

2021 RTSP

MADRID TRANSPORTATION SAFETY PLAN



LEE ENGINEERING

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Source: Santa Fe NM True (<https://santafenmtrue.com/media/files/DayTripImage2.jpg>)

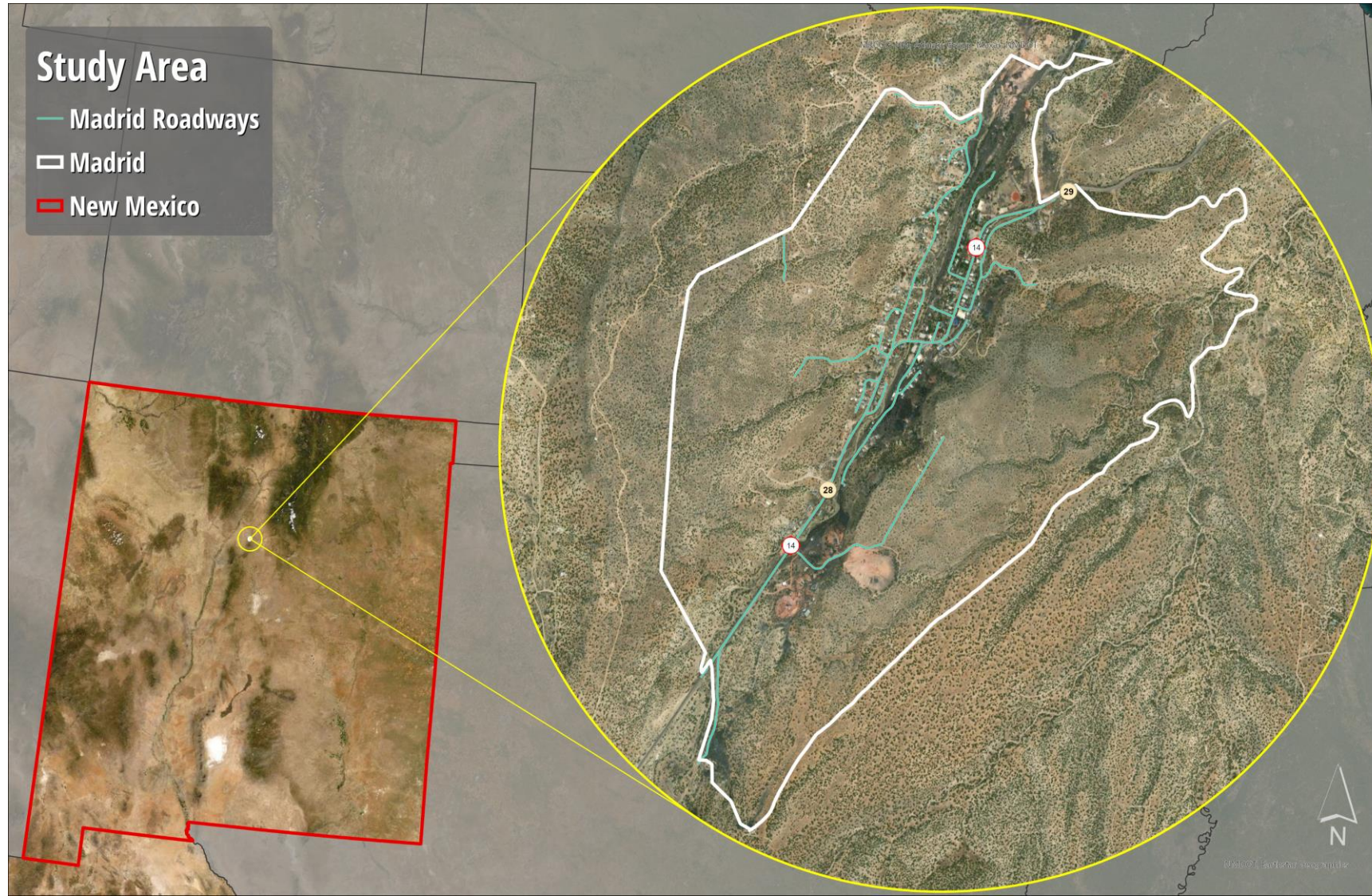
INTRODUCTION



SCHEDULE

Data Collection and Preliminary Analysis	February 2021
Stakeholder Meeting #1	March 25 th , 2021
Public Meeting #1	March 31 st , 2021
Analysis and Preliminary Identification of Countermeasures	April 2021
Stakeholder Meeting #2	May 5th, 2021
Findings & Recommendations	May 2021
Public Meeting #2	June 2021
Community-wide Multimodal Safety Plan	July 2021

STUDY AREA



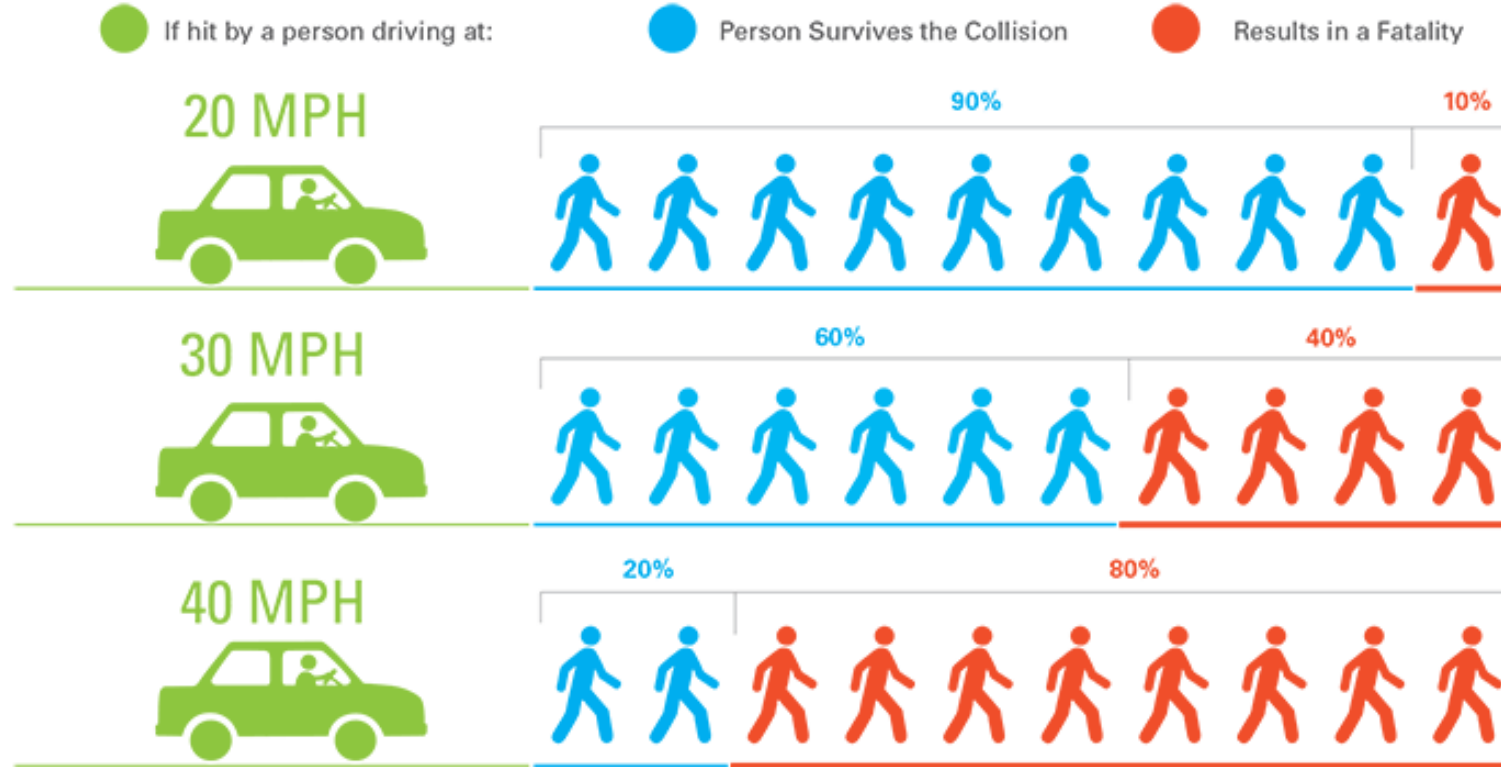
PROJECT WEBPAGE

- <https://leeengineering.com/madrid/>
- Link for Public Meeting #2 will be available here

The screenshot shows the top of the website with the Lee Engineering logo and navigation links: Home, About, Services, Careers, News & Events, and Contact. Below the navigation is a breadcrumb trail: Home // Madrid Transportation Safety Plan Information. The main content area features three logos: the New Mexico Department of Transportation, Lee Engineering, and Santa Fe County. A paragraph of text describes the project: "The New Mexico Department of Transportation, in partnership with Santa Fe County and Lee Engineering is currently initiating a community-wide transportation safety plan for the village of Madrid. The six-month planning process will culminate in a plan to enhance safety and mobility for all roadway users; pedestrians, bicyclists, and motorists." Another paragraph explains the page's purpose: "Please use this page to access presentation materials, recordings, and meeting summaries from previous meetings. Also, the details for June's public meeting and the link to register and attend will be posted here in the weeks leading up to the meeting. The intent of this page is to keep the community of Madrid informed during the project's duration. Upon completion of the project, the content on this page will be removed. The final report will be available through NMDOT." A third paragraph thanks visitors: "Thank you for your interest and support as we work to improve roadway safety in the village of Madrid!" Below this are three expandable sections: "Public Meetings" with a link to "Public Meeting #1 | View Here"; "Public Downloads" with a link to "Public Meeting #1 PPT - Download Here"; and "Project Schedule" which contains a table of activities and dates.

ACTIVITY	DATE
Data Collection and Preliminary Analysis	February 2021
Public Meeting #1	March 31st, 2021
Analysis and Preliminary Identification of Countermeasures	April 2021
Findings & Recommendations	May 2021

VEHICLE SPEED AND PEDESTRIAN SAFETY



<https://www.ite.org/technical-resources/topics/speed-management-for-safety/speed-as-a-safety-problem/>

TIERED APPROACH

Tier 1

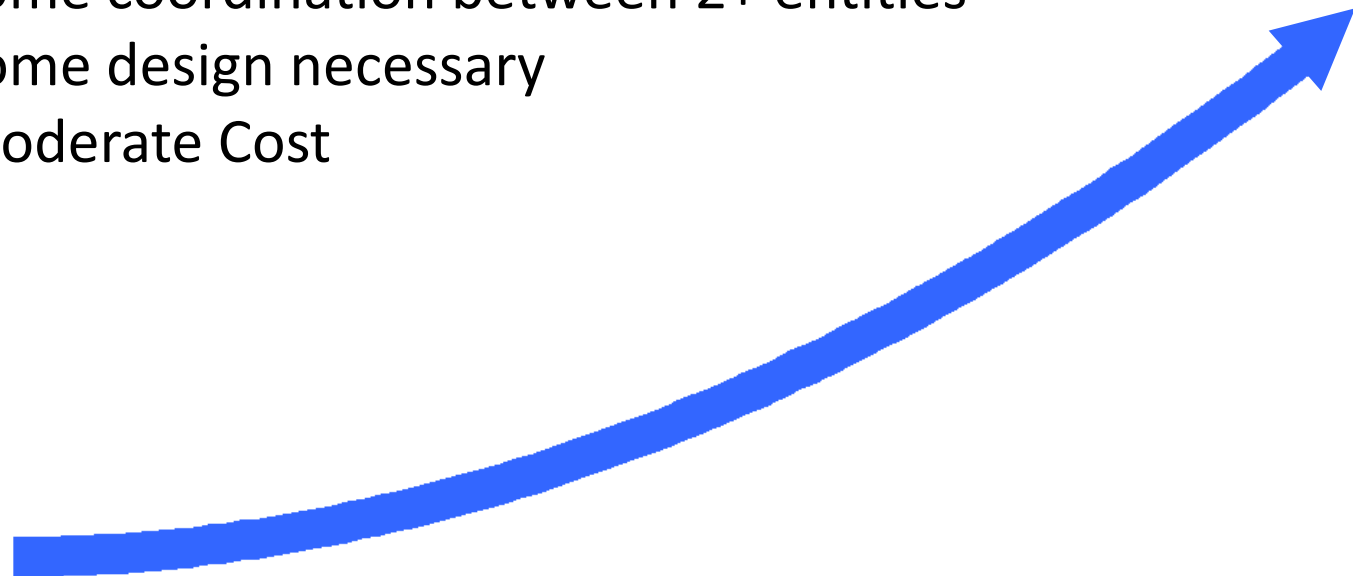
- Near-term (≈ 6 mos.)
- No coordination
- Maintenance
- Low Expense

Tier 2

- Mid-term (≈ 1 yr.)
- Some coordination between 2+ entities
- Some design necessary
- Moderate Cost

Tier 3

- Long Term ($\approx 2+$ yr.)
- May require environmental clearance
- Results in Request for Bid
- Necessary to utilize multiple funding avenues



COUNTERMEASURE TOOLBOX



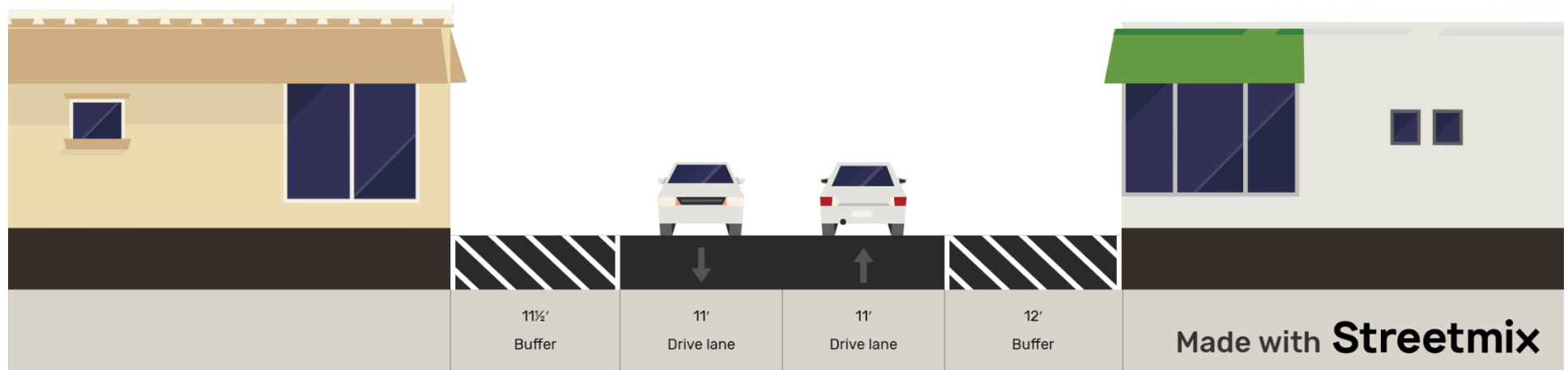
OBSERVED CHALLENGES

Speeding

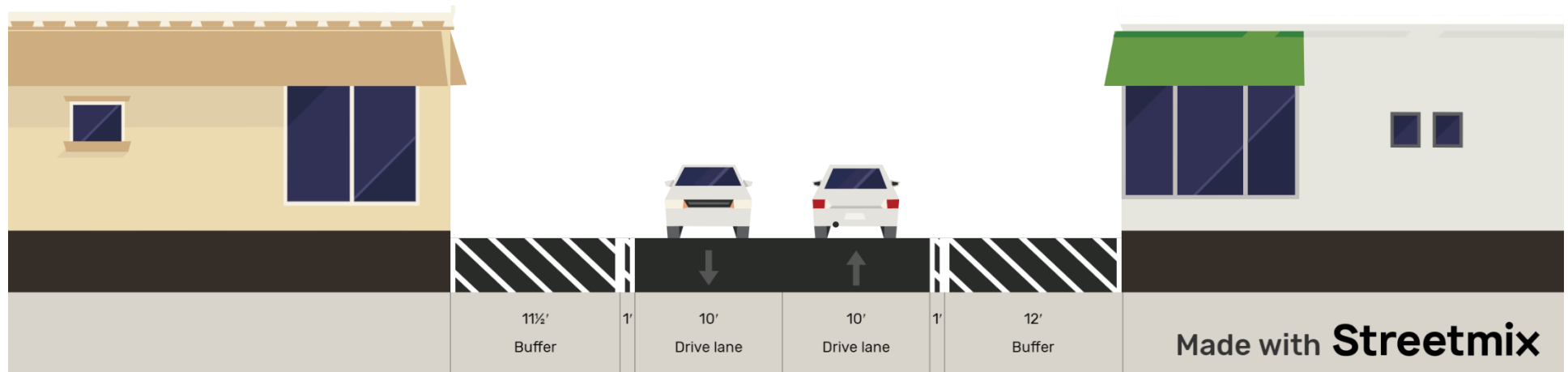


VISUALLY NARROW DRIVING LANES

Existing

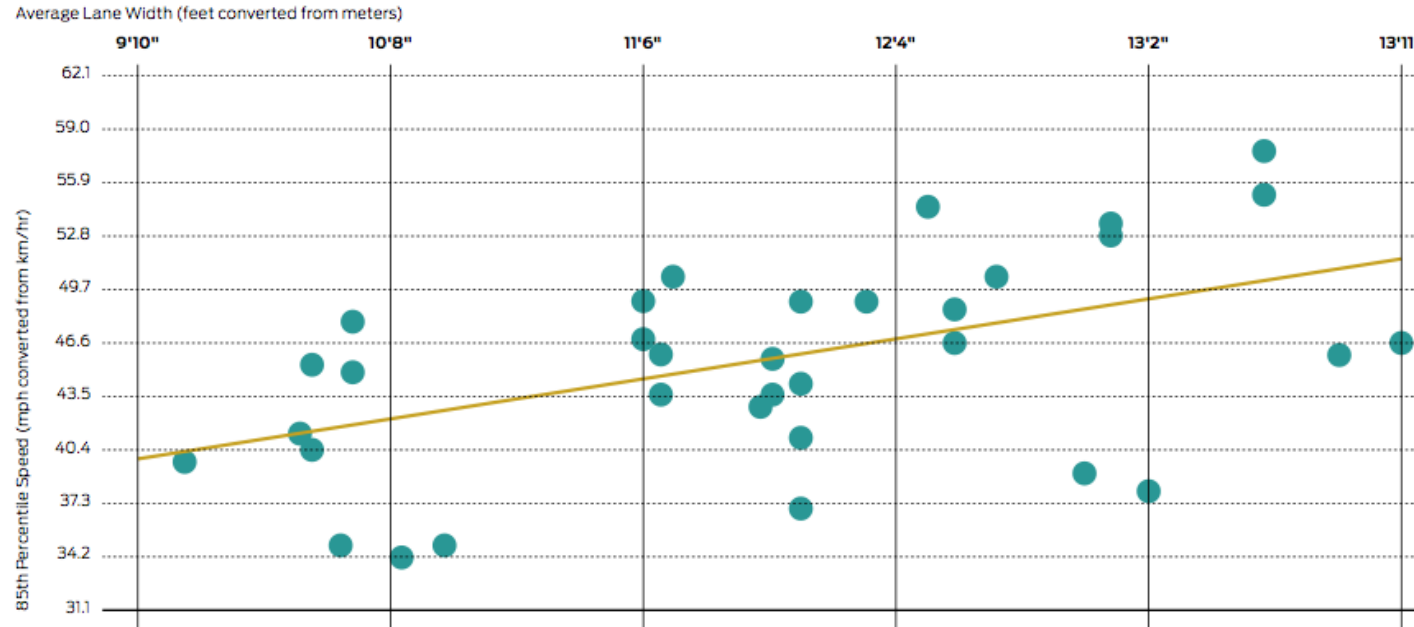


Proposed



VISUALLY NARROW DRIVING LANES

Wider travel lanes are correlated with higher vehicle speeds.



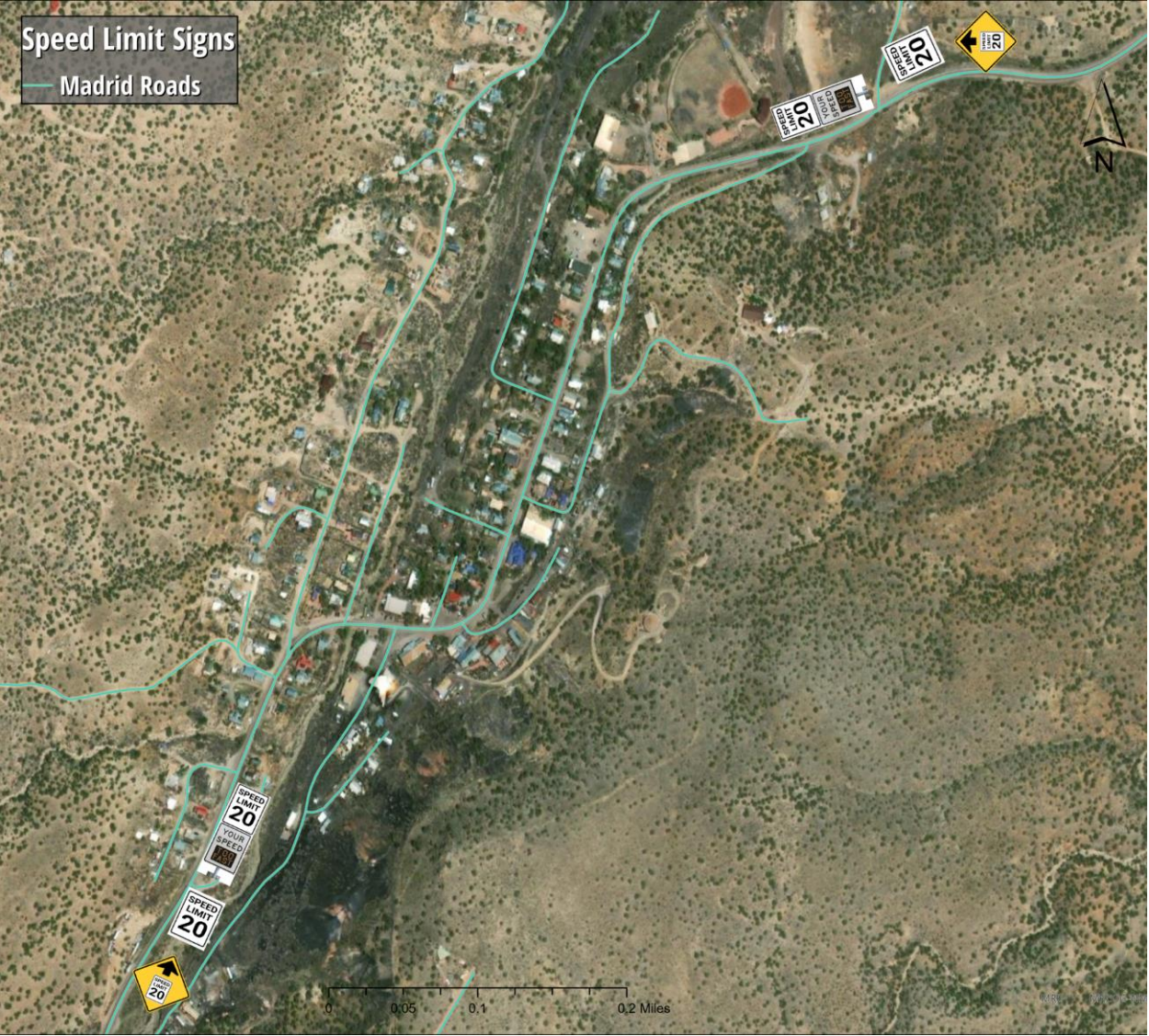
"As the width of the lane increased, the speed on the roadway increased... When lane widths are 1 m (3.3 ft) greater, speeds are predicted to be 15 km/h (9.4 mph) faster."

Chart source: Fitzpatrick, Kay, Paul Carlson, Marcus Brewer, and Mark Wooldridge, 2000. "Design Factors That Affect Driver Speed on Suburban Streets." *Transportation Research Record* 1751: 1B-25.

— Regression Line
● 85th Percentile Speed of Traffic

Source: https://nacto.org/wp-content/themes/sink_nacto/views/design-guides/retrofit/urban-street-design-guide/images/lane-width/wider-travel-lanes-graph.png

OVERSIZED WARNING SIGNS



OVERSIZED SPEED LIMIT SIGNS



OVERSIZED WARNING SIGNS

Existing



36" x 36"

Single Lane/Multi-Lane
Conventional Road

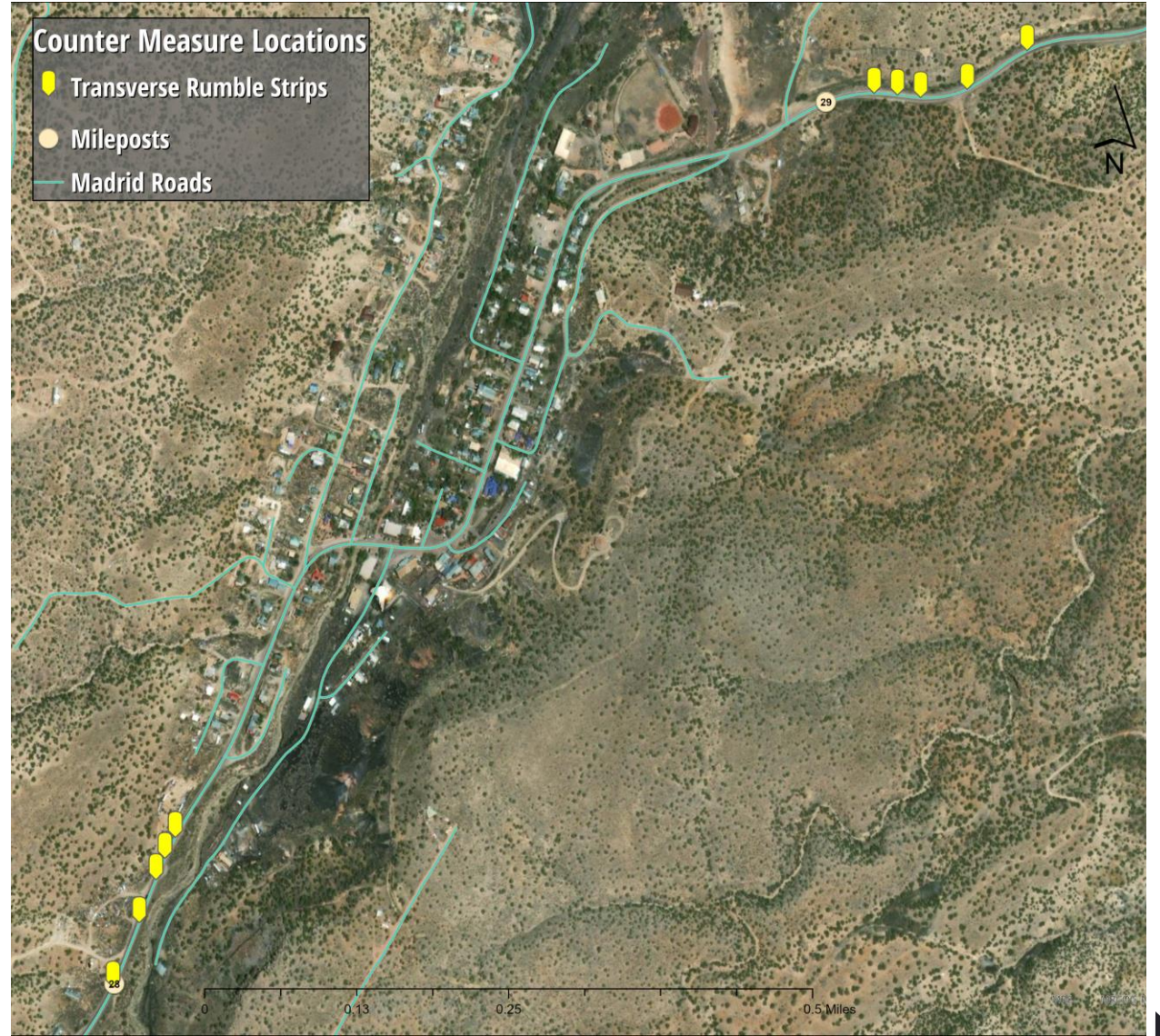
Oversized



48" x 48"

Expressway/Freeway

TRANSVERSE RUMBLE STRIPS

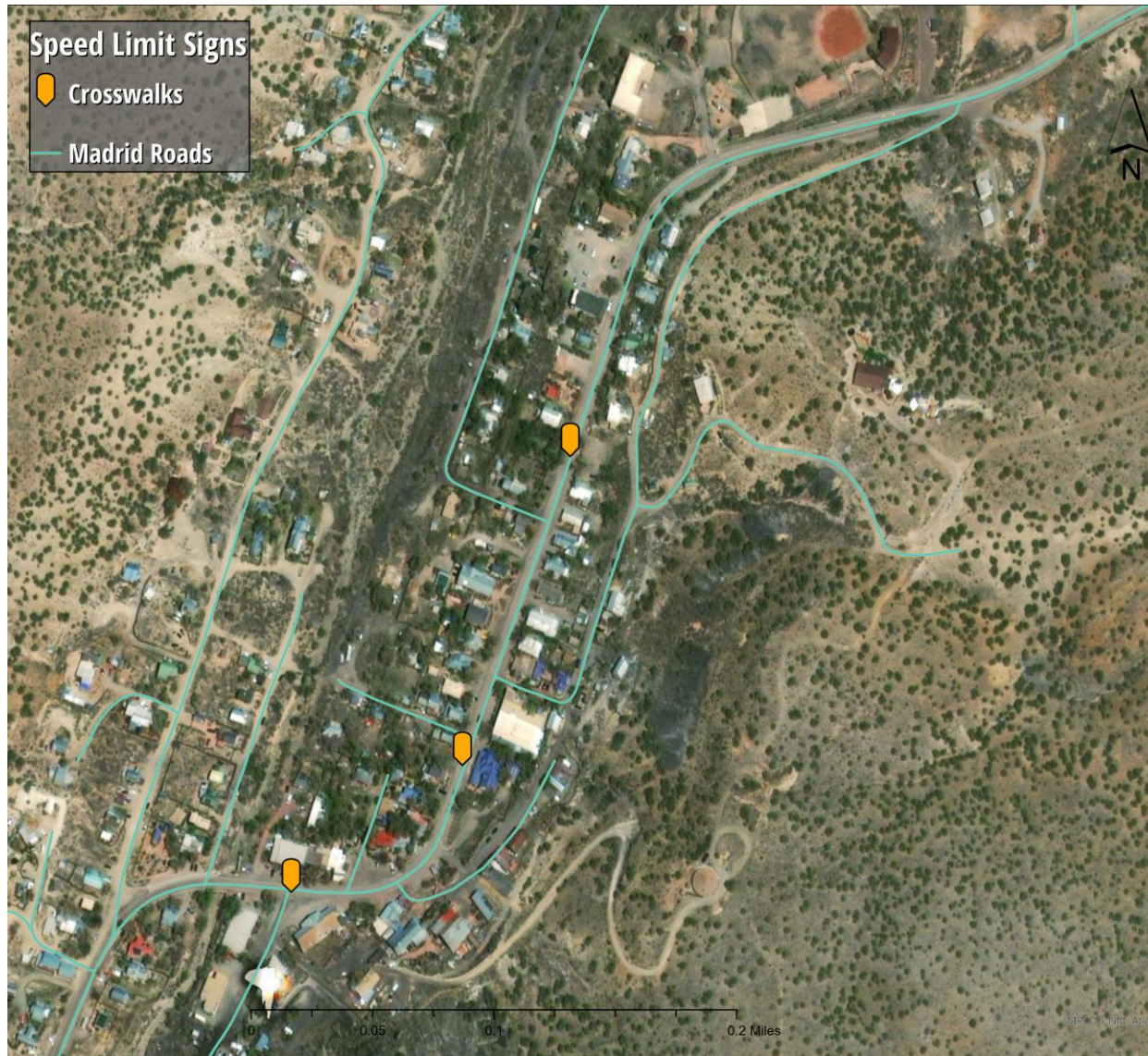


OBSERVED CHALLENGES

Pedestrian Facilities



CROSSWALKS



MARKED CROSSWALKS



GATEWAY TREATMENTS FOR CROSSWALKS



Source: MDOT, User Guide for R1-6 Gateway Treatment for Pedestrian Crossings Updated (2019)

RECTANGULAR RAPID-FLASHING BEACON (RRFB)



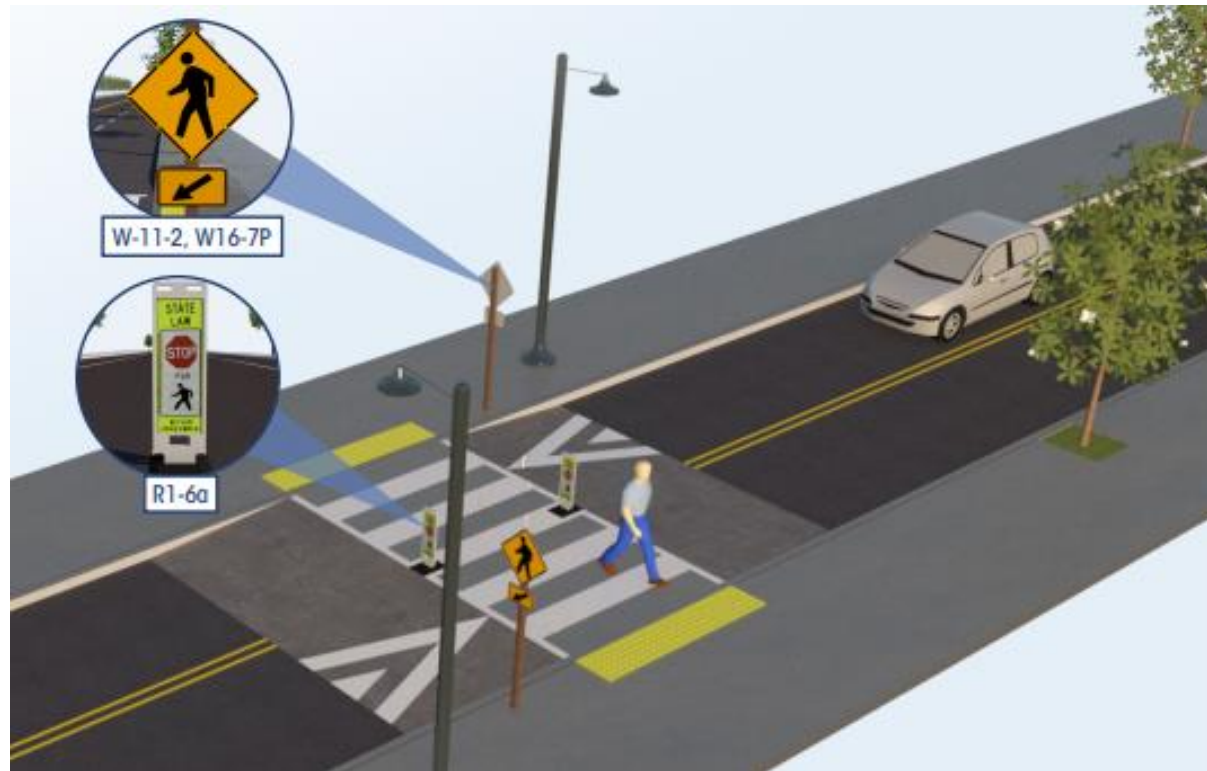
Source: <https://www.youtube.com/watch?v=pxUspTKKR0>

PEDESTRIAN REFUGE ISLANDS



Source: NACTO, Urban Street Design Guide (2013)

SPEED TABLE CROSSINGS



Source: https://safety.fhwa.dot.gov/ped_bike/step/docs/TechSheet_RaisedCW_508compliant.pdf

Counter Measure Locations

- Mileposts
- Sidewalk/Multi-use Path
- Madrid Roads



SIDEWALK/WALKWAY



Source: <https://ruraldesignguide.com/physically-separated/sidewalk>

LIGHTED BOLLARDS



Source: NPS, Grand Canyon National Park - Visitor Center Footpath Lighting (2021)

BOARDWALK RESTORATION



OBSERVED CHALLENGES

Parking



PARKING COUNTER MEASURES

- Trailblazing
 - RV Parking
 - Alternative Parking Areas
 - Off-street Parking
- Parking area shuttle
- Right of Way/NMDOT Airspace

COMMUNITY INITIATIVES

- Address Mine Shaft Tavern public facility easement
- Railroad Right of Way for recreational trails
- Transit Facility Enhancement
 - NCRTD turquoise trail route
 - Peak-season transit schedule
- Community Gateways on N and S approaches

TIER 1 SUMMARY

Challenge	Countermeasure	Location
Worn, Inconspicuous Lane Striping	Refresh Center Line, Edge Line Striping	Through town
Speed Compliance	Visually Narrow Driving Lanes	Through town
Speed Compliance	Oversized Speed Limit/Warning Signs	Approaches to town
Speed Compliance	Speed Limit Zone	Approaches to town
Speed Compliance	Transverse Rumble Strips	Approaching 20 MPH speed zone Identify high volume and natural crossing points.
Pedestrian Safety	Marked Crosswalks	Suggestions: Near arroyo Near Bridge Road Near Cave Road
Pedestrian Safety	R1-6 Gateway treatments	Proposed Crosswalks

TIER 2 SUMMARY

Challenge	Countermeasure	Location
Pedestrian Safety	Rectangular Rapid Flashing Beacons (RRFBs)	Proposed Crosswalks
Speed Compliance Pedestrian Safety	Speed Table Crossings	Proposed Crosswalks
Pedestrian Safety	Sidewalk/Multi-use Path	Westside of NM-14 from Johnsons to Trading Bird Gallery
Pedestrian Safety	Lighted Bollards	Along Proposed Sidewalk/Multi-use Path

TIER 3 SUMMARY

Challenge	Countermeasure	Location
Pedestrian Safety Speed Compliance	Pedestrian Refuge Islands	Proposed crosswalk locations
Pedestrian Safety Parking Access	Boardwalk restoration	Existing boardwalk location

THANK YOU

QUESTIONS?