Ports-to-Plains Corridor Economic Impact Study

Northeast New Mexico

JUNE 2021



Prepared For:

Eastern Plains Council of Governments

New Mexico Department of Transportation

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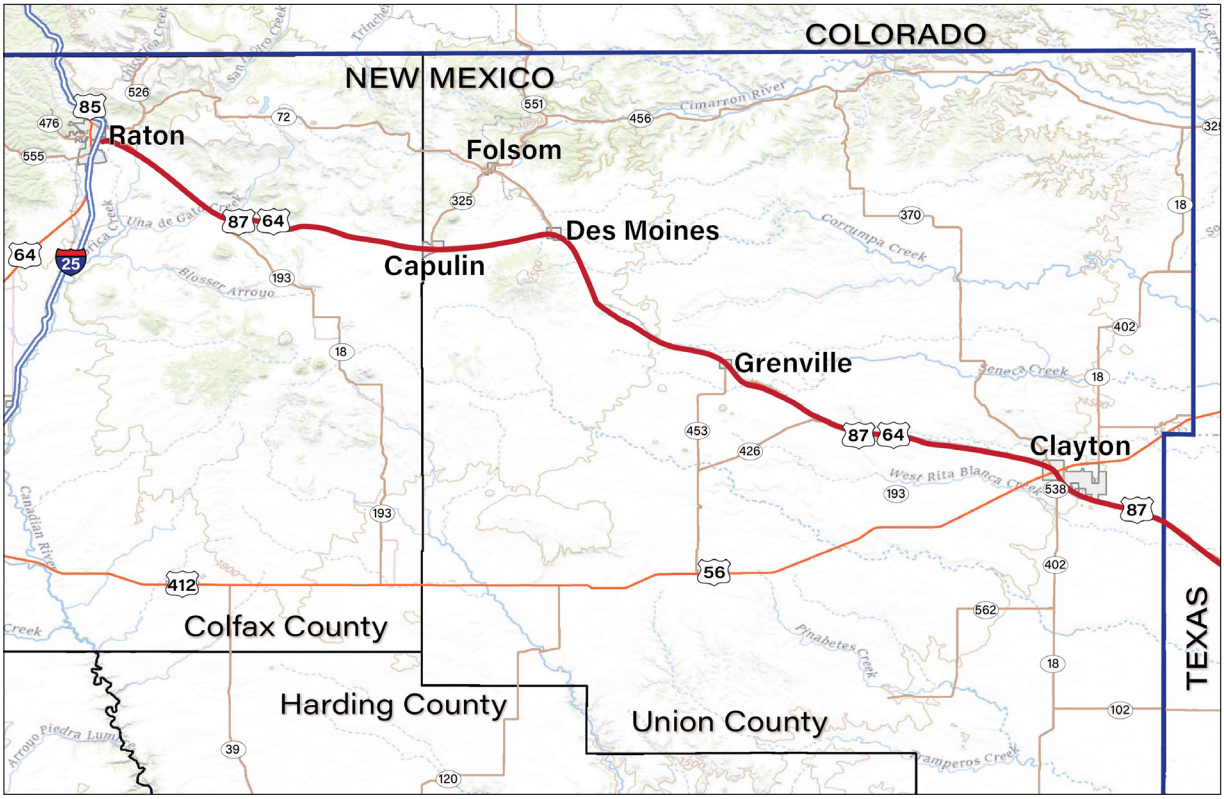
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CHAPTER 1:
Executive Summary

1.1 INTRODUCTION

The Ports-to-Plains Economic Impact Study examines a segment of the international Ports-to-Plains Trade Corridor (US Highway 87/64) in northeast New Mexico and the potential effects on the local communities (Union County, Town of Clayton, Colfax County, City of Raton) of designating the route as an Interstate Highway. This study reflects a broader effort to establish the entirety of the Ports-to-Plains High Priority Corridor as part of the Interstate Highway System from Canada to Mexico. It was conducted on behalf of the Eastern Plains Council of Governments (EPCOG) for use by the New Mexico Department of Transportation (NMDOT).



PORTS-TO-PLAINS CORRIDOR STUDY AREA

PROJECT SUMMARY and PURPOSE

In order to address the impacts of an Interstate Highway designation on this region, the study involved conducting research and analysis on northeast New Mexico's primary industries, economic development opportunities, existing transportation and mobility conditions, and the existing physical infrastructure of the route. A series of stakeholder interviews were conducted with representatives from the energy, tourism, and agriculture industries to ascertain their opinions on the potential impact of the Interstate Highway designation.

- Economic development impacts of the Interstate Highway designation on northeast New Mexico with an emphasis on employment projections;
- Analysis of the current conditions and future trends for the agriculture, energy, and tourism industries in northeast New Mexico;
- Evaluation of existing physical infrastructure conditions along the route and identification of the requirements, costs, and impacts of an Interstate Highway designation;

- Analysis of the route's existing traffic and freight movement patterns, and generation of future projections relevant to assessing the effects of an Interstate Highway designation; and
- Stakeholder interviews and analysis to identify qualitative perspectives on the potential impacts of the Interstate Highway designation.

KEY FINDINGS and RECOMMENDATIONS

The designation of the Ports-to-Plains Trade Corridor (US Highway 87/64) between the New Mexico-Texas state border and Raton would provide positive economic development impacts for northeast New Mexico. In addition to general economic impacts, there would be an increase in both temporary construction related employment and permanent post-construction employment.

1. The study divided the US 87/64 Corridor into nine segments for analysis. With improvement to Interstate Highway standards, traffic is projected to increase between 1% and 2%. The Level of Service (LOS) is A for all segments for existing and future traffic volumes. Improvement or expansion of the Corridor would not create traffic congestion along the Corridor.

2. Improvement or expansion of the Corridor would create temporary and cumulative/permanent employment opportunities in the region. The study looked at five-year increments between 2025 and 2040. Temporary employment includes construction for highway improvements, lodging, truck stop, restaurants, wind farms and wind generation manufacturing, marijuana grow facilities, a distribution center, meat processing facility, and a solar energy facility. There would be 10,770 direct construction-related jobs and 20,034 indirect jobs created by 2040. Permanent employment covers the same categories, with the exception of highway construction, adding up to 3,448 jobs by 2040.

3. The energy industry would benefit from improved access for construction of renewable energy facilities. There are two large-scale wind generation projects planned in the region; the 50,000-acre Triangle Gallegos Wind Farm in Union County and the 16,000-acre Gladstone Wind Farm in Union, Colfax, and Harding counties. The Union County Comprehensive Plan shows an additional 27,000 acres available for future renewable energy projects.

4. The Clayton Business Park and the planned Raton Industrial Park/Distribution Center are ideally situated along the Ports-to-Plains Corridor. Both facilities will have space and infrastructure available along the Ports-to-Plains Corridor to support local manufacturing and distribution, such as wind-related equipment and value-added agriculture.

5. Designation as an Interstate Highway would provide benefits to the agriculture industry. This would improve the ability to transport products to market and increase opportunities for value-added agricultural processing, such as beef, hemp, and marijuana.

6. The tourism industry would benefit from improved access and increased tourism traffic. Based on the traffic projections with Interstate Highway designation, the number of visitors is expected to increase to destinations such as Capulin Volcano National Monument, Clayton Lake State Park and Dinosaur Trackways, and Sugarite Canyon State Park. In 2019, there were 5.7 million visitors to northeast New Mexico; the number is projected to grow to 6.9 million by 2040, a 22% increase.

7. The freight industry would benefit from improved access to the national highway network. Agricultural products are the largest freight transportation users and rely on national and international markets. While much of the freight traffic on the Ports-to-Plains Corridor is generated outside the region, improved access to Canada and Mexico will benefit local industry. The planned Raton

Industrial Park/Distribution Center is located at a critical junction equidistant from major metropolitan markets in Denver, Amarillo, and Albuquerque.

8. Improvement or expansion of the Corridor would promote safety and mobility in the region. The study projected a reduction in vehicle crashes of between 17% and 63% by improving the Corridor to Interstate Highway standard. The greatest reduction in crash rates would occur with the construction of a bypass in Clayton.

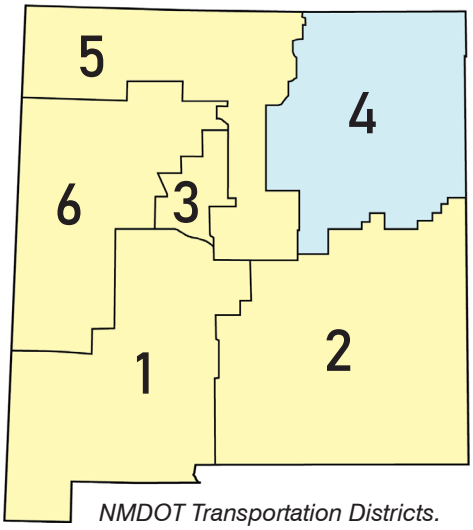
9. The full cost to bring the existing facility up to Interstate Highway standards would be a substantial investment, and require improvements to existing road conditions, acquisition of right-of-way, and construction of a bypass around the Town of Clayton. The study included two cost scenarios, 1) Rehabilitate the current Corridor and construct a truck bypass around Clayton; and 2) Convert the existing US Highways (US 87/64) within the Corridor to an Interstate and construct a truck bypass around Clayton. Scenario 1 would cost approximately $219 million, including contingencies. Scenario 2 would cost approximately $1.3 billion, including contingencies. Both cost scenarios include construction of a bypass around the Town of Clayton.

10. There is currently strong support from the Biden Administration for transportation and infrastructure projects that is expected to continue throughout the Biden presidency. This support may increase the amount of federal funding available for projects like the Ports-to-Plains Corridor. The current version of President Biden's $2 trillion infrastructure legislation provides $115 billion for bridges and roads and $20 billion to improve road safety.

PROJECT PARTNERS

New Mexico Department of Transportation

The New Mexico Department of Transportation (NMDOT) is the statewide transportation agency responsible for highways, transit, rail, and aviation throughout New Mexico. The NMDOT prioritizes multi-modal transportation and is committed to setting the standard for a "safe, reliable, and efficient transportation system." The majority of NMDOT's operations fall within the Infrastructure Division led by the Chief Engineer and comprised of six individual districts. The Infrastructure Division has oversight over a collection of functional units in NMDOT, as well as the three Regional Design Centers.



NMDOT Transportation Districts.

The Ports-to-Plains Corridor falls within District 4, which covers part of New Mexico's northeast quadrant and encompasses seven counties and 20 municipalities. The District 4 Office is located in Las Vegas, New Mexico, the largest municipality in the District. Services provided by the District 4 Office include business management, construction, maintenance, and engineering. The NMDOT also facilitates relationships with the United States Department of Transportation (USDOT) to secure federal funding for New Mexico and help local entities with federal and state funding processes.

Eastern Plains Council of Governments

The Eastern Plains Council of Governments (EPCOG) is a voluntary association of county and municipal governments within the seven counties of Planning and Development District 4. The EPCOG provides assistance to counties, cities, towns, and villages with planning and economic development, Community

Development Block Grants (CDBG), capital outlay, and other funding requests and Infrastructure Capital Improvement Plan (ICIP) development. The organization's program areas include transportation, housing, economic development, and community development.

The EPCOG has supported the Ports-to-Plains Corridor project, including the designation of US Highway 87/64 as an Interstate Highway from the Texas state line to Interstate 25 in Raton. The NMDOT and EPCOG identified the need for a study to determine the potential benefits and impacts that an Interstate Highway designation would have on communities along the Corridor. As such, EPCOG is leading the study and NMDOT is the reviewing agency. Consensus Planning was engaged as the prime consultant to complete the scope of work.

1.2 PORTS-TO-PLAINS CORRIDOR - HISTORY and SIGNIFICANCE

The Ports-to-Plains Trade Corridor is a 2,300-mile transportation and trade route between the United States, Canada, and Mexico. The United States portion of the Ports-to-Plains Corridor contains three contiguous segments that extend from Laredo, Texas to the Montana/Canada border via Denver, Colorado. The segments are identified by the United States Department of Transportation (USDOT) as the following:

- The Ports-to-Plains High Priority Corridor 38 from the US-Mexico border at Laredo, Texas, to Denver, Colorado, generally following US 87 and US 27;
- The Heartland Expressway High Priority Corridor 14 from Denver through Scottsbluff, Nebraska, to Rapid City, South Dakota, generally following US 26 and US 385; and
- The Theodore Roosevelt Expressway High Priority Corridor 58 from Rapid City to the US-Canada border by way of Williston, North Dakota, generally following US 85.

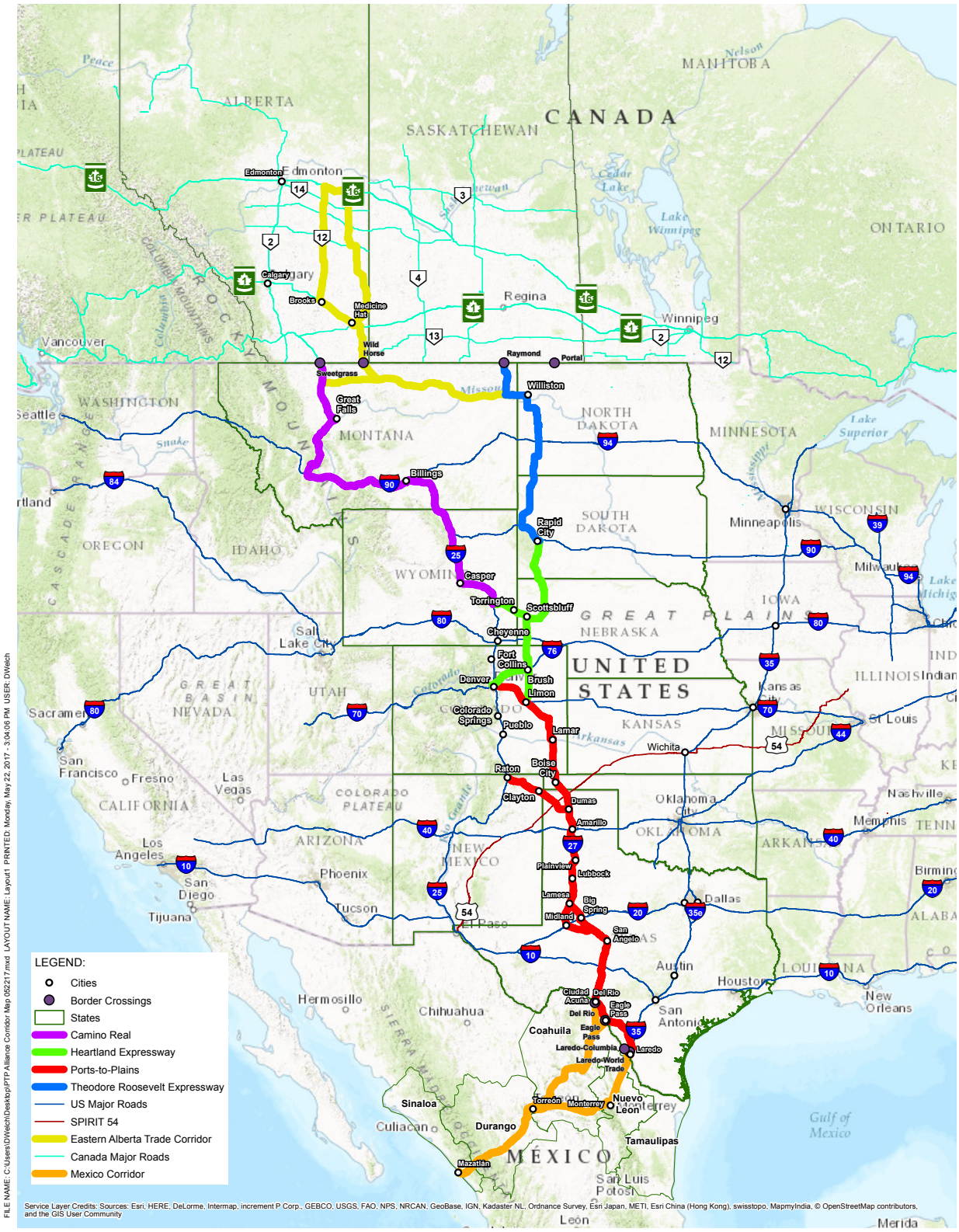
After adoption of the North American Free Trade Agreement (NAFTA) in 1994, the Ports-to-Plains High Priority Corridor was designated in 1998 under the provisions of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. The United States-Mexico-Canada Agreement (USMCA) replaced NAFTA effective in July 2020.

In March 2021, United States Representatives from Texas, Jodey Arrington (TX-19) and Henry Cuellar (TX-28), reintroduced the Ports-to-Plains Highway Act of 2021 in the House of Representatives. This legislation would expand and upgrade the Port-to-Plains Alliance Corridor to a modern four-lane, divided facility to improve economic development, safety, and efficiency. Representatives Arrington and Cuellar cited impacts on energy, agriculture, and international trade in support of the legislation, as well as benefits of diverting freight traffic from the highly congested, north-south interstate highway corridors along Interstate 25 and Interstate 35.

This study analyzes the New Mexico spur of the Ports-to-Plains High Priority Corridor, which runs along US Highway 87/64 from the Texas border through the Town of Clayton to Interstate 25 in the City of Raton.

PORTS-TO-PLAINS ADVOCACY INITIATIVES

The Ports-to-Plains Corridor is supported by the Ports-to-Plains Alliance, a coalition formalized in 2009 between the advocacy organizations that represent each congressionally designated High Priority Corridor along the route. The resulting overarching membership alliance consists primarily of cities, counties, businesses, and economic development organizations from nine states (Texas, New Mexico, Oklahoma, Colorado, North Dakota, South Dakota, Montana, Nebraska, and Wyoming). The Ports-to-Plains Alliance advocates for international transportation infrastructure to promote economic development.



PORTS-TO-PLAINS ALLIANCE
Securing the Benefits of Commerce to North America's Energy & Agricultural Heartland

PORTS-TO-PLAINS ALLIANCE CORRIDOR MAP

PARKHILLSMITH&COOPER

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Project No:	2884.17	**Sheet:**	1 of 1

The Ports-to-Plains Trade Corridor Coalition focuses on the route in New Mexico, Texas, Colorado, and Oklahoma, and coordinates advocacy activities on behalf of Ports-to-Plains Alliance membership. Most recently, the Coalition has focused on the designation and conversion of the entire Ports-to-Plains High Priority Corridor as part of the Interstate Highway system.

HISTORY OF THE PORTS-TO-PLAINS CORRIDOR IN NORTHEAST NEW MEXICO

The road between Clayton and Raton was prominent on the first Official New Mexico Road Map published after statehood and establishment of the New Mexico State Highway Department. In 1919, the American Automobile Association's highway map labeled the route and its extension through Texas as the "Colorado-to-Gulf Highway." In 1926, the American Association of State Highway Officials designated this route as US Highway 385 through Amarillo, then became US Highway 87 in 1935. US Highway 64 originally joined the route at Capulin, then was rerouted from Oklahoma to a junction at Clayton.

The NMDOT improved US Highway 87/64 over the years, and by the 1990s, it had been updated to a "Super Two" style design with widened sections that permitted safer passing. Between 2005 and 2012, the NMDOT completed a series of seven projects along the Corridor, at a cost of approximately $132 million, that created the four-lane, paved highway section that currently exists.

1.3 STUDY APPROACH

The study involved several components to determine the potential qualitative and quantitative impacts of designating US 87/64 an Interstate Highway. An overview of the chapters is provided below:

- **Chapter 2** provides a regional profile focusing on Union and Colfax counties, including population, employment and income, and land use characteristics. It describes the ability of the agriculture and energy industries to transport products to market, as well as the impacts and opportunities for tourism in this region of New Mexico.
- **Chapter 3** provides recommendations for the Interstate Highway designation, including evaluation of the capacity and capability of the existing Corridor, and opportunities and constraints in the existing alignment. It contains a comparison of the Interstate System highway design standards and compliance impacts to the existing roadway. An analysis of the bypass alternatives for the Town of Clayton is also presented.
- **Chapter 4** provides an evaluation of the potential economic development impacts of the Ports-to-Plains Corridor for northeast New Mexico. Employment projections are presented based on highway construction scenarios. Several economic development scenarios were analyzed for typical projects in the tourism, renewable energy, and agriculture industries, and well as freight-related facilities. Construction and post-construction employment projections were developed for projects that would likely result for Interstate Highway projections.
- **Chapter 5** discusses potential transportation impacts, including traffic congestion, safety and mobility, and freight movement. Currently, the largest amount of traffic on US 87/64 occurs in the Town of Clayton. It is projected that traffic would grow by 2050 with the current highway designation; however, Interstate Highway designation would attract a much higher amount of traffic.
- **Chapter 6** provides estimates of Interstate Highway construction project costs for two construction cost scenarios.

STUDY METHODOLOGY

The Ports-to-Plains Economic Impact study utilized both quantitative and qualitative methods to analyze the impacts of an Interstate Highway designation to US 87/64 on the communities in northeast New Mexico. Research and analysis was conducted on the key regional industries of agriculture, tourism, and energy. Traffic engineering analysis, economic development projections, and stakeholder interviews were included in the study.

The traffic engineering analysis used the existing conditions of the Corridor to identify opportunities and challenges with Interstate Highway designation and the potential cost of partial or full conversion of the Corridor to Interstate Highway standards. This assessment informed projections for future traffic volumes and an examination of crash rate data for the Corridor to assess the benefits of safety improvements.

The employment projections utilized the traffic engineering analysis, economic conditions in northeast New Mexico, and expected industry trends to estimate potential future employment impacts. The employment figures are based on employment during construction and post-construction of the highway conversion process, facilities for impacted industries, and travel and tourism amenities primarily in Clayton and Raton.

Key findings for the study included stakeholder interviews to identify local, state, and industry specific perspectives on the Interstate Highway designation. Interviewees were selected based on their knowledge of northeast New Mexico and relevant industry experience from the following categories:

- Local government officials from Colfax County, Union County, Town of Clayton, and City of Raton;
- Public and private sector representatives from the agriculture, energy, and tourism industries;
- Transportation and freight experts from the New Mexico Department of Transportation; and
- Representatives from other organizations, including the Ports-to-Plains Alliance and the Eastern Plains Council of Governments.

The interviews were conducted via email, phone, and video conferencing from November 2, 2020 to March 23, 2021. A total of 22 individuals were interviewed, which are listed in Appendix B.

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CHAPTER 2:
Regional Profile

2.1 INTRODUCTION

Northeast New Mexico is rich in the history and tradition of New Mexico. Residents and business owners in the region's cities, towns, and villages are actively working to adapt and adjust to continuous changes in the state, national, and world economies. This chapter presents a profile of the region, including population, employment, and land use. It examines the ability of the agriculture and energy industries to transport products to market, and impacts and opportunities for New Mexico tourism.

2.2 POPULATION

COLFAX COUNTY

The US Census Bureau estimated the 2019 population of Colfax County at 11,941 residents. The City of Raton, population 5,938, is the primary population center and county seat of Colfax County. Between 2010 and 2019, the population of Colfax County decreased by approximately 12%, while the population of Raton decreased by 13.6%. The median age in Colfax County in 2010 was 45.6 years and grew to 50.2 years by 2019. This was significantly older than the statewide median age, which was estimated at 37.8 years.

UNION COUNTY

The 2019 estimated population of Union County was 4,059. The Town of Clayton, population 2,681, is the population center and the county seat of Union County. Between 2010 and 2019, the population of Union County decreased by approximately 11%, while Clayton's population decreased by 10%. The median age in Union County in 2010 was 42.3 years and decreased to 39.8 years by 2019. The median age was greater in Union County than the statewide average of 37.8 years, but much closer than Colfax County.

TABLE 2.1: POPULATION, 2019

Colfax County	**11,941**
Raton	5,938
Angel Fire	1,070
Springer	906
Cimarron	881
Eagle Nest	251
Maxwell	212
Unincorporated Areas	2,683
Union County	**4,059**
Clayton	2,681
Des Moines	122
Folsom	57
Grenville	29
Unincorporated Areas	1,170

Source: US Census Bureau.

2.3 EMPLOYMENT and INCOME

COLFAX COUNTY

According to the US Bureau of Economic Analysis (BEA), there were 6,501 employees working in Colfax County in 2019, a decrease of 8.5% since 2010. Government jobs (19.4%) represented a slightly greater share of Colfax County employment than New Mexico statewide (18.4%). Colfax County had a much higher share of Accommodation and Food Services employment (17.1%) than in New Mexico statewide (8.5%). Other Services (11.8%) and Retail Trade (11.5%) are the next largest sources of employment.

According to the American Community Survey (ACS), Colfax County residents have the largest share of jobs, 36%, in the Management, Professional and Related Occupations, slightly lower than the New Mexico overall rate of 37%. Approximately 10% of employed Colfax County residents commute outside the county, compared to 16% of residents statewide.

In 2019, the median household income in Colfax County was $36,302; statewide, the median household income was $49,754. The per capita income was $24,035 in Colfax County; statewide, per capita income was $27,230. Approximately 20.0% of individuals and 16.1% of families in Colfax County had incomes below the poverty level. These rates were higher than the statewide average, which showed 19.1% of individuals and 14.5% of families living below the poverty level.

UNION COUNTY

There were 2,285 employees working in Union County in 2019, an increase of 3.8% since 2010. Government jobs (15.3%) had a smaller share of Union County employment than New Mexico statewide. Union County had a much greater share of farm employment,17.9%, as compared to 2.5% in New Mexico statewide.

According to the ACS, Union County residents in 2019 had the largest share of jobs, 32%, in the Management, Professional and Related Occupations. Approximately 20% of employed Union County residents commute outside the County, greater than the statewide average of 16%.

In 2019, the median household income in Union County was $35,884 and the per capita income was $22,116. Approximately 19.4% of individuals and 16.2% of families in Union County had incomes below the poverty level.

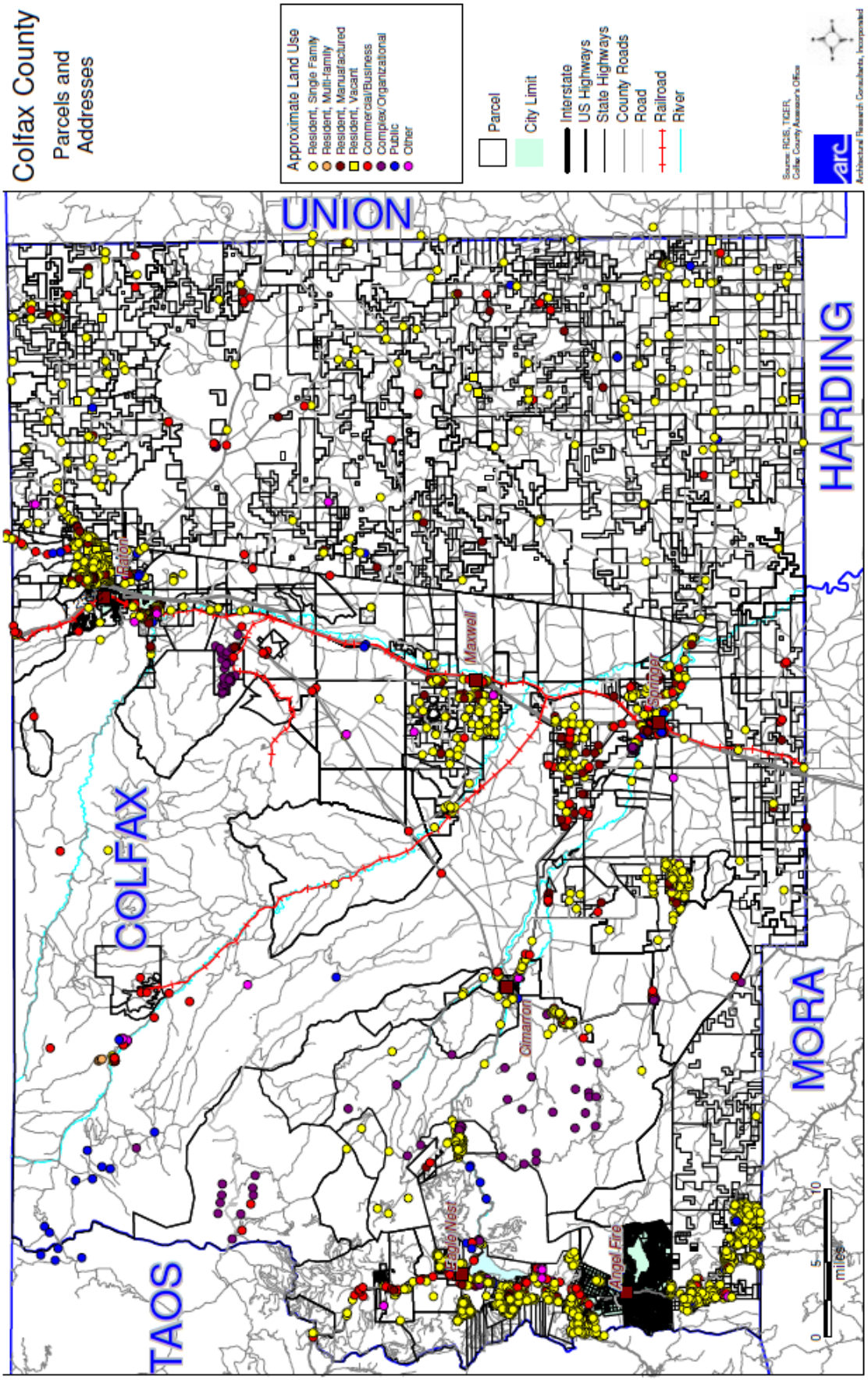
2.4 LAND USE

Land use planning provides context for a community's growth and development. Transportation and infrastructure networks connect different types of existing and proposed land uses to meet community market demands and prepare for the future.

COLFAX COUNTY

Colfax County covers a combination of mountains and plains, with Interstate 25 running north-south across the center. The City of Raton is the primary commercial center in Colfax County. Approximately 85% of the land in Colfax County is under private ownership, much of which is in large ranches, including Vermejo Park, Silver Spur Land and Cattle Co., and Philmont Scout Ranch. The remaining area is state (12%) and federal (3%) land. Other uses, including rural residential, commercial, and industrial land use, are clustered around municipalities, such as Raton, Springer, and Maxwell, with dispersed residences on the plains east of Interstate 25 and more intensive rural residential development in the mountains near Angel Fire and Eagle Nest. The Santa Fe Trail, a major tourism attraction, includes both the mountain branch and Cimarron cutoff crossing the County. Tourism will remain an important industry in both the mountains and plains portions of Colfax County.

A primary goal of the Colfax County Comprehensive Plan (Architectural Research Consultants, 2015) is to guide development of the County through land use planning and regulations that protect the health, safety, and general welfare of the residents and visitors, and promote the economy, convenience, and good appearance of the County. The Plan supports continued agricultural, energy, and tourism development in Colfax County, with consideration for environmentally sensitive lands and mitigation of potential impacts. The Plan includes goals for economic development and transportation that would support development of US 87/64 as an Interstate Highway.



Source: Colfax County, NM, Comprehensive Plan (ARC 2015).

CITY OF RATON

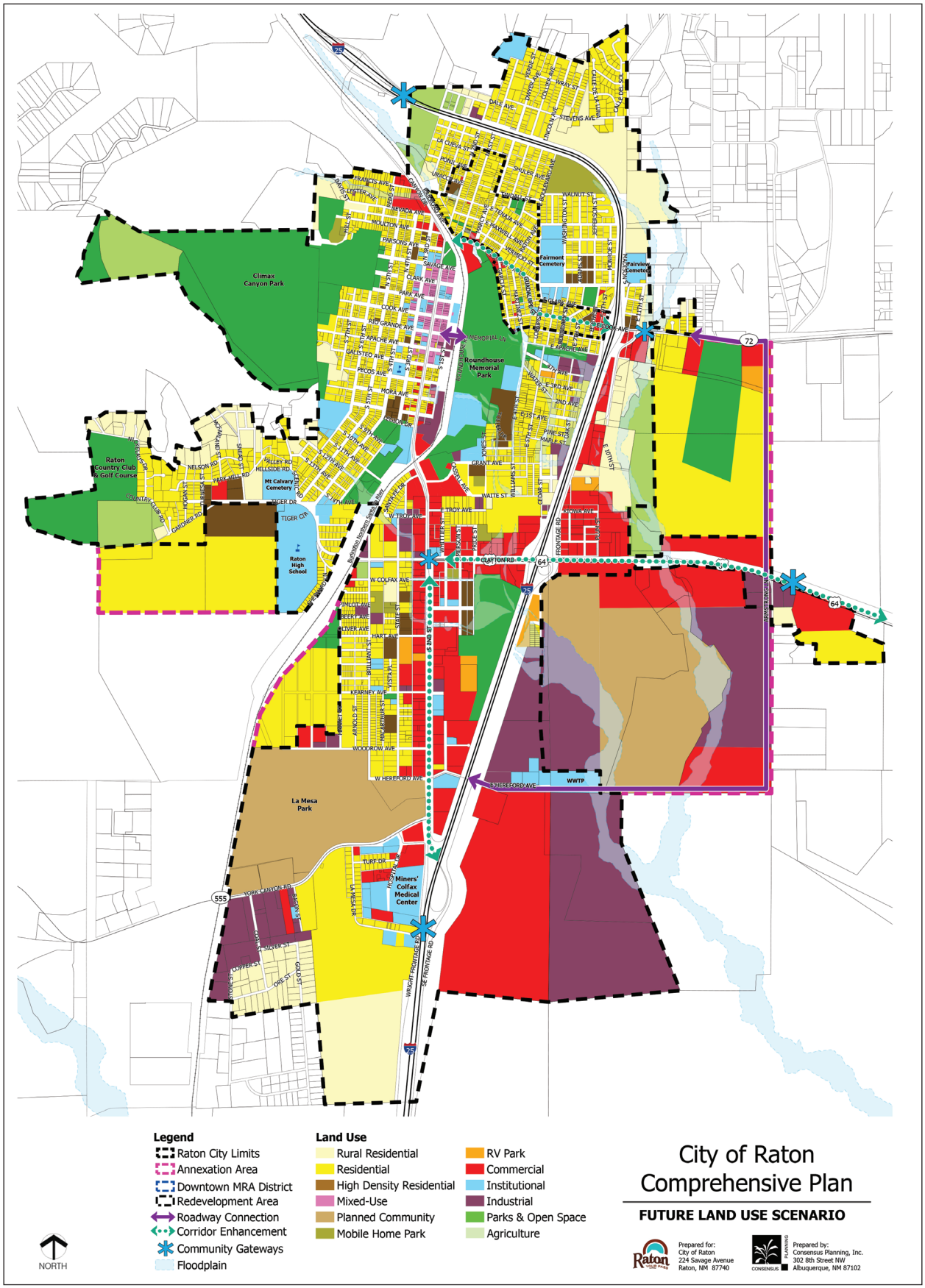
The City of Raton, located at the crossroads of Interstate 25 and the US 64, has a wide variety of land uses. The City has substantial public services, infrastructure resources, and a reliable transportation network, including Interstate 25, US 87/64, and the BNSF Railway's Raton Line. Historic downtown Raton features a combination of public and private services, retail stores, and housing. In addition to local parks and open space, Raton and the region are the center of a growing outdoor recreation industry, with nearby Sugarite Canyon State Park, Vermejo Park Guest Ranch, Philmont Scout Ranch, and other attractions.

The City of Raton Comprehensive Plan (Consensus Planning, 2021) expresses the community's values and vision for the City's physical growth and development, as well as its social and economic character, over the next 20 years. The Future Land Use Scenario provides a graphic representation of how the City of Raton would like growth and development to occur. There are existing areas for commercial and industrial development with frontage on Interstate 25 in the southern part of the City. There is a large area of land identified for an industrial park/distribution center, which would be appropriately located for value-added agricultural processing, warehousing, and manufacturing. There are also opportunities for commercial redevelopment along US 87/64 on both sides of the Interstate 25 interchange, and plans to rebuild the frontage road on the east side of the Interstate.

The Comprehensive Plan identifies the future annexation of land between Interstate 25 and US 87/64, with areas for commercial, industrial, and planned community development. The former La Mesa Park, west of Interstate 25, is shown as a future planned community that would ideally contain a mix of land uses. Industrial areas are shown south of NM 555 to the east of the BNSF railroad.

Expanding outdoor recreation and tourism is an important element of the City of Raton Comprehensive Plan. Designation of the Ports-to-Plains Corridor as an Interstate Highway is likely to directly increase tourism traffic and lead to new employment opportunities, and retention and expansion of businesses providing related goods and services, which are primary goals of the Comprehensive Plan.




Legend
Raton City Limits
Annexation Area
Downtown MRA District
Redevelopment Area
Roadway Connection
Corridor Enhancement
Community Gateways
Floodplain
Land Use
Rural Residential
Residential
High Density Residential
Mixed-Use
Planned Community
Mobile Home Park
RV Park
Commercial
Institutional
Industrial
Parks & Open Space
Agriculture
NORTH
City of Raton
Comprehensive Plan
FUTURE LAND USE SCENARIO
Prepared for:
City of Raton
224 Savage Avenue
Raton, NM 87740
Prepared by:
Consensus Planning, Inc.
302 8th Street NW
Albuquerque, NM 87102
Climax Canyon Park
Roundhouse Memorial Park
Fairmont Cemetery
Fairview Cemetery
Raton Country Club & Golf Course
Mt Calvary Cemetery
Raton High School
La Mesa Park
Miners' Colfax Medical Center
WWTP

UNION COUNTY

The majority of Union County is rural, with the Town of Clayton being the primary population center. Approximately 80% of the land in Union County is under private ownership; the remaining land is a mix of federal (2%) and state (18%) land. Agriculture and ranching comprise the largest land use category in the County. Other uses, such as rural residential, commercial, and industrial land use, are primarily located in and around towns, villages, and unincorporated communities.

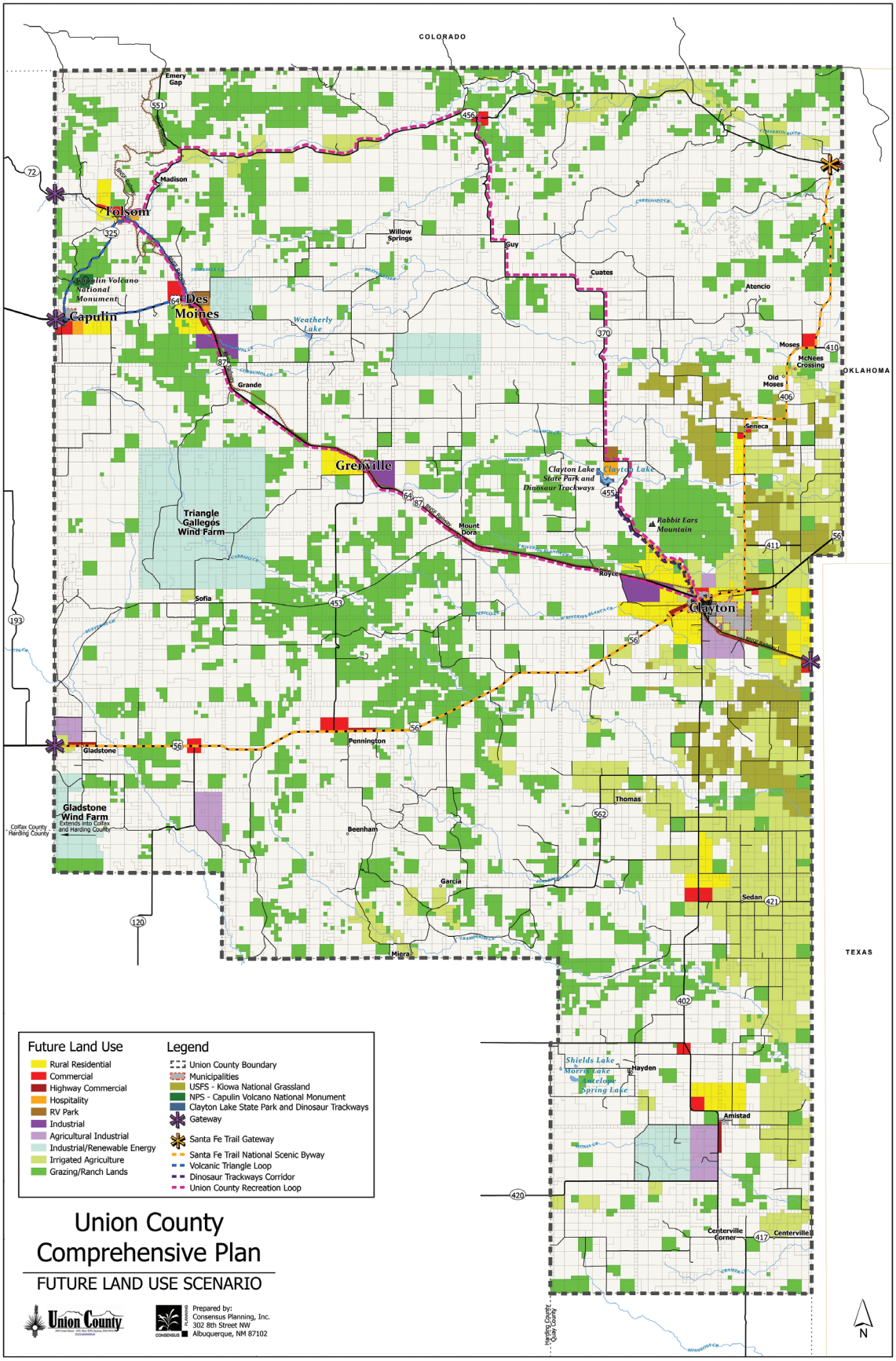
The Union County Comprehensive Plan (Consensus Planning, 2020) guides decision making related to the future growth and development of the County. The Union County Future Land Use Scenario builds on existing land use, with population growth concentrated near existing communities. Commercial and industrial uses, including highway commercial and hospitality uses, are primarily located along the Ports-to-Plains Corridor (US 87/64). Industrial/Renewable Energy areas are designated in areas appropriate for industrial-scale wind or solar energy uses. These include the currently planned 50,000-acre Triangle Gallegos Wind Farm, located south of Des Moines, and the 16,000-acre Gladstone Wind Farm near the Colfax County and Harding County boundaries. Other future energy generation areas are identified southeast of Amistad, in central Union County, and near Des Moines.

The Union County Comprehensive Plan emphasizes protecting and preserving the custom and culture of ranching and agriculture. The Future Land Use Scenario provides for grazing/ranch lands, irrigated agriculture, and agricultural industrial (large-scale agriculture) areas.

Tourism is a growing industry in Union County. In addition to the Santa Fe Trail National Scenic Byway, three recreational corridors are illustrated on the Union County Future Land Use Scenario, intended to enhance opportunities for tourism and outdoor recreation:

- The Volcanic Triangle Loop connects Capulin to the Capulin Volcano National Monument, Folsom, and Des Moines.
- The Dinosaur Trackways Corridor connects Clayton to Clayton Lake State Park and Dinosaur Trackways.
- The Union County Recreation Loop is a larger connection between the two smaller corridors and other areas in northern Union County.




COLORADO
OKLAHOMA
TEXAS
Emery Gap
Madison
Folsom
Capulin Volcano National Monument
Capulin
Des Moines
Willow Springs
Guy
Cuates
Atencio
Weatherly Lake
Grande
Moses
McNees Crossing
Old Moses
Seneca
Grenville
Clayton Lake State Park and Dinosaur Trackways
Clayton Lake
Rabbit Ears Mountain
Triangle Gallegos Wind Farm
Mount Dora
Royce
Clayton
Sofia
Gladstone
Pennington
Gladstone Wind Farm
Extends into Colfax and Harding County
Colfax County
Harding County
Beenham
Thomas
Garcia
Sedan
Miera
Shields Lake
Morris Lake
Lake Spring Lake
Hayden
Amistad
Centerville Corner
Centerville
Harding County
Quay County
Future Land Use
Rural Residential
Commercial
Highway Commercial
Hospitality
RV Park
Industrial
Agricultural Industrial
Industrial/Renewable Energy
Irrigated Agriculture
Grazing/Ranch Lands
Legend
Union County Boundary
Municipalities
USFS - Kiowa National Grassland
NPS - Capulin Volcano National Monument
Clayton Lake State Park and Dinosaur Trackways
Gateway
Santa Fe Trail Gateway
Santa Fe Trail National Scenic Byway
Volcanic Triangle Loop
Dinosaur Trackways Corridor
Union County Recreation Loop
Union County Comprehensive Plan
FUTURE LAND USE SCENARIO
Union County
Prepared by:
Consensus Planning, Inc.
302 8th Street NW
Albuquerque, NM 87102
N

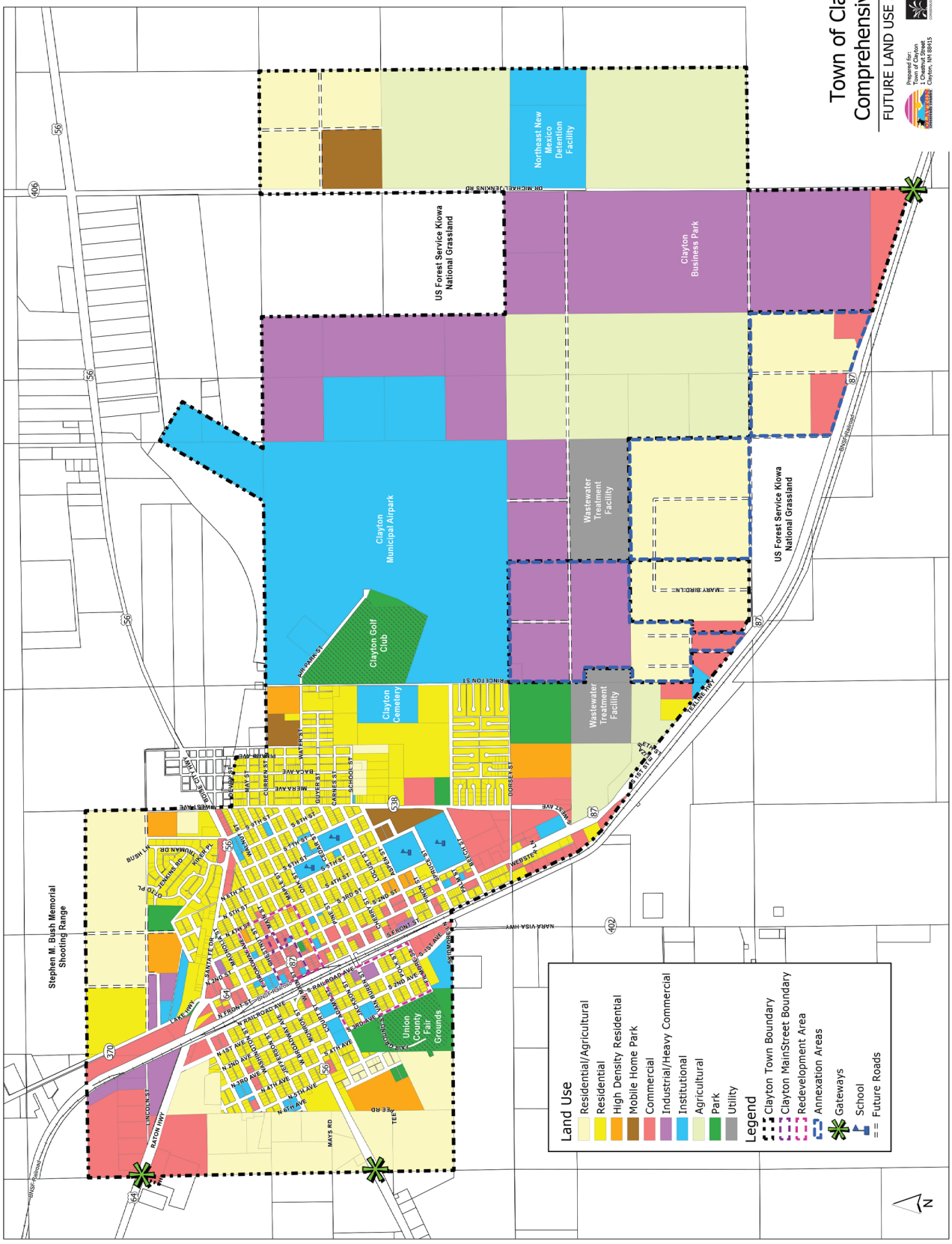
TOWN OF CLAYTON

The Town of Clayton sits at the well-traveled crossroads of US Highways 56, 64, 87, and 412 connecting regional destinations in New Mexico, Colorado, Texas, and Oklahoma. BNSF Railway's Clayton Line also parallels US 87/64 through the community. Nearby Clayton Lake State Park and Dinosaur Trackways, Capulin Volcano National Monument, and the Kiowa National Grasslands attract visitors for unique outdoor recreation experiences.

The Town of Clayton Comprehensive Plan (Consensus Planning, 2020) contains a Future Land Use Scenario that was developed based on existing land use, best planning practices, and community input. The Comprehensive Plan provides for a significant increase in areas available for commercial uses through redevelopment and expansion of highway commercial development along US 87/64. A new truck stop is under development near the Port-of-Entry on US 87. Industrial uses are directed to the existing Clayton Business Park north of US 87 along Dr. Michael Jenkins Road, between the Clayton Municipal Air Park and the Northeast New Mexico Correctional Facility. Sewer, water, and electric infrastructure have been extended to the 512-acre Clayton Business Park. The Future Land Use Scenario also identifies areas adjacent to the Business Park and airport for future annexation and development. The Clayton Commercial Historic District, a much valued community asset, is on the existing US 87/64 Corridor.

Outdoor recreation and tourism is recognized as a key industry by the Town of Clayton Comprehensive Plan. The Clayton Lake State Park and Dinosaur Trackways, located about 12 miles northwest of Clayton, was identified in the community survey as the most popular recreation site for residents. New Mexico State Parks Department worked closely with the Town of Clayton and Union County in 2019 to rebrand the name of the Park to highlight the 'Dinosaur Trackways'.




Town of Clayton
Comprehensive Plan
FUTURE LAND USE SCENARIO
Prepared for:
Town of Clayton
1 Chestnut Street
Clayton, NM 88415
Prepared by:
Consensus Planning, Inc.
302 8th Street NW
Albuquerque, NM 87102
Northeast New Mexico Detention Facility
US Forest Service Kiowa National Grassland
Clayton Business Park
Clayton Municipal Airpark
Clayton Golf Club
Clayton Cemetery
Wastewater Treatment Facility
Wastewater Treatment Facility
US Forest Service Kiowa National Grassland
Stephen M. Bush Memorial Shooting Range
Union County Fair Grounds
Land Use
Residential/Agricultural
Residential
High Density Residential
Mobile Home Park
Commercial
Industrial/Heavy Commercial
Institutional
Agricultural
Park
Utility
Legend
Clayton Town Boundary
Clayton MainStreet Boundary
Redevelopment Area
Annexation Areas
Gateways
School
Future Roads
N

2.5 AGRICULTURE INDUSTRY

The agriculture industry is part of the foundation of New Mexico's economic base. The farms in New Mexico produce a wide variety of crops and ranches raise animals and animal-products for national and international markets. Food processing and value-added agriculture manufacturers also rely on trade networks to sell their products across the nation and around the world.

COLFAX COUNTY

According to the USDA Census of Agriculture, there were 304 farms and ranches in Colfax County in 2017, an increase of 4.8% since 2012 (*see Table 2.2*). There were over 2 million acres being farmed, an increase of 5.6% since 2012. The average size of a farm or ranch was 6,819 acres in 2017, while the median size was 443 acres. Approximately 55% of all farms in Colfax County raised cattle in 2017, and 24% grew hay, with 28,472 cattle and calves. According to the 2019 New Mexico Agricultural Statistics bulletin, there were 27,500 cattle in Colfax County on January 1, 2020.

Colfax County farms and ranches sold approximately $25 million in agricultural products and had approximately $19.5 million in total farm production expenses in 2017 (*see Table 2.3*). Net cash farm income increased in Colfax County from 2012 to 2017. Colfax County ranked 17th in the state for total market value of products sold in 2017. Colfax County was the 7th largest cattle producer in the state

UNION COUNTY

There were 369 farms and ranches in Union County in 2017, an increase of 4.5% since 2012 *(see Table 2.2)*. There were approximately 1.88 million acres, a decrease in area from 2012. The average size of a farm or ranch was 5,114 acres, with a median size of 1,400 acres. Approximately 77% of all farms in Union County raised cattle and 8% grew hay, with 78,954 cattle and calves. According to the 2019 New Mexico Agricultural Statistics bulletin, there were 77,000 cattle in Union County on January 1, 2020. The USDA Census of Agriculture reported that there were 8,000 acres of corn and 5,700 acres of wheat harvested for grain in 2017.

Union County farms and ranches sold approximately $83.1 million in products had almost $77.0 million in production expenses (*see Table 2.3*). Net cash farm income decreased in Union County from 2012 to 2017. Union County ranked 7th in the state for total market value of products sold in 2017. Union County was the second largest cattle producer in New Mexico behind Lea County.



Clayton Livestock Research Center.

TABLE 2.2: AGRICULTURAL PRODUCTION						
	Colfax County			Union County		
	2012	2017	% Change	2012	2017	% Change
Number of Farms	290	304	4.8%	353	369	4.5%
Land in Farms (acres)	1,962,965	2,073,125	5.6%	1,967,370	1,886,887	-4.1%
Average size (acres)	6,769	6,819	0.7%	5,573	5,114	-8.2%
Median size (acres)	320	443	33.4%	1,980	1,400	-29.3%
1 to 9 acres	13	20	53.8%	8	4	-50.0%
10 to 49 acres	26	34	30.8%	12	0	-100.0%
50 to 179 acres	77	56	-27.3%	37	57	54.1%
180 to 499 acres	54	55	1.9%	38	42	10.5%
500 to 999 acres	26	33	26.9%	40	45	12.5%
1,000 acres or more	94	106	12.8%	218	221	1.4%
Livestock						
Farms with Cattle	180	166	-7.8%	278	284	2.2%
Cattle & Calves Inventory	19,480	28,472	46.2%	61,343	78,954	28.7%
Farms with Hogs & Pigs	1	(D)		3	1	-66.7%
Hogs & Pigs Inventory	(D)	(D)		7	(D)	
Farms with Sheep	15	4	-73.3%	5	5	0.0%
Sheep & Lambs Inventory	90	110	22.2%	114	25	-78.1%
Farms with Chickens (Layers)	24	36	50.0%	15	15	0.0%
Layers Inventory	358	811	126.5%	195	200	2.6%
Crops						
Farms with Corn for Grain	-	-		17	11	-35.3%
Acres of Corn for Grain	-	-		9,824	8,067	-17.9%
Bushels of Corn for Grain Harvested	-	-		1,839,469	1,532,233	-16.7%
Farms with Wheat for Grain	-	-		15	12	-20.0%
Acres of Wheat for Grain	-	-		6,140	5,700	-7.2%
Bushels of Wheat for Grain Harvested	-	-		183,778	158,221	-13.9%
Farms with Hay	60	73	21.7%	44	31	-29.5%
Acres in Hay Production	7,690	7,854	2.1%	10,217	6,617	-35.2%
Tons Dry Hay Produced	15,266	12,252	-19.7%	20,979	12,389	-40.9%
Farms Harvesting Vegetables	-	-		2	3	50.0%
Acres of Vegetables Harvested	-	-		(D)	(D)	

Source: USDA Census of Agriculture. (D) Not Disclosed.

TABLE 2.3: MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD						
	Colfax County			Union County		
	2012	2017	% Change	2012	2017	% Change
Total Market Value of Products Sold	$35,744,000	$25,093,000	-29.8%	$98,138,000	$83,134,000	-15.3%
Government Payments	$918,000	$237,000	-74.2%	$2,900,000	$2,896,000	-0.1%
Farm-related Income	$7,871,000	$6,561,000	-16.6%	$2,425,000	$3,896,000	60.7%
Total Farm Production Expenses	$33,668,000	$19,558,000	-41.9%	$81,850,000	$76,973,000	-6.0%
Net Cash Farm Income	$10,866,000	$12,332,000	13.5%	$21,613,000	$12,853,000	-40.1%
Food Marketing Practices						
Value of food sold directly to consumers	$92,000	$51,000	-44.6%	$44,000	n/a	-
Per Farm Average						
Market Value of Products Sold	$123,256	$82,542	-33.0%	$278,013	$225,297	-19.0%
Government Payments Received	$13,701	$9,867	-28.0%	$16,667	$28,678	72.1%
Farm-Related Income	$99,633	$61,896	-37.9%	$25,797	$25,461	-1.3%
Total Farm Production Expenses	$116,096	$64,337	-44.6%	$231,871	$208,600	-10.0%
Net Cash Farm Income	$37,468	$40,567	8.3%	$61,227	$35,103	-42.7%
Livestock & Poultry Market Value						
Total Livestock & Poultry Sales	$33,599,000	$24,347,000	-27.5%	$81,277,000	$75,013,000	-7.7%
Poultry and Eggs	$3,000	$7,000	133.3%	(D)	(D)	
Cattle and Calves	$31,291,000	$23,549,000	-24.7%	$80,496,000	$74,898,000	-7.0%
Milk from Cows	-	-		-		
Hogs and Pigs	$16,000	(D)		(D)	(D)	
Sheep, Goats, Wool, Mohair, Milk Goats	$54,000	$44,000	-18.5%	$21,000	(D)	
Horses, Ponies, Mules, Burros, Donkeys	$637,000	(D)		(D)	(D)	
Crops Market Value of Products Sold						
Total Crop Sales	$2,145,000	$746,000	-65.2%	$16,862,000	$8,121,000	-51.8%
Grains, Oilseeds, Dry Beans, Dry Peas	(D)	(D)		$14,702,000	$7,319,000	-50.2%

Source: USDA Census of Agriculture. (D) Not Disclosed, n/a - not available.

AGRICULTURAL PRODUCTION and PROCESSING

Modern production agriculture requires inputs that are transported locally or between states. While some animal producers can supply their own feed from corn and hay grown on the same ranch, many purchase feed and feed supplements throughout the year. Annually crop producers purchase seed, as well as fertilizer, which is often classified as a hazardous material. Along with on-farm fuel, these may be purchased at retail from local farm supply stores, or by wholesale directly and delivered in bulk. Transportation improvements would decrease farm production expenses and increase options to source retail and wholesale inputs.

Cattle ranchers have long transported cattle and calves by semi-truck, which requires that even farm roads be able to handle heavy truck traffic. Increasingly, many grain producers utilize larger single-unit and

semi-trailer trucks to transport harvested grain directly from the field to storage or sale. Producers also must transport large over-sized farm machinery such as articulated tractors, tillage and planting equipment, or combines and headers, on public highways.

Union County is a leader in the cattle industry. The Clayton Livestock Research Center, located approximately six miles east of Clayton, is a New Mexico State University (NMSU) facility dedicated to the research of shipping protocols for livestock, particularly the nutrition needs of newly transported cattle; irrigated pastures; and grazing on natural grasslands including densities of locoweed infested pastures. The facilities include a feed mill, flaker, 24 sort pens, and 8 treatment pens. Researchers conduct up to 32 studies at a time and conduct pasture studies in the grazing areas.

Cattle Processing

Meat production is a large segment of the agriculture industry. Many ranchers in northeast New Mexico ship cattle and calves to feed lots for finishing, while others keep their cattle until they are ready to process. Nationwide, 32.2 million cattle and calves were processed in 2017, resulting in 26.3 billion pounds of beef for market, according to the North American Meat Institute. On the Ports-to-Plains Corridor, Texas and Colorado are the third and fourth ranking states for cattle processing. There are a number of large beef processing facilities located along the Ports-to-Plains Corridor in the Texas panhandle and nearby in western Kansas, including plants operated by the three largest meat processing companies in the United States; JBS USA Holdings (Swift), Tyson Foods, and Cargill Meat Solutions. Improvements to the Corridor will increase producers' efficiency in transporting cattle to market.

There are also opportunities to increase in-state beef processing which would benefit from a stronger transportation network. The State of New Mexico does not currently perform state inspection of meat products or meat processing facilities, so all meat plants in New Mexico must be inspected by the USDA Food Safety and Inspection Service (FSIS) whether for in-state or interstate markets. USDA FSIS listed slaughterhouses are located in Raton, Roswell, Mountainair, El Rito, and Moriarty. High Country Meats is located at 340 Colfax Avenue in Raton and offers custom processing and retail meat products to customers across New Mexico, Oklahoma, Texas, and Colorado. In the 2021 regular session, the New Mexico House of Representatives passed House Bill (HB) 33, the Livestock Board Meat Inspections Act, which would have restored state meat inspections; however, the regular session finished before the bill could be heard in the State Senate.

Hemp Farming and Marijuana

The Agriculture Improvement Act of 2018 (the Federal "Farm Bill") authorized the production and trade of industrial hemp as a regulated commodity. Hemp is a type of cannabis sativa plant and derivatives that contain no more than 0.3 % delta-9 tetrahydrocannabinol ("THC") on a dry-weight basis, in contrast to marijuana varieties with a larger THC content which remain a federal controlled substance. Hemp is a fast-growing plant with diverse varieties for different environmental conditions and distinct end products such as fiber, grain, dietary supplements, and other items.

Hemp has been adopted by growers in northeast New Mexico. According to Hemp Industry Daily, there were approximately 1,800 acres of hemp licensed in New Mexico for the 2020 growing season. The USDA Farm Service Agency (FSA) reported 953 acres of hemp planted in New Mexico in 2020, with 510 acres planted in Union County with CBD as the intended use.

Hemp being grown in the region will need to be transported for processing into a variety of commercial and industrial products. Hemp Industry Daily reported that about 80% of the 2020 hemp crop was dedicated to cannabinoid (CBD). Processors continue to work on developing new markets for feed (oil

and protein), fuel, building materials, biodegradable composites, and other innovative hemp products. New Mexico Highlands University in Las Vegas has also established a new certificate in industrial hemp entrepreneurship, with tracks in business and agricultural production, that will help grow the industry in northeast New Mexico.

In March 2021, the New Mexico Legislature met in Special Session and passed HB 2, the Cannabis Regulation Act. The legislation provides a process to regulate production, processing, and retail sales of marijuana, in addition to the current medical cannabis program. When implemented in 2022, there will be new opportunities for cultivation, production, manufacture, storage, testing, research, and consumer sales in New Mexico which will provide new jobs for residents and tax revenue. The Interstate Highway designation of US 87/64 may encourage consumers in Texas and Oklahoma who are currently traveling to other states to patronize New Mexico producers.

Value-added Agriculture

The New Mexico Economic Development Department (NMEDD) has identified sustainable and value-added agriculture as a key industry for the state. A value-added economic development approach focuses on creating more value from commodities before they are shipped out of the region, or capturing more value during production (such as with agri-tourism). These may be commodities already in production or that could be added to diversify the local economy. For example, some farmers and ranchers are specializing in organic and "all natural" products, such as premium brands of grass-fed beef and bison meat, rather than simply shipping animals to market. There are also currently over 150 organic farms across the state certified by the New Mexico Department of Agriculture (NMDA).

Many rural communities across the country have embraced biofuels, such as ethanol and biodiesel. The State of New Mexico mandates a 5% biodiesel blend for commercial diesel fuel. Currently, New Mexico has one ethanol production plant in Portales. There may be greater opportunities to add biofuel processing capacity in northeast New Mexico with better transportation infrastructure, where sufficient quality and quantity of water can be provided.

Agri-tourism combines agriculture and tourism to link agricultural production and/or processing with tourism in order to attract visitors to a farm, ranch or other agricultural destination providing recreation, entertainment, and educational experiences. Examples range from the traditional dude ranch or outfitting to u-pick operations and hayrides to rural bed & breakfasts and retreat centers. Agri-tourism presents a unique opportunity to combine the rich heritage and culture of northeast New Mexico agriculture and tourism while providing a memorable experience for visitors. Some farmers and ranchers have also added direct sales to consumers, online or at farmers markets, to diversify their incomes. Increased access with Interstate Highway designation, with expected increases in tourist traffic, would directly benefit this sector.

2.6 ENERGY INDUSTRY

New Mexico is among the top energy-producing states in the United States, with significant petroleum, natural gas, and coal reserves. The energy industry brings new wealth into New Mexico, as well as providing a substantial share of the State's tax revenues. Recently, New Mexico has also become a leading producer of renewable energy, with construction of solar and wind farms. The energy industry requires reliable and efficient transportation routes to bring in equipment and material and to distribute energy products to national and international destinations.

RENEWABLE ENERGY CONDITIONS and TRENDS

Renewable energy is a growing industry in northeast New Mexico and across the nation. In 2019, the New Mexico Legislature passed the Energy Transition Act (Senate Bill 489, codified as §62-18-1 § NMSA 2019). The Energy Transition Act established statewide renewable energy standards for public utilities regulated by the New Mexico Public Regulation Commission (PRC) and transitions energy generation away from coal. Renewable resources include solar, wind, geothermal, and hydropower, as well as potential facilities for fuel cells, biomass, and landfill gas resources.

The Energy Transition Act sets increasing standards for retail electric sales portfolios for investor-owned utilities and rural electric cooperatives:

- 50% of electric sales from renewable energy sources by 2030;
- 80% renewable energy sources for investor-owned utilities by 2040;
- 100% renewable energy (with zero carbon resources for retail sales) for investor-owned utilities by 2045; and
- 80% renewable energy (with zero carbon resources) for rural electric cooperatives by 2050, if technically feasible and affordable for customers

These standards are intended to create increased market demand for renewable energy. Investor-owned utility PNM serves the Town of Clayton. Southwestern Electric Cooperative of Clayton and Springer Electric Cooperative serve rural Union County and eastern Colfax County with electricity generated by Tri-State Generation and Transmission Cooperative, which limits their portfolio of local and renewable energy resources. Kit Carson Electric Cooperative of Taos serves western Colfax Counties. Having withdrawn from the Tri-State Cooperative, Kit Carson Electric Cooperative buys or generates its electricity independently. Municipal electric utilities (which are generally exempt from PRC oversight) serve Raton and Springer, purchasing power on wholesale energy markets.



According to the Solar Energies Industries Association, New Mexico is ranked 16th in the nation for the number of solar installations, with enough solar installed to power 205,000 homes. Mapping by the National Renewable Energy Laboratory (NREL) indicates that solar energy potential increases from New Mexico's border with Colorado and Oklahoma to the southwest across this region. The Cimarron Solar Facility at Vermejo Park Ranch is a 30-megawatt photovoltaic facility west of Raton in unincorporated Colfax County. This was the largest solar facility in New Mexico when completed in December 2010. The Springer Electric Cooperative has a 1-megawatt photovoltaic generation system adjacent to their substation on Interstate 25 in Colfax County.

The NREL analyzed the annual average wind speed in New Mexico, showing Union County as having some of the highest wind speeds in New Mexico *(see NREL map, page 29).* Two major wind farm projects are planned in the region. In 2014, the State Land Office approved plans for the Triangle Gallegos Wind Farm to be constructed on 19,000 acres of State Trust Land and 31,000 acres of private land west of Clayton and south of Grenville. This 500-megawatt wind farm, with 285 turbines proposed, has been delayed pending transmission line capacity. The proposed Gladstone Wind Farm is in planning stages for approximately 16,000 acres in Colfax and Union counties on US Highway 412, south of the US 87/64 Corridor. PNE USA Inc. is developing the project to generate at least 31-megawatts from eleven turbines on public lands, with additional turbines on private lands expected to generate a total of 78-megawatts of electricity.

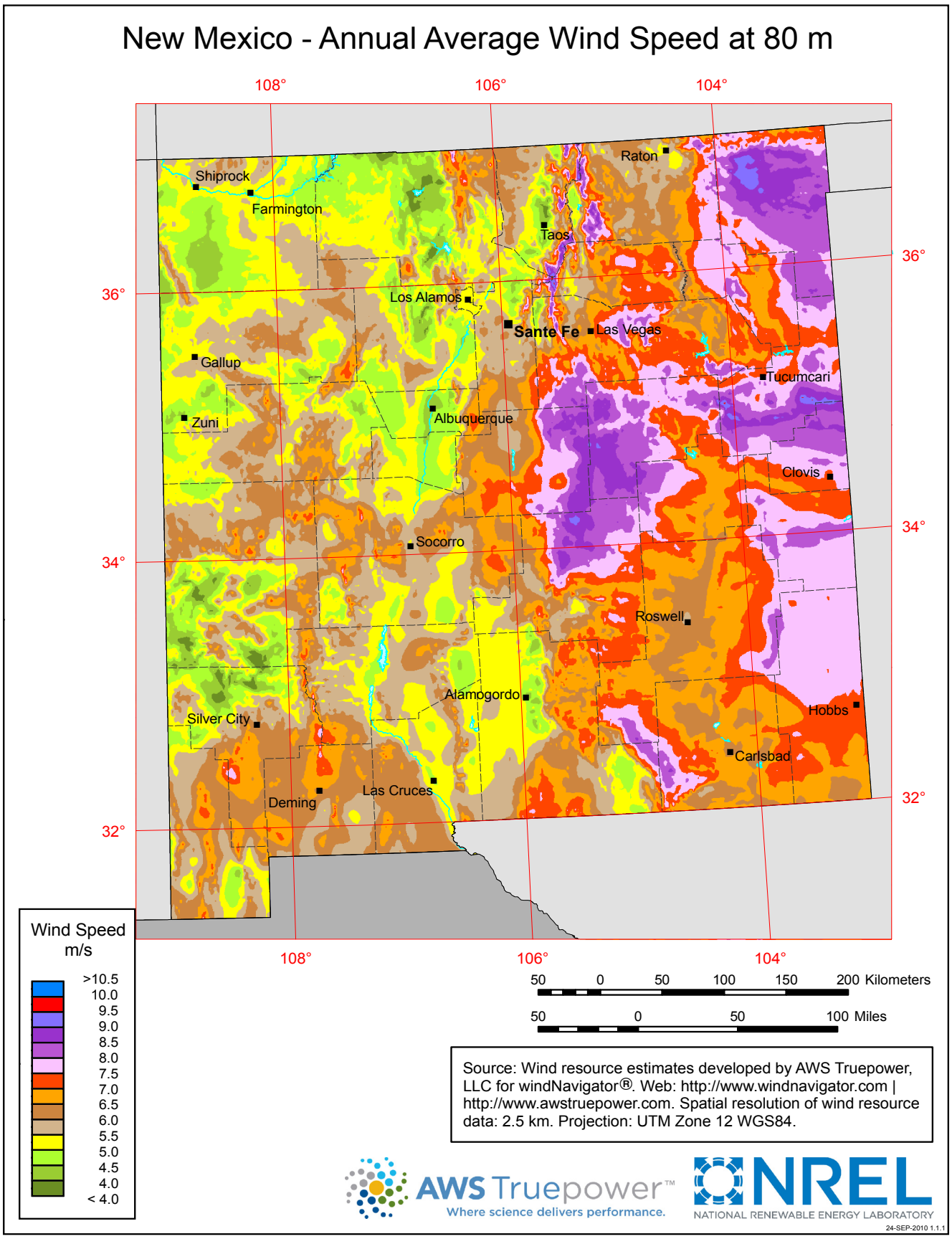
Energy Transmission

Development of energy generation capacity is limited by regional electric transmission capacity. Historically, the high-voltage transmission system was designed to deliver electricity in one direction, from central power plants to retail customers. New distributed renewable energy generation facilities require transmission grids that are much more sophisticated and flexible. The Lucky Corridor, recently acquired by Ameren Transmission Company, includes two planned projects in northeast New Mexico, the Mora and the Lucky Corridor transmission lines. The 110-mile, 115-kV Mora Line will connect the Triangle Gallegos and Gladstone wind farms with the existing PNM 345-kV Arriba substation near Las Vegas, New Mexico, by way of the Springer substation. It will have a transfer capacity of 180 MW, and will be part of more than $15 million in network upgrades. The 62-mile, 345-kV Lucky Corridor Line will run west of Interstate 25 from the Springer substation to the Taos substation. It has an estimated cost of $131.1 million and a transfer capacity of at least 700 MW.

TRADITIONAL FUELS

According to the US Energy Information Administration (EIA), New Mexico ranked as the third largest state for crude oil production and ninth for natural gas in 2019. The Raton Basin in northeast New Mexico and southeast Colorado is ranked nationally for proven natural gas reserves. Colfax County produced almost 16.8 million MCF of natural gas in 2019, as the 5th largest producing county in the state as reported by NM Energy, Minerals and Natural Resources Department (EMNRD). Drilling rigs and production support equipment would benefit from more reliable, all-weather access such as an Interstate highway.

There are also significant reserves of carbon dioxide in northeast New Mexico. The Bravo Dome is a 1,400 square mile field in Union and Harding counties. Carbon dioxide is extracted and transported to active oil fields where it is injected with water into wells to increase production, a process known as enhanced oil recovery. OXY USA, Inc. operates a processing facility near Amistad on NM Highway 420. As noted by the NM Political Report in December 2020, over 20% of tax revenues in Union County originate from operations at the Bravo Dome.


New Mexico - Annual Average Wind Speed at 80 m
108°
106°
104°
36°
34°
32°
Shiprock
Farmington
Raton
Taos
Los Alamos
Sante Fe
Las Vegas
Gallup
Tucumcari
Zuni
Albuquerque
Clovis
Socorro
Roswell
Alamogordo
Hobbs
Silver City
Carlsbad
Deming
Las Cruces
Wind Speed m/s
>10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
< 4.0
50 0 50 100 150 200 Kilometers
50 0 50 100 Miles
Source: Wind resource estimates developed by AWS Truepower, LLC for windNavigator®. Web: http://www.windnavigator.com | http://www.awstruepower.com. Spatial resolution of wind resource data: 2.5 km. Projection: UTM Zone 12 WGS84.
AWS Truepower™
Where science delivers performance.
NREL
NATIONAL RENEWABLE ENERGY LABORATORY
24-SEP-2010 1.1.1

2.7 TOURISM INDUSTRY

Tourism is an important part of New Mexico's economic base and a growing part of the national economy. Outdoor recreation consumers in New Mexico spend $9.9 billion annually; contribute to 99,000 jobs; and generate $623 million in state and local tax revenue. New Mexico has long been a popular destination for domestic and international tourists, due to varied landscapes and a rich multi-cultural heritage. Northeast New Mexico is also a popular route for travelers between the states of Texas and Colorado. The economic importance of tourism extends well beyond the core hospitality and transportation sectors, impacting employment and income across industries.

EXISTING CONDITIONS and TRENDS

According to the New Mexico Tourism Department and research firm Tourism Economics, about 38.2 million visitors spent $7.4 billion in New Mexico in 2019. Since 2015, the number of visitors increased by 12% while visitor spending increased by 18%. A total of over 96,000 jobs in New Mexico were sustained by tourism in 2019, or about 8.6% of all jobs statewide. The largest economic impacts of visitor spending are in food and beverage, lodging, and recreation and entertainment sectors. While international tourism has been growing, most visitors are from other states in the U.S. About 30% of visitors to New Mexico are passing through on their way to other destinations. About 80% of destination visitors travel to New Mexico in a car, truck or RV (recreational vehicle). There were about 5.7 million visitors to the Northeast Region of New Mexico in 2019, with most out-of-state travelers arriving from Texas, California, and Florida. Popular activities on overnight trips to the region include hiking/backpacking, shopping, and visiting landmark/historic sites, national/state parks, and museums.

Outdoor recreation has become an increasingly important aspect of tourism in New Mexico. The US Bureau of Economic Analysis (BEA) estimates that outdoor recreation contributed $2.4 billion to New Mexico's Gross Domestic Product (GDP) in 2019, employing over 35,000 people and contributing $1.2 billion in total income. New Mexico's outdoor economy is growing faster than the nation's overall, with employment growing 5.3% from 2018 to 2019, and income increasing by 7.6%. In 2019, RVing, equestrian activity, and snow sports were the top three contributors to the New Mexico outdoor economy. According to the Outdoor Industry Association, over 65% of New Mexico residents participate in outdoor recreation activities each year.

REGIONAL DESTINATIONS

Capulin Volcano National Monument

Capulin Volcano National Monument is located between Raton and Clayton off US 87/64 on NM Highway 325 in Union County. Designated in 1965, the National Monument covers 793 acres of the 7,500 square mile Raton-Clayton Volcanic Field at elevations ranging from 7,000 feet to 8,182 feet on the crater rim. Capulin Volcano is a classic cinder cone mountain, one of several volcanic peaks in the area, that last erupted about 60,000 years ago making it the easternmost "young" volcano in North America. On a clear day, visitors can see the five states of New Mexico, Colorado, Kansas, Oklahoma, and Texas, including some of the best-preserved segments of the Santa Fe Trail and the archaeological Folsom Man site. Access to the rim is provided by a narrow two-mile long road. The Monument includes a visitors' center, nature trails, picnic areas, and crater rim overlooks.



Capulin Volcano National Monument.

The Monument attracted over 81,000 visitors, and according to the National Park Service provided an economic impact on local gateway economies of $2.5 million in 2019 (National Park Service Visitor Spending Effects Report, 2020). The Visitor Spending Effects Report found that 98.5% of visitor spending at Capulin Volcano National Monument is from non-local visitors.

Santa Fe Trail National Scenic Byway



Santa Fe Trail National Scenic Byway.

The year 2021 is the 200th anniversary of the founding of the Santa Fe Trail. From 1821 to 1880, the Santa Fe Trail connected the capital of New Mexico to the eastern United States. The trade route was pioneered by Missouri traders after Mexico won independence from Spain. After 1848, when the New Mexico Territory become part of the United States, trade end emigration flourished on the Santa Fe Trail. The Mountain Branch followed the Purgatoire River to Trinidad, Colorado, then south over Raton Pass. The Cimarron Cutoff diverted in southwest Kansas along the Cimarron River, rejoining the Mountain Branch near Fort Union. The Mountain Branch followed the same route as modern Interstate 25 to the site of the City of Raton, then southwest toward Cimarron in Colfax County. The Cimarron Cutoff crossed into New Mexico north of the site of the Town of Clayton.

The Santa Fe Trail National Scenic Byway follows the Mountain Branch from Raton along US 87/64, then at Cimarron on NM Highway 21 back to Springer. The National Scenic Byway follows the Cimarron Cutoff from the Oklahoma state line on NM Highway 406 then joins US 87/64 outside of Clayton. The Byway continues northwest on US 87/64 before turning south on NM Highway 453, and west on US Highway 56 to Interstate 25 at Springer. The Santa Fe Trail Interpretive Center is located in Springer in the 120-year-old historic Colfax County Courthouse. The National Scenic Byway continues southwest along Interstate 25 through Las Vegas, New Mexico, to Santa Fe.

Clayton Lake State Park and Dinosaur Trackways



Clayton Lake State Park and Dinosaur Trackways

The Clayton Lake State Park and Dinosaur Trackways is located in Union County, about 12 miles northeast of the Town of Clayton. The State Park was established in 1955 as a fishing lake and winter waterfowl resting area. Today, visitors have a variety of activities to choose from, including boating, picnicking, camping, fishing, and hiking. The Dinosaur Trackways, discovered in the 1970s, are a popular attraction and one of the most extensive sites of its kind in North America. The Trackways contains nearly 500 dinosaur tracks from at least eight species that are over 100 million years old. In 2010, the State Park earned official designation as an International Dark Sky Park by the International Dark Sky Association.

Sugarite Canyon State Park

Sugarite Canyon State Park encompasses 3,320 acres of land leased from the City of Raton, and approximately 600 acres owned by New Mexico State Parks, on the New Mexico/Colorado border east

of Raton on NM Highway 526. The State Park was established in 1985, and attracts approximately 115,000 visitors a year. The Dorothey Lake Wildlife Management Area covers an additional 17,000 just north of the state line. Sugarite Canyon's watershed provides the majority of Raton's drinking water. While the area once featured coal mines, the park features heavily wooded mountains, lakes and streams, with campgrounds and 15 miles of hiking trails.



Sugarite Canyon State Park.

Fishers Peak State Park

The State of Colorado recently opened the 19,200-acre Fishers Peak State Park immediately adjacent to Sugarite Canyon State Park, along Interstate 25 outside of Trinidad. With assistance from the Trust for Public Land and the Nature Conservancy, the former Crazy French Ranch is Colorado's newest state park. The City of Raton has been involved in plans for trail connections, reciprocal park admission, and joint promotion opportunities with New Mexico State Parks.

Kiowa National Grasslands

The Kiowa National Grasslands cover 136,505 acres in northeast New Mexico, administered by the Cibola National Forest. The District Ranger Station is located in the Town of Clayton. Visitors to the Grasslands are attracted by its wildlife viewing, geologic and landscape diversity, as well as a two-mile section of the original Santa Fe Trail. There are two campgrounds and dispersed camping is permitted.

BSA Philmont Scout Ranch

Philmont Scout Ranch, founded in 1938, is the world's largest camping facility, with approximately 140,000 acres of land west of Raton on US 87/64. Owned and operated by the Boy Scouts of America (BSA), more than 18,000 scouts from across the country visit the high adventure base each year. The Philmont Training Center hosts youth and adults throughout the year. The National Scouting Museum also relocated to Philmont Scout Ranch in 2016.

Vermejo Park Ranch

Vermejo Park Ranch is a deluxe guest ranch on approximately 590,000 acres of land west of Raton, at elevations ranging from 6,400 to 12,960 feet and covering six bio-geographic life zones. The ranch hosts a large herd of bison that are considered "foundation genetic" herds. Historically, there were a number of coal mines and mining towns on the property, now all abandoned ghost towns. Ted Turner acquired Vermejo Park Ranch from the Pennzoil corporation in 1996. Turner has managed the guest ranch as a national destination for hunting, fishing, and other outdoor recreation, attracting on average about 5,000 visitors each year. Texas is the Ranch's largest market, just ahead of New Mexico, with about 75% of guests arriving from out of state.



Bison grazing at Vermejo Park Ranch.

CHAPTER 3:
Interstate Designation

3.1 INTRODUCTION

US Highway 87/64 is a four-lane, Super Two alignment between the New Mexico-Texas border and Interstate 25 at Raton. This chapter is intended to inform the determination of areas that are preferable and suitable for Interstate Highway designation. Results are presented of an objective analysis of the capacity and capability for the designation of the Ports-to-Plains Corridor to an Interstate Highway within the existing alignment and Right-of-Way. The chapter presents results of identification and evaluation of constraints in the existing alignment, including existing right-of-way widths, driveway access points, and existing traffic circulation, particularly in proximity to the local communities where the Corridor currently passes through. Finally, the chapter presents bypass options, including the potential to create a truck bypass around the core developed area of Clayton.

This section is intended to determine areas of the Ports-to-Plains Corridor that are preferable and suitable for Interstate Highway designation. This will require improvements of US 87/64 from a four-lane highway to four-lane controlled access, where feasible. The differences between a four-lane divided highway and Interstate Highway are summarized is included on this page.

3.2 EXISTING CAPACITY and CAPABILITY

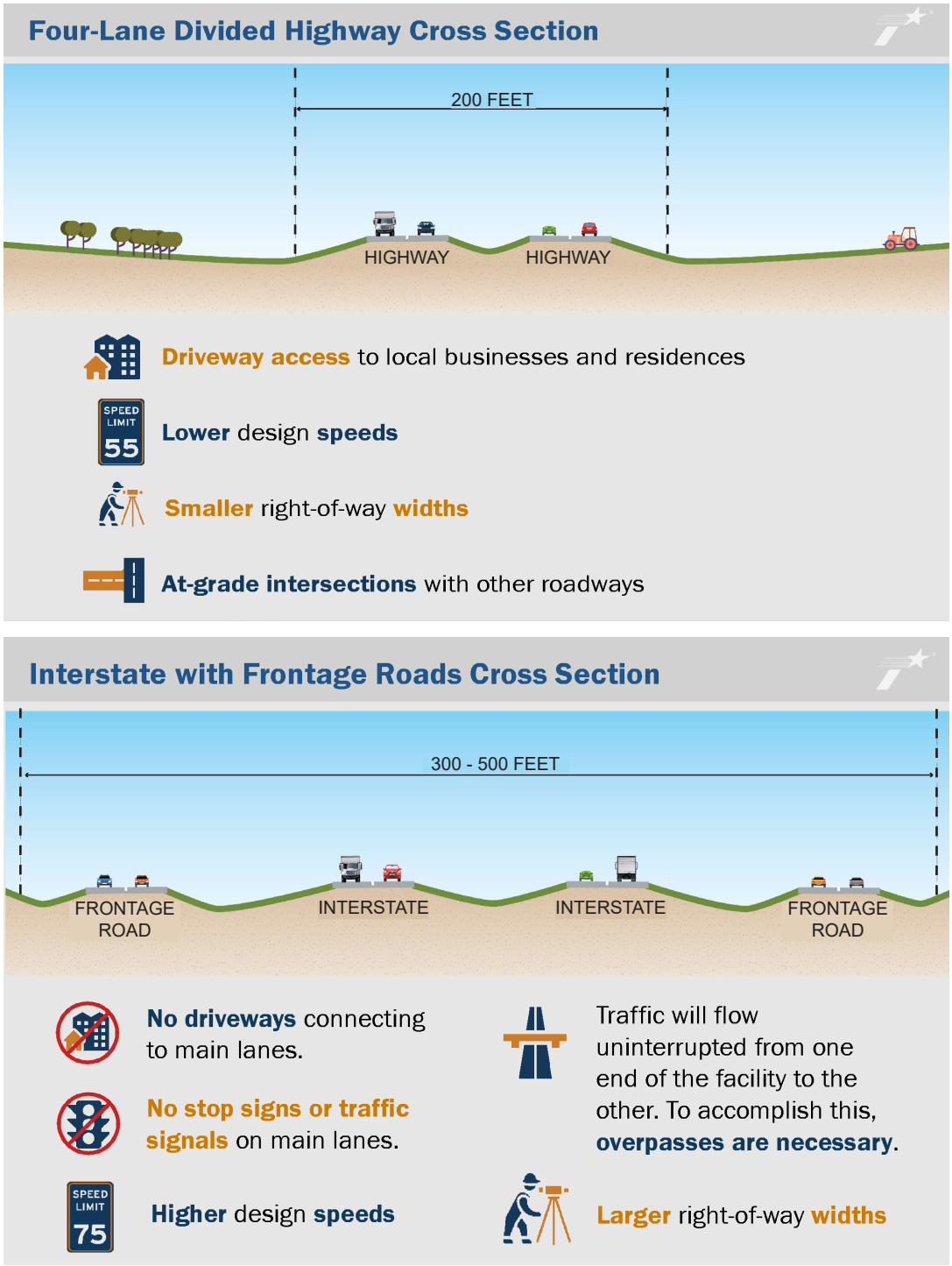
The Ports-to-Plains Corridor in New Mexico extends from US 87 at the Texas state line west for nine miles west to Clayton, and then continues 84 miles west on US 87/64 through the communities of Capulin, Des Moines, Grenville, and Mount Dora, terminating at Interstate 25 in Raton. From US 87/64, the Corridor proceeds north on Interstate 25 to the Colorado state line.

Key features of the Corridor relevant to the Interstate Highway designation are described as follows:

- US 87 and US 87/64 are four-lane US Highways and classified as Principal Arterial Highways by the NMDOT.
- Almost all of the Ports-to-Plains Corridor outside of the towns have divided medians and no curbs and gutters.
- The segment of US 87/64 through Clayton is a four-lane roadway with a two-way left-turn center lane.
- Portions of US 87/64 in the other communities along the route are undivided with only a centerline stripe.
- The unofficial truck route around Downtown Clayton is a two-lane undivided roadway through a residential district.
- The maximum speed limit along the route is 70 mph.
- The speed limit through Clayton is 30 mph.
- Speed limits through the other towns along the Corridor usually slow down to between 40 to 45 mph with 50 to 55 mph speed limit zones near the municipal boundaries.
- There are multiple grade level access points along the Corridor, especially in and around the towns.
- Outside of the towns, at least 50 roadways access the New Mexico Ports-to-Plains Corridor, not including ranch, residential, and railroad access driveways.
- The BNSF Railway runs parallel to and north of US 87/64 from Clayton to Des Moines; the highway ROW and the railroad ROW are adjacent to each other for most of this distance.
- US 87 crosses over the railroad as a grade-separated structure on the north side of Clayton and runs parallel to and south of US 87 from Clayton to the Texas border. The highway ROW and railroad ROW are adjacent to each other for most of this distance.

- Based on inspection of distances between fence lines and other physical features along US 87/64, existing right-of-way widths outside of the towns range from 190-feet wide to 230-feet wide. Within the municipal boundaries, the right-of-way varies from 75-feet to 78-feet wide.

The diagrams below show a comparison between cross sections of a four-lane divided highway and an interstate with frontage roads.



Source: Ports-to-Plains Corridor Feasibility Study (HB 1079).

PAVEMENT CONDITIONS

Due to inadequate state and local funding, 54% of major roads and highways in New Mexico are in poor or mediocre condition. The NMDOT has identified nearly $2.8 billion in needed, but unfunded, transportation projects throughout the state. One of the unfunded projects in the Ports-to-Plains Corridor is the Interstate 25 and US 87/64 Interchange reconstruction at Exit 451 in Raton to improve safety and relieve backups on the highway which is heavily used for commerce and tourism.

The pavement along the Corridor varies from good to fair condition. The pavement material is primarily asphalt with short sections of concrete. The asphalt pavement is showing signs of age, especially on US 87 east of Clayton, US 87/64 just west of Clayton, and US 87/64 near the US 87/64 and Interstate 25 junction. In these areas, the pavement is rutted and exhibiting significant lateral and longitudinal cracking and alligator cracking, which is indicative of older pavement exposed to high vehicle axle weights. Many of these areas could be rehabilitated with an overlay. Some areas; however, may require reconstruction. A pavement study to determine corrective action is recommended.

3.3 OPPORTUNITIES and CONSTRAINTS in the EXISTING ALIGNMENT

According to the American Association of State Highway and Transportation Officials (AASHTO), as published in *A Policy on Design Standards: Interstate System, 2016,* a roadway must comply with certain basic design criteria to be designated as an Interstate Highway. Table 3.1 lists these standards and what modification would have to be made to the existing roadway to comply with these standards.

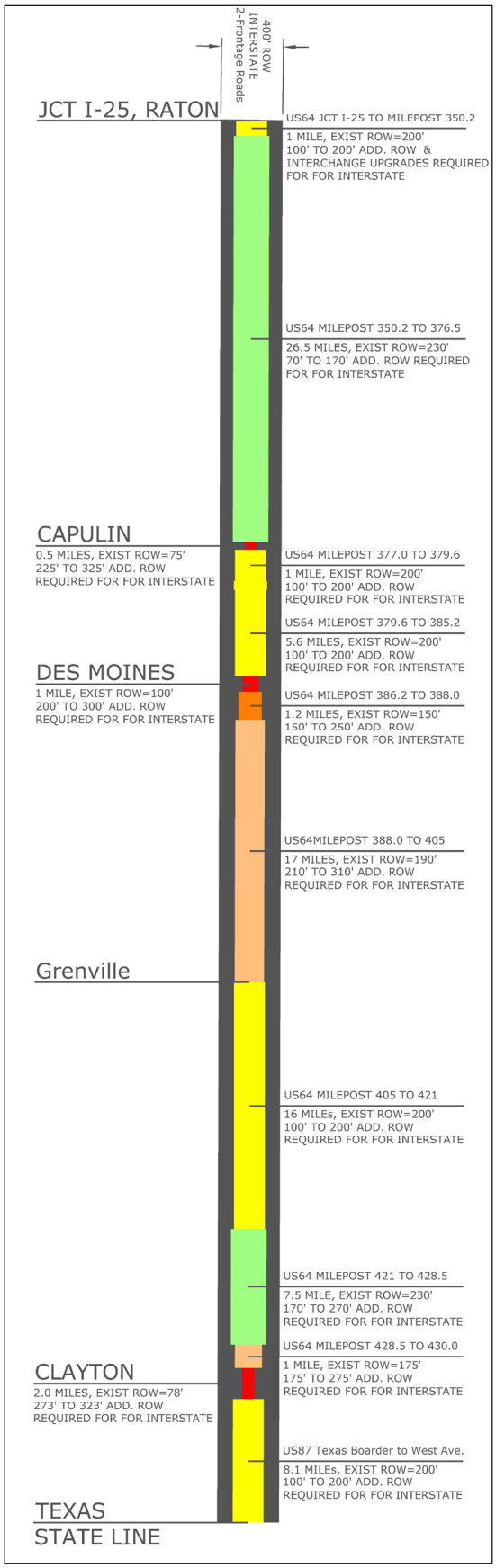
TABLE 3.1: INTERSTATE SYSTEM DESIGN STANDARDS and COMPLIANCE IMPACTS

Design Standards	Compliance Impacts to Existing Roadway
Controlled Access: All access onto and off the highway is to be controlled with interchanges and grade separations, including all railroad crossings. Interchanges are to provide access to and from both directions of the highway and both directions of the crossroad. Interchanges should be spaced at least 1 mi (1.6 km) apart in urban areas and 3 mi (4.8 km) apart in rural areas; collector/distributor roads or other roadway configurations that reduce weaving can be used in urban areas to shorten this distance. a. In urban areas, there should be no driveways or other access points to adjacent properties along the crossroad for at least 100 feet (30 m) from entrance and exit ramps, in both directions, and for at least 300 feet (91 m) in rural areas. b. In urban and suburban areas, consideration should be given to accommodating bicycles and pedestrians along crossroads.	There are over 50 access points outside of the towns along the Ports-to-Plains Corridor, not including driveways and ranch access roads. As a result, frontage roads and at least eight interchanges would need to be constructed to maintain access to towns, roads, and driveways. Therefore, additional ROW (between 100 to 200-feet) would need to be acquired in these areas. See page 40 for a diagram of existing and required ROW widths along the Ports-to-Plains Corridor. In Clayton, Grenville, Des Moines, and Capulin, bypass routes around the residential/commercial areas may be required due to limited available ROW. Adjacent BNSF railroad ROW in some of these towns and along a significant portion of the Ports-to-Plains route further restricts ROW acquisition.
Minimum Design Speed: A minimum design speed of 70 mph (113 km/h) is to be used, except in mountainous and urban areas, where the minimum is 50 mph (80 km/h). a. The sight distance, curvature, and super elevation of the highway should follow the current edition of AASHTO's A Policy on Geometric Design of Highways and Streets for the chosen design speed.	The current speed limit between towns is 70 mph and 50 to 55 mph approaching towns. Upgrading the route to an interstate would increase the speed limit to the state maximum of 75 mph. Bypass routes around populated areas will increase the speed limits in these areas from 30 to 40 mph to at least 50 mph.

TABLE 3.1: INTERSTATE SYSTEM DESIGN STANDARDS and COMPLIANCE IMPACTS	
Design Standards	**Compliance Impacts to Existing Roadway**
Maximum Grade: The maximum permissible vertical angle, or grade, along the highway is determined from terrain and design speed, with up to 6% generally allowed in mountainous areas, 5% in rolling terrain, and 4% on level terrain. An additional 1% is allowed in urban areas.	Existing grades along the Ports-to-Plains route appear to be less than 5%; however, there are some areas between Raton and Capulin where actual grades may be slightly steeper.
Minimum Number of Lanes: There are to be at least two lanes in each direction, unless more are necessary for an acceptable level of service, according to the current edition of AASHTO's *A Policy on Geometric Design of Highways and Streets*. Climbing lanes and emergency escape ramps should be provided where appropriate.	The current highway system has 2-lanes in each direction.
Minimum Lane Width: The minimum lane width is 12 feet (3.7 m), identical to most US and state highways.	The current highway system has 12-foot wide lanes.
Shoulder Width: The minimum width of the left paved shoulder is 4 feet (1.2 m), and of the right paved shoulder 10 feet (3.0 m). With three or more lanes in each direction, both shoulders are to be at least 10 feet (3.0 m) wide. In mountainous terrain, a left shoulder of 4 feet (1.2 m) and a right shoulder of 8 feet (2.4 m) are acceptable, except where there are at least four lanes in each direction, in which case both shoulders are to be at least 8 feet (2.4 m) wide. In places with higher truck traffic, over 250 Directional Design Hour Volume, wider shoulders should be considered.	The current highway system outside of the towns has right shoulder widths from 6 to 8 feet wide and left should widths from 4 to 6 feet wide. Within the towns, the right shoulder widths vary from 1 to 10 feet and left shoulder widths vary from 0 to 4 feet. Additional ROW will be required to comply with minimum shoulder width standards for an interstate.
Pavement Sloping: On straight sections of the highway, the roadway is to have a cross slope of at least 1.5%, and preferably 2% to ensure proper drainage, with up to 2.5% in areas of heavy rainfall. The cross slope of both the left and right shoulders should be between 2% and 6%, but not less than the main lanes.	Pavement slopes on the existing roadway could not be verified with visual inspection, however, assuming current construction standards for US Highways were followed, existing slopes should be adequate for interstate standard.
Median Width: The median should have a width of least 50 feet (15 m), and preferably 60 feet (18 m), in rural areas, and 10 feet (3.0 m), plus a barrier, in urban or mountainous areas.	Median widths outside of the towns vary from 20 to 35 feet wide. Median widths would have to be increased by 15 to 30 feet to comply with Interstate Highway design standards.
Recovery Areas: There should be no fixed objects in the clear zone, the width of which should be determined by the design speed in accordance with the current edition of AASHTO's Roadside Design Guide. When this is not possible, breakaway supports or barriers guarding the objects should be used. Special care should be taken in depressed highways, where piers and walls should be placed at least 2 feet (0.61 m) beyond the outer edge of either shoulder. Slopes in the clear zone should be at most 1:4, and should typically be 1:6.	There are no defined recovery areas in the New Mexico Ports-to-Plains roadway system; however, there are minimal barriers and adequate space for most vehicles to find safe clearance from highway traffic.

TABLE 3.1 INTERSTATE SYSTEM DESIGN STANDARDS and COMPLIANCE IMPACTS

Design Standards	Compliance Impacts to Existing Roadway
Curbs: No curb is to be placed nearer to the roadway than the outside edge of the paved shoulder. Any curb is to have a sloping, and not a vertical, face and be no more than 4 inches (10 cm) in height. Special care should be taken when curbs are combined with barriers.	The only segments of the Corridor that have curbs along the roadway are through the towns. Re-routing the interstate around the towns would be necessary to eliminate curbing.
Vertical Clearance: The minimum vertical clearance under overhead structures, such as bridges, is 16 feet (4.9 m), including both paved shoulders and an allowance for extra layers of pavement. Through urban areas, at least one routing is to have 16-foot (4.9 m) clearances, but others may have a lesser clearance of 14 feet (4.3 m). Sign supports and pedestrian overpasses must be at least 17 feet (5.2 m) above the road, except on urban routes with lesser clearance, where they should be at least 1 foot (30 cm) higher than other objects. The cross bracing of truss bridges has a special additional clearance requirement of 17.5 feet (5.3 m).	There are no structures along the Corridor where clearance is an issue; however, clearance of overhead utility wires in the towns should be verified.
Bridges: Bridges less than 200 feet (61 m) long should carry the full width of the roadway, including the paved shoulders. Longer bridges can reduce the width of both shoulders to 4 feet (1.2 m). Existing bridges can remain part of the Interstate system if they have at least 12-foot- wide (3.7 m) lanes with 3.5-foot (1.1 m) shoulder on the left and a 10-foot (3.0 m) shoulder on the right, except that longer bridges can have 3.5 feet (1.1 m) shoulders on both sides. For all bridges, the railing should be upgraded if necessary.	Bridges in the New Mexico Ports-to-Plains Corridor, such as the bridge over the BNSF railroad in Clayton and the Raton and Chicorica Creeks east of Raton, do not have adequate shoulder widths for an Interstate Highway and must be widened by 4 to 6-feet to comply with Interstate Highway standards.
Tunnel Clearance: Tunnels should not differ significantly from bridges, but because of the high costs of tunnels, the width of both shoulders may be reduced to 4 feet (120 cm). An exit walkway, 4 feet (120 cm) wide, is also required, which should either be elevated or separated from the roadway with a barrier. In addition, access for emergency responders needs to be accommodated. The minimum vertical clearance is the same as it is under bridges.	There are no tunnels on the Ports-to-Plains highway system in New Mexico.
At-Grade Railroad Crossings: At-grade railroad crossings are not permitted on the Interstate Highway System (standard since 1966).	There are no at-grade railroad crossing on the Ports-to-Plains highway system in New Mexico. Any new crossings must comply with the bridge standards listed above and with applicable federal, state, county, and municipal laws. Regulations, codes, and standards should, as a minimum, meet the specifications and design standards of the American Railway Engineering and Maintenance of Way Association (AREMA), the Association of American Railroads, and AASHTO.



EXISTING and REQUIRED ROW

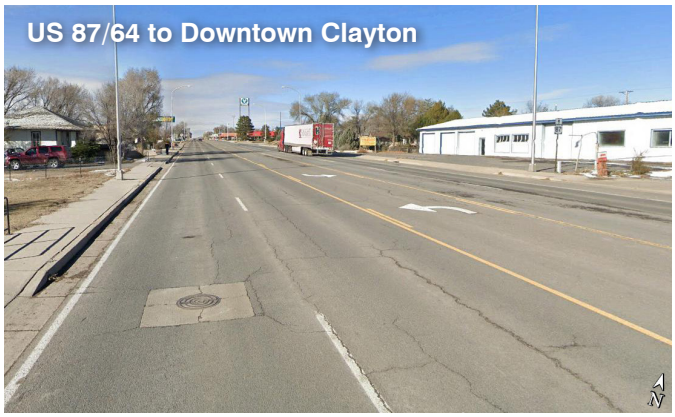
3.4 BYPASS OPTIONS

CLAYTON TRUCK BYPASS

The existing truck route through the Town of Clayton (West Avenue) is a two-lane roadway without a center median. The route starts on the southern end of town at the Junction of US 87 and West Avenue near the Port-of-Entry weigh station and proceeds north on West Avenue to NM Highway 56 and then west to Santa Fe Drive, finally connecting with US 87/64 on the northern side of Clayton. To take the route, trucks must make a left turn to exit the weigh station and another left turn onto West Avenue. There are two additional left-turn movements along the route. The route penetrates mostly residentially-zoned areas.

Google Earth images suggest that instead of using the designated truck route, trucks exiting the weigh station make a right-turn on US 87 and proceed north through Downtown Clayton to US 87/64. The Downtown route provides a 4-lane road with a two-way-left turn center lane and is a straight connection to US 87/64.



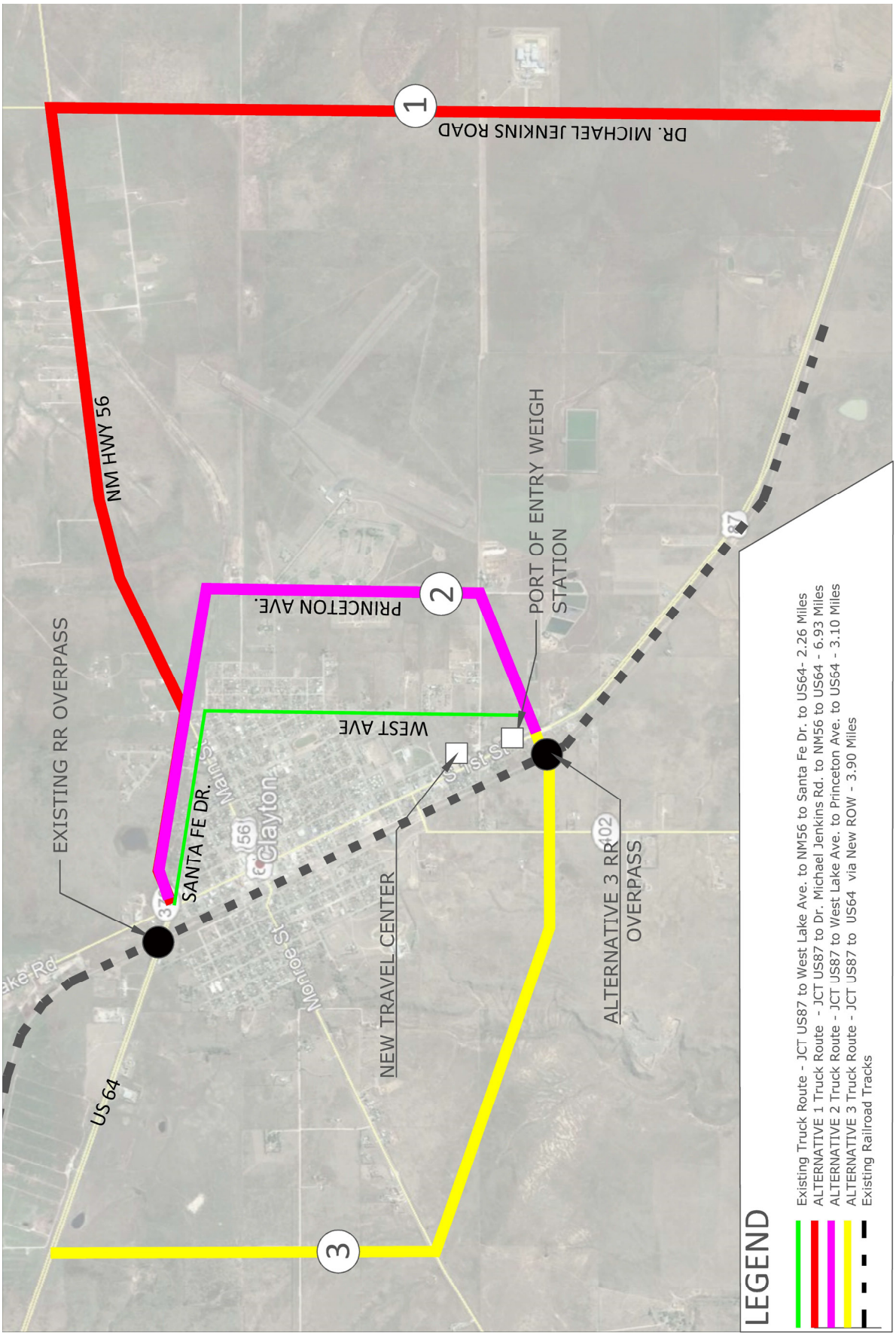




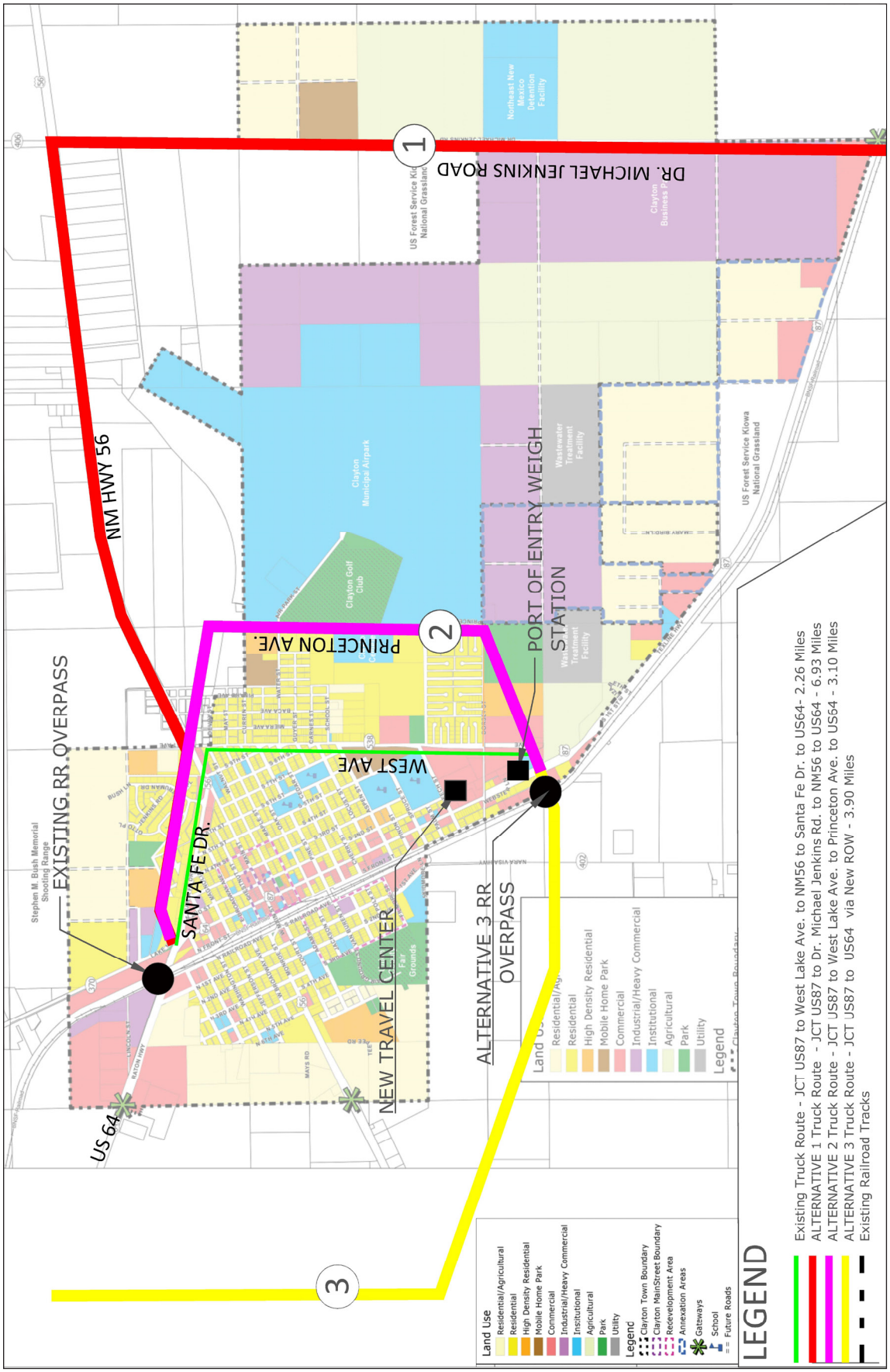


ALTERNATIVE TRUCK BYPASS OPTIONS

Given the limited ROW available for an Interstate Highway and the residential and intersection density along the current truck bypass, three alternative routes were developed to connect US 87 to US 87/64 that would decrease the impact on residential communities and still provide access to services in Clayton. Alternative 1 uses existing roadway corridors east of Clayton (Dr. Michael Jenkins Road and NM Highway 56) and a new ROW north and parallel to Santa Fe Drive. Alternative 2 uses Princeton Avenue and new rights-of-way through vacant and some developed land near the port of entry and north of Santa Fe Drive. Alternative 3 travels through mostly undeveloped land west of Clayton with no existing roadway corridor. An analysis of the advantages and disadvantages of each alternative is provided on page 44.



TOWN OF CLAYTON - CONCEPTUAL TRUCK BYPASS ALTERNATIVES



TOWN OF CLAYTON - CONCEPTUAL TRUCK BYPASS ALTERNATIVES
(OVERLAID ON PREFERRED LAND USE SCENARIO, TOWN OF CLAYTON COMPREHENSIVE PLAN)

TABLE 3.2: COMPARISON OF TRUCK BYPASS ROUTE ALTERNATIVES IN CLAYTON			
Alternative		**Advantages**	**Disadvantages**
Existing Truck Route:	West Avenue (2.26 miles long)	• No construction costs • Redirects truck traffic away from Downtown Clayton • Lowest cost • Close to weigh station and new travel center • Shortest route	• Most impact to residential areas • Does not comply with design standards for a US Highway or Interstate Highway • Requires 3 or 4 left turn movements
Option 1:	Dr. Michael Jenkins Road (6.93 miles long)	• Uses existing corridor • Minimal impact to residential areas • Uses existing railroad overpass • Closest to Clayton Business Park • New ROW north of Santa Fe Drive impacts existing residents	• Longest route • Need to add 150 feet of new ROW to comply with Interstate Highway standards • Does not take advantage of location of new travel center and existing weigh station
Option 2:	Princeton Avenue (3.10 miles long)	• Nearest to Clayton Business District • Close to weigh station and new travel center • Uses mostly existing corridors • Shortest route • Uses existing railroad overpass • Closest to airport • New ROW north of Santa Fe Drive impacts existing residents	• Most impact to developed areas • Need to add 200 feet of new ROW
Option 3:	West Clayton (3.90 miles long)	• Least impact to residential areas • Close to weigh station and new travel center	• Must build new railroad overpass • Most new ROW required (400 feet for Interstate Highway, 250 feet for US Highway) • Highest cost

CHAPTER 4:
Economic Development Impacts

4.1 INTRODUCTION

Designation of the Ports-to-Plains Corridor as an Interstate Highway will have economic development impacts. This analysis establishes the existing baseline for employment sectors in northeast New Mexico and projects the anticipated impacts of temporary construction-related and permanent employment, including employment for agriculture, energy, and tourism-related industries.

The estimated impacts to the regional economy due to Interstate Highway designation of US 87/64 assume the Corridor is a priority project of the US Department of Transportation (USDOT) and the New Mexico Department of Transportation (NMDOT). Planning and construction is assumed to begin by 2025. Based on this assumption, projections for employment impacts to the affected region, primarily Colfax and Union counties, are considered in two primary stages: temporary impacts during the construction phase *(see Table 4.1)* and long-term impacts during the post-construction phase *(see Table 4.2).* Post-construction economic development impacts are considered over a time horizon generally from 2025 to 2040.

There would be 10,770 direct construction-related jobs and 20,034 indirect jobs created by 2040. Permanent employment would total 3,448 jobs by 2040.

TABLE 4.1: EMPLOYMENT IMPACTS - TEMPORARY

Employment	2025	2030	2035	2040
Highway - Construction	4,945	2,473		
Highway - Indirect Jobs	9,801	4,901		
Lodging - Construction	31			
Lodging - Indirect Jobs	61			
Raton Truck Stop - Construction	18			
Raton Truck Stop - Indirect Jobs	35			
Retail Restaurant - Construction	20	40	13	13
Retail Restaurant - Indirect Jobs	39	78	27	27
Wind Generation Manufacturing - Direct Jobs	12	12	12	12
Wind Generation Manufacturing - Indirect Jobs	25	25	25	25
Marijuana Grow Facilities - Construction	118	588	821	821
Marijuana Grow Facilities - Indirect Jobs	233	1,164	1,627	1,627
Raton Distribution Center - Construction	12	12	12	12
Raton Distribution Center - Indirect Jobs	25	25	25	25
Meat Processing Facility - Construction		9		
Meat Processing Facility - Indirect Jobs		17		
Gladstone Wind Turbine - Construction		43		
Triangle Gallegos Wind Turbine - Construction		225		
Future Project Wind Turbine - Construction			396	
Solar Energy - Construction	100			
Solar Energy - Indirect Jobs	197			
Total (One-time Employment Impacts)	**15,672**	**9,612**	**2,958**	**2,562**

Assumptions made in the analysis are that the Corridor improvements will be made to Interstate Highway standards described in Scenario 2 in Chapter 6: Project Costs and Funding Sources. The estimated time frame for construction of these improvements within the New Mexico portion of the Ports-to-Plains Corridor is 18 months. Thereafter, impacts due to increased travel along the Corridor at 1% per year is used as a conservative baseline for economic development in the area.

Currently, there is a truck stop planned and under construction in the Town of Clayton and is not considered an “added” impact due to Corridor improvements. Nonetheless, addition of the truck stop will likely add adjacent retail restaurant accommodations due to the Corridor improvements. The cumulative and specific industry impacts are speculative; however, an improved highway with higher traffic is reasonably assumed to increase economic activity to northeastern New Mexico (Union and Colfax counties) over the time horizon between 2025 through 2040.

Temporary employment impacts are based on construction employment. Recurring employment impacts are cumulative and permanent. Note that the baseline employment figures in Table 4.3 and Table 4.4 are not included in the employment figures projected in Tables 4.1 and 4.2. It is assumed that increased traffic due to Corridor improvements will have positive impacts to the base employment figures.

Using Construction Scenario 2 – Full Interstate Highway Designation, new employment figures are based on a 1% increase in the baseline high level employment categories identified in Table 4.3 and Table 4.4. The increase in "high level" employment sectors using Bureau of Labor of Labor (BLS) figures are baseline and are shown to increase at 1% annually – consistent with the traffic projections for the Corridor.

TABLE 4.2: EMPLOYMENT IMPACTS - CUMULATIVE/PERMANENT

Full Time Permanent Jobs *(Cumulative)*	**2025**	**2030**	**2035**	**2040**
Lodging	20	20	20	20
Raton Truck Stop	50	50	50	50
New Retail Restaurants	45	135	165	195
Wind Generation Manufacturing	50	100	150	200
Marijuana Grow Facilities	118	712	1,422	2,375
Raton Distribution Center	50	100	150	200
Tourism Sites	119	125	132	138
Meat Processing Facility		20	20	20
Gladstone Wind Turbine Maintenance		13	13	13
Triangle Gallegos Wind Turbine Maintenance		85	85	85
Future Project Wind Turbine Maintenance			150	150
Solar Energy Array Maintenance	2	2	2	2
Total (Cumulative)	**454**	**1,362**	**2,359**	**3,448**

** Employment impacts are based upon baseline employment and projections for the Construction Scenario 2 which brings the Corridor up to Interstate Highway standards with an estimated travel increase of 1% per year during the projected time periods described. Associated increase in retail restaurant employment in both the Clayton and Raton areas are implied by the increase in traffic of 1% per year.*

4.2 EMPLOYMENT BASELINE

Employment impacts of the Ports-to-Plains Interstate Highway designation on northeast New Mexico come from direct employment related to road construction and improvements, indirect employment during the active construction/improvement phase, and potential economic growth caused by improvement of the highway. The industries with the greatest potential for positive employment impacts in northeast New Mexico due to the road improvements for Interstate Highway designation are designated into two phases: Construction Phase and Post-construction Phase.

The US Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW) program publishes a periodic count of employment and wages reported by employers covering more than 95% of U.S. jobs, available at the county, state and national levels by industry. The QCEW reports are updated with monthly statistics throughout the year in cooperation with the New Mexico Department of Workforce Solutions for workers covered by state and federal unemployment programs.

The QCEW data is aggregated by industry using NAICS (North American Industry Classification System) codes. Category 10 is the total of all industries covered by unemployment insurance. Category 101 and 102 group good-producing and service-producing industries. The following 10 four-digit industries combine similar types of establishments and employers. It should be noted that agricultural employment, where firms may be covered, is reported with NAICS code 1011 Natural Resources and Mining.

Table 4.3 presents the most current QCEW report on private high level industries in Colfax County. The 12-month rate of change in employment from September 2019 to September 2020 for Colfax County was

-7.7%. However, it should be noted that unemployment in New Mexico and nationwide rose sharply during the COVID-19 pandemic starting in March 2020. Table 4.3 presents a Location Quotient (LQ) by industry, which compares the concentration of county-level employment with typical concentrations at the national level. An LQ of 4.7 for Colfax County indicates about five times as many jobs in Leisure and Hospitality as would be typical.

TABLE 4.3: PRIVATE HIGH LEVEL INDUSTRIES, COLFAX COUNTY BASELINE

High Level Industry	Quarterly Establishments	July Empl.	Aug. Empl.	Sept. Empl.	Total Quarterly Wages	Average Weekly Wage	Sept. Empl. Location Quotient	Total Quarterly Location Quotient
10 Total, all industries	405	2,759	2,708	2,774	$22,699,976	$636	0.83	0.73
102 Service-providing	324	2,368	2,319	2,390	$18,865,745	$615	0.87	0.76
101 Goods-producing	81	391	389	384	$3,834,231	$760	0.63	0.62
1011 Natural Resources and Mining*	18	125	123	115	$1,346,660	$856	2.20	3.02
1012 Construction	48	141	142	150	$1,382,950	$737	0.72	0.65
1013 Manufacturing	15	125	124	119	$1,104,621	$693	0.35	0.31
1021 Trade, Transportation, and Utilities	85	693	678	675	$5,742,717	$648	0.89	0.99
1022 Information	7	13	14	14	$117,599	$662	0.19	0.08
1023 Financial Activities	37	155	147	155	$1,550,335	$783	0.67	0.48
1024 Professional and Business Services	53	117	112	117	$954,175	$636	0.20	0.14
1025 Education and Health Services	56	323	321	325	$2,967,246	$707	0.51	0.56
1026 Leisure and Hospitality	54	984	962	1,011	$6,853,105	$535	2.80	4.97
1027 Other Services	32	83	85	93	$680,568	$602	0.83	0.92

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.
**Agricultural employment is included under Natural Resources and Mining.*

Table 4.4 presents the most current QCEW report on private high level industries in Union County. The 12-month rate of change in employment from September 2019 to September 2020 for Union County was -11.0%. The BLS did not disclose employment for Union County in NAICS 1012 Construction or 1013 Manufacturing to protect employer privacy in small industries. NAICS 1011 Natural Resources and Mining includes agricultural employment. The Location Quotient (LQ) by industry of 9.15 for Union County means there are approximately nine times as many jobs in Natural Resources and Mining as would be typical across the United States.

TABLE 4.4: PRIVATE HIGH LEVEL INDUSTRIES, UNION COUNTY BASELINE

High Level Industry	Quarterly Establishments	July Empl.	Aug. Empl.	Sept. Empl.	Total Quarterly Wages	Average Weekly Wage	Sept. Empl. Location Quotient	Total Quarterly Location Quotient
10 Total, all industries	133	826	810	793	$6,967,024	$662	0.78	0.74
102 Service-providing	98	671	650	653	$5,497,587	$643	0.78	0.73
101 Goods-producing	35	155	160	140	$1,469,437	$745	0.76	0.78
1011 Natural resources & mining*	23	120	127	107	$1,239,902	$808	6.75	9.15
1012 Construction	11	(1)	(1)	(1)	(1)	(1)	(2)	(2)
1013 Manufacturing	1	(1)	(1)	(1)	(1)	(1)	(2)	(2)
1021 Trade, transportation, & utilities	29	239	238	242	$1,784,867	$573	1.06	1.01
1022 Information	3	35	33	34	$350,130	$792	1.48	0.75
1023 Financial activities	9	57	58	58	$671,034	$895	0.82	0.68
1024 Professional & business services	15	22	21	22	$257,316	$914	0.13	0.12
1025 Education & health services	13	183	178	181	$1,918,512	$817	0.95	1.20
1026 Leisure & hospitality	20	121	108	102	$421,986	$294	0.93	1.01
1027 Other services	9	14	14	14	$93,742	$515	0.41	0.42

(1) Data does not meet BLS or State agency disclosure standards.
(2) One or more components of this calculation do not exist or do not meet BLS or State agency disclosure standards.
Source: Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics
**Agricultural employment is included in the reporting for Natural Resources and Mining.*

The latest high level industry employment data available are considered “baseline” employment. Increased traffic due to Corridor improvements will likely increase employment impacts from baseline growth, projected to be at or near 0% for the period between 2020 and 2025. This is not a pessimistic estimate, as New Mexico, particularly in rural counties, has experienced outmigration since 1990, but the impacts of the pandemic on short-term change suggest lower population in Colfax and Union counties. Optimistic estimates are that the region and country will benefit from the success of inoculations with population and economic recovery with a short time. To what extent the recovery of jobs and economic activity and the rate at which it occurs is as yet uncertain, the outlook is positive that recovery is underway. To the extent the rate

of jobs will recover to pre-pandemic levels is unknown, the assumptions that follow in the estimates assume growth rates of tourism and construction-related employment will occur beginning in 2025 at historical rates (pre-pandemic).

4.3 CONSTRUCTION PHASE EMPLOYMENT IMPACTS

Construction projects provide both direct and indirect employment impacts. Direct employment impacts are jobs created by the construction project itself. Indirect employment effects are jobs created by the economic impact of the project on the regional economy. For example, construction projects require the purchase of goods and services during the construction phase of the project. Construction-related employment is a temporary, yet significant, benefit for any region. For the purposes of this study, employment is projected for:

- Direct jobs - employment of workers for a construction project;
- Supplier jobs - indirect employment resulting from spending on construction materials and supplies; and
- Induced jobs- indirect employment resulting from spending on goods and services such as restaurants, fuel, or lodging.

Construction-related employment Tables 4.5 and 4.6 present direct jobs, supplier jobs and induced jobs, and the total indirect jobs (supplier and induced jobs). Jobs that are created from construction activity are typically estimated by applying final demand multipliers through input-output tools such as IMPLAN, RIMS II, and the REMI model. Given the scope of this study, a typical construction multipliers estimate was used instead:

- 5.5 direct jobs per $1 million in construction costs;
- 4.8 supplier jobs; and
- 6.1 induced jobs.

The typical construction multipliers were calculated based on studies of average project costs and employment in the United States. It should be noted that these employment multipliers were calculated based on pre-pandemic costs of construction. Actual costs will vary significantly based on the type and location of construction.

HIGHWAY CONSTRUCTION PROJECT COST SCENARIOS

There are two construction scenarios provided in Chapter 6: Project Costs and Funding Sources. Scenario 1 includes Corridor improvements with a total cost of $219.3 million, and Scenario 2 includes Corridor improvements with a total cost of $1,348.8 billion.

For purposes of determining employment impacts, Scenario 2 will be assumed, which brings the length of the Corridor from the New Mexico/Texas border to the Interstate 25 interchange at Raton up to Interstate Highway standards. Direct annual construction jobs range between 3,642 and 6,429, depending on the cost scenarios, and indirect supplier and induced jobs range between 6,680 and 12,741 during an estimated construction period of 18 months. These estimates assume 100% contract labor (i.e. not including NMDOT employment) and are based on updated construction multipliers for highway construction. These estimates are presented as a range due to the fact that the Corridor in its current condition may not require as intensive level of improvement and as extensive employment.

The direct and indirect employment impacts of improvements to the Corridor during the construction phase are presented in three scenarios: baseline, optimistic, and pessimistic. The baseline scenario is the estimate based upon the Cost Scenarios 1 and 2 as presented in Chapter 6 “Project Costs and Funding Sources”. The pessimistic scenario is the baseline cost scenario, minus 30%. The optimistic scenario

is the baseline scenario, plus 30%. The projections are used to provide a range of costs. As such, the construction schedule may be phased, depending on the availability of funding.

The two Corridor improvement scenarios analyzed are identified in Chapter 6: Project Costs and Funding Sources:

- Cost Scenario 1: Rehabilitate the Corridor and construct a truck bypass around Clayton, New Mexico with "Bypass Option 3". Total Construction Phase Cost: $219,348,000.

  Cost Scenario 1 assumes that 30% of the existing pavement on US 87/64 would need to be rehabilitated with a new asphalt overlay and 10% would need to be reconstructed. No improvements are assumed to be required for the Interstate 25 segment. The truck bypass route around Clayton and a new railroad overpass would be constructed to US Highway standards.

TABLE 4.5: COST SCENARIO 1 - 100% CONTRACT LABOR EMPLOYMENT OVER 12 MONTHS

Annualized Cost	Direct Jobs	Supplier Jobs	Induced Jobs	Total Indirect Jobs
Baseline Scenario				
$219,348,000	1,206	1,053	1,338	2,391
Optimistic Scenario (Baseline Scenario +30% of Baseline Costs)				
$285,152,400	1,568	1,369	1,739	3,108
Pessimistic Scenario (Baseline Scenario -30% of Baseline Costs)				
$153,543,600	844	737	937	1,674

- Cost Scenario 2: Convert the US 64 and US 87 portions of the Corridor from a US Highway to an Interstate Highway and construct a truck bypass around the Town of Clayton with "Bypass Option 3". Total Construction Phase Cost: $1,348,845,000 over 18 months.

  Cost Scenario 2 assumes that the entire Ports-to-Plains Corridor would be converted to an Interstate Highway and no improvements would be required to Interstate 25. Existing rights-of-way would be expanded, speed limits would increase, and frontage roads and new interchanges would be constructed. Additionally, the truck bypass around Clayton would need to be constructed to Interstate Highway standards.

TABLE 4.6: COST SCENARIO 2 - 100% CONTRACT LABOR EMPLOYMENT OVER 12 MONTHS

Annualized Cost	Direct Jobs	Supplier Jobs	Induced Jobs	Total Indirect Jobs
Baseline Scenario				
$899,140,077	4,945	4,316	5,485	9,801
Optimistic Scenario (Baseline Scenario +30% of Baseline Costs)				
$1,168,882,100	6,429	5,611	7,130	12,741
Pessimistic Scenario (Baseline Scenario -30% of Baseline Costs)				
$629,398,054	3,462	3,021	3,839	6,860

To the extent existing state employees are utilized in the construction phase of the Corridor improvement, it will somewhat diminish the estimated "direct employment impacts" of the scenarios presented. While including NMDOT staff on the Corridor improvement project may lower the projected increase in direct employment impacts of the two projected scenarios, it will likely not impact the indirect employment effects as the construction workers will likely frequent retail dining establishments and possibly to a lesser extent, lodging accommodations.

4.4 POST-CONSTRUCTION: INDUSTRIES with POTENTIAL for POSITIVE EMPLOYMENT IMPACTS

The designation of US 87/64 as an Interstate Highway will create long-term economic development impacts for the Ports-to-Plains Corridor, including employment opportunities in northeast New Mexico. Specific projects will depend on regional and national market conditions and entrepreneurial initiative by individual employers. For the purposes of this analysis, it is assumed that certain types of projects would typically be attracted to an Interstate Highway location. It is also assumed that certain economic development projects planned or likely in the area would be accelerated or enhanced by Interstate Highway designation. These include traveler services such as lodging and truck stops, manufacturing facilities at the Clayton Business Park, distribution center facilities at the Raton Industrial Park, impacts to renewable energy (wind and solar generation), retail restaurant establishments, and impacts for tourism and agriculture.

TOURISM IMPACTS

According to the New Mexico Tourism Department's *Northeast Region Visitor Research Study*, there were 5.7 million visitors to northeast New Mexico in 2019. This study analyzed the overall number of visitors to the region, and specifically to Clayton Lake State Park and Dinosaur Trackways, Sugarite Canyon State Park, and Capulin Volcano National Monument, which account for 258,445 visitors of the total in 2019. Utilizing the projected traffic increase of 1% per year as identified in Chapter 5: Transportation Impacts, Table 4.8 provides the 2019 baseline of regional tourism-related employment and projections in five year increments.

TABLE 4.7: NORTHEAST NEW MEXICO REGIONAL TOURISM

Tourism Destination	2019 Baseline	2025	2030	2035	2040
Total Visitors*	5,700,000	5,990,757	6,296,346	6,617,523	6,955,083
Clayton Lake State Park and Dinosaur Trackways	62,985	66,198	69,575	73,124	76,854
Sugarite Canyon State Park	113,843	119,650	125,753	132,168	138,910
Capulin Volcano National Monument	81,617	85,780	90,156	94,755	99,588
Other	5,435,398	5,712,658	6,004,061	6,310,328	6,632,219

**Source: New Mexico Tourism Department, NM Northeast Region 2019 Visitor Research Executive Summary.*

TABLE 4.8: JOBS AT STATE AND FEDERAL PARKS

	2019 Baseline	2025	2030	2035	2040
Parks Jobs*	113	119	125	132	138

**Estimated tourist park employees is 1 per 2,332 visitors at Capulin Volcano National Monument based on the National Park Service Visitor Spending Effects Report (2020).*

New Lodging Establishments

Lodging during the construction phase for Scenario 2 is projected to be in high demand, likely overwhelming existing lodging capacity, particularly in Clayton. Long-term demand related to tourism is also anticipated. This analysis assumes construction of a 70-unit, mid-level hotel in Clayton is assumed to occur over a 12-month construction period with the following construction costs and permanent full time employment:

- No kitchen facilities
- Construction cost on a per room basis: $80,000
- Total Construction Cost: $5,600,000
- Permanent FTE (after construction), depending on occupancy: 15-20.

Based on the assumptions presented above, the estimated construction employment impacts are as follows:

TABLE 4.9: 12-MONTH CONSTRUCTION TIME FRAME - CLAYTON MOTEL				
	Direct Jobs	Supplier Jobs	Induced Jobs	Total Indirect Jobs
Construction	30.8	26.9	34.2	61.1

New Restaurant Establishments

Traffic is expected to increase throughout the Ports-to-Plains Corridor between 2025 and 2040 at a projected rate of 1% per year. It is assumed that retail food chain establishments will increase with the designation of the Ports-to-Plains Corridor. The projected increase in traffic is likely to encourage the development of fast food restaurants near the planned truck stop on US 87/64 and Beech Road and other locations within Clayton and Raton. Industry patterns of past highway improvements nationally suggest that several retail/drive through establishments will contemplate locating in close proximity to one another in high traffic areas. As traffic increases along the Corridor, and as the truck stops are "magnets" for all travelers stopping for fuel, food, and services, the likelihood of additional economic development around these truck stops and in Clayton and Raton is highly probable.

For this analysis, four new restaurants in Clayton and five new restaurants in Raton are assumed from 2025 and 2030. An additional two restaurants are assumed to be constructed from 2031 through 2040 in each community. Assuming an average construction cost of $1.2 million, the direct and indirect jobs associated with new retail franchise construction employment are shown in Table 4.10. A full-service sit-down restaurant can cost from $750,000 to $3 million or more to construct. Assuming approximately 15 FTEs at each restaurant, long-term employment is shown in Table 4.11.

TABLE 4.10: NEW RETAIL FRANCHISE CONSTRUCTION EMPLOYMENT					
Year	Construction Cost	Direct Jobs	Supplier Jobs	Induced Jobs	Total Indirect Jobs
2025	$3,600,000	19.80	17.28	21.96	39.24
2027	$2,400,000	13.20	11.52	14.64	26.16
2029	$2,400,000	13.20	11.52	14.64	26.16
2030	$2,400,000	13.20	11.52	14.64	26.16
2035	$2,400,000	13.20	11.52	14.64	26.16
2040	$2,400,000	13.20	11.52	14.64	26.16

Source: Economic Policy Institute, Bureau of Labor Statistics and Bureau of Economic Analysis GDP-by Industry Accounts.

TABLE 4.11: NEW RETAIL FRANCHISE EMPLOYMENT		
Year	Industry Group	Cumulative Full Time Employment
2025	Retail Restaurant	45
2027	Retail Restaurant	75
2029	Retail Restaurant	105
2030	Retail Restaurant	135
2035	Retail Restaurant	165
2040	Retail Restaurant	195

Source: Economic Policy Institute, Bureau of Labor Statistics and Bureau of Economic Analysis GDP-by Industry Accounts.

AGRICULTURE EMPLOYMENT IMPACTS

The designation of US 87/64 as an Interstate Highway, and subsequent related improvements, will most directly impact agriculture by improving operating conditions and efficiency, and assisting with retention and expansion of existing employers. As noted in Section 4.5, there are opportunities to enhance agricultural marketing efforts regionally and to broader markets. Enhancing transportation reliability, and reducing costs of shipping supplies, crops, and animals, will directly impact profitability of agricultural operations. Agriculture, like many industries, is increasingly relying on just-in-time supply chains based on the Interstate Highway system.

The Interstate Highway designation would support new value-added agricultural processing opportunities in northeast New Mexico. Marijuana production and retail sales is a new market for New Mexico, offering new employment and income opportunities *(see discussion later in this section regarding grow facilities in Clayton Business Park).* Industrial hemp, a related crop, is an already established commodity in Union County with similar opportunities to add value between production and retail markets. Other value-added opportunities, such as farmers' markets and artisan products, would also benefit from increased visitor traffic along the Corridor.

Cattle production is a major industry in the region and along the entire Port-to-Plains Corridor. Improvement to the Interstate Highway standard would in turn improve the market access to feedlots and processing facilities in adjacent states, but also could encourage expansion of local feedlots and attract new meat packing plants to the region. The High Plains Processing project on Interstate 25 in Las Vegas, New Mexico, is an example of this type of project. With the support from a New Mexico Economic Development Department LEDA grant, the Colorado cattle company announced a $1.6 million investment in April 2020 to refurbish a vacant facility for meat processing and will employ 20 employees. Proximity to the Interstate Highway was specifically cited for the location decision. A similar project developed in the region by 2030 would create approximately 9 direct construction jobs and 17 indirect jobs.

TABLE 4.12: MEAT PROCESSING FACILITY CONSTRUCTION

Year	Cost	Direct Jobs	Supplier Jobs	Induced Jobs	Total Indirect Jobs
Construction Jobs	$1,600,000	8.8	7.7	9.8	17.4

Source: Economic Policy Institute, Bureau of Labor Statistics and Bureau of Economic Analysis GDP-by Industry Accounts

RENEWABLE ENERGY EMPLOYMENT IMPACTS

Wind

As previously mentioned, Union County has some of the highest potential wind resources in New Mexico. Two wind energy generation projects are currently planned in the region; the 50,000-acre Triangle Gallegos Wind Farm and the 16,000-acre Gladstone Wind Farm. The Union County Comprehensive Plan identified additional future project sites appropriate for wind energy generation totaling 27,476 acres (5,760 located south of Des Moines, 11,848 acres in central Union County, and 9,868 acres near Amistad). As such, there is a strong potential for manufacturing of wind generation equipment that could be accommodated in Clayton Business Park *(see discussion of wind generation manufacturing at Clayton Business Park later in this section)*. Assuming a 5-year build-out for each project, Table 4.13 describes the cumulative number of turbines and the potential energy in megawatts (MW) that may be produced in the region.

TABLE 4.13: WIND GENERATION PROJECTED BUILD-OUT

Site	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Gladstone-Turbines	5	10	15	21	28	28	28	28	28	28
Gladstone-Megawatts	14	28	42	59	78	78	78	78	78	78
Triangle Gallegos-Turbines	57	114	171	228	285	285	285	285	285	285
Triangle Gallegos-Megawatts	100	200	300	400	500	500	500	500	500	500
Future Projects-Turbines*						68	138	207	276	345
Future Projects-Megawatts						174	353	528	704	880
Total-Turbines	**62**	**124**	**186**	**249**	**313**	**381**	**451**	**520**	**589**	**658**
Total-Megawatts	**114**	**228**	**342**	**459**	**578**	**752**	**931**	**1,106**	**1,282**	**1,458**

**Assumption for future potential projects: 8 turbines per section (640 acres); each turbine producing 2.55 MW (Megawatt) average rated capacity. Source: U.S. Office of Energy Efficiency & Renewable Energy.*

While both Colfax and Union counties have a high potential for wind and solar energy projects, there is currently a lack of transmission infrastructure to move electricity produced at planned sites to existing or new electrical grid connection. New transmission lines will be required to be constructed to connect some of the facilities. The additional cost and employment impacts of this necessary infrastructure is yet unknown at the time of this report.

One resource with regard to transmission installation was prepared by the New Mexico Economic Development Department in a 2016 report, *Economic Impact of the Lucky Corridor Project on Communities in Northern New Mexico.* According to this report, the estimated transmission line projects would generate up to 3,200 direct, indirect, and induced jobs in the area during the construction period and 137 jobs annually during the operating years.

Employment Impacts of Wind Turbine Installation

Employment impacts estimates are based on the study, *A Methodology For The Evaluation Of The Economic Impacts of Wind Energy Projects* (Mathieu A. Landry, Andre Leclerc, and Yves Gagnon). Construction employment is based on 2.25 persons per megawatt and operations and maintenance is based on 0.17 per megawatt. The build-out of the two planned wind farms over five years (2026-2030) would produce a total 578 MW by 2030. The build-out of the three future sites would occur over the following five years (2031-2035). The estimated construction and maintenance employment is shown in Table 4.14.

TABLE 4.14: WIND GENERATION EMPLOYMENT										
Site	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Gladstone-Construction	32	32	32	38	43					
Gladstone-Maintenance	2	5	7	10	13	13	13	13	13	13
Triangle Gallegos-Construction	225	225	225	225	225					
Triangle Gallegos-Maintenance	17	34	51	68	85	85	85	85	85	85
Future Projects-Construction						392	403	394	396	396
Future Projects-Maintenance						30	60	90	120	150
Total-Construction	**257**	**257**	**257**	**263**	**268**	**392**	**403**	**394**	**396**	**396**
Total-Maintenance	**19**	**39**	**58**	**78**	**98**	**128**	**158**	**188**	**218**	**248**

Training for wind turbine installation is available at the Wind Energy Technology Program at Mesalands Community College in Tucumcari. The North American Wind Research and Training Center provides students with the opportunity to perform actual maintenance and repair on the College's General Electric 1.5-megawatt ESS turbine.

Solar

New Mexico has high potential for solar energy. Solar arrays of an industrial scale at current technological capacity require significant land space, which is readily available in northeast New Mexico. As referenced in the Union County Comprehensive Plan, the vast availability of land in Union County could be utilized for renewable energy facilities, including large-scale solar facilities. Installation of solar facilities would have positive economic impacts for Union County.

Based on information provided by Public Service Company of New Mexico Resources (PNMR), a typical industrial scale solar array project is 50 MW, with 1 MW per 7 acres for single axis trackers. Assuming a 350-acre solar array with a cost of $49 million to $69 million, the midpoint cost would be $60 million. Table 4.15 provides the construction employment including 100 direct jobs and 197 indirect jobs. The time frame for construction would be 12 months. The number of permanent FTE for continued site maintenance is approximately 2 FTE for a 50 MW project, as shown in Table 4.16.

TABLE 4.15: SOLAR ENERGY CONSTRUCTION EMPLOYMENT				
	Direct Jobs	**Supplier Jobs**	**Induced Jobs**	**Total Indirect Jobs**
Union County	100	87	110	197

Source: Public Service Company of New Mexico Resources (PNMR); Economic Policy Institute, Bureau of Labor Statistics and Bureau of Economic Analysis GDP-by Industry Accounts.

TABLE 4.16: SOLAR ENERGY EMPLOYMENT				
	2025	**2030**	**2035**	**2040**
Maintenance FTE	2	2	2	2

CLAYTON BUSINESS PARK

The projected development of the 512-acre Clayton Business Park along US 87 and Dr. Michael Jenkins Road is anticipated over the time period of 2025 to 2040. Wind generation manufacturing facilities would be a suitable enterprise for this facility. The Town of Clayton has identified its preference to allocate half the Business Park acreage to wind generation manufacturing use and temporary site storage of large wind turbine blades, and the other half for an indoor marijuana grow facility for both medical and recreational

consumption. Corridor improvements are assumed to accelerate development of the Clayton Business Park.

As described in the Clayton Comprehensive Plan, the intent of the Clayton Business Park was to draw businesses that would benefit from its proximity along the Ports-to-Plains Corridor. Sewer, water, and electric lines were extended to the site. The timing of site improvements to the Ports-to-Plains Corridor up to Interstate Highway standards will likely accelerate the development of building construction at Clayton Business Park. This will expedite employment and revenue generation from taxation for the local community.



New billboard being installed along US 87/64 at Dr. Michael Jenkins Road.

Marijuana - Value-Added Agriculture

Assuming 256 acres devoted to marijuana manufacturing, and using a 0.85 Floor Area Ratio (FAR), total buildable area results in 217.6 acres or approximately 9.4 million square feet for this use. The assumptions are that 30% of grow facilities (2,848,596 SF) will be constructed during the period from 2025 to 2030. The remaining 70% of building facilities (6,635,050 SF) is assumed to be built during the 2031 to 2040 time period. Table 4.17 shows the average annual construction from 2025 to 2030 to include 117.5 direct jobs and 232.87 indirect jobs. By 2031, these jobs grow to 164.22 direct jobs and 232.87 total indirect jobs.

TABLE 4.17: CONSTRUCTION MARIJUANA GROW FACILITIES - CLAYTON BUSINESS PARK

Year	Square Footage	Cost @ $45/SF	Direct Jobs	Supplier Jobs	Induced Jobs	Total Indirect Jobs
2025	474,766	$21,364,470	117.50	102.55	130.32	232.87
2026	474,766	$21,364,470	117.50	102.55	130.32	232.87
2027	474,766	$21,364,470	117.50	102.55	130.32	232.87
2028	474,766	$21,364,470	117.50	102.55	130.32	232.87
2029	474,766	$21,364,470	117.50	102.55	130.32	232.87
2030	474,766	$21,364,470	117.50	102.55	130.32	232.87
2031	663,505	$29,857,725	164.22	143.32	182.13	325.45
2032	663,505	$29,857,725	164.22	143.32	182.13	325.45
2033	663,505	$29,857,725	164.22	143.32	182.13	325.45
2034	663,505	$29,857,725	164.22	143.32	182.13	325.45
2035	663,505	$29,857,725	164.22	143.32	182.13	325.45
2036	663,505	$29,857,725	164.22	143.32	182.13	325.45
2037	663,505	$29,857,725	164.22	143.32	182.13	325.45
2038	663,505	$29,857,725	164.22	143.32	182.13	325.45
2039	663,505	$29,857,725	164.22	143.32	182.13	325.45
2040	663,505	$29,857,725	164.22	143.32	182.13	325.45
Total	**9,483,646**	**426,764,070**	**2,347**	**2,048**	**2,603**	**4,652**

Source: Economic Policy Institute, Bureau of Labor Statistics and Bureau of Economic Analysis, GDP-by Industry Accounts

The average cost to build a basic warehouse is assumed to be approximately $45 per square foot. Additional cost may be required due to rural construction and transportation costs of materials to the site. It also does not include land costs or extension of utilities. For this analysis, a cost of $45/square foot is assumed for the construction of space needed at the Clayton Business Park site for both marijuana grow facilities as well as wind generation manufacturing. Construction costs have fluctuated rapidly during the COVID pandemic and will vary with site conditions and building specifications.

Based on research of employment at marijuana grow facilities, a reasonable assumption is one FTE per 4,000 square feet of building space. Full build-out would create the opportunity for up to approximately 2,379 jobs in the future. The FTE for grow operations is indicated in Table 4.18.

TABLE 4.18: MARIJUANA GROW MANUFACTURING PERMANENT EMPLOYMENT

Employment	2025	2030	2035	2040
Marijuana Grow Operations - Permanent FTE	118	712	1,422	2,379

Assumption: 1 person per 4,000 square feet of grow space.

Wind Generation Manufacturing

Using the Vestas Pueblo Tower Factory located in Pueblo, Colorado as a model, a manufacturing facility on 256 acres could include 200,000 square feet of facilities and associated outdoor storage. Table 4.19 shows build-out occurring between 2025 and 2040. It is assumed that this facility would create one renewable energy employee per 1,000 square feet of manufacturing space. The estimated time frame for total employment for wind generation related manufacturing at the Clayton Business Park would occur between 2025 and 2040. As shown in Table 4.20, the projections assume employment would be added at a steady pace of about 50 jobs for every five year increment with a total of 200 FTEs at build-out.

TABLE 4.19: WIND GENERATION FACILITY CONSTRUCTION - CLAYTON BUSINESS PARK

Year	Square Footage	Cost @ $45/SF	Direct Jobs	Supplier Jobs	Induced Jobs	Total Indirect Jobs
2025	50,000	$2,250,000	12.38	10.80	13.73	24.53
2030	50,000	$2,250,000	12.38	10.80	13.73	24.53
2035	50,000	$2,250,000	12.38	10.80	13.73	24.53
2040	50,000	$2,250,000	12.38	10.80	13.73	24.53

Source: Economic Policy Institute, Bureau of Labor Statistics and Bureau of Economic Analysis, GDP-by Industry Accounts

TABLE 4.20: WIND GENERATION MANUFACTURING EMPLOYMENT

Employment	2025	2030	2035	2040
Wind Generation Employment	50	100	150	200

RATON INDUSTRIAL PARK / DISTRIBUTION CENTER

The Future Land Use Scenario contained in the City of Raton Comprehensive Plan identified an area for commercial and industrial development near Interstate 25 and US 64, which would be suitable for a distribution center. As such, the assumption is for the construction of a 200,000-square foot distribution center (one or more buildings) between 2025 and 2040, with approximately 50,000 square feet per five year increment. Assuming a construction cost of $45 per square foot (not including land costs or infrastructure extensions), the total construction cost for warehouse space is estimated to be $9,000,000. Construction of this facility is expected to generate approximately 12 direct jobs and 25 indirect jobs for each five year increment from 2025 to 2040. At build-out, it is assumed one FTE per 1,000 square feet for a total of 200 jobs.

TABLE 4.21: DISTRIBUTION CENTER CONSTRUCTION - RATON						
Year	Square Footage	Cost @ $45/SF	Direct Jobs	Supplier Jobs	Induced Jobs	Total Indirect Jobs
2025	50,000	$2,250,000	12.38	10.80	13.73	24.53
2030	50,000	$2,250,000	12.38	10.80	13.73	24.53
2035	50,000	$2,250,000	12.38	10.80	13.73	24.53
2040	50,000	$2,250,000	12.38	10.80	13.73	24.53
Total	**200,000**	**$9,000,000**	**49.5**	**43.2**	**54.9**	**98.1**

Source: Economic Policy Institute, Bureau of Labor Statistics and Bureau of Economic Analysis GDP-by Industry Accounts

TRUCK STOPS IN CLAYTON and RATON

A new truck stop is currently in the beginning stages of construction at US 87 and Beech Street in Clayton. This construction is considered "baseline" and not contingent on improvements to the Corridor as it is already permitted and under construction. The construction-related jobs associated with the truck stop are also not considered "added" effects resulting from potential Interstate Highway designation. However, the truck stop is needed due to the current overflow of customers at the Love's Travel Stop in Downtown Clayton. For Raton, a truck stop is assumed for the area near the interchange of US 87/64 and Interstate 25.

It is estimated that the cost of building a well-fitted truck stop will be around $2.0 to $4.5 million with the following typical amenities:

- Convenience store with Gas Station: $600,000–$1,000,000
- Restaurant: $420,000–$940,000
- Mechanic/Service Station: $115,000–$320,000
- Weigh Station: $74,000 – $152,000
- Parking: $800,000–$1,400,000

For this analysis, a midpoint construction cost estimate of $3.25 million is projected for both the Clayton and Raton area truck stops. It is projected from local authority interviews that demand from increased traffic will create the need for a new truck stop near Raton in 2025. It is estimated both the Clayton and Raton truck stops each will employ 40-50 full time employees at build-out.

TABLE 4.22: 12-MONTH CONSTRUCTION TIME FRAME BEGINNING IN 2025 - RATON				
	Direct Jobs	Supplier Jobs	Induced Jobs	Total Indirect Jobs
Construction	17.9	15.6	19.8	35.4

4.5 INDUSTRY EXPERT and LOCAL GOVERNMENT INTERVIEWS

TOURISM INDUSTRY

Interviews regarding the tourism industry in northeast New Mexico highlighted the potential for growth and state and local goals to increase tourism in the region. Axie Navas (Director, Outdoor Recreation Division of the New Mexico Economic Development Department) noted that regardless of improvements from the designation, northeast New Mexico is a priority area for increasing outdoor recreation. Interviewees working at local tourist attractions and local government officials in Union and Colfax counties cited the frequency of shorter stay visitors to the region and the benefit of increasing the length of these stays on the tourism economy. Overall, the interviewees indicated that increased traffic from an Interstate Highway designation would help bring additional vehicular travelers and could be beneficial in goals to establish northeast New Mexico as a tourist destination, rather than just a stop along the way.



Visitors Center at Clayton Lake State Park and Dinosaur Trackways.

Key Interview Takeaways - Tourism Industry

Direct Impacts

Increased traffic resulting from the designation of the Ports-to-Plains Corridor as an Interstate Highway may increase the noise level at Capulin Volcano National Monument; however, interviewees felt this issue could be mitigated.

- The Interstate Highway designation will help with tourism marketing for the region at the state level, specifically for outdoor recreation initiatives.
- The designation will also help with tourism marketing for the region at the local level, with one local official from Raton expressing the ability to market destinations in Colfax County outside the state in locales like Oklahoma, the Southeast, and the Midwest.
- Increased attention on the Corridor may help raise the awareness of northeast New Mexico as a tourism destination.
- The recent legalization of marijuana in New Mexico, the anticipation of Clayton Business Park becoming a growing facility, and Clayton's anticipated allowance for recreation marijuana retail establishments, will attract additional tourists that would otherwise be going to Colorado.

Indirect Impacts

- If traffic increases along the Corridor, Kiowa National Grasslands would consider installation of an additional campground closer to the Corridor. The closest campground currently is approximately 15 miles off US Highway 87/64.
- If passenger vehicle traffic increases along the Corridor, it is anticipated that tourist destinations will experience an increase in visitors.
- Increased awareness of the region may encourage longer stays by visitors instead of just passing through or staying for a single night.

Overall Tourism Industry Considerations

- The northeast region is a priority for the New Mexico Outdoor Recreation Division.
- Tourism is currently generated primarily by short-term overnight stays in the area by visitors passing through to other destinations in New Mexico and Colorado. Many of these tourists are coming from Texas.
- The US 87/64 Corridor through New Mexico to Colorado is a primary route for tourism traffic. It is anticipated that an Interstate Highway designation will help generate additional tourism traffic.
- Sugarite Canyon State Park has seen a marked increase in tourism the past few years, which is expected to increase with the recent acquisition of parkland by the state in Colorado. This acquisition will combine Sugarite Canyon with the new Fishers Peak State Park to form almost 40,000 contiguous acres of state parkland.
- The Raton Interstate 25 hub experiences significant traffic from Texas to Colorado, with visitors stopping at local tourist destinations, such as Sugarite Canyon State Park.
- The McDonald's in Raton along Interstate 25 is one of the busiest locations for the fast food chain in the United States. It was recently renovated to serve its large customer base.

AGRICULTURE INDUSTRY

Interviews regarding the agriculture industry focused on the opportunities that would be created by the Interstate Highway designation. Multiple interviewees noted the benefit of opening additional feedlots in the area and the importance of connectivity to regional import and export markets for agricultural commodities. However, some agriculture industry professionals were unsure what the direct benefits would be for the region, noting the designation could have a more pronounced effect on destinations outside the region.

Key Interview Takeaways - Agriculture Industry

Direct Impacts

- The Interstate Highway designation creates an opportunity to enhance agricultural marketing efforts for northeast New Mexico, both regionally and to broader markets.
- The ability to move products locally may be affected depending on decisions about highway access and local infrastructure changes.
- A reduction of travel times due to higher Interstate Highway speed limits or other benefits to make driving the route quicker would make it easier to move agricultural products, creating benefits for the logistics of livestock management.
- Value-added agricultural products, like industrial hemp and marijuana, will help diversify the agricultural economy in the region.

Indirect Impacts

If traffic increases along the route due to the designation, it creates an opportunity to market New Mexico products via signage along the route.

- If the designation helps the local economy in the short term, this may make the area more attractive for long term agricultural investment.
- Increased development from the designation could help reopen feedlots and attract meat packing plants, both of which would help expand the capacity of existing industry in the region.

Overall Agriculture Industry Considerations

- Most of the agricultural industry activity in the area occurs based on long standing relationships with US Highway 87/64 users who are already heavily reliant on the route.

- Much of the agricultural commodity exchange occurs from nearby states like Colorado, Oklahoma, Nebraska, and Texas.
- There are existing routes for agricultural imports/exports that use New Mexico's border crossings with Mexico and not the Ports-to-Plains route.

ENERGY INDUSTRY

Conversations regarding the Ports-to-Plains route through northeast New Mexico and its ramifications on the energy industry centered primarily on the long term potential for renewable energy in the region and the physical infrastructure considerations necessary to ensure the route remains accessible for energy creation and transmission. Both public and private industry professionals cited renewable energy transmission infrastructure as the most important energy priority for the region. All parties interviewed outlined the same potential effects of an Interstate Highway designation, and highlighted that anything resulting from the designation that makes it easier to put in renewable energy infrastructure or enhances the economy of the local area would be positive for the renewable energy industry.

Key Interview Takeaways - Energy Industry

Direct Impacts

- An opportunity to ensure the Right-of-Way permitting process is streamlined, removing barriers to creating necessary transmission infrastructure for renewable energy.
- The designation could be used for marketing strategies, particularly to attract larger out of state energy companies that prioritize locating near Interstate Highways.
- Changes in road infrastructure could affect the ability to transport components for wind and solar energy. Additionally, having a highway that has the capacity to handle large components for the renewable energy industry would be highly beneficial for the region as there are few highways in the United States that have the capacity for large components.

Indirect Impacts

- Long term investment in the area sparked by the Interstate Highway designation could be beneficial in attracting more energy companies to the region.
- Right-of-Way permitting that promotes the creation of transmission infrastructure can help attract companies able to place needed transmission infrastructure along the route, and subsequently help bring in new renewable energy companies to use that infrastructure.
- If the designation brings in more renewable energy companies, it creates the potential for local landowners to lease their property to these companies for the installation of transmission or energy creation infrastructure.

Overall Energy Industry Considerations

- The renewable energy industry in northeast New Mexico is still in its relative infancy—improvements to the region will help the development of this industry long term.
- Establishment of transmission infrastructure and ensuring a robust, well connected local economy will help attract additional renewable energy investment in the area.
- Any improvements made to the roadway, Right-of-Way permitting process, and benefits to the local economy will help the energy industry by making the region more attractive to new renewable energy companies seeking to locate in areas like northeast New Mexico.
- Lucky Corridor, LLC. was purchased in 2020 by an out of state energy company with the financial and technical means necessary to advance the infrastructure plan created by the original founds of Lucky Corridor.

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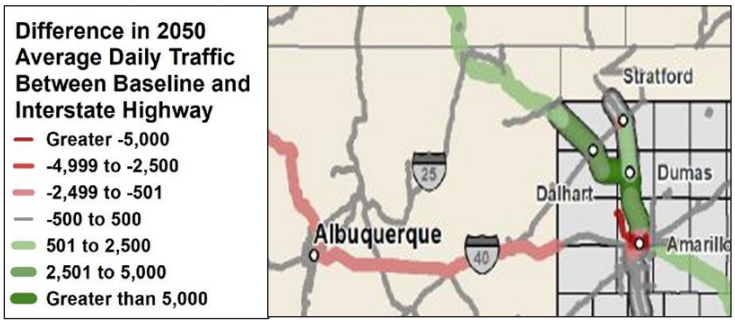
CHAPTER 5:
Transportation Impacts

5.1 INTRODUCTION

The Ports-to-Plains Corridor has been examined to identify potential transportation impacts along the route and their effects on existing freight movement trends. Projections indicate a significant increase in daily passenger and truck traffic that could create opportunities for advancement in the freight sector. Current freight trends have been highlighted to contextualize these projections and provide insight on future freight development in northeast New Mexico.

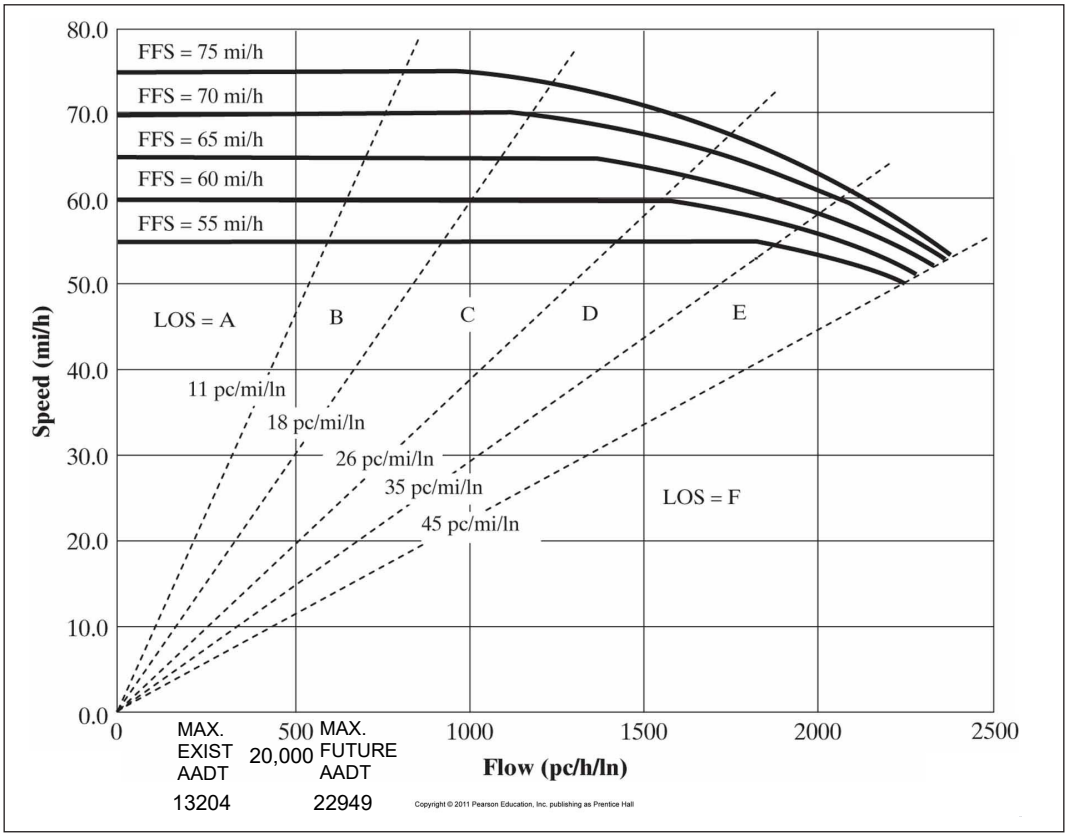
5.2 TRAFFIC CONGESTION

The New Mexico Ports-to-Plains Corridor was analyzed to determine existing conditions and current traffic data, including Annual Average Daily Traffic (AADT), Annual Average Daily Truck Traffic (ADTT), future (30 years) AADT and AADTT, and current and future crash data. Data sources include the New Mexico Department of Transportation (NMDOT), National Highway Traffic Safety Administration, TRIP (A National Transportation Research Nonprofit), Texas Department of Transportation (TxDOT), and the TxDOT's Ports-to-Plains Corridor Interstate Feasibility Study for Segment 1. The Interstate 25 and US Highway 87/64 sections of the Corridor were divided into nine segments according to roadway type, population density, or segments between towns or major intersections *(see Study Corridor Segments map, next page)*.

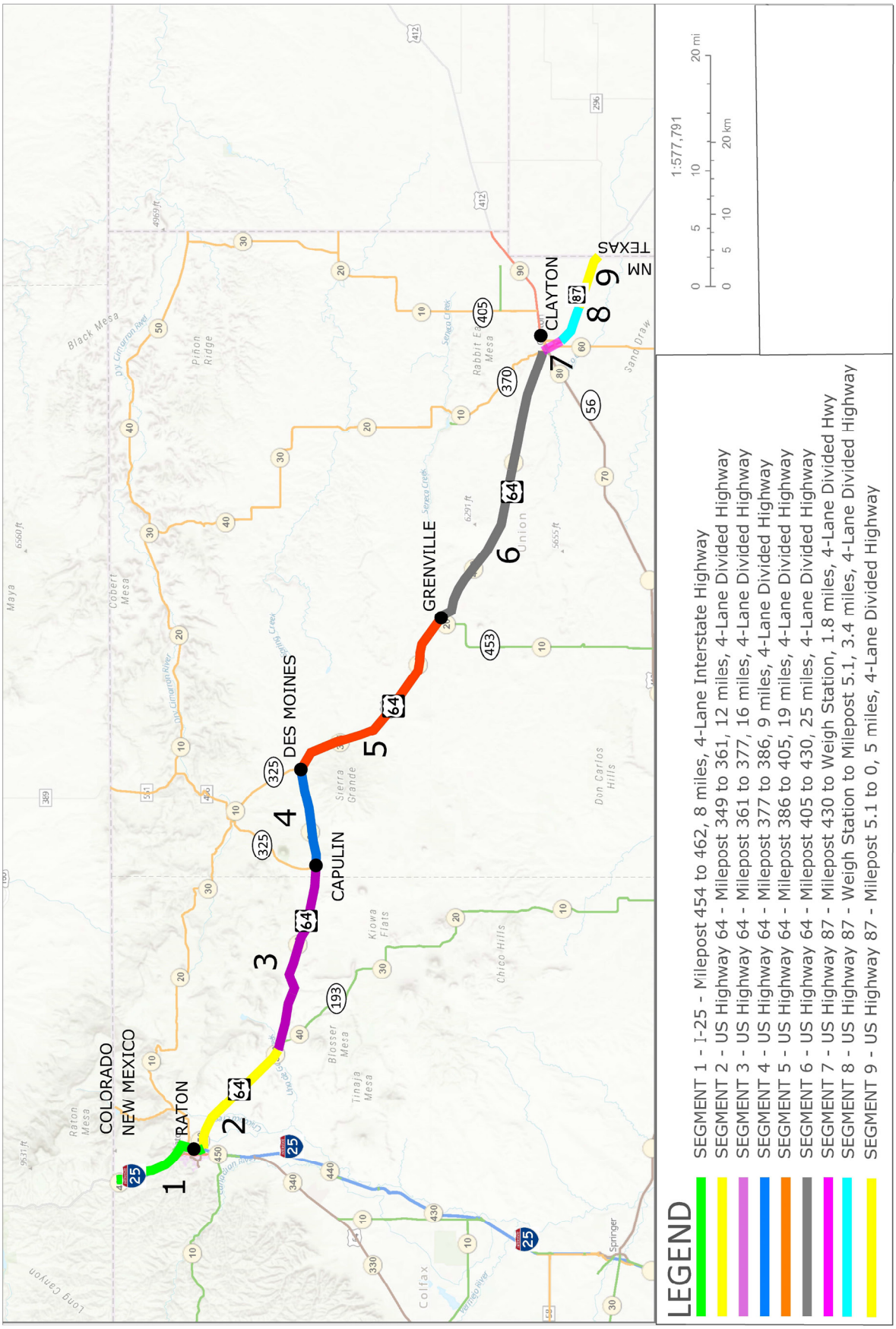


Source: Texas DOT.

LOS ESTIMATE: FREEWAYS

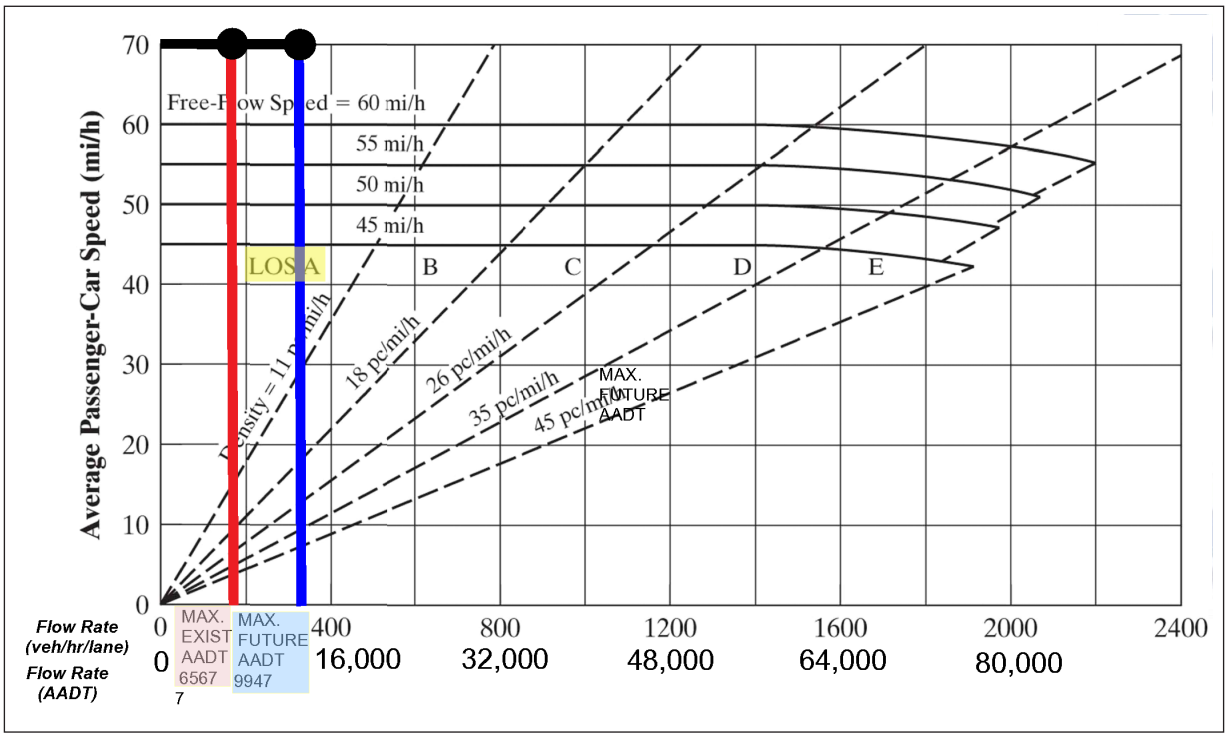


Source: The University of Memphis



STUDY CORRIDOR SEGMENTS

LOS ESTIMATE: MULTI-LANE HIGHWAYS



Source: The University of Memphis

The Level of Service (LOS) for each segment was determined using the graphs for multi-lane highways and Interstate Highways. The existing LOS is A for all segments for existing and future traffic volumes.

The maximum existing AADT for the US 87/64 section of the Corridor is 7,884 AADT and the maximum future without the interstate upgrade (2050) AADT is 9,947. These maximum values occur in Segment 7 on US 87 near the weigh station. The maximum existing AADT for the Corridor assuming the entire Corridor is upgraded to an interstate is 13,204 AADT and the maximum future (2050) AADT is 22,949. These maximum values occur in the Interstate 25 portion of the Corridor.



Photo of the Ports-to-Plains Corridor.

TABLE 5.1: TOTAL AADT and TRUCK AADT - WITHOUT INTERSTATE					
	AADT (Existing)	TRUCK AADT (Existing)	Growth	AADT (w/o Interstate)	TRUCK AADT (w/o Interstate)
Corridor Segments	**2019**	**2017**	**(%)**	**2050**	**2050**
SEGMENT 1 (I-25)					
I-25	10,704	3,433	1.8%	18,609	6,164
SEGMENT 2 (US-64)					
US-64	3,697	269	1.0%	5,033	366
SEGMENT 3 (US-64)					
US-64	4,812	668	1.0%	6,551	909
SEGMENT 4 (US-64)					
US-64	2,951	962	1.0%	4,017	1,310
SEGMENT 5 (US-64)					
US-64	4,857	962	1.0%	6,612	1,310
SEGMENT 6 (US-64)					
US-64	2,981	675	1.0%	4,058	919
SEGMENT 7 (US-87)					
US-64/87	6,567	1,487	2.0%	7,329	1,566
SEGMENT 8 (US-87)					
US-87	5,384	1,150	2.0%	9,947	2,125
SEGMENT 9 (US-87)					
US-87-P	5,356	1,341	2.0%	9,896	2,478

TABLE 5.2: TOTAL AADT and TRUCK AADT - WITH INTERSTATE					
	AADT (w/ Interstate)	TRUCK AADT (w/ Interstate)	Growth	AADT (w/ Interstate)	TRUCK AADT (w/ Upgrade to Interstate)
Corridor Segments	**2019**	**2017**	**(%)**	**2050**	**2050**
SEGMENT 1 (I-25)					
I-25	13,204	4,234	1.8%	22,949	7,612
SEGMENT 2 (US-64)					
US-64	6,197	451	1.0%	8,436	626
SEGMENT 3 (US-64)					
US-64	7,312	1,015	1.0%	9,954	1,410
SEGMENT 4 (US-64)					
US-64	5,451	1,777	1.0%	7,421	2,468
SEGMENT 5 (US-64)					
US-64	7,357	1,457	1.0%	10,015	2,024
SEGMENT 6 (US-64)					
US-64	5,481	1,241	1%	7,461	1,723
SEGMENT 7 (US-87)					
US-64/87	7,884	1,684	2%	10,733	2,339
SEGMENT 8 (US-87)					
US-87	7,884	1,684	2.0%	14,566	3,237
SEGMENT 9 (US-87)					
US-87-P	7,856	1,967	1.0%	10,695	2,731

5.3 TRAFFIC SAFETY and MOBILITY

According to the Texas Department of Transportation's Ports-to-Plains Corridor Interstate Feasibility Study for Segment 1, the interstate upgrade will produce a significant traffic diversion north of Amarillo on US 87 toward Clayton, New Mexico, and Interstate 25 north of Raton and away from Interstate 40 west into New Mexico *(see Table 5.1 on page 70)*. No significant impact is expected to the Interstate 25 corridor south of Raton.

The maximum increase in future (2050) AADT on the New Mexico Ports-to-Plains Corridor by converting the roadway from a US Highway to an Interstate is 2,500 AADT as shown in the diagram. Conversely, the maximum decrease in future AADT to Interstate 40 in New Mexico is 2500 AADT. The increase in AADT along the Ports-to-Plains Corridor was included in the calculations for AADT for the Interstate scenario in Table 5.2 on page 71.

CRASH RATES

New Mexico Transportation by the Numbers, Meeting the State's Need for Safe, Smooth and Efficient Mobility (TRIP, A National Transportation Research Nonprofit, January 2020) states:

> "From 2014 to 2018, 1,853 people were killed in traffic crashes in New Mexico. In 2018, New Mexico had 1.43 traffic fatalities for every 100 million miles traveled, the tenth highest in the nation and significantly higher than the national average of 1.13. Truck- related crashes in particular reduce transportation reliability since they often involve multiple lanes, infrastructure damage, cargo spills (including hazardous materials), and injuries. These crashes can thus have a negative effect on freight movement reliability in New Mexico. Of the estimated 43,000 car wrecks that occur annually in New Mexico, approximately 1,400 of these crashes involved semi-trucks. And semi-truck accidents in New Mexico are four times more likely to result in a fatality than accidents not involving semi trucks."

Average yearly crashes were determined for each segment along the Ports-to-Plains Corridor. The average number of crashes per million vehicle miles for each segment were determined using the average yearly crashes, the AADT for each segment, and the distance of each segment. Then the average number of crashes per million vehicle miles was compared to crash rates published by the TxDOT for each road type (*see Tables 5.3 and 5.4*). Crash rates along the Corridor are mostly lower than the published crash rates except for Segment 1, Interstate 25 north of Raton, and Segment 7, east of Clayton near the weigh station. Segment 1 has a crash rate that is 54% greater than average crash rates for Interstate Highways. Weather and wild-life related crashes are common is this area. The crash rates east of Clayton are 16% higher than the published rate for highways.

TABLE 5.3: AVERAGE CRASH RATES BY HIGHWAY SYSTEM

Highway System	Traffic Crashes per 100 million vehicle miles	
	Rural	Urban
Interstate	58.10	135.95
US Highway	71.06	186.24
State Highway	91.64	220.59
Farm-to-Market	121.81	s248.85

Source: Texas DOT.

TABLE 5.4: AVERAGE CRASH RATES BY ROAD TYPE

Highway System	Traffic Crashes per 100 million vehicle miles	
	Rural	Urban
2 lane, 2 way	102.09	205.75
4 or more lanes, divided	60.43	156.59
4 or more lanes, undivided	98.43	311.47

Source: Texas DOT.

Crash rates for 2050 were determined by increasing the current crash rates proportionally to the increase in traffic volume. Table 5.5 provides a summary of the crash data for each segment of the Corridor.

TABLE 5.5: CRASH RATES BY CORRIDOR SEGMENT

	Average Yearly Crashes	Average Number of Crashes per Million Vehicle Miles	Crash Rates for Road Type (Crashes per 1M Veh. Mi)	% Greater/Less than Crash Rates for Road Type	Average Projected Crashes per Million Vehicle Miles	Projected Crashes per Million Vehicle Miles w/ 100% Interstate	% Reduction in Crashes by Converting US-Highway to Interstate
Corridor Segments	**2017- 2019**	**2017-2019**	**2018**	**%**	**2050**	**2050**	**% Reduction**
SEGMENT 1 (I-25)							
I-25	66	210	97.0	54%	350	350	0%
SEGMENT 2 (US-64)							
US-64	11	68	71.1	-5%	90	74	-18%
SEGMENT 3 (US-64)							
US-64	14	50	71.1	-42%	67	54	-18%
SEGMENT 4 (US-64)							
US-64	5	49	71.1	-44%	66	54	-18%
SEGMENT 5 (US-64)							
US-64	10	30	71.1	-140%	40	32	-18%
SEGMENT 6 (US-64)							
US-64	11	39	71.1	-83%	52	42	-18%
SEGMENT 7 (US-87)							
US-64/87	6	139	156.6	-13%	247	92	-63%
SEGMENT 8 (US-87)							
US-87	5	85	71.1	16%	151	123	-18%
SEGMENT 9 (US-87)							
US-87-P	6	60	71.1	-18%	107	88	-17%

5.4 FREIGHT MOVEMENT and TRENDS

The national and international freight transportation system is a complex network comprised of highways, railways, navigable waterways, pipelines, and the ports and intermodal hubs to support the network. This interconnected system allows transport of raw materials, intermediate goods, and finished products for all sectors of the economy. As noted in the National Freight Strategic Plan (USDOT, 2020), freight shipments nationwide are expected to increase by over 22% over the next 20 years. Trucks carry over 70% of freight by weight and 73% of freight by value, and are the primary mode for freight trips under 750 miles. Railroads carry over 9% of freight by weight and 1.4% by value, and are the primary mode for freight moved 750 to 2,000 miles. Laredo, Texas, at the Ports-to-Plains Corridor's southern border crossing, is the busiest land port in the United States, accounting for $228 billion in annual trade value.

NEW MEXICO TRANSPORTATION and FREIGHT PLANS

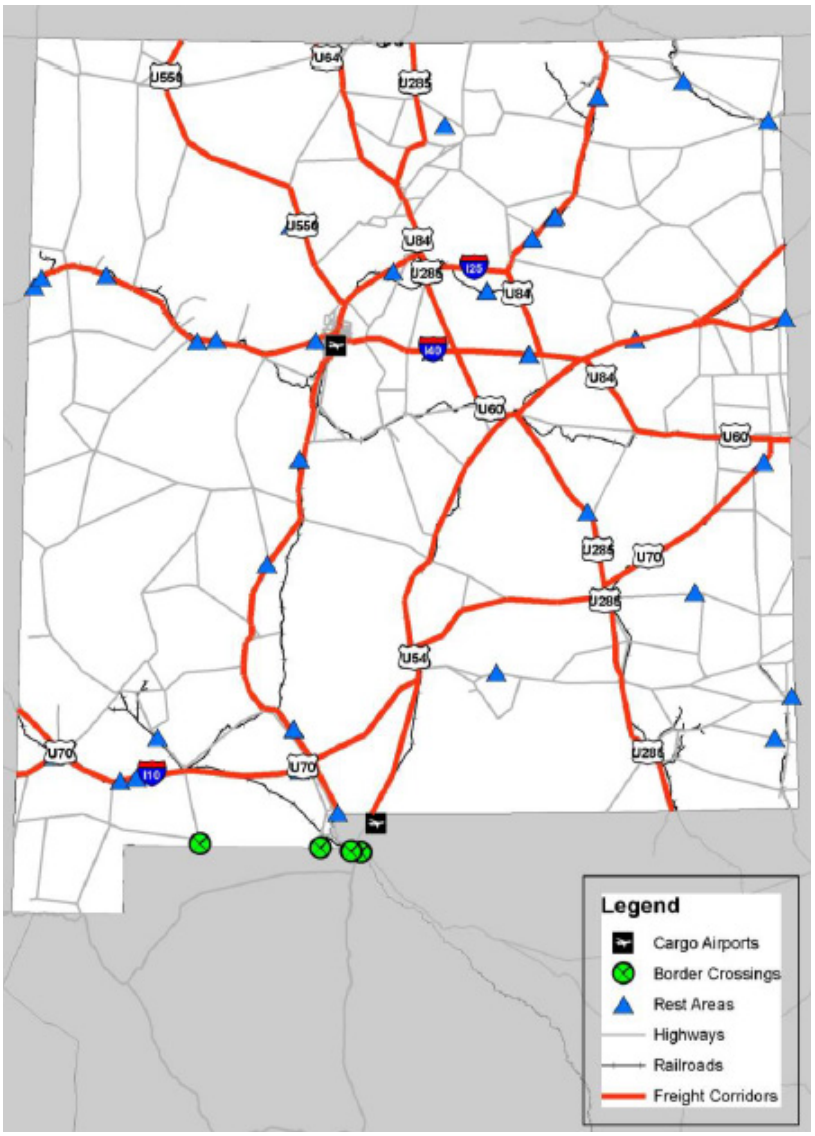
The New Mexico 2040 Plan is the statewide transportation plan, which provides a strategic framework to guide statewide transportation decision making. The Plan sets out challenges and opportunities, and goals and strategies for transportation-related infrastructure improvements. NMDOT is currently updating the New Mexico 2040 Plan. After that is completed, NMDOT will initiate public review and update of the New Mexico Freight Plan, with a focus on better coordination of New Mexico freight corridors and the overall freight

network. The Freight Plan update is expected to be completed in 2022.

The New Mexico Freight Plan: Moving Freight Forward through 2040 (NMDOT, 2015) was developed concurrently with the New Mexico 2040 Plan, with more specific analysis and focus on freight movement. The New Mexico Freight Plan described several national and international trends affecting freight transportation in New Mexico:

- Cross border trends related to trade with Mexico, and congestion in the El Paso/Ciudad Juárez region affecting New Mexico's cross-border port at Santa Teresa-Jeronimo;
- Trucking industry trends related to trucking practices and emerging technology;
- Rail industry trends related to access to transcontinental rail networks;
- Supply chain trends related to expanding trade relationships for goods produced in New Mexico and those shipped through the state; and
- Warehousing and distribution center trends relating to shifts in wholesale trade, e-commerce and transloading opportunities for New Mexico.

NEW MEXICO PRIORITY FREIGHT CORRIDORS



Source: New Mexico Freight Plan.

New Mexico's Interstate Highways are, as the New Mexico Freight Plan states, "the dominant corridor for truck traffic, both for movements originating and terminating in the state as well as those simply passing through...Interstate 25 also is expected to experience significant truck volume growth in the future, particularly between Albuquerque and Santa Fe." A large portion of the freight traffic on New Mexico's highways passes through the state, rather than having an origin or destination in New Mexico.

The New Mexico Freight Plan cites the Ports-to-Plains Corridor concept in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) as a model to facilitate the movement of goods and services through the state. The Freight Plan recommends that NMDOT designate freight corridors and build highways to handle heavy truck traffic, including investments in parallel routes to reduce truck impacts in congested corridors. An Addendum adopted in 2017 and currently under review identified a list of projects with immediate needs to facilitate federal funding of freight traffic improvements on the Interstate Highways and a limited mileage of roadways in rural and urban areas of New Mexico.

FREIGHT IN NORTHEAST NEW MEXICO

The Ports-to-Plains Corridor connects south and west Texas to Colorado and states further north. The Northeast Regional Transportation Planning Organization (RTPO) identified regional multi-modal challenges, opportunities, goals, and strategies for NMDOT in the Northeast Regional Transportation Plan (Northeast RTPO, 2015), which is currently being updated. The North Central New Mexico Economic Development District (NCNM EDD) jointly manages the Northeast RTPO, in cooperation with the Eastern Plains Council of Government (EPCOG). The Northeast RTPO coordinates with NMDOT District 4 staff to review and approve projects on the Statewide Transportation Improvement Plan (STIP). Its largest project in the region is a $20 million line item in the STIP for reconstruction of the US 87/64 Interchange at Interstate 25, Exit 451. Preliminary engineering for the project is included with $3 million in funding committed by NMDOT. This project will develop a Phase 1A/B Location Study Report to identify a preferred design alternative of the Interchange. The project will then progress to finalize the Phase 1C Environmental Documentation, Phase 1D Preliminary Design (30% plans), and Phase II Final Design.

As noted in the previous section, the maximum existing Annual Average Daily Traffic (AADT) on US 87/64 occurs in Clayton. The maximum existing Annual Average Daily Truck Traffic (AADTT) is 1,487 on the same segment *(see Table 5.1)*. AADTT is projected to increase by 2050 to a maximum of 2,478 trucks on Segment 9 of US 87 at the New Mexico-Texas border. With improvement to Interstate Highway designation, Segment 8 east of Clayton would attract the largest amount of truck traffic, projected at 3,237 AADTT *(see Table 5.2)*.

The New Mexico Motor Transportation Police (MTP) District 2 operates the Clayton Port of Entry at mile marker 8 on US 87 and the Raton Port of Entry at milepost 460 on Interstate 25. Operations include verification of commercial motor vehicle credentials, regulation of oversize/overweight loads, collection of taxes and fees, and commercial vehicle inspections. As of March 2021, the Clayton Port of Entry operates Monday through Friday, 7am-3pm. The Raton Port of Entry operates seven days a week from 6am-10pm. The NMDOT is planning reconstruction of the Raton Port of Entry with a budget of $1.5 million.

The north-south international trade between Canada, the United States, and Mexico is the primary use of by the Ports-to-Plains Corridor. The Denver, Oklahoma City, and Dallas Fort-Worth metropolitan areas are the largest urban areas nearest to northeast New Mexico, as identified in the *Freight-Related Economic Development Opportunity Study* (Bohannan Huston, 2016). While the greatest truck traffic in New Mexico occurs on Interstates 10 and 40, there are significant origins and destinations of truck traffic on Interstate 25 to and from these cities. There are opportunities to provide better service to freight users as well as to the transportation industry on all freight routes. For example, full service truck stops provide a safe place for long-haul drivers to rest, maintain vehicles, and re-fuel.

As noted in Chapter 2, northeast New Mexico relies heavily on agricultural freight transportation. “Agricultural products are the single largest user of freight services in the United States, comprising 24% of freight services across all modes by tonnage and 27% of all ton miles” (US DOT Volpe National Transportation Systems Center, The Importance of Highways to US Agriculture, 2020). Trucks move 83% of agricultural freight by weight and 88% by market value. In comparison, 70% of all freight by weight and 73% of all freight by value moves by truck. Investment in infrastructure is especially important for moving agricultural freight.

The first and last miles of the farm-to-market trip are important, as narrow or weight-restricted roads and bridges make it difficult to move more modern, larger vehicles. Improved pavement and expanded highway capacity results in reduction in truck operating costs across the value chain, from farmers to manufacturers to consumers.

FREIGHT LOGISTICS LOCATION OPPORTUNITIES

The City of Raton, Town of Clayton, and the US 87/64 segment of the Ports-to-Plains Corridor between them are located equidistant from the major metropolitan areas of Albuquerque, Denver, and Amarillo. Designation as an Interstate Highway, in conjunction with the existing trade corridor along Interstate 25, provides an excellent opportunity for cargo-oriented development and establishment of freight logistics facilities, such as warehousing and regional distribution centers.

An integrated logistics center, for example, would bring together manufacturing, transportation, and logistics services in a convenient regional location. Distribution centers have become a key part of the distribution chain for products, order fulfillment, and storage of produced goods prior to shipment to wholesalers, retailers, or directly to consumers. Distribution centers are typically large, specialized facilities operating around the clock, and may be refrigerated to handle perishable goods. Modern distribution centers are often built as cross-dock facilities, with incoming and outgoing docks on opposite sides of the building to facilitate rapid turnover of truck traffic.

The City of Raton has designated space for an industrial park/distribution center on land along Interstate 25, south of US 87/64 that could easily accommodate warehousing and other freight-generating activities. The Town of Clayton owns the Clayton Business Park with 512 acres available for development north of US 87 at Dr. Michael Jenkins Road near the Clayton Municipal Air Park. Water, sewer, and electric infrastructure have been extended to the Clayton Business Park, and the Town has targeted manufacturing/production facilities, warehouse distribution centers, and storage facilities for location in the Business Park.

RAIL and INTERMODAL FACILITIES

Raton and Clayton are located on BNSF Railway corridors. BNSF uses the Clayton rail line to move coal trains northbound from Amarillo to Pueblo, Colorado. The Raton Line runs from near Santa Fe north to near Trinidad. Although the Raton Line is currently used exclusively for Amtrak passenger rail service, BNSF maintains the route as a freight backup to the primary Transcon Line through eastern New Mexico. The New Mexico State Rail Plan (NMDOT, 2014) and the Regional Transportation Plan also both discuss the opportunity for a smaller, regional operator to resume freight service as a “short line” railroad.

An inland port is a specialized logistics and distribution hub inland from border ports, and typically combines highway and rail intermodal service where freight can switch modes between rail and semi-trucks. The Inland Port Analysis (NMEDD, 2015) explains that inland ports allow rail containers to move quickly off ships to distribution centers closer to consumers, and are also becoming popular options to move oil and gas by rail. The nearest intermodal ramp facilities are located in Albuquerque, Denver, and Amarillo, although BNSF’s Albuquerque facility only offers limited rail connections. BNSF has a direct connection across the US-Mexico border at El Paso, Texas, by way of the rail line from Albuquerque and Belen. The Union Pacific Intermodal Facility, 13 miles west of downtown El Paso north of the Santa Teresa Logistics Park, operates as an inland port. If local freight service did resume on either BNSF rail line, long-term trends may provide an opportunity for a future intermodal facility in a less congested and more cost-effective setting, such as Raton or Clayton.

CHAPTER 6:
Project Estimated Costs

6.1 INTRODUCTION

Designation of the Ports-to-Plains Corridor as an Interstate Highway would require improvements to meet Interstate System Design Standards, as detailed in Chapter 3: Interstate Designation. This study has identified two cost projections for the Ports-to-Plains Corridor that reflect the two most likely alternatives, both including bypass estimates around the Town of Clayton.

6.2 PROJECT COST ESTIMATES

Below are cost estimates for two Ports-to-Plains Corridor scenarios: Scenario 1) Rehabilitate the current Corridor and construct a truck bypass around Clayton; and Scenario 2) Convert the existing US Highways (US 87/64) within the Corridor to an Interstate and construct a truck bypass around Clayton. For the sake of comparison, the truck bypass, Alternative 3, was selected for both scenarios since it had the least impact to existing development and was identified as the preferred alternative by the Clayton Town Manager.

Scenario 1 assumes that 30% of the existing US 87/64 and US 87 pavement would need to be rehabilitated with a new asphalt overlay and 10% would need to be reconstructed. No improvements are assumed to be required for the Interstate 25 segment. A pavement study would be required to verify these quantities. The existing rights-of-way, speed limits and designation of US 87/64 and US 87 as US Highways would be maintained. The truck bypass route around Clayton and a new railroad overpass would be constructed to US Highway standards.

TABLE 6.1: COST SCENARIO 1 - IMPROVE US 64, US 87, and I-25

Rehabilitate the Ports-to-Plains Corridor and construct a truck bypass around Clayton (with Bypass Option 3)

Summary of Costs:			
1) Resurface/Reconstruct Pavement and Shoulders of Existing Roadway			
Assume Overlay 30% of US-64/87 Highways			$74,400,000
Recontruct 10% of Roadway			$37,200,000
2) Jct I-25/US-64 Interchange Improvements			$25,000,000
3) Construct New Truck Bypass - Clayton, NM (Worst Case - Option 3)			
	Right-of-Way Acquisition		$590,000
	Construction Costs		$15,600,000
4) New Railroad Overpass (From Option 3)			$30,000,000
	Subtotal		$182,790,000
	Contingencies	20%	$36,558,000
	Total		**$219,348,000**

Scenario 2 assumes that the entire Ports-to-Plains Corridor would be converted to an Interstate Highway and no improvements would be required to Interstate 25. Existing rights-of-way would need to be expanded, speed limits would increase, and frontage roads and new interchanges would need to be constructed. The truck bypass around Clayton would need to be constructed to Interstate standards.

TABLE 6.2: COST SCENARIO 2 - 100% INTERSTATE			
Convert all of the US 87/64 portion of the Ports-to-Plains Corridor from a US Highway to an Interstate Highway and construct truck bypass around Clayton (with Bypass Option 3)			
Summary of Costs:			
1) Widen / Improve Existing Roadway (to Interstate Standards)			
	Right-of-Way Acquisition		$5,637,500
	Construction Costs		$446,400,000
2) Interchange Construction Costs			$270,000,000
3) Frontage Road Construction			$372,000,000
4) New Railroad Overpass (From Option 3)			$30,000,000
	Subtotal		$1,124,037,500
	Contingencies	20%	$224,807,500
	Total		**$1,348,845,000**

APPENDICES:

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LITERATURE REVIEW of BYPASS FACILITIES

1. Effects of Highway Bypasses on Rural Communities and Small Urban Areas (1996)

"The Transportation Research Board National Cooperative Highway Research Program conducted a study to understand the effect highway bypasses have on communities, specifically those smaller and rural in nature. The study found that overall, it is difficult to quantify the true impact of highway bypasses on local communities. The perceived effect is often stronger than the true economic impact.

- In general, business activity generally grows with development of a bypass.
- Immediately following construction, there is often a transition period of declining sales or relocation of traffic-dependent services (fast food, gasoline), but eventually, downtown areas see greater growth in business sales due to decreased congestion, noise, and pollution.
- Older bypassed routes may suffer some loss of sales, but in many cases, declining sales or other indicators of adverse impact are attributable to broad demographic and economic trends unrelated to the highway bypass.
- Land values tend to increase both along the bypass and along the old route, supporting increases in business activity.
- Communities that are unable to extend their political boundaries to encompass new development along the bypass may feel a greater economic impact."

2. The Economic Impacts of Highway Bypasses on Communities (1998)

"The Wisconsin Department of Transportation conducted research to identify the economic impacts on the 17 communities that have been bypassed. The results of this study are intended to help the agency and communities realize the full benefit of future bypasses while minimizing the potential for adverse impacts. The major findings of this analysis include:

- There is little evidence that bypasses adversely impact the overall economies of most communities. Most bypass communities had significant economic growth occurring before the bypass was constructed. This growth was one of the reasons the bypasses were needed. Smaller communities have a greater potential to be impacted economically by a bypass, especially if the community is already in a state of economic decline.
- Over the long term, average traffic levels on "old routes" in medium (2,000 -5,000 residents) and larger (more than 5,000 residents) communities are close to pre- bypass levels. Smaller communities saw much greater decreases in traffic on the old route after the bypass opened. In almost all cases, both the bypass and the old route are being utilized, but for different markets.
- Communities consider their bypasses to be beneficial overall, while understanding that a bypass brings many changes for a community and businesses and need to be addressed proactively to ensure the most benefits and least adverse impacts."

3. The Economic Impact of Rural Highway Bypasses (1995)

"The Transportation Research Board National Cooperative Highway Research Program conducted a study to understand the effect highway bypasses have on communities, specifically those smaller and rural in nature. The study found that overall, it is difficult to quantify the true impact of highway bypasses on local communities. The perceived effect is often stronger than the true economic impact.

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- Communities that are unable to extend their political boundaries to encompass new development along the bypass may feel a greater economic impact."

4. FHWA/IN/JTRP-2008/16 Final Report EFFECTS OF BYPASSES Jon D. Fricker Joshua B. Mills August 2009

"The statistical models have shown that in general, a bypass can provide the opportunity for economic growth, reflected in the models by positive increases in employment and payroll levels following the construction and opening of the bypass. Total Employment: Total employment of affected counties are positively impacted by the presence of a bypass. Over time, an affected county will contribute more to the state's economy in terms of employment. The presence of a nearby large city also positively impacts total employment. Manufacturing: Even though the initial impacts on payroll are negative, there will be long-term benefits as the bypass ages.

Employment will be positively impacted by the presence of a bypass. A bypass will provide a means of expanding the local manufacturing employment base over time. Retail Trade: Although negative impacts were observed in the first ten years following the opening of a bypass, the overall impact of a bypass on both county employment and payroll was positive. Eating & Drinking Places: Both employment and payroll were negatively impacted by the presence of a bypass for the first ten years the bypass was opened. The large magnitudes of the elasticities of the bypass indicator for both models, however, showed that the presence of a bypass has benefits that overshadow these negative impacts. Wholesale Trade: Overall impacts on both employment and payroll were positive. All bypass age indicators had double- digit elasticities. This shows that the wholesale trade industry is highly dependent on the presence of a bypass. Healthcare: Negative impacts on annual earnings were observed for the first ten years the bypass was open. Impacts became positive starting with the 26th year after the bypass was opened, with no statistically significant findings between intervening years. This may be indicative of a lag between the opening of a bypass and the positive impacts shown in the model."