

Louisville's Vulnerable Road User Road Safety Assessments



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Agenda and Acknowledgements

- Introduction to Vulnerable Road User Road Safety Assessments (VRU RSA)
- Evolution of VRU RSA in Louisville





Introduction to Vulnerable Road User Road Safety Assessments (VRU RSA)



What is a Road Safety Assessment (RSA)?



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Who is a Vulnerable Road User (VRU)?

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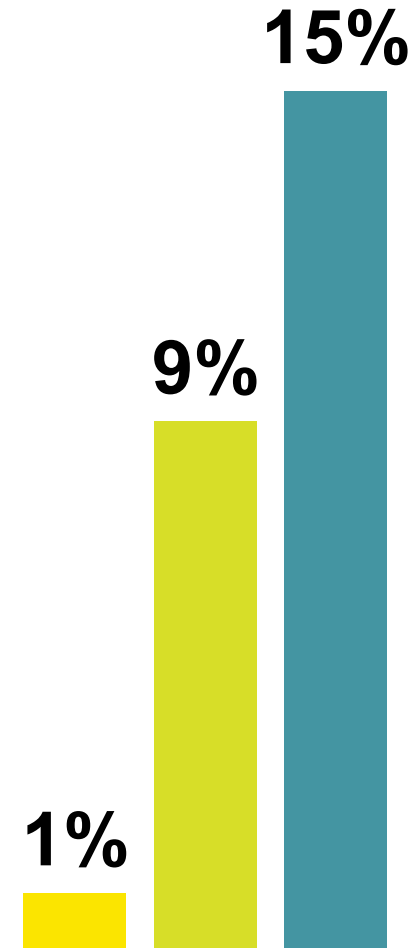


Why are we doing VRU RSA's?



Why are we doing VRU RSA's?

- Strategic Highway Safety Plan Emphasis Area
- Vulnerable Road Users Crash Statistics
 - 1% of total crashes
 - 9% of serious injury crashes
 - 15% of fatal crashes



SAFERoad SOLUTIONS

Keep Kentuckians moving through life...safely.



Transportation Systems Management and Operations

TEAM KENTUCKY
TRANSPORTATION CABINET



Why are we doing VRU RSA's?

KENTUCKY TRANSPORTATION CABINET (KYTC)

EDITION 1
AUGUST 2022

COMPLETE STREETS, ROADS, AND HIGHWAYS MANUAL

A GUIDE TO IMPLEMENTING SAFE AND EQUITABLE TRANSPORTATION STRATEGIES FOR FACILITIES IN RURAL AND URBAN KENTUCKY.

TEAM KENTUCKY
TRANSPORTATION CABINET



Who should be involved?

School Crossing Guards

Local Public Agency

Local Officials

KYTC District Staff

Emergency Responders

Engineers

Transit

Planners



What is the status of VRU RSA's in Kentucky?

88+ VRU RSA's Performed to Date

Expansion to Lexington in 2024

Short, Mid, and Long-term Site-Specific Recommendations

Systemic Recommendations

Prioritization and Implementation of 2023 Recommendations

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Evolution of VRU RSA in Louisville

Short-Term – Signs and Pavement Markings Key Themes

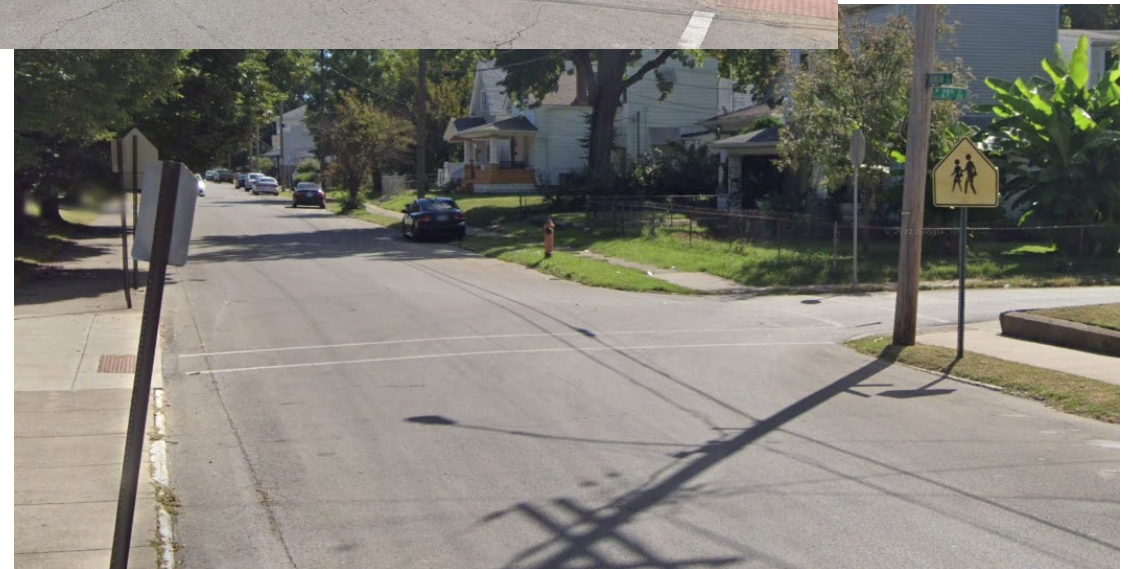
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Missing/Damaged
Signage

Faded Pavement
Markings

“Transverse Style”
Crosswalks

Lack of Yield Bars and
Advance Signage



Countermeasure	CRF	CMF	Basis	Reference
Crosswalk visibility enhancement ¹	—	—	—	—
Advance STOP/YIELD signs and markings	25%	0.75	Pedestrian crashes ²	Zegeer, et. al. 2017
Add overhead lighting	23%	0.77	Total injury crashes	Harkey, et. al. 2008
High-visibility marking ³	48%	0.52	Pedestrian crashes	Chen, et. al., 2012
High-visibility markings (school zone) ³	37%	0.63	Pedestrian crashes	Feldman, et. al. 2010
Parking restriction on crosswalk approach	30%	0.70	Pedestrian crashes	Gan, et. al., 2005
In-street Pedestrian Crossing sign	UNK	UNK	N/A	N/A
Curb extension	UNK	UNK	N/A	N/A
Raised crosswalk (speed tables)	45%	0.55	Pedestrian crashes	Elvik, et. al., 2004
	30%	0.70	Vehicle crashes	
Pedestrian refuge island	32%	0.68	Pedestrian crashes	Zegeer, et. al., 2017
PHB	55%	0.45	Pedestrian crashes	Zegeer, et. al., 2017
Road Diet – Urban area	19%	0.81	Total crashes	Pawlovich, et. al., 2006
Road Diet – Suburban area	47%	0.53	Total crashes	Persaud, et. al., 2010
RRFB	47%	0.53	Pedestrian crashes	Zegeer, et. al. 2017

Source: Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations, FHWA



Signs and Pavement Markings - Uncontrolled Crosswalks



Broadway and Rubel Ave.

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Signs and Markings - Signalized Intersections

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Mid-Term - Crosswalk Guidelines

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64% of KA VRU crashes occurred in an area without a marked crossing.

Mid-Term - Surface Street Lighting



72% of KA VRU crashes occurred at night.

Mid-Term - Surface Street Lighting



TAPCO Safewalk



Fonroche Solar Lighting



Mid-Term – Signal Rebuilds

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Install/Repair Pedestrian
Facilities

Intersection Lighting

Flashing Yellow Arrows/
Negative Pedestrian Offset

Leading Pedestrian Intervals



34% of VRU KA crashes occurred at
controlled intersections.

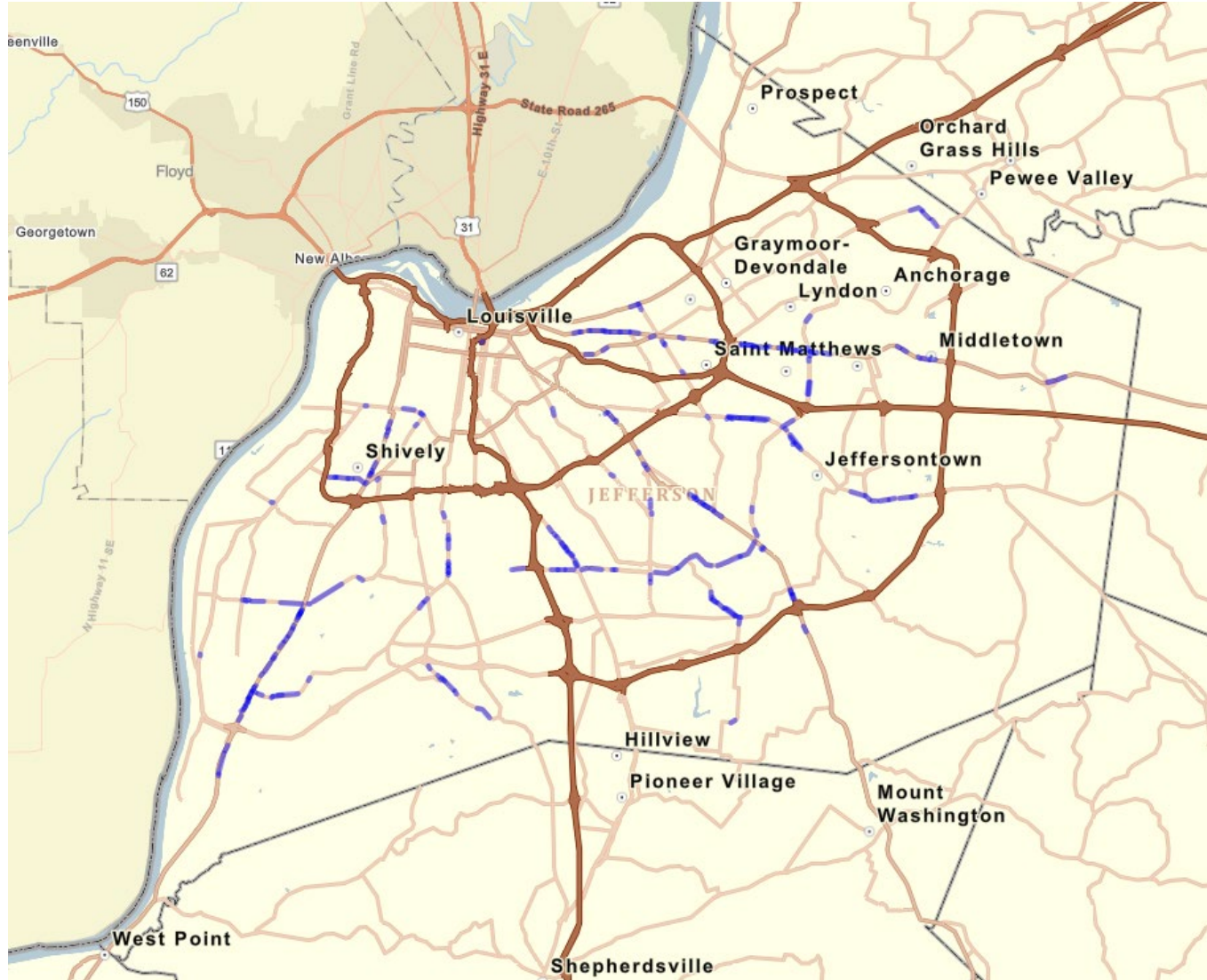
Mid-Term – Two-Stage Crossing



18% of VRU KA crashes on state roads occurred on Dixie Hwy.



Long-Term - Sidewalk Network



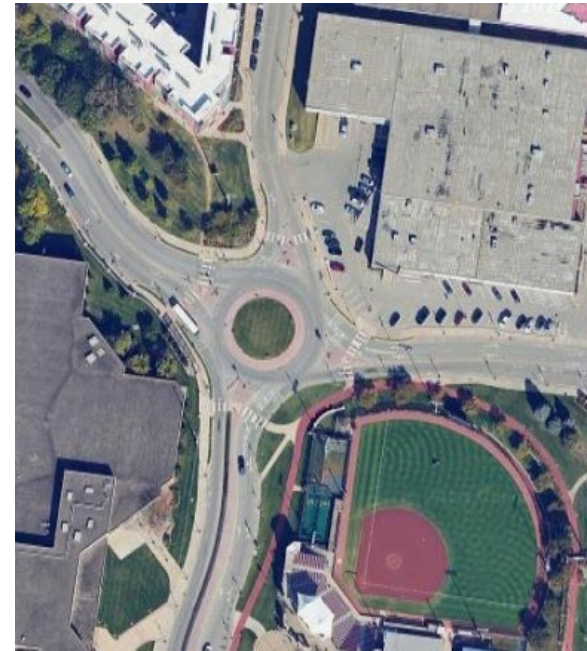
Known sidewalk gaps along HIN routes.



Planning Studies

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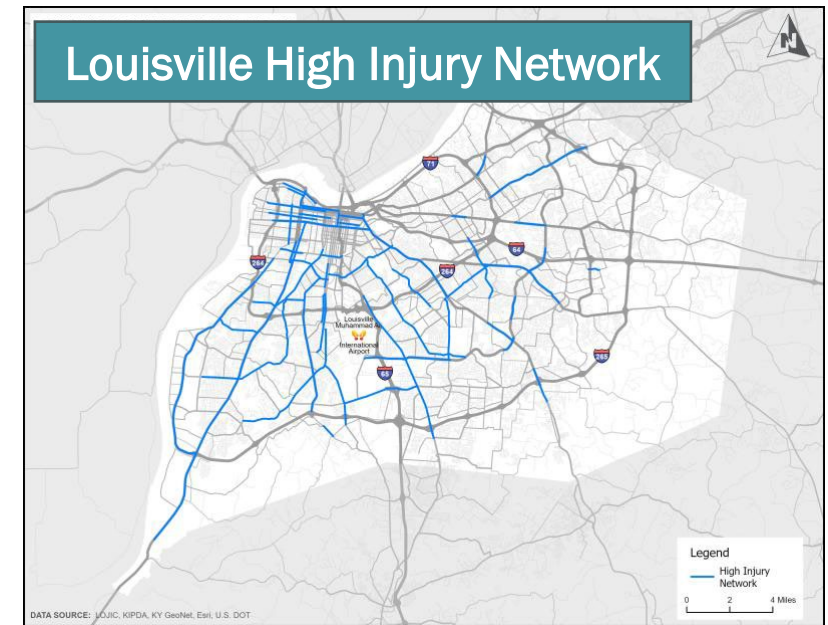
- Reconfiguration of Dixie Hwy. from Crums Ln. to Lee St.
- Safety improvements on Goss Ave. between Texas Ave. and Logan St.
- Roundabout feasibility studies



What's Next?

Louisville

- Continuing in 2024
- \$8 million in spending next year
- Collaboration with VRU RSA-focused LPA initiatives



Statewide

- Lexington VRU RSA's
- Gauge interest in expansion





**HSIP Jefferson County- VRU Road Safety Assessments
10:00am**