

# MAKING CONCORD STREETS SAFER

## Comprehensive Safety Action Plan

Community Outreach Meeting

March 30, 2026 | City of Concord

**City of Concord**  
Transportation Division

Federally Funded by  
**U.S. DOT SS4A Program**

[www.concordsafeststreets.org](http://www.concordsafeststreets.org)

# Agenda

Community Outreach Meeting | March 30, 2026

Welcome & Introductions

What is the CSAP & Why It Matters

Our Vision: Zero Traffic Fatalities and Serious Injuries

5-Year Collision Snapshot (2021–2025)

Community Engagement

Your Voice Shapes This Plan

How to Stay Involved

# What is a Comprehensive Safety Action Plan?

## What It Is

A data-driven roadmap that identifies high-risk locations and defines strategies to reduce fatal and serious injury crashes.

## Safe System Approach

No one should die or be seriously injured on our roadways. Safety is a shared responsibility.

## SS4A Federal Funding

Supported by the U.S. DOT Safe Streets and Roads for All program. Positions Concord for implementation grants.

1. Collision data analysis
2. High-risk location identification
3. Community & stakeholder engagement
4. Safety countermeasure development
5. Project prioritization & funding plan
6. Monitoring & evaluation framework

# Our Commitment: Zero Traffic Fatalities and Serious Injuries

Vision Zero – No death on our roads is acceptable or inevitable

## Data-Driven Priorities

Uses 5 years of crash data to identify exactly where and why crashes are happening

## Focused on Saving Lives

Every strategy targets fatal and severe injury (KSI) crashes first

## Community Input

Your lived experience tells us which streets feel unsafe and what improvements matter most

## Systemic Approach

Addresses crash patterns across the entire city network, not just one intersection

## Funding Readiness

Positions Concord for future SS4A implementation grants to deliver real capital improvements

## Measurable Outcomes

Clear metrics track progress and demonstrate impact over time

# CSAP Process

Where we are today — and where we're heading



# 5-Year Collision Snapshot

2021 – 2025 | City of Concord

**1,804**

Total  
Collisions

**164**

KSI  
Collisions

**19**

Fatal  
Collisions

**145**

Severe  
Injuries

## Key Highlights

Severity	Segment	Intersection	Total
Fatal	3	16	19
Severe Injury	19	126	145
Visible Injury	79	348	427
Complaint of Pain	185	1,028	1,213
<b>Total</b>	<b>286</b>	<b>1,518</b>	<b>1,804</b>

## Key Highlights

### 87% of KSI at intersections

142 of 164 KSI collisions occurred at intersection locations

### 60% of KSI: Peds, Bikes, Motos

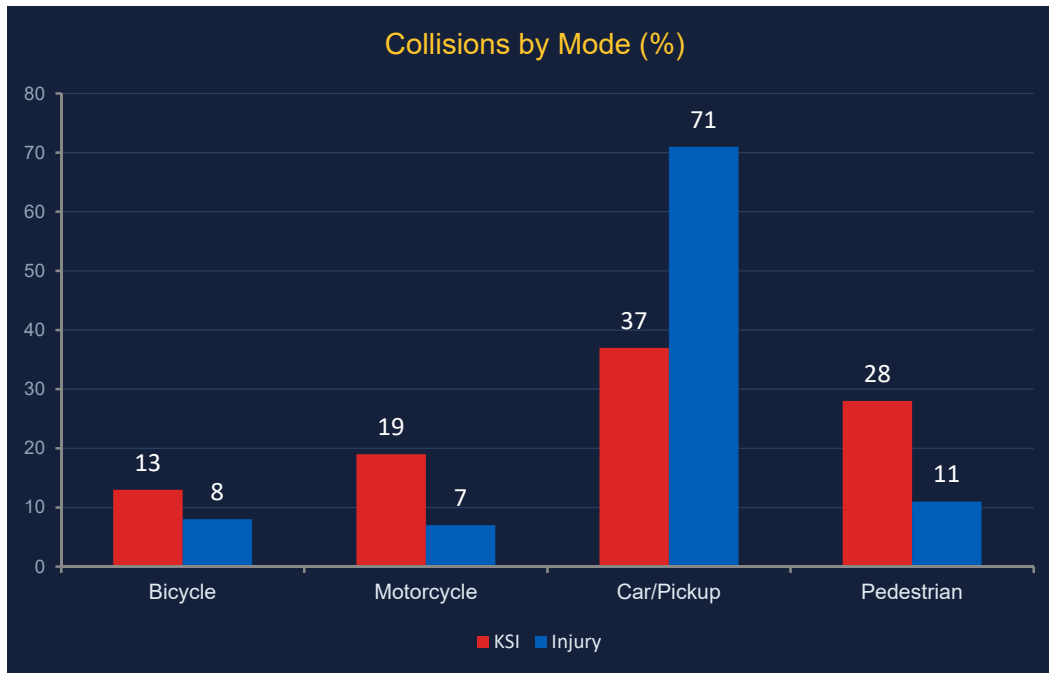
Vulnerable road users far overrepresented in severe outcomes

### 12% of KSI involve alcohol

20 of 164 KSI collisions were alcohol-related

# Collision Trends Over Time

2021 – 2025 | KSI and Total Collisions by Mode



## Key Observations

### Peak year: 2022

383 total collisions and 39 KSI

### 2025 shows decline

341 total collisions ( $\Sigma$ 11% from peak)

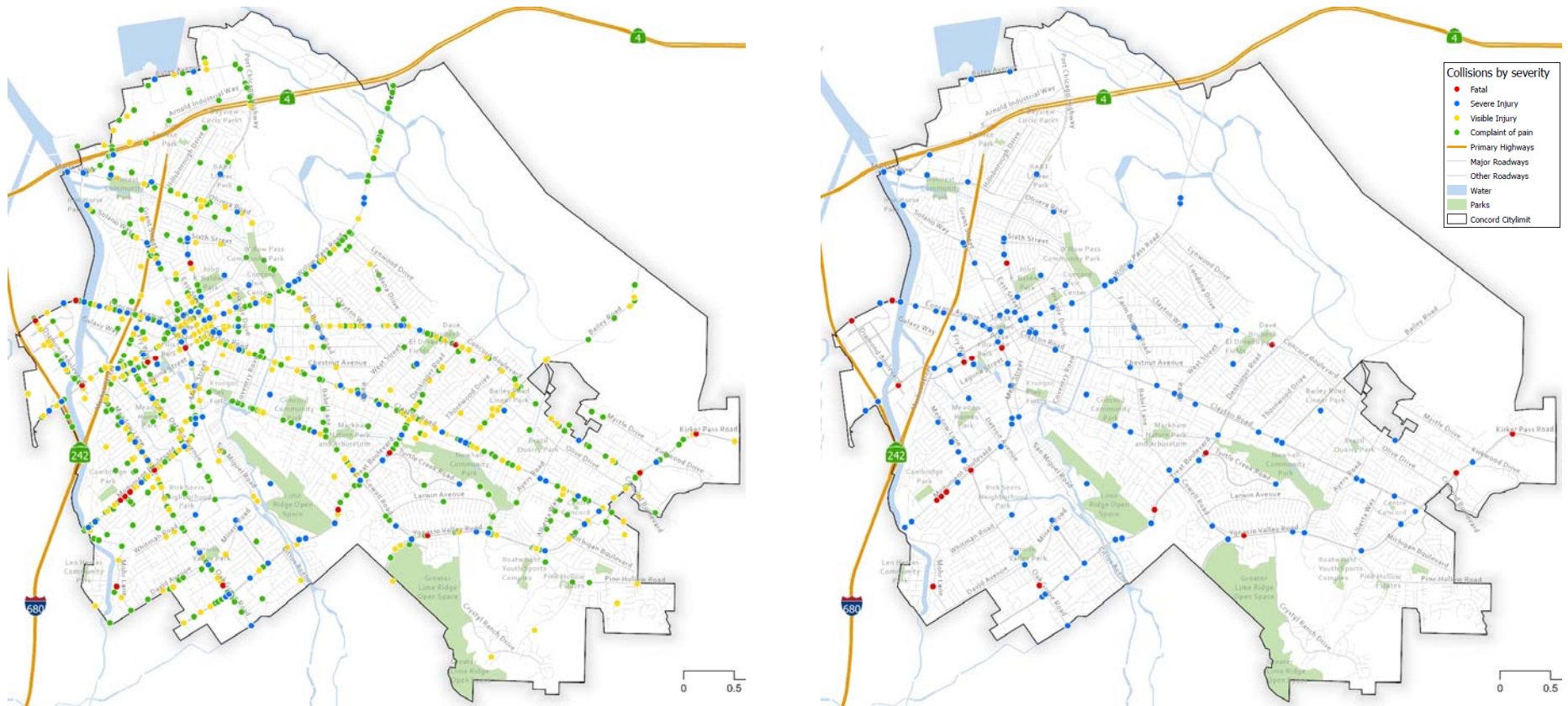
### KSI remains elevated

34 KSI in 2025—same as 2021 despite overall decline

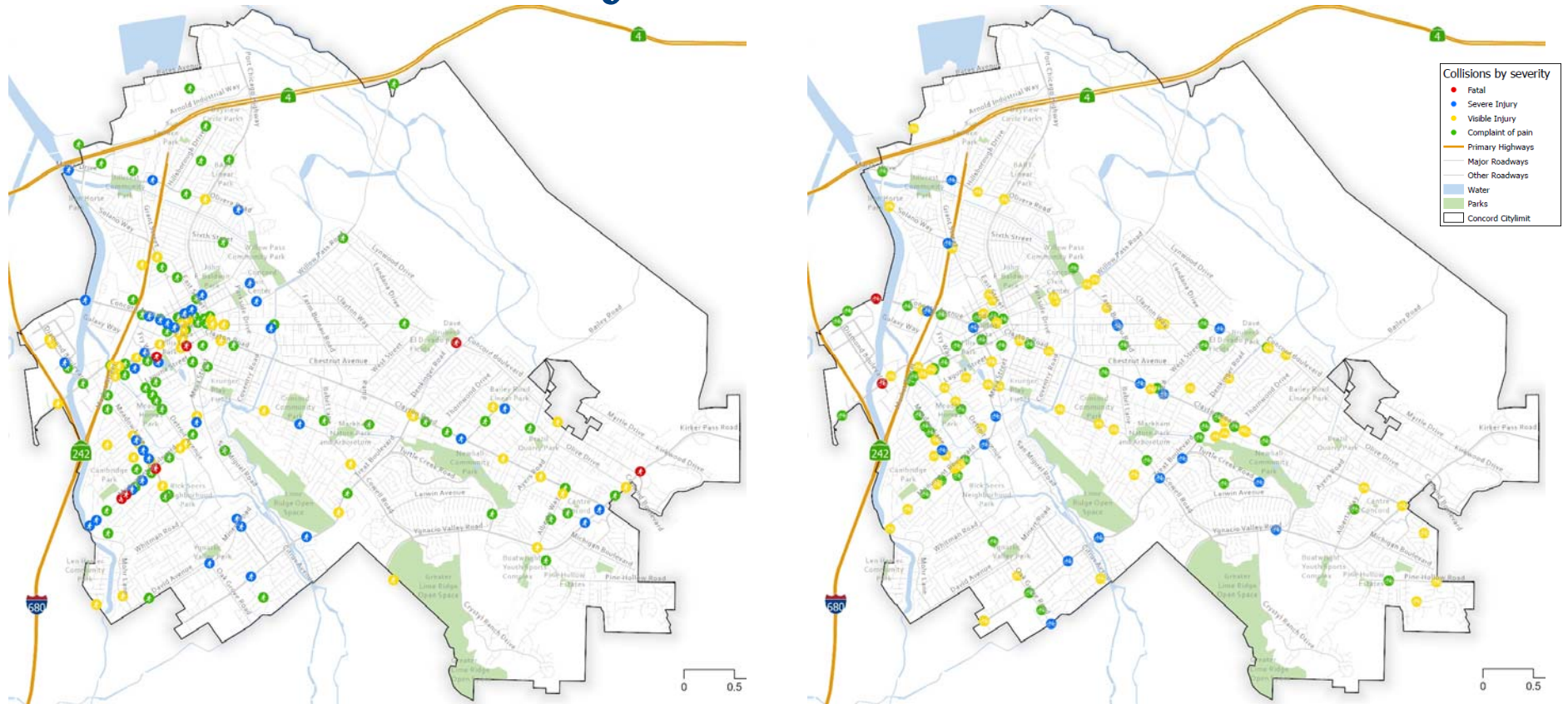
### 84% at intersections

1,518 of 1,804 collisions occurred at intersections

# Where Crashes Are Happening



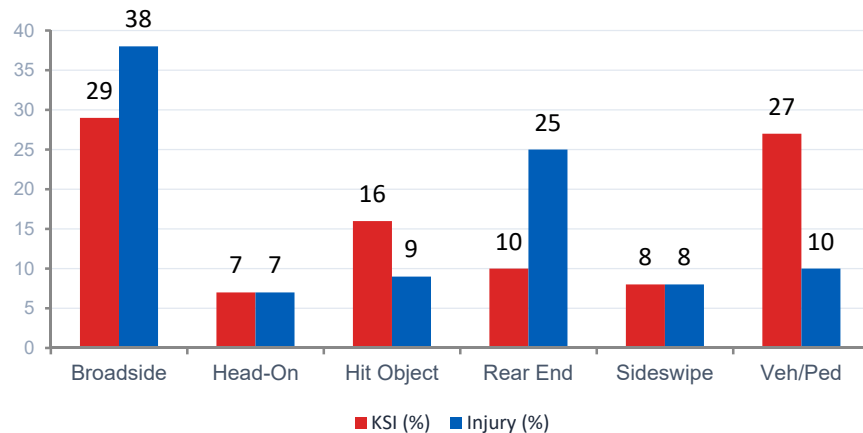
# Pedestrian & Bicycle Crash Locations



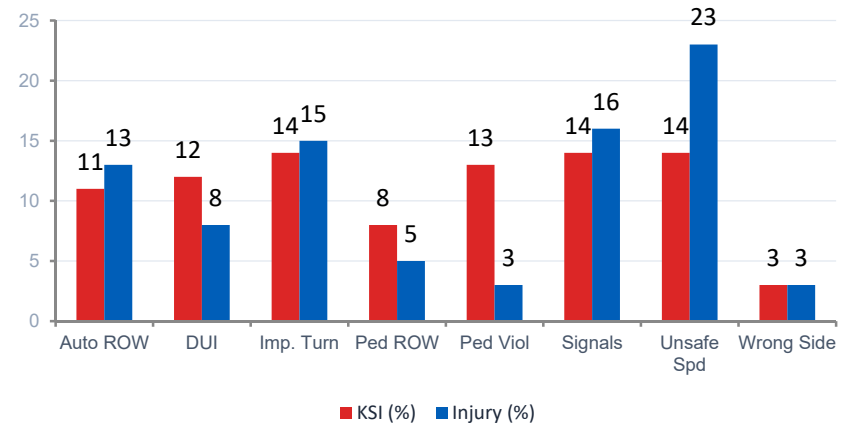
# How & Why Crashes Are Happening

Understanding crash patterns helps target the right solutions

By Collision Type



By Violation Category



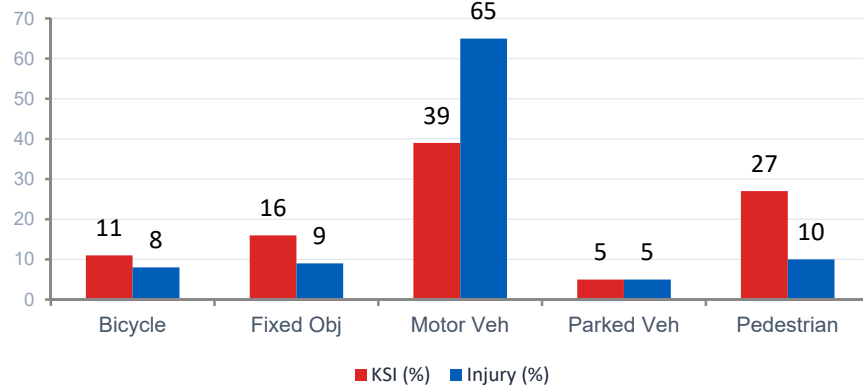
**Key Finding:**

Broadside and Vehicle/Pedestrian collisions accounted for 29% and 27% of KSI outcomes respectively, together responsible for over half of all deaths and severe injuries. Pedestrian/bicycle collisions are disproportionately severe relative to their overall share.

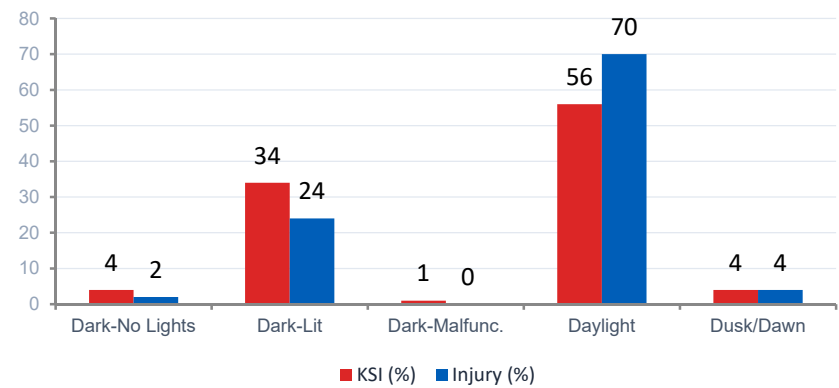
# Vehicle Involvement & Lighting

What is involved and when are crashes most severe?

Motor Vehicle Involved With



Lighting Conditions



### Top 5 KSI Corridors:

Willow Pass Rd (17 KSI), Clayton Rd (16), Monument Blvd (13), Treat Blvd (13), Concord Ave (10). Together: 69 of 164 citywide KSI = 42% of all severe crashes.

### Lighting & Peak Hours:

38% of KSI occur in dark conditions. PM Peak (4–7 PM) is the single highest-risk period with 33 KSI, followed by evenings at 40 KSI.

# Community Engagement

## What are we doing?

- Webpage with Interactive Map to report your concern
- Web base survey
- Community Meetings

1. Meeting No. 1 – to receive feedback

2. Meeting with Bike Concord and Community Groups

3. Meeting No. 2 – Present the findings and recommendations

# Community Survey: What We've Heard So Far

252 responses · March 11–27, 2026 | All Modes of Travel

**252**

Responses Received

**79%**

Had Personal Collision Experience

**96%**

Changed Travel Behavior Due to Safety

**72%**

Concerned About School Zone Safety

## WHO RESPONDED



Top ZIP: 94521 (38%) | English: 90% | Disability: 11%

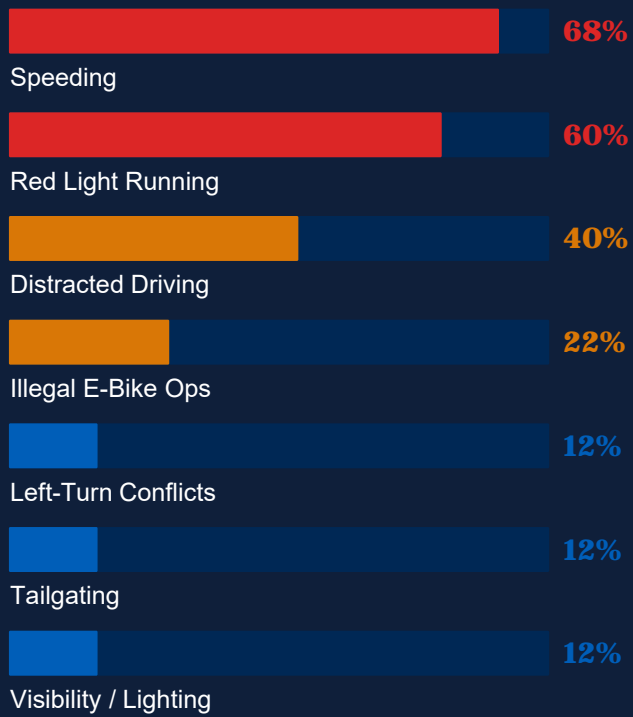
## TOP GEOGRAPHIC FOCUS



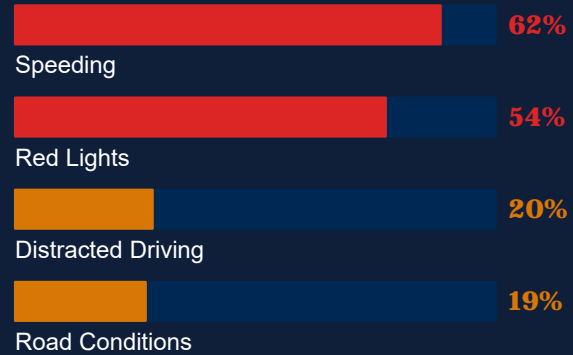
# Top Safety Concerns — What Community is Telling Us

Multi-select responses · n=252

## OVERALL SAFETY CONCERNS



## DRIVERS



## PEDESTRIANS



## CYCLISTS



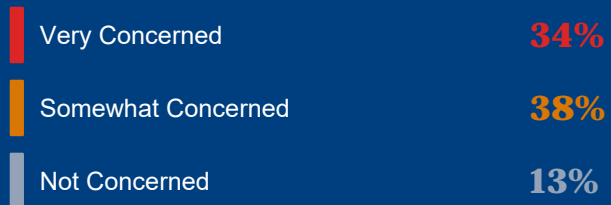
# School Zone Safety & Collision Experience

Two high-priority themes from community feedback

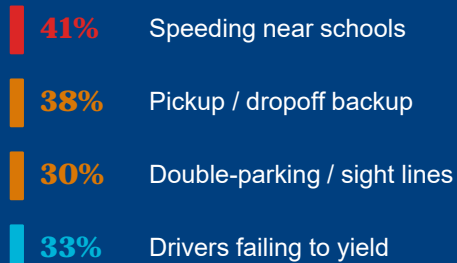
## SCHOOL ZONE SAFETY

**72%**

concerned about school-zone safety



## TOP SCHOOL ISSUES CITED



## PERSONAL COLLISION EXPERIENCE

**79%**

have experienced a collision firsthand



### INSIGHT

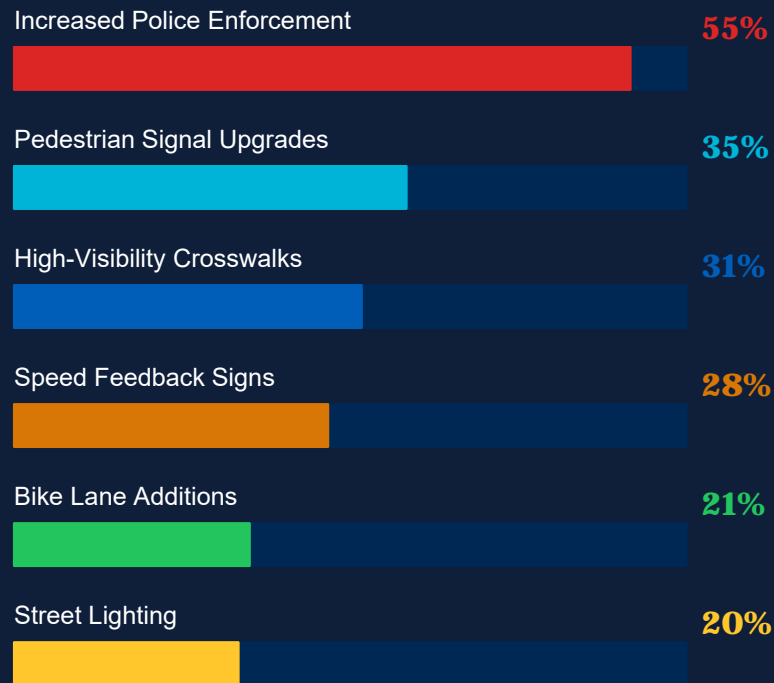
Residents directly involved in collisions cite distracted driving at 53% — 15 points higher than those with no experience (38%). Collision exposure sharpens concern for all violations.

# What Community Wants — Priorities & Behavior Change

% of 252 respondents · March 11–27, 2026

## REQUESTED IMPROVEMENTS

% of 252 respondents selecting each option



## TRAVEL BEHAVIOR CHANGED BY SAFETY

# 96%

of residents have modified their travel due to safety concerns

**36%** Avoid certain streets

**27%** Avoid certain times

**26%** Drive / walk more cautiously

**2%** Changed travel mode

**4%** No change in behavior

*Residents 65+ shift time (41% avoid times) · Working-age adults shift routes (47–52% avoid streets)*

# Key Takeaways: What the Survey Is Telling Us

Evidence-based priorities derived from 252 community survey responses · March 11–27, 2026

## 01 Enforcement Is the #1 Requested Fix

55% of residents named increased police enforcement as their top improvement — higher than any infrastructure measure. This holds across every geographic focus area.

## 02 Speeding + Red Lights Dominate Every Mode

68% cite speeding and 60% cite red light running. These dual violations top every subgroup: drivers, pedestrians, cyclists, and all age groups.

## 03 School Zone Safety Is a Shared Urgency

72% are concerned about school-zone safety. Very concerned residents identify speeding; somewhat concerned identify pickup congestion — requiring a two-stream response.

## 04 Pedestrian Signals Are the Top Infrastructure Ask

35% requested pedestrian signal upgrades, ranking 2nd overall. Residents with disabilities cited signals at 36% — key equity finding for crosswalk investment.

## 05 96% Changed How They Travel Due to Safety

Route avoidance (36%), time-shifting (27%), and cautious driving (26%) are widespread. Older adults shift when they travel; working-age adults shift where — both responses need parallel interventions.

## 06 Survey & Data Tell a Consistent Story

Community concerns align directly with collision data: high-injury corridors on Clayton Rd, Willow Pass, and Monument Blvd are the same streets residents call out most.

# Your Voice Shapes This Plan

Crash data tells us **WHERE**. Your experience tells us **WHY** streets feel unsafe.

## Take the Survey

5 minutes, anonymous. Share which streets feel unsafe and your top safety priorities.

[concord safestreets.org/survey](https://concord safestreets.org/survey)

## Contact the Team

Reach out directly to our project team with questions or detailed feedback.

[abhishek.parikh@cityofconcord.org](mailto:abhishek.parikh@cityofconcord.org)

## Report a Concern

Pin your exact location on our interactive map at [concord safestreets.org](https://concord safestreets.org) to report a safety concern.

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## Stay Informed

Visit [concord safestreets.org](https://concord safestreets.org) for collision data, project updates, and event announcements.

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## Spread the Word

Share the project with neighbors, friends, and community groups. More voices = better plan.

Share with neighbors

# Thank You — Your Input Matters

*Together we are building safer streets for every person who walks, bikes, drives, and lives in Concord.*

## City of Concord — Transportation Division

Survey: [concordsafestreets.org/survey](https://concordsafestreets.org/survey) | Concerns:  
[concordsafestreets.org](https://concordsafestreets.org)

Comprehensive Safety Action Plan | 2026

# MAKING CONCORD STREETS SAFER

## Comprehensive Safety Action Plan

Community Outreach Meeting No. 2

April 13<sup>th</sup>, 2026 | City of Concord

**City of Concord**  
Transportation Division

Federally Funded by  
**U.S. DOT SS4A Program**

[www.concordsafeststreets.org](http://www.concordsafeststreets.org)

# Agenda

Community Outreach Meeting | April 13, 2026

Welcome & Introductions

What is CSAP ?

Our Vision: Zero Traffic Fatalities and Serious Injuries

5-Year Collision Snapshot (2021–2025)

Community Engagement

Your Voice Shapes This Plan

How to Stay Involved

# What is a Comprehensive Safety Action Plan?

## What It Is

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## Focused on Saving Lives

Every strategy targets fatal and severe injury (KSI) crashes first

## Community Input

Your lived experience tells us which streets feel unsafe and what improvements matter most

## Systemic Approach

Addresses crash patterns across the entire city network, not just one intersection

## Funding Readiness

Positions Concord for future SS4A implementation grants to deliver real capital improvements

## Measurable Outcomes

Clear metrics track progress and demonstrate impact over time

# CSAP Process

Where we are today — and where we're heading



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## Key Highlights

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## Key Highlights

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### 60% of KSI: Peds, Bikes, Motos

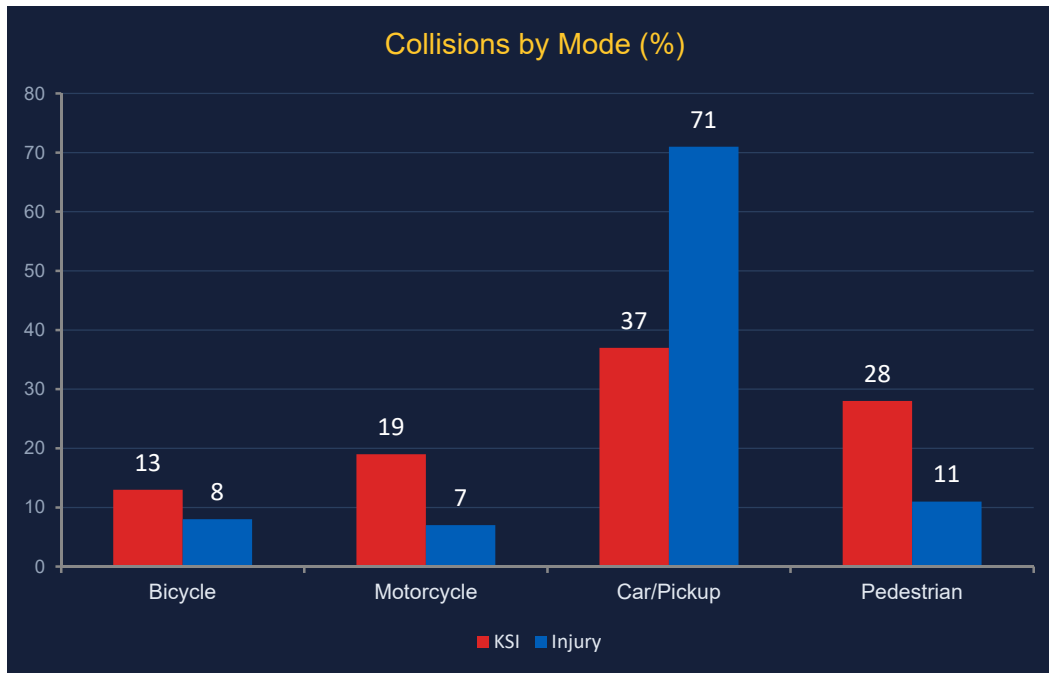
Vulnerable road users far overrepresented in severe outcomes

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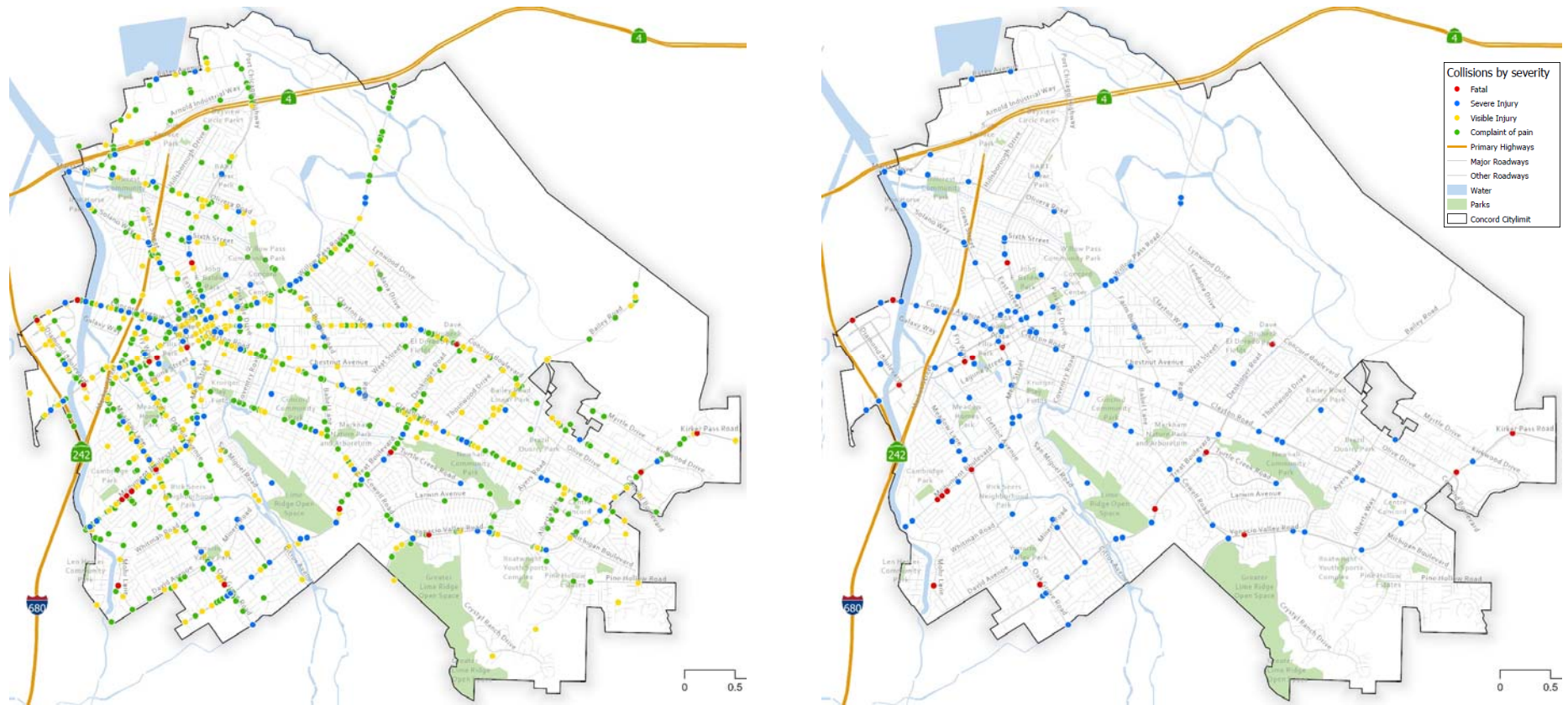
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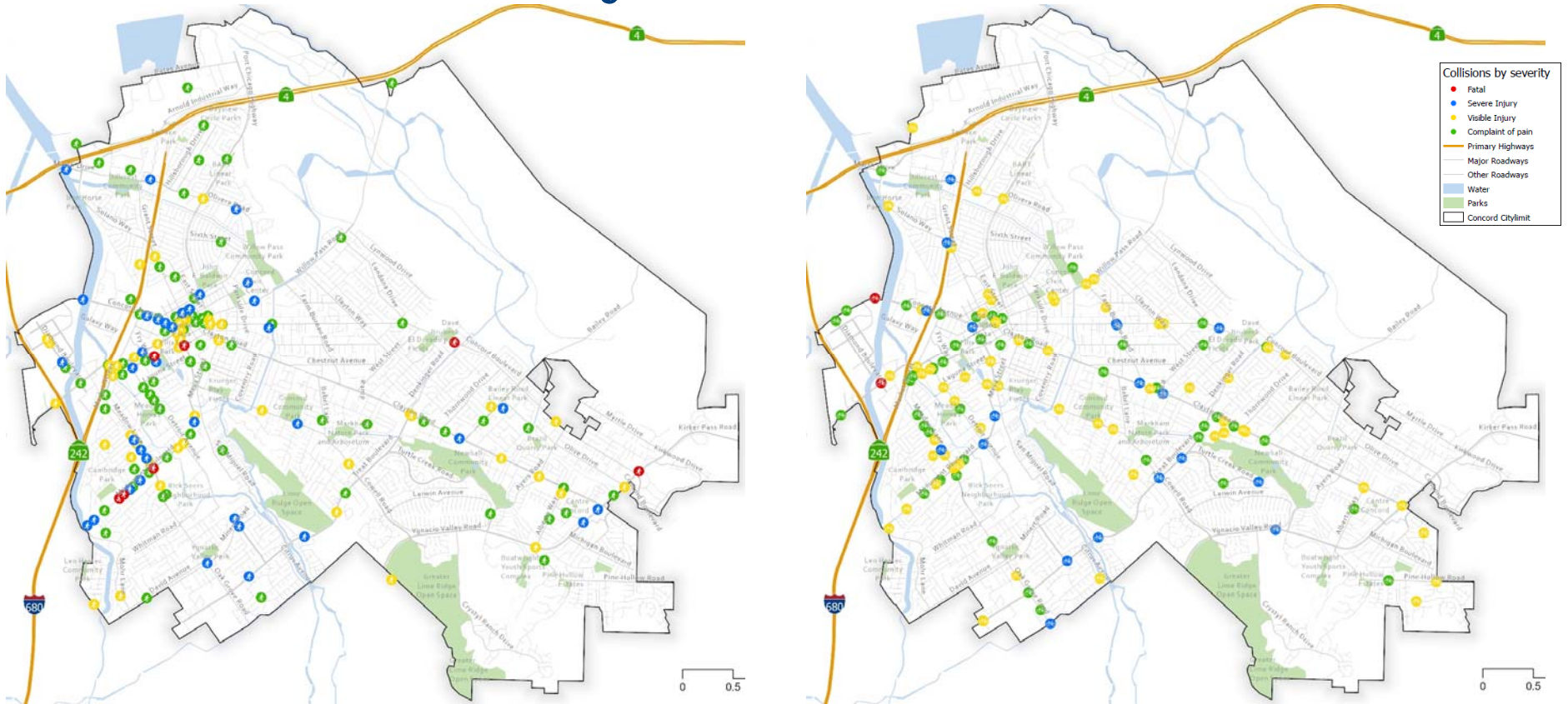
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# Where Crashes Are Happening



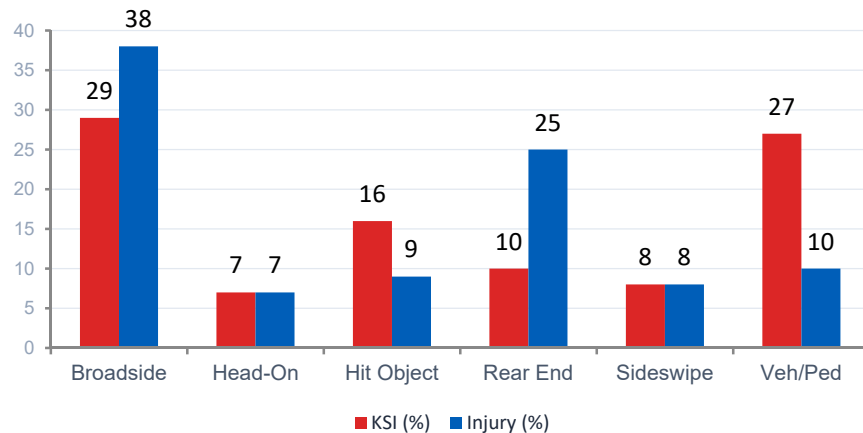
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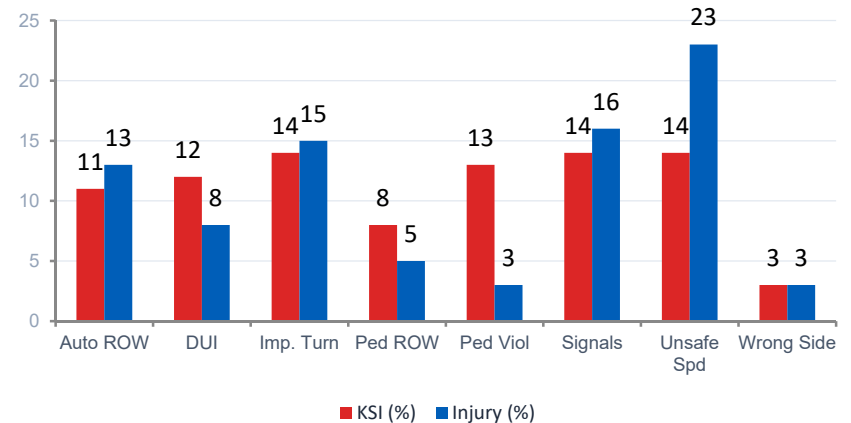
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Understanding crash patterns helps target the right solutions

By Collision Type



By Violation Category



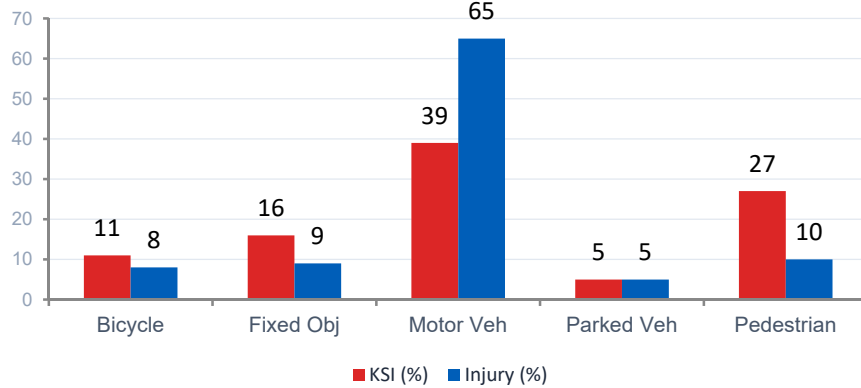
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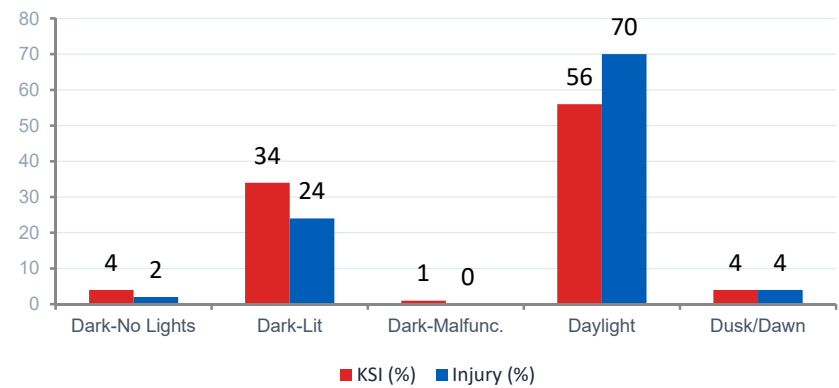
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What is involved and when are crashes most severe?

Motor Vehicle Involved With



Lighting Conditions



**Top 5 KSI Corridors:**

Willow Pass Rd (17 KSI), Clayton Rd (16), Monument Blvd (13), Treat Blvd (13), Concord Ave (10). Together: 69 of 164 citywide KSI = 42% of all severe crashes.

**Lighting & Peak Hours:**

38% of KSI occur in dark conditions. PM Peak (4–7 PM) is the single highest-risk period with 33 KSI, followed by evenings at 40 KSI.

# Community Engagement

## What are we doing?

- Webpage with Interactive Map to report your concern
- Web base survey
- Community Meetings

1. Meeting No. 1 – to receive feedback

2. Meeting No. 2 – to receive feedback

3. Meeting No. 3 – Present the findings and recommendations

4. Meeting with Bike Concord and Community Groups

# Community Survey: What We've Heard So Far

523 responses · March 11–April 12, 2026 | All Modes of Travel

**523**

Responses Received

**73%**

Reported a Traffic Incident Experience

**96%**

Changed Travel Behavior Due to Safety

**70%**

Expressed Concern About School Zone Safety

## WHO RESPONDED



Top ZIP: 94521 (37%) | English: 91% | Disability: 11%

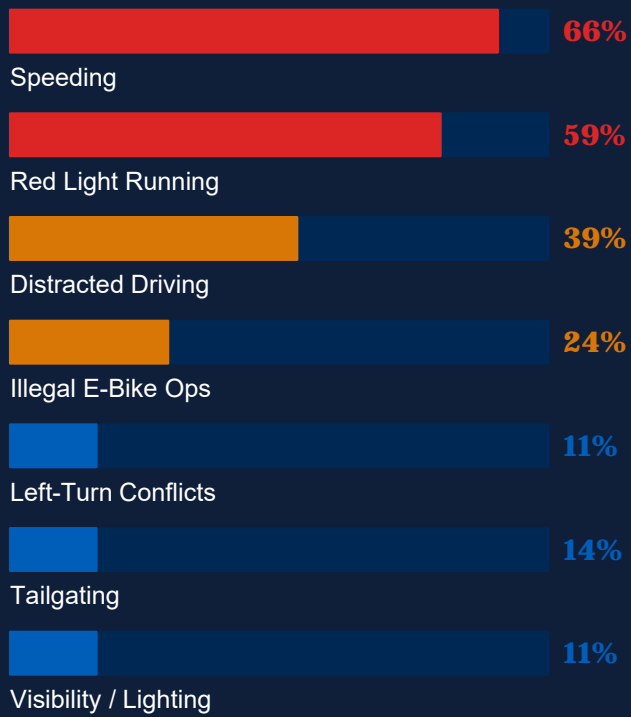
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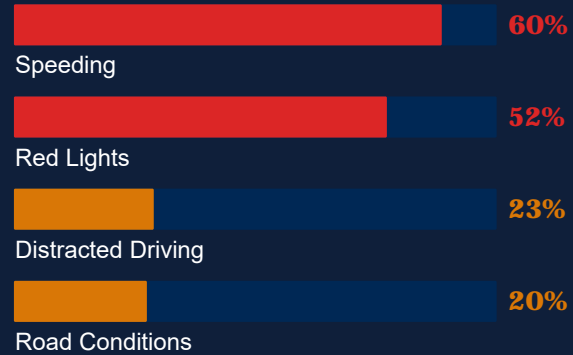
# Top Safety Concerns — What Community is Telling Us

Multi-select responses · n=523

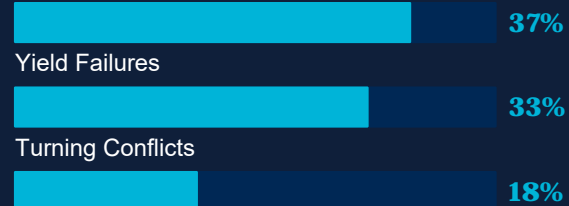
## OVERALL SAFETY CONCERNS



## DRIVERS



## PEDESTRIANS



## CYCLISTS



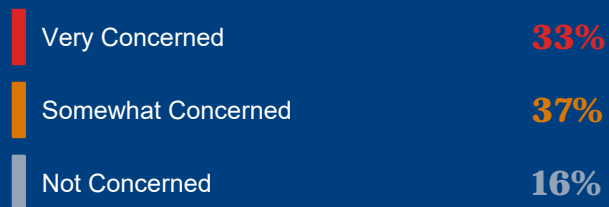
# School Zone Safety & Collision Experience

Two high-priority themes from community feedback

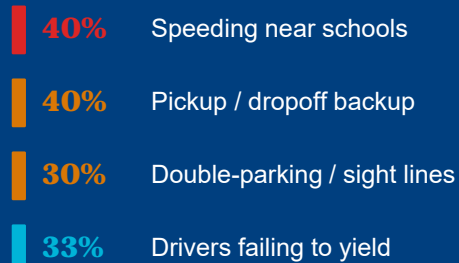
## SCHOOL ZONE SAFETY

**70%**

concerned about school-zone safety



## TOP SCHOOL ISSUES CITED



## PERSONAL COLLISION EXPERIENCE

**73%**

have experienced a collision firsthand



### INSIGHT

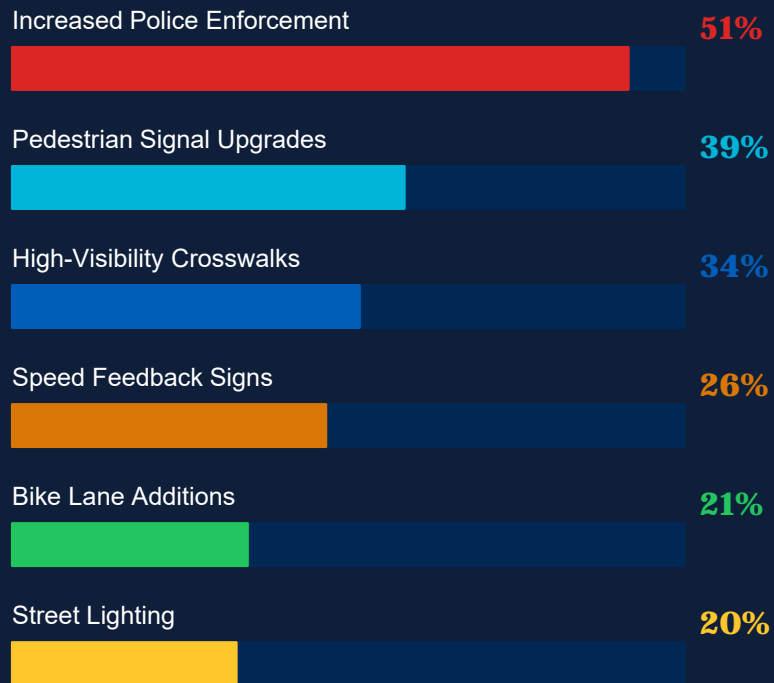
Afternoon (3–6 PM) and morning (6–9 AM) are the periods when the most respondents across all modes cited elevated concerns — 63% of drivers, 33% of pedestrians, and 26% of cyclists. These windows align with collision data peak hours.

# What Community Wants — Priorities & Behavior Change

% of 523 respondents · March 11–April 12, 2026

## REQUESTED IMPROVEMENTS

% of 523 respondents selecting each option



*Enforcement ranks first in every geographic focus area. The one exception: residents*

## SCHOOL ZONE SAFETY CONCERNS

# 70%

of respondents expressed concern about school-zone safety

**40%** Speeding near schools

**38%** Pickup/dropoff congestion

**30%** Double-parking near schools

**33%** Drivers failing to yield to children

**19%** No dedicated bike route to school

*E-bike concerns near schools were cited by 20% of respondents — the highest rate among any school-related bike issue. Physical separation of bike and pedestrian facilities near schools was a common open-text request.*

# Key Takeaways: What the Survey Is Telling Us

Key findings from 523 community survey responses · March 11–April 12, 2026

## 01 Enforcement Is the #1 Requested Fix

51% of respondents selected increased police enforcement as their top requested improvement — the highest of any option. This preference was consistent across all geographic focus areas, from crash intersections to school zones.

## 02 Speeding + Red Lights Dominate Every Mode

66% of respondents cited speeding and 60% cited red light running as top safety concerns. These two issues were cited consistently across all respondent groups — by drivers, pedestrians, cyclists, and every age group.

## 03 School Zone Safety Is a Shared Urgency

70% of respondents expressed concern about school-zone safety. Speeding near schools (40%), pickup/dropoff congestion (38%), and double-parking (30%) were the most frequently cited issues.

## 04 Sidewalks and Crosswalks Are Priority Infrastructure Gaps

18% of respondents cited missing sidewalks and 14% cited missing crossings. These gaps were noted across residential areas and near schools. Respondents with mobility limitations cited sidewalk gaps at a higher rate than those without.

## 05 Afternoon and Morning Are the Highest-Concern Time Windows

63% of respondents identified the afternoon (3–6 PM) as an elevated-concern period for drivers, and 58% identified the morning (6–9 AM). School hours were cited by 34%. These windows align with peak collision periods in the CSAP data.

## 06 Survey & Data Tell a Consistent Story

Community-cited locations align with collision data. The corridors most frequently mentioned in open-text responses — Clayton Road, Willow Pass Road, Treat Boulevard, and Ygnacio Valley Road — correspond directly with the corridors identified in the CSAP High Injury Network analysis.

# Your Voice Shapes This Plan

Crash data tells us **WHERE**. Your experience tells us **WHY** streets feel unsafe.

## Take the Survey

5 minutes, anonymous. Share which streets feel unsafe and your top safety priorities.

[concord safestreets.org/survey](https://concord safestreets.org/survey)

## Contact the Team

Reach out directly to our project team with questions or detailed feedback.

[abhishek.parikh@cityofconcord.org](mailto:abhishek.parikh@cityofconcord.org)

## Report a Concern

Pin your exact location on our interactive map at [concord safestreets.org](https://concord safestreets.org) to report a safety concern.

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Visit [concord safestreets.org](https://concord safestreets.org) for collision data, project updates, and event announcements.

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## Spread the Word

Share the project with neighbors, friends, and community groups. More voices = better plan.

Share with neighbors

# Thank You — Your Input Matters

*Together we are building safer streets for every person who walks, bikes, drives, and lives in Concord.*

## City of Concord — Transportation Division

Survey: [concordsafestreets.org/survey](https://concordsafestreets.org/survey) | Concerns:  
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Comprehensive Safety Action Plan | 2026

# COMPREHENSIVE SAFETY ACTION PLAN

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## *Steering Committee Meeting #1*

February 23, 2026 | 2:00 PM



**City of Concord**

Transportation Division

Prepared by TJKM

# Agenda

Steering Committee Meeting #1



Introduction



Your Role as a Safety Champion



What is a Comprehensive Safety Action Plan?



Benefits of CSAP



CSAP Process Overview



Preliminary Collision Analysis Findings



Next Steps



Discussion & Questions

# Steering Committee

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Abhishek Parikh – City of Concord Public Works Department

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Virendra Patel – City of Concord Public Works Department, Project Manager

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Phalen Shwan – City of Concord

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Jesse Crawford – City of Concord

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Danielle Thomas – Contra Costa County Fire Protection Department

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Pranjal Dixit – CCCTA

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Kamla Parks – BART

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Melanie Koslow – Mt. Diablo Unified School District

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# Your Role as a Safety Champion



## Set Goals

Help set the goals and objectives of the CSAP



## Share Issues

Tell us about traffic-safety-related issues you see



## Community Voice

Tell us what you've heard from community members



## Report Concerns

Use the survey and interactive map on the project webpage



## Share Experience

Share your experience with recently implemented countermeasures



## Spread the Word

Share project details and help increase community awareness



## Monitor Progress

Help monitor the program and evaluate implemented strategies



## Stay Informed

Stay up to date on the project and its milestones

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# What is a Comprehensive Safety Action Plan?

## CSAP Definition

A data-driven roadmap that identifies high-risk locations and defines strategies to reduce fatal and serious injury crashes. It uses the Safe System approach to prioritize and implement effective roadway safety improvements.

## Key Elements

- 1 Collision data analysis
- 2 High-risk location identification
- 3 Stakeholder engagement
- 4 Safety countermeasure development
- 5 Project prioritization
- 6 Implementation & funding plan
- 7 Monitoring & evaluation



## Safe System Approach

No one should die or be seriously injured on our roadways. Safety is a shared responsibility across road design, vehicle safety, speeds, and user behavior.

# Benefits of the CSAP



## Data-Driven Priorities

Uses data to identify high-risk locations and prioritize improvements



## Focused on Saving Lives

Reduces fatal and serious injury (KSI) crashes



## Community Input

Incorporates community and stakeholder feedback



## Systemic Approach

Addresses crash patterns across the entire network



## Funding Readiness

Positions the City for state and federal safety grants



## Measurable Outcomes

Establishes clear metrics for monitoring and evaluation

# CSAP Process

Our structured approach to safety improvement



# Collision Analysis Findings

2020 – 2025 | Six-Year Analysis Period

**2,108**

Total Injury  
Collisions

**191**

KSI  
Collisions

**23**

Fatal  
Collisions

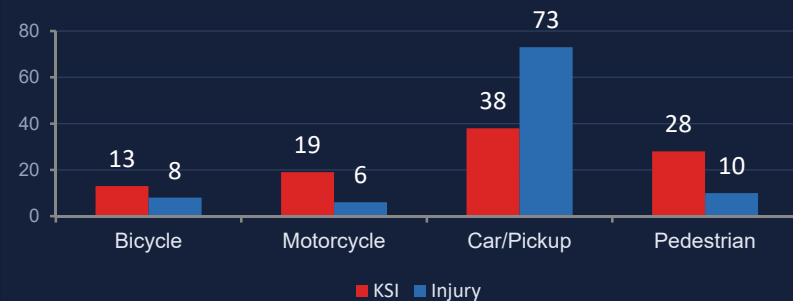
**168**

Severe Injury  
Collisions

## Collisions by Severity and Location

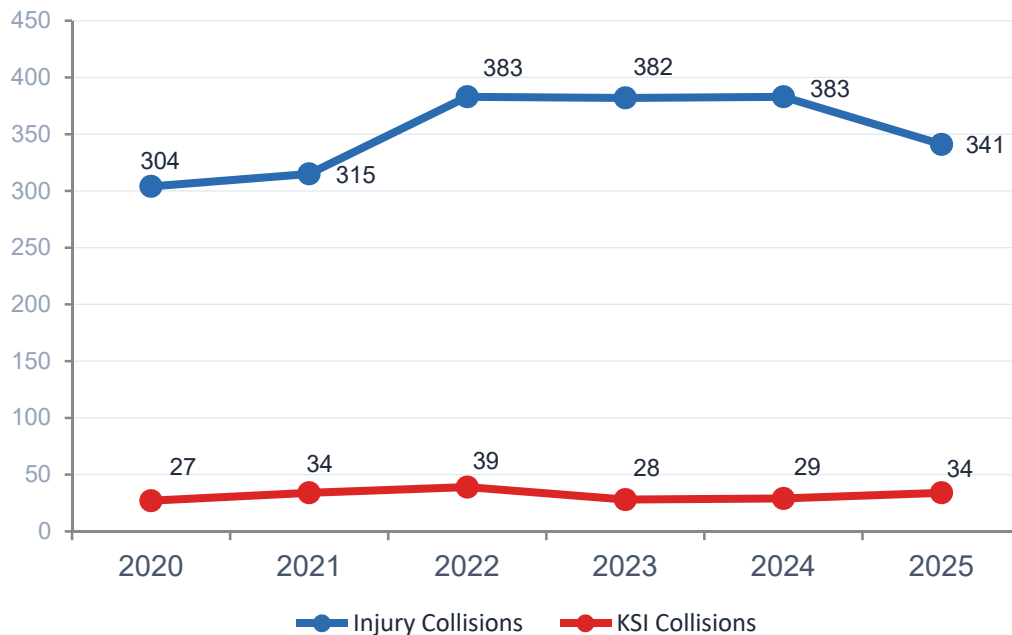
Severity	Segment	Intersection	Total
Fatal	4	19	23
Severe Injury	23	145	168
Visible Injury	93	416	509
Complaint of Pain	214	1,194	1,408

## Collisions by Mode (%)



# Yearly Collision Trends

2020 – 2025 | KSI and Total Injury Collisions



## Key Observations

### Peak year: 2022

383 total collisions and 39 KSI

### 2025 shows decline

341 total collisions ( $\Sigma$ 11% from peak)

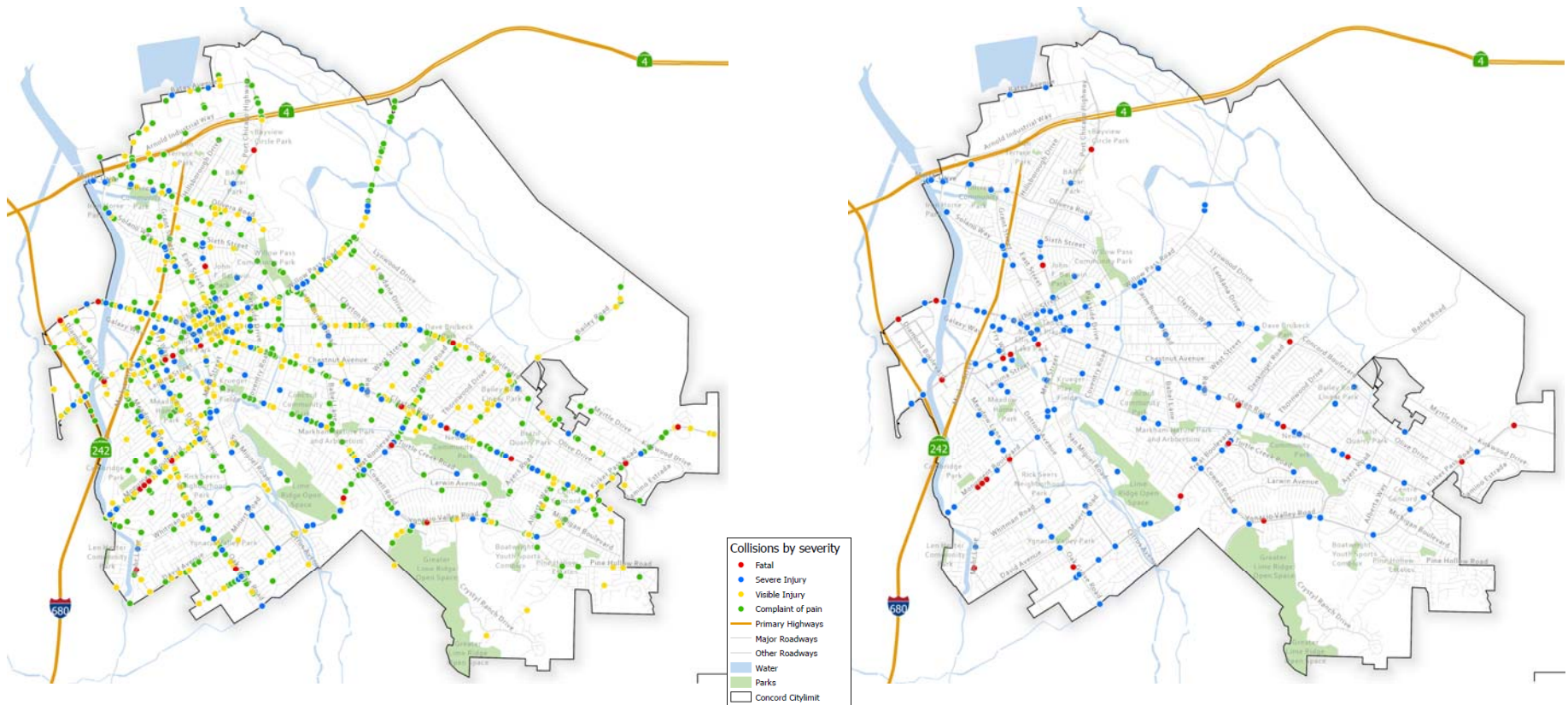
### KSI remains elevated

34 KSI in 2025—same as 2021 despite overall decline

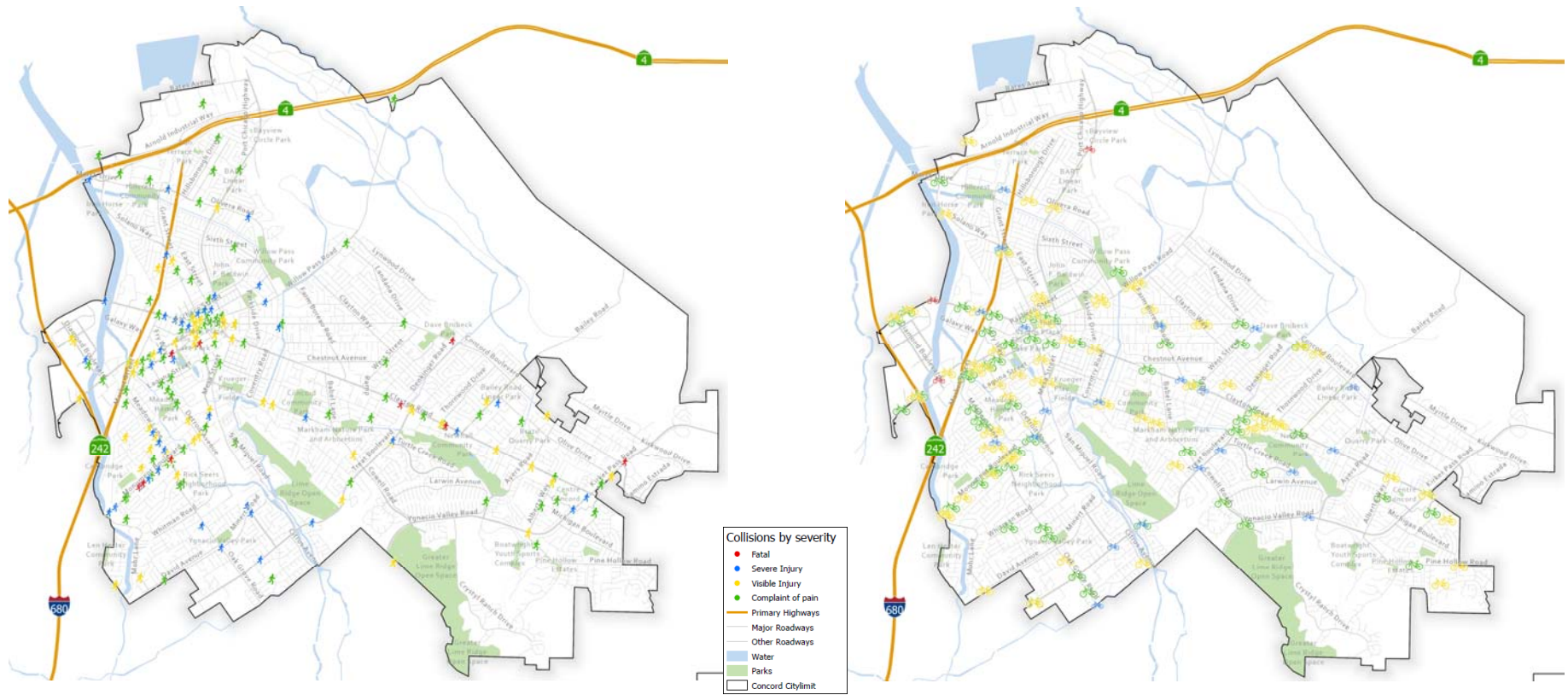
### 84% at intersections

1,774 of 2,108 collisions occurred at intersections

# Injury and Collision Map



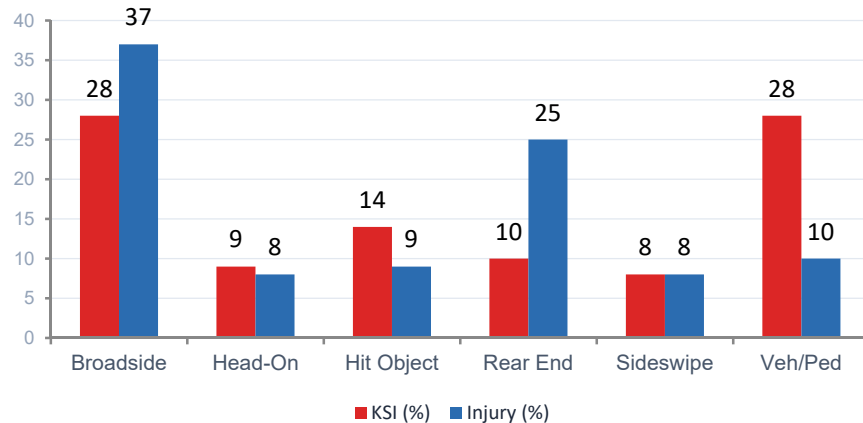
# Pedestrian and Bicycle Collision Map



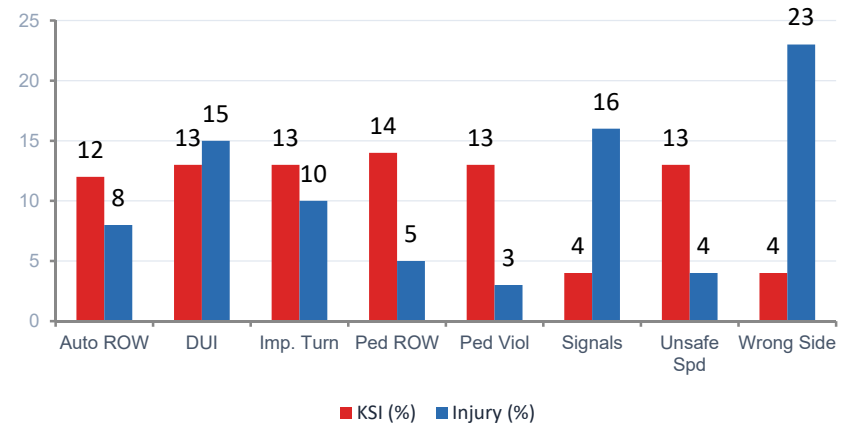
# Collisions by Type & Violation

What types of crashes are occurring and why?

By Collision Type



By Violation Category



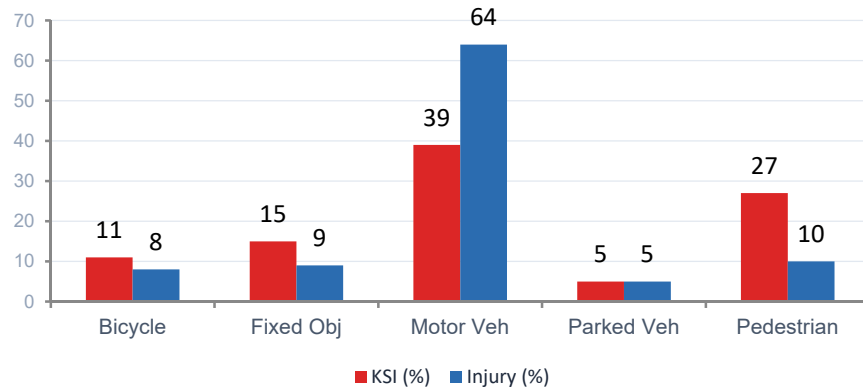
**Key Finding:**

Broadside and Vehicle/Pedestrian collisions each account for 28% of KSI outcomes together responsible for over half of all deaths and severe injuries. Pedestrian/bicycle collisions are disproportionately severe relative to their overall share.

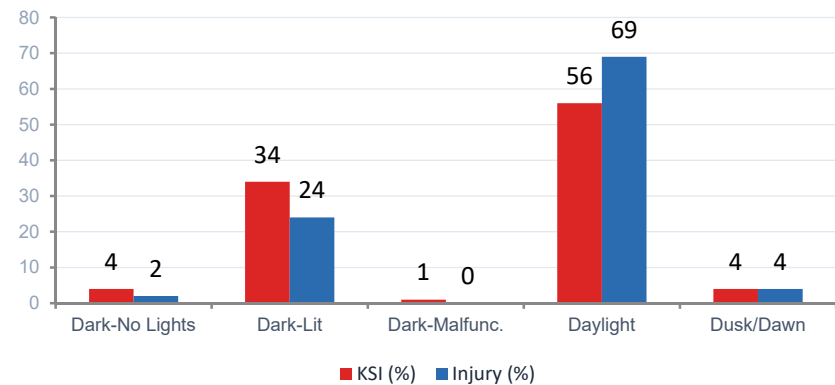
# Vehicle Involvement & Lighting

What's involved and when are crashes most severe?

Motor Vehicle Involved With



Lighting Conditions



**VRU Disproportionality:**

Pedestrians and bicycles account for 38% of KSI but only 18% of all injury collisions, a 2.1x disproportionality ratio.

**Darkness Severity Spike:**

Dark conditions account for 39% of KSI but only 26% of injury collisions. KSI rate is significantly elevated after dark, especially for pedestrians.

# Next Steps

1

## High-Risk Location Identification

Pinpoint specific corridors, intersections, and zones with the highest collision risk for targeted analysis.

2

## Safety Countermeasures & Strategies

Develop engineering, enforcement, and education measures tailored to the identified collision patterns.

3

## Project Prioritization

Rank safety improvements by impact, feasibility, and cost-effectiveness to maximize safety investment returns.

4

## Safety Action Plan

Compile findings into a comprehensive, adopted plan with timelines, responsibilities, and funding strategies.

# Discussion & Questions

---

*Thank you for your partnership in making Concord's streets safer.*

**City of Concord — Transportation Division**  
**Virendra Patel**

Prepared by TJKM Transportation Consultants

Comprehensive Safety Action Plan | 2026

# COMPREHENSIVE SAFETY ACTION PLAN

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## *Steering Committee Meeting #2*

April 14, 2026 | 2:00 PM



**City of Concord**

Transportation Division

Prepared by TJKM

# Agenda

Steering Committee Meeting #2



Introduction



Your Role as a Safety Champion



CSAP Process Overview



Collision Analysis Findings



Community Survey Findings



Next Steps & Discussion

# Steering Committee

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Abhishek Parikh – City of Concord Public Works Department

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Virendra Patel – City of Concord Public Works Department, Project Manager

---

Phalen Shwan – City of Concord

---

Jesse Crawford – City of Concord

---

Danielle Thomas – Contra Costa County Fire Protection Department

---

Pranjal Dixit – CCCTA

---

Kamla Parks – BART

---

Melanie Koslow – Mt. Diablo Unified School District

---

Cristian Lepe – Mt. Diablo Unified School District

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# Your Role as a Safety Champion



## Set Goals

Help set the goals and objectives of the CSAP



## Share Issues

Tell us about traffic-safety-related issues you see



## Community Voice

Tell us what you've heard from community members



## Report Concerns

Use the survey and interactive map on the project webpage



## Share Experience

Share your experience with recently implemented countermeasures



## Spread the Word

Share project details and help increase community awareness



## Monitor Progress

Help monitor the program and evaluate implemented strategies



## Stay Informed

Stay up to date on the project and its milestones

# CSAP Process

Our structured approach to safety improvement



# 5-Year Collision Snapshot

2021 – 2025 | City of Concord

**1,804**

Total  
Collisions

**164**

KSI  
Collisions

**19**

Fatal  
Collisions

**145**

Severe  
Injuries

## Key Highlights

Severity	Segment	Intersection	Total
Fatal	3	16	19
Severe Injury	19	126	145
Visible Injury	79	348	427
Complaint of Pain	185	1,028	1,213
<b>Total</b>	<b>286</b>	<b>1,518</b>	<b>1,804</b>

## Key Highlights

### 87% of KSI at intersections

142 of 164 KSI collisions occurred at intersection locations

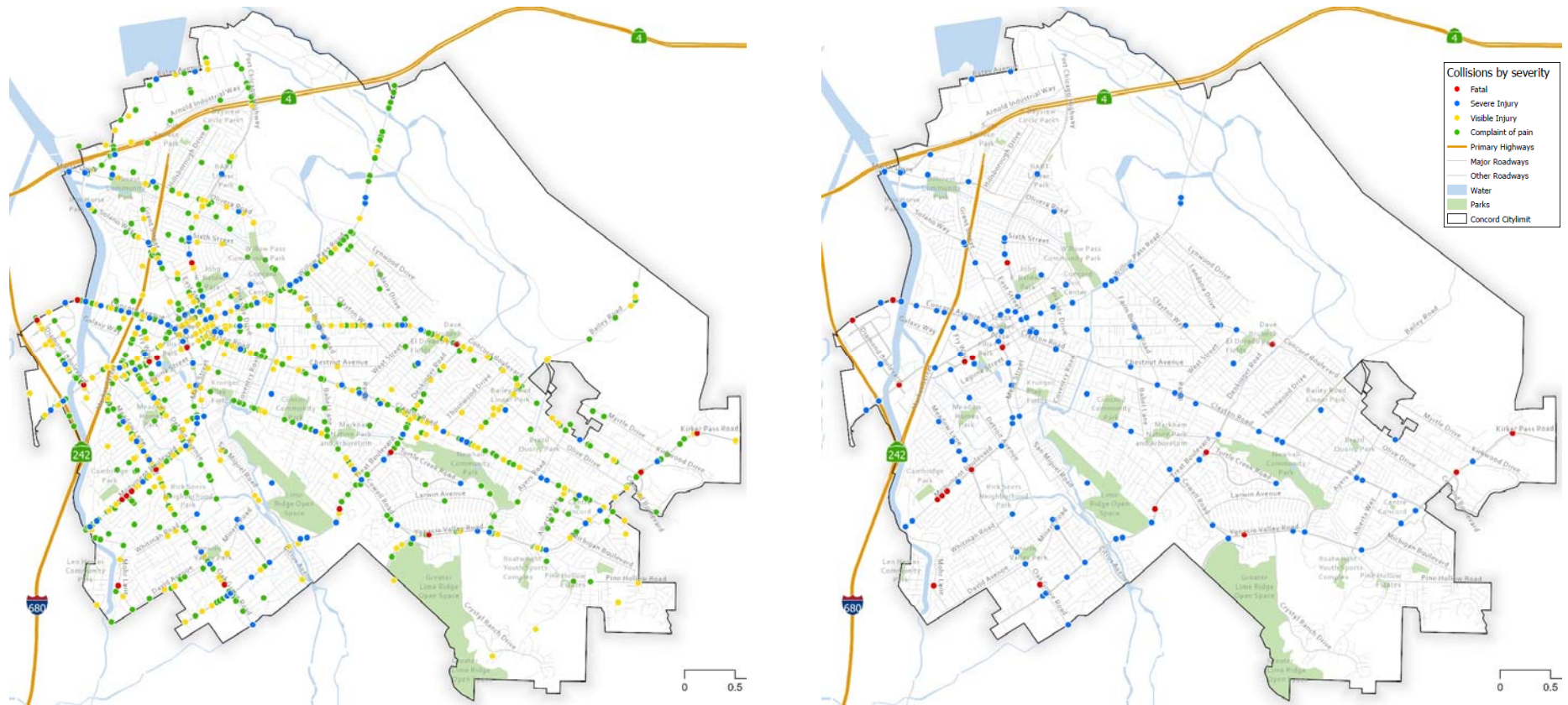
### 60% of KSI: Peds, Bikes, Motos

Vulnerable road users far overrepresented in severe outcomes

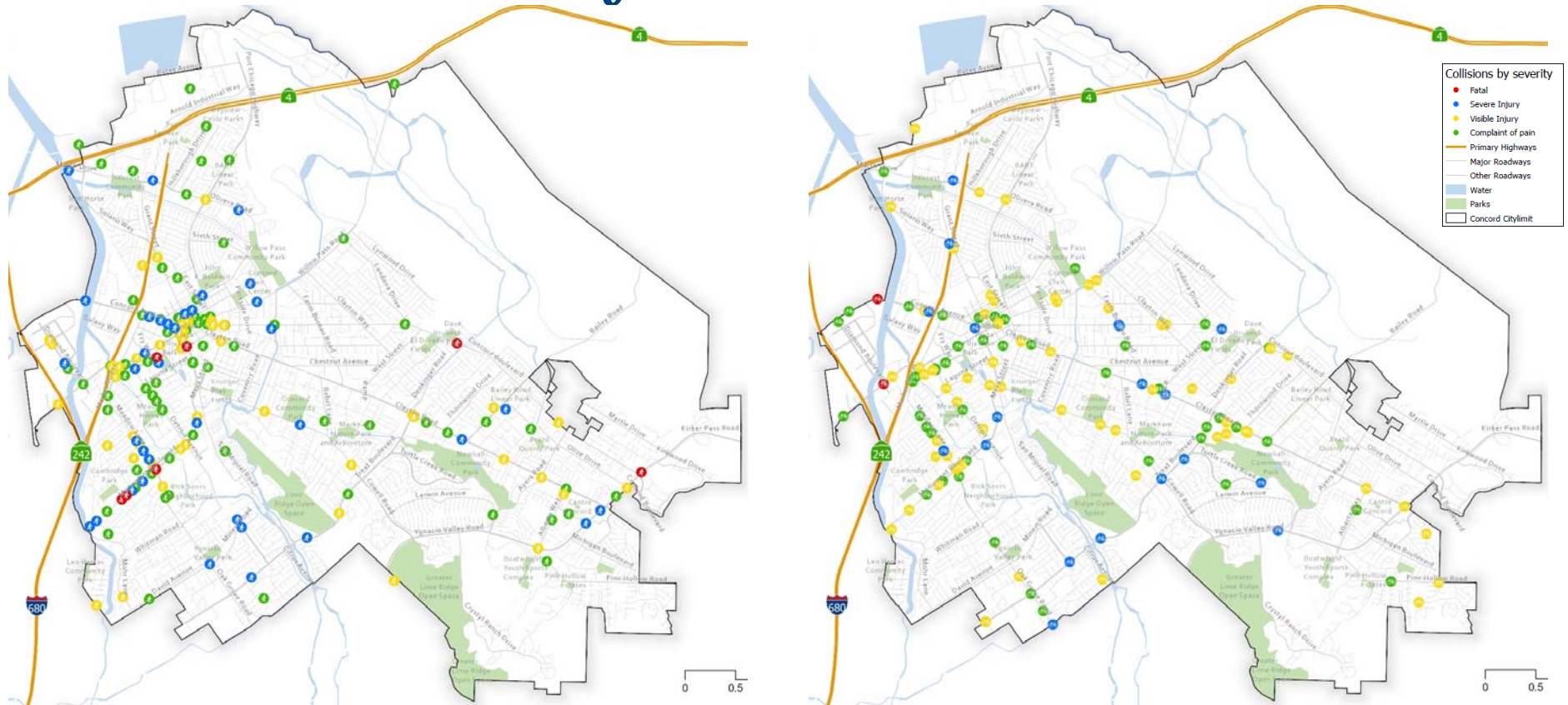
### 12% of KSI involve alcohol

20 of 164 KSI collisions were alcohol-related

# Where Crashes Are Happening



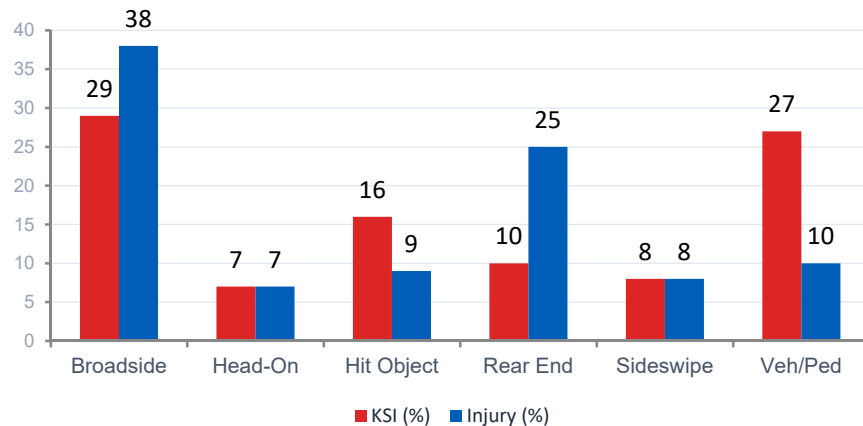
# Pedestrian & Bicycle Crash Locations



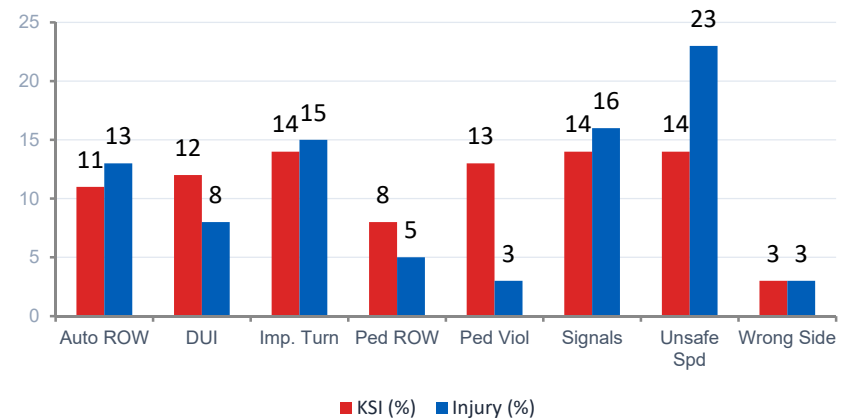
# How & Why Crashes Are Happening

Understanding crash patterns helps target the right solutions

By Collision Type



By Violation Category



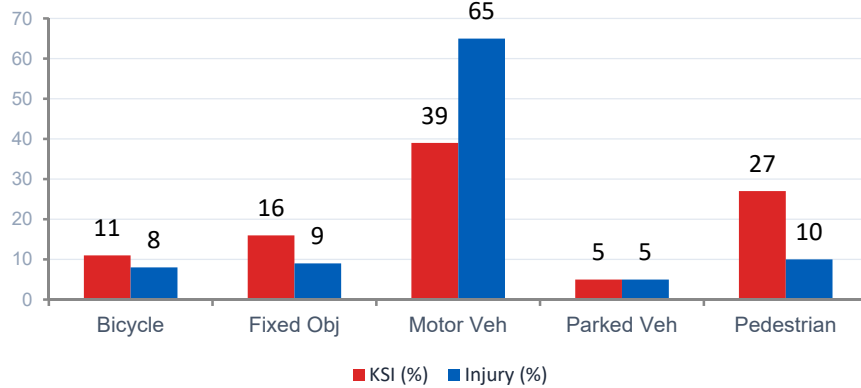
**Key Finding:**

Broadside and Vehicle/Pedestrian collisions accounted for 29% and 27% of KSI outcomes respectively, together responsible for over half of all deaths and severe injuries. Pedestrian/bicycle collisions are disproportionately severe relative to their overall share.

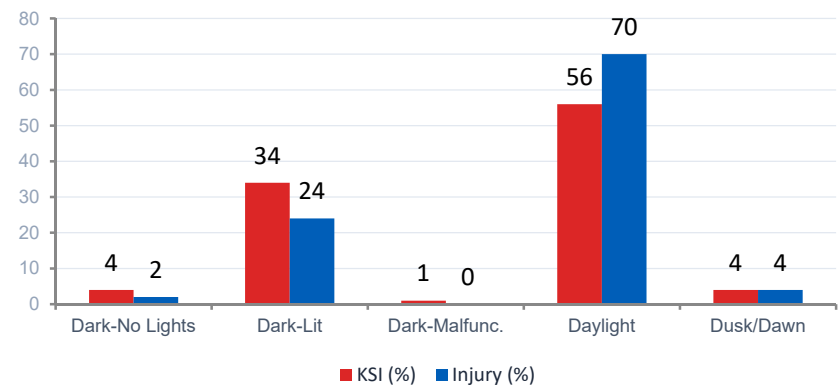
# Vehicle Involvement & Lighting

What is involved and when are crashes most severe?

Motor Vehicle Involved With



Lighting Conditions



**Top 5 KSI Corridors:**

Willow Pass Rd (17 KSI), Clayton Rd (16), Monument Blvd (13), Treat Blvd (13), Concord Ave (12). Together: 71 of 164 citywide KSI = 43% of all severe crashes.

**Lighting & Peak Hours:**

39% of KSI occur in dark conditions (all categories). PM Peak (2–5 PM) is the single highest-risk window with 36 KSI, followed by the evening hours (6–11 PM) with 40 KSI.

# What Concord Residents Are Telling Us

523 residents shared their safety concerns, priorities, and experiences across all travel modes

**523**

Responses

**73%**

Reported an Incident

**70%**

School Zone Concern

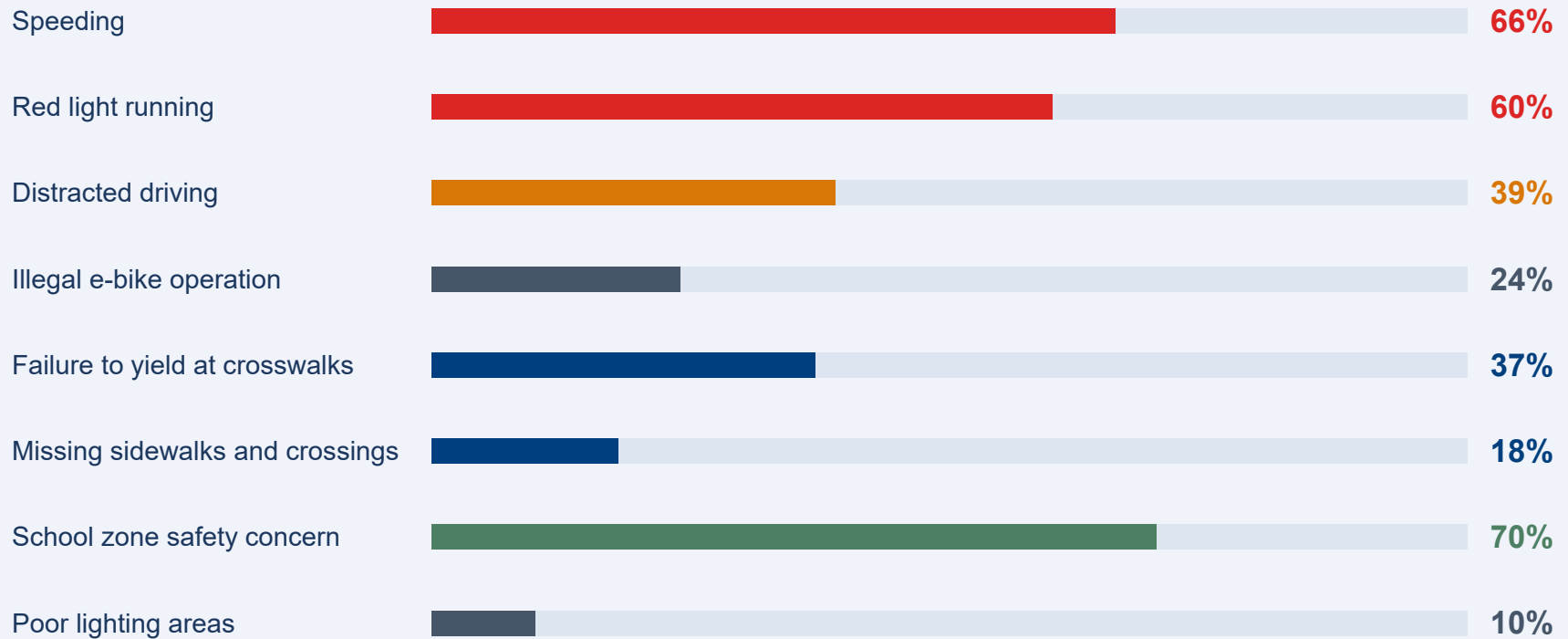
**51%**

Enforcement Requested

City of Concord CSAP Community Safety Survey | March 11 - April 12, 2026 | n = 523

# Top Safety Concerns Reported by Community Residents

Multi-select question — 523 respondents — March 11 - April 12, 2026



Focus areas: crash-prone intersections (54%) · commercial corridors (36%) · residential streets (34%) · schools and parks (31%)

# Survey vs. Collision Data: Where They Agree

Three community concerns directly confirmed by 5 years of collision records (2021-2025)

<b>MATCH</b>	<p><b>Speeding and signal violations lead both survey and crash data</b></p> <p>66% of respondents cite speeding; 60% cite red light running — the two top concerns across all age groups and modes. These exactly match the top 2 Primary Collision Factors in KSI records: Unsafe Speed and Signals/Signs violations. Together they account for 28% of all KSI events over 5 years and appear consistently on every top HIN corridor.</p>
<b>MATCH</b>	<p><b>Community-cited corridors match the High Injury Network exactly</b></p> <p>Clayton Rd, Willow Pass Rd, Treat Blvd, Monument Blvd, and Ygnacio Valley Rd cited most in open-text responses. Each is a top-5 KSI corridor in the CSAP HIN analysis — Clayton Rd (#1 with 16 KSI, Willow Pass #3 with 17 KSI. Community-perceived risk is geographically aligned with measured crash concentration — a strong validation of this CSAP.</p>
<b>MATCH</b>	<p><b>PM peak is the highest-concern and highest-KSI time window</b></p> <p>63% of respondents identified the afternoon (3-6 PM) as the period of greatest concern for drivers across all modes. Collision data confirms: PM peak (4-7 PM) accounts for 36 KSI events — the single highest window in the 5-year record. School hours (34%) and morning commute (58%) are also cited — aligning with Profile 3 school-zone collision patterns.</p>

# Survey vs. Collision Data: What Is New

Three community signals not visible in historical crash records — emerging priorities for the CSAP

NEW

## E-bike safety: an emerging concern not yet in crash data

24% of all respondents cited illegal or unsafe e-bike operation — the 4th highest concern overall.

Historical SWITRS data does not disaggregate e-bikes as a distinct collision category, so this risk is invisible in the record.

Open-text responses specifically cite sidewalk riding near schools and park trails — a forward-looking planning signal.

DIVERG  
E

## Late-night danger is severely underrepresented in survey perceptions

Only 14% of driver respondents flagged late night (10 PM+) as a concern — the lowest of any time window surveyed.

63% of all FATAL collisions occur in dark conditions; nighttime KSI rate = 13% vs. citywide 9.1% average.

Gap likely explained by fewer residents traveling at night — the community underestimates one of the highest-risk scenarios.

NEW

## School zone operational issues absent from collision records

70% expressed school-zone concern; pickup congestion (38%) and double-parking (30%) were cited as distinct problems.

These are operational issues — blocking sightlines, impeding pedestrian flow — not captured in SWITRS crash data at all.

The survey is the only data source revealing these conditions, identifying the cause of risk before crashes occur.

# School Zone Safety and Time-of-Day: Operational Priorities

Community-identified patterns that inform engineering, enforcement, and operational planning

## SCHOOL ZONE SAFETY

70% of residents expressed concern

**33% Very Concerned**    **37% Somewhat**    **16% Not**

### DRIVER ISSUES

40% Speeding near schools

38% Pickup / drop-off congestion

30% Double-parking / sight lines blocked

### PEDESTRIAN + BIKE

33% Drivers failing to yield near crossings

21% Child pedestrian habits near schools

19% No dedicated bike route to school

## TIME-OF-DAY CONCERNS

All modes of travel | n = 523 respondents

Time Period	Drivers	Peds	Cyclists
Afternoon (3-6 PM)	63%	33%	26%
Morning (6-9 AM)	58%	29%	19%
School hours	34%	27%	17%
Midday (10AM-2PM)	27%	19%	13%
Evening (6-10 PM)	24%	21%	13%
Weekends	23%	15%	13%
Late night (10PM+)	14%	9%	7%

**KEY INSIGHT:** Afternoon and morning are the only windows where all three modes simultaneously report elevated concern — directly aligning with PM peak KSI concentration in collision data.

# High Injury Network — Methodology & Scoring

## What is the High Injury Network?

The HIN identifies streets and intersections where fatal and severe injury (KSI) crashes are most concentrated.

## FHWA Safe System Weighted Scoring

- 1 **KSI Collisions** Weight: 30
- 2 **Pedestrian Collisions** Weight: 20
- 3 **Bicycle Collisions** Weight: 20
- 4 **Injury Collisions** Weight: 20
- 5 **Intersection Collisions** Weight: 10

$Score = (KSI/Total\ KSI \times 30) + (Injury/Total\ Injury \times 20) + (Intersection/Total\ Intersection \times 10) + (Ped/Total\ Ped \times 20) + (Bicycle/Total\ Bicycle \times 20)$

## Corridor Prioritization

- Corridors are ranked by their final Safe System Score.
- Higher scores indicate a greater concentration of severe crashes and vulnerable road user collisions.

## High-Injury Intersection Ranking

- Intersections are ranked by total **injury collisions** and **KSI collisions** recorded at each location.

## Top Priority Corridor

### Clayton Road

SR-242 to Washington Boulevard

**11.36** Safe System Score

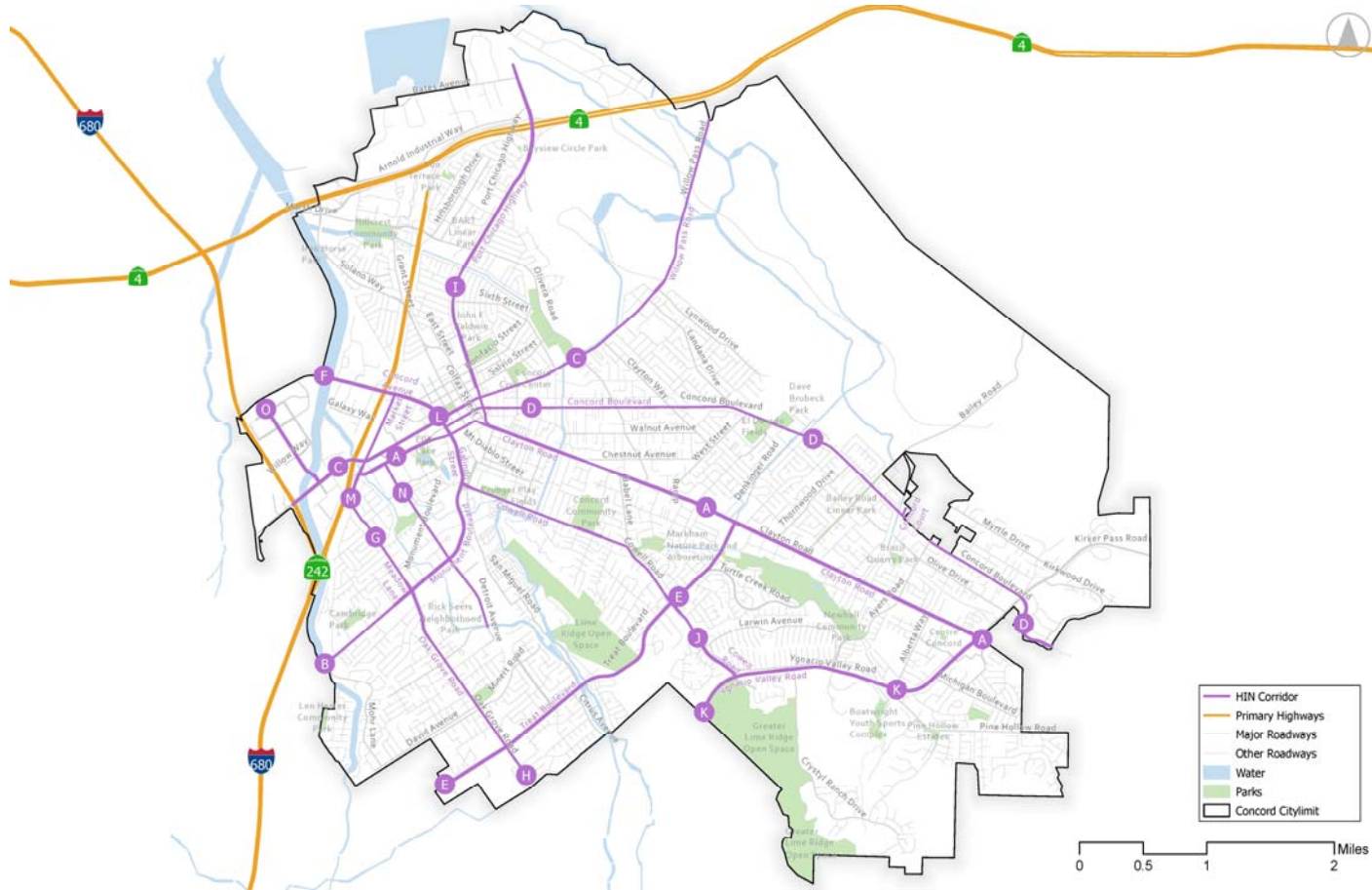
16 KSI • 224 Injury Collisions

18 Pedestrian • 20 Bicycle Collisions

# High Injury Network - Corridors

Rank	Corridor	KSI	Injury	Collisions occurred at Intersections	Pedestrian Collisions	Bicycle Collisions	Safe System Score
<b>A</b>	Clayton Rd: SR-242 to Washington Blvd	16	224	208	18	20	<b>11.36</b>
<b>B</b>	Monument Blvd: Cowell Rd to Mohr Ln	13	144	114	24	14	<b>9.13</b>
<b>C</b>	Willow Pass Rd: I-680 to Avila Rd	17	181	153	16	9	<b>9.02</b>
<b>D</b>	Concord Blvd: Galindo St to Yolanda Cir	10	159	150	9	10	<b>6.87</b>
<b>E</b>	Treat Blvd: Argonne Dr to Clayton Rd	13	78	71	10	4	<b>5.30</b>
<b>F</b>	Concord Ave: John Glenn Dr to Salvio St	12	78	67	5	7	<b>4.97</b>
<b>G</b>	Meadow Ln: Market St to Monument Blvd	6	51	43	9	8	<b>3.97</b>
<b>H</b>	Oak Grove Rd: Monument Blvd to Canal Trail	7	48	40	3	6	<b>3.20</b>
<b>I</b>	Port Chicago Hwy: Clayton Rd to Bates Ave	8	66	52	4	1	<b>3.09</b>
<b>J</b>	Cowell Rd: Monument Blvd to Ygnacio Valley Rd	5	58	52	2	6	<b>2.92</b>
<b>K</b>	Ygnacio Valley Rd: Clayton Rd to Cowell Rd	7	55	42	3	2	<b>2.75</b>
<b>L</b>	Galindo St: Salvio St to Cowell Rd	2	60	60	5	3	<b>2.36</b>
<b>M</b>	Market St: Concord Ave to Meadow Ln	1	36	30	4	5	<b>1.87</b>
<b>N</b>	Detroit Ave: Clayton Rd to Whitman Rd	1	40	27	6	2	<b>1.70</b>
<b>O</b>	Diamond Blvd: Willow Pass Rd to Concord Ave	2	46	30	4	1	<b>1.63</b>

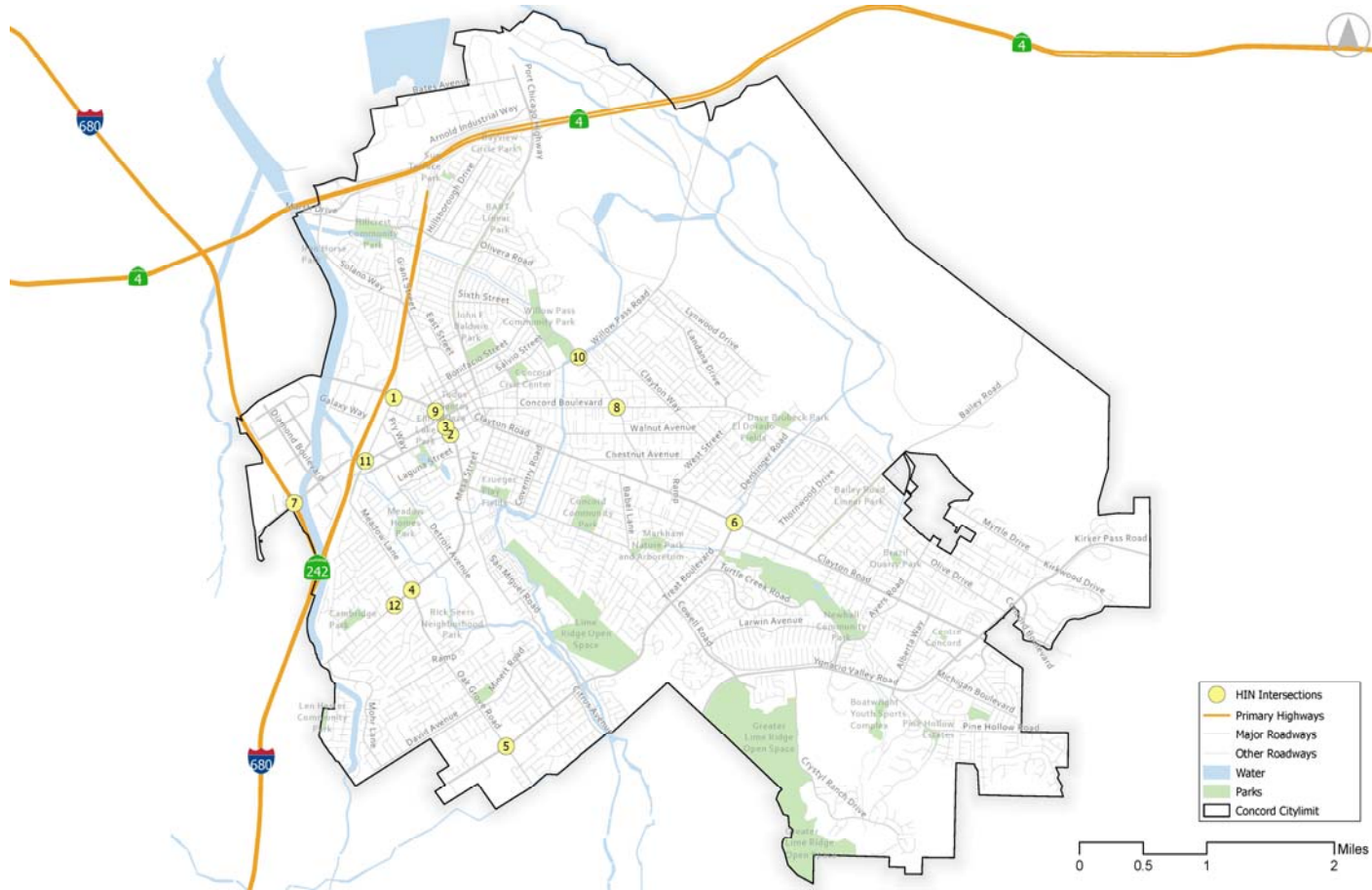
# High Injury Network – Corridors



## High Injury Network - Intersections

Rank	Intersection	KSI	Injury	Pedestrian Collisions	Bicycle Collisions
1	Market Street & Concord Avenue	0	32	1	1
2	Galindo Street & Clayton Road	1	27	2	0
3	Galindo Street & Concord Boulevard	1	26	3	2
4	Monument Boulevard & Meadow Lane	4	23	4	4
5	Treat Boulevard & Oak Grove Road	2	21	0	1
6	Clayton Road & Treat Boulevard	0	20	2	0
7	Willow Pass Road & I-680	1	16	1	0
8	Concord Boulevard & Farm Bureau Road	2	15	0	3
9	Concord Avenue & Salvio Street	3	13	3	1
10	Willow Pass Road & Farm Bureau Road	1	13	0	2
11	Willow Pass Road & Market Street	1	13	1	1
12	Monument Boulevard & Virginia Lane	1	13	4	2

# High Injury Network - Intersections



## Collision Profiles Summary | 10 profiles | 2021–2025 | City Roads Only

#	Profile Name	Injuries	KSI	KSI Rate
<b>1</b>	Improve Safety at Intersections	<b>1,518</b>	<b>142</b>	<b>9%</b>
<b>2</b>	Reduce Broadside Collisions	<b>687</b>	<b>47</b>	<b>7%</b>
<b>3</b>	Address Collisions near Schools	<b>667</b>	<b>57</b>	<b>9%</b>
<b>4</b>	Reduce Nighttime Collisions	<b>544</b>	<b>71</b>	<b>13%</b>
<b>5</b>	Reduce Rear-End Collisions	<b>450</b>	<b>16</b>	<b>4%</b>
<b>6</b>	Reduce Unsafe Speed Collisions	<b>418</b>	<b>23</b>	<b>6%</b>
<b>7</b>	Address Traffic Signs & Signal Violations	<b>292</b>	<b>23</b>	<b>8%</b>
<b>8</b>	Improve Pedestrian Safety	<b>190</b>	<b>46</b>	<b>24%</b>
<b>9</b>	Improve Bicycle Safety	<b>149</b>	<b>21</b>	<b>14%</b>
<b>10</b>	Reduce DUI-Related Collisions	<b>139</b>	<b>20</b>	<b>14%</b>

## Profile 8 — Improve Pedestrian Safety | 190 Injury Collisions | 46 KSI | KSI Rate: 24%

**190**

Injury Collisions

**46**

KSI Collisions

**24%**

KSI Severity Rate

### KEY INSIGHTS

**1** 46 KSI collisions — 24% severity rate, nearly 3× the citywide 9% average

**2** 181 of 190 collisions (95%) involve a vehicle striking a pedestrian

**3** 86% at intersections — pedestrian crossing design is the primary intervention target

**86%** at intersections **32%** at night

### TOP COLLISION TYPES

**Vehicle/Pedestrian** — **181** (95%)

### TOP VIOLATION CATEGORIES

**Ped Right-of-Way Violation** — **75** (39%)

**Pedestrian Violations** — **48** (25%)

**Profile 9 — Improve Bicycle Safety** | 149 Injury Collisions | 21 KSI | KSI Rate: 14%

**149**

Injury Collisions

**21**

KSI Collisions

**14%**

KSI Severity Rate

**KEY INSIGHTS**

**1** 21 KSI collisions — 14% severity rate, above the citywide 9% average

**2** 133 of 149 collisions (89%) at intersections — bicycle infrastructure at crossings is key

**3** 33 collisions (22%) occurred at night — lighting and visibility are critical factors

**89%** at intersections

**22%** at night

**TOP COLLISION TYPES**

**Broadside** — **89** (60%)

**Sideswipe** — **22** (15%)

**TOP VIOLATION CATEGORIES**

**Wrong Side of Road** — **52** (35%)

**Signal Violations** — **30** (20%)

**Profile 10 — Reduce DUI-Related Collisions** | 139 Injury Collisions | 20 KSI | KSI Rate: 14%

**139**

Injury Collisions

**20**

KSI Collisions

**14%**

KSI Severity Rate

**KEY INSIGHTS**

**1** 20 KSI collisions — 14% severity rate, above the citywide 9% average

**2** 107 of 139 collisions (77%) at night — highest nighttime share of all profiles

**3** 81% at intersections — DUI enforcement and intersection lighting are primary countermeasures

**77%** at intersections

**81%** at night

**TOP COLLISION TYPES**

**Hit Object** — **48** (35%)

**Rear-End** — **35** (25%)

**TOP VIOLATION CATEGORIES**

**DUI** — **139** (100%)

**Unsafe Speed** — **42** (30%)

# Next Steps

1

## Safety Countermeasures & Strategies

Develop engineering, enforcement, and education measures tailored to the identified collision patterns.

2

## Project Prioritization

Rank safety improvements by impact, feasibility, and cost-effectiveness — incorporating community-identified priorities from 523 survey responses.

3

## Safety Action Plan

Compile collision data findings and community survey input into a comprehensive, adopted plan with timelines, responsibilities, and funding strategies.

**APPENDIX**

# **Safe Street Toolkit**

Countermeasures Aligned to Concord Collision Profiles

## Profile 4 — Reduce Nighttime Collisions | 544 Injury Collisions | 71 KSI | KSI Rate: 13%

### RECOMMENDED COUNTERMEASURES

#### Add / Upgrade Intersection Lighting

Crash Type: Nighttime CRF: 40% **Cost: \$\$\$**

13% KSI severity rate — 44% above citywide average. 84% at intersections. New LED poles + foundations at top dark-condition KSI locations: \$60K-\$120K per intersection.

#### Pushbutton-Activated Pedestrian Lighting (PPLS)

Crash Type: Pedestrian / Nighttime CRF: 40% **Cost: \$\$\$**

Dynamic overhead LED floods that activate on pedestrian pushbutton press. Concentrates illumination on crosswalk zone only when pedestrians are present. Most effective at nighttime ped collision locations.

#### C-V2X Roadside Units (RSUs)

Crash Type: All CRF: N/A **Cost: \$\$\$**

Broadcast SPaT, MAP, and hazard data to connected vehicles at fatality locations. Concord's AXIS fiber backbone supports deployment. \$30K-\$50K per RSU. Leverages existing SS4A project infrastructure.

#### DUI Saturation / High Visibility Enforcement

Crash Type: All (DUI) CRF: N/A **Cost: \$\$\$**

20% of nighttime collisions involve DUI — 107 of 544 events. Targeted HVE deployments during high-risk hours (10 PM-3 AM). Coordinate with Concord PD at top nighttime corridors.

#### Upgrade Signs with Fluorescent Sheeting

Crash Type: All CRF: 15% **Cost: \$**

High-intensity retroreflective sheeting on regulatory and warning signs dramatically improves nighttime conspicuity. Very High systemic opportunity. \$500-\$1,250 per sign installed systemically.

# Discussion & Questions

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*Thank you for your partnership in making Concord's streets safer.*

**City of Concord — Transportation Division  
Abhishek Parikh, T.E.**

Prepared by TJKM Transportation Consultants

Comprehensive Safety Action Plan | 2026

**Profile 1 — Improve Safety at Intersections** | 1,518 Injury Collisions | 142 KSI | KSI Rate: 9%

**1,518**

Injury Collisions

**142**

KSI Collisions

**9%**

KSI Severity Rate

**KEY INSIGHTS**

**1** 142 KSI collisions — severity rate consistent with the citywide 9% average

**2** Broadside collisions dominate — 607 events (40%), primarily at signalized intersections

**3** 457 collisions (30%) occurred at night — nighttime intersection safety is a priority

**40%** broadside collisions

**30%** at night

**TOP COLLISION TYPES**

**Broadside** — **607** (40%)

**Rear-End** — **374** (25%)

**TOP VIOLATION CATEGORIES**

**Unsafe Speed** — **340** (22%)

**Signal Violations** — **287** (19%)

## Profile 2 — Reduce Broadside Collisions

687 Injury Collisions | 47 KSI | KSI Rate: 7%

**687**

Injury Collisions

**47**

KSI Collisions

**7%**

KSI Severity Rate

### KEY INSIGHTS

- 1** 47 KSI collisions — 6.8% severity rate, below the citywide 9% average
- 2** 607 of 687 collisions (88%) at intersections — signal and right-of-way violations are primary factors
- 3** Bicycle involvement is significant — 89 bicycle collisions within this profile

**88%** at intersections **26%** at night

### TOP COLLISION TYPES

**Broadside** — **607** (88% at intersections)

### TOP VIOLATION CATEGORIES

**Signal Violations** — **253** (37%)

**Auto Right of Way** — **190** (28%)

**Profile 3 — Address Collisions near Schools** | 667 Injury Collisions | 57 KSI | KSI Rate: 9%

**667**

Injury Collisions

**57**

KSI Collisions

**9%**

KSI Severity Rate

**KEY INSIGHTS**

**1** 57 KSI collisions — 8.5% severity rate, near the citywide 9% average

**2** 589 of 667 collisions (88%) at intersections — consistent with the citywide pattern

**3** 70 pedestrian and 52 bicycle collisions — elevated VRU exposure near school zones

**88%** at intersections

**30%** at night

**TOP COLLISION TYPES**

**Broadside** — **243** (36%)

**Rear-End** — **166** (25%)

**TOP VIOLATION CATEGORIES**

**Unsafe Speed** — **155** (23%)

**Signal Violations** — **105** (16%)

## Profile 4 — Reduce Nighttime Collisions | 544 Injury Collisions | 71 KSI | KSI Rate: 13%

**544**

Injury Collisions

**71**

KSI Collisions

**13%**

KSI Severity Rate

### KEY INSIGHTS

- 1** 71 KSI collisions — 13% severity rate, significantly above the citywide 9% average
- 2** DUI is a major contributing factor — 107 of 544 collisions (20%) are DUI-related
- 3** Pedestrians are disproportionately impacted — 60 pedestrian collisions recorded

**84%** at intersections

**20%** DUI-related

### TOP COLLISION TYPES

**Broadside** — **179** (33%)

**Rear-End** — **136** (25%)

### TOP VIOLATION CATEGORIES

**Unsafe Speed** — **122** (22%)

**DUI** — **107** (20%)

## Profile 5 — Reduce Rear-End Collisions | 450 Injury Collisions | 16 KSI | KSI Rate: 4%

**450**

Injury Collisions

**16**

KSI Collisions

**4%**

KSI Severity Rate

### KEY INSIGHTS

**1** 16 KSI collisions — 4% severity rate, among the lowest of all profiles

**2** 373 of 450 collisions (83%) at intersections — signal timing and following distance are key

**3** 135 collisions (30%) occurred at night — nighttime rear-end risk is elevated

**83%** at intersections

**30%** at night

### TOP COLLISION TYPES

**Broadside** — **354** (79%)

**Rear-End** — **60** (13%)

### TOP VIOLATION CATEGORIES

**Unsafe Speed** — **152** (34%)

**Following Too Closely** — **98** (22%)

**Profile 6 — Reduce Unsafe Speed Collisions** | 418 Injury Collisions | 23 KSI | KSI Rate: 6%

**418**

Injury Collisions

**23**

KSI Collisions

**6%**

KSI Severity Rate

**KEY INSIGHTS**

**1** 23 KSI collisions — 6% severity rate, below the citywide 9% average

**2** 338 of 418 collisions (81%) at intersections — speed management at signals is critical

**3** 121 collisions (29%) at night — lighting and speed enforcement both apply

**81%** at intersections **29%** at night

**TOP COLLISION TYPES**

**Hit Object** — **148** (35%)

**Rear-End** — **89** (21%)

**TOP VIOLATION CATEGORIES**

**Unsafe Speed** — **418** (100%)

**Unsafe Lane Change** — **42** (10%)

## Profile 7 — Address Traffic Signs & Signal Violations | 292 Injury Collisions | 23 KSI | KSI Rate: 8%

292

Injury Collisions

23

KSI Collisions

8%

KSI Severity Rate

### KEY INSIGHTS

**1** 23 KSI collisions — 8% severity rate, near the citywide 9% average

**2** 286 of 292 collisions (98%) at intersections — highest concentration of all profiles

**3** 70 collisions (24%) at night — signal compliance is critical across all hours

**98%** at intersections **24%** at night

### TOP COLLISION TYPES

**Broadside** — **204** (70%)

**Rear-End** — **44** (15%)

### TOP VIOLATION CATEGORIES

**Auto Right of Way** — **292** (100%)

**Signal Violations** — **58** (20%)

## Profile 1 — Improve Safety at Intersections | 1,518 Injury Collisions | 142 KSI | KSI Rate: 9%

### RECOMMENDED COUNTERMEASURES

#### Provide Protected Left-Turn Phase

Crash Type: All (Angle, Broadside) CRF: 30% **Cost: \$\$\$·**

Add protected left-turn phasing where left pockets exist. Removes driver judgment gaps vs. oncoming traffic. High priority at Concord's 87%-intersection KSI cluster.

#### Improve Signal Timing & Coordination

Crash Type: All CRF: 15% **Cost: \$\$\$·**

Re-time signals, extend clearance intervals, add all-red extensions. Addresses signal violations (14% of KSI) and reduces angle conflicts at approach speeds.

#### Near-Miss Video Analytics (AI Platform)

Crash Type: All (Diagnostic Tool) CRF: N/A **Cost: \$\$\$·**

Deploy AI-based conflict detection at priority intersections using Concord's existing AXIS cameras. Identifies near-miss hotspots pre-crash, supports grant applications with quantitative data.

#### Leading Pedestrian Interval (LPI)

Crash Type: Pedestrian & Bicycle CRF: 60% **Cost: \$·**

Give pedestrians a 3-7 second head start before vehicles receive green. Low-cost timing change with highest CRF of any ped countermeasure. Deployable citywide via software.

#### High Friction Surface Treatment (HFST)

Crash Type: All (Wet-Road, Failure to Stop) CRF: 55% **Cost: \$\$\$·**

Apply HFST epoxy or polyurethane on stop bars and approach lanes. Reduces skid-related broadside and rear-end events. Strong CRF, 10-year life, federally eligible.

## Profile 2 — Reduce Broadside Collisions

687 Injury Collisions | 47 KSI | KSI Rate: 7%

### RECOMMENDED COUNTERMEASURES

#### Protected Left-Turn Phase (Existing Pocket)

Crash Type: All (Broadside, Angle) CRF: 30% **Cost: \$\$\$·**

88% of this profile occurs at intersections. Signal violations and auto ROW are the top violations. Protected phasing directly eliminates the gap-acceptance conflict driving broadside events.

#### Install Left-Turn Lane + Protected Phase

Crash Type: All CRF: 55% **Cost: \$\$\$\$·**

Where no left-turn pocket exists, add channelization plus signal phase. Costs vary \$100K-\$250K+ with mast arm. Highest CRF of geometric countermeasures for left-turn conflicts.

#### Improve Signal Hardware (Backplates, LEDs)

Crash Type: All CRF: 15% **Cost: \$·**

Retroreflective backplates and upgraded LED heads improve signal conspicuity. Very High systemic opportunity. Low cost relative to impact — \$800-\$2,700 per head for backplate + LED retrofit.

#### All-Red Clearance Interval Extension

Crash Type: All (Angle, Red-Light Running) CRF: 15% **Cost: \$·**

Extend all-red phase via controller reprogramming only — no hardware needed. Especially effective at wide intersections. Controller programming only: \$2,000-\$5,000 per intersection.

#### High Visibility Enforcement (HVE)

Crash Type: All CRF: N/A **Cost: \$·**

Deploy targeted enforcement at top broadside intersections. Signal violations = 14% of KSI in this profile. Engineering + enforcement pairing maximizes impact at priority locations.

## Profile 3 — Address Collisions Near Schools | 667 Injury Collisions | 57 KSI | KSI Rate: 9%

### RECOMMENDED COUNTERMEASURES

#### Rectangular Rapid Flashing Beacon (RRFB)

Crash Type: Pedestrian & Bicycle CRF: 35% **Cost: \$\$\$**

Pedestrian-activated irregular flash pattern at unsignalized crossings near schools. 70 ped + 52 bike collisions in this profile. Solar-powered pairs: \$25K-\$40K. Proven VRU safety impact.

#### Accessible Pedestrian Signal (APS)

Crash Type: Pedestrian & Bicycle CRF: 45% **Cost: \$\$\$\$**

Audible/vibrotactile signals at school crossings improve compliance for all users, not just visually impaired. Retrofit \$4,500-\$8,500 per location. Very High systemic opportunity.

#### Safe Routes to School (SRTS) Program

Crash Type: All CRF: N/A **Cost: \$\$\$**

Expand curriculum, walking audits, and Vision Zero training for students, parents, and staff. Addresses unsafe speed (23%) and pedestrian violations near schools. \$50K-\$120K per school.

#### Enhanced School Zone Package

Crash Type: All CRF: 30% **Cost: \$\$\$**

Reduced speed zone + flashing beacons + speed feedback signs + high-visibility markings. Full package \$120K-\$300K per school. 88% of this profile at intersections near school zones.

#### Leading Pedestrian Interval (LPI)

Crash Type: Pedestrian & Bicycle CRF: 60% **Cost: \$\$\$\$**

Head-start walk phase is the single highest-CRF pedestrian countermeasure available. Timing-only implementation near school zones: \$4K-\$18K. Concord has existing hardware to support.

## Profile 8 — Improve Pedestrian Safety | 190 Injury Collisions | 46 KSI | KSI Rate: 24%

### RECOMMENDED COUNTERMEASURES

#### Pedestrian Hybrid Beacon (HAWK Signal)

Crash Type: Pedestrian & Bicycle CRF: 55% **Cost: \$\$\$\$**

24% KSI rate — nearly 3x citywide. 95% are vehicle/pedestrian events. HAWK provides active stop compliance for mid-block and uncontrolled crossings. \$300K-\$500K per location.

#### Leading Pedestrian Interval (LPI)

Crash Type: Pedestrian & Bicycle CRF: 60% **Cost: \$\$\$\$**

Highest-CRF ped countermeasure. Ped ROW violations = 39% of Profile 8 violations. LPI directly addresses driver yielding failure by giving pedestrians a visible head start before vehicle green.

#### Advance Pedestrian Warning System (Activated)

Crash Type: Pedestrian & Bicycle CRF: 30% **Cost: \$\$\$**

Radar/IR-activated W11-2 warning signs alert far-lane drivers that a pedestrian is actively crossing. Addresses multiple-threat scenarios at multilane crossings. \$12K-\$55K per approach.

#### High-Visibility Ladder Crosswalk Markings

Crash Type: Pedestrian & Bicycle CRF: 25% **Cost: \$\$\$**

Continental/ladder striping dramatically increases driver recognition distance at crossings. 86% at intersections. \$2,500-\$6,000 per crossing. SS4A project standard at all 23 priority locations.

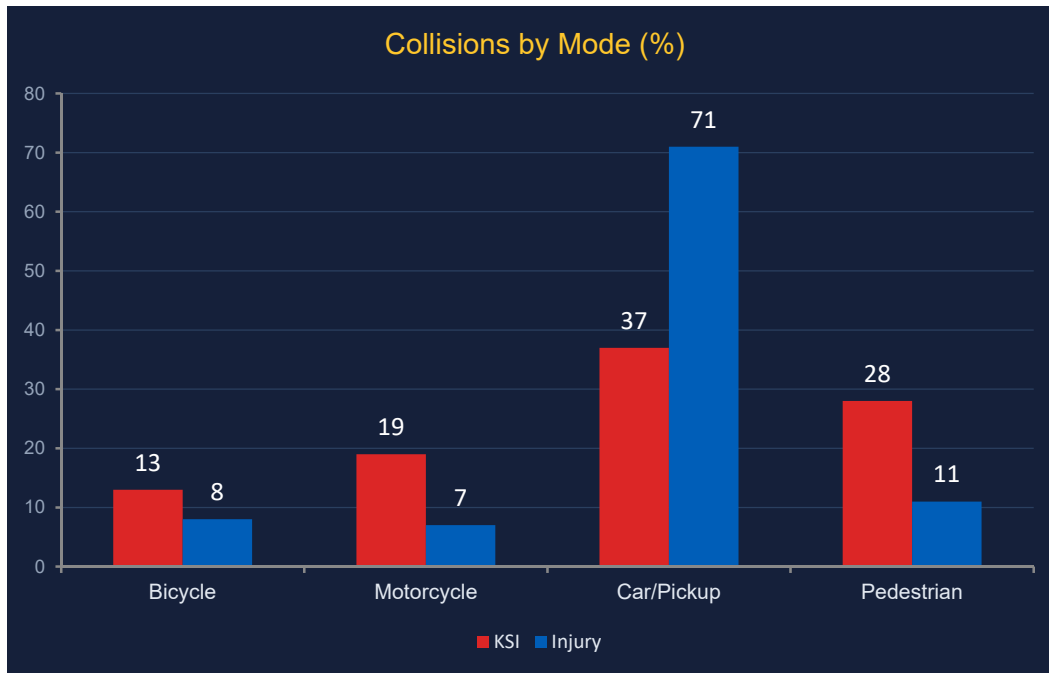
#### Bulb-Outs / Curb Extensions

Crash Type: Pedestrian & Bicycle CRF: 20% **Cost: \$\$\$**

Narrow crossing distance, slow turning vehicles, improve ped-driver sightlines. Concord project cost estimate: \$8K-\$10K per location (per recent project data). Very High systemic opportunity.

# Collision Trends Over Time

2021 – 2025 | KSI and Total Collisions by Mode



## Key Observations

### Peak year: 2022

383 total collisions and 39 KSI

### 2025 shows decline

341 total collisions ( $\Sigma$ 11% from peak)

### KSI remains elevated

34 KSI in 2025—same as 2021 despite overall decline

### 84% at intersections

1,518 of 1,804 collisions occurred at intersections