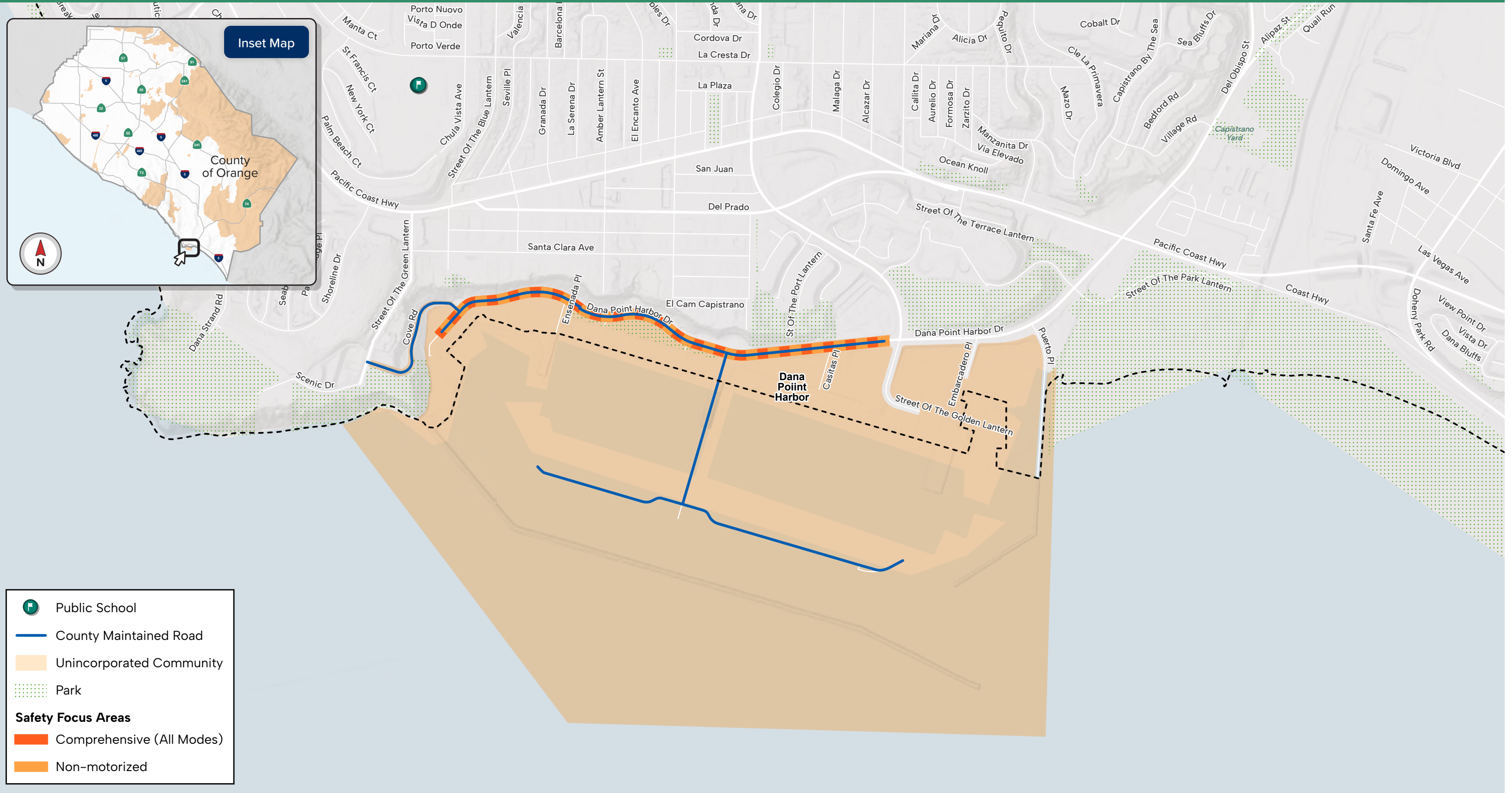


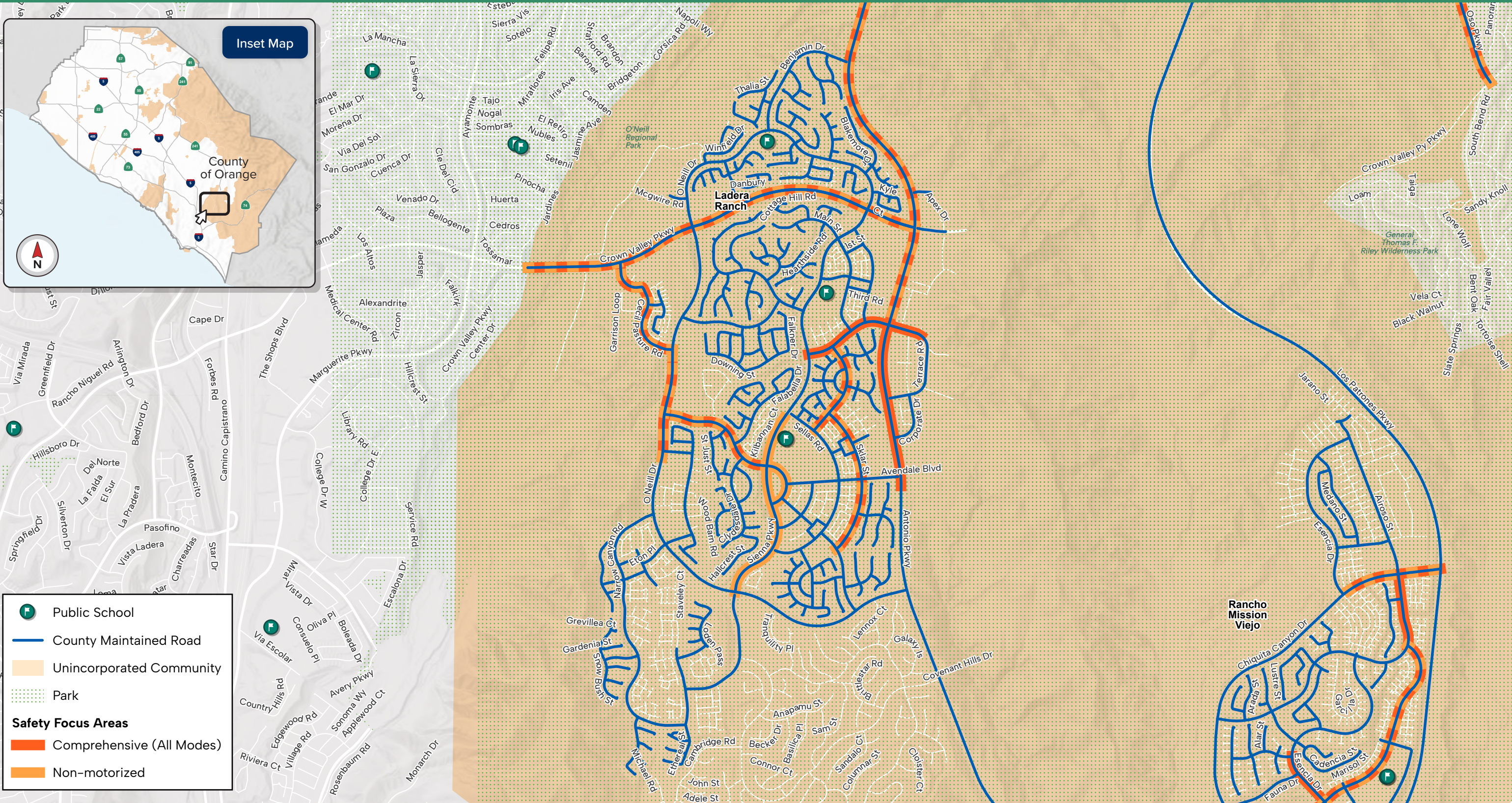
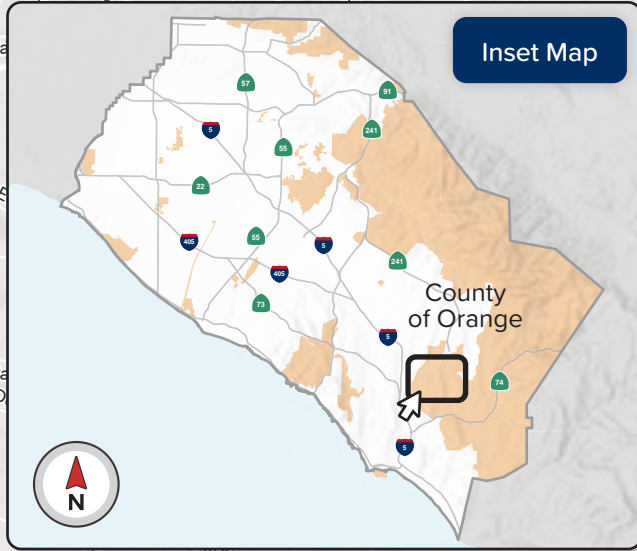


10 South County Communities Dana Point Harbor





10 South County Communities Ladera Ranch



Legend

- Public School
- County Maintained Road
- Unincorporated Community
- Park

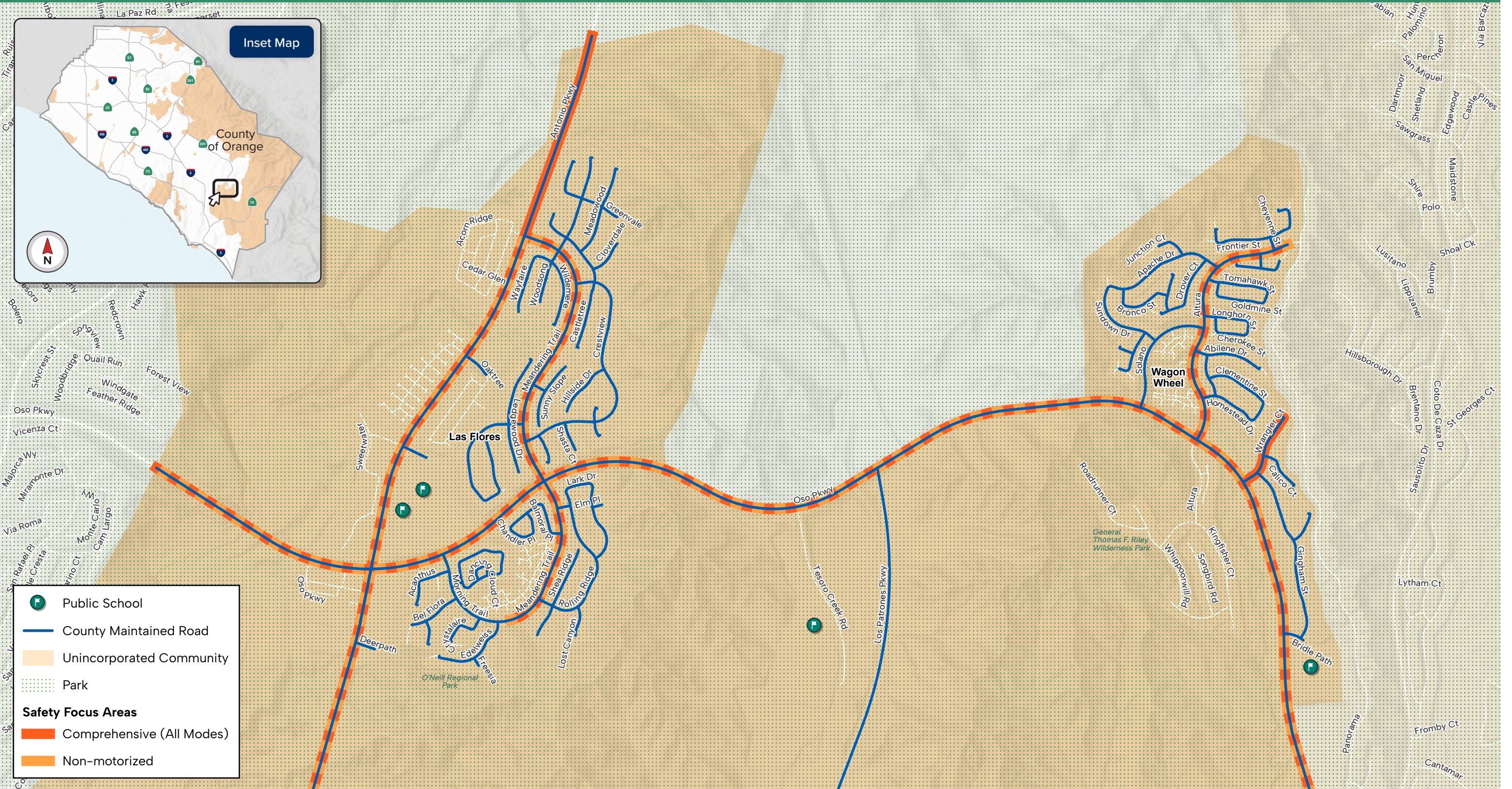
Safety Focus Areas

- Comprehensive (All Modes)
- Non-motorized



10 South County Communities

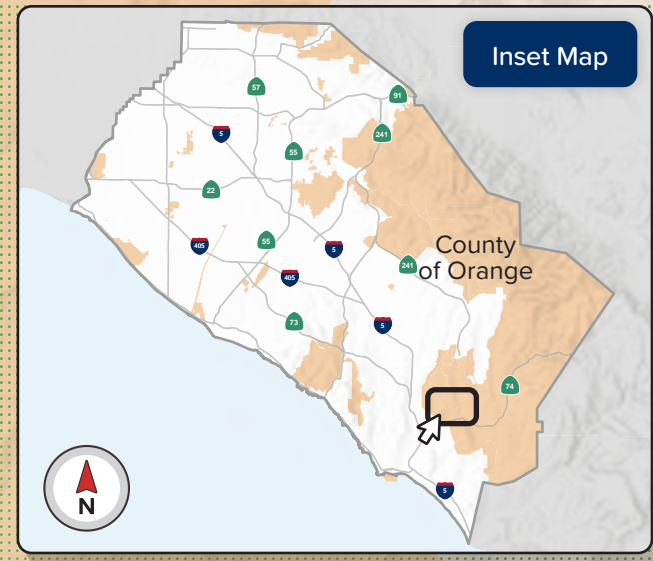
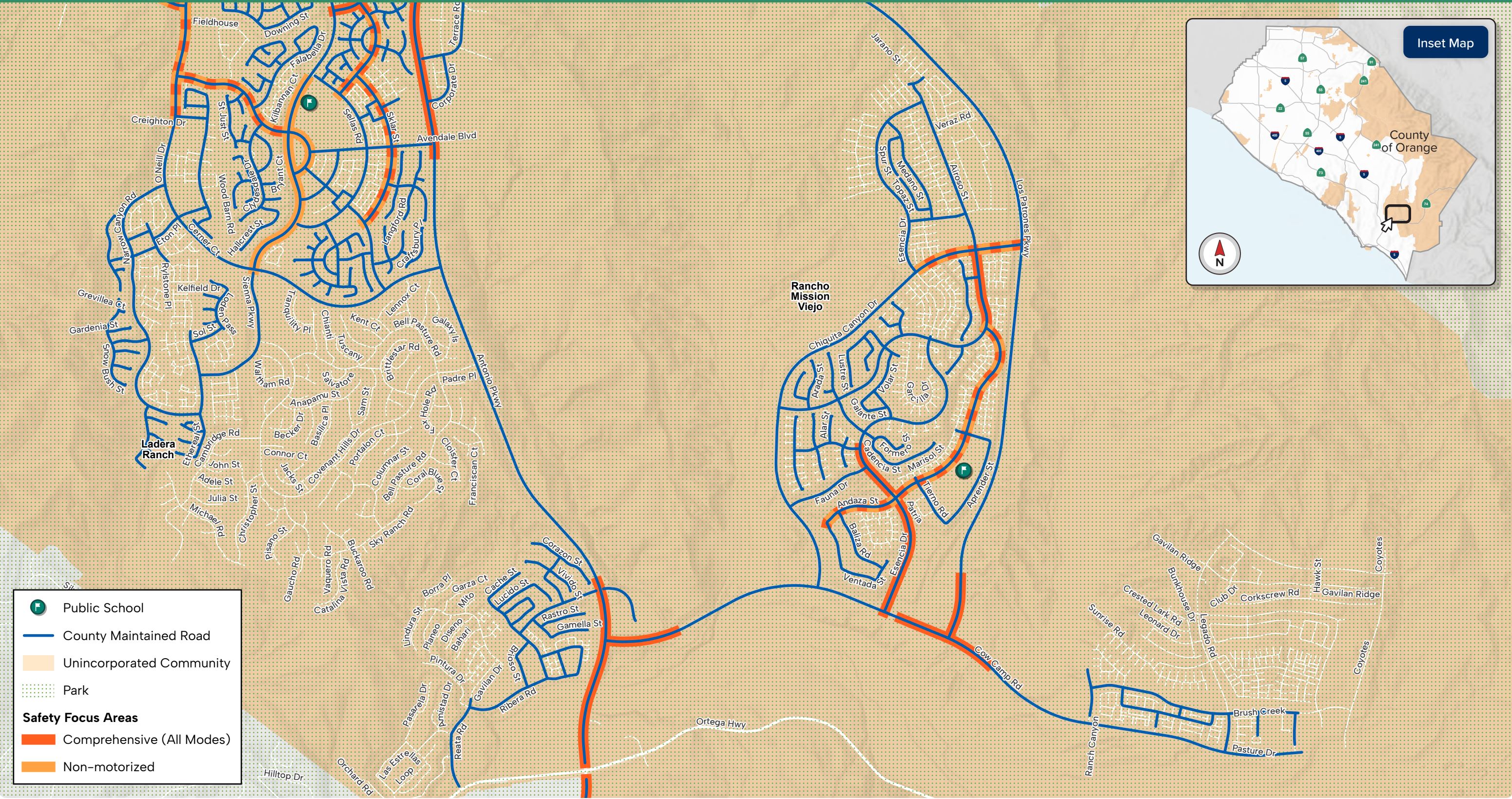
Las Flores, Wagon Wheel





10 South County Communities

Rancho Mission Viejo





Chapter 3: Community Engagement & Safety Task Force



Our priorities, plans, and policies are based on the goal we aim for, and we should not be aiming for some of our loved ones to be safe as they move about our communities — we should be working for safety for all. Goals drive our actions and our urgency. And we need to shake off the complacency we've had for too long of preventable deaths and injuries. Just as a civilized society works to provide safe drinking water and clean air, we must work to ensure safe mobility."

Leah Shahum
Director of Vision Zero Network



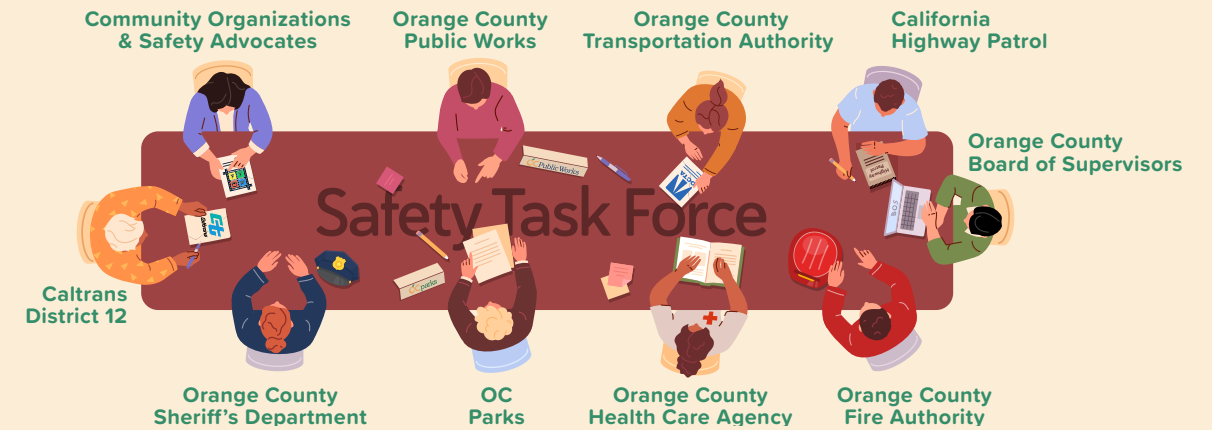
Developing a safer transportation system requires the perspectives and experiences of the people who use it every day. Public engagement and collaboration is central to the development of the LRSP, ensuring that the strategies reflect community needs, address real-world concerns, and build broad support for implementation. Through outreach activities, residents, community organizations, and advocacy groups contributed valuable input on roadway safety challenges, travel behaviors, and opportunities for improvement.

Public Engagement



Safety Task Force

In parallel with these outreach efforts, the County established a multidisciplinary Safety Task Force to guide the LRSP's development. This group brought together representatives from the County of Orange, partner agencies, law enforcement, public health, and Community-Based Organizations. The task force provided insights on roadway safety issues, priority locations, crash trends, and partnership opportunities. Just as importantly, the task force will remain engaged beyond plan development by supporting implementation and monitoring progress over time.



Together, public engagement and stakeholder collaboration form the foundation of the LRSP. This chapter describes the methods used to connect with the public, highlights the input received through engagement activities, and explains how the Safety Task Force has shaped, and will continue to guide, the County's efforts to improve roadway safety for all users.



Public Engagement

The outreach period for the LRSP spanned from March through September 2025, providing multiple opportunities for community members to share their experiences and ideas about roadway safety. During this time, the Project Team participated in a range of local community events and public meetings to raise awareness and gather meaningful input.

Community Events

These events were hosted as pop-ups featuring project materials, branded giveaways, and interactive opportunities for participants to provide feedback. These informal, approachable settings helped residents engage directly with project staff and share their day-to-day experiences with local transportation challenges.



Silverado Flea Market

Public Meetings

These meetings offered a more structured format, including a presentation and project display boards, followed by an interactive mapping workshop where participants identified safety issues and opportunities for improvement within their neighborhoods.



North Tustin Community Meeting

Feedback was collected through multiple channels, including comment forms, interactive input maps (both physical and digital), and online and in-person surveys. This variety of engagement tools helped ensure broad participation and inclusive representation of community voices across the County.

Speeding Tops Local Safety Concerns

Speeding emerged as the top driver behavior concern, cited by 70% of survey respondents, followed by aggressive driving (49%) and drivers ignoring traffic laws (44%).

Enforcement Seen as Key to Safer Roads

Enforcement and education were identified as critical strategies for improving roadway safety. Increased enforcement of unsafe driving behaviors was the most frequently cited approach, mentioned by 66% of respondents, followed by improved pedestrian and bicycle infrastructure and educational programs such as e-bike safety classes

Community Calls for Safer Street Design

Traffic calming measures - such as rumble strips and roundabouts - were the most supported improvement, followed by roadway redesigns that prioritize safety over speed, and the addition of "protected bike lanes.

Strong Support for People-First Streets

The vast majority of survey respondents emphasized the importance of safety-focused design. 88% agreed that safety should be the top priority in roadway planning and design decisions, and 84% supported designing streets near schools, parks, senior centers, and other places frequented by children and older adults to encourage slower speeds.



Public Engagement Events

- 1 Ladera Ranch Farmers Market

- 2 Mile Square Park Farmers Market

- 3 Downtown Anaheim Farmers Market

- 4 Orange Home Grown Farmers Market

- 5 Yorba Linda Farmers Market

- 6 Orange Park Acres Meeting

- 7 Rossmoor Homeowners Association

- 8 El Modena Center

- 9 Hana Field, Dog Days at the Farm

- 10 Rossmoor Family Festival at Rush Park

- 11 SOCO Costa Mesa Farmers Market

- 12 Silverado Canyon Flea Market

- 13 Inter-Canyon League Monthly Meeting

- 14 Westminster National Night Out

- 15 Foothill Communities Association

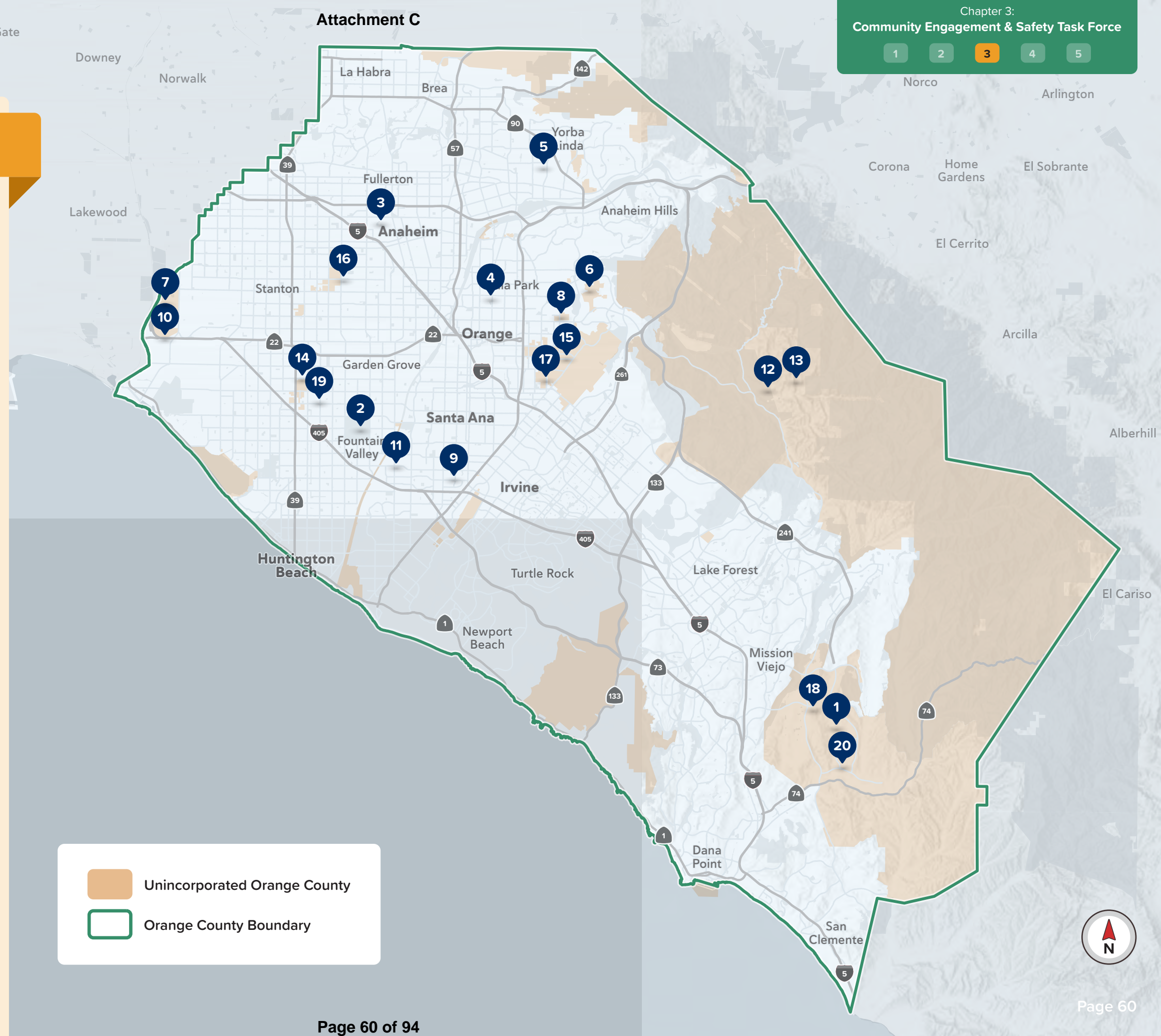
- 18 Layali Little Arabia


- 17 North Tustin Community Meeting


- 18 Ladera Ranch Civic Council Meeting

- 19 Midway Community Center

- 20 Rancho Mission Viejo Fire & Emergency Preparedness Town Hall



 Unincorporated Orange County

 Orange County Boundary





Community Feedback

The community feedback collected from residents and visitors of unincorporated Orange County highlights a clear desire for safer, more connected, and more accessible transportation options. Respondents expressed concerns about speeding, gaps in pedestrian and bicycle facilities, limited lighting in certain areas, and the growing need for clearer e-bike regulations. Many also noted that a stronger law enforcement presence during peak periods and weekends could help address unsafe driving behaviors.

The recommended action items in the LRSP respond directly to these priorities. They include infrastructure improvements such as traffic calming and lighting enhancements; safety programs focused on enforcement and public education; and coordinated planning efforts to support safer travel for all modes across unincorporated communities. Together, these strategies aim to create safer streets, strengthen community connections, and support a transportation system that better serves residents in unincorporated areas of Orange County.



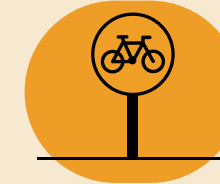
Midway City Community Center

Most Frequently Mentioned Issues



Speeding & Traffic Calming

Excessive speeding in residential and rural areas, and unsafe driving behaviors.



Bike Lane Safety & Infrastructure

Need for protected bike lanes, improved signage, and safer cycling routes.



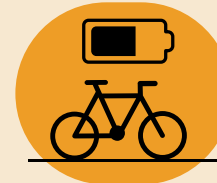
Pedestrian Infrastructure & Crosswalks

Lack of sidewalks, unsafe crossings, and poor ADA accessibility.



Lighting & Visibility

Poor nighttime visibility, blind curves, and inadequate street lighting.



E-Bike Regulation & Education

Safety concerns around e-bike usage, especially near schools and pedestrian zones.



Requests for Enforcement

Desire for increased patrols during peak hours and weekends, installed cameras and license plate readers, increased monitoring forest access points, and enforced traffic laws.

Other notable concerns include traffic signal timing, road conditions, wildlife safety, planning and development, and parking accessibility.



Hana Field Dog Days



Safety Task Force

The County established a multidisciplinary Safety Task Force to guide the LRSP’s development. This group brought together representatives from the from the County of Orange, partner agencies, law enforcement, public health, and community-based organizations. The task force provided insights on roadway safety issues, priority locations, crash trends, and partnership opportunities. Just as importantly, the task force will remain engaged beyond plan development by supporting implementation and monitoring progress over time.

Community Organizations & Safety Advocates

Community organizations and advocates support for the LRSP reflects real-world experiences of people who walk, bike, drive, and take transit. Groups like the OC Bicycle Coalition and CMABS help prioritize equity, accountability, and shared ownership of safer streets.

Orange County Public Works

As project sponsor, Orange County Public Works led the LRSP development and manages the County’s roadway network through planning, design, and maintenance. The department coordinated with partner agencies and will continue to guide implementation and track progress toward County safety goals.

Orange County Transportation Authority

OCTA oversees transit and regional transportation planning. Their role ensures transit riders, pedestrians, and bicyclists are considered in safety efforts while helping fund and coordinate LRSP implementation and multimodal projects.

California Highway Patrol

The California Highway Patrol (CHP) provides key insights on enforcement, crash trends, and driver behavior. As first responders, CHP supports emergency response and ensures that enforcement and education complement engineering strategies for safer roads.

Caltrans District 12

Caltrans District 12 manages Orange County’s state highways, including SR-1, SR-39, and SR-74. Collaboration with Caltrans supports safety at intersections with state routes and aligns the LRSP with statewide priorities and the Safe System approach.



Orange County Board of Supervisors

The Board of Supervisors connects residents to the County’s safety programs and priorities. Their leadership and policy direction support LRSP goals, with representatives from all five districts contributing to the Safety Task Force for countywide input.

Orange County Sheriff’s Department

The Sheriff’s Department provides law enforcement in unincorporated areas and contributes on-the-ground insights on safety issues. Their collaboration supports targeted enforcement, education, and outreach in high-need communities.

OC Parks

OC Parks manages regional parks, trails, and open spaces across the County. Their participation ensures safe access for people walking and biking to recreation areas, supporting multimodal safety and improving connections to public spaces.

Orange County Health Care Agency

The Health Care Agency adds a public health lens to roadway safety, emphasizing equity and injury prevention. Their involvement ensures safety strategies support vulnerable groups and align with broader community health initiatives.

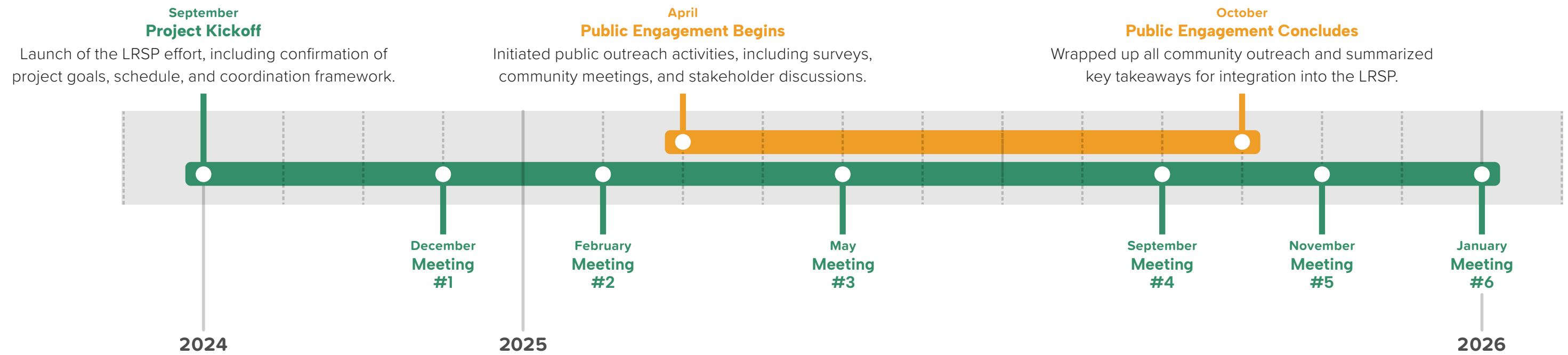
Orange County Fire Authority

The Orange County Fire Authority provides fire protection and emergency medical services. Their work supports the LRSP’s Post-Crash Care focus, improving coordination and response times to reduce injury severity and save lives after collisions.



Task Force Timeline

The Safety Task Force met six times throughout the LRSP development process to guide the County’s vision for roadway safety. Meeting topics included interactive discussions on plan priorities, detailed reviews of crash trends, identification of emphasis areas, and stakeholder feedback on proposed strategies and safety enhancements. Feedback from task force members and community representatives was incorporated directly into the development of this plan, as well as the selection of priority projects within each crash profile.



Meeting #1

Developed the project’s Vision Statement and Guiding Principles, establishing the overall direction for roadway safety efforts.

Meeting #2

Prepared for public engagement by outlining outreach methods, target audiences, and priority messages.

Meeting #3

Reviewed crash data to identify key safety focus areas.

Meeting #4

Examined crash trends and underlying risk factors, leading into an exploration of behavioral countermeasures.

Meeting #5

Evaluated engineering countermeasures and reviewed candidate strategies for priority locations.

Meeting #6

Shared the draft LRSP for stakeholder review, refinement, and final input before preparation of the final plan.



Chapter 4: Crash Profiles & Countermeasures



No other preventable cause of death is so overlooked and implicitly condoned as the tens of thousands of preventable traffic fatalities each year in this country. This must — and can — change. We are encouraged that this new Resolution to set and advance the goal of eliminating traffic deaths by 2050 is a sign of stepped-up federal leadership. Now we need to put proven strategies to work, including designing roadways for safety instead of speed and investing funding in safety improvements, especially for those walking and biking and those in traditionally underserved communities."

Leah Shahum
Director of Vision Zero Network

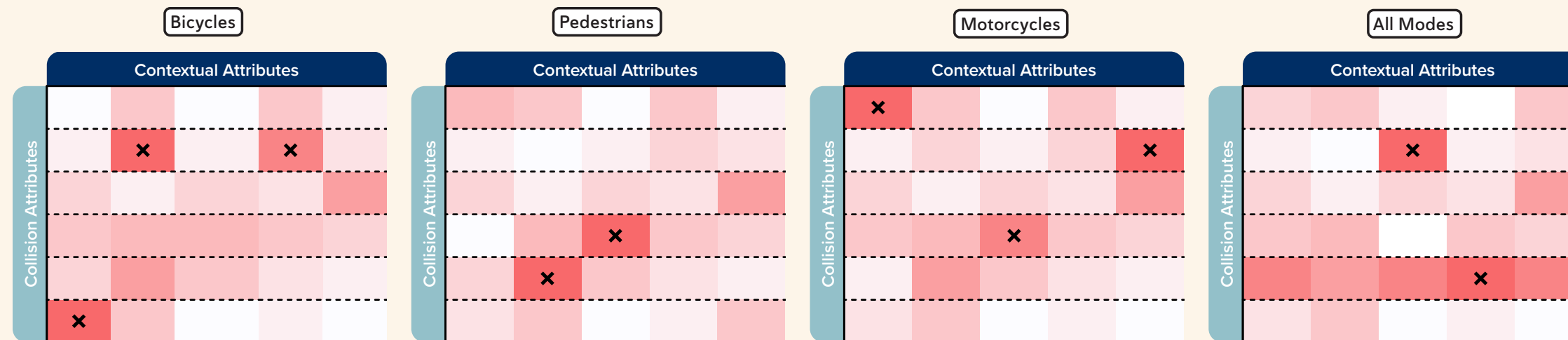


Building on the findings from the safety analysis and stakeholder engagement process, this chapter outlines a set of targeted strategies and countermeasures designed to address key crash trends and priority emphasis areas within Unincorporated Orange County. The solutions presented here are grounded in data-driven insights, community input, and best practices in roadway safety engineering and program management. Together, these strategies form a comprehensive framework aimed at reducing fatalities and serious injuries on the County’s transportation network.

Systemic Analysis and Project Prioritization

Systemic analysis served as the foundation for identifying and prioritizing safety improvements in Unincorporated Orange County. This proactive, data-driven approach evaluates the entire roadway network using consistent risk-based criteria to uncover roadway features and conditions most strongly associated with crash risk. By integrating roadway and intersection characteristics with detailed crash data, systemic analysis reveals patterns and relationships between contextual factors - such as roadway type, geometry, and surrounding land use - and the likelihood of severe or frequent crashes.

Crash and contextual data was organized into a series of cross-tabulation (crosstab) matrices, with crash attributes in rows and contextual attributes in columns. Separate matrices were developed for each travel mode - pedestrian, bicycle, motorcycle, and all-modes combined - to capture mode-specific patterns and risk factors. The **Weighted Crash Score (WCS)** was calculated for each cell within these matrices to identify the combinations of crash and contextual factors associated with the highest frequency and severity of crashes. The results of this analysis led to the identification of ten distinct crash profiles, representing the most prevalent and severe crash patterns across the unincorporated roadway network.



The graphics above are visual representations of the underlying crash matrices, with **Collision Attributes** shown vertically and **Contextual Attributes** shown horizontally for each travel mode. Darker cells indicate higher weighted crash risk, and marked cells (X) identify the highest frequency and severity of crashes which led to the identification of ten distinct crash profiles shown on the next page.

Systemic Safety Analysis: A data-driven approach that proactively identifies roadway features correlated with higher crash risk across a transportation network, rather than reacting only to individual high-crash sites.

Weighted Crash Score (WCS): A relative measure that converts crashes of different severities into a single comparable metric based on property-damage-only equivalents. Used to assess and prioritize safety issues consistently across locations.

Why Systemic Analysis Matters: Systemic analysis helps agencies move from a reactive to a proactive safety strategy—identifying potential risks before they result in serious crashes.



Crash Profiles

The following ten crash profiles (A-J) represent the most prevalent and severe crash patterns across Unincorporated Orange County. Each profile reflects a unique combination of roadway, user, and environmental characteristics associated with elevated crash risk. Together, these profiles provide a data-informed foundation for developing targeted countermeasures and prioritizing safety investments throughout the County.

Each crash profile is presented as a cut sheet that includes summary statistics showing the proportion of total and KSI (killed or severely injured) crashes represented by the profile. The cut sheets also identify top locations where these crash types occur and provide a list of recommended countermeasures to address the contributing factors. These profiles translate the results of the systemic analysis into actionable strategies, supporting a proactive approach to reducing severe crashes across the County's roadway network.

Profile	Description	Mode
A	Unsafe Speed Violations Road Width ≥ 32' 2-Lane Road Crashes involving Bicycles Linked to Unsafe Speeds on Wide Two/Three-Lane Roads	Bicycles
B	Daylight Class II Bike Facility Daytime Crashes involving Bicycles on Roads with Class II Facilities	Bicycles
C	Crossing Not in a Crosswalk 25 MPH Posted Speed Crashes involving Pedestrians at Unmarked Crossings Near Low-Speed Roads (25 mph)	Pedestrians
D	Dusk/Dawn/Dark Intersection Nighttime Crashes involving Pedestrians Near Intersections	Pedestrians
E	Driver Proceeding Straight Near Schools Crashes involving Pedestrians and Vehicles Proceeding Straight Near Schools	Pedestrians

Profile	Description	Mode
F	Overtuned Midblock Overtuned Crashes involving Motorcycles at Midblock Locations	Motorcycles
G	Weekend (Fri - Sun) South Orange County Crashes involving Motorcycles on Weekends in South Orange County	Motorcycles
H	Hit Object Arterial Roads Hit Object Crashes along Arterial Roads	All Modes
I	Broadside 40+ MPH Observed Speed Broadside Collisions Where Observed Speed 40+ MPH	All Modes
J	Alcohol Involved Weekend (Fri - Sun) Crashes on Weekends involving Alcohol	All Modes

Countermeasure Toolbox

A comprehensive Countermeasure Toolbox is provided in Appendix C. It includes detailed descriptions of the safety strategies referenced in each crash profile, organized by focus area—including bicycle facilities, pedestrian facilities, intersection design, roadway design, signal timing and phasing, signing and striping, speed management, and non-engineering countermeasures. The toolbox serves as a resource for identifying context-appropriate improvements and supporting project implementation and funding efforts.

Crash Reduction Factors (CRFs), representing the expected percentage reduction in collisions after a countermeasure is implemented, are provided in the Countermeasure Toolbox where available. CRFs are sourced from the 2024 Caltrans Local Roadway Safety Manual (LRSM) and supplemented by the FHWA Crash Modification Factors (CMF) Clearinghouse.



Crash Profile: **A** B C D E F G H I J

Bicycles Unsafe Speed Violations Road Width \geq 32' 2-Lane Road

Crashes Involving Bicycles Linked to Unsafe Speeds on Wide Two/Three-Lane Roads

Total Bicycle Crashes within Crash Profile A

16 Total Bicycle Crashes

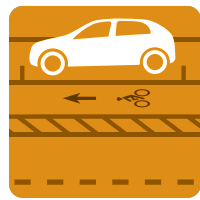
14% of all Bicycle Crashes

9 KSI Bicycle Crashes

36% of all KSI Bicycle Crashes

Countermeasures with Crash Reduction Factor (CRF)

Construct/Upgrade Bicycle Facilities



Bike or Buffered Bike Lanes

CRF: 35%

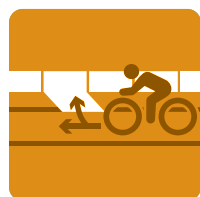


Separated Bike Lanes

CRF: 45%

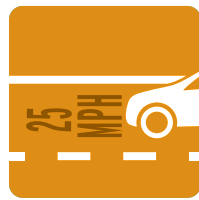


Conflict Zone Striping



Bicycle Ramp

Automobile Speed Management



Pavement Speed Legends



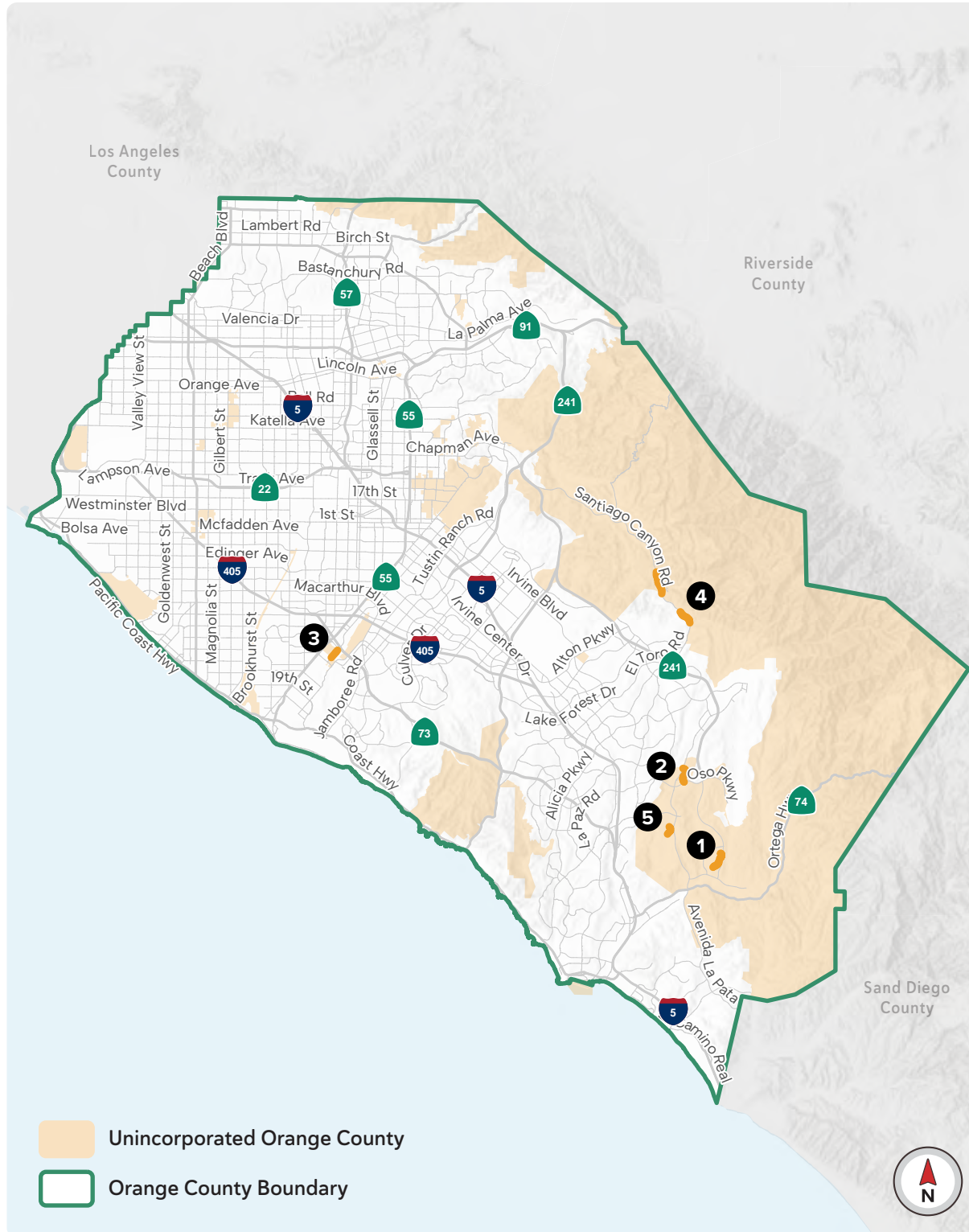
Speed Feedback Sign



Speed Limit Reduction



Lane Narrowing



Top Crash Locations

- 1 Andaza Street between Airoso Street and Esencia Drive
- 2 Meandering Trail between Antonio Parkway and Oso Parkway
- 3 Santa Ana Avenue between Mesa Drive and Bristol Street
- 4 Santiago Canyon Road between Silverado Canyon Road and Live Oak Canyon Road
- 5 Snapdragon Street between Sellas Road and Windmill Avenue



Crash Profile: A B C D E F G H I J

Bicycles Daylight Class II Bike Facility

Daytime Crashes Involving Bicycles On Roads With Class II Facilities

Total Bicycle Crashes within Crash Profile B

56 Total Bicycle Crashes

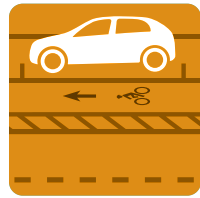
48% of all Bicycle Crashes

14 KSI Bicycle Crashes

56% of all KSI Bicycle Crashes

Countermeasures with Crash Reduction Factor (CRF)

Upgrade Bicycle Facilities



Buffered Bike Lanes

CRF: 35%



Separated Bike Lanes

CRF: 45%



Shared-Use Path

CRF: 80%

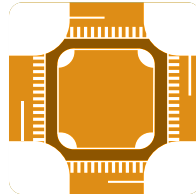


Conflict Zone Striping

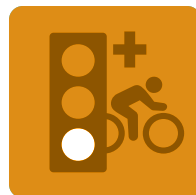
Intersection Design For Bicycles



Prohibit Right-Turn-on-Red



Protected Intersections



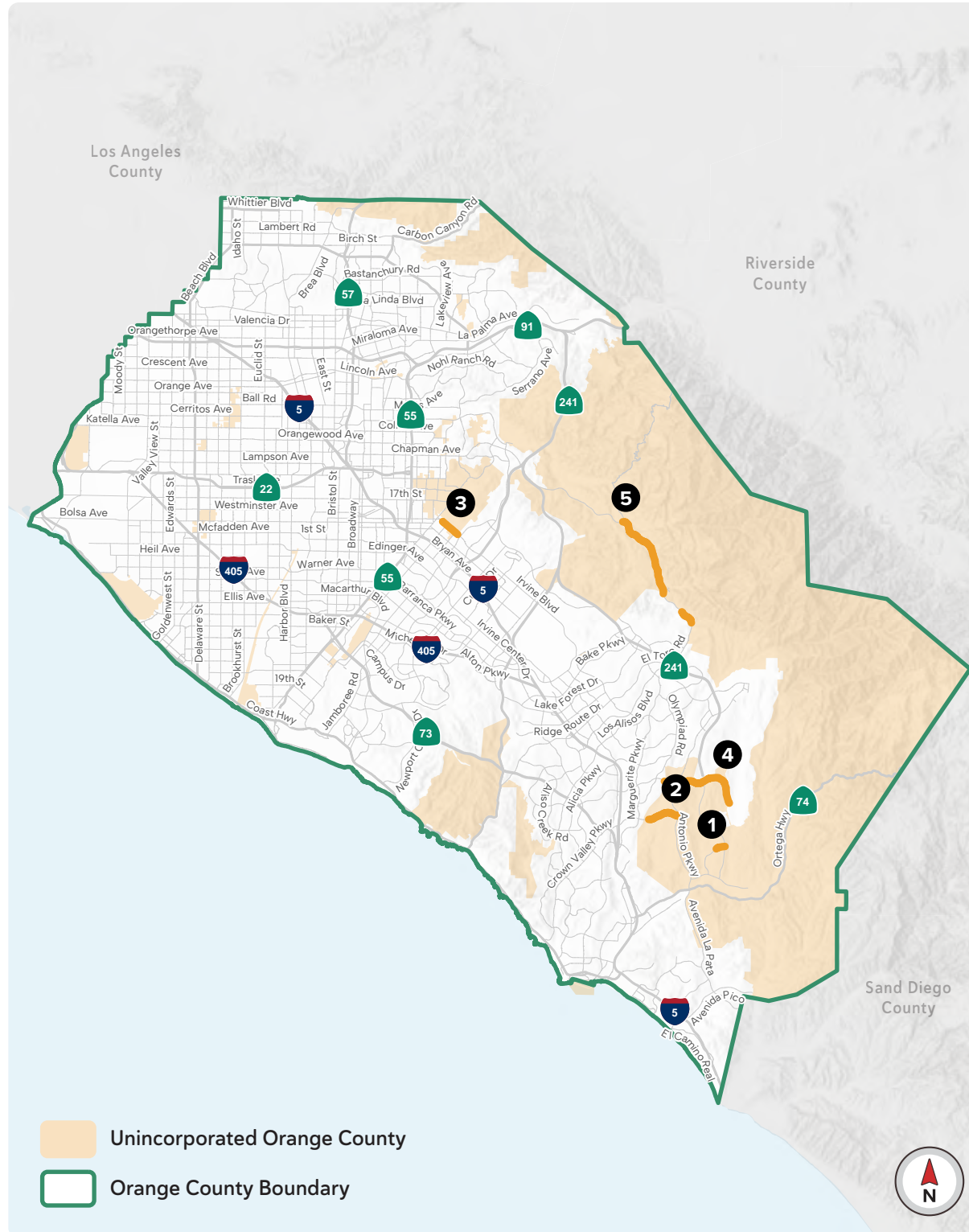
Extend Green Time for Bicycles

CRF: 15%



Bicycle Signal/ Exclusive Bike Phase

CRF: 15%



Top Crash Locations

- 1 Chiquita Canyon Drive between Esencia Drive and Los Patrones Parkway
- 2 Crown Valley Parkway between Trabuco Creek and Antonio Parkway
- 3 Irvine Boulevard between Charloma Drive and Ranchwood Road
- 4 Oso Parkway between Trabuco Creek and Coto de Caza Drive
- 5 Santiago Canyon Road between Silverado Canyon Road and Live Oak Canyon Road



Crash Profile: A B **C** D E F G H I J

Pedestrians Crossing Not in a Crosswalk 25 MPH Posted Speed

Crashes Involving Pedestrians at Unmarked Crossings Near Low-Speed Roads (25 mph)


Total Pedestrian Crashes within Crash Profile C

23 Total Pedestrian Crashes
26% of all Pedestrian Crashes

8 KSI Pedestrian Crashes
25% of all KSI Pedestrian Crashes

Countermeasures with Crash Reduction Factor (CRF)


Along Arterial Roads




Rectangular Rapid Flashing Beacon
 CRF: 35%



Pedestrian Hybrid Beacon
 CRF: 55%



Pedestrian Signal
 CRF: 55%




Pedestrian Barrier/Buffer
 CRF: 35%

Along Collector and Local Roads




Install Stop or Yield Signs
 CRF: 15%



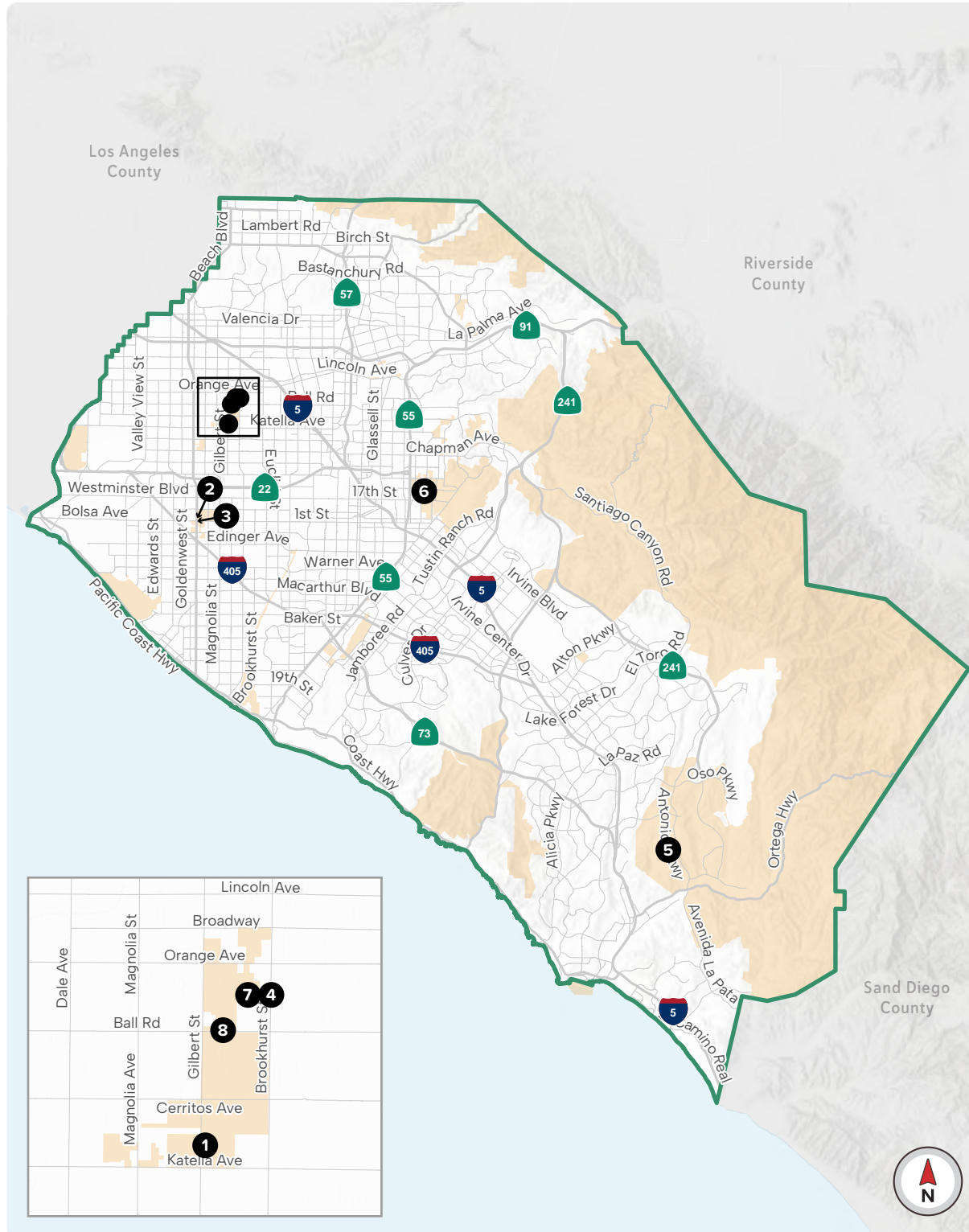
Install Crosswalk
 CRF: 25%



Curb Extensions
 CRF: 35%



Pedestrian Refuge Island
 CRF: 45%



Top Crash Locations

- 1 Banta Avenue & Endry Street (Uncontrolled)
- 2 Beach Boulevard (SR-39) & Washington Avenue (Side-Street Stop)
- 3 Bolsa Avenue & Adams Street (Side-Street Stop)
- 4 Brookhurst Street & Stonybrook Drive (Side-Street Stop)
- 5 Duskywing Court & Bluewing Lane (Uncontrolled)
- 6 Prospect Avenue & Leafwood Lane (Side-Street Stop)
- 7 Stonybrook Drive & Campus Drive (Side-Street Stop)
- 8 Yardley Street & Harvest Lane (Uncontrolled)



Crash Profile: A B C **D** E F G H I J

Pedestrians Dusk/Dawn/Dark Intersection

Nighttime Crashes Involving Pedestrians Near Intersections


Total Pedestrian Crashes within Crash Profile D

34 Total Pedestrian Crashes
38% of all Pedestrian Crashes


17 KSI Pedestrian Crashes
53% of all KSI Pedestrian Crashes

Countermeasures with Crash Reduction Factor (CRF)


At Signalized Intersections



Intersection Lighting
CRF: 40%



Pedestrian Countdown Signal Head
CRF: 25%



Leading Pedestrian Interval
CRF: 60%




High Visibility Crosswalk

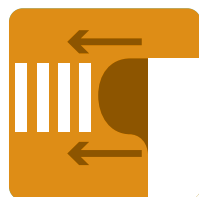
At Unsignalized Intersections




Roadway Lighting
CRF: 35%



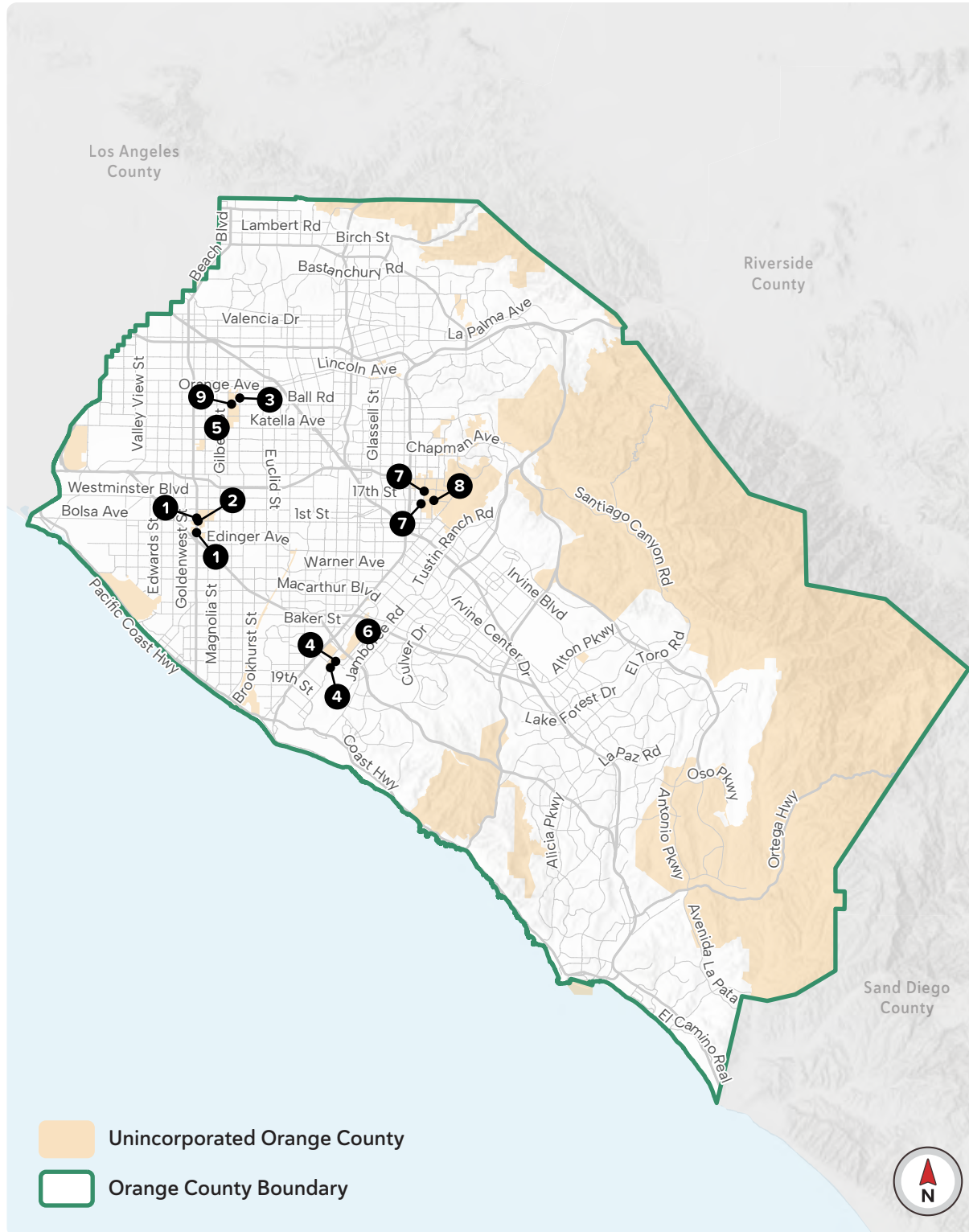
Install/Upgrade Crosswalk
CRF: 25% - 55%



Curb Extensions
CRF: 35%



Co-Locate Bus Stops and Pedestrian Crossings



Top Crash Locations

- 1** Beach Boulevard (SR-39) & McFadden Avenue (Signal) and Washington Avenue (Side-Street Stop)
- 2** Bolsa Avenue & Adams Street (Side-Street Stop)
- 3** Brookhurst Street & Stonybrook Drive (Side-Street Stop)
- 4** Irvine Avenue & Mesa Drive (Signal) and Granada Way (Uncontrolled)
- 5** Katella Avenue & Magnolia Street (Signal)
- 6** MacArthur Boulevard & Michelson Drive (Signal)
- 7** Prospect Avenue & Arbolada Way (Side-Street Stop) and Leafwood Lane (Side-Street Stop)
- 8** Seventeenth Street & Greshon Place (Side-Street Stop)
- 9** Yardley Street & Harvest Lane (Uncontrolled)



Crash Profile: A B C D **E** F G H I J

Pedestrians Driver Proceeding Straight Near Schools

Crashes Involving Pedestrians and Vehicles Proceeding Straight Near Schools

Total Pedestrian Crashes within Crash Profile E

17 Total Pedestrian Crashes

19% of all Pedestrian Crashes

10 KSI Pedestrian Crashes

31% of all KSI Pedestrian Crashes

Countermeasures with Crash Reduction Factor (CRF)

Construct/Upgrade Ped Facilities



Add or Improve Sidewalk

CRF: 80%



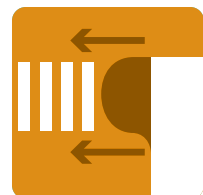
Leading Pedestrian Interval

CRF: 60%



Install/Upgrade Crosswalk

CRF: 25% - 55%



Curb Extensions

CRF: 35%

Traffic Calming

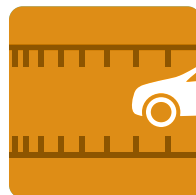


Raised Crosswalk/Speed Table

CRF: 35%



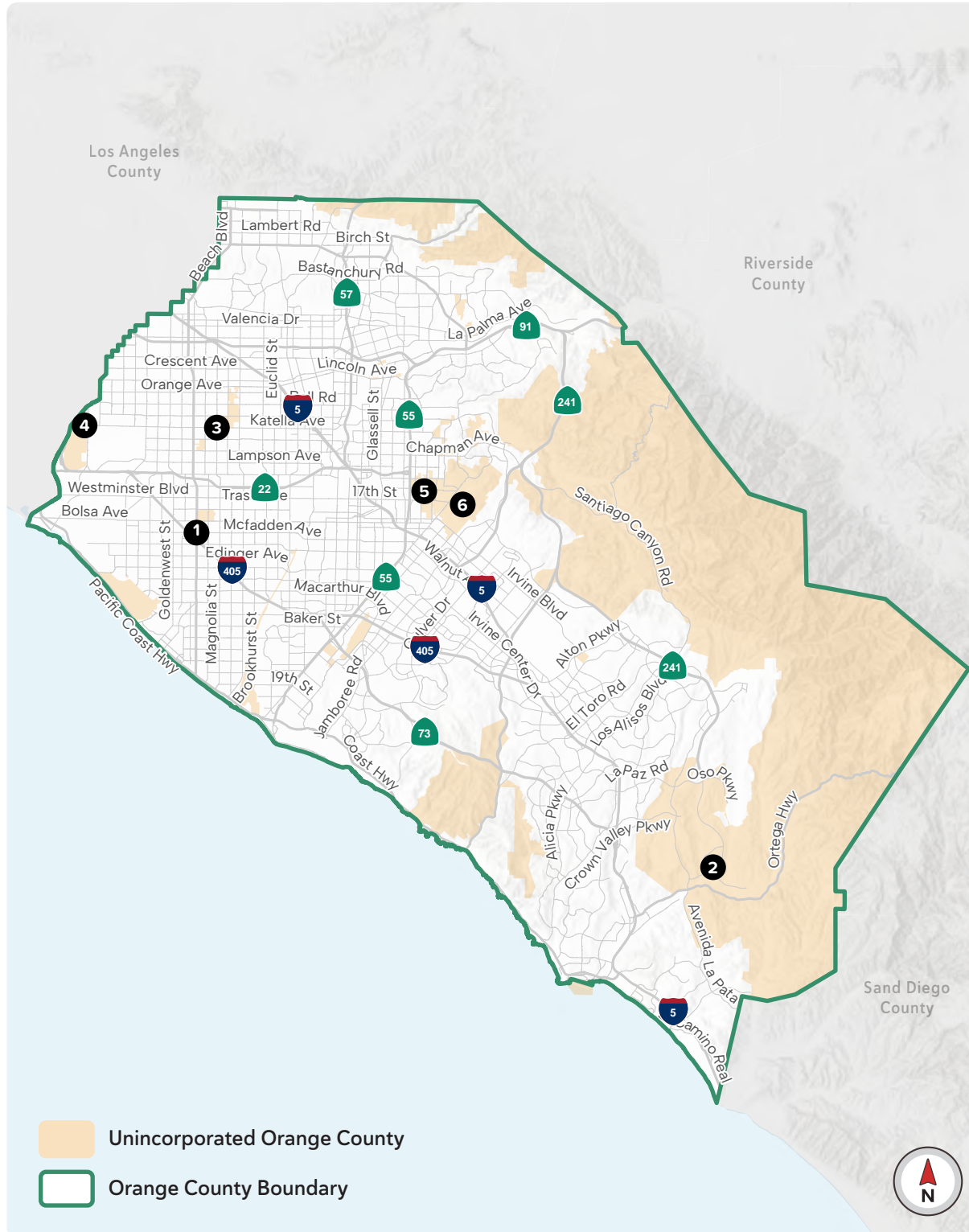
Speed Cushion or Speed Hump



Speed Reduction Markings



Speed Limit Reduction



Top Crash Locations

- 1 Beach Boulevard (SR-39) & McFadden Avenue (Signal)
- 2 Esencia Drive & Andaza Street (Roundabout)
- 3 Katella Avenue & Magnolia Street (Signal)
- 4 Katella Avenue & Wallingsford Road (Signal)
- 5 Prospect Avenue & Leafwood Lane (Side-Street Stop)
- 6 Red Hill Avenue & Wyndham Court Road (Uncontrolled)



Crash Profile: A B C D E **F** G H I J

Motorcycles Overturned Midblock

Overtaken Crashes involving Motorcycles at Midblock Locations

Total Motorcycle Crashes within Crash Profile F



Countermeasures with Crash Reduction Factor (CRF)

Curved Roadway Design

High Friction Surface Treatment
CRF: 55%

Motorcycle Speed Management

Pavement Speed Legends

Chevron Signs
CRF: 40%

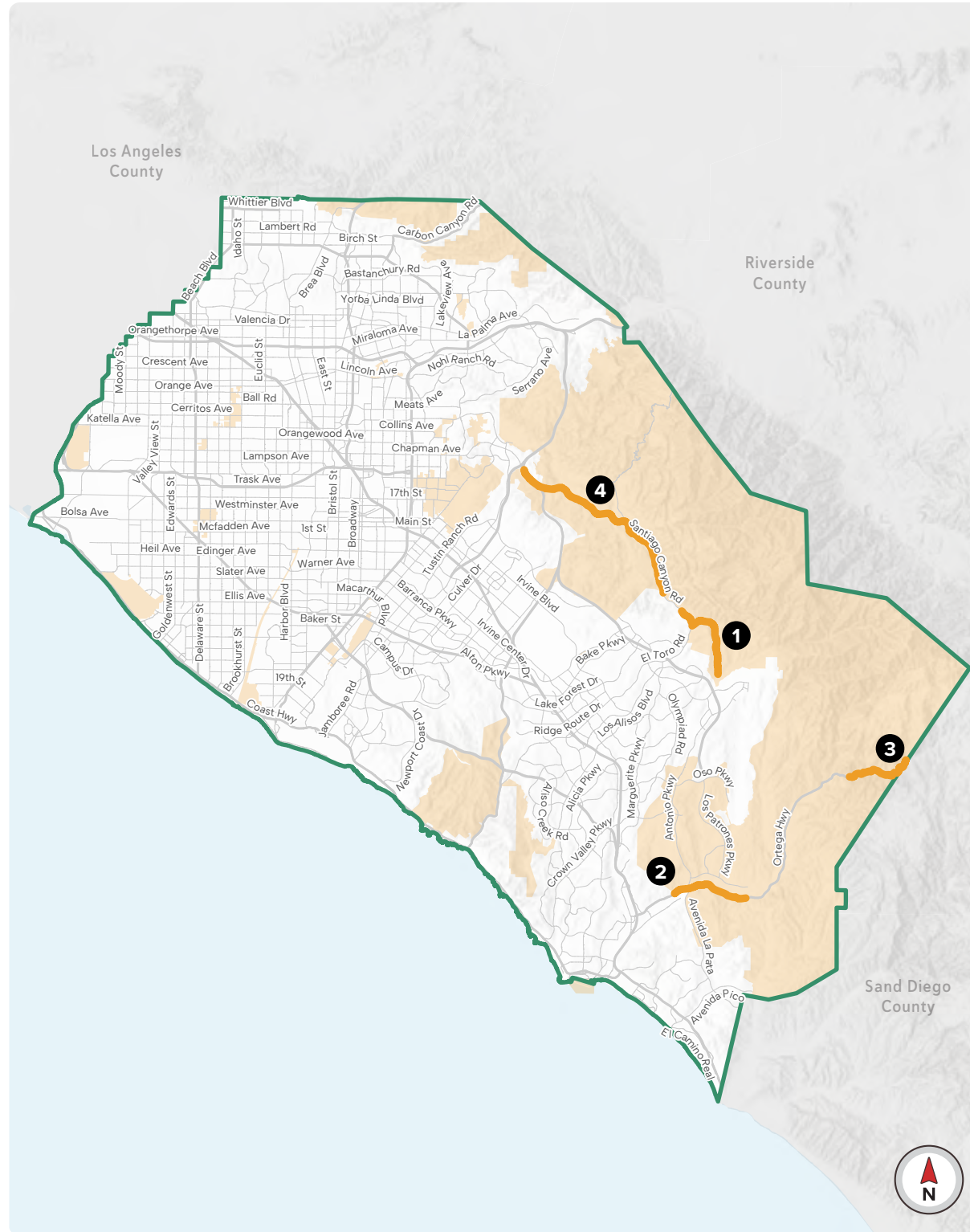
Speed Feedback Sign

Curve Ahead Warning Sign
CRF: 25% - 30%

Speed Limit Reduction

Motorcycle Protection Guardrail
CRF: 25%

High Visibility Enforcement



Top Crash Locations

- 1 Live Oak Canyon Road
- 2 Ortega Highway (SR-74) between San Juan Capistrano and Gibby Road
- 3 Ortega Highway (SR-74) East of San Juan Canyon Bridge
- 4 Santiago Canyon Road



Crash Profile: A B C D E F **G** H I J

Motorcycles Weekend (Fri - Sun) South Orange County

Crashes Involving Motorcycles on Weekends in South Orange County

Total Motorcycle Crashes within Crash Profile G



Countermeasures with Crash Reduction Factor (CRF)

Engineering Countermeasures

Enhanced Curved Roadway Design
CRF: 25% -55%

Improved Delineation (e.g., Reflective Markers, Contrast Striping, etc.)
CRF: 25%

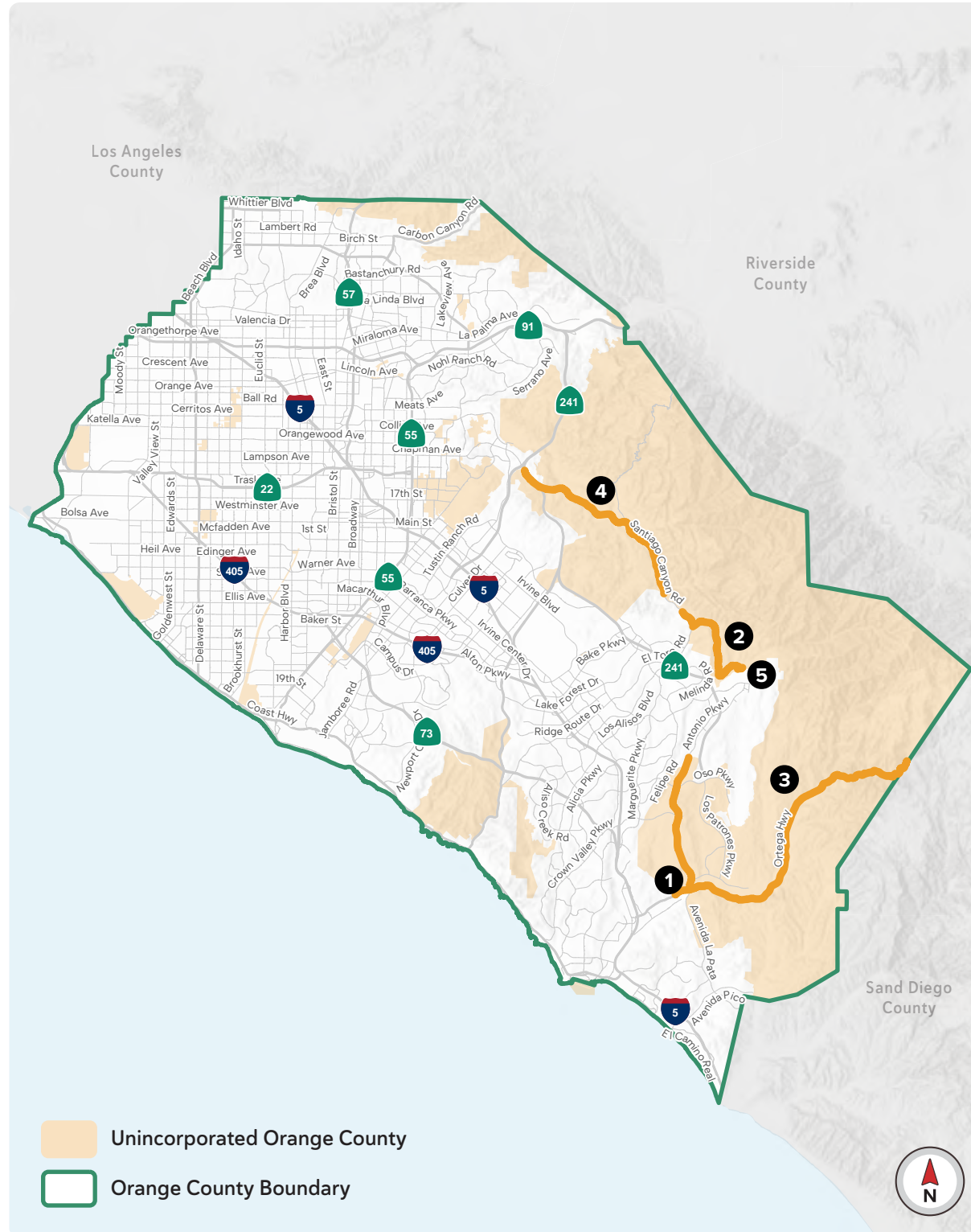
Centerline/Edgeline Rumble Strips
CRF: 15% - 20%

Non-Engineering Countermeasures

Targeted Weekend Enforcement
CLICK IT OR TICKET

Public Awareness Campaigns

Rider Training Partnerships



Top Crash Locations

- 1 Antonio Parkway
- 2 Live Oak Canyon Road
- 3 Ortega Highway (SR-74)
- 4 Santiago Canyon Road
- 5 Trabuco Canyon Road



Crash Profile: A B C D E F G **H** I J

All Modes Hit Object Arterial Roads

Hit Object Crashes Along Arterial Roads

Total All Modes Crashes within Crash Profile H



Countermeasures with Crash Reduction Factor (CRF)

Roadway Design

Enhanced Singage (e.g., Larger, Reflective, LED-Enhanced, etc.)
CRF: 15%

Improved Delineation (e.g., Reflective Markers, Contrast Striping, etc.)
CRF: 25%

Centerline/Edgeline Rumble Strips
CRF: 15% - 20%

Widen Shoulder
CRF: 30%

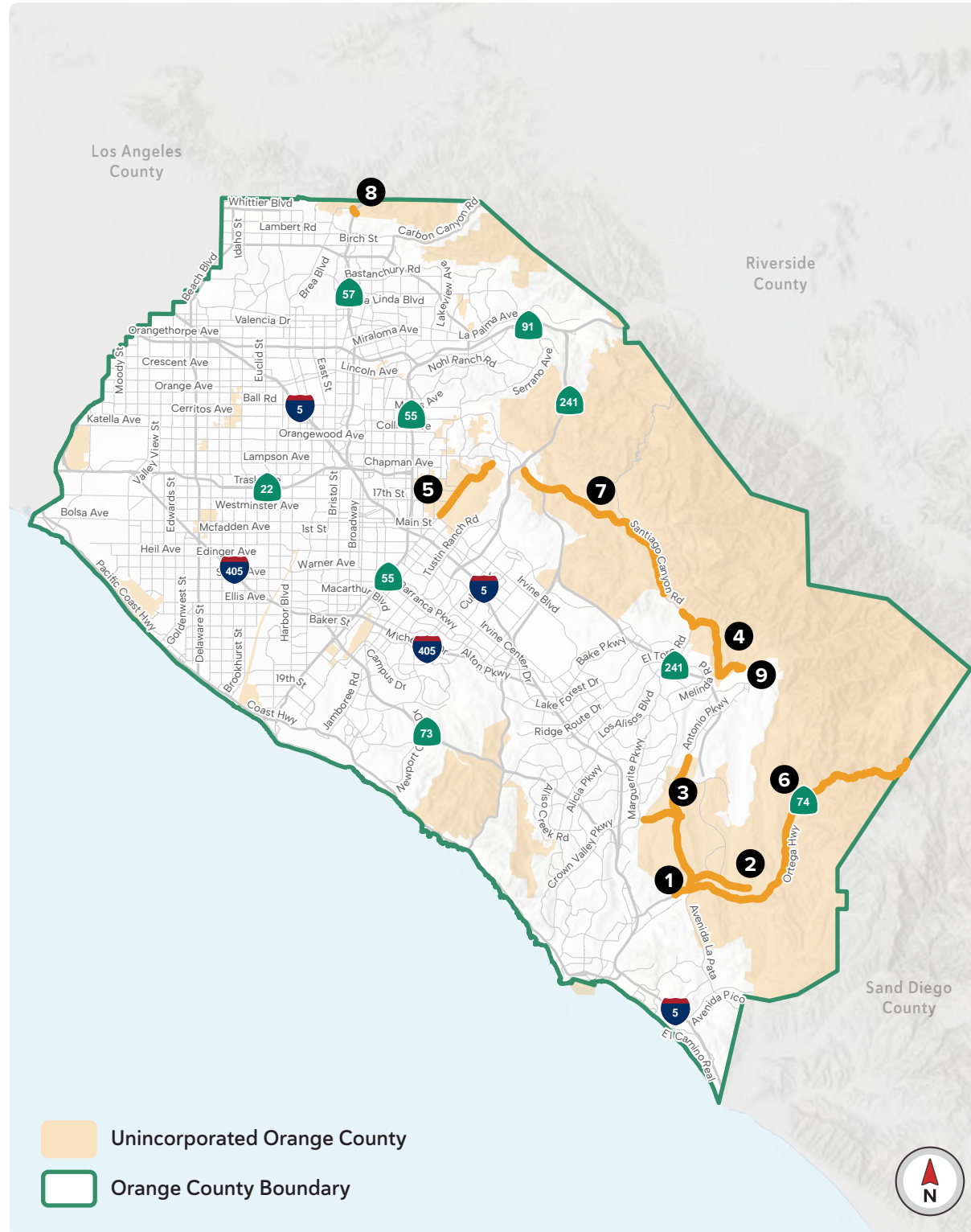
Roadside Design

Intersection/Roadway Lighting
CRF: 35% - 40%

Reflectors and Object Markers
CRF: 35%

Guardrails, Barriers, and Impact Attenuators
CRF: 25%

Replace with Impact Attenuators
CRF: 25%



Top Crash Locations

- 1 Antonio Parkway
- 2 Cow Camp Road
- 3 Crown Valley Parkway
- 4 Live Oak Canyon Road
- 5 Newport Avenue/Boulevard
- 6 Ortega Highway (SR-74)
- 7 Santiago Canyon Road
- 8 Tonner Canyon Road
- 9 Trabuco Canyon Road



Crash Profile: A B C D E F G H I J

All Modes Broadside 40+ MPH Observed Speed

Broadside Crashes Along High-Speed Roadways (≥40 mph)

Total All Modes Crashes within Crash Profile I



Countermeasures with Crash Reduction Factor (CRF)

At Signalized Intersections

Extend Yellow and All Red Time
CRF: 15%

Supplemental/Upgrade Signal Heads
CRF: 15%

Flashing Yellow Turn Phase

Protected Left Turns
CRF: 30% - 55%

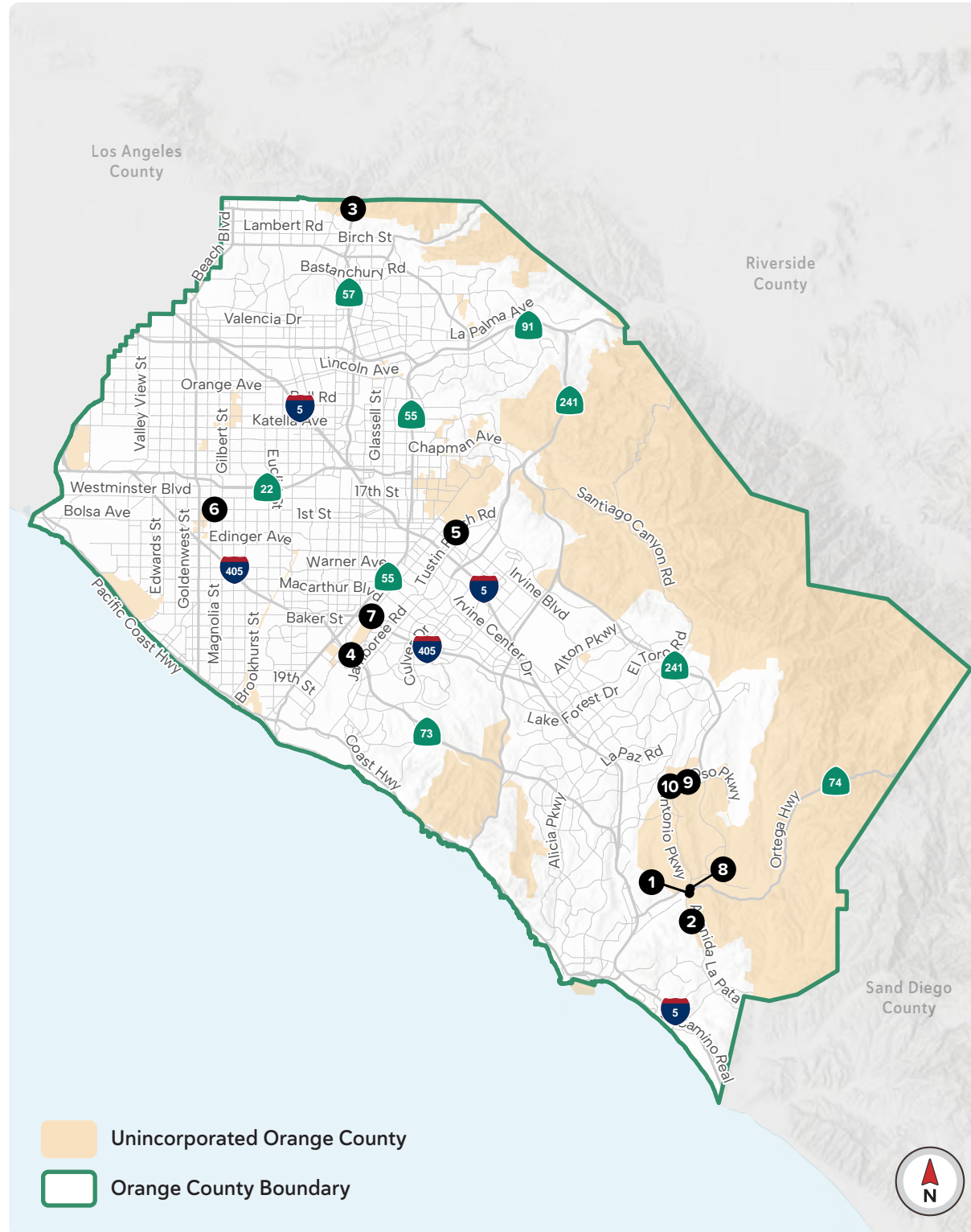
At Unsignalized Intersections

Install Left Turn or Two-Way Left-Turn Lane
CRF: 30% - 55%

Create Directional Median Openings
CRF: 50%

Close Slip Lane

Convert to Roundabout
CRF: Varies



Top Crash Locations

- 1 Avenida La Pata & Gateway Place (Side-Street Stop)
- 2 Avenida La Pata & Stallion Ridge (Signal)
- 3 Brea Boulevard/Brea Canyon Road & Tonner Canyon Road (Side-Street Stop)
- 4 Bristol Street & Campus Drive/Irvine Avenue (Signal)
- 5 Browning Avenue & Irvine Boulevard (Signal)
- 6 Hazard Avenue & Purdy Street (Side-Street Stop)
- 7 Main Street & Executive Park (East) (Signal)
- 8 Ortega Highway (SR-74) & Antonio Parkway (Signal)
- 9 Oso Parkway & Meandering Trail (Signal)
- 10 Oso Parkway & Plaza Entrance (Signal)



Crash Profile: A B C D E F G H I **J**

All Modes Alcohol Involved Weekend (Fri - Sun)

Crashes on Weekends Involving Alcohol

Total All Modes Crashes within Crash Profile J

131 Total All Modes Crashes

27 KSI All Modes Crashes

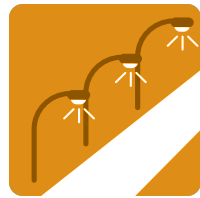
9% of all All Modes Crashes

14% of all KSI All Modes Crashes

Countermeasures with Crash Reduction Factor (CRF)

Engineering Countermeasures

Non-Engineering Countermeasures



Intersection/Roadway Lighting
CRF: 35% - 40%



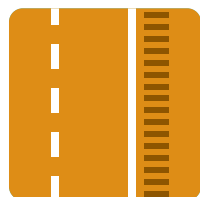
Targeted DUI Enforcement



Enhanced Signage (e.g., Larger, Reflective, LED-Enhanced, etc.)
CRF: 15%




High Visibility Enforcement



Centerline/Edgeline Rumble Strips
CRF: 15% -20%



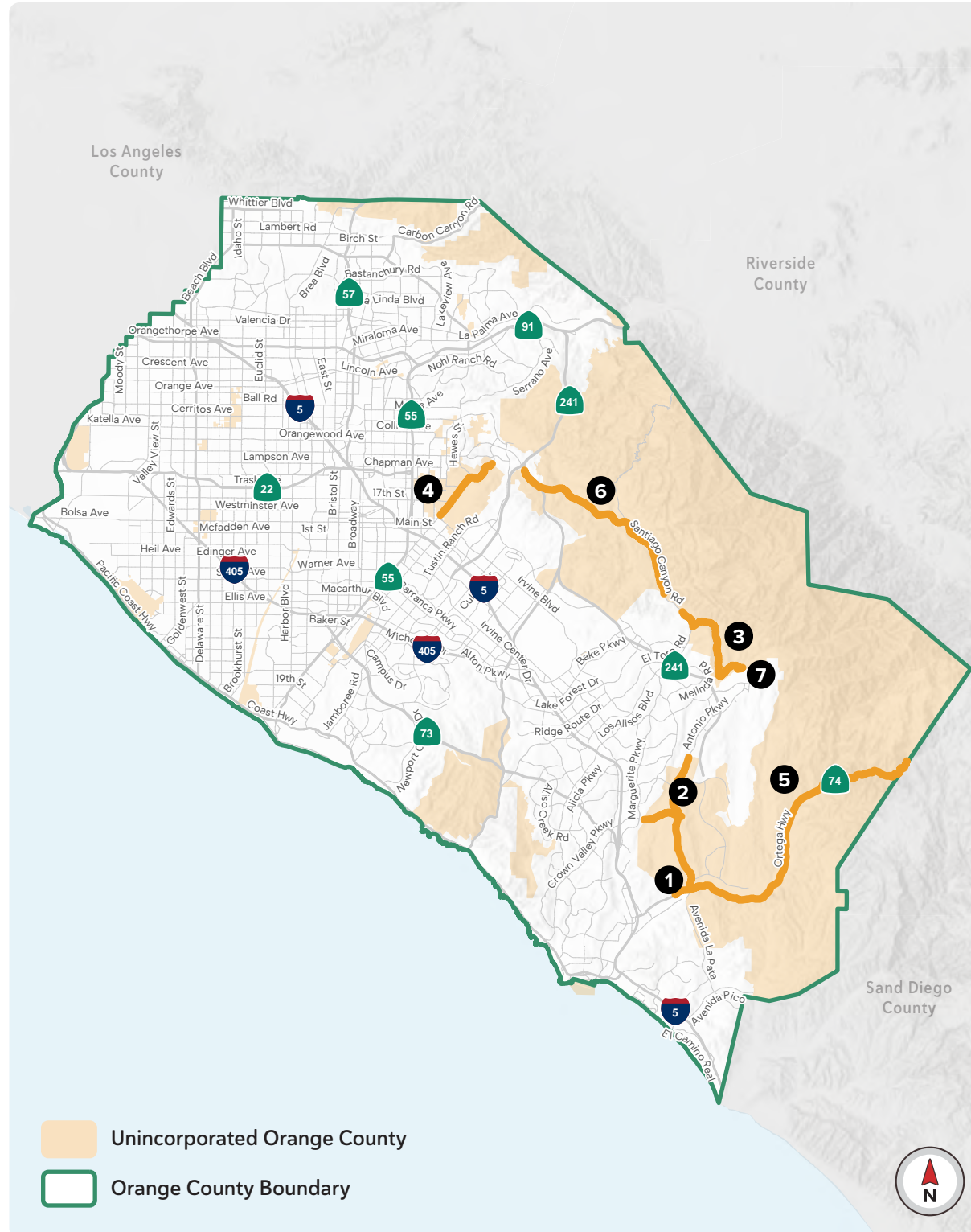
Public Awareness Campaigns



Guardrails, Barriers, and Impact Attenuators
CRF: 25%



Alcohol Server Training & Partnerships



Top Crash Locations

- 1 Antonio Parkway
- 2 Crown Valley Parkway
- 3 Live Oak Canyon Road
- 4 Newport Avenue/Boulevard
- 5 Ortega Highway (SR-74)
- 6 Santiago Canyon Road
- 7 Trabuco Canyon Road

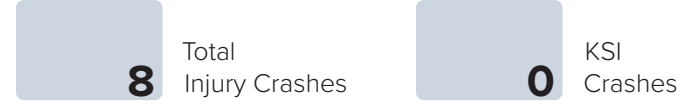


Priority Corridor: 1 2 3 4 5

Foster Road/Hedwig Road

Between Silverwood Drive and Los Alamitos Boulevard

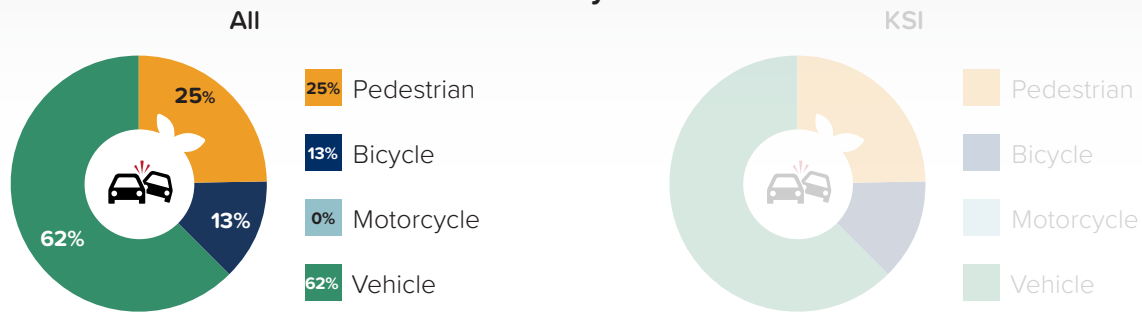
Crash Summary (2019 - 2023)



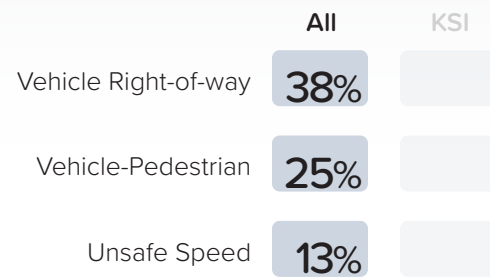
Roadway Characteristics



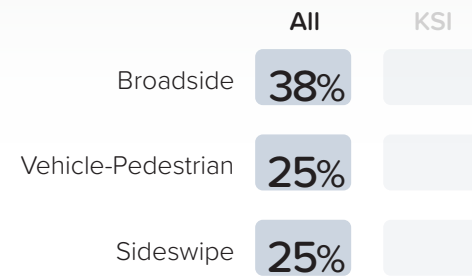
Crashes By Mode



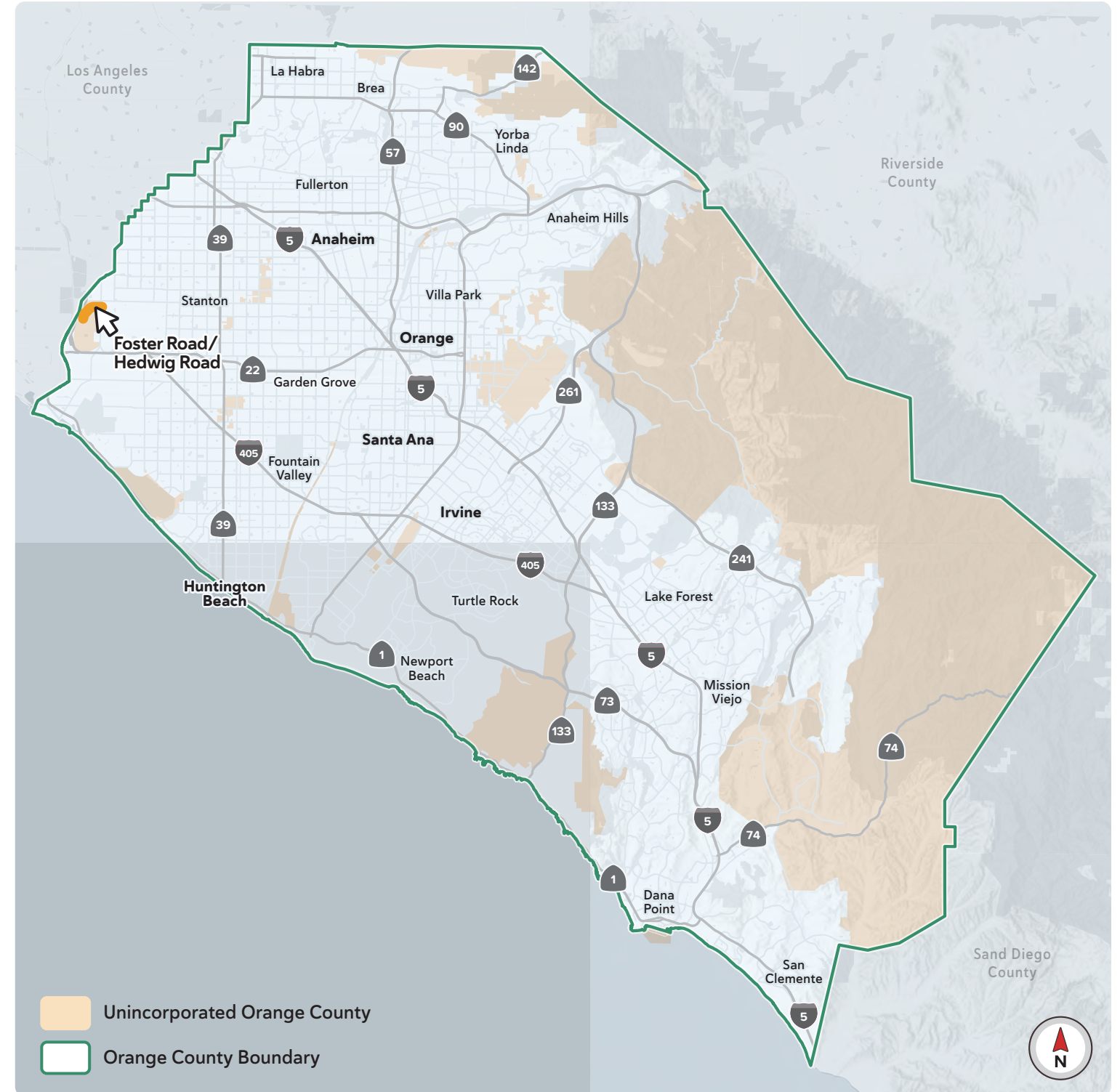
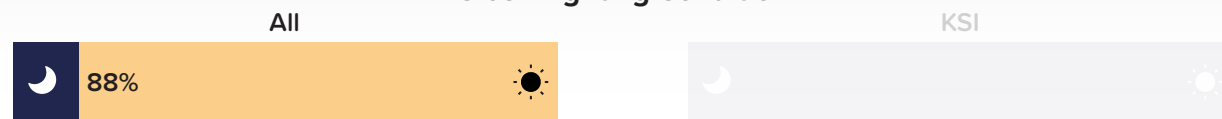
Top Violations



Top Crash Types



Crash Lighting Condition



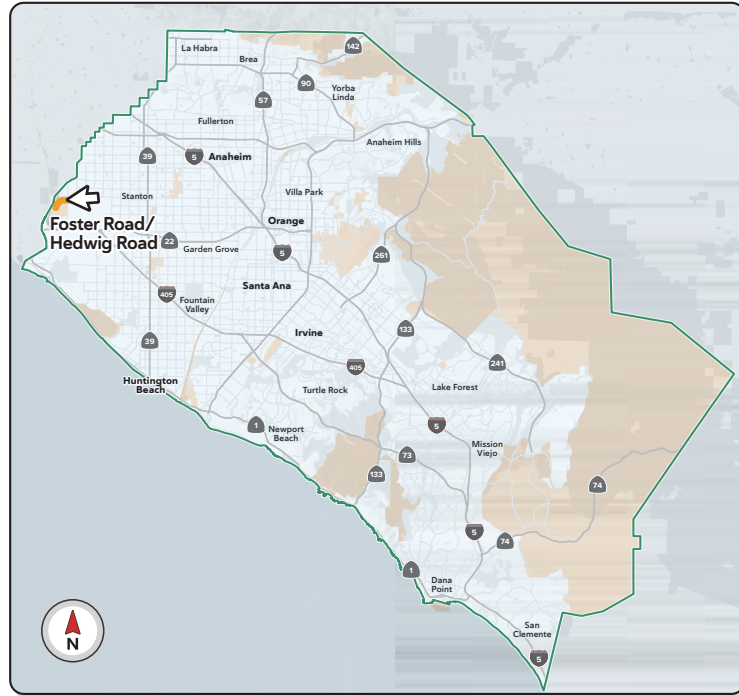


Priority Corridor: 1 2 3 4 5

Foster Road/Hedwig Road

Between Silverwood Drive and Los Alamitos Boulevard



Location Map






Existing Cross-Section

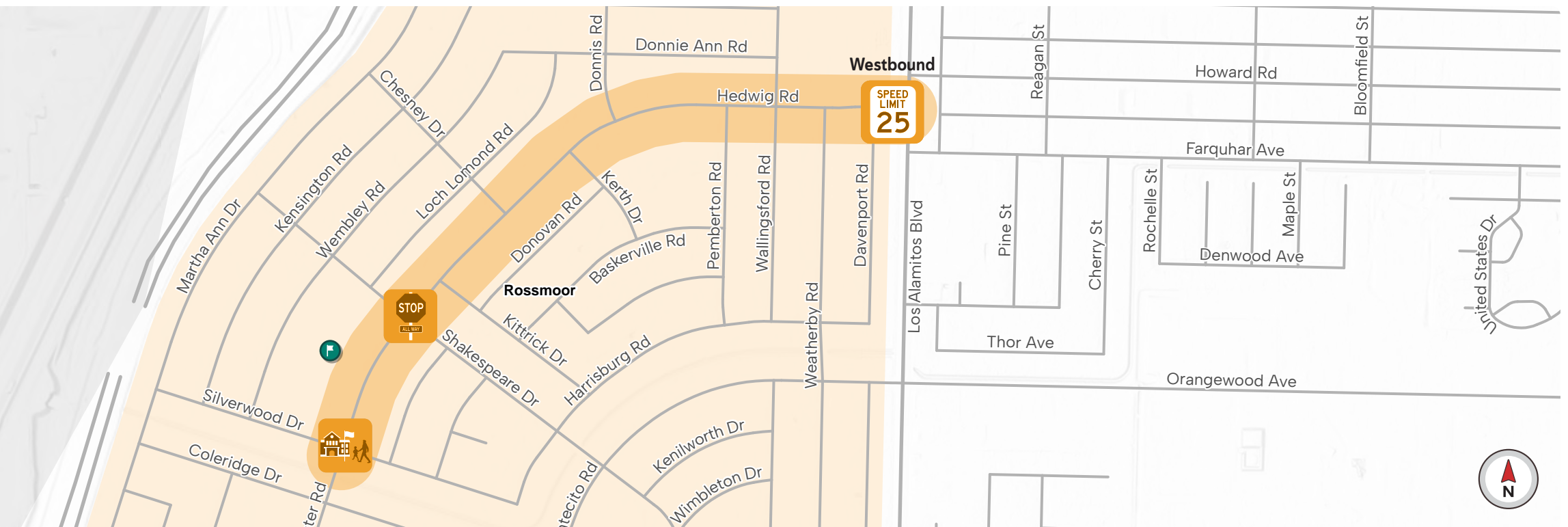


Corridor-wide Safety Countermeasures

-  Install curb extensions at pedestrian crossings
-  Paint curbs red in accordance with AB 413 where curb extensions are not constructed

Location-Specific Safety Countermeasures

-  Provide crossing guard
-  Install 'All-Way' R1-3P signage
-  Install speed limit sign (R2-1)



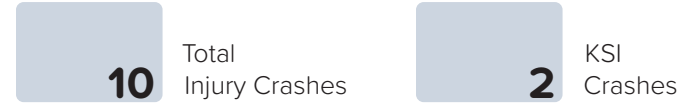


Priority Corridor: 1 2 3 4 5

Yorba Street

Between Fairhaven Avenue and Leafwood Lane

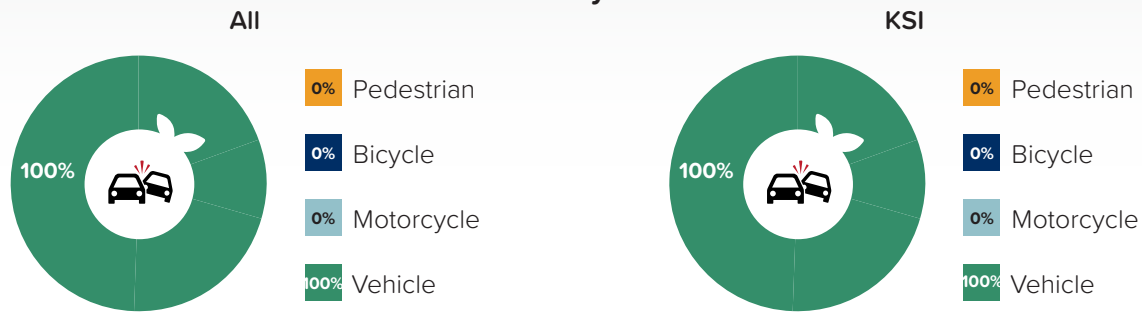
Crash Summary (2019 - 2023)



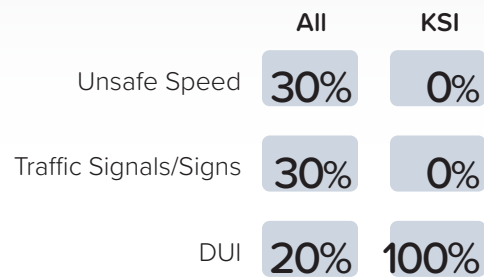
Roadway Characteristics



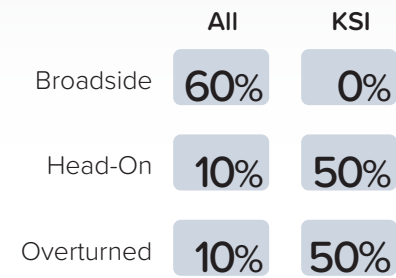
Crashes By Mode



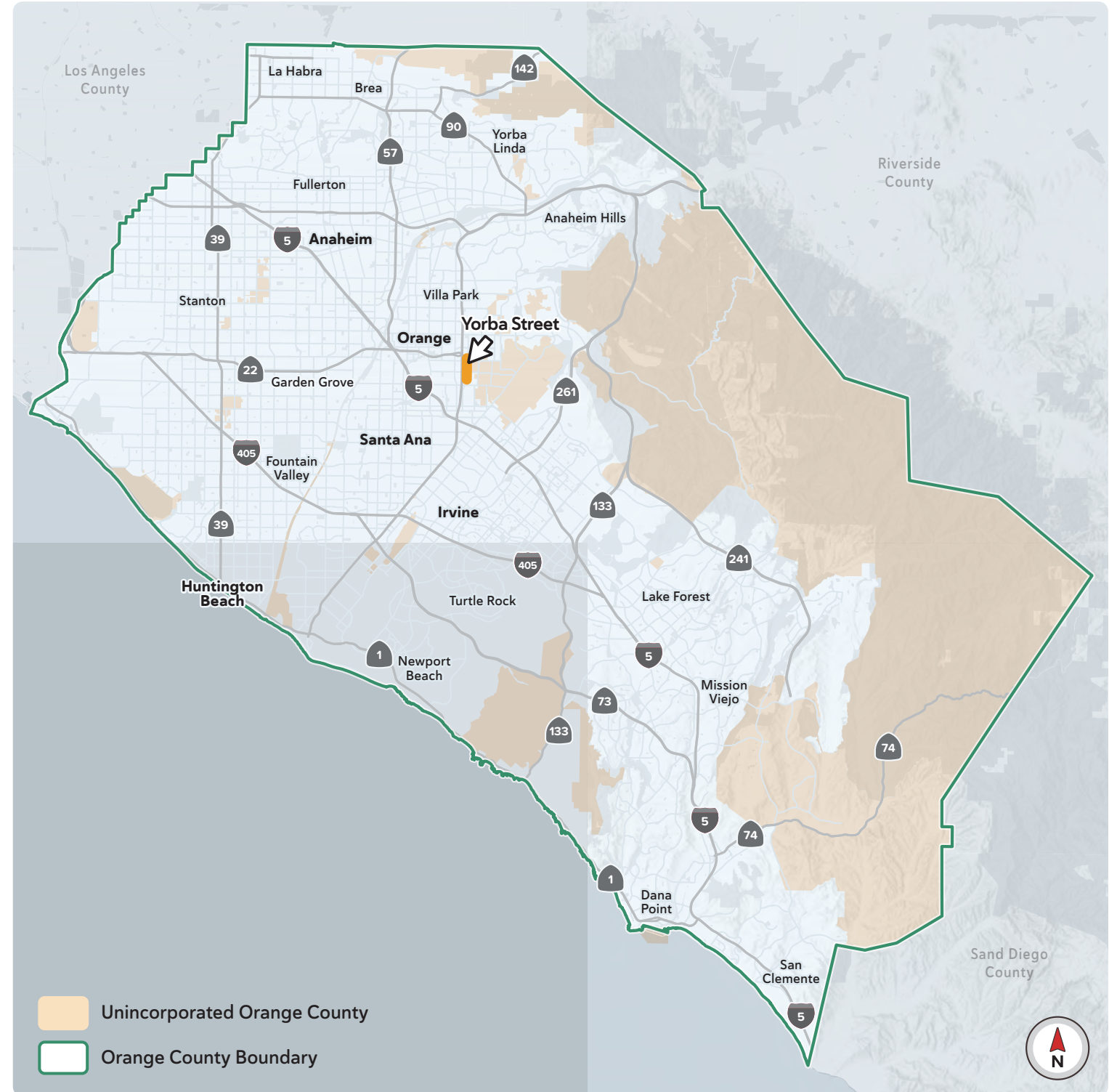
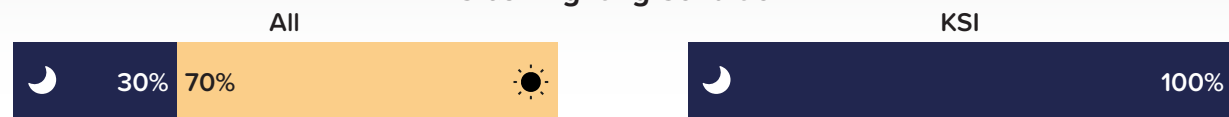
Top Violations



Top Crash Types



Crash Lighting Condition



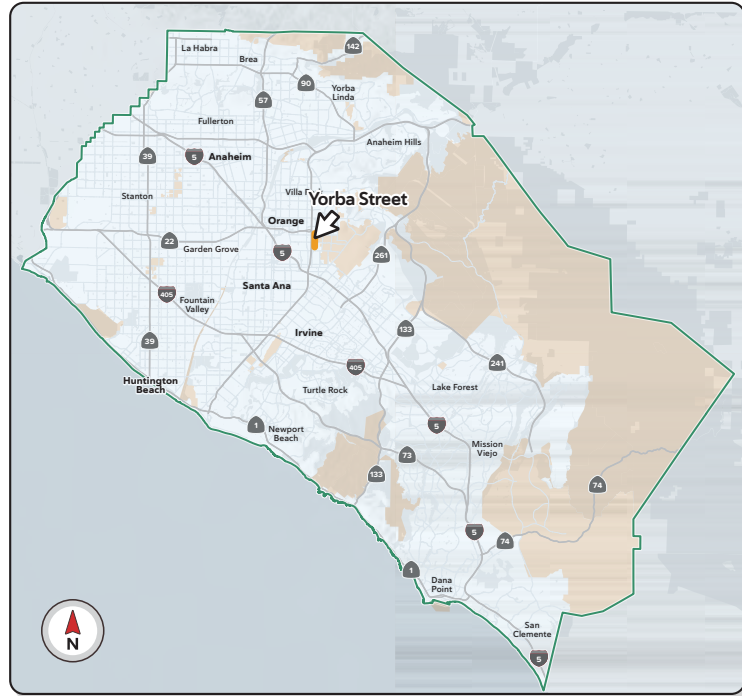


Priority Corridor: 1 2 3 4 5

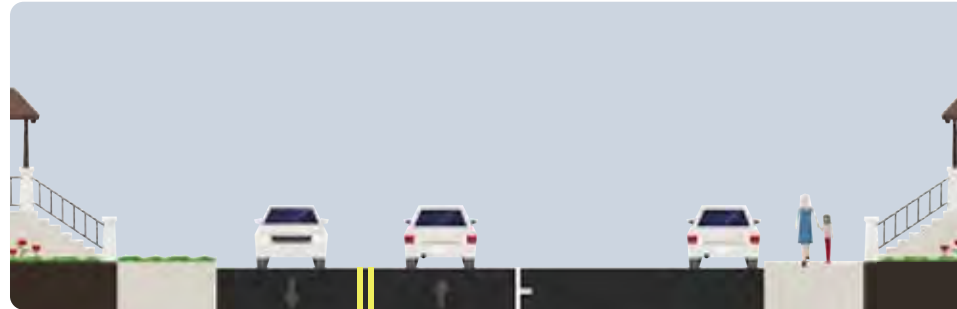
Yorba Street

Between Fairhaven Avenue and Leafwood Lane

Location Map



Existing Cross-Section



Proposed Cross-Section

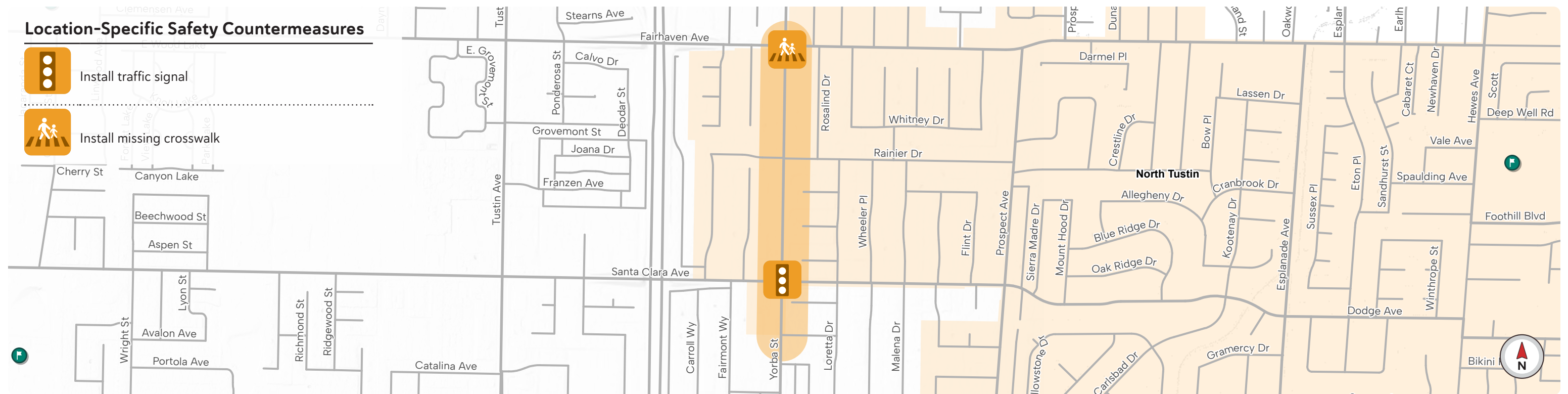


Corridor-wide Safety Countermeasures

- Install roadway lighting
- Install edgelines and reflective pavement markers along the centerline and edgelines where not currently present.
- Close the sidewalk gaps on Yorba Street
- Lower the posted speed limit

Location-Specific Safety Countermeasures

- Install traffic signal
- Install missing crosswalk



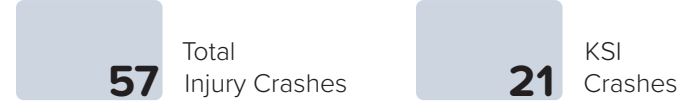


Priority Corridor: 1 2 3 4 5

Santiago Canyon Road

Between SR-241 and El Toro Road

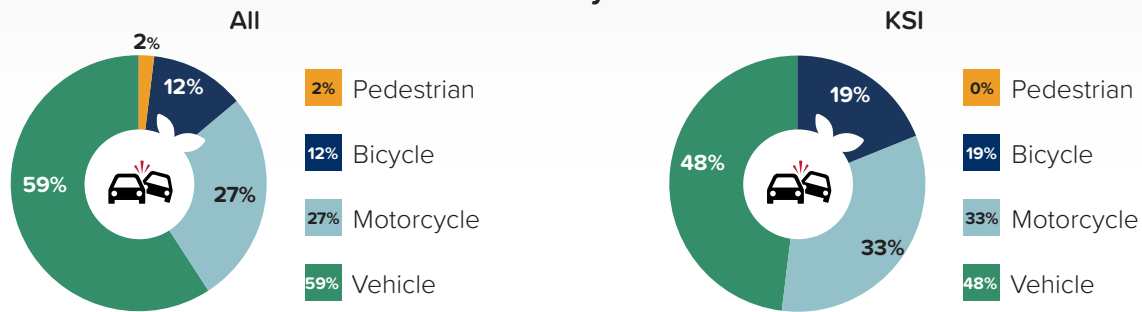
Crash Summary (2019 - 2023)



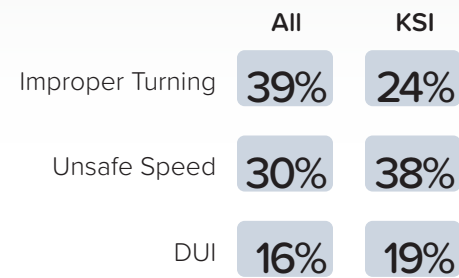
Roadway Characteristics



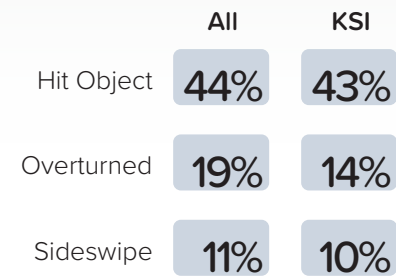
Crashes By Mode



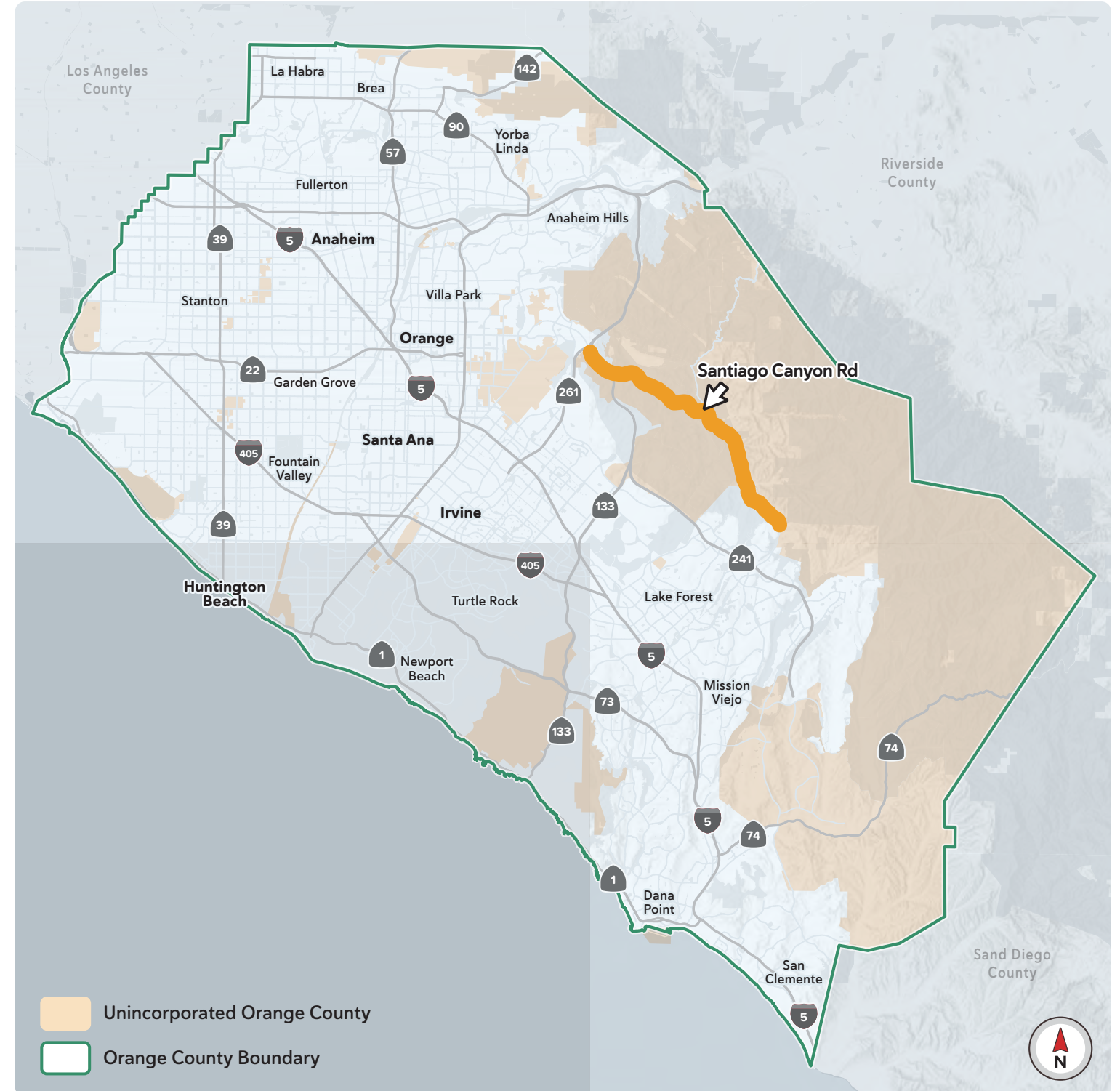
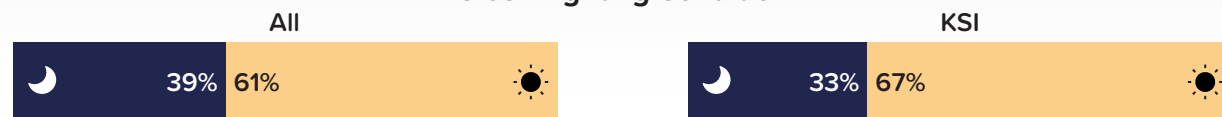
Top Violations



Top Crash Types



Crash Lighting Condition



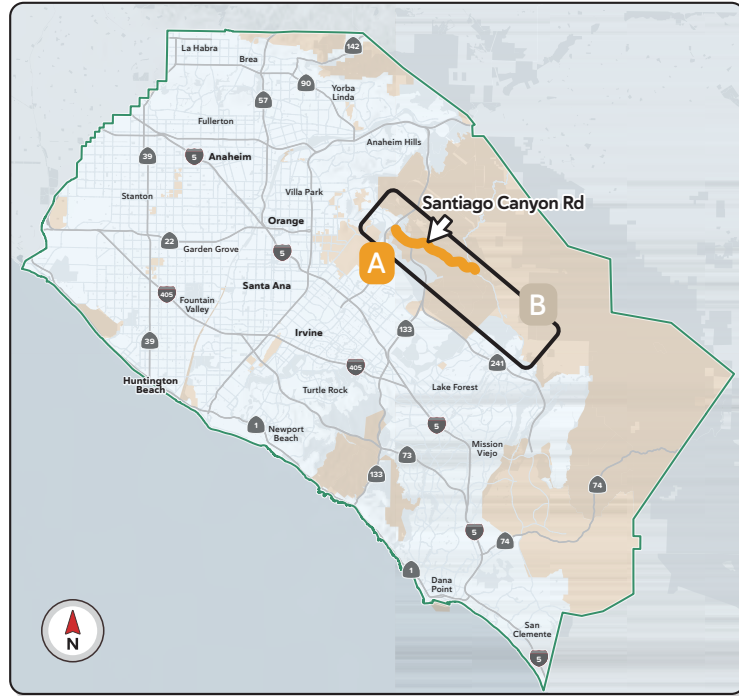


Priority Corridor: 1 2 3 4 5

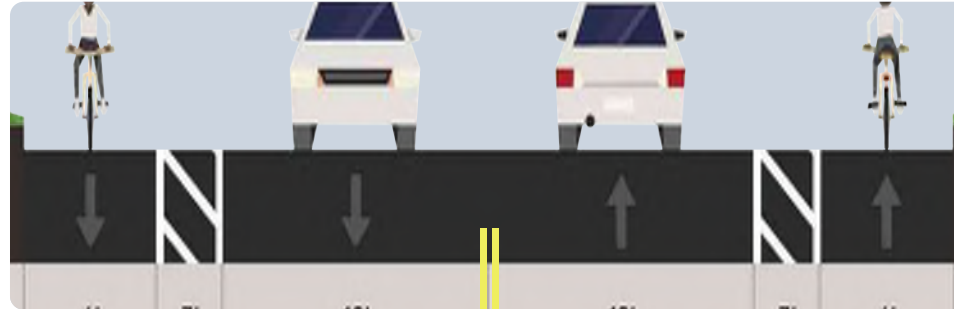
Santiago Canyon Road

Between SR-241 and El Toro Road

Location Map









Existing Cross-Section

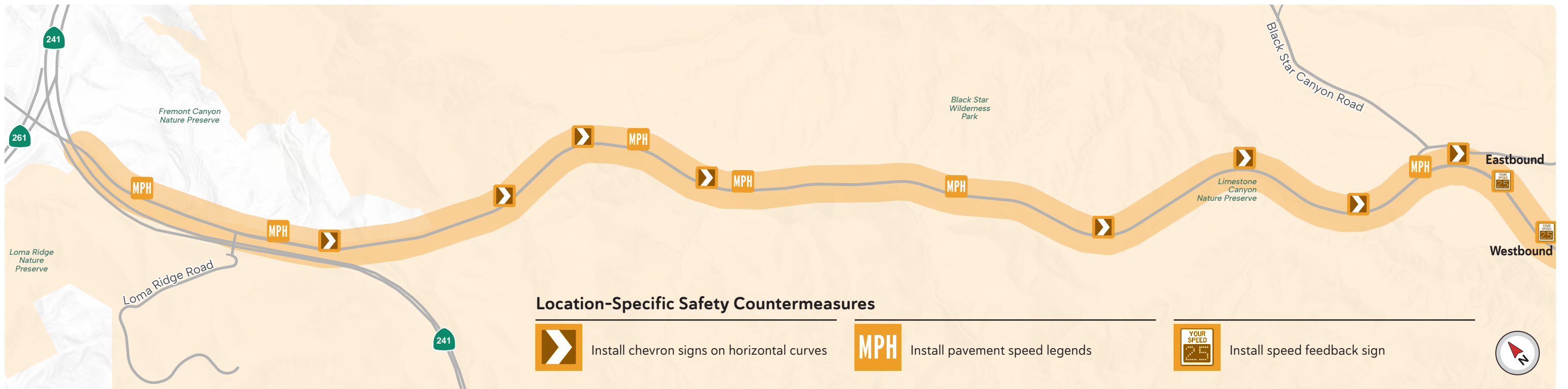


Proposed Cross-Section



Corridor-wide Safety Countermeasures

-  Buffered bike lanes with 4' buffer and 6' bike lanes
-  Bicycle conflict zone striping
-  Centerline and edgeline rumble strips
-  High friction surface treatments.
-  Install a continuous 4' center median with flexible delineators to restrict illegal passing.
-  Upgrade guardrails to protect motorcycles.



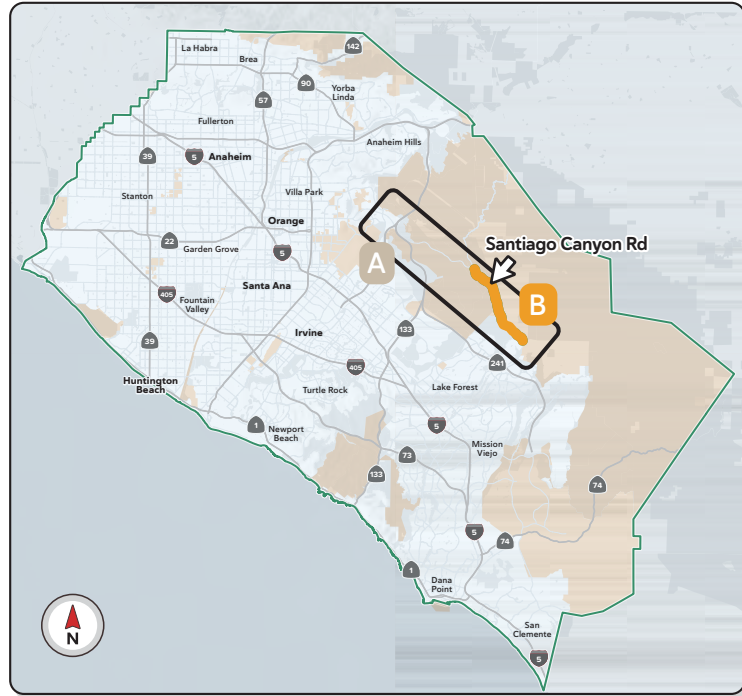


Priority Corridor: 1 2 3 4 5

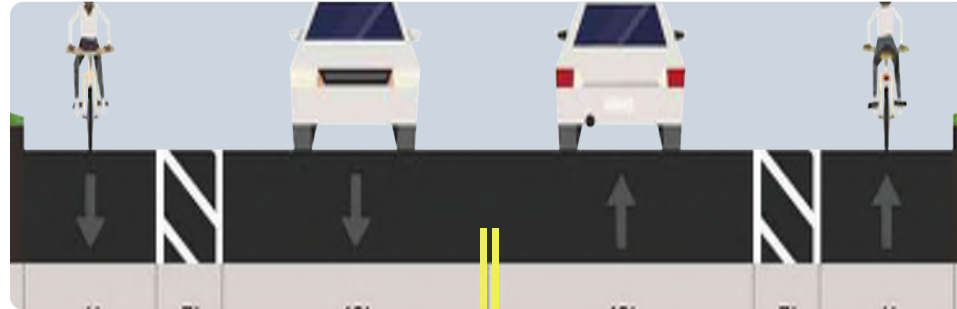
Santiago Canyon Road

Between SR-241 and El Toro Road

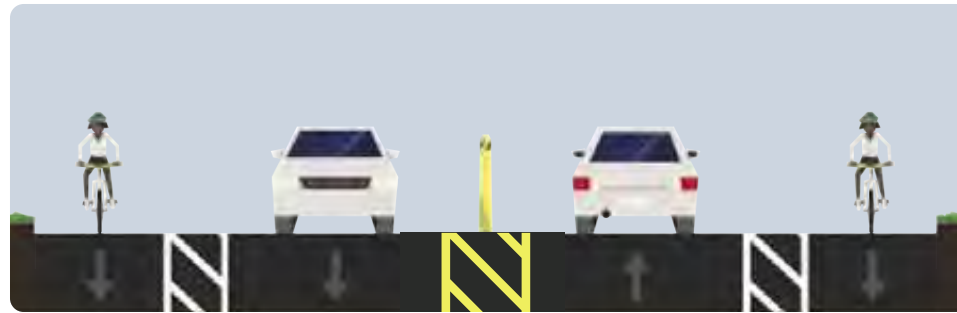
Location Map









Existing Cross-Section

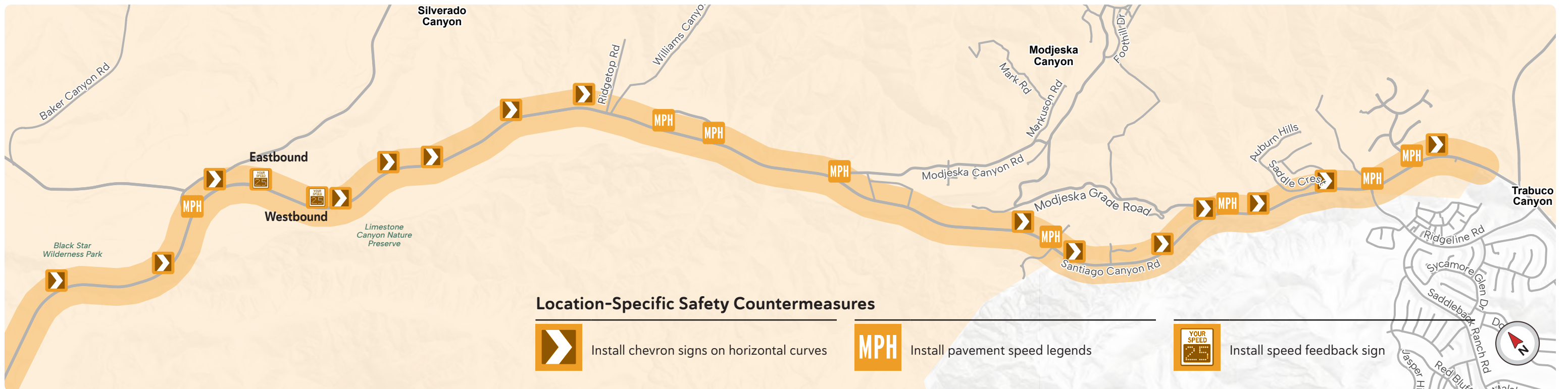


Proposed Cross-Section



Corridor-wide Safety Countermeasures

-  Buffered bike lanes with 4' buffer and 6' bike lanes
-  Bicycle conflict zone striping
-  Centerline and edgeline rumble strips
-  High friction surface treatments.
-  Install a continuous 4' center median with flexible delineators to restrict illegal passing.
-  Upgrade guardrails to protect motorcycles.



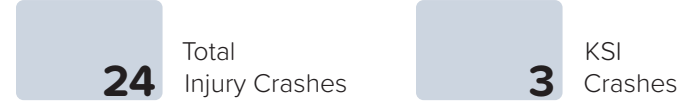


Priority Corridor: 1 2 3 4 5

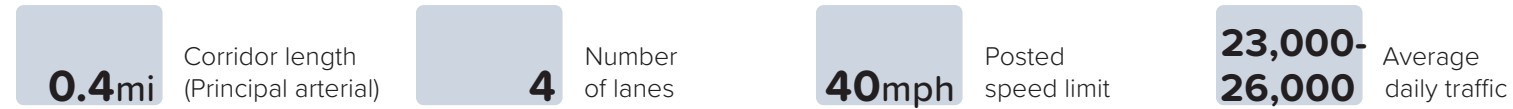
Ball Road

Between Gilbert Street and Anaheim City Limits

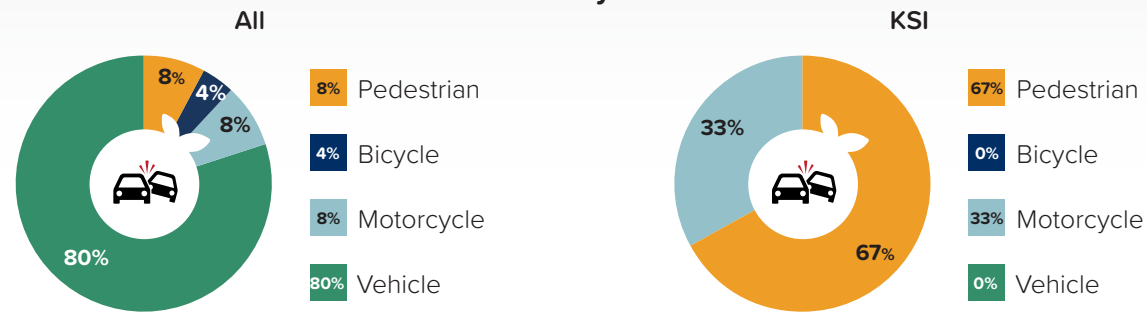
Crash Summary (2019 - 2023)



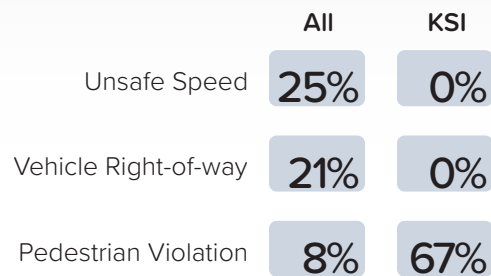
Roadway Characteristics



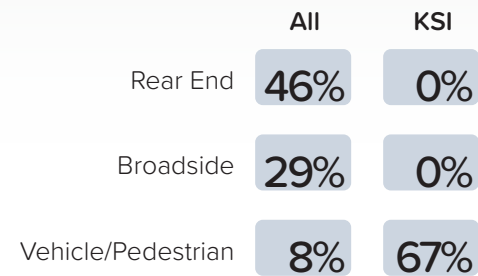
Crashes By Mode



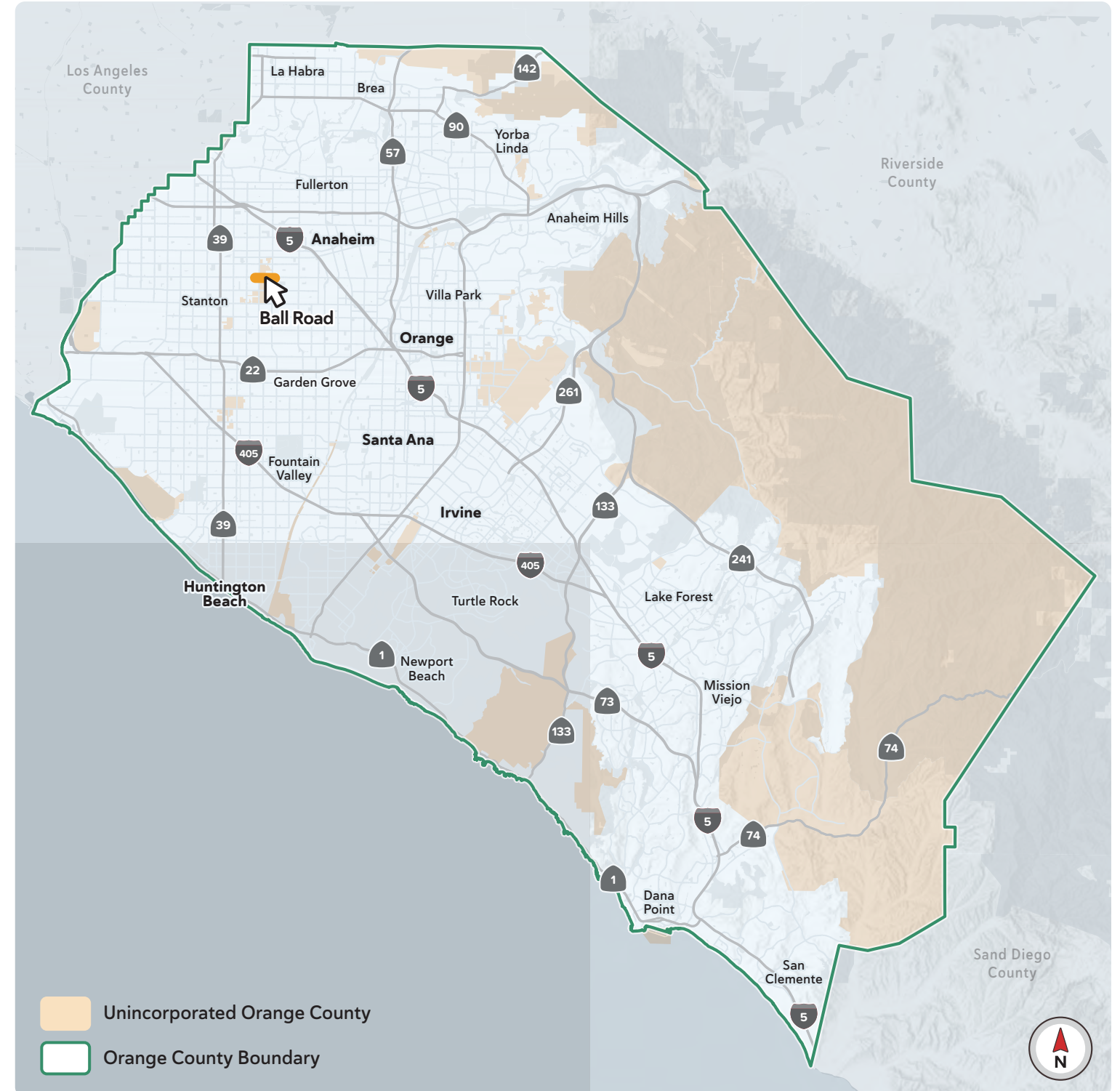
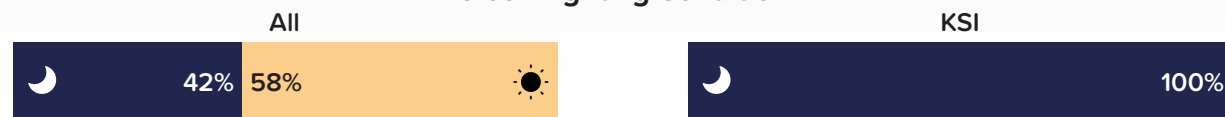
Top Violations



Top Crash Types



Crash Lighting Condition



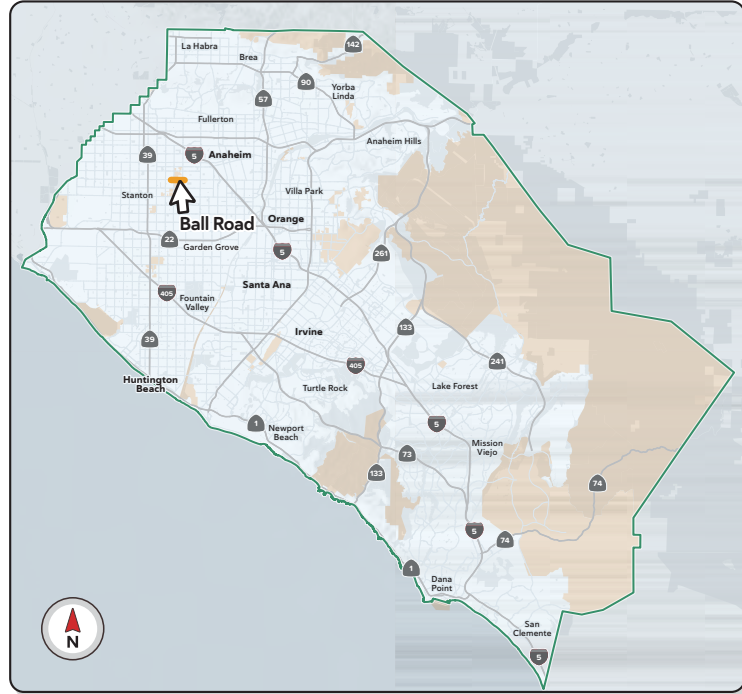


Priority Corridor: 1 2 3 4 5

Ball Road

Between Gilbert Street and Anaheim City Limits

Location Map



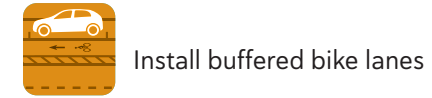
Existing Cross-Section



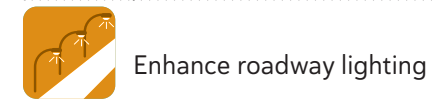
Proposed Cross-Section



Corridor-wide Safety Countermeasures

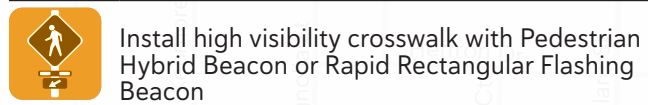


Install buffered bike lanes

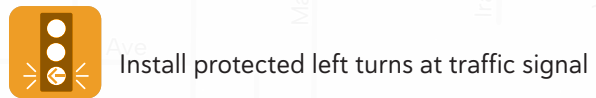


Enhance roadway lighting

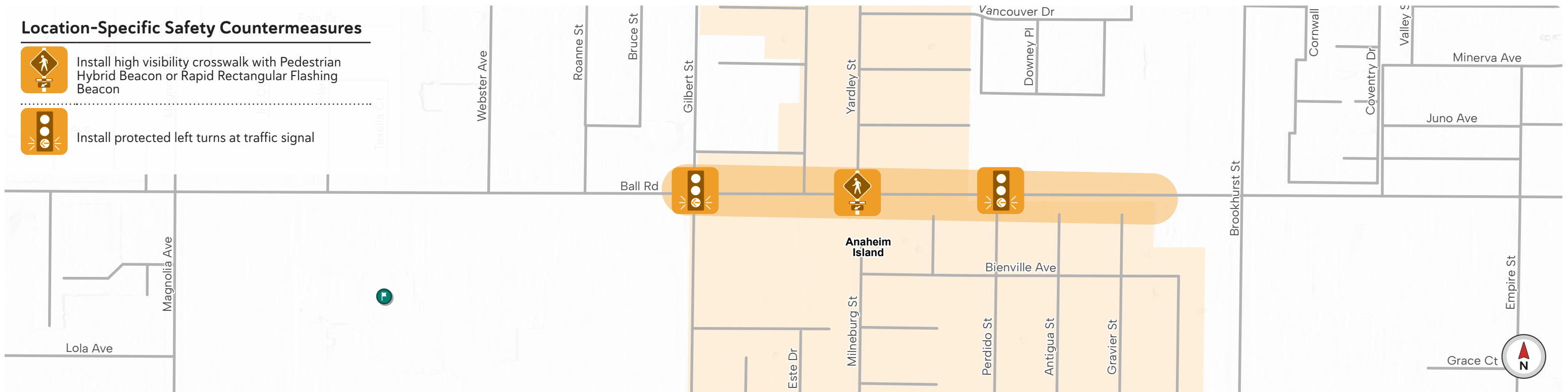
Location-Specific Safety Countermeasures



Install high visibility crosswalk with Pedestrian Hybrid Beacon or Rapid Rectangular Flashing Beacon



Install protected left turns at traffic signal



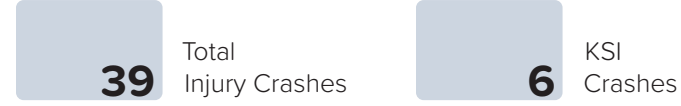


Priority Corridor: 1 2 3 4 5

Crown Valley Parkway

Between Mission Viejo City Limit to east of Antonio Parkway

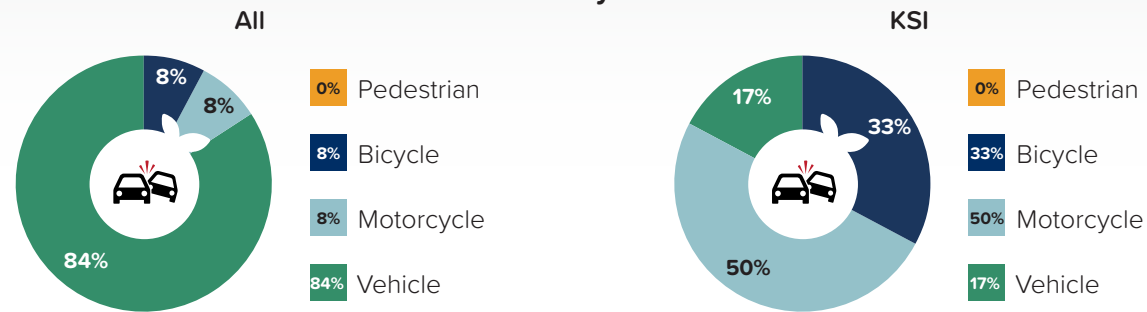
Crash Summary (2019 - 2023)



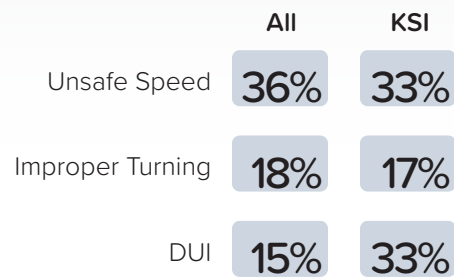
Roadway Characteristics



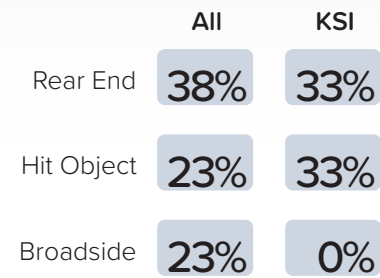
Crashes By Mode



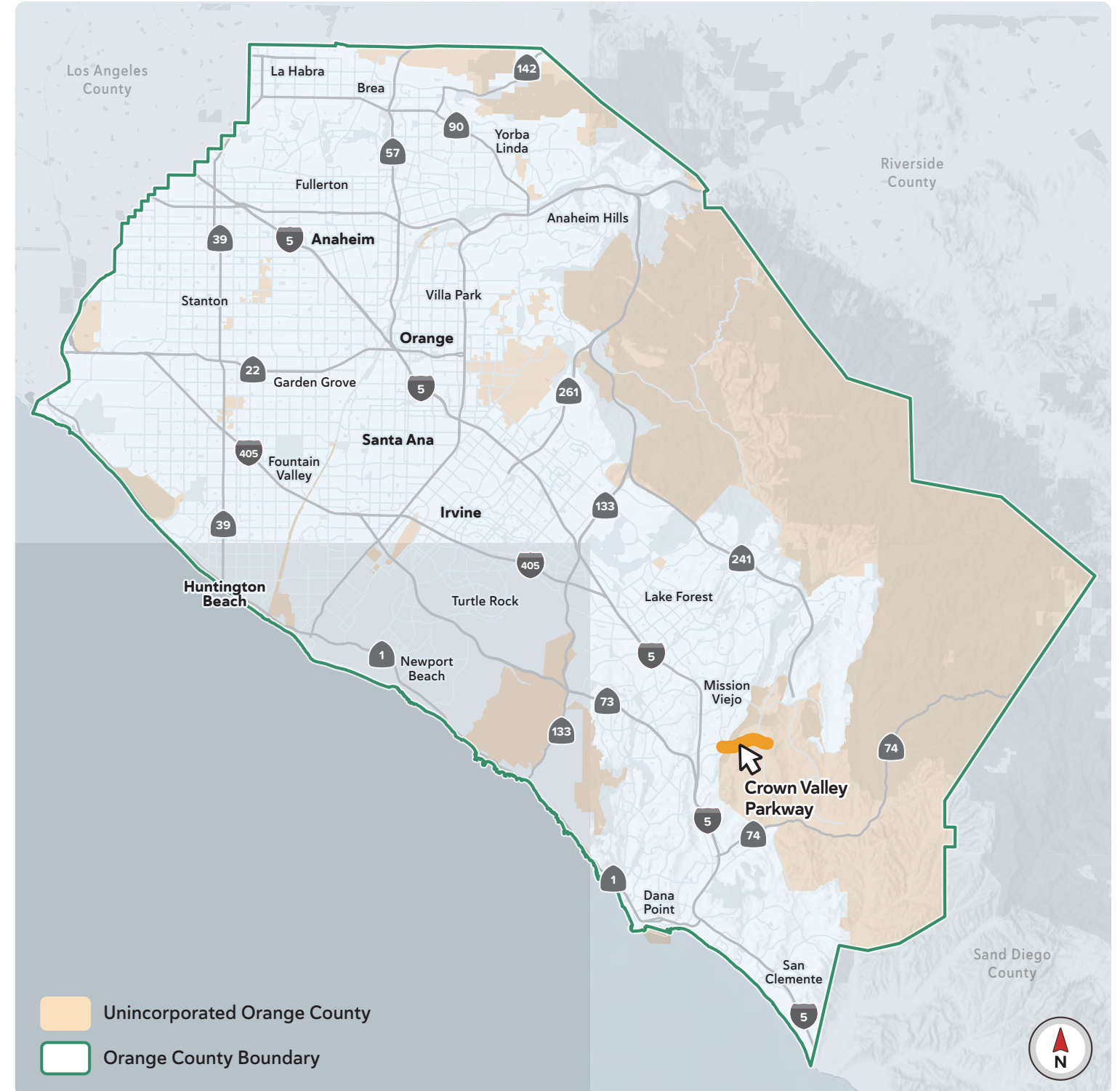
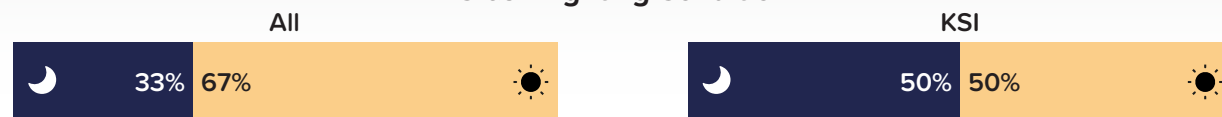
Top Violations



Top Crash Types



Crash Lighting Condition



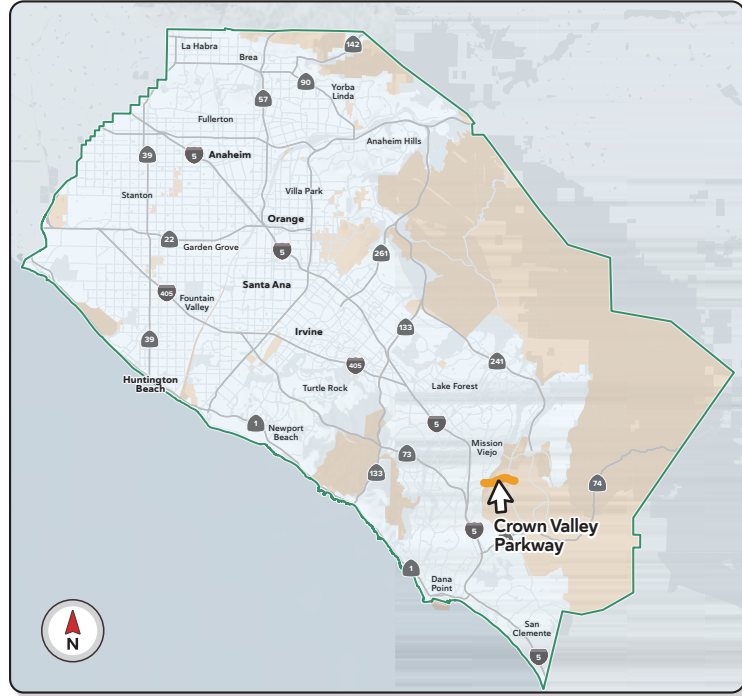


Priority Corridor: 1 2 3 4 5

Crown Valley Parkway

Between Mission Viejo City Limit to east of Antonio Parkway

Location Map



Existing Cross-Section



Proposed Cross-Section



Corridor-wide Safety Countermeasures



Install buffered bike lanes; evaluate feasibility of upgrading to protected bike lanes



Add a yellow centerline with reflective delineators for improved visibility

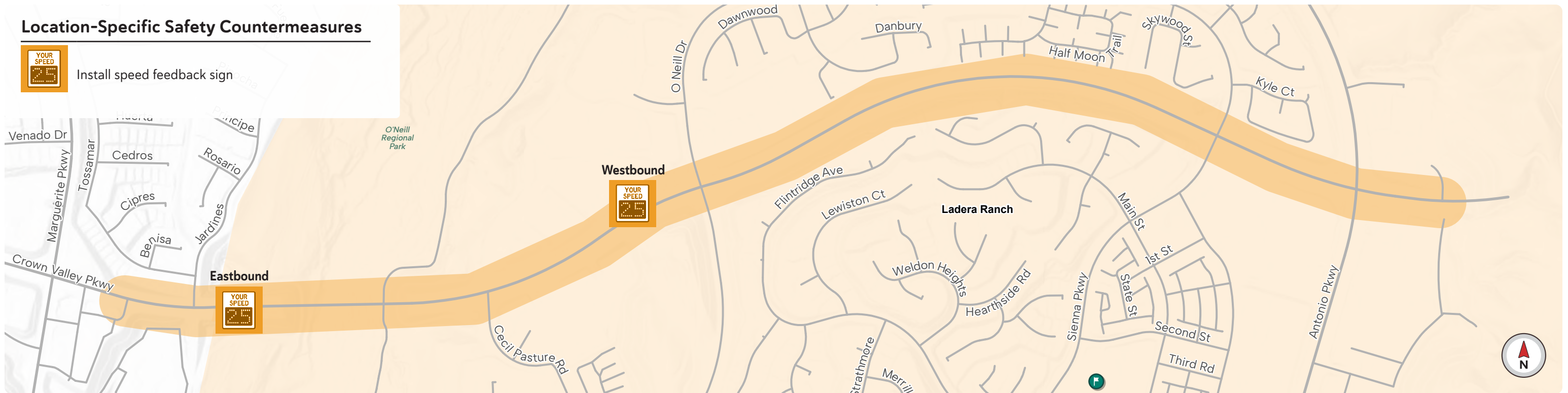


Install object markers on streetlight poles located adjacent to roadway

Location-Specific Safety Countermeasures



Install speed feedback sign





Chapter 5: Implementation & Evaluation



We need a national change in mentality. It is time for a transformation in how people think about road safety. Together, we can act to change the culture and expectations. We are so accustomed to hazards on our roads that we sometimes behave as if the risks of today's roadways are inevitable. But they're not. People should leave the house and know they're going to get to their destination safely. Once we believe that, and believe in our ability to collectively make progress, once we demand better, we will see more positive changes cascading across governments and industry.

Pete Buttigieg
Former US Secretary of Transportation



The implementation phase of the LRSP turns the plan’s strategies and actions into on-the-ground results. These efforts may include updates to County policies and procedures, development of new programs, infrastructure investments, and operational enhancements. Achieving meaningful safety outcomes will depend on strong coordination among County departments, sustained stakeholder collaboration, and consistent support from leadership and funding partners.

Benchmarking Assessment

The County of Orange has already taken notable steps to improve roadway safety, including the adoption of policies and planning documents that define the County’s transportation safety priorities. These documents, particularly those with safety-focused goals, policies, and recommendations, were reviewed to help strengthen the foundation for the LRSP.

The resulting benchmarking assessment documents existing safety initiatives and identifies opportunities to better align County practices with the Safe System Approach. It also makes clear that meaning progress will require more than just responding to issues with individual infrastructure projects; it will depend on addressing systemic barriers and ensuring that safety is prioritized across all programs and operational decisions.

The following plans and documents were reviewed as part of the benchmarking effort:

✓ Orange County Traffic Manual	OCPW, 2007
✓ Systemic Safety Analysis Report	OCPW, 2019
✓ Systemic Safety Plan	OCTA, 2019
✓ Transportation Implementation Manual	OCPW, 2021
✓ “OC on the Move” Active Transportation Plan (ATP)	OCPW, 2023
✓ Americans with Disabilities Act (ADA) Transition Plan	OCPW, 2024
✓ County of Orange General Plan, Chapter IV: Transportation Element	OCPW, 2025
✓ Orange County Municipal Code	November 2025

Key Takeaways

Key takeaways from the benchmark assessment are highlighted below and directly resulted in the development of the recommended Implementation Strategies. The full benchmarking assessment is provided in **Appendix D**.

- **Planning and Policy** Maintain active membership in regional safety planning efforts, while also building internal staff capacity, commitment, and coordination.
- **Leadership & Commitment:** Continued leadership engagement and education is needed; especially as newly elected officials take office and to help maintain safety as a top priority for the County Board of Supervisors.
- **Safe System Framework:** Establish regular review, evaluation, and management of crash data to track progress and understand trends over time.
- **Project Delivery:** Funding remains a critical challenge for safety project implementation. The LRSP should identify grant funding opportunities or strategies for implementing low-cost improvements.
- **Safety Culture:** Leverage existing communication platforms and County events to continue spreading messaging about County’s transportation safety goals.



Implementation Strategies

For each implementation strategy, the responsible agencies supporting the action are identified, along with an implementation timeline.

Implementation strategies are categorized as follows:

Near-Term

1 - 2 Years

Mid-Term

3 - 5 Years

Long-Term

5 - 10 Years

Safety Planning & Culture

ID	Implementation Strategy	Responsible Agencies	Timeline
1.1	Strengthen countywide commitment to roadway safety by formally adopting the LRSP and publish the plan on the County’s website for public access. To remain eligible for Highway Safety Improvement Program (HSIP) grant funding, the LRSP must be updated every five years.	Public Works, County BOS	Near-Term
1.2	Adopt and track the Safety Performance Indicators identified in the LRSP, and implement a regular monitoring and reporting process to proactively assess progress and guide future safety investments.	Public Works	Near-Term
1.3	Leverage crowdsourcing tools, third-party mobility data, and video-based detection or conflict analysis to identify near-miss events and safety concerns that may not be captured in police-reported crash data. These approaches can help agencies better understand risk patterns affecting vulnerable road users and communities that are historically underrepresented in crash reporting, thereby improving the identification of emphasis areas and informing more proactive and equitable safety investments.	Public Works	Near-Term

Safe Road Users

ID	Implementation Strategy	Responsible Agencies	Timeline
2.1	Expand safety education through partnerships with local agencies, schools, and community organizations, and introduce e-bike safety and training programs to reach broader audiences and address emerging safety challenges.	Public Works, OCTA, Community Organizations	Near-Term
2.2	Continue and formalize coordination with the California Highway Patrol and the Orange County Sheriff’s Department through existing Traffic Committees and related interagency forums to align enforcement priorities, share data, and reinforce a consistent focus on behaviors and locations most associated with fatal and serious injury crashes. While recognizing that enforcement deployment decisions, staffing levels, and budget constraints fall largely outside the purview of Orange County Public Works, these coordination efforts can help maximize the effectiveness of available resources and support targeted, data-driven enforcement where feasible.	Public Works, CHP, Sheriff’s Department	Near-Term



Safe Roadways

ID	Implementation Strategy	Responsible Agencies	Timeline
3.1	Systematically implement proven safety countermeasures that separate users in space and time and improve attentiveness and awareness across County roadways, prioritizing locations with elevated risk and advancing consistent application of Safe System principles beyond individual projects.	Public Works, County BOS	Mid-Term
3.2	Prioritize completion of pedestrian and bicycle networks by targeting locations with high crash risk and activity, and incorporate context-based separation treatments informed by roadway characteristics, land use, and crash data.	Public Works	Long-Term
3.3	Establish functional roadway classifications and clearly defined modal priorities to support selection of context-appropriate safety countermeasures and improve transparency and consistency in tradeoff decisions, with particular focus on corridors experiencing higher rates of fatal and serious injury crashes.	Public Works, County BOS	Mid-Term
3.4	Enhance the development review process to prioritize safety-focused performance measures and best practices for active transportation and transportation demand management, reducing reliance on vehicle Level of Service and incorporating metrics such as conflict points, queuing, and multimodal safety to ensure circulation within and around new development supports safe access for all users.	Public Works, County BOS	Mid-Term
3.5	Strengthen construction and maintenance policies and procedures to move beyond the current case-by-case assessment of work zone safety and accessibility and more consistently prioritize multimodal safety and access for all users, such as pedestrians, bicyclists, and people with disabilities, through standardized requirements.	Public Works, County BOS	Mid-Term

Safe Speeds

ID	Implementation Strategy	Responsible Agencies	Timeline
4.1	Adopt roadway design standards that prioritize speed management by incorporating target speed-based design and context-appropriate roadway geometries, enabling more consistent and systemic application of traffic calming and speed management treatments across County roadways rather than relying on project-by-project discretion.	Public Works, County BOS, Fire Authority	Near-Term
4.2	Monitor the outcomes of California’s automated speed enforcement pilot programs and remain prepared to pursue authorization and implementation if state law is expanded, including evaluating potential corridors, equity considerations, and administrative requirements to support effective deployment when permitted.	Public Works	Long-Term
4.3	Provide staff training on AB 43 methodologies, update speed-setting procedures to prioritize vulnerable users, and establish a routine review process to align speed limits with LRSP corridor designations and evolving safety data.	Public Works	Near-Term

Post Crash Care

ID	Implementation Strategy	Responsible Agencies	Timeline
5.1	Support and participate in collaborative, interagency efforts to advance integrated and automated sharing of crash, roadway, enforcement, and injury outcome data among state, county, and local agencies, law enforcement, and hospitals. Emphasizing standardized data practices, appropriate privacy protections, and coordinated governance can help improve data accuracy, timeliness, and completeness, while reducing reliance on manual processes and supporting a more comprehensive understanding of roadway safety outcomes.	Public Works, Caltrans, CHP, Health Care Agency, Sheriff’s Department, OCTA	Long-Term



Funding Opportunities

Improving roadway safety will require sustained investment across planning, design construction, and operations. A wide range of federal, state, regional, and local funding programs can further support the County’s safety initiatives. By aligning projects with the goals, requirements, and evaluation criteria of these programs, the County can strengthen its competitiveness and secure funding that accelerates high-impact safety improvements across the transportation network.

State Sources

Affordable Housing and Sustainable Communities (AHSC) - California Strategic Growth Council

AHSC funds affordable housing and transportation projects that reduce greenhouse-gas emissions and increase walking, biking, and transit access near daily destinations.

Next Funding Opportunity: Round 10 NOFO anticipated Winter/Spring 2026

Active Transportation Program (ATP) - Caltrans

ATP funds projects that increase walking and biking, improve safety, and expand active-transportation access. The program consolidates TAP, BTA, and SRTS into a single competitive statewide grant program.

Next Funding Opportunity: Cycle 8 NOFO anticipated Spring 2026

California Office of Traffic Safety (OTS) Grants

OTS funds local programs addressing impaired driving, distracted driving, motorcycle safety, occupant protection, pedestrian and bicycle safety, EMS response, traffic enforcement, and traffic records system improvements.

Next Funding Opportunity: Applications due January 31 each year

HSIP - Highway Safety Improvement Program (Caltrans)

HSIP funds infrastructure projects that reduce fatalities and serious injuries on public roads, emphasizing treatments with proven crash-reduction benefits. It is a primary resource for LRSP-identified safety projects.

Next Funding Opportunity: Cycle 13 NOFO anticipated Spring 2026

SB 1 Local Streets and Roads (LSR) Program

SB 1 provides \$1.5 billion annually for maintenance, rehabilitation, and safety projects on local streets and roads. Jurisdictions must submit an annual project list to the CTC to receive funding.

Next Funding Opportunity: Project list due July 1 each year

Sustainable Communities Grants (Caltrans)

Supports local and regional planning that advances State climate, equity, and multimodal transportation goals, consistent with Regional Transportation Plan/Sustainable Communities Strategy guidelines.

Next Funding Opportunity: FY 2027–28 NOFO anticipated Fall 2026

Regional and Local Sources

OCTA OC Go (Measure M) Funding

OC Go provides ongoing sales-tax funding to support transportation improvements. The County has received OC Go funding every year since FY 2010–11.

Next Funding Opportunity: FY 2026–27

OCTA Surface Transportation Block Grant (STBG) Program

Flexible federal funds administered regionally, supporting roadway improvements, maintenance, safety, ADA upgrades, and active-transportation facilities. OCTA prioritizes projects within Orange County.

Next Funding Opportunity: FY 2026–27

SCAG Go Human Grants

Supports active-transportation safety through mini-grants, temporary demonstration projects, and regional safety campaigns.

Next Funding Opportunity: 2026

SCAG Sustainable Communities Program (SCP)

Provides technical assistance and planning support to help jurisdictions implement the regional Sustainable Communities Strategy (SCS).

Next Funding Opportunity: N/A

Federal Sources

BUILD Grant

Administered by the U.S. Department of Transportation (USDOT), the BUILD program funds capital investments in surface transportation infrastructure that demonstrate significant local or regional impact, including roads, transit, rail, ports, and multimodal facilities. It supports multi-jurisdictional and multimodal projects that may be difficult to fund via formula or other programs.

Next Funding Opportunity: Fiscal Year (FY) 2026–27 Notice of Funding Opportunity (NOFO) anticipated Winter 2025/26

Safe Streets and Roads for All (SS4A) Grants

Established by the Infrastructure Investment and Jobs Act (IIJA), SS4A provides up to \$5 billion over FY 2022–26 for grants that support local, regional, and Tribal initiatives to prevent roadway fatalities and serious injuries. This LRSP was funded through a SS4A planning grant and now qualifies as a Comprehensive Safety Action Plan (CSAP), making the County eligible to apply for SS4A implementation grants.

Next Funding Opportunity: FY 2026–27 NOFO anticipated Spring 2026



Evaluating Safety Performance After LRSP Adoption

Ongoing evaluation is essential to understanding the effectiveness of the County’s roadway safety efforts and ensuring continued progress toward significantly reducing fatalities and serious injuries on unincorporated roadways. The following Safety Performance Indicators will be used to evaluate progress over time. By regularly assessing trends, identifying emerging issues, and monitoring implementation progress, the County can adjust strategies as needed and maintain accountability to its safety goals.

Implementation Strategy	Safety Performance Indicators (SPIs)	Metric
Crash Outcomes	KSI (Killed or Severely Injured) Crashes	<ul style="list-style-type: none"> • KSI crashes • Percent of crashes resulting in KSI
	Crashes involving Vulnerable Road Users	<ul style="list-style-type: none"> • Pedestrian and bicycle crashes • Pedestrian and bicycle KSI crashes • Percent of pedestrian and bicycle crashes resulting in KSI
	Crashes involving Vulnerable Populations	<ul style="list-style-type: none"> • Percent of victims aged under 15 • Percent of victims aged over 65
Behavioral Factors	Speeds and Speed Limit Compliance	<ul style="list-style-type: none"> • Measured speed where posted speed has been lowered, based on AB 43 policy • Percent of KSI crashes involving Unsafe Speed
	Impaired Driving	<ul style="list-style-type: none"> • Percent of KSI crashes involving DUI
Project Delivery	Funding	<ul style="list-style-type: none"> • Dollars awarded for LRSP-identified projects
	Countermeasure Implementation	<ul style="list-style-type: none"> • Miles of Safety Focus Areas treated • Number of countermeasures implemented • Number of educational, engagement and enforcement campaigns or programs



Glossary

AB	Assembly Bill	EMS	Emergency Medical Services	OTS	Office of Traffic Safety
ACS	American Community Survey	FHWA	Federal Highway Administration	PDO	Property Damage Only
ADA	American with Disabilities Act	FY	Fiscal Year	SB	Senate Bill
AHSC	Affordable Housing and Sustainable Communities	HSIP	HSIP Highway Safety Improvement Program	SCAG	Southern California Associate of Governments
ATP	Active Transportation Plan	IJJA	Infrastructure Investment and Jobs Act	SCP	Sustainable Communities Program
BOS	Board of Supervisors	KSI	Killed or Seriously Injured	SCS	Sustainable Communities Strategies
BTA	Bicycle Transportation Account	LOS	Level of Service	SOCO	South Coast
BUILD	Better Utilizing Investments to Leverage Development	LSR	Local Streets and Roads	SPI	Safety Performance Indicators
Caltrans	California Department of Transportation	LRSM	Local Roadway Safety Manual	SR	State Route
CHP	California Highway Patrol	LRSP	Local Roadway Safety Plan	SRTS	Safe Routes to School
CMABS	Costa Mesa Alliance for Better Streets	N/A	Not Available	SS4A	Safe Streets and Roads for All
CMF	Crash Modification Factor	NOFO	Notice of Funding Opportunity	STBG	Surface Transportation Block Grants
CSAP	Comprehensive Safety Action Plan	OC	Orange County	TAP	Transportation Alternatives Program
CRF	Crash Reduction Factor	OCBC	Orange County Bicycle Coalition	TIMS	Transportation Injury Mapping System
CTC	California Transportation Commission	OCCOG	Orange County Council of Governments	US	United States
DUI	Driving Under the Influence	OCPW	Orange County Public Works	USDOT	United States Department of Transportation
E-Bike	Electric Bike	OCTA	Orange County Transportation Authority	WCS	Weighted Crash Score