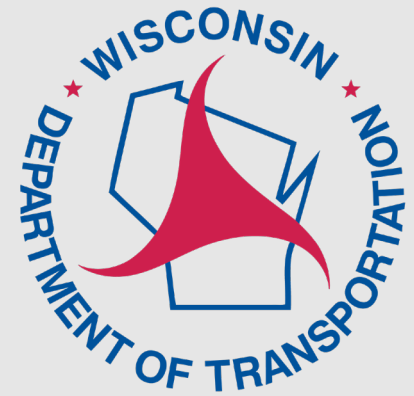




*Highway Safety Improvement Program  
Data Driven Decisions*



# HIGHWAY SAFETY IMPROVEMENT PROGRAM

*Division of Transportation Investment Management  
Bureau of State Highway Programs*

**HSIP General Information  
SFY2025-2028 Program Cycle**

Matthew Gast  
WisDOT Statewide HSIP Manager  
608.267.3277  
[matthew.gast@dot.wi.gov](mailto:matthew.gast@dot.wi.gov)

# The Basics of HSIP

**Program Areas, Funding, Typical Projects,  
Project Selection Process, Rail Crossing  
Highway Safety Program (RCHSP)**



# *HSIP Program Areas*

- **Highway Safety Improvement Program (HSIP)**
  - High Risk Rural Roads Program (HRRRP)
  - Statewide Initiatives
  
- **Rail Crossing Highway Safety Program (RCHSP)**
  - Warning Devices
  - Elimination of Hazards



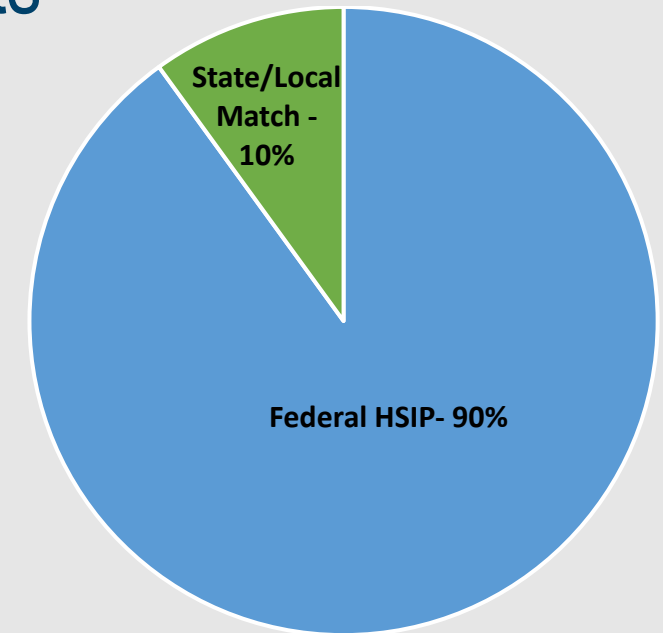
# *Highway Safety Improvement Program*

- Projects that reduce the number and severity of crashes on all public roads
- Focused on infrastructure improvements identified and selected through a data-driven approach
- Lower-cost treatments are given first consideration
- Includes the High Risk Rural Roads Program (HRRRP), which funds projects for construction and operational improvements on county rural major and minor collector roads



# Program Funding

- Current program level = \$60 million/year
- A federal reimbursement program and NOT a federal grant program
- 90% federal HSIP funds available for most projects
- 10% match required
  - State pays match for STN projects
  - Locals pay match for non-STN projects (local streets and highways)



# Program Cycle & Application Deadlines

- Four-year program<sup>1</sup> of projects
- Program on annual cycle
- Current program is SFY2025-2028
  - Next application period for SFY2025-2028 is February 15<sup>th</sup>, 2024
  - Following application period for SFY2026-2029 is August 15<sup>th</sup>, 2025

<sup>1</sup>Projects with longer, more complicated delivery schedules (at least 4 years) will be considered for approval in Years 5 and 6; but will be given lower priority than projects that can be delivered quickly.



# Typical Eligible Projects

- Intersection safety improvements (including roundabouts and channelization/turning radii improvements)
- Installing or modifying traffic signals; as allowed under state statutes
- Installing signs, delineators, flashing warning lights; as allowed under state statutes. New upgraded signs are eligible under the following situations:
  - There is no existing sign (not broken off/missing and never replaced).
  - The existing sign is poorly located. Sign would be more visible/effective if moved 20 feet.
  - There is an existing sign, but a larger sign would be more visible/effective
  - There is an existing sign, but a different sign (different message) would be more effective.



# *Typical Eligible Projects Continued*

- Straightening isolated curves or hills
- Improving sight distance
- Access modifications
- Constructing turning, bypass, or other auxiliary lanes
- An improvement for pedestrian or bicyclist safety or safety of the disabled where there are crashes
- Constructing traffic calming feature
- Eliminating roadside obstacle





# *Typical Eligible Projects Continued*

- Installing pedestrian countdown timers and signals
- Installing a priority control system for emergency vehicles at signalized intersections
- Installing guardrails, barriers, and crash attenuators

The previous slides were examples of typical eligible projects, not an exhaustive list. If you aren't sure of the eligibility of your project reach out to your regional HSIP Coordinator.



# *High Risk Rural Roads Program (HRRRP)*

- Focuses on:
  - Local rural minor and major collector corridors
  - Run-off-the-road crashes
  - Fatal and serious injury crashes
  - Low complexity, low-cost treatments that can be implemented in less than 4 years
- Program development starts with annual review of crash data statewide by WisDOT



# *High Risk Rural Roads Program (HRRRP)*

- After initial screening and more detailed review of crash information by regional WisDOT safety engineers, 20 corridors are selected for further review and analysis
- With local agency participation, WisDOT consultant reviews each corridor and develops a Corridor Safety Evaluation (CSE)
- CSE includes:
  - Summary of locations in the corridor with safety concerns
  - List of safety treatment within the corridor eligible for HRRRP funding
  - Cost estimates for design and construction if eligible treatments



# *High Risk Rural Roads Program (HRRRP)*

- Local agency has the option of using the CSE to develop an application for HRRRP funding
- A project that requires real estate acquisition is not eligible in the HRRRP
- After a CSE is completed, it can be used for an HRRRP for the duration of three application periods



# *High Risk Rural Roads Program (HRRRP)*

## *Eligible Treatments*

- Edgeline and/or centerline pavement markings
- Shoulder rumble strips
- Centerline rumble strips
- Spot shoulder widening
- Chevrons and/or night arrows
- Post-mounted delineation
- Guide signs and/or advanced warning signs
- Obstacle removal for adequate clear zone

Larger, more complex projects may be submitted separately through the “standard” HSIP



# The HSIP Process

## Applications, Approval, and Programming Details



# *Application Requirements*

- Completed HSIP Project Application Form
- General sketch of the project proposal
- Collision diagrams
- Crash history (most current consecutive 5 years) and appropriate crash analysis
- Site photos
- Itemized cost estimate
- Project Evaluation Factor (PEF) analysis worksheet(s) – completed by Regional Safety Engineer



# The HSIP Application Form

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION** *(continued)*  
Wisconsin Department of Transportation DT1501

Design ID \_\_\_\_\_ Tied Project IDs \_\_\_\_\_  
Related IDs (CONST) \_\_\_\_\_ (R/W) \_\_\_\_\_

**1. PROJECT LOCATION**

Name of Road/Intersection \_\_\_\_\_ Highway Number \_\_\_\_\_  
County \_\_\_\_\_ City of \_\_\_\_\_ Village of \_\_\_\_\_ Town of \_\_\_\_\_  
Native Nation \_\_\_\_\_ Name of the Metropolitan Planning Organization (MPO) the project is represented by \_\_\_\_\_

Did the project complete the Safety Certification Process (state highways only)?  Yes  No  
Is the project located on a connecting highway?  Yes  No  
Is the project located on a local roadway?  Yes  No  
What area type is the project?  Urban  Rural

**2. SEGMENT INFORMATION**

Current Annual Average Daily Traffic \_\_\_\_\_ Project Length (miles) \_\_\_\_\_

**3. INTERSECTION INFORMATION**

Existing Traffic Control  
 Yield Control  One-Way Stop-Control  Two-Way Stop-Control  
 All-Way Stop-Control  Traffic Signal  Roundabout  Other (List): \_\_\_\_\_  
Entering Vehicle Volume \_\_\_\_\_ Pedestrian/Bicycle Volume (if available) \_\_\_\_\_

**4. IDENTIFICATION OF HAZARDS**

Describe existing hazards such as: visibility restrictions, curves, hills, intersection problems, bike/pedestrian conflicts, narrow shoulders, rutting, etc. Describe any relevant crash history resulting from existing hazards or deficiencies.  
\_\_\_\_\_

**5. PROPOSED IMPROVEMENT**

5a. Provide a brief list/summary of the proposed countermeasure(s) that will address the identified hazards.  
\_\_\_\_\_

DT1501 Highway Safety Improvement Program (HSIP) Project Application Page 3 of 8

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION** *(continued)*  
Wisconsin Department of Transportation DT1501

5b. Describe the proposed project and how the countermeasure(s) address the identified hazards. In addition, briefly discuss any alternatives considered and why these options are not the preferred alternative.  
\_\_\_\_\_

**6. TOTAL PROJECT COSTS** - Provide ALL project costs in today's dollars for all project elements, regardless of whether HSIP funding will be used

	Prelim. Engineering/Design (include state review)	Real Estate	Major Construction Items (include Const., Engineering, Mobilization, and Contingencies)	Other Costs	TOTAL
SFY2024	_____	_____	_____	_____	_____
SFY2025	_____	_____	_____	_____	_____
SFY2026	_____	_____	_____	_____	_____
SFY2027	_____	_____	_____	_____	_____
SFY2028	_____	_____	_____	_____	_____
SFY2029	_____	_____	_____	_____	_____
<b>TOTAL</b>	_____	_____	_____	_____	_____
HSIP Funding Requested? (Yes/No)*	Yes or No	Yes or No	Yes or No	Yes or No	Yes or No

\* Generally, 90% of the requested safety funding is covered with federal HSIP funds and the remaining 10% is covered by state and/or local funds. The project sponsor is responsible for any project costs exceeding the approved HSIP funding amount.

Is this project advanceable?  Yes  No. If yes, what SFY is the project advanceable to \_\_\_\_\_

**7. CONTACT INFORMATION**

Primary Contact Person and Agency Name \_\_\_\_\_ Title \_\_\_\_\_  
Address \_\_\_\_\_ (Area Code) Telephone Number \_\_\_\_\_  
City, State, ZIP Code \_\_\_\_\_ Municipality \_\_\_\_\_

**8. SIGNATURE OF LOCAL APPROVING AUTHORITY**

X \_\_\_\_\_  
(Signature of Local Approving Authority) (Date - mm/dd/yyyy)

**WisDOT INFORMATION** (shaded areas to be completed by WisDOT Regional Staff Only)

A. Environmental Documentation Type  
 Environmental Impact Statement  Categorical Exclusion  
 Environmental Assessment  Planning Studies  
 Other: \_\_\_\_\_

B. HSIP Work Type  
\_\_\_\_\_

C. Functional Class  
\_\_\_\_\_

D. PEF  
\_\_\_\_\_

DT1501 Highway Safety Improvement Program (HSIP) Project Application Page 4 of 8

The form is available at the Programs for Local Government and WisDOT HSIP webpages and from Regional HSIP Coordinators and Safety Engineers

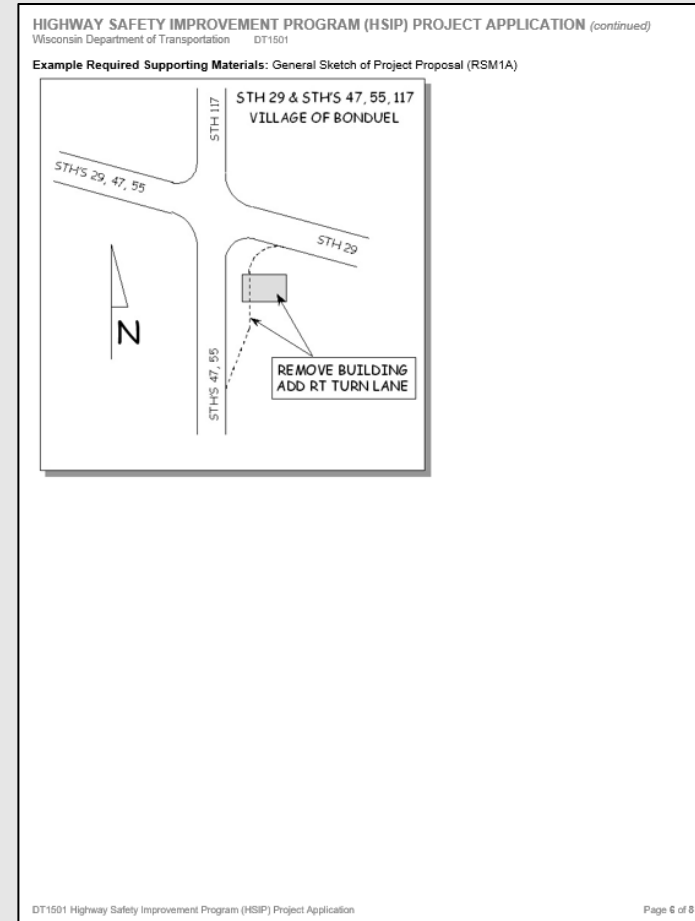




# Other Application Materials



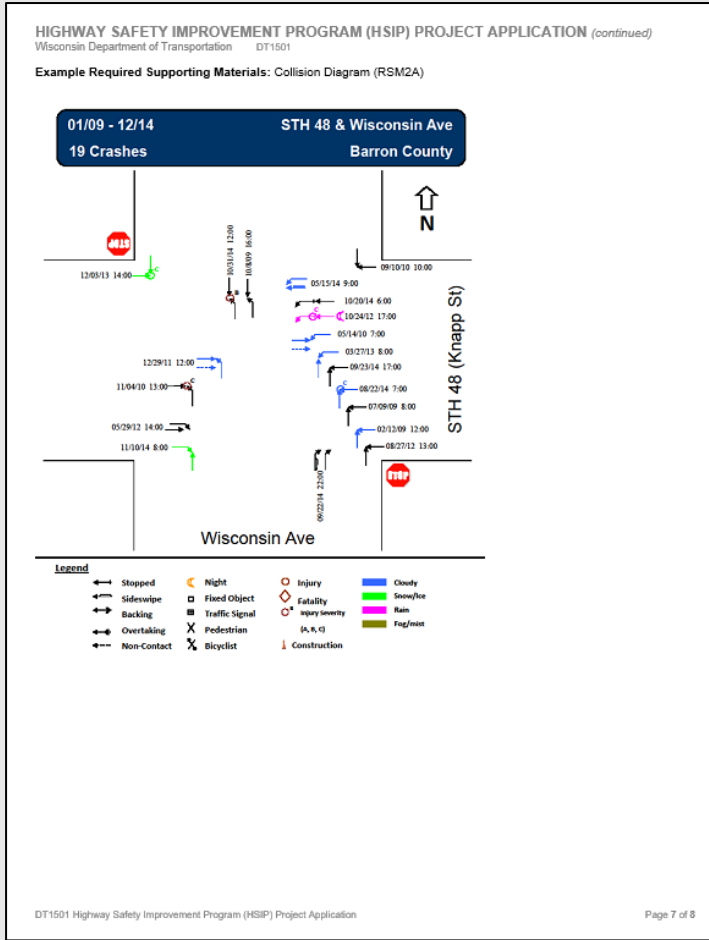
## Site Photos



## Sketch of Project Proposal



# Other Application Materials



Collision Diagram(s)

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION (continued)  
Wisconsin Department of Transportation DT1501

Example Required Supporting Materials: Itemized Cost Estimate (RSM5A)

EXAMPLE: Road A & Road B Intersection Improvements  
Cost Estimate  
Prepared Month/Date/Year

ITEM NO.	ITEM	QUANTITY	UNITS	NUMERIC UNIT PRICE	NUMERIC TOTAL PRICE
<b>100 GENERAL CONDITIONS</b>					
101	Strip Coordination	1	LS	\$2,000.00	\$2,000.00
102	Maintenance of Traffic	1	LS	\$23,000.00	\$23,000.00
103	Dust Control	6	EA	\$17,700.00	\$106,200.00
104	Mobilization	1	LS	\$7,000.00	\$7,000.00
<b>200 EARTHWORK</b>					
201	Retention	1	LS	\$10,000.00	\$10,000.00
202	Unclassified Excavation	1700	CV	\$10.00	\$17,000.00
203	Underdrain (nonstable Material) and Fill	100	CV	\$26.00	\$2,600.00
<b>300 CONCRETE</b>					
301	Curb and Gutter Removal and Replacement	2700	LF	\$13.00	\$35,100.00
302	New 8-inch Curb & Gutter	1400	LF	\$17.00	\$23,800.00
303	Concrete Pavement Removal	4000	SY	\$3.00	\$12,000.00
304	8-inch Concrete Median Base	5800	SF	\$4.50	\$26,100.00
305	Concrete Sawcutting	100	LF	\$3.00	\$300.00
306	8-inch Concrete Pavement	3000	SY	\$22.00	\$66,000.00
307	24"x48" Treated Dome Panels	20	EA	\$165.00	\$3,300.00
<b>400 PAVEMENTS</b>					
401	Asphalt Sawcutting	80	LF	\$1.00	\$80.00
402	Bituminous Asphalt Pavement Removal	250	SY	\$1.00	\$250.00
403	New 4 1/2-inch Bituminous Asphalt Pavement (3-1)	250	SY	\$16.00	\$4,000.00
404	1-inch Bituminous Asphalt Bitulph or 2-inch Base	410	SY	\$16.00	\$6,560.00
405	Crushed Aggregate Basecourse (2-inch depth)	8000	SY	\$5.00	\$40,000.00
406	Crushed Aggregate Basecourse (3-inch depth)	250	SY	\$6.50	\$1,625.00
<b>500 SANITARY &amp; STORM</b>					
501	Adjust Manhole Manhole Casting	1	EA	\$250.00	\$250.00
502	Adjust Storm Manhole Casting	5	EA	\$250.00	\$1,250.00
503	Storm Sewer Collection/Conveyance Modifications	1	LS	\$12,000.00	\$12,000.00
<b>600 WATER MAIN</b>					
601	Adjust Water Valves	3	EA	\$450.00	\$1,350.00
602	Replace Water Valve Box	1	EA	\$400.00	\$400.00
<b>700 MISCELLANEOUS</b>					
701	Type C Safety Protection	8	EA	\$200.00	\$1,600.00
702	Pavement Marking and Signage	1	LS	\$3,000.00	\$3,000.00
703	Traffic Signal Cabinet Upgrade	1	LS	\$200,000.00	\$200,000.00

Sub Total = \$728,695.00  
20% Contingency = \$145,739.00  
Estimated Construction Cost = \$874,434.00  
Engineering @ 15% = \$131,165.10  
TOTAL Estimated Cost = \$1,005,599.10

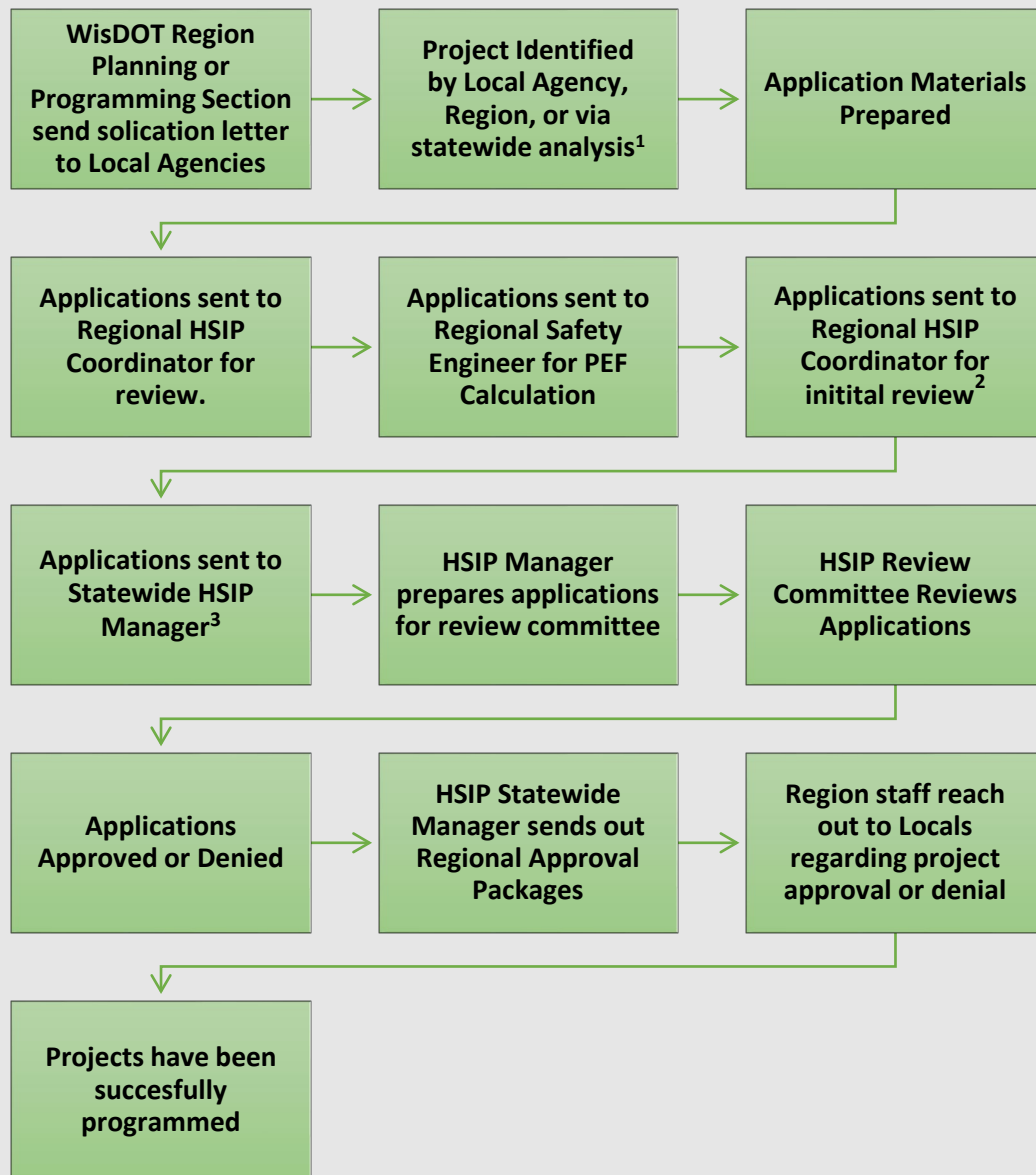
If additional information is available on signalization components, provide as much detail as possible. Additional information might include details and costs for items like circuitry components, types of poles/arms, pedestrian countdown timers, etc.

DT1501 Highway Safety Improvement Program (HSIP) Project Application Page 8 of 8

Itemized Cost Estimate



# General HSIP Application Process



<sup>1</sup>See slides 7-9 for project type eligibility.

<sup>2</sup>Applications must be received by Region staff by August 15<sup>th</sup> for “Standard” HSIP Cycle or February 15<sup>th</sup> for Mid-Cycle. HRRRP application do not have to be sent in until September 15<sup>th</sup>.

<sup>3</sup>Applications must be received by Statewide HSIP Manager by September 15<sup>th</sup> for “Standard” HSIP Cycle or March 15<sup>th</sup> for Mid-Cycle. HRRRP applications do not have to be sent to Statewide HSIP Manager until October 1<sup>st</sup>.



# Spot Project Analysis

- WisDOT region staff calculate a Project Evaluation Factor (PEF) for each HSIP application
- The PEF is used to evaluation and compare proposed projects
- The PEF estimates crash reduction potential of proposed improvements and compares them to project costs
- The PEF calculation includes
  - Estimated costs of proposed project
  - Crash history at the project location
  - Identification of crashes that the proposed project would have reduced
  - Estimate crash reduction potential of proposed improvements, based on established research and studies



# Corridor Project Analysis

- Individual PEFs must be calculated for each location in the corridor where a safety improvement is being proposed
- A cumulative PEF must be calculated covering all proposed safety improvements in the corridor
- The cumulative PEF for all locations in the corridor must be greater than or equal to 1.0 for the project to be considered
- At least 2/3 of the locations proposed must have a PEF greater than or equal to 1.0 for the project to be considered
- Any individual locations in the corridor with a PEF of less than 1.0 will be evaluated and determination will be made whether the locations should be approved



# Tips for Successful HSIP Applications

- Follow general instructions on HSIP application
- Projects rooted in documented crash problems (crash reports)
- Be as specific as possible in “Proposed Improvements” box justifying the selected improvement and explaining why alternatives weren’t selected or list other safety countermeasures that have previously been deployed and crashes have persisted.
- Be **realistic** with the provided estimate and outlined SFY timeframe
  - Generally, design, R/E, and construction not be scheduled in the same FY. If R/E is required please allow more time when preparing the project schedule.



# Project Funding Caps

- Applies to all HSIP-funded projects
- State Projects – overages charged to Region's allocation
- Local Projects – overages charged to Local sponsor
- Any funding cap increase must be approved by the HSIP Program Manager
- Any schedule change resulting in the project moving SFY must be approved by the HSIP Program Manager
- Any project scope change would require application resubmittal with an updated PEF (using the original submittal's crash history)



# Co-Pay Requirement

## For State-sponsored projects:

Projects over \$2,300,000 trigger a co-pay requirement

1. First \$2,300,000 → HSIP Program Funds (90% Fed)
2. Second \$2,300,000 → Non-HSIP Funds
3. Balance of Project → Cost Shared equally between HSIP & Non-HSIP Sources

## For Local-sponsored projects:

Projects over \$4,600,000 trigger a co-pay requirement

1. First \$4,600,000 → HSIP Program Funds (90% Fed)
2. Balance of Project → Cost Shared equally between HSIP & Non-HSIP Sources





# Sunset Provision

- Annual program review to check on status of previously approved projects
- A project may be removed from the program IF:
  - There is no design action within 2 years<sup>1</sup> of program approval, OR,
  - If its not LET to contract within 3 years<sup>1</sup> of program approval (4 years<sup>1</sup> if right of way is needed)
- Local officials will be notified by letter before a project is removed

This ensures safety resources are reserved only for viable projects and enables adding viable projects to replace no longer viable projects

<sup>1</sup>One year can be added to these timeframes for project approved in Year 5 and two years added for projects approved in Year 6



# *For More Information*

- WisDOT Programs for Local Government
    - <http://www.dot.wisconsin.gov/localgov/highways/hsip.htm>
    - HSIP application materials are available for download at the website listed above
  - WisDOT HSIP Staff
    - WisDOT Regional HSIP Coordinators and Safety Engineers
      - General program information
      - Questions about specific potential projects and application help
    - Statewide HSIP Manager
      - General program information
- Matthew Gast  
608.267.3277  
matthew.gast@dot.wi.gov



# Regional HSIP Coordinators

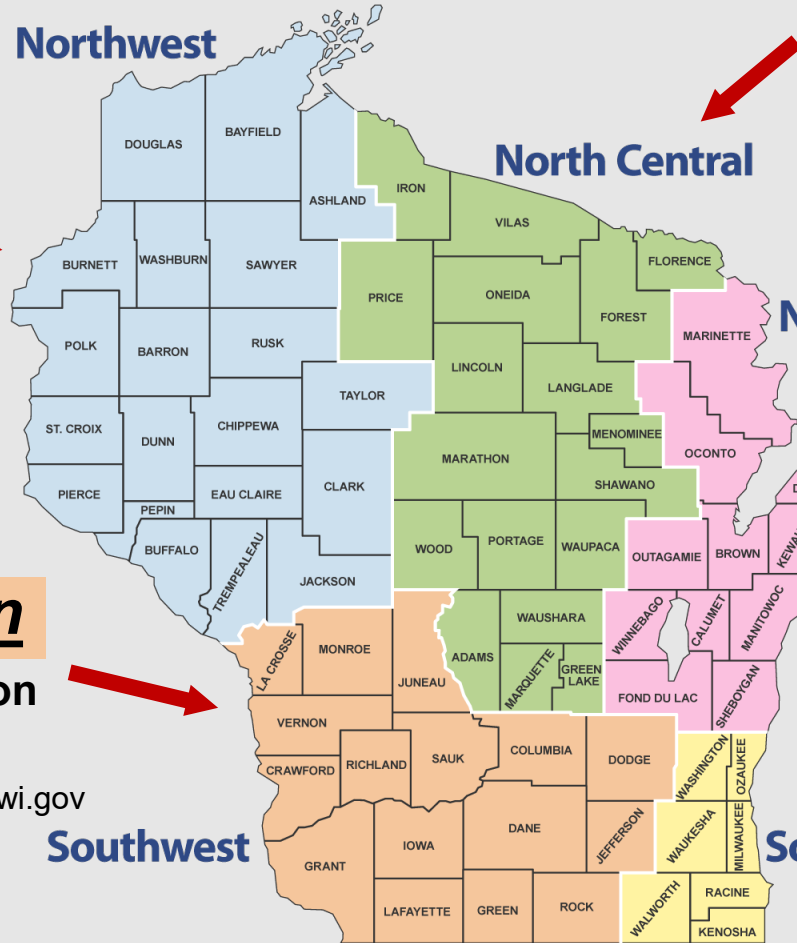
## NW Region

**Tim Smrstick**

715.836.2834

timothy.smrstick@dot.wi.gov

**Northwest**



## NC Region

**Cole Dineen**

715.421.8083

cole.dineen@dot.wi.gov

**North Central**

## NE Region

**Kelsey Lorenz**

920.492.0142

kelsey.lorenz@dot.wi.gov

**Northeast**

## SW Region

**Linda Richardson**

608.789.7869

linda.richardson@dot.wi.gov

**Southwest**

## SE Region

**Tyler Beinlich**

262.548.5856

tyler.beinlich@dot.wi.gov

**Southeast**

**Roslin Burns**

262.521.5383

roslin.burns@dot.wi.gov



# Regional Safety Engineers

## NW Region

**Jennifer Leech**  
715.836.2853  
jennifer.leech@dot.wi.gov

## SW Region

**Chris Wells (Madison)**  
608.246.3275  
christopher.wells@dot.wi.gov  
**Brad Byom (La Crosse)**  
608.789.5707  
brad.byom@dot.wi.gov

## NC Region

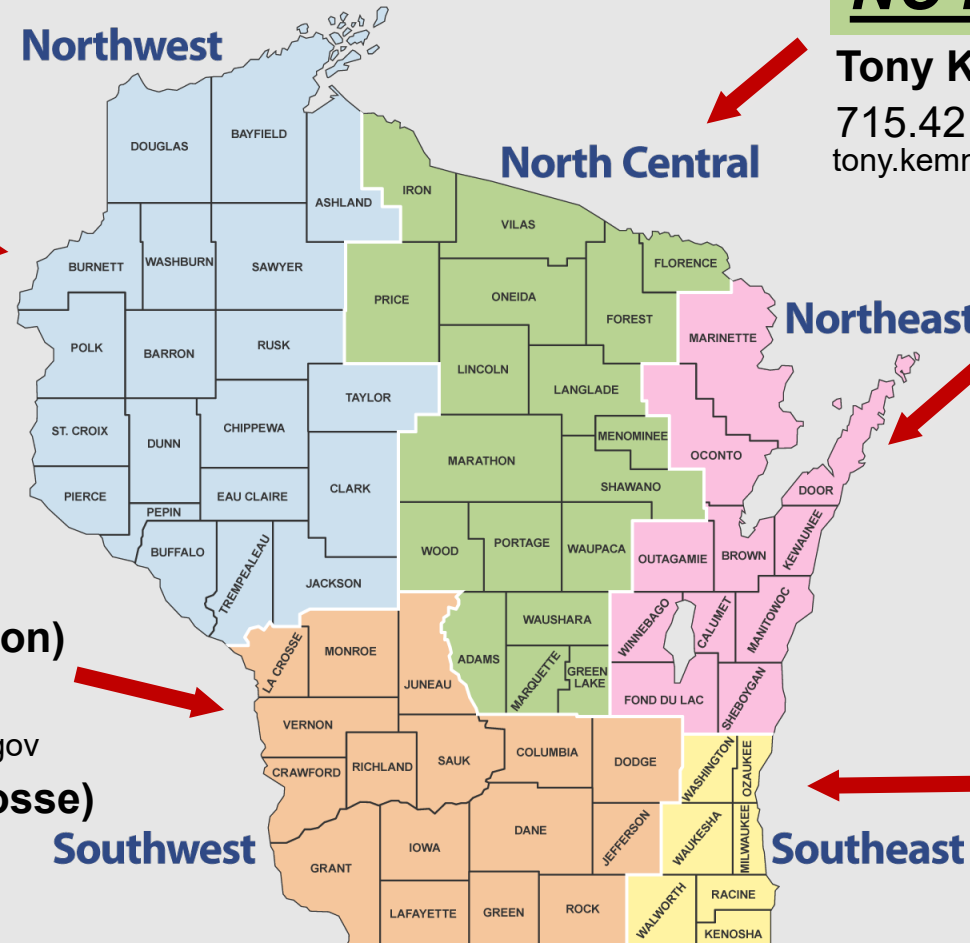
**Tony Kemnitz**  
715.421.8023  
tony.kemnitz@dot.wi.gov

## NE Region

**Mason Simmons**  
920.492.5980  
mason.simmons@dot.wi.gov

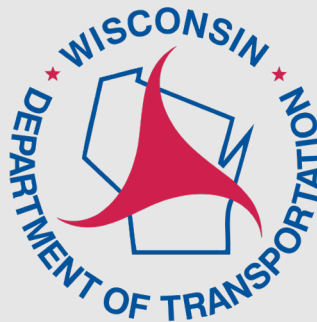
## SE Region

**Dan Dedrick**  
262.548.5958  
dan.dedrick@dot.wi.gov  
**Luis Galimberti**  
262.548.8721  
luis.galimberti@dot.wi.gov



# Railway-Highway Crossing Safety Program

## Warning Devices & Elimination of Hazards Programs

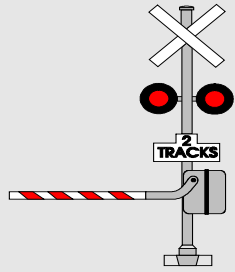


# HSIP Program Areas

## Highway Safety Improvement Program (HSIP)

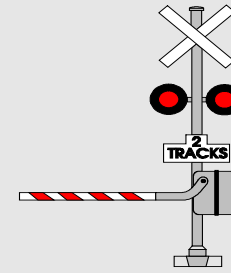
- Railway-Highway Crossing: Warning Devices
  - Projects that primarily involve electronic signal installations and upgrades
- Railway-Highway Crossing: Elimination of Hazards
  - Projects that improve crossings geometrics or eliminate at-grade crossings with a separation structure





# Warning Devices

## WisDOT & OCR



- Typical Eligible Projects:
  - Flashing lights
  - Flashing lights and gates
  - Enhanced flashing lights & gates
    - Examples: with barrier curb, 4-quadrant gates
  - Adding cantilevered lights, gates
  - Circuitry adjustments/improvements (such as constant warning time)



# Elimination of Hazards

## WisDOT

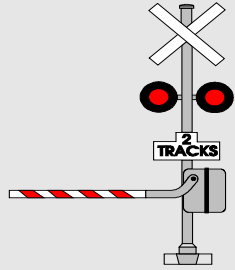
- Typical Eligible Projects

- Geometric improvements (grades and horizontal alignments)
- Modular crossings
- Grade separations\*
- Crossing consolidations
- Crossing closures
- Incentive payments to encourage closures

\*Limited to partial funding because of high cost of structures

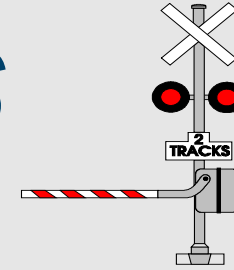






# Warning Devices

## OCR



- Locals or railroads can petition the OCR for improvements
- OCR may furnish match to federal funds
  - If OCR provides match, there is no cost to locals or railroads
- Annual Program Level = \$4.4 million
  - \$2.7M in Federal Funds
  - \$1.7M in State Funds

The Office of the Commissioner of Railroads (OCR) is the state agency with primary responsibility for making determinations of the adequacy of warning devices at railroad crossing, along with other railroad related regulations



# Warning Devices & Elimination of Hazards

## WisDOT

- An application package for each project must include – preferably in electronic form:
  - Completed Concept Definition Report
  - Rail Crossing Report (Form DT 1589)
  - Map showing the rail-highway crossing – and at least one alternative crossing, If possible
  - Any engineering diagrams needed to describe the proposed improvement
  - Digital photos of the crossing – from the standard WisDOT designated locations – as specified in WisDOT document: Digital Photographic Standards for Public Railroad Crossings
- Generally, a 10% local match is required
  - Railroad will pay match in certain situations
- Annual Program Level = \$650,000



# Program Cycle & Application Deadlines

- Four-year program of projects
- Program on annual cycle
- Current program is SFY2025-2028
- Next program is SFY2026-2029 (starts July 1, 2025)

Rail project applications may be submitted at any time



# Project Analysis

## The Process:

- Rail Projects Review Committee evaluates proposed projects – reviews benefit-cost analysis and engineering assessment
- Crossing Evaluation Procedure used to rank relative merits for the following types of projects:
  - Flashing lights
  - Flashing lights & gates
  - Enhanced flashing lights & gates
  - Grade Separations
  - Crossing closures
- The committee applies collective assessment and judgement to evaluate all other projects such as the addition of cantilevers or constant warning time circuitry



# Crossing Evaluation Procedure

## Benefit-Cost Analysis

- Assesses economic viability of projects by comparing safety benefits to life-cycle project costs
- Calculates net benefit (benefits – costs) and B/C ratio
- Benefits calculated:
  - Reductions in the economic costs of crashes
  - Reductions in vehicle delay and operating cost (separations only)
- Costs taken into account:
  - Initial construction
  - Expected annual maintenance and operating costs
  - Crossing surface replacement – when grade separation is an alternative
  - Miscellaneous costs (e.g. R/W)



# Railroad Coordinators

## NW Region

**Anna Davey**  
715.392.7960  
anna.davey@dot.wi.gov

## SW Region

**Scott Willinger (La Crosse)**  
608.799.8697  
gene.willinger@dot.wi.gov

## SW Region

**Teri Beckman (Madison)**  
608.733.1923  
teri.beckman@dot.wi.gov

## NC Region

**Caleb Herrin**  
715.712.8856  
caleb.herrin@dot.wi.gov

## NE Region

**Jared Kinzinger**  
920.492.7713  
jared.kinzinger@dot.wi.gov

## SE Region

**Jason Kazmierski**  
262.548.6770  
jason.kazmierski@dot.wi.gov  
**Rachel Nuetzel**  
262.548.5931  
rachel.nuetzel@dot.wi.gov

