Gurnee Police Department Memorandum

TO: Chief Woodside

FROM: Philip Brunell

SUBJECT: Follow-up Evaluation Report (Three Year)

DATE:10/5/2018

Chief Woodside,

Per the Illinois Department of Transportation policy on Red Light Running Camera Systems (RLR), we are required to present an evaluation report one year after operation of a photo enforced intersection(s) and every three years after.

In accordance with their policy the following information is needed for the evaluation report:

- Intersection Location(s).
- Date of implementation.
- RLR Camera System manufacturer and contractor name.
- Crash data specific to the RLR location(s) for the 3-year period prior to and for the period post RLR Camera installation. The crash data shall include yearly collision diagrams of the intersection(s).
- An analysis of the crash data, including a summary of any increases or decreases in crash types.
- Signal timings and other settings before and after RLR Camera installation.
- Traffic volumes before and after RLR Camera System installation. The traffic volumes shall include both Average Daily and Peak Period traffic.
- Recommendations to further reduce red light violations and severe crashes and to improve the operation of the intersection(s).
- Summary of adjudication experience and results.

<u>Overview</u>
The Village of Gurnee is required to provide a follow-up evaluation report to the Illinois Department of Transportation for the intersection(s) of Route 41 & Delany, Route 132 & Route 21, Route 132 & Dilleys and Route 132 & Hunt Club Road one year after the installation of a RLR Camera System.

On December 3, 2007, the Village of Gurnee entered into agreement with Redflex Traffic Systems Inc. to install RLR Camera Systems at several intersections throughout the village. The RLR Camera Systems were installed at each of the intersections listed below. Once the testing and warning phase was completed the RLR Systems went fully operational with citations being issued on:

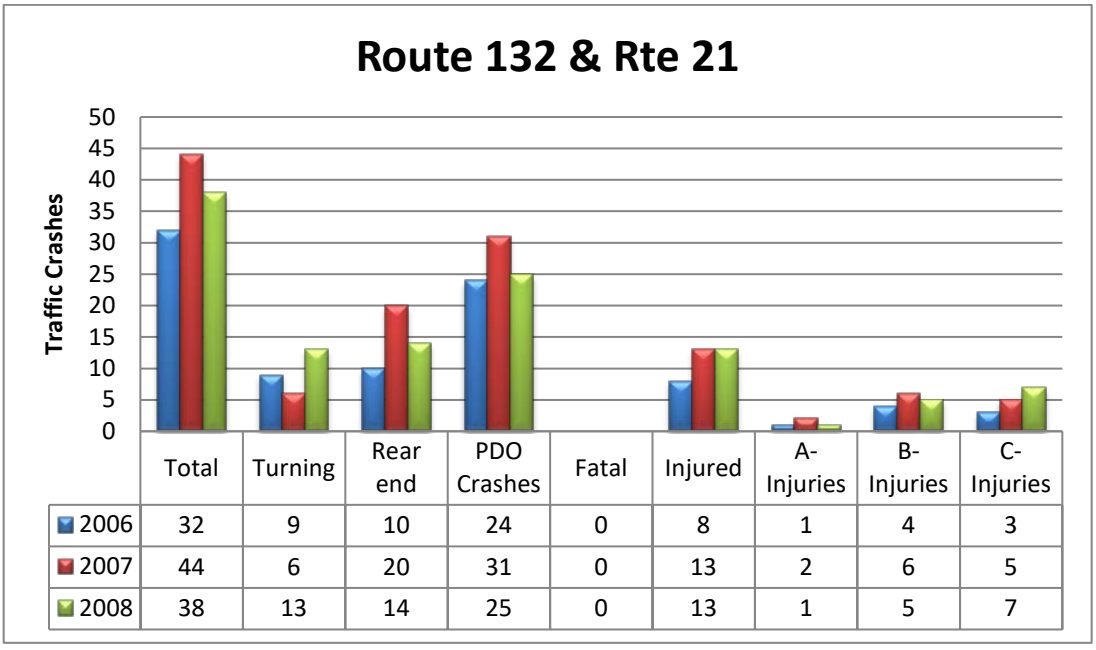
Route 132 & Route 21	June 6, 2009
Route 132 & Hunt Club Road	June 6, 2009
Route 132 & Dilleys Road	June 17, 2009
Route 41 & Delany Road	July 1, 2009

Crash Data

The crash data specific to the RLR location(s) for the 3-year period (Exhibit #1) prior to and for the period post (Exhibit #2, 3, 4, & 5) RLR Camera installation. The crash data shall include yearly collision diagrams of the intersection(s).

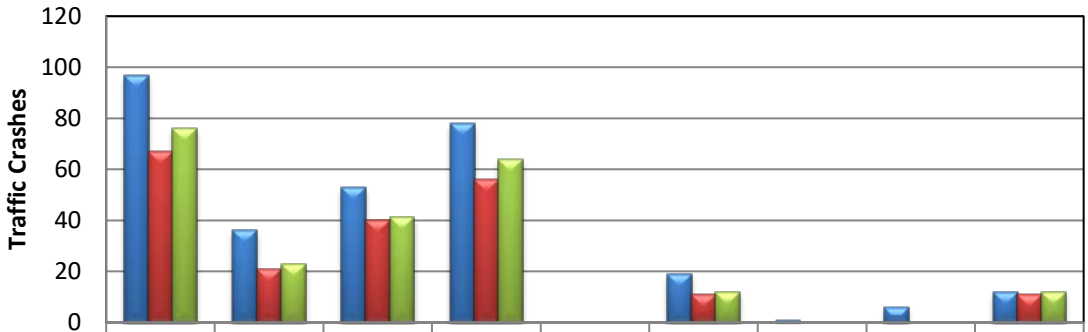
Note**** crash data source http://lake.ms2soft.com/tcds.

Exhibit #1



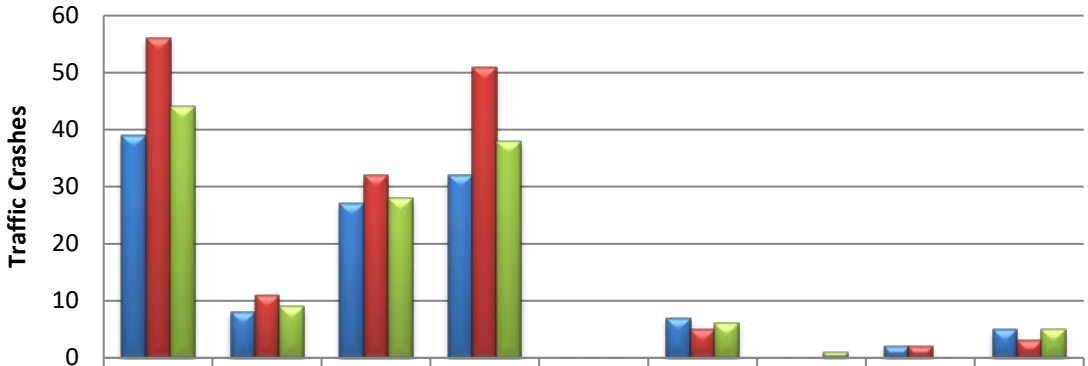
	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2006	32	9	10	24	0	8	1	4	3
2007	44	6	20	31	0	13	2	6	5
2008	38	13	14	25	0	13	1	5	7

Route 132 & Hunt Club Road

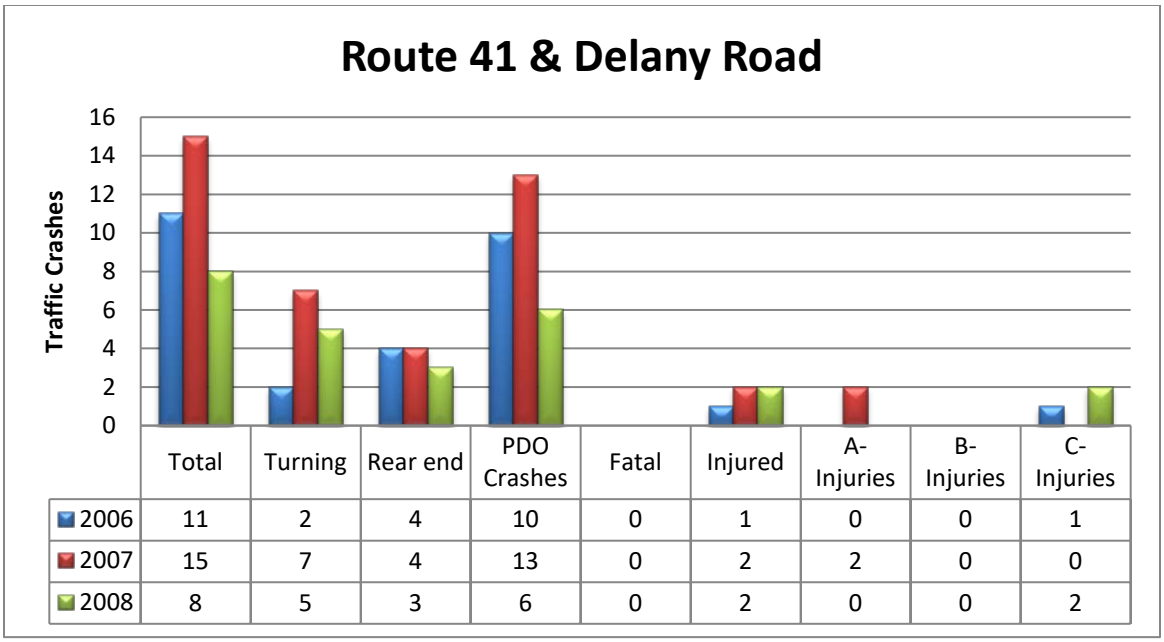


	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2006	97	36	53	78	0	19	1	6	12
2007	67	21	40	56	0	11	0	0	11
2008	76	23	41	64	0	12	0	0	12

Route 132 & Dilley's Road



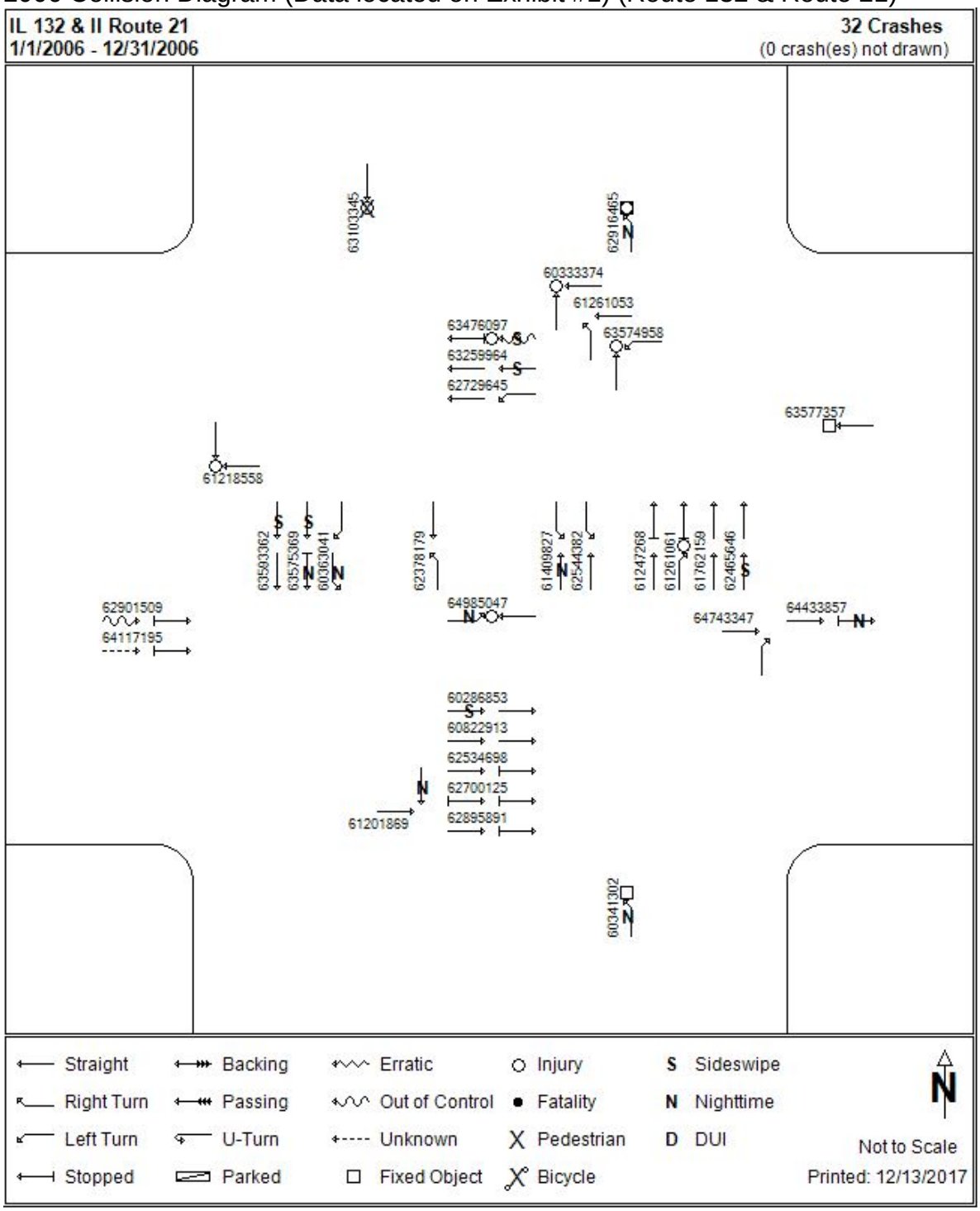
	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2006	39	8	27	32	0	7	0	2	5
2007	56	11	32	51	0	5	0	2	3
2008	44	9	28	38	0	6	1	0	5



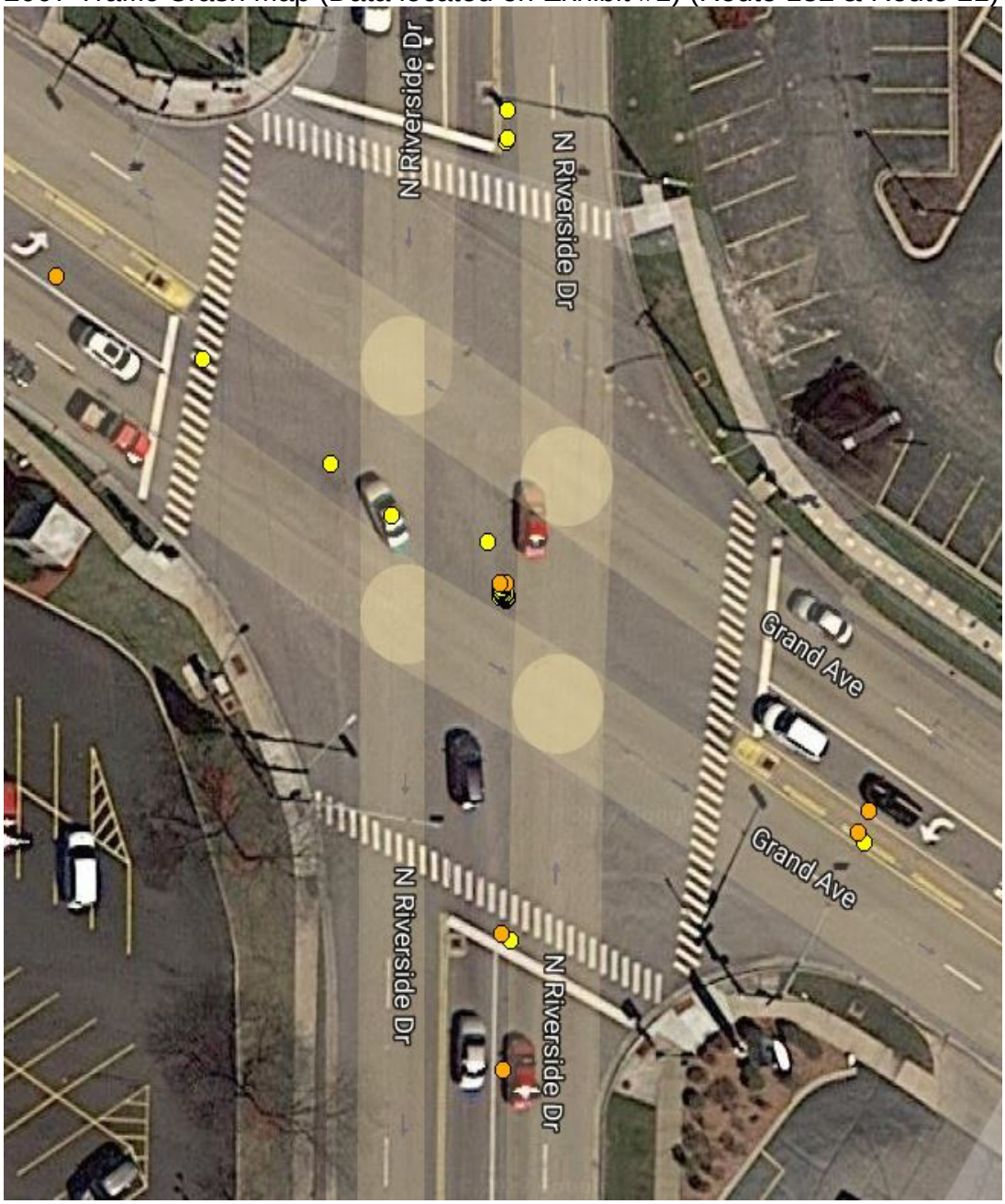
	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2006	11	2	4	10	0	1	0	0	1
2007	15	7	4	13	0	2	2	0	0
2008	8	5	3	6	0	2	0	0	2

2006 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Route 21)

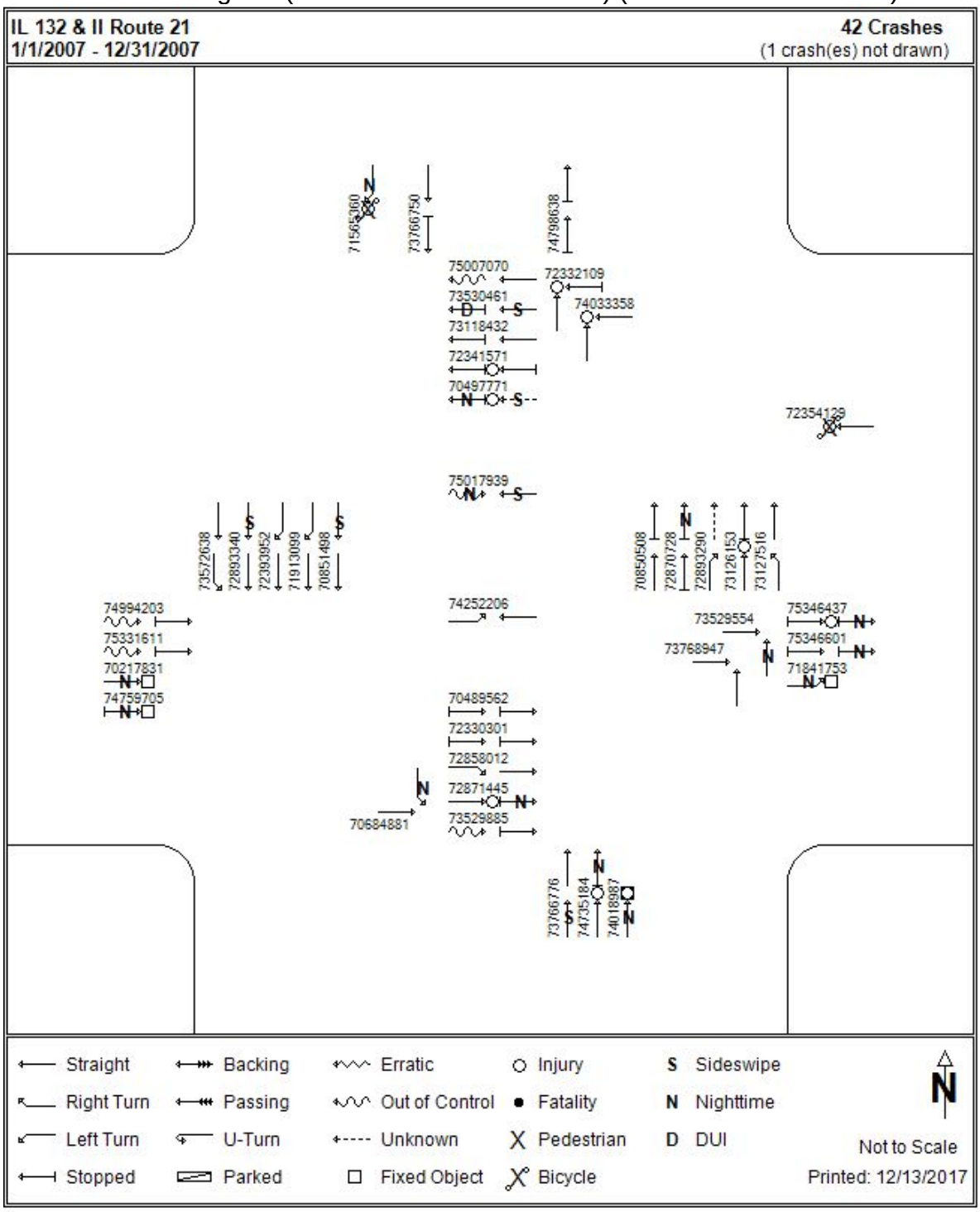
2006 Collision Diagram (Data located on Exhibit #1) (Route 132 & Route 21)



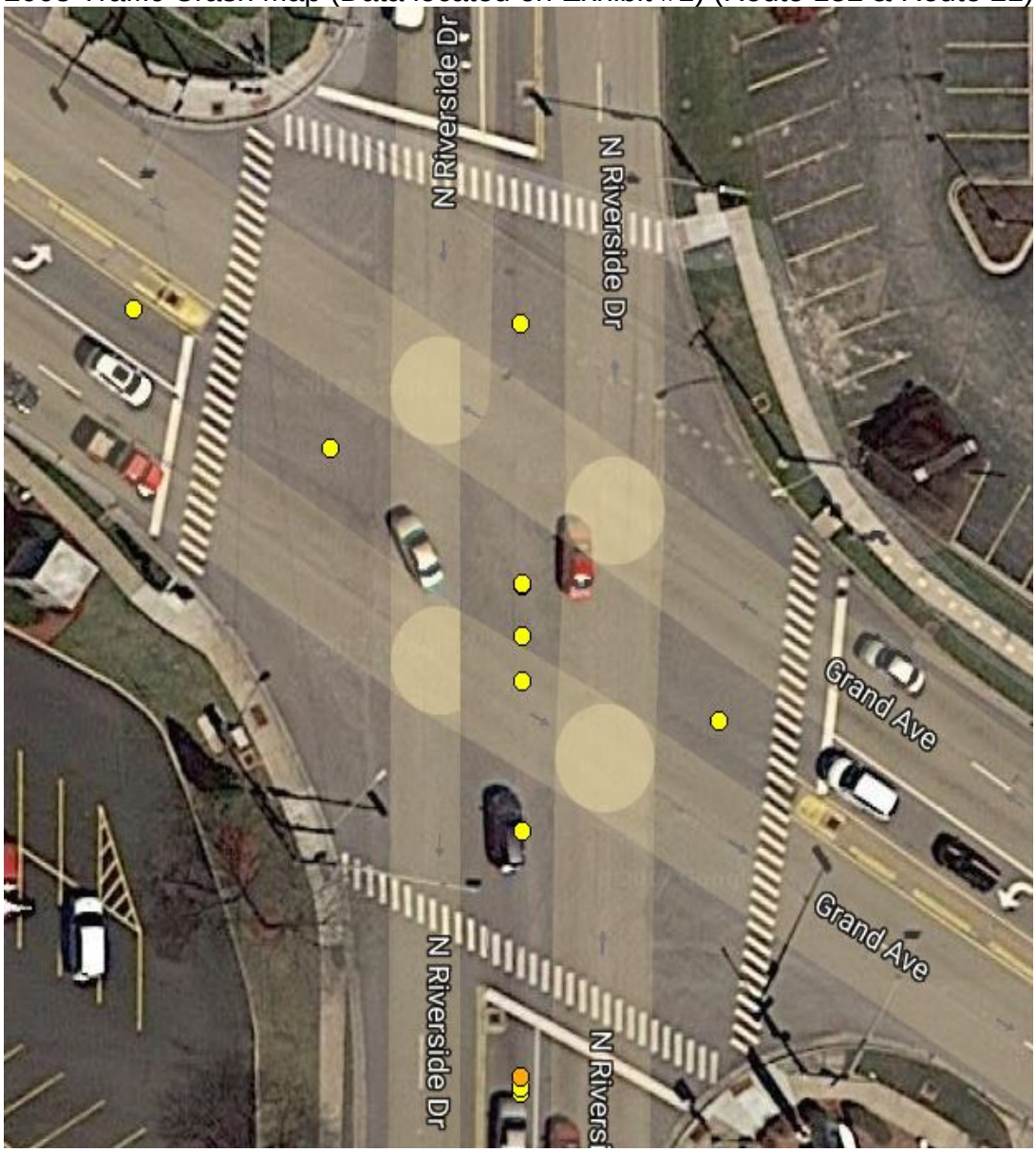
2007 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Route 21)



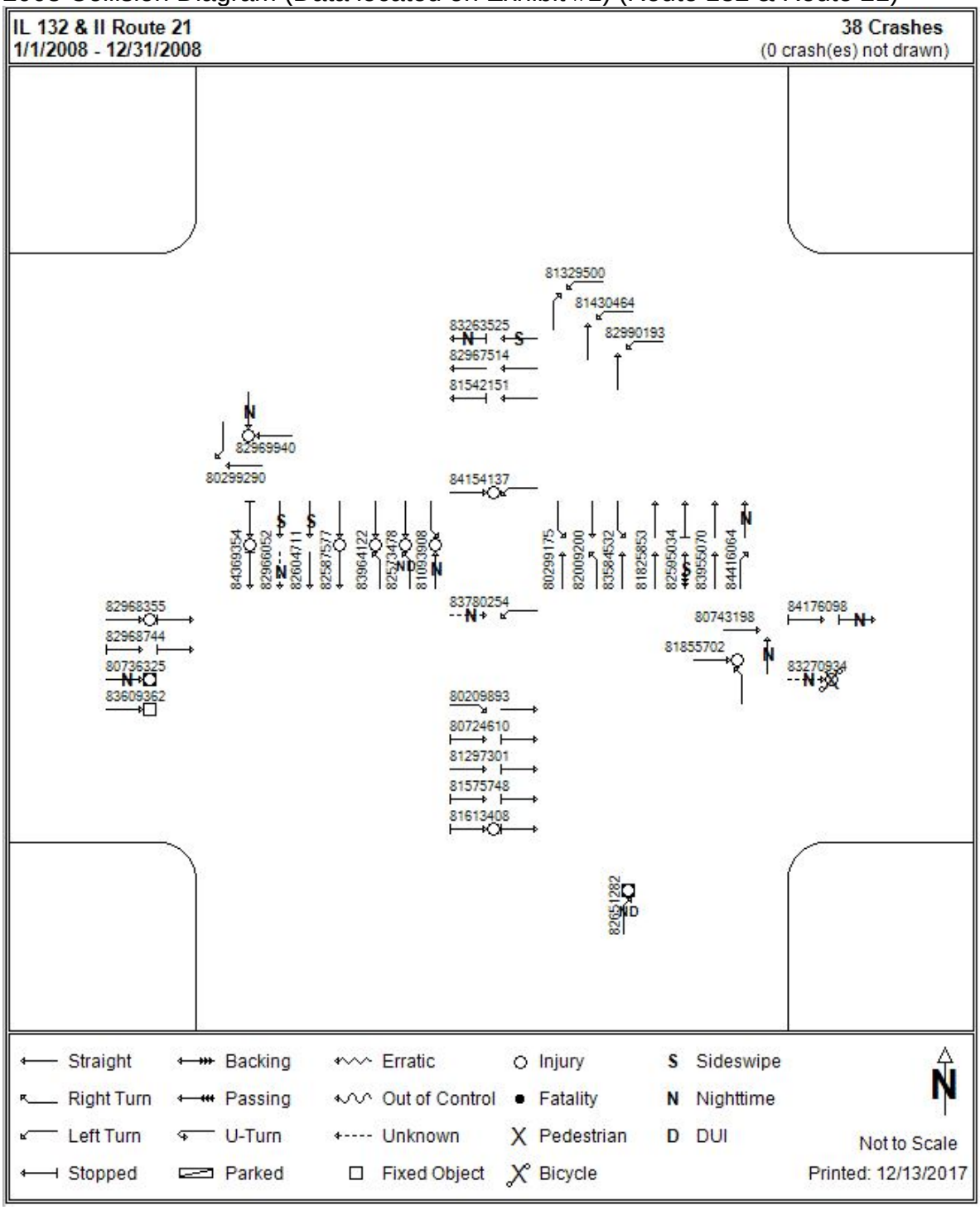
2007 Collision Diagram (Data located on Exhibit #1) (Route 132 & Route 21)



2008 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Route 21)



2008 Collision Diagram (Data located on Exhibit #1) (Route 132 & Route 21)



2006-2008 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Route 21)

2006-2008 Collision Diagram (Data located on Exhibit #1) (Route 132 & Route 21)

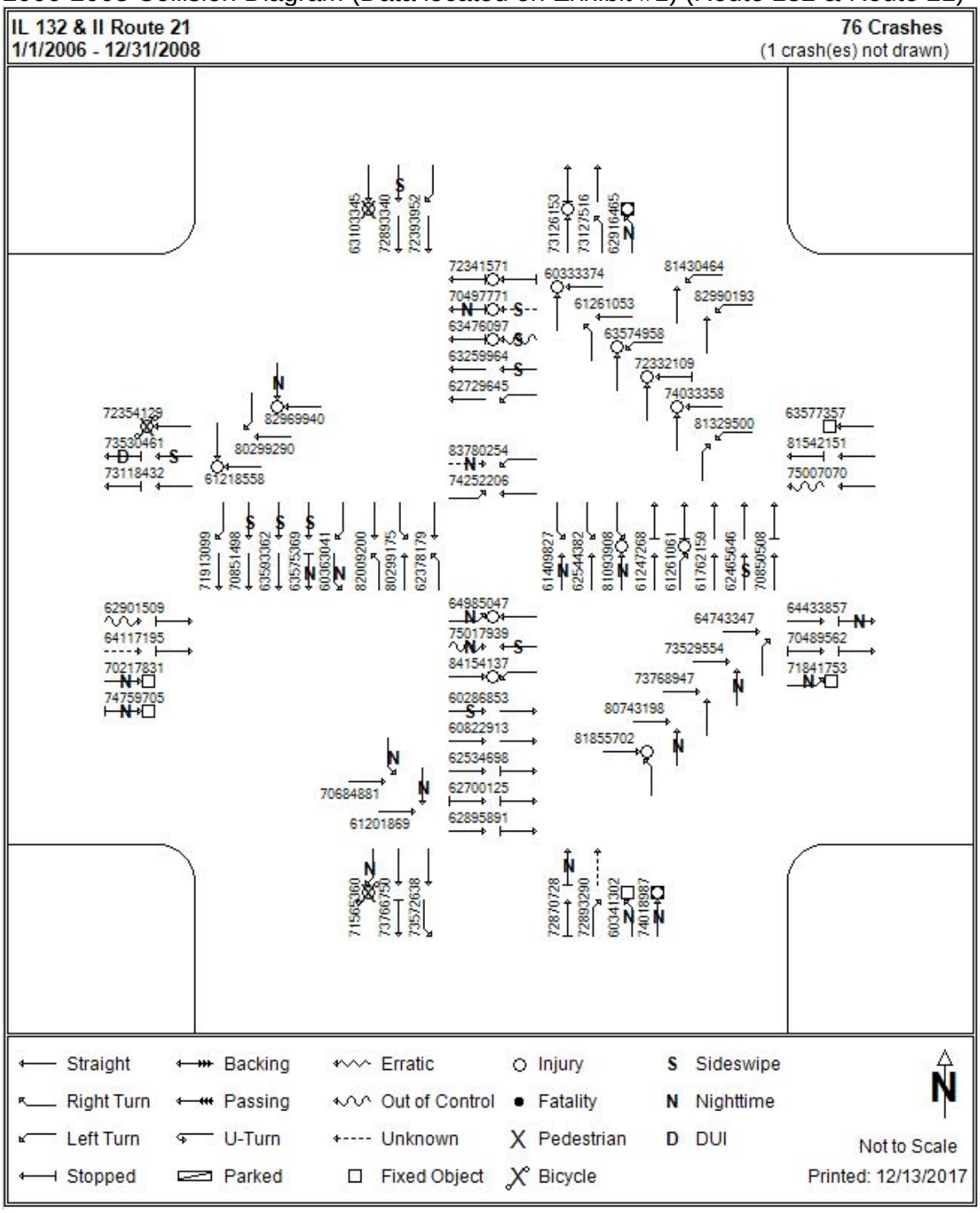
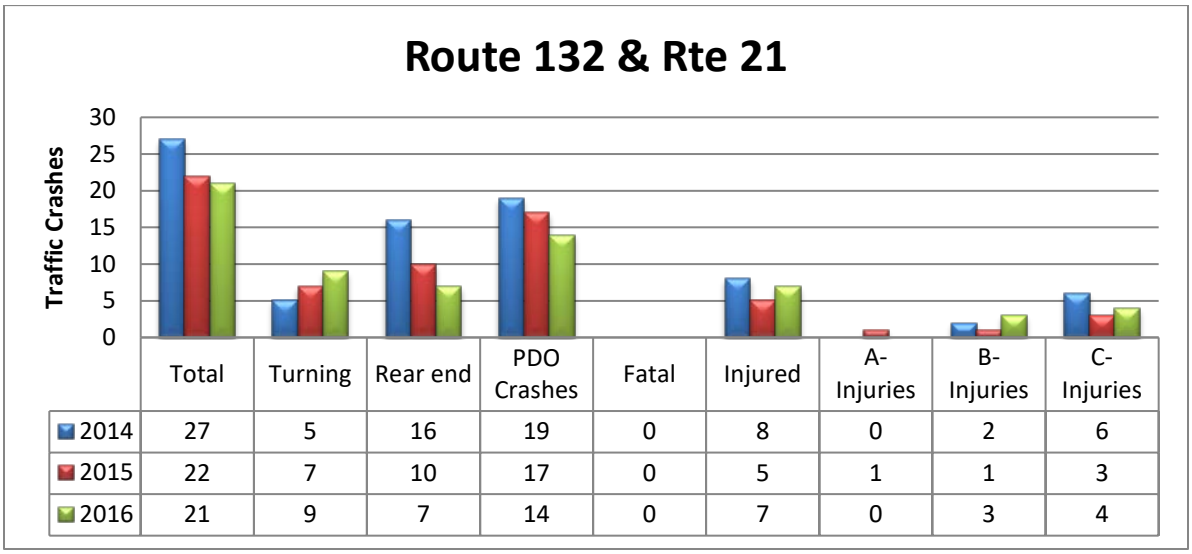
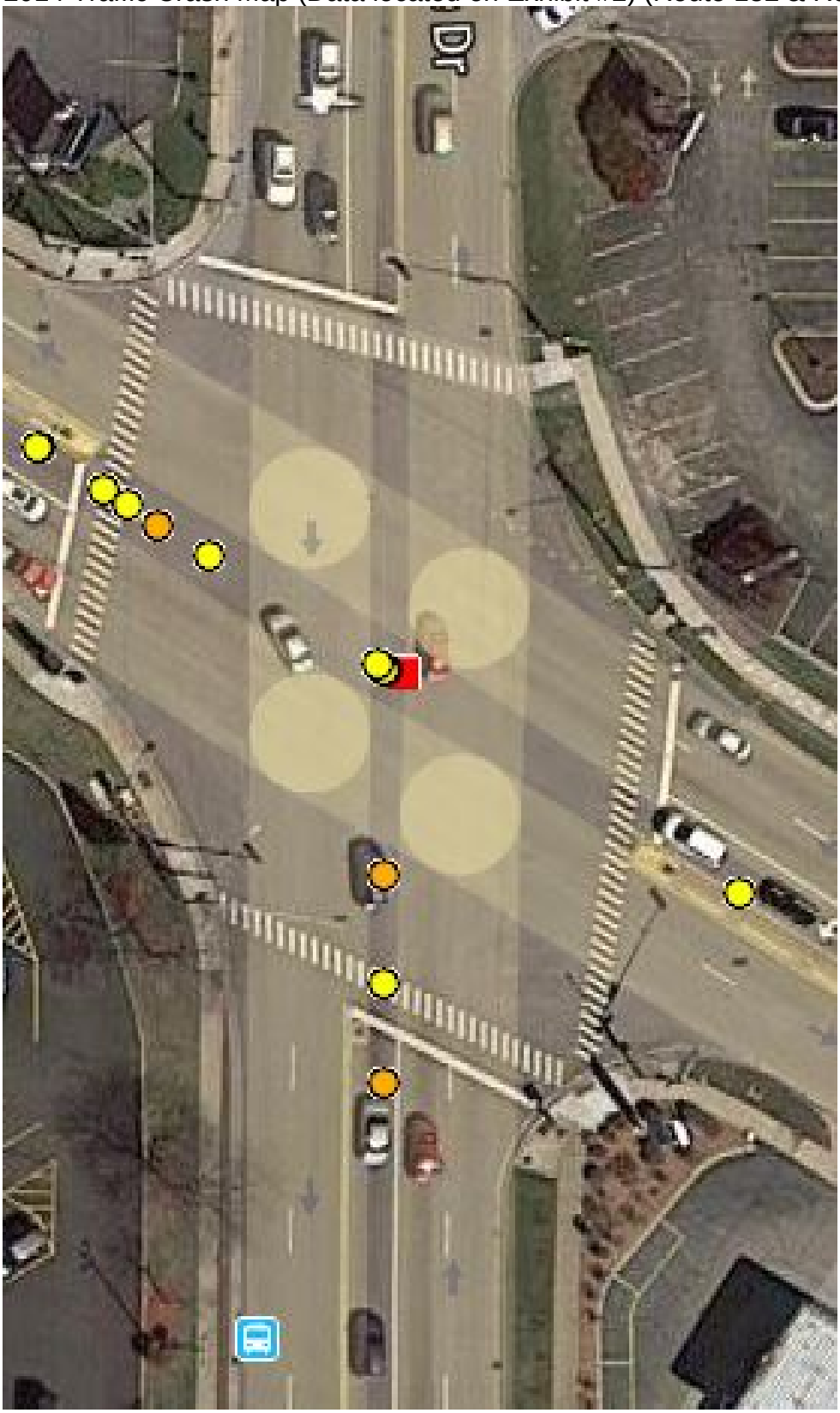


Exhibit #2

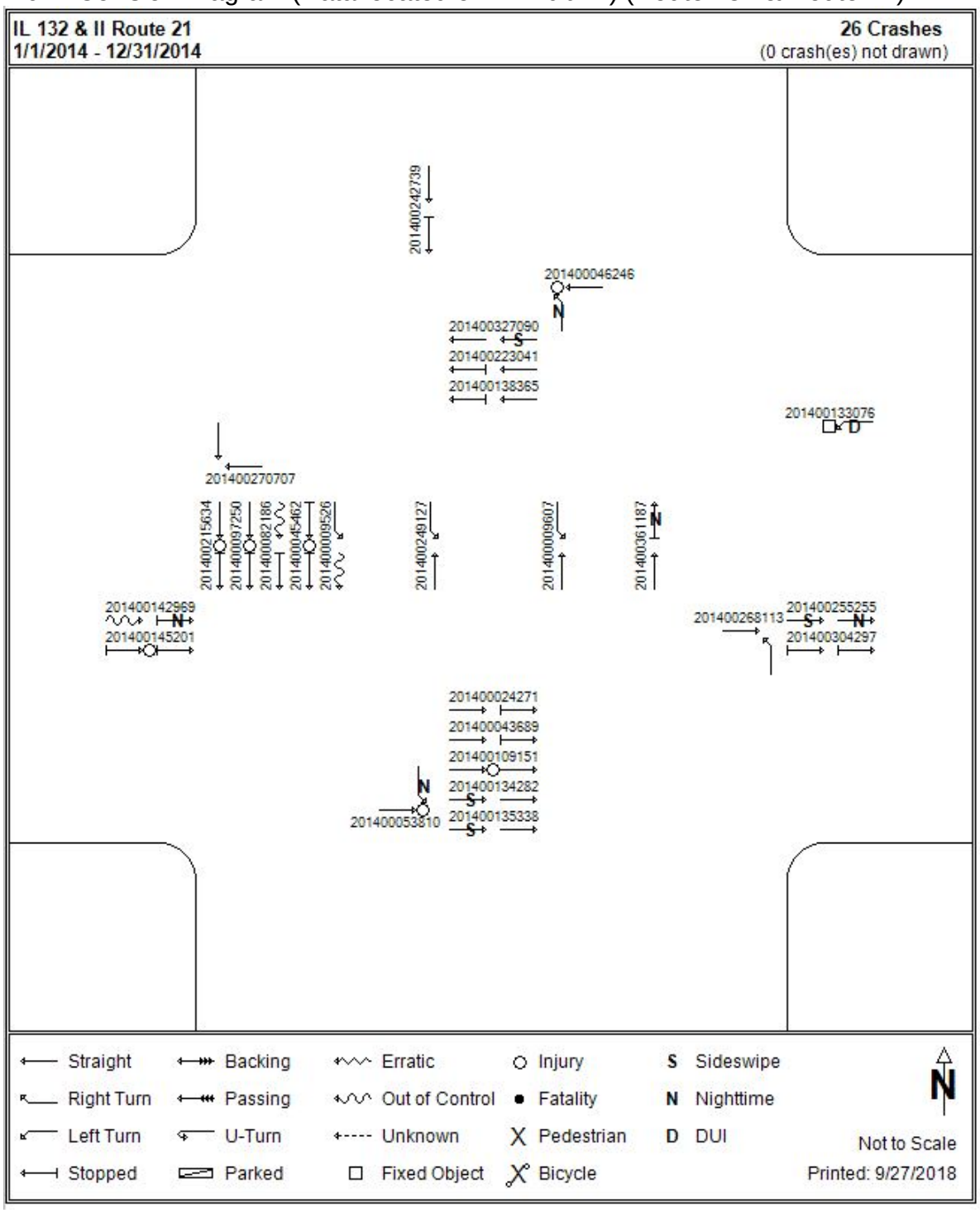


	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2014	27	5	16	19	0	8	0	2	6
2015	22	7	10	17	0	5	1	1	3
2016	21	9	7	14	0	7	0	3	4

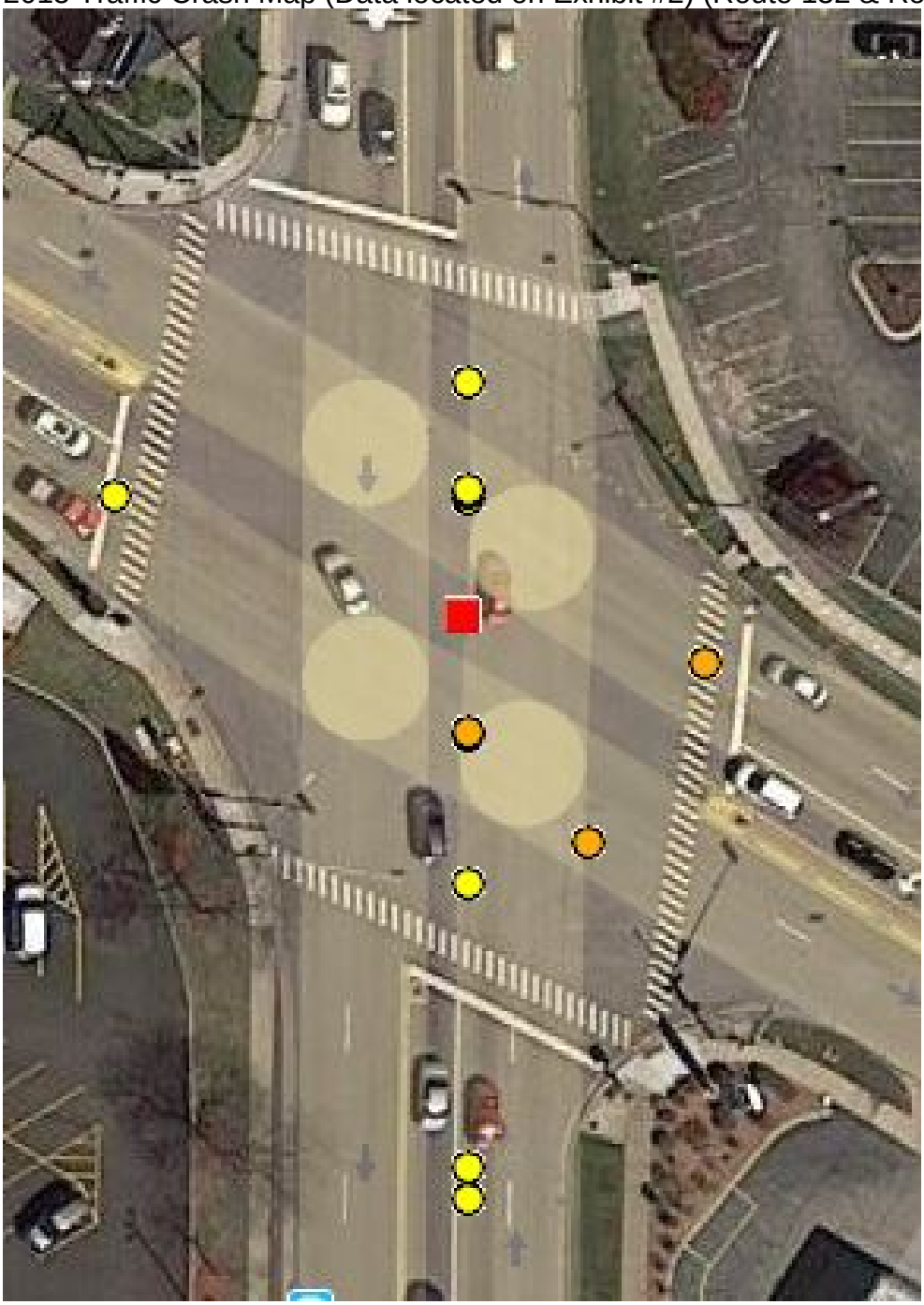
2014 Traffic Crash Map (Data located on Exhibit #2) (Route 132 & Route 21)



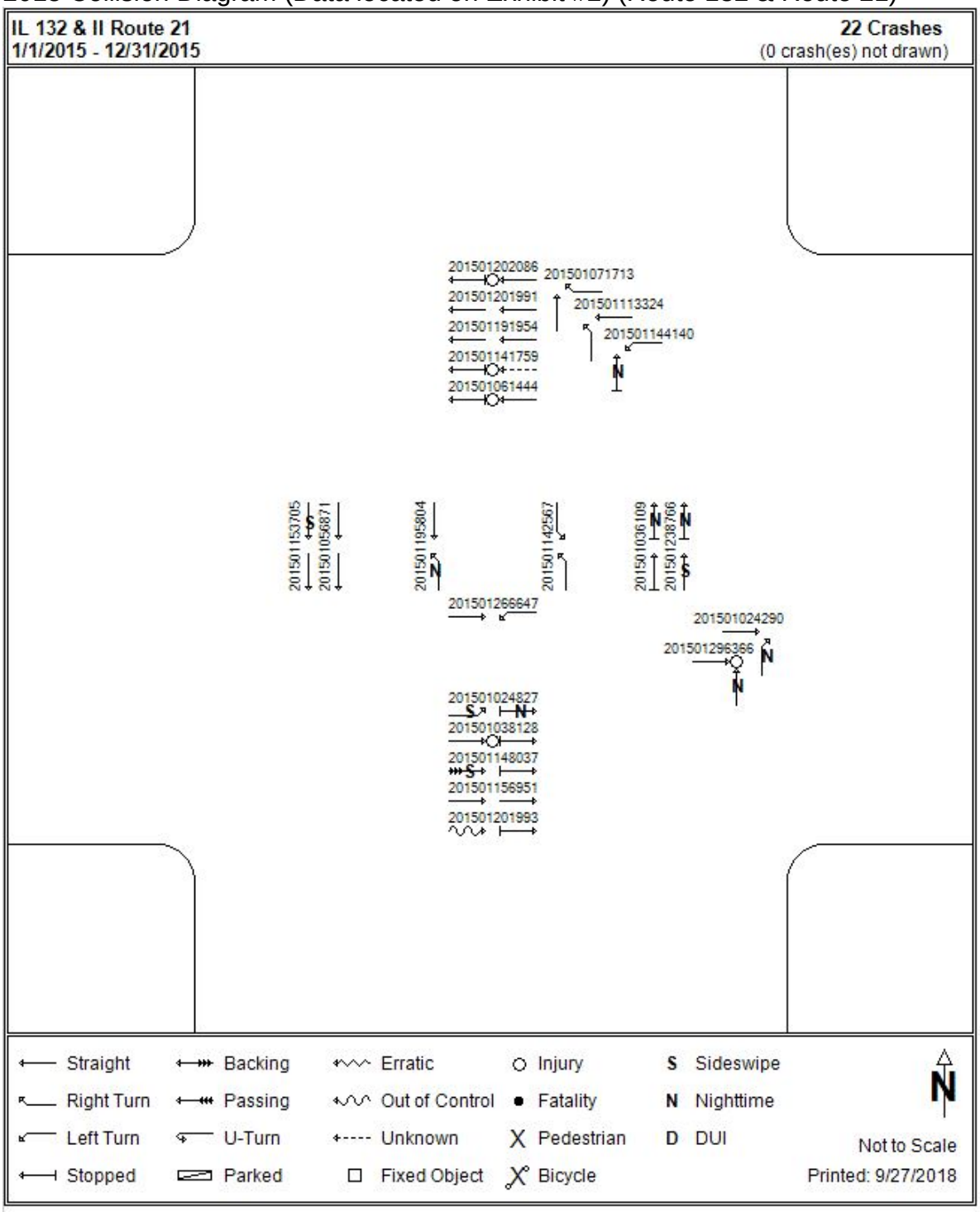
2014 Collision Diagram (Data located on Exhibit #2) (Route 132 & Route 21)



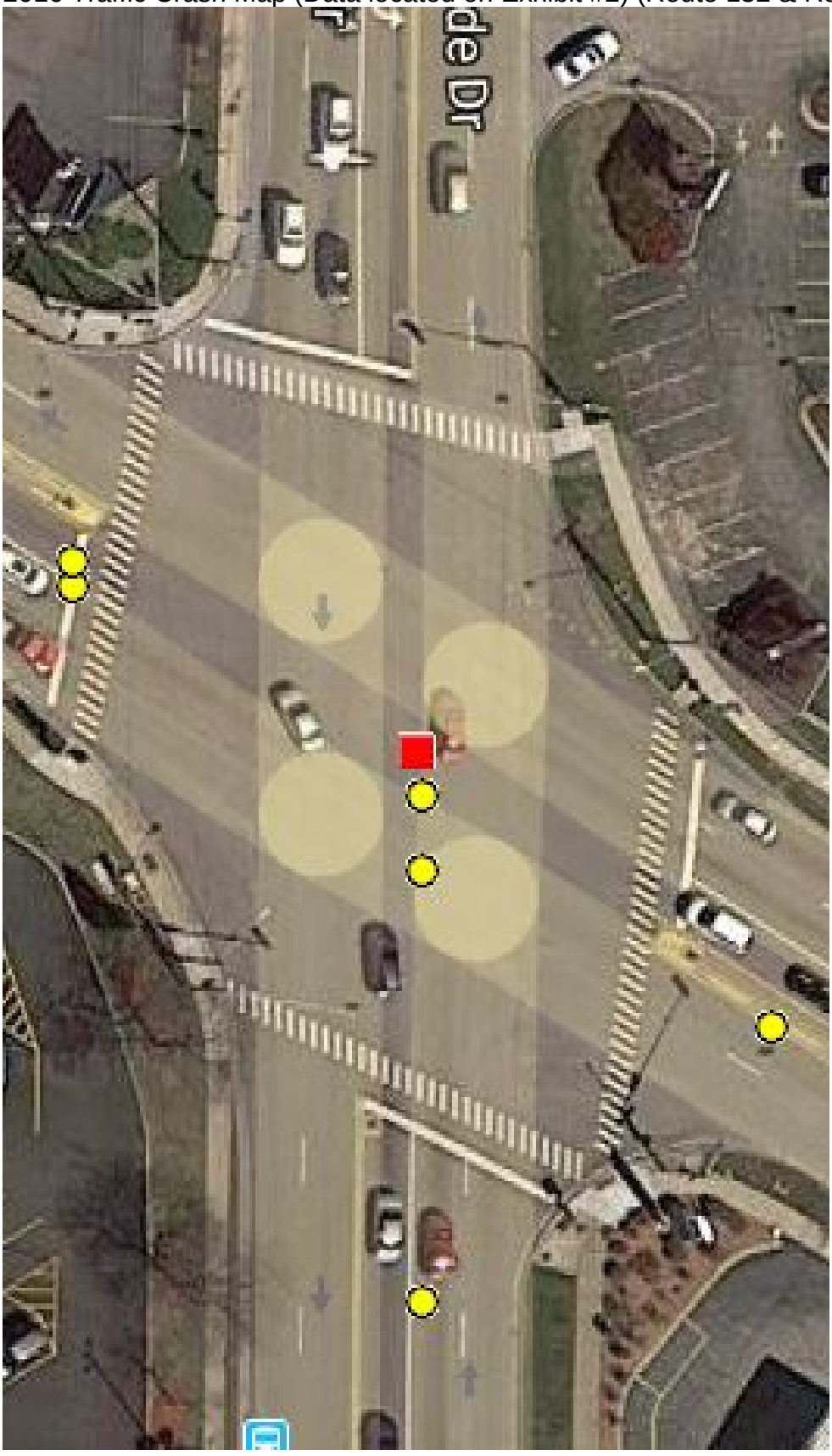
2015 Traffic Crash Map (Data located on Exhibit #2) (Route 132 & Route 21)



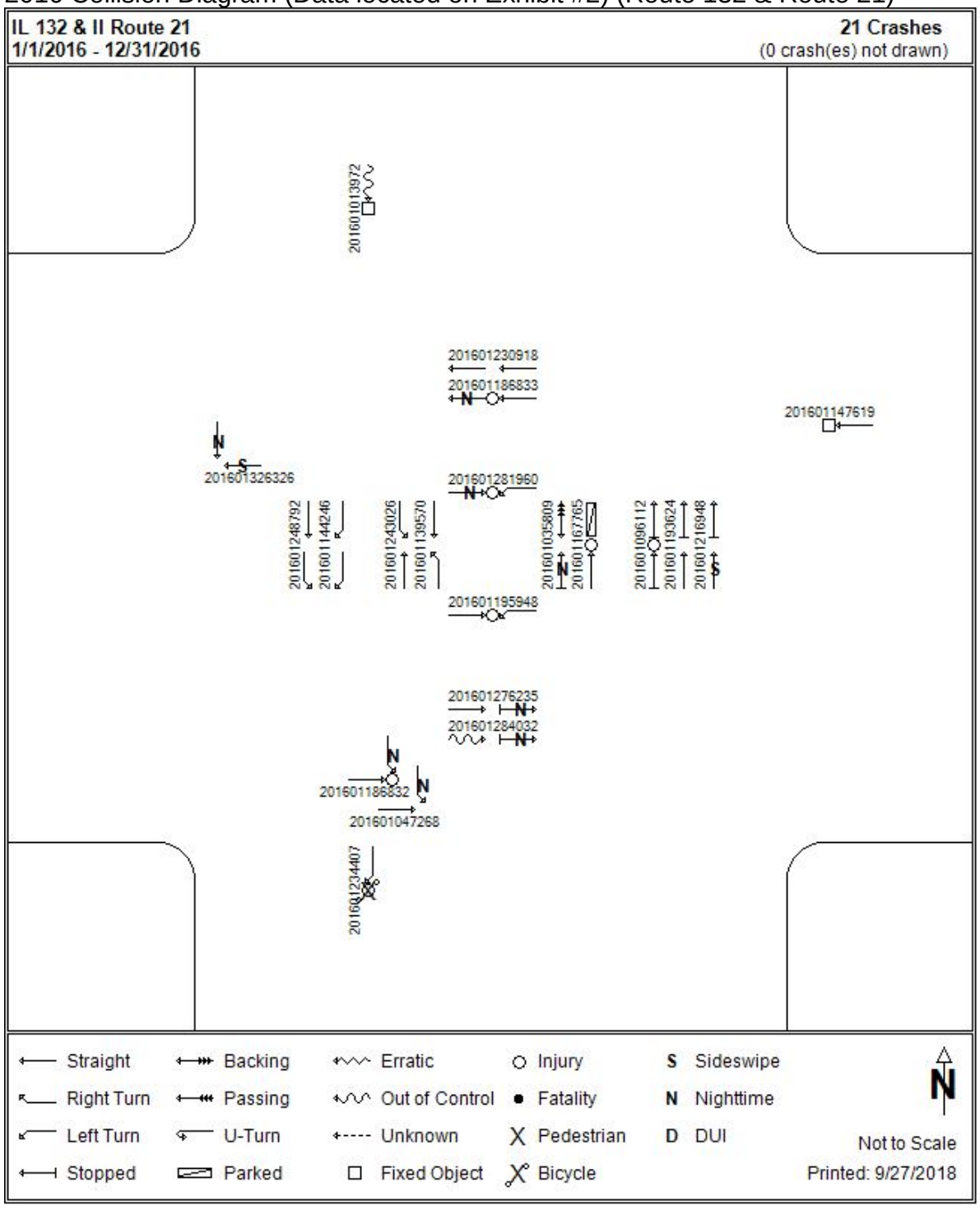
2015 Collision Diagram (Data located on Exhibit #2) (Route 132 & Route 21)



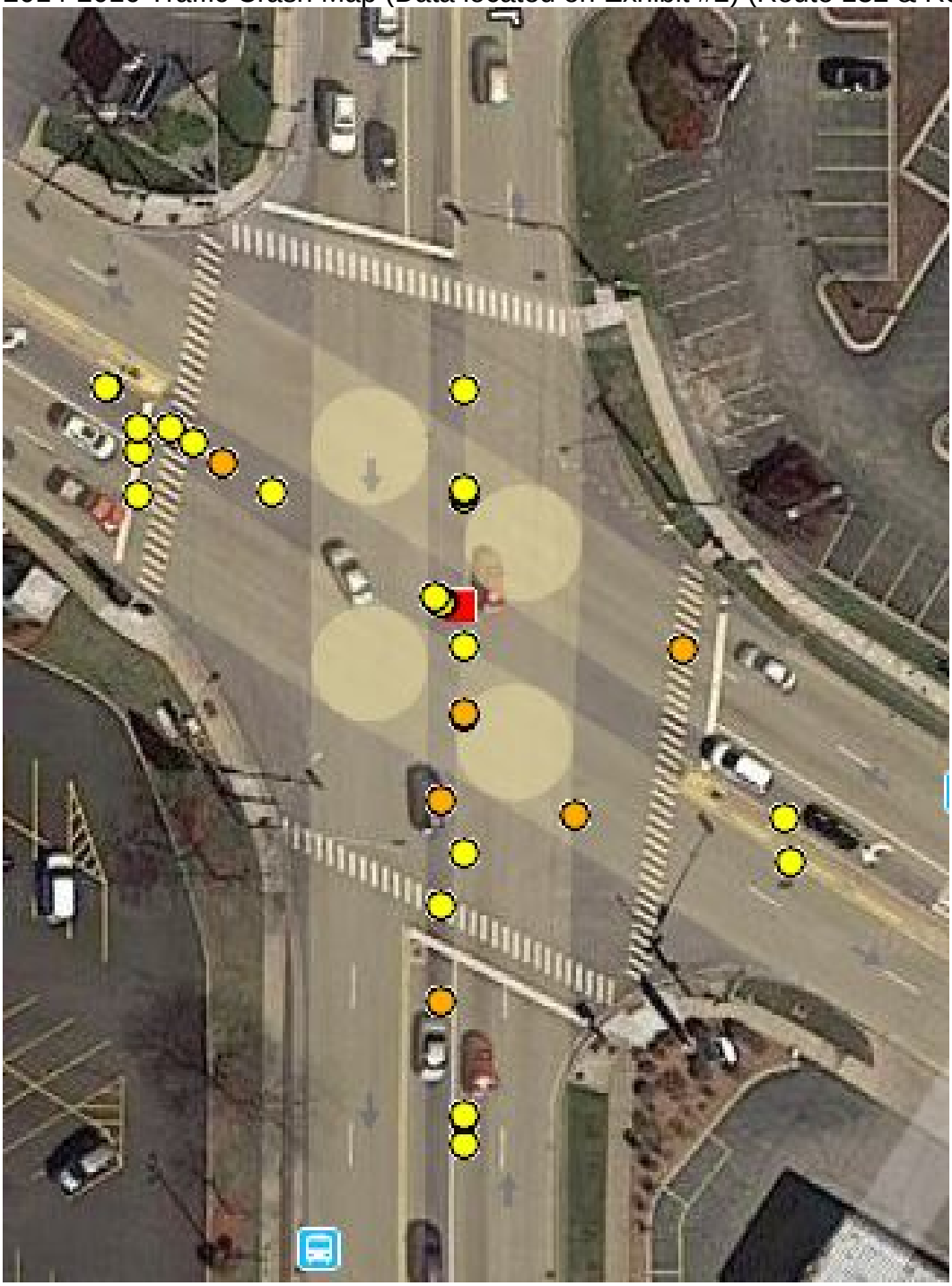
2016 Traffic Crash Map (Data located on Exhibit #2) (Route 132 & Route 21)



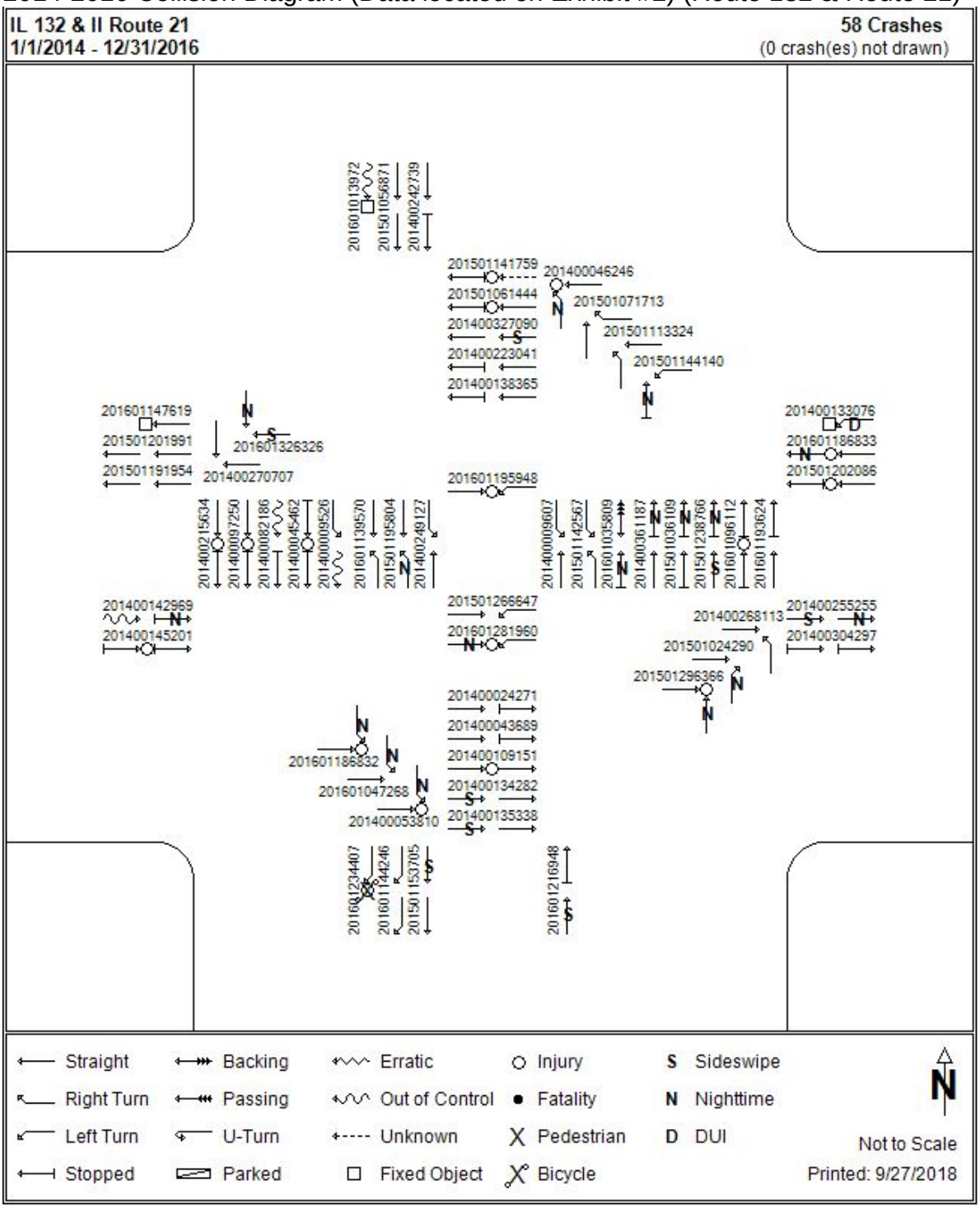
2016 Collision Diagram (Data located on Exhibit #2) (Route 132 & Route 21)



2014-2016 Traffic Crash Map (Data located on Exhibit #2) (Route 132 & Route 21)

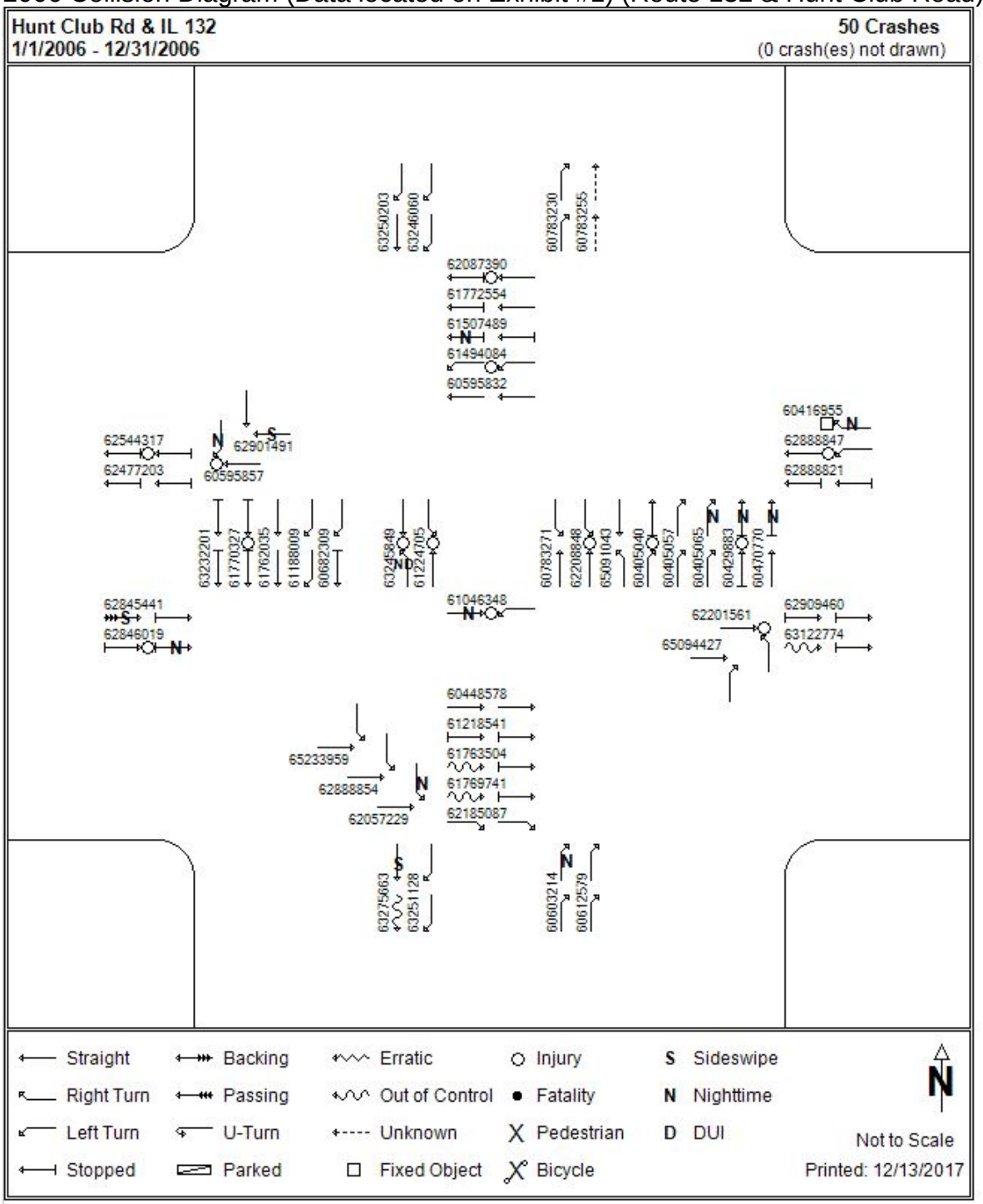


2014-2016 Collision Diagram (Data located on Exhibit #2) (Route 132 & Route 21)



2006 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Hunt Club Road)

2006 Collision Diagram (Data located on Exhibit #1) (Route 132 & Hunt Club Road)



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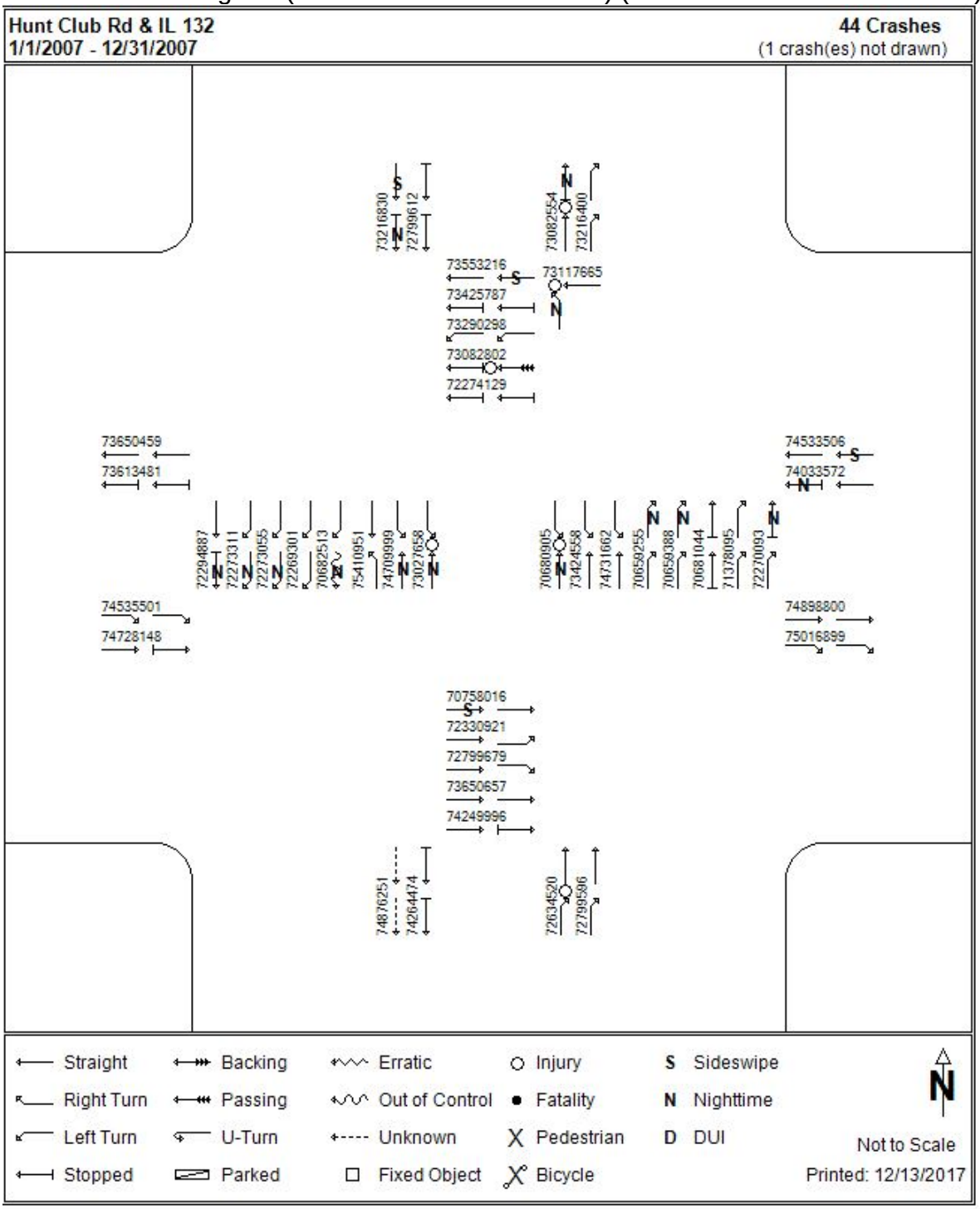
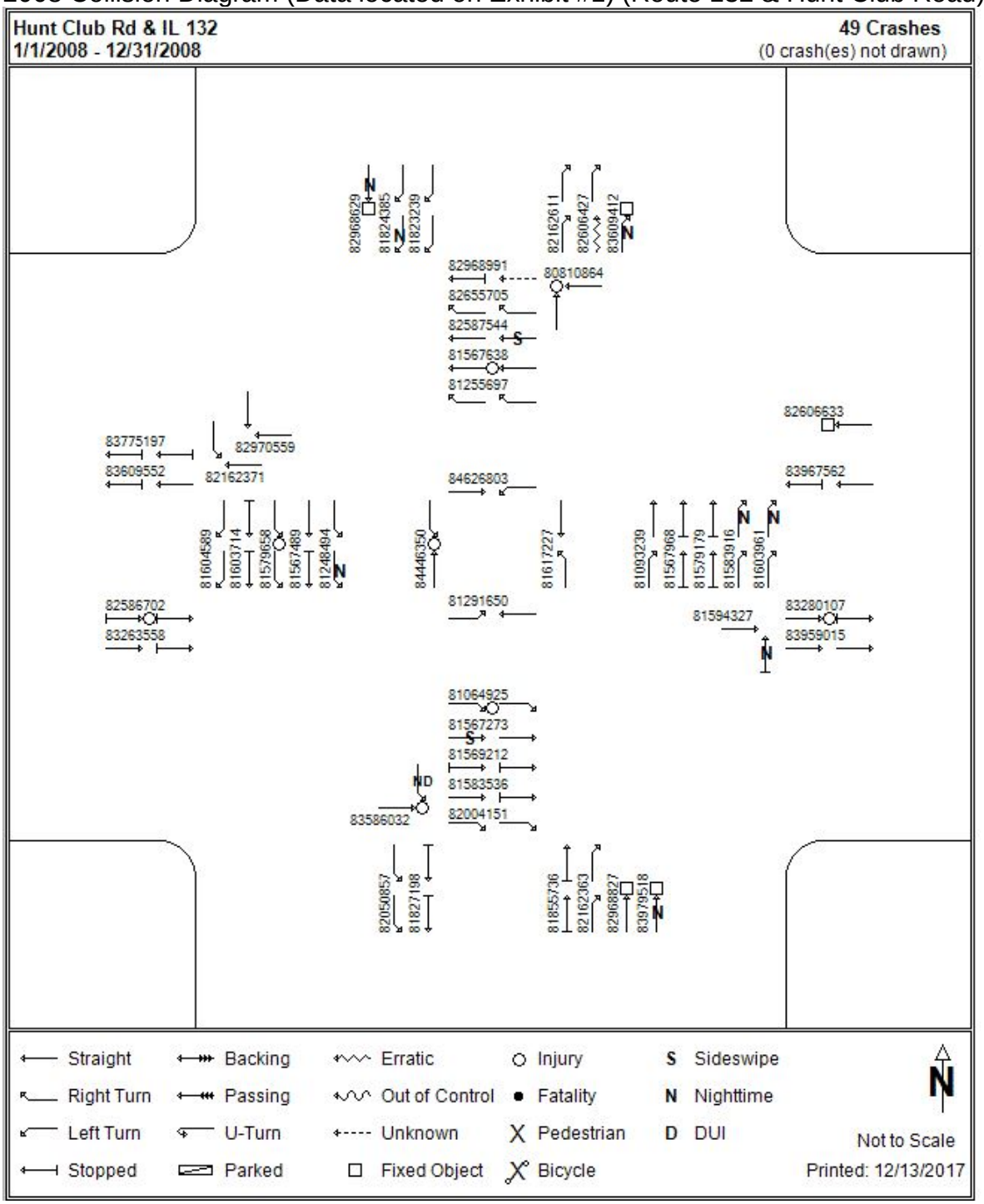
2007 Collision Diagram (Data located on Exhibit #1) (Route 132 & Hunt Club Road)



2008 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Hunt Club Road)

2008 Collision Diagram (Data located on Exhibit #1) (Route 132 & Hunt Club Road)



2006-2008 Crash Map (Data located on Exhibit #1) (Route 132 & Hunt Club Road)

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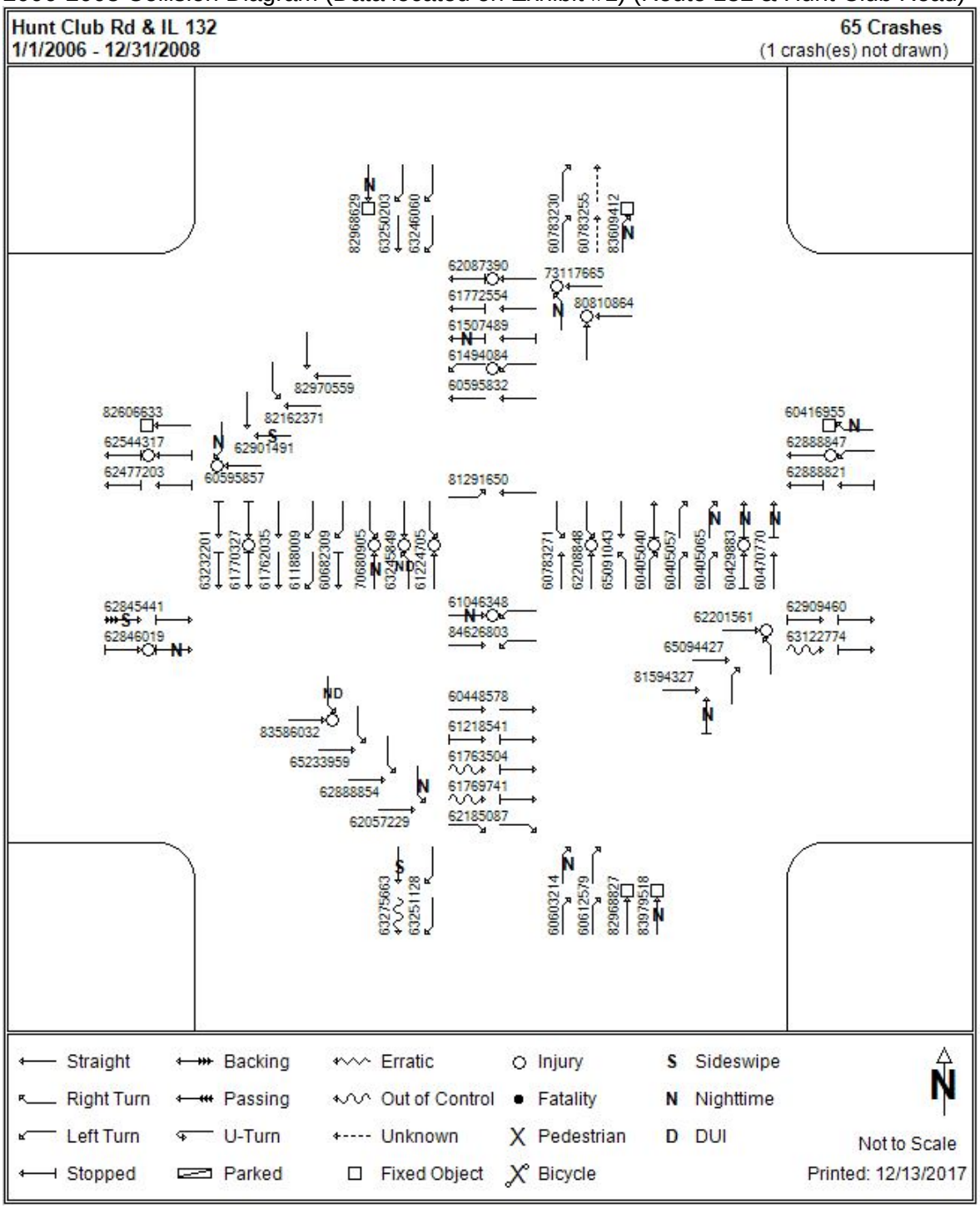
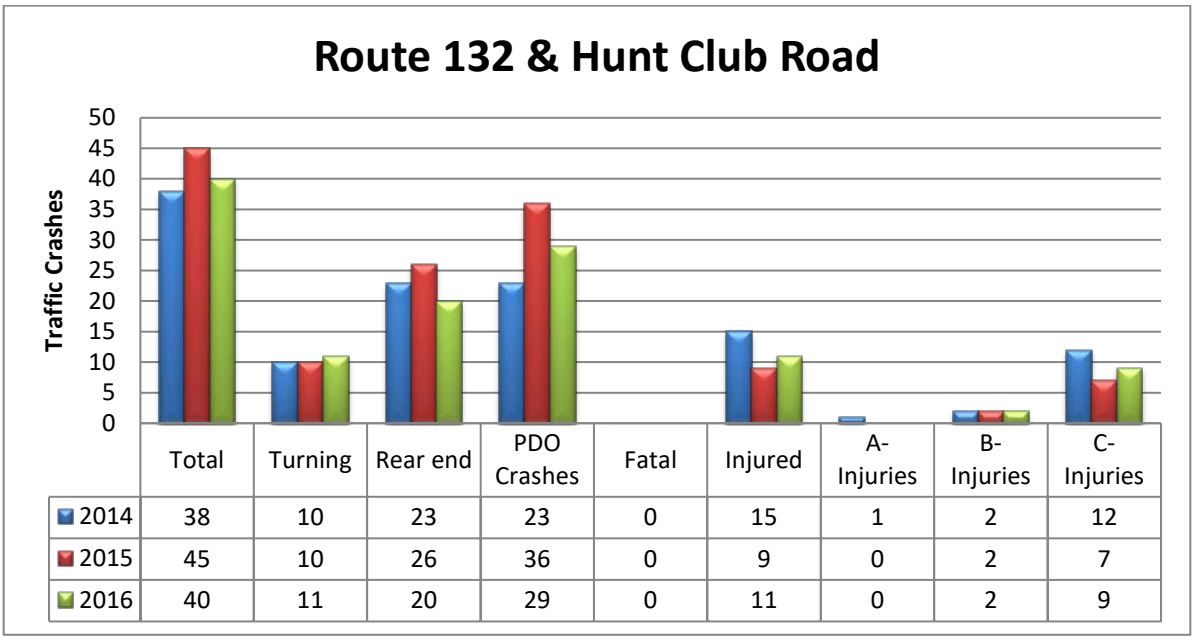


Straight | Backing | Erratic | Injury | S Sideswipe
Right Turn | Passing | Out of Control | Fatality | N Nighttime
Left Turn | U-Turn | Unknown | Pedestrian | D DUI
Stopped | Parked | Fixed Object | Bicycle

Not to Scale
Printed: 12/13/2017

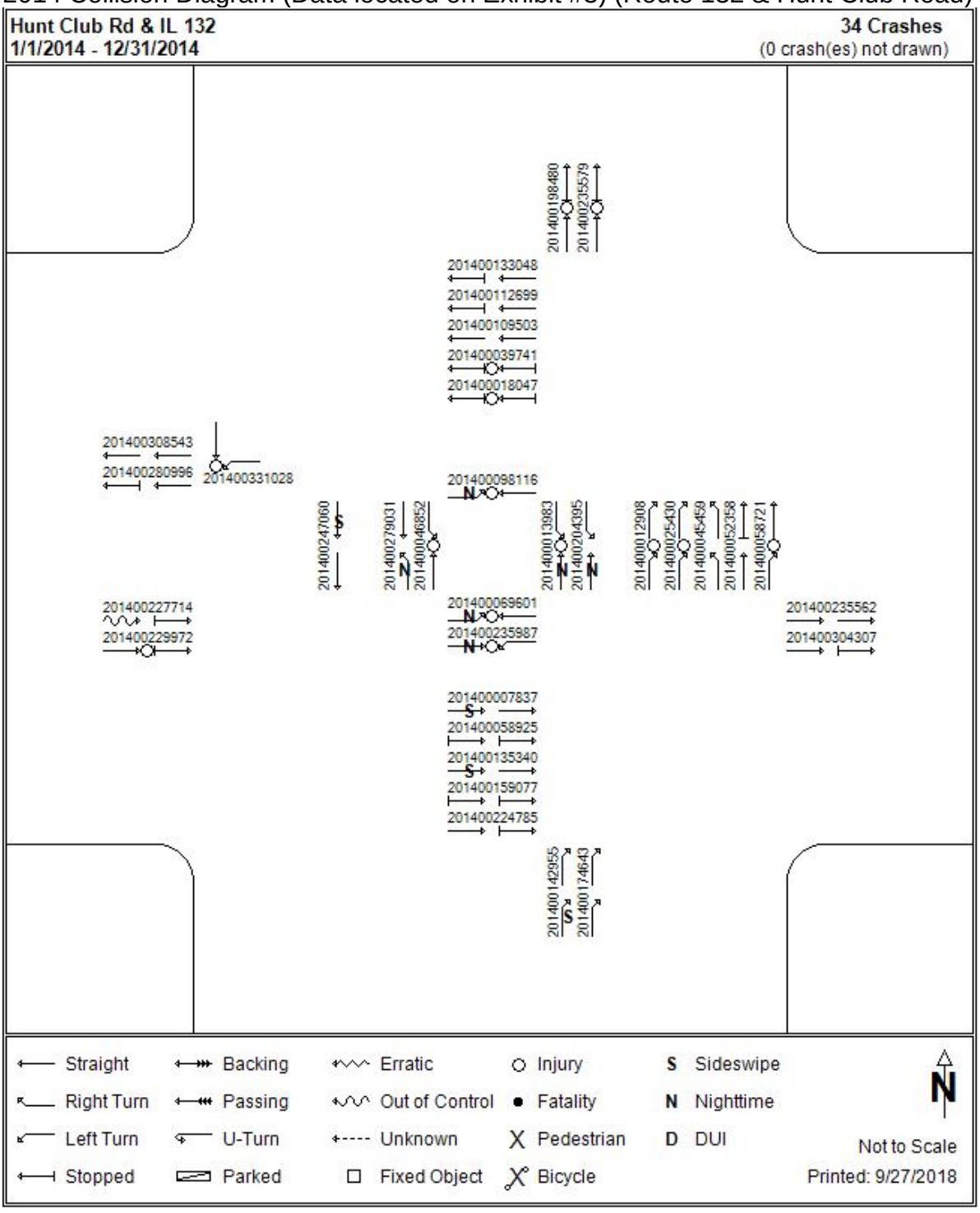
Exhibit #3



	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2014	38	10	23	23	0	15	1	2	12
2015	45	10	26	36	0	9	0	2	7
2016	40	11	20	29	0	11	0	2	9

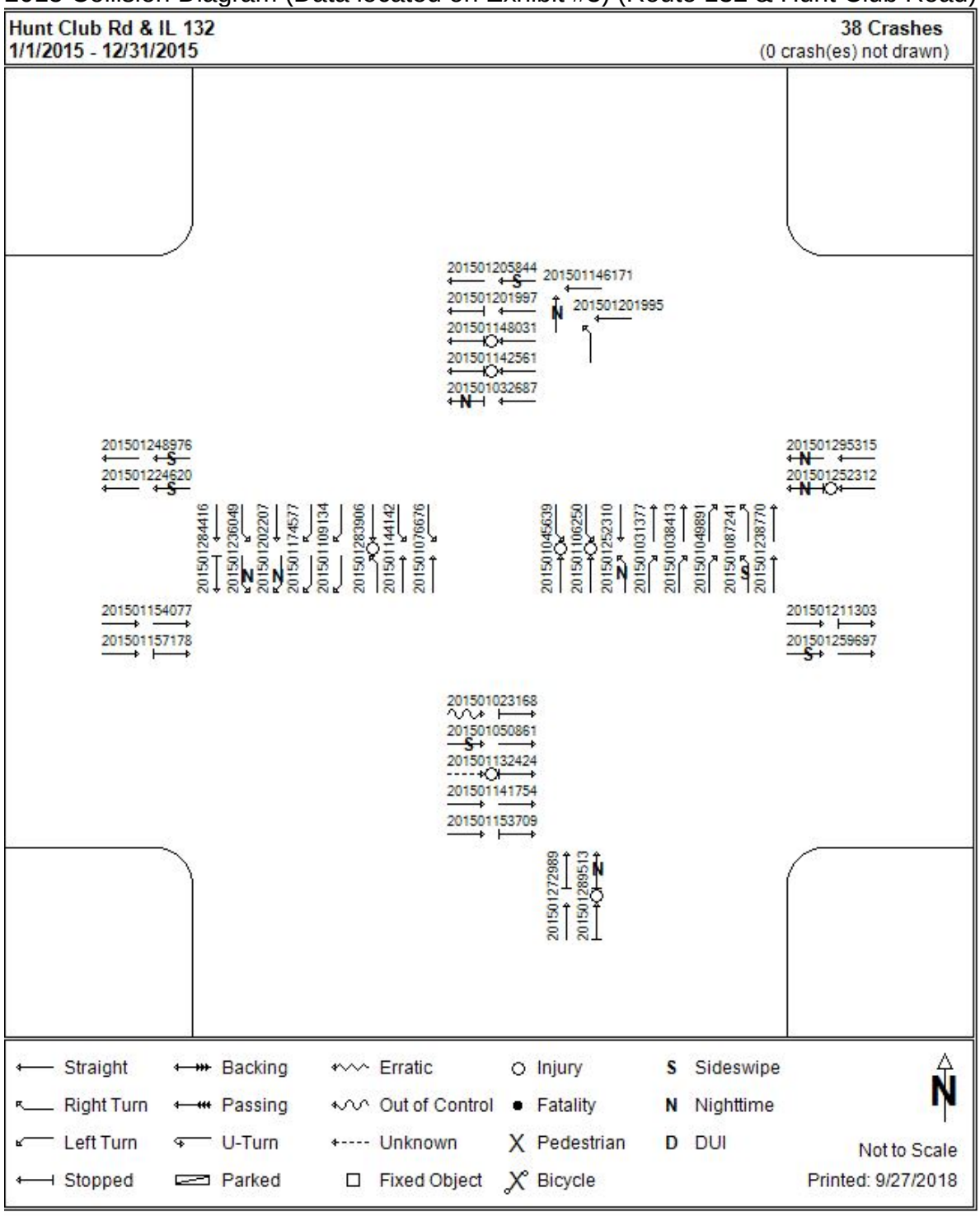
2014 Traffic Crash Map (Data located on Exhibit #3) (Route 132 & Hunt Club Road)

2014 Collision Diagram (Data located on Exhibit #3) (Route 132 & Hunt Club Road)



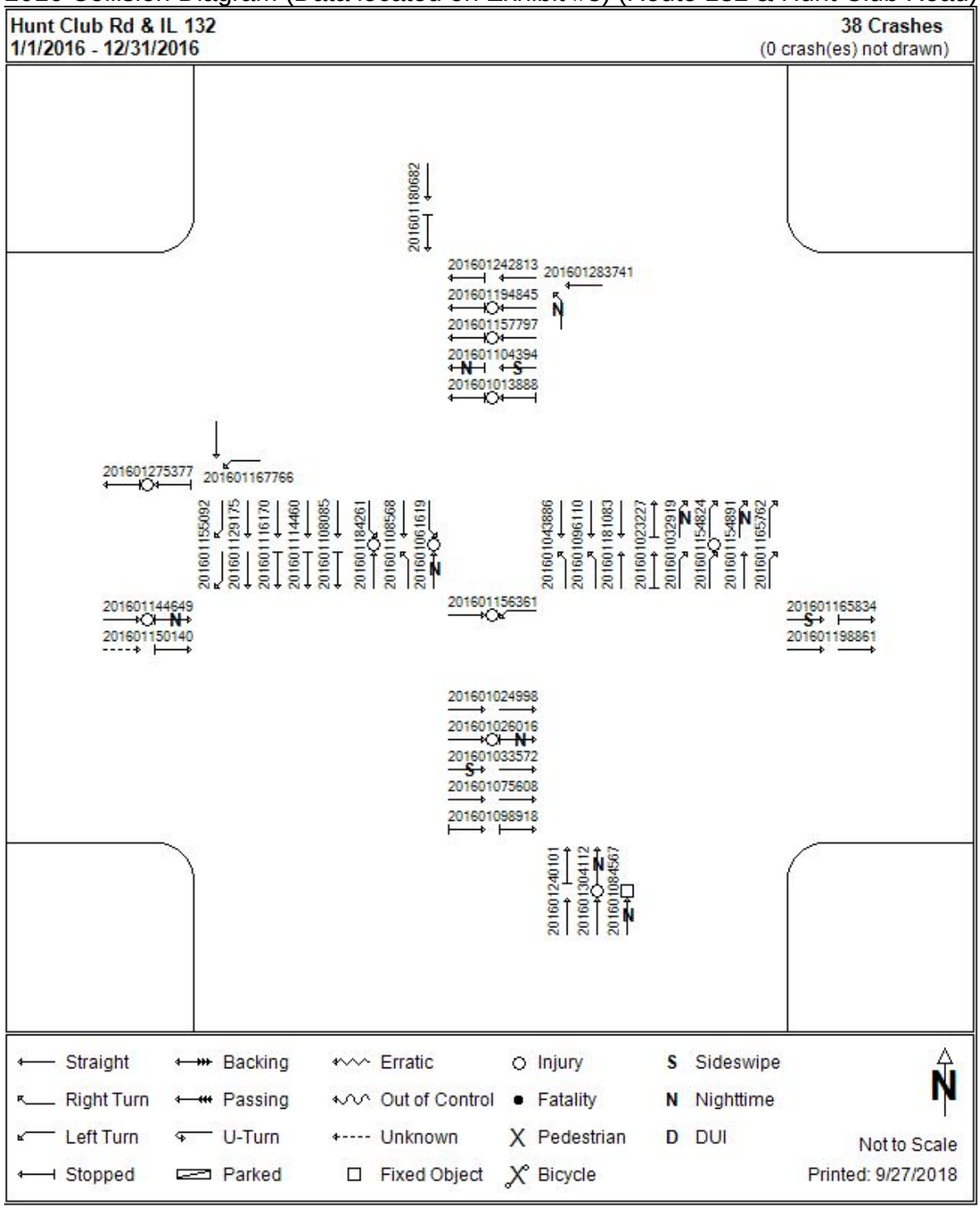
2015 Traffic Crash Map (Data located on Exhibit #3) (Route 132 & Hunt Club Road)

2015 Collision Diagram (Data located on Exhibit #3) (Route 132 & Hunt Club Road)



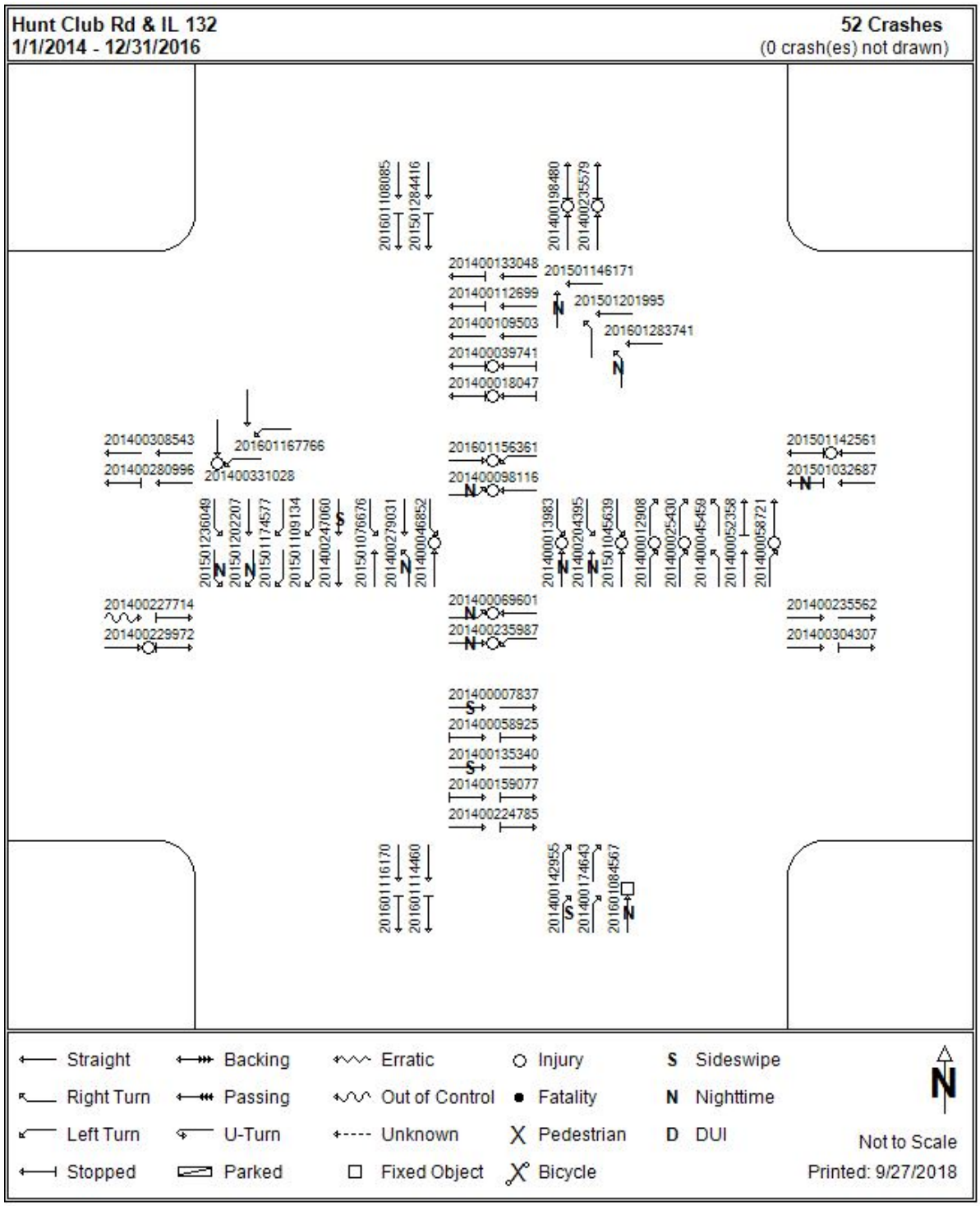
2016 Traffic Crash Map (Data located on Exhibit #3) (Route 132 & Hunt Club Road)

2016 Collision Diagram (Data located on Exhibit #3) (Route 132 & Hunt Club Road)



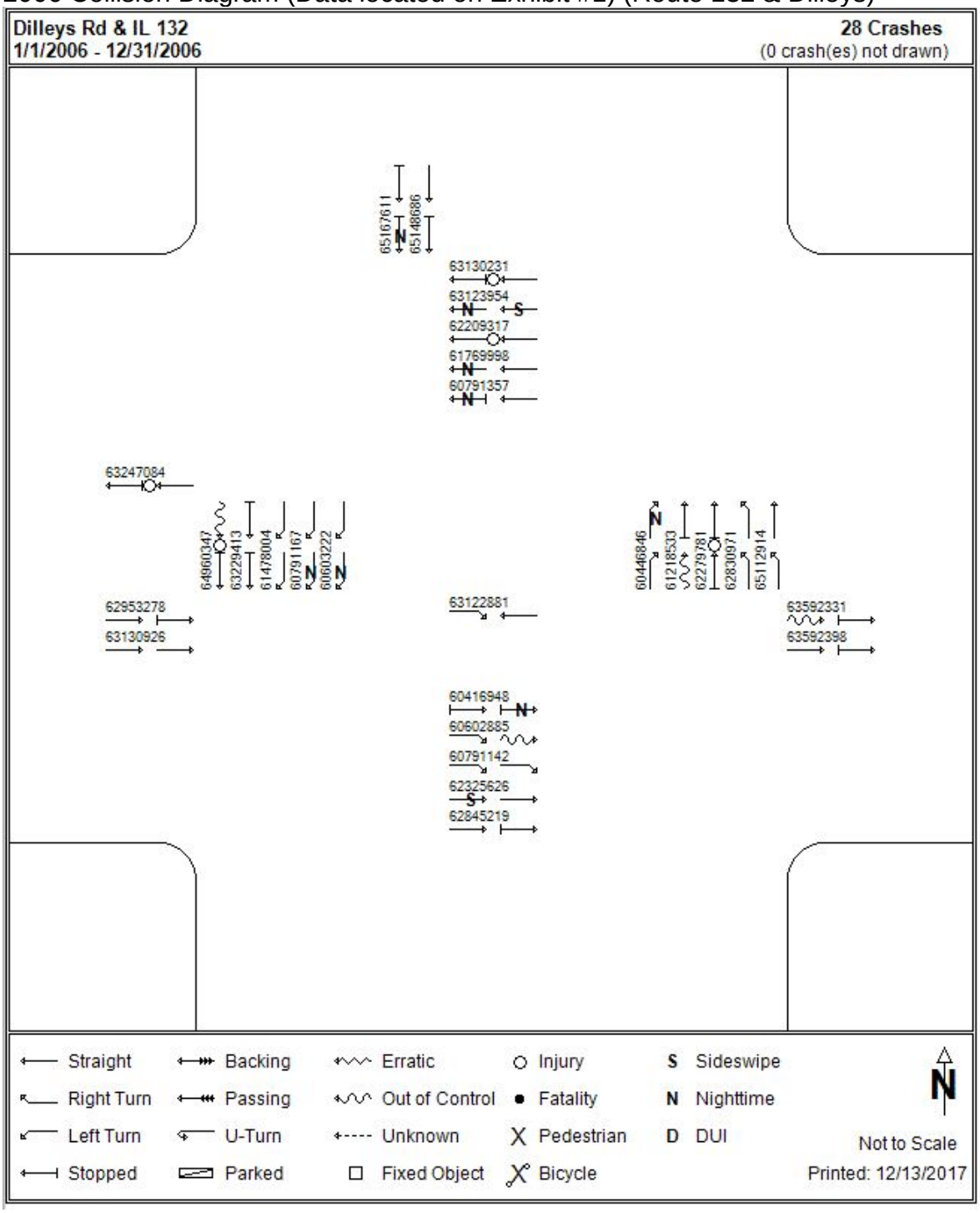
2014-2016 Traffic Crash Map (Data located on Exhibit #3) (Route 132 & Hunt Club Road)

2014-2016 Collision Diagram (Data located on Exhibit #3) (Route 132 & Hunt Club Road)



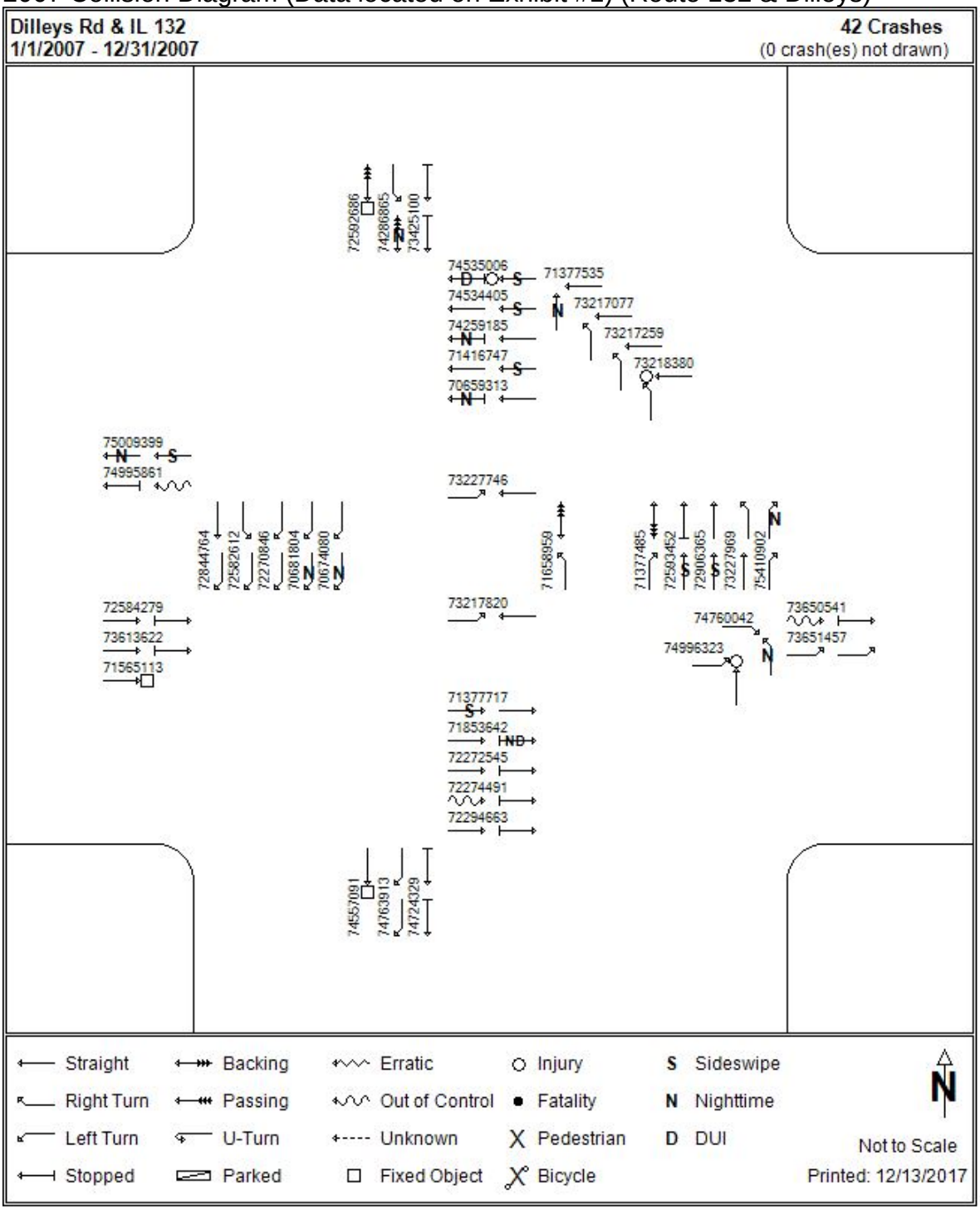
2006 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Dilleys)

2006 Collision Diagram (Data located on Exhibit #1) (Route 132 & Dilleys)



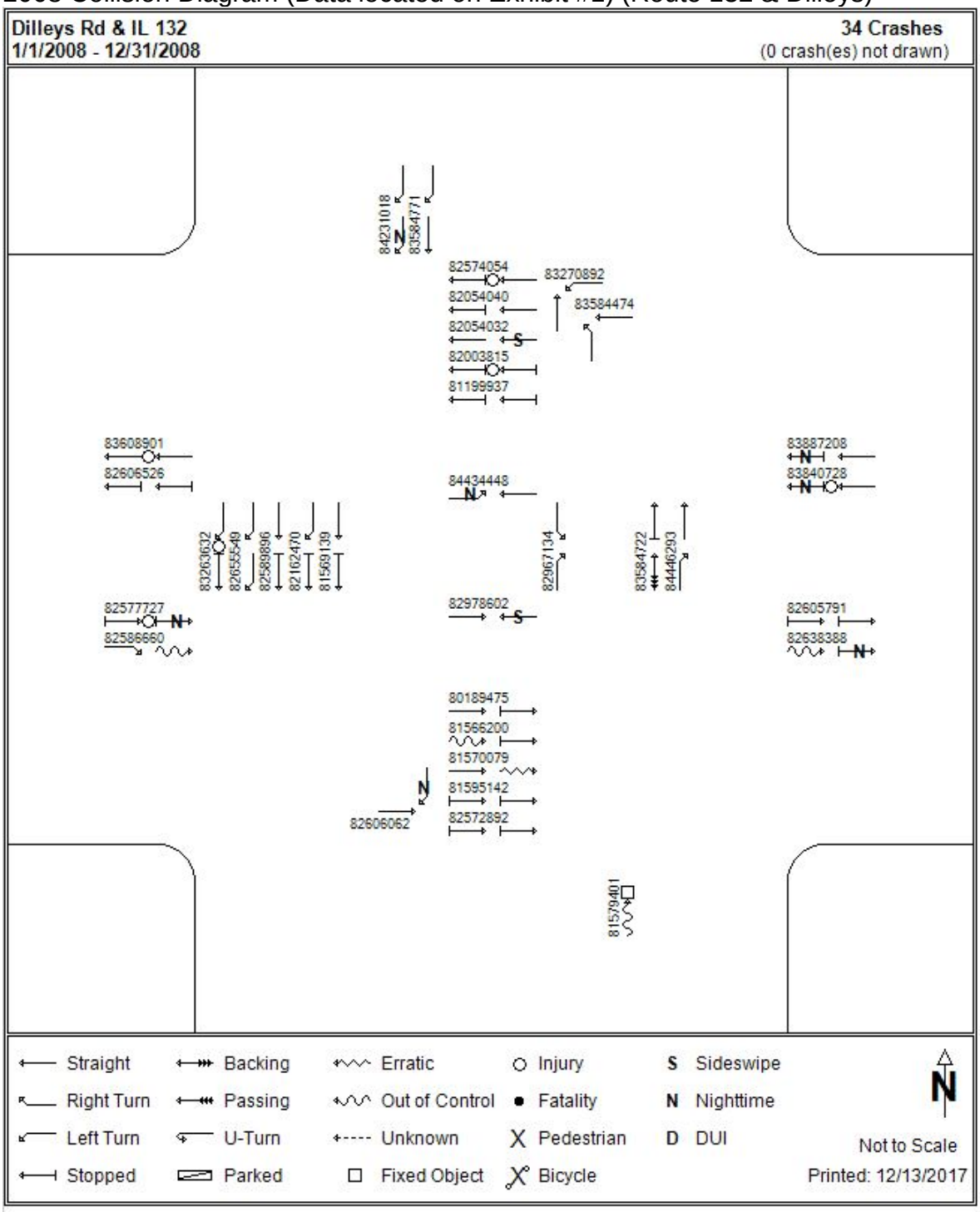
2007 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Dilleys)

2007 Collision Diagram (Data located on Exhibit #1) (Route 132 & Dilleys)

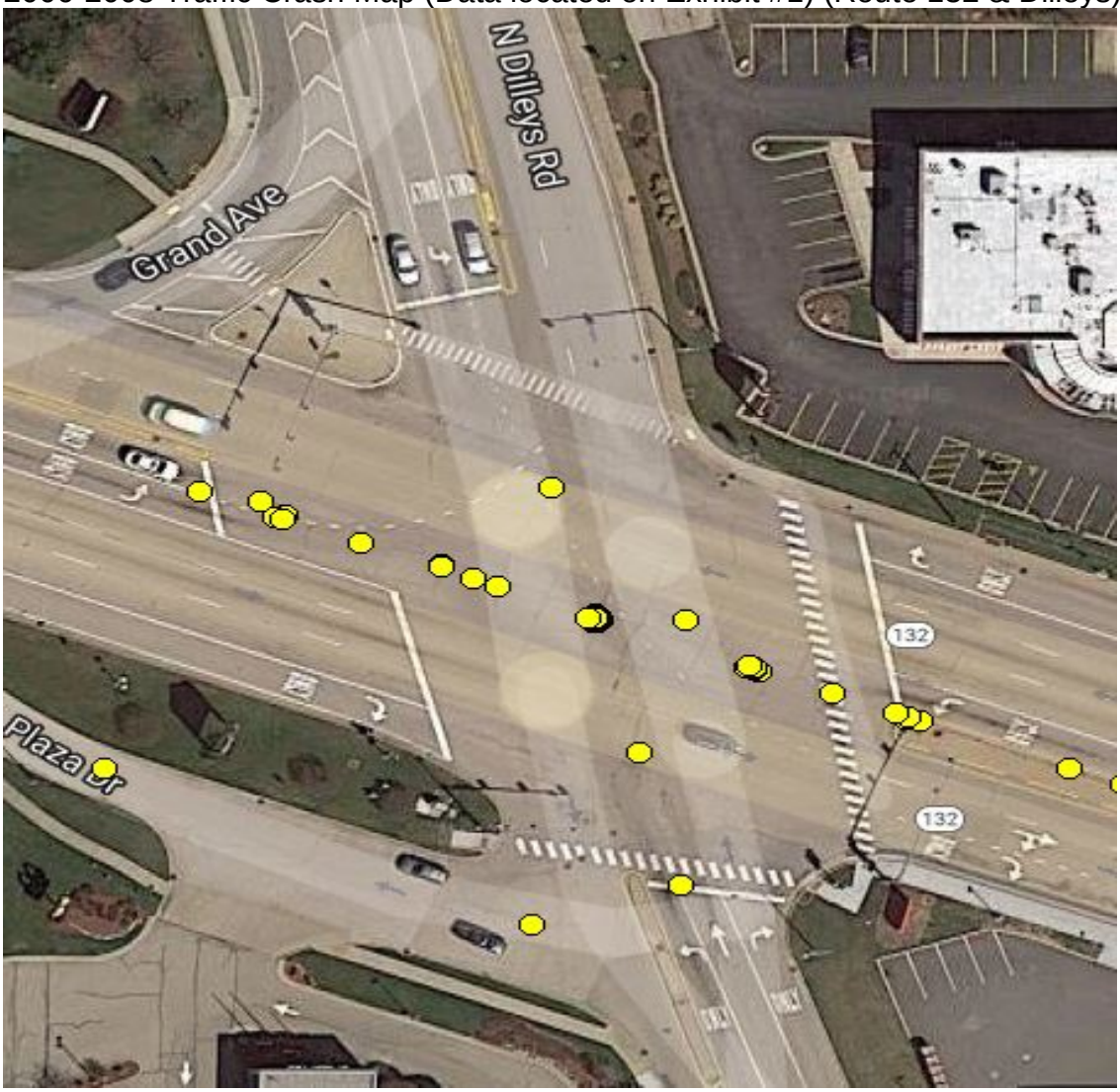


2008 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Dilleys)

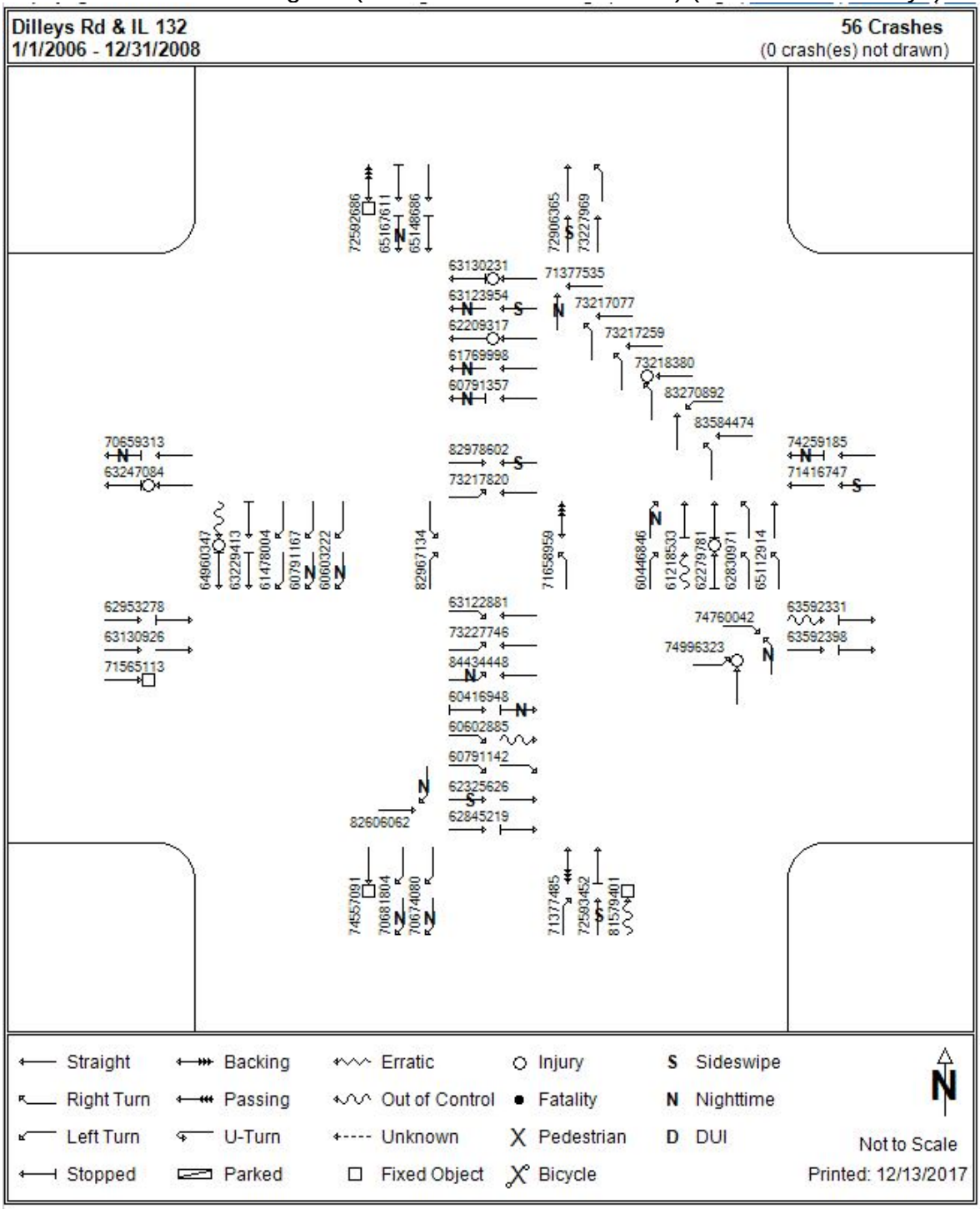
2008 Collision Diagram (Data located on Exhibit #1) (Route 132 & Dilleys)



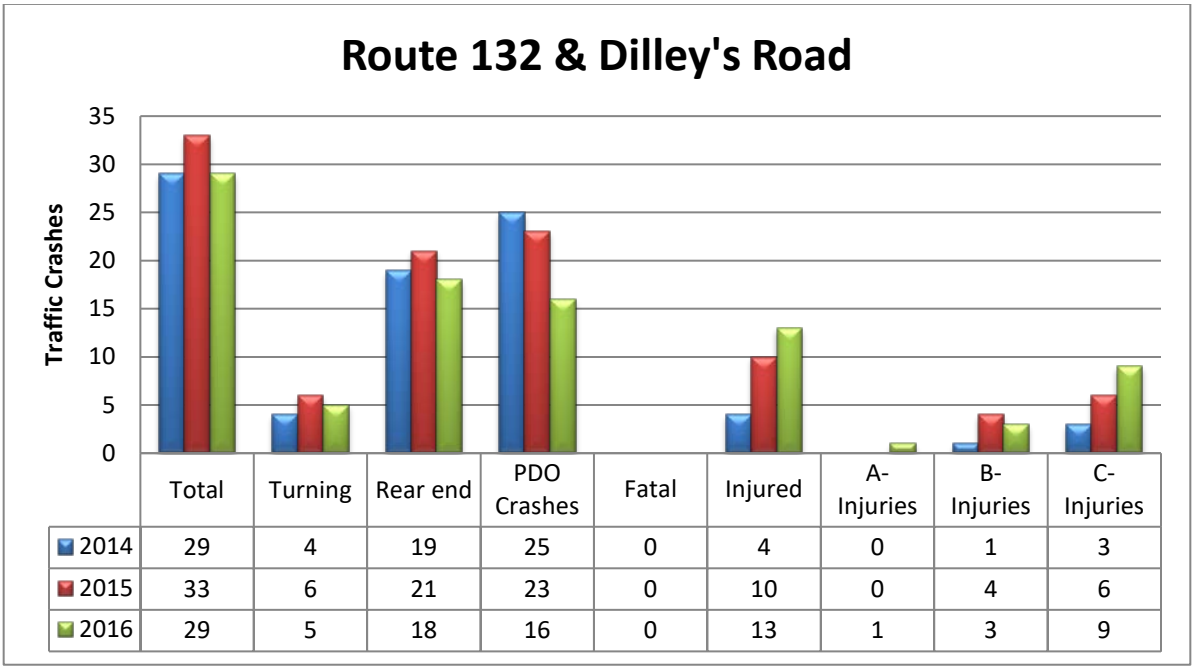
2006-2008 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Dilleys)



2006-2008 Collision Diagram (Data located on Exhibit #1) (Route 132 & Dilleys)

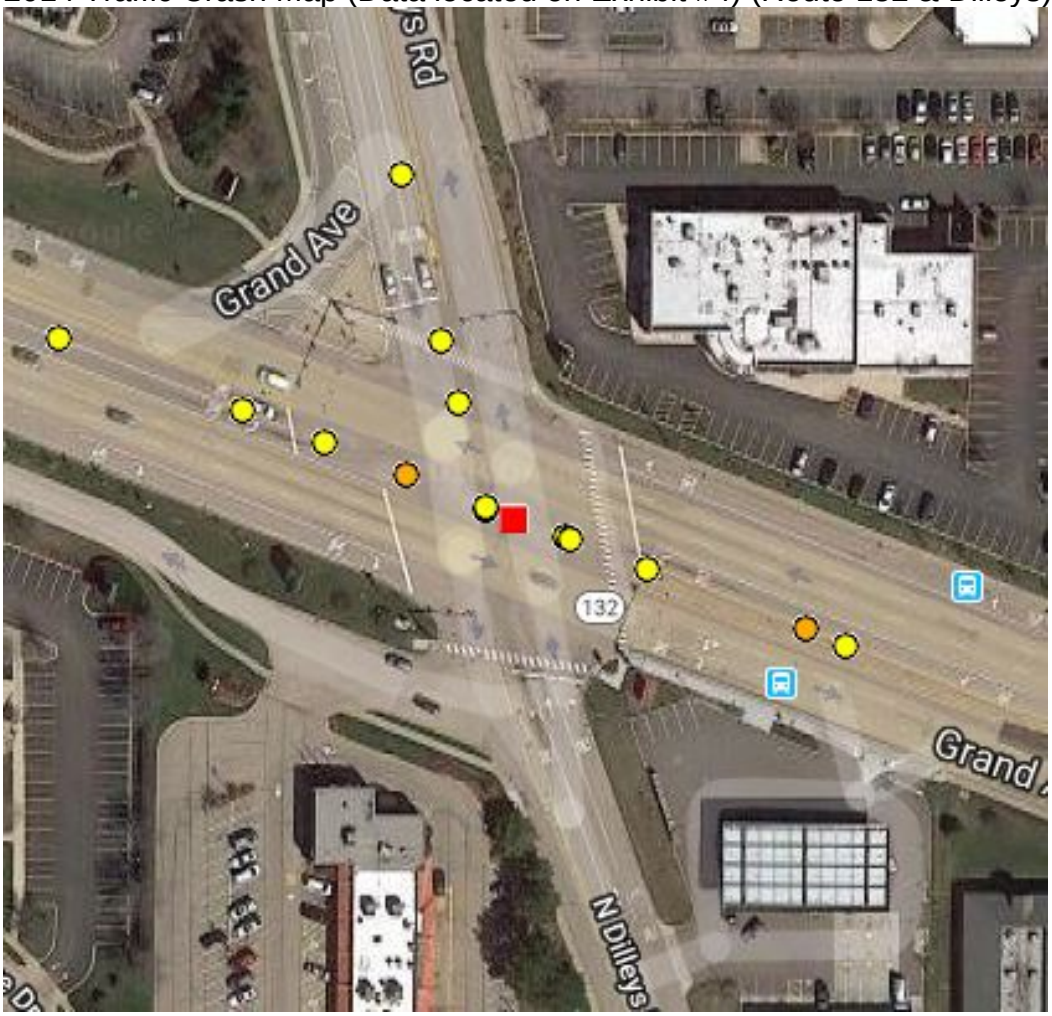


Exhibit# 4

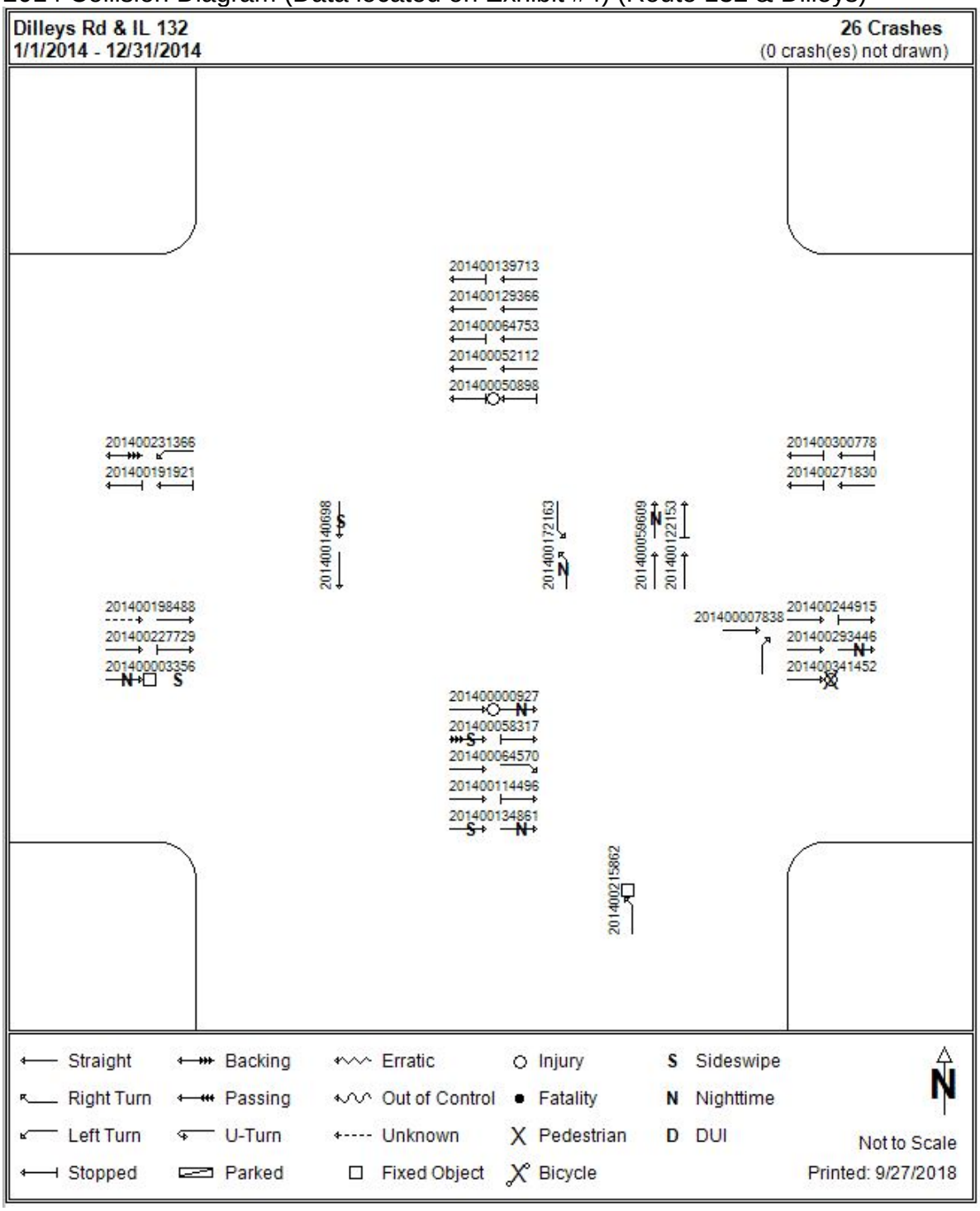


	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2014	29	4	19	25	0	4	0	1	3
2015	33	6	21	23	0	10	0	4	6
2016	29	5	18	16	0	13	1	3	9

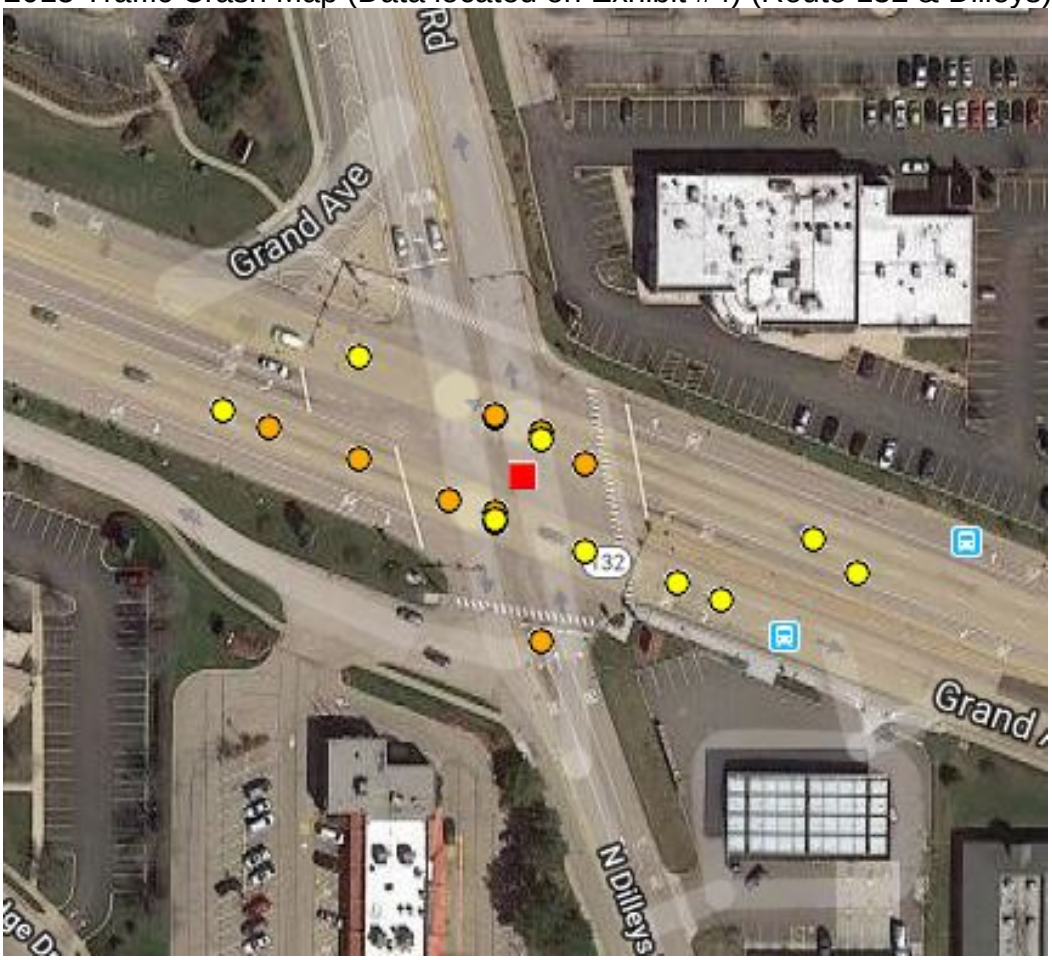
2014 Traffic Crash Map (Data located on Exhibit #4) (Route 132 & Dilleys)



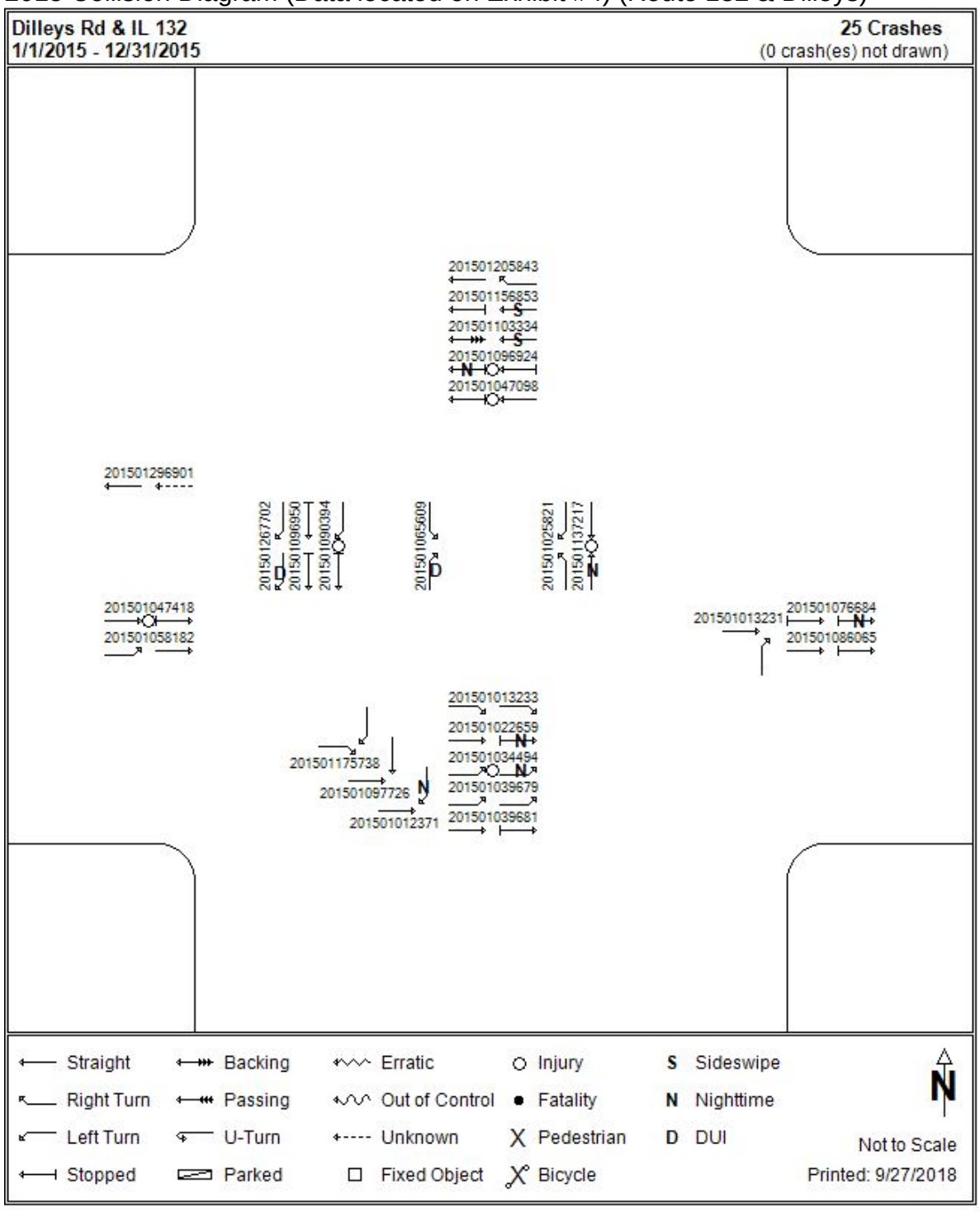
2014 Collision Diagram (Data located on Exhibit #4) (Route 132 & Dilleys)



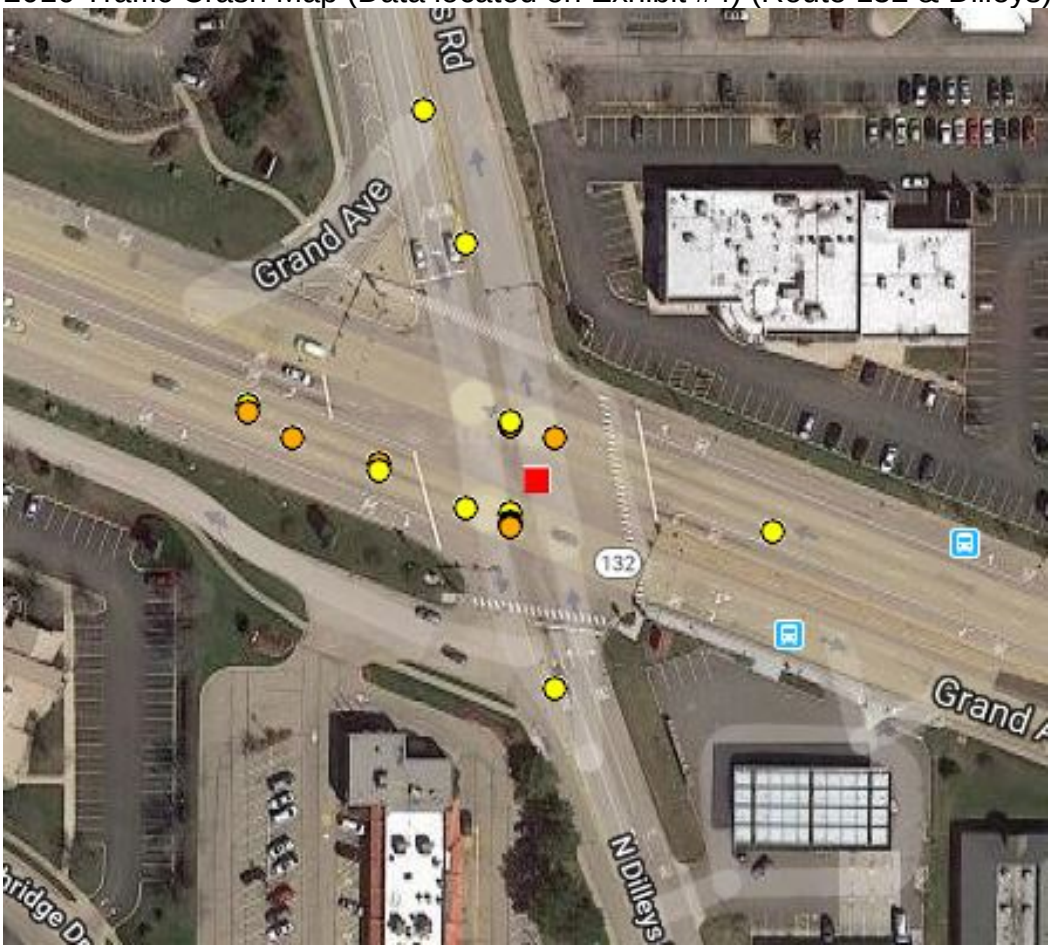
2015 Traffic Crash Map (Data located on Exhibit #4) (Route 132 & Dilleys)



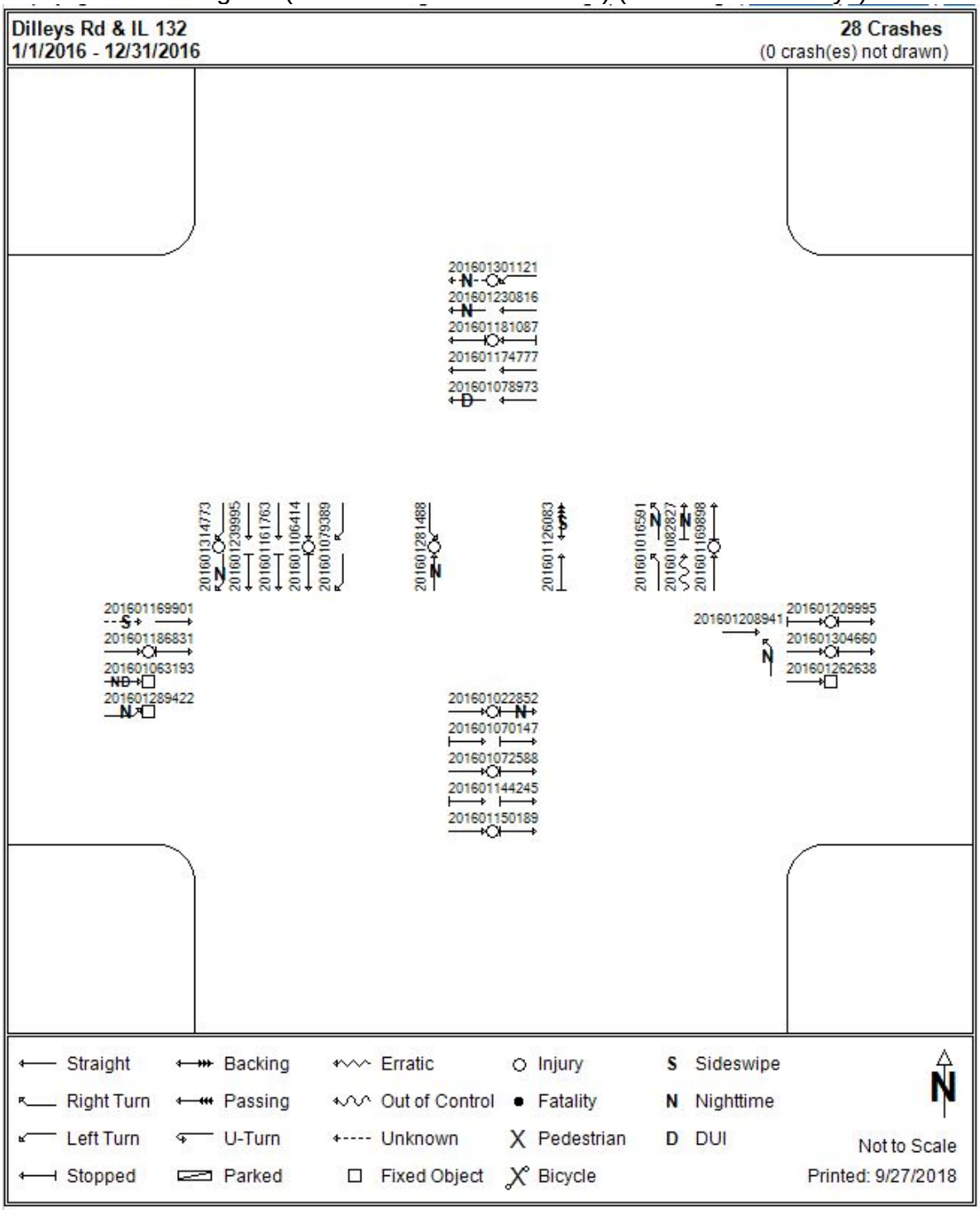
2015 Collision Diagram (Data located on Exhibit #4) (Route 132 & Dilleys)



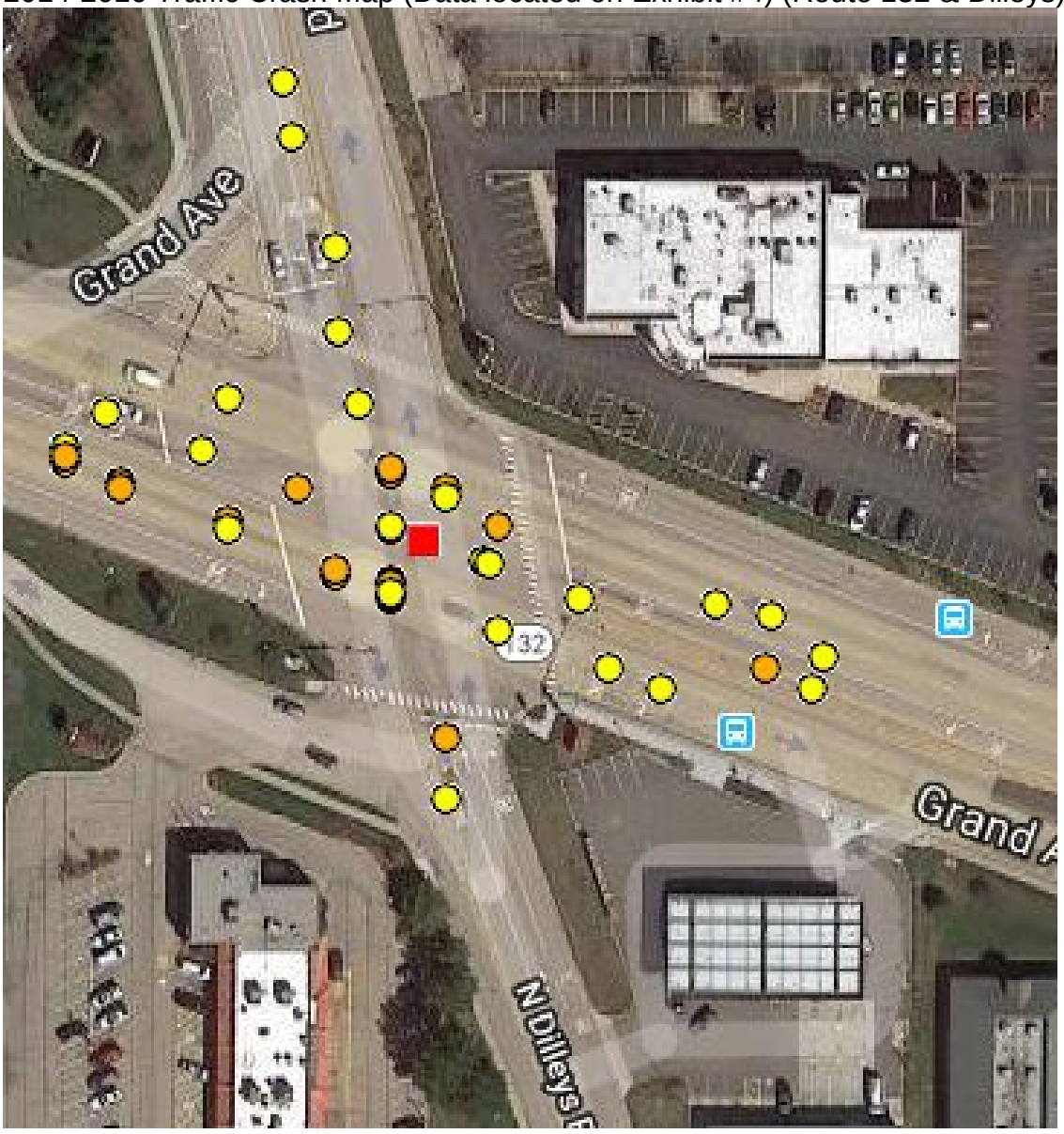
2016 Traffic Crash Map (Data located on Exhibit #4) (Route 132 & Dilleys)



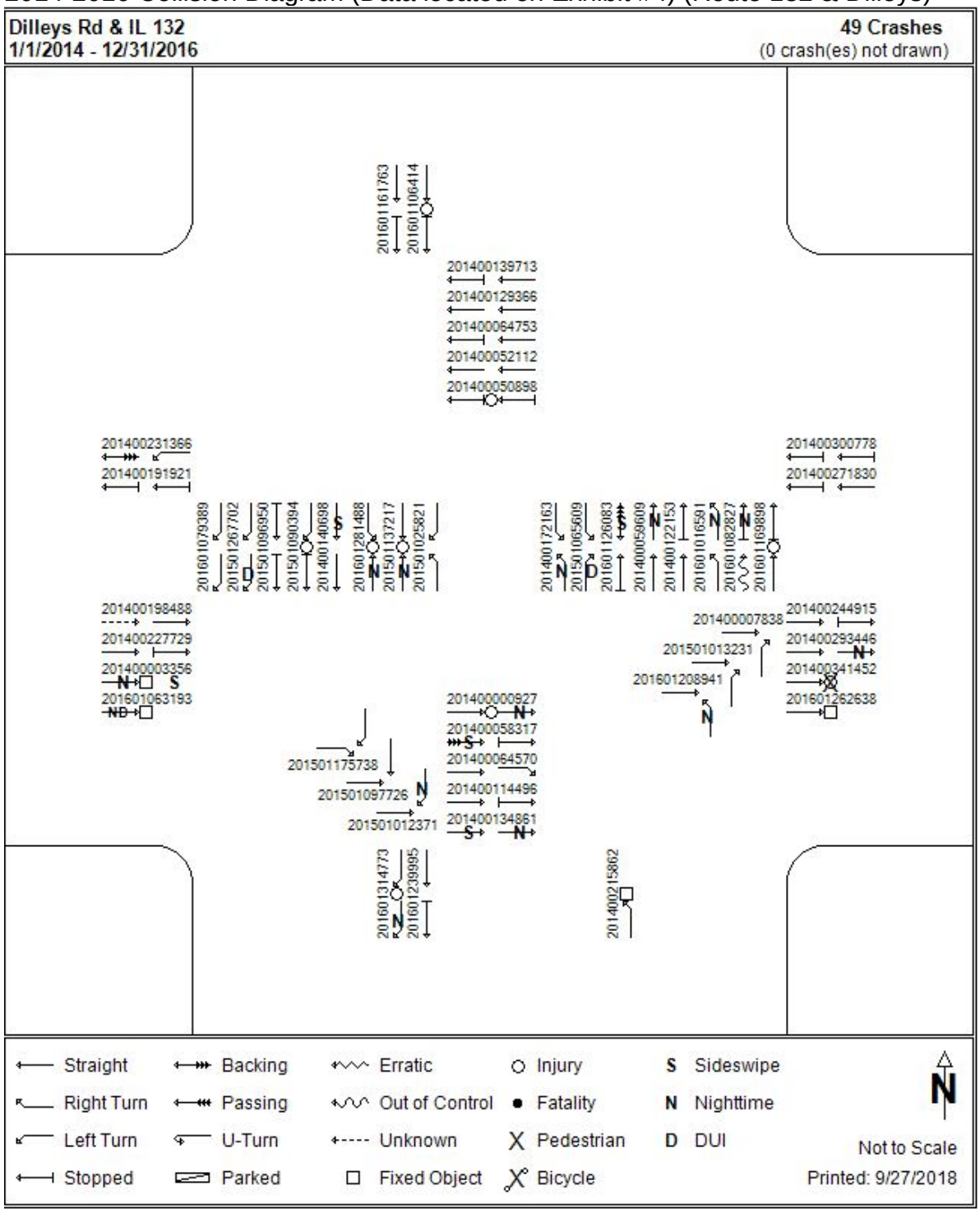
2016 Collision Diagram (Data located on Exhibit #4) (Route 132 & Dilleys)



2014-2016 Traffic Crash Map (Data located on Exhibit #4) (Route 132 & Dilleys)

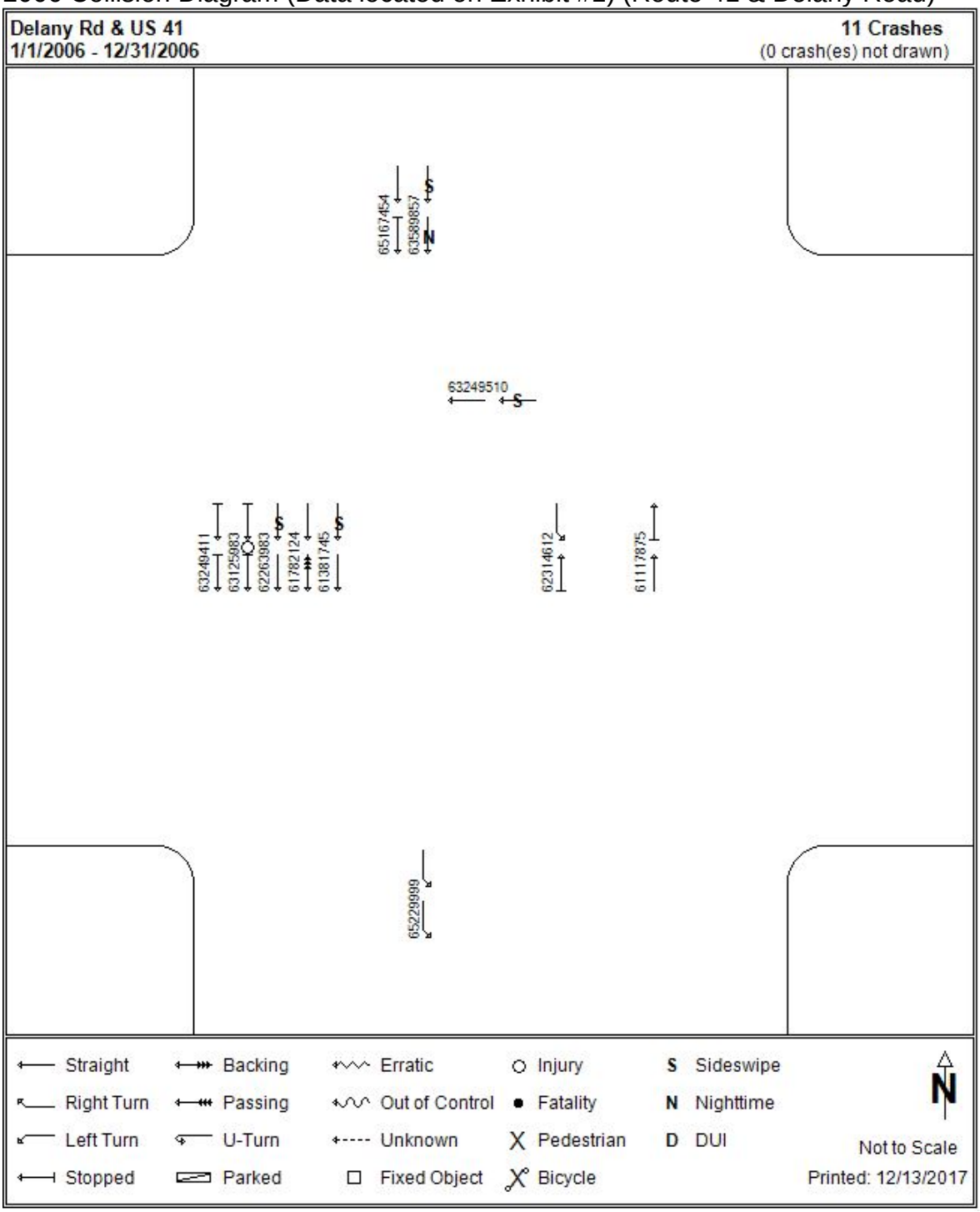


2014-2016 Collision Diagram (Data located on Exhibit #4) (Route 132 & Dilleys)



2006 Traffic Crash Map (Data Located on Exhibit #1) (Route 41 & Delany Road)

2006 Collision Diagram (Data located on Exhibit #1) (Route 41 & Delany Road)



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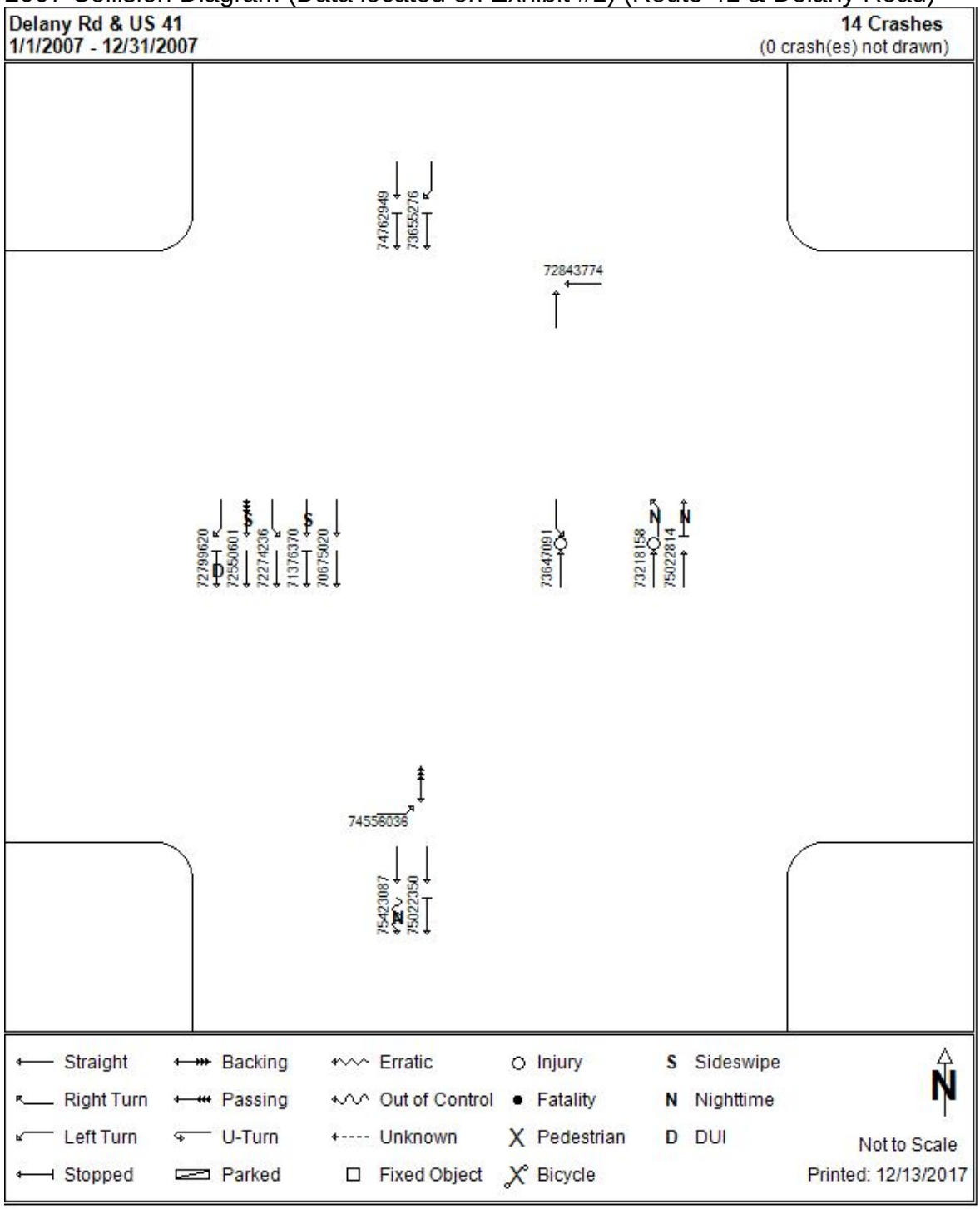
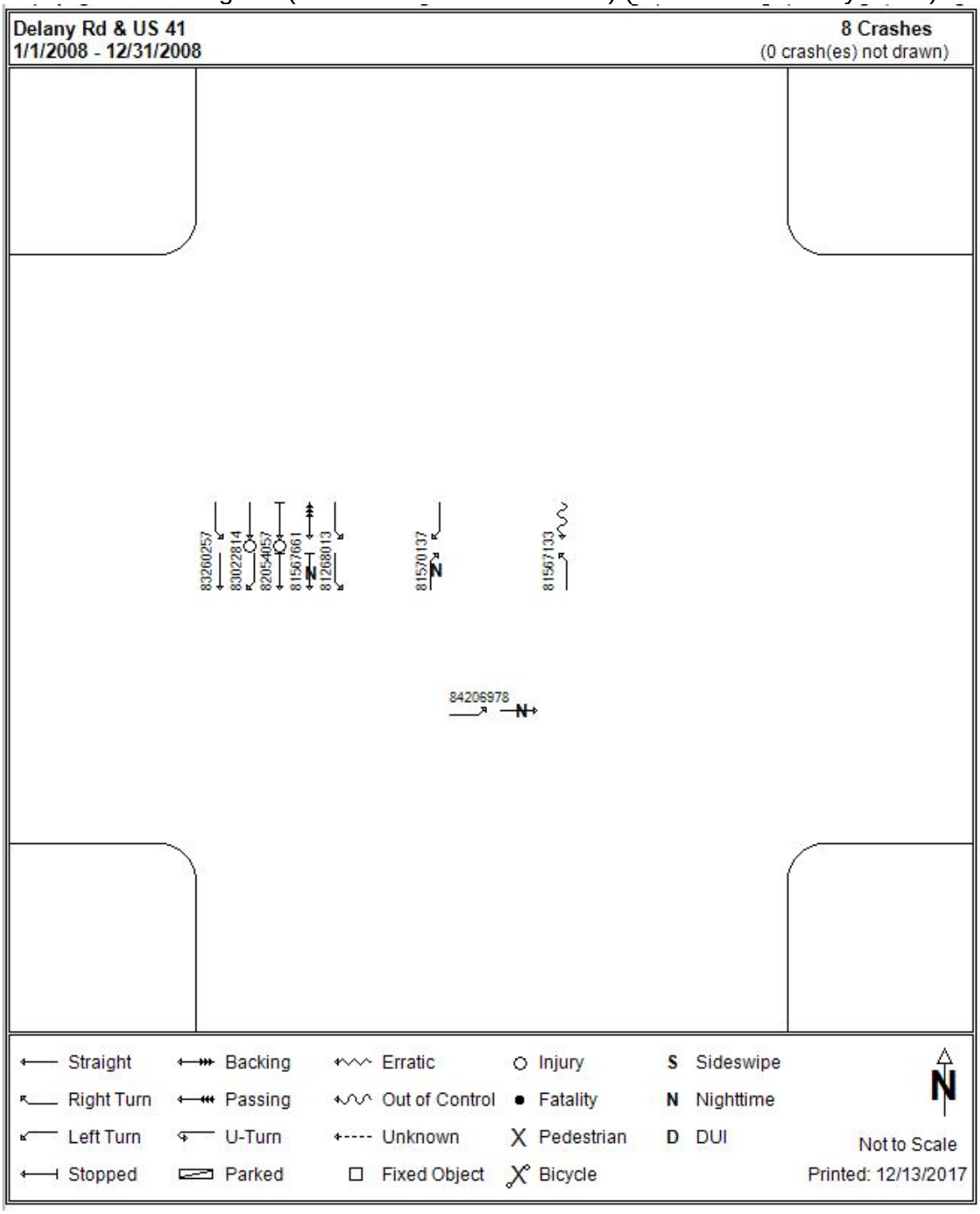


2008 Traffic Crash Map (Data Located on Exhibit #1) (Route 41 & Delany Road)

2008 Collision Diagram (Data located on Exhibit #1) (Route 41 & Delany Road)



2006-2008 Crash Map (Data located on Exhibit #1) (Route 41 & Delany Road)

2006-2008 Collision Diagram (Data located on Exhibit #1) (Route 41 & Delany Road)

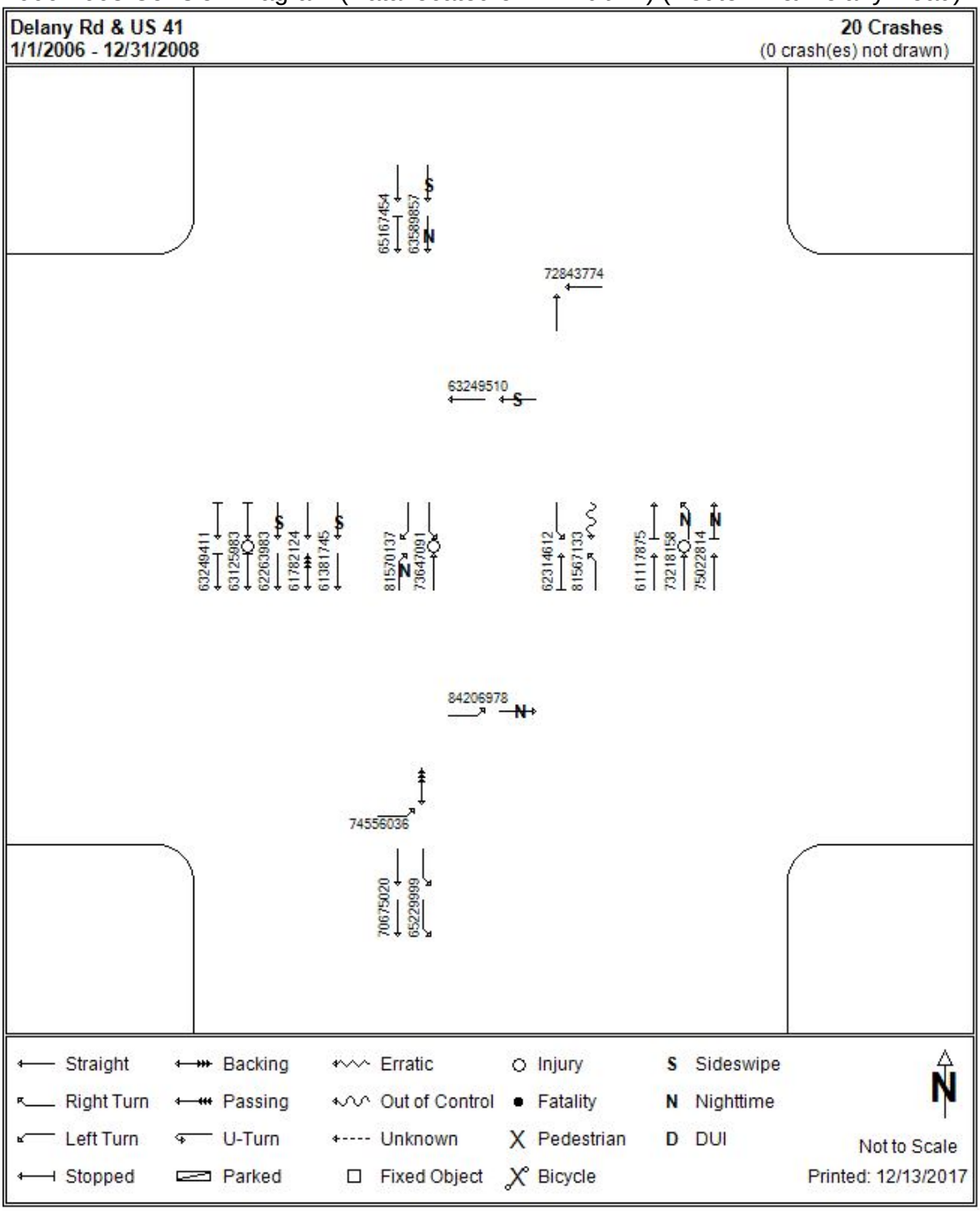
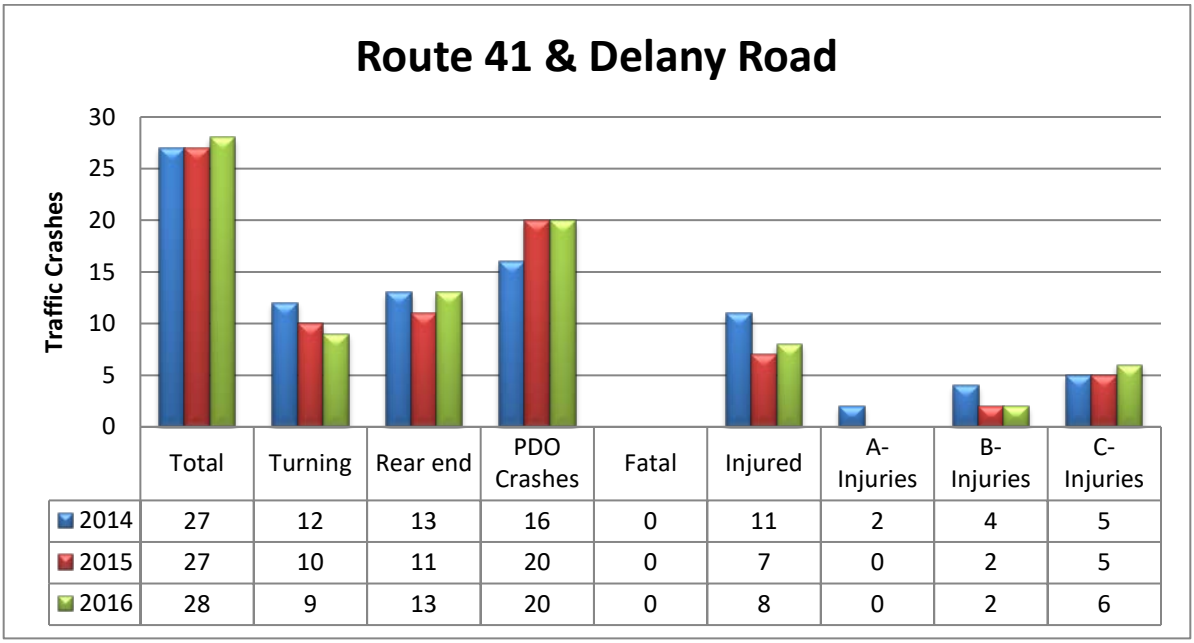


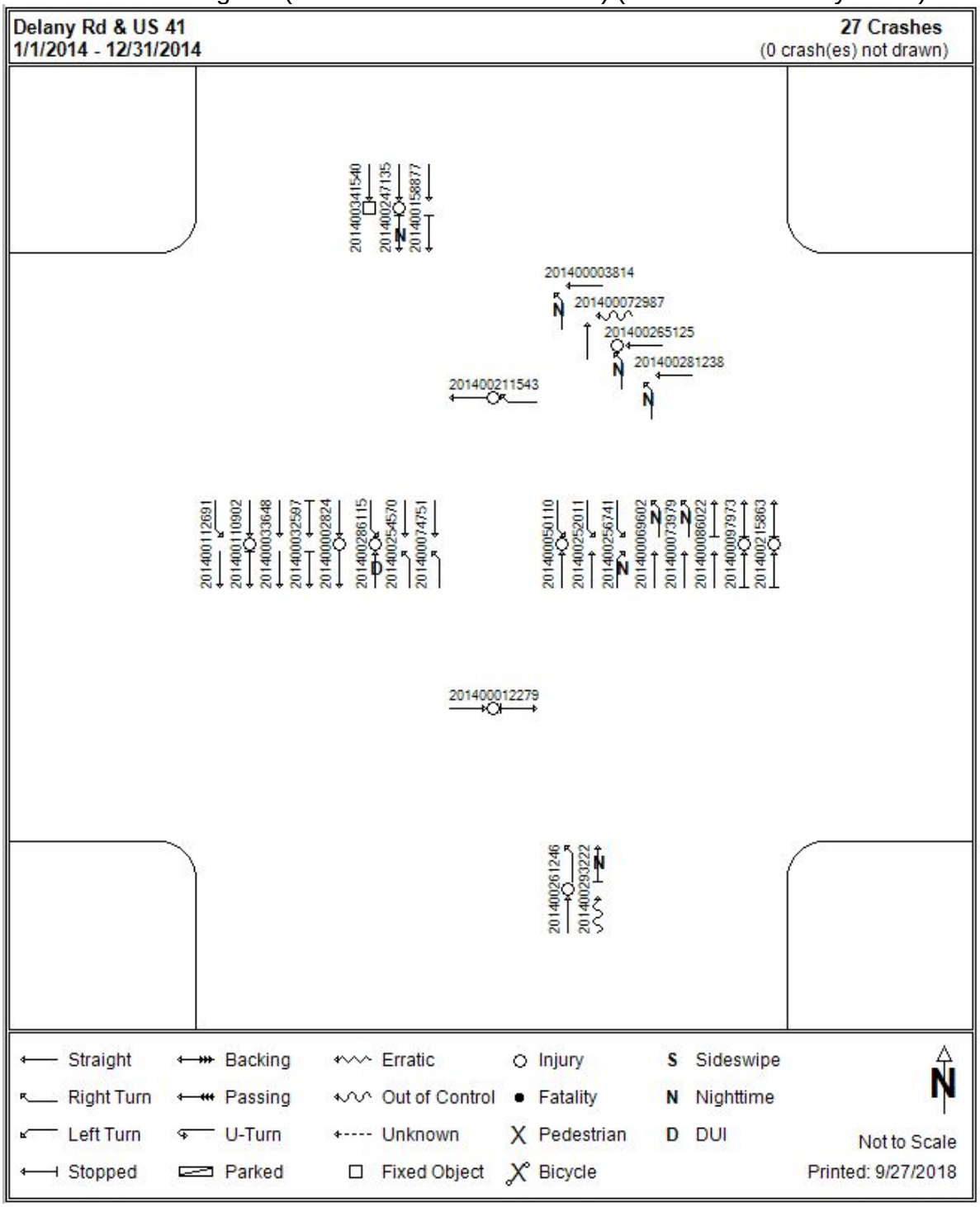
Exhibit #5



	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2014	27	12	13	16	0	11	2	4	5
2015	27	10	11	20	0	7	0	2	5
2016	28	9	13	20	0	8	0	2	6

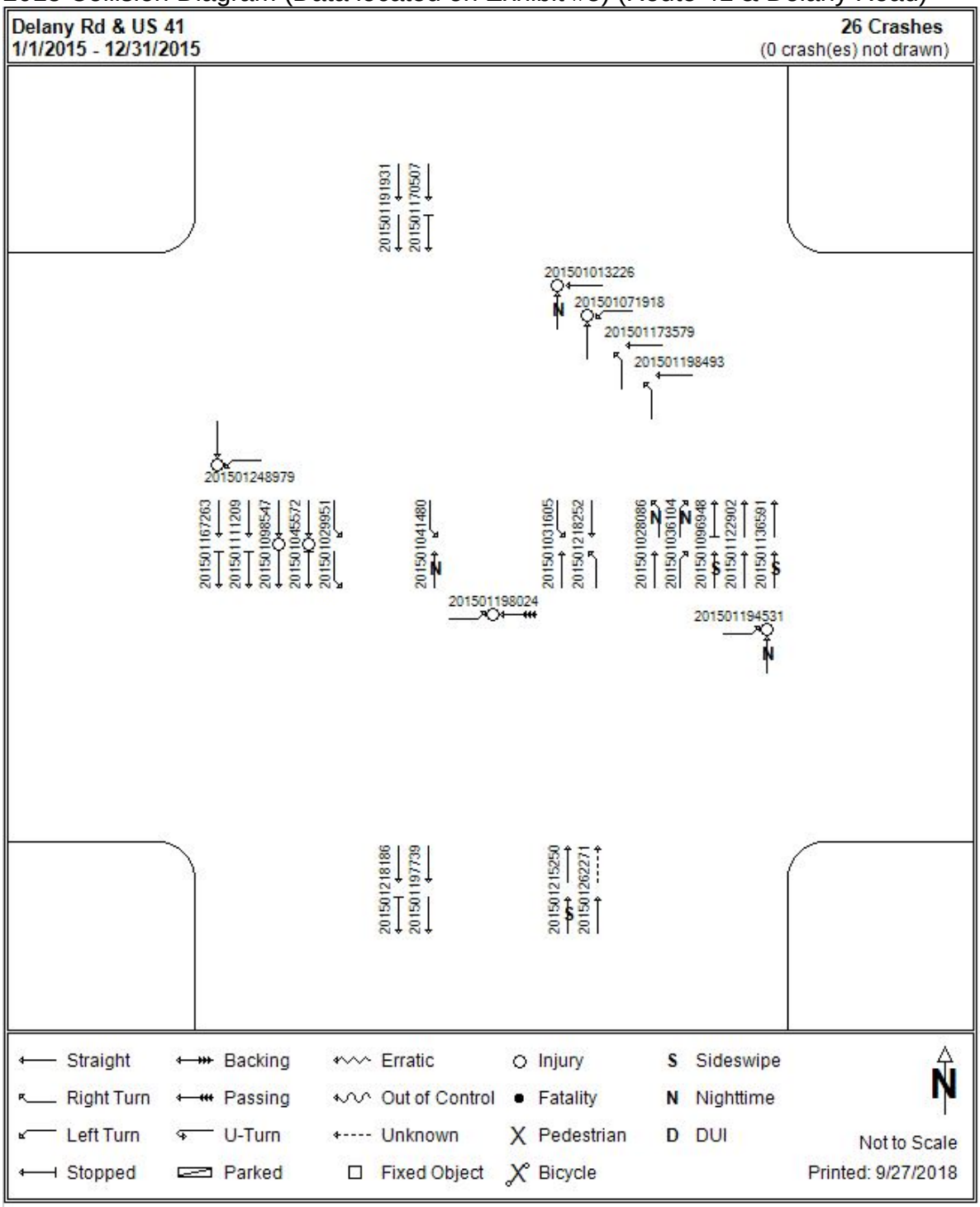
2014 Traffic Crash Map (Data located on Exhibit #5) (Route 41 & Delany Road)

2014 Collision Diagram (Data located on Exhibit #5) (Route 41 & Delany Road)



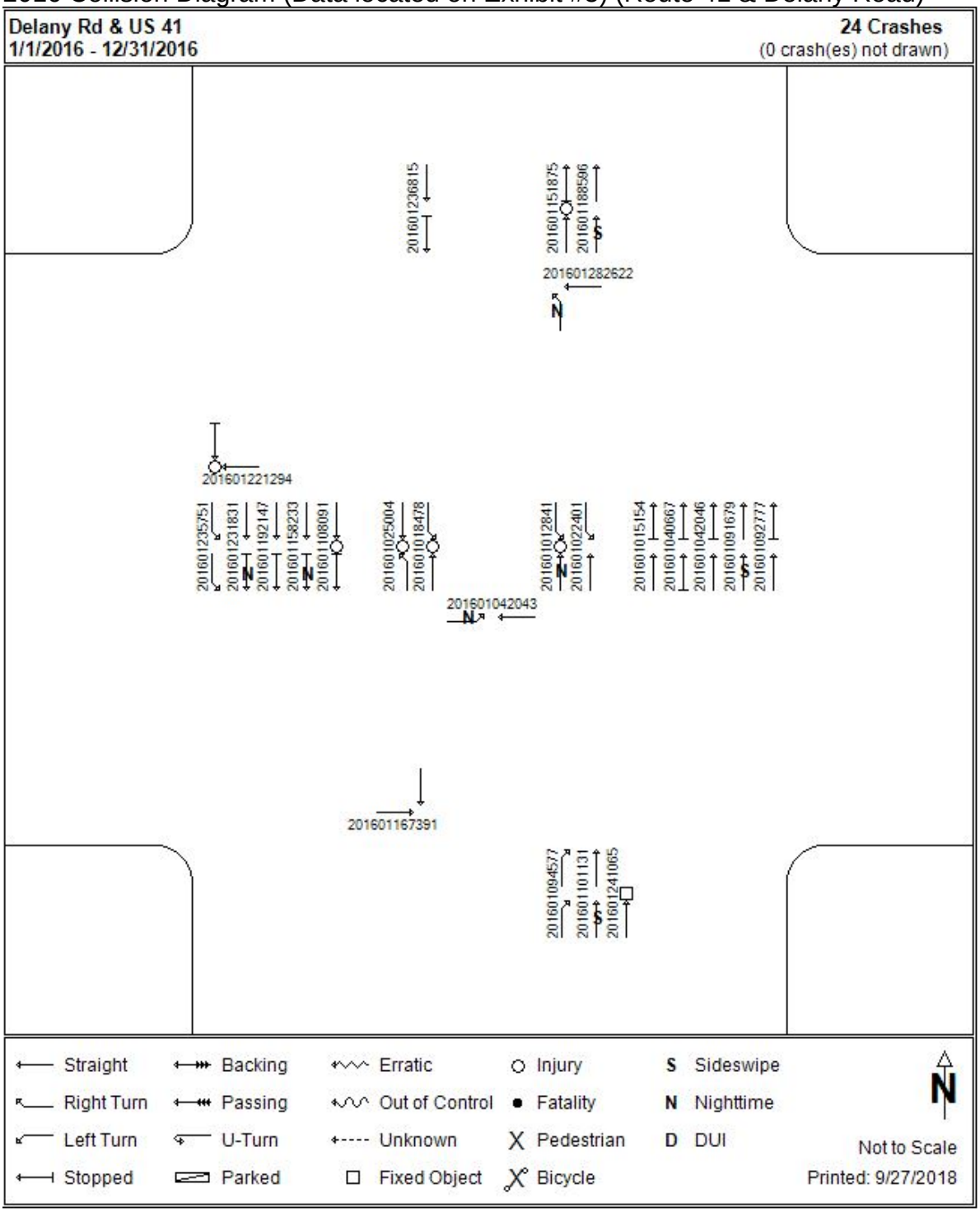
2015 Traffic Crash Map (Data located on Exhibit #5) (Route 41 & Delany Road)

2015 Collision Diagram (Data located on Exhibit #5) (Route 41 & Delany Road)



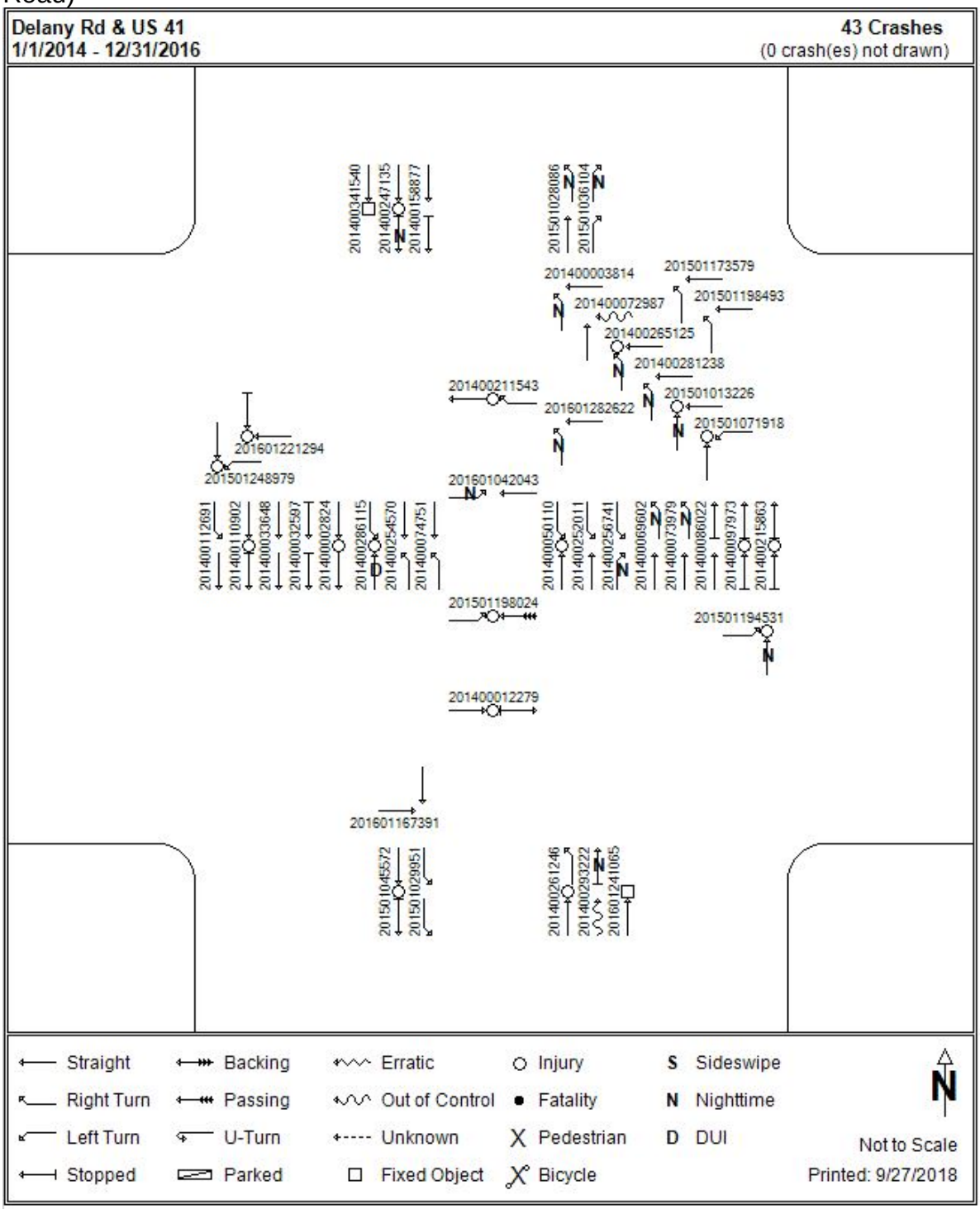
2016 Traffic Crash Map (Data located on Exhibit #5) (Route 41 & Delany Road)

2016 Collision Diagram (Data located on Exhibit #5) (Route 41 & Delany Road)



2014-2016 Traffic Crash Map (Data located on Exhibit #5) (Route 41 & Delany Road)

2014-2016 Collision Diagram (Data located on Exhibit #5) (Route 41 & Delany Road)



Crash Data Analysis

The post camera system crash data (Exhibits #2-5) show an increase in crashes at one intersection as compared to Exhibit #1, Route 41 & Delany Road.

The data from Route 41 & Delany Road has seen an increase in traffic crashes. It does suggest two hazardous actions are contributing to the increase: following too closely/failure to yield. There were (8) following too closely an (33) failure to yield.

Signal Timings

Signal timings and other settings before and after RLR camera installation. The traffic signal timings are not under control of the Village of Gurnee. As such, we do not possess this information.

Traffic Volumes

Traffic volumes before and after RLR Camera System installation. The traffic volumes shall include both Average Daily and Peak Period traffic.

The average daily traffic counts are supplied by the Illinois Department of Transportation at: https://www.gettingaroundillinois.com. and the Lake County Division of transportation at http://lake.ms2soft.com/tcds.

The average daily traffic volume for the Intersection(s) for the 3-years prior to photo enforcement is:

Route 132 & Route 21	19,850
Route 132 & Hunt Club Road	41,300
Route 132 & Dilleys Road	30,850
Route 41 & Delany Road	43,450

The average daily traffic volume for 6 years post camera installation:

Route 132 & Route 21	34,600
Route 132 & Hunt Club Road	66,650
Route 132 & Dilleys Road	55,150
Route 41 & Delany Road	41,950

Recommendations

There are two recommendations. First, continue to analyze the intersection(s) crash data over the next three years to monitor post photo enforcement data. Second; protect the left turn lanes for east and westbound traffic at Route 41 & Delany Road to reduce the traffic crashes that are a result of failure to yield while turning left.

Adjudication Process

During the examined time period (2014 through 2016) we conducted 1,175 administrative hearings related to photo enforcement citations issued. Of those hearings, 939 of those were found to be liable including those who failed to appear at their scheduled hearing.

Financial Report

The total number of citations issued at all intersection(s) from January 1, 2014 through December 31, 2016 was 24,794. When you subtract the lease payments, bank and various fees for the system during the same time period. The net revenue collected was approximately $1,558,928.