
US 31 at SR 110 Intersection Improvement

Wednesday, September 27, 2017



Welcome

- 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 110 J-Turn

- **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**

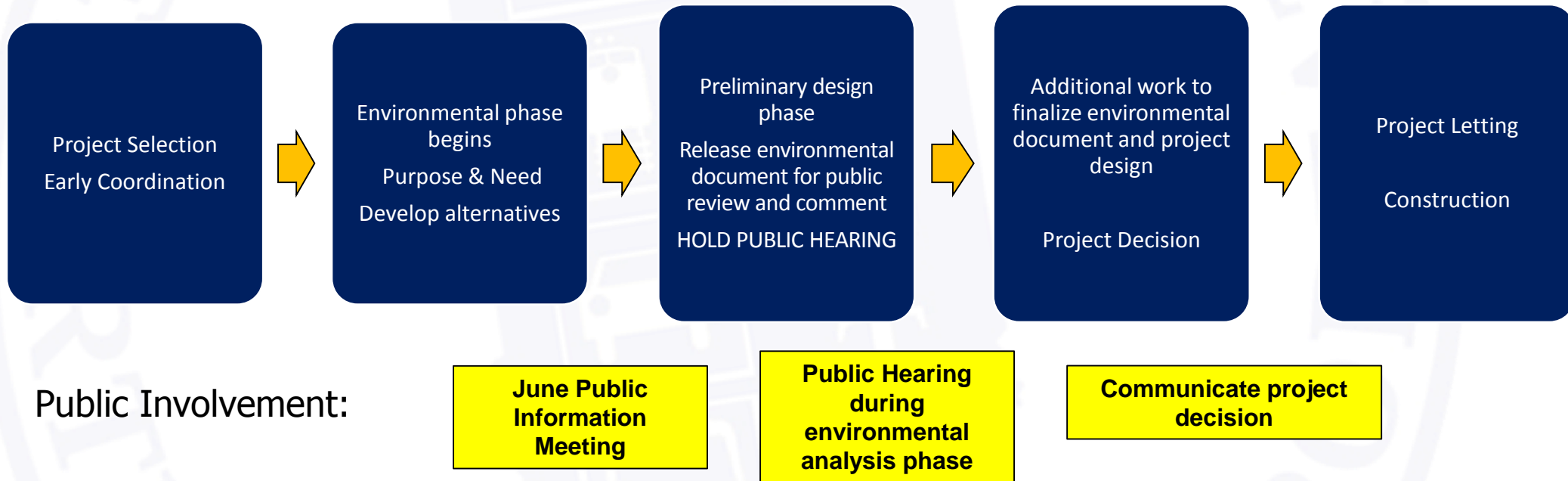
- Sign-in at attendance table to be added to project mailing list
- *Legal notice of public hearing was published in the Pilot News (Plymouth) on 9/1, 9/8 & 9/15*
- A notice of the public hearing was mailed to known property owners within project area
- Announcement of this hearing was posted to INDOT 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

- 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

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

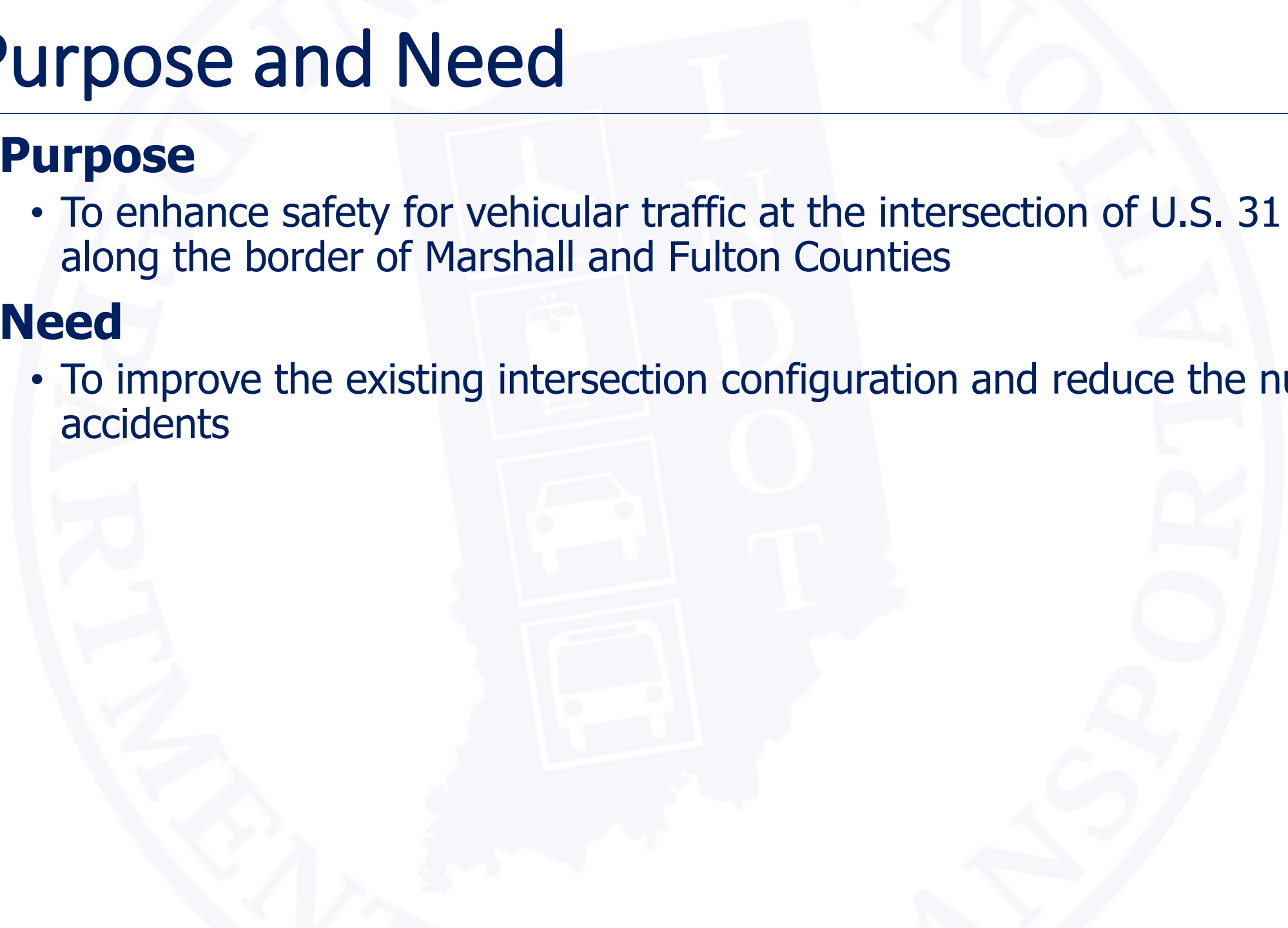
Purpose and Need

- **Purpose**

- To enhance safety for vehicular traffic at the intersection of U.S. 31 and S.R. 110 along the border of Marshall and Fulton Counties

- **Need**

- To improve the existing intersection configuration and reduce the number of accidents



Alternatives Considered

- **No Build**

- Would not improve safety at intersection

- **Signalized Intersection**

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

- ***Interchange***

- *Implementation would require 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

- **INDOT LaPorte District Office**

315 E. Boyd Boulevard, LaPorte, IN 46350

- Toll Free 1-855-464-6368
- 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



Crash Data

Crash Data for US 31 at SR 110 (2012-2016)						
SEVERITY	2012	2013	2014	2015	2016	Total
Crash with no Injury	5	1	2	4	3	15
Non-Incapacitating Injury	3	2	-	1	1	7
Incapacitating Injury	1	1	-	2	-	4
Fatal	-	-	-	-	-	-
TOTALS	9	4	2	7	4	26

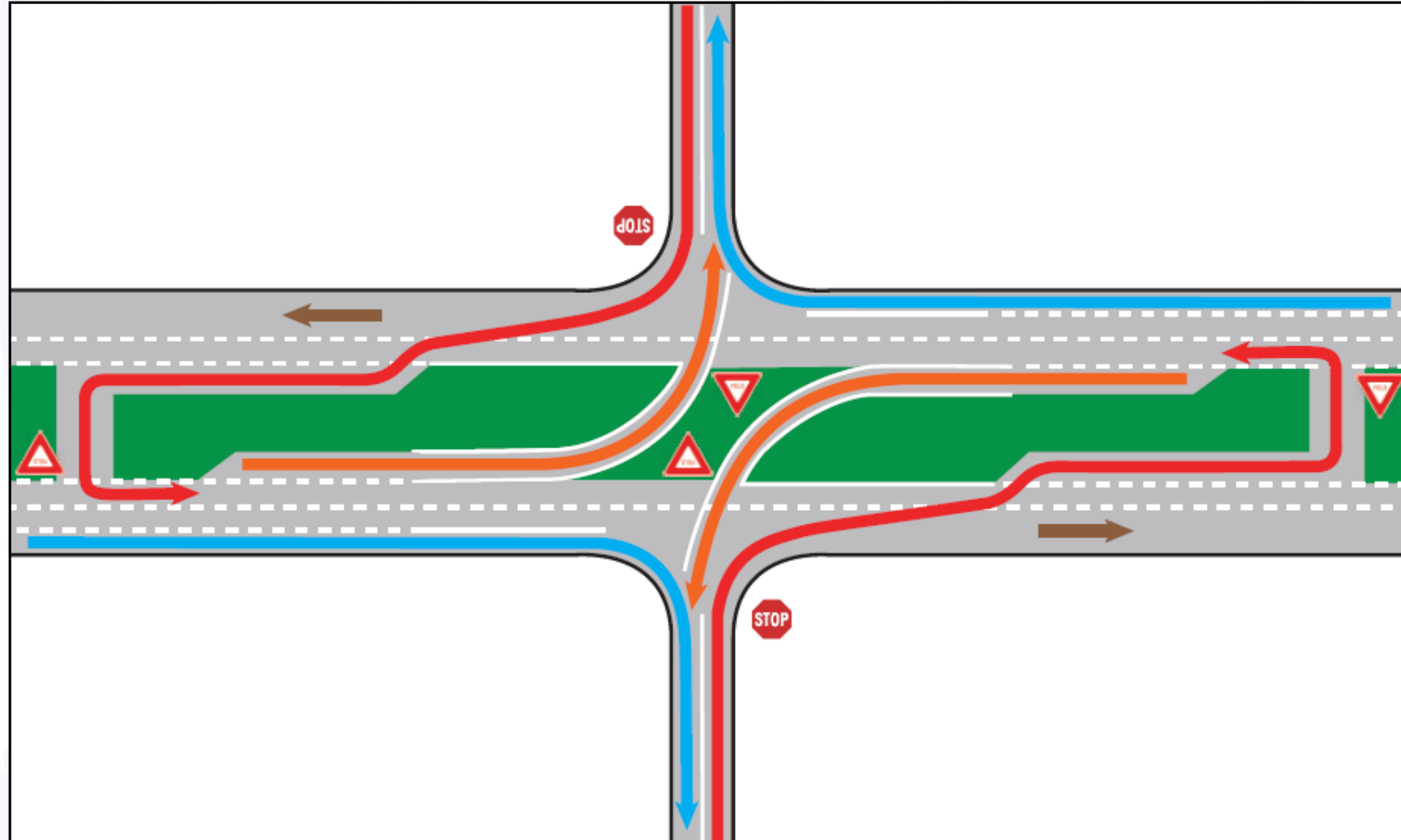
Existing Intersection Geometry

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



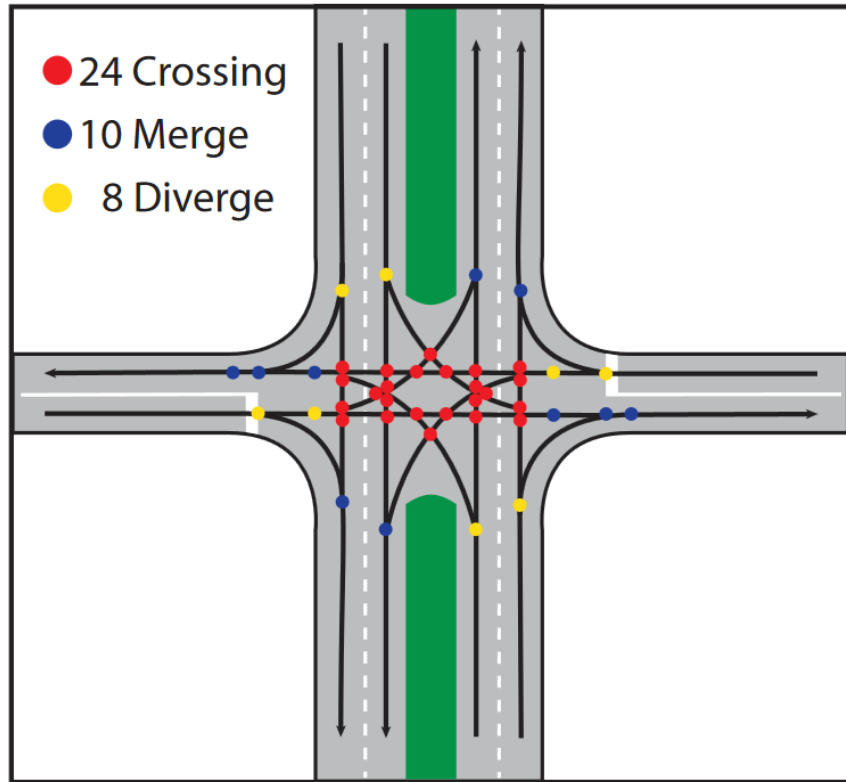
J-Turn – INDOT Preferred Alternative

- 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)



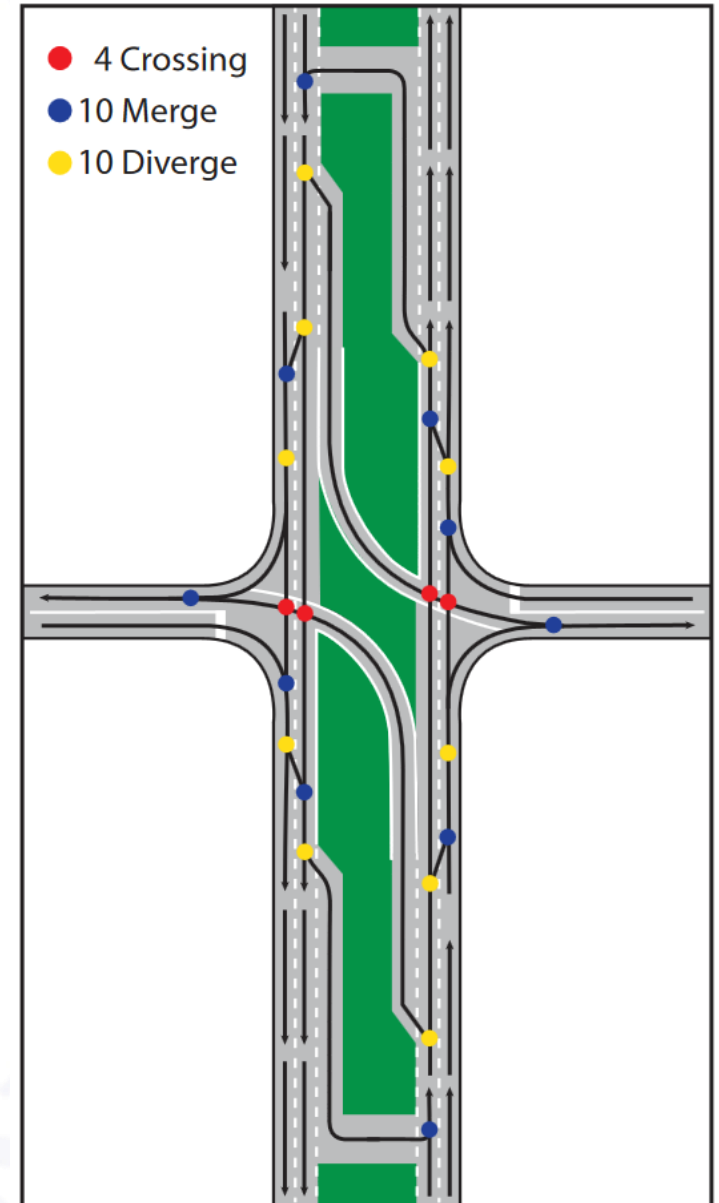
Benefits of J-Turns

- **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 %
TOTALS	100	21	-79 %

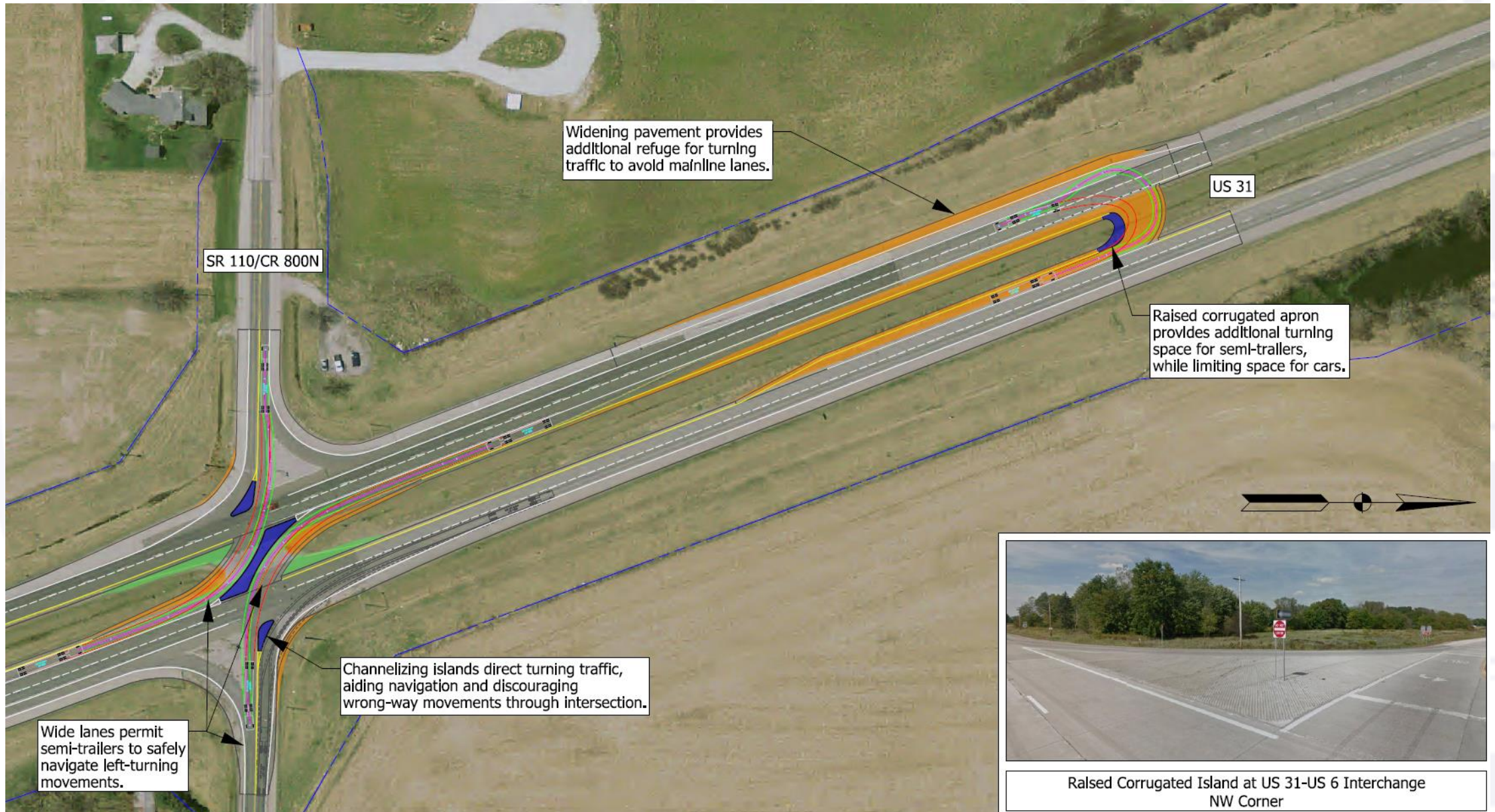
Case Studies Collision Summary by Severity			
	Before	After	%Change
Injury	56	10	-82 %
Fatality	2	1	-50 %

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 110



North Crossover - US 31 at SR 110



Widening pavement provides additional refuge for turning traffic to avoid mainline lanes.

SR 110/CR 800N

US 31

Raised corrugated apron provides additional turning space for semi-trailers, while limiting space for cars.

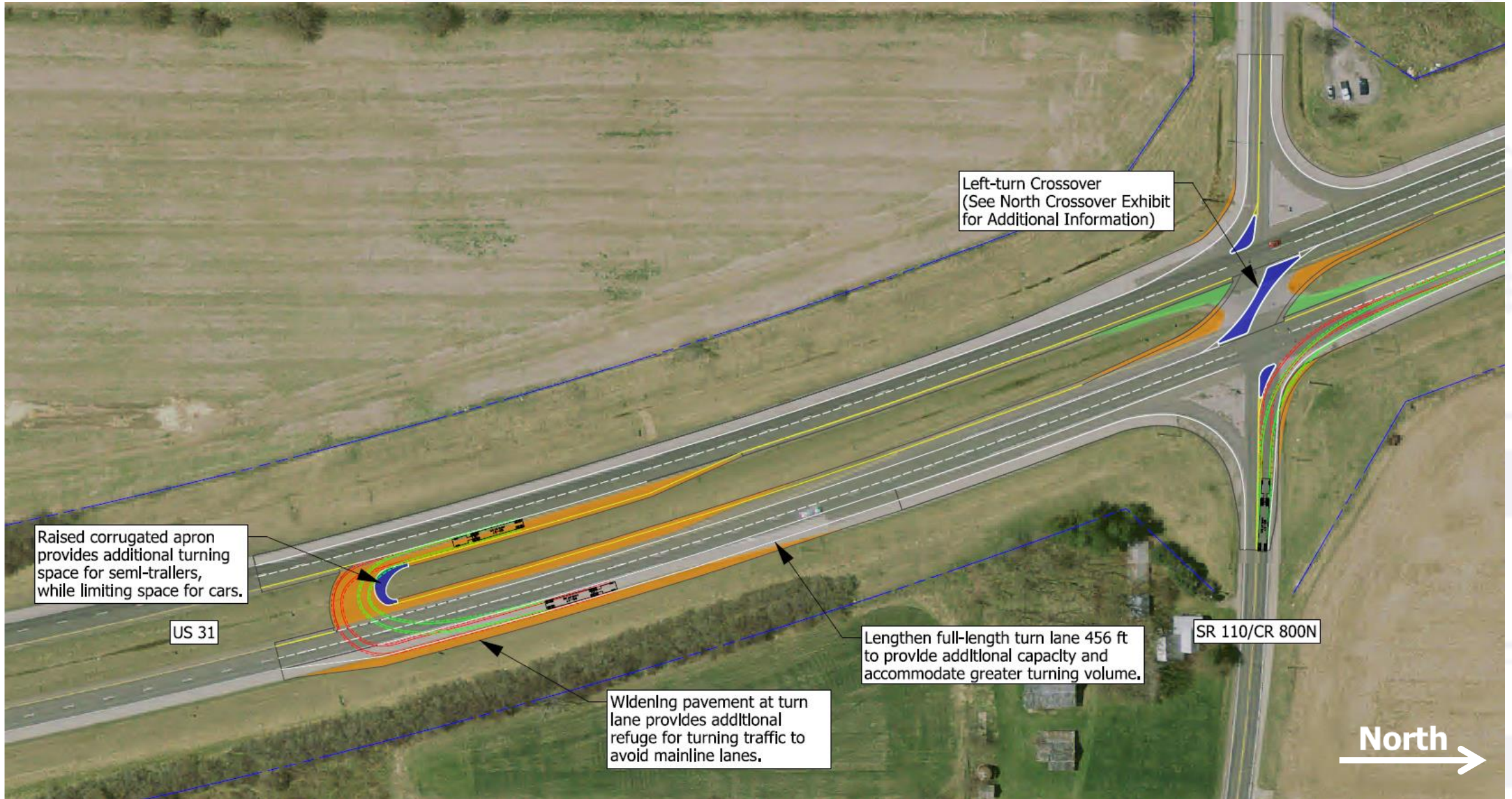
Channelizing islands direct turning traffic, aiding navigation and discouraging wrong-way movements through intersection.

Wide lanes permit semi-trailers to safely navigate left-turning movements.



Raised Corrugated Island at US 31-US 6 Interchange NW Corner

South Crossover - US 31 at SR 110



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)

- ***The public stated their preference for an interchange***
 - *Project purpose is to improve safety - immediately and cost-effectively*
 - *Immediate improvements will not prohibit an interchange in the future*

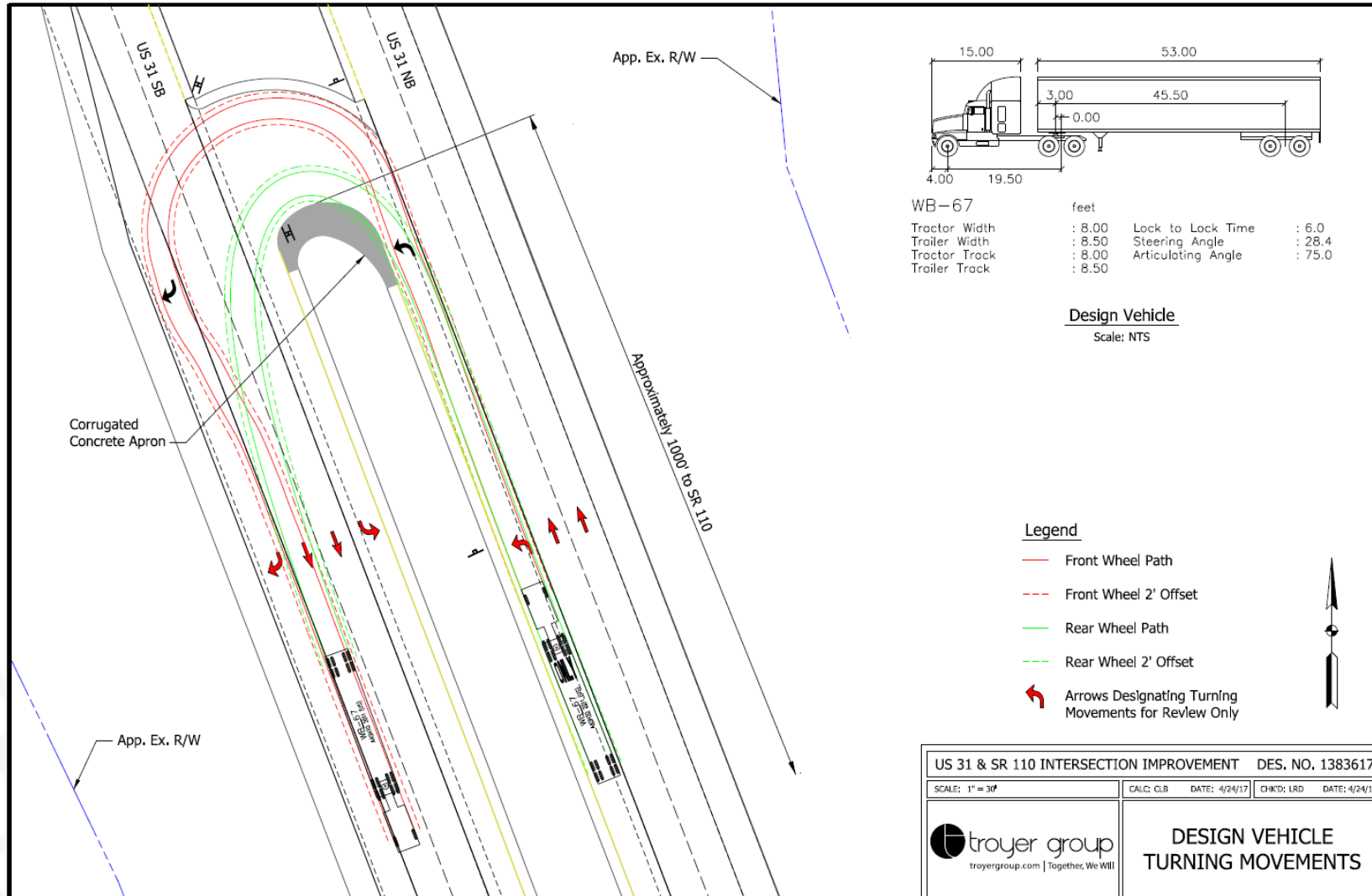


Future US 31 Upgrades

- *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.*

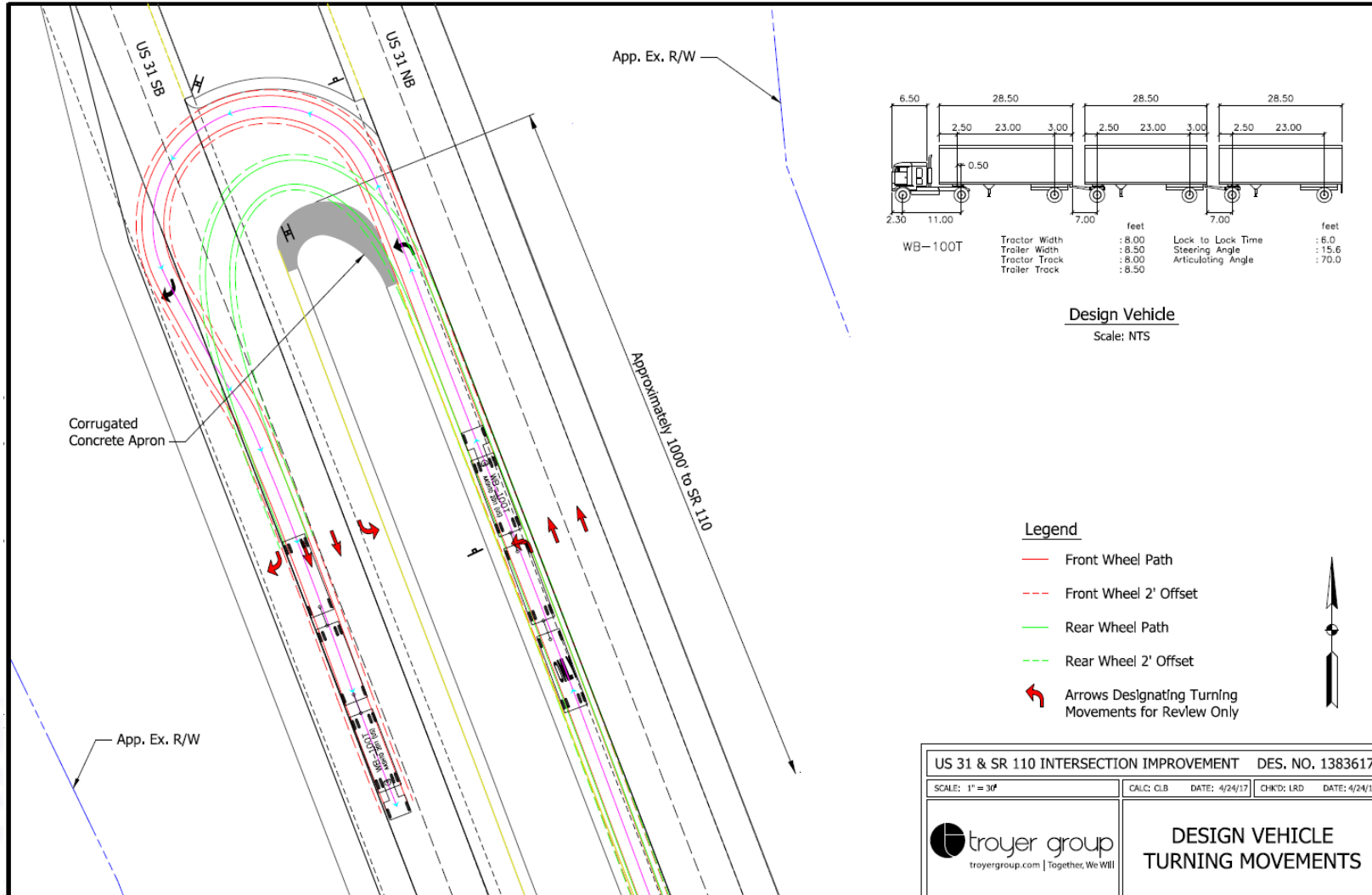
Summary of Comments Public Inf. Meeting (June)

"Maneuverability of large vehicles will be decreased." (semis, livestock trailers, farm equipment, school buses)



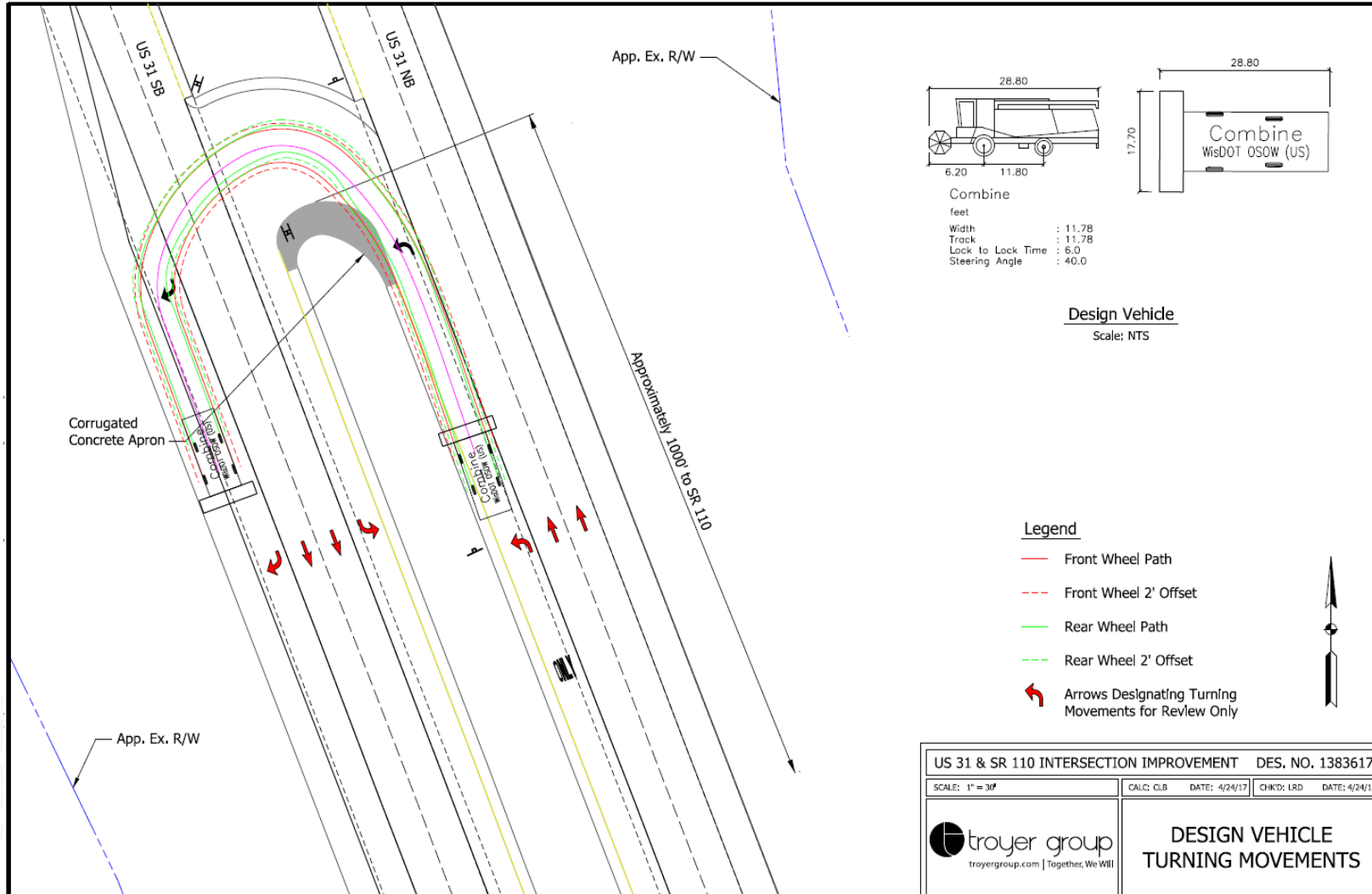
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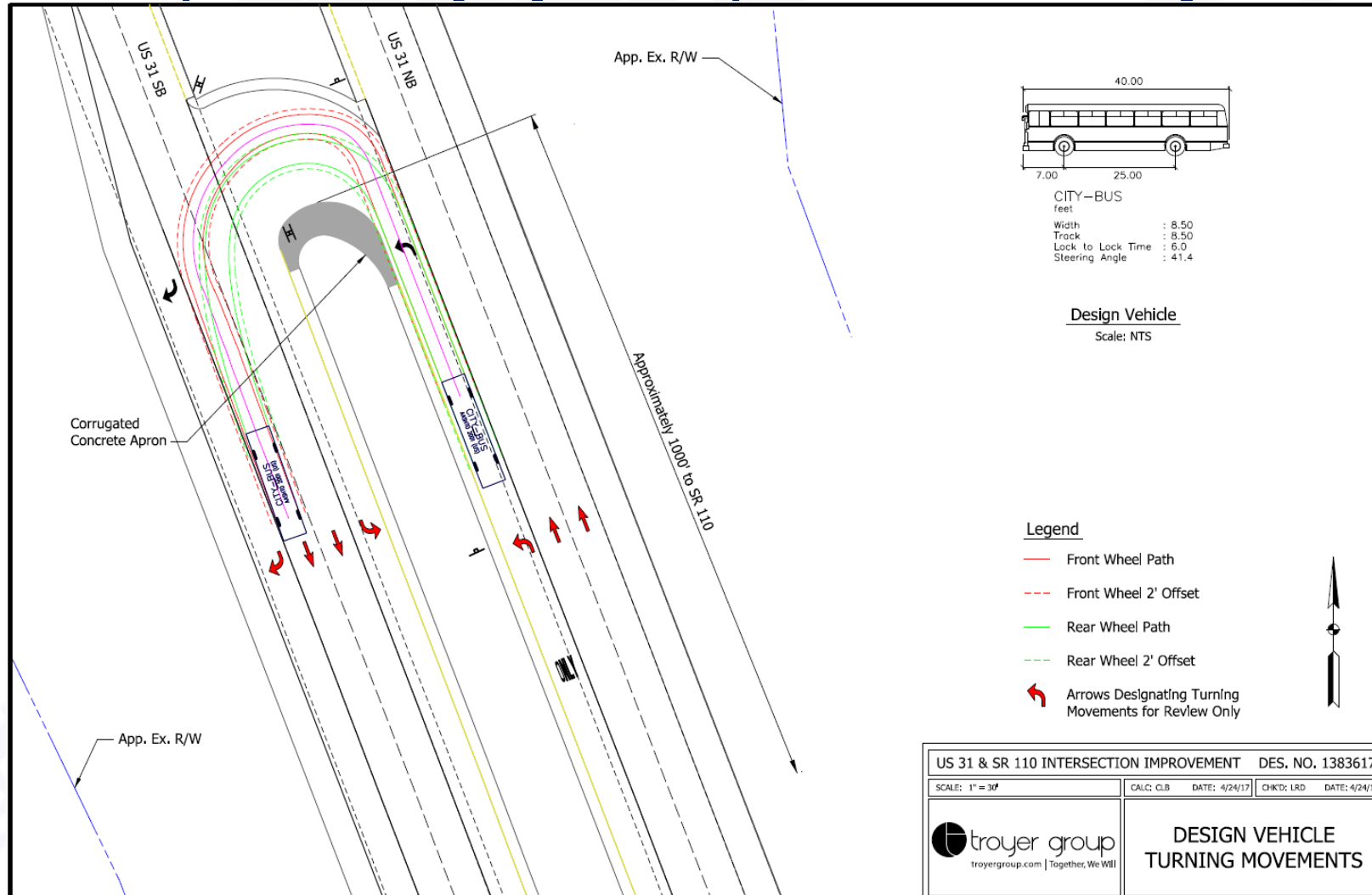
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- *Case Study: US 41 at SR 114*



Summary of Comments

Public Inf. Meeting (June)

"Economic Impact will result from restriction of truck access"

- Truck access will not be eliminated
- Time increase for cross traffic is approx. 30 seconds
- Traffic Simulations have been performed







Summary of Comments Public Inf. Meeting (June)

- Proposed Configuration will maintain or improve capacity of intersection.

Location Description	Node ID	Approach LOS	
		Existing	Proposed
EB SR 110 @ US 31	7	C	B
WB SR 110 Crossover	7	C	-
WB SR 110 @ US 31	8	C	B
EB SR 110 Crossover	8	C	C
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
A		≤10	Very short delays
B		11-15	Short delays
C		16-25	Minimal delays
D		26-35	Minimal delays
E		36-50	Significant delays
F		>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

- 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

- **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 13, 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

- **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

- **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