


IOWA STATE FREIGHT PLAN

EXECUTIVE SUMMARY

IOWA DOT
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IOWA IN MOTION
planning ahead 2040

Iowa State Freight Plan

Executive Summary

2016

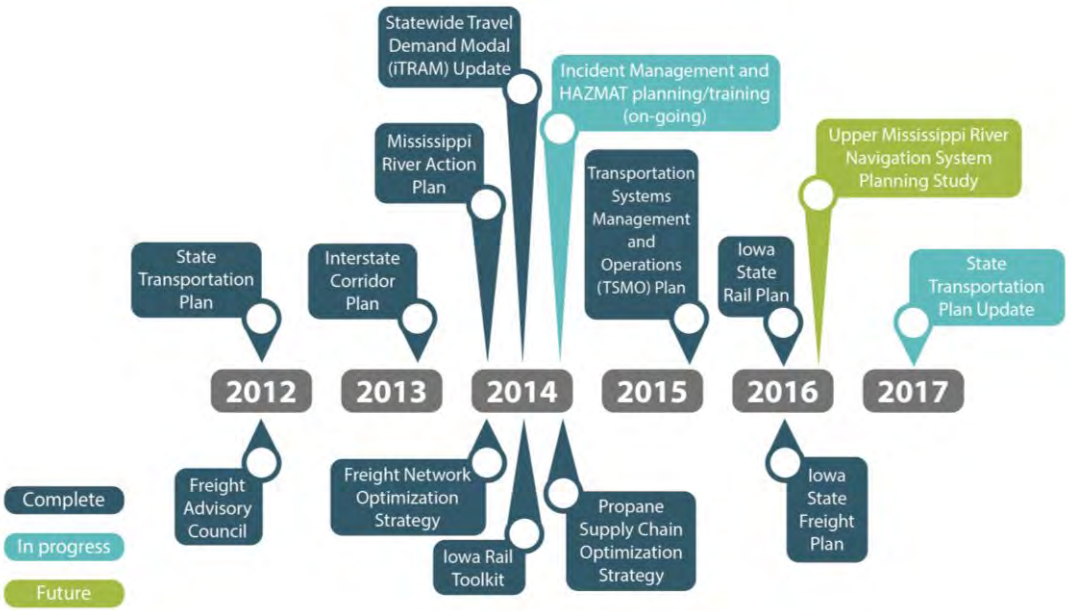
Purpose of the plan

Iowa's central geographic location and abundance of transportation options make it a major player in the global marketplace. The transport of goods and services is the backbone of the economy and investments in basic infrastructure components such as airports, highways, pipelines, railroads, and waterways secure and strengthen the economic vitality of the state.

The Iowa Department of Transportation (DOT) recognizes the need to further incorporate freight considerations into the statewide transportation planning and programming process. As a result, Iowa DOT has developed a multimodal freight plan that will address each of the five modes of the freight transportation system: air, truck, pipeline, rail, and water. The Iowa State Freight Plan (State Freight Plan) will serve as a platform for safe, efficient, and convenient freight transportation in the state. This plan will also:

- Align with the state transportation plan: *Iowa in Motion – Planning Ahead 2040.*
- Meet the requirements of the Moving Ahead for Progress in the 21st Century Act (MAP-21) and most requirements of the Fixing America's Surface Transportation (FAST) Act.
- Support national freight goals.
- Connect Iowa's freight-related initiatives and allow them to move forward toward a common goal of optimal freight transportation in the state (see Figure E.1)

Figure E.1: Iowa freight-related initiatives timeline

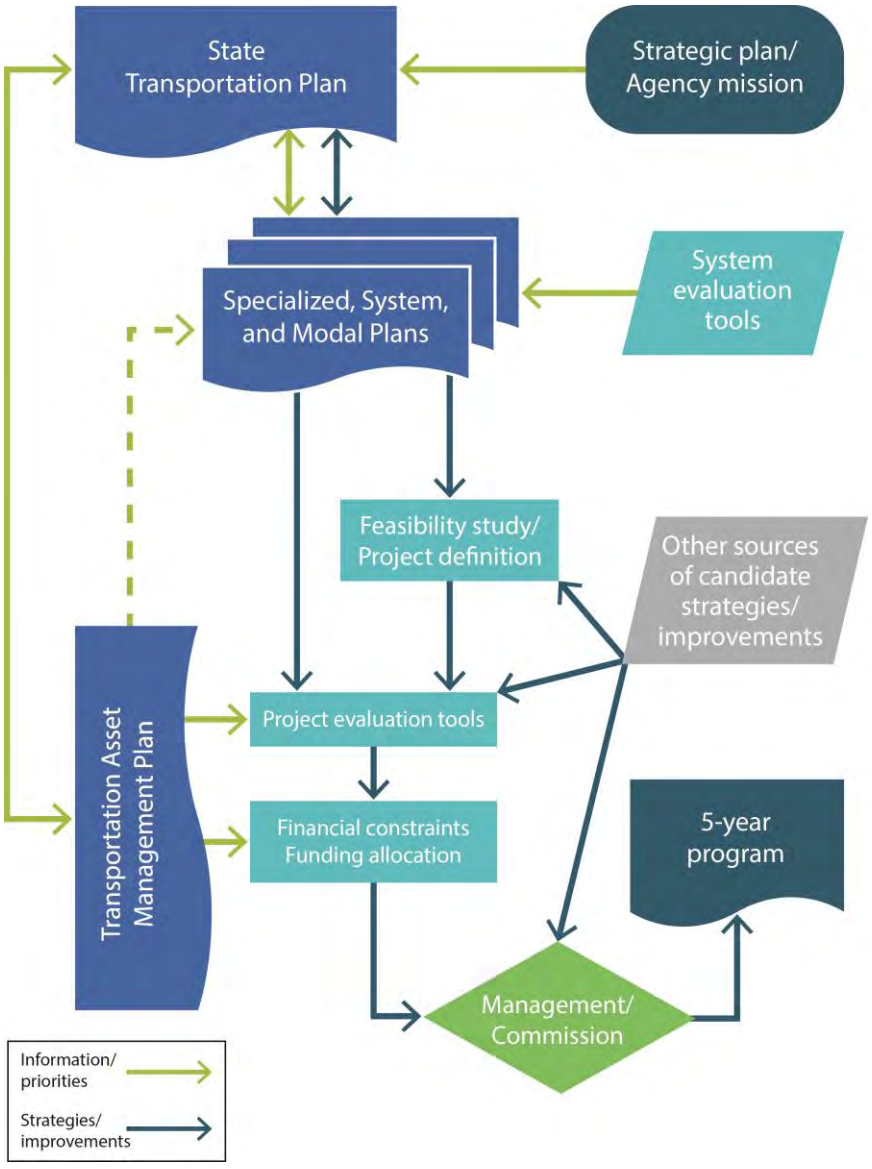


Source: Iowa Department of Transportation

Elements of planning/programming process

Each of Iowa's freight-related initiatives plays a role in a collaborative planning and programming process. The tools and studies are utilized to develop system/modal plans, such as the State Freight Plan, which are consistent with the state transportation plan. Projects are then identified, studied, and programmed based on the findings and recommendations provided from each of these initiatives. Figure E.2 shows the relationship between the tools, system/modal plans, state transportation plan, and the overall planning and programming process.

Figure E.2: Relationship between elements of the planning and programming process



Source: Iowa Department of Transportation

Freight goals

MAP-21 requires a state freight plan to include a description of how the plan will improve the ability of the state to meet national freight goals. The national freight goals are to:

- Improve the contribution of the freight transportation system to economic efficiency, productivity, and competitiveness.
- Reduce congestion on the freight transportation system.
- Improve the safety, security, and resilience of the freight transportation system.
- Improve the state of good repair of the freight transportation system.
- Use advanced technology, performance management, innovation, competition, and accountability in operating and maintaining the freight transportation system.[1]
- Reduce adverse environmental and community impacts of the freight system.

In addition to these goals, the Iowa DOT will consider the potential regulatory impact of all initiatives and how these could act as hindrances to freight movement. Chapter 9, *Freight improvement strategy*, identifies Iowa DOT's strategies for addressing freight mobility issues and improving the overall freight transportation network. Each of these strategies aligns with one or more of the national freight goals above.

OBJECTIVES OF THE PLAN

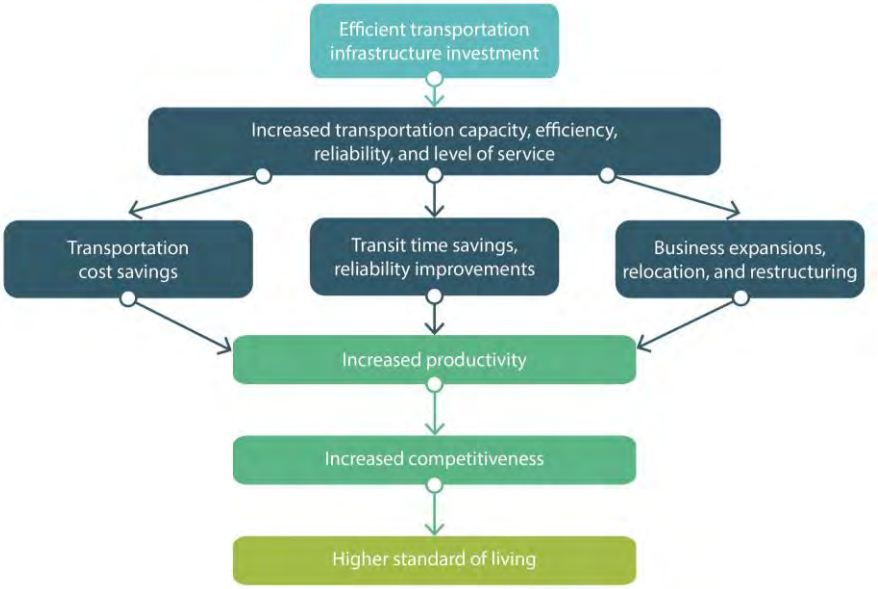
- **Identify strategic goals**
- **Identify and document the economic importance of freight**
- **Document freight trends and issues**
- **Present freight-related forecasts**
- **Inventory existing assets**
- **Describe conditions of the system and develop performance measures**
- **Identify the State's decision making process**
- **Present freight strategies and improvements**

[1] For the purposes of illustrating alignment with the national freight goals, this goal is separated into two distinct goals for the remainder of the State Freight Plan.

Economic context of freight transportation planning

The performance of the freight transportation system affects economic productivity in several ways. Changes in the cost and the quality of freight movement affect both the amount of freight transport that firms buy and the ways in which they use it. At the most basic level, a drop in the cost of goods movement means firms will buy more, which will most likely take the form of shipping products and obtaining inputs, materials, and intermediate products from longer distances. This increases the market that can be served from a given facility by providing access to lower-cost inputs.

Figure E.3: Transportation and the economy



Source: ICF Consulting, 2010 and Beyond: A Vision of America's Transportation Future

Improvements in the quality of transportation (i.e., capacity, efficiency, and reliability) result in reduced transit times and greater reliability of delivery times. Both of these effects, and especially the latter, impact the way in which firms design their logistics systems. These improvements also open the door for transportation cost savings, as well as potential business expansions and restructuring. Lower transit times increase the "reach" of facilities such as factories and distribution centers; if these facilities can be more widely spaced, a given market area can be served with fewer facilities. Since fewer facilities for a given flow of goods means more volume per facility, operating costs, as well as investment costs, may be reduced. Thus, when firms consider their logistics arrangements and the design of their distribution systems, they will take into account improved freight transport to develop lower-cost systems. The result is more productivity, increased competitiveness with other businesses, and in turn, a higher standard of living for the area as more capital is invested in the region.

Trends and issues

The advancement of globalization leads to constantly shifting market variables. This makes adapting and evolving a challenge for all involved parties, including manufacturers, shippers, and government agencies. To be proactive in addressing developing patterns and overcoming new obstacles, it is necessary to identify current trends and issues and attempt to forecast the changes that will come.

What we heard during stakeholder engagement

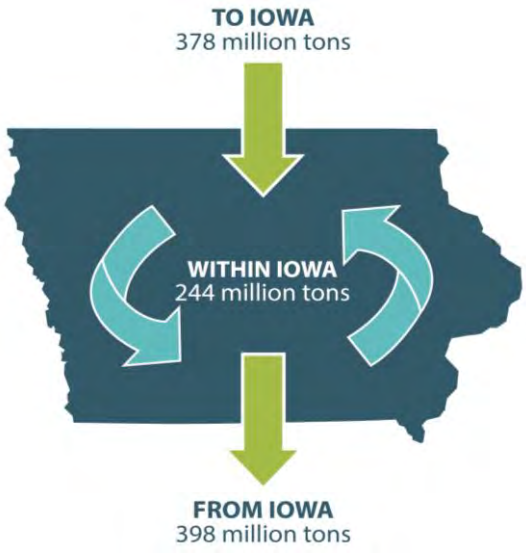
- Funding for all modes of freight transportation is a constant obstacle.
- Freight industries want reliable transportation above all else.
- There is a need for more intermodal connections.
- Heavy truck traffic on I-80 in eastern Iowa is a concern.
- The nation's locks and dams on the inland waterway system are in need of funding for maintenance and improvements.
- All freight transportation modes are important and impact each other.
- The State of Iowa should be thinking regionally, nationally, and internationally when considering freight movement.
- Some state and federal regulations hinder freight movement.
- Greater harmonization and standardization of rules in regulation between states is desired by shippers.

See pages 40 through 61 of the State Freight Plan (Chapter 4, *Trends and issues)* for an in-depth investigation of major freight trends and issues impacting Iowa.

Forecasts

According to the Federal Highway Administration's (FHWA) Freight Analysis Framework (FAF) tool, freight transportation in the United States will double by the year 2040. This growth will be reflected in Iowa and seemingly will not be uniform across all modes. If this becomes reality, it will prove to be a sizable challenge for the overall freight transportation system. The State Freight Plan builds on the freight trends and provides current Iowa commodity flow data and forecasts out to the year 2040. Understanding these changes is a crucial piece in any proactive planning approach.

Figure E.4: Iowa freight movement, 2012



Source: Federal Highway Administration's Freight Analysis Framework

Iowa's transportation system facilitated the movement of approximately 1.1 billion tons of freight with an estimated value exceeding $563 billion to, from, and within the state in 2012. Table E.1 illustrates the tonnage and value for freight movements in 2012, 2020, 2030, and 2040. The total weight of goods imported into and exported out of Iowa is expected to grow from 774 million tons in 2012 to 1.1 billion tons (a growth of 35.6 percent) in 2040. The total value of goods imported into and exported out of Iowa is expected to grow from $468 billion in 2012 to $715 billion (a growth of 52.6 percent) in 2040. Freight that has both an origin and destination in the state is expected to grow by 27.8 percent in weight and 30.5 percent in value from 2012 to 2040.

Table. E.1: Commodity flow into and out of Iowa, 2012-2040

	2012		2020		2030		2040	
	Tons (millions)	Value ($	Tons (millions)	Value ($	Tons (millions)	Value ($	Tons (millions)	Value ($
Total	**1018.1**	**$563,313**	**1181.3**	**$656,952**	**1279.7**	**$740,262**	**1361.3**	**$838,457**
Within Iowa	243.2	$95,335	277.2	$108,407	297.2	$116,511	310.7	$124,380
From Iowa	397.3	$241,115	480.0	$286,210	537.1	$333,513	592.7	$392,457
To Iowa	377.6	$226,863	424.2	$262,335	445.4	$290,237	457.9	$321,619

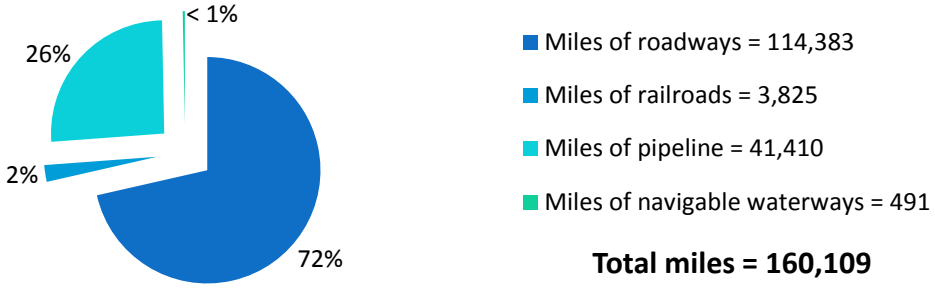
Source: Federal Highway Administration's Freight Analysis Framework

See pages 62 through 81 of the State Freight Plan (Chapter 5, *Freight forecasts*) for information on Iowa's freight flows.

Freight transportation assets

Iowa's 160,000-mile multimodal freight transportation system is comprised of multiple air cargo facilities, a well-developed highway system, an extensive rail network, a large web of pipelines, two bordering navigable waterways, and hundreds of freight-related facilities to assist in the movement of commodities. The State Freight Plan provides an inventory of the infrastructure and facilities that make up this system and how they interact to increase the efficiency of goods movement through the state and region.

Figure E.5: Iowa freight transportation system



Source: Iowa Department of Transportation

AIR

- 108 publicly owned airports
- More than 4,000 registered aircraft
- 5,550 active licensed pilots
- More than 300 licensed aerial applicators

HIGHWAY

- 114,383 miles of roadways
- 9,420-mile Primary Highway System
- 2,391-mile Commercial and Industrial Network
- Two transcontinental interstate highways
- Over 25,000 bridge structures
- Nearly 20,000 trucking companies operating in Iowa

RAILROAD

- 3,825 miles of railroads
- 18 railroad companies, including:
  - six Class I, one Class II, and 11 Class III
- Rail service in 90 of the 99 Iowa counties

FREIGHT-GENERATING FACILITIES

- One trailer-on-flat car/container facility
- 15 biodiesel producers
- 30 coal burning facilities
- 44 ethanol producers
- 60 barge terminals
- 811 licensed grain elevators

PIPELINE

- 41,410 miles of pipelines
- 84 pipeline operators
- Carry liquid petroleum, natural gas, anhydrous ammonia, crude oil, and highly volatile liquids

WATERWAY

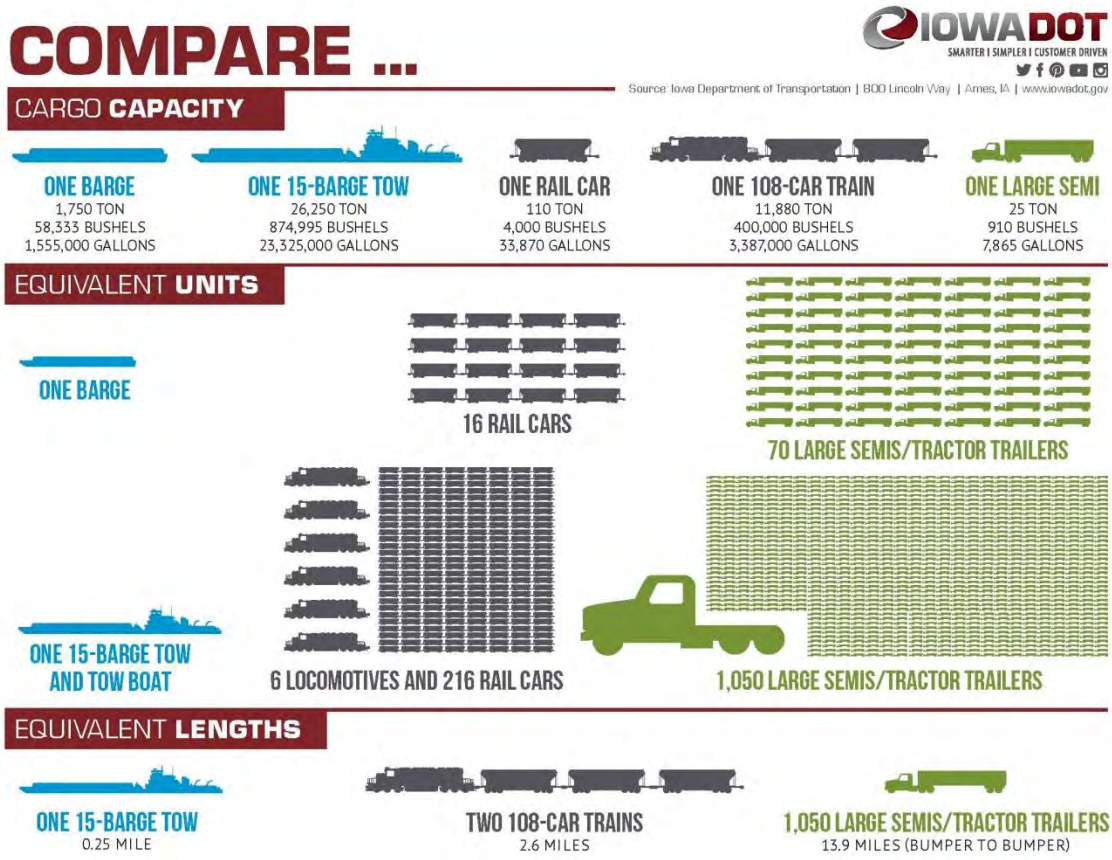
- Bordered by two marine highways
- 491 miles of navigable waterways
- 60 barge terminals
- 11 Mississippi River locks and dams on the border, five of which (10, 11, 12, 14, and 19) are on the Iowa side
- Keokuk, Iowa is the northernmost port on the Mississippi River that is open to barge traffic year-round

Currently, the majority of freight in Iowa is carried by truck, train, and barge. Although trucking is the most expensive per pound, it is the also the most flexible. Trucking companies provide various services to shippers. Full truckload service providers move products from one customer to another using a variety of equipment, including dry van, flatbed, hopper, and refrigerated. Trucks can move small amounts of a few hundred pounds all the way up to 50,000 pounds per shipment (see Figure E.6).

Rail is less expensive than trucking and more fuel-efficient, but is more restricted by the privately owned networks the trains move on. This mode is well suited for moving large volumes of freight between two shipping points and, like trucks, uses dry car, flatbed, hopper, and refrigerated equipment.

Transporting commodities via waterway is the slowest and least flexible of the three modes. However, it is the most fuel-efficient, the cheapest, and can handle the largest volumes per trip. Figure E.6 compares these three modes by the amount of freight each can carry at a time. This comparison shows that one barge can handle as much as 70 trucks or more than 16 rail cars.

Figure E.6: Iowa freight tonnage comparisons



Source: Iowa Department of Transportation

Iowa Multimodal Freight Network

As part of the State Freight Plan development process, the Iowa DOT identified and established a new Multimodal Freight Network in the state. This network will be the target of several freight strategies and improvements identified in the State Freight Plan (Chapter 9, *Freight improvement strategy)*.

Benefits of this network include:

- Recognition of corridors to protect and enhance for improved freight movement.
- Developing department policies for these corridors related to design and use.
- Assisting in programming decisions regarding where to invest in the overall transportation system.

Identification criteria used for each mode are listed below and the final network is shown in Figure E.7.

Air

Two commercial airports, Des Moines International Airport (DSM) and Eastern Iowa Airport (CID), were included in the Multimodal Freight Network as they handle more than 99 percent of Iowa's air cargo and are forecasted to continue handling the vast majority.

Highway

Total truck traffic and oversize/overweight (OS/OW) vehicle use thresholds were used to identify the highway portion of the Multimodal Freight Network. Primary highway corridors were included if they had 30 percent total truck traffic, 1,000 or greater total truck annual average daily traffic , or were issued 1,000 or more OS/OW permits in the previous year. Some highway segments were added and removed in order to improve connectivity and continuity.

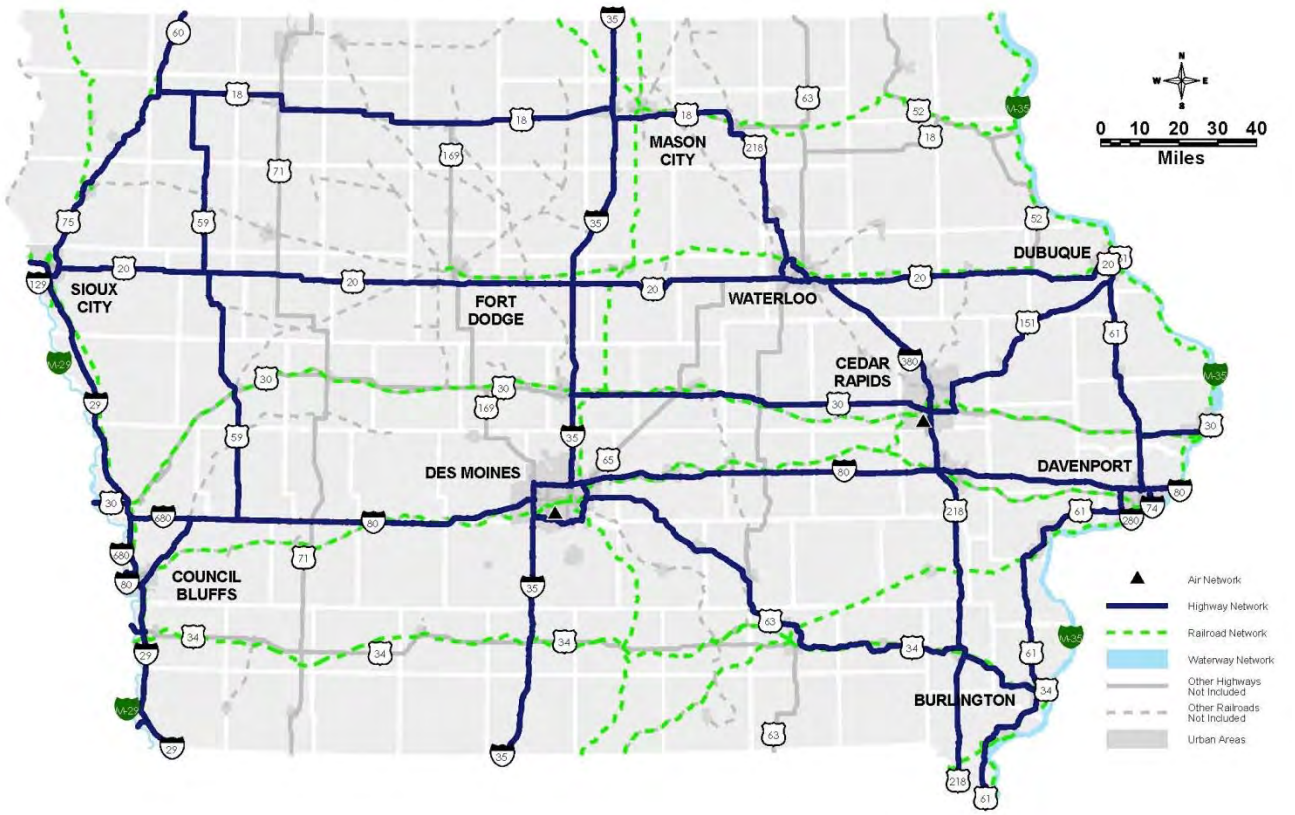
Railroad

After internal discussions with the Iowa DOT's Office of Rail Transportation, a tonnage threshold of 5 million tons per mile or greater was established for rail lines to be included in the Multimodal Freight Network. An additional rail line, Iowa Interstate Railroad from Des Moines to Council Bluffs, was also included for improved connectivity to Iowa's only intermodal container facility.

Waterway

Both of Iowa's marine highways (M-35 and M-29) were included in the Multimodal Freight Network due to their importance for strengthening the economy, relieving landside congestion, and reducing air emissions. These routes are also significant for moving Iowa's agriculture-related goods to and from the state.

Figure E.7: Iowa Multimodal Freight Network



Source: Iowa Department of Transportation

See pages 106 and 107 of the State Freight Plan (Chapter 6, *Freight transportation assets*) for more information.

Freight mobility issues identification

As required by MAP-21 and the FAST Act, locations with freight mobility issues, or bottlenecks, were identified for each of the freight transportation modes. This process included analysis and extensive input from public and private stakeholders throughout the state who are familiar with the networks and operations of freight movement. Below is a summary of the identification process for each mode.

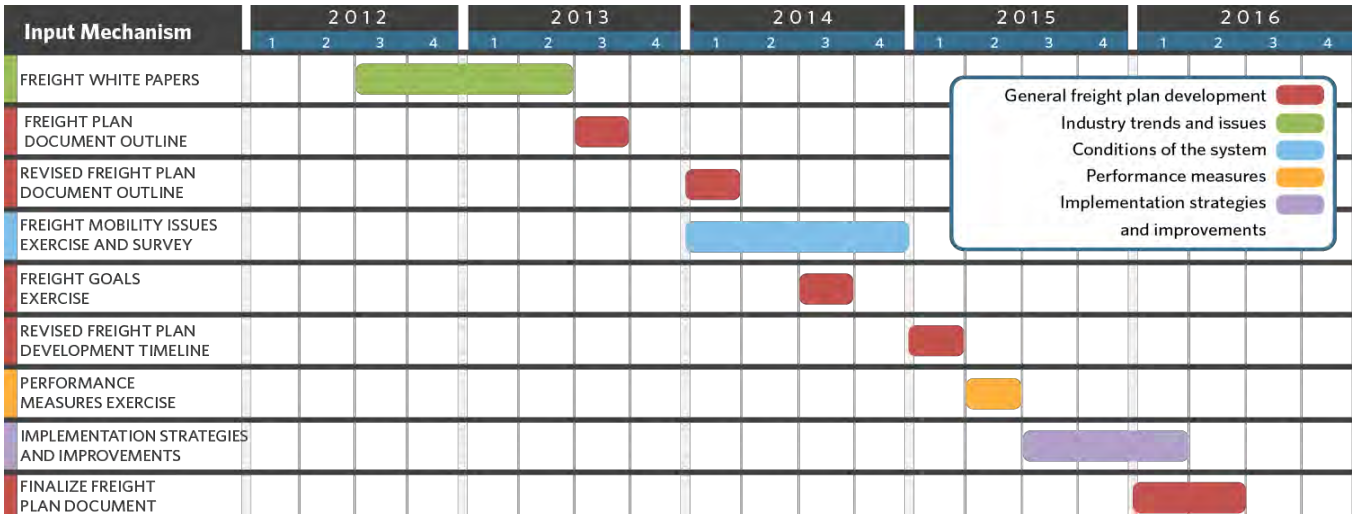
- **Air:** The Iowa DOT's Office of Aviation was contacted, along with the two largest air cargo airports in the state, to determine locations. After consulting these sources, it was determined that major air freight mobility issues do not currently exist in the state. There is currently excess capacity.
- **Highway:** INRIX traffic data was analyzed to identify bottleneck locations in the state and the number of occurrences for each during a one-year period. These locations were reviewed and additions were made by the Freight Advisory Council (FAC), Metropolitan Planning Organizations (MPOs), Regional Planning Affiliations (RPAs), and the Iowa DOT's districts on multiple occasions through exercises and the Freight Mobility Issues Survey.
- **Pipeline:** Locations with freight mobility issues were not identified for pipelines.
- **Railroad:** Surveys and exercises to identify locations were carried out on multiple occasions with the railroads operating in Iowa. Surveys were then sent to the MPOs, RPAs, and the Iowa DOT's districts for additions through the Freight Mobility Issues Survey.
- **Waterway:** Data from the U.S. Army Corps of Engineers was gathered and reviewed. Due to age, delay, and unavailability, each lock along Iowa's border was identified. All swing-span bridges, which cause delays for barges and trains, were also identified as locations with freight mobility issues.

See pages 118 through 124, 129 through 133, and 139 through 142 of the State Freight Plan (Chapter 7, *Conditions and performance of the freight transportation system*) for an in-depth summary and full listings of freight mobility issues in the state.

Plan development driven by FAC and designated stakeholder committees

Utilizing input from freight stakeholders and the general public is crucial for the development of strong plans and implementation of successful strategies. Iowa DOT engaged a number of public and private sector stakeholders, such as the FAC, in various ways throughout the process to gather input on plan development. This included face-to-face meetings and exercises, email correspondence, and online surveys. The figure below shows a timeline of major input gathering efforts preceding and throughout plan development.

Figure E.8: Stakeholder and public engagement



Source: Iowa Department of Transportation, HDR

FAC (11 meetings): This group was engaged to provide input on the freight white paper development (that ultimately led to the issues and solutions lists), the plan document outline, the Freight Mobility Issues Survey, goals, performance measures, strategies and improvements.

High Leverage Stakeholder Committee (2 meetings): This group was engaged to provide input on strategies and improvements.

Rail Advisory Committee (2 meetings): This group was engaged to provide input as part of the Freight Mobility Issues Survey.

Issue-Based Workshop: This event was held to engage freight stakeholders and gather input on goals.

Public Input Meeting: A public input meeting was where display boards, handouts, and copies of the draft document were available for attendees to review and comment on. DOT staff was available to discuss the State Freight Plan and answer any questions.

45-day Public Comment Period: Iowa DOT provided the required 45-day public comment period from May 2, 2016 to June 15, 2016.

Freight Mobility Issue Survey (6 stakeholder groups): Locations with freight mobility issues, or bottlenecks, were identified for each of the freight transportation modes. This process included analysis and extensive input from public and private stakeholders throughout the state who are familiar with the networks and operations of freight movement.

Midwest States Webinar (7 states): Representatives from the states of Illinois, Kansas, Minnesota, Missouri, Nebraska, South Dakota, and Wisconsin were invited to join the Iowa DOT to discuss freight and rail planning activities in the region. Topics covered included: freight plans, rail plans, freight data, current initiatives, etc., and the Iowa DOT also requested feedback on the Iowa Multimodal Freight Network related to the identification methodology and locations of border crossings.

Freight strategies

The following strategies represent the primary elements of the Iowa DOT's overall freight improvement strategy going forward. Some of the activities associated with these strategies are already underway, while others will be initiated in the near future as new tools and technologies are implemented. Each element of the department's strategy aligns with both the priorities of the FAC and the national freight goals identified in MAP-21.

Table E.2: Alignment of freight strategies and national freight goals

		Contribution of freight system	Reduce congestion	Safety and security	Repair system	Innovative technology	Performance management	Reduce impacts
1	Maximize the advantages inherent to Iowa's geographic proximity	X	X			X	X	X
2	Explore/Create other funding sources to increase investment in the freight transportation system	X	X	X	X	X	X	X
3	Target investment to address mobility issues that impact freight movements	X	X	X	X	X	X	
4	Emphasize the Multimodal Freight Network and utilize designs that are compatible with significant freight movements	X	X	X		X		X
5	Target investment on the interstate system at a level that reflects the importance of this system for moving freight	X	X	X	X	X	X	X
6	Right-size the highway system and apply cost-effective solutions to locations with existing and anticipated issues	X	X	X	X	X	X	X
7	Advance a 21st century Farm-to-Market System that moves products seamlessly across road, rail, and water to global marketplaces	X	X		X	X	X	
8	Implement asset management tools and practices and promote their use at the local level	X	X	X	X	X	X	X
9	Optimize the freight transportation network to minimize cost and travel time and improve supply chain efficiency	X	X	X	X	X	X	X
10	Optimize the availability and use of freight shipping containers	X	X			X	X	X
11	Explore opportunities for increasing value-added production within the state	X				X	X	

		Contribution of freight system	Reduce congestion	Safety and security	Repair system	Innovative technology	Performance management	Reduce impacts
12	Continue to advance efforts on the M-35 Marine Highway Corridor	X	X	X	X	X	X	X
13	Promote freight movement on the M-29 Marine Highway Connector	X	X	X	X	X	X	X
14	Provide real-time information on system conditions to support the movement of freight	X	X	X		X	X	X
15	Leverage real-time information from users of the system to support advanced decision-making and incident avoidance	X	X	X		X	X	X
16	Provide measured, clear, nontechnical performance results for the freight system	X	X	X	X	X	X	X
17	Streamline and align freight-related regulations and minimize unintended consequences	X				X	X	
18	Act as a point of contact and educator on freight transportation options	X	X			X	X	
19	Explore new truck cross-docking operations to enable greater opportunities to consolidate truck freight for Iowa shippers	X	X			X		
20	Explore a new rail intermodal facility to enable access to lower cost rail services for Iowa businesses	X	X			X		
21	Explore additional transload facilities to provide Iowa businesses with more access to lower cost railroad freight services	X	X			X		
22	Explore opportunities to leverage a barge and rail multimodal solution to provide a cost-effective freight transportation alternative	X	X		X	X		X
23	Explore opportunities to build a logistics park to co-locate cross-docking, intermodal, transloading and warehousing facilities	X	X			X		
24	Collaborate with the railroads to provide Iowa companies with more access and capacity to accommodate additional Iowa freight shipments	X	X					X
25	Explore opportunities to reposition empty containers by barge and reduce repositioning costs	X	X			X	X	X
26	Explore and implement strategies to reduce deadhead truck miles	X	X	X		X	X	X
27	Explore opportunities for railroads to provide additional lower cost freight rail transportation for high volume traffic lanes within Iowa	X	X	X	X			

Source: Iowa Department of Transportation

Freight improvements

In addition to the strategies outlined, specific improvements are necessary to address the freight mobility issues in Iowa. These improvements were identified using the state's decision-making process and newly updated/developed tools outlined in the State Freight Plan (Chapter 8, *Iowa's decision-making process).* They will support the state's freight strategies as well as the national freight goals identified in Chapter 2, *Strategic goals*, and will be analyzed using the state's freight performance measures outlined in Chapter 7, *Conditions and performance of the freight transportation system*.

Air

Most commercial airports in Iowa have the capacity, acreage, and necessary services to accommodate freight movement. However, the presence of freight service depends on whether or not a company chooses one of those locations for its operations. In Iowa, DSM and CID handle more than 99 percent of reported air freight; therefore, current and future improvements at both locations were highlighted.

Highway

In order to identify and prioritize candidates for highway freight improvements, the Iowa DOT utilized the Value, Condition, and Performance (VCAP) matrix. This approach takes advantage of multiple tools available at the Iowa DOT, including the Freight Mobility Issues Survey, Iowa Travel Analysis Model, (iTRAM), Infrastructure Condition Evaluation (ICE), INRIX bottleneck ranking tool, and Iowa's annual traffic counts.

Railroad

Iowa railroad improvements were identified through input opportunities with the railroad companies operating in Iowa and other stakeholders. Due to the fact that most railroads are private entities, the companies make the ultimate decisions on when and where to complete improvement projects. The list of freight railroad improvements included in the State Freight Plan is intended to highlight potential future projects that could be considered. Some of these improvements do have funding partially committed, but most do not have set schedules or committed funding sources.

Waterway

The U.S. Army Corps of Engineers (USACE) is responsible for all inland waterway navigation projects in the United States. In Iowa, the USACE Rock Island and St. Paul Districts maintain the M-35 and the Omaha District maintains the M-29. The State Freight Plan outlines current and future navigation projects provided to the Iowa DOT by each of the three districts.

See pages 180 through 202 of the State Freight Plan (Chapter 9, *Freight improvement strategy*) for more on improvements for all modes.

Value, Condition, and Performance (VCAP) matrix

Location list (Freight Mobility Issues Survey): The Iowa DOT initially developed a draft list of highway locations with freight mobility issues (see Chapter 7, *Conditions and performance of the freight transportation system,* of the State Freight Plan). This was completed by analyzing INRIX traffic data that can, among other things, identify "bottleneck" locations in the state and the number of times each occurs throughout the year. This data was retrieved for 2014 and overlaid with the Iowa DOT's truck traffic count data. INRIX bottleneck locations that occurred in each quarter of the year and had either 30 percent truck traffic or more than 5,000 total trucks per day were flagged as locations with potential freight mobility issues.

This draft list was presented to the FAC for input and was sent to the Iowa DOT districts, metropolitan planning organizations, and regional planning affiliations. Each of these groups was asked to review the list, make necessary additions, and assign priority votes to each location. This was used to populate the initial candidate list.

Value (iTRAM): iTRAM is a statewide travel demand model used in the evaluation of Iowa's transportation system (see Chapter 8, *Iowa's decision-making process*). This tool was used to assess the value of each candidate location to the overall freight transportation network. An initial run of the model was completed first to show a base case scenario. A second run was then completed that excluded each one of the candidate locations individually. Once complete, the truck vehicle-hours traveled (VHT) was compared from the before-and-after scenarios and the difference was assigned as the value of the location. This process was completed for each individual candidate location, with higher priority being assigned to locations with larger VHT increases when excluded from the network. In other words, higher priority was assigned to locations that make the truck network more efficient from a VHT perspective.

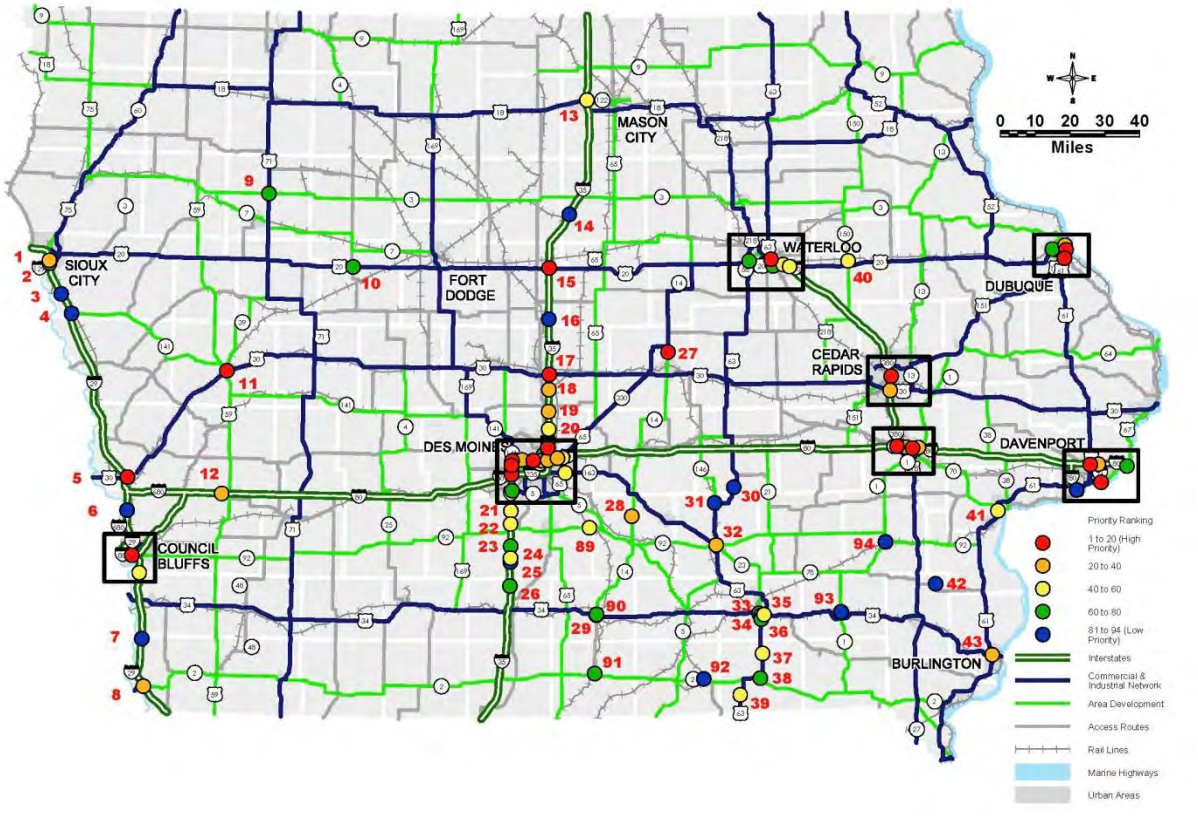
Condition (ICE): ICE was originally developed as a tool for evaluating the Interstate Highway System based on seven criteria: Pavement Condition Index, International Roughness Index, structure sufficiency rating, passenger traffic, single-unit truck traffic, combination truck traffic, and congestion (see Chapter 8, *Iowa's decision-making process,* of the State Freight Plan). A normalization and weighting process is applied to each criterion and used to analyze highway segments before ultimately ranking them against each other based upon a final composite rating. The original tool was recently expanded to the entire Primary Highway System in Iowa. ICE was used to evaluate the current condition of each candidate location. The segments that make up each location were analyzed using

the seven criteria and the normalization and weighting processes that had already been established. This resulted in a composite rating for each location.

Performance (INRIX Bottleneck Ranking tool): INRIX has a tool to identify and rank bottleneck locations (see Chapter 7, *Conditions and performance of the freight transportation system,* of the State Freight Plan). This tool, with additional analysis using traffic data, was used to develop a draft list of highway locations with freight mobility issues. To determine the performance of each candidate location, the number of annual bottleneck occurrences for each location was used, with higher priority being assigned to locations with more occurrences.

VCAP matrix (final ranking and prioritization): After each candidate location was assigned a Value, Condition, and Performance rating, each was ranked using those values for each of the three categories. The average of these three rankings was calculated and the candidate locations were assigned an overall priority rank. If two locations had the same average ranking, total truck traffic at the location was used as a tiebreaker.

Figure E.9: Highway freight priority locations



Source: Iowa Department of Transportation

See pages 183 through 193 of the State Freight Plan (Chapter 9, *Freight improvement strategy*) for a full list of highway improvements.

Iowa's freight transportation system boasts a central geographic location and an abundance of transportation options. As a producer-state, meaning one that ships more goods than it receives, and a relatively rural state, this transportation flexibility provides shippers and businesses a strong comparative advantage. This fosters the ability to efficiently and competitively serve domestic and global markets via a single or multiple modes of transportation. By continuing to maintain and invest in the freight transportation system, public and private transportation providers can increase competitiveness for Iowa businesses, strengthen the economy, and raise the quality of life for Iowa citizens.