

EXISTING TRANSPORTATION NETWORK



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The existing street network within the study area is an interconnected grid of two- and four-lane roadways. Riverfront Parkway, 3rd Street, and 4th Street are the primary east-west routes. The north-south roadways within the study area are Lookout Street, High Street, Georgia Avenue, Lindsay Street, Houston Street, and Mabel Street. One-way pair roadways (Lindsay Street and Houston Street) and the on-ramp from 4th Street near Siskin Drive provides access to Riverfront Parkway.

Currently, Riverfront Parkway provides no direct connection to Georgia Avenue / Veterans Bridge, forcing traffic to navigate through residential areas along 4th Street to cross the Tennessee River. 3rd Street closely parallels Riverfront Parkway from High Street to the 4th Street ramp, and 3rd Street is elevated on a bridge over the ramp connecting Riverfront Parkway and 4th Street.

Due to the close proximity of 3rd Street to Riverfront Parkway, a series of tight, congested intersections with unsuitable storage length capacity for turning vehicles exist at Lindsay Street, Houston Street and Mabel Street.

The lack of interconnectivity, one-way roadways, overpasses and lack of wayfinding can result in confusion for drivers unfamiliar with the area in and around the University of Tennessee at Chattanooga and the Erlanger and Siskin hospital district.



Riverfront Parkway

The portion of Riverfront Parkway passing through the study area is a four-lane divided (barrier wall) high-speed arterial with eight-foot inside and ten- to twelve-foot outside shoulders. Within the existing roadway cross-section, there is no accommodation for on-street parking, bicycle lanes or sidewalks. Limited hardscaping or landscaping and a need for improved street lighting exists.



3rd Street

- Georgia Avenue to Mabel Street: one-lane eastbound / two-lane westbound with sidewalks on south side; no on-street parking or bike lanes.
- Mabel Street to Siskin Drive: three-lanes westbound with limited sidewalks on the south side; no on-street parking or bike lanes.
- Siskin Drive to Hampton Street: two-lanes eastbound / westbound with sidewalks on both sides; no on-street parking or bike lanes.
- Hampton Street to Central Avenue: two-lanes eastbound / westbound with a two-way center turn lane and sidewalks on both sides; no on-street parking or bike lanes.



4th Street

- Lindsay Street to Mabel Street: two-lanes eastbound / one-lane westbound with sidewalks on both sides; no on-street parking or bike lanes.
- Mabel Street to Riverfront Parkway on-ramp: three-lanes eastbound with sidewalks on both sides; no on-street parking or bike lanes.

SAFETY

From 2012 through 2014, 851 reported crashes occurred within the study area (Figure 4-1). Of these, 757 crashes (approximately 89% of the total number of crashes) involved only property damage, while 80 crashes (approximately 10%) resulted in 98 non-incapacitating injuries, 13 crashes (approximately 2%) resulted in 15 incapacitating injuries, and one (1) crash (less than 1% of the total number of crashes) resulted in a fatality.

While crashes occurred on all roadways throughout the study area, locations with higher concentrations of crashes include 3rd Street, from Palmetto Avenue to Central Avenue, and 4th Street, from Georgia Avenue to Mabel Street.

Of the 851 reported crashes occurring from 2012 through 2014 (Figure 4-2), 35 (approximately 4% of the total number of crashes) involved bicyclists or pedestrians. The area with higher concentrations of bicycle / pedestrian crashes include 3rd Street, from Siskin Drive to Central Avenue (adjacent to the Chattanooga School for the Arts and Sciences and the Erlanger campus).

Additionally, 104 crashes (approximately 12% of the total number of crashes) involved parked vehicles; areas with higher concentrations of crashes involving parked vehicles include Lindsay Street and Houston Street as well as 3rd Street, Central Avenue, and Blackford Avenue adjacent to the Erlanger campus. A total of 248 crashes (approximately 29% of the total number of crashes) were of unknown type.

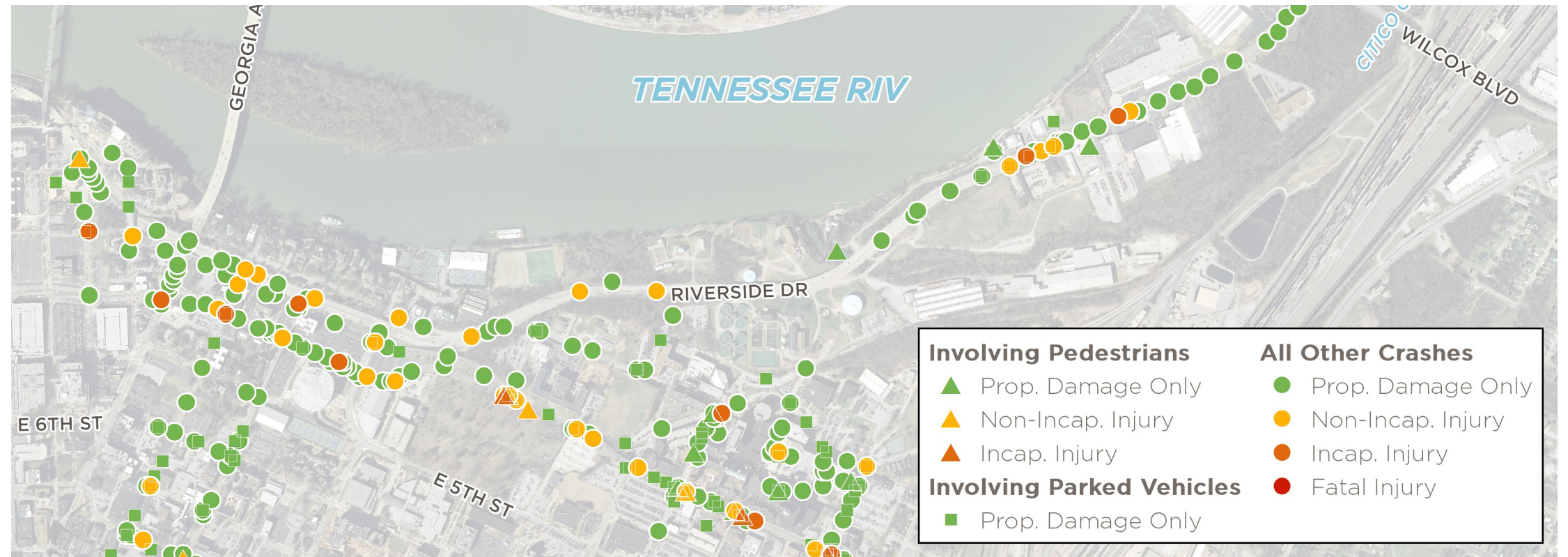


Figure 4-1. Study Area Crash Involvement | 2012-2014



Figure 4-2. Study Area Crash Type | 2012-2014

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TRAFFIC

Current annual average daily traffic (AADT) volumes on major roadways within the study area range from slightly over 2,000 vehicles per day on Houston Street south of 4th Street to over 26,000 vehicles per day on Riverfront Parkway southwest of Wilcox Boulevard. Historically, count stations have displayed varying trends in traffic volumes, with several locations reporting little or no growth.

Of note, K-factors (the proportion of daily traffic occurring within the peak hour) within the study area vary widely. While typical K-factors for roadways are around 10%, K-factors on roadways within the study area range from approximately 8% on 3rd Street near the Siskin and Erlanger hospital district to nearly 12% on 3rd Street near Georgia Avenue, or west of Lindsay Street. While higher K-factors can indicate unused roadway capacity during off-peak hours, lower K-factors can indicate extended periods of congestion where roadways lack sufficient capacity to handle peak-hour traffic.

Directional distribution (the proportion of vehicles traveling in a certain direction of a roadway during peak hours) are less defined for the study area due to the presence of major traffic generators, including the Siskin and Erlanger hospital district and the University of Tennessee at Chattanooga.

The asymmetrical nature of roadway lanes on 3rd Street and 4th Street, as well as the partial access offered by the ramps to and from Riverfront Parkway, also contribute to the directional nature of traffic patterns during peak periods.

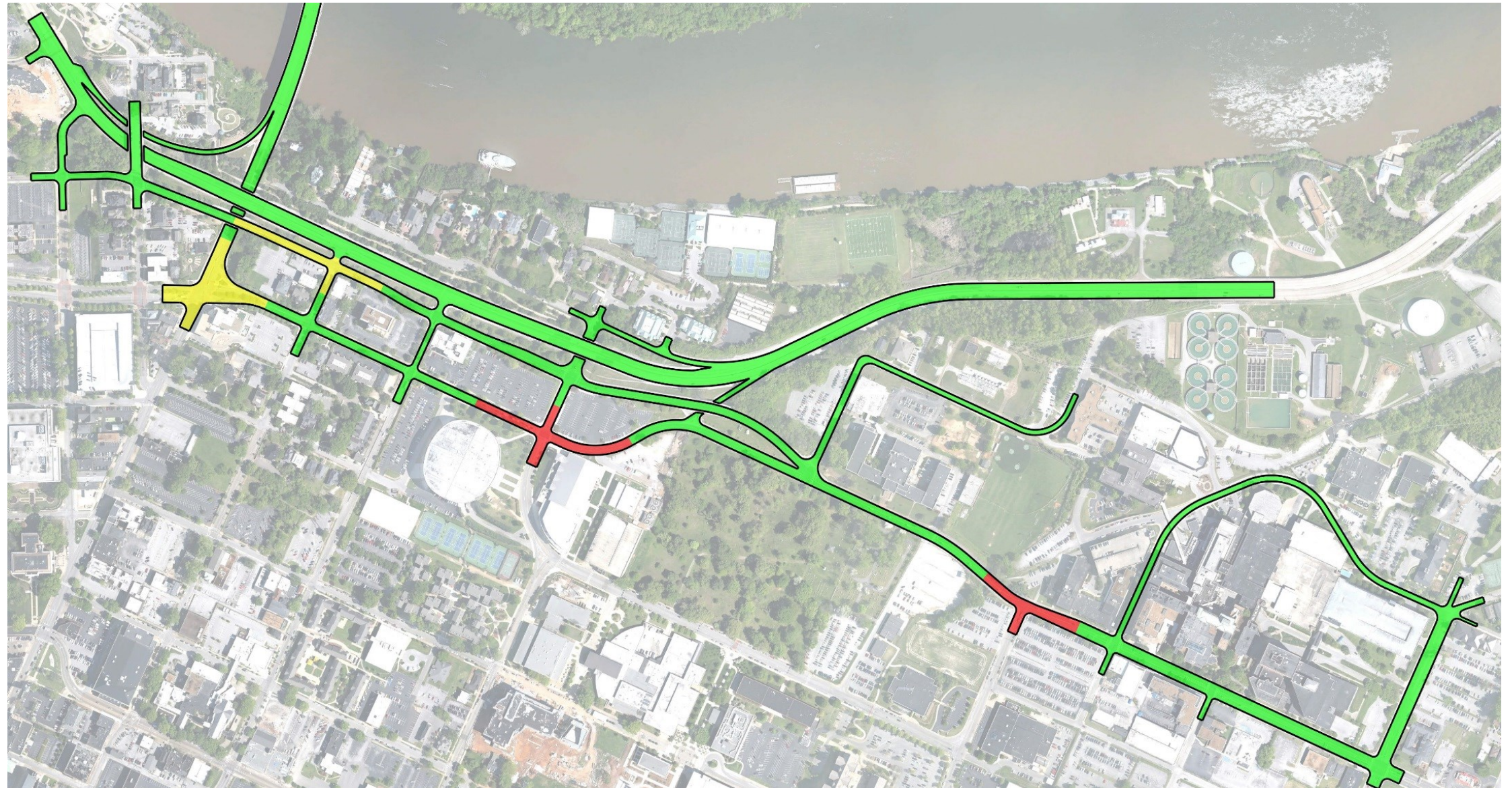


Figure 4-3. Study Area Peak Hour Traffic Flows

Under present conditions, most roadways within the study area operate within ten miles per hour of free-flow speeds during peak hours (Figure 4-3), with only a few segments featuring travel speeds more than 15 miles per hour less than free-flow speed, including Lindsay Street between 4th Street and 3rd Street.

Using the growth rates and committed projects outlined in the Chattanooga-Hamilton County / North Georgia 2040 Regional Transportation Plan (RTP), the roadway network in 2038 is projected to operate at lower speeds relative to free-flow speeds, with several segments of 3rd Street, 4th Street, and Riverfront Parkway featuring travel speeds more than 15 miles per hour less than free-flow speed during peak hours.

Traffic signals in the study area, while not interconnected, do not present significant levels of delay during current peak hours, though the projected changes in traffic patterns suggest that by 2038 they may add to travel times experienced by vehicles within the study area.