

Iowa in Motion 2045 – It's not just about highways



Many people associate the Iowa Department of Transportation with highways; however the agency plays a vital role in all other forms of transportation including aviation, public transit, bicycle and pedestrian, rail, and water.



When planning for the future of these modes of transportation, the Iowa Transportation Commission and Iowa DOT planning staff have tapped into multiple sources to get a clearer picture of future needs for all modes of transportation in our state.

Aviation

For Iowa's aviation community, needs surround two basic elements, facilities and services. Both rural and urban areas of Iowa are served by airports that range from grass landing strips to full-service commercial airports.

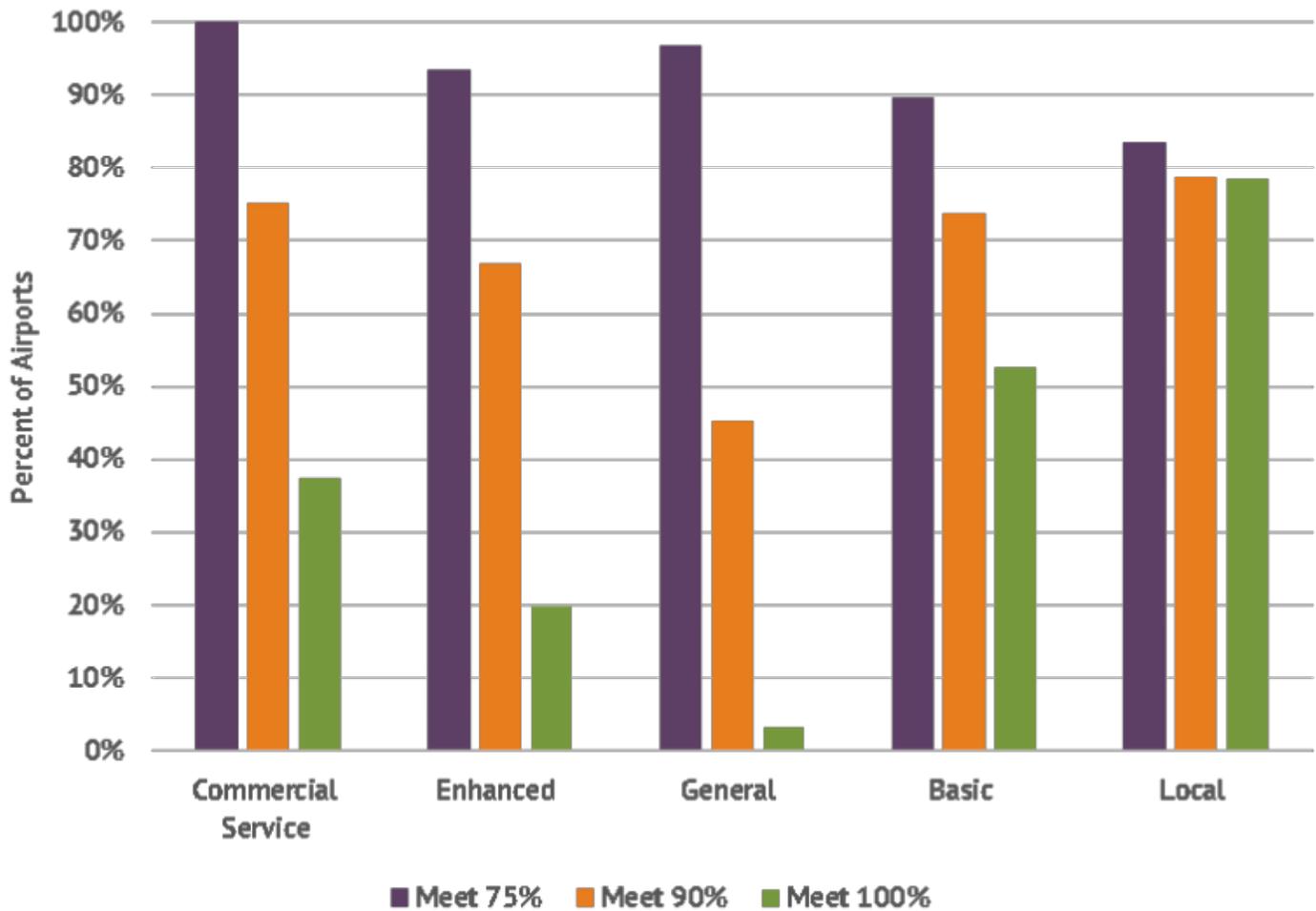
While the Iowa DOT does not directly operate any of the aviation facilities in Iowa, the agency serves as an advocate to promote and enhance air service in a number of ways including administering state and federal aviation funding programs, managing Iowa's aircraft registration program, and inspecting and certifying all public-use airports. When needed, the Iowa DOT also provides communications, data collection, planning, and research assistance Iowa's aviation community.

For the Iowa DOT's long-range planning effort, staff reviewed facility and service levels for Iowa's eight commercial service and 99 general aviation airports that are publically owned. An additional eight privately-owned airports are open for public use. Depending on the available amenities, general aviation airports are categorized as:

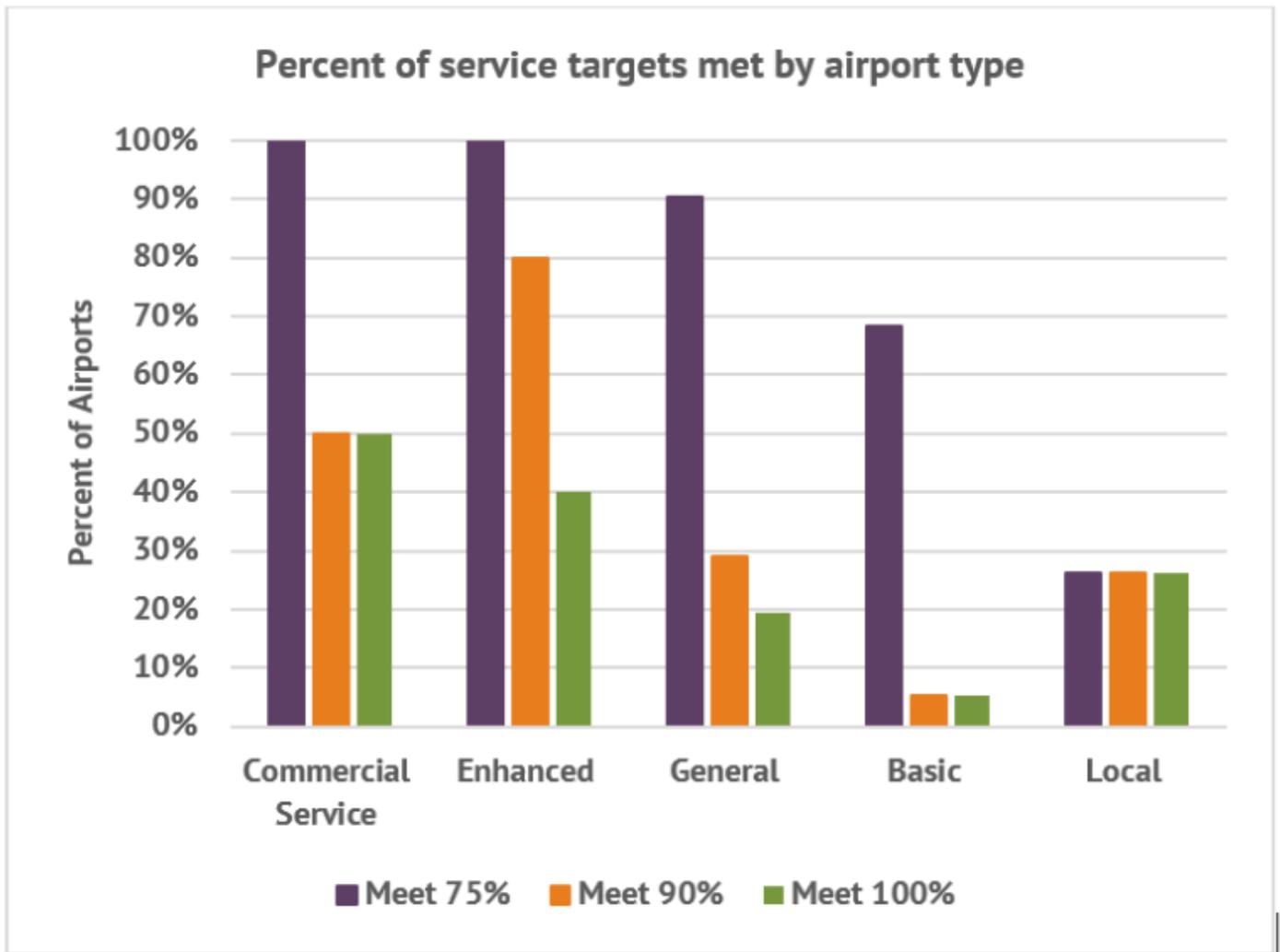
- Enhanced service
- General service
- Basic service
- Local service

In-depth analysis of the facility and service needs had previously been completed in the [2010 Iowa Aviation Systems Plan](#) that looked forward 20 years. Andrea White of the Iowa DOT's Office of Systems Planning, said, "Many of our transportation modes have their own planning documents in place already. For the overall Iowa in Motion 2045 plan, we were able to use the data from these plans to give an overview of future modal needs."

Percent of facility targets met by airport type



The analysis shows that for most airports in Iowa facility needs such as primary runway length and width, runway lighting, taxiway lighting, covered aircraft storage, and terminal parking are met, but there is room for improvement. While many airports may currently be meeting facility and service targets, they were originally designed and constructed prior to the 1970's with modifications made as air transportation demands have changed. Ongoing maintenance and improvement is necessary to ensure a safe and reliable aviation system.

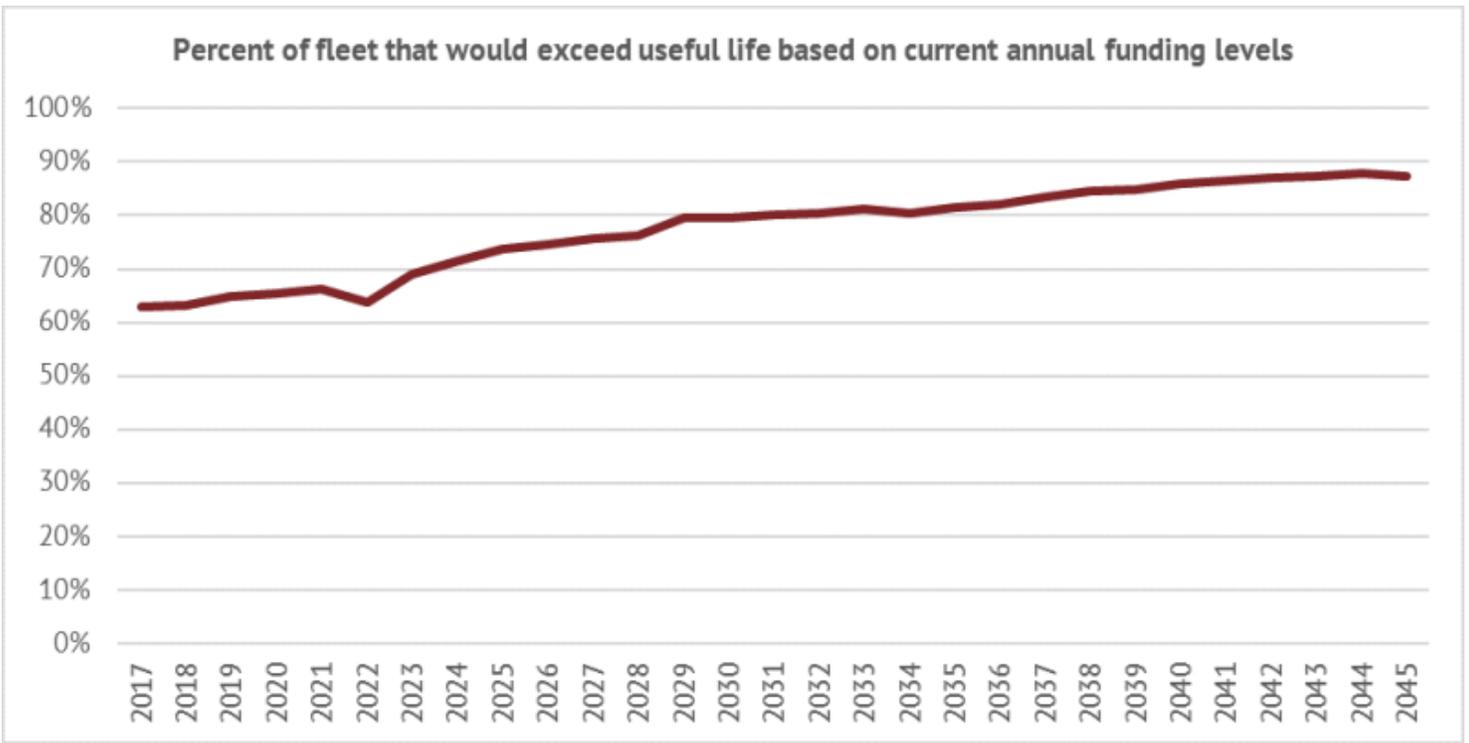


For service needs, the study shows additional room for improvement in areas such as the fuel types and hours of availability, airport staffing, available ground transportation, snow removal, and features like concessions and restrooms.

Public transit

The Iowa DOT's role in public transit is much the same as it is for aviation. The agency does not directly provide transit service or operate transit facilities, however Iowa DOT staff administer state and federal grants and serve as a resource to the 35 urban, small urban, and regional transit agencies that serve all 99 Iowa counties.

For the Iowa in Motion 2045 planning purposes, data was drawn from the [2009 Passenger Transportation Funding Study](#). In updating the 2009 study, data through 2015 shows statewide public transit ridership has grown steadily and is projected to continue to increase 40 percent between 2015 and 2045, from 28.77 million trips in 2015 to 40.33 million trips in 2045.



While it is great news that more lowans than ever are looking to public transit, the data shows an alarming trend in needs for transit vehicle funding. Analysis shows that vehicle needs are currently not being met and many of the vehicles in the current fleet are past their useful life. The analysis showed that at current vehicle replacement funding levels, an estimated 87 percent of vehicles will exceed their useful life in 2045.

Additionally, a 2016 survey of public transit agencies found that a significant amount of space will need to be retrofitted or added for administration, vehicle storage, and vehicle maintenance between now and 2045. The total amount of space reported as a future need by all public transit agencies in the survey was nearly 600,000 square feet, or more than 12 football fields of space.

Bicycle and pedestrian

An updated statewide Bicycle and Pedestrian Long-Range Plan is currently being developed. For Iowa in Motion 2045, on-road bicycle and pedestrian future needs were determined by using an analysis of roadways that was conducted as part of that plan update. This needs analysis utilized rating systems based on factors such as traffic levels, speed, and roadway width. Treatment types, such as paved shoulders or multi-use trails, are also recommended based on these factors. There are unique rating systems for rural and urban highways.

Rural rating system:

		Existing Paved Roadway Width					
		≤22'	23' - 24'	25' - 28'	29' - 30' (may include 4' paved shoulders)	≥31' (may include 5-6' paved shoulders)	Any width (with adjacent path)
Annual Average Daily Traffic	Less than 1,000	Suitable as Is	Suitable as Is	Suitable as Is	Suitable as Is	Suitable as Is	Suitable as Is
	1,000 to 1,500	3' paved shoulder on higher use corridors	3' paved shoulder on higher use corridors	3' paved shoulder (add or widen existing) on higher use corridors	Suitable as Is	Suitable as Is	Suitable as Is
	1,500 to 2,000	3' paved shoulder	3' paved shoulder	3' paved shoulder (add or widen existing)	Suitable as Is	Suitable as Is	Suitable as Is
	2,000 to 3,000	4' paved shoulder	4' paved shoulder	4' paved shoulder (add or widen existing)	4' paved shoulder (widen existing)	Suitable as Is	Suitable as Is
	3,000 to 5,000	4' paved shoulder	4' paved shoulder	4' paved shoulder (add or widen existing)	4' paved shoulder (widen existing)	4' paved shoulder (widen existing)	Suitable as Is
	5,000 to 6,500	6' paved shoulder	6' paved shoulder	6' paved shoulder (add or widen existing)	6' paved shoulder (widen existing)	6' paved shoulder (widen existing)	Suitable as Is
	Over 6,500	10' paved shoulder	10' paved shoulder	10' paved shoulder (add or widen existing) or separate path	10' paved shoulder (add or widen existing) or separate path	10' paved shoulder (add or widen existing) or separate path	Suitable as Is

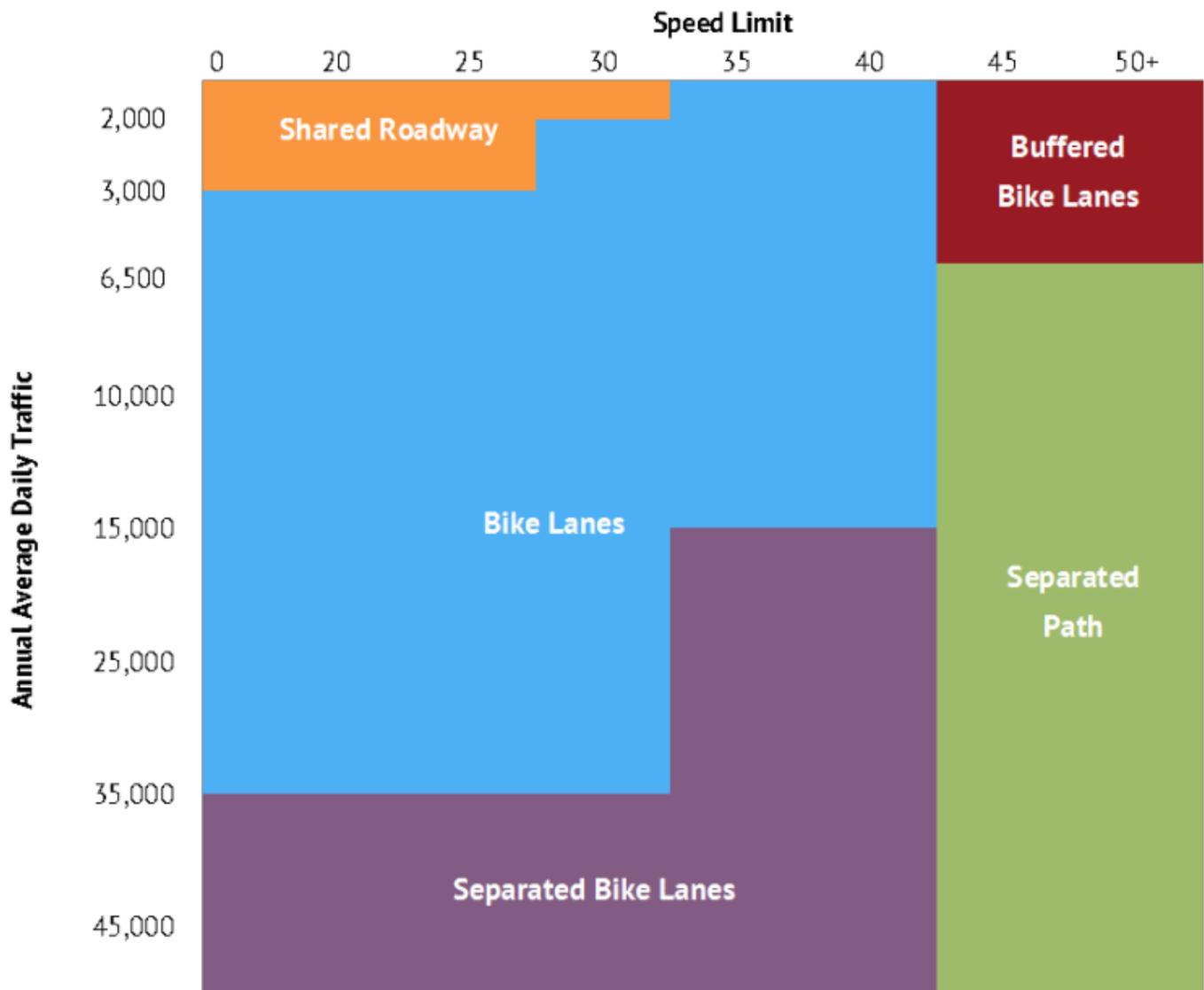
 Good

 Moderate

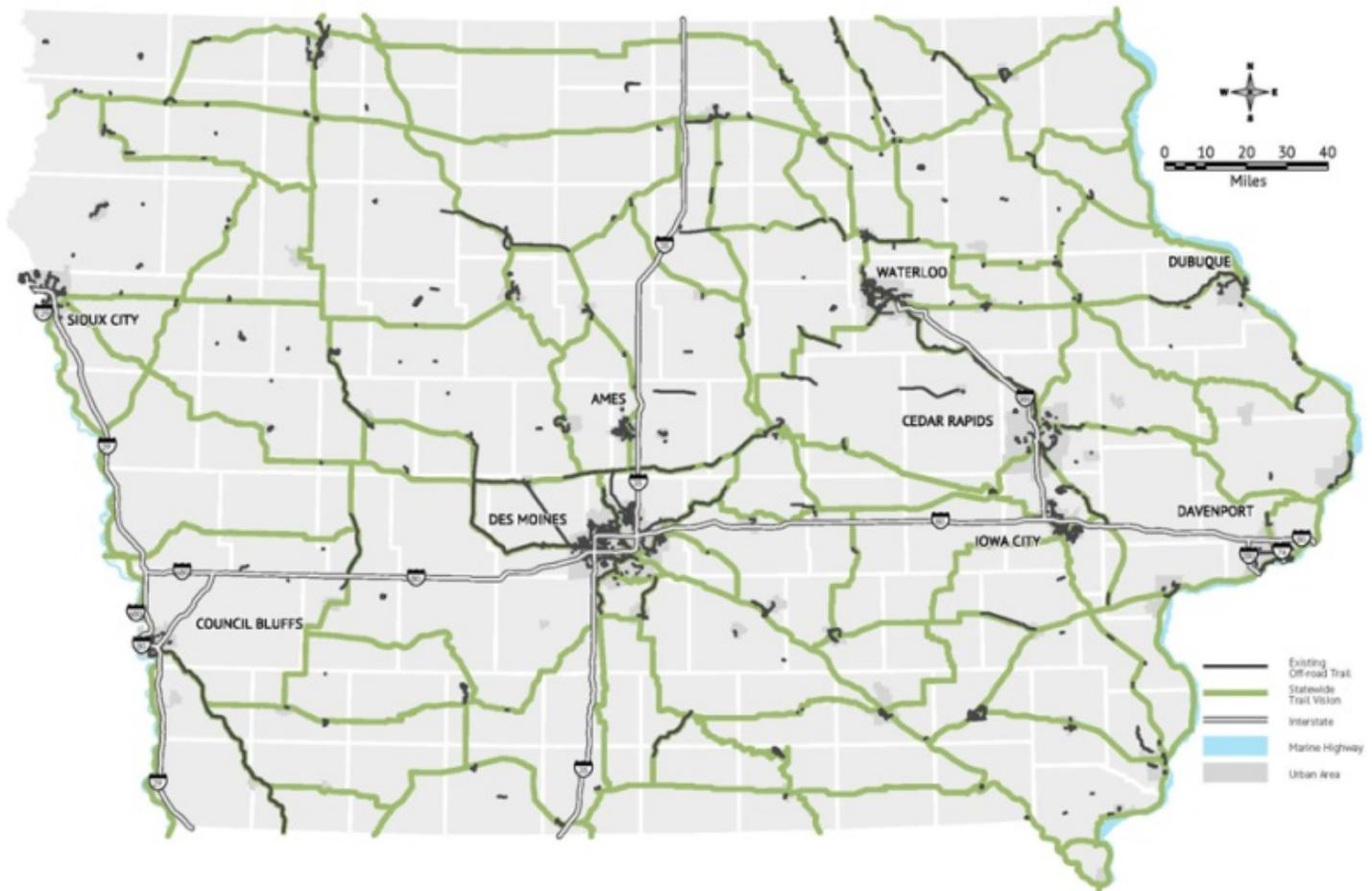
 Poor

Note: all recommended paved shoulder widths are exclusive of rumble strips.

Urban rating system:



Meeting the needs of Iowa’s bicyclists and pedestrians off-road was addressed in a statewide vision developed as part of the [Trails 2000](#) planning effort, which has been updated as part of the Iowa in Motion 2045 initiative. The trails vision update includes a renewed emphasis on a statewide network of separated multi-use trails connecting rural communities, metropolitan areas, state and county parks, and natural amenities. The Iowa DOT’s role in creating the statewide trails vision is primarily providing funding through grants to agencies that build and maintain the trails.



Rail transportation

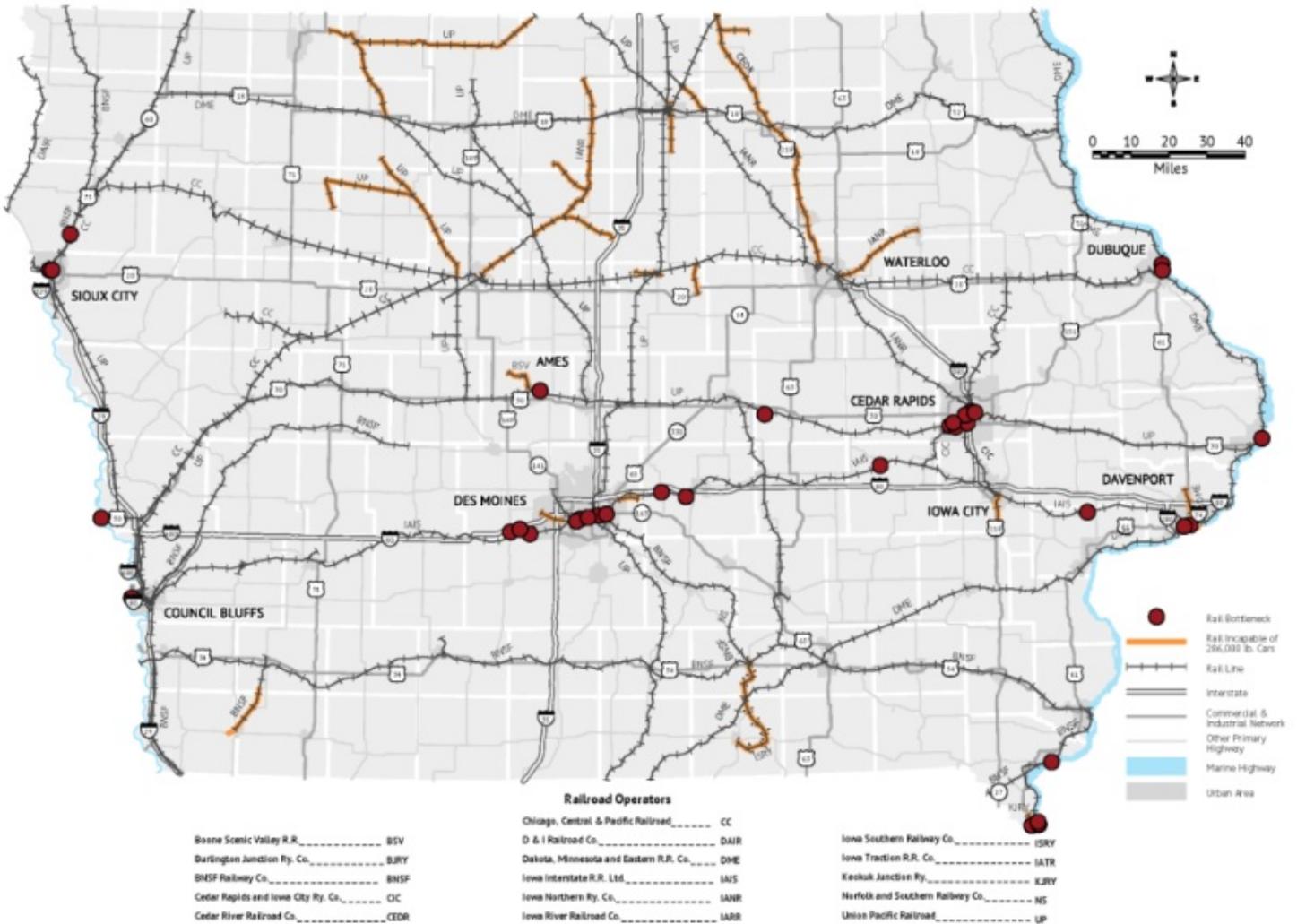
America’s railroads are typically owned and operated private companies. The Iowa DOT’s role in rail transportation is to assist those companies by administering state and federal grant programs, such as the highway-railroad crossing program, and advocating for both freight and passenger rail within and through our state.

Similar to the other modes, the future needs of rail transportation have been documented through a variety of planning efforts including the [Iowa State Freight Plan](#) and [Iowa State Rail Plan](#). For Iowa in Motion 2045, staff used these planning documents to get a long-range view of needs related to rail transportation.

The completed studies identified and prioritized potential short-term and long-term projects aimed at:

- Increasing the operational efficiency of Iowa’s railroads.
- Enhancing rail access and expanding or constructing multimodal facilities for handling freight more economically and efficiently.
- Enhancing safety at crossings.
- Upgrading existing passenger rail stations.
- The potential for expanding intercity passenger rail services.

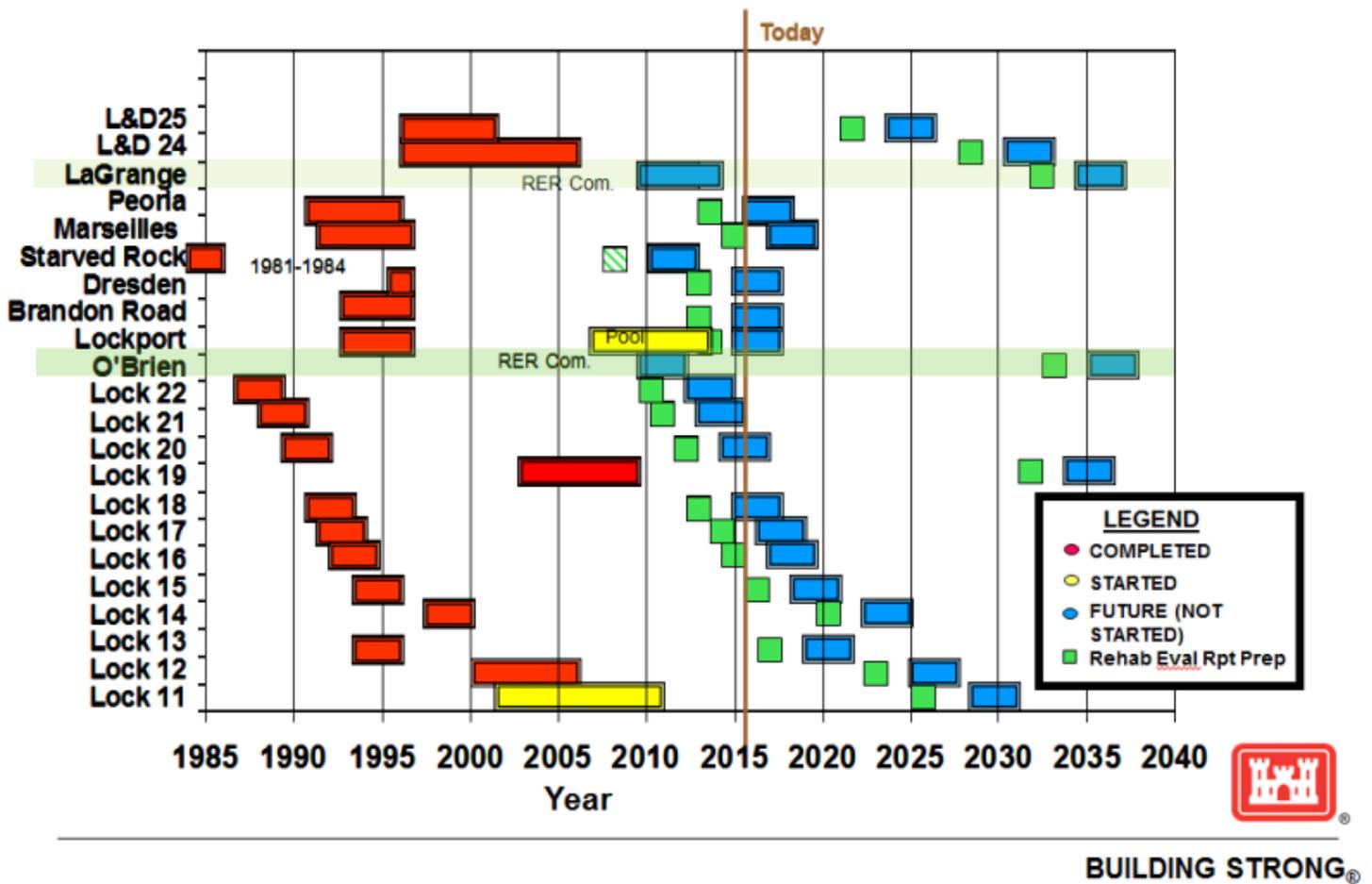
In the analysis of rail transportation’s future needs, Iowa in Motion 2045 looked specifically at rail bottlenecks and rail lines that are unable to handle current industry-standard 286,000-pound rail car weights. Some of these locations may require additional attention in the future as rail movements continue to grow.



Water

Iowa's distinction of being bordered by two navigable waterways, the Mississippi and Missouri Rivers, provides a number of opportunities and challenges for transportation, especially moving freight efficiently and economically to world markets.

For Iowa in Motion 2045, Iowa DOT planners worked with the U.S. Army Corps of Engineers (USACE) data included in the 2016 State Freight Plan. That plan included an analysis of needs provided by the USACE for major rehabilitation of locks and dams on the Upper Mississippi River in the Rock Island District.



Look for the full draft Iowa in Motion 2045 plan to be available for review [online](#) in the coming days, and for notices about the public comment period and public meeting for the plan.

Previous Iowa in Motion 2045 blog entries for highway needs analysis

[Nov. 1, 2016: Iowa's Long-Range Transportation Plan continues to sharpen the focus on future needs](#)

[Dec. 22, 2016: Iowa in Motion 2045 – connecting the dots to improve the transportation system](#)

[Jan. 20, 2017 – Iowa in Motion 2045 – Data analysis is in line with public comment on long-range planning](#)

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