

# Baumhart Road and Industrial Parkway

## Abbreviated Safety Study

Lorain County Engineer's Office  
247 Hadaway Street  
Elyria, Ohio 44035

April 30, 2021



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Abbreviated Study	
County: Lorain	Route: C.R. 51 (Baumhart Road) and Industrial Parkway
Lorain County Engineer's Office	
Submitted: April 30, 2021	
By: Bramhall Engineering & Surveying Company	

## Background

Businesses owners located along Industrial Parkway requested a meeting with the Lorain County Engineer's Office and ODOT to discuss crashes occurring at the intersection of Industrial Parkway and Baumhart Road. The County agreed to review this location to determine any appropriate countermeasures that could be installed to address the crashes.

## Existing Conditions

Baumhart Road and Industrial Parkway is a 3-way intersection, with Baumhart Road traffic having the right of way and Industrial Parkway operating under stop control at its intersection with Baumhart Road.



Figure 1 – Baumhart Road and Industrial Parkway

Baumhart Road within the study area is a four-lane divided highway that runs south to north with a posted speed limit of 50 mph. The Functional Classification is Principal Arterial, it is part of the National Highway System (NHS) from S.R. 2 to U.S. 6 and the 2020 ADT is 8,962. The land use consists of vacant land on the west side, and commercial/industrial development on the east side. Highway lighting is present along both sides of Baumhart Road as well as at the intersection of Industrial Parkway.

Industrial Parkway is a 2-lane road that provides access to several of the commercial/industrial sites and terminates at Baumhart Road to form a T-intersection operating under stop control. The single stop sign is located almost 40' from the intersection and the stop bar is completely worn away. The Functional Classification is Local Road. Industrial Parkway is a full-movement intersection with access to southbound Baumhart Road provided via a paved median.



Figure 2- Industrial Parkway looking west

## **Crash History and Analysis**

There were eight (8) crashes in the vicinity of this intersection for the time period of January 2018 through December 2020. Of those crashes, one (1) was animal related and therefore not included in this analysis. One (1) crash occurred on Industrial Parkway and consisted of a vehicle backing into another vehicle; this crash was not included in this analysis since it is not related to the intersection. One (1) crash occurred on Baumhart Road south of Industrial Parkway and not included in this analysis since it was not intersection related.

Of the five (5) remaining crashes that are intersection related, all are nearly identical in that a vehicle pulled out from Industrial Parkway to turn left (southbound) onto Baumhart Road and was struck by a through vehicle on Baumhart Road. Four (4) of the crashes involved a vehicle traveling northbound on Baumhart Road, while only one (1) of the crashes involved a southbound vehicle on Baumhart Road. All five (5) of the vehicle operators attempting to turn left onto Baumhart Road from Industrial Parkway were cited for Failure to Yield.



*Figure 3 - Baumhart Road looking north*

Of the crashes, four (4) were Injury crashes, and one (1) was Fatal. It is not surprising that the crashes are more severe due to the 50-mph posted speed on Baumhart Road. While the crash reports do not indicate that any of the Baumhart Road vehicles were speeding, a review of the 85<sup>th</sup> percentile speed indicates that vehicles are travelling in the range of 56-57 mph.

## **Conclusions and Recommendations**

The crashes are all related to vehicles pulling out from Industrial Parkway to turn left (southbound) onto Baumhart Road, and being struck by a through vehicle on Baumhart Road. The severity of the crashes is likely partially attributable to the 50-mph speed limit on Baumhart Road.

The existing stop bar on Industrial Parkway is located almost 40' from the intersection and was extremely faded during our field review. It should be re-striped to be located within the recommended 4'-30' distance from the edge of Baumhart Road. Epoxy pavement marking material may provide a longer service life for this stop bar location.

Dual-mounting the stop signs and installing sign post reflectors should help draw attention to the stop condition and mitigate the occurrences of vehicles entering the intersection without stopping. Adding W4-4P "Cross Traffic Does Not Stop" plates under the stop signs should help remind vehicles on Industrial Parkway that Baumhart Road has the right-of-way.

For Baumhart Road, installing W2-2R "T-Intersection" warning signs with supplemental street name plaque for both northbound and southbound traffic may help in alerting Baumhart Road vehicles to the possibility of traffic entering the roadway from Industrial Parkway, so they can react accordingly.

Lastly, the County could consider a speed zone study to determine if a lower speed limit on Baumhart Road is warranted.

We recommend implementing the signing and striping measures and continuing to monitor the performance of the intersection after these improvements have been implemented.

## **Attachments**

Photo Log

Crash Diagram

Existing Conditions Diagram

Traffic Control Recommendations Exhibit

# Attachment 1

## Photo Log



ATTACHMENT 1



# Baumhart Road & Industrial Parkway Intersection Photo Log



Baumhart Road – Looking north, 250' south of Norfolk and Southern Railroad overpass.



Baumhart Road – Looking north, 300' south of Industrial Parkway.



Industrial Parkway – Looking west toward Baumhart Road.



Industrial Parkway – Looking south. Brick sign is approximately 22' long and 11' high.





Industrial Parkway – Looking south.



Industrial Parkway – Looking north.





Baumhart Road – Looking south, 600' north of Industrial Parkway.



Baumhart Road – Looking east toward Industrial Parkway.

# Attachment 2

## Crash Diagram



ATTACHMENT 2

# CRASH DIAGRAM

## Baumhart Road & Industrial Parkway Intersection

08-24-18/PDO

07-02-19/Fatal

01-16-18/Injury

01-16-18/Injury

07-31-19/PDO

Baumhart Road

Industrial Parkway



### Legend

Symbols      Types of Crash

→↘ Left Turn

### Crash Severity

— Fatal  
— Injury  
— PDO (Property Damage Only)



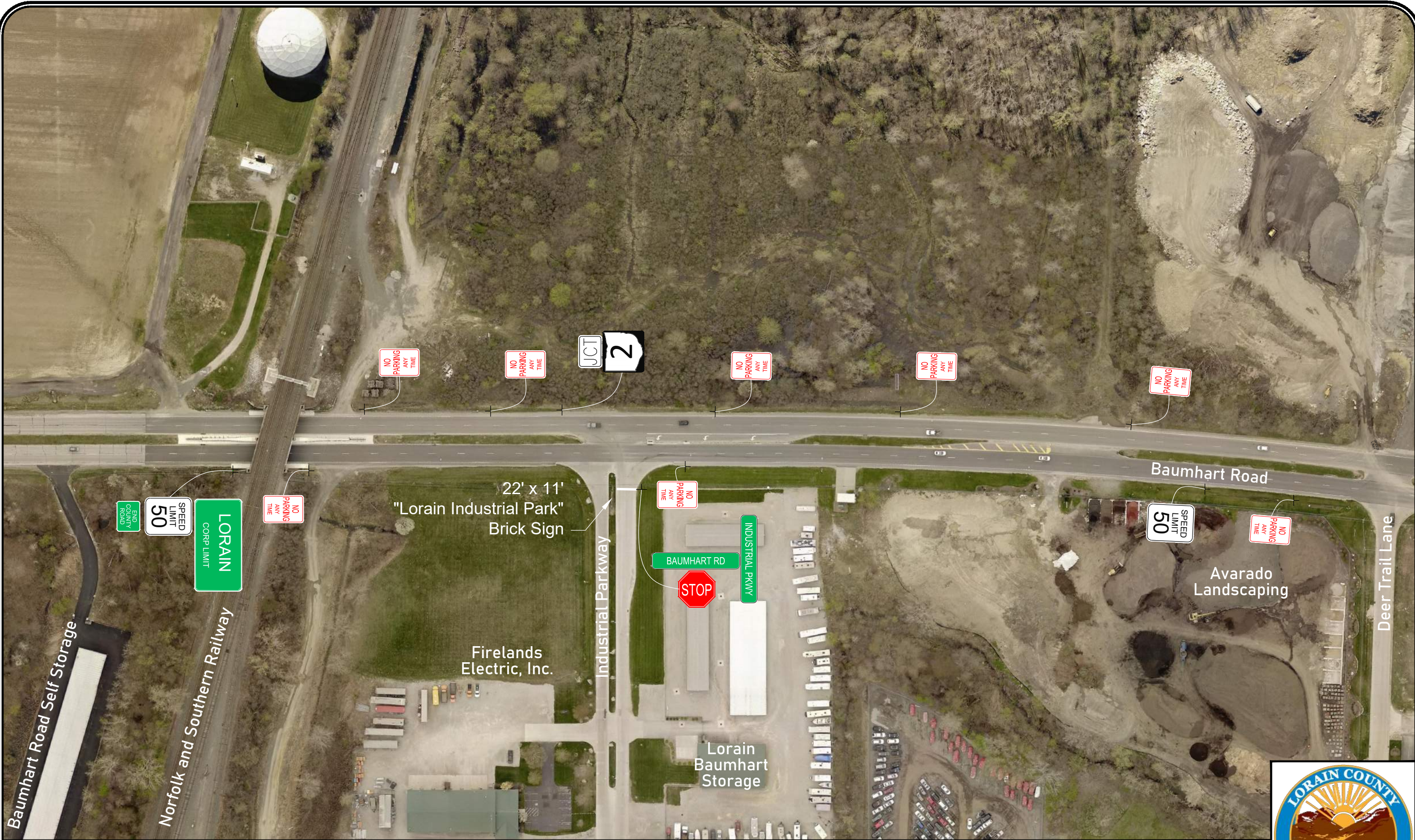
# Attachment 3

## Existing Conditions Diagram

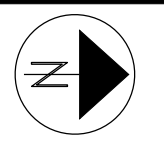


ATTACHMENT 3





## Baumhart Road & Industrial Parkway Intersection Existing Conditions





# Attachment 4

## Traffic Control Recommendations Exhibit



ATTACHMENT 4



