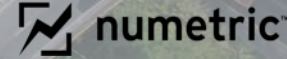




AASHTOWare™



SAFETY

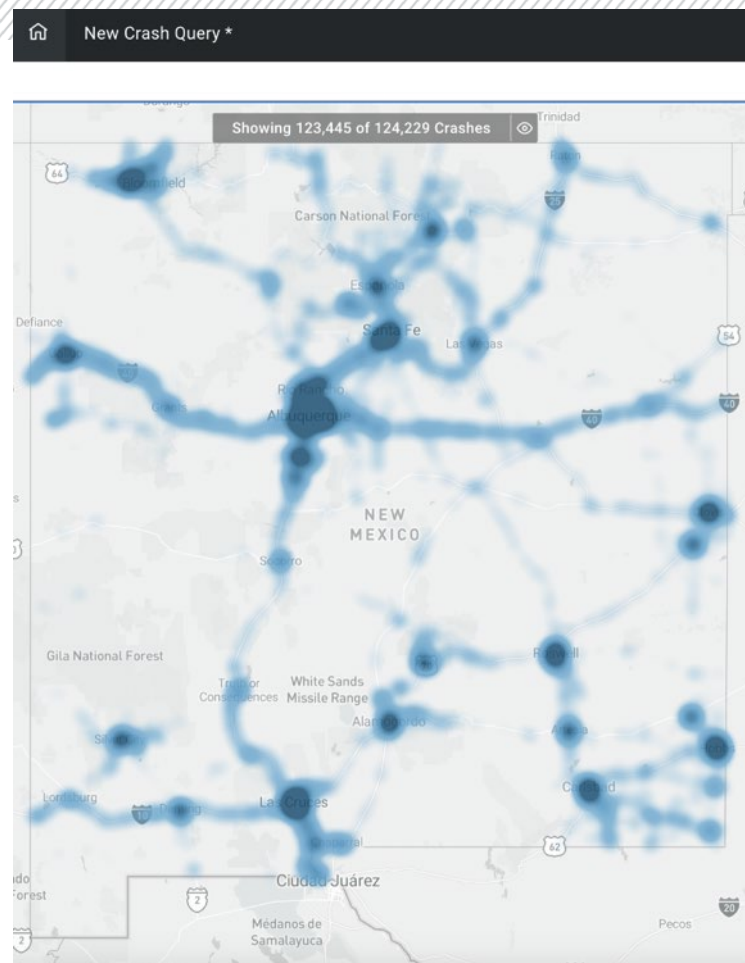


Using AASHTOWare Safety To Implement the Roadway Safety Management Process (HSM Part B) in New Mexico

Jason Coffey, Nancy Perea | NMDOT
Audra Engle, Lauren Miller | Numetric, Inc.
September 2025

Background

- AASHTOWare Safety powered by Numetric
- Implemented
 - Crash Query
 - Network Screening
 - Safety Analysis
 - Dashboards - SHSP Emphasis Area
- Crash Data available from January 1, 2013 to December 31, 2023
- The Crash Data in this tool comes from NM Traffic Records

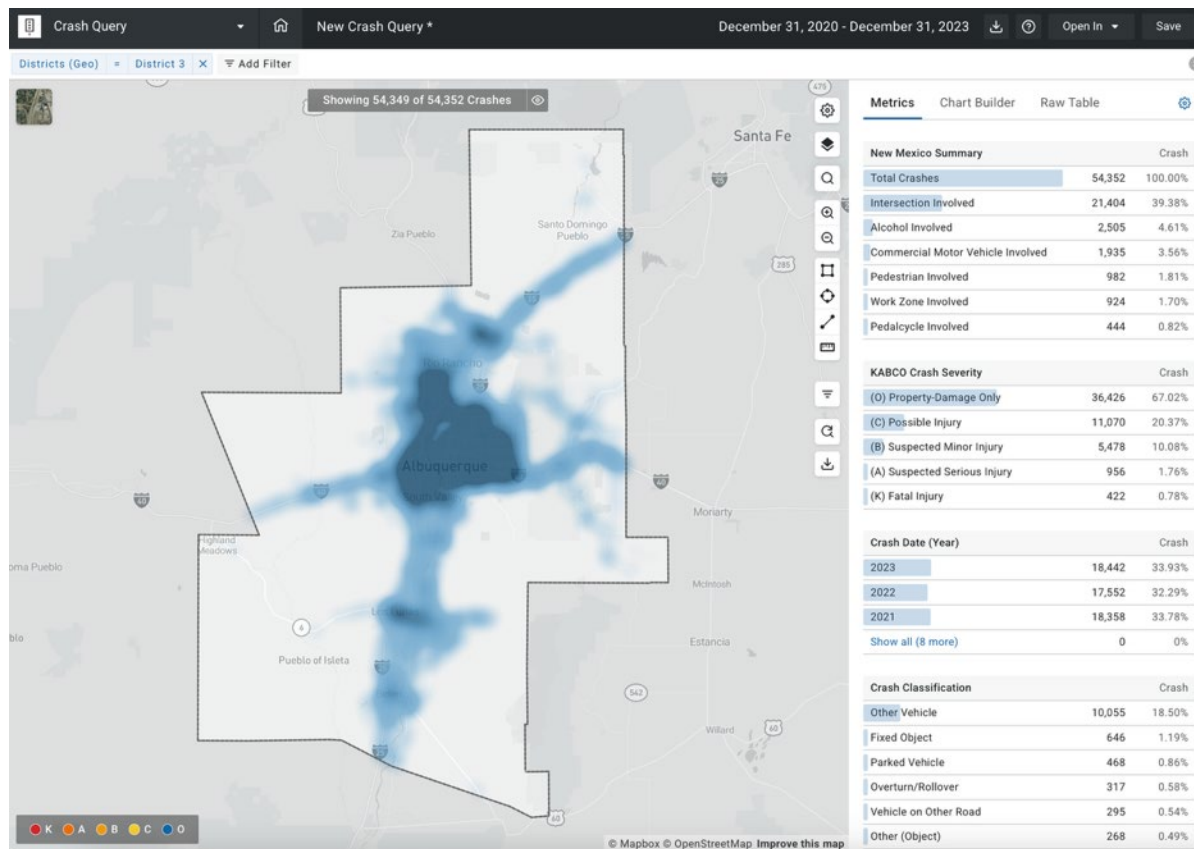


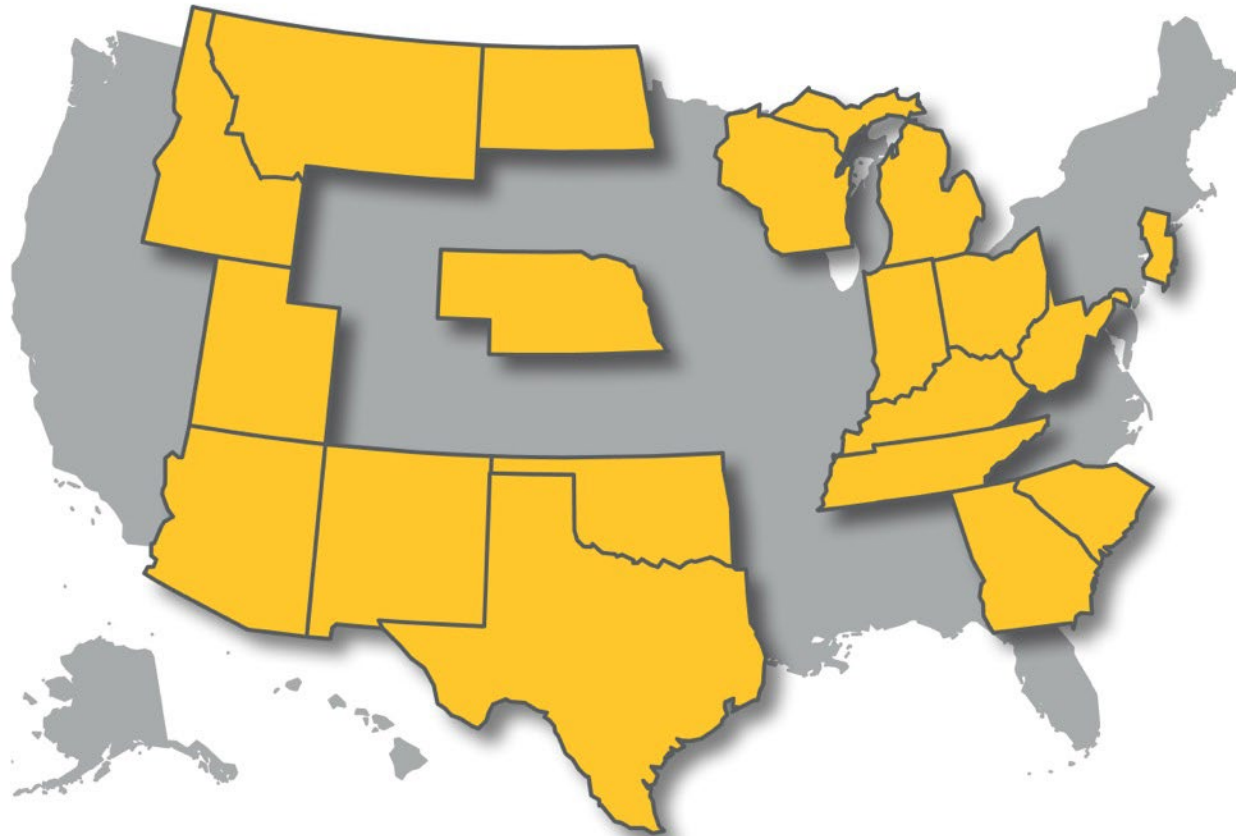
Sharing Access

- DOT Districts can have access today
- Anyone working on a DOT project can have access today
- Non-DOT Locals:
 - For non-DOT projects: NMDOT is currently exploring options to grant access to local users for their projects. We are actively working on this and hoping to have a solution.

District Use

- District 3





Customer Accounts - 21

This includes partnerships with state and local government and law enforcement agencies in 19 states.

Roadway Safety Management Process

HSM Part B - Roadway Safety Management Process

1. Network Screening
2. Diagnosis
3. Countermeasure Selection
4. Economic Appraisal
5. Project Prioritization
6. Safety Effectiveness Evaluation

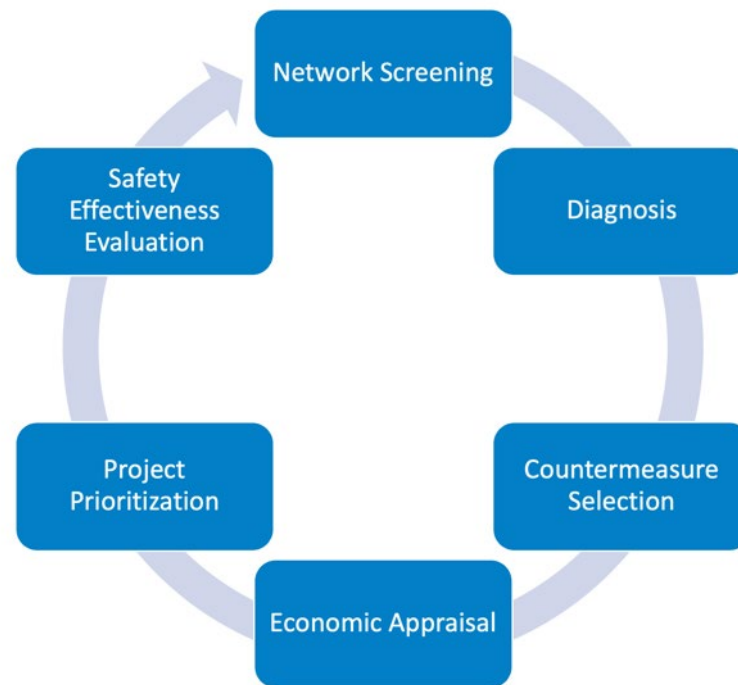
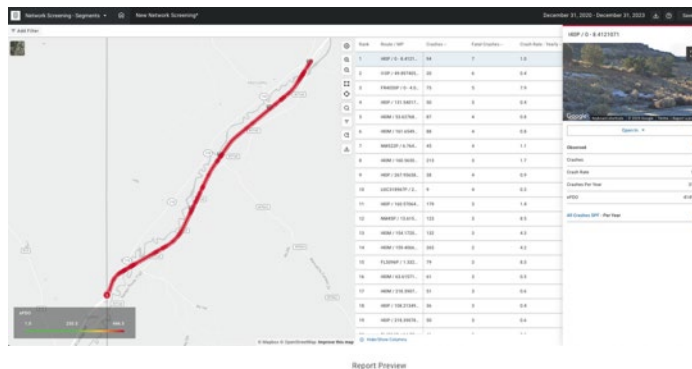


Figure 1. HSM 6-step Roadway Safety Management Process

Network Screening (Segments and Sliding Window)

Purpose

- Conduct a Segment or Sliding Window Analysis
- Rank by observational performance measures (crashes, fatalities, crash rate, etc.)
- Add filters to narrow scope



Deliverables

- On-demand Network Screenings
- Network Screening Reports
- Spreadsheet downloads

Report Preview

SEGMENTS REPORT
New Segments Report
Created on September 3, 2025
Created by Lauren Miller
Data Range (Observed/ER Adjusted) December 31, 2020 to December 31, 2023

Rank	Segment	Crashes	Fatal Crashes	Crash Rate
1	MSDP / 10-4-4121071	94	7	1.0
2	110P / 40-8914056-10-764296	20	4	0.4
3	FR4030P / D-4-0311142	75	5	7.9
4	MSDP / 101-5401717-140-0753007	30	5	0.4
5	MSDM / 53-4276887-63-1919429	87	4	0.8
6	MSDM / 161-6549170-162-6481255	88	4	0.8
7	NAUS22P / 6-7642076-16-4069948	45	4	1.1
8	MSDM / 160-5630337-161-454979	213	3	1.7
9	MSDP / 267-956583-272-7611351	38	4	0.9
10	LOC319947P / 20-649064155-28-80705467	9	4	0.3
11	MSDP / 160-5704486-161-654979	179	3	1.4
12	NAUSDP / 13-8158422-14-304952	123	3	8.5
13	MSDM / 154-1730044-155-1139896	132	3	4.3

New Mexico DOT Roadway Segmentation

In Network Screening - Segments, all routes in New Mexico are subdivided into segments to make network screening easier. This allows you to compare smaller portions of a roadway with similar characteristics in Network Screening rather than evaluating an entire route.

Segment Criteria

A new segment is created each time one or more of the following roadway characteristics changes:

- Volume on the route (AADT)
- Urban and Rural
- Functional Class
- Number of Lanes

Min/Max Segment Lengths

- Any segment that is < 0.25 miles will be added to the smallest adjoining segment.
- Any segment that is > 10 miles will be segmented at the 10-mile mark.

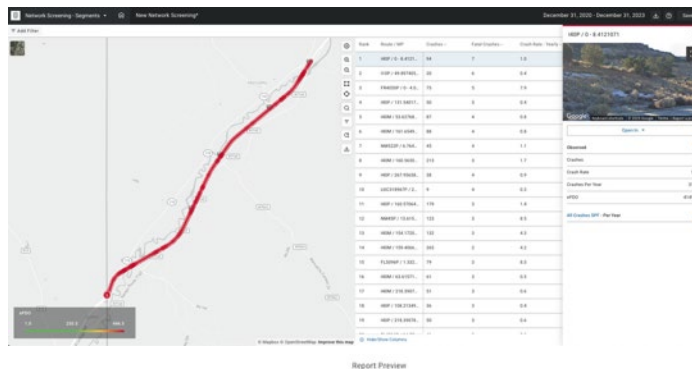
Network Screening - Sliding Window Analysis

- Network Screening allows users to generate a Sliding Window Analysis. Sliding Window analysis is a frequency-based Network Screening approach that helps users determine where the most crashes are occurring along their roadway network in a given sized window.
- Sliding Window Analysis allows users to customize the length of the window for evaluation, anywhere from a .1 up to a 10 mile window (the default window length is set to .3 miles).

Network Screening (Segments and Sliding Window)

Purpose

- Conduct a Segment or Sliding Window Analysis
- Rank by observational performance measures (crashes, fatalities, crash rate, ePDO, etc.)
- Filter to narrow scope



Deliverables

- On-demand Network Screenings
- Network Screening Reports
- Spreadsheet downloads

Report Preview

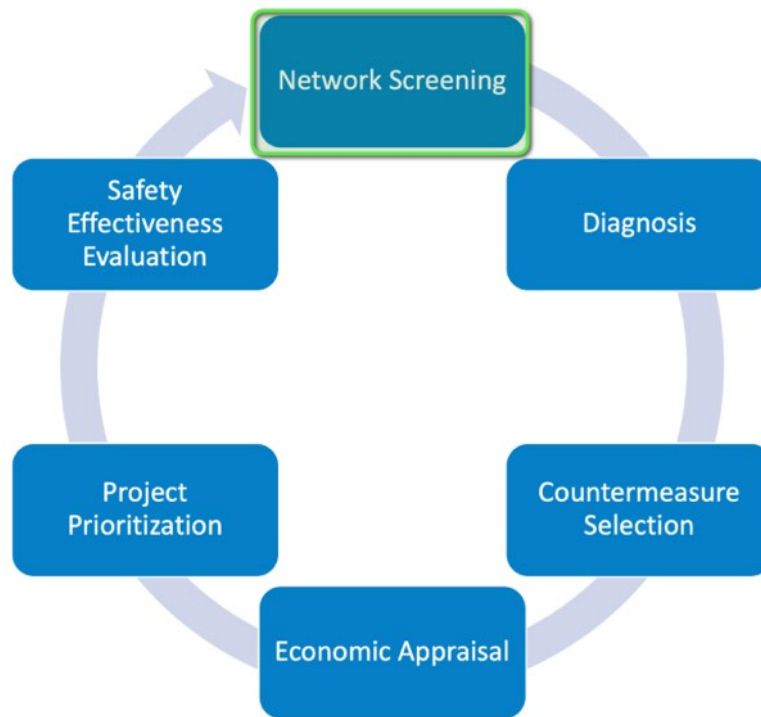
SEGMENTS REPORT
New Segments Report
Created on September 3, 2025
Created by Lauren Miller
Data Range: (Observed/ER Adjusted) December 31, 2020 to December 31, 2023

Rank	Segment	Crashes	Fatal Crashes	Crash Rate
1	ADP / 10.4-10.5	94	7	1.0
2	ADP / 10.5-10.6	20	4	0.4
3	ADP / 10.6-10.7	75	5	7.9
4	ADP / 10.7-10.8	30	5	0.4
5	ADP / 10.8-10.9	87	4	0.8
6	ADP / 10.9-11.0	38	4	0.8
7	ADP / 11.0-11.1	45	4	1.1
8	ADP / 11.1-11.2	213	3	1.7
9	ADP / 11.2-11.3	38	4	0.9
10	ADP / 11.3-11.4	123	3	8.5
11	ADP / 11.4-11.5	130	3	4.3
12	ADP / 11.5-11.6	130	3	4.3
13	ADP / 11.6-11.7	130	3	4.3
14	ADP / 11.7-11.8	130	3	4.3
15	ADP / 11.8-11.9	130	3	4.3
16	ADP / 11.9-12.0	130	3	4.3
17	ADP / 12.0-12.1	130	3	4.3
18	ADP / 12.1-12.2	130	3	4.3
19	ADP / 12.2-12.3	130	3	4.3
20	ADP / 12.3-12.4	130	3	4.3

Network Screening (Segments and Sliding Window)

Purpose

- Conduct a Segment or Sliding Window Analysis
- Rank by observational performance measures (crashes, fatalities, crash rate, etc.)
- Filter to narrow scope



Deliverables

demand Network
eenings

work Screening Reports

eadsheet downloads

Figure 1. HSM 6-step Roadway Safety Management Process

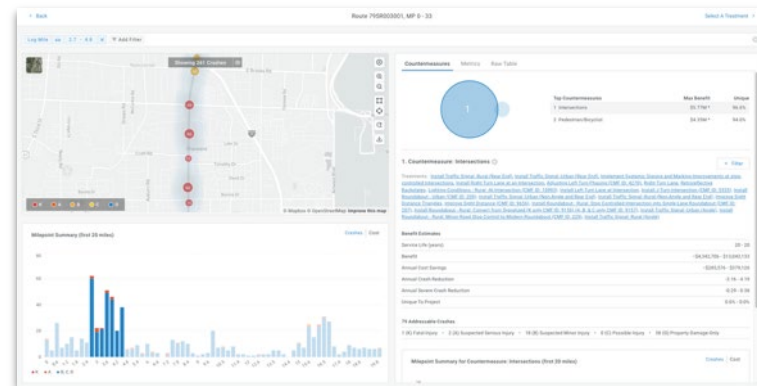
Safety Analysis

Purpose

- Conduct a diagnosis of crash patterns
- Identify potential countermeasures
- Calculate Benefit Cost for selected and custom treatments

Deliverables

- Raw Table Downloads
- Safety Analysis Reports
- Benefit Cost Calculations



Total Benefit	Total Project Cost	Total Benefit Cost Ratio
\$7,487,424	\$1,000,000	7.49

Route 79SR003001, MP 0 - 33					
Treatment	Location	Benefit	Construction Cost	Maintenance Cost	B/C Ratio
Improve Sight Distance Triangles	MP 2.7 - 4.8	\$7,487,424	\$1,000,000	\$0	7.49
Total		\$7,487,424	\$1,000,000	\$0	7.49

Purpose

- Conduct a diagnosis of crash patterns
- Identify potential countermeasures
- Calculate Benefit Cost for selected and custom treatments

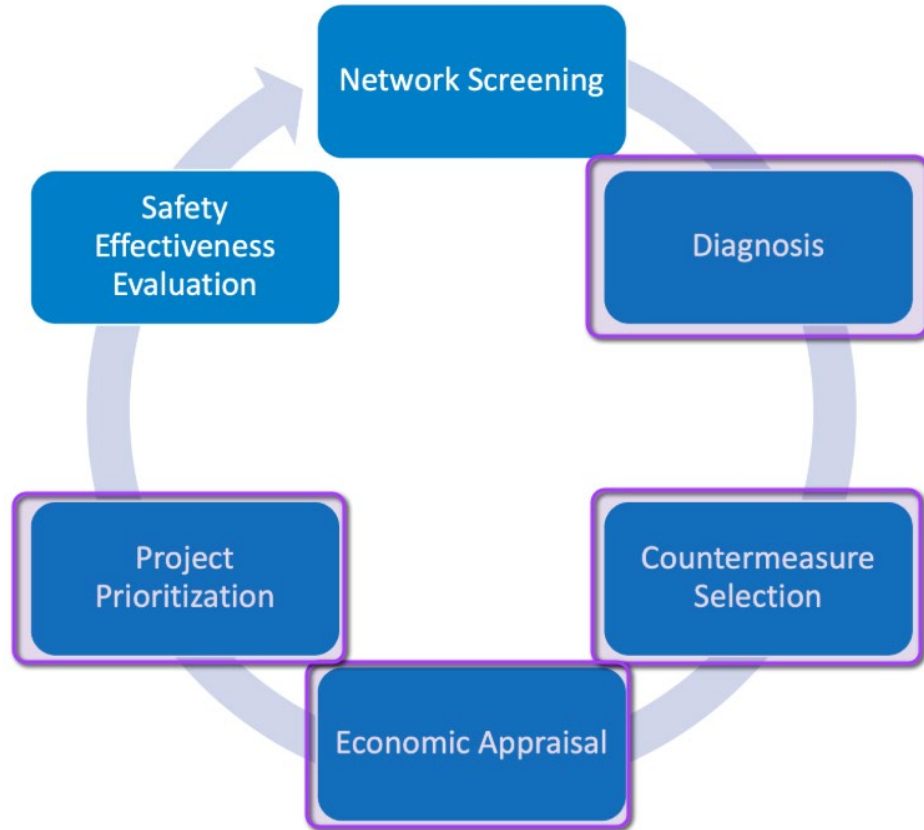


Figure 1. HSM 6-step Roadway Safety Management Process

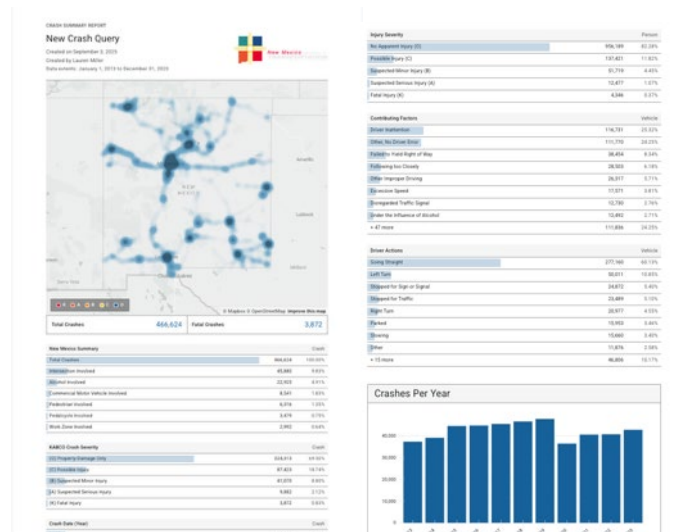
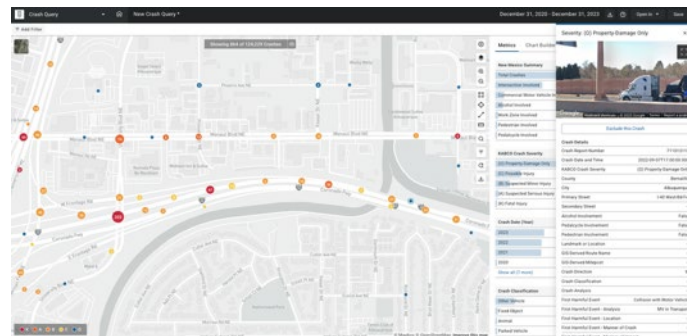
Crash Query

Purpose of Crash Query

- Ability to Query and view Crash, Vehicle, and Occupant Level Data across the state
- Explore crashes in a GIS interface
- Easy-to-use filter bar to narrow scope

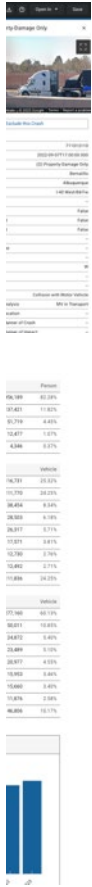
Crash Query Deliverables

- Crash Reports
 - Summary
 - Overrepresentation
 - Comparison
- Charts
- Raw Table Download



Purpose of Crash Query

- Ability to Query and view Crash, Vehicle, and Occupant Level Data across the state
- Explore crashes in a GIS interface
- Easy-to-use filter bar to narrow scope



APPLICATIONS

Example!

Let's look at an example use case of the Roadway Safety Management Process in AASHTOWare Safety.

Network Screening



Safety Analysis



Comparison Report in Crash Query

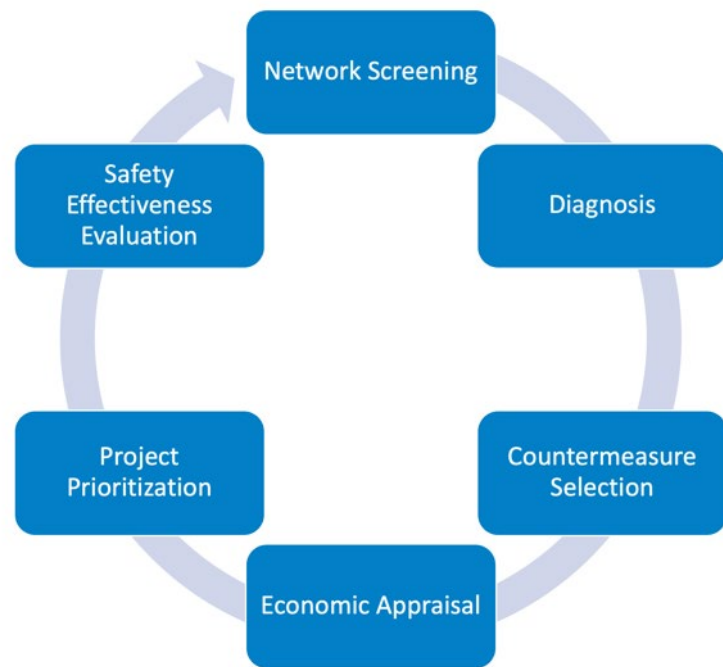
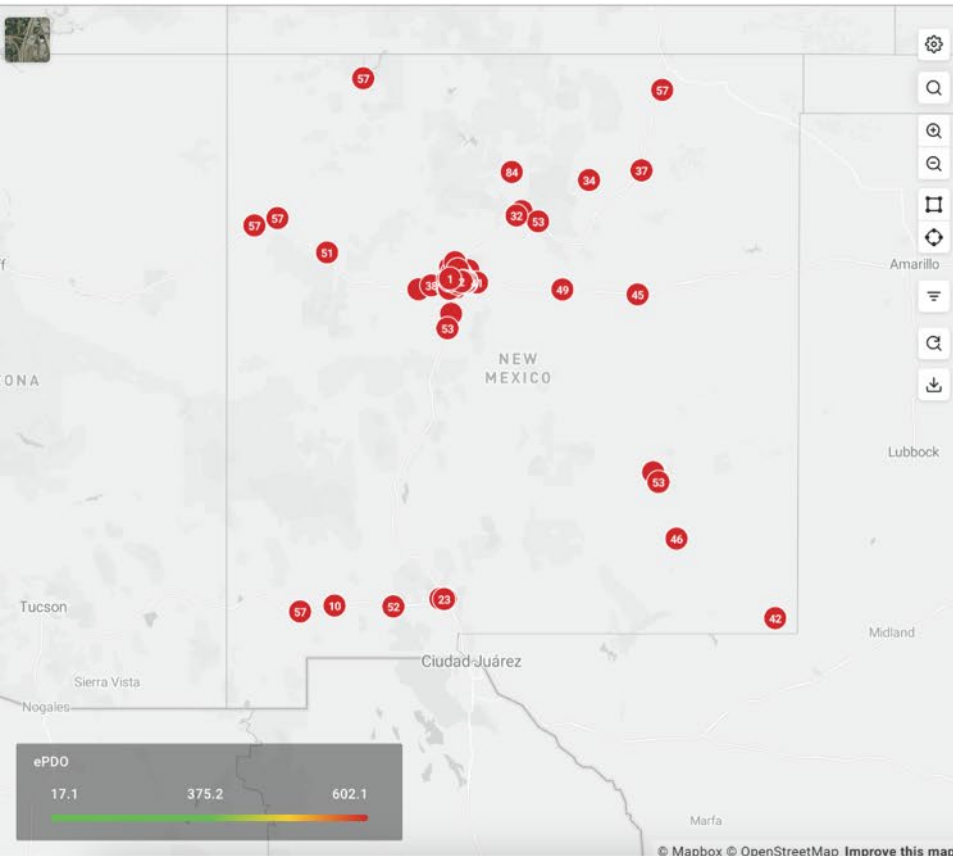


Figure 1. HSM 6-step Roadway Safety Management Process



Add Filter



© Mapbox © OpenStreetMap Improve this map

Rank	Route / MP	Crashes ▾	Fatal Crashes ▾	Crash Rate ▾	ePDO ▾
1	NM45P / 14 - 14.3	119	3	19.0	2074.1
2	FL5096P / 1.1 - 1.4	76	3	18.2	1927.0
3	FL4057P / 1.5 - 1.8	39	3	10.3	1783.4
4	FL4016P / 14.8 - 15.1	29	3	6.9	1749.0
5	FL5089P / 7.6 - 7.9	30	3	12.8	1744.5
6	I40M / 159.7 - 160	196	2	5.9	1712.6
7	FL4030P / 0.9 - 1.2	17	3	3.7	1693.1
8	I40M / 160.8 - 161.1	179	2	5.2	1649.0
9	FL4057P / 1.8 - 2.1	134	2	32.8	1641.2
10	I10M / 73 - 73.3	5	3	1.8	1636.9
11	FL5004P / 2.6 - 2.9	151	2	89.4	1610.1
12	NM528P / 5.3 - 5.6	199	2	24.1	1563.8
13	NM45P / 17.6 - 17.9	195	2	31.8	1538.7
14	I40P / 160.8 - 161.1	153	2	4.5	1519.3
15	I40M / 155 - 155.3	128	2	12.6	1477.2
16	FL5014P / 3.3 - 3.6	101	2	23.2	1467.4
17	FL4063P / 1 - 1.3	111	2	33.7	1433.5

[Hide/Show Columns](#)

Network Screening - Performance Metrics; Crashes

Rank	Route / MP	Crashes ▾	Fatal Crashes ▾	Crash Rate ▾	ePDO ▾
1	FL1673P / 25.1 - 25.4	12	1	10.5	572.6
2	FL1660P / 31.3 - 31.6	6	0	10.7	15.7
2	NM176P / 28.3 - 28.6	6	0	9.5	20.7
4	FL1673P / 15.6 - 15.9	5	0	4.4	24.4
4	NM128P / 52.8 - 53.1	5	0	4.9	5.0
4	NM208M / 3.2 - 3.5	5	0	2.1	5.0
7	FL1107P / 3.1 - 3.4	4	0	2.0	9.1
7	FL4498P / 0 - 0.3	4	0	2.9	13.7
7	NM128P / 22.5 - 22.8	4	0	1.2	4.0
7	NM128P / 32.1 - 32.4	4	0	1.2	4.0
7	NM128P / 46.1 - 46.4	4	1	1.0	544.7

- Ranks by number of crashes
- The site with highest number of crashes is ranked #1

Network Screening - Performance Metrics; Fatal Crashes

Rank	Route / MP	Crashes ▾	Fatal Crashes ▾	Crash Rate ▾	ePDO ▾
1	FL1673P / 25.1 - 25.4	12	1	10.5	572.6
1	FL4498P / 2.5 - 2.8	1	1	0.7	541.7
1	LOC125872P / 1.6 - 1.9	1	1	15.7	541.7
1	LOC137656P / 1.4 - 1.7	1	1	15.6	541.7
1	NM128P / 46.1 - 46.4	4	1	1.2	544.7
1	NM176P / 32.1 - 32.4	1	1	2.2	541.7
1	NM18P / 17.7 - 18	2	1	3.2	542.7
1	NM18P / 19.5 - 19.8	1	1	1.6	541.7
1	NM18P / 24.9 - 25.2	1	1	1.6	541.7
1	NM18P / 4.4 - 4.7	1	1	1.0	541.7
1	NM18P / 5.8 - 6.1	1	1	1.0	541.7

- Ranks by number of fatal crashes
- The site with highest number of fatal crashes is ranked #1

Network Screening - Performance Metrics; Crash Rate

Rank	Route / MP	Crashes ▾	Fatal Crashes ▾	Crash Rate ▾	ePDO ▾
1	LOC133563P / 9.9 - 1...	3	0	268.6	3.0
2	LOC134992P / 6 - 6.3	1	0	74.2	6.1
3	LOC130294P / 8.5 - 8.8	1	0	69.2	6.1
4	LOC127943P / 0.2 - 0.5	3	0	47.1	22.4
4	LOC134416P / 0 - 0.3	3	0	47.1	8.1
4	LOC138024P / 0.8 - 1.1	3	0	47.1	3.0
7	LOC137721P / 0.3 - 0.6	3	0	37.6	3.0
8	LOC129276P / 2.1 - 2.4	2	0	31.4	11.7
8	LOC129335P / 1.4 - 1.7	2	0	31.4	7.1
8	LOC135186P / 0.4 - 0.7	2	0	31.4	11.7
8	LOC135283P / 4.3 - 4.6	2	0	31.4	2.0
8	LOC135506P / 0.5 - 0.8	2	0	31.4	7.1
8	LOC136171P / 0 - 0.3	2	0	31.4	2.0
8	LOC136998P / 1.7 - 2	2	0	31.4	2.0

- Ranks by crash rate
- Site with the highest crash rate will be ranked first

Network Screening - Performance Metrics; EPDO

Rank	Route / MF	ePDO			ePDO
1	FL1673P /	ePDO			572.6
2	NM18P / 5	ePDO			559.5
3	NM128P /	ePDO			544.7
4	NM18P / 1	ePDO			542.7
5	FL4498P /	ePDO			541.7
5	LOC125872P / 1.6 - 1.9	1	1	15.7	541.7
5	LOC137656P / 1.4 - 1.7	1	1	15.6	541.7
5	NM176P / 32.1 - 32.4	1	1	2.2	541.7
5	NM18P / 19.5 - 19.8	1	1	1.6	541.7
5	NM18P / 24.9 - 25.2	1	1	1.6	541.7

Equivalent to Property Damage Only

(O) Property-Damage Only 1.0

(C) Possible Injury 6.1

(B) Suspected Minor Injury 10.7

(A) Suspected Serious Injury 20.0

- Equivalent to PDO crash - weighted score
- Higher number = higher severity crashes
- Used to identify “hotspot” areas with history of more severe crash

Crash Severity - KABCO

The KABCO scale is the nationally recognized crash severity model developed by the U.S. Department of Transportation Federal Highway Administration (FHWA). The KABCO definitions are as follows:

(K) - Fatal Injury

(A) - Suspected Serious Injury

(B) - Suspected Minor Injury

(C) - Possible Injury

(O) - No Apparent Injury

To determine the economic benefits of safety treatments, safety analysts use crash costs to quantify the impacts of crashes reduced by the safety improvement project, according to the [FHWA](#).

NMDOT - Crash Injury Severity (KABCO) Costs

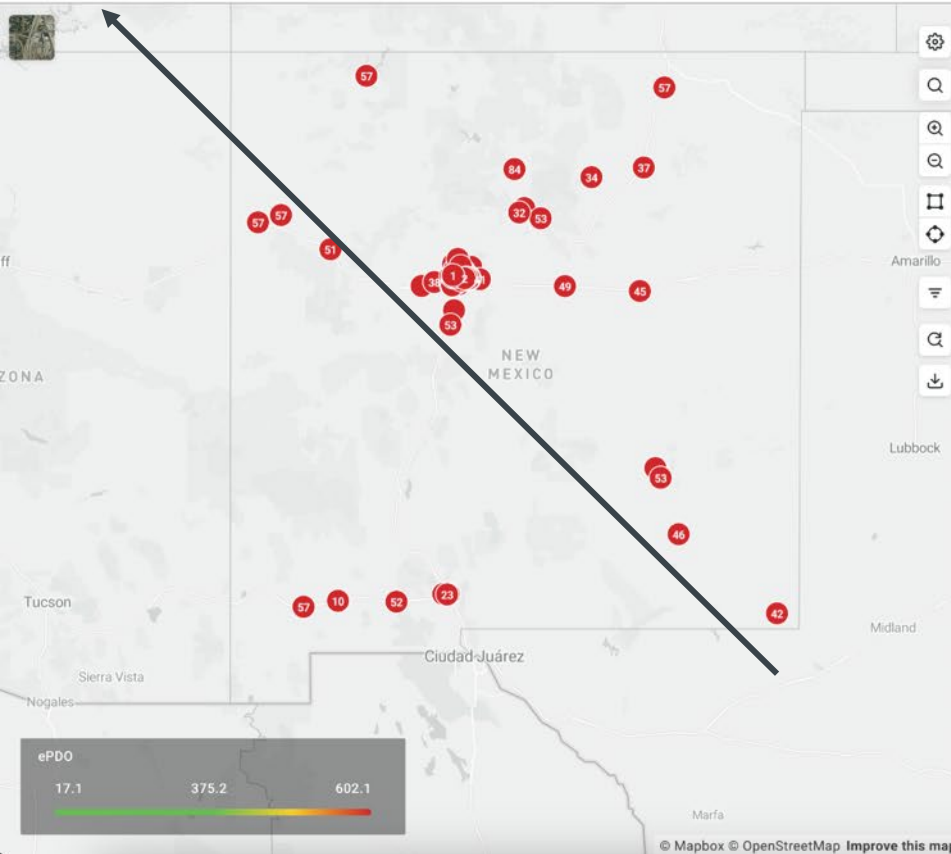
The following outlines the NMDOT default Crash Injury Severity (KABCO) costs that are used in AASHTOWare Safety when calculating crash costs.

Display Name In-App	Cost Category	Equivalent to Property Damage Only (ePDO) Weight
(K) Fatal Injury	\$4,008,900	541.74
(A) Suspected Serious Injury	\$216,000	29.19
(B) Suspected Minor Injury	\$79,000	10.68
(C) Possible Injury	\$44,900	6.07
(O) Property Damage Only	\$7,400	1

Let's Start our Screening:

- We're screening for roadways in Lea County that will benefit from implementing a countermeasure to reduce roadway departure crashes. We want to target an area with a high ePDO score to target areas with more severe crash injuries.

Add Filter



Rank	Route / MP	Crashes	Fatal Crashes	Crash Rate	ePDO
1	NM45P / 14 - 14.3	119	3	19.0	2074.1
2	FL5096P / 1.1 - 1.4	76	3	18.2	1927.0
3	FL4057P / 1.5 - 1.8	39	3	10.3	1783.4
4	FL4016P / 14.8 - 15.1	29	3	6.9	1749.0
5	FL5089P / 7.6 - 7.9	30	3	12.8	1744.5
6	I40M / 159.7 - 160	196	2	5.9	1712.6
7	FL4030P / 0.9 - 1.2	17	3	3.7	1693.1
8	I40M / 160.8 - 161.1	179	2	5.2	1649.0
9	FL4057P / 1.8 - 2.1	134	2	32.8	1641.2
10	I10M / 73 - 73.3	5	3	1.8	1636.9
11	FL5004P / 2.6 - 2.9	151	2	89.4	1610.1
12	NM528P / 5.3 - 5.6	199	2	24.1	1563.8
13	NM45P / 17.6 - 17.9	195	2	31.8	1538.7
14	I40P / 160.8 - 161.1	153	2	4.5	1519.3
15	I40M / 155 - 155.3	128	2	12.6	1477.2
16	FL5014P / 3.3 - 3.6	101	2	23.2	1467.4
17	FL4063P / 1 - 1.3	111	2	33.7	1433.5

Hide/Show Columns



Sliding Window Analysis



Screening Example *

County = Select a value... X



64

Q lea



VALUES



Lea

5,207

Apply

Fort Defiance



Sliding Window Analysis



Screening Example *

County = Lea X Roadway Departure Involved = Select a value... X



Q

VALUES



False

4,080



True

1,127

Apply

Denver City

FL1673P / 25.1 - 25.4

Crashes

Crash Rate

Crashes Per Year

ePDO

12

10.51

Per Year	4
----------	---

572.55

Sliding Window Analysis

Screening Example *

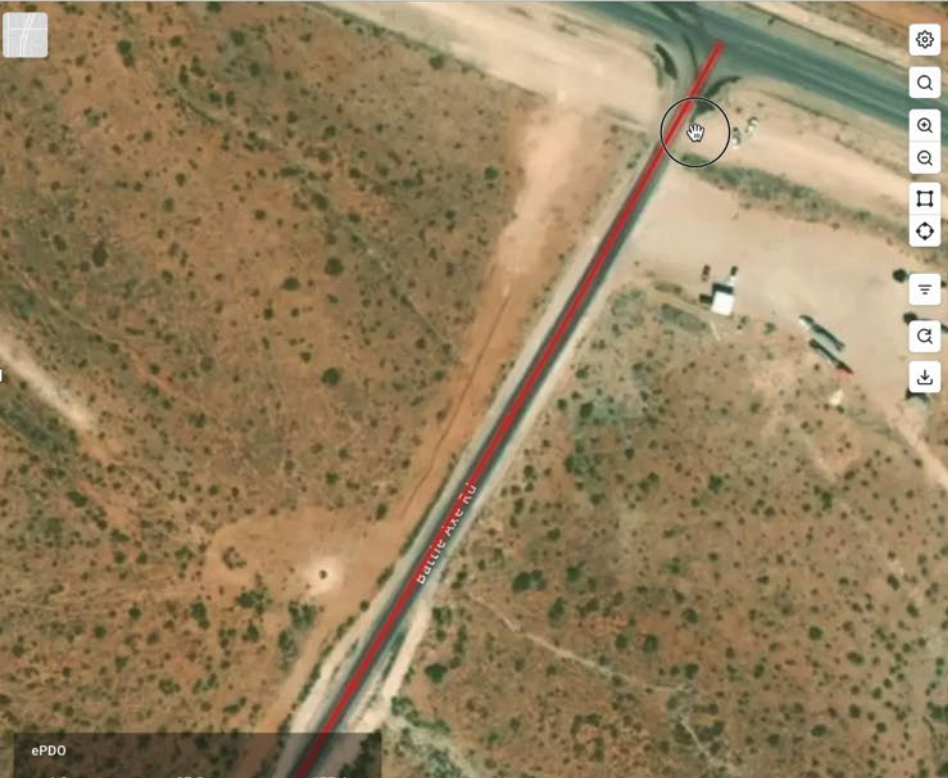
December 31, 2020 - December 31, 2023

Save

County = Lea X

Roadway Departure Involved = True X

Add Filter



Settings

Search

Zoom In

Zoom Out

Full Screen

Reset View

Layers

Measure

Download

ePDO

Rank	Route / MP	Crashes	Fatal Crashes
1	FL1673P / 25.1 - 25.4	12	1
2	NM18P / 57.7 - 58	4	1
3	NM128P / 46.1 - 46.4	4	1
4	NM18P / 17.7 - 18	2	1
5	FL4498P / 2.5 - 2.8	1	1
5	LOC125872P / 1.6 - 1.9	1	1
5	LOC137656P / 1.4 - 1.7	1	1
5	LOC318552P / 0 - 0.3	1	1
5	NM176P / 32.1 - 32.4	1	1
5	NM18P / 19.5 - 19.8	1	1
5	NM18P / 24.9 - 25.2	1	1
5	NM18P / 4.4 - 4.7	1	1
5	NM18P / 5.8 - 6.1	1	1
5	NM206P / 16.7 - 17	1	1
5	NM248P / 1.9 - 2.2	1	1
5	NM529P / 22.8 - 23.1	1	1

FL1673P / 25.1 - 25.4



Google Keyboard shortcuts © 2025 Google Terms Report a problem

Open In

Observed

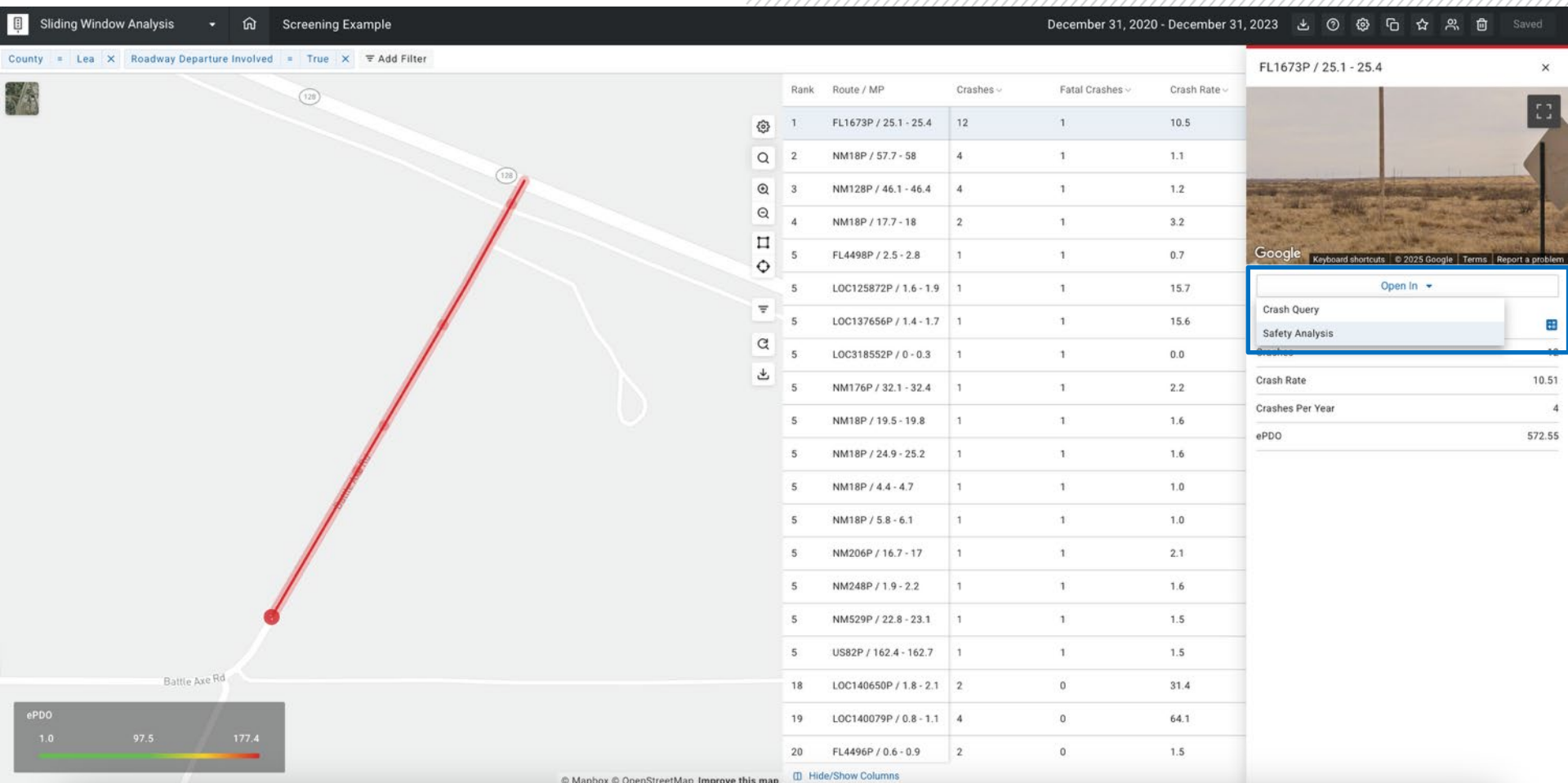
Crashes 12

Crash Rate 10.51

Crashes Per Year 4

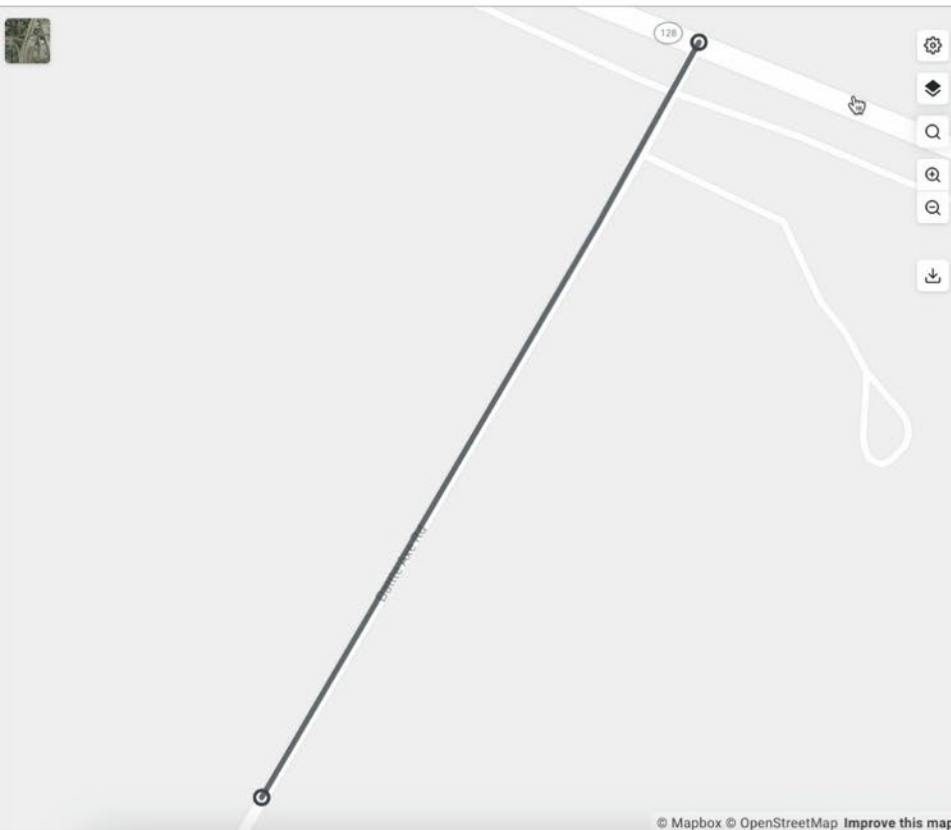
ePDO 572.55







Project Overview



© Mapbox © OpenStreetMap Improve this map

Route FL1673P, MP 25.1 - 25.4

Segment and Intersection Crashes



Route ID (from LRS) = FL1673P MP: 25.1 - 25.4

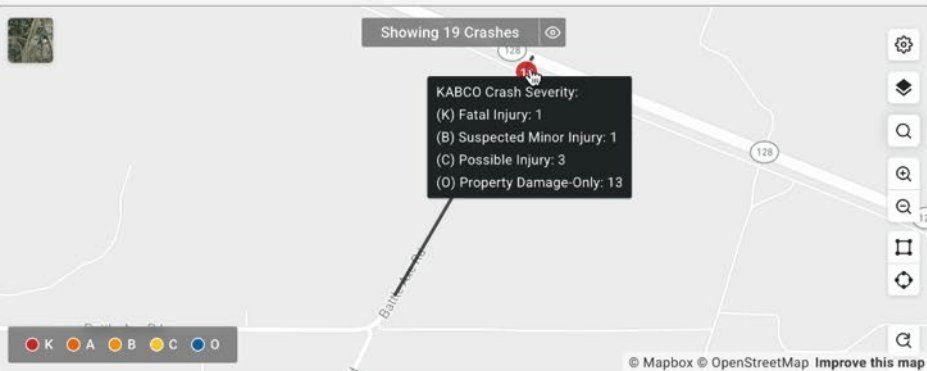
[Explore Treatments](#)[+ Add Segment](#)

< Back

Route FL1673P, MP 25.1 - 25.4

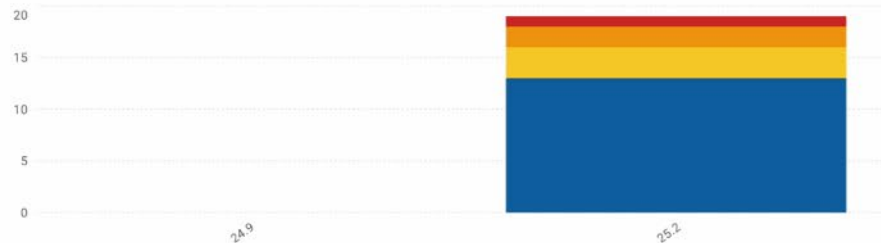
Select A Treatment >

Add Filter

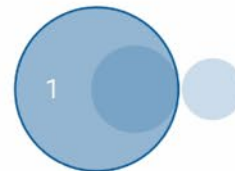


Milepoint Summary

Crashes Cost



Countermeasures Metrics Raw Table



Top Countermeasures	Max Benefit	Unique
1 Lighting	\$8.68M	98.7%
2 Speed Safety Cameras	\$140k	0.0%
3 Reduced Left-Turn Conflict Intersections	\$120k	100.0%

1. Lighting

+ Filter

Treatments: [Provide Highway Lighting \(CMF ID: 192\)](#), [Provide Intersection Illumination \(CMF ID: 436\)](#)

Benefit Estimates

Service Life (years)	20 - 20
Benefit	\$5,783,600 - \$8,675,400
Annual Cost Savings	\$380,328 - \$570,493
Annual Crash Reduction	0.65 - 0.98
Annual Severe Crash Reduction	0.09 - 0.14
Unique To Project	100.0% - 100.0%

7 Addressable Crashes

1 (K) Fatal Injury • 0 (A) Suspected Serious Injury • 1 (B) Suspected Minor Injury • 1 (C) Possible Injury • 4 (O) Property-Damage Only

Lighting = Select a value...

VALUES

Daylight

Dark-Not Lighted

Dusk

12

6

1

Apply

ng 19 Crashes

Milepoint Summary

Crashes | Cost

Countermeasures

Metrics

Raw Table

Top Countermeasures	Max Benefit	Unique
1 Lighting	\$8.68M	98.7%
2 Speed Safety Cameras	\$140k	0.0%
3 Reduced Left-Turn Conflict Intersections	\$120k	100.0%

1. Lighting

+ Filter

Treatments:

[Provide Highway Lighting \(CMF ID: 192\)](#)
[Provide Intersection Illumination \(CMF ID: 436\)](#)

Benefit Estimates

Service Life (years)	20 - 20
Benefit	\$5,783,600 - \$8,675,400
Annual Cost Savings	\$380,328 - \$570,493
Annual Crash Reduction	0.65 - 0.98
Annual Severe Crash Reduction	0.09 - 0.14
Unique To Project	100.0% - 100.0%

7 Addressable Crashes

1 (K) Fatal Injury

0 (A) Suspected Serious Injury

1 (B) Suspected Minor Injury

1 (C) Possible Injury

4 (O) Property-Damage Only

Safety Analysis

New Safety Analysis*

December 31, 2020 - December 31, 2023

Save

Back

Route FL1673P, MP 25.1 - 25.4

Select A Treatment

LightingDark-Not LightedAdd Filter

Showing 6 Crashes

KABCO Crash Severity:
(K) Fatal Injury: 1
(B) Suspected Minor Injury: 1
(C) Possible Injury: 1
(O) Property Damage-Only: 3

KABCO Crash Severity:
(K) Fatal Injury: 1
(B) Suspected Minor Injury: 1
(C) Possible Injury: 1
(O) Property Damage-Only: 3

CrashesCost

24.925.2

CountermeasuresMetricsRaw Table

1

Top Countermeasures	Max Benefit	Unique
1 Lighting	\$8.66M	98.7%
2 Speed Safety Cameras	\$120k	0.0%
3 Wider Edge Lines	\$94.7k	0.0%

1. Lighting

+ Filter

Treatments: [Provide Highway Lighting \(CMF ID: 192\)](#), [Provide Intersection Illumination \(CMF ID: 436\)](#)

Benefit Estimates

Service Life (years)	20 - 20
Benefit	\$5,773,318 - \$8,659,977
Annual Cost Savings	\$379,652 - \$569,478
Annual Crash Reduction	0.56 - 0.84
Annual Severe Crash Reduction	0.09 - 0.14
Unique To Project	100.0% - 100.0%

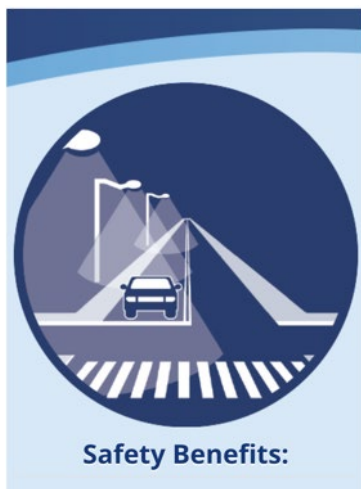
6 Addressable Crashes

1 (K) Fatal Injury · 0 (A) Suspected Serious Injury · 1 (B) Suspected Minor Injury · 1 (C) Possible Injury · 3 (O) Property-Damage Only

AASHTOWARE SAFETY

Intersection Lighting

- The number of fatal crashes occurring in daylight is about the same as those that occur in darkness. However, the nighttime fatality rate is three times the daytime rate because only 25% of vehicle miles traveled (VMT) occur at night.
- At nighttime, vehicles traveling at higher speeds may not have the ability to stop once a hazard or change in the road ahead becomes visible by the headlights.



**Lighting can reduce
crashes up to:**

33-38%

for nighttime crashes at rural
and urban intersections.^{[2,1](#)}

< Back

Route FL1673P, MP 25.1 - 25.4

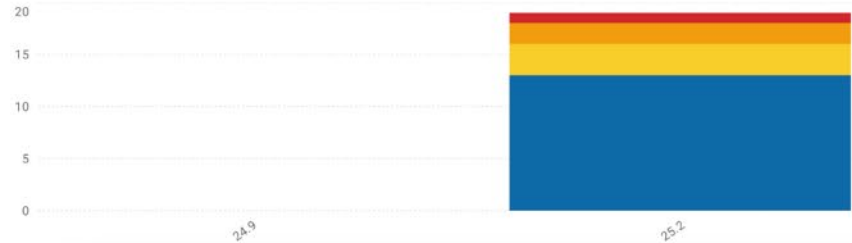
Select A Treatment >

≡ Add Filter

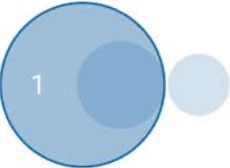


Milepoint Summary

Crashes Cost



Countermeasures Metrics Raw Table



Top Countermeasures	Max Benefit	Unique
1 Lighting	\$8.68M	98.7%
2 Speed Safety Cameras	\$140k	0.0%
3 Reduced Left-Turn Conflict Intersections	\$120k	100.0%

1. Lighting

+ Filter

Treatments: [Provide Highway Lighting \(CMF ID: 192\)](#) [Provide Intersection Illumination \(CMF ID: 436\)](#)

Benefit Estimates

Service Life (years)	20 - 20
Benefit	\$5,783,600 - \$8,675,400
Annual Cost Savings	\$380,328 - \$570,493
Annual Crash Reduction	0.65 - 0.98
Annual Severe Crash Reduction	0.09 - 0.14
Unique To Project	100.0% - 100.0%

7 Addressable Crashes

1 (K) Fatal Injury • 0 (A) Suspected Serious Injury • 1 (B) Suspected Minor Injury • 1 (C) Possible Injury • 4 (O) Property-Damage Only

TREATMENT

Provide Intersection Illumination (CMF ID: 436)

Cost ⓘ

CONSTRUCTION COST

0

MAINTENANCE COST

0

project cost

\$0

Details

CMF Clearinghouse

SERVICE LIFE (YEARS)

20

(K) FATAL INJURY CMF ⓘ

0.58

(A) SUSPECTED SERIOUS INJURY CMF ⓘ

0.58

(B) SUSPECTED MINOR INJURY CMF ⓘ

0.58

(C) POSSIBLE INJURY CMF ⓘ

0.58

(O) PROPERTY DAMAGE ONLY CMF ⓘ

Applied Filters

Countermeasures = Lighting

7 Filtered Crashes

1 (K) Fatal Injury • 0 (A) Suspected Serious Injury • 1 (B) Suspected Minor Injury • 1 (C) Possible Injury • 4 (O) Property-Damage Only

Treatment Preview

Benefit	Project Cost	Benefit Cost Ratio
\$8,675,400	Add Cost...	Add Cost...
Annual Cost Savings		\$570,493
Annual Crash Reduction		0.98
Annual Severe Crash Reduction		0.14

Treatment Location



[Back](#)

Route FL1673P, MP 25.1 - 25.4

Add Treatment

TREATMENT

Provide Intersection Illumination (CMF ID: 436)

Cost ⓘ

CONSTRUCTION COST

0

MAINTENANCE COST

0

project cost

\$0

Details [CMF Clearinghouse](#)

SERVICE LIFE (YEARS)

20

(K) FATAL INJURY CMF ⓘ

0.58

(A) SUSPECTED SERIOUS INJURY CMF ⓘ

0.58

(B) SUSPECTED MINOR INJURY CMF ⓘ

0.58

(C) POSSIBLE INJURY CMF ⓘ

0.58

Applied Filters

Countermeasures = Lighting

7 Filtered Crashes

1 (K) Fatal Injury • 0 (A) Suspected Serious Injury • 1 (B) Suspected Minor Injury • 1 (C) Possible Injury • 4 (O) Property-Damage Only

Treatment Preview

Benefit	Project Cost	Benefit Cost Ratio
\$8,675,400	Add Cost...	Add Cost...
Annual Cost Savings		\$570,493
Annual Crash Reduction		0.98
Annual Severe Crash Reduction		0.14

Treatment Location

Back

Route FL1673P, MP 25.1 - 25.4

Add Treatment

TREATMENT

Provide Intersection Illumination (CMF ID: 436)

Cost

CONSTRUCTION COST

330,000

MAINTENANCE COST

85,000

project cost

\$415,000

Details

CMF Clearinghouse

SERVICE LIFE (YEARS)

20

(K) FATAL INJURY CMF

0.58

(A) SUSPECTED SERIOUS INJURY CMF

0.58

(B) SUSPECTED MINOR INJURY CMF

0.58

(C) POSSIBLE INJURY CMF

0.58

** (O) PROPERTY DAMAGE-ONLY CMF

0.58

NOTES

Add notes

This estimated cost is an **EXAMPLE** and not representative of what this exact project would cost. NMDOT is working on finalizing standardized construction cost estimates to use for benefit/cost analysis.

Applied Filters

Countermeasures = Lighting

7 Filtered Crashes

1 (K) Fatal Injury · 0 (A) Suspected Serious Injury · 1 (B) Suspected Minor Injury · 1 (C) Possible Injury · 4 (O) Property-Damage Only

Treatment Preview

Benefit *	Project Cost	Benefit Cost Ratio *
\$8,675,400	\$415,000	20.90
Net Benefit *		\$3,643,668
Annual Cost Savings *		\$239,607
Annual Crash Reduction *		0.41
Annual Severe Crash Reduction *		0.06
* The location of this treatment overlaps a previously added treatment(s), this results in a reduced benefit.		

Treatment Location

Route FL1673P, MP 25.1 - 25.4

Safety Analysis

NM Conf Example *

December 31, 2020 - December 31, 2023

Save

Back

Route FL1673P, MP 25.1 - 25.4

Add Treatment

TREATMENT

Provide Intersection Illumination (CMF ID: 436)

Cost ⓘ

CONSTRUCTION COST

330,000

MAINTENANCE COST

85,000

project cost

\$415,000

Details

CMF Clearinghouse

SERVICE LIFE (YEARS)

20

(K) FATAL INJURY CMF ⓘ

0.58

(A) SUSPECTED SERIOUS INJURY CMF ⓘ

0.58

(B) SUSPECTED MINOR INJURY CMF ⓘ

0.58

(C) POSSIBLE INJURY CMF ⓘ

0.58

** (O) PROPERTY DAMAGE-ONLY CMF ⓘ

0.58

NOTES

Add notes...

Applied Filters

Countermeasures = Lighting

7 Filtered Crashes

1 (K) Fatal Injury · 0 (A) Suspected Serious Injury · 1 (B) Suspected Minor Injury · 1 (C) Possible Injury · 4 (O) Property-Damage Only

Benefit *

\$8,675,400

Project Cost

\$415,000

Benefit Cost Ratio *

20.90

Net Benefit *

\$3,643,668

Annual Cost Savings *

\$239,607

Annual Crash Reduction *

0.41

Annual Severe Crash Reduction *

0.06

* The location of this treatment overlaps a previously added treatment(s), this results in a reduced benefit.

Treatment Location

Route FL1673P, MP 25.1 - 25.4

AASHTOWARE SAFETY

Project Overview



Total Benefit	Total Project Cost	Total Benefit Cost Ratio
\$8,675,400	\$415,000	20.90

Route FL 1673P, MP 25.1 - 25.4

Segment and Intersection Crashes

Route ID (from LRS) = FL 1673P MP: 25.1 - 25.4

Treatment	Location	Benefit	Construction Cost	Maintenance Cost	B/C Ratio	
Provide Intersection Illumination (CMF ID: 436)	MP 25.1 - 25.4	\$8,675,400	\$330,000	\$85,000	20.90	
Total		\$8,675,400	\$330,000	\$85,000	20.90	

Explore Treatments

+ Add Segment

NM Conf Example

Created on September 12, 2025
Created by Lauren Miller
For crashes from December 31, 2020 to December 31, 2023



Total Crashes	19	Fatal Crashes	1
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Treatments Overview

Total Benefit	Total Project Cost	Total Benefit Cost Ratio
\$8,675,400	\$415,000	20.90

Route FL1673P, MP 25.1 - 25.4

Segment and Intersection Crashes

Route ID (from LRS) = FL1673P MP: 25.1 - 25.4					
Treatment	Location	Benefit	Construction Cost	Maintenance Cost	B/C Ratio
Provide Intersection Illumination (CMF ID: 436)	MP 25.1 - 25.4	\$8,675,400	\$330,000	\$85,000	20.90
Total		\$8,675,400	\$330,000	\$85,000	20.90

Treatment Details

Provide Intersection Illumination (CMF ID: 436)

Applied Filters

Countermeasures = Lighting

7 Targeted Crashes

1 (K) Fatal Injury · 0 (A) Suspected Serious Injury · 1 (B) Suspected Minor Injury · 1 (C) Possible Injury · 4 (O) Property-Damage Only

Benefit	Project Cost	Benefit Cost Ratio
\$8,675,400	\$415,000	20.90

Annual Cost Savings	\$570,493
Annual Crash Reduction	0.98
Annual Severe Crash Reduction	0.14



Applied Filters

County (Sliding Windows) = Lea Roadway Departure Involved (Sliding Windows) = True

Rank	Route / MP	Crashes	Fatal Crashes	Crash Rate
1	FL1673P / 25.1 - 25.4	12	1	10.5
2	NM18P / 57.7 - 58	4	1	1.1
3	NM128P / 46.1 - 46.4	4	1	1.2
4	NM18P / 17.7 - 18	2	1	3.2
5	FL4498P / 2.5 - 2.8	1	1	0.7
5	LOC125872P / 1.6 - 1.9	1	1	15.7
5	LOC137656P / 1.4 - 1.7	1	1	15.6
5	LOC318552P / 0 - 0.3	1	1	0.0

1. FL1673P / 25.1 - 25.4

12 Total Crashes

1 Fatal • 0 Serious • 1 Minor • 2 Possible Injury • 8 No Injury

Crash Rate	10.5
Crashes / Mile	0.0
ePDO	572.6
Fatal Percentage	8.3%
Severe Percentage	8.3%



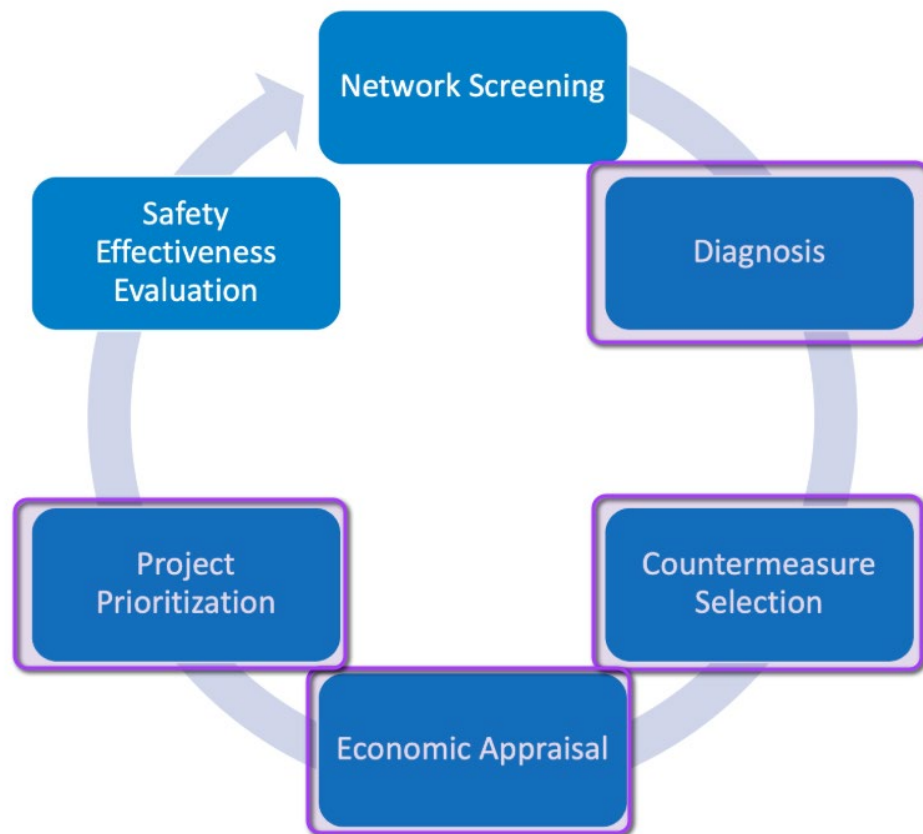


Figure 1. HSM 6-step Roadway Safety Management Process

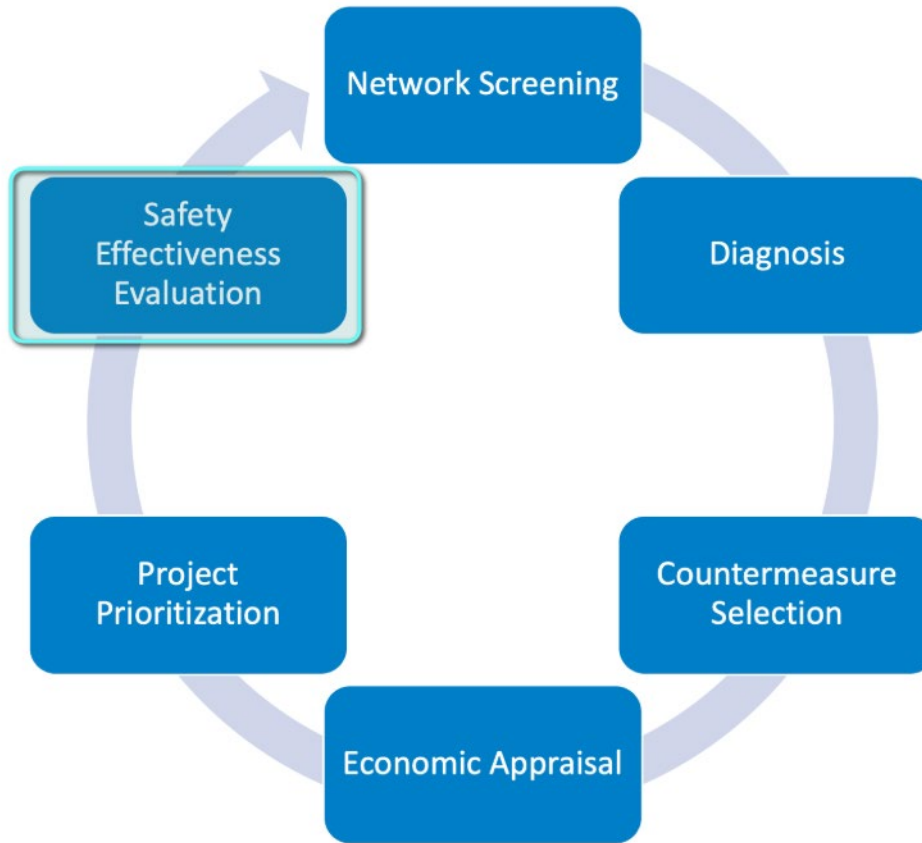
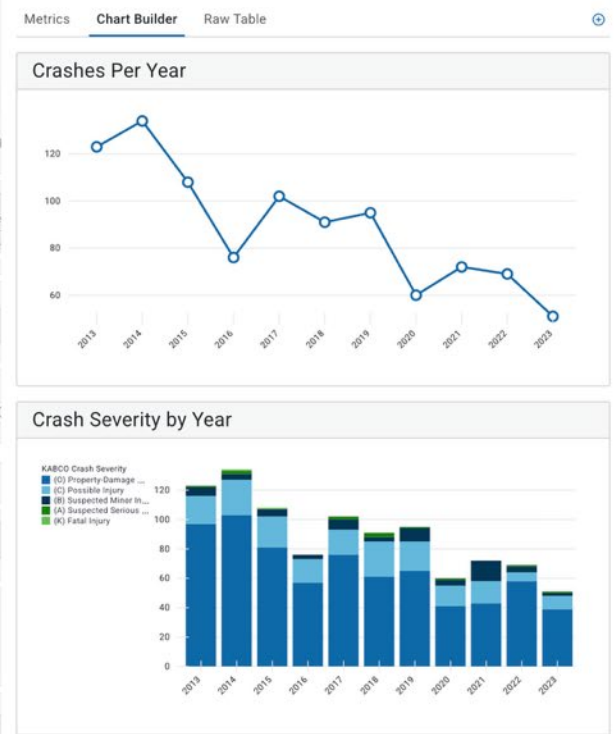


Figure 1. HSM 6-step Roadway Safety Management Process



Intersection Comparison Report - Lauren Example

Created on September 12, 2025
Created by Lauren Miller
Data extents: January 1, 2013 to December 31, 2022



Applied Filters

Route ID (from LRS)	=	NM423P	MP: 5.92 - 6.13	Route ID (from LRS)	=	NM423M	MP: 5.92 - 6.18
Route ID (from LRS)	=	I25M	MP: 233.03 - 233.19	Route ID (from LRS)	=	I25P	MP: 233.02 - 233.18

Time Ranges

1	January 1, 2013 - December 31, 2017 (1826 days) K: 2 (0.4%) B: 25 (4.6%) C: 97 (17.9%) O: 414 (76.2%) A: 5 (0.9%)	543 Crashes
2	January 1, 2018 - December 31, 2022 (1826 days) K: 0 (0.0%) B: 34 (8.8%) C: 79 (20.4%) O: 268 (69.3%) A: 6 (1.6%)	387 Crashes

K = (K) Fatal Injury, B = (B) Suspected Minor Injury, C = (C) Possible Injury, O = (O) Property-Damage Only, A = (A) Suspected Serious Injury

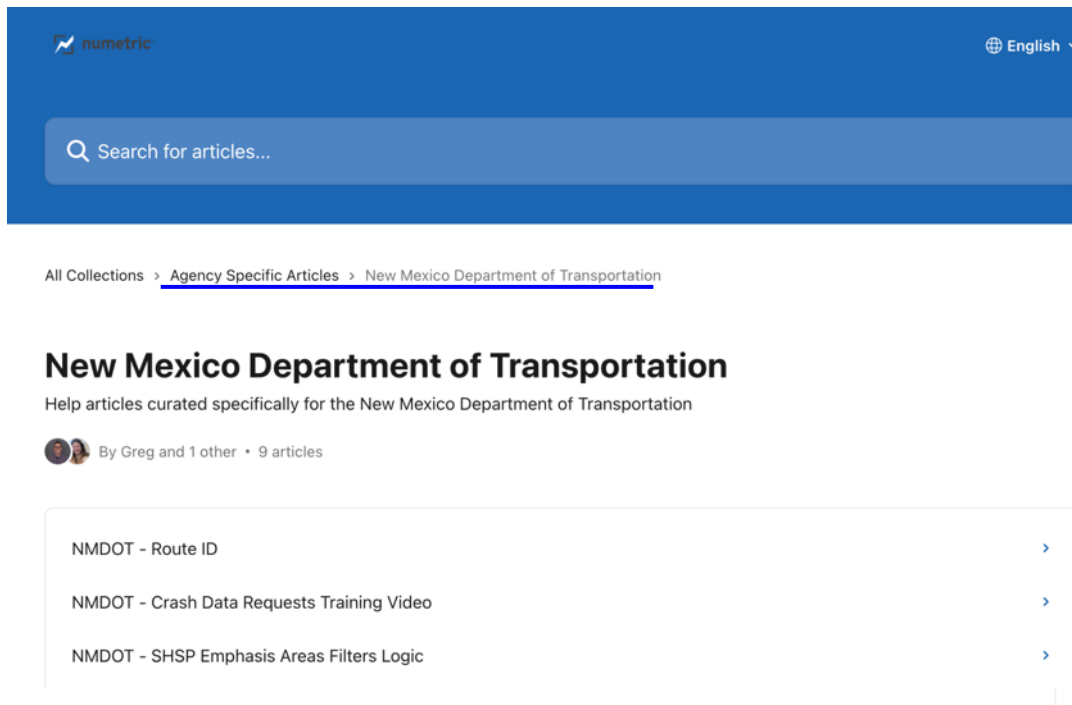
Change Overview (annualized)

0 (20%) Serious Crashes	0 (100%) Fatal Crashes	\$1.8M (49%) Crash Cost
----------------------------	---------------------------	----------------------------

Crash Counts & Cost (annualized)	1	2	+ / -
(K) Fatal Injury	\$1.6M (0.4)	\$0 (0)	-\$1.6M (-0.4)
(B) Suspected Minor Injury	\$395K (5)	\$537.2K (6.8)	+\$142.2K (1.8)
(C) Possible Injury	\$871.1K (19.4)	\$709.4K (15.8)	-\$161.6K (-3.6)
(O) Property Damage-Only	\$612.7K (82.8)	\$396.6K (53.6)	-\$216.1K (-29.2)
(A) Suspected Serious Injury	\$216K (1)	\$259.2K (1.2)	+\$43.2K (0.2)

AASHTOWare Safety Help Center

- General Help Center - <https://support.numeric.com/>
- New Mexico DOT - specific Help Center (NM-specific training videos, other resources)



The screenshot shows the AASHTOWare Safety Help Center interface. At the top, there is a blue header with the 'numeric' logo on the left and a language selector set to 'English' on the right. Below the header is a search bar with the placeholder text 'Search for articles...'. Under the search bar, there is a breadcrumb trail: 'All Collections > Agency Specific Articles > New Mexico Department of Transportation'. The main heading is 'New Mexico Department of Transportation', followed by the subtitle 'Help articles curated specifically for the New Mexico Department of Transportation'. Below this, it says 'By Greg and 1 other • 9 articles'. A list of three articles is shown, each with a right-pointing chevron: 'NMDOT - Route ID', 'NMDOT - Crash Data Requests Training Video', and 'NMDOT - SHSP Emphasis Areas Filters Logic'.

numeric English

Search for articles...

All Collections > Agency Specific Articles > New Mexico Department of Transportation

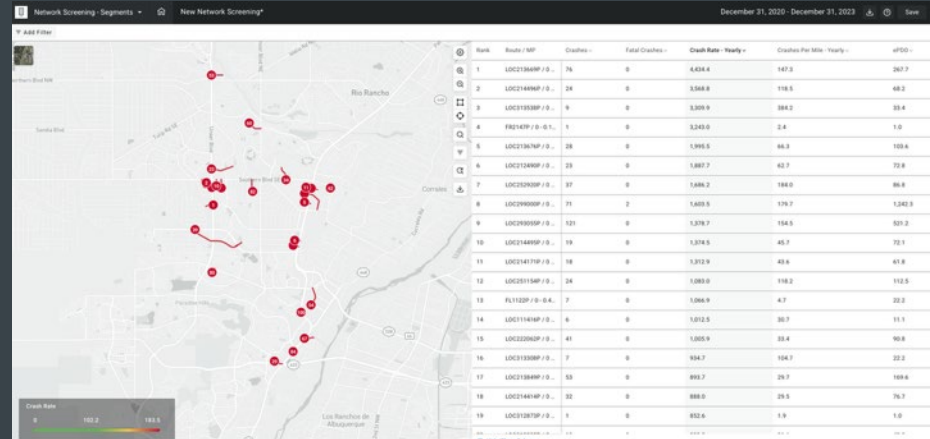
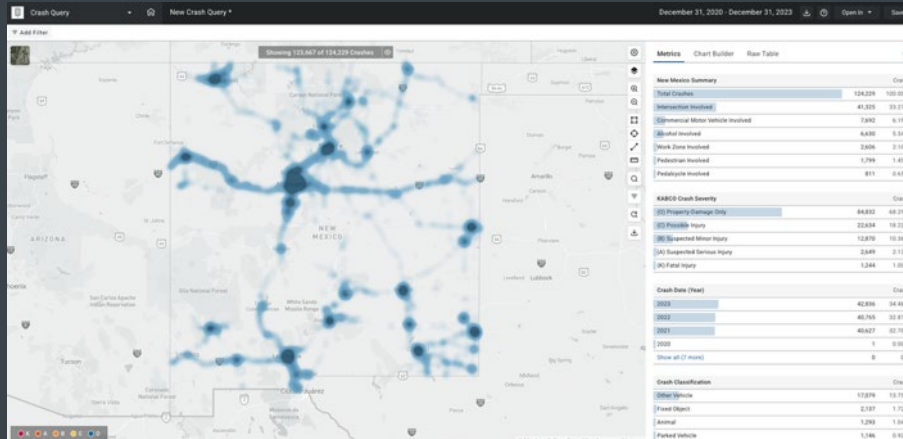
New Mexico Department of Transportation

Help articles curated specifically for the New Mexico Department of Transportation

By Greg and 1 other • 9 articles

- NMDOT - Route ID
- NMDOT - Crash Data Requests Training Video
- NMDOT - SHSP Emphasis Areas Filters Logic

Questions?



NMDOT.AASHTOWareSafety.com
Support@numetric.com



Access Questions? Contact:
Brad Julian
Brad.julian@dot.nm.gov

