

Memorandum

TO: Town of Lysander Comprehensive Plan Update Committee

FROM: Meghan Vitale, SMTC

DATE: January 7, 2015

RE: Accident data analysis (Technical Memorandum #2)

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The SMTC has examined data from the NYSDOT’s Accident Location Identification System (ALIS) database for locations within the Town of Lysander for the most recent three-year period available (December 1, 2010, to November 30, 2013). The findings of this analysis are summarized below.

*Intersection accidents*

The ALIS database was queried to identify the intersections with the greatest number of total accidents over the most recent three-year period available. All intersections within the Town of Lysander plus the Route 370/John Glenn Boulevard intersection in the Town of Salina were included in this query. The analysis classified “intersection” events as those that occurred within 10 meters (32.8 feet) of the center of an intersection. Table 1 lists the five locations with the greatest number of total accidents.

**Table 1: Intersection accident summary (top 5 locations by total accidents),  
December 1, 2010, to November 30, 2013**

| <b>Intersection</b>               | <b>Location</b> | <b>Total accidents</b> | <b>Motor vehicles only</b> | <b>With bicycles</b> | <b>With pedestrians</b> | <b>Other collisions*</b> |
|-----------------------------------|-----------------|------------------------|----------------------------|----------------------|-------------------------|--------------------------|
| Route 370/John Glenn Blvd         | Salina          | 40                     | 36                         | 0                    | 0                       | 4                        |
| Route 370/Route 48                | Lysander        | 24                     | 20                         | 0                    | 0                       | 4                        |
| Route 31/Albert Palmer Ln/Lock St | Lysander        | 20                     | 17                         | 0                    | 1                       | 2                        |
| Route 31/River Rd                 | Lysander        | 14                     | 13                         | 0                    | 0                       | 1                        |
| Route 370/Hicks Rd/Hayes Rd       | Lysander        | 12                     | 12                         | 0                    | 0                       | 0                        |

\*Other collisions may include, for example, collisions with fixed object (such as a sign post), animal, or ditch.  
Source: NYSDOT ALIS database

The Route 370/John Glenn Boulevard intersection had the greatest number of total accidents over the three-year period examined, with a total of 40 accidents. The NYSDOT has investigated this location and recommended the installation of an exclusive eastbound right-turn lane on Route 370 and a second northbound left-turn lane on John Glenn Boulevard (with receiving lane on Route 370 westbound). This safety improvement project is currently included in the SMTC’s Transportation Improvement Program to start the scoping phase in Federal Fiscal Year 2014.

Within the Town of Lysander, the Route 31/Route 48 intersection and the Route 31/Albert Palmer Lane/Lock Street intersections had the highest number of accidents, with totals of 24 accidents and 20 accidents, respectively. In all cases, the majority of accidents were multiple-vehicle collisions.

Recent turning movement counts are available at Route 370/Route 48, Route 31/River Road, and Route 370/Hicks Road/Hayes Road (see Technical Memorandum #1). No traffic count data are available for the Route 31/Albert Palmer Lane/Lock Street intersection. Accident rates were calculated for the three intersections with turning movement count data. The accident rate calculations assumed that the PM peak hour volume entering the intersection from the turning movement counts represents 10 percent of the total Average Daily Entering Vehicles at that intersection. Accident rates for each of these intersections and a comparison to the statewide average rate for similar intersection types are summarized in Table 2.

**Table 2: Accident rates for selected intersections**

| <b>Intersection</b>         | <b>Total accidents<sup>1</sup></b> | <b>Total PM peak hour entering vehicles<sup>2</sup></b> | <b>Average Daily Entering Vehicles</b> | <b>Accident rate (accidents per million entering vehicles)</b> | <b>Statewide average accident rate<sup>3</sup></b> |
|-----------------------------|------------------------------------|---------------------------------------------------------|----------------------------------------|----------------------------------------------------------------|----------------------------------------------------|
| Route 370/Route 48          | 24                                 | 2,060                                                   | 20,600                                 | 1.06                                                           | 0.21                                               |
| Route 31/River Rd           | 14                                 | 2,460                                                   | 24,600                                 | 0.52                                                           | 0.21                                               |
| Route 370/Hicks Rd/Hayes Rd | 12                                 | 1,010                                                   | 10,100                                 | 1.09                                                           | 0.26                                               |

<sup>1</sup>Source: NYSDOT ALIS database

<sup>2</sup>Source: SMTC, 2014; GTS Consulting, 2012

<sup>3</sup>Source: NYSDOT

As shown in Table 2, the calculated accident rates at the Route 370/Route 48, Route 31/River Road, and Route 370/Hicks Road/Hayes Road intersections all exceed the published statewide average rate for similar type intersections.

ALIS identifies the collision type for multiple vehicle collisions. Collision types include, for example, head-on, rear-end, right-angle, overtaking, left-turn, right-turn, etc. Rear-end collisions were the most common collision type for all locations listed in Table 1 except the Route 370/Hicks Road/Hayes Road intersection (right-angle collisions were the most common type at

that location). At the Route 31/River Road intersection, 11 of the 13 total multiple-vehicle collisions were rear-end collisions.

There were no fatalities at intersections within the town during the time period examined.

*Non-intersection accidents*

The ALIS database was queried to identify the road segments with the highest accident rates (accidents per million vehicle miles traveled) over the most recent three-year period available. The accident rates were determined using the Average Annual Daily Traffic volumes (AADT) available from the SMTC’s travel demand model. Segments less than 0.1 mile in length and segments with three or fewer total accidents over the three-year period examined were eliminated from this analysis. Table 3 lists the five road segments in the Town of Lysander with the highest accident rates over the period from December 1, 2010, to November 30, 2013.

**Table 3: Road segment accident summary (top 5 segments by accident rate),  
December 1, 2010, to November 30, 2013**

| <b>Road segment</b>                                                  | <b>Total non-intersection accidents<sup>1</sup></b> | <b>Length (mi.)</b> | <b>Average Annual Daily Traffic (vehicles per day)<sup>2</sup></b> | <b>Accident rate (accidents per million vehicle miles traveled)</b> | <b>Statewide average accident rate<sup>3</sup></b> |
|----------------------------------------------------------------------|-----------------------------------------------------|---------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------|
| River Rd. from Doyle Rd. to Patchett Rd.                             | 17                                                  | 1.23                | 650                                                                | 19.55                                                               | 2.25                                               |
| Smokey Hollow Rd. from Hencle Blvd. to 0.5 mi. north of Hencle Blvd. | 5                                                   | 0.51                | 550                                                                | 16.28                                                               | 2.24                                               |
| Church Rd., from Prine Rd. to Wheaton Rd.                            | 6                                                   | 0.81                | 510                                                                | 13.19                                                               | 2.24                                               |
| Lamson Rd. from Plainville Rd. to Prine Rd.                          | 9                                                   | 1.42                | 510                                                                | 11.46                                                               | 2.24                                               |
| Route 370/Route 31 from Oswego St. to Virginia St.                   | 27                                                  | 0.14                | 17,070                                                             | 10.32                                                               | 2.48                                               |

<sup>1</sup>Source: NYSDOT ALIS database

<sup>2</sup>Source: SMTC travel demand model

<sup>3</sup>Source: NYSDOT

For all of the segments listed in Table 3, the majority of accidents on each segment were classified as property damage only or “non-reportable” (meaning property damage of less than \$1,000, with no injuries or fatalities). There were no fatalities on these segments.

Notably, only 2 of the 17 collisions on the River Road segment were collisions with another motor vehicle; the remaining 15 incidents consisted of collisions with deer or roadside elements such as a ditch, utility pole, tree, or other fixed object and the majority of these occurred under dark (night/early morning) conditions.

Of the 27 collisions that occurred on Route 370/Route 31 (East Genesee Street) between Route 48 and Virginia Street in the Village of Baldwinsville, 21 were collisions with other motor vehicles, one was a collision with a bicyclist, and five were collisions with roadside objects. The collisions with other motor vehicles were mostly rear-end or right-angle collisions.

SMTC also queried the ALIS database for road segments with the greatest total number of accidents over the three-year period (as opposed to the highest accident rates). The segment with the highest total number of accidents over the three-year period examined was Route 48 from Kellogg Road to Lamson Road, with a total of 31 accidents. However, the calculated rate for this location is 2.02 acc/MVM, which is below the statewide average for similar facilities. The road segment with the second highest total number of accidents was Route 370/Route 31 from Route 48 to Virginia Street in the Village of Baldwinsville, which is included in Table 3 due to the relatively high accident rate for this short segment of road.

There were two fatal accidents on road segments within the town, each with one fatality, during the three-year period examined. One of these collisions occurred on Route 690 southbound, just south of Hencle Boulevard. The other fatality was a collision with a pedestrian that occurred on Route 370/Route 31 between Route 690 and Dexter Parkway.

#### *Pedestrian and bicycle accidents*

Within the three-year period examined, there were 8 pedestrian accidents (including one fatality) and 9 bicycle accidents in the Town of Lysander. None of the pedestrian or bicycle accidents occurred at the same location more than once. Most of the pedestrian and bicycle accidents occurred within the Village of Baldwinsville, which likely has more pedestrian and bicycle activity than other areas of the town. Figure 1 shows the location of pedestrian and bicycle accidents.



**Figure 1: Pedestrian and bicycle accidents within the Town of Lysander (December 1, 2010, to November 30, 2013)** Source: NYSDOT ALIS database

### Summary

The SMTC has examined the available accident data for intersections and road segments, including bicycle and pedestrian accidents, in the Town of Lysander for the most recent three-year period available (December 1, 2010, to November 30, 2013). Accident data were obtained from the NYSDOT's Accident Location Identification System (ALIS). As detailed in this memo, accident rates at the Route 370/Route 48, Route 31/River Road, and Route 370/Hicks Road/Hayes Road intersections all exceed the published statewide average rate for similar type intersections. Rear-end or right-angle collisions were the most common collision type at these locations. The segment of River Road from Doyle Road to Patchett Road had the highest accident rate within the town, and the vast majority of collisions on this segment were collisions with deer or roadside objects. Pedestrian and bicyclist accidents mostly occurred within the Village of Baldwinsville, which likely has more pedestrian and bicycle activity than other parts of the town. None of the pedestrian or bicycle accidents occurred at the same location more than once.