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# US 31 at SR 10 Intersection Improvement

Tuesday, September 19, 2017



# Welcome

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- Purpose/explanation of public hearing
- Public hearing format
- Visit our sign-in table
- Informational handouts
- Participate during public comment session
- Submit written public comments
- Project display area



# US 31 at SR 10 J-Turn

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- **Introduction of INDOT Project Team**

- Project Management
- Public Involvement
- LaPorte District – INDOT Regional Office
- Environmental Services
- Troyer Group
  - Engineering, Design & Environmental Analysis Team

- **Recognition of elected and local public officials**

- Sign-in at attendance table to be added to project mailing list
- Legal notice of public hearing was published in the Pilot News (Plymouth) on 9/1, 9/8 & 9/15
- A notice of the public hearing was mailed to known property owners within project area
- Announcement of this hearing was posted to INDOT website. A media release was also issued
- A copy of presentation and project documentation are available for review on-line via INDOT website

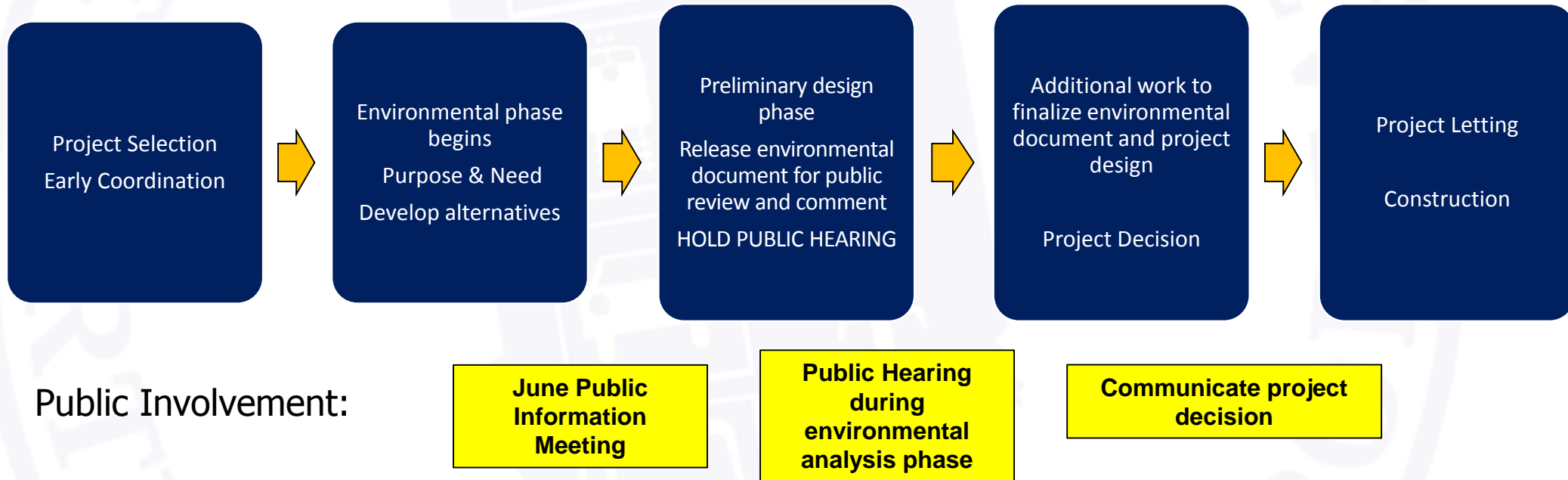
# Project Stakeholders

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- Indiana Department of Transportation
- Indiana Division Federal Highway Administration
- Marshall County & Town of Argos
- Elected & Local officials
- Residents and citizens
- Commuters
- Businesses
- Emergency services
- Schools
- Churches
- Community Organizations



# Project Development



# Environmental Document

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## **National Environmental Policy Act (NEPA)**

- Requires INDOT to analyze and evaluate the impacts of a proposed project to the natural and socio-economic environments
- NEPA is a decision-making process
  - Purpose and Need
  - Alternatives Screening
  - Preferred Alternative
- **Impacts are analyzed, evaluated and described in an environmental document**
  - What are the impacts this project might have on the community?
  - How can impacts be avoided?
  - Can impacts be minimized?
  - Mitigation for impacts?
- **Draft environmental document to be released for public involvement**
  - Is available for review via public repositories

# Purpose and Need

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- **Purpose**

- To enhance safety for vehicular traffic at the intersections of U.S. 31 and S.R. 10 and U.S. 31 at Dewey Street

- **Need**

- To improve the existing intersection configuration, reduce the number of accidents and address sight distance issues at this location
  - Sight distance issue related to road grade and intersection proximity to railroad bridge south of S.R. 10

# Alternatives Considered

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- **No Build**

- Would not improve safety at intersection

- **Signalized Intersection**

- Traffic on minor legs (SR 10 and SR 110) do not warrant a signalized intersection when compared to traffic on major leg (US 31)

- **Interchange** (specifically at SR 10)

- Implementation would take years of planning and design, would not address safety concerns in a timely fashion

- **J-Turn Intersection (Preferred Alternative)**

- Meets purpose & need of project
- Enhances safety at intersection by eliminating or significantly reducing injury crashes
- Can be implemented in one construction season



# Project Resource Locations

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- **INDOT LaPorte District Office**
  - 315 E. Boyd Boulevard, LaPorte, IN 46350
  - Toll Free 1-855-464-6368
  - [LaPorteDistrictCommunications@indot.in.gov](mailto:LaPorteDistrictCommunications@indot.in.gov)
  - <http://www.in.gov/indot/2705.htm>
  - Planning, Project Development/Delivery, Construction, Maintenance for Northwest Indiana
- **Argos Public Library** - 142 N Michigan St., Argos, IN 46501
- **INDOT Office of Public Involvement**
  - 100 North Senate Avenue, Room N642, Indianapolis, IN 46204
  - Phone (317) 232-6601
  - [rclark@indot.in.gov](mailto:rclark@indot.in.gov)



# Crash Data

Crash Data for US 31 at SR 10 (2012-2016)						
SEVERITY	2012	2013	2014	2015	2016	Total
Crash with no Injury	1	2	4	8	5	20
Non-Incapacitating Injury	1	-	3	4	-	8
Incapacitating Injury	1	-	5	-	5	11
Fatal	-	-	1	-	-	1
<b>TOTALS</b>	<b>3</b>	<b>2</b>	<b>13</b>	<b>12</b>	<b>10</b>	<b>40</b>

# Existing Intersection Geometry

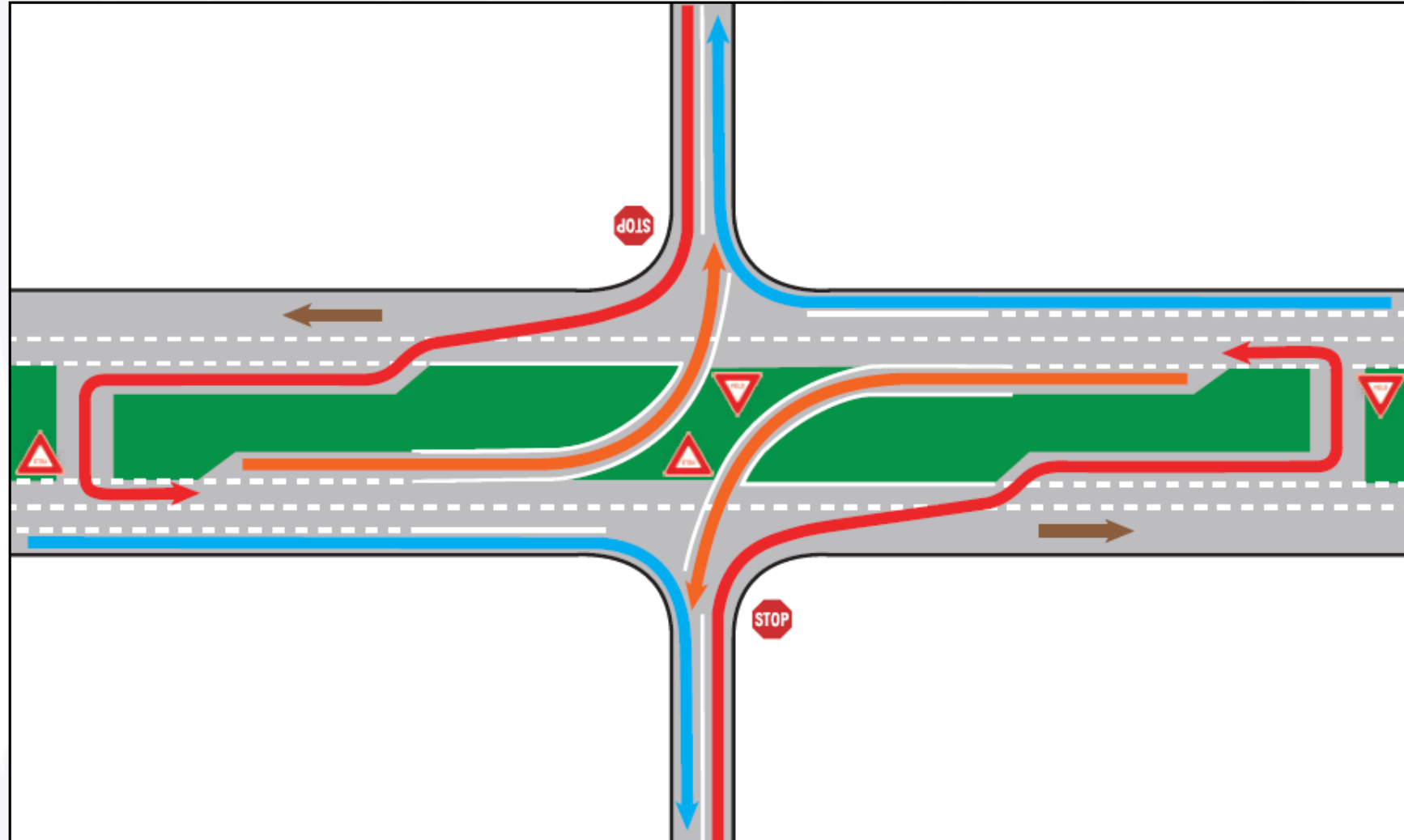
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- Crashes most often involve through movements and left turns being struck on the far side of the wide intersection.



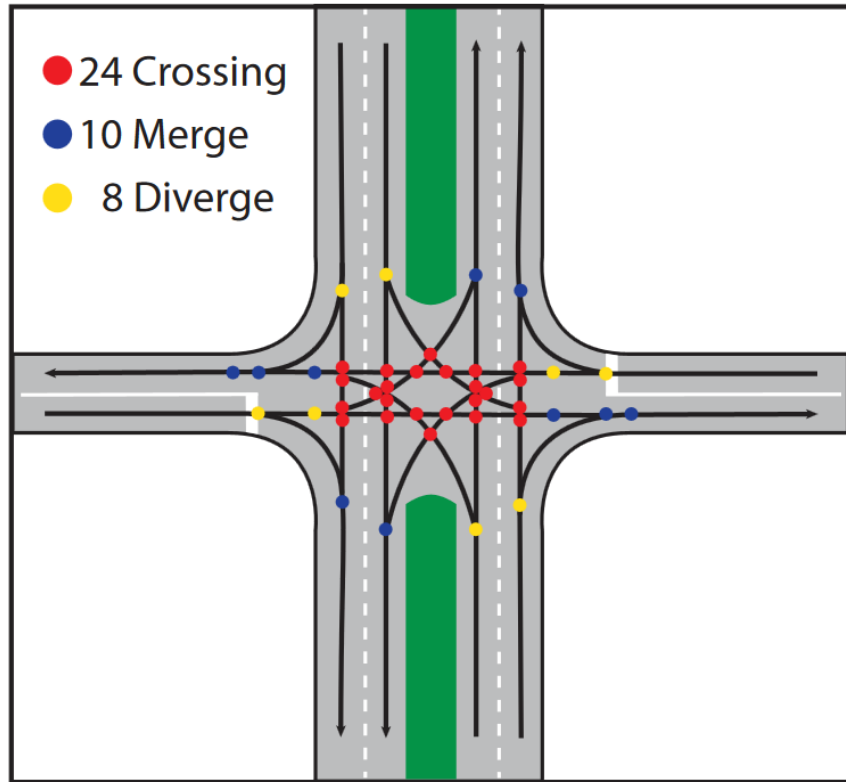
# J-Turn – INDOT Preferred Alternative

- Left turns and crossing minor roads are made using U-turn movement on major road.
- Left turns from major road are made under yield (as current)



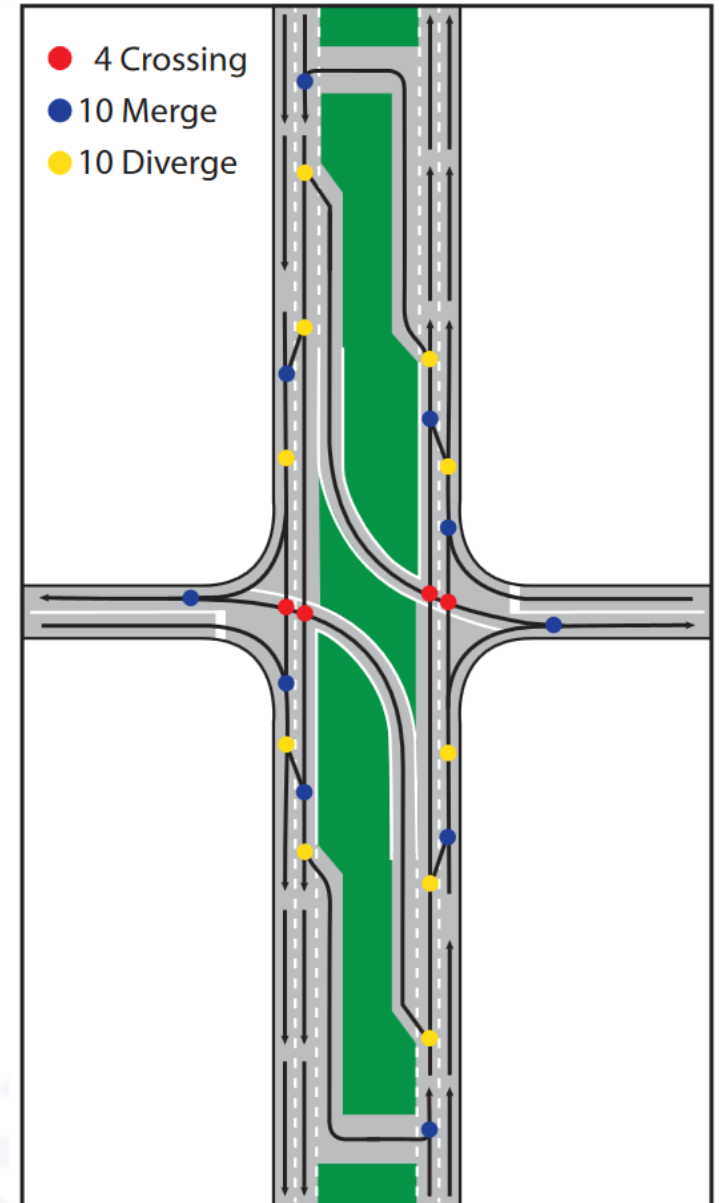
# Benefits of J-Turns

- **Conflict points are dramatically reduced**



Conventional Intersection

J-Turn Intersection



# Benefits of J-Turns

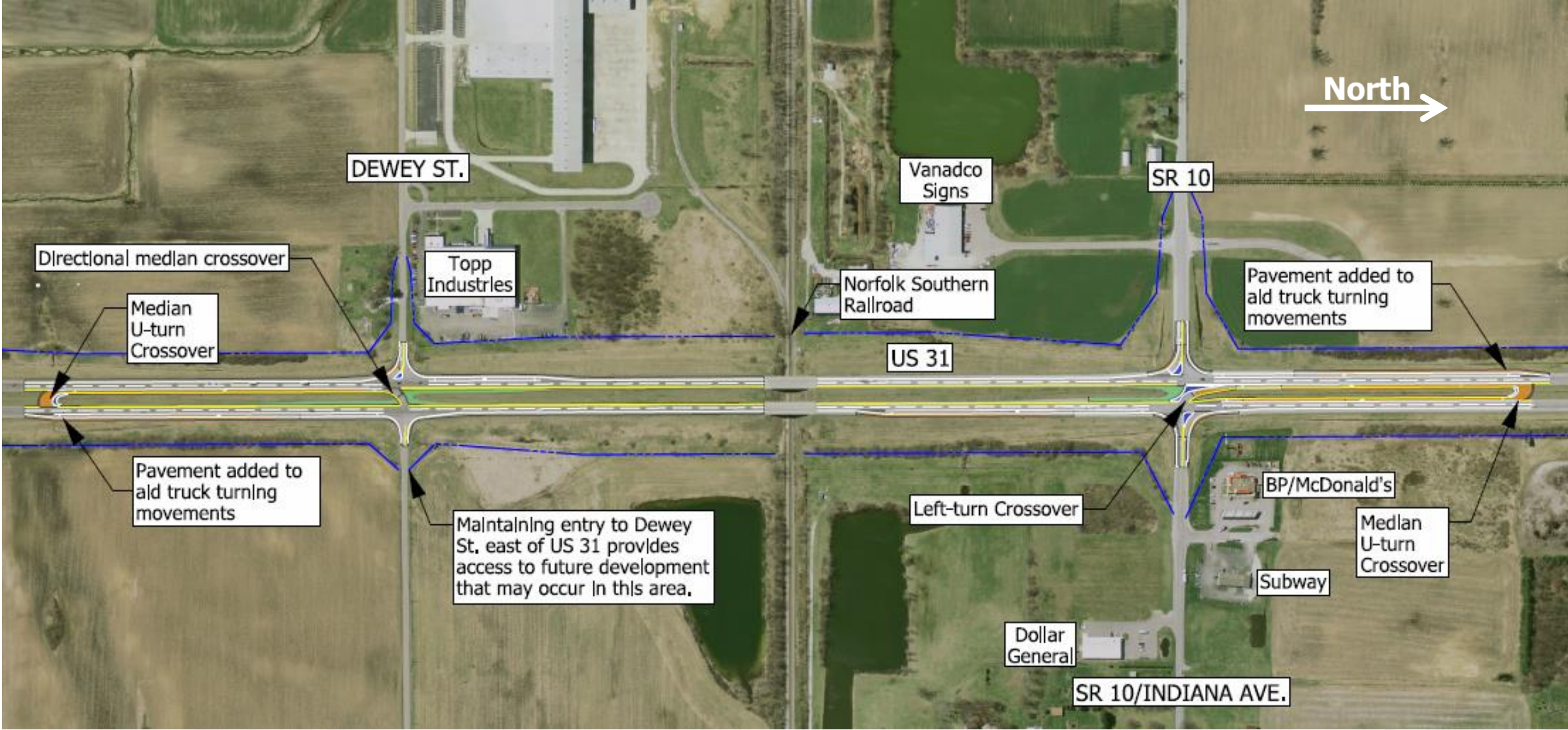
- **Reduces crashes and severity significantly**

Case Studies Collision Summary by Type			
	Before	After	%Change
Rear End	13	8	-38 %
Angle	47	0	-100 %
Turning	32	10	-69 %
Sideswipe	8	3	-63 %
<b>TOTALS</b>	<b>100</b>	<b>21</b>	<b>-79 %</b>

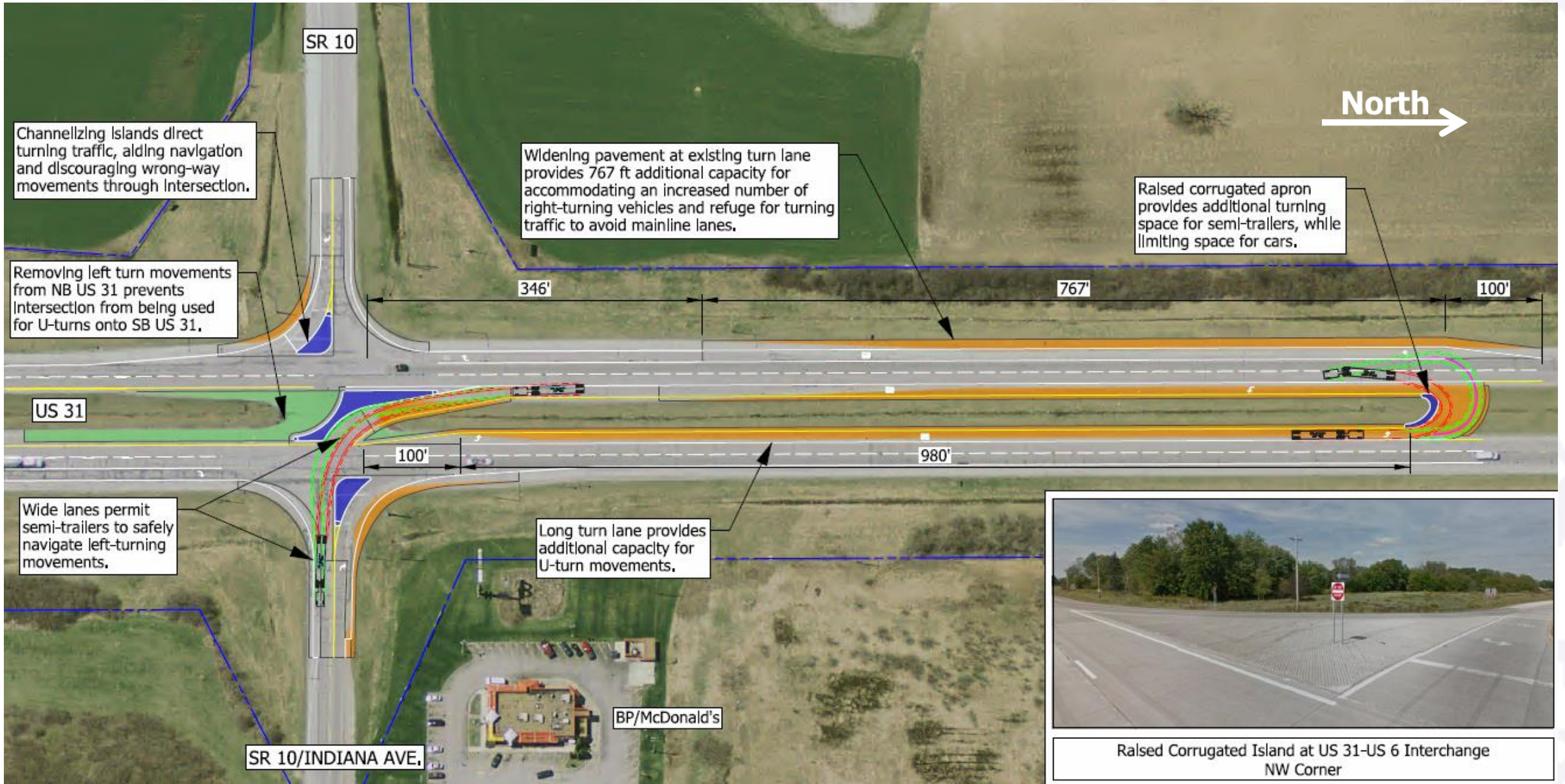
Case Studies Collision Summary by Severity			
	Before	After	%Change
Injury	56	10	-82 %
Fatality	2	1	-50 %

Source "Spot Safety Project Evaluation", #02-00-208/02-00-209 #11-99-210 #14-97-018 NCDOT Safety Evaluation Group, 2005 and 2006

# J-Turn Layout - US 31 at SR 10

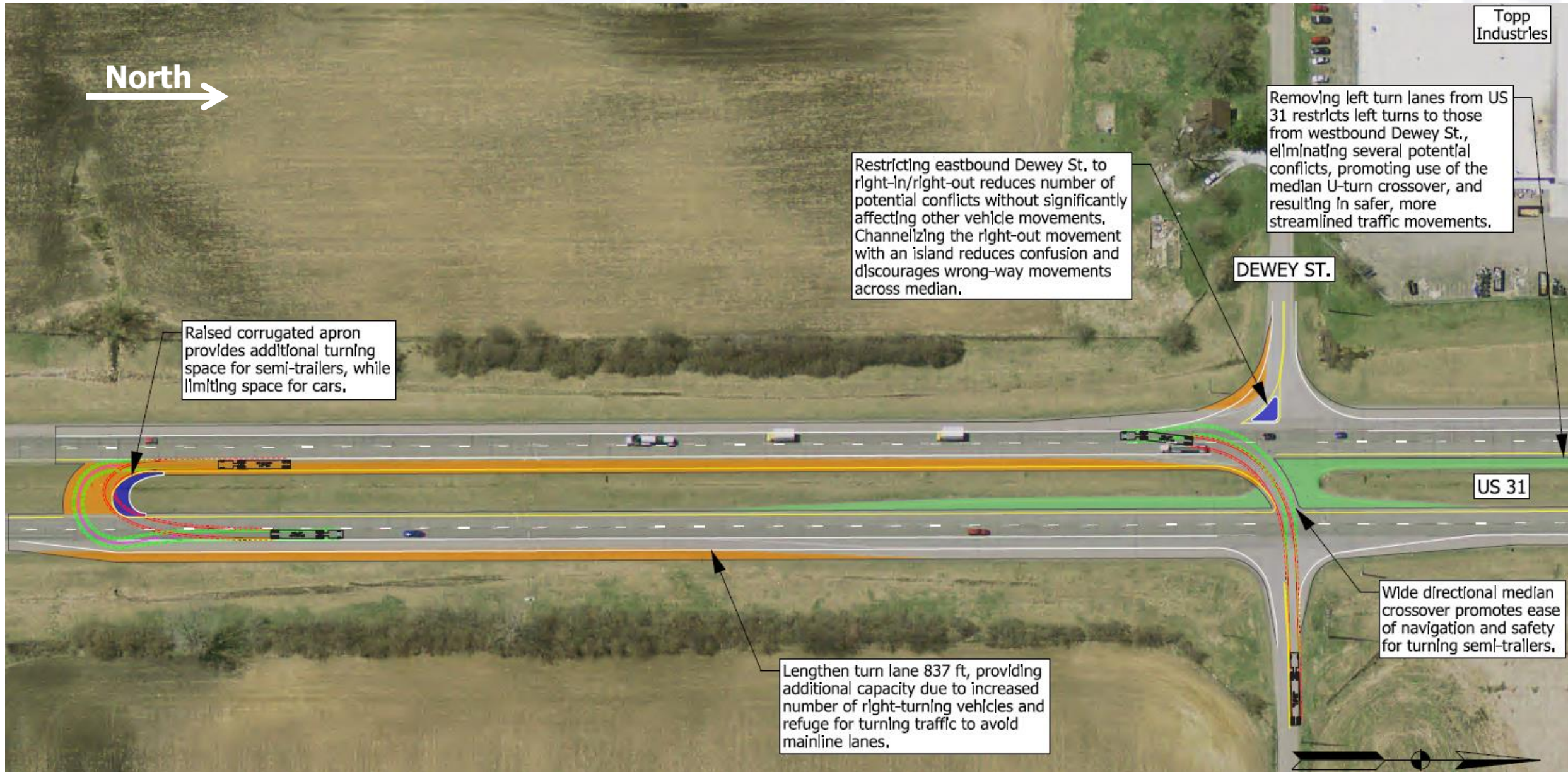


# North Crossover - US 31 at SR 10





# South Crossover - US 31 at SR 10



# Recent Case Study

- US 41 at SR 114, near Morocco, IN
- First J-turn intersection in Indiana
- Improvement needed to reduce injury accidents
- New intersection alignment opened in May, 2015
- **Zero injury accidents** in nearly two ½ years since opening

Before:



After:



# Summary of Comments

Public Inf. Meeting (June)

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- **Preference for an interchange**

- Project purpose is to improve safety - immediately and cost-effectively
- Immediate improvements will not prohibit an interchange in the future



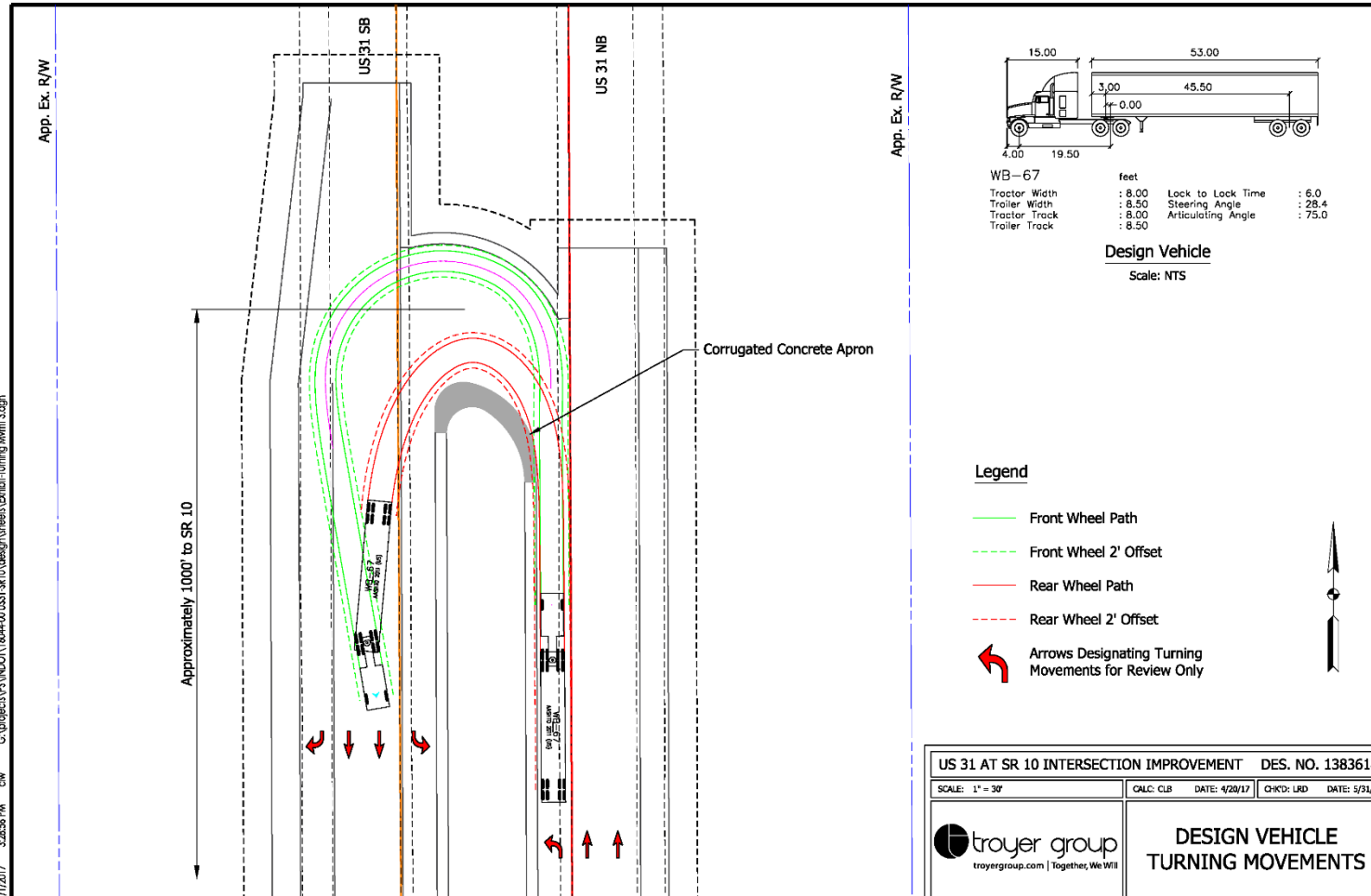
# Future US 31 Upgrades

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- *INDOT is developing a strategy to upgrade US 31.*
- *Potential location of interchanges based on:*
  - *Traffic Volume*
  - *Safety*
  - *Access*
  - *Consistency with regional road network*
  - *Cost*
- *Immediate operational and safety concerns on US 31 will be addressed with small, cost-effective solutions*
- *Immediate improvements will not impact plan for upgraded US 31 corridor.*

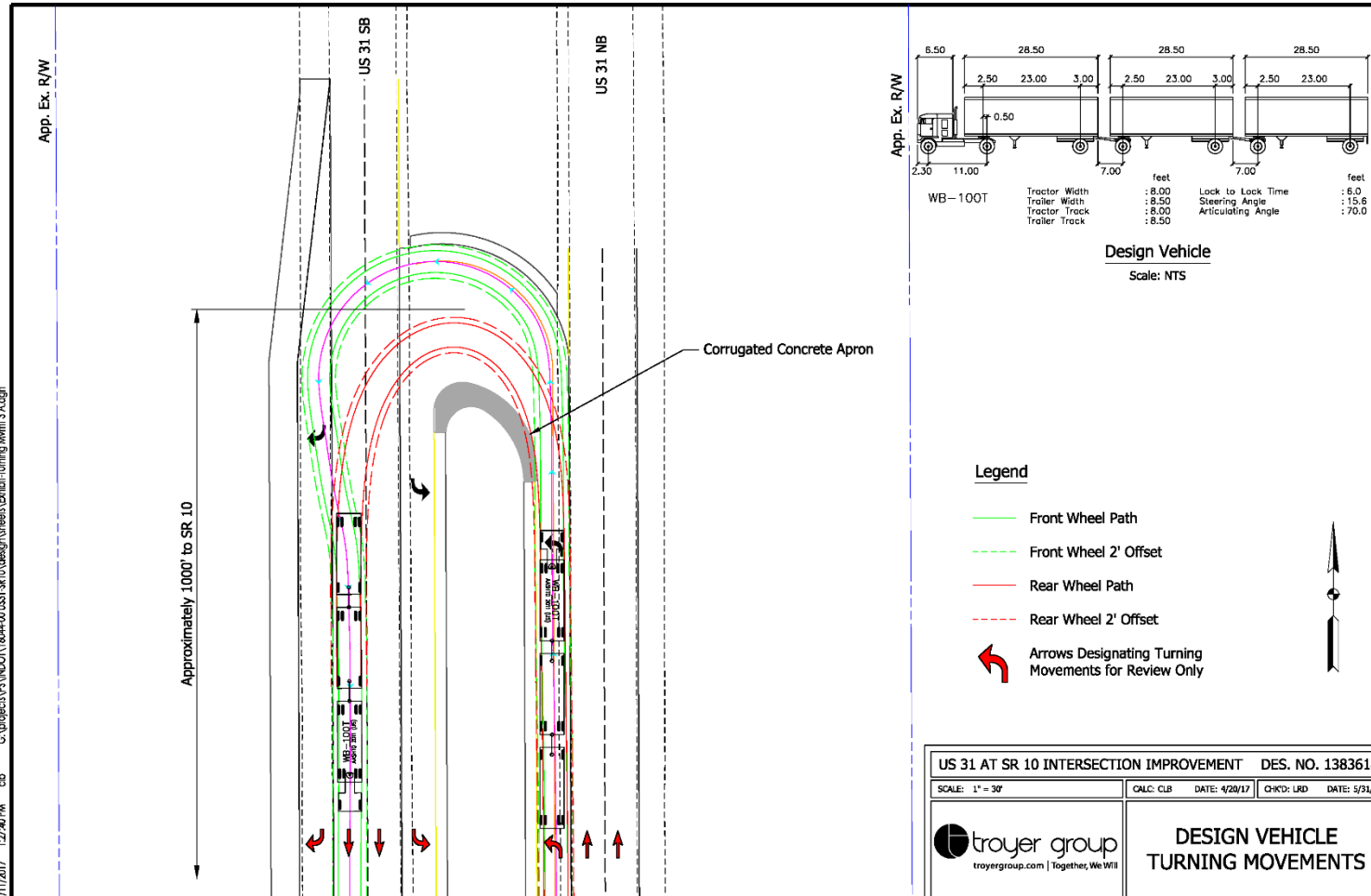
# Summary of Comments Public Inf. Meeting (June)

## Maneuverability of large vehicles (semis, livestock trailers, farm equipment, school buses)



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# Summary of Comments

Public Inf. Meeting (June)

## **Maneuverability of large vehicles (semis, livestock trailers, farm equipment, school buses)**

- *Cite US 41- SR 114*
  - *Videos*



# Summary of Comments

Public Inf. Meeting (June)

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## **Economic Impact due to restriction of truck access**

- Truck access will not be eliminated
- Time increase for cross traffic ranges from 30 to 60 seconds
- *Insert Traffic Simulation here*





# Summary of Comments Public Inf. Meeting (June)

## Economic Impact due to restriction of truck access

- Proposed Configuration will maintain or improve capacity of intersection.

Location Description	Node ID	Approach LOS	
		Existing	Proposed
EB SR 10 @ US 31	7	C	B
WB SR 10 Crossover	7	C	-
WB SR 10 @ US 31	8	C	B
EB SR 10 Crossover	8	C	C
EB Dewey @ US 31	2	B	B
WB Dewey Crossover	2	B	B
WB Dewey @ US 31	4	B	B
EB Dewey Crossover	4	B	-
North U-Turn	11	-	B
South U-Turn	5	-	B

### LEVELS OF SERVICE for Two-Way Stop Intersections

Level of Service	Flow Conditions	Delay per Vehicle (seconds)	Technical Descriptions
<b>A</b>		≤10	Very short delays
<b>B</b>		11-15	Short delays
<b>C</b>		16-25	Minimal delays
<b>D</b>		26-35	Minimal delays
<b>E</b>		36-50	Significant delays
<b>F</b>		>50	Considerable delays

Source: 2000 HCM, Exhibit 17-2, Level of Service Criteria for TWSC Intersections

# Summary of Comments

Public Inf. Meeting (June)

## **Project purpose is to reduce travel time between South Bend and Indianapolis**

- No reduction from project

## **Emergency vehicle response across US 31 will take longer**

- No more than 30 seconds added to response time

## **J-turns will not accommodate horse and buggy traffic**

- J-Turn will maintain refuge area off US 31 travel lanes
- Current refuge is in center crossover area
- J-Turn refuge is in shoulders along left and right turn lanes

# Summary of Comments

Public Inf. Meeting (June)

## **US 31 traffic volumes are too high for a J-Turn.**

- J-turns have been implemented successfully in areas across the U.S.
- Many on four lane divided highways with higher traffic than on US 31.
  - Missouri - 1 ½ times the traffic
  - Maryland - 2 ½ times the traffic
  - Michigan - 5 ½ times the traffic



# Project Schedule

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- Public Information Meeting – June 2017
- NEPA document released for public involvement August 2017
- Public Hearing - September 2017
- Finalize environmental document and design - November 2017
- Proposed construction - Summer 2018



# Submit Public Comments

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- **Submit public comments using the options described in first page of information packet:**
  - Public Comment Form
  - Via e-mail
  - Participate during public comment session following formal presentation
- **INDOT respectfully requests comments be submitted by Friday, October 6, 2017**
- All comments submitted will become included in an official public hearings transcript and made part of the public record
- Comments will be reviewed, evaluated and given full consideration during decision making process

# Next Steps

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- **Public and project stakeholder input**
  - Submit comments via options described on page 1 of information packet
- **INDOT review and evaluation**
  - All comments are given full consideration during decision-making process
  - Finalize/approve environmental document, complete project design
- **Communicate a decision**
  - INDOT will notify project stakeholders of decision
  - Work through local media, social media outlets, paid legal notice
  - Make project documents accessible via repositories
- **Questions? Contact Public Involvement Team**



# Thank You

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- **Please visit with the design team and INDOT project officials following the presentation and Q&A.**
- **Project Open House**
  - Project maps, displays, INDOT project team and informal Q & A
  - INDOT LaPorte District page <http://www.in.gov/indot/2705.htm>
  - [LaPorteDistrictCommunications@indot.in.gov](mailto:LaPorteDistrictCommunications@indot.in.gov)