

Purpose and Need

The Federal Highway Administration (FHWA), in cooperation with the Colorado Department of Transportation (CDOT), has prepared this Environmental Assessment (EA) to identify and assess a new alignment for U.S. Highway (U.S.) 287 and U.S. 50 through the City of Lamar, Colorado in Prowers County. Federal and state funds would be used to design and construct the new alignment, requiring that this project comply with the National Environmental Policy Act (NEPA). This EA has been prepared pursuant to NEPA, the Council on Environmental Quality regulations implementing NEPA (Title 40 of the Code of Federal Regulations [CFR] Parts 1500-1508), FHWA Technical Advisory T6640.8A, and 23 CFR. It has been prepared to analyze impacts to the natural, socioeconomic, and cultural environment that are likely to occur from the construction and operation of the Proposed Action. This EA identifies environmental impacts that could arise from the Proposed Action and includes avoidance or mitigation measures to reduce the impacts.

1.1 Project Background and History

The City of Lamar is one of the largest communities on the Eastern Plains of Colorado. Lamar is located in Prowers County in the southeastern corner of the state. The city serves as a regional agricultural trade hub for the areas north and south between Sterling, Colorado, and Amarillo, Texas (a distance of 440 miles), and west and east from Pueblo, Colorado to Garden City, Kansas (a distance of 225 miles). Two regionally important highways intersect in Lamar: U.S. 287 and U.S. 50. Figure 1-1 illustrates these national highways in a regional context, Figure 1-2 shows the project location in a local context, and Figure 1-3 shows the local street network in Lamar.

U.S. 287 is a major north-south travel route serving national, regional, and local transportation needs. Nationally, U.S. 287 through Lamar serves as a link on the Ports-to-Plains Trade Corridor, an economic development highway corridor between Laredo, Texas and Alberta, Canada. The Ports-to-Plains Alliance is a grassroots alliance of communities and businesses whose mission is to advocate for a robust transportation infrastructure along the existing highway segments that form the Ports-to-Plains Trade Corridor to promote economic security and prosperity throughout North America's energy and agricultural heartland. Both CDOT and FHWA have demonstrated a commitment to support the Ports-to-Plains Alliance, as demonstrated by the reconstruction of 24 segments of the corridor through Colorado since 1991, including the recent completion of the last remaining section through the town of Kit Carson, which opened in August 2012. The section of U.S. 287 through Lamar will need to be improved if U.S. 287 is not realigned as proposed by this action. Regionally, U.S. 287 serves as a secondary route to Interstate 25 (I-25), connecting southeastern Colorado with the state's Front Range cities from Denver to Fort Collins. Locally, U.S. 287 acts as Lamar's Main Street, serving local residences, businesses, schools, and other community destinations.

FIGURE 1-1
Regional Highway Map

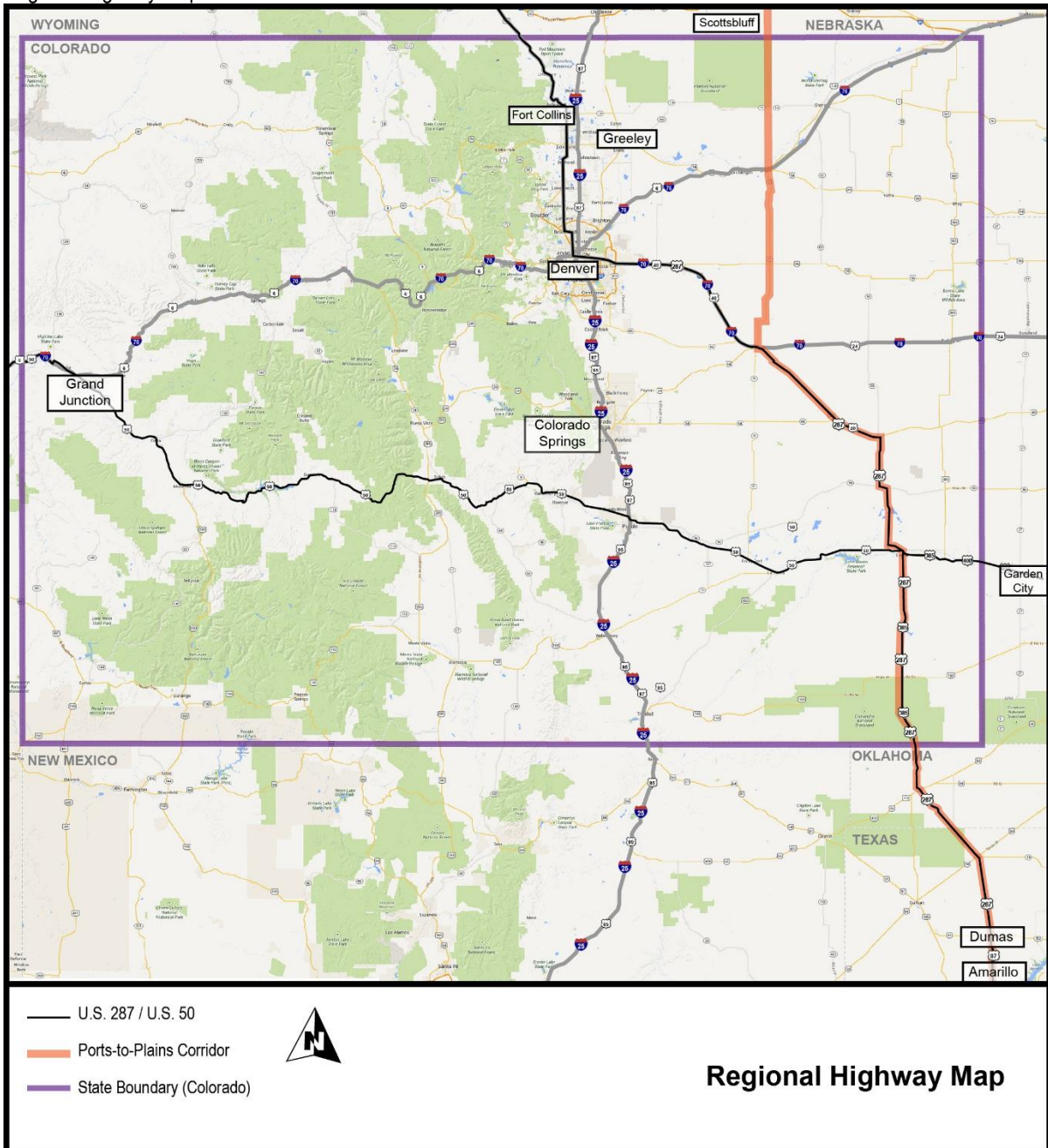


FIGURE 1-2
Project Location Map

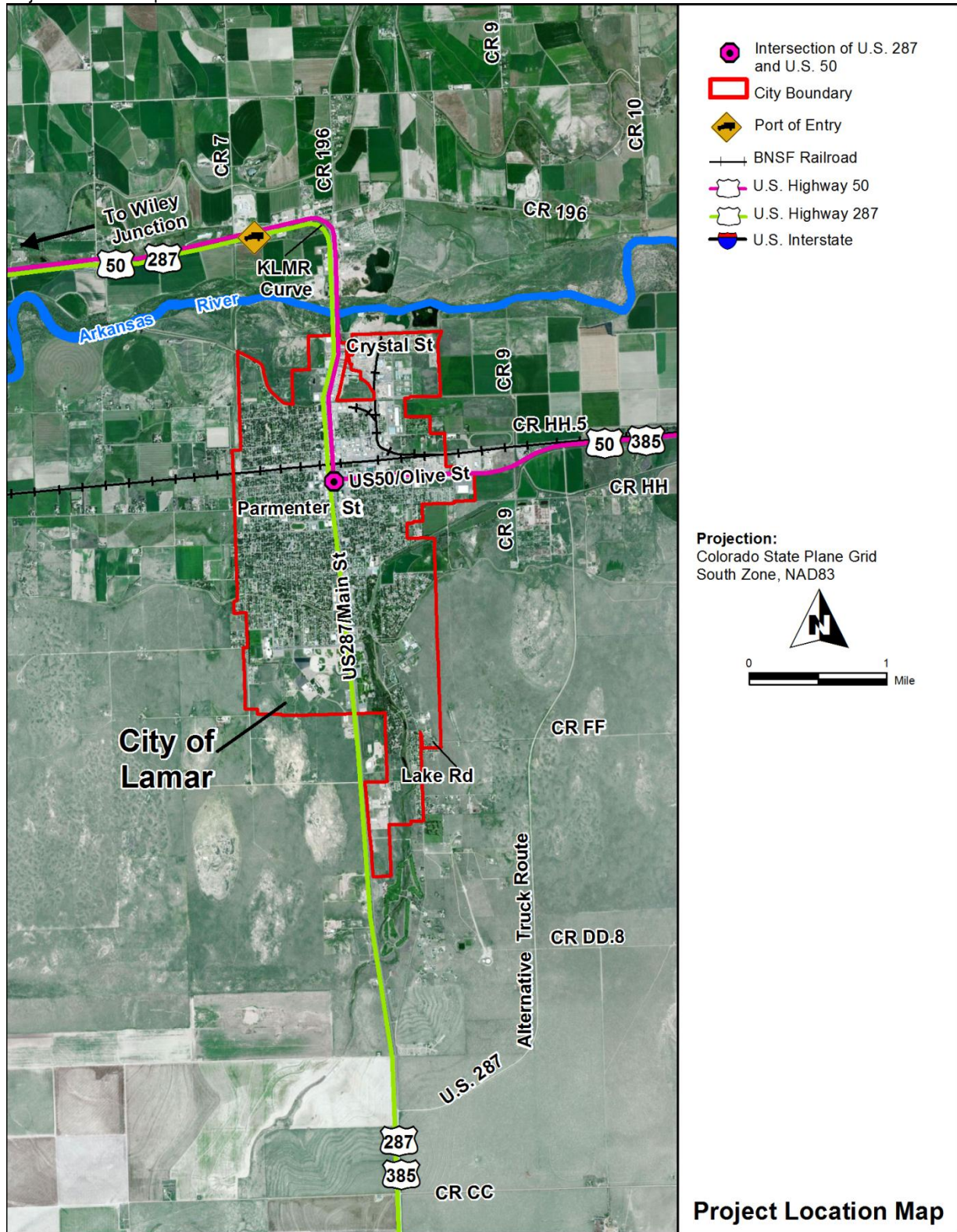
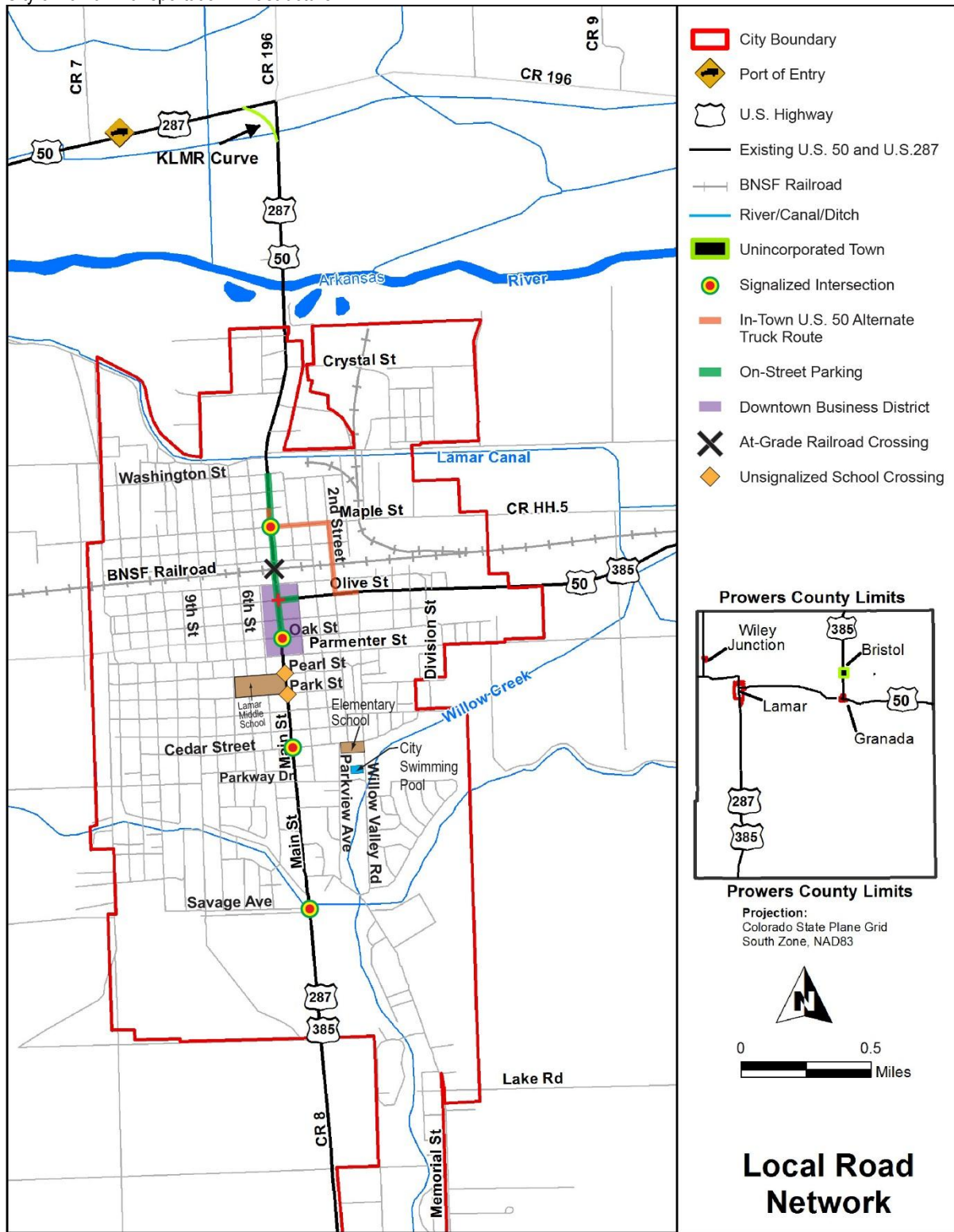


FIGURE 1-3
City of Lamar Transportation Infrastructure



U.S. 50 is a two-lane rural highway serving the central United States from Washington, D.C. to Sacramento, California. Regionally, U.S. 50 is one of the primary east-west travel routes in southern Colorado, linking Lamar and the Arkansas River valley with I-25 at Pueblo and Interstate 70 (I-70) at Grand Junction, as well as agricultural markets in Kansas. U.S. 50 facilitates the movement of both commercial freight and agricultural goods across the region. Currently, CDOT is conducting a tiered Environmental Impact Statement (EIS) studying safety and mobility improvements to the U.S. 50 corridor from the vicinity of the Kansas state line west to Pueblo. Locally, U.S. 50 operates as an important local road (Olive Street) in Lamar, which provides direct access to numerous small businesses including retail, motels, restaurants, and the Lamar Workforce Center.

Due to their national and regional transportation purposes, both U.S. 287 and U.S. 50 carry a substantial volume of truck traffic. Livestock, agricultural produce, equipment, and machinery are hauled along U.S. 287 and U.S. 50 to and from local farms and ranches to shipping destinations or processors for markets across the nation. National and regional travelers must slow down from 65 miles per hour (mph) to 30 mph as they travel through Lamar, whose local road network is not equipped to serve the increasing truck traffic on this economic corridor.

Traffic conflicts occur in Lamar because both U.S. 287 and U.S. 50 act as local roads in Lamar (see Figure 1-3). U.S. 287 serves as the city's Main Street as well as the only north-south route through the city. It is a four-lane roadway lined with local businesses and city facilities with on-street parking downtown and stoplights at several intersections. U.S. 50/Olive Street is a major east-west local route through Lamar, providing direct access to numerous small businesses. U.S. 50 is a four-lane roadway with two signalized intersections. U.S. 50 and U.S. 287 share the same alignment from their intersection in downtown Lamar to Wiley Junction, seven miles west. Another national highway, U.S. 385, also runs contiguous with both U.S. 287 and U.S. 50 through Lamar. U.S. 385 is a north-south highway linking south Texas with I-90 in South Dakota. U.S. 385 enters Lamar on the south concurrent with U.S. 287, and turns east downtown to follow U.S. 50 east through Lamar. The convergence of these national highways with the local street network in Lamar presents mobility and safety challenges for all users, as described in the following subsections.

The project study limits generally extend east from the intersection of County Road (CR) 7 and U.S. 50/U.S. 287 to approximately the intersection of CR 10 and U.S. 50 and extend south from the intersection of CR 196 and U.S. 50/U.S. 287 to the intersection of CR CC and U.S. 287. The study limits bound the area where a reliever route could reasonably travel around Lamar and tie back into the existing highways; the study limits encompass the existing gravel Alternative Truck Route, the City of Lamar, and the point at which U.S. 287 and U.S. 50 turn east toward Wiley Junction, north of Lamar. The existing highway mileage in the project area includes 7.7 miles of U.S. 287 and 4.2 miles of U.S. 50, of which, 2.5 miles are shared by both U.S. 287 and U.S. 50. Throughout this document, the existing routes of U.S. 287 and U.S. 50 specifically within the city limits will be referred to as U.S. 287/Main Street and U.S. 50/Olive Street.

1.2 Project Purpose and Need

The purpose of the project is to reduce conflicts between local and through-traffic, improve safety, and meet local, regional, and national travel demands on U.S. 287 and U.S. 50 through Lamar.

The project is designed to meet the following local and regional mobility and safety needs:

1.2.1 Mobility Needs

- Improve regional travel conditions and travel times for through-trips on U.S. 287 and U.S. 50.
- Improve local operations and access to businesses and services in the downtown business district on U.S. 287/Main Street.
- Accommodate the future growth of freight traffic resulting from the formalization of the Ports-to-Plains Trade Corridor.

1.2.2 Safety Needs

- Improve traffic and pedestrian safety in downtown by reducing conflicts between local traffic and truck and through-traffic.
- Improve local safety conditions by rerouting trucks hauling hazardous materials away from U.S. 287/Main Street and the downtown business district and the at-grade crossing of the BNSF Railway railroad tracks in downtown Lamar.

1.2.3 Mobility

Interstate traffic on both U.S. 287 and U.S. 50 traveling from Texas, Kansas, Oklahoma, and New Mexico, as well as regional traffic from the surrounding rural portions of Prowers County, pass through downtown Lamar using U.S. 287/Main Street and U.S. 50/Olive Street. Travel in and around U.S. 287/Main Street in Lamar is impacted by the high volume of truck traffic. An origin and destination evaluation conducted for this project in 2002 indicated that, on a daily average, 84 percent of trucks originating outside of the region pass through Lamar without stopping, while only 30 percent of cars pass through the city without stopping.

These data show that while most truck traffic moves non-stop through Lamar, the majority of cars are seeking destinations in the city. Regional traffic needs safe travel through the city with minimal disruptions to travel time, speed, or route. Local traffic needs safe access to local destinations with minimal delay, while pedestrian traffic requires safe access to schools and downtown commercial locations. The mix of regional, local, and pedestrian traffic with contrasting objectives results in difficulty for drivers and pedestrians trying to reach local destinations along U.S. 287/Main Street and slows the progress of through-travelers seeking other destinations.

In the downtown business district, few businesses adjacent to U.S. 287/Main Street have parking or vehicle access from U.S. 287/Main Street, and their customers must use parallel parking on U.S. 287/Main Street. Many small businesses and public offices are located along this route, including retail stores, restaurants, car dealerships, motels, grocery stores, fast

food and convenience stores, and the Lamar Country Club. Public facilities on U.S. 287/Main Street include the City and County Buildings, a fire station, Lamar Middle School, Lamar Community College, and several parks and recreational facilities (see Figure 3-4). Through-vehicles must wait for vehicles that are parallel parking at downtown destinations, slowing traffic and reducing mobility. North and south of the downtown business district, businesses adjacent to U.S. 287/Main Street have direct access from U.S. 287/Main Street. Businesses adjacent to U.S. 50/Olive Street have access directly from U.S. 50/Olive Street.



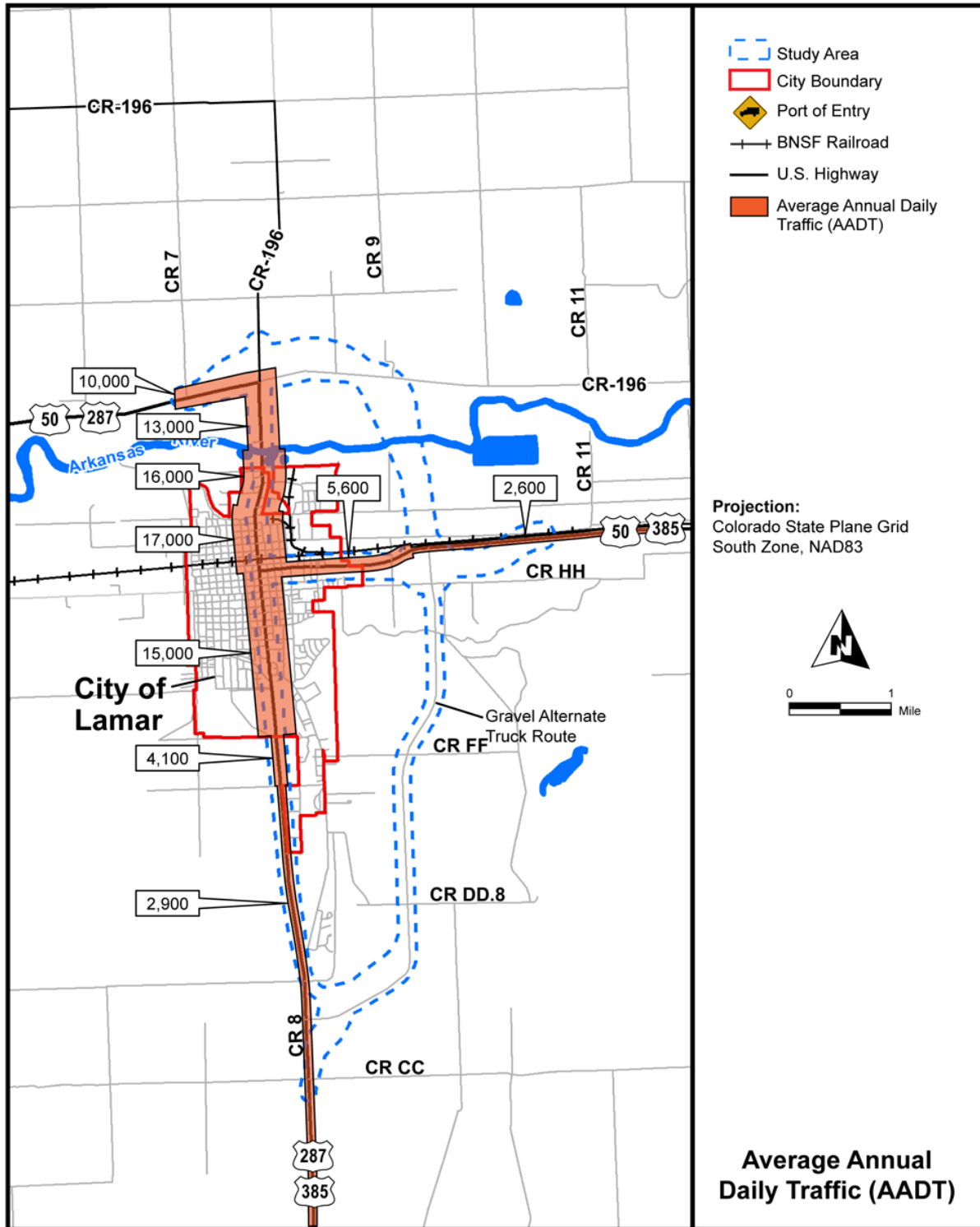
Freight trucks traveling on U.S. 287/Main Street through downtown Lamar

A traffic volume assessment from 2010 counted 15,000 vehicles per day on U.S. 287 south of the junction with U.S. 50 (see Figure 1-4). Of the 15,000 total vehicles, truck traffic accounted for 1,310 vehicles, or 9 percent of the total average daily traffic at this location. Traffic volumes on U.S. 287/U.S. 50 north of the intersection with U.S. 50/Olive Street are 17,000 vehicles per day. Of the total vehicles on this segment, 1,550, or 9 percent, were trucks. Traffic volumes on U.S. 50 are observed to be less than half the volumes on U.S. 287. On U.S. 50 east of the intersection with U.S. 287/Main Street, 2010 traffic counts identified 5,600 vehicles per day (see Figure 1-4). Of the 5,600 vehicles, truck traffic accounted for 670 vehicles, or 12 percent. The local agriculture-based economy results in a higher proportion of large vehicle traffic than in urban areas. This high mix of truck traffic is expected to continue and increase in the future as traffic increases and the Ports-to-Plains Trade Corridor is fully developed and attracts more regional and national freight trips.

The modeled 2035 traffic projections estimate 16,100 vehicles per day on U.S. 287 south of the junction with U.S. 50, and 19,750 vehicles per day on U.S. 287/U.S. 50 north of the intersection with U.S. 50/Olive Street. The modeled 2035 traffic projections estimate 6,700 vehicles per day on U.S. 50 at the same location. The 2035 modeled projections are based on No Action conditions. The existing roadway capacity is adequate to accommodate both current and future travel demand on U.S. 287 and U.S. 50. As a result, congestion is not listed as a need for the project.

Six signalized intersections are located along U.S. 287/Main Street, and two signalized intersections are located along U.S. 50/Olive Street (one of these signalized intersections is shared between the two). Figure 1-3 shows the locations of these intersections and other traffic conditions discussed in this section. Although signals are timed along U.S. 287/Main Street, traffic is slowed through the city. The posted speed limit slows from 65 mph on the rural sections of U.S. 287 to 30 mph through the city, which conflicts with through-traffic objectives. This traffic mix also creates challenges for vehicles traveling eastbound or westbound across U.S. 287/Main Street. The number and speed of slow-moving trucks traveling on U.S. 287/Main Street results in delays for traffic crossing the street.

FIGURE 1-4
Existing Average Annual Daily Traffic Volumes (Year 2010) on U.S. 287 and U.S. 50 in Lamar



The intersection of U.S. 287/Main Street and U.S. 50/Olive Street in downtown Lamar is signal-controlled. The tight intersection geometry at this location makes it difficult for semi-trailer trucks to make a right turn from U.S. 50/Olive Street onto U.S. 287/Main Street without crossing several lanes of oncoming traffic. This results in frequent traffic delays while trucks and large vehicles maneuver through the tight intersection. To relieve this issue, the city designated a paved, in-town alternate truck route within the city for trucks traveling on westbound U.S. 50/Olive Street. The paved, in-town alternate truck route directs trucks away from the U.S. 287/Main Street and U.S. 50/Olive Street intersection to turn northbound on Second Street and then westbound on Maple Street. This route is not widely used because it requires two additional turns, which further delays travel through the city and does not fully eliminate the need to travel on U.S. 287/Main Street.

The BNSF Railway railroad crosses U.S. 287/Main Street on a single track at-grade between Hickory and Beech Streets. Amtrak and Union Pacific Railroad (UPRR) also use the tracks. Freight and passenger rail operations in 2012 include 10 freight trains and 2 passenger trains passing through Lamar on the BNSF Railway tracks each day. The crossing is a signal-controlled intersection with flashing gates to stop vehicle traffic. Multiple times each day, train traffic through the city results in delays and congestion for vehicles and pedestrian traffic along U.S. 287/ Main Street.

1.2.4 Safety

U.S. 287/Main Street has lane and shoulder widths that narrow as travelers enter the city, resulting in an increased potential for vehicle conflicts with large trucks. Many local trips access the businesses in the downtown business district by using on-street, parallel parking along U.S. 287/Main Street, which is the primary parking for the downtown business district. Some side streets have on-street parking, and limited off-street parking exists. Large trucks traveling in narrow travel lanes conflict with local traffic using parallel parking; the trucks pass within several feet of parked vehicles and create safety concerns for vehicle passengers entering and exiting their cars.



Parking Conflicts in Downtown Lamar

The need to improve safety applies to both pedestrian and vehicular traffic. The volume of traffic, especially trucks, creates conflicts with pedestrians along U.S. 287/Main Street and other travelers to local destinations. As mentioned above, U.S. 287/Main Street and the surrounding blocks are lined by schools, businesses, and homes. In many cases, pedestrians must cross U.S. 287/Main Street without a stoplight-controlled signal. Two unsignalized school crossings are located along this segment, and traffic lights are spaced several blocks from each other in the city, as illustrated in Figure 1-3. Children and families crossing U.S. 287/Main Street mid-block may be less visible and unexpected to through-traffic. The heavy

truck traffic exacerbates safety risks to children and their families because trucks cannot stop quickly in an emergency.

The transport of hazardous materials on U.S. 287/Main Street is another safety concern in the city. More than 10,000 reported loads of hazardous substances passed through the Lamar Port of Entry between January 1, 2011, and December 31, 2011, as shown in Table 1-1. As noted previously, this route through the middle of the city is lined with schools, businesses, and homes, and also requires that each of these hazardous loads cross through the at-grade railroad crossing of the BNSF Railway tracks. A spill would pose potentially significant health and environmental risks.

TABLE 1-1

Hazardous Materials Transported on U.S. 287, January 1, 2011 through December 31, 2011

Substance	Number of Loads¹
Flammable Liquids	5,368
Gases (Compressed or Liquefied)	1,965
Corrosives	1,552
Oxidizers	278
Poisons	254
Explosives A, B, or Blasting Agents	200
Flammable Solids	114
Radioactive Materials	47
Miscellaneous or Dangerous Substances	427
Total	10,205

¹ The PrePass program gives trucks, including those carrying hazardous materials, the option to pass through the Port of Entry without stopping. Therefore, the number of hazardous material loads shown in Table 1-1 is most likely lower than the actual number of loads being transported through the Lamar Port of Entry.

Source: Colorado Department of Revenue, 2011.

The community's awareness of the health risks from hazardous material transports was heightened by an accident that occurred in September 1977 on U.S. 287 south of the city when a truck carrying a concentrated form of uranium called "yellow cake" spilled its cargo in a collision with another truck. The incident closed U.S. 287 for a week while the yellow cake and contaminated soil were removed (Leonard, 2003). Although this accident occurred more than 30 years ago, numerous residents identified it as a continuing concern during project meetings.

Using CDOT's current safety performance functions (SPF) methodology, most portions of U.S. 287 and U.S. 50 within the project limits (primarily south and east of Lamar) performed as expected or better than expected in terms of average annual number of crashes. The U.S. 287 intersection with U.S. 50 is an exception; in this location, a higher number (7) of average annual crashes than expected (5) occurred during the years 2007 through 2011. The presence of parking on all four intersection approaches could contribute to the above-average crash experience at this intersection.

The SPF methodology assumes more crashes would be expected as traffic volumes increase by 2035. Additionally, the mix of large trucks and other vehicles may contribute to crashes because of speed differences and because driver expectancy and understanding of the operating characteristics of the vehicles around them decreases as more large trucks mix with other vehicles.