



Northeastern Indiana Regional Coordinating Council

Local Road Safety Plan
Wells County, Indiana

Wells County Highway Department

Introduction

A Local Road Safety Plan (LRSP) is a FHWA proven countermeasure to improve safety on rural and local roadways. It provides a framework for identifying, analyzing, and prioritizing roadway safety improvements on local roadways. The process helps to prioritize issues, risks, actions, and improvements to address serious injury and fatal crashes within an area. The Wells County LRSP was developed using crash data obtained through ARIES by the Northeastern Indiana Regional Coordinating Council (NIRCC). Crash data from 2015-2019 was used to derive the information within the plan.

Purpose

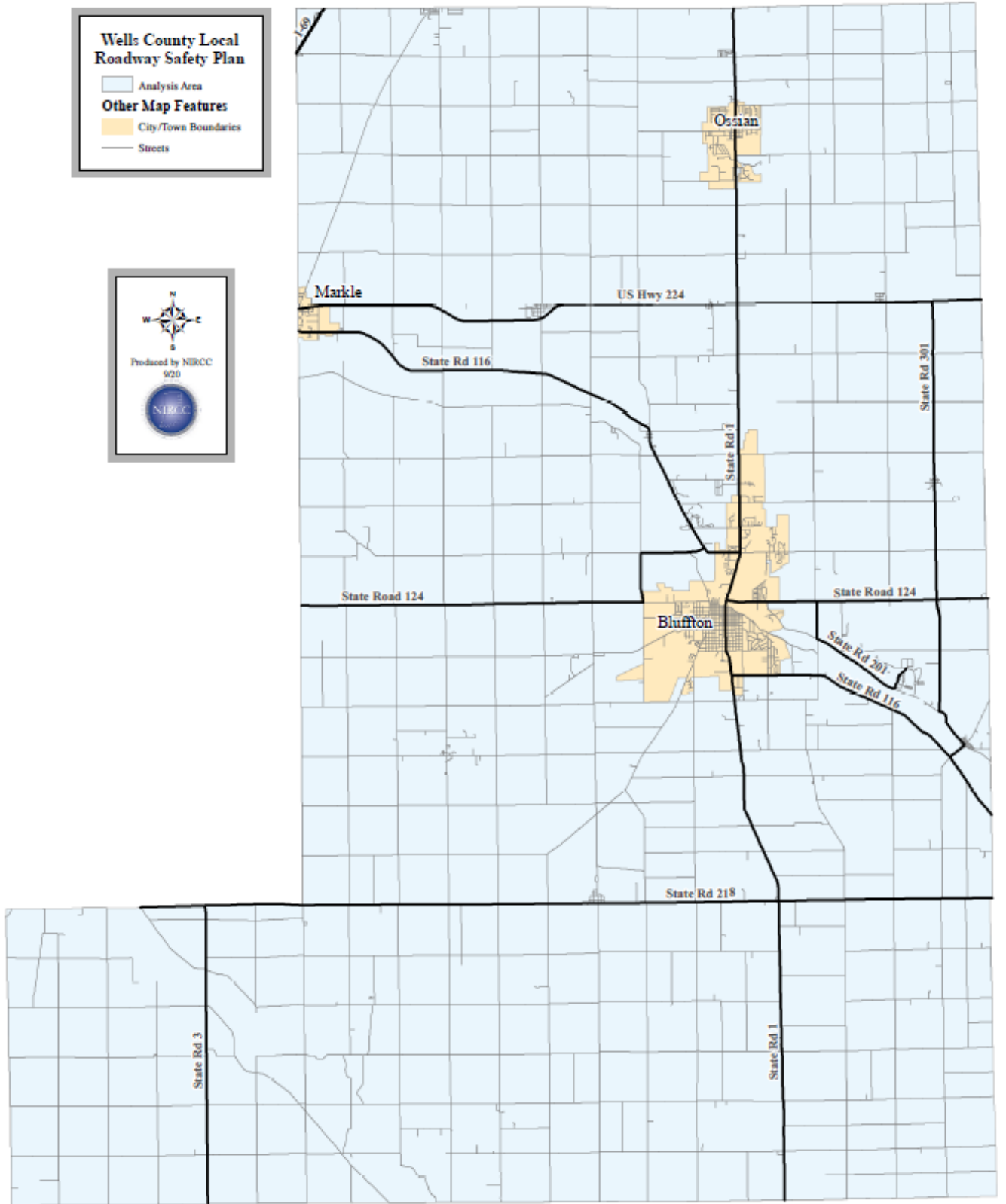
The Local Road Safety Plan is a mechanism to determine the primary safety factors for roadway crashes and corrective actions within Wells County. The crash data from the five-year period of 2015 to 2019 will provide the information for local officials to use in determining crash types and crash locations that result in serious injuries and fatalities. The focus of the plan is the locally owned roadways in non-incorporated areas of Wells County. Crashes on INDOT facilities and within limits of Bluffton, Ossian, and Markle have been removed from the analysis (FIGURE 1).

**Wells County Local
Roadway Safety Plan**

- Analysis Area
- Other Map Features
 - City/Town Boundaries
 - Streets



Produced by NIBCC
920



Crash Analysis

The Local Road Safety Plan assists in determining what the primary crash types in a geographical area are and where they are occurring. Once these two facts have been determined the objective is to understand the factors contributing to the crashes and identify corrective actions to mitigate these in the future. The Northeastern Indiana Regional Coordinating Council analyzed the frequency of each crash type within Wells County by local and INDOT facilities. The data showed on local roadways that ran off roadway was the most frequent crash type (TABLE 1). Roadway departure crashes occur from a variety of reasons including leaving the lane of travel. Additional crash types are often attributed to this same action. Vehicles may leave the lane of travel for various reasons such as speed too fast for weather conditions, inattention, animal or object in the roadway, or mechanical issues. Therefore, additional crash types were combined in the analysis to include head on, non-collision, and sideswipe crashes.

Local roadways also experience serious injury and fatal crashes where ran off roadway crashes were the primary crash type for all facility types in Wells County. The additional crash types that involve vehicles leaving the lane of travel and causing a different type of crash other than “ran off roadway” (TABLE 2) were also identified.

TABLE 1*2015-2019 Crash Data (Includes All Data)*

CRASH TYPE	All Wells Co Crash Data		All Wells Co Crash Data - INDOT		All Wells Co Crash Data - Local	
	Total	%	Total	%	Total	%
BACKING CRASH	148	5%	52	3%	96	8%
COLLISION WITH ANIMAL OTHER	58	2%	30	2%	28	2%
COLLISION WITH DEER	580	19%	373	21%	207	17%
COLLISION WITH OBJECT IN ROAD	42	1%	23	1%	19	2%
HEAD ON BETWEEN TWO MOTOR VEHICLES	35	1%	22	1%	13	1%
LEFT TURN	108	4%	76	4%	32	3%
LEFT TURN/RIGHT TURN	30	1%	20	1%	10	1%
NON COLLISION	24	1%	13	1%	11	1%
OPPOSITE DIRECTION SIDESWIPE	56	2%	32	2%	24	2%
OTHER EXPLAIN IN NARRATIVE	172	6%	69	4%	103	8%
RAN OFF ROAD	661	22%	291	16%	370	30%
REAR END	518	17%	457	25%	61	5%
REAR TO REAR	4	0%	4	0%	0	0%
RIGHT ANGLE	364	12%	190	11%	174	14%
RIGHT TURN	29	1%	24	1%	5	0%
SAME DIRECTION SIDESWIPE	189	6%	124	7%	65	5%
UNKNOWN	12	0%	9	0%	3	0%
TOTAL	3030		1809	60%	1221	40%

Serious injury and fatal crashes were also reviewed to determine the most frequent crash types, locations, facility type, and roadway characteristics. There were a total of 280 serious injury and fatal crashes in Wells County between 2015 and 2019 (Table 2). INDOT facilities had 171 (61 %) of these while local roadways had 109 (39%). The local road safety plan focused on the locally owned roadways and then excluded those in the urban areas which included the city limits of Bluffton, Markle, and Ossian.

TABLE 2*2015-2019 Crash Data (Includes All Serious Injury and Fatal Crashes)*

CRASH TYPE	All (INJ / FAT)		INDOT (INJ / FAT)		LOCAL (INJ / FAT)	
	Total	% of All	Total	% of INDOT	Total	% of Local
BACKING CRASH	2	0.71%	0	0.00%	2	1.83%
COLLISION WITH ANIMAL OTHER	2	0.71%	1	0.58%	1	0.92%
COLLISION WITH DEER	3	1.07%	3	1.75%	0	0.00%
COLLISION WITH OBJECT IN ROAD	4	1.43%	3	1.75%	1	0.92%
HEAD ON BETWEEN TWO MOTOR VEHICLES	13	4.64%	9	5.26%	4	3.67%
LEFT TURN	13	4.64%	13	7.60%	0	0.00%
LEFT TURN/RIGHT TURN	2	0.71%	1	0.58%	1	0.92%
NON COLLISION	4	1.43%	2	1.17%	2	1.83%
OPPOSITE DIRECTION SIDESWIPE	8	2.86%	7	4.09%	1	0.92%
OTHER EXPLAIN IN NARRATIVE	17	6.07%	9	5.26%	8	7.34%
RAN OFF ROAD	90	32.14%	46	26.90%	44	40.37%
REAR END	36	12.86%	31	18.13%	5	4.59%
REAR TO REAR	0	0.00%	0	0.00%	0	0.00%
RIGHT ANGLE	75	26.79%	39	22.81%	36	33.03%
RIGHT TURN	4	1.43%	4	2.34%	0	0.00%
SAME DIRECTION SIDESWIPE	6	2.14%	2	1.17%	4	3.67%
UNKNOWN	1	0.36%	1	0.58%	0	0.00%
TOTAL	280		171	61.07%	109	38.93%

Lane Departure Crashes

A crash tree was created showing all lane departure crashes. This includes all roadways and incorporated areas within Wells County. There was a total of 776 lane departure crash types and 115 of them resulted in a serious injury or fatality (FIGURE 2).

FIGURE 3 is a crash tree showing only local roadways, outside of incorporated areas of Bluffton, Ossian, and Markle and excludes INDOT facilities. This showed that 337 of the total 776 lane departure crashes (43 percent) were occurring on these roadways. Of these, 39 of the 115 crashes resulted in serious injury or fatality which is 34 percent of the total.

FIGURE 2

Wells County
Lane Departure Crashes
ROR / HO / ODSS / NC

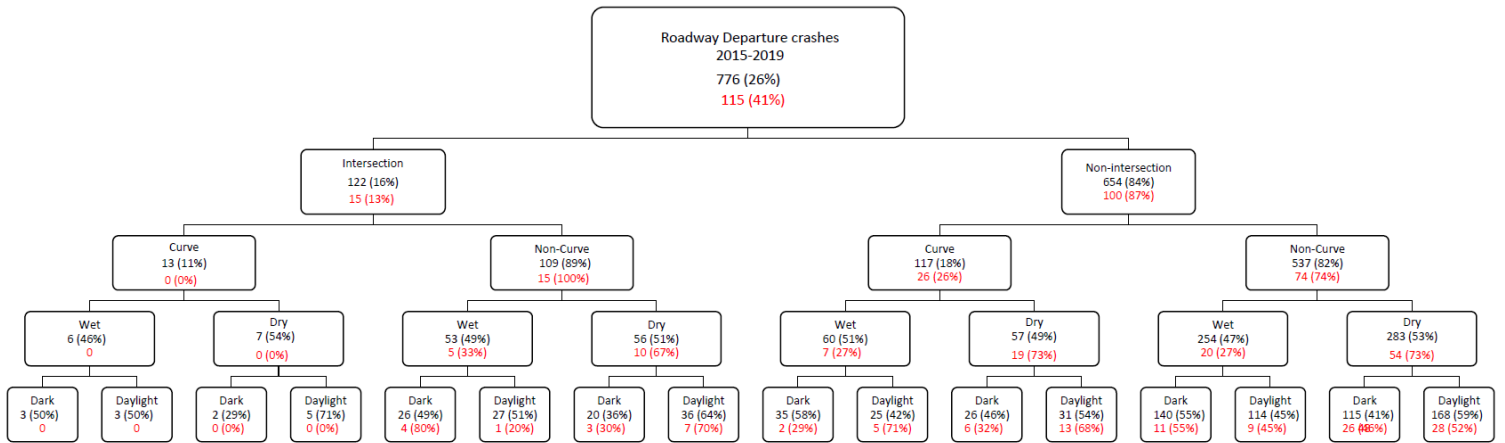
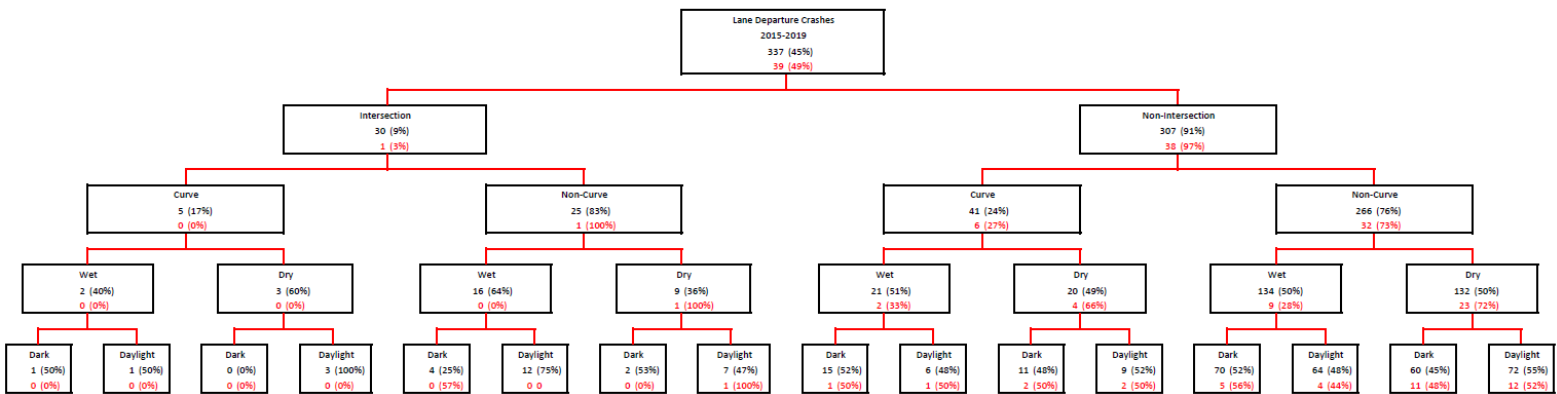


FIGURE 3

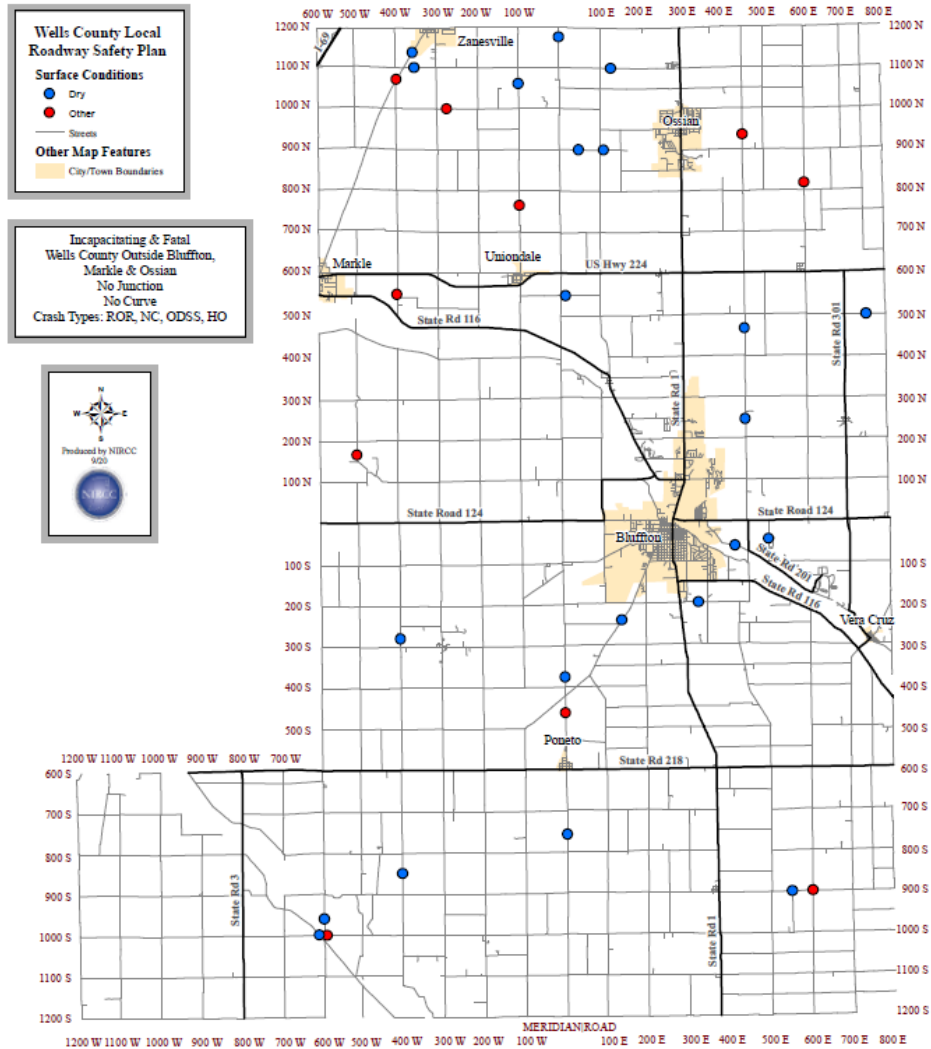
Wells County (Outside incorporated areas and excluding INDOT roads) 2015-2019

Ran Off Roadway / Head On / Opposite Direction Sideswipe / Non Collision



Corridors Identified

Lane departure crashes in FIGURE 3 were mapped to identify the corridors where this crash was occurring. The roadways with more than one serious injury or fatal crashes occurred were:



- 400 W (four crashes)
- Meridian Rd (four crashes)
- 450 E (three crashes)
- 1100 N (two crashes)
- 900 N (two crashes)
- 900 S (two crashes)
- 1000 S (two crashes)

Action Plan

- County to hold annual Local Road Safety Plan, LRSP, review and stakeholder meeting to review plan and comments.
- County to adopt county highway standards of construction consistent with recommendations of the stakeholders.
- County to adopt standard right of way limits for local roads, rural minor collectors, rural major collectors and rural arterial roadways.
- County to investigate with NIRCC crash data to identify demographic distinctions and educational needs for future.
- County to use LRSP to better equip law enforcement agencies for patrol and enforcement activities.
- County to pursue road right of way acquisition via donations and acquisitions across the county consistent with the County standards and engineering need defined by specific projects.
- County will use highway department and contractors to remove permanent obstructions with the public right of way that would obstruct the clear zone.
- County will install pavement markings on roadways that meet MUTCD guidance.
- County will provide recoverable edge of pavement on identified roadways where road departure crashes are likely to result in serious injury or death.
- County will ensure curves are properly marked in accordance with MUTCD guidance and install increased measures at curves identified as having prior serious injury or fatal crashes.
- County will install centerline and edgeline rumble strips on applicable roadways identified as high risk for lane departure crashes, where the pavement width will support the installation.
- County will ensure roadway widths and paved sections are consistent with maintaining the desired speed of traffic on roadways

