planning efforts, establishing a comprehensive, continuous, and cooperative cycle of planning, programming, and project delivery through 2050.

The chapters that follow expand on this framework, beginning with a regional profile that examines demographics, socioeconomic trends, and environmental conditions that influence transportation needs. Subsequent chapters address each of the plan's goal areas—Safety and Security; Transportation Options; Preservation and Resilience; Economic Vitality; and Land Use and Growth & Sustainability—providing an overview of existing system conditions, identified deficiencies, and proposed strategies and improvements. The plan concludes with a Financial Analysis that reviews historical and anticipated funding sources and outlines the process for project selection and prioritization. Together, these chapters present a comprehensive picture of the RPA-18 transportation system and the strategies needed to maintain a safe, connected, and resilient network through 2050.

1.5 | Other Plans Coordinated with the LRTP

RPA-18's transportation and economic development efforts are closely linked. Each influences the other, shaping where people live, work, and travel. Because of this interdependence, the LRTP is developed in coordination with complementary regional and statewide plans that address safety, transit, freight, resilience, and economic growth. The following sections summarize how these plans align with and inform the LRTP.

MAPA Plans

Safe Streets for All RPA-13/18

Administered by MAPA via RPA-18 and SWIPCO via RPA-13, the Safe Streets for All (SS4A) RPA 13 and 18 project aims to improve roadway safety and mobility for all users within the following

seven communities: Atlantic, Clarinda, Glenwood, Harlan, Missouri Valley, Red Oak and Shenandoah. This initiative promotes the adoption of road designs and policies and the identification of prioritized projects that ensures all road users can travel safely. The coordination of this plan with the LRTP is essential in aligning safety priorities, funding strategies, and project timelines. By integrating SS4A RPA-13/18 into the LRTP, the region can advance the development of safer infrastructure that supports multimodal travel and enhances overall community well-being.

Passenger Transportation Development Plan (PTP)

The 2024-2029 Passenger Transportation Development Plan (PTP) addresses the need for improved public transportation services in RPAs 13 and 18, identifying strategies to close service gaps, expand coverage, and improve accessibility. The PTP's coordination with the LRTP ensures a cohesive regional transportation strategy that incorporates public transit as a critical component of the transportation network. By aligning both plans, the region can identify priority transit corridors, improve connectivity with other transportation modes, and ensure that public transportation infrastructure supports both existing and future community needs.

Public Participation Plan (PPP)

MAPA's 2024 Public Participation Plan (PPP) outlines how public involvement will be integrated into the transportation planning process, enabling stakeholders an opportunity to provide input on transportation projects. The coordination of the PPP with the LRTP ensures that community feedback is directly incorporated into the development of long-term transportation goals and projects for the region. Through this integration, RPA-18 ensures that the LRTP reflects the diverse needs of the community, ensuring an inclusive process that supports transparency, accountability, and access to transportation.

Comprehensive Economic Development Strategy (CEDS)

The 2025 Comprehensive Economic Development Strategy (CEDS) is a strategy-driven plan for regional economic development. It is a result of a regionally owned planning process designed to build capacity and guide the economic success and resiliency of the entire six-county MAPA region. The CEDS provides a mechanism for individuals, organizations, local governments, institutes of learning, and private industry to engage in a meaningful conversation and debate what capacity building efforts would best serve economic development in the region. An Economic Development District (EDD) acts as the link between the Economic Development Administration (EDA) and the local governments and economic development organizations that make up a particular region. The MAPA EDD, via the CEDS, works to identify, prioritize and communicate to the EDA locally driven projects of regional significance. The CEDS and LRTP align in their goals of fostering regional growth and sustainability, supporting complementary efforts for the future of the MAPA region for the next 20-30 years.

Metropolitan Transportation Plan (MTP)

The MAPA 2050 Metropolitan Transportation Plan (MTP) is designed to create a vision to guide future infrastructure projects towards building a safe, efficient transportation system to meet the broader region's current and future needs. Building on a performance-based planning process and incorporating extensive public engagement ensures that transportation investments align with the region's goals. While the MTP primarily focuses on investment in the

MAPA TMA (Douglas, Sarpy, and urban Pottawattamie Counties), many of the same issues and stakeholders are involved in both the MPO and RPA-18 long-range plans, ensuring a cohesive approach to regional transportation challenges and opportunities.

Regional and State Plans

Strategic Highway Safety Plan (SHSP)

The 2024-2028 Strategic Highway Safety Plan (SHSP) aims to reduce fatalities and serious injuries on Iowa's highways through safety improvements, education, and enforcement, with a focus on vulnerable road users (VRUs) such as pedestrians, cyclists, and motorcyclists. By coordinating the SHSP with the LRTP, high-risk corridors and infrastructure within the region can be identified and prioritized for safety improvements. The integration of SHSP strategies into the LRTP ensures that the region's long-term transportation planning includes safety as a core objective, aligning regional goals with state and federal safety targets to create a safer and more resilient transportation network.

97-County Safety Action Plans (SAPs)

Iowa's 97-County Safety Action Plans were developed through an FY22 SS4A planning grant to provide every county without an existing plan a comprehensive, data-driven safety assessment. Led by Mahaska County and coordinated through the ICEA Service Bureau, the effort leverages uniform crash analysis, safety workshops, and county-specific recommendations prepared by a consultant team in partnership with Iowa DOT and Iowa State University's Institute for Transportation (InTrans). Completed in 2025, the plans for the RPA-18 region—Harrison, Mills, Pottawattamie, and Shelby Counties—offer locally tailored analyses of crash trends, roadway risk factors, and priority countermeasures identified through direct collaboration with county engineers. Integrating the SAPs findings into the LRTP ensures that regional planning aligns with county-identified safety needs, supports future SS4A implementation funding, and strengthens the region's ability to address its highest-risk corridors through coordinated, evidence-based investment decisions.

Freight Plan

Iowa's 2022 Freight Plan outlines strategies to enhance the efficiency, safety, and reliability of freight transportation throughout the state. The plan focuses on improving key freight corridors, reducing congestion, and ensuring the infrastructure is capable of supporting increased freight demand. This includes investing in road maintenance, upgrading bridges, and improving rail and intermodal connections. The Freight Plan also considers emerging technologies and logistics innovations, such as autonomous vehicles and real-time data sharing, to improve the flow of goods through the region. Supporting freight mobility is essential for sustaining economic growth and ensuring that Iowa communities remain competitive in a regional marketplace. By aligning this plan with the LRTP, the region can prioritize the development of transportation infrastructure that supports both passenger and freight movement, fostering a multimodal approach to improving regional connectivity and economic competitiveness.

Resilience Improvement Plan (RIP)

The 2023 statewide Resilience Improvement Plan (RIP) is focused on strengthening transportation infrastructure in Iowa to withstand the impacts of natural hazards, such as

flooding, severe winter weather, and extreme storms. It includes strategies for retrofitting vulnerable infrastructure, improving flood mitigation, and incorporating resilience into road and bridge design standards. The plan aligns with the LRTP by addressing specific regional vulnerabilities, such as flood-prone corridors and the challenges posed by harsh winter weather in southwest Iowa. By integrating the RIP's strategies into the LRTP, RPA-18 ensures that local projects are consistent with state resilience goals, while also positioning the region to benefit from federal and state funding opportunities to enhance transportation system resilience.

1.6 | Public & Stakeholder Involvement

In the summer of 2024, MAPA began engaging residents and stakeholders in updating the RPA-18 LRTP. Participants were asked to prioritize transportation goals and identify areas of concern. Online surveys played a key role in reaching rural communities within the RPA, alongside in-person comments and feedback gathered at engagement events. These surveys gathered insights on the region's transportation habits, concerns, and priorities, further informing the plan's development.

Pottawattamie	08/06/2024
Bike Rodeo Event, Harlan	08/03/2024
Harrison	08/22/2024
Mills	10/01/2024
MAPA Trails Workshop, Neola	10/09/2024
Shelby	10/15/2025

In the summer of 2025, MAPA staff presented draft LRTP materials to the Boards of Supervisors in all four RPA-18 counties. These public forums were presentations and discussions of the regional transportation planning process, the purpose of the LRTP, and an opportunity to discuss any local transportation issues.

Harrison	07/17/2025	Pottawattamie	08/19/2025
Mills	07/29/2025	Shelby	07/15/2025

1.7 | Plan Revisions and Amendments

The Long Range Transportation Plan (LRTP) is a living document that must remain responsive to new data, emerging needs, and evolving regional priorities. To maintain its relevance and consistency with state and federal requirements, the LRTP is reviewed and updated on a five-year cycle, with amendments processed as necessary between full updates.

Under Iowa DOT guidance, RPAs may revise their LRTPs at any time under policies and procedures agreed upon with state and federal partners. All LRTP revisions must follow the public participation process outlined in the MAPA Public Participation Plan (PPP) to ensure transparency, accessibility, and meaningful stakeholder involvement.

Revisions to the LRTP are documented through two procedures: **amendments** and **administrative modifications**. The method used depends on the magnitude of the change, its potential impact on the plan, and the level of public review required.

Public Review and Approval Process

All LRTP updates and amendments must follow the public involvement procedures established in the MAPA Public Participation Plan (PPP).

Public Comment Periods:

- **Draft Document:** Minimum 25-day public comment period
- **Major Amendment:** Minimum 25-day public comment period
- **Minor Amendment:** Minimum 7-day public comment period

Draft documents or amendments are discussed with the RPA-18 Policy and Technical Committees. Outreach is conducted to inform the public of the availability of documents for review, as well as the comment period and public meetings. At least one public meeting is held during the public comment period. RPA-18 Policy and Technical Committee meetings may serve as the public meeting, and members of the public will be allowed time to provide comments at those meetings.

If additional public meetings are held outside the designated comment period, an additional comment period must be open at least two weeks prior and two weeks after the meeting(s). Public comments are addressed to the maximum extent reasonable, and a summary of comments received on the draft document is included in an appendix of the final approved LRTP.

The RPA-18 Technical Committee makes a recommendation to the Policy Board, which then votes whether to approve the draft document or amendment. Following Policy Board action, RPA-18 submits amendment materials electronically to Iowa DOT Systems Planning Bureau and the District Transportation Planner for review and recordkeeping.

Amendment materials must include:

- A **resolution** or **meeting minutes** documenting Policy Board approval
- The **modified LRTP section(s)** with changes noted or summarized
- **Documentation of the public review process and comments**, consistent with the PPP

Once approved and submitted, the final version of the document or amendment is added to the MAPA website, posted on the RPA-18 webpage, and publicized as appropriate.

Amendments

Amendments are revisions that involve a major change to the LRTP, including the addition or deletion of a project, a substantial change in project cost, initiation dates, or a major modification to project design, concept, or scope. Amendments require public review and comment, as well as approval by the RPA-18 Policy Board, following a recommendation from the RPA-18 Technical Committee.

Amendment Thresholds

Minor Amendment

- Changes to anticipated funding or project categories
- Changes to project route or termini greater than ¼ mile
- Amendments reflecting changes to federal policy
- Amendments reflecting changes to state policy

Major Amendment

- Changes to specific project funding levels that significantly impact plan assumptions
- Changes to project route or termini greater than ¼ mile
- Addition of a regionally significant project to the LRTP
- Addition or change to a federal funding source

Following Policy Board approval, the adopted amendment and associated documentation are incorporated into the official LRTP, posted on the RPA-18 webpage, and publicized as appropriate.

Administrative Modifications

Administrative modifications are minor revisions that do not substantially alter the LRTP's intent, strategies, or priorities. These changes do not require public review or Policy Board approval but are documented internally and shared with Iowa DOT as needed.

Administrative modifications may include:

- **Editorial corrections, formatting updates, or clarifications** to improve clarity or consistency
- **Minor data updates** that do not alter analysis, conclusions, or plan priorities
- **Small changes to project descriptions, schedules, or phase initiation dates** that do not affect project scope or funding assumptions
- **Updates to references, figures, or supporting materials** that do not change the LRTP's goals, strategies, or outcomes

All administrative modifications are recorded and maintained by RPA-18 and are available upon request.

Full Updates

The LRTP is fully updated at least once every five years in accordance with Iowa DOT requirements. Each update replaces the prior plan in its entirety, incorporating updated demographic data, system conditions, goals, and strategies to maintain alignment with state and regional priorities.

2| Regional Profile

2.1 | Socioeconomic Overview

Future transportation needs in the RPA-18 region are identified through analysis of demographic trends, land use changes, safety data, transportation system inventory, freight movement, financial information, and input from stakeholders and the public. This regional profile serves as a baseline for assessing current conditions and trends, as well as determining future transportation needs and priorities within RPA-18.

Figure 2.1: View of Malvern, with a paved segment of the Wabash Trace Nature Trail visible on the left. Mixed-use paths such as this one provide valuable recreational opportunities and contribute to the economic vitality of adjacent communities.

2.1.1 Employment

A significant portion of travel in the region is associated with major employers, both as a result of employees' commutes, and transportation associated with operational activities of these centers of employment.

Sources of Employment	Harrison	Mills	Pott.	Shelby	Regional Total	Regional %
Agriculture, forestry, fishing and hunting, mining	451	136	528	600	1,715	5.9%
Arts, entertainment and recreation, accommodation and food services	375	334	428	214	1,351	4.6%
Construction	731	570	868	481	2,650	9.1%
Educational services, health care and social assistance	2,066	1,873	2,101	1,264	7,304	25.0%
Finance and insurance, real estate, rental and leasing	483	456	767	350	2,056	7.0%
Information	84	91	105	72	352	1.2%
Management, business, science, and arts occupations	2,702	2,908	3,385	2,314	11,309	38.7%
Manufacturing	689	546	834	709	2,778	9.5%
Natural resources, construction, maintenance occupations	992	633	1,245	609	3,479	11.9%
Other services, except public administration	238	431	328	239	1,236	4.2%
Production, transportation, material moving occupations	1,093	961	1,419	1,168	4,641	15.9%
Professional, scientific, management, administrative, waste management services	449	453	577	458	1,937	6.6%
Public administration	213	458	368	186	1,225	4.2%
Retail trade	727	755	1,026	707	3,215	11.0%
Sales and office occupations	1,547	1,245	1,862	1,230	5,884	20.1%
Service occupations	1,044	996	1,219	643	3,902	13.4%
Transportation and warehousing, utilities	545	403	881	479	2,308	7.9%
Wholesale trade	327	237	319	219	1,102	3.8%
Civilian employed population 16 years and over	**7,378**	**6,743**	**9,130**	**5,964**	**29,215**	**100%**

Source: 2018-2022 American Community Survey

Figure 2.1: Sources of Employment in the RPA-18 Region

As shown in Figure 2.1, employment in the RPA-18 region is especially driven by management, business, science, and arts fields, and education, health care, and social services, which employ nearly 6 in 10 adults which is about 64%. Agriculture accounts for about 6% of jobs, but its impact goes far beyond employment. Farming shapes the region's land use and has unique transportation needs—like freight movement, rural road access, and farm-to-market connections—that are vital to long-range infrastructure planning.

Other notable sectors are Sales and office occupations, and Production, transportation, material moving occupations which represent nearly 36% of the regional workforce. As compared to the previous LRTP there is a shift in the region to a diversification of employment within the region and shifts the work force from traditional trades services to more managerial and clerical work.

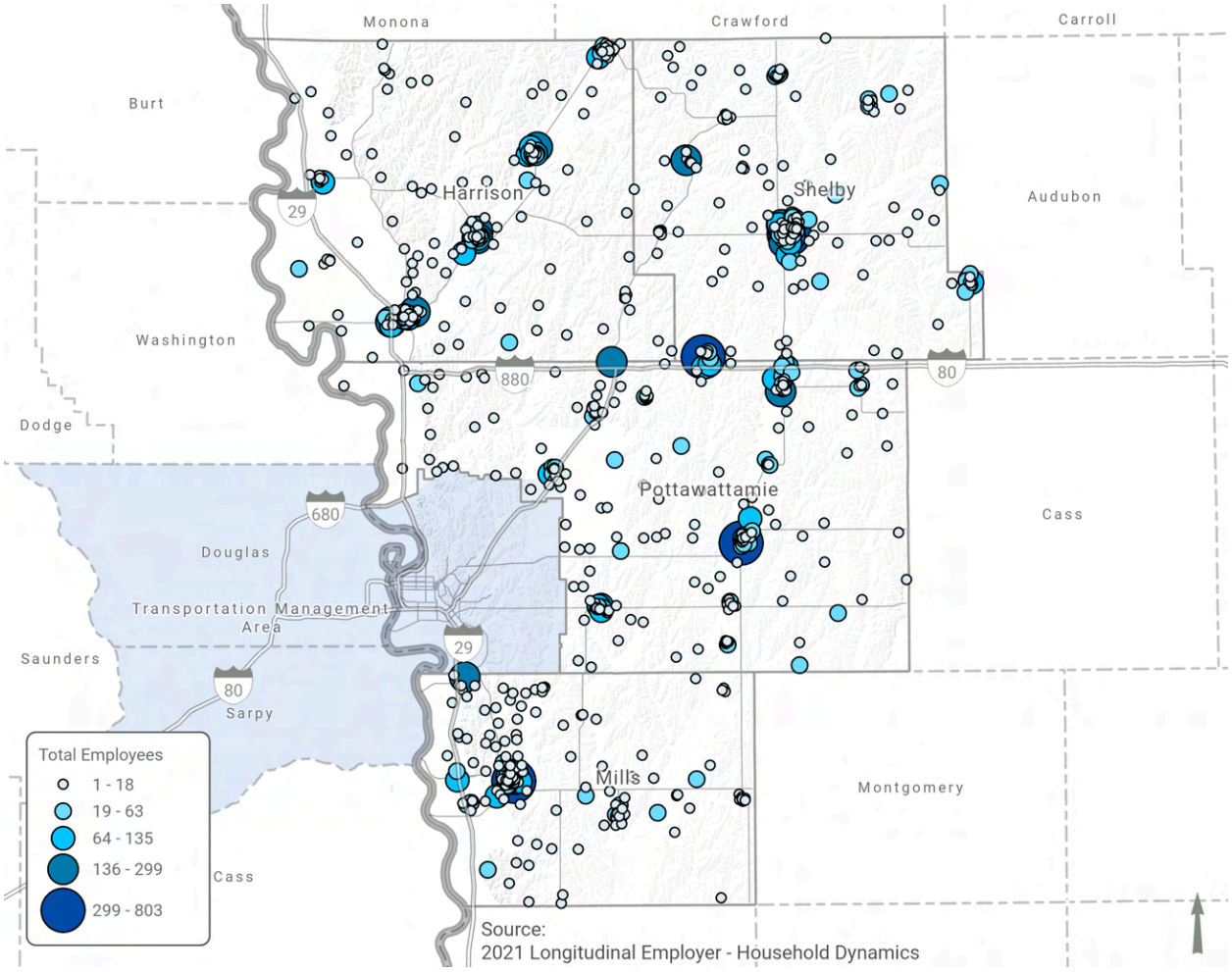


Figure 2.2: Major Employment Centers in the RPA-18 Region

Figure 2.2 notes there are over 2,500 employers of various sizes in the RPA-18 region. Most of these employers are located within cities and towns across RPA-18 (74.1%) or within one mile of a city or town (80.2%), and nearly all (98%) of those employers are located on or within one mile of a federal-aid eligible roadway.

Pottawattamie County has the highest number of employed individuals, indicating its role as an economic hub, while Shelby County shows a more substantial reliance on agriculture and natural resource-based jobs. Harrison and Mills Counties exhibit notable employment in professional and technical services, indicating a demand for skilled labor.

Iowa Workforce Development

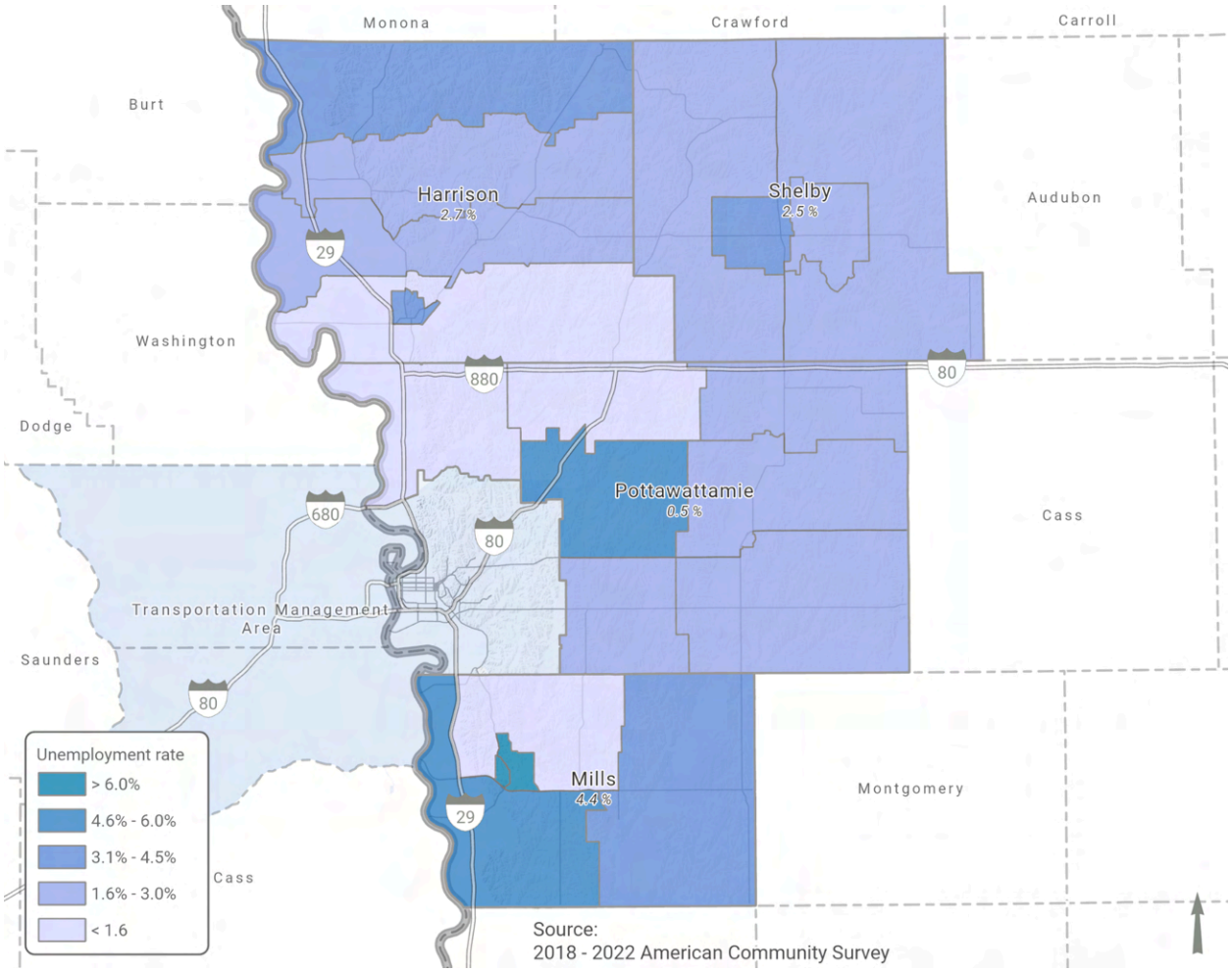


Figure 2.3: Unemployment Rate in the RPA-18 Region

While unemployment rates vary across the region, Figure 2.3 shows that most counties within RPA-18 maintain rates below the statewide average of 3.0%. The most notable exception is Mills County, which reports an unemployment rate of 4.4%, while higher concentrations of unemployment (Figure 2.3) tend to align with the distribution of employer locations (Figure 2.2).

Although not represented in the current data, the 2024 closure of the Glenwood Resource Center (GRC), a state-operated facility that provided residential care and services for Iowans with intellectual and developmental disabilities, is also likely to have an effect on unemployment rates in Glenwood. The Center employed approximately 400 individuals, around 200 of which were laid off after the closure.

Much of the RPA-18 region functions as a bedroom community for the Omaha–Council Bluffs metropolitan area, with a significant portion of residents commuting outside their home counties for employment. This dynamic contributes to lower local employment density in some areas while increasing pressure on regional transportation infrastructure, particularly key commuting corridors. As a result, planning efforts must account not only for local access but also for safe and efficient connections to major employment centers outside RPA-18.

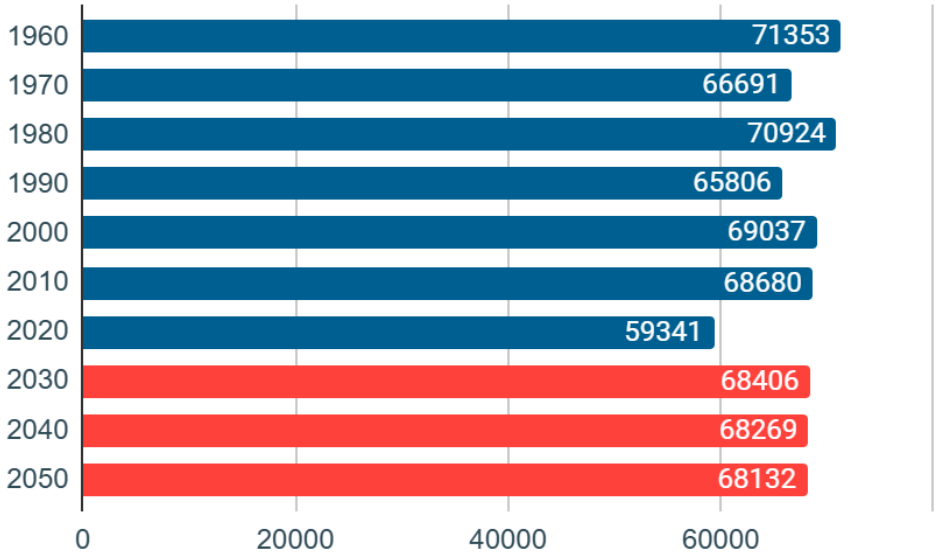
2.1.2 Population and Households

Population

The RPA-18 region had a population of 59,341 in 2020—a 13.6% decrease since 2010. While part of this drop reflects changes in how data is reported, long-term trends show the region's population has declined by 16.8% since 1960.

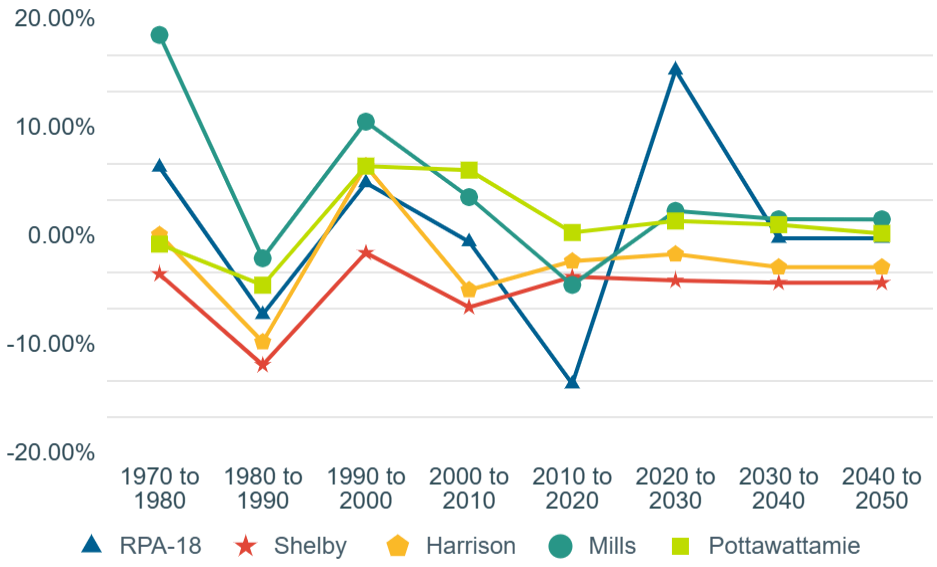
- **Shelby County** has steadily lost residents, down 24.7% since 1970.
- **Harrison County** has seen ups and downs, with a net 10.7% decline.
- **Pottawattamie County (RPA-18 area)** is up 7.4%, while **Mills County** has grown the most, up 26.7%—likely due to proximity to Omaha-Council Bluffs job opportunities.

Looking ahead, the population is expected to rebound by 2030, then dip slightly by 2050, stabilizing around levels last seen in 2000–2010.



Source: Woods & Poole Economics Inc.

Figure 2.4: Population Estimates and Forecasts for the RPA-18 Region: 1960 to 2050



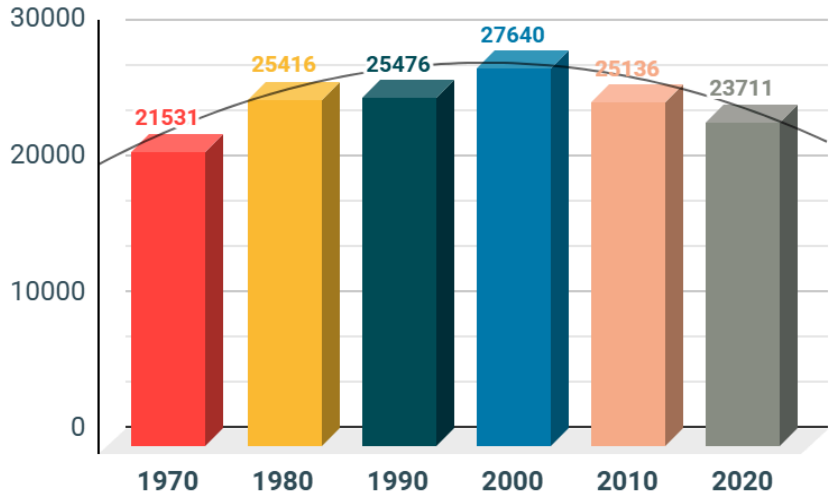
Source: Iowa State Data Center, 2024

Figure 2.5: Percent Population Change for the RPA-18 region, as well as for each county, 1970-2050

Contradictorily to Figure 2.6, it is expected that the MPO boundary will expand as the Omaha-Council Bluffs metropolitan area continues to grow, with the result that the RPA-18 region will decrease in both geographic and population size as the urban area continues to grow and absorbs portions of the rural region.

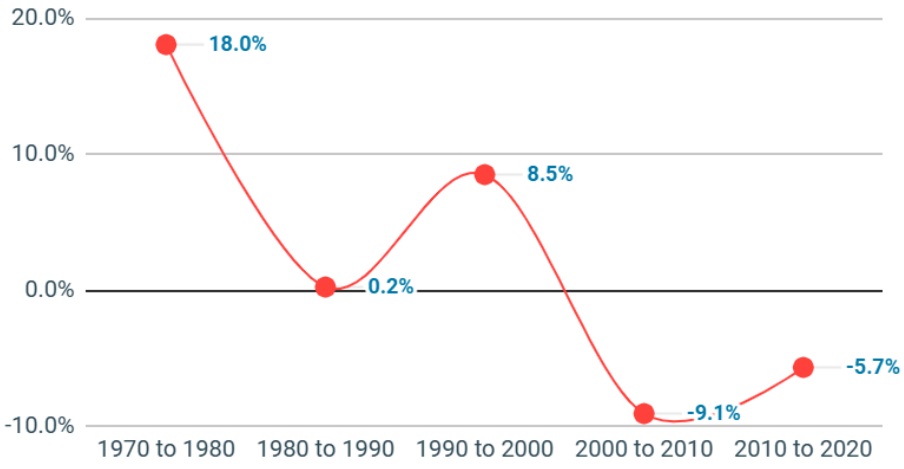
Households

Households in the RPA-18 region have declined by about 5.7% between 2010 and 2020, dropping to levels not seen since 1980. This mirrors the region's overall population decline, though the decrease was less steep than in the 2000–2010 period. Household and population distribution closely follow the region's larger communities—Harlan, Missouri Valley, Glenwood, and the Omaha–Council Bluffs metro area.



Source: U.S. Census Bureau (Decennial Census Data), 2024

Figure 2.6: Number of Households in the RPA-18 Region, 1970 to 2020



Source: U.S. Census Bureau (Decennial Census Data), 2024

Figure 2.7: Percent Change of RPA-18 Households, 1970 to 2020

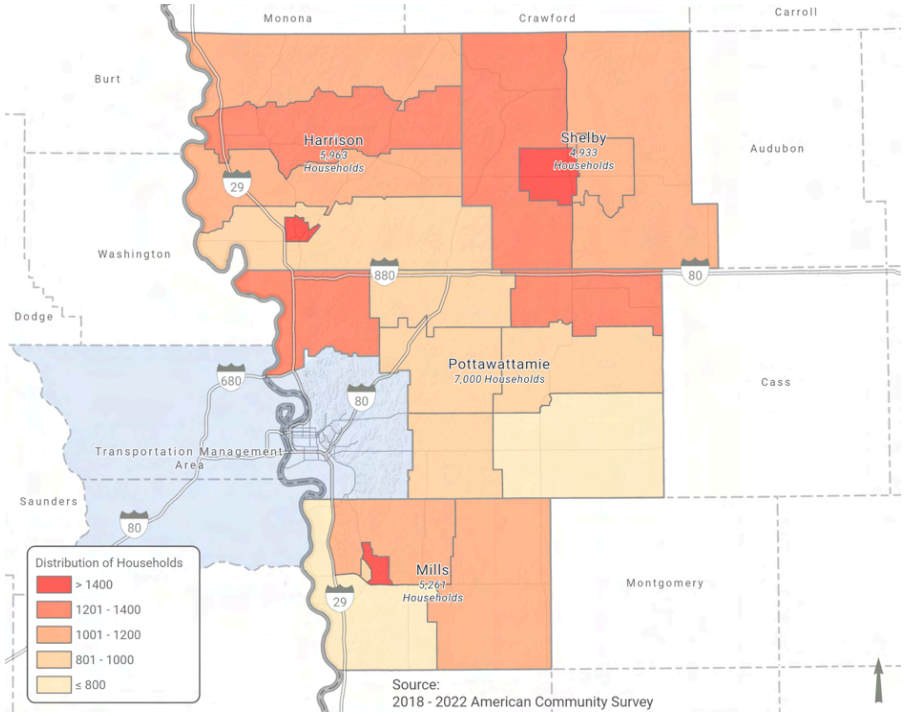


Figure 2.8: Distribution of Households in the RPA-18 Region

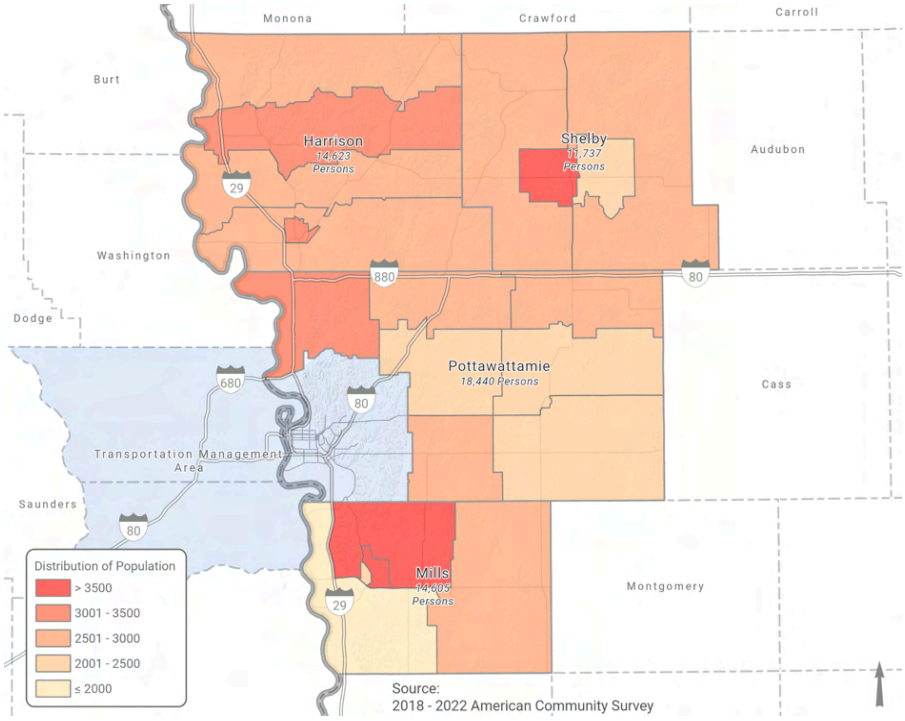
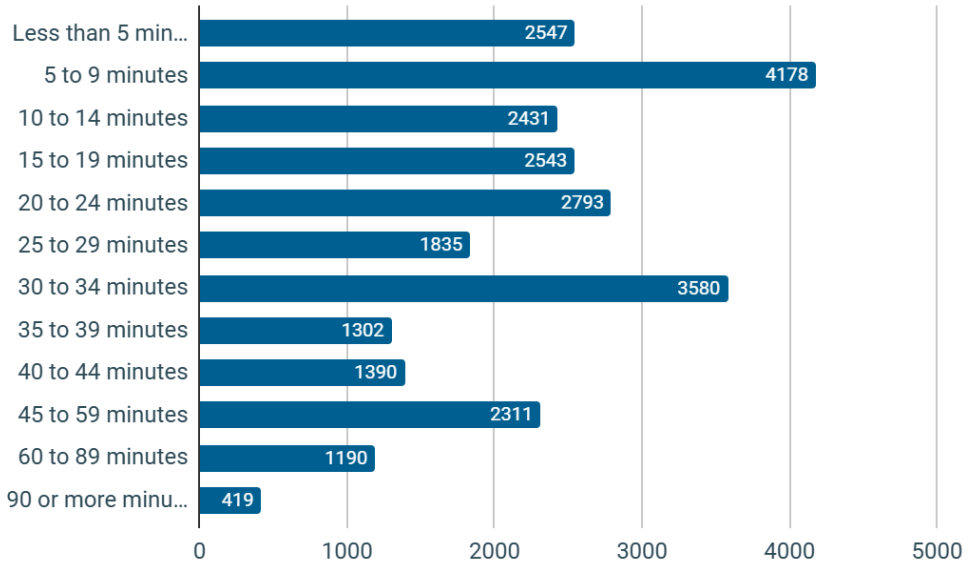


Figure 2.9: Distribution of Population in the RPA-18 Region.

2.1.3 Transportation Patterns

Understanding how people travel is key to keeping the RPA-18 transportation system up to date. Most residents rely on private vehicles, with far fewer using other modes. The majority

commute less than 30 minutes to work, and average travel times have remained steady—even through the pandemic. Many trips cross county lines, with Douglas, Sarpy, and Pottawattamie Counties serving as major destinations for jobs, including Offutt Air Force Base. As the Omaha–Council Bluffs metro area grows, tracking commuting patterns will be essential to meeting the needs of rural residents and ensuring access to employment.



Source: 2018-2022 American Community Survey.

Figure 2.10: Travel Time to Work for RPA-18 Residents

On average, the number of persons working in their county of residence in the RPA-18 is declining. Those who live in the same county in which they work declined approximately 10% between 1990 and 2000. Mills County had the largest change with 10.8% of workers now working outside of that county compared to 1990.

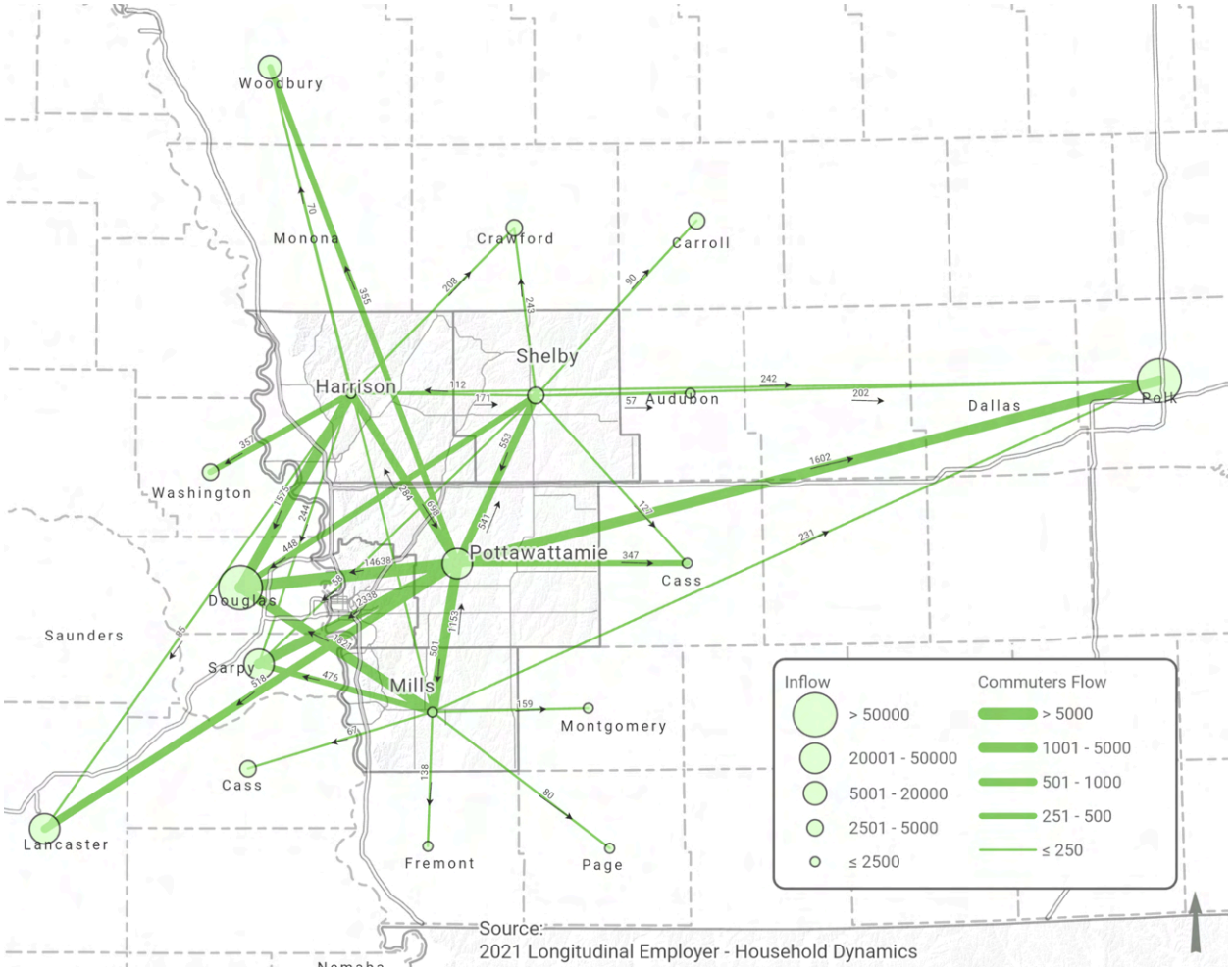


Figure 2.11: Commuting Patterns to Work in the RPA-18 Region

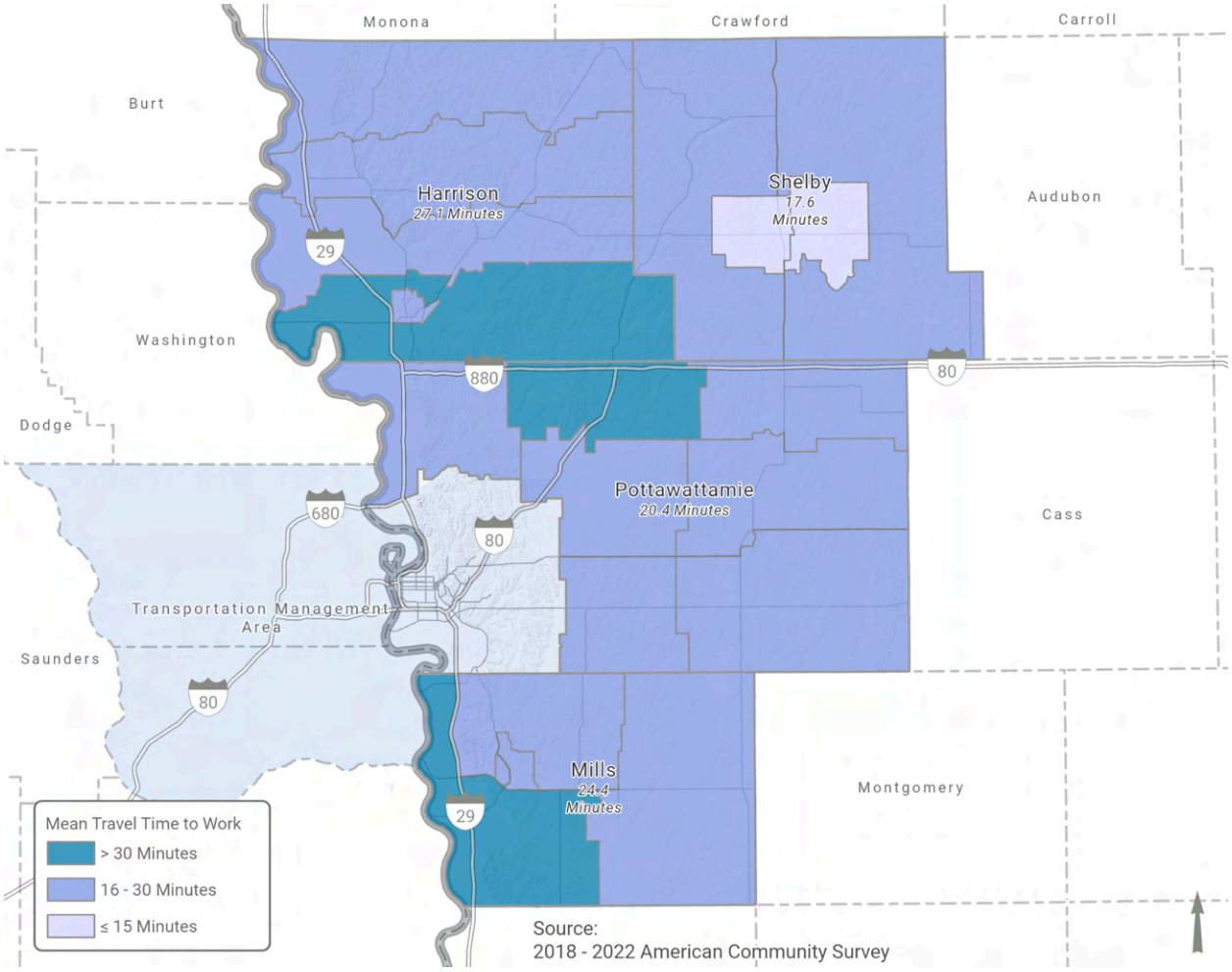


Figure 2.12: Mean Travel Time to Work in the RPA-18 Region

As part of MAPA's efforts to incorporate public input into this Long Range Transportation Plan, a survey was distributed to RPA-18 residents and other stakeholders. Although significant proportions of survey respondents (35.3%, 29.4% and 5.9%, respectively) indicated that they use modes of transportation, namely walking, bicycle and carpooling/ridesharing, other than a personal vehicle on a regular basis, the majority, 52.9%, do not.

Complete survey results may be found in the Appendix.

2.1.4 Demographics

Age

Nearly one in five residents of the RPA-18 region is over age 65, with many living in rural areas away from larger cities that provide essential services such as medical institutions, education, and retail. This spatial disconnect can present challenges for older adults who may face age-related difficulties with driving and live in areas that lack transportation options.

Locally, Southwest Iowa Transit Agency (SWITA) provides affordable public transit across eight counties, offering rides to medical appointments, shopping, work, school, and more. Taxi

services are also available in several communities. MAPA works with SWITA and local partners to expand mobility for seniors and people with disabilities. However, the demand for these services far exceeds the current capacity, with an aging community this will be an area of focus for the region.

Safety efforts also extend to younger drivers, as teens remain disproportionately involved in crashes. MAPA and regional partners are addressing both ends of the age spectrum through the Safe Streets for All program, which includes county-level Safety Action Plans.

Figure 2.13: Population over 65 in the RPA-18 Region

Total Population	Over 65	Percent
59,405	12,221	20.57%

Source: 2018-2022 American Community Survey.

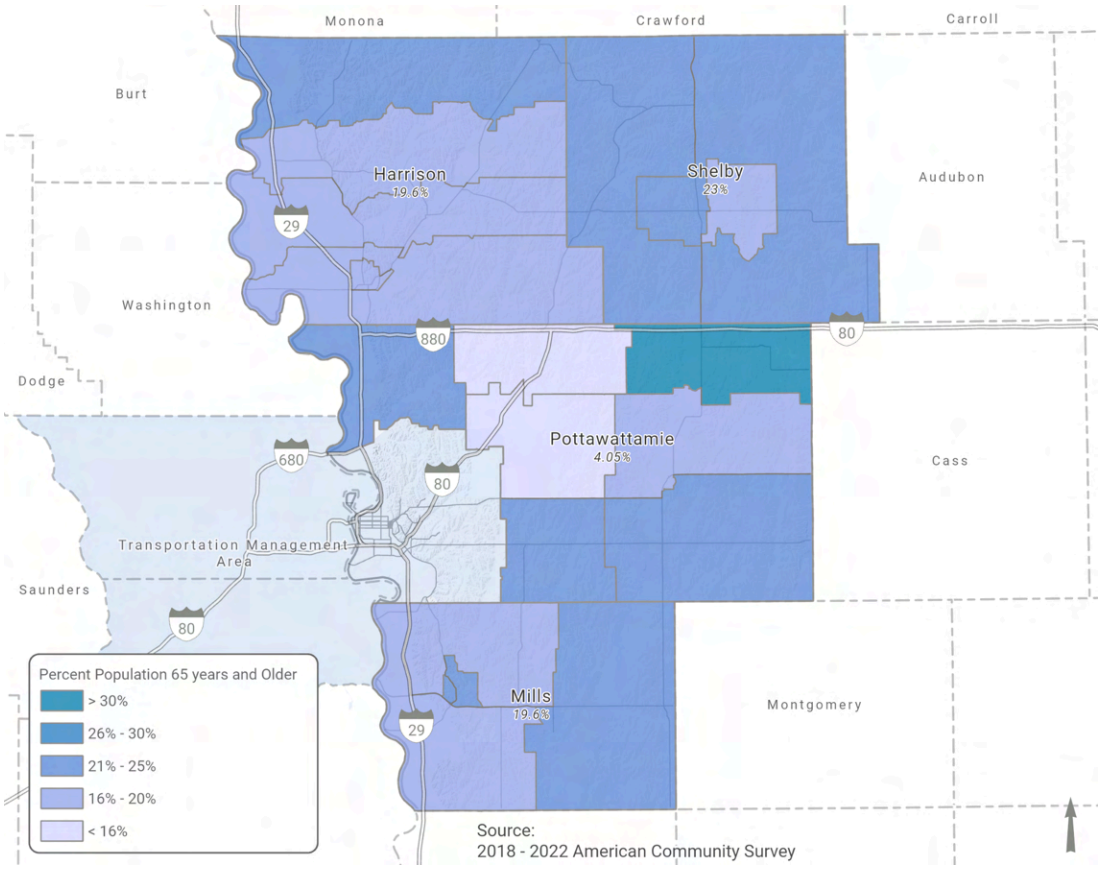


Figure 2.14: Percentage of Population 65 Years and Older

Limited English Proficiency and Minority Designation

According to the U.S. Census Bureau, "a 'limited English speaking household' is one in which no member 14 years old and over (1) speaks only English or (2) speaks a non-English language and speaks English 'very well.' In other words, all members 14 years old and over have at least some difficulty with English. By definition, English-only households cannot belong to this group.

Previous Census Bureau data products have referred to these households as 'linguistically isolated' and 'Households in which no one 14 and over speaks English only or speaks a language other than English at home and speaks English "very well ". In most of the RPA-18 region, there are very few or no Limited English Proficiency (LEP) households. However, as Figure 10 shows, in east central Pottawattamie County, there is a higher concentration of LEP households, which corresponds to a higher proportion of the population with minority designation (Figure 25).

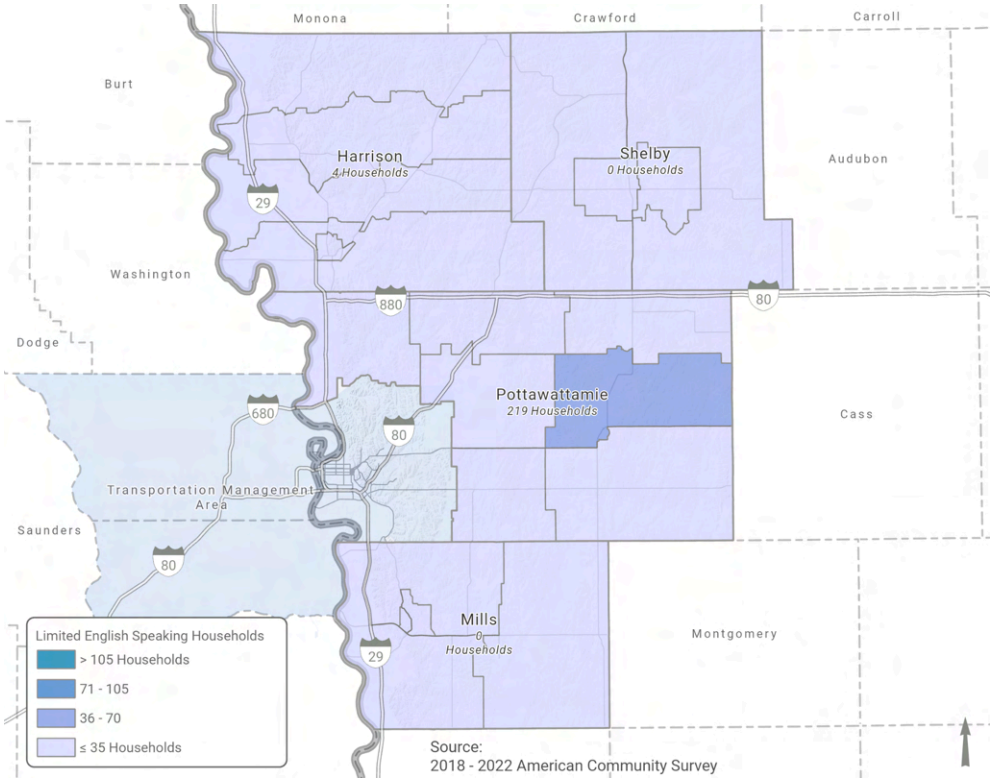


Figure 2.15: Limited English Proficiency (LEP) Households in the RPA-18 Region

Native American Tribes

There are several statutes, regulations, executive orders, and federal policies that instruct federal agencies to consult with Native American tribes. These include the National Historic Preservation Act (NHPA) as amended. Section 106 of the NHPA, 54 U.S.C. 306108 and its implementing regulations at 36 CFR part 800 (Section 106), requires federal agencies to take into account the effects of projects they carry out, license, or financially assist on historic properties and provide the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on those undertakings. The NHPA also requires that, in carrying out its responsibilities under the Section 106 review process, a federal agency must consult with any Native American tribe that attaches religious and cultural significance to historic properties that may be affected by the agency's undertakings. 54 U.S.C. 302706 (b)[1].

[1] ACHP

Figure 2.16 provides a list of the federally recognized Native American tribes in the RPA-18 region that represent the rich cultural heritage of the area, and that could be consulted during federally funded transportation activities.

Figure 2.16: Native American tribes represented in the RPA-18 Region

Tribe	County
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation	H,M,P,S
Iowa Tribe of Kansas and Nebraska	H,M,P,S
Iowa Tribe of Oklahoma	H,M,P,S
Omaha Tribe of Nebraska	H,M,P,S
Otoe-Missouria Tribe of Indians	H,M,P,S
Ponca Tribe of Nebraska	H,M,P
Sac and Fox Nation	M,P,S
Sac and Fox Nation of Missouri in Kansas and Nebraska	P,S
Sac and Fox Tribe of the Mississippi in Iowa	M,P,S
Counties: H=Harrison, M=Mills, P=Pottawattamie, S=Shelby	

Source: HUD Tribal Assessment Information

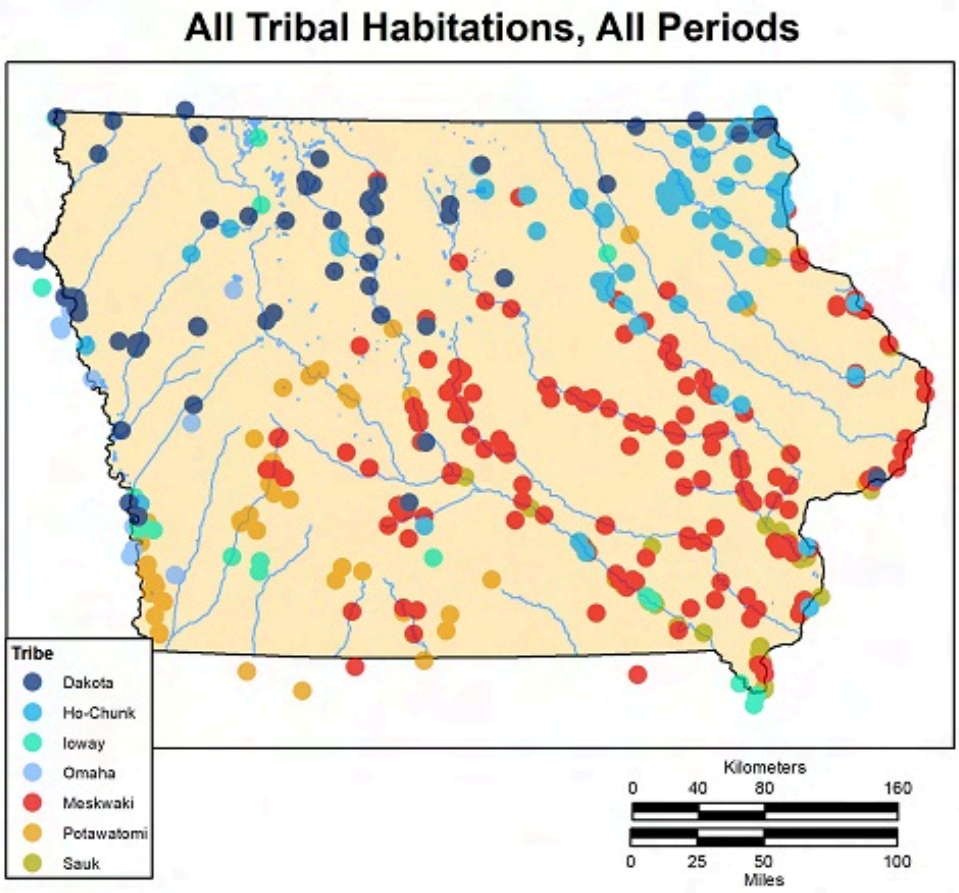


Figure 2.17: Tribal habitation locations across Iowa

Source: Iowa Office of the State Archaeologist

Figure 2.17 illustrates the distribution of tribal habitation sites across Iowa from various historical periods. Each point represents a documented habitation associated with specific tribal nations, including the Dakota, Ho-Chunk, Ioway, Omaha, Meskwaki, Potawatomi, and Sauk. The spatial pattern shows that habitation sites are concentrated along major river systems and waterways, reflecting traditional settlement patterns tied to natural resources and travel corridors. Although statewide in extent, the map provides regional context for understanding the long-standing presence of tribal nations in and around the RPA-18 area and supports awareness of cultural resources that may be relevant during long-range transportation planning and environmental review processes. Region-specific data will be included in a later rendition of the LRTP to further enhance the transportation planning context for local communities.

Vehicle Access

Although the percentage of households that do not own a vehicle is relatively low in the RPA-18 region, approximately 3.9% as shown in Figure 2.18, mobility for members of those households can be severely limited. The highest concentration of zero-vehicle households are found in rural, northern Harrison County; rural, northeastern Pottawattamie County; and the Glenwood area in

Mills County. SWITA fortunately provides public transportation in several forms, to all residents throughout the entire RPA-18 region. In Glenwood, as well as in the other RPA-18 communities of Harlan and Missouri Valley, SWITA offers taxi service in addition to other transportation options.

Figure 2.18: Total Households with Zero Vehicles in the RPA-18 Region

Total Households	Zero-Vehicle Households	Percent
23,157	897	3.87%

Source: 2018-2022 American Community Survey.

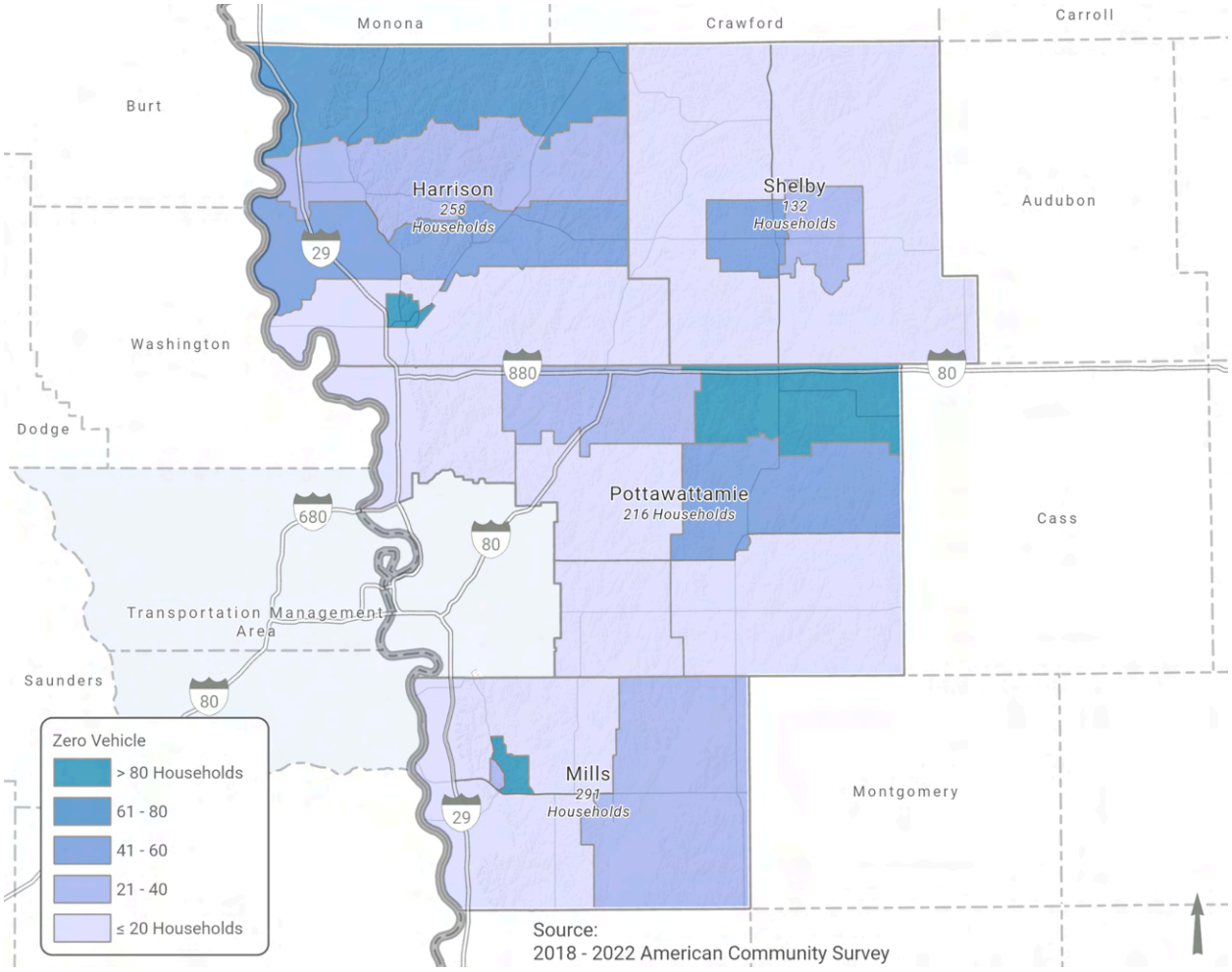


Figure 2.18: Zero-Vehicle Households in the RPA-18 Region

Figure 2.19: Vehicle Availability per Household in the RPA-18 Region

Vehicle Availability	Harrison	Mills	Pott.	Shelby	Region	Regional %
No vehicle available	258	291	216	132	897	4%
1 vehicle available	1,258	1,142	1,519	1,349	5,268	23%
2 vehicles available	2,205	2,080	2,649	1,755	8,689	38%
3 vehicles available	1,417	1,020	1,688	1,103	5,228	23%
4 or more vehicles available	825	728	928	594	3,075	13%
Total:	**5,963**	**5,261**	**7,000**	**4,933**	**23,157**	

Disability

According to data from the U.S. Census Bureau's American Community Survey, Mills County has the highest percentage of population with a disability in the RPA-18 region - 13.6%, compared to an overall rate of 11.8%, with the Glenwood area having a disabled population of over 20% (Figure 10 , Table 2.20). For some locations in the RPA-18 region, a high percentage of population with disabilities appears to correspond with a higher percentage of the population being 65 or older. This pattern may be observed in Mills County, as well as in northeastern Pottawattamie County, and northern Harrison County.

Such areas, where a significant proportion of the population may have additional and specialized transportation needs, may benefit from unique initiatives that target specific groups. For instance, a potential partnership between SWITA and Montgomery County Memorial Hospital is currently being discussed, with the hope that it can provide a model to be replicated in other areas. With potential volunteer involvement, such initiatives can successfully serve many residents who would otherwise face significant mobility obstacles.

Figure 2.20: Total Population with a Disability

Total Civilian Noninstitutionalized Population	Disabled	Percent
58,199	6,882	11.82%

Source: 2018-2022 American Community Survey.

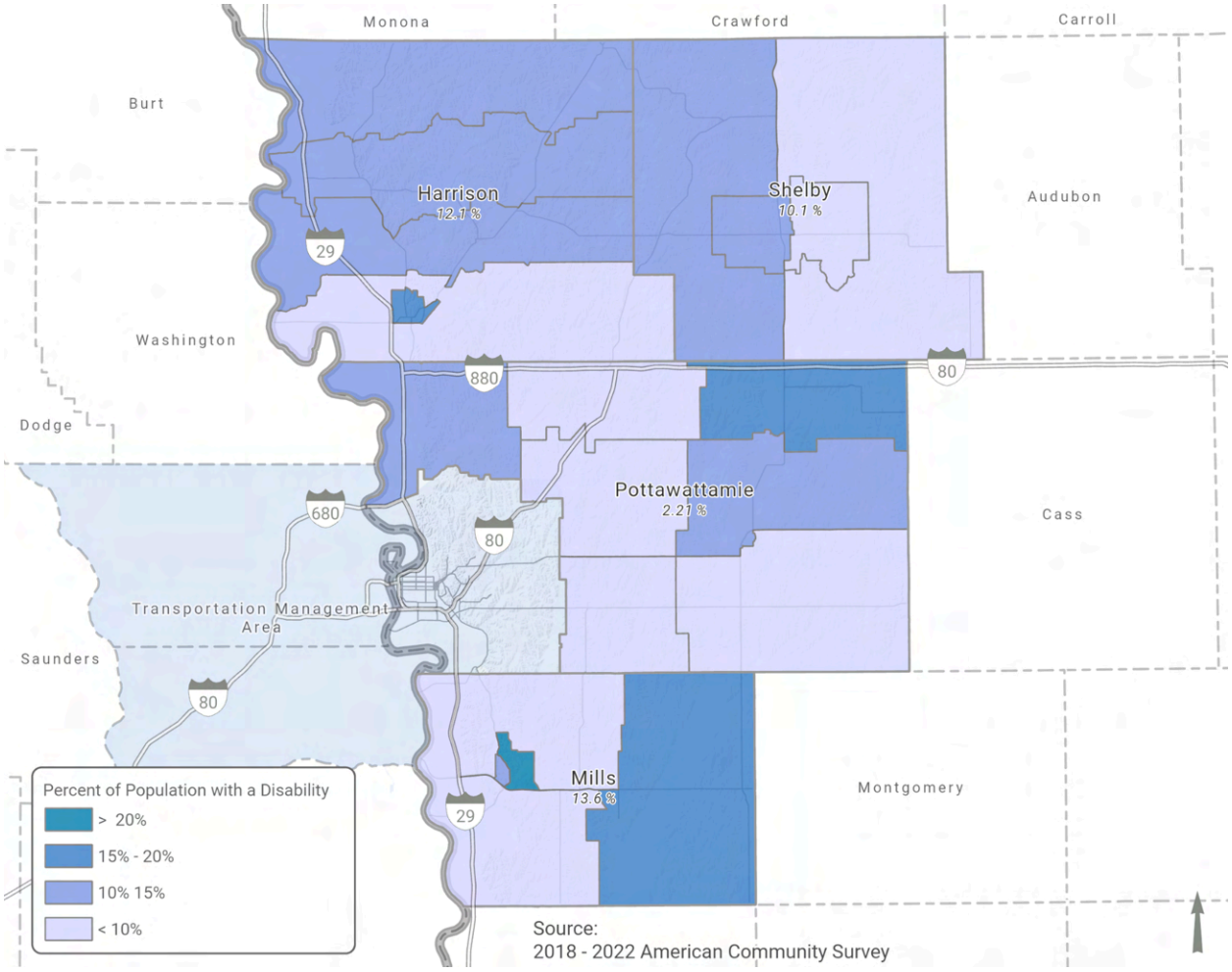


Figure 2.21: Percent of Population with a Disability in the RPA-18 Region

Poverty

The highest poverty rate in the RPA-18 region, 8.8%, is found in Shelby County, with an especially high concentration of people living in poverty, 11-15%, in the Harlan area (Figure 2.23). Although the PRA-18 portion of Pottawattamie County has a low rate of 1.1% of the population living in poverty, the concentration in the northeast corner of the county is rather high, at a rate of 11-15% (Figure 2.23). The overall poverty rate in the RPA-18 region is 7.1% (Figure 2.22). In addition to Shelby County, Harrison County has a higher poverty rate than the overall rate, at 7.6% (Figure 2.23).

It is not surprising that poverty rates are lowest in most areas bordering the Omaha-Council Bluffs metropolitan area (Figure 2.23), a destination for a significant proportion of commuters to work. One area in Pottawattamie County, to the east of the metro area, has a notably high unemployment rate of 4.6 to 6.0%. SWITA offers workforce transportation, as well as vanpooling options to help connect people with job opportunities. Making RPA-18 residents aware of these services may contribute to combatting poverty to some extent.

Figure 2.22: Population Living in Poverty

Population With Poverty Status Determined	Population in Poverty With Status Determined	Percentage in Poverty
58,312	4,139	7.10%

Source: 2018-2022 American Community Survey.

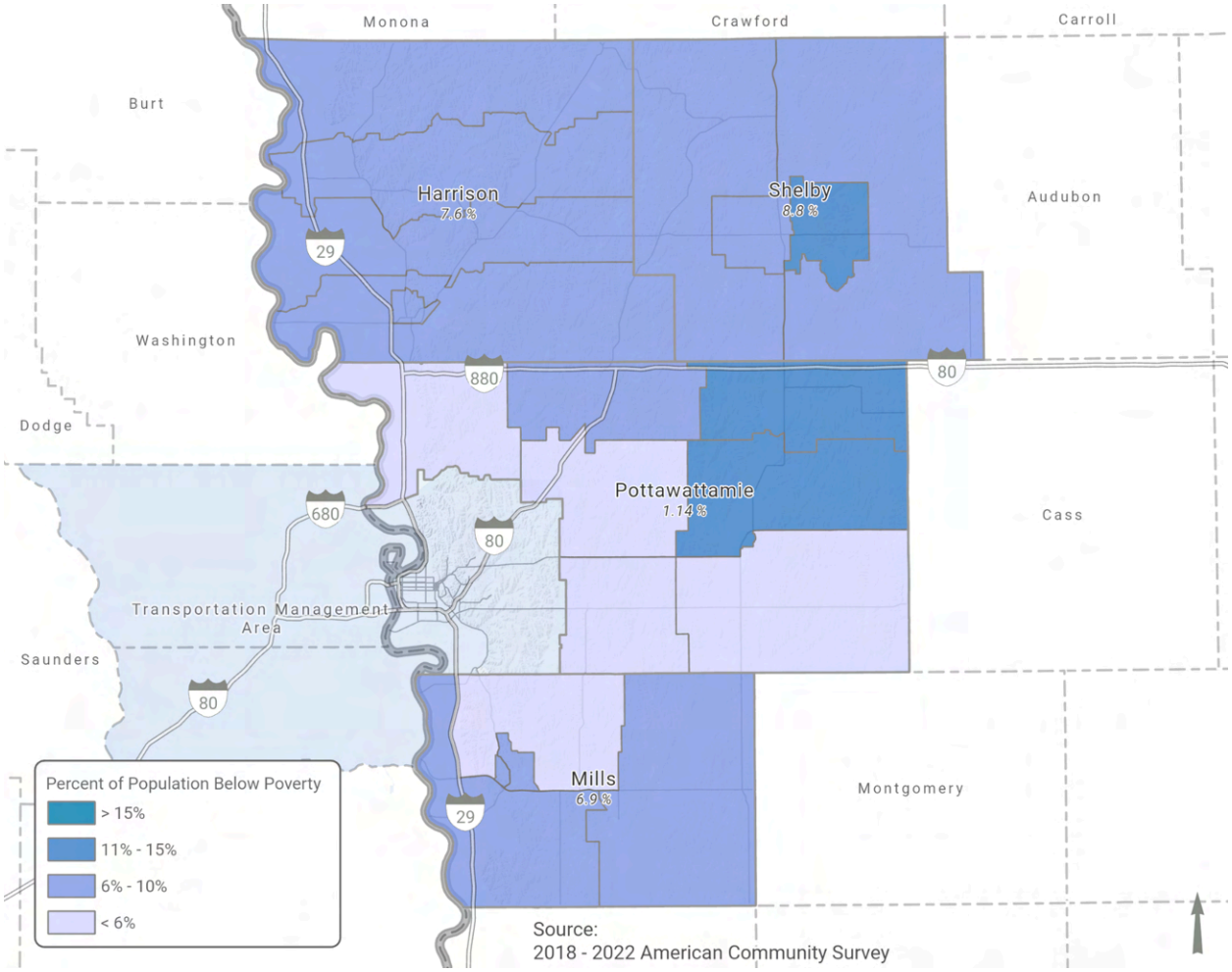


Figure 2.23: Percent of Population Below Poverty Line in the RPA-18 Region

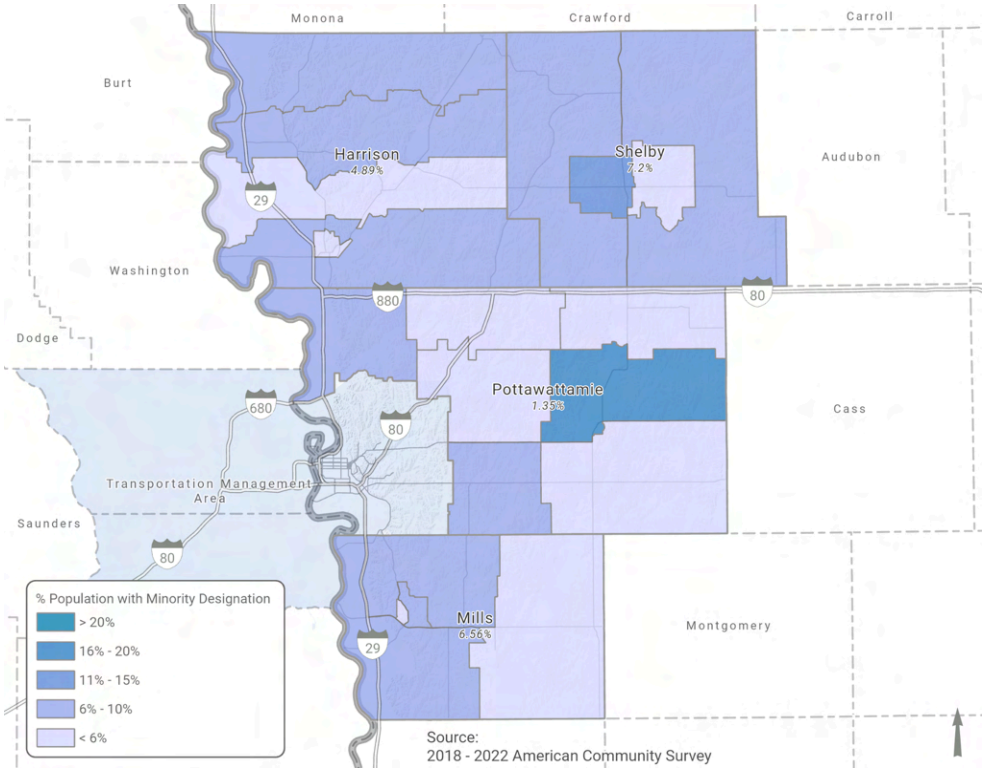


Figure 2.24: Percent Population with Minority Designation, by county, in the RPA-18 Region

2.2 | Environmental Inventory - National Environmental Policy Act (NEPA)

The National Environmental Policy Act (NEPA), passed in 1970, ensures that federal projects consider and minimize environmental impacts. Any transportation project receiving federal funding must go through a NEPA review to evaluate and ensure projects are designed with care for the environment, historic sites, and communities.

Under the Endangered Species Act, federal agencies must protect threatened and endangered species and their habitats. Each project begins with consultation through the U.S. Fish and Wildlife Service's Ecological Services Office—for this region, located in Bloomington, Minnesota. Figure 2.29 highlights the plants and animals listed as threatened or endangered within the RPA-18 region.

Figure 2.25: Threatened or Endangered Species in the RPA-18 Region

Group	Name	Status	Counties
Birds	Least tern (Sterna antillarum)	Endangered	P
Birds	Piping Plover (Charadrius melodus)	Threatened	P

Fish	Pallid sturgeon (Scaphirhynchus albus)	Endangered	H, M, P,
Flowering Plants	Prairie bush-clover (Lespedeza leptostachya)	Threatened	H, M, P, S
Flowering Plants	Western prairie fringed Orchid (Platanthera praeclara)	Threatened	H, M, P, S
Mammals	Indiana bat (Myotis sodalis)	Endangered	M, P
Counties: H=Harrison, M=Mills, P=Pottawattamie, S=Shelby			

Source: U.S. Fish and Wildlife Service

NEPA also requires compliance with the National Historic Preservation Act (Section 106) and Executive Orders on Floodplain and Flood Risk Management.

Depending on a project's potential impacts, NEPA reviews fall into one of three levels:

- Categorical Exclusion (CE) – For actions with minimal or no environmental impact, such as maintaining existing roads.
- Environmental Assessment (EA) – A brief study to determine if a project will have significant effects. If not, a Finding of No Significant Impact (FONSI) allows the project to move forward.
- Environmental Impact Statement (EIS) – A detailed review for projects that may cause major impacts. It includes a public comment period and results in a Record of Decision (ROD) outlining next steps and mitigation measures.

Transportation projects that expand or alter existing infrastructure—especially those affecting sensitive natural or historic areas—typically require an EA or EIS. Noise is also evaluated as part of NEPA reviews. Analyses identify and address noise impacts on nearby residents, wildlife, and historic sites. In some cases, redesigning a project—such as realigning a curve—can even reduce noise levels. Within the RPA-18 region the U.S. 30 Missouri Valley Bypass is considered an active EA project.

The RPA-18 region is predominantly rural, with a population density of 22 people/sq mile which is well below the national average[2] of 94 people/sq mile. The majority of communities have fewer than 2,000 residents, with the exceptions of Missouri Valley (pop. 2,678), Harlan (pop. 4,893), and Glenwood (pop. 5,073).

The entire RPA-18 region is classified as an attainment area, meaning that levels of the six criteria pollutants regulated under the Clean Air Act—carbon monoxide, lead, nitrogen dioxide, ozone, particle pollution, and sulfur dioxide—are within acceptable limits[3]. These pollutants are monitored because they can be harmful to human health and the environment, including animals, infrastructure, and crops and other vegetation.

Most of the pollution in Iowa's waterways comes from nonpoint sources, meaning that it comes

[2] U.S. Census Bureau Quick Facts

[3] EPA Green Book

from a variety of sources, in a variety of locations, as opposed to pollution from specific industrial sources and/or sewage treatment plants. Examples include runoff from agricultural and urban land management that can contain fertilizers, herbicides and pesticides; urban runoff that can contain oil and grease; sediment from croplands, eroding streambanks and construction sites; as well as runoff that can contain bacteria and nutrients from livestock and inadequate septic systems. Rainfall and snowmelt can pick up pollutants as it moves over the ground and enters into the soil. The result pollutants being deposited in both surface water, such as rivers and lakes, and groundwater[4] [5].

Although this type of pollution presents a challenge, with appropriate land-use practices, it can be reduced, while at the same time, habitat for wildlife can be improved, recreational opportunities can be increased, and flood and drought conditions can be mitigated. Iowa's Nonpoint Source Management Plan contains Iowa's vision, goals, and objectives for water quality, as well as potential steps to reduce non-point source pollution[13].

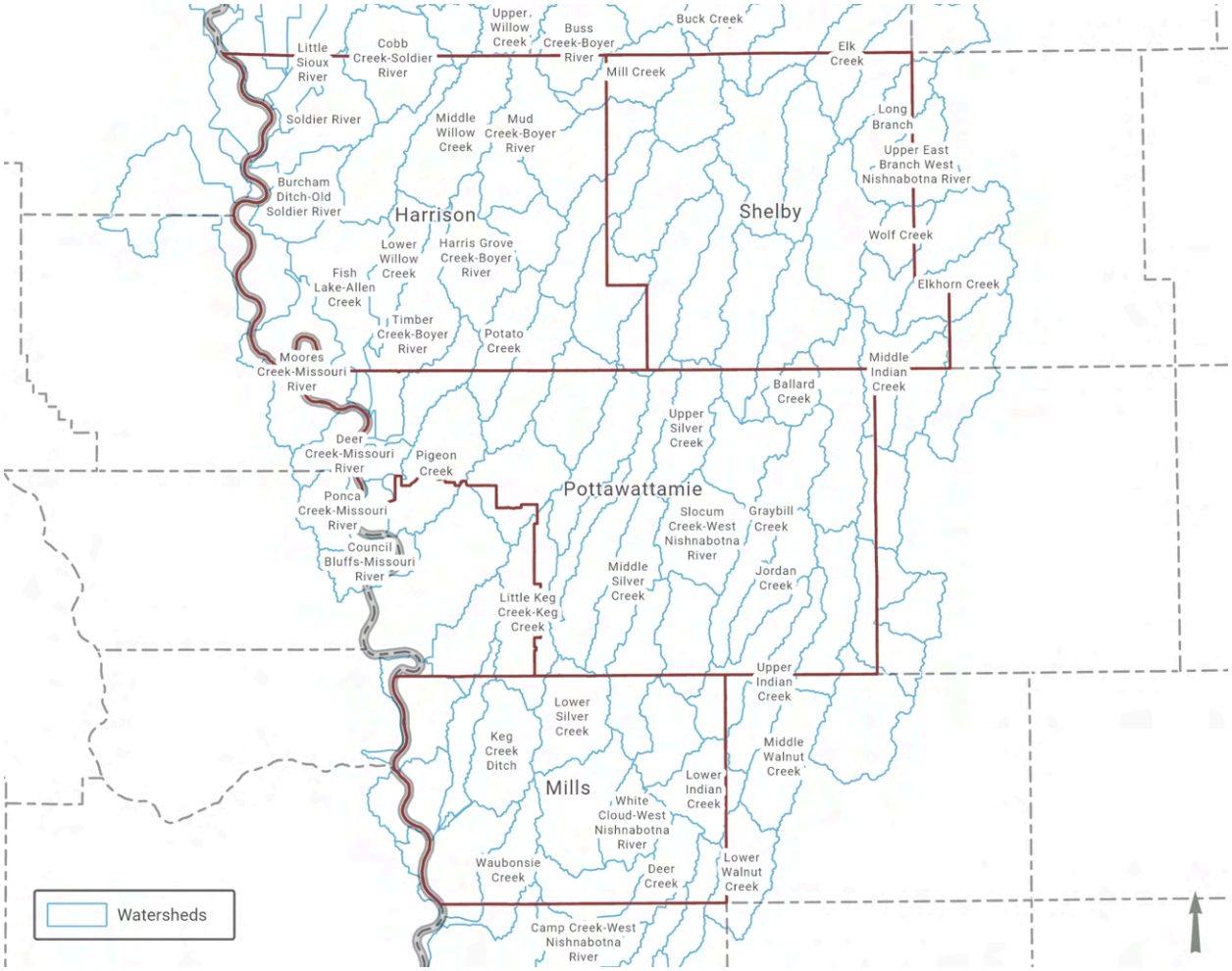


Figure 2.26: Watersheds in the RPA-18 Region

[4] Iowa Nonpoint Source Management Plan

[5] EPA Basic Information about Nonpoint Source Pollution

2.2.1 Parks, Trails, Forests & Wildlife Refuges

As part of the 4(f) process properties that include significant publicly owned public parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately owned historic site listed or eligible for listing on the National Register of Historic Places. Southwest Iowa offers miles of scenic trails and natural spaces with one of the more popular trail segments contained within close proximity to the Omaha-Council Bluffs metro area: the Wabash Trace Nature Trail. The following includes an inventory of the resources available in the region.

Wabash Trace Nature Trail
Stretching 63 miles from Council Bluffs to Blanchard, this crushed limestone trail follows a former rail line through woodlands and farmland. Ideal for biking, walking, jogging, and cross-country skiing, the trail is maintained by the nonprofit Southwest Iowa Nature Trails Project (SWINT) through trail pass fees and community support. The popular Taco Ride between Council Bluffs and Mineola draws cyclists each week. A nearby 6-mile dirt path welcomes hikers, mountain bikers, and equestrians.

Railroad Highway Trail
When complete, this 15-mile trail will connect Neola to Council Bluffs and become part of the Great American Rail-Trail, a 3,700-mile cross-country route from Washington, D.C. to Washington State.

Rock Island Old Stone Arch Nature Trail
This 3.8-mile trail near Shelby winds through wetlands, prairie, and woodlands. Its historic stone arch viaduct is listed on the National Register of Historic Places.

Brent's Trail
An 8-mile hiking route linking Murray Hill Scenic Overlook and the Gleason-Hubel Wildlife Area, Brent's Trail showcases the rugged beauty of the Loes Hills State Forest.

West Nishnabotna River Water Trail
Spanning 26.8 miles, this river route is perfect for canoeing, kayaking, tubing, and fishing. With wooded banks, sandbars, and small towns like Avoca, Hancock, Oakland, Carson, and Macedonia along the way, it's a favorite for paddlers.

DeSoto National Wildlife Refuge
Located along the Missouri River near Missouri Valley, this 8,365-acre refuge features forests, prairie, wetlands, and an oxbow lake that attract thousands of migratory birds each spring and fall.

State Parks and Historic Trails
The region's state parks include multiple Loess Hills State Forest, Prairie Rose, and Wilson Island State Recreation Area. The Mormon Pioneer Historic Trail also passes through Pottawattamie County, marking the 1,300-mile route from Illinois to Utah.

The Iowa Department of Natural Resources (DNR) Wildlife Bureau manages over 410,000 acres of land that provides habitat for native wildlife species, as well as those species that migrate through the state. The primary management objective is to develop and restore wildlife habitat,

to provide various species a safe place to breed, rest and feed. Only basic public use facilities are provided, and portions of wildlife management areas may be designated as refuges, with restrictions on certain uses. There are over 30 wildlife management areas in the RPA-18 region. The Iowa DNR maintains a list which can be searched by county[6].

There are also many county parks, which include various types of natural areas, in the RPA-18 region.

Figure 2.27: County Parks in the RPA-18 Region

Harrison County[7]	Mills County[8][9]
Gee-Hruska Wetland Area	Fisher Wildlife Area
Gleason-Hubel Wildlife Area	Glenwood Archeological State Preserve
Goodman Property	Indian Creek Greenbelt Area
Harrison County Historical Village Welcome Center	Kenny's Woods
Horseshoe Lake Wetland Area	Lake George
Missouri Bottoms Wetland Area	Mile Hill Lake
Murray Hill Scenic Overlook	Pony Creek Lake Access
Nolan Wetland Area	Pony Creek Park
O Day Wetland Area	Ray Thomas Wildlife Preserve
Old Town Conservation Area	Wabash Trace Nature Trail - Malvern
Remington Boat Launch	Wabash Trace Nature Trail - Mineola Head
Roadside Rest Area	Wabash Trace Nature Trail - Silver City
Ruffcorn Wildlife Area	West Oak Forest
Sawmill Hollow Wildlife Area	
Schaben Park	
Sioux Dam Wildlife Area	

[6] Iowa Department of Natural Resources. Wildlife Management Areas

[7] County Parks - Harrison County

[8] County Parks - Mills County

[9] Mills County, Iowa - County Parks

Vaile Wetland Nature Area	
Willow Lake Recreation Area	
Pottawattamie County	**Shelby County**
Arrowhead Park	Dinesen Prairie
Botna Bend Park	Elk Horn Creek Recreation Area
Hitchcock Nature Center	Manteno Park
Mt. Crescent Ski Area	Nishna Bend Recreation Area
Old Towne Park	Oak Ridge Habitat Area
	Rosenow Timber
	Rosman-Glendale Farms Rec. Area
	Schimerowski Park
	Shelby County Conservation Office
	Six Bee Tree Timber
	Upper Nish Habitat Area

https://www.mycountyparks.com/County/Shelby.aspx

https://www.mycountyparks.com/County/Pottawattamie.aspx

https://www.exploreshelbycounty.com/bike/-hike-trails

https://www.goldenhillsrcd.org/brentstrail.html

https://www.goldenhillsrcd.org/fit.html

https://millscountytrails.wordpress.com/existing-trails/

https://www.fws.gov/refuge/desoto

https://www.iowadnr.gov/Places-to-Go/State-Parks

https://www.nps.gov/mopi/planyourvisit/places-to-go.htm

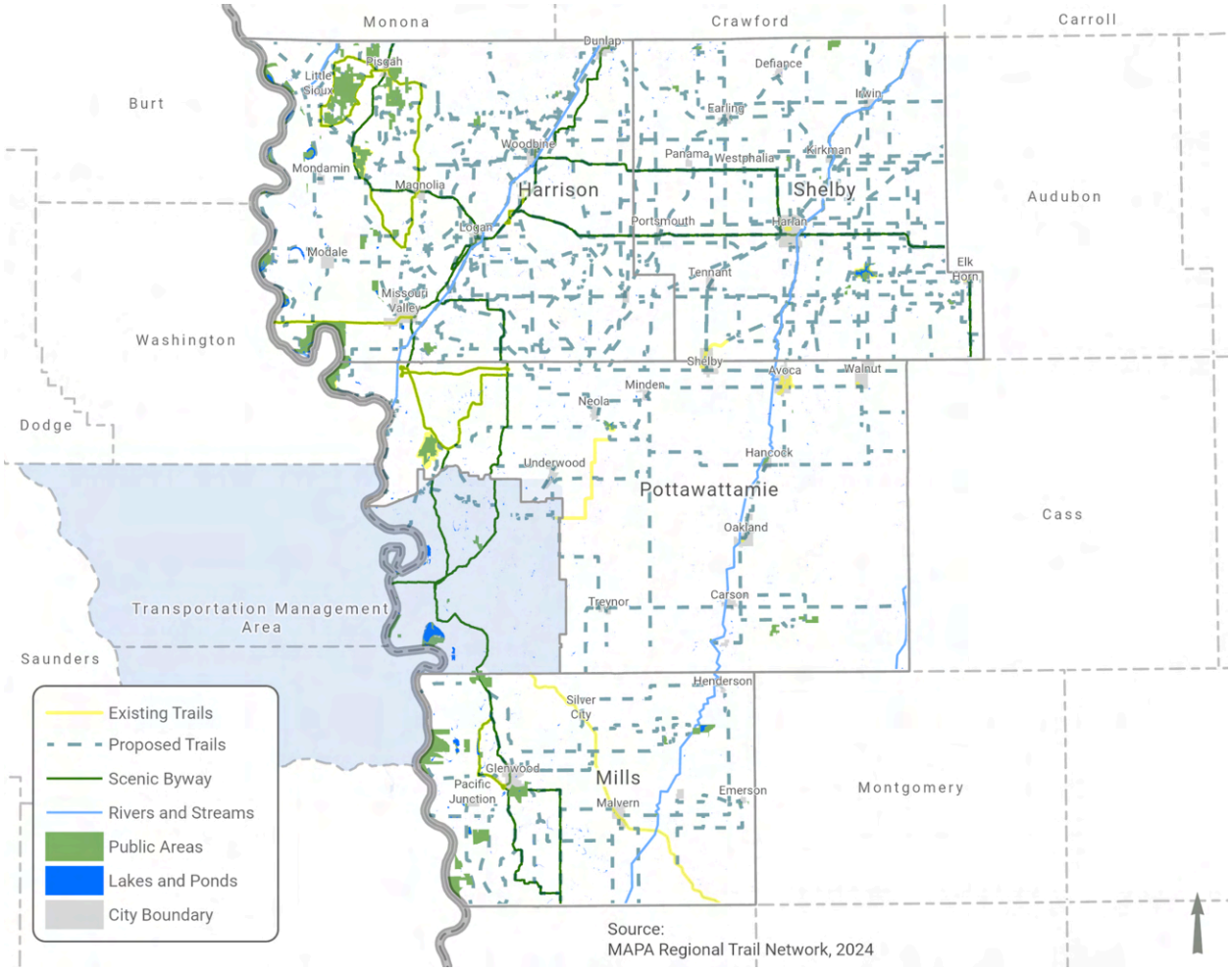


Figure 2.28: Trails, Parks and Natural Resources in the RPA-18 Region

2.2.2 Waterways

Water transportation can ease congestion and reduce the burden placed on roadway systems[10]. The Missouri River is well suited for commercial navigation since there are no requirements for locks or dams, and it flows through major agricultural production areas, including those that produce wheat and corn. However, commercial traffic on the Missouri River has declined over the last several decades[11].

In response, the Missouri DOT initiated the Missouri River Freight Corridor Redevelopment Project in 2009. One key development from this effort is the Port of Blencoe, located between Council Bluffs and Sioux City. Opened in 2021, the port lies just outside the RPA-18 region and serves as the northernmost access point for barge traffic on the Missouri River. With the capacity to load and unload up to nine barges at once, the facility provides a cost-effective freight option for bulk commodities such as corn, soybeans, and fertilizer. Shipping these goods by barge can significantly reduce transportation costs when compared to rail or truck; for

[10] U.S. DOT Maritime Administration, Marine Highway M-29.

[11] Mid-America Freight Coalition, Regional Solutions for a Regional Issue

example, a single tow managing 15 barges can carry the equivalent load of approximately 870 semi-trucks[12]. Other commodities transported via the Missouri River include crude resources such as stone, sand, and gravel, which are used in infrastructure and other construction projects [13].

Under Congressional authorization, the Corps is responsible for the construction, operation, and maintenance of the river for navigation, flood control, and related purposes, including flow regulation and bank stabilization. The Missouri River Bank Stabilization and Navigation Project supports this effort by maintaining a 9-foot-deep, 300-foot-wide navigation channel[14].

https://www.irpt.net/missouri/

2.2.3 Historic and Archeological Resources

The National Register of Historic Places is the official list of the country's historic places to be preserved. The National Historic Preservation Act of 1966 authorized the National Park Service's National Register of Historic Places as part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources.

States, tribes, and other federal agencies may submit nominations for review. Listing in the National Register is the first step towards eligibility for federal preservation tax credits, as it is administered by the National Park Service[15].

Nearly every county in the U.S. has at least one place listed in the National Register of Historic Places. The properties found in the RPA-18 counties are listed in Figure 2.28.

The preservation of historic transportation systems, structures, and artifacts became a consideration in the Intermodal Surface Transportation Act of 1991 (ISTEA). Federal funding is available for restoring and preserving the national transportation heritage. Historical preservation activities in RPA-18 include the rebuilding of the historical Lincoln Way in Woodbine, Iowa. The roadway is being rebuilt to the original brick surface.

The DeSoto Bend National Wildlife Refuge is currently home to the USS Bertrand. The Bertrand is a 19th-century, side-wheel steamship that sank in the Missouri River in 1865. The refuge currently maintains an artifact museum of Bertrand's cargo and is restoring the artifacts for future generations to enjoy.

Figure 2.29: National Register of Historic Places Properties in RPA-18 Region

Property	Address	City	County
William Haner Polygonal Barn	CR L16	Pisgah	Harrison
Harrison County Courthouse	7th St	Logan	Harrison

[12] Inland Rivers Ports & Terminals (IRPT), Grand opening for new barge terminal on Missouri River

[13] Mid-America Freight Coalition, Top Commodities by Waterway

[14] US Army Corps of Engineers Omaha District

[15] National Register of Historic Places

Property	Address	City	County
I.O.O.F. Hall	613-615 Iowa Ave	Dunlap	Harrison
Old Harrison County Courthouse	401 Locust	Magnolia	Harrison
Murray General Merchandise Store	Jct of Mulberry and Second Sts	Little Sioux	Harrison
Siebel's Department Store - Boyer Valley Bank	501-505 Walker St	Woodbine	Harrison
State Savings Bank	312 E. 7th St	Logan	Harrison
Wheeler John R. Jr. House	407 S Third St	Dunlap	Harrison
Woodbine Normal and Grade School	5th and Weare	Woodbine	Harrison
Woodbine Public Library	58 5th St	Woodbine	Harrison
Woodbine Savings Bank	424 Walker St	Woodbine	Harrison
Davis Oriole Earthlodge Site	Restricted	Glenwood vicinity	Mills
Glenwood Archaeological State Preserve	Levi Rd	Glenwood vicinity	Mills
Nishnabotna River Bridge	Co Rd M16 over Nishnabotna River	Henderson vicinity	Mills
Pony Creek Park	N of Glenwood	Glenwood	Mills
West Oak Forest Earthlodge Site	Restricted	Glenwood vicinity	Mills
Carstens Farmstead	S of Shelby on IA-168	Shelby	Pottawattamie
Eckle Round Barn	Off IA 168	Shelby	Pottawattamie
German Bank Building of Walnut IA	Jct of Highland and Central Sts	Walnut	Pottawattamie
Graceland Cemetery Chapel Graceland Cemetery	US 59	Avoca	Pottawattamie
Hancock Savings Bank	311 Main Street	Hancock	Pottawattamie
Norton, Charles Henry & Charlotte, House	401 N Chestnut Street	Avoca	Pottawattamie
Pottawattamie County Sub Courthouse	Elm Street	Avoca	Pottawattamie

Property	Address	City	County
Turner Francis A. and Rose M. House	1004 Cherry Street	Avoca	Pottawattamie
Chicago Rock Island and Pacific Railroad Stone Arch Viaduct	0.5 mi. NW of jct of Street F66 and Hackberry Rd	Shelby vicinity	Shelby
Christiansen Jens Otto House	2105 College Ave	Elk Horn	Shelby
Floral Hall	314 4th St on Shelby County Fairgrounds	Harlan	Shelby
Harlan Courthouse Square Commercial District	Market 6th 7th and Court Sts around Courthouse Square	Harlan	Shelby
Irwin Consolidated School	North St	Irwin	Shelby
Larsen Chris House	4215 Main St	Elk Horn	Shelby
Poldberg Chris Farmstead	0.5 mi. S of IA 44 on Wolf Creek	Jacksonville	Shelby
Rewerts George House	306 8th Ave	Defiance	Shelby
Saint Boniface Catholic Church Dist.	Three blocks N of Co Rd F32	Westphalia	Shelby
Shelby County Courthouse	7th and Court Sts	Harlan	Shelby
St. Paul's Episcopal Church	712 Farnham St	Harlan	Shelby

3| Safety and Security

All transportation systems that are used by the traveling public and for commerce should be safe. The issues of safety and security were identified as separate issues that need to be addressed under previous federal legislation and continued today with the Infrastructure Investment and Jobs Act (IIJA). This federal legislation set forth several programs to encourage safety and security in transportation planning.

3.1 | Safety

The Iowa DOT presents a 5-pronged approach to highway safety:

- Engineering
- Education
- Enforcement
- Emergency Response
- Everyone Else

Each component of this framework encompasses a set of factors that increase the safety of the transportation network. However, when these factors are considered together they provide for a comprehensive approach to safety for those who use the region's highways and other transportation facilities.

3.2 | Iowa's Strategic Highway Safety Plan

Iowa's 2024–2028 Strategic Highway Safety Plan (SHSP) is built on detailed crash data, public feedback, and expert input to guide future safety improvements. The plan identified 18 Safety Emphasis Areas, which were prioritized—based on crash trends and community input—into seven Key Emphasis Areas, organized under three main categories for easier implementation.

These focus areas help target the most critical factors contributing to crashes, ensuring that future projects and programs effectively reduce serious injuries and fatalities throughout the state. A comparison of crash outcomes in the RPA-18 region with statewide data from 2017–2021 helps pinpoint where local safety efforts can have the greatest impact.

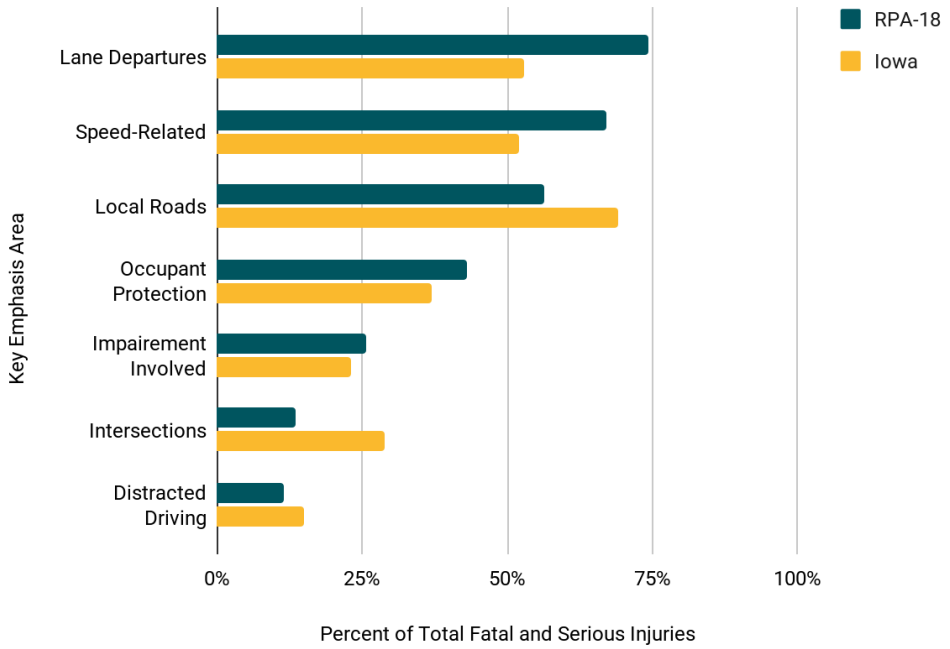


Figure 3.1: Comparison of Percent of Fatal and Serious Injuries by Key Emphasis Area

The Iowa Strategic Highway Safety Plan embraces the Safe System Approach. Identified by the USDOT in the National Roadway Safety Strategy as the guiding paradigm to address roadway safety. Figure 3.2 below illustrates the five principles on the outer ring, and the five objectives within the safe system circle.

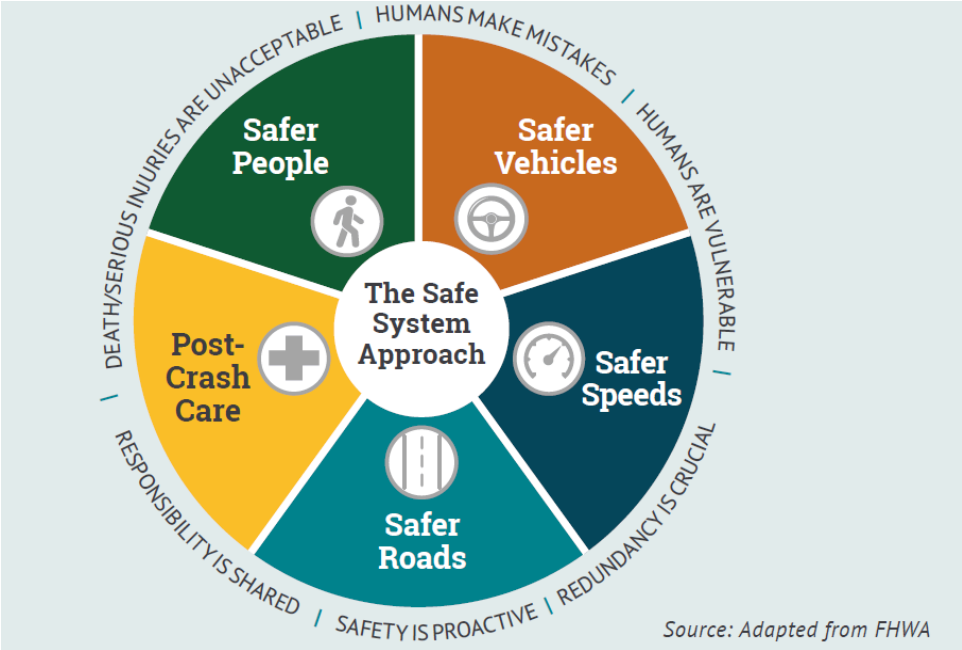


Figure 3.2: Emphasis Areas As Organized by the Safe System Approach

Through both reporting periods of 2013-2017 and 2017-2021, the Key Emphasis Areas: lane departures, local roads, and speed-related were represented in over 50 percent of severe injury crashes in Iowa.[16] This is also true for RPA-18, and is why the state of Iowa considers these the top three Key Emphasis Areas. Figure 3.3 below shows the trend for the RPA region.

Figure 3.3: Top 3 Key Emphasis Areas as a Percentage of Fatal and Serious Injuries

Key Emphasis Area	2013-2017*	2017-2021	2022-2024
Lane departure	69%	74%	73%
Speed related	66%	67%	62%
Local roads	60%	56%	64%

*The 2013-2017 was reported as a percentage of fatal and serious injury crashes rather than injuries

Lane Departure Crashes are crashes that occur when a vehicle leaves the travel lane, encroaches onto the shoulder, or crosses the centerline or median, and crashes.

Speed Related crashes are the result of a driver consciously choosing an inappropriate speed, or inappropriately responding to the roadway conditions (e.g., during weather events such as ice or fog).

Local Roads are the secondary (county) and municipal (city) systems. Although they are not as heavily traveled, they represent a significant portion of system mileage.

[16] Iowa DOT. 2019-2023 Strategic Highway Safety Plan. p. 23. https://iowadot.gov/traffic/pdfs/IowaSHSP.pdf

3.3 | RPA-18 Safety Emphasis Areas Results

The Iowa DOT provides an online Crash Analysis Tool (ICAT) which allows users to depict crash locations and filter by jurisdiction, year, and crash characteristics.[17] To support the development of this LRTP, the Iowa DOT provided the SHSP analysis for years 2017-2021. The data from this report was used along with the ICAT tool assessing 2017-2021 within the RPA-18 boundaries to illustrate the location and total number of fatal or serious injury crashes by county for: 1) Lane Departure (Figure 3.3), Speeding-Related (Figure 3.4), and crashes on Local Roads (Figure 3.5). Although ICAT contains individual crash records for more recent years, the SHSP's latest validated statewide safety dataset covers 2017–2021. This timeframe was selected to maintain consistency with Iowa DOT's official safety analysis.

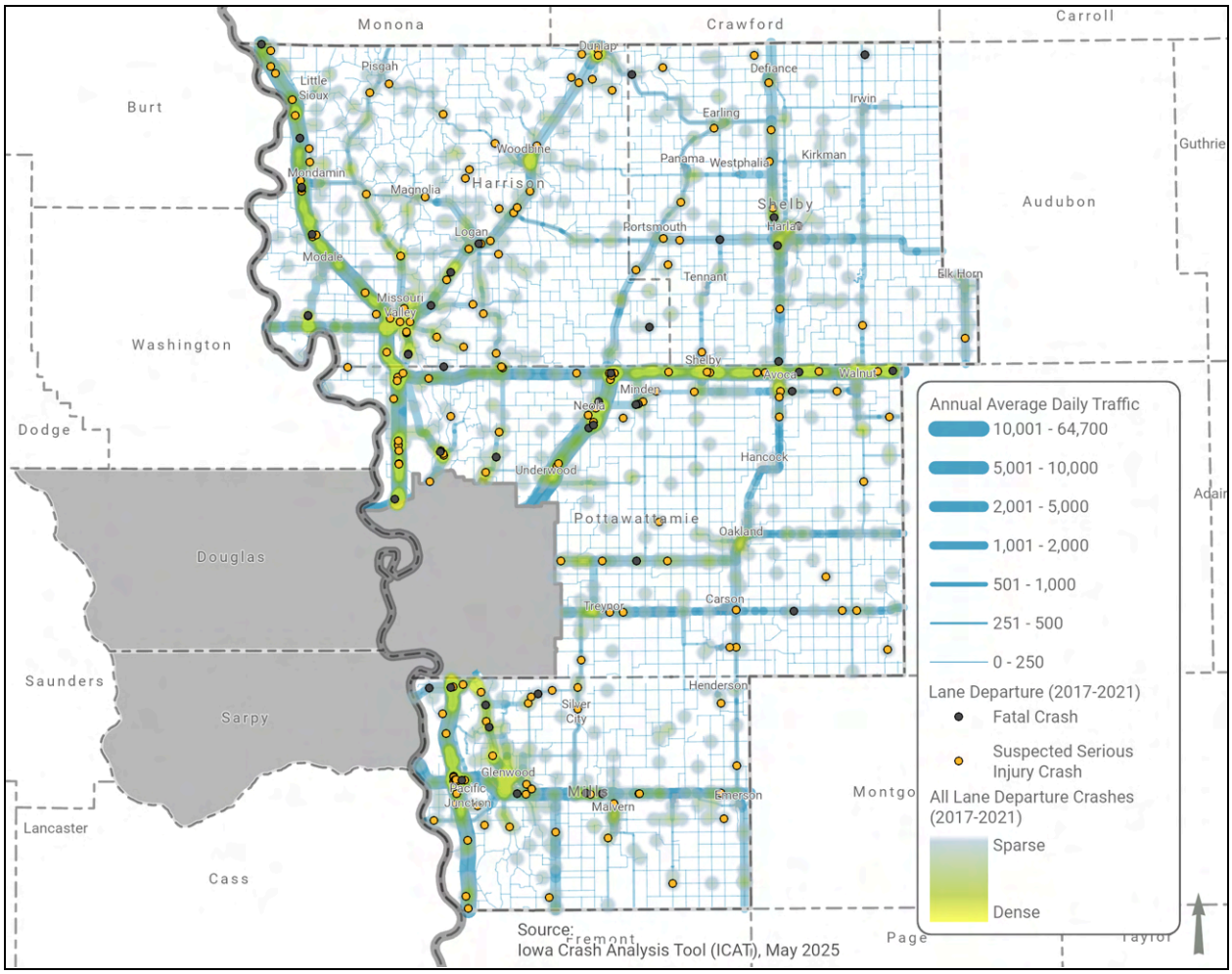


Figure 3.4: Crashes Resulting in Fatalities or Serious Injuries 2017 - 2021

[17] https://icat.iowadot.gov/#

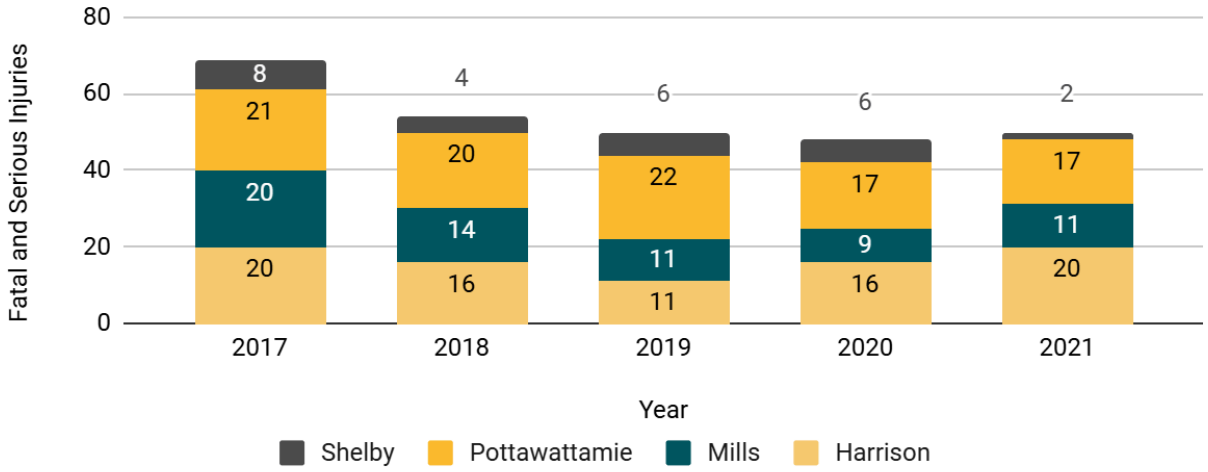
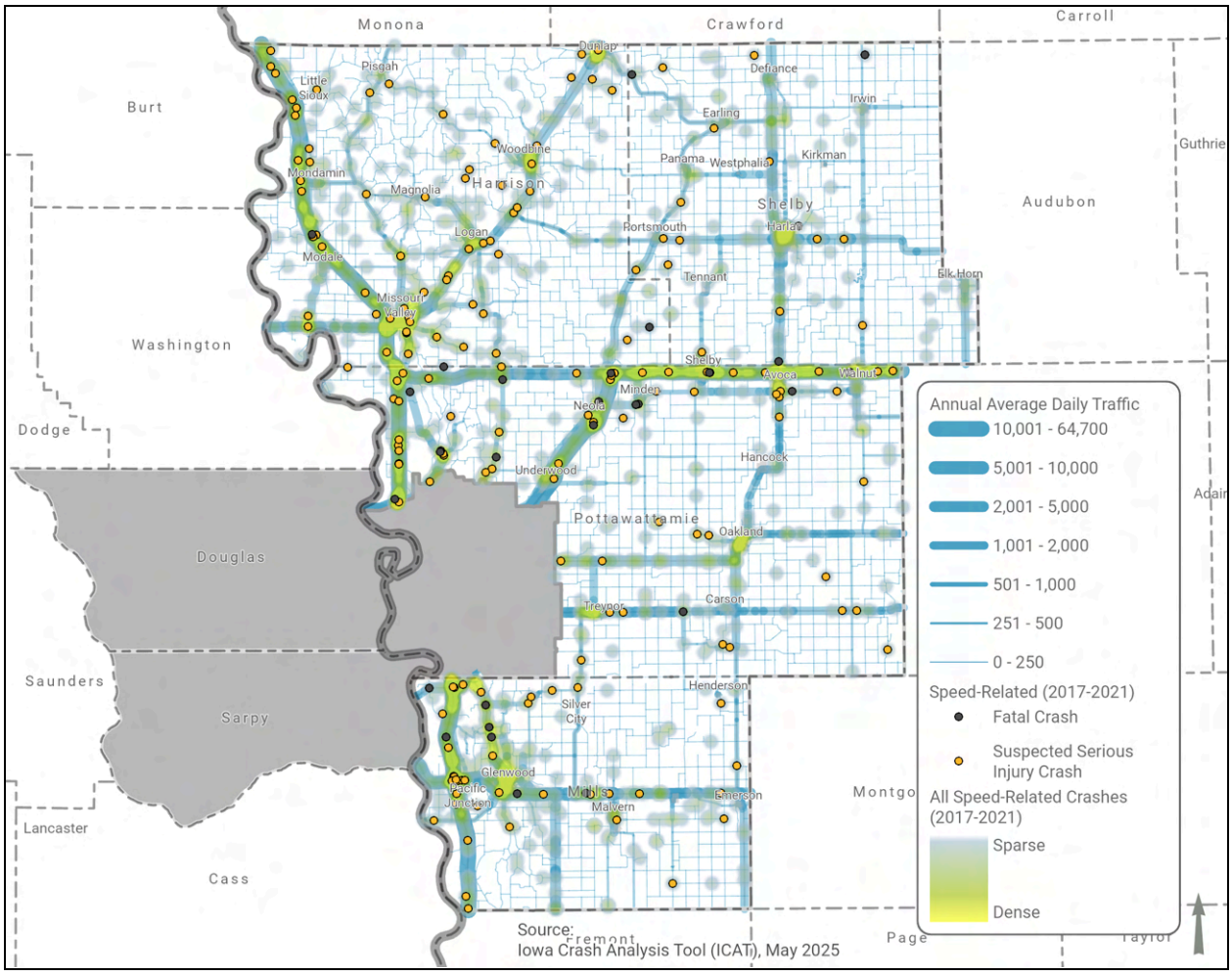


Figure 3.5: Lane Departure Crashes Resulting in Fatalities or Serious Injuries 2017-2021



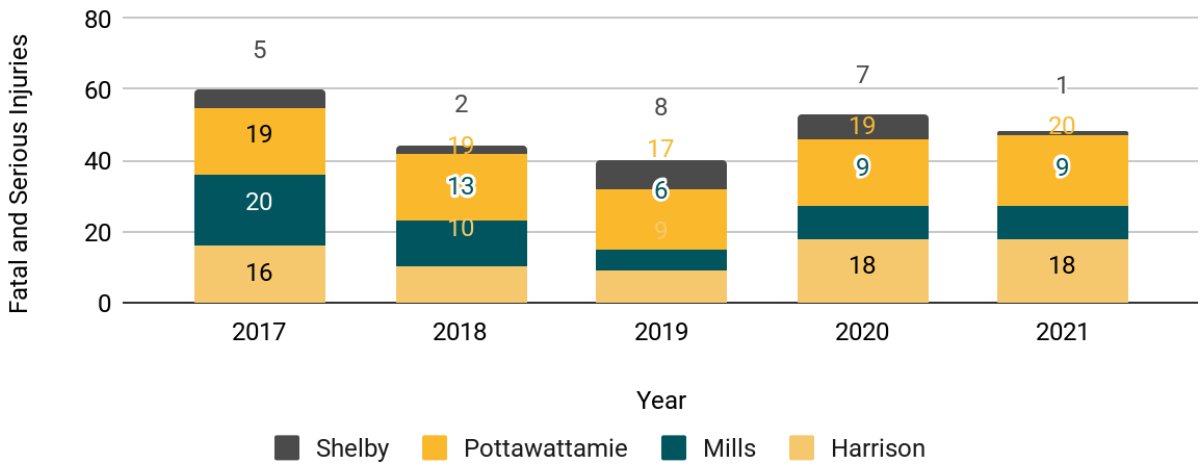


Figure 3.6 : Speeding-Related Crashes Resulting in Fatalities or Serious Injuries 2017-2021

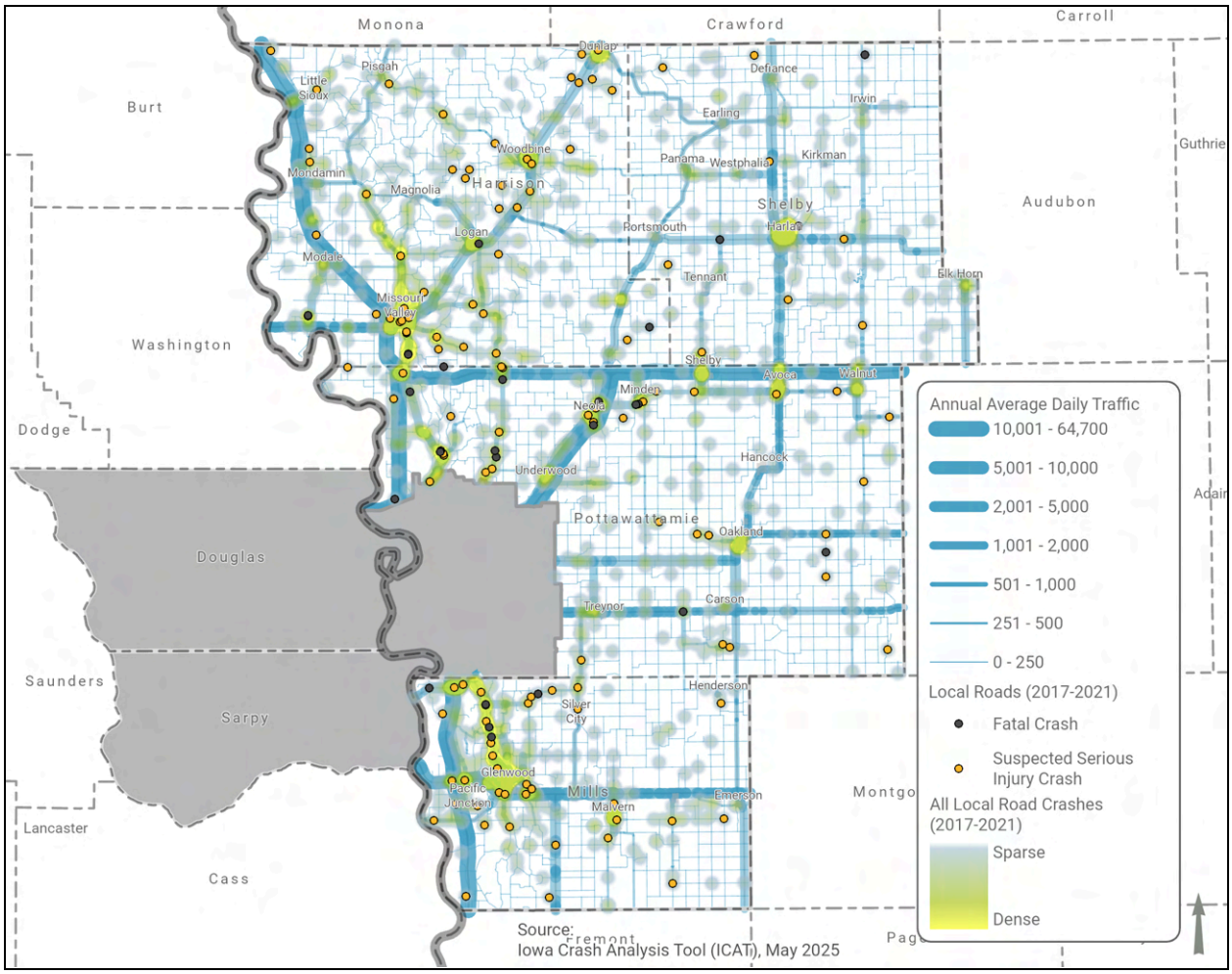


Figure 3.7 : Crashes Resulting in Fatalities or Serious Injuries on Local Roads 2017 - 2021

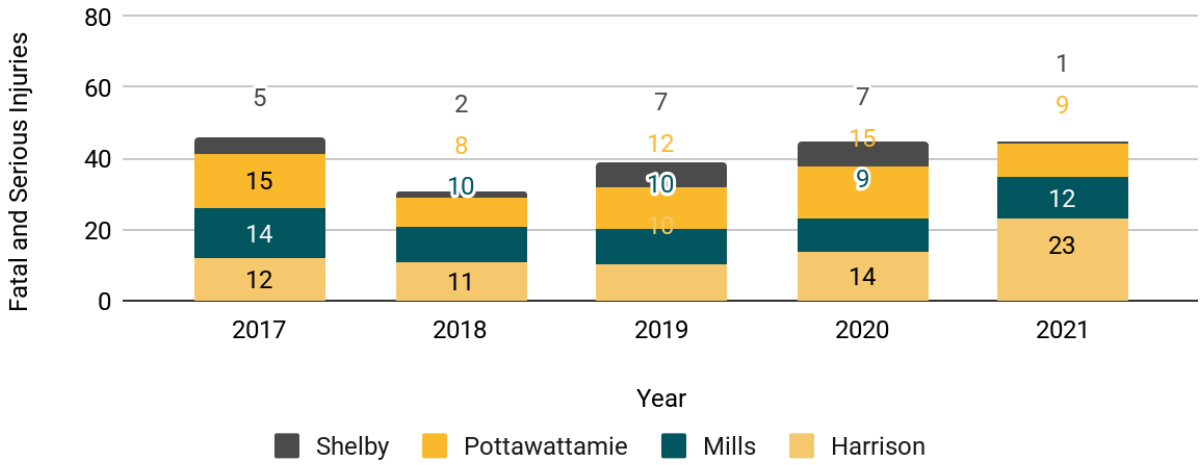


Figure 3.8: Crashes Resulting in Fatalities or Serious Injuries on Local Roads 2017-2021

3.4 | Planning for Safety Improvements

County Safety Action Plans

In the summer of 2025, all four of the RPA-18 counties approved Safety Action Plans (SAPs) developed through funding provided by the USDOT Safe Streets and Roads for All (SS4A) discretionary grant program. These comprehensive plans were informed by a detailed roadway safety analysis and input from local and regional safety stakeholders. MAPA staff participated in three of the four stakeholder meetings, providing continuity with the regional planning. The resultant plans provide recommended driver behavioural countermeasures and roadway projects to help each county work towards the stated goal of reducing road safety fatal and serious injuries within the RPA-18 region to zero by 2050.

Nationwide, roadway traffic fatalities disproportionately impact rural areas both based on population and roadway traffic volumes. The SAPs state that for 2023:

> "According to the Federal Highway Administration (FHWA), rural fatalities account for 40 percent of all fatalities across the United States, yet less than 20 percent of the population lives in rural areas. In addition, the fatality rate on rural roads is 1.5 times higher than the fatality rate on roads in urban areas, resulting in a focus on rural road safety."

The county road system within Iowa provides an extensive and easily accessible network for users of the transportation system. Unfortunately, while the county network carries less than 1/5 of the statewide vehicle miles of travel (VMT), they account for over 1/3 of the fatal and serious injury crashes within the state. The SAPs considered each county's unique traffic patterns and existing roadway characteristics to develop a prioritized list of driver-related countermeasure strategies, and roadway projects on: 1) priority roadway segments, 2) intersections, and 3) roadway curves. These projects are summarized in Figure 3.9 below.

Figure 3.9: Summary of County Safety Action Plan Prioritized Projects

Harrison County		
Facility Type	**Number of Locations**	**Estimated Project Cost**
Segment	10	$10,703,000
Intersection	10	$339,000
Curve	10	$167,000
Total	30	$11,209,000
Mills County		
Facility Type	**Number of Locations**	**Estimated Project Cost**
Segment	12	$4,556,000
Intersection	8	$1,354,000
Curve	10	$205,000
Total	30	$6,115,000
Pottawattamie County (within RPA-18)		
Facility Type	**Number of Locations**	**Estimated Project Cost**
Segment	3	$9,582,000
Intersection	4	$2,635,000
Curve	2	$99,000
Total	9	$12,316,000
Shelby County		
Facility Type	**Number of Locations**	**Estimated Project Cost**
Segment	12	$8,486,000
Intersection	8	$316,000
Curve	10	$367,000
Total	30	$9,169,000
Grand Totals	**99**	**$38,809,000**

The projects listed in Table 2 are shown in Figure 3.6, and include all projects within the counties that also lie within the RPA-18 boundary. At this time the projects are still being compiled, and an updated map will be provided in the final version.

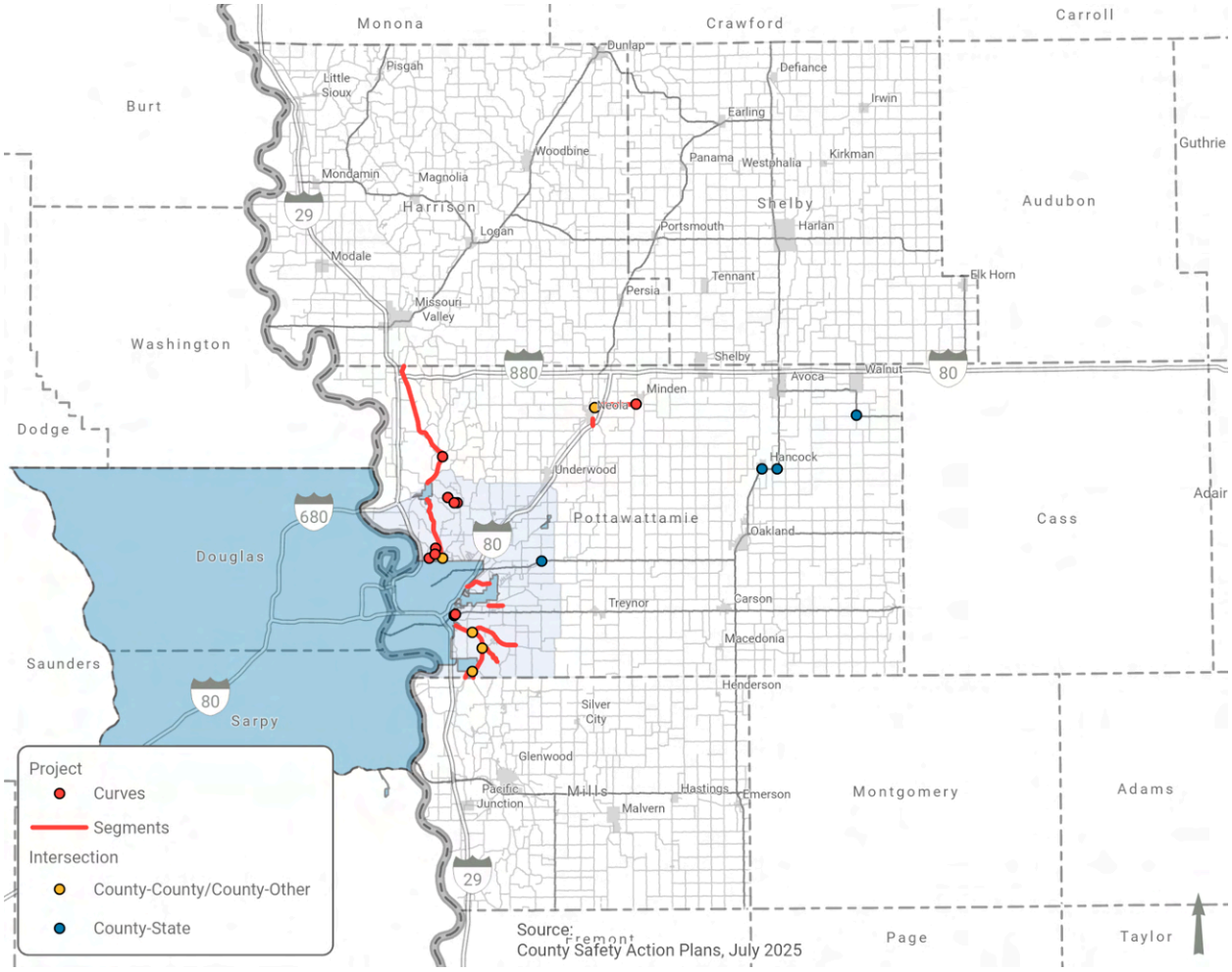


Figure 3.10: Safety Action Plans Segment, Intersection, and Curve Projects within Pottawattamie County

RPA-13/18 Safe Streets and Roads for All

RPA-18 has collaborated with RPA-13, which covers Cass, Fremont, Montgomery, and Page Counties, on a Safe Streets for All (SS4A) initiative to develop a Comprehensive Safety Action Plan (CSAP) for seven communities in southwest Iowa which are not included in the County Safety Action Plans. Three of these communities are in the RPA-18 region: Glenwood, Harlan and Missouri Valley, and four are in neighboring counties: Atlantic, Clarinda, Red Oak and Shenandoah. Development of the Comprehensive Safety Action Plan is ongoing, and you can find out more at https://rpa-safestreets.mapacog.org/.

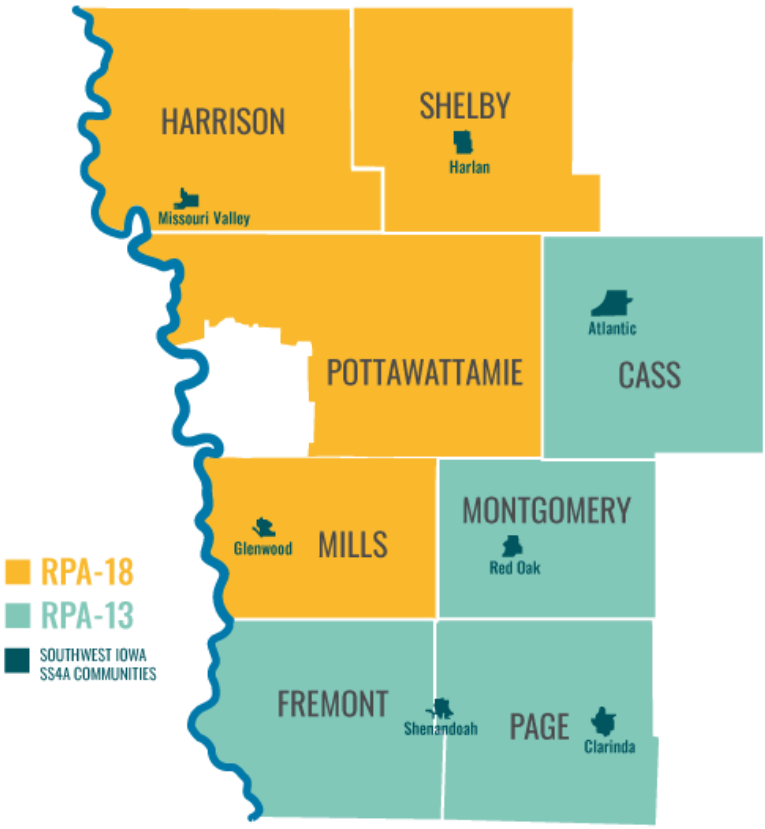


Figure 3.11: RPA-18 and RPA-13 SS4A communities

Safe Routes To School

The Safe Routes to School program was established through the SAFETEA-LU Act to encourage children to walk or bicycle to school. The program funded infrastructure improvements and educational programs to make the commute for school age students safer and more feasible.

With MAP-21, Safe Routes to School was no longer its own funding program, and has been rolled into the Transportation Alternative Program (TAP) through the Infrastructure Investment and Jobs Act (IIJA).

Examples of eligible Safe Routes to School projects are:

- 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

Figure 3.12: Image of a crossing guard assisting school children across a marked crosswalk

MAPA staff will provide technical support and assist in the collection of data for local jurisdictions, agencies and organizations within RPA-18 in their efforts to secure funding under the SRTS program.

Potential for Crash Reduction

Potential for Crash Reduction (PCR) is an analysis that identifies locations on the region's roadway networks where safety improvements could significantly reduce the frequency and severity of crashes. This analysis reflects MAPA's continued commitment to transportation safety, complementing state and local initiatives. The PCR evaluation draws on historical crash data, traffic volumes, and roadway characteristics to highlight segments and intersections where targeted investments would have tremendous impacts. Figure 3.13 shows the segments and intersections with a high to medium potential for reducing fatal and serious injury crashes. The image shown below illustrates the areas indicated as a high medium potential crash zone.

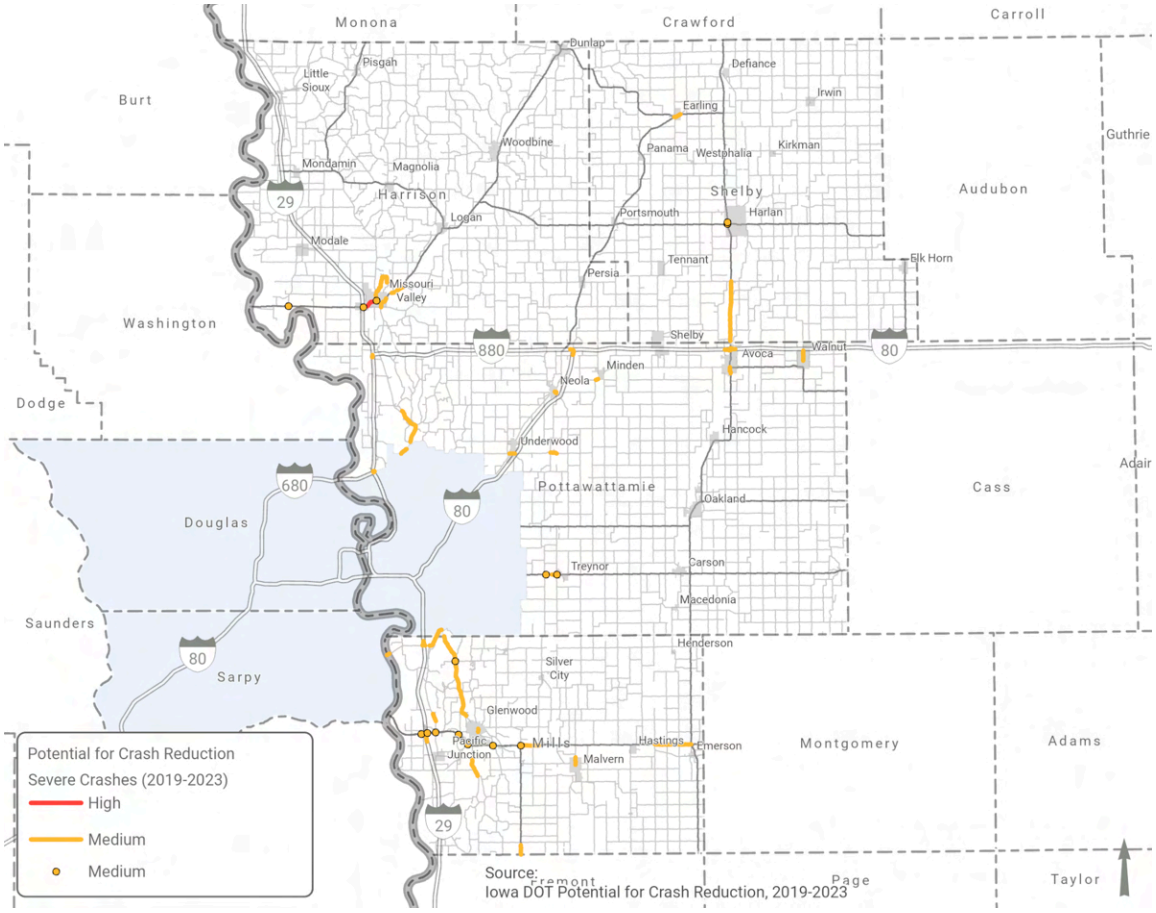


Figure 3.13: Potential for Crash Reduction 2019-2023

Figure 3.14: Image of a front dashcam-style view of a curving two-lane rural roadway

[18] Potential for Crash Reduction.
https://experience.arcgis.com/experience/ba1618dc121545b8b3a13455e74e18b5/page/PCR-Map

3.5 | Safety Projects

Recently completed or planned safety-related projects are listed in Figure 3.15 below.

Figure 3.15: Projects Planned or Accomplished with Safety Funds in RPA-18

Funding Program	Location	Description	State FY	Approximate Cost
Harrison				
TSIP	F-20-L	Upgrade warning and regulatory signs	2014	$8,000
Pottawattamie				
TSIP	Intersection Old Lincoln Highway and Powells Addition	Cut back hillside to improve sight triangle	2015	$50,000
Mills (and Montgomery)				
TSIP	H-34 from m-37 to Emerson	Widen pavement and re-grade foreslopes	2016	$500,000
HSIP	US 34: Hillman Rd Intersection 1.0 mi W of 221st St	Grade and pave	2026	$432,000
Shelby				
HSIP	US 59 Pottawattamie Co Line to IA 144 in Harlan	Paved shoulders	2020	$500,000

3.6 | Long Term Safety Goals

As the number of miles driven impacts the likelihood of fatalities or severe injuries in automobile crashes, a common measure of these outcomes are as a rate per 100 million vehicle miles traveled (VMT). Iowa's ultimate goal is toward zero deaths; however Iowa has set statewide annual safety targets following the Federal Transportation Performance Management guidelines, with the latest set for 2021-2025 as shown in Figure 3.16 below.[19] As there is variability year-over-year, these performance measures are expressed as five-year rolling averages.

[19] Iowa DOT FHWA 2025 Safety Targets. https://iowadot.gov/media/2695/download?inline=

Figure 3.16: Iowa DOT 2021-2026 Safety Targets

Performance Measure	2020-2024 Forecast	2021-2025 Target
Fatalities	352.7	365.8
Serious Injuries	1,389.1	1,496.1
Non-motorized Injuries and Fatalities	142.5	148.4
Fatalities per hundred million VMT	1,077	1.085
Serious Injuries per hundred million VMT	4.235	4.391

Transportation Systems Management and Operations (TSMO)

In February of 2016, the Iowa DOT implemented the 'Iowa Transportation Systems Management and Operations (TSMO) Strategic Plan'.[20] This strategic plan intends to offer resources and strategies to:

1. Realize the full capacity of the existing transportation system
2. Increase reliability for freight and auto
3. Improve safety and reliability through traffic incident management, traveler information, and work zone management
4. Target safety and operational problems to deliver performance-driven improvements to the existing system

The TSMO Plan is executed under eight Service Layer Plans. These plans provide detailed recommendations and actions for each of the topical areas, and include methods to assess existing conditions, identify gaps, and detail opportunities and challenges. The current **Service Layer Plans** which are relevant to this safety discussion within the RPA are:

1. Traveler Information
2. Traffic Incident Management
3. Intelligent Transportation Systems (ITS) and Communications Systems
4. Work Zone Management
5. Emergency Management

[20] Transportation Systems Management and Operations (TSMO) https://iowadot.gov/consultants-contractors/traffic-operations/transportation-systems-management-and-operations-tsmo

Traveler Information

Many users of Iowa's roadway systems rely on Traveler Information services, such as *Iowa511* and *Iowa Counties Road Notifications*.[21] These platforms provide a wide range of information coming from internal (Iowa DOT and Iowa County) manual changes, shared information from traffic services such as Waze, speed data from roadway sensors, and information provided by adjacent states' DOTs. These services also share their data with other traffic and information service providers, such as mapping and traffic planning apps. The goal of the Traveler Information Service Layer Plan is to make this information available in a timely, cost-effective, and error-free manner for use by Iowa travelers. Figure 3.12 presents an illustration of the IA511 website.

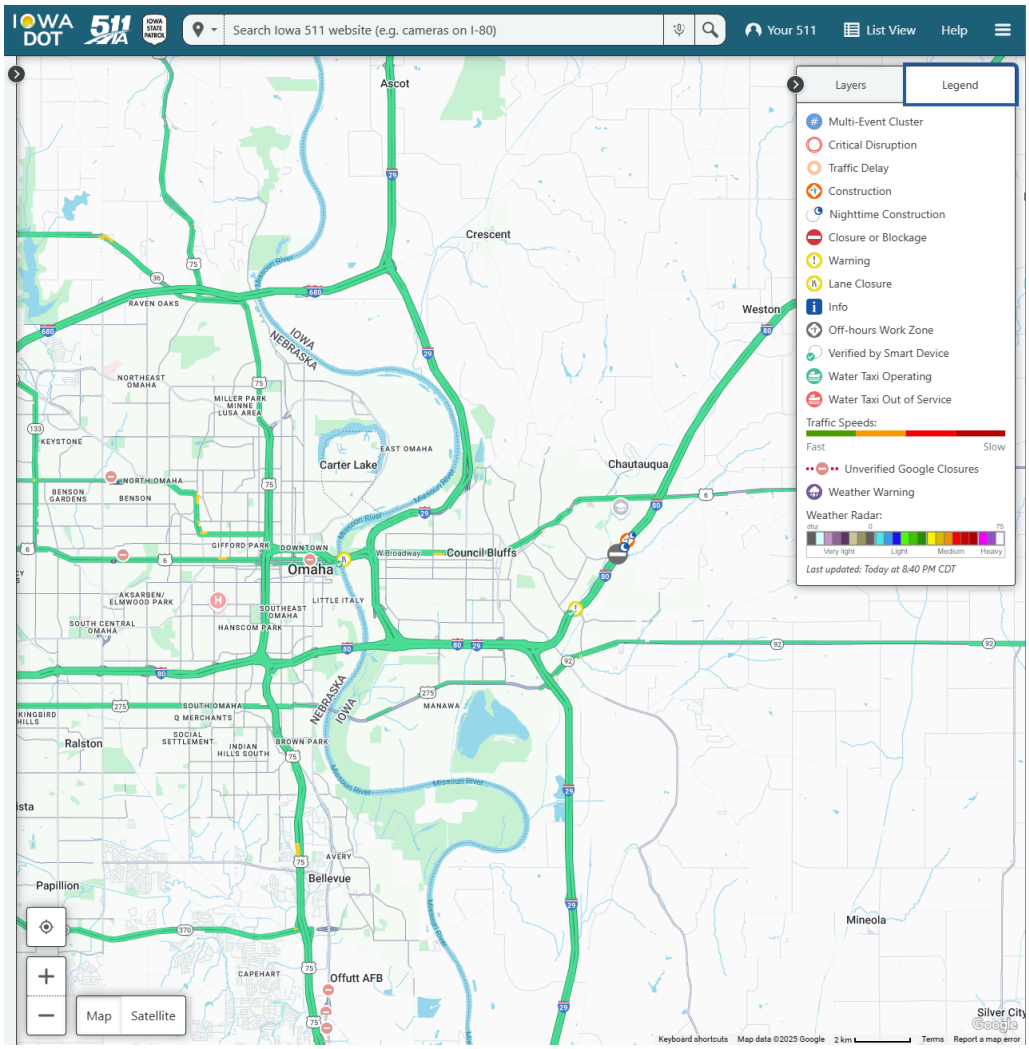


Figure 3.17: Screenshot of the Iowa 511 Online Interface

[21] https://www.iowacountyroads.org/connections#county-511-map

Traffic Incident Management

Traffic Incident Management, or 'TIM', provides 'a systematic, coordinated approach to managing incidents on the highway to minimize impacts to the traveling public and enhance the safety of those involved in and responding to those incidents.'[22] Although much of RPA-18's roadway is not on the highway, users of the secondary system still benefit from many of the TIM programs. Effective TIM operations minimize the impact of crashes on the highway system (both in terms of time, and of traffic that was forced or choseforced or choosing to detour on secondary system road networks). Iowa DOT provides Highway Helpers, who provide support to drivers requiring assistance, allowing freeing up Iowa State Patrol and other roadside services to deal with more serious incidents. Although the Council Bluffs Highway Helpers typically stay within the metro region, their reach and hours have recently been updated, extending their patrol area and providing on-call capacity beyond the metro area as shown in Figure 3.18.

[22] https://iowadot.gov/TSMO/ServiceLayerPlan2.pdf

Figure 3.18: Council Bluffs Highway Helper Routes

Intelligent Transportation Systems

Iowa DOT and Iowa Flood Information Service (along with local municipality) equipment collects information at numerous locations across the state. A snapshot of that equipment, and the information it collects, is shown in Figure 3.11. Information, such as traffic counts and weigh-in-motion, are provided to roadway users via monthly and annual reports. Much of the information, however, can be accessed in real-time by travelers and transportation operations center personnel. In many cases this information is presented in a consolidated format, such as *Weatherview*[23], a GIS application which presents the collected weather information in a graphical method users can query which is illustrated in Figure 3.19 below.

[23] https://weatherview.iowadot.gov/

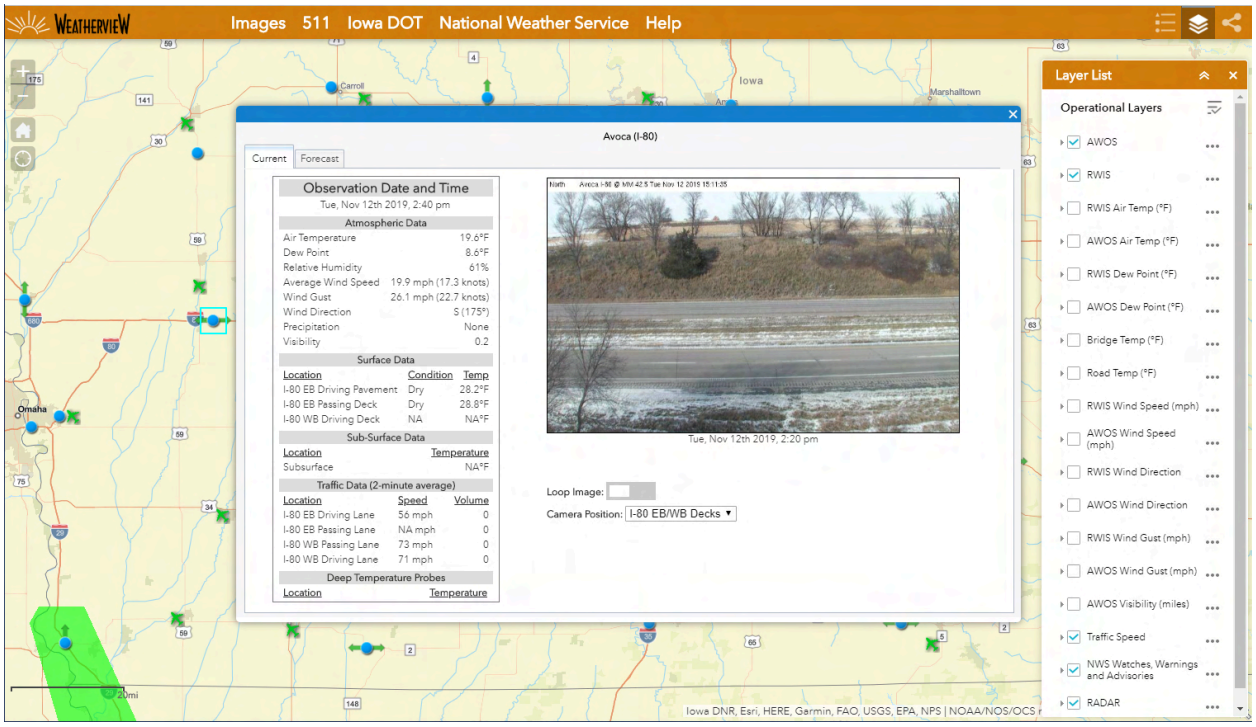


Figure 3.19: Output of the Iowa DOT Weatherview App

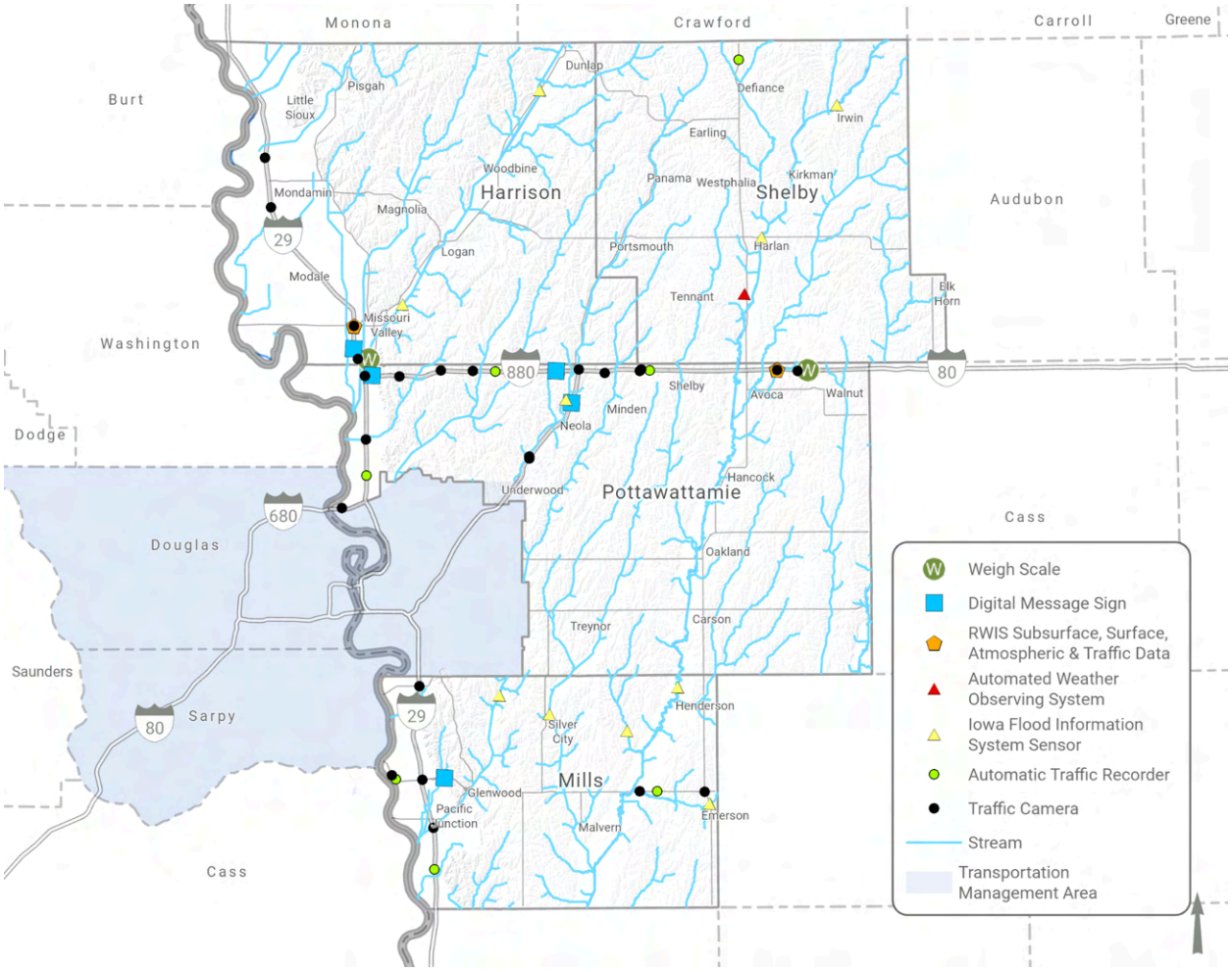


Figure 3.20: Map of Intelligent Transportation Systems (ITS) Technologies

Work Zone Management

Temporary installations of ITS equipment, such as speed and queue sensors, cameras, and portable Digital Message Signs (DMS) can increase safety on roads undergoing maintenance. The figure below illustrates an Intelligent Work Zone (IWZ) established for resurfacing on an eastbound stretch of I-880. The sensors enabled drivers on northbound I-29 to be aware of traffic slowdown and queueing on I-880, allowing them to slow before approaching the traffic around a blind curve, or to choose to avoid I-880 altogether. Information provided within an Iowa DOT dashboard is shown in Figure 3.17.

Additionally, *Iowa 511* and *Iowa Counties Road Notifications* provide travelers with information about current and future maintenance locations. The sites provide current and future planned maintenance, and can also offer drivers detour routes as well as additional details to help them plan their trips.

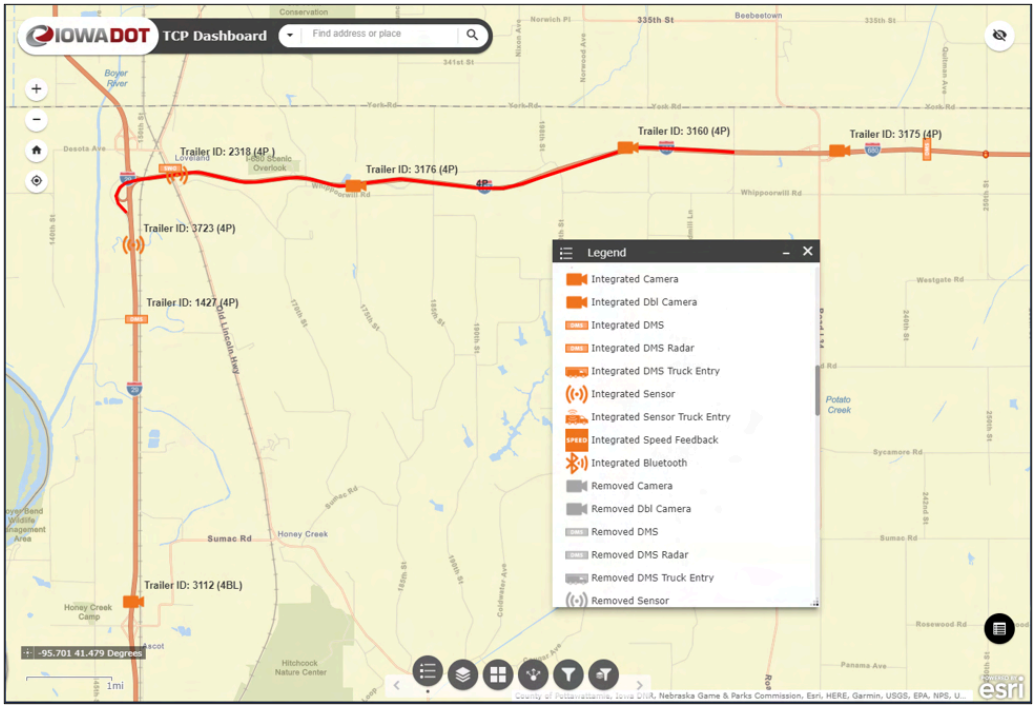


Figure 3.21: Intelligent Work Zone for I-880 Resurfacing Project (formerly I-680)

Figure 3.22: Image of a work zone message board displaying "Slow Traffic Ahead" on a multi-lane highway

Source: Iowa State University

Figure 3.23: Iowa DOT Crash Dashboard

4| Transportation Options

Connecting People, Places, and Opportunity

Communities and regions with a multitude of transportation options are more vibrant, economically competitive, and sustainable places. Whether a trip serves the purposes of employment, education, activity in the community, or access to vital services, the community and the user both see an enhanced benefit due to the connection made. Through these goals and strategies, residents will see an increase in accessibility options for the RPA-18 region.

More transportation options = More opportunity

Movement of people and goods often requires many different modes of transportation, whether via personal automobile, public transportation, freight trucks & rail, or even by air and water. Transportation modes like cycling provide many with a recreational transportation opportunity, and when supported heavily enough, can be a viable commuting option. Communities with multiple transportation options promote opportunities to enhance the connectivity between modes and the transportation choices available to residents in the RPA-18 region.

System Conditions and Connectivity Needs

The RPA-18 region offers a range of transportation options, but gaps remain in infrastructure and service coverage:

- Incomplete sidewalk and bike networks, especially between common destinations and along key corridors
- Limited intercity bus availability and scheduling
- Rural public transit that may not align with shift work or short-notice needs
- A lack of connected infrastructure between modes, such as bus stops near trails or park-and-ride options

Improving these connections can help expand access to employment, medical care, and other critical services throughout the region.

Future Priorities and Enhancements

RPA-18 is committed to developing an integrated transportation system that meets regional needs now and into the future. Future strategies include:

- Projects that enhance roadway safety, improve intersections, support capacity needs, and expand rural access
- Enhancements to transit service and intercity bus routes, especially those that link rural areas to regional centers
- Expanded investment in sidewalks, multimodal trails, and safe bicycle routes, with a focus on connectivity and safety in accordance with 23 U.S.C. 217(g)
- Infrastructure that supports freight movement, including last-mile connections for agricultural and industrial traffic

- Projects that support access for all users, including seniors, students, and those without personal vehicles

4.1 | Passenger Transportation

Rural transit within the RPA-18 region is provided by the Southwest Iowa Transit Agency (SWITA), also serving RPA-13. The goal of this service is to maximize user trips on a daily basis and service as many people as possible. SWITA, based in Atlantic, consists of 103 vehicles and 82 employees providing various services throughout the eight-county region.

Service is door-to-door, and is offered 24/7 weekdays pending vehicle and driver availability, with live dispatch available Monday through Friday, from 6:00 a.m. to 5:00 p.m. In addition to its in-house fleet, SWITA has historically partnered with taxi companies, human service agencies, and other private providers to expand service capacity when needed.

As a Metropolitan Planning Organization (MPO) and RPA administrator, MAPA works with federal, state, and local agencies and citizens to coordinate transit at the regional level. MAPA receives federal funds to develop regional transportation plans and programs and to coordinate technical and policy committees that include transit as a core focus.

Like much of the nation, the RPA-18 region is experiencing the demographic shift of an aging population. This shift places new and growing demands on existing transportation, housing, and social service systems, especially in rural areas where residents are more dispersed and services are harder to reach. The combination of rising demand and service limitations in outlying communities presents an ongoing challenge for transit providers like SWITA, who must balance resource constraints with a growing need for accessible, flexible mobility options.

Existing Conditions: Southwest Iowa Transit Agency (SWITA)

Figure 4.1: Photo of a SWITA Bus

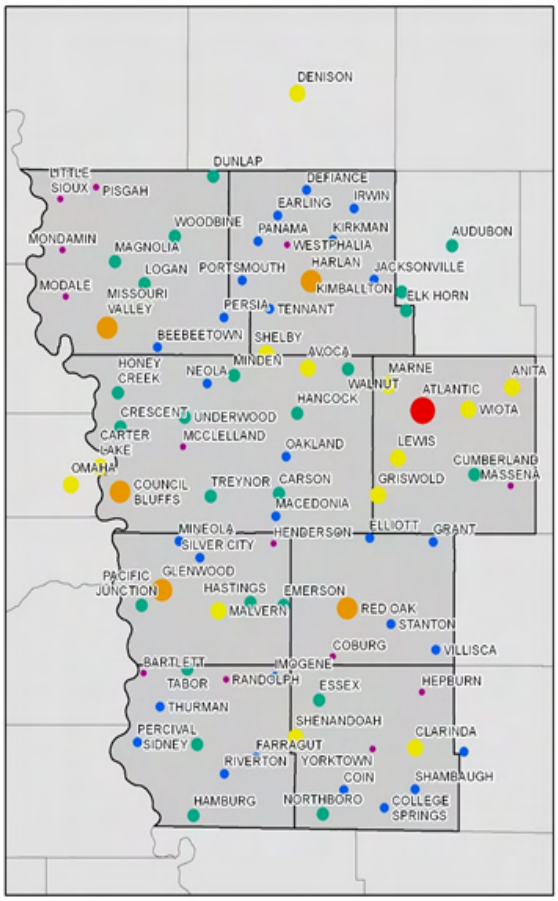
SWITA provides services to older adults, individuals with disabilities, and Head Start students within the RPA-18 area. In order to meet the needs of various agencies and organizations and to extend the reach of SWITA, the service is structured in a variety of ways, including public trips, contracted services, and specialized transportation.

Figure 4.2 shows a breakdown of the total rides and ride count types for fiscal year 2022, and Figure 4.3 shows the trip origins for each of the cities in the RPA.

Figure 4.2: Ride Counts by County of Origin for FY2022.

County	Total Rides	Disabled Rides	Elderly Rides	General Public
Harrison	15,142	8,518	5,448	1,176
Mills	47,004	20,851	756	25,373
Pottawattamie	243,943	164,352	2,687	76,904
Shelby	36,093	9,550	3,343	23,200

Figure 4.3: SWITA Service Locations and Trip Origins Across the RPA-18 Region



Types of Service

SWITA offers a variety of service models to meet the needs of different communities, agencies, and user groups throughout the RPA-18 region:

- **Direct Service** - SWITA provides both the vehicle and driver, billing partner agencies by the mile, hour, or flat rate.
- **Taxi Voucher** - SWITA contracts with cab companies to accept taxi vouchers provided for older adults and individuals with disabilities. SWITA reimburses the difference between the voucher value and fare, and includes these rides in its service totals.
- **Vehicle Lease (Agency Operated)** - SWITA supplies a vehicle for use by an agency's staff, allowing partner organizations to operate the service independently.
- **Employee/Student Commuter Service** - SWITA operates demand-based commuter routes that transport residents to worksites or schools. These routes pick up from a single location and drop off at the destination. Service is available in Council Bluffs, Harlan, and Atlantic, as well as Monogram Food, with expanded capacity to meet growing demand.
- **Shopping Trips** - SWITA offers prescheduled shopping transportation in Fremont, Harrison, and Page Counties as well as in the City of Atlantic.
- **Summer Fun Bus** - SWITA operates a seasonal taxi for kids service during summer break in cities with taxi services.

Vehicle Inventory

SWITA maintains a fleet consisting of full-sized buses, light-duty buses, and ADA-compliant minivans that serve most of the RPA-18 region, with vehicle ages ranging from one to sixteen years. Additional fleet details can be found in Figure 9.1 in Appendix A.

In addition to its core rural service, SWITA provides special transit services within the City of Council Bluffs and offers open public transit in Atlantic, Glenwood, Harlan, Missouri Valley, Red Oak, and Shenandoah. Medical trips are available and provided throughout the entire region. SWITA also partners with local employers to operate work-route programs, which continue to expand in response to regional demand.

SWITA is the primary transit provider in the RPA-18 region, with its services occasionally supplemented by cab companies, social service agencies, and church volunteer groups. Given the region's low population density, ridesharing apps have not emerged as a practical or sustainable option for most communities. Instead, transit coordination is managed through a regional Transportation Advisory Group (TAG), which typically meets twice a year. The TAG includes representatives from local social service agencies, governmental entities, hospitals, and MAPA.

Health and Human Services Agencies

Health and human service agencies generally provide services to and from medical appointments, work, and/or community services during weekday hours for their clients. Other rides exist for transportation to social events, activities, or shopping that may occur in evenings, on an "as needed" basis. The following table lists services available through agencies that

responded to the provider survey or were included in the previous plan update. These agencies provide transportation using agency-owned or leased vehicles, contracted transportation services, or volunteers/staff driving personal vehicles. Some agencies provide only services for persons with disabilities or persons 65 years of age (as noted below).

Figure 4.3: Health and Human Services Agency Inventory

Agency	County	City	Type of Service
Amerigroup	Statewide	WestDesMoines	Elderly/Disability
Bethany Heights	Pottawattamie	Council Bluffs	Disabled/Youth
Boost4Families	Pottawattamie	Oakland	Other
CarterLakeSeniorCenter P	Pottawattamie	CarterLake	Elderly
JennieEdmundsonHosp.	Pottawattamie	CouncilBluffs	Medical
SalemLutheranHomes	Shelby	ElkHorn	Elderly
TriviumLifeServices	Harrison	MissouriValley	HumanService

Needs and Projected Gaps in Transit Service

Like many rural regions, RPA-18 continues to face significant transportation challenges driven by an aging population, widespread geography, and limited local funding. These issues place increasing pressure on transit services and contribute to persistent service gaps. Findings from the 2024 Provider Survey, public input, and discussions with SWITA management and the Transportation Advisory Group (TAG) have highlighted key transportation needs, barriers, and deficiencies across the region.

Deficiencies:

1. Employment and workforce transit options
2. Expanded routes and hours of operation
3. Accessible vehicles (bariatric, wheelchair, etc.)
4. Affordability of service for clients

Barriers:

1. Driver shortages

2. Vehicle availability and supply chain disruptions
3. Limited coordination between providers
4. SWITA fleet expansion

Given the sparse population spread over a large area, combined with the limited availability of resources in equipment, manpower, and funding, addressing these deficiencies is always a challenge.

Goals and Strategies - Passenger Transportation Plan

The following goals were identified by the Iowa Department of Transportation as the foundation for Regional Planning Affiliations statewide to develop Passenger Transportation Plans. These goals guide the planning efforts of SWITA and its partners. Through continued coordination between the SWITA Transportation Advisory Group (TAG) and the MAPA Coordinated Transit Committee (CTC), regional priorities and strategies are developed to support the implementation of these goals. SWITA coordinates the TAG meetings, while MAPA facilitates the CTC, with both agencies actively participating in each other's planning processes to ensure alignment across the region.

Goals

1. Improve transportation services
2. Increase passenger transportation coordination
3. Create awareness of unmet needs
4. Develop new working partnerships
5. Assist decision-makers, advocates, and consumers in understanding the range of transportation options available
6. Develop justification for future passenger transportation investments
7. Eliminate overlapping of services

Priorities

Short-term and long-term:

1. Recruit, train, and retain drivers: Addressing the ongoing driver shortage will help maintain existing routes, meet peak-hour service demand, and enable any future service expansion. SWITA will also expand training efforts, explore other benefits for drivers, and increase the number of full-time driving staff to help address its current state.
2. Increase transit options: Expanding work-related and general public routes in the region will improve access to jobs, healthcare, and other essential services. Additional focus is also needed on areas with limited service hours and affordability challenges for some clients.
3. Update and grow the transit fleet: Maintaining and modernizing SWITA's vehicle fleet will help ensure safe, efficient, and accessible service. Increasing ADA-compliant and

specialized vehicles will improve mobility for elderly and disabled passengers in the region, as RPA-18 is characterized by an aging population.

4. Pursue increased funding opportunities: Securing additional funding helps SWITA offset rising operational costs and maintain affordable fares. It also allows for continued investment in vehicles, staffing, and service improvements, ensuring the system can grow alongside community needs.

Strategies

The strategies outlined in the previous PTP are relevant, and the region continues to work toward these goals as modified under the current PTP. The coordination strategies for the current PTP are shown in the table below.

Figure 4.4: PTP Coordination Strategies

Priority	Gaps and Needs	Strategies
Recruit, Train, and Retain Drivers	● Driver shortage ●Training needs ●Wages are not competitive	SWITA training efforts ●Continue to explore additional benefits for drivers ●Increase the number of full-time drivers
Increase Transit Options	● Limited routes ● Limited hours ● Limited connection with private ride-sharing and taxi services ● Too expensive for some clients	● Expansion of employer-specific route options ● Collaborate with taxi and ride-sharing services
Update and Grow Transit Fleets	● Supply chain issues ● Inflation ● Accessible vehicles (wheelchair, bariatric)	● Iowa DOT renegotiating contracts ● Preparation and readiness for electric vehicle transitions
Increase Funding Opportunities	● Client affordability ● Driver wages ● Fuel Costs ● Inflation and vehicle costs	● Pursue recurring federal funding opportunities ● Pursue recent funding opportunities from the Bipartisan Infrastructure Bill

Goal #1: Recruit, Train, and Retain Drivers

Driver shortages remain the top challenge to maintaining and expanding transit service across the region. Federal training requirements, limited rural training access, and competition with

other industries have made recruitment difficult. SWITA has taken proactive steps by expanding in-house training programs and exploring ways to increase driver retention.

Action Items

1. Expand SWITA's internal CDL and ELDT certification and training programs.
2. Increase the number of full-time drivers to maximize training investment.
3. Offer additional benefits to attract and retain drivers, including insurance and paid time off.

In 2022, federal ELDT rules went into effect, requiring new and existing CDL drivers to complete specific classroom and behind-the-wheel training before operating passenger vehicles. This significantly impacted smaller and rural agencies like SWITA. In response, SWITA began preparing to become a certified testing site for CDL licensing and plans to fully implement internal certification by April 2023. These steps are intended to improve access to training, reduce onboarding time, and establish a reliable internal pipeline of qualified drivers.

Goal #2: Increase Transit Options

Meeting the transportation needs of rural workers, students, and the general public requires expansion of routes and improved coordination with private transportation services. Efforts continue to focus on employment-based transportation, taxi services, and underserved populations.

Action Items

1. Expand employer-based routes, especially in Harlan, Red Oak, and Council Bluffs
2. Collaborate with taxi and rideshare services in areas with limited transit demand
3. Explore partnerships with employers for subsidized workforce transit routes

Since the last PTP update, SWITA has expanded multiple employer-based transit routes and continues to work closely with large regional employers to address workforce transportation needs. SWITA is currently in discussions with ConAgra in Council Bluffs to explore the feasibility of new employee transit services. In addition to fixed routes, SWITA maintains a cooperative agreement with Bluffs Cab in Council Bluffs to provide flexible, demand-based services in areas not currently covered by standard transit. While major rideshare platforms remain unavailable in much of the region, their potential use is being monitored for future integration. These combined efforts aim to close service gaps, particularly in rural areas where traditional transit models are not yet economically viable.

Goal #3: Update and Maintain an Adequate Transit Fleet

Fleet maintenance is imperative to providing adequate transit services. SWITA employs one full-time fleet mechanic and a full-time mechanic's assistant who assesses vehicle reliability and completes required maintenance/repairs to the fleet. Vehicle life is assessed based on Iowa DOT standards, and replacement is completed on a rolling timeline. SWITA will continue to

work with human services agencies to determine where partnerships can occur to promote sustainable and equitable ridership.

Action Items

1. Maintain vehicle replacement on a rolling schedule
2. Evaluate partnerships for vehicle leasing or shared use with agencies
3. Explore fleet storage facility options near Council Bluffs

SWITA continues to replace vehicles on a rolling schedule but has faced recent challenges due to supply chain disruptions, inflation, and vendor contract cancellations under Iowa DOT's statewide procurement program. In response, Iowa DOT renegotiated vehicle pricing and introduced a shortfall assistance program to help agencies cover rising costs. SWITA plans to utilize this program where applicable in future purchases. In addition, SWITA has initiated early discussions around long-term electric vehicle conversion. Initial plans anticipate introducing a small electric fleet primarily operating in Council Bluffs and Atlantic before expanding into rural routes as vehicle range technology improves. These efforts reflect SWITA's commitment to maintaining a safe, modern, and sustainable fleet.

Goal #4: Increase Funding Opportunities

As transit needs grow, SWITA must secure diversified and sustainable funding to support both operations and fleet modernization. Inflation and growing ridership have pushed funding needs beyond traditional sources.

Action Items

1. Pursue competitive grants
2. Assist local agencies with grant writing and project development
3. Expand local funding partnerships with cities and counties

While SWITA receives regular formula funding from the Federal Transit Administration and Iowa DOT, the agency is increasingly focused on pursuing competitive grant opportunities to support growing operational and capital needs. To strengthen funding efforts, SWITA is working closely with RPA-13 and RPA-18 staff to assist with grant writing, particularly for smaller agencies that may lack internal capacity. Also, SWITA is actively exploring new funding programs made available through the Infrastructure Investment and Jobs Act (IIJA), which allocated $1.7 trillion nationwide for transportation initiatives. Accessing these funds will be critical for expanding services, modernizing the fleet, and maintaining fare affordability across the region.

Exploratory or Long-Term Strategies

Coordinate Community Development Planning Efforts

SWITA and the RPAs will continue to explore stronger integration between transportation and community development efforts. Successful Community Development Block Grant (CDBG) and Economic Development Authority (EDA) initiatives in the region have supported infrastructure

and business growth. Coordinating these efforts with transportation planning can create more localized job opportunities, reducing the need for long commutes and enhancing the sustainability of rural communities.

Broadband Internet Collaboration

As broadband access expands across Southwest Iowa, opportunities for remote work and telehealth may reduce transportation demand. However, many of the region's current transit users are employed in in-person roles (e.g., factory or service work). SWITA and planning staff will continue to monitor broadband expansion and explore ways to collaborate on shared goals that reduce transportation barriers and promote equitable access to employment and services.

Full Electric Vehicle Rollout

The availability and reliability of electric vehicles have increased rapidly since the last update of this planning document in 2018. Current electric vehicle strategies note a few exploratory options for electric vehicles within communities. As technology advances, preparedness by the RPA 13-18 staff could ensure that conversion to electric vehicles could be done more rapidly as technology and production capacity allow and advances in the coming decades.

Broader Commuter Transit Expansion

Locally and nationally, efforts to expand regional transportation have been proposed to provide more non-single occupancy vehicle options to persons traveling locally or regionally. These examples include expansion of commuter rail service between the Omaha and Des Moines Metropolitan Areas, enhancement of charter bus services, and expanded vanpooling options through public and private carriers, which are currently implemented in other regions of the Country. Communities like Atlantic have strong commuting patterns to both the Omaha and Des Moines Metropolitan Areas, and could directly benefit from these services if they become viable options and funding is available, though expanding on the existing SWITA service is the most viable and immediate option.

4.2 | Nonmotorized Transportation

Inventory

Trails

The RPA-18 region features four major trails—the Wabash Trace, the Lewis and Clark Trail along the Missouri River (proposed), the Mormon Trail, and the American Discovery Trail—along with two minor trails such as the Easton Trail and the Highway 191 connection. Existing trails also include parts of the Railroad Highway Trail and the Great American Rail-Trail route in southwest Iowa.

On October 9, 2024, MAPA hosted a trails workshop in Neola, IA, where participants prioritized trail connections that would close gaps in the Great American Rail-Trail, such as linking Neola to

Atlantic or Council Bluffs, and connecting the T-Bone Trail to Atlantic. These connections are recognized for their public health, community, and economic benefits.

MAPA continues to work with Golden Hills RC&D and the Frontier Iowa Trails (FIT) network to advance regional trails. Efforts focus on raising awareness, coordinating development plans, connecting organizers with funding, and prioritizing projects most likely to succeed. Small completed segments of the Great American Rail-Trail are seen as catalysts to secure future funding and support. MAPA and FIT will continue strategic workshops and meetings to maintain momentum and foster collaboration.

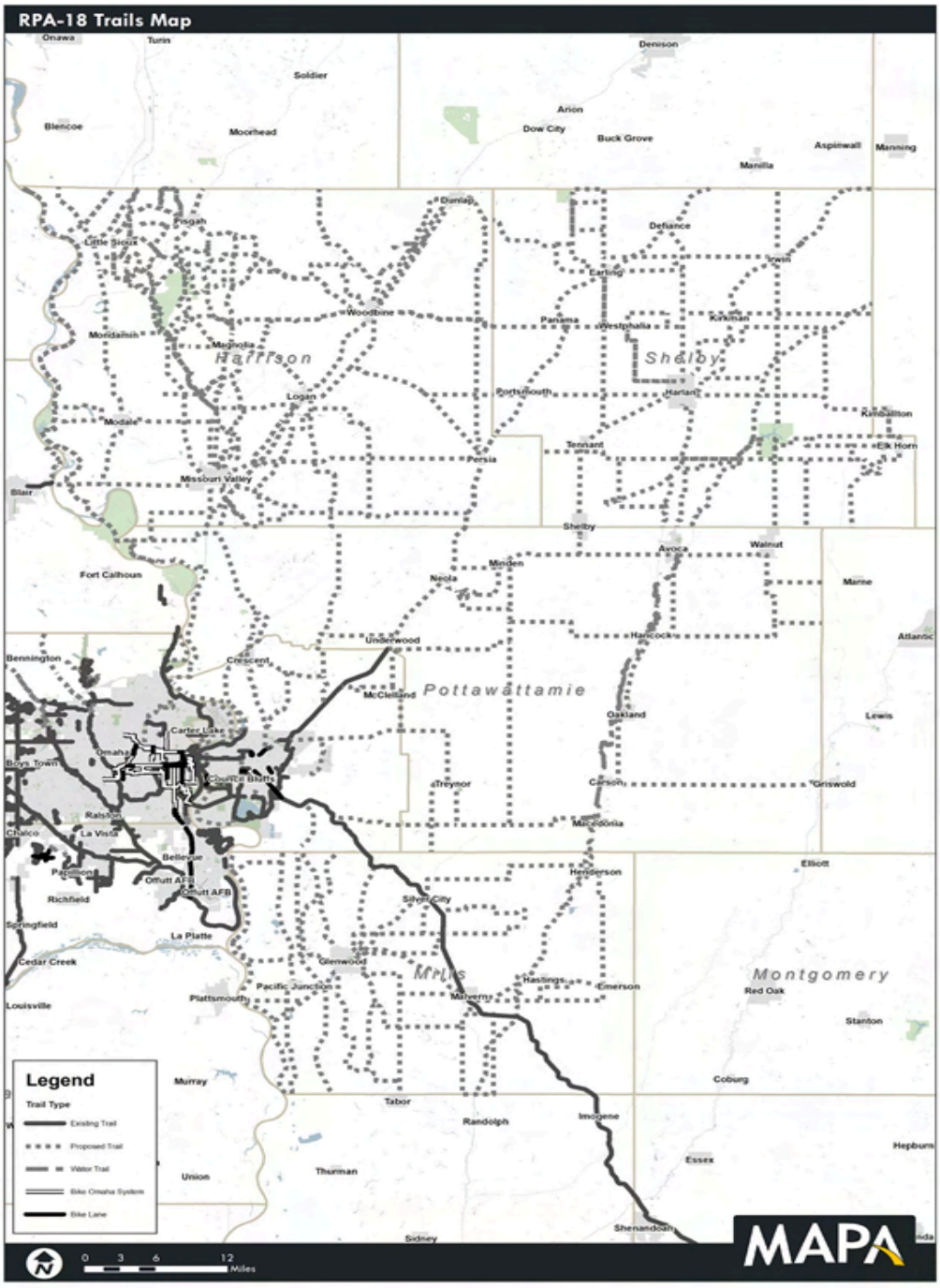


Figure 4.5: Bicycle Trail Facilities in RPA-18

Figure 4.6: Photo of a segment of Wabash Trace Nature Trail containing a rail bridge

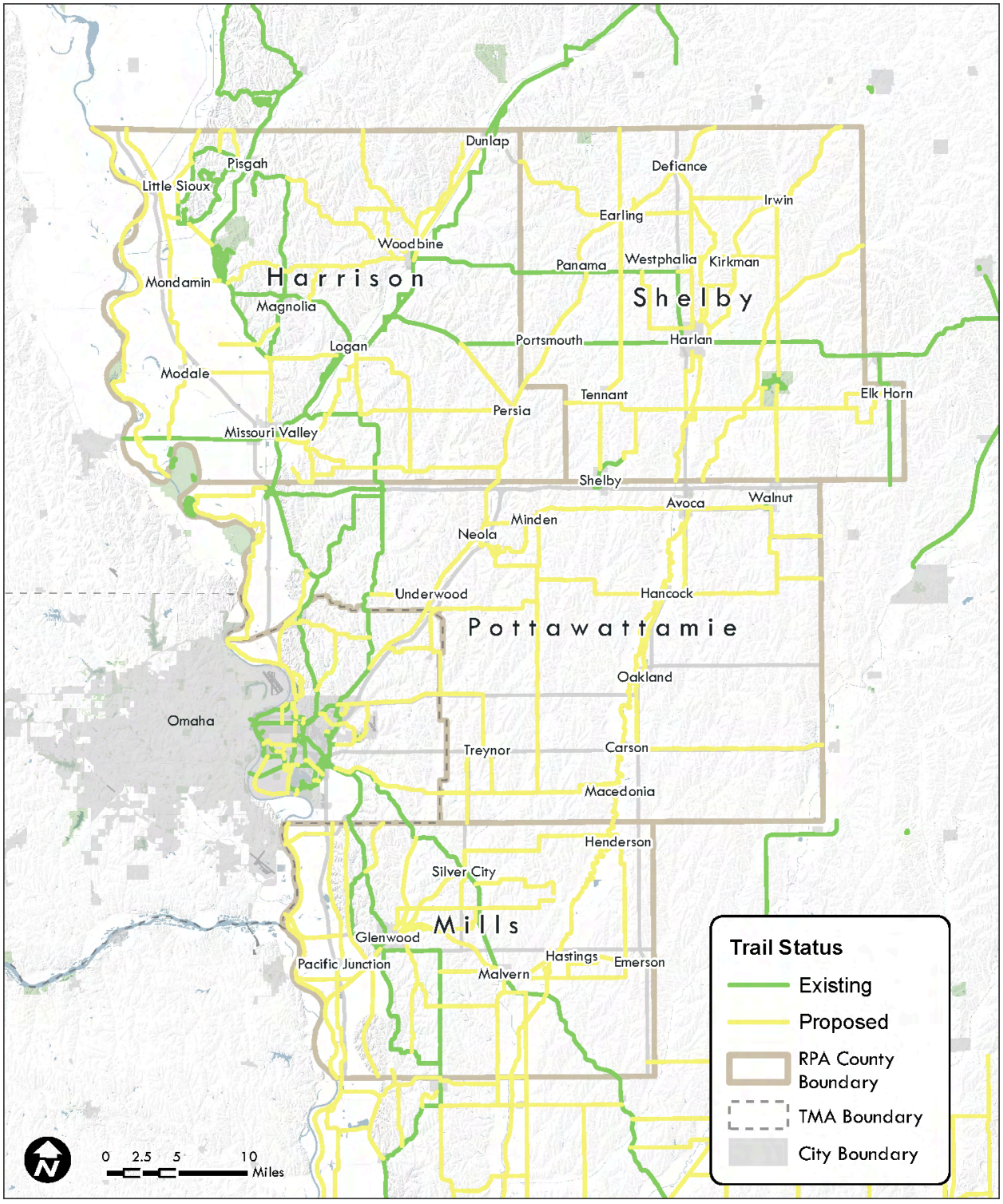


Figure 4.7: Existing and Proposed Trails in RPA-18

The Wabash Trace is a ground stone trail that connects the Council Bluffs metro area to cities

and towns in Pottawattamie and Mills counties, and as far south as the Missouri state line and beyond.

The proposed Lewis and Clark Trail (shown on the right) will use the Missouri levee system as a general base with a hard surface trail atop. It will trek across RPA-18 along the Missouri River from Fremont County into Mills, Pottawattamie, and Harrison counties and continue into Monona County to the north. A signage plan for the on-road portion is in development, and signs should be installed in 2020.

The American Discovery Trail and the Mormon National Historic Trail are nationally-designated trail systems that use existing highways, trails, and other routes to provide a link across the nation. The American Discovery Trail enters RPA-18 from Montgomery County along US-34 and merges with the Wabash Trace Trail northwest of Malvern, Iowa. The Mormon National Historic Trail enters RPA-18 from Cass County on IA-92 and crosses Pottawattamie County, where it ties in with the trail system in Council Bluffs. Both trails currently use the US-275 bridge to cross the Missouri River and connect to the Nebraska trail system in Omaha.

Minor trails in RPA-18 are the Walnut Nature Trail and the Stone Arch Trail in Shelby, Iowa. These trails do not connect to a regional trail network but offer trail access to the towns of Shelby and Walnut.

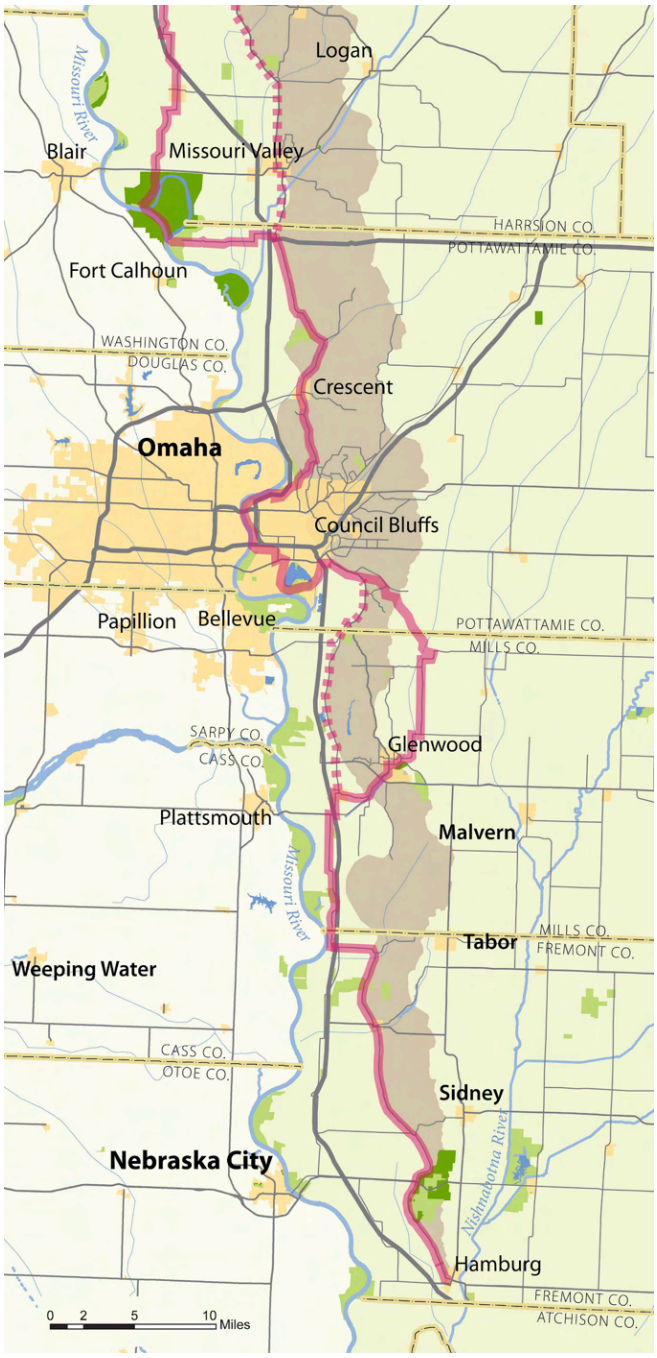


Figure 4.8: Scenic Byways in RPA-18

Scenic Byways

Development of the Loess Hills Scenic Byway management plan has provisions for trails along this route through Harrison, Pottawattamie, and Mills counties in RPA-18 and to the counties

north and south of RPA-18. Another Scenic Byway, the Western Skies Scenic Byway, located in Harrison and Shelby counties, is included in the Iowa Scenic Byways Pilot Program and has been included in this LRTP.

Figure 4.9: Photo of a Loess Hills National Scenic Byway sign along a rural roadway with hills in the background
Source: Iowa DOT

Sidewalks

RPA-18 comprises four counties that are rural in nature. Sidewalk development is guided by the local codes and regulations of individual municipal jurisdictions. Inventories related to sidewalks are spread over multiple municipalities, and this LRTP accepts the fact that these facilities are an important vehicle for pedestrian traffic and assumes that sidewalk facilities exist in local municipalities based on local regulations requiring such facilities.

Figure 4.10: Active Transportation System Needs and Improvement Strategies

Category	Identified Deficiency	Proposed Improvement
Trail & Scenic Byways	• Trails are not fully connected • Road signage is limited • Few bike lanes or paved shoulders	• Expand and connect trails • Improve signage and safety • Add scenic byways & historic sites • Ensure ADA accessibility

Sidewalks	• Gaps in sidewalks • Poor maintenance • Limited accessibility for disabled users	• Build and maintain sidewalks • Retrofit for ADA compliance • Utilize Safe Routes to School & other grants
Private Development	• Limited funding for trails & non-motorized transportation	• Encourage and support private trail & pedestrian projects • Collaborate with local governments and organizations

Financial

There are multiple state and federal funding sources available to RPA-18 to fund trails, scenic byways, and historic preservation. These sources are grant-based and reviewed, approved, and prioritized by the Iowa DOT. Additional opportunities from IIJA include discretionary funding opportunities specifically targeted at Rural communities and set-asides for larger funding sources like Better Utilizing Investments to Leverage Development (BUILD) grants.

RPA-18 provided an annual allocation of federal Surface Transportation Block Grant (STBG) funds through the Transportation Alternative Program (TAP). Projects will be reviewed and prioritized, and funded with the accrued funding attributable to RPA-18. Financial constraints of these funds will be based on funds currently available or to be made available to RPA-18 based on Iowa DOT allocations. Future TAP revenues will not exceed those anticipated to be received under the current federal funding legislation.

Additionally, RPA regional TAP and State TAP funding attributable to street and highways may be drawn on to supplement STBG funds or to fully fund a transportation alternatives project. Programming of RPA regional TAP funds for these projects is at the discretion of the RPA-18 Policy Committee.

Project Selection and Prioritization

RPA-18 provides an application-based, competitive process for selecting Transportation Alternative Program (TAP)projects in the area. Trails, historic preservation, and scenic byways are ranked separately based on the merits associated with each category. Projects are then prioritized based on their respective ranking within each category and overall. Projects are programmed in the RTIP based on financial availability. The selection, prioritization, programming, and subsequent funding of any enhancement project are at the discretion of the RPA-18 Policy Committee.

5| Preservation and Resilience

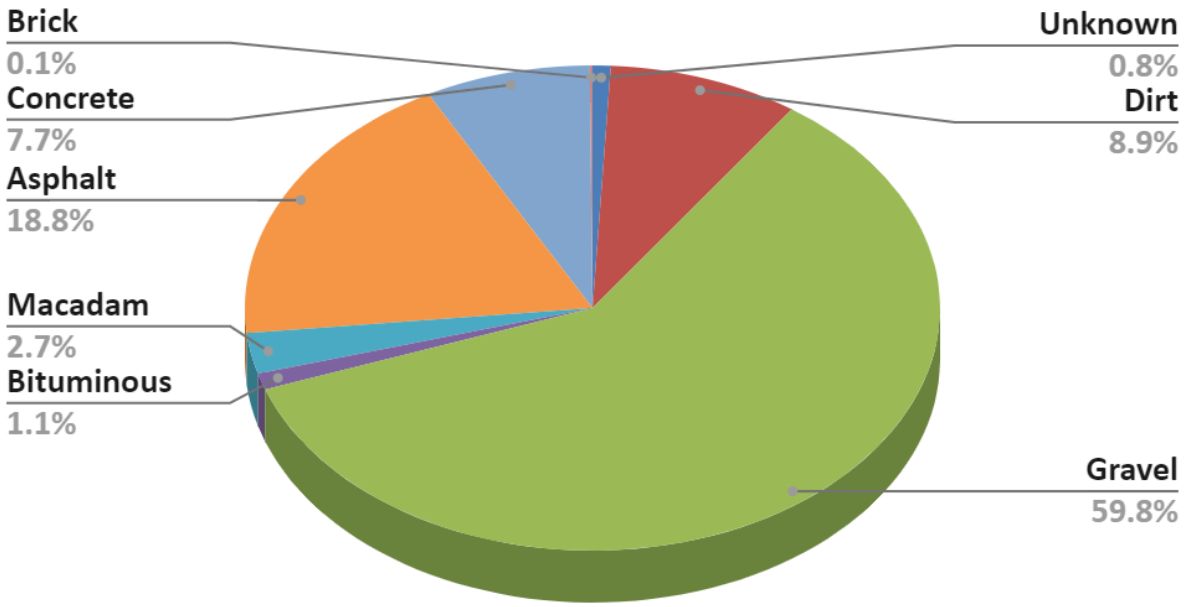
Prioritize maintenance of existing transportation assets– including roadways, bridges, trails, and transit vehicles

5.1 | Pavement Management

Roadway Characteristics

The street and highway network in the RPA-18 is represented by some 4,868 miles of roadway constructed with various surface types. More than half (59.8%) of the roadways in the RPA-18 are surfaced with gravel.

Figure 5.1: Roadway Pavement Type in RPA-18



Highway Category

Interstates 29, 80, 680, and 880 account for nearly 5.1% of the roadways in the region. State and Federal highways account for approximately 7% of the roadway in the region as well. Street and highways eligible for Farm to Market Funds represent nearly 29% of the street and highway inventory, with the remaining 59% being completely local in nature. The distribution of roads by functional classification is shown in the following figure.

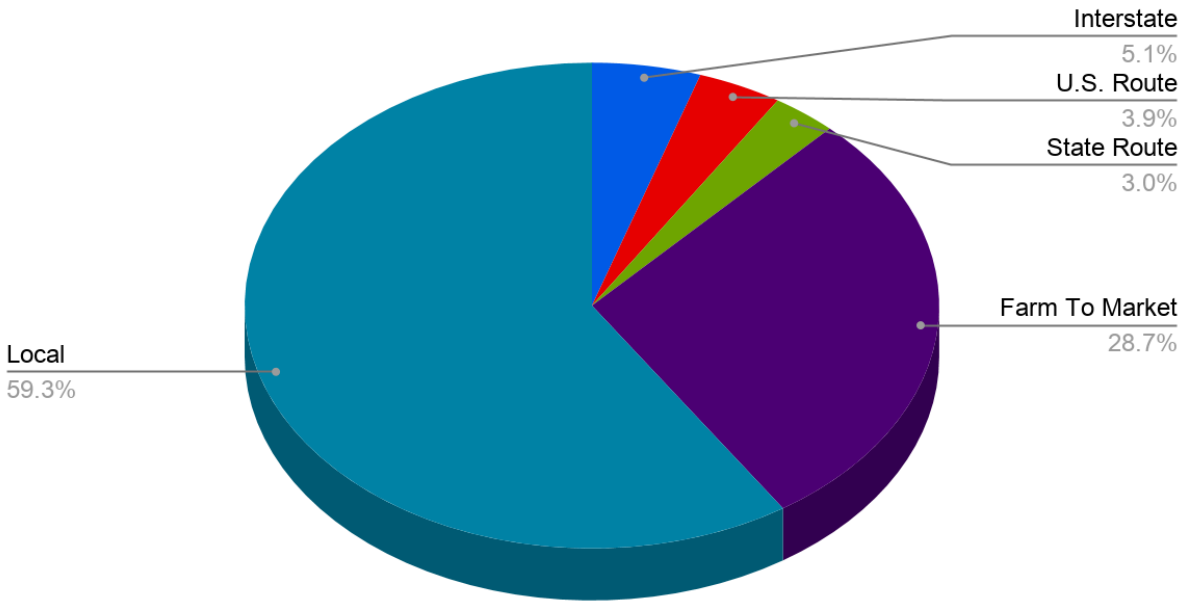
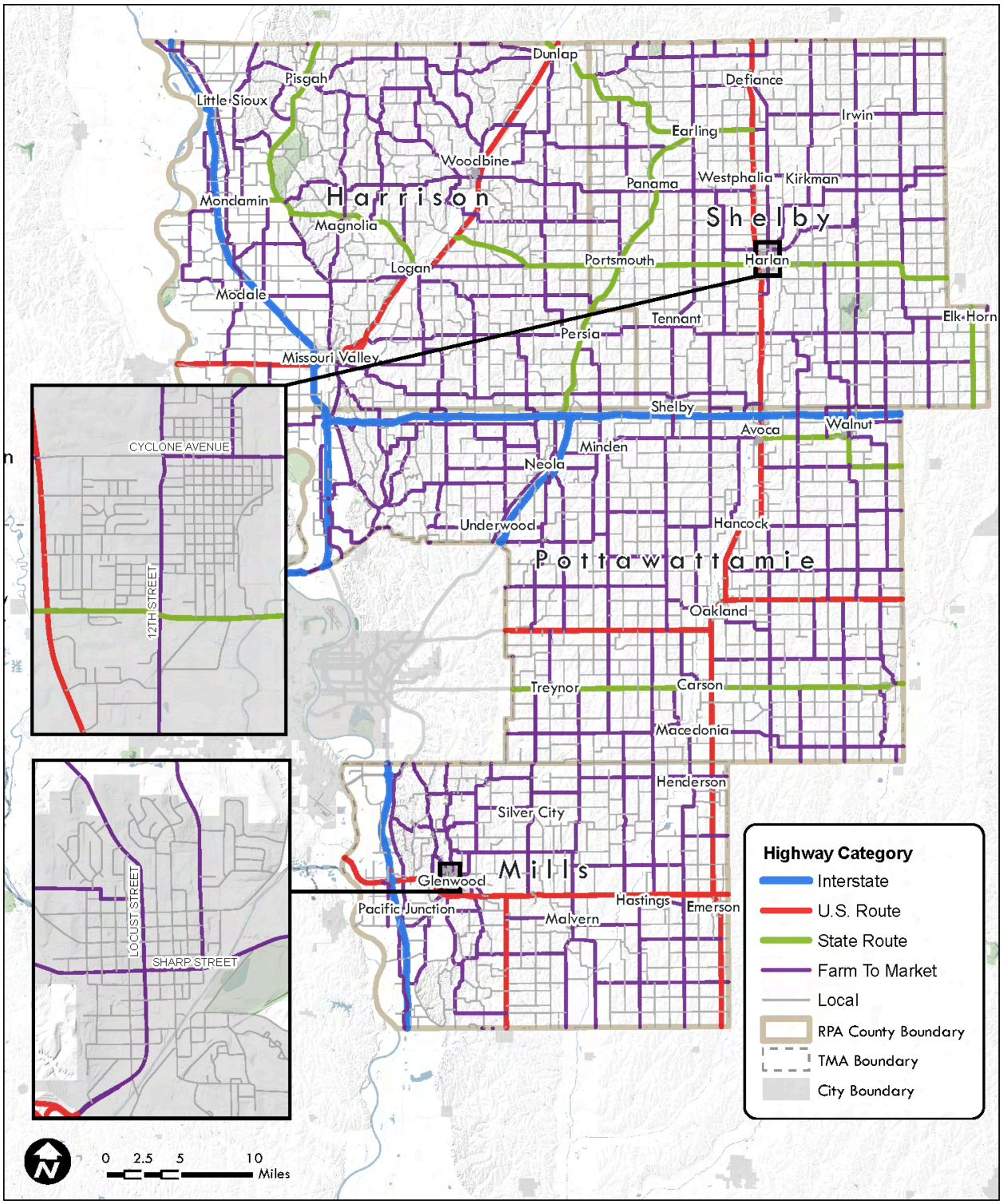


Figure 5.2: Classification of roadway facilities in RPA-18

Figure 5.3: Distribution of Roadways in RPA-18 by Highway Category



The functional classification of a roadway describes the role it plays with respect to the entire network and establishes an expectation for roadway design, as well as eligibility for federal funding.[24] The roadway management is conducted by the Iowa DOT, with any classification changes being requested through them by the respective jurisdiction. Limits are set for the total number of miles of groups of functional classifications at either the county or city level (for rural or urban roadways) as described in the figure below.

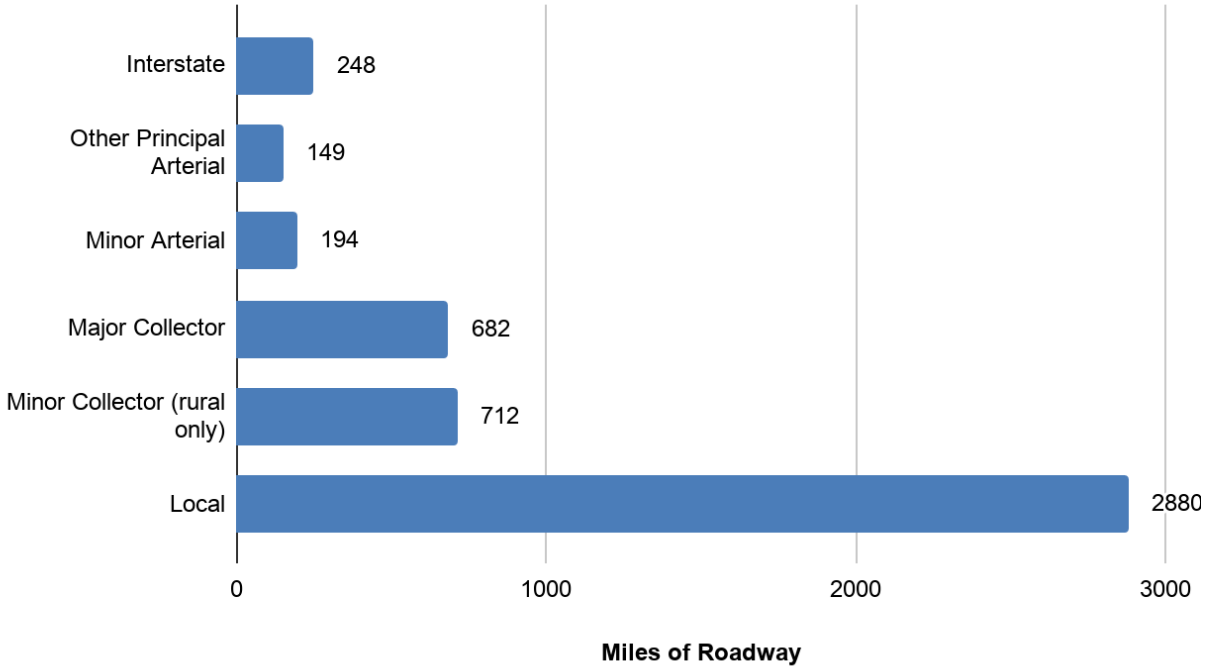


Figure 5.4. Distribution of Roadways in RPA-18 - Functional Classification

[24] FHWA. (2013 Edition). Highway Functional Classification Concepts, Criteria and Procedures. https://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/

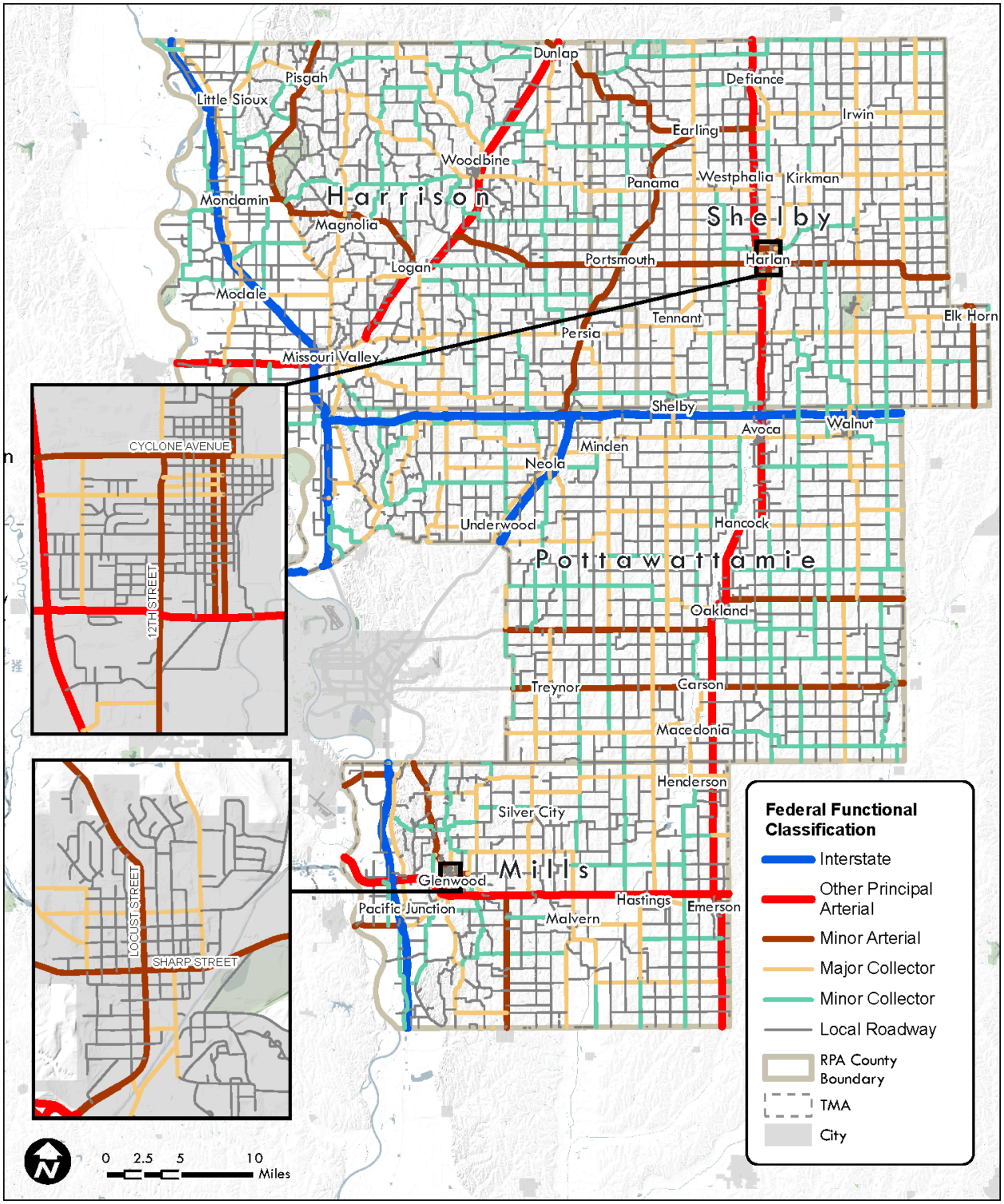


Figure 5.5: RPA-18 Roadways by Federal Functional Classification

Figure 5.6: Streetview image of an RPA-18 Minor Arterial roadway

Iowa Pavement Management Program

Since 2014, Iowa DOT has funded a program that collects pavement distress data on all RPA-18 paved roads. This data was collected on a biannual basis using vehicle-mounted equipment to assess road conditions, including information on cracks and the quality of the ride.[25] In addition to the distress data collection, video logging of the right of way along the collection vehicle's path, as well as the collected pavement surface image and elevation, is provided. This information is made available through a web service called PathWeb.[26] The specific pavement condition data collected through the IPMP program are listed in the table below.

This data, collected for segments of paved roads throughout the county and cities, is then used to calculate the Pavement Condition Index (PCI) for each segment. The PCI within cities is presented as City PCI, which uses a lower threshold for the IRI component, due to the slow speeds drivers would expect to use on these roadways.

[25] https://ctre.iastate.edu/ipmp/ipmp-services/

[26] http://rams.iowadot.gov/pathweb/

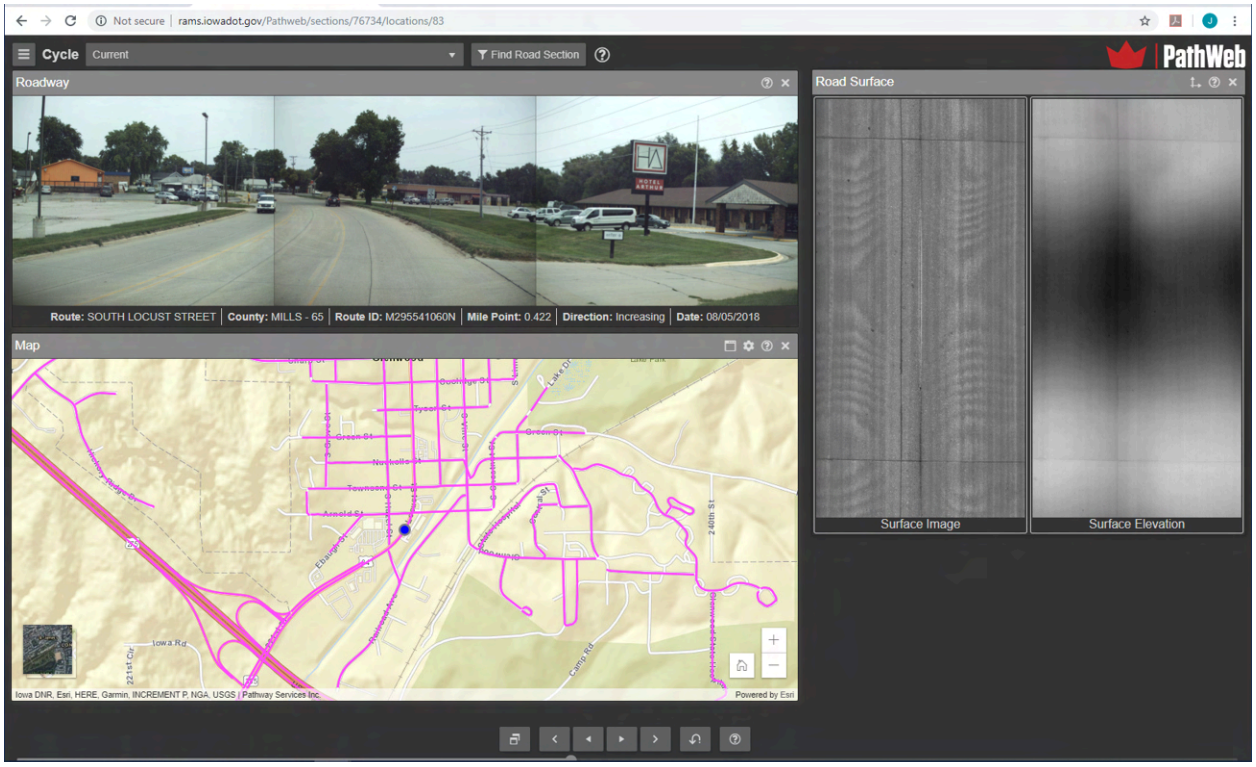


Figure 5.7: Raw Data Available from IPMP Data Collection

Figure 5.8: Pavement Condition Data

Smoothness	International Riding Index (IRI)
Rutting	For Asphalt - measure of depression of wheel paths
Faulting	For Concrete - differential vertical displacement between adjoining slabs of pavement
Cracking	For Concrete - transverse, longitudinal, longitudinal-wheel-path, and durability
	For Asphalt - transverse, longitudinal, longitudinal-wheel-path, and alligator cracking

[27] InTrans Research. Pavement Management Perforamnce Mdoeling: Evaluating the Existing PCI Equations. https://intrans.iastate.edu/research/completed/pavement-management-performance-modeling-evaluating-the-existing-pci-equations/

Data Collection Program

The existing data collection program (all paved roadways collected every two years) will be shifting to a four-year plan for all local paved streets/roads (with the exception of local NHS roads). As seen in the figure below, RPA-18 sits within the 'Even-A -' collection area, which will be collected again in 2020 and every subsequent four years. An option is available that provides for the collection of the RPA local streets and roads in the second of these four years, to be funded by the RPA.

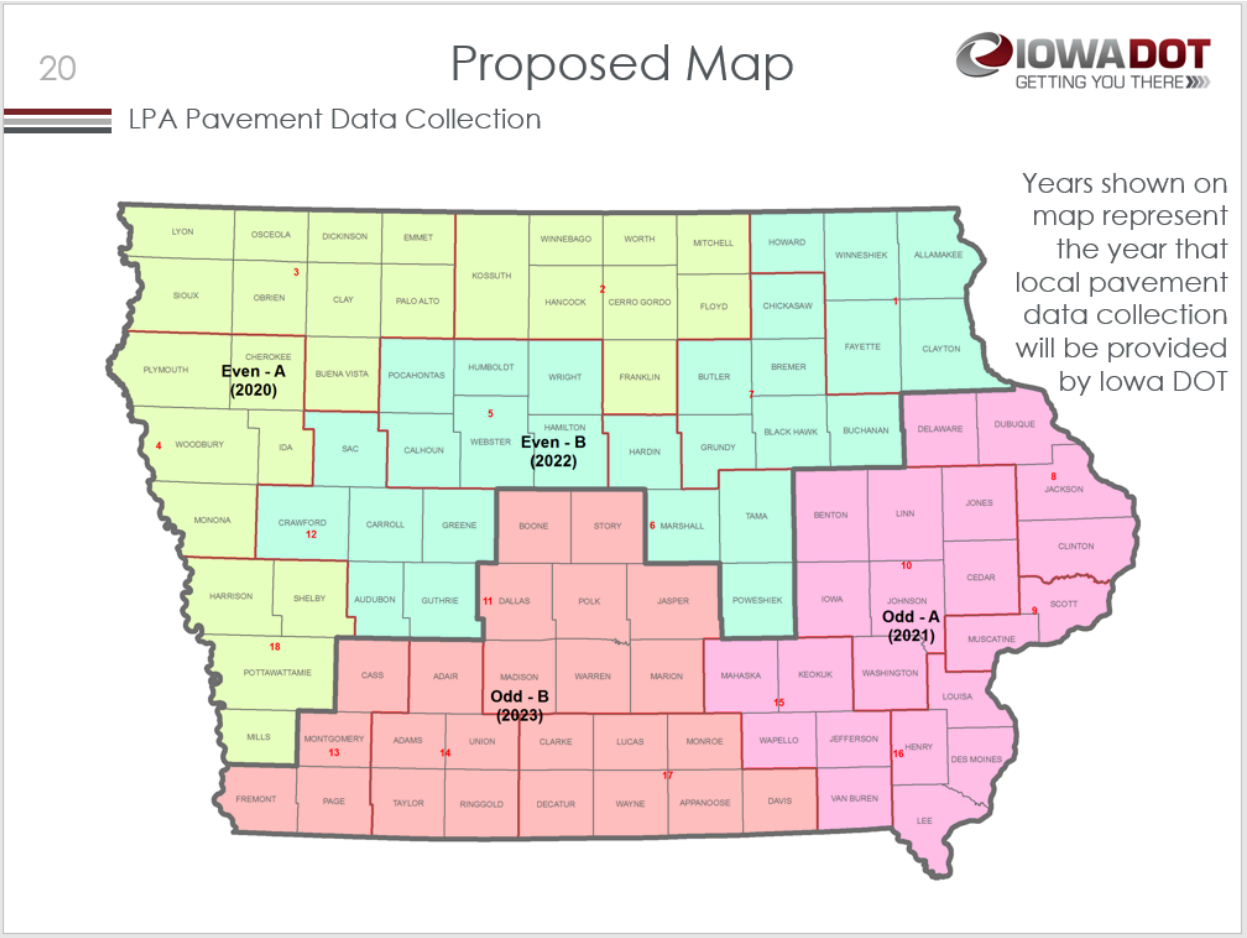


Figure 5.9: Proposed Local Public Agency Pavement Data Collection Cycle

Current RPA-18 Pavement Condition

The current pavement condition for RPA-18 is depicted in the figure below. The City PCI is used for those roads located within cities and towns, and otherwise, the standard PCI value is used.

[28] https://iowadot.gov/media/2590/download?inline

https://iowadot.gov/media/2570/download?inline

RPA-18 Pavement Condition Changes

Choosing the most appropriate projects in RPA-18 does not just consider current and projected pavement conditions. The Iowa DOT evaluates the primary system using the *Infrastructure Condition Evaluation (ICE)* process; the latest version utilizes data from 2024. What makes ICE unique is that it rates segments not only by pavement conditions, but also by considering overall traffic volume, the contribution of single-unit and combination trucks, and congestion. In addition, safety along study corridors is also factored into an overall score, whose trend is monitored over time.

The US-34 example below references the earlier 2018 statewide ICE analysis, which remains a useful illustration of how ICE scoring compares similar corridors across Iowa. Of the 465 corridors (composed of more than 37,000 segments) analyzed in 2018 the stretch of US-34 in Mills County shown in the figure below ranks 456th. Although this segment received very low scores for single unit (1) and combination truck (3) in the ICE scoring (out of 10), it is even more helpful to put these scores in perspective. This 14.97-mile stretch of US-34 is a typical 2-lane highway in Iowa. It is a designated truck route and is classified as a principal arterial, other than the Federal Functional Classification system. Using data available from the Roadway Asset Management System (RAMS), this segment was compared to all other 2-lane truck routes with the same Federal Classification. Along these 3,500+ centerline miles of roads, the mean percentage of truck traffic is 13% (STD Dev 7.4%) and the mean, normalized PCI is 8.07 (out of 10, with an STD Dev of 1.25). However, for the segment in Mills County, the percentage of truck traffic is 16% and the normalized PCI runs from 3 to 4 along this segment.

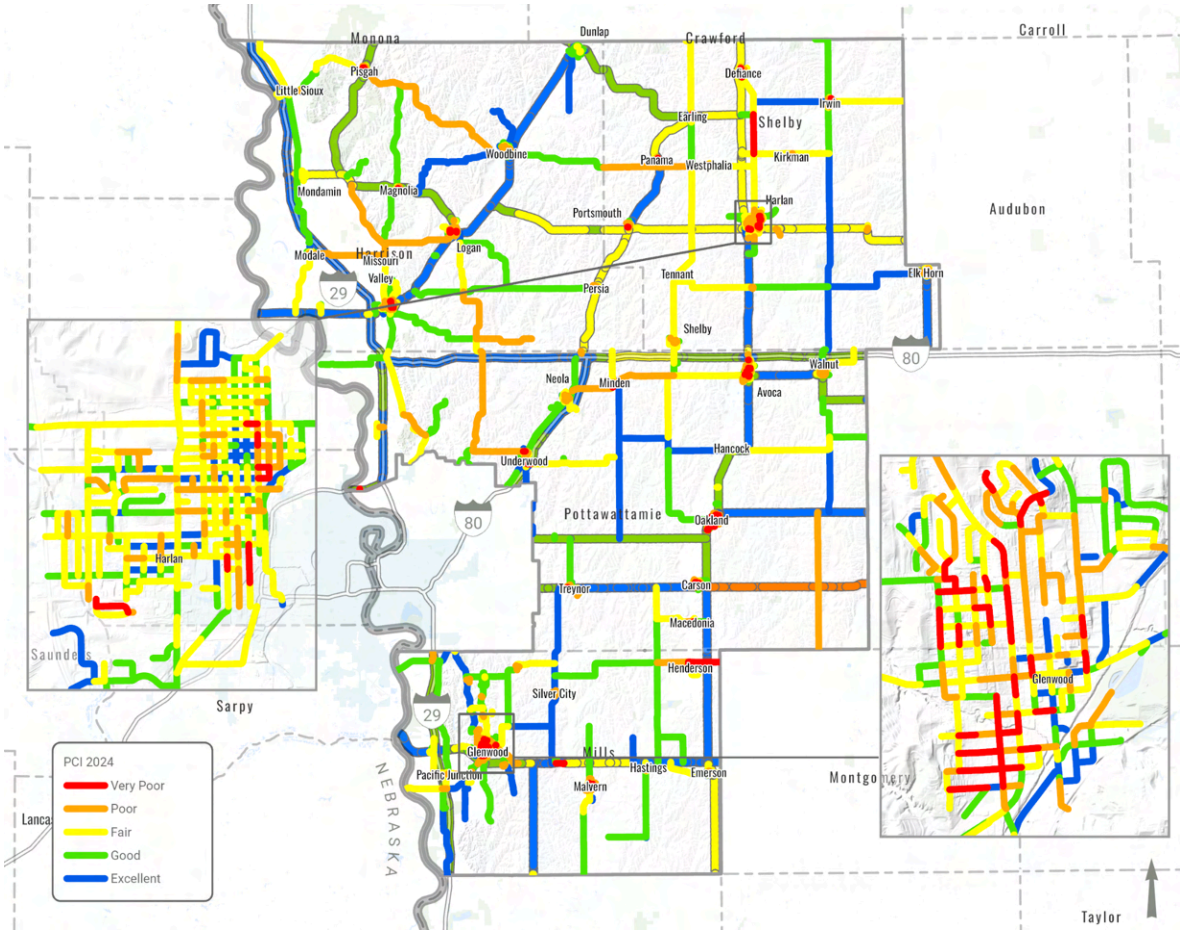


Figure 5.10: PCI rating for roadway facilities in RPA-18

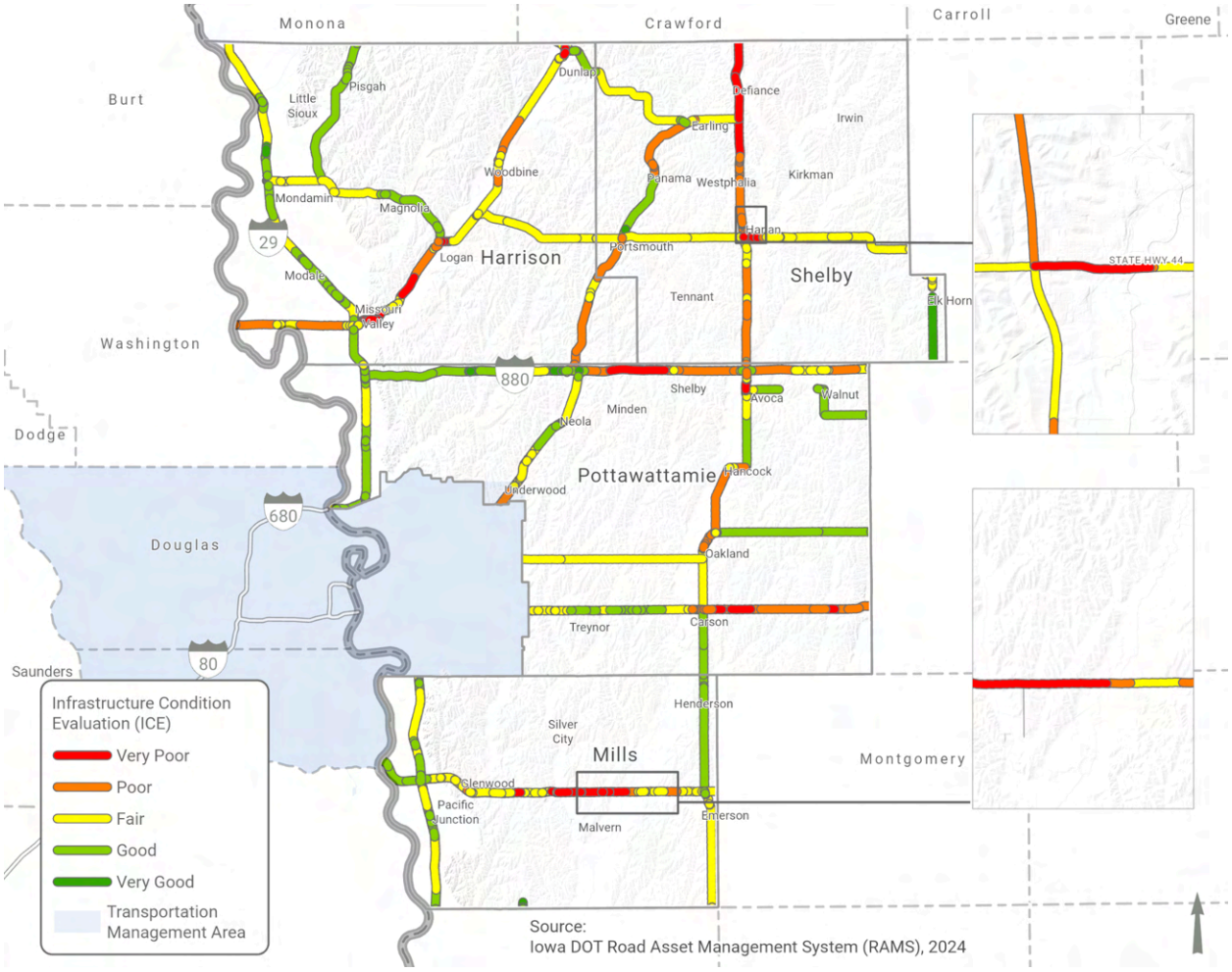


Figure 5.11: Infrastructure Condition Evaluation Score in RPA-18.

RPA-18 has recommended that this section be considered for a Super 2 reconfiguration for safety when the pavement condition needs are addressed. Although a majority of the pavement being considered for RPA projects does not benefit from direct measurements such as ICE, having an understanding of the function of a roadway and a measure of its safety can help influence not just the timing but the type of project chosen to address preservation and functionality concerns. For example, the Super 2 project can help the RPA progress towards the goals of **Preservation, Safety, and Economics** directly, while the incorporation of sound design practices will likely benefit the **Environment** goal as well.

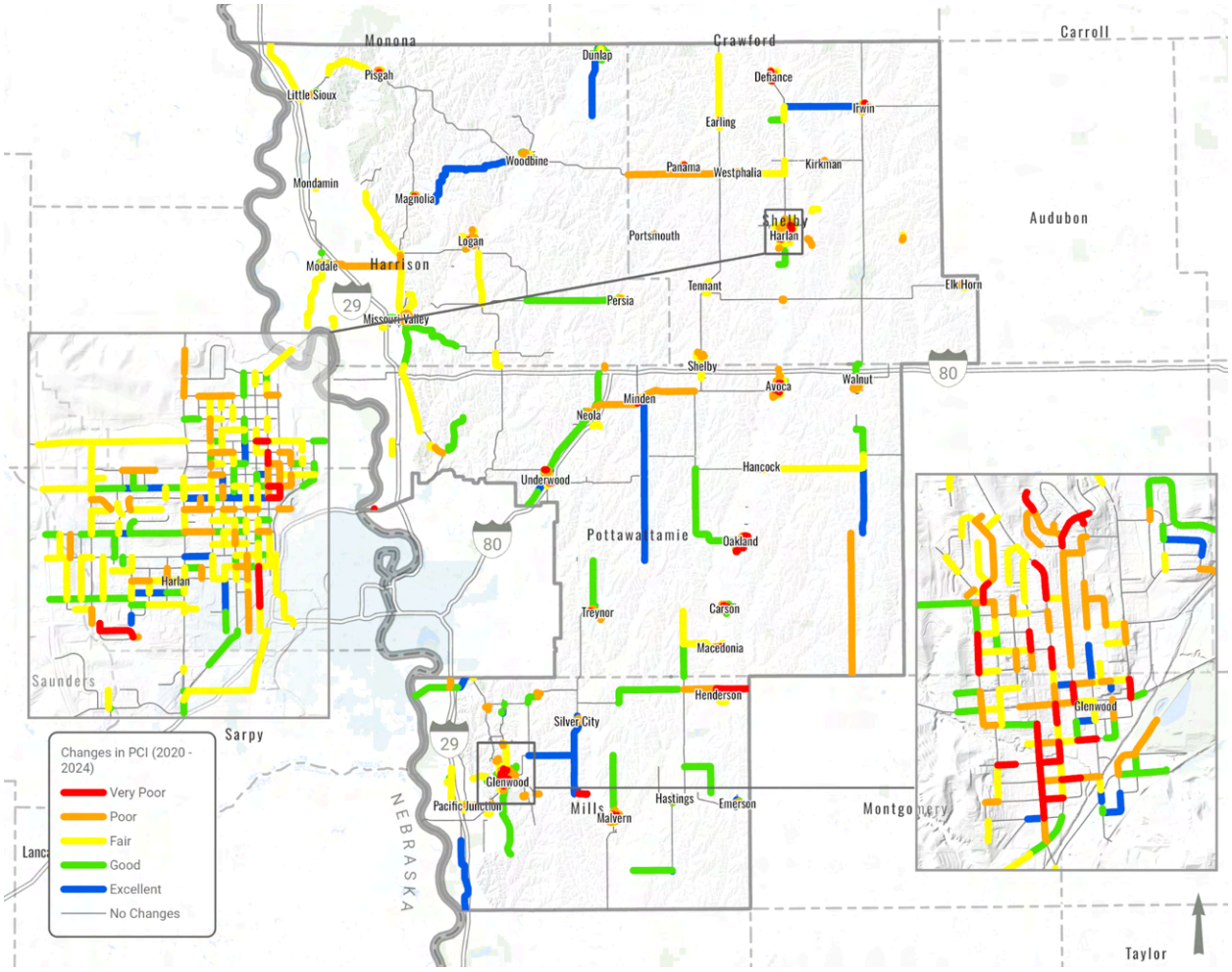


Figure 5.12: Change in PCI Index (2020-2024)

5.2 | Bridges

The measure, or rating of a bridge condition in the State of Iowa, is expressed in two ways. The first is the FHWA National Bridge Inventory (NBI) method, which provides a bridge rating of Good, Fair, or Poor, based upon a minimum biennial inspection collecting 116 data items to assess the bridge condition. This historical means of rating bridge condition remains the FHWA-directed assessment and is used to describe nationally the overall condition of bridges and culverts. For bridges, the scoring of a bridge's 3 NBI items, 58-Deck, 59-Superstructure, and 60-Substructure, is utilized as described in the bridge condition table below. Iowa DOT describes these conditions in their 2018 Transportation Asset Management Program by stating, "A bridge in good condition is adequate for today's traffic and vehicle loads. A bridge with a Poor condition rating is not unsafe, but should be considered for repair, replacement, restriction posting, weight limits, or monitoring on a more frequent basis."[29]

[29] Iowa DOT (2018). Transportation Asset Management Plan. p. 14. https://iowadot.gov/systems_planning/fpmam/IowaDOT-TAMP-2018.pdf

Figure 5.13: National Bridge Inventory Condition Criteria

FHWA NBI Condition	Definition
Good	The lowest rating of 3 NBI items is 7, 8, or 9
Fair	The lowest rating of 3 NBI items is 5 or 6
Poor	Lowest rating of 3 NBI items 4, 3, 2, 1, or 0

The Iowa DOT has developed an additional metric known as the Bridge Condition Index. This index (on a 100-point scale) considers the bridge NBI condition along with its ability to provide adequate service and how essential it is for the traveling public. This aids in the prioritization of bridges for replacement and maintenance.

Although local bridges are the responsibility of the local jurisdiction, Iowa DOT does provide resources and programs to assist local agencies. Iowa DOT provides the Structural Inventory and Inspection Management System (SIIMS) software to local agencies as a tool to help manage local bridges. Iowa DOT also assists local agencies with guidance and instruction in completing bridge inspections and maintaining bridge inventories. Finally, the Iowa DOT is working with MPOs and local agencies to establish performance targets for bridges that are on the non-interstate NHS yet managed by local jurisdictions.[31]

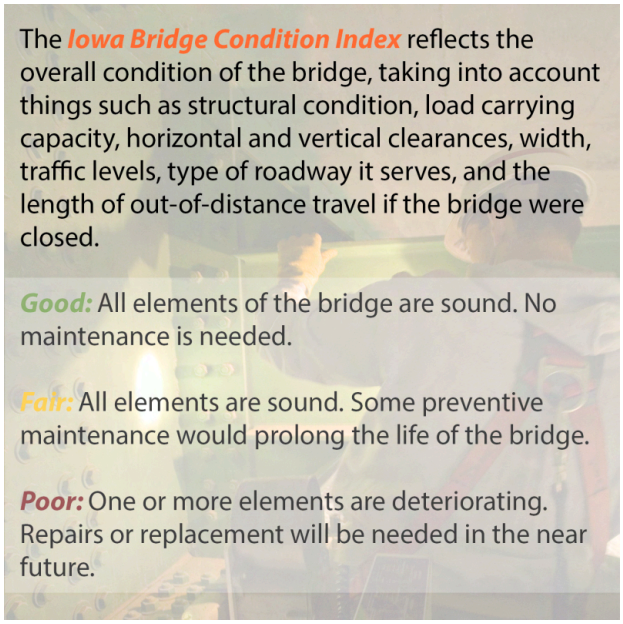


Figure 5.14: Graphic of the Iowa Bridge Condition Index with bridge condition rating descriptions

[30] §490.409 Calculation of National performance management measures for assessing bridge condition. https://www.ecfr.gov/cgi-bin/text-idx?SID=d55a4c337bf6f3bae97d9f72d8a1c6e3&mc=true&node=se23.1.490_1409&rgn=div8

[31] Iowa DOT (2018). Transportation Asset Management Plan. p. 28. https://iowadot.gov/systems_planning/fpmam/IowaDOT-TAMP-2018.pdf

RPA-18 bridge conditions are displayed by county in Figure 26. Note that the classification 'functionally obsolete' is still included in this data, although it has been removed from FHWA guidance as a classification.

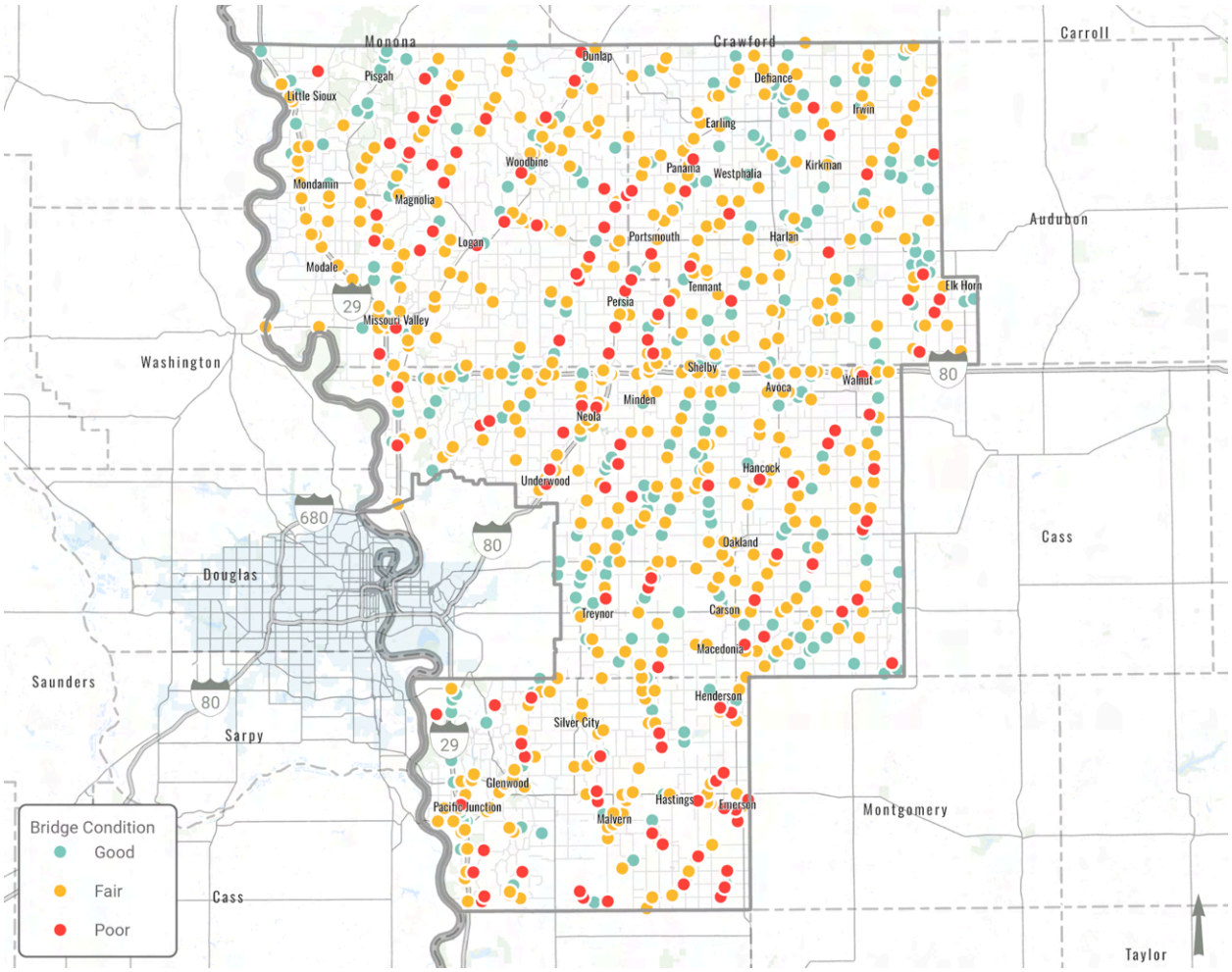


Figure 5.15. County or City Maintained Bridge Status within RPA-18

Bridge conditions by county are shown in Figure 5.16.

Figure 5.16: Bridge conditions by county

Total Bridges by County and Condition			
County	**Condition**	**Total Bridges**	**% Total**
Harrison	Good	61	27.5%
	Fair	120	54.1%
	Poor	41	18.5%
Mills	Good	53	29.1%
	Fair	94	51.6%
	Poor	35	19.2%

Pottawattamie	Good	133	36.7%
	Fair	193	53.3%
	Poor	36	9.9%
Shelby	Good	78	37.7%
	Fair	111	53.6%
	Poor	18	8.7%
Region	Good	298	33.4%
	Fair	531	53.2%
	Poor	164	13.4%

5.3 | Bicycle & Pedestrian Facilities

Sidewalks

The RPA-18 comprises of four counties that are rural in nature. The issue of sidewalks is guided by the local codes and regulations of individual municipal jurisdictions. Inventories related to sidewalks are spread over multiple municipalities, and this LRTP accepts the fact that these facilities are an important vehicle for pedestrian traffic and assumes that sidewalk facilities exist in local municipalities based on local regulations requiring such facilities.

All consideration will be given to accommodate the physically disadvantaged in the design, construction, and maintenance of bicycle and pedestrian facilities within the RPA-18. Rules and regulations promulgated under the Americans with Disabilities Act (ADA) will be incorporated into facility design as well.

Trails

There is one major trail, one proposed trail, two trail systems, and two minor trails in the RPA-18 region.

The Wabash Trace is a ground stone trail that connects the Council Bluffs metro area to cities and towns in Pottawattamie and Mills counties, and as far south as the Missouri state line and beyond.

The proposed Lewis and Clark Trail will use the Missouri levee system as a general base with a hard surface trail atop. It will trek across the RPA-18 along the Missouri River from Fremont County into Mills, Pottawattamie, and Harrison counties and continue into Monona County to the north.

The American Discovery Trail and the Mormon National Historic Trail are nationally-designated trail systems that use existing highways, trails, and other routes to provide a link across the nation. The American Discovery Trail enters the RPA-18 from Montgomery County along US-34 and merges with the Wabash Trace Trail northwest of Malvern, Iowa. The Mormon National Historic Trail enters the RPA-18 from Cass County on IA-92 and crosses Pottawattamie County,

where it ties in with the trail system in Council Bluffs. Both trails currently use the US-275 Bridge to cross the Missouri River and connect into the Nebraska trail system in Omaha.

Minor trails in the RPA-18 are the Walnut Nature Trail and the Stone Arch Trail in Shelby, Iowa. These trails do not connect to a regional trail network but offer trail access to the towns of Shelby and Walnut.

5.5 | Public Transportation Facilities

Office support is provided by six full-time staff includes the Fleet Maintenance Specialist, Transit Coordinator, three Transit Assistants, and a Transit Director. Service is provided by 55, of whom are drivers. Many of these are retirees or women who previously worked in the home. Frequently, part-time drivers work a split shift, with a long break in the middle of the day. This type of scheduling also helps to reduce staff costs, as drivers are maintained as part-time workers.

Much of the service is concentrated on helping rural residents find access to social services and perform basic activities, like shopping, banking, and errands. Although the basic service model is individually scheduled demand response, SWITA has a very flexible philosophy for agencies wishing to contract with SWITA on an ongoing basis.

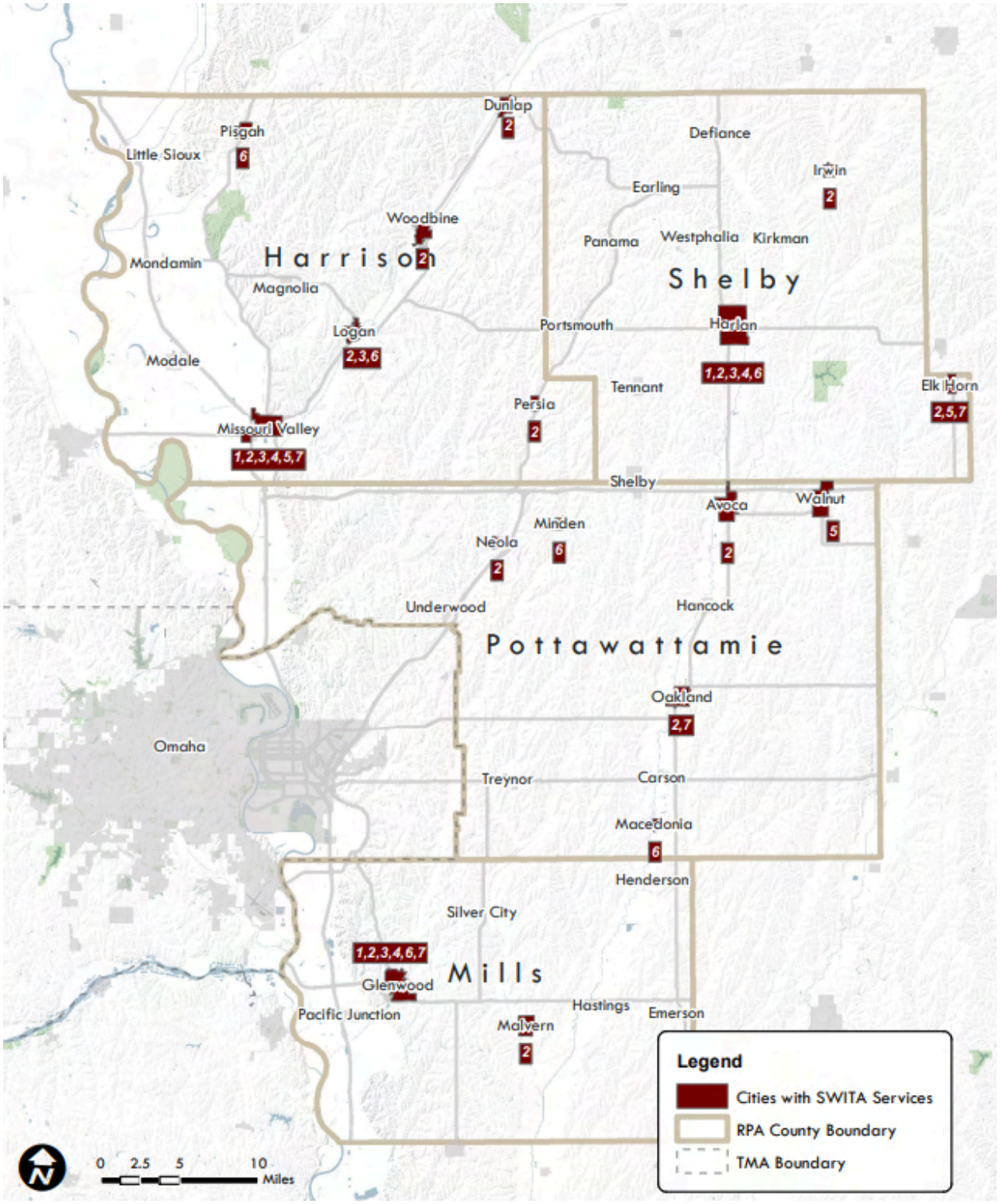


Figure 5.17: SWITA Services in RPA-18

5.6 | Intercity Bus Facilities

Greyhound

Greyhound Bus Lines provides nationwide bus service that locally picks up passengers near the RPA region in Omaha, Nebraska.

Figure 5.18: Greyhound Route Map

Jefferson Lines

Jefferson Lines provides regional bus service within the Central United States and Upper Midwest region. Jefferson Lines picks up riders in Omaha, Nebraska, and Shenandoah, Iowa, both near the RPA region. Service for Jefferson Lines includes service to Kansas City and other parts of Iowa.

Figure 5.19: Jefferson Lines Route Map

5.7 | Rail

The RPA-18 is fortunate to be served by two major rail facilities and two short-line regional railroads:

Figure 5.20 Railroads Operating Within RPA-18

Railroad	Class	Description / Service
Union Pacific Railroad (UPRR)	Class I	Transcontinental freight service operating through RPA-18
Burlington Northern Santa Fe (BNSF)	Class I	Provides freight service connecting the West Coast to Chicago; the Mills County segment is part of STRACNET and carries Amtrak passenger service.
Chicago Central & Pacific Railroad (CCPRR)	Class II	Provides local and regional shortline freight service.
Iowa Interstate Railroad (IIRR)	Class II	Offers local and regional rail service connecting communities within and beyond the RPA-18 region.

Figure 5.14 identifies the main-line sections and major spurs associated with the four (4) rail systems that operate on the RPA-18 region. The map also identifies the density of rail traffic in tons per mile. Rail densities range from approximately 1 ton-mile for the Class II facilities to over 150 ton-miles for the Class I carriers.

Rail Deficiencies and Improvements

The number of industries served by Class I and Class II rail facilities is increasing. Existing biofuel plants in Mills County (and across the Missouri River in Nebraska) are expanding. New facilities in Mills County will require additional rail service. There is also a need to address multi-modal transfer issues (rail to truck, pipeline to rail, etc.) to facilitate growth related to rail.

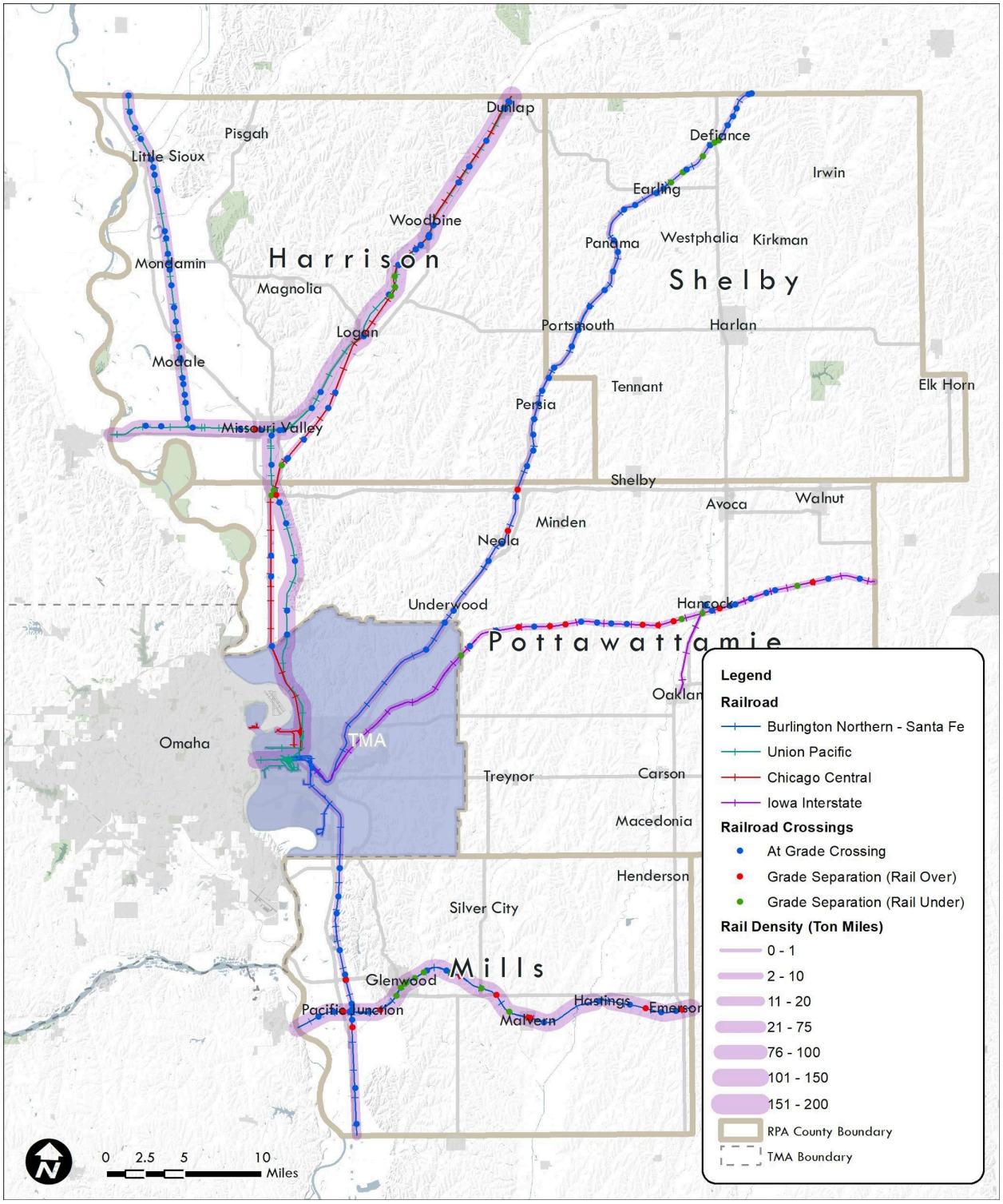
There are many sub-standard railroad crossings that offer a less-than-safe crossing of existing rail facilities. The RPA-18, through the local jurisdictions, will work with the rail industry to update, upgrade, and eliminate substandard railroad crossings within the region.

Rail facilities in the RPA-18 are owned and operated by private industries. As such, they are governed by each respective company and their long-range planning efforts. The RPA-18 will work with the rail industries, as well as businesses served by the rail industry, to maximize the safe and efficient rail system in the RPA-18 region.

Funding

Rail service is a private concern and is operated by public and private corporations. Operation and maintenance costs are incurred by these corporations. There are, however, funding sources available from the Iowa DOT for rail crossing safety, economic support for spur lines, and other concerns.

Figure 5.21: Railroads in RPA-18



5.8 | Aviation

There are two airports within the RPA-18 region– one in Harlan and one in Woodbine. The Council Bluffs Airport is located just outside the RPA-18 area within the MAPA TMA and provides general aviation service to residents and businesses within the RPA-18. Additional general aviation airports in the cities of Blair, Omaha (North Omaha Airport and Millard Airport), and Plattsmouth, NE, serve the RPA-18 region as well.

The RPA-18 is fortunate to be served by four Commercial Airports within hours of the RPA-18 region. The Des Moines International Airport in Des Moines, IA; the Sioux Gateway Airport in Sioux City, IA; the Kansas City International Airport in Kansas City, MO; and Eppley Airfield across the Missouri River in Omaha, NE. These facilities provide regional, national, and international connectivity for freight and people in the RPA-18 region. Table 20 (next page) includes a summary of the characteristics of RPA-18 aviation facilities.

Harlan Municipal Airport

The Harlan Municipal Airport offers a complex consisting of two active runways for air traffic as well as a terminal building, aircraft storage hangers, and fueling operations. The facility also maintains a paved (concrete), 3,500 sq. yard apron with tie downs for five aircraft and a parking area for eleven vehicles.

There were 26 single-engine and 1 multi-engine aircraft based at Harlan (in 2010), generating approximately 6,750 annual operations. These figures are projected to increase to 35 aircraft and 8,750 annual operations by 2030.

The Harlan Municipal Airport is recognized in the Iowa Aviation System Plan as a general service airport. It provides services for the local area and also provides some business needs.

Figure 5.22: Photo of an airplane parked in front of a hangar at the Harlan Municipal Airport

Woodbine Municipal Airport

The Woodbine Municipal Airport consists of one turf runway facility. No aeronautical or administration services are available at the site. There are, however, five conventional hangar facilities that provide storage for 5 aircraft.

In 2010, there was one single-engine aircraft and one ultralight aircraft based at the Woodbine airport with annual operations of 500. Projections show limited increases to 3 aircraft and 750 annual operations in 2030.

The Woodbine Municipal Airport is identified as a basic service airport in the Iowa Aviation System Plan. It offers basic aviation operations for local users.

Figure 5.23: Airport and Helipad Facilities in RPA-18

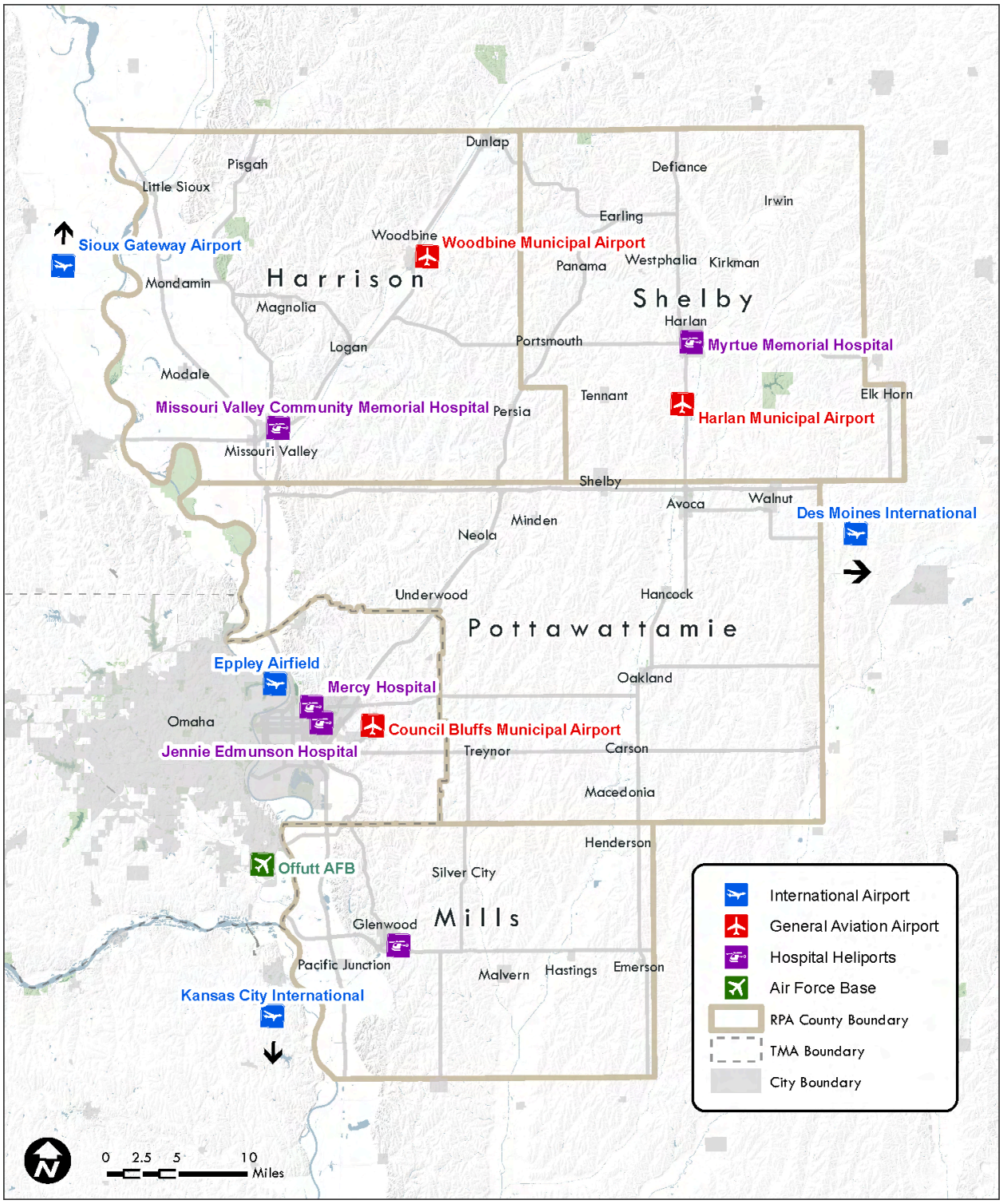


Figure 5.24: Runway facilities in RPA-18

City	Runway	Surface	Width (ft)	Length (ft)	Runway Lights	Approach Lights	VGSI
Woodbine	17/35	Turf	95	2,045	LIRL	None	None
Harlan	03/21	Turf	120	1,700	None	None	None
	15/33	ASPH-CONC	75	4,100	MIRL	None	PAPI
Council Bluffs	18/36	CONC	100	5,500	HIRL	REIL	PAPI
	14/32	CONC	60	3,650	MIRL	REIL	PAPI

Source: Iowa DOT Office of Aviation 2010-2030 Aviation System Plan

Heliport Facilities

There are three heliports that service the RPA-18, which are located at hospitals in the RPA-18 and the Council Bluffs-Omaha MPO. Heliports at Jennie Edmondson General Hospital in Council Bluffs, Myrtue Memorial Hospital in Harlan, and the Glenwood Resource Center in Glenwood provide facilities and staff to dispatch Medivac helicopters to areas of need within the RPA-18.

Identified Deficiencies

Both Harlan and Woodbine offer runway lighting, Medium Intensity (MIRL) in Harlan and Low Intensity (LIRL) in Woodbine. Neither municipal airport offers Runway End Identifier Lights (REIL).

While Harlan supports one paved runway, the Woodbine airport does not. Lack of a paved runway limits the size of aircraft that can use the facility and limits usage to times of good weather.

Proposed Improvements

Proposed improvements aimed to address identified deficiencies are to add REIL at each facility and to extend and pave the runway facility in Woodbine. Additionally, each airport wants to increase user amenities at each facility (automobile parking, restroom facilities, phone, etc.). Improvements funded with federal dollars, or those of regional significance, are identified in Figure 5.25 below.

Figure 5.25: Anticipated Airport Facility Needs

Airport	Project Description	Funding Needed
Council Bluffs	Install a Remote Communications Outlet	$25,000
Council Bluffs	Construct 17 T-hangar Units	$1,105,000
Council Bluffs	Airport Layout Plan Update (2011, 2019, 2027)	$1,350,000
Harlan	Rehabilitate Runway 15/33 and install new Runway End Identified Lights (REILs)	$600,000
Harlan	Construct Conventional Hangar	$600,000
Harlan	Airport Layout Plan (ALP) update (2011, 2021)	$1,700,000
	Total	**$5,380,000**

Source: Iowa DOT Office of Aviation 2010-2030 Aviation System Plan

Airport	Project Description	Funding Needed
Council Bluffs	Replace Automates Weather Observing System (AWOS) equipment	$126,315
Council Bluffs	Construct Runway 18 Stormwater and Drainage Plan	$690,715
Council Bluffs	Construct Airport Stormwater Management Plan	$978,300
Council Bluffs	Acquire Lake and Pond	$500,000
Council Bluffs	Construct Taxiway B	$482,845
Council Bluffs	Acquire Snow Removal Equipment	$850,000
Council Bluffs	Apron Taxiway Expansion	$767,051
Council Bluffs	Vehicle Parking Lot	$149,125
Council Bluffs	Upgrade Fuel System	$466,000
Council Bluffs	Corporate Hangar Area Apron	$450,000
Council Bluffs	Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR)	$1,800,000
Harlan	Rehabilitate Runway and Design	$45,000
Harlan	Replace AWOS Equipment	$131,580
Harlan	Apron Major Rehabilitation	$121,172
Harlan	Acquire Land	$284,000
	Total	**$7,842,103**

Source: Iowa DOT Office of Aviation 2010-2030 Aviation System Plan

Safety and Security

Proposed improvements to runways and approach lighting, as well as other mechanical enhancements and functional improvements, only add to the safety of the airport facilities and their users.

Security measures for airports are a function of their size, activity, and use. Security measures for the Harlan and Woodbine airports should be addressed in a comprehensive security plan commensurate with their current and planned operations. Security signage is currently posted at each airport facility.

Financial

The Harlan Municipal Airport is part of the National Plan of Interoperated Airport Systems (NPIAS). As such, it is eligible for federal Airport Improvement Program funding (AIP). The Woodbine Municipal Airport is not on the NPIAS and is not eligible for federal aviation funding.

Applications for federal funding are submitted to the Iowa DOT, prioritized, and submitted to the Federal Aviation Administration (FAA) for selection. Project funding is limited to grants offered directly to the airport sponsor. Financial constraint for these funds is based on the amount of the AIP grant and other funding sources, and is not constrained by the RPA-18.

Both Harlan and Woodbine Municipal airports are eligible to apply for state airport improvement and vertical infrastructure funding. As with federal funding, applications for such funds is through the Iowa DOT.

Funding

Federal Airport Improvement Program (AIP) – funding for airport improvements and airport planning. Public agencies owning public-use airports in the Federal Aviation Administration's (FAA) National Plan of Integrated Airport Systems are eligible to request funds.

State Airport Improvement Program – funding for publicly owned airports in Iowa for airport development, emergency operational repairs, and pavement maintenance.

Airport Vertical Infrastructure Program – state funding for publicly owned commercial service and general aviation airports for improvements to vertical infrastructure.

5.9 | Pipeline

There are several pipelines that traverse the RPA-18 region that ship multiple commodities. Anhydrous ammonia, crude oil, and natural gas are all transported to cities in the RPA-18 from outside of the region. All pipelines in service in the RPA-18 region are privately owned. As such, any deficiencies associated with the pipeline system will be identified and rectified by the individual owner. The RPA-18 will work to coordinate construction projects with the pipeline concerns to maintain the integrity of the service offered by the pipelines. The RPA-18 will also work with the pipeline vendors to provide multi-modal transfer of their respective services.

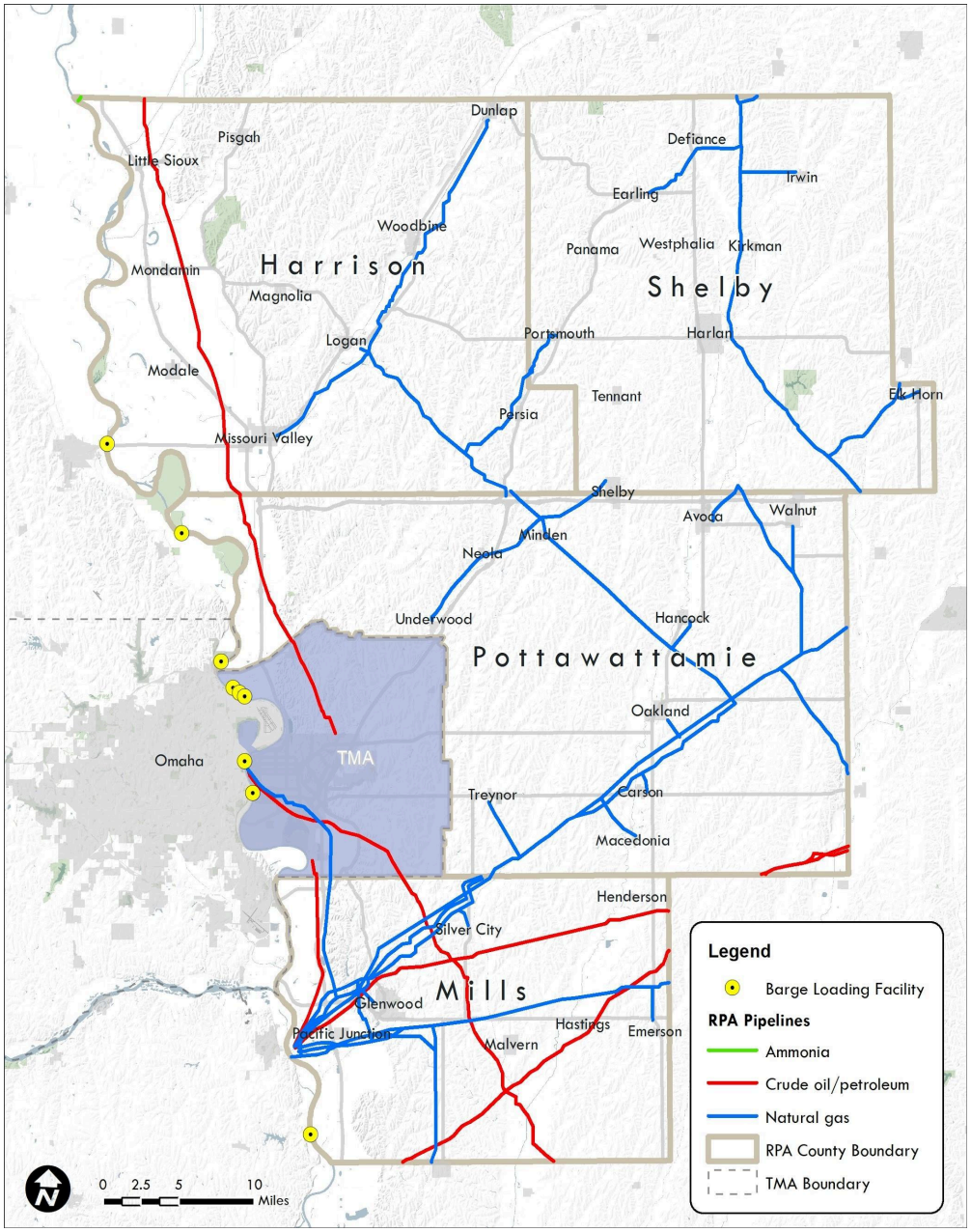


Figure 5.26: Pipeline Facilities in the RPA-18 Region

Figure 5.27: Photo of multiple above-ground pipelines running through a grassy corridor

5.10 | Waterways

Water freight transportation for RPA-18 takes place on the Missouri River. Recently, low water levels have caused barge traffic on the Missouri River to decline. Several other factors have also led to the decline of barge traffic on the Missouri River as well. While the Mississippi River has a system of locks in order to support barge traffic, the Missouri River does not. The Missouri River also has a narrower channel than the Mississippi, resulting in higher flow speeds. These higher speeds cause greater resistance and greater fuel consumption on upstream traffic, making it less efficient to operate on this waterway.

In order to deal with the low water levels and fast currents of the Missouri, shallow draft Missouri River tugs were designed and built. These tugs can navigate the channel much more efficiently and effectively than their Mississippi River counterparts. However, due to the decrease in overall traffic on the Missouri River, the vast majority of Missouri River-specific tugs were shipped to South America. There is currently one Missouri River-specific tug that operates in the United States today.

The availability of rail transport is also a contributing factor to the decline of water freight in the region. While no port facilities presently exist in the RPA-18 region, a study is currently underway to evaluate the potential for an intermodal facility in Mills County near the Missouri River. A similar study was conducted for a site within the MAPA Transportation Management Area

(TMA) north of Council Bluffs, which demonstrated the potential market for an intermodal connection in this area. Significant flooding in 2011 has stalled development of this northern site, and work is still underway to determine the feasibility of the Mills County facility.

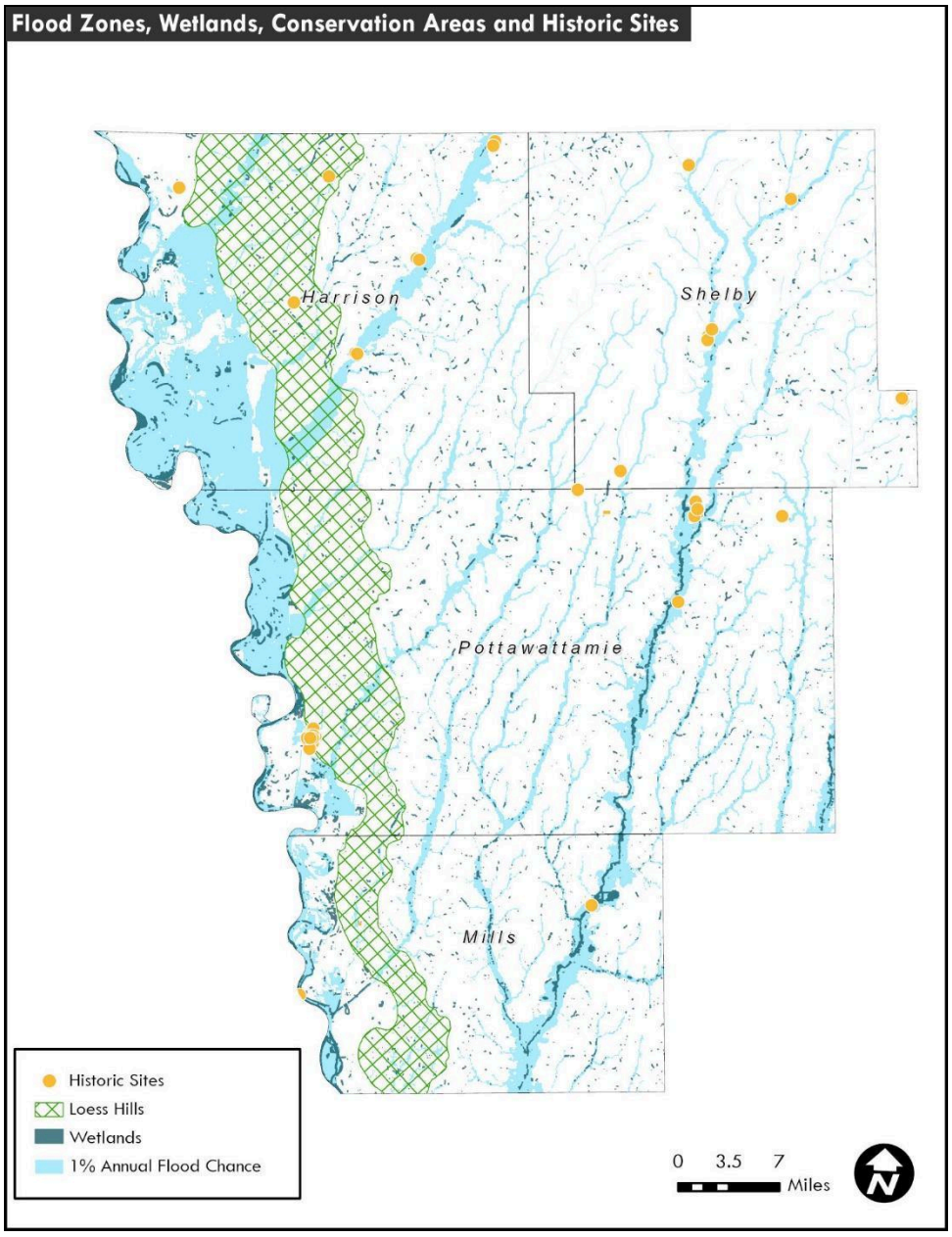


Figure 5.28: Flood Zones, Wetlands, Conservation Areas, and Historic Sites in RPA-18

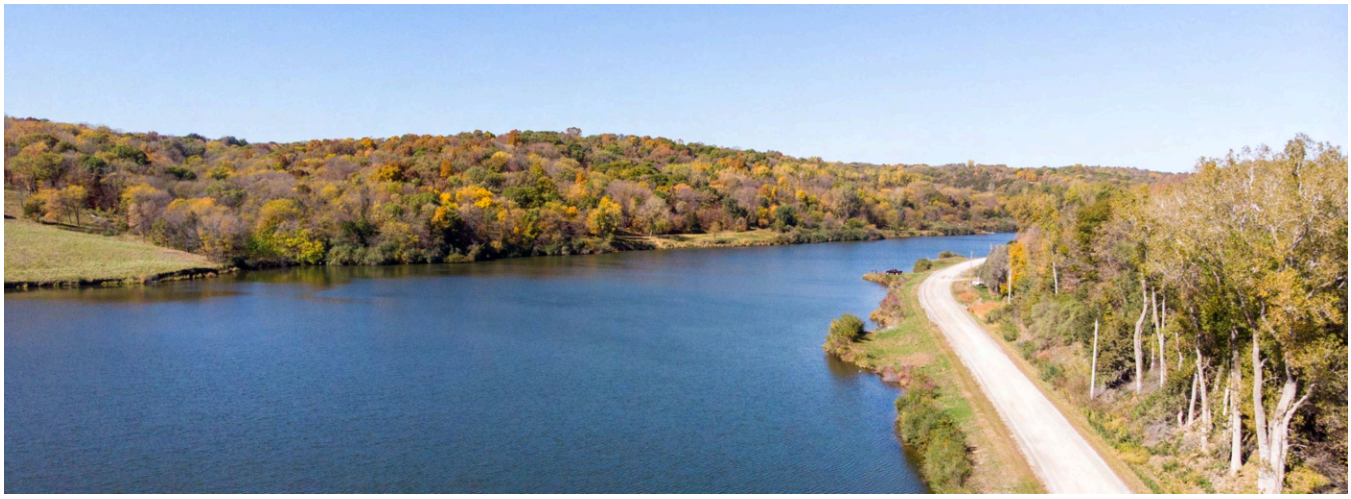


Figure 5.29: Photo of Pony Creek in Mills County

5.11 | Pavement Performance Measures

The Moving Ahead for Progress in the 21st Century (MAP-21) Act directed the establishment of performance measures to assess the pavement condition of the Interstate and National Highway System. No municipalities or counties within RPA-18 are responsible for NHS roads, so these measurements do not directly impact RPA planning, but an understanding of the statewide performance and targets is useful to consider alongside local asset management planning.

Figure 5.29: Iowa DOT Pavement Condition Performance Targets

	Iowa State Target[32]	
	2-Year	4-Year
Percentage of pavements of the Interstate System in Good condition	N/A	49.4%
Percentage of pavements of the Interstate System in Poor condition	N/A	2.7%
Percentage of pavements of the non-Interstate NHS in Good condition	48.8%	46.9%
Percentage of pavements of the non-Interstate NHS in Poor condition	13.2%	14.5%

[32] https://www.fhwa.dot.gov/tpm/reporting/state/condition.cfm?state=Iowa and https://iowadot.gov/systems_planning/fpmam/2018-Baseline-Performance-Period-Report.pdf

5.12 | Bridge Performance Measures

The MAP-21 Act also established performance measures for bridge condition on the National Highway System (NHS). These measures evaluate the percentage of bridge deck area classified as good or poor based on condition ratings for deck, superstructure, and substructure components.

Although RPA-18 jurisdictions do not maintain NHS bridges directly, the region includes numerous county and local bridges that rely on similar inspection and rating standards. The Iowa DOT oversees inspection data collection and prioritizes replacement or rehabilitation of deficient bridges through the Highway Bridge Program (HBP) and other state and federal funding sources.

Figure 5.30: Iowa DOT Bridge Condition Performance Targets

Performance Measure	Iowa State Target[33]	
	2-Year	4-Year
Percentage of NHS bridges classified as in Good condition	45.7%	44.6%
Percentage of NHS bridges classified as in Poor condition	3.7%	3.2%

5.13 | Transit Asset Management Performance Measures

The performance targets below reflect statewide Transit Asset Management (TAM) goals established by the Iowa Department of Transportation (Iowa DOT) for all public transit providers in Iowa, including the Southwest Iowa Transit Agency (SWITA), which serves the RPA-18 region. These measures are based on the useful life benchmark (ULB) established for each asset class under the Federal Transit Administration's (FTA) TAM Rule (49 CFR 625).

Figure 5.31: Iowa DOT Annual Performance Goals

Asset Category	Class	Current Status	2019 Target
Revenue Vehicles	Automobiles	6% of fleet exceeds ULB of 8	6%
	Buses	6% of fleet exceeds ULB of 14	3%
	Cutaway Buses	6% of fleet exceeds ULB of 8	40%

[33] https://www.fhwa.dot.gov/tpm/reporting/state/condition.cfm?state=Iowa and https://iowadot.gov/systems_planning/fpmam/2018-Baseline-Performance-Period-Report.pdf

[34] https://iowadot.gov/systems_planning/fpmam/Iowa-2019-transit-asset-management-targets.pdf

	Trolley	6% of fleet exceeds ULB of 13	0%
	Vans	6% of fleet exceeds ULB of 8	35%
	Minivans	6% of fleet exceeds ULB of 8	22%
Equipment (Non-Revenue Vehicles)	Automobile	41% of non-revenue service vehicles exceeds the ULB of 8	50%
	Other rubber-tire vehicle (tractor)	6% of fleet exceeds ULB of 14	100%
Facilities	Admin/Maintenance Facility	0% of facilities rated under 3.0 on the TERM scale	0%

The Iowa DOT's TAM Plan sets statewide performance targets to maintain vehicles, equipment, and facilities in a state of good repair (SGR) and to guide replacement and capital investment decisions. Each rural transit system, including SWITA, monitors its fleet and facility condition annually and reports asset data to the Iowa DOT.

Funding Deficiencies

Funding is the driving force to achieve the goals of this LRTP. It is anticipated that the RPA-18 will have a shortfall of funding to meet all the needs of the jurisdictions within the RPA-18 region. Lack of adequate funding to address deficiencies in the various transportation systems is, in itself, the largest deficiency posed by those involved. These issues require even more consideration in the identification of needs during the planning process and vigilant asset management to make the greatest impact with scarce transportation funding.

Proposed Improvements

Most improvements to the street and highway systems in the RPA-18 region are directed to maintain the current system. Overlay, patching, drainage and other maintenance activities will dominate the future improvements over the next 20 years. Capacity improvements to some primary and secondary roads may be needed to relieve existing and future congestion and will be identified by their respective jurisdiction.

Given the various modes and jurisdictional responsibilities, planned improvements are grouped into 4 categories:

- Primary roads (predominantly Iowa DOT facilities, all federal aid-eligible)
- Federal aid-eligible secondary roads (county facilities)
- Other modes (Transit, Rail, Air, Ports, Trails, Historic Preservations, Scenic Byways)
- Local projects of regional Significance / major, non-federal funded projects.

5.14 | Projected Transportation Demand and Infrastructure

Freight activity across Iowa is projected to grow significantly by 2050, which will place increasing pressure on key transportation routes within the RPA-18 region. According to the

Freight Analysis Framework (FAF5), truck freight dominates the statewide goods movement system. In 2017, trucks accounted for approximately 95% of Iowa's total freight ton-miles, moving over 483 million ton-miles. By 2050, this figure is expected to exceed 960 million ton-miles, comprising about 83% of the total. Given that many of RPA-18's primary corridors are part of this statewide network, the region is likely to face heightened infrastructure demands from continued truck freight growth, as shown in Figure 5.32.

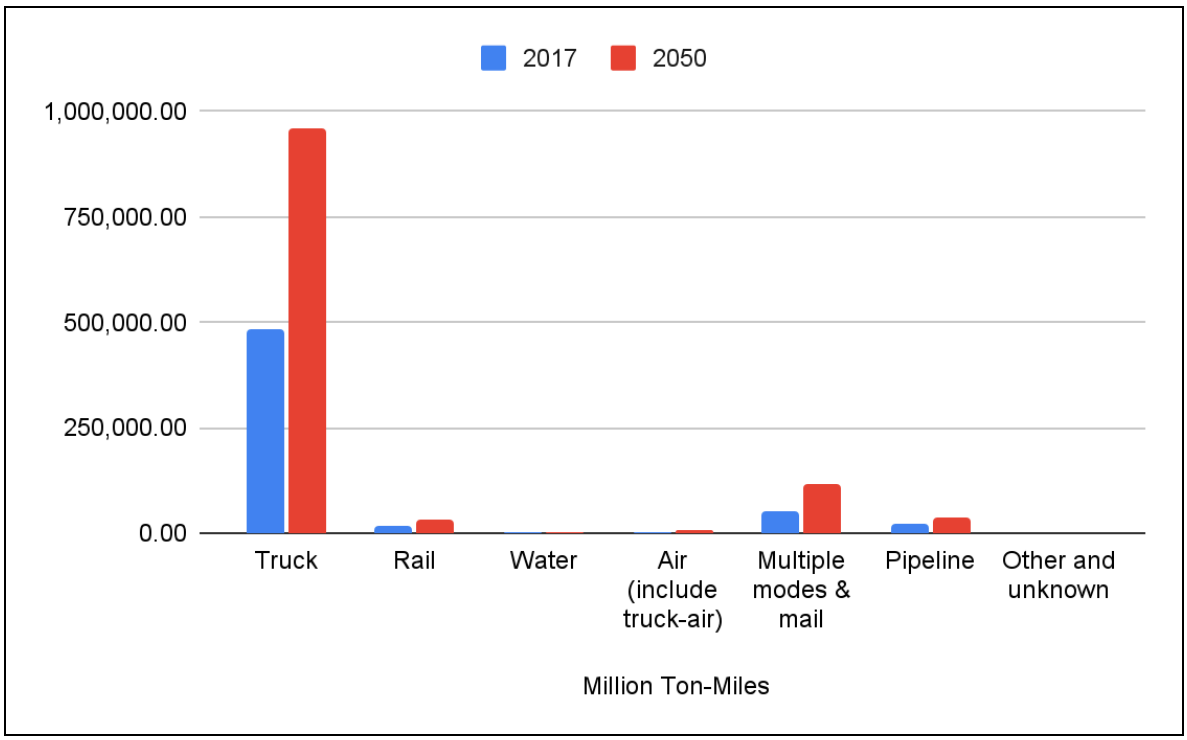


Figure 5.32: Freight Growth by Mode in Iowa (2017-2025)

According to the Iowa State Freight Plan, truck activity in Iowa is heavily concentrated on the interstate system and the Iowa multimodal Freight Network, with highest truck volumes occurring along I-29 and I-80 which both pass through the RPA-18 region. These corridors carry the largest share of the statewide freight tonnage and serve as major east-west and north-south distribution routes.

The I-80 corridor, a critical freight and commuter route, has been identified as one of the most operationally constrained highways in the state. According to the Iowa DOT's Transportation Systems Management and Operations (TSMO) analysis, the stretch of I-80 between Council Bluffs and Exit 83 is among the 10 worst segments in Iowa for congestion, bottleneck duration, and incident frequency (Figure 5.6). These challenges are intensified by consistently high truck volumes, which not only magnify congestion and crash delays during peak periods but also place greater physical stress on the roadway. Heavy axle loads and frequent freight movements accelerate pavement wear causing rutting, cracking, and structural fatigue, particularly on rural highway segments not originally designed for sustained high-volume truck traffic. Preserving

the functionality of this corridor will require targeted investments in pavement rehabilitation, bridge repair, and improved access to freight facilities.

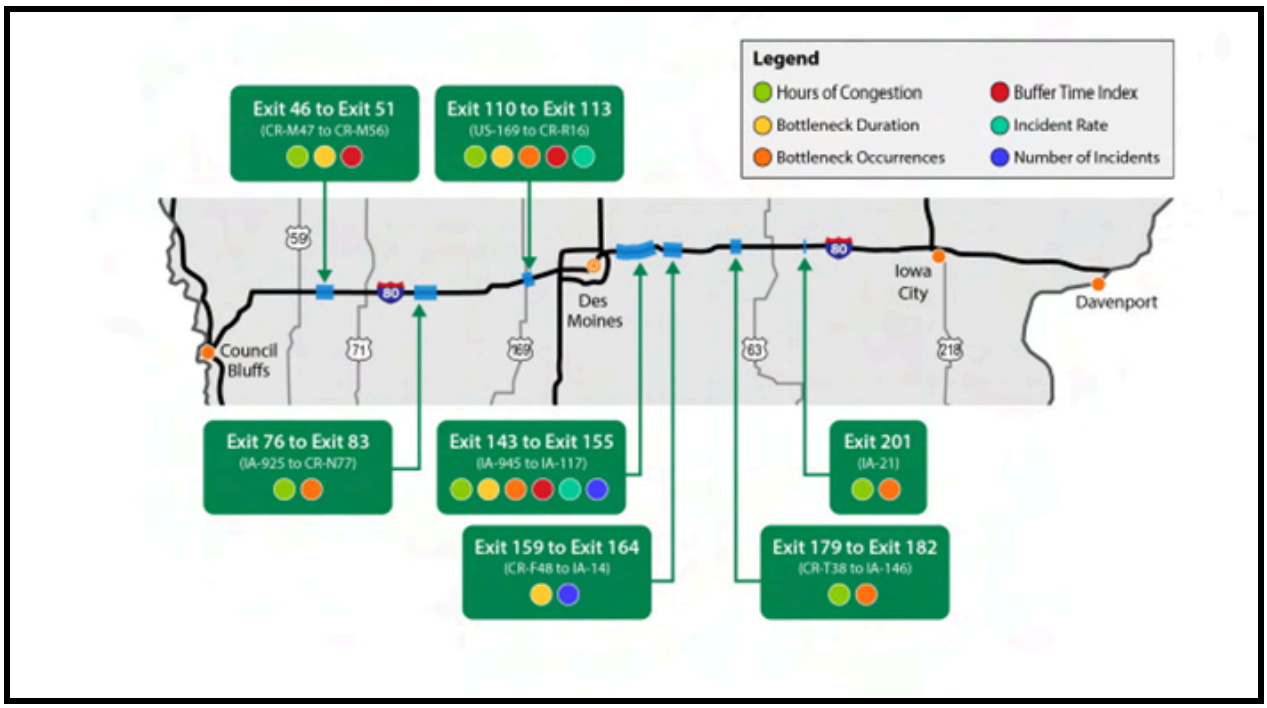


Figure 5.33: Iowa DOT Worst Transportation System Management and Operations (TSMO) Segments
Source: I-80 Planning Study

Commodity Flow by Value

The Iowa state freight plan indicates that total value of freight moved in Iowa is expected to rise from $383.2 billion in 2017 to $746.3 billion by 2050. By value, the mix of leading commodities becomes more diverse. In 2050, live animals, mixed freight, and machinery are forecasted to be the highest-value commodities moved within and across Iowa. While cereal grains remain important in terms of tonnage, their overall value grows more slowly compared to higher-value sectors such as livestock and manufactured goods.

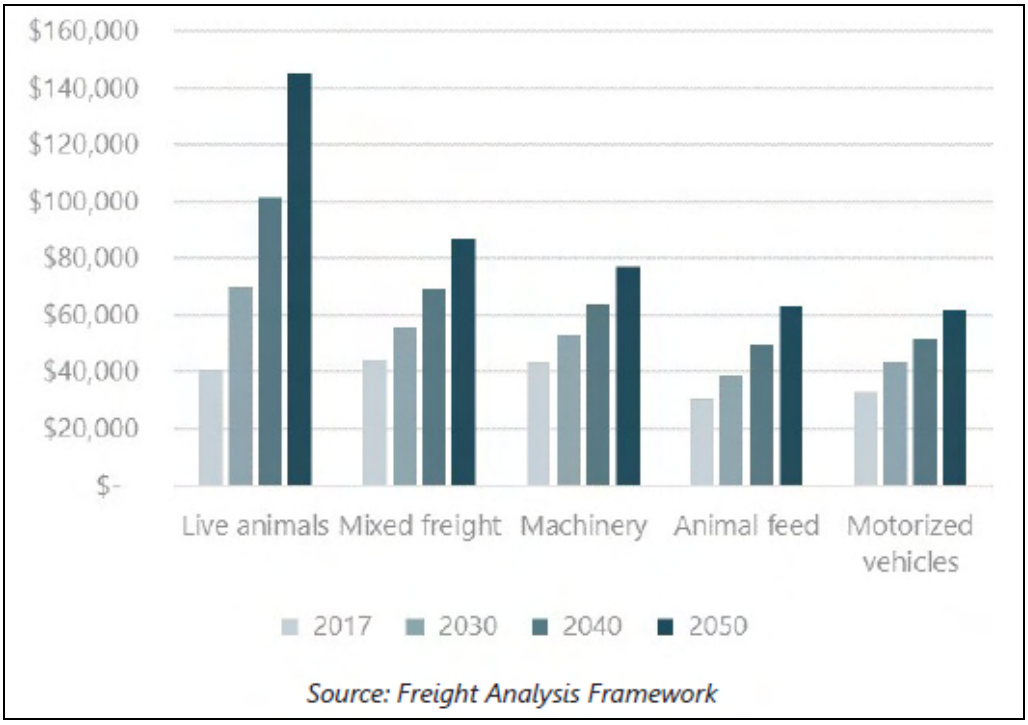


Figure 5.34 Forecast of Iowa domestic freight by value (millions of dollars), 2017-2050.

Commodity Flow by Tonnage

According to the Iowa State freight plan (FAF5), the total weight of freight moved in Iowa is projected to grow from approximately 666 million tons in 2017 to more than 1 billion tons by 2050. Agricultural commodities will continue to dominate Iowa's freight landscape. Cereal grains were the top freight commodity by tonnage in 2017 and are expected to remain the highest-volume commodity through 2050. Other high-weight commodities such as animal feed, gravel, coal (n.e.c.), and fertilizers will also experience continued growth, contributing to increasing demand on Iowa's transportation network.

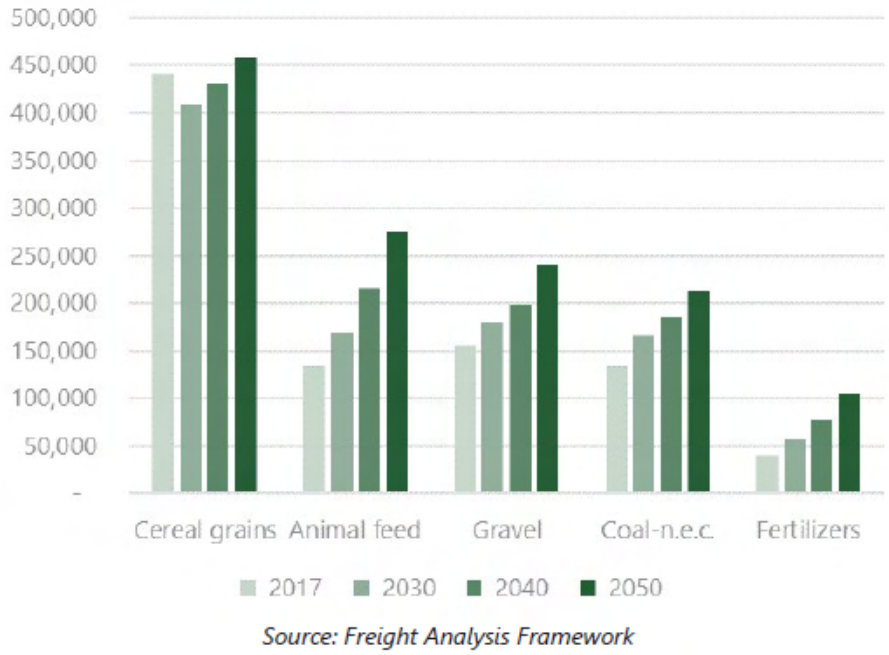


Figure 5.35: Forecast of Iowa domestic freight by tonnage, 2017-2050

5.15 | Resilience Needs Assessment

This Resilience Needs Assessment evaluates natural hazard vulnerabilities within the RPA-18 region, including Pottawattamie, Mills, Harrison, and Shelby counties. It is based on the Iowa State Hazard Mitigation Plan, the Iowa Statewide Resilience Improvement Plan (SRIP), and county-level mitigation plans for Mills and Pottawattamie counties, which identify primary hazards such as flooding, drought, excessive heat, tornadoes, and hazardous materials incidents. These hazards pose risks to public safety and critical infrastructure, including roads, bridges, levees, and transportation corridors. The Iowa DOT defines resiliency as "the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and quickly recover from disruptions." This framework guides the RPA-18 region's approach to risk mitigation and helps prioritize infrastructure investments that support long-term reliability and emergency access.

Major Hazard Vulnerabilities in RPA-18

Levee breaches and dam failures are one of the major concerns in the RPA-18 region, particularly in Pottawattamie, Mills, Shelby, and Harrison counties. According to the Statewide Resilience Improvement Plan SRIP, dams and levees are essential for flood control and water management. However, when these structures fail due to heavy rainfall, erosion, or inadequate maintenance, they can cause severe flooding and widespread damage. Levees and dams also influence land development, including the location of homes, businesses, and roadways. Their failure can significantly disrupt transportation networks and place nearby communities at risk.

The map below highlights areas in the region that are highly vulnerable to levee and dam failure. Levee breaches and dams.

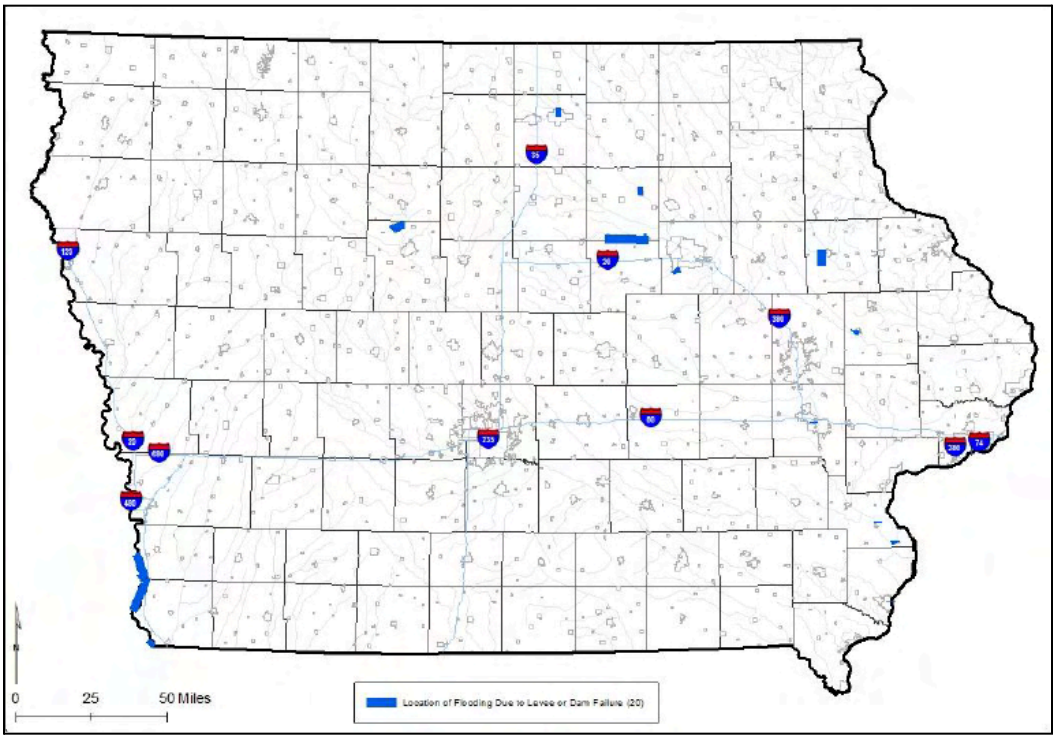


Figure 5.36: flooding from levee and Dam Failures, 2007-2022
Source: Mills county Hazard plan.

Flash & River Flooding

Flooding remains one of the most pervasive threats in the RPA-18 region. Flash flooding, caused by intense rainfall or rapid snowmelt, can occur with little warning, damaging roadways, washing out rural bridges, and disrupting local transportation. Riverine flooding occurs when streams or rivers overflow their banks, temporarily inundating normally dry land as water flow exceeds the channel's capacity. While all counties in the region experience flooding, the most vulnerable areas are those located near major rivers such as the Missouri River and the West Nishnabotna River, where flood risks are more severe and frequent. The last flood events in the region occurred in 2019 and 2024 which disrupted access on I-29. The map below highlights flood-prone areas with a 1% annual chance of flooding within the RPA-18 region.

Figure 5.37: Image depicting flood occurrence in Pottawattamie County

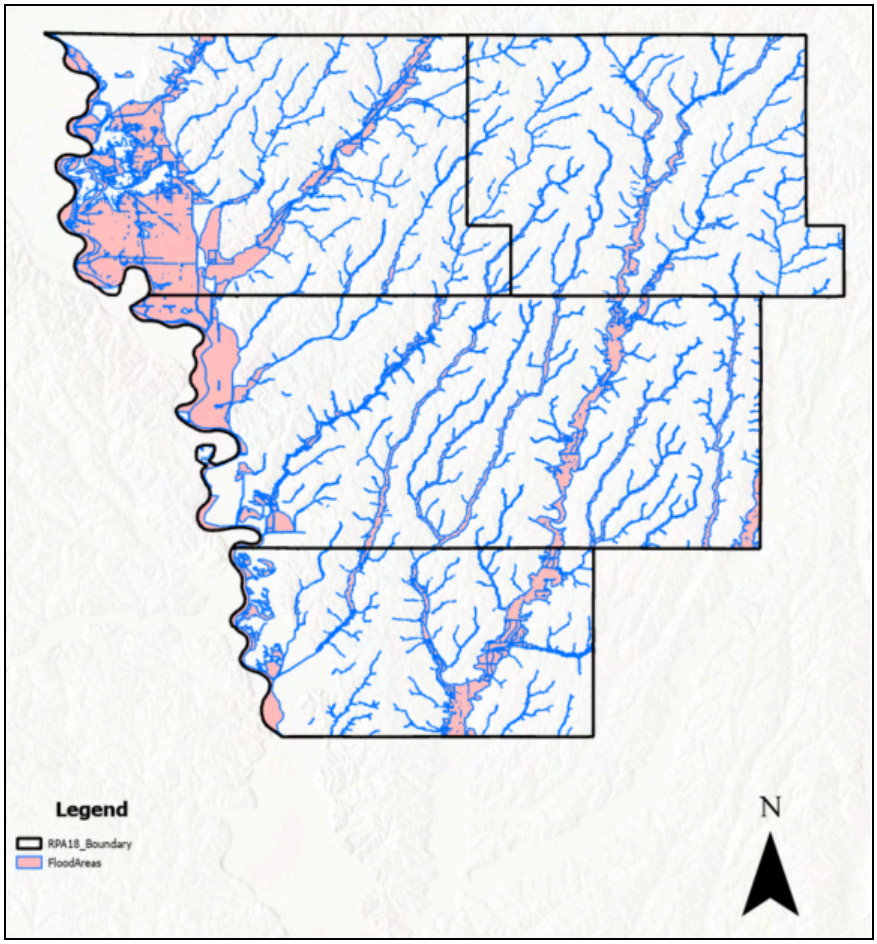


Figure 5.38: High-Risk Flood Zone Areas

Drought and Excessive Heat

Drought is a long-term hazard with significant implications for agriculture, water supply, and community resilience. It is defined as a period of prolonged, abnormally low precipitation that leads to extremely dry conditions. Since 1989, Pottawattamie County has ranked among Iowa's top counties for drought-related agricultural losses. Mills County has also experienced recurring drought conditions over the past 25 years, though these events have not resulted in sustained long-term damage. Excessive heat, defined by the National Weather Service as a heat index exceeding 110°F for two or more consecutive days, can degrade pavement, reduce labor productivity, and increase health risks for vulnerable populations. Between 2009 and 2019, both Mills and Pottawattamie counties recorded five excessive heat events. The figure below shows drought and excessive heat patterns in the region.

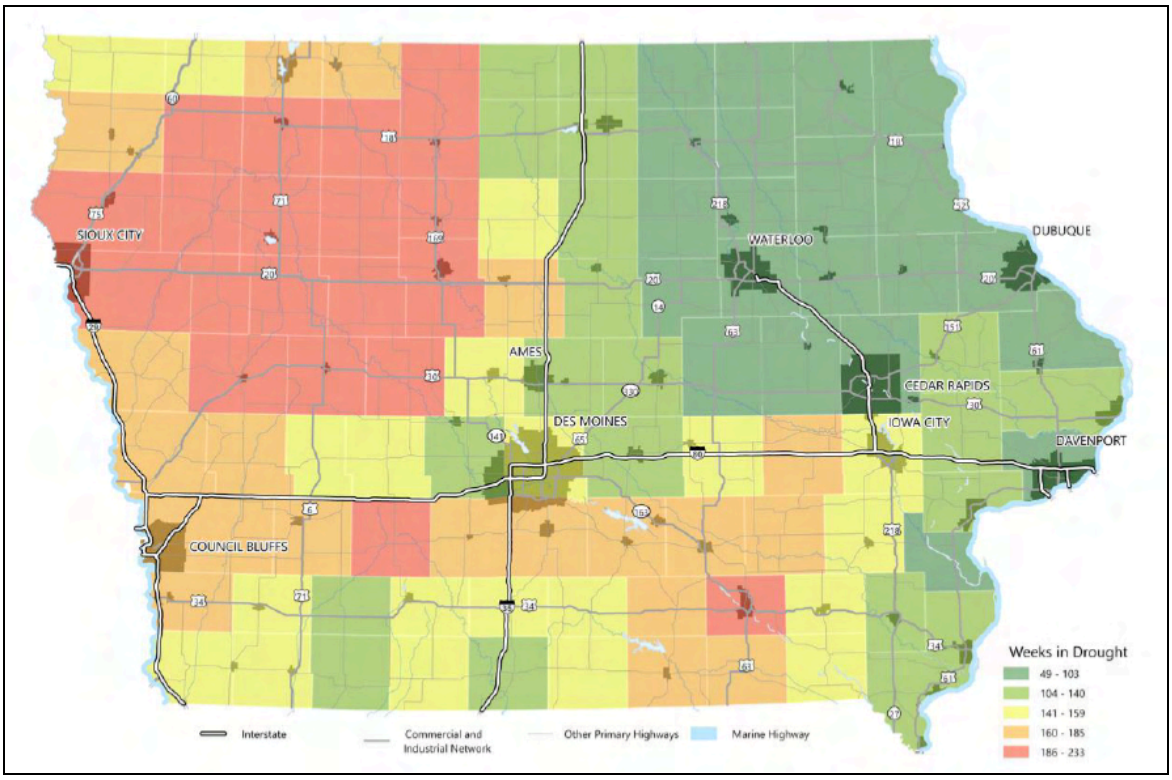


Figure 5.39: Drought Frequency Across Iowa

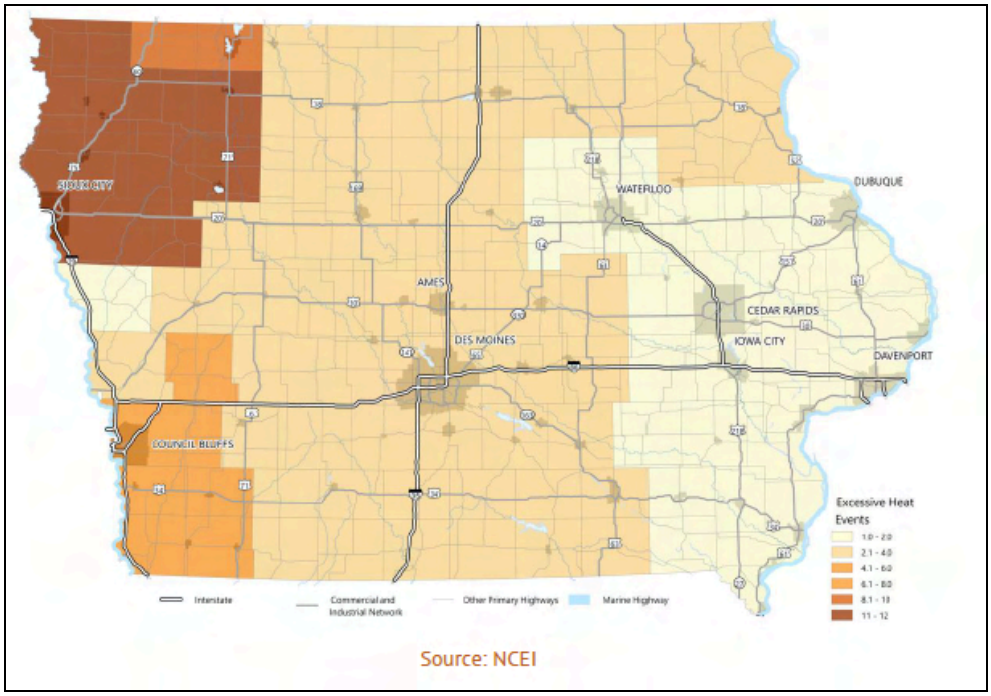


Figure 5.40: Excessive heat in Iowa, 2009-2019

Source: Iowa Statewide Resilience Improvement Plan

Tornadoes and Severe Storms

Tornadoes and high-wind events are recurring hazards in the RPA-18 region. According to the Iowa DOT Hazard Mitigation Plan, a tornado is a violent, rotating column of air that extends from a cumulonimbus cloud and follows a narrow, unpredictable path. Wind speeds can exceed 300 mph, with ground speeds averaging 25–30 mph. Tornado widths may range from a few yards to over a mile at ground level.

Pottawattamie and Mills counties are particularly vulnerable, with both identified as having some of the highest expected annual tornado-related losses to state facilities. Nearly all communities in Pottawattamie County have experienced tornadoes, and Mills County has recorded tornado activity since 1950. Mills is also located along the northern edge of "Tornado Alley," a region known for frequent tornado occurrences.

Windstorms, often associated with severe thunderstorms, winter storms, derechos, or steep pressure gradients, have also historically impacted the region, causing widespread damage and power disruptions.

Hazardous Substances

Hazardous materials incidents can stem from fixed facilities, pipeline systems, or transporting dangerous substances via road, rail, or water. These events may involve the accidental release of flammable, toxic, corrosive, or radioactive materials posing serious risks to public health, safety, and property, and may require emergency evacuations. Causes include equipment failure, poor handling, or illegal dumping.

In Pottawattamie County, many communities, such as Carson, Avoca, Crescent, Hancock, Macedonia, and Highways 59 and 92, are considered high-risk corridors for hazardous materials transport. The county is broadly exposed to hazmat risks, with Council Bluffs alone containing 68 storage sites, including 34 classified as Extremely Hazardous Substances (EHS).

Mills County has 11 facilities that handle EHS materials above federal reporting thresholds. The primary areas at risk are within a 0.5 to 1-mile radius of these sites, which may include residential areas and community facilities. Figure 5.25 highlights the region's hazardous materials storage locations and transportation risk zones.

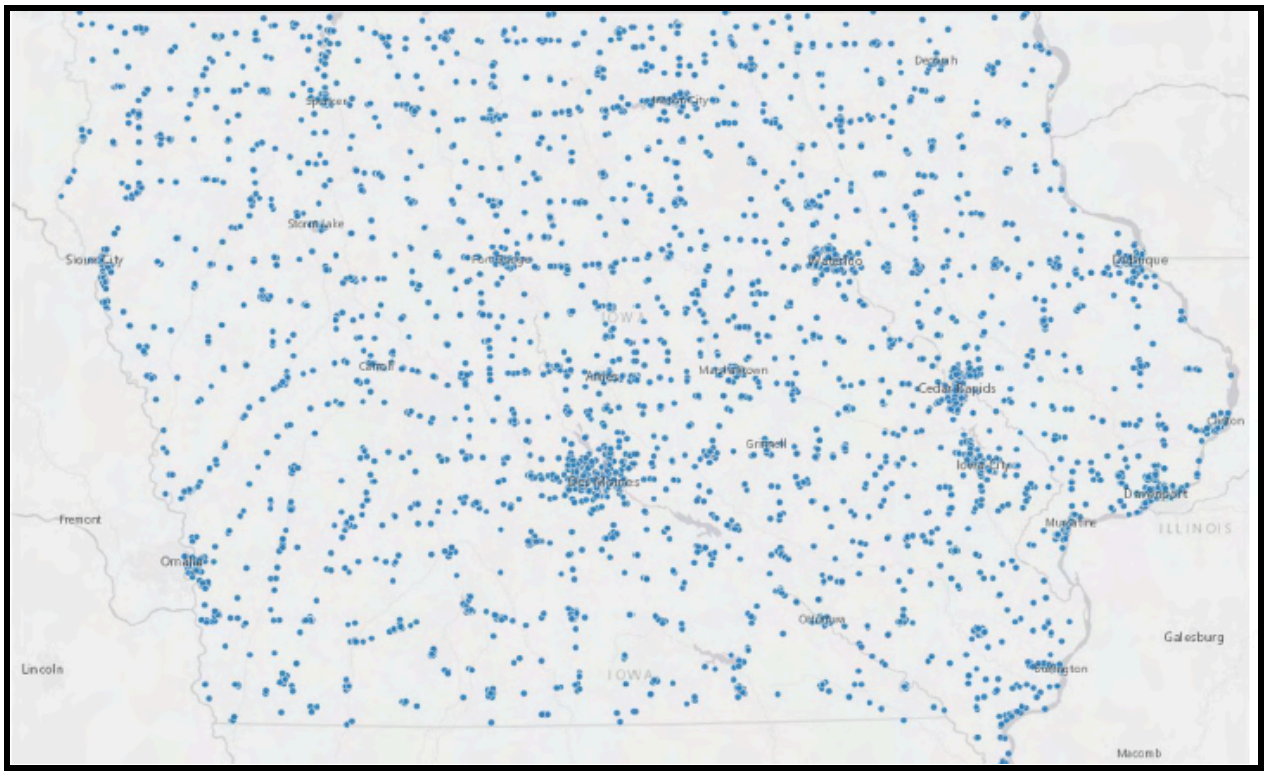


Figure 5.41: Chemical storage in Iowa

Figure 5.42: Hazard exposure and potential regional impacts

County	Hazards	Vulnerable Areas	Potential Impacts
Harrison	River Flooding, Landslides, Tornadoes, Wildfire	Missouri Valley, Mondamin, Boyer River, Loess Hills slopes	Flooding along major highways (I-29, Hwy 30); landslides damaged roads; 77 homes and 6 businesses were flooded and declared an almost complete loss. Many vehicles were destroyed.
Mills	Flooding, Tornadoes, Drought, excessive heat, hazardous materials, Levee, landslide, Wildfire	Pacific Junction, I-29 corridor, rural levee districts	Levee breaches and community displacement (2011 & 2019); emergency access cutoffs; drought stress on crops. Highway 34 and I-29 were destroyed due to flooding. The entire town was flooded by the Missouri River water. Loss of livestock and crops may lead to economic hardships within a jurisdiction. Cleanup costs could also be significant to a jurisdiction. Release of some toxic gases may cause immediate death, disablement, or sickness

Pottawattamie	Flooding, Tornadoes, Animal and Plant Disease, Hazmat, Levee Failure, Grass & Wildland fire, Drought & extreme heat, hazardous materials.	Council Bluffs, Avoca, Oakland, Neola, Underwood, and all cities in the county	Damage to wastewater systems, parks, and homes; over 300 bridges at risk; hazmat incidents in the urban core. Impact on the population residing on farms. March 6, 2005 | Extreme conditions led to a 4,000-acre fire resulting in the loss of 4 homes, several vehicles, an outbuilding, and farm implements with an estimated loss of over $5,000,000. It spanned 8 miles in length and 3 miles wide. Anhydrous ammonia is the most significant threat.
Shelby	River Flooding, Flash Flooding, Drought	Harlan, West Nishnabotna River corridor, rural farmland	Urban drainage failures, agricultural drought losses, and risk to small dams during high rain events

Source: Pottawattamie County Hazard Mitigation Plan
Iowa DOT Hazard Mitigation Plan

Iowa Statewide Resilience Improvement Plan

The above disaster and its associated impacts in Figure 5.40 emphasize the critical need to integrate resilience into transportation planning across the RPA-18 region. Each county faces unique vulnerabilities from flood-prone highways and damaged bridges to hazardous materials corridors and drought-stressed infrastructure that can disrupt mobility, safety, and economic activity. As such, prioritizing infrastructure projects that mitigate these risks is essential to maintaining system reliability and protecting community well-being.

Social Vulnerability and Risk Index

National Risk Index (NRI) is a composite used to evaluate the relative risk of natural hazards based on expected annual losses, social vulnerability, and community resilience. These scores help identify areas where resilience efforts may be most needed. The figure below highlights the areas within the RPA-18 region with higher vulnerability to disasters.

For the RPA-18 region, Pottawattamie County ranks the highest, with a Relatively Moderate risk level, reflecting its larger population, greater infrastructure exposure, and broader hazard profile. Harrison County is classified as Relatively Low, while Mills and Shelby Counties fall within the Very Low risk category, which means that these counties face comparatively fewer risks and potential losses relative to the national landscape.

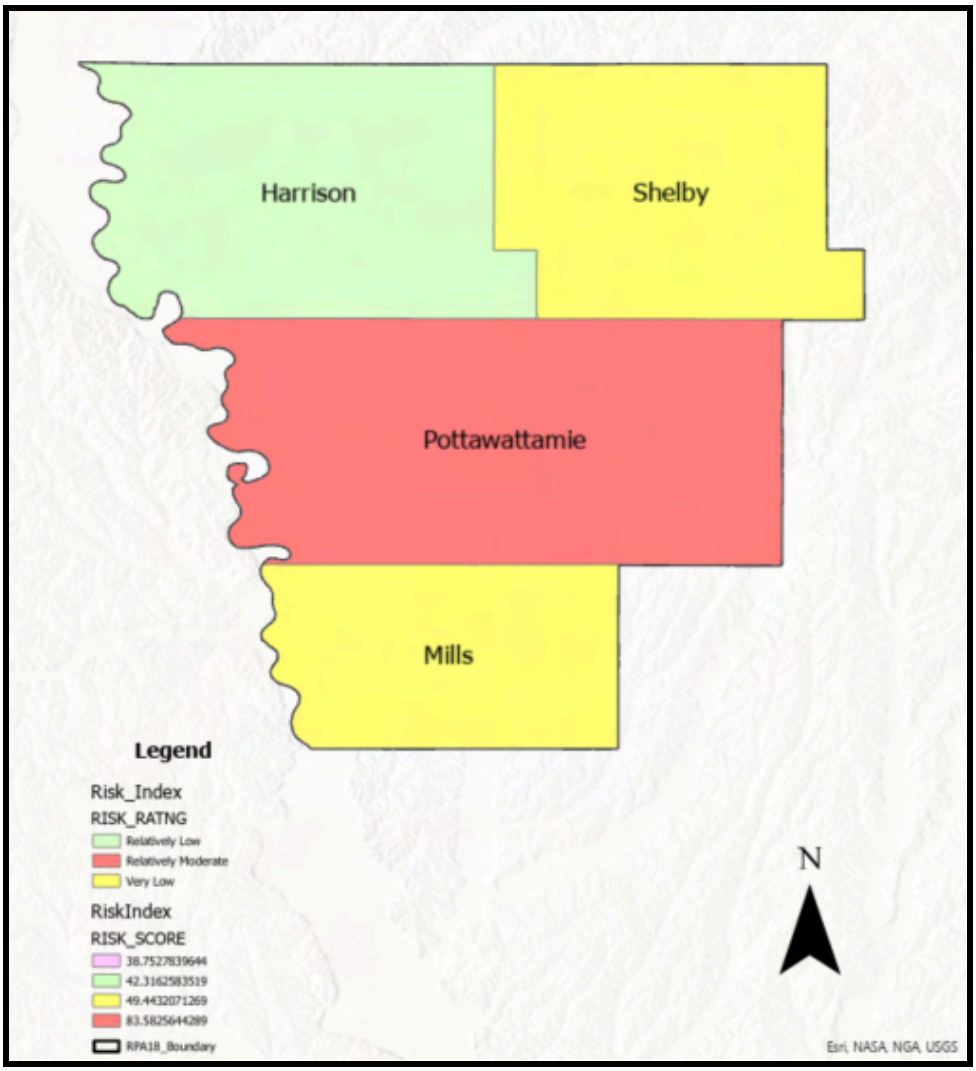


Figure 5.43: National Risk Index ranking for RPA-18 counties

Project Selection Alignment

To strengthen the RPA-18 region's ability to withstand and recover from natural disasters, there is a need to integrate resilience considerations into the selection and prioritization of transportation projects, including those identified in the Transportation Improvement Program (TIP). However, the current TIP does not include project-specific scoring or prioritization that explicitly targets resilience outcomes. As a result, this LRTP does not include a formal scoring or ranking of projects based on resilience factors. Instead, the analysis provided in this section, including pavement and bridge condition, hazard exposure, and freight growth projections, will serve as foundational inputs for future prioritization efforts. Key resilience-informed factors that are proposed to strengthen project evaluation include asset condition (e.g., Good/Fair/Poor ratings), hazard vulnerability (e.g., social vulnerability Index), criticality for access (e.g., emergency or freight routes), and demand growth and usage.

6| Economic Vitality

6.1 | Freight Trucking

The interstate corridors of I-80, I-29, 1-680, and I-880 (formerly the northern portion of I-680 in Pottawattamie County) carry ever-growing numbers of freight trucks to destinations inside the state, and across the nation. The Federal Highway Administration, through a program called the Freight Analysis Framework (FAF), measures existing freight flow (both in number of vehicles and tons of goods) and provides a modeled estimate for future freight volumes. The framework is in its fourth version (referred to as FAF5), which is based on 2012 data. Figure 6.1 shows the average annual daily truck traffic (AADTT) for the RPA-18 region in 2012.

[Text to be updated when received updated data]

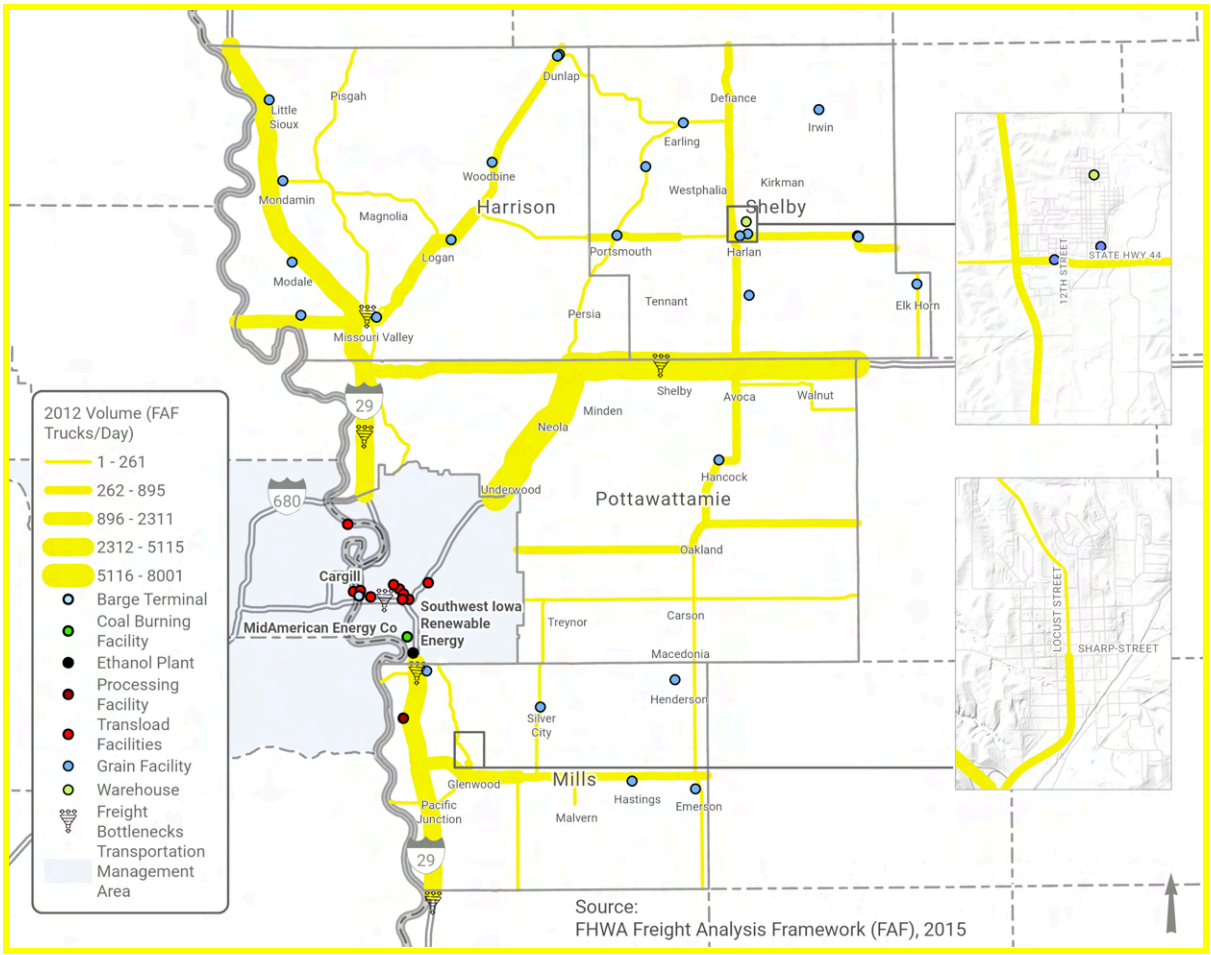


Figure 6.1: Average Annual Daily Truck Traffic (FAF5) 2012

[35] https://www.arcgis.com/home/item.html?id=60f5cbbd6b25434e9bd475851d66b5ac

The modeled freight flows for 2045 are shown in Figure 6.2. Although the interstate volumes pick up as expected, the increased volumes on the state highway systems within the RPA are noteworthy. Increasing freight volume along interstates and state highways create more bottlenecks and chances for delay, along with added safety concerns as volume increases the likelihood of collision. Delays in freight delivery due to volume or collisions creates a burden upon the local and regional economy as freight reliability indices diminish.

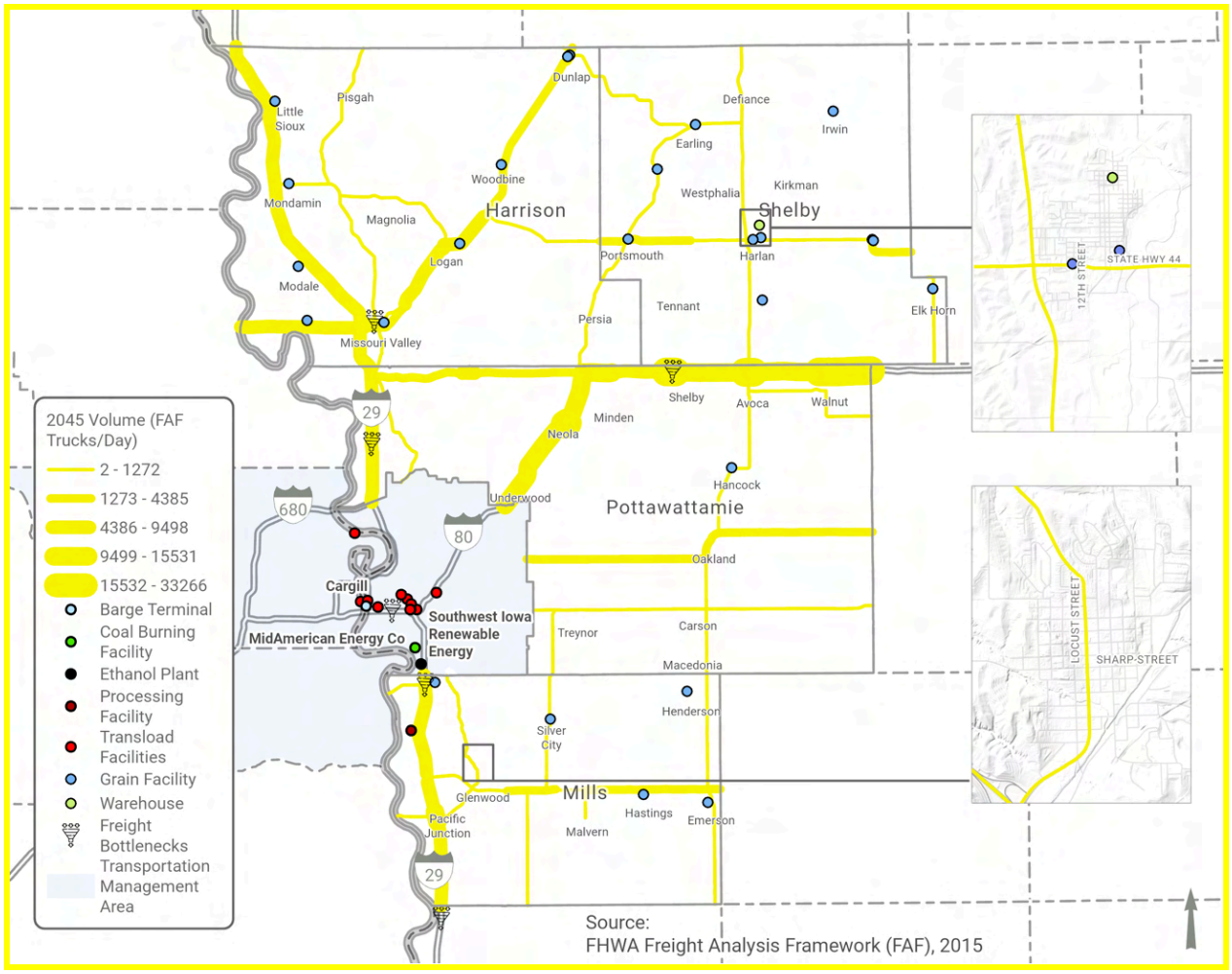


Figure 6.2: Projected truck freight volumes for 2045

6.2 | Rail

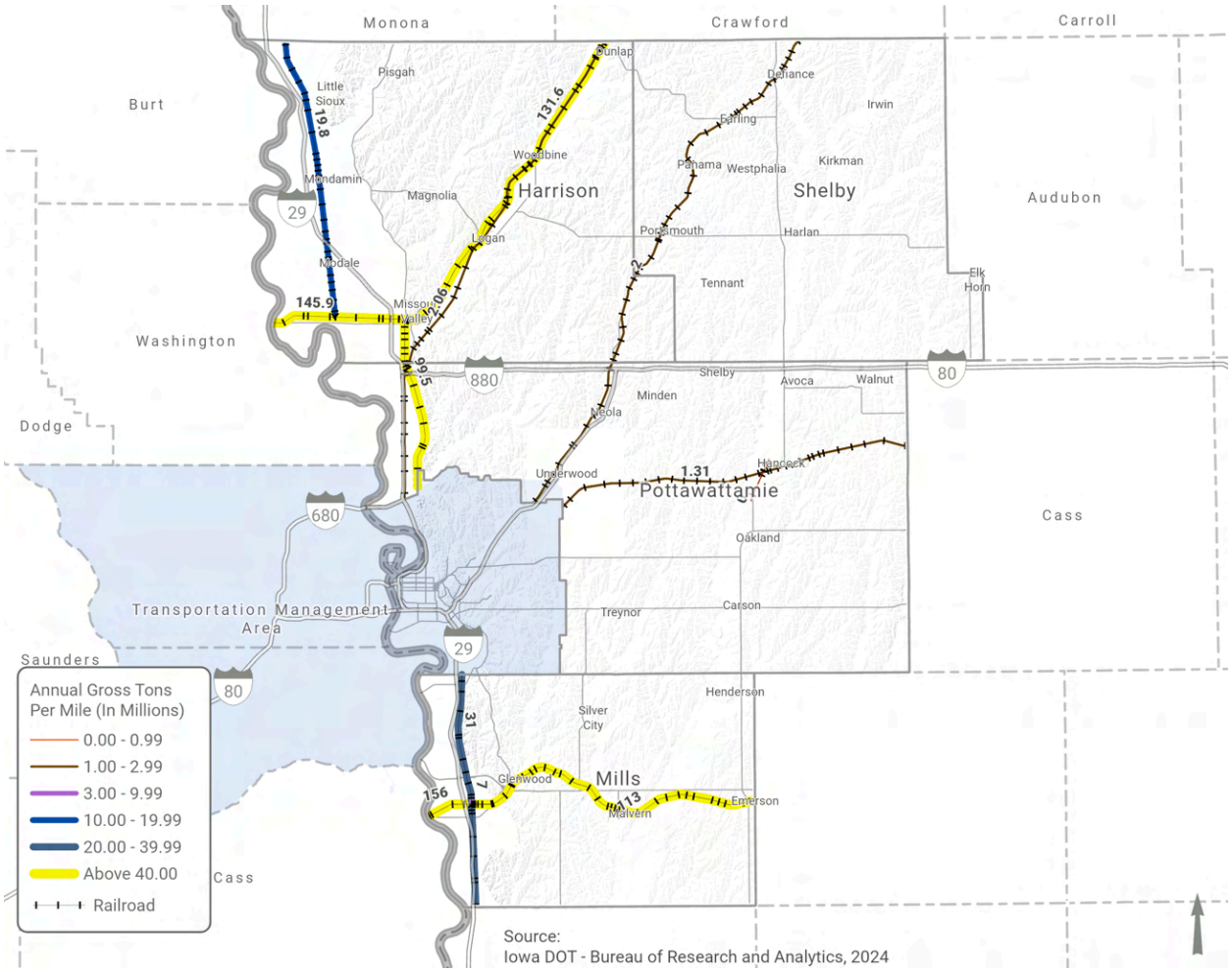


Figure 6.3: Rail Traffic (Annual Gross Tons per mile) in RPA-18 Region

Figure 6.3 illustrates the level of freight rail activity across the RPA-18 region, measured in annual gross tons per mile. The map shows that the highest rail volumes occur along the major Class I corridors operated by UPRR and BNSF, particularly in Mills, Pottawattamie, and Harrison counties, where long-haul freight moves through the region toward national distribution hubs. Regional and short-line railroads, such as the CCPRR and IIRR, carry lower but still has still been indicated as an important freight volume, supporting local industries, agricultural producers, and smaller communities throughout the RPA-18 area. These corridors form a critical freight network that connects rural counties to larger markets and supports the economic activity of the region.

7| Land Use and Growth & Sustainability

The RPA-18 Long Range Transportation Plan (LRTP) seeks to understand and shape how land use patterns intersect with transportation systems in Harrison, Mills, Shelby, and rural Pottawattamie counties. This chapter explores existing land use, forecasts future growth, and analyzes key challenges and opportunities in building a resilient, efficient, and accessible transportation network.

Figure 7.1: Residential Land Use Patterns in Harlan, Iowa.

Source: *City of Harlan*

7.1 | Forecasted Growth & Development

There are approximately 40 cities and towns in the RPA-18 region with populations of less than 2,000. Those with greater populations include Glenwood (pop. 5,073), Harlan (pop. 4,893), and Missouri Valley (pop. 2,678). These communities are also considered key drivers of economic opportunity in the region.

The primary land use in RPA-18 is agricultural, with most activity centered on crop production, such as corn, soybeans, and hay, as well as livestock production, including cattle and hogs. As of 2024, the Center for Agriculture and Rural Development, in collaboration with the ISU Extension and Outreach, reported a decline in cropland values across the region: Pottawattamie County experienced a -8.9% decrease, Mills -4.8%, Shelby -9.2%, and Harrison -9.7% however, while there was a decrease in crop land value, livestock increase by 8.4% in 2024.

Community feedback and committee discussions have highlighted growing challenges on rural roads:

- **Heavier Equipment:** Larger agricultural machinery is causing more wear on local roads as farms expand production.

- **Higher Speeds:** Residents have noted faster traffic on rural routes—an issue supported by state data linking speed to serious crashes and fatalities.
- **Safety & Maintenance:** Together, these trends are driving up maintenance costs and raising safety concerns for all road users.

MAPA and RPA-18 partners continue to explore strategies to maintain safe, reliable rural transportation networks.

Growth in the RPA-18 region is concentrated in the southwestern counties, particularly in areas adjacent to the Omaha–Council Bluffs Metropolitan Area. Pottawattamie and Mills counties are projected to experience population growth in the coming year, with Pottawattamie County expecting to have a total increase of 847 persons by 2030 within the incorporated communities in the county, while Harrison and Shelby counties are expected to see population decline. This pattern reflects broader statewide trends, where counties with urban centers tend to grow while many rural counties face decline.

7.2 | Existing Land Use (ELU)

Land use patterns across the region reflect its rural heritage, economic reliance on farming, and growing proximity-based pressures from the Omaha-Council Bluffs metropolitan area. The following section discusses the existing land use patterns across the RPA-18 region.

Agricultural Land

Agriculture remains the backbone of the RPA-18 region where agriculture dominates the land use, with large, non-contiguous farms operated by a smaller number of full-time farmers. According to the 2022 Census on Agriculture

Figure 7.2: Growth in farm size and land between 2017 and 2022

Metric	RPA-18 Region	Statewide (Iowa)	Trend
Number of Farms	+0.4%	+0.94%	Slight growth
Average Farm Size	+2.2%	−3%	Larger farms locally
Land in Farms	+1.3%	−2%	More farmland in use

While much of the State of Iowa is consolidating and losing farmland, the RPA-18 region is maintaining and even expanding its agricultural base. The overall trends are indicative of a

reduction in small family farms and a move towards larger industrial farms that constitute larger land and farm size. Farming dominates the land use in the region with the share of land dedicated to farms with all regions on the RPA-18 exceeding 75% of their land to farming (see Figure 7.2) and represented by county percent of land dedicated to farming:

- Pottawattamie: 92.6%
- Shelby: 89.8%
- Harrison: 83.9%
- Mills: 75.4%

These trends highlight the region's strong rural identity and the continued importance of farmland preservation in local planning.

Figure 7.3: Percentage Change in RPA-18 Agricultural Land Use from 2017 - 2022

State/County	Percentage Change in Number of Farms	Percentage Change in Land in Farms	Percentage Change in Average Size of Farm(acres)
Iowa	***0.94***	***-1.92***	***-2.82***
Harrison	2.	-1	-3
Mills	-13	2	17
Pottawattamie	8	10	2
Shelby	-3	-8	6
Total	***0.29***	***1.50***	***1.25***

Source: USDA Census of Agriculture

Figure 7.4: Total Land Area and Land in Farms in the RPA-18 Region for 2022

County	Total Land Area (acres)	Total Number of Farms (count)	Land in Farms (acres)	Average size of Farm (acres)	Percentage of land in Farms
Harrison	446,016	811	374,383	462	83.9%
Mills	279,936	451	210,969	468	75.4%
Pottawattamie	608,832	1203	563,574	468	92.6%
Shelby	378,112	865	339,793	393	89.9%

Source: USDA Census of Agriculture and U.S. Census Bureau

Figure 7.5: Rural and Agricultural Land Use in Harrison County

Source: Iowa Land Company blog, 2019

Residential and Other Land Use Patterns

While agriculture remains the predominant land use across RPA-18, residential, commercial, and institutional land uses also play an important role, particularly within the incorporated cities and towns. Residential land use is generally the second-largest land use across RPA-18, especially in unincorporated areas of Mills and Pottawattamie Counties. In Mills County, 95.5% of unincorporated land is agricultural or undeveloped, while residential land accounts for 3.8%, making it the second-largest land use. Most of these residential parcels are single-family homes located in the western part of the county, near Glenwood and the Loess Hills region.

In Pottawattamie County, rural residential uses are spread throughout the county, with growth influenced by proximity to Council Bluffs and major transportation corridors. Approximately 90% of all housing units in the county are single-family homes, with multi-family units mostly concentrated in urban areas like Council Bluffs.

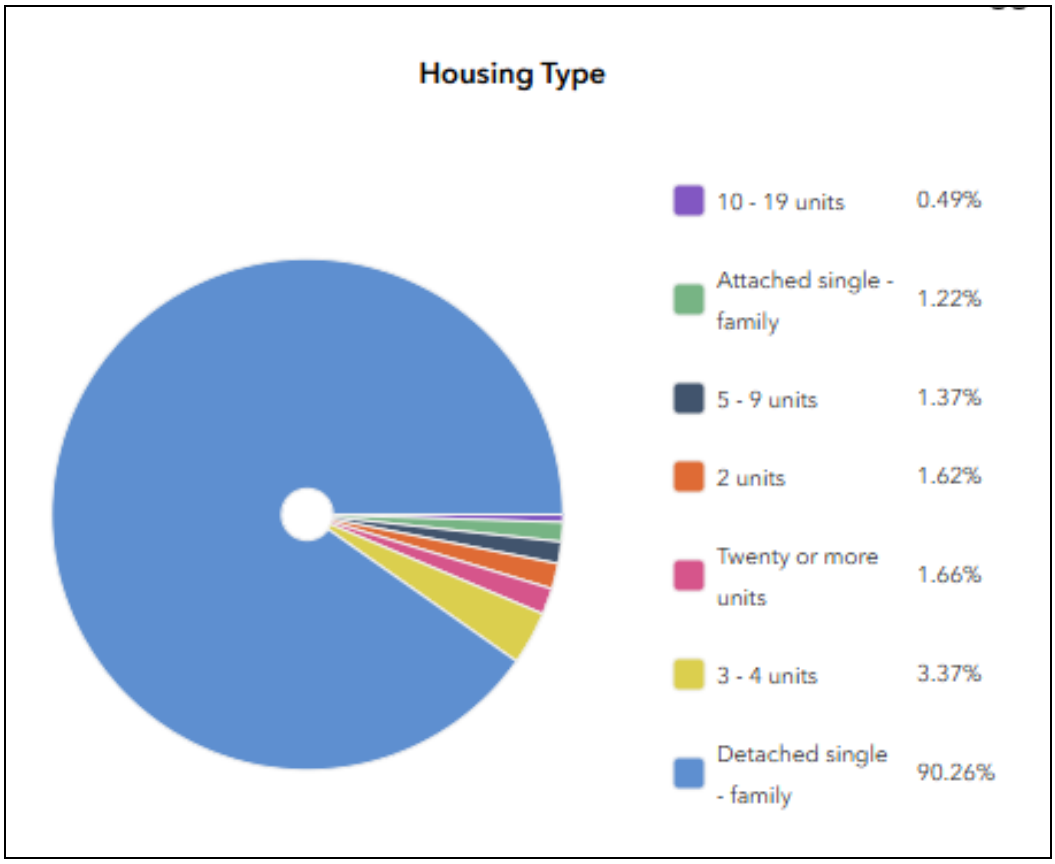


Figure 7.6 : Housing Types in RPA-18

Commercial and Industrial Land Use

Commercial and industrial land uses form the smallest share of land use across the RPA-18 region. These uses tend to be concentrated in or near town centers and major transportation corridors, supporting local service economies and ag-related industries. Glenwood, Harlan, and Missouri Valley each serve as central business hubs for their respective counties. They support small retail centers, public institutions, and county offices and deliver local services.
Industrial land use is more limited and generally located on these cities' outskirts or near rail and highway infrastructure, such as I-29 and Highway 34 in Mills and Pottawattamie counties.

Conservation and Recreation Lands

Conservation and recreation land uses comprise a small but increasingly significant share of land use across the RPA-18 region. These areas include public parks, wildlife preserves, trail corridors, and other open space amenities contributing to community well-being. In particular, the Loess Hills region extending through Mills and Pottawattamie counties contains unique ecological and scenic resources that have been protected through conservation easements and limited-development zoning.

Counties and communities in the region are increasingly integrating public facilities, parks, and trail systems into broader land use and development strategies. These strategies aim to

enhance quality of life, support tourism and outdoor recreation, and promote sustainable growth across the region.

	Riverfront & Ag Production	Ag Production	Loess Hills	Ag – Urban Transitional	Urban Transitional	Industrial	Commercial
Dwellings per quarter-quarter section	1	2	2	3	3	-	-
Commercial permitted	No - except at interchanges	No	No	Yes	Yes	N/A	Yes
Industrial permitted	N/A	No	*Limited	No	Yes	Yes	N/A
Residential subdivisions permitted	No	No	Yes, clustered recommended	Yes	Yes	No	No
Minimum lot size with well and septic	40 acres	2 acres	2 acres if not clustered	2 acres	2 acres	1 acre	1 acre
Minimum lot size with water and/or sewer	N/A	N/A	2 acres if not clustered	1 acre	1 acre	N/A	N/A
Minimum lot size when within ½ mile of a city	N/A	N/A	2 acres if not clustered	N/A	1 acre	N/A	N/A
Requires subdivision roads to County standards	N/A	N/A	Yes	Yes	Yes	N/A	N/A
Minor sub (4 lots or <) direct-shared access hard surfaced roads	N/A	N/A	Yes	Yes	Yes	Yes	Yes
Major sub (5 lots +) frontage roads	N/A	N/A	Yes	Yes	Yes	Yes	Yes

Figure 7.7: Pottawattamie County Existing Land Use Breakdown

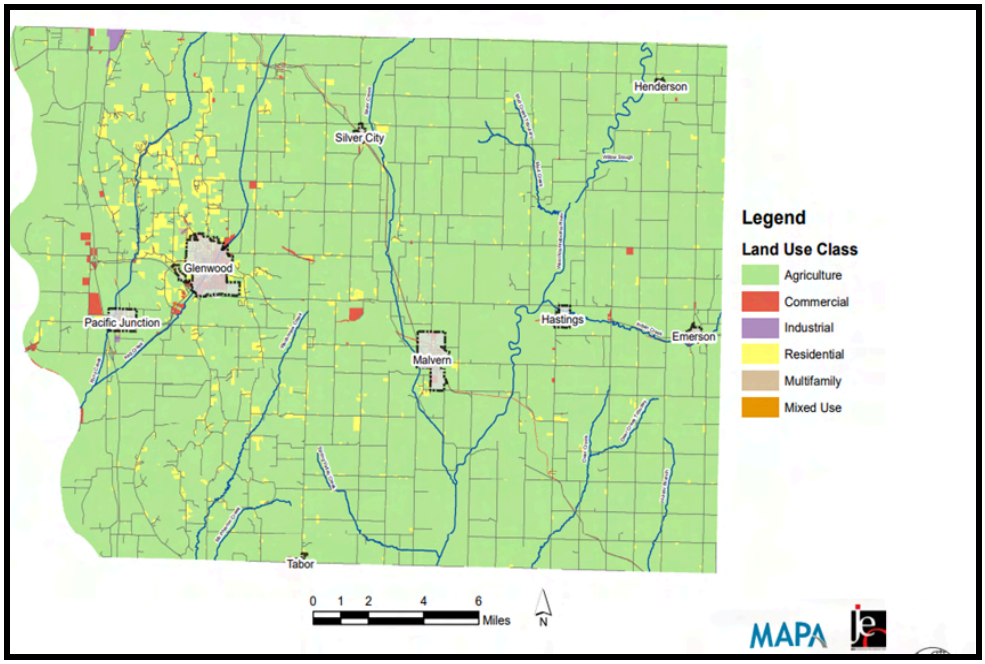


Figure 7.8: Mills County Existing Land Use

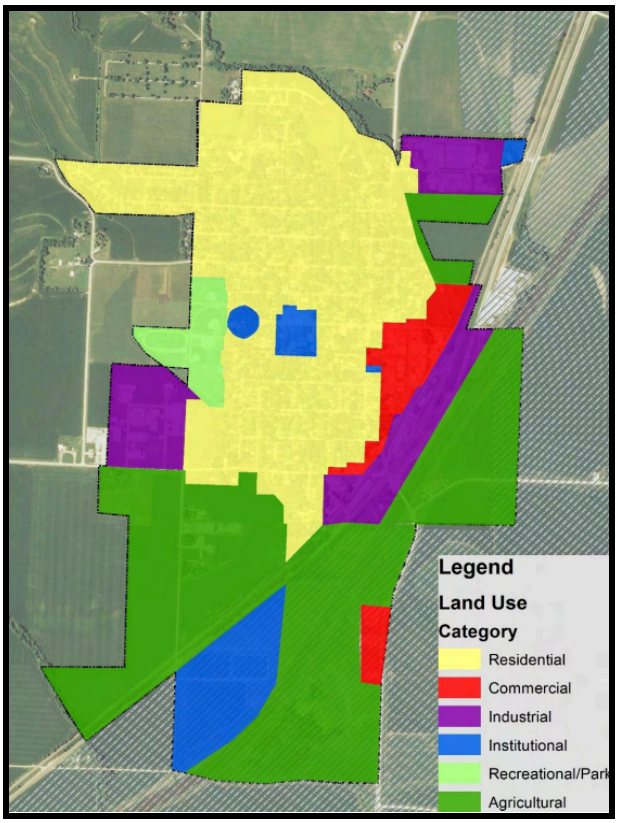


Figure 7.9: Woodbine Existing Land Use

7.3 | Future Land Use (FLU)

The future land use vision for the RPA-18 region builds on the long-range plans developed by the four counties, Pottawattamie, Mills, Shelby, and Harrison, and their respective cities and towns. While each jurisdiction has unique needs and priorities, they share common long-term goals, such as preserving agricultural land, conserving natural resources such as the Loess Hills, and encouraging new development in areas where infrastructure and public services already exist.

In 2025, Iowa passed Senate File 592, a state law, which requires all Iowa cities and counties to allow at least one accessory dwelling unit (ADU) on single-family residential lots. This change supports the region's goals of increasing housing diversity and affordability while maintaining its rural character. By enabling ADUs, communities can offer more flexible housing options that make it easier for residents to age in place, support multi-generational living, and provide workforce housing. Together, these efforts help strengthen neighborhoods and ensure housing choices keep pace with the region's changing needs.Overall, the counties in RPA-18 aim to guide future development in ways that support growth while protecting farmland and natural resources. The following section explains how each county plans to use land in the future and

how those plans support the region's overall goals for sustainable growth, strong local economies, and a high quality of life.

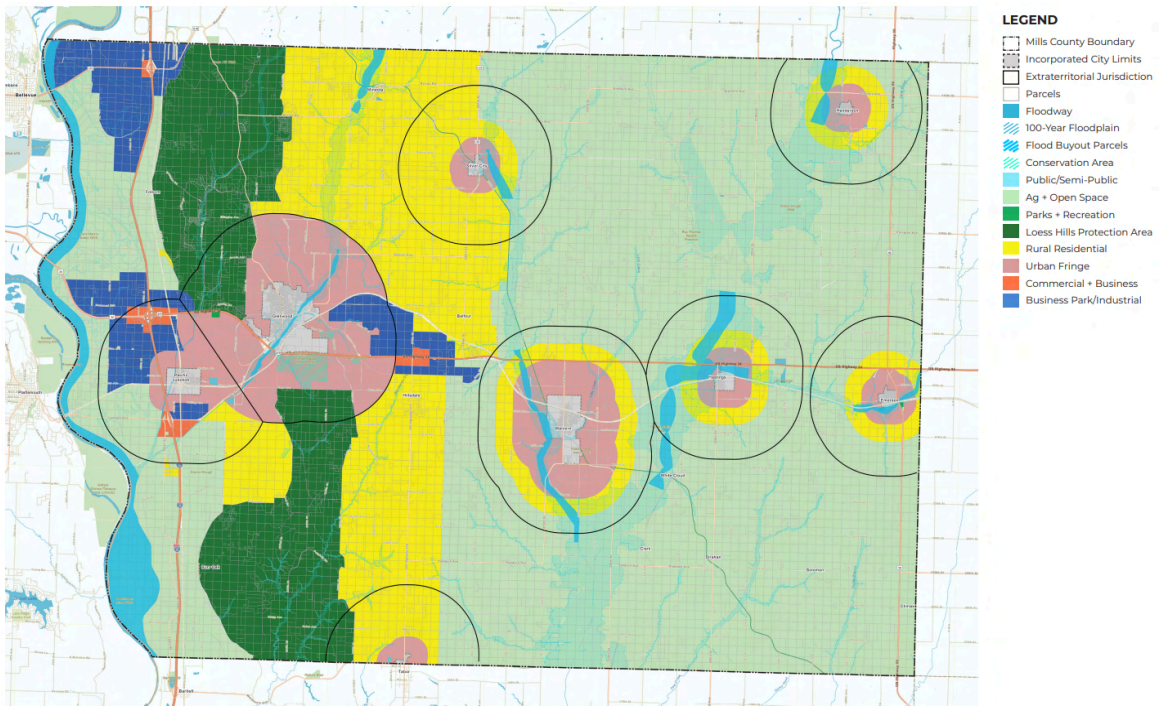
Mills County

Mills County's future land use plan charts a balanced path between growth and preservation. Most of the county—nearly 60%—will remain Agricultural and Open Space, reflecting strong public support for protecting farmland. Residents voiced concern about preserving as much farmland as possible and a general openness to pursuing renewable energy opportunities like solar and wind.

The plan guides growth toward the Urban Fringe areas around Glenwood and Malvern, with modest residential expansion north of Glenwood and new commercial or industrial development along I-29 and Highway 34. These growth areas leverage existing infrastructure while keeping the county's scenic and agricultural character intact.

Overall, the plan safeguards the Loess Hills and farmland that define Mills County, while encouraging thoughtful, infrastructure-ready development where it makes the most sense.

Figure 7.10: Mills County Future Land Use



Source: Mills Comprehensive Plan

Figure 7.11: Mills County Future Land Use Breakdown

Land Use Designation	Percent Land Use

Agricultural & Open Space	59.7%
Rural Residential	15.5%
Loess Hills Protection Area	11.1%
Urban Fringe	8.8%
Business Park/Industrial	4.4%
Commercial & Business	0.3%
Parks & Recreation	0.2%
Public/Semi-Public	0.1%

Figure 7.12: City of Glenwood Future Land Use

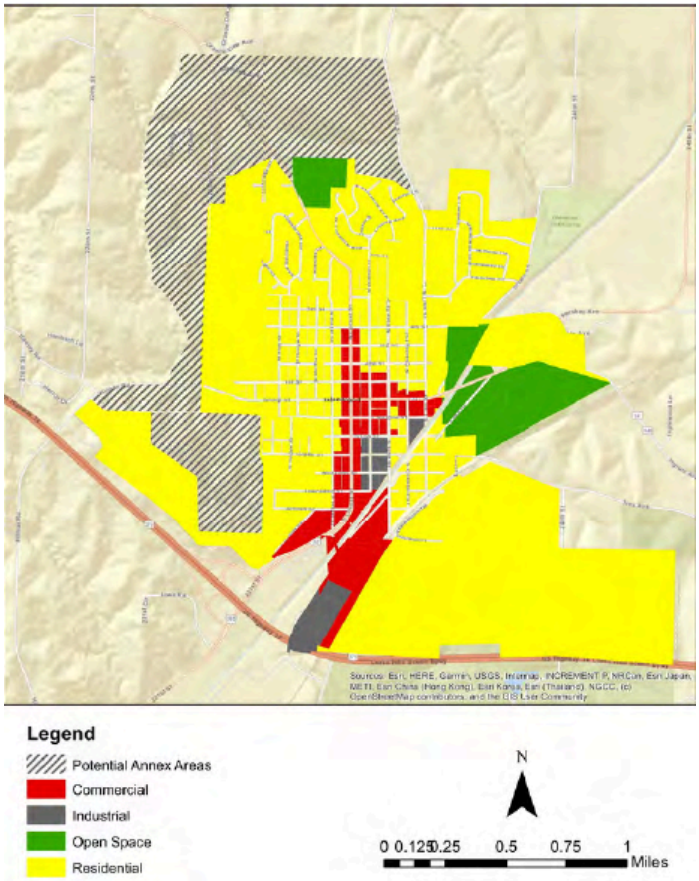
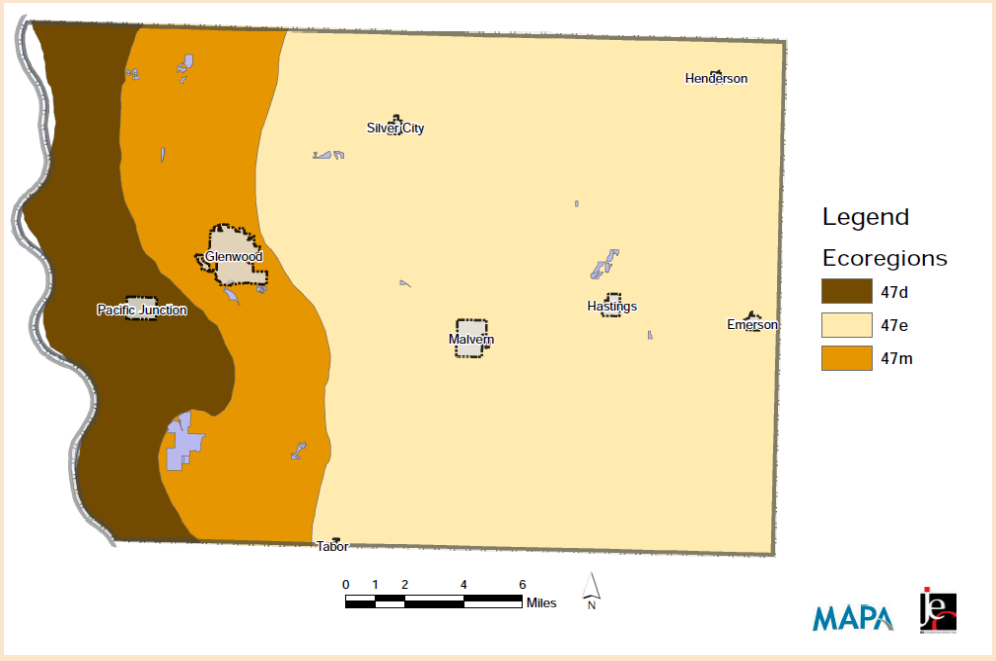


Figure 7.13: Mills County Ecoregion



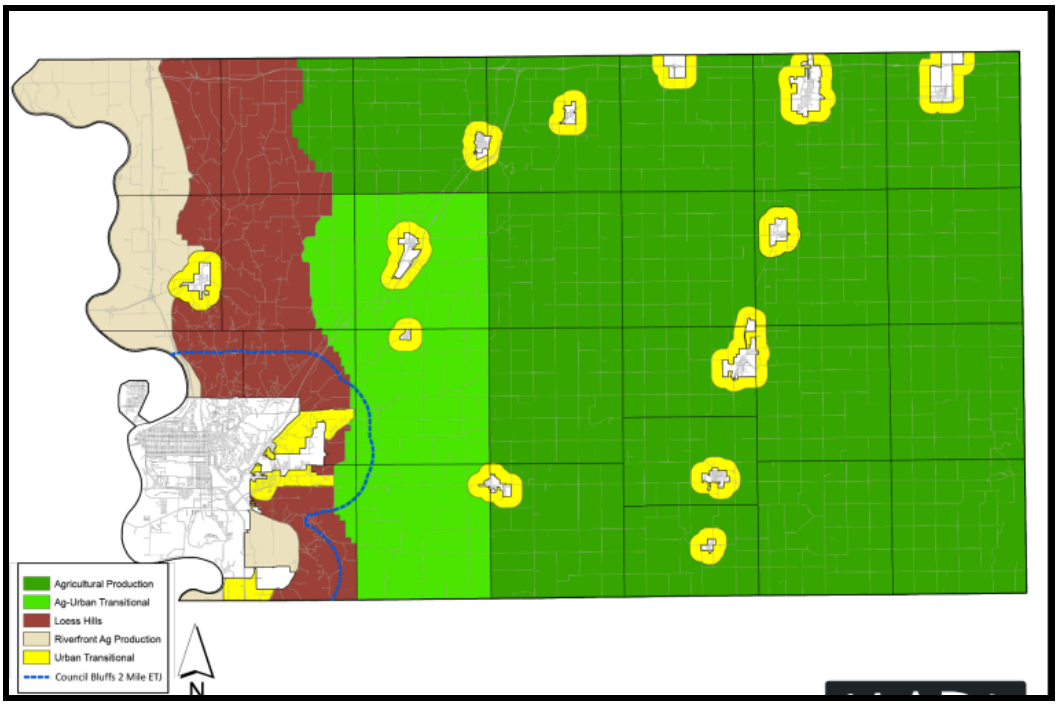
Pottawattamie County (Non-Urbanized)

Pottawattamie County's future land use plan focuses on protecting its natural landscapes while guiding growth to the right places. The Riverfront and Low-Lying Agricultural Production Areas—mostly within the floodplain—are the county's most protected zones, set aside to preserve wetlands, open space, and working farmland.

Agriculture will continue to define the central and eastern parts of the county, while the Loess Hills—one of Iowa's most unique ecological regions—remain a conservation priority. To curb rural sprawl, the plan limits new non-farm housing in prime agricultural areas and instead promotes infill development within existing communities.

Future commercial and industrial growth will be concentrated along established transportation corridors, ensuring that new development supports infrastructure efficiency and environmental stewardship

Future 7.14: Pottawattamie County Rural Future Land Use



Source: Pottawattamie Comprehensive Plan

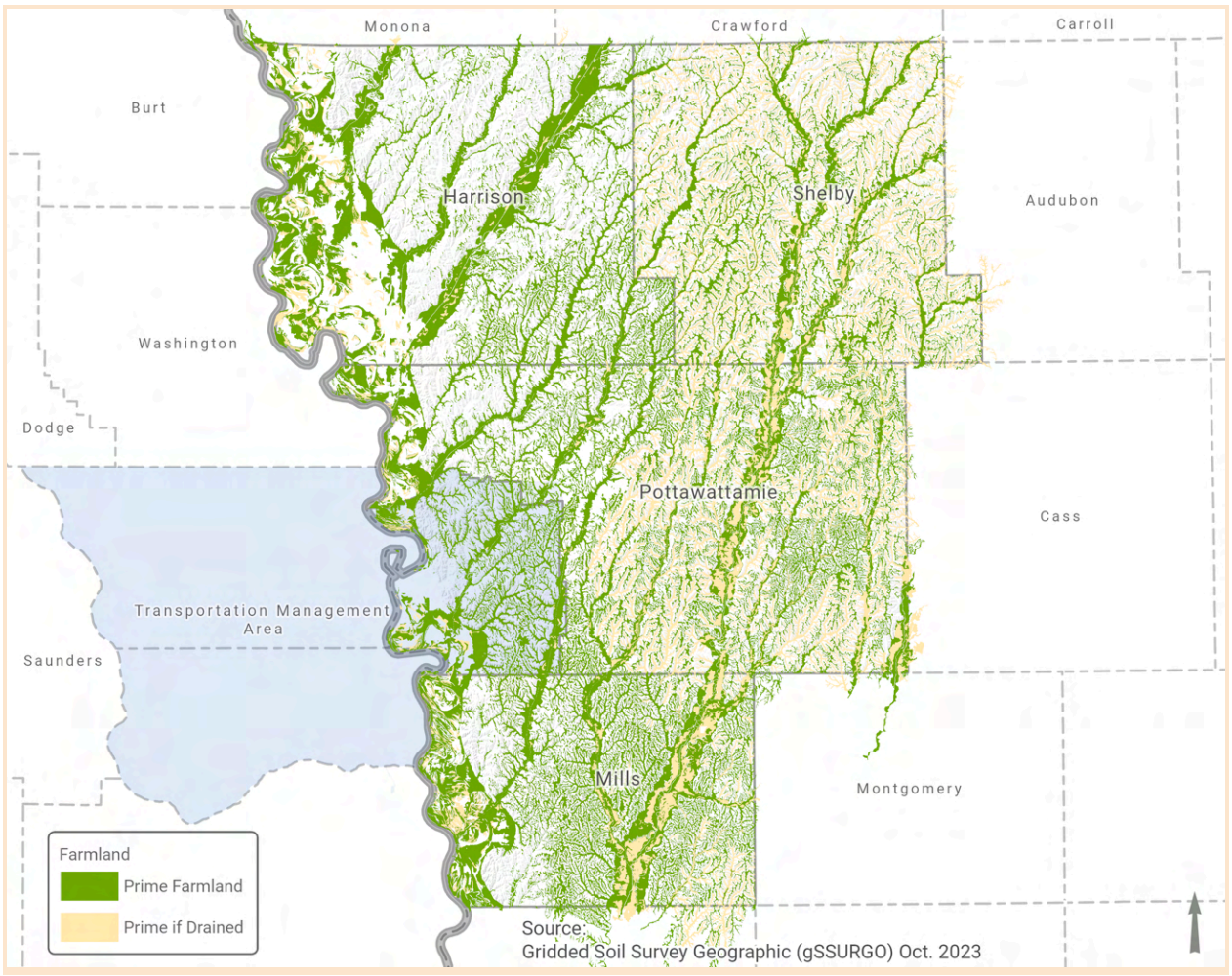


Figure 7.15: Prime Farmland in RPA-18

Source: USDA

Shelby County

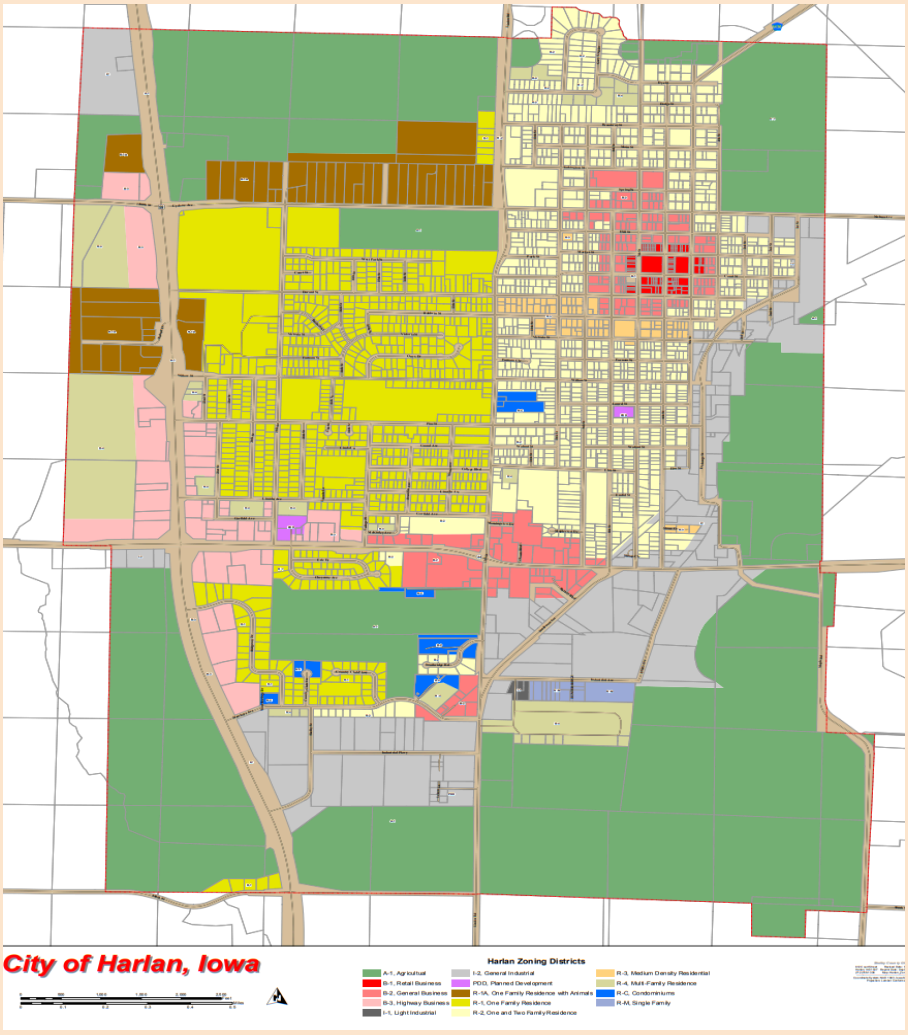
Shelby County's future growth is largely guided by maintaining agricultural zoning throughout the County and allowing individual cities to maintain their own zoning. The City of Harlan, one of the largest cities and a main population center, plans to build on existing land use patterns, steering new development to areas already served by infrastructure and city services.

Future residential growth will concentrate on the west and south sides of town, adding single-family and multi-family housing near established neighborhoods. Commercial expansion will strengthen the downtown core and key corridors, while industrial uses are planned for the south and southeast, close to major transportation routes.

Agricultural and open space areas will remain on the city's outer edges, preserving Harlan's rural character, while schools and public facilities are distributed throughout the community to support future neighborhoods.

Public and institutional uses, including schools and city facilities, are placed throughout the community to serve the growing neighborhoods.

Figure 7.16: City of Harlan Future Land Use



Source: City of Harlan Zoning Map

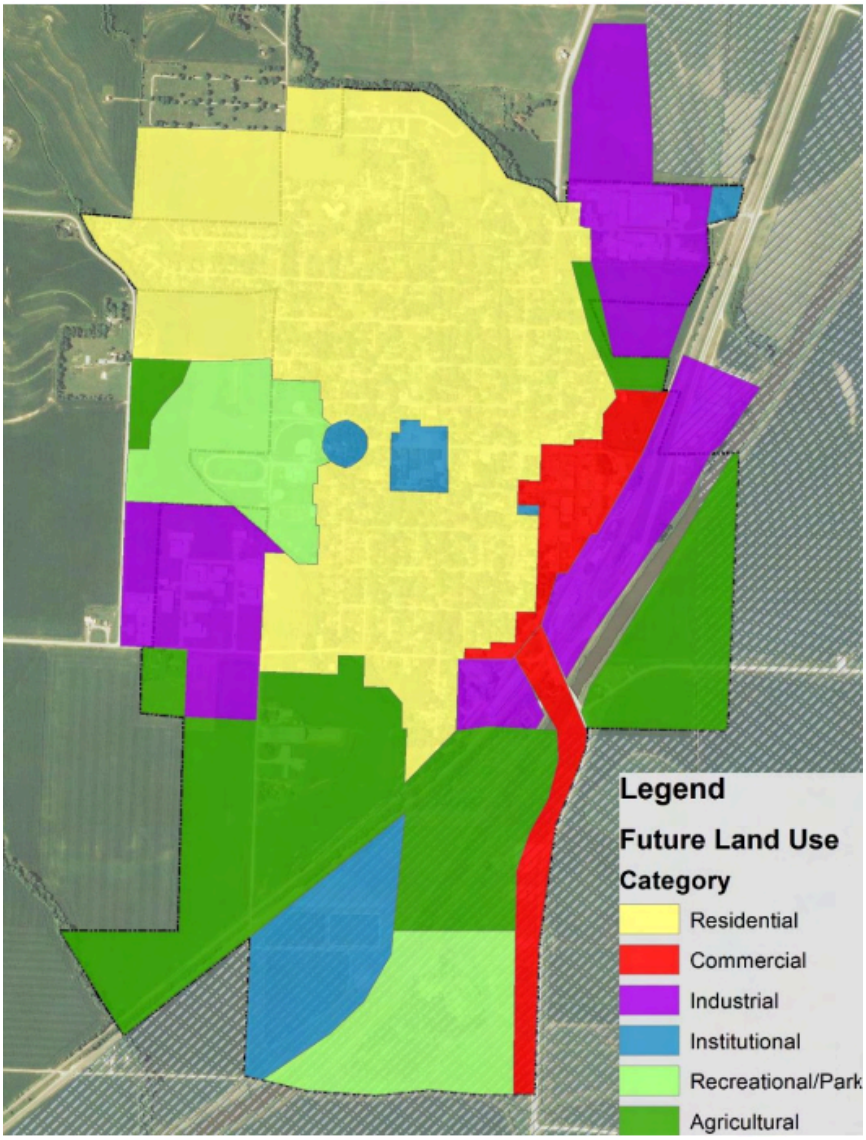
Harrison County

Similar to other surrounding counties, Harrison County's future growth is guided by its local communities—especially Logan, Missouri Valley, and Woodbine, which has the most detailed plan for development.

Woodbine's plan directs growth to areas best served by existing infrastructure and community services. New housing is planned mainly within city limits and to the northwest, close to roads, schools, and parks. Commercial activity will continue to build along Lincoln Way, while industrial growth is focused north of Brown Drive and 1st Street, where industrial parks and major road access already exist. The city also plans for a two-mile area beyond its limits, coordinating with the county to guide future development and utility extensions. Overall, Woodbine's

approach—and by extension, Harrison County's—aims to manage growth responsibly, strengthen local economies, and make efficient use of existing infrastructure. This allows the majority of the land within the county to continue as agricultural and open space.

Figure 7.17: City of Woodbine Future Land Use



Source: Woodbine Comprehensive Plan

7.4 | Land Use Impacts on Transportation

How communities develop, including the location and intensity of housing, jobs, services, and open space, directly shapes how people travel, how transportation systems perform, and the long-term costs of infrastructure maintenance.

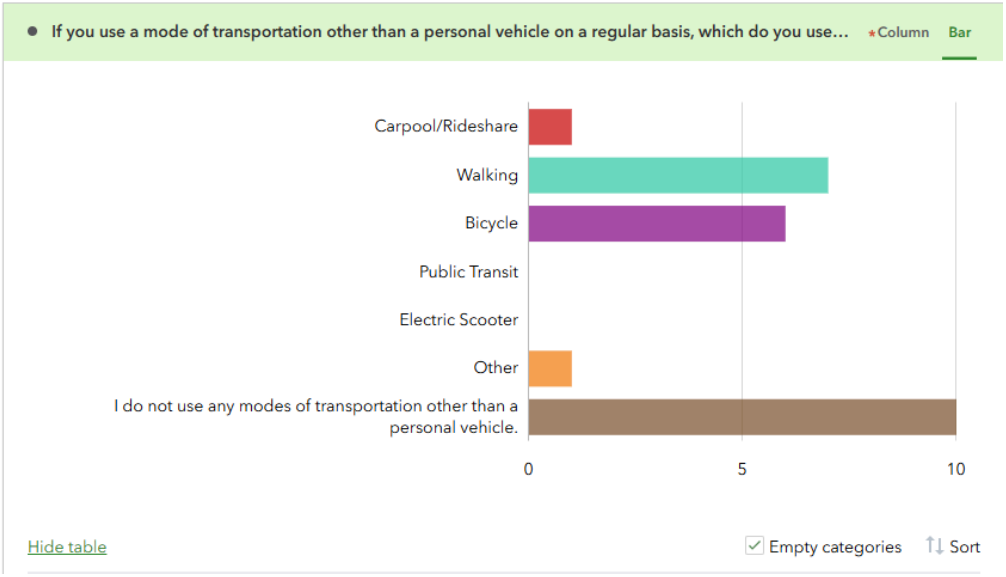
In the RPA-18 region, the region's rural character, small urban centers, and growing commuter population influence transportation patterns and system demands. Much of the area, particularly in Harrison and Shelby Counties, is defined by low-density development and widespread agricultural land. These dispersed patterns increased the distance people traveled to access employment, healthcare, education, and other daily needs.

Survey data for the LRTP 2050 shows that the majority of respondents rely solely on personal vehicles, with minimal use of alternatives like walking, biking, or public transit as indicated in Figure 7.11. These align with national research from the Victoria Transport Policy Institute, which indicates that low-density rural areas can generate 20–40% more daily vehicle travel than compact, connected urban areas. As a result, rural communities face higher costs for roadway maintenance, greater fuel use, and more safety concerns, especially on older or narrower roadways.

Some communities in the region are beginning to address these challenges through land-use strategies aimed at reducing car dependence. For example, Glenwood's future land use plan identifies higher-density nodes that better serve both commuters and local residents. Similarly, Woodbine has adopted development concepts that concentrate on new growth near existing infrastructure. These approaches help shorten travel distances, support walking and biking, and improve the feasibility of future transit options.

Coordinating land use and transportation planning offers long-term benefits, including reduced infrastructure costs, improved mobility, and greater equity for households without access to a personal vehicle. Without this coordination, the region risks continued sprawl, higher transportation expenses, and limited mobility for aging and lower-income populations. Encouraging development within existing urban areas, establishing growth boundaries, and prioritizing compact development are key strategies already in motion in several RPA-18 communities.

Figure 7.18: Survey of Transportation Mode Breakdown



Source: MAPA

7.5 | Sustainable Land Use and Development Practices

Sustainable land use and development practices seek to balance growth with the preservation of natural resources, ensure the efficient use of public infrastructure, and support economic and social resilience. The region's rural landscape, small-town communities, and proximity to a rapidly growing metropolitan area highlight the need for sustainable planning to maintain quality of life while accommodating change. Counties like Mills and Pottawattamie and cities like Woodbine and Glenwood have embraced sustainable growth principles to reduce infrastructure costs, conserve farmland and sensitive ecosystems, and align them with transportation goals.

These sustainable practices offer multiple benefits, such as reducing the long-term cost of extending and maintaining infrastructure, promoting more active transportation options, preserving the region’s agricultural heritage, and improving resilience to economic and environmental changes. For example, concentrating development in walkable town centers and communities can improve safety outcomes and enhance access to essential services, particularly for older adults, youth, and residents without personal vehicles.

As land use plans evolve, sustainable development practices will remain critical to achieving the region’s long-range goals. Integrating these strategies into local zoning, infrastructure planning, and transportation investments will help ensure that growth is accommodated and directed in a way that enhances the region’s quality of life, economic health, and environmental integrity.

8| Financial Analysis

The financial element of the RPA-18 LRTP is based on capital and maintenance costs anticipated to realize and maintain the various elements identified for each mode. This section also reflects the anticipated revenue and funding sources to cover the anticipated capital and operational costs incurred, details historical funding sources, and estimates future funding revenues.

8.1 | Historic Transportation Funding

Major transportation improvements in the RPA-18 region are funded through a combination of Federal, state, and local funds. Communities in the RPA-18 region have access to similar types of federal, state, and local funding.

8.1.1 Federal Funds

The **Surface Transportation Block Grant Funding (STBG)** program is the largest funding source administered through the RPA-18 planning process. While not explicitly limited to roadway and bridge investments, the majority of STBG (previously Surface Transportation Program) funds have historically funded system preservation activities related to roadways and bridges.

The **Transportation Alternatives Set-Aside (TASA)** Program (previously called the Transportation Alternatives Program or TAP) serves as an important funding source for trail and walkability related projects in the RPA-18 region. The TASA program is administered through Iowa DOT with applicants submitting applications to RPA-18 for consideration and project selection.

The **Highway Bridge Program (HBP)** represents another federal funding source available for these kinds of investments. HBP funding is distributed to the RPA-18 Counties by the state.

Figure 8.1 below outlines a ten year history of available STBG, TASA, and HBP funding for RPA-18 since 2016.

Figure 8.1: Historic RPA-18 federal Surface Transportation Block Grant (STBG), Transportation Alternative Set Aside (TASA), and Highway Bridge Program (HBP) funding allocations. STBG and TASA projects are selected by RPA-18. HBP funds are distributed to RPA-18 Counties by the state. HBP funds provided for 2025 are estimates only; as provided by Iowa DOT.

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
STBG	$1,491,440	$1,536,184	$1,533,263	$1,659,526	$1,710,590	$1,656,586	$1,616,540	$1,917,636	$1,886,069	$2,036,807
TASA	$140,739	$145,117	$141,389	$143,423	$140,804	$142,068	$139,073	$181,273	$169,938	$194,441
HBP	$1,680,027	$1,623,051	$1,710,537	$1,659,386	$1,599,464	$1,437,789	$2,192,192	$2,103,889	$2,000,157	$1,948,179
Total	**$1,632,179**	**$1,681,301**	**$1,674,652**	**$1,802,949**	**$1,851,394**	**$1,798,654**	**$1,755,613**	**$2,098,909**	**$2,056,007**	**$2,231,248**

8.1.2 Local Funds

Local funds consist primarily of property taxes, the Secondary Road Fund (SRF), Farm-to-Market (FTM) funds, and the City Street funds. The SRT and FTM funds come out of the state's Road Use Tax Fund. Figures of historic levels of funding for these programs are included below. Local funding estimates are derived from Iowa DOT reports of non-federal transportation revenues.

Figure 8.2: Historic Local Non-Federal-Aid Revenues

	2020	2021	2022	2023	2024
Farm to Market (FM)	$5,302,659	$5,653,496	$5,939,492	$6,382,640	$6,440,468
Secondary Road Fund (SRF)	$34,047,666	$37,075,253	$38,653,818	$38,616,588	$40,979,631
City Street Fund	$9,547,823	$10,996,179	$11,597,377	$12,804,079	$13,990,381
Total	**$48,898,148**	**$53,724,928**	**$56,190,687**	**$57,803,307**	**$61,410,480**

8.1.3 Operations and Maintenance

The IIJA states that fiscal planning must include operation and maintenance (O&M) of the system, in addition to capital projects. Including O&M in fiscal planning is an effort to ensure the preservation of the existing transportation system, including requirements for operational improvements, resurfacing, restoration, and rehabilitation of existing and future major roadways, as well as operations, maintenance, modernization, and rehabilitation of existing and future transit facilities. Estimated operations and maintenance cost information is provided annually to the RPA by Iowa DOT Program Management. Historical O&M costs for the Cities and Counties in the region are presented in Table 8.3 below.

Figure 8.3: Historic Operations and Maintenance (O&M) Costs.

	2020	2021	2022	2023	2024
County Operations	$4,152,237	$5,045,037	$3,406,090	$3,801,533	$3,699,674
County Maintenance	$9,135,447	$9,135,447	$9,128,237	$9,704,764	$9,551,371
City Operations	$265,237	$663,020	$942,184	$1,082,885	$858,655
City Maintenance	$403,193	$190,714	$209,135	$230,431	$222,646
Total	**$13,956,114**	**$15,034,218**	**$13,685,647**	**$14,819,613**	**$14,332,345**

8.2 | Project Selection & Prioritization

To allocate regional federal funding, RPA-18 opens a call for projects on an annual basis. During this call for projects, applications are submitted via the RPA-18 Surface Transportation Block Grant (STBG) and Transportation Alternatives Set-Aside (TA Set-Aside) Program application processes. Upon close of the call for projects, submissions are summarized, presented to the Technical Committee and Policy Board, and made available for public review and input.

Following the public review period, MAPA staff rank projects based on criteria outlined below, and present the rankings, along with public input, to the RPA-18 Technical Committee and Policy board in February of each year. This information, along with project eligibility for federal aid, ability to obligate within the specified year, compatibility with the LRTP and funding availability, is used to propose which projects to include in the TIP. The RPA-18 Policy Board is responsible for final approval of project inclusion in the TIP.

Projects are then placed in one of the four TIP elements based on identified priority and funding availability. Projects with the highest priority are programmed in the first element year of the TIP. Those projects with lesser priority are programmed in the remaining two fiscal year elements, and projects with the least priority are programmed in the final element year.

Following final project selection, as well as approval of County Five Year Plan (CFYP) documents in May of each year, MAPA staff prepare the Draft TIP and notify the RPA Policy Board and member jurisdictions of any balance or other application deficiencies. The Draft TIP is presented to the Technical Committee and Policy Board for review and approval, after which it is made available to the public for comment and Iowa DOT for review.

8.2.1 Surface Transportation Block Grant (STBG)

In FY2017, the RPA-18 Technical Committee and Policy Board reviewed and updated their project selection process for Regional-STBG funds. Further refinement of this process has taken place in each subsequent fiscal year. The Technical Committee and Policy Board developed selection criteria to assist in the prioritization of projects submitted to RPA-18 for funding. These criteria and the prioritization factors within each, are summarized below:

- **Functional Classification**: Projects proposed on roads with higher Functional Classifications are given a higher rank under this criterion due to regional significance.
- **Annual Average Daily Traffic (AADT)**: Projects with higher AADT counts receive a higher rank.
- **Pavement Condition & Age**: Pavement condition is determined based on INTRANS data as well as qualitative description of other factors. Based on these results, pavement condition is classified as Good, Fair or Poor. Pavements falling in the Poor category receive the highest rank.
- **Bridge Factors**: Projects involving structurally deficient or functionally obsolete bridges receive higher rank . Bridge projects with a sufficiency rating below 50 also receive higher priority to ensure prioritization of bridges in poor condition.
- **Crash History**: Three (3) years of crash data are evaluated to determine the total number of crashes along a project corridor. Higher rank is given to projects on corridors that experience a higher number of crashes.
- **Regional Significance**: Evaluation of the narrative includes the consideration of economic development, connectivity, environmental or bridge-related factors that make the project significant to the RPA-18 region. Projects determined to have higher regional impact are given a higher rank.
- **Local Match**: Projects providing more than 30% local match are given a higher rank, as they allow the region to fund more projects.

- **Multi-Jurisdictional**: Projects demonstrating cooperation or coordination between RPA-18 jurisdictions receive a higher rank.

In January 2020, considerations were made toward expediting the STBG selection and award process to prevent delay in project delivery. The new process allows more flexibility in scheduling while still enabling local communities and jurisdictions to be engaged in the process. Counties will engage cities in the project selection process prior to application. However, cities are still able to submit projects independently of their counties.

Cities within the RPA-18 region are permitted and encouraged to submit applications for projects independently to the RPA Policy Board for consideration, per Iowa Department of Transportation requirements. All applications received by the RPA Policy Board will be considered in discussions and ultimate decisions on regional funding.

8.2.2 Transportation Alternative Set Aside Program (TA Set-Aside)

Iowa's Transportation Alternatives Set-Aside Program (TA Set-Aside) is a new iteration of the former Transportation Enhancements (later, Transportation Alternatives) program that has been in existence since 1991. The most recent transportation authorization act, the Infrastructure Investment and Jobs Act (IIJA), was enacted in 2022. Implementation of the IIJA placed further restrictions on the selection of projects for funding under the federal TAP program structure which has led Iowa to implement a modified version of the federal program.

Iowa's TA Set-Aside program can be accessed in two ways. Statewide and multi-regional projects should apply directly to the Iowa DOT in November for consideration in the Statewide TA Set-Aside program. RPA-18 administers funding for smaller, local projects through the Regional TA Set-Aside program.

Applications for TA Set-Aside funding must consist of at least one eligible activity under one or more of the following categories of projects: (1) Trails and Bicycles; (2) Scenic and Historic; (3) Safe Routes to School (SRTS); or (4) Environmental.

RPA-18's criteria for Regional TA Set-Aside projects include the following components from the State TAP Application:

- Project Sponsor Information
- Project Information
- Project Costs and Matching Funds
- Project Development Milestones
- Safe Routes to School
- Narrative Questions
- Application Checklist
- Form 105101 Minority Impact Statement

Narrative Questions will be reviewed upon the following objectives laid out in the Iowa State TAP Guidance:

- Statewide or Multi-Regional Impact
- Connectivity and Completion of Trail Linkages
- Alignment with Local, Regional, or Statewide Planning Documents
- Federal-aid Highway Project Development Process, Understanding and Capacity
- Contribution Toward Safety for All Transportation Modes
- Enhancement of Statewide Tourism Benefits

- Leverage of Non-Federal Funding Sources
- Need for the Proposed Project
- Addresses High-Need Areas
- Improve Accessibility
- Long-Term Maintenance Plan
- Project Readiness

8.3 | Short Term Fiscal Constraint

Every year the RPA develops a Transportation Improvement Program (TIP) that describes improvements programmed over the next four years. It lists capital and noncapital projects within the boundaries of the RAP for proposed federal-aid and Swap funding.

Fiscal constraints for the STBG and TASA programs over the next four years (from 2026 through 2029) are outlined below in Figures 8.4 and 8.5 respectively. Supporting documentation can be found in the FY2026 TIP[36].

Figure 8.4: FY2026-29 RPA-18 Surface Transportation Block Grant (STBG) Fiscal Constraint

(FY 2027-FY 2029 are Iowa DOT Projections)		RPA-18 Regional STBG (including SWAP-STBG)			
	FY2025	**FY2026**	**FY2027**	**FY2028**	**FY2029**
STBG Balance (Carryover)	$2,557,668	$1,987,186	$1,661,090	$1,593,501	$1,344,501
STBG Funding Target	$2,032,739	$1,836,904	$1,871,000	$1,871,000	$1,871,000
Total Funds Available for Programming	**$4,590,407**	**$3,824,090**	**$3,532,090**	**$3,464,501**	**$3,215,501**
Programmed STBG Funds	$2,684,000	$2,163,000	$1,938,589	$2,120,000	$2,270,000
Balance of STBG Funds (Carryover)	**$1,987,186***	**$1,661,090**	**$1,593,501**	**$1,344,501**	**$945,501**

**An additional $80,779 was returned to the STBG balance for RPA-18 due to a funding surplus from a previously awarded project that was formally closed out in FY25 (STP-S-CO43(95)--5E-43). These additional funds are reflected in the end of FY25 Balance and start of FY26 carryover.*

[36] https://mapacog.org/reports/rpa18tip_2026/

Figure 8.5: FY2026-2029 RPA-18 Transportation Alternatives Set Aside Program (TASA) Fiscal Constraint

(FY 2027-FY 2029 are Iowa DOT Projections)		RPA-18 Federal TAP Funds			
	FY2025	**FY2026**	**FY2027**	**FY2028**	**FY2029**
TASA Balance (Carryover)	$751,326.00	$698,073	$148,753	$322,753	$496,753
TASA Target	$194,441	$168,885	$174,000	$174,000	$174,000
Total Funds Available for Programming	**$945,767**	**$866,958**	**$322,753**	**$496,753**	**$670,753**
Total TASA Funds Programmed	$247,694	$718,205	$0	$0	$0
Balance of TASA Funds (Carryover)	**$698,073**	**$148,753**	**$322,753**	**$496,753**	**$670,753**

8.4 | Future Transportation Investments

The 2050 Long Range Transportation Plan assumes that transportation funding will remain largely the same in the RPA-18 region in the future. Forecasts of the funding programs discussed above are included to demonstrate the capacity of communities to implement projects over the planning period. Furthermore, O&M costs are projected to demonstrate the capacity of local communities in the RPA-18 region to maintain the transportation infrastructure region into the future.

To estimate future funding, RPA-18 staff examined the percent growth for each funding stream over the past 5 or 10 years based on available data to determine a base projection, and a conservative projection estimate. Base projection was taken as the average of the five year rolling average (STBG, TASA, HBP), or of the year over year % change for funding streams with only 5 years of historical data (FM, SRF, City Street Funds).

Due to the recent change in federal administration priorities and funding uncertainty with the expiration of IIJA, a conservative projection was also examined. This conservative growth rate was calculated as the base growth rate minus one standard deviation. Projections are shown in Figure 8.6.a through 8.6.c below. It is worth noting that the conservative growth estimate for TASA reflects a decline in total funding availability over the next 25 years.

To estimate future expenditures by Cities and Counties, RPA-18 staff examined the percent growth using 5 year rolling average growth rates on federal reserve economic data on State and Local Government current expenditures[37]. Growth was estimated at 4.87% annually. Projections are charted in Figures 8.7.a through 8.7.d below.

[37] U.S. Bureau of Economic Analysis, State and Local Government Current Expenditures [SLEXPND], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/SLEXPND, August 1, 2025.

Figure 8.6.a through 8.6.c: Historic and projected federal (8.6.a-c) and local (8.6.d-f) revenues. Base growth rates were estimated using 5 year rolling averages over 10 years of historical data. Conservative growth rates were determined by taking these base rates and subtracting one standard deviation.

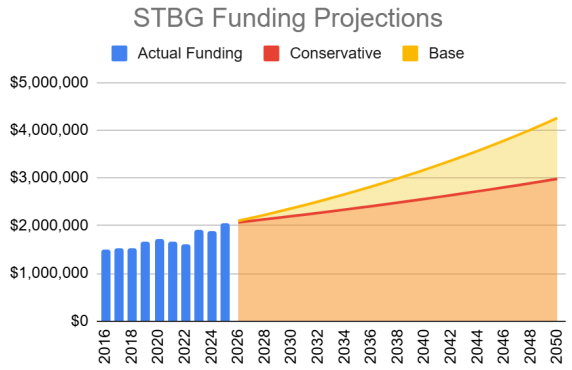


Figure 8.1.a: Estimated base growth rate of 2.99%, and estimated conservative growth of 1.53%

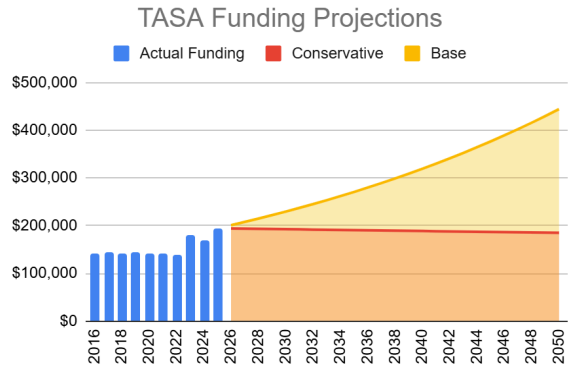


Figure 8.1.b: Estimated base growth rate of 3.36%, and estimated conservative growth of -0.20%

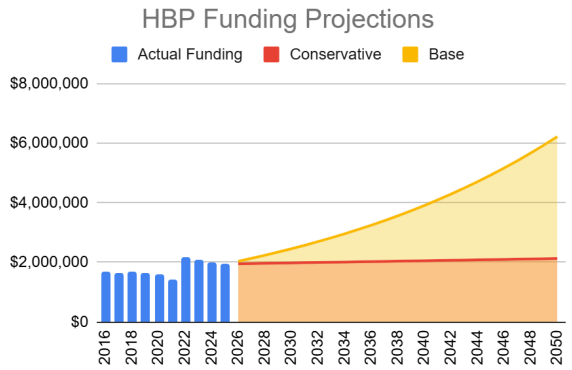


Figure 8.1.c: Estimated base growth rate of 4.75%, and estimated conservative growth of 0.36%

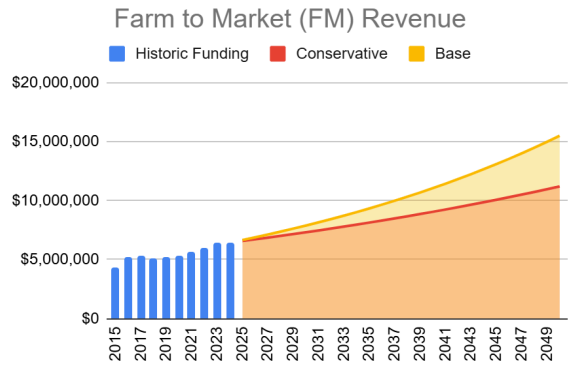


Figure 8.1.d: Estimated base growth rate of 3.43%, and estimated conservative growth rate of 2.15%

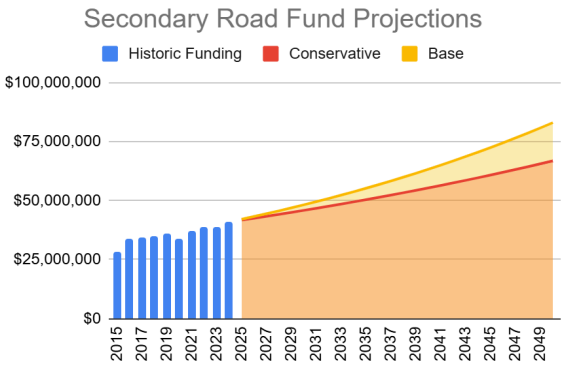


Figure 8.1.e: Estimated base growth rate of 2.75%, and estimated conservative growth rate of 1.90%

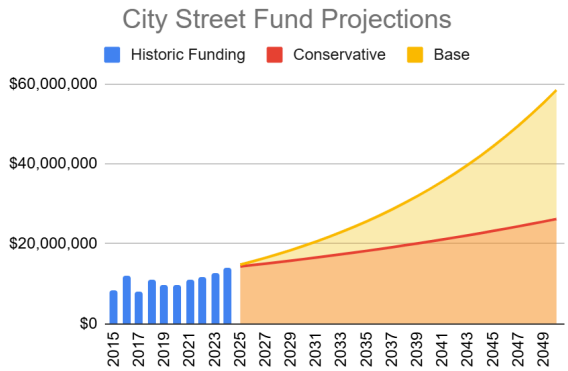


Figure 8.1.f: Estimated base growth rate of 5.66%, and estimated conservative growth rate of 2.44%

Figure 8.7.a through 8.7.d: Historic and projected Operations and Maintenance Costs for RPA-18 Counties and Cities in the RPA-18 region. Annual inflation rate was estimated at 4.87% using federal reserve economic data on State and Local Government current expenditures.

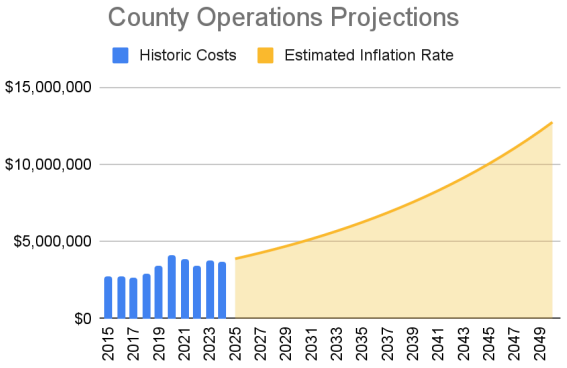


Figure 8.2.a: Estimated inflation of county operations costs.

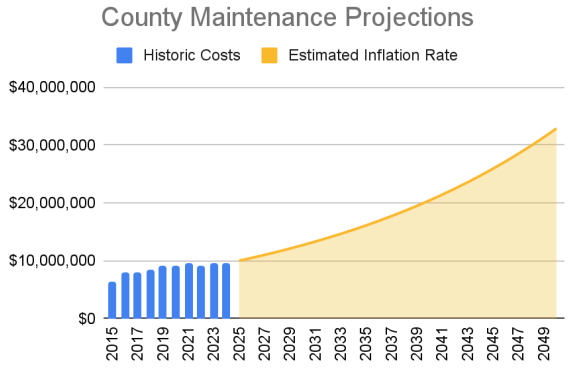


Figure 8.2.b: Estimated inflation of county maintenance costs.

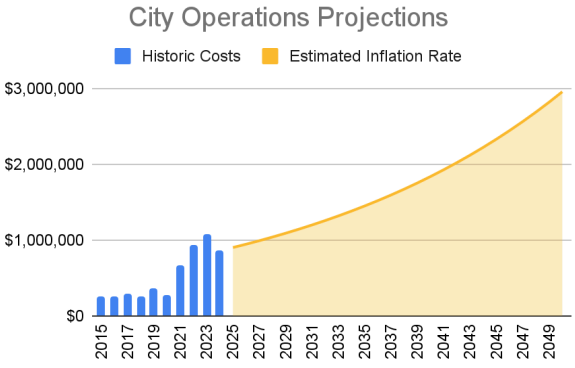


Figure 8.2.c: Estimated inflation of city operations costs.

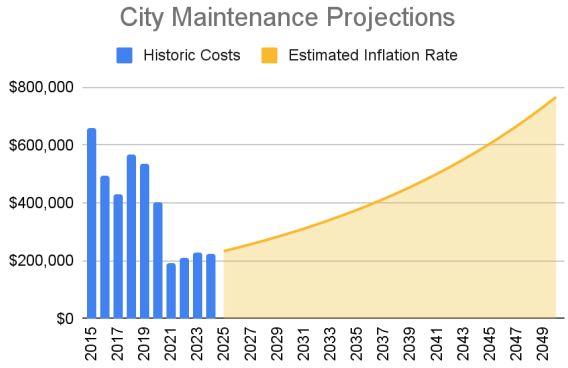


Figure 8.2.d: Estimated inflation of city maintenance costs.

8.5 | Long Term Projects

The projected O&M costs as outlined in tables 8.2.a through 8.2.d demonstrate a key long term regional need with regards to maintaining the system in its current condition.

Discussions were had with County Engineers and Board supervisors to determine key concerns and future needs of the transportation system within the region. Safety was the primary identified concern, mainly roadway intersections and configurations. Approximately 30% of the comments listed concerns related to economic vitality, for example adding bike trails or improving access to local communities.

Future Needs mostly centered around enhancing transportation options, adding shoulders to federal aid routes L-34 and F-50, bridge replacements needed, and railroad crossing solutions.

Key areas and corridors identified for improvement included;

- Numerous safety concerns on K45 from Hwy 30 to IA-127 around speeding and turn lanes
- Hwy 30 bypass around Missouri Valley
- Hwy 30 bypass around Dunlap
- Tamarack Road deterioration concerns from Neola to Avoca
- Flood resilience needs on I-29 north of I-680
- Bike trail from Botna Bend Park in Oakland to Freedom Rock in Hancock
- Roadway paving and bike lane from Macedonia and Carson

9| Appendices

Appendix A: Asset & Resource Inventories

Figure A.1 SWITA Vehicle Inventory

ID#	Equipment Type	Year	Description	Class Size	Compliant	Odometer Read Date	Odometer Reading
713	LDB	2007	FORD EL DORODO	176	N	7/1/2019	160082
901	LDB	2008	SUPREME	176	Y	7/1/2019	208255
903	LDB	2008	FORD STAR TRANS SUPREME	176	Y	7/1/2019	167462
904	LDB	2008	2008 FORD EL DORODO	138	Y	7/1/2019	212796
905	LDB	2008	2008 FORD EL DORODO	138	Y	7/1/2019	242405
906	LDB	2008	2008 FORD EL DORODO	138	Y	7/1/2019	256584
907	LDB	2008	2008 FORD EL DORODO	138	Y	7/1/2019	126135
908	LDB	2008	2008 FORD EL DORODO	138	Y	7/1/2019	183825
1003	LDB	2010	2008 FORD EL DORODO	176	Y	7/9/2019	180689

ID#	Equipment Type	Year	Description	Class Size	Compliant	Odometer Read Date	Odometer Reading
1004	LDB	2010	2008 FORD EL DORODO	176	Y	7/1/2019	291015
1005	LDB	2010	2008 FORD EL DORODO	176	Y	7/1/2019	155815
1007	LDB	2010	2008 FORD EL DORODO	176	Y	7/1/2019	263365
1008	LDB	2010	2008 FORD EL DORODO	176	Y	7/1/2019	190638
1009	LDB	2010	2008 FORD EL DORODO	176	Y	7/1/2019	211774
1011	MV	2010	DODGE CARAVAN ADA	201	Y	7/1/2019	255597
1012	MV	2010	DODGE CARAVAN ADA	201	Y	7/1/2019	215567
1013	MV	2010	DODGE CARAVAN ADA	201	Y	7/1/2019	224434
1014	MV	2010	DODGE CARAVAN ADA	201	Y	7/1/2019	165740
1014	MV	2010	DODGE CARAVAN ADA	201	Y	7/1/2019	200957
1016	LDB	2010	FORD EL DORODO	176	Y	7/1/2019	210207
1201	LDB	2010	FORD EL DORODO	176	Y	7/1/2019	201553
1203	LDB	2010	FORD EL	176	Y	7/1/2019	228754

ID#	Equipment Type	Year	Description	Class Size	Compliant	Odometer Read Date	Odometer Reading
			DORODO				
1204	LDB	2010	FORD EL DORODO	176	Y	7/1/2019	165567
1301	LDB	2012	FORD GLAVAL	176	Y	7/1/2019	136616
1302	LDB	2012	FORD GLAVAL	176	Y	7/1/2019	226526
1303	LDB	2012	FORD GLAVAL	176	Y	7/1/2019	196070
1304	LDB	2012	FORD GLAVAL	176	Y	7/1/2019	218814
1305	LDB	2013	FORD EL DORODO	176	Y	7/1/2019	129051
1306	LDB	2012	FORD EL DORODO	176	Y	7/1/2019	171916
1307	LDB	2013	FORD EL DORODO	176	Y	7/1/2019	127196
1308	LDB	2012	FORD EL DORODO	176	Y	7/1/2019	151184
1309	MV	1999	PLYMOUTH GRAND VOYAGER	NA	N	7/1/2019	211043
1401	S	2012	FORD TAURUS	NA	N	7/1/2019	162597
1407	LDB	2014	FORD GLAVAL	176	Y	7/1/2019	115292
1408	LDB	2014	FORD GLAVAL	176	Y	7/1/2019	158212
1501	MV	2006	FORD FREESTAR SE	NA	N	7/1/2019	245260
1503	LDB	2015	ELDORADO AEROTECH	176	Y	7/1/2019	68556
1504	LDB	2015	ELDORADO AEROTECH	176	Y	7/1/2019	80382
1505	LDB	2015	ELDORADO AEROTECH	176	Y	7/1/2019	140658

ID#	Equipment Type	Year	Description	Class Size	Compliant	Odometer Read Date	Odometer Reading
1506	LDB	2015	ELDORADO AEROTECH	176	N	7/1/2019	96926
1601	LDB	2016	FORD/E450 CUTAWAY	176	Y	7/1/2019	96236
1602	LDB	2016	FORD/E450 CUTAWAY	176	Y	7/1/2019	75731
1603	MV	2016	DODGE ADA MINIVAN	NA	Y	7/1/2019	69544
1605	MV	2016	DODGE ADA MINIVAN	NA	Y	7/1/2019	60545
1608	LDB	2009	FORD GOSHEN	176	Y	7/1/2019	190769
1610	LDB	2009	FORD GOSHEN	176	Y	7/1/2019	200861
1701	S	2012	CHEVROLET MAILBU	NA	N	7/1/2019	153995
1702	LDB	2017	EL DORADO LD BUS	176	Y	7/1/2019	75490
1702	LDB	2017	EL DORADO WB ADA BUS	176	Y	7/1/2019	43731
1704	MV	2016	DODGE BRAUN MINIVAN	NA	Y	7/1/2019	43731
1705	MV	2016	MV-1	NA	Y	7/1/2019	50994
1706	MDB	2016	AERO ELITE320 33 PASSENGER	M32	N	7/1/2019	129239
1707	LDB	2017	ELDORADO AEROTECH	176	Y	7/1/2019	52837
1708	LDB	2017	ELDORADO AEROTECH	176	Y	7/1/2019	39514
1710	LDB	2017	FORD GOSHEN	176	Y	7/1/2019	27857
1711	MV	2007	DODGE GRAND CARAVAN	NA	Y	7/1/2019	97534

ID#	Equipment Type	Year	Description	Class Size	Compliant	Odometer Read Date	Odometer Reading
1801	MV	2015	TOYOTA SIENNA	NA	N	7/1/2019	97069
1802	MV	2016	NISSAN QUEST	NA	N	7/1/2019	96416
1803	MV	2014	GMC ACADIA	NA	N	7/1/2019	137307
1804	MV	2004	CHRYSLER TOWN AND COUNTRY	NA	N	7/1/2019	134753
1805	MV	2015	MV-1 DELUX	NA	Y	7/1/2019	24735
1806	MV	2015	EL DORADO AEROTECH	NA	Y	7/1/2019	26446
1807	LDB	2017	EL DORADO AEROTECH	176	Y	7/1/2019	52807
1808	LDB	2017	EL DORADO AEROTECH	176	Y	7/1/2019	37841
1809	LDB	2017	EL DORADO AEROTECH	176	Y	7/1/2019	22144
1810	LDB	2017	EL DORADO AEROTECH	176	Y	7/1/2019	82033
1811	LDB	2017	EL DORADO AEROTECH	176	Y	7/1/2019	26624
1812	LDB	2017	EL DORADO AEROTECH	176	Y	7/1/2019	81979
1813	LDB	2017	EL DORADO AEROTECH	176	Y	7/1/2019	23914
1814	LDB	2017	EL DORADO AEROTECH	176	Y	7/1/2019	47815
1815	LDB	2017	EL DORADO AEROTECH	176	Y	7/1/2019	26624
1816	LDB	2017	EL DORADO AEROTECH	176	Y	7/1/2019	50295

ID#	Equipment Type	Year	Description	Class Size	Compliant	Odometer Read Date	Odometer Reading
1817	MV	2012	KIA SEDONA	NA	N	7/1/2019	172147
1818	MV	2010	CHRYSLER TOWN AND COUNTRY	NA	N	7/1/2019	79648
1820	MV	2003	CHEVY VENTURE ADA	NA	Y	7/1/2019	150004
1821	MV	2018	CHAMPION DEFENDER 37 PASSENGER	NA	Y	7/1/2019	39800
1822	MV	2018	FREIGHLINER GLAVAL 40 PASSENGER	M40	Y	7/1/2019	28739
1902	MV	2015	DODGE GRAND CARAVAN	NA	N	7/1/2019	110284
1903	MV	2015	DODGE GRAND CARAVAN	NA	N	7/1/2019	69786
1904	MV	2013	DODGE GRAND CARAVAN	NA	N	7/1/2019	97622
1905	MV	2014	DODGE GRAND CARAVAN	NA	N	7/1/2019	102609
1906	MV	2015	DODGE GRAND CARAVAN	NA	N	7/1/2019	41926
1907	SW	2011	DODGE DURANGO	NA	N	7/1/2019	119360
1908	S	2014	CHEVY IMPALA	NA	N	7/1/2019	54188
1909	S	2014	CHEVY IMPALA	NA	N	7/1/2019	66917
1910	MV	2019	DODGE GRAND CARAVAN	NA	Y	7/1/2019	3146

ID#	Equipment Type	Year	Description	Class Size	Compliant	Odometer Read Date	Odometer Reading
1911	MV	2019	DODGE GRAND CARAVAN	NA	Y	7/1/2019	1175
1912	MV	2019	DODGE GRAND CARAVAN	NA	Y	7/1/2019	886
19113	MV	2019	DODGE GRAND CARAVAN	NA	Y	7/1/2019	1080
1914	LDB	2019	ELDORADO BUS	176	Y	7/1/2019	3859
1915	LDB	2019	ELDORADO BUS	176	Y	7/1/2019	1129
1916	LDB	2019	ELDORADO BUS	176	Y		
1917	LDB	2019	ELDORADO BUS	176	Y		

Figure A.2: Regional Social Service Agencies

Agency	County	City	Type of Service	Fixed	Demand
Support Services of South Central Iowa	Adair	Greenfield	Disabled		Y
Elm Crest Retirement	Shelby	Harlan	Elderly		Y
Faith in Action Volunteers	Fremont	Sidney	Other	Y	Y
Children's Square	Pottawattamie	Council Bluffs	Disabled/Youth		Y
Partnership for Progress	Cass	Atlantic	Disabled		Y
Park Place RCF/PMI	Cass	Atlantic	Other	Y	Y
Cass County Health System	Cass	Atlantic	Disabled/General Public	Y	Y

Agency	County	City	Type of Service	Fixed	Demand
Amerigroup	Dallas	West Des Moines	Elderly/Disabled	Y	Y
Iowa Vocational Rehab Services	Cass	Atlantic	Disabled		Y
Boost4Families	Pottawattamie	Oakland	Other	Y	Y
REM	Cass	Atlantic	Disabled		Y
Crossroads of Western IA	Harrison	Missouri Valley	Human Service		Y
Manor of Malvern	Mills	Malvern	Medical		Y
Good Samaritan Society	Montgomery	Villisca	Elderly		Y
Waubonsie MHC	Page	Clarinda	Medical		Y
Page County Passengers	Page	Clarinda	Other		Y
Nishna Productions	Page	Shenandoah	Disabled	Y	Y
Gardenview Care Center	Page	Shenandoah	Medical	Y	Y
Bethany Heights	Pottawattamie	Council Bluffs	Elderly	Y	Y
Jennie Edmundson Hosp.	Pottawattamie	Council Bluffs	Medical	Y	Y
Good Samaritan Society	Montgomery	Red Oak	Elderly		Y
Goldenrod Manor Care	Page	Clarinda	Elderly		Y
Fair Oaks Residential Care	Page	Shenandoah	Elderly		Y
Carter Lake Senior Center	Pottawattamie	Carter Lake	Elderly		Y
Salem Lutheran Homes	Shelby	Elk Horn	Elderly		Y

Figure A.3: Regional Social Service Transit Providers - Vehicle Inventories

Agency	City	Vehicle Type	Condition	Seating Capacity
Crest Services	Harlan	3 -- minivans	Good	6
Faith in Action Volunteers	Sidney	2 – minivans (1 wc*) 3- car	Good	5 3
Children's Square*	Council Bluffs	10 – minivans (in 2018)	Good	7
		2 - cars (in 2018)	Good	5
Partnership for Progress	Atlantic	6 - minivans	Fair to poor	6
Park Place RCF/PMI	Atlantic	2 - minivans	Poor	7
Waubonsie Medical	Clarinda	3 – minivans 1- car	Fair Fair	5 3
Jennie Edmundson Hospital*	Council Bluffs	1 – minivan (wc)* (in 2018)	Good	9
		1 – light duty bus (in 2018)	Good	8
Bethany Heights	Council Bluffs	1 – light duty bus	Good	15
Elm Crest Retirement	Harlan	1 – car	Good	2
		1 – light duty bus (wc)*	Good	15
Manor of Malvern	Malvern	1 – minivan	Fair	5
Trivium Life Services	Council Bluffs/ region	44 – minivans 4 - cars	Good to poor Fair	Between 7-12 5
Garden View Care Cent.	Shenandoah	1 – minivan (wc)*	Fair	5
		1 – maxi van	Fair	10
Nishna Productions, Inc.	Shenandoah	50 – cars and vans*	Fair-Excellent	5-15
Good Samaritan	Villisca	1 – light duty bus (wc)* 1 - minivan	Fair Fair	14 6

* - Wheelchair accessible	** Vehicle information not provided

Appendix B: Public Involvement

B.1 | Overview

MAPA's public engagement requirements and tools are outlined in the Public Participation Plan (PPP)[38]. The purpose of the Public Participation Plan is to provide baseline policy and standards to guide outreach and engagement activities for MAPA public committee meetings and projects to ensure that the general public, relevant stakeholders, and state and federal agencies are included in MAPA's planning activities. MAPA is committed to Public Participation to;

- Ensure early and continuous public notification about regional planning
- Provide meaningful information concerning regional planning
- Obtain participation and input to inform regional planning efforts
- Commit to listen to those affected to learn how MAPA can help
- Include robust representation from all communities.

Key engagement tools used for the RPA-18 LRTP included;

- Public survey
- Public meetings and events
- Open public comment on the draft document

B.2 | Public Survey

An online survey was made available to the public in August, 2024, and was open through July of 2025. The survey received a total of 19 responses. Seventeen (17) respondents indicated that they lived in the RPA-18 region, while the other two either work in the region, or travel through on a regular basis.

Participants were asked to drop a pin on a map to indicate areas where they wished to see transportation improvements (see Figure 9.1). Many respondents indicated locations within the Omaha-Council Bluffs metro area, outside of the RPA-18 region. Within the region, the top requested improvements were bicycle facilities and roadway maintenance.

[38] https://mapacog.org/projects/public-participation-plan/

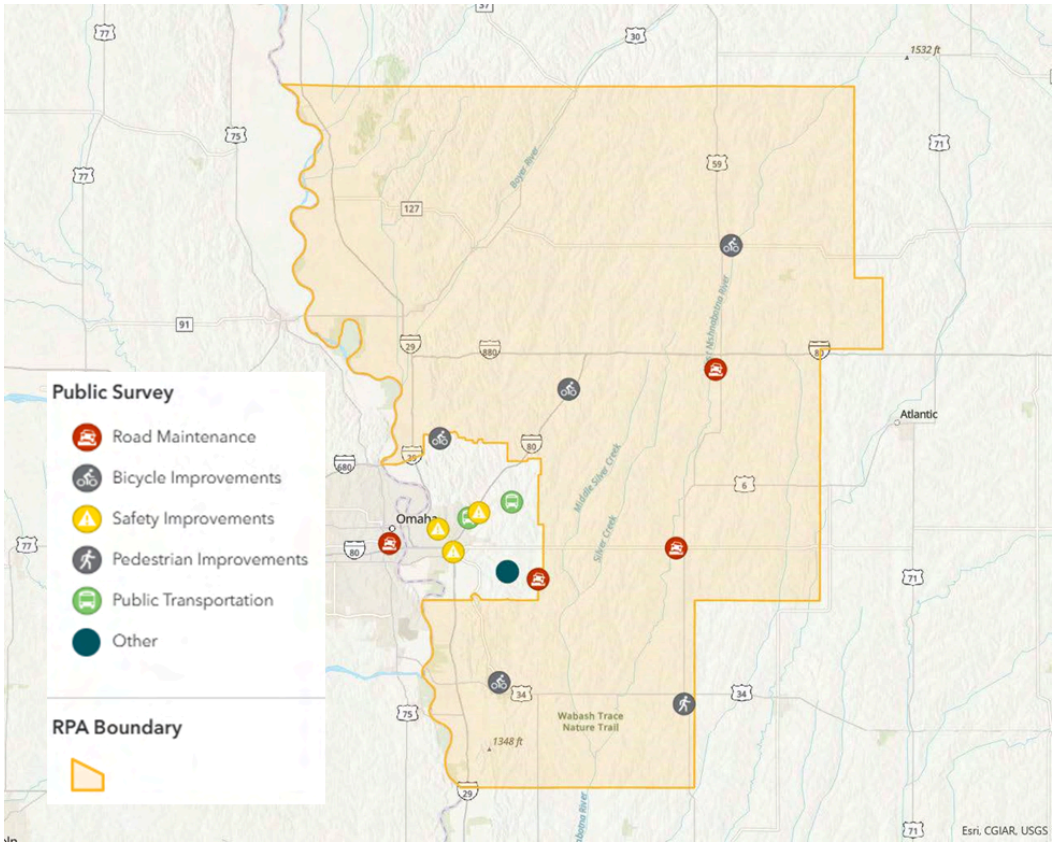


Figure 9.1: Map of requested transportation system improvements per public survey responses.

When asked if they use a mode of transportation other than a personal vehicle on a regular basis, the majority of respondents indicated that they do not use any modes of transportation other than a personal vehicle (Figure 9.2).

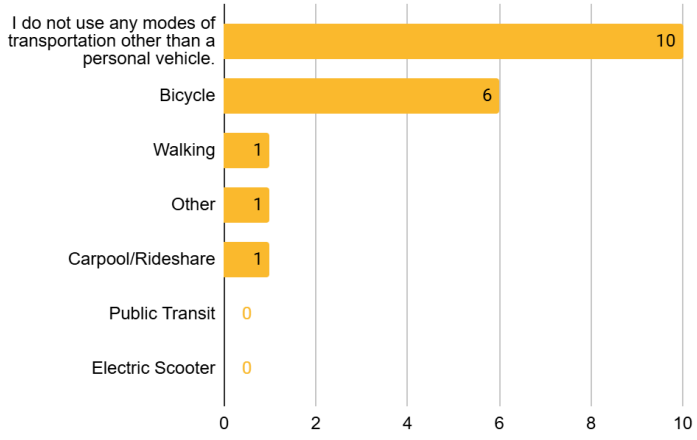


Figure 9.2: Participant responses to the question "If you use a mode of transportation other than a personal vehicle on a regular basis, which do you use?"

When asked about their primary concern regarding the current transportation system, most respondents indicated the condition of the roadway and infrastructure as their top concern (7), with bicycle and pedestrian facilities coming in second (5) (Figure 9.3).

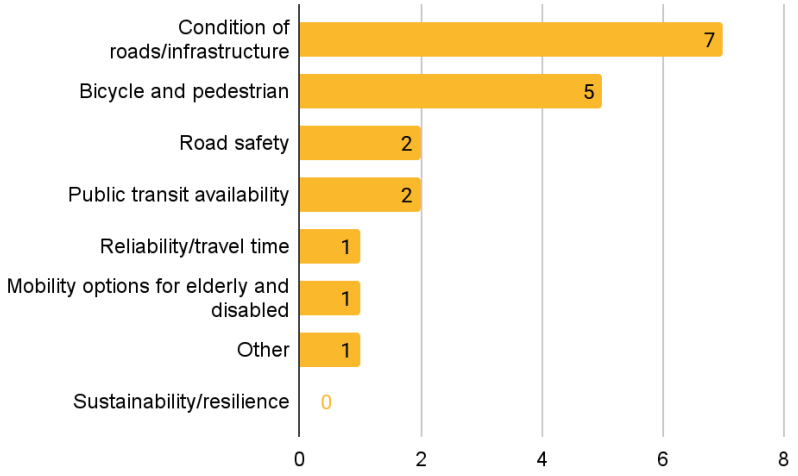


Figure 9.3: Top concerns as indicated by public survey respondents (n=19)

Most participants agreed that they feel safe when travelling in their area regardless of mode (9). Respondents do not agree they have sufficient bike lanes and pedestrian sidewalks in their area(13). Respondents also indicated they do not have good access to public transportation (13) (Figure 9.4).

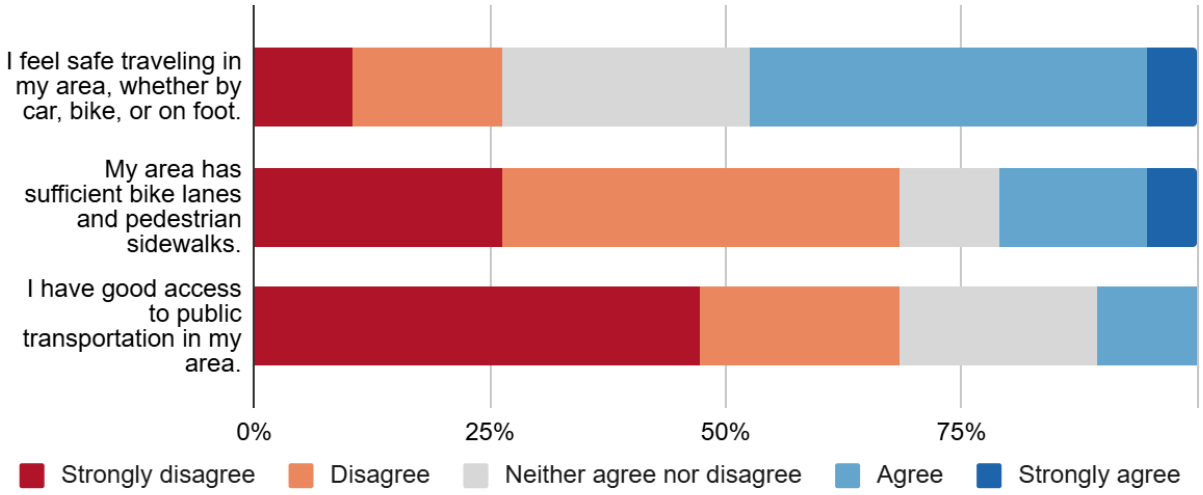


Figure 9.4: Levels of agreement with various statements regarding safety, bike lanes and sidewalks, and access to public transportation. (n=19)

When asked to rank their top priorities related to transportation, safety and security received the highest average ranking, with economic vitality and preservation/resilience receiving the lowest (Figure 9.5).

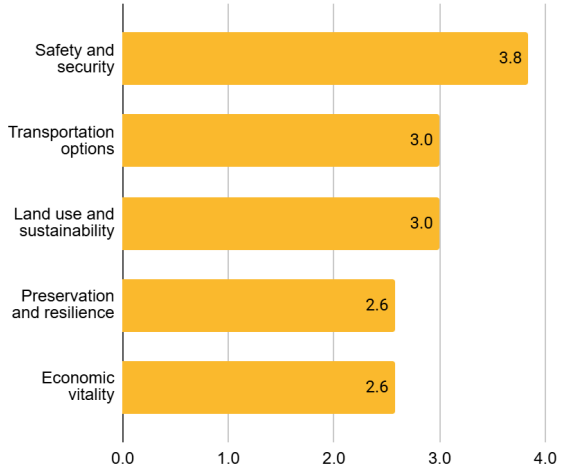


Figure 9.5: Rank choice of transportation priorities (n=19). High values indicate a higher priority, and low values indicate a lower priority.

Seventeen (17) of the 19 participants indicated that they lived in the RPA region, while the other two either work in the RPA region, or travel through part of the region on a regular basis.

B.3 | Public Meetings and Events

In order to obtain input from each of the four Counties in the RPA region, MAPA staff presented to the August 2024 RPA-18 Policy Board and Technical Committee, and attended Board of Supervisors meetings and events in August and October 2024. At each meeting, participants were provided with a printed map of the region and asked to mark locations of concern under each of the LRTP goals (Safety; Transportation Options; Land Use and Growth & Sustainability Preservation & Resilience; Economic Development) and locations of planned future improvements. Additionally, MAPA staff attended a Bike Rodeo in Harlan to discuss the LRTP with the community and solicit public participation in the online survey.

Input highlighted several recurring **transportation safety** concerns, including inattentive driving and cell phone use, insufficient paved shoulder width for cyclists, and gaps in sidewalk and bicycle connectivity. Many comments focused on issues with limited visibility at intersections, high speeds, lack of turn lanes, and unsafe crossings—particularly in areas near Woodbine, Missouri Valley, and K45.

Participants were concerned that there are no **transportation options** if someone doesn't drive, and transit connections are missing. Regarding **land use and growth**, concerns were raised about food deserts.

Key issues were raised regarding **preservation and resilience**, particularly with relation to flood resilience along I-880, and with an increase in traffic and the transition from pickups to heavier vehicles moving agricultural products contributing to roadway deterioration. Few concerns were raised specifically related to economic development.

A second round of meetings were held with each County Board of Supervisors in July and August 2025 to discuss the draft plan, and outcomes that were particularly pertinent to each county.

County	City	Event	Date	Attendees
Harrison	Harlan	Bike Rodeo	August 2024	13
Pottawattamie	Council Bluffs	RPA Policy Board and Technical Committee	August 2024	10
Pottawattamie	Council Bluffs	Regional Trails Workshop	August 2024	20
Harrison	Logan	Board of Supervisors - Round 1	August 2024	10
Pottawattamie	Council Bluffs	Board of Supervisors - Round 1	August 2024	22
Mills	Glenwood	Board of Supervisors - Round 1	October 2024	4
Shelby	Harlan	Board of Supervisors - Round 1	October 2024	15
Harrison	Logan	Board of Supervisors - Round 2	July 2025	11
Pottawattamie	Council Bluffs	Board of Supervisors - Round 2	August 2025	TBD
Mills	Glenwood	Board of Supervisors - Round 2	July 2025	9
Shelby	Harlan	Board of Supervisors - Round 2	July 2025	8

Figure 9.6: County Board of Supervisors Outreach

MAPA staff also hosted a Regional Trails Development Workshop with key stakeholders throughout the RPA-18 region in October of 2024. This workshop focused on the current status of existing trails, and brainstorming sessions on visions and goals for future trail networks, challenges, opportunities, and next steps. Key topics of conversation included trail connections between metro areas and rural communities, funding and development / maintenance responsibilities, and marketing of the existing trail network. Several opportunities were identified with respect to national trail visions that already include the region, and potential integration of maps and signage into something consistent for the user.

Open Public Comment on Draft Document

In addition to in person events and the public survey, and per the requirements outlined in MAPA's Public Participation Plan[39], a 25 day public comment period was opened by The RPA-18 Policy Board on July 13, 2025. Public notice was distributed to local newspapers. A draft of the LRTP was made available online and comments were solicited through the MAPA website and social media platforms. Email notification of the public comment period was sent to identified outreach contacts including federal and state partners. A printed copy of the draft document was made available at the MAPA office for public review. In total, 3 public comments were received, and are summarized for clarity and content with their responses in Figure 9.10.

Draft LRTP - Public comments received

1. Expressed **safety concerns at the Highway 6/I-80 interchange** and highlighted **eastbound traffic**, suggesting widening Highway 6 or adding turn lanes to accommodate

[39] https://mapacog.org/wp-content/uploads/2023/08/PPP_2024_FINAL_2023.08.23.pdf

ongoing and future growth in the area, including Iowa Western Community College, Westfair, Bent Tree Golf Course, Ditmars Orchard, Iowa Highway Patrol, and nearby commercial developments.

- Thank you for your comments regarding the Highway 6 and Interstate 80 interchange area. We appreciate your detailed observations and input on safety, traffic operations, and anticipated development impacts. The LRTP identifies regional safety and capacity needs based on current data and stakeholder input, but site-specific design and similar highway projects fall under the jurisdiction of the Iowa Department of Transportation (Iowa DOT) and Pottawattamie County.

  Your comments have been shared with those agencies for consideration in their ongoing project planning and safety assessments. RPA-18 will continue to coordinate with Iowa DOT and local jurisdictions to monitor growth and safety concerns along Highway 6 and to evaluate the corridor for potential future improvements as funding and programming allow.

2. Asked for more attention to **rural transportation gaps** by exploring light rail and expanded public transit, particularly in light of growing senior populations with long commutes to essential services.
   - Thank you for your comments regarding rural transportation needs and public transit options. The LRTP acknowledges the importance of improving mobility for rural residents—particularly seniors and individuals with limited access to vehicles. RPA-18 will continue to support coordination between regional transit providers, including SWITA and local jurisdictions, to explore service expansions and other innovative solutions for rural access.

     While light rail is not currently feasible within the region due to cost and density considerations, the plan emphasizes continued investment in regional transit connectivity and the exploration of intercity and on-demand service models to better serve rural populations.

3. Requested prioritization of **Highway 6 east of I-80 for safety upgrades**, citing poor sight distances, growing traffic volumes from new development and institutional uses, and event-related congestion at Westfair. Suggested consideration of a 2+1 or four-lane roadway.
   - Thank you for your comments highlighting the safety and capacity challenges along Highway 6 east of Interstate 80. The RPA recognizes the growing travel demand in this area and the need for continued safety monitoring and coordination with the Iowa DOT, which owns and maintains this segment of roadway.

     Your comments will be shared with the Iowa DOT for their review in future corridor and safety studies. The LRTP includes a focus on corridor safety improvements, including strategies to improve operations along roadways such as Highway 6 as development continues in eastern Pottawattamie County.

Public Survey - Comments received

Close the trail gap between Highway 75 (Plattsmouth) and Wabash Trace.
Accessibility to sidewalks on all streets.
Focus on other options for interstate access south of HWY 92. That intersection is way too crowded and there are many accidents.
I find it incredibly unfortunate that we have no type of train for public transit. The Metro area would significantly benefit from a train, and there could also be opportunities to have trains from the metro area out to surrounding towns and communities.
I live in a subdivision which has many, many platted lots that could be sold and bring in more tax dollars for the community if they would hard surface the road that comes to our subdivision.; which has been "on the agenda" for many, many years!
As new developments are added we need to be forward with adding traffic improvements sooner at developers cost. Des Moines did this and that alleviates future congestion and lowers overall costs.
Tamarack road is junk
Creating opportunities to connect rural communities to the urban areas through alternative transportation means.
Gravel roads in our area are getting worse and worse. Constantly worn away by heavy farm equipment and semis. Our road was paved until about a decade ago and it was great. Since turning to gravel it has deteriorated more and more each year.
Need to widen Highway 6 to super 2 or 4 lane to improve safety reduce accidents
widen roads to accommodate bike lanes
Would like to see a trolly/bus service with dedicated stops in each town through southwest IA & Omaha
don't infringe on individual property rights

LRTP 2050 Survey Questions

1. **If you use a mode of transportation other than a personal vehicle on a regular basis, which do you use? (Select all that apply)**
   - ☐ 1. Carpool/Rideshare
   - ☐ 2. Walking
   - ☐ 3. Bicycle
   - ☐ 4. Public Transit
   - ☐ 5. Electric Scooter
   - ☐ 6. Other

2. **What is your primary concern about the current transportation system?**
   - ☐ 1. Road safety, e.g., too many crashes
   - ☐ 2. Condition of roads/infrastructure, e.g., too many potholes

- ☐ 2. Bicycle and pedestrian, e.g., not enough facilities or not safe enough
- ☐ 4. Sustainability/resilience, e.g., lack of ability to recover after flooding
- ☐ 5. Reliability/travel time, e.g., doesn't consistently take the same amount of time to get to a place
- ☐ 6. Public transit availability, e.g., not enough or no options
- ☐ 7. Mobility options for elderly and disabled, e.g., too difficult to get around
- ☐ 8. Other

3. **Indicate your level agreement: I feel safe traveling in my area, whether by car, bike, or on foot.**
   - ☐ 1. Strongly disagree
   - ☐ 2.Disagree
   - ☐ 3.Neither agree nor disagree
   - ☐ 4.Agree
   - ☐ 5.Strongly agree

4. **Indicate your level agreement: My area has sufficient bike lanes and pedestrian sidewalks.**
   - ☐ 1. Strongly disagree
   - ☐ 2.Disagree
   - ☐ 3.Neither agree nor disagree
   - ☐ 4.Agree
   - ☐ 5.Strongly agree

5. **Indicate your level agreement: I have good access to public transportation in my area.**
   - ☐ 1. Strongly disagree
   - ☐ 2.Disagree
   - ☐ 3.Neither agree nor disagree
   - ☐ 4.Agree
   - ☐ 5.Strongly agree

6. **Do you use public transit?**
   - ☐ 1. Yes
   - ☐ 2. No

7. **If yes, how often do you use public transit in the RPA-18 region?**

8. **Please rate the following five priorities related to transportation. Click and drag each priority.**
   - ☐ 1. Safety and security

- ☐ 2. Land use and sustainability e.g. making transportation improvements consistent with expected growth; energy efficiency
- ☐ 3. Transportation options, e.g., accessibility and mobility of people and freight; connectivity between different modes of transportation
- ☐ 4. Economic vitality
- ☐ 5. Preservation and resilience, e.g., reliability; recovering from natural disasters

9. Do you have any other comments or suggestions regarding transportation improvements in your area? Please share them below.

10. If you selected a location in the above map, what kind of improvement would it be?

- ☐ 1. Public Transportation
- ☐ 2. Pedestrian Improvements
- ☐ 3. Bicycle Improvements
- ☐ 4. Safety Improvements
- ☐ 5. Road Maintenance

11. Which best describes you? (Select all that apply)

- ☐ 1. I live in the RPA-18 region
- ☐ 2. I work in the RPA-18 region
- ☐ 3. I travel through (part of) the RPA-18 region on a regular basis

12. What is the ZIP code of where you live?

13. What is the ZIP code where you work (if applicable)?

14. What is the ZIP code of your school/education center (if applicable)?

15. What is your employment status?

- ☐ 1. Employed full-time
- ☐ 2. Employed part-time
- ☐ 3. Not employed
- ☐ 4. Retired
- ☐ 5. Student
- ☐ 6. Other

16. Do you own the place where you live?

- ☐ 1. Yes
- ☐ 2. No

17. Which of the following best describes you? (Select all that apply)

- ☐ 1. American Indian or Alaska Native
- ☐ 2. Asian
- ☐ 3. Black or African American
- ☐ 4. Hispanic or Latino
- ☐ 5. Middle Eastern or North African
- ☐ 6. Native Hawaiian or Other Pacific Islander
- ☐ 7. White
- ☐ 8. Prefer not to answer

18. Which of the following best describes you?

- ☐ 1. Man
- ☐ 2. Woman
- ☐ 3. Non-Binary
- ☐ 4. Prefer not to answer
- ☐ 5. Middle Eastern or North African
- ☐ 6. Other

19. What is your highest level of education?

- ☐ 1. Less than high school diploma or equivalent
- ☐ 2. High school diploma or equivalent
- ☐ 3. Some college
- ☐ 4. Associate degree
- ☐ 5. Bachelor's degree or equivalent
- ☐ 6. Some advanced education beyond a bachelor's degree or equivalent
- ☐ 7. Completed advanced education such as a master's degree, professional degree or doctorate.

20. What is your year of birth?