

CM Toolbox for Intersections

Signalized						
Sr. No.	Code	Countermeasure Name	CM Description	CRF	Federal Funding	Systemic Approach Opportunity
HSIP/Non-HSIP Code						
1	S02	Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, etc.	Includes new LED lighting, signal back plates, retro-reflective tape outlining the back of the signal.	15%	100%	Very High
2	S03	Improve signal timing (coordination, phases, red, yellow, or operation)	Includes adding phases, lengthening clearance intervals, eliminating or restricting higher-risk movements, and coordinating signals at multiple locations.	15%	50%	Very High
3	S08	Convert signal to mast arm (from pedestal-mounted)	Intersections currently controlled by pedestal mounted traffic signals (in medians and/or on outside shoulder) that have a high frequency of right-angle and rear-end crashes occurring because drivers are unable to see traffic signals in advance to safely negotiate the intersection.	30%	100%	Medium
4	S09	Install raised pavement markers and striping (Through Intersection)	Addition of clear pavement markings, raised pavement marking to help guide motorists through complex intersections.	10%	100%	Very High
5	S12	Install raised median on approaches (S.I.)	Addition of raised medians next to left-turn lanes at intersections, directly over existing pavement.	25%	90%	Medium
6	S17PB	Install pedestrian countdown signal heads	A pedestrian countdown signal contains a timer display and counts down the number of seconds left to finish crossing the street. Countdown signals can reassure pedestrians who are in the crosswalk when the flashing "DON'T WALK" interval appears that they still have time to finish crossing.	25%	100%	Very High
7	S21PB	Modify signal phasing to implement a Leading Pedestrian Interval (LPI)	Addition of LPI gives pedestrians the opportunity to enter an intersection 3-7 seconds before vehicles are given a green indication; only minor signal timing alteration is required.	60%	100%	Very High

Unsignalized						
Sr. No.	Code	Countermeasure Name	CM Description	CRF	Federal Funding	Systemic Approach Opportunity
1	NS03	Install signals	Installation of traffic signals	30%	100%	Low
2	NS06	Install/upgrade larger or additional stop signs or other intersection warning/regulatory	enhance the ability of approaching drivers to perceive them	15%	100%	Very High
3	NS07	Upgrade intersection pavement markings	perceive them can be enhanced by installing	25%	100%	Very High
4	NS17	Install right turn lane	Provision of exclusive right-turn lanes, particularly on high-volume and high-speed major-road approaches.	20%	90%	Low
5	NS21PB	features)	opportunity to enhance pedestrian safety at locations noted as being especially	35%	100%	Medium
6	NS22PB	Install Rectangular Rapid Flashing Beacon (RRFB)	Rectangular Rapid Flashing Beacon (RRFB) includes pedestrian-activated flashing lights and additional signage that enhance the visibility of marked crosswalks and alert motorists to pedestrian crossings	35%	100%	Medium

CM Toolbox for Roadway Segments

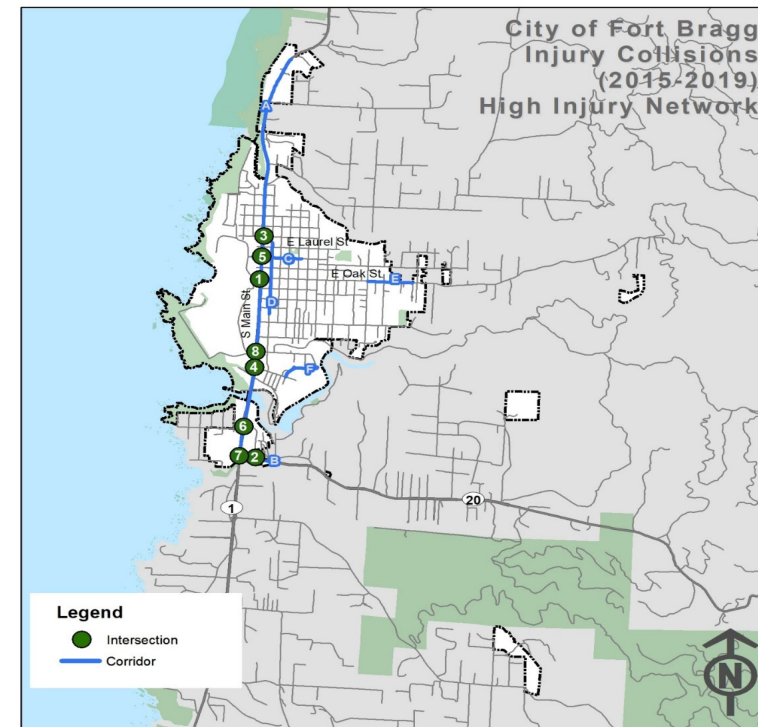
Sr. No.	Code	Countermeasure Name	CM Description	CRF	Federal Funding	Systemic Approach Opportunity
1	R22	Install/Upgrade signs with new fluorescent sheeting (regulatory or warning)	Additional or new signage can address crashes caused by lack of driver awareness or compliance of roadway signing.	15%	100%	Very High
2	R26	Install dynamic/variable speed warning signs	Includes the addition of dynamic regulatory signs (also known as Radar Speed Feedback Signs)	30%	100%	High
3	R34PB	Install sidewalk/pathway (to avoid walking along roadway)	Sidewalks and walkways provide people with space to travel within the public right-of-way that is separated from roadway vehicles.	80%	90%	Medium
4	R35PB	Install/upgrade pedestrian crossing (with enhanced safety features)	The enhanced safety elements, which may include curb extensions, medians and pedestrian crossing islands, beacons, and lighting, combined with pavement markings delineating a portion of the roadway that is designated for pedestrian crossing.	35%	90%	Medium
5	R36PB	Install raised pedestrian crossing	Ramped speed tables spanning the entire width of roadway or intersection	35%	90%	Medium

High-risk Intersections

ID	Intersection	Control	Consolidated CMs (HSIP-Eligible - Refer to LRSM* 2020)				Additional CM (non-HSIP)**	EA - 1 Improve Intersection Safety			EA - 2 Improve Pedestrian Safety			EA - 3 Reduce Improper Turning Collisions			EA - 4 Reduce Route 1 Collisions			EA - 5 Reduce Alley Way collisions		
			CM1	CM2	CM3	CM4		CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3
I-1	Redwood Ave and Route 1/S Main St	Signalized		S03	S08	S21PB	Install ADA curb ramps, install advance ped warning signs, verify crosswalk width		S03	S08	S17PB	S21PB			S08			S03	S08			
I-2	Oak St and Route 1/S Main St	Signalized		S03	S9	S21PB	Advance ped warning signs		S03	S09		S21PB		S09				S03	S09			
I-3	Boat Yard Dr and Route 20	Two way stop controlled	NS06				Reduce corner radius of NW and NE corners with planters or striping	NS06						NS06								
I-4	Pine St and Route 1/ S Main St	Two way stop controlled	NS21PB	NS22PB			Stripe high visibility crosswalk, update ADA ramps, radar speed feedback signs along Main St	NS21PB	NS22PB		NS21PB	NS22PB					NS21PB	NS22PB				
I-5	South St and Route 1/S Main St	One way stop controlled	NS06	NS21PB			Reduce corner radius for southeast corner	NS06	NS21PB		NS21PB						NS06	NS21PB				
I-6	Boat Yard Drive and Route 1/ S Main St	Signalized		S03	S09	S12	Install ADA curb ramps, install intersection warning signs		S03	S12					S12			S03	S12			
I-7	Route 1 and Route 20	Signalized		S03			Install intersection warning signs, radar feedback signs on SB approach		S03						S03			S03				
I-8	Cypress St and Route 1/ S Main St	Signalized	S03	S21PB			Stripe high visibility crosswalk, install ADA ramps, upgrade pavement markings		S03			S21PB						S03				
Identified from Stakeholder Input																						
I-9	Traffic Safety around Schools		NS06	NS22PB			Other traffic calming measures near schools	NS06	NS22PB		NS22PB			NS06								
I-10	Highway 1/Main Street and Pudding Creek Road	One way stop controlled	NS03	NS06				NS03	NS06					NS03	NS06		NS03	NS06				
I-11	Noyo Point Road and S Main Street	Two way stop controlled	NS06	NS07			Restrict left turns from Noyo	NS07						NS07			NS07					

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HSIP/Non-HSIP Code	
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S03	Improve signal timing (coordination, phases, red, yellow, or operation)
S08	Convert signal to mast arm (from pedestal-mounted)
S09	Install raised pavement markers and striping (Through Intersection)
S12	Install raised median on approaches (S.I.)
S17PB	Install pedestrian countdown signal heads
S21PB	Modify signal phasing to implement a Leading Pedestrian Interval (LPI)

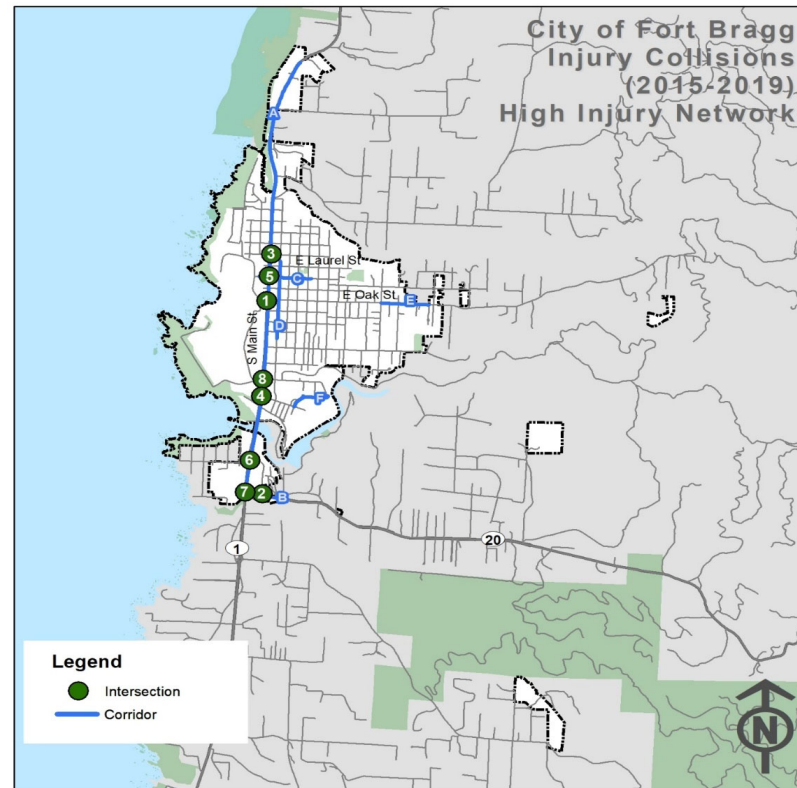
Code	Countermeasure Name
NS03	Install signal
NS06	Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs
NS07	Upgrade intersection pavement markings
NS17	Install right turn lane
NS21PB	Install/upgrade pedestrian crossing at uncontrolled locations (with enhanced safety features)
NS22PB	Install Rectangular Rapid Flashing Beacon (RRFB)



High-risk Roadway Segments

ID	Roadway Segment	Consolidated CMs (HSIP-Eligible - Refer to LRSM* 2020)				Additional CM (non-HSIP)**	EA - 1 Improve Intersection Safety			EA - 2 Improve Pedestrian Safety			EA - 3 Reduce Improper Turning Collisions			EA - 4 Reduce Route 1 Collisions			EA - 5 Reduce Alley Way Collisions		
		CM1	CM2	CM3	CM4		CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3	CM1	CM2	CM3
A	Main St/Route 1: Jane Ln to Highway 20/ Fort Bragg Willits Rd	R22	R26	R34PB	R35PB	bike route signange				R34PB	R35PB		R22			R22	R26	R35PB			
B	Highway 20/ Fort Bragg Willits Rd: Route 1 to South Harbor Dr	R22	R26			Restripe intersection corners							R22								
C	Redwood Ave: West Terminus to North Whipple St	R01	R22	R22	R22	Install ADA curb ramps; upgrade pavement markings				R35PB	R36PB		R22								
D	Franklin St: Laurel St to E Chestnut St	R22				Restrict parking near intersection to increase sight distance (red curbs)							R22								
E	Fort Bragg Sherrwood Rd: California Way to Dana St	R22	R34PB			Install Class III bike route markings, reduce parking near intersection corners				R34PB			R22								
F	River Dr/ Kempe Way: South St to Cypress St	R22	R35PB	R01		Install streetlights to increase ped visibility near hospital				R01	R35PB		R22								
Identified from Stakeholder Input																					
G	Alleyways					Limit parking near alley exits to increase sight distance															
H	Chestnut Street	R26				traffic calming measures															

Code	Countermeasure Name
R22	Install/Upgrade signs with new fluorescent sheeting (regulatory or warning)
R26	Install dynamic/variable speed warning signs
R34PB	Install sidewalk/pathway (to avoid walking along roadway)
R35PB	Install/upgrade pedestrian crossing (with enhanced safety features)
R36PB	Install raised pedestrian crossing



	Strategy	Performance Measure	Organizations to be involved
Education	Conduct public information and education campaign for intersection safety laws, unsafe speeds, distracted driving, improper turning and driving under the influence.	Number of education campaigns	City/ School District/ Police Department
	Conduct pedestrian safety campaigns and outreach to raise their awareness of pedestrian safety needs through media outlets, social media and Bike and Walk Mendocino. Update pamphlet for crosswalk safety for Fort Bragg every 3-5 years	Number of education campaigns	City/ School District/ Police Department
	Conduct bicycle safety campaigns and outreach to raise their awareness of bicycle safety needs through media outlets, social media and Bike and Walk Mendocino. Update pamphlet for bicycle safety for Fort Bragg every 3-5 years	Number of education campaigns	City/ School District/ Police Department
Enforcement	Targeted enforcement at high-risk locations.	Number of tickets issued.	Police Department
	Increase the number of personnel who have completed Advanced Roadside impaired Driving Enforcement (ARIDE) training	Number of personnel who have completed Advanced Roadside impaired Driving Enforcement (ARIDE) training	Police Department
Emergency Medical Services (EMS)	S05, Install emergency vehicle pre-emption systems	EMS vehicle response time.	Mendocino County Local Emergency Services Agency
	Increase the number of EMS/fire control personnel taking Traffic Incident Management Training	number of EMS/fire control personnel taking Traffic Incident Management Training	Mendocino County Local Emergency Services Agency