

3RD AND 4TH STREET IMPROVEMENTS PLAN TRANSPORTATION CONCEPTS



TRANSPORTATION CONCEPTS

OVERALL

To address connectivity goals for the project, three transportation concepts were developed as part of the planning process. These concepts were presented and discussed during the design charrette and public meeting held in November 2015.

The following components are common to each of the three transportation concepts:

- Removal of 3rd Street from High Street to Siskin Drive
- Removal of the off-ramp from Riverfront Parkway to Battery Lane
- Creation of an at-grade intersection at Riverfront Parkway and Georgia Avenue
- Conversion of Lindsay Street and Houston Street from one-way to two-way

For each of the concepts, it is assumed that the planned extension of Central Avenue to connect with Riverfront Parkway is in place at the time of implementation of the proposed improvements.

The primary differences between the three transportation concepts is how the connection between 3rd and 4th to Riverfront Parkway is addressed. The three main options explored as part of the planning process include a(n):

- Interconnected Grid Intersection
- Major Intersection
- Roundabout

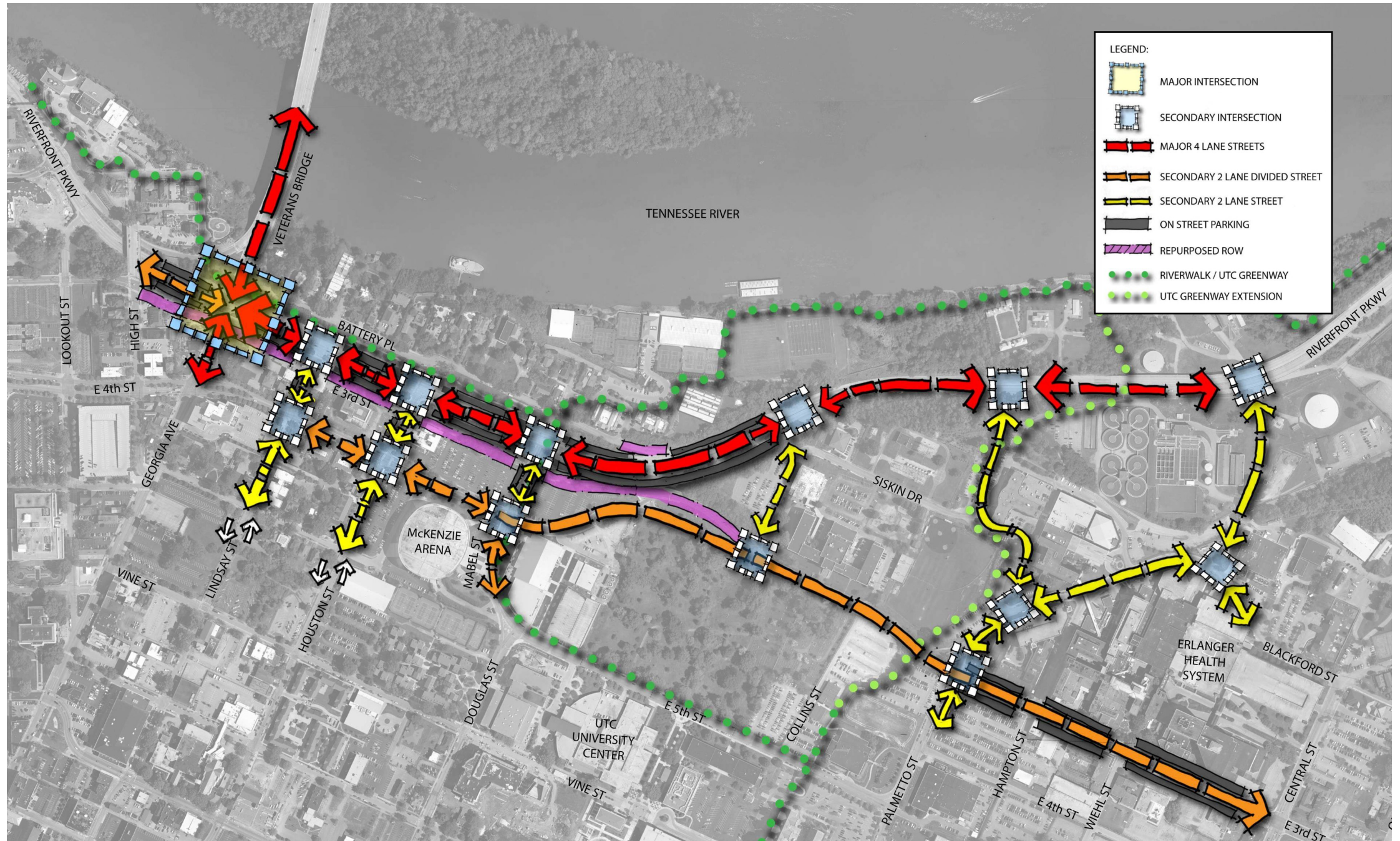


Figure 5-1. Interconnected Grid Concept

Interconnected Grid Intersection
Concept 1

The interconnected grid intersection concept (Figure 5-2) separates the main flow of traffic along Riverfront Parkway from the main flow of traffic along 3rd and 4th Streets. This concept does not include a direct connection in the immediate vicinity of the current 4th Street to Riverfront Parkway on-ramp. Rather connections between the two corridors are accomplished via existing or newly established at-grade intersections at Georgia Avenue, Lindsay Street, Houston Street, Mabel Street, and within the Siskin and Erlanger hospital district.

Riverfront Parkway would function as the primary route in and out of the downtown area, while 3rd and 4th Streets would function as lower speed collector routes through the campuses of the University of Tennessee at Chattanooga, Chattanooga School for the Arts and Sciences, Siskin Hospital, and Erlanger Hospital, where a higher percentage of pedestrian and bicycle activity occurs.

Existing traffic signals would be optimized to encourage more efficient traffic flow. Enhancements to the typical cross-section for each street within the corridor will occur but the overall directional component of each roadway will remain the same. This concept allows continuous east-west connectivity for vehicles, pedestrians and bicyclists.

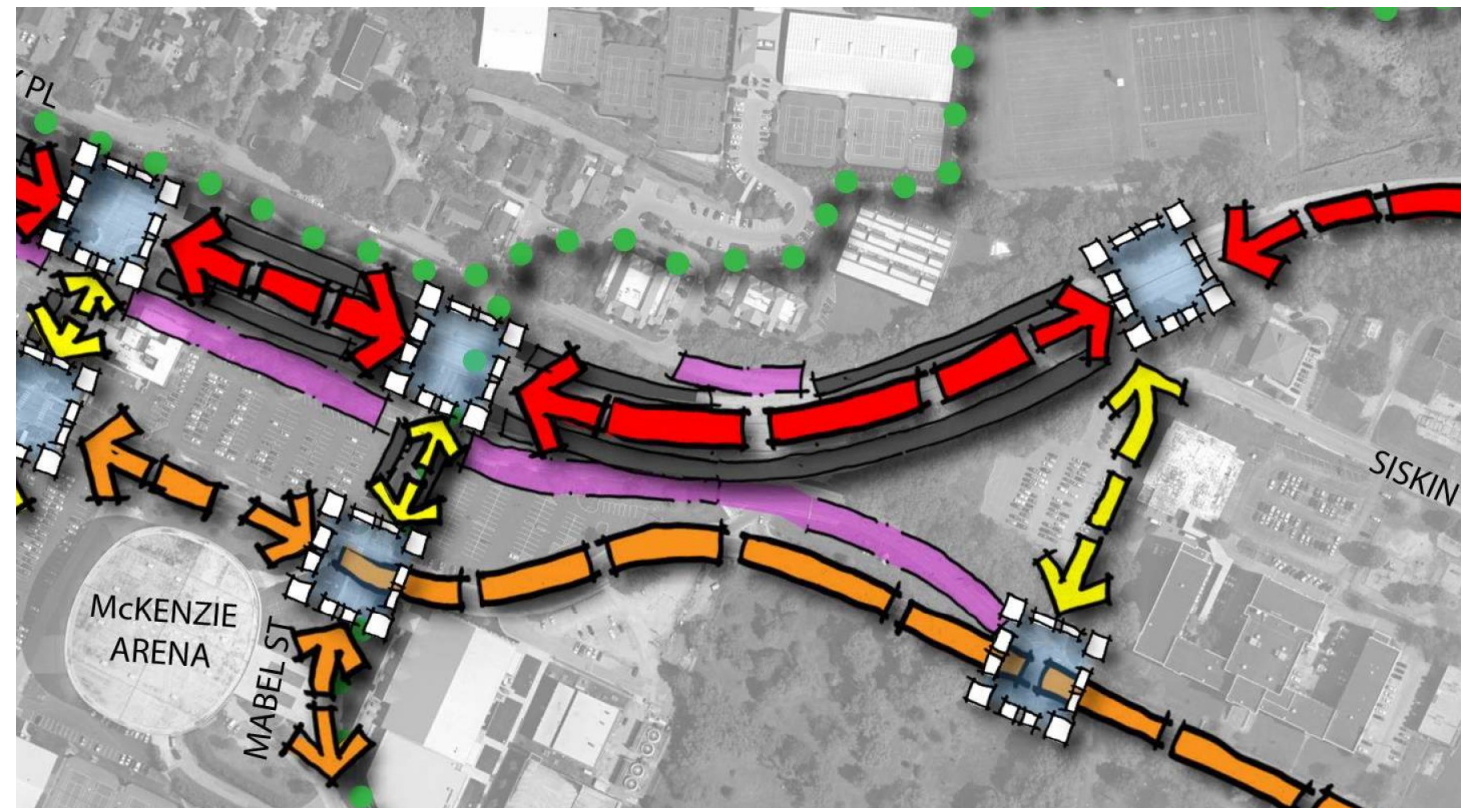


Figure 5-2. Interconnected Grid Concept



TRANSPORTATION CONCEPTS

Major Intersection

Concept 2a and 2b

The major intersection concept provides for a full intersection at Riverfront Parkway and 3rd and 4th Streets. The intersection would include right- and left-turn lanes as required and a traffic signal. Two options for the major intersection are shown in Figure 5-3 and Figure 5-4. The difference between the two options is the number of lanes on Riverfront Parkway, 3rd Street and 4th Street entering and exiting the intersection, as discussed below.

Option 2a

This option creates a direct connection from a four-lane Riverfront Parkway (east of the intersection) to a four-lane 4th Street (west of the intersection), which connects through downtown to US 27. West of the study area, 4th Street would be a median divided urban roadway with sidewalks and landscaping. This cross-section would extend along 4th Street, through the intersection, and continue on Riverfront Parkway to a logical transition point, such as the proposed extension of Central Avenue.

West of the intersection, Riverfront Parkway would become a two-lane urban boulevard, matching the existing Riverfront Parkway to the west. To the east of the intersection, the 3rd Street cross-section would match the two-lane Riverfront Parkway to the west, extending this cross-section all the way to Central Avenue.

In this concept, a continuous corridor with amenities like protected bike lanes, wide sidewalks, and streetscaping, would be established from the neighborhoods to the east and connect to downtown Chattanooga.

Option 2b

This option creates a direct connection from a four-lane Riverfront Parkway (east of the intersection) to a two-lane 4th Street west of the intersection. In this concept, 4th Street would be a median divided urban roadway with sidewalks, landscaping and potential bike lanes, extending to the major intersection.

Riverfront Parkway would become a four-lane median divided urban roadway with sidewalks and landscaping, extending to a logical transition point, such as the proposed extension of Central Avenue.

West of the intersection, Riverfront Parkway would continue to be a four-lane median divided urban roadway with sidewalks and landscaping to Georgia Avenue. East of the intersection, 3rd Street would match the two-lane 4th Street cross-section and extend to Central Avenue. This option is designed to encourage higher speed and higher volume traffic to remain on Riverfront Parkway.

Based on the preliminary concept, both options appear to fit within existing right-of-way. Both options would include on-street parking, sidewalks, and bicycle lanes, along with streetscaping and street lighting.

A major intersection at this location would control the spacing and/or consideration of a potential at-grade intersection at Mabel Street or a new connection into the Siskin and Erlanger hospital district.

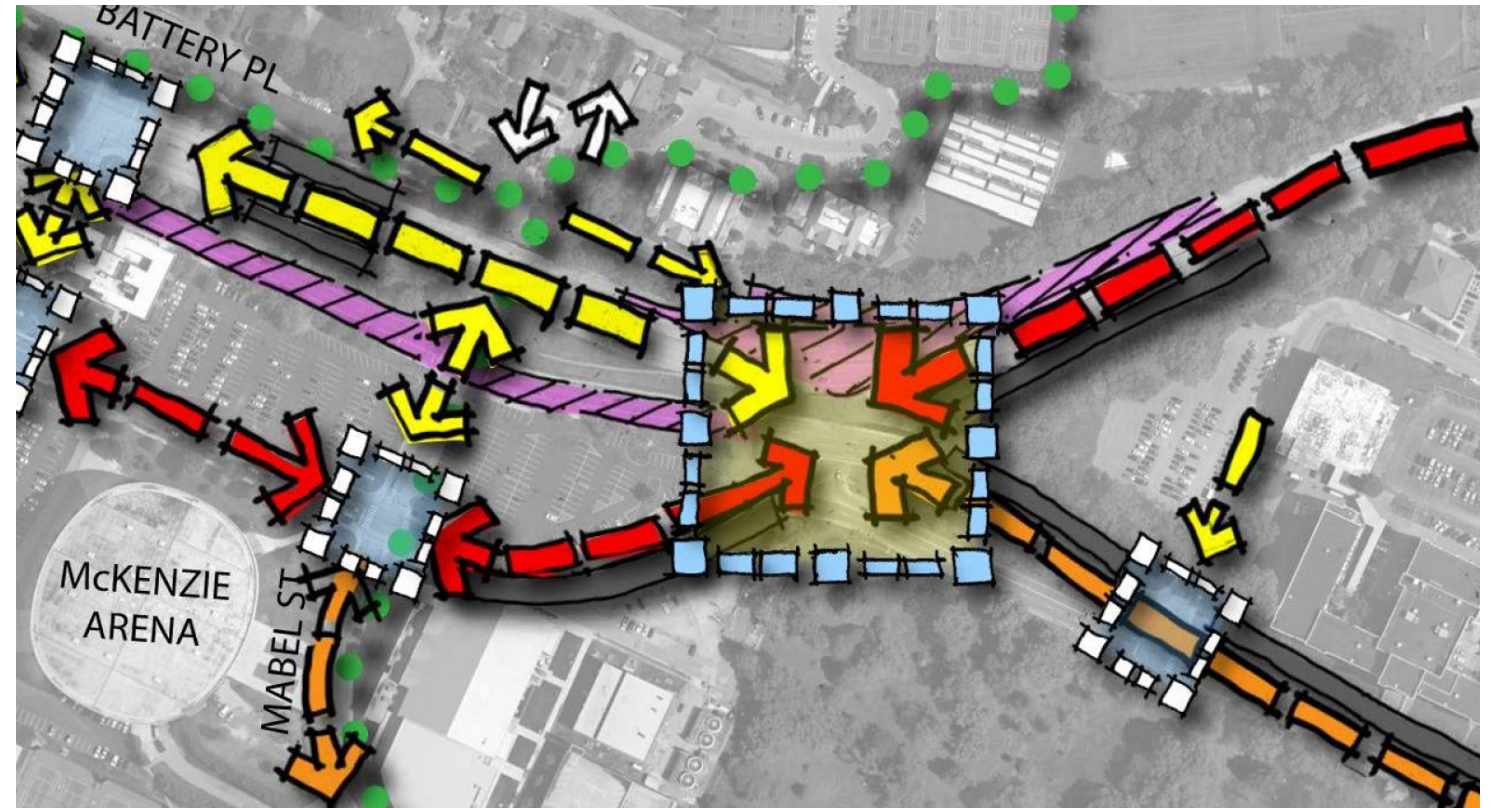


Figure 5-3. Major Intersection Concept (Option 2a)

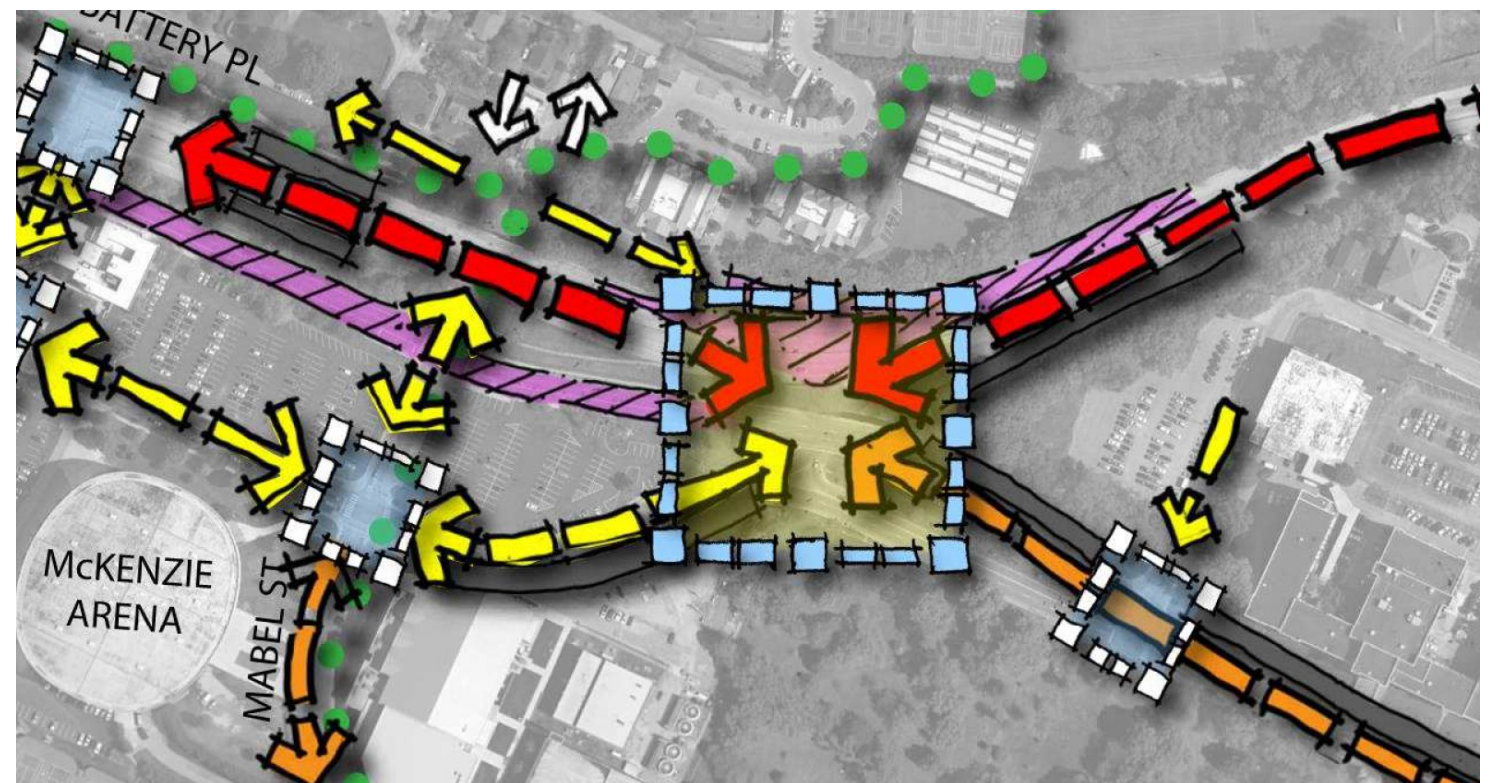


Figure 5-4. Major Intersection Concept (Option 2b)

Roundabout
Concept 3

The roundabout concept (Figure 5-5) would function similar to either of the major intersection concepts, but would provide continuous flow of traffic between Riverfront Parkway, 3rd Street and 4th Street.

A large diameter roundabout would provide an opportunity for a grand entrance into the University of Tennessee at Chattanooga campus. The roundabout would be designed to accommodate large trucks and transit vehicles. While roundabouts can cause confusion for drivers unfamiliar with how a roundabout operates, advanced signing and pavement markings can help ease the potential for confusion.

The proposed concept is for a two lane roundabout, which would accommodate variable lane configurations for Riverfront Parkway, 3rd Street and 4th Street. The stakeholders and public provided mixed comments, either favoring or expressing a dislike for the roundabout concept.

While roundabouts have proven nationally to be safer than stop-controlled intersections — primarily due to the reduced travel speeds — pedestrian safety would need to be addressed by placing crosswalks at the shortest path distance and at the locations with greatest visibility. Pedestrian safety could also be addressed by redirecting pedestrian traffic away from the roundabout at alternate intersections.

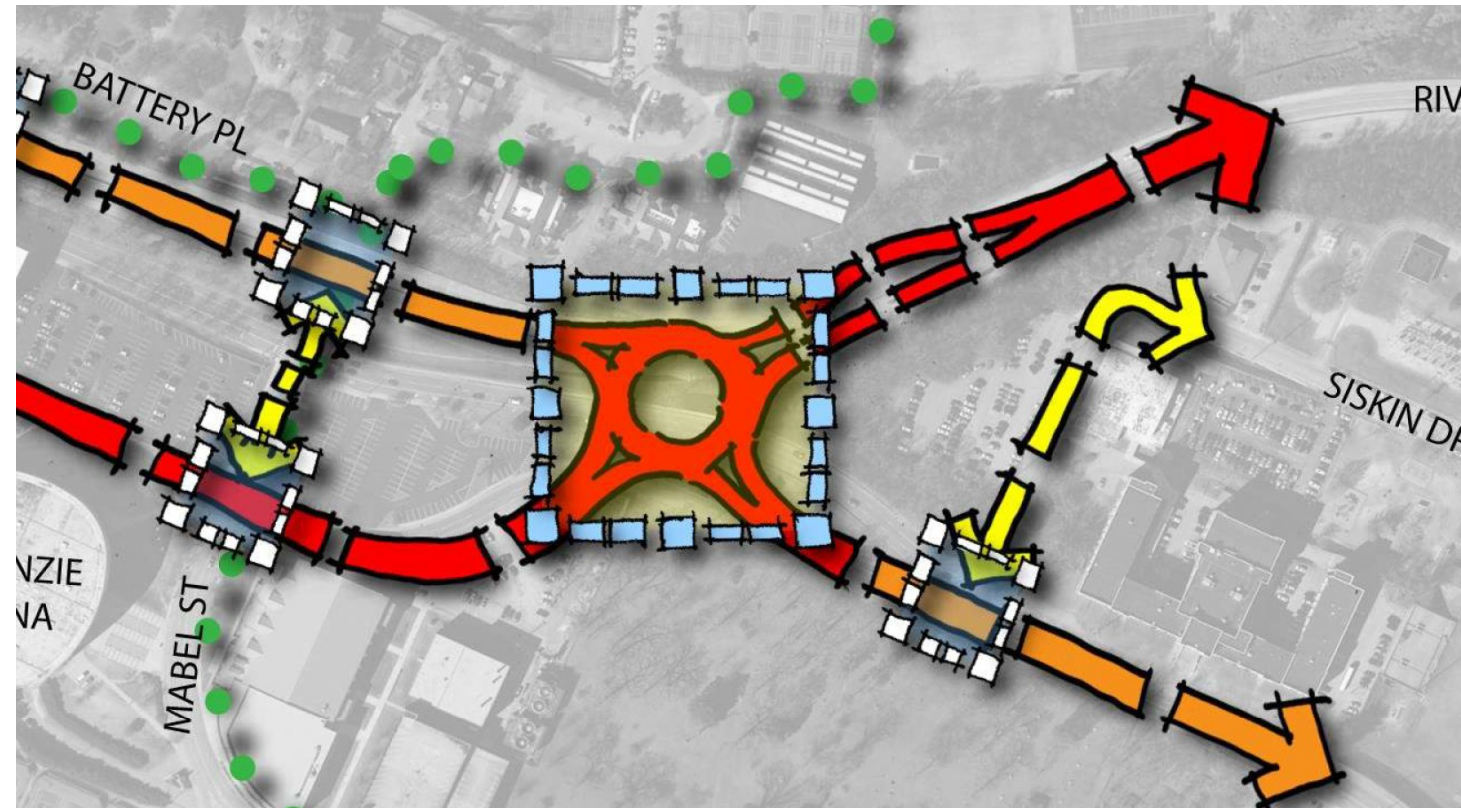


Figure 5-5. Roundabout Concept



