

CHAPTER 2 – ROADWAY NETWORK

Existing Roadway Network

Region 9 is characterized by its extensive roadway network. One interstate highway, several United States primary highways, and a high-quality secondary highway system provide for the movement of goods, services, and people within the region and to other market locations. Interstate 80 bisects Scott County and carries significant passenger and freight traffic across Iowa. It is a vital thread connecting the Region 9 economy to national and international markets. Maps 2.1 and 2.2 illustrate the roadway networks within Muscatine and Scott Counties by Federal Functional Classification (FFC). These maps also include the 2023 Annual Average Daily Traffic (AADT) volume. (Maps are found at the end of the chapter.)

Federal Functional Classification

All roads in the United States are federally classified by the role they play in the transportation networks based on guidelines set by the Federal Highway Administration. The road classifications present in Region 9 are Interstate, Other Principal Arterial, Minor Arterial, Major Collector, Minor Collector, and Local Roads. A road classified as an arterial road provides the highest level of service at the greatest speed for the longest uninterrupted distance. An interstate highway is the highest functionally classified arterial road. The next FFC level a collector road. A collector road provides less highly developed service at lesser speeds than an arterial for shorter distances. Roadways classified as rural major collectors or above may be eligible for federal transportation funding. A roadway providing the lowest service is classified as

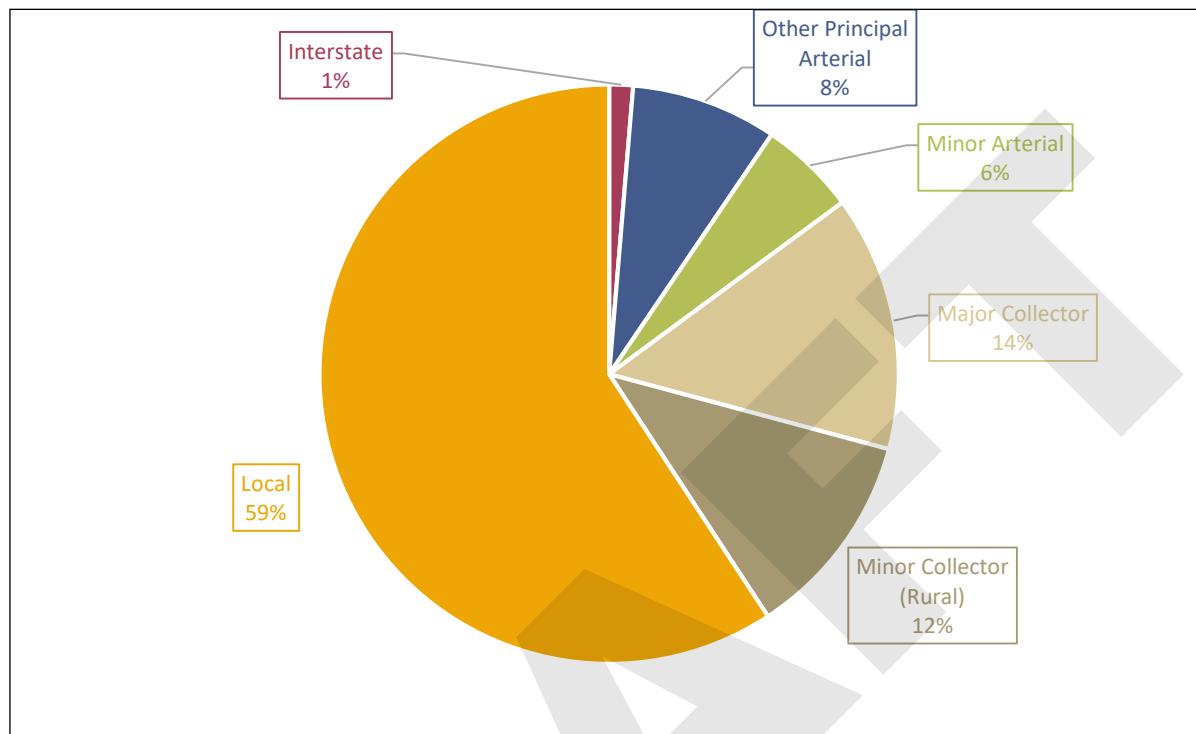
a local road, which provide access to abutting land with little or no through movement and thus has the shortest road distances and the least amount of traffic. Beyond Interstate 80 and U.S. Highways 6 and 61, key roadways in Muscatine County include state and/or county highways 22, 92, F58, and F70. In Scott County, key roadways include I-80, U.S. Highways 6, 61, and 67, and state and/or county highways 130, Allens Grove Road, Scott Park Road, and Utica Ridge Road. Fifty-nine percent of the roads in Region 9 are classified as local roads, while only one percent are classified as interstates. Table 2.1 shows roadway mileage by FFC by county.

Table 2.1 – Iowa Region 9 RPA Federal Functional Classification in Miles by County (2024)

| Functional Classification | Scott County | Muscatine County | Region 9 |
|---------------------------|--------------|------------------|----------|
| Interstate | 19.54 | 0 | 19.54 |
| Other Principal Arterial | 26.61 | 93.73 | 120.34 |
| Minor Arterial | 11.79 | 67.98 | 79.77 |
| Major Collector | 100.49 | 110.02 | 210.51 |
| Minor Collector (Rural) | 57.68 | 113.24 | 170.92 |
| Local | 325.29 | 548.2 | 873.49 |
| Total | 541.4 | 933.17 | 1474.57 |

Source: Iowa Department of Transportation, 2024

Figure 2.1 – Region 9 Road Mileage by Federal Functional Classification



Source: Iowa Department of Transportation, 2024

Traffic Information

Having traffic information provides an opportunity to measure number of vehicles, speed, vehicle type and other parameters. Maps 2.1 and 2.2 show the 2023 annual average daily traffic in Muscatine and Scott Counties, respectively. The most heavily traveled roadways within Region 9 are along Interstate 80 with as high as 39,000 vehicles per day, U.S. 61 with 6,100 and 17,900 vehicles per day, and U.S. 67 with over 3,500 and 5,500 vehicles per day beyond the metropolitan planning boundary.

Maps 2.3 and 2.4 illustrate the primary truck routes in Scott and Muscatine Counties, respectively. These maps also show 2024 average annual truck traffic for large trucks on these primary routes. As would be expected, I-80 carries the heaviest amount of truck traffic with over 15,000 trucks per day. This means that roughly 40% of the vehicles traveling along the

roadway are trucks. Other primary routes, by comparison, carried 13-16% trucks compared to other vehicles.

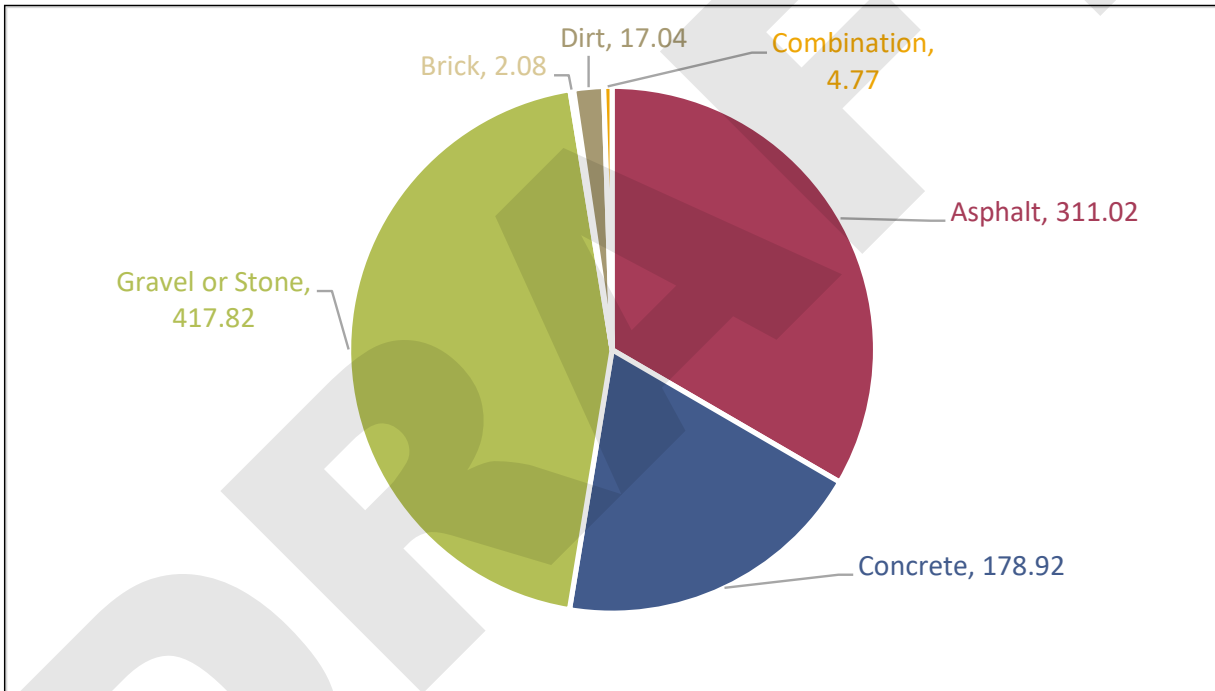
Road Surface and Pavement Condition

One of the goals of the Region 9 Long Range Transportation Plan, as laid out in Chapter 1, is to preserve the existing transportation network. This includes repairing and/or replacing existing roadways. The State of Iowa has developed a statewide pavement management system (PMS). The project, Iowa Pavement Management Program (IPMP), covers 38,000 km (23,500 miles) of roads operated under three levels of government (state, county, and city). Operated by Iowa State University, IPMP maintains a geographic information system (GIS) pavement management database to support local governmental agencies and the Iowa Department of Transportation pave-

ment management efforts. The data, which includes information on pavement condition, raw pavement distress data, and inventory and history information on roadways, is available to local governments. Local engineers utilize this data to determine road maintenance and reconstruction needs.

Maps 2.5 and 2.6 illustrate the road surface types in Region 9: concrete, asphalt, bituminous, granular, or dirt. A visual survey of these maps shows the majority of roads are granular surface. Figure 2.2 displays the miles of road based on surface type for Region 9. In most cases, cities within these counties are connected via a paved surface and to the larger urban center, either Muscatine or the Quad Cities Area.

Figure 2.2 – Total Miles of Road in Region 9 by Surface Type



Source: Iowa Department of Transportation, 2024

Roadway Network

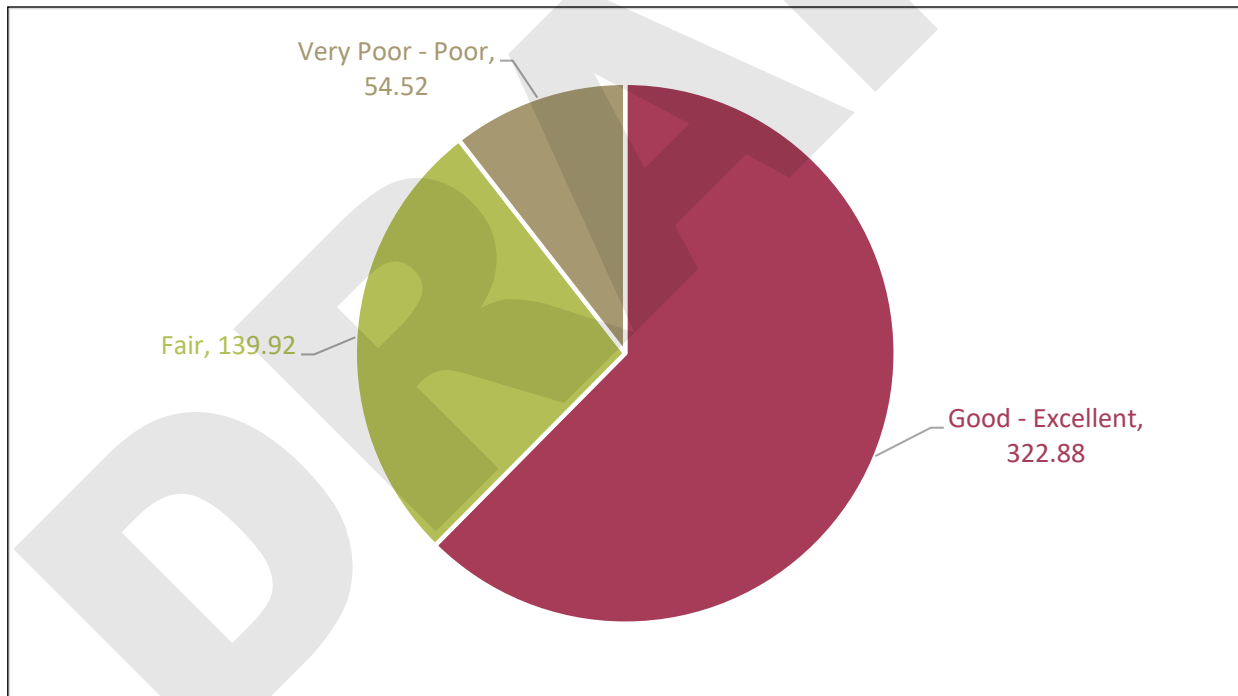
Maps 2.7 and 2.8 show pavement conditions in Region 9 based on the PMS data from 2023. Roads with a pavement condition index of 40-55 would be considered poor or very poor, 55-70 fair condition, and above 70 good to excellent. Table 2.2 shows the mileage of roads in Scott County and Muscatine County in each category, while Figure 2.3 shows the total mileage of roads Region 9 that fall into each category. The majority of Region 9 roads in both Muscatine County (66.48%) and Scott County (57.29%) are in Good – Excellent condition, while a relatively small portion of Muscatine County (8.95%) and Scott County (13.05%) are in Very Poor – Poor Condition.

Table 2.2 – Total Miles of Region 9 Roads by Pavement Condition

| | Very Poor – Poor | Fair | Good - Excellent |
|------------------|------------------|-------|------------------|
| Muscatine County | 27.49 | 75.52 | 204.26 |
| Scott County | 27.03 | 61.40 | 118.62 |

Source: Iowa Department of Transportation, 2024

Figure 2.3 – Total Miles of Region 9 Roads by Pavement Condition



Source: Iowa Department of Transportation, 2024

Bridges

River crossings often limit access or create barriers to traffic flow within regions. There are three major rivers in Region 9: the Mississippi River, Wapsipinicon River, and Cedar River. Rivers can also become natural hazards and limit access due to flooding. Iowa Route 92 at Muscatine provides a bridge crossing into Illinois over the Mississippi River with the remaining crossings being within the Quad Cities metropolitan area. There are five crossings of the Wapsipinicon River in Scott County and four crossings of the Cedar River in Muscatine County. In addition to the major crossings, numerous streams and creeks traverse the landscape of the planning area. All of these bridge crossings require varying degrees of maintenance and inspection.

Maps 2.9 and 2.10 display the bridge age of each bridge in rural Scott and Muscatine Counties, respectively. This analysis helps identify older bridges in the area that may require more attention and maintenance, depending on their use, traffic volume and status of bridge sufficiency.

Maps 2.11 and 2.12 show bridge sufficiency/condition ratings for primary system structures in Scott and Muscatine Counties (2020-2024), respectively. These maps also show the level of traffic utilizing these bridges. According to Iowa Department of Transportation (DOT), a bridge sufficiency rating is calculated on a scale of 1 to 100 for the National Bridge Inventory maintained by the Federal Highway Administration, with 100 being the highest. The rating is determined following a complex bridge inspection process, which examines its structural components. For Highway Bridge Program funding, bridges with sufficiency ratings of 60 or less are classified as 'poor' and eligible for replacement or rehabilitation. Bridges with a sufficiency rating of 61 to 80 are only eligible for rehabilitation, unless approved by the Iowa DOT Local Systems Bureau. For state bridge



Iowa Route 92 Bridge in Muscatine.

funding, bridges with a sufficiency rating of 80 or less are eligible for either replacement or rehabilitation. There are 29 bridges in total within Muscatine County with a bridge sufficiency of 60 or less. In rural Scott County, there are 14 bridges in total with a bridge sufficiency of 60 or less. Of the 43 bridges in Region 9 with a sufficiency rating of 60 or less in 2024, there were two that have an AADT above 2,000. Both bridges are located in Scott County, one on Z30 near Lost Grove Lake, and the other on 35th Avenue near Wilton. In 2025, the 35th Avenue bridge was replaced, leaving the Z30 bridge as the only bridge in Region 9 with a sufficiency rating of 60 or less and an AADT over 2,000. Consideration should be given to pursuing federal bridge funds or other funds to improve the road network.

Crashes/Safety

Iowa Strategic Highway Safety Plan

In the State of Iowa, the *2024-2028 Strategic Highway Safety Plan (SHSP)* outlines 18 safety emphasis areas: lane departures, intersections, roadside collisions, work zones, speed-related, occupant protection, younger drivers, older drivers, impaired driving, distracted drivers, local roads, motorcycles, heavy trucks, other special vehicles, bicyclists, pedestri-

Roadway Network

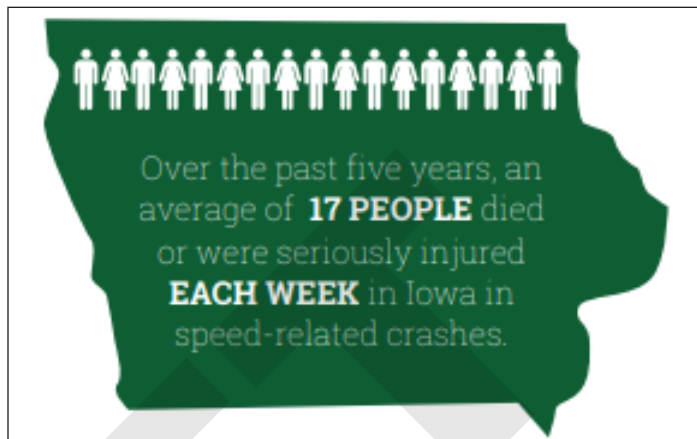
ans, trains, and winter road conditions. Of these 18 Emphasis Areas, seven are identified as Key Emphasis Areas. These Key Emphasis Areas are occupant protection, impairment involvement, distracted driving, speed related, local roads, lane departures, and intersections. It is recommended for Region 9 to examine its crash data history on a regular basis. A more detailed report for municipalities will fill a gap not covered by recent federally funded Traffic Safety Actions plans for Muscatine, and the unincorporated areas of the two counties in order to continually monitor and improve safety pertaining to crashes.

Traffic Safety Action Planning

The Infrastructure Investment and Jobs Act (IIJA) established the Safe Streets and Roads for All (SS4A) grant program, providing funds for planning, demonstration, and implementation projects that support increased safety on roadways. The program's goal is to reduce fatal and severe injury crashes to zero. The premise is based on a safe system approach recognizing people make mistakes; and to improve safety, federal, state, and local governments need to work with other partners to improve roads and vehicles, provide post-crash care, monitor safe speeds, and protect vulnerable users of the road system.

In 2023, the State of Iowa, through the Iowa Service Bureaus, received a SS4A planning grant to provide nearly every Iowa county with a County Safety Action Plan. Ninety-seven of Iowa's 99 counties participated, with the consultant-led plans released in 2025. The plans identify high-risk areas in the unincorporated parts of the counties where countermeasures related to the Key Emphasis Areas can be implemented to improve safety.

Using a formula that determined the highest-risk road segments based on factors like AADT, presence of high-risk curves and intersections, and historic crash data, the plans identified road segments in



Source: Iowa DOT 2024-2028 Strategic Highway Safety Plan

their respective counties that would benefit the most from safety countermeasures. In Muscatine County, the top three road segments identified as benefitting the most from potential countermeasures were:

- Stewart Road south of Muscatine between Fruitland Road and Dick Drake Way
- 121st Street west of West Liberty between Davis Avenue and Elder Avenue
- Garfield Avenue north of West Liberty from 17th Street to 100th Street

In Scott County, the top three road segments in Region 9 that were identified as being the highest risk segments were:

- 115th Avenue south of Donahue from IA Hwy 130 to 8th Court East
- 270th Street east of Long Grove between Scott Park Road and 220th Avenue
- W Grove Street/270th Street east of Long Grove from N Cadda Road to 150th Avenue

A full list of the highest-risk segments can be found in Table 2.3

One thing that is important to note is that these plans focused on the unincorporated areas and did

not include incorporated areas of their respective counties. This means that there are areas of both Scott and Muscatine Counties that are not currently covered by a Traffic Safety Action Plan.

Table 2.3 – Muscatine and Scott County High-Risk Road Segments

| Segment | Nearest Region 9 Incorporated Municipality | Distance (mi) |
|--|--|---------------|
| Muscatine County | | |
| Stewart Road from Fruitland Rd and Dick Drake Way | Muscatine | 2.94 |
| 121st Street from Davis Ave and east of Elder Avenue | West Liberty | 1.53 |
| Garfield Avenue from 17th St and 100th St | West Liberty | 1.06 |
| North Isett Avenue from U.S. 61 to north of 180th St | Muscatine | 2.11 |
| Geneva Hills Road from IA Hwy 22 to north of Park Rd | Muscatine | 1.01 |
| 112th Street from Moscow Rd to N Isett Ave | Wilton | 1.36 |
| Noble Avenue from U.S. 6 to north of Noble Ave | Atalissa/Wilton | 0.88 |
| Zachary Avenue from west of 171st St to U.S. 61 | Blue Grass | 1.33 |
| Taylor Avenue from U.S. 61 to Cedar County line | Muscatine/Wilton | 8.36 |
| Vail Avenue from U.S. 61 to 3rd St | Durant | 7.53 |
| Highway 927 (F58) from east of Spruced St to Cedar County line | Wilton/Durant | 2.09 |
| Stewart Road from Fruitland Rd to Louisa County line | Fruitland | 1.64 |
| Scott County | | |
| 115th Avenue from IA 130 to south of 8th Ct E | Donahue | 3.64 |
| 270th Street from Scott Park Rd to 220th Ave | Long Grove | 4.02 |
| 270th Street/West Grove Street from N Cadda Rd to 150th Ave | Long Grove | 1.07 |
| 267th Street from east of Eastwood Dr to Scott Park Rd | Long Grove | 1.63 |
| Scott Park Road from south of 250th St to Clinton County line | Long Grove | 8.07 |
| Coonhunters Road from U.S. 61 to south of 113th St | Blue Grass | 3.58 |
| 112th St from SE of 70th Ave to Buffalo corporate limits | Blue Grass | 0.73 |

Roadway Network

In spring 2025, Bi-State Regional Commission concluded a consultant-led *Quad Cities, Kewanee & Muscatine Traffic Safety Action Plan*. The plan reviewed crashes in the urban area, as well as in the cities of Kewanee, IL, and Muscatine, IA, through the lens of a Safe Systems Approach. The plan identified various types of crashes and proposed specific safety measures to address the contributing factors. The City of Muscatine’s top 9 crash locations were ranked based on a scoring matrix to identify the highest priority locations to install potential countermeasures.

The criteria used to determine the highest priority locations were:

- Fatal and Serious Vehicle Crashes – Total crashes over a 10-year period
- Vulnerable Roadway User Fatal and Serious Crashes – Total crashes over a 10-year period

- High Injury Network – Projects on a High Injury Network
- Equity – Projects located in areas of persistent poverty and/or historically disadvantaged communities
- Public Concerns – Identified in public input sessions

These segments, along with the categories of potential countermeasures can be found in Table 2.4. The plan also identified a series of proposed, in progress, and recently completed projects that would contribute to increased safety in the region. These projects can be found in Table 2.5. For more information see the *Quad Cities, Kewanee & Muscatine Traffic Safety Action Plan*.

Table 2.4 – Top Crash Locations in City of Muscatine and Potential Countermeasures

| Location | Potential Countermeasure |
|--|---|
| E 5th St & Mulberry Ave | Signage, Enforcement Of Stop Sign Running |
| U.S. 61/Grandview Ave & IA-92 & Dick Drake Way | Signage |
| U.S. 61 & Oakview Drive | Add Traffic Signal |
| 33rd St and U.S. 61/Grandview Ave SB | Crossing Divided Highway |
| E 7th St & Mulberry Ave | Signage, Enforcement of Stop Sign Running |
| IA-22/Park Ave | SB Protected Left, Striping |
| U.S. 61/Grandview Ave & 49th St S | Crossing Divided Highway |
| E 8th St & Cedar St | Signage, Enforcement |
| 67th Ave W | Crossing Divided Highway, Enforcement of Speeding |
| Mulberry Ave | Improve Sight Distance, Increase Length of Turn Lanes |

Source: *Quad Cities, Kewanee & Muscatine Traffic Safety Action Plan*

Table 2.5 – Existing and Proposed Traffic Safety Projects in City of Muscatine

| Planned Projects | | | |
|-------------------|---|--------------------|-----------------------|
| Location | Project | Timeframe | Intervention Type |
| City of Muscatine | Colorado Street reconstruction project | Completed | Sidewalks and Streets |
| City of Muscatine | West Hill Sewer Separation Project | Under Construction | Sidewalks and Streets |
| City of Muscatine | Mulberry Avenue from Houser Street to the U.S. 61 Bypass | Completed | Sidewalks and Streets |
| City of Muscatine | Reconstruct Lucas Street from Houser Street to the U.S. 61 Bypass | Long-term | Sidewalks and Streets |
| City of Muscatine | Houser Street from Lucas Street Grandview Avenue and redesign of the Grandview/Mittman/Sampson intersection | Long-term | Sidewalks and Streets |
| City of Muscatine | Mississippi Drive Corridor Project | Under Construction | Sidewalks and Streets |
| City of Muscatine | 38/61 Connector Road | Long-term | Sidewalks and Streets |
| City of Muscatine | Extension of Palms Drive | Long-term | Sidewalks and Streets |
| City of Muscatine | New trail running from Kent- Stein Park/Muscatine | Mid-term | Sidewalks and Streets |
| City of Muscatine | Soccer Complex to 41st Street | Completed | Trails |
| City of Muscatine | Extension of trail along Mad Creek from the Mouth of Mad Creek to Washington Street | Mid-term | Trails |
| City of Muscatine | Trail connecting the Mulberry Avenue/U.S. 61 Bypass to the existing Mad Creek Greenbelt Trail at the U.S. 61 Bypass | Mid-term | Trails |
| City of Muscatine | Sidewalk Program | Under Construction | Sidewalks |
| City of Muscatine | Isett Avenue Corridor Reconstruction | Mid-term | Sidewalks and Streets |
| City of Muscatine | Sampson Street Corridor Reconstruction | Long-term | Sidewalks and Streets |

Source: Quad Cities, Kewanee & Muscatine Traffic Safety Action Plan (2025)

Crash Severity Data

Crash severity data for Muscatine County and the rural areas of Scott County is provided in Tables 2.6 and 2.7. The data represents a five-year period from 2020 to 2024. This is important for the Iowa Department of Transportation to encourage crash reductions for all roads in accordance with Federal Highway Administration traffic safety performance measures. To meet state targets, Iowa DOT seeks to partner with cities and counties, as noted above, to reduce fatal and injury related traffic crashes. In Tables 2.6 and 2.7, the number of persons injured is listed next to the severity of injury sustained. General definitions for severity types are:

- Fatality – loss of life
- Serious Injury – incapacitating
- Minor Injury, not incapacitating
- Possible/Unknown Injury – injury suspected, but not confirmed or not classified

Scott County had a total of 14 crash-related fatalities and 31 major injuries in that time frame. Muscatine County had 27 fatalities and 79 major injuries. Over the five year-period, that is a five-year average of 2.8

fatalities and 6.2 major injuries in Scott County, and 3.8 fatalities and 21.2 major injuries in Muscatine County.

The total number of crashes in rural Scott County remained relatively unchanged from 2020 to 2023, with a significant decrease in 2024. Crashes in Muscatine County noticeably declined from 2021 to 2022, and have remained relatively unchanged over the last three years.

Within Muscatine County, heavy concentrations of intersection crashes occurred on U.S. 61 along the perimeter of the city of Muscatine, particularly at intersections with Hwy 38, Hwy 22, and Hwy 92. Other areas with high concentrations of intersection crashes occurred within the city limits of Muscatine, Wilton, and West Liberty. In Rural Scott County, high concentrations of intersection crashes occurred on I-80, U.S. 61 (both north and west of Davenport), and along Y40. The number of intersection crashes is greatest in the Iowa Quad Cities area and in Muscatine, where the volume of traffic and crash potential are greater. Maps 2.13 and 2.14 identify the location of all crashes in Region 9 for Scott and Muscatine Counties, respectively.

Table 2.6 – Scott County (Region 9 Only) Reported Crash Severity History, 2020-2024

| Severity Type | Number of Injuries by Year | | | | | Total | 5 Year Average |
|-------------------------|----------------------------|------|------|------|------|-------|----------------|
| | 2020 | 2021 | 2022 | 2023 | 2024 | | |
| Fatalities | 3 | 3 | 2 | 3 | 3 | 14 | 2.8 |
| Major Injury | 7 | 11 | 7 | 4 | 2 | 31 | 6.2 |
| Minor Injury | 26 | 18 | 24 | 22 | 18 | 108 | 21.6 |
| Possible/Unknown Injury | 24 | 26 | 24 | 32 | 12 | 118 | 23.6 |
| Total | 60 | 58 | 57 | 61 | 35 | 271 | 54.2 |

Source: Iowa Department of Transportation, Iowa Crash Analysis Tool (2020-2024 data)

Table 2.7 – Muscatine County Reported Crash Severity History, 2020-2024

| Severity Type | Number of Injuries by Year | | | | | Total | 5 Year Average |
|-------------------------|----------------------------|------|------|------|------|-------|----------------|
| | 2020 | 2021 | 2022 | 2023 | 2024 | | |
| Fatalities | 4 | 7 | 5 | 2 | 9 | 27 | 5.4 |
| Serious Injury | 11 | 19 | 19 | 12 | 18 | 79 | 15.8 |
| Minor Injury | 58 | 70 | 64 | 51 | 55 | 298 | 59.6 |
| Possible/Unknown Injury | 70 | 91 | 72 | 90 | 72 | 395 | 79 |
| Total | 143 | 187 | 160 | 155 | 154 | 799 | 159.8 |

Source: Iowa Department of Transportation, Iowa Crash Analysis Tool (2020-2024 data)

Other Transportation Considerations

Congestion

According to the Federal Highway Administration (FHWA), congestion is the result of traffic demand approaching or exceeding the available capacity of the system. While this is a simple concept, neither demand nor system capacity is constant. Traffic demands vary significantly depending on the season of the year, the day of the week, and even the time of day, while the system capacity – often mistaken as constant – can change because of weather, work zones, traffic incidents, or other non-recurring events.

Congestion can be measured by knowing both roadway capacity based on level of service and physical roadway characteristics, and comparing that to the number of vehicles using a facility. While recurring congestion is a national problem, it is very localized and primarily associated with small segments of the roadway in Region 9. Non-recurring events, such as crash detours, special events, or work zones are a more frequent cause of congestion within Region 9. In 2014, the Iowa Department of Transportation (DOT) created the Infrastructure Condition Evaluation

(ICE) tool to evaluate primary highway systems as a composite rating of roadway and traffic conditions. The system has been refined multiple times, the most recent of which being in 2024, to provide a more detailed analysis of summary corridors, analyzing segments of individual corridors rather than assigning one score to the entire corridor. The criteria used to determine a segments total ICE score are

- Annual Average Daily Traffic (AADT) passenger count
- AADT single-unit truck count
- AADT combination truck count
- Congestion Index value (V/C)
- International Roughness Index (IRI) value
- Pavement Condition Index (PCI) rating
- Bridge Condition Index Rating (BCI), if applicable¹.

The goal of the ICE tool is to serve as an initial screening and prioritization tool to assist in identifying areas that should be considered for further study. The roadways in Region 9 evaluated by this tool are I-80, U.S. 6, U.S. 61, U.S. 67, IA-22, IA-70, and IA-130. The

¹ Source: Iowa Department of Transportation, Infrastructure Condition Evaluation Technical Memo,

Roadway Network

segments with the lowest ICE scores are:

- U.S. 6 from F65 to Wilton city limits, due to a low IRI score and relatively high passenger and combination truck AADT counts
- U.S. 6/Columbus Street in West Liberty from 3rd Street to Garfield Avenue due to low IRI and PCI scores and high passenger AADT counts
- U.S. 61 from IA-38 to IA-22 due to low IRI and high passenger and combination truck AADT counts.²

Operations and Management

Operations is an integrated approach to managing the performance of the roadway network to meet travel needs. It is the application of programs, technology, and business processes that support the flow of vehicles, travelers, and goods on the existing roads. These activities support improvements to the day-to-day operations through asset management, application of traffic control devices, real time traveler information, and use of traffic analysis tools to better understand problems and possible solutions.

In Region 9, there are few of these operational systems in place, and they are primarily located in or near urban centers, such as the Quad Cities and Muscatine. Traveler information is available through the statewide 511 program to access real time information on major roadways for construction and weather-related restrictions. Region 9 is included in the *Bi-State Regional Intelligent Transportation System (ITS) Architecture Plan*. The plan looks at deployment of transportation technologies within the Bi-State Region to improve transportation safety, security, and system efficiency. The plan is reviewed periodically to determine whether updates are needed. Initial deployment of an incident management system with

Transportation System Management and Operations (TSMO) Definition: Integrated strategies to optimize the performance of existing infrastructure through the implementation of multimodal and intermodal, cross-jurisdictional systems, services and projects designed to preserve capacity and improve security, safety and reliability of the transportation system.

Examples of Strategies:

- Active Transportation and Demand Management
- Congestion Pricing
- Expanding Multimodal alternatives and Mobility Services
- Road Weather Management
- Real Time Traveler Information
- Traffic Incident Management
- Work Zone Management

Source: *Federal Highway Administration ops.fhwa.dot.gov*

dynamic message signs and traffic detection occurred along I-74 in the Quad Cities and in multiple locations on Interstates 80 and 280. In addition, similar technology was deployed in the Iowa City area along I-80.

Region 9 is encompassed within the Iowa DOT's Traffic Management Center (TMC) Annual Report, which tracks, reports, and monitors all traffic related needs. This includes incidents, crashes, Highway Helper, work zones, weather, etc. District 5 includes Muscatine County, while District 6 includes Rural Scott County. For each district, the 2024 TMC Annual Report outlines incident totals, Highway Helper locations and response totals, work zone crashes, and snow plow hits. District 5 had a total of 1,267 incidents, and District 6 had a total of 14,242. Highway Helper was deployed only in major urban areas within Iowa, such as Davenport, but Davenport is a

² Source: Iowa Department of Transportation, Infrastructure Condition Evaluation Tool

neighbor to the region – specifically rural Scott County and thus, can be used for comparison. Of the total of 2,099 Highway Helper responses in Davenport, 122 were for crashes, with the vast majority of responses being a result of a stalled or abandoned vehicle. There were under 20 work zone crashes in District 5, while District 6 saw just under 100 work zone crashes. Eight snow plow hits were recorded in 2024, with 5 recorded in District 6.

Connectivity

An important component to a complete transportation network is the integration of all modes. The roadway network provides motor vehicle and bicycle access to multi-purpose trails, transit facilities, airports, railroad stations and terminals, and intermodal facilities. In many areas within Region 9, sidewalks accompany roads and provide access and connections for pedestrians within cities and towns. Roads intersect these various modes and provide a connection to land, air, and water transportation.

From a regional perspective, the interstates provide important corridors for thru-traffic and traffic moving between regions, either for travel or freight movement. For example, arterial roads from the rural areas carry agricultural products. These roads allow freight to be transported to a barge terminal located at the Mississippi River. This freight can then be carried to other ports regionally, nationally, and internationally. Other examples include roads that provide the routes for transit buses, where a bicyclist may ride a bicycle trail, then board a bus and complete a trip via local roads after exiting the bus. There are a host of other connections that can be illustrated to support regional economic vitality, increased accessibility and mobility, enhanced connectivity, and system efficiency.

Because interstates play a key role in thru-traffic and traffic moving within Region 9, it is important

Ways to increase connectivity:

- Short block lengths
- Implementation of a Complete Streets policy
- Bicycle/pedestrian outlets for cul-de-sacs and dead ends
- Prioritization of multimodal access to public transportation
- Safe and visible bicycle and pedestrian facilities

Source: <https://www.transportation.gov/mission/health/promoting-connectivity>

to acknowledge the growing capacity concern of I-80. According to the Iowa DOT *Iowa In Motion 2050* Long Range Plan, I-80 will approach or be over capacity by 2050. The portions of I-80 within Region 9 are greatly affected by this growing capacity issue. Mobility and safety improvements are being analyzed to reduce this concern within this I-80 corridor. Replacement of the I-80 bridge over the Mississippi is underway, with Phase I preliminary engineering and environmental studies completed in July 2025, and Phase II the final design and contract preparation ongoing as of December 2025. The new bridge is anticipated to improve both mobility and safety along the I-80 corridor as the new bridge will be designed to handle increased traffic than the current bridge, and will necessitate less frequent closures or traffic delays due to repairs and rehabilitation.

Another tool created by the Iowa DOT to monitor connectivity and traffic movement is the Scoping Bottlenecks tool, which uses INRIX travel time data as well as input from stakeholders to identify locations of traffic bottlenecks. Three areas have been identified as bottleneck locations in Region 9, all in the city of Muscatine. These locations are where U.S. 61 intersects with IA-38, IA-22, and IA-92.

Future Roadway Network Priorities

Future roadway improvement needs were determined through input from the various jurisdictions and the public in Region 9. They support the 2050 Plan Goals as identified in Chapter 1. Planners and engineers from the jurisdictions used the existing comprehensive development or land use plans, where available, and the data on the existing roadway network when developing suggested roadway improvements. While roadway preservation projects may take less time for planning and engineering, an expansion project for a road or highway typically includes a number of major phases over several years (See inset.) Each of these major phases also includes bidding and contract negotiations between the jurisdiction that is developing a new road and the people completing that particular phase of the project.

Network Preservation

The road network is a series of interconnected roads and bridges. Preserving these facilities can reap major benefits, such as increased customer satisfaction, improved pavement condition and ride quality, safer roads, and lower life-cycle costs. With increasing extreme weather disasters, efforts should be taken to mitigate future traffic disruptions due to failed pavement, and the impacts of erosion, flooding and storm damage, should be a consideration for system preservation.

Maintenance of the existing roadway network is critical to efficient, safe operation and continuing usage of the transportation system. Regular maintenance of roads and associated structures can increase the useful life of a street or bridge. Roads are constructed with life cycles calculated into their design. Life cycles are developed by taking the average actual life

Major Road/Highway Project Development Phases

1. Feasibility Study (Pre-Engineering Process)
2. Engineering Phase I (with Environmental Impact Statement-EIS)
3. Engineering Phase II (with Plan Preparation)
4. Land Acquisitions
5. Utility Relocations
6. Environmental Mitigation
7. Bridge Work (if Applicable)
8. Construction (Grading, Paving, and Other)
9. Lighting and Signing

of different surfaces and structures. These can be influenced by climate, construction materials, traffic volumes, and usage based on the weight of vehicles. In general, roads are constructed with a 15- to 20-year life span. Bridges are constructed with a 30- to 50-year life span. Restoration or rehabilitation of these facilities can add 10 to 20 years of life to an existing facility. Therefore, regular maintenance for all existing roadways and associated structures is important. State and local governments are responsible for the maintenance of the existing roads through planned repairs and rehabilitation.

Federal Highway Administration (FHWA) offers guidance on pavement maintenance. It can be classified into three categories: preventative maintenance, minor rehabilitation (non-structural), and routine maintenance. Preventative maintenance is typically for pavements in good condition to extend a roadway's service life. Rehabilitation projects restore existing structural capacity through elimination of age-related, environmental cracking of a roadway surface, or by increasing the pavement thickness to strengthen a section of roadway. Routine maintenance address-

es specific conditions and events that restore the roadway to an adequate level of service and requires regular reoccurring attention.³

As noted earlier in the chapter, the local jurisdictions in Region 9 participate in the statewide pavement management system. The data is utilized to prioritize pavement maintenance needs through the respective jurisdictions' five-year programs or capital plans. In Region 9, gravel dust control, surface sealing, resurfacing, and bridge replacement are primary maintenance needs. Both Scott and Muscatine Counties outline resurfacing projects in their 5-year program. Currently, the Region 9 programming of Surface Transportation Block Grant (STBG) funds does not directly address pavement condition as part of the evaluation criteria; however, the 2023 manual includes a review checklist that includes pavement condition as a data reference as background to the evaluation criteria. Bi-State staff provides pavement condition information for the proposed projects to support Technical Committee members ranking of projects. Pavement condition is continued to be recommended to be used to support the plan's system preservation goal.

Network Expansion

In addition to maintaining the existing network, this plan considers what is needed to expand roadway capacity through 2050. The future roadway system is presented in general terms related to corridor improvements. Similar to system preservation, mitigating future extreme weather impacts on the system should be a consideration as improvements are being planned. The final chapter of this plan outlines future roadway costs and projected revenues. In the short term through 2030, bridge replacements are in process within Region 9. A corridor analysis was conducted on I-80, showing that many communities

in Region 9 directly connect to I-80 and thus, it is important to follow I-80 improvements. Pavement rehabilitation projects for the section of I-80 west of Walcott to the Cedar County line are programmed in Federal Fiscal Years (FFY) 2028 and 2030 in the FFY 2026-2030 Iowa Highway program. In 2023, Iowa DOT announced that the study for the widening of I-80 in Scott County had been delayed due to it currently being a lower priority than other projects in the state.

The City of Muscatine anticipates a number of roadway improvements, which are outlined in Tables 2.8 and 2.9 and on Map 2.15. The City of Muscatine intends to incorporate their complete streets policy into every major reconstruction project.

Roadway projects where costs have not been identified would require a locational or feasibility analysis. As these projects become more fully defined and costs and funding are identified, they can shift from conceptual elements to be studied to planned elements to be programmed. The following listed proposed priority roadway projects in Table 2.9 are suggested by Region 9 to be improved to enhance the region's roadway network in the future. The projects in Table 2.8 are currently in the Region 9 Federal Fiscal Year 2026-2029 Transportation Improvement Program. Not all projects are currently in the Iowa Department of Transportation five-year program and will require further study, either locally or by the Department of Transportation, prior to their implementation. Maps 2.15 and 2.16 highlight where future roadway priorities are planned or envisioned.

Projects over the next four years with identified funding sources are included in the Region 9 Transportation Improvement Program (TIP). Please see the Region 9 TIP document, or Appendix B in this plan, for more detailed information on upcoming approved projects.

³ Source: Federal Highway Administration Pavement Preservation Definitions Memorandum 02-25-2016

Roadway Network

Table 2.8 – Funded Priority Roadway Projects from FFY 2026-2029 Transportation Improvement Program (TIP)

| Jurisdiction | Location | Description | Federal Fiscal Year |
|-------------------|--|---|---------------------|
| City of Muscatine | Carver Corner Roundabout at Hershey Ave and Green St | Road Reconstruction and Roundabout Construction | 2026 |
| Scott County | 115th Ave./Y52 (Hwy 130 to 1st Ave.) | Resurfacing | 2026 |
| Scott County | 240th St./F45 (180th Ave. to 240th Ave.) | Resurfacing | 2026 |
| Scott County | On Y4E over a tributary to Rock Creek | Bridge Replacement | 2027 |
| Scott County | On 85th Ave over Hickory Creek | Bridge Replacement | 2027 |
| Scott County | Y52 (Hwy 130 to 1st Ave) | Resurfacing | 2028 |
| Scott County | On Y40 over Mud Creek | Bridge Replacement | 2029 |
| Muscatine County | On F70 over Little Mosquito Creek | Bridge Replacement | 2026 |
| Muscatine County | F58 (Wilton to Muscatine County Line) | Reconstruction | 2027 |
| Muscatine County | On F58 over Elkhorn Creek | Bridge Replacement | 2027 |
| Muscatine County | On Bancroft Ave over Hockeys Slough, | Bridge Replacement | 2027 |
| Muscatine County | On 180th Street/G14 over Mad Creek | Bridge Replacement | 2028 |
| Muscatine County | On F 70, over Cedar River | Bridge Rehabilitation | 2028 |
| State of Iowa | On IA-38 over Mad Creek | Bridge Rehabilitation | 2027 |
| State of Iowa | On IA-92 over Mississippi River | Bridge Rehabilitation | 2027 |
| State of Iowa | On U.S. 6 over East Branch of Wapsinonoc Creek | Bridge Replacement | 2027 |
| State of Iowa | I-80 (east of Y30 to west of Y40) | Resurfacing | 2028 |
| State of Iowa | On IA-38 over Mosquito Creek | Bridge Deck Overlay | 2029 |
| State of Iowa | On IA-22 over Pine Creek | Bridge Deck Overlay | 2029 |

Source: Bi-State Regional Commission, 2025

Table 2.9 – Proposed Future Priority Roadway Projects (2026 - 2050)

| Jurisdiction | Location | Description |
|--------------------|---|--|
| State of Iowa* | I-80 (east of Y30 to Cedar County line) | Resurfacing |
| City of Long Grove | 1st St. (E. Grove Rd. to N. Corporate Limits) | Reconstruction and Complete Streets Design Standards |
| City of Muscatine | 2nd Ave. & U.S. 61 Intersection | Intersection Reconstruction |
| City of Muscatine | 5th St. (Cypress Ave. to Park Ave.) | Reconstruction |
| City of Muscatine | 8th St. (Cedar St. to Cypress St.) | Reconstruction |
| City of Muscatine | 11th St. (Mulberry Ave. to Isett Ave.) | Reconstruction |
| City of Muscatine | Bidwell Rd. (U.S. 61 Bypass to Isett St.) | Reconstruction |
| City of Muscatine | Cedar St. (Mississippi River Dr. to Parham St.) | Reconstruction |
| City of Muscatine | Cleveland St. & Park Ave. Intersection | Intersection Reconstruction |
| City of Muscatine | Fulliam Ave. (Houser St. to Cedar St.) | Reconstruction |
| City of Muscatine | Hershey Ave. (Green St. to Houser St.) | Reconstruction |
| City of Muscatine | Houser St. (Lucas St. to Cedar St.) | Reconstruction |
| City of Muscatine | Isett Ave. (Bidwell Rd. to U.S. 61) | Reconstruction |
| City of Muscatine | Lake Park Blvd. (Park Ave. to Isett Ave.) | Reconstruction |
| City of Muscatine | Leroy St. (Mulberry Ave. to Bidwell Rd.) | Reconstruction |
| City of Muscatine | Lucas St. (Houser St. to 8th St.) | Reconstruction |
| City of Muscatine | Main St./8th St. (Grandview Ave. to Lucas St.) | Reconstruction |
| City of Muscatine | Mulberry Ave. (3rd St. to Houser St.) | Reconstruction |
| City of Muscatine | Stewart Rd. (Sampson St. to Dick Drake Way) | Reconstruction |
| City of Muscatine | Washington St. (Park Ave. to Cypress St.) | Reconstruction |
| City of Muscatine | Woodlawn Ave. (Mulberry Ave. to Isett Ave.) | Reconstruction |
| City of Wilton | E 5th Street (Liberty St to east of Spruce St.) | Resurfacing and Culvert Replacement |
| Muscatine County | Hwy 6 (West Liberty to Muscatine County Line) | Widening |
| Muscatine County | Hwy 61 | Planning Study for Commuter Traffic & Other Modes |
| Muscatine County | IA38 (U.S. 61 to I-80) | Widening or Super-2 Design Standards |
| Muscatine County | F62 (Muscatine County Line to X34) | Resurfacing |
| Muscatine County | F62 (X34 to West Liberty City Limits) | Reconstruction |
| Muscatine County | F70 (Moscow Rd to Hwy 38) | Resurfacing |
| Muscatine County | F70 (Hwy 38 to Hwy 61) | Resurfacing |
| Muscatine County | F70 (Hwy 70 to X54) | Reconstruction |
| Muscatine County | G28 (Louisa County to Hwy 70) | Reconstruction |
| Muscatine County | G28 (Hwy 70 to X43) | Reconstruction |
| Muscatine County | X30 (Muscatine County Line to Hwy 6) | Resurfacing |

Roadway Network

| Jurisdiction | Location | Description |
|------------------|--|----------------|
| Muscatine County | X34 (F62 to Hwy 6) | Resurfacing |
| Muscatine County | X40 (Cedar County to City of West Liberty) | Resurfacing |
| Muscatine County | X46 (Hwy 6 to F70) | Resurfacing |
| Muscatine County | X54 (U.S. 6 to F70) | Reconstruction |
| Muscatine County | X54/F70 (Moscow Rd to Muscatine City Limits) | Resurfacing |
| Muscatine County | X61 (Fruitland Road to Muscatine County Line) | Reconstruction |
| Muscatine County | Y26 (New Era Rd to Hwy 61) | Resurfacing |
| Muscatine County | Y26 (Muscatine County Line to Hwy 61) | Resurfacing |
| Scott County | 20th Ave./Y30 (200th St. to Hwy 130) | Resurfacing |
| Scott County | 60th Ave./Y40 (200th St. to Big Rock Rd.) | Resurfacing |
| Scott County | 115th Ave./Y52 (1st Ave. to Wapsipinicon River) | Resurfacing |
| Scott County | 160th St./F65 (Y40 to I-280) | Resurfacing |
| Scott County | 162nd Ave./Y64 (Eldridge N. Corporate Limits to 267th St.) | Resurfacing |
| Scott County | 200th St./F58 (60th Ave to 110th Ave.) | Resurfacing |
| Scott County | 240th St./F45 (115th Ave. to 155th Ave.) | Resurfacing |
| Scott County | 240th Ave./Z30 (260th St. to 280th St.) | Resurfacing |
| Scott County | 240th Ave./Z30 (280th St. to Wapsipinicon River) | Resurfacing |
| Scott County | 270th St./F41 (Y68 to Scott County Park Entrance) | Resurfacing |
| Scott County | Allens Grove Rd. (275th St. to 115th Ave.) | Grade and Pave |
| Scott County | Big Rock Rd./Y4E (60th Ave. to N. Scott County Line) | Resurfacing |

*Project programmed for FFY 2030 in FFY 2026-2030 Iowa Highway Program
 Source: Bi-State Regional Commission, 2025

Other Transportation Considerations

Traffic Operations

As noted above for existing conditions, traffic operations and the deployment of technology will be important tools to help manage traffic in Region 9. Transportation innovation is an important federal priority. Utilizing Intelligent Transportation Systems identified in the *Bi-State Regional ITS Architecture Plan* will offer opportunities to use technology to solve traffic problems. Examples may be dynamic messaging for directing traffic or improving lane markings and reflectivity to aid driver-assist features in vehicles.

Planning for limited highway access helps improve the safety and efficiency of a roadway corridor. By limiting access points, access management reduces the number of traffic conflicts and potential crashes. An access management program has been suggested for the U.S. 61 corridor, particularly the by-pass area within the City of Muscatine. Access management along U.S. 61 will continue to be explored, so future projects are compatible with Iowa DOT access policy, specifically to provide efficient and safe highway operation while utilizing the full potential of the highway investment. U.S. 67 north of the Quad Cities is another limited access highway where access management has been applied.

Potential Safety Corridors

In the 2019-2023 Iowa Strategic Highway Safety Plan, a safety emphasis area analysis was conducted. The safety emphasis area analysis identified crashes and attributes them to a certain emphasis area, such as roadside collisions and distracted drivers. Within Region 9, U.S. 61 between I-280 in Davenport through Muscatine, a small section of I-80 in Scott County, and U.S. 61 north of the Quad Cities are the major roadways included with this safety emphasis area analysis. The three highest safety emphasis areas of concern in Region 9 were lane departures, local roads, and speed. These are further detailed in the county-level and Muscatine Traffic Safety Action Plans in order to achieve “Vision Zero” for fatal and serious injuries resulting from crashes.

The Community Awareness of Roadway Safety (CARS) interdisciplinary team of engineers and public safety and emergency responders in Scott County have partnered with the Iowa Department of Transportation and interdisciplinary representatives from Scott County, and through coordination with Region 9, the City of Muscatine and Muscatine County will work on safety solutions for high-injury network corridors. Bi-State Regional Commission will convene periodic traffic safety summits to highlight reduction successes, and to address regional and local problem areas in the Region 9 network. Initial discussions for potential solutions include increased fines, special signing, increased enforcement for impaired drivers and speed, and access control.

