

ODOT SAFETY COMMITTEE • MAY 23, 2017



OHIO DEPARTMENT OF
TRANSPORTATION

GEA-608-3.09/4.50 SAFETY FUNDING APPLICATION ODOT DISTRICT 12



Brian Blayney, ODOT District 12

Scott Knebel, CMT

Kevin Miller, CMT

Dave Lair, Geauga County Administrator

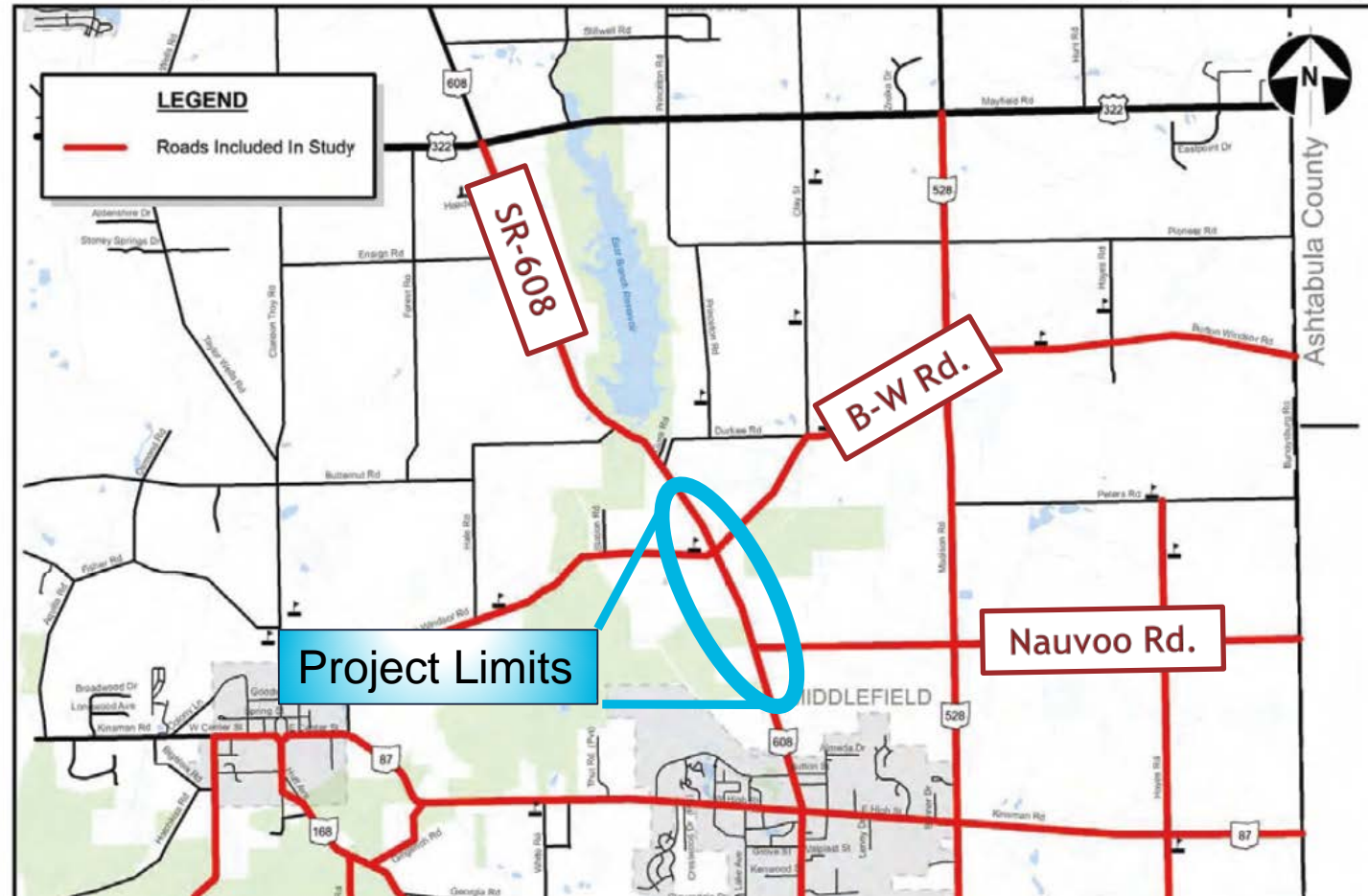
Joseph Cattell, Geauga County Engineer



AREA MAP

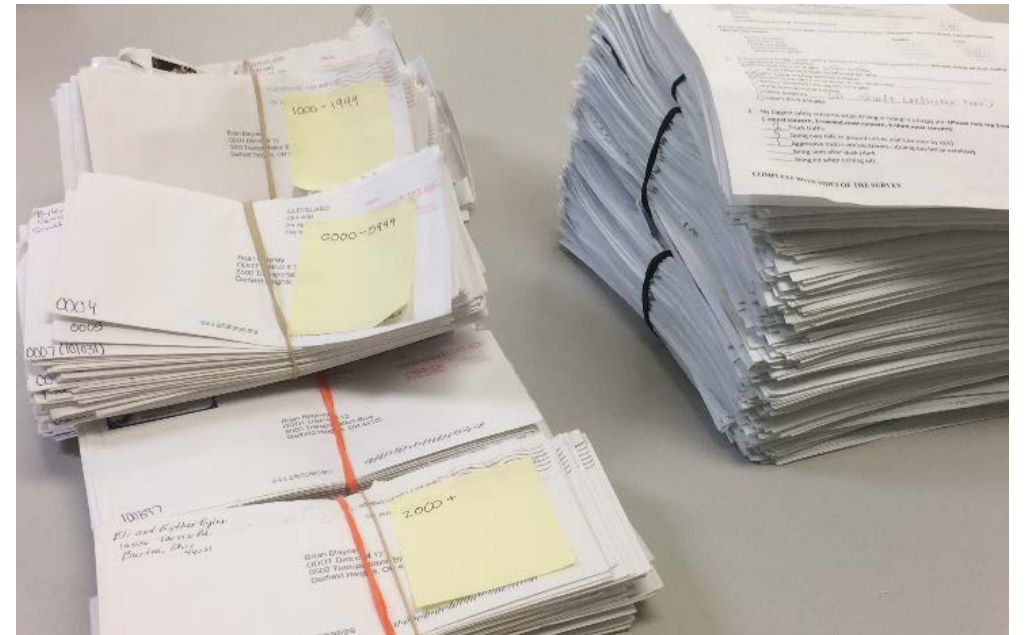


Amish Safety Strategic Plan Study Area Map



PURPOSE

- Ranked #1 buggy lane priority by Geauga Co Amish Strategy Safety Plan (ASSP) to mitigate buggy safety
 - High speed vehicles (49 mph +) conflict with low speed buggies (3-8 mph) and pedestrians
- Ranked #1 and #3 critical intersections by ASSP
- Priority ISD location at Burton-Windsor Road intersection, steep grade



GEAUGA COUNTY ASSP RESULTS

Roadway Segment	Log Points	Length (miles)	Shoulder Width	Vehicular ADT	Buggy Count	Crash Rate (Buggy)	Speed Limit	Amish Survey (Critical - Buggy)	Rank	Construction Cost (ROW not included)
SR 608 - Nauvoo Rd to North of B-W Rd.	3.09 to 4.50	1.41	●	◐	●	●	◐	●	1	\$ 2,397,000
SR 87 - SR 528 to Hayes Rd	18.20 to 19.74	1.54	●	◐	●	●	●	◐	2	\$ 2,618,000
SR 608 - SR 528 to CR 124/Georgia Rd	0.00 to 1.24	1.24	●	◐	◐	●	◐	●	3	\$ 2,108,000

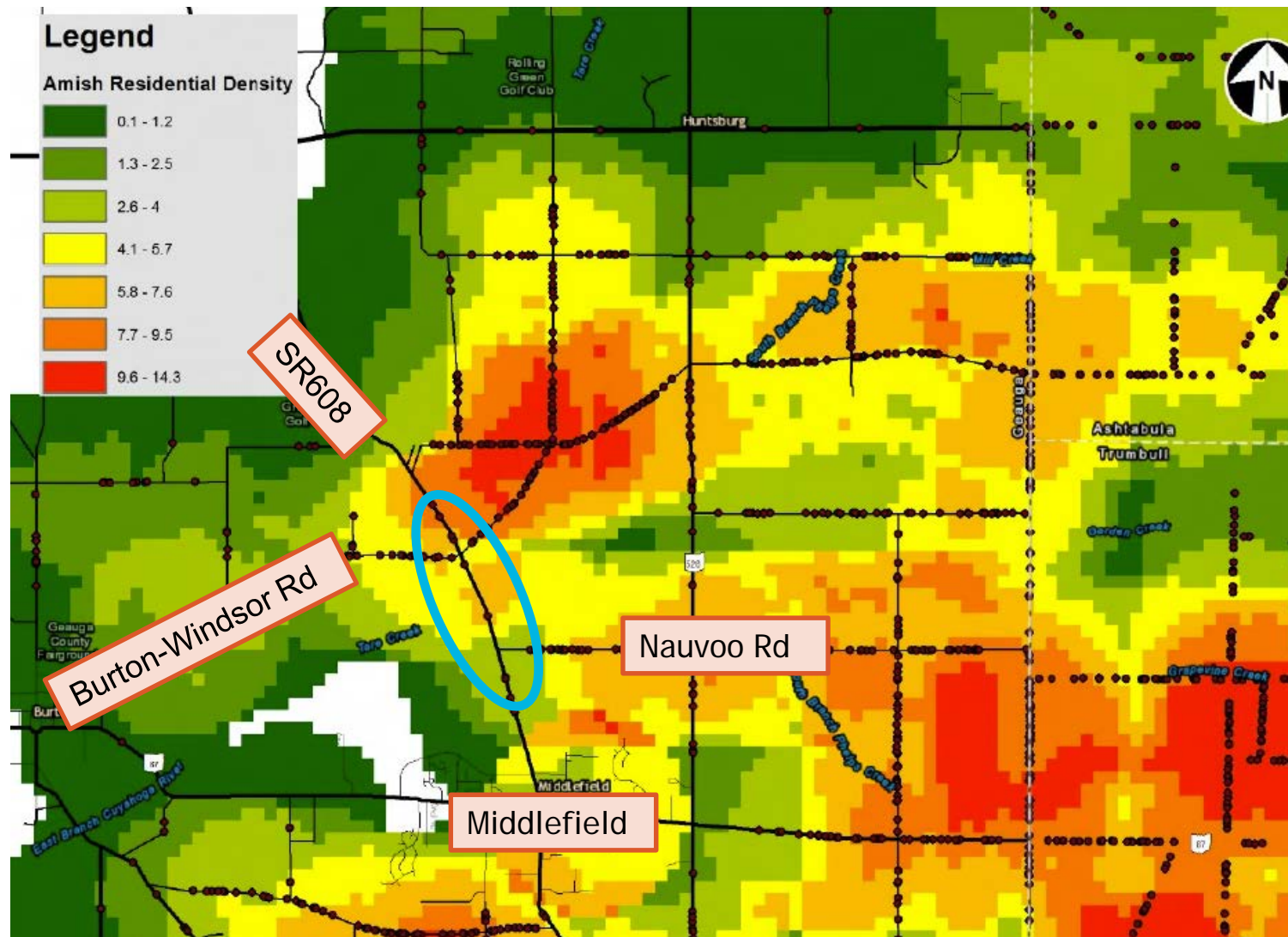
Note: SR 87 - Hayes Rd to Trumbull CL is under design for construction of full buggy lane in 2018
 Costs do not include ROW acquisition costs

*Combination of heavy traffic + buggies + speed + no passing = driver frustration

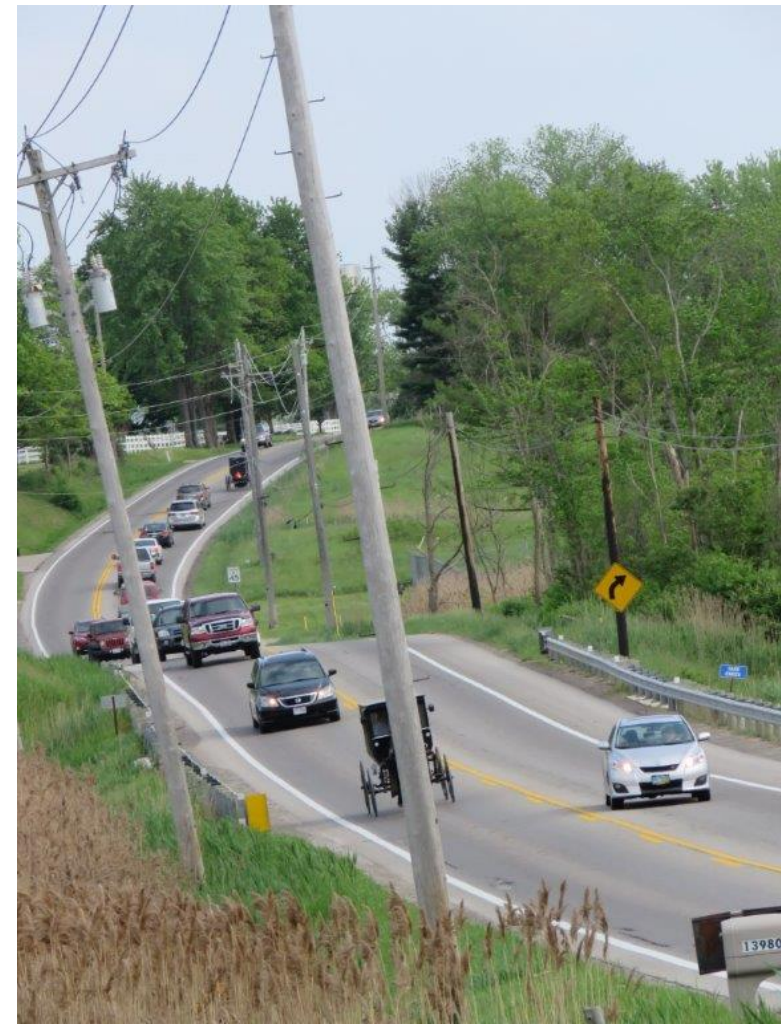
EXISTING CONDITIONS

- SR-608 is a two lane rural roadway with residential and commercial land uses
- Existing 11' lanes with 1-2' paved shoulder
- High population density of Amish Community - SR-608 is link to retail in Village
- Rolling terrain = limited passing zones and restricted ISD and SSD sight distance

AMISH RESIDENTIAL DENSITY



EXISTING CONDITIONS



EXISTING CONDITIONS

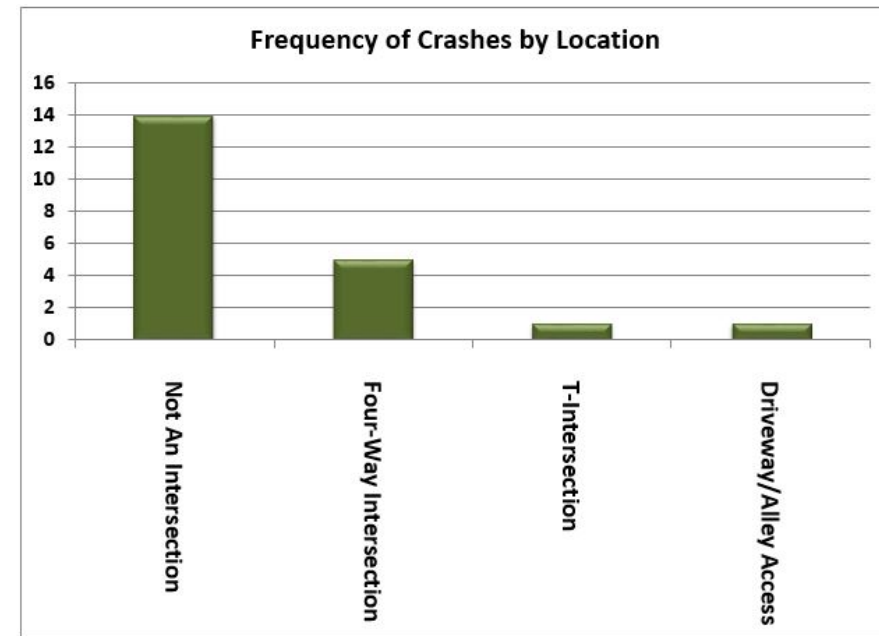
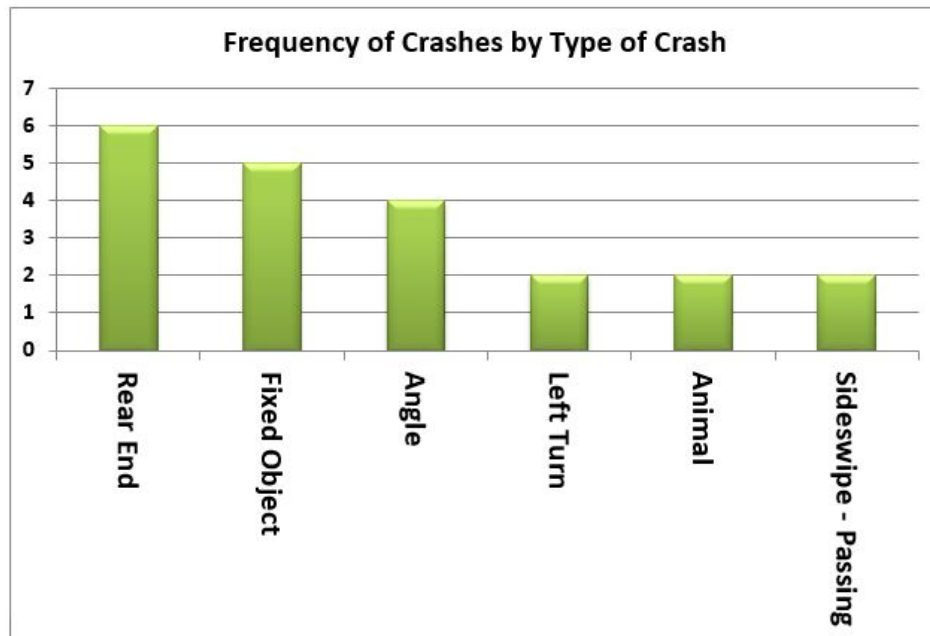


EXISTING CONDITIONS



CRASH SUMMARY

- 24 total crashes (2010-2014) from ASSP including one fatality
- 19 total crashes (2014-2016) with 7 injury crashes
- Pattern of rear-end crashes on segments (vs. intersection)
- 74% of crashes not at an intersection (2014-2016 dataset)

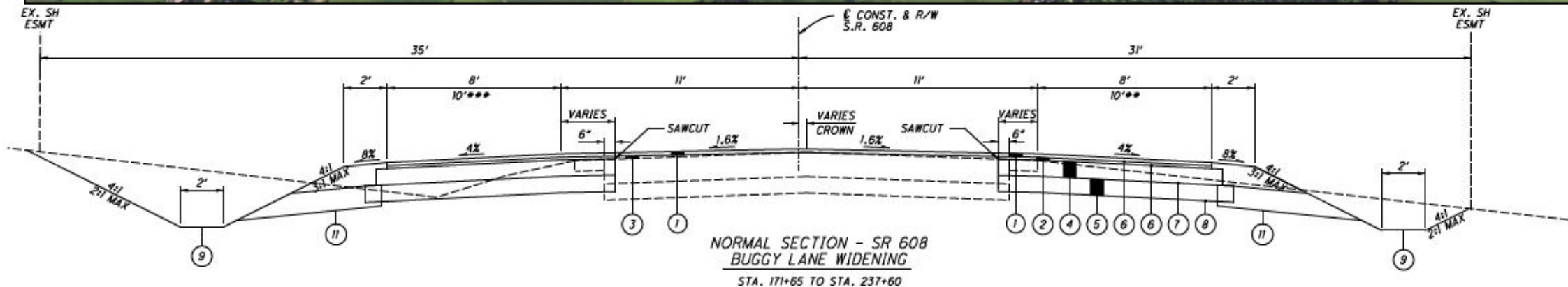


COUNTERMEASURES

- Construct 8' buggy lanes both NB (3.09 to 4.50) and SB (3.09 to 4.00)
 - SB segment shorter to reduce construction costs, target greatest needs first
- Add exclusive NB right-turn lanes (125 ft) at Nauvoo and Burton-Windsor intersections
 - Right only except buggies
 - Mitigate right hook crashes
- Increase ISD at Burton-Windsor



CONCEPT PLAN



FUNDING SUMMARY

- \$70,178 in prelim engineering completed by D12 to refine cost estimate
- \$315,500 for PE, final design, and R/W plans
- \$1.93 M construction cost
 - 35% contingency (includes inflation)
- \$200,000 right-of-way acquisition/utilities

SCORING

- Benefit cost ratio = 1.05
- Existing volume to capacity ratio = 0.65
- Expected Crash Frequency = 7.35
- Relative Severity Index = \$63,118

PROJECT SCHEDULE

	2017				2018				2019				2020				2021				2022			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
safety/ feasibility study	█	█																						
funding award/contracting			█																					
prelim eng				★			█	█	█															
environmental									█	█														
final plans/ROW											█	█	█	█	█	█								
award construction																	█							
construction																		█	█	█	█	█		
	★	December programmatic																						

SUMMARY

- Mitigates top ranked segment from Geauga Co Amish Safety Strategic Plan (ASSP)
 - Addition of NB and SB buggy lanes
 - Project limits reduced to address most critical design elements from ASSP
 - Includes two dips with poor stopping sight distance
- Mitigates top ranked intersection at B-W Rd.
 - Mitigates restricted intersection sight distance (NW Corner)
 - Mitigates right hook concerns by adding short NB right-turn lanes at intersections
 - Mitigates top ranked intersection at B-W Rd.
- Mitigates 3rd ranked intersection at Nauvoo Rd.

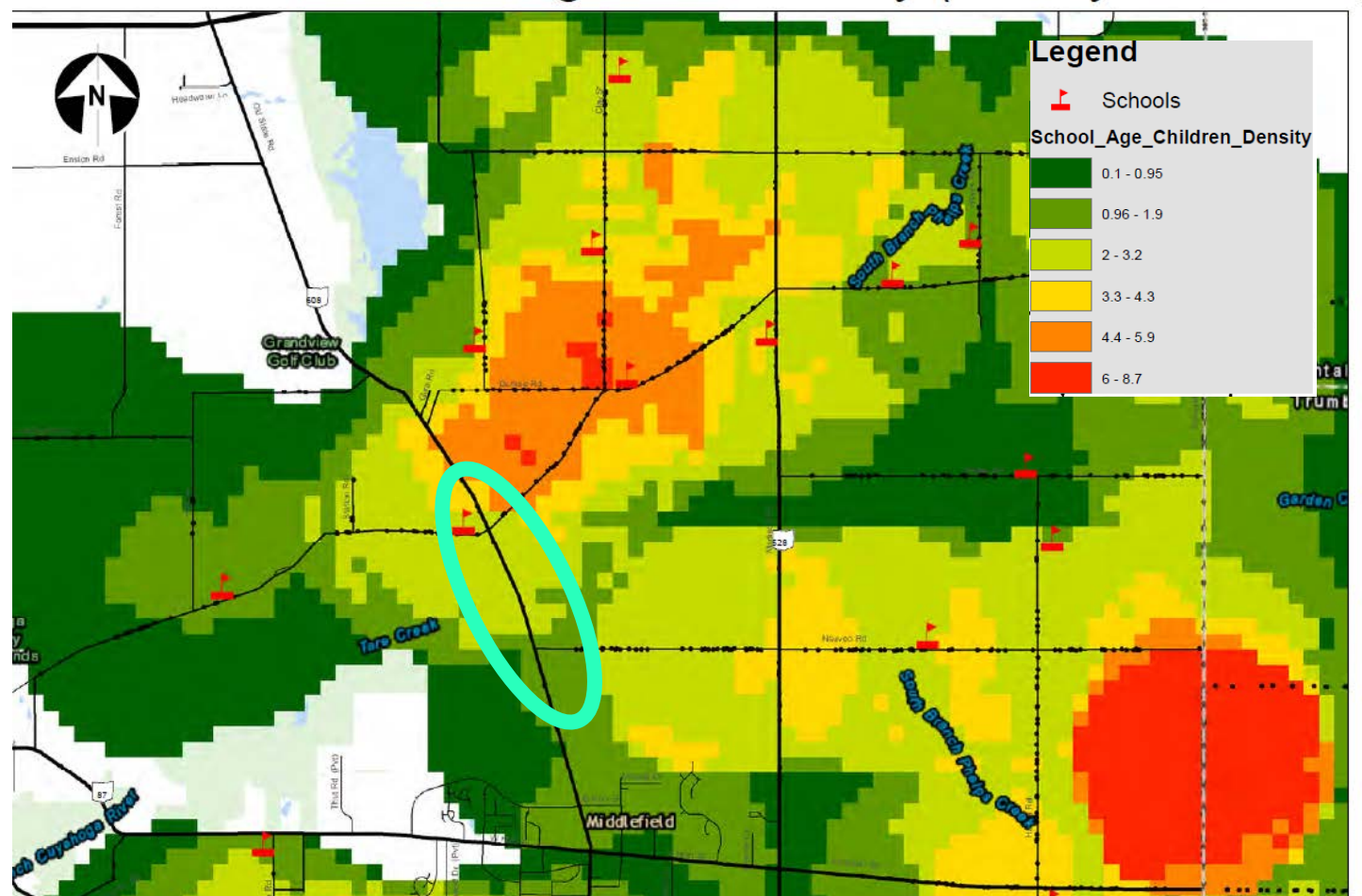
QUESTIONS



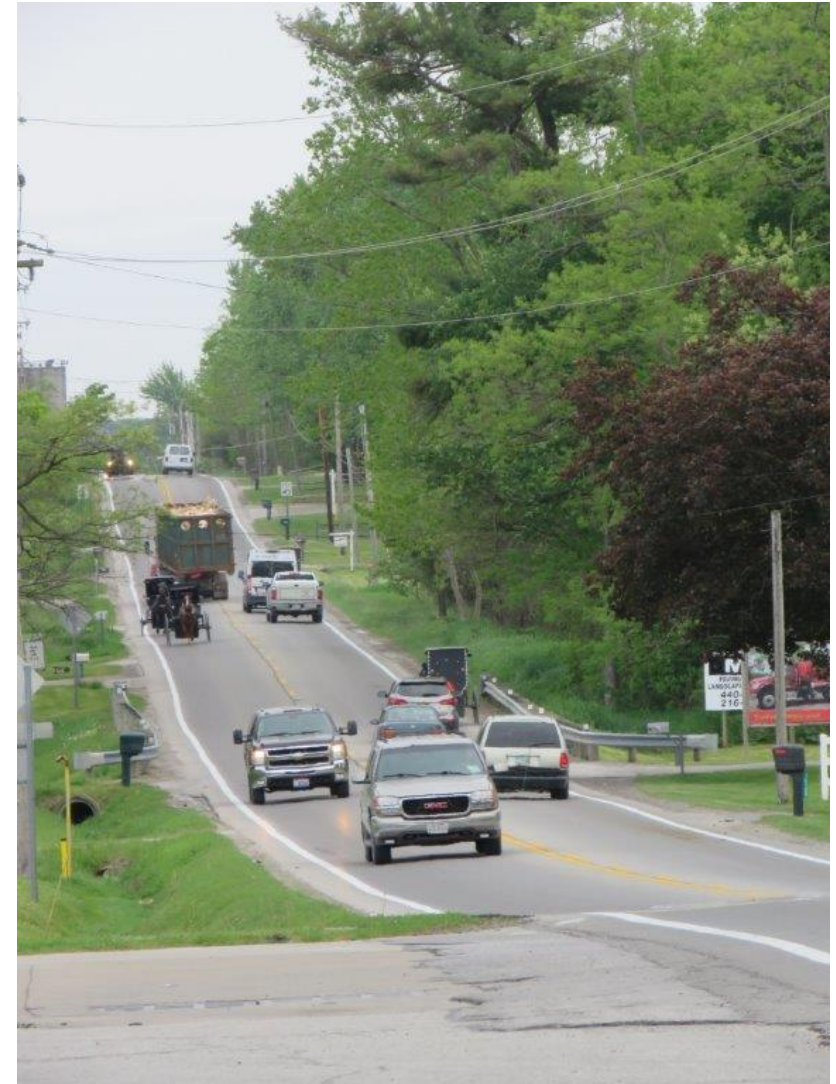
Last updated 8/17/2017

EXISTING CONDITIONS

Amish Safety Strategic Plan Amish School Age Kids Density (Survey Feedback)



EXISTING CONDITIONS



EXISTING CONDITIONS



AMISH STUDY RESULTS

- Amish Strategic Safety Plan surveyed 1331 Amish residences with 645 responses (48%)
 - 265 responded with SR 608 as primary roadway segment with safety concern
 - 122 specifically identified this section north of the Village
 - Identified as 1st (B-W) and 3rd (Nauvoo) most critical intersections
 - Study ranked as top candidate for buggy lane addition