State Freight Plan
Freight Improvements
Iowa Freight Advisory Council | September 10, 2021
2022 State Freight Plan

- Required by FAST Act
- Immediate and long-range freight planning activities and investments
- Consultation with FAC
- Due July 2022
Input opportunities

- 9/2020 TRENDS & ISSUES
- 3/2021 MULTIMODAL NETWORKS
- 9/2021 IMPROVEMENTS/PROJECTS
- 3/2022 FREIGHT INVESTMENT PLAN
- 6/2020 HIGHWAY BOTTLENECKS
- 12/2020 GOALS & PERFORMANCE MEASURES
- 6/2021 MULTIMODAL BOTTLENECKS
- 12/2021 IMPLEMENTATION STRATEGIES
- 7/2022 FINAL DRAFT DUE
Priority trends & issues

1. Funding 4.58
2. Agriculture 4.42
3. Lock & Dams 4.32
4. Trade 4.26
5. Multimodal 4.26

6. Safety 4.21
7. Resiliency 4.16
8. Truck Cargo 4.16
9. Highway Design 4.16
10. Regulations 4.11

State Freight Plan document outline

<table>
<thead>
<tr>
<th>Introduction &amp; Purpose</th>
<th>System Inventory &amp; Performance</th>
<th>Industries &amp; Commodities</th>
<th>Planning Considerations</th>
<th>Action Plan</th>
</tr>
</thead>
</table>

IOWA DOT
GETTING YOU THERE
# Other priorities

<table>
<thead>
<tr>
<th>High priority (4.00)</th>
<th>Medium priority (3.99-3.50)</th>
<th>Lower priority (3.49-2.11)</th>
<th>Suggested items to consider</th>
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<tbody>
<tr>
<td>Intermodalism</td>
<td>Human trafficking</td>
<td>Land use</td>
<td>Rural infrastructure</td>
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<tr>
<td>Trucking issues</td>
<td>Mississippi River cargo</td>
<td>Energy</td>
<td>Interstate System</td>
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<tr>
<td>Industry</td>
<td>Manufacturing</td>
<td>Sourcing</td>
<td>Rail crossing safety</td>
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<tr>
<td></td>
<td>Rail network</td>
<td>Automated trucking</td>
<td>Sustainable investment</td>
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<td>E-commerce</td>
<td>Economics</td>
<td>Container availability</td>
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<td></td>
<td>Rail cargo</td>
<td>Panama Canal</td>
<td>Pipelines</td>
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<tr>
<td></td>
<td>First mile/last mile</td>
<td>Missouri River cargo</td>
<td></td>
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<tr>
<td></td>
<td>Automation</td>
<td>Fuel</td>
<td></td>
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<td></td>
<td>Oversize/overweight</td>
<td>Aviation trends</td>
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<td></td>
<td>Bio renewables</td>
<td>Air cargo</td>
<td></td>
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<td></td>
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<td>Coal decline</td>
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</table>
Goals & performance measures

SAFETY

Improve the safety, security, and resilience of the national freight system.

INFRASTRUCTURE

Modernize freight infrastructure and operations to grow the economy, increase competitiveness, and improve quality of life.

INNOVATION

Prepare for the future by supporting the development of data, technologies, and workforce capabilities that improve freight system performance.
# Industry perspective

<table>
<thead>
<tr>
<th>SAFETY</th>
<th>INFRASTRUCTURE</th>
<th>INNOVATION</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accidents (totals, severity, causes, claims)</td>
<td>Condition (roads, tracks, locks)</td>
<td>Efficiency (time, fuel, reliability)</td>
<td>Economics (jobs, global competitiveness, value of shipments)</td>
</tr>
<tr>
<td>Safety scores</td>
<td>Maintenance (inspections, plans)</td>
<td>Productivity &amp; profitability (automation, costs, competitiveness)</td>
<td>Sustainability (funding, environmental)</td>
</tr>
<tr>
<td>Labor force (training, adherence to requirements)</td>
<td>Operations (mitigating impacts, congestion reporting, connections)</td>
<td>Labor force (training, satisfaction, jobs added)</td>
<td>Intermodal &amp; multimodal (connections)</td>
</tr>
<tr>
<td>Investment (totals, cost, upgrades)</td>
<td>Investment (totals, cost)</td>
<td>Technologies (tracking, electronic HOS, PTC, automation)</td>
<td></td>
</tr>
</tbody>
</table>
Multimodal networks

• **Objective:**
  – Designate freight network locations to protect and enhance for improved freight mobility.

• **Methodology:**
  – **Air:** major cargo airports
  – **Highway:** 30% truck traffic or 1000 truck AADT or 1000 OSOW permits annually
  – **Rail:** 5 million tons per mile
  – **Water:** marine highways
Iowa Multimodal Freight Network
Multimodal bottlenecks

• **Objective**
  - Identify freight bottleneck locations to mitigate for improved freight mobility

• **Identification and prioritization**
  - **Air:** N/A
  - **Highway:** 28 locations identified using INRIX and truck traffic analysis
  - **Railroad:** 38 locations provided by railroads
  - **Inland waterway:** 19 locations on M-35 marine highway
Multimodal bottlenecks
Freight improvements

• Objective
  – Identify priority locations to target for improved freight mobility

• Source of identification and prioritization
  – **Air:** DSM and CID
  – **Highway:** VCAP matrix
  – **Railroad:** Companies operating in Iowa
  – **Inland waterway:** U.S. Army Corps of Engineers
Air

• Des Moines International Airport
  – Completed new FedEx facility and runway reconstruction
  – Development plan includes cargo-related development as demand increases

• Eastern Iowa Airport
  – Three cargo ramps and cargo buildings are 90% utilized
  – 2021 Master Plan update underway to help guide development of 76 acres set aside for cargo handling
Highway

- Value, Condition, and Performance (VCAP)
- Prioritize highway bottleneck locations by:
  - value (iTRAM)
  - condition (ICE)
  - performance (INRIX)
- Includes:
  - 28 priority locations on the state freight network
Highway improvements

VCAP – Top 10

1. US 52 at US 61/US 151 (Dubuque)
2. NE 70th Street at Iowa 163 (Altoona)
3. US 61 at Grandview Ave (Muscatine)
4. US 151/Iowa 13 at Mt Vernon Rd (Cedar Rapids)
5. US 20 at US 61/US 151 (Dubuque)
6. US 218 at US 61 (Keokuk)
7. Iowa 22 at US 61 (Muscatine)
8. US 61 at Iowa 38 (Muscatine)
9. US 59 at Iowa 39 (Denison)
10. US 75 at C60 (Hinton)
Railroad

• Projects provided by:
  – Railroads operating in Iowa

• Compiled in 2017; updated 2020 & 2021

• Includes:
  – 42 short-range projects (1-5 years)
  – 64 long-range (5+ years)
  – Of the above, 31 short-range and 55 long-range on the state freight network
Railroad improvements

Map includes short-range freight railroad improvements on the state freight network.

Map does not include any statewide grade crossing improvement and upgrade projects.

Full project list is included in the Iowa State Rail Plan.
Waterway

- Projects provided by:
  - U.S. Army Corps of Engineers
  - St. Paul District (LD 9 & 10)
  - Rock Island District (LD 11-19)

- Includes:
  - 31 priority maintenance projects on the state freight network
  - Deferred/backlog major rehab, repairs, and maintenance by lock
**Inland waterways deferred maintenance cost estimate**

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Lock and Dam 9</td>
<td>$40,033,696</td>
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<tr>
<td>Lock and Dam 10</td>
<td>$41,762,096</td>
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<td>Lock and Dam 11</td>
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<tr>
<td>Lock and Dam 12</td>
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<tr>
<td>Lock and Dam 13</td>
<td>$72,500,000</td>
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<td>Lock and Dam 14</td>
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<td>Lock and Dam 15</td>
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<td>Lock and Dam 17</td>
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<td>Lock and Dam 18</td>
<td>$132,500,000</td>
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<tr>
<td>Lock 19</td>
<td>$145,000,000</td>
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**Prioritized maintenance – Top 10 projects**

1. Lock 18 Miter Gate Anchorage Replacement
2. Lock 17 Miter Gate Anchorage Replacement
3. Lock 19 PLC System Replacement
4. Lock 17 Upstream Guide wall Sheet pile Transition Wall Repair
5. Lock 13 Filling and Emptying System Replacement
6. Lock 19 Hydraulic Cylinder Rod Replacement
7. Dam 13 Spillway Seepage Cutoff Wall Repairs
8. Lock 14 - Auxiliary Lock/MRPO Guide wall
9. Lock 18 Access Road Repairs
10. 6 Sites Dam Gate Trunnion Repairs
THANK YOU FOR YOUR TIME AND ATTENTION

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