

May 2020

CIRTPA

Horizon Year 2040
Long-Range Transportation Plan

The Central Iowa Regional Transportation Planning Alliance (CIRTPA) has prepared this report with partial funding from the United States Department of Transportation's Federal Highway Administration and Federal Transit Administration, and in part with local matching funds provided by the CIRTPA member governments. The contents of this report are the responsibility of the CIRTPA. The United States government and its agencies assume no liability for the contents of this report or for the use of its contents.

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RESOLUTION FY 2020-31

WHEREAS, the Central Iowa Regional Transportation Planning Alliance is established under Chapter 28E of the Code of Iowa;

WHEREAS, the Central Iowa Regional Transportation Planning Alliance is a voluntary organization for certain city and county governments in Boone, Jasper, Marion, and Story Counties and portions of Dallas, Madison, Polk, and Warren Counties;

WHEREAS, the Central Iowa Regional Transportation Planning Alliance is the designated regional transportation planning agency for the Iowa Department of Transportation's Region 11; and

NOW, THEREFORE, BE IT RESOLVED by the Central Iowa Regional Transportation Planning Alliance that:

The Central Iowa Regional Transportation Planning Alliance Transportation Policy Committee approves the HY 2040 Long Range Transportation Plan.

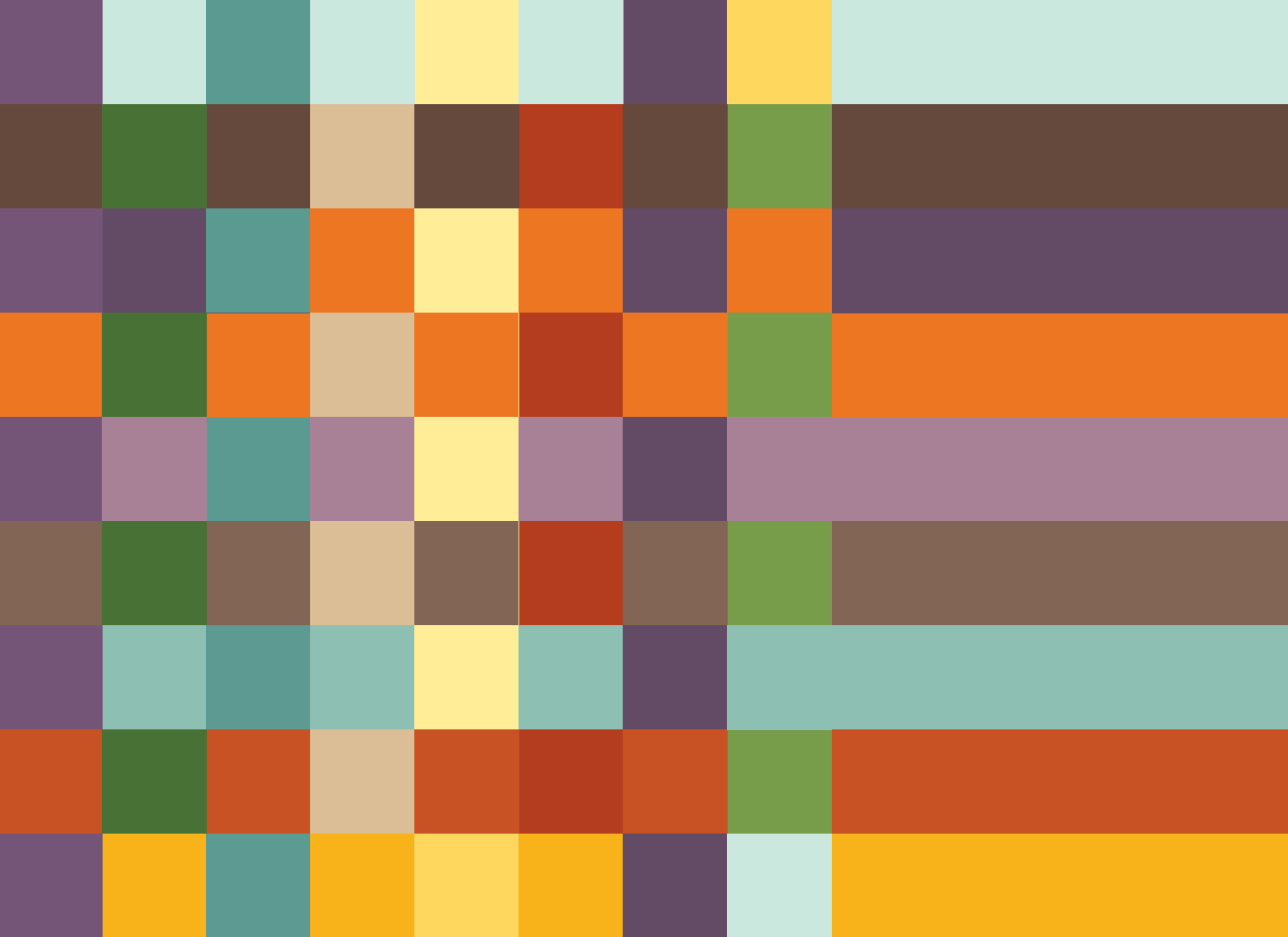
Done the 21st day of May 2020

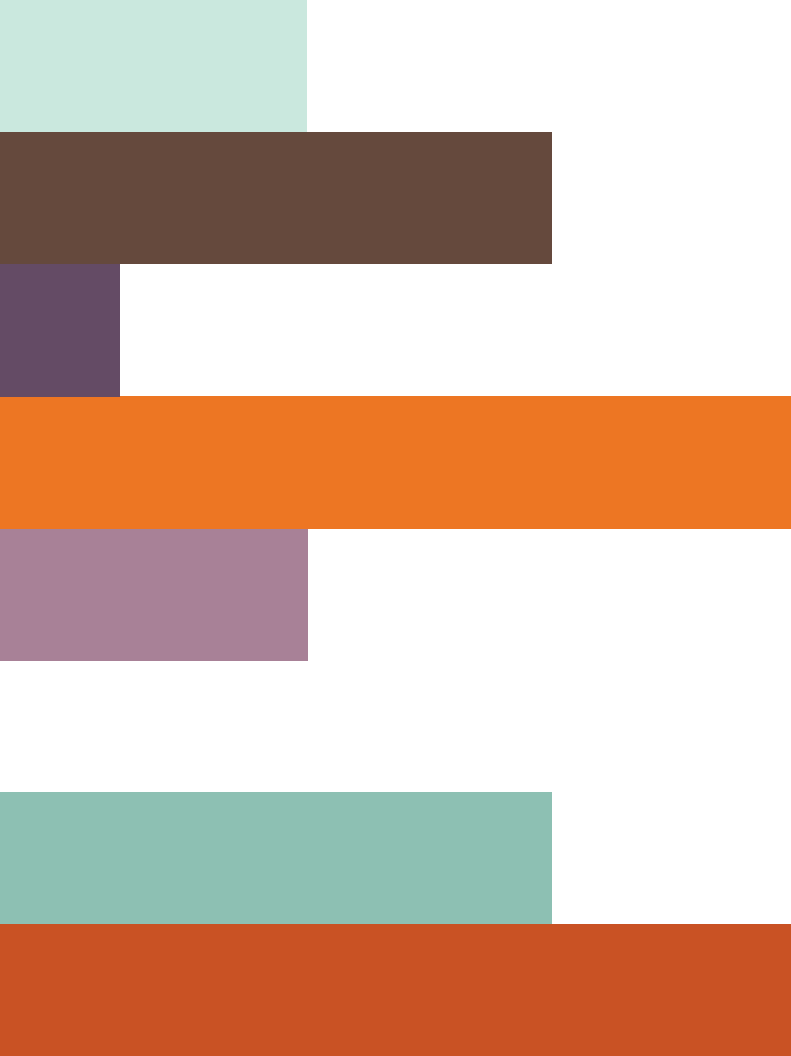


Bret VandLune
CIRTPA TPC Chair

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INTRODUCTION

INTRODUCTION

The Central Iowa Regional Transportation Planning Alliance (CIRTPA) was created in 1994 to carry out transportation planning for the central Iowa region, excluding the Des Moines Area Metropolitan Planning Organization (DMAMPO) and the Ames Area Metropolitan Planning Organization (AAMPO). The CIRTPA serves as the designated regional transportation planning agency for the Iowa Department of Transportation's (DOT) Region 11. The CIRTPA coordinates planning and programming efforts in the region and fosters new partnerships with state and local officials.

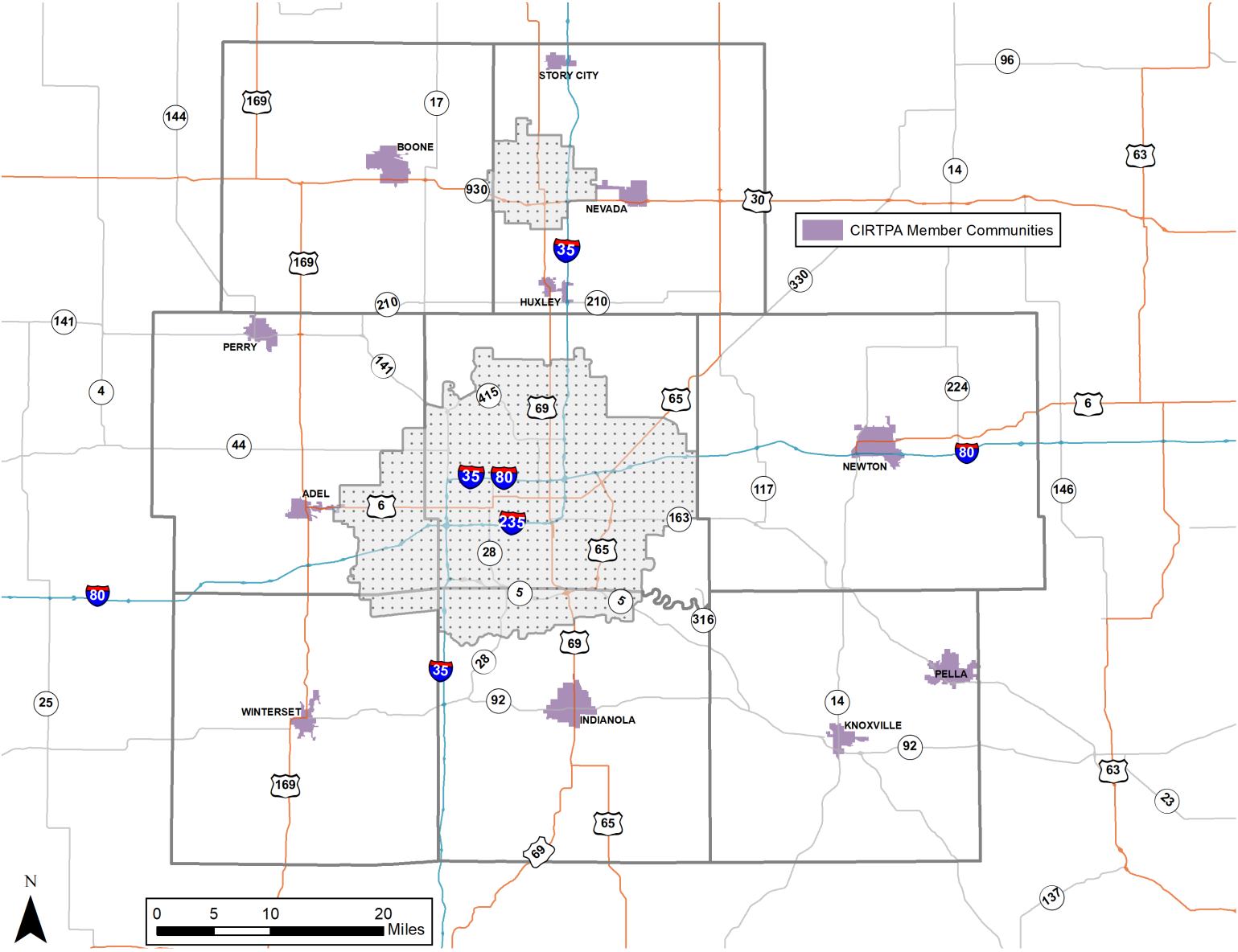
The CIRTPA's Regional Transportation Planning Area includes Boone, Jasper, and Marion Counties and portions of Dallas, Madison, Polk, Story, and Warren Counties not included as part of the DMAMPO or the AAMPO. Members of the CIRTPA include the eight counties noted above as well as eleven cities: Adel, Boone, Huxley, Indianola, Knoxville, Nevada, Newton, Pella, Perry, Story City, and Winterset. The location of the CIRTPA region within Iowa is shown on a map on the following page. The CIRTPA has an agreement with the DMAMPO for support services in carrying out its transportation planning responsibilities.

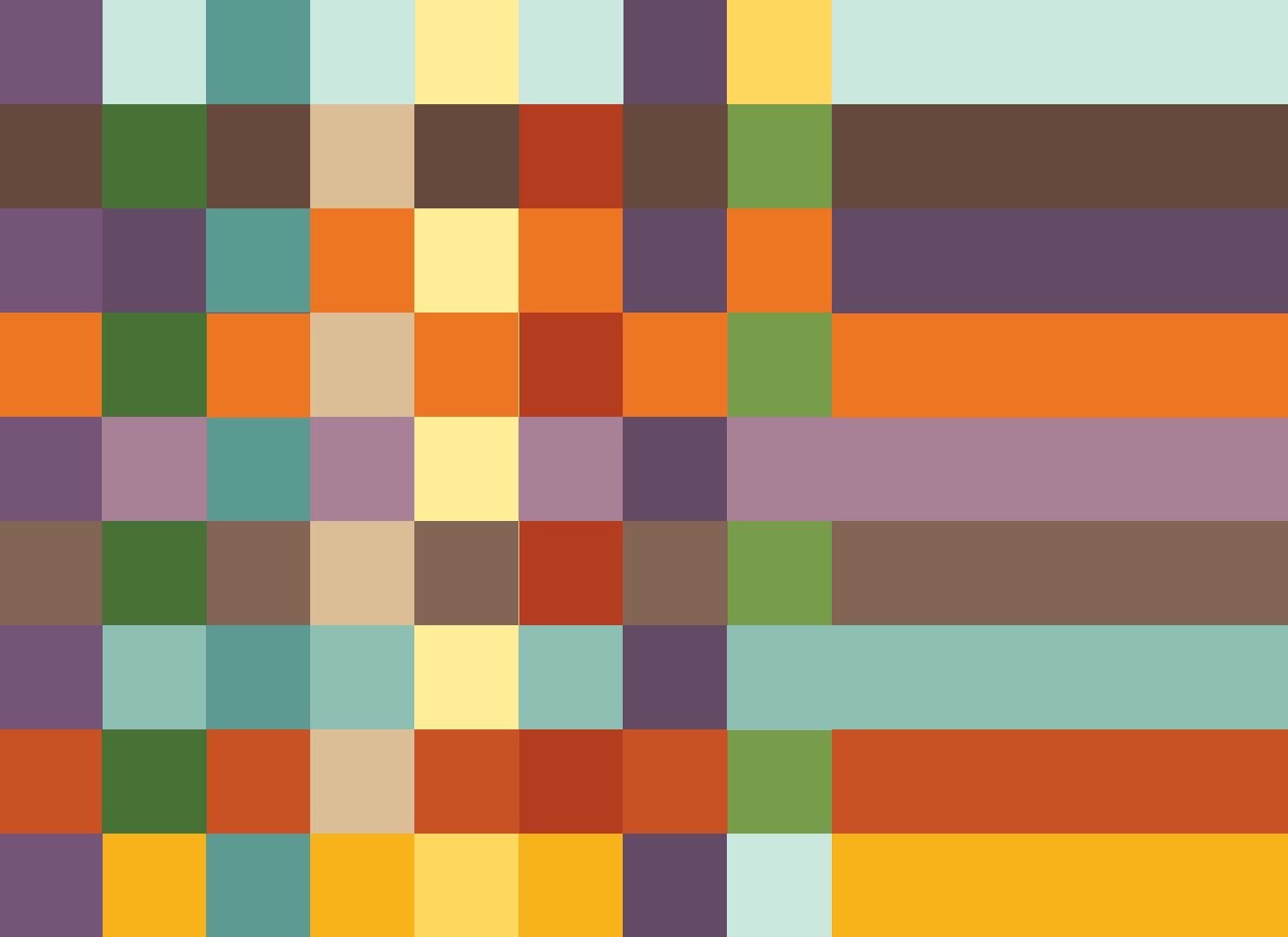
The CIRTPA cooperates with a number of agencies, including the Iowa DOT, the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the DMAMPO, the AAMPO, Des Moines Area Regional Transit Authority (DART), the Heart of Iowa Regional Transit Authority (HIRTA), and the CIRTPA's eleven member communities and eight member counties in fulfilling its transportation planning responsibilities.

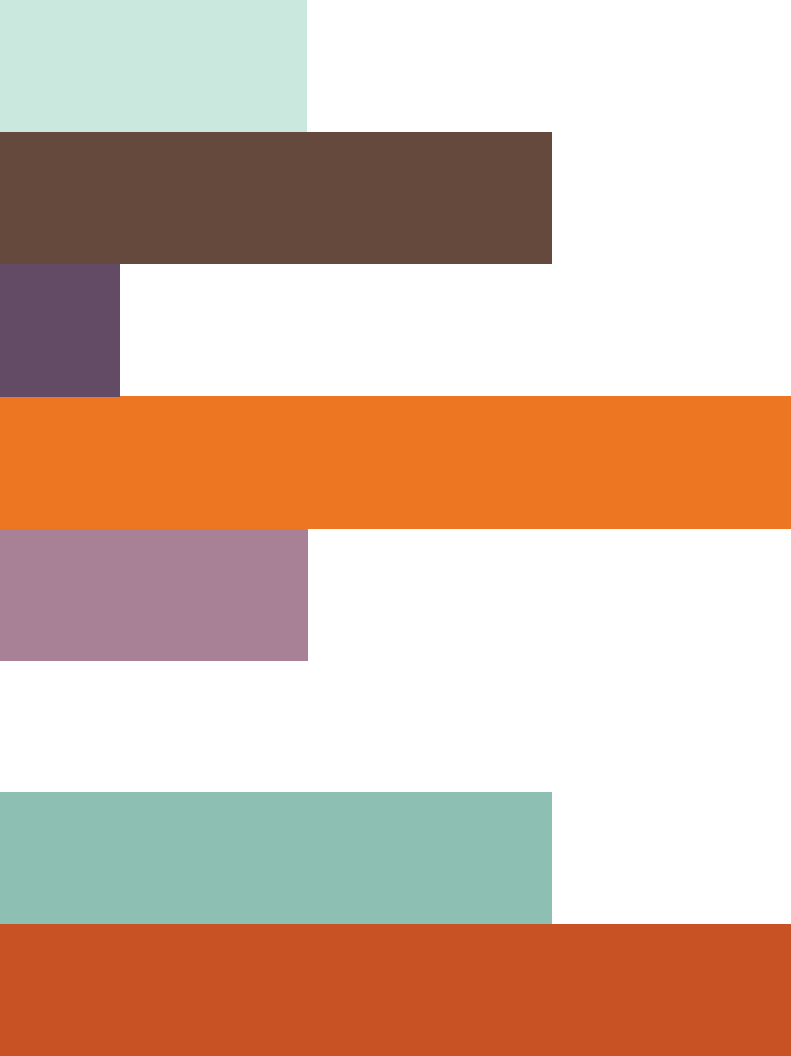
The CIRTPA Transportation Policy Committee (TPC) receives input and recommendations from its Transportation Technical Committee (TTC). In addition to the TTC, the CIRTPA will establish and support other committees, as needed, on various transportation-related issues relevant to the CIRTPA's responsibilities. The CIRTPA also can request citizens to serve on these committees, as appropriate.

The CIRTPA staff worked through the planning process with the CIRTPA LRTP Committee. Once approved by the CIRTPA LRTP Committee they were forwarded to the CIRTPA TTC and TPC for final approval. This plan was enacted as an update to the previous Horizon Year 2035 Long-Range Transportation Plan.

CIRTPA PLANNING AREA







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PURPOSE

PURPOSE

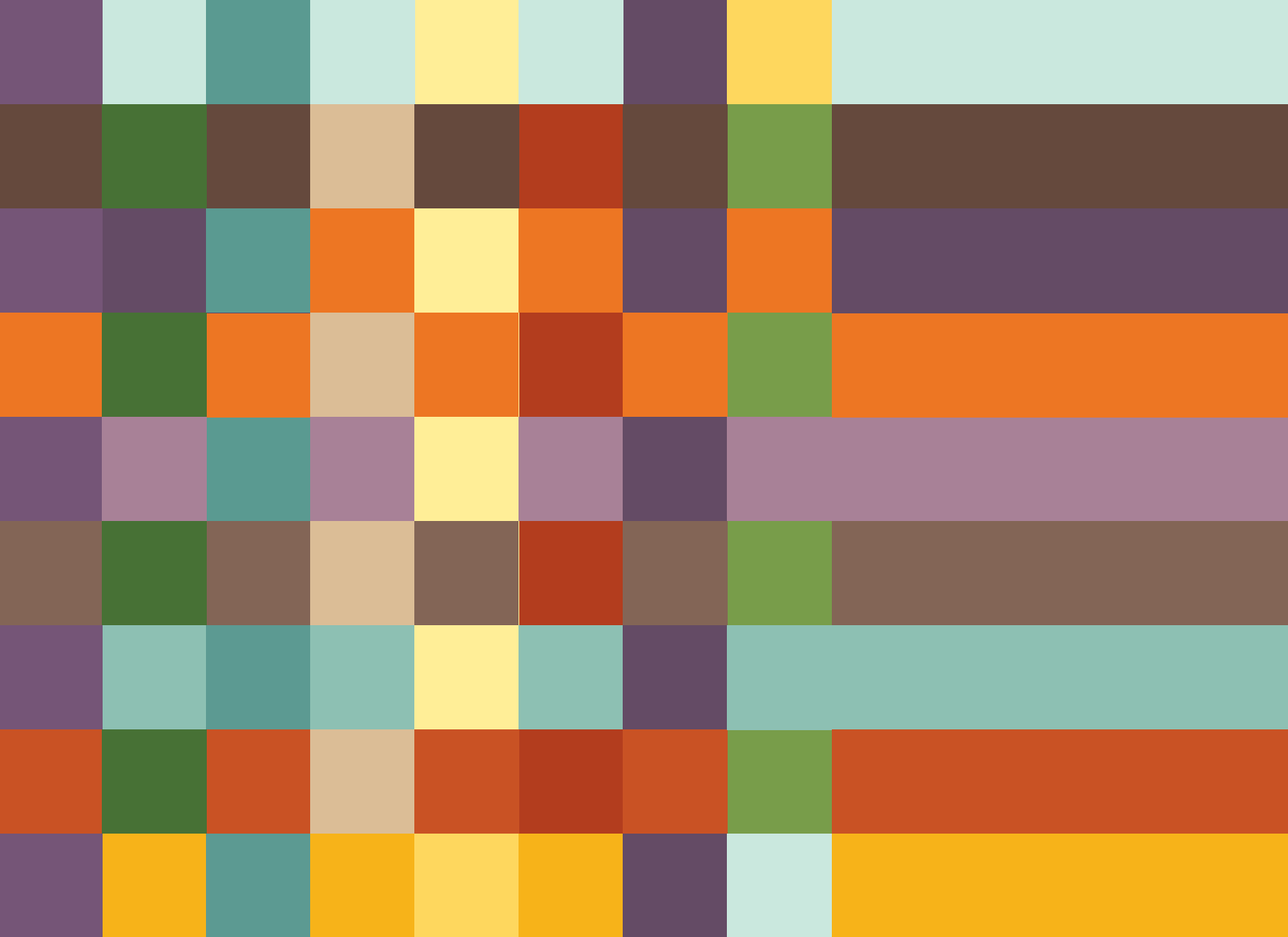
CIRTPA's Long-Range Transportation Plan is intended to provide a blueprint for the development of the area's transportation system over the next 20 years. Planning of this nature assists in protecting investments that are already made while at the same time providing information and resources to pursue new and innovative solutions that enhance mobility and travel choices in the region.

The geographic area for the CIRTPA Horizon Year 2040 Long-Range Transportation Plan (CIRTPA 2040 LRTP) is the CIRTPA's regional transportation planning area. The CIRTPA 2040 LRTP is intended to address transportation needs through the stated horizon year, in this version that is year 2040.

This document covers the following modes of transportation: air, rail, transit, bicycle and pedestrian facilities, waterways, freight, and streets and highways. The 2040 LRTP is an update to the previous Horizon Year 2035 Long-Range Transportation Plan, which was completed in 2014. Updates to the LRTP are intended to occur on a regular five year basis. Continually updating the plan ensures that the most recent and accurate data is used when making transportation planning decisions for the CIRTPA region.



Marion County Courthouse, Knoxville





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GOALS + OBJECTIVES

GOALS + OBJECTIVES

Four overarching goals frame the CIRTPA 2040 Long-Range Transportation Plan. Derived from discussions of CIRTPA's Transportation Technical Committee and backed up with available data, these goals encompass all aspects of the transportation system as well as elements of other systems that the transportation system impacts. These goals include maintaining our existing transportation system, providing a safe transportation system, promoting livability, protecting the environment, and conserving resources.

Goal 1 | Maintain and optimize our existing transportation system

Federal legislation has shifted funding priorities for the transportation system, placing an emphasis on maintaining existing infrastructure. Within the CIRTPA area, there are over 2,000 miles of federally classified roadways measured for pavement conditions; 11 percent of local roadways are rated poor or worse. There also are 1,640 bridges, of which 415 are deficient. Coupling these conditions with limited financial resources results in the goal of maintaining our existing transportation system. Optimizing the transportation system will help with maintenance by encouraging the efficient use of resources dedicated to transportation.

Two main objectives will help CIRTPA reach this goal. The first objective is to maintain existing roads and bridges to fair or better condition. CIRTPA will measure this using Pavement Condition Index ratings (i.e., the condition of the roadway) and bridge condition. The second objective is to produce street and bridge reports for member communities in order to forecast infrastructure needs and recommend the most efficient use of funding.

Goal 2 | Provide a safe and accessible transportation system

A key element of any transportation system is the safety – both actual and perceived – of all users. Whether in an automobile, cycling, walking, or taking public transportation, residents must feel secure for the transportation system to function effectively. Accessibility and mobility are also crucial as those least able to access the transportation system represent the most vulnerable populations. Ensuring adequate transportation options stands to benefit all users.

To reach this goal, CIRTPA will promote improvements that reduce accidents. The reduction in accidents will be measured for automobiles,

bicycles, and pedestrians, and fatalities and major injury rates will be tabulated. Housing and transportation costs as a percentage of income will also be measured.

Goal 3 | Promote livability

A livable community supports transportation choices, equitable, affordable housing, and economic competitiveness; leverages existing infrastructure; coordinates policies and investments; and celebrates unique characteristics. There is a push – both nationally and in central Iowa – towards these kinds of communities. Consequently, the third goal of this plan is to promote livability.

Transportation choice includes access to basic services and important destinations via a variety of modes. Measures include miles of bicycle and pedestrian facilities – both on- and off-road – and the number of gaps in the bicycle and pedestrian network. The other elements of a livable community depend greatly upon their context. Total HIRTA ridership by HIRTA will be measured to track transportation accessibility.

Goal 4 | Protect the environment and conserve resources

The transportation system cannot be considered in isolation; its impacts reach far beyond roads, buses, and bicycle-pedestrian infrastructure. It impacts economic development, access to opportunity, and the environment. The fourth and final goal of this plan envisions greater protection for the environment and conservation of its resources.

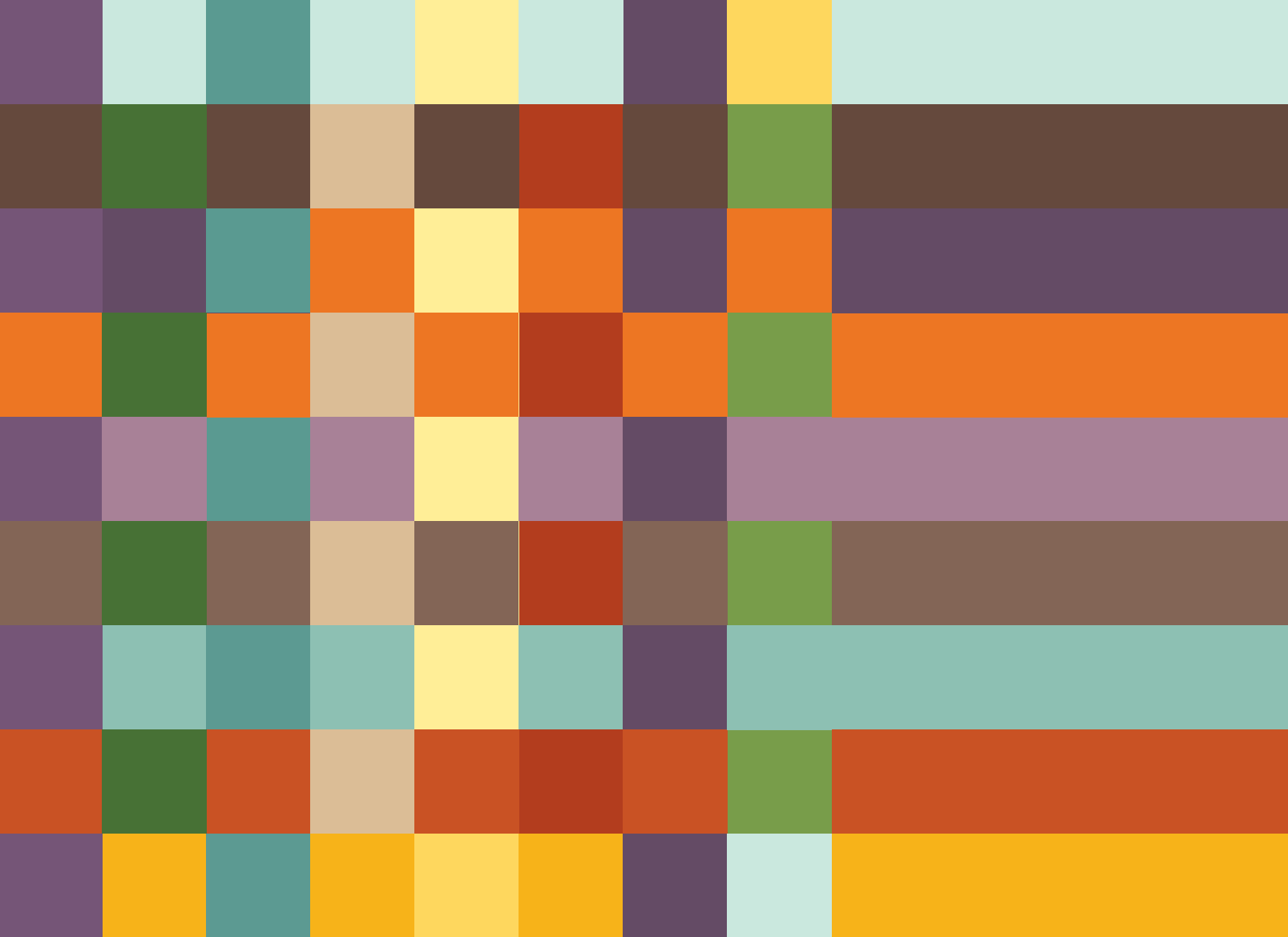
The CIRTPA outlines two objectives to achieve this goal: decrease emissions, lessen negative impacts on water quality, and limit impacts on farmland and natural resources. Decreasing emissions can be seen through increased Electric Vehicle Supply Equipment (EVSE). CIRTPA can also limit impacts on farmland and natural resources by working to minimize the number of acres impacted by transportation projects.

CIRTPA PERFORMANCE MEASURES

MEASURE	CURRENT	2024 TARGET	2040 TARGET
Goal 1 Maintain and optimize our existing transportation system			
Pavement Condition Index (average)	64	66	75
Pavement Condition Index (% poor or worse)	11%	10%	5%
Bridges in Good Condition (%)	32%	35%	45%
Bridges in Poor Condition (%)	25%	22%	12%
Bridge Deck Area in Good Condition (%)	13%	15%	25%
Bridge Deck Area in Poor Condition (%)	7%	6%	2%
Transit Vehicles Beyond Useful Life (%)	77%	72%	50%
Goal 2 Provide a safe and accessible transportation system			
Number of fatalities (5-year average)	24.2	22	15
Fatality rate (per 100 million VMT)	0.868	Maintain	Maintain
Number of serious injuries (5-year average)	95.2	90	70
Serious injury rate (per 100 million VMT)	3.415	Maintain	Maintain
Number of bike/pedestrian crashes (5-year average)	23.2	21	14
Bike/pedestrian crash rate (per 100 million VMT)	0.832	Maintain	Maintain
Polk County H+T Index (% of income spent on housing)	44%	Maintain	Maintain
Boone County H+T Index (% of income spent on housing)	51%	50%	45%
Story County H+T Index (% of income spent on housing)	50%	49%	45%
Jasper County H+T Index (% of income spent on housing)	48%	47%	45%
Marion County H+T Index (% of income spent on housing)	49%	48%	45%
Warren County H+T Index (% of income spent on housing)	49%	48%	45%
Madison County H+T Index (% of income spent on housing)	50%	49%	45%
Dallas County H+T Index (% of income spent on housing)	50%	49%	45%

The H+T Index measures the percent of household income spent on housing and transportation. 45% and less is considered affordable.

MEASURE	CURRENT	2024 TARGET	2040 TARGET
Goal 3 Promote Livability			
Miles of on-street bicycle facilities	7	8	20
Miles of trails	251	260	300
Number of trail system gaps	7	5	0
Miles of trail system gaps	58	50	0
Transit (total ridership)	264,587	295,000	350,000
Goal 4 Protect the environment and conserve resources			
Number of Electric Vehicle Supply Equipment (EVSE)	3	10	30
Number of Green Infrastructure Projects	0	2	10
Wetlands (% of total acres)	2.1%	Maintain	Maintain
Floodplains (% of total acres)	12.4%	Maintain	Maintain
Woodlands (% of total acres)	12.8%	Maintain	Maintain
Farmland (% of total acres)	80.0%	Maintain	75%





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SOCIOECONOMIC CONDITIONS

SOCIOECONOMIC CONDITIONS

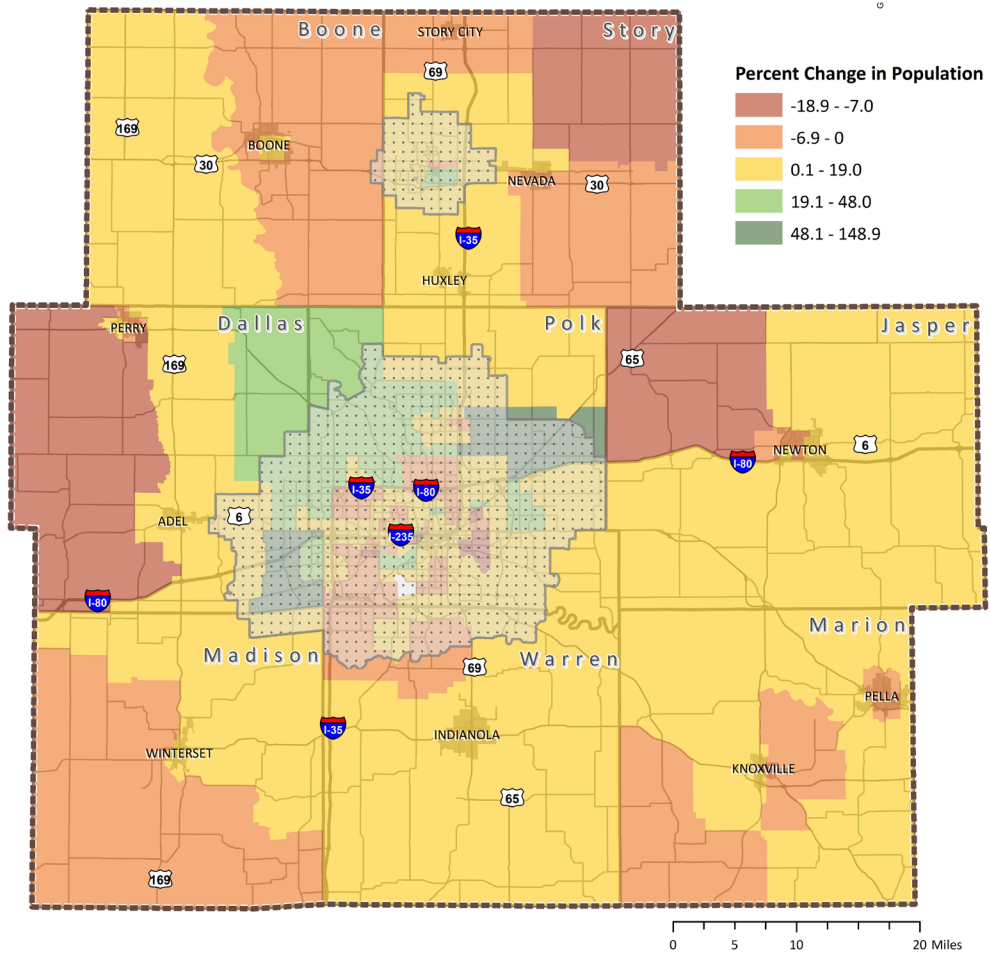
Population Projections

The CIRTPA planning area is in central Iowa, occupying the following eight counties: Boone, Dallas, Jasper, Polk, Madison, Marion, Story, and Warren. Within the CIRTPA region lays the Des Moines Area MPO, located in portions of Dallas, Madison, Polk, and Warren Counties. According to the 2018 American Community Survey, the eight-county region was home to nearly 805,000 (ACS 2018 pop est.) people, with around 560,000 (TCIP report) residing inside the Des Moines Area MPO planning boundary.

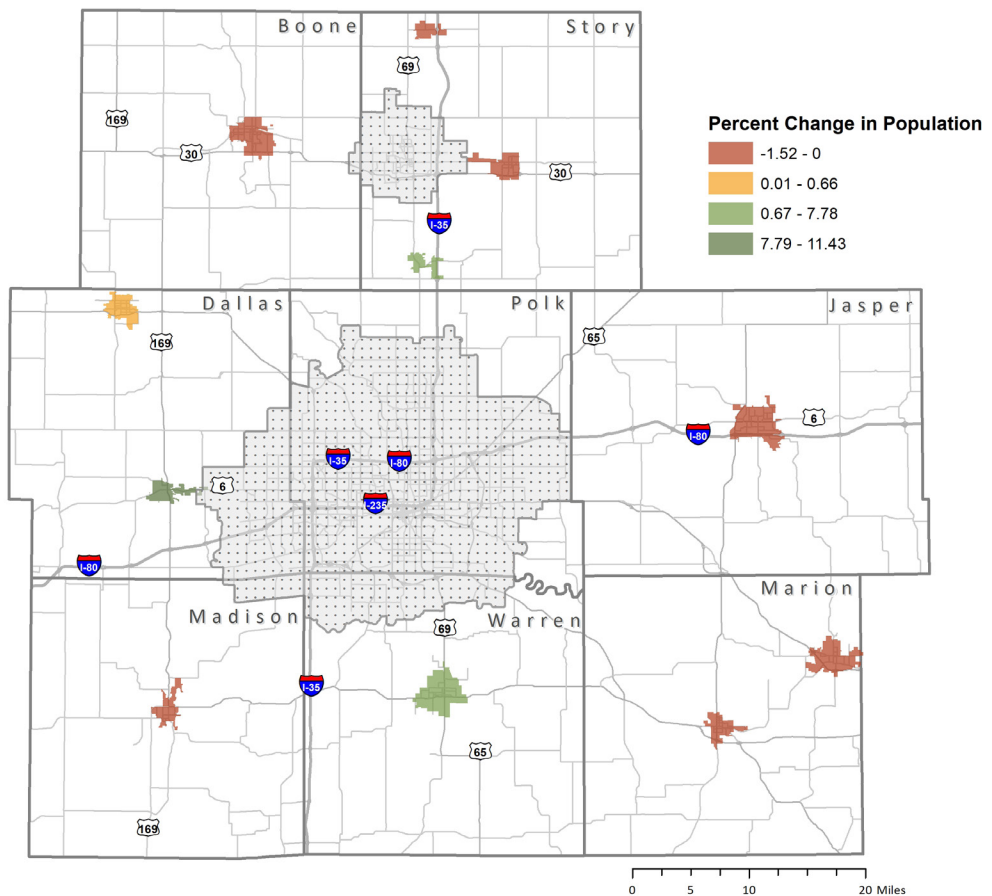
Between 2010 and 2017, CIRTPA growth areas tended to be in and near both the Ames Area MPO and Des Moines Area MPO boundaries. There were three outliers for population change identified in the data, which included one census tract in the Ames Area MPO region and two in the Des Moines Area MPO region that indicated a 149 percent, 70 percent, and 68 percent increase in population. Disregarding these three census tracts, the average percent of population growth was 10 percent. Few areas in the region saw a population decline and tended to be in less populated census tracts on the edges of the region. Of those census tracts that declined in population, the average was 5 percent.

The CIRTPA also mapped the percent change in population from 2010 to 2017 in CIRTPA member cities. Four of the eleven CIRTPA member cities experienced growth during the 2010s, averaging a 6 percent increase. The fastest growing city in the region was Adel, with a population increase of 11 percent. Seven cities saw a minor decline in the 2010s; the percentage of decline maxed out at around 1 percent.

2010 TO 2017 POPULATION GROWTH BY CENSUS TRACT



2010 TO 2017 POPULATION GROWTH BY CITY



During the development stages of CIRTPA's Horizon Year 2035 Long Range Transportation Plan, Regional Economic Models, Inc. Method of Population and Employment Method forecasting was used. The HY 2030 plan also utilized REMI Population and Employment forecasts. However, for this plan REMI forecasts were not available. Therefore, Woods & Poole population and employment numbers were used.

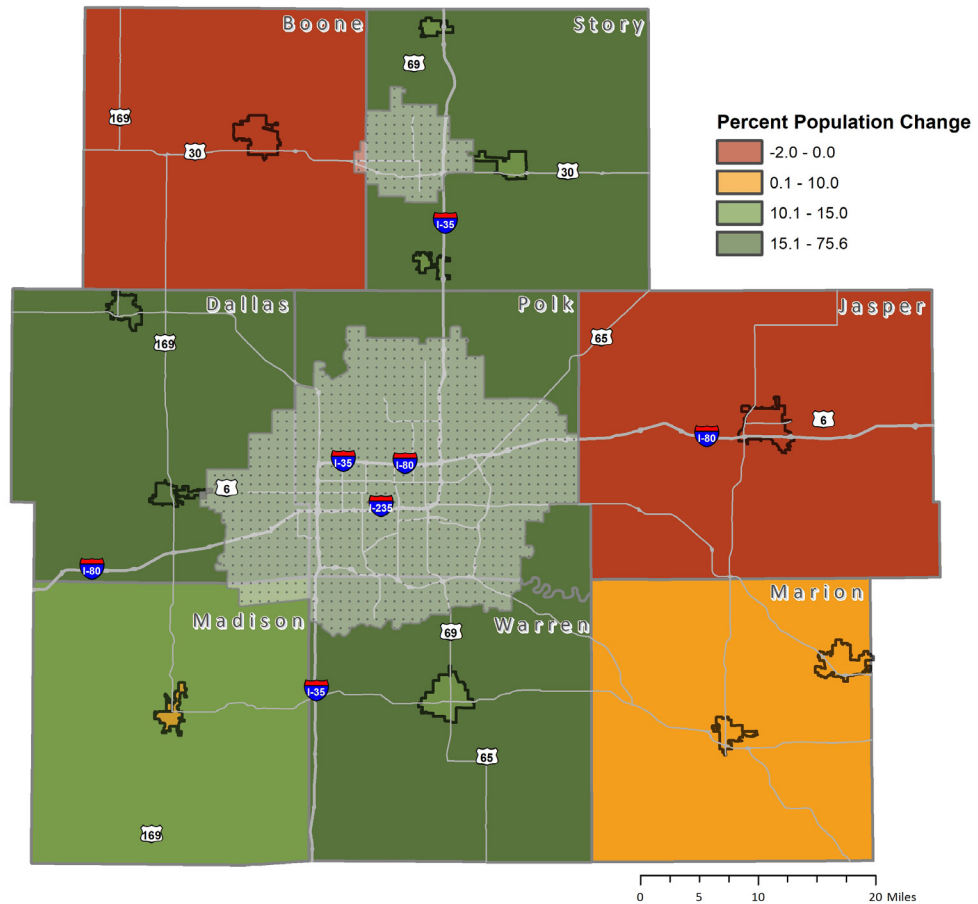
In the HY 2035 plan, REMI population numbers were only available for Dallas, Madison, Polk, and Warren counties, with the remaining Boone, Jasper, Madison, and Story county projections to be based on the available data and trends. For the HY 2040 plan, Woods and Poole has population projections available for each county thus no local projections were needed.

The CIRTPA developed a methodology to project CIRTPA city population from the Woods and Poole population projection for each CIRTPA county. The CIRTPA staff used the percent share of city population to county population from 2015 ACS data. That ratio of city to county population was used to calculate city projections with the current Woods and Poole population projection numbers for each CIRTPA county (calculated by the percent share of a city multiplied by current Woods and Poole projections of a county for each of the listed years).

The percent change in population from 2015 to 2040 for CIRTPA cities and CIRTPA counties was mapped to illustrate the locations of the highest amount of projected growth in the region. The map shows Dallas County as the fastest growing county in the region, with an increase of about 75 percent. The map also shows that Adel and Perry are the fastest growing cities in the CIRTPA region, with increases of about 54 percent. The results for the entire region are included on the following map.



PERCENT CHANGE IN POPULATION BY CITY + COUNTY (2015 TO 2040)



POPULATION PROJECTION BY COUNTY

	2015	2020	2030	2040	2015-2040 % CHANGE
Boone	26,439	26,604	26,751	26,398	-0.2%
Dallas	80,491	93,360	115,946	141,310	75.6%
Jasper	36,729	37,066	37,047	36,337	-1.1%
Madison	15,713	16,293	17,016	17,831	13.5%
Marion	33,109	33,333	33,779	33,593	1.5%
Polk	467,252	494,344	533,336	564,676	20.9%
Story	96,348	99,652	106,150	110,963	15.2%
Warren	48,466	51,344	54,960	57,734	19.1%
Central Iowa	744,678	794,408	872,322	949,517	22.9%
Des Moines Area MPO	543,219	591,406	698,102	775,884	42.8%
Ames Area MPO	66,095	68,361	72,819	76,121	15.2%
CIRTPA	195,233	192,229	154,064	136,837	-29.9%

POPULATION PROJECTION BY CITY

	2015	2020	2030	2040	2015-2040 % CHANGE
Adel	4,055	4,703	5,841	7,119	51.4%
Boone	12,631	12,710	12,780	12,611	-0.8%
Huxley	3,430	3,548	3,779	3,950	11.4%
Indianola	15,165	16,066	17,197	18,065	12.4%
Knoxville	7,245	7,294	7,392	7,351	0.8%
Nevada	6,799	7,032	7,491	7,830	11.4%
Newton	15,085	15,223	15,216	14,924	-2.0%
Pella	10,316	10,386	10,525	10,467	0.8%
Perry	7,747	8,986	11,159	13,601	51.4%
Story City	3,435	3,553	3,784	3,956	11.4%
Winterset	5,159	5,349	5,587	5,854	9.4%

Employment Projections

Future employment projections are based on Woods and Poole Employment Projections. Woods and Poole's projected growth for the region is 25.7%. The largest employment growth is projected to be Dallas County, while Polk County will still the employment center for the region.

It should be noted that the central Iowa total population projection and total employment projection reflect population and employment that include the CIRTPA region, the Des Moines Area MPO planning boundary, and the Ames Area MPO boundary. The CIRTPA's share of population and employment in central Iowa's counties and cities will change in the future based on the expansion of both the Des Moines Area MPO planning boundary and the Ames Area MPO planning boundary.

The region's unemployment rate averages 4.1 percent (ACS 2013-2017 Employment Status), are just above the current national rate of 3.7 percent (US Bureau of Labor Statistics, December 2019).

EMPLOYMENT PROJECTION BY COUNTY

	2015	2020	2030	2040	PERCENT CHANGE
Boone	13,828	13,895	14,679	15,082	8.3%
Dallas	55,416	64,936	88,021	115,047	51.8%
Jasper	16,024	17,032	17,236	17,017	5.8%
Madison	6,922	7,564	8,343	9,031	23.4%
Marion	22,427	23,089	23,769	23,768	5.6%
Polk	356,085	386,033	430,458	463,593	23.2%
Story	63,522	65,891	71,232	74,558	14.8%
Warren	18,453	20,281	23,355	26,138	29.4%
Central Iowa	552,677	598,721	677,093	744,234	25.7%

Economic Data

The median household income for households in the CIRTPA Region is \$62,837 and the mean household income is \$79,229. The higher income areas of the region correspond to those in and near the Ames and Des Moines metropolitan areas. Overall, Central Iowa has higher incomes than the rest of the state but there are some areas that, depending on looking at mean or median income, lag both the region and state.

HOUSEHOLD INCOME BY COUNTY AND REGION

	TOTAL HOUSEHOLDS	MEDIAN HOUSEHOLD INCOME	MEAN HOUSEHOLD INCOME
Boone	10,998	\$57,906	\$71,406
Dallas	31,363	\$82,719	\$108,537
Jasper	14,533	\$56,363	\$68,498
Madison	6,357	\$60,077	\$77,887
Marion	13,098	\$57,917	\$69,344
Polk	181,316	\$63,530	\$84,020
Story	37,106	\$52,671	\$69,792
Warren	18,621	\$71,514	\$84,350
Central Iowa	313,392	\$62,837	\$79,229
State of Iowa	1,251,587	\$56,570	\$73,510

The median earnings for individuals in the CIRTPA Region is \$34,232 and the mean earnings is \$60,251. As with income, earnings in the region are generally higher near the metropolitan areas and are smaller in the other areas. Compared to the state, both median and mean earnings are higher in Central Iowa with the notable exception of lower median earnings in Story County due to the high ratio of university students and part time work.

EARNINGS BY COUNTY AND REGION

	WORKERS OVER AGE 16 WITH EARNINGS	MEDIAN EARNINGS	MEAN EARNINGS (FOR FULL-TIME, YEAR-ROUND WORKERS)
Boone	15,296	\$33,252	\$52,958
Dallas	47,677	\$46,705	\$78,119
Jasper	19,559	\$31,636	\$49,850
Madison	8,979	\$36,003	\$58,593
Marion	18,633	\$31,427	\$52,826
Polk	274,598	\$35,754	\$70,295
Story	34,611	\$19,554	\$58,762
Warren	28,205	\$39,523	\$60,602
Central Iowa	447,558	\$34,232	\$60,251
State of Iowa	1,770,040	\$31,887	\$55,583

EMPLOYMENT DATA

	BOONE	DALLAS	JASPER			POLK	STORY		CENTRAL IOWA
Civilian employed population 16 years and over	13,803	44,329	17,428	7,971	17,090		51,305	25,345	427,376
Agriculture, forestry, fishing and hunting, and mining	432	824	681	399	610	2,736	1,222	469	7,373
Construction	787	2,068	986	713	784	15,626	2,680	1,894	25,538
Manufacturing	1,519	3,566	3,113	734	4,256	22,518	4,925	1,650	42,281
Wholesale trade	480	1,435	763	226	391	7,424	903	794	12,416
Retail trade	2,216	4,314	1,861	1,025	1,541	29,157	4,974	3,402	48,490
Transportation and warehousing, and utilities	716	1,737	877	390	638	10,549	1,352	1,305	17,564
Information	341	720	319	146	199	5,137	999	412	8,273
Finance and insurance, and real estate and rental and leasing	657	9,340	1,244	1,048	763	38,170	2,200	4,065	57,487
Professional, scientific, and management, and administration and waste management services	953	5,162	1,304	696	929	26,376	4,159	2,209	41,788
Educational services, and health care and social assistance	3,747	9,266	3,709	1,518	4,517	51,140	18,959	5,782	98,638
Arts, entertainment, and recreation, and accommodation and food services	906	2,582	1,074	457	1,217	20,980	5,165	1,332	33,713
Other services, except public administration	508	1,708	853	381	835	11,099	1,684	1,035	18,103
Public administration	541	1,607	644	238	410	9,193	2,083	1,203	15,919

The employee population reported per county includes residents from outside of the county that commute to that county for work. The largest employment industry in the region is educational services, and health care and social assistance with 98,638 employees, or 23% of the region's total employees. The second largest employment industry is finance and insurance, real estate and rental and leasing with 57,487 employees, or 13% of the region's total employees. The third largest employment industry is retail trade with 48,490 employees, or 11% of the region's total employees.

Commuter Data

The average work commute time for the region is 21.7 minutes, which is slightly longer than the state average of 19.0 minutes. Approximately 59.1% of the region works within their county of residence, which is less than the state average of 75.8%. This suggests that the region's workforce is dependent on the transportation network to get to and from their place of employment and are directly impacted by its condition.

Commuting is longest for Madison County residents and shortest for Story County residents, with a 10.5 min difference between the two. Even though Dallas and Warren counties have a smaller percentage of residents who work within the county, they generally have a shorter commute time due to being partially within the Des Moines metropolitan area. Overall Central Iowa has a slightly longer commute time compared to the state. The two counties with over 80% of residents who work in county are the areas that wholly or mostly comprise the two major metropolitan areas in the 8 county CIRTPA region.

AVERAGE COMMUTE BY COUNTY

	TOTAL POPULATION	TOTAL WORKERS OVER AGE 16	AVERAGE WORK COMMUTE TIME (IN MINUTES)	PERCENT WORKED IN COUNTY OF RESIDENCE
Boone	26,381	13,495	21.4	52.6%
Dallas	80,864	43,887	21.1	37.0%
Jasper	36,789	17,113	22.9	53.6%
Madison	15,720	7,923	28.2	43.1%
Marion	33,127	16,806	19.0	79.6%
Polk	467,235	245,995	19.4	89.7%
Story	95,888	49,825	17.7	81.3%
Warren	48,630	25,345	23.7	36.2%
Central Iowa	804,634	420,389	21.7	59.1%
State of Iowa	3,066,927	1,573,318	19.0	75.8%

Other Regional Considerations

The central Iowa transportation system must be responsive to factors beyond population and employment numbers. As such, the CIRTPA looks at a number of topics to ensure the transportation system is best serving those who live, work, and play in the region. Seven degrees of disadvantage were used to identify concentrated areas of social justice.

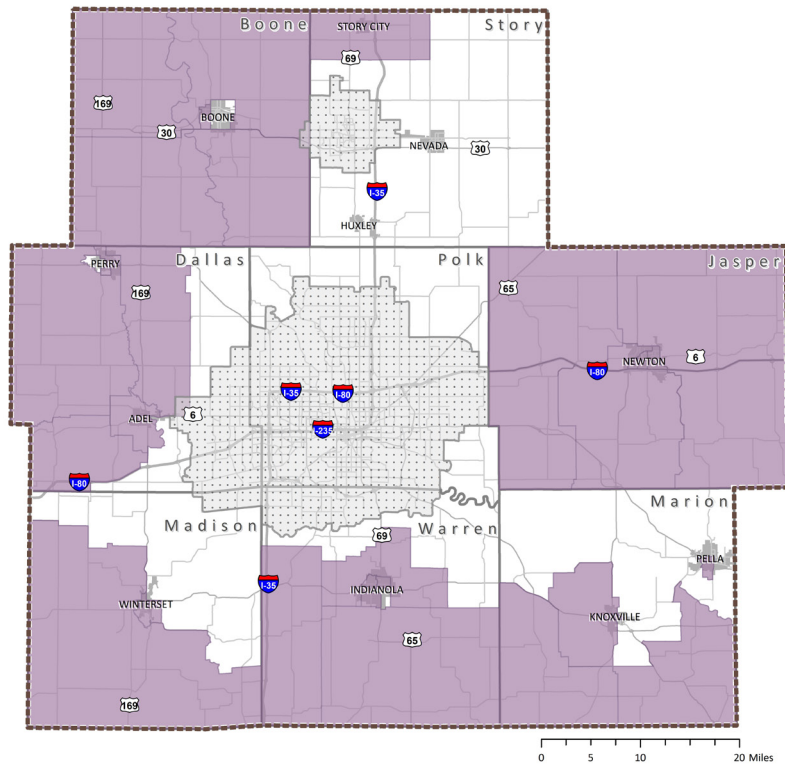
The seven degrees include:

- Households over 65
- Limited English Proficiency Households
- Carless Households
- Persons with Disabilities
- Households in Poverty
- Minority Populations
- Single Heads of Households with Children



Households over 65

Concentrations of persons over the age of 65 are important to locate, as these populations often rely more heavily on passenger transportation. The following map displays concentrated areas of persons over the age of 65. An analysis was performed to locate concentrated areas where households over 65 are located. Using 2015 American Community Survey data, the percent of the total households considered to contain someone over 65 for each census tract was calculated and compared to all census tracts in the eight-county region. Any tract that had a percentage above the regional average of 28.0 percent was determined to be a concentrated area of over 65 households. This same methodology was used for all seven degrees of disadvantage.

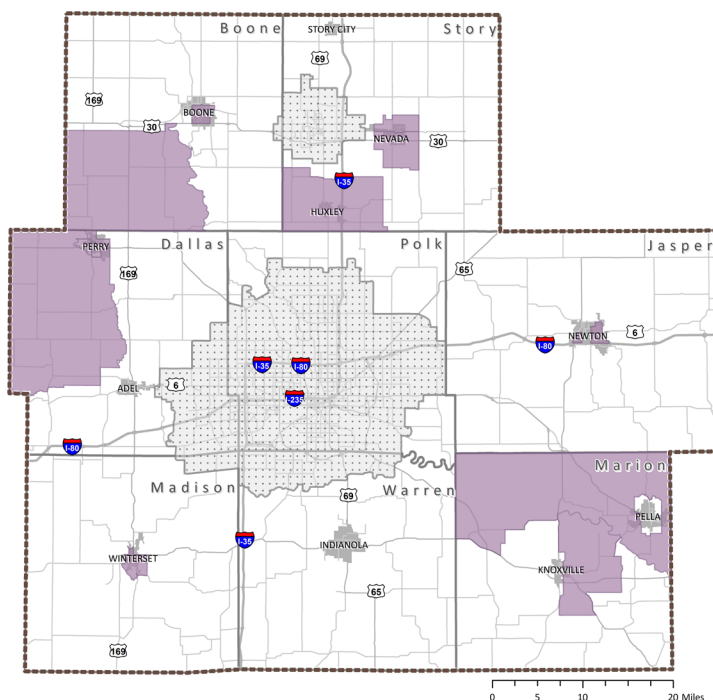


OVER 65 HOUSEHOLDS BY COUNTY

	TOTAL HOUSEHOLDS	OVER 65 HOUSEHOLDS	OVER 65 PERCENT
Boone	10,943	3,052	27.9%
Dallas	11,674	3,141	26.9%
Jasper	14,644	4,639	31.7%
Madison	6,260	1,705	27.2%
Marion	13,026	3,831	29.4%
Polk	5,566	1,243	22.3%
Story	10,067	2,489	24.7%
Warren	10,920	3,138	28.7%
CIRTPA Area	83,100	23,238	28.0%

Limited English Proficiency

To address the needs of the region's limited English proficient (LEP) population, an analysis was performed to locate concentrated areas where LEP households are located. The percent of households considered to be LEP for each census tract was calculated and compared to all census tracts in the CIRTPA region. Any tract that had a percentage above the regional average of 0.7 percent was determined to be a concentrated area of LEP populations.



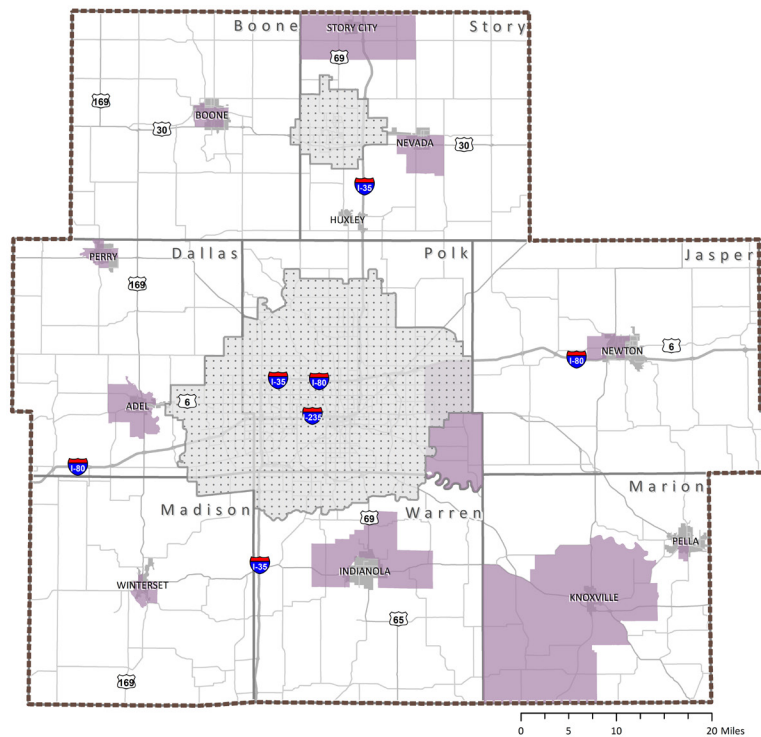
Concentrated areas of LEP populations exist in and around the City of Perry, City of Nevada, City of Perry, City of Boone, City of Newton, City of Winterset, and around the cities of Knoxville and Pella. The following table breaks down the number of LEP households by county.

LEP HOUSEHOLDS BY COUNTY

	TOTAL HOUSEHOLDS	LEP HOUSEHOLDS	PERCENT OF LEP HOUSEHOLDS
Boone	10,943	60	0.5%
Dallas	11,674	313	2.7%
Jasper	14,644	57	0.4%
Madison	6,260	44	0.7%
Marion	13,026	41	0.3%
Polk	5,566	0	0.0%
Story	10,067	71	0.7%
Warren	10,920	71	0.7%
Central Iowa	83,100	586	0.7%

Carless Households

Concentrations of carless households are important to identify because these populations often rely more heavily on passenger transportation. In our auto centric society, mobility of these populations will be severely limited. Any tract that had a percentage above the regional average of 4.4% was determined to be a concentrated area of Carless households.



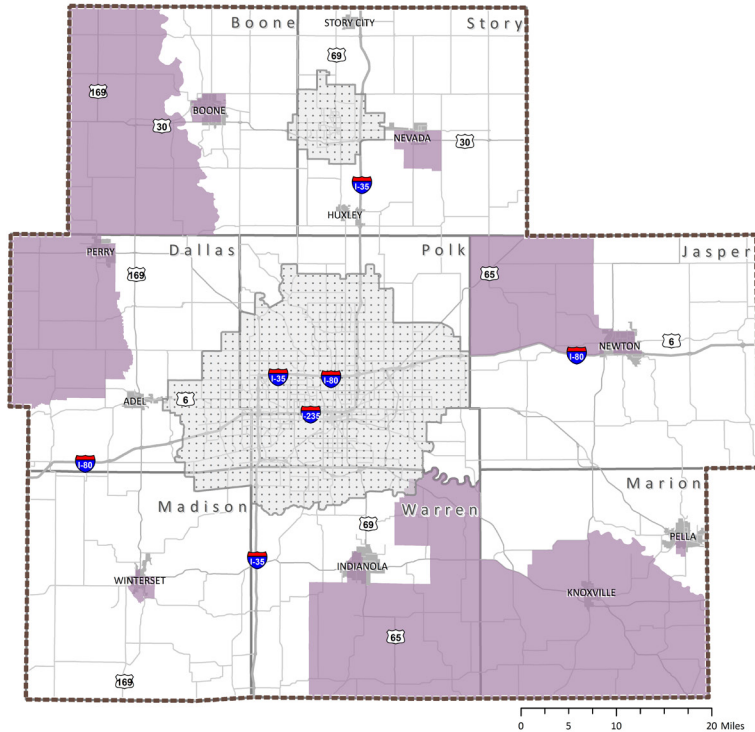
Looking regionally, the total number of carless households makes up 4.4% percent of households. Of all the counties, Marion County has the highest percent, sitting at 5.2%, and Story County has the lowest at 1.4%. The following table breaks this information down by county.

CARLESS HOUSEHOLDS BY COUNTY

	TOTAL HOUSEHOLDS	CARLESS HOUSEHOLDS	PERCENT OF CARLESS HOUSEHOLDS
Boone	10,943	491	4.5%
Dallas	11,674	606	5.2%
Jasper	14,644	689	4.7%
Madison	6,260	313	5.0%
Marion	13,026	971	5.2%
Polk	5,566	143	2.6%
Story	10,067	143	1.4%
Warren	10,920	305	2.8%
Central Iowa	83,100	3,640	4.4%

Persons with Disabilities

People with disabilities also are more dependent on passenger transportation and other medical services. Concentrated areas of people with disabilities were determined using the same methodology as the previously mentioned population groups. The following map shows that there are concentrations of disabled population groups across the CIRTPA region.



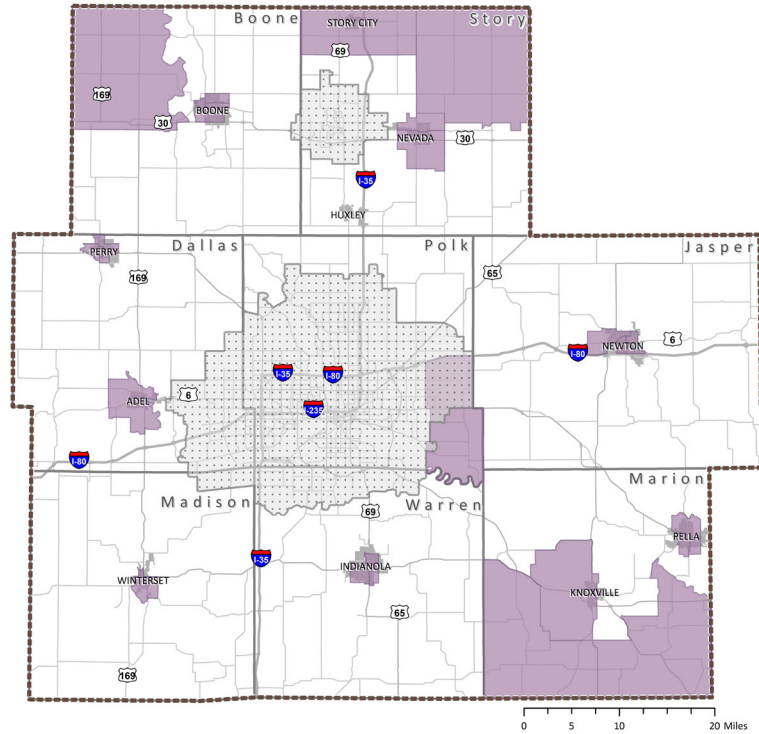
Overall, 12.4 percent of the population in the region has a disability. The county with the highest percentage is Boone County, at 14.6 percent. Polk County that is within the CIRTPA region is the lowest, with 8.0 percent of its population having a disability. The following table displays information for all areas in the CIRTPA region.

PERSONS WITH DISABILITIES BY COUNTY

	TOTAL PEOPLE	PEOPLE WITH A DISABILITY	PERCENT OF DISABLED PEOPLE
Boone	25,794	3,778	14.6%
Dallas	30,456	3,287	10.8%
Jasper	35,077	4,923	14.0%
Madison	15,475	1,904	12.3%
Marion	32,954	4,431	13.4%
Polk	15,525	1,237	8.0%
Story	25,286	2,685	10.6%
Warren	28,651	3,595	12.5%
Central Iowa	209,218	25,840	12.4%

Households in Poverty

Households in poverty are more likely to need transportation assistance to access jobs and various amenities. Concentrations of poverty are more likely to need additional transportation investments. The following map shows that poverty population groups are concentrated in cities and several rural areas.



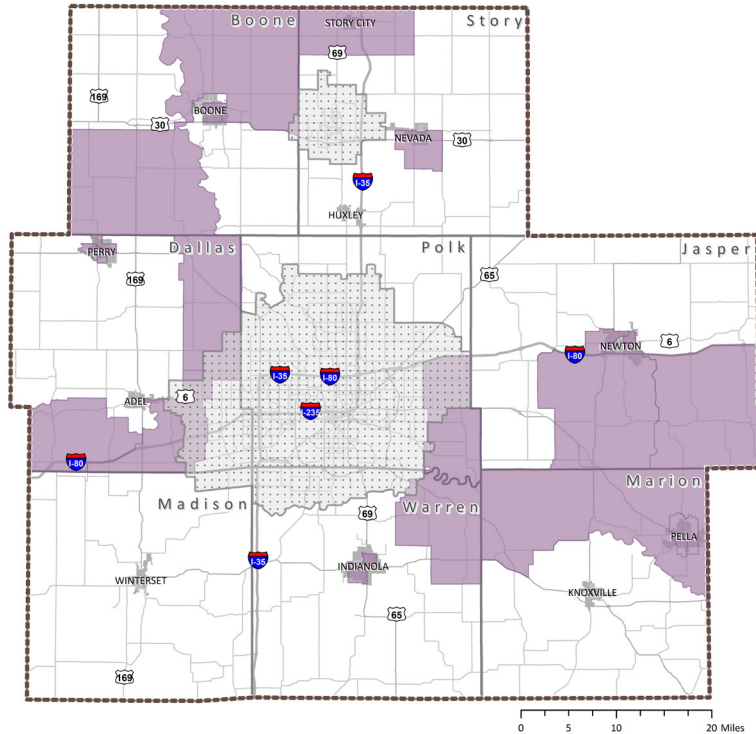
Overall, 9.2 percent of households in the region live in poverty. The county with the highest percentage is Marion County, at 10.0 percent. Polk County is the lowest, with 3.0 percent of its population living in poverty. The following table displays information for all areas in the CIRTPA region.

HOUSEHOLDS IN POVERTY BY COUNTY

	TOTAL HOUSEHOLDS	HOUSEHOLDS IN POVERTY	PERCENT OF HOUSEHOLDS IN POVERTY
Boone	10,943	989	9.0%
Dallas	11,674	1,011	8.7%
Jasper	14,644	1,420	9.7%
Madison	6,260	575	9.2%
Marion	13,026	1,305	10.0%
Polk	5,566	333	6.0%
Story	10,067	987	9.8%
Warren	10,920	1,003	9.2%
Central Iowa	83,100	7,623	9.2%

Minority Populations

Higher than average concentrations of minority populations, while not in itself something an issue, should be monitored to ensure no issues occur. For example, tracking infrastructure investment or transportation and other services to see if disinvestment is disproportionately occurring.



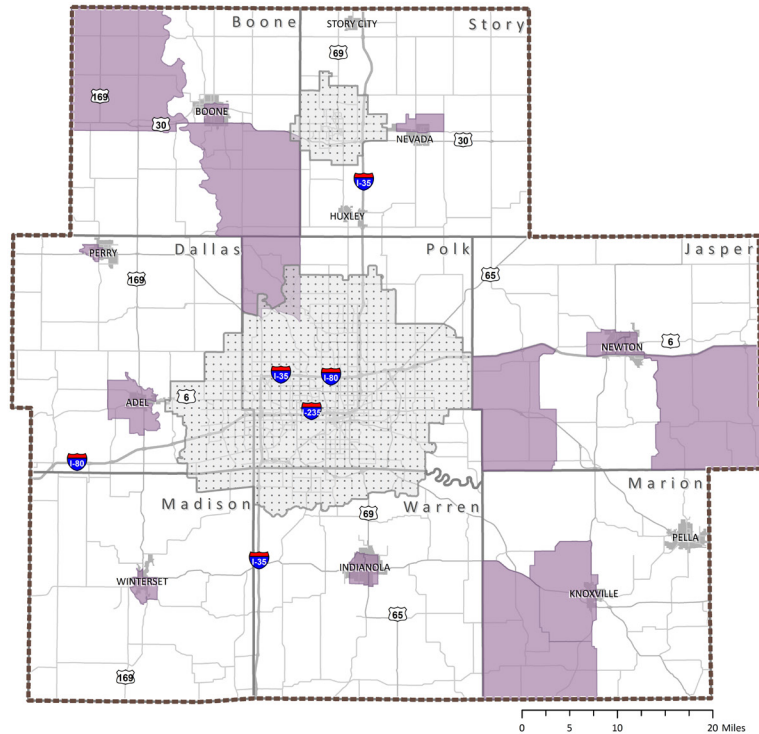
Overall, 3.9 percent of people in the region is a minority. The county with the highest percentage is Dallas County, at 6.3 percent. Madison County is the lowest, with 2.5 percent of its population being a minority. The following table displays information for all areas in the CIRTPA region.

MINORITY POPULATION BY COUNTY

	TOTAL POPULATION	MINORITY POPULATION	PERCENT OF MINORITY POPULATION
Boone	26,411	793	3.0%
Dallas	30,778	1,932	6.3%
Jasper	36,175	1,541	4.2%
Madison	15,661	394	2.5%
Marion	33,197	1,348	4.1%
Polk	16,353	440	2.7%
Story	25,636	791	3.1%
Warren	29,009	967	3.3%
Central Iowa	213,760	8,206	3.9%

Single Heads of Households with Children

Single heads of households with children may need greater access to transportation amenities and proximity to activity centers. In the CIRTPA region, most areas with higher concentrations of this group are in the larger cities, which tend to offer greater amenities than rural areas. The following map shows the locations of greater than average population concentration of heads of households with children.



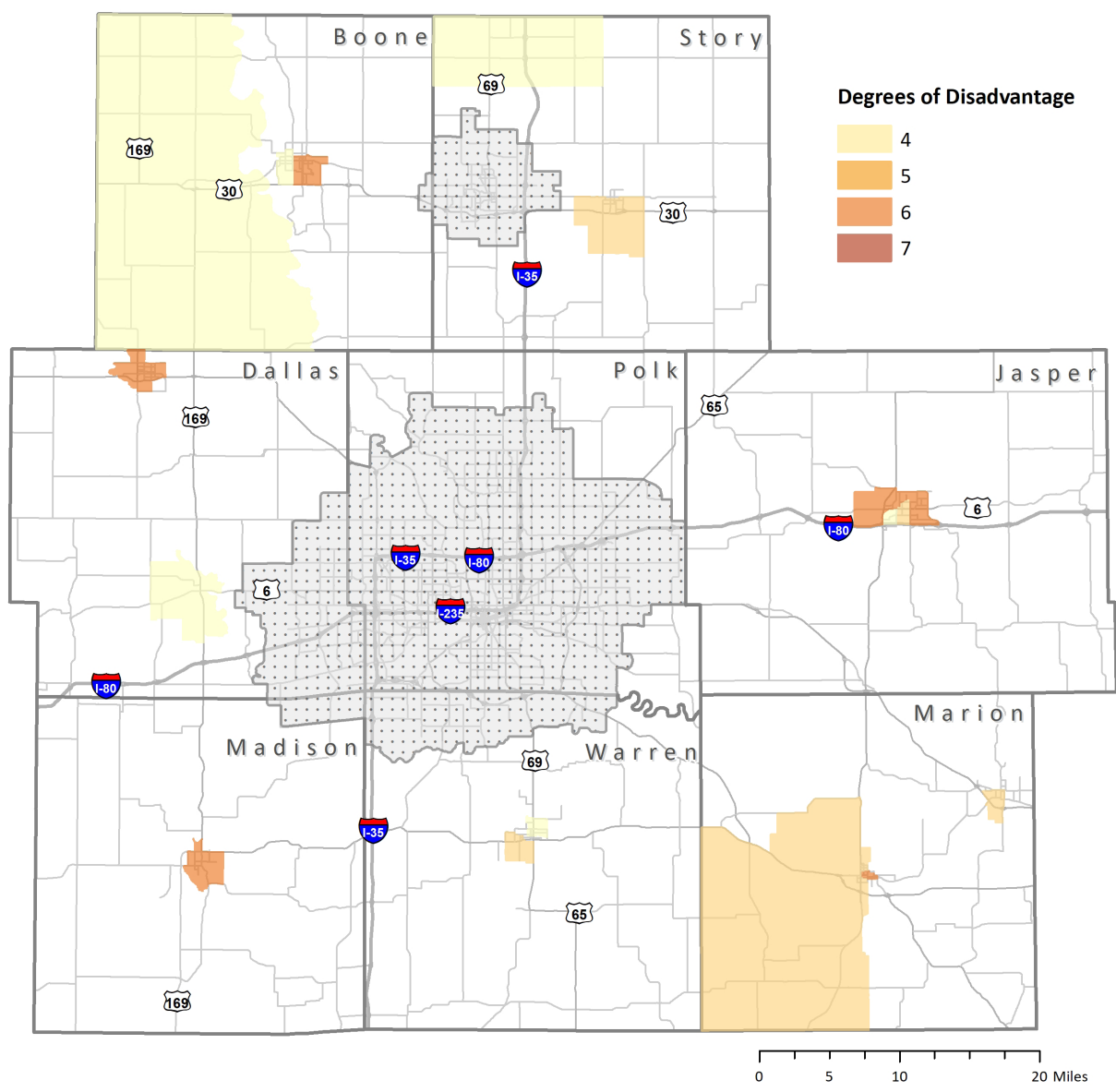
Overall, 10.8 percent of households with children are single heads of households. The county with the highest percentage is Warren County, at 15.9 percent. Marion County is the lowest, with 8.4 percent of its population living in poverty. The following table displays information for all areas in the CIRTPA region.

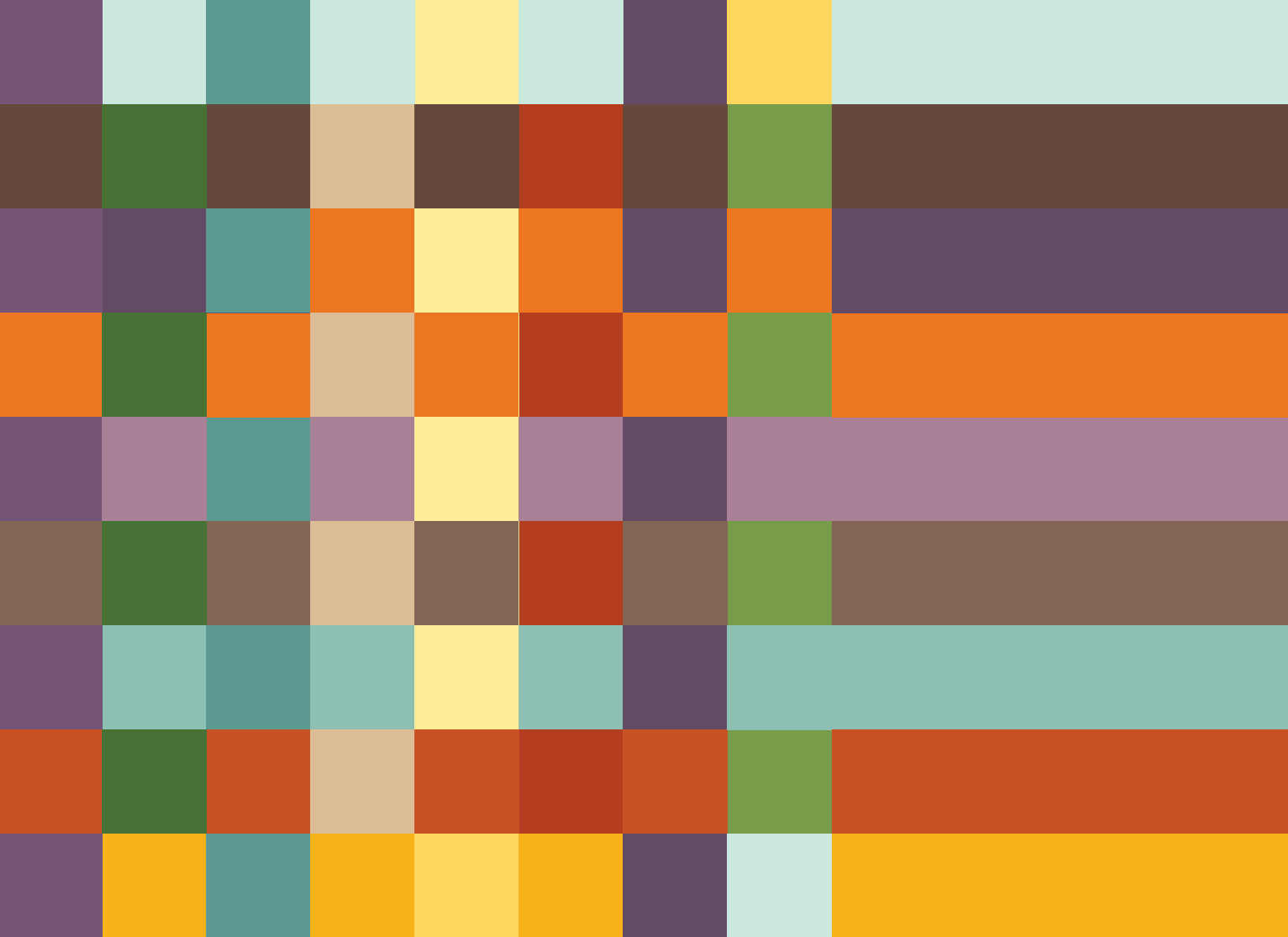
SINGLE HEAD OF HOUSEHOLDS WITH CHILDREN BY COUNTY

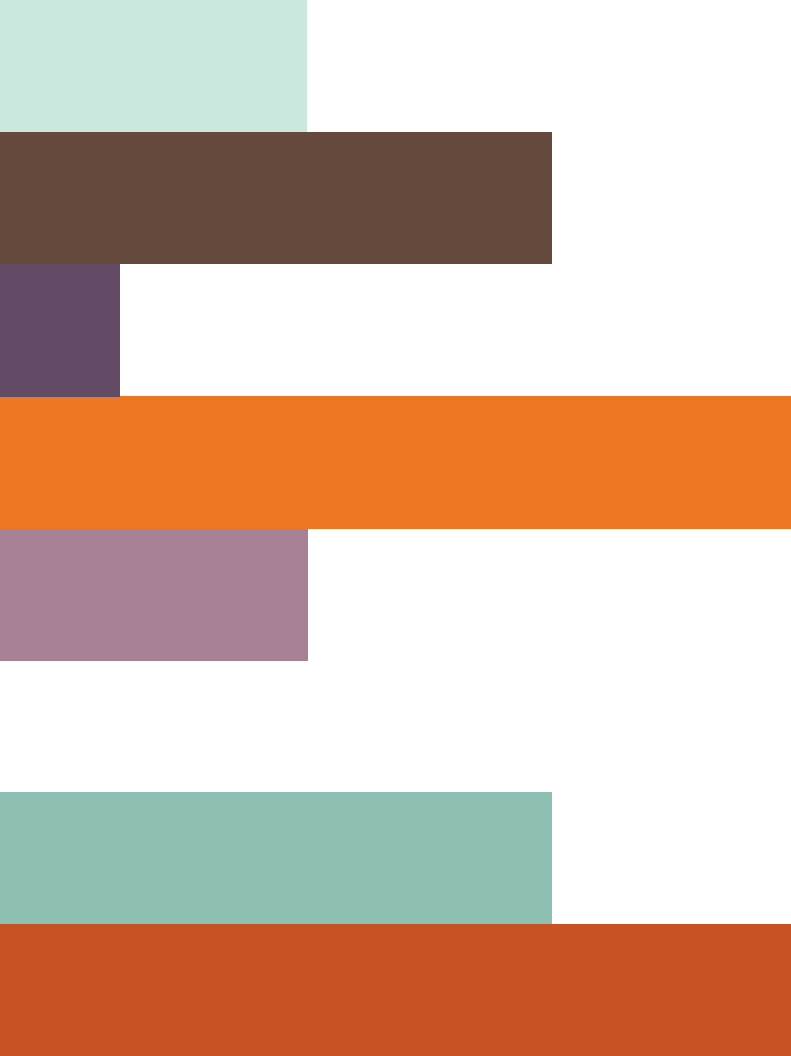
	TOTAL HEAD OF HOUSEHOLDS W/ CHILDREN	SINGLE HEAD OF HOUSEHOLDS W/ CHILDREN	PERCENT OF SINGLE HEAD OF HOUSEHOLDS W/ CHILDREN
Boone	6,975	785	11.3%
Dallas	8,292	738	8.9%
Jasper	9,786	1,193	12.2%
Madison	4,428	379	8.6%
Marion	8,666	728	8.4%
Polk	4,360	395	9.1%
Story	6,981	718	10.3%
Warren	7,819	1,244	15.9%
Central Iowa	57,307	6,180	10.8%

Degrees of Disadvantage and Environmental Justice

20 of the 54 Census Tracts in the CIRTPA region are considered an Environmental Justice (EJ) area. In order to qualify, a Census Tract must be higher than the regional average in four out of the seven Degrees of Disadvantage. There were no tracts that had the maximum seven, although several had 6 degrees. Generally, EJ areas are centered around the larger communities of CIRTPA. Most notably the six degrees of disadvantage EJ areas were centered around the cities of Boone, Knoxville, Newton, Perry, and Winterset.







5



AIR

AIR

Iowa Aviation System Plan

The Iowa Department of Transportation (DOT) produces and maintains the Iowa Aviation System Plan (IASP) to evaluate the aviation needs of Iowa's public airports over the next 20 years. The IASP includes system goals to promote the development, economic support, safety and security, accessibility, and education at Iowa's public airports. The current IASP has a 2010 to 2030 timeline and classifies public airports into one of five categories:

1. Commercial Service – “Airports that support some level of scheduled commercial airline service, have the infrastructure and services to support a full range of general aviation activity, and meet most needs of the aviation system and serve as essential transportation and economic centers of the state.” The Des Moines International Airport is the closest Commercial Service airport to the CIRTPA region.
2. Enhanced Service – “Enhanced Service airports have runways 5,000 feet or greater in length with facilities and services that can accommodate a full range of general aviation activity, including most business jets. These airports serve business aviation and are regional transportation centers and economic catalysts.” It is noted that the Ankeny Regional Airport serves as the relief airport for the Des Moines International Airport. Enhanced Service airports in the CIRTPA region include:
 - a. Ames Municipal Airport;
 - b. Ankeny Regional Airport; and,
 - c. Newton Municipal Airport.
3. General Service – “General Service airports have runways 4,000 feet or greater in length with facilities and services customized to support most general aviation activity, including small to mid-sized business jets. These airports serve as a community economic asset.” General Service airports in the CIRTPA region include:
 - a. Boone Municipal Airport;
 - b. Knoxville Municipal Airport;
 - c. Pella Municipal Airport; and,
 - d. Perry Municipal Airport.

4. Basic Service – “These airports have runways 3,000 feet or greater in length with facilities and services customized to meet local aviation demands.” The only Basic Service airport in the CIRTPA region is:

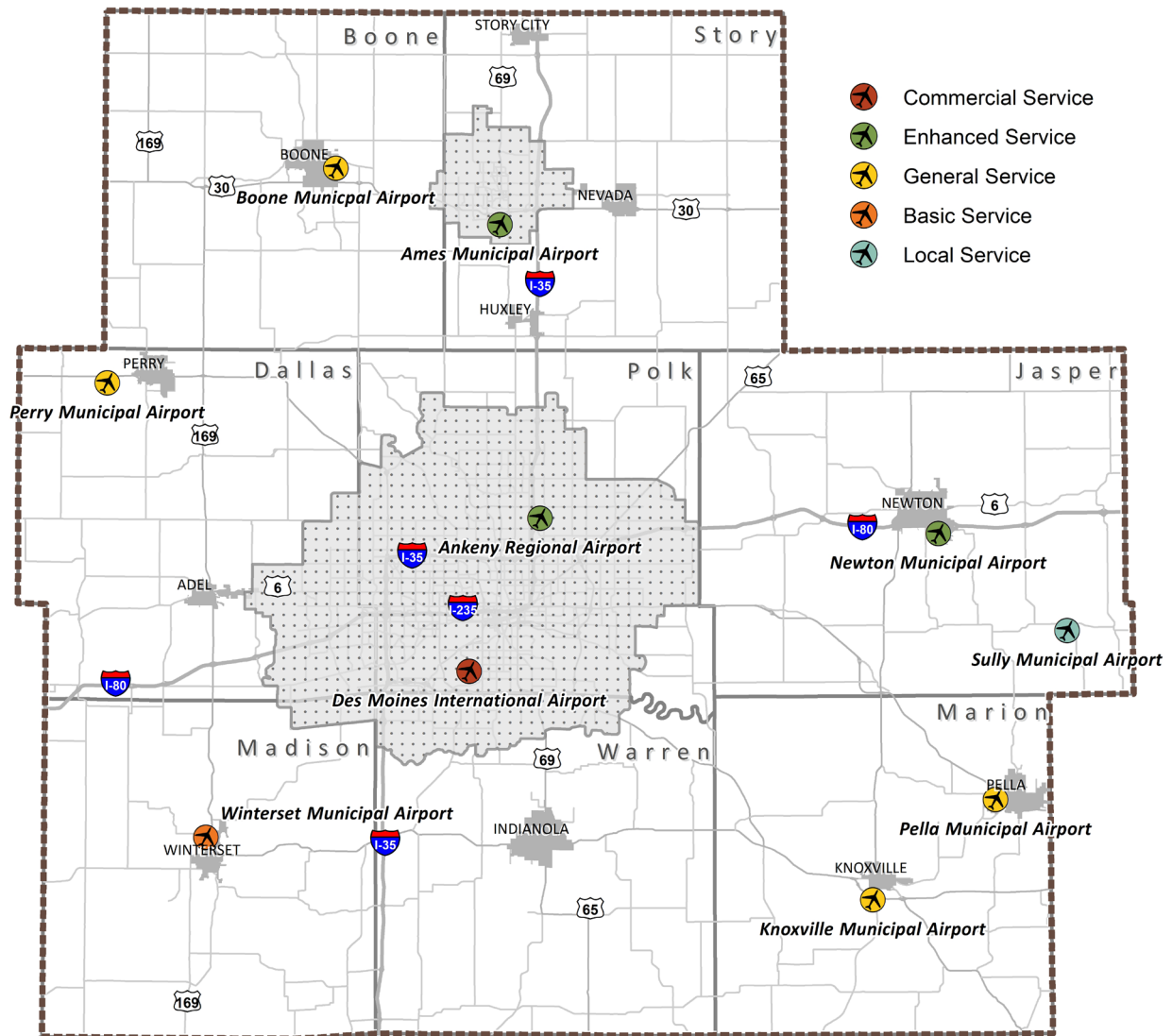
a. Winterset Municipal Airport.

5. Local Service– “These airports have runways less than 3,000 feet, many of which are turf runways, that support local aviation activity with little or no airport services.” The only Local Service airport in the CIRTPA region is:

a. Sully Municipal Airport

A summary of each airport’s specifications can be found on the following page. A map depicting the location of the public airports previously described is below.

CIRTPA AIRPORTS



Knoxville and Pella Regional Airport

In March 2012 Oskaloosa, Pella, and Mahaska County approved a 28-E Agreement forming the South-Central Regional Airport Agency. The 28-E Agreement legally solidifies the parties’ intent to move forward with an evaluation and potential construction of a regional airport. The Airport Master Plan was completed in 2015 and the environmental assessment was completed in 2017. Land acquisition was to be completed in FFY 2019 but negotiations are still ongoing. The closing of existing Pella and Oskaloosa airports and transition is slated for FFY 2024, but may be delayed due to land acquisition and construction issues.

Des Moines International Airport New Terminal

Since 2016, the Des Moines International Airport has been planning and seeking funding for the construction of a new terminal and runway improvements. The total project cost is estimated to be \$500 million, but the project is currently short \$200 million in funding. Possible funding sources include raising passenger facility charges from \$4.50 to \$8.50 per ticket and increasing the Rebuild Iowa Infrastructure fund allocation to \$16.5 million per year. Unless the additional funding mechanisms are secured, the construction of the terminal is unknown.



Boone Airport

Perry

Perry and the Dallas County region have experienced substantial growth and impacts from the rapidly growing Des Moines metro and the expansion of industry. Perry Municipal Airport is the only airport in Dallas County, serving as a hub for the region and significantly contributing to the local and state economy. The airport is currently in the process of expanding their service capabilities to accommodate the regional growth by constructing a new 4,000 foot runway, partnered with the FAA.

There is a significant need to lengthen this runway to 5,500 feet to safely accommodate aircraft operating in the region and doing business in Dallas County. Unfortunately, while the FAA supports the additional runway for the airport there is a lack of available funding to complete the work. The current project is anticipated to be in service by 2022 at an estimated cost of \$9,680,000. Additional funding of approximately \$5,000,000 are need for the additional runway length for the airport.

The goal of the airport expansion is to create a facility that can accommodate increased business aviation demand. The programmed improvements to the Perry Municipal Airport will provide additional opportunity for national firms to start or expand presence within Dallas County.

Additionally, constructing the runway to a length of 5,500 feet will aid in keeping regional Dallas County businesses operating in the region. The City of Perry continue to work with their partners is gaining funding for the necessary extension to complete the overall project. Once the improvements are complete, this airport will provide an opportunity for those doing commerce on the western side of the metro to have a facility that can accommodate their needs.

AIRPORT SPECIFICATIONS

AIRPORT	BASED AIRCRAFT	% CHANGE SINCE 2012	OPERATIONS 2012	% CHANGE SINCE 2012	MAXIMUM RUNWAY LENGTH	MAXIMUM RUNWAY WIDTH
Des Moines International*	111 (2019)	-5.9%	71,175 (2019)	-17.1%	9,003 feet	150 feet
Ankeny*	94 (2016)	-2.1%	48,545 (2016)	-0.1%	5,500 feet	100 feet
Ames*	75 (2016)	-15.7%	33,580 (2016)	-0.5%	5,700 feet	100 feet
Boone	40 (2018)	17.6%	20,805 (2018)	0.5%	4,800 feet	75 feet
Knoxville	43 (2017)	2.2%	9,855 (2017)	-36.0%	4,000 feet	75 feet
Pella	33 (2016)	22.2%	13,870 (2016)	-0.5%	5,400 feet	75 feet
Winterset	29 (2017)	26.1%	4,732 (2017)	-17.7%	3,000 feet	50 feet
Perry	28 (2019)	33.3%	4,732 (2019)	-9.9%	4,000 feet	75 feet
Newton	23 (2015)	27.8%	9,125 (2015)	13.9%	5,599 feet	100 feet
Sully	0 (2016)	-	600 (2016)	140%	2,130 feet	120 feet

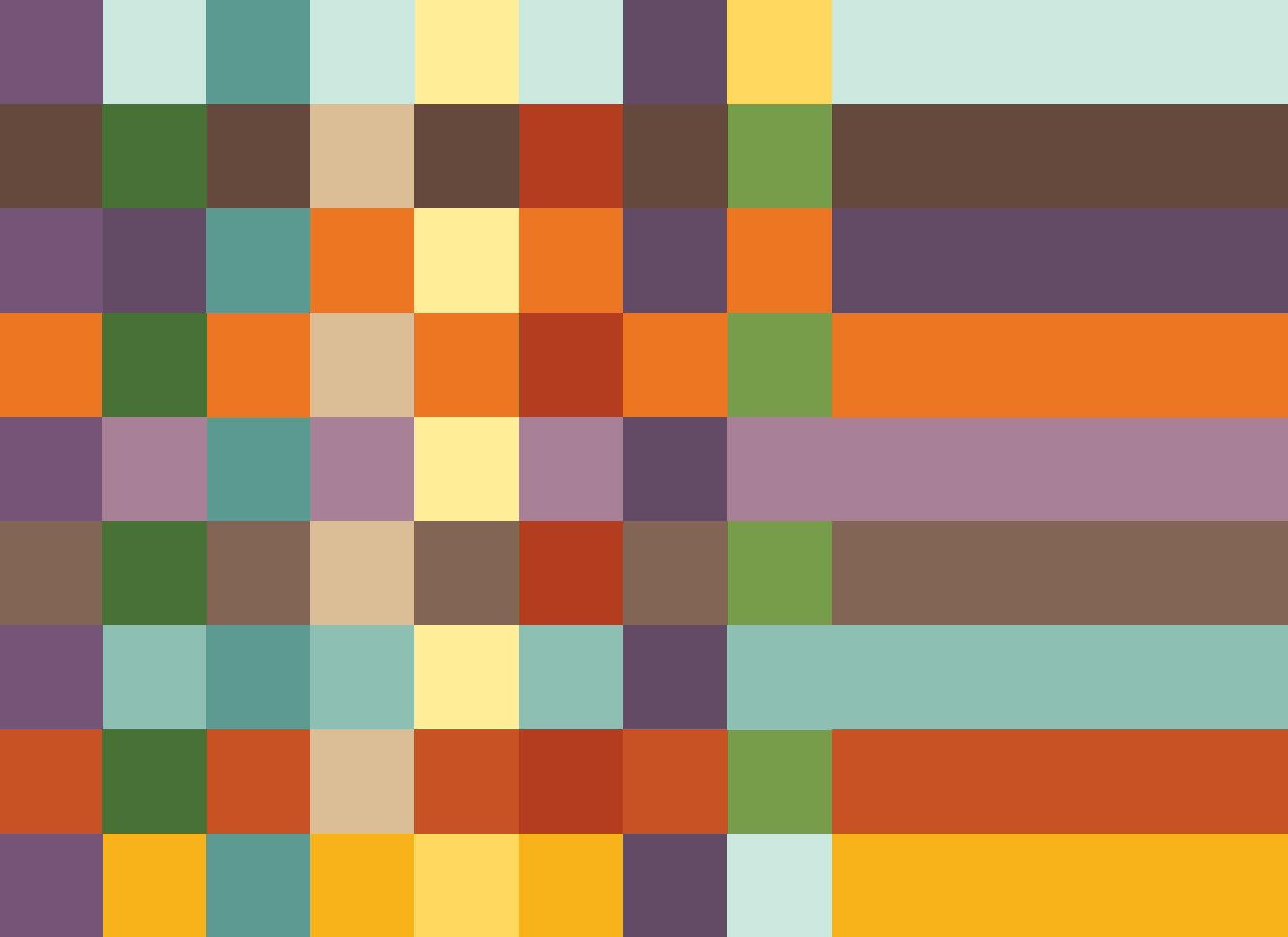
*Outside of the CIRTPA area

Airport Improvements

According to the Iowa DOT, Aviation Division, from 2012 to 2018 airports within the CIRTPA planning area have seen over \$1.5 million in investments that have either state or federal funding included. Other minor investments, including other funding sources, were not included.

Funding for smaller airports is always limited and never enough to fully maintain necessary infrastructure but for the most part, managers have kept airports operating efficiently. However several airports have seen double digit percentage drops in operations since 2012. With steady or declining airport usage, it will become more difficult to fund needed repairs moving forward.

CIRTPA will continue to monitor regional airport usage and work with airport managers to provide resources and expertise as needed.





6

FREIGHT + GOODS MOVEMENT

FREIGHT + GOODS MOVEMENT

Freight Overview

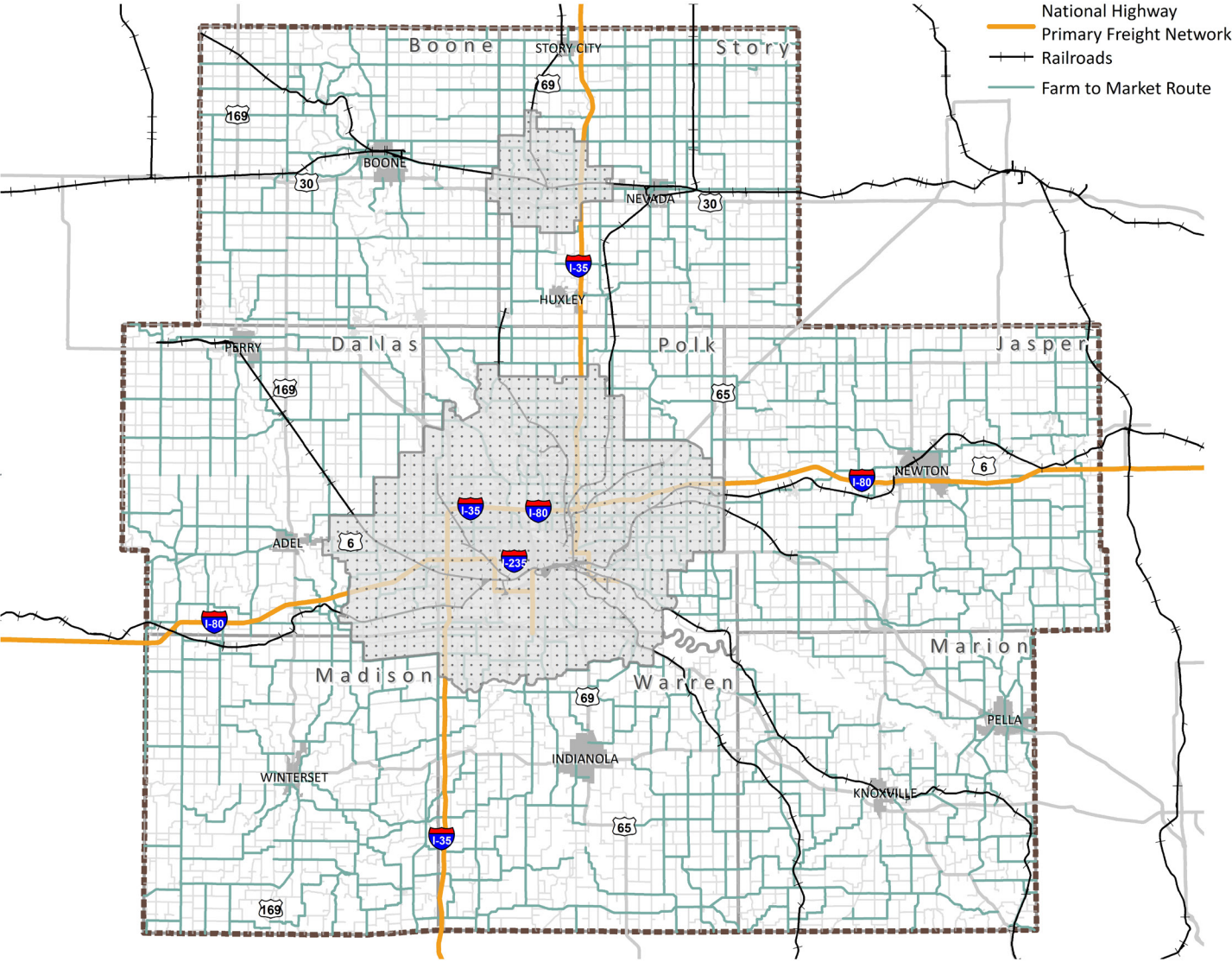
Freight and Goods Movement is a critical component of the CIRTPA regions transportation network. The movement of freight through the CIRTPA region occurs primarily via two modes, truck and rail.

A significant amount of the freight traffic in the region is pass-through traffic via the regions two Interstate Highways, I-80 and I-35. Economic activity within the CIRTPA region does generate a large amount of outbound freight through the agricultural and manufacturing industries. The movement of these goods creates a significant amount of wear and tear on the region's transportation infrastructure. Maintenance issues created by freight as well as the economics that the industries creating the freight generate are a major contributor to the decision-making process that CIRTPA must consider.

A map of the freight network within the CIRTPA region is included on the following page.



FREIGHT NETWORK

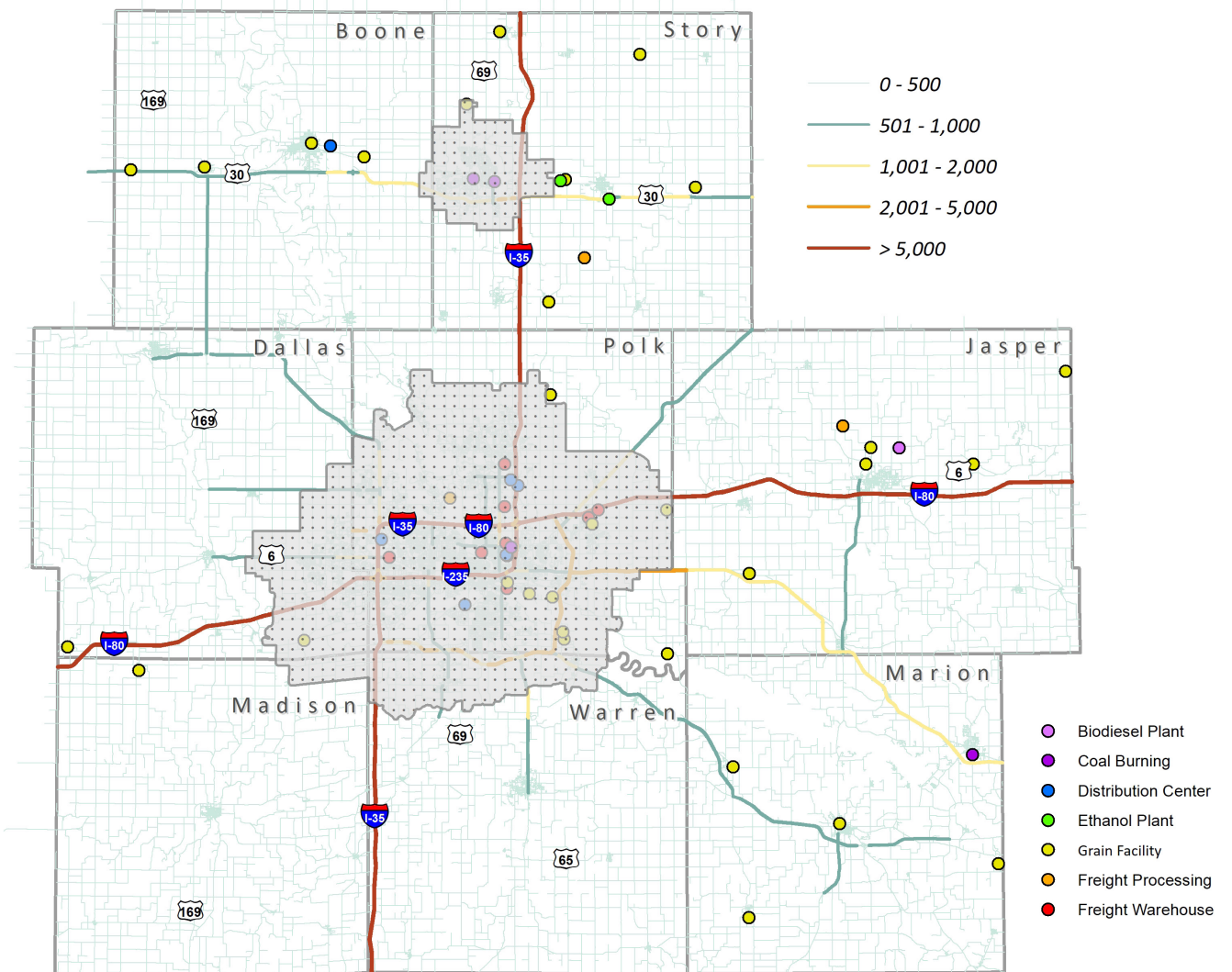


Freight on the Roadway

In 2006, the DMAMPO conducted the Goods Movement in Central Iowa and in the Des Moines Metro Area: 2006 Update Report (2006 Goods Movement Study). The 2006 Goods Movement Study states that by 2020 a large amount of truck freight traffic in central Iowa will be concentrated on Interstate 35, Interstate 80, Interstate 235, U.S. 30, U.S. 65, U.S. 6, U.S. 169, and IA 163. Reebie Associates data used in the 2006 Goods Movement Study showed that trucks in and out of central Iowa moved 80 million tons (94% of the tonnage for all modes) of goods in 2001. This totaled roughly \$62 billion or 95% of the total value of all shipments that year.

Without an update to this study, freight movements on roadways are notoriously difficult to track. However current truck traffic volumes are available and can be seen below. Major truck movements are concentrated on the Interstates, but Highways 5 and 163 sees over 1,000 trucks a day and other routes such as Highways 5 and 65/69 have over 500 trucks a day.

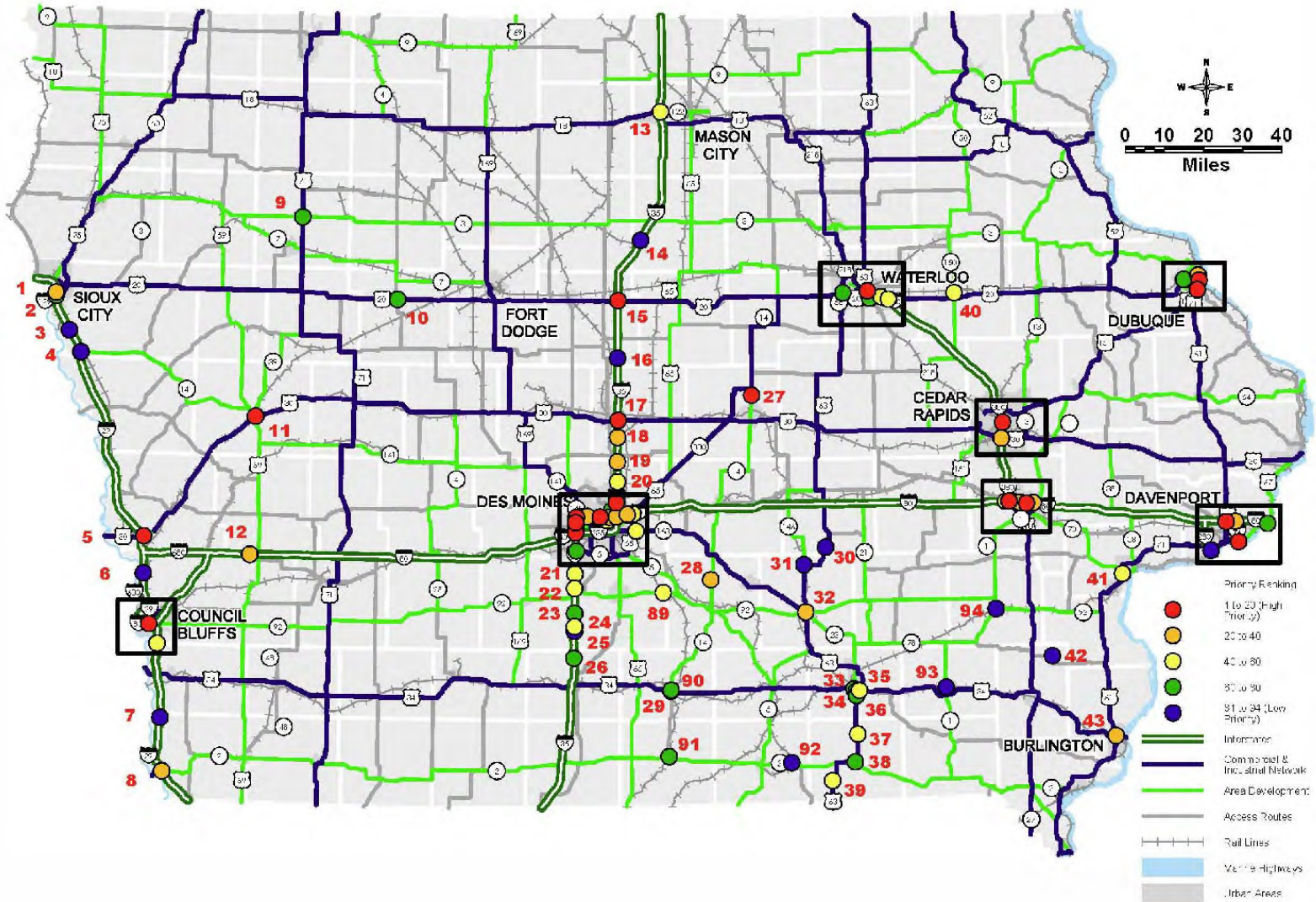
TRUCK AADT AND FREIGHT GENERATORS



Typical freight generators, such as grain facilities, freight warehousing, biodiesel plants, etc. are generally located near larger freight corridors. However, it is not a requirement as several generators are in the county not near larger population centers.

Additional constraints to freight flow are freight bottlenecks that are identified in the Iowa DOT's State Freight Plan - Iowa in Motion. Below is the map from that plan and generally such impediments are on major freight corridors (i.e. the Interstate System). Several non-Interstate bottlenecks are identified in the CIRTPA area. More information about the development of these bottlenecks are available in the full freight plan.

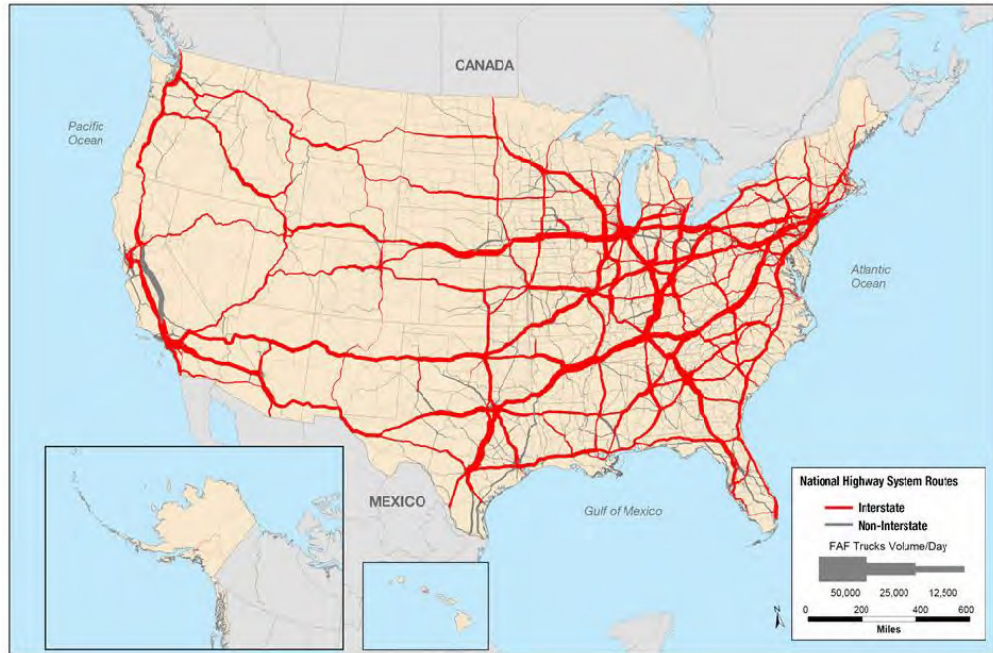
HIGHWAY FREIGHT BOTTLENECKS



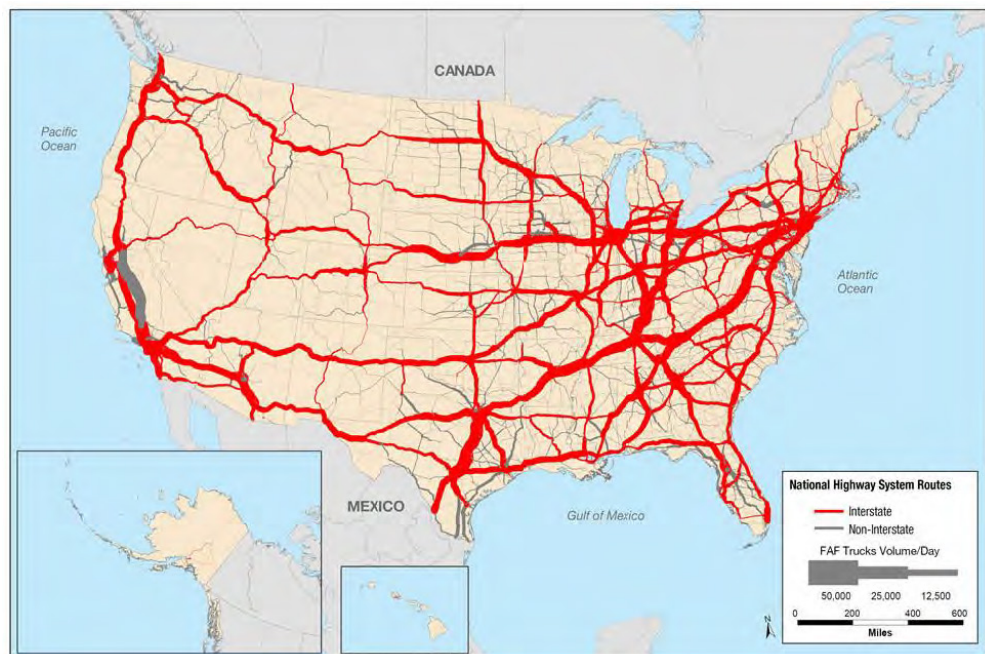
Freight Roadway Growth

According to Iowa in Motion, Iowa truck traffic is expected to grow by 32.4 percent in 2040. Most growth will be on the Interstate system, but some growth is expected on the rest of the highway system and locally near identified freight generators. The maps below, taken from Iowa in Motion, show the expected increase in truck traffic on major U.S. roadways from 2011 to 2040.

AVERAGE DAILY LONG-HAUL TRAFFIC ON THE NATIONAL HIGHWAY SYSTEM, 2011



AVERAGE DAILY LONG-HAUL TRAFFIC ON THE NATIONAL HIGHWAY SYSTEM, 2040



Freight by Rail

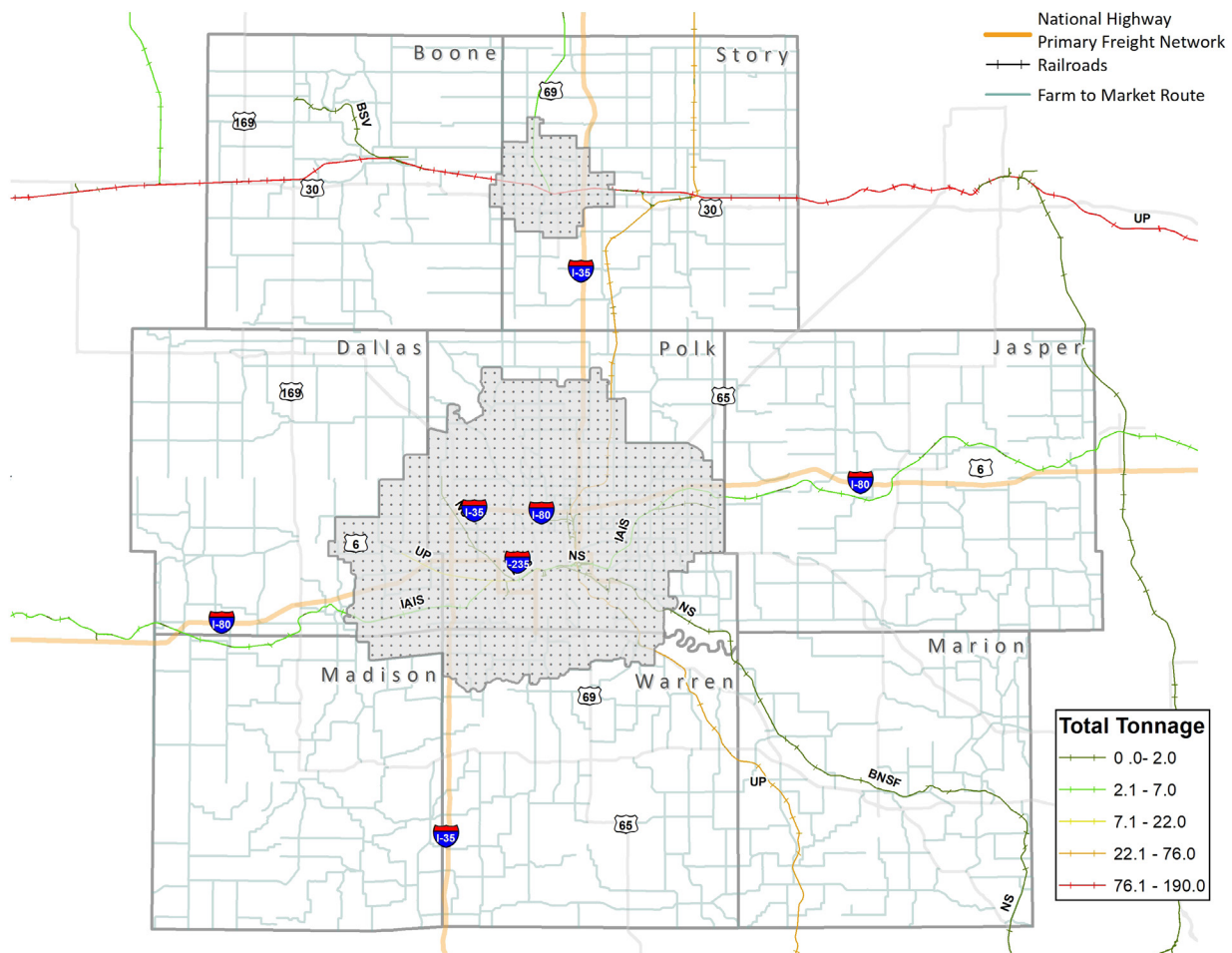
The rail transportation system in the CIRTPA region is currently used exclusively for freight transportation to, from, and through central Iowa. As of 2019 there are four railroads operating within the CIRTPA region. The four railroads are:

- Class I Railroads
 - Burlington Northern Santa Fe (BNSF);
 - Norfolk Southern (NS); and,
 - Union Pacific (UP).
- Class II Railroad
 - Iowa Interstate Railroad (IAIS).

Combined, these four railroad companies operate a total of 523 miles of track within the central Iowa region and provide central Iowa with regional, national, and global connections.

The most utilized tracks is the UP line going east-west while the second ranked track is the UP line running north-south.

RAIL FREIGHT MOVEMENT



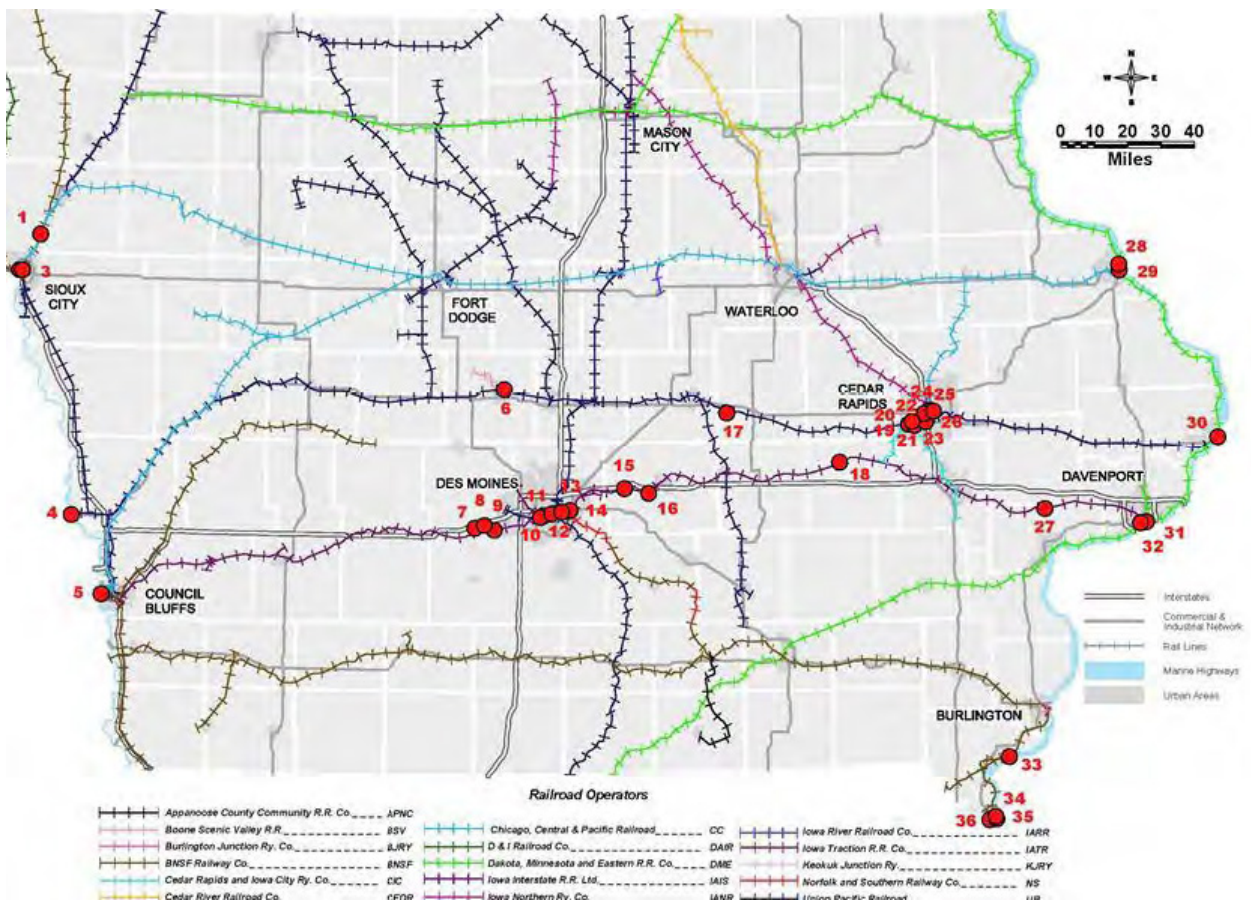
The maps on the following pages, taken from the Iowa DOT's Railplan, show Polk County by far has the most total inbound and outbound tonnage of any county in Central Iowa. Only Boone, Dallas, Story, and Warren counties, besides Polk County, send freight by rail and the amount sent is under 200,000 tons per year. Conversely, only Marion and Warren counties do not have rail freight destined to those two counties. Interestingly Story County imports more than it exports on rail, with inbound shipments ranking higher than output.

The state report also estimates that total state outbound rail tonnage will grow 34.7% between 2013 and 2040. Inbound tonnage is expected to increase by 44.0% during that same time period. It is anticipated that Polk County, and in particular the Des Moines Metro Area will see most, if not all, of the growth for Central Iowa.

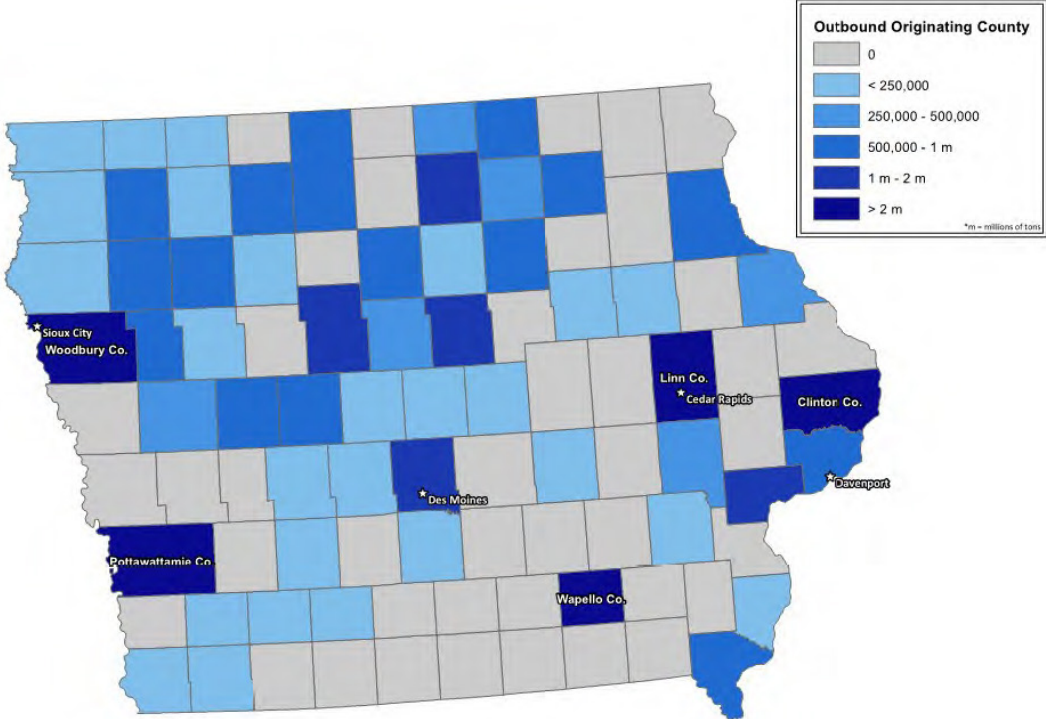
Rail Bottlenecks

As with highways, railroad bottlenecks were identified that influence freight rail traffic. The Iowa DOT's Railplan shows that nearly all bottlenecks in Central Iowa are on the east-west IAIS line in and around the Des Moines Region. There is one bottleneck located on the east-west UP line near the City of Boone.

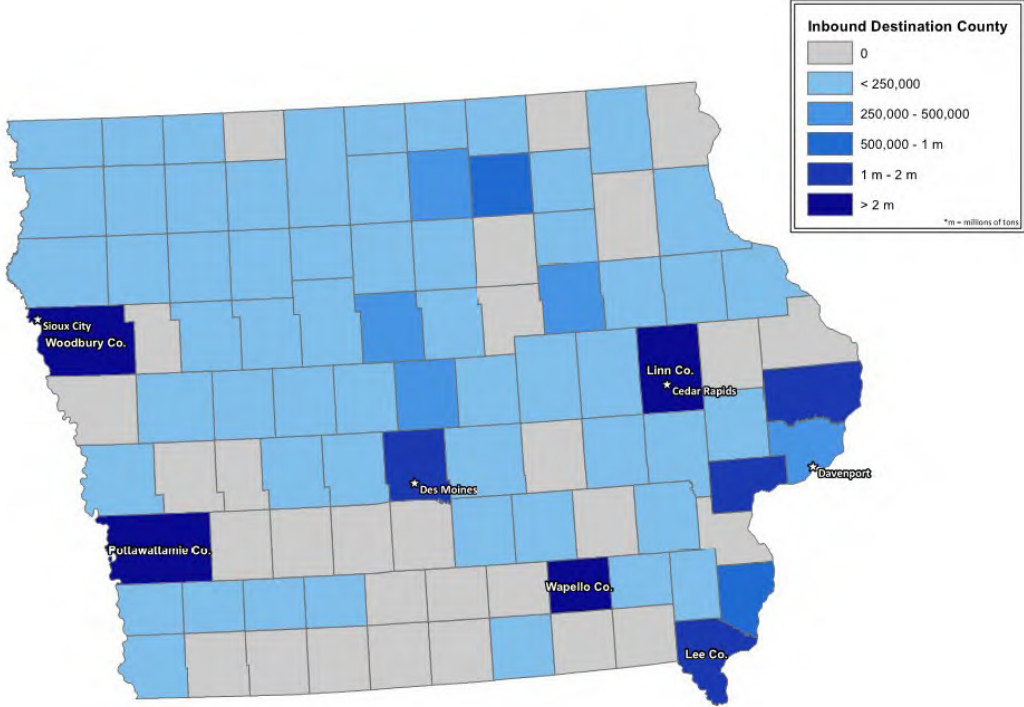
IOWA RAIL NETWORK BOTTLENECKS MAP



RAIL OUTBOUND TOTAL TONNAGE BY IOWA COUNTY ORIGIN, 2013



RAIL INBOUND TOTAL TONNAGE BY IOWA COUNTY ORIGIN, 2013



Air Freight

The CIRTPA region does not include a major freight-generating airport. The Des Moines International Airport (DMIA) is the only freight-generating airport in Central Iowa and is located in the Des Moines Area MPO planning area. While not located in the CIRTPA region, the freight generated at the DMIA will have an effect on the CIRTPA's transportation system as goods are moved from the DMIA to areas within CIRTPA, and through CIRTPA to other parts of the state and the Midwest.

The table below shows data taken from the Iowa in Motion Plan. From 2005-2014, there was a 36% drop in the pounds of air freight handled at the DMIA. During that same time frame, the percentage of DMIA's total air cargo only dropped 9.2%. This indicates that while the rest of the state's airports also saw a decrease in air freight, the decrease wasn't as fast as the DMIA's.

DES MOINES INTERNATIONAL AIRPORT CARGO STATISTICS

YEAR	TOTAL AIR CARGO POUNDS	% OF TOTAL IOWA AIR CARGO
2005	204,369,161	80.9%
2006	205,274,902	79.4%
2007	201,526,176	79.3%
2008	180,882,388	76.6%
2009	145,494,828	75.5%
2010	123,300,470	71.3%
2011	135,797,823	72.1%
2012	148,241,365	74.2%
2013	129,470,911	72.6%
2014	130,790,339	71.7%
% Change	-36.0%	

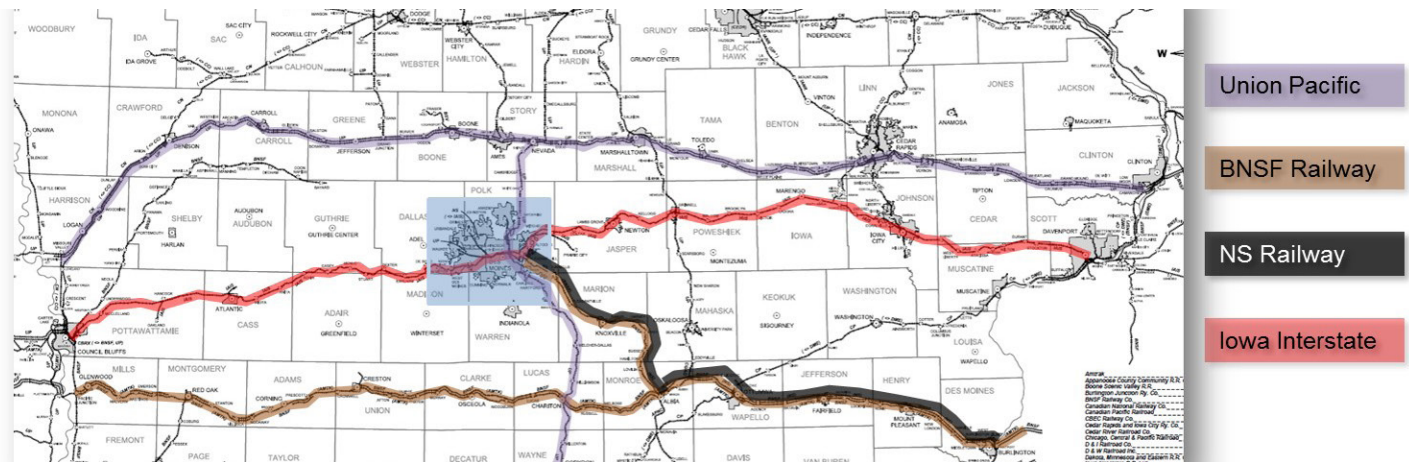
Intermodal Freight and Transloading

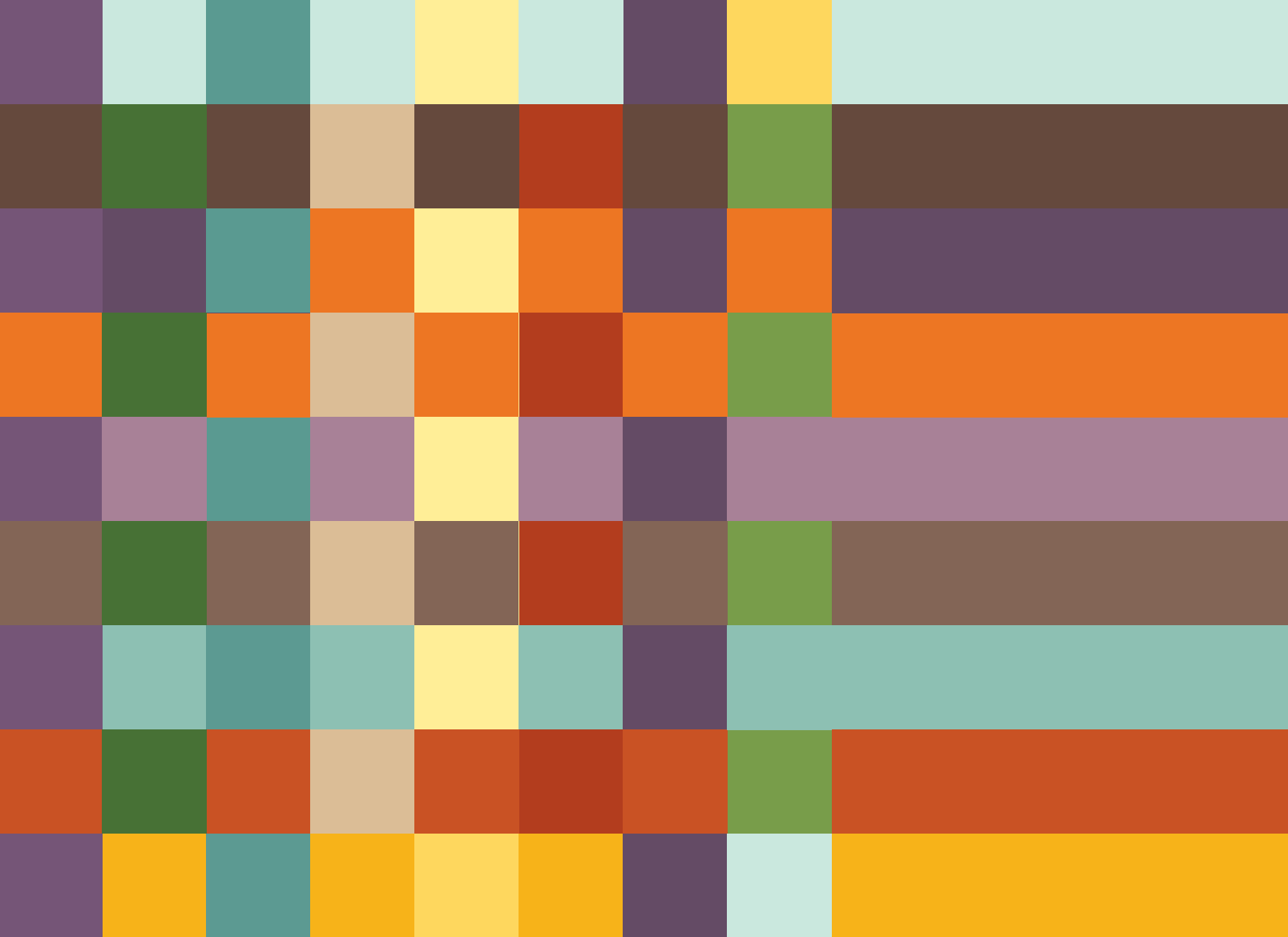
Intermodal freight transportation is the movement of freight using multiple modes of transportation without the need to transfer cargo between containers. Transloading is simply the movement of goods from one mode of transportation to another. With transloading the goods may or may not have containers and the process is not as seamless as intermodal.

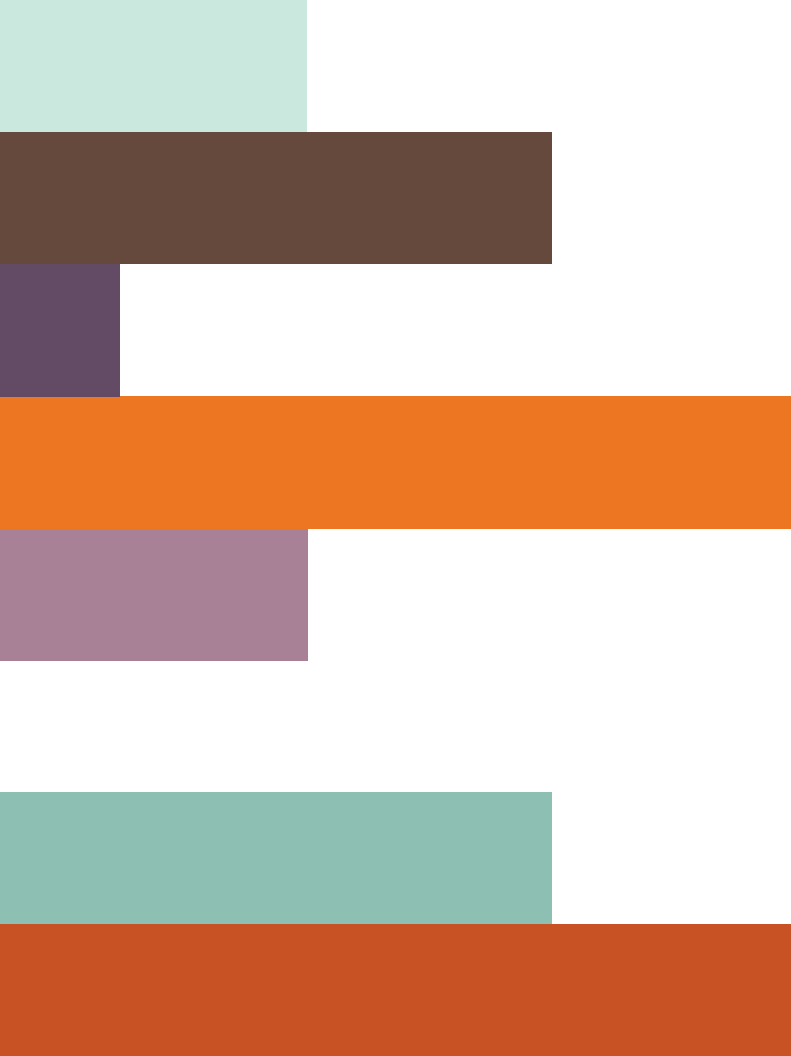
The CIRTPA region does not contain any major intermodal or transloading operations. Smaller facilities at individual businesses, grain elevators, and ethanol plants do offer the ability for specific goods to change modes of transportation. However; a dedicated facility specifically for the transfer of multiple types and sizes of goods from one mode to another requires transportation outside of the CIRTPA region.

Since 2012, the Des Moines Area MPO has been working to establish a transload facility near Des Moines's downtown in an area where three Class I and one Class II rails converge. Since that time, funding has been secured through a zero-interest loan from the Iowa DOT and an \$11.2 million BUILD grant to construct the facility. An operator has been selected and the project is currently awaiting NEPA clearances and facility construction. The project is expected to open in Fall of 2020.

Once in operation, rail shipping is expected to increase significantly due to the competitive advantage of potential shipping rates from multiple rail lines. Additionally, the transload facility will increase the number and type of commodities available for shipping on rail.







7



BICYCLE +
PEDESTRIAN
FACILITIES

BICYCLE + PEDESTRIAN FACILITIES

Bicycle and Pedestrian Facilities Inventory

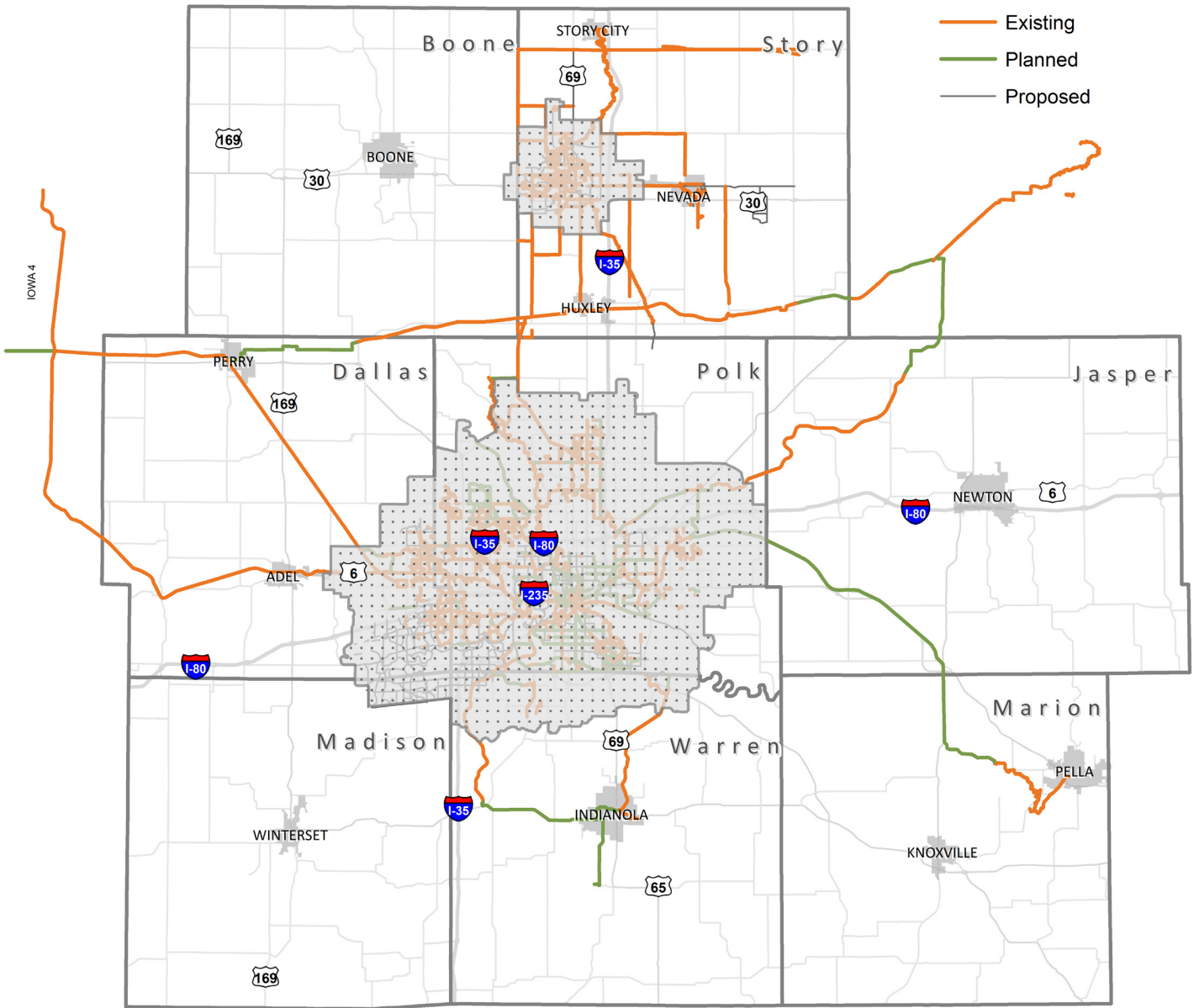
The bicycle and pedestrian facilities of central Iowa are an important part of the recreational and alternative commuter transportation options in the region. Representatives from the CIRTPA region serve on the Central Iowa Bicycle and Pedestrian Roundtable (Bike-Ped Roundtable). The Bike-Ped Roundtable supports the development of a bicycle and pedestrian facility network that connects communities within central Iowa to each other and the rest of the state. The Bike-Ped Roundtable completed the Central Iowa Bicycle and Pedestrian Transportation Plan (CONNECT Plan) in August, 2009 to analyze the development of facilities in central Iowa.

The major trails within the CIRTPA planning area are:

- Raccoon River Valley Trail
- Great Western Trail
- High Trestle Trail
- Neal Smith Trail
- Heart of Iowa Nature Trail
- Chichaqua Valley Trail
- Summerset Trail
- Volksweg Trail
- American Discovery Trail

Those trails located in the CIRTPA region can be seen on the map on the following page.

BICYCLE AND PEDESTRIAN FACILITIES



Miles of Facilities in the CIRTPA Region

The CIRTPA's planning area has 256.4 miles of bicycle and pedestrian facilities as of December 2019. Combining the planned and proposed facilities, the CIRTPA planning area could have an additional 100 miles of additional facilities in the future. The table below includes a breakdown of the facilities by type within the CIRTPA region.

MILES OF BICYCLE + PEDESTRIAN FACILITIES

FACILITY TYPE	EXISTING	PLANNED	PROPOSED
Bike Lane	6.7	-	6.8
Shared Use Path	161.7	65.4	19.9
Trail	68.4	-	7.3
Walkway	0.6	-	-
Single Track	19	-	-

The map on the previous page displays existing, planned and proposed trails. Existing facilities are those that have been constructed in the region and are currently in use. Planned facilities are a specific project with a defined location and purpose. Typically planned facilities have received some funding or at least will be constructed at a definite date in the future. Proposed facilities are conceptual projects for future consideration.

The level of significance for the trail facilities is broken up into four categories as defined below and included in a map on the following page:

Level 1 - State Significance - Must first meet all of the criteria described in Level 2. Must span two or more counties and be recognized by the State of Iowa/Iowa DOT as a Level 1 Trail. A decisive knowledge of the trail boundaries must exist. Alternatively, must receive approval by the Central Iowa Bicycle – Pedestrian Roundtable;

Level 2 - Regional Significance - Must first meet all of the criteria described in Level 3. Must exist in two or more city or county jurisdictions. Must connect places, street or trails of significance to the central Iowa region. Alternatively, must receive approval by the Central Iowa Bicycle - Pedestrian Roundtable;

Level 3 - Jurisdiction Significance - Must first meet all of the criteria described in Level 4. Must be a minimum of eight feet in width. Must connect places, streets, or trails of jurisdictional significance. Alternatively, must receive approval by the Central Iowa Bicycle - Pedestrian Roundtable; and,

Level 4 - Local/Neighborhood Significance - Must meet the minimum criteria to be designated as a Shared-Use Path, Bicycle Lane, or Bicycle Route, as specified in the Manual on United Traffic Control Devices, Millennium Edition; which designates as follows:

Other facilities are defined as follows:

Trail - A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way within an independent alignment. Trails might also be used by pedestrians, skaters, joggers, and other non-motorized users;

Bicycle Lane - A portion of a roadway that has been designated by signs and pavement markings for preferential or exclusive use of bicyclists; and,

Bicycle Route - A system of bikeways designated by the jurisdiction having authority with directional and informational route markers, with or without specific bicycle route numbers. Bicycle routes, which might be a combination of various types of bikeways, should establish a continuous routing.

Shared Use Path – Similar to a trail however it is designed with all non-motorized users in mind.

Single Tracks – A narrow mountain biking trail that is approximately the width of a bike.

Iowa Bicycle and Pedestrian Long Range Plan

The State Bicycle and Pedestrian Long-Range Plan was adopted by the Iowa DOT in December of 2018 and is a much more recently updated document than the CONNECT plan. It includes new analysis, innovate practices, and planning techniques that were not available in previous planning efforts. The statewide plan should be referred to for updated information and state of the art planning practices.

New to the statewide plan is the removal of a hierarchy of trails. Levels of trails will no longer be used, rather a trail will be either part of the statewide trail network (which includes regional trails) or local trails that are part of a local trail network. Specifically, the plan identifies two types of statewide networks for bicycle and pedestrian mobility:

1. **A statewide network of multi use trails** - The Iowa DOT will prioritize trails that make significant contributions to improving state and regional connectivity.
2. **A statewide network of national trails and US Bicycle Routes** - This network comprises the American Discovery Trail, the Mississippi River Trail, and the Lewis and Clark Trail as well as several US Bicycle Routes.

In addition to the numerous statewide network recommendations the state plan introduces the concept of a Complete Street Policy, which is a policy that streets are for all people and not just for certain modes of transportation. While CIRTPA has not formally adopted a complete streets policy nor encouraged its members to do so, moving forward staff will review the applicability of a Complete Street Policy for member governments.

Given that the Connect Plan is slated for updating in 2020, it will most likely move towards following the state's example and eliminate levels of trails within the CIRTPA area. The state plan will prove to be a guiding document as the Connect Plan goes through the update process.

The Iowa Data Bike

Since the approval of the last CIRTPA LRTP, the Des Moines Area MPO developed the Iowa Data Bike in the winter of 2016. The bike is an electric assist cargo bike that is outfitted with equipment designed to measure the quality of pavement in Central Iowa's trails. Additionally, it includes a camera mounted to the back of the bike that is geo-referenced for additional review of pavement condition. There is also a 360-camera mounted on a pole that provides imagery used for Google Street View.

The goal of the Iowa Data Bike is to provide trail managers with similar information as the streets data that the Iowa DOT provides so that pavement condition can be tracked over time and allow for better trail maintenance planning.

During the summer and fall of 2017, the Iowa Data Bike collected approximately 400 miles of roughness data, over 100,000 photos of the trail surface, and more than 2,700 photos for Google Street View. The initial report created in 2018 shows that the trail network in Central Iowa trail is in good condition with 86 percent of trail miles in smooth or very smooth condition. Additional information is available in the 2018 Data Bike report.



Since its inception, the Iowa Data Bike has always been viewed as a collaboration between the Des Moines Area MPO and CIRTPA. Given the hundreds of interconnecting trails between the two areas, it was impossible to collect data for all trails but the majority of areas did get data collected.

In 2018 some additional trail data was collected that was not part of the initial ride. Also part of the collaboration process the bike was loaned to the City of Ames so that both city and county trails could have data collected. It is a goal to make a bike available to regional communities to help fill their data collection needs.

In 2019 the trail network was recollected and during that ride, it was determined that Central Iowa trails are generally in great condition with 95% of trail miles being in very smooth or smooth condition. However there are still localized issues that do occur and some trails are in better condition than others. Additional information can be found in the 2019 Iowa Data Bike Trails Report.

The MPO and CIRTPA will continue to refine this new program and consult with trail managers to better assist them in their programming and planning needs.



Photo courtesy of MPO staff.

Bicycle and Pedestrian Funding Sources

State Recreational Trails Program – provides funds for public recreation trails. State agencies, counties or cities and non-profit organizations are eligible to apply for funding. Sponsors must provide a 25% match, guarantee the maintenance of the trail for 20 years, and projects must be a part of a local, area-wide, regional, or statewide trail plan.

Federal Recreational Trails Program – provides funds to maintain motorized and non-motorized trails and trail-related projects. Public agencies, non-profit organizations, and private organizations can request funding through this program; however, private organizations must have a public agency as a co-sponsor. Sponsors must provide a 20% match and guarantee the maintenance of the trail for 20 years.

Surface Transportation Block Grant Transportation Alternative Program – provides funds for the enhancement or preservation activities of transportation related projects including trails, bikeways, safe routes to school, historical, archeological, scenic, and environmental. Eligible sponsors include; local governments, regional transportation authorities, transit agencies, natural resource or public lands agencies, school districts, local education agencies, or schools, tribal governments, or any other local or regional government entity with responsibility for oversight of transportation or recreational trails (other than an MPO or State agency that the State determines to be eligible). A non-eligible project sponsor (such as a non-profit) may partner with an eligible co-sponsor in applying for funds. A 20% match is required. For specific eligible project types please refer to the Iowa DOT.

Surface Transportation Block Grant Program – Bicycle and pedestrian facilities are an eligible category under this program.

Iowa Clean Air Attainment Program – The Iowa Clean Air Attainment Program provides funds to projects that improve air quality. A 20% match is required.

Future Planning and the Funding Process

CIRTPA programs bicycle and pedestrian facilities into future years, typically four years out. Projects are applied for on an annual basis. Applications are submitted and scored by members of the TAP Review Committee made up of area stakeholders and trail managers. Those applying for funding cannot be part of the committee. The scores are compiled by CIRTPA staff and the committee makes a formal recommendation to the CIRTPA Technical Committee and Policy Committee. The CIRTPA Policy Committee has final approval for funding distribution.

Promoting Livability and Bicycle Safety

Goal 3 of this plan is to promote livability, which incorporates many different aspects of a community. Livability, as it relates to transportation, mainly looks at non-auto oriented modes of transportation. In the CIRTPA region this relates to bicycle and pedestrian paths and bus transportation services (HIRTA).

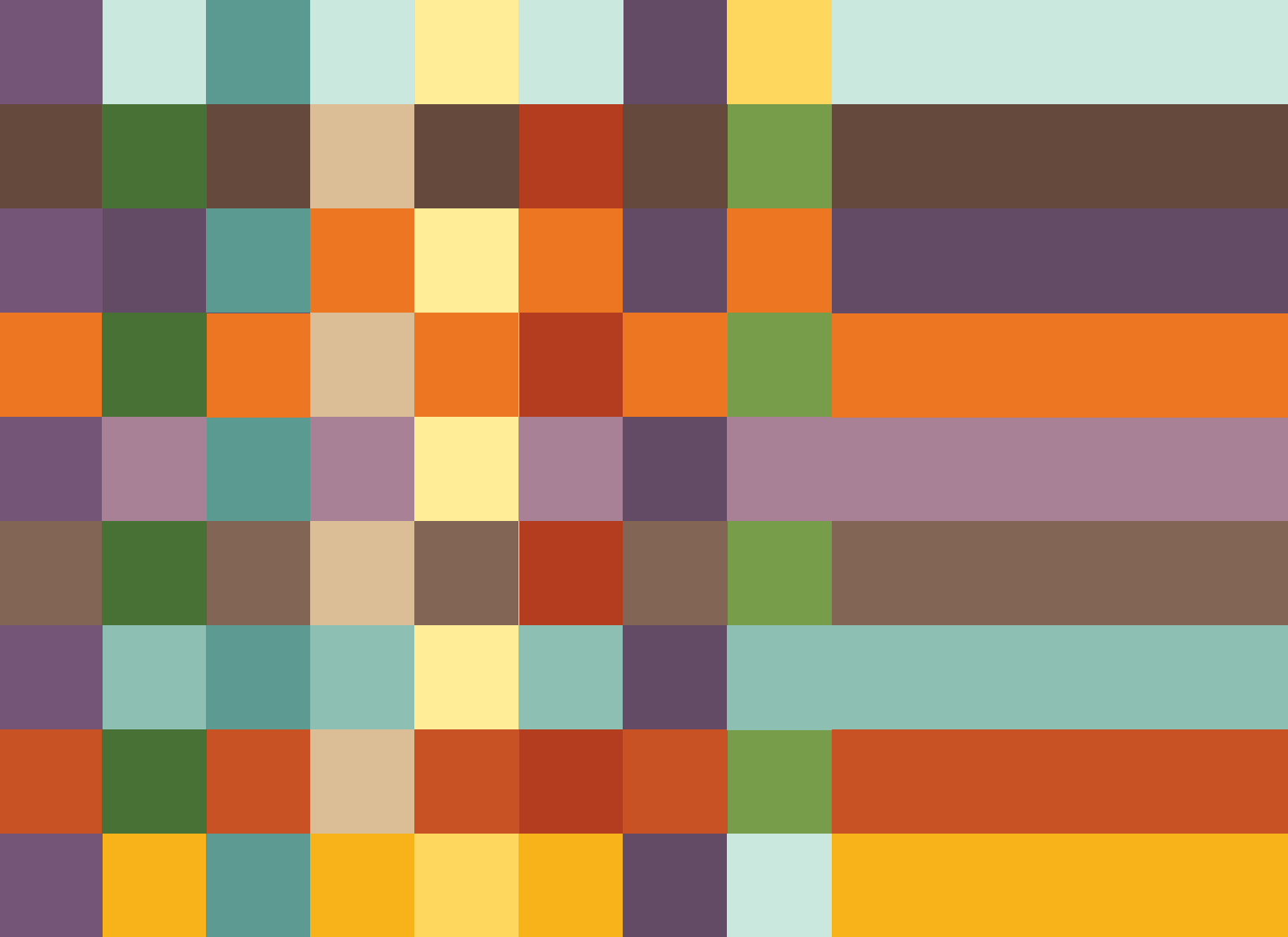
Given the limited ways to measure livability within a transportation focus, the performance measures for to track the number and miles of trails, as well as tracking HIRTA rides. With all of these measures, the overall goal is to increase their numbers.


However, there are several obstacles that makes these improvements difficult. The largest is that bike/ped infrastructure is often a low priority for many communities. Even though it is touted as an economic development tool, traditional economic development measures are more heavily utilized.

CIRTPA will continue to promote active transportation alternatives, including investments in needed infrastructure. With the impending update to the CONNECT plan additional information will be incorporated into that document and CIRTPA's planning process.



Photo courtesy of MPO staff.





8

ENVIRONMENT AND
WATERWAYS

WATERWAYS

Lakes + Rivers

The CIRTPA region contains no waterways that are used for transportation purposes. The largest bodies of water in the CIRTPA region are:

- Lake Red Rock – located in north central Marion County;
- Saylorville Lake – located in northwest Polk County; and,
- Big Creek – located in northwest Polk County.

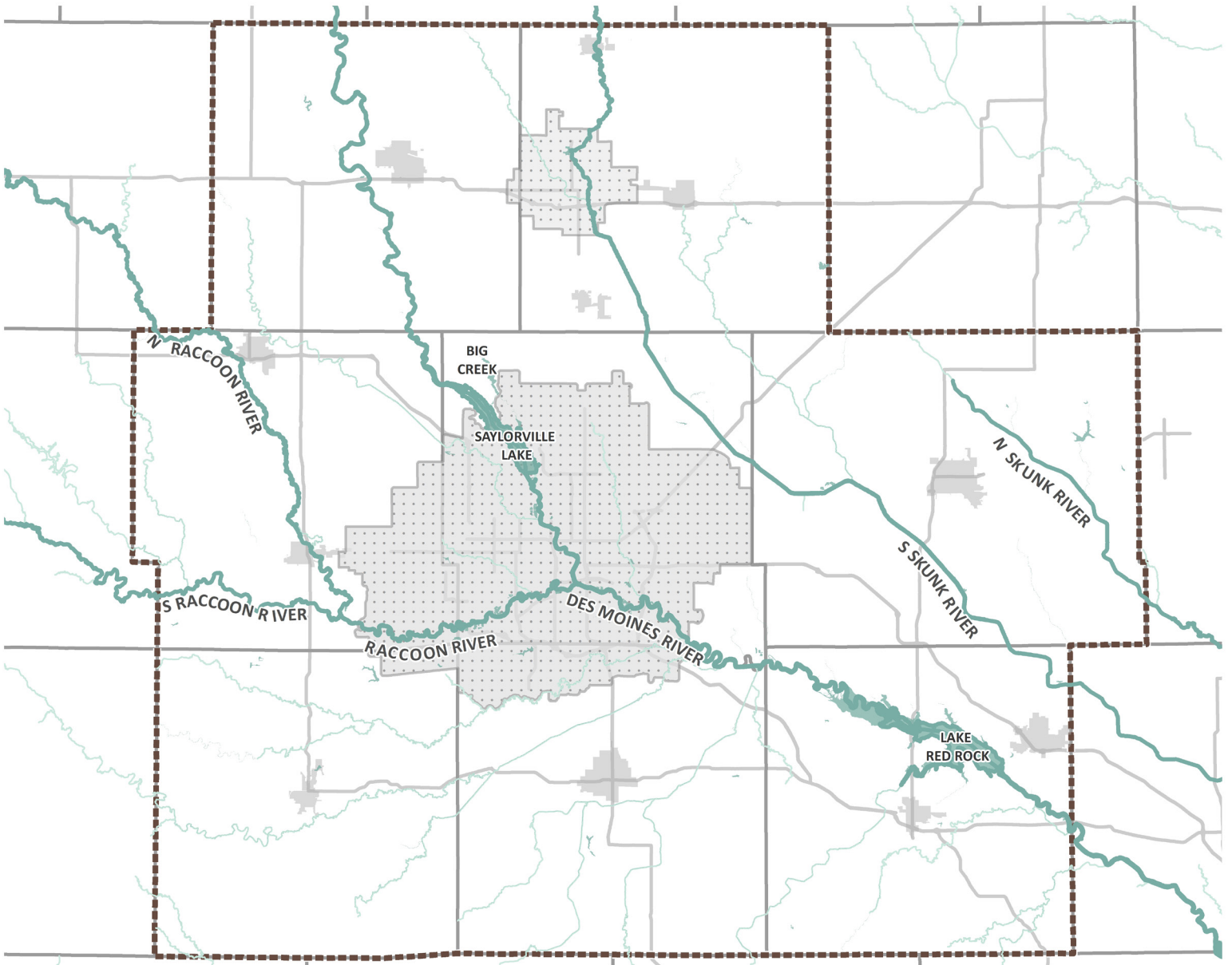
The primary purpose of Saylorville Lake and Lake Red Rock is flood control. Water levels in these lakes can be volatile and are subject to control by the US Army Corps of Engineers. Varying water levels can have a significant impact on the CIRTPA region. During wet years there is a potential for spillover and flooding, while in dry years there is a potential for water restrictions to users in impacted areas. It is also noted that Lake Red Rock is home to a new hydroelectric power plant, currently in the construction phase, the plant is scheduled to become operational by 2020. There are also economic impacts as recreational users may be banned or restricted depending on water levels.

In addition to these lakes the Des Moines River, Raccoon River, and the Skunk River flow through the CIRTPA region. The primary impact that these three rivers have on the CIRTPA region is the potential for flooding and associated road closures and detours. Road closures and detours due to flooding can have a significant impact on farmers and other motorists that need to navigate the region.

These bodies of water and their surrounding areas attract boaters, anglers, campers, hunters, bicyclists, hikers, and other recreational users. The CIRTPA region can expect to have higher amounts of traffic to these resources in the summer months, when weather permits more users access to the lakes.

A map of these waterways is located on the following page.

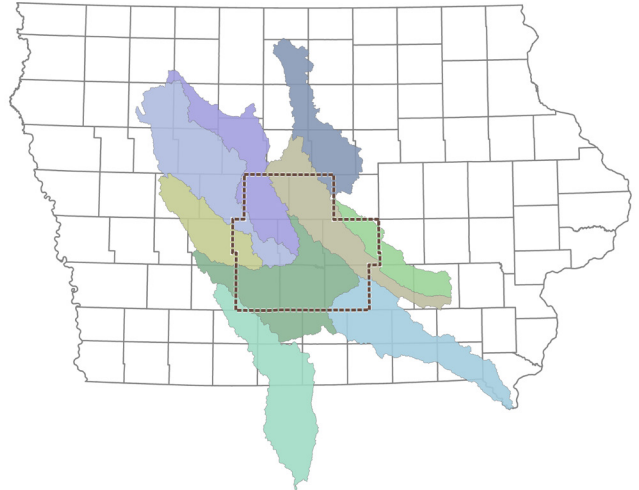
CIRTPA WATERWAYS



Watersheds

Watersheds are defined by the United States Environmental Protection Agency as the area of land where all of the water that is under it or drains off of it goes to the same place. There are nine primary watersheds that impact the CIRTPA region. These watersheds are:

- Lake Red Rock;
- North Skunk;
- South Skunk;
- Iowa Upper;
- North Raccoon;
- South Raccoon;
- Des Moines Middle;
- Des Moines Lower; and,
- Thompson.

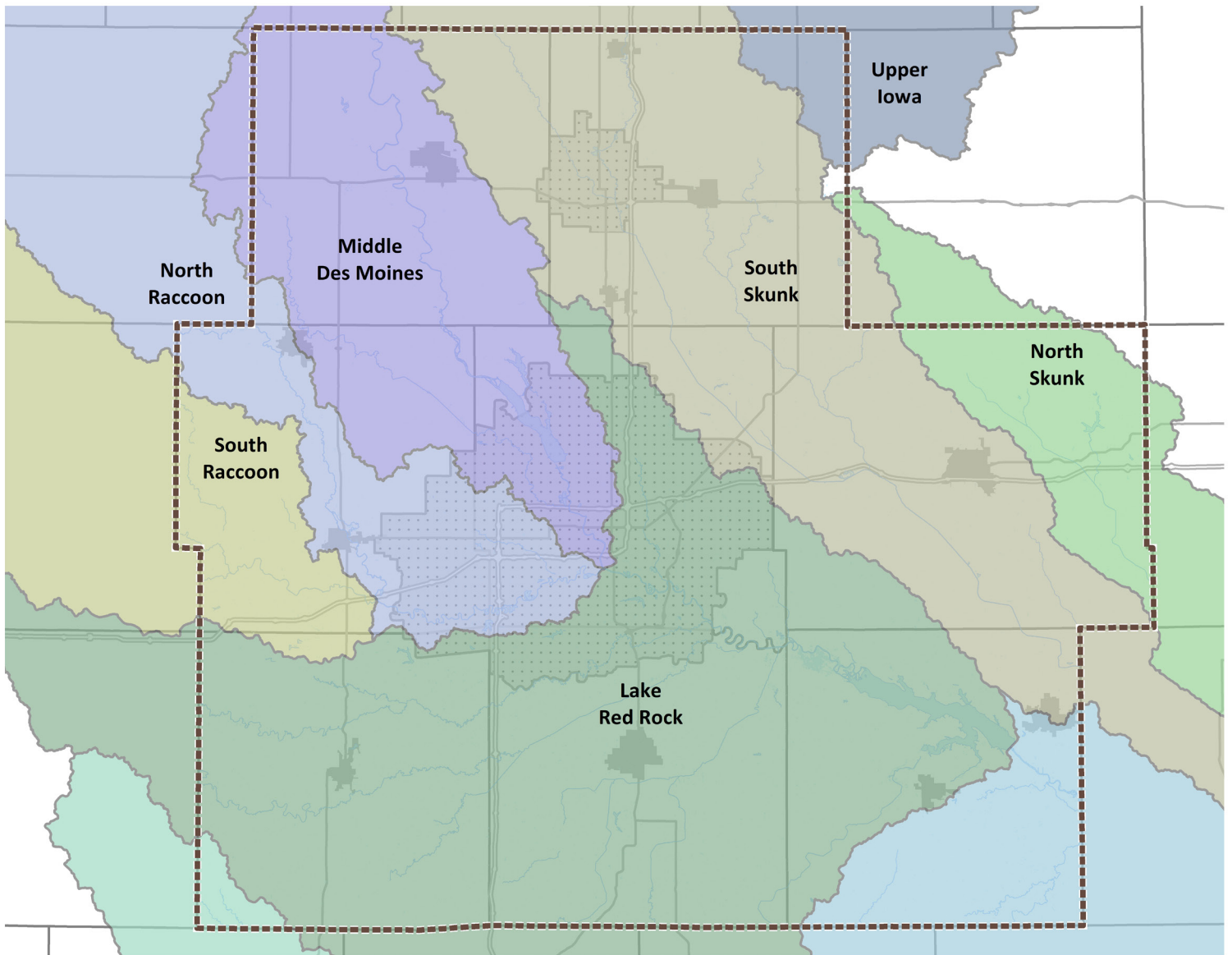


Watershed planning can lead to improved water quality, increased recreation opportunities, and reduced flood risk for the impacted area. The first step in improving water quality is improving how water moves over the land and into the impacted stream or lake. Land management, both agricultural and urban, makes a significant impact on our water quality. In the CIRTPA region seasonally high nitrate concentrations are of particular concern and can negatively impact water quality if not properly mitigated.

Watershed Management Authorities (WMAs) are 28E bound organizations which collectively consult and advise on water resource issues and projects across jurisdictional boundaries. Currently, there are ten WMAs in the CIRTPA region: North Raccoon River Watershed Management Coalition, Middle-South Raccoon River WMA, North & Middle Rivers WMA, Beaver Creek WMA, Walnut Creek WMA, Fourmile Creek WMA, Mud, Camp, & Spring Creeks WMA, South Central Iowa Cedar Creek WMA, Squaw Creek WMA, and Headwaters of the South Skunk WMA.

Members of WMAs consist of soil and water conservation districts, city and county officials, water utilities, the public, and other related organizations. Through joint partnerships many of these WMAs have watershed management plans that land owners and public agencies can reference when putting projects on the ground within the watersheds.

CIRTPA WATERSHEDS



ENVIRONMENT

The transportation system cannot be considered in isolation; its impacts reach far beyond roads, buses, and bicycle-pedestrian infrastructure. It impacts economic development, access to opportunity, and the environment. The fourth and final goal of this plan envisions greater protection for the environment and conservation of its resources.

The CIRTPA outlines three objectives to achieve this goal: decrease emissions, lessen negative impacts on water quality, and limit negative impacts on farmland and natural resources. Decreasing emissions can be seen through increased Electric Vehicle Supply Equipment (EVSE) and decreased emission and particulate levels. The region can lessen its negative impact on water quality by increasing the number of projects that include green infrastructure designed to manage stormwater. Finally, CIRTPA can limit impacts on farmland and natural resources by working to minimize the number of acres impacted by transportation projects.

Federal Requirements + Guidelines

Federally funded transportation projects must comply with the National Environmental Policy Act (NEPA) of 1969. NEPA is a policy designed to protect and enhance the environment, and contains a process for developing major federal actions (such as federal funding for a transportation project) that require environmental review documents. Complying with NEPA is typically the responsibility of the project sponsor. The NEPA process includes the consideration of alternatives for the project and their environmental impacts, as well as public involvement and interagency collaboration.

The type and scope of environmental document required by NEPA depends on the nature of a project and the significance of its impacts. The three types are:

- **Categorical Exclusion (CE):** The simplest process, a CE is required for projects with no significant environmental impacts.
- **Environmental Assessment (EA):** An EA is performed if a project's environmental impact is unclear, and it determines if the project would significantly affect the environment. If the project will not, a finding of no significant impact (FONSI) is issued.
- **Environmental Impact Statement (EIS):** If the EA determines that there may be significant environmental consequences from the project, an EIS must be prepared.

Beyond the NEPA process, CIRTPA encourages jurisdictions to follow federal guidance when addressing environmental issues. The steps used in environmental mitigation are found in 40 CFR 1508.20. In order of preference, these are:

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

Avoiding negatively impacting the environment should always be the primary goal. However, when this cannot be achieved, impacts should be minimized and compensated for appropriately.

Environmental Analysis

In addition to looking at federal regulations and guidelines, the region needs to understand its critical resources in order to make informed quality growth and conservation decisions. CIRTPA has an online tool (located at <http://cirtpa.org/maps/>) to aid in the decision making process as projected impacts and costs of land use and transportation decisions are being made. This online tool consists of layers of the following data:

- Current parks, trails and other protected areas
- Wetlands, streams and other water features
- Floodways
- Locations of rare or threatened species
- Cultural and historical resources
- Prairie remnants and other sensitive areas
- Farmland and woodlands

Climate Change

Climate change action is addressed in two ways: mitigation and adaptation. Mitigation aims to limit the magnitude of long-term global warming and the impacts that could result from the warming; i.e. reduction of greenhouse gas (GHG) emissions. Adaptation aims to reduce the vulnerabilities of social and biological systems to the changing climate and the overall global warming; i.e. constructing roads that can absorb or direct stormwater. Transportation affects both efforts.

Mitigation

Transportation modes have a large impact on GHG emissions. According to the U.S. Environmental Protection Agency, transportation is the largest contributor of GHG emissions in the United States. Light-duty vehicles, such as the personal automobile, contribute nearly 60% of all U.S. transportation GHG emissions; medium and heavy-duty vehicles, such as semi-trucks and other commercial vehicles, contribute 23% of GHG emissions. Since 2009, the CIRTPA region has trended upwards in vehicle miles traveled overall.

In order for the Central Iowa to take serious climate change mitigation action in the transportation sector, the region must reduce the reliance on fossil-fuel automobiles, especially those trips that are single-occupancy. Investments in transit and other climate conscience modes of transportation are crucial to reducing the amount of GHG emissions the metro produces. This is an especially difficult task in the more rural areas of our region.

Adaptation

In the United States the most publicly facing climate change adaptation work is dealing with rising sea levels. While Iowa has no oceanic coastlines, it does have opportunities to adapt to the effects of climate change that will greatly impact social and biological systems. The biggest opportunity in the transportation sector is stormwater management.

There are a number of ways in which transportation and land-use infrastructure can manage stormwater better. The overarching applicable concept is treating stormwater where it lands on the built environment instead of relying upon stormwater grey infrastructure to take the water away. Permeable pavers, bioswales, curb cutaways, and tree boxes can help to retain and infiltrate water within the transportation right of way. Using these strategies for stormwater management also add capacity for urban areas to produce oxygen, sequester carbon, provide shade, filter particulate matter, and add habitat. Inclusion of these green spaces also are important to mental health. Having access to green spaces can reduce health inequalities, improve well-being, and aid in treatment of mental illness (World Health Organization, 2019).

Climate adaptation in rural areas faces different challenges than their urban counterparts. Rural governments often depend heavily on volunteers to meet community challenges like fire protection or flood response. Rural communities have limited locally available financial resources to cope with the effects of climate change. Small community size tends to make services expensive or available only by traveling some distance.

If rural communities in Central Iowa are to respond adequately to future climate changes, they will likely need help assessing their risks and vulnerabilities, prioritizing and coordinating projects, funding and allocating financial and human resources, and deploying information-sharing and decision support tools.

Interagency Consultation

The Des Moines Area MPO established the Environment Roundtable to support the review of environmental impacts of transportation projects and activities. Stakeholders from CIRTPA also serve on the board.

Members include but are not limited to the following agencies:

- 1000 Friends of Iowa
- Capital Crossroads – Environmental Capital
- Central Iowa Sierra Club and Des Moines Area Audubon
- Des Moines Izaak Walton League of America
- Environmental Law and Policy Center
- Great Outdoors Foundation
- The Nature Conservancy
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife

Identified Environmental Areas

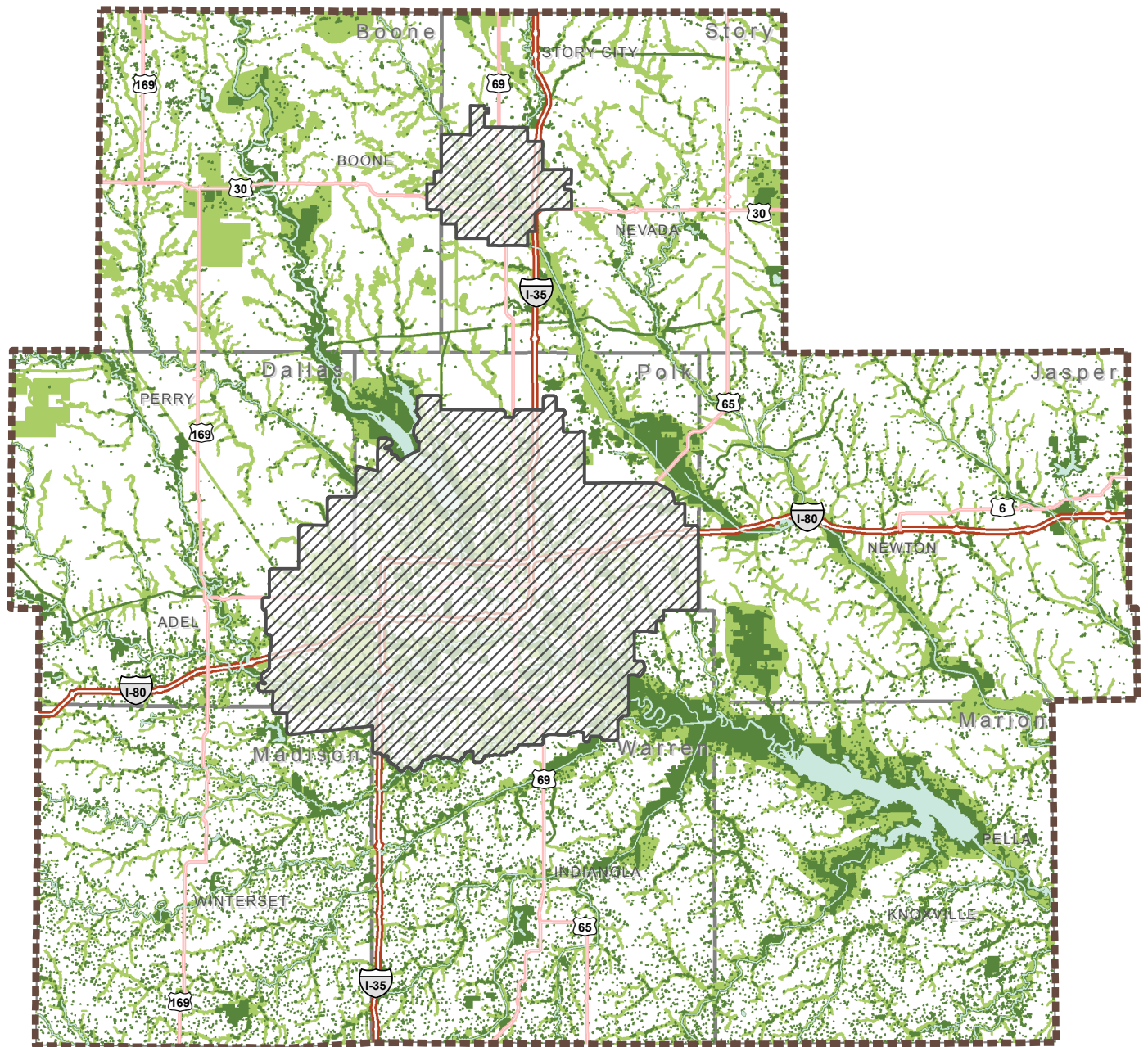
The HY 2035 Long Range Transportation Plan identified Environmentally Sensitive Areas and a copy of that map is included on the following page. However moving forward that map will not be regularly updated due to data availability restrictions. Therefore, CIRTPA will focus in on areas that are environmentally sensitive that can be updated and used for project planning and programing. The four areas to be reviewed out are:

- 500 Year Floodplains
- Wetlands
- Farmland
- Woodlands

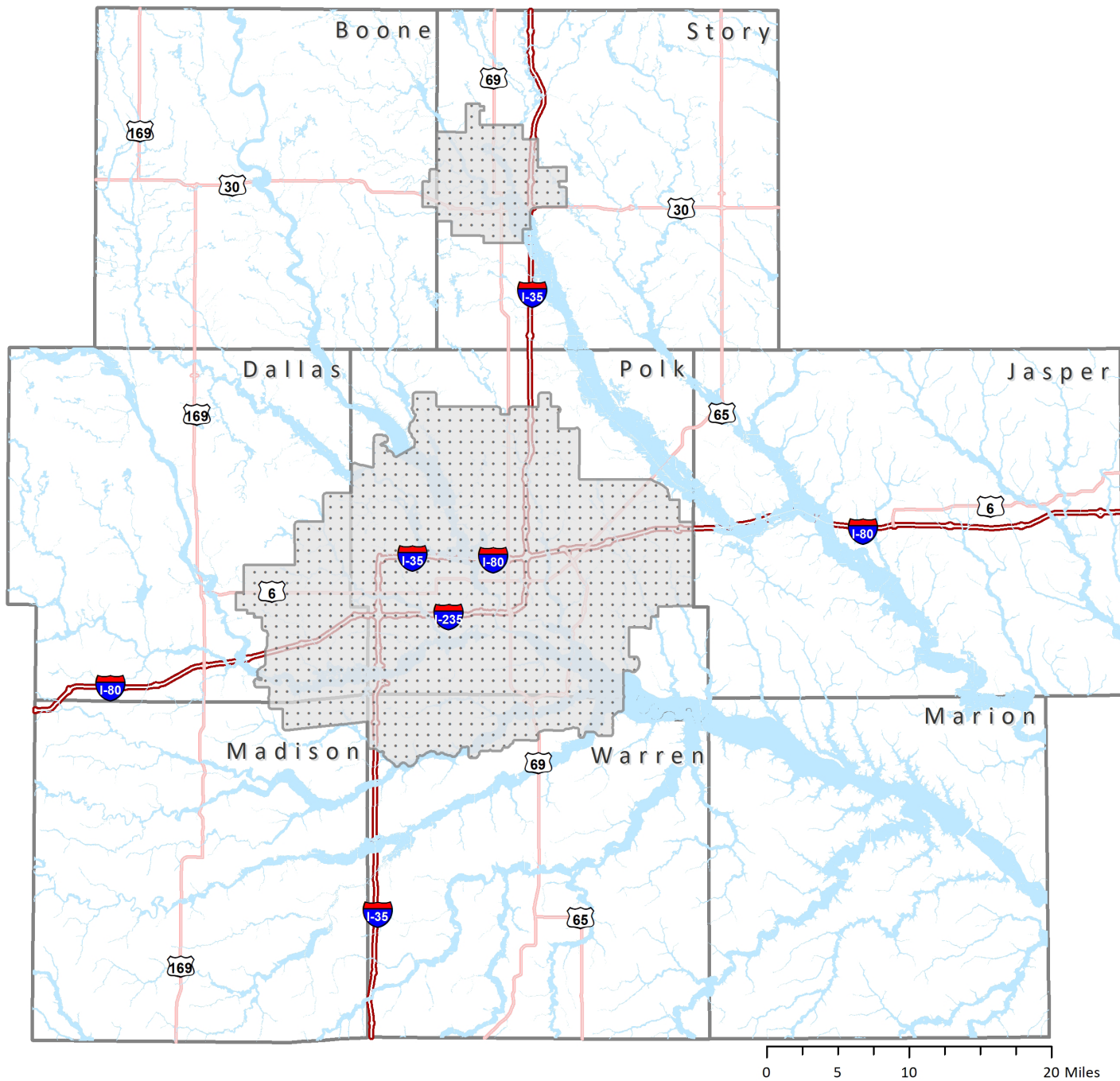


Middle River Water Trail, Madison County

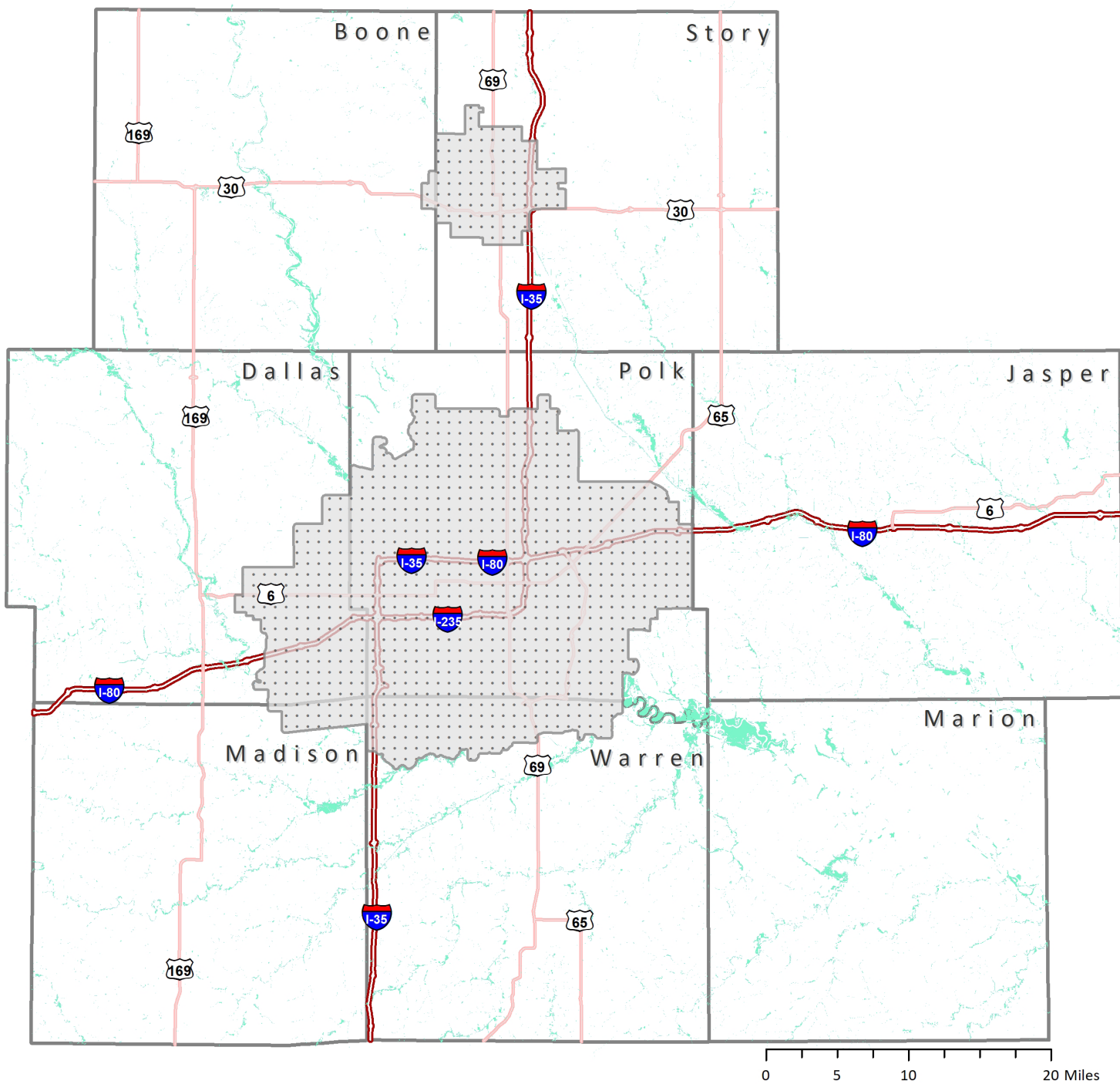
ENVIRONMENTALLY SENSITIVE AREAS



500 YEAR FLOODPLAIN



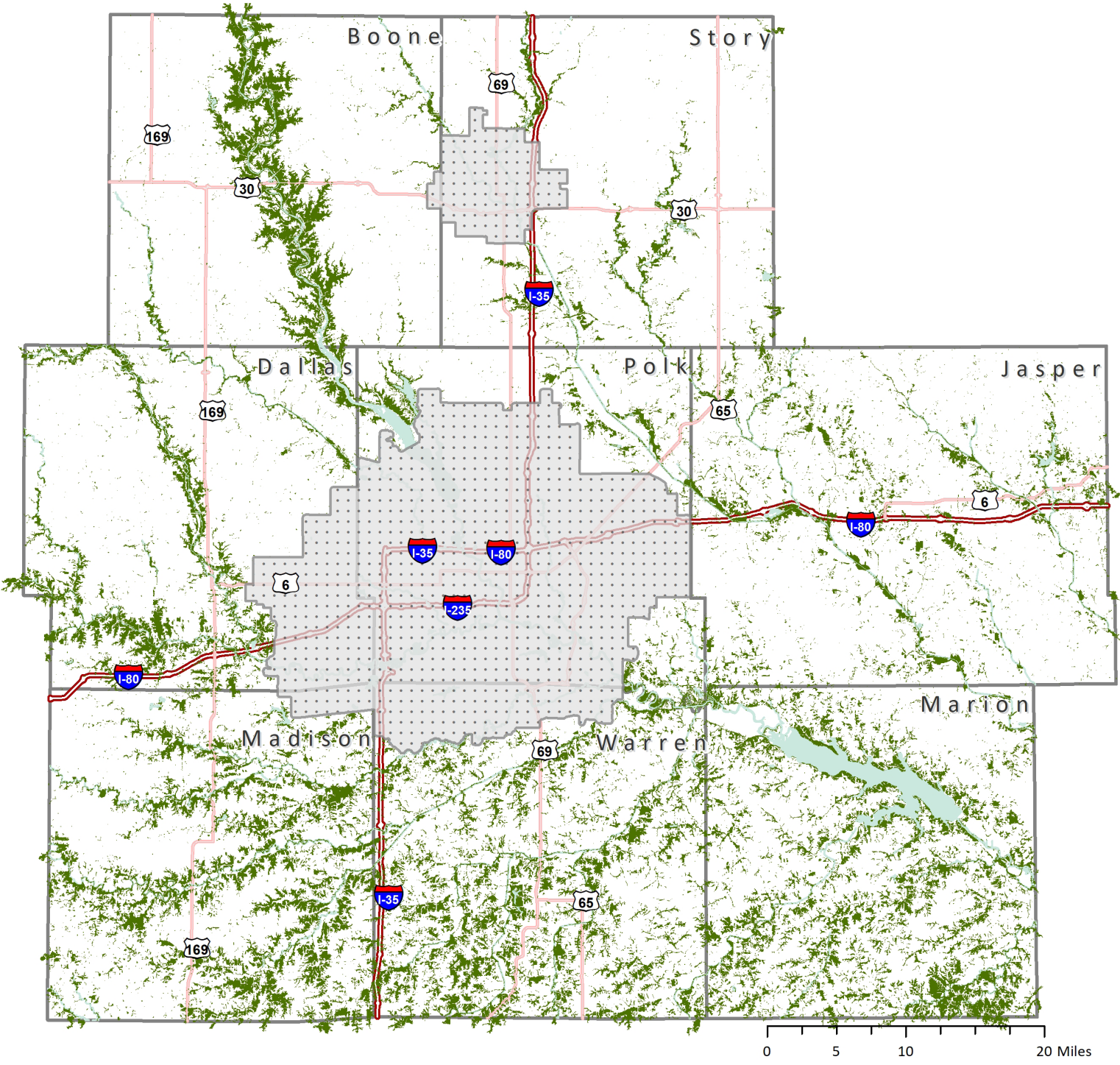
WETLANDS



FARMLAND



WOODLANDS



Environmental Consultation Mitigation Actions

Throughout the NEPA process, consultation with state and federal agencies are required. However, in recent years due to the funding swap of STBG funding, local agencies are completing fewer federally funded projects than in the past. Because the State of Iowa has no state NEPA process, jurisdictions complete a truncated environmental process which requires less consultation than the Federal NEPA. However communities are still required to comply with the various environmental policy acts such as the Clean Water Act, the Endangered Species Act, etc.

CIRTPA encourages all communities to consult with governmental agencies on project specific activities, including but not limited to:

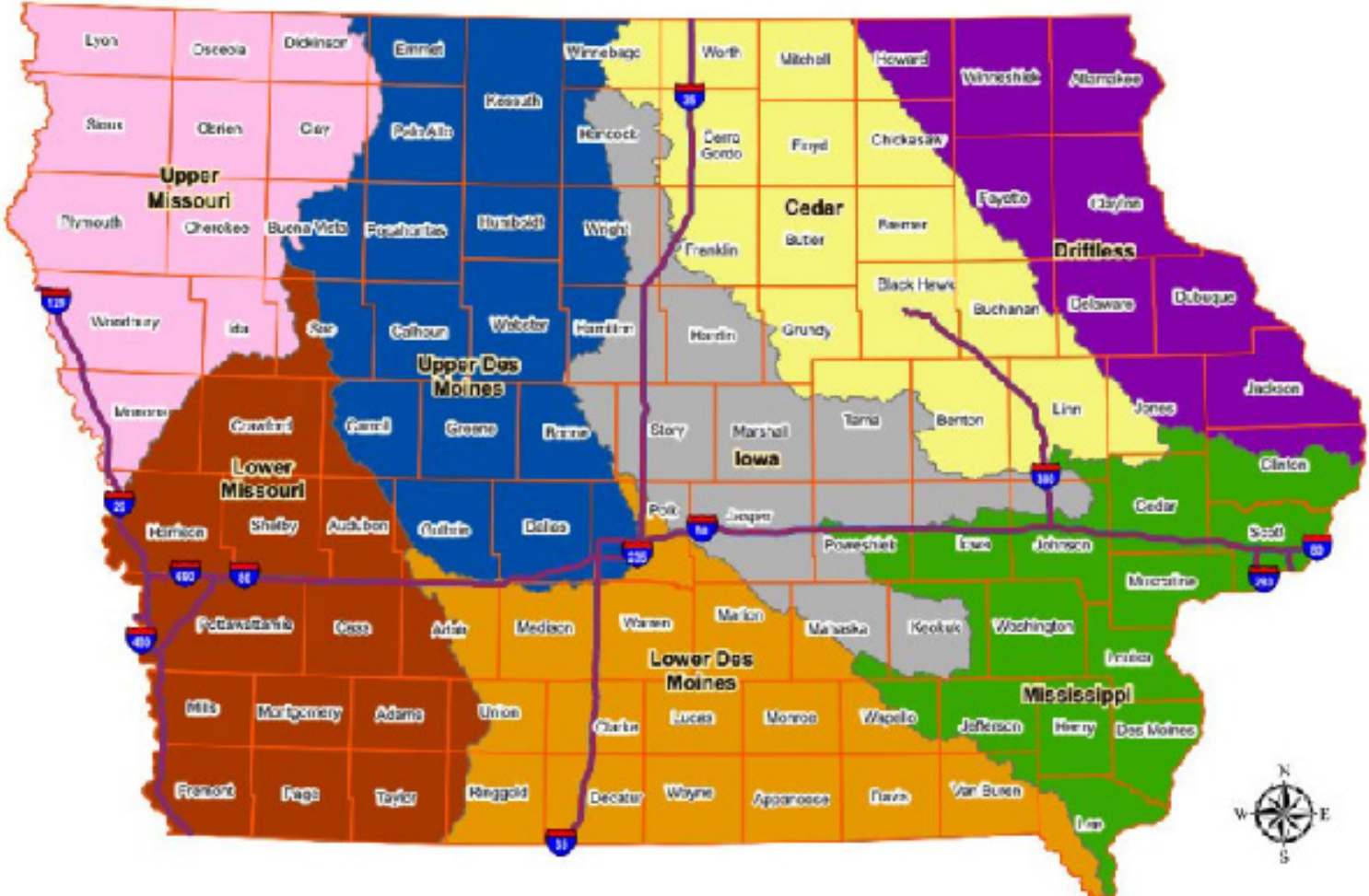
- Iowa DNR
- EPA
- State Historic Preservation Office
- Army Corps of Engineers

Mitigation Actions

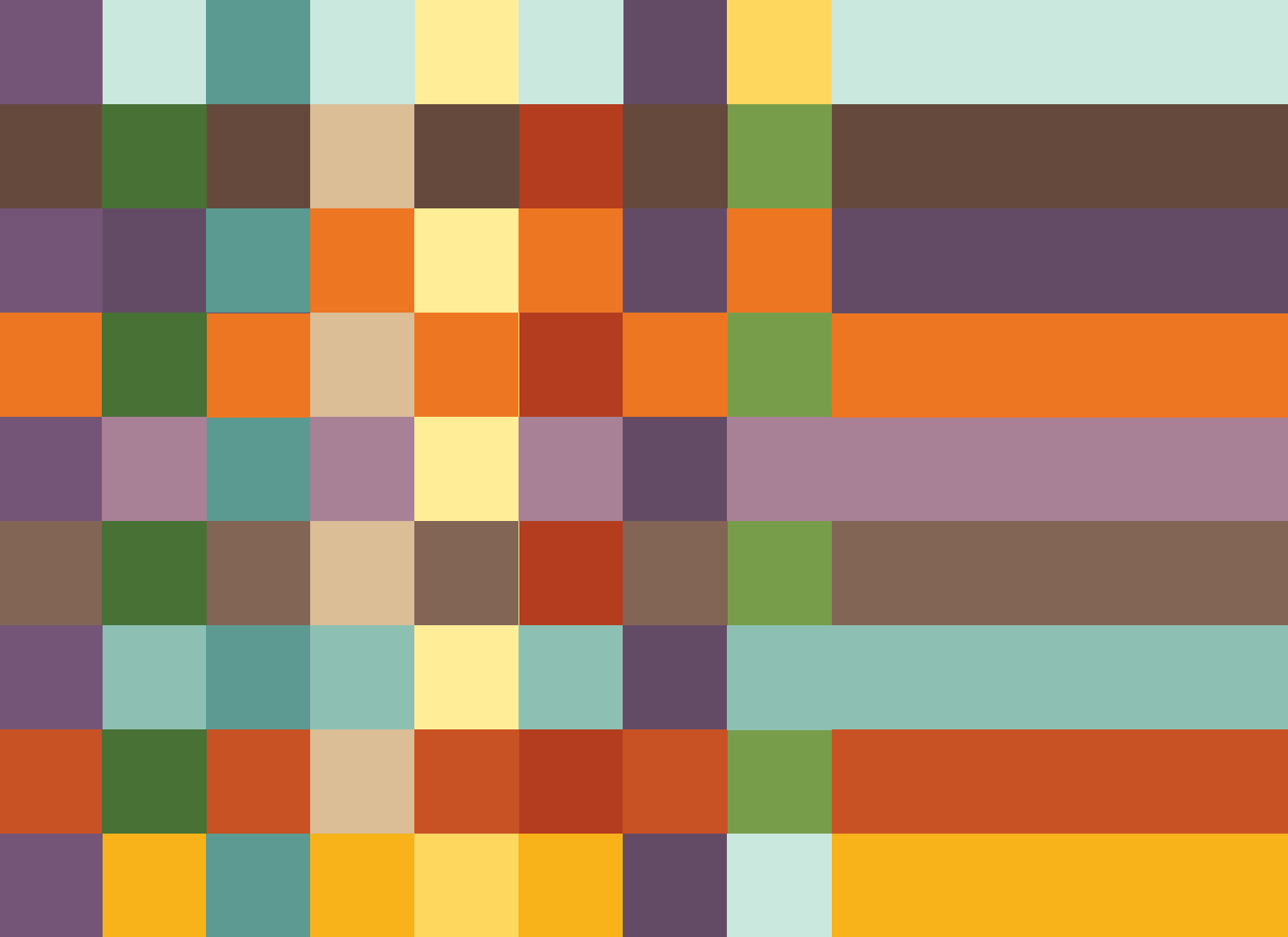
One program that CIRTPA highly encourages is the Mitigation Bank offered by the Army Corps of Engineers, Rock Island District. A wetland mitigation bank is a wetland site that has been restored and protected by formal agreement between the Corps of Engineers and the wetland mitigation bank sponsor. A wetland mitigation bank sponsor may be a government agency, non-profit organization, or corporation. The Corps of Engineers determines the amount of environmental credits a wetland mitigation bank can provide.

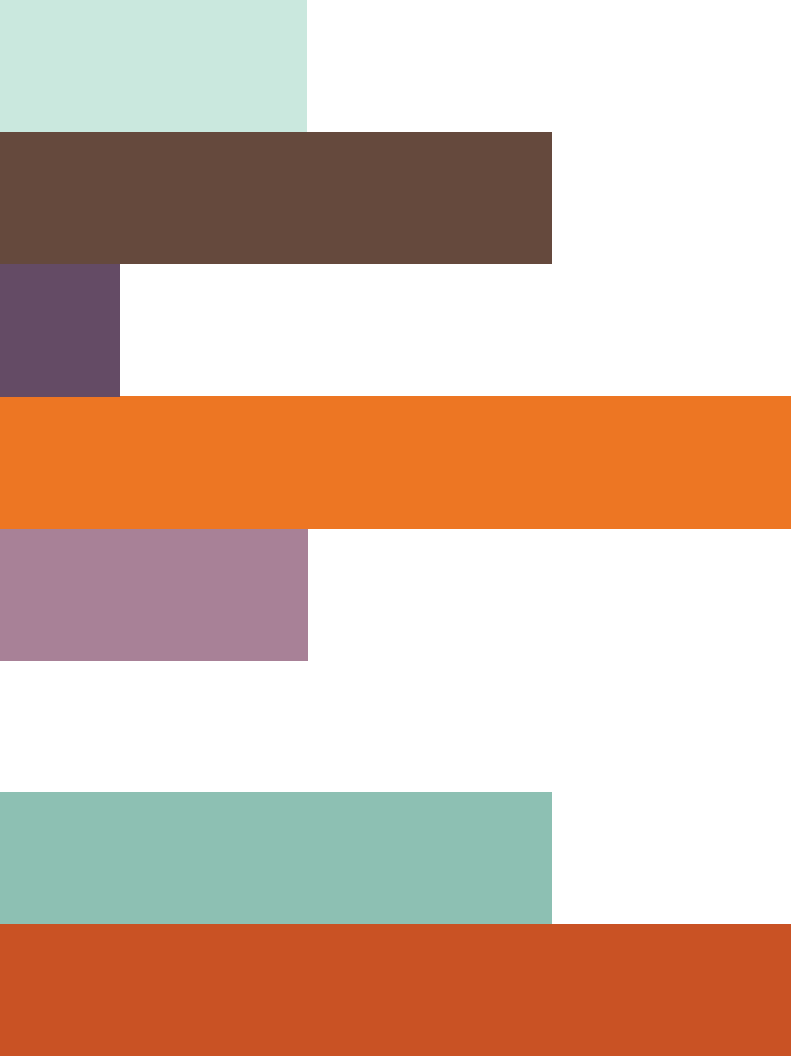
Any additional mitigation actions will likely be proposed by the Environment Roundtable, which has numerous stakeholders from a variety of state agencies present that include the Iowa DNR, US Army Corps of Engineers, and US Fish and Wildlife service. CIRTPA will continually seek out this group when developing environmental policies or input.

Mitigation Bank Service Areas in Iowa



Map created by the Army Corps of Engineers - Rock Island District





9



TRANSIT

TRANSIT

Public Transit Providers

Every 5 years, CIRTPA jointly prepares the Passenger Transportation Plan (PTP) with the Des Moines MPO to document the existing conditions and the future needs of transit providers in the CIRTPA region.

The PTP identified two public transit providers operating in the CIRTPA region. The Heart of Iowa Regional Transit Agency (HIRTA) is the public transit provider for seven of the eight counties in the CIRTPA region and the Des Moines Area Regional Transit Authority (DART) provides transit service for Polk County. The HIRTA provides door-to-door service in a demand-response transit system that requires scheduling of rides twenty-four hours in advance. The HIRTA provides services in:

- Boone County;
- Dallas County;
- Jasper County;
- Madison County;
- Marion County;
- Story County; and,
- Warren County.

The HIRTA operates 71 Americans with Disabilities Act (ADA) accessible vehicles. In FY 2015-2018, the HIRTA provided rides as follows:

HIRTA RIDES BY COUNTY

COUNTY	2015 - 2018 TOTAL RIDES	2015 - 2018 TOTAL VMT
Boone	164,734	835,890
Dallas	118,482	1,024,658
Jasper	227,291	696,988
Madison	108,521	302,486
Marion	173,030	709,081
Story	210,198	1,315,440
Warren	161,243	633,423
Total	1,163,499	5,517,966
Per Year	290,874	1,379,492

The average total rides for HIRTA has decreased since 2012 by 56,184 rides and VMT has decreased by 289,237 miles. This represents a drop of 16.2% and 17.3% respectively. HIRTA has seen a steady drop in rides since 2015, going from 318,249 in that year to 253,217 in 2018.

This is also in contrast to what was reported in the previous LRTP. At that time, both rides and miles were increasing. The main reason for the drops in rides and VMT is due to the privatization of the Medicaid program in Iowa in 2015. Before that, it was a state-run program. Much of the disruption in service occurred because of the many changes in the Medicaid program. Also, the collectable rates allowed under the program dropped, which caused HIRTA to lose revenue. This is a major issue because the formula federal funding that HIRTA gets is calculated based on passenger rides and VMT. Thus, a drop in either can cause HIRTA to lose money in future years, which hampers its ability to provide service, which causes an even greater drop in rides and miles and becomes a cycle of reduced service and money lost.

In order to combat this, HIRTA adopted a 10-year strategic plan that sets out to grow the organization and ensure the continued success that it has had since its inception.

One major milestone was achieved since the last LRTP was adopted and that is having transit services in each county being performed by HIRTA itself. In the previous plan Boone, Dallas, and Madison counties had contracted services between local organizations and HIRTA. Since that time all counties are now being served directly by HIRTA. This will allow for the ending duplicative efforts, increased service, and a reduction in costs.



The Des Moines Area Regional Transit Authority (DART) is the largest public transit agency in the state of Iowa. DART provides resources for those who vanpool, walk, or bike. These services connect thousands of people every day to jobs, schools, medical appointments, entertainment and more. DART is an independent authority composed of 12 member governments serving Altoona, Ankeny, Bondurant, Clive, Des Moines, Grimes, Johnston, Pleasant Hill, Polk County, Urbandale, West Des Moines and Windsor Heights. The services provided by DART include local and express fixed-routes, paratransit service, RideShare, and regional on call shuttles.

In addition to the bus services, DART offers a RideShare program which offers individuals an alternative to driving alone. RideShare helps commuters locate others with like travel patterns to share rides in vanpools. DART has a fleet of vans used by groups of five to 12 commuters for trips to and from work. Nearly 100 vanpools are currently in operation. RideShare serves an 18-county region that includes Adair, Boone, Clarke, Dallas, Decatur, Guthrie, Iowa, Jasper, Lucas, Madison, Marion, Marshall, Polk, Poweshiek, Story, Union, Warren and Wayne counties.

In Fiscal Year 2018, DART RideShare service provided 235,716 passenger trips with approximately 72% of riders on this service including travel to or from a location in the CIRTPA planning area. About 18% of all RideShare trips extend beyond the CIRTPA planning area.



Intercity Busing

Intercity transit means the movement of people between communities. In this plan, it specifically refers to the busing companies that are identified by the Iowa DOT that provide intercity bus service. Currently there are two services operating within the CIRTPA area. They are Burlington Trailways and Jefferson Lines. Each have stops in the cities of Des Moines and Ames. Two other companies operate limited service in the state, they are the Dodger Area Rapid Transit and Greyhound Lines.

These companies provide a much-needed service, which is the ability to travel within and outside Iowa without the need to have a personal vehicle. Some populations are unable to drive or cannot afford to own a vehicle. Without these services those people would be unable to travel outside their area.

Intercity busing is also a cheap alternative to flying for both local and intermediate travel. For the CIRTPA area, this represents an opportunity for connectivity to the surrounding states at a reasonable price. However, the limiting factor is that those companies have stops either within the MPO areas, or in communities just outside of the CIRTPA area in Osceola, Oskaloosa, and Grinnell. These communities are located south and east of the planning area. Because of the limited connectivity, it is difficult for populations without access to vehicles to access these services.

There is still opportunity to make connections however even if there are no bus stops in the area. By partnering with an on-demand transit provider such as HIRTA, they can be the connection between individuals and the intercity bus facilities.

CIRTPA also recommends partnering with local agencies and organizations to help fund such a program. In particular there is opportunity to partner with local colleges such as Central College in Pella, which has expressed its desire to connect students to intercity bus services. Some students don't have vehicles and rideshare is lacking in the rural areas of Iowa and for some, intercity bus is their only option for travel regionally.

Passenger Transportation Plan

Every 5 years, CIRTPA update its Passenger Transportation Plan, the most recent version of which was passed in 2018. Done in conjunction with the Des Moines Area MPO, it is the guiding document that identifies how people who don't and/or cannot use a car will have access to transportation.

It analyzes and identifies vulnerable populations, identifies how those populations can and will be served, and makes recommendations on how to better serve the region. That document is the overarching guide for all things passenger transportation.

Future Transit Needs

Ridership continues to decrease in the CIRTPA region on an annual basis. The trend however is projected to be upward for demand of public transit within the region as demographics in the CIRTPA region evolve. HIRTA and DART's future needs are to both replace existing vehicles with newer, more reliable vehicles and also to expand their fleet and services as demand increases. HIRTA may also require additional storage and service facilities to accommodate increasing demand for public transit within the region.

A study is currently underway with the Iowa DOT that could bring passenger rail (AMTRAK) to central Iowa. The study referred to as the Chicago to Council Bluffs - Omaha Regional Passenger Rail System Study, has completed the Environmental Impact Study. The preferred alternative depicts a route that has passenger rail travelling through, but not stopping within, the CIRTPA region. The nearest stops would be in Des Moines and/or Grinnell. If funded and ultimately placed into service passenger rail would provide an additional option for CIRTPA residents to make regional connections to destinations such as Chicago, Omaha, and beyond.

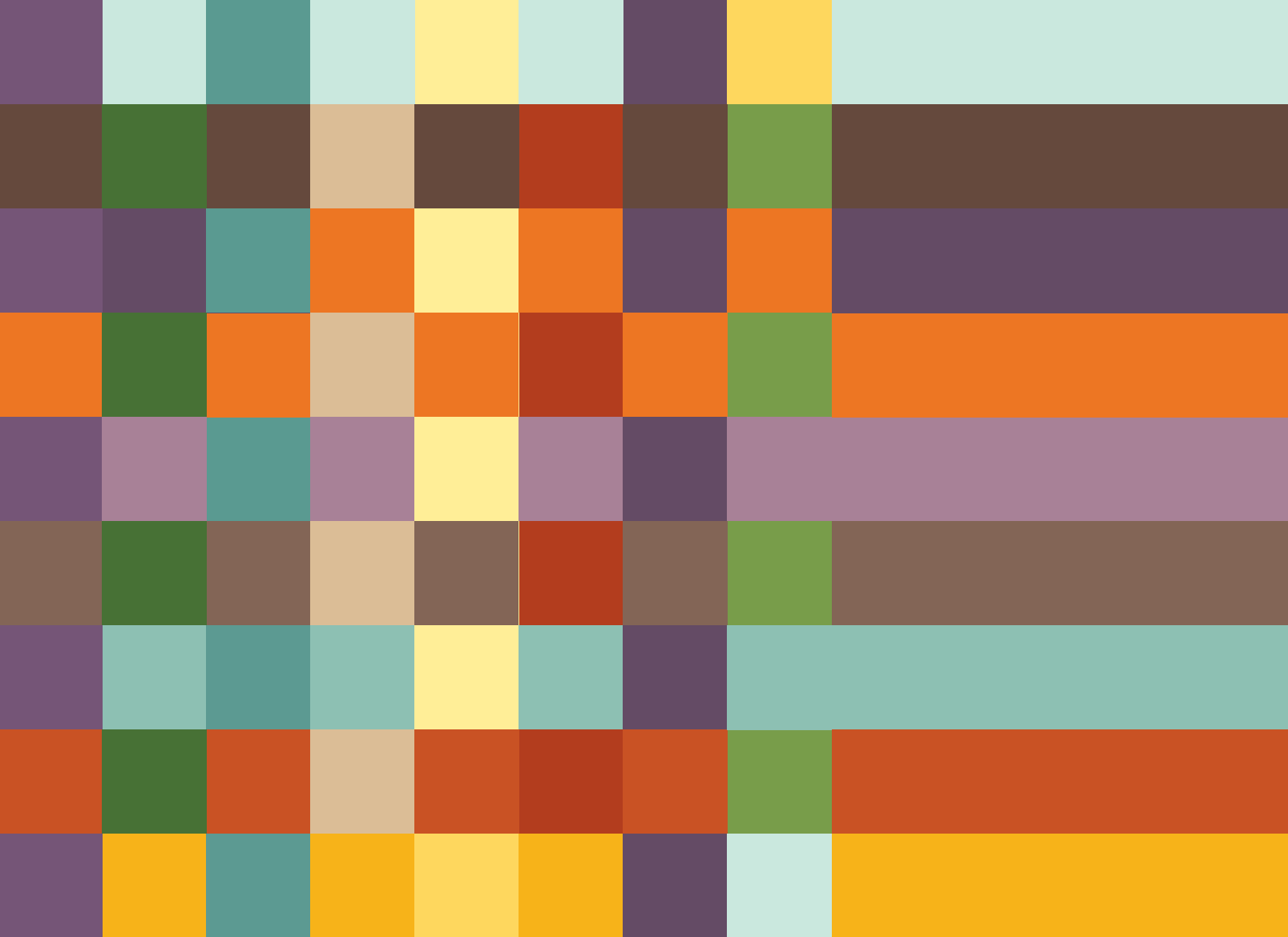
No major updates have occurred since the adoption of the previous CIRTPA LRTP and the future of this project is tied to future federal activity.

Transit Funding

CIRTPA receives a designated amount of funding from the Surface Transportation Block Grant Program (STBG) on an annual basis. The current practice is for CIRTPA to sub allocate these funds to each CIRTPA member; the CIRTPA members are then free to use these funds for transportation projects, including transit funding. Other funding sources are typically applied for directly by HIRTA. These are usually state funds that require the HIRTA to reapply in each year funds are desired.

In order to support transit and recognize how vital the service is to the CIRTPA region, CIRTPA began to sub allocate STBG funds directly to HIRTA to help replace its aging transit fleet as 77% of vehicles are over their federally defined useful life. Older buses require more maintenance and over the long haul, can be more expensive to run and maintain than newer vehicles.

DART receives STBG funds from the Des Moines Area MPO.





10

STREETS +
HIGHWAYS

STREETS + HIGHWAYS

In developing the street and highway section, the CIRTPA first reviewed the existing conditions of the street and highway network in the region. Existing conditions included the Federal Functional Classification System, average annual daily traffic counts, street and highway crash data, street and highway level of service, and street and highway pavement conditions.

Existing Conditions

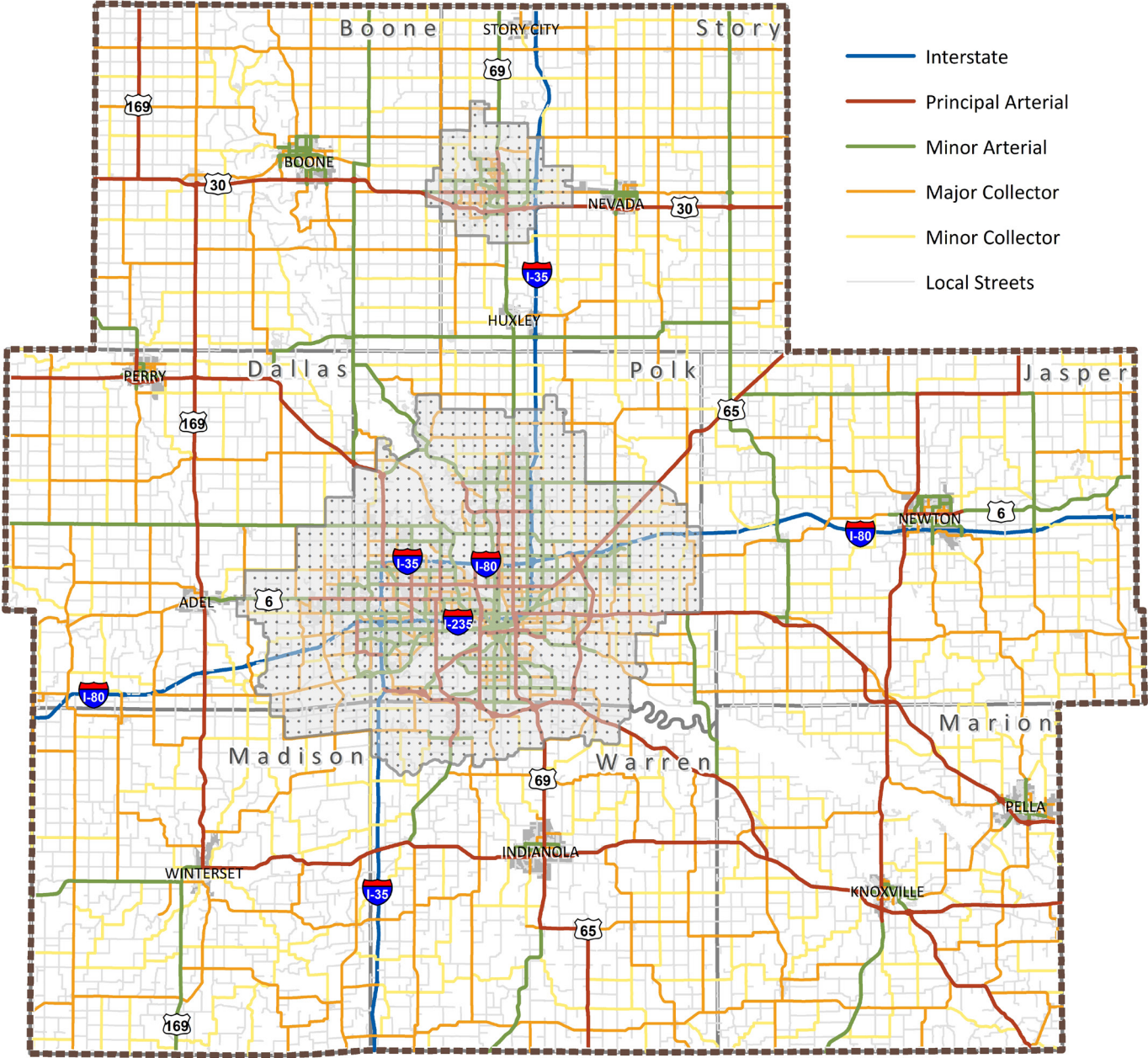
Federal Functional Classification System

The CIRTPA used the latest Iowa DOT RAMS data to classify the street and highway network in the region. The FFCS breaks roads down into six different classifications based the access the road provides to individual properties. The classifications from highest to lowest are:

- Interstate (Principal Arterial) – limited access highway which is part of the national system;
- Principal Arterial – high traffic volume road with controlled access serving as a major thoroughfare;
- Minor Arterial – medium traffic volume road that provides a link between collectors and principal Arterials;
- Major Collector – medium to low traffic volume road that links arterials to local streets;
- Minor Collector – low traffic volume road that links arterials to local streets; and,
- Local Streets – low traffic volume road that provides the most access to individual properties.

A map of the CIRTPA FFCS is located on the following page.

FEDERAL FUNCTIONAL CLASSIFICATION SYSTEM (FFCS)

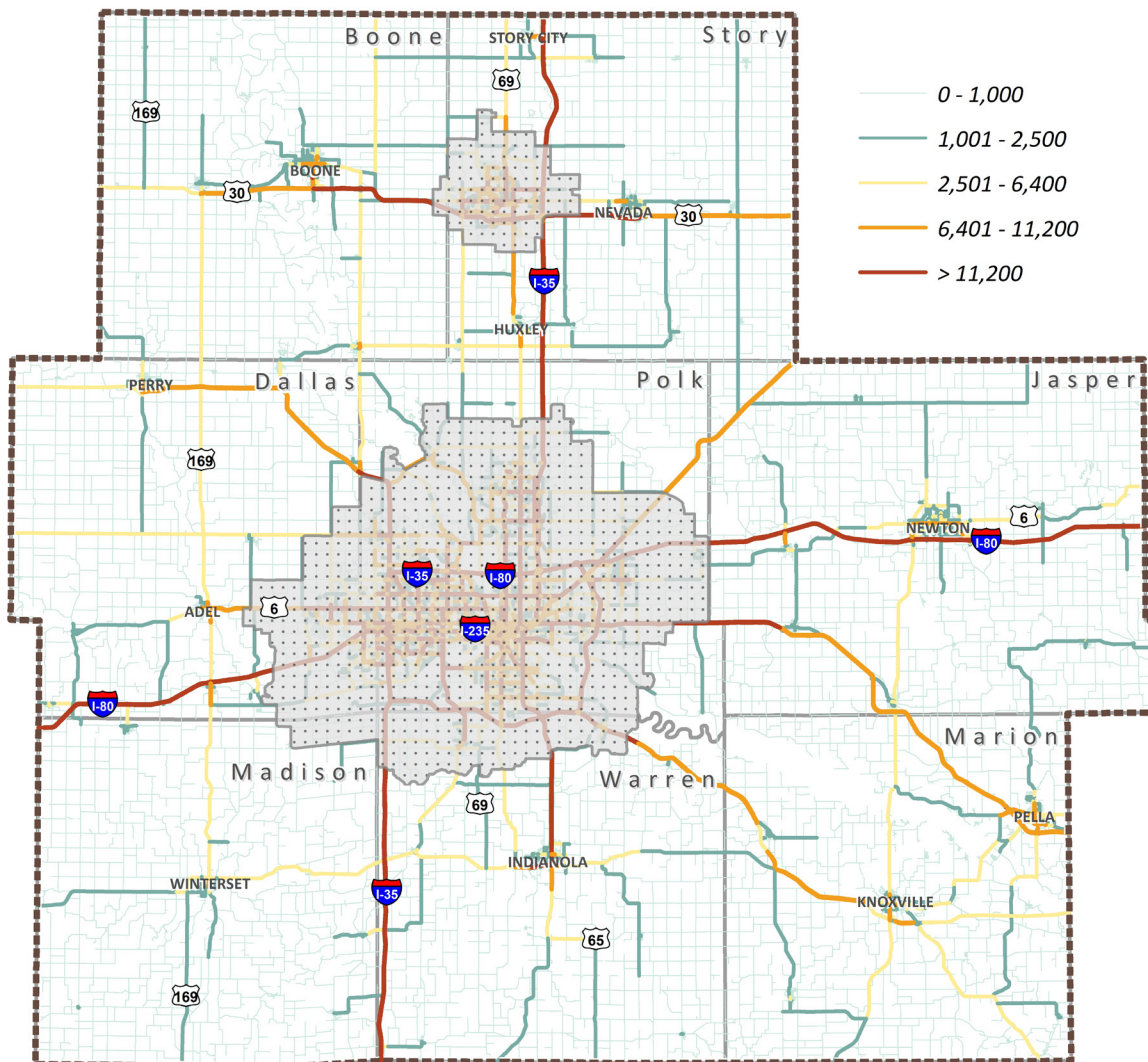


Average Annual Daily Traffic

Average annual daily traffic (AADT) data was used from Iowa DOT RAMS road files. The AADT map shows the estimated volume of traffic on the street and highway network in the CIRTPA region. The volume of traffic is broken down by the amount of traffic for each road classification. A map of the CIRTPA AADT is below.

Year over year change on local CIRTPA roads is small compared to the two MPO areas. Generally, traffic increases more on state and federal routes. Increased traffic on the Interstates constitute the largest increases in traffic per year. Much of that is a function of the smaller population increases within the CIRTPA Planning Area compared to the Ames and Des Moines metro areas. It is expected that these trends continue.

AVERAGE ANNUAL DAILY TRAFFIC (AADT)



Pavement and Bridge Conditions

Pavement and bridge condition data was used from Iowa DOT RAMS road file, as well as road files from the Institute for Transportation at Iowa State University (InTrans). Of the almost 2,200 miles of roadways that were measured for pavement conditions, 11 percent were rated poor or worse. There also are 1,640 bridges, of which 415 are deficient. That is a 25% decrease from the previous plan. Maps of pavement and bridge conditions can be found on the following page.

Local pavement information will be discussed later in this chapter but has generally seen a decrease in both the average pavement condition index (PCI) and percentage of roads classified in poor or worse condition. PCI has dropped 5% from 2013 to 2017 and the percentage of poor or worse roads increased 5% from 6% to 11%.

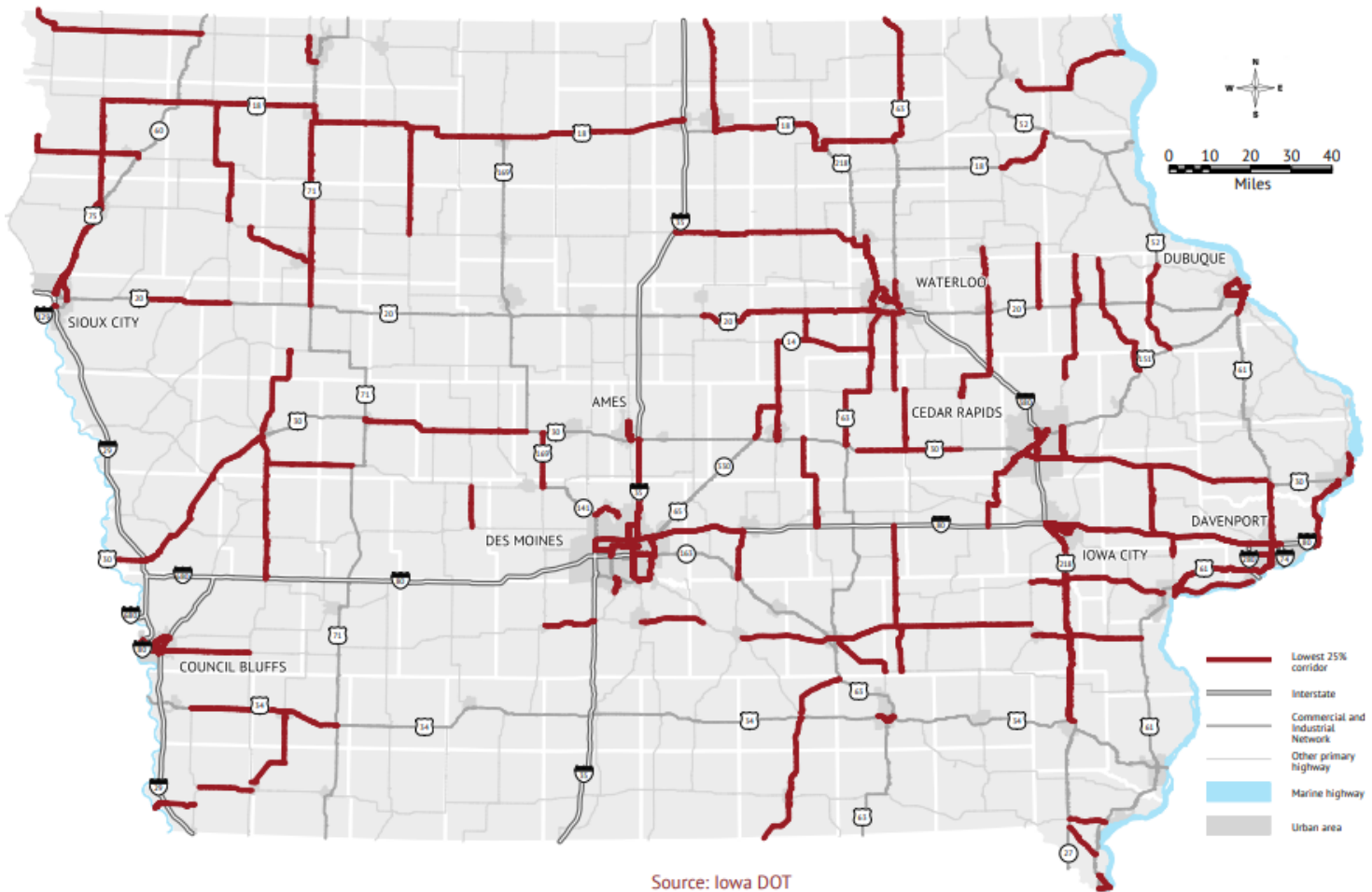
Bridges on the other hand have seen a great improvement as the number of deficient bridges in the CIRTPA Planning Area has dropped over 25% from 556 to 415. This drop has been the direct result of a major effort by CIRTPA communities to reduce the number of deficient bridges, including a joint effort between the CIRTPA counties and Iowa DOT. County and city bridge funding programmed in the CIRTPA TIP has increased dramatically. From the FFY 2014 to FFY 2020 TIP, CIRTPA has seen an 112% increase in federal or SWAP bridge funding that has been programmed. The use of these funds has been to fix identified deficient bridges.

State Owned Assets

The current Iowa DOT LRTP, Iowa in Motion 2045, is the overarching document that covers all state-owned assets in the CIRTPA Planning Area. Chapter 5 sets the foundation for analysis of the statewide system.

The current condition of the Primary Highway System is determined by the Infrastructure Condition Evaluation (ICE) tool. It is a composite rating system calculated from seven different criteria. On the following page shows that there are parts of the state system within the CIRTPA Planning Area that fall in the bottom 25% for corridors, including major sections of the Iowa 92 Corridor.

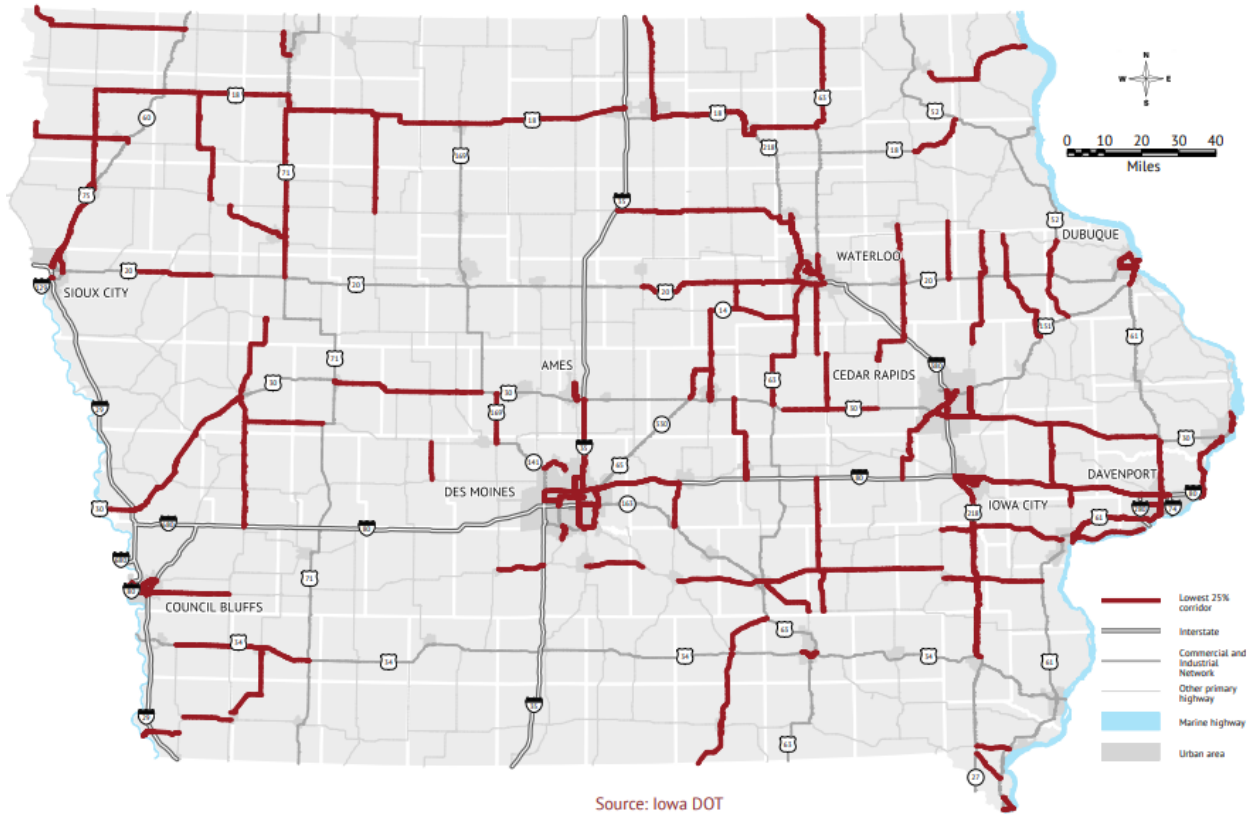
BOTTOM 25 PERCENT OF PRIMARY HIGHWAY CORRIDORS BASED ON ICE COMPOSITE



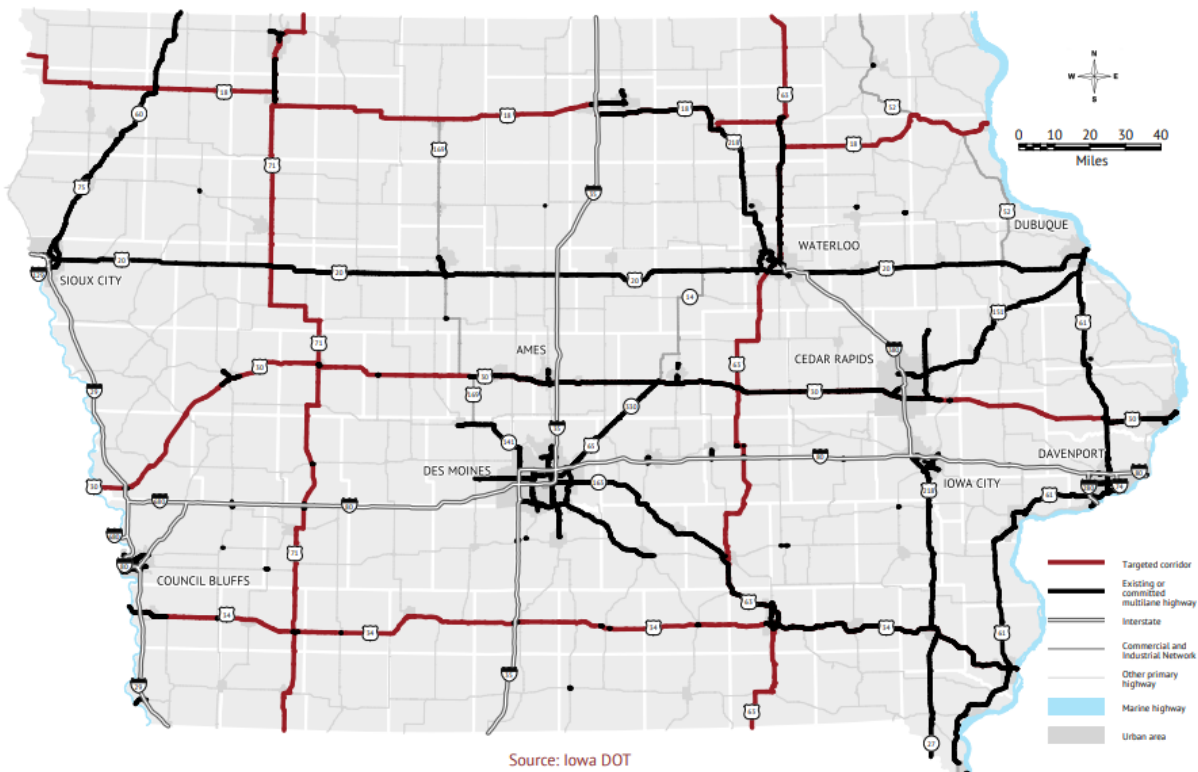
Additional analysis shows that capacity is not an issue for the CIRTPA Planning Area except for the Interstate corridors and areas within the MPOs. The map on the following page shows corridors projected to be approaching or over capacity in 2040.

Mobility and safety analysis incorporated different attributes such as crash statistics, AADT, and existing climbing/passing lanes. The following map shows the state analysis and existing or committed multilane highways. Several corridors in CIRTPA has mobility or safety enhancements planned for existing roadways.

STATEWIDE AND URBAN CORRIDORS APPROACHING OR OVER CAPACITY IN 2040



CORRIDORS TARGETED FOR MOBILITY AND SAFETY IMPROVEMENTS



Future Projects FFY 2020-2024

Iowa DOT Projects

The following Iowa DOT projects were pulled from CIRTPA's FFY 2020-2024 Transportation Improvement Program (TIP). Additional information about Iowa DOT projects are available in the state's LRTP, Iowa In Motion.

In the previous CIRTPA LRTP, additional future year projects were solicited from the Iowa DOT. However, due to the fluidity of project construction and programming, it was determined that other than identifying several of the largest projects the rest were not needed. Instead investments should be targeted to fit needs rather than having to list specific projects for future projects.

IOWA DOT PROJECTS FFY 2020 - 2024

SPONSOR	PROJECT DESCRIPTION	TYPE OF WORK	PROGRAM YEAR	COST
Iowa DOT	IA 163: Walnut Creek 2.4 mi W of IA 117 (EB)	Bridge Deck Overlay	2020	\$377,000
Iowa DOT	IA 5: White Breast Creek 2.7 Mi N of IA 14 (SB)	Bridge Deck Overlay	2020	\$588,000
Iowa DOT	US 65: Co Rd E41 1.0 Mi N of US 30	Bridge Rehabilitation	2020	\$868,000
Iowa DOT	IA 92: South River 0.4 Mi E of E JCT Co Rd S23	Bridge Deck Overlay	2020	\$324,000
Iowa DOT	I-80: Co Rd P58 to Polk Co (WB)	Pavement Planning	2020	\$1,189,000
Iowa DOT	I-80: Approx 0.5 mi E of IA 224 east 2 miles (EB)	Bridge Replacement	2020, 2021, 2023	\$16,374,000
Iowa DOT	I-35: N of North River to S of Badger Creek (SB)	Bridge Replacement	2020, 2021	\$14,963,000
Iowa DOT	US 6: S of 302ND PI to Greenwood Hills Dr in Adel (State Share)	Pavement Rehab	2020	\$1,000,000
Iowa DOT	US 30: E of W 18th St to E of Co Rd S27 In Nevada (EB & WB)	Grade and Pave	2020	\$6,292,000
Iowa DOT	IA 92: N St In Indianola to W Jct IA 5 (State Share)	Wetland Mitigation	2020	\$14,000
Iowa DOT	IA 117: 0.2 Mi S of I-80	Slope Improvement	2020	\$10,000
Iowa DOT	US 30: T Ave (WB) and University Ave EB Exit Ramp	Improvement	2020	\$80,000
Iowa DOT	IA 144: IA 141 to 0.5 Mi N of Park Street in Perry	Pavement Rehab	2020	\$935,000

SPONSOR	PROJECT DESCRIPTION	TYPE OF WORK	PROGRAM YEAR	COST
Iowa DOT	IA 44: Co Rd R30 2.0 Mi W of Polk Co	Right of Way	2020	\$300,000
Iowa DOT	US 6: E of N Raccoon River to 0.2 Mi W of U Ave in Waukee	Pavement Rehab	2020	\$6,009,000
Iowa DOT	US 6: W of E 14th St to Iowa Speedway Dr in Newton (State Share)	Pavement Rehab	2020	\$600,000
Iowa DOT	I-80: 0.9 Mi E of Co Rd T14/Iowa Speedway Dr	Slope Improvement	2020	\$50,000
Iowa DOT	IA 330: 4.1 Mi and 5.7 Mi N of US 65	Culvert Replacement, Right of Way	2020	\$276,000
Iowa DOT	US 65: 1.0 Mi N of IA 117 to 0.5 Mi S of US 30	Pavement Rehab	2020	\$4,340,000
Iowa DOT	IA 14: SCL to NCL in Knoxville	Pavement Rehab	2020	\$1,603,000
Iowa DOT	IA 17: IA 141 to 1.0 Mi S of Madrid	Pavement Rehab	2020	\$4,477,000
Iowa DOT	I-35: Old Weigh Station Site to S of US 30 (NB & SB)	Pavement Rehab	2020	\$1,650,000
Iowa DOT	IA 316: IA 5 to E of Blee St Near SCL Runnells	Pavement Rehab	2020	\$2,940,000
Iowa DOT	IA 117: Stream 0.5 Mi S of Co Rd F24	Bridge Deck Overlay	2021	\$190,000
Iowa DOT	IA 5: Middle River 1.5 Mi S of Co Rd G16 (NB & SB)	Bridge Deck Overlay	2021	\$503,000
Iowa DOT	I-80: US 6/169 In De Soto to Co Rd R16	Bridge Replacement	2021, 2022,	\$51,060,000
Iowa DOT	I-80: 2.5 Mi E of IA 224 to 1.0 Mi W of IA 146 (EB & WB)	Pavement Rehab	2021	\$4,854,000
Iowa DOT	I-80: South Skunk River 2.5 Mi W of IA 117 (EB & WB)	Bridge Deck Overlay	2021	\$2,023,000
Iowa DOT	US 30: Co Rd R18 Intersection	Grade and Pave	2021	\$1,697,000
Iowa DOT	US 30: 1.8 Mi W of Des Moines River to 0.25 Mi W of Snedden Dr (Var Loc)	Rip Rap, Right of Way	2021	\$148,000
Iowa DOT	IA 14: 0.6 Mi S of Co Rd G18	Culver Replacement	2021	\$75,000
Iowa DOT	IA 210: Des Moines River 0.6 Mi E of Co Rd E62	Bridge Rehabilitation	2022	\$3,174,000
Iowa DOT	US 6: Ditch 0.2 Mi E of Co Rd T12	Bridge Rehabilitation	2022	\$625,000
Iowa DOT	IA 117: Squaw Creek 1.7 Mi N of Co Rd S6G	Bridge Deck Overlay	2022	\$270,000
Iowa DOT	US 169: North River 3.5 Mi N of N Jct IA 92	Bridge Deck Overlay	2022	\$500,000
Iowa DOT	IA 28: Raccoon River 3.7 Mi N of IA 5 (SB)	Bridge Replacement	2022	\$5,728,000
Iowa DOT	US 65: Skunk River 7.6 Mi N of I-80 (NB)	Bridge Deck Overlay	2022	\$770,000
Iowa DOT	I-35: Co Rd G64 Interchange	Bridge Deck Overlay	2022	\$360,000

SPONSOR	PROJECT DESCRIPTION	TYPE OF WORK	PROGRAM YEAR	COST
Iowa DOT	I-35: Co Rd G50 Interchange 4.7 Mi S of IA 92	Bridge Deck Overlay	2022	\$360,000
Iowa DOT	IA 17: 0.5 Mi N of US 30 to 3.0 Mi N (State Share)	Bridge	2022, 2023	\$6,172,000
Iowa DOT	I-35: N of IA 92 to S of North River (SB)	Bridge Replacement	2022, 2023	\$17,387,000
Iowa DOT	I-80: Co Rd R16 To Co Rd R22/UTE Ave	Traffic Signs	2023	\$925,000
Iowa DOT	IA 14: Alloway Creek 1.6 MI S of IA 224	Bridge Replacement	2023	\$860,000
Iowa DOT	IA 5: S JCT IA 92	Bridge Deck Overlay	2023	\$1,200,000
Iowa DOT	US 30: Co Rd S14 Intersection in Nevada	Grade and Pave	2023	\$4,000,000
Iowa DOT	IA 5: Coal Creek 0.8 Mi N of Ia 316 (NB)	Bridge Deck Overlay	2023	\$480,000

Source: CIRTPA 2020 Transportation Improvement Program

CIRTPA Projects

The following local projects were pulled from CIRTPA's FFY 2020-2024 Transportation Improvement Program (TIP).

In the last LRTP, local communities were asked to provide projects out to 2035. However, given the fluidity of projects and variability of predicting future road conditions, staff did not ask for specific projects.

CIRTPA PROJECTS FFY 2020 - 2024

SPONSOR	DESCRIPTION	TYPE OF WORK	PROGRAM YEAR	COST
Adel	Adel Recreational Trails`	Ped/Bike Grade & Pave	2023	\$519,000
Boone	11th Street reconstruction from Division Street to Linn Street	Pavement Rehab	2020	\$1,200,000
Boone County	On 240th Street, Over Beaver Creek, along NLINE S16 T83 R28	Bridge Replacement	2020	\$400,000
Boone County	On R18 from E-57 South 3.9 miles to 310th Street	Pave	2021	\$2,000,000
Boone County	On 150th St, Over Trib. of Squaw Creek, along NLINE S36 T85 R25	Bridge Replacement	2021	\$350,000
Boone County	High Trestle to City of Boone Trail - Phase 1	Ped/Bike Grade & Pave	2021	\$418,000
Boone County	On Lower Ledges Rd and E-52, from Lower Ledges Easterly 4.2 Miles to Hwy 17	Pavement Rehab	2022	\$1,344,000
Boone County	On J Ave, Over UP RR, S27 T84 R27	Bridge Replacement	2022	\$720,000
Boone County	On QW Ln, Over Bike Trail, S 35, T82 R26	Bridge Replacement	2022	\$950,000
Boone County	On I Ave, Over BSV RR, in SW 1/4 of S33 T85 R27	Bridge Replacement	2023	\$800,000
Dallas County	On 170th St, Over Slough Creek, S27/34 T81 R27, Beaver Township	Bridge Replacement	2020	\$300,000
Dallas County	On 250th St, Over Walnut Creek, S2/11 T79 R26, Walnut Township	Bridge Replacement	2020	\$325,000
Dallas County	Raccoon River Valley Trail Bridges Project Phase I - Redfield to Adel	Ped/Bike Miscellaneous	2020	\$574,000
Dallas County	RRVT to HTT Connector Phase II - R Avenue to S Avenue	Ped/Bike Paving	2020	\$568,000
Dallas County	On B Avenue, Over Mosquito Creek, S5/6 T80 R29, Lincoln Township	Bridge Replacement	2021	\$420,000
Dallas County	On 270th St, Over Panther Creek, s15/22 T79 R28, Colfax Township	Bridge Replacement	2021	\$600,000
Dallas County	RRVT Project Phase II - Bridge S	Ped/Bike Structures	2021	\$617,000
Dallas County	On Pioneer Avenue, Over Slough Creek, S27/28 T81 R27, Beaver Township	Bridge Replacement	2022	\$400,000
Dallas County	On R22 from Highway 44 North 5.0 Miles to F31, S31/32, 29/30, 19/20, 17/28, 8/7 T80 r26, Grant Township	Pavement Rehab	2022	\$2,000,000
Dallas County	RRVT Bridge Project Phase III - Bridge D	Ped/Bike Structures	2022	\$313,000

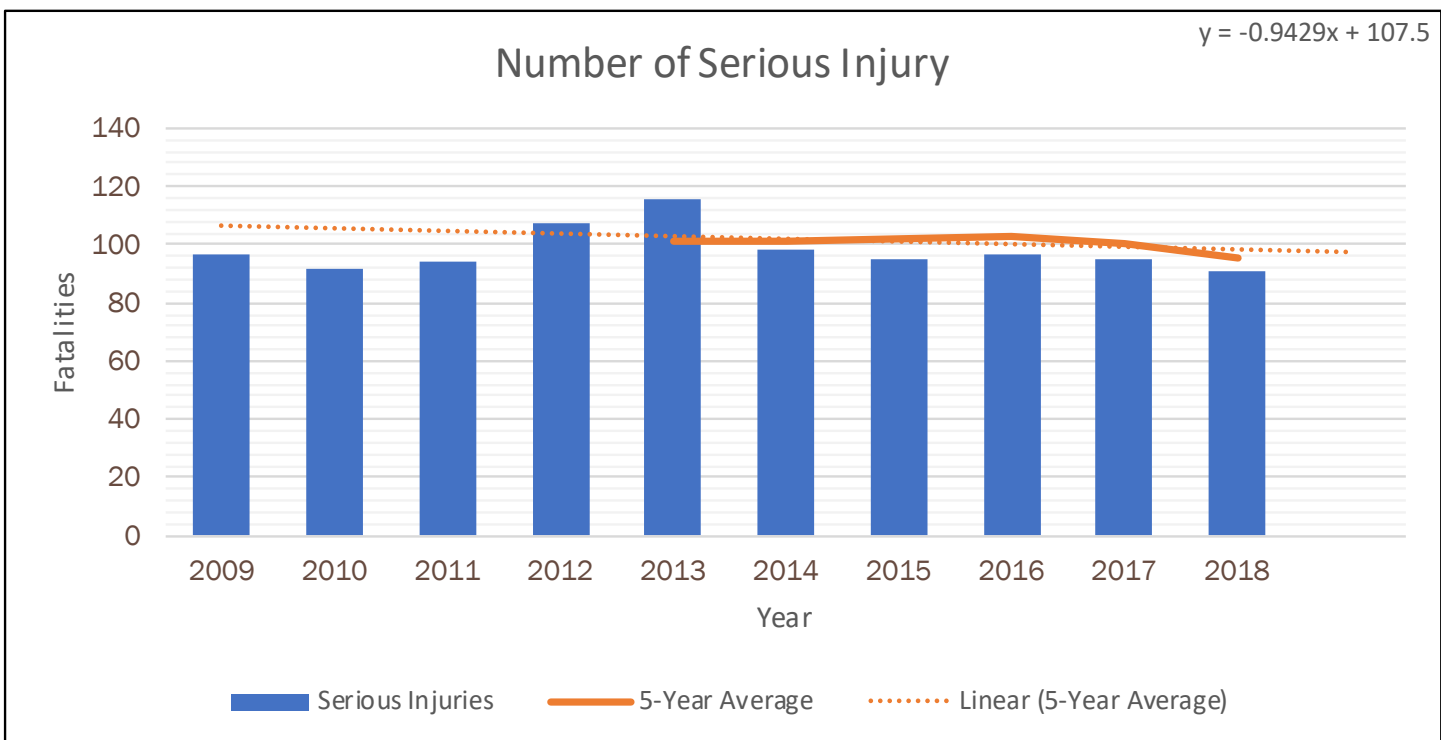
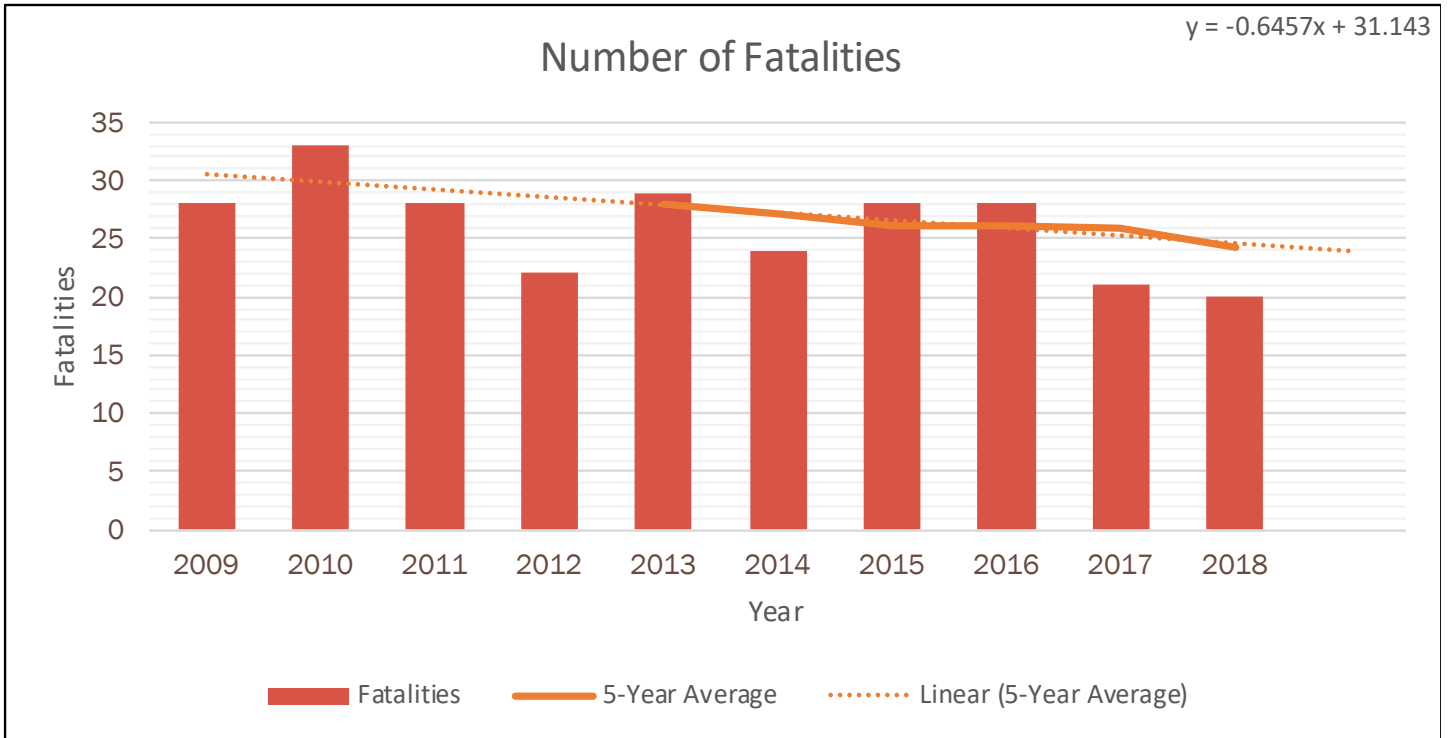
SPONSOR	PROJECT DESCRIPTION	TYPE OF WORK	PROGRAM YEAR	COST
Dallas County	On R30, Over Beaver Creek, S8/9 T81 R27, Beaver Township	Bridge Replacement	2023	\$600,000
Huxley	On Heart of Iowa Nature Trail Paving from Hwy 69 to 320th Street	Ped/Bike Grading and Paving	2020	\$400,000
Huxley	East 1st Street Rec Phase 1 - From Approx. 240' east of Parkridge Ave east approx. 650'	Pavement Rehab	2020	\$365,000
Indianola	Traffic Signal System Timings Update	Traffic Signals	2020	\$142,000
Indianola	On S J & K St, from approx. 600' N of IA 92 to Approx 500' S of IA 92	Grade and Pave, Traffic Signals	2021	\$955,000
Jasper County	N 75th Ave W: Over Clear Creek	Bridge Replacement	2020	\$375,000
Jasper County	On County Road F48, Over Squaw Creek, just of W 116th St S on NLINE S11 T79 R21	Bridge Rehabilitation	2020	\$1,500,000
Jasper County	On County Road F24, Over Indian Creek, along NLINE S3 T80 R21 approx. 500 east of State Hwy	Bridge Rehabilitation	2020	\$1,700,000
Jasper County	On S 64th Ave E, Over Sugar Creek, in S25 T79 R17	Bridge Replacement	2020	\$450,000
Jasper County	On F62, from State Highway 163 East 4.285 Miles to State Highway 14	Pavement Rehab/ Widen	2020	\$2,500,000
Jasper County	From NSNWR entrance road to S 80th Avenue W and from Red Rock Park in Monroe to Jasper Street and IA 163 interchange	Ped/Bike Paving	2020	\$2,300,000
Jasper County	On F-24, Over Clear Creek, along NLINE S2 T80 R21	Bridge Replacement	2021	\$600,000
Jasper County	On County Road F48, Over Small Stream, along WLINE S10 T79 R21	Bridge Rehabilitation	2021	\$200,000
Jasper County	On T38, Over Sugar Creek, on WLINE S13 T80 R17	Bridge Replacement	2021	\$750,000
Jasper County	On S 44th Ave, Over Small Stream, on NLINE S16 T79 R19	Bridge Replacement	2023	\$550,000
Jasper County	On Eagle St., Over Indian Creek, in SW Corner of S27 T81 NRR21W	Bridge Replacement	2023	\$350,000
Knoxville	Competine Creek Trail Phase II - From Knoxville Hospital to S 5th St	Ped/Bike Grand & Pave	2020	\$1,261,000
Knoxville	On Park Lane Dr, Larson St, Rock Island St, 2nd St, and Roche St	Pavement Rehab	2021	\$935,000
Madison County	Clark Tower Rd.: Over Clanton Creek	Bridge Replacement	2020	\$1,250,000
Madison County	On Valleyview Ave., Over Drainage, S10 T75 R26	Bridge Replacement	2020	\$1,000,000
Madison County	On Hogback Bridge Rd, Over Drainage, at S1/4 S23 T76 R28	Bridge Replacement	2020	\$1,000,000
Madison County	On R21 (Peru rd), Over Clanton Creek at NW S12 T74 R27	Bridge Replacement	2020	\$1,800,000
Madison County	On R35 (Bev. Park Rd.) Over clanton Creek, at NW S12 T75 R26	Bridge Replacement	2020	\$2,000,000
Madison County	On Settlers Ave., Over stream, at SE S36 T77N R27W	Bridge Replacement	2020	\$550,000
Madison County	On G61 (Macksburg Rd), from Adair/Madison county Line East 6 Miles to Fieldstone Ave	Pavement Rehab	2021	\$2,000,000

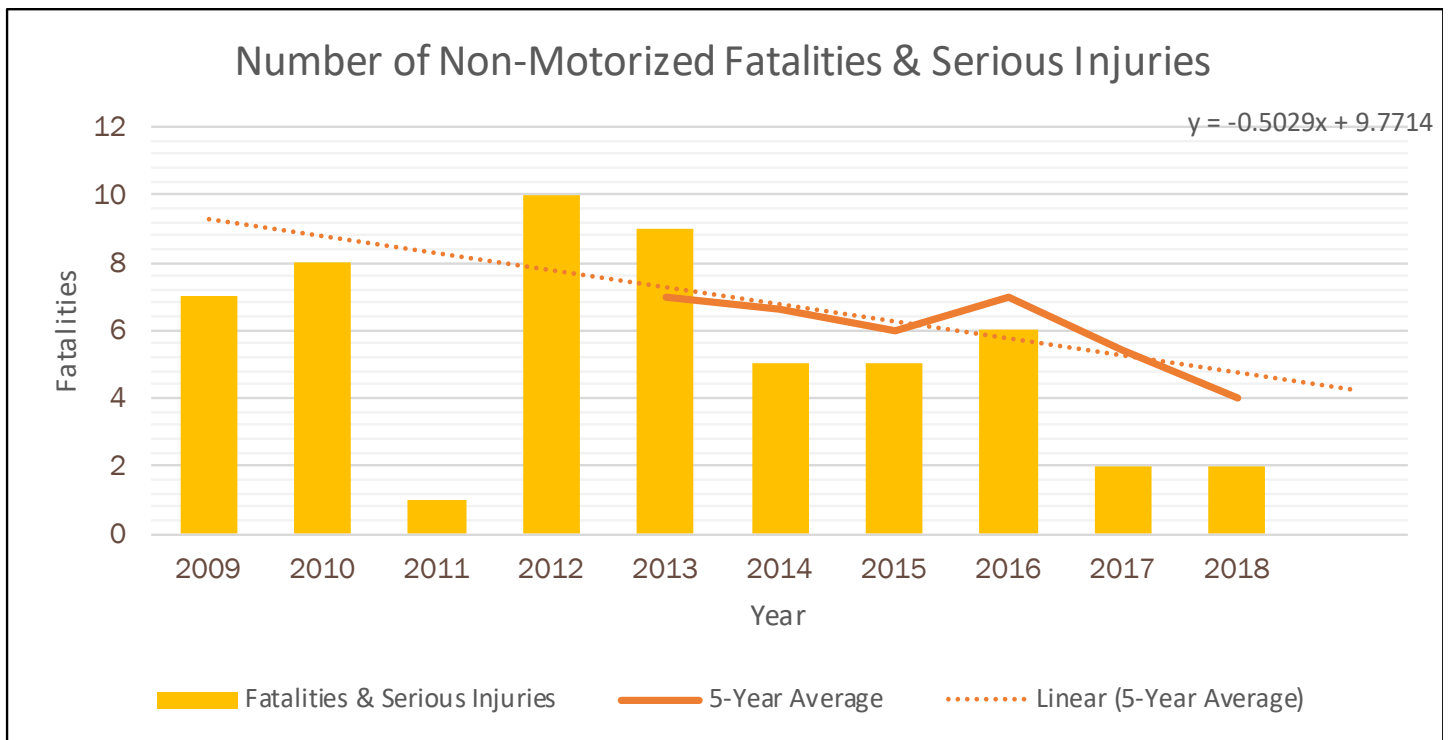
SPONSOR	PROJECT DESCRIPTION	TYPE OF WORK	PROGRAM YEAR	COST
Madison County	On R21, Over Branch to Clanton Creek, at S1 T74 R27	Bridge Replacement	2021	\$500,000
Madison County	On P53, Over North River, S10 T76 R29	Bridge Replacement	2022	\$1,200,000
Madison County	On R35 (10th Ave.), Over Branch Badger Creek, at S31 T77 R25	Bridge Replacement	2023	\$800,000
Marion County	On Various, Countywide	Pavement Rehab	2020	\$120,000
Marion County	T14, from Pella Corp. Limit to Jasper Co. Line	Pavement Widening	2021	\$1,200,000
Marion County	On Various, Countywide	Pavement Rehab	2021	\$120,000
Marion County	On Kennedy St., Over Competine Creek, from S71 W 0.25 Miles	Bridge Replacement	2022	\$350,000
Marion County	On T15, Over BNSF RR and Stream, from Old Hwy 92 to Lucas Dr.	Bridge Replacement	2023	\$2,000,000
Milo	Multi- use Path Project - From Southeast Warren Elementary School to Centennial Park	Ped/Bike Grade & Pave	2023	\$370,000
Newton	Union Drive Reconstruction, from N 4th Avenue W to N 19th Avenue W	Pavement Rehab	2022	\$2,800,000
Pella	Oskaloosa St, from SE 16 to 240 st (Eagle Lane) including the intersection approx 300 ft	Pavement Rehab	2022	\$1,650,000
Perry	Willis Avenue Overlay	Pavement Rehab	2022	\$539,000
Polk County	On NE 72 St, Over Drainage Ditch at NE 126 Ave	Bridge Replacement	2020	\$800,000
Polk County	On NW 134 Ave E. of NW 2 St	Bridge Replacement	2021	\$800,000
Polk County	On NE 112 St/SE 116th St, from Hwy 163 to E CL of Runnells	Pavement Rehab	2022	\$1,204,000
Polk County	On SE 48 Ave, Over Creek E of SE Powers Dr	Bridge Replacement	2023	\$400,000
Roland	Bridge Replacement Project and approach work on E18/Maple St over Bear Creek	Bridge Replacement	2020	\$750,000
RPA 11	HIRTA: Vehicle Purchase	Vehicle Purchase	2020, 2021, 2022	\$466,000
Story County	On E18, Over East Indian Creek, on NLINE S19 T85 R22	Bridge Replacement	2020	\$600,000
Story County	On 570th Ave., Over Ballard Creek, along WLINE S17 T82 R23	Bridge Replacement	2020	\$600,000
Story County	HoINT - Huxley to South Skunk River Bridge, Hard Surfacing, and Trail IMprovements	Ped/Bike Paving and Structures	2020	\$1,077,000
Story County	On R38, from Slater City Limits north 8.0 Miles	Pavement Rehab	2022	\$2,240,000
Story County	On 150th St. Over Skunk River, NLINE S31 T85 R23	Bridge Replacement	2023	\$1,000,000
Warren County	R-63: From North River to DM City Limit	Pavement Rehab	2020	\$1,300,000
Warren County	140th Ave: Scotch Ridges Rd S 0.4 MI	Bridge Replacement	2020	\$375,000
Warren County	On 30th Ave, Over Painter Creek, S21 T75 R25	Bridge Replacement	2020	\$525,000
Warren County	On Idaho St, Over Branch Middle River, from 50th Ave W 0.3, S 15 T76 R25	Bridge Replacement	2021	\$400,000

SPONSOR	PROJECT DESCRIPTION	TYPE OF WORK	PROGRAM YEAR	COST
Warren County	On 115th Ave, Over Cavitt Creek, from 115th Ave & Fulton St South 0.25 miles, S2 T76 R24	Bridge Replacement	2021	\$350,000
Warren County	On R35 (10th Ave), Over Branch Badger Creek, S31 T77 R25	Bridge Replacement	2021	\$900,000
Warren County	On S23, Over Mill Creek, S27 T74 R22	Bridge Replacement	2021	\$700,000
Warren County	On Buchanan St, 0.25 miles east of 143rd Ave, Over Branch North River, S8 T77 R23	Bridge Replacement	2022	\$375,000
Warren County	On Dubuque St, 0.5 Mile West of R63, Over Unnamed stream, S28 T77 R24	Bridge Replacement	2022	\$375,000
Warren County	On G64, Over S River Branch, S15 T74 R25	Bridge Replacement	2023	\$660,000
Winterset	10th Street Reconstruction, from Iowa 92 and Benton Street	Pavement Rehab	2020	\$1,300,000

Safety

The number of fatal crashes, serious injury crashes, and non-motorized fatalities & serious injuries has decreased over time since 2009. The following charts shows how, even though individual years can vary greatly, tracking a 5-year rolling average for all categories shows decreases across the board.





The Iowa DOT's Strategic Highway Safety Plan (SHSP) 2019-2023 is the overarching document related to safety for Iowa's roadways. The plan looks at safety holistically and incorporates various viewpoints on safety. It also is a data driven document that has several safety emphasis areas. Data points include lane departures and roadside collisions, speed-related, unprotected persons, young drivers, intersections, impairment involvement, older drivers, and distracted or inattentive drivers.

CIRTPA will continue to review and implement SHSP recommended practices as applicable. This includes recommending practices to local jurisdictions, of which receives the majority of CIRTPA's funding.

Future Roadways

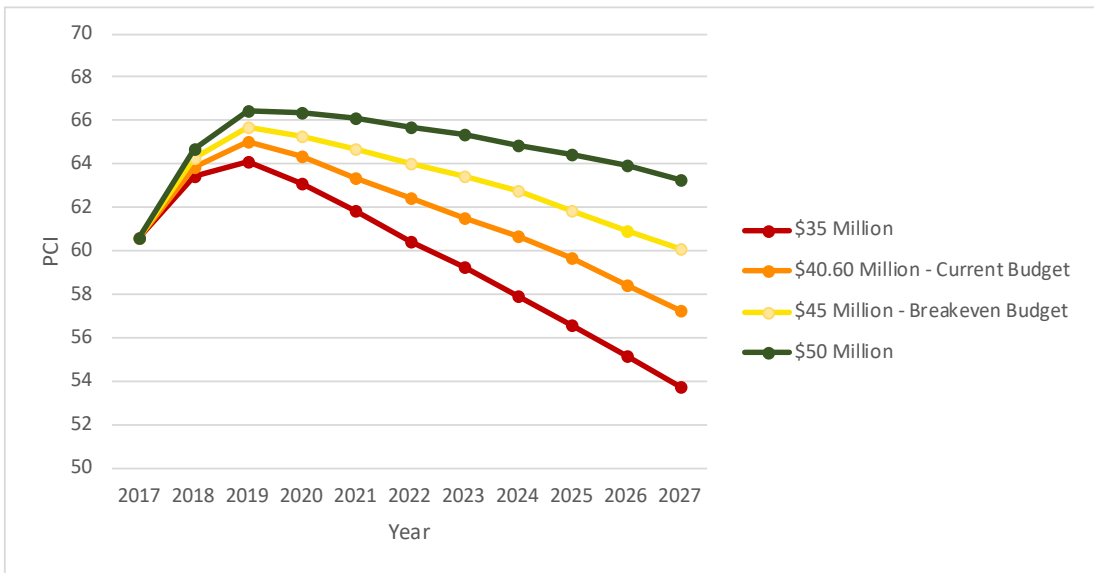
Local Roads

Since 2013, Pavement Condition Index (PCI) data has been collected for all paved roads in the CIRTPA region. As has been discussed previously, the average PCI has decreased, and the percentage of roads rated in poor or worse condition has increased since then. In order to accurately assess the future conditions of CIRTPA roadways, the dTIMS pavement management software was used to forecast road conditions 10 years into the future.

CIRTPA staff reviewed 5 years' worth of street finance reports published by the Iowa DOT to estimate the average communal budget of all CIRTPA communities with the Planning Area. The average 5-year budget is \$40.60 Million. Below is the forecasted average regional PCI given several different budget scenarios. Given the existing conditions and assumed treatments used by jurisdictions, the average spending per year needed to maintain the existing PCI is \$45 Million.

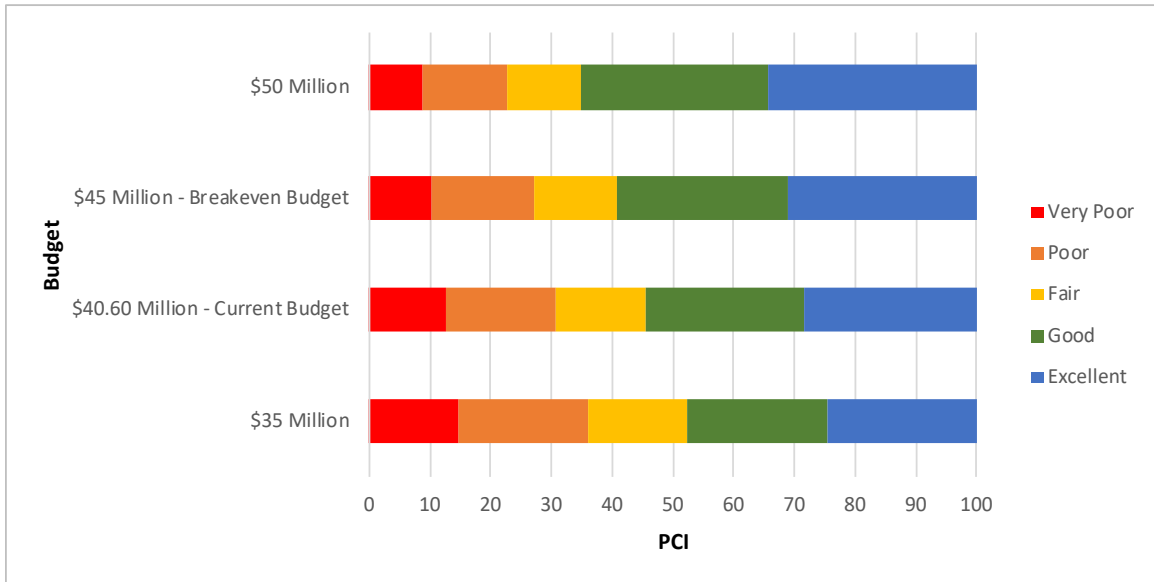
Currently the region needs to spend an additional \$4.4 Million per year to maintain current road conditions or risk seeing a nearly 4-point drop in PCI by 2027.

AVERAGE PREDICTED PCI BY BUDGET SCENARIO



The 2027 PCI breakdown by category shows that, although not a huge difference in PCI makeup, it would affect the almost 2,200 miles or local roadways. For example, the percentage of roads in poor or worse condition for the current budget in 2027 is 31% and for the breakeven budget it is 27%. Although that is only a 4% difference, it represents almost 100 miles of roadway.

YEAR 2027 PCI BREAKDOWN PER CONDITION CATEGORY AND BUDGET



CIRTPA Regional Road Corridors

In addition to identifying the future road projects for the CIRTPA region, the CIRTPA identified several important regional road corridors that could potentially begin development before 2040. These corridors are currently in a preliminary stage and their feasibility and exact locations are still under consideration. These corridors do not represent the final location of any future road, but simply represent a wide swath of land where a potential road could be built.

The purpose of these corridors is to inform surrounding governments and citizens of the possible development of a major road within these areas. These corridors will continue to be studied in the near future and are subject to change based on the findings of any future study. The regional road corridors identified include:

- Northeast Beltway – located in Polk County, the northeast beltway provides a connection from I-80 in the eastern DMAMPO to US-69 in the northern DMAMPO. It should be noted that a portion of this corridor resides within a CIRTPA section of Polk County.
- Pella to I-80 Corridor – located in Marion and Jasper County, the Pella to I-80 corridor provides a direct link to I-80 from the city of Pella.
- Southwest Connector/Veteran’s Parkway - located primarily in the DMAMPO, the southwest connector/Veteran’s Parkway connects I-80 to Iowa 5. This future corridor was partially completed by West Des Moines for economic development purposes. The future completion of the roadway is likely with more development.

- Knoxville to Pella Corridor - An extension of the Pella to I-80 Corridor a feasibility study was completed to determine if an enhanced corridor was needed to connect the cities of Knoxville and Pella. This project can be stand alone and completed if the Pella to I-80 Corridor never gets built.

The location of these corridors is included on the following map. A potential roadway could occur anywhere within the corridor.

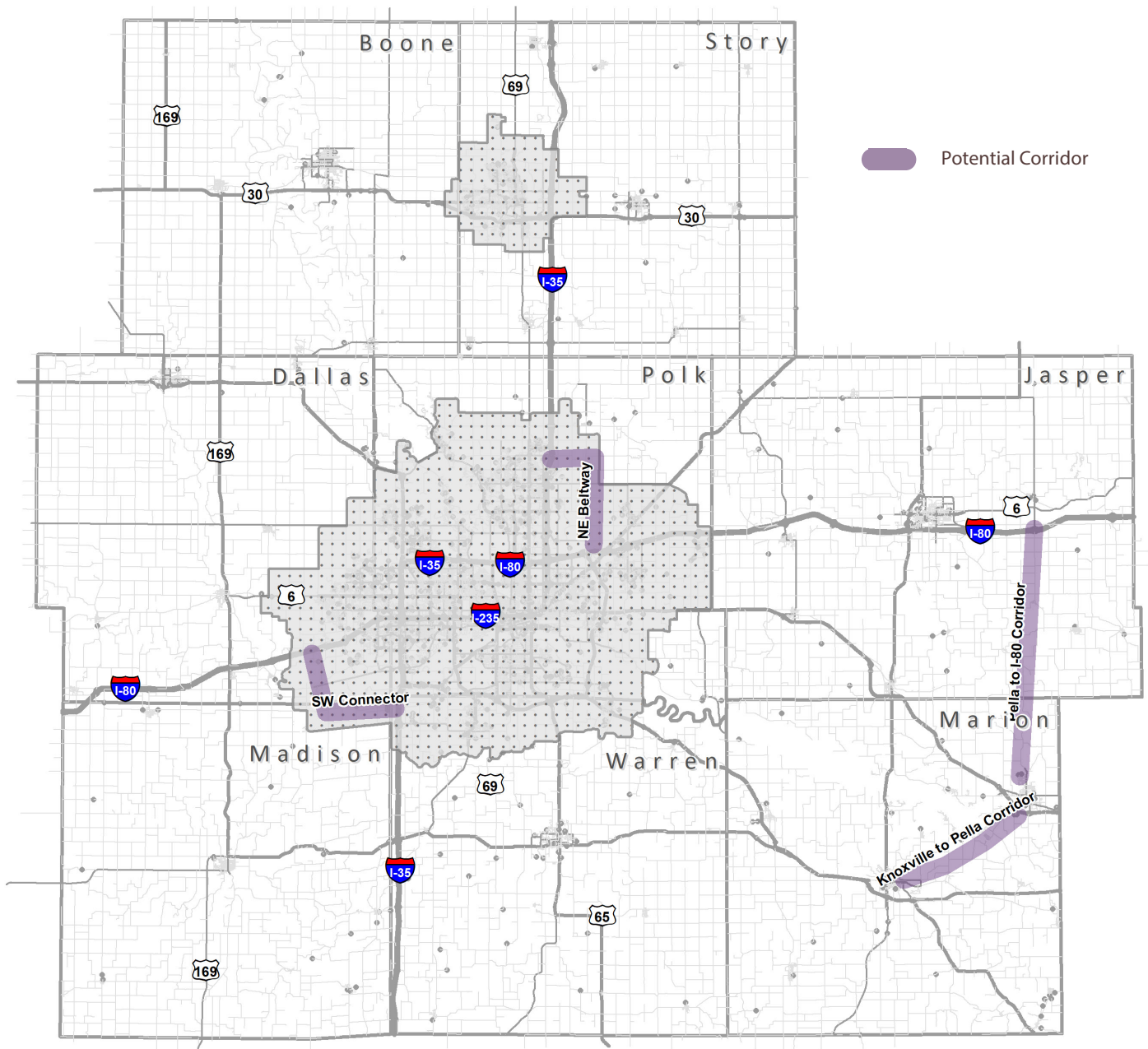
Since the last plan update, several corridors that were identified in the last plan have been removed from the list of potential corridors. Those include:

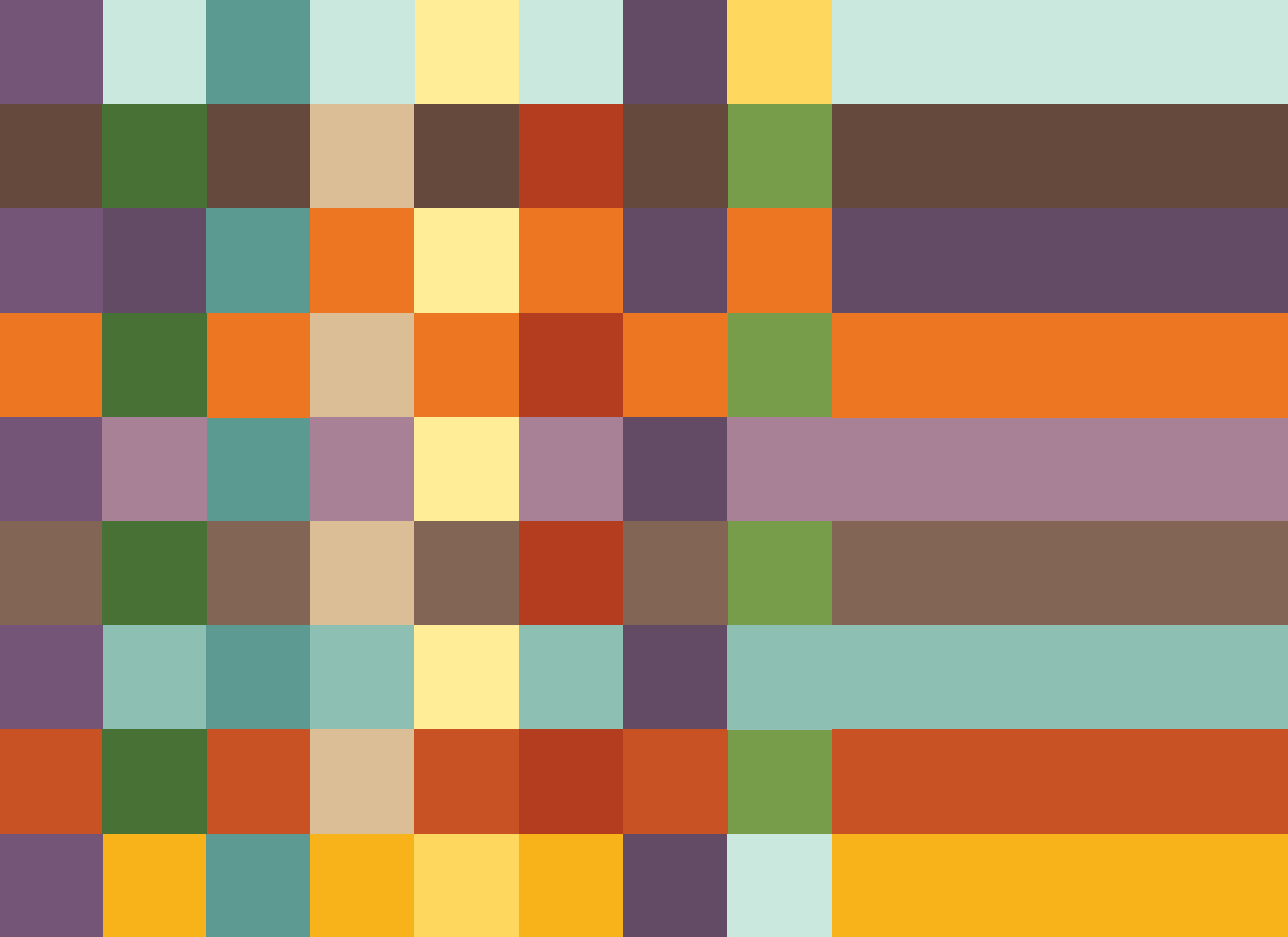
- Northwest Bypass – located in Dallas County, the northwest bypass connects I-80 in the western DMAMPO to IA 17 in northern Polk County. A feasibility study was completed and found that there would likely not be enough traffic to justify the corridor’s construction.
- Northwest Connector – located primarily in the DMAMPO, the northwest connector provides access from the Rider corner of I-35/I-80 to the west near Dallas Center and IA 44. As it was a connector to the Northwest Bypass, without its construction the Northwest Connector is now in doubt.

Connectivity between the cities and counties in the CIRTPA region is a key to the ongoing growth of the area and the related traffic projected to occur through 2040. Many factors were considered, including the growth of the Des Moines and Ames MPOs, the freight needs of the global economy and the development of the renewable energy industry. The impact on individual routes within the CIRTPA region is difficult to predict and will need to be monitored throughout the planning period and a proactive plan put in place to address the developing needs. The highway 169, 92, 30 and corridor from Knoxville to Pella to Newton to Highway 30 is a key to this connectivity. In addition, as traffic growth occurs on roads that are currently under local jurisdiction, it may be necessary to review the jurisdiction of these roads. The IDOT has studied

the capacity needs of Interstate 80 through the CIRTPA region and has determined that I-80 will need to be expanded, however how to fund that project is still being considered. With these two traffic issues occurring at the same time in the CIRTPA area, the CIRTPA staff and local jurisdiction members of the CIRTPA are prepared to assist the IDOT in studying these issues and review possible alternate routes through the CIRTPA region that may be able to address the needs of the region and also address needed capacity expansion for traffic that would otherwise travel Interstate 80.

REGIONAL ROAD CORRIDORS







11



FINANCIAL
ANALYSIS

FINANCIAL ANALYSIS

This chapter presents the CIRTPA's historical funding sources, current funding sources, estimates future funding revenues, and identifies future transportation improvement cost estimates in order to ensure the CIRTPA has the fiscal capacity to implement the planned transportation improvements contained the HY 2040 LRTP.

Historical Funding Sources

The following tables summarize the amount of funding historically available to the CIRTPA by funding source. The tables include the amount of funding actually received by its member governments. Federal revenue information was collected from CIRTPA historical records and the Iowa Department of Transportation.

SURFACE TRANSPORTATION BLOCK GRANT FUNDS 2012-2019

JURISDICTION	2012	2013	2014	2015	2016	2017	2018	2019
Boone County	\$374,260	\$358,593	\$363,334	\$368,453	\$366,159	\$374,208	\$367,682	\$375,894
Boone	\$274,301	\$262,818	\$270,274	\$277,939	\$275,899	\$288,216	\$278,251	\$290,946
Dallas County	\$471,724	\$451,977	\$457,374	\$463,469	\$461,810	\$472,257	\$463,810	\$474,677
Perry	\$171,217	\$164,049	\$168,562	\$173,025	\$171,809	\$179,153	\$173,212	\$180,781
Jasper County	\$549,989	\$526,965	\$534,004	\$541,492	\$538,114	\$549,984	\$540,368	\$552,558
Newton	\$359,511	\$344,461	\$353,413	\$362,841	\$360,343	\$375,416	\$363,223	\$378,757
Madison County	\$374,901	\$359,207	\$362,908	\$368,335	\$365,475	\$372,444	\$366,800	\$373,999
Winterset	\$-	\$-	\$125,276	\$128,158	\$127,354	\$132,209	\$128,281	\$133,285
Marion County	\$418,562	\$401,040	\$406,217	\$412,347	\$410,066	\$419,573	\$411,878	\$421,536
Knoxville	\$172,058	\$164,855	\$169,090	\$173,462	\$172,290	\$179,362	\$173,641	\$180,930
Pella	\$205,438	\$196,838	\$203,033	\$208,375	\$206,820	\$216,203	\$208,613	\$218,283
Polk County	\$357,909	\$342,927	\$344,095	\$346,791	\$351,814	\$360,953	\$353,563	\$363,300
Story County	\$545,796	\$522,948	\$529,045	\$536,828	\$532,759	\$543,601	\$534,871	\$545,853
Nevada	\$142,150	\$136,199	\$140,229	\$144,163	\$143,089	\$149,567	\$144,327	\$151,003
Warren County	\$404,172	\$387,253	\$391,971	\$397,421	\$396,304	\$405,753	\$398,098	\$407,862
Indianola	\$286,423	\$274,433	\$283,315	\$291,416	\$289,138	\$302,888	\$291,765	\$305,936
HIRTA	\$-	\$-	\$-	\$-	\$-	\$-	\$116,937	\$126,149
Small Communities	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$252,298
Total	\$5,108,412		\$5,102,141	\$5,194,516	\$5,169,243	\$5,321,787	\$5,315,319	

Source: CIRTPA - Please note that this funding includes both direct STBG and STBG-TAP Flex funding. STBG-TAP Flex is funding that can be used in either STBG or TAP balances, CIRTPA has chosen to add this funding to its' STBG balance.

TRANSPORTATION ALTERNATIVES PROGRAM FUNDS 2012-2019

JURISDICTION	2012	2013	2014	2015	2016	2017	2018	2019
Boone County	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Boone	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Dallas County	\$-	\$-	\$-	\$97,209	\$-	\$61,443	\$-	\$459,000
Adel	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Perry	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Jasper County	\$-	\$137,769	\$-	\$-	\$280,000	\$-	\$-	\$240,000
Newton	\$-	\$-	\$185,543	\$-	\$-	\$-	\$-	\$-
Madison County	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Winterset	\$-	\$-	\$92,772	\$-	\$-	\$-	\$-	\$-
Marion County	\$-	\$2,000	\$-	\$-	\$-	\$-	\$-	\$-
Knoxville	\$143,641	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Pella	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Polk County	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Story County	\$-	\$127,231	\$-	\$180,791	\$-	\$225,000	\$-	\$200,000
Huxley	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$260,000
Nevada	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Story City	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Warren County	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Indianola	\$309,520	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Total Spent	\$453,161	\$267,000	\$278,315	\$278,000	\$280,000	\$286,443	\$-	\$1,159,000
Total Allocated	\$393,878	\$378,333	\$281,120	\$283,015	\$281,419	\$289,142	\$282,564	\$286,152

Source: CIRTPA

HIGHWAY BRIDGE PROGRAM FUNDS 2012-2019

JURISDICTION	2012	2013	2014	2015	2016	2017	2018	2019
Boone County	\$284,337	\$265,678	\$287,713	\$281,358	\$290,718	\$301,440	\$325,302	\$382,526
Dallas County	\$264,985	\$248,473	\$230,037	\$209,436	\$228,634	\$284,938	\$322,686	\$222,173
Jasper County	\$505,749	\$574,204	\$601,600	\$595,186	\$635,715	\$626,054	\$688,032	\$748,748
Madison County	\$471,921	\$513,460	\$566,694	\$574,444	\$575,800	\$569,052	\$625,776	\$674,355
Marion County	\$355,053	\$361,725	\$366,467	\$390,394	\$387,893	\$362,319	\$383,711	\$390,709
Polk County	\$139,406	\$144,495	\$149,437	\$147,462	\$147,620	\$150,893	\$162,476	\$176,058
Story County	\$305,312	\$326,873	\$333,242	\$338,215	\$349,699	\$348,585	\$362,690	\$344,055
Warren County	\$485,972	\$565,577	\$553,807	\$526,229	\$518,183	\$517,209	\$565,658	\$496,933
Total	\$3,035,236	\$3,234,213	\$3,088,997	\$3,062,725	\$3,134,261	\$3,160,491	\$3,436,331	\$3,435,558

ROAD USE TAX FUNDS 2012-2018

JURISDICTION	2012	2013	2014	2015	2016	2017	2018
Boone County	\$2,854,362	\$2,649,725	\$2,821,773	\$2,956,933	\$3,575,640	\$3,666,126	\$3,507,118
Boone	\$1,200,910	\$1,212,492	\$1,264,248	\$1,316,522	\$1,564,637	\$1,571,783	\$1,615,419
Dallas County	\$2,756,898	\$2,574,990	\$2,734,332	\$2,860,223	\$3,452,859	\$3,540,543	\$3,408,472
Adel	\$356,950	\$359,530	\$368,077	\$382,864	\$455,019	\$457,097	\$469,787
Perry	\$730,543	\$737,589	\$769,074	\$800,873	\$951,807	\$956,155	\$982,699
Jasper County	\$3,850,323	\$3,613,246	\$3,847,596	\$4,028,838	\$4,860,142	\$4,972,865	\$4,778,913
Newton	\$1,446,859	\$1,460,813	\$1,523,169	\$1,586,149	\$1,885,078	\$1,893,688	\$1,946,260
Madison County	\$2,710,169	\$2,543,213	\$2,706,272	\$3,203,483	\$3,421,863	\$3,514,565	\$3,371,371
Winterset	\$492,277	\$497,025	\$518,241	\$539,669	\$641,376	\$644,306	\$662,193
Marion County	\$3,293,843	\$2,874,123	\$3,058,767	\$3,203,483	\$3,869,806	\$3,970,270	\$3,784,349
Knoxville	\$693,646	\$700,336	\$730,230	\$760,424	\$903,735	\$907,863	\$933,067
Pella	\$981,899	\$991,368	\$1,033,686	\$1,076,427	\$1,279,292	\$1,285,135	\$1,320,813
Polk County	\$2,185,033	\$2,051,707	\$2,183,621	\$2,297,030	\$2,811,831	\$2,876,521	\$2,809,315
Story County	\$3,057,918	\$2,860,055	\$3,049,140	\$3,194,381	\$3,863,620	\$4,019,115	\$3,830,544
Huxley	\$314,621	\$317,655	\$331,215	\$344,910	\$409,912	\$411,785	\$423,217
Nevada	\$659,459	\$664,178	\$679,597	\$706,873	\$840,092	\$843,929	\$867,358
Story City	\$325,434	\$328,573	\$342,598	\$356,764	\$424,000	\$425,937	\$437,762
Warren County	\$2,988,387	\$2,805,526	\$3,015,381	\$3,146,265	\$3,806,803	\$3,905,325	\$3,777,928
Indianola	\$1,402,089	\$1,415,611	\$1,476,038	\$1,537,069	\$1,826,749	\$1,835,092	\$1,886,038
Other Communities	\$7,412,454	\$6,727,372	\$7,060,284	\$7,035,230	\$8,903,929	\$9,016,371	\$9,060,385
Total	\$39,714,074	\$37,385,127	\$39,513,339	\$41,334,410	\$49,748,190	\$50,714,471	\$49,873,009

Source: Iowa Department of Transportation

HISTORIC OPERATIONS AND MAINTENANCE SPENT 2014-2018

JURISDICTION	2014	2015	2016	2017	2018
Boone County	\$4,833,740	\$4,482,323	\$5,423,875	\$5,301,333	\$6,144,762
Boone	\$1,632,340	\$1,474,522	\$1,711,262	\$1,718,544	\$1,566,960
Dallas County	\$7,787,191	\$6,232,322	\$6,520,104	\$6,961,905	\$7,294,716
Adel	\$310,379	\$519,618	\$580,723	\$508,656	\$578,279
Perry	\$862,440	\$1,113,439	\$897,648	\$878,681	\$1,226,083
Jasper County	\$5,800,455	\$6,300,223	\$7,417,087	\$7,162,330	\$8,969,467
Newton	\$1,356,054	\$1,321,356	\$1,657,493	\$1,704,188	\$1,453,699
Madison County	\$4,310,939	\$4,629,067	\$5,196,456	\$5,720,018	\$4,750,100
Winterset	\$658,913	\$510,099	\$714,478	\$811,210	\$803,908
Marion County	\$5,289,467	\$4,975,869	\$5,187,440	\$5,912,641	\$6,392,250
Knoxville	\$623,021	\$641,518	\$1,035,171	\$852,416	\$1,853,731
Pella	\$946,195	\$1,044,652	\$851,810	\$1,016,448	\$961,338
Polk County	\$3,475,679	\$3,226,393	\$3,368,748	\$3,676,615	\$3,704,311
Story County	\$5,480,515	\$5,243,843	\$5,254,782	\$5,405,166	\$6,610,026
Huxley	\$336,037	\$346,966	\$289,914	\$315,393	\$497,370
Nevada	\$988,697	\$1,424,204	\$805,063	\$730,441	\$611,312
Story City	\$434,628	\$360,041	\$358,752	\$466,068	\$400,176
Warren County	\$5,021,974	\$5,113,810	\$6,030,626	\$3,672,545	\$5,370,336
Indianola	\$1,333,523	\$1,275,492	\$1,595,277	\$1,489,961	\$1,669,849
Other Communities	\$4,728,677	\$5,728,622	\$5,248,787	\$5,546,828	\$5,879,209
Total	\$56,210,864	\$55,964,379	\$60,145,495	\$59,851,387	\$66,737,882

Source: Iowa Department of Transportation

OTHER HISTORIC FUNDING FOR BICYCLE/PEDESTRIAN FACILITIES AND STREETS/HIGHWAYS

JURISDICTION	HSIP 2012-2019	HBP 2012-2019	DEMO 2012-2019	RISE 2015-2019	RTP 2012-2019	NRT 2012-2019
Boone County	\$-	\$2,972,000	\$725,000	\$94,482	\$-	\$-
Boone	\$-	\$-	\$1,095,000	\$454,802	\$-	\$-
Dallas County	\$703,000	\$1,640,000	\$-	\$-	\$851,507	\$592,000
Adel	\$-	\$968,000	\$-	\$-	\$-	\$-
Perry	\$-	\$440,000	\$-	\$-	\$-	\$-
Jasper County	\$231,000	\$10,092,000	\$-	\$-	\$749,501	\$1,262,000
Newton	\$-	\$160,000	\$-	\$-	\$-	\$-
Madison County	\$263,000	\$7,178,000	\$-	\$-	\$-	\$-
Winterset	\$-	\$-	\$-	\$-	\$500,000	\$-
Marion County	\$247,000	\$1,714,000	\$-	\$-	\$-	\$-
Knoxville	\$-	\$-	\$-	\$718,532	\$-	\$-
Pella	\$-	\$-	\$176,000	\$-	\$-	\$-
Polk County	\$-	\$1,435,000	\$-	\$-	\$-	\$-
Story County	\$154,000	\$2,290,000	\$-	\$-	\$530,000	\$-
Huxley	\$-	\$-	\$-	\$-	\$-	\$-
Nevada	\$-	\$-	\$-	\$501,452	\$-	\$-
Story City	\$-	\$-	\$-	\$172,161	\$-	\$-
Warren County	\$500,000	\$5,880,000	\$19,000	\$-	\$-	\$-
Indianola	\$-	\$-	\$-	\$-	\$-	\$-
Other	\$-	\$2,199,000	\$-	\$-	\$-	\$-
Total	\$2,098,000		\$2,015,000	\$1,941,429	\$2,631,008	\$1,854,000

Source: CIRTPA TIP's 2012-2019 and the Iowa DOT

Acronyms

- DEMO Federal Demonstration Funds
- HBP Highway Bridge Program
- HSIP Highway Safety Improvement Program
- NRT Federal Recreational Trails Program
- RISE Revitalize Iowa's Sound Economy
- RTP Recreational Trails Program

Current Funding Sources

The CIRTPA's transportation system improvements are funded through a combination of Federal, state, and local funds. CIRTPA member governments have access to similar types of federal, state, and local funding. The CIRTPA primarily deals with the administration of Surface Transportation Block Grant Funding (STBG) funds. The CIRTPA sub allocates the amount of STBG funds to each CIRTPA member government using a modified version of the formula used by the Iowa DOT to distribute STP funds to regional planning affiliations. Other federal funds include the Surface Transportation Block Grant – Highway Bridge Program (STBG-HBP), which is distributed to the CIRTPA Counties by the state. Local funds consist of property taxes, the Secondary Road Fund (SRF), and Farm-to-Market (FTM) funds. The SRT and FTM funds come out of the state's Road Use Tax Fund.

Surface Transportation Block Grant Program

This program is designed to address some specific issues identified by Congress and to continue programs funded under the previous highway bill. STBG funding may be spent on roadway and bridge projects on Federal-aid routes, Transportation Alternative (TA) projects, transit capital improvements, and planning activities. The table on the following page includes the projected STBG funds for CIRTPA member governments through HY 2040 (Appendix A includes further discussion of the methodology staff used to project future revenues).

Surface Transportation Block Grant Program - Highway Bridge Program

The Iowa DOT uses a set-aside from STBG funds to provide a revenue stream for the rehabilitation and replacement of bridges that are deemed structurally deficient or functionally obsolete. These funds are allocated directly to the counties based on an Iowa DOT formula. The table on the following page includes the projected STBG-HBP funds for CIRTPA member counties through HY 2040 (Appendix A includes further discussion of the methodology staff used to project future revenues).

PROJECTED STBG FUNDS FFY 2020-2040

JURISDICTION	2020-2025	2026-2030	2031-2035	2036-2040
Boone County	\$2,262,298	\$2,125,516	\$2,407,437	\$2,689,357
Boone	\$1,730,571	\$1,617,868	\$1,836,077	\$2,054,286
Dallas County	\$2,855,632	\$2,682,509	\$3,038,517	\$3,394,525
Perry	\$1,076,336	\$1,006,653	\$1,142,239	\$1,277,824
Jasper County	\$3,325,316	\$3,124,174	\$3,538,592	\$3,953,011
Newton	\$2,256,103	\$2,110,461	\$2,394,529	\$2,678,597
Madison County	\$2,254,257	\$2,119,287	\$2,399,786	\$2,680,286
Winterset	\$795,432	\$744,682	\$844,646	\$944,610
Marion County	\$2,535,469	\$2,381,572	\$2,697,724	\$3,013,875
Knoxville	\$1,078,156	\$1,008,726	\$1,144,424	\$1,280,121
Pella	\$1,297,889	\$1,213,175	\$1,376,887	\$1,540,598
Polk County	\$2,181,426	\$2,047,534	\$2,320,009	\$2,592,484
Story County	\$3,288,268	\$3,090,669	\$3,500,059	\$3,909,448
Nevada	\$897,893	\$839,304	\$952,556	\$1,065,808
Warren County	\$2,452,141	\$2,302,875	\$2,608,772	\$2,914,668
Indianola	\$1,817,057	\$1,697,654	\$1,927,106	\$2,156,558
HIRTA	\$756,202	\$709,292	\$803,904	\$898,515
Small	\$1,512,406	\$1,418,584	\$1,607,807	\$1,797,031
Total	\$34,372,851	\$32,240,534	\$36,541,069	\$40,841,603

PROJECTED STBG-HBP FUNDS FFY 2020-2040

JURISDICTION	2020-2025	2026-2030	2031-2035	2036-2040
Boone County	\$2,215,305	\$2,114,462	\$2,358,438	\$2,602,414
Boone	\$-	\$-	\$-	\$-
Dallas County	\$2,197,488	\$2,097,456	\$2,339,470	\$2,581,484
Perry	\$-	\$-	\$-	\$-
Jasper County	\$4,685,501	\$4,472,211	\$4,988,235	\$5,504,260
Newton	\$-	\$-	\$-	\$-
Madison County	\$4,261,532	\$4,067,542	\$4,536,874	\$5,006,205
Winterset	\$-	\$-	\$-	\$-
Marion County	\$2,613,071	\$2,494,121	\$2,781,904	\$3,069,687
Knoxville	\$-	\$-	\$-	\$-
Pella	\$-	\$-	\$-	\$-
Polk County	\$1,106,464	\$1,056,096	\$1,177,953	\$1,299,811
Story County	\$2,469,922	\$2,357,488	\$2,629,505	\$2,901,523
Nevada	\$-	\$-	\$-	\$-
Warren County	\$3,852,131	\$3,676,777	\$4,101,021	\$4,525,264
Indianola	\$-	\$-	\$-	\$-
HIRTA	\$-	\$-	\$-	\$-
Small	\$-	\$-	\$-	\$-
Total	\$23,401,414	\$22,336,152	\$24,913,400	\$27,490,648

Road Use Tax Funds

The State of Iowa's primary revenue source is the Road Use Tax Fund (RUTF). The 53rd Iowa General Assembly created the RUTF in 1949 to provide a dependable source of funding for the State of Iowa's primary, secondary, and municipal street and highway system. The CIRTPA member counties receive RUTF's for their secondary country road and farm-to-market road. CIRTPA cities receive RUTF's for their city streets. Similar to the HTF, the RUTF is funded through user fees. These user fees include fuel taxes, motor vehicle registration fees, motor vehicle use tax, driver's license fees, and other miscellaneous sources. The table on the following page includes the projected RUTF funds for CIRTPA member governments through HY 2040 (Appendix A includes further discussion of the methodology staff used to project future revenues).

Local Funds

The CIRTPA member governments and participating agencies generate local revenues for transportation improvements. Sources include debt service (proceeds from bonds sold, notes, and loans) and other funds (including property taxes, local option sales taxes, tax increment financing districts (TIF), impact fees, special assessments, and developer contributions). One should note that local revenue sources, as well as the amount of revenues generated, are the decisions of the local jurisdiction. The table on the following page includes the projected local funds for CIRTPA member governments through HY 2040 (Appendix A includes further discussion of the methodology staff used to project future revenues).

PROJECTED RUTF'S FUNDS FFY 2020-2040

JURISDICTION	2020-2025	2026-2030	2031-2035	2036-2040
Boone County	\$23,883,474	\$22,796,267	\$25,426,606	\$28,056,944
Boone	\$11,001,003	\$10,500,224	\$11,711,788	\$12,923,352
Dallas County	\$23,211,695	\$22,155,069	\$24,711,423	\$27,267,777
Adel	\$3,199,249	\$3,053,616	\$3,405,956	\$3,758,296
Perry	\$6,692,180	\$6,387,544	\$7,124,568	\$7,861,592
Jasper County	\$32,544,398	\$31,062,935	\$34,647,119	\$38,231,304
Newton	\$13,254,031	\$12,650,690	\$14,110,385	\$15,570,080
Madison County	\$22,959,037	\$21,913,912	\$24,442,440	\$26,970,968
Winterset	\$4,509,534	\$4,304,255	\$4,800,899	\$5,297,544
Marion County	\$25,771,417	\$24,598,269	\$27,436,530	\$30,274,792
Knoxville	\$6,354,186	\$6,064,936	\$6,764,736	\$7,464,536
Pella	\$8,994,737	\$8,585,285	\$9,575,894	\$10,566,504
Polk County	\$19,131,438	\$18,260,551	\$20,367,537	\$22,474,524
Story County	\$26,086,005	\$24,898,536	\$27,771,444	\$30,644,352
Huxley	\$2,882,108	\$2,750,911	\$3,068,323	\$3,385,736
Nevada	\$5,906,708	\$5,637,827	\$6,288,346	\$6,938,864
Story City	\$2,981,159	\$2,845,453	\$3,173,775	\$3,502,096
Warren County	\$25,727,693	\$24,556,535	\$27,389,981	\$30,223,428
Indianola	\$12,843,919	\$12,259,247	\$13,673,776	\$15,088,304
Other Communities	\$35,871,872	\$34,238,939	\$38,189,585	\$42,140,232
Total	\$339,635,191	\$324,174,559	\$361,579,315	\$398,984,072

PROJECTED LOCAL FUNDING FFY 2020-2040

JURISDICTION	2020-2025	2026-2030	2031-2035	2036-2040
Boone County	\$14,822,862	\$13,598,956	\$14,732,202	\$15,865,448
Boone	\$8,672,954	\$7,956,839	\$8,619,909	\$9,282,979
Dallas County	\$21,923,483	\$20,113,287	\$21,789,394	\$23,465,501
Adel	\$237,403	\$217,801	\$235,951	\$254,101
Perry	\$1,828,745	\$1,677,748	\$1,817,560	\$1,957,372
Jasper County	\$15,503,928	\$14,223,787	\$15,409,103	\$16,594,418
Newton	\$1,974,477	\$1,811,447	\$1,962,401	\$2,113,355
Madison County	\$10,588,684	\$9,714,389	\$10,523,921	\$11,333,454
Winterset	\$3,797,849	\$3,484,265	\$3,774,620	\$4,064,976
Marion County	\$12,861,658	\$11,799,686	\$12,782,994	\$13,766,301
Knoxville	\$5,700,539	\$5,229,852	\$5,665,673	\$6,101,494
Pella	\$8,189,744	\$7,513,526	\$8,139,654	\$8,765,781
Polk County	\$20,004,993	\$18,353,205	\$19,882,638	\$21,412,072
Story County	\$15,386,658	\$14,116,200	\$15,292,550	\$16,468,900
Huxley	\$3,561,948	\$3,267,842	\$3,540,163	\$3,812,483
Nevada	\$900,497	\$826,144	\$894,989	\$963,834
Story City	\$720,051	\$660,598	\$715,647	\$770,697
Warren County	\$14,841,278	\$13,615,852	\$14,750,506	\$15,885,160
Indianola	\$4,478,109	\$4,108,357	\$4,450,720	\$4,793,083
Other Communities	\$25,031,951	\$22,965,092	\$24,878,850	\$26,792,608
Total	\$191,027,811	\$175,254,872	\$189,859,445	\$204,464,017

Surface Transportation Block Grant - Setaside (TAP)

This program is a setaside from the STBG program. The TAP program provides funding to expand travel choices and improve the transportation experience. Transportation Alternatives Program projects improve the cultural, historic, aesthetic, and environmental aspects of transportation infrastructure. Projects can include creation of bicycle and pedestrian facilities, and the restoration of historic transportation facilities, among others. It is important to note that some types of projects eligible under the SAFETEA-LU program Transportation Enhancements are no longer eligible, or have modified eligibility, under the TAP. The table on the following page includes the projected TAP funds for CIRTPA through HY 2040 (Appendix A includes further discussion of the methodology staff used to project future revenues). Note that funding is not assigned to individual communities given that funding is awarded on a project specific basis.

SWAP Funding

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

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

PROJECTED TAP FUNDS FFY 2020-2040

JURISDICTION	2020-2025	2026-2030	2031-2035	2036-2040
Total	\$1,682,178	\$1,420,204	\$1,445,458	\$1,470,712

TOTAL CIRTPA FUNDING PROJECTIONS FFY 2020-2040

JURISDICTION	2020-2025	2026-2030	2031-2035	2036-2040
STBG	\$34,372,851	\$32,240,534	\$36,541,069	\$40,841,603
STBG-HBP	\$23,401,414	\$22,336,152	\$24,913,400	\$27,490,648
RUTF	\$339,635,191	\$324,174,559	\$361,579,315	\$398,984,072
Local	\$191,027,811	\$175,254,872	\$189,859,445	\$204,464,017
TAP	\$1,682,178	\$1,420,204	\$1,445,458	\$1,470,712
Total	\$590,119,445	\$555,426,321	\$614,338,687	\$673,251,053

Operations and Maintenance Costs

CIRTPA staff reviewed operation and maintenance costs for FFY 2014 through FFY 2018 as provided by the annual street finance reports published by the Iowa DOT. Operation costs include costs associated with snow removal, street lighting, equipment purchases, administration, and other related costs. Maintenance costs include costs associated with maintaining the existing physical infrastructure (i.e., pavement, signals, right-of-way). CIRTPA applied a four percent annual inflation rate to the average operations and maintenance costs to project annual operations and maintenance costs through HY 2040. The table below includes a summary of the street and highway operations and maintenance costs used in the Horizon Year 2040 Long Range Transportation Plan for FFY 2020-2040.

OPERATIONS & MAINTENANCE PROJECTIONS FOR FFY 2020-2040

JURISDICTION	AVERAGE O+M	AVERAGE INCREASE	2020-2025	2026-2030	2031-2035	2036-2040	TOTAL O&M FFY 2020-2040
Boone County	\$5,237,206	\$209,488	\$37,079,421	\$36,660,444	\$41,897,651	\$47,134,857	\$162,772,373
Boone	\$1,620,726	\$64,829	\$11,474,737	\$11,345,079	\$12,965,805	\$14,586,530	\$50,372,152
Dallas County	\$6,959,248	\$278,370	\$49,271,473	\$48,714,733	\$55,673,981	\$62,633,228	\$216,293,415
Adel	\$499,531	\$19,981	\$3,536,679	\$3,496,717	\$3,996,248	\$4,495,779	\$15,525,423
Perry	\$995,658	\$39,826	\$7,049,260	\$6,969,607	\$7,965,266	\$8,960,924	\$30,945,057
Jasper County	\$7,129,912	\$285,196	\$50,479,780	\$49,909,387	\$57,039,299	\$64,169,212	\$221,597,677
Newton	\$1,498,558	\$59,942	\$10,609,791	\$10,489,906	\$11,988,464	\$13,487,022	\$46,575,183
Madison County	\$4,921,316	\$196,853	\$34,842,917	\$34,449,212	\$39,370,528	\$44,291,844	\$152,954,501
Winterset	\$699,722	\$27,989	\$4,954,029	\$4,898,051	\$5,597,773	\$6,297,494	\$21,747,347
Marion County	\$5,551,533	\$222,061	\$39,304,856	\$38,860,734	\$44,412,267	\$49,963,801	\$172,541,658
Knoxville	\$1,001,171	\$40,047	\$7,088,294	\$7,008,200	\$8,009,371	\$9,010,543	\$31,116,407
Pella	\$964,089	\$38,564	\$6,825,747	\$6,748,620	\$7,712,709	\$8,676,797	\$29,963,874
Polk County	\$3,490,349	\$139,614	\$24,711,671	\$24,432,443	\$27,922,792	\$31,413,142	\$108,480,049
Story County	\$5,598,866	\$223,955	\$39,639,974	\$39,192,065	\$44,790,931	\$50,389,798	\$174,012,768
Huxley	\$357,136	\$14,285	\$2,528,523	\$2,499,952	\$2,857,088	\$3,214,224	\$11,099,787
Nevada	\$911,943	\$36,478	\$6,456,559	\$6,383,604	\$7,295,547	\$8,207,491	\$28,343,201
Story City	\$403,933	\$16,157	\$2,859,846	\$2,827,531	\$3,231,464	\$3,635,397	\$12,554,238
Warren County	\$5,041,858	\$201,674	\$35,696,356	\$35,293,007	\$40,334,865	\$45,376,723	\$156,700,951
Indianola	\$1,472,820	\$58,913	\$10,427,568	\$10,309,743	\$11,782,563	\$13,255,384	\$45,775,258
Other	\$5,426,425	\$217,057	\$38,419,086	\$37,984,972	\$43,411,397	\$48,837,821	\$168,653,277
Total	\$59,782,001	\$2,391,280	\$423,256,568	\$418,474,008	\$478,256,009	\$538,038,010	\$1,858,024,596

Source: CIRTPA member governments and Iowa DOT

Fiscal Constraint

The table below shows the fiscal constraint for each of CIRTPA's member governments for FFY 2020-2025 given the projected total revenue and the regional as a whole. Given all of the anticipated operations and maintenance spending, as well as anticipated projects, the 2020-2025 timeframe of this plan is fiscally constrained.

ANTICIPATED PROJECT FUNDING AVAILABILITY FOR FFY 2020-2025

JURISDICTION	TOTAL REVENUE	TOTAL O + M	REVENUE MINUS O + M	TOTAL PROJECT	FISCAL CONSTRAINT
Boone County	\$43,183,938	\$37,079,421	\$6,104,517	\$6,982,000	\$(877,483)
Boone	\$21,404,528	\$11,474,737	\$9,929,791	\$1,200,000	\$8,729,791
Dallas County	\$50,188,298	\$49,271,473	\$916,825	\$6,717,000	\$(5,800,175)
Adel	\$4,512,989	\$3,536,679	\$976,309	\$519,000	\$457,309
Perry	\$16,531,742	\$7,049,260	\$9,482,482	\$539,000	\$8,943,482
Jasper County	\$50,304,429	\$50,479,780	\$(175,351)	\$11,275,000	\$(11,450,351)
Newton	\$21,744,297	\$10,609,791	\$11,134,506	\$2,800,000	\$8,334,506
Madison County	\$34,343,152	\$34,842,917	\$(499,765)	\$12,100,000	\$(12,599,765)
Winterset	\$13,455,923	\$4,954,029	\$8,501,894	\$1,300,000	\$7,201,894
Marion County	\$39,711,231	\$39,304,856	\$406,374	\$3,790,000	\$(3,383,626)
Knoxville	\$13,352,614	\$7,088,294	\$6,264,320	\$2,196,000	\$4,068,320
Pella	\$20,472,370	\$6,825,747	\$13,646,623	\$1,650,000	\$11,996,623
Polk County	\$44,894,621	\$24,711,671	\$20,182,950	\$3,204,000	\$16,978,950
Story County	\$42,370,556	\$39,639,974	\$2,730,581	\$5,517,000	\$(2,786,419)
Huxley	\$12,748,328	\$2,528,523	\$10,219,805	\$765,000	\$9,454,805
Nevada	\$8,624,262	\$6,456,559	\$2,167,702	\$0	\$2,167,702
Story City	\$4,457,413	\$2,859,846	\$1,597,567	\$0	\$1,597,567
Warren County	\$42,081,377	\$35,696,356	\$6,385,021	\$5,960,000	\$425,021
Indianola	\$75,096,294	\$10,427,568	\$64,668,725	\$1,097,000	\$63,571,725
Other	\$60,903,823	\$38,419,086	\$22,484,737	\$2,351,000	\$20,133,737
Total - Includes TAP	\$532,345,180	\$423,256,568	\$109,088,612	\$69,962,000	\$39,126,612

Source: CIRTPA member governments and Iowa DOT

CIRTPA Sub-Allocation of STBG Funding

CIRTPA currently sub-allocates the majority of STBG funding to communities of 5,000 or more and HIRTA, the regional transit agency. Communities under this threshold and the Iowa DOT can apply for funding through a competitive process. Sub-allocation promotes the goals and objectives of this LRTP because it allows for local decision to be made on local projects. In particular, it also better allows for maintenance projects to be completed with CIRTPA funding rather than utilizing it for larger expansion projects. Typically, if STBG funding is applied for it must be used on larger projects which typically include expansions. If a community receives a direct allocation, they are better able to utilize this funding for maintenance projects. Communities can better plan on how best to use the funding with a reliable stream rather than an unknown amount that needs to be applied for. The ongoing lack of funding means that maintenance should be a priority for communities.

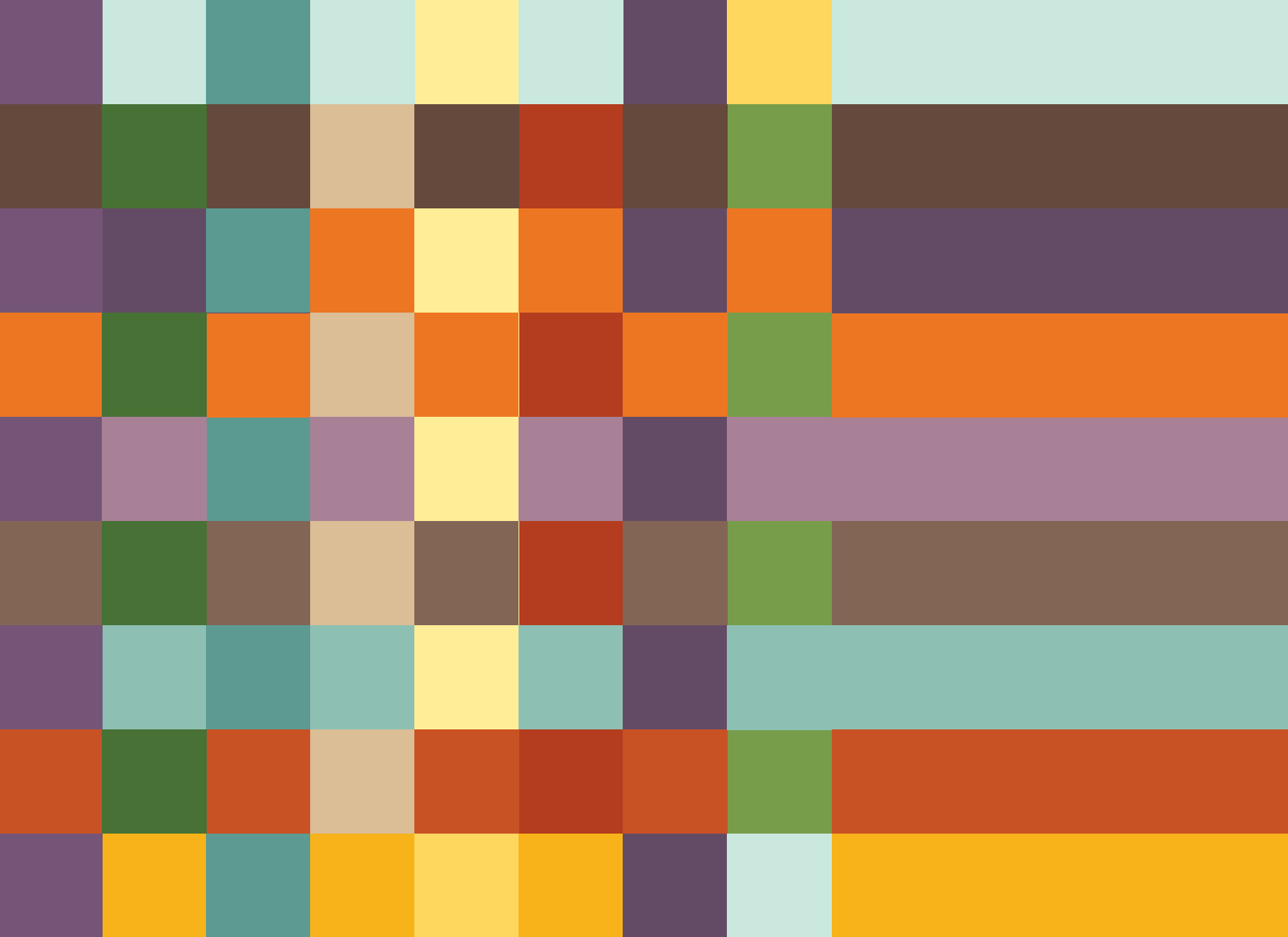
The sub-allocation process used by CIRTPA will be reviewed to ensure the equitable distribution of funding. This will be accomplished by a thorough review of the funding process by the full CIRTPA Technical and Policy Committees. Currently used funding formulas may be updated or changed to more closely follow the ones used by the Iowa DOT.

Regional needs and priorities are still considered under the sub-allocation model, however given the unique nature of RPA-11's circular geography it can be difficult to prioritize regional projects. This is true even if there wasn't a sub-allocation process. But what would be a regional priority would also certainly be a local priority and given the equitable funding distribution of CIRTPA, there is ample ability to fund regional projects with sub-allocated funding.

One way that CIRTPA ensures the prioritization of projects through the LRTP is that any projects that receive CIRTPA funding must have an official application submitted to CIRTPA for approval. So even though communities have funding allocated to them, CIRTPA still requires communities to apply for specific projects subject to the Policy Board's approval. In the application there are questions that ask how the project relates to the Goals and Performance Measures of the LRTP and to provide examples and additional information.

Funding available to non sub-allocation communities and the lowa DOT is referred to the Small Communities Fund. Approximately 4.4% of CIRTPAs funding allocation is available per year. It is a competitive process that is modeled after the Des Moines Area MPO's application process.

Scoring is based on the Goals of the long-range transportation plan, with each scoring metric falling under a goal and related to the plan's performance measures. Scoring is completed by staff and is used by CIRTPA's funding subcommittee to review and rank projects. A formal recommendation is made to the full CIRTPA Technical and Policy Committees.





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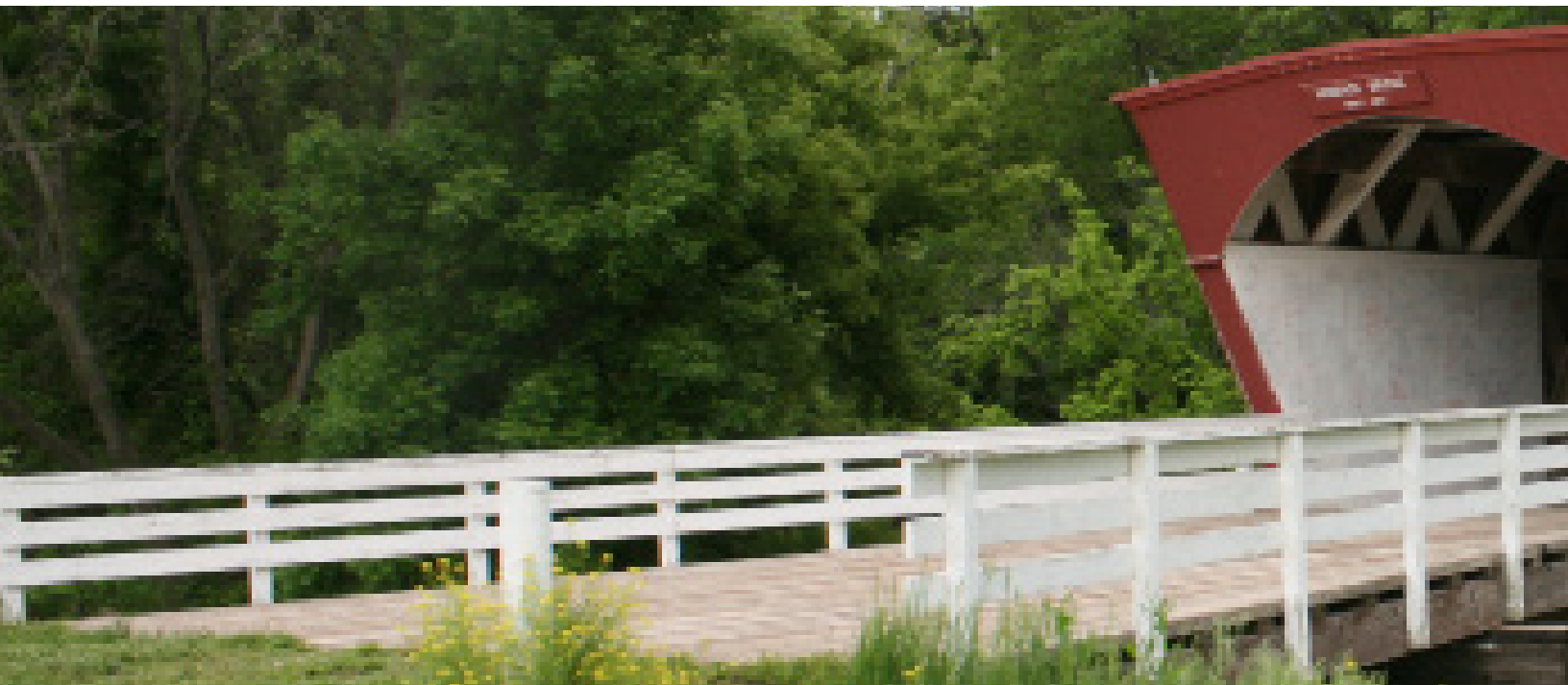
PUBLIC
PARTICIPATION

PUBLIC PARTICIPATION

CIRTPA Public Participation Process

The CIRTPA has a Public Participation Plan that was last updated in January of 2014. The CIRTPA Public Participation Plan defines the procedures and guidelines for conducting public outreach, scheduling public meetings, and incorporating public input into the transportation planning process. The CIRTPA is subject to the Open Meetings Law, Public Records Laws, and Executive Order 12898 on Environmental Justice.

The CIRTPA utilizes several forms of communication including, the CIRTPA website, newspaper postings in The Des Moines Register, and social media such as Facebook and Twitter. CIRTPA is also able to provide translation services to non-English speaking citizens with appropriate notice



CIRTPA PUBLIC PARTICIPATION PROCESS SUMMARY

PLANNING DOCUMENT OR ACTIVITY	PUBLIC PARTICIPATION PROCEDURES
Long Range Transportation Plan (LRTP)	<ul style="list-style-type: none"> Public input meetings will be held during the development of the LRTP; The draft and final LRTP will be made available on the CIRTPA website; Legal notice will be published one week prior to the public meeting; Forty-five calendar day public comment and review period; and, At least one public input meeting will be held for the completed draft LRTP.
Transportation Improvement Program (TIP)	<ul style="list-style-type: none"> The draft and final TIP will be made available on the CIRTPA website; Legal notice will be published one week prior to the public meeting; Forty-five calendar day public comment and review period; and, At least one public input meeting will be held for the draft TIP.
TIP Revisions	<ul style="list-style-type: none"> The proposed TIP revisions will be made available on the CIRTPA website; Legal notice will be published one week prior to the beginning of public comment periods; Public comment for proposed TIP revisions can be made at the CIRTPA Policy Committee meeting prior to the CIRTPA’s formal action on the request.
LRTP Amendments	<ul style="list-style-type: none"> The proposed LRTP Amendments will be made available on the CIRTPA website; Legal notice will be published one week prior to the public meeting; Forty-five calendar day public comment and review period; and, At least one public input meeting will be held for proposed LRTP and TIP Amendments.
Public Participation Plan (PPP)	<ul style="list-style-type: none"> The draft and final PPP will be made available on the CIRTPA website; Legal notice will be published one week prior to the public meeting; Forty-five calendar day public comment and review period; and, At least one public input meeting will be held for the draft PPP.
Additional Public Comment Period, as necessary	<ul style="list-style-type: none"> Relevant documents and plans will be made available on the MPO website; Legal notice will be published one week prior to the public meeting; and, At least a fifteen calendar day public comment and review period.



CIRTPA Long-Range Plan Public Participation Process Summary

A preliminary round of public outreach was conducted in May of 2019 to help gather public input. This outreach series consisted of a several month long public survey that was designed to determine citizen priorities. Not surprisingly, the top 3 important aspects of the CIRTPA transportation system are roadway/bridge maintenance, safety, and road congestion mitigation. A complete summary of the survey efforts are available in the appendix.

A steering committee was also formed that provided feedback on proposed new ideas and developed the overarching goals for the plan. Members of the committee represent CIRTPA members, the Ames Area MPO, HIRTA, and the Iowa DOT.

Throughout the process of preparing a draft of the plan the item has been on the bi-monthly agendas for the CIRTPA. The agendas are publicly posted and available on the CIRTPA website along with supplemental materials. The public is able to attend the CIRTPA meetings and provide input.

Once a first draft was completed the CIRTPA staff scheduled a second round of public input. Because the public comment period coincided with the COVID-19 Pandemic, there was one public meeting held virtually. The meeting was open house style, with a story map containing information on the goals, objectives, and targets for the plan, maps of the roads and other transportation system, a survey, and a link to a copy of the plan.

Feedback provided by the general public at the meeting and during the public input period was then taken into account in the edits between the first draft and the final draft plan that will be voted on by the CIRTPA. While attendance at the meeting was minimal, which is typical for the region, the feedback received through public outreach was a clear desire to maintain existing roads and bridges.

CIRTPA Contact Information

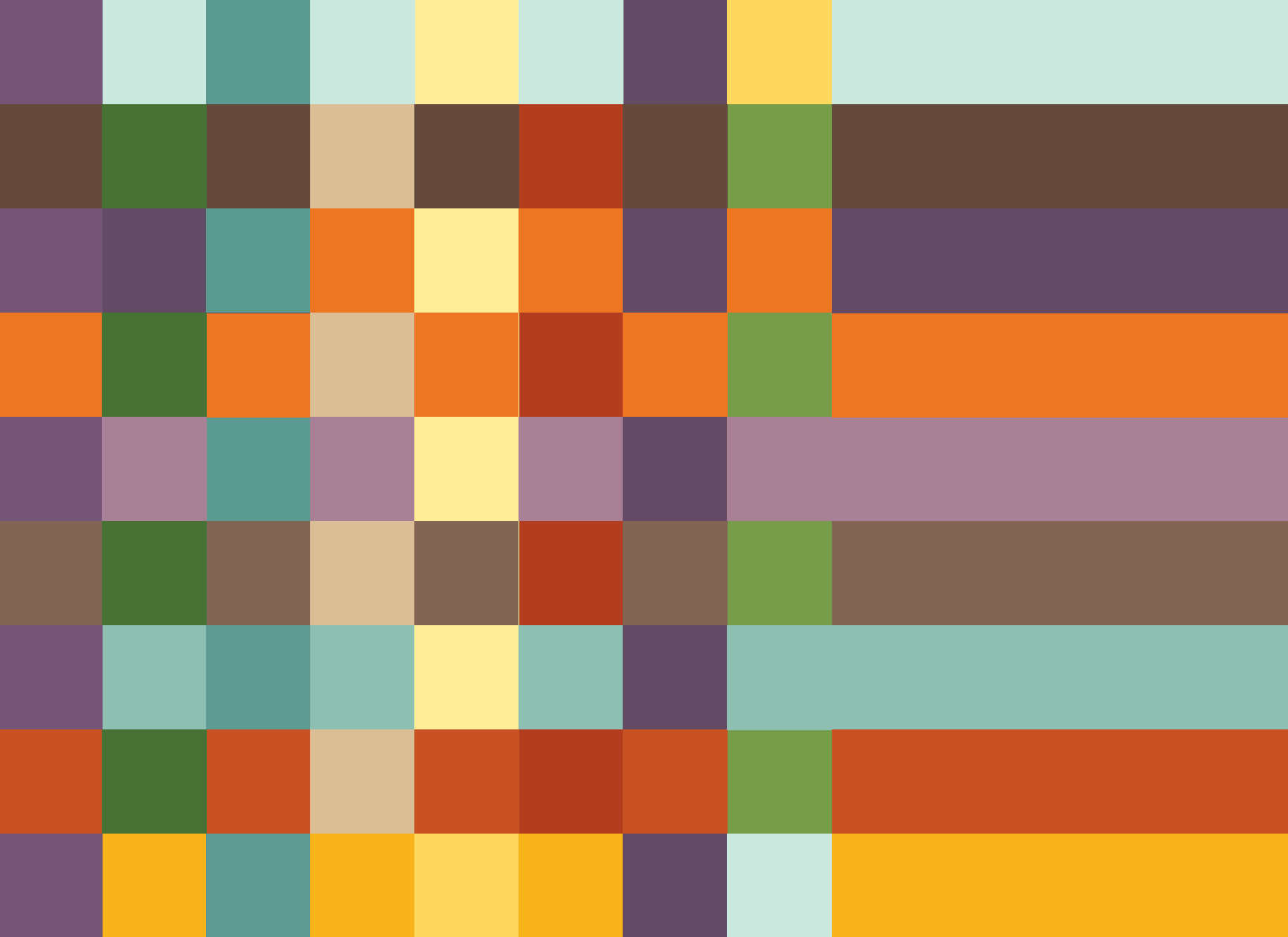
The CIRTPA understands that, without the public, the planning process is not nearly as strong as it could be. As such, the CIRTPA encourages residents to submit comments to the CIRTPA. This can be accomplished by contacting the CIRTPA by:

Mail: CIRTPA
420 Watson Powell, Jr., Way, Suite 200
Des Moines, Iowa 50309

Phone: 515.334.0075

Email: info@dmampo.org

Web: <http://cirtpa.org/>





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CONCLUSION

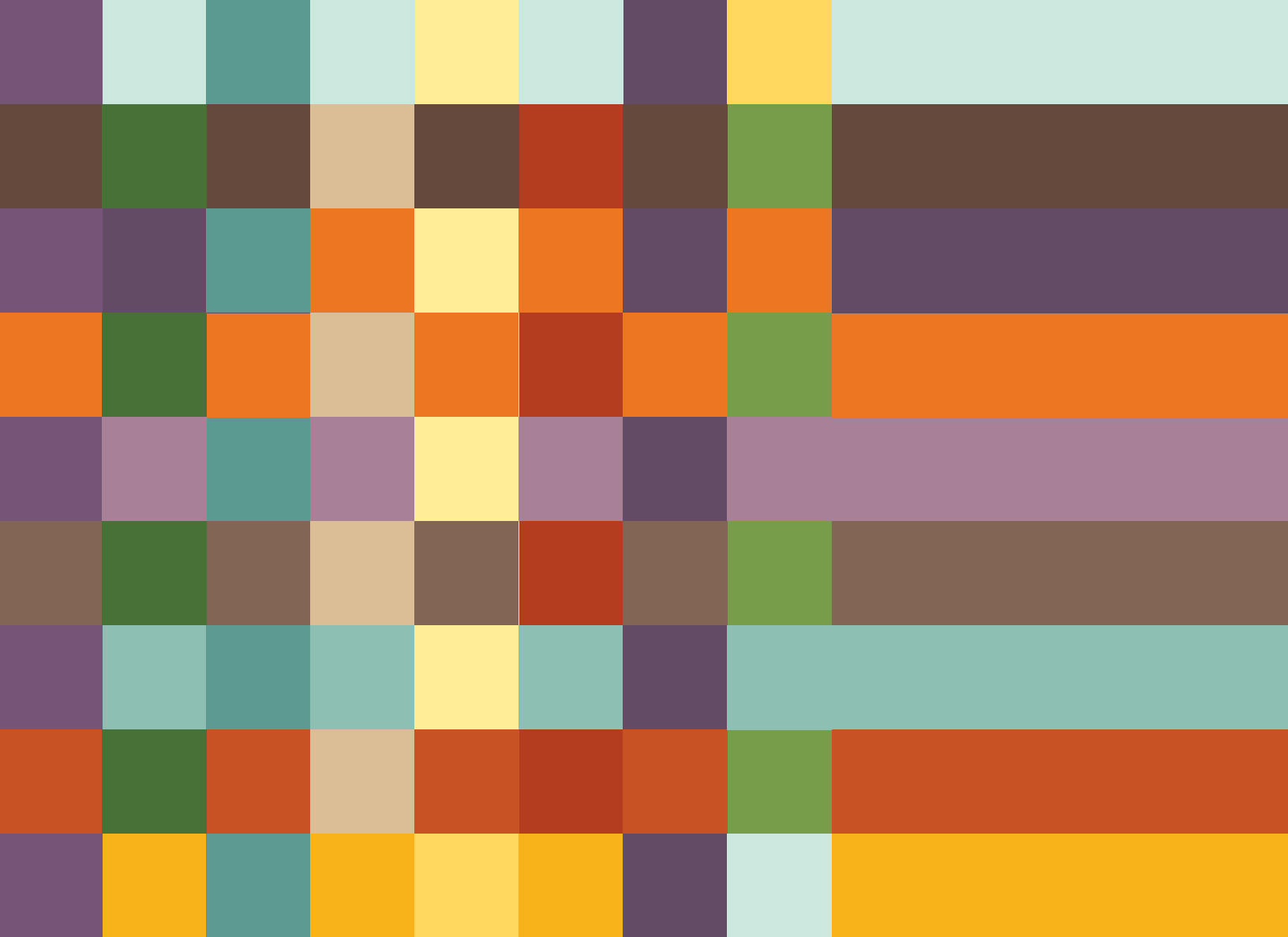


Jasper County Courthouse, Newton

CONCLUSION

The CIRTPA 2040 LRTP identified and discussed a variety of transportation modes and is meant to offer guidance for future planning efforts within the region. The CIRTPA will update this document in regular intervals and will provide amendments to the projects identified as needed. The CIRTPA will also continue with additional detailed planning studies that will be derived from this plan.

A major issue identified in this plan is the funding shortfalls for all modes of transportation. The CIRTPA, and other transportation agencies, faces major challenges in ensuring funds are available for the maintenance of the existing transportation system, and the expansion of the transportation system. The jurisdictions in the CIRTPA will complete as many projects as possible in an attempt to meet the goals and objectives set forth in this plan. However, due to funding shortfalls, the CIRTPA acknowledges the limitations the region will face in the future if additional funding for transportation cannot be secured.





APPENDIX A: FINANCIAL ANALYSIS METHODOLOGY

APPENDIX A: FINANCIAL ANALYSIS METHODOLOGY

Appendix A provides supplemental information about the Central Iowa Regional Transportation Planning Alliance's (CIRTPA) methodology and assumptions used to estimate project costs and to develop funding revenue projections.

Revenue Projections

The CIRTPA considered four revenue types when developing future funding estimates: Surface Transportation Block Grant (STBG) funds, Surface Transportation Block Grant – Highway Bridge Program (STBG-HBP) funds, Road Use Tax Funds (RUTF), Surface Transportation Block Grant - Setaside (TAP), and local funds. The methodology for projecting funding amount for each type is outline below:

Surface Transportation Block Grant (STBG)

STP funding projections were calculated by setting a base year using the FFY 2019 STBG funding target and applying a 3 percent annual percentage increase in the base year to calculate an average increase, then taking the dollars increase and applying it out to future years. The Iowa DOT has already determined the funding targets for FFY 2020-2023, therefore the 3 percent annual increase was applied to FFY 2024-2040.

The choice of 3 percent represents a compromise between an actual percentage increase per year and utilizing a base year dollar increase that stays the same year over year. The percentage change between FFY 2015-2019 was 2.34%, however this fails to take into account doing any future or present value calculations, nor does it account for potential STBG funding allocation changes at the Iowa DOT level or any increases seen during a new transportation bill. Therefore, the 3 percent is the number that best represents future funding changes given the various considerations and assumptions that were made.

The tables on the following page show how the annual percentage increase was calculated and the projected amounts for FFY 2020-2025.

STBG ANNUAL PERCENT CHANGE

JURISDICTION	2019 BASE YEAR	3 PERCENT ANNUAL INCREASE
Boone County	\$375,894	\$11,277
Boone	\$290,946	\$8,728
Dallas County	\$474,677	\$14,240
Perry	\$180,781	\$5,423
Jasper County	\$552,558	\$16,577
Newton	\$378,757	\$11,363
Madison County	\$373,999	\$11,220
Winterset	\$133,285	\$3,999
Marion County	\$421,536	\$12,646
Knoxville	\$180,930	\$5,428
Pella	\$218,283	\$6,548
Polk County	\$363,300	\$10,899
Story County	\$545,853	\$16,376
Nevada	\$151,003	\$4,530
Warren County	\$407,862	\$12,236
Indianola	\$305,936	\$9,178
HIRTA	\$126,149	\$3,784
Small Communities	\$252,298	\$7,569
Total	\$5,734,046	\$172,021

STBG FUNDING PROJECTIONS FFY 2015-2020

JURISDICTION	2020	2021	2022	2023	2024	2025	TOTAL
Boone County	\$384,872	\$368,719	\$368,719	\$368,719	\$379,996	\$391,273	\$2,262,298
Boone	\$304,727	\$279,932	\$279,932	\$279,932	\$288,660	\$297,388	\$1,730,571
Dallas County	\$486,409	\$465,300	\$465,300	\$465,300	\$479,541	\$493,781	\$2,855,632
Perry	\$188,998	\$174,214	\$174,214	\$174,214	\$179,637	\$185,060	\$1,076,336
Jasper County	\$565,830	\$541,951	\$541,951	\$541,951	\$558,528	\$575,105	\$3,325,316
Newton	\$395,622	\$365,279	\$365,279	\$365,279	\$376,641	\$388,004	\$2,256,103
Madison County	\$381,809	\$367,757	\$367,757	\$367,757	\$378,977	\$390,197	\$2,254,257
Winterset	\$138,718	\$128,944	\$128,944	\$128,944	\$132,942	\$136,941	\$795,432
Marion County	\$432,111	\$413,084	\$413,084	\$413,084	\$425,730	\$438,376	\$2,535,469
Knoxville	\$188,844	\$174,606	\$174,606	\$174,606	\$180,034	\$185,461	\$1,078,156
Pella	\$228,780	\$209,893	\$209,893	\$209,893	\$216,441	\$222,990	\$1,297,889
Polk County	\$373,670	\$355,012	\$355,012	\$355,012	\$365,911	\$376,810	\$2,181,426
Story County	\$557,862	\$536,256	\$536,256	\$536,256	\$552,631	\$569,007	\$3,288,268
Nevada	\$158,251	\$145,210	\$145,210	\$145,210	\$149,740	\$154,271	\$897,893
Warren County	\$418,455	\$399,396	\$399,396	\$399,396	\$411,632	\$423,868	\$2,452,141
Indianola	\$321,320	\$293,641	\$293,641	\$293,641	\$302,819	\$311,997	\$1,817,057
HIRTA	\$130,169	\$122,936	\$122,936	\$122,936	\$126,720	\$130,505	\$756,202
Small	\$260,339	\$245,872	\$245,872	\$245,872	\$253,441	\$261,010	\$1,512,406
Total	\$5,916,787	\$5,588,000	\$5,588,000	\$5,588,000	\$5,760,021	\$5,932,043	\$34,372,851

Surface Surface Surface Transportation Block Grant - Highway Bridge Program (STBG-HBP)

STP-HBP funding projections were calculated by setting a base year using the FFY 2018 STP-HBP funding target and applying a 3 percent annual percentage increase. The tables below show how the annual percentage increase was calculated and the projected funding amounts for FFY 2020-2025.

STP-HBP ANNUAL PERCENT CHANGE

JURISDICTION	2018 BASE YEAR	3 PERCENT ANNUAL INCREASE
Boone County	\$325,302	\$9,759
Dallas County	\$322,686	\$9,681
Jasper County	\$688,032	\$20,641
Madison County	\$625,776	\$18,773
Marion County	\$383,711	\$11,511
Polk County	\$162,476	\$4,874
Story County	\$362,690	\$9,192
Warren County	\$565,658	\$16,970
Totals	\$3,436,331	\$92,209

STP-HBP FUNDING PROJECTIONS FFY 2020-2025

JURISDICTION	2020	2021	2022	2023	2024	2025	TOTAL
Boone County	\$344,820	\$354,579	\$364,338	\$374,097	\$383,856	\$393,615	\$2,215,305
Dallas County	\$342,047	\$351,727	\$361,408	\$371,088	\$380,769	\$390,449	\$2,197,488
Jasper County	\$729,314	\$749,955	\$770,596	\$791,237	\$811,878	\$832,519	\$4,685,501
Madison County	\$663,322	\$682,095	\$700,869	\$719,642	\$738,415	\$757,189	\$4,261,532
Marion County	\$406,734	\$418,245	\$429,756	\$441,268	\$452,779	\$464,290	\$2,613,071
Polk County	\$172,225	\$177,099	\$181,973	\$186,848	\$191,722	\$196,596	\$1,106,464
Story County	\$172,225	\$177,099	\$181,973	\$186,848	\$191,722	\$196,596	\$2,469,922
Warren County	\$599,597	\$616,567	\$633,537	\$650,507	\$667,476	\$684,446	\$3,852,131
Totals	\$3,642,511	\$3,745,601	\$3,848,691	\$3,951,781	\$4,054,871	\$4,157,961	\$23,401,414

Road Use Tax Fund (RUTF)

RUTF projections were calculated by setting a base year using the FFY 2018 RUTF funding target and applying a 3 percent annual percentage increase. The table to the right shows how the annual percentage increase was calculated and the table below shows the projected funding amounts for FFY 2020-2025.

RUTF ANNUAL PERCENT CHANGE

JURISDICTION	2018 BASE YEAR	3 PERCENT ANNUAL INCREASE
Boone County	\$3,507,118	\$105,213.54
Boone	\$1,615,419	\$48,462.57
Dallas County	\$3,408,472	\$102,254.16
Adel	\$469,787	\$14,093.61
Perry	\$982,699	\$29,480.97
Jasper County	\$4,778,913	\$143,367.39
Newton	\$1,946,260	\$58,387.80
Madison County	\$3,371,371	\$101,141.13
Winterset	\$662,193	\$19,865.79
Marion County	\$3,784,349	\$113,530.47
Knoxville	\$933,067	\$27,992.01
Pella	\$1,320,813	\$39,624.39
Polk County	\$2,809,315	\$84,279.46
Story County	\$3,830,544	\$114,916.32
Huxley	\$423,217	\$12,696.51
Nevada	\$867,358	\$26,020.74
Story City	\$437,762	\$13,132.86
Warren County	\$3,777,928	\$113,337.85
Indianola	\$1,886,038	\$56,581.14
Other Communities	\$5,267,529	\$158,025.87
Total	\$49,873,009	\$1,496,190.27

RUTF FUNDING PROJECTIONS FFY 2020-2025

JURISDICTION	2020	2021	2022	2023	2024	2025	TOTAL
Boone County	\$3,717,545	\$3,822,759	\$3,927,972	\$4,033,186	\$4,138,399	\$4,243,613	\$23,883,474
Boone	\$1,712,344	\$1,760,807	\$1,809,269	\$1,857,732	\$1,906,194	\$1,954,657	\$11,001,003
Dallas County	\$3,612,980	\$3,715,235	\$3,817,489	\$3,919,743	\$4,021,997	\$4,124,251	\$23,211,695
Adel	\$497,974	\$512,068	\$526,161	\$540,255	\$554,349	\$568,442	\$3,199,249
Perry	\$1,041,661	\$1,071,142	\$1,100,623	\$1,130,104	\$1,159,585	\$1,189,066	\$6,692,180
Jasper County	\$5,065,648	\$5,209,015	\$5,352,383	\$5,495,750	\$5,639,117	\$5,782,485	\$32,544,398
Newton	\$2,063,036	\$2,121,423	\$2,179,811	\$2,238,199	\$2,296,587	\$2,354,975	\$13,254,031
Madison County	\$3,573,653	\$3,674,794	\$3,775,936	\$3,877,077	\$3,978,218	\$4,079,359	\$22,959,037
Winterset	\$701,925	\$721,790	\$741,656	\$761,522	\$781,388	\$801,254	\$4,509,534
Marion County	\$4,011,410	\$4,124,940	\$4,238,471	\$4,352,001	\$4,465,532	\$4,579,062	\$25,771,417
Knoxville	\$989,051	\$1,017,043	\$1,045,035	\$1,073,027	\$1,101,019	\$1,129,011	\$6,354,186
Pella	\$1,400,062	\$1,439,686	\$1,479,311	\$1,518,935	\$1,558,559	\$1,598,184	\$8,994,737
Polk County	\$2,977,874	\$3,062,154	\$3,146,433	\$3,230,713	\$3,314,992	\$3,399,272	\$19,131,438
Story County	\$4,060,377	\$4,175,293	\$4,290,209	\$4,405,126	\$4,520,042	\$4,634,958	\$26,086,005
Huxley	\$448,610	\$461,307	\$474,003	\$486,700	\$499,396	\$512,093	\$2,882,108
Nevada	\$919,399	\$945,420	\$971,441	\$997,462	\$1,023,482	\$1,049,503	\$5,906,708
Story City	\$464,028	\$477,161	\$490,293	\$503,426	\$516,559	\$529,692	\$2,981,159
Warren County	\$4,004,604	\$4,117,942	\$4,231,280	\$4,344,618	\$4,457,956	\$4,571,293	\$25,727,693
Indianola	\$1,999,200	\$2,055,781	\$2,112,363	\$2,168,944	\$2,225,525	\$2,282,106	\$12,843,919
Other	\$5,583,581	\$5,741,607	\$5,899,632	\$6,057,658	\$6,215,684	\$6,373,710	\$35,871,872
Total	\$52,865,390	\$54,361,580	\$55,857,770	\$57,353,960	\$58,850,151	\$60,346,341	\$339,635,191

Surface Transportation Block Grant - Setaside (TAP) Funding

TAP funding projections were calculated by setting a base year of 2019 and reviewing the average change in funding from 2015-2019, which is a 0.36% increase per year. This is different from other funding sources given the extreme volatility CIRTPA has seen regarding funding from this source since 1995. The Iowa DOT has already determined the funding targets for FFY 2020-2023, therefore the 3 percent annual increase was applied to FFY 2024-2040. The tables below show how the annual percentage increase was calculated and the projected funding amounts for FFY 2020-2025.

TAP ANNUAL PERCENT CHANGE

JURISDICTION	2019 BASE YEAR	0.36 PERCENT ANNUAL INCREASE
Totals	\$286,152	\$1,010

TAP ANNUAL FUNDING PROJECTIONS FFY 2020-2025

JURISDICTION	2020	2021	2022	2023	2024	2025	TOTAL
Totals	\$281,539	\$279,629	\$280,000	\$280,000	\$280,000	\$281,010	\$1,682,178

Local Funding

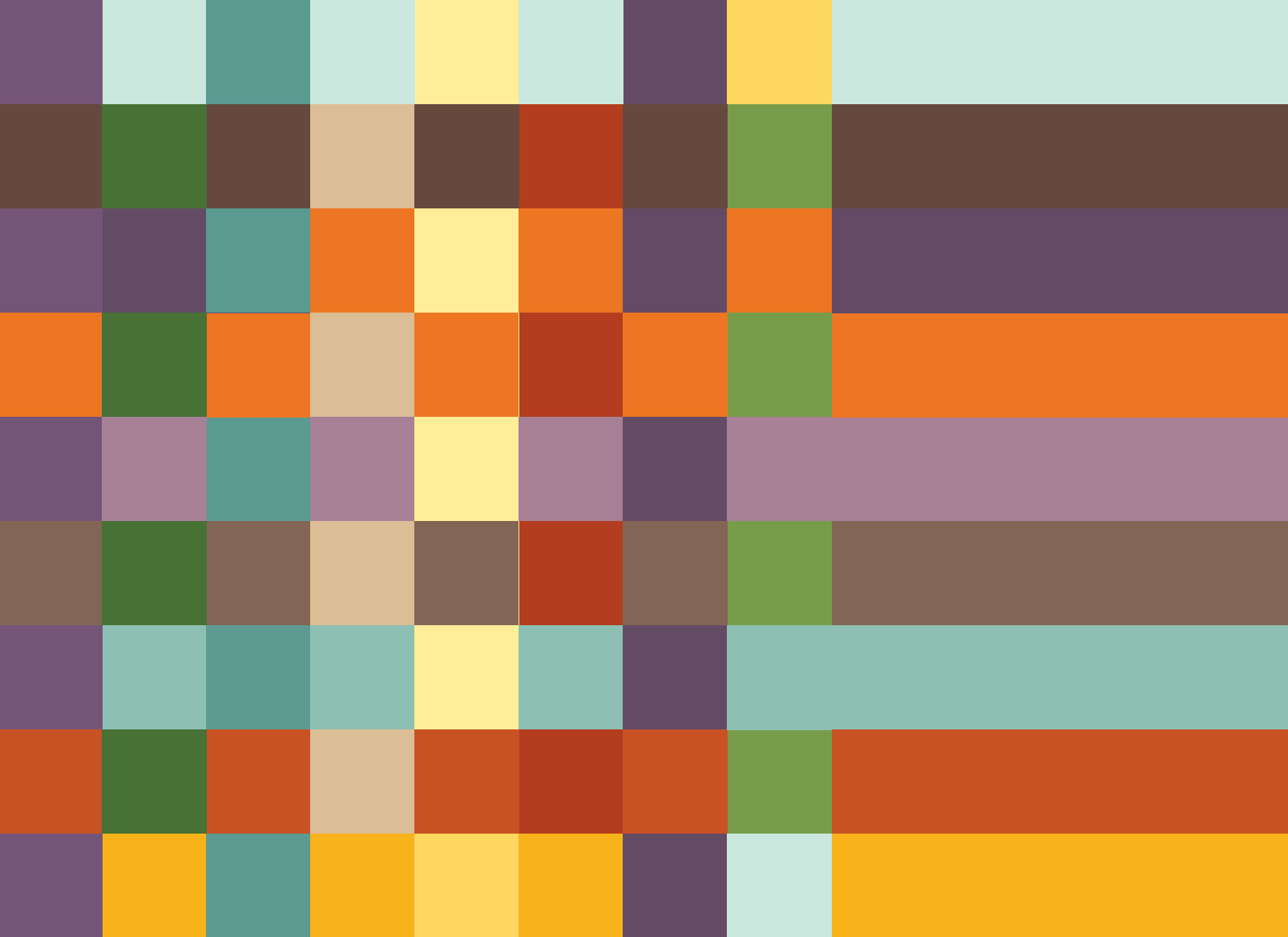
Local funding projections were calculated by setting a five year average for local funding spent on roads and applying a 2 percent annual percentage increase. The table to the right shows how the annual percentage increase was calculated and the table below shows the projected funding amounts for FFY 2015-2020.

LOCAL FUNDING ANNUAL PERCENT CHANGE

JURISDICTION	5 YEAR AVERAGE	2 PERCENT ANNUAL INCREASE
Boone County	\$2,266,493	\$45,329.85
Boone	\$1,326,140	\$26,522.80
Dallas County	\$3,352,214	\$67,044.29
Adel	\$36,300	\$726.00
Perry	\$279,625	\$5,592.49
Jasper County	\$2,370,631	\$47,412.62
Newton	\$301,908	\$6,038.16
Madison County	\$1,619,065	\$32,381.30
Winterset	\$580,711	\$11,614.22
Marion County	\$1,966,614	\$39,332.29
Knoxville	\$871,642	\$17,432.84
Pella	\$1,252,254	\$25,045.09
Polk County	\$3,058,867	\$61,177.35
Story County	\$2,352,700	\$47,054.00
Huxley	\$544,640	\$10,892.81
Nevada	\$137,691	\$2,753.81
Story City	\$110,100	\$2,201.99
Warren County	\$2,269,309	\$45,386.17
Indianola	\$684,726	\$13,694.52
Other	\$3,827,515	\$76,550.31
Total	\$29,209,145	\$584,182.91

LOCAL FUNDING PROJECTIONS FFY 2020-2025

JURISDICTION	2020	2021	2022	2023	2024	2025	TOTAL
Boone County	\$2,357,152	\$2,402,482	\$2,447,812	\$2,493,142	\$2,538,472	\$2,583,802	\$14,822,862
Boone	\$1,379,185	\$1,405,708	\$1,432,231	\$1,458,754	\$1,485,277	\$1,511,799	\$8,672,954
Dallas County	\$3,486,303	\$3,553,347	\$3,620,392	\$3,687,436	\$3,754,480	\$3,821,525	\$21,923,483
Adel	\$37,752	\$38,478	\$39,204	\$39,930	\$40,656	\$41,382	\$237,403
Perry	\$290,810	\$296,402	\$301,995	\$307,587	\$313,180	\$318,772	\$1,828,745
Jasper County	\$2,465,456	\$2,512,869	\$2,560,282	\$2,607,694	\$2,655,107	\$2,702,520	\$15,503,928
Newton	\$313,984	\$320,022	\$326,060	\$332,099	\$338,137	\$344,175	\$1,974,477
Madison County	\$1,683,827	\$1,716,209	\$1,748,590	\$1,780,971	\$1,813,353	\$1,845,734	\$10,588,684
Winterset	\$603,939	\$615,553	\$627,168	\$638,782	\$650,396	\$662,010	\$3,797,849
Marion County	\$2,045,279	\$2,084,611	\$2,123,944	\$2,163,276	\$2,202,608	\$2,241,940	\$12,861,658
Knoxville	\$906,508	\$923,941	\$941,373	\$958,806	\$976,239	\$993,672	\$5,700,539
Pella	\$1,302,345	\$1,327,390	\$1,352,435	\$1,377,480	\$1,402,525	\$1,427,570	\$8,189,744
Polk County	\$3,181,222	\$3,242,399	\$3,303,577	\$3,364,754	\$3,425,932	\$3,487,109	\$20,004,993
Story County	\$2,446,808	\$2,493,862	\$2,540,916	\$2,587,970	\$2,635,024	\$2,682,078	\$15,386,658
Huxley	\$566,426	\$577,319	\$588,212	\$599,104	\$609,997	\$620,890	\$3,561,948
Nevada	\$143,198	\$145,952	\$148,706	\$151,460	\$154,213	\$156,967	\$900,497
Story City	\$114,504	\$116,706	\$118,908	\$121,110	\$123,312	\$125,514	\$720,051
Warren County	\$2,360,081	\$2,405,467	\$2,450,853	\$2,496,239	\$2,541,626	\$2,587,012	\$14,841,278
Indianola	\$712,115	\$725,810	\$739,504	\$753,199	\$766,893	\$780,588	\$4,478,109
Other	\$3,980,616	\$4,057,166	\$4,133,717	\$4,210,267	\$4,286,817	\$4,363,368	\$25,031,951
Total	\$30,377,511	\$30,961,694	\$31,545,877	\$32,130,060	\$32,714,243	\$33,298,426	\$191,027,811





APPENDIX B: SURVEY

APPENDIX B: SURVEY

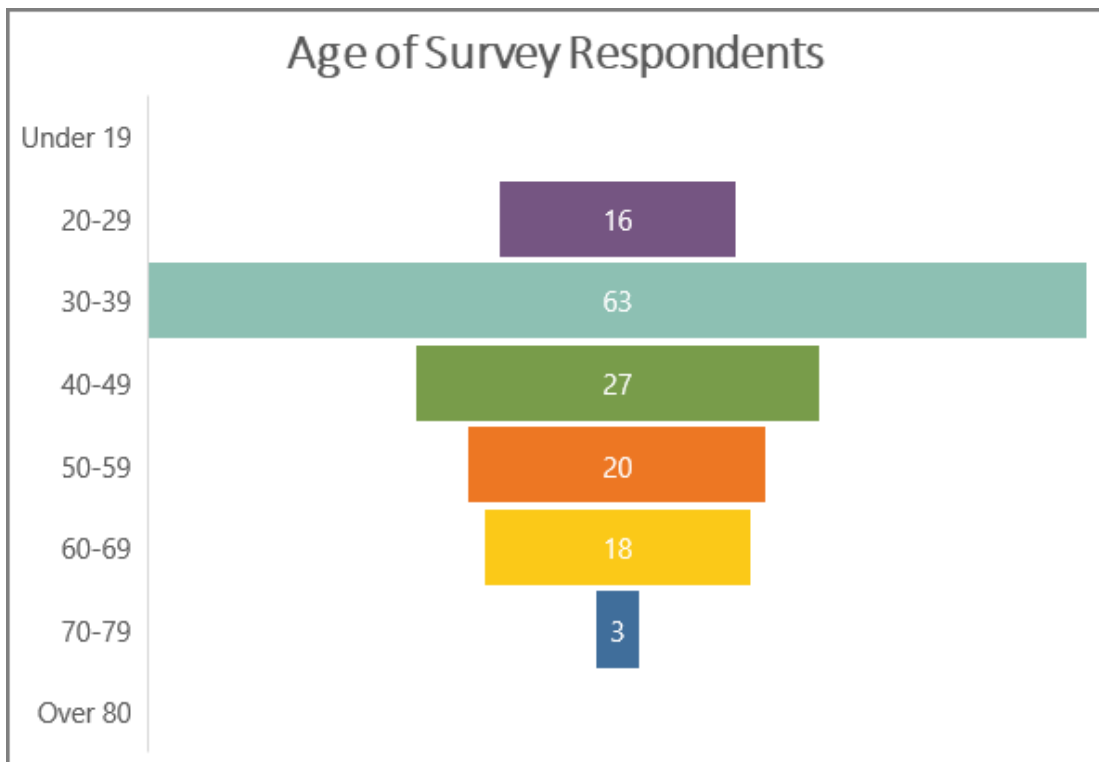
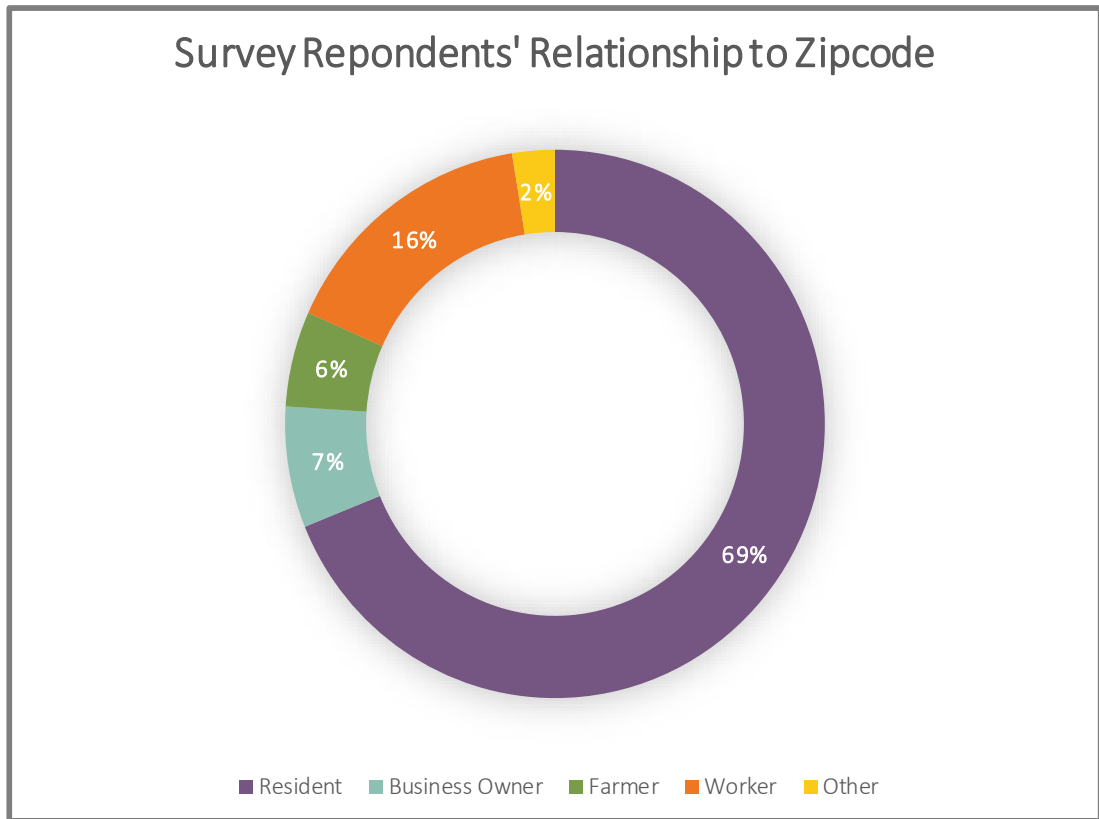
In May and June of 2019, CIRTPA completed a survey to identify citizen priorities. Below is a copy of the survey questions, as well as a summary of the responses.

Survey Questions

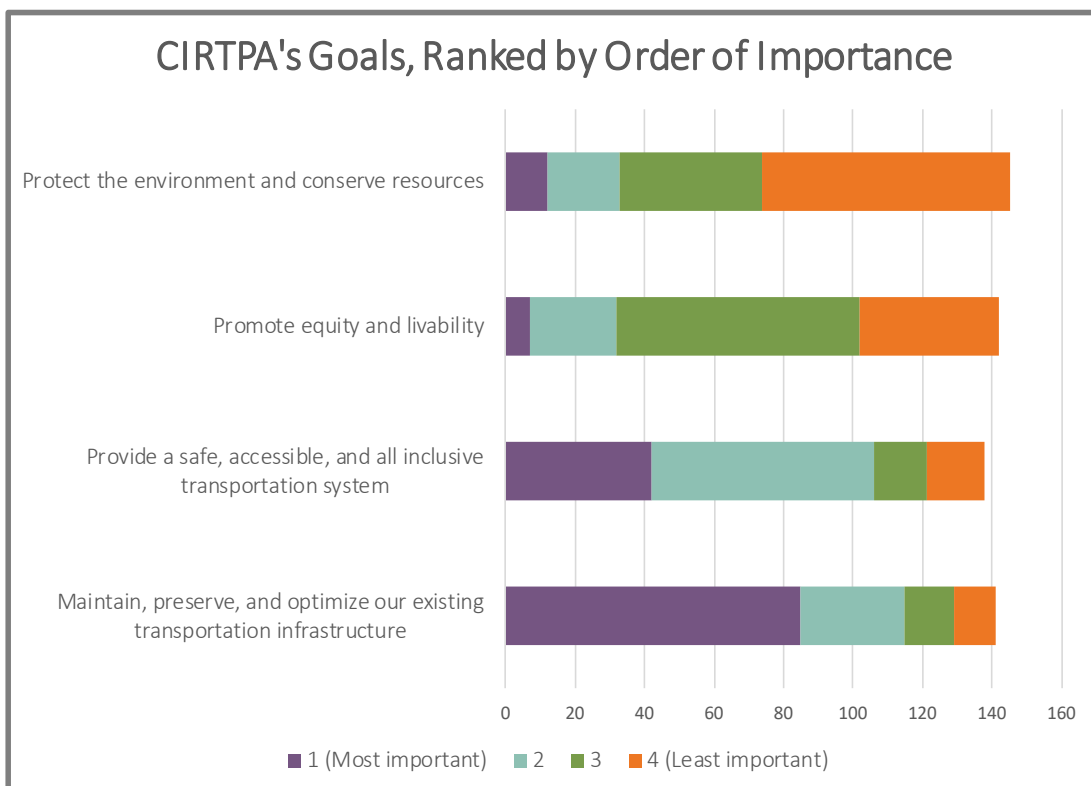
1. What is your zip code?
2. What is your relation to the zip code given above? Select all those that apply.
 - a. Resident
 - b. Business Owner
 - c. Farmer
 - d. Worker
 - e. Other (Please Specify)
3. Age
 - a. Under 19
 - b. 20-29
 - c. 30-39
 - d. 40-49
 - e. 50-59
 - f. 60-69
 - g. 70-79
 - h. Older than 80
4. What is your main source of transportation?
 - a. Own and operate a vehicle
 - b. Fixed public transportation (DART or CyRide)
 - c. Friend or family member
 - d. Human services agency
 - e. Church or religious institution
 - f. Taxi service
 - g. HIRTA
 - h. Other (Please Specify)
5. Please rank the following goals of the CIRTA LRTP in order of importance, with #1 being the most important.
 - a. Maintain, preserve, and optimize our existing transportation infrastructure

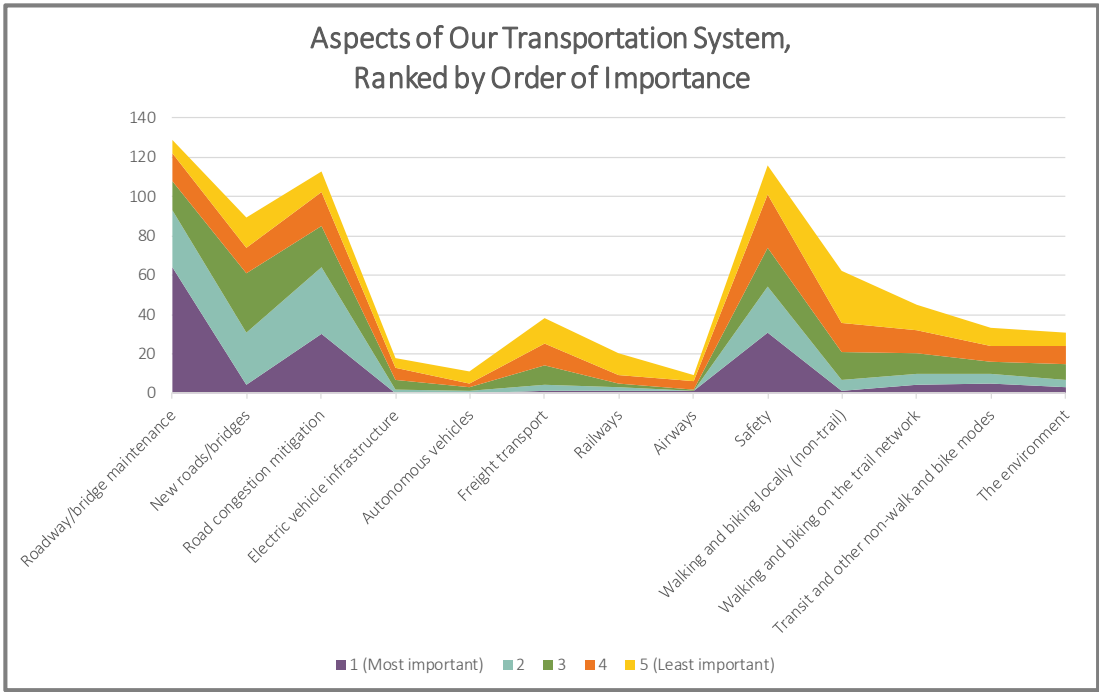
- b. Provide a safe, accessible, and all inclusive transportation system
 - c. Promote equity and livability
 - d. Protect the environment and conserve resources
6. Rank the top 5 most important aspects of our transportation system, with #1 being most important
- a. Roadway/bridge maintenance
 - b. New roads/bridges
 - c. Road congestion mitigation
 - d. Electric vehicle infrastructure
 - e. Autonomous vehicles
 - f. Freight transportation
 - g. Railways
 - h. Airways
 - i. Safety
 - j. Walking and biking locally (non-trail sidewalks)
 - k. Walking and biking on the trail network
 - l. Transit and other non-walk and bike modes of transportation (bus, taxi, rideshare (uber, lyft), etc.)
 - m. The environment
7. Based on your answers to the previous question is there anything you would like to share?
8. CIRTPA receives around \$5.5 Million in federal surface transportation funding (paved roads, bridges, trails, etc.) per year. What priorities should funding be targeted to?

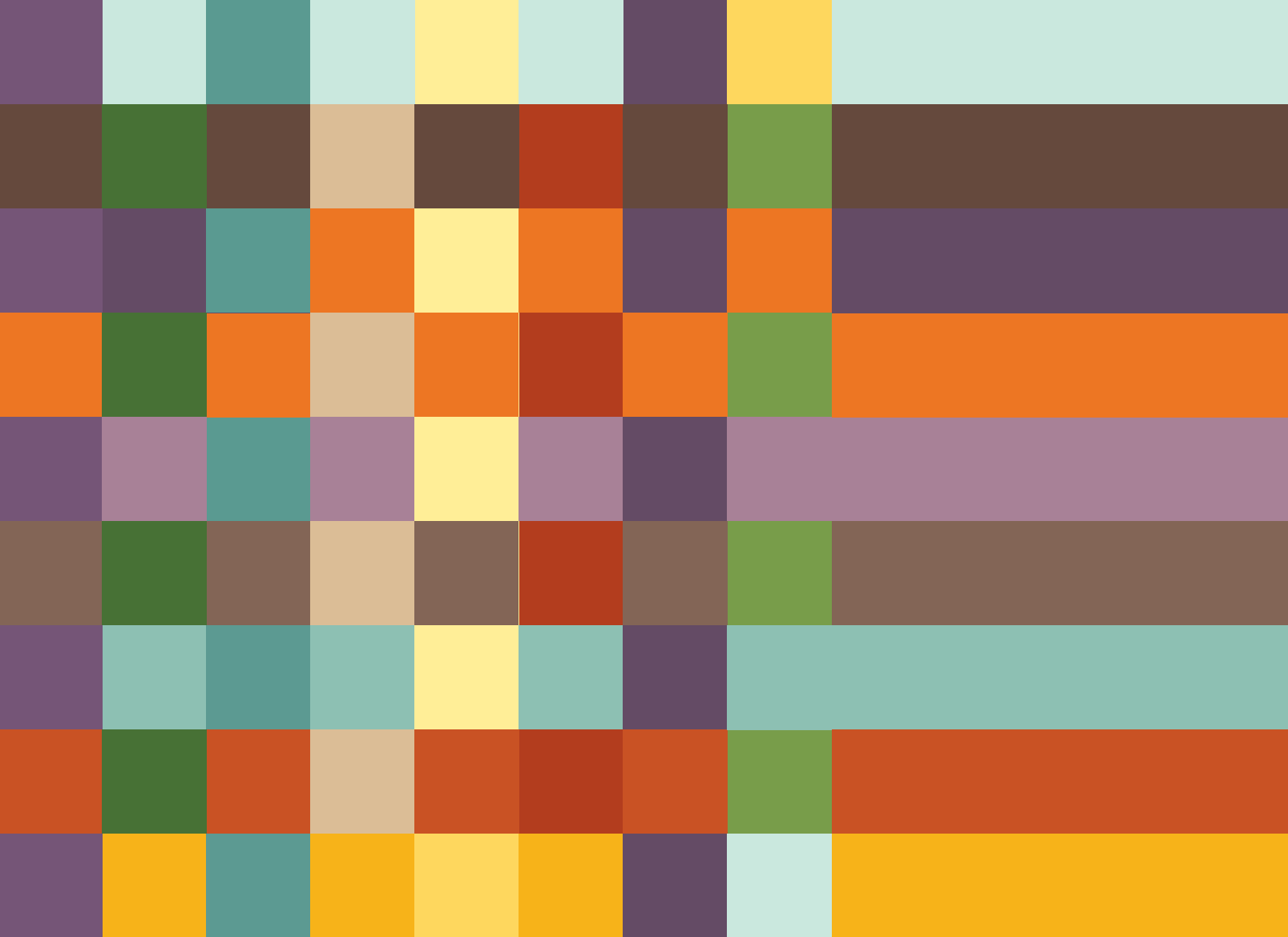
Survey Responses



98%
of survey respondents
own and operate a
vehicle as their main
source of transportation









**APPENDIX C: HY
2035 PERFORMANCE
MEASURES**

APPENDIX C: HY 2035 PERFORMANCE MEASURES

The HY 2035 plan also included performance measures. Below is a summary of those measures, as well as the actual existing condition.

MEASURE	2014	2019 TARGET	2019 ACTUAL
Goal 1 Maintain our existing transportation system			
Pavement Condition Index (average)	64	-	61
Pavement Condition Index (% poor or worse)	12%	10%	17%
Bridge Sufficiency Rating	70	75	-
Goal 2 Provide a safe transportation system			
Number of fatalities (5-year average)	33	-	24
Fatality rate (per 100,000 people)	16.0	Maintain	13
Number of serious injuries (5-year average)	124	-	95
Serious injury rate (per 100,000 people)	60	Maintain	50
Number of bike/pedestrian crashes (5-year average)	41	-	23
Bike/pedestrian crash rate (per 100,000 people)	19.8	Maintain	12

MEASURE	2014	2019 TARGET	2019 ACTUAL
Goal 3 Promote Livability			
Miles of on-street bicycle facilities	40	44	7
Miles of trails	182	200	252
Number of trail system gaps	6	0	7
Miles of trail system gaps	65	0	58
Goal 4 Protect the environment and conserve resources			
Number of Electric Vehicle Supply Equipment (EVSE)	0	2	3
Number of Green Infrastructure Projects	0	2	0
Emission and particulate levels	In Attainment	Maintain Attainment Status	In Attainment
Number of impacted acres	Establish Baseline	-	-

Goal 1 saw a decrease in the PCI average and percentage of pavement in poor or worse condition, even though the targets were to maintain or improve. As detailed earlier in this plan, it is due to communities not spending enough funding on maintenance, with a nearly \$4 million dollar deficient. Bridge sufficiency is no longer a supported measure by FHWA, so CIRTPA has moved to tracking bridge deck area and other relevant measures.

Goal 2 has seen a marked improvement in all safety measures as both the Iowa DOT and CIRTPA prioritize safety in all of the funded projects which has invariably helped reduce these measures.

Goal 3 had mixed results, especially given that the definition for on-street bicycle facilities has changed since the last plan's adoption. Therefore the actual number of those facilities does not include sharrows and other pavement markings that were included in the initial number. However, the miles of trails increase significantly and the miles of trail system gaps was reduced. The number of trail system gaps remains.

Goal 4 did not have much to it and most of the measures were outside of CIRTPA's per view. It is good to see that there are several EVSEs in the region.

