

New Mexico 2045 Freight Plan Update

March 17, 2023





U.S. Department
of Transportation
**Federal Highway
Administration**

New Mexico Division

March 17, 2023

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Suite 801
Santa Fe, NM 87507
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In Reply Refer To:
DDA-NM
ENGI 40

Mr. Ricky Sena
Cabinet Secretary
New Mexico Department of Transportation
PO Box 1149
Santa Fe, NM 87504

Dear Secretary Sena:

The Federal Highway Administration, New Mexico Division Office, has reviewed the New Mexico Department of Transportation's, NM 2045 Freight Plan, updated January 10, 2023, and re-submitted to the Division Office on January 10, 2023.

The Division Office finds that the Plan contains all elements required by 49 U.S.C. § 70202. The State has therefore met the prerequisite in 23 U.S.C. § 167(h)(4) that it develop a State Freight Plan in accordance with 49 U.S.C. § 70202, before it may obligate funds apportioned to the State under 23 U.S.C. § 104(b)(5). The State may now obligate such funds for projects that meet all National Highway Freight Program (NHFP) eligibility requirements described in 23 U.S.C. § 167, and all other applicable Federal requirements.

Please be advised that the Division Office's finding that the Plan satisfies the requirements of 49 U.S.C. § 70202 and 23 U.S.C. § 167(h)(4) is not a determination that the projects listed in the Freight Investment Plan component of the Plan required by 49 U.S.C. § 70202(c)(2) meets all other NHFP eligibility requirements set forth in 23 U.S.C. § 167, or any other applicable Federal requirement.

If you have any questions regarding NHFP eligibility requirements, please contact Rodolfo Monge-Oviedo, Deputy Division Administrator at rodolfo.monge-oviedo@dot.gov or at 505-660-6867.

Sincerely,

**CYNTHIA
VIGUE**

Cindy Vigue, P.E.
Division Administrator

Digitally signed by
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cc:

Jerry Valdez, NMDOT

Joseph Moriarty, NMDOT

Jessica Griffin, NMDOT



November 3, 2022

The efficient movement of freight is paramount to the health of both New Mexico's economy and the national economy. Therefore, I am pleased to formally adopt the 2045 New Mexico Freight Plan Update (2045 NMFP) on behalf of the New Mexico Department of Transportation (NMDOT).

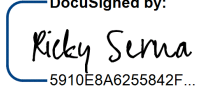
The 2045 NMFP re-establishes the vision of how New Mexico will maintain and improve the condition and performance of its multimodal freight network. The NMFP includes freight-focused goals and objectives that create a strategic foundation for future decisions. The 2045 NMFP also aligns with the New Mexico 2045 Plan (2045 Plan), which is New Mexico's statewide long-range transportation plan covering both the movement of people and goods.

The 2045 NMFP is also consistent with Federal regulations and guidance, including the Infrastructure Investment and Jobs Act (IIJA) and the Fixing America's Surface Transportation (FAST) Act. Each state that receives funding under Title 23 of the United States Code, Section 167, is required to develop a freight plan every four years that outlines immediate and long-term freight-related planning activities and investments.

I appreciate and would like to recognize the Freight Advisory Committee, NMDOT staff, the state's Metropolitan Planning and Regional Transportation Planning Organizations and other state-wide stakeholders for their valued collaboration and contribution in developing the 2045 NMFP.

Please refer to the 2045 NMFP to learn about our state's commitment to improving our multimodal freight network.

Sincerely,

DocuSigned by:

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Ricky Serna
 Cabinet Secretary

**Michelle Lujan
 Grisham**
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Ricky Serna
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Jennifer Sandoval
 Commissioner, Vice-Chairman
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1. Introduction

The 2045 New Mexico Freight Plan Update (NMFP) describes the current state of freight in New Mexico and looks ahead to the next 23 years of freight transportation throughout the state. The 2045 NMFP re-establishes the vision and analysis of how New Mexico will maintain and improve the condition and performance of its multimodal freight network. The NMFP includes freight-focused strategic goals, objectives, and performance measures that create a foundation for future freight plans and decisions and allow NMDOT to monitor progress over time. The NMFP also provides a strategic foundation for freight transportation across the state. While the NMFP examines commodity movement and trends across all freight transportation modes, the implementation strategies focus on modes which the New Mexico Department of Transportation (NMDOT) can influence. The NMFP is aligned with the New Mexico 2045 Plan (2045 Plan), which is New Mexico's statewide long-range transportation plan covering both the movement of people and goods. To realize these improvements to the condition and performance of the multimodal freight network, the 2045 Plan supports strategic decision-making by:

- identifying key trends and issues affecting freight transportation in New Mexico;
- improving understanding of freight transportation system conditions, needs, resources, and gaps;
- engaging partners, stakeholders, and the public in investment planning and solving freight-related transportation challenges;
- considering changing trends and new policies that affect freight transportation;
- establishing goals, objectives, and policies to guide NMDOT investment decisions; and
- providing mechanisms for tracking performance and plan implementation.

The NMFP is also consistent with Federal regulations and guidance, including the Infrastructure Investment and Jobs Act (IIJA) and the Fixing America's Surface Transportation (FAST) Act. Each state that receives funding under Title 23 of the United States Code, Section 167 is federally required to develop a freight plan every four years that outlines immediate and long-term freight-related planning activities and investments. Additionally, states that wish to receive funding from the National Highway Freight Program (NHFP) are required to develop a fiscally constrained Freight Investment Plan (FIP) as part of their Freight Plan.

The 2045 NMFP was developed by NMDOT Multimodal Planning and Programs Bureau in coordination with the Freight Advisory Committee, the NMDOT Freight Working Group, and in cooperation with Metropolitan Transportation Organizations (MPOs) and Regional Transportation Planning Organizations (RTPOs) across the state.

1.1 Freight Advisory Committee

The Freight Advisory Committee (FAC) is a cross-section of public and private freight stakeholders that provide input on NMDOT transportation decisions affecting freight mobility and participated in developing the 2045 NMFP. The organizations represented by FAC members include academia, airports, the Federal Highway Administration (FHWA), other state government agencies, the United States Department of Defense (DOD), MPOs, RTPOs, logistics firms, manufacturers, NMDOT, partner states, private consultants, railroads, trade associations, and tribal entities.

The FAC's role is to advise NMDOT on freight-related priorities, issues, projects, and funding needs. The FAC also promotes information sharing between the private and public sectors on freight issues, as well as communicates and coordinates regional priorities with other organizations.

1.2 Freight Working Group

The Freight Working Group (FWG) is a group of internal NMDOT staff who are responsible for selecting freight-related projects. The FWG includes representatives from all districts across the state, NMDOT staff involved in State Transportation Improvement Program (STIP) development, as well as modal representatives including those involved in international border, aviation, and rail planning.

1.3 Plan Process

The 2045 NMFP is a performance-based long-range statewide freight transportation plan that establishes a foundation for the future of freight transportation in New Mexico through the implementation of long-term strategies and performance monitoring methods. Figure 1 shows the timeline of the planning process for the New Mexico 2045 Freight Plan.

Figure 1. New Mexico 2045 Freight Plan Process



1.4 Plan Summary

The 2045 NMFP includes:

- **Freight Transportation Goals, Objectives, and Performance Measures:** This chapter focuses on NMDOT's freight priorities and their delineation through a vision statement, goals, objectives, and performance measures.
- **Planning Context:** This chapter provides context for planning in New Mexico, including freight-related institutions, freight-related policies and strategies, and federal and state freight programs.
- **Freight Trends and Commodity Flow Analysis:** This chapter analyzes New Mexico's current and future economy and freight movement and identifies emerging national freight trends that are likely to impact how and where goods move across the country and internationally, including in New Mexico.
- **System Condition, Performance, and Gap Analysis:** This chapter examines the condition and performance of New Mexico's freight network. It also includes a gap analysis and needs assessment.
- **Truck Parking:** This chapter presents research and data related to truck parking inventory and future truck parking needs in New Mexico.
- **Border Crossings and Land Ports of Entry:** This chapter explores the inventory and needs of Ports of Entry (POE) at the international border between New Mexico and Mexico.
- **Implementation Plan:** This chapter includes the FIP and policies and strategies which NMDOT will implement over the next eight years in an effort to work toward the NMFP goals and objectives.

2. Goals, Objectives, and Performance Measures

The New Mexico 2045 Freight Plan serves as the guiding document for freight-related decision making in New Mexico by providing a review of historical conditions, forecasting existing and emerging trends, and outlining the state's priorities for the future. This chapter focuses on the development of NMDOT's freight priorities and their delineation through a vision statement, goals, objectives, and performance measures.

The "Visioning Process" refers to the establishment of a preferred future by freight community stakeholders. Regarding the New Mexico freight system, the vision statement focuses on **creating a safe, sustainable, and resilient multimodal transportation system**.

Goals are value-based statements that specify what issues a plan will address, but they typically do not include measurable aspects and are instead concerned with purpose, scope, and context. Objectives are more specific than goals and include clear ends with measurable aspects that detail how a related goal will be achieved. Both plan components inform the development of performance measures as well as subsequent strategies and policies used to affect changes in the freight system that bring circumstances closer in line with the vision statement.

Performance measures are derived from collected data that describe progress toward the plan's vision, goals, and objectives. A single performance measure may inform reports on progress for multiple goals and objectives. Federal transportation legislation has promoted performance-based planning since Moving Ahead for Progress (MAP-21) was signed in 2012, and current regulations require states to report transportation performance measures to the federal government. Therefore, utilizing measures with wide applicability across multiple plans is preferable for consistency and usefulness for federal and state government, local decision-makers, and the public.

2.1 Vision & Goals

Vision

The New Mexico 2045 Plan is the overarching planning document for transportation in New Mexico, and as such the vision for the NMFP plan is consistent: **"A safe, sustainable, and resilient multimodal transportation system that meets New Mexico's current and future mobility and accessibility needs."**

Draft Goals and Objectives

NMDOT developed initial draft goals and objectives for the NMFP based on existing New Mexico planning documents and studies, peer state freight plans, federal freight planning guidance, and national freight planning strategic goals. Federal and NMDOT plans reviewed include:

- National Freight Strategic Plan
- The New Mexico 2045 Plan
- The New Mexico Freight Plan, Moving Freight Forward Through 2040
- Infrastructure Investment and Jobs Act (IIJA)
- Fixing America's Surface Transportation (FAST) Act
- I-10 Corridor Study Vision and Goals

Common themes identified through the review of these plans served as the basis for the initial draft vision and goals. Special consideration was given to the New Mexico 2045 Plan goals, the National Freight Strategic Goals, and the National Performance Goals, as outlined below.

National Freight Strategic Goals

The US Department of Transportation (USDOT) developed a National Freight Strategic Plan, which supports the USDOT's three strategic goals:

- **SAFETY:** Improve the safety, security, and resiliency 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.

National Performance Goals

Congress established seven performance goals for the Federal-aid Highway Program:

- **SAFETY:** To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- **INFRASTRUCTURE CONDITION:** To maintain the highway infrastructure asset system in a state of good repair.
- **CONGESTION REDUCTION:** To achieve a significant reduction in congestion on the National Highway System.
- **SYSTEM RELIABILITY:** To improve the efficiency of the surface transportation system.
- **FREIGHT MOVEMENT AND ECONOMIC VITALITY:** To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **ENVIRONMENTAL SUSTAINABILITY:** To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- **REDUCED PROJECT DELIVERY DELAYS:** To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

New Mexico 2045 Plan Goals

New Mexico's 2045 Plan includes four goals:

- **Safety:** Improve safety for all transportation system users.
- **Asset Management:** Optimize spending to cost effectively preserve our transportation assets in the best possible condition over the long term.
- **Mobility & Accessibility:** Efficiently and equitably invest in infrastructure and technology to provide reliable multimodal access and connectivity, improve mobility, foster economic growth, and minimize transportation's contribution to climate change.
- **Program Delivery:** Deliver transportation programs through approaches and processes that improve resiliency, respect New Mexico's unique cultures, and promote fiscal and environmental stewardship.

The New Mexico 2045 Plan goals were the primary foundation for defining the NMFP goals and objectives; however, NMDOT also referenced other recent plans and documents including:

- *New Mexico Freight Plan (2015, updated in 2017)* – Developed in conjunction with the New Mexico 2040 Plan (NMDOT's prior long-range statewide transportation plan), the freight plan aligns freight-related policies, strategies, and performance measures with the 2040 Plan goals.
- *Strategic Highway Safety Plan (2021)* – Identifies a New Mexico safety vision consistent with the current LRSTP, and provides associated statewide safety goals, objectives, actions, and strategies.
- *New Mexico Climate Strategy: Initial Recommendations and Status Update (2019)* – Developed by the New Mexico Interagency Climate Change Task Force, the climate strategy directs multiple New Mexico

agencies, including NMDOT, to take specific actions to mitigate greenhouse gas emissions and adapt to climate change. This report sets the GHG emission reduction targets by sector, including the transportation sector. The overall statewide target for all sectors is a 45% reduction in net GHG emissions by 2030 (relative to 2005 levels).

- *NMDOT Resilience Prioritization Plan (2020)* – Outlines a resiliency prioritization methodology for NMDOT and uses examples and preliminary results to illustrate how the methodology would work in practice.
- *New Mexico Climate Strategy: Progress & Recommendations (2020 and 2021)* – Developed by the New Mexico Interagency Climate Change Task. These reports identify by sector, including the transportation sector, the actions that the state is taking to reduce greenhouse gas (GHG) emission levels.



2.2 Stakeholder Input

NMDOT developed its NMFP goals to reflect New Mexico’s regional and statewide priorities, as well as the national freight strategic goals, and incorporated feedback from the public, MPOs, RTPOs, and key stakeholders via the FAC.

The FAC served as a forum for discussion of NMDOT transportation decisions affecting freight mobility during the development of the 2045 NMFP. The FAC had multiple opportunities to provide feedback on the plan goals through both an online survey and virtual Freight Advisory Committee meetings. Additionally, NMDOT met with New Mexico’s RTPO and MPO committees during plan development to share progress updates and gather input (See Appendix H for details).

Freight Advisory Committee

The first FAC meeting was held on February 24th, 2022 – prior to draft goal development. At this meeting, the project team asked the FAC three questions to learn about the FAC members’ concerns and priorities. The questions and recurring themes in responses are outlined in Table 1.

Table 1. Questions and Response Themes from FAC Meeting #1 (February 24, 2022)

Question	Response Themes
<i>What freight-related problems have you experienced in the last 5 years?</i>	<p><u>Access Issues</u>: rural areas, tribal communities, absence of rail spurs, first and last mile, stakeholder coordination</p> <p><u>Supply Chain Delays</u>: manufacturing, shipping, wait times at international crossings</p> <p><u>Lack of Roadway and Trucking Accommodations</u>: difficulty passing vehicles, lack of bypasses, roadway deterioration, lack of parking resulting in parking on shoulders, road closures and reroutes</p> <p><u>Other</u>: funding, economic opportunity</p>
<i>What changes to freight transportation are you preparing for over the next 5 years?</i>	<p><u>Access Issues</u>: rural communities, tribal lands, railroad spur construction, highway connectors, stakeholder engagement</p> <p><u>Regulatory Requirements</u>: carbon emissions, air freight separation, safety improvements</p> <p><u>Technological Advancements</u>: alternative fuels, electric vehicles, autonomous vehicles, funding for innovative technology</p> <p><u>Increased Demand and Competition</u>: short line rail traffic, rail capacity (286K), overall capacity, e-commerce, labor shortages</p>
<i>What emerging freight transportation trends are on your radar for the long-term future?</i>	<p><u>Technological Advancements</u>: autonomous vehicles, alternative fuels, fleet electrification, hydrogen cell conversions</p> <p><u>Shift in Demand</u>: long haul trucking vs. rail transload, cross-border traffic</p> <p><u>Other</u>: nearshoring, population changes, land use near railways</p>

Following the first FAC meeting, FAC members received the draft goals via email along with an online feedback survey. The survey was completed by 37 FAC members who represented airports, the FHWA, non-NMDOT government agencies, MPOs, RTPOs, logistics firms, manufacturers, NMDOT, railroads, trade associations, and tribal governments. The preliminary survey results indicated that a majority (86%) of participants agreed or strongly agreed that the goals reflect New Mexico's freight priorities. Some write-in comments reflected specific priorities and ideas for strategies to achieve these goals. These comments were considered in the final plan development. Overall, the priorities and concerns highlighted in the responses of FAC members align with the draft goals. Access improvements, state of repair of roadways, trucking accommodations, regulatory requirements, and technological advancements are integrated into the draft objectives. Beyond freight-related obstacles, the COVID-19 pandemic contributed to challenges in manufacturing, shipping, wait times at international border crossings, labor shortages, and e-commerce. Still, these emerging challenges affect the freight transportation system and are examined in more detail in Chapter 4: Economic and Freight Context and Trends.

2.3 Final 2045 New Mexico Freight Plan Goals

Based on the document review and feedback from the FAC, NMDOT developed final NMFP goals:



Safety: Improve safety and security for all transportation system users.



Asset Management: Optimize spending to cost effectively preserve our transportation assets in the best possible condition over the long term.



Mobility & Accessibility: Efficiently and equitably invest in infrastructure and technology to provide reliable movement of goods, improve intermodal connectivity, provide access to the freight transportation system, and foster economic growth.



Program Delivery: Deliver freight transportation projects and programs through approaches and processes that minimize freight transportation's contribution to climate change, improve resiliency, respect New Mexico's unique cultures, and promote fiscal and environmental stewardship.

2.4 Objectives

Based on the final NMFP goals, NMDOT developed 23 objectives, which reflect how NMDOT will make progress toward the four goal areas. The following sections identify each goal area and the associated objectives.

Safety

NMDOT will improve the safety and security for all transportation system users.

The objectives for the Safety goal are as follows:

- **Objective 1.1:** Reduce the number and severity of heavy-truck related crashes and injuries. Align the freight planning process with the Highway Safety Improvement Program. Continue to utilize safety as a key criterion for selecting projects for the Freight Investment Plan.
- **Objective 1.2:** Reduce the number of roadway and non-motorized fatalities and serious injuries. Continue to use National Highway Freight Program funds to help address Performance Management Safety Targets (PM1).
- **Objective 1.3:** Coordinate with relevant organizations to ensure safe and secure movement at the international borders with Mexico.
- **Objective 1.4:** Identify and address infrastructure and cargo vulnerabilities to environmental and human interference.
- **Objective 1.5:** Invest in infrastructure and programs that improve safety and prevent rail trespassing, including highway-rail grade crossings and rail security.

Asset Management and Preservation

NMDOT will optimize spending to cost-effectively preserve our transportation assets in the best possible condition over the long term.

The objectives for the Asset Management and Preservation goal are as follows:

- **Objective 2.1:** Maintain pavement and bridges of the National Highway Freight Network within New Mexico in a state of good repair by aligning with the recommendations of the NMDOT Transportation Asset Management Plan for the National Highway System.
- **Objective 2.2:** Assess and address system risks to improve resiliency and mitigate the impacts of extreme weather, stormwater runoff, and flooding. As part of the freight planning process, follow recommendations in the NMDOT Transportation Asset Management Plan and the New Mexico Climate Change Action Plan.
- **Objective 2.3:** Support improvement in the state of good repair for freight assets (i.e., truck parking, rest area facilities, and weigh stations) throughout the state.
- **Objective 2.4:** Maintain pavement and bridges on roadways that provide access to intermodal facilities.
- **Objective 2.5:** Maintain airport runway pavement in a state of good repair for airports moving air cargo.

Mobility and Accessibility

NMDOT will efficiently and equitably invest in infrastructure and technology to provide reliable movement of goods, improve intermodal connectivity, provide access to the freight transportation system, and foster economic growth.

The objectives for the Mobility and Accessibility goal are as follows:

- **Objective 3.1:** Improve reliability and accessibility along strategic corridors, including addressing bottlenecks identified in the New Mexico 2045 Freight Plan. Utilize the Freight Investment Plan process to make strategic investments in the freight network to maintain the Truck Travel Time Reliability metric throughout the New Mexico freight network.

- **Objective 3.2:** Coordinate with local governments, MPOs, and the private sector to manage congestion and freight system reliability.
- **Objective 3.3:** Maintain and modernize intelligent transportation systems, network components, and infrastructure.
- **Objective 3.4:** Improve highway connections at intermodal facilities, airports, or other modal hubs.
- **Objective 3.5:** Implement performance-based policies and utilize data-based decision-making to select cost effective investments that simultaneously advance plan goal areas and objectives. Provide transparent access to NMDOT planning documents, data resources, decision-making processes, and industry coordination to freight partners and the public to facilitate more efficient and effective freight-related decision making.

Program Delivery

NMDOT will deliver freight transportation projects and programs through approaches and processes that minimize freight transportation's contribution to climate change, improve resiliency, respect New Mexico's unique cultures, and promote fiscal and environmental stewardship.

The objectives for the Program Delivery goal are as follows:

- **Objective 4.1:** Deliver projects on time and within budget.
- **Objective 4.2:** Implement strategies that leverage innovative technology and address impacts of logistics and freight innovations. Develop and advocate for strategies, policies, and investments that help the New Mexico freight system adapt quickly and effectively to evolving markets and emerging trends.
- **Objective 4.3:** Deliver projects that adhere to local plans and respect New Mexico's unique cultural resources and community context. Reduce inequalities in the accessibility of the freight network and in the distribution of its negative impacts.
- **Objective 4.4:** Implement projects and programs that reduce the negative impacts on the natural environment, including wildlife habitat and wildlife migration corridor preservation, stormwater runoff management, dust storms, rockfall, and wildfire mitigation. Invest in impact reductions, negative externality offsets, and policy updates that protect the natural environment.
- **Objective 4.5:** Reduce emissions by promoting cleaner commercial fleet technologies and alternative fuel corridors. Facilitate the transition of the commercial fleet to electric vehicles, zero emission vehicle and other alternative fueled vehicles that reduce carbon dioxide and other greenhouse gas emissions. Continue to collaborate with the Los Alamos National Lab regarding alternative fuel corridors in New Mexico.
- **Objective 4.6:** Build and maintain a freight network that supports key and emerging economic sectors that drive competitiveness, opportunities, and economic return that provide high paying jobs to residents of the state.
- **Objective 4.7:** Effectively engage with public entities, especially those representing vulnerable populations. Consider projects under the National Highway Freight Program that address environmental justice concerns.
- **Objective 4.8:** Coordinate improvements to enhance freight connections between New Mexico businesses and foreign and domestic trading partners.

2.5 NMFP Performance Measures

NMDOT identified existing performance measures which help track progress towards the plan's goals and objectives. These performance measures provide clear connections to plan components while taking into consideration measures identified in other NMDOT planning documents and federal transportation performance measures.

Existing performance measures from other NMDOT plans, New Mexico state government initiatives and reports, and federal requirements align with the direction of the New Mexico 2045 Freight Plan goals and objectives. NMDOT reviewed the following documents to guide the development of the NMFP performance measures:

- *Performance Measures Target Reports (2020)* – Responds to federal transportation performance management program requirements including target setting and performance reporting.
- *Transportation Asset Management Plan (TAMP) (2019)* – Provides a framework to assess the condition of pavements and bridges on the state's Interstates and National Highway System; includes ten-year projections for asset conditions and defines asset performance targets.
- *Federal Highway Administration (FHWA) Performance Measures* – Includes safety (PM1), pavement and bridge condition (PM2), and system performance (PM3) (as applicable to New Mexico). The federal Moving Ahead for Progress in the 21st Century Act of 2012 (MAP-21) and the Fixing America's Surface Transportation (FAST) Act of 2015 created requirements for state DOTs and MPOs to establish measures to carry out the National Highway Performance Program and to develop plans that align with the important national transportation system goal areas.
- *New Mexico Highway Safety Improvement Program Annual Report (HSIP) (2021)* – An annual update prepared by the Multimodal Planning and Programs Bureau of the Planning Division based on the best and most recent available transportation safety data and information, including projects contained in the Federal Fiscal Year (FFY) 2020.
- *NMDOT Quarterly Performance Report (Department of Finance and Administration (DFA))* – Prepared by NMDOT for the Department of Finance and Administration for the Legislative Finance Committee, the DFA report is published quarterly and shows NMDOT's performance results and action plans on existing measures and goals.

Using these measures will allow NMDOT to leverage existing data collection and align with other state and department initiatives.

Safety

The Safety goal is to improve safety and security for all transportation system users. The performance measures associated with the Safety objectives are outlined in Table 2.

Table 2. Performance Measures for the Safety Objectives

Performance Measure	As Required By
Number of serious injuries	HSIP, PM 1
Number of fatalities (statewide, rural)	
Rate of fatalities per 100 million VMT	
Rate of serious injuries per 100 million VMT	
Number of employee injuries occurring in work zones	Legislative Finance Committee (prepared by NMDOT)
Number of Highway-Rail Grade Crossing Incidents	Federal Railroad Administration Section 130
Heavy vehicle-involved crashes	
Heavy vehicle-involved fatalities	

Asset Management and Preservation

The Asset Management and Preservation goal is to optimize spending to cost-effectively preserve our transportation assets in the best possible condition over the long term. The performance measures associated with the Asset Management and Preservation objectives are outlined in Table 3.

Table 3. Performance Measures for the Asset Management and Preservation Objectives

Performance Measure	As Required By
Percent of pavement in good condition (Interstate/non-interstate NHS)	PM 2
Percent of pavement in poor condition (Interstate/non-interstate NHS)	
Percent of NHS bridges by square footage of deck area in good condition	
Percent of NHS bridges by square footage of deck area in poor condition	
Percent of lane miles of pavement in fair or better condition by tier (Interstate/non-interstate/ NHS/non-NHS)	Legislative Finance Committee (prepared by NMDOT)
Percent of New Mexico DOT bridges in fair or better condition (based on deck area)	
Percent of airport runways in satisfactory or better condition	

System Management, Mobility, and Accessibility

The System Management, Mobility, and Accessibility goal is to efficiently and equitably invest in infrastructure and technology to provide reliable multimodal access and connectivity, improve mobility, foster economic growth, and minimize transportation’s contribution to climate change. The performance measures associated with the System Management, Mobility, and Accessibility objectives are outlined in Table 4.

Table 4. Performance Measures for the System Management, Mobility, and Accessibility Objectives

Performance Measures	As Required By
Interstate Truck Travel Time Reliability Index	PM 3
Percent of the non-Interstate NHS person-miles traveled that are reliable	
Percent of the person-miles traveled on the Interstate that are reliable	
Bottlenecks identified in statewide Freight Plan mitigated	

Program Delivery

The Program Delivery goal is to deliver freight-oriented transportation projects through approaches and processes that improve resiliency, respect New Mexico’s unique cultures, and promote fiscal and environmental stewardship. The performance measures associated with the Program Delivery objectives are outlined in Table 5.

Table 5. Performance Measures for the Program Delivery Objectives

Performance Measures	As Required By
Percent of projects in production let to bid as scheduled	Legislative Finance Committee (prepared by NMDOT)
Percent of cost-over-bid amount on highway construction projects	
Percent of projects completed according to schedule	
Annual hours peak hour excessive delay per capita (PHED) – El Paso, TX— NM	PM 3

2.6 Conclusion

The vision, goals, objectives, and performance measures in the NMFP serve as the foundation for NMDOT decision-making processes that rely on the NMFP for guidance. Selecting goals, objectives, and measures with broad applicability establishes a flexible basis for future decisions at NMDOT. As data on performance measures is collected, performance-based planning will inform project prioritization for the freight investment plan updates, the development of specific improvements and implementation strategies, policy formation for future freight efforts, and other general direction for NMDOT freight planning until the next freight plan update.

3. Planning Context

3.1 Introduction

This chapter provides context to the freight planning process in New Mexico. Described below are the freight-related institutions, freight-focused policies and strategies, and federal and state freight funding sources that are part of the coordinated and cooperative planning process of the New Mexico 2045 Freight Plan Update.

3.2 Freight-Related Institutions

NMDOT Technical and Freight Planning Unit

Situated within NMDOT's Multimodal Planning and Programs Bureau, the Technical and Freight Planning (T&FP) Unit manages freight planning efforts, including the maintenance and implementation of the New Mexico State Freight Plan, and provides technical support including maintenance of the New Mexico Statewide Travel Demand Model (NMSTDM). TF&P also coordinates with freight partners and maintains roadway classification systems, including the Functional Classification System, National Highway System (NHS), and freight-specific classifications.

NMDOT State Transportation Improvement Program

The Statewide Transportation Improvement Program (STIP) Unit is responsible for developing the STIP, which is the four-year, fiscally constrained list of federally funded and regionally significant projects. The STIP is created through a cooperative and comprehensive process that incorporates federally required Performance Measures (PMs), the seven National Planning Goals, and aligns with the NMDOT's long range statewide plan, to choose projects that support the vision of the Department and address the multimodal needs of New Mexico's transportation customers.

NMDOT International Programs

The New Mexico Department of Transportation International Programs plays a proactive role in bi-national transportation infrastructure planning and economic development strategy along the New Mexico-Chihuahua international border. The International Programs team has several responsibilities, from development agreements that establish or strengthen U.S.–Mexico bilateral cooperation, to collecting and analyzing data that allows regional entities to better plan and target infrastructure investment, to advocating for political and economic policy approaches that fosters economic growth and infrastructure development in the bi-national border region.

NMDOT Rail Bureau

The Rail Bureau, which is part of the NMDOT Transit and Rail Division, is responsible for all rail-related projects. Of those projects, freight-related work handled by the Rail Bureau includes applying for Federal Railroad Administration grants, administering grant funding, preparing the State Rail Plan, managing NMDOT-owned railroad property, leading the Highway-Rail Grade Crossing Safety Improvement Program, and overseeing the permit process for new utility crossings, roadway crossings, and temporary occupancy of NMDOT-owned railroad property.

NMDOT Tribal Liaison

NMDOT supports and encourages tribal participation in the MPO, RTPO, and statewide transportation planning processes. NMDOT fosters this coordination by completing Memoranda of Agreements and Joint Powers Agreements with all pueblos and tribal nations in the State. The NMDOT Tribal Liaison conducts outreach,

mediates communications between tribal entities and NMDOT, and builds close relationships based on experience and accountability.

NMDOT Aviation

The Aviation Division is NMDOT's modal division that coordinates with public and private agencies and organizations at the state, local and federal levels to encourage and advance general aviation in New Mexico. Rules and regulations set by this division impact freight that moves by aircraft.

NMDOT Government to Government Unit

The Government-to-Government Unit (GTG) is also located within NMDOT's Multimodal Planning and Programs Bureau. The GTG Unit monitors state and federal legislation that pertains to transportation appropriations and policies, researches transportation planning program best practices, develops and oversees plan implementation, provides technical assistance to planning efforts, coordinates local involvement in the STIP, and manages the Transportation Alternatives, Recreational Trails, Bicycle/Pedestrian and Equestrian, Tribal Outreach, Safe Routes to School, and Scenic Byways programs.

The GTG Unit administers contracts for seven RTPOs and five MPOs, and works closely with NMDOT's District Offices, STIP Unit, Design Regions, and other Divisions to ensure proactive enforcement of state and federal laws.

MPOs and RTPOs

Section 112 of the Federal Highway Act of 1973 and subsequent federal transportation legislation require that Metropolitan Planning Organizations (MPOs) conduct comprehensive transportation planning for metropolitan areas with populations of 50,000 or more. Federal law requires MPOs to develop Transportation Improvement Programs (TIPs) and long-range transportation plans. New Mexico has five MPOs:

- Farmington (FMPO)
- Santa Fe (SFMPO)
- Mid-Region (MRMPO, Albuquerque area)
- Mesilla Valley (MVMPO, Las Cruces area)
- El Paso MPO (EPMPO). This is a multistate MPO and coordinates with both the NMDOT and Texas DOT.

Regional Transportation Planning Organizations are state-designated entities that provide rural transportation planning in regions outside of MPO boundaries. Each RTPO is comprised of a Policy Committee, and some have established Technical Committees. Policy Committee members represent the governmental entities that comprise the RTPO and are authorized to make decisions on their behalf, whereas Technical Committee members are professional staff who provide technical expertise to the transportation planning process. New Mexico has seven RTPOs:

- Northwest (NWRTPO)
- Northern Pueblos (NPRTPO)
- Northeast (NERTPO)
- Mid-Region (MRRTPO)
- Southeast (SERTPO)
- South Central (SCRTPO)
- Southwest (SWRTPO)

I-10 Corridor Coalition

In 2016, the departments of transportation for California, Arizona, New Mexico, and Texas formed the I-10 Corridor Coalition to promote safe and efficient transportation along I-10. Together, these four states share information and resources, jointly test technology, and implement best practices and innovations.

3.3 Freight-Related Policies and Strategies

Fixing America's Surface Transportation (FAST) Act

The New Mexico 2045 Freight Plan meets the requirements of the Fixing America's Surface Transportation (FAST) Act. The FAST Act requires performance-based planning and programming to be integrated in the transportation decision-making process. This process ultimately aims to support the seven national transportation goals (safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays). NMDOT considered these goals as well as associated performance targets in the development of the 2045 NMFP.

On a national level, the FAST Act enacts a policy of maintaining and improving the condition and performance of the National Multimodal Freight Network and requires that USDOT establishes and publishes a national freight strategic plan. It also requires USDOT to develop transportation investment data and planning tools, as well as publish a biennial freight conditions and performance report.

The FAST Act provisions that pertain to freight are as follows:

- **Freight:** The Act establishes both formula and discretionary grant programs to fund critical transportation projects that would benefit freight movements. This marks the first time there is a dedicated source of Federal funding for freight projects, including multimodal projects. In this provision, the Act emphasizes the importance of Federal coordination to focus local governments on the needs of freight transportation providers.
- **Project Delivery:** The Act adopts several Administration proposals to facilitate the permitting processes while protecting environmental and historic resources. The Act also codifies the online system to track projects and interagency coordination processes.
- **National Surface Transportation and Innovative Finance Bureau:** The Act establishes a new bureau within the USDOT to serve as an efficient one-stop shop for state and local governments to receive federal funding, financing, permitting, or technical assistance.
- **Transportation Infrastructure Finance and Innovation Act (TIFIA):** The TIFIA Loan program provides financing options for large projects and public-private partnerships. The Act institutes structural organization changes that have the potential to accelerate the delivery of innovative finance projects.
- **Safety:** The Act enhances the USDOT's safety oversight of transit agencies and streamlines the Federal truck and bus safety grant programs, which gives states more flexibility to improve truck and bus safety.

The FAST Act also encourages each State to establish a freight advisory committee of public and private freight stakeholders who will (1) advise the State on freight-related priorities, issues, projects, and funding needs, (2) serve as a forum for discussion for State transportation decisions affecting freight mobility, (3) communicate and coordinate regional priorities with other organizations, (4) promote information sharing between the private and public sectors on freight issues, and (5) participate in the development of the state freight plan.

Additionally, the FAST Act requires each state to develop a state freight plan, which must address the State's freight planning activities and investments (both immediate and long-range), cover a five-year forecast period, be

fiscally constrained, include a freight investment plan with a list of priority projects, and describe how the state will invest and match its NHFP funds. Each state must then update its freight plan at least every five years.

The Infrastructure Investment and Jobs Act (IIJA)

The Infrastructure Investment and Jobs Act (IIJA), also referred to as the Bipartisan Infrastructure Law (BIL) and signed in November 2021, introduced \$1.2 trillion for transportation and infrastructure spending, nearly half of which is set aside for new investments and programs. Several of the newly introduced programs and sources of funding will impact freight in New Mexico. The freight-related components of the IIJA are outlined in Table 6.

Table 6. Freight-Related IIJA Requirements

Strategy Area	Summary
State Freight Planning	Adds requirement for state freight plans to include commercial vehicle parking facilities assessments, supply chain cargo flows by mode, inventory of commercial ports, impacts of e-commerce, considerations of military freight.
	Adds requirement for state freight plans strategies and goals to decrease the severity of impacts of extreme weather and natural disasters on freight mobility; the impacts of freight movement on local air pollution; the impacts of freight movement on flooding and stormwater runoff; and the impacts of freight movement on wildlife habitat loss.
	Changes the frequency of state freight plans from every 5 years to every 4 years.
	Changes the planning period of state freight plans from 5 years to 8 years.
	Continues the NHFP to improve efficient movement of freight on the National Highway Freight Network (NHFN).
National Highway Performance Program	Adds new purpose element to include increasing resilience of the NHS to mitigate the cost of damages from various natural disasters.
	Enables (with limitations) Protective Features to be funded through NHPP monies.
	Requires that extreme weather and resilience analysis be included in TAMP.
State Human Capital Plans	Adds new section to the USC that allows state DOTs to develop workforce development plans. If a state chooses to develop one, there are certain requirements, and it must cover a five-year forecast period.
Prioritization Process Pilot Program	New grant opportunity to support data-driven approaches to planning that, on completion, can be evaluated for public benefit.
Travel Demand Data and Modeling	Requires the Secretary to develop a public web-based tool to enable State DOTs and MPOs to evaluate the effectiveness of highway and public transportation projects.
Carbon Reduction Program	Requires the Secretary to establish a new formula carbon reduction program to reduce transportation emissions.
Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program	Defines an emergency even as either a natural disaster or catastrophic failure resulting in an emergency declared by a Governor or the President.
	Establishes a competitive grant program for communities to do planning to assess vulnerabilities to current and future weather events and other natural disasters. Plan result in either transportation improvements or emergency response strategies.
	If a state DOT develops a Resilience Improvement Plan and incorporates the Resilience Plan into section 134/135 planning requirements, the state share can be reduced by up to 10% (90% federal/10% non-federal).

Strategy Area	Summary
	States that the Resilience Improvement Plan shall include a risk-based assessment of vulnerabilities of transportation assets and system to natural environment effects.
	An MPO or a state does not have to develop a Resilience Improvement Plan to get access to the PROTECT formula funds.
	Lays out a means of evaluating the effectiveness of the projects funded through the competitive PROTECT grant program to include metrics to be used.
Bridge Terminology	Changes the term from "structurally deficient" to "poor condition" in referring to bridges.
Performance Management Data Support Program	Extends Section 6028(c) of the FAST Act for FY 22 through 26 related to the performance management data support program.
Emerging Technology Research Pilot Program	Intent of the research is to reduce the impact of automated and connected driving systems and advanced driver-assistance systems on pavement and infrastructure performance.
Highway Safety Programs	NHTSA HSP is now a three-year plan. Performance targets requirements for the NHTSA HSP performance measures are changed; targets must be set to align with constant or improved performance. The Secretary shall develop a minimum set of performance measures that states will use for the NHTSA HSPs.
Federal Support for Local Decision-making	Requires Bureau of Transportation Statistics to assess, update, and develop data and data analysis tools to assist local communities with making infrastructure decisions.
Risk and System Resilience	Requires the secretary to develop a process for quantifying annual risk in order to increase system resilience regarding surface transportation.
Coordination on Emerging Transportation Technology	Requires the Secretary to establish an internal Nontraditional and Emerging Transportation Technology Council.

New Mexico State Rail Plan

The New Mexico State Rail plan is a comprehensive plan that addresses funding, challenges, and projects for both passenger and freight rail service throughout New Mexico. The freight-related goals, objectives, and strategies from the New Mexico State Rail Plan are outlined in Table 7.

Table 7. New Mexico State Rail Plan – Freight Related Goals and Objectives

Goal	Objective
Support Economic Growth and Development	Increase capacity of long-distance freight corridors
	Develop and promote local freight connections
	Link rail investments to strategies that support economic development
Improve railroad safety and security	Improve highway-rail grade crossing safety
	Implement Federally mandated safety and security systems
	Develop and implement other safety-related measures included in the Rail Safety Improvement Act of 2008 (RSIA)
Maintain railroad assets in a state of good repair	Improve the conditions of the State's Class III rail lines

IIJA funds NMDOT's Highway-Rail Grade Crossing Hazard Elimination Program by contract authority from the Highway Account of the Highway Trust Fund as a part of the Highway Safety Improvement Program (HSIP). HSIP funds safety improvements to reduce the number of fatalities, injuries, and crashes at grade crossings. Under the Railroad Safety Program (Section 130), New Mexico receives funding to eliminate hazards at highway-rail grade crossings and is responsible for implementing safety improvements to do so. NMDOT obtains input from railroads, district engineers, and MPOs, along with a project prioritization system, to identify candidate grade crossings for safety improvements.

Climate Action Plan

The State's Climate Action Plan has also been taken into consideration in the development of the 2045 NMFP. On January 29th, 2019, Governor Lujan Grisham issued an executive order (2019-03) to reduce greenhouse gas emissions by at least 45 percent by 2030, as compared to 2005 levels. In particular, the order directed state agencies to develop policies that will encourage clean energy deployment, curb climate pollution, and reduce methane waste in the oil and gas industry. The Climate Action Plan includes the carbon reduction strategy and resilience improvement program in alignment with the Carbon Reduction Program and the Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program, as outlined in IIJA.



3.4 Other Federal and State Freight Programs

In 2022, NMDOT does not have state funding solely dedicated to freight improvement projects. However, state funding does provide the match portion of the NHFP, as well as other Federal-Aid Highway Programs, for NMDOT-led projects. In addition to the NHFP and the NHPP, other federal programs support freight improvements across the state. These programs are supported through NMDOT and other state agencies. In addition, other state agencies provide funding and loans that can be used for improvements to the freight transportation system. Appendix A provides a summary of some of these federal and state programs that may support freight system improvements. The IIJA also provides other transportation funding opportunities through discretionary grants.¹ NMDOT intends to leverage these opportunities by applying for federal discretionary grants for eligible projects to increase investments in the freight transportation system.

¹ USDOT. Key Notices of Funding Opportunity. <https://www.transportation.gov/bipartisan-infrastructure-law/key-notices-funding-opportunity>.

4. Economic and Freight Context and Trends

4.1 Introduction

This chapter analyzes New Mexico's current and future economy and freight movement, including current and forecasted gross domestic product (Real GDP, adjusted for inflation), industry employment, domestic and international trade, commodity movements by freight mode, and transportation spending. It also identifies emerging national freight trends which are likely to impact how and where goods move across the country and internationally, including in New Mexico.

Analyses related to New Mexico's existing and future GDP and industries are primarily based on Moody's economic data and forecasts. Current and forecasted commodity flows in New Mexico are based on FHWA's Freight Analysis Framework (FAF), which integrates a variety of data to estimate existing and future commodity freight movements by mode, weight (tonnage), and dollar amount (value).

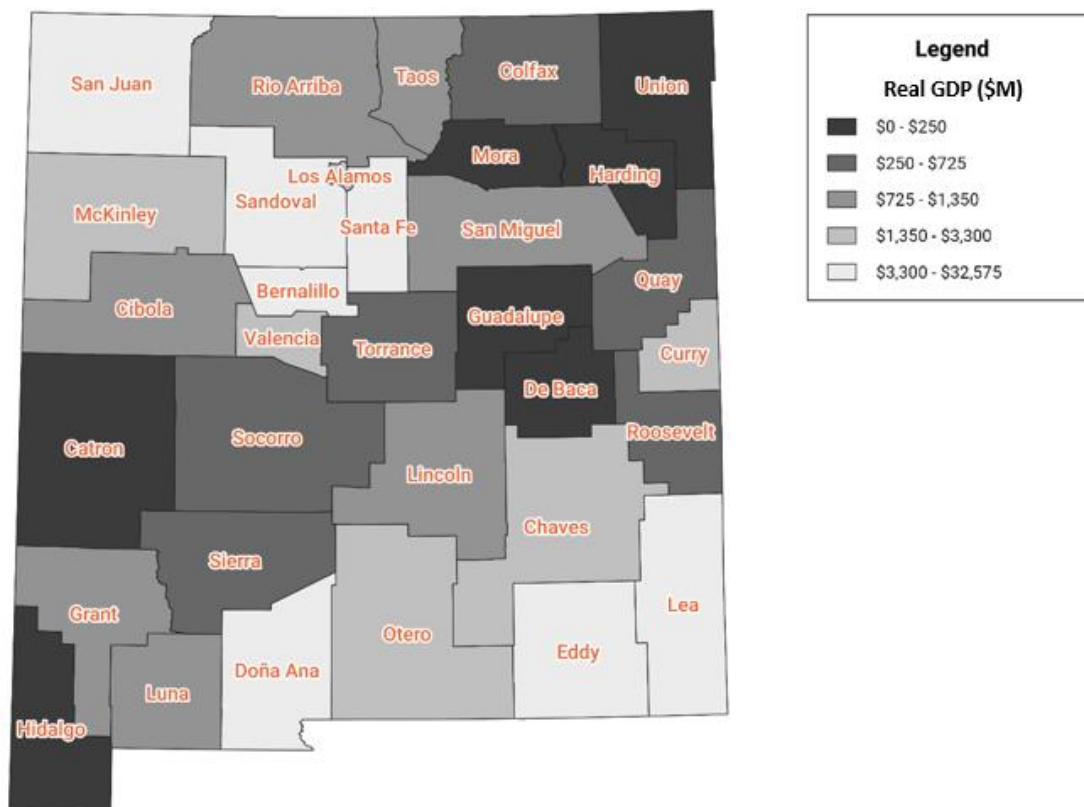
4.2 New Mexico's Economy Today

GDP & Industries

Real Gross Domestic Product (GDP)

In 2018, New Mexico's total Real GDP was \$91.2 billion dollars. However, economic output is not evenly distributed throughout New Mexico; the five highest GDP outputs are seen in Bernalillo County, which is home to Albuquerque, Santa Fe County, Dona Ana County, San Juan County, and Eddy County (Figure 2).

Figure 2. County Real GDP, 2018

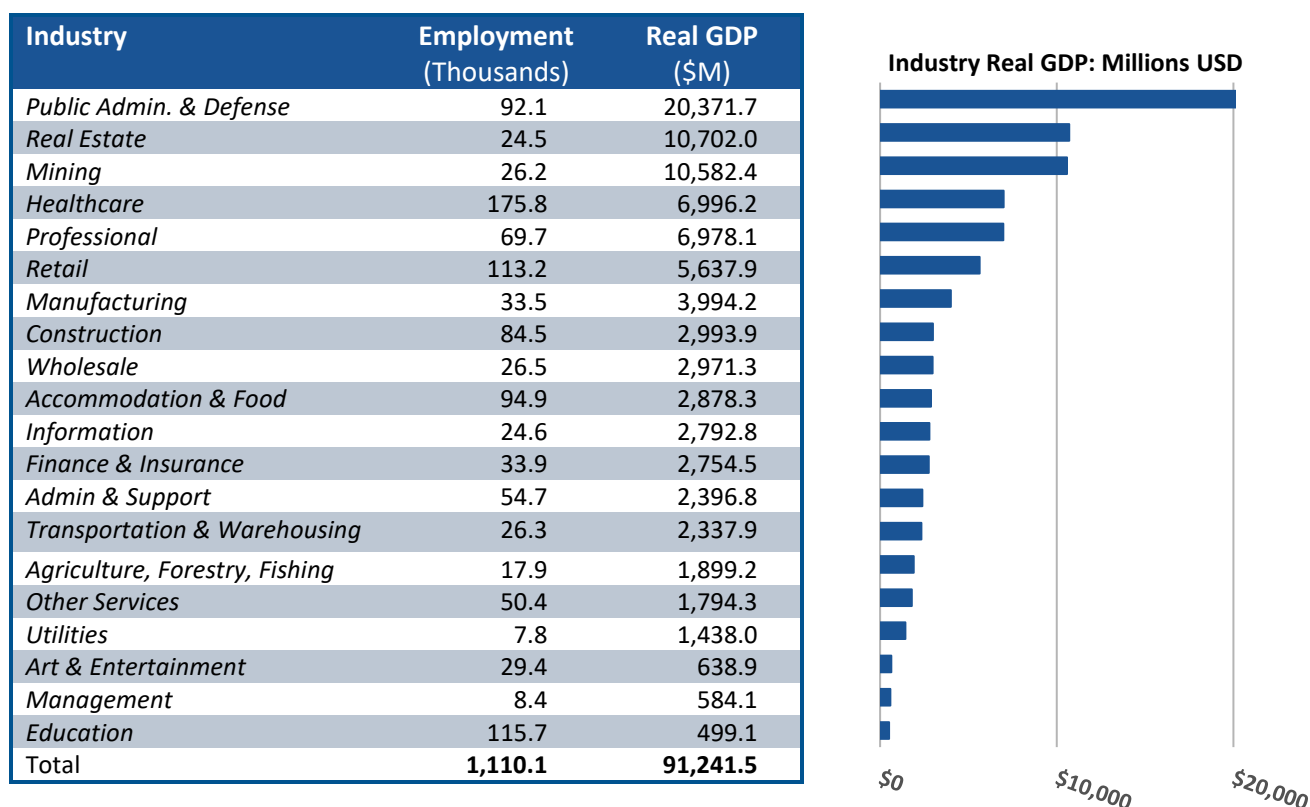


Source: EBP Analysis of Moody's Data

Top Industries by Employment & GDP

Freight-dependent industries² such as mining, manufacturing, and construction are among the top ten industries by GDP in New Mexico, (Figure 3). Despite contributing to a sizable portion of the state's GDP, these industries employ relatively few New Mexicans; for example, the mining sector contributed the third highest amount to New Mexico's real GDP, but only employed about 26,200 New Mexicans. For comparison, the healthcare, retail, and education sectors each employed over one hundred thousand people in 2018. Although the mining industry's contribution to New Mexico's economy is outpaced by public administration and real estate, its position among the top three contributors (as measured by GDP) highlights the industry's vital role in New Mexico's economy.

Figure 3. New Mexico Employment and Real GDP by Industry, 2018



Source: EBP Analysis of Moody's Data

² Industries are classified by North American Industry Classification System (NAICS) code. The NAICS System was developed for use by Federal Statistical Agencies for the collection, analysis and publication of statistical data related to the US Economy.

Commodity Movement

Commodities in New Mexico are primarily moved via truck, rail, air, pipeline, and intermodally via two or more of these modes. In the NMFP, the modes are defined to align with FHWA's Freight Analysis Framework (FAF):

- **Truck:** Includes private and for-hire trucks but does not include truck moves in conjunction with domestic air cargo.
- **Rail:** Includes any common carrier or private railroad.
- **Air:** Includes shipments move by air or a combination of truck and air in commercial or private aircraft. Includes air freight and air express.
- **Pipeline:** Includes crude petroleum, natural gas, and product pipelines.
- **Multiple Modes and Mail:** Includes shipments by multiple modes and by parcel delivery services, U.S. Postal Service, or couriers (capped at 150 pounds). This category is not limited to containerized or trailer-on-flatcar shipments.
- **Other and Unknown:** Includes movements not elsewhere classified such as flyaway aircraft, and shipments for which the mode cannot be determined.

While pipelines are important to New Mexico's domestic commodity movement, they are typically privately owned. This plan focuses on the modes that NMDOT oversees in some capacity: rail, truck, and air (see Chapter 5: System Condition, Performance, and Gap Analysis for detailed descriptions of the New Mexico freight system).

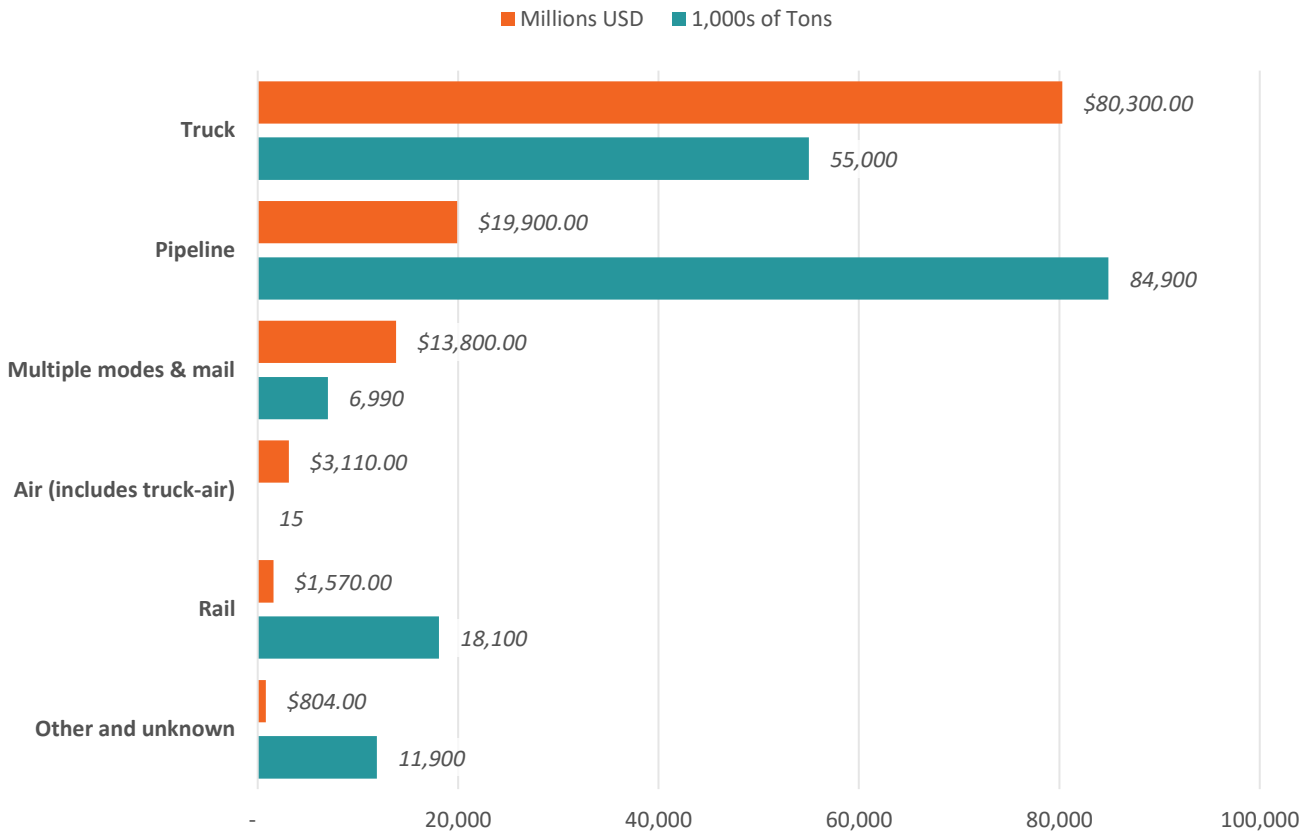
Commodities impacted by New Mexico's freight systems can originate in, arrive to, or travel through the state. Commodities that originate in New Mexico and are transported out of the state are categorized as "Export;" those which come from outside the state and have a final destination in New Mexico are categorized as "Import;" and those which have both origin and destination outside of New Mexico, but which travel through the state are categorized as "Through".

Domestic

New Mexico Imports & Exports by Mode

New Mexico’s domestic commodity movement for freight originating in or arriving to New Mexico relies most heavily on trucks and pipelines (Figure 4). In 2017, 55 million tons of goods (valued at \$80.3 million) were transported via truck and over 80 million tons (valued at \$19.9 million) were transported via pipeline.

Figure 4. Domestic trade by mode with Origin or Destination in New Mexico tonnage (1,000s of tons) and value (millions of USD), 2017



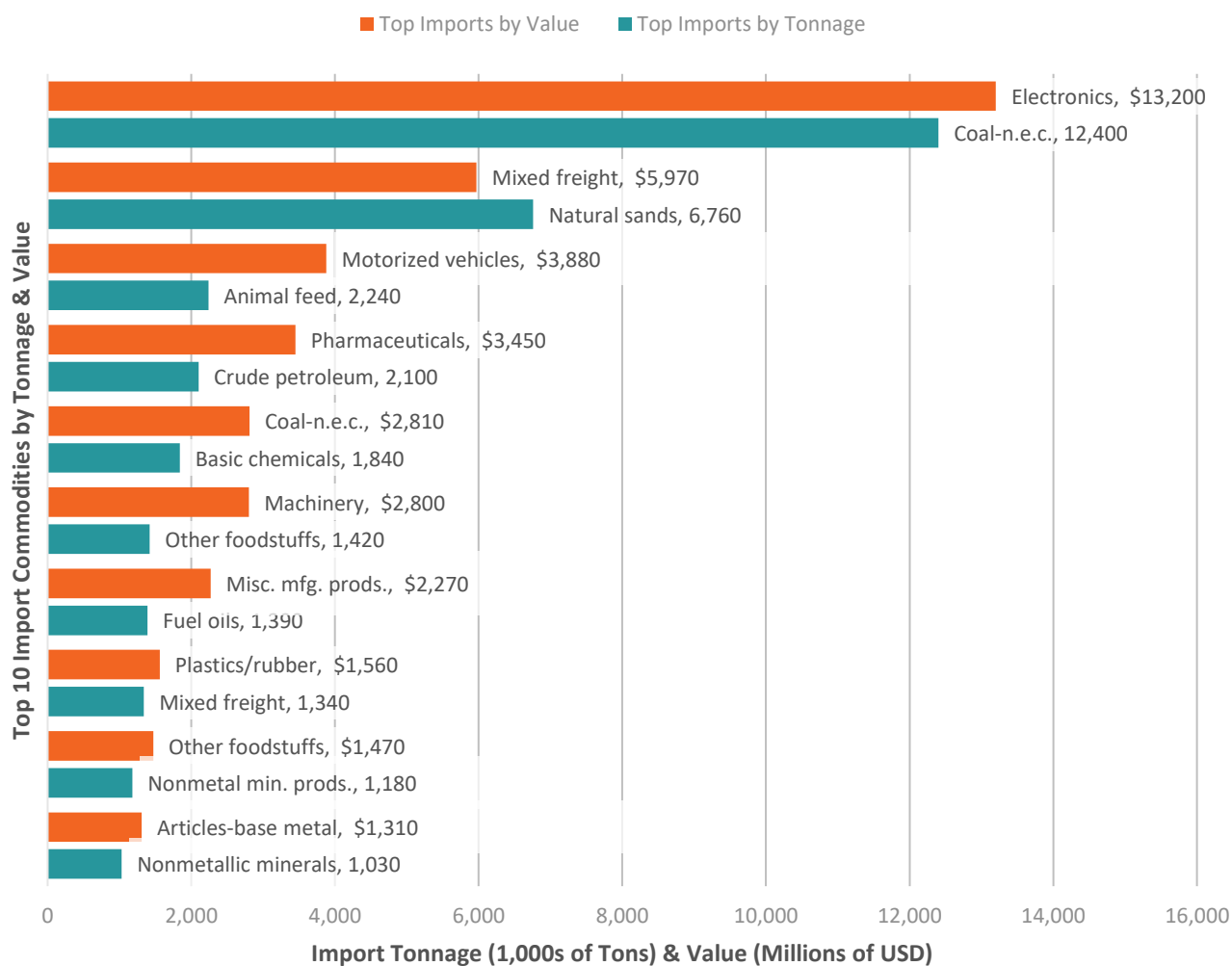
Source: High Street Consulting Group Analysis of Freight Analysis Framework 5.2

In 2017 through 2019, the Surface Transportation Board’s (STB) waybill data estimates that on average 141 million tons valued at nearly \$4 billion were transported on the New Mexico rail system annually; however, through traffic represented 87.3 percent of rail traffic by weight and 94.0 percent of traffic by value. Although through traffic accounts for most of the demand on New Mexico’s rail system, some local industries also depend on railroads. The mining and utilities sectors are particularly reliant on rail with bituminous coal accounting for 27 percent on average of all rail tonnage originating in or arriving to New Mexico in 2017-2019. Other rail dependent sectors in New Mexico include sand and gravel and inorganic chemicals.

Top Import Commodities

Electronics, mixed freight, and motorized vehicles were the highest value commodities imported to New Mexico in 2017. However, the top imported commodities by weight were coal-not elsewhere classified (n.e.c)³, natural sands, and animal feed. Commodities vary in value and tonnage (Figure 5); higher value commodities are typically lighter (for example, electronics, automobile parts, or pharmaceuticals). Heavier, bulk commodities such as sands or coal often have lower value per pound.

Figure 5. Top 10 imported commodities by tonnage (1,000s of tons) and value (millions of USD), 2017



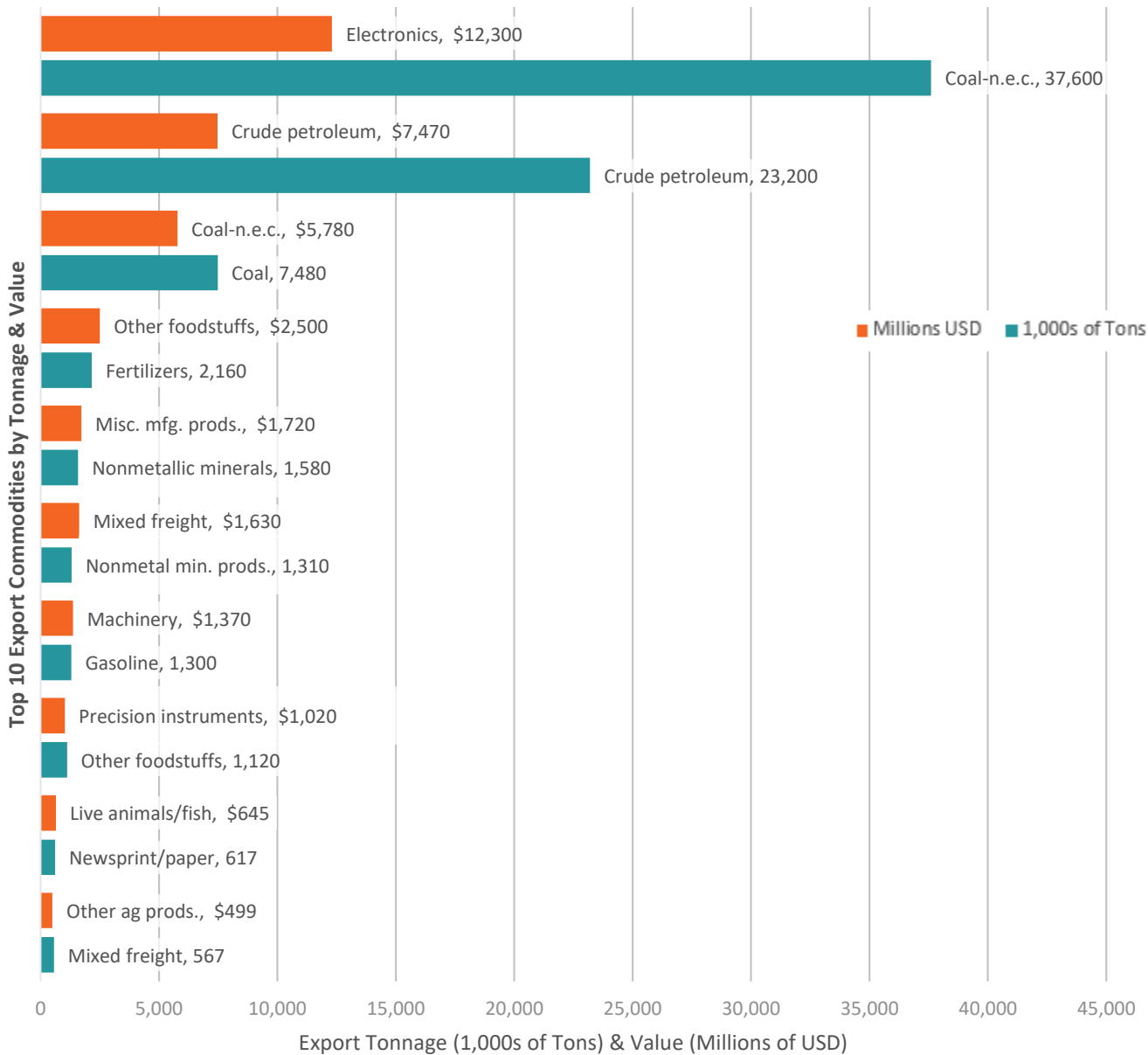
Source: Freight Analysis Framework 5.2

³ Coal-n-e-c includes coal and petroleum products not elsewhere classified, including oils, greases, kerosine, liquified natural gas, propane, and coke, among other products.

Top Export Commodities

Electronics, crude petroleum, and coal-n.e.c made up the highest value export commodities in New Mexico in 2017. The commodities with the highest export tonnage from New Mexico were also coal n.e.c., coal, and crude petroleum (Figure 6). As noted in the Real GDP analysis, the mining sector ranks third in terms of GDP contribution to New Mexico’s economy.

Figure 6. Top 10 exported commodities by tonnage (1,000s of tons) and value (millions of USD), 2017

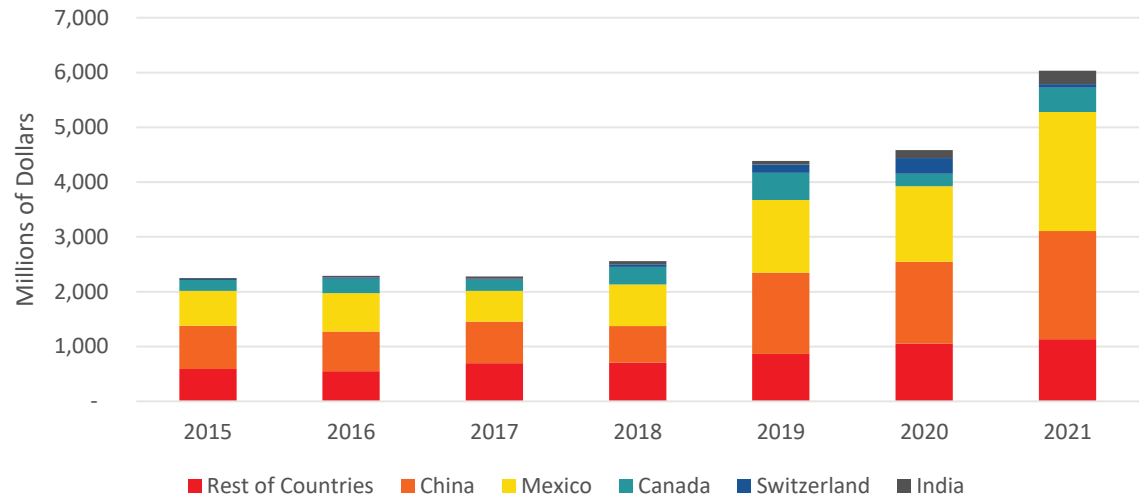


Source: Freight Analysis Framework 5.2

International

The value of international imports to New Mexico has risen over the last several years (Figure 7). Commerce with Mexico represents the highest share of the New Mexican international market by value; in 2021, 36 percent of New Mexico’s imports by value came from Mexico and 46 percent of New Mexico’s international exports are sent to Mexico. Although the share of imports by country of origin has remained stable in recent years, growth in total international imports since 2018 suggests that New Mexican residents and businesses are increasingly purchasing goods from international markets.

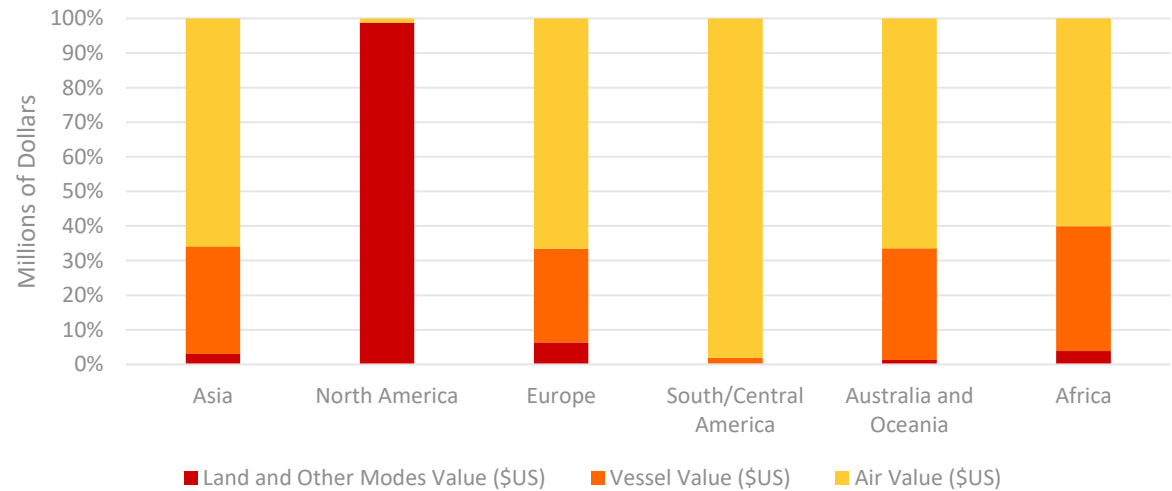
Figure 7. Major New Mexico international imports by value, 2015-2021



Source: EBP Analysis of USA Trade data

Geography influences the point of entry and mode for international trade; for example, imported goods from New Mexico’s neighbor and primary international trade partner Mexico rely mainly on truck and rail modes, whereas overseas trade partners in Asia, Europe, Oceania, and Africa utilize a combination of marine and air cargo modes (Figure 8).

Figure 8. Value of New Mexico international imports by mode, 2021



Source: EBP Analysis of USA Trade data

Table 8 shows New Mexico's import activity, broken down by product types and import origin. New Mexico's largest import industries are computer and electronic products, machinery, and manufactured commodities.⁴

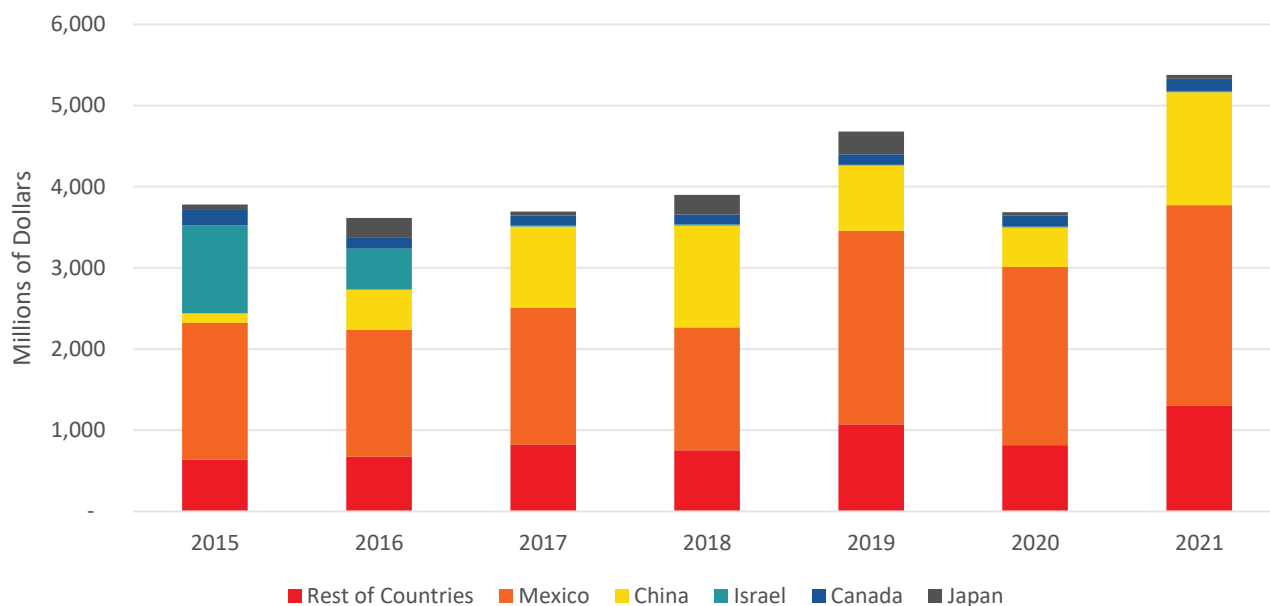
Table 8. New Mexico Industrial Commodity Imports (millions of dollars)

Imported Industry Commodity Activity (2021)	From Mexico	From Rest of World	Total
334 Computer & Electronic Products	\$323.8	\$1,521.3	\$1,845.1
336 Transportation Equipment	\$105.0	\$104.9	\$209.9
335 Electrical Equipment, Appliances & Components	\$113.7	\$298.8	\$412.6
339 Miscellaneous Manufactured Commodities	\$300.0	\$567.8	\$867.8
333 Machinery, Except Electrical	\$8.4	\$987.1	\$995.6
332 Fabricated Metal Products	\$106.2	\$201.7	\$307.9
325 Chemicals	\$1.2	\$270.2	\$271.5
311 Food & Kindred Products	\$23.2	\$69.6	\$92.7
326 Plastics & Rubber Products	\$126.1	\$57.2	\$183.3
211 Oil & Gas	-	\$3.1	\$3.1
<i>Other of Industry Commodities</i>	\$269.1	\$573.9	\$843.0
Total	\$1,376.7	\$4,655.8	\$6,032.5

Source: EBP Analysis of USA Trade data

In contrast to New Mexico's recent growth of imports, total exports have historically been higher value and more stable year-to-year. New Mexico exports the most goods by value to Mexico, with a sizeable portion of exports going to China as well (Figure 9).

Figure 9. Major New Mexico export destinations from 2015 to 2021

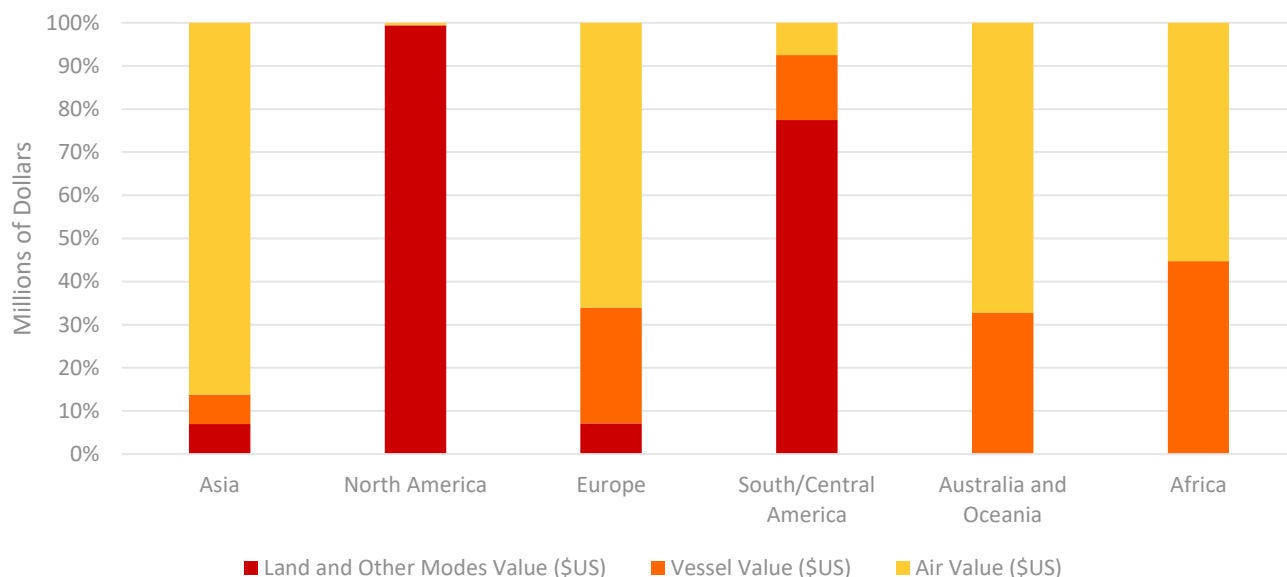


Source: EBP Analysis of USA Trade Data

⁴ Commodity codes are from NAICS.

Like the mode split for its imports, New Mexico's exports to Mexico and other North American countries are almost entirely moved via land modes, and goods or commodities exported to overseas destinations in Asia are primarily transported via air (Figure 10). A smaller proportion (by value) of New Mexico's exports to Asia move via water when compared to imports from the same continent.

Figure 10. New Mexico exports by mode by international destination, 2021



Source: EBP Analysis of USA Trade data

Table 9 shows New Mexico's export activity, broken down by industry and export destination. New Mexico's largest export industries are computer and electronic products, transportation equipment, and other industry commodities. Mexico receives almost half (46.0%) of New Mexico's exports.

Table 9. New Mexico Industrial Commodity Exports (millions of dollars)

Exported Industry Activity (2021)	To Mexico	To Rest of World	Total
334 Computer & Electronic Products	\$1,313.0	\$1,596.5	\$2,909.4
336 Transportation Equipment	\$71.7	\$528.1	\$599.8
335 Electrical Equipment, Appliances & Components	\$245.7	\$52.6	\$298.4
339 Miscellaneous Manufactured Commodities	\$9.0	\$196.1	\$205.0
333 Machinery, Except Electrical	\$115.0	\$63.7	\$178.7
332 Fabricated Metal Products, Neso	\$116.2	\$57.4	\$173.7
325 Chemicals	\$65.4	\$106.7	\$172.1
311 Food & Kindred Products	\$104.1	\$52.9	\$157.0
326 Plastics & Rubber Products	\$93.3	\$43.6	\$136.8
211 Oil & Gas	\$135.1	-	\$135.1
Rest of Industry Commodities	\$205.1	\$207.7	\$412.8
Total	\$2,473.6	\$2,905.3	\$5,378.9

Source: EBP Analysis of USA Trade data

New Mexico’s international trade (by value) is primarily driven by imports from and exports to Mexico. Primarily, goods and commodities moving between Mexico and New Mexico rely on truck and rail. However, exports from New Mexico to markets in Asia are growing and mostly rely on air freight.

Transportation Reliant Sectors & Modes

Industry Spending on Transportation

By Industry

“Transportation intensity” is calculated using an industry’s spending on transportation services as a share of the industry’s total sales; transportation intensity estimates how much each industry depends upon transportation services to operate successfully. Transportation intensity is used to support site development efforts, to serve as a proxy for an industry’s freight dependency, and to convert regional economic forecasts into needs for additional commodities and transportation demand by mode. Table 10 categorizes industries, as defined by the NAICS 3 Digit Code, as having high, medium, or low transportation intensity.

Table 10. Industry Transportation Intensity (National)

Transportation Intensity		
High	Medium	Low
<ul style="list-style-type: none">• Administration & Support⁵• Mining• Retail• Transportation & Warehousing• Utilities• Wholesale	<ul style="list-style-type: none">• Agriculture, Forestry, & Fishing• Art & Entertainment• Construction• Education• Management• Manufacturing• Other Services• Professional• Public Administration & Defense	<ul style="list-style-type: none">• Accommodation & Food• Finance & Insurance• Healthcare• Information• Real Estate

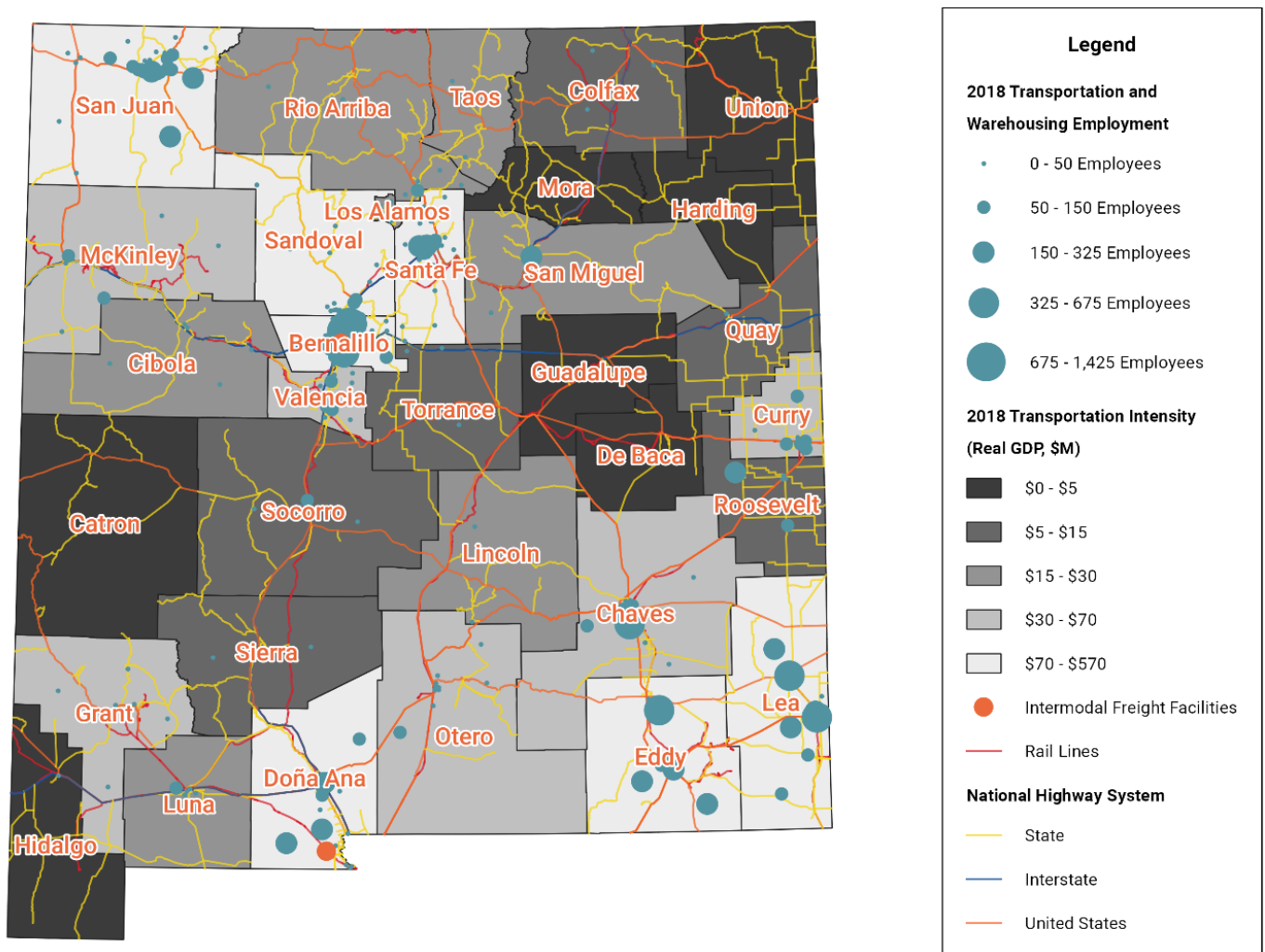
Source: EBP Analysis of Moody's Data

⁵ Administration and Support Services comprises establishments performing routine support activities for the day-to-day operations of other organizations. including sub industries such as private mail centers, tour operators, armored car services, and waste collection and disposal services.

New Mexico Counties by Transportation Spending & Employment

Figure 11 highlights the counties with highest demand for freight transportation services based on the industries located in each county and their combined transportation intensity. The map identifies areas of high demand for freight transportation, including Bernalillo, Eddy, Lea, San Juan, Sandoval, and Santa Fe counties. The map also identifies employment by number of employees in the transportation and warehousing sector. Together, these two data points highlight the geographic areas in New Mexico where freight transportation is in highest demand. Bernalillo County has the highest transportation intensity, due to the large presence of wholesale and retail activity, along with construction and manufacturing which are all types of businesses which rely on freight shipments. There are also other hidden industries present within the county – public administration has “medium” transportation intensity and includes military activity, and as such, is picking up the presence of the Kirtland Airforce Base.

Figure 11. Transportation intensity by county, and transportation and warehousing employment, 2018

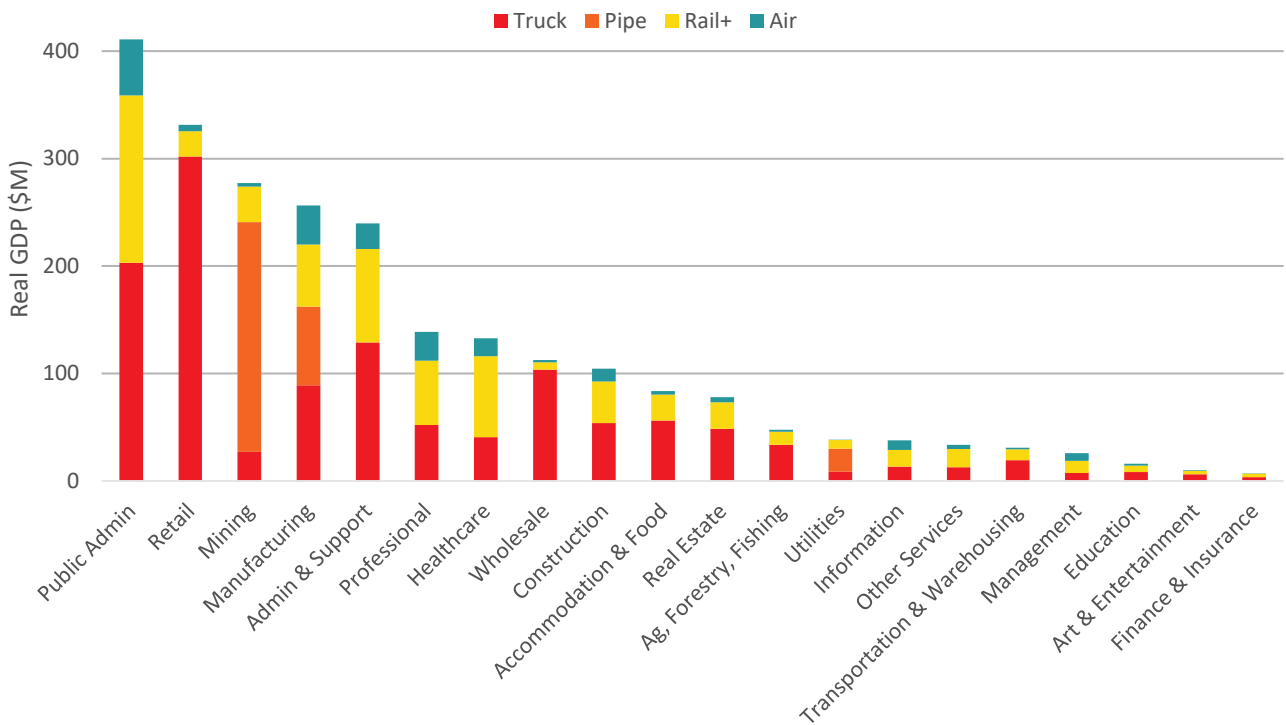


Source: EBP Analysis of Moody's Data, Transportation Satellite Accounts, Longitudinal Employer-Household Dynamics (LEHD)

Industry Reliance on Freight Modes

To understand on which freight modes New Mexico’s businesses rely, the NMFP relates industries’ commodities to the modes that move those commodities into, out of, and within the state. Figure 12 visualizes commodity demand and the mix of modes used to move those goods. For example, the mining industry relies on pipelines whereas manufacturing relies on a balanced mix of truck, pipeline, and rail modes with a smaller proportion of goods moving via air.

Figure 12. New Mexico forecasted modal reliance for 2045



Source: EBP Analysis of Moody’s Data, Transportation Satellite Accounts

The mining and other extractive industries have a strong presence in New Mexico, especially crude oil and natural gas, and rely on pipelines to move goods from extraction sites to refineries and ultimately to consumption; as noted, pipelines are generally outside of NMDOT’s area of influence. However, other natural materials extracted by mining and other high-value industries rely on modes that NMDOT can support or influence, including truck, rail, and air; for example, retail, manufacturing, and agriculture, forestry and fishing primarily rely on trucking.

For example, Bernalillo County has the highest transportation intensity (i.e., share of total sales spent on transportation services) in New Mexico. This high intensity is driven by high employment in industries that depend on trucking, such as retail, wholesale, transportation and warehousing, construction, and manufacturing. These industries are served by two Interstate highways and an airport. Lea and Eddy counties also have high transportation intensity due to the concentrations of mining activities; while they are not connected directly to the Interstate system, they are served by rail lines which primarily move mining-related goods. Reliable freight transportation appropriate for each county’s industry mix is critical for New Mexico’s continued economic success.

4.3 New Mexico's Future

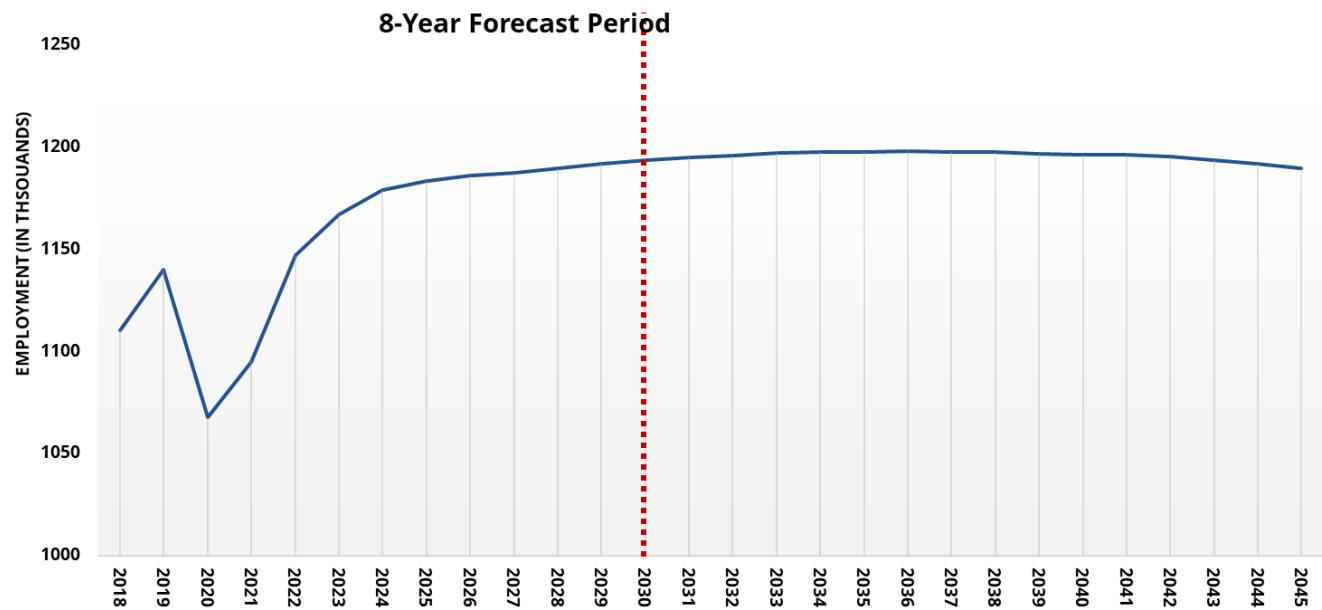
New Mexico's GDP, and modal freight movements are forecasted to increase overall by 2045. Over the 8-Year forecast period employment is forecasted to increase and then level out after 2030. Historical data are used to project economic trends such as employment and GDP estimates through 2045, which are broken out by industry and counties to identify industry and location specific sub-trends. Additionally, the FHWA publishes FAF forecasts for how the types of commodities that New Mexico will import and export, and the modes used to move them, are likely to shift by 2045. The National Trends section discusses emerging trends in e-commerce, truck automation and platooning, and how they may impact New Mexico.

Economic Trends

Change in Employment

Despite the global impact of the COVID-19 pandemic in 2020-2022, forecasts show employment returning to pre-pandemic levels between 2022 and 2023. Figure 13 depicts the forecasted growth trajectory of employment in New Mexico, tracking a slowing of employment growth after 2025. Between 2018 and 2045, forecasts expect New Mexico's employment to grow by approximately 7.1 percent, with most of the growth occurring in the 2020-to-2030-time horizon. Because forecasts are based on current data, five-to-ten-year forecast periods are more reliable than 20- or 30-year forecasts. For that reason, it is important to continue updating forecasted growth as time passes and more data becomes available.

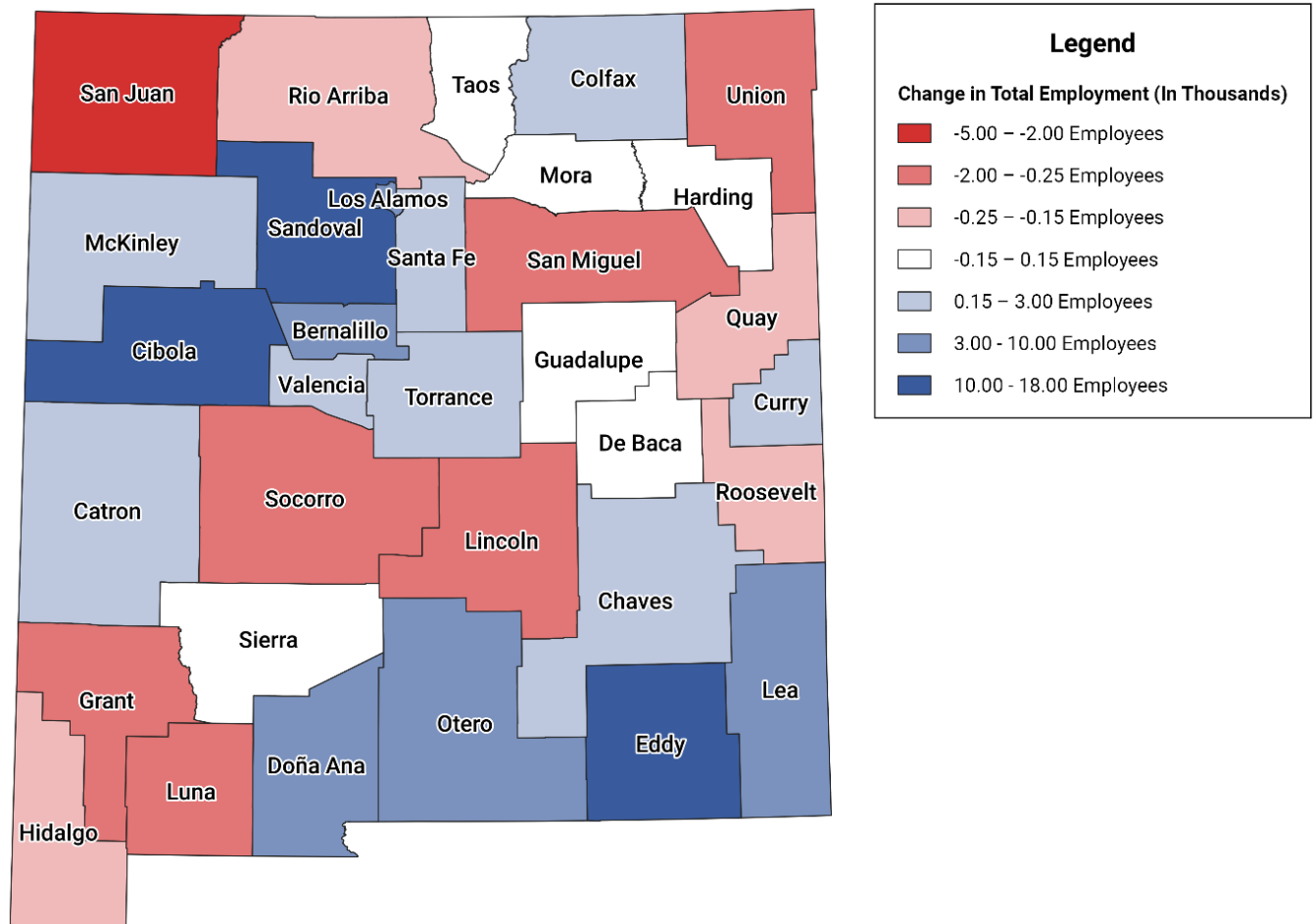
Figure 13. Forecasted growth in New Mexico employment 2018-2045



Source: EBP Analysis of Moody's Data

However, economic growth in New Mexico is not forecasted to be uniformly consistent statewide. Over the next 23 years, forecasts indicate that the most employment growth will occur in Cibola, Sandoval, and Eddy Counties. Employment growth is also forecasted for Otero, Bernalillo, Dona Ana, Los Alamos, and Lea Counties (Figure 14).

Figure 14. Change in county employment between 2018 and 2045



Source: EBP Analysis of Moody's Data

Employment & GDP by Industry

Forecasted changes in New Mexico employment and real GDP for 2018 and 2045 are reflected in Table 11, with green indicating an increase and red indicating a decrease. The largest employment growth is expected in the following industries: education (+ 24,100), accommodation & food (+19,500), admin & support (+ 19,500), and construction (+ 16,100). The largest employment losses are expected to occur in the following industries: manufacturing (- 8,300), information (- 6,600), and mining (- 4,400). GDP growth is expected across all industries, except for other services. The largest GDP growth is expected in real estate (+ \$9 million), manufacturing (+ \$7 million), and healthcare (+ \$6 million). The increases in mining and manufacturing industries' GDP paired with a decrease in forecasted employment indicates that those sectors may become increasingly automated and require fewer employees to produce more output. Overall, between 2018 and 2045, New Mexico's GDP is forecast to increase by nearly 60 percent, while employment is only expected to increase by around seven percent.

Table 11. Employment and Real GDP Growth by Sector, 2018-2045

Industry	Employment (Thousands)		GDP (Real \$M)	
	2018	2045	2018	2045
Public Admin	92.1	93.0	20,371.7	24,438.4
Real Estate	24.5	21.2	10,702.0	19,900.6
Healthcare	175.8	199.4	6,996.2	13,177.8
Professional	69.7	73.4	6,978.1	12,798.6
Mining	26.2	21.8	10,582.4	12,663.8
Manufacturing	33.5	25.2	3,994.2	11,032.1
Retail	113.2	112.8	5,637.9	10,082.7
Wholesale	26.5	24.2	2,971.3	6,458.8
Accommodation & Food	94.9	114.4	2,878.3	5,123.4
Admin & Support	54.7	74.2	2,396.8	4,861.0
Information	24.6	18.0	2,792.8	4,319.3
Construction	84.5	100.6	2,993.9	4,080.3
Transportation & Warehousing	26.3	30.2	2,337.9	3,913.1
Finance & Insurance	33.9	36.4	2,754.5	3,526.0
Ag, Forestry, Fishing	17.9	15.4	1,899.2	2,108.2
Utilities	7.8	6.6	1,438.0	2,034.9
Other Services	50.4	49.9	1,794.3	1,770.6
Management	8.4	7.3	584.1	1,045.9
Education	115.7	139.8	499.1	993.5
Art & Entertainment	29.4	25.7	638.9	657.7
Total	1,110.1	1,189.4	91,241.5	144,986.7

Source: EBP Analysis of Moody's Data

Forecasted changes in employment may illustrate where changes in freight demand are likely to occur; however, employment growth has a complicated relationship to volume of freight transportation. Some industries are labor-intensive but produce or consume a relatively low volume of freight goods. Conversely, there are highly automated sectors with few workers which are heavily reliant on transportation services.

Emerging Industries

In addition to changes in New Mexico's existing industries, some new industries are emerging, including cannabis, wind power, and hydrogen, which may also impact the future of freight movement in the state.

Cannabis

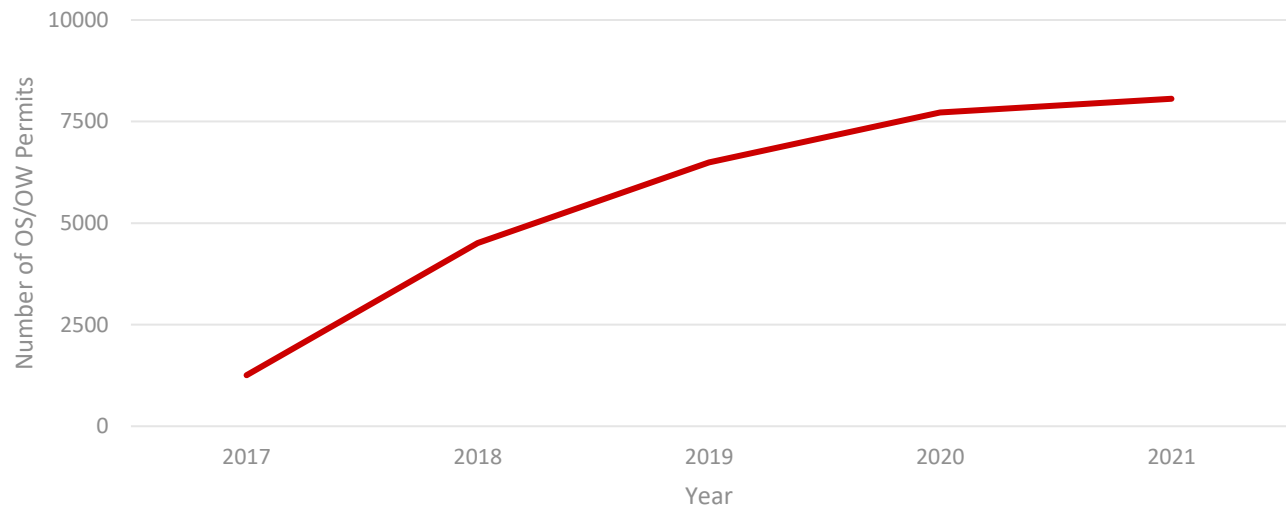
As of December 2021, the CCD had received over 200 applications for approval for New Mexico businesses at all points in the cannabis supply chain. While there is the potential for traffic generation along each link in this chain, the greatest transportation impacts are likely to be at the distribution and retail levels.

As a result of legalizing the recreational use of cannabis, New Mexico may see increased interest in cannabis delivery services. If cannabis consumers rely on delivery services, they may be less likely to tie in other shopping activities outside the home as well. The degree to which this shift occurs may be hindered by several factors, including the availability of specialized third-party logistics and last mile delivery services that leverage blockchain and telematics technology which can provide tracking tools and monitor compliance to local laws. Given that federal restrictions prevent cannabis operations from being financed by banks or other federally insured means, efficiently scaled cannabis delivery operations are going to be difficult to run, further obstructing adoption. Demand for goods will also likely be limited to in-state consumers to avoid the legal issues related to being stopped with cargo in a state or region where cannabis is not medicinally or recreationally legal. Recreational sale of cannabis in New Mexico began on April 1st, 2022, so the industry’s full impact on freight remains to be seen.

Wind Power

Due to its topography and abundance of open land, New Mexico is a prime candidate for wind-energy projects. In 2011, New Mexico generated just over 2.1 million megawatt hours and by 2021, annual generation had increased to over 10.6 million megawatt hours. The growth of the wind-energy sector introduces additional freight challenges. Transporting wind turbines and blades requires Oversized/Overweight (OS/OW) permits and the freight network needs to accommodate these large and heavy loads. The number of OS/OW permits issued annually has risen from 1,256 permits in 2017 to 8,061 permits in 2021, an increase of over 641 percent (Figure 15).

Figure 15. Number of OS/OW Permits over Time (2017-2021)



Source: NMDOT Permit Office

Pattern Energy, a wind and solar facility company, completed a large-scale, 377-wind turbine wind-energy project called Western Spirit in central New Mexico that provides electricity to Los Angeles, San Jose, and several other cities in southern California. Western Spirit is the largest single-phase wind power construction project in the US.

Following the success of the Western Spirit project, Pattern Energy is breaking ground on another wind-energy project in central New Mexico called SunZia. SunZia will contain 950 wind turbines and is scheduled to be completed by 2026.

Hydrogen

Given New Mexico's abundant natural gas reserves, there is interest in creating incentives for companies to produce low carbon hydrogen via hydrogen hubs throughout the state. However, the New Mexico Legislature has not yet acted on this proposal. As a follow-on to this general interest, New Mexico joined a coalition with Colorado, Utah, and Wyoming to compete for a portion of the IJA funds for regional clean hydrogen hubs in February 2022.

Independent of government-backed hydrogen hub development, the Process Equipment and Service Company (PESCO) is collaborating with BayoTech to expand their existing facility in Farmington, New Mexico by 16,000 square feet to build blue hydrogen reactors. This expansion could create 150 manufacturing-related jobs.

Hydrogen is transported from production sites to destinations for use via pipelines, cryogenic liquid tanker trucks, and gaseous tube trailers. Pipelines are primarily used when transporting hydrogen to areas with high demand, whereas trucks are used to deliver hydrogen to areas with lower demand. Expansion of New Mexico's hydrogen industry may increase demand for pipeline and truck freight modes in the northwest part of the state.

Transportation Trends

Sectors & Counties Driving Transportation Trends

Warehousing

Warehousing and delivery services became more vital than ever during the COVID-19 pandemic, as many quarantined and isolated households turned to e-commerce as a safer alternative to shopping in-person. Consequently, warehousing and courier related employment and GDP has increased on a national level and in New Mexico it is expected to continue to grow through 2045. Forecasted changes in New Mexico's Transportation sectors' employment and real GDP for 2018 and 2045 are reflected in Table 12, with green indicating an increase and red indicating a decrease.

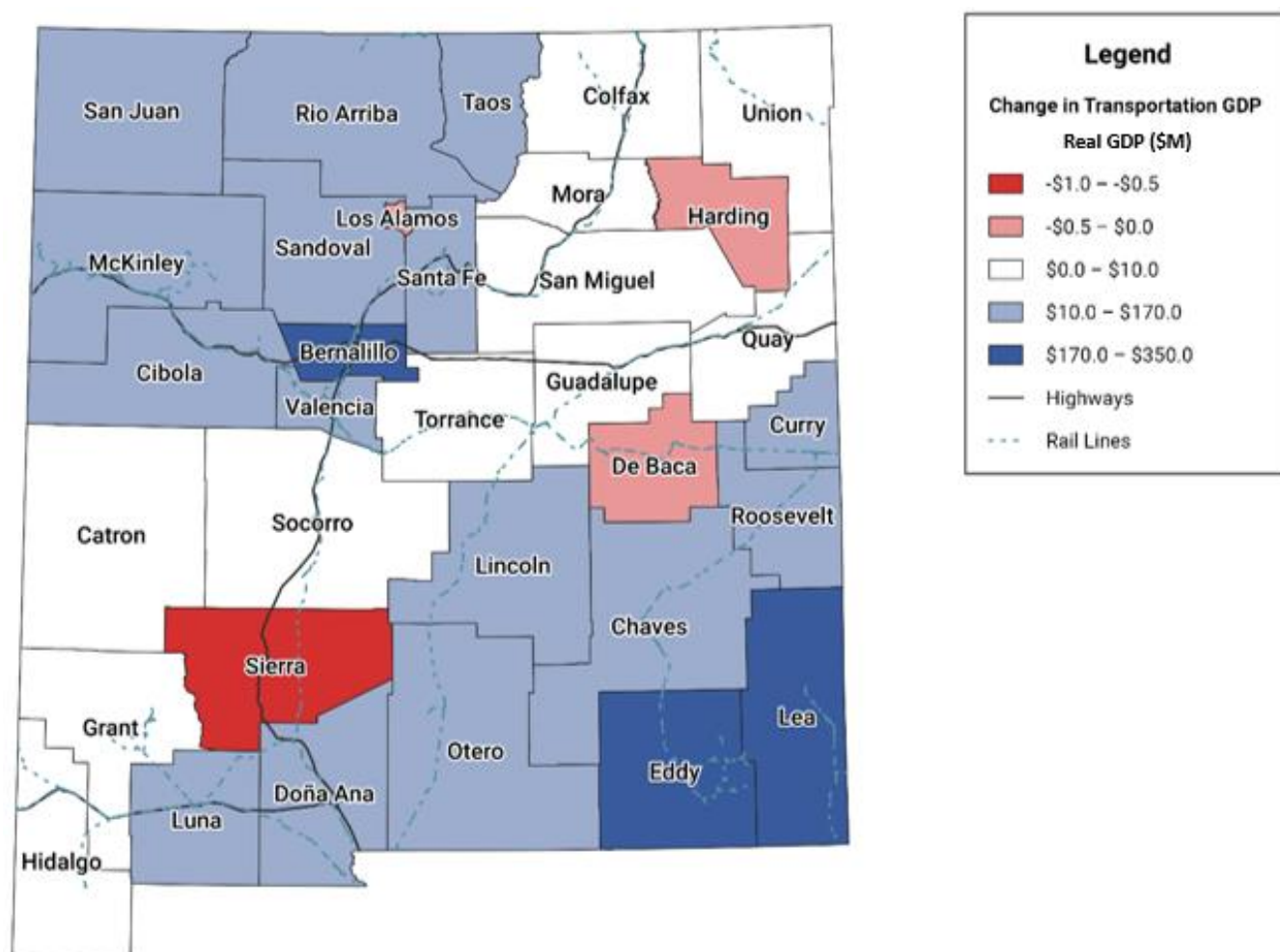
Table 12. Transportation and Warehousing Activity Measures

Transportation Sectors	Employment (Thousands)		Real GDP (\$M)	
	2018	2045	2018	2045
Truck Transportation	9.6	8.7	787.8	1,219.6
Rail Transportation	1.8	0.9	661.6	672.3
Support Activities for Transportation	3.1	2.6	172.4	494.2
Warehousing and Storage	1.9	4.1	87.1	463.5
Pipeline Transportation	0.6	0.6	123.4	308.8
Couriers and Messengers	4.2	10.5	135.0	283.0
Air Transportation	1.6	0.9	255.3	214.0
Transit and Ground Passenger Transportation	3.4	1.6	101.0	214.0
Scenic and Sightseeing Transportation	0.1	0.1	13.5	43.7
Water Transportation	0.0	0.0	0.7	-
Total	26.3	30.2	2,337.9	3,913.1

Source: EBP Analysis of Moody's Data

Currently, a large share of transportation and warehousing GDP is concentrated in southeastern New Mexico, particularly in Eddy County and Lea County. In the future, both southeastern and northwestern New Mexico can expect to experience growth in those sectors. The exception to this pattern is Sierra County, which is projected to see a 23 percent decrease in transportation and warehousing GDP over the same time frame, with smaller declines in transportation and warehousing GDP in De Baca County and no change in Harding or Los Alamos Counties (Figure 16).

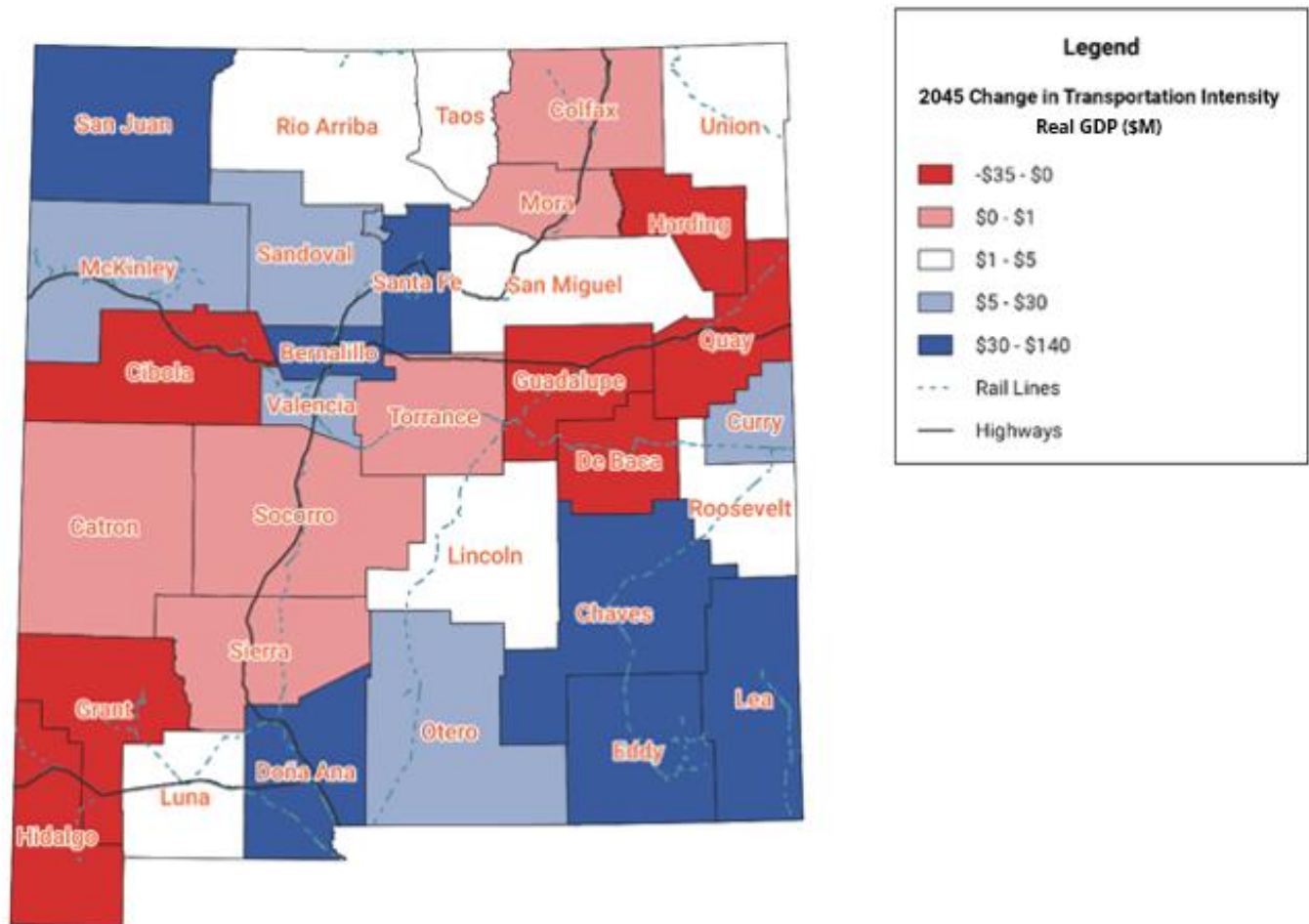
Figure 16. Change in county-level Real GDP in Transportation and Warehousing, 2018—2045



Source: New Mexico Department of Transportation, Moody's Analytics

Figure 17 illustrates projected transportation intensity change between 2018 and 2045. By 2045, transportation intensity is expected to grow the most in the southeast (Chaves, Eddy, Lee, and Doña Ana Counties) and northwest (San Juan, Santa Fe, and Bernalillo Counties). This trend is primarily driven by an increase in manufacturing GDP and a decrease in mining GDP and agriculture GDP in the central areas of the state.

Figure 17. Change in county-level transportation spending intensity, 2018—2045



Source: EBP Analysis of Moody's Data, Transportation Satellite Accounts, LEHD

Manufacturing

Driven primarily by productivity improvements and increasing use of automation, forecasts indicate that the overall manufacturing sector could see a 176.2 percent increase in GDP by 2045. The computer and electronic product manufacturing subindustry is projected to see a 369 percent increase in GDP and a 34.3 percent decrease in employment concentration, which suggests a competitive economic base in New Mexico. Subsequently, the demand for freight goods and transportation is expected to continue to rise due to the increases in forecasted manufacturing output as measured by GDP.

Table 13 shows the projected employment and GDP generated by each manufacturing subindustry, with green indicating an increase and red indicating a decrease. Sectors related to petroleum and coal product manufacturing, as well as computer and electronic products manufacturing are expected to see the most GDP growth from 2018-2045. Chemical manufacturing is the only manufacturing sector expected to see an employment increase between 2018 and 2045.

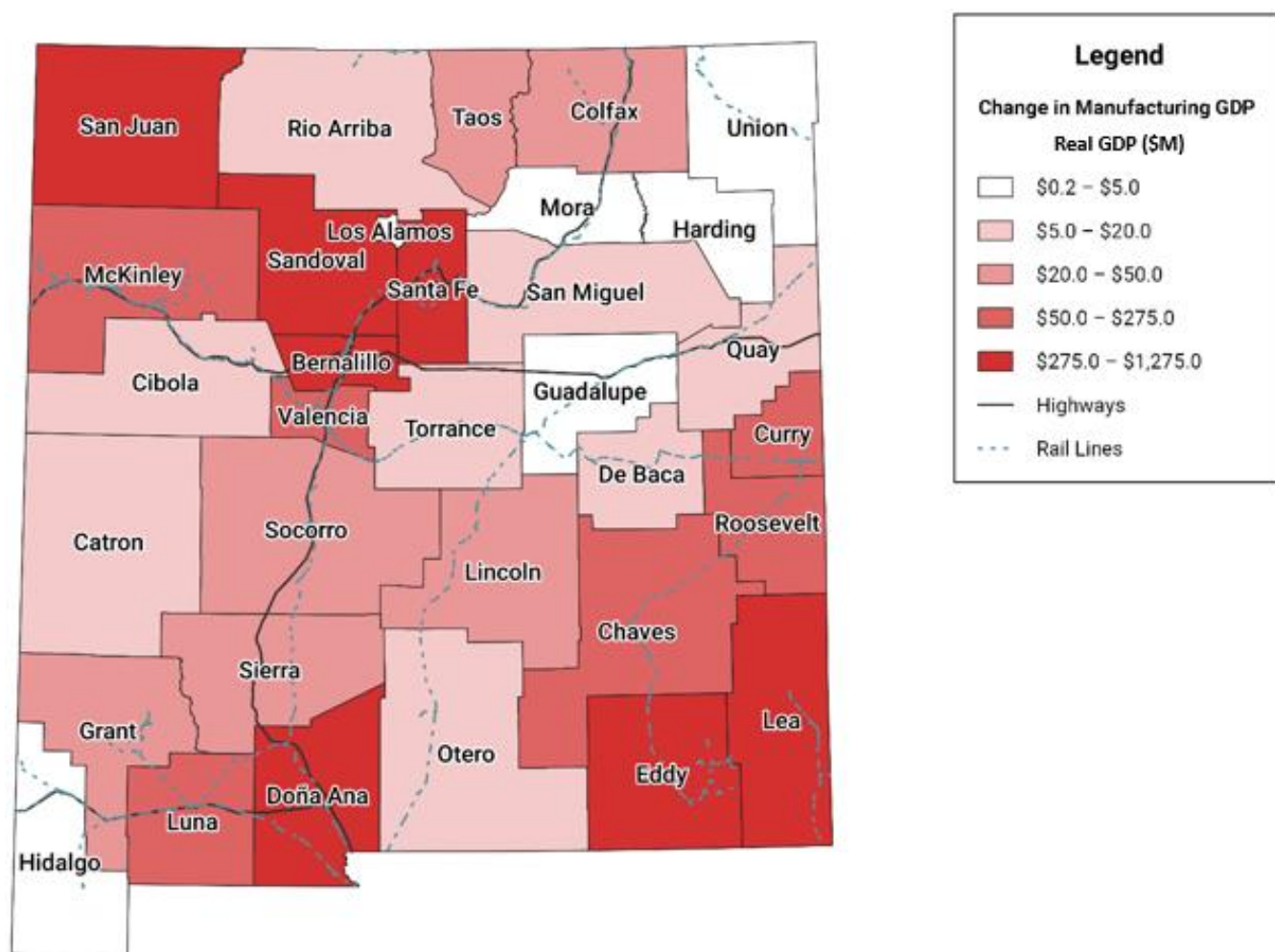
Table 13. Manufacturing Activity Measures

Manufacturing Sectors	Employment (Thousands)		Real GDP (\$M)	
	2018	2045	2018	2045
Computer and Electronic Products	6.7	4.4	1,083.1	5,087.2
Petroleum and Coal Products	0.9	0.8	867.1	2,482.1
Chemical Manufacturing	1.8	1.9	307.8	721.2
Food	6.3	5.3	422.3	440.8
Non-metallic Mineral Products	2.2	1.9	162.1	361.2
Fabricated Metal Products	2.9	1.9	181.4	350.0
Machinery	1.6	1.0	125.4	345.3
Miscellaneous	2.5	1.5	149.0	301.7
Plastics and Rubber Products	1.2	1.0	102.8	213.3
Beverage and Tobacco Products	1.6	1.2	179.9	158.2
Transportation Equipment	1.1	1.1	86.8	140.8
Paper	0.7	0.4	69.8	102.8
Electrical Equipment, Appliances, and Components	0.4	0.2	72.8	92.4
Primary Metal	0.4	0.3	48.8	90.1
Furniture and Related Products	0.7	0.6	25.4	58.8
Wood Products	1.0	1.0	43.6	42.1
Printing and Related Support Activities	0.9	0.6	54.4	34.9
Textile Product Mills	0.1	0.1	6.4	5.8
Apparel	0.2	0.1	3.5	2.7
Textile Mills	0.1	0.0	1.1	0.4
Leather and Allied Products	0.1	0.0	0.8	0.4
Total	33.5	25.2	3,994.2	11,032.1

Source: EBP Analysis of Moody's Data

New Mexico's manufacturing industry is expected to experience GDP growth across every county (Figure 18). Currently, the largest share of manufacturing GDP is concentrated in Lea County and San Juan County. Looking forward to 2045, manufacturing GDP is expected to increase by 383 percent in San Juan County and 329 percent in Sandoval County. The growth in Sandoval County, which contains Rio Rancho, reflects the impacts of Intel expanding their silicon chip plant during the COVID-19 pandemic as a response to the manufacturing shortage. This expansion includes a \$32 million investment in a water pipeline to support the fabrication plant. Although all counties in New Mexico are expected to experience GDP growth related to manufacturing, Harding County is projected to experience the smallest amount of industry growth (62%).

Figure 18. County-level change in manufacturing Real GDP between 2018 and 2045



Source: New Mexico Department of Transportation, Moody's Analytics

Mining

The mining industry in New Mexico is made up of three subsectors: oil and gas extraction (22%), other mining (17%), and mining support services (61%). Mining support services include “providing integrated equipment solutions to manage, maintain, and operate auxiliary fleets and specialty mining equipment during mine construction or daily operations,” as well as on site hauling services. Employment across all three subsectors is anticipated to decline by 2045. However, GDP is expected to grow in the oil and gas extraction subsector by over \$5 million. Real GDP associated with mining (except oil and gas) and support activities for mining is forecasted to decline from 2018 to 2045. Overall, the Mining Sector GDP is forecasted to marginally increase between 2018 and 2045. Forecasted changes in New Mexico’s mining sectors’ employment and real GDP for 2018 and 2045 are shown in Table 14, with green indicating an increase and red indicating a decrease.

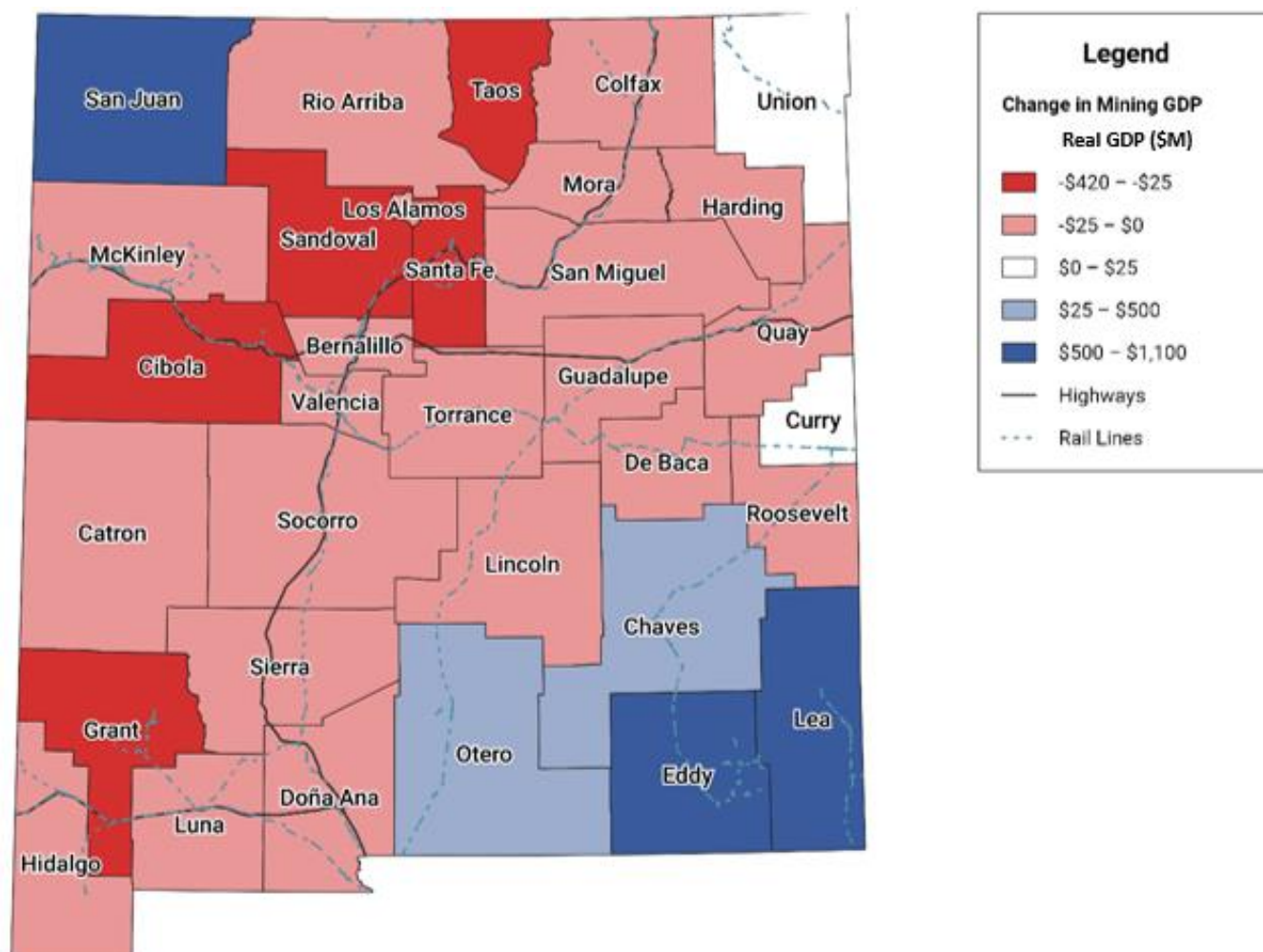
Table 14. Mining Activity Measures

MINING SECTOR	Employment (Thousands)		Real GDP (\$M)	
	2018	2045	2018	2045
Oil and Gas Extraction	5.7	5.6	7,154.3	12,393.7
Mining (Except Oil and Gas)	4.4	4.2	1,459.7	157.8
Support Activities for Mining	16.2	12.1	1,968.4	112.3
Total	26.2	21.8	10,582.4	12,663.8

Source: EBP Analysis of Moody's Data

A large share of New Mexico's mining GDP remains concentrated in the southeast and northwest, particularly in Eddy, San Juan, and Lea Counties (Figure 19). GDP growth associated with the mining sector is forecasted to occur particularly in Lea County (42%), Otero County (39%), Chaves County (32%), San Juan County (31%), and Eddy County (22%). However, it is expected that New Mexico will experience a decrease in GDP from mining in 23 counties. Of those 23 counties, Grant County (-\$420 million) Sandoval County (-\$99 million), Santa Fe County (-\$39 million), Taos County (-\$38 million), and Cibola County (-\$33 million) are projected to experience the most severe declines.

Figure 19. Change in county-level mining Real GDP between 2018 and 2045

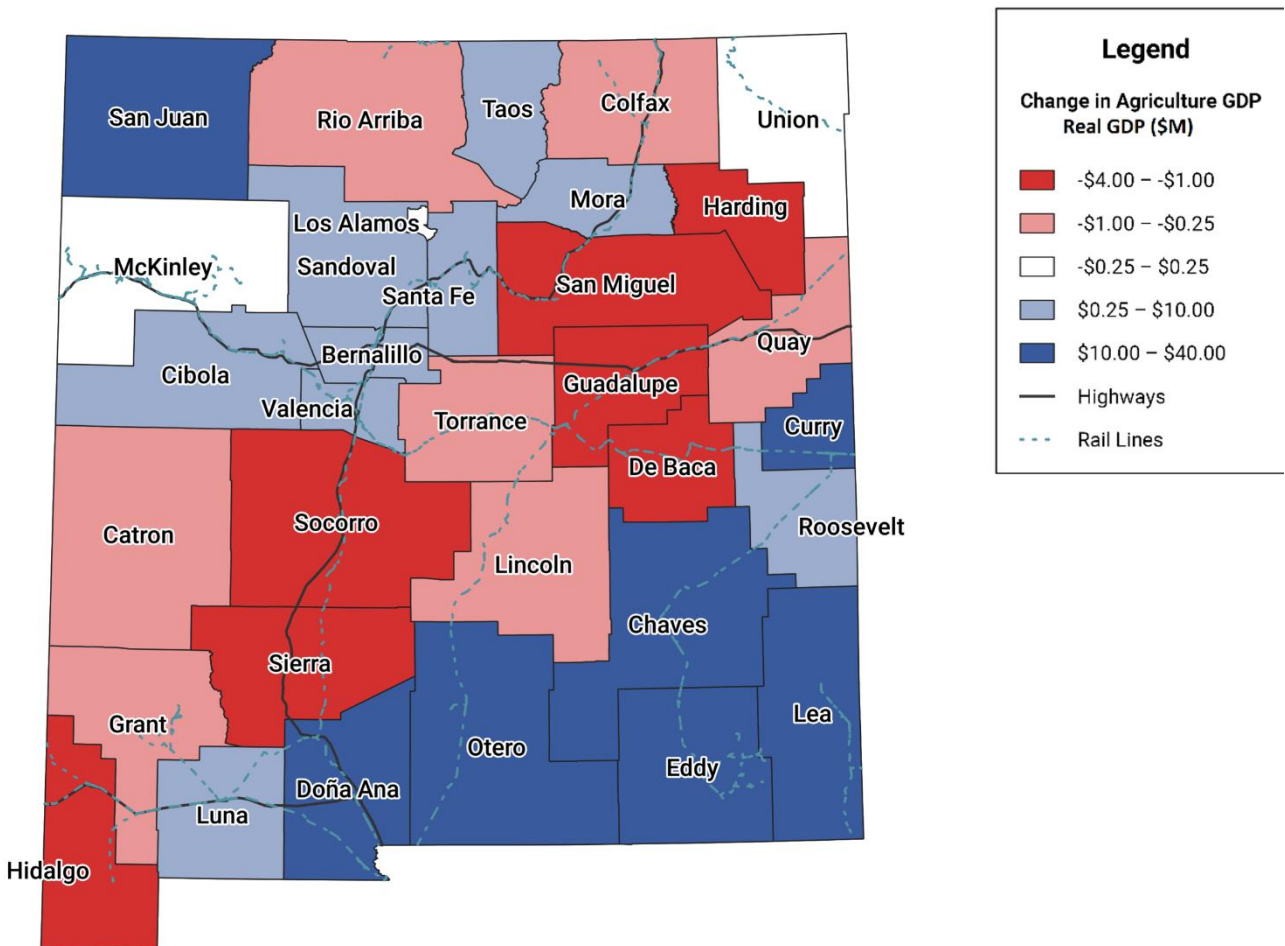


Source: New Mexico Department of Transportation, Moody's Analytics

Agriculture

The future of New Mexico's agriculture industry varies on a county level, see Figure 20. Currently, a large share of agriculture GDP remains concentrated in the northwestern counties of McKinley and San Juan. Southeastern counties, namely Lea, Chaves, Eddy, Otero, Dona Ana, and Curry Counties, are projected to experience the largest growth in the next 23 years. New Mexico can expect to experience an agricultural GDP decrease in 11 of its 33 counties, most notably by 26 percent in Harding County and 14 percent in De Baca County.

Figure 20. Change in county-level agriculture Real GDP between 2018 and 2045



Source: New Mexico Department of Transportation, Moody's Analytics

Spatial Concentration of Industries

New Mexico is heading towards a compositional shift in its workforce. Projected changes in employment show an increasing concentration among New Mexico's industries towards a service-based economy. As automation and emerging technologies influence the relationship between employment and demand for freight services, it is helpful to visualize how individual sectors are concentrating spatially using metrics such as a Location Quotient. A Location Quotient (LQ) greater than one indicates that a region has an above average share of employment in that industry or sector when compared to national concentrations, and LQ less than one indicates a below average share. New Mexico's highest LQ industries include mining (5.37), education (4.31), and utilities (1.96).

Comparing an industry's forecasted LQ growth with its transportation intensity indicates how much each growing or shrinking industry relies upon transportation. Between 2018 and 2045, the education (+ 33%) and agriculture, forestry, and fishing (+ 25%) industries are anticipated to see the largest LQ growth and have medium transportation intensity. Conversely, information (- 23%), real estate (- 21%), and finance & insurance (- 20%) are projected to see the largest LQ declines but have low transportation intensity (Table 15). The industries that are anticipated to grow the most over the next two decades have medium or high transportation intensity, meaning that their growth will have moderate to large effects on the transportation system and industry.

Table 15. Forecasted Change in Industry Concentration (LQ), 2018—2045

Industry	2018 LQ	Forecasted LQ Change (2045)	Transportation Intensity
Education	4.31	33%	Medium
Ag, Forestry, Fishing	0.81	25%	Medium
Utilities	1.96	10%	High
Manufacturing	0.37	7%	Medium
Construction	1.61	5%	Medium
Healthcare	1.22	3%	Low
Wholesale	0.63	2%	High
Mining	5.37	1%	High
Management	0.49	0%	Medium
Retail	0.99	-2%	High
Transport/ Warehousing	0.67	-3%	High
Public Admin & Defense	0.52	-4%	Medium
Other Services	1.20	-4%	Medium
Admin & Support ⁶	0.82	-5%	High
Professional	1.04	-6%	Medium
Accommodation & Food	0.94	-7%	Low
Art & Entertainment	1.71	-14%	Medium
Finance & Insurance	0.74	-20%	Low
Real Estate	1.51	-21%	Low
Information	1.20	-23%	Low

Source: EBP Analysis of Moody's Data

⁶ The NAICS sector 'Admin & Support' is a catch all for business services inclusive of everything from landscaping to IT and security services, to the more freight intensive waste remediation services.

Figure 21 groups industries by their current employment concentration in New Mexico (as compared to the national average) and by the forecasted change in that concentration, with green indicating an increase and red indicating a decrease. Industries with high transportation intensity that are projected to have higher employment will increase demand on the existing freight network. In contrast, New Mexico’s current freight infrastructure may more easily accommodate growth in low transportation intensity sectors, regardless of their forecasted changes in concentration.

Figure 21. Comparison of changes in concentration by industry sector between 2018 and 2045

	Industries More Common at National Level	Industries Concentrated in New Mexico
Growing Employment Concentration	<ul style="list-style-type: none">• Agriculture, Forestry, Fishing• Manufacturing• Wholesale	<ul style="list-style-type: none">• Construction• Education• Healthcare• Mining• Utilities
Declining Employment Concentration	<ul style="list-style-type: none">• Accommodation & Food• Administration & Support• Finance & Insurance• Management• Public Administration & Defense• Retail• Transportation & Warehousing	<ul style="list-style-type: none">• Art & Entertainment• Information• Other Services• Professional• Real Estate

Source: EBP Analysis of Moody’s Data

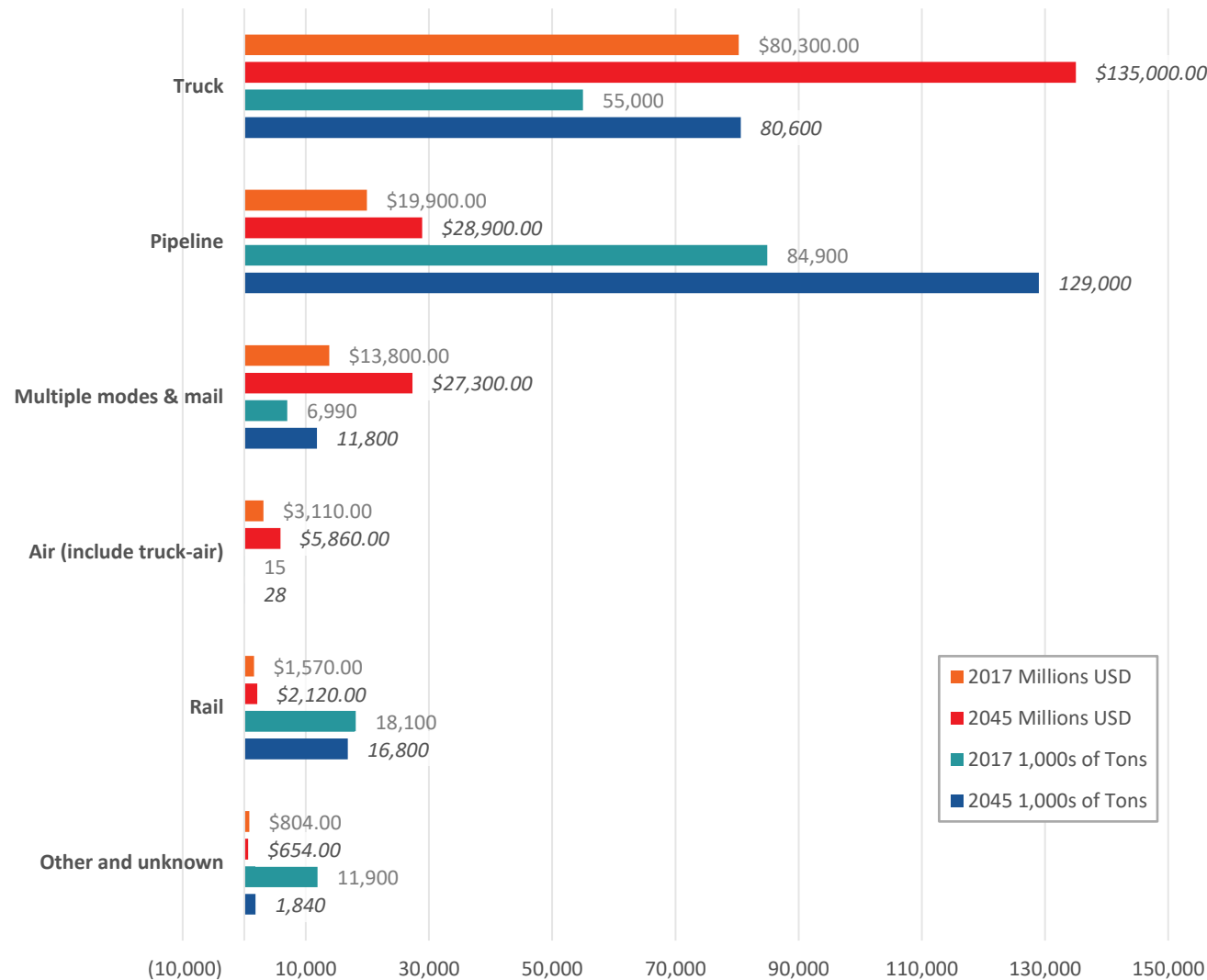
Top Commodities 2045 & Comparison to 2018

Changes in industry GDP and employment will impact the types and amounts of commodities that are imported to or exported from New Mexico. The mix of freight modes that will be in demand will also change to support those industries and commodity movements. This section relies on FHWA’s FAF forecasts for commodity flows by mode, tonnage, and value.

By Mode

By 2045, commodities moved via trucking are expected to increase by tonnage (+ 25.6 million tons) and value (+ \$54.7 billion). Pipelines are expected to see a substantial increase in tonnage (+ 45.1 million tons), but a less substantial increase in value (+ \$9 billion). Air and Multiple Modes & Mail are expected to grow as a mode in terms of value, but to lesser degrees than trucking and pipeline. Finally, Rail is expected to experience minor growth in value, while tonnage slightly decreases (Figure 22).

Figure 22. Change in tonnage and value from 2017 to 2045 by mode.

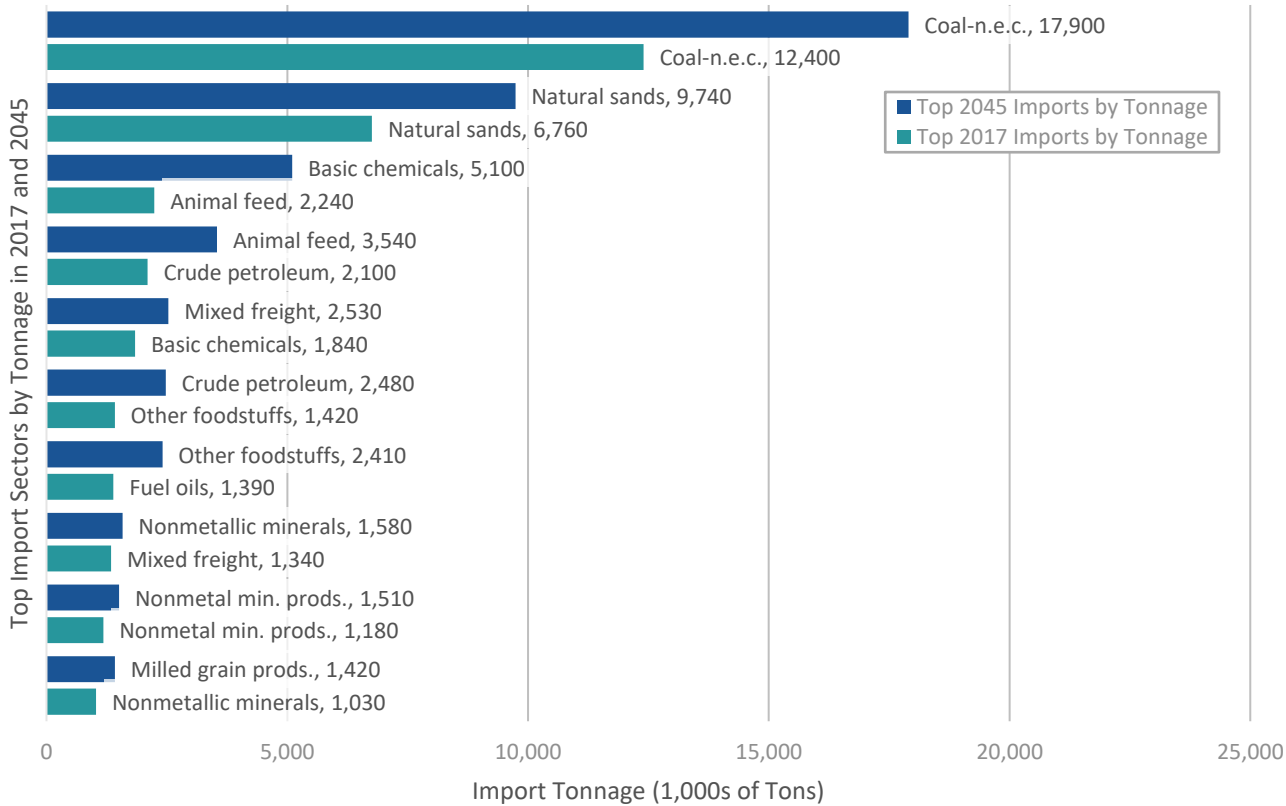


Source: Freight Analysis Framework 5.2

Imports

In 2017, New Mexico’s top import commodities by tonnage were coal n.e.c., natural sands, animal feed, crude petroleum, basic chemicals, other foodstuffs (i.e., dairy products, vegetables, fruits, nuts, coffee, tea, spices, sugars, cocoa, oils, and fats), fuel oils, mixed freight (i.e., grocery and convenience store items, restaurant food and supplies, hardware, plumbing supplies, and office supplies), nonmetal mineral products (i.e., hydraulic cements, ceramics, and glass), and nonmetallic minerals. By 2045, milled grain products are projected to replace fuel oils as a top import commodity. Figure 23 illustrates the top ten import commodities by tonnage in 2045 and 2017. The largest growth in import commodity tonnage is expected in coal-n.e.c. (+ 5.5 million tons), basic chemicals (+ 3.3 million tons), and natural sands (+ 3 million tons).

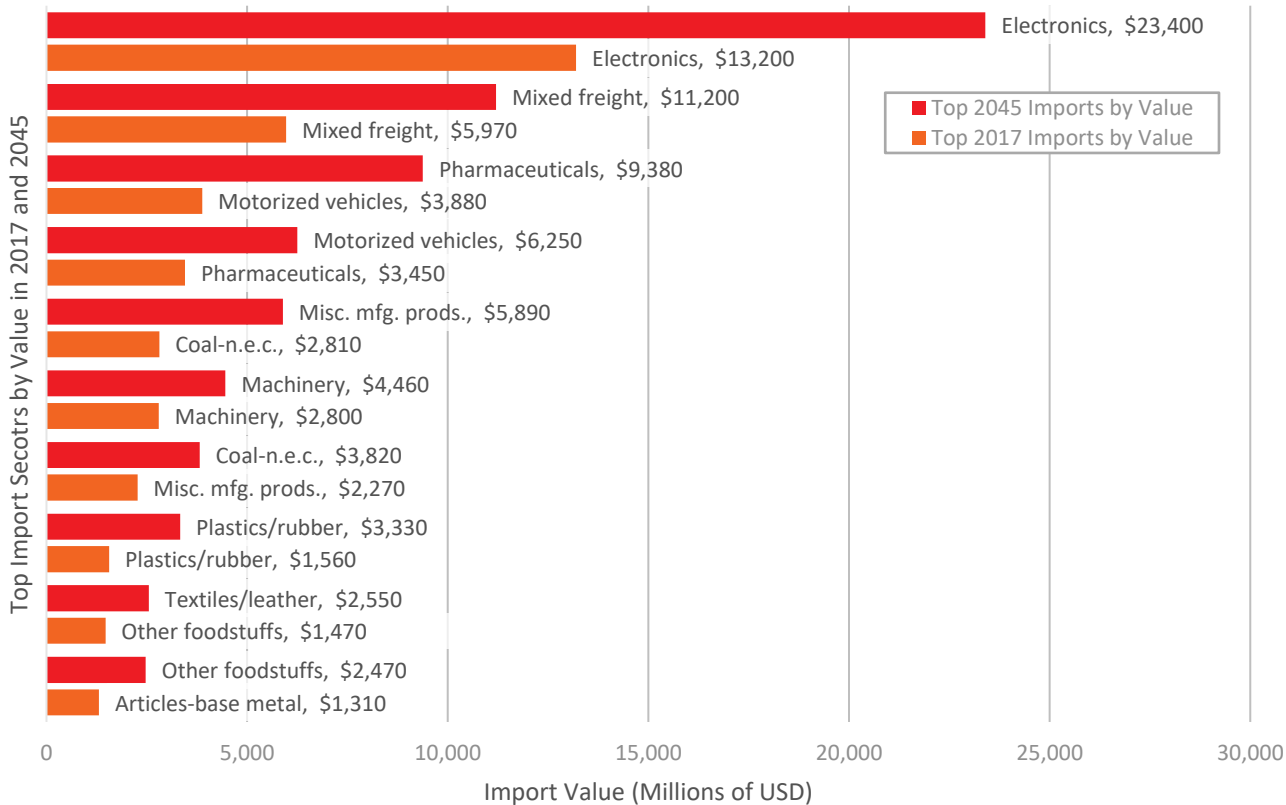
Figure 23. Change in top import commodities by tonnage from 2017 to 2045



Source: Freight Analysis Framework 5.2

In 2017, New Mexico’s top value import commodities were electronics, mixed freight, motorized vehicles, pharmaceuticals, coal, machinery, miscellaneous manufacturing products (i.e., arms, ammunition, toys, and sporting equipment), plastics/rubber, other foodstuffs, and articles-base metal. By 2045, textiles/leather is projected to replace articles-base metal as a top import commodity. Figure 24 illustrates the top ten import commodities by value in 2045 and 2018. The largest growth in import commodity value is expected in electronics (+ \$10.2 billion), mixed freight (+ \$5.2 billion), pharmaceuticals (+ \$5.9 billion), and motorized vehicles (+ \$2.4 billion).

Figure 24. Change in top import commodities by value from 2017 to 2045

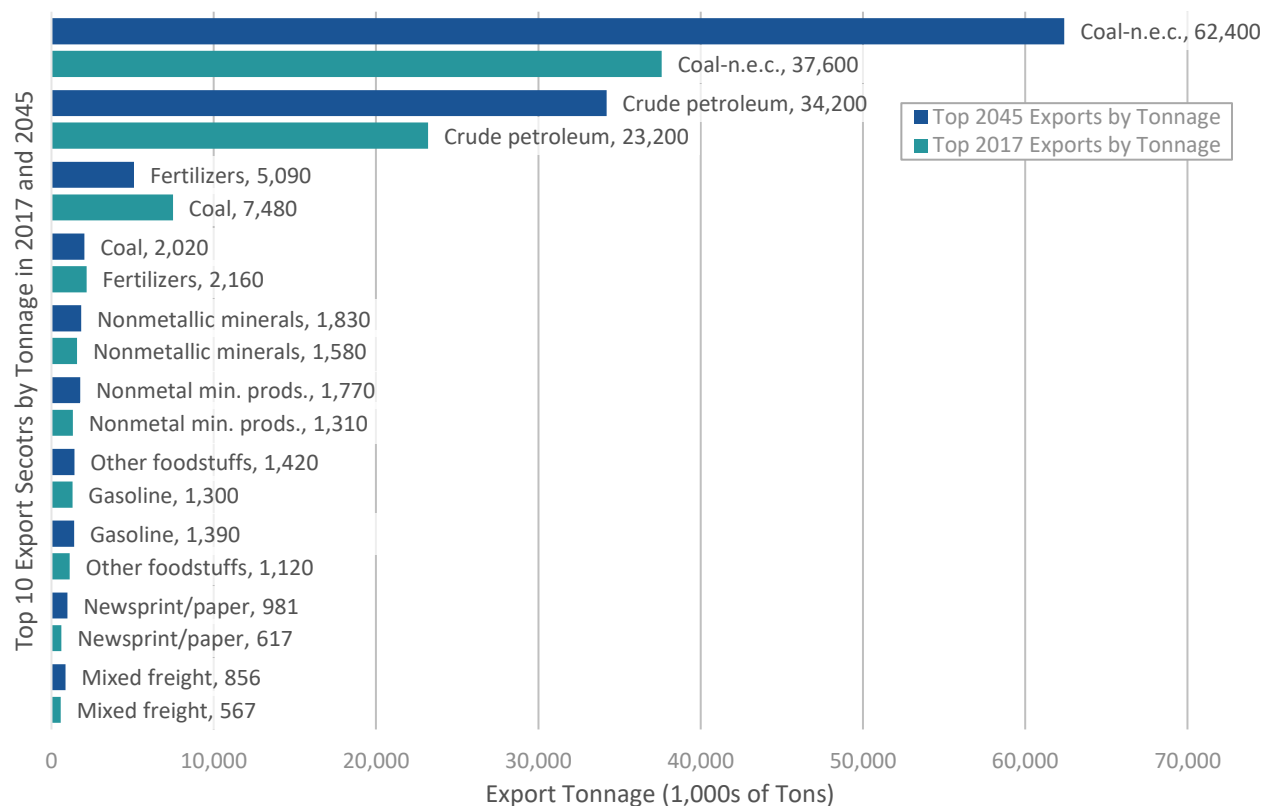


Source: Freight Analysis Framework 5.2

By Exports

New Mexico's top tonnage export commodities in 2017 were coal-n.e.c., coal, crude petroleum, fertilizers, nonmetallic minerals, nonmetal mineral products, gasoline, other foodstuffs, newspaper/print, and mixed freight (i.e., grocery and convenience store items, restaurant food and supplies, hardware, plumbing supplies, and office supplies). While these commodities are all expected to remain in the top ten in 2045, tonnage growth varies. The largest growth is expected to occur in coal-n.e.c. (+ 24.8 million tons) and crude petroleum (+ 11 million tons) (Figure 25 and Table 16).

Figure 25. Change in top export commodities by tonnage from 2017 to 2045



Source: Freight Analysis Framework 5.2

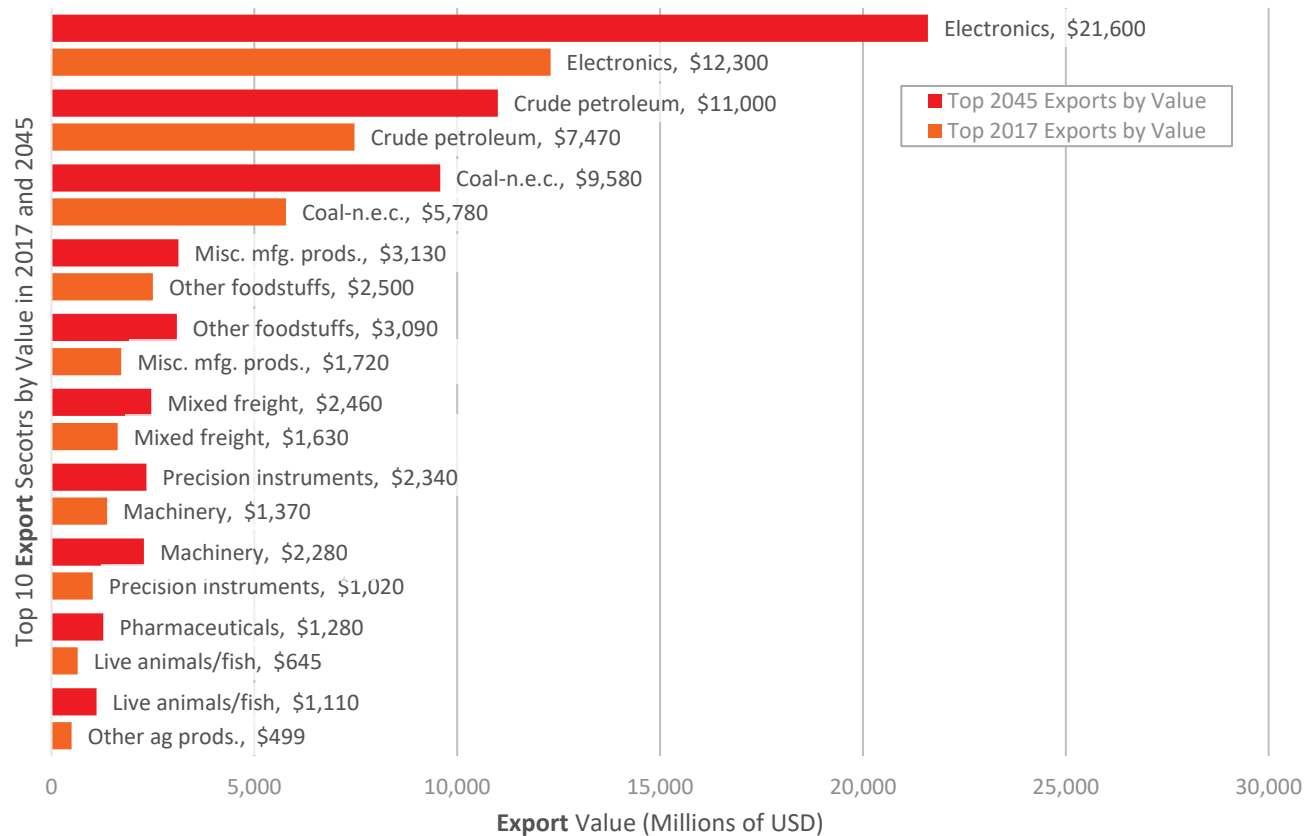
Table 16. Change in top export commodities by tonnage from 2017 to 2045

Export Commodity	Tonnage (2017)	Tonnage (2030)	Tonnage (2045)
Coal n.e.c.	37,599.3	51,067.0	62,425.1
Crude petroleum	23,157.3	36,412.0	34,181.5
Fertilizers	2,164.9	3,284.4	5,088.9
Coal	7,476.9	5,016.9	2,019.7
Nonmetallic minerals	1,579.4	1,914.1	1,829.9
Nonmetal min. prods.	1,308.2	1,283.1	1,768.1
Gasoline	1,303.7	1,544.2	1,393.0
Other foodstuffs	1,115.9	1,245.1	1,417.6
Newsprint/paper	616.8	725.1	981.4
Mixed freight	567.4	659.5	855.6

Source: Freight Analysis Framework 5.2

New Mexico’s top value export commodities in 2017 were electronics, crude petroleum, coal-n.e.c., other foodstuffs, miscellaneous manufacturing products, mixed freight, machinery, precision instruments, live animals and fish, and other agricultural products. By 2045, it is expected that pharmaceuticals will replace other agricultural products as a top export commodity (Figure 26). The largest growth in export commodity value is expected in electronics (+ \$9.3 billion), coal n.e.c. (+ \$3.8. billion), and crude petroleum (+ \$3.5 billion).

Figure 26. Change in top export commodities by value from 2017 to 2045



Source: Freight Analysis Framework 5.2

National Trends

In addition to the GDP, employment, and commodity and mode changes within New Mexico by 2045, there are also significant national trends which will also play a role in determining New Mexico’s freight needs. Some of these trends include the growth in e-commerce, autonomous and connected commercial vehicles (truck automation and platooning), and commercial vehicle electrification.

E-Commerce

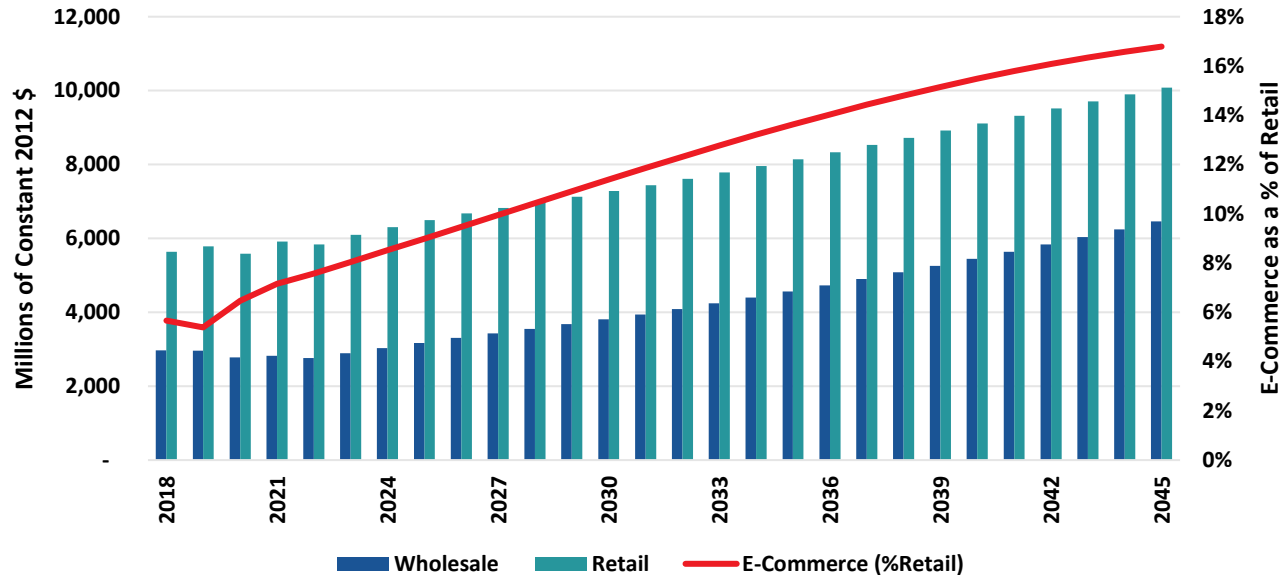
Consumers have become increasingly reliant on the convenience of online ordering and are shifting away from making purchases in traditional brick-and-mortar retail stores (Figure 27). This trend has been further accelerated by the COVID-19 pandemic.

New Mexico has not been isolated from this trend. Regional GDP forecasts project growth in wholesale and retail trade for New Mexico, with expected growth of approximately 66 percent over the next 27 years. These services

are major generators of commercial vehicle traffic. Although some of the added demand will translate into new long-distance freight transporting goods to and from major distribution centers, the bulk will be in local delivery activity door to door, and delivery in dense, urban areas can be a challenge.

The e-commerce share of the broader retail sector is slated to grow at a rapid rate. Although lagging national trends, New Mexico's e-commerce sector is predicted to reach a 17 percent share of retail by 2045, a notable increase from its 2018 share of 5.8 percent. This trend will likely impact airports as high-value, low-volume goods like electronics continue to see high demand.

Figure 27. National growth in wholesale trade, retail trade, and the e-commerce share of retail trade



Source: EBP Analysis of Moody's Analytics Data

Prior to COVID-19, Amazon did not have any warehouses within New Mexico or immediately adjacent to its borders. However, in part due to increased demand, in 2021 Amazon built four new facilities (fulfillment, delivery, and regional sortation centers) near the Albuquerque airport as part of a national facility development surge to keep up with increased demand and added a new fulfillment center near El Paso. Facility location trends follow clear priorities:

- Provide access to large customer bases by placing warehouses in locations with access to areas with higher household income due to the correlation between income and willingness/frequency of engagement in e-commerce; and
- Situate near highways and airports to minimize transportation costs.

Increased demand for e-commerce also creates additional last-mile and logistics considerations. For example, households that pay for expedited delivery can contribute to inefficiencies by reducing the likelihood that packages in each area will be delivered in a cost-effective manner. This comes along with typical last-mile issues where delivery vehicles, transit vehicles, passenger vehicles, pedestrians, and bicyclists create conflict points and safety risks. These challenges are particularly present in urban areas, which also face additional challenges such as on street parking and higher densities of transit stops. As trip patterns shift away from home-based shopping trips and truck deliveries to stores and towards logistics facilities that radiate last-mile deliveries to customers,

roads may not be prepared for new levels of demand, resulting in faster surface deterioration and increased congestion.

Truck Automation & Platooning

Truck automation and platooning technologies are currently being tested and evaluated to establish their safety and cost benefits. As more automation technologies are adopted, the operational efficiencies gained from safer, cost-efficient trucking could allow trucking to compete with rail for longer distance routes.

Automation

In 2020, Torc and Daimler Trucks announced the expansion of their “Level 4” self-driving vehicle test program into New Mexico and established a testing center in Albuquerque. Level 4 represents a high level of independent operation while still requiring a human for complex situations. Autonomous trucking technology has the potential to boost overall freight performance in four areas:

- Increased fuel efficiency by automatically adapting to conditions to optimize speed.
- Increased operational efficiency through integration with back-end machine learning algorithms optimizing operations and reducing downtimes.
- Reduced labor issues and costs by lessening the need for a driver (at least partially), which has the potential of addressing labor shortages of drivers.
- Reduced safety issues (fewer collisions and fatalities) through advanced detection.

The International Council on Clean Transportation (ICCT) conducted a meta-analysis of non-platooning benefits associated with predictive cruise control, adaptive cruise control, forward collision warning, eco-driving, and automated manual transmissions. The largest fuel efficiency improvements were estimated in eco-driving (4 – 11 percent) and predictive cruise control (0 – 5 percent).

The benefits of automation technology are more apparent on roadways where long-haul trucking is more common because cost savings accrue most heavily on longer travel distances, which are also less challenging than operation in congested urban areas. Interstates 40, 10, and 25 in New Mexico represent ideal locations where long-distance trucking could potentially benefit the most from the technology. However, deteriorating infrastructure could impede the adoption of autonomous trucking because the vehicles require roadways in good to very good condition.

Platooning

Truck platooning is a subset of automated trucking in which electronically linked vehicles are placed in tandem at very close proximity resulting in reduced fuel consumption due to reduced wind resistance, (aerodynamic drafting).

The ICCT conducted a meta-analysis of fuel consumption benefits associated with platooning in real-world evaluations, track testing, virtual simulations, and literature reviews. Technologies used included radar, dedicated short-range communication-based (DSRC) vehicle-to-vehicle (V2V) communications, satellite positioning, actuation for vehicle controls, human-machine interfaces, radar collision mitigation systems, front facing cameras, global positioning systems (GPS), vehicle braking and torque control interfaces, driver displays, laser scanners, cruise control, electronic longitudinal control systems, and electronic tow bars. On test tracks, lead vehicles saw a 2 - 10 percent decrease in fuel consumption and platooned vehicles saw an 8.6 - 10.2 percent decrease in fuel consumption. However, the fuel consumption decreases were slightly lower during real-world tests; lead vehicles saw a 0.4 - 4.5 percent decrease in fuel consumption decrease and platooned vehicles saw a 2.8 – 22 percent decrease in fuel consumption.

Legal Challenges of Automation and Platooning

Organizations studying freight movements, such as the American Trucking Research Institute (ATRI), are quick to point out that autonomous trucking requires support from state and federal government. The ICCT identified liability for crashes in which an autonomous truck is involved, state and federal trucking regulations, and traffic laws as challenges to autonomous truck adoption.

As of March 2022, the liability for crashes involving autonomous vehicles has not been addressed. Until the legal system sets a precedent for these crashes and states change their pertinent laws, this remains a challenge for adoption. Finally, trucking regulations have not yet addressed autonomous technology. Pertinent vehicle laws, traffic laws, and trucking regulations will need to change at a state level.

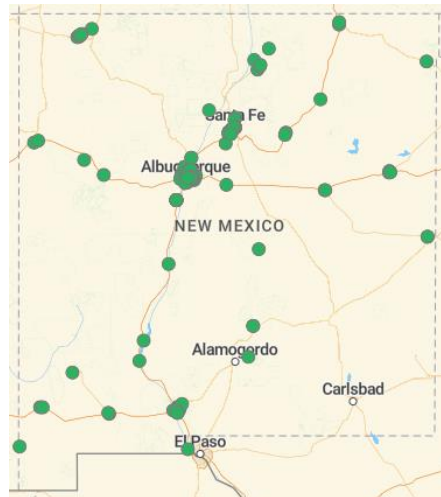
In New Mexico, House Bill 270 was signed by Governor Lujan Grisham and put into effect in 2021. The bill defines autonomous vehicles, creates a legal mechanism to determine where autonomous vehicle testing is permitted within New Mexico, and requires testers to file a five-day advance notice. The bill does not require a testing permit, but does reserve the rights of NMDOT to implement restrictions regarding hours of testing, location, etc. It also requires that vehicle operators or a person working on behalf of the vehicle operators notify local law enforcement in the event of a crash involving an autonomous motor vehicle. HB270 restricts the ability of counties and municipalities to prohibit autonomous motor vehicle use within its boundaries solely based on the vehicle being equipped with an automated driving system.

In addition to vehicle crash laws, following too close to another vehicle is a moving traffic violation. This presents a problem for autonomous trucking because the congestion mitigation and fuel efficiency technology used for truck platooning requires close vehicle proximity.

Electrification

Electric vehicles are penetrating the market with promises of reducing emissions and operating costs. Although currently most electric vehicles are light duty passenger vehicles, research and development of fully electric freight trucks is underway. While electrification promises many benefits including reduced emissions, the transition to a fully electric freight fleet presents challenges. Electric vehicle operation is limited to areas where charging stations already exist or routes that fall within the vehicle's single charge operational range. Charging stations are typically clustered around densely populated areas and major highway corridors. Additionally, even when chargers are available, their power output capacity can limit their usefulness to certain classes of vehicles, especially heavier trucks. Figure 28 highlights the existing electric vehicle charging stations in New Mexico.

Figure 28. New Mexico electric vehicle charging station locations



Source: US Department of Energy: Alternative Fuels Data Center (June 13th, 2022)

Medium and heavy-duty trucks require more power than the maximum output from Direct Current Fast Charging (DCFC) stations. Insufficient charging station output leads to long charging times, which limits their usefulness for trucking, particularly for local deliveries and trips within a 300-mile radius of the average freight vehicle where little to no charging would be available during operation.

For commercial EVs to travel through rural areas, a substantial increase (and investment) in high-capacity charging stations (and associated parking areas) in these rural areas would be required. Concentrations of high output charging stations would require coordination with local utilities to avoid grid strain from fleets charging during peak hours. If fleet charging times are not scheduled during off-peak hours, part of the purported cost savings may be eroded due to peak energy pricing by utility companies as they balance supply and demand.

In accordance with New Mexico climate plans and legislation, New Mexico is pursuing a wide variety of strategies to support the use of clean vehicles, provide the infrastructure necessary for these vehicles, and reduce the overall number of vehicle miles traveled. For example, New Mexico expects to adopt low emission vehicle (LEV) standards that would come into effect in 2023. These rules would limit greenhouse gas emissions from vehicles and require a certain number of new vehicle sales to be zero emission vehicles (ZEVs). Additionally, New Mexico completed its inaugural National Electric Vehicle Infrastructure (NEVI) Plan in 2022 focused on passenger electric vehicle charging locations. According to the NEVI Plan authorized commercial vehicles will also be allowed to use the charging stations. Initially, commercial vehicle use will likely be limited to smaller profile light duty commercial

vans and trucks engaged in localized freight deliveries. However, the NMDOT continues to monitor the advances in battery and charging technologies associated with the electrification of larger heavy-duty freight trucks to better understand the potential impact of commercial vehicle electrification on our freight network and facilities.

Impacts of Expanding Industries & Trends

The IIJA, signed in November 2021, introduced several new programs and sources of funding that will impact freight in New Mexico. Increases in port funding may result in increases in pass-through freight to and from the Port of Los Angeles and the Port of Long Beach, via I-10 and I-40. Better access to broadband internet and clean water may expand the geographic distribution of goods production and delivery locations into more rural locations and tribal areas. Airport funding will help expand capacity at New Mexico's existing facilities and may provide the impetus for projects such as the proposed expansion of Doña Ana County International Jetport at Santa Teresa. Expanded and new funding for electric vehicle charging infrastructure may provide opportunities for freight electrification but will require substantial coordination with local governments regarding land use and opportunities for large commercial vehicle charging.

New designations of critical freight network facilities, military considerations for the Strategic Highway Network (STRAHNET), industry adaptations to emerging trends, a clearer State focus on resiliency to climate change, and a host of other challenges and opportunities will continue to shape the freight industry over the coming decades in New Mexico. These come amid historic labor shortages and mobility that has followed a massive public health crisis that disrupted global supply chains across nearly every industry. This plan serves to help decision makers and industry leaders identify the best paths forward amid complex circumstances as they seek to improve the quality of life of all the State's residents and commerce.

5. System Condition, Performance, and Gap Analysis of the Freight Network

5.1 Introduction

New Mexico's freight network is comprised of highways, rail lines, pipelines, and airports. Together these four transportation modes moved 73 million tons and 85 billion dollars of freight in and out of New Mexico in 2017.^{4F7} New Mexico is served by three interstates (I-10, I-25, and I-40), several US highways and a network of facilities such as rest areas, ports of entry, intermodal transfer locations, freight rail, and weigh stations. State and local roads often serve as first/last mile connectors between national infrastructure and freight origins and destinations.

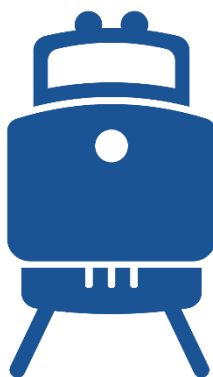
Two Class I and several short-line railroads provide freight rail service in New Mexico, serving high-volume, low-value commodity sectors such as mining. Pipelines also move a substantial volume of goods in the state, but many of these are privately owned and operated by industries such as oil and gas extraction. Thus, they are not treated as extensively in this plan.

Eight New Mexico airports handle air cargo. Albuquerque International Sunport handled approximately 98 percent of total air cargo moved in New Mexico in 2019. Four Corners Regional airport in Farmington handled approximately 1.6 percent of total air freight in the same year. Early data indicates that air cargo may be increasing (see Chapter 4 Economic and Freight Context and Trends). New Mexico's international border crossings in Antelope Wells, Columbus, and Santa Teresa, as well as the nearby El Paso, Texas international border crossing provide freight truck access between Mexico and the US. It is expected that international highway and rail traffic through border crossings will double by 2045.



11,743 lane miles on the National Highway System (NHS)

1,750 bridges and culverts on the NHS



2,207 miles of railroad

2 Class I railroads

5 Class III railroads



8 airports receiving freight

Over **84,000 tons** of freight in 2019

⁷ See FAF 5.2.

5.2 System Condition and Performance of Freight Network

Highways

NMDOT owns and operates 25,062 lane miles of highway and 2,978 bridges. Of these, 11,743 lane miles and 1,750 bridges are part of the National Highway System (NHS). The FAST Act established the “National Highway Freight Network” (NHFN). In New Mexico, the NHFN consists of the following facility designations, mapped in Figure 29:

- **Primary Highway Freight System (PHFS):** the most critical portions of highway for the US freight transportation system, including Interstate and a limited number of non-Interstate facilities.
 - *Total Centerline Miles: 41,518; New Mexico Miles: 1,011*
- **Critical Rural Freight Corridors (CRFCs):** public roads in non-urbanized areas that provide access and connection to the PHFS and Interstates.
 - *Total Centerline Miles: 5,044; New Mexico Miles: 189.9 (2021)*
- **Critical Urban Freight Corridors (CUFCs):** public roads in urbanized areas that provide access and connection to the PHFS and Interstates.
 - *Total Centerline Miles: 2,387; New Mexico Miles: 50.7 (2021)*

The IIJA expanded the eligible mileage for both Critical Urban Freight Corridors (CUFCs) and Critical Rural Freight Corridors (CRFCs). CUFCs are now limited to the greater of 150 miles (up from 75 miles under the FAST Act) or 10 percent of the state’s existing Primary Highway Freight System (PHFS) mileage. According to this definition New Mexico qualifies for up to 150 miles of CUFCs. CRFCs⁸ are now limited to the greater of a maximum of 600 miles or 25 percent of the PHFS mileage. New Mexico currently meets the IIJA definition of a rural state and qualifies for up to 600 miles for CRFCs.

States and MPOs internally coordinate to identify potential CRFCs and CUFCs, respectively. As a follow-up to the freight planning process, New Mexico DOT plans to coordinate with the MPOs throughout the state to identify new or extensions of CUFCs per the IIJA expansion. In addition, as a follow-up to the freight planning process the internal NMDOT Freight Working Group will be consulted to nominate and identify new or extensions of CRFCs throughout rural portions of the state. At present, the most recent FHWA-approved list of Critical Freight Corridors can be found in the New Mexico 2015 Freight Plan 2021 Addenda (Addendum 2), which was approved in December 2021, summarized in Appendix G.

New Mexico’s freight infrastructure for trucking to, from, and passing through the state is dominated by the three interstates. Interstates 10 and 40 are the major east-west facilities, while Interstate 25 travels north to south from the New Mexico/Colorado border to Las Cruces, NM. (Figure 29). Other US routes and NM Highways connect various industries and population centers to other parts of the state and to intermodal facilities. Accompanying the road network itself are adjacent facilities such as weigh stations and rest areas.

Truck traffic is primarily concentrated in the major metropolitan areas of Albuquerque and El Paso. Las Cruces, Farmington, and Santa Fe are secondary generators of truck traffic. Routes such as US 550, US 285, US 70, and NM 136 are emerging as important facilities for key United States-Mexico-Canada Agreement (USMCA) related trade as well as for the petroleum industry. Other industries that contribute significant loads to the NHFN include mining, agriculture, and manufacturing.

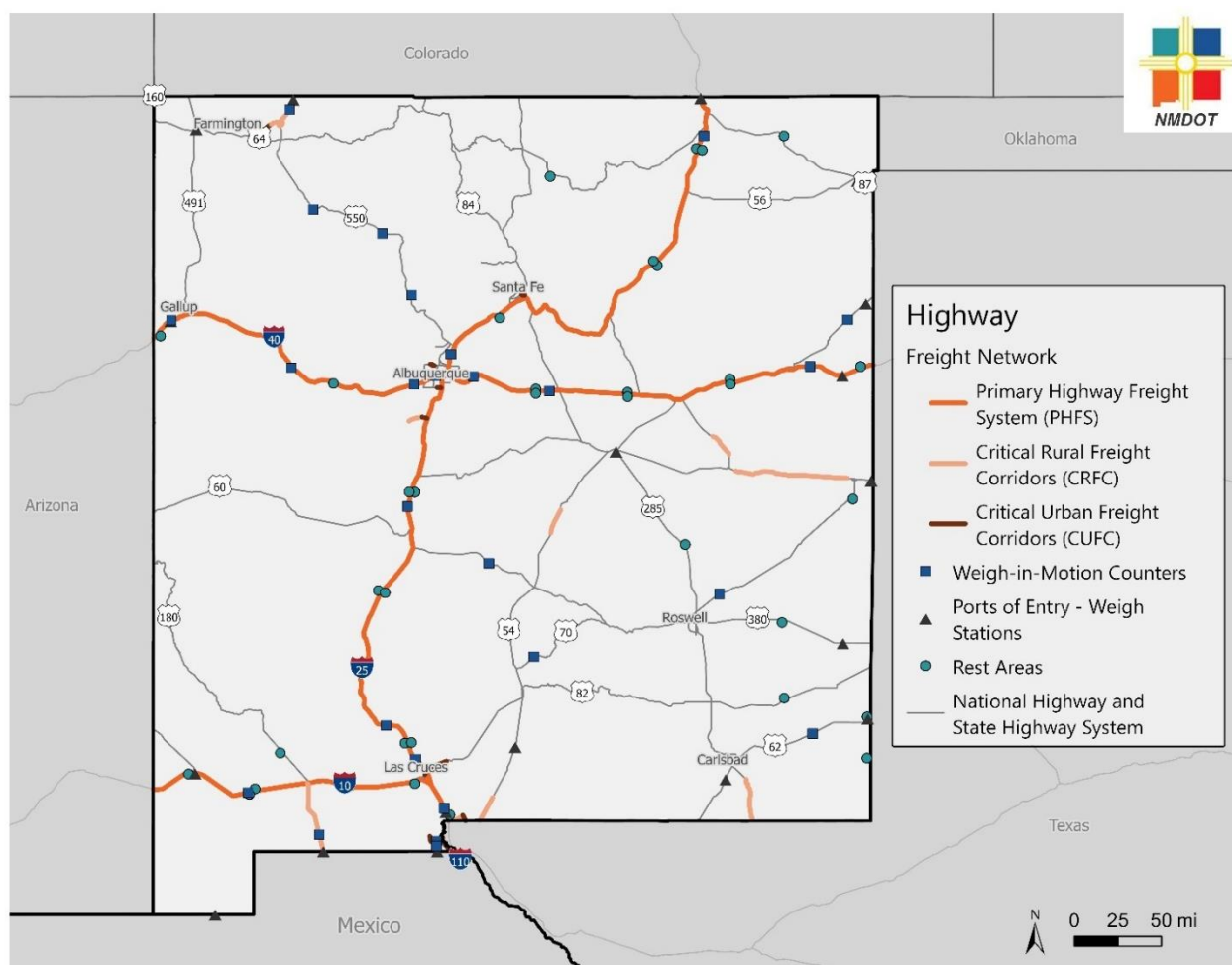
⁸ IIJA Sec. 11114. (1)(B) defines a “Rural State” as “...a State with a population per square mile of area that is less than the national average, based on the 2010 census...”

Highway Movements & Reliability

With its proximity to major west coast ports, a sizable portion of truck traffic passes through the state bound for other destinations. Planning for infrastructure demand must account for New Mexico's "bridge state" status by including forecasts for destinations served by New Mexico freight facilities.

The I-10 Corridor Coalition is one case of how New Mexico is working to address this challenge alongside other planning issues. The coalition consists of the Departments of Transportation from California, Arizona, New Mexico, and Texas. It works towards better multi-jurisdictional coordination, technical and operation improvements along the corridor, and implementing best practices and research findings. One example of this is the Truck Parking Availability System (TPAS), initiated in 2019 and expected to launch in 2023. According to the I-10 Freight Corridor Study, TPAS is expected to have a \$1.38 trillion annual economic impact from an initial investment of just \$13.7 million by improving mobility and safety, reducing damages and emissions, and preventing truck driver losses in earnings and productivity.⁹

Figure 29. National Highway Freight Network in New Mexico



⁹ I-10 Corridor Coalition. (2021). I-10 Corridor Coalition Truck Parking Availability System (TPAS). Retrieved from https://i10connects.com/sites/default/files/2021/04/TPAS-FactSheet_March2021.pdf

NMDOT regularly reports freight-related performance measures to FHWA for Transportation Performance Management (TPM) purposes. Interstate reliability and the Truck Travel Time Reliability Index (TTTR) describe the difference between average travel speeds and free-flow conditions. The Interstate Travel Time Reliability (ITTR) measure begins at the Level of Travel Time Reliability (LOTTR), which is the ratio of 80th percentile travel times to a “normal” travel time (50th percentile) for all vehicles and is calculated for all NHS facilities. Then, person-miles (derived from segment length, annual traffic volumes, and occupancy rates) are summed for all Interstate segments and for segments where LOTTR is below 1.50 during all identified time periods. The ratio of these sums provides the Percent of Interstate Highway Reliable Person-Miles Traveled for the state, see Figure 30. Higher percentages indicate more reliable or consistent travel times on the interstates.

TTTR is calculated as the 95th percentile travel time for trucks divided by the 50th percentile travel time for trucks. For example, a TTTR index of 1.50 represents conditions where truck travel times would be 50 percent longer than expected for normal traffic flow. Put simply, a lower TTTR score means more reliable travel, a higher TTTR less reliable travel. Although lower values indicate better system performance, values near 1 should not be reasonably expected. From 2017 to 2019, TTTR has increased in New Mexico and declined in 2020, while overall interstate reliability has remained more stable to improving in 2020, see Figure 30 and Figure 31.

Figure 30. New Mexico percent of Interstate Highway Reliable Person-Miles Traveled

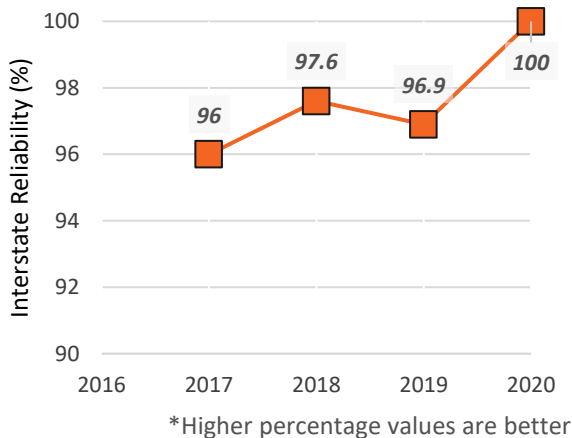
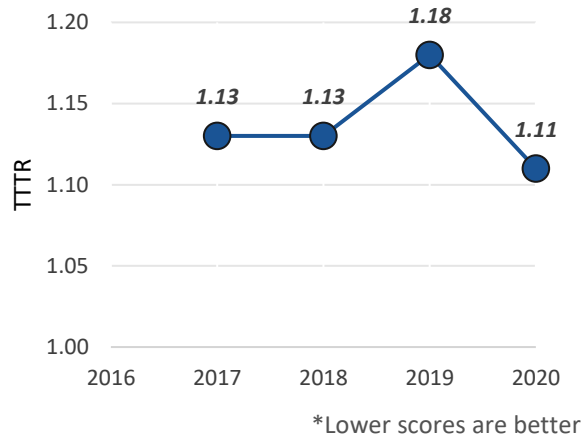


Figure 31. New Mexico Truck Travel Time Reliability Index (TTTR)

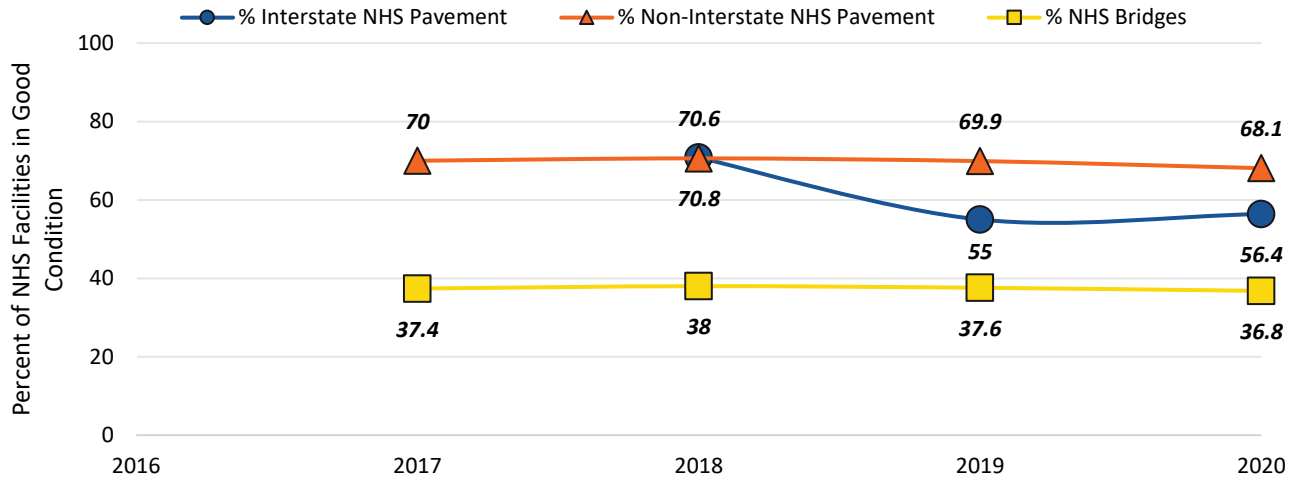


Source: FHWA TPM State Performance Dashboard

Highway Infrastructure Performance

Preserving the state highway system facilities in good or fair condition improves access to national and international trade markets while supporting regional economic development efforts. The National Highway Freight Program (NHFP) is the mechanism used to fund freight-related infrastructure projects and provides funding for NMDOT projects totaling between \$15 million and \$35 million annually.

As of the New Mexico 2019 TAMP, less than 4 percent of both NHS pavement and NHS bridges by deck area are in poor condition. The percent of non-interstate NHS pavement in good condition has remained consistent between 2017 and 2020, whereas the percent of interstate NHS pavement in good condition fell by over 15 percent between 2018 and 2019 and improved slightly in 2020. The percent of NHS bridges in good condition has remained consistent over time, ranging between 36.8 percent and 38 percent (Figure 32).

Figure 32. Federal transportation performance measures for facilities in good condition.

Source: NMDOT Transportation Asset Management Plan, 2019

Highway Safety

According to the National Highway Traffic Safety Administration (NHTSA), the largest share of fatal crashes involving large trucks nationally were on non-Interstate facilities in rural areas during weekday daytime hours. Many factors contribute to safety outcomes, but engineering design and facility maintenance are some of the factors NMDOT can influence. Upgrading NHFN route infrastructure when design standards change and ensuring facilities are maintained to the proper level can help reduce serious injuries and fatalities.

The New Mexico “2019 Annual Traffic Crash Report” notes that heavy trucks were disproportionately represented in traffic fatalities. Heavy trucks were involved in 6.2 percent of all vehicle crashes, yet account for 17.6 percent of all fatalities, the highest it has been in five years. While heavy trucks’ share of crashes rose in 2020 to 7.8 percent, their share of fatalities was lower than the previous three years at 13 percent. It should be noted that the COVID-19 pandemic drastically altered traffic patterns during the summer months of 2020. As social isolation and business closures occurred, demand for local delivery services increased dramatically, travel speeds rose as fewer vehicles were on the road, and higher crash severities followed. Heavy truck-related crashes also impact transportation reliability as these incidents often involve closure or obstruction of multiple lanes, infrastructure damage, cargo spills (including hazardous materials), and higher injury rates.

According to NHTSA in 2019 New Mexico ranked 9th nationally in the percent of large trucks involved in fatal crashes, at 14.0 percent. Wyoming (25.0%), Nebraska (17.0%), Vermont (16.2%), North Dakota (15.6%), Kansas (15.1%), Iowa (14.5%), Montana (14.2%), and Idaho (14.1%) lead the country in highest percentage of large trucks involved in fatal crashes. Over the 2017-2019 period, fatalities increased while serious injuries decreased. Over the same years, the number of fatalities and serious injuries remained relatively steady by comparison. Rates are adjusted using miles traveled by vehicles on New Mexico roads during the year.

Figure 33. Number of Fatalities, 2013-2020

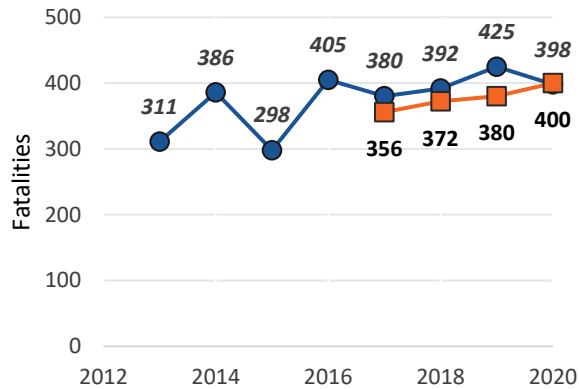


Figure 34. Fatality Rate per 100 million Vehicle Miles Traveled, 2013-2020

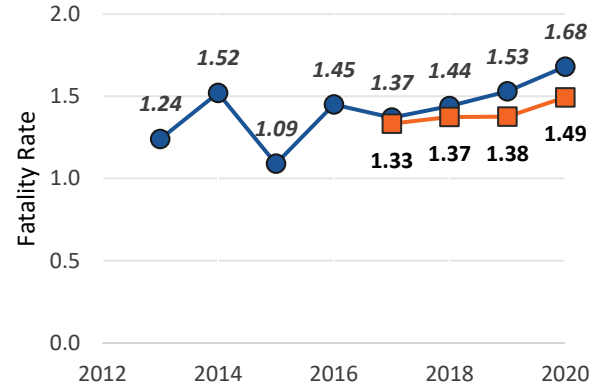


Figure 35. Number of Serious Injuries, 2013-2020

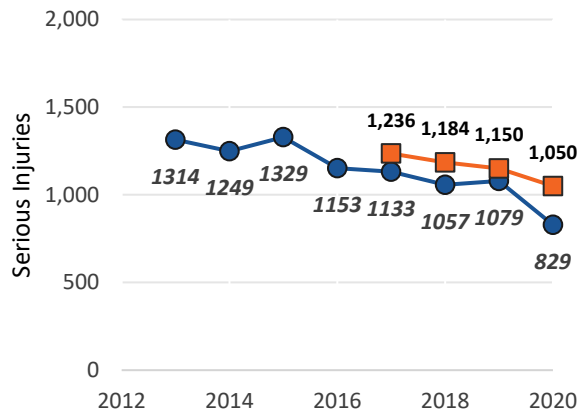


Figure 36. Rate of Serious Injuries per 100 million Vehicle Miles Traveled, 2013-2020

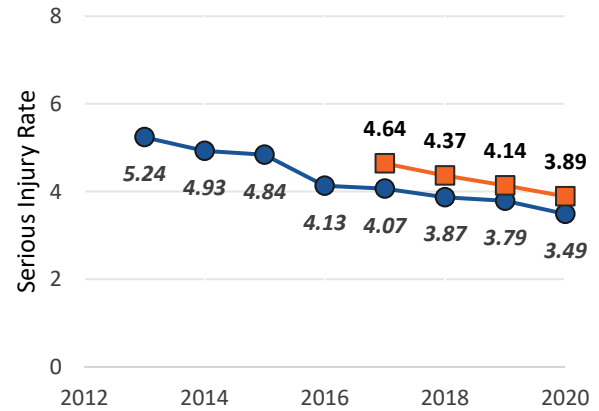
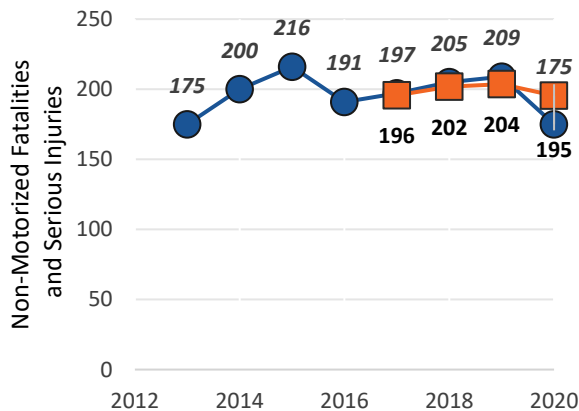
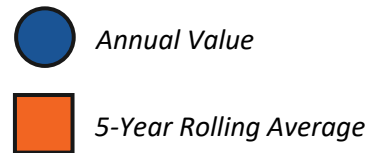


Figure 37. Number of Non-Motorized Fatalities and Serious Injuries, 2013-2020



Legend



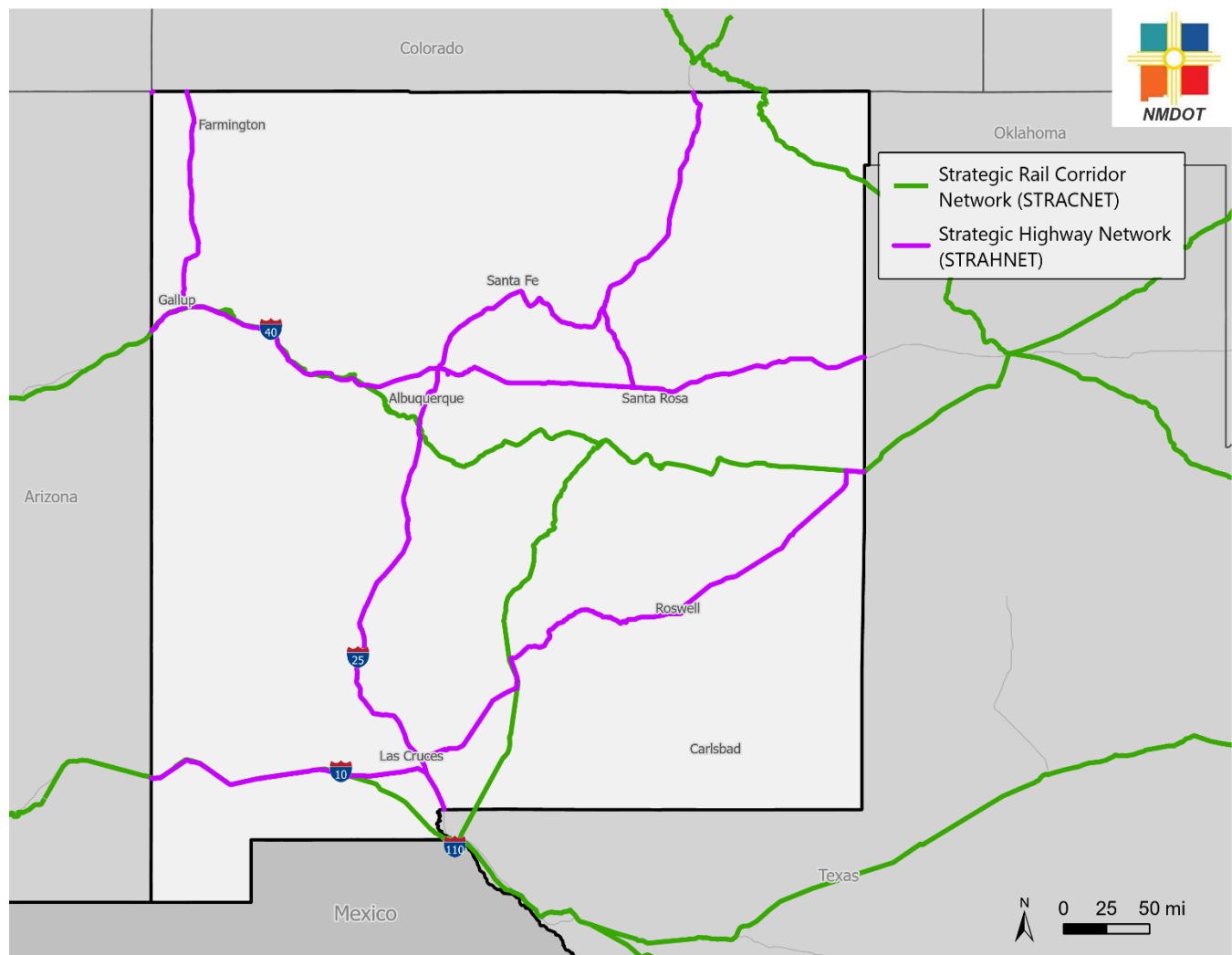
Source: FHWA TPM State Performance Dashboard

Military Assets

The US DOD designates roadways and rail corridors in the United States as part of the STRAHNET and Strategic Rail Corridor Network (STRACNET), both of which are considered necessary for the active mobilization of troops and supplies and their peacetime movements. As of 2002, STRAHNET consisted of 62,791 miles of roadway nationally (Figure 38). In New Mexico, portions of Interstates 10, 25, and 40 as well as approximately 450 miles of non-interstate routes are part of STRAHNET. The non-interstate routes consist of the following facilities:

- US 160 from the Colorado/New Mexico border to the northwest corner of the Arizona/New Mexico border
- US 491 from the Colorado/New Mexico border south to I-40 in Gallup
- US 84 from I-25 in Las Vegas south to I-40
- US 70 from I-25 at Las Cruces to US 60/70 in Clovis and then east to the Texas/New Mexico border

Figure 38. STRACNET and STRAHNET



Source: USDOT FRA GIS

Important military installations in the state are the US Army White Sands Missile Range near Las Cruces and Kirtland Air Force Base near Albuquerque.

New Opportunities

The I-10 Corridor Coalition is a voluntary partnership that began in 2016 between the state Departments of Transportation for California, Arizona, New Mexico, and Texas. The coalition aims to leverage shared resources and economies of scale to prepare for and adapt to emerging technologies and challenges while also employing joint expertise to make best practice improvements to the interstate facility.

In 2019, the New Mexico legislature passed House Bill (HB) 694 that established the Transportation Project Fund (TPF). The TPF is a recurring competitive grant program focused on local oriented transportation projects. Local public agencies and tribal entities are eligible to apply for TPF funding. The funding for fiscal year (FY) 2022 was \$167 million. The estimated amount of funding available for FY23 is \$46 million. In future fiscal years, the base amount available is estimated to be approximately \$40 million per year from the program's internal funding mechanisms. The legislature in past years has added to this baseline amount with General Funds. The bill defines a "local government transportation project" as "environmental and other studies, planning, design, construction and acquisition of rights of way necessary for the development of transportation infrastructure in a county or municipality" and "transportation infrastructure" as "highways, streets, roadways, bridges, crossing structures and parking facilities, including all areas for vehicular use for travel, ingress, egress and parking". As local and tribal governments identify aspects of the transportation network that are experiencing increased freight demand, this fund provides a way for those organizations to better address their community's first mile/last mile freight needs.

Driven by Governor Lujan Grisham's Executive Order 2019-003, "Executive Order on Addressing Climate Change and Energy Waste Prevention", New Mexico has also begun developing robust climate action plans, strategies, and organizations to help mitigate the impact of climate change on the state and its residents. In New Mexico's 2020 Climate Change Report, electrifying the transportation system is a major point of interest, as new vehicles will need to be advertised, purchased, and supported through new charging infrastructure. Between participating in efforts to support electrification and promoting measures to reduce overall vehicle miles traveled, the freight industry can play a leading role in reducing New Mexico's carbon footprint without sacrificing efficiency or effectiveness. Freight electrification is further discussed in Chapter 4, Economic and Freight Context and Trends.

Governor Lujan Grisham has also recently highlighted the impact of the IIJA funding for New Mexico. According to the White House, this will include the following items related to the state's freight infrastructure.

- \$2.5 billion over five years for federal-aid highway apportioned programs
- \$225 million over five years for bridge replacement and repairs
- At least \$366 million over five years to improve public transportation options
- \$38 million over five years to protect against wildfires
- \$13 million to protect against cyberattacks
- \$38 million over five years to support the expansion of an EV charging network in the state
- Approximately \$90 million over five years for infrastructure development for airports

NMDOT can use these resources and apply for other federal competitive grant funding opportunities for freight related projects while advancing NMDOT goals. Some examples are included below.

- \$33 million over five years to reduce commercial motor vehicle crashes available to New Mexico
- \$10 billion for rail improvements and safety grants
- \$5.5 billion for grade crossing safety improvements

- \$14 billion for projects of regional or national significance
- \$8.7 billion to increase transportation system resilience

Freight Rail System

The New Mexico rail system consists of 2,207 miles of railroad as detailed in Table 17. BNSF Railway (BNSF) and Union Pacific (UP) are considered Class I Railroads and collectively own 2,302 miles (approximately 77 percent) and operate the two major transcontinental corridors that pass-through New Mexico. BNSF also has trackage rights to the New Mexico Rail Runner Express (NMRX) commuter rail between Albuquerque and Lamy. Class III or “Short-line” railroads own 7.6 percent of the New Mexico rail network and provide rail freight connectivity for local industries (Figure 39). The rail system also includes three intermodal ramps, six major railyards, and two automotive ramps. BNSF has also identified three optimal rail-served potential sites for future development in Gallup, Los Lunas, and Clovis as part of its “Site Certification Program.” Additionally, the Navajo Mine line, which has no connection to the national rail network, operates on a 13.8-mile track and transports coal in the northwest part of the State.

Figure 39. Freight railroads in New Mexico

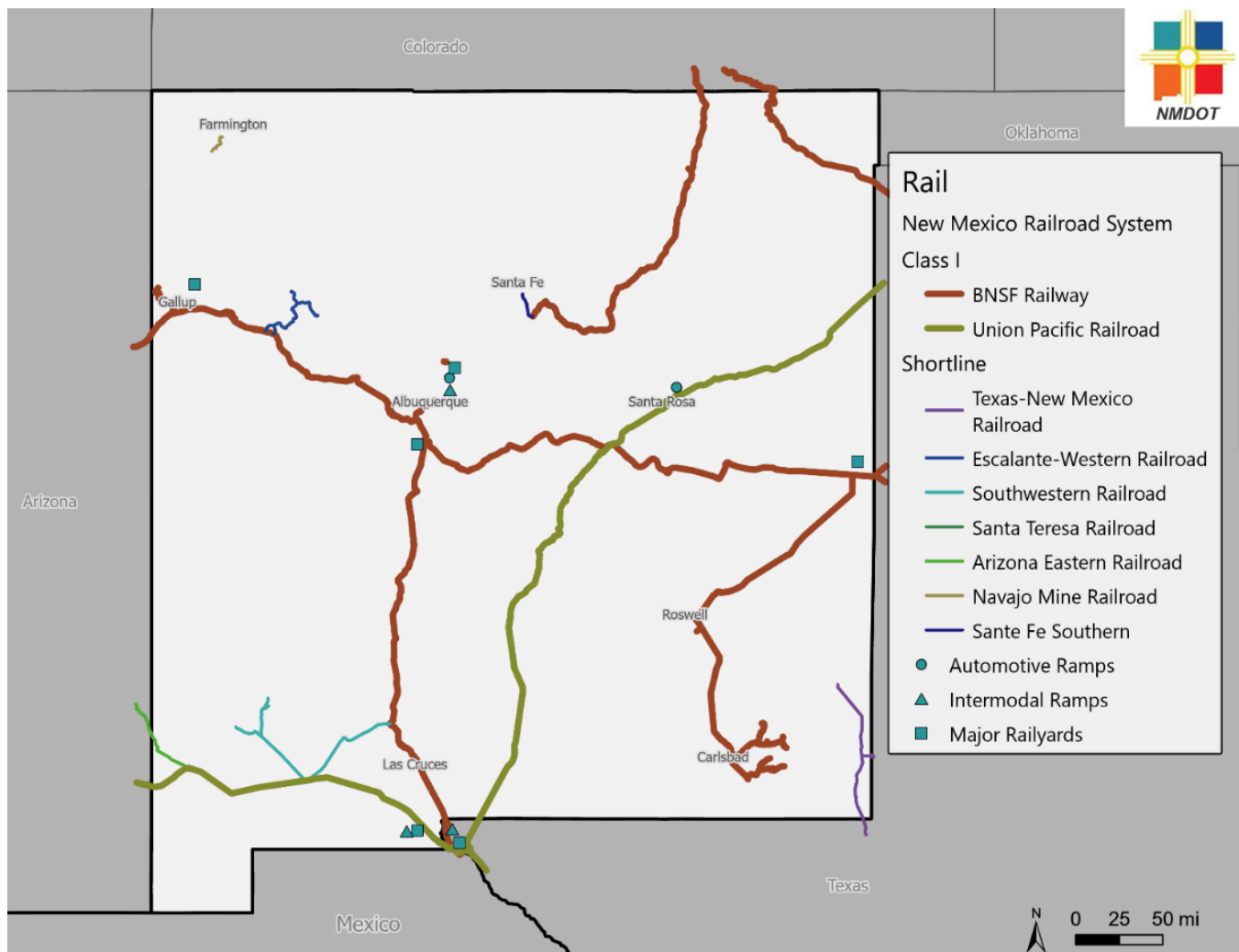


Table 17. Mileage Owned and Operated by Railroads in New Mexico

Railroads	Miles Owned	Leased / Operated under Contract	Trackage Rights	Total Miles Operated
<i>Class I Railroads</i>	<i>1,703</i>		<i>599</i>	<i>2,302</i>
BNSF Railway	1,171		514	1,685.5
Union Pacific Railroad	532		85	616.6
<i>Class III Railroads</i>	<i>167</i>	<i>69</i>	<i>33</i>	<i>270</i>
Arizona Eastern Railway	25		27	52
Santa Fe Southern Railway	0.3	13	4	18
Santa Teresa Southern Railroad ¹⁰		3		3
Southwestern Railroad	66	53	2	121
Texas & New Mexico Railway	76			76
<i>Private Railroads</i>	<i>17</i>			<i>17</i>
Escalante-Western Railway	4			4
Navajo Mine Railroad	13			13
<i>Passenger/Tourist Railroads</i>	<i>32</i>	<i>97</i>	<i>596</i>	<i>749</i>
Amtrak			596	596
Cumbres & Toltec Scenic RR ¹¹	32			32
Rail Runner Express ¹²		121		121
City of Santa Fe	0.7			
NMDOT Lines	133			
Total Miles	2,207	166	1,228	3,338

Source: New Mexico DOT Rail Bureau, March 2022

¹⁰ Mileage in an industrial park.¹¹ C&TS route mileage is owned almost evenly between the states of Colorado and New Mexico.¹² Showing miles owned by NMDOT and leased for operation of Rail Runner Express.

Rail Capacity and Operations Analysis

For New Mexico's Class I and short-line railroads, three major factors dictate capacity and level of service:

- **Number of Tracks** – There are 2,207 miles of rail lines in New Mexico. Roughly 73 percent of New Mexico rail miles are single tracked with sidings for trains to pass. Double tracked freight facilities include the Gallup Subdivision (BNSF, 176 miles), the Clovis Subdivision (BNSF, 242 miles), and the Lordsburg Subdivision (UP, 168 miles).
- **Control System** – Traffic control and signal technology types in use in New Mexico include Centralized Traffic Control (CTC), Automatic Block Signaling (ABS), and manual (including Block Register Territory and Track Warrant Control).
- **Train Type/Mix** – Through trains represent most of the rail traffic in the state. Rail to truck and truck to rail Intermodal container lift operations occur at the Albuquerque Intermodal Facility, the Union Pacific Santa Theresa Intermodal Terminal in Doña Ana County, and the El Paso Transportation Hub Intermodal Terminal.

In addition to these three major factors, bulk transload facilities, which provide storage and processing services, have an impact on capacity and level of service for Class I and short-line railroads. Precision Terminal Logistics, located in Loving, operates on the BNSF rail line, and holds 250 spots for crude oil and frac sand.

Rail System Safety

Table 18 reports rail safety statistics for 2018-2021 according to the FRA's Office of Safety. Incidents are primarily concentrated in Curry, Hidalgo, and McKinley, counties.

Table 18. Federal Railroad Administration Accident Trends 2018-2021

Statistic	National		New Mexico	
Train Accidents (excluding Highway-Rail Crossings (HRCs))	7,242		75	
Total HRC Incidents	8,501		36	
	Fatal	Non-fatal	Fatal	Non-fatal
Total Casualties	3,311	27,582	26	157
Total HRC Incident Casualties	984	3,034	4	15
Trespasser Casualties	2,191	2,108	20	16

Source: FRA Office of Safety Statistics

Rail Institutional Relationships

The NMDOT Rail Bureau is responsible for overseeing New Mexico's rail assets and managing all other rail-related responsibilities:

- Provide support for commuter rail planning and operations for existing and proposed passenger rail service.
- Prepare and update the New Mexico State Rail Plan.
- Manage the inspection, maintenance, and improvement of NMDOT-owned railroad property.
- Apply for and administer FRA grants.
- Manage the statewide Highway-Rail Grade Crossing Safety Improvement Program.
- Manage the permit process for new utility or roadway crossings within NMDOT-owned railroad property.
- Manage the permit process for temporary occupancy of NMDOT-owned railroad property such as film production, construction access, or environmental monitoring/abatement.

The Rail Bureau engages several other organizations in rail-related decision making: the Public Regulation Commission, which enforces railroad safety; the Rio Metro Regional Transit District (Rio Metro) which manages the Rail Runner under a Memorandum of Agreement with NMDOT; private railroad companies; and landowners with whom the State negotiates new line or facility agreements.

As part of an update to the State Rail Plan, the vision for New Mexico's rail network is: "A fully integrated and safe multimodal rail system that provides efficient passenger services to, from, and within the state; provides a competitive option for New Mexico shippers; is a vital component of the national transportation network; and supports sustainable, inclusive economic development statewide."

The vision is supported by four key goals which are aligned with the vision and various objectives to realize its rail service vision for New Mexico:

- Support economic growth and development – NMDOT objectives include promoting rail related tourism and linking rail investments to strategies that support economic growth.
- Improve railroad safety and security – NMDOT objective include supporting implementation of Positive Train Control (PTC) on NMDOT trackage and continuing improvements for safety at highway-rail at-grade crossings.
- Maintain railroad assets in a state of good repair – NMDOT objectives include supporting the state's small railroads in achieving a state of good repair and improved operating conditions, including crossing safety.
- Promote efficient passenger rail service – NMDOT objectives include support for Amtrak route and station improvements and Rail Runner service enhancements.

Aviation

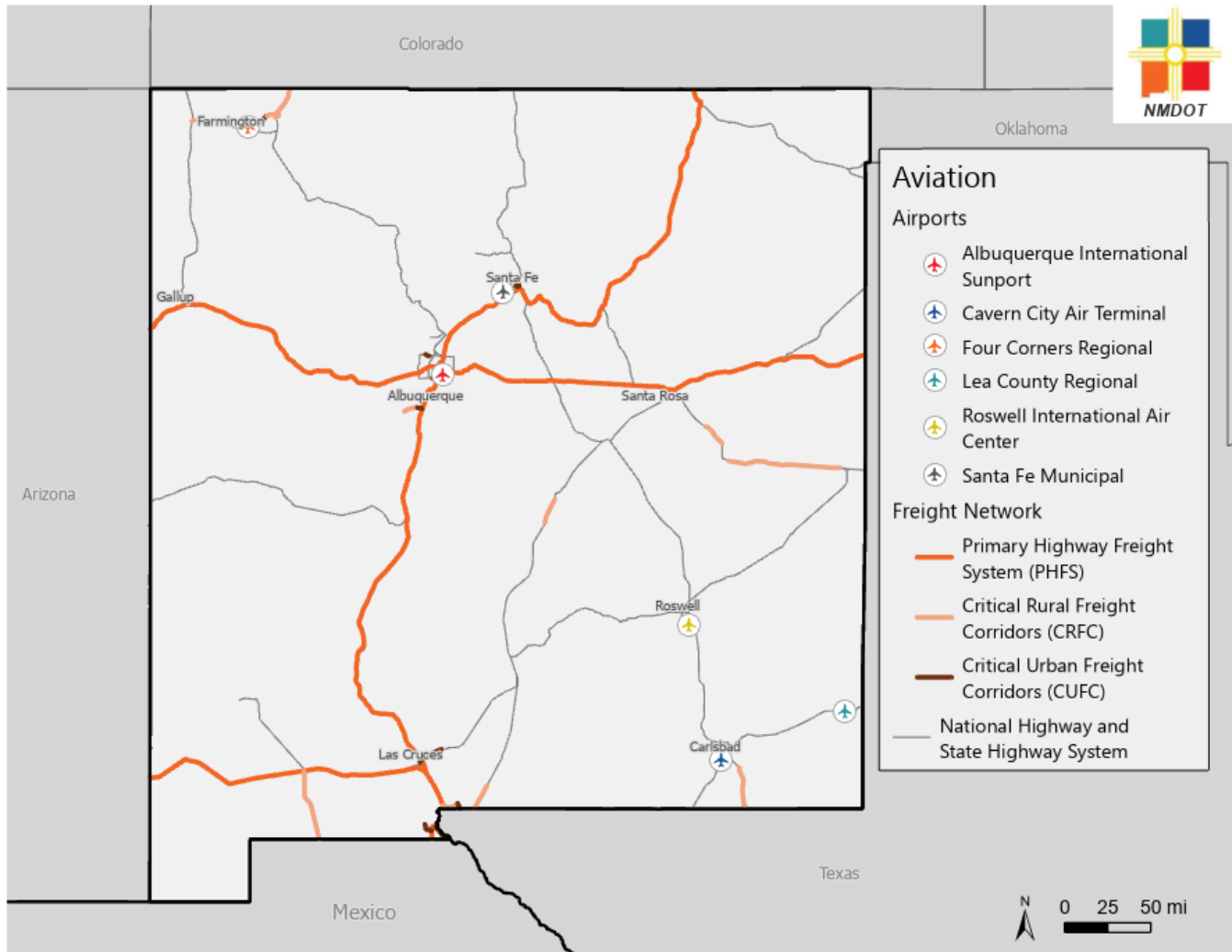
The NMDOT Aviation Division supports aviation in the state through grants which support construction, development, maintenance, and promotion of air service. Additionally, NMDOT provides planning and technical support, registers and licenses aircraft and dealers, and promotes aviation safety and education. New Mexico has 56 public airports. Albuquerque International Sunport is the only large/medium hub as defined by the National Plan of Integrated Airport Systems (NPIAS). Santa Fe Municipal, Roswell International Air Center, and Lea County Regional airports are classified as small/non-hub, and New Mexico's remaining airports are classified as either regional or local. In total, New Mexico's airports have 98 total runways ranging from 2,442 to 13,793 feet long. In 2020, 59 percent of the airport runways in New Mexico were in satisfactory or better condition, and three minor safety incidents involving commercial pilots were reported to the Federal Aviation Administration (FAA).

Albuquerque International Sunport handles most air freight in the state, with FedEx and UPS moving over 82,000 tons (97.7%) in 2019 according to the BTS. Although Albuquerque International Sunport is the primary air freight carrier, there are several other commercial and general aviation airports within state boundaries which carry small to moderate amounts of air cargo. Farmington's Four Corners Regional Airport processed the next highest volume by weight at about 1,300 tons (1.6%), and all other airports recorded about 575 tons or less than one percent of all air cargo moved in New Mexico (Figure 40).

The Albuquerque Sunport has continued to expand its cargo capacity following FedEx's completion of a nearly 100,000 square-foot facility in 2019 and as Amazon develops a 31,000 square-foot facility nearby. In the southern portion of the State, the Doña Ana County International Jetport's "Airport Multi-Modal Master Plan" (2017) identified a long-term planning proposal to expand a second runway to provide air cargo capacity; however, full funding has not been secured for this future project proposal as of the writing of this plan.

Although El Paso International Airport is not within State boundaries, it is the primary passenger and freight airport for the southern portion of the state, including Las Cruces. In 2019, the airport received 108,000 tons of freight (~48,000 originating; ~59,000 arriving). This represents 25 percent increase from the 2014 tonnage reported in the last New Mexico freight plan. DHL, FedEx, and UPS operate out of El Paso International.

Figure 40. Commercial airports in New Mexico



5.3 Gap Analysis

The following gap analysis identifies freight needs, specifically those related to safety and bottlenecks. Needs related to truck parking and international ports of entry are addressed in subsequent chapters.

Stakeholder Engagement

The second FAC meeting was held on July 15th, 2022 – after draft goal development. At this meeting, the project team asked the FAC seven questions to gain insight into New Mexico’s freight system needs. The two questions related to needs and recurring themes in responses are outlined in Table 19.

Table 19. Questions and Response Themes from FAC Meeting #2 (July 19, 2022)

Question	Response Themes
<i>What safety and/or security system needs exist on the NM Freight system?</i>	<p><u>Truck Parking</u>: setting truck parking capacity on public parking rest areas, prohibiting truck parking on ramps and along roadways unless there is an emergency, matching hours of service requirements with provision of safe truck parking</p> <p><u>Partnerships and Collaboration</u>: sharing information between states (i.e., data, security, best practices), including NM Trucking Association in design-related input</p> <p><u>Infrastructure</u>: deteriorated road surface conditions that lead to vehicle control issues, tire shreds from truck tire blowouts</p> <p><u>Other</u>: distracted driving, susceptibility of traffic control devices to cyber security attacks, unnecessary or outdated at-grade rail crossings, insufficient port of entry and weigh stations to manage illegal freight</p>
<i>What issues or needs exist at the international ports of entry?</i>	<p><u>Facility Expansion</u>: Santa Teresa POE expansion will require coordination with other facilities</p> <p><u>Wait Times</u>: assuring acceptable wait times for commodities that suffer time-related quality impacts (i.e., produce)</p> <p><u>Job Creation</u>: full-service facilities could support job creation</p> <p><u>Influence</u>: ports of entry operate similar to border patrol stations and their operations are outside of NMDOT’s range of influence</p>

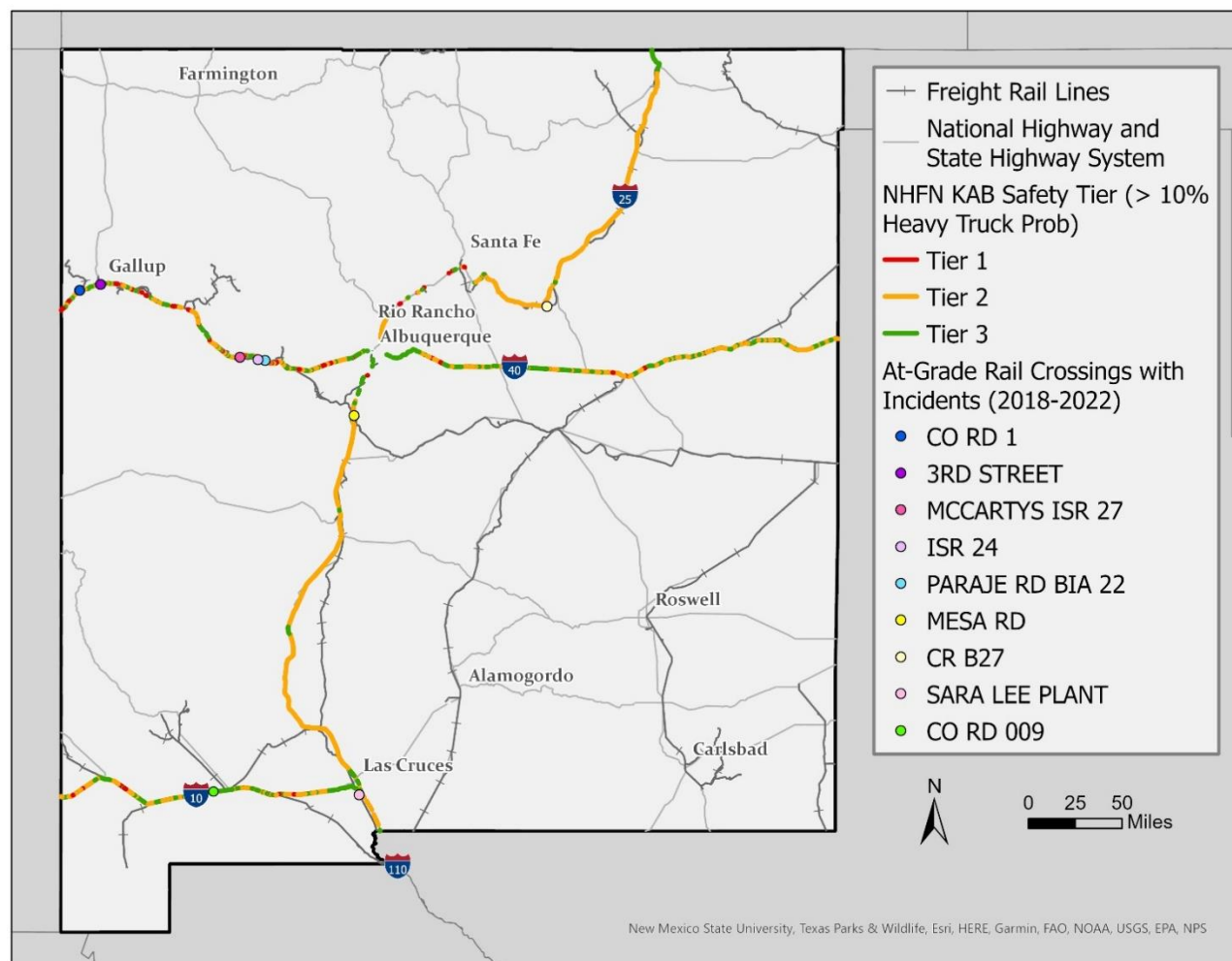
Safety Needs

New Mexico’s 2021 Highway Safety Plan presents strategies and projects that will reduce crashes, fatalities, and injuries throughout the state. This plan notes that the number of crashes involving heavy trucks and their associated fatality rate have been increasing. In 2018, heavy trucks were involved in 5.7 percent of all crashes and 15.3 percent of all fatalities.

The fatal and severe injury (KAB) classification system scores incidents where an individual was killed (K), incapacitated and carried from the scene (A), or visibly injured (B). These safety tiers can help prioritize freight projects that improve freight safety. Figure 41 shows the KAB scoring for NHFN segments with a greater than 10 percent probability of experiencing a heavy truck crash, as well as the locations of nine at-grade rail crossings with crash incidents between 2018 and 2022. At-grade crossings are intersections where a highway crosses a railroad at-grade. At-grade crossings present a safety risk to vehicles, bikers, and pedestrians when crossings lack the

proper safety mechanisms like bells, flashing lights, gates, crossbucks, yield signs, stop signs, and pavement markings. The majority of the NHFN is identified as safety Tier 2 based off the 2021 NMDOT Interstate Networking Screening. Network Screening is an American Association of State Highway and Transportation Officials (AASHTO) Highway Safety Manual tool for identifying roadway segments with high potential for safety improvement. Tier 1 roadway segments have the highest potential for safety improvement and Tier 3 has the lowest potential for safety improvement. Additional safety topics, including a truck parking and international crossing gap analysis will be addressed in subsequent chapters in greater detail.

Figure 41. KAB Safety Tier Map



Bottleneck Analysis

Federal regulations define freight bottlenecks as “any highway segment identified by a State DOT to have constraints that significantly affect freight mobility and reliability.” New Mexico Department of Transportation’s (NMDOT) focus was to identify bottlenecks that have the greatest impact on the flow of interstate freight commerce. To identify freight bottlenecks on the New Mexico highway system, NMDOT developed a data-driven approach informed by input from its internal Freight Working Group (FWG) to screen for bottleneck locations. NMDOT also gathered feedback, validation, and suggestions from external stakeholders via the Freight Advisory Committee (FAC) and evaluated all potential bottlenecks to determine a prioritized list. Finally, NMDOT examined

each potential location in detail to identify the underlying cause(s) of the bottleneck and to determine which locations should be included in NMDOT's final list of bottlenecks.

As a first step, NMDOT established an empirical methodology to identify an initial list of potential bottlenecks. Six criteria were used to identify the initial bottleneck locations based on freight congestion and freight importance. The methodology and criteria used for initial bottleneck identification are summarized below:

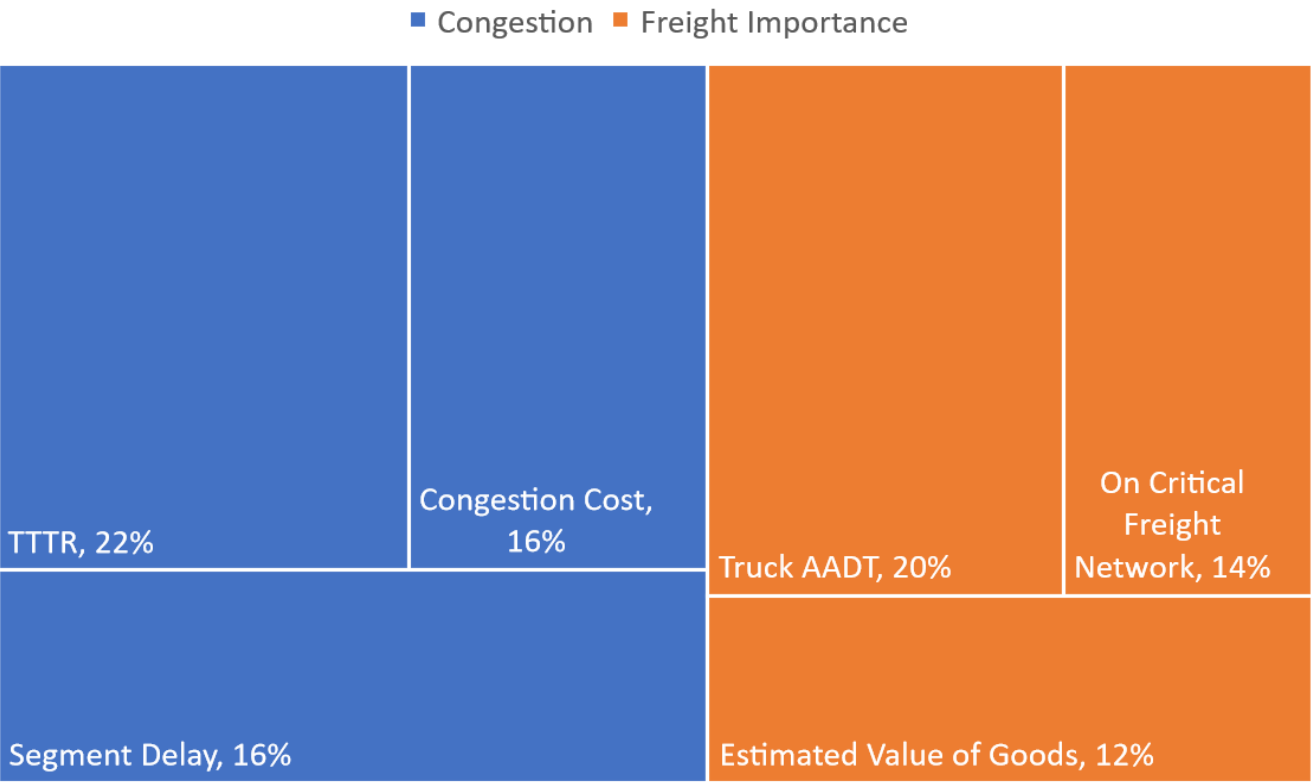
- **Congestion:** How congested is each segment?
 - **Non-Recurring Congestion**
 - **Truck Travel Time Reliability (TTTR) Index:**
 - Relevance: TTTR is a measure of the reliability of a given highway segment for truck traffic. It is calculated by dividing the 95th percentile truck travel time (i.e., the time it takes to travel the length of a road segment) by the 50th percentile truck travel time. TTTR indicates how predictable travel times on a road segment are and is an estimate of the extent of unexpected delays. Commercial drivers who plan to drive on road segments which have a high TTTR must estimate a time cushion or buffer to account for the variability (unreliability) of the time it might take to get to their destination, and often might arrive early or late.
 - Data source: National Performance Management Research Data Set (NPMRDS)
- **Recurring Congestion**
 - **Segment Delay:**
 - Relevance: Segment delay is an estimate of the extra time vehicles spent traveling due to congestion, or the total amount of time all vehicles on the segment were delayed. Segment delay compares actual speeds to estimated free flow speeds on each highway segment. Segment delay indicates locations with reoccurring congestion such as peak hour traffic or locations with limited capacity.
 - Data source: NPMRDS
 - **Congestion Cost (Annualized Cost of Congestion of Segment):**
 - Relevance: The annualized cost of congestion on each segment is the estimated cost of delay experienced by commercial drivers because of congestion each year including factors such as fuel, lease or purchase payments, repairs and maintenance, insurance, permits and licenses, tires, tolls, and driver wages and benefits.
 - Data source: NPMRDS and the Texas A&M Transportation Institute (TTI)
- **Freight Importance:** How important is each segment for highway freight movement?
 - **Truck AADT (Truck Average Annual Daily Traffic):**
 - Relevance: Truck AADT is an estimate of how many single and combination unit trucks traveled on each segment, on average, each day. The number of trucks traveling on a highway segment give an indication of whether that location is frequently used by commercial vehicles.
 - Data source: Highway Performance Management System (HPMS)
 - **On Critical Freight Network:**
 - Relevance: New Mexico has identified Critical Urban and Rural Freight Corridors (CUFC and CRFC) which provide important highway freight connections in New Mexico beyond the Primary Highway Freight System (PHFS). Segments which are designated as CUFC or

CRFC are important to highway freight movement in New Mexico, although they may not have as high of truck AADT as the PHFS.

- Data source: New Mexico Department of Transportation
- **Estimated Value of Goods:**
 - Relevance: The Federal Highway Administration (FHWA) produces the Freight Analysis Framework which estimates tonnage and value of goods traveling on freight modes throughout the United States. The estimated value of goods moved on each segment can indicate which locations are still important to freight due to the higher-value, lower-volume goods being moved, which may not be captured by the Truck AADT measure.
 - Data source: Freight Analysis Framework 5 (FAF5), FHWA

Using an online survey, the FWG provided input on the relative importance or weight of each criterion used to identify New Mexico’s bottlenecks, the results of which are shown in Figure 42.

Figure 42: Bottleneck Criteria Weights

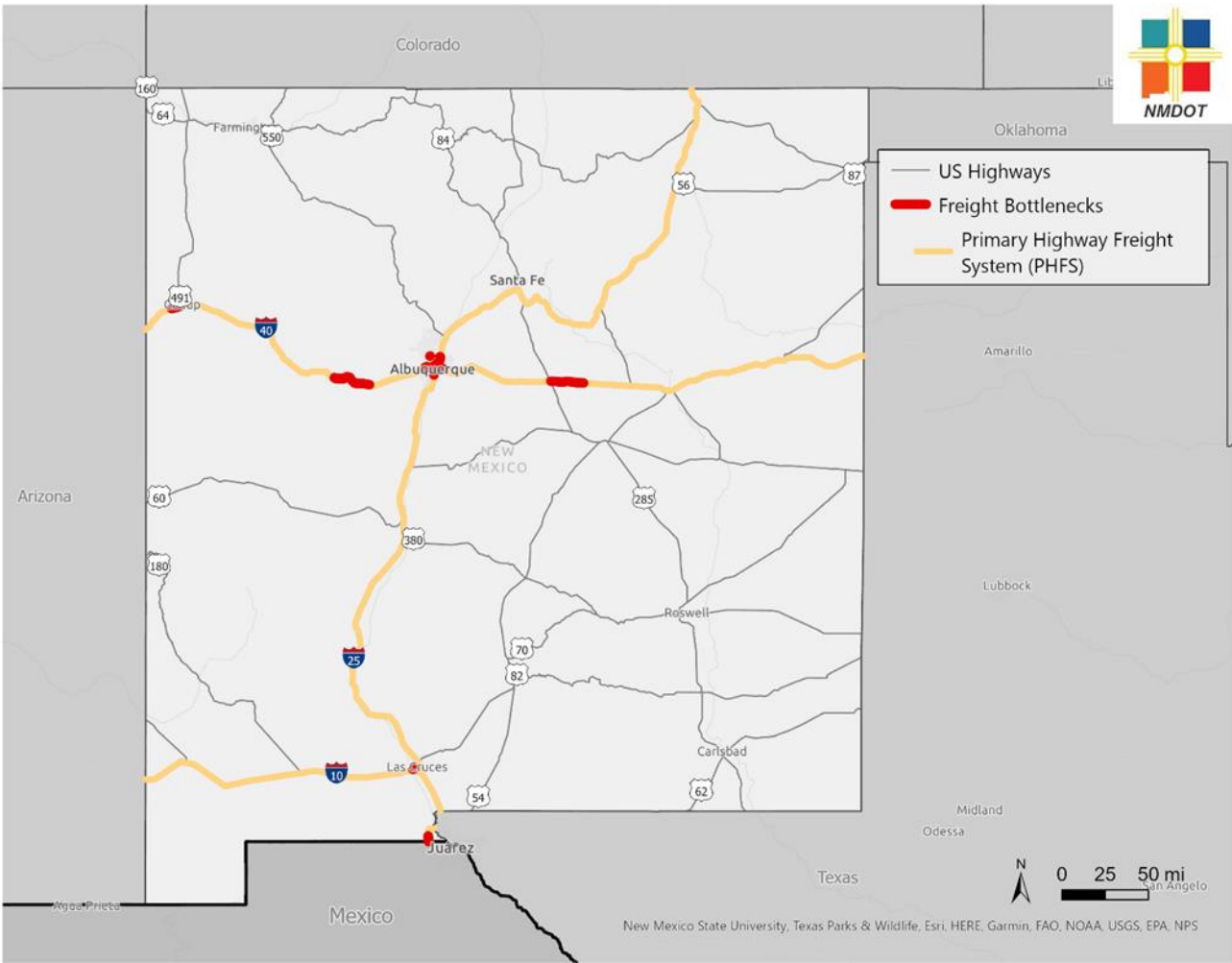


NMDOT normalized the values of each criterion (from 0 to 1), applied the criteria weights to the normalized values, and summed the products to develop an initial score for each segment. The segments with the highest scores (ranging from .2 to .37) were included on an initial list of data-identified bottlenecks; contiguous segments which scored above the .2 threshold were combined into one bottleneck for the purposes of initial evaluation.

The FAC evaluated the initial list and map of 11 data-identified bottlenecks as part of its virtual meeting on July 15, 2022. FAC members responded to poll questions confirming the proposed bottleneck locations and suggested several additional locations for NMDOT to review and consider as bottlenecks. NMDOT conducted

sensitivity testing and lowered the initial bottleneck analysis threshold to capture FAC suggestions for additional freight bottleneck locations, and then individually reviewed each candidate bottleneck to determine whether it was a reoccurring freight bottleneck impacting interstate freight commerce, or whether it may have been caused by other factors, such as delays due to construction projects or road grades that naturally reduce the speed of trucks. The final locations of reoccurring freight bottleneck locations impeding interstate freight commerce are illustrated in Figure 43.

Figure 43: New Mexico Freight Bottlenecks



The list of reoccurring freight bottleneck locations impeding interstate freight commerce are described in Table 20, including each location’s HPMS Route ID, approximate mileposts, and average values (if available) for a selection of the bottleneck criteria that the FWG weighted most highly to illustrate whether the bottleneck is primarily a result of high truck volumes, unreliability, or congestion (or a combination).

Table 20: Prioritized Bottleneck Locations

Rank	Description (Approximate Mileposts)	HPMS Route ID	AADT	Truck AADT	TTTR	Annual Congestion Cost
1	NM 136 Pete Domenici Blvd SB MP 0-3	NM136M	5,879	251	10.15	Not available
2	NM 342 W Amador Ave between 188 and I-10	FL5614M	10,586	278	8.08	Not available
3	I-25 Southbound MP 228-232	I25M	191,211	165,423	1.58	\$2,729,047
4	I-40 Eastbound MP 108-114	I40P	24,528	6,624	4.43	\$2,417,223
5	I-40 Westbound MP 159-162	I40M	182,479	150,642	5.1	\$1,051,955
6	NM 136 Pete Domenici Blvd NB MP 0-3	NM136P	5,879	251	6.31	Not available
7	I-40 Westbound MP 126-121	I40M	26,608	7,799	4.44	\$3,977,855
8	I-25 Northbound MP 230-231	I25P	147,283	98,078	1.32	\$1,426,255
9	I-40 Westbound MP 218-233	I40M	20,574	4,655	4.6	\$2,842,378
10	I-40 Westbound MP 155-159	I40M	144,025	93,777	2.41	\$1,349,210
11	NM 423 EB MP 8	NM423P	50,536	6,670	3.2	\$2,102,918
12	NM 423 WB MP 8	NM423M	51,383	6,897	2.39	\$2,101,334
13	I-25 Southbound MP 224	I25M	147,229	98,019	1.37	\$989,881
14	NM 118 MP 17- 21	NM118P	8,865	245	2.93	Not available
15	I-40 Eastbound MP 155-159	I40P	132,654	79,550	3.64	\$1,295,640
16	I-40 Westbound MP 163-164	I40M	160,700	116,793	1.35	\$255,336
17	I-25 Northbound MP 223-225	I25P	196,446	172,872	1.39	\$1,019,399

Table 21 identifies ongoing or future planning initiatives, current or recent projects, and/or strategies to help mitigate these freight bottlenecks. Collectively, these efforts aim to address and improve freight mobility throughout New Mexico.

Table 21: Bottleneck Notes and Progress, Projects, and Planning

Rank	Description (Approximate Mileposts)	HPMS Route ID	Notes	Projects or Planning
1	NM 136 Pete Domenici Blvd SB MP 0-3	NM136M	Connection to Santa Teresa border crossing; reliability and congestion are primary issues	STIP ID: R918200 Title: Border Master Plan 2045 New Mexico Freight Plan Update
2	NM 342 W Amador Ave between NM 188 and I-10	FL5614M	Connection between I-10 and downtown Las Cruces; trucks entering and exiting I-10 to divided road	STIP ID: 1102110 Title: I-10 Truck Parking Availability System I-10 Corridor Coalition 2045 New Mexico Freight Plan Update
3	I-25 Southbound MP 228-232	I25M	High-value freight movements; relatively high delay and congestion cost	STIP ID: A301901 I-25 Improved: Comanche to Montgomery STIP ID: M300810 Title: South of Jefferson to Tramway Pavement Preservation STIP ID: A301890 Title: Interstate 25 / Gibson Blvd. Interchange Reconstruction Project STIP ID: A303270 Title: Study I-25 S Curve Area for detailed alternatives 2045 New Mexico Freight Plan Update
4	I-40 Eastbound MP 108-114	I40P	Congested	STIP ID: 6101181 Title: I-40 concrete wall barrier project near Laguna Pueblo STIP ID: 6100838 Title: Bridge Project (Replacement Bridges 6488 and 6489 MP 105.9 to 106.4) STIP ID: 6101580 Title: I-40 Corridor Study (Phase A/B) 2045 New Mexico Freight Plan Update
5	I-40 Westbound MP 159-162	I40M	I-40/I-25 interchange in ABQ, unreliable; high value freight	STIP ID: A302125 Title: I-40 Pavement Preservation STIP ID: M300750

Rank	Description (Approximate Mileposts)	HPMS Route ID	Notes	Projects or Planning
				Title: District 3 Pavement Preservation - I-40 And I-25 (Big I) STIP ID: 6101580 Title: I-40 Corridor Study (Phase A/B) I-40 Congestion Study (Albuquerque) 2045 New Mexico Freight Plan Update
6	NM 136 Pete Domenici Blvd NB MP 0-3	NM136P	Congestion and reliability coming north from Santa Teresa border crossing	STIP ID: R918200 Title: Border Master Plan 2045 New Mexico Freight Plan Update
7	I-40 Westbound MP 126-121	I40M	High congestion among bottlenecks, also unreliable	STIP ID: 6101181 Title: I-40 Concrete Wall Barrier Project Near Laguna (includes reconstruction of pavement in curves to correct deficiencies and rehab of bridge 6491) STIP ID: 6101580 Title: I-40 Corridor Study (Phase A/B) 2045 New Mexico Freight Plan Update
8	I-25 Northbound MP 230-231	I25P	High value freight movements; relatively high delay and congestion cost	STIP ID: A301901 I-25 Improved: Comanche to Montgomery STIP ID: A301890 Title: Interstate 25 / Gibson Blvd. Interchange Reconstruction Project STIP ID: A303270 Title: Study I-25 S Curve Area for detailed alternatives 2045 New Mexico Freight Plan Update
9	I-40 Westbound MP 218-233	I40M	Congested	STIP ID: 5101670 Title: I-40 Pavement Preservation STIP ID: 5100880 Title: I-40 Pavement Preservation 2045 New Mexico Freight Plan Update
10	I-40 Westbound MP 155-159	I40M	Entering Albuquerque; multiple on/off ramps;	STIP ID: A302125 Title: I-40 Pavement Preservation

Rank	Description (Approximate Mileposts)	HPMS Route ID	Notes	Projects or Planning
			relatively high freight value	STIP ID: M300750 Title: District 3 Pavement Preservation - I-40 And I-25 (Big I) STIP ID: 6101580 Title: I-40 Corridor Study (Phase A/B) I-40 Congestion Study (Albuquerque) 2045 New Mexico Freight Plan Update
11	NM 423 Eastbound MP 8	NM423P	High freight value and delay; movement from I-25	2045 New Mexico Freight Plan Update
12	NM 423 Westbound MP 8	NM423M	High freight value and delay; ramps to I-25	2045 New Mexico Freight Plan Update
13	I-25 Southbound MP 224	I25M	High freight value, congested; near onramp merge	STIP ID: A301890 Title: Interstate 25 / Gibson Blvd. Interchange Reconstruction Project STIP ID: A301891 Title: Interstate 25 / Gibson Blvd. Interchange Reconstruction-Informational STIP ID: A303270 Title: Study I-25 S Curve Area For Detailed Alternatives 2045 New Mexico Freight Plan Update
14	NM 118 MP 17-21	NM118P	Access between I-40 and BNSF Gallup Rail Yard and Gallup Municipal Airport	STIP ID: 6101600 Title: I40/NM 118 Bridge Clearance (Phase IB/IC & ID I-40 MP 8 Lower NM 118 for truck clearance) STIP ID: 6101400 Title: NM 118 Study (Phase A/B Study from MP 11- MP 16) STIP ID: 6101390 Title: I-40/US 491 Interchange (Phase A/B Study) 2045 New Mexico Freight Plan Update
15	I-40 Eastbound MP 155-159	I40P	High freight value, some congestion entering Albuquerque	STIP ID: A302100 Title: District 3 Pavement Preservation I-40 West of Coors STIP ID: 6101580 Title: I-40 Corridor Study (Phase A/B)

Rank	Description (Approximate Mileposts)	HPMS Route ID	Notes	Projects or Planning
				I-40 Congestion Study (Albuquerque) 2045 New Mexico Freight Plan Update
16	I-40 Westbound MP 163-164	I40M	High truck volumes; friction points with on/off ramps; access to Kirtland AFB	STIP ID: A302125 Title: I-40 PAVEMENT PRESERVATION STIP ID: 6101580 Title: I-40 Corridor Study (Phase A/B) I-40 Congestion Study (Albuquerque) 2045 New Mexico Freight Plan Update
17	I-25 Northbound MP 223-225	I25P	High freight value and truck volumes; mildly congested + unreliable	STIP ID: A301890 Title: Interstate 25 / Gibson Blvd. Interchange Reconstruction Project STIP ID: A303270 Title: Study I-25 S Curve Area For Detailed Alternatives 2045 New Mexico Freight Plan Update

6. Truck Parking

6.1 Introduction

The personal safety of truck drivers who must park for rest requirements is the primary goal of providing adequate truck parking. According to Federal Motor Carrier Safety Administration (FMCSA) regulation, “hours of service” refers to the maximum amount of time drivers are permitted to be on duty including drive time. FMCSA regulations also specify the number and length of rest periods, which helps ensure that drivers stay awake and alert. These provisions are different depending on whether the driver is carrying property or passengers and include provisions for driving limits, required breaks, and adverse conditions. Fatigued drivers or those that have reached the maximum hours of service who are unable to find parking often park along shoulders and ramps on highway segments due to insufficient parking capacity and overflowing rest facilities. This can be dangerous to the personal safety of drivers and to other vehicles as trucks return and accelerate onto shared roadways.



Cargo theft is also a threat to freight and logistics as the majority of cargo thefts occur at truck parking sites. Adequate truck parking means providing enough well-spaced, secure places for truck drivers to meet the demand of commercial motor vehicle traffic volumes moving through New Mexico. Other issues related to truck parking include lack of security, poor design of access and egress, and lack of information about location and availability of space. Limitations on truck parking and the demands placed on truck drivers can impact route selection and result in illegal parking.

This chapter provides an estimate of the truck parking inventory and discusses current truck parking needs in New Mexico. NMDOT’s continuous effort to provide enough quality truck parking to meet demand supports the freight plan’s safety goal.

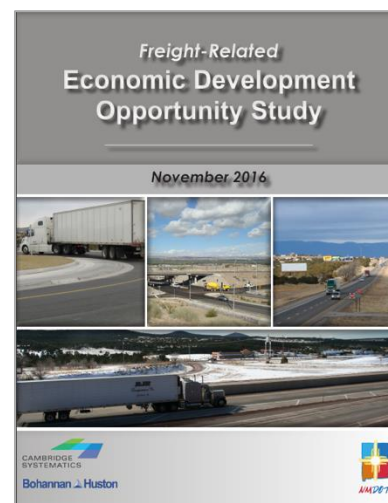
Federal Context

Jason’s Law requires that FHWA conduct a survey to evaluate public truck parking and commercial motor vehicle traffic volumes in each state. FHWA must also develop a system of metrics to measure truck parking as part of this requirement. The last survey was conducted in 2019 and the data from that survey are used in this analysis. The IIJA (Sec. 21104) builds on the legacy of Jason’s Law by requiring that states do an assessment of truck parking facilities.

Section 11110 of the IIJA on Nationally Significant Freight and Highway Projects (NSFHP) program (also known as the INFRA grant program) sets aside 10 percent of the funds for the NSFHP annually for multistate corridor organizations. The I-10 Corridor Coalition was created to promote safer and more efficient travel for both people and freight along the I-10 corridor. The I-10 Corridor Coalition and its efforts to improve truck parking is discussed in more detail later in this chapter.

New Mexico Truck Parking Analysis

In 2016, NMDOT completed the *Freight-related Economic Development Opportunity Study* in coordination with the New Mexico Economic Development Department, New Mexico State University, and New Mexico Trucking Association. The study team developed and distributed a *Truck Driver Parking and Services Preferences and Needs* survey, which was used to assess truck driver preferences for truck parking and service-related amenities. The culminating report was used as the foundation for this chapter, supplemented by a selection of other documents and data sources discussed in the following section.



6.2 Methods and Data

This section provides details on the methods and data used to update the current inventory of truck parking in New Mexico as well as any outstanding needs, where information was available. The methodology to estimate New Mexico's statewide truck parking inventory and identify outstanding needs includes the following steps:

1. Review the *Freight-related Economic Development Opportunity Study 2016* survey results for implied needs. This report was the basis for the truck parking analysis.
2. Compare public parking counts and utilization using 2015 and 2019 Jason's Law Survey Data and *The State of New Mexico Rest Areas* handbook, published in 2021.
3. Estimate the number of private truck parking spaces from Loves, Pilot/Flying J, and other privately owned and operated facilities offering truck parking.
4. Supplement parking estimates with information crowdsourced from truck drivers using sources such as Trucker Path and American Truck Parking.
5. Research completed or planned NMDOT projects that will increase public truck parking availability since the completion of the 2016 Study.
6. Review the *2040 New Mexico Freight Plan* for truck parking needs and projects.
7. Review MPO Metropolitan Transportation Plans (MTPs) for truck parking needs and projects.
8. Research current news articles that discuss lack of truck parking, the need for additional parking, or new truck parking facility plans.
9. Review the *TPAS Truck Driver and Dispatcher Survey* data for I-10 truck parking needs.
10. Vet truck parking needs identified in this process with the FAC.

Descriptions of the datasets and their sources and locations are summarized in Appendix B.

6.3 Inventory

This section provides an overview of the estimated truck parking availability and locations in New Mexico, including private parking. It only presents the counts of truck parking spaces and does not include details about amenities, specific numbers for dedicated overnight parking, or the quality of the parking available.

Public Truck Parking

The State of New Mexico Rest Areas handbook (released in 2021) provides details on 29 open rest areas with truck parking, and two closed rest areas (Blackwater Draw, permanently and Manuelito, temporarily) which still have truck parking spaces available, for a total of 31 rest areas with 331 public truck parking spaces.

Twenty-four of the open rest areas are located along the portion of the NHFN within New Mexico and contain 275 designated truck parking spaces. There are an additional six rest areas on US highways, which are part of the NHS, and these provide 26 more truck parking spaces at public rest areas. Additionally, two closed rest areas contain an estimated 30 spaces between them.

Interstates tend to be better served by public rest areas than the other freight corridors; however, even on the Interstates not all rest areas can accommodate commercial trucks, and, in many cases, the number of available spaces is not sufficient to meet demand. This observation is supported by the NMDOT district truck parking utilization data analyses, which is presented in a later section.

Data Discrepancies

According to the 2019 Jason's Law Survey data, New Mexico had 31 public truck parking locations at rest areas with a total of 344 parking spaces. The 2015 Jason's Law Survey data identified 32 public truck parking locations in New Mexico with a total of 368 truck parking spaces. The discrepancy is partially explained by the Blackwater Draw Rest Area on US 70 (permanently closed), which appears in the 2015 data, but not in the above 2019 Jason's Law data. This closure resulted in a loss of about 10 parking spaces. The remaining difference could be a result of counting or reporting errors.

Further, *The State of New Mexico Rest Areas* handbook reports that 31 rest areas with public truck parking (including closed rest areas) as does the 2019 Jason's Law Survey data. However, the totals are slightly different at 331 and 344, respectively.

In general, the number public truck parking spaces has decreased slightly in New Mexico since 2015. An updated list of public rest areas and select attributes, including truck parking counts, is available in Appendix C.

Private Parking Facilities

Well-known travel stop facilities Love's and Pilot/ Flying J offer around 2,001 truck parking spaces to truck drivers in New Mexico in search of a place to rest. An additional 89 spaces appear to be available at Walmart stores, according to Trucker Path data. A variety of "Other Types" of facilities also claim to have truck parking, totaling around 1,658. Other types of facilities include a mix of independent truck stops, restaurants, casinos, and other similar businesses. Some of these may not be "official" parking areas, but they are acknowledged on crowdsourced databases from websites such as truckerpath.com and americantruckparking.com. These locations included places described as "dirt lots" or "parking area." They may not be paved or lighted or may be located alongside a road and thus may not be of sufficient quality for safe, overnight parking. It is important to consider these locations in the analysis because they may point to areas with high demand and potential for additional investment in safe truck parking facilities. Private truck parking spaces total around 3,748 spaces at 95 facilities.

According to NMDOT's *Freight-related Economic Development Opportunity Study* developed in 2016, Pilot/ Flying J reported having nine travel centers in New Mexico, which means the company has opened two new facilities since that study was published. Loves reported having eight in 2016, compared to the 15 the company operates in New Mexico today.

Total Inventory Estimates

The total approximate statewide truck parking inventory is just over 4,000 at 126 facilities. Table 22 summarizes the public and private truck parking estimated inventory in New Mexico. "Other Types" includes parking reported to be available at non-truck stop businesses such as Walmart, independent truck stops, casinos, restaurants, and other "unofficial" parking locations.

Table 22. Summary of Public and Private Truck Parking Spaces

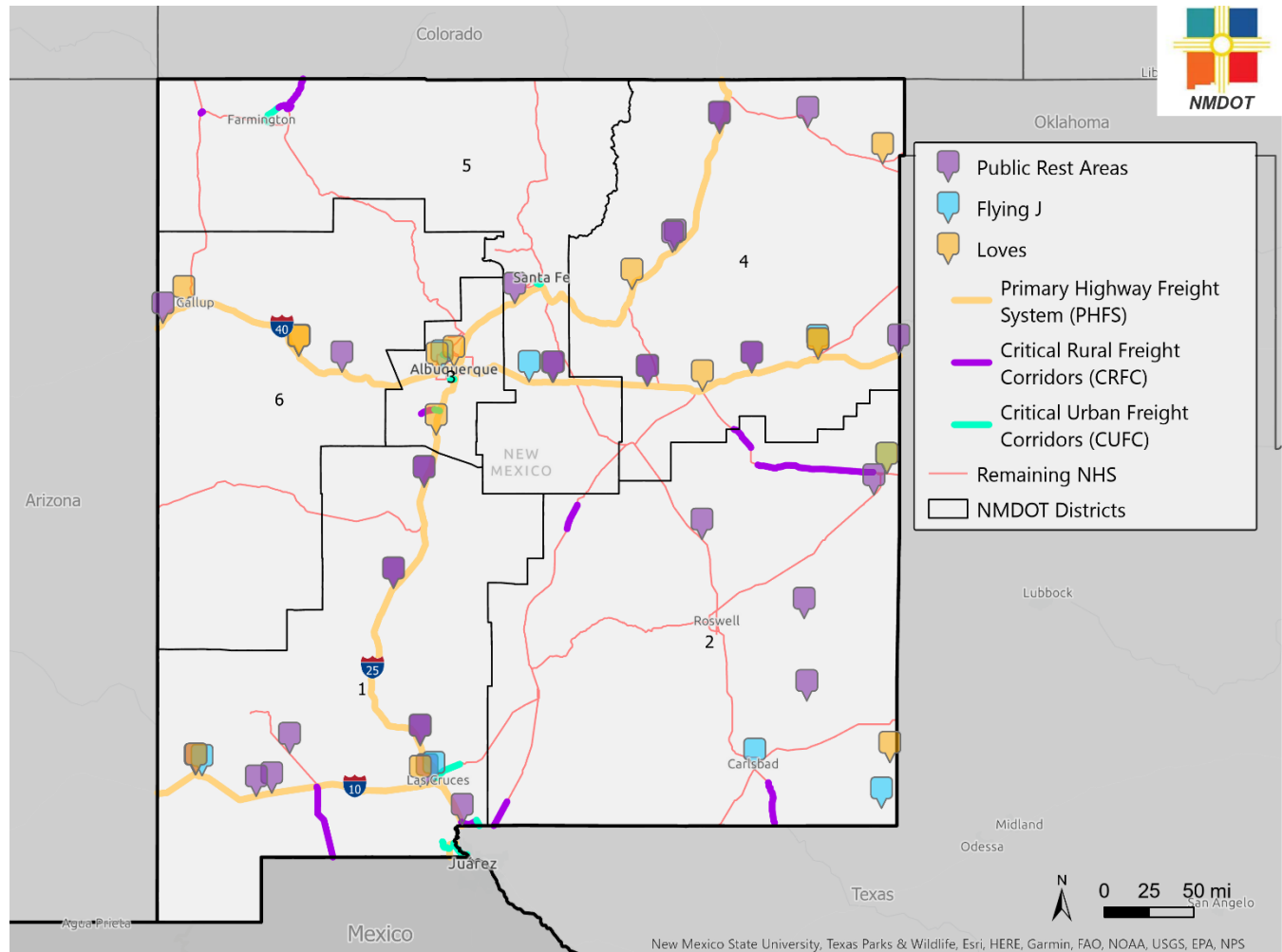
Facility	Number of Facilities	Number of Parking Spaces
Public Rest Areas	29	301
Closed Public Rest Areas*	2	30
Love's	15	775
Pilot/ Flying J	11	1,226
Walmart	12	89
Other Types	57	1,658
Total	126	4,079

*The amenities at the Blackwater Draw and Manuelito Rest Areas are currently closed. However, there are around 30 semi-truck parking spaces available for use.

Sources: Jason's Law 2019 data, The New Mexico Rest Areas handbook, Google Maps, Loves, Pilot/Flying J, Trucker Path, American Truck Parking, and various casino websites.

The two maps below show the locations for New Mexico's truck parking considered in this analysis. The map in Figure 44 shows confirmed locations of the public and private truck parking facilities in New Mexico. Locations include spaces at public rest areas, and those at the well-known truck stops, Love's and Pilot/ Flying J.

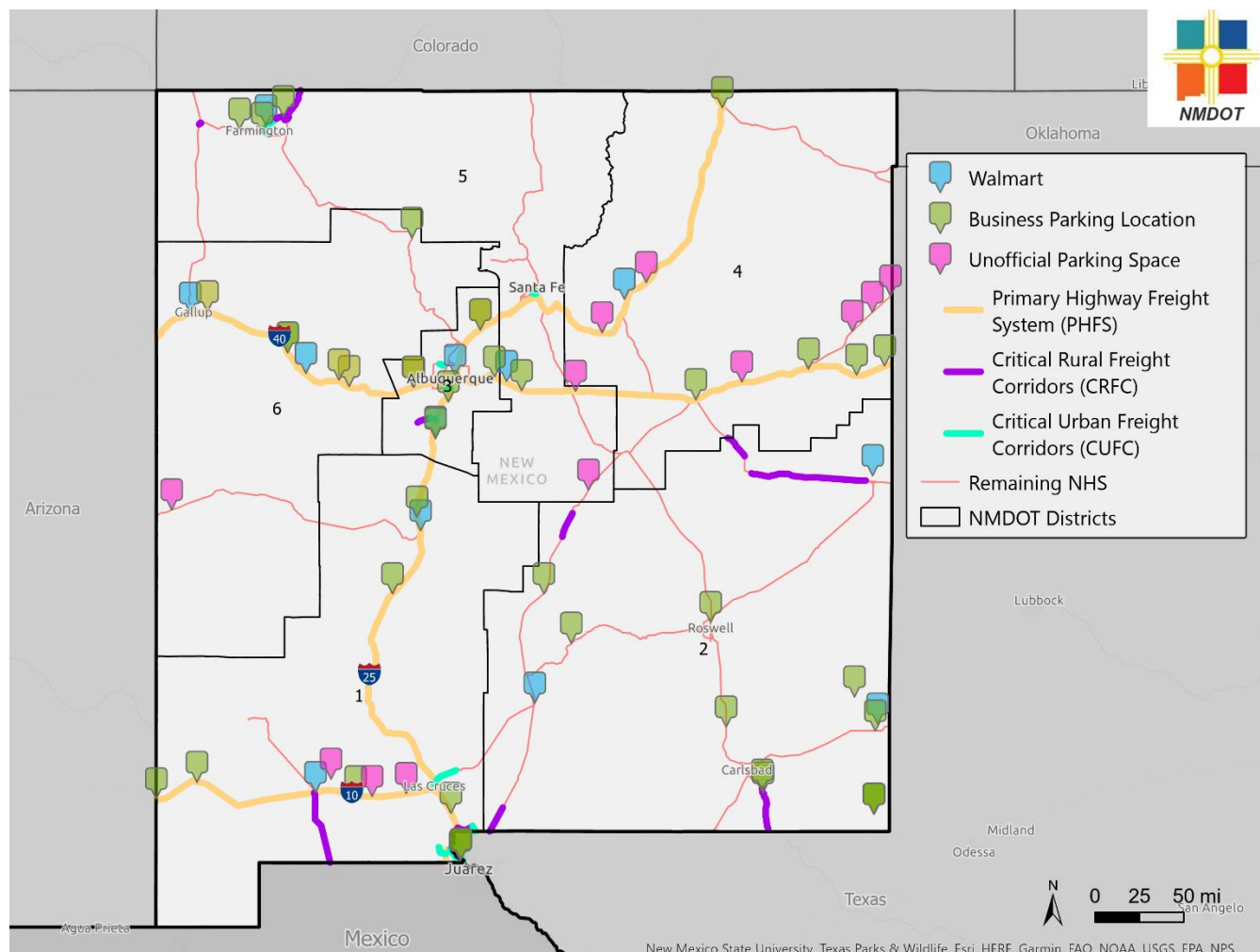
Figure 44. Confirmed Truck Parking Locations



Sources: The State of New Mexico Rest Areas (2021), Love's and Pilot/Flying J websites

Figure 45 shows locations of crowdsourced coordinate data from the Trucker Path and American Truck Parking websites. These spaces are a mix of those reported to be available at Walmart, independent truck stops, casinos, restaurants, other businesses, and implicitly “unofficial” parking. Several of these unofficial locations are in NMDOT Districts 1 and 4. District 3 in the Albuquerque region does not contain any public rest areas. Maps and totals were supplemented with manual counts of truck parking spaces at casinos along the NHFN.

Figure 45. Crowdsourced/Other Truck Parking Locations



Sources: Trucker Path, American Truck Parking, Google Maps, and various casino websites

Utilization

Currently there is limited utilization data for truck parking facilities in New Mexico; however, the NMDOT districts provided some utilization data to USDOT in the 2019 Jason’s Law survey. For each rest area in each district, data submitted include daily, weekly, and monthly truck parking utilization estimates using the following ranges:

- 25% or less full
- 26% - 50% full
- 51% - 75% full
- 76% - 100% full
- More than 100% full

2019 Jason’s Law Survey Parking Utilization Summary

- Ft. Seldon, Ft. Craig, and Walking Sands on I-25; Las Cruces Overlook (Fairacres), Yucca, and Gage rest areas on I-10 in District 1 are almost always at or above capacity (more than 100% full during peak periods, 4pm – 5am).
- La Bajada rest area on I-25 in District 5 and Butterfield Trail on U.S. 180 in District 1 appear to be the least utilized (almost always 25% or less full).
- Mesa rest area on U.S. 285 in District 2 and the Acomita and Rattlesnake Draw rest areas on I-40 in District 5 are almost always approaching or at capacity (mostly 76% - 100% full during peak periods).
- District 4 rest areas tend to have good availability (mostly 26% - 50% full).

In general, the utilization data indicates that truck parking at public rest areas tends to frequently be at or near capacity along I-10 and I-25 in District 1. Similarly, District 5 rest areas along I-40 are almost always approaching capacity. These findings indicate that there may be a need for additional truck parking in these regions. Meanwhile, truck parking appears to be adequate or underutilized at several rest areas in Districts 2, 4, and 5.

Needs and Issues

Although e-commerce and online purchasing increased dramatically during the COVID-19 pandemic in 2020-2021, Amazon, one of the largest online retailers, began to sublet about five percent of its fulfillment centers in 2022, which may indicate that the rate of e-commerce increases may be leveling off. This trend could result in slightly less freight truck travel although it is not clear whether these patterns will continue. Nevertheless, adequate, quality truck parking at all jurisdictional levels is essential.

Many of the needs identified through the 2016 *Truck Driver Parking and Services Preferences Needs Survey* remain today. Results and analyses of the 2016 *Truck Driver Parking and Services Preferences Needs* survey are published in the [Freight-Related Economic Development Opportunity Study](#) report. NMDOT plans to conduct another truck parking analysis before the 2026 Freight Plan Update. Some of the main takeaways are listed below:

- The availability of truck parking is by far the most important truck stop service.
- When asked the length of time on average it takes to find parking when stopping in New Mexico, 43% of truck drivers reported that it takes less than 30 minutes, 49% reported that it takes 30 minutes to 1 hour, and 9% reported that it takes more than 1 hour.

In addition to safety issues, adequate truck parking is also important for economic and environmental reasons. The time spent searching for parking results in increased travel costs (e.g., more fuel use), which are passed along to the consumer. Further, the extra fuel use results in additional mobile source emissions.

The three segments along Interstate 10 mentioned in Table 23 were specifically called out for needing additional truck parking. More discussion on needs specific to I-10 is included in the following section.

Table 23. I-10 Truck Parking Needs (2016)

Location	Need Area
Lordsburg	Between mile marker 5 and 15
Separ-Wilna-Gage	Westernmost and easternmost segments
Las Cruces	Limited parking in the area

In urban areas with a high concentration of commercial properties, drivers need short-term staging areas for vehicles to park while making a pickup or delivery. The private sector, shippers and receivers in particular, can

play a role in mitigating insufficient truck-parking locations. For example, through zoning laws and building codes, local jurisdictions can require increased levels of truck parking when allowing for new development requiring shippers and receivers to provide on-site parking. City streets without adequate parking may result in trucks parked in unauthorized locations, double-parked in peak traffic hours, or illegally parked on sidewalks or bicycle lanes.

6.4 I-10 Corridor Coalition Truck Parking Availability System

The I-10 Corridor Coalition mission seeks multi-jurisdictional coordination to improve safety and efficiency and promote cooperative planning initiatives along the entire length of the corridor. In 2019, the Coalition was awarded a USDOT grant to implement a truck parking availability system. The I-10 Corridor Coalition [Truck Parking Availability System \(TPAS\)](#) is a technology system that will detect, monitor, and disseminate truck parking availability information at 37 public truck parking locations along I-10 in California, New Mexico, Arizona, and Texas. New Mexico hosts 164 miles of the Interstate 10 corridor along with five truck parking sites. Real-time truck parking availability will be provided to the state’s traveler information site, NMROADS. The software is currently in development.

In Fall 2020, the Coalition conducted a survey to gather baseline information from commercial vehicle drivers and dispatchers. Some of the key findings for New Mexico are summarized below. In general, most respondents need truck parking on I-10 in New Mexico once a week and parking availability is better at private truck stops versus public rest areas. Overall, truck parking along New Mexico’s stretch of I-10 is not sufficient to meet demand – around 40 percent of respondents say that parking at public rest areas is never or rarely available; around 29 percent report that parking at private locations is never or rarely available.

- Frequency of Truck Parking Needs – How often do you need truck parking in NM along I-10?

Never	Once a Week	2-4 times a week	5-6 times a week	Every day
15.59%	40.74%	34.31%	5.65%	3.7%

- Truck Parking Availability – How often does NM have available truck parking along I-10?

	Never	Rarely	Sometimes	Often	Always	N/A
Public Rest Areas	9.89%	29.28%	39.16%	11.98%	2.28%	7.41%
Private Truck Stops	4.57%	23.81%	43.05%	17.14%	4.57%	6.86%

6.5 Strategies and Next Steps

Safe and secure truck parking is important not only to the drivers and the materials in transit, but also to the state and national economy. Ample quality parking helps to promote the efficient movement of goods, which is a necessary element to upholding a competitive and thriving economy. With this in mind, NMDOT should consider the following strategies to address changing truck parking demands:

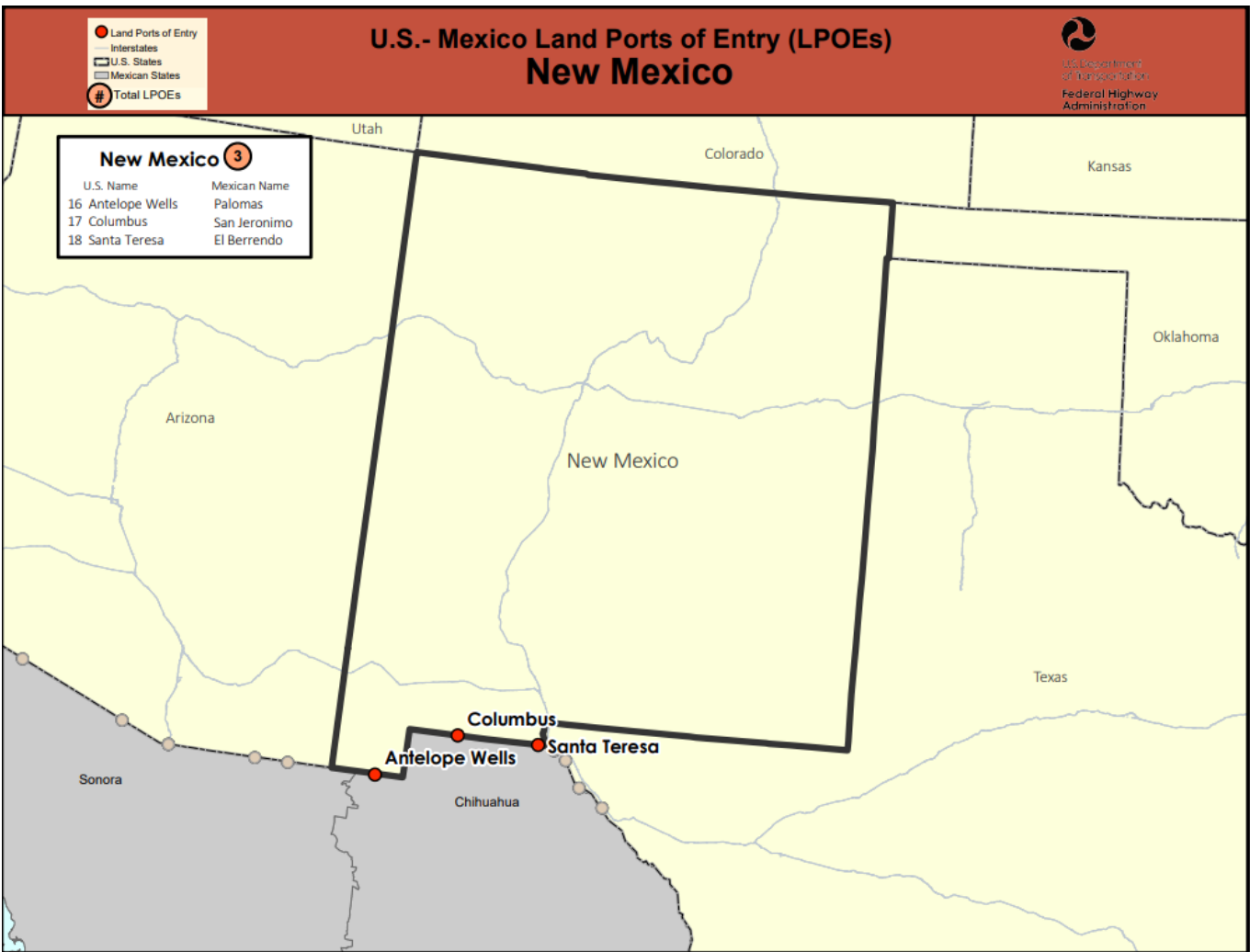
- **Pay specific attention to truck parking utilization at District 1 rest areas on I-10 and I-25.** These appear to be the public rest areas that are almost always at or above capacity, which could indicate that this region needs more truck parking. Drivers passing through this district may be coming from the ports of Long Beach and Los Angeles, which is about a 12-hour drive to the New Mexico/Arizona border. Per FMCSA hours of service (HOS) provisions, among other HOS provisions drivers must stop to rest after a maximum of 11 hours driving. Thus, drivers may need a safe place to spend the night in New Mexico.
- **Districts 1, 4, the Arizona border region of 6, and the southern region of 5 all contain “informal parking locations” according to crowdsourced trucking data.** This information warrants additional exploration as it could point to demand for safer, more secure parking. These locations were identified in the data using names such as “dirt parking lot,” “parking space,” or “roadside parking.”
- **Update the 2016 truck parking survey data and address data gaps.** Evaluate the location, availability, and utilization of rest areas and truck stops. Adequate truck parking is a crucial element to enhance public safety for truck drivers and other system users. Precise and sufficient utilization data will allow NMDOT to make the best investment decisions with respect to adding truck parking. Accordingly, NMDOT is planning to conduct a statewide truck parking survey within the next two years.
- **Revisit the needs outlined in the *Freight-related Economic Development Opportunity Study*.** NMDOT should explore these needs further to see if they are still valid or if needs have changed since 2016 when the study report was published. This report also has strategies that may still be applicable.

7. International Ports of Entry Conditions and Needs

7.1 Purpose and Need

New Mexico and Mexico share three border crossings (Figure 46): Santa Teresa, New Mexico (NM)–San Jerónimo, Chihuahua (CH); Columbus, NM– Puerto Palomas, CH; and Antelope Wells Port, NM–El Berrendo, CH, the only port that does not offer commercial truck crossings currently. Over the last five years there has been a 25 percent decline in total crossings at the Santa Teresa and Columbus Ports of Entry (POE). While previous years’ trends show an increase in crossings, it is assumed that the border closures due to COVID have contributed to the recent five-year decline. While passenger vehicles, pedestrian, and truck crossings combined have decreased, truck crossings alone have increased nearly 37 percent from 2017 to 2021. These POEs are vital to the economic growth, quality of life, and transportation systems along New Mexico’s 180 miles of shared border with Chihuahua, Mexico’s largest state.

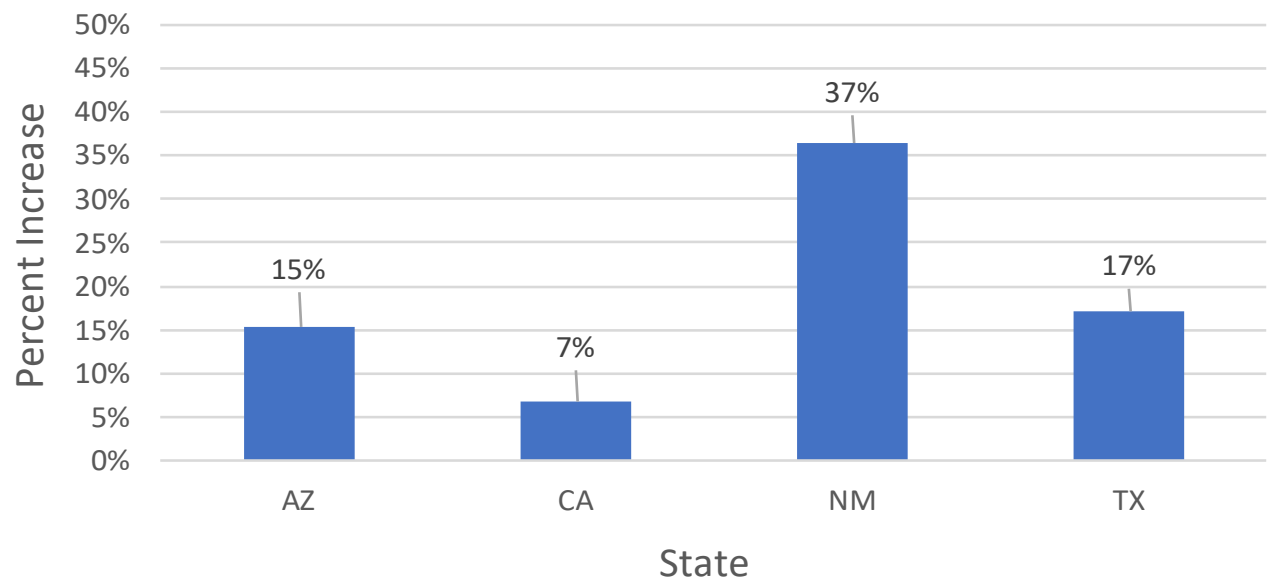
Figure 46. New Mexico Border Crossings



Over the last 20 years, New Mexico’s POEs have seen dramatic increases in traffic and resource demand, apart from the last several years, presumably due to COVID closures. Near the Santa Teresa POE, the recent completion of the UP terminal, a Foxconn manufacturing plant, and related industrial developments have contributed to the recent spike in commercial and personal vehicle crossings. Additionally, due to proximity, New Mexico has become a critical hub for the flow of goods into the United States from Mexico and Latin America. According to The New Mexico Partnership, Santa Teresa offers logistics infrastructure with rail access provided by both UP and BNSF. It is home to UP’s Santa Teresa Intermodal Facility, a \$500 million state-of-the-art facility, one of UP’s largest in the nation. This facility provides fast, direct connections to ports in LA/Long Beach and Houston and has helped make the Santa Teresa area a strategic focal point for rail shipments in the southwestern United States.

Interstate 10 connects to Interstate 25 in Las Cruces, which provides Santa Teresa POE a direct route to the Canadian border. The Union Pacific intermodal facility (discussed further in Section 7.2) on the Sunset Route between El Paso and Los Angeles provides service between 19 Mexico markets and 47 markets within the United States and Canada. Figure 47 depicts the ten-year increase in truck traffic along the New Mexico border compared to nearby southern states. New Mexico continues to outpace truck border crossing growth in Arizona, California, and Texas.

Figure 47. Truck Crossing Growth at Mexico Border (2017-2021)



Source: USDOT BTS

In 2015, New Mexico and Chihuahua completed their Border Master Plan to guide future improvements and enhance the efficiency and effectiveness of cross-border transportation infrastructure in three principal metropolitan areas: Las Cruces, New Mexico; Deming, New Mexico; and Juárez, Chihuahua. Figure 48 shows the three New Mexico border crossings and their direct connections to nearby major water ports and major cities.

Figure 48. New Mexico Ports of Entry Connections



Drive times and distances sourced from Google Earth and Google Maps

New Mexico border transportation planning involves the development of goals, objectives, and strategies for moving people and goods across the US–Mexico border. Border planning requires a collaborative effort among many stakeholders including USDOT, FHWA, US General Services Administration (GSA), New Mexico Border Authority, and many more to create safe and effective cross-border transportation. NMDOT is committed to understanding the current conditions along the US–Mexico border to address existing and anticipated demand for cross-border travel and trade.

7.2 Existing New Mexico Ports of Entry

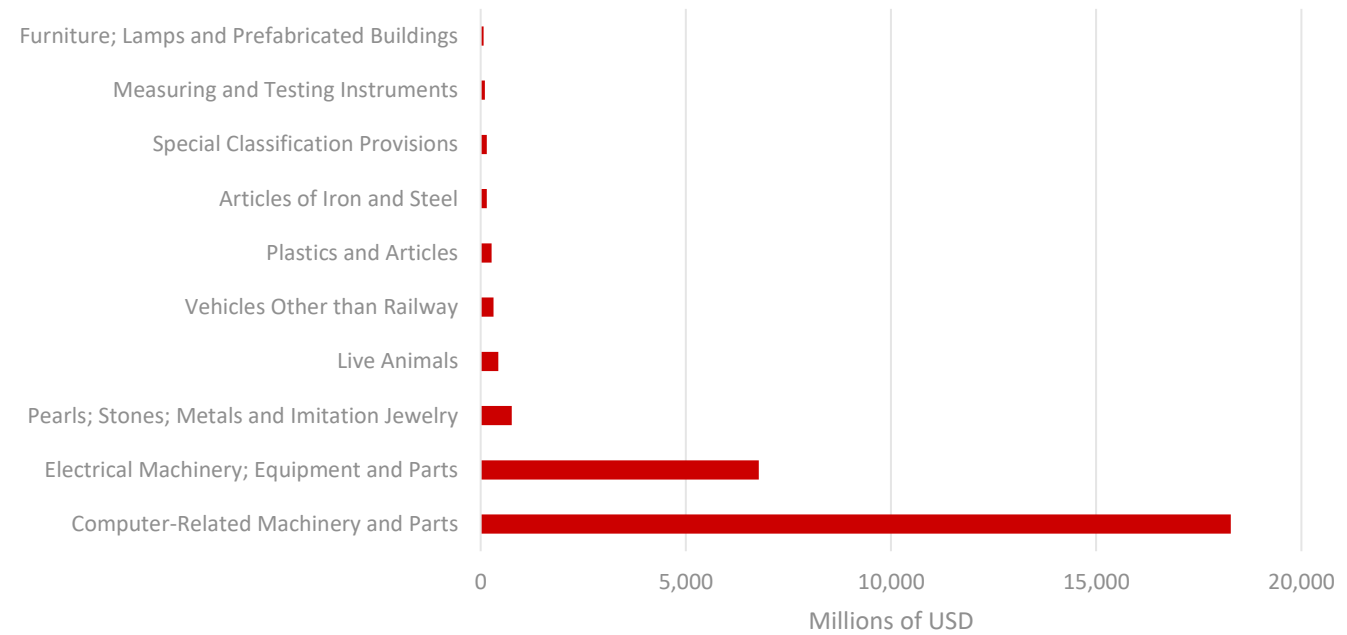
New Mexico state law requires that all commercial motor carrier vehicles which enter, leave, and travel through New Mexico on designated highways must stop at every operating port of entry for manifesting and clearance stickers from the New Mexico Motor Vehicle Division.

Freight Commodity Groups

A 2018 USDOT report on New Mexico Border Planning states that Santa Teresa is the largest facility for the import and export of livestock along the US–Mexico border, exchanging upwards of \$300 million in cattle each year. Other major economic clusters contributing to border crossings at the Santa Teresa POE include automotive, aerospace,

logistics, lighting and machinery, meat-based products, mining, ironwork, electrical equipment, and agriculture. The Santa Teresa POE exported \$1,137 million and imported \$1,528 million over the last twelve months while the Columbus POE exported \$29.95 million and imported \$10.33 million. Annual values per commodity group for the ten highest commodities in both Santa Teresa and Columbus POEs from April 2021 to March 2022 are shown in Figure 49.

Figure 49. New Mexico Ports Commodities Value (April 2021 – March 2022)



Source: <https://explore.dot.gov/>

Santa Teresa Port of Entry

The Santa Teresa POE is in Santa Teresa, New Mexico, 42 miles south of Las Cruces, along the Pete Domenici Highway (Figure 50). According to the USDOT Bureau of Transportation Statistics (BTS), this is the largest and busiest port of entry along the New Mexico–Chihuahua border, accounting for 87 percent of the state’s truck crossings and 63 percent of its personal vehicle crossings.

Figure 50. Santa Teresa Land Port of Entry



Building names and locations sourced from Google Earth

Inventory

Freight Crossings

There are currently three dedicated commercial lanes at the Santa Teresa POE. According to the US Census Bureau, the Santa Teresa POE saw a 17.4 percent growth in overall trade, with more than \$30 billion in imports and exports in 2019. Santa Teresa POE sees the fifth-highest value of goods transported by truck along the US–Mexico border, accounting for \$22.4 billion of the \$372 billion in goods that crossed the border in 2016. Figure 51 depicts the Santa Teresa Border Station.

Figure 51. Santa Teresa Border Station



Table 24 illustrates a five-year period of annual USDOT BTS data for inbound border crossings at the Santa Teresa POE. The data represents both empty and loaded trucks, and crossings for truck-only lanes.

Table 24. Santa Teresa Inbound Border Crossing Truck Counts

Inbound Crossings	2017	2018	2019	2020	2021	Total
Truck Containers Empty	56,023	31,100	19,916	59,017	56,523	222,579
Truck Containers Loaded	79,456	84,972	114,701	80,806	97,148	457,083
Trucks	14,114	14,502	16,754	19,914	22,039	87,323
Total	149,593	130,574	151,371	159,737	175,710	766,985

Source: USDOT BTS

Customs

The Santa Teresa POE is open daily from 6 am to 10 pm for commercial, non-commercial, and pedestrian traffic and includes four passenger lanes. Table 25 illustrates passenger crossings for a five-year period from 2017 to 2021. Crossings decreased significantly in 2019 and 2020 due to the pandemic. The most impacted category was pedestrians, likely due to school closures.

Table 25. Santa Teresa Inbound Border Crossing Customs Counts

Inbound Crossings	2017	2018	2019	2020	2021	Total
Bus Passengers	2,710	2,270	2,048	226	1,078	8,332
Buses	269	232	240	50	134	925
Pedestrians	134,458	145,702	166,754	52,103	55,400	554,417
Personal Vehicle Passengers	1,358,085	1,175,504	1,373,762	697,752	883,811	5,488,914
Personal Vehicles	614,398	528,894	627,321	379,975	460,881	2,611,469
Total	2,109,920	1,852,602	2,170,125	1,130,106	1,401,304	8,664,057

Source: USDOT BTS

UP Strauss Rail Yard

The UP recently completed construction of its Santa Teresa Terminal, which now handles the current workload of the Dallas Street Yard in El Paso, Texas when it was relocated to the Santa Teresa Terminal. The facility sits on 2,200 acres and could be expanded in the future to accommodate up to 700,000 freight containers annually. The UP Strauss Rail Yard is the main rail facility which houses the Santa Teresa terminal and the Santa Teresa Intermodal Facility. A portion of the Strauss Rail Yard also focuses on providing fuel and water services for the trains, crew, and passengers. The Strauss Rail Yard provides the UP a key inland port for its operations in the southwest United States, specifically the Sunset Route, a critical rail line running 760 miles from El Paso, Texas, to Los Angeles, California. This rail yard consists of a run-through fueling facility, intermodal yard and block swap yard serving the Santa Teresa POE (Figure 52).

Figure 52. UP Strauss Rail Yard



Source: Wilson & Company

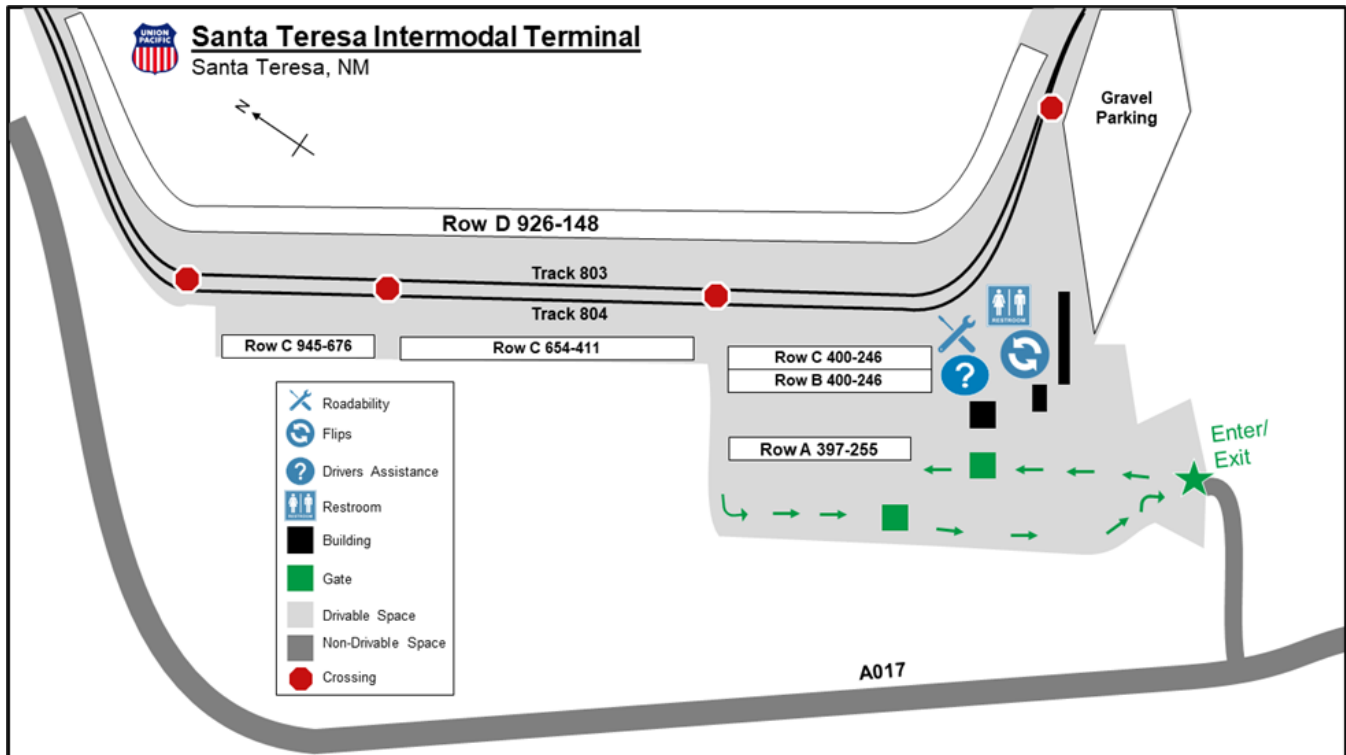
Intermodal Facilities

The \$400 million Santa Teresa Intermodal Ramp and Fueling Station is the first inland port in New Mexico, providing a strategic center for freight shipments in the southwestern United States. The intermodal facility features:

- Intermodal Ramp – The ramp’s annual lift capacity of 225,000 units allows shippers and receivers to service their current transportation needs and grow their business. The ramp can expand to 700,000 lifts annually to accommodate future growth.
- Eight-Lane Automated Gates System (AGS) – Automated gate systems to improve the gate/terminal throughput and truck turn times. The ramp can expand to 12 automated gates to handle additional volume.
- Refrigerated Container and Trailer Refueling – The ramp’s central location along the Sunset Route allows crews to efficiently refuel refrigerated containers and trailers to ensure products arrive at destinations at the proper temperature.
- 2,200-Acre Facility – The ramp and fueling station sit on 2,200 acres, nearly 12 miles long and one mile wide. The facility has approximately 74,000 feet of track with the ability to expand to 145,000 feet.
- 1,266 Container and Trailer Parking Stalls – The ramp has ample capacity to process containers and trailers allowing faster access to loads and empties. The location has the available space for up to 4,380 stalls.
- Locomotive Fueling Facilities – The facility is the first to be built with “run-thru” fueling stations to improve efficiency, allowing crews to fuel multiple trains at one time and decreasing overall transit time.

The Santa Teresa Intermodal Ramp (Figure 53) is both an intermodal facility and fueling station, which allows commercial goods to move from rail to truck and then across the Santa Teresa Border. This facility allows shipments to bypass the El Paso and Ciudad Juárez border POE and creates opportunities to strengthen partnerships between New Mexico and Texas. The El Paso, Paso del Norte (PDN) POE is one of the busiest border crossings, with more than 13 million passenger vehicles, 7 million pedestrians, and 800,000 commercial vehicle crossings annually. In an effort to reduce congestion at PDN, the POE can offload to Santa Teresa and Columbus POEs to reduce wait times and backup.

Figure 53. Santa Teresa Intermodal Terminal



Source: Union Pacific

Additionally, a Bi-National Industrial Park, consisting of 230 acres of industrial-zoned real estate, is located directly adjacent to the Santa Teresa POE. The Bi-National Park is located near the Foxconn electronics plant, which is Mexico's largest manufacturing facility. Existing and planned facilities for the Bi-National Park are expected to surpass three million square feet.

Performance

Wait Times

Through a grant from FHWA, NMDOT funded the installation of radio frequency identification (RFID) equipment to measure border wait and crossing times of commercial vehicles traveling northbound from Mexico into New Mexico at the Santa Teresa POE. In March 2017, NMDOT contracted with the Texas A&M Transportation Institute to develop and implement a wait and crossing time measurement system at this port. The system collects, archives, and posts northbound border wait times for commercial vehicles entering the State of New Mexico from Mexico on the Border Crossing Information System, a public website. The border crossing and wait time

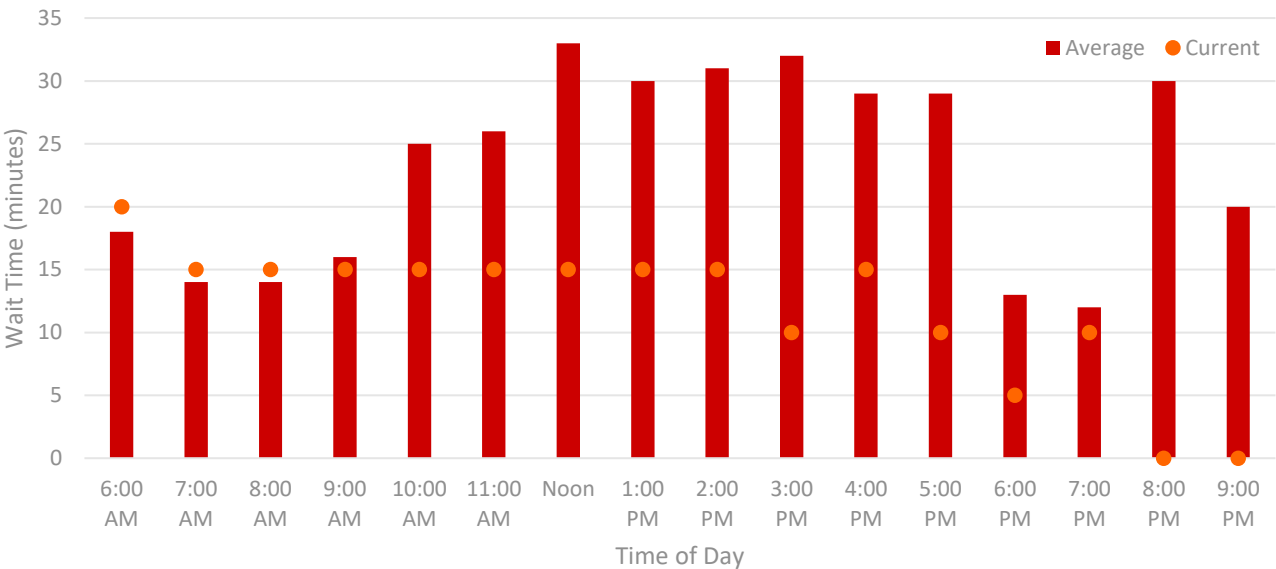
measurement system is based on RFID technology and includes four RFID reader stations from Mexico into southern New Mexico.

The Santa Teresa POE offers the most viable driving route to Ciudad Juarez and Chihuahua, and other Mexican cities. The number of Mexican residents traveling to the western United States through the Santa Teresa POE has increased over the years as this port has gained popularity as an easy and reliable way to access the United States.

Typically, there is little congestion and minimal wait times at the Santa Teresa POE. The POE provides access for both commercial and passenger vehicles, as well as pedestrians. Users can expect to wait fewer than 30 minutes at the crossing. According to a 2019 US-Mexico Border Crossing Time Profile, the busiest day at the Land Port of Entry (LPOE) in 2019 was July 2nd, with an average crossing time of 25 minutes. The least busy day was July 6th, with an average crossing time of only 13 minutes. Tuesdays and Fridays were the busiest crossing days in 2019.

Figure 54 illustrates average commercial hourly wait times in 2019 compared to the average hourly wait times for a single day - March 23, 2022.

Figure 54. Average Santa Teresa POE Commercial Vehicle Wait Times in 2019 and Current Wait Times for March 2022



Source: US Customs and Border Protection

Columbus Port of Entry

The Columbus POE (Figure 55) is in Columbus, New Mexico, approximately 36 miles south of Deming and 65 miles west of Santa Teresa. This is the only port in New Mexico that is open 24 hours per day, seven days a week. The POE was constructed in 1989 and underwent renovations in 2011 and 2019 (see Section 4.3 - Physical Infrastructure Improvements Related to Freight), all of which have contributed to an increase in commercial traffic, namely livestock and vegetable imports.

Figure 55. Columbus Port of Entry



Source: AIA.org

Inventory

Freight Crossings

The Columbus LPOE is open daily 24 hours a day, seven days a week for commercial, non-commercial, and pedestrian traffic and includes three dedicated commercial lanes. Table 26 illustrates a five-year period of annual USDOT BTS data for inbound border crossings at the Columbus POE. The data represents both empty and loaded trucks, and crossings for truck-only lanes.

Table 26. Columbus Inbound Border Crossing Truck Counts

Inbound Crossings	2017	2018	2019	2020	2021	Total
Truck Containers Empty	1,472	1,308	794	1,873	2,125	7,572
Truck Containers Loaded	13,449	15,684	15,960	18,051	19,865	82,809
Trucks	14,114	14,502	16,754	19,914	22,039	87,323
Total	28,835	31,494	33,508	39,838	44,029	117,704

Source: USDOT BTS

Customs

The Columbus POE offers three passenger lanes and three pedestrian lanes. The crossing accommodates more than 300 school children every day who live in Puerto Palomas, Chihuahua, but attend school in Columbus, New Mexico. These students account for a sizable portion of the pedestrian crossings each year.

Table 27 shows the five-year period from 2017 to 2022, provided by the USDOT BTS, for vehicles, passengers, and pedestrians entering the Columbus POE. Total crossings remained relatively steady until the pandemic when pedestrian crossings decreased significantly.

Table 27. Columbus Inbound Border Crossing Customs Counts

Inbound Crossings	2017	2018	2019	2020	2021	Total
Bus Passengers	16,955	17,090	16,463	1,417		51,926
Buses	1,377	1,261	1,371	118		4,127
Pedestrians	257,998	278,133	275,235	68,620	177,821	1,057,807
Personal Vehicle Passengers	746,789	757,426	810,134	517,224	587,413	3,418,986
Personal Vehicles	380,308	351,723	364,686	276,932	305,038	1,678,687
Total	1,403,427	1,405,633	1,467,889	864,311	1,070,272	6,211,532

Source: USDOT BTS

Intermodal Facilities

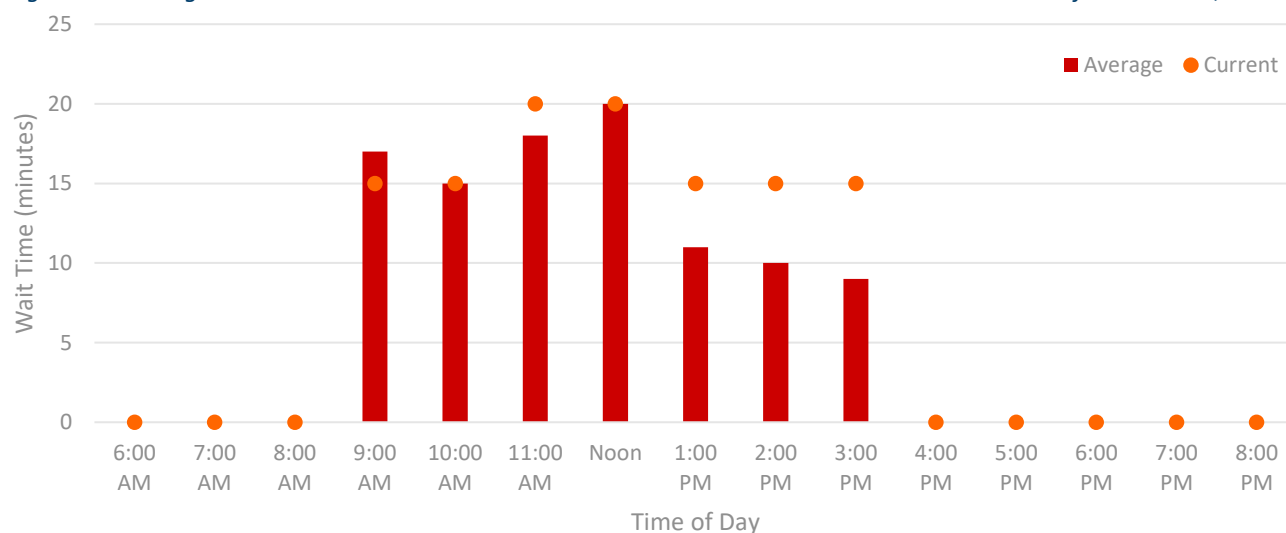
The Columbus POE currently does not have freight intermodal facilities.

Performance

Wait Times

Similar to Santa Teresa POE, there is typically little congestion and minimal wait times at the Columbus POE. Because the port is open 24 hours per day, commercial vehicle wait time is generally between 0-30 minutes. Depending on the time of day, passenger vehicles, as well as pedestrians can expect to wait between 0-40 minutes at the crossing, with an average of 15 minutes. Figure 56 illustrates average commercial hourly wait times on a daily basis in 2019 along with the average hourly wait times for a single day - March 23, 2022.

Figure 56. Average Columbus POE Commercial Vehicle Wait Times in 2019 and Current Wait Times for March 23, 2022



Antelope Wells Port of Entry

The Antelope Wells POE is a remote border crossing located in Antelope Wells, New Mexico, roughly 45 miles from Hachita, New Mexico. The port was established in 1872 and has been open to non-commercial crossings since 1928. The port is open daily from 10 am until 4 pm. Because this port draws minimal traffic, the US Customs and Border Protection does not report official statistics for the facility. However, it is estimated that pre-pandemic crossings averaged 40-50 vehicles per day. Primary users for this port are shuttle buses and local ranchers. This POE does not accommodate commercial truck movements.

7.3 Completed Projects (Since 2015)

New Mexico Chihuahua Border Master Plan

NMDOT, FHWA, Secretaría de Comunicaciones y Transportes (SCT) and the government of the State of Chihuahua, Mexico, prepared the first New Mexico – Chihuahua Border Master Plan (BMP) in 2015. The plan was updated in November 2021 and is a “bi-national comprehensive approach to coordinate the planning, inventory, and delivery of projects at LPOEs and related transportation infrastructure serving the international ports of entry in the New Mexico – Chihuahua border region”. The purpose of the plan is to improve the efficiency of New Mexico-Chihuahua border traffic, through a coordinated effort with federal, state, county, and city governments in coordination with port authorities and other planning associations. The BMP utilizes a broad range of data to evaluate short, medium, and long-term needs and priorities that support the international trade business and improve border-crossing efficiency.

Santa Teresa Border Area Transportation Needs Assessment and Strategic Plan

The 2016 Santa Teresa Border Area Transportation Needs Assessment and Strategic Plan (STBAT) was funded by a Transportation Investment Generating Economic Recovery (TIGER) grant from USDOT. The plan facilitates effective decision-making strategies for transportation infrastructure in the Santa Teresa Border area, and examines the long-term effects related to economic competitiveness, quality of life, state of good repair, safety, and environmental sustainability. The STBAT focuses on aggregating all previous regional plans and studies to determine the highest priority infrastructure projects while recognizing the relationship between employment opportunities and transportation infrastructure in the region. This plan offers key decision makers feasible recommendations that will guide policy decisions for their communities.

Physical Infrastructure Improvements Related to Freight

According to US Customs and Border Protection and the New Mexico Border Authority, several infrastructure improvements have been implemented at the Santa Teresa and Columbus POEs since 2015 (Table 28).

Table 28. Port of Entry Improvements

Santa Teresa Port of Entry Improvements	Columbus Port of Entry Improvements
<ul style="list-style-type: none">• Commercial Safety Inspection Facility• POE Visitor Parking and New Import Lane• POE Export Lane• Lighting• Strauss Road UPRR Intermodal Access• Creation of the UPRR Intermodal Facility• HAZMAT/Fire Emergency Response Facility• Port Entrance Expansion• NM 136 Reconstruction, LPOE to Texas State Line• McNutt Road, Racetrack to Ross• Interstate 10 Hachita Bridge Replacement• Airport Road & Industrial Drive Improvements	<ul style="list-style-type: none">• Creation of Berrendo Road• Columbus Flood Control Study & Infrastructure• Columbus LPOE Expansion and Reconstruction• Reconstruction and beautification of the original 1989 building• Commercial and non-commercial primary and secondary inspection facilities• Pedestrian processing and outbound canopy• Export facilities• Non-intrusive inspection systems• Hazmat containment area• New earthen berm and drainage basin• Enlargement of an existing culvert• Outside vehicle parking• Inspection Kennel facility

7.4 Planned Projects

Camino Real de Tierra Adentro Port of Entry

In 2019, Doña Ana County completed a Feasibility Study for the proposed Camino Real de Tierra Adentro Port of Entry in Sunland Park, New Mexico. The study assessed the impact and viability of the proposed POE by conducting preliminary engineering work to evaluate the feasibility of advancing construction and pursuing a Presidential Permit. The study found that the proposed POE is a viable option that could promote the economic development and livability in the City of Sunland Park.

Freight Related Proposed Improvements to Existing Land Ports of Entry

Table 29 lists proposed freight-related projects, the lead agency, and projected costs in US \$1,000s for each project.

Table 29. New Mexico Freight Related Land Ports of Entry Proposed Improvements

Project	Lead Agency	Project Cost (US \$1,000s)
Expansion and Modernization of the Santa Teresa LPOE	CBP/New Mexico Border Authority (NMBA)	170,000
Construct a new US LPOE in Sunland Park, New Mexico with a connection to Anapra, Chihuahua. Travel modes include pedestrians and privately owned vehicles.	City of Sunland Park	124,000
Widening between McNutt Road and the Texas State Line	City of Sunland Park	20,000
New roadway connection between NM 136 and McNutt Road, parallel to NN-CH border	NMBA	25,000
New 4-lane roadway bypassing Village of Columbus	Village of Columbus	30,000
Reconstruct 6 miles of roadway and pedestrian lighting along Doña Ana County Road from NM11 east to Country Club, Country Club north to Cedar Street Pine, and Cedar Street Pine to Motel Drive	City of Deming	3,500
Extend Columbus Road as a 4-lane divided principal arterial from, McNutt to Pete Dominici	City of Sunland Park	14,977
New roadway connection between NM 136 and 404; near I-10	NMDOT	60,000
Widen Industrial Drive to 4 lanes from Airport Road to Strauss Road	Doña Ana County	4,800
Traffic Signal Installation at NM 273 and Airport Road	NMDOT	1,300
Addition of center turn lane along McNutt Road, from Racetrack to Corishain Bridge	NMDOT	5,285
Widen Industrial Drive to 4 lanes with center-turn through intersection and construct 150' SB right-turn lane at the Industrial Drive and Divisadero Intersection	Doña Ana County	10,000
Install traffic signal at Airport Road and Industrial Drive intersection	Doña Ana County	500
Grade Separation at NM 136/NM 273	NMDOT	60,000
Rehabilitation and/or Reconstruction of Interstate 10- Exit 85 interchange	NMDOT	16,423
Widen NM 404 and NM 213 to four lanes divided with shoulders	NMDOT	44,400
Construct 600' WB right-turn lane at Strauss Road & Road 2A intersection	NMDOT, Doña Ana County	1,000
Construct new 4 lane roadway and interchange at Interstate 10 bypassing City of Deming	City of Deming, Luna County	150,000
Reconstruct NM 9 from NM 136 to NM 81	NMDOT	206,000

Synchronize the traffic signals at Pine / Gold and Spruce / Gold with a new signal at US 180 / Gold Avenue and Railroad Boulevard intersection	City of Deming	500
Construct 4-lane divided principal arterial with grade separation at UPRR tracks on Sunland Park Drive from McNutt Road to proposed Sunland Park POE site and border crossing	Sunland Park	21,597
Grade separation at NM 136 and Airport Road	NMDOT	60,000
Reconstruction of Posey Road as two-lane collector with bicycle lanes and sidewalks between McNutt Road and Anapra Road	Sunland Park	2,000
Construct new two-lane roadway connecting NM 11, Quinta Avenue, Plata Avenue, and cattle stock yards in the Village of Columbus	Village of Columbus	10,000
Revise intersection geometry at intersection of Lou Henson Highway NM 28) and McNutt Road (NM 273)	NMDOT	10,000
Reconstruct and grade separate railroad at Interstate 10 and Exit 85 interchange	NMDOT	30,000
New “Cross-wind” runway at Doña Ana County Airport	Doña Ana County, State Aviation Division, FAA	41,000
Construct roadway on Futurity Drive from Racetrack to McNutt	City of Sunland Park	3,000
Relocate existing Interstate 10/Pearl underpass to Interstate 10/Ruby. Eliminate two off-ramps. *Noted within the City of Deming Interstate Access Change Request	City of Deming	16,000

Sources: New Mexico-Chihuahua Border Master Plan 2021 Update, New Mexico Partnership, New Mexico Border Authority

Proposed Congestion Management

The NMDOT initiated the West Mesa Corridor Study to determine potential roadway corridors that could provide a direct connection between the Pete Domenici Highway (NM 136) near Santa Teresa and Interstate 10, west of Las Cruces. The proposed corridor would run parallel to Interstate 10 between Las Cruces and El Paso, which would provide a direct freight route between Mexico and the United States via the El Paso POE. The route would not only reduce commercial vehicle travel time, but also direct some commercial vehicles away from the congested POEs near El Paso. The West Mesa Corridor could serve as a designated truck route for the region.

7.5 Conclusion

New Mexico and Mexico share a 180-mile international border, with three border crossings that facilitate the movement of \$31 billion in trade and over 2 million people annually. International land ports of entry are vitally important to the economies of the United States and Mexico. According to USDOT BTS, in 2020 approximately 6.4 million trucks hauled nearly 4.2 million loaded containers into the United States from Mexico, representing a doubling in the number of loaded containers entering the US from Mexico in 2000. Mexico is currently the largest trading partner with the US.

The New Mexico-Mexico border region will continue to grow in the future. As the movement of goods and people across the border continues to increase, border infrastructure will need to be enhanced. In addition to truck traffic, it is important to understand how the POEs facilitate social, business, and cultural ties between New Mexico and

Mexico as people travel across the border to work, visit family, shop, vacation, use medical facilities, and go to school. For example, more than 300 school children cross the Columbus POE to attend school in the US each day.

Currently the three POEs (Santa Teresa, Columbus, and Antelope Wells) are operating at an acceptable level, with minimal wait times. This is in part due to recent improvements at both Santa Teresa and Columbus POEs that include new lanes, entrance expansions, improvements to adjacent roadways, additional parking, pedestrian amenities, and the creation of the UP Intermodal facility.

Because the border crossings serve a range of modes, from pedestrians, bicycles, buses, trucks, and rail it will be important for both Santa Teresa and Columbus POEs to advance projects that promote safety and mobility. In addition, New Mexico will maintain close coordination with key stakeholders to enhance and promote international relationships relating to the border region.



8. Implementation Plan

8.1 Introduction

The Implementation Plan details the actions that will be taken and projects that will be pursued over the next five years to address the needs and gaps identified in the NMFP. The implementation plan has been developed in alignment with the following NMFP goals:



Safety: Improve safety and security for all transportation system users.



Asset Management: Optimize spending to cost effectively preserve our transportation assets in the best possible condition over the long term.



Mobility & Accessibility: Efficiently and equitably invest in infrastructure and technology to provide reliable movement of goods, improve intermodal connectivity, provide access to the freight transportation system, foster economic growth, and minimize freight transportation's contribution to climate change.



Program Delivery: Deliver freight transportation projects and programs through approaches and processes that improve resiliency, respect New Mexico's unique cultures, and promote fiscal and environmental stewardship.

The following section details the specific strategies that advance the NMFP Goals. The symbols identify the NMFP Goals that each strategy addresses.

8.2 Strategies

Wildlife Corridor Action Plan



The Wildlife Corridors Act, or New Mexico Senate Bill 228, was signed into law by Governor Lujan Grisham in 2019, and directed NMDOT and New Mexico Department of Game and Fish (NMDGF) to develop a [Wildlife Corridor Action Plan](#) for NMDOT roads across the state.

Using crash data, ecological data, and forecast modeling, the Plan identifies wildlife-vehicle collision hotspots that pose a particularly elevated risk to the traveling public and wildlife corridors that bisect roads. It also provides a list of priority projects based on the results of the Plan's analysis. The Plan focuses primarily on the movements of six large mammals: elk, deer, black bear, bighorn sheep, pronghorn, and mountain lion. However, other sensitive species and confounding factors were also taken into consideration when developing the priority project list.

The joint NMDOT NMDGF team applied a science-driven approach to identify areas per the Act that “pose a risk to successful wildlife migration or that pose a risk to the traveling public.” The Plan builds on prior and ongoing efforts and is intended to raise support for and consensus in the identification of priority wildlife corridors and priority projects across New Mexico.

NMDOT will continue to implement the Wildlife Corridor Action Plan to identify priority wildlife corridors and minimize the impacts of freight movement on wildlife and their migration and habitat.

Corridor Coalitions



Multi-state corridor coalitions help state departments of transportation and regional planning agencies coordinate on transportation improvements along important corridors that cross state boundaries. These coalitions provide a means for collaboration in analysis, decision-making, and investments. NMDOT is currently a member of the I-10 Corridor Coalition, which is completing important analysis and improvements along the I-10 corridor.

In April 2019, USDOT awarded the I-10 coalition \$6.85 million to create and implement a Truck Parking Availability Study (TPAS). The coalition matched this funding, resulting in a budget of \$13.7 million for the project. The I-10 TPAS project aims to help truck drivers and dispatchers make informed decisions about where to park along the corridor. To achieve this goal, the TPAS project will create a system that can detect where truck parking is available at locations along the corridor and disseminate that information to truck drivers and dispatchers in real time. This will reduce the amount of time and fuel spent looking for parking, reduce the risk that drivers will park in unauthorized or unsafe locations, and reduce the likelihood that drivers will continue to drive while fatigued.

NMDOT will continue to participate in the I-10 Corridor Coalition to identify truck parking needs and address reliability and safety issues for truck drivers along the corridor and will explore other opportunities to work with neighboring states on similar coalitions on other critical multi-state freight corridors, such as I-40.

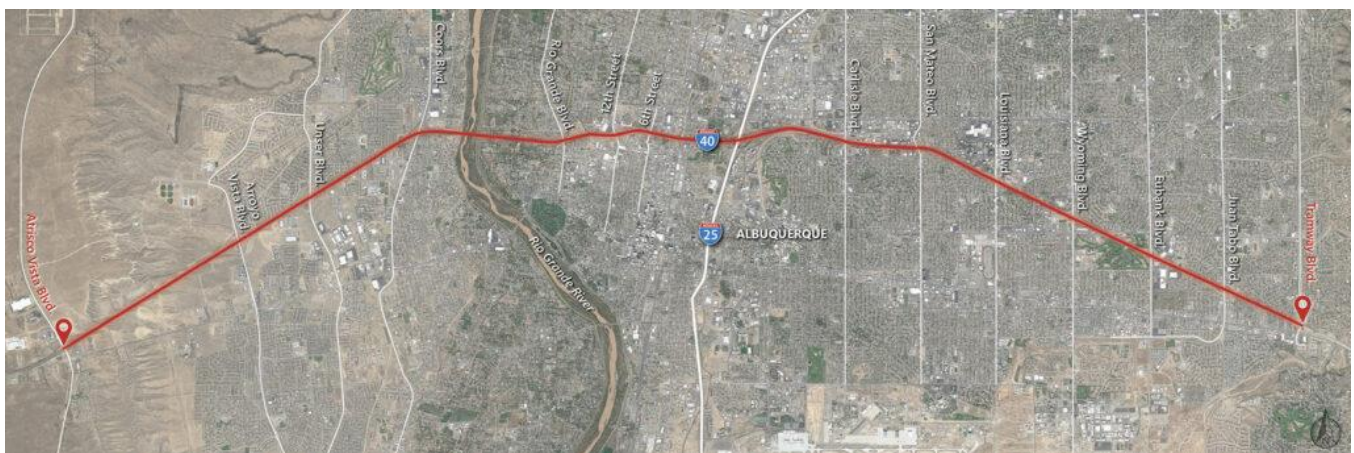
I-40 Corridor Congestion Study (Albuquerque)



NMDOT is conducting a study of Interstate 40 through Albuquerque from Atrisco Vista Boulevard to Tramway Boulevard (Figure 57) to explore practical ways to reduce traffic congestion during peak traffic times. One of the first components of this study is collecting and analyzing existing condition data to help NMDOT better understand traffic

flow conditions, factors contributing to crashes, and commuter travel patterns. NMDOT has also identified four truck bottlenecks along I-40 through Albuquerque within the study area; this study may help identify improvements for those locations. During the development of this study, NMDOT collected user feedback via a publicly available survey.

Figure 57. I-40 Corridor Study Area Map



Source: I-40 Corridor Congestion Study

NMDOT will complete the I-40 Congestion Study to identify solutions to address peak traffic congestion, freight bottlenecks, and safety issues identified on I-40 in Albuquerque.

I-40 Corridor Study



NMDOT is in the process of completing the I-40 Corridor Study, a Phase A/B Preliminary Engineering Study from the Arizona border to Albuquerque (Milepost 0 to Milepost 150). In addition to examining possible capacity enhancements on I-40, the study is examining possible improvements and/or additions to frontage roads and interchanges to enhance redundancy and develop alternative routes. The study is focused on reducing congestion impacts due to crashes and other incidents on I-40, a major transcontinental truck route.

NMDOT will complete the I-40 Corridor Study to identify possible capacity, congestion, safety, and redundancy improvements.

Truck Parking Study



Appropriate availability of safe and secure truck parking is important for safe truck travel and to New Mexico's and the national economy. Understanding where more truck parking is needed to meet existing and future demand will support New Mexico's future decision making around truck parking investments. Improved truck parking will contribute to efficient freight movement and reduce freight's impacts on the environment and climate, as drivers will drive fewer unnecessary miles looking for appropriate and available parking locations.

NMDOT will complete a comprehensive Truck Parking Study to evaluate the location, availability and utilization of rest areas and truck stops and prioritize truck parking investment decisions.

Redundancy



Stakeholders and FAC members indicated that some key freight routes, such as I-40, are at risk of very severe delays in the event of crashes or extreme weather in areas where there are no redundant routes such as frontage roads.

NMDOT will develop methods to identify and prioritize key freight bottleneck locations that lack redundancy and incorporate the findings into freight decision making.

Freight Project Selection Process



As part of the 2045 NMFP, NMDOT developed a novel, data-driven approach to rate, prioritize, and select freight-related projects for the Freight Investment Plan. As IIA guidance becomes available and data is updated, NMDOT will identify opportunities to refine this approach to continue to select the optimal freight projects to improve the safety, and efficiency of the New Mexico freight network while minimizing negative impacts on communities, wildlife, and climate change.

NMDOT will continue to evaluate and revise its data-driven freight project selection process.

Freight Advisory Committee



NMDOT expanded and convened the state Freight Advisory Committee (FAC) as part of the 2045 NMFP. The FAC provided key feedback from planning partners and public and private stakeholders on freight-related issues.

NMDOT will continue to engage the FAC on both freight project prioritization efforts and the upcoming Truck Parking Study and will regularly include freight stakeholders in project development and planning efforts that are likely to impact the freight community.

Future Freight Fueling



Freight electrification and other alternative fueling options for highway freight are rapidly changing as innovative technologies are developed and increasingly adopted by private sector freight carriers. While there is not significant demand for alternative fueling in 2022, circumstances may change quickly as electrification and additional federal funding programs become available.

NMDOT will continue to monitor trends and opportunities in alternative truck fuels, including natural gas, electric, hydrogen, and biofuels, and assess the need to provide system users with information on the location of alternative fuel/recharging sites and identify opportunities to support the expansion of alternative fuel/recharging sites as appropriate.

Emerging Freight Technology



Transportation and freight technology is quickly expanding and evolving throughout the country and within New Mexico. NMDOT has identified emerging trends in freight automation and ITS which may allow for operational efficiencies gained from safer, more cost-efficient trucking.

NMDOT will continue to evaluate ITS improvements such as traffic control and monitoring systems, Weigh-In-Motion (WIM) systems, route-planning systems, freight status and location monitoring systems, driving behavior monitoring and crash prevention systems, rail crossing safety and rail management systems. NMDOT also will monitor the adoption of advanced technologies by the private freight industry and associated infrastructure needs.

Freight Corridors



NMDOT most recently updated its Critical Urban and Rural Freight Corridors (CUFCs and CRFCs) in 2017. When final IJIA guidance is available and the Primary Highway Freight System (PHFS) federal redesignation is complete, NMDOT will coordinate with MPOs and RTPs to revise its CUFC and CRFC designations to optimize the use of NHFP funding to improve national freight movement. In addition, NMDOT received feedback from the FAC to identify a Priority Truck Freight Corridor

Network in New Mexico to assist in prioritizing freight-related projects, strategies, and improvements specific to freight movement within New Mexico.

NMDOT will coordinate with MPOs, RTPOs and FAC members to update New Mexico's Critical Urban and Rural Freight Corridors as appropriate.

NMDOT will continue to develop and refine New Mexico's Priority Truck Freight Corridors network and develop prioritization approaches that consider the importance of freight and goods movement, accounting for intermodal connections and border crossings.

NMDOT will identify ways to incorporate national and statewide freight corridors in its decision making and investment prioritization.

Sustainability and Resilience Program



The New Mexico Energy, Minerals, and Natural Resources Department's Energy Conservation and Management Division (ECMD) works with the Interagency Climate Change Task Force on the Sustainability and Resilience Program to reduce greenhouse gas emissions from electricity generation, transportation, industry, the built environment, and natural and working lands. Additionally, the program coordinates interagency climate change mitigation efforts to integrate adaptation and resilience practices to:

- Ensure the long-term sustainability and resilience of New Mexico and its infrastructure and resources;
- Prepare the state for climate change;
- Reduce the vulnerability of natural and built systems, economic sectors, natural resources, and communities to risks;
- Promote long-term water and energy resource security; and
- Support state economic development and diversification.

NMDOT will continue to participate in the Sustainability and Resilience Program to incorporate climate mitigation and adaptation practices into its freight policies and operations and reduce freight-related greenhouse gas emissions.

Resiliency Analysis and Resilience Improvement Plan



The PROTECT Program establishes a competitive grant program for states or MPOs to create a Resilience Improvement Plan that will assess and plan for vulnerabilities to current and future weather events and other natural disasters. The Resilience Improvement Plan will include both a risk-based assessment of transportation asset vulnerability and system vulnerabilities to natural environmental effects. The plan will include transportation investment projects and emergency response strategies, as well as a methodology for evaluating the effectiveness of any projects funded through the competitive grant program. Freight projects are eligible for inclusion under the PROTECT program.

NMDOT is currently conducting a Resiliency Analysis to develop project prioritization methods for projects that will improve transportation network resilience and will be incorporated into the Resilience Improvement Plan.

The Resiliency Analysis is a multimodal analysis and will include a freight component. This analysis consists of developing data and evaluation methods for the following:

- Identifying facilities that are most vulnerable to failure due to extreme weather events (i.e., wildfires, floods, rockfall), facility conditions, and state of repair;
- Identifying network elements that lack redundancy in the event of their failure;
- Identifying facilities that are most economically important to residents and businesses; and
- Identifying facilities that are most critical for safety and medical care access.

NMDOT will complete a comprehensive, multimodal Resiliency Analysis to develop project prioritization methods for projects that will improve transportation network resilience. Upon completion of the Resiliency Analysis, NMDOT will develop a multimodal Resilience Improvement Plan Analysis to assess and plan for vulnerabilities to current and future weather events, as well as other natural disasters, including on identified national and state freight corridors.

Strategic Highway Safety Plan



New Mexico's Safe Mobility for Everyone Vision is from the 2021 Strategic Highway Safety Plan (SHSP). The SHSP is the plan that guides interagency efforts to reduce fatalities and serious injuries for motorists, truck operators, pedestrians, bicyclists, and users of all other transportation modes.

NMDOT utilizes data driven approaches and continues to build on education, enforcement, engineering, and emergency medical services components of traffic safety to improve roadway safety. NMDOT works with partner agencies and transportation safety stakeholders to adopt strategic safety initiatives based on crash data, evidence-based approaches, and best practices. The freight-related strategies of the SHSP include:

- Improving work zone safety for pedestrians, bicyclists, motorcyclists, and heavy truck drivers;
- Improving maintenance and inspection of heavy trucks; and
- Developing inclement weather strategies for coordinated public agency responses to inform heavy truck drivers of hazardous road conditions.

NMDOT will continue to advance the Safe Mobility for Everyone Vision contained in the Strategic Highway Safety Plan to reduce severe crashes and improve overall road safety, including for heavy truck drivers.

Feasibility Study for the Four Corners Freight Rail Project



San Juan County and the Navajo Nation secured a \$2 million Better Utilizing Investments to Leverage Development (BUILD) grant to study the feasibility of a spur rail line that would connect the Farmington area to the national freight network via the BNSF line near Gallup, approximately 120 miles south.

NMDOT will participate in the Four Corners Freight Rail Project Feasibility Study to determine the feasibility, costs, and benefits of building a freight rail line.

Ports-to-Plains Interstate Designation



On March 15, 2022, President Biden signed the FY 2022 Omnibus Appropriations legislation (Public Law 117–103). A provision in this legislation included the designation of the entire Ports-to-Plains Corridor in Texas and New Mexico as a Future Interstate Highway. This proposal would create a new interstate highway connection between New Mexico and Texas in the northeast part of New Mexico as part of the “Ports-to-Plains” corridor. I-27 (which currently goes from Lubbock, TX to Amarillo, TX) would be extended from Amarillo, TX via Clayton, NM to Raton, NM where it would connect with I-25.

NMDOT will continue to monitor developments in the I-27 expansion process, especially related to highway freight flows and needs.

8.3 Freight Investment Plan

NMDOT anticipates receiving approximately \$13.41 million dollars per year as part of the federal National Highway Freight Program (NHFP) (Table 30). As part of the freight planning process, NMDOT has developed a fiscally constrained plan to invest those funds according to a data driven project prioritization process and key stakeholder input, with a focus on optimizing and maximizing the use of available funds to improve freight movement in New Mexico.

Table 30: National Highway Freight Program funding for New Mexico

Federal Fiscal Year	NHFP (targets)	Funding NHFP (program of projects)	Funds
FFY 2023	\$13,409,928*	\$13,200,000 (obligated)	
		\$13,409,928 (available)	
FFY 2024	\$13,409,928	\$13,409,928 (planned)**	
FFY 2025	\$13,409,928	\$13,409,928 (planned)**	
FFY 2026	\$13,409,928	\$13,409,928 (planned)**	
FFY 2027	\$13,409,928	\$13,409,928 (planned)**	
* For planning purposes, FFY 2023 allocation used to estimate funding targets for FFY 2024 through FFY 2027.			
** To Be Programmed (TBD), FFY 2024 through FFY 2027 NHFP funding allocations pending. Program funds will be updated as allocations are received.			

NMDOT developed its 2022 fiscally constrained Freight Investment Plan (FIP) based on a legacy list of candidate freight projects, expert NMDOT stakeholder input, and a data-driven prioritization and selection process. NMDOT initially screened a previously developed list of freight projects and removed projects which had been programmed with other funding or had already been obligated to develop an initial freight project list. This list of projects was assessed by NMDOT's Freight Working Group, a diverse and multimodal internal committee representing NMDOT's Planning Division, District Engineers, Asset Management, Environmental Bureau, Modal Division, Rail Bureau, Aviation Bureau, Chief Engineer, and the Office of the Secretary. District Engineers provided feedback on the initial project list regarding the updated status of each legacy project, and any potential new freight-related projects that should be considered for inclusion in the FIP.

To objectively evaluate the initial project list and the new projects proposed by district engineers, NMDOT developed data-driven freight evaluation criteria and scoring system. NMDOT established scoring methods for each criterion (from 0 - 200 points per criteria, see Appendix D for details). In parallel, the FAC established the category weights for the final scores (Table 31). The category weights were established through a FAC member survey which asked each respondent to allocate a theoretical \$100 among the three criteria categories. On average, FAC members allocated \$33 to increasing freight mobility, \$37 to improving the state of good repair, and \$30 to improving freight related safety. NMDOT translated those dollar amounts into weights, which were applied to the sum of criteria scores in the applicable category (see Appendix D for FIP selection methodology details).

Table 31: FIP Criteria and Scoring Summary

Category	Category Weight	Criteria
Increase Freight Mobility (Reduce Freight Bottlenecks)	33%	AADT
		% Truck of AADT
		TTTR
		Enhance Roadway Functionality for Freight Movement (FMIS Code)
Improve the State of Good Repair	37%	Overall Pavement Condition Rating for Project Extent
		Bridge Condition
Improve Freight Related Safety	30%	Safety Tier
		Safety: STIP FMIS Improvement Type Codes

NMDOT used the scores to rank each potential FIP project. From the list of top-scoring projects, NMDOT evaluated project costs against anticipated NHFP funds for the next eight years, consulted with the NMDOT STIP Unit to determine project readiness, and identified the list of projects to include in the 2022 FIP, shown in Table 32. NMDOT's over-arching FIP principle is to maximize the programming of NHFP funding on an annual statewide basis. In addition to the FIP, NMDOT also developed an additional list of candidate projects to serve as a pool of eligible freight projects to draw from and ensure that NMDOT will optimize the efficient use of NHFP funding each year (see Appendix D).

Table 32: 2022 Fiscally Constrained Freight Investment Plan

Project Information	Funding Information	
Project 1 - E100203	Project Fiscal Year: 2023	
Route: NM 404	Funding Sources:	Millions (\$)
Project Title: NM 404 Widening Project	NHFP	\$11.46
Project Description: Widen NM 404 from I-10 to NM 213 from 2 lanes to 4 lanes	State Match	\$1.95
	Total Project Cost:	\$13.41
Project 2 - 4101390	Project Fiscal Year: 2024	
Route: I-40	Funding Sources:	Millions (\$)
Project Title: I-40 (Hudson Lake)	NHFP	\$11.46
Project Description: Pavement Rehabilitation, MP 345 to MP 350	State Match	\$1.95
	Total Project Cost:	\$13.41
Project 3 - LC00330	Project Fiscal Year: 2025	
Route: I-10	Funding Sources:	Millions (\$)
Project Title: Bridge Replacement	NHFP	\$11.46
Project Description: I-10 Bridge Replacement (Bridges 7169, 7170, 7260, and 7261)	State Match	\$1.95
	Total Project Cost:	\$13.41

Project Information		Funding Information	
Project 4 - S100440		Project Fiscal Year: 2026	
Route: NM-466		Funding Sources:	Millions (\$)
Project Title: NM 466 (St. Michaels)		NHFP	\$11.46
Project Description: Study, design, and construction of the St Francis Dr/St Michaels Dr interchange; pedestrian ADA improvements; pavement preservation, bridge reconstruction		State Match	\$1.95
		Total Project Cost:	\$13.41
Project 5 - F100340		Project Fiscal Year: 2027	
Route: US 550		Funding Sources:	Millions (\$)
Project Title: US 550 Pavement Rehab		NHFP	\$11.46
Project Description: Major Rehab (FDR) of US 550 MM MP 164.9 to MP 168.3		State Match	\$1.95
		Total Project Cost:	\$13.41

NMDOT is committed to completing its FIP projects, optimizing NHFP funds, and coordinating with freight planning partners in New Mexico to implement the strategies outlined in the NMFP. Moving forward, NMDOT will continue to monitor freight needs and opportunities to ensure that the safe, reliable, and efficient movement of goods continues throughout New Mexico.



9. Appendices

9.1 Appendix A – Summary of Other Potential Funding Opportunities for Freight-Related Projects in New Mexico

This table lists a summary of other potential federal and state funding opportunities including grants and loans. This is not a comprehensive list of funding options but provides a list of potential funding options that could be used for New Mexico freight improvements.

Department	Funding	Funding Type	Eligibility
FHWA	Railway-Highway Crossings Program	Set aside funds	Section 130 Program funds projects that eliminate hazards at railway-highway crossings, including roadways, bike trails, and pedestrian paths. NMDOT selects projects and provides oversight for this program.
FAA	Runway pavement passthrough funds	Passthrough funds	Airport runway pavement is surveyed using the Pavement Condition Index (PCI), a procedure in which inspectors identify signs of deterioration on the surface of the pavement and characterize pavement defects in terms of type of distress, severity level of distress, and amount of distress. This information is then used to develop a composite index (PCI number) that represents the overall condition of the pavement on a scale of 0-100. This PCI number indicates what type of maintenance, rehabilitation, or reconstruction is required.
New Mexico Economic Development Department	Volkswagen Settlement	Reimbursement	Eligible projects include (1) Class 8 local freight trucks and port drayage trucks, (2) Class 4-8 school/shuttle/transit buses, (3) Freight switcher locomotives, (4) Ferries/tugboats, (5) Ocean-going vessels shore power, (6) Class 4-7 local trucks, (7) Airport ground support equipment, (8) Forklifts and cargo handling equipment at ports, (9) Light duty Zero Emission Vehicle supply equipment (up to 15% of allocation), (10) Diesel Emissions Reduction Act (DERA) Option (#10). Eligible applicant organizations must operate a diesel-powered fleet within New Mexico. Eligible applicants include (1) Businesses, corporations, partnerships, sole proprietorships, limited liability companies, business trusts or other legal business registered to do business in New Mexico, (2) Nonprofit Corporations – incorporated nonprofit, (3) Municipal Authorities, School Districts, and other State Agencies, (4) Political Subdivisions, New Mexico municipalities or counties.
	Clean Diesel Program (Federal DERA Program managed by state DOTs)	Grant	Eligible projects include idle reduction technologies, aerodynamic technologies, and the retrofit or replacement of diesel vehicles and equipment throughout the state. Eligible vehicles include school buses and municipal fleets, commercial transportation vehicles, and non-road equipment. The grant funds will be used for the purchase and installation of EPA or California Air Resources Board verified/certified technologies in accordance with DERA funding guidelines.

Department	Funding	Funding Type	Eligibility
New Mexico Finance Authority	Public Project Revolving Fund (PRF)	Loans of up to 30 years, based upon the useful life of the project, offered at low, fixed interest rates.	The PPRF provides both market-rate loans and loans to disadvantaged communities at subsidized rates. Eligible projects include infrastructure improvements, road projects, water system upgrades, fire and law enforcement equipment, public buildings, hospitals and healthcare facilities, electric and broadband utilities, quality of life projects, and more. Eligible applicants include Local governments, tribal entities and charter schools.
	Local Government Planning Fund (LGPF)	Sliding scale grant made on a reimbursement basis	The LGPF funds development of critical planning documents for public infrastructure projects. Eligible plans include Preliminary Engineering Reports, Feasibility Studies, Environmental Information Documents, Comprehensive Plans, Asset Management Plans, Water Conservation Plans, Master Plans, Local Economic Development Act Plans and Metropolitan Redevelopment Act Plans. Eligible applicants include local governments, tribal entities, and mutual domestic water consumers associations
	Colonias Infrastructure Act	90% grant and 10% loan, with provisions for loan waivers. The loans are structured with terms of up to 20 years at 0% interest	The Act ensures adequate financial resources for infrastructure development for Colonia-recognized communities, provides for the planning and development of infrastructure in an efficient and cost-effective manner, and develops infrastructure projects to improve quality of life and encourage economic development. Eligible applicants include local governments, including counties, cities, and mutual domestic water consumers associations.
New Mexico Indian Affairs Department	Capital Outlay Program	One-time grant	Capital Outlay projects build, improve, or equip physical property that will be used by the public. Eligible capital outlay projects include roads, computers, museums, playgrounds, schools, irrigation ditches, hospitals, lands, and furniture.
	Tribal Infrastructure Fund	Competitive grant application	Eligible projects include basic infrastructure, including, but not limited to water and wastewater systems, roads, and electrical power lines. Eligible applicants must be federally recognized tribal nations, tribes, or pueblos located wholly or partially in New Mexico or any of its governmental subdivisions

9.2 Appendix B – Truck Parking Analysis Data Summary

This table lists all data sources used in the truck parking analysis and how each of these datasets were used.

Source	Description	Use	Link
Love's	Web-based private truck parking location maps	Map the inventory of private truck parking facilities from large Truck Service Center companies	Link
Pilot/Flying J	Web-based private truck parking location maps	Map the inventory of private truck parking facilities from large Truck Service Center companies	Link
Trucker Path	Trucking application website that provides parking location and amenity information	Map Walmart store and other facility locations; count truck parking spaces	Link
Jason's Law 2015 and 2019 Truck Parking Survey	Facilities and spaces shapefile and PDF summary of nationwide results	Map inventory of public truck parking at rest areas; compare to 2015 inventory	Link
The State of New Mexico Rest Areas, 2021	Document developed by NMDOT GIS staff that provides summary data and maps of the public rest areas in New Mexico	Supplement and confirm Jason's Law data	Link
USDOT	GIS-based dataset containing Truck Stop Parking locations across the US using Jason's Law data	Confirm accuracy of public truck parking locations map	Link
American Truck Parking	Searchable, GIS-based dataset showing all trucking parking locations nationwide	Fill in gaps and crosscheck with Trucker Path Data	Link
Sky City Casino website and Google maps	Some casino websites offered information about truck parking; supplemented with manual counts using Google aerial map view	Supplement additional truck parking inventory along the Primary Highway Freight Network	Link
NMDOT Freight-related Economic Development Opportunity Study 2016	Summary of a "Truck Driver and Services Preferences and Needs" survey and recommendations on truck-related service improvements	Review for inventory information, general parking needs, recommendations, and statistics	Link
NMDOT Freight Plan 2040	2040 New Mexico Freight Plan	Update maps and extract persisting issues and needs	Link

Source	Description	Use	Link
I-10 Connects	I-10 Truck Parking Availability System (TPAS) Fact Sheet	Update New Mexico's I-10 Truck Parking sites	Link
i-10 Connects	TPAS Truck Driver and Dispatcher Baseline Survey Summary	Review key survey findings and truck parking Issues	Link
Mid-Region Council of Governments*	Metropolitan Transportation Plan	Review for truck needs, projects, and other discussion	Link
USDOT	Supply Chain Assessment of the Transportation Industrial Base: Freight and Logistics (February 2022)	Truck parking policy recommendations	Link
CDL Life	New Flying J Locations in NM	Private parking count	Link

* The *Northwest New Mexico Regional Transportation Plan* and the *Santa Fe Multimodal Transition Plan* were also reviewed, but neither included information specifically about truck parking.

9.3 Appendix C – Public Rest Area Truck Parking Facilities

Facility Name	Route Name	Travel Access Direction	Milepost	Number of Truck Parking Spaces
Acomita	I-40	Eastbound (EB) Westbound (WB)	102	8
Anthony	I-10	Northbound (NB)	164	17
Anton Chico	I-40	EB	251	14
Anton Chico	I-40	WB	252	23
Blackwater Draw*	U.S. 70	NB	429	8
Butterfield Trail	U.S. 180	Southbound (SB)	145	6
Ft. Craig	I-25	NB	114	4
Ft. Craig	I-25	SB	114	10
Ft. Selden	I-25	NB	23	7
Ft. Selden	I-25	SB	23	5
Ft. Union	I-25	NB	374	8
Ft. Union	I-25	SB	376	7
Gage	I-10	WB	61	4
Glenrio Visitor Center	I-40	WB	373	53
La Bajada	I-25	NB	267	14
Las Cruces Overlook	I-10	EB	135	14
Lordsburg	I-10	EB	21	10
Maljamar	U.S. 82	SB	144	2
Manuelito^	I-40	WB	3	22
Mesa	U.S. 285	NB	150	5
Pajarito	I-40	EB	302	14
Pajarito	I-40	WB	302	12
Rattlesnake Draw	I-40	EB	208	12
Rattlesnake Draw	I-40	WB	208	10
Sierra Grande	U.S. 64	NB	392	8
Thaxton	I-25	NB	434	4

Facility Name	Route Name	Travel Access Direction	Milepost	Number of Truck Parking Spaces
Thaxton	I-25	SB	434	4
Waldrop	U.S. 380	EB	196	5
Walking Sands	I-25	NB	167	8
Walking Sands	I-25	SB	167	8
Yucca	I-10	EB	53	5

*Permanently closed; truck parking still accessible.

^Temporarily closed.

9.4 Appendix D – Freight Investment Plan

NMDOT developed a data-driven process to evaluate and rank candidate projects for the FIP.

Core Project Evaluation Criteria: By Proposed Project Extent					FAC Assigned Weight for Evaluation Criteria	Final Scoring of Candidate FIP Project
Increase Freight Mobility (Reduce Freight Bottlenecks)					33%	
Average Annual Daily Traffic (AADT) Maximum Points: 100 Scoring Criteria: ≥ 60K = 100% max points > 40K to 59.9K = 80% max points > 20K to 39.9K = 60% max points > 10K to 19.9K = 40% max points > 5K to 9.9K = 20% max points ≤ 4.9 = 0% max points	% Truck of AADT Maximum Points: 100 Scoring Criteria: ≥ 40% = 100% max points > 30% to 39.9% = 75% max points > 20.0% to 29.9% = 50% max points > 10% to 19.9% = 25% max points ≤ 9.9% = 0% max points	TTTR Metric in Project Extent (PM3 2021 Target = 1.15) Maximum Points: 100 Scoring Criteria: ≤ 1.00 to 1.10 = 0% max points >1.11 to 1.12 = 50% max points >1.13 to 1.14 = 75% max points ≥ 1.15 = 100% max points	Enhance Roadway Functionality for Freight Movement: STIP FMIS Improvement Type Codes Maximum Points: 100 Scoring Criteria: Added Capacity = 100% max points Roadway - New/Reconstruction Bridge - New, Replacement, Rehabilitation FMIS Codes 01, 03, 08, 10 and 13 In-Kind Improvements (No Added Capacity) = 50% max points Roadway - Reconstruction, Resurfacing, Restoration and Rehabilitation, Relocation Bridge - Replacement, Rehabilitation FMIS Codes 04, 05, 06, 07, 11, and 14 Remaining FMIS Codes = 0% max points	On Freight Bottleneck? Maximum Points: 200 Scoring Criteria If project is on FAC Identified Freight Bottleneck Location: Yes = 200 points No = 0 points		Sum of Scores X FAC Weight for "Parent" Evaluation Criteria
Improve the State of Good Repair of Freight Infrastructure					37%	

Core Project Evaluation Criteria: By Proposed Project Extent		FAC Assigned Weight for Evaluation Criteria	Final Scoring of Candidate FIP Project
Overall Pavement Condition Rating for Project Extent Maximum Points: 100 Scoring Criteria: Pavement Condition Rating 2.10 to 3.00 = max points 1.1 to 2.00 = 50% max points < = 1.00 = 0% max points	Bridge Condition Maximum Points: 100 Scoring Criteria: Bridge Condition Rating 2.10 to 3.00 = max points 1.1 to 2.00 = 50% max points < = 1.00 = 0% max points		Sum of Scores X FAC Weight for "Parent" Evaluation Criteria
Improve Freight Related Safety		30%	
Safety Tier Maximum Points: 100 Scoring Criteria < = 1.5 = max points 1.6 to 2.0 = 75% max points 2.1 to 2.5 = 50% max points 2.6 to 3.0 = 25% max point No Safety Tier = 0% max points	Safety: STIP FMIS Improvement Type Codes Maximum Points: 100 Scoring Criteria Safety and Rail/Highway Crossing If FMIS Codes 21 and 22 = 100% max points Remaining FMIS Codes = 0% max points		Sum of Scores X FAC Weight for "Parent" Evaluation Criteria
			Total (Sum of Evaluation Criteria Scores)

In addition to the planned FIP projects detailed in Chapter 8, NMDOT identified a list of candidate projects that are also eligible for NHFP funding. This contingency list represents freight projects that may be drawn from in the future to ensure that all NHFP funds are programmed. In addition, The IIJA also provides other transportation funding opportunities through discretionary grants. NMDOT intends to leverage these opportunities by applying for federal discretionary grants for eligible projects to increase investments in the freight transportation system.

STIP Program Year	Control Number (CN)	Road	On NHFN?	Total Cost	Mile Point	Project Title	Project Description	Primary Project Type (FMIS Code)
2024	1100980	I-25	Yes, interstate	\$85,000,000	106 to 108 (Bridge Replacements : 6776 and 6777)	Bridge Replacement	I-25 Bridge Replacement (Bridges 6776 and 6777) (Note: CON funds programmed for FFY24 & FFY25)	Bridge - Replace (11)
2026	A301901	I-25	Yes, as Interstate	\$197,945,153	227 to 229.9 (2.90)	I-25 Improved: Comanche to Montgomery	Series 2021A Bond Project - Reconstruct Interchange with bridge replacement or rehab, and other improvements to interstate and adjacent infrastructure as needed	Road - Add Capacity/Widening (3)
2026	5101011	US 64/US 491	Yes, both segments are on CRFC	\$29,228,417	US 491, 91.12 to 92.2; US 64, 21.77 to 22.88 Replace Bridges 1792 and 7148	US 491 Truss Bridge Over the San Juan River	Replace bridges and reconstruct north and south intersections of US 64 and US 491	Bridge - Replace + Add Capacity (10)
2026	1101900	I-10	Yes, as Interstate	\$17,000,000	35 to 44 (9 miles)	I-10 Pavement Rehab	Pavement Rehab	Road - Major Rehabilitation (6)

STIP Program Year	Control Number (CN)	Road	On NHFN?	Total Cost	Mile Point	Project Title	Project Description	Primary Project Type (FMIS Code)
2026	1102080	I-10	Yes, as interstate	\$22,000,000	0 to 15	I-10 AZ State Line to MP 15 Pavement Preservation	Pavement Preservation	Road - Major Preservation (6)
2026	LC00440	US-70	Yes, as a CUFC	\$20,000,000	150.7 to 161.7	US-70 Pavement Preservation	Pavement Preservation	Road - Major Preservation (6)
2026	4101371	I-25	Yes, as Interstate	\$9,900,000	299.55 to 305	I-25 (North of Glorieta) Phase II	Pavement Rehabilitation	Road - Minor Rehabilitation (6)
2026	1101930	I-25	Yes, as Interstate	\$20,100,000	139 to 150 (11 miles)	I-25 Pavement Preservation	Pavement Preservation	Road - Major Rehabilitation (6)
2026	A301001	NM-500	Yes, as a CUFC	\$86,000,000	Bridge Replacements : 6224, 6225, 8568, and 8569	NM 500 Rio Bravo Bridge Replacement	Replacement of structurally deficient bridges on NM 500 over the Rio Grande (Note: CON funds programmed for FFY26 & FFY27)	Bridge - Replace + Add Capacity (10)
2026	1101890	I-10	Yes, as Interstate	\$17,200,000	64.8 to 75.2 to 75 (10.4 miles)	I-10 Pavement Preservation	Pavement Preservation & Guardrail Replacement	Road - Major Rehabilitation (6)

STIP Program Year	Control Number (CN)	Road	On NHFN?	Total Cost	Mile Point	Project Title	Project Description	Primary Project Type (FMIS Code)
2026	E100321	NM-213	Yes, as CRFC	\$35,800,000	0 to 3	NM 213 Widening Project	Widen NM 213 from 2 to 4 lanes	Road - Add Capacity/Widening (3)
2027	1101024	I 25	Yes, as Interstate	\$8,900,000	34 to 41 (7 miles)	I-25 near Hatch Phase IV	Roadway Rehabilitation	Road - Minor Rehabilitation (6)
2027	4100860	I-40	Yes, as Interstate	\$8,000,000	286 to 291 (5 miles)	I-40 (Santa Rosa)	Pavement Rehabilitation	Road - Minor Rehabilitation (6)

NMDOT also identified a “Watch List” of projects that could potentially become eligible for the NHFP funding in the future.

Control Number (CN)	Road	On NHFN?	Total Cost	Mile Point	Project Title	Project Description	Primary Project Type (FMIS Code)
E100322	Intersection of NM-404/NM-213	Yes, as CRFC	\$45 Million	NM-404, MP 8.0 to NM 213, MP 2.5	Note: Not in current STIP (Future Potential Freight Project, D1 indicates Phase A/B ongoing)	NM-404/NM-213 New Interchange (Note: Monitor follow-on projects as future potential Freight Project, D1 indicates Phase A/B ongoing.)	FMIS Code not assigned
2104660	US 60/84	Yes, as CRFC	\$4.5 Million	MP 325 to MP 381 (56 miles)	US 60 Passing Lanes, MP 325 to MP 381 - Phase 1A	Clovis to Ft. Sumner; the increase in freight and overall traffic growth warrants the need for capacity projects adding passing lanes and rehabbing existing pavement. (Note: Monitor follow-on projects as future potential freight projects.)	Preliminary Engineering (15)
6101580	I-40	Yes, as Interstate	NA	MP 0 to MP 163	Project Title Not Assigned	Phase A/B study for the I-40 corridor from MP 0 – 163. (Note: Monitor follow-on projects as future potential freight projects.)	FMIS Code not assigned
CN not assigned (FP #4.1)	I-40	Yes, as Interstate	\$10.9 Million	MP 269.9 to MP 276	Project Title Not Assigned	Pavement Preservation with spot reconstruction	FMIS Code not assigned
CN not assigned (FP #4.2)	I-40	Yes, as Interstate	\$9.35 million	MP 308 to MP 313.1	Project Title Not Assigned	Pavement Preservation with spot reconstruction	FMIS Code not assigned

Control Number (CN)	Road	On NHFN?	Total Cost	Mile Point	Project Title	Project Description	Primary Project Type (FMIS Code)
CN not assigned (FP #4.3)	I-40	Yes, as Interstate	\$21.5 Million	MP 339 to MP 351	Project Title Not Assigned	Pavement Preservation with spot reconstruction	FMIS Code not assigned
CN not assigned (FP #4.4)	New SH connecting NM 136 to NM 273	May be designated as CUFC	NA	NA	Project Title Not Assigned	New State Highway, to be designed and constructed under the Border Highway Connector project (formerly known as St. Francis Dr. Extension), that will connect NM136 from the Santa Teresa Land Port of Entry with NM 273 in Sunland Park, NM	FMIS Code not assigned

9.5 Appendix E – Federal Freight Planning Guidance – FAST ACT Content Requirements

Requirement	Location in Freight Plan
An identification of significant freight system trends, needs, and issues	4. Economic and Freight Context and Trends 5. System Condition, Performance, and Gap Analysis of the Freight Network
A description of the freight policies, strategies, and performance measures that will guide the freight-related transportation investment decisions of the state	2. Goals, Objectives, and Performance Measures 3.3 Freight-Related Policies and Strategies 8 Implementation Plan
A list of multimodal critical rural freight facilities and corridors	5.2 System Condition and Performance of Freight Network
A list of critical rural and urban freight corridors	5.2 System Condition and Performance of Freight Network
A description of how the plan will improve the ability of the state to meet the national multimodal freight policy goals and the national highway freight program goals	2.1 Vision & Goals
A description of how innovative technologies and operational strategies that improve the safety and efficiency of the freight movement were incorporated.	2 Goals, Objectives, and Performance Measures 4.3 New Mexico's Future 5.3 Gap Analysis 7.4 Planned Projects 8 Implementation Plan
An inventory of facilities with freight mobility issues, as well as a description of the strategies the state is employing to address those freight mobility issues for facilities that are state- owned and operated.	5 System Condition, Performance, and Gap Analysis of the Freight Network 6 Truck Parking 7 International Ports of Entry Conditions and Needs
Consider any significant congestion or delay caused by freight movements and any strategies to mitigate that congestion or delay.	5.3 Gap Analysis 7.4 Planned Projects 8.3 Freight Investment Plan
A freight investment plan that includes a list of priority projects and describes how funds made available would be invested and matched	8 Freight Investment Plan
Consultation with the State FAC, if applicable	1.1 Stakeholder Engagement 2.2 Feedback and Revision 8.3 Freight Investment Plan

9.6 Appendix F – Federal Freight Planning Guidance – IIJA Content Requirements

Requirement	Location in Freight Plan
An inventory of supply chain cargo flows	4.2 New Mexico's Economy Today
An inventory of commercial ports	7 International Ports of Entry Conditions and Needs
A description of the impacts of e-commerce on freight infrastructure	4.3 New Mexico's Future
Military freight consideration	5.2 System Condition and Performance of Freight Network
Strategies and goals to address extreme weather, air pollution, flooding, and wildlife and habitat loss	2 Goals, Objectives, and Performance Measures 8.1 Strategies
Truck parking facilities	6 Truck Parking
A priority either to enhance reliability and redundancy of freight transportation or how to improve the ability to rapidly restore access to freight transportation	2.3 Draft Objectives 8.1 Strategies

9.7 Appendix G – Critical Freight Corridors

NEW MEXICO 2015 STATE FREIGHT PLAN – 2021 ADDENDUM 2:

CRITICAL FREIGHT CORRIDORS

NMDOT completed the 2015 State Freight Plan (2015 Freight Plan) according to the guidance outlined in the Moving Ahead for Progress in the 21st Century Act (MAP-21) of 2012, ahead of the Fixing America's Surface Transportation (FAST) Act of 2015. The purpose of this *Critical Freight Corridors Addendum* is to recognize the FAST Act provisions for states to designate Critical Rural Freight Corridors (CRFCs) and for Metropolitan Planning Organizations (MPOs) to coordinate with State DOTs to designate Critical Urban Freight Corridors (CUFCs). New Mexico is allocated 202.32 miles of CRFC and 101.16 miles of CUFC.

In the summer of 2019, NMDOT evaluated NMDOT-lead freight-focused projects throughout the state and identified nine projects located on highway segments that were not on the Primary Highway Freight System (PHFS). The PHFS consists of the three Interstates in New Mexico (Interstate 10, Interstate 25, and Interstate 40), as well as New Mexico Route 136 (NM-136), which connects the Santa Teresa Port of Entry to Interstate 10.

These additional highway segments are outside of urbanized areas with populations of 50,000 or more, as designated by the U.S. Census, and as such are determined to be rural. NMDOT submitted the final list and illustrative map of CRFC segments to FHWA-NM September 17, 2020, which issued a letter of concurrence on November 4, 2020 for the 157.05 centerline miles of designated CRFC.

Subsequently, NMDOT coordinated with the five MPOs in the state, and developed a list of 15 additional highway segments that could further expand the PHFS and the previously designated CRFCs, to support additional freight-focused projects. That added 15 highway segments, including 25.88 miles of CRFC and 50.72 miles of CUFC. FHWA-NM issued a letter of concurrence on March 29, 2021. The complete list of designated CRFCs, CUFCs is as follows:

Route No.	Start	End	Length (U)	CUFC_ID	Length (R)	CRFC_ID
NM-11	MP 0	MP 35			35 miles	E, G
NM-404	MP 0.9	MP 9			8.1 miles	G
US 54	MP 151.6	MP 163.7			12.1 miles	G
US 64	MP 21.77	MP 22.88			1.11 miles	B, G
US 84	MP 6.74	MP 18.49			11.75 miles	G
US 60/84	MP 331	MP 385			54 miles	G
US 285	MP 2	MP 22			20 miles	B, G
US 491	MP 91.1	MP 92.2			1.1 miles	B, G
US 550	MP 161	MP 174.89			13.89 miles	B, G
Aztec Arterial	MP 0	MP 3.60			3.60 miles	G
NM 516	MP 0	MP 14	9.6 miles	K	4.4 miles	G
US 84	MP 161.9	MP 163	1.1 miles	K		
NM 466	MP 0	MP 1.75	1.75 miles	K		
NM 14	MP 52.04	MP 53.71	1.67 miles	K		
US 54	MP 0	MP 11.33			11.33 miles	G
NM 213	MP 0	MP 3	3 miles	K		

Route No.	Start	End	Length (U)	CUFC_ID	Length (R)	CRFC_ID
NM 273	MP 0	MP 9.5	9.5 miles	K		
Strauss Rd, Santa Teresa	MP 0	MP 5.15	5.15 miles	H, K		
US 70	MP 149.1	MP 150	0.9 mile	K		
US 70	MP 151	MP 162	11 miles	K		
Paseo del Norte, ABQ	Rainbow Blvd	Calle Nortena	2.2 miles	K		
NM 500	MP 3.16	MP 3.74	0.58 mile	K		
NM 500	MP 8.9	MP 9.9	1 mile	K		
NM 6	MP 23.6	MP 32.6	2.45 miles	K	6.55 miles	G
			50.72 miles	U. Total	182.93 miles	R. Total

9.8 Appendix H – MPO and RTPO Outreach Activities

Organization Type	Name	Meeting Date
Metropolitan Planning Organization	Farmington MPO Technical Committee	February 9, 2022
	Mid-Region Metropolitan MPO Transportation Program Technical Group*	March 1, 2022
	Mesilla Valley MPO (Technical Advisory Committee)	March 3, 2022
	EL Paso MPO Transportation Project Advisory Committee	April 6, 2022
	Santa Fe MPO Technical Coordinating Committee	February 21, 2022
	Northeast RTPO (NERTPO)	March 23, 2022
Regional Transportation Planning Organization	Northwest RTPO (NWRTPO)**	March 9, 2022
	Northern Pueblos RTPO (NPRTPO)	March 23, 2022
	South Central RTPO (SCRTPO)	March 23, 2022
	Southeast RTPO (SERTPO)	March 31, 2022
Other	NMDOT Govt to Govt Update - Week of 02/07/2022	February 9, 2022

References

- AASHTO. (2021). *AASHTO Comprehensive Analysis of the Bipartisan Infrastructure Bill - Infrastructure Investment and Jobs Act (IIJA)*. Retrieved from <https://policy.transportation.org/wp-content/uploads/sites/59/2021/09/2021-09-15-AASHTO-Comprehensive-Analysis-of-IIJA-FINAL.pdf>
- ABQ International Sunport. (2019). *Facts & Figures – ABQ Sunport*. Retrieved from <https://www.abqsunport.com/facts-figures/>
- AMECO. (2022). *Mining Support Services*. Retrieved from <https://www.ameco.com/operations-services/mining-services>
- AIA. (2020). *US Land Port of Entry, Columbus, New Mexico*. Retrieved from <https://www.aia.org/showcases/6280250-us-land-port-of-entry-columbus-new-mexico>
- BillTrack50. (2022). *NM - HB6*. (2022). Retrieved from <https://www.billtrack50.com/BillDetail/1423980>
- BNN Bloomberg. (2022). *Amazon Aims to Sublet, End Warehouse Leases as Online Sales Cool*. Retrieved from <https://www.bnnbloomberg.ca/amazon-aims-to-sublet-end-warehouse-leases-as-online-sales-cool-1.1768859>
- BNSF Railway. (2022). *Certified Sites | BNSF*. Retrieved from <https://www.bnsf.com/ship-with-bnsf/rail-development/certified-sites.page>
- Brown, A. (2020, January 9). *Electric Cars Will Challenge State Power Grids*. Retrieved from <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2020/01/09/electric-cars-will-challenge-state-power-grids>
- Bureau of Transportation Statistics. (2017). *Air Carriers: T-100 Segment (All Carriers)*. Retrieved from https://www.transtats.bts.gov/DL_SelectFields.aspx?gnoyr_VQ=FMG&QO_fu146_anzr=Nv4%20Pn44vr45
- City of El Paso. (2021). *Air Cargo*. Retrieved from <https://business.elpasointernationalairport.com/cargo-and-logistics/air-cargo/>
- DeGolia, A. (2022, February 10). *The Clean Future Act: New Mexico's biggest opportunity to lead on climate*. Retrieved from <https://blogs.edf.org/climate411/2022/02/10/the-clean-future-act-new-mexicos-biggest-opportunity-to-lead-on-climate/>
- EBP. (2022, July 31). *New Mexico Transportation Network Resilience*. Retrieved from <https://www.ebp-us.com/en/projects/new-mexico-transportation-network-resilience>
- Elgharbawy, M., Scherhauer, I., Oberhollenzer, K., Frey, M., & Gauterin, F. (2019). Adaptive functional testing for autonomous trucks. *International Journal of Transportation Science and Technology*, 8(2), 202–218. Retrieved from <https://doi.org/10.1016/j.ijtst.2018.11.003>
- Federal Aviation Administration. (2022). *AIDS Search Results*. Retrieved from <https://www.asias.faa.gov/apex/f?p=100:11:::NO>

- Federal Aviation Administration. (2020, October 7). *National Plan of Integrated Airport Systems (NPIAS) Appendix B: National and State Maps*. Retrieved from https://www.faa.gov/airports/planning_capacity/npias/current/media/NPIAS-2021-2025-Appendix-B.pdf
- Federal Highway Administration. (2020). *Jason's Law Truck Parking Survey Results and Comparative Analysis*. Retrieved from https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/jasons_law/truckparkingsurvey/ch1.htm#:~:text=Jason's%20Law%20requires%20a%20survey,truck%20parking%20in%20each%20State
- Federal Highway Administration. (2022). *Truck Parking*. Retrieved from https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/index.htm
- Federal Motor Carrier Safety Administration (2021). *Hours of Service (HOS)*. Retrieved from <https://www.fmcsa.dot.gov/regulations/hours-of-service>
- Federal Railroad Administration – Office of Safety Analysis. (2019). *FRA-Homepage*. Retrieved from <https://safetydata.fra.dot.gov/OfficeofSafety/default.aspx>
- Federal Railroad Administration – Office of Safety Analysis. (2019). *3.08 - Accident Map with Table*. Retrieved from <https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Query/inctmap.aspx>
- Federal Railroad Administration – Office of Safety Analysis. (2019). *3.01 - Accident Trends - Summary Statistics*. Retrieved from <https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/summary.aspx>
- Federal Railroad Administration – Office of Safety Analysis. (2019). *9.12 - Definitions*. Retrieved from <https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Definitions.aspx>
- Federal Register. (2017, January 18). *National Performance Management Measures; Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program*. Retrieved from <https://www.federalregister.gov/documents/2017/01/18/2017-00681/national-performance-management-measures-assessing-performance-of-the-national-highway-system>
- Federal Register. (2019, November 29). *Waybill Sample Reporting*. <https://www.federalregister.gov/documents/2019/11/29/2019-25924/waybill-sample-reporting>
- Freight Analysis Framework (2017). *Freight Analysis Framework Version 5*. Retrieved from <https://faf.ornl.gov/faf5/Default.aspx>
- I-10 Connects. (2016). *Home | I10 Corridor Coalition*. Retrieved from <https://i10connects.com/>
- I-10 Connects. (2019). *Overview of TPAS*. Retrieved from <https://i10connects.com/overview-tpas>
- I-10 Connects. (2021). *I-10 Corridor Coalition Truck Parking Availability System (TPAS)*. Retrieved from https://i10connects.com/sites/default/files/2021/04/TPAS-FactSheet_March2021.pdf
- I-10 Connects. (2021). *I-10 Corridor Coalition Truck Parking Availability System Truck Driver and Dispatcher*

Baseline Survey Summary. Retrieved from <https://i10connects.com/sites/default/files/2021/01/TPAS-survey-summary-20201223.pdf>

I-10 Connects. (2022). *About the I-10 Corridor Coalition | I-10 Corridor Coalition*. Retrieved from <https://i10connects.com/about/about-i-10-corridor-coalition>

Jaekel, B. (2021, May 12). *Cannabis Transportation Has Surprising Requirements for 3PLs*. Retrieved from <https://www.foodlogistics.com/transportation/3pl-4pl/article/21389897/cannabis-transportation-has-surprising-requirements-for-3pls>

Mid-region Metropolitan Planning Organization. (2020). *Connections 2040*. Retrieved from <https://www.mrcog-nm.gov/DocumentCenter/View/4226/Connections-2040-MTP---Full-Documnet-PDF>

National Center for Statistics and Analysis. (2021, May). *Large trucks: 2019 data. (Traffic Safety Facts. Report No. DOT HS 813 110)*. National Highway Traffic Safety Administration. Retrieved from <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813110>

New Mexico Border Authority. (2022). *New Mexico Ports of Entry*. Retrieved from http://www.nmborder.com/Santa_Teresa.aspx

New Mexico Climate Change Action. (2022, March 7). *New Mexico Climate Change Action*. <https://www.climateaction.nm.gov/>

New Mexico Climate Change Action. (2022, March 7). *Resources*. <https://www.climateaction.nm.gov/resources/>

New Mexico Department of Finance and Administration – State Budget Division. (2020). *Executive Budget Recommendations, Fiscal Year 2022*. Retrieved from <https://www.nmdfa.state.nm.us/wp-content/uploads/2021/01/FY22-Executive-Budget-Recommendation.pdf>

New Mexico Department of Transportation. (2021). *Highway Safety Improvement Program*. Retrieved from <https://www.dot.nm.gov/planning-research-multimodal-and-safety/planning-division/multimodal-planning-and-programs-bureau/highway-safety-improvement-program/>

New Mexico Department of Transportation. (2021). *New Mexico – Chihuahua Border Master Plan Update*. Retrieved from <https://www.dot.nm.gov/contact-us/districts/district-1/international-programs/>

New Mexico Department of Transportation. (2022). *Asset Management Bureau*. Retrieved from <https://www.dot.nm.gov/business-support/capital-program-and-investments/asset-management-bureau/>

New Mexico Department of Transportation. (2022). *Aviation Division*. Retrieved from <https://www.dot.nm.gov/planning-research-multimodal-and-safety/modal/aviation-division/>

New Mexico Department of Transportation. (2022). *Government to Government Unit*. Retrieved from <https://www.dot.nm.gov/planning-research-multimodal-and-safety/planning-division/multimodal-planning-and-programs-bureau/government-to-government/>

- New Mexico Department of Transportation. (2022). *Native American Tribal Liaison Unit*. Retrieved from <https://www.dot.nm.gov/planning-research-multimodal-and-safety/planning-division/multimodal-planning-and-programs-bureau/native-american-tribal-liaison/>
- New Mexico Department of Transportation. (2022). *Ports of Entry*. Retrieved from <https://www.dot.nm.gov/planning-research-multimodal-and-safety/modal/ports-of-entry/>
- New Mexico Department of Transportation. (2022). *Rail Bureau*. Retrieved from <https://www.dot.nm.gov/planning-research-multimodal-and-safety/modal/transit-rail/rail-bureau/>
- New Mexico Department of Transportation. (2022). *Technical and Freight Planning*. Retrieved from <https://www.dot.nm.gov/planning-research-multimodal-and-safety/planning-division/multimodal-planning-and-programs-bureau/technical-and-freight-planning/>
- New Mexico Department of Transportation. (2021). *Transportation Performance Management Program*. Retrieved from <https://www.dot.nm.gov/business-support/capital-program-and-investments/transportation-performance-management-program/>
- New Mexico Economic Development Department. (2014, August 29). *Governor Susana Martinez Announces PESCO Expanding, Creating 150 New Jobs in Farmington*. Retrieved from <https://edd.newmexico.gov/pr/governor-susana-martinez-announces-pesco-expanding-creating-150-new-jobs-in-farmington/>
- New Mexico Energy, Minerals, and Natural Resources Department. (2021, December 23). *Climate Change Task Force - Energy Conservation and Management*. Retrieved from <https://www.emnrd.nm.gov/ecmd/climate-change-task-force/>
- New Mexico Legislature. (2022). *2021 Regular Session - HB 270*. Retrieved from <https://www.nmlegis.gov/Legislation/Legislation?chamber=H&legtype=B&legno=270&year=21>
- New Mexico Legislature. (n.d.). Project Oversight Division: Local Government Road Fund & Transportation Project Fund. Retrieved August 19, 2022, from <https://www.nmlegis.gov/handouts/REOTF%20080421%20Item%209%20Local%20Government%20Road%20Fund%20and%20TPF%20-%20NMDOT.pdf>
- New Mexico Partnership. (2019). *Southwest NM Port of Entry Expansion Signifies Economic Growth*. Retrieved from <https://nmpartnership.com/southwest-nm-port-of-entry-expansion-signifies-economic-growth-2/>
- Nott, R. (2021, December 29). *New Mexico issues recreational cannabis rules*. Retrieved from https://www.santafenewmexican.com/news/local_news/new-mexico-issues-recreational-cannabis-rules/article_bbe5e504-6819-11ec-ad3e-97b9eb68c5a2.html
- nVision Global. (2019, July 30). *Legal Cannabis Is Creating Nightmares for Freight and Logistics*. Retrieved from <https://corporate.nvisionglobal.com/legal-cannabis-is-creating-nightmares-for-freight-and-logistics/>
- Office of Energy Efficiency and Renewable Energy. (2022). *Hydrogen Delivery*. Retrieved from <https://www.energy.gov/eere/fuelcells/hydrogen-delivery>

- Office of Energy Efficiency & Renewable Energy. (2020). *WINDEXchange: Wind Energy in New Mexico*. Energy.gov. <https://windexchange.energy.gov/states/nm>
- Office of the Governor – Michelle Lujan Grisham. (2021). *Gov. Lujan Grisham joins President Biden for signing ceremony of historic infrastructure bill*. Retrieved from <https://www.governor.state.nm.us/2021/11/15/gov-lujan-grisham-joins-president-biden-for-signing-ceremony-of-historic-infrastructure-bill/>
- Office of the Governor – Michelle Lujan Grisham. (2022). *New Mexico, coalition of mountain west states sign MOU to develop a regional clean hydrogen hub*. Retrieved from <https://www.governor.state.nm.us/2022/02/24/new-mexico-coalition-of-mountain-west-states-sign-mou-to-develop-a-regional-clean-hydrogen-hub/>
- Office of the Governor – Michelle Lujan Grisham. (2022). *New Mexico to boost clean energy economy with Hydrogen Hub Development Act*. Retrieved from <https://www.governor.state.nm.us/2022/01/25/new-mexico-to-boost-clean-energy-economy-with-hydrogen-hub-development-act/>
- Press, A. (2022). *Computer Chip Maker to Pay \$32M for Water Pipeline*. Retrieved from <https://www.usnews.com/news/best-states/new-mexico/articles/2022-01-08/computer-chip-maker-to-pay-32m-for-water-pipeline>
- Ruggles, R. (2022, May 29). *Huge wind project developing in Central New Mexico*. Retrieved from https://www.santafenewmexican.com/news/local_news/huge-wind-project-developing-in-central-new-mexico/article_d24d77ce-d076-11ec-92fa-4b8b5c06fb87.html?utm_medium=social&utm_source=email&utm_campaign=user-share
- Shankland, S. (2021, May 3). *Intel investing \$3.5B in New Mexico fab upgrade, boosting US chipmaking*. Retrieved from <https://www.cnet.com/tech/mobile/intel-investing-3-5b-in-new-mexico-fab-upgrade-boosting-us-chipmaking/>
- Short, J., & Murray, D. (2016). Identifying autonomous vehicle technology impacts on the trucking industry. Retrieved from <https://truckingresearch.org/wp-content/uploads/2016/11/ATRI-Autonomous-Vehicle-Impacts-11-2016.pdf>
- SICCODE.com. (2021, May 7). *SIC Code 2999 - Products of Petroleum and Coal, Not Elsewhere Classified*, Retrieved from <https://siccode.com/sic-code/2999/products-petroleum-coal>
- Slowik, P., & Sharpe, B. (2018). Automation in the long haul: Challenges and opportunities of autonomous heavy-duty trucking in the United States. *The International Council on Clean Transportation*, 1-30. Retrieved from <https://theicct.org/publication/automation-in-the-long-haul-challenges-and-opportunities-of-autonomous-heavy-duty-trucking-in-the-united-states/>
- Texas A&M Transportation Institute. (2019, September 2019). *Commercial Border Crossing and Wait Time Measurement at Santa Teresa in Santa Teresa, New Mexico*.
- Texas Department of Transportation. (2021). *Texas-Mexico Border Master Transportation Plan 2021*. Retrieved from <https://www.txdot.gov/government/partnerships/trade-border/btmp.html>

- Texas Department of Transportation. (2021). *Texas Freight Mobility Plan*. Retrieved from <https://www.txdot.gov/government/partnerships/freight-planning/texas-freight-mobility-plan.html>
- Torc. (2020, September 3). *Torc Robotics to expand self-driving truck testing to New Mexico with test center in Albuquerque*. Retrieved from <https://torc.ai/torc-robotics-to-expand-self-driving-truck-testing-to-new-mexico-with-test-center-in-albuquerque/>
- Union Pacific. (2022). *Santa Teresa Intermodal Terminal*. Retrieved from <https://www.up.com/customers/premium/intmap/stir/index.htm>
- University of New Mexico. (2020). *Annual Crash Reports | Geospatial and Population Studies*. Retrieved from <https://gps.unm.edu/tru/crash-reports/annual-reports>
- University of New Mexico. (2013). *Heavy-Truck-Involved Crash Statistics 2013-2017 | Geospatial and Population Studies*. Retrieved from <https://gps.unm.edu/tru/crash-reports/crash-statistics/heavy-truck-involvement-crash-statistics-2014-2018>
- US Customs and Border Protection. (2022). *Locate a Port of Entry in New Mexico*. Retrieved from <https://www.cbp.gov/contact/ports/nm>
- US Department of Transportation. (2020). *National Freight Strategic Plan (NFSP)*. Retrieved from <https://www.transportation.gov/freight/NFSP>
- US Department of Transportation. (2022). *Border Crossing Information System*. Retrieved from <https://bcis.tti.tamu.edu/>
- US Department of Transportation. (2022). *Supply Chain Assessment of the Transportation Industrial Base: Freight and Logistics*. Retrieved from https://www.transportation.gov/sites/dot.gov/files/2022-03/EO%2014017%20-%20DOT%20Sectoral%20Supply%20Chain%20Assessment%20-%20Freight%20and%20Logistics_FINAL_508.pdf
- US Department of Transportation. (2022). *Workbook: Dashboard Port by Commodity*. Retrieved from https://explore.dot.gov/views/Dashboard_PortbyCommodity/Last12MonthsofTrade
- US Department of Transportation – Bureau of Transportation Statistics. (2022). *Border Crossing/Entry Data*. Retrieved from <https://www.bts.gov/content/border-crossingentry-data>
- US Department of Transportation – Bureau of Transportation Statistics, Repository & Open Science Access Portal. (2018, February). *New Mexico Border Planning, Facilitating Transportation Across the Southern Border*. Retrieved from <https://rosap.ntl.bts.gov/>
- US Department of Transportation – Federal Highway Administration. (2012). *Map of Major Freight Flow by Trucks that Pass-Through the State of New Mexico: 2012 and 2045 - FHWA Freight Management and Operations*. Retrieved from https://ops.fhwa.dot.gov/freight/freight_analysis/state_info/new_mexico/statetruckflow.htm

- US Department of Transportation – Federal Highway Administration. (2017). *State Performance Dashboard - New Mexico - State - Reporting - Transportation Performance Management*. Retrieved from <https://www.fhwa.dot.gov/tpm/reporting/state/state.cfm?state=New%20Mexico>
- US Department of Transportation – Federal Highway Administration. (2020). *National Highway Freight Network - Freight Management and Operations*. Retrieved from <https://ops.fhwa.dot.gov/Freight/infrastructure/nfn/index.htm>
- US Department of Transportation – Federal Highway Administration. (2021). *October 2021 - CMAQ Applicability - Measures - CMAQ - Air Quality - Environment - FHWA*. Retrieved from https://www.fhwa.dot.gov/environment/air_quality/cmaq/measures/cmaq_applicability/october_2021/
- US Department of Transportation – Federal Highway Administration. (2022). *National Goals - About TPM - Transportation Performance Management*. Retrieved from <https://www.fhwa.dot.gov/tpm/about/goals.cfm>