

**To: Robert Nugent**  
**Director, Lawrence Transit**  
**From: Olsson Associates**  
**Date: January 7<sup>th</sup>, 2010**  
**Re: Route Recommendations Overview Technical Memo**

This technical memo is a summary overview of the route recommendations reflecting increased coordination between the City of Lawrence transit system (The T) and University of Kansas transit system (KU On Wheels, or KUOW).

There are currently 16 routes in the system, not including variations in weekday or evening routes. Eight routes are changed in some way in these recommendations. Specific alignments for two of these routes are still being evaluated.

The following discusses the specific route changes:

**Merge Route 1 and Route 2 into a single route.**

Route 1 is currently interlined with Route 4, and Route 2 is currently interlined with Route 3. The proposal would end the route interlining and merge Route 1 and Route 2 into a single route. Specific alignments on the new Route 1 are still being evaluated.

The new Route 1 would continue to provide a north-south connection in east Lawrence between downtown and 23<sup>rd</sup> Street, and may create a loop generally following 9<sup>th</sup> Street, Connecticut Street, 19<sup>th</sup> Street, Haskell Avenue, 23<sup>rd</sup> Street to HINU where transfer opportunities would occur. The route would connect back to the downtown on 23<sup>rd</sup> Street, Harper Street, 19<sup>th</sup> Street, Haskell Avenue, 13<sup>th</sup> Street, Delaware Street, and 9<sup>th</sup> Street.

**Modify Route 3 to include peak and off-peak alignments, and an off-peak flex zone.**

Ridership data and discussions with bus drivers indicate that Route 3 has lower ridership than many other transit routes while providing key service to Lawrence Memorial Hospital. To more efficiently match supply with demand, Route 3 will continue its current alignment during the peak morning and afternoon periods. The fixed route alignment will be limited in the off-peak periods (9 a.m. to 3 p.m., and after 6 p.m.) to the portion connecting downtown to Lawrence Memorial Hospital. This will allow riders transferring from other routes to continue easy access to the hospital. The remainder of the route area will be served by a flex route. This demand response service will be operated with the Route 3 vehicle, and will pick passengers up in northwest Lawrence, delivering them to either the downtown transfer center or the a new transfer center at 6<sup>th</sup> Street and Wakarusa Drive. Passengers using the flex route service will be required to reserve rides 24 hours in advance. The fixed route would be at a 40 minute frequency. The new route and previous route are displayed in Figure 1

**Convert Route 4 into a flex route.**

Ridership data and discussions with bus drivers indicate that Route 4 has the lightest ridership loads in the Lawrence transit system.

This proposal would convert the North Lawrence area currently being served by Route 4 into a flex area zone. A flex route is a general public demand response service offering curb-to-curb service within the zone, or delivering passengers between the flex zone and the downtown transfer point. Callers would reserve rides 24 hours in advance, and a subscription service would be available allowing riders to have a regular pick-up without making daily reservation calls. Fares within the flex zone would be the same as regular fixed route bus fare. Riders outside of the flex zone wanting to access the service would be required to meet the vehicle within the flex zone. The new route and previous route are displayed in Figure 2.

#### **Split Route 5 into two separate routes.**

Currently Route 5 serves as a cross town connector at 40 minute frequencies. The new routes would serve separate areas east and west of Iowa Street at 60 minute frequencies. This change would be revenue hour neutral.

#### **Route 5A (Route 5 West)**

Route 5A would serve southwest Lawrence and provide a north-south connection along Wakarusa Drive connecting 31<sup>st</sup> Street and Iowa Street to 6<sup>th</sup> Street and Wakarusa Drive through the 27<sup>th</sup> Street and Inverness Drive area. The route would be at 60 minute frequency. The new route and previous route are displayed in Figure 3.

#### **Route 5B (Route 5 East)**

Route 5B would provide an east Lawrence connection following at 60 minute frequencies. The route would follow 23<sup>rd</sup> Street / K – 10 out to the east Hills Business park, and may follow a different alignment on the inbound trip to achieve more neighborhood integration. The route would be at 60 minute frequency. Specific alignments on the Route 5B are still being evaluated.

#### **Split Route 6 into two separate Routes.**

Currently Route 6 is a bi-directional loop route. Creating two separate routes, Route 6 and Route 12, out of the service area would allow for more targeted route changes in the future.

#### **Modify Route 6 to only serve along 6<sup>th</sup> Street.**

The new route would maintain the strong connection between downtown and the 6<sup>th</sup> Street and Wakarusa Drive area. This route would deviate slightly onto Iowa Street to maintain service to the 9<sup>th</sup> Street and Iowa Street vicinity, before continuing on 6<sup>th</sup> Street. The route would serve Free State High School along Overland Drive on the westbound trip, and would extend into the West Lawrence neighborhood on Congressional Drive and Harvard Drive before beginning the eastbound trip. The new route 6 would have a peak frequency of 30 minutes, and a off-peak frequency of 60 minutes. The new route and previous route are displayed in Figure 4.

#### **Create Route 12**

A new Route 12 would assume part of the southern portion of the current Route 6, and create a connection between the 6<sup>th</sup> Street and Wakarusa Drive area with the University of Kansas Campus using Wakarusa Drive and Bob Billings Parkway. Passengers wishing to continue onto downtown can transfer to Route 11 at the University of Kansas

campus. The new Route 12 would maintain a 60 minute frequency. The new route and previous route are displayed in Figure 5.

**Modify Route 7 to create shorter frequency and access HINU.**

Currently Route 7 is at an 80 minute frequency. Modifying this route by performing a loop around the 31<sup>st</sup> Street and Iowa Street area once per trip instead of the current twice per trip would allow Route 7 to improve the frequency from 80 minutes to 60 minutes. Route 7 would also begin direct service to HINU by continuing east on 23<sup>rd</sup> Street instead of turning north onto Louisiana Street. Passengers to and from Lawrence High School can still access the route on Massachusetts Street. The new route and previous route are displayed in Figure 6.

**Modify Route 26**

Currently Route 26 serves several large apartment complexes and faces overcrowding issues. A slight route modification will decrease the pressure on Route 26. Instead of continuing from 24<sup>th</sup> Street and Ousdahl Road onto 24<sup>th</sup> Street, Naismith, and 21<sup>st</sup> Street, the route will continue from 24<sup>th</sup> Street and Ousdahl Road north on Ousdahl Road to 21<sup>st</sup> Street where it will resume its current alignment. The bypassed areas along 24<sup>th</sup> Street and Naismith Drive will continue to be served by Route 11. The new route and previous route are displayed in Figure 7.

Figure 1

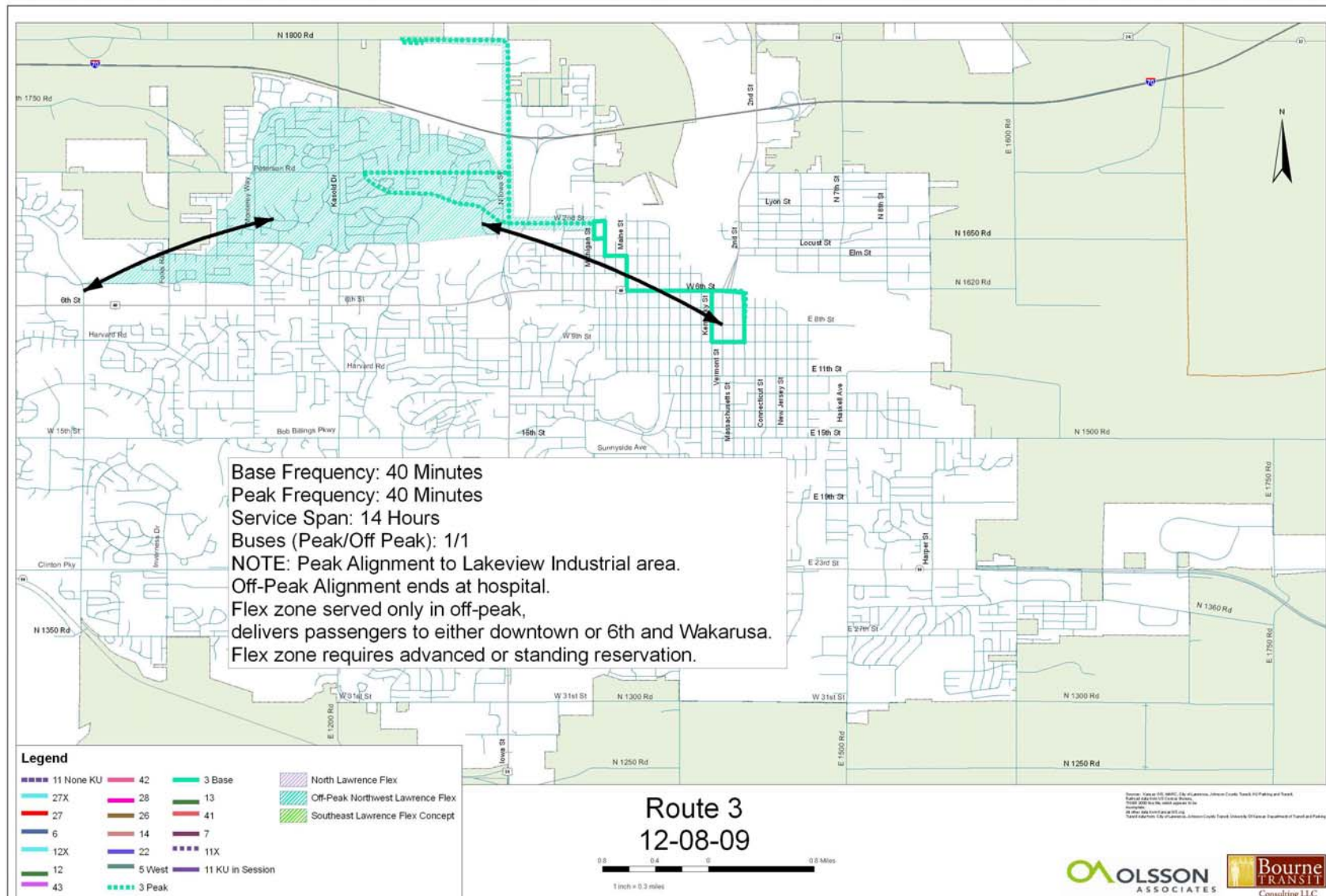




Figure 2

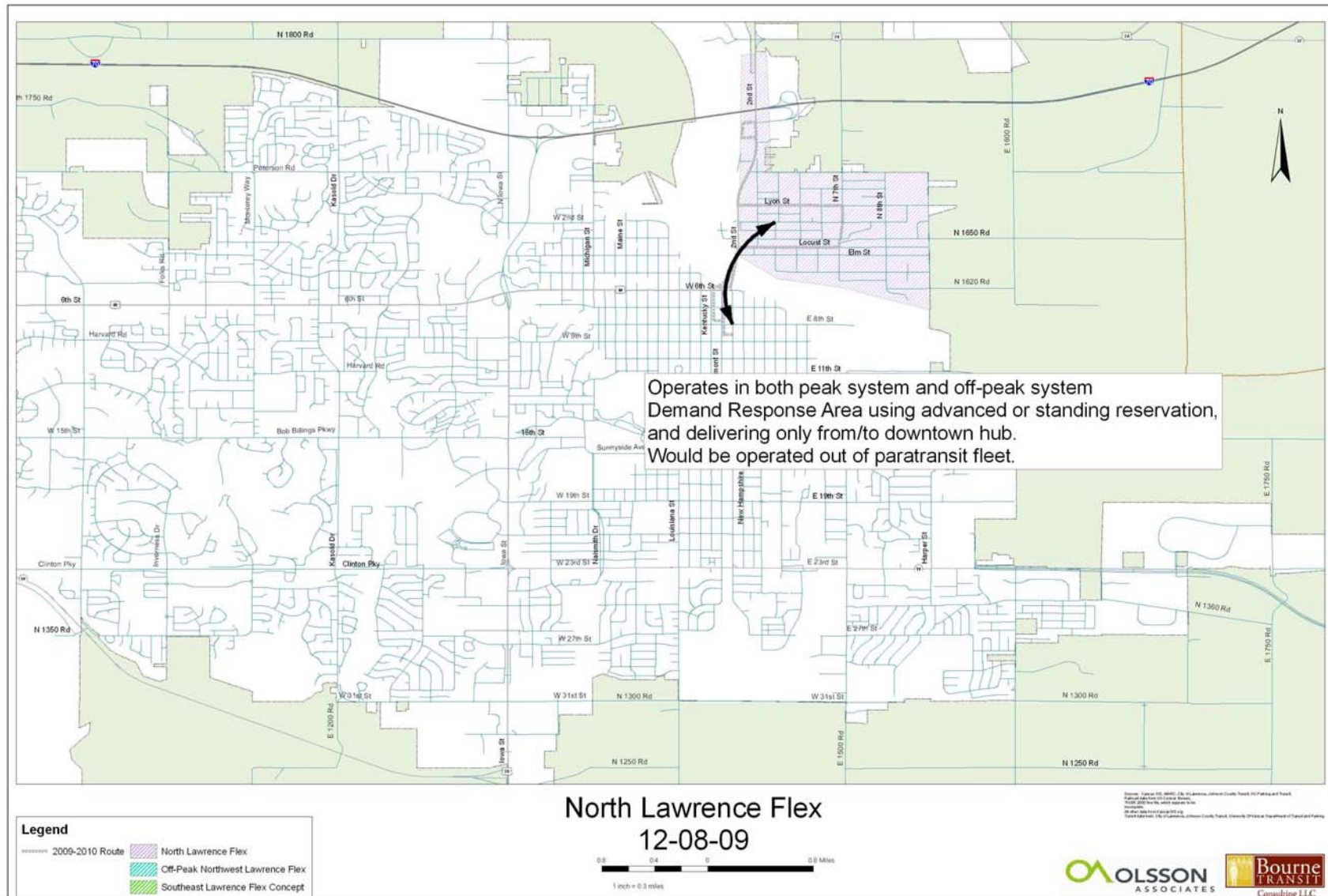


Figure 3

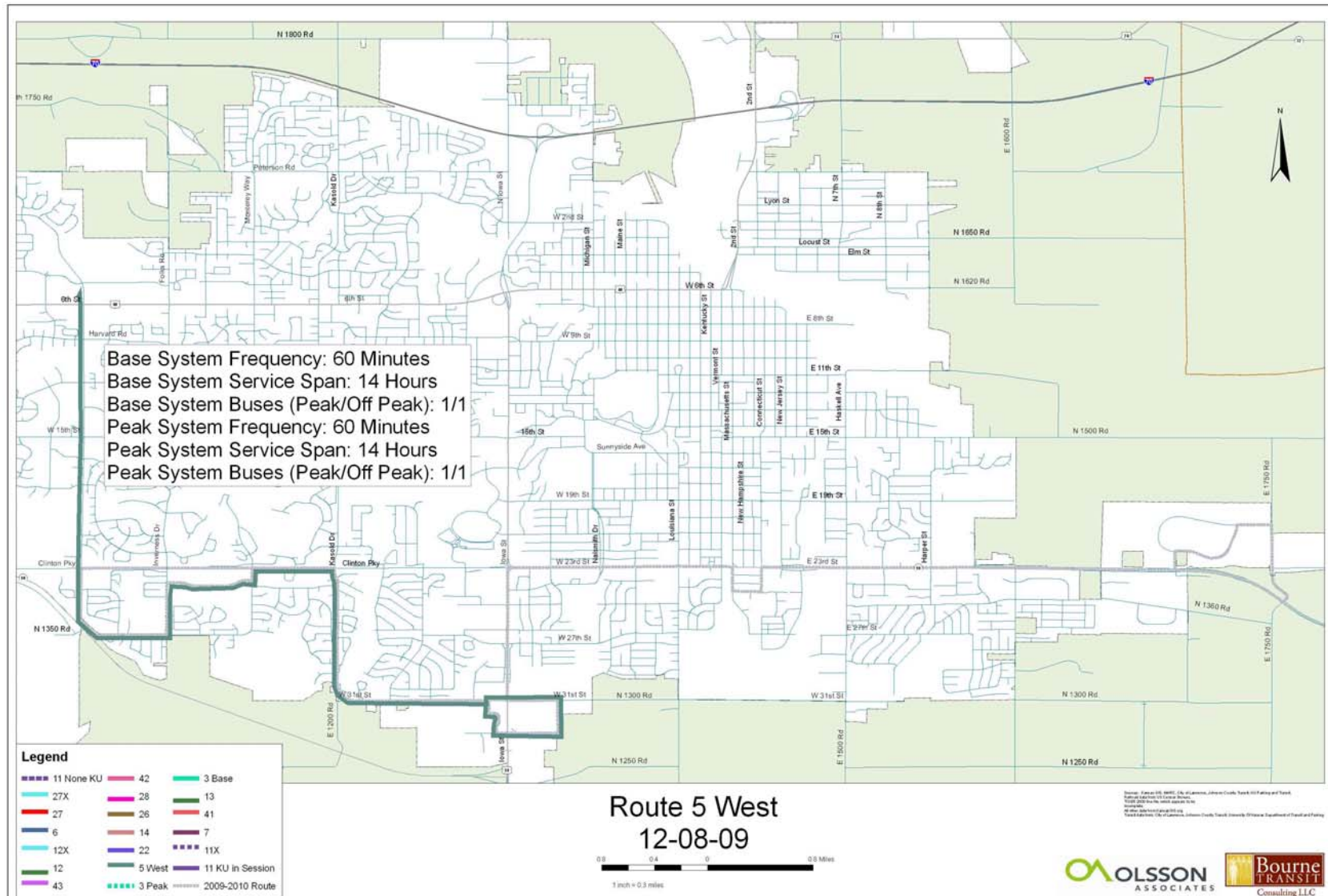




Figure 4

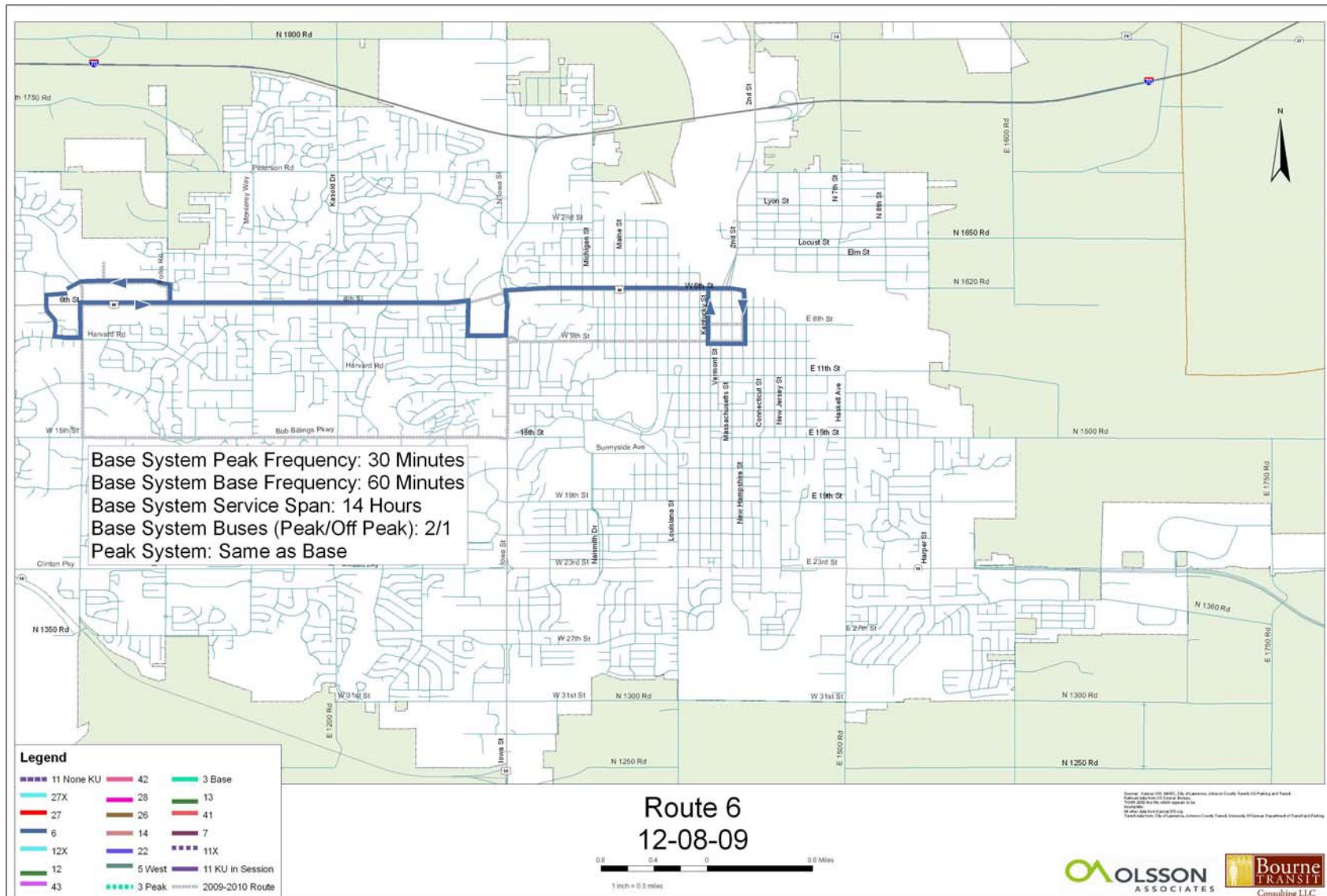
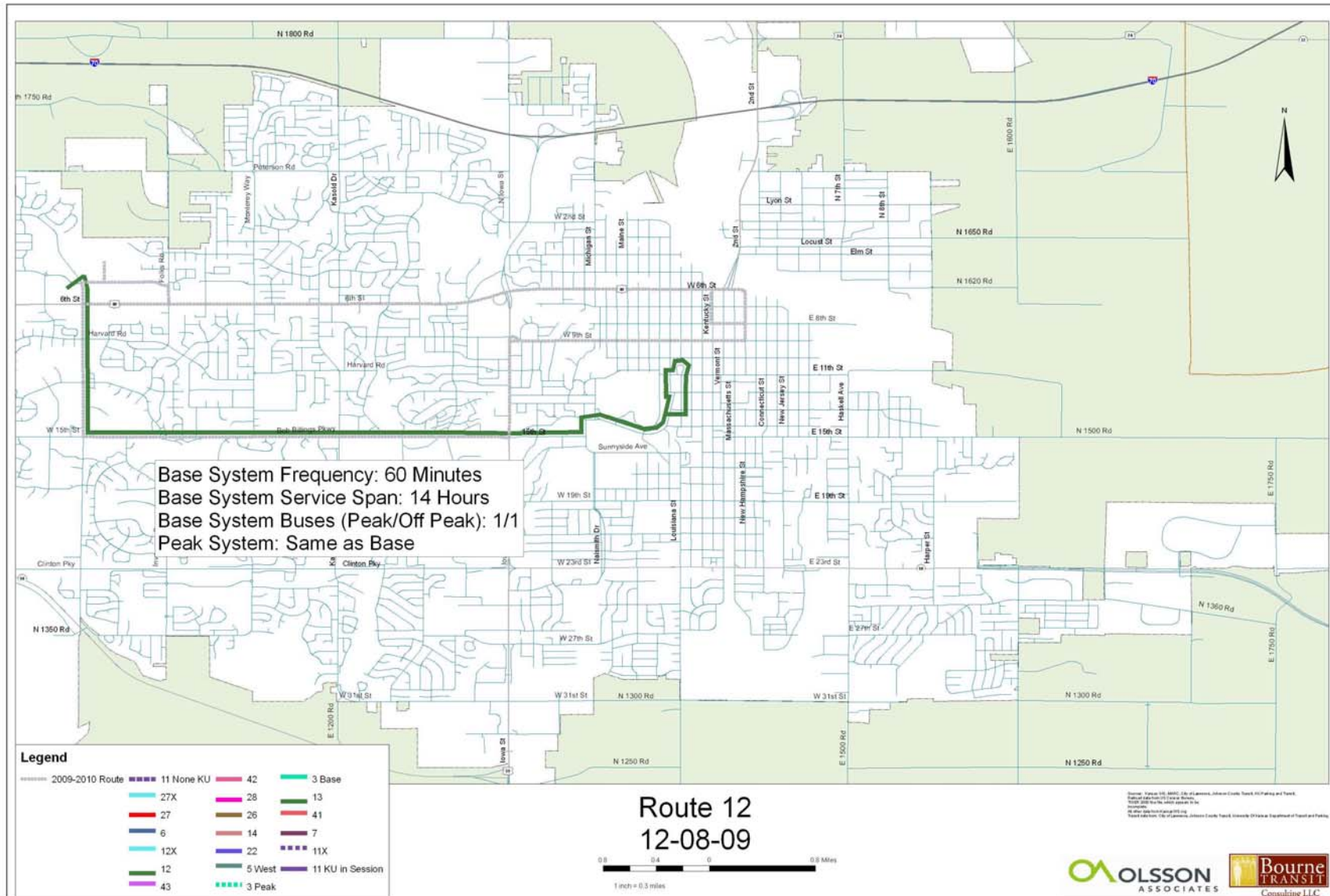


Figure 5





**Base System Peak Frequency: 60 Minutes**  
**Base System Base Frequency: 60 Minutes**  
**Base System Service Span: 14 Hours**  
**Base System Buses (Peak/Off Peak): 1/1**  
**Peak System: Same as Base**  
**NOTE: Performs 31st & Iowa loop only once.**  
**Serves HINU.**

**Legend**

11 None KU	42	3 Base
27X	28	13
27	26	41
6	14	7
12X	22	11X
12	5 West	11 KU in Session
43	3 Peak	2009-2010 Route

**Route 7**  
**12-08-09**

1 inch = 0.5 miles

**OLSSON ASSOCIATES**

**Bourne TRANSIT**  
 Consulting LLC

Figure 7

