



REGIONAL PLANNING AFFILIATION 18

LONG-RANGE TRANSPORTATION PLAN

Developed By:

Metropolitan Area Planning Agency

January 2014



Table of Contents

Introduction	1
Acknowledgements	3
Plan Scope	5
Socioeconomic Summary	10
Environment	21
Street and Highway Section	26
Bridge Section	37
Pedestrian, Scenic Byways, and Historic Preservation	40
Transit	45
Aviation	49
Railroad	54
Pipelines	56
Water Freight	58
Intelligent Transportation Systems	59
Safety	61
Security	68
Financial Analysis	72
Public Participation	77
Long Range Transportation Plan Maintenance	78
Appendix A: Federal Functional Classifications	79
Appendix B: Public Meeting Schedule & Comments	81
List of Tables	
Table 1: Number of Firms by Industry by RPA-18 County	10
Table 2: Threatened or Endangered Species in the RPA-18 Region	22
Table 3: Native American Tribes Represented in the RPA-18 Region	23
Table 4: National Register of Historic Places Properties in RPA-18 Region	24
Table 5: County Parks in the RPA-18 Region	25
Table 6: Draft Long Range Transportation Plan Project List	35
Table 7: Draft Long Range Transportation Plan Project List (continued)	36
Table 8: Airport Characteristics Within the RPA-18 Region	51
Table 9: 2011-2030 Development Needs for RPA-18 Airports	51
Table 10: Other Potential Airport Improvements in RPA-18 Region, 2011-2030	52
List of Figures	
Figure 1: Locational Map of Rural Planning Affiliation 18 Region	2
Figure 2: Estimated FY2014 Apportionment for Federal-Aid Programs in Iowa	5



Figure 3: Communities within the RPA-18 Region	6
Figure 4: Federal Functional Classification of RPA-18 Roadways	7
Figure 5: Distribution of Firms in the RPA-18 Region	11
Figure 6: Agricultural Land Use Trends in RPA-18 Region, 2002-2007	12
Figure 7: Population Estimates & Forecasts for RPA-18 Region, 1960-2050	13
Figure 8: Percent Population Change by County, 1960-2050	14
Figure 9: Number of Households in RPA-18 Region, 1970-2010	14
Figure 10: Percent Change of RPA-18 Households, 1970-2010	15
Figure 11: Distribution of Households in the RPA-18 Region	16
Figure 12: Distribution of Population in the RPA-18 Region	17
Figure 13: RPA-18 Age Breakdown	18
Figure 14: Mode of Transportation Taken to Work	18
Figure 15: Travel Time to Work for RPA-18 Residents	19
Figure 16: Surface Type of RPA-18 Roadways	26
Figure 17: Percentage of RPA-18 Roadways by Highway Category	26
Figure 18: Miles of RPA-18 Roadway by Functional Classification.....	27
Figure 19: PCI Rating for RPA-18 Secondary Roads	28
Figure 20: Condition of Federal-Aid Eligible Secondary Roads (PCI).....	29
Figure 21: Condition of RPA-18 Primary Highway Network.....	29
Figure 22: International Roughness Index of Primary Roadways in RPA-18 Region	30
Figure 23: International Roughness Index of Primary Roadways in RPA-18 Region	31
Figure 24: Annual Average Daily Traffic in RPA-18 Region.....	33
Figure 26: Bridge Crossing by Type.....	37
Figure 27: Bridges in the RPA-18 Region	38
Figure 28: RPA-18 Trails, Scenic By-Ways, and Cultural Facilities	41
Figure 29: SWITA Transit Services in the RPA-18 Region	46
Figure 30: RPA-18 Airport & Heliport Facilities	50
Figure 31: RPA Railroad Facilities, Crossings, and Rail Densities.....	53
Figure 32: Pipelines in the RPA-18 Region.....	53
Figure 33: Intelligent Transportation System Deployments in the RPA-18 Region	53
Figure 34: Primary Cause of Fatal & Major Injury Crashes, 2008-2012.....	53
Figure 35: RPA-18 Crash History, 2008-2012	53
Figure 36: LRTP Projection of Regional STP Funding.....	53
Figure 37: LRTP Projection of Regional STP Expenditures.....	53



INTRODUCTION

Transportation is one of the most pervasive functions of society. A transportation system provides the means for moving people and goods from one place to another. Farm commodities are shipped by truck, train, or water to markets within and outside a region. People use the transportation system for travel to work, shopping, recreational facilities, health care, and schools. The coordination and planning of such activities has stepped to the forefront to maximize available resources and to provide a diverse, efficient transportation system.

The purpose of the RPA-18 transportation system is two-fold. The transportation system provides interconnectivity among the cities and towns within the region as well as to those urban areas in connecting counties. It provides a modern all-weather farm-to-market network and generally provides for quick, efficient movement of goods across the region in all directions.

The RPA-18 is comprised of a network of roads, trails, transit, barge and rail facilities that allow people and goods to move within and through the area. These systems provide the basis of a multi-modal transportation system to be built upon and expanded, as needed, to fulfill the vision of the RPA-18.

Identifying the needs of a multimodal transportation system over a long period of time is a required step in maintaining and expanding the transportation system to accommodate current and future needs. This document serves as a framework for addressing these needs and achieving a transportation system that is functional, safe and efficient.

The Iowa Department of Transportation (Iowa DOT) organized the state into 18 Regional Planning Affiliations (RPAs) to provide long range transportation planning on a regional level. Each of these 18 RPAs is responsible for developing a long range transportation plan (LRTP) for its member counties. The LRTP will foster a coordinated effort within the region to provide an efficient transportation system and promote interlocal cooperation.

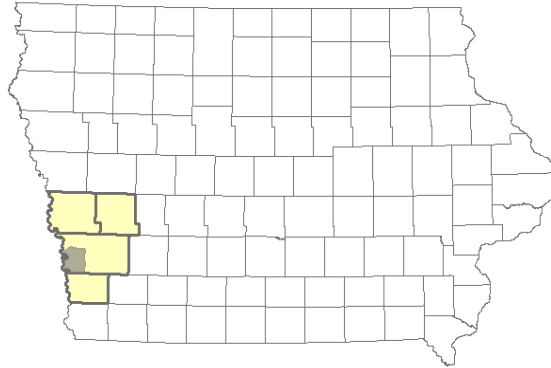
Regional Planning Affiliation- Region 18

The Regional Planning Affiliation - Region 18 (RPA - 18) was one of 18 regional planning affiliations chartered by the Iowa Department of Transportation. As the 18th RPA, RPA-18 was the last RPA to be organized in the State of Iowa. The RPA-18 consists of local governments in Harrison, Mills, Pottawattamie, and Shelby counties in southwest Iowa (Figure 1). The City of Council Bluffs and areas of western Pottawattamie County lie within the Omaha-Council Bluffs Urbanized Area and are not a part of the RPA-18 region. While federal transportation funding for these areas is also administered by MAPA, it is overseen by a separate Metropolitan Planning Organization (MPO).



The RPA - 18 maintains separate Policy and Technical Committees to address the transportation issues that affect the area. Each county and each city over 5,000 in population within these four counties has appointed a representative to each of these committees. The Technical Committee also includes representatives from the Southwest Iowa Transit Agency (SWITA), the Iowa Department of Transportation (Iowa DOT) and the Golden Hills Resources Conservation and Development District (RC&D). Cities under the 5,000 population threshold are represented by their respective county representatives to the Policy and Technical Committees.

Figure 1: Locational Map of Rural Planning Affiliation 18 Region



The Metropolitan Area Planning Agency (MAPA) was designated in early 1994 by the governing bodies of Harrison, Mills, Pottawattamie, and Shelby counties to function in the capacity of RPA facilitator for planning and coordinating transportation-related issues for the RPA-18. MAPA provides professional and administrative services to the RPA-18 for transportation planning issues. One of those services is the development and maintenance of a Long Range Transportation Plan (LRTP).

This RPA-18 LRTP will identify existing transportation inventories and transportation issues, identify deficiencies of the transportation system and offer a financially constrained plan to address those deficiencies. Elements of the RPA-18 LRTP will adhere to directives and regulations of the Moving Ahead for Progress in the 21st Century (MAP-21) of 2012, the Clean Air Act (CAA) of 1990 (as amended), the Americans with Disabilities Act (ADA) of 1990, the National Environmental Policy Act (NEPA) and local master and comprehensive plans and local regulations and ordinances.



ACKNOWLEDGEMENTS

RPA- 18 Policy Board Members

Robert Smith, Chair	Supervisor, Harrison County
Terry Cox	City Administrator, City of Harlan
Richard Crouch	Supervisor, Mills County
Melvin Houser	Supervisor, Pottawattamie County
Kim Clark	Mayor, Glenwood
Charles Parkhurst	Supervisor, Shelby County

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 for the uniform and efficient development of surface transportation facilities within its service area. The Policy Board allocates federal-aid funds to eligible projects within its service area.

RPA-18 Technical Committee Members

Daniel Ahart, Chair	County Engineer, Shelby County
John McCurdy	Executive Director – SWIPCO
Perry Cook	Public Works Director, City of Glenwood
Terry Cox	Public Works Director, City of Harlan
Kevin Mayberry	County Engineer, Mills County
J. Thomas Stoner	County Engineer, Harrison County
John Rasmussen	County Engineer, Pottawattamie County

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

Iowa Department of Transportation

The Iowa Department of Transportation provides technical assistance and guidance for the work carried out by RPA-18 in its duties and in the process of this Long Range Transportation Plan.



Metropolitan Area Planning Agency

The Metropolitan Area Planning Agency (MAPA) provides professional staff for the development and maintenance of RPA-18 planning and programming responsibilities.

MAPA is the coordinating body responsible for the submission of various transportation documents to the Iowa DOT and for public distribution. MAPA works with the MAPA Policy and Technical Committees to fulfill the transportation planning and program requirements of federal legislation, such as MAP-21. MAPA facilitates the development of the LRTP process and creation of this document.

Michael Felschow
Mike Helgerson
John Bair

RPA-18 Transportation & Data Manager
RPA-18 Planner
Graphics Specialist



PLAN SCOPE

Study Area

The RPA-18 study area covers approximately 2,541 square miles in southwest Iowa. It consists of all of Harrison, Mills and Shelby counties and the non-urbanized area encompassing the eastern three-fourths of Pottawattamie County. The remaining urban portion of Pottawattamie County is served by the Metropolitan Planning Organization (MPO) representing the Omaha-Council Bluffs metropolitan area (Figure 2). Unless otherwise stated, all data and information related to the Pottawattamie portion of the RPA-18 is based solely on the RPA-18 section of the county and not the county total.

Federal Aid Eligible Facilities

The focus of this RPA-18 LRTP is multimodal and primarily focuses on the development and implementation federal-aid transportation projects on National Highway System (NHS) routes. These facilities may be state highways, secondary county roads or city streets within the four-county region. The RPA-18 is charged with programming federal transportation funds for projects on a regional level within the four counties that comprise the RPA-18 planning area. Various pots of federal funding are made available to the region. Surface Transportation Program (STP) and Transportation Alternatives Program (TAP) funds directly sub-allocated to the RPA-18 by the Iowa DOT. In FY2014 the Iowa Department of Transportation will sub-allocate a total of \$43 million of Surface Transportation Program funds to RPAs and MPOs across the state.

Figure 2: Estimated FY2014 Apportionment for Federal-Aid Programs in Iowa

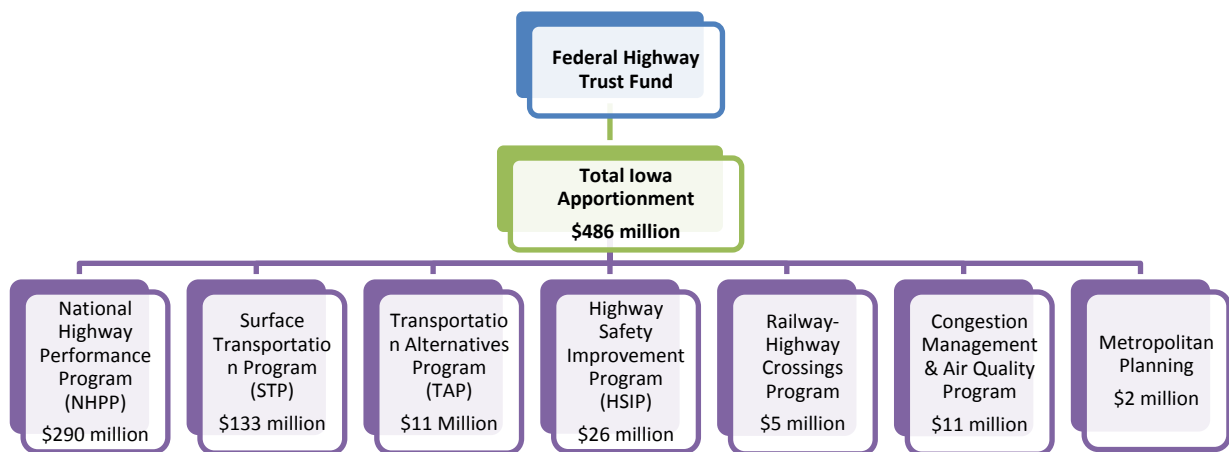
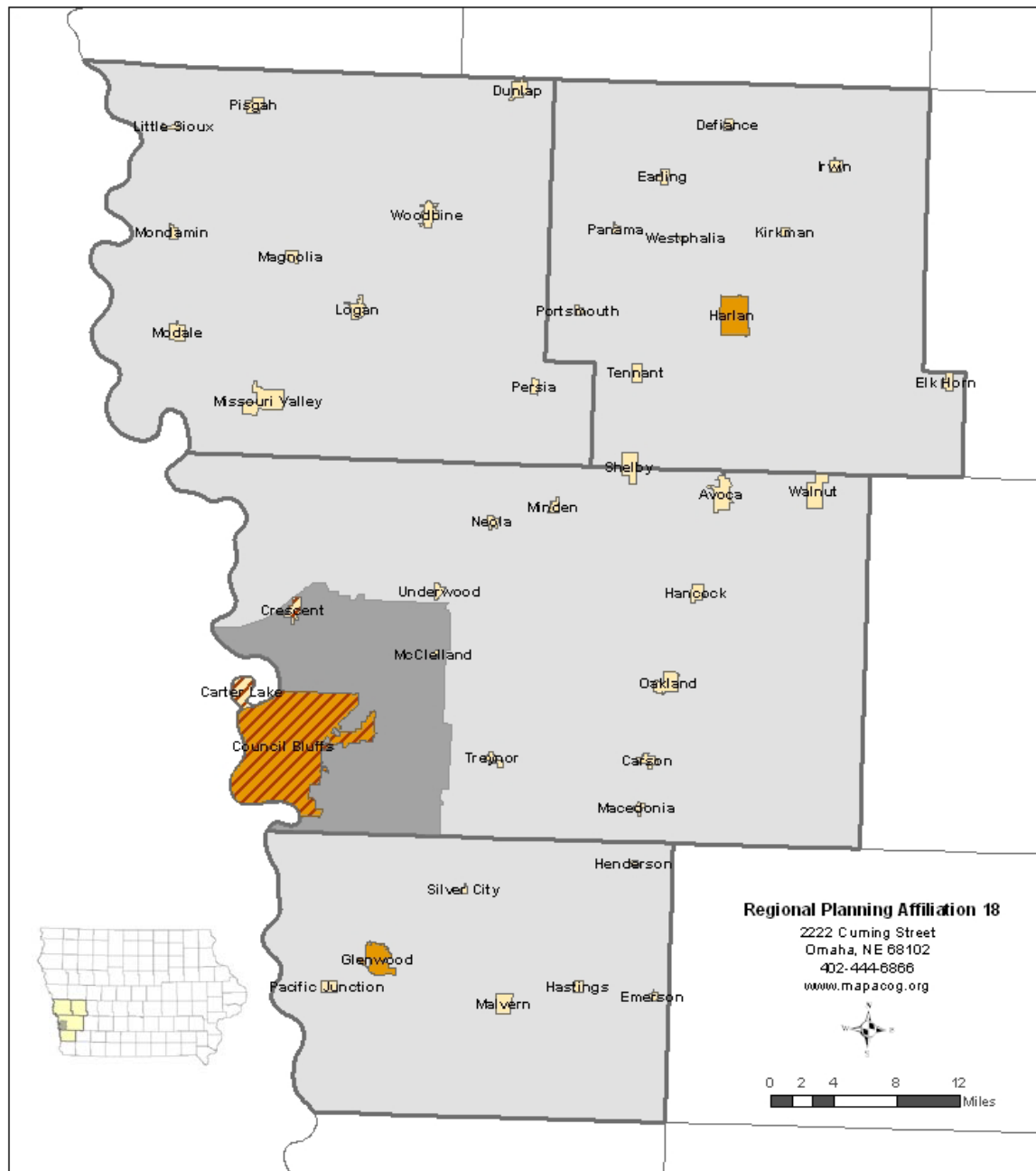


Figure 2 illustrates the federal-aid apportioned to the State of Iowa for transportation activities. The Iowa Department of Transportation utilizes State STP, TAP, and National Highway Performance Program (NHPP) funds apportioned to IDOT under MAP-21 to improve transportation facilities within the RPA-18 region. Many of these non-regional funds are utilized on the primary highway system that includes Interstate Highways, United States Highways, and Iowa State Highways.



Figure 3: Communities within the RPA-18 Region



Legend






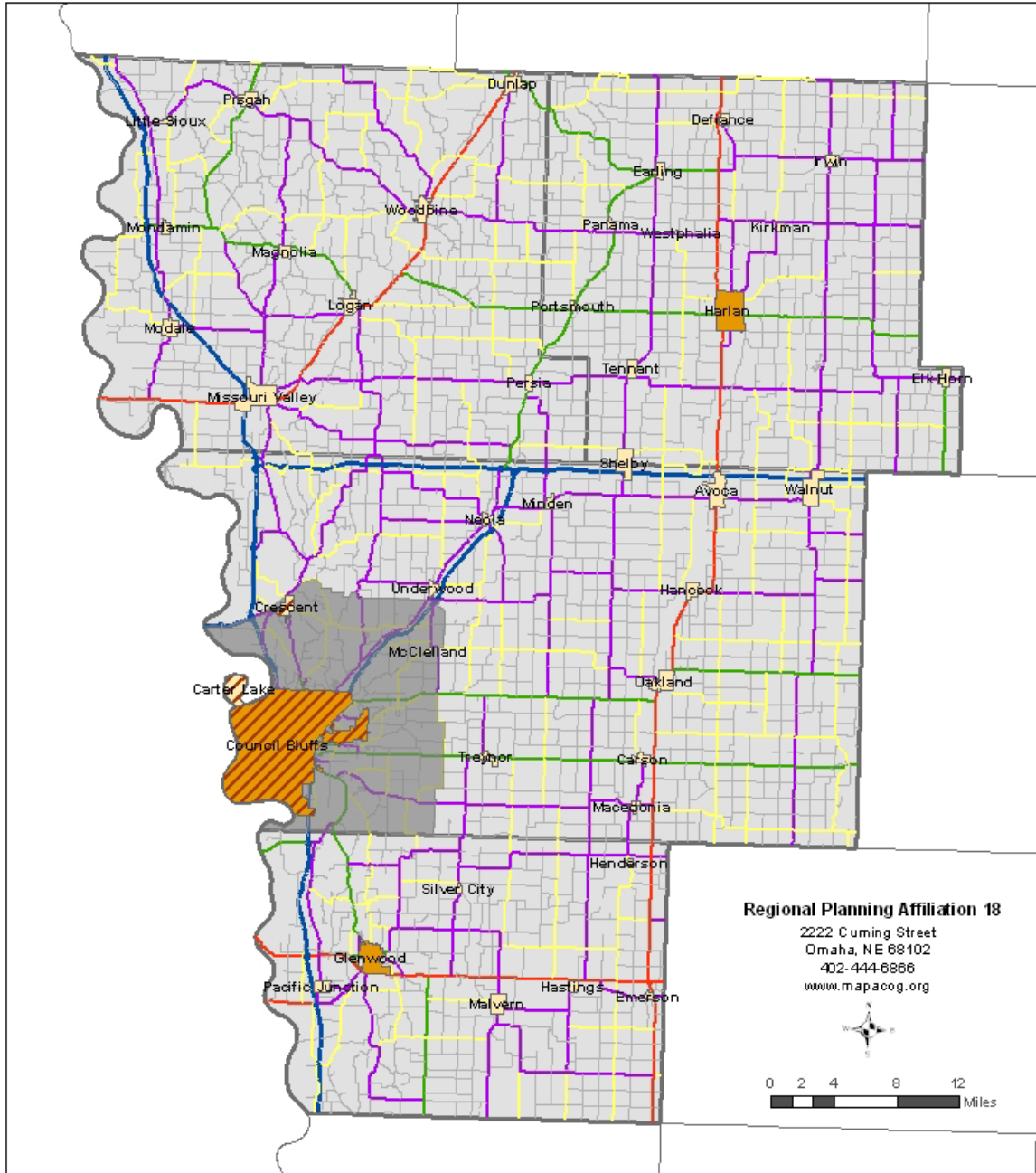
-  City Under 5,000 Population
-  City Over 5,000 Population
-  City within MPO Boundary
-  Iowa portion of MPO
-  RPA-18 County Boundary



Figure 4: Federal Functional Classification of RPA-18 Roadways



- Legend**
- Interstate
 - Rural Principal Arterial
 - Rural Minor Arterial
 - Rural Minor Collector
 - Rural Major Collector
 - Local
 - Iowa portion of MPD



Regional funds are typically used for the secondary road system for county roads, county highways, farm-to-market roads, and other non-state routes. Street and highway facilities that are eligible for federal aid must have a Federal Functional Classification of a Rural Major Collector or above.

Local Facilities

Local facilities are those streets and highways, bridges and other transportation modes that are not part of the National Highway System and are not eligible for federal funding. Local street and highway segments provide interconnectivity to the federal aid-eligible facilities as well as providing continuity and access to all areas of the RPA-18. Generally, transportation projects on local facilities are centered on routine maintenance and are not addressed in this LRTP. Projects on local facilities that exhibit regional significance or are considered to be major improvements (rebuilding existing systems, expanding capacity, adding new facilities, etc.) will be included in this LRTP.

Time Horizon

This LRTP will address those transportation improvements and issues in the RPA-18 to be accomplished over the next 20 years through the year 2035. At a minimum, the RPA-18 LRTP will be reviewed and updated every 5 years. The LRTP may be amended at any time to reflect changes in jurisdictional priorities, funding availability, socioeconomic factors or new planning factors introduced by the Iowa DOT or the federal government.

Vision Statement

The transportation needs of the RPA-18 are no different than those of other RPAs in Iowa. The provision of an efficient, safe, and manageable transportation system to move people and goods are basic transportation needs in any region. In keeping with these basic principles, RPA-18's vision statement is:

...to provide safe and efficient movement of goods and people via a well maintained multi-modal transportation system that uses each mode to its optimum advantage.

The transportation planning process is complicated— particularly when projecting the needs of the public twenty-five years into the future. As such, it is necessary to identify the basic assumptions which underlie the content of this plan. The principal assumptions which inform the goals, objectives and content of this plan are as follows:

- Local and national economies will not suffer from drastic economic depression or financial crises that would adversely affect population, transportation alternatives, and other factors providing basis for the LRTP development;
- The RPA-18 will primarily remain a rural farming environment;
- The economies of the Council Bluffs-Omaha metro area, the cities of Harlan and Glenwood, as well as other towns in the area, will continue to affect the transportation needs and trends within and through the RPA-18;
- Federal, state, and local funding for transportation systems and improvements will be allocated in a manner consistent with current and past trends;



- The use of new technologies (ITS measures for highways, automated vehicle locators for transit vehicles, railroad safety initiatives, etc.) will be used if and when they provide a cost effective means of accomplishing the stated goals of this plan or provide a significant contribution to the transportation system as a whole.

As the planning environment changes and new best practices are identified, the RPA-18 LRTP will be updated and amended to accommodate any changes in these planning principles. At a minimum, the RPA-18 LRTP will be reviewed and updated every 5 years.

Goals

The RPA-18 LRTP will guide transportation planning decisions in the region in order to achieve the goals enumerated in the RPA-18 Vision Statement. Local and regional transportation-related efforts will strive to:

- Maintain a transportation system that supports economic vitality and promotes economic development.
- Maintain and/or construct road facilities that meet present needs and serve as the foundation for meeting future demands.
- Identify funding sources for all modes in order that improvements for each mode can be made in an orderly manner.
- Provide a clean and healthy environment for our citizens.
- Maintain the varied and valued recreational, cultural, and educational facilities.
- Meet requirements of the MAP-21 as they pertain to the RPA system in Iowa.



SOCIOECONOMIC SUMMARY

Informed decisions are made by first identifying measures of future transportation needs within a particular area. Current and projected socioeconomic indicators, as well as current inventories of transportation facilities, are used in this plan to establish the need and type of transportation improvements to be accomplished.

In major metropolitan areas, socioeconomic data is used to support transportation modeling efforts. Population, household and income data often are used to supplement the development and calibration of a transportation model. Transportation modeling is not currently available in the rural areas of Iowa and the RPA-18. As such, the socioeconomic data supporting this LRTP is focused on demographic trends among its residents, changes in land use, and freight movement through and within the RPA-18.

Major Employers

The most prevalent transportation-related trip is the daily commute to work. Data acquired from INFOGROUP, a leading provider of innovative business data, was utilized to better understand employment driving the regional economy. This data is summarized for RPA-18 in Table 1. According to this data there are over 2,500 employers located within RPA-18 region as of 2010. Major industries within the region include manufacturing, logistics, health service providers, and education (Figure 4). Most of the employment locations represented by these employers are located within cities and towns across the RPA-18 (74.1%) or within 1 miles of the city or town (80.2%). Ninety-eight percent of those employers are located on or within one mile of a federal aid-eligible roadway.

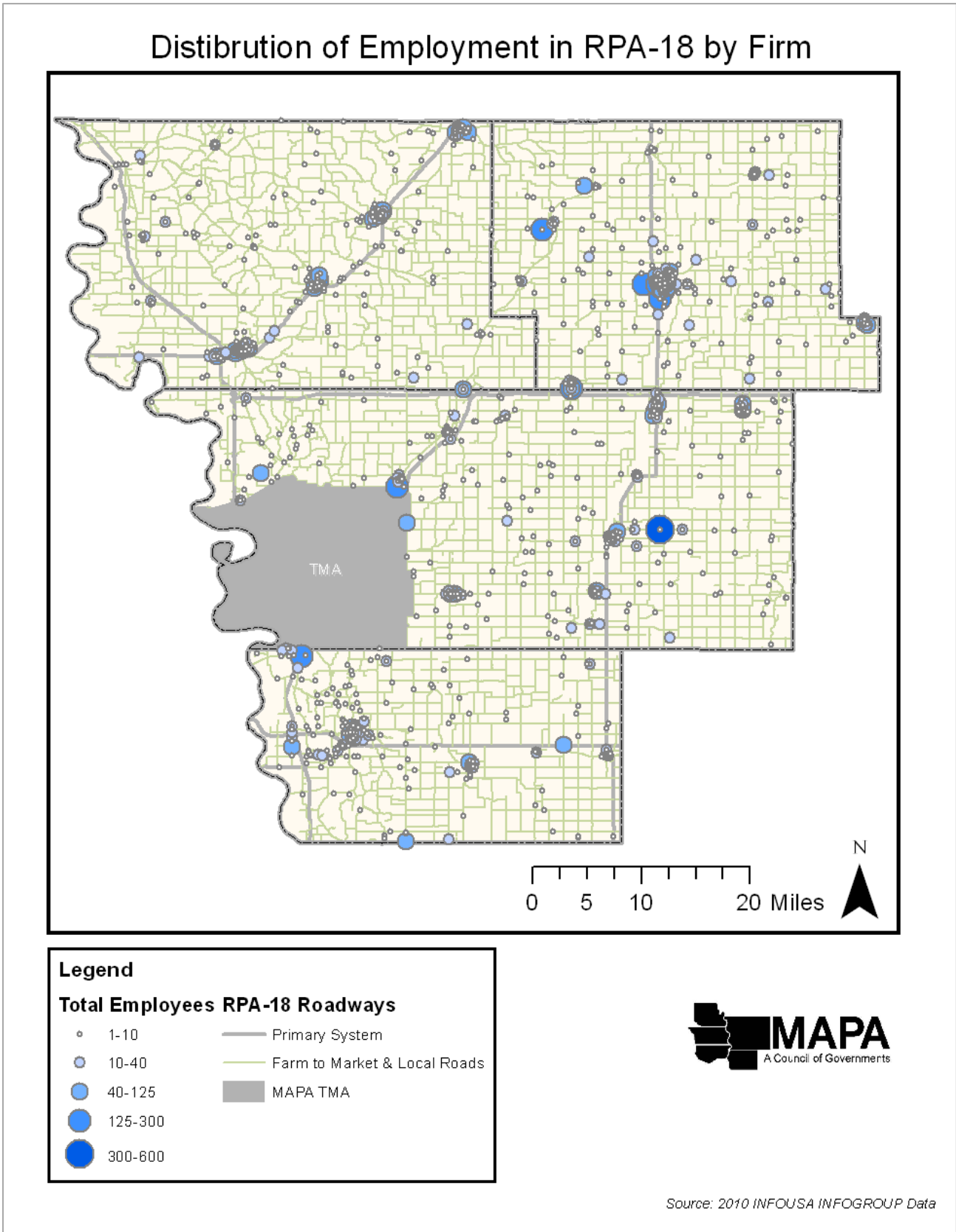
Table 1: Number of Firms by Industry by RPA-18 County

Industry	County				RPA-18 Total
	Harrison	Mills	Pottawattamie	Shelby	
Agriculture	35	23	77	49	184
Construction	42	34	50	25	151
Manufacturing	18	14	23	22	77
Transportation & Warehousing	30	18	35	27	110
Wholesale, Retail, Accommodations, & Food Services	180	99	156	151	586
HealthCare & Social Assistance	81	59	28	62	230
Utilities	3	1	3	2	9
All Other Employers	341	258	281	306	1,186
Grand Total	730	506	653	644	2,533

Source: 2010 INFOGROUP Data



Figure 5: Distribution of Firms in the RPA-18 Region



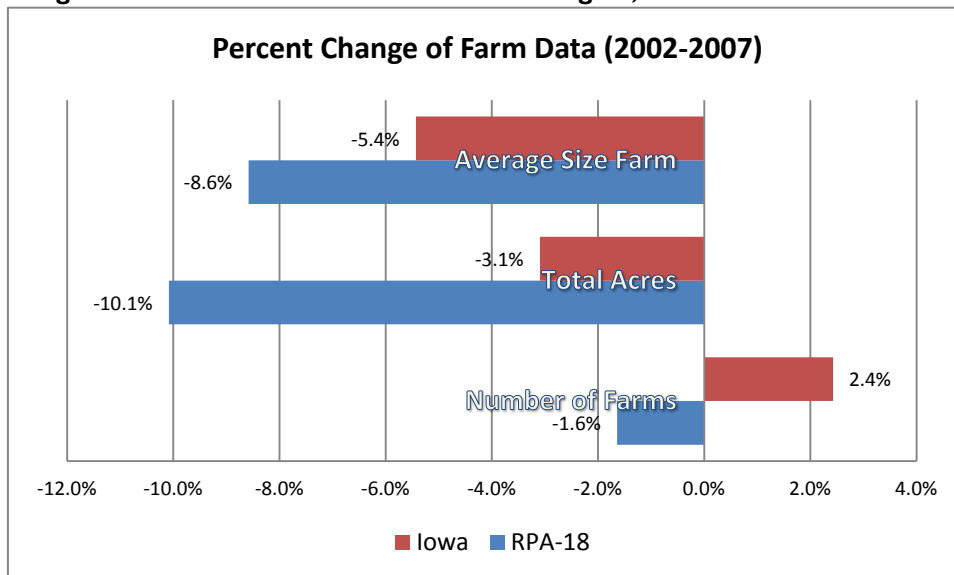


Land Use

The RPA-18 is a primarily agricultural region containing some 40 cities and towns scattered across the region. The larger cities of Harlan, Glenwood, Missouri Valley, and Logan are key drivers of economic opportunity in the region as economic and employment centers. The Omaha-Council Bluffs metropolitan area, adjacent to RPA-18 region in Nebraska and Iowa, offers many economic and employment opportunities to the residents of the RPA-18 region as well.

Land use in the RPA-18 region is generally agricultural, comprised of various non-contiguous parcels owned by fewer farmers and operated by fewer farmers who farm on a full-time basis. According to the 2007 Census of Agriculture, the total number of farms in the RPA-18 region decreased by 1.6% between 2002 and 2007 and exhibited a slight decrease in the average size of farms (-8.6%) (Figure 6). While the downward trend of average farm sizes parallels that of the entire state (-5.4%), Iowa has seen an increase of 2.4% in total number of farms during the same five-year period. This indicates RPA-18 farms are consolidating and taking farmland out of production at a greater rate than the state of Iowa. This is further explained by the 10.1% decline in the total acres of farmed land in the region versus a 3.1% decline statewide. Other land use trends such as increased residential development in exurban areas and increased use of conservation easements have contributed to the decline in farmed land as well.

Figure 6: Agricultural Land Use Trends in RPA-18 Region, 2002-2007



Source: 2007 Census of Agriculture-County Profiles

Additionally, crop yields have steadily increased precipitating the need for more and larger machinery to bring the crop to market. The increase in rural traffic volumes generated by scattered farm parcels and increased farming activity have put an ever increasing burden on the existing secondary road systems. If the present demand for cereal grains is sustained, the need for routine and long-term maintenance activities on the secondary roads system may increase dramatically.



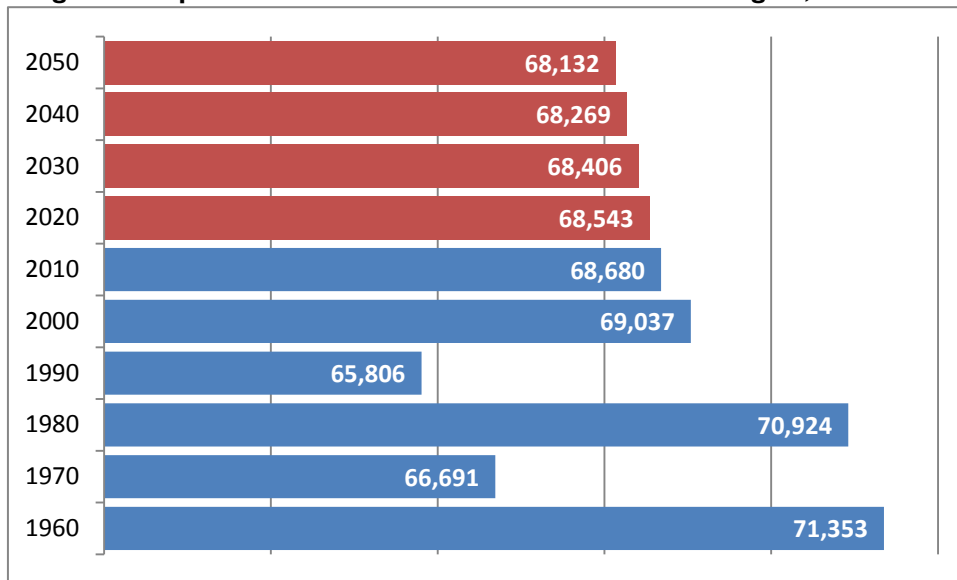
POPULATION AND HOUSEHOLDS

Population

The total population of RPA-18, as recorded by the 2010 Census, is 68,680. This is less than a 1% decrease in population since 2000 although it is a 4.0% overall increase since 1990. Historically, the RPA 18 region has fluctuated in population although growth patterns show it has produced net loss of 10,342 residents (-13.1%) between 1940 and 2010.

MAPA projects a decrease in population in the RPA-18 region by 2030 based on the current -0.5% decline between 2000 and 2010. Figure 7 illustrates the shifting population of the RPA region in the recent past and through the LRTP planning period. Population increases in the RPA 18 region can be attributed to Mills and rural Pottawattamie counties, which benefit from their adjacency to the metropolitan area. As Council Bluffs continues to annex and develop land, the MPO boundary will expand with the increasing urbanized area within Pottawattamie County; this will reduce the size of the RPA-18 region over time. This growth is offset by larger losses in Shelby and Harrison counties. Figure 8 (next page) shows the population growth and decline of RPA-18 counties since 1950.

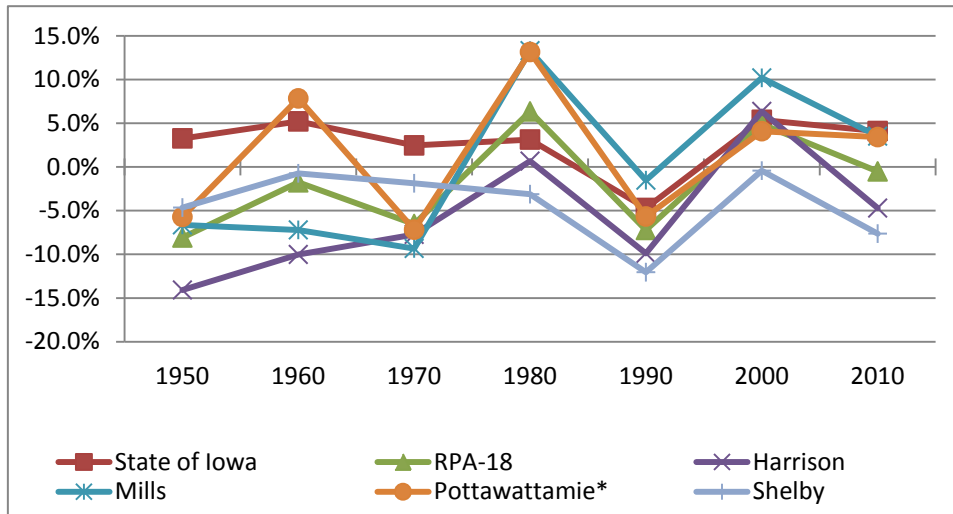
Figure 7: Population Estimates & Forecasts for RPA-18 Region, 1960-2050



Source: Metropolitan Area Planning Agency, Land Use Activity Allocation Model



Figure 8: Percent Population Change by County, 1960-2050

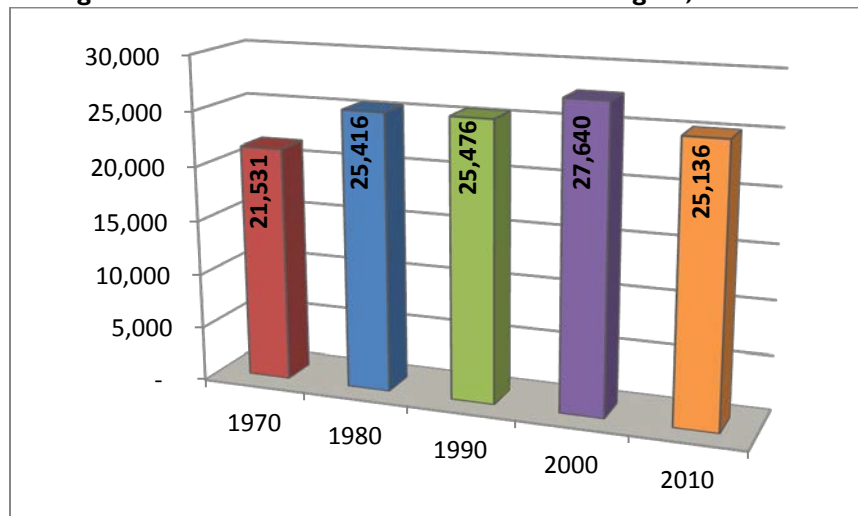


Source: United States Census Bureau; MAPA Land Use Activity Allocation Model (LUAMM)

Households

An increase in travel demand on roadways in the RPA-18 region is also explained by the increase in the number of households over the last 20 years. As lifestyles have changed, more single person and two-person households have been created, further contributing to the need for personal transportation. Figure 9 shows the trend in the total number of households in the RPA-18 region since 1970.

Figure 9: Number of Households in RPA-18 Region, 1970-2010

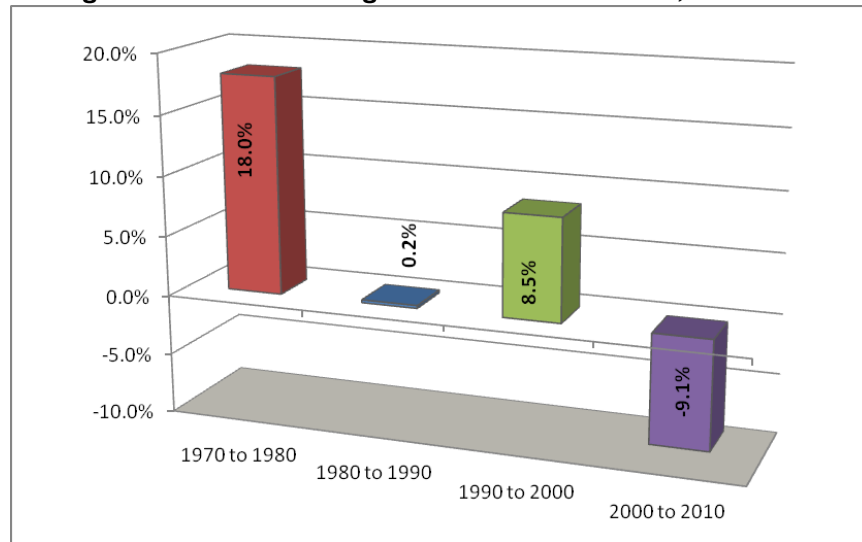


Source: 2010 US Census

Based on the most recent Census data, the total number of households in the region has decreased to levels slightly below those of the 1990 Census. The number of occupied housing units (households) has increased approximately 8.5% since 1990. Figure 10 (next page) illustrates this same data as percentage growth by decennial Census.



Figure 10: Percent Change of RPA-18 Households, 1970-2010



Source: 2010 US Census

Population and Household Density

As previously stated, the RPA-18 is heavily influenced by the urban centers located within the region. The majority of population and housing units are centered on and around these areas. Heavy concentrations of people and households border the MAPA MPO area in Council Bluffs, as well as the cities of Glenwood, Harlan and Missouri Valley. Figure 11 (next page) illustrates those concentrations of households in the RPA-18 region and Figure 12 shows the distribution of population throughout the RPA-18 region.



Figure 11: Distribution of Households in the RPA-18 Region

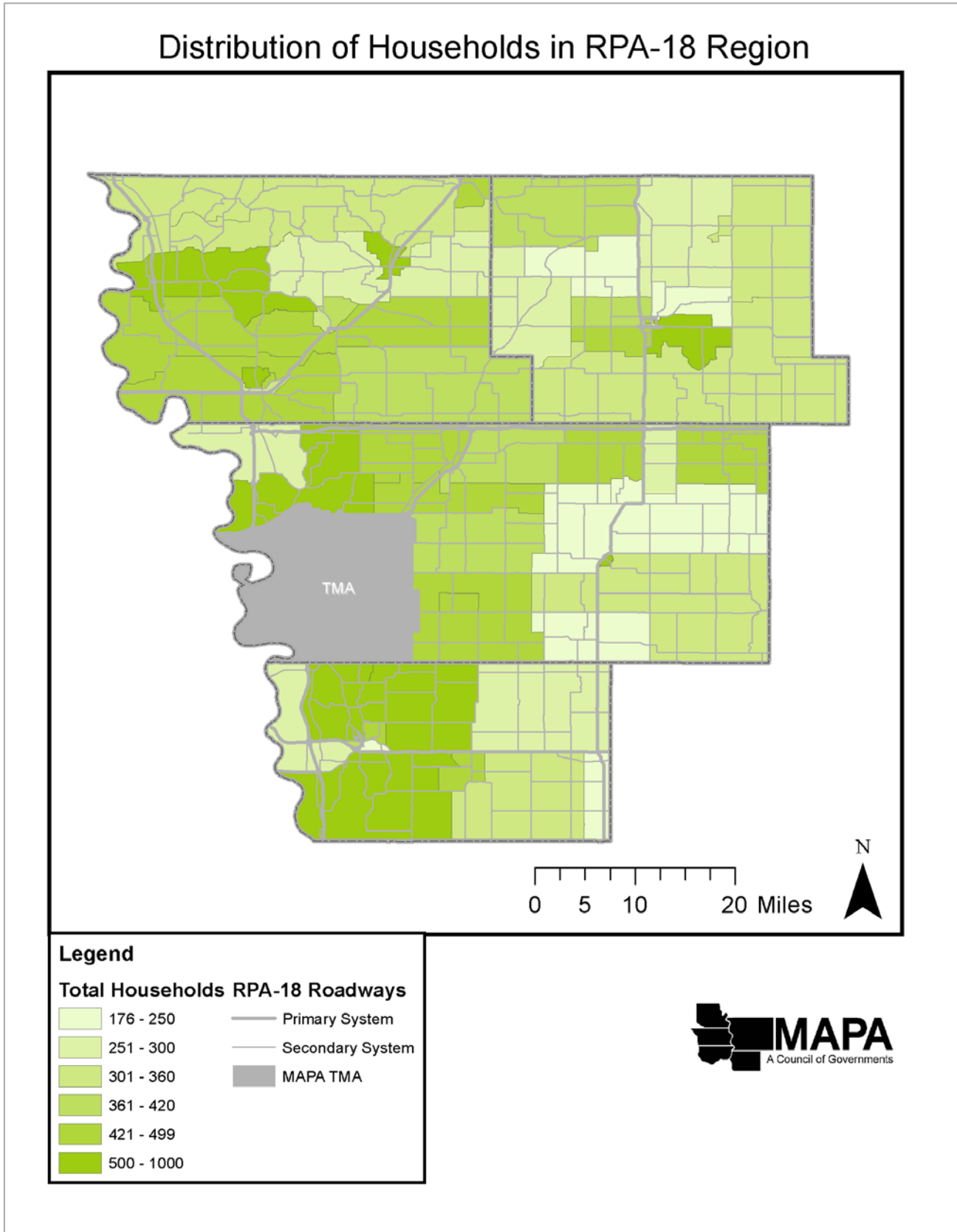
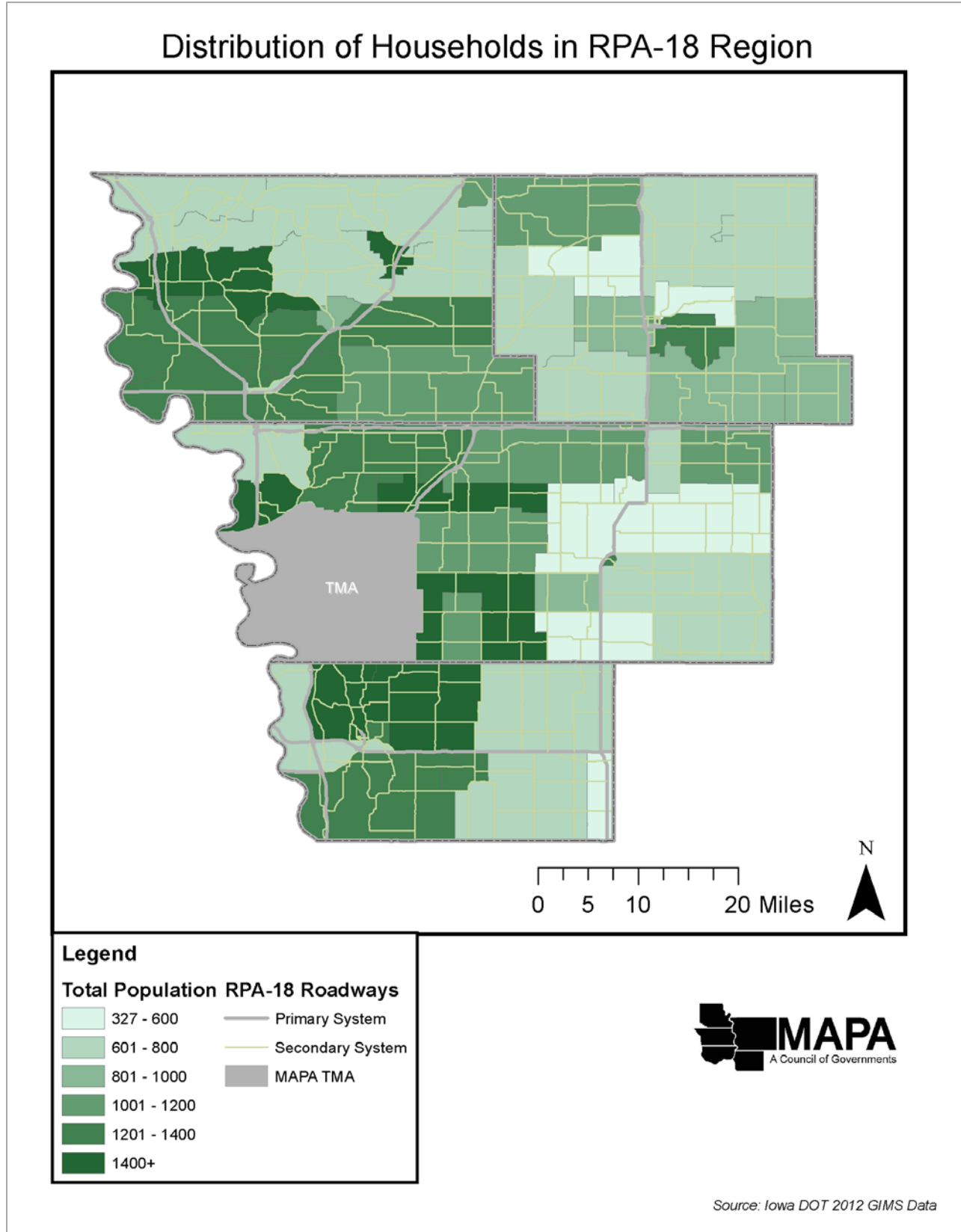




Figure 12: Distribution of Population in the RPA-18 Region



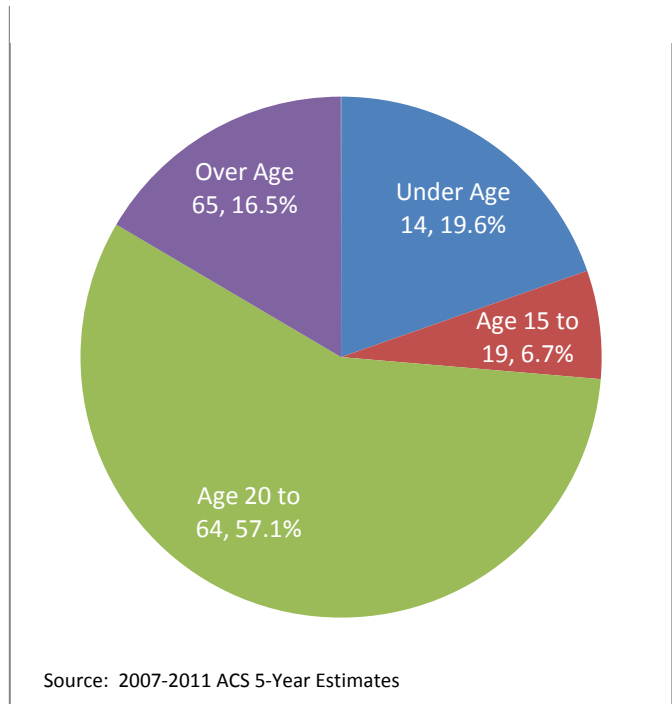


AGE

Social evolution also presents change in the work force. The number of persons 16 years or older has increased approximately 35% since 1970. Although male participation in the work force has only increased seven percent during this time, female participation in the work force has increased by 96% since 1970.

Figure 13 represents the overall breakdown of the RPA-18 region by age. Over 3/4 of the RPA-18 population is of legal age to drive. While younger drivers (age 15 to 19) make up only 6.7% of the population, elderly drivers (age 65 or over) are more than double at figure 16.5%. As we get older, the number of elderly drivers will increase and the requirements of the transportation system will need to be adjusted to accommodate them.

Figure 13: RPA-18 Age Breakdown

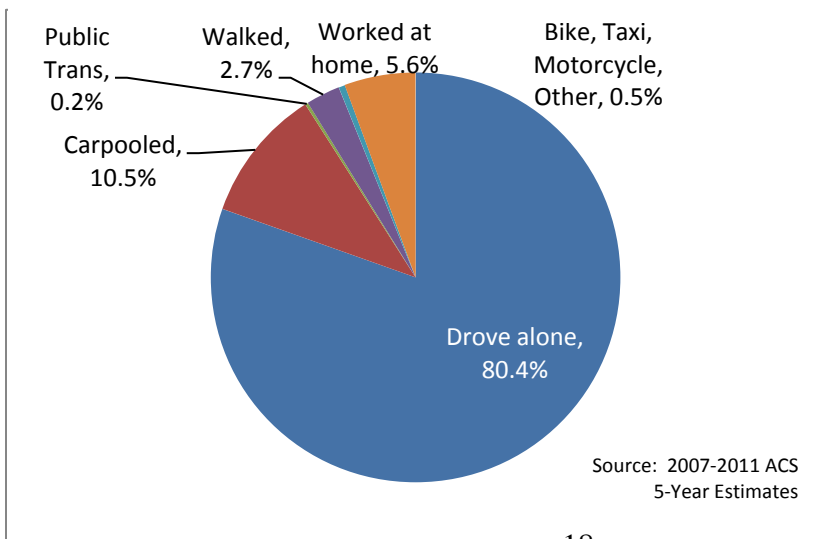


Various measures are possible to help mitigate the aging population in RPA-18, as well as in Iowa and the rest of the United States. Education programs for the elderly and the younger drivers, street and highway designs to accommodate older driver, better signage and graduated licensing are all being considered or implemented to provide a safer transportation system.

TRANSPORTATION PATTERNS

How people travel presents information that lends itself to maintaining and updating the transportation system. Figure 14 summarizes the mode choice of commuters in the RPA-18 region. The private auto remains the most popular mode of transportation with 80.4% of the RPA-18 population driving private vehicles to work each day. Less than 10.5% of residents carpooled to work while even less walked (2.7%) or used public transit (<1%) to get to work each day; even fewer still biked, rode a taxi or a motorcycle to get to work.

Figure 14: Mode of Transportation Taken to Work

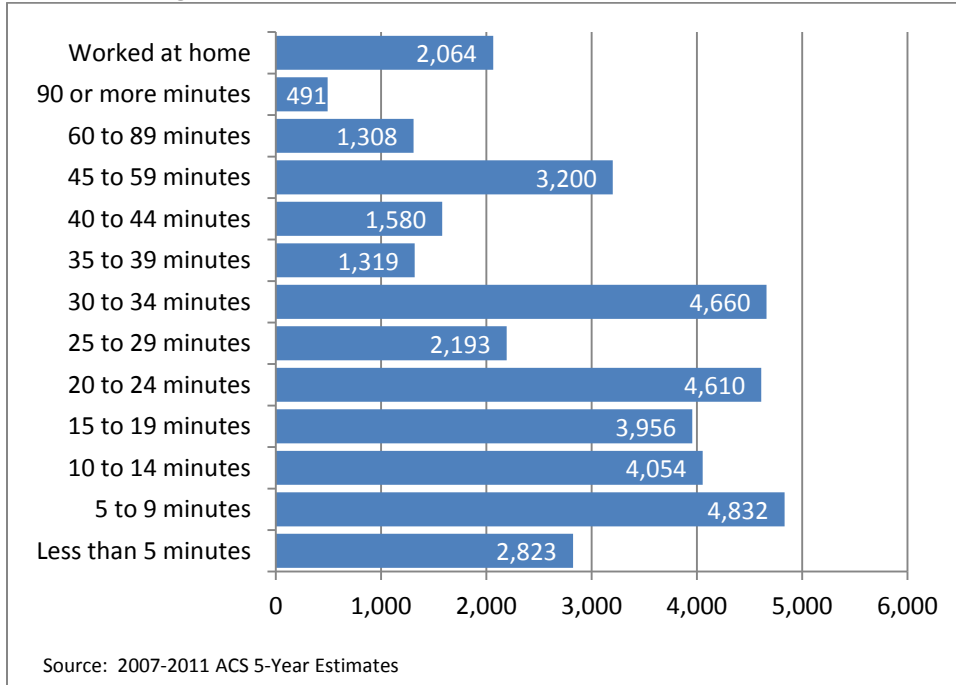


80.4% of the RPA-18 population driving private vehicles to work each day. Less than 10.5% of residents carpooled to work while even less walked (2.7%) or used public transit (<1%) to get to work each day; even fewer still biked, rode a taxi or a motorcycle to get to work.



The majority of workers spend 30 minutes or less getting to work each day with intra-county work trips dominating the commuting traffic flows. Figure 15 summarizes commute time data for residents of the RPA-18 region.

Figure 15: Travel Time to Work for RPA-18 Residents



Commuting Patterns to Work

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.

Summary

There are an increasing number of drivers using transportation systems in the RPA-18 and they are traveling farther and more often. Although multi-modal means exist, workers tend to drive their private vehicle and are driving alone. This presents the need to maintain the existing transportation system and to plan to expand the system as time and funding can accommodate.

Population is anticipated to increase in the more urban counties of Mills, Harrison and Pottawattamie while rural parts of the region will continue to see population decline.

Land use, centers of employment and social changes have generated more and longer daily trips adding to the increased use of the transportation system in the RPA-18 region and surrounding areas. The increase in the number of workers and the dispersal of work locations throughout the RPA-18 have generated more vehicle travel and thus more demand on the transportation system.



The driving population is getting older. Transportation systems and future improvements to the system need to accommodate the needs of the aging population.

These socio-economic factors work in concert with one another to create the need to maintain the existing transportation system. Similarly, it will take multiple types of improvements to the transportation system to help address and respond to these changing factors. At one end of the spectrum are physical improvements to the multi-modal transportation systems (better highway design, increased maintenance, capacity improvements, increased transit use, etc.). At the other end are factors more closely related to social science than to engineering (dependency on the automobile, individual responsibility, education efforts, mode choice, etc.). The goals and objectives identified within the Plan Scope have been developed to establish the best policies for RPA-18 to maximize available resources and provide for the safest, most efficient transportation network possible.



Environment

The RPA-18 region is rural and agricultural in nature with most communities having less than 3,000 persons. Harlan and Glenwood are the exception, having populations of 5,106 and 5,269, respectively.

In some areas of the region there is concern about development of property that lies outside corporate boundaries and in rural subdivisions that create a demand for public services. Providing roadways capable of handling the quantity and type of traffic generated by these developments must often be considered. Large animal confinement facilities cause a dilemma because, while they contribute to the region's economy, they can also add contaminants to the watershed through accidental manure spills, and may affect the air quality for their neighbors.

National Environmental Protection Act (NEPA)

The National Environmental Protection Act (NEPA) presents a process for reviewing and evaluating of new transportation and transportation-related projects. All federal-aid transportation projects must undergo a NEPA evaluation. Such an evaluation process can have one of three possible levels of concern:

CE– Categorical Exclusion

EA/ FONSI - Environmental Assessment with a Finding of No Significant Impact

EIS - Environmental Impact Statement with a Record of Decision.

Under most circumstances, a CE will be the level of NEPA review for maintaining the existing system. Major transportation projects requiring Right-of-Way purchase or that involve sensitive ecological or archeological areas would require more investigation and mitigation strategies before constructing or reconstructing the facility. These strategies would evolve out of an EA or and EIS.

Air Quality

All RPA-18 communities and the entire State of Iowa are in attainment for all criteria pollutants identified by the Environmental Protection Agency. Presently, the neighboring Omaha-Council Bluffs metropolitan region is close to the threshold for non-attainment, and could go into non-attainment if new rules are adopted by the EPA. The RPA-18 LRTP will be amended, as needed, to reflect changes in air quality and attainment status.

Threatened or Endangered Species

Consideration must be given to protect the habitat of threatened or endangered species during federally funded activities. Table 2 (next page) includes a complete list of the plants and animals which are considered threatened or endangered within the RPA-18 region.



Table 2: Threatened or Endangered Species in the RPA-18 Region

Group	Name	Status	Counties
Birds	Least tern (<i>Sterna antillarum</i>)	Endangered	P
Birds	Piping Plover (<i>Charadrius melodus</i>)	Threatened	P
Fishes	Pallid sturgeon (<i>Scaphirhynchus albus</i>)	Endangered	H, M, P,
Flowering Plants	Prairie bush-clover (<i>Lespedeza leptostachya</i>)	Threatened	H, M, P, S
Flowering Plants	Western prairie fringed Orchid (<i>Platanthera praeclara</i>)	Threatened	H, M, P, S
Mammals	Indiana bat (<i>Myotis sodalis</i>)	Endangered	M, P

Counties: H=Harrison; M=Mills; P=Pottawattmie; S=Shelby

Source: U.S. Fish and Wildlife Services

Water Quality

The Environmental Protection Agency (EPA) is charged with providing for the quality of groundwater, rivers and creeks. Issues related to water quality and pollution directly related to new transportation projects will be addressed in the NEPA review process and will receive continued support of transportation officials.

Noise Pollution

Transportation improvements generally increased the capacity of cars, trucks, airplane and other modes within their respective area. Noise abatement and mitigation issues related to new transportation projects are addressed in the environmental assessment portion of the NEPA planning process. Issues of noise pollution generated by increased traffic, airport expansion or other modal improvements considered in the NEPA review will be mitigated accordingly in the planning and construction of such facilities.

Environmental Justice

As with the NEPA process, all federal-aid projects are evaluated to assess their impacts on low-moderate income populations and minority population. In 1997, the United States Department of Transportation (US DOT) issued its Order to Address Environmental Justice in Minority Populations and Low-Income Populations (US DOT Order). The US DOT Order addresses the requirements of Executive Order 12898 and sets forth US DOT's policy to promote the principles of environmental justice in all programs, policies and activities under its jurisdiction.

Since the DOT Order was issued, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) have been working with their state and local transportation partners to make sure that the principles of environmental justice are integrated into every aspect of their mission. RPA-18 works to ensure that these concepts are considered as a part of the transportation planning process and mitigated accordingly.

Historic and Archeological Resources

The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966,



the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources.

There are numerous districts, sites, buildings, structures, and objects located within the RPA-18 region listed in the Register as significant in American history. Table 4 (next page) is a list of all properties listed on the National Register of Historic Places within the RPA-18 region.

Native American Tribes

There is a rich cultural heritage of Native American Tribes throughout the RPA-18 region. Section 106 of the National Historic Preservation Act (16 U.S.C.§470 et seq.) provides definitions and procedures for consultation between federal agencies and Native American tribes for federal undertakings, as defined in 36 CFR §800.16(y).

Table 3 includes a listing of the federally recognized Indian tribes who are consulted as a part federally funded transportation activities.

Table 3: 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=Pottawattmie; S=Shelby	

Source: HUD Tribal Assessment Information

Parks, Historic Trails, Forests & Wildlife Refuges

The DeSoto National Wildlife Refuge is located along the Missouri River where the Pottawattamie and Harrison County boundary meet. The Refuge is located in the migratory bird corridor of the Missouri River floodplain and provides essential habitat for resident, migratory and endangered species. High quality floodplain forest, grassland, wetland, sandbar and riverine habitats support diverse and productive populations of migratory waterfowl, shorebirds and neotropical birds, as well as rare, threatened and endangered species including the pallid sturgeon, piping plover and least tern.

There is one national historic trail, the Mormon Pioneer National Historic Trail that runs east-west along the southern edge of Pottawattamie County.



Table 4: 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 Street	Logan	Harrison
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 Street	Woodbine	Harrison
State Savings Bank	312 E. 7th Street	Logan	Harrison
Wheeler John R. Jr. House	407 S. Third Street	Dunlap	Harrison
Woodbine Normal and Grade School	5th and Weare	Woodbine	Harrison
Woodbine Public Library	58 5th Street	Woodbine	Harrison
Woodbine Savings Bank	424 Walker Street	Woodbine	Harrison
Davis Oriole Earthlodge Site	Restricted	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
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 Street 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 Street	Irwin	Shelby
Larsen Chris House	4215 Main Street	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 Street	Harlan	Shelby



County Parks

The State of Iowa established the Iowa County Conservation Board system in 1955 to “acquire, develop maintain and make available to the inhabitants of the county, public parks, museums, preserves, parkways, playgrounds, recreational centers, county forests, wildlife and other conservation areas and to promote the orderly development and conservation of the natural resources, and to cultivate good citizenship by providing adequate programs of public recreation.” Table 5 contains a complete list of the county park facilities within the RPA-18 region.

Table 5: County Parks in the RPA-18 Region

Harrison County	Mills County
Murray Hill Scenic Overlook	Bass Memorial Park
Roadside Rest Area	Highway 34 Roadside Park
Schaben Park	Lake George
Schley Park	Mile Hill Lake
Sioux Dam Wildlife Area	Pony Creek Park
Willow Lake Recreation Area	Tree Lake
Pottawattamie County	Shelby County
Arrowhead Park	Elk Horn Creek Recreation Area
Botna Bend Park	Manteno Park
Hitchcock Nature Area	Nishna Bend Recreation Area
Old Towne Park	Reinig River Access
	Rosenow Timber County Park
	Rosman Glendale Farm Rec. Area
	Schimerowski Recreation Area

State Park & Forests

The Loess Hills State Forest is the only forest in the region. The forest is made up of four major units totaling 11,266 acres: Little Sioux, Pisgah Unit, Mondamin and Preparation Canyon, also a state park. The following state parks and wildlife areas are located within the RPA-18 Region:

- Prairie Rose State Park- located southeast of Harlan (Shelby County)
- Wilson Island State Recreation Area- located in the northwest corner of Pottawattamie County

Wildlife Management Areas

The Iowa Department of Natural Resources (DNR) manages wildlife areas to provide habitat for Iowa’s native wildlife species and those species that migrate through our state. The primary management objective is to develop and restore these habitats to ensure that wildlife species have a safe place to thrive. The RPA-18 region has nearly 12,140 acres of WMA within its five counties.

A listing of wildlife areas managed by the Iowa DNR may be found on the Iowa DNR website: <http://www.iowadnr.gov/wildlife/wmamaps/index.html>

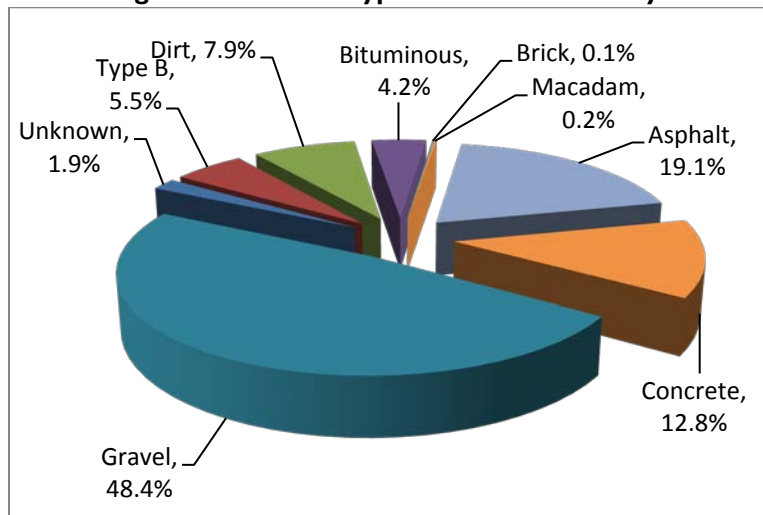


STREET AND HIGHWAY SECTION

Street and Highway Inventory

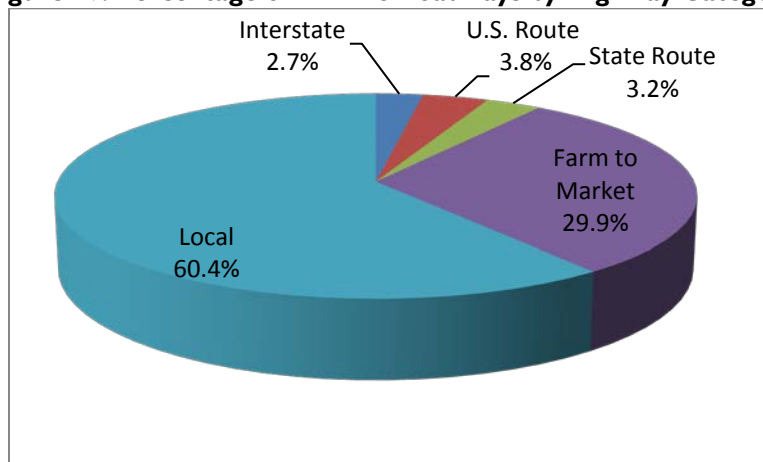
The street and highway network in the RPA-18 is represented by some 4700 miles of roadway constructed with various surface types. Nearly half (48.4%) of the roadways in the RPA-18 are surfaced with gravel while nearly 30% of all Primary and Secondary roads having a hard surface (concrete, asphalt, or other hard surface).

Figure 16: Surface Type of RPA-18 Roadways



Interstates 80, 680 and 29 account for nearly 2.7% 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 slightly more than 29% of the street and highway inventory with the remaining 60% being completely local in nature.

Figure 17: Percentage of RPA-18 Roadways by Highway Category

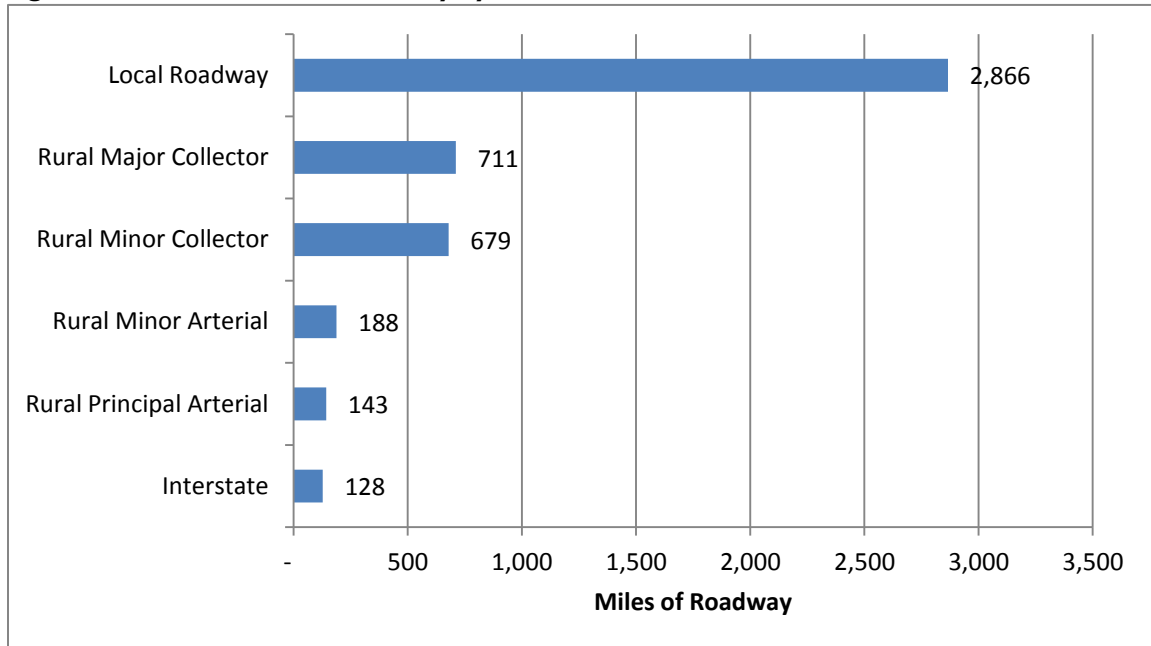




Federal Aid-Eligible Facilities

The federal aid-eligible roadways account for over 25% of complete street and highway network in the RPA-18 region. In order to be eligible for Federal-Aid, roadways must be functionally classified as a Rural Major Collector or higher– including Minor Arterials, Principal Arterials, and Interstate Highways. More information about Federal Functional Classifications can be found in Appendix 1. Figure 18 lists the mileage of roadways within each functional classification.

Figure 18: Miles of RPA-18 Roadway by Functional Classification



The majority of roadways in the RPA-18 are under the jurisdiction of its member communities. Local roadways account for over 60% of the roadway mileage in RPA-18. Collectors (major and minor) account for nearly 30% of the RPA-18 roadway mileage as well. Principal and minor arterials comprise approximately 7% of the roadway mileage in the region, while interstates account for less than 3% of this roadway mileage.

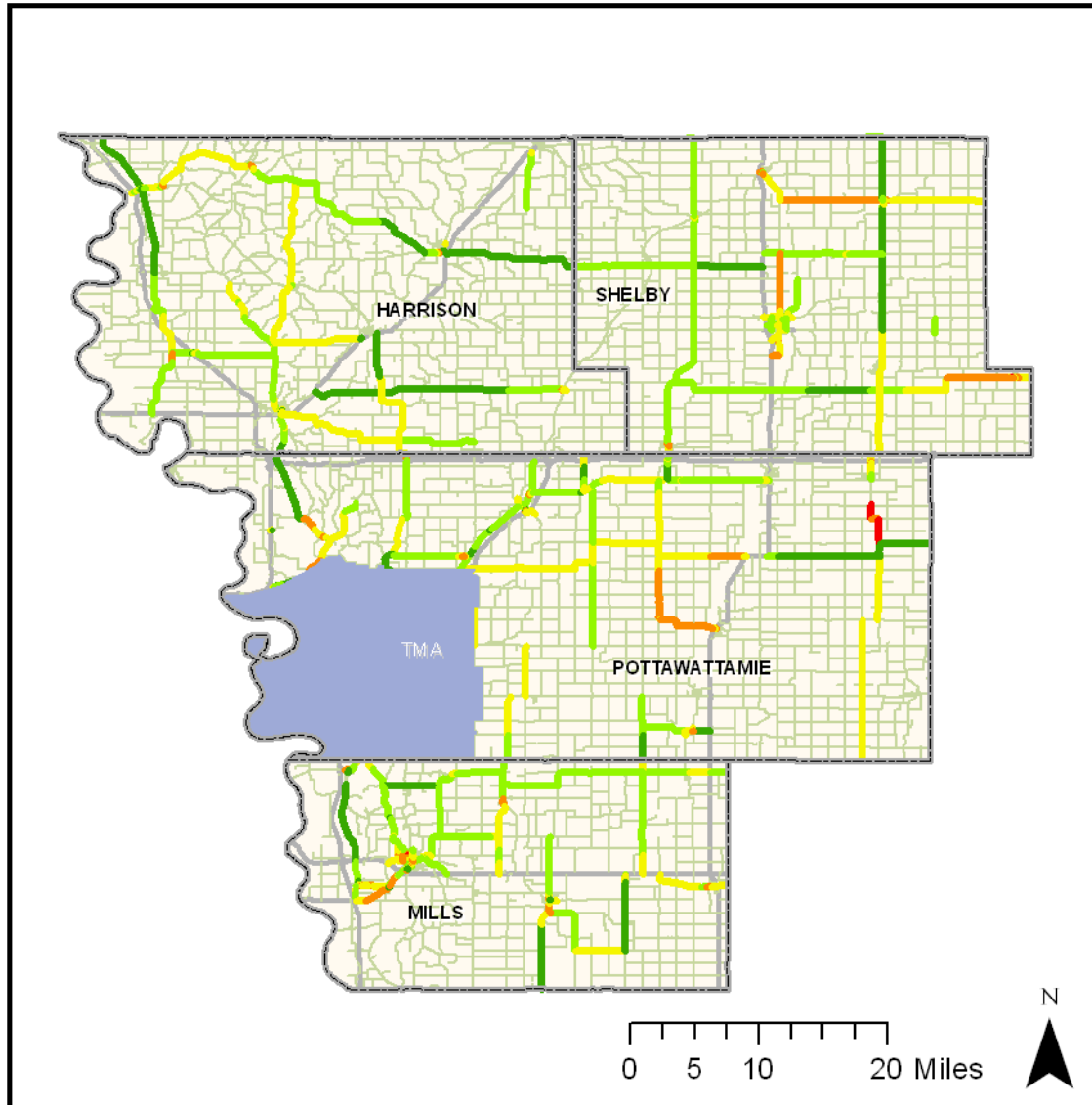
Secondary Road Pavement Condition Index

The Pavement Condition Index (PCI) rates secondary roadways on a five-tier scale ranging from Very Poor to Excellent. The PCI was used to evaluate approximately 490 miles of secondary roads in the RPA-18 with a FFC of Rural Major Collector or above. Figure 19 illustrates the PCI rating of secondary roads within the RPA region. Over 60% of these facilities had a rating of Excellent or Good. Over 9% of these facilities rated Poor to Very Poor, with approximately 30% of the roadways rating Fair. Due to the 20-year planning horizon of this document, facilities identified as Fair, Poor and Very Poor were considered to be deficient for planning purposes. Figure 20 summarizes the data from this testing.



Figure 19: PCI Rating for RPA-18 Secondary Roads

PCI Rating for RPA-18 Federal Aid Eligible Roadways



Legend

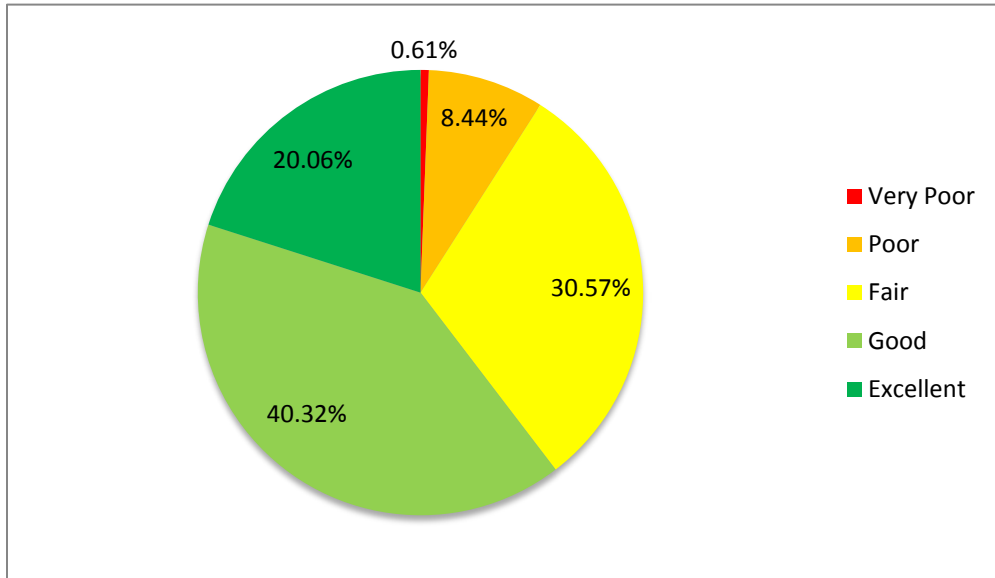
Federal-Aid Eligible Roadways	RPA-18 Roadways
Very Poor (0 - 20)	Primary System
Poor (20.1 - 40)	Farm to Market & Local Roads
Fair (40.1 - 60)	MAPA TMA
Good (60.1 - 80)	
Very Good (80.1 - 100)	



Source: Iowa State University, Institute for Transportation (InTrans), Center for Transportation Research (CTRE), 2012 Iowa Pavement Management Program (IPMP)



Figure 20: Condition of Federal-Aid Eligible Secondary Roads (PCI)



International Roughness Index

The International Roughness Index (IRI) identifies Primary system roadway facilities as being Good, Fair or Poor. The Iowa DOT identifies approximately 560 miles of primary roads in the RPA-18 as being rated using the IRI. Figure 20 summarizes the most recent testing data available for RPA-18. Over 60% of the miles were deemed to be in Good condition. Additionally, over 38% of the remaining roadways were deemed to be in Fair condition. Only 1% of the primary highway system was rated as Poor Condition. For planning purposes, this plan identifies those facilities with an IRI of more than 200 as deficient or potentially deficient over the time horizon of the plan. The map in Figure 22 shows the IRI rating for all tested roadways in the primary highway system

Figure 21: Condition of RPA-18 Primary Highway Network

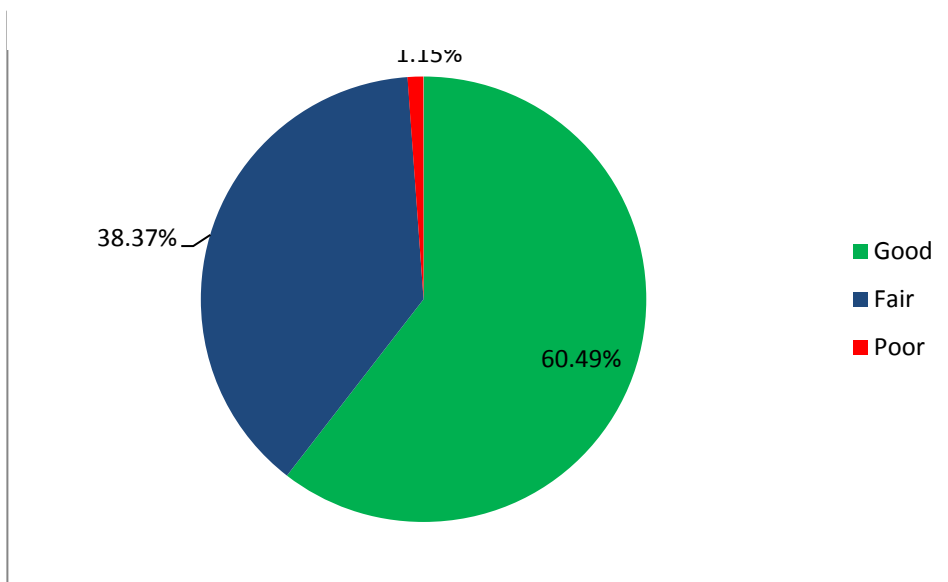
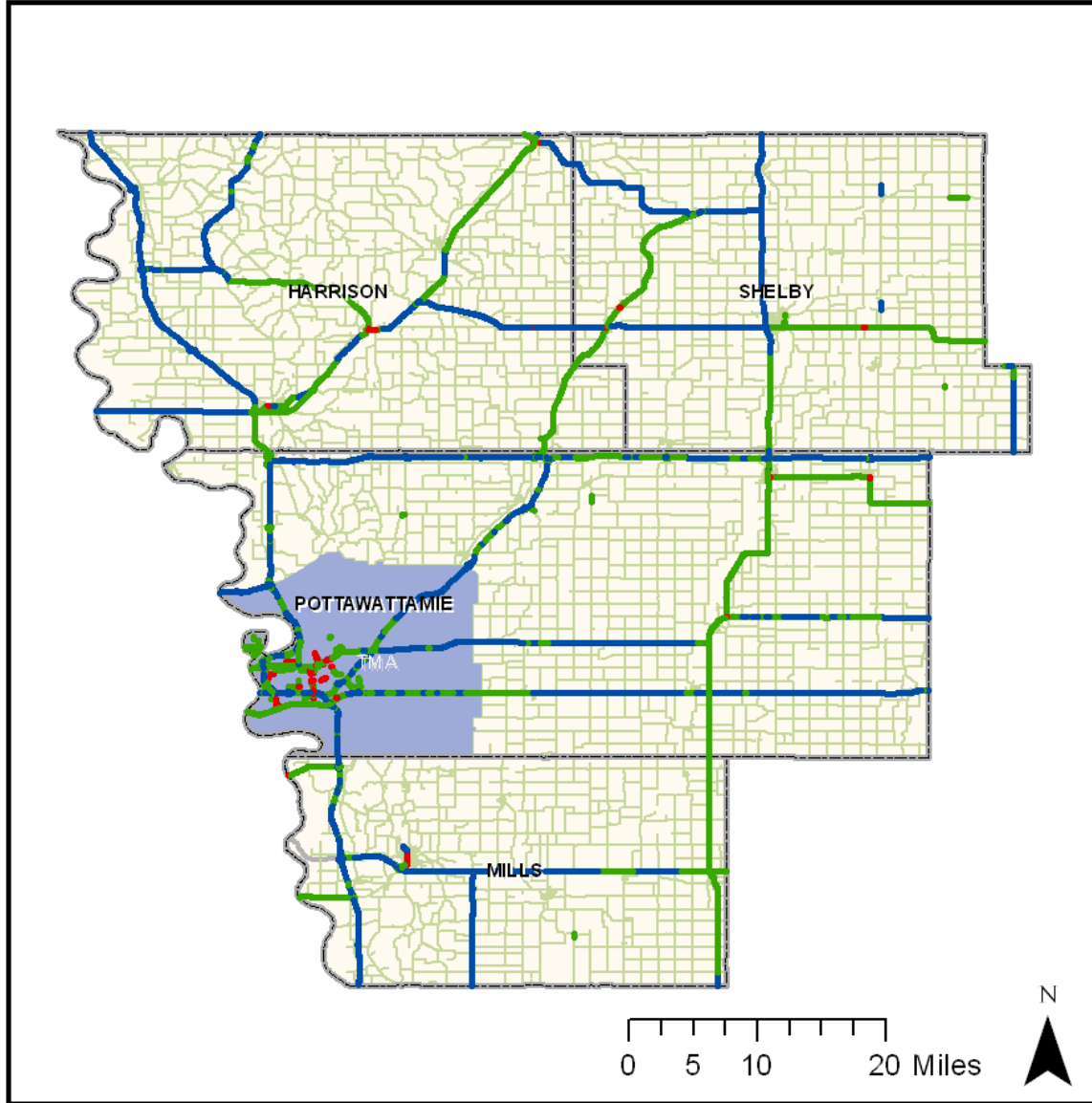




Figure 22: International Roughness Index of Primary Roadways in RPA-18 Region

RPA-18 Primary Roads - International Roughness Index (IRI)



Legend	
IRI Rating	RPA-18 Roadways
Blue line: Good (0-100)	Grey line: Primary System
Green line: Fair (100-250)	Light green line: Farm to Market & Local Roads
Red line: Poor (250+)	Blue shaded area: MAPA TMA

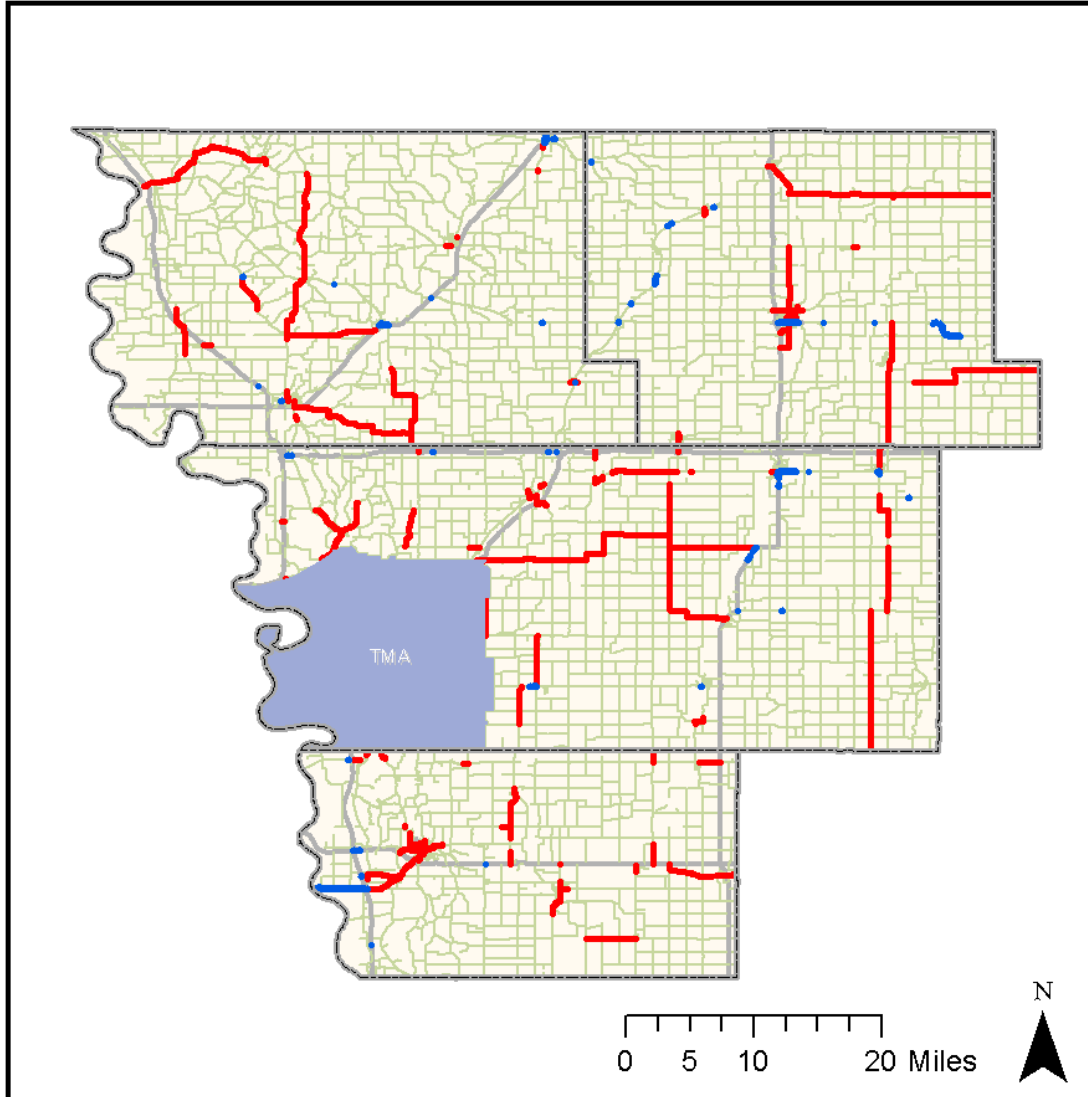


Source: Iowa DOT 2012 GIMS Data



Figure 23: International Roughness Index of Primary Roadways in RPA-18 Region

RPA-18 LRTP Potentially Deficient Roadways



Legend	
MAPA TMA	RPA-18 Roadways
Primary Roads	Primary System
Secondary Roads	Farm to Market & Local Roads



Source: Iowa DOT 2012 GIMS Data



Average Annual Daily Traffic (AADT)

The Average Annual Daily Traffic is an indicator of the actual use of a street or road. Traffic is counted by mechanical means, by personal observation or a combination of both. Data is recorded and adjusted to account for the season, the time of day and other variables that would correct the primary data to reflect actual traffic volumes.

AADT has been on the rise, indicating more traffic is using the street and highway network. AADT will be used to aid the prioritization of future transportation projects to maximize the cost-to-benefit of a particular transportation improvement. Generally, AADT will provide information on those facilities that have higher volumes of traffic and those that show increased usage. Figure 24 (next page) shows the AADT for all the roadways within the RPA-18 region.

AADT, like PCI and IRI are only tools to identify areas of concern that may require additional consideration in selecting and prioritizing street and highway projects in the RPA-18 region.

Conclusion

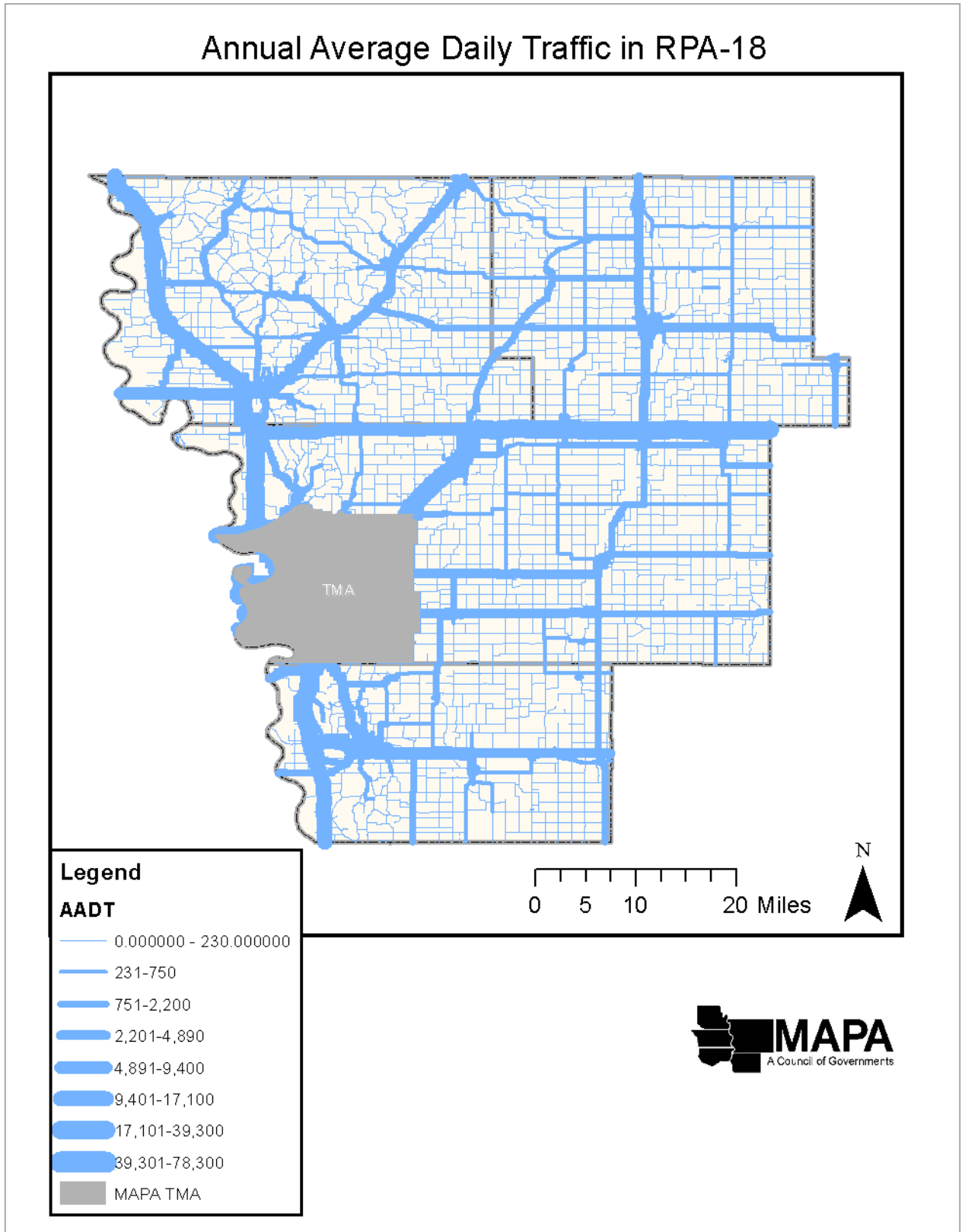
There are many factors that determine what street and highway projects need to be accomplished, and in what order of priority. Many factors, when combined, provide a useful profile of information from which project selection decisions can be made.

There are various considerations (pavement condition, daily traffic, safety, etc.) that play a large part in the determination of what transportation projects are initiated. Additionally, there are other factors (funding, equity, political considerations, logistical, etc.) that enter the equation.

The emphasis of this LRTP is to provide planners, engineers and the powers-at-be information to select and prioritize projects that meet current and future needs of the RPA-18 region and the goals set forth by this LRTP.



Figure 24: Annual Average Daily Traffic in RPA-18 Region





FEDERAL	STATE	LOCAL
<p>RPA Regional STP- Funds available for use by counties and cities over 5,000 population on federal-aid eligible facilities.</p> <p>State-STP- Funds available from Iowa DOT</p> <p>HSIP - funds for safety and intersection improvements</p> <p>Other Funds- Congestion Mitigation Air Quality (CMAQ), National Highway Performance Program (NHPP)</p>	<p>Fuel Use Tax</p> <p>Vehicle Registration</p> <p>Sales Tax on New Vehicles</p>	<p>Property Tax</p> <p>Motor Vehicle Fees</p> <p>Transportation Bonds</p> <p>Lottery Funds</p> <p>General Fund Impact Fees/Developer Contributions</p>

Funding Deficiencies

Funding is, and will be, 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 to 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.

Tables 6 & 7 identifies planned improvements over the time horizon of this plan. They are grouped into two functional time frames: Action Plan (0 to 5 years) and long term (6 to 20 years). Project priorities are limited to the two time cohorts and no priority is implied within each individual time frame.

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

- **Primary roads** (predominately 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.**



Table 6: Draft Long Range Transportation Plan Project List

CNTY	Project	Type of Improvement	Time Frame	In RTIP	Projected Cost
Primary Highway System					
Harrison	US-30 - Missouri River Bridge at Blair	Outside services (Iowa's share).	1 to 5 Years	✓	\$45,000
Mills	US-34 - Bridge across Missouri River	New 4-lane Bridge	6 to 20 Years	✓	\$47,000,000
Mills	US-34 -New Alignment, I-29 to new Missouri River Bridge	Construct new 4-lane	1 to 5 Years	✓	\$13,000,000
Harrison	IA-183 - Drainage ditch 0.5 miles south of Monona County line.	ROW for bridge replacement.	1 to 5 Years	✓	\$13,000
Harrison	IA-183 - Drainage ditch 0.5 miles south of Monona County line.	Bridge replacement.	1 to 5 Years	✓	\$304,000
Mills	US-59 - at US-34, 0.8 miles north of Emerson, Iowa.	Bridge deck overlay.	1 to 5 Years	✓	\$253,000
Pott	I-680: IA 191 (EB)	Bridge Deck Overlay	1 to 5 Years	✓	\$444,000
Shelby	IA37: MOSER CREEK 1.4 MI W OF IA 191	Bridge Rehabilitation	1 to 5 Years	✓	\$681,000
Harrison	US30: MISSOURI RIVER TO I-29	Grading,Right of Way	1 to 5 Years	✓	\$195,000
Pott	IA92: WALNUT CREEK 0.9 MI W OF CO RD M47	Bridge Deck Overlay	1 to 5 Years	✓	\$394,000
Harrison	US30: BOYER RIVER AT CO RD F32	Bridge Replacement,Right of Way	1 to 5 Years	✓	\$15,000
Mills	US34: MISSOURI RIVER N OF PLATTSMOUTH NE (STATE SHARE)	Bridge Washing	1 to 5 Years	✓	\$25,000
Pott	IA92: LITTLE SILVER CREEK 0.3 MI W OF CO RD L55	Bridge Replacement,Right of Way	1 to 5 Years	✓	\$2,966,000
Harrison	US30: MISSOURI RIVER E OF BLAIR NEBRASKA (STATE SHARE)	Bridge Deck Overlay,Bridge Washing	1 to 5 Years	✓	\$2,015,000
Harrison	I-29: HARRISON-MONONA-WOODBURY CO	Patching	1 to 5 Years	✓	\$850,000
Pott	I-680: MISSOURI RIVER TO I-80	Patching	1 to 5 Years	✓	\$200,000
Mills	US34: MISSOURI RIVER TO I-29 (STATESHARE)	Pavement Rehab,Erosion Control	1 to 5 Years	✓	\$858,000
Pott	I-29: AT N JCT I-680	Grading,Right of Way	1 to 5 Years	✓	\$627,000
Mills	I-29: REST AREA N OF US 34 (NB)	Rest Area Improvement	1 to 5 Years	✓	\$3,150,000
All	Maintain Existing Transportation Facilities	Various	1 to 20 Years		To Be Financially Constrained
Secondary Roads System					
Mills	Bridge 246080 - Pien Bridge on L-45, Section 06-72-42.	Replace bridge.	1 to 5 Years		\$600,000
Mills	Bridge 246380 - Treatment Plant Bridge, Section 27-72-43.	Replace bridge.	1 to 5 Years		\$800,000
Mills	Bridge 253515 - Keg Creek bridge on H-12	Deck overlay.	1 to 5 Years		\$215,000
Mills	In the City of Glenwood, RAILROAD AVE: Sewer Lift Station S 0.2 MI to	Pavement Rehab/Widen	1 to 5 Years		\$297,000
Mills	In the City of Glenwood, S VINE ST: From Nuckolls Street to Alley betwe	Pavement Rehab,Subdrains	1 to 5 Years		\$731,000
Pott	Bridge 283990 - Cottonwood Road, Section 03-74-40 (CA-15).	Replace bridge.	1 to 5 Years		\$825,000
Pott	Bridge 284360 - Section 06-74-41 (SC-5).	Replace bridge.	1 to 5 Years		\$500,000
Pott	Bridge 284615 - Section 25/26-74-41, (SC-29).	Replace bridge.	1 to 5 Years		\$200,000
Pott	Bridge 285381 - Bridge on Hickory Road, Section 14-75-39 (CE-10).	Replace bridge.	1 to 5 Years		\$200,000
Pott	Bridge 285975 - 400th Street (CA10).	Replace bridge.	1 to 5 Years		\$150,000
Pott	Bridge 286550 - Bridge on Elmtree/310th Street, Section 29-75-41.	Replace bridge.	1 to 5 Years	✓	\$175,000
Pott	Bridge 286630 - Section 28-75-42 (HA-20).	Replace bridge.	1 to 5 Years		\$460,000
Pott	Bridge 287450 - Bridge on 420th Street, Section 06-76-39.	Replace bridge.	1 to 5 Years	✓	\$150,000
Pott	Bridge 289330 - 300th Street, Section 02-77-38 (LY-1).	Replace bridge.	1 to 5 Years		\$300,000
Pott	Bridge 289380 - Bridge on G-16, Section 03-77-38 (LY-6).	Replace bridge.	1 to 5 Years		\$300,000
Pott	Bridge 290560 - Section 01-77-43, over Potato Creek (BO-1).	Replace bridge.	1 to 5 Years		\$400,000
Shelby	Bridge 307190 - Jefferson Bridge, Section 30-81-37.	Bridge replacement.	1 to 5 Years		\$500,000
Shelby	Bridge 361950 - Linden Road Bridge, Section 07-79-38	Bridge replacement.	1 to 5 Years	✓	\$225,000
Pott	G-42 M-16 - Oakland, Iowa to G-30.	PCC overlay.	1 to 5 Years		\$2,150,000



Table 7: Draft Long Range Transportation Plan Project List (continued)

Secondary Roads System (continued)					
Mills	H-20 - Section 06-72-42	PCC patching.	1 to 5 Years		\$125,000
Mills	L-31 - Section 29-73-43.	Edge drain.	1 to 5 Years		\$100,000
Pott	L-52 - US-6 to G-30.	Pavement rehabilitation, PCC overlay.	1 to 5 Years		\$1,750,000
Mills	Pacific Junction Railroad Crossing Grading - Section 30-72-43.	Grading.	1 to 5 Years		\$40,000
Mills	225TH ST: From 6th Street North to 221st Street	Grade and Pave	1 to 5 Years	✓	\$600,000
Shelby	M-47: From Ia. 44 to South County Line	Pavement Rehab	1 to 5 Years	✓	\$2,950,000
Mills	SIVERS RD: From Fairview Drive to gravel portion of 240th Street	Grade and Pave	1 to 5 Years	✓	\$500,000
Harrison	L16: From NCL WOODBINE to INTERS. W/ 155TH ST.	Pave	1 to 5 Years	✓	\$1,400,000
Mills	L-35: From Glenwood City Limits to County Line	Pavement Rehab	1 to 5 Years	✓	\$2,000,000
OTHER MODES					
	Glenwood Trails and Sidewalks	TA - Construct Trail / Sidewalks	1 to 5 Years		\$0
	Elk Horn Little Mermaid Trail	TA - Construct Trail	1 to 5 Years		
	Council Bluffs Municipal Airport*	Install a Remote Communications Outlet	1 to 5 Years		\$25,000
	Council Bluffs Municipal Airport*	Construct 17 T-hangar Units	6 to 12 Years		\$1,105,000
	Harlan Municipal Airport*	Rehabilitate Runway 15/33; Install REILs	6 to 12 Years		\$600,000
	Harlan Municipal Airport*	Construct Conventtional Hangard	6 to 12 Years		\$600,000
	Various Railroad Crossings	Reconstruct/Grade Spearate	1 to 20 Years		\$0
	SWITA Vehicle Purchases	Expand/Replace Transit Fleet	1 to 20 Years		\$0



BRIDGE SECTION

Bridge Inventory

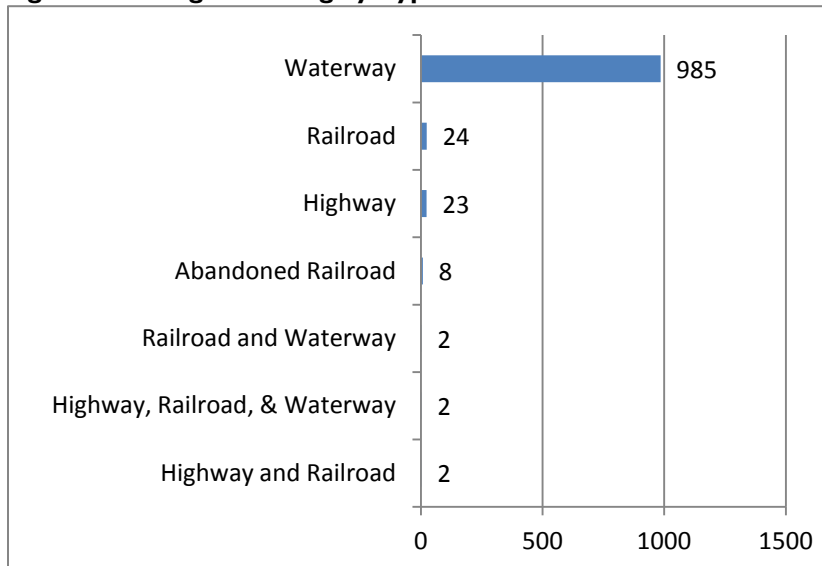
There are approximately 1,110 bridges in the RPA-18, two of which are eligible for placement on the National Register of Historical Places. They carry motor vehicle, railroad and pedestrian traffic over rivers, streams, railroads and other highways.

The average age of waterway bridges in the RPA-18 region is 34 years, the oldest of which was built in 1900. Of the existing inventory, 3 bridges are currently closed and 268 are posted for load capacity restrictions. Approximately 153 one-lane bridges are still in service, of which 52 are described as structurally deficient and 27 as functionally obsolete.

Bridge Inventory by Crossing Type

The vast majority of bridges in the RPA region (985 total) were constructed to cross rivers and streams. Highway bridges over other highways total 60 while highway bridges over railroads total 24. Additionally, there are 23 railroad bridges that cross over streets and highways.

Figure 25: Bridge Crossing by Type



There are three major river crossings of the Missouri River within the RPA-18 study area. One is on US-30 in Harrison County and IA-370 and the remaining two (US-34 and IA-370) are in Mills County. The US-34 and IA-370 bridges in Mills County are toll facilities owned and operated by toll authorities in Nebraska.

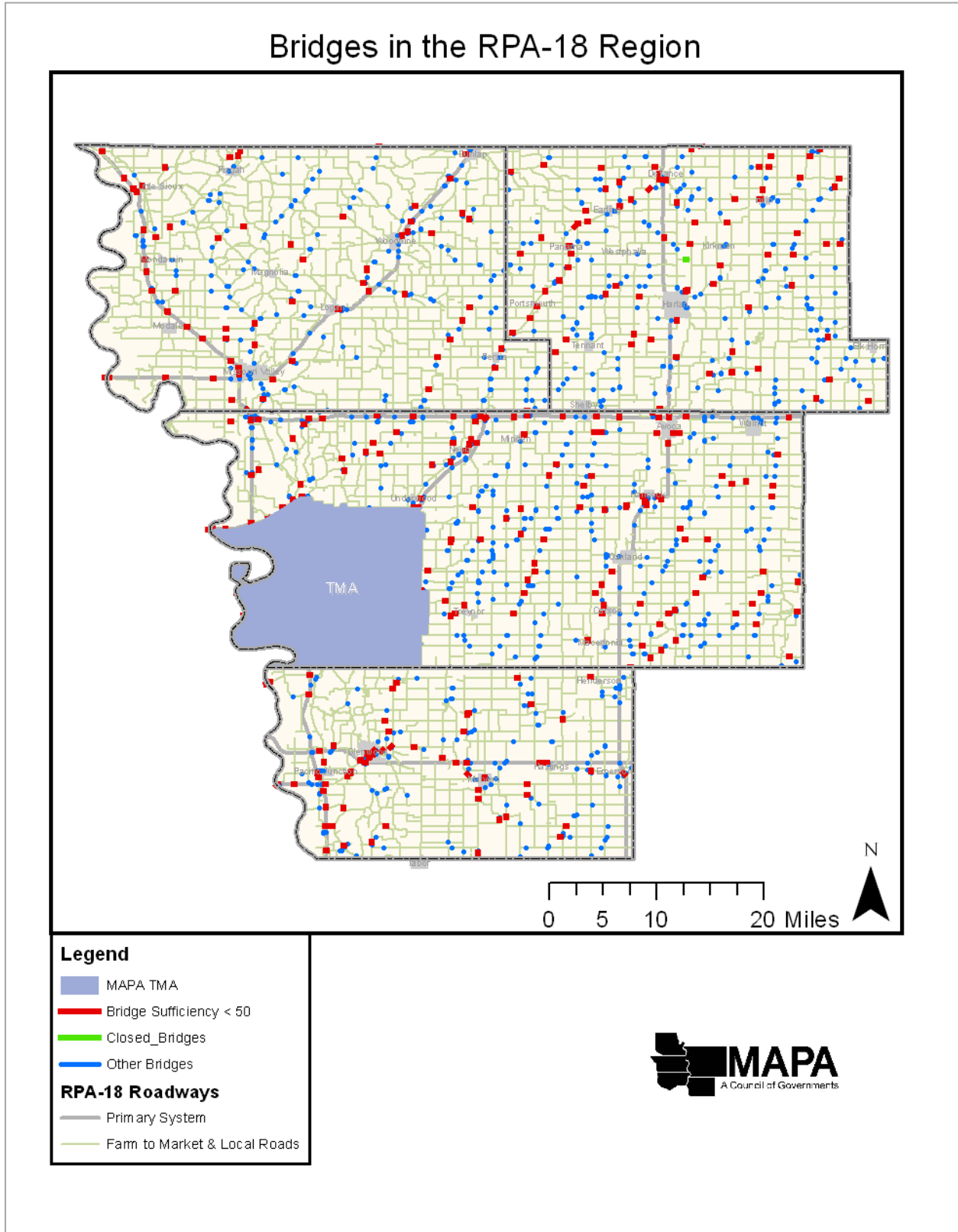
A new Highway 34 bridge is under construction in Mills County and is scheduled for completion in 2014. This new facility will no longer require a toll payment and will be aligned with the Highway 34 corridor that goes through Glenwood.

Identified Deficiencies

Deficiencies in the RPA-18 bridge inventory were identified using the Sufficiency Rating of each bridge facility. The RPA-18 currently inventories 270 structurally deficient bridges with sufficiency ratings of less than 50. Additionally, 212 bridges are signed with load restrictions. The RPA-18 programs improvements to or the reconstruction of 5 to 10 bridges per year based on available funding.



Figure 26: Bridges in the RPA-18 Region





Proposed Improvements

Bridges, like all transportation facilities, have a useful design. The life span of a bridge can be shortened or extended by many factors including traffic volumes, traffic loads, amount and type of maintenance necessary to keep structures in a state of good repair. Improvements to bridges in the RPA-18 will be to replace, repair or reconstruct deficient bridges as funding allows. The priority in which bridges will receive attention will be decided based on available funding, factors inherent in this LRTP and factors outside the control of the RPA-18.

The decision to rebuild, replace or reconstruct a deficient bridge will be determined by the respective county engineer based on engineering judgment and available funding.

Funding

Counties and cities with more than 5,000 residents may apply to RPA-18 for regional STP funds to repair and replace structures on the federal aid-eligible facilities. These projects are selected by the same process described for other roadway projects. The elimination of dedicated Bridge funding under MAP-21 has made regional STP allocations more competitive.



PEDESTRIAN, SCENIC BYWAYS AND HISTORICAL PRESERVATION

INVENTORY

Trails

There are four major trails and two minor trails in the RPA-18 region. The Wabash Trace (Pottawattamie and Mills Counties), the proposed Lewis and Clark trail along the Missouri River (Harrison, Pottawattamie, and Mills Counties), the Mormon Trail (Pottawattamie County) and the American Discovery Trail (Mills County).

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.

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 the 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.

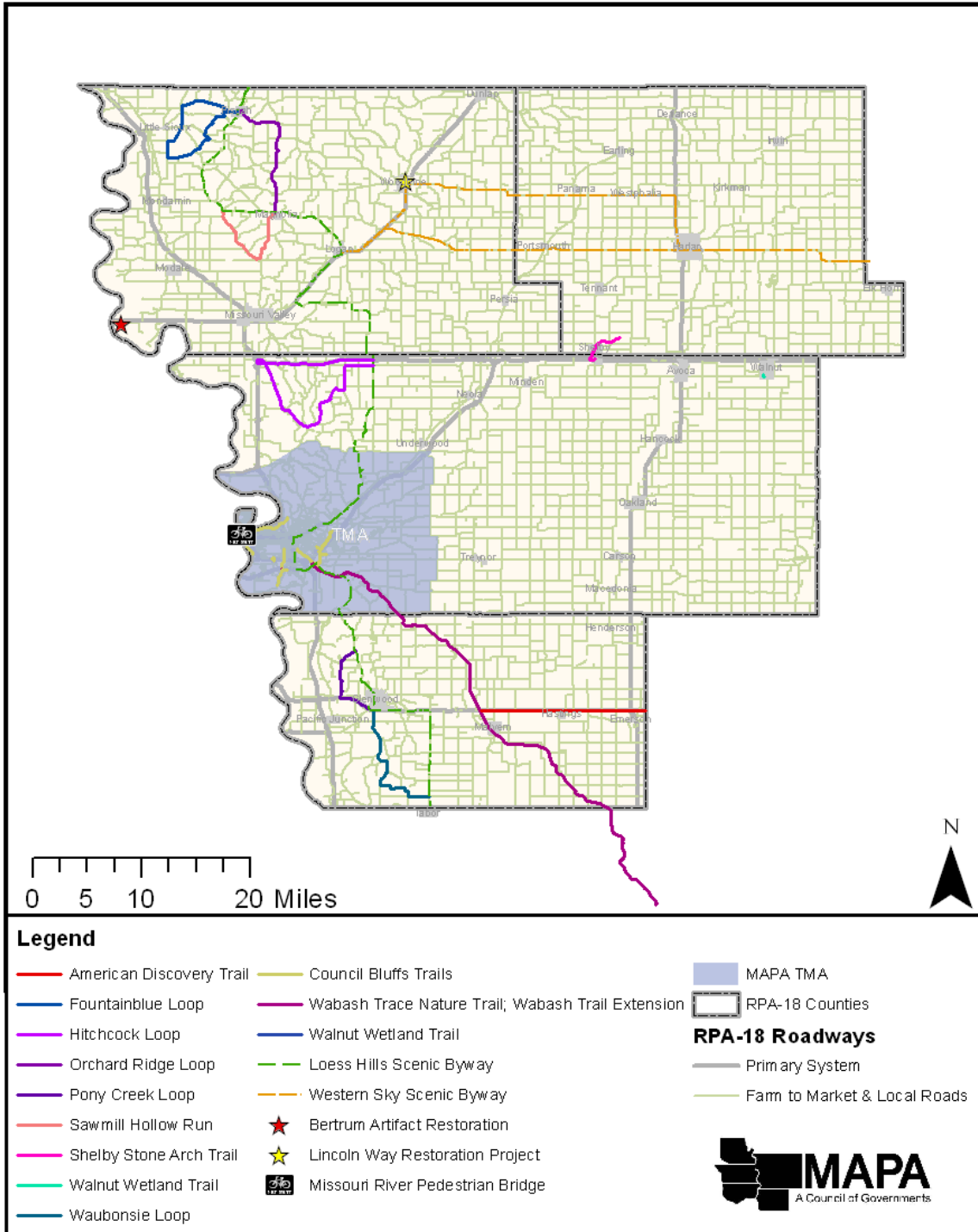
Historic Preservation

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.



Figure 27: RPA-18 Trails, Scenic By-Ways, and Cultural Facilities

RPA-18 Trails & Scenic Byways





Historical preservation activities in the 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 19th century, side-wheel steamship that sank in the Missouri River in 1865. The refuge currently maintains an artifact museum of the Bertrand's cargo and is restoring the artifacts for future generations to enjoy.

Sidewalks

The RPA-18 is comprised 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.

IDENTIFIED DEFICIENCIES

Trails

Deficiencies in the trails and scenic byways are relatively simple to define but difficult to remedy. Notable deficiencies in the regional trail network include:

- Lack of connectivity of the various trails systems in the area
- Inadequate signage on primary and secondary roads to provide route guidance between the various trails by means of existing streets and highways
- Lack of paved shoulders, dedicated bicycle lanes or shared lanes on primary and secondary highway facilities limit access to recreational and non-motorized traffic

Sidewalks

Sidewalks in the RPA-18 region also have significant issues arising from past development and deferred maintenance. Notable deficiencies include;

- Lack of sidewalks in developed communities
- Inadequate safety considerations along the pedestrian network
- ADA requirements require retrofits to existing facilities but have no major funding sources to which communities can apply



PROPOSED IMPROVEMENTS

Trails, Scenic Byways and Historical Preservation

The RPA-18 will work with individuals, groups and local government agencies to increase the total mileage of dedicated trails, the connectivity of future and existing trails and the use of other means to provide a safe and direct system of trails in the RPA-18 region. Additionally, RPA-18 will also work with individuals, groups and its member jurisdictions to increase the mileage of scenic byways and the number of historic preservation sites in the region.

In recent years many counties in the RPA-18 region have engaged in trail planning activities. Notably, the Pottawattamie Trails Committee a listing of priority trail corridors which connect outlying communities to Council Bluffs. A diverse group of stakeholders including MAPA, SWIPCO, the National Parks Service and local officials meet regularly to move the project forward.

Similarly, Shelby County has embarked on a similar trail planning project. The National Parks Service is assisting the county to produce a comprehensive county-wide trails plan that can be used by the County Conservation Board and Board of Supervisors for future trail planning and development. In the fall and winter of 2013, county officials hosted a series of trail planning workshops in Mills County to identify potential routes to identify future trail facilities in the county. RPA-18 will continue to be involved in these trail planning activities at the county level and will prioritize trail projects associated with these master planning activities.

Private Development

Limited resources available for funding of trails and other non-motorized modes of transportation present the opportunity for private development of such facilities. The RPA-18 encourages private development by interested parties and will provide cooperation and support for those projects showing merit.

Sidewalks

The RPA-18 supports the use, construction, maintenance and retrofitting of existing sidewalk facilities in the region.

Major trail, historic preservation and scenic byway projects identified to be accomplished within the time frame of this plan are identified in Tables 6 and 7.

Sidewalks and other such items are considered to maintenance issues and are addressed at the local level. Exceptions to this are local projects identified as recipients of the Safe Routes to School program and other federal or state grant programs.

Financial

There are multiple state and federal funding sources available to the RPA-18 to fund trails, scenic byways and historic preservation. These sources are grant-based and reviewed, approved and prioritized by the Iowa DOT.



The RPA-18 is provided an annual allocation of federal STP funds through the Transportation Alternative Program (TAP) and TAP Flex. Projects will be reviewed and prioritized and funded with the accrued funding attributable to the RPA-18. Financial constraint of these funds will be based on funds currently available or to be made available to the 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 TAP Flex funding attributable to street and highways may be drawn on to supplement STP funds or to fully fund an transportation alternatives project. Programming of RPA regional TAP and TAP Flex funds for these projects is at the discretion of the RPA-18 Policy Committee.

Project Selection and Prioritization

The RPA-18 provides an application-based, competitive process for selecting Transportation Alternative Program (TAP) and TAP Flex projects in the area. Trails, historic preservations 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 is at the discretion of the RPA-18 Policy Committee

Summary

There are multiple pedestrian and bicycle-oriented facilities and scenic byways in the RPA-18 region. There are also multiple areas in which the transportation heritage of the region can be preserved. The RPA-18 will assist private, public and joint efforts in obtaining funding for such amenities as well as support efforts to increase the use of non-motorized modes of travel for recreation and daily activities.



TRANSIT SECTION

Rural transit within the RPA-18 region is provided by the Southwest Iowa Transit Agency (SWITA). The goal of this service is to maximize user trips on a daily basis and service as many people as possible.

Service is door-to-door, and is offered 24/7 weekdays pending vehicle and driver availability with live dispatch available from 6:00 a.m. to 5:00 p.m. Monday through Friday. Service is provided by a 68 vehicle fleet, in addition to a contracted fleet available through taxi companies, human service agencies, and other private providers.

SWITA provided a total of 226,703 passenger trips in 2012, with 26,021 of those for seniors (11%), and 150,710 trips for people with disabilities (66%). The extreme emphasis on passengers with disabilities is a direct reflection of the impact relationship SWITA has with area disabled workshops. SWITA directly provided 886,484 miles of service within the RPA 18 region. There were 35,561 revenue hours provided. The contractors used by SWITA greatly expand the program's reach through the provision of indirect service.

Office support is provided by six fulltime staff includes the Fleet Maintenance Specialist, Transit Coordinator, three Transit Assistants, and a Transit Director. Service is provided by 55 of which are drivers. Many of these are retirees or women that 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 access 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 on-going basis.

SWITA provides service to the elderly, disabled, 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, service is structured in a variety of ways:

Direct Service - SWITA provides the vehicle and the driver, and bills the agency contracting for service on a per mile ride, per hour, or a flat rate.

Taxi Voucher - SWITA contracts with cab companies to accept taxi vouchers provided for seniors and persons with disabilities, and SWITA reimburses the difference between the voucher value and the total fare. SWITA counts these trips in its service statistics.

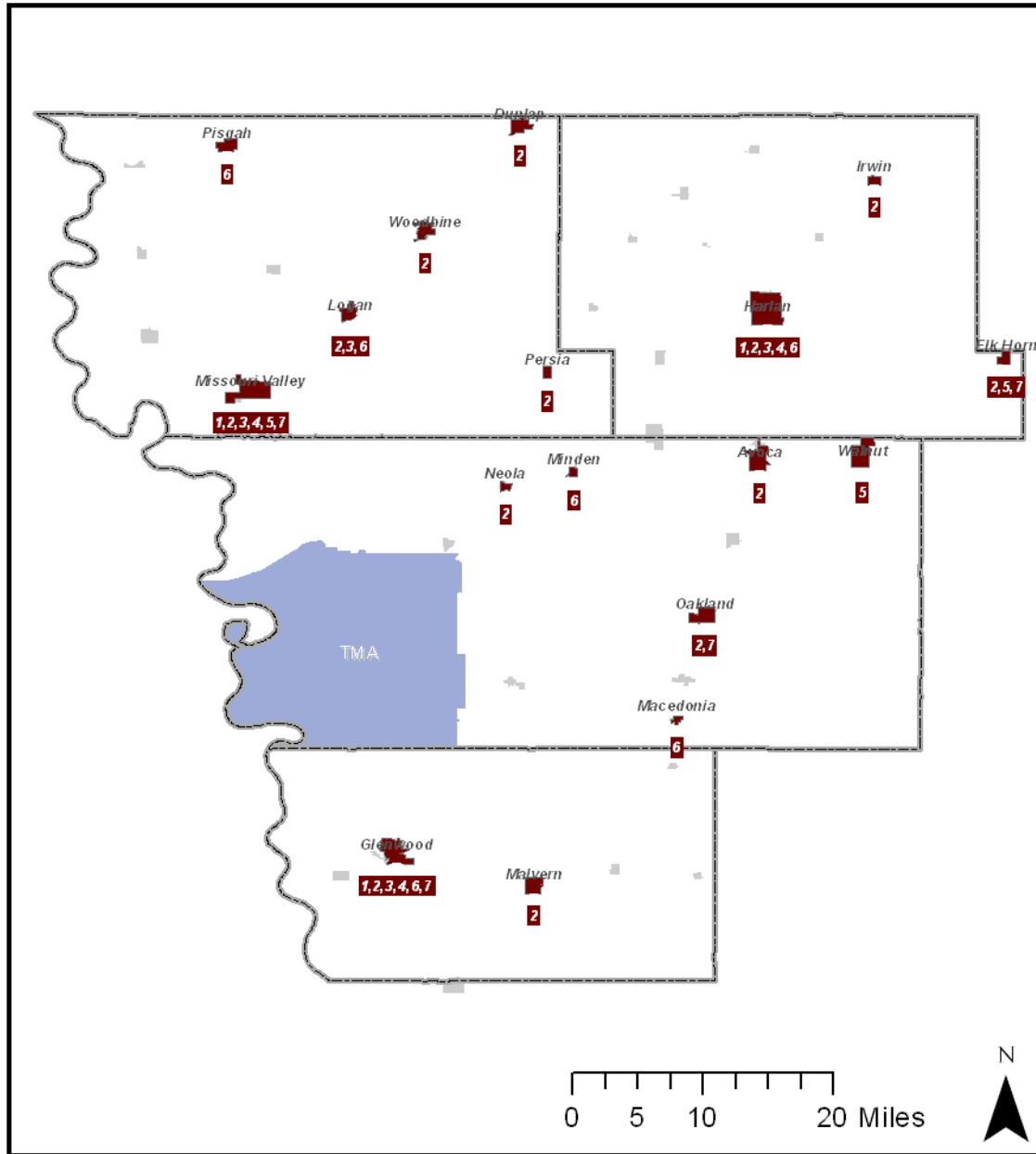
Lease Vehicle, Agency Operates - SWITA will provide a vehicle to an agency when an agency staff person operates the vehicle.

Shopping Trips - Prescheduled shopping trips are available in Fremont, Harrison, and Page Counties as well as The City of Atlantic.



Figure 28: SWITA Transit Services in the RPA-18 Region

SWITA Services in the RPA-18 Region



Legend

- Cities with SWITA Services
- MAPA TMA

- SWITA Major Trip Destination Services**
- 1 - Medical 4 - Work 7 - School
 - 2 - Senior Center 5 - Tourist
 - 3 - Shopping 6 - Head Start





Arrangements are meant to promote increased coordination and cost sharing. Virtually all scheduled services are prearranged on an ongoing basis. The system does not operate fixed routes; rather, it sets aside blocks of time for specific client groups.

Despite the downward population trend in the region, the volume of service has increased. This increase is probably due to the growing percentage of older persons in the region, and the flexible contracting relationships encouraged by SWITA.

Transit Deficiencies

SWITA has continued to address the need for affordable taxi service in new areas and/or for extended service hours. New Freedom funds have been used by SWITA to expand taxi services into many areas and to increase hours including increasing taxi service in Harlan two hours and increasing Atlantic Taxi Coupon Program successfully. However, with the discontinuation of these funds, SWITA will look to include the program as part of our general service. It is evident from the increased usage from disabled riders following the implementation of the programs (Harlan disabled usage increased 50% and Atlantic disabled usage increased 63%) that these needs continue to meet a need and must continue to be utilized and remain as recommended projects for the foreseeable future.

Another major issue being addressed is better coordination between transportation services providers in southwest Iowa and the Council Bluffs/Omaha metropolitan area. These providers are public and private in nature and consist of social service agencies and other such services that offer their clients transportation service that either duplicates that of SWITA or could be coordinated to maximize its effect and to leverage existing equipment to provide existing service. For instance, coordination efforts with health and human service agencies are being improved through the creation of the Human Services Advisory Council (HSAC) Transportation Coordination Subcommittee.

SWITA continues to coordinate with Connections Area Agency on Aging (CAAA) to provide elderly transportation services. CAAA is providing funding for elderly. In addition HSAC the Loess Hills Transportation Cooperative Team was formed in the spring of 2011 to focus on transportation coordination of services throughout Southwest Iowa. The team completed intensive training through the Iowa Institute for Transportation Coordination training, and maintains a goal of employing a Mobility Coordinator in FY2014

Transit Improvements

The SWITA fleet is constantly refurbished, replaced, and added to. SWITA expects to replace approximately six vehicles per year with new vehicles. To meet new demand, SWITA expects to purchase a new vehicle every other year to supplement the transit fleet. All vehicles purchased or refurbished with federal FTA dollars will conform to all applicable ADA regulations for accessibility of handicapped individuals.

The Human Services Advisory Council (HSAC) Transportation Coordination Subcommittee (formerly the Mobility Action Planning committee) assists in the coordination of transit and transportation service operating in its service area. The group



leverages existing services and equipment to provide a more comprehensive offering of transportation services in southwest Iowa. Identified needs include improved coordination of marketing efforts promoting the use of public transit services, and continued partnership between MAT and SWITA, which includes transporting rural riders to and from MAT stops.

Major transit investments planned within the planning horizon of this document are included within Tables 6 and 7.

Funding

Rural transit service is funded by various Federal Transit Administration (FTA) sources, as well as by funding provided by the Iowa DOT. The elimination of Job Access Reverse Commute (JARC) and New Freedom funding by MAP-21 has changed how some ride share programs operate. The need for the programs is not decreased and SWITA continues to look for options to assist where possible. The lack of grant funding availability means costs of these services are now shared between increased SWITA assistance and increased rider contributions.

Additionally, regional STP funding attributable to street and highways may be drawn on to supplement transit capital and transit-related projects in the RPA-18 area.



Aviation

Inventory

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 business 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, Nebraska. These facilities provide regional, national and international connectivity for freight and people in the RPA-18 region. Table 8 (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 aircrafts 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 service for the local area and also provides some business needs.

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 29: RPA-18 Airport & Heliport Facilities

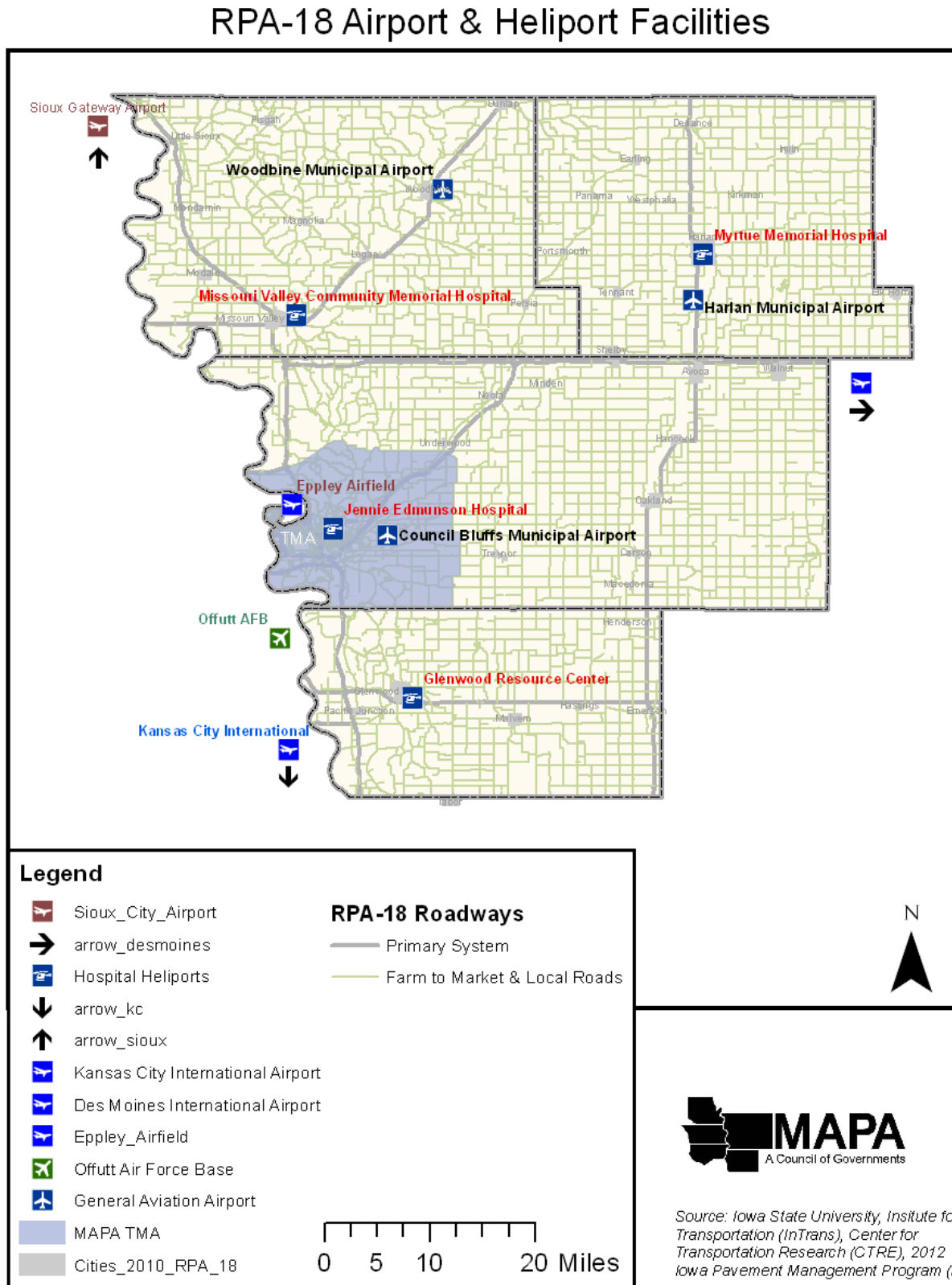




Table 8: Airport Characteristics Within the RPA-18 Region

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 that 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 offer 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 Table 9 and Table 10 Below.

Table 9: 2011-2030 Development Needs for RPA-18 Airports

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



Table 10: Other Potential Airport Improvements in RPA-18 Region, 2011-2030

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 improvement to runway 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 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, application 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.

Summary

The airport facilities located in Harlan and Woodbine offer aviation services based on the current needs. There are potential improvements that can be made at each facility that will provide increased functionality at each of them. These improvements will be made at the leisure of the cities of Harlan and Woodbine based on need and financial availability.

The RPA-18 will continue to support efforts of the local airports. The RPA-18 will work with each airport facility to provide safe, secure and intermodally-accessible facilities that support air service and promote economic opportunities in the region.



RAILROAD

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

- Union Pacific Railroad (UPRR)
- Burlington Northern-Sante Fe Railroad (BNSF)
- Chicago Central and Pacific Railroad (CCPRR)
- Iowa Interstate Railroad (IIRR)

The UPRR operates a Class I rail line that offers transcontinental service to and through the RPA-18. The BNSF also offers Class I rail service that provides a rail link from the west coast of the United States to Chicago. The BNSF line in Mills County is part of the Strategic Rail Corridor Network (STRACNET) and carries the AMTRAK passenger line.

The CCPRR and the IIRR operate Class II rail facilities that provides for local and regional rail service to and through the RPA-18.

Map 12 identifies the main-line sections and major spurs associated with the 4 rail systems that operate on the RPA-18 region. The map also identifies the density of rail traffic in Ton Miles. 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 bio fuel 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 sub-standard 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 operated by public and private corporations. Operation and maintenance costs are expended 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.



PIPELINES

Pipelines

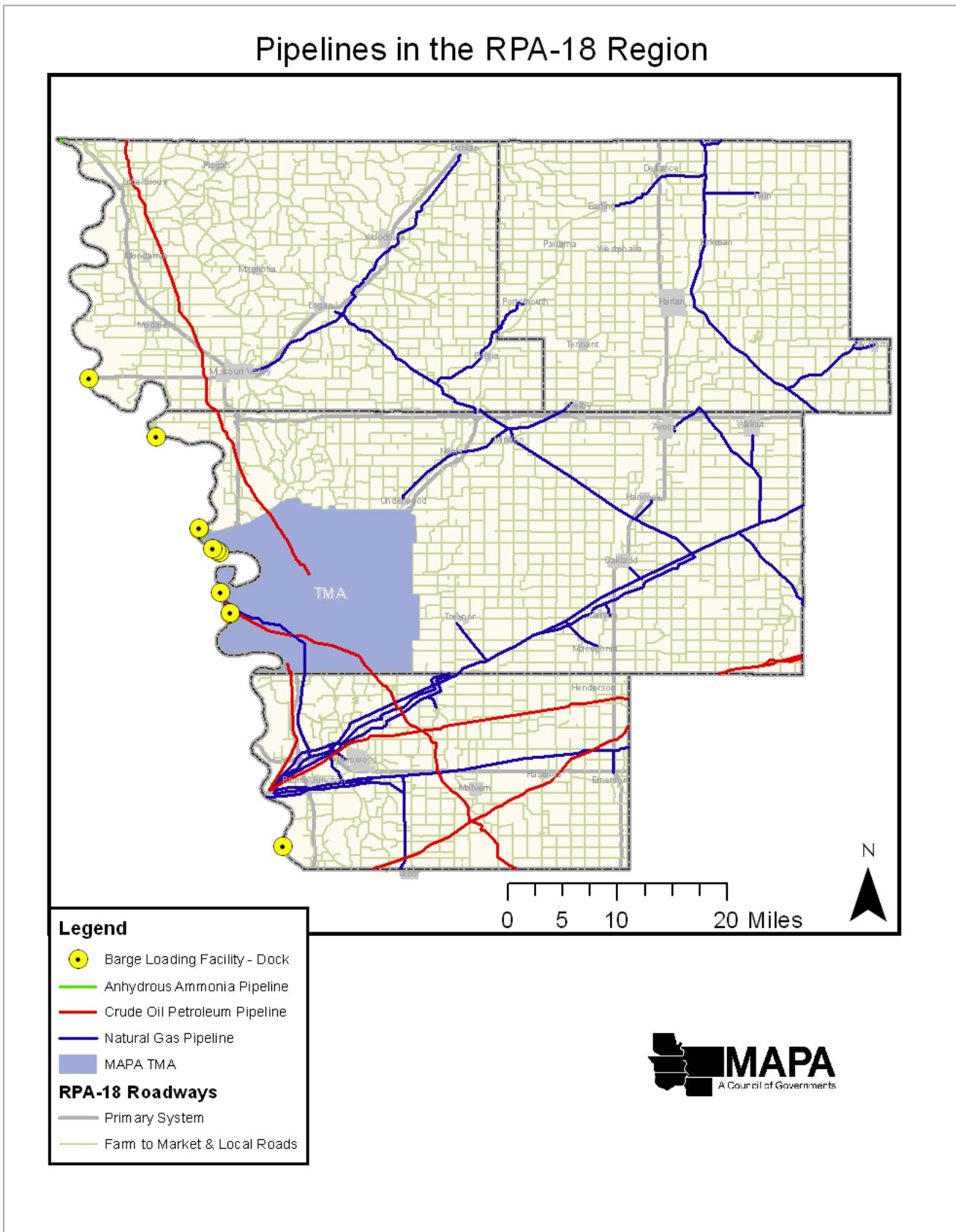
There are several pipelines that traverse the RPA-18 region that ship multiple commodities. Anhydrous ammonia, crude oil and natural gas are all transported to cities in the RPA-18 from outside of the region.

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 31: Pipelines in the RPA-18 Region





WATER FREIGHT

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.



INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

Intelligent Transportation Systems are measures added to transportation systems to provide additional monitoring and traffic control activities. These systems can be roadway sensors, Dynamic Message Signs (DMS), CCTV cameras to detect incidents and monitor traffic flows. Automated Vehicle Locators (AVL) units can be installed on transit, public safety or maintenance vehicles to track their movement and location. Elements of ITS systems in the RPA-18 are identified in the Iowa DOT Statewide ITS Architecture and are complemented by the ITS Architecture of the neighboring Omaha-Council Bluffs Metropolitan region.

The RPA-18 is host to two major interstate corridors that serve major population centers in Council Bluffs/Omaha, Des Moines, Kansas City and Sioux City. Advanced notice of incidents into or out of these areas would be beneficial to the driving public and freight operators to avoid major delays or to provide alternate route information. These high volume corridors are the principal areas of the RPA-18 region in which ITS are likely to be deployed due to the lack of funding at the local level to support these activities.

Inventory

Currently, there are three DMS deployed in the RPA-18 study area. The DMS provide information to the traveling public relating to road conditions and incidents on the Interstate system in the RPA-18. They can be activated to detour traffic to local facilities at times when the mainline Interstate is blocked or slowed by weather, crash or other incidents.

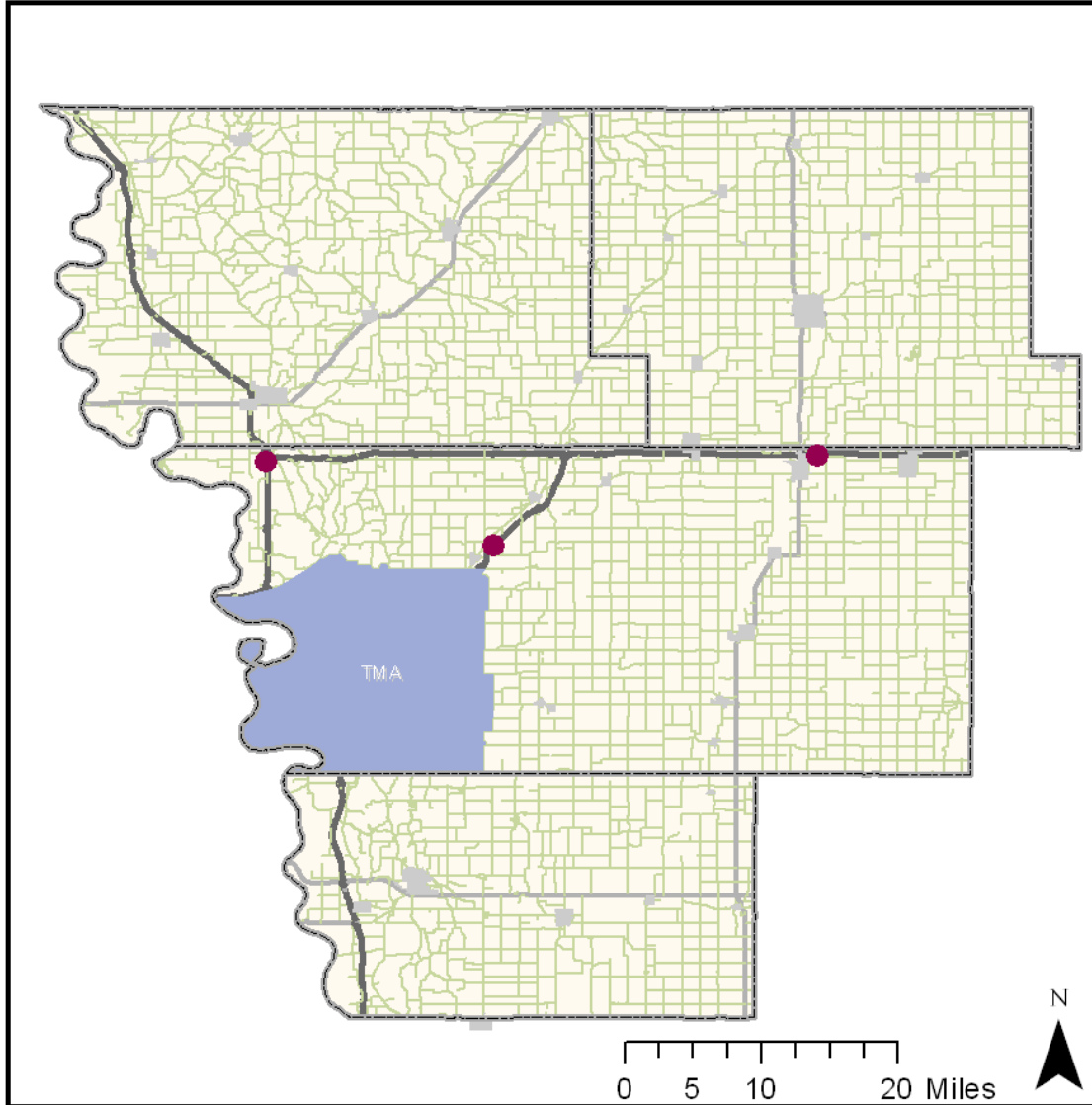
Improvements

The Iowa DOT currently plans to install additional traffic sensor devices on the I-29 and I-80 corridors in the RPA-18 study area. There are also plans to include the operation of ITS elements located in the RPA-18 region through the Iowa DOT District 4 offices, as well as the Traffic Operations Center in Omaha, Nebraska. ITS elements to be contained in future transportation improvements will be reviewed to assure compliance with the specifications and interoperability of systems contained in the Iowa DOT Statewide ITS Architecture.



Figure 32: Intelligent Transportation System Deployments in the RPA-18 Region

Dyanmic Messaging Sign (DMS) Deployments in RPA-18



Legend

 Dynamic Messaging Signs	 Interstate
 MAPA TMA	 Other Primary System
 RPA-18 Cities	 Farm to Market & Local Roads



Source: Iowa State University, Institute for Transportation (InTrans), Center for Transportation Research (CTRE), 2012 Iowa Pavement Management Program (IPMP)



SAFETY

All transportation systems that are used by the traveling public and for commerce should be safe. The issues of safety and security are identified as separate issues that need to be addressed under MAP-21. The legislation set forth several programs to encourage safety and security in transportation planning.

Highway 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.

The RPA-18 supports all efforts to make the transportation system in the region the state, and the nation safer. To this end local jurisdictions engage in safety planning and undertake infrastructure projects to specific safety issues and improve the overall safety of the region's transportation network. Figure 34 (next page) lists the primary causes of fatality accidents within the RPA-18 region.

Engineering

The Iowa DOT, like most state DOTs, has specific design standards for roadway construction, signalization and other elements of street and highway design. New facilities will be built to these standards. Existing facilities currently not meeting these standards are upgraded to these standards when they are rebuilt or significantly modified. Some potential benefits of engineering improvements include:

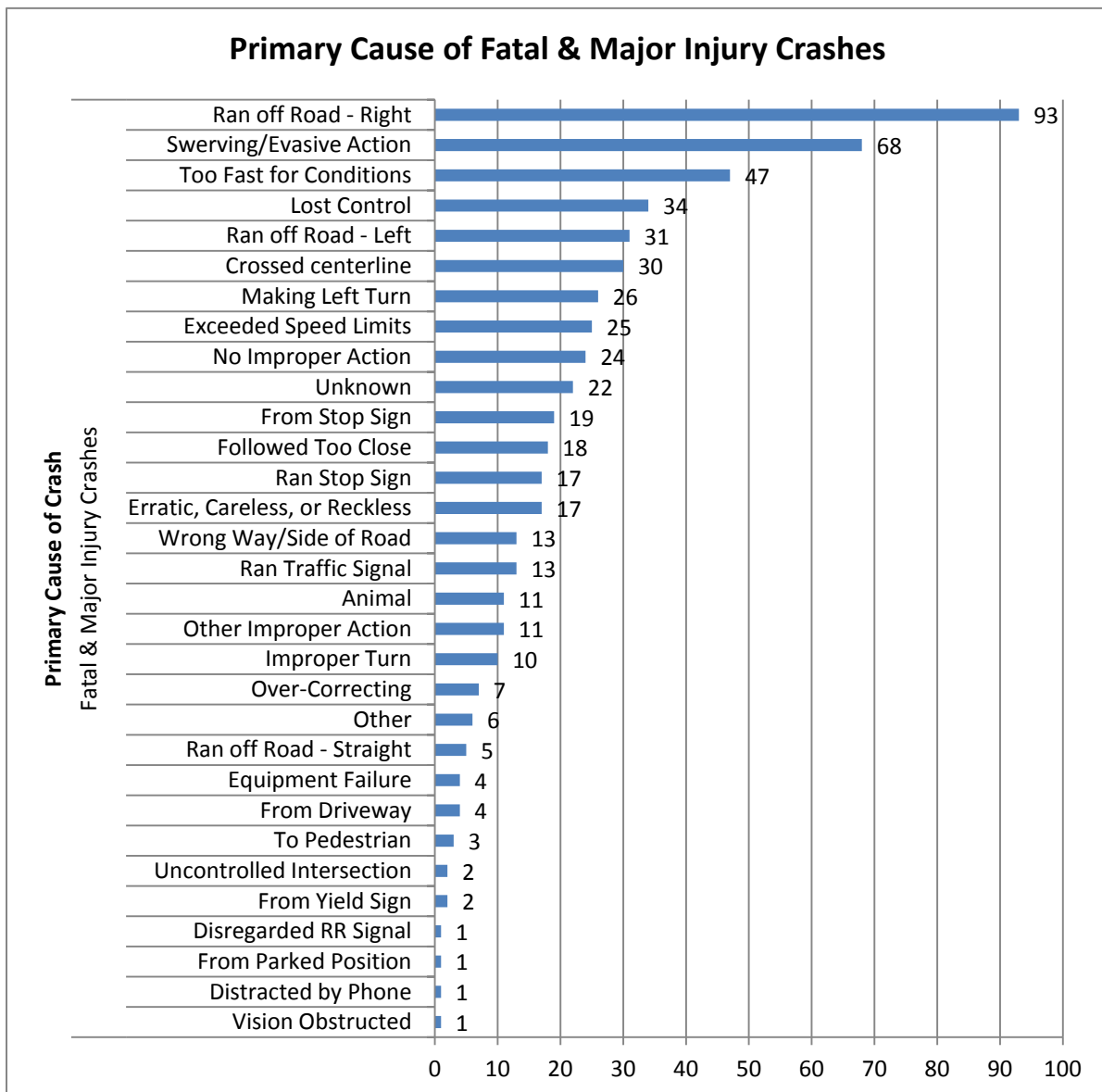
- Low-cost enhancements without major changes to the system
- Safety improvements
- Improvements to accommodate the aging population
- Access control or traffic calming efforts can also be implemented.



Transportation planning to improve the roadway/driving environment can be extended to include such amenities as:

- Advance warning signs
- Advance guide signs and street name signs
- Increased letter size of roadway signs
- Longer clearance intervals at signalized intersections
- Protected left turn lanes at intersections
- Horizontal curve delineation
- Improved lighting
- Improved roadway delineation
- Use of raised channelization
- Reduced intersection skew angles
- Improved traffic control in work zones.
- Offset left turn lanes at intersections

Figure 33: Primary Cause of Fatal & Major Injury Crashes, 2008-2012





Access Management

The ability to manage the amount and types of access to our highways provides safety, as well as functional considerations. Access management provides reasonable access to property and provides a safer environment for vehicular and pedestrian traffic. It provides coordination between existing land uses and lessens the cut-through traffic in residential neighborhoods.

The RPA-18 will encourage state and local governments to actively consider access management in their overall planning processes, planning policies and codes.

Traffic Calming

Traffic calming measures for cities and towns in the RPA-18 will be encouraged to provide safer traffic patterns in local neighborhoods— particularly with regard to slower vehicle speeds and improvements to reduce conflicts between automobiles and other modes.

The Remaining 4 Es

Education, enforcement, emergency response and everyone else are safety issues that carry just as much emphasis as engineering but are not directly controlled by the RPA-18. The RPA-18 supports those efforts of other agencies, jurisdictions and the public in providing a safer environment for the traveling public and freight operators.

Transportation Incident Management (TIM)

Transportation Incident Management (or TIM) is an important component of the safety planning taking place in the Omaha-Council Bluffs region and surrounding counties. The Southwest Iowa Freeway Team was established in 1992 as a forum to discuss highway incidents and how to better manage these incidents in southwest Iowa. As a part of a large deployment of ITS in Western Iowa, the Iowa DOT partnered with public safety officials (police, fire, E-911), the Nebraska DOR, city and county public works and MAPA to coordinate and improve incident response in the metro area.

Recently, the Iowa Department of Transportation has initiated a conversation about using the RPAs around the state as hosts for Multi-Disciplinary Safety Teams to discuss the nexus of emergency response, design, and project selection. RPA-18 will continue to support this initiative as it develops.

Older Drivers

As with other rural areas of Iowa, the cities and counties of RPA-18 have seen the median age of their communities increase over the last several decades. As



the large baby boomer generation enters its retirement years, the number of older drivers has increased throughout Iowa and rest of the nation.

Various measures can be introduced to accommodate elderly drivers. While many strategies (including licensing restrictions) are outside the purview of the RPA-18's activities, comprehensive safety planning can provide for benefits to older drivers. Some issues that can be addressed to accommodate older drivers could be:

- Vehicle adaptation and advanced technology
- Screening and assessment
- Education and Training
- Alternative transportation
- Infrastructure projects improving sight lines and the visibility of signage

Strategic Highway Safety Plan

The RPA-18 will work with the Iowa DOT to implement the Strategic Highway Safety Plan (SHSP). Policies and best practices identified by the SHSP will be incorporated into the RPA-18 transportation planning activities and elements identified in this LRTP to provide for a safe transportation system.

Current Crash Data

The Iowa Department of Transportation maintains a database of accident data to identify crash locations and attributes related to the cause of the accident. Crashes have a myriad of causes, some of which may be mitigated by changes or improvements to the transportation system.

According to the Iowa DOT's Safety, Analysis, Visualization and Exploration Resource (SAVER), there were 5,683 crashes in the RPA-18 between 2008 and 2012. Of these crashes, 80 resulted in at least one death and 311 resulted in major injuries to at least one occupant.

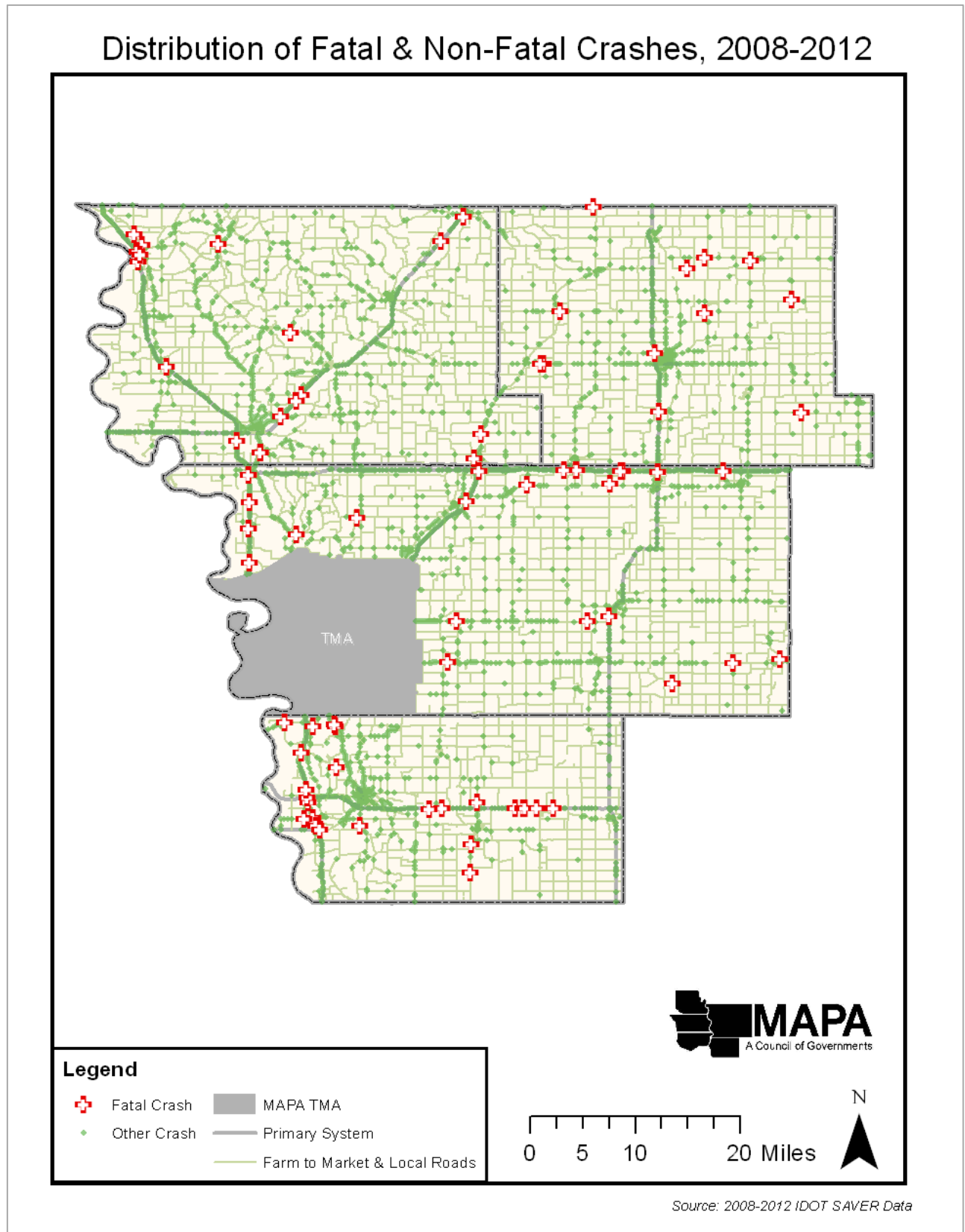
The largest single type of crashes during this time period was "Run of the Road" incidents— accounting for 23% of serious crashes. Crashes of this type were led by the first event being a rollover or overturned vehicle and a collision with a ditch or embankment.

It is the intent of this LRTP to provide basic data relating to crash locations and use it to determine if changes or improvements are needed to provide a safer transportation system. Figure 35 (next page) identifies crash locations in the RPA-18.

Data collected and maintained by the Iowa DOT will be used to identify areas prone to accidents. This information will be discussed with local jurisdictions and



Figure 34: RPA-18 Crash History, 2008-2012





stakeholders to use in their planning and design processes to help in mitigating crashes due to tangible causes.

IDENTIFIED DEFICIENCIES

The Iowa Department of Transportation has created a list of the top 200 safety improvement candidate locations (SICL) throughout the state. This report is developed as a supplement to IDOT's Five-Percent Safety Program which supports the planning and project selection process for the Highway Safety Improvement Program.

Of the 200 candidate locations, two are located within the RPA-18 Region:

- #104 – I-80 & County Road G30/Magnolia Road
- #144 – IA 83 & North 490th Street

RPA-18 will coordinate with state and local partners to identify and develop potential projects to address these extant safety concerns.

SAFE ROUTES TO SCHOOL

The Safe Routes to School program was established through the SAFETEA-LU to encourage children to walk or bicycle to school. The program will fund improvements to make the commute to school for kindergarten through 8th grade students safer and more feasible. It also will provide funding for educational programs.

With passage of MAP-21 Safe Routes is no longer its own funding program, and has been rolled into the Transportation Alternative Program (TAP). Projects eligible in the previous program are still eligible in this TAP.



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

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

SAFETY CONSCIOUS PLANNING

Beginning with the passage of TEA-21 and more recently with the passage of MAP-21, safety has become a major concern and is an issue to be addressed at the planning level. Safety is, and should be, a daily concern for everyone involved in transportation. The issue of safety in transportation and transportation planning is more far-reaching than can be identified through this LRTP. Safety falls on the shoulders of the traveling public, the various transportation systems and those that operate and maintain those systems. Safety Conscious Planning (SCP) should be a high priority issue in transportation planning and should be a priority mandate of the local, state and the federal governments.

The RPA-18 is responsible for introducing safety into this LRTP but all organizations and jurisdictions should routinely consider safety as an explicit planning priority in all planning projects. Decision makers at all levels should be informed about the implications of safety in all planning decisions, and safety should be reflected in their decision making process.

Summary

Safety is a continuing issue in transportation that needs to be addressed. The 5 E's of Highway Safety draw on a multi-jurisdictional, multi-discipline approach to provide a safe transportation system in the RPA-18, the State of Iowa and the United States.

Safety is a consideration that needs to be addressed at all levels of planning to fully meet the intent of the MAP-21 legislation, as well as to provide a safe and efficient transportation system in the RPA-18.



SECURITY

All transportation modes present a system to move people and goods within and through the RPA-18. The streets, highways, bridges, air, transit and water facilities sited in the RPA-18 all are part a nationwide transportation network. They consist of large capital investment in infrastructure used to serve the social and economic well being of the region and the nation.

The Federal government has set a National Preparedness Goal to “engage Federal, State, Territorial, tribal and local entities, their private and non-governmental partners and the public to achieve and sustain risk-based target levels of capability to prevent, protect against, respond to and recover from major events...”

Preparedness goals for the transportation sector include plans to implement three specific programs:

- The National Infrastructure Protection Program (NIPP)
- The National Incident Management System (NIMS)
- The National Response Plan (NRP)

National Infrastructure Protection Program

The NIPP establishes the nation’s ready-state level of protection by focusing resources where investment yields the largest reduction in national risk relative to cost. The NRP addresses prevention, preparedness, response, and recovery in the context of domestic threat and incident management of Incidents of National Significance.

The goal of the National Infrastructure Protection Program focuses on three objectives:

- Build security partnerships to implement CI/KR protection programs;
- Implement long-term risk-reduction program
- Maximize efficient use of resources for Critical Infrastructure/Key Resource protection

The NIPP defines an infrastructure asset as something of importance or value belonging to one of 17 sectors that if targeted, exploited, destroyed, or incapacitated could result in large-scale injury, death, economic damage, destruction of property and could profoundly affect the nation’s prestige or confidence. Elements of the transportation system fall into this category.



The NIPP defines a program management approach that provides for collecting and validating sector requirements; prioritizing the allocation of federal resources through the annual budget process, measuring national results and performance, and continuously improving critical infrastructure/key resource protection based on results and performance.

Resource allocation consists of four phases:

- Establish sector requirements
- Prioritize requirements according to criticality to the nation
- Protective programs are the recommended that have the greatest potential to reduce risk as per the NIPP risk management framework
- HSC reviews proposed funding, resolves issues, finalizes recommendations to be passed to OMB for President's budget recommendation

Resources of potential risk in the RPA-18 region include portions of the National Defense Highway Interstates I-80 and I-29), major bridges across the Missouri River, active rail, pipeline and telecommunication corridors and facilities.

National Incident Management System (NIMS)

The National Incident Management System (NIMS) was released in March of 2004. It was adopted by all Federal agencies and departments and is to be used in their individual domestic incident management and emergency prevention, preparedness, response and recovery and mitigation of emergency events.

The NIMS consists of a six-component, systems approach aimed at integrating existing best practices into a multi-jurisdictional incident management plan.

- Command and Management
- Preparedness
- Resource Management
- Communication and Information Management
- Supporting Technologies
- Ongoing Management and Maintenance



These best practices establish specific safety-related goals for agencies involved in transportation planning activities. Specific initiatives which could be undertaken by the RPA-18 to meet these goals include:

- Make security a distinct factor from safety in the transportation planning process
- Provide resources for transportation-related homeland security projects that would be identified through the regular transportation planning process, including those aimed at prevention, mitigation, response and recovery.
- Provide resources to improve security at Intermodal facilities, airports and ports and military facilities.
- Provide resources to expedite urgent highway and public transportation security projects to address an imminent threat or to repair damage caused by a terrorist attack, including structural hardening, relocation of roads from sensitive areas, property acquisition to create secure zones or replace or repair damages or destroyed structures as a result of a terrorist attack.
- Encourage the use of monitoring systems (ITS) to check the status or condition of key surface transportation facilities.

National Response Plan

The National Response Plan establishes a comprehensive all-hazards approach to enhance the ability of the United States to manage domestic incidents. The plan incorporates best practices and procedures from incident management disciplines—homeland security, emergency management, law enforcement, firefighting, public works, public health, responder and recovery worker health and safety, emergency medical services, and the private sector—and integrates them into a unified structure. It forms the basis of how the federal government coordinates with state, local, and tribal governments and the private sector during incidents. It establishes protocols to help:

- Save lives and protect the health and safety of the public, responders, and recovery workers;
- Ensure security of the homeland;
- Prevent an imminent incident, including acts of terrorism, from occurring;
- Protect and restore critical infrastructure and key resources;
- Conduct law enforcement investigations to resolve the incident, apprehend the perpetrators, and collect and preserve evidence for prosecution and/or attribution;



- Protect property and mitigate damages and impacts to individuals, communities, and the environment; and
- Facilitate recovery of individuals, families, businesses, governments, and the environment.

As with safety, the need to draw in professionals from outside the transportation discipline is a large issue. The Multi-Disciplinary Safety Team model described in the previous chapter offers a framework in which safety-related issues could be discussed within the RPA-18 region. Based on the stakeholders identified by that process, additional outreach to the following stakeholders is an important goal of the RPA-18 related to these issues:

- Police and sheriff departments
- Fire departments, rescue squads
- Federal response agencies
- Elements of the Department of Homeland Security (TSA, FEMA, US Coastguard, etc)

Summary

The potential threat posed by international and domestic terrorists to disrupt the movement of freight and the safety of the public is an unfortunate consideration which must be taken by transportation planners and engineers. The RPA-18 will work with local jurisdictions, the Iowa DOT and the state of Iowa to protect the transportation infrastructure in the region. Security measures will be addressed in the planning process and incorporated into transportation projects, as required, to provide for a safe and efficient environment for the public and the capital assets they use.



FINANCIAL ANALYSIS

The financial component 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.

MAP-21 continues the requirement that long range transportation plans be financially constrained. Policies and guidelines from the Iowa DOT also require financial constraint for the RPAs. As such, the transportation improvements identified by this plan need to be backed with viable funding sources and, if applicable, options to service the debt that is incurred.

Projects contained in this LRTP are a composite of various transportation modes presented by multiple governing jurisdictions, responsible agencies and private concerns. Projects accomplished, or to be accomplished, with funding attributable to the RPA-18 are primarily Surface Transportation Program (STP) funds for street, highway and transportation enhancements.

RPA Regional STP Funds

RPA regional STP funds represent Surface Transportation Program (STP) funds obligated to counties and cities with populations greater than 5,000 but less than 200,000. Under Iowa DOT policy for the RPA system, these funds were rolled into one funding source for each RPA based on the county and city jurisdictions within the individual RPA.

The RPA-18, like all RPAs in Iowa, is obligated STP-33E funds based on a funding distribution methodology developed by the Iowa DOT. This methodology considers various factors (population, Farm to Market factors, 1991 FAS obligations and other factors) in determining RPA regional STP fund obligations to the RPA-18.

Transportation Alternatives Program (TAP)

Transportation Alternative Program funds (formerly Transportation Enhancement) are obligated to the RPA-18 for the specific use toward the development and maintenance of trails, scenic byways and historic preservation of transportation-related facilities and items of historic significance.

Similar to RPA regional STP funds, TAP funds are obligated on an annual basis to the RPAs based on population.



Other Transportation Funding Programs

Various federal funding sources are available for projects in the RPA-18. Federal funding, for the most part, can fund up to 80% of a street or highway project that is in the federal aid-eligible system. Projects funded with Interstate Maintenance funds can be funded up to 90% of the project cost.

Projects that are not federal aid-eligible are funded through the various mechanisms available through the state and local governments.

Iowa Clean Air Attainment Program (ICAAP) – Funds roadway, transit, or trail projects or programs that help maintain Iowa's clean air quality by reducing transportation related emissions. Eligible roadway projects must be on a federal-aid system, which includes all federal functional class routes except local and rural minor collectors. The State, a county or a city may sponsor as an applicant or may co-sponsor for private, non-profit organizations and individuals. Funds utilized for this program are derived from IDOT's Congestion Management & Air Quality apportionment.

Surface Transportation Program (STP) – Federal funding for any road or bridge project on the federal aid system (excluding local and minor collectors). Any agency with public road jurisdiction, public transit responsibilities, or transportation planning responsibilities is eligible to apply for STP funding. Application and approval is handled by RPA XII.

County and City Bridge Construction Fund – State funds for the replacement or rehabilitation of obsolete or deficient public roadway bridges in cities or counties.

Revitalize Iowa's Sound Economy (RISE) – Funding available to Iowa counties and cities to promote economic development in Iowa through construction or improvements of roads and streets.

Highway Safety Improvement Program (HSIP) – The High Risk Rural Roads (HRRR) program has been discontinued. However, MAP-21 has added performance measures for roads previously eligible for these funds. The criteria is based on the following: if fatal and major injury crashes on one of these eligible roads increase two consecutive years, then the state is required to invest a portion of its HSIP funds. Funding levels for this program are two times that of the 2009 HRRR allocation.

Transportation Alternatives Program (TAP) – The Transportation Alternatives Program was authorized by Moving Ahead for Progress in the 21st Century Act (MAP-21) signed into law on July 6, 2012. TAP redefines the former Transportation Enhancements activities and consolidates these eligibilities with the former Safe Routes to School program. Some projects that were previously funded through the discretionary National Scenic Byways Program are now



eligible for TAP as are projects eligible under the Recreational Trails Program. The Transportation Enhancements program was originally authorized in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and continued through two successive laws, Transportation Equity Act for the 21st Century (TEA-21) and Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

Other Funding Sources

There are several funding sources for transportation-related projects and improvements. Federal funds (Interstate Maintenance, National Highway System, State STP, FTA Funding, etc.), state fuel taxes and other such funding sources are controlled by the State of Iowa and the Iowa DOT. Funding identified by MAP-21 and controlled by the Iowa DOT may be used on projects within the RPA-18 and are programmed at their discretion based on projects identified through their planning processes.

The SWITA, Woodbine and Harlan airport authorities, private freight businesses and commercial transportation entities and other non-highway agencies and organizations develop a cost estimate for their long term planning goals based on long term financial analysis.

Private capital for transportation improvements related to specific, private modes (air, water, rail, etc) will be identified, programmed and expended based on the needs and long range planning associated with those modes.

This LRTP assumes a good faith condition that those responsible for the development of their financial plans for non-RPA-18 attributable funds have adequately addressed funding issues to achieve their long- range efforts identified in this LRTP.

Street and highway expenditures and the funding anticipated to be available will be constrained as best as possible. Projects will be prioritized and funded with anticipated revenues. Projects and long range transportation planning issues may be reprioritized to reflect changes in anticipated revenue or project costs. The RPA-18 LRTP will be revised to reflect those changes as required.

Capital and Operating Expenditures

Capital and operating costs for the various modes represented by this LRTP represent the amount of funding required to complete the long-range transportation needs of the respective transportation mode. These expenditures include the funding for new streets and street improvements, intersection improvements, new bridges and other improvements that have a life cycle over a set time frame.



As previously stated, the primary goal of this LRTP is directed at maintaining the existing transportation system, specifically the federal aid-eligible portion of the transportation system. Federal funding attributable to the RPA-18 is based on annual RPA regional STP fund allocations to the RPA-18 from the Iowa DOT.

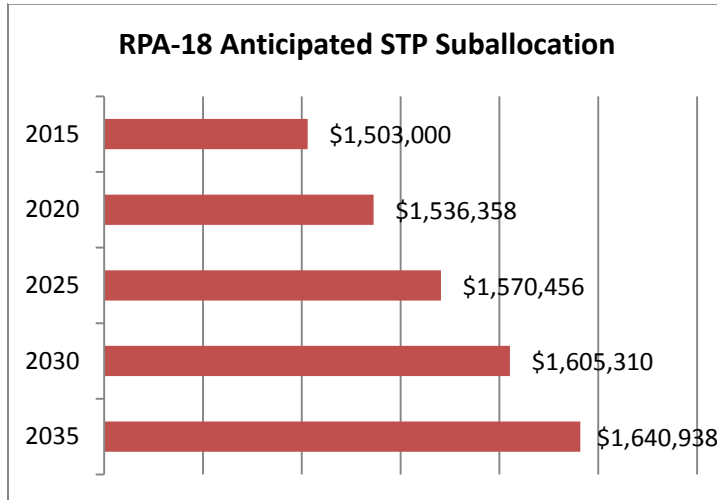


Fiscal Constraint

RPA Regional STP Funds

The Iowa Department of Transportation sub-allocates a portion of its “any area” Surface Transportation Program and Transportation Alternatives Program funding to RPAs across the state. Fiscal constraint of this LRTP is based on the STP funding presently allocated to the RPA-18

Figure 35: LRTP Projection of Regional STP Funding

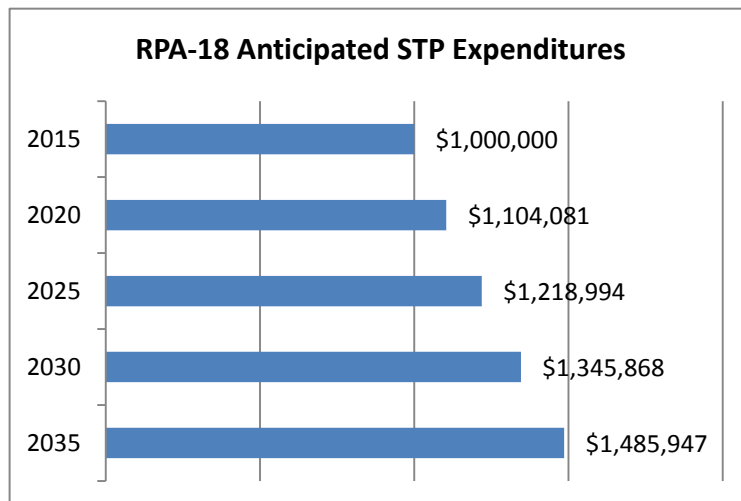


and an assumed growth rate of 0.44% each year—the growth rate used to set funding targets under the two-year authorization of MAP-21. The projected regional STP funding available to RPA-18 is summarized in Figure 35. In total RPA-18 anticipates over \$7.8 million in regional STP funds to be available through the planning period.

Because no new transportation bill has been developed by the United States Congress, it is difficult to project with certainty the amount of STP funding that will be available for the RPA-18 region. Utilizing conservative estimates such as these will ensure that the goals of the LRTP can be achieved with the resources that are likely to be available.

On average the RPA-18 Policy and Technical Committees program \$1 million of projects with regional STP funds each year. To ensure that the RPA-18’s program is fiscally constrained throughout the planning period, we have assumed an annual growth rate of 2% for project costs. This projection of STP expenditures is shown in Figure 36. In total, RPA-18 anticipates that \$6.1 million of regional STP funds will be programmed during the planning period.

Figure 36: LRTP Projection of Regional STP Expenditures



These charts demonstrate that the anticipated funding available to RPA-18 will exceed the anticipated funding needed for



projects. No major STP-funded projects are identified in this LRTP that are eligible for RPA regional STP funds. All RPA regional STP funding is intended to program RPA regional STP funds for maintaining the existing system, as best can be done with funds available. Funds for maintaining the system will not be programmed beyond that anticipated to be received.

Funds identified from local jurisdictions used to match the federal funds requested are assumed to be available to meet the financial commitment.

Transportation Alternative Program (TAP)

The RPA-18 is obligated annual targets of TAP funding. Projects requesting these funds are reviewed and any existing balance or projected balance is applied to fund the project(s). Projects will be programmed to match available carryover funding and annual funding targets set by the Iowa DOT throughout the planning period.

Other Funds

Other federal funds available for use in the RPA-18 region are beyond the direct control of the RPA-18. Transit funds (including Sec. 5310), other STP program funds (National Highway Performance Program, CMAQ, State STP, etc.) and other funding sources are assumed financially constrained at the state level. Projects identified with these funds will be programmed at the request of the specific jurisdiction based on the assumption that they meet financial constraint concerns within their own organizations.



PUBLIC PARTICIPATION

The MAP-21, as with previous transportation legislation, places emphasis on involving participation on the development and maintenance of the transportation systems in the RPA-18. THE RPA-18 maintains a Participation Plan that identifies the responsibilities and procedures to include the public in transportation planning activities in the RPA-18.

One component of the RPA-18 Participation Plan is to provide access to the development of the RPA-18 LRTP to the public. A draft copy of the RPA-18 2035 Long Range Transportation plan was presented for public review and comment at meetings of the county supervisors in Harrison, Mills, Pottawattamie and Shelby counties. Additionally, the 2035 LRTP was presented for public review and comment at city council meetings in Harlan and Glenwood and through the open meeting process of the RPA-18 Policy and Technical Committees.

Public notice of the review meetings and the availability to review the draft 2035 LRTP was published in local news publications identified in the RPA-18 Public Participation Plan. The 2035 LRTP is available for review and comment at all county engineers' offices, city and county clerks offices, the MAPA offices and on the internet at <http://www.mapacog.org>.

Public comments were collected and presented to the RPA-18 Policy and Technical Committees for review and addressed, as applicable, in the final draft of the 2035 LRTP. A list of public comments, as well as a list of public meeting dates can be found in appendix A.

MAPA will continue to accept comment on the 2035 LRTP and will forward any comments to the RPA-18 Policy and Technical Committees for review and disposition. Any changes to the LRTP will be reviewed and approved by the RPA-18 Policy Committee and the LRTP amended accordingly.



LONG RANGE TRANSPORTION PLAN MAINTENANCE

LONG RANGE PLAN AND THE TIP

The long range transportation plan identifies potential improvements to the transportation system which will maintain a level of service desirable by the residents of the RPA-18 throughout the planning period. long range plan serves as the basis for decisions about project selection and the programming of projects in the Regional Transportation Improvement Program (RTIP). The RTIP will program funds for the planning cycle for each project, from corridor selection through design and construction, on a time line consistent with the LRTP.

The RTIP encompasses a six-year time frame and is updated each year by the RPA-18 after concurrence by the RPA-18 Policy Committee.

Maintenance and revision of the Long Range Transportation Plan

All actions concerning transportation improvements, enhancements, and mode additions, as well as project funding, scheduling, and prioritization, shall be reviewed by the RPA-18 Technical Advisory Committee.

Recommendations for action from the Technical Committee will be provided to members of the RPA-18 Policy Committee for discussion and approval.

The long range plan will be reviewed annually and updated or revised as needed to reflect changes in priorities, socioeconomic and spatial changes, and financial availability.

Public input into the review and update process will be guided by regulations and specifications of the MAP-21 and other federal, state, and local mandates and ordinances. Procedures for public participation are contained in the ***Regional Planning Affiliation 18 Participation Plan***.



Appendix 1: Federal Functional Classifications

1) Rural Federal Functional Classification

FFC	Definition
<p>Rural Principal Arterial</p>	<p>Interstate The Interstate System consists of all presently designated routes of the Interstate System.</p> <p>Other Principal Arterial This system consists of all non-Interstate principal arterials.</p>
<p>Rural Minor Arterial</p>	<p>Link cities and larger towns (and other traffic generators, such as major resort areas, that are capable of attracting travel over similarly long distances) and form an integrated network providing interstate and inter-county service.</p> <p>Be spaced at such intervals, consistent with population density, so that all developed areas of the State are within a reasonable distance of an arterial highway.</p> <p>Provide (because of the two characteristics defined immediately above) service to corridors with trip lengths and travel density greater than those predominantly served by rural collector or local systems. Minor arterials therefore constitute routes whose design should be expected to provide for relatively high overall travel speeds, with minimum interference to-through movement.</p>
<p>Rural Collector</p>	<p>Rural Major Collector These routes should: (1) Provide service to any county seat not on an arterial route, to the larger towns not directly served by the higher systems, and to other traffic generators of equivalent intra-county importance, such as consolidated schools, shipping points, county parks, important mining and agricultural areas, etc. ; (2) link these places with nearby larger towns or cities, or with routes of higher classification; and (3) serve the more important intra-county travel corridors.</p> <p>Rural Minor Collector These routes should: (1) Be spaced at intervals, consistent with population density, to collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road; (2) provide service to the remaining smaller communities; and (3) link the locally important traffic generators with their rural hinterland.</p>
<p>Rural Local</p>	<p>The rural local road system should have the following characteristics: (1) Serve primarily to provide access to adjacent land; and (2) provide service to travel over relatively short distances as compared to collectors or other higher systems. Local roads will, of course, constitute the rural mileage not classified as part of the principal arterial, minor arterial, or collector systems.</p>

Source: Federal Highway Administration

Map of the Federal Functional Classification System of roadways in the RPA-18 is located on page 9.



2) Urban Federal Functional Classification

FFC	FUNCTION	LAND USE	TRAFFIC DEMANDS	FACILITY TYPE
FREEWAYS	Moving inter and intra-regional traffic, particularly long trips and the high traffic volume corridors.	Providing access to major industrial and commercial developments.	Normally in excess of 20,000 vehicles per day and often over 50,000 vehicles per day.	High speed, divided highway with full control of access and grade separated interchanges. Number of lanes is directly related to traffic volumes with four and six-lane freeways dominant.
EXPRESSWAYS	Serve longer trip desires and high traffic volume corridors where not served by freeways.	Serve major centers of activity, with service to abutting land uses secondary to the provision of travel service.	Generally in the range of 15,000 to 35,000 vehicles per day.	Divided highway with partial access control, some grade separated interchanges access only with surface street systems, and no access to abutting land uses. Number of lanes and type of median directly related to traffic volumes and abutting land uses, with four-lane and six-lane divided facilities dominant.
PRINCIPAL ARTERIAL	Serve longer trip desires and high traffic volume corridors, where not served by freeways.	Serve major centers of activity, with service to abutting land uses secondary to the provision of travel service.	Generally in the range 15,000 to 35,000 vehicles per day.	Divided street with major access points at intersections with the surface street system and some direct access permitted to abutting land use. Number of lanes and type of median directly related to traffic volumes and abutting land uses, with four-lane and six-lane divided facilities dominant.
MINOR ARTERIAL	Interconnect with and augment the principal arterial system and provide service to trips of moderate length.	Distributes traffic to geographic areas smaller than those served by the higher system, with more emphasis on service to abutting land uses.	Generally in the range of 5,000 to 15,000 vehicles per day.	Number of lanes and type of median directly related to traffic volumes and abutting land uses with normal standards calling for a mixture of four-lane and two-lane facilities.
COLLECTORS	Connect local streets to the arterial street systems.	Serve residential neighborhoods, with direct access to abutting land uses.	Generally in the range of 2,000 to 5,000 vehicles per day, with some situations approaching 10,000 vehicles per day.	Normally two-lane streets with curb and gutters.

Source: Federal Highway Administration



Appendix B. Public Meeting Schedule and Comments

RPA-18 Long Range Transportation Plan

Meeting Date	Meeting Location
11/20/2013	RPA-18 Policy and Technical Committee
1/14/2014	Glenwood City Hall; Glenwood, IA
1/21/2014	Shelby County Courthouse; Harlan, IA
1/23/2014	Harrison County Courthouse; Logan, IA
1/28/2014	Mills County Courthouse; Glenwood, IA
1/30/2014	Pottawattamie County Courthouse; Council Bluffs, IA

Public Comments Received:

Comment	Response
Status of Transportation Reauthorization	Unclear at this time; this plan assumes general consistency with MAP-21 and past authorization bill goals
Include Information About County Trail Committees	Trail section updated to reflect these planning efforts
Plan Should Include Water Section	Water section incorporated into the plan
Questions about Project Eligibility	Eligibility for Regional STP and TAP allocations is located in Introduction, Streets & Highways, and Trails sections
Role of RPA-18	The role of RPA-18 as an administrative region is covered in the plan scope
Additional Revenue for Transportation Projects is Needed	No additional funding is derived from this plan and this plan does not address specific proposals for identifying future sources of local or federal funding