Regional Transportation Safety Action Plan (RTSAP)

Improving Safety for all Modes in Central New Mexico

Part I

Report prepared by Mid-Region Metropolitan Planning Organization (MRMPO), a division of the Mid-Region Council of Governments (MR-COG) with support from Lee Engineering.

A Message from the Mid-Region Metropolitan Planning Organization

Dear Friends,

The Albuquerque Metropolitan Planning Area (AMPA) faces some serious challenges related to the safety of people traveling in our community. Between 2011 to 2015, 365 people lost their lives while walking, biking, taking transit, or driving, and 2,913 were seriously injured. New Mexico has one of the highest pedestrian fatality rates per capita in the United States with 102 pedestrian deaths and 263 serious or incapacitating injuries during this time period.

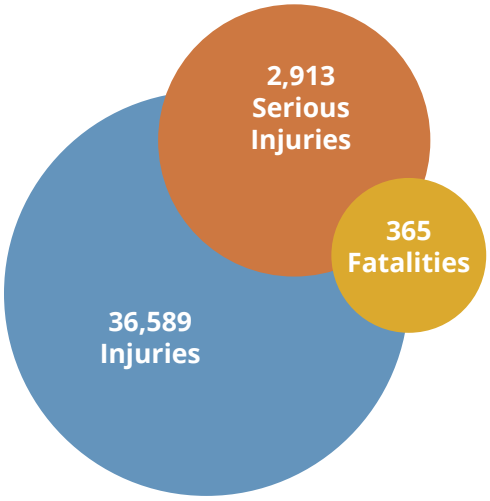
This is unacceptable.

The Regional Transportation Safety Action Plan is a step toward moving our region out of the unsavory top ten lists and toward creating safe streets and places for everyone. This plan was created through data driven analysis in collaboration with local agency stakeholders and public input, and puts forth well-researched best practices for combating unsafe streets by identifying short and long-term implementable action items.

In recent years, regional and local governments with local elected officials, and advocacy groups have been working on policies and plans that will result in safer streets. In 2011, the Mid-Region Metropolitan Planning Organization (MRMPO) passed a resolution to integrate Complete Streets principles into all its planning documents, and in 2015 both the City of Albuquerque and Bernalillo County passed Complete Streets policies as well.

These efforts have been helpful in reframing the conversation and changing priorities, but issues related to the implementation of policies and plans remain.

We have to balance a fast commute with safer roadways and prioritize safety for **all modes** over speed. Sometimes taking a minute longer to get to your destination can save a life.



Dave Pennella
MPO Administrator

Bringing it Home...

A Young Boy Loses His Life in Hit and Run

Isaiah Harper, an 8-year-old boy, was hit by two vehicles—one who left the scene along Louisiana Blvd. near Trumbull Ave. at 7pm at night in 2017. Isiah was going to Sai's Food Mart to get some candy. According to people living in the area, this stretch of Louisiana is very dark at night and is also used for drag racing. The corner of Louisiana Blvd. and Zuni Rd. was lined with candles and prayers from his family and community.

Devastating Effects of Texting and Driving

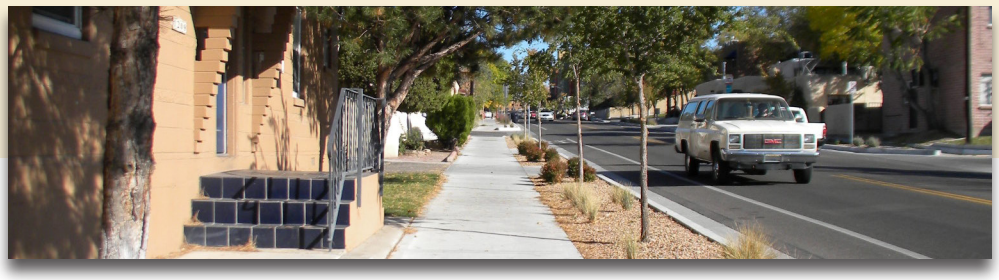
In 2017, Kerry Houlihan's life changed drastically when she by a car while walking her dog. The driver left the scene and got a ticket for distracted driving. It is believed the driver was texting. Kerry lost part of her leg, is at home with daily in-home care, and is still unable to walk, feed, or clothe herself. She used to play soccer, volleyball, and run half-marathons.

The Biggest Tragedy? There is more we can do...

Kerri's very serious injuries and Isaiah's death may have been prevented with a greater focus on improving the safety of our roadway system. Of course, we need to take responsibility when using our streets, but design features along with other educational strategies, can play a big part in the safety of more vulnerable roadway users.

A planting strip with gravel, shrubs, and/or trees can provide a buffer between the sidewalk and the travel lane. Pictured is an example from Dr. Martin Luther King Jr. Blvd. A narrow travel lane, the bicycle lane, and the planting strip provide a barrier between people walking and vehicles. These design cues alert drivers to be more aware. A planting strip can keep a reckless driver from driving onto the sidewalk, provide a safe place to wait for the bus. It also provides extra space if a pedestrian were to trip and fall.

Street lighting is also very important. Our streets are often not well-lit for pedestrians, so cars may not see people walking or trying to cross the street. Members of the International District Healthy Communities Coalition, in partnership with Presbyterian's Healthy Here project have started a "Light the District" program to address this. It is a particularly important issue since 67% of fatal pedestrian crashes happen at night and 23% of them are hit and runs.



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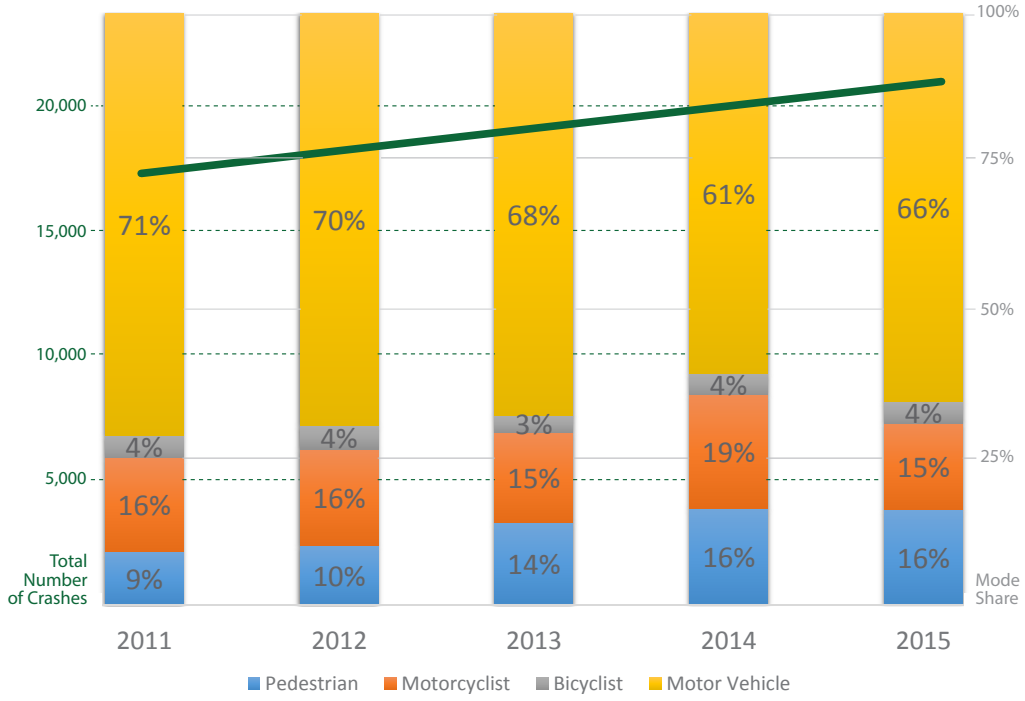
Why This Plan is Needed

From 2011 to 2015, 365 people were killed in traffic crashes in the Albuquerque Metropolitan Planning Area (AMPA) and 39,502 people were injured. Of those injuries, 2,464 were serious or incapacitating injuries. A particularly alarming statistic for our region is that of the total number of fatal crashes in our region, 30% involve pedestrians. Pedestrians are our most vulnerable users and by making our roadways safer for them, we can reduce crash-related fatalities and injuries for every mode of travel.

By the Numbers

2011-2015 Total Crashes and Fatal/Incapacitating Injury Crashes by Mode, AMPA



Crash Data Sources

This plan uses the most recent crash data available: 2011 through 2015. The crash data is provided by University of New Mexico Geospatial Population Studies department, which geocodes crash record data compiled by the New Mexico Department of Transportation's (NMDOT) Traffic Safety Bureau from police records across the State of New Mexico.

A crash must involve at least one motor vehicle, occur on a public roadway, and result in at least $500 of property damage or personal injury in order to be recorded. This crash data, along with MRMPO's street network and traffic counts data, allow for the region's crash rates to be calculated.

Incapacitating injuries are non-fatal injuries that prevent a person from walking, driving, or continuing on with activities a person was capable of doing before the injury (PBOT).

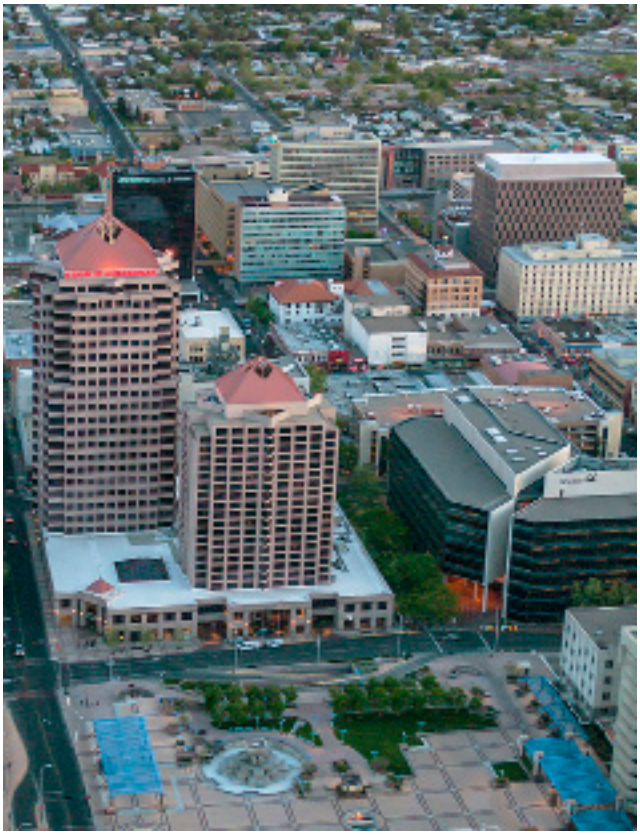
Between 2011 to 2015 in the AMPA, the total number of crashes has been trending upward. Serious injuries and fatalities have remained high throughout the five-year period for drivers, motorcyclists, bicyclists, and pedestrians.

Metropolitan Comparisons

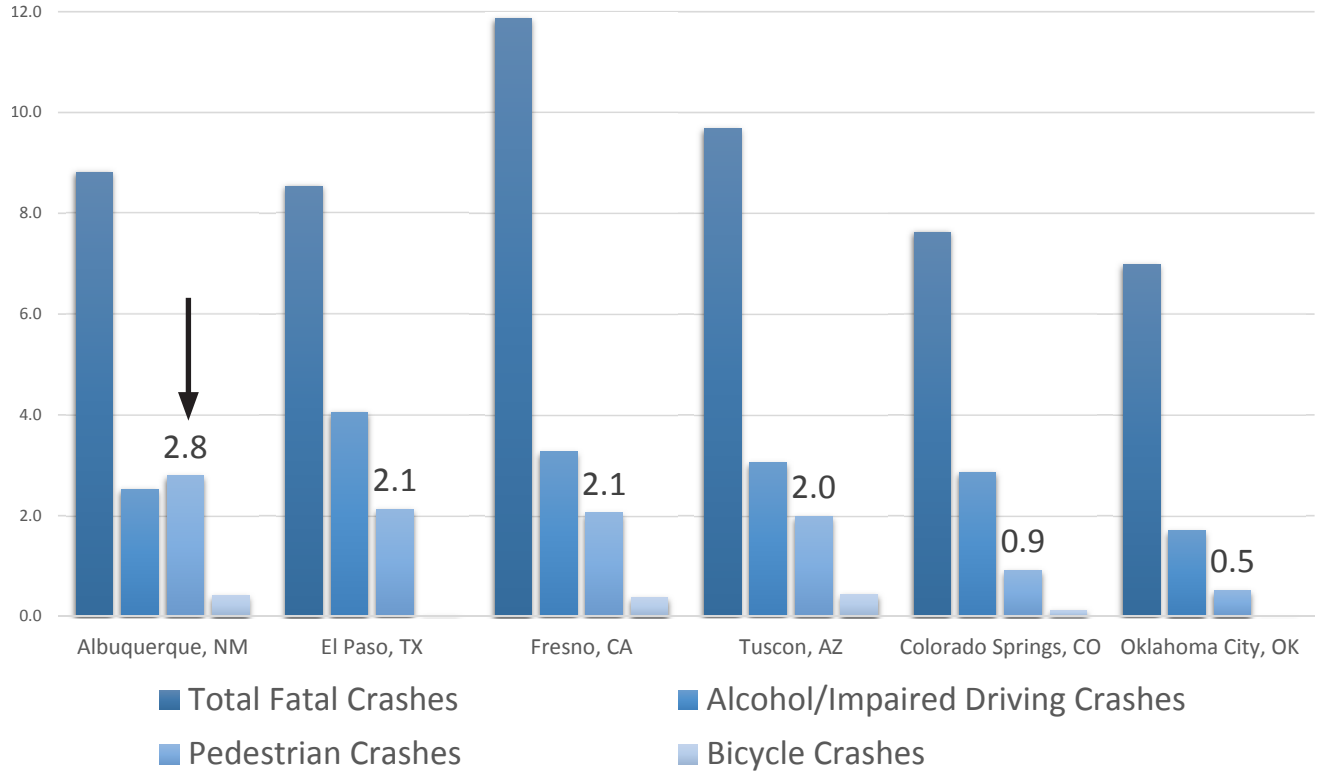
Albuquerque's crash rates were compared to areas similar to the Albuquerque metropolitan area in population size (465,101 to 683,080 as of 2016). The chart below shows that Albuquerque's statistics are similar to those of other metropolitan areas of the Southwest, but that it ranks highest in terms of pedestrian crashes.

In fact, both the Albuquerque metropolitan area as well as the state of New Mexico as a whole stand out when it comes to certain types of fatalities and high crash rates. Because of this, the Federal Highway Administration (FHWA) identified New Mexico and the City of Albuquerque as *Focus State/City,* respectively, and provides technical assistance to address the issue of high pedestrian and bicycle fatalities.

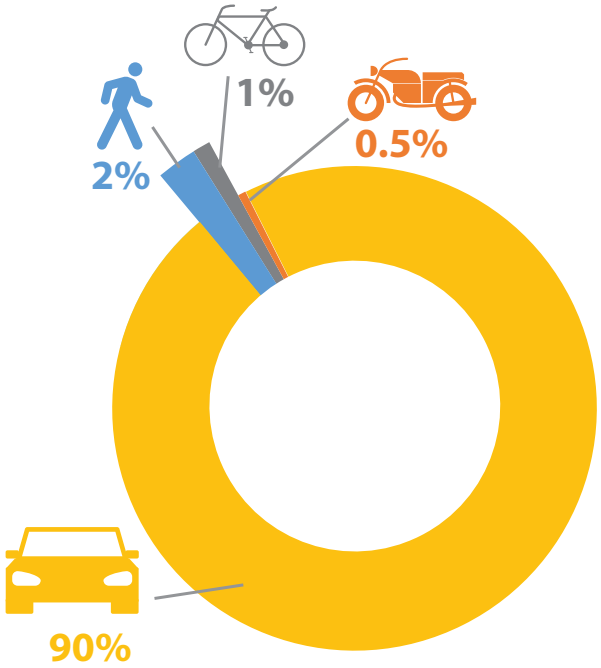
Pedestrian, bicycle, and motorcyclist traffic fatalities are particularly high considering the proportion of people that commute by these two modes. The circle graphic on the next page clearly illustrates this.



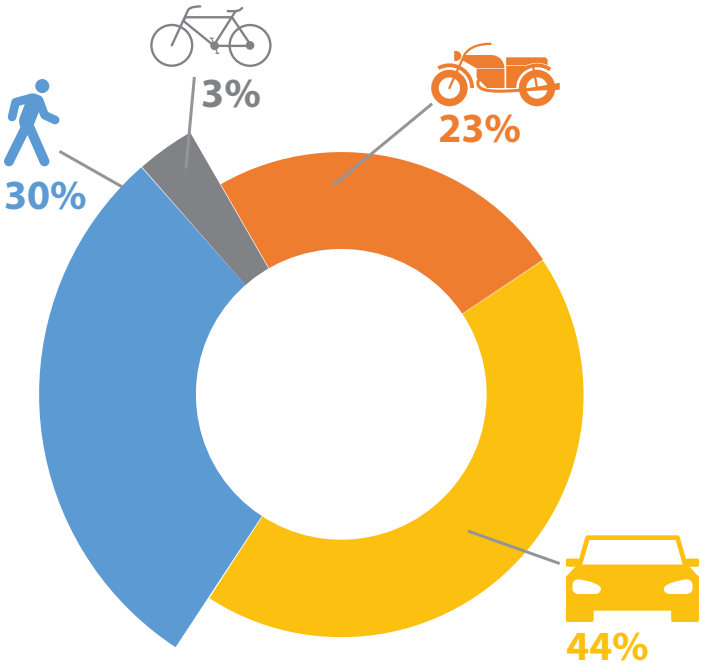
Comparison of Metropolitan Areas, Crashes per 100,000 Population, 2016



AMPA
Travel to Work
by Mode of Transportation
2015



AMPA
Traffic Fatalities
by Mode of Transportation
2015



Cost

Not only is loss of life in traffic crashes unacceptable and tragic, but there is also a financial cost to society. Direct and indirect costs of crashes include property damage, emergency services, medical bills, and loss of time at work.

In 2015, the Centers for Disease Control and Prevention (CDC) estimated the cost of medical care and productivity losses was over $63 billion for motor vehicle-related crashes in one year (CDC 2017).

According to AAA, traffic crashes cost society over three times more than congestion. This cost is on top of the estimated 2016 cost of maintaining and operating a car for one year (approximately $8,558).

National Safety Council (NSC) data* shows that crashes in the AMPA from 2011-2015 cost our community a total of $3.6 billion.

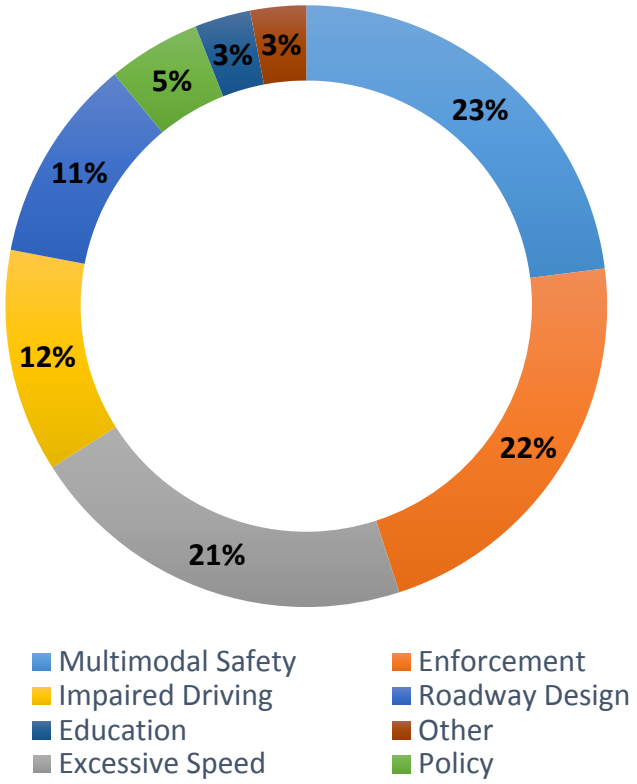
This translates into $737 million per year.

*The National Safety Council (NSC) estimates the average costs of each motor-vehicle related death, injury, and per damaged vehicle. The NSC analyzes wage and productivity losses, medical expenses, administrative expenses, motor vehicle damage, and employers' uninsured costs.

What People Think

Stakeholders

A stakeholder group was created to provide input on transportation safety issues and to help identify implementation strategies. The group consisted of people who were knowledgeable about the different geographic areas of the region, and who worked with transportation safety issues. It involved representatives from local governments, the NM Department of Transportation, the Sheriff's Office, transit providers, the Southern Sandoval County Arroyo Flood Control Authority, and a bicycling advisory group.



Concerns Raised

In order to get input relevant to different local entities, stakeholders were grouped according to geographic area: Large Urban, Small Urban, Rural, or Tribal. This was a critical step because the safety concerns for each of these geographies vary. This approach also allowed locations that may have not have had a high crash rate for the regional statistic to still be highlighted because it was a concern at the local level. Under-reported crash locations for bicycles and pedestrians could also be identified.

The highest general areas of concern for local agency staff were multi-modal safety, enforcement, excessive speed, impaired drivers, and roadway design.

Large Urban area stakeholders expressed concern over distracted and aggressive drivers (mentioning distracted pedestrians as well), and a lack of knowledge on how to use the roadway for drivers, pedestrians, and bicyclists. Concerns were also expressed about the leniency of the court system, particularly on repeat offenders, and that aggressive driving should have zero tolerance.

Small Urban/Rural area stakeholders commented on a lack of capacity, access control, and inadequate number of turning lanes on certain roadways. In addition, many roads are designed as State Highways, which is out of context when they traverse a small town, and sometimes maintenance and ownership agreements can be tricky. Other issues raised related to accommodating large vehicles, such as farm equipment and large trucks (particularly on roadways without shoulders) or dealing with ice and snow on roadways. This group also commented on the lack of pedestrian facilities.

Recommendations

Stakeholders from all geographies stressed the need for better education about the rules of the road for all modes, and recommended better awareness campaigns, such as:
1) the reasons why it is safer for bicyclists to ride with traffic
2) information on how to use a HAWK signal

Additional recommendations included having clear sightlines, the ability to keep up with aging

infrastructure and maintenance, reducing conflicts between roadway and trail users, and widening bike lanes.

Agency representatives stressed that design speed is key to ensuring our roadways are safer, and policy changes may be able to help ensure better planning and engineering outcomes. Representatives also believed that attitudes were changing and gave examples of increased seat belt use but felt that it was difficult to identify the consequences for traffic fatalities and serious injuries.

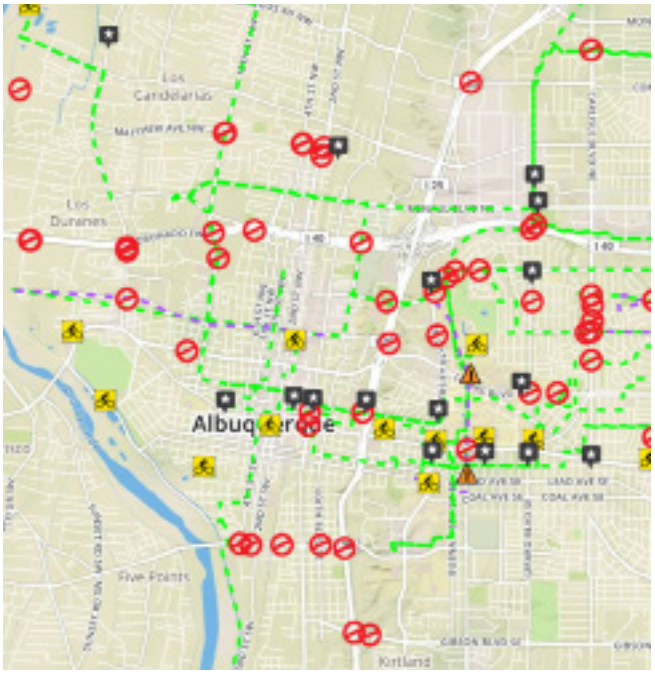
Public Outreach

Further input was gathered from the general public: the people who actually use the transportation system. The project team provided opportunities for public input through an online survey, and presentations to key advisory committees such as the City of Albuquerque's Greater Albuquerque Bicycling Advisory Committee and to the New Mexico Complete Streets Leadership Team. Staff used an interactive online crowdsource map to gather input on barriers to walking and biking, as well as those elements in the built environment that the public liked and would like to see more of.

Positives

People identified pedestrian/bicycle facilities such as mid-block crossings and connected bicycle infrastructure as desirable because these improvements made it easier to walk or bicycle and increased feelings of safety. People expressed appreciation for some of the more innovative designs such as green "paint," buffered bicycle lanes, flex posts on Dr. Martin Luther King Jr. Blvd., and the Silver bicycle boulevard, as well.

Screenshot of Interactive Crowdsource Map Used to get Public Input



Respondents felt that roundabouts made it safer for pedestrians to navigate intersections, and people also appreciated well-placed bicycle buttons to signal traffic lights, such as those along Constitution Avenue.

Negatives

Of 166 comments received about barriers to travel by bike and on foot, the majority were overwhelmingly about the following issues:

- Not safe to cross the street due to:
  - driver speeding
  - unmarked crosswalks
  - lack of crosswalks
- Not safe to ride a bike on the street due to:
  - driver speeding
  - lack of bicycle facilities
  - bike lane too narrow
- Not safe to walk due to:
  - narrow sidewalks
  - high speed traffic
  - unevenness of pavement
  - sidewalk obstructions, such as poles

- Not safe to use the intersection for bicyclist or pedestrians because of:
    - high speed traffic
    - large multiple lane intersections
    - too many turning movements (drivers pulling into crosswalk or not waiting their turn)

Other problems identified by respondents:

- Debris in streets and bike lanes (including drainage gutter hazards)
- Poor pavement quality
- Lack of pedestrian lighting
- Facilities abruptly ending for both pedestrians and bicyclists

Sidewalk obstructions, like this fire hydrant, are a common sight and make the facility useless and dangerous to pedestrians.

When sidewalks are not designed well, people don't use them

Call to Action

A New Way of Thinking

The statistics and issues outlined above, show there are serious challenges when it comes to transportation safety in the Albuquerque metropolitan area. The current statistics and safety concerns expressed by the public should not be accepted as the norm. Traffic fatalities should not be considered to be inevitable. Safe mobility should be a human right.

Vision Zero

There has been an implicit assumption that there's an inevitable amount of death and injury within our public roadways (Morris 2016). However, these traffic collisions are not traffic ***accidents***; they are traffic ***crashes***: preventable incidents. Several municipalities in the United States and around the world are working to make this shift in mindset, using a framework called Vision Zero, which has as its goal zero traffic fatalities.

Sweden first implemented this concept in 1994 and reduced its traffic fatalities by half since 2000 (*Economist*, 2014). Such a radical vision for safety was not adopted without meeting resistance from political economists and experts in the transportation sector. Most did not believe zero fatalities were achievable and that fatalities were just a consequence of transporting people. However, the success of Vision Zero programs show that fatal and injury crashes can be reduced.

Since its conception, countries around the world (the Netherlands, the United Kingdom, Norway, and more), state DOTs (Rhode Island, Virginia, Michigan, Minnesota, and Pennsylvania), and cities (Boston, New York City, San Francisco) have adopted the goal of zero fatalities.

Traditional Approach	Vision Zero Principles
1. Traffic deaths and severe injuries are an inevitable consequence of transporting people	1. Traffic deaths and severe injuries are preventable
2. Humans are assumed to behave perfectly, and to not make any mistakes when out in traffic	2. Human error is inevitable, and transportation systems should be designed to minimize the consequences of human error
3. Improvements to transportation safety emphasize influencing individual behavior	3. Improvements to transportation safety focused on systems-level changes
4. Emphasis on preventing collisions	4. Emphasis on preventing severe crashes leading to fatalities (mitigation of speed is recognized and prioritized as *the* fundamental factor in crash severity)
5. Saving lives is expensive	5. Saving lives is not expensive: human life and health are prioritized within all aspects of the transportation system.

New York City: A Success Story

New York City (NYC) has seen a steady decline of pedestrian deaths since 2014, when Mayor Bill de Blasio began implementation of Vision Zero. In January 2018, Mayor de Blasio announced that in 2017, NYC experienced the fewest traffic fatalities on record and witnessed a 32% decline in pedestrian fatalities. While the National Highway Traffic Safety Administration reports a 13% increase in traffic fatalities nationwide between 2013 and 2016, NYC has seen lower pedestrian fatalities and lower traffic fatalities overall. From 2013 to 2017, all traffic deaths were down by 28% and pedestrian deaths were down 45% during the same time frame. "*Vision Zero is working. The lower speed limit, increased enforcement, and safer street designs are all building on each other to keep New Yorkers safe,*" said Mayor de Blasio in a press release. "*Now we must deepen this work. Not even a single tragedy on our streets is acceptable, and we'll keep fighting every day to protect our people.*" (NY Curbed, 2018)

Regional Transportation Safety Action Plan Vision

If the AMPA is serious about decreasing its traffic fatalities and serious injuries, a new vision is required. The vision of zero.

This report will present a collaborative campaign model that can be followed to improve transportation safety for everyone and to provide equitable mobility for all.

Through data analysis, stakeholder and public outreach, field visits, and national best practices research, the following five emphasis areas were identified for the AMPA:

1. **Reduce excessive speed and dangerous driving**
2. **Design streets for all modes of travel**
3. **Implement meaningful behavior change campaigns**
4. **Expand data collection and traffic management**
5. **Ensure strong policy and funding mechanisms**
6. **Provide targeted traffic enforcement**

In order to evaluate and track our progress, we have formulated some intermediate goals:

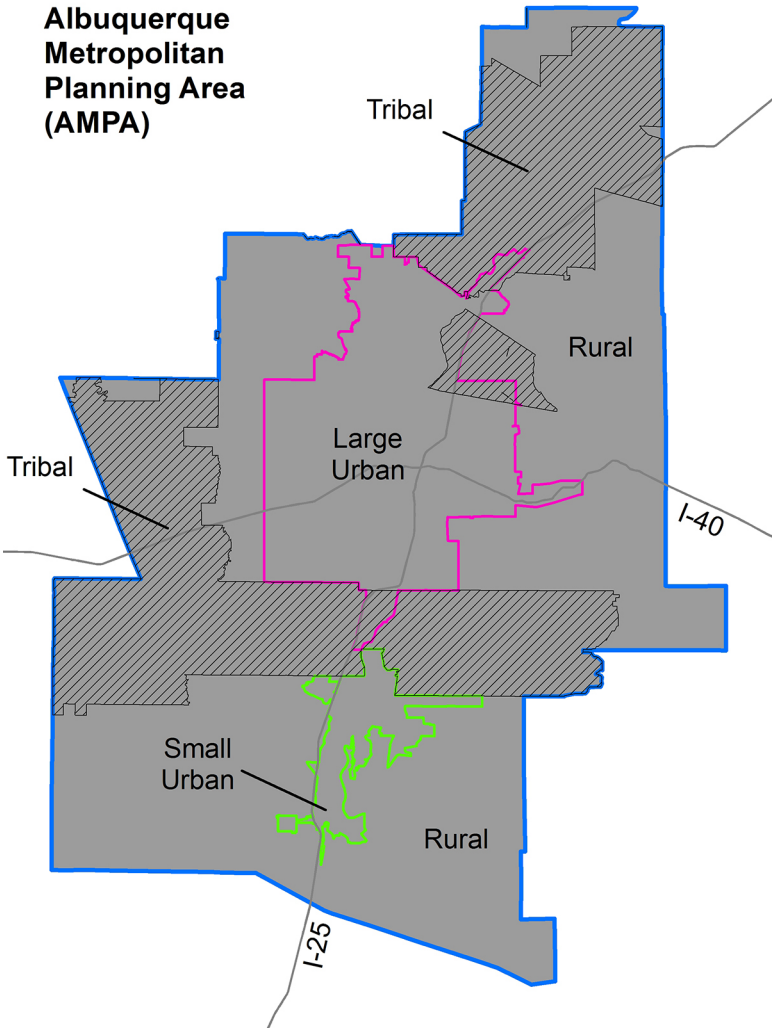
1. **A year over year reduction in fatal and injury crashes:**
   a. at high priority corridors and intersections
   b. related to excessive speed and dangerous driving
   c. involving pedestrian and bicyclists
   d. involving alcohol and drugs
2. **An overall 5 to 10% reduction of the above categories of fatal and injury crashes over the next 5 years**
3. **A year over year increase in the levels of comfort and safety experienced by bicyclists and pedestrians out in traffic**
4. **Complete streets approach incorporated by all future construction projects from inception to construction**

Analysis

The following section provides additional analysis and insight into what's occurring on our roadways. Unfortunately, we do not have unlimited funding to make improvements to all our roadways. By reviewing and analyzing the crash data, and performing select site visits, we were able to identify recurring patterns in specific locations to target problem areas and responsibly invest limited funding.

AMPA Geography

The Albuquerque Metropolitan Planning Area (AMPA) is a diverse region, encompassing diverse communities, areas, and facilities, which all experience traffic crashes in different ways.



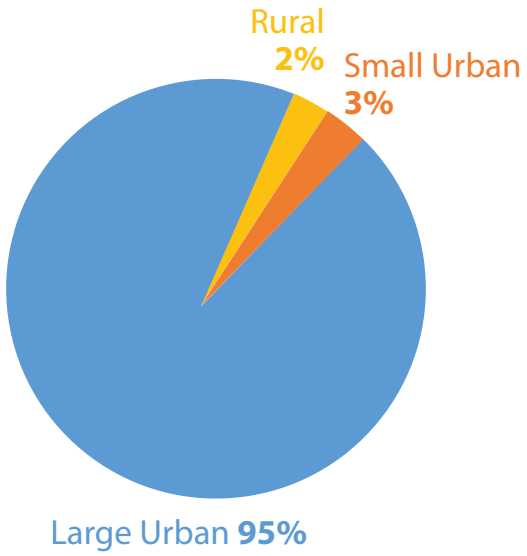
Diverse Areas

The AMPA can be subdivided into different geographic areas: Large Urban, Small Urban, Rural, and Tribal - these are determined by Census data. When we superimpose crash statistics onto these different areas, we are able to identify the safety issues that are predominant in each.

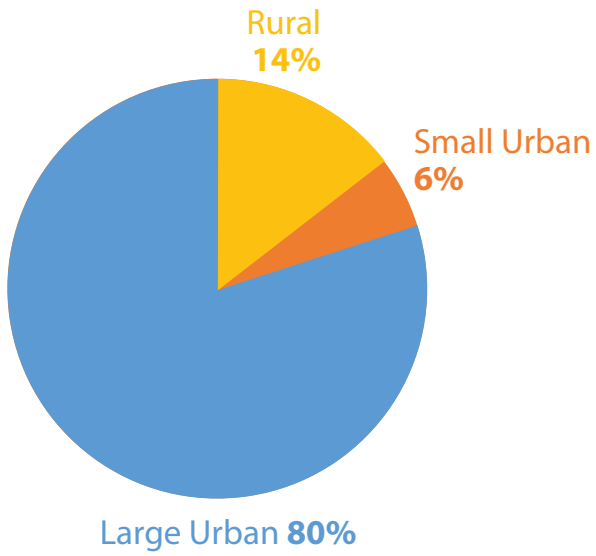
Rural areas experience a larger proportion of fatal crashes than other areas. Only 1.7% of all crashes occurred in the rural areas of the AMPA, yet 12.5% of all fatal crashes occurred in the rural areas. The top contributing factor for these fatalities is excessive speed, contributing to 20% of the deadly incidents. Other primary issues are driving left of center, and rollovers.

Small Urban Areas also have a disproportionately larger share of the region's fatal crashes, as illustrated by the graphs on the next page,

AMPA Total Crashes 2011-2015
by Geographic Area



AMPA Fatal Crashes 2011-2015
by Geographic Area



Intersections Crash Rates

ntersections crash rates are calculated by taking the total number of crashes for a certain intersection, and dividing it by the number of vehicles passing though that intersection (the approach volume, based on average daily traffic counts). The table on the next page shows the forty AMPA intersections with the highest fatal and injury crash rates.

Of the top twenty highest fatal and injury intersection locations, all except one fall within the Albuquerque urban area. Some of the areas around the UNM and CNM campuses where many people walk and bike should be priority areas for improving facilities for these modes of travel.

It is currently not possible to calculate pedestrian and bicycle crash rates at intersections because there is not enough data available. This is why the ranking of intersections for pedestrians and bicycle crashes is based on the total number of crashes as opposed to a crash rate.

These lists can provide a starting point to target future infrastructure improvements and also serve as potential candidates for intersection showcase projects (page 21).

Severe Intersection Crash Rates (Fatal and Injury Crashes) 2011-2015

Intersection 1	Intersection 2	ADT Average	Pedestrian Crashes	Bicycle Crashes	Total Crash Rate	Severe Crash Rate
OLD AIRPORT RD.	COTTONWOOD DR.	750	0.00	0.00	13.15	3.65
PASEO DEL NORTE	COORS BLVD.	37411	2.00	1.00	7.03	2.01
PASEO DEL NORTE	JEFFERSON ST.	36233	1.00	1.00	6.74	1.59
CENTRAL AVE.	COORS BLVD.	47832	11.00	5.00	4.38	1.36
PASEO DEL NORTE RAMPS	2ND ST.	25898	0.00	0.00	5.37	1.31
OURAY RD.	COORS WEST FRONTAGE RD.	20255	0.00	0.00	4.71	1.24
SEQUOIA RD.	LADERA DR.	8817	1.00	0.00	2.55	1.18
I-40 SOUTH FRONTAGE R	PAN AMERICAN WEST	8078	0.00	0.00	2.71	1.15
MOUNTAIN RD.	PAN AMERICAN WEST	15444	0.00	0.00	2.13	1.14
7 BAR LOOP RD.	COORS BLVD.	20970	1.00	1.00	3.61	1.12
RAINBOW	UNSER	19047	0.00	0.00	2.53	1.06
MOUNTAIN RD.	3RD ST.	9445	0.00	0.00	2.32	1.04
I-40 NORTH FRONTAGE R	PAN AMERICAN WEST	7909	0.00	0.00	1.52	1.04
CENTRAL AVE.	98TH ST.	40067	4.00	0.00	3.57	1.03
GIBSON BLVD.	LOUISIANA BLVD.	15089	0.00	0.00	2.61	1.02
CENTRAL AVE.	UNSER BLVD.	39454	1.00	2.00	2.71	1.00
GOLD AVE.	3RD ST.	6186	3.00	2.00	2.66	0.97
MENAUL BLVD.	CHELWOOD PARK BLVD.	14694	2.00	0.00	1.72	0.97
I-40 S. FRONTAGE RD.	2ND/3RD ST.	14745	0.00	0.00	2.30	0.97
SILVER AVE.	4TH ST.	2866	0.00	0.00	3.44	0.96
MARQUETTE AVE.	2ND ST.	11148	1.00	1.00	2.26	0.93
OSUNA RD.	PAN AMERICAN EAST	8946	1.00	0.00	2.20	0.92
QUAIL RD.	COORS BLVD.	63245	4.00	0.00	2.89	0.92
PASEO DEL NORTE	UNSER	19146	0.00	0.00	3.15	0.92
CENTRAL AVE.	LOUISIANA BLVD.	46233	17.00	3.00	3.39	0.90
MONTANO	COORS BLVD.	68643	4.00	1.00	3.34	0.89
MOUNTAIN RD.	PAN AMERICAN EAST	10823	0.00	0.00	1.97	0.86
MONTGOMERY BLVD.	JUAN TABO BLVD.	44529	3.00	2.00	2.66	0.85
GOLD AVE.	7TH ST.	3240	0.00	0.00	1.69	0.85
HANOVER RD.	COORS BLVD.	41685	2.00	0.00	2.34	0.84
CENTRAL AVE.	SAN MATEO BLVD.	50929	17.00	5.00	2.79	0.83
CENTRAL AVE.	OLD COORS RD.	31148	0.00	0.00	2.99	0.81
GIBSON BLVD.	UNIVERSITY BLVD.	33466	2.00	0.00	2.67	0.80
LOMAS BLVD.	JUAN TABO BLVD.	48788	2.00	5.00	3.21	0.80
MOUNTAIN RD.	BROADWAY BLVD.	18617	1.00	0.00	2.15	0.79
CENTRAL AVE.	JUAN TABO BLVD.	44198	9.00	5.00	2.02	0.79
CANDELARIA RD.	12TH ST.	15998	1.00	1.00	2.40	0.79
OSUNA RD.	SAN MATEO BLVD.	41966	1.00	2.00	2.28	0.78
LOMAS BLVD.	LOUISIANA BLVD.	48091	4.00	2.00	2.34	0.77
GOLD AVE.	2ND ST.	7837	4.00	2.00	2.38	0.77
LADERA DR.	UNSER BLVD.	36786	0.00	0.00	2.26	0.76
CENTRAL AVE.	EUBANK BLVD.	56310	10.00	1.00	2.75	0.75
MONTGOMERY BLVD.	SAN MATEO BLVD.	73575	20.00	3.00	3.00	0.74
ALAMEDA BLVD.	WYOMING BLVD.	12575	0.00	0.00	1.35	0.74
CARMEL AVE.	WYOMING BLVD.	18498	2.00	1.00	1.63	0.74
CENTRAL AVE.	YALE BLVD.	33560	8.00	6.00	2.84	0.73
BLAKE RD.	COORS BLVD.	26134	1.00	0.00	3.12	0.73
BRIDGE BLVD.	OLD COORS RD.	21672	1.00	1.00	2.15	0.73
ZUNI RD.	ALVARADO DR.	15723	2.00	1.00	1.92	0.73
ENCHANTED HILLS BLVD.	N.M. 528	28457	0.00	0.00	1.64	0.73
ILIFF RD.	COORS BLVD.	48561	5.00	0.00	2.30	0.72
AMERICAS PKWY/WINROCK	LOUISIANA BLVD.	42584	1.00	2.00	2.30	0.72
BLAKE RD.	UNSER BLVD.	14612	0.00	0.00	2.33	0.71
CENTRAL AVE.	COPPER/10TH	12363	2.00	0.00	1.91	0.71
CENTRAL AVE.	TRAMWAY BLVD.	37327	5.00	0.00	2.38	0.70
KING BLVD.	UNSER BLVD.	11858	1.00	0.00	1.48	0.69
CENTRAL AVE.	I-25 EAST FRONTAGE RD.	30095	1.00	0.00	2.18	0.69
IRVING BLVD.	COORS BLVD.	68113	1.00	0.00	2.34	0.69
DENNIS CHAVEZ	118TH	4791	1.00	0.00	2.17	0.69
ARENAL	UNSER	19963	0.00	0.00	1.89	0.69
MCLEOD RD.	SAN MATEO BLVD.	39942	2.00	2.00	2.14	0.69
RIO BRAVO BLVD.	COORS BLVD.	36869	3.00	0.00	2.90	0.68
PARADISE BLVD.	GOLF COURSE DR.	36993	1.00	0.00	2.41	0.68
PASEO DEL NORTE	SAN PEDRO DR.	55527	0.00	0.00	2.73	0.68
MOUNTAIN RD.	2ND ST.	10533	0.00	0.00	1.56	0.68
MENAUL BLVD.	PAN AMERICAN WEST	25155	1.00	0.00	1.29	0.68

*Crash rates may be inflated at both the Old Airport Road/Cottonwood Drive and Serafin Road/Eastside School Road intersections because these locations have low traffic volumes and even a modest number of crashes can inflate crash rates.
Also, some corridors that exhibit high crash incidences such as the Sandia Crest Rd, Avenida Cesar Chavez (The Pit, Isotopes Park, and University Stadium), Alameda Boulevard (Balloon Fiesta Park, and Bobby Foster Road (Dr. E.A. Swede Scholar Recreational Complex) could be event related and not necessarily facility related. Nevertheless, some of these areas still deserve further inspection.

Bicycle and Pedestrian Intersection Crashes 2011-2015

Intersection 1	Intersection 2	ADT Average	Pedestrian Crashes	Bicycle Crashes	Ped+Bike	Total Crash Rate	Severe Crash Rate
MONTGOMERY BLVD.	SAN MATEO BLVD.	73575	20.00	3.00	23.00	3.00	0.74
CENTRAL AVE.	SAN MATEO BLVD.	50929	17.00	5.00	22.00	2.79	0.83
CENTRAL AVE.	LOUISIANA BLVD.	46233	17.00	3.00	20.00	3.39	0.90
CENTRAL AVE.	COORS BLVD.	47832	11.00	5.00	16.00	4.38	1.36
CENTRAL AVE.	JUAN TABO BLVD.	44198	9.00	5.00	14.00	2.02	0.79
CENTRAL AVE.	YALE BLVD.	33560	8.00	6.00	14.00	2.84	0.73
CENTRAL AVE.	EUBANK BLVD.	56310	10.00	1.00	11.00	2.75	0.75
LOMAS BLVD.	JUAN TABO BLVD.	48788	2.00	5.00	7.00	3.21	0.80
LOMAS BLVD.	LOUISIANA BLVD.	48091	4.00	2.00	6.00	2.34	0.77
GOLD AVE.	2ND ST.	7837	4.00	2.00	6.00	2.38	0.77
ILIFF RD.	COORS BLVD.	48561	5.00	0.00	5.00	2.30	0.72
CENTRAL AVE.	TRAMWAY BLVD.	37327	5.00	0.00	5.00	2.38	0.70
MONTANO	COORS BLVD.	68643	4.00	1.00	5.00	3.34	0.89
GOLD AVE.	3RD ST.	6186	3.00	2.00	5.00	2.66	0.97
MONTGOMERY BLVD.	JUAN TABO BLVD.	44529	3.00	2.00	5.00	2.66	0.85
CENTRAL AVE.	98TH ST.	40067	4.00	0.00	4.00	3.57	1.03
QUAIL RD.	COORS BLVD.	63245	4.00	0.00	4.00	2.89	0.92
MCLEOD RD.	SAN MATEO BLVD.	39942	2.00	2.00	4.00	2.14	0.69
RIO BRAVO BLVD.	COORS BLVD.	36869	3.00	0.00	3.00	2.90	0.68
PASEO DEL NORTE	COORS BLVD.	37411	2.00	1.00	3.00	7.03	2.01
CARMEL AVE.	WYOMING BLVD.	18498	2.00	1.00	3.00	1.63	0.74
ZUNI RD.	ALVARADO DR.	15723	2.00	1.00	3.00	1.92	0.73
CENTRAL AVE.	UNSER BLVD.	39454	1.00	2.00	3.00	2.71	1.00
OSUNA RD.	SAN MATEO BLVD.	41966	1.00	2.00	3.00	2.28	0.78
AMERICAS PKWY/WINROCK	LOUISIANA BLVD.	42584	1.00	2.00	3.00	2.30	0.72
MENAUL BLVD.	CHELWOOD PARK BLVD.	14694	2.00	0.00	2.00	1.72	0.97
HANOVER RD.	COORS BLVD.	41685	2.00	0.00	2.00	2.34	0.84
GIBSON BLVD.	UNIVERSITY BLVD.	33466	2.00	0.00	2.00	2.67	0.80
CENTRAL AVE.	COPPER/10TH	12363	2.00	0.00	2.00	1.91	0.71
PASEO DEL NORTE	JEFFERSON ST.	36233	1.00	1.00	2.00	6.74	1.59
7 BAR LOOP RD.	COORS BLVD.	20970	1.00	1.00	2.00	3.61	1.12
MARQUETTE AVE.	2ND ST.	11148	1.00	1.00	2.00	2.26	0.93
CANDELARIA RD.	12TH ST.	15998	1.00	1.00	2.00	2.40	0.79
BRIDGE BLVD.	OLD COORS RD.	21672	1.00	1.00	2.00	2.15	0.73
SEQUOIA RD.	LADERA DR.	8817	1.00	0.00	1.00	2.55	1.18
OSUNA RD.	PAN AMERICAN EAST	8946	1.00	0.00	1.00	2.20	0.92
MOUNTAIN RD.	BROADWAY BLVD.	18617	1.00	0.00	1.00	2.15	0.79
BLAKE RD.	COORS BLVD.	26134	1.00	0.00	1.00	3.12	0.73
KING BLVD.	UNSER BLVD.	11858	1.00	0.00	1.00	1.48	0.69
CENTRAL AVE.	I-25 EAST FRONTAGE RD.	30095	1.00	0.00	1.00	2.18	0.69
IRVING BLVD.	COORS BLVD.	68113	1.00	0.00	1.00	2.34	0.69
DENNIS CHAVEZ	118TH	4791	1.00	0.00	1.00	2.17	0.69
PARADISE BLVD.	GOLF COURSE DR.	36993	1.00	0.00	1.00	2.41	0.68
MENAUL BLVD.	PAN AMERICAN WEST	25155	1.00	0.00	1.00	1.29	0.68
OLD AIRPORT RD.	COTTONWOOD DR.	750	0.00	0.00	0.00	13.15	3.65
PASEO DEL NORTE RAMPS	2ND ST.	25898	0.00	0.00	0.00	5.37	1.31
OURAY RD.	COORS WEST FRONTAGE RD.	20255	0.00	0.00	0.00	4.71	1.24
I-40 SOUTH FRONTAGE R	PAN AMERICAN WEST	8078	0.00	0.00	0.00	2.71	1.15
MOUNTAIN RD.	PAN AMERICAN WEST	15444	0.00	0.00	0.00	2.13	1.14
RAINBOW	UNSER	19047	0.00	0.00	0.00	2.53	1.06
MOUNTAIN RD.	3RD ST.	9445	0.00	0.00	0.00	2.32	1.04
I-40 NORTH FRONTAGE R	PAN AMERICAN WEST	7909	0.00	0.00	0.00	1.52	1.04
GIBSON BLVD.	LOUISIANA BLVD.	15089	0.00	0.00	0.00	2.61	1.02
I-40 S. FRONTAGE RD.	2ND/3RD ST.	14745	0.00	0.00	0.00	2.30	0.97
SILVER AVE.	4TH ST.	2866	0.00	0.00	0.00	3.44	0.96
PASEO DEL NORTE	UNSER	19146	0.00	0.00	0.00	3.15	0.92
MOUNTAIN RD.	PAN AMERICAN EAST	10823	0.00	0.00	0.00	1.97	0.86
GOLD AVE.	7TH ST.	3240	0.00	0.00	0.00	1.69	0.85
CENTRAL AVE.	OLD COORS RD.	31148	0.00	0.00	0.00	2.99	0.81
LADERA DR.	UNSER BLVD.	36786	0.00	0.00	0.00	2.26	0.76
ALAMEDA BLVD.	WYOMING BLVD.	12575	0.00	0.00	0.00	1.35	0.74
ENCHANTED HILLS BLVD.	N.M. 528	28457	0.00	0.00	0.00	1.64	0.73
BLAKE RD.	UNSER BLVD.	14612	0.00	0.00	0.00	2.33	0.71
ARENAL	UNSER	19963	0.00	0.00	0.00	1.89	0.69
PASEO DEL NORTE	SAN PEDRO DR.	55527	0.00	0.00	0.00	2.73	0.68
MOUNTAIN RD.	2ND ST.	10533	0.00	0.00	0.00	1.56	0.68

Functional Classification

When evaluating crashes, the type of roadway is also taken into consideration. MRMPO is required by law to identify major roadways within the region. Functional Classification is the system used to do that and requires an understanding of how a roadway functions within the metropolitan area.

The main roadway categories are Interstate, Arterials, Collectors, and Locals. Locals are neighborhood streets. In this report, the term "Major Roads" includes all arterial and collector roadways, excluding interstates and local roads.*

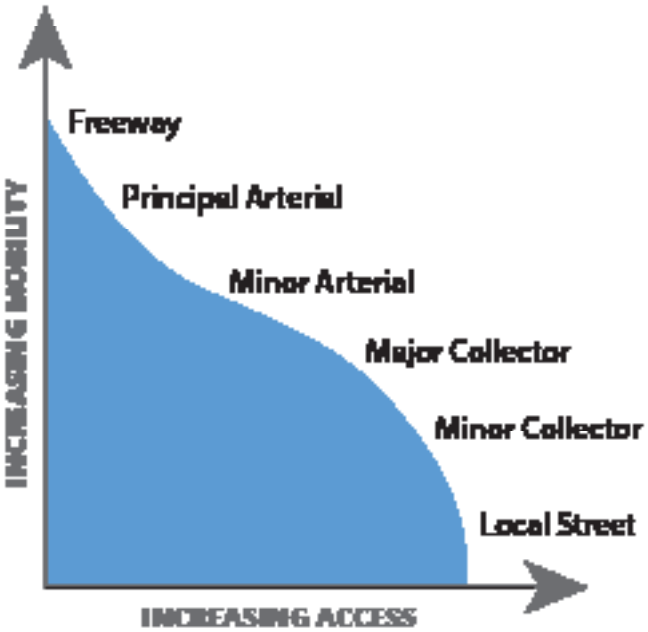


Image source: FHWA

Crash Statistics Related to Major Roads

- 95% of fatalities occur on Interstates and Major Roads.
- 78% of fatalities and 80% of injuries occur on our Major Roads. Major Roads comprise 35% of our total lane miles.
- 63% of fatalities occur on Arterials in the Urban Area. Arterials compose 15% or our total lane miles.

A common misconception is that the design of the roadway is dictated by its functional classification, but this isn't always the case. **In fact, the National Association of City Transportation Officials (NACTO), states that the functional classification system is unsuitable as a design control because it does not consider the diversity of land uses and travel characteristics throughout an area.** A better option is for local jurisdictions to develop their own street design system based on local usage, built environment, and modal priorities, or to use MRMPO's Long Range Transportation System (LRTS) guide.

The intersection of two Principal Arterials: San Mateo and Montgomery Boulevards

*These are the roadways that are available for local entities to apply for federal funding through the MPO.

High Fatal and Injury Network (HFIN)

The previous section shows the need is high for safety improvements in our transportation system. Funding to accomplish improvements is limited. This makes it imperative to be selective about where safety funds are spent. Identifying the most dangerous streets and intersections will allow us to focus our efforts there, ensuring we get the biggest bang for our "safety buck." Below, two networks are presented that can help guide future decision making regarding where to implement safety strategies and where to invest limited funding.

The HFIN includes fatal and injury crashes per mile and fatal and injury intersection crash rates for every Major Road in the AMPA. (Interstates were not included because they are maintained and operated by the NMDOT and accounted for in the State Highway Safety Plan.)

The HFIN was developed by reviewing each geographic area: Large Urban, Small Urban, Rural (which includes Tribal) individually then calculating the mean (of either the intersection rate by volume or the crashes per mile). Intersections and roadways included in the HFIN experience ***twice*** the mean crash rate.

Pedestrian crashes at intersections were analyzed using a total number of crashes as opposed to a rate.

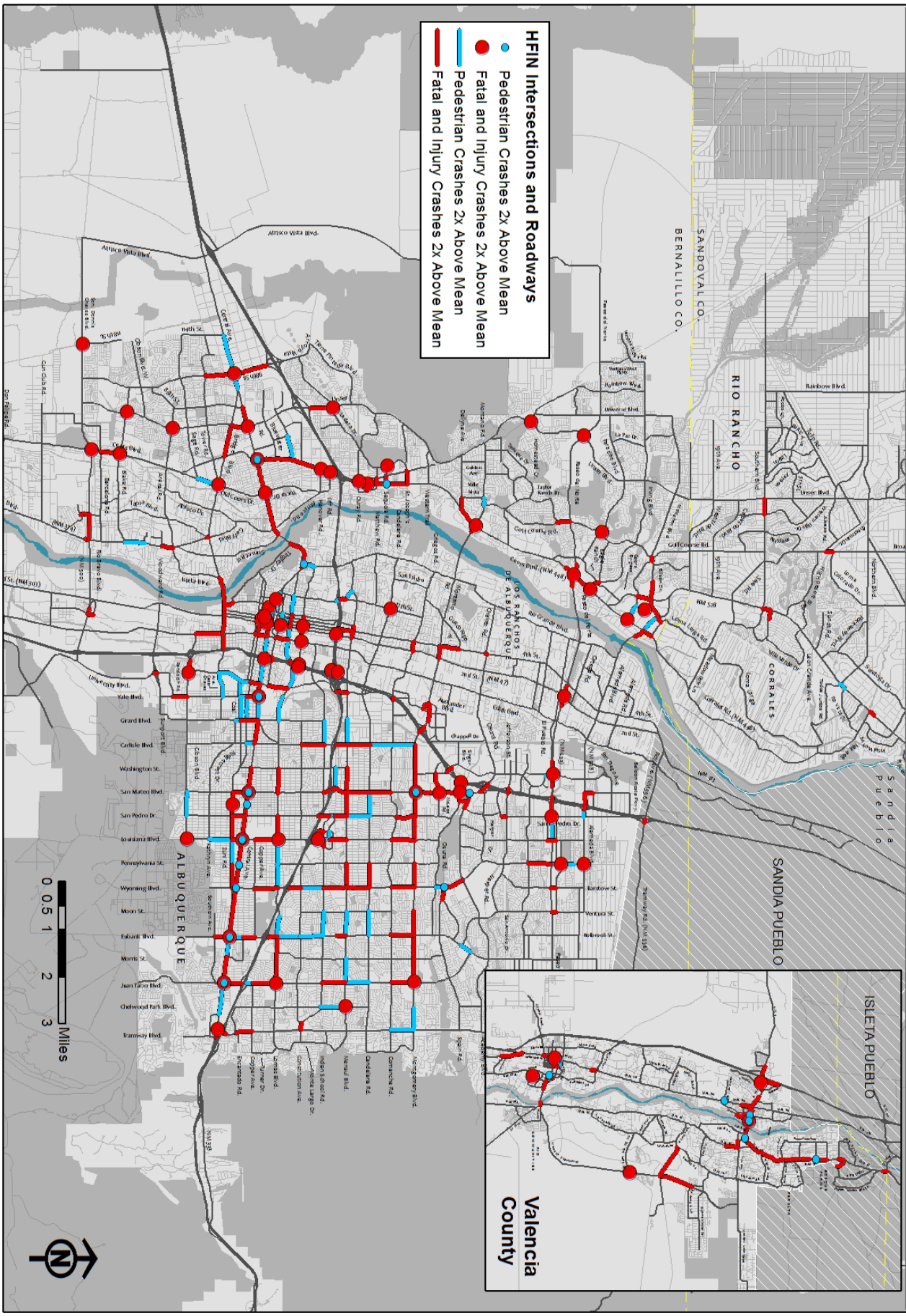
The High Fatal and Injury Network

- Includes only 7% of the Major Roads Network miles (and 2% of all roads), but 64% of the total fatalities and injuries.
- Shows that most fatalities occur on Principal Arterials in the Large Urban area, followed by Interstates in the Large Urban area, and then Collectors in the Rural Area.*

*Per mile of roadway, Small Urban Arterials become more prominent, but are still outweighed by Large Urban Arterials and Interstates.

Source: Bike Michigan Share the Road

High Fatality and Injury Network (HFIN) for the Albuquerque Metropolitan Planning Area (AMPA)



Look for Me Corridors

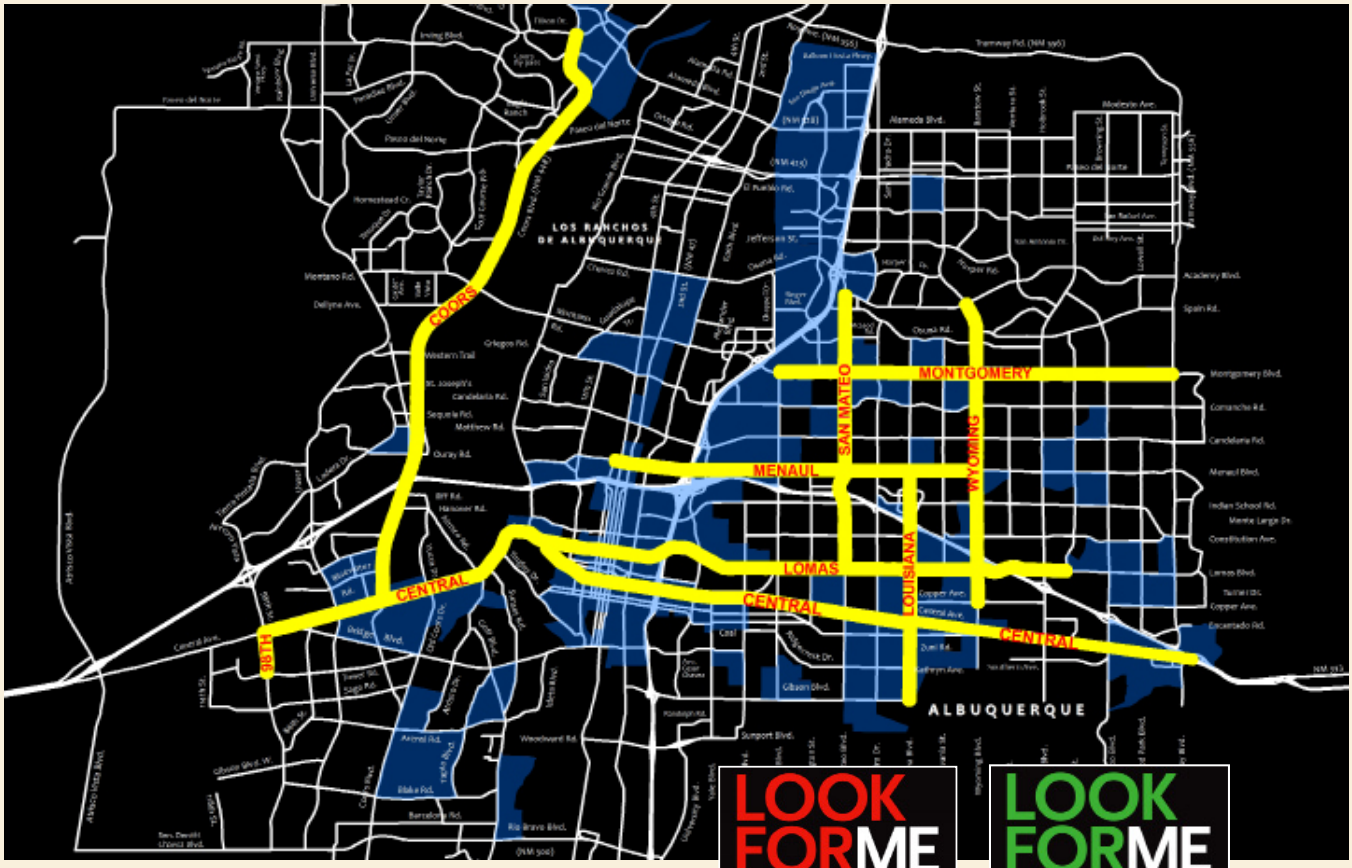
Look For Me Corridors are high crash risk travel corridors coupled with high frequency transit travel corridors. The frequency of transit along these routes is ~30 minutes or less during peak travel times. The incidence of transit buses involved in crashes is very low, but every transit trip begins and/or ends with a walking, rolling, or biking trip. This makes improving multimodal safety on and near transit corridors critical.

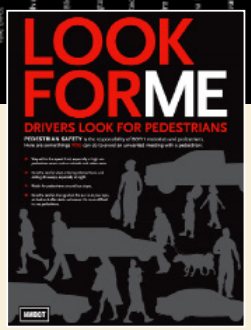
The goal of the Look For Me campaign is to help reduce traffic conflicts through travel safety education and by cultivating a climate of well-being for everyone using the road.

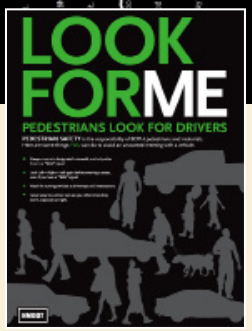
The blue areas on the map indicate low income families with fewer-than-average or no cars per household. In these areas further education and design improvements for transit and pedestrians could be made.

Analysis from the RTSAP identified Look For Me Corridors as locations where further education around the slogan of "Keep Streets Safe For Everyone-Here's How!" could be implemented.

This includes encouraging behaviors like reducing speed, using turn signals, stopping sooner, and leaving room for pedestrians in crosswalks, not parking in bike lanes, and not being distracted by cell phone use or other activities in the car. For pedestrian and bicyclist education, it includes tips like using marked and unmarked crosswalks when crossing the street, and riding the same direction as traffic.







Look For Me Map above, and some of the behavior-modification campaign materials to the right

INTERSECTION SHOWCASE

Locations within the top 40 fatal and injury intersections and the top 20 pedestrian and bicycle crash intersections would be good candidates for a showcase project. The showcase project could use more innovative intersection geometry and national best practices. Sometimes our communities have a difficult time imagining innovative changes to our streets, so a showcase project would provide an on the ground example of safety improvements that people can experience first hand. Ideal locations would have high occurrence of not only vehicle crashes, but also high numbers of bicycle and pedestrian crashes. These showcase projects should be multi-modal and include innovations such as bicycle signals, flashing yellow arrows conditional to a pedestrian call, bicycle detection, separation of pedestrian crossing from turning vehicular traffic, and pedestrian refuges.

Candidate: San Mateo and Montgomery

San Mateo and Montgomery would be a good candidate for a showcase project because it has high vehicular traffic, the highest number of pedestrian crashes, and also high transit use. This site is located immediately adjacent to a high school, has heavy foot-traffic, and transit stops on all approaches, so it also serves as major transit transfer area. The showcase project could be used to demonstrate to the public new approaches that could provide safety benefits without overly significant degradation in operations or perhaps combined with traffic signal improvements.

There are great examples across the country where safer intersection concepts have been implemented. One example pictured here is from Salt Lake City, Utah. This project was part of a larger deployment of design features along 200 West. Some of the improvements include protected bicycle lanes, bicycle signals, and separate bicycle/pedestrian crossings at the intersection where vehicle traffic stopped farther back from the intersection giving all roadway users better visibility of each other. More examples exist in Austin, TX, and Davis, CA, and Caltrans developed design guidance for this type of intersection.

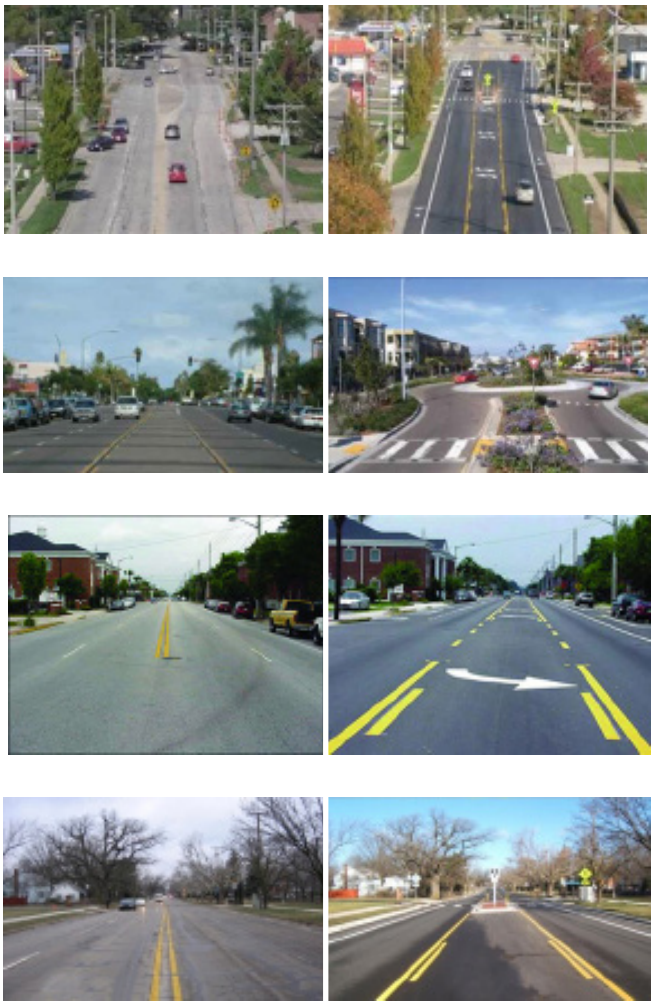
Road Diets

A road diet is essentially a reallocation of roadway space that aims to reduce dangerous speeding and improve infrastructure for vulnerable road users. The most common type of road diet takes an undivided four lane roadway and reconfigures it into a three-lane roadway, with one travel lane in each direction and a two-way left turn lane in the center. This reconfiguration decreases conflict points and opens up space for bicycle lanes and/or parking spaces in each direction of travel. The bike and/or parking lane also provides pedestrians with a traffic buffer increasing their comfort on the road.

The needs of our communities evolve over time, and our street design should, too. That's the idea behind a road diet, or 'rightsizing streets:' reconfiguring the layout of our streets to better serve the people who use them, whether they're commuters driving, shoppers walking, or children bicycling. Road diets have become more popular in recent years as evidence of their safety benefits mount.

New guides have been written to support local governments in successfully implementing road diets. In 2014, the FHWA released its Road Diet Informational Guide, followed by the New Mexico Department of Transportation's Road Diet Guide in 2016. This new guidance and interest spurred MRMPO to further investigate how this strategy could be used in the AMPA.

"Before and After" Road Diet Examples from Across the Nation



Benefits of Road Diets

According to the USDOT, road diets can **reduce traffic crashes** to a very large degree. In small urban areas with populations around 17,000 and roadways with traffic volumes up to 12,000 (daily volume), post-road-diet crashes dropped about 47%. In larger metropolitan areas with populations around 269,000 and roadways with traffic up to 24,000 (daily volume), the crash reduction was roughly 19%.

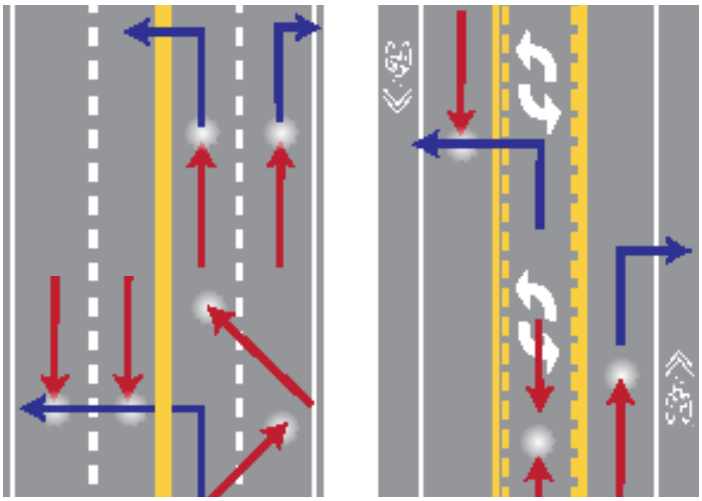
The combined estimate from all the best studies predicts that accidents will decline an average of 29% after a four-to-three-lane road diet.

Other benefits of road diets include an **increase in bicycle and pedestrian traffic**. This is because road diets open up space for biking and walking. The addition of bike lanes and crossing islands also increase feelings of safety for bicyclists and pedestrians

Also, post-road-diet **vehicle speeds decline.** This is especially true for speeders going more than 5 miles per hour over the limit. Traffic volumes, meanwhile, typically stay even in post-road diet situations: some drivers are diverted to other parts of the street network, while the rest quickly soak up any vacated space.

Reduction in Number of Conflict Points with Four To Three Lane Road Diet

Source: FHWA



BEFORE **AFTER**

Road diets can create **opportunities**: Albuquerque has more than 400 miles of bikeways and trails, but many do not connect. Bicycle lanes on the side of roadways often end abruptly forcing bicyclists to mix with vehicular traffic, which is dangerous and discourages people from using them. Investing in connected and protected or separated bicycling infrastructure increases people's comfort level with this mode of transportation. A national survey of the largest metros found that about 51% are interested in biking, but not confident enough to do so.

"But, road diets increase congestion!"

On roads used by fewer than 20,000 vehicles per day, road diets actually have a minimal or even positive impact on vehicle capacity. Left-turning vehicles, delivery trucks, police enforcement, and stranded vehicles can move into a center lane or bike lane, which eliminates double-parking and reduces crash risks.
(Source: completestreets.org)

Cost

The types of changes involved in road diets don't cost very much when compared to other transportation infrastructure investments. When timed with regular road maintenance and re-paving, little more than paint is needed to re-stripe lanes. They're about as cheap and cost-effective as infrastructure improvements get.

One reason why communities are hesitant to implement road diets (aside from general car reliance) may be that caution is suggested when implementing road diets on corridors that carry more than 20,000 cars a day. But, even though some major urban roads can't slim down overnight without creating traffic problems, road diets have worked in New York City and on roadways with over 30,000 daily traffic trips. It's critical to review each potential road diet candidate and not deploy a one

Lane Narrowing

Improvements can sometimes also be made without removing travel lanes. In some cases, traffic lanes are wider than needed, which can induce speeding. The New York City Department of Transportation recently reported that, when it narrowed traffic lanes to accomodate bike lanes, traffic flows remained strong, while safety increased. A different approach, but the same outcome as a road diet.

ALBUQUERQUE EXAMPLE

Central Avenue was given a road diet between 8th Street and San Pasquale in 2011.

Crashes

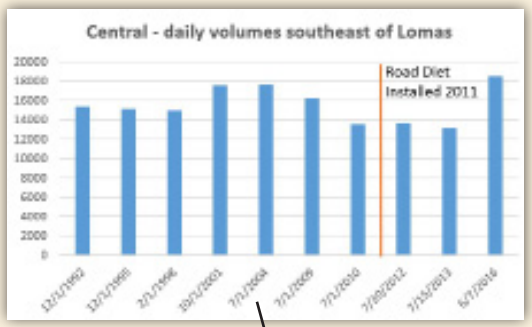
In the two years after the Central Avenue change, there was a 2% increase in overall crashes along the road diet corridor, but a ***31% decrease in injury crashes***. For some context, in the AMPA as a whole, property damage only (PDO) increased 27% from 2012 to 2015, and the number of ***injury crashes increased by 51%***.

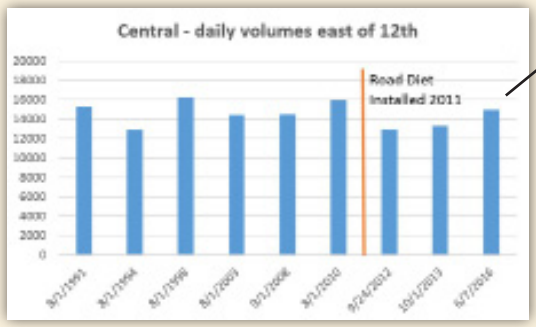
Most importantly, after the road diet, there were fewer crashes attributed to the most dangerous contributing factors, such as running red lights, speeding, and improper overtaking. Preliminary traffic and safety data seem to indicate that these types of projects work just as well in the AMPA as they do elsewhere.

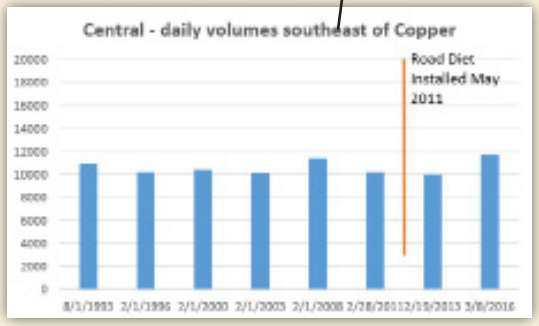
Volumes

Historical traffic data on the four segments subject to the reconfiguration show that average weekday traffic (AWDT) dipped slightly after the road diet (during a period coinciding with the Great Recession) and have since recovered to previous traffic levels. 2016 traffic counts even show some of the highest traffic volumes ever recorded on these sections of roadway.

	Road Diet	*Installed 2011*	
Crash Type	**2009-2010 Annual Average**	**2012-2013 Annual Average**	**Change**
Fatal Crashes	0	0	0
Injury Crashes	8	5.5	-31%
PDO	20.5	24	17%
TOTAL	29	29.5	2%







Selecting Road Diet Candidates

MRMPO identified roadways that are good candidates for changing the roadway reconfiguration in the AMPA. In some cases, there may be opportunities for lanes to be narrowed as not every reconfiguration has to include decreasing the number of lanes. The preliminary determination of candidates is a data driven process that considers traffic volume and crash rates on all major roads in the region. Average weekday traffic (AWDT) is the first step in determining locations for possible road diets. The Federal Highway Administration (FHWA) suggests that roadways with 20,000 vehicles per day or less are good candidates for road diets from four (4) lanes to three (3) lanes, but different agencies across the country have different thresholds that they find acceptable.

MRCOG adopted the FHWA suggestion of 20,000 Average Weekday Traffic (AWDT) as the upper limit for four to three lane changes. The FHWA has no guidance on AWDT thresholds for converting six lane or larger roadways to five lanes (two lanes in each direction and a center turn lane).

Analysis found that while many four lane roads in the region support over 35,000 vehicles a day, others are underused.

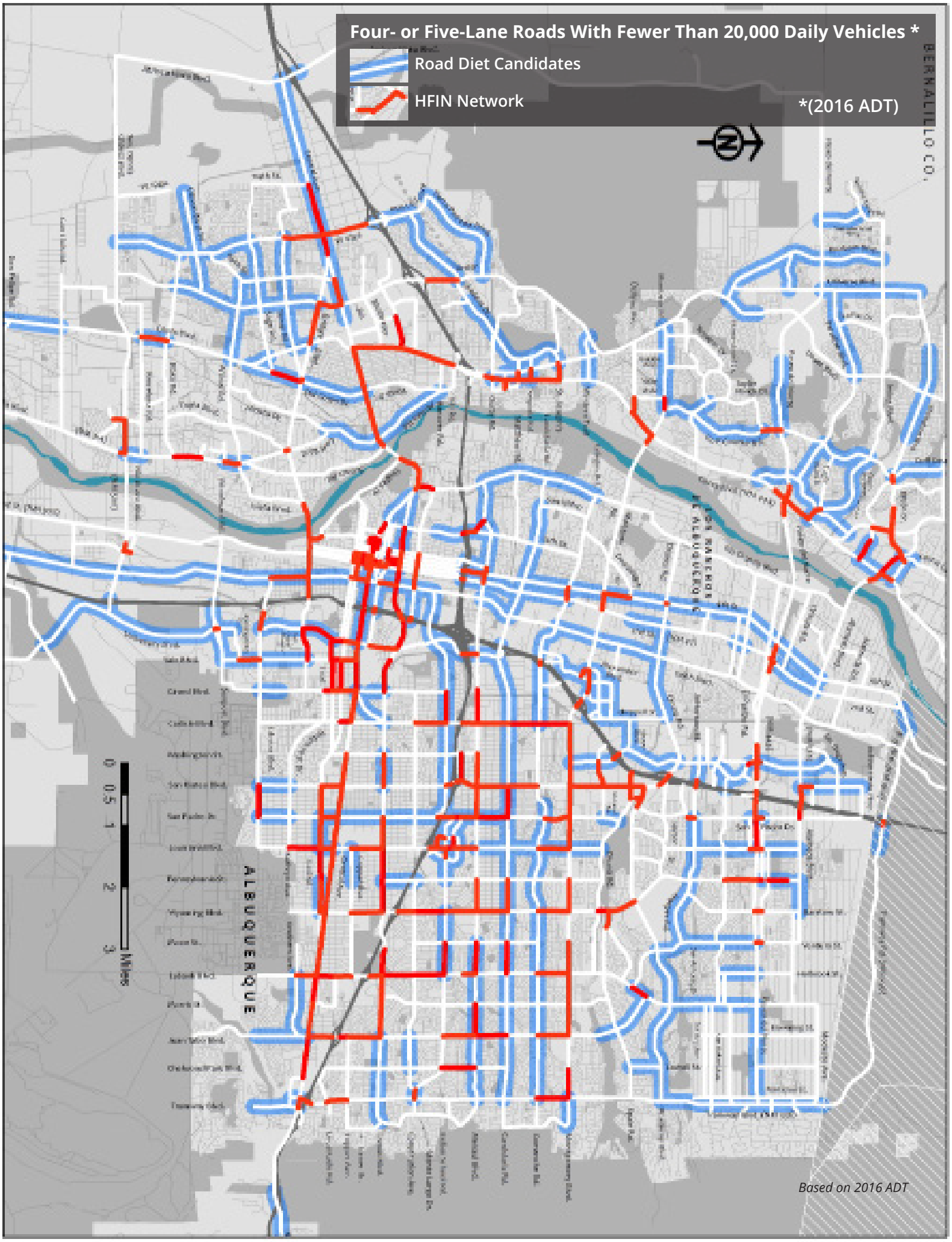
San Pedro Avenue Road Diet

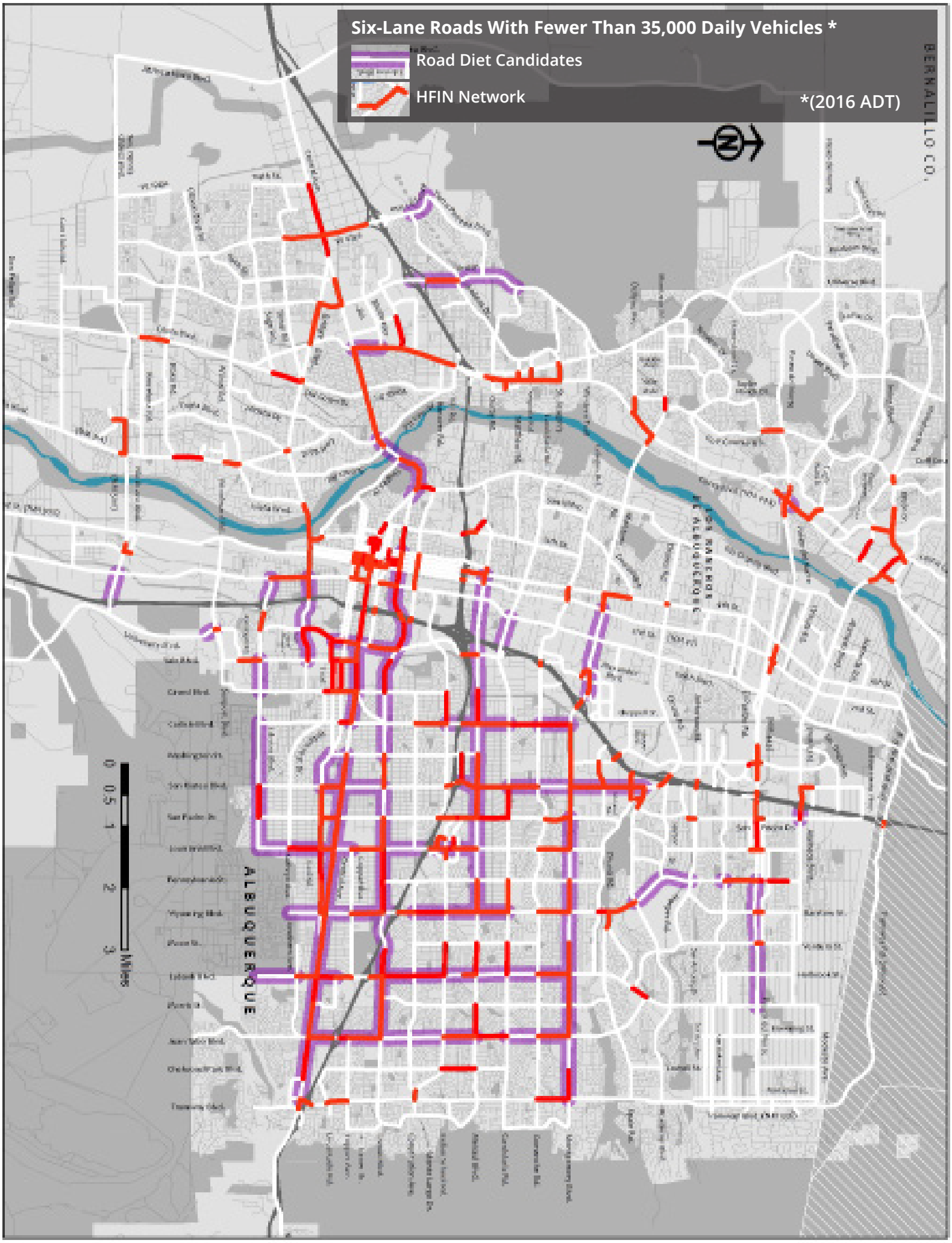
Source: Google Street View

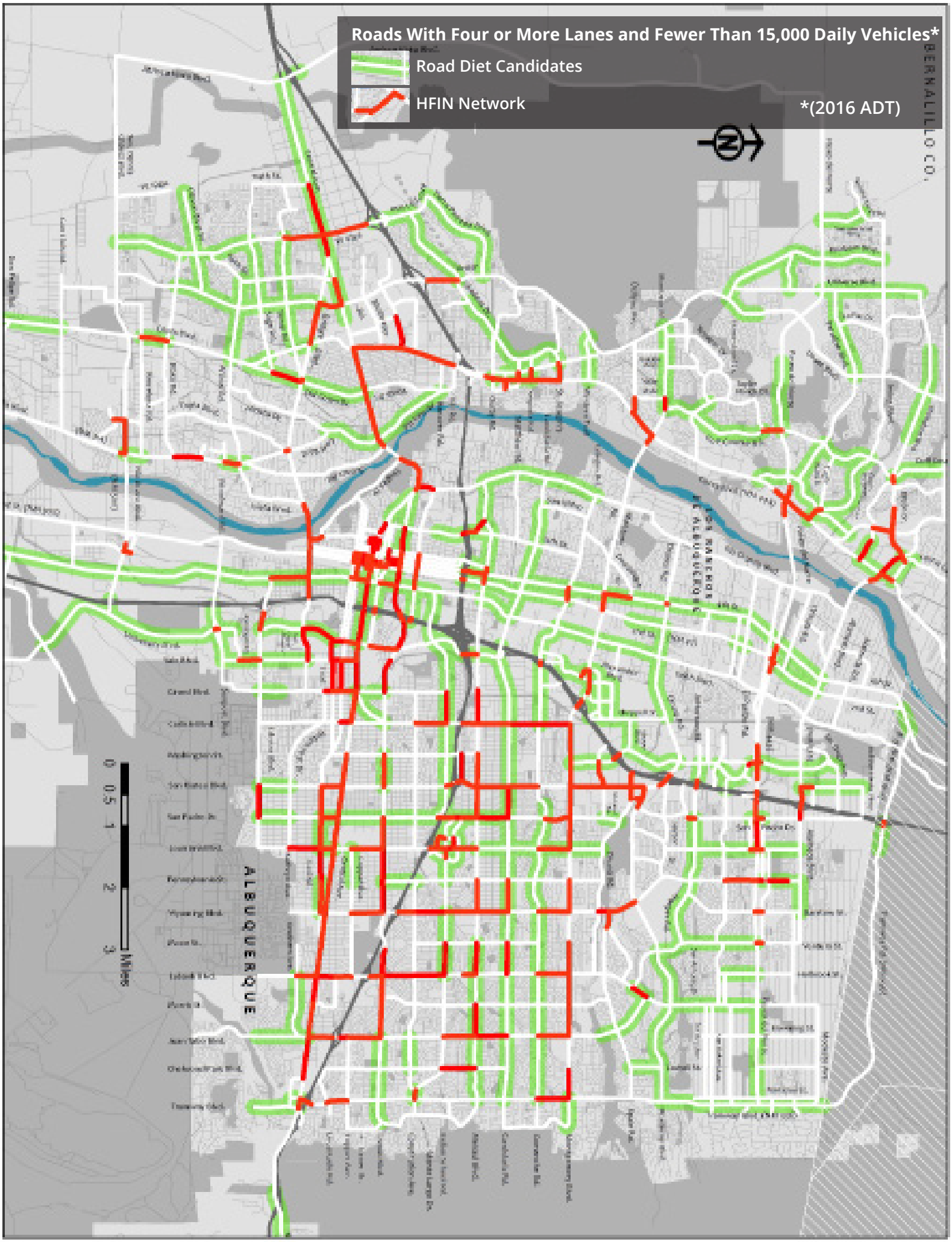
Case Study: La Jolla Blvd., San Diego, Ca.

In 2007, construction on a road diet began on La Jolla Blvd. through the Bird Rock Community of San Diego. Average speeds along the four lane thoroughfare were 40mph before the road diet. After the road diet, average speeds came down to 19 mph, while volumes stayed roughly the same (23,000 a day before to 22,000 a day after). After the road diet, there was a 90% reduction in traffic accidents, a 77% drop in noise levels, and a 30% growth in retail sales. Businesses report that the increase in sales is due to greater visibility due to the lower speeds and more on street parking. (Steuteville, 2018).

Source: CNU


Four- or Five-Lane Roads With Fewer Than 20,000 Daily Vehicles *
Road Diet Candidates
HFIN Network
*(2016 ADT)
BERNALILLO CO.
ALBUQUERQUE
0 0.5 1 2 3
Miles
Based on 2016 ADT


Six-Lane Roads With Fewer Than 35,000 Daily Vehicles *
Road Diet Candidates
HFIN Network
*(2016 ADT)
BERNALILLO CO.
ALBUQUERQUE
Miles
0 0.5 1 2 3


Roads With Four or More Lanes and Fewer Than 15,000 Daily Vehicles*
Road Diet Candidates
HFIN Network
*(2016 ADT)
ALBUQUERQUE
BERNALILLO CO.
0 0.5 1 2 3
Miles

Road Diet Maps

The maps on the previous pages shows roadways with low average daily traffic volumes (compared to their capacity) and high fatal and injury crash rates. These two factors combined can help regional decision makers find potential road diet candidates. It is important to note that the road diet map only points out potential candidates to be considered for further study. Before a road diet is undertaken, there should be an in-depth analysis of the corridor's suitability for roadway reconfiguration. Other considerations are the land use context, whether or not there is on-street parking, whether there is heavy transit use along the roadway, or if the project might fill a gap in the bike network.

When a road does not experience above-average crashes, implementing a road diet may still be a good decision because of its many benefits, including the potential to add facilities for bicyclists and buffers for pedestrians.

Indian School is an example of a roadway that provides an important link on the bike system network, which might make it a good candidate for a road diet even though it doesn't have the highest risk ranking.

Another important policy to look at for streets within the City of Albuquerque is the ABC to Z Comprehensive Plan, which identifies the intended character of some of these roadways. Central east of Louisiana and Montgomery are identified as a Major Transit Corridors, and Wyoming and Menaul are identified as Multi-Modal Corridors. These designations should be a part of the decision making process.

Where a below-capacity roadway coincides with the High Fatal and Injury Network, MRMPO strongly suggests local agencies explore the possibility of a road diet to enhance safety and mobility.

Let's Take Action!

The philosophy behind Vision Zero is that traffic fatalities and serious injuries are preventable. There is no one silver bullet to achieve zero. To effect change and increase safety on our roadways for everyone, we not only have to be bold, but we also need to start looking at problems from a different angle.

Part 2 of the RTSAP explores the six emphasis areas that were identified for the AMPA based on the thorough data analyses, and stakeholder and public input presented above. Also provided in Part 2 are extensive action items for each of these emphasis areas.

1. **Reduce excessive speed and dangerous driving**
2. **Design streets for all modes of travel**
3. **Implement meaningful behavior change campaigns**
4. **Expand data collection and traffic management**
5. **Ensure Strong Policy and Funding Mechanisms**
6. **Provide targeted traffic enforcement**

Focusing our efforts on the above six areas will help our region achieve the following five-year goals:

1. A year over year reduction in fatal and injury crashes:
   a. at high priority corridors and intersections
   b. related to excessive speed and dangerous driving
   c. involving pedestrian and bicyclists
   d. involving alcohol and drugs
2. An overall 5 to 10% reduction of the above categories of fatal and injury crashes over the next 5 years
3. A year over year increase in the levels of comfort and safety experienced by bicyclists and pedestrians out in traffic
4. Complete streets approach incorporated by all future construction projects from inception to construction