Vision Zero Action Plan

TAC Meeting #4

AGENDA

- Roster Roll Call
- Vision Zero & TAC #3 Review
- What is New in Transportation Safety?
- Remembering Victims
- Exercise: Crash Costs
- Existing Crash Conditions Update
- Crash Reduction Example
- Benchmarks & Implementation Plan – Action Items
- Breakout Discussion
- Group Discussion
- Next Steps

ROSTER ROLL CALL

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ROSTER ROLL CALL

***In-Person*: I will call off your name, please answer with "Here"**

***Online*: Please write your name and entity in the Comment Section**

VISION ZERO & TAC #3 REVIEW

- Roster Roll Call
- **Vision Zero & TAC #3 Review**
- What is New in Transportation Safety?
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- Exercise: Crash Costs
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WHAT IS VISION ZERO

Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all. First implemented in Sweden in the 1990s, Vision Zero has proved successful across Europe – and now it's gaining momentum in major American cities.

VISION 4 ZERO NETWORK

REACTIVE VS. PROACTIVE

https://visionzeronetwork.org/about/what-is-vision-zero/

LAS VEGAS VISION ZERO ACTION PLAN

WOOD RODGERS

The City of Las Vegas *Vision Zero Action Plan* will develop strategies to eliminate all traffic fatalities and severe injuries by the year 2050. The *Vision Zero Action Plan* will be a collaborative effort, combining City of Las Vegas, elected officials, safety stakeholders, and public outreach to create safe, healthy, and equitable mobility for all.

VISION STATEMENT

WOOD RODGERS

VISION STATEMENT

Eliminate all transportation fatalities and serious injuries in the City of Las Vegas by 2050

MISSION STATEMENT

MISSION STATEMENT

Engage everyone to create safe, healthy, and equitable mobility for all

GOALS & SUB-GOALS

WOOD RODGERS

Revised during TAC #2 & TAC #3

Currently working on associated Action Items

City of Las Vegas *Vision Zero Action Plan* Goals

REVISED GOALS

1. **Collaborate between the City of Las Vegas and Stakeholders to identify processes (collaboration/communication, safety performance, implementation)**
   a. Short-Term Enforcement: Collaboration between the City and Metro regarding location, time, and conduct of fatalities, including post-crash analysis
   b. Short-Term Enforcement: Strategic locations for enforcement based off the High Injury Network, with equity in mind to remove stigma
   c. Short-Term Schools: Continued and targeted enforcement at schools, including improved transportation engineering, consistent signage, meetings, and proof of improvements
   d. Short-Term Public/Private Developments: Collaboration with businesses (casinos, resorts, bars, lounges) to partner with rideshare to offer discounted rides for patrons to get home, get their car the next day, and advertise these services at the businesses
   e. Short-Term Rideshare: Collaborate with rideshare to develop programs for special services, such as first mile/last mile transit solutions and options for 3rd shift workers
   f. Short-Term Education: Continued education by keeping the conversation going/open with other entities regarding our goals
   g. Middle-Term Education: Continued education by keeping the conversation going/open with other entities regarding our goals
   h. Long-Term Education: Continued education by keeping the conversation going/open with other entities regarding our goals

2. **Create safe streets by giving equal importance to all roadway users**
   a. Short-Term Public/Private Developments: Consistency with private developments and forethought regarding walkability, bikeability, and micromobility, including incorporating sidewalks on both sides of the road for all new developments
   b. Short-Term Enforcement: Collaborate with Metro to ensure all modes of traffic are obeying traffic laws
   c. Middle-Term Engineering: Check engineering deficiencies to ensure lighting, sidewalks, crosswalks, and bicycle lanes are up-to-code for a safe systems approach
   d. Middle-Term Engineering: Make suitable bicycle facilities, such as buffered bicycle lanes and cycle tracks, the norm along arterials
   e. Middle-Term Engineering: Push for public transportation by lessening the travel time on buses and creating a positive experience for all road users

3. **Adopt a culture of safe speeds**
   a. Short-Term Education: Educate the public that speeding is not guaranteed to get you to your location faster and change the focus from how fast you can get somewhere to getting there safely
   b. Middle-Term Enforcement: Increase police presence and enforcement
   c. Middle-Term Engineering: Revise how speed limits are set to be more context and safety sensitive versus traditional methods
   d. Middle-Term Engineering: Decrease the speed limit on arterials posted at 40 MPH and 45 MPH to 35 MPH and time the signals to turn green based off vehicles traveling at 35 MPH

WOOD RODGERS 1

City of Las Vegas *Vision Zero Action Plan* Goals

4. **Develop and promote a culture of safety through new public dialogue on roadway safety**
   a. Short-Term Education: Involve and coordinate with professional societies, community groups, law enforcement, and media to share a common message surrounding safe speeds
   b. Short-Term Education: Educate the public that it takes more than 20-minutes to get to places within Las Vegas and you do not save significant time by speeding
   c. Short-Term Education: Set a goal to conduct yearly public meetings within the High Injury Network, in multiple languages, to inform the community of annual updates
   d. Short-Term Education: Run a public education campaign focused on safety awareness, specifically, speeding, intoxication, and watching out for other modes of transportation
   e. Long-Term Education: Inform residents and tourists that disobeying transportation safety laws will have consequences

5. **Leverage actionable data to ensure meaningful changes**
   a. Short-Term Schools: Ensure traffic signals and Rectangular Rapid Flashing Beacons (RRFB) are located in necessary locations
   b. Short-Term Data: Collect more data on pedestrians and bicyclists, including total number of users and trip purpose
   c. Short-Term Engineering: Implement Leading Pedestrian Intervals (LPI) along crosswalks Downtown and analyze the before and after crash results
   d. Middle-Term Engineering: Plan for alternative modes of travel and determine where they make sense based off data driven decisions
   e. Middle-Term Data: Work with Metro, hospitals, and insurance companies to collect data on underreported crashes

6. **Influence and adopt policies and legislation to advance the Vision Zero Action Plan**
   a. Short-Term Policy: Develop policies for setting safe speed limits as part of the Fiscal Year 2023 Program
   b. Middle-Term Policy: Develop policies to allow for automated traffic enforcement, including allowing fines for speeding and red light running
   c. Middle-Term Policy: Develop policies to change the parking standards to allow for less parking spaces at new developments and to allow for charging for all parking
   d. Middle-Term Policy: Develop policies to incentivize drivers not to speed
   e. Middle-Term Policy: Develop policies to base transportation fines off of a percent of a person's salary, while also increasing the penalties if injuries or fatalities are involved

7. **Develop safe street design standards and regulations**
   a. Short-Term Engineering: Create new engineering standard plans, based off of a Safe Systems Approach, to help reduce speeds, including reducing travel lane widths, widening the sidewalk width, updating street markings, implementing landscaping, and restriping non-perpendicular crosswalks
   b. Short-Term Engineering: Make sure local entities, community groups, and law enforcement agree the new engineering standard plans are "safe"
   c. Short-Term Engineering: Commit to Complete Streets Policy including Complete Streets should not have a posted speed limit above 35 MPH
   d. Short-Term Engineering: Select a City of Las Vegas test corridor for Fiscal Year 2023
   e. Middle-Term Engineering: Implement new engineering standard plans, based off of a Safe Systems Approach, within new and existing infrastructure

WOOD RODGERS 2

City of Las Vegas *Vision Zero Action Plan* Goals

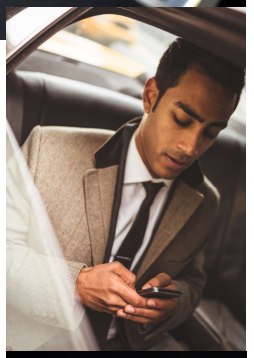
   f. Long-Term Engineering: New community designs need to be more connected to the roadway network, not overbuilt, and have adequate multimodal facilities

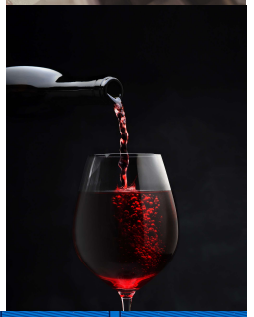
8. **Incorporate Vision Zero Action Plan action items into the RTC's Regional Transportation Plan/ Transportation Improvement Program (RTP/TIP)**
   a. Short-Term Action Plan: Develop periodic program updates to ensure the Vision Zero Action Plan remains a living document
   b. Short-Term Funding: Continued funding and resources for Vision Zero until 2050
   c. Middle-Term Funding: Leverage funding across multiple agencies
   d. Middle-Term Funding: Continued funding and resources for Vision Zero until 2050
   e. Long-Term Funding: Continued funding and resources for Vision Zero until 2050

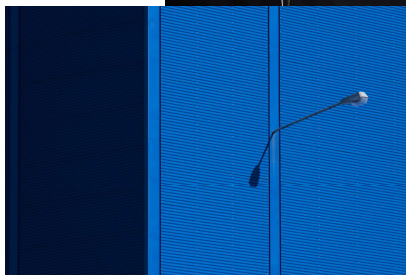
WOOD RODGERS 3

TAC #3 POLLING: TOP CONCERNS WHY CRASHES OCCUR

- *Travel Speed vs. Posted Speed*
- *Distracted Driving*
- *Impairment*
- *Street and Intersection Lighting*
- *Reason for Trip*
- *Driver's History*
- *Exact Location of Crash*

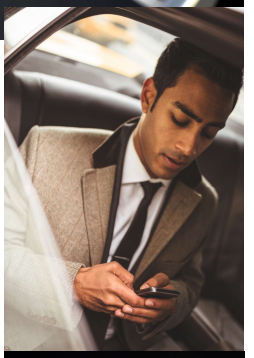


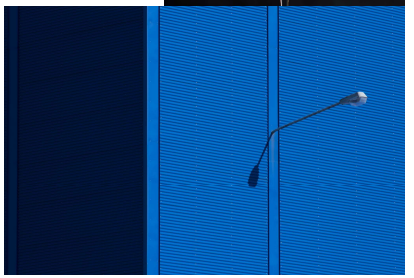




TAC #3 POLLING: ITEMS WOULD LIKE TO SEE ON ALL CRASH REPORTS

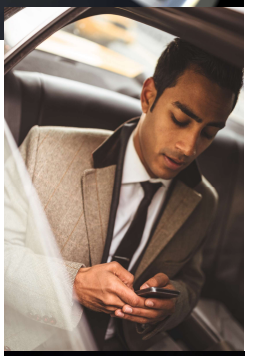
- ***Driver Speeding***
- ***Driver Impairment***
- ***Distracted Driving***
- ***Poor Street & Intersection Lighting***
- ***Poor Road and Community Design***

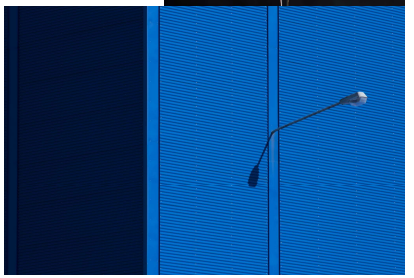




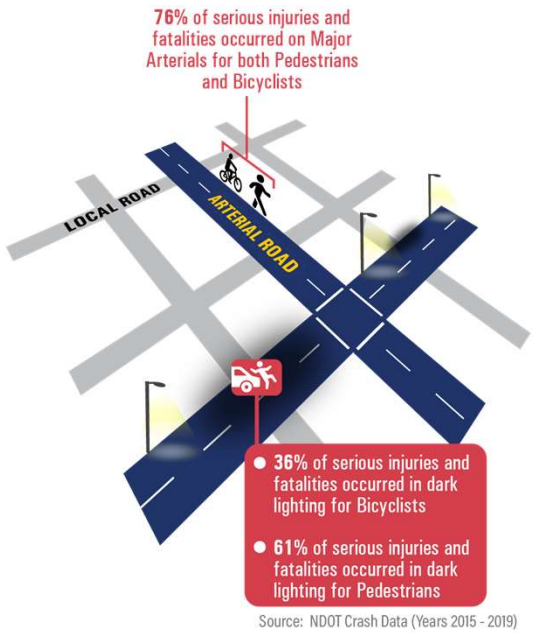
COMMON CONCERNS

- ***SPEEDING***
- ***IMPAIRMENT***
- ***DISTRACTED DRIVING***
- ***LIGHTING***

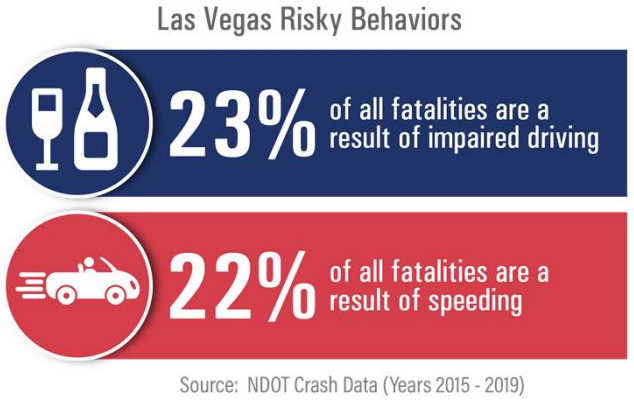




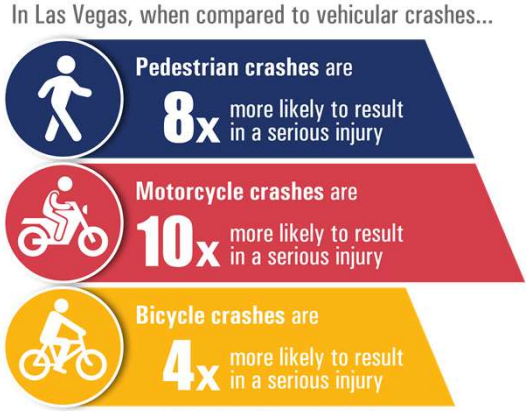
EXISTING CRASH CONDITIONS



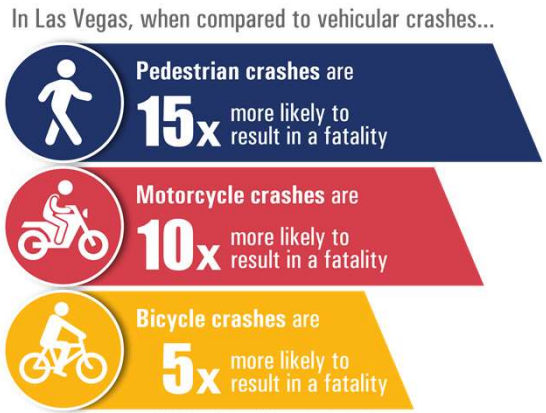
Source: NDOT Crash Data (Years 2015 - 2019)



Source: NDOT Crash Data (Years 2015 - 2019)



Source: NDOT Crash Data (Years 2015 - 2019)



Source: NDOT Crash Data (Years 2015 - 2019)

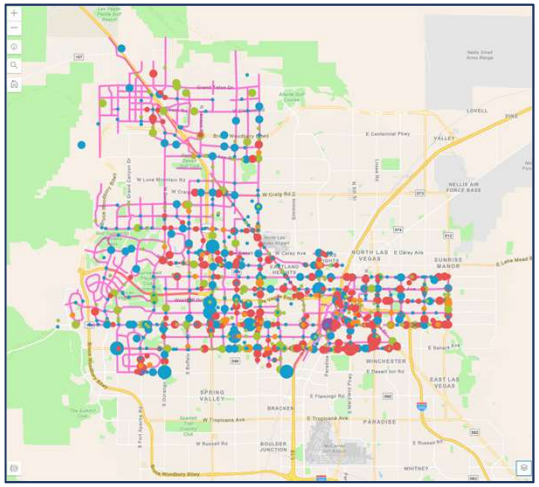
EXISTING CRASH CONDITIONS

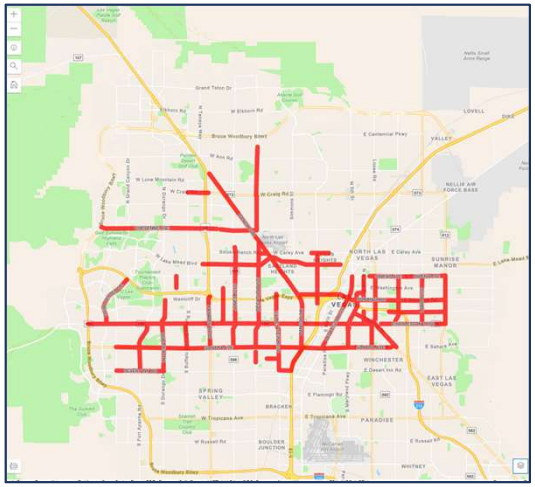
High Injury Network (HIN)

- *Identifies roadways with most traffic-related fatalities & serious injuries*

Communities of Concern (CoC)

- *Concentration of vulnerable residents*





Final HIN & CoC presented today

WHAT IS NEW IN TRANSPORTATION SAFETY?

- Roster Roll Call
- Vision Zero & TAC #3 Review
- **What is New in Transportation Safety?**
- Remembering Victims
- Exercise: Crash Costs
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WHAT IS NEW IN TRANSPORTATION SAFETY?

United States Department of Transportation (USDOT)

- *Adoption of Vision Zero*

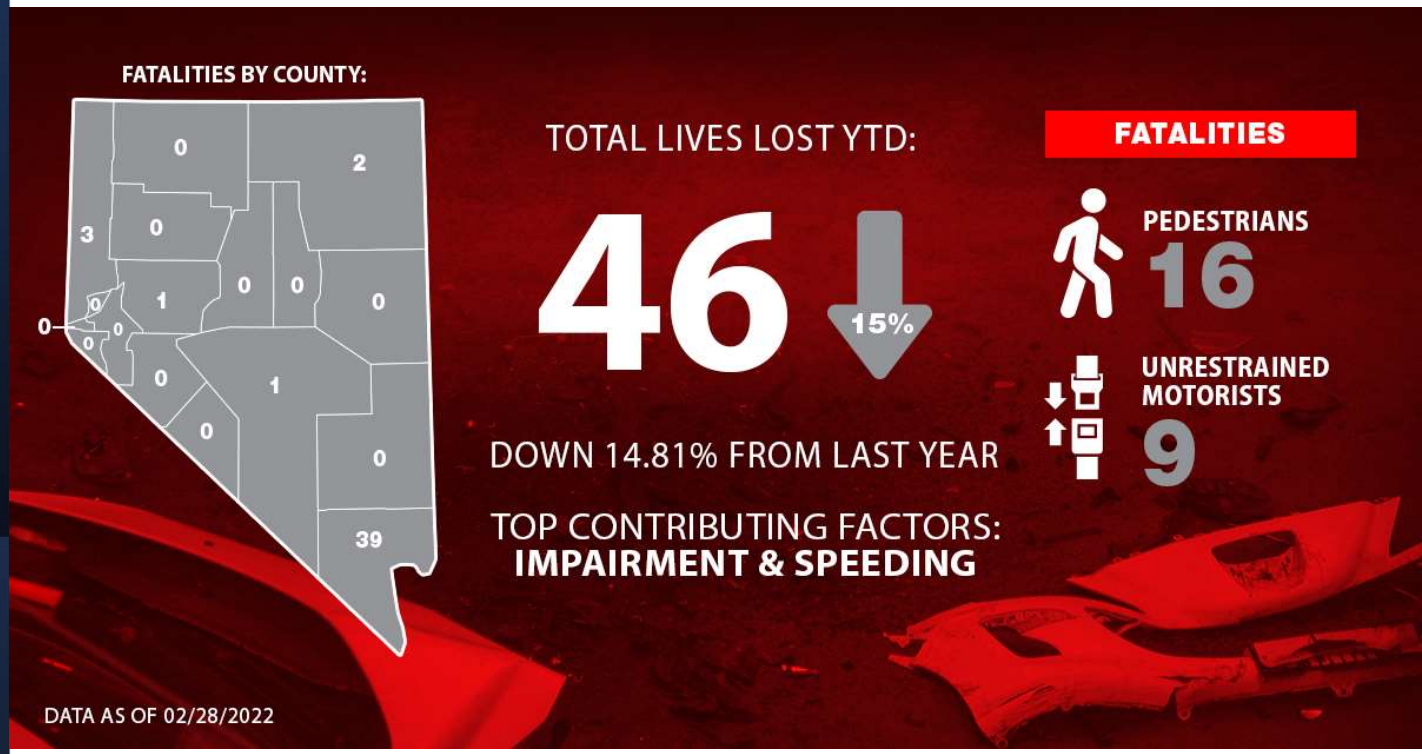
North Las Vegas, Nevada

- *9 Fatalities from 1 Crash*
- *Motorist going 103 MPH*

Henderson, Nevada

- *Student killed on sidewalk near school*
- *Student related to Coworker*
- *My Niece goes to same school*

WHAT IS NEW IN TRANSPORTATION SAFETY?



REMEMBERING VICTIMS

- Roster Roll Call
- Vision Zero & TAC #3 Review
- What is New in Transportation Safety?
- **Remembering Victims**
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REMEMBERING VICTIMS

Messages for the Vision Zero Action Plan:

Cole's Story

by Mike Sukle and Michelle Roche, Cole's father and mother

OUR CALL TO ACTION

On April 14, 2002, your run-of-the-mill miracle happened.

A little boy with crazy blonde hair was born into this world. His name was Cole Michael Sukle. To some that may not sound like much of a miracle, but everyone who met Cole would come to understand how that day would change so many lives.

Cole, like many kids his age had a lot of interests. He was an athlete. An artist. A student. A brother. And a son, grandson and cousin. He had a big yellow dog that he loved as much as the dog loved him. He loved Hawaii. And he could recite every line from favorite TV shows, Family Guy and How I Met Your Mother. But what made Cole really special was how comfortable he was in his own skin and how he invited you to feel the same. He easily made friends with just about anyone. If you're trying to picture Cole, close your eyes and just imagine bright sunshiny yellow. That's the feeling of Cole. He was well known for laughs, jokes and bringing a special kindness to those around him. He didn't care what color someone was, what kind of grades they got, how much money they had, or where they came from. Cole had a gift for bringing people together.

On July 13, 2016, Cole was doing what he enjoyed most - riding his skateboard around his neighborhood with two of his best buddies. The three had just left Cole's house when tragedy struck. A block from home, a quarter of a mile from their middle school, and well within the bike lane, an elderly woman under the influence of alcohol struck Cole and one of his friends. The friend left with minor injuries, but Cole didn't survive. On July 14 at 11:14 a.m. Cole became an organ donor. He gave both of his kidneys saving two lives.

Even in passing, the loss of Cole has brought the community, classmates, friends, family and even strangers closer together than ever before. That's just what Cole does.

We hope that Cole's story will bring Denver together to implement Vision Zero so that no one's child, brother, best friend or neighbor will ever have their life taken from them simply by walking, biking or enjoying their own neighborhood.

If you would like to share your story about how a traffic fatality or serious injury has affected your life, please visit the Denver Vision Zero Coalition website (walkdenver.org/vision-zero) or contact the City and County of Denver at visionzero@denvergov.org.

Denver

04

VISION ZERO LA | ERIN ACTION PLAN • PROGRESS REPORT

MESSAGES

FROM MEDICAL PROFESSIONALS

"No one wakes up in the morning, and leaves their home saying, "today I am going to be involved in a traffic incident." Unfortunately, these incidents are unpredictable, at times catastrophic and lethal. As a trauma center health care professional I see first-hand the impact that these incidents cause, not only on the patient and family, but on our staff as well. Although, not every patient involved in an Auto vs Pedestrian incident may die, the increasing numbers of severe injury continue to climb. Speed has clearly become the most prevalent indicator of incident survivability, which can be coupled by distracted driving and walking, as well as driving while under the influence.

In the past, the responsibility for safety was often placed on the driver. Now, people walking, running or biking can be just as distracted or altered as someone behind the wheel of a vehicle. Therefore, the Vision Zero Initiative is ever so important because it focuses on the complete problem, encouraging both drivers and pedestrians to take responsibility for their safety. These incidents are completely preventable.

Everyone has a responsibility to slow down and make important decisions while navigating the streets of Los Angeles.

Through the Vision Zero Initiative, and in collaboration with the Trauma Centers' injury prevention programs, we can help make this behavioral change into a common practice, because preventable deaths are the easiest to mitigate by education and exposure."

Michelle Baker - Lee, RN BS
Trauma Program Manager
Huntington Memorial Hospital

"Annually, more children die from traumatic injury than all other causes/diseases combined. Many of these preventable injuries are from car crashes and pedestrian injuries. Children rely on us to help keep them safe."

Every child deserves to travel safely through their community; Vision Zero is a start.

Helen Arbogast
Manager of Injury Prevention
Trauma Program, Children's Hospital Los Angeles
Director, Safe Kids CA

"I've been a Trauma Surgeon for 17 years. It gets harder every year to deliver terrible news to families and patients. Pedestrians struck by cars are THE definition of the Vulnerable Road User, they don't have metal armor or a helmet, just flesh and bones. Pedestrians suffer a pattern of injury that is often devastating. They are typically struck in the legs, suffering bad fractures, and then get flipped onto their heads, causing a traumatic brain injury. Lives are forever changed. When I hear stories about an incident, I think about how those drivers likely reflect on how it was not THAT important to speed, not THAT important to run the red light, not THAT important to ignore a crosswalk, all in retrospect.

Commutes are hard, but not as hard as living with a head injury, not as hard as having a family member die before their time, not as hard as never living to your full potential.

The cry that comes from a mother who loses a child to trauma is other-worldly. There ARE public health measures we can do to prevent pedestrian injury. We just need to understand that our community is at risk, and remind ourselves how much our neighbors matter."

Rochelle A. Dicker, MD
Professor of Surgery
Associate Trauma Medical Director, UCLA

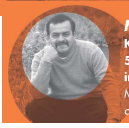
05

2018 ACTION PLAN • PROGRESS REPORT | VISION ZERO LA

Los Angeles

Dustin Finney
Son, brother, friend, advocate for equality of all people. Killed at age 28 by a drunk driver in a hit and run crash while riding in a bike lane on SE Division at 85th Avenue.
August 12, 2011
courtesy of Dustin's mom

Joe Stone
Fun-loving and beloved son, brother, and uncle. Joe was killed by an inattentive driver at age 25 while walking in a marked crosswalk.
October 4, 2013
courtesy of Joe's mom



Marcos Castillo
Kind, loving, and hard-working—Marcos was killed at age 50 on the way to work when his car was hit by a drug-impaired driver.
March 24, 2013
courtesy of Marcos' wife

Portland

Reached out to:

- *Erin Breen, UNLV*
- *Trauma Intervention Program (TIP)*

WOOD RODGERS

VISION ZERO ACTION PLAN

EXERCISE: CRASH COSTS

- Roster Roll Call
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EXERCISE: CRASH COSTS

Please fill in the "Associated Cost" for each category

FATAL CRASH COSTS	
CATEGORY	**ASSOCIATED COST ($)**
Medical Care	
Market Productivity	
Household Productivity	
Workplace Costs	
Insurance Administrative Costs	
Legal Costs	
Congestion / Travel Delay	
Property Damage	
TOTAL	

EXERCISE: CRASH COSTS

Table Definitions

DEFINITIONS	
CATEGORY	**DEFINITION**
Medical Care	Ambulance, ER, Inpatient, Follow-up, PT, Prescriptions, Prosthetics, Home
Market Productivity	Lost Wages & Benefits over Lifespan
Household Productivity	Lost Productive Household Activity (Hire)
Workplace Costs	New Employee Training, OT to complete, Administrative
Insurance Administrative Costs	Administrative
Legal Costs	Legal Fees & Court Costs
Congestion / Travel Delay	Travel Delay, Fuel, Greenhouse Gas
Property Damage	Vehicles, Cargo, Roadways

EXERCISE: CRASH COSTS

WOOD RODGERS

Approximate Associated Costs Fatal Crashes

FATAL CRASH COSTS	
CATEGORY	**APPROXIMATE ASSOCIATED COST ($)**
Medical Care	1.4 Million
Market Productivity	2.7 Million
Household Productivity	900 Thousand
Workplace Costs	200 Thousand
Insurance Administrative Costs	1 Million
Legal Costs	500 Thousand
Congestion / Travel Delay	1.1 Million
Property Damage	3.1 Million
TOTAL	**10.9 Million**

EXERCISE: CRASH COSTS

WOOD RODGERS

Crash Cost Assumptions All Crash Severities

CRASH COST ASSUMPTIONS	
CRASH SEVERITY	**CRASH COST PER CRASH**
Fatal (K)	$10,900,000
Serious Injury / Incapacitating Injury (A)	$521,300
Minor Injury / Non-Incapacitating Injury (B)	$142,000
Possible Injury (C)	$72,500
Property Damage Only (O)	$4,500

EXERCISE: CRASH COSTS

WOOD RODGERS

City of Las Vegas
All Crash Severities Costs

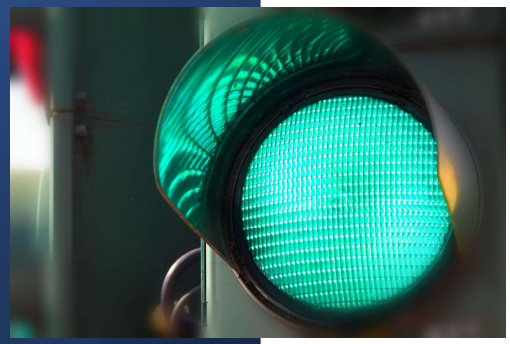
CITY OF LAS VEGAS CRASH COSTS			
CRASH TYPE	**# OF CRASHES**	**COST / CRASH**	**TOTAL CRASH COST**
Fatality	254	$10,900,000	$2,768,600,000
Injury A	892	$521,300	$464,999,600
Injury B	5,535	$142,000	$785,970,000
Injury C	16,701	$72,500	$1,210,822,500
PDO	18,895	$4,500	$85,027,500
		5-Year Total (2015-2019)	**$5,315,419,600**
		Average / Year	**$1,063,083,920**

EXERCISE: CRASH COSTS

WOOD RODGERS

City of Las Vegas
All Fatalities & Serious Injuries Costs

CITY OF LAS VEGAS CRASH COSTS			
CRASH TYPE	**# OF CRASHES**	**COST / CRASH**	**TOTAL CRASH COST**
Fatality	254	$10,900,000	$2,768,600,000
Injury A	892	$521,300	$464,999,600
		5-Year Total (2015-2019)	**$3,233,599,600**
		Average / Year	**$646,719,920**



EXERCISE: CRASH COSTS

WHAT COULD YOU BUILD?

Traffic Signal Systems

$600,000 Each

All Severity – # of Systems:

1,772 (1-Year)

8,859 (5-Years)

Fatal/Injury A – # of Systems:

1,078 (1-Year)

5,389 (5-Years)

EXERCISE: CRASH COSTS

WHAT COULD YOU BUILD?

Streetlight

$5,000 Each

All Severity – # of Streetlights:

212,617 (1-Year)

1,063,084 (5-Years)

Fatal/Injury A – # of Streetlights:

129,344 (1-Year)

646,720 (5-Years)

EXERCISE: CRASH COSTS

WHAT COULD YOU BUILD?

L-Curb

$30 / Linear Foot

All Severity – Linear Feet L-Curb:

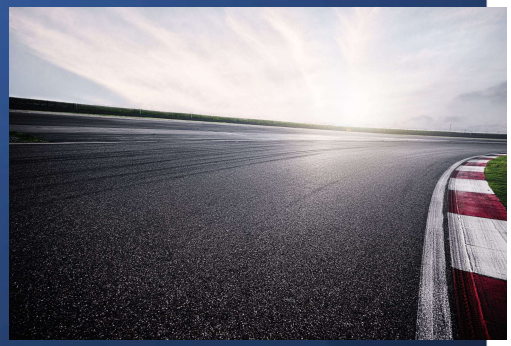
35,436,131 (1-Year)

177,180,653 (5-Years)

Fatal/Injury A – Linear Feet L-Curb:

21,557,331 (1-Year)

107,786,653 (5-Years)



EXERCISE: CRASH COSTS

WHAT COULD YOU BUILD?

6-Inch Plantmix Bituminous Surface

$100 / Square Yard

All Severity – Yd² 6" Surface:

10,630,839 (1-Year)

53,154,196 (5-Years)

Fatal/Injury A – Yd² 6" Surface:

6,467,199 (1-Year)

32,335,996 (5-Years)

EXERCISE: CRASH COSTS

WHAT COULD YOU BUILD?

RTC's CIP

$2,150,516,093 / 10-Years

All Severity – # of CIP Years:

5 (1-Year)

25 (5-Years)

Fatal/Injury A – # of CIP Years:

3 (1-Year)

15 (5-Years)

EXERCISE: CRASH COSTS

WHAT COULD YOU BUILD?

CLV's CIP

$1,220,449,001,/ 5-Years

All Severity – # of CIP Years:

4 (1-Year)

22 (5-Years)

Fatal/Injury A – # of CIP Years:

3 (1-Year)

13 (5-Years)

EXERCISE: CRASH COSTS

CONCLUSION

According to the National Highway Traffic Safety Administration (NHTSA), 3 factors produced the most harm:

- *Speeding*
- *Drunk Driving*
- *Distracted Driving*

Cost borne by general public:

- *75% of total costs associated with crashes show up as:*
  - *Higher Taxes*
  - *Insurance Costs*
  - *Medical Costs*
  - *Negative Economic Effects of Congestion & Other Environmental Impacts*

EXISTING CRASH CONDITIONS UPDATE

- Roster Roll Call
- Vision Zero & TAC #3 Review
- What is New in Transportation Safety?
- Remembering Victims
- Exercise: Crash Costs
- **Existing Crash Conditions Update**
- Crash Reduction Example
- Benchmarks & Implementation Plan – Action Items
- Breakout Discussion
- Group Discussion
- Next Steps

EXISTING CRASH CONDITIONS UPDATE

High Injury Network (HIN)

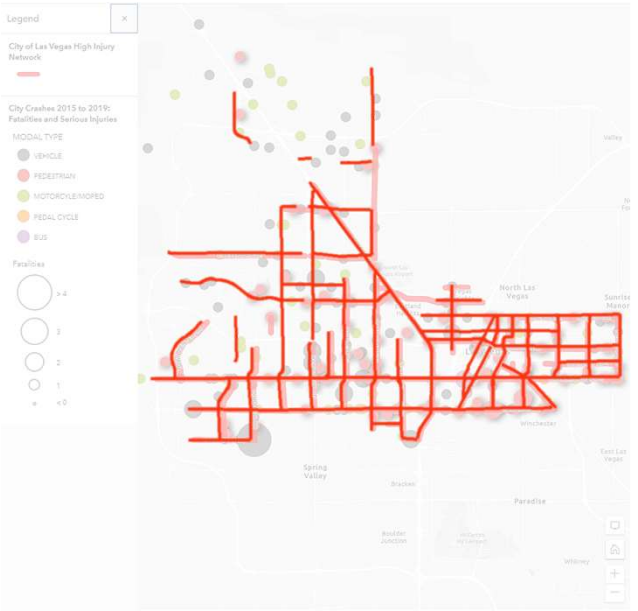
- Identifies roadways with most traffic-related fatalities & serious injuries
  - Indicates where fatalities and serious injuries are most concentrated, *NOT* whether the roadway is dangerous
- Aides in prioritizing where improvements will have biggest impact
- Helps in understanding patterns of fatalities and serious injuries
  - Informs more sustainable, more effective engineering measures to ultimately save lives

EXISTING CRASH CONDITIONS UPDATE

Updated HIN: Prioritized Arterials

City of Las Vegas Results

- HIN Identified by Red Lines
  - ~148-Miles
  - 11% of City Surface Streets contributes to 77% of Transportation Fatalities and Serious Injuries
- https://arcg.is/SPbW5



EXISTING CRASH CONDITIONS UPDATE

WOOD RODGERS

Communities of Concern (CoC)

- Identify pattern areas with Communities of Concern in mind
  - Concentration of vulnerable residents (low-income communities, communities of color, seniors, people with disabilities…)
- Integrate TAC input/data subsets into the HIN to account for Equity
  - RTC's Access 2050 RTP

EXISTING CRASH CONDITIONS UPDATE

access 2050
Enhancing Mobility for Southern Nevada Residents

WOOD RODGERS

RTC's defined Equity population groups

Low Income
Less than $12,060 per 1 person/household

People with Disabilities
Individuals with one or more of the following: hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty.

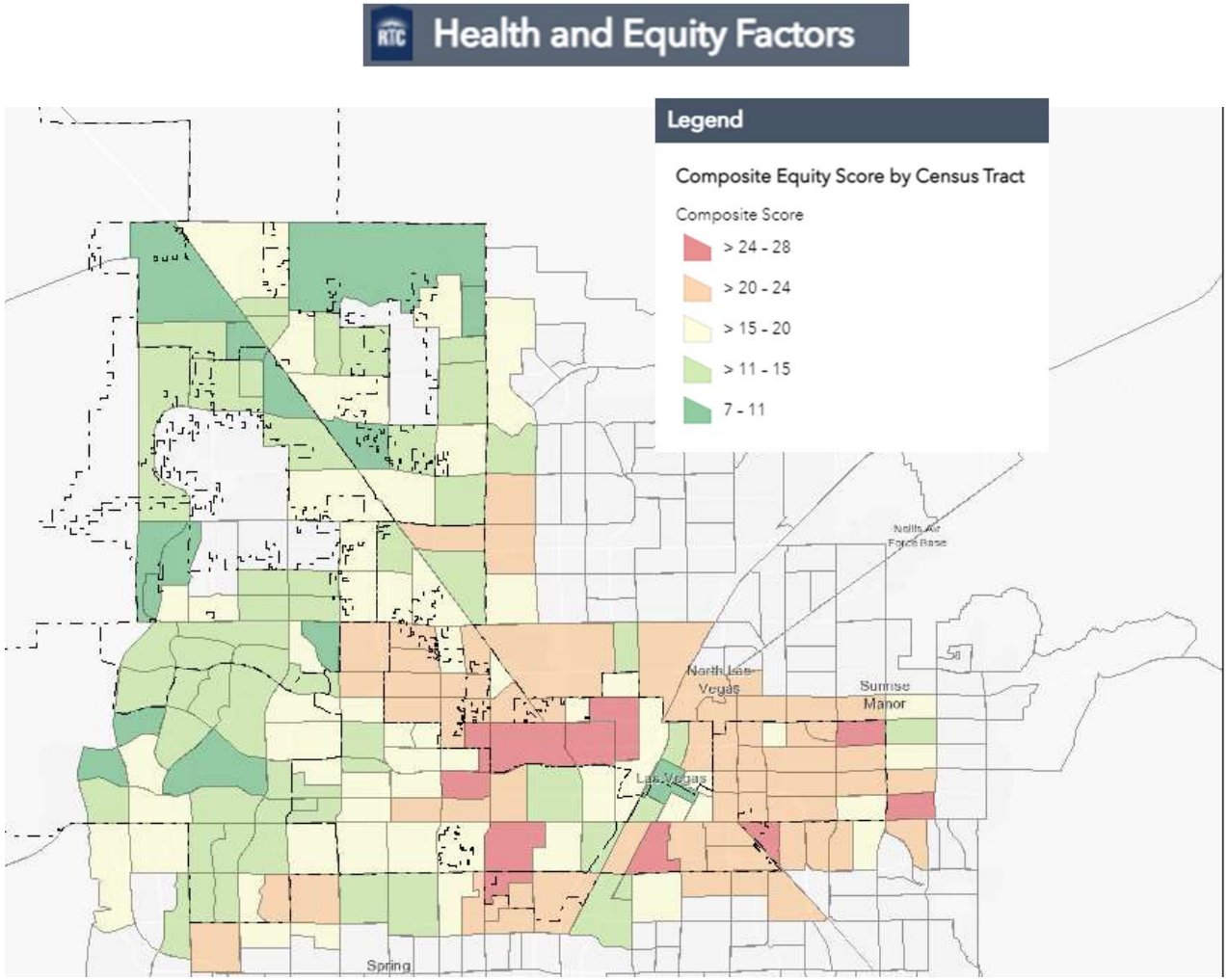
Seniors
65 years of age or older

Limited English Proficiency
Speaks English "less than very well"

Minority
Non-white

Source: RTC Access 2050 – Appendix K: Environmental Justice Analysis

EXISTING CRASH CONDITIONS UPDATE



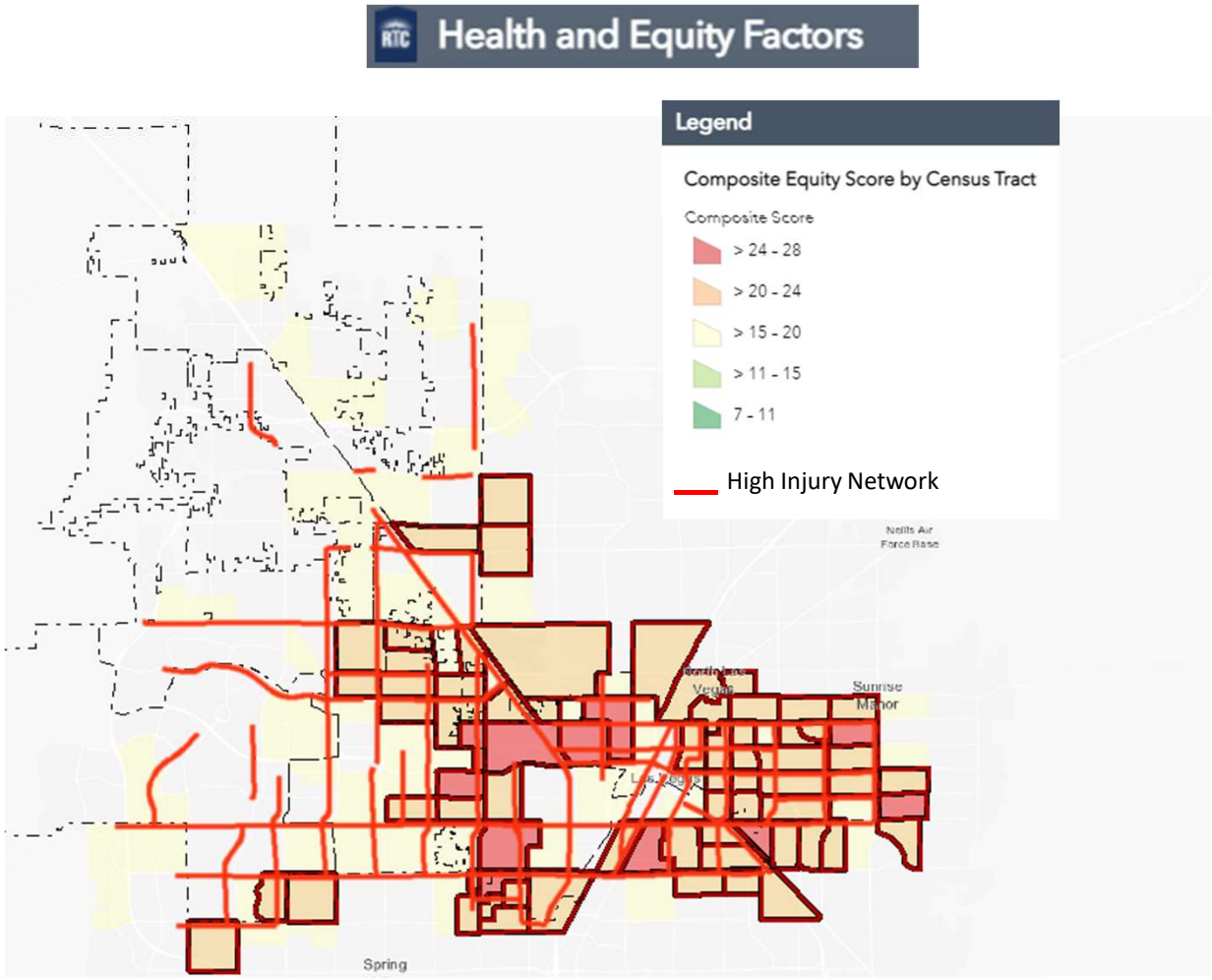
EXISTING CRASH CONDITIONS UPDATE

WOOD RODGERS

Communities of Concern (CoC)

- Tracts that scored **higher:**
  - Have a higher identified need and typically represent low-income, minority neighborhoods who rely more heavily on bicycling, walking, or transit as their primary form of transportation.
- Integration of EQUITY & HIN
  - Reveals that traffic crashes disproportionately affect disadvantaged communities and are impacted by higher rates of crashes, fatalities, & serious injuries

EXISTING CRASH CONDITIONS UPDATE



EXISTING CRASH CONDITIONS UPDATE

VISIONZERO

City of Las Vegas High Injury Network

The Vision Zero High Injury Network (HIN) guides the city's investments in infrastructure and programs, and ensures that Vision Zero projects support those most in need.

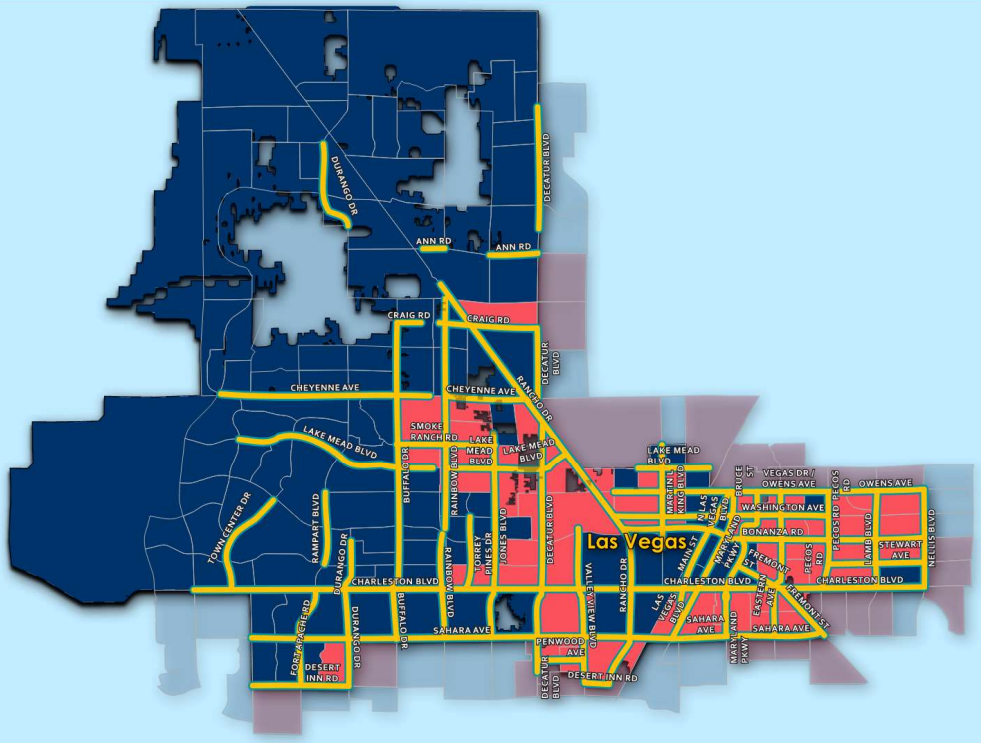
77% of Las Vegas' severe and fatal traffic injuries occur on just **11%** of our streets.

33% of city streets are in Communities of Concern, and **58%** of the High Injury Network is in those same communities.

High Injury Network

The RTC of Southern Nevada Equity Focus Areas / Communities of Concern (CoC)

The CoC represents areas that have a higher identified need and typically represent low-income, minority neighborhoods who rely more heavily on bicycling, walking, or transit as their primary form of transportation

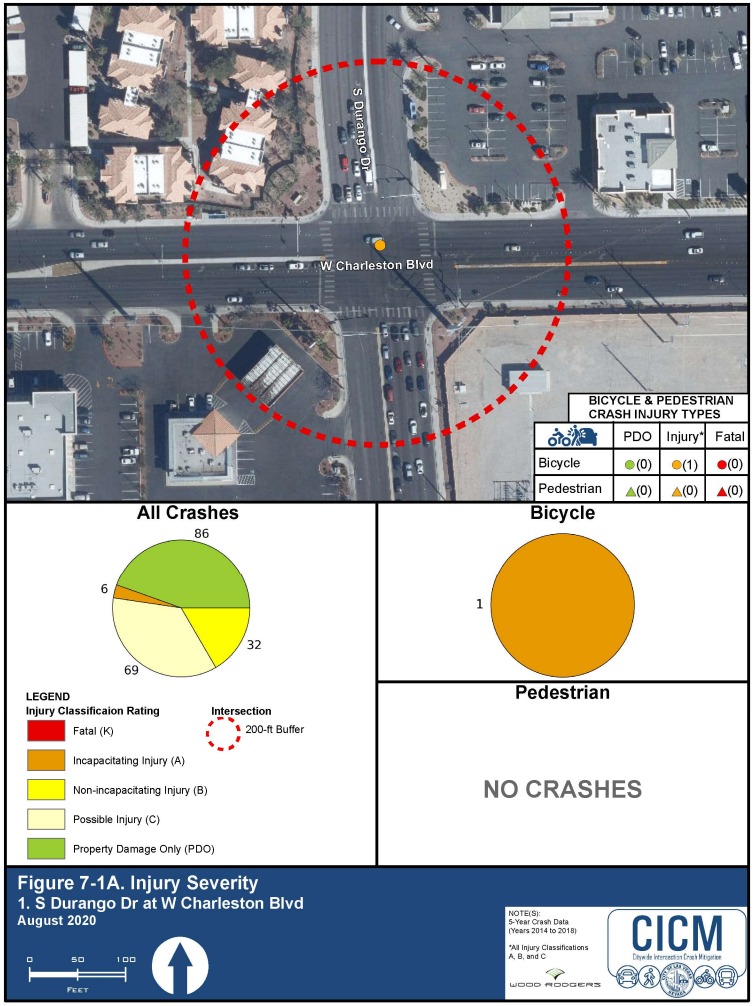


CRASH REDUCTION EXAMPLE

- Roster Roll Call
- Vision Zero & TAC #3 Review
- What is New in Transportation Safety?
- Remembering Victims
- Exercise: Crash Costs
- Existing Crash Conditions Update
- **Crash Reduction Example**
- Benchmarks & Implementation Plan – Action Items
- Breakout Discussion
- Group Discussion
- Next Steps

CRASH REDUCTION EXAMPLE

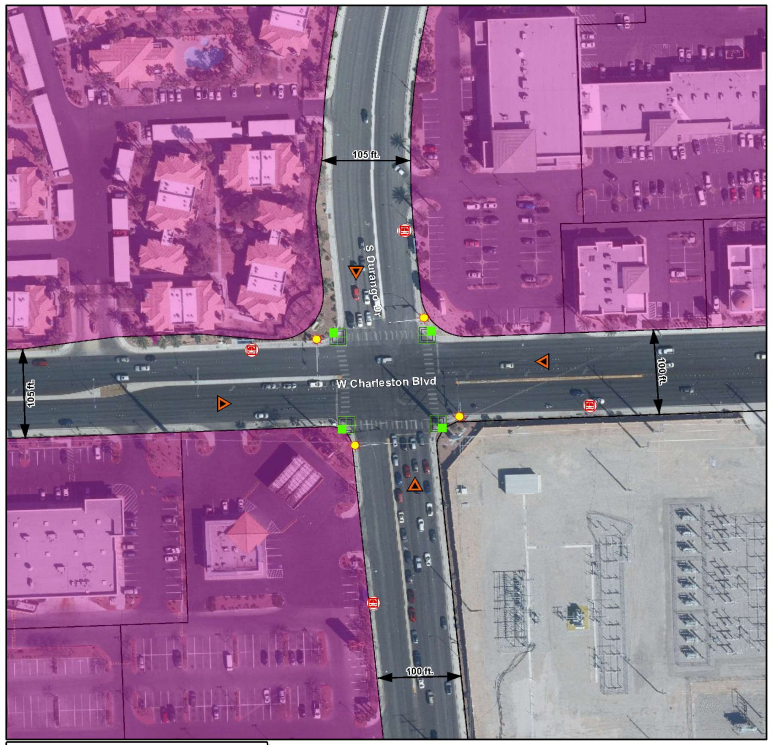
Durango Drive & Charleston Boulevard



- *193 Crashes*
- *(39 Crashes/Year)*
  - *0 Fatalities*
  - *6 Serious Injuries*

Durango Drive & Charleston Boulevard

CRASH REDUCTION EXAMPLE



	Existing	Mitigation
Signal System: Retroreflective Backplates / Signal Heads Aligned with Lanes / Left-Turn Phasing / Mast Arm Lighting		
NB	No / No / Green Ball - Permitted / 1-Luminaire	Yes / Yes / Protected / 2-Luminaires
SB	No / No / Green Ball - Permitted / 1-Luminaire	Yes / Yes / Protected / 2-Luminaires
EB	No / No / Green Ball - Permitted / 1-Luminaire	Yes / Yes / Protected / 2-Luminaires
WB	No / No / Green Ball - Permitted / 1-Luminaire	Yes / Yes / Protected / 2-Luminaires
Roadway (Vehicle): Median Island / Through Lane Alignment / U-Turn Allowed (Sign) / Lane Geometrics		
NB	Yes / Yes / N/A / LT:1-300'; 3-Thru; RT:Shared	Yes / Yes / **Yes / LT:2-300'**; 3-Thru; **RT:1-200'**
SB	Yes / No / N/A / LT:1-380'; 3-Thru; RT:Shared	Yes / Yes / **Yes / LT:2-380'**; 3-Thru; **RT:1-200'**
EB	Yes / Yes / N/A / LT:1-220'; 3-Thru; RT:Shared	Yes / Yes / **Yes / LT:2-300'**; 3-Thru; **RT:1-200'**
WB	Yes / No / N/A / LT:1-330'; 3-Thru; RT:Shared	Yes / **Yes / Yes / LT:2-330'**; 3-Thru; **RT:1-200'**
Multimodal Transit Facilties: Turnout / Amenities		
NB	No / Shelter	**Yes** / Shelter
SB	No / Shelter	**Yes** / Shelter
EB	No / Shelter in S/W	**Yes / Shelter behind S/W**
WB	No / Shelter	**Yes** / Shelter
Multimodal Bicycle Facilties: Presence (Type)		
NB	No	No
SB	No	No
EB	No	No
WB	No	No
Multimodal Pedestrian Facilties: Crosswalk / ADA Compliance		
NB	Yes / Non-Compliant	Yes / **Compliant**
SB	Yes / Non-Compliant	Yes / **Compliant**
EB	Yes / Non-Compliant	Yes / **Compliant**
WB	Yes / Non-Compliant	Yes / **Compliant**

0 50 100 FEET

Figure 10A. Systemic Improvements: 1. Durango Dr at Charleston Blvd
Las Vegas Citywide Intersection Crash Mitigation Program
January 2021

NOTE(S):
BOLD represents improvement opportunity

CICM Citywide Intersection Crash Mitigation

WOOD RODGERS

CRASH REDUCTION EXAMPLE

Durango Drive & Charleston Boulevard

Roadway Data
Facilty Type: Control Type
Intersection: Signalized
Number of Approaches
4
Urban / Rural
Urban
Agency
City of Las Vegas
District - Ward
Ward 1 and Ward 2
Daily Entering Traffic
68,663
Existing LOS: AM / (PM)
LOS D / (LOS E)
Mitigated LOS: AM / (PM)
LOS D / (LOS D)

(1) Charleston Boulevard and Durango Drive

Crash Data (2014 - 2018)

Total Crashes (PDO / Injury A/B/C / Fatal)	
193	(86) / (6/32/69) / (0)
Total Pedestrain & Bicyclist Crashes (PDO / Injury A/B/C / Fatal)	
0 & 1	(0) / (1/0/0) / (0)

Countermeasures Considered and Benefit Cost Evaluation

Improvements:	Minor Traffic Signal	Roadway [1]	Pedestrian Realm
Capital Cost	$262,000	$3,340,000	$85,000
Service Life	20 Years	20 Years	20 Years
Crash Savings	$17,555,000	$28,071,000	$201,000
CMF composite	0.85	0.76	0.79
Crash Costs*	$116,960,000	$116,960,000	$970,000
BCR	67.0	8.4	2.4

[1] ROW cost included for Roadway Improvements

Figure 7A:
Charleston Boulevard and Durango Drive BCRs

NOTE(S):
*NDOT 2018 Crash Cost
Property Damage Only (PDO): $32,800
Injury (A), (B), and (C): $206,500
Fatal (K): $9,400,000

Annual 1.5% increase in ADT prediction

DISCLAIMER(S):
Estimation of cost of labor, materials, and equipment are provided herein based on estimates of regional information at the time of the study. All values are represented as year 2020 "present values", where life-cycle maintenance/service costs are not included. No guarantee is implied that the proposals, bids, or actual costs will not vary.

January 2021

Crash Modification Factors (CMF)

- Minor Traffic Signal – 0.85
- Roadway – 0.76
- Pedestrian Realm – 0.79

CRASH REDUCTION EXAMPLE

Durango Drive & Charleston Boulevard

Improvements Include:

- ***Changed Single Permissive Left-turns for All Approaches to Protected Dual Left-turns for All Approaches (Roadway)***
- ***Added Southbound Right-turn Pocket (Roadway)***
- ***Added Retroreflective Backplates (Minor Traffic Signal)***
- ***Added U-Turn Signs (Minor Traffic Signal)***

CRASH REDUCTION EXAMPLE

Durango Drive & Charleston Boulevard

Before Improvements

Average of 39 Crashes/Year

Average of 1.2 Serious Injuries/Year

CMFs

Minor Traffic Signal (0.85)

- *Average of 33 Crashes/Year*

Roadway (0.76)

- *Average of 30 Crashes/Year*

Pedestrian Realm (0.79)

- *Average of 31 Crashes/Year*

CRASH REDUCTION EXAMPLE

Durango Drive & Charleston Boulevard

Before Improvements

Average of 39 Crashes/Year

Average of 1.2 Serious Injuries/Year

After Improvements (All 2021 Crashes)

9 Crashes All Year

- *Equivalent CMF = 0.23*

0 Serious Injuries All Year

WOOD RODGERS

BENCHMARKS & IMPLEMENTATION PLAN – ACTION ITEMS

- Roster Roll Call
- Vision Zero & TAC #3 Review
- What is New in Transportation Safety?
- Remembering Victims
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- Crash Reduction Example
- **Benchmarks & Implementation Plan – Action Items**
- Breakout Discussion
- Group Discussion
- Next Steps

BENCHMARKS & IMPLEMENTATION PLAN – ACTION ITEMS

Action Items

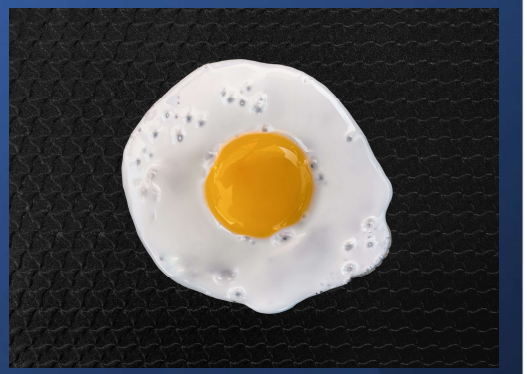
- ***At least one Action Item per Sub-Goal***
  - ***Short-term (0-3 Years)***
  - ***Medium-term (4-10 Years)***
  - ***Long-term (10+ Years)***
- ***Responsible Party***
  - ***Lead***
  - ***Supporting***

BENCHMARKS & IMPLEMENTATION PLAN – ACTION ITEMS

WOOD RODGERS

Discussion Topics:

- ***In-Person***
  - ***Clark County School District (CCSD) Action Items:***
    - ***What coordination is needed with schools across jurisdictions?***
    - ***What action items can we include to make school zones safer?***
    - ***What processes/requirements do we need when new schools are in design?***



BENCHMARKS & IMPLEMENTATION PLAN – ACTION ITEMS

WOOD RODGERS

Discussion Topics:

- ***Online***
  - ***Collaboration Safety Efforts Action Items:***
    - ***How do we provide consistent advertisement between other safety state and regional programs?***
    - ***Do we want separate Public Service Announcements (PSAs), or can we combine efforts between Zero Fatalities, Vision Zero, Department of Public Safety, & Clark County Office of Traffic Safety?***

BREAKOUT DISCUSSION

- Roster Roll Call
- Vision Zero & TAC #3 Review
- What is New in Transportation Safety?
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- Exercise: Crash Costs
- Existing Crash Conditions Update
- Crash Reduction Example
- Benchmarks & Implementation Plan – Action Items
- **Breakout Discussion**
- Group Discussion
- Next Steps

BREAKOUT DISCUSSION

Group Tasks

- In-Person
  - Clark County School District Action Items
- Online
  - Collaboration Safety Efforts Action Items

BREAKOUT DISCUSSION

Discussion Topics:

- *In-Person*
  - *Clark County School District (CCSD) Action Items:*
    - *What coordination is needed with schools across jurisdictions?*
    - *What action items can we include to make school zones safer?*
    - *What processes/requirements do we need when new schools are in design?*
- *Online*
  - *Collaboration Safety Efforts Action Items:*
    - *How do we provide consistent advertisement between other safety state and regional programs?*
    - *Do we want separate Public Service Announcements (PSAs), or can we combine efforts between Zero Fatalities, Vision Zero, Department of Public Safety, & Clark County Office of Traffic Safety?*

GROUP DISCUSSION

- Roster Roll Call
- Vision Zero & TAC #3 Review
- What is New in Transportation Safety?
- Remembering Victims
- Exercise: Crash Costs
- Existing Crash Conditions Update
- Crash Reduction Example
- Benchmarks & Implementation Plan – Action Items
- Breakout Discussion
- **Group Discussion**
- Next Steps

GROUP DISCUSSION

All Groups Discussion

- ***In-Person***
  - ***Clark County School District Action Items***
- ***Online***
  - ***Collaboration Safety Efforts Action Items***

NEXT STEPS

- Roster Roll Call
- Vision Zero & TAC #3 Review
- What is New in Transportation Safety?
- Remembering Victims
- Exercise: Crash Costs
- Existing Crash Conditions Update
- Crash Reduction Example
- Benchmarks & Implementation Plan – Action Items
- Breakout Discussion
- Group Discussion
- **Next Steps**

NEXT STEPS

Fifth TAC Meeting

- *What: Fifth TAC Meeting*
- *Where: City of Las Vegas &/or Virtually*
- *When: TBD – Based on Public Meeting Date*

TENTATIVE TAC SCHEDULE

TAC MEETING #1 (10/25/2021)
- Informational Meeting

TAC MEETING #2 (11/16/2021)
- Vision Statement, Mission Statement, Goals

TAC MEETING #3 (01/18/2022)
- Existing Conditions

TAC MEETING #4 (03/22/2022)
- Remembering Victims, Crash Reduction Examples, Benchmarks & Implementation Plan

TAC MEETING #5 (TBD)
- **Public Meeting & Surveys (*BOTH Online & In-Person*)**

TAC MEETING #6 (TBD)
- **Draft Report**

TENTATIVE TAC SCHEDULE

Winter 2022

Completed

- Existing Conditions
- Vision, Mission, Goals
- Crash Reduction Examples

Spring 2022

In-Progress

- Action Items
- Public Meetings
- Public Surveys
- Remembering Victims
- Webpage
- TAC Meetings

Summer 2022

Upcoming

- Report
- Board Updates
- Action Plan Updates

ADJOURN

Las Vegas Vision Zero Action Plan Email:
VisionZeroCLV@lasvegasnevada.gov

Las Vegas Vision Zero Action Plan Website:
https://www.lasvegasnevada.gov/vision-zero

EXERCISE: CRASH COSTS

The crash costs per event (i.e., cost per fatality, cost per serious injury A, and others) were derived using Highway Safety Manual's Crash Cost Estimates. Consumer Price Index (CPI) and Employment Cost Index (ECI) were obtained from the Bureau of Labor Statistics (BLS) website, https://www.bls.gov/. The crash costs per event then were converted and rounded into 2020 dollars using BLS CPI data. The crash costs per event were converted to costs per crash to correspond with the data on crash reduction. Costs per crash are higher than costs per event because, for example, a fatal crash can involve multiple injuries; therefore, the cost of a single crash is likely higher than one event. Table E-5 shows the crash cost assumptions.

Table E-5 Crash Cost Assumptions

Crash Severity	Crash Cost per Event[1]	Crash Cost per Crash[2]
Fatal (K)	$6,439,100	$10,900,000
Suspected Serious (A)	$339,300	$521,300
Suspected Minor (B)	$123,900	$142,000
Possibly/Claimed (C)	$69,600	$72,500
Property Damage Only (PDO)	$11,200	$4,500

1. Source: Highway Safety Manual's Crash Cost Estimates converted into 2020 dollars using BLS CPI data.
2. Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs, USDOT, February 2021.

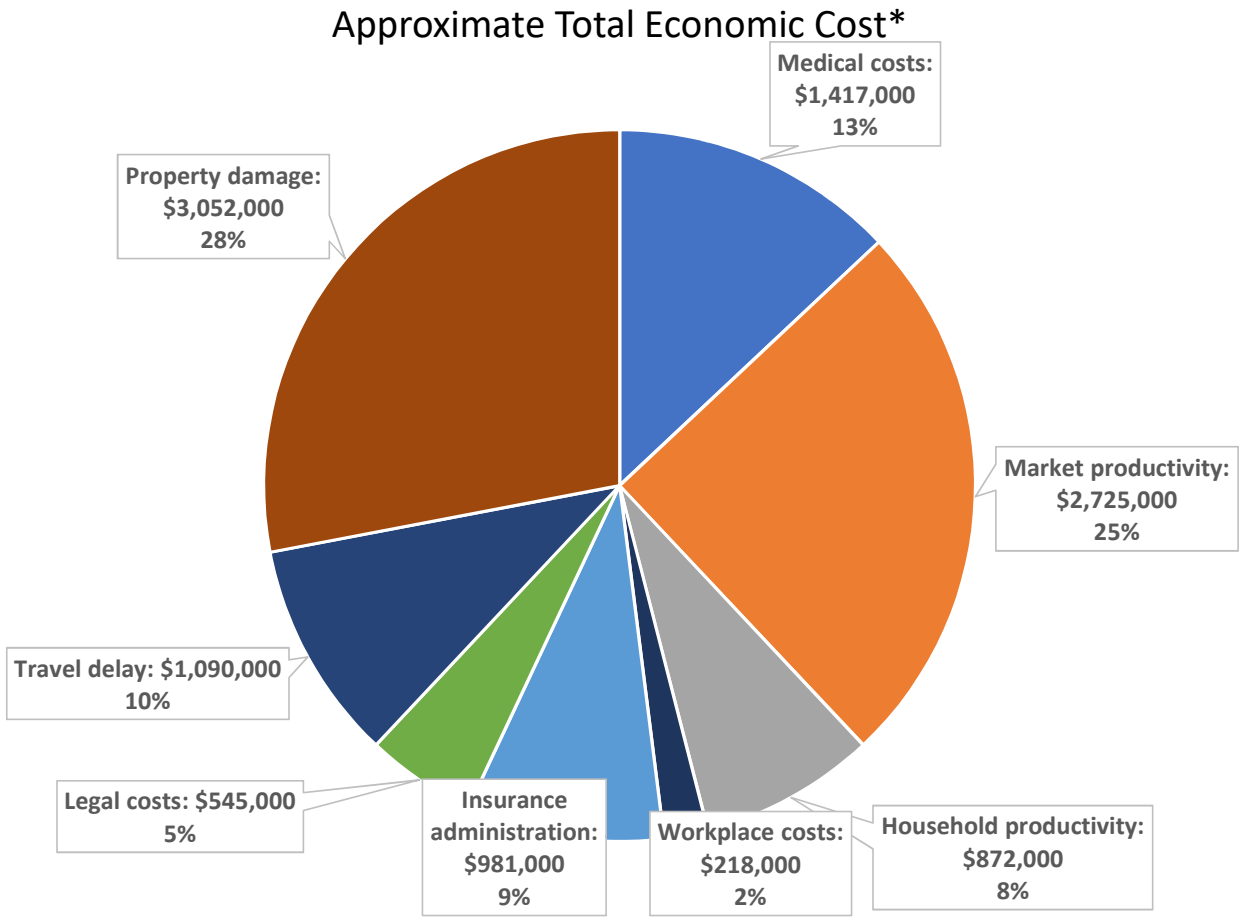
Guide to Calculating Costs

Brief | Data Details

Costs of Motor-Vehicle Injuries

The calculable costs of motor-vehicle crashes are **wage and productivity losses**, **medical expenses**, **administrative expenses**, **motor-vehicle damage**, and **employers' uninsured costs**. The costs of all these items for each death (not each fatal crash), injury (not each injury crash), and per-damaged-vehicle were:

EXERCISE: CRASH COSTS



*Cost breakdown as published in *NHTSA Total Economic Costs Estimations,* 2015