

City of Syracuse Safety Assessment (2021)

Syracuse Metropolitan Transportation Council



Final Report

June 23, 2021

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Executive Summary

Purpose

The City of Syracuse (City) wants to reduce fatal crashes and serious injury crashes on its road network. The City also seeks to improve its ability to secure Highway Safety Improvement Program (HSIP) funds, including HSIP funds solicited by the New York State Department of Transportation (NYSDOT) through state-sponsored Action Plan solicitations (e.g., Pedestrian Safety Action Plan, etc.) if/when available.

Background

In 2018, the Onondaga County Department of Transportation (OCDOT, or County) requested that the Syracuse Metropolitan Transportation Council (SMTC) develop a data-driven assessment of the County road network to identify: 1) 'hot spots' for fatal / serious injury crashes, and 2) roads with attributes correlated with crash types for six 'emphasis area' categories.

As part of the 2018-2019 Unified Planning Work Program (UPWP), the SMTC agreed to complete the safety assessment for County-owned roads. SMTC also included roads owned by the City of Syracuse (City). In consultation with City and OCDOT representatives, SMTC developed one scope for two safety assessment reports. To oversee the assessments, SMTC formed a Study Advisory Committee (SAC) that includes representatives from the City, NYSDOT, Onondaga County Department of Transportation (OCDOT), the Onondaga County Legislature, and the Syracuse-Onondaga County Planning Agency (SOCPA). The SAC met in-person as well as virtually (due to the COVID-19 pandemic) to help guide the develop of the methodology and review findings.

The City's safety assessment commenced in June 2020 following completion of the County's assessment. Both reports have a similar framework and structure. However, each assessment includes custom methodology due to differences in land use patterns and differences in road and land use attributes. Furthermore, the availability of data varies for City and County facilities, which further necessitated refinements to methodology.

The methodology described in this report is specific to roads owned by the City of Syracuse. SMTC used the NYSDOT Accident Location Information System (ALIS) to analyze crashes between January 1, 2014 and December 31, 2018. The KABCO Scale is used as a part of this analysis, consistent with the data provided in ALIS. For each event, ALIS lists the number of fatalities (K), the number of serious injuries (A), the number of injuries (B and C), and other (O).

Hot Spot Assessment

The City's road network includes approximately 400 miles of roads that sorted into: 1,399 road segments, 282 signalized intersections, and 2,487 unsignalized intersections. SMTC reviewed approximately 25,000 crashes that occurred during the 5-year period ('14, '15, '16, '17, and '18) and developed an approach, outlined in the following chapters, to identify 'hot spots' and 'systemic emphasis area locations.' As a first step, SMTC used criteria to identify 83 'focus areas' and then used additional criteria to sort the focus areas into Special Mention (Tier I-III) categories and 'hot spots.' This process identified the following seven 'hot spot' intersections and five 'hot spot' segments.

Intersection ‘Hot Spots’:

Butternut St./Catherine St.
Hiawatha Blvd. West/Solar St.
West Onondaga St./South Geddes St.
West Fayette St./South Geddes St.
James St./North Salina St.
Geddes St./West Genesee St.
Teall Ave./ Grant Blvd.

Segment ‘Hot Spots’:

South Geddes St. Grand Ave. to Fayette St.
Shonnard St. Grand Ave. to West St.
North Salina St. State St. to Kirkpatrick St.
South Salina St. Seneca Tpk. to Calthrop Ave.
Burnet Ave. Teall Ave. to Midler Ave.

This report highlights takeaways and provides a one-page summary of each ‘hot spot’ location. Each summary includes an annotated map, a crash table, and observations. ‘Hot spot’ summaries were designed to serve as a quick and easy “stand-alone” resource to attach to a funding application or serve as a reference for design and engineering efforts. Figure A – shows the location of ‘hot spot’ segments and intersections. Figure B provides an example of a hot spot intersection map and crash table. One-page observation summaries (not shown) accompany each ‘hot spot’ intersection.

Figure A – Segment and Intersection ‘Hot Spot’ Locations

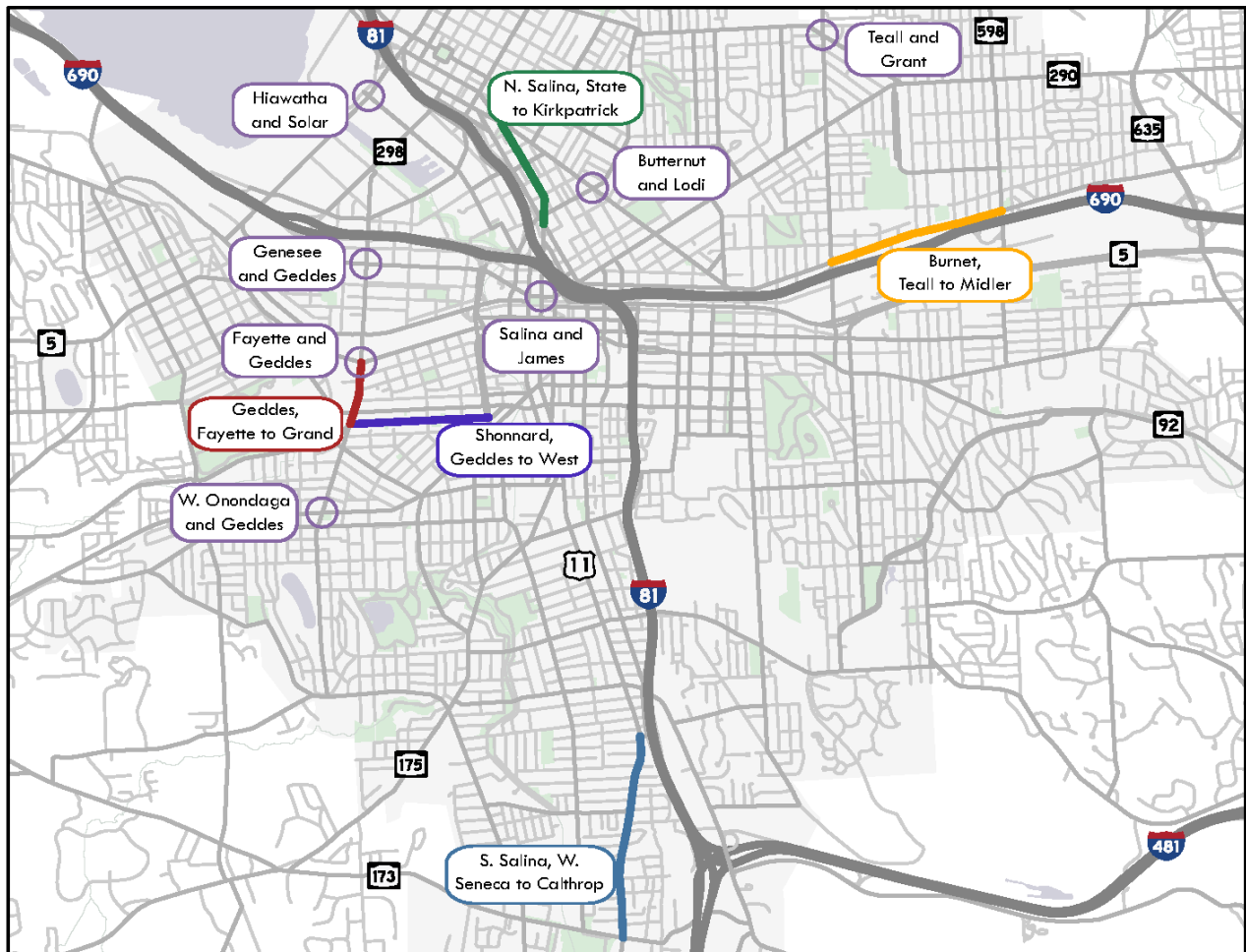


Figure B – Example ‘Hot Spot’ Intersection Map (Grant Boulevard / Teall Avenue)



Some ‘hot spot’ segments can extend longer than a mile, which make them difficult to map in their entirety. To provide sufficient detail, segments are divided into subsegment figures based on the location of fatal and/or serious injury crash(es). Subsegment figures include a crash table for comparison against all segment crashes. Approximate crash locations are shown, and corridor observations are summarized in a separate segment summary table.

Systemic Safety Assessment

NYSDOT continues to develop emphasis area action plans, such as the Pedestrian Safety Action Plan, and occasionally solicits requests from local road owners to seek HSIP funds for systemic safety improvements. Action plans identify systemic safety improvements that are widely implemented and

target locations correlated with particular crash types, rather than crash frequency. Currently, NYSDOT is developing a Lane Departure Action Plan and anticipates completion during mid-to-late 2021.

Since NYSDOT encourages local road owners to implement systemic safety improvements across road networks, SMTC categorized crashes by crash type and severity to sort into six emphasis areas: *'Intersections'*, *'Lane Departure'*, *'Vulnerable Users'*, *'Speed'*, *'Age-Related'*, and *'Driver Behavior.'* The six emphasis areas are consistent with those identified in the New York State Strategic Highway Safety Plan (SHSP).

Based on available data, SMTC identified road and land use attributes for locations where the most crashes (including the most fatal and serious injury crashes) occurred for each emphasis area category. SMTC developed a map for each emphasis area to highlight locations of interest for emphasis area crash types. The Figure C example below shows locations with attributes that had the highest rates of Lane Departure crashes. These locations could be targeted for systemic safety improvements to help reduce the likelihood of a fatal and/or severe injury crash. Similar to the 'hot spot' summaries, emphasis area figure maps were designed to serve as a one-page "stand-alone" resource to attach to a funding application or serve as a reference for design and engineering efforts.

Figure C – Example of Locations with Attributes that had the highest rates of Lane Departure Crashes

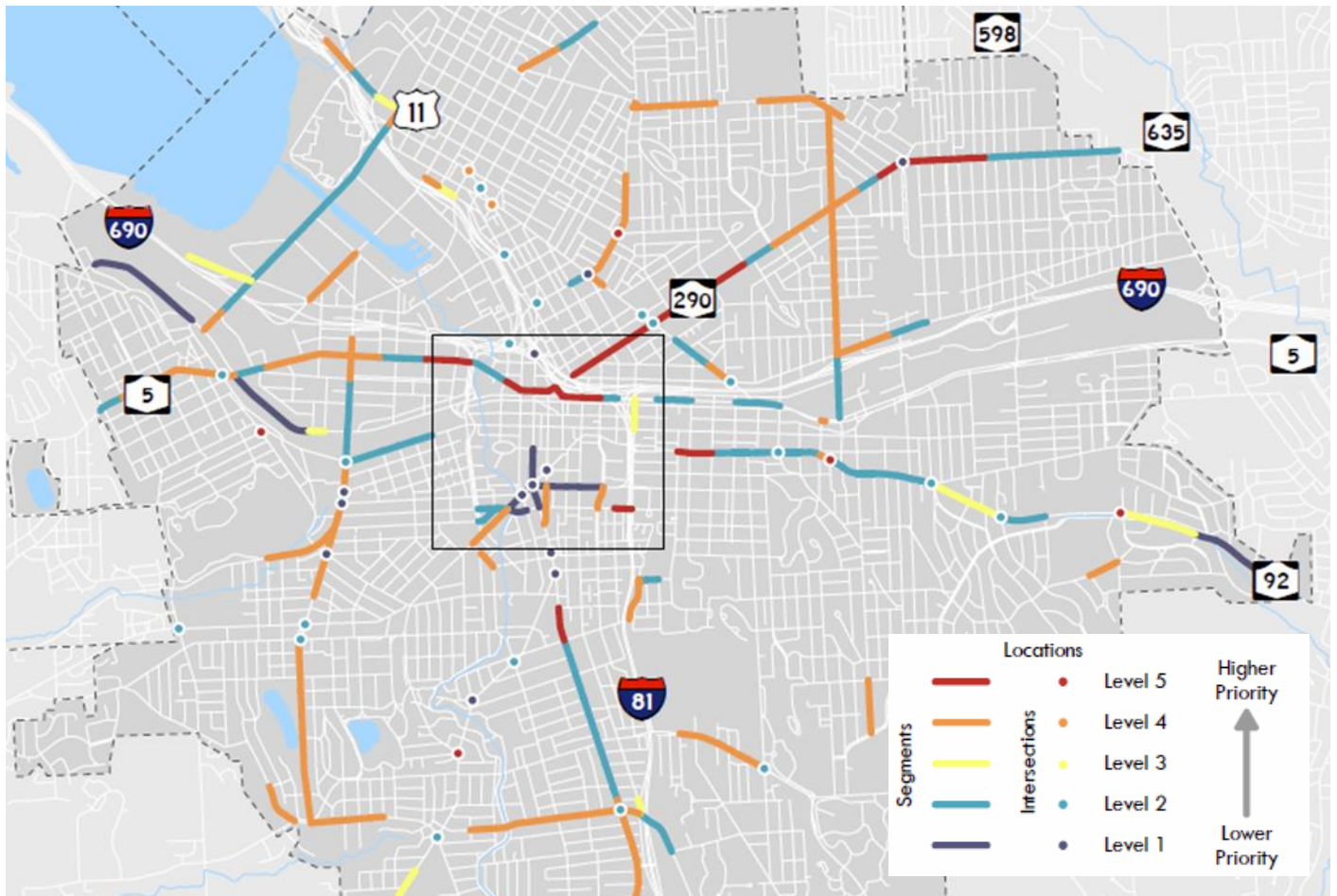


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Image

Image 1 – Hiawatha Boulevard West looking towards Solar Street Intersection

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1 - Introduction

The City of Syracuse (City) seeks insight into fatal and serious injury crash events on its road network to inform investment decisions that help reduce fatalities and serious injuries. Each year, thousands of crashes occur on hundreds of miles of City-owned roads. The Syracuse Metropolitan Transportation Council (SMTC) established a data-driven process to assess crash events across the City's road network.

The data-driven process identifies 'hot spot' locations and 'systemic safety emphasis areas' based on fatal crash and serious injury crash patterns. Using the New York State Department of Transportation's (NYSDOT) Accident Location Information System (ALIS), SMTC planners analyzed approximately 25,000 crashes that occurred during a five-year period. SMTC used ALIS to analyze crashes between January 1, 2014 and December 31, 2018. The KABCO Scale is used as a part of this analysis, consistent with the data provided in ALIS. For each event, ALIS lists the number of fatalities (K), the number of serious injuries (A), the number of injuries (B and C), and other (O).

The methodology described in this report is specific to the City of Syracuse. An initial high-level analysis categorized fatal and serious injury crash locations into several tiers. SMTC further assessed the priority ('hot spot') tier to inform future safety improvement decisions¹. SMTC also conducted a systemic assessment to categorize crashes into six emphasis areas² based on crash type. SMTC identified roads and intersections with attributes correlated with emphasis area crashes to inform decisions about systemic safety improvements³.

Overall, 'hot spot' and 'systemic' safety assessment findings will inform where to focus limited resources⁴ to reduce fatal and severe crashes. This will help position road owners to seek solutions eligible for safety funds, such as Highway Safety Improvement Program (HSIP). Identifying solutions and final projects are engineering-related tasks beyond the scope of this planning-level assessment⁵.

¹ Requires site-specific engineering assessment and design by a licensed engineer; possible need for a site-specific Road Safety Audit (RSA) that involves a multi-disciplinary team conducting site visits; etc., to further analyze individual crash events, and site conditions at a level of detail beyond the scope of a macro-level analysis.

² The New York State Department of Transportation 2017-2022 *Strategic Highway Safety Plan* (SHSP) identifies six state-wide emphasis areas: intersections, lane departure, vulnerable users, age-related, road user behavior, and speed. The SMTC assessed the City road network to determine local emphasis area patterns.

³ Per 23 U.S.C. 148, the term "systemic safety improvement" means an improvement that is widely implemented based on high-risk roadway features that are correlated with particular crash types, rather than crash frequency.

⁴ "Limited resources" include not only financial constraints, but also time constraints; data, equipment, and technology constraints; the need to balance various priorities (e.g., deciding between rebuilding a bridge or installing high-friction pavement on a roadway to reduce run-off-the-road crashes); multi-disciplinary staff due to limited agency budgets.

⁵ The SMTC will not select final solutions nor complete cost-benefit analysis (i.e., TE 164a, TE 204a forms). Final solutions require identification and design by a licensed engineer.

2 – Part I Assessment - Fatal and/or Serious Injury Crash Locations

2.1 City of Syracuse Road Network

The City road network consists of approximately 400 miles of roads, 282 city-owned signalized intersections⁶, and 2,487 unsignalized intersections⁷. The City road network includes 1,399 road segments⁸. State-owned facilities⁹ within the City are not included in the assessment.

2.2 Fatal and Serious Injury Crash Location Assessment

The SMTC used the ALIS to analyze crashes during a 5-year period ('14-'18). Attachment A includes all crash data assessment tables. SMTC sorted intersection crashes separately from crashes that occurred along a road segment¹⁰. Table 1 summarizes total crashes, fatal crashes, and serious injury crashes that occurred along segments and at intersections¹¹.

The 435 fatal/serious injury crashes occurred at 329 locations (i.e., some locations had multiple fatal and/or serious injury crashes). Although not shown, the 329 locations include: 107 segments, 94 signalized intersections, and 128 unsignalized intersections. Subsequent assessment reviewed the 329 locations to identify 'hot spots' and systemic emphasis areas.

Table 1 - Crashes at Study Area Segments & Intersections

	Fatal		Serious Injury		All	
	#	%	#	%	#	%
Corridor						
<i>Segments</i>	11	42%	141	35%	11,337	45%
Intersections						
<i>Signalized</i>	9	35%	136	33%	6,534	26%
<i>Unsignalized</i>	6	23%	132	32%	7,266	29%
TOTAL	26	100%	409	100%	25,137	100%

6 The City does not own or control intersections that involve a state-owned road. Therefore, SMTC excluded crashes that occur at an intersection (signalized or unsignalized) with a state-owned road. (See list in footnote #9.)

7 For this assessment, an unsignalized intersection involves a City road with a City road only. It does not include a City road with a private or state-owned road.

8 SMTC referenced the Federal Aid System to help identify road segments. For federal-aid roads, SMTC identified a "segment break" at the point where the road intersects another road with the same or greater functional class. For non-federal-aid roads, the entire length was considered. Segment breaks create road segments for assessment purposes.

9 City-owned roads with state touring route numbers are included in the City assessment. The following state-owned facilities (roads and intersections) within the City were excluded from assessment: Interstates and associated ramps; West Street, from Shonnard Street to Interstate 690; Erie Boulevard East, from Teall Avenue to the City Line (Thompson Road); Thompson Road, from Erie Boulevard East to James Street; Seymour Street, from West Street to West Onondaga Street; Shonnard Street, from West Street to West Onondaga Street; Adams Street, from West Onondaga Street to Almond Street; Bear Street, from Interstate 690 to Solar Street. SMTC confirmed this list of excluded facilities with the NYSDOT.

10 Crash types were determined using the ALIS dataset's "At Intersection" field.

11 The report scope limited the assessment to road segments and signalized intersections only. However, several fatal crashes occurred at unsignalized intersections. Therefore, SMTC included unsignalized intersections in the assessment.

2.3 Fatal Crash and Serious Injury Crash Takeaways

Part I assessment findings inform the Part II assessment. The Part II assessment uses screening criteria to group segments and intersections into priority tiers. The following findings highlight key Part I assessment takeaways:

Overall Takeaways

- 26 fatal crashes and 409 serious injury crashes occurred during the 5-year period
- 435 fatal/serious injury crashes occurred at 329 locations
- No more than one fatal crash occurred at a segment or intersection
- Fatal and serious injury crashes were more common at intersections than along segments
 - 58% of fatal crashes occurred at an intersection
 - 65% of serious injury crashes occurred at an intersection
- 65% of all fatal crashes (17 of 26) involved a bicyclist (3) or a pedestrian (14)
 - All (3) fatal bicycle crashes occurred at an intersection
 - 9 (of 14) fatal pedestrian crashes occurred along a road segment
- 30% of serious injury crashes (124 of 409) involved a bicyclist (39) or a pedestrian (85)
 - 33 (of 39) serious injury crashes that involved a bicyclist occurred at an intersection
 - 43 (of 85) serious injury crashes that involved a pedestrian occurred at an intersection

Road Segment Takeaways

- 11 fatal crashes (42%) occurred along a road segment (not at an intersection)
- 141 serious injury crashes (34%) occurred along a road segment (not at an intersection)
- 9 fatal crashes (of 11 fatal segment crashes) involved a pedestrian
- No fatal segment crashes involved a bicyclist
- 42 serious injury crashes (of 141 serious injury segment crashes) involved a pedestrian
- 6 serious injury crashes (of 141 serious injury segment crashes) involved a bicyclist
- 107 out of 1,399 road segments experienced at least one fatal and/or serious injury crash
 - 6 segments had 1 fatal crash - no serious injury crashes
 - 1 segment had 1 fatal crash, 1 serious injury crash
 - 1 segment had 1 fatal crash, 2 serious injury crashes
 - 2 segments had 1 fatal crash, 3 serious injury crashes
 - 1 segment had 1 fatal crash, 4 serious injury crashes
 - 75 segments had 1 serious injury crash - no fatal crashes
 - 15 segments had 2 serious injury crashes - no fatal crashes
 - 4 segments had 3 serious injury crashes - no fatal crashes
 - 1 segment had 4 serious injury crashes - no fatal crashes
 - 1 segment had 7 serious injury crashes - no fatal crashes

Signalized Intersection Takeaways

- 9 fatal crashes (34%) occurred at a signalized intersection
- 136 serious injury crashes (33%) occurred at a signalized intersection
- 2 fatal crashes (of 9 fatal signalized intersection crashes) involved a bicyclist
- 3 fatal crashes (of 9 fatal signalized intersection crashes) involved a pedestrian
- 16 serious injury crashes (of 136 serious injury signalized intersection crashes) involved a bicyclist
- 23 serious injury crashes (of 136 serious injury signalized intersection crashes) involved a pedestrian
- 94 out of 282 signalized intersections experienced at least one fatal and/or serious injury crash
 - 4 signalized intersections had 1 fatal crash – no serious injury crashes
 - 2 signalized intersections had 1 fatal crash, 1 serious injury crash
 - 1 signalized intersection had 1 fatal crash, 2 serious injury crashes
 - 1 signalized intersection had 1 fatal crash, 3 serious injury crashes
 - 1 signalized intersection had 1 fatal crash, 4 serious injury crashes
 - 57 signalized intersections had 1 serious injury crash - no fatal crashes
 - 20 signalized intersections had 2 serious injury crashes - no fatal crashes
 - 6 signalized intersections had 3 serious injury crashes - no fatal crashes
 - 1 signalized intersection had 4 serious injury crashes - no fatal crashes
 - 1 signalized intersection had 6 serious injury crashes - no fatal crashes

Unsignalized Intersection Takeaways

- 6 fatal crashes (23%) occurred at an unsignalized intersection
- 132 serious injury crashes (32%) occurred at an unsignalized intersection
- 1 fatal crash (of 6 fatal unsignalized intersection crashes) involved a bicyclist
- 2 fatal crashes (of 6 fatal unsignalized intersection crashes) involved a pedestrian
- 17 serious injury crashes (of 132 serious injury unsignalized intersection crashes) involved a bicyclist
- 20 serious injury crashes (of 132 serious injury unsignalized intersection crashes) involved a pedestrian
- 128 out of 2,487 unsignalized intersections experienced at least one fatal or serious injury crash
 - 5 unsignalized intersections had 1 fatal crash – no serious injury crashes
 - 1 unsignalized intersection had 1 fatal crash, 1 serious injury crash
 - 114 unsignalized intersections had 1 serious injury crash – no fatal crashes
 - 7 unsignalized intersections had 2 serious injury crashes – no fatal crashes
 - 1 unsignalized intersection had 3 serious injury crashes – no fatal crashes

3 – Part II Assessment – Categorize Priority & Special Mention Tiers I-III

3.1 Identification Methodology

SMTC applied the following criteria to identify priority tier (i.e., ‘hot spot’ locations) and special mention (Tier I-III) locations from the 107 segments and 222 intersections (329 total locations) that experienced a fatal and/or serious injury crash:

Step 1 – Screen the 329 locations with a fatal and/or serious injury crash into ‘Focus Areas’

- Focus areas include: 1 fatal crash - OR - 2 or more serious injury crashes

Step 2 – Sort Focus Areas into four Tiers: Priority ‘Hot Spot’ and Special Mention Tiers I-III

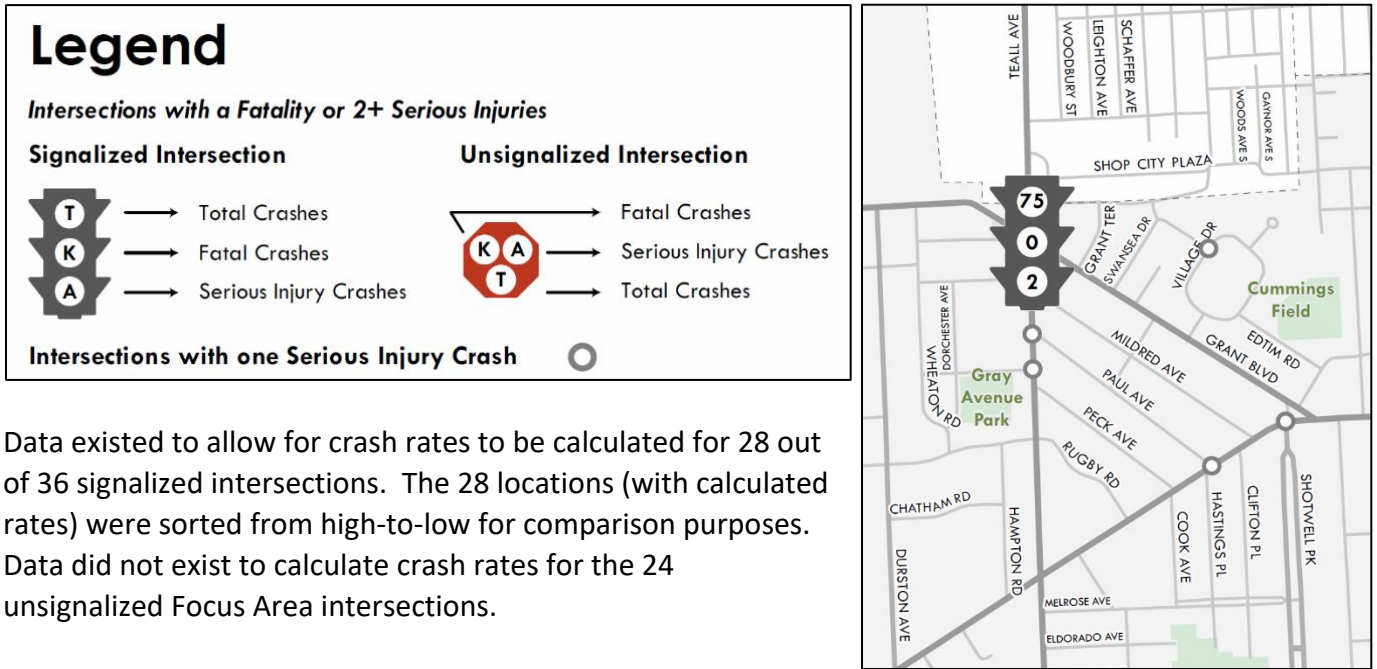
- Calculate crash rates (based on available data) for Focus Areas
- Filter Focus Area locations using the following seven yes/no questions:
 - Did the location involve:
 1. a fatal and a serious injury crash?
 2. a fatal crash?
 3. 3 or more serious injury crashes?
 4. 5 or more bike/ped crashes, with at least one that is a fatal or serious injury crash?¹²
 - When sorting the Focus Segments/Focus Intersections, did the location fall within the “top ten” highest locations for:
 5. crash rate?
 6. injury crashes? (i.e., not serious injury)
 7. total crashes?
- Filter locations into tiers based on the number of ‘yes’ responses (out of 7):
 - Priority Tier (‘Hot Spots’) = 4 or more
 - Tier I - Special Mention = 3
 - Tier II - Special Mention = 2 or 1
 - Tier III - Special Mention = 0

Priority Tier segments and intersections are deemed ‘hot spot’ locations for fatal and/or serious injury crashes. Hot spot locations underwent additional review.

¹² SMTC staff decided to include this question to help sort locations since 65% of fatal crashes on City roadways involved a bicyclist or pedestrian.

Figure 2 includes an example of a focus intersection. It shows the (signalized) Teall Avenue / Grant Boulevard intersection and indicates the total number of crashes, fatal crashes, and serious injury crashes that occurred at this location. Figure 2 also shows the location of intersections that involved one serious injury crash only, i.e., those locations that did not meet the criteria to be considered a Focus Area intersection. (A high-resolution electronic PDF of Figure 2 that shows all 37 signalized and 14 unsignalized intersection Focus Areas is available upon request as Attachment - Figure 2.)

Figure 2 – Example Focus Area Signalized Intersection (Teall Ave/Grant Boulevard)



Data existed to allow for crash rates to be calculated for 28 out of 36 signalized intersections. The 28 locations (with calculated rates) were sorted from high-to-low for comparison purposes. Data did not exist to calculate crash rates for the 24 unsignalized Focus Area intersections.

Categorize Priority Tier ('Hot Spot') and Special Mention Tier I-III Locations

Table 2 and Table 3 show the results of filtering focus areas (intersections and segments, respectively) using the seven yes/no questions. Locations with 4 or more 'yes' responses are considered Priority Tier 'hot spot' locations. Those with three 'yes' responses are considered Tier I; two or one 'yes' responses are Tier II, and zero "yes" responses are Tier III.

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Table 2 - Focus Area Intersections Grouped by “Priority” & “Special Mention Tier I-III” Criteria

Focus Intersection	Type	Does it include:				Is it listed in highest ten (out of 51) Focus Intersections for:			
		Fatal and Serious Injury Crash	Fatal Crash	More than 2 Serious Injury Crashes	More than 4 Bike/Ped Crashes, at least one of which was a Fatal or Serious Injury Crash	Crash Rate	Injury Crashes	Total Crashes	
Butternut Street / Catherine Street	Signalized			Yes	Yes	Yes	Yes	Yes	Priority
Hiawatha Boulevard West / Solar Street	Signalized	Yes	Yes	Yes		Yes	Yes		
West Onondaga Street / South Geddes Street	Signalized			Yes		Yes	Yes	Yes	
West Fayette Street / South Geddes Street	Signalized			Yes		Yes	Yes	Yes	
James Street / North Salina Street	Signalized			Yes		Yes	Yes	Yes	
Geddes Street / West Genesee Street	Signalized			Yes		Yes	Yes	Yes	
Teall Avenue / Grant Boulevard	Signalized				Yes	Yes	Yes	Yes	
James Street / North State Street	Signalized					Yes	Yes	Yes	Tier I
South Salina Street / Seneca Turnpike	Signalized					Yes	Yes	Yes	
North Townsend Street / Butternut Street	Signalized	Yes	Yes		Yes				
East Genesee Street / Westcott Street	Signalized	Yes	Yes	Yes					
Butternut Street / South Alford Street	Signalized	Yes	Yes		Yes				Tier II
South Avenue / West Brighton Avenue	Signalized		Yes					Yes	
West Genesee Street / North Franklin Street	Signalized					Yes		Yes	
East Genesee Street / Irving Avenue	Signalized		Yes		Yes				
South State Street / Harrison Street	Signalized			Yes	Yes				
North Salina Street / Bear Street	Signalized	Yes	Yes						
South Salina Street / Lafayette Avenue	Unsignalized	Yes	Yes						
South Salina Street / East Colvin Street	Signalized		Yes		Yes				
South Salina Street / East Washington Street	Signalized				Yes				
South Clinton Street / West Fayette Street	Signalized				Yes				
North Salina Street / Pearl Street	Unsignalized		Yes						
South Salina Street / Tallman Street	Unsignalized		Yes						
East Genesee Street / Columbus Avenue	Signalized			Yes					
Tallman Street / Hudson Street	Unsignalized		Yes						
Spencer Street / Genant Drive	Unsignalized			Yes					
Hiawatha Boulevard West / Van Rensselaer Street	Signalized			Yes					
Erie Boulevard East / North McBride Street	Signalized						Yes		
Belleuve Avenue / Palmer Avenue	Unsignalized		Yes						
Tallman Street / Lincoln Avenue	Unsignalized		Yes						
James Street / Homecroft Road	Signalized		Yes						
South Clinton Street / West Washington Street	Signalized				Yes				
West Onondaga Street / Dudley Street	Unsignalized								Tier III
West Genesee Street / Avery Avenue	Signalized								
East Genesee Street / South Beech Street	Signalized								
West Genesee Street / State Fair Boulevard	Signalized								
North Salina Street / Erie Boulevard East	Unsignalized								
East Colvin Street / Skytop Road	Signalized								
West Court Street / Solar Street	Signalized								
East Fayette Street / South Townsend Street	Signalized								
South Salina Street / East Maston Avenue	Signalized								
East Genesee Street / Maple Street	Unsignalized								
North State Street / Erie Boulevard East	Signalized								
South Geddes Street / Elliot Street	Unsignalized								
Velasko Road / West Onondaga Street	Signalized								
West Court Street / Genant Drive	Unsignalized								
East Raynor Avenue / Fineview Place	Unsignalized								
Burnet Avenue / South Collingwood Avenue	Unsignalized								
Park Street / Harborside Drive	Signalized								
South Avenue / Onondaga Avenue	Signalized								
Spencer Street / State Fair Boulevard	Signalized								

Note: Focus Intersections include segments that had a fatal crash and/or two or more serious injury crashes.

Table 3 - Focus Area Segments Grouped by “Priority” & “Special Mention Tier I-III” Criteria

Focus Segments	Does it include:				Is it listed in highest ten (out of 32) Focus Segments for:			
	Fatal and Serious Injury Crash	Fatal Crash	More than 2 Serious Injury Crashes	More than 4 Bike/Ped Crashes, at least one of which was a Fatal or Serious Injury Crash	Crash Rate	Injury Crashes	Total Crashes	
South Geddes Street <i>Grand Ave. to Fayette St.</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Priority
Shonnard Street <i>Geddes St. to West St.</i>	Yes	Yes	Yes	Yes	Yes			
North Salina Street <i>State St. to Kirkpatrick St.</i>	Yes	Yes			Yes		Yes	
South Salina Street <i>Seneca Tpk. (NYS 173) to Calthrop Ave. (I-81 Access)</i>			Yes	Yes		Yes	Yes	
Burnet Avenue <i>Teall Ave. to Midler Ave. (NYS 598)</i>			Yes		Yes	Yes	Yes	
South Salina Street <i>Calthrop Ave. (I-81 Access) to Kennedy St. (NYS 175)</i>				Yes		Yes	Yes	Tier I
Teall Avenue <i>Burnet Ave. to James St. (NYS 290)</i>	Yes	Yes	Yes					
Hiawatha Boulevard West <i>Spencer St. to Solar St.</i>			Yes			Yes	Yes	
James Street <i>Lodi St. to Teall Ave.</i>			Yes			Yes	Yes	Tier II
Park Street <i>Butternut St. to Pond St.</i>		Yes			Yes			
Kenmore Avenue <i>Newell St. to Ostrander Ave.</i>		Yes			Yes			
Grant Boulevard <i>Butternut St. to Teall Ave.</i>						Yes	Yes	
West Seneca Turnpike <i>Valley Dr. (NYS 80) to the City Line</i>	Yes	Yes						
West Onondaga Street <i>Velasko Rd. to Hoefler St.</i>					Yes	Yes		
James Street <i>Grant Blvd. to Midler Ave. (NYS 598)</i>			Yes				Yes	
West Genesee Street <i>Erie Blvd. West to the City Line</i>						Yes	Yes	
Catherine Street <i>Lodi St. to Erie Blvd. East</i>				Yes				
Hudson Street <i>Tallman St. to Crescent Ave.</i>					Yes			
NBT Bank Parkway <i>Park St. to Tex Simone Dr.</i>					Yes			
Erie Boulevard East <i>Lodi St. to Teall Ave.</i>		Yes						
Burnet Avenue <i>State St. (US 11) to Lodi St.</i>		Yes						
West Onondaga Street <i>Geddes St. to Tallman St.</i>		Yes						
North Franklin Street <i>West Genesee St. to Butternut St.</i>		Yes						
South Salina Street <i>Seneca Tpk. (NYS 173) to Dorwin Ave.</i>						Yes		
South Avenue <i>Glenwood Ave. to the City Line</i>						Yes		
Erie Boulevard West <i>Milton Ave. to Hiawatha Blvd.</i>			Yes					
South Clinton Street <i>Adams St. to Tallman St.</i>					Yes			
Midland Avenue <i>Brighton Ave. to Cortland Ave.</i>								Tier III
East Brighton Avenue <i>State St. to Thurber St.</i>								
Cortland Avenue <i>MLK Blvd. to Salina St.</i>								
East Fayette Street <i>Almond St. to Columbus Ave.</i>								
Midland Avenue <i>Seneca Tpk. (NYS 173) to Brighton Ave.</i>								

Note: Focus Segments include segments that had a fatal crash and/or two or more serious injury crashes.

3.3 ‘Hot Spot’ Locations

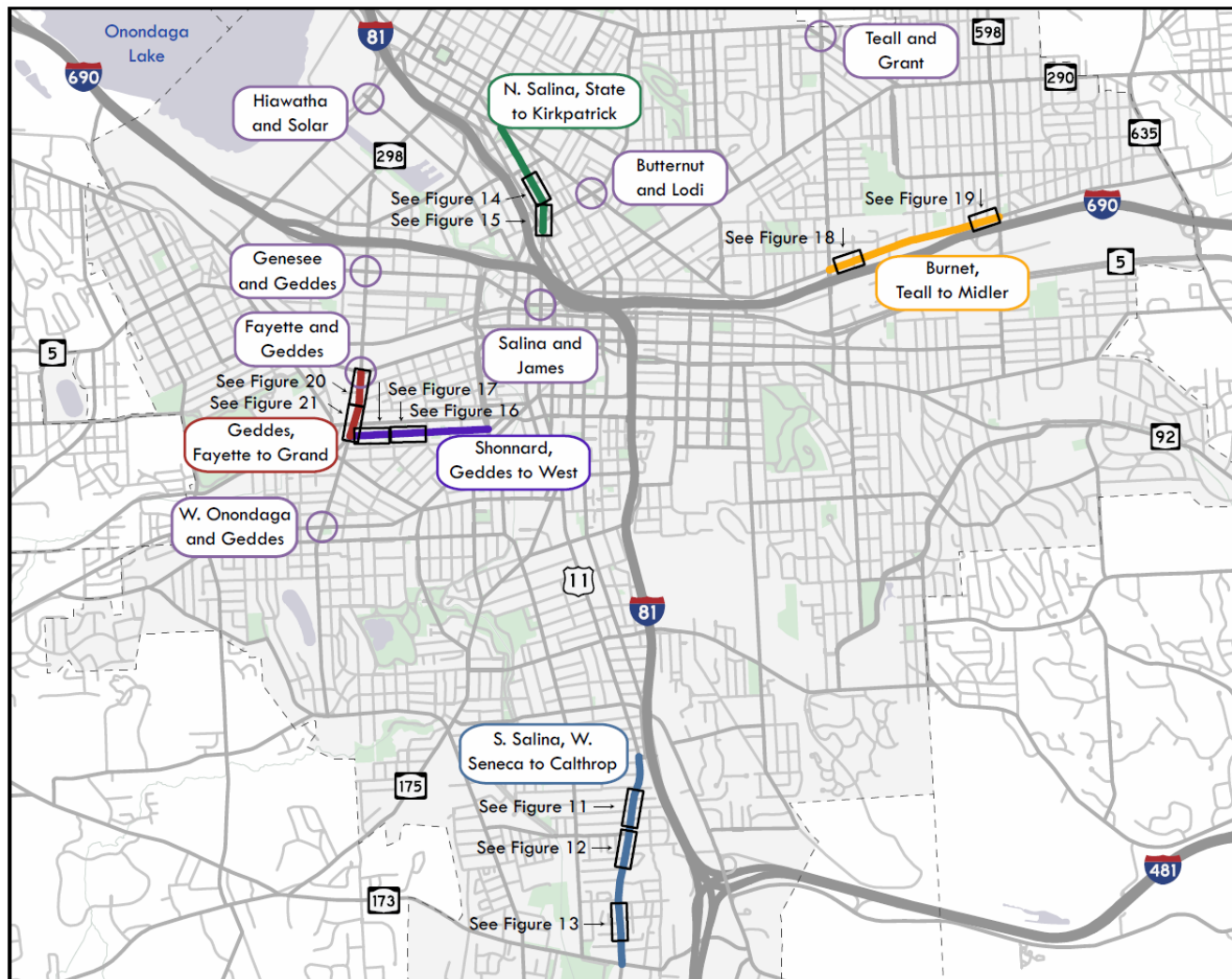
The Part II assessment identified 12 Priority Tier (‘hot spot’) locations. Table 4 lists the seven intersections and five segments deemed ‘hot spot’ locations for fatal and serious injury crashes.

Table 4 – Fatal Crash and Serious Injury Crash Priority Tier (‘Hot Spot’) Locations

Intersection ‘Hot Spot’ Locations:	Segment ‘Hot Spot’ Locations:
Butternut Street / Catherine Street	South Geddes Street <i>Grand Ave. to Fayette St..</i>
Hiawatha Boulevard West / Solar Street	Shonnard Street <i>Geddes St. to West St.</i>
West Onondaga Street / South Geddes Street	North Salina Street <i>State St. to Kirkpatrick St.</i>
West Fayette Street / South Geddes Street	South Salina Street <i>Seneca Tpk. to Calthrop Ave.</i>
James Street / North Salina Street	Burnet Avenue <i>Teall Ave. to Midler Ave.</i>
Geddes Street / West Genesee Street	
Teall Avenue / Grant Boulevard	

Figure 3 shows the location of the seven intersections and five segments identified as ‘hot spots.’ It also references Figure 11 to Figure 21, which identifies subsegment areas where the fatal and/or serious injury crashes occurred. (A high-resolution electronic PDF that shows all priority tier and special mention tier I-III locations is available upon request as Attachment - Figure 3.)

Figure 3 - ‘Hot Spot’ Locations for Fatal and Serious Injury Crashes



3.4 ‘Hot Spot’ Assessment Findings

SMTC assessed ‘hot spot’ locations and summarized findings in summary narratives that accompany Figure 4 to Figure 21. Staff conducted a site visit of each hot spot location on November 5, 2020. Site visits involved observations from within vehicles – i.e., informally referred to as “windshield” observations.

During the site visits, staff noted road construction at a few ‘hot spots,’ which made it difficult to confirm road attributes at those locations. For example, Image 1 shows road construction at the Hiawatha Boulevard West / Solar Street intersection. Descriptions are based on observations that existed at the time of the visit. Furthermore, observed conditions may not have existed during the 5-

year crash period. SMTC summarized observations for general informational purposes only and does not guarantee its accuracy or completeness.

'Hot spot' segments are up 1.1 miles long and crash patterns differ throughout the corridor. Figure 11 to Figure 21 show crash patterns within the general vicinity of a fatal and/or serious injury crashes along 'hot spot' segments.¹⁴ Crash locations (shown as dots) are approximate and illustrate one dot per crash. (Attachment Figure 4 to Attachment Figure 8 show crash attributes for entire segments. They are available as high-resolution PDFs upon request.)



Image 1 – Hiawatha Boulevard West looking towards the Solar Street Intersection – repaving, restriping, and pedestrian facilities under construction. Embassy Suites is the hotel shown in the distance on the right side of the image. An enclosed pedestrian bridge connects the Solar Street lots to Destiny USA. The bridge spans above Hiawatha Boulevard and Harborside Drive. The bridge casts a shadow on the road and crosswalk beneath. Lighting does not exist on the bottom of the bridge. The bridge's Hiawatha Boulevard entrance (shown) did not appear to be ADA accessible (with door push buttons). Pedestrian facilities at the intersection were under construction at the time of the site visit. Sidewalks do not exist between the mall's entrance (approximately 130 feet away) and this intersection. Furthermore, the mall's entrance is not at grade level and must be accessed by traveling approximately 170 feet along Harborside Drive (no sidewalks) to a crosswalk that provides access to a ramp on the opposite side Harborside Drive. The ramp extends approximately 190 feet to the mall's entrance.

¹⁴ As mentioned, Figure 3 shows the boundaries of Figure 11 to Figure 21. Figures 11 through Figure 21 show the crash patterns within the general vicinity of fatal and/or serious injury crashes along 'hot spot' segments.

Butternut Street / Lodi Street / Catherine Street

As shown in Figure 4, the Butternut Street / Lodi Street / Catherine Street intersection is signalized – the type of signal structure was mast arm. The estimated average daily entering vehicles (DEV) was 18,830 vehicles per day and the intersection had a calculated crash rate of 2.328 crashes per million entering vehicles (MEV). The statewide average crash rate for similar facilities on state highways is 0.23/MEV. Table 5 provides a summary of crash patterns.

Butternut St. is functionally classified as a Minor Arterial and serves as a northeast-southwest route. Left-turn only lanes existed on both Butternut Street approaches, although turn arrow pavement markings did not exist. A “no-right-turn-on-red” sign existed on Butternut Street’s northeast-bound approach. Lodi Street is functionally classified as a Minor Arterial and serves as a northwest-southeast route. Catherine Street is functionally classified as Local. All roadways have a 30 MPH limit. All approach grades are 0-3%.

As shown in Figure 4, this location is a skewed, 5-legged intersection with 4 approaches as Catherine Street is one-way southeast-bound (between Butternut St. and East Laurel St. only). One-way signs were not observed at the signal (near Lombardi’s Market) to indicate that Catherine Street is one-way for entering traffic only. Shoulders did not exist along roads.

Land uses are primarily commercial on Butternut Street - a Dollar Tree store, a Dollar General, Lombardi’s Market, and a Rite Aid existed at each corner. Residential uses primarily exist along Lodi Street and Catherine Street. A minimart (formerly Jreck Subs) existed on a triangle parcel with access on Lodi St. and Catherine St. A one-way sign existed on Catherine St. opposite the minimart’s driveway.

A raised island (no curb cuts or pedestrian amenities) existed northwest of the minimart. A slip road (not named) exists between the minimart and the island to allow northwest-bound traffic to turn left from Lodi St. onto Catherine St. A one-way sign was not observed across from the slip road. The Lombardi’s building had a closed storefront (or shuttered loading dock?) that aligns with the slip road - a curb existed in front.

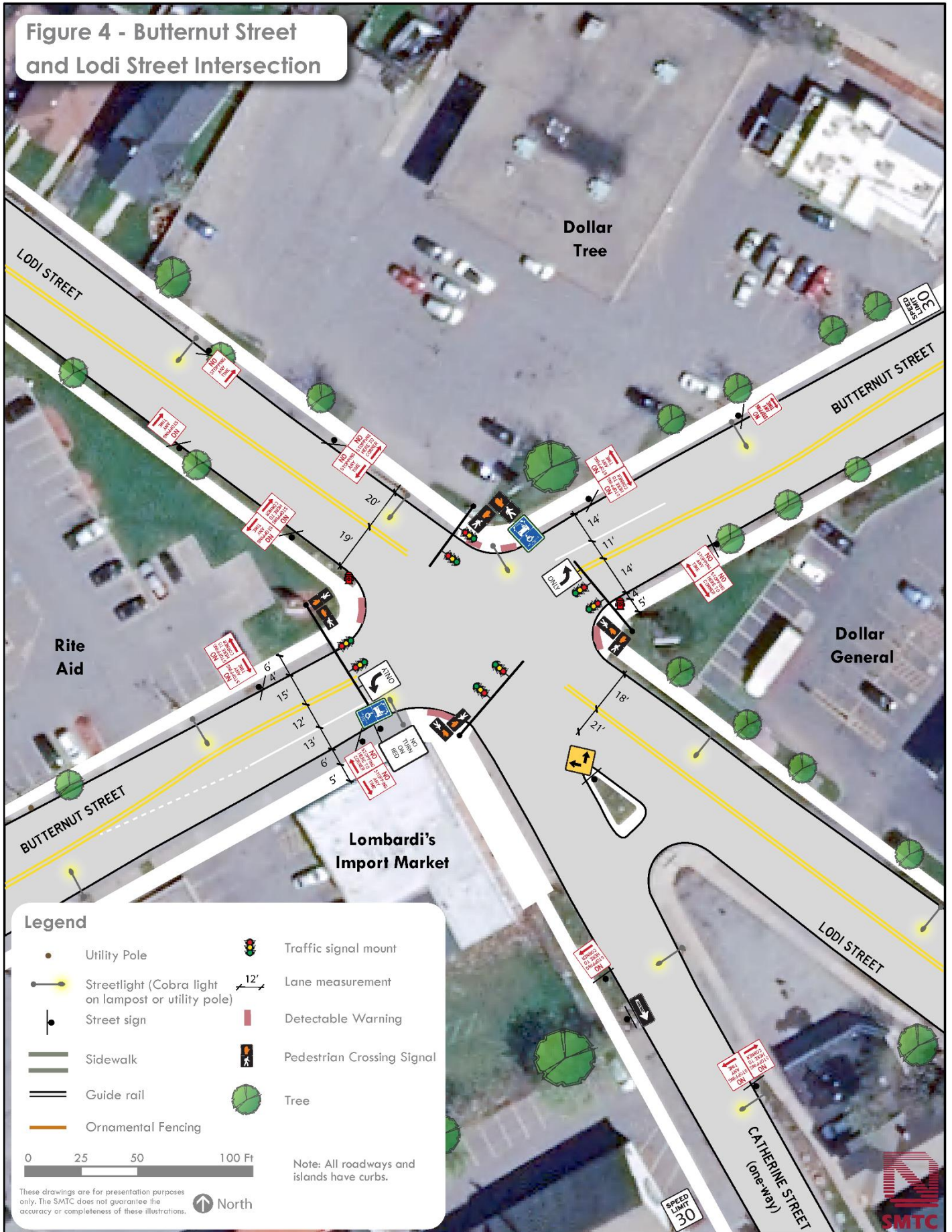
Near-side bus stops existed on Butternut Street’s northeast-bound and southwest-bound approach corners. No parking and no stopping signs existed at each leg, except at Lodi’s northwest-bound approach. Sidewalks exist throughout. Curb-cuts with detectable warnings exist as do pedestrian signal heads with push buttons. Crosswalks did not exist.

Table 5: Butternut Street / Lodi Street Crashes (SYR-047)

Crash Type	Total Number:		
	Crashes	K	A
Collision with Bicyclist	3	-	-
Collision with Fixed Object	3	-	-
Collision with Motor Vehicle	59	-	-
Collision with Pedestrian	14	-	2
Non-Collision	1	-	1
Not Entered/Unknown	0	-	-
Collision Type			
Head On	0	-	-
Left Turn Against Other Car	2	-	-
Left Turn With Other Car	1	-	-
Overtaking	8	-	-
Rear End	29	-	-
Right Angle	7	-	-
Right Turn Against Other Car	0	-	-
Right Turn With Other Car	1	-	-
Sideswipe	3	-	-
Other	27	-	3
Not Entered/Unknown	2	-	-
Light Conditions			
Dark Road, Lighted	26	-	-
Dark Road, Unlighted	0	-	-
Dawn	2	-	-
Daylight	48	-	3
Dusk	1	-	-
Other/Not Entered/Unknown	3	-	-
Weather Conditions			
Clear	42	-	2
Cloudy	21	-	1
Rain	8	-	-
Sleet/Hail/Freezing Rain	0	-	-
Snow	6	-	-
Other/Not Entered/Unknown	3	-	-
Road Surface Conditions			
Dry	54	-	3
Slush	0	-	-
Snow/Ice	5	-	-
Wet	18	-	-
Other/Not Entered/Unknown	3	-	-
Apparent Factor			
Alcohol Involvement	1	-	-
Backing Unsafely	3	-	-
Driver Inattention	11	-	1
Failure to Yield Right of Way	15	-	-
Following Too Closely	19	-	-
Pavement Slippery	0	-	-
Turning Improper	3	-	1
Unsafe Lane Change	0	-	-
Unsafe Speed	2	-	-
View Obstructed/Limited	0	-	-
Other	26	-	1
Total Intersection Crashes	80		
Fatal Crashes	0		
Serious Injury Crashes	3		

K = Fatal Crash, A = Serious Injury Crash

Figure 4 - Butternut Street and Lodi Street Intersection



Legend

● Utility Pole	🚦 Traffic signal mount
— Streetlight (Cobra light on lamppost or utility pole)	↔ Lane measurement
⊥ Street sign	🚶 Detectable Warning
▬ Sidewalk	🚶 Pedestrian Crossing Signal
▬ Guide rail	🌳 Tree
▬ Ornamental Fencing	

0 25 50 100 Ft

These drawings are for presentation purposes only. The SMTC does not guarantee the accuracy or completeness of these illustrations.

↑ North

Note: All roadways and islands have curbs.

Hiawatha Boulevard West / Solar Street

The Hiawatha Boulevard West / Solar Street intersection is signalized – the type of signal structure was span wire. The estimated average daily entering vehicles (DEV) was 29,250 vehicles per day and the intersection had a calculated crash rate of 1.330 crashes per MEV. The statewide average crash rate for similar facilities on state highways is 0.23/MEV. Table 6 provides a summary of crash patterns. Hiawatha Boulevard and pedestrian facilities were under construction at the time of the site visit. Figure 5 illustrates observed conditions. Some features may not have existed during the five-year crash assessment period. All approach grades are 0-3%.

Hiawatha Boulevard is functionally classified as a Principal Arterial and serves as a northeast-southwest route with 35 MPH speed limit. Solar Street is functionally classified as a Major Collector and serves as a northwest-southeast route with a 30 MPH speed limit. A southwest-bound right slip ramp exists without pedestrian facilities.

The Onondaga Creekwalk exists to the west, a new shared-use trail bridge over the CSX rail lines connects the Onondaga Creekwalk to the Loop-the-Lake Trail around Onondaga Lake. Construction was underway to connect these trails to the Empire State Trail via a connection through the New York State Fairgrounds. Land uses include a hotel - Embassy Suites and a shopping mall – the fourth largest in the U.S. with 2.5 million square feet of space. Solar Street is lined with parking lots to the southeast.

An enclosed pedestrian bridge (Figure 5 and Image 1) over Hiawatha Boulevard and Harborside Drive connects the Solar Street lots to the mall - it does not service the Harborside Drive lots on the north side of Hiawatha Boulevard. Only one of the two bridge entrances at the Solar Street lot appears to be ADA accessible with door push buttons; the third entrance on Hiawatha did not appear to be ADA accessible. The bridge crosses the intersection’s southwestern leg; it casted a shadow on the surface street and crosswalk below (see Image 1). Lighting did not exist on the bottom of the skybridge.

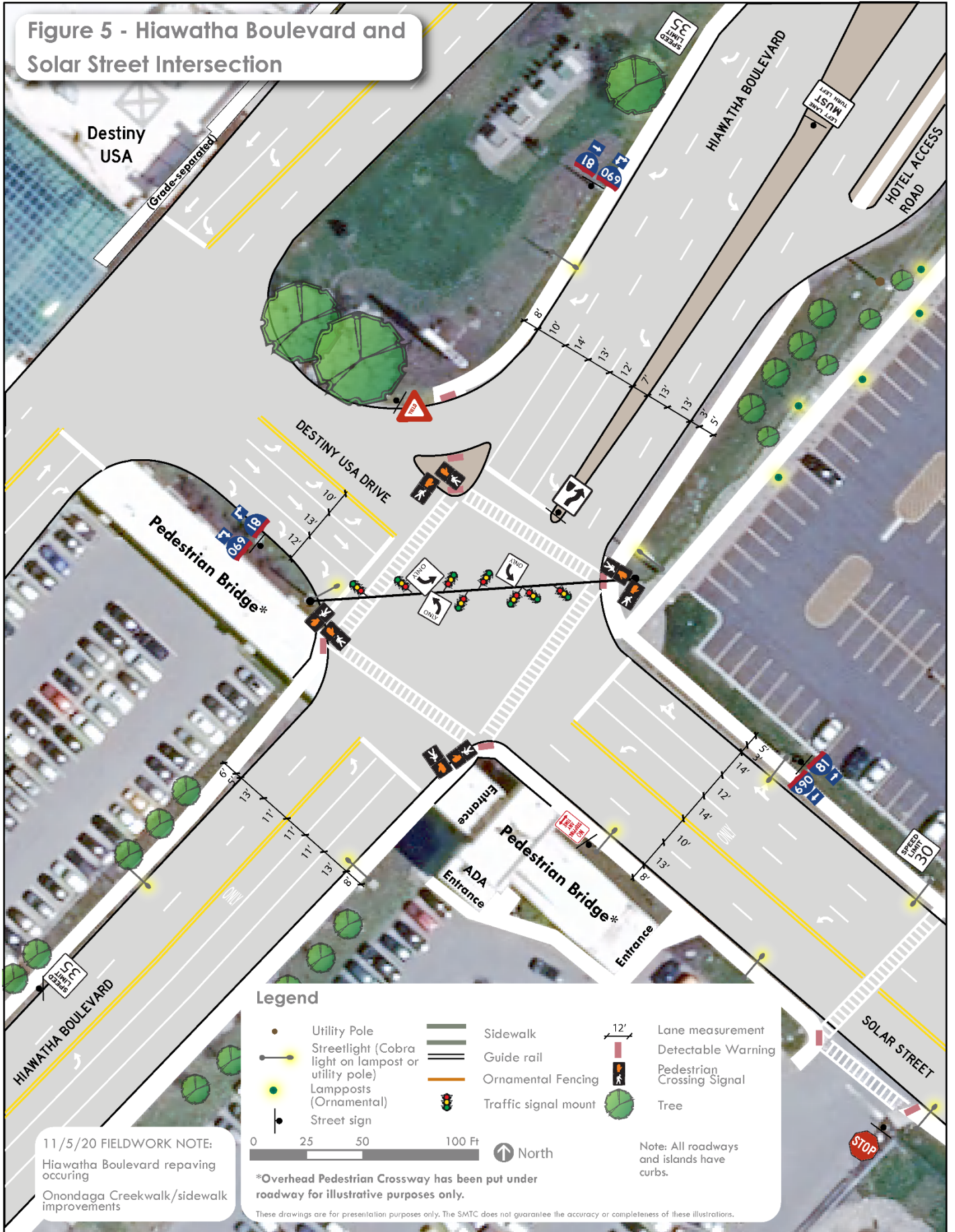
The intersection is ~ 125 feet from the Destiny USA / Harborside Drive intersection, which exists in front of the mall’s entrance. Pedestrian facilities did not exist between the two intersections. Moreover, the mall’s entrance is not at ground level. Pedestrians must travel ~ 170 feet along Harborside Drive (no sidewalks) to a crosswalk that leads to a ramp up to the mall’s entrance.

Table 6: Hiawatha Boulevard West / Solar Street Crashes (SYR-053)

Crash Type	Total Number:		
	Crashes	K	A
Collision with Bicyclist	1	-	1
Collision with Fixed Object	1	-	-
Collision with Motor Vehicle	67	1	3
Collision with Pedestrian	0	-	-
Non-Collision	1	-	-
Not Entered/Unknown	1	-	-
Collision Type			
Head On	2	-	1
Left Turn Against Other Car	9	-	1
Left Turn With Other Car	5	-	1
Overtaking	8	-	-
Rear End	17	-	-
Right Angle	8	-	-
Right Turn Against Other Car	2	-	-
Right Turn With Other Car	2	-	-
Sideswipe	3	-	-
Other	12	1	1
Not Entered/Unknown	3	-	-
Light Conditions			
Dark Road, Lighted	16	1	2
Dark Road, Unlighted	1	-	-
Dawn	2	-	-
Daylight	48	-	2
Dusk	2	-	-
Other/Not Entered/Unknown	2	-	-
Weather Conditions			
Clear	40	1	2
Cloudy	18	-	2
Rain	6	-	-
Sleet/Hail/Freezing Rain	0	-	-
Snow	5	-	-
Other/Not Entered/Unknown	2	-	-
Road Surface Conditions			
Dry	43	-	3
Slush	0	-	-
Snow/Ice	9	-	-
Wet	17	1	1
Other/Not Entered/Unknown	2	-	-
Apparent Factor			
Alcohol Involvement	1	1	-
Backing Unsafely	3	-	-
Driver Inattention	11	-	-
Failure to Yield Right of Way	20	-	3
Following Too Closely	11	-	-
Pavement Slippery	0	-	-
Turning Improper	1	-	-
Unsafe Lane Change	4	-	-
Unsafe Speed	2	-	-
View Obstructed/Limited	1	-	-
Other	17	-	1
Total Intersection Crashes			71
Fatal Crashes			1
Serious Injury Crashes			4

K = Fatal Crash, A = Serious Injury Crash

Figure 5 - Hiawatha Boulevard and Solar Street Intersection



West Onondaga Street / South Geddes Street

West Onondaga Street / South Geddes Street is a skewed signalized intersection - the signal structure type was mast arm. Geddes Street has grades that vary from 3.1% to 12%. West Onondaga Street enters the intersection at approximately 1.5% grade at each approach. The 3-color signal changes to a flashing signal during the winter months (November 1 – April 1); flashing yellow for Geddes Street and flashing red for West Onondaga Street. The flashing signal was observed at the time of the (November 5) site visit. Table 7 provides a summary of crash patterns.

The estimated average daily entering vehicles (DEV) at this intersection was 12,400 vehicles per day and had a calculated crash rate of 5.745 crashes per million entering vehicles (MEV). The statewide average crash rate for similar facilities on state highways is 0.54 / MEV.

Surrounding land uses included single and two-family residential and the Onondaga-Geddes Playground. Delaware Elementary School exists approximately 1,700 feet to the north and Belleview Elementary school exists approximately 1,200 feet to the south.

As shown in Figure 6, topographic lines at two-foot contours are provided to emphasize slope patterns. A hillside exists along the south side of West Onondaga Street. The hillside, in combination with Geddes Street’s grade and the skew of the intersection, may (or may not) make right-turns challenging from both West Onondaga Street approaches, and may (or may not) make approach sightlines difficult. Mature trees with full canopies exist along West Onondaga Street eastbound approach.

The pedestrian facilities appeared to be new, so intersection features may have evolved during the five-year accident assessment period. Observed facilities included push buttons with countdown timers, sidewalks, curb ramps/curb cuts with detectable warnings, and parallel crosswalks at all approaches. Bicycle facilities were not present. Staff observed bicyclists along each leg. Near-side bus stops exist on both West Onondaga Street intersection approaches.

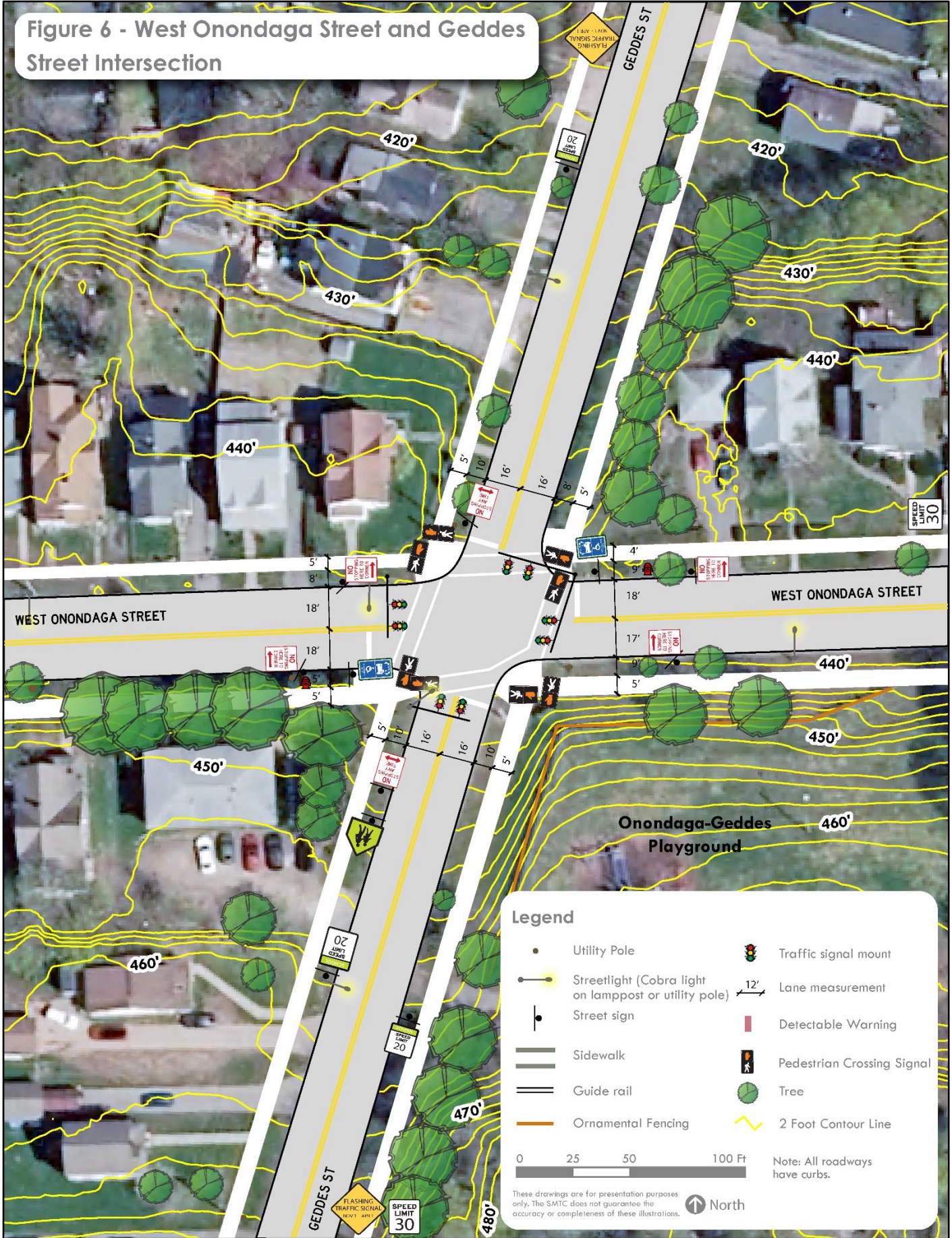
Geddes Street is functionally classified as a Minor Arterial and serves as a northeast-southwest route. It has 20 MPH posted [school zone] speed limits. West Onondaga Street is functionally classified as a Major Collector and serves as an east-west route with a 30 MPH speed limit.

Table 7: West Onondaga Street / South Geddes Street Crashes (SYR-154)

Crash Type	Total Number:		
	Crashes	K	A
Collision with Bicyclist	3	-	-
Collision with Fixed Object	6	-	-
Collision with Motor Vehicle	117	-	4
Collision with Pedestrian	4	-	-
Non-Collision	0	-	-
Not Entered/Unknown	0	-	-
Collision Type			
Head On	2	-	-
Left Turn Against Other Car	5	-	-
Left Turn With Other Car	2	-	-
Overtaking	2	-	-
Rear End	7	-	-
Right Angle	82	-	1
Right Turn Against Other Car	3	-	-
Right Turn With Other Car	1	-	-
Sideswipe	2	-	-
Other	24	-	3
Not Entered/Unknown	0	-	-
Light Conditions			
Dark Road, Lighted	23	-	1
Dark Road, Unlighted	0	-	3
Dawn	0	-	-
Daylight	98	-	-
Dusk	8	-	-
Other/Not Entered/Unknown	1	-	-
Weather Conditions			
Clear	67	-	2
Cloudy	35	-	1
Rain	12	-	1
Sleet/Hail/Freezing Rain	0	-	-
Snow	14	-	-
Other/Not Entered/Unknown	2	-	-
Road Surface Conditions			
Dry	76	-	3
Slush	1	-	-
Snow/Ice	10	-	-
Wet	40	-	1
Other/Not Entered/Unknown	3	-	-
Apparent Factor			
Alcohol Involvement	0	-	-
Backing Unsafely	1	-	-
Driver Inattention	10	-	-
Failure to Yield Right of Way	79	-	3
Following Too Closely	7	-	-
Pavement Slippery	1	-	-
Turning Improper	4	-	-
Unsafe Lane Change	1	-	-
Unsafe Speed	5	-	-
View Obstructed/Limited	1	-	-
Other	21	-	1
Total Intersection Crashes	130		
Fatal Crashes	0		
Serious Injury Crashes	4		

K = Fatal Crash, A = Serious Injury Crash

Figure 6 - West Onondaga Street and Geddes Street Intersection



West Fayette Street / South Geddes Street

The West Fayette Street / South Geddes Street intersection is signalized – the signal support structure was mast arm. Fayette Street west of the intersection was closed during the time of the site visit. Geddes Street is a Minor Arterial and serves as a north-south route with 30 MPH posted speed limits.

Geddes Street’s northern leg tapers under three NYS&W railroad bridges, the first bridge (abandoned) is about 100 feet north of the intersection and has a listed clearance of 12-feet 6 inches. Clearance signs for the other two bridges (active) were not observed when traveling northbound. Fayette Street east of the intersection is a Minor Arterial and has a skewed approach; it is a Major Collector with a skewed approach west of the intersection. Corner buildings, the depressed northern leg, and the skewed eastbound and westbound approaches may (or may not) make approach sightlines difficult. The estimated average daily entering vehicles (DEV) was 27,710 vehicles per day. The calculated crash rate was 2.393 crashes per million entering vehicles (MEV). The statewide average crash rate for similar facilities on state highways is 0.23 / MEV. Table 8 provides a summary of crash patterns.

Corridor land uses primarily included commercial. Fowler High School exists approximately 540 feet south of the intersection and has a posted 20 MPH [school zone] speed limit in this area. The Gear Factory Building continues to undergo transformation as do many properties along Fayette Street east of the intersection. Land use east and north of the intersection continues to evolve as new private and public investments are made in the Westside and Near Westside.

Figure 7 shows intersection features that existed during the site visit. Many roadway and pedestrian facility improvements appear to have been made in recent years. Ladder crosswalks exist across the northbound, eastbound, and westbound approaches. Observed facilities included push buttons with countdown timers and curb ramps with detectable warnings. It appeared that sidewalks along the eastern side of Geddes Street were under construction during the time of the site visit.

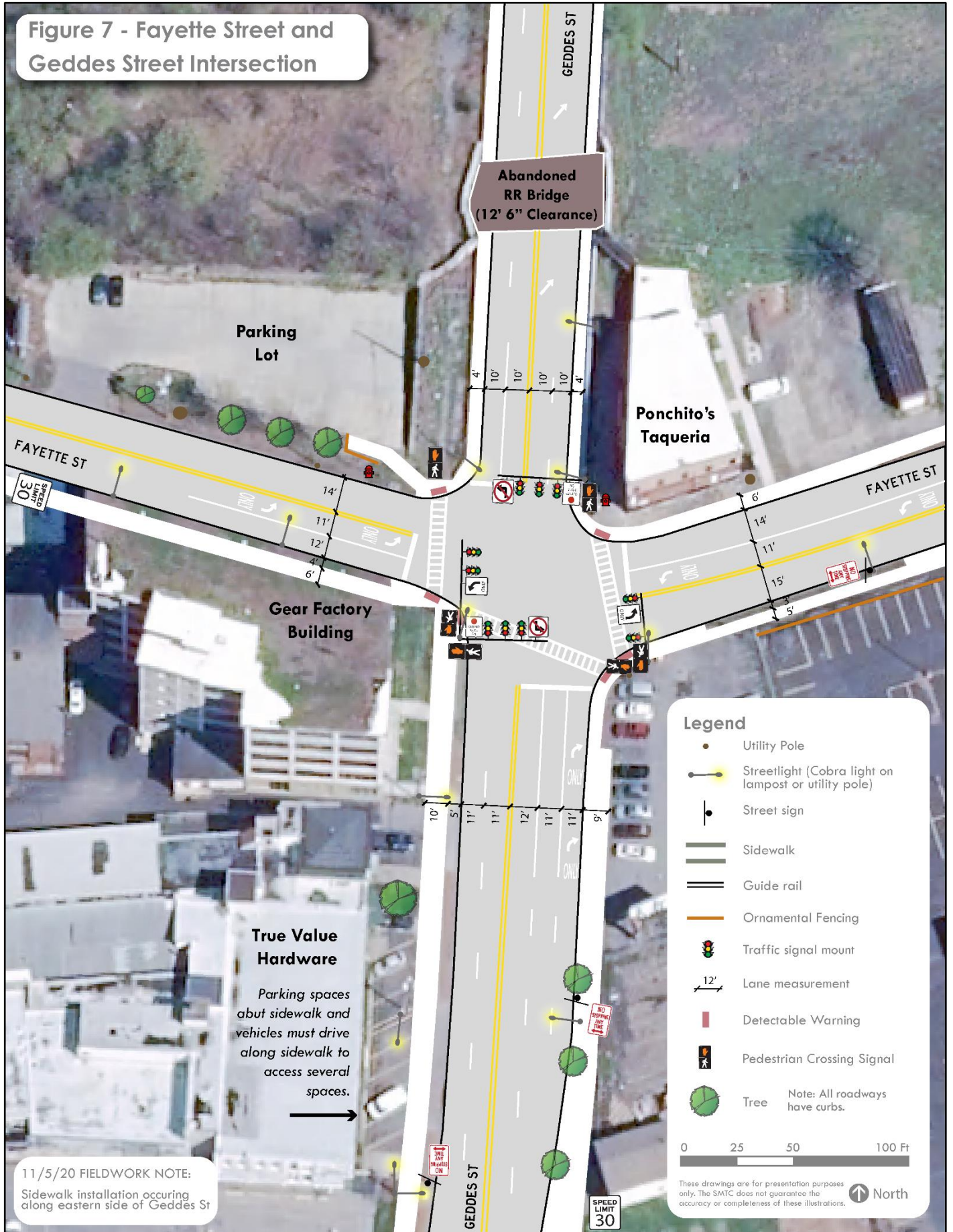
Staff observed off-street parking in front of buildings on Geddes Street that appeared to abut the sidewalk and several spaces appeared to not have driveway access. Cars may have to drive down the sidewalk to park. Staff did not observe bicycle facilities or signed Centro bus stops.

Table 8: West Fayette Street / South Geddes Street Crashes (SYR-137)

Crash Type	Total Number:		
	Crashes	K	A
Collision with Bicyclist	2	-	1
Collision with Fixed Object	0	-	-
Collision with Motor Vehicle	117	-	1
Collision with Pedestrian	1	-	1
Non-Collision	1	-	-
Not Entered/Unknown	0	-	-
Collision Type			
Head On	2	-	-
Left Turn Against Other Car	9	-	-
Left Turn With Other Car	0	-	-
Overtaking	11	-	-
Rear End	53	-	-
Right Angle	30	-	-
Right Turn Against Other Car	2	-	-
Right Turn With Other Car	2	-	-
Sideswipe	0	-	-
Other	12	-	3
Not Entered/Unknown	0	-	-
Light Conditions			
Dark Road, Lighted	29	-	-
Dark Road, Unlighted	1	-	-
Dawn	0	-	-
Daylight	84	-	3
Dusk	2	-	-
Other/Not Entered/Unknown	5	-	-
Weather Conditions			
Clear	57	-	2
Cloudy	21	-	1
Rain	19	-	-
Sleet/Hail/Freezing Rain	0	-	-
Snow	19	-	-
Other/Not Entered/Unknown	5	-	-
Road Surface Conditions			
Dry	62	-	3
Slush	0	-	-
Snow/Ice	19	-	-
Wet	35	-	-
Other/Not Entered/Unknown	5	-	-
Apparent Factor			
Alcohol Involvement	2	-	-
Backing Unsafely	3	-	-
Driver Inattention	8	-	1
Failure to Yield Right of Way	18	-	-
Following Too Closely	36	-	1
Pavement Slippery	2	-	-
Turning Improper	3	-	-
Unsafe Lane Change	4	-	-
Unsafe Speed	11	-	-
View Obstructed/Limited	0	-	-
Other	34	-	1
Total Intersection Crashes			121
Fatal Crashes			0
Serious Injury Crashes			3

K = Fatal Crash, A = Serious Injury Crash

Figure 7 - Fayette Street and Geddes Street Intersection



James Street / North Salina Street

The James Street / North Salina Street intersection is signalized – the support structure type was span wire. James Street and West Genesee Street are both functionally classified as a Principal Arterial and they serve an east-west route. North Salina Street is a north-south route and is functionally classified as a Minor Arterial north of the intersection and as a Principal Arterial south of the intersection.

All approach grades are 0-3%. The estimated average daily entering vehicles (DEV) at this intersection was 18,500 vehicles per day and it had a calculated crash rate of 2.932 crashes per million entering vehicles (MEV). The statewide average crash rate for similar facilities on state highways is 0.2 / MEV. Table 9 provides a summary of crash patterns. Figure 8 shows intersection features.

This intersection is located within Syracuse’s Central Business District (CBD). Surrounding land uses primarily include high-density office, urban commercial, and mixed-use commercial and residential. For more than a decade, downtown has been redeveloping into mixed-use neighborhoods with more residents moving into the CBD. Clinton Square is a major civic space at the southeast corner of the intersection. Clinton Square hosts many large outdoor events that draw in tens of thousands of visitors annually. Staff observed several bicyclists and pedestrians crossing the intersection.

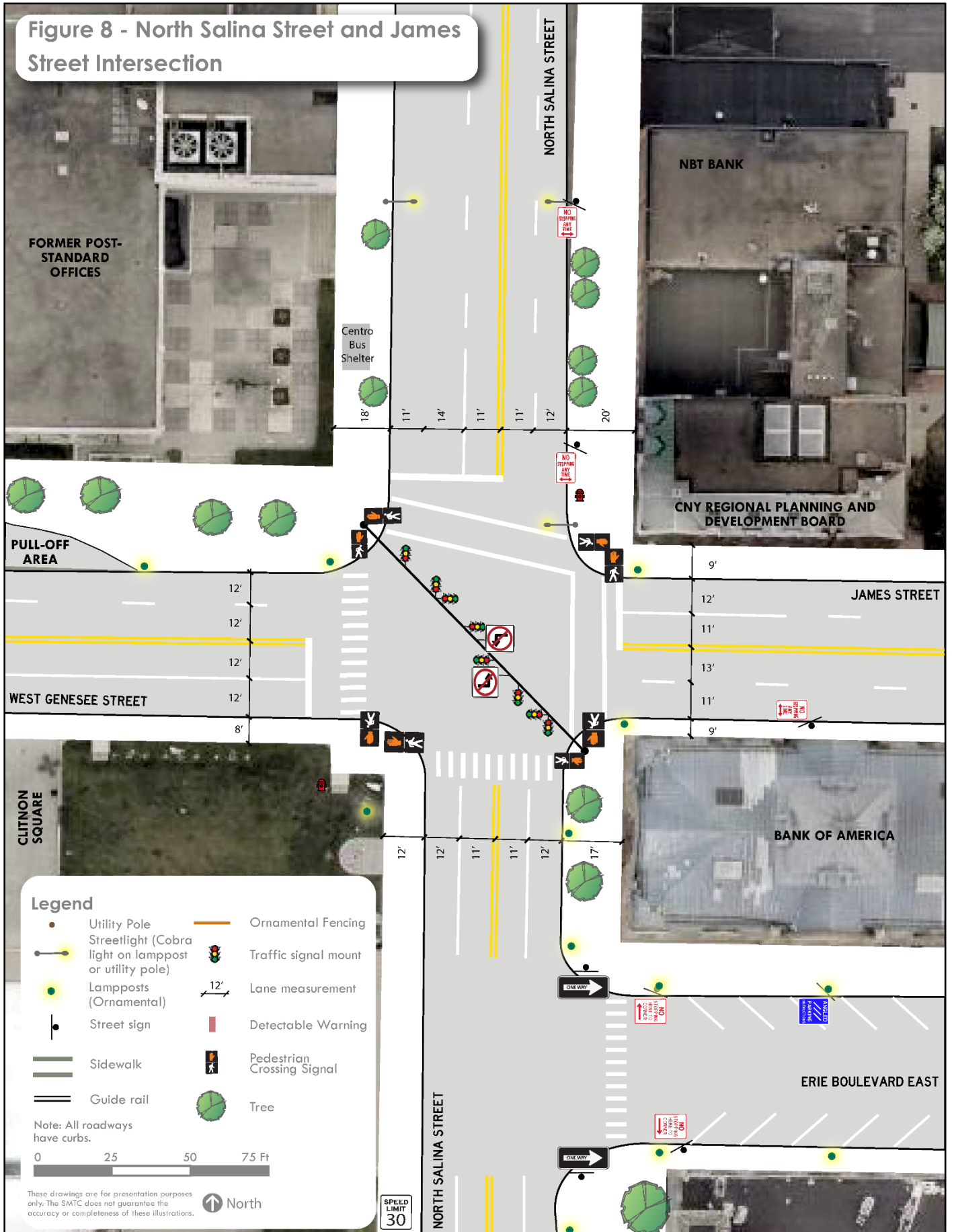
The buildings on southeast and northeast corners are built about 8-10 feet from James Street and North Salina street. Sightlines appear difficult from several angles, especially heading northbound or westbound. Sidewalks separate the buildings from the roads. Detectable warnings did not exist at curb cuts. Staff observed the rear tires of a large vehicle drive across a sidewalk ramp when making a northbound right. Lamp and utility poles are located close to the intersection corners at these locations. Staff observed a Bank of America patron parking on James Street in front of the building’s northern entrance. On-street parking was not permitted at this location. The car parked in the travel lane, which causes approaching motorists to make sudden lane changes. Vehicles traveling westbound and eastbound appeared to travel “at-speed” through the intersection. Pavement also changes from asphalt to paver along the southern leg. Westbound left movements (turning south) are restricted from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 6:00 p.m. Staff observed vehicles disregarding this restriction. Eastbound lefts (turning north) are restricted.

Table 9: James Street / North Salina Street Crashes (SYR-167)

Crash Type	Total Number:		
	Crashes	K	A
Collision with Bicyclist	2	-	-
Collision with Fixed Object	1	-	-
Collision with Motor Vehicle	93	-	6
Collision with Pedestrian	2	-	-
Non-Collision	1	-	-
Not Entered/Unknown	0	-	-
Collision Type			
Head On	3	-	-
Left Turn Against Other Car	8	-	-
Left Turn With Other Car	3	-	-
Overtaking	18	-	-
Rear End	14	-	-
Right Angle	37	-	5
Right Turn Against Other Car	1	-	-
Right Turn With Other Car	1	-	-
Sideswipe	1	-	-
Other	12	-	1
Not Entered/Unknown	1	-	-
Light Conditions			
Dark Road, Lighted	28	-	-
Dark Road, Unlighted	2	-	-
Dawn	0	-	-
Daylight	66	-	6
Dusk	2	-	-
Other/Not Entered/Unknown	1	-	-
Weather Conditions			
Clear	55	-	2
Cloudy	25	-	2
Rain	8	-	2
Sleet/Hail/Freezing Rain	0	-	-
Snow	9	-	-
Other/Not Entered/Unknown	2	-	-
Road Surface Conditions			
Dry	70	-	4
Slush	0	-	-
Snow/Ice	11	-	-
Wet	16	-	2
Other/Not Entered/Unknown	2	-	-
Apparent Factor			
Alcohol Involvement	2	-	-
Backing Unsafely	1	-	-
Driver Inattention	7	-	-
Failure to Yield Right of Way	32	-	3
Following Too Closely	13	-	-
Pavement Slippery	1	-	-
Turning Improper	7	-	-
Unsafe Lane Change	7	-	-
Unsafe Speed	3	-	-
View Obstructed/Limited	0	-	-
Other	26	-	3
Total Intersection Crashes			99
Fatal Crashes			0
Serious Injury Crashes			6

K = Fatal Crash, A = Serious Injury Crash

Figure 8 - North Salina Street and James Street Intersection



Geddes Street / West Genesee Street

The Geddes Street / West Genesee Street is a signalized intersection – the signal support was mast arm. Table 10 provides a summary of crash patterns.

West Genesee Street is a Principal Arterial that serves an east-west route with a 30 MPH posted speed limit. Geddes Street is a Minor Arterial that serves a north-south route with a posted 30 MPH speed limit. All approach grades are 0-3%. The estimated average daily entering vehicles (DEV) at this intersection was 22,910 vehicles per day and it had a calculated crash rate of 2.368 crashes per million entering vehicles (MEV). The statewide average crash rate for similar facilities on state highways is 0.23 / MEV.

Surrounding land uses included low density “suburban” commercial adjacent to residential one-family, two-family, and multi-family homes. Auto dealerships are well established along the West Genesee Corridor and developers built several new commercial buildings and plazas on the southwest corner of the intersection.

Figure 9 shows intersection features. Many new sidewalks and other pedestrian amenities have been improved recently as part of ongoing redevelopment and investment in the area. Shoulders and bike lanes did not exist along West Genesee Street. Pavement markings were hard to see. A signed and stripped bike lane existed along both sides of Geddes Street through the intersection. On-street parking was restricted.

Geddes Street also provides access to I-690, which is located approximately 700 feet to the north. Frazer Middle School exists approximately 1,200 feet away (south and east) on Park Avenue. Young teens / adults were observed walking and bicycling at the intersection during the site visit.

Table 10: Geddes Street / West Genesee Street Crashes (SYR-147)

Crash Type	Total Number:		
	Crashes	K	A
Collision with Bicyclist	2	-	-
Collision with Fixed Object	1	-	-
Collision with Motor Vehicle	92	-	3
Collision with Pedestrian	1	-	-
Non-Collision	1	-	-
Not Entered/Unknown	2	-	-
Collision Type			
Head On	1	-	1
Left Turn Against Other Car	5	-	-
Left Turn With Other Car	5	-	-
Overtaking	13	-	-
Rear End	34	-	1
Right Angle	22	-	-
Right Turn Against Other Car	0	-	-
Right Turn With Other Car	1	-	-
Sideswipe	3	-	-
Other	11	-	1
Not Entered/Unknown	4	-	-
Light Conditions			
Dark Road, Lighted	23	-	-
Dark Road, Unlighted	0	-	-
Dawn	1	-	-
Daylight	69	-	3
Dusk	1	-	-
Other/Not Entered/Unknown	5	-	-
Weather Conditions			
Clear	49	-	1
Cloudy	23	-	1
Rain	15	-	-
Sleet/Hail/Freezing Rain	0	-	-
Snow	7	-	1
Other/Not Entered/Unknown	5	-	-
Road Surface Conditions			
Dry	61	-	2
Slush	2	-	-
Snow/Ice	7	-	1
Wet	24	-	-
Other/Not Entered/Unknown	5	-	-
Apparent Factor			
Alcohol Involvement	0	-	-
Backing Unsafely	7	-	-
Driver Inattention	8	-	-
Failure to Yield Right of Way	19	-	-
Following Too Closely	26	-	1
Pavement Slippery	1	-	1
Turning Improper	3	-	-
Unsafe Lane Change	2	-	-
Unsafe Speed	2	-	-
View Obstructed/Limited	0	-	-
Other	31	-	1
Total Intersection Crashes	99		
Fatal Crashes	0		
Serious Injury Crashes	3		

K = Fatal Crash, A = Serious Injury Crash

Teall Avenue / Grant Boulevard

Teall Avenue / Grant Boulevard is a skewed signalized intersection – the support structure was mast arm. Teall Avenue is functionally classified as a Principal Arterial and serves a north-south route with 30 MPH speed limit. Grant Boulevard is functionally classified as a Minor Arterial with a 30 MPH speed limit. All approach grades are 0-3%. Table 11 provides a summary of crash patterns.

The estimated average daily entering vehicles (DEV) at this intersection was 20,120 vehicles per day and it has a calculated crash rate of 2.043 crashes per million entering vehicles (MEV). The statewide average crash rate for similar facilities on state highways is 0.23 / MEV.

Surrounding land uses primarily included suburban commercial (Shop City Shopping Plaza) surrounded by residential. Woodlawn Cemetery exists at the intersection’s northwest corner. SMTC is not aware of any significant changes in land use in the general area during the past several years.

Figure 10 shows intersection features. Two yield-controlled slip ramps exist, one southbound right and one northbound right. Each slip ramp forms a curbed island. Both islands are connected to the corners with crosswalks, however, neither island had curb cuts. Utility poles and one utility box existed within the raised islands.

Crosswalks existed across the northbound, westbound, and eastbound approaches. There were no crosswalks at the southbound approach. Pedestrian signals with push buttons were provided for the northbound and northwest bound approaches only. Shrubs grew close to the pedestrian signal push button on the southwest corner.

Parking was restricted on all approaches. Pavement markings were difficult to see. No-turn-on-red signs existed at both approaches along Grant Boulevard.

Fiegel Avenue ends as a dead end at the intersection’s southwest corner and is separated from the intersection by a Northside gateway sign.

Table 11: Teall Avenue / Grant Boulevard Crashes (SYR-180)

Crash Type	Total Number:		
	Crashes	K	A
Collision with Bicyclist	1	-	-
Collision with Fixed Object	0	-	-
Collision with Motor Vehicle	71	-	1
Collision with Pedestrian	3	-	1
Non-Collision	0	-	-
Not Entered/Unknown	0	-	-
Collision Type			
Head On	2	-	-
Left Turn Against Other Car	7	-	1
Left Turn With Other Car	11	-	-
Overtaking	6	-	-
Rear End	20	-	-
Right Angle	17	-	-
Right Turn Against Other Car	1	-	-
Right Turn With Other Car	1	-	-
Sideswipe	1	-	-
Other	7	-	1
Not Entered/Unknown	2	-	-
Light Conditions			
Dark Road, Lighted	18	-	-
Dark Road, Unlighted	0	-	-
Dawn	0	-	-
Daylight	51	-	2
Dusk	1	-	-
Other/Not Entered/Unknown	5	-	-
Weather Conditions			
Clear	42	-	2
Cloudy	20	-	-
Rain	4	-	-
Sleet/Hail/Freezing Rain	1	-	-
Snow	2	-	-
Other/Not Entered/Unknown	6	-	-
Road Surface Conditions			
Dry	52	-	2
Slush	0	-	-
Snow/Ice	8	-	-
Wet	8	-	-
Other/Not Entered/Unknown	7	-	-
Apparent Factor			
Alcohol Involvement	1	-	-
Backing Unsafely	1	-	-
Driver Inattention	6	-	-
Failure to Yield Right of Way	27	-	1
Following Too Closely	11	-	-
Pavement Slippery	0	-	-
Turning Improper	3	-	-
Unsafe Lane Change	0	-	-
Unsafe Speed	5	-	-
View Obstructed/Limited	1	-	-
Other	20	-	1
Total Intersection Crashes	75		
Fatal Crashes	0		
Serious Injury Crashes	2		

K = Fatal Crash, A = Serious Injury Crash

Figure 10- Teall Avenue and Grant Boulevard Intersection



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As mentioned, several ‘hot spot’ segments are over a mile in length and crash patterns differ throughout the corridor. Table 12 provides a general overview of corridor features and attributes for each segment. This information is presented as supplemental data to help inform decisions.

Table 12 – A General Overview of ‘Hot Spot’ Segment Features

Segment Attributes	South Salina Street from West Seneca Turnpike to Calthrop Avenue	North Salina Street from North State Street to Kirkpatrick Street	Shonnard Street from South Geddes Street to West Street	South Geddes Street from West Fayette Street to Grand Avenue	Burnet Avenue from Teall Avenue to Midler Avenue
Functional Class	Minor Arterial	Minor Arterial	Major Collector	Minor Arterial	Minor Arterial
AADT	13,817	6,345	3,023	8,251	7,982
Approximate Length of Corridor Segment	1.1 miles	0.6 miles	0.7 miles	0.3 miles	0.9 miles
Number of Lanes	Varies (Typically 2, up to 4)	3	2	4	Varies (Typically 2, up to 3)
Lane width	Varies (Typically 11'-14')	Varies (Typically 11'-14')	15'	Varies (Typically 10'-16')	17'
Shoulder width	None (7' parking lanes where applicable)	Varies (17' parking lanes north of Catawba St)	None (7' parking lanes where applicable)	None (7' parking lane on Eastern side where applicable)	None (7' parking lanes where applicable)
Curbed	Yes	Yes	Yes	Yes	West of Woodbine Ave and East of S Collingwood Ave
Lit/Unlit					
Cobra	Yes	N/A	Yes	Yes	Yes
Pedestrian-scale	N/A	Yes	N/A	N/A	N/A
Pedestrian Facilities					
Sidewalks	Yes	Yes	Yes	Yes	Yes (North side) Sporadic (South side - east of Hickock Ave)
Crosswalks	Yes (Primarily at signalized intersections)	Yes	Yes	Yes	Only at Teall Ave and Midler Ave
Curb-cuts	Yes	Yes	Yes	Yes	Yes (Primarily North side)
Pedestrian Signals	Yes (Signalized Intersections)	Yes (Signalized Intersections)	Yes (Signalized Intersections)	Yes (Signalized Intersections)	Yes (Signalized Intersections)
Transit (Bus Stops)	Yes	Yes	No	Yes	Yes
Land Use	Northern End (Residential) Middle (Commercial) Southern End (Mixed - Residential & Commercial)	Mixed-Use (Commercial & Residential)	Residential	Commercial	North Side (Residential) South Side (Commercial)
5% or greater slopes?	No	No	No	No	No
Crash Rate					
Segment Rate	5.347	10.382	15.521	16.087	6.892
Statewide Average (Similar Facilities)	3.54	4.76	3.54	5.81	3.54
Posted Speed Limit	30 MPH	30 MPH	30 MPH (20 MPH School Zone)	30 MPH (20 MPH School Zone)	30 MPH
Within SMTC Pedestrian Priority Zone per the SMTC Pedestrian Demand Model (see SMTC 2014 Sustainable Streets report)?	Medium pedestrian demand. Not in a Priority Zone	Entire Segment is in a Priority Zone	Entire Segment is in a Priority Zone	Entire Segment is in a Priority Zone	Western third in a Priority Zone. Eastern segment has low pedestrian demand - Not in a Priority Zone
Identified as a potential bike corridor in: SMTC's 2013 Bicycle Commuter Corridor Study ?	No	Yes	No	No	No
...the City's 2012 Syracuse Bicycle Plan 2040 as a bicycle corridor?	Yes	Yes	No	Yes	Yes
Additional Observations	A portion of the corridor was under construction. The segment is a two-lane corridor with a Two-Way-Left-Turn-Lane (TWLTL) near Valley Plaza. Several left turn lanes exist. The corridor widens to four lanes north of W. Lynhurst Ave. Travel lanes appear wide in areas with on-street parking; parking pavement markings do not exist - this appears to give the impression that the parking area is a travel lane. The northbound through travel lane at Seneca Turnpike aligns directly across the southbound left turn lane. Shared Lane Markings (i.e., sharrows) exist in areas.	Travel lanes appear wide with on-street parking; parking pavement markings do not exist; this appears to give the impression that the parking area is a travel lane. A TWLTL exists in combination with left turn lanes. New York State Bike Route 11. Cars observed not parking correctly in back-in parking spaces. Many skewed intersections exist. Pedestrian signals and crosswalks appear to show their age. Mast arm poles do not include street name signs. Cars were observed backing out of driveways.	This is a curbed two-way road within a residential neighborhood. The street has on-street odd/even parking. Staff observed parking on both sides of the street during the site visit. Staff observed vehicles traveling at a high rate of speed, including at "bottle neck" locations where vehicles are parked on both sides of the road across from each other. Seymour Elementary School exists at the eastern end of the corridor. Multiple stop-controlled intersections exist along corridor, with crosswalks along each approach.	A portion of the corridor was under construction. The Shonnard Street/Geddes Street/Grand Ave intersection is skewed with some restricted movements. A raised curbed island exists across from Shonnard Street to prevent vehicles from driving across the intersection onto Grand Avenue. Staff observed vehicles driving illegally around the curb, and in one instance over the curb. Some off-street parking observed on sidewalks along the corridor. George Fowler High School exists on the western side of the corridor. Geddes Street also has directional signs for the ZOO that direct motorists from I-690.	A variety of commercial uses exist, including several well-established restaurants that often have multiple parking lots and multiple curb cuts. Kilian Manufacturing is a large employer. Hillsdale Avenue appears to be a high-point in the road, which is only about one block west of the I-690 on-ramp. Some pavement markings appear to be faded or non-existent. Recently, the NYSDOT made a significant investment to the I-690 bridge over Teall Avenue. This resulted in several new improvements to the Teall Avenue/Burnet Avenue, including new pedestrian amenities.

Table 13 summarizes segment crash patterns. Figure 11 to Figure 21 show crash patterns and additional road features within the general vicinity of fatal crashes and serious injury crashes. Crash patterns shown in Figure 11 to Figure 21 are presented for comparison purposes against segment crash patterns (Table 13).

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Table 13 – ‘Hot Spot’ Segment Crash Pattern Summary Table

Segment Crash Attributes	S. Salina St. from Calthrop Ave. to W.Seneca Tpk.		N. Salina St. from N. State St. to Kirkpatrick St.		Shonnard St. from S. Geddes St. to West St.		Burnet Ave. from Teall Ave. to Midler Ave.		S. Geddes St. from W. Fayette St. to Grand Ave.	
	#	% Total	#	% Total	#	% Total	#	% Total	#	% Total
Total Crashes	147	100%	71	100%	63	100%	95	100%	83	100%
Crash Type										
<i>Collision with Animal</i>	1	1%	0	0%	1	2%	1	1%	0	0%
<i>Collision with Bicyclist</i>	0	0%	0	0%	1	2%	0	0%	2	2%
<i>Collision with Fixed Object</i>	14	10%	2	3%	7	11%	5	5%	3	4%
<i>Collision with Motor Vehicle</i>	123	84%	68	96%	50	79%	86	91%	73	88%
<i>Collision with Pedestrian</i>	8	5%	1	1%	3	5%	2	2%	3	4%
<i>Non-Collision</i>	0	0%	0	0%	0	0%	0	0%	2	2%
<i>Not Entered/Unknown</i>	1	1%	0	0%	1	2%	1	1%	0	0%
Collision Type										
<i>Head On</i>	3	2%	1	1%	4	6%	1	1%	1	1%
<i>Left Turn Against Other Car</i>	6	4%	5	7%	2	3%	2	2%	3	4%
<i>Left Turn With Other Car</i>	3	2%	0	0%	1	2%	1	1%	1	1%
<i>Overtaking</i>	22	15%	20	28%	18	29%	35	37%	16	19%
<i>Rear End</i>	39	27%	18	25%	8	13%	24	25%	26	31%
<i>Right Angle</i>	34	23%	13	18%	7	11%	9	9%	13	16%
<i>Right Turn Against Other Car</i>	0	0%	0	0%	0	0%	1	1%	0	0%
<i>Right Turn With Other Car</i>	3	2%	0	0%	0	0%	0	0%	1	1%
<i>Sideswipe</i>	2	1%	2	3%	2	3%	2	2%	6	7%
<i>Other</i>	32	22%	10	14%	21	33%	18	19%	15	18%
<i>Not Entered/Unknown</i>	3	2%	2	3%	0	0%	2	2%	1	1%
Light Conditions										
<i>Dark Road, Lighted</i>	30	20%	19	27%	21	33%	35	37%	23	28%
<i>Dark Road, Unlighted</i>	0	0%	1	1%	0	0%	1	1%	1	1%
<i>Dawn</i>	3	2%	0	0%	2	3%	1	1%	0	0%
<i>Daylight</i>	108	73%	50	70%	38	60%	55	58%	54	65%
<i>Dusk</i>	4	3%	1	1%	2	3%	0	0%	4	5%
<i>Other/Not Entered/Unknown</i>	2	1%	0	0%	0	0%	3	3%	1	1%
Weather Conditions										
<i>Clear</i>	76	52%	32	45%	39	62%	41	43%	46	55%
<i>Cloudy</i>	47	32%	22	31%	13	21%	27	28%	20	24%
<i>Fog/Smog/Smoke</i>	0	0%	0	0%	0	0%	0	0%	0	0%
<i>Rain</i>	10	7%	7	10%	6	10%	14	15%	6	7%
<i>Sleet/Hail/Freezing Rain</i>	0	0%	0	0%	0	0%	1	1%	0	0%
<i>Snow</i>	13	9%	10	14%	5	8%	9	9%	9	11%
<i>Other/Not Entered/Unknown</i>	1	1%	0	0%	0	0%	3	3%	2	2%
Road Surface Conditions										
<i>Dry</i>	98	67%	44	62%	47	75%	60	63%	52	63%
<i>Slush</i>	1	1%	1	1%	0	0%	0	0%	0	0%
<i>Snow/Ice</i>	15	10%	8	11%	5	8%	12	13%	11	13%
<i>Wet</i>	31	21%	0	0%	0	0%	21	22%	18	22%
<i>Other/Not Entered/Unknown</i>	2	1%	18	25%	11	17%	2	2%	2	2%
Apparent Factor*										
<i>Alcohol Involvement</i>	3	2%	1	1%	0	0%	3	3%	1	1%
<i>Animal's Action</i>	1	1%	0	0%	1	2%	1	1%	0	0%
<i>Backing Unsafely</i>	30	20%	18	25%	8	13%	8	8%	16	19%
<i>Driver Inattention</i>	17	12%	3	4%	3	5%	8	8%	8	10%
<i>Failure to Yield Right of Way</i>	18	12%	8	11%	4	6%	10	11%	9	11%
<i>Following Too Closely</i>	24	16%	6	8%	2	3%	14	15%	11	13%
<i>Pavement Slippery</i>	1	1%	0	0%	0	0%	1	1%	0	0%
<i>Turning Improper</i>	12	8%	3	4%	1	2%	5	5%	1	1%
<i>Unsafe Lane Change</i>	1	1%	3	4%	2	3%	1	1%	5	6%
<i>Unsafe Speed</i>	7	5%	3	4%	9	14%	4	4%	2	2%
<i>View Obstructed/Limited</i>	0	0%	1	1%	0	0%	1	1%	0	0%
<i>Other (25 Possible Categories)</i>	33	22%	25	35%	33	52%	39	41%	30	36%
Hour of Crash										
<i>7 AM - 9 AM</i>	17	12%	3	4%	6	10%	7	7%	9	11%
<i>10 AM - 3 PM</i>	53	36%	38	54%	22	35%	34	36%	30	36%
<i>4 PM - 8 PM</i>	59	40%	13	18%	15	24%	28	29%	31	37%
<i>9 PM - 6 AM</i>	18	12%	17	24%	20	32%	26	27%	13	16%
Month of Crash										
<i>Spring (Mar - May)</i>	36	24%	19	27%	23	37%	27	28%	16	19%
<i>Summer (Jun - Aug)</i>	37	25%	13	18%	14	22%	23	24%	18	22%
<i>Autumn (Sep - Nov)</i>	34	23%	14	20%	11	17%	15	16%	17	20%
<i>Winter (Dec - Feb)</i>	40	27%	25	35%	15	24%	30	32%	32	39%

Figure 11 - South Salina Street, Subsection I

Subsection Crashes: 19

Collision Type

- Head On
- Rear End
- Right Turn
- Left Turn
- Overtaking
- Right Angle
- Sideswipe
- Other

Roadway Features

- Utility Pole
- Other Pole
- Ornamental Lighting
- Cobra Lighting
- Reflective Marker
- Fence
- Guide rail
- Other
- Sidewalk

Crash Severity (KABCO Scale)

- Fatal (K)
- Serious Injury (A)
- Injury (B, C)
- Other (O)

Segment Fatal	0
This Subsection Fatal	0
Segment Serious Injury	3
Subsection Serious Injury	1



Crash Type

Collision with Animal	1	-	-	1
Collision with Bicyclist	-	-	-	-
Collision with Fixed Object	2	-	1	14
Collision with Motor Vehicle	15	-	-	123
Collision with Pedestrian	1	-	-	8
Non-Collision	-	-	-	-
Not Entered/Unknown	-	-	-	1

Collision Type

Head On	-	-	-	3
Left Turn Against Other Car	-	-	-	6
Left Turn With Other Car	-	-	-	3
Other	6	-	1	32
Overtaking	2	-	-	22
Rear End	9	-	-	39
Right Angle	-	-	-	34
Right Turn Against Other Car	-	-	-	-
Right Turn With Other Car	1	-	-	3
Sideswipe	1	-	-	2
Not Entered/Unknown	-	-	-	3

Light Conditions

Dark Road, Lighted	4	-	1	30
Dark Road, Unlighted	-	-	-	-
Dawn	-	-	-	3
Daylight	15	-	-	108
Dusk	-	-	-	4
Other/Not Entered/Unknown	-	-	-	2

Weather Conditions

Clear	11	-	-	76
Cloudy	4	-	-	47
Fog/Smog/Smoke	-	-	-	-
Rain	1	-	1	10
Sleet/Hail/Freezing Rain	-	-	-	-
Snow	3	-	-	13
Other/Not Entered/Unknown	-	-	-	1

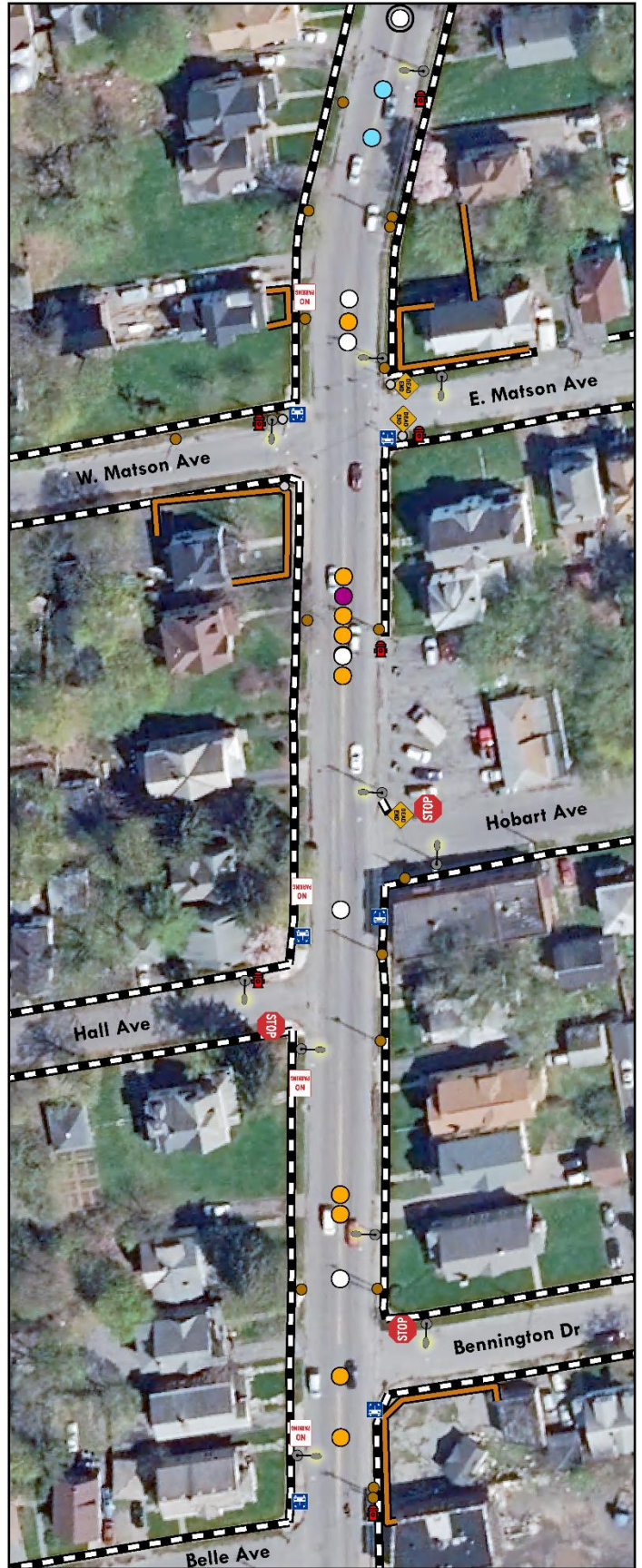
Road Surface Conditions

Dry	13	-	-	98
Slush	-	-	-	1
Snow/Ice	2	-	-	15
Other/Not Entered/Unknown	-	-	-	2
Wet	4	-	1	31

Apparent Factor*

Alcohol Involvement	-	-	-	3
Animal's Action	1	-	-	1
Backing Unsafely	2	-	-	30
Driver Inattention	2	-	-	17
Failure to Yield Right of Way	-	-	-	18
Following Too Closely	7	-	-	24
Pavement Slippery	-	-	-	1
Turning Improper	1	-	-	12
Unsafe Lane Change	1	-	-	1
Unsafe Speed	1	-	-	7
View Obstructed/Limited	-	-	-	-
Other (25 Possible Categories)	4	-	1	33

* Vehicle 1 Only



Note: Crash locations and selected features as indicated here are approximate and may have been altered for cartographic purposes. Only segment crashes are shown. Refer to report for further details.

This map is for planning purposes only. The SMTC does not guarantee the accuracy or completeness of this information. Source: SMTC, NYSDOT ALIS 2014-2018.



Figure 12 - South Salina Street, Subsection II

Subsection Crashes: 49

Collision Type

- Head On
- Rear End
- Right Turn
- Left Turn
- Overtaking
- Right Angle
- Sideswipe
- Other

Roadway Features

- Utility Pole
- Other Pole
- Ornamental Lighting
- Cobra Lighting
- Reflective Marker
- Fence
- Guide rail
- Other
- Sidewalk

Crash Severity (KABCO Scale)

- Fatal (K)
- Serious Injury (A)
- Injury (B, C)
- Other (O)

Segment Fatal	0
This Subsection Fatal	0
Segment Serious Injury	3
Subsection Serious Injury	1



Crash Type

Collision with Animal	-	-	1
Collision with Bicyclist	-	-	-
Collision with Fixed Object	2	-	14
Collision with Motor Vehicle	46	-	123
Collision with Pedestrian	1	-	8
Non-Collision	-	-	-
Not Entered/Unknown	-	-	1

Collision Type

Head On	2	-	3
Left Turn Against Other Car	2	-	6
Left Turn With Other Car	1	-	3
Other	7	-	32
Overtaking	10	-	22
Rear End	12	-	39
Right Angle	14	-	34
Right Turn Against Other Car	-	-	-
Right Turn With Other Car	1	-	3
Sideswipe	-	-	2
Not Entered/Unknown	-	-	3

Light Conditions

Dark Road, Lighted	8	-	30
Dark Road, Unlighted	-	-	-
Dawn	1	-	3
Daylight	38	-	108
Dusk	2	-	4
Other/Not Entered/Unknown	-	-	2

Weather Conditions

Clear	28	-	76
Cloudy	16	-	47
Fog/Smog/Smoke	-	-	-
Rain	3	-	10
Sleet/Hail/Freezing Rain	-	-	-
Snow	2	-	13
Other/Not Entered/Unknown	-	-	1

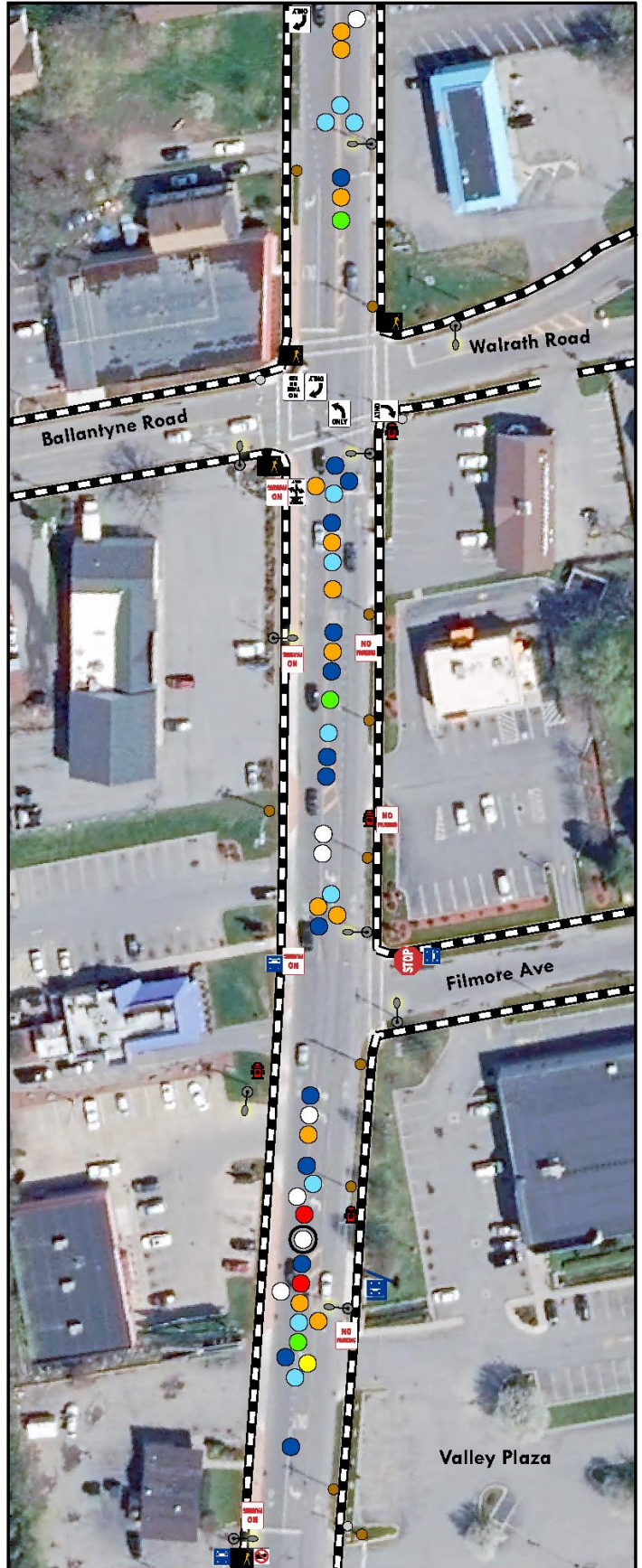
Road Surface Conditions

Dry	35	-	98
Slush	-	-	1
Snow/Ice	3	-	15
Other/Not Entered/Unknown	-	-	2
Wet	11	-	31

Apparent Factor*

Alcohol Involvement	-	-	3
Animal's Action	-	-	1
Backing Unsafely	13	-	30
Driver Inattention	4	-	17
Failure to Yield Right of Way	8	-	18
Following Too Closely	5	-	24
Pavement Slippery	-	-	1
Turning Improper	4	-	12
Unsafe Lane Change	-	-	1
Unsafe Speed	2	-	7
View Obstructed/Limited	-	-	-
Other (25 Possible Categories)	13	-	33

* Vehicle 1 Only



Note: Crash locations and selected features as indicated here are approximate and may have been altered for cartographic purposes. Only segment crashes are shown. Refer to report for further details.

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Figure 13 - South Salina Street, Subsection III

Subsection Crashes: 13

Collision Type

- Head On
- Rear End
- Right Turn
- Left Turn
- Overtaking
- Right Angle
- Sideswipe
- Other

Roadway Features

- Utility Pole
- Other Pole
- Ornamental Lighting
- Cobra Lighting
- Reflective Marker
- Fence
- Guide rail
- Other
- Sidewalk

Crash Severity (KABCO Scale)

- Fatal (K)
- Serious Injury (A)
- Injury (B, C)
- Other (O)

Segment Fatal	0
This Subsection Fatal	0
Segment Serious Injury	3
Subsection Serious Injury	1



Crash Type

Collision with Animal	-	-	1
Collision with Bicyclist	-	-	-
Collision with Fixed Object	1	-	14
Collision with Motor Vehicle	8	-	123
Collision with Pedestrian	4	-	8
Non-Collision	-	-	-
Not Entered/Unknown	-	-	1

Collision Type

Head On	-	-	3
Left Turn Against Other Car	-	-	6
Left Turn With Other Car	-	-	3
Other	7	-	32
Overtaking	2	-	22
Rear End	1	-	39
Right Angle	2	-	34
Right Turn Against Other Car	-	-	-
Right Turn With Other Car	-	-	3
Sideswipe	1	-	2
Not Entered/Unknown	-	-	3

Light Conditions

Dark Road, Lighted	3	-	130
Dark Road, Unlighted	-	-	-
Dawn	-	-	3
Daylight	9	-	108
Dusk	1	-	4
Other/Not Entered/Unknown	-	-	2

Weather Conditions

Clear	7	-	74
Cloudy	3	-	47
Fog/Smog/Smoke	-	-	-
Rain	1	-	10
Sleet/Hail/Freezing Rain	-	-	-
Snow	2	-	13
Other/Not Entered/Unknown	-	-	1

Road Surface Conditions

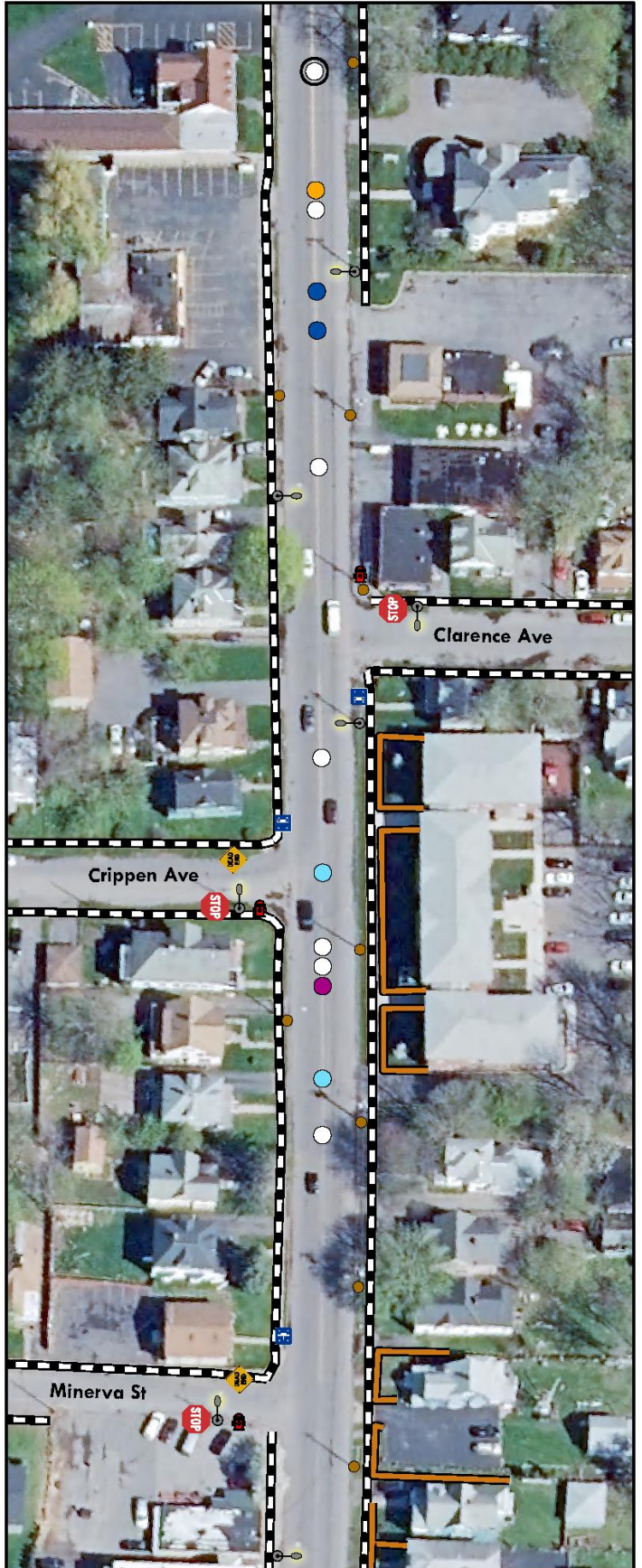
Dry	8	-	98
Slush	-	-	1
Snow/Ice	1	-	15
Other/Not Entered/Unknown	1	-	2
Wet	3	-	31

Apparent Factor*

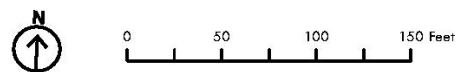
Alcohol Involvement	1	-	3
Animal's Action	-	-	1
Backing Unsafely	2	-	30
Driver Inattention	2	-	17
Failure to Yield Right of Way	1	-	18
Following Too Closely	1	-	24
Pavement Slippery	1	-	1
Turning Improper	-	-	12
Unsafe Lane Change	-	-	1
Unsafe Speed	1	-	7
View Obstructed/Limited	-	-	-
Other (25 Possible Categories)	4	-	33

* Vehicle 1 Only

Subsection Total	-	-	-
Subsection K	-	-	-
Subsection A	-	-	-
Segment Total	-	-	-



This map is for planning purposes only. The SMTC does not guarantee the accuracy or completeness of this information. Source: SMTC, NYSDOT ALIS 2014-2018.



Note: Crash locations and selected features as indicated here are approximate and may have been altered for cartographic purposes. Only segment crashes are shown. Refer to report for further details.

Figure 14 - North Salina Street, Subsection I

Subsection Crashes: 14

Collision Type

- Head On
- Rear End
- Right Turn
- Left Turn
- Overtaking
- Right Angle
- Sideswipe
- Other

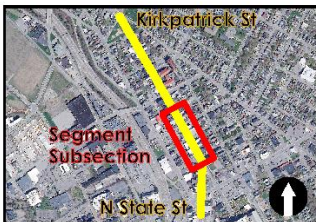
Roadway Features

- Utility Pole
- Other Pole
- Ornamental Lighting
- Cobra Lighting
- Reflective Marker
- Fence
- Guide rail
- Other
- Sidewalk

Crash Severity (KABCO Scale)

- ⊙ Fatal (K)
- ⊙ Serious Injury (A)
- Injury (B, C)
- Other (O)

Segment Fatal 1
 This Subsection Fatal 1
 Segment Serious Injury 2
 Subsection Serious Injury 1



Crash Type

Collision with Animal	-	-	-
Collision with Bicyclist	-	-	-
Collision with Fixed Object	-	-	2
Collision with Motor Vehicle	13	1	68
Collision with Pedestrian	1	1	1
Non-Collision	-	-	-
Not Entered/Unknown	-	-	-

Collision Type

Head On	-	-	1
Left Turn Against Other Car	1	-	5
Left Turn With Other Car	-	-	-
Other	1	1	10
Overtaking	5	-	20
Rear End	3	-	18
Right Angle	3	-	13
Right Turn Against Other Car	-	-	-
Right Turn With Other Car	-	-	-
Sideswipe	1	-	2
Not Entered/Unknown	-	-	2

Light Conditions

Dark Road, Lighted	3	-	19
Dark Road, Unlighted	-	-	1
Dawn	-	-	-
Daylight	10	1	50
Dusk	1	-	1
Other/Not Entered/Unknown	-	-	-

Weather Conditions

Clear	8	1	32
Cloudy	5	-	22
Fog/Smog/Smoke	-	-	-
Rain	1	-	7
Sleet/Hail/Freezing Rain	-	-	-
Snow	-	-	10
Other/Not Entered/Unknown	-	-	-

Road Surface Conditions

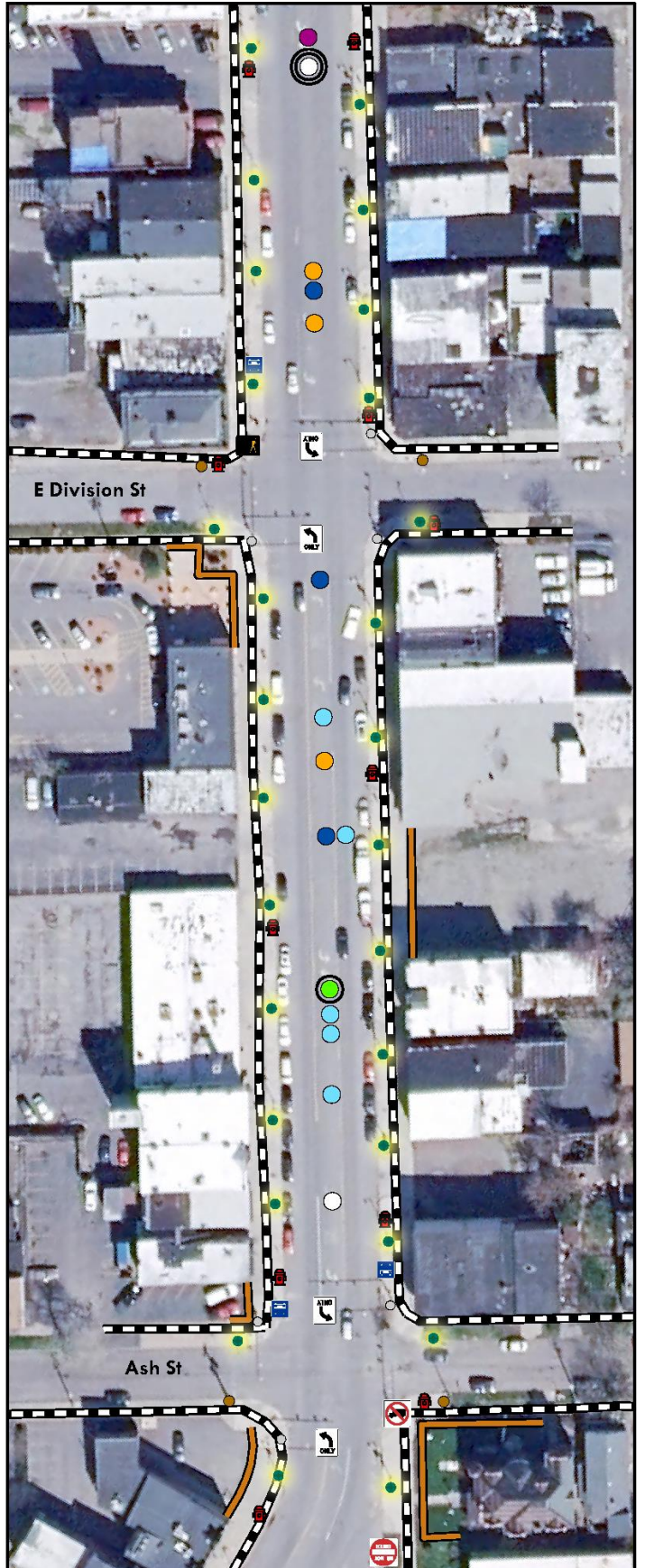
Dry	10	1	44
Slush	-	-	1
Snow/Ice	1	-	8
Other/Not Entered/Unknown	-	-	-
Wet	3	-	18

Apparent Factor*

Alcohol Involvement	-	-	1
Animal's Action	-	-	-
Backing Unsafely	3	-	18
Driver Inattention	1	-	3
Failure to Yield Right of Way	2	-	8
Following Too Closely	-	-	6
Pavement Slippery	-	-	-
Turning Improper	1	-	3
Unsafe Lane Change	2	-	3
Unsafe Speed	1	-	3
View Obstructed/Limited	-	-	1
Other (25 Possible Categories)	4	1	25

* Vehicle 1 Only

Subsection Total
 Subsection K
 Subsection A
 Segment Total



This map is for planning purposes only. The SMTC does not guarantee the accuracy or completeness of this information. Source: SMTC, NYSDOT ALIS 2014-2018.



Note: Crash locations and selected features as indicated here are approximate and may have been altered for cartographic purposes. Only segment crashes are shown. Refer to report for further details.

Figure 15 - North Salina Street, Subsection II

Subsection Crashes: 28

Collision Type

- Head On
- Rear End
- Right Turn
- Left Turn
- Overtaking
- Right Angle
- Sideswipe
- Other

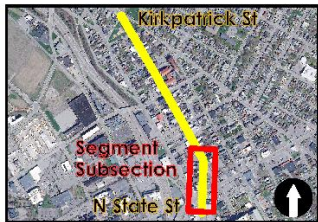
Roadway Features

- Utility Pole
- Other Pole
- Ornamental Lighting
- Cobra Lighting
- Reflective Marker
- Fence
- Guide rail
- Other
- Sidewalk

Crash Severity (KABCO Scale)

- Fatal (K)
- Serious Injury (A)
- Injury (B, C)
- Other (O)

Segment Fatal	1
This Subsection Fatal	0
Segment Serious Injury	2
Subsection Serious Injury	1



Crash Type

Collision with Animal	-	-	-
Collision with Bicyclist	-	-	-
Collision with Fixed Object	-	-	2
Collision with Motor Vehicle	28	-	68
Collision with Pedestrian	-	-	1
Non-Collision	-	-	-
Not Entered/Unknown	-	-	-

Collision Type

Head On	1	-	1
Left Turn Against Other Car	2	-	5
Left Turn With Other Car	-	-	-
Other	3	-	10
Overtaking	9	-	20
Rear End	12	-	18
Right Angle	1	-	13
Right Turn Against Other Car	-	-	-
Right Turn With Other Car	-	-	-
Sideswipe	-	-	-
Not Entered/Unknown	-	-	2

Light Conditions

Dark Road, Lighted	6	-	19
Dark Road, Unlighted	1	-	1
Dawn	-	-	-
Daylight	21	-	50
Dusk	-	-	1
Other/Not Entered/Unknown	-	-	-

Weather Conditions

Clear	12	-	32
Cloudy	5	-	22
Fog/Smog/Smoke	-	-	-
Rain	4	-	7
Sleet/Hail/Freezing Rain	-	-	-
Snow	7	-	10
Other/Not Entered/Unknown	-	-	-

Road Surface Conditions

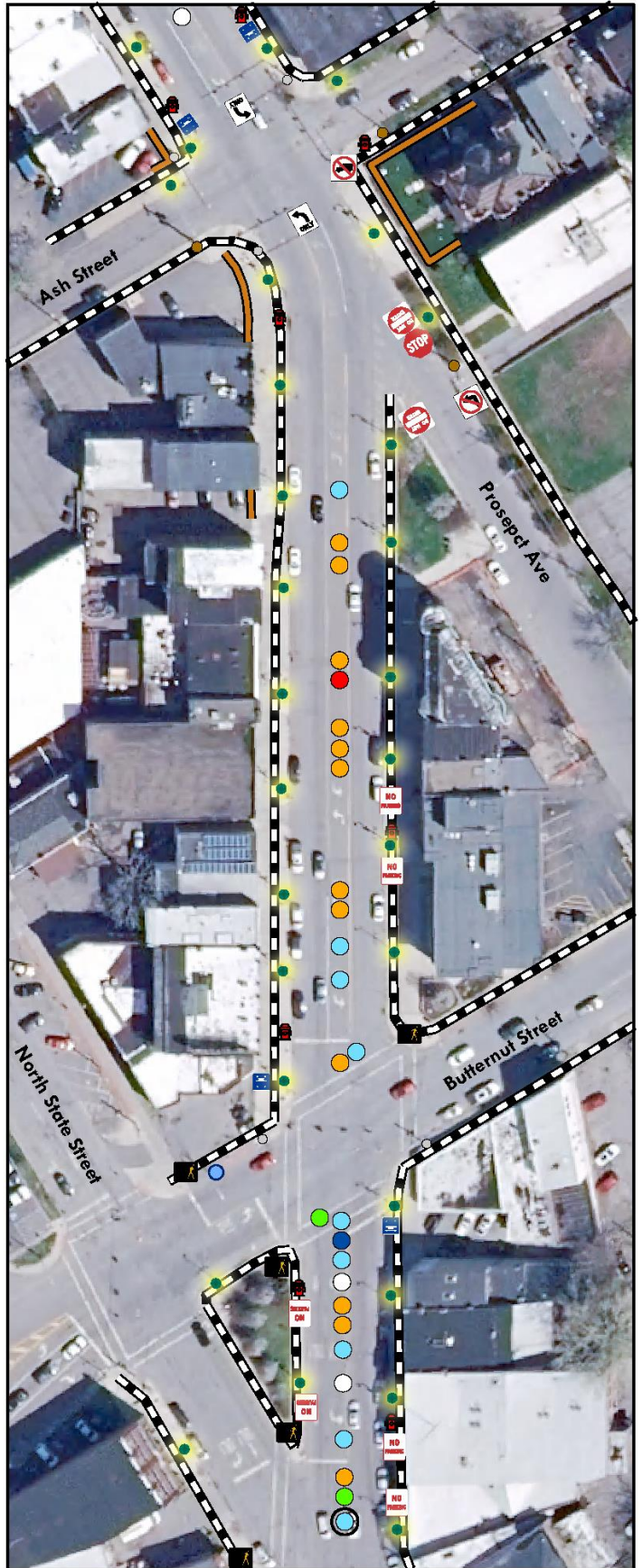
Dry	15	-	44
Slush	-	-	1
Snow/Ice	4	-	8
Other/Not Entered/Unknown	-	-	-
Wet	9	-	18

Apparent Factor*

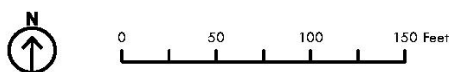
Alcohol Involvement	-	-	1
Animal's Action	-	-	-
Backing Unsafely	8	-	18
Driver Inattention	1	-	3
Failure to Yield Right of Way	4	-	8
Following Too Closely	4	-	6
Pavement Slippery	-	-	-
Turning Improper	-	-	3
Unsafe Lane Change	-	-	3
Unsafe Speed	2	-	3
View Obstructed/Limited	-	-	1
Other (25 Possible Categories)	9	-	25

* Vehicle 1 Only

Subsection Total
Subsection K
Subsection A
Segment Total



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Note: Crash locations and selected features as indicated here are approximate and may have been altered for cartographic purposes. Only segment crashes are shown. Refer to report for further details.

Figure 16 - Shonnard Street, Subsection I

Subsection Crashes: 22

Collision Type

- Head On
- Rear End
- Right Turn
- Left Turn
- Overtaking
- Right Angle
- Sideswipe
- Other

Roadway Features

- Utility Pole
- Other Pole
- Ornamental Lighting
- Cobra Lighting
- Reflective Marker
- Fence
- Guide rail
- Other
- Sidewalk

Crash Severity (KABCO Scale)

- Fatal (K)
- Serious Injury (A)
- Injury (B, C)
- Other (O)

Segment Fatal 1
 This Subsection Fatal 1
 Segment Serious Injury 3
 Subsection Serious Injury 0



Crash Type

Collision with Animal	-	-	1
Collision with Bicyclist	-	-	1
Collision with Fixed Object	1	-	7
Collision with Motor Vehicle	21	1	50
Collision with Pedestrian	-	-	3
Non-Collision	-	-	-
Not Entered/Unknown	-	-	1

Collision Type

Head On	2	-	4
Left Turn Against Other Car	-	-	2
Left Turn With Other Car	-	-	1
Other	5	1	21
Overtaking	6	-	18
Rear End	4	-	8
Right Angle	4	-	7
Right Turn Against Other Car	-	-	-
Right Turn With Other Car	-	-	-
Sideswipe	1	-	2
Not Entered/Unknown	-	-	-

Light Conditions

Dark Road, Lighted	11	-	21
Dark Road, Unlighted	-	-	-
Dawn	-	-	2
Daylight	10	1	38
Dusk	1	-	2
Other/Not Entered/Unknown	-	-	-

Weather Conditions

Clear	13	1	39
Cloudy	3	-	13
Fog/Smog/Smoke	-	-	-
Rain	3	-	6
Sleet/Hail/Freezing Rain	-	-	-
Snow	3	-	5
Other/Not Entered/Unknown	-	-	-

Road Surface Conditions

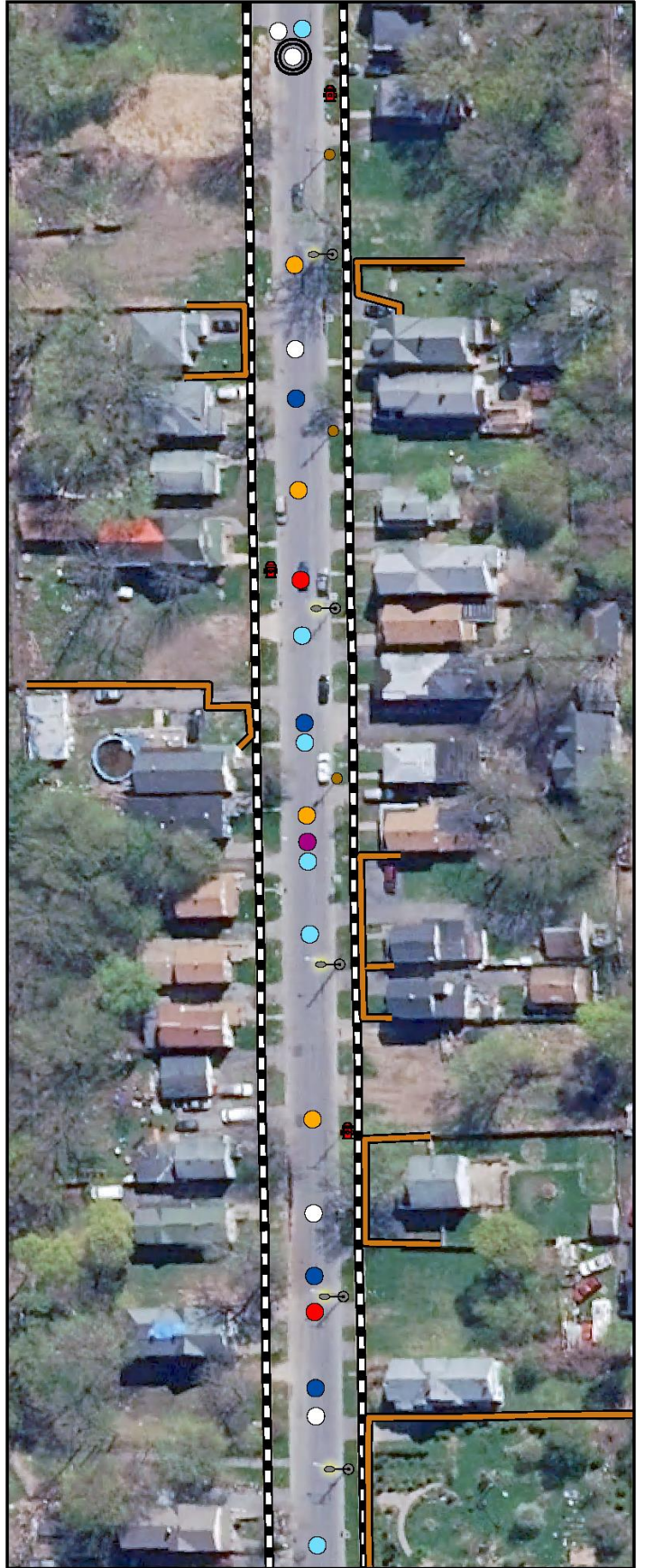
Dry	14	1	47
Slush	-	-	-
Snow/Ice	2	-	5
Other/Not Entered/Unknown	-	-	-
Wet	6	-	11

Apparent Factor*

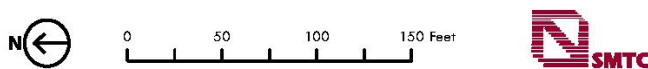
Alcohol Involvement	-	-	-
Animal's Action	-	-	1
Backing Unsafely	4	-	8
Driver Inattention	1	-	3
Failure to Yield Right of Way	2	-	4
Following Too Closely	-	-	2
Pavement Slippery	-	-	-
Turning Improper	-	-	1
Unsafe Lane Change	1	-	2
Unsafe Speed	5	1	9
View Obstructed/Limited	-	-	-
Other (25 Possible Categories)	9	-	33

* Vehicle 1 Only

Subsection Total
 Subsection K
 Subsection A
 Segment Total



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Note: Crash locations and selected features as indicated here are approximate and may have been altered for cartographic purposes. Only segment crashes are shown. Refer to report for further details.

Figure 17 - Shonnard Street, Subsection II

Subsection Crashes: 17

Collision Type

- Head On
- Rear End
- Right Turn
- Left Turn
- Overtaking
- Right Angle
- Sideswipe
- Other

Roadway Features

- Utility Pole
- Other Pole
- Ornamental Lighting
- Cobra Lighting
- Reflective Marker
- Fence
- Guide rail
- Other
- Sidewalk

Crash Severity (KABCO Scale)

- Fatal (K)
- Serious Injury (A)
- Injury (B, C)
- Other (O)

Segment Fatal	1
This Subsection Fatal	0
Segment Serious Injury	3
Subsection Serious Injury	3

Crash Type

Collision with Animal	-	-	1
Collision with Bicyclist	1	-	1
Collision with Fixed Object	2	-	7
Collision with Motor Vehicle	11	-	50
Collision with Pedestrian	2	-	3
Non-Collision	-	-	-
Not Entered/Unknown	1	-	1

Collision Type

Head On	2	-	4
Left Turn Against Other Car	-	-	2
Left Turn With Other Car	1	-	1
Other	9	-	21
Overtaking	3	-	18
Rear End	-	-	8
Right Angle	-	-	7
Right Turn Against Other Car	-	-	-
Right Turn With Other Car	-	-	-
Sideswipe	1	-	2
Not Entered/Unknown	-	-	-

Light Conditions

Dark Road, Lighted	7	-	21
Dark Road, Unlighted	-	-	-
Dawn	1	-	2
Daylight	8	-	38
Dusk	1	-	2
Other/Not Entered/Unknown	-	-	-

Weather Conditions

Clear	10	-	39
Cloudy	4	-	13
Fog/Smog/Smoke	-	-	-
Rain	2	-	6
Sleet/Hail/Freezing Rain	-	-	-
Snow	1	-	5
Other/Not Entered/Unknown	-	-	-

Road Surface Conditions

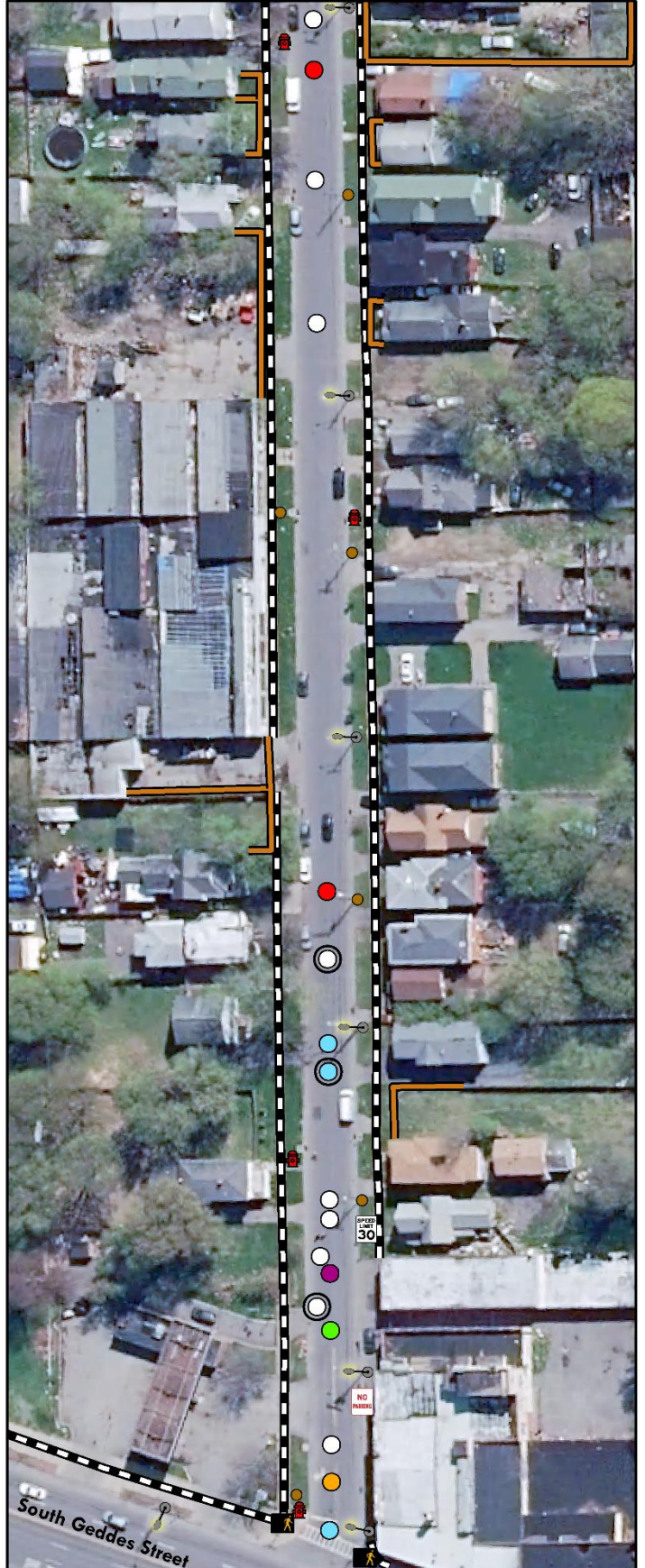
Dry	13	-	47
Slush	-	-	-
Snow/Ice	1	-	5
Other/Not Entered/Unknown	-	-	-
Wet	3	-	11

Apparent Factor*

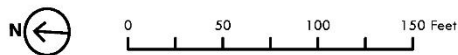
Alcohol Involvement	-	-	-
Animal's Action	-	-	1
Backing Unsafely	1	-	8
Driver Inattention	2	-	3
Failure to Yield Right of Way	1	-	4
Following Too Closely	-	-	2
Pavement Slippery	-	-	-
Turning Improper	-	-	1
Unsafe Lane Change	-	-	2
Unsafe Speed	2	-	9
View Obstructed/Limited	-	-	-
Other (25 Possible Categories)	11	-	33

* Vehicle 1 Only

Subsection Total
Subsection K
Subsection A
Segment Total



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Note: Crash locations and selected features as indicated here are approximate and may have been altered for cartographic purposes. Only segment crashes are shown. Refer to report for further details.

Figure 18 - Burnet Avenue, Subsection I

Subsection Crashes: 42

Collision Type

- Head On
- Rear End
- Right Turn
- Left Turn
- Overtaking
- Right Angle
- Sideswipe
- Other

Roadway Features

- Utility Pole
- Other Pole
- Ornamental Lighting
- Cobra Lighting
- Reflective Marker
- ▬ Fence
- ▬ Guide rail
- ▬ Other
- ▬ Sidewalk

Crash Severity (KABCO Scale)

- Fatal (K)
- Serious Injury (A)
- Injury (B, C)
- Other (O)

Segment Fatal 0
 This Subsection Fatal 0
 Segment Serious Injury 3
 Subsection Serious Injury 2



Crash Type

Collision with Animal	1	-	1
Collision with Bicyclist	-	-	-
Collision with Fixed Object	1	-	5
Collision with Motor Vehicle	37	-	86
Collision with Pedestrian	2	-	2
Non-Collision	-	-	-
Not Entered/Unknown	1	-	1

Collision Type

Head On	-	-	1
Left Turn Against Other Car	-	-	2
Left Turn With Other Car	-	-	1
Other	8	-	18
Overtaking	22	-	35
Rear End	6	-	24
Right Angle	3	-	9
Right Turn Against Other Car	-	-	1
Right Turn With Other Car	-	-	-
Sideswipe	1	-	2
Not Entered/Unknown	2	-	2

Light Conditions

Dark Road, Lighted	19	-	35
Dark Road, Unlighted	1	-	1
Dawn	-	-	1
Daylight	20	-	55
Dusk	-	-	-
Other/Not Entered/Unknown	2	-	3

Weather Conditions

Clear	15	-	41
Cloudy	16	-	27
Fog/Smog/Smoke	-	-	-
Rain	3	-	-
Sleet/Hail/Freezing Rain	-	-	-
Snow	6	-	9
Other/Not Entered/Unknown	2	-	3

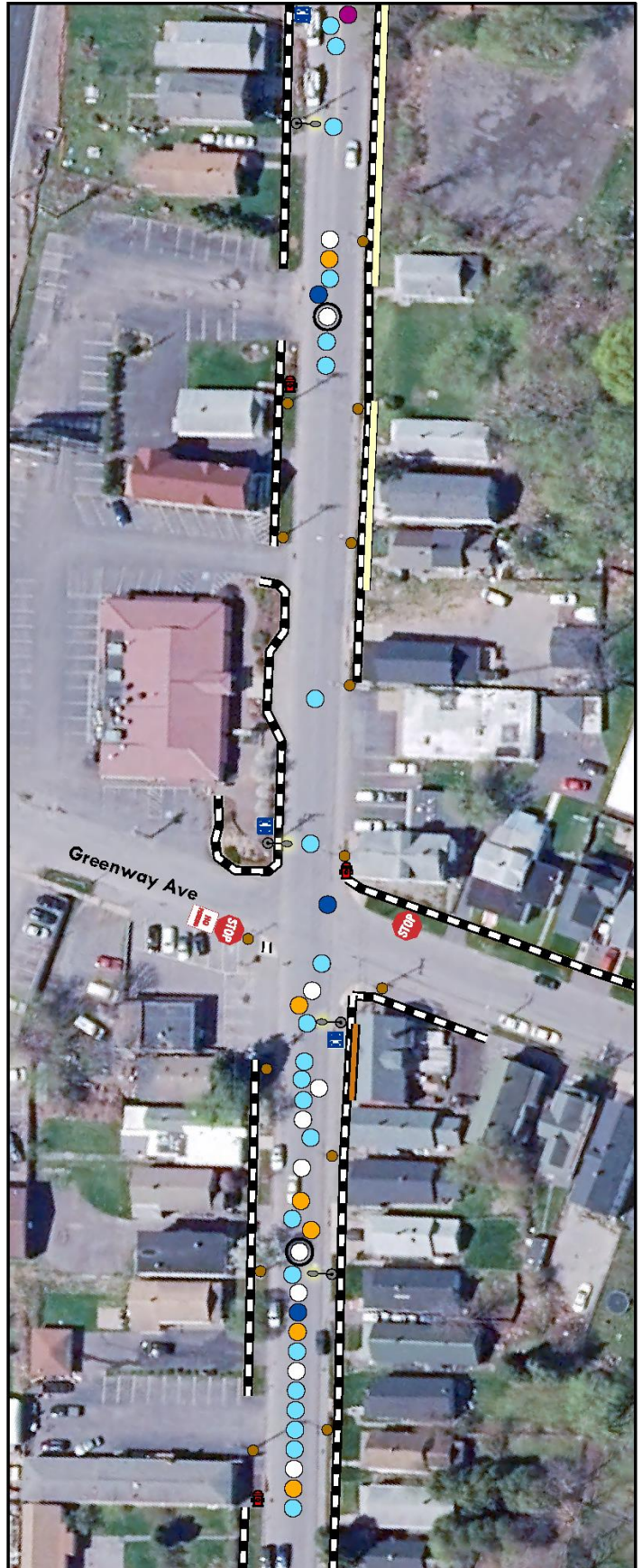
Road Surface Conditions

Dry	25	-	60
Slush	-	-	-
Snow/Ice	7	-	12
Other/Not Entered/Unknown	2	-	2
Wet	8	-	21

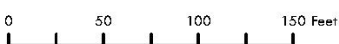
Apparent Factor*

Alcohol Involvement	2	-	3
Animal's Action	1	-	1
Backing Unsafely	3	-	8
Driver Inattention	3	-	8
Failure to Yield Right of Way	5	-	10
Following Too Closely	1	-	14
Pavement Slippery	1	-	1
Turning Improper	1	-	5
Unsafe Lane Change	-	-	1
Unsafe Speed	2	-	4
View Obstructed/Limited	1	-	1
Other (25 Possible Categories)	22	-	39

* Vehicle 1 Only



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Note: Crash locations and selected features as indicated here are approximate and may have been altered for cartographic purposes. Only segment crashes are shown. Refer to report for further details.

Figure 19 - Burnet Avenue, Subsection II

Subsection Crashes: 28

Collision Type

- Head On
- Rear End
- Right Turn
- Left Turn
- Overtaking
- Right Angle
- Sideswipe
- Other

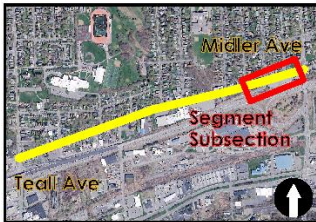
Roadway Features

- Utility Pole
- Other Pole
- Ornamental Lighting
- Cobra Lighting
- Reflective Marker
- Fence
- Guide rail
- Other
- Sidewalk

Crash Severity (KABCO Scale)

- Fatal (K)
- Serious Injury (A)
- Injury (B, C)
- Other (O)

Segment Fatal	0
This Subsection Fatal	0
Segment Serious Injury	3
Subsection Serious Injury	1



Crash Type

Collision with Animal	-	-	1
Collision with Bicyclist	-	-	-
Collision with Fixed Object	-	-	5
Collision with Motor Vehicle	28	-	86
Collision with Pedestrian	-	-	2
Non-Collision	-	-	-
Not Entered/Unknown	-	-	1

Collision Type

Head On	-	-	1
Left Turn Against Other Car	2	-	2
Left Turn With Other Car	1	-	1
Other	4	-	18
Overtaking	6	-	35
Rear End	10	-	24
Right Angle	5	-	9
Right Turn Against Other Car	-	-	1
Right Turn With Other Car	-	-	-
Sideswipe	-	-	2
Not Entered/Unknown	-	-	2

Light Conditions

Dark Road, Lighted	4	-	35
Dark Road, Unlighted	-	-	1
Dawn	-	-	1
Daylight	24	-	55
Dusk	-	-	-
Other/Not Entered/Unknown	-	-	3

Weather Conditions

Clear	10	-	41
Cloudy	8	-	27
Fog/Smog/Smoke	-	-	-
Rain	8	-	14
Sleet/Hail/Freezing Rain	1	-	1
Snow	1	-	9
Other/Not Entered/Unknown	-	-	3

Road Surface Conditions

Dry	16	-	60
Slush	-	-	-
Snow/Ice	3	-	12
Other/Not Entered/Unknown	-	-	2
Wet	9	-	21

Apparent Factor*

Alcohol Involvement	-	-	3
Animal's Action	-	-	1
Backing Unsafely	2	-	8
Driver Inattention	4	-	8
Failure to Yield Right of Way	4	-	10
Following Too Closely	12	-	14
Pavement Slippery	-	-	1
Turning Improper	3	-	5
Unsafe Lane Change	-	-	1
Unsafe Speed	-	-	4
View Obstructed/Limited	-	-	1
Other (25 Possible Categories)	3	-	39

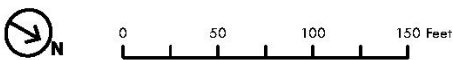
* Vehicle 1 Only

Subsection Total
Subsection K
Subsection A
Segment Total



Several curb cuts providing access to Burnet Avenue are present in this parking lot.

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Note: Crash locations and selected features as indicated here are approximate and may have been altered for cartographic purposes. Only segment crashes are shown. Refer to report for further details.

Figure 20 - South Geddes Street, Subsection I

Subsection Crashes: 35

Collision Type

- Head On
- Rear End
- Right Turn
- Left Turn
- Overtaking
- Right Angle
- Sideswipe
- Other

Roadway Features

- Utility Pole
- Other Pole
- Ornamental Lighting
- Cobra Lighting
- Reflective Marker
- Fence
- Guide rail
- Other
- Sidewalk

Crash Severity (KABCO Scale)

- ⊙ Fatal (K)
- ⊙ Serious Injury (A)
- Injury (B, C)
- Other (O)

Segment Fatal	1
This Subsection Fatal	1
Segment Serious Injury	4
Subsection Serious Injury	0



Crash Type

Collision with Animal	-	-	-
Collision with Bicyclist	1	-	2
Collision with Fixed Object	1	-	3
Collision with Motor Vehicle	30	-	73
Collision with Pedestrian	3	1	3
Non-Collision	-	-	2
Not Entered/Unknown	-	-	-

Collision Type

Head On	1	-	1
Left Turn Against Other Car	1	-	3
Left Turn With Other Car	-	-	1
Other	6	1	15
Overtaking	7	-	16
Rear End	10	-	26
Right Angle	6	-	13
Right Turn Against Other Car	-	-	-
Right Turn With Other Car	1	-	1
Sideswipe	3	-	6
Not Entered/Unknown	-	-	1

Light Conditions

Dark Road, Lighted	3	1	23
Dark Road, Unlighted	-	-	1
Dawn	-	-	-
Daylight	30	-	54
Dusk	2	-	4
Other/Not Entered/Unknown	-	-	1

Weather Conditions

Clear	15	-	46
Cloudy	8	1	20
Fog/Smog/Smoke	-	-	-
Rain	5	-	6
Sleet/Hail/Freezing Rain	-	-	-
Snow	7	-	9
Other/Not Entered/Unknown	-	-	2

Road Surface Conditions

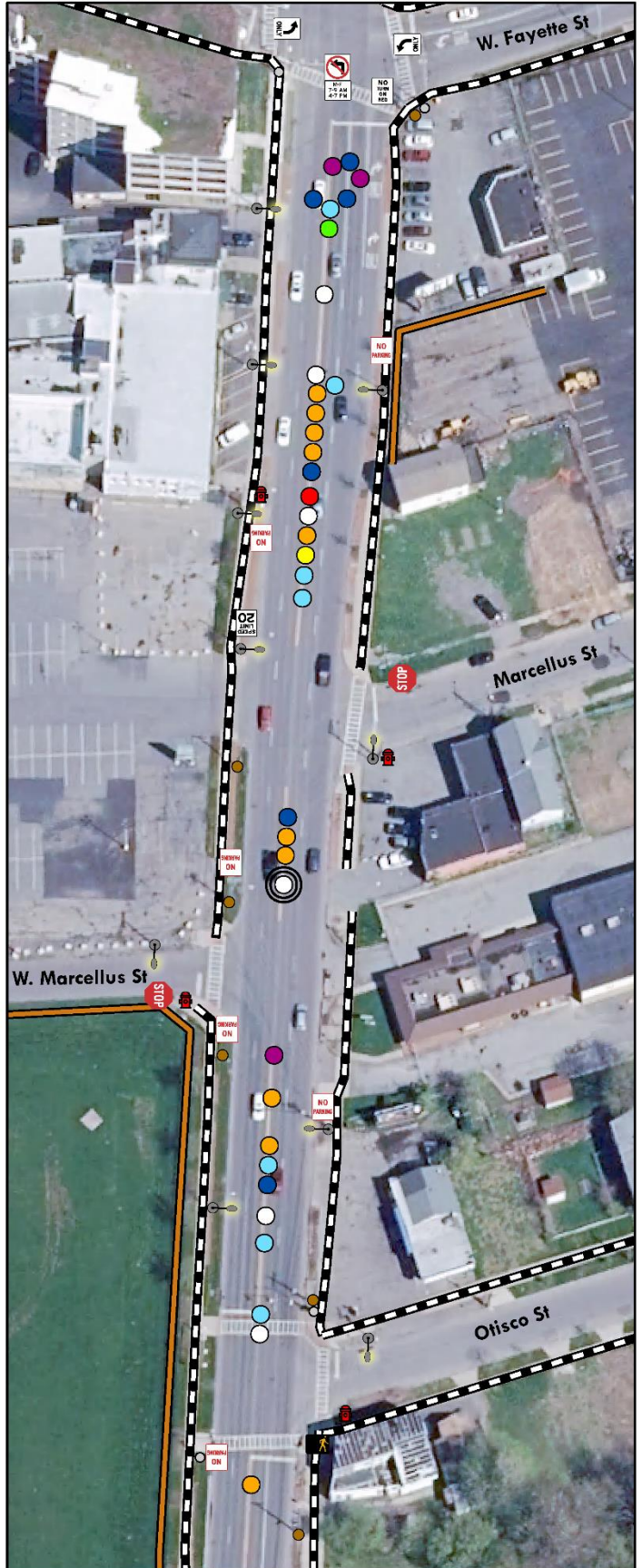
Dry	18	1	52
Slush	-	-	-
Snow/Ice	6	-	11
Other/Not Entered/Unknown	11	-	18
Wet	-	-	2

Apparent Factor*

Alcohol Involvement	1	1	1
Animal's Action	-	-	-
Backing Unsafely	8	-	16
Driver Inattention	2	-	8
Failure to Yield Right of Way	4	-	9
Following Too Closely	3	-	11
Pavement Slippery	-	-	-
Turning Improper	-	-	1
Unsafe Lane Change	3	-	5
Unsafe Speed	2	-	2
View Obstructed/Limited	-	-	-
Other (25 Possible Categories)	12	-	30

* Vehicle 1 Only

Subsection Total
Subsection K
Subsection A
Segment Total



Note: Crash locations and selected features as indicated here are approximate and may have been altered for cartographic purposes. Only segment crashes are shown. Refer to report for further details.

This map is for planning purposes only. The SMTC does not guarantee the accuracy or completeness of this information. Source: SMTC, NYSDOT ALIS 2014-2018.



Figure 21 - South Geddes Street, Subsection II

Subsection Crashes: 48

Collision Type

- Head On
- Rear End
- Right Turn
- Left Turn
- Overtaking
- Right Angle
- Sideswipe
- Other

Roadway Features

- Utility Pole
- Other Pole
- Ornamental Lighting
- Cobra Lighting
- Reflective Marker
- Fence
- Guide rail
- Other
- Sidewalk

Crash Severity (KABCO Scale)

- Fatal (K)
- Serious Injury (A)
- Injury (B, C)
- Other (O)

Segment Fatal	1
This Subsection Fatal	0
Segment Serious Injury	4
Subsection Serious Injury	4



Crash Type

Collision with Animal	-	-	-
Collision with Bicyclist	1	-	2
Collision with Fixed Object	2	-	3
Collision with Motor Vehicle	43	-	73
Collision with Pedestrian	-	-	3
Non-Collision	2	-	2
Not Entered/Unknown	-	-	-

Collision Type

Head On	-	-	1
Left Turn Against Other Car	2	-	3
Left Turn With Other Car	1	-	1
Other	10	-	15
Overtaking	9	-	16
Rear End	16	-	26
Right Angle	7	-	13
Right Turn Against Other Car	-	-	-
Right Turn With Other Car	-	-	1
Sideswipe	3	-	6
Not Entered/Unknown	1	-	1

Light Conditions

Dark Road, Lighted	20	-	23
Dark Road, Unlighted	1	-	1
Dawn	-	-	-
Daylight	24	-	54
Dusk	2	-	4
Other/Not Entered/Unknown	1	-	1

Weather Conditions

Clear	31	-	46
Cloudy	12	-	20
Fog/Smog/Smoke	-	-	-
Rain	1	-	6
Sleet/Hail/Freezing Rain	-	-	-
Snow	2	-	9
Other/Not Entered/Unknown	2	-	2

Road Surface Conditions

Dry	34	-	52
Slush	-	-	-
Snow/Ice	5	-	11
Other/Not Entered/Unknown	2	-	2
Wet	7	-	18

Apparent Factor*

Alcohol Involvement	-	-	1
Animal's Action	-	-	-
Backing Unsafely	8	-	16
Driver Inattention	6	-	8
Failure to Yield Right of Way	5	-	9
Following Too Closely	8	-	11
Pavement Slippery	-	-	-
Turning Improper	1	-	1
Unsafe Lane Change	2	-	5
Unsafe Speed	-	-	2
View Obstructed/Limited	-	-	-
Other (25 Possible Categories)	18	-	30

* Vehicle 1 Only

Subsection Total
Subsection K
Subsection A
Segment Total



This map is for planning purposes only. The SMTC does not guarantee the accuracy or completeness of this information. Source: SMTC, NYSDOT AUS 2014-2018.



Note: Crash locations and selected features as indicated here are approximate and may have been altered for cartographic purposes. Only segment crashes are shown. Refer to report for further details.

4 – Part III Assessment – Systemic Emphasis Areas

4.1 HSIP and Action Plan Fund Solicitations – Enhancing Competitiveness

The New York State Department of Transportation (NYSDOT) *2017-2022 Strategic Highway Safety Plan (SHSP)* assessed fatal and serious injury crash patterns on state-owned highways and identified the following six emphasis area categories:

- ‘intersection’, ‘lane departure’, ‘vulnerable users’, ‘speed’, ‘age-related’, and ‘behavior’.¹⁵

Additionally, NYSDOT continues to develop emphasis area ‘action plans,’ (e.g., Pedestrian Safety Action Plan (PSAP), etc.). Action plans identify systemic safety improvement treatments¹⁶ to implement wherever road and intersection features are correlated with particular crash types. In recent years, NYSDOT solicited requests from local road owners to fund widespread pedestrian safety improvements at uncontrolled intersections and mid-block locations. As NYSDOT develops new action plans, (e.g., Lane Departure Action Plan) it is possible they may solicit additional funding requests.

The Part III Assessment identifies roads and intersections that experienced high rates of Emphasis Area crashes. These locations can be targeted for systemic safety improvements. Assessment findings used to support funding applications also put the applicant at a competitive advantage when soliciting safety improvement funds. Identifying final systemic safety improvement solutions is an engineering task that is beyond the scope of this planning-level assessment.

4.2 Systemic Emphasis Area Screening

SMTC sorted total crashes, fatal and serious injury crashes, fatal crashes, and serious injury crashes into the SHSP emphasis area categories for the 5-year period between 2014 and 2018. As shown on the preceding pages (see Venn Diagrams), crashes may fit into more than one emphasis area. For example, a speeding-related crash may also involve a lane departure and thus be assigned to both categories. Emphasis area crashes therefore do not add to the number of total crashes on City roads. Likewise, emphasis area percentages do not total 100 percent.

¹⁵ SMTC used the ALIS data attributes to review local emphasis area categories. SMTC used the ‘at intersection’ field to identify intersection crashes. Lane departures include any collision (e.g., collision with tree) that suggests the vehicle departed the lane. Vulnerable users include bicyclists, pedestrians, motorcyclists (there were no road construction worker fatalities during the five-year period). Age-Related includes drivers, bicycle riders, and pedestrians under 21 and 65 and older. Driver behavior includes any collision involving a distracted driving attribute (e.g., texting) noted in ALIS. Speed included any unsafe speed attribute noted in ALIS.

¹⁶ As previously mentioned, per 23 U.S.C. 148, the term ‘systemic safety improvement’ means an improvement that is widely implemented based on high-risk roadway features that are correlated with particular crash types, rather than crash frequency. As of the writing of this report, the NYSDOT is developing a Lane Departure Action Plan that will identify related systemic safety improvements. NYSDOT also developed the Pedestrian Safety Action Plan (PSAP) and solicited PSAP requests from local road owners for HSIP funds to implement systemic safety improvements.

Table 14 shows the total of all crashes for each emphasis area and the percent of total. It also shows the total number of fatal and serious injury crashes and the percent of total of fatal and serious injury crashes. Similar information is provided for fatal crashes only and serious injury crashes only. Table 15 distinguishes Emphasis Area crashes into segment crashes and intersection crashes. The “All Crashes” column identifies segment and intersection crashes for comparison purposes.

Table 14 - Crashes per SHSP Emphasis Area

Crash Category	Lane Departure		Vulnerable		Speed		Age Related		Behavior		Intersection	
Total Crashes Percent of Total Crashes*	4,043	16%	1,210	5%	1,741	7%	5,692	23%	3,161	13%	13,800	55%
K & A Crashes Percent of K & A Crashes**	63	14%	171	39%	38	9%	142	33%	62	14%	283	65%
K Crashes Percent of K Crashes***	2	8%	17	65%	2	8%	11	42%	9	35%	15	58%
A Crashes Percent of A Crashes****	61	15%	154	38%	36	9%	131	32%	53	13%	268	66%

* Out of 25,137 Total Crashes, ** Out of 435 Fatal & Serious Injury Crashes, *** Out of 26 Fatal Crashes, **** Out of 409 Serious Injury Crashes

Table 15 – Segment and Intersection Crashes per Emphasis Area

Crash Category	Lane Departure		Vulnerable User		Speed		Age Related		Behavior		All Crashes	
Total Crashes												
Segment Crashes Percent Segment	2,188	54%	440	36%	785	45%	2,070	36%	1,625	51%	11,337	45%
Intersection Crashes Percent Intersection	1,855	46%	770	64%	956	55%	3,622	64%	1,536	49%	13,800	55%
Fatal & Serious Injury Crashes												
Segment Crashes Percent Segment	30	48%	65	38%	14	37%	56	39%	28	45%	152	35%
Intersection Crashes Percent Intersection	33	52%	106	62%	24	63%	86	61%	34	55%	283	65%
Fatal												
Segment Crashes Percent Segment	1	50%	9	53%	1	50%	4	36%	4	44%	11	42%
Intersection Crashes Percent Intersection	1	50%	8	47%	1	50%	7	64%	5	56%	15	58%
Serious Injury												
Segment Crashes Percent Segment	29	48%	56	36%	13	36%	52	40%	24	45%	141	34%
Intersection Crashes Percent Intersection	32	52%	98	64%	23	64%	79	60%	29	55%	268	66%

Vulnerable users and age-related crashes accounted for the top two categories for fatal and/or serious injury crashes. Crashes that involved a vulnerable user consisted of 5% of all crashes but accounted for 65% of fatal crashes and 38% of serious injury crashes. Similarly, age-related crashes accounted for 23% of all crashes, 42% of fatal crashes, and 32% of serious injury crashes. When it came to location, more than half of all fatal crashes and serious injury crashes (58% and 66%, respectively) occurred at an intersection. The following bullets summarize findings of interest from Table 14 and Table 15:

- The top three emphasis areas (based on the percent of total of fatal and serious injury crashes) included: Intersection (65%), Vulnerable Users (39%), and Age-Related (33%)
- More than half of vulnerable user, speed, or age-related crashes occurred at an intersection
- More than half of lane departure crashes, behavior crashes occurred on a road segment

Lane Departure

- 16% of all crashes included a lane departure
- 8% of fatal crashes and 15% of serious injury crashes involved a lane departure
- 46% of all lane departure crashes occurred at an intersection; 54% on segments
- 50% of fatal lane departure crashes occurred at an intersection; 50% on segments
- 52% of serious injury lane departure crashes occurred at an intersection; 48% on segments

Vulnerable User

- 5% of all crashes involved a vulnerable user
- 65% of fatal crashes and 38% of serious injury crashes involved a vulnerable user
- 64% of all vulnerable user crashes occurred at an intersection; 36% on segments
- 47% of fatal vulnerable user crashes occurred at an intersection; 53% on segments
- 64% of serious injury vulnerable user crashes occurred at an intersection; 36% on segments

Speed

- 7% of all crashes involved speeding
- 8% of fatal crashes and 9% of serious injury crashes involved speeding
- 55% of all speed crashes occurred at an intersection; 45% on segments
- 50% of fatal speed crashes occurred at an intersection; 50% on segments
- 64% of serious injury speed crashes occurred at an intersection; 36% on segments

Age-Related

- 23% of all crashes were age-related
- 42% of fatal crashes and 32% of serious injury crashes were age-related
- 64% of all age-related crashes occurred at an intersection; 36% on segments
- 64% of fatal age-related crashes occurred at an intersection; 36% on segments
- 60% of age-related speed crashes occurred at an intersection; 40% on segments

Behavior-Related

- 13% of all crashes were behavior-related
- 35% of fatal crashes and 13% of serious injury crashes involved behavior
- 49% of all behavior-related crashes occurred at an intersection; 51% on segments
- 56% of fatal behavior-related crashes occurred at an intersection; 44% on segments
- 55% of behavior-related speed crashes occurred at an intersection; 45% on segments

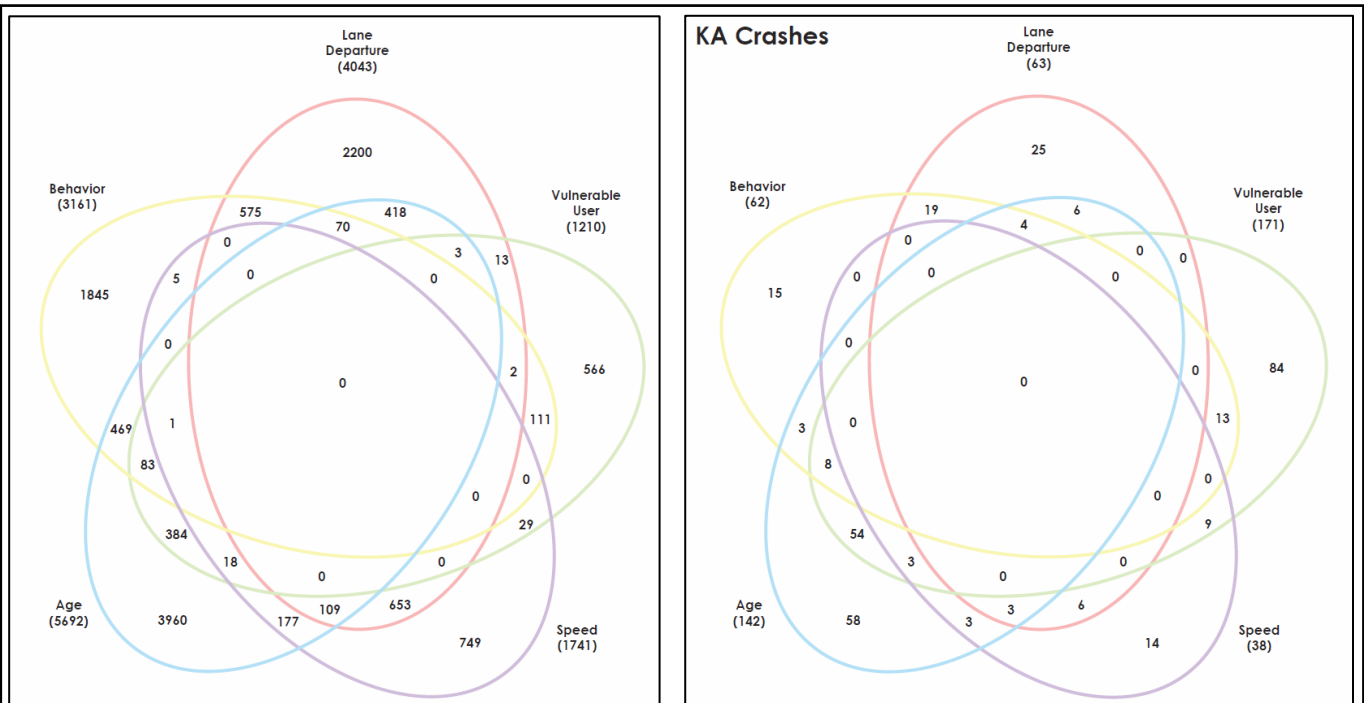
Intersection

- 55% of all crashes occurred at an intersection
- 58% of fatal crashes, and 66% of serious injury crashes occurred at an intersection.

One or More Emphasis Area Designations

As mentioned, a crash may fit into one or more than one emphasis area category. For example, a speed-related crash may also involve a lane departure and thus be assigned to both categories. The following two Venn Diagrams¹⁷ show the number of crashes for each emphasis area and the number of crashes that can be assigned to one or more emphasis areas. Figure 22 shows two diagrams. The first diagram sorts all emphasis area crashes - regardless of severity - into one or more Emphasis Area categories based on assigned crash type(s). The second diagram sorts fatal and serious injury (KA) crashes by emphasis area. The figure summarizes findings in table format for comparison purposes.

Figure 22 - Crashes by Emphasis Area Category



Emphasis Area	Total Crashes		% KA*
	All	KA*	
Lane Departure	4043	63	2%
Vulnerable User	1210	171	14%
Speed	1741	38	2%
Age	5692	142	2%
Behavior	3161	62	2%

One Emphasis Area	# Crashes		% KA*
	All	KA*	
Lane Departure	2200	25	1%
Vulnerable User	566	84	15%
Speed	749	14	2%
Age-Related	3960	58	1%
Behavior-Related	1845	15	1%

Two Emphasis Areas	# Crashes		% KA*
	All	KA*	
Lane Departure, Vulnerable User	13	0	0%
Lane Departure, Speed	653	6	1%
Lane Departure, Age	418	6	1%
Lane Departure, Behavior	575	19	3%
Vulnerable User, Speed	29	9	31%
Vulnerable User, Age	384	54	14%
Vulnerable User, Behavior	111	13	12%
Speed, Age	177	3	2%
Speed, Behavior	5	0	0%
Age, Behavior	469	3	1%

Three Emphasis Areas	# Crashes		% KA*
	All	KA*	
Lane Departure, Vulnerable User, Age	3	0	0%
Lane Departure, Vulnerable User, Behavior	2	0	0%
Lane Departure, Speed, Age	109	3	3%
Lane Departure, Age, Behavior	70	4	6%
Vulnerable User, Speed, Age	18	3	17%
Vulnerable User, Age, Behavior	83	8	10%

Four Emphasis Areas	# Crashes		% KA*
	All	KA*	
Vulnerable User, Speed, Age, Behavior	1	0	0%

¹⁷ Venn Diagram Design by Cmglee - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=14250677>

4.3 Segment and Intersection Attributes

Population and employment density, the built environment, and other land use characteristics found within an urban context can differ significantly from features found within suburban and rural contexts. As such, city roads often have different segment and intersection features than their rural and suburban counterparts. SMTC referenced available road and land use data to identify segment and intersection attributes associated with emphasis area crashes.¹⁸ Correlation does not imply causation, but it does help to identify locations where emphasis area crash types occurred most often.

Available Intersection Attribute Data

SMTC considered the following intersection attributes to help identify locations where intersection emphasis area crashes occurred most often: control type such as signalized or unsignalized; number of legs, skewed angles, and slope.

Available Segment Attribute Data

SMTC considered the following segment attributes to help identify roads where emphasis area crashes occurred most often: functional classification, volume, transit, proximity to school buildings, major institutions, and high-activity areas such as business districts, sidewalks, and slope.¹⁹

Priority Emphasis Area Roadways and Intersections

Attribute data helps describe roads and intersections. For example, a “signalized, 3-legged, nearly orthogonal, steep intersection” or a “principal arterial with high traffic volume, sidewalks, near a school.” Crash rates are generated for each Emphasis Area road and intersection category. Locations that exceed the 90th percentile crash rate for all crashes, and the 95th percentile for fatal and serious injury crashes are considered a priority for that Emphasis Area. Using these percentile thresholds allows for up to 40 miles of roads and up to 100 intersections to be selected for emphasis area categories. Table 16 shows criteria used to sort priority level based on which categories met or exceeded percentile thresholds. The higher the level number – the higher the priority.

Table 16 – Priority Sorting Criteria

Priority Level	Total Crashes		K&A
	95th	90th	95th
Level 5	Yes	Yes	Yes
Level 4	Yes	Yes	No
Level 3	No	Yes	Yes
Level 2	No	Yes	No
Level 1	No	No	Yes

¹⁸ Examples of data that are not currently available citywide include: the location of on-street parking and associated regulations (odd/even, etc.), the number of travel lanes, crosswalk locations, curb cuts, detectable warnings, pedestrian-activated pushbuttons, countdown timers, presence of lighting, etc.

¹⁹ SMTC referenced existing data from its Geographical Information System (GIS) database.

Available intersection attribute data, such as number of legs, slope, and the angle of intersection (e.g., moderately acute, significantly acute, nearly orthogonal, etc.), suggests which intersection features experienced crashes correlated to each emphasis area. Correlation was determined if the crash rate exceeded the 90th percentile crash rate for all intersection crash rates, or the 95th percentile crash rate for fatal / serious injury intersection crashes. Table 17 identifies the intersection attributes that exceeded these thresholds for each Emphasis Area.

Table 17 – Emphasis Area Attributes for Intersection Crashes

Control Type	Num. Legs	Angle, Slope*	Count	Does the crash rate exceed the following percentile threshold?														
				Lane Departure			Vulnerable User			Speed			Age Related			Behavior Related		
				Total	K&A	95	Total	K&A	95	Total	K&A	95	Total	K&A	95	Total	K&A	95
				95	90	95	95	90	95	95	90	95	95	90	95	95	90	95
Signalized	3 Legs	Moderately Acute, Nearly Flat	9	-	-	-	-	-	Yes	-	-	-	-	-	Yes	-	-	Yes
		Nearly Orthogonal, Steep	7	-	-	-	-	Yes	-	-	-	-	-	Yes	-	-	-	-
		Significantly Acute, Moderately Sloped	5	Yes	Yes	Yes	-	-	-	Yes	Yes	Yes	-	-	-	-	-	-
		Significantly Acute, Nearly Flat	8	-	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-
		Significantly Acute, Steep	6	-	-	-	-	-	Yes	-	Yes	Yes	-	-	-	-	-	-
	4 Legs	Moderately Acute, Moderately Sloped	6	-	-	-	Yes	Yes	Yes	-	-	-	Yes	Yes	Yes	-	Yes	Yes
		Moderately Acute, Nearly Flat	25	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes
		Nearly Orthogonal, Nearly Flat	61	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-
		Significantly Acute, Moderately Sloped	10	-	Yes	-	-	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	-
		Significantly Acute, Nearly Flat	28	-	-	-	-	-	-	-	Yes	-	-	-	-	-	-	-
	5 Legs	Significantly Acute, Steep	11	-	Yes	-	Yes	Yes	-	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes	-
		Significantly Acute, Moderately Sloped	1	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-
		Significantly Acute, Nearly Flat	6	-	-	Yes	Yes	Yes	Yes	-	-	-	Yes	Yes	-	Yes	Yes	Yes
	Unsignal.	5 Legs	Significantly Acute, Steep	1	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	-
Other		Nearly Orthogonal, Nearly Flat	2	-	-	-	-	-	Yes	-	-	Yes	-	-	-	-	-	-

* Angle definitions: 0 or 90 degrees = Nearly Orthogonal, 85 to 90 degrees = Nearly Orthogonal, 75 to 85 degrees = Moderately Acute; less than 75 degrees = Significantly Acute. Slope definitions: 6+% = Steep, 3 to 6% = Moderately Sloped, less than 3% = Nearly Flat.

Road attribute data, such as functional classification, traffic volume, availability of transit and sidewalks, and the proximity to schools and major institutions can help identify areas that experienced emphasis area crashes. Correlation was determined if the crash rate exceeded the 90th percentile crash rate for all crashes, or the 95th percentile crash rate for fatal / serious injury intersection crashes. Table 18 identifies the road attributes that exceeded these thresholds for each Emphasis Area.

Table 18 – Emphasis Area Attributes for Segment Crashes

Class	Volume*	Attributes**	Miles	Does the crash rate exceed the following percentile?														
				Lane Departure			Vulnerable User			Speed			Age Related			Behavior Related		
				Total	K&A	95	Total	K&A	95	Total	K&A	95	Total	K&A	95	Total	K&A	95
				95	90	95	95	90	95	95	90	95	95	90	95	95	90	95
Principal Arterial	High	Transit, School, Sidewalks	3.1	Yes	Yes	-	-	-	-	-	Yes	-	-	Yes	-	-	-	-
		Transit, Institution, Sidewalks	2.9	Yes	Yes	Yes	-	Yes	-	-	Yes	-	Yes	Yes	-	Yes	Yes	-
		Transit, Sidewalks	5.7	-	Yes	-	Yes	Yes	-	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes	Yes
		Institution, Sidewalks	0.5	-	Yes	-	-	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	-	-	Yes
	Low	Transit, School, Institution, Sidewalks	0.9	-	-	Yes	Yes	Yes	-	-	Yes	-	-	Yes	-	Yes	Yes	Yes
		Transit, School	0.6	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-
		Transit, School, Sidewalks	0.5	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-
		Transit, Institution, Sidewalks	3.6	-	-	-	-	-	-	-	-	-	-	Yes	-	-	Yes	-
		Transit	1.0	-	-	Yes	-	-	-	-	Yes	Yes	-	-	Yes	-	-	-
		Transit, Sidewalks	1.4	-	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	-
Other		0.8	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	
Minor Arterial	High	Transit, School, Institution, Sidewalks	1.7	-	Yes	-	-	-	-	-	-	-	-	Yes	-	-	Yes	-
		Transit, School, Sidewalks	7.7	Yes	Yes	-	Yes	Yes	-	-	Yes	-	Yes	Yes	-	Yes	Yes	-
		Transit, Institution, Sidewalks	4.8	-	-	-	-	Yes	-	-	Yes	-	-	Yes	-	Yes	Yes	-
		Transit	0.9	-	Yes	Yes	-	-	-	Yes	Yes	Yes	-	-	Yes	-	-	-
		Transit, Sidewalks	10.7	-	-	-	-	-	-	-	-	-	Yes	Yes	-	-	Yes	-
	Low	Transit, School	0.6	-	-	Yes	-	-	-	-	-	Yes	-	-	-	-	-	Yes
		Transit, School, Sidewalks	2.7	-	-	-	Yes	Yes	-	-	-	-	-	-	-	-	Yes	-
		Transit, Institution, Sidewalks	3.8	-	-	-	-	Yes	-	-	-	-	-	Yes	-	-	Yes	-
		Institution, Sidewalks	0.6	-	-	-	Yes	Yes	Yes	-	-	-	Yes	Yes	Yes	-	Yes	-
		Other	2.4	-	-	-	-	-	-	Yes	Yes	-	-	-	-	-	-	-
Collector	High	Transit, School, Institution, Sidewalks	0.6	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-
		School, Institution, Sidewalks	1.2	-	-	-	-	-	Yes	-	-	Yes	-	-	-	-	-	-
		Institution, Sidewalks	0.9	-	-	-	Yes	Yes	Yes	-	-	-	-	-	-	Yes	Yes	Yes
	Low	Transit, School	0.7	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-
		Transit	2.3	-	-	-	-	-	-	-	-	Yes	-	-	-	-	-	-
		School, Institution, Sidewalks	0.5	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-
School, Sidewalks	2.7	-	-	-	-	-	-	Yes	Yes	Yes	-	-	-	-	-	-		
Local	Medium Activity*	0% - 3% Slope, Transit, School, Institution, Sidewalks	0.9	-	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-
		0% - 3% Slope, Transit, Sidewalks	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes
		3% - 6% Slope, Transit, School, Sidewalks	1.0	-	-	-	-	-	-	Yes	Yes	-	-	-	-	-	-	-
		3% - 6% Slope, Institution, Sidewalks	0.7	-	-	-	-	-	Yes	-	-	-	-	-	Yes	-	-	-

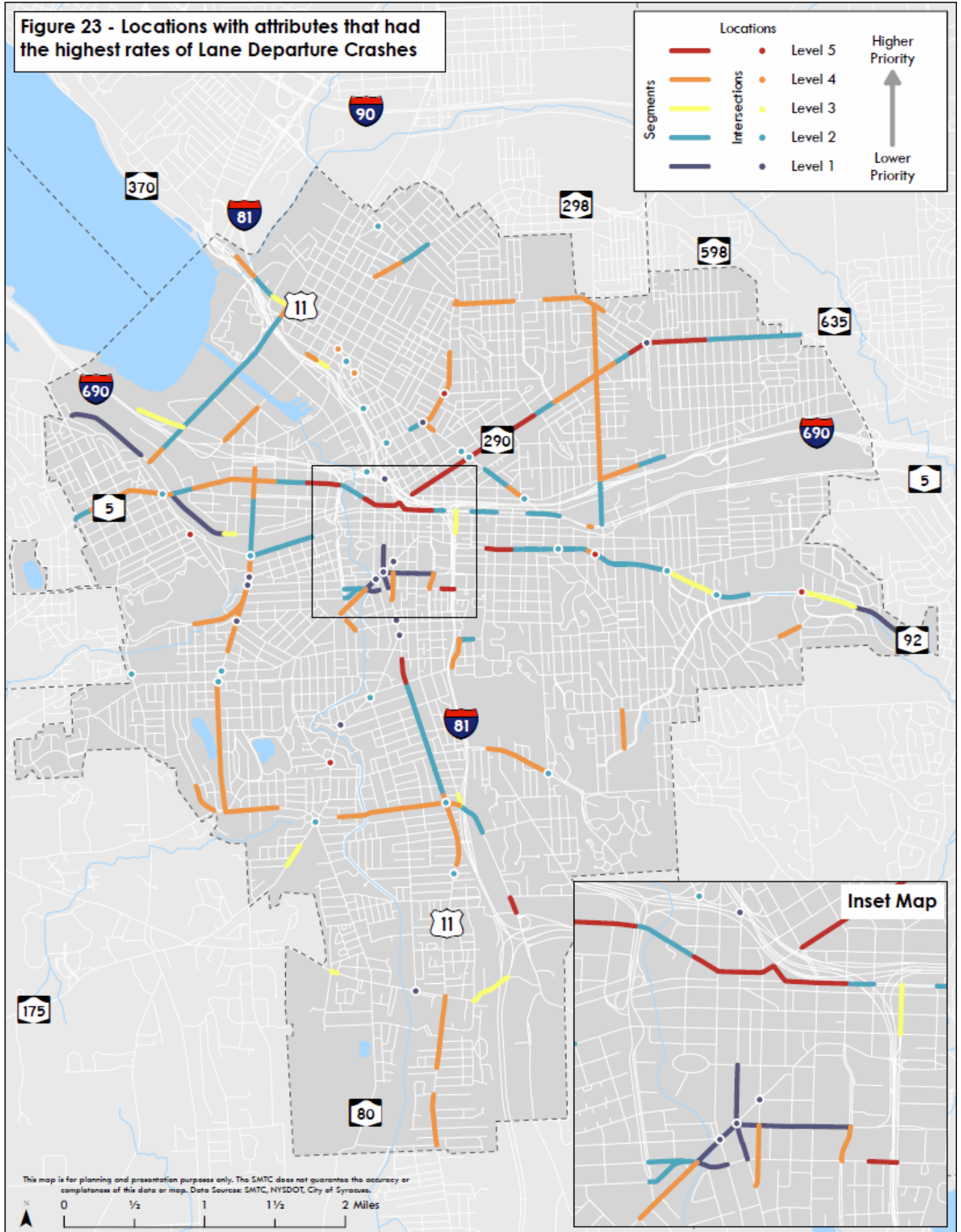
* For traffic volumes, SMTC calculated the median volume for each functional classification based on available data. "High" volume roads were above the median for that functional class, and "Low" volume roads were below. SMTC referenced the City's draft land use regulations to assign three "activity" categories (low, medium, and high) to roads functionally classified as Local. "Low Activity" roads were either greater than 90% residential, greater than 90% industrial, or greater than 50% open space. "High Activity" roads were either over 90% commercial, over 90% urban core/central business districts, or over 90% Institutional uses. "Medium Activity" roads were the remainder: a mix of residential (less than 90%), and other uses such as areas with mixed-use neighborhood businesses or offices, and planned developments.

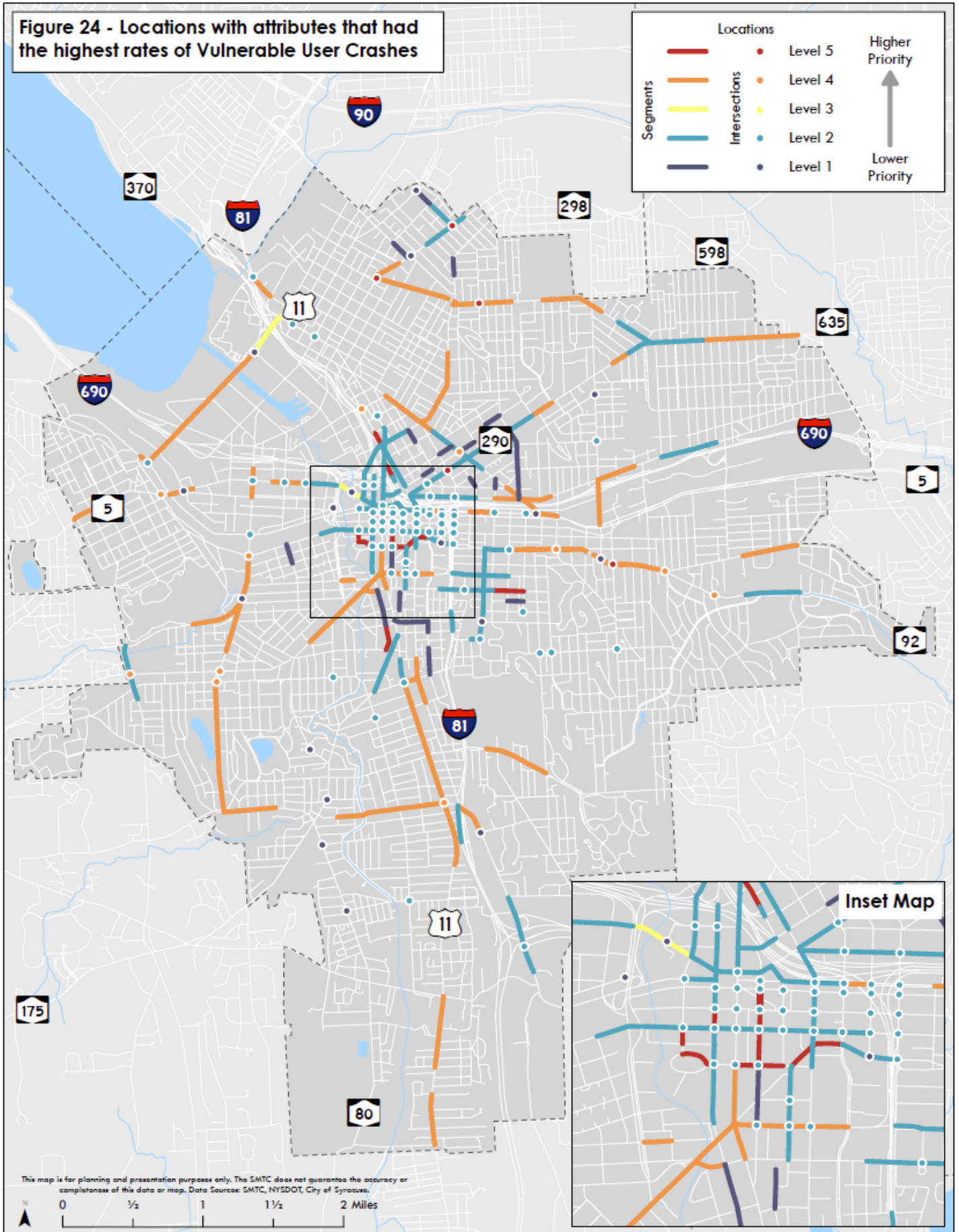
** On a transit line, near a school, near a major institution, with sidewalks. The term "near" refers to within 1/4 mile. "Institutions" are defined as hospitals, universities, and large employers (over 250 employees).

Locations that experienced the highest rates of Emphasis Area Crashes

Roads and intersections that meet or exceed the percentile thresholds for each emphasis area in Table 17 and Table 18 are mapped in Figure 23 to Figure 27 for easy reference. Using the Table 16 sorting criteria, identified locations are assigned a level of priority and are color-coded accordingly. The higher the level number – the higher the priority.

Figure 23 - Locations with attributes that had the highest rates of Lane Departure Crashes





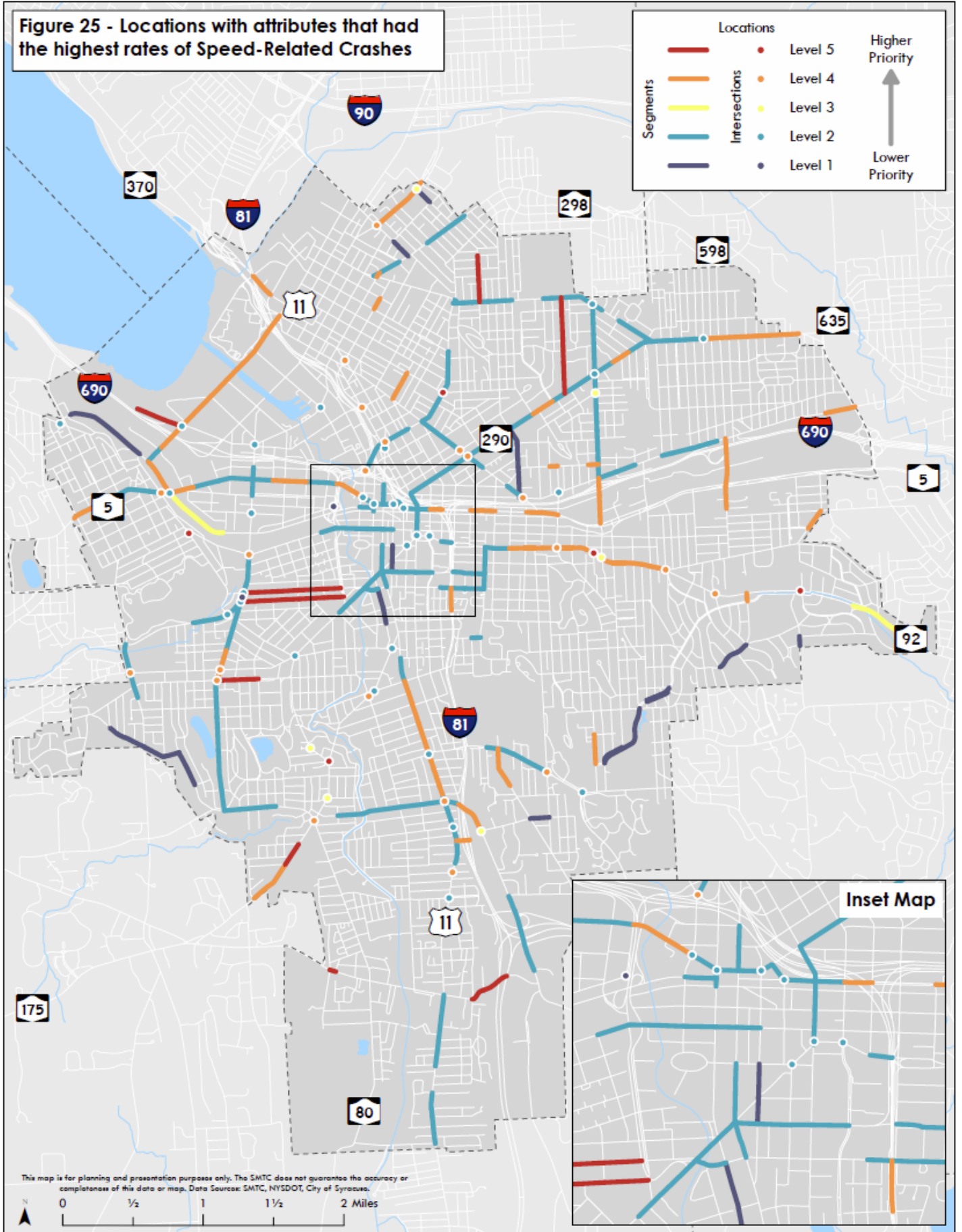


Figure 26 - Locations with attributes that had the highest rates of Age-Related Crashes

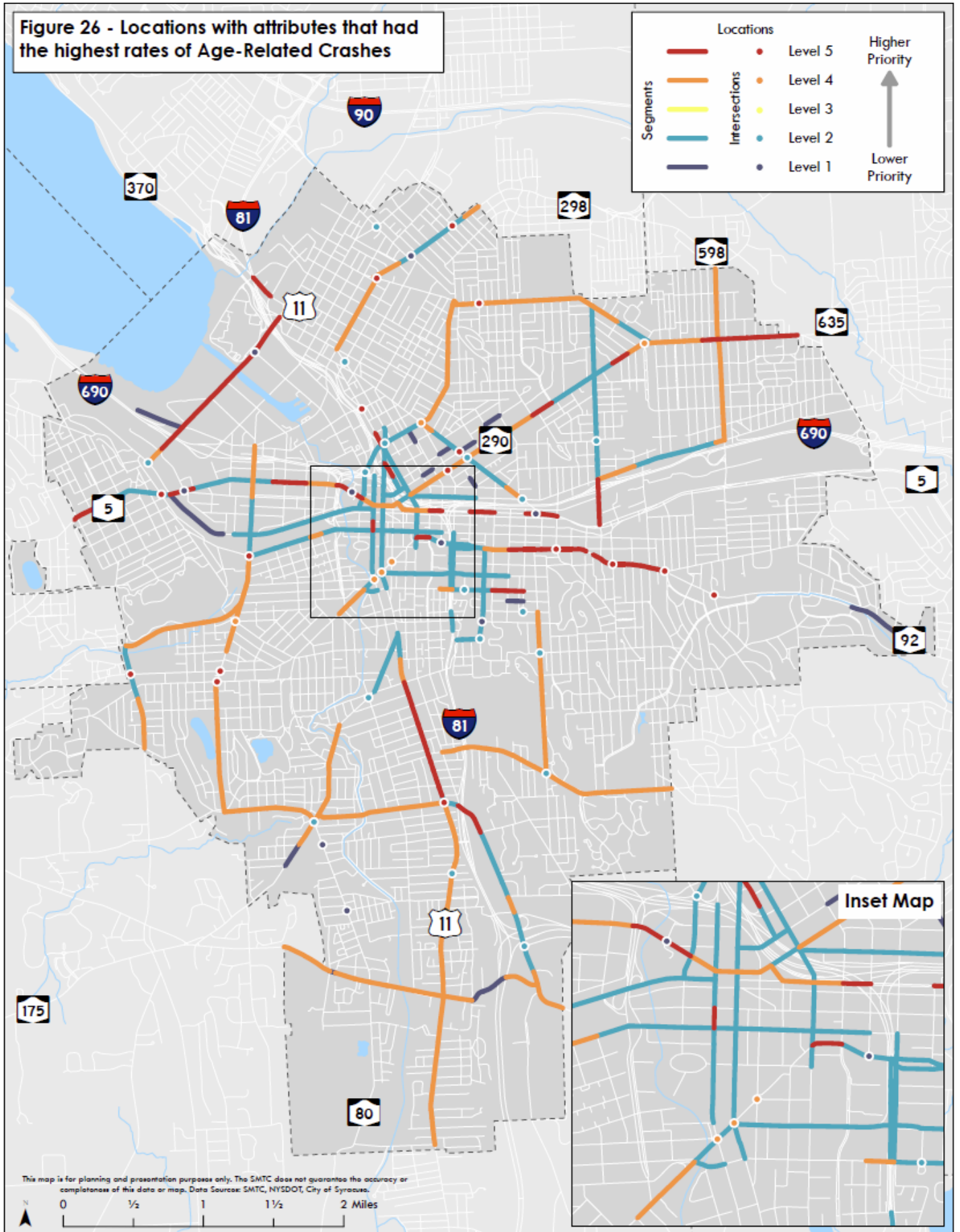
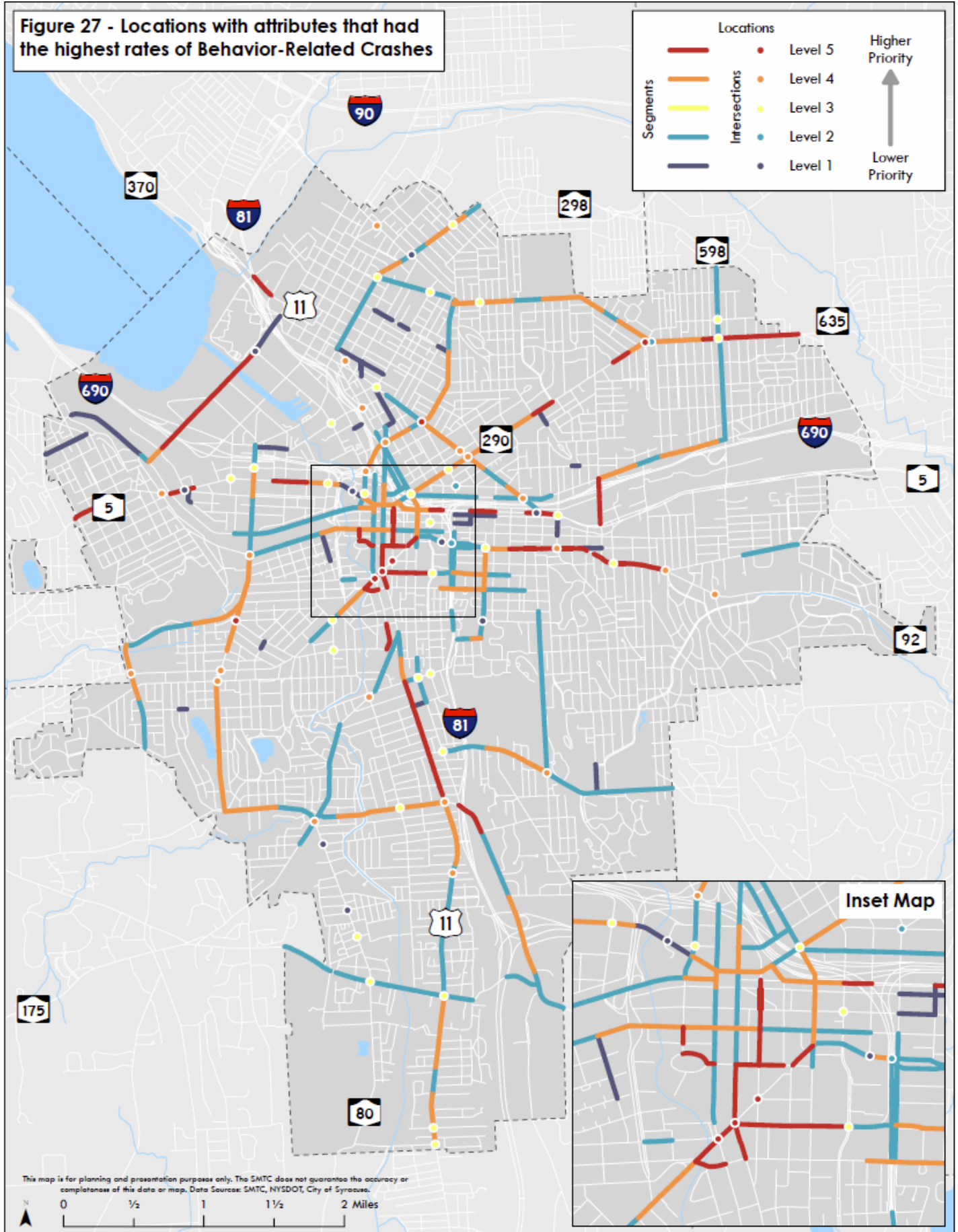


Figure 27 - Locations with attributes that had the highest rates of Behavior-Related Crashes



Appendix – Select Data Assessment Tables

[Attachment Figures available upon request as PDFs and/or E-Size sheets.]

Appendix A – Focus Segment Information Table

Appendix B – Focus Intersection Information Table

Appendix C – Comparison of Focus Segment Crash Rates to Statewide Crash Rates

Appendix D – Comparison of Focus Intersection Crash Rates to Statewide Crash Rates

Appendix A – Focus Segment Information Table

Focus Segment	Number of:				Crash Rate	Number of Injury Crashes	Total Crashes	
	Fatal and Serious Injury Crashes	Fatal Crashes	Serious Injury Crashes	Bike/Ped Crashes				
South Geddes Street <i>Grand Ave. to Fayette St.</i>	5	1	4	5	16.087	12	83	Priority
Shonnard Street <i>Geddes St. to West St.</i>	4	1	3	4	15.521	5	63	
North Salina Street <i>State St. to Kirkpatrick St.</i>	3	1	2	1	10.159	7	71	
South Salina Street <i>Seneca Tpk. (NYS 173) to Calthrop Ave. (I-81 Access)</i>	3	0	3	8	5.240	38	147	
Burnet Avenue <i>Teall Ave. to Midler Ave. (NYS 598)</i>	3	0	3	2	6.892	12	95	Tier I
South Salina Street <i>Calthrop Ave. (I-81 Access) to Kennedy St. (NYS 175)</i>	2	0	2	8	4.903	9	87	
Teall Avenue <i>Burnet Ave. to James St. (NYS 290)</i>	4	1	3	3	2.628	6	62	
Hiawatha Boulevard West <i>Spencer St. to Solar St.</i>	7	0	7	3	2.591	17	89	
James Street <i>Lodi St. to Teall Ave.</i>	3	0	3	1	6.565	23	147	Tier II
Park Street <i>Butternut St. to Pond St.</i>	1	1	0	3	14.665	5	32	
Kenmore Avenue <i>Newell St. to Ostrander Ave.</i>	1	1	0	1	15.061	0	8	
Grant Boulevard <i>Butternut St. to Teall Ave.</i>	2	0	2	3	3.332	9	72	
West Seneca Turnpike <i>Valley Dr. (NYS 80) to the City Line</i>	2	1	1	1	3.016	4	30	
West Onondaga Street <i>Velasko Rd. to Hoefler St.</i>	2	0	2	1	10.301	10	44	
James Street <i>Grant Blvd. to Midler Ave. (NYS 598)</i>	4	0	4	1	5.049	6	68	
West Genesee Street <i>Erie Blvd. West to the City Line</i>	2	0	2		3.753	10	80	
Catherine Street <i>Lodi St. to Erie Blvd. East</i>	2	0	2	4	5.6073	3	50	
Hudson Street <i>Tallman St. to Crescent Ave.</i>	2	0	2	2	22.827	1	28	
NBT Bank Parkway <i>Park St. to Tex Simone Dr.</i>	2	0	2	1	13.503	3	12	
Erie Boulevard East <i>Lodi St. to Teall Ave.</i>	1	1	0	1	1.2755	1	19	
Burnet Avenue <i>State St. (US 11) to Lodi St.</i>	1	1	0	1	6.572	3	27	
West Onondaga Street <i>Geddes St. to Tallman St.</i>	1	1	0	1	5.879	2	17	
North Franklin Street <i>West Genesee St. to Butternut St.</i>	1	1	0	1	6.122	0	18	
South Salina St. <i>Seneca Tpk. (NYS 173) to Dorwin Ave.</i>	2	0	2	1	2.525	12	51	
South Avenue <i>Glenwood Ave. to the City Line</i>	2	0	2	0	2.348	9	37	
Erie Boulevard West <i>Milton Ave. to Hiawatha Blvd.</i>	3	0	3	0	1.776	1	11	
South Clinton Street <i>Adams St. to Tallman St.</i>	2	0	2	3	7.893	2	6	
Midland Avenue <i>Brighton Ave. to Cortland Ave.</i>	2	0	2	3	4.842	8	31	Tier III
East Brighton Avenue <i>State St. to Thurber St.</i>	2	0	2	1	4.458	3	21	
Cortland Avenue <i>MLK Blvd. to Salina St.</i>	2	0	2	1	4.985	2	18	
East Fayette Street <i>Almond St. to Columbus Ave.</i>	2	0	2	2	4.553	1	30	
Midland Avenue <i>Seneca Tpk. (NYS 173) to Brighton Ave.</i>	2	0	2	1	4.117	6	42	

Note: Focus Segments include segments that had a fatal crash and/or two or more serious injury crashes.

Crash Rates in *Italics* use an Estimated AADT.

City of Syracuse Safety Assessment (2021)

Appendix B – Focus Intersection Information Table

Focus Intersection	Type	Number of:				Crash Rate Estimate	Number of Injury Crashes	Total Crashes	
		Fatal and Serious Injury Crashes	Fatal Crashes	Serious Injury Crashes	Bike/Ped Crashes				
Butternut Street / Catherine Street	Signalized	3	0	3	17	2.328	26	80	Priority
Hiawatha Boulevard West / Solar Street	Signalized	5	1	4	1	1.330	18	71	
West Onondaga Street / South Geddes Street	Signalized	4	0	4	7	5.745	50	130	
West Fayette Street / South Geddes Street	Signalized	3	0	3	3	2.393	28	121	
James Street / North Salina Street	Signalized	6	0	6	4	2.932	23	99	
Geddes Street / West Genesee Street	Signalized	3	0	3	3	2.368	25	99	
Teall Avenue / Grant Boulevard	Signalized	2	0	2	4	2.043	19	75	
James Street / North State Street	Signalized	2	0	2	7	2.403	21	85	Tier I
South Salina Street / Seneca Turnpike	Signalized	2	0	2	3	1.950	13	75	
North Townsend Street / Butternut Street	Signalized	2	1	1	5	1.573	7	32	
East Genesee Street / Westcott Street	Signalized	4	1	3	3	0.959	2	26	
Butternut Street / South Alvord Street	Signalized	2	1	1	4	-	5	35	
South Avenue / West Brighton Avenue	Signalized	1	1	0	3	1.962	10	52	
West Genesee Street / North Franklin Street	Signalized	2	0	2	2	1.873	12	64	
East Genesee Street / Irving Avenue	Signalized	1	1	0	7	1.209	9	27	Tier II
South State Street / Harrison Street	Signalized	3	0	3	6	1.461	8	35	
North Salina Street / Bear Street	Signalized	3	1	2	1	-	2	21	
South Salina Street / Lafayette Avenue	Unsignalized	2	1	1	1	-	1	15	
South Salina Street / East Colvin Street	Signalized	1	1	0	4	1.350	10	35	
South Salina Street / East Washington Street	Signalized	2	0	2	7	1.246	10	30	
South Clinton Street / West Fayette Street	Signalized	2	0	2	5	1.185	7	25	
North Salina Street / Pearl Street	Unsignalized	1	1	0	2	-	5	14	
South Salina Street / Tallman Street	Unsignalized	1	1	0	2	-	3	12	
East Genesee Street / Columbus Avenue	Signalized	3	0	3	2	1.345	4	31	
Tallman Street / Hudson Street	Unsignalized	1	1	0	1	-	0	6	
Spencer Street / Genant Drive	Unsignalized	3	0	3	1	-	1	20	
Hiawatha Boulevard West / Van Rensselaer Street	Signalized	3	0	3	1	-	3	30	
Erie Boulevard East / North McBride Street	Signalized	2	0	2	2	1.642	17	51	
Bellevue Avenue / Palmer Avenue	Unsignalized	1	1	0	0	-	2	4	
Tallman Street / Lincoln Avenue	Unsignalized	1	1	0	0	-	2	12	
James Street / Homcroft Road	Signalized	1	1	0	0	0.377	2	9	
South Clinton Street / West Washington Street	Signalized	2	0	2	4	0.983	6	19	
West Onondaga Street / Dudley Street	Unsignalized	2	0	2	3	-	7	28	Tier III
West Genesee Street / Avery Avenue	Signalized	2	0	2	3	1.736	4	37	
East Genesee Street / South Beech Street	Signalized	2	0	2	2	-	7	30	
West Genesee Street / State Fair Boulevard	Signalized	2	0	2	2	0.968	3	26	
North Salina Street / Erie Boulevard East	Unsignalized	2	0	2	1	-	3	16	
East Colvin Street / Skytop Road	Signalized	2	0	2	1	-	1	16	
West Court Street / Solar Street	Signalized	2	0	2	1	-	2	10	
East Fayette Street / South Townsend Street	Signalized	2	0	2	1	0.984	4	25	
South Salina Street / East Maston Avenue	Signalized	2	0	2	1	-	1	15	
East Genesee Street / Maple Street	Unsignalized	2	0	2	2	-	11	34	
North State Street / Erie Boulevard East	Signalized	2	0	2	2	1.104	4	36	
South Geddes Street / Elliot Street	Unsignalized	2	0	2	1	-	1	7	
Velasko Road / West Onondaga Street	Signalized	2	0	2	1	-	8	57	
West Court Street / Genant Drive	Unsignalized	2	0	2	0	-	3	22	
East Raynor Avenue / Fineview Place	Unsignalized	2	0	2	0	-	2	18	
Burnet Avenue / South Collingwood Avenue	Unsignalized	2	0	2	0	-	6	21	
Park Street / Harborside Drive	Signalized	2	0	2	0	1.411	9	52	
South Avenue / Onondaga Avenue	Signalized	2	0	2	0	1.191	3	29	
Spencer Street / State Fair Boulevard	Signalized	2	0	2	0	0.815	7	48	

Note: Focus Intersections include segments that had a fatal crash and/or two or more serious injury crashes.

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Appendix C – Comparison of Focus Segment Crash Rates to Statewide Crash Rates

Focus Segment	Crash Rate	Statewide Average for Similar Facilities	Facility Description (NYS DOT Categories)		
South Geddes Street <i>Grand Ave. to Fayette St.</i>	16.087	5.81	Urban, Free Access Controlled, Undivided, 4 Lanes	Priority	
Shonnard Street <i>Geddes St. to West St.</i>	15.521	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
North Salina Street <i>State St. to Kirkpatrick St.</i>	10.159	4.76	Urban, Free Access Controlled, Undivided, 3 Lanes		
South Salina Street Seneca Tpk. (NYS 173) to Calthrop Ave. (I-81 Access)	5.240	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
Burnet Avenue Teall Ave. to Midler Ave. (NYS 598)	6.892	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
South Salina Street <i>Calthrop Ave. (I-81 Access) to Kennedy St. (NYS 175)</i>	4.903	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes	Tier I	
Teall Avenue <i>Burnet Ave. to James St. (NYS 290)</i>	2.628	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
Hiawatha Boulevard West <i>Spencer St. to Solar St.</i>	2.591	4.01	Urban, Free Access Controlled, Undivided, All Lanes		
James Street <i>Lodi St. to Teall Ave.</i>	6.565	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
Park Street <i>Butternut St. to Pond St.</i>	14.665	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes	Tier II	
Kenmore Avenue <i>Newell St. to Ostrander Ave.</i>	15.061	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
Grant Boulevard <i>Butternut St. to Teall Ave.</i>	3.332	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
West Seneca Turnpike <i>Valley Dr. (NYS 80) to the City Line</i>	3.016	4.76	Urban, Free Access Controlled, Undivided, 3 Lanes		
West Onondaga Street <i>Velasko Rd. to Hoefler St.</i>	10.301	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
James Street <i>Grant Blvd. to Midler Ave. (NYS 598)</i>	5.049	4.76	Urban, Free Access Controlled, Undivided, 3 Lanes		
West Genesee Street <i>Erie Blvd. West to the City Line</i>	3.753	5.81	Urban, Free Access Controlled, Undivided, 4 Lanes		
Catherine Street <i>Lodi St. to Erie Blvd. East</i>	5.607	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
Hudson Street <i>Tallman St. to Crescent Ave.</i>	22.827	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
NBT Bank Parkway <i>Park St. to Tex Simone Dr.</i>	13.503	5.81	Urban, Free Access Controlled, Undivided, 4 Lanes		
Erie Boulevard East <i>Lodi St. to Teall Ave.</i>	1.276	4.01	Urban, Free Access Controlled, Undivided, All Lanes		
Burnet Avenue <i>State St. (US 11) to Lodi St.</i>	6.572	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
West Onondaga Street <i>Geddes St. to Tallman St.</i>	5.879	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
North Franklin Street <i>West Genesee St. to Butternut St.</i>	6.122	5.81	Urban, Free Access Controlled, Undivided, 4 Lanes		
South Salina Street <i>Seneca Tpk. (NYS 173) to Dorwin Ave.</i>	2.525	4.76	Urban, Free Access Controlled, Undivided, 3 Lanes		
South Avenue <i>Glenwood Ave. to the City Line</i>	2.348	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
<i>Erie Boulevard West Milton Ave. to Hiawatha Blvd.</i>	1.776	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
<i>South Clinton Street Adams St. to Tallman St.</i>	7.893	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
Midland Avenue <i>Brighton Ave. to Cortland Ave.</i>	4.842	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		Tier III
East Brighton Avenue <i>State St. to Thurber St.</i>	4.458	4.76	Urban, Free Access Controlled, Undivided, 3 Lanes		
Cortland Avenue <i>MLK Blvd. to Salina St.</i>	4.985	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
East Fayette Street <i>Almond St. to Columbus Ave.</i>	4.553	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		
Midland Avenue <i>Seneca Tpk. (NYS 173) to Brighton Ave.</i>	4.117	3.54	Urban, Free Access Controlled, Undivided, 2 Lanes		

Note: Focus Segments include segments that had a fatal crash and/or two or more serious injury crashes. Crash Rates in *Italics* use an Estimated AADT.

City of Syracuse Safety Assessment (2021)

Appendix D – Comparison of Focus Intersection Crash Rates to Statewide Crash Rates

Focus Intersection	Type	Crash Rate Estimate	Statewide Average for Similar Facilities	Facility Description (NYSOT Categories)	
Butternut Street / Catherine Street	Signalized	2.328	0.23	Urban, 5-Legged, Signal w/ Left Turn, 5 or More Lanes	Priority
Hiawatha Boulevard West / Solar Street	Signalized	1.330	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
West Onondaga Street / South Geddes Street	Signalized	5.745	0.54	Urban, 4-Legged, Signal, 1-4 Lanes	
West Fayette Street / South Geddes Street	Signalized	2.393	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
James Street / North Salina Street	Signalized	2.932	0.2	Urban, 4-Legged, Signal w/o Left Turn, 5 or More Lanes	
Geddes Street / West Genesee Street	Signalized	2.368	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
Teall Avenue / Grant Boulevard	Signalized	2.043	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
James Street / North State Street	Signalized	2.403	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	Tier I
South Salina Street / Seneca Turnpike	Signalized	1.950	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
North Townsend Street / Butternut Street	Signalized	1.573	0.54	Urban, 4-Legged, Signal, 1-4 Lanes	
East Genesee Street / Westcott Street	Signalized	0.959	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
Butternut Street / South Alvord Street	Signalized	-	0.54	Urban, 4-Legged, Signal, 1-4 Lanes	Tier II
South Avenue / West Brighton Avenue	Signalized	1.962	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
West Genesee Street / North Franklin Street	Signalized	1.873	0.2	Urban, 4-Legged, Signal w/o Left Turn, 5 or More Lanes	
East Genesee Street / Irving Avenue	Signalized	1.209	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
South State Street / Harrison Street	Signalized	1.461	0.2	Urban, 4-Legged, Signal w/o Left Turn, 5 or More Lanes	
North Salina Street / Bear Street	Signalized	-	0.54	Urban, 4-Legged, Signal, 1-4 Lanes	
South Salina Street / Lafayette Avenue	Unsignalized	-	0.15	Urban, 4-Legged, Sign, 4 or More Lanes	
South Salina Street / East Colvin Street	Signalized	1.350	0.54	Urban, 4-Legged, Signal, 1-4 Lanes	
South Salina Street / East Washington Street	Signalized	1.246	0.54	Urban, 4-Legged, Signal, 1-4 Lanes	
South Clinton Street / West Fayette Street	Signalized	1.185	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
North Salina Street / Pearl Street	Unsignalized	-	0.07	Urban, 3-Legged, Sign, 5 or More Lanes	
South Salina Street / Tallman Street	Unsignalized	-	0.07	Urban, 3-Legged, Sign, 5 or More Lanes	
East Genesee Street / Columbus Avenue	Signalized	1.345	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
Tallman Street / Hudson Street	Unsignalized	-	0.18	Urban, 3-Legged, Sign, 1-3 Lanes	
Spencer Street / Genant Drive	Unsignalized	-	0.15	Urban, 4-Legged, Sign, 4 or More Lanes	
Hiawatha Boulevard West / Van Rensselaer Street	Signalized	-	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
Erie Boulevard East / North McBride Street	Signalized	1.642	0.54	Urban, 4-Legged, Signal w/o Left Turn, 5 or More Lanes	
Bellevue Avenue / Palmer Avenue	Unsignalized	-	0.15	Urban, 4-Legged, Sign, 4 or More Lanes	
Tallman Street / Lincoln Avenue	Unsignalized	-	0.15	Urban, 4-Legged, Sign, 4 or More Lanes	
James Street / Homecroft Road	Signalized	0.377	0.31	Urban, 3-Legged, Signal, 1-4 Lanes	
South Clinton Street / West Washington Street	Signalized	0.983	0.2	Urban, 4-Legged, Signal w/o Left Turn, 5 or More Lanes	
West Onondaga Street / Dudley Street	Unsignalized	-	0.15	Urban, 4-Legged, Sign, 4 or More Lanes	
West Genesee Street / Avery Avenue	Signalized	1.736	0.2	Urban, 4-Legged, Signal w/o Left Turn, 5 or More Lanes	
East Genesee Street / South Beech Street	Signalized	-	0.54	Urban, 4-Legged, Signal, 1-4 Lanes	
West Genesee Street / State Fair Boulevard	Signalized	0.968	0.2	Urban, 4-Legged, Signal w/o Left Turn, 5 or More Lanes	
North Salina Street / Erie Boulevard East	Unsignalized	-	0.05	Urban, 3-Legged, No Control All Lanes	
East Colvin Street / Skytop Road	Signalized	-	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
West Court Street / Solar Street	Signalized	-	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
East Fayette Street / South Townsend Street	Signalized	0.984	0.2	Urban, 4-Legged, Signal w/o Left Turn, 5 or More Lanes	
South Salina Street / East Maston Avenue	Signalized	-	0.54	Urban, 4-Legged, Signal, 1-4 Lanes	Tier III
East Genesee Street / Maple Street	Unsignalized	-	0.15	Urban, 4-Legged, Sign, 4 or More Lanes	
North State Street / Erie Boulevard East	Signalized	1.104	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
South Geddes Street / Elliot Street	Unsignalized	-	0.15	Urban, 4-Legged, Sign, 4 or More Lanes	
Velasko Road / West Onondaga Street	Signalized	-	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
West Court Street / Genant Drive	Unsignalized	-	0.54	Urban, 4-Legged, Signal, 1-4 Lanes	
East Raynor Avenue / Fineview Place	Unsignalized	-	0.18	Urban, 3-Legged, Sign, 1-3 Lanes	
Burnet Avenue / South Collingwood Avenue	Unsignalized	-	0.15	Urban, 4-Legged, Sign, 4 or More Lanes	
Park Street / Harborside Drive	Signalized	1.411	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
South Avenue / Onondaga Avenue	Signalized	1.191	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	
Spencer Street / State Fair Boulevard	Signalized	0.815	0.23	Urban, 4-Legged, Signal w/ Left Turn, 5 or More Lanes	

Note: Focus Intersections include segments that had a fatal crash and/or two or more serious injury crashes.