

Wednesday, June 13, 2018 - 1:30-3:30 PM
Development Services Conference Room
1 Riverfront Plaza, Suite 110
Lawrence, Kansas 66044
(See the attached directions)

REGIONAL TRANSIT ADVISORY COMMITTEE - AGENDA

1. Call Meeting to Order and Introductions

2. Public Comment

The public is allowed to speak to any items or issues that are not scheduled on the agenda after first being recognized by the Chair. Each person will be limited to 5 minutes for public comment.

3. Action Item: Approval of Minutes from the January 10, 2018 Meeting (attached)

4. Receive the Community Transportation Association of America (CTAA) report about transit strategies in Eudora and Baldwin City (attached)

The revised report incorporates committee/staff comments provided in January.

5. Discussion Item: Emergency Planning Table-Top Exercise

RTAC members will partake in a table-top emergency management scenario.

**If your agency has an emergency operations plan, please bring it to the meeting.

6. Other Business/Updates

7. Next Meeting

Special Accommodations: Please notify the Lawrence-Douglas County Metropolitan Planning Organization (L-DC MPO) at (785) 832-3150 at least 72 hours in advance if you require special accommodations to attend this meeting (i.e., qualified interpreter, large print, reader, hearing assistance). We will make every effort to meet reasonable requests.

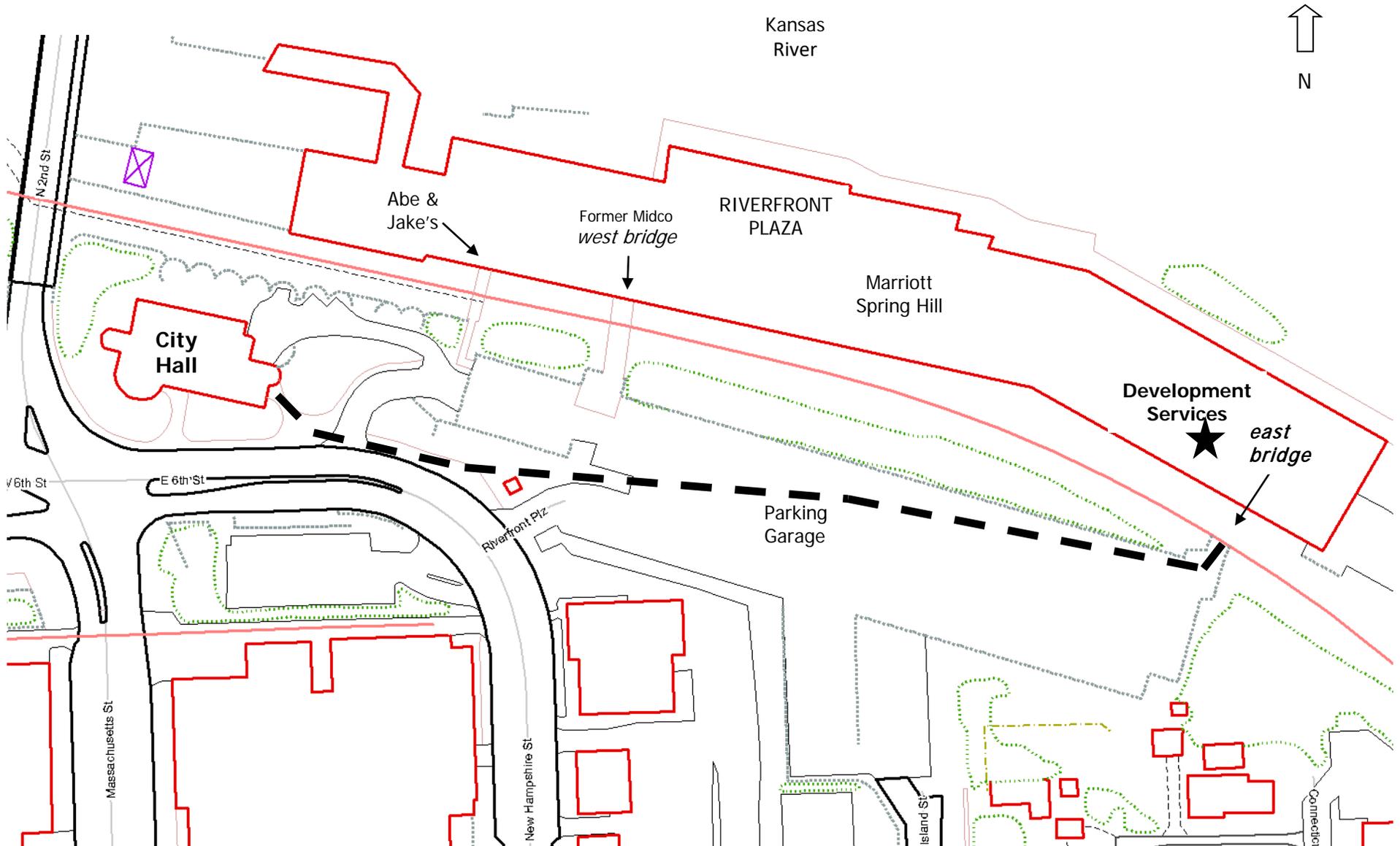
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Development Services

1 Riverfront Plaza, Suite 110 - east bridge entrance, *take elevator or stairs down to Level 1*

Lawrence, KS 66044

(785) 832-7700



REGIONAL TRANSIT ADVISORY COMMITTEE
Minutes for Wednesday, January 10, 2018 Meeting

VOTING MEMBERS PRESENT:

Robert Nugent (Lawrence Transit)
Heather Thies (Cottonwood Inc.)
Tracy Kihm (Bert Nash Community Mental Health Center)
Heidi Briery (Senior Resource Center for Douglas County)
Christie Patrick (Assisted Living Centers Transit Provider)

STAFF PRESENT:

Jessica Mortinger (L-DC MPO Senior Transportation Planner)
Ashley Myers (L-DC MPO Transportation Planner)
Margaret Campbell (L-DC MPO Transportation Planning Intern)

1. Call Meeting to Order and Introductions

Tracy Kihm called the meeting to order at 2:02 PM.

2. Public Comment

No public comment.

3. Action Item: Approval of Minutes from the February 21, 2017 Meeting (attached)

Tracy Kihm asked if anyone had any changes to the minutes, no changes were requested. Heather Thies made a motion to approve the minutes, seconded by Heidi Briery; the motion passed unanimously, 5-0.

4. Action Item: Election of Chair and Vice Chair for 2018

Tracy Kihm asked if the committee was satisfied with keeping the Chair and Vice Chair positions. After discussion, Christie Patrick made a motion to keep Tracy Kihm as Chair and Heather Thies as Vice Chair, seconded by Ms. Briery; passed unanimously, 5-0.

5. Discussion Item: Transportation 2040 Update

Jessica Mortinger discussed the relevant sections of the plan update for transit providers. The plan update incorporates the planning work done already through various existing plans. The MPO has received permission from the Steering Committee to open the draft for a 30-day public comment period in February. Ashley Myers said all vehicle inventories and financial data received from the providers were included in the document. Ms. Mortinger said the Transit Asset Management (TAM) information is separated out in an appendix. Ms. Kihm asked how the update was different than the CPT-HSTP or one of the other transit specific plans. Ms. Mortinger said this plan included those plans and showed how transit fits into the big picture of transportation throughout the county in conjunction with other modes such as: auto, bicycling, pedestrians, etc. The plan update is also required to receive federal transportation funding. This plan is performance based and will annually track data for 26 performance measures. Ms. Myers said the plan was developed through a public engagement phase in the spring that gained 1,500+ survey responses and in the fall, which gained 88 survey responses. Ms. Mortinger said any comments about the document or areas that need changed need to be submitted by January 16th.

6. Discussion Item: Transit Asset Management (TAM) Performance Measures/Target

Ashley Myers discussed the TAM plan. The providers need to weigh in on if the MPO should follow state TAM targets or to set MPO targets. Some of the providers use different ULBs, KU busses have a 15-year ULB instead of the average 14-year ULB KDOT vehicles use since KU vehicles only operate during school months. Tracy Kihm said that two of the vehicles listed as minivans were actually vans. Christie Patrick asked if it mattered if the vehicles are KDOT or non-KDOT vehicles; they included both in the data. There was a discussion about should Bob Nugent have to replace a non-revenue vehicle that is over its ULB but still runs well. These non-revenue vehicles are used as support vehicles for transit operations and save money. The

question was brought up, what is the purpose of the benchmarks? Currently, there is not enough funding to replace all of the vehicles over the ULB. Jessica Mortinger said the purpose of showing all vehicles not just KDOT ones, is to show the full picture of what it costs to operate services throughout Douglas County that paints the best representation of services that the community relies on. Mr. Nugent said it could be okay if the benchmarks are not met because it shows the full depreciation of vehicles. In the U.S. there is more money for capital investment than for maintenance. Ms. Mortinger said they would need to be able to justify why they did not meet the targets and if at a later date the targets are discovered to be unreasonable then they could shift them.

Heather Theis said KDOT no longer requests maintenance fees to be recorded by 5310s. Mr. Nugent said they should go with the KDOT targets to be close to the new T-WORKS. Ms. Patrick asked if they need to get any information from the other communities being serviced outside of Douglas County. Ms. Mortinger said staff would be unable to track down all the private services that are not state-funded or services outside of the MPO area. Ms. Mortinger indicated the MPO can adopt the state targets using the MPO data. MPO staff will collect the performance measure data annually and report it; this allows the community to see if by the next plan update, progress was made.

Ms. Theis said when the funds are lean vehicles have to stay on the road a few more years. Ms. Myers asked if they want to include all non-revenue vehicles that support transit operations. Mr. Nugent said they should include all non-revenue vehicles that support transit because they are required to support transit operations. Ms. Theis said they have over 40 vehicles that are used to support transit, such as caseworkers driving clients to the hospital. It was decided to include agency vehicles that support transit, but not personal staff cars. Mr. Nugent said they have support staff driving older vehicles to save money since the vehicle is in good repair with low miles and the cost to replace would exceed the cost required to maintain the vehicle outside of the ULB. Ms. Mortinger said according to the ULB for KDOT, cars only have an 8-year ULB. Mr. Nugent said the ULB does not track the difference between hours of driving and miles. By recording both, the true picture of transit operations is shown.

Ms. Myers will be sending inventory tables for the transit providers to fill out. Ms. Theis and Mr. Nugent said that age and miles both need to be included because they paint different pictures. Even if a vehicle does not have too many miles it can still degrade due to age. The data included will show end of the year data. Ms. Mortinger asked if any historical data is being included; Ms. Myers said no.

7. Discussion Item: Emergency Planning

Bob Nugent said Douglas County is working to develop additional emergency planning preparedness through planning exercises. This year Lawrence Transit will be participating in an internal emergency planning exercise. Mr. Nugent hopes to be able to conduct a table-top exercise with RTAC members. KU conducted an emergency scenario with transit. This showed there was a lack of communication. Mr. Nugent said that they need to plan what to do if there is an emergency that knocks out communications with drivers and vehicles. Christie Patrick asked who to contact about taking part in this planning. Mr. Nugent said that they should contact Jillian Rodriguez with Douglas County Emergency Management. RTAC members agreed that it would be helpful to do a table-top exercise at a future RTAC meeting and asked Mr. Nugent to set up a scenario.

8. Discussion Item: Eudora and Baldwin City Transit Strategies from Community Transportation Association of America (CTAA)

Jessica Mortinger said that RTAC needs to give feedback on the CTAA document by Chris Zeilinger. Mr. Zeilinger calculated transit demand for Baldwin City internally, Baldwin City to Lawrence, Eudora internally, and Eudora to Lawrence. According to the calculations there could be demand in Baldwin City for a van pool service to Lawrence but not enough demand for fixed-route. Eudora could maybe support a Lawrence connection, possibly by Independence, Inc. Another option would be to extend a Lawrence Transit route to Eudora. This comes with administrative issues surrounding Lawrence Transit coverage. The final option listed was adding one or more Eudora stops to the K-10 Connector. This would require the K-10 Connector to do complimentary para-transit, which can be very expensive. This fact wasn't noted in Mr. Zeilinger's

recommendations. Ms. Mortinger noted that the investigation done by CTAA provides a picture of what options might be available to pursue but all were dependent upon generating additional revenue to support the proposed services. Ms. Mortinger said that comments and suggestions for the document should be sent to Ashley Myers. She will collect the comments and send them to Mr. Zeilinger. After the changes are made then RTAC can consider accepting the CTAA document and it can be shared.

9. Other Business/Updates

No other business or updates.

10. Next Meeting

The next meeting will take place in March or April. The January RTAC meeting adjourned at 3:21 pm.

DRAFT

Technical Assistance Report: Transit Demand and Strategies for Baldwin City and Eudora, Kansas



June 2018

Prepared by Chris Zeilinger, Community Transportation Association of America

FINDINGS AND RECOMMENDATIONS IN BRIEF

- Douglas County is fortunate to have a number of efficient, high-functioning transit providers in Independence Inc., KU on Wheels, Lawrence Transit, the Senior Resource Center for Douglas County, and their partners.
- Even with its established presence as the primary provider of state- and federal-funded public transit in the county's rural area, there is considerable rural transit demand that Independence Inc. currently has neither the operating resources nor the financial resources to satisfy.
- Three aspects of un- or under-met transit demand stand out:
 - Local transit within the city of Eudora,
 - Local transit within the city of Baldwin City, and
 - Regional trips, primarily for employment, into Lawrence from its outlying communities.
- SRC already provides some demand-response transit services within Baldwin City, with some modest and in-kind support from city government. This should be continued. If resources from the city and/or from Baker University allow for an expansion of this service within Baldwin City, that opportunity should be explored.
- The city of Eudora and SRC should explore a partnership for the delivery of local demand-response transit within Eudora, modeled after the relationship between SRC and Baldwin City.
- To begin addressing regional commuting needs, CTAA suggests launching some form of pilot project to better connect Eudora residents with jobs or other destinations in Lawrence. Funding for such a project may be available from Kansas DOT through one of its competitive grant programs. If this pilot project is successful, elements of its success can be replicated across more of Douglas County.
- Independence Inc. fulfills a vital function of providing demand-response public transit across all of Douglas County's rural areas. As resources allow, it should add more vehicles and personnel to better meet more of the mobility needs of Douglas County's rural residents.

Background

At the request of the Lawrence-Douglas County MPO, the Community Transportation Association of America (CTAA) examined the extent of transit demand in the rural areas of

Douglas County, focusing on the cities of Eudora and Baldwin City. CTAA conducted a site visit on October 31 and November 1, 2017, held meetings with key stakeholders in Lawrence, Baldwin City and Eudora, and conducted background analysis subsequent to these meetings. The meetings were with local officials and leaders in the two rural communities, with the MPO's Regional Transit Advisory Committee, and with the current providers of public transit in Lawrence and Douglas County: Independence Inc., KU on Wheels, Lawrence Transit, and the Senior Resource Center for Douglas County. After the site visit was concluded, CTAA also met with the Kansas Department of Transportation's public transportation program manager.

This technical assistance was provided by CTAA to the Lawrence-Douglas County MPO through support of the Rural Business-Cooperative Service of the United States Department of Agriculture. Any findings or opinions presented in this report are those of the author, and do not represent official positions of CTAA or the United States Government.

Baseline Information

Douglas County is mostly urban, but with a significant rural population. The census-designated Lawrence urbanized area is wholly within Douglas County's borders. The local economy is dominated by the education sector, primarily on account of the presence of the University of Kansas (more than 25,000 students) and Haskell Indian Nations University (approximately 1,000 students) in Lawrence, as well as Baker University's main campus (approximately 900 students) in Baldwin City. The majority of employed Douglas County residents commute to jobs in the county, but there are significant numbers of county residents who commute to jobs in neighboring Johnson and Shawnee Counties.

Approximately half the population of Douglas County is employed. Most of the employed persons who live in Douglas County commute to jobs within the county, although some residents have jobs in either the Topeka area (Shawnee County KS), or in the Kansas City metropolitan area (including Johnson and Wyandotte counties KS, Jackson, Cass and Clay counties MO, and 10 other counties in Kansas and Missouri). Likewise, many of the workers with jobs in Douglas County commute from the Topeka or Kansas City metropolitan areas.

For residents of both Baldwin City and Eudora, they're more likely to be employed in Lawrence than in their home communities. This is most pronounced in Eudora, for whom employment in Lawrence is more than three times the number of jobs held within Eudora itself.

With respect to the ways in which Douglas County residents get to their jobs, the use of personal vehicles, primarily for solo commuting, but with some carpooling or ridesharing, predominates. What's notable are the relatively high levels of walking and biking to work, especially in Lawrence and Baldwin City, for which a safe, accessible infrastructure is important.

While the numbers are small, it's also worth noting that Eudora has a noticeable number of employed persons without personal vehicles, which – when combined with the significant incidence (at least in 2015) of high unemployment, below-average household vehicle availability, and the dominance of Lawrence as the location of jobs for Eudora residents – begins to make the case for improving the commuter connections between Eudora and Lawrence.

Selected Demographic Data

Population (2015)

- Douglas County: 114,967
 - Lawrence: 91,305
 - Eudora: 6,276
 - Baldwin City: 4,588
 - Other portions of county: 12,798

Urban/Rural Population (2010)

- Lawrence urbanized area: 88,053 (79.5 percent of county population)
 - Urbanized portions of Lawrence: 87,460
 - Urbanized portions of unincorporated Douglas County: 593
- Non-urbanized Douglas County: 22,773 (20.5 percent of county population)
 - Lawrence: 183
 - Eudora: 6,136
 - Baldwin City: 4,515
 - Other non-urbanized portions of county: 11,939

Population age 65+ (2015)

- Douglas County: 11,497
 - Lawrence: 8,035
 - Eudora: 590
 - Baldwin City: 592
 - Other portions of county: 2,280

Population with disabilities (2015)

- Douglas County: 11,153
 - Lawrence: 8,584
 - Eudora: 785
 - Baldwin City: 374
 - Other portions of county: 1,410

Population living in households with income below poverty (2015)

- Douglas County: 20,137
 - Lawrence: 18,134
 - Eudora: 700
 - Baldwin City: 404
 - Other portions of county: 899

Population living in households without vehicles (2015)

- Douglas County: 3,813
 - Lawrence: 3,433
 - Eudora: 149
 - Baldwin City: 29
 - Other portions of county: 202

Unemployed persons in workforce and rate of unemployment (2015)

- Douglas County: 3,953 (6.0%)
 - Lawrence: 3,142 (5.9%)
 - Eudora: 396 (12.1%)
 - Baldwin City: 125 (5.0%)
 - Other portions of county: 290 (4.0%)

Where People Work, and How They Commute

Employed persons living in Douglas County, 2015: 49,267

- Live and work in Douglas County: 28,634 (58.1% of employed Douglas County residents)
- Commute to jobs in Johnson County KS: 7,915 (16.1%)
- Commute to jobs in Shawnee County KS: 3,796 (7.7%)
- Commute to jobs in Jackson County MO: 1,764 (3.6%)
- Commute to jobs in Wyandotte County KS: 1,430 (2.9%)
- Commute to jobs in other counties: 5,728 (11.6% of employed Douglas County residents)

Employed persons living in Lawrence, 2015: 38,245 (77.6% of county's workforce)

- Live and work in Lawrence: 22,175 (58.0% of employed Lawrence residents)
- Commute to jobs in Topeka: 2,686 (7.0%)
- Commute to jobs in Overland Park: 1,893 (4.9%)
- Commute to jobs in Kansas City MO: 1,285 (3.4%)
- Commute to jobs in Lenexa: 1,184 (3.1%)
- Commute to jobs in Olathe: 1,056 (2.8%)
- Commute to jobs in Kansas City KS: 969 (2.5%)
- Commute to jobs in other cities/places: 6,997 (18.3% of employed Lawrence residents)

Employed persons living in Eudora, 2015: 3,020 (6.1% of county's workforce)

- Live and work in Eudora: 268 (8.9% of employed Eudora residents)
- Commute to jobs in Lawrence: 927 (30.7%)
- Commute to jobs in Overland Park: 225 (7.5%)
- Commute to jobs in Lenexa: 220 (7.3%)
- Commute to jobs in Olathe: 185 (6.1%)
- Commute to jobs in Topeka: 165 (5.5%)
- Commute to jobs in Kansas City MO: 105 (3.5%)
- Commute to jobs in Kansas City KS: 100 (3.3%)
- Commute to jobs in other cities/places: 825 (27.3% of employed Eudora residents)

Employed persons living in Baldwin City, 2015: 2,023 (4.1% of county's workforce)

- Live and work in Baldwin City: 355 (17.5% of employed Baldwin City residents)
- Commute to jobs in Lawrence: 471 (23.3%)
- Commute to jobs in Olathe: 132 (6.5%)
- Commute to jobs in Overland Park: 128 (6.3%)
- Commute to jobs in Topeka: 126 (6.2%)
- Commute to jobs in other cities/places: 811 (40.1% of employed Baldwin City residents)

Number of employed Douglas County residents who commute primarily by transit, 2015: 1,193 (2.0% of county's workforce)

- Number of Lawrence residents who commute primarily by transit: 1,181 (2.4% of city's workforce)
- Number of Eudora and Baldwin City residents who commute primarily by transit: none
- Number of residents in other areas of Douglas County who commute primarily by transit: 12 (0.2% of unincorporated Douglas County's workforce)

Number of employed Douglas County residents who commute primarily by walking or biking, 2015: 4,081 (6.8% of county's workforce)

- Number of Lawrence residents who commute primarily by walking or biking: 3,685 (7.6% of city's workforce)
- Number of Eudora residents who commute primarily by walking or biking: 103 (3.8% of city's workforce)
- Number of Baldwin City residents who commute primarily by walking or biking: 172 (7.7% of city's workforce)
- Number of residents in other areas of Douglas County who commute primarily by walking or biking: 121 (1.8% of unincorporated Douglas County's workforce)

Number of employed Douglas County residents who do not have a vehicle in their household, 2015: 1,448 (2.4% of county's workforce)

- Number of Lawrence residents who do not have a vehicle in their household: 1,313 (2.7% of city's workforce)
- Number of Eudora residents who do not have a vehicle in their household: 41 (1.5% of city's workforce)
- Number of Baldwin City residents who do not have a vehicle in their household: none
- Number of residents in other areas of Douglas County who do not have a vehicle in their household: 94 (1.4% of unincorporated Douglas County's workforce)

Patterns of Rural Transit Need and Demand in Douglas County

There are a number of tools and techniques that can be used to identify and explore the demand for public transit in rural communities. One generally accepted approach for forecasting demand and quantifying the need for transit services in smaller communities has been validated over time and is published by the National Academy of Sciences as Transit Cooperative Research Program (TCRP) Report 161, *"Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation."* Based on that report's model, the following elements of transit demand begin to emerge:

- A. Local transit demand within Baldwin City: approximately 2,100 one-way trips per year**

The likeliest consumers of transit within Baldwin City are its older adults (12.9 percent of the city's population is over the age of 65) and its households with income below poverty (10.4 percent of the city's population lives in households with income below the federal poverty line). Since vehicle availability rates in Baldwin City are the highest in all of Douglas County, overall demand for transit is likely to remain low. Most – possibly all – of this demand already is satisfied through the transit services that SRC provides for the city of Baldwin City.

B. Intercity transportation between Baldwin City and Lawrence: approximately 5,400 one-way trips per year

There is real, and largely unmet, need to connect these cities, whether it's a matter of Baker University staff commuting from Lawrence, of Baldwin City residents commuting to jobs in Lawrence, or Baker University community members (and other Baldwin City residents) looking for shopping, entertainment or social service travel to Lawrence. However, the overall numbers will be quite low, on account of Baldwin City's small population, and the modest level of staff and enrollment at Baker University. With an estimated 5,400 one-way trips per year, the anticipated demand for some type of commuter service works out to serving an average of 10 persons per day, or about 2.1 percent of the commuter traffic between Baldwin City and Lawrence. This probably is too low a level of ridership to support any kind of scheduled commuter bus service, but may be enough for interested parties in Lawrence or Baldwin City to consider vanpools or other shared-ride forms of transportation between the two cities.

C. Local transit demand within Eudora: approximately 4,100 one-way trips per year

While the current services provided by SRC and Independence respond to some of the transit demand within Eudora, there's a good deal of un-met transit need. Unlike Baldwin City, no transportation assets are dedicated to meeting the in-town transit needs of Eudora residents. If SRC and the city of Eudora can enter into some kind of relationship similar to that which SRC has with Baldwin City, it should be possible to meet most of Eudora's in-town transit demand with a single SRC vehicle (and driver) assigned to Eudora.

D. Intercity transportation between Eudora and Lawrence: approximately 12,500 one-way trips per year

As stated above, more of Eudora's residents work in Lawrence than any other destination. For those Eudora residents who are seeking jobs, their greatest employment prospects are likely to be found in Lawrence. This may be particularly important to the 700 Eudora residents currently living in poverty, and the nearly 150 Eudora residents who do not have any vehicles in their household (which probably overlaps with the number of Eudora residents living in poverty). If some form of transit were available to connect these cities, it could attract approximately 50 one-way passenger trips per day, or 12,500 passenger trips per year. That's not a huge number, serving an average of 25 commuters per day, but substantial enough to consider launching some form of pilot program to help people commute by bus from Eudora to Lawrence-area jobs. There are a number of ways in which this important – albeit modest – commuter transit need could be addressed, some of which are discussed briefly below. In any case, CTAA found that this was the most significant, and currently the least addressed, transit need in the rural areas of Douglas County.

Based on the above analysis, CTAA recommends that it would be most appropriate to focus initial attention on improving the transportation connections between Eudora and Lawrence. That's not to deny that connections between Baldwin City and Lawrence, or within either

Baldwin City or Eudora, aren't also important: they are. But in terms of overall quantified transit demand and the opportunity for positive economic impact as a result of transit system improvements, the Eudora-Lawrence connection looms largest.

Strategies for Connecting Eudora and Lawrence

In looking for transit strategies that can be used to provide at least 50 one-way passenger trips per day between Eudora and Lawrence, a number of possibilities emerge. Some may be impractical for either jurisdictional or operational reasons, but it's important to explore the options, even if the ultimate solution is completely different from anything presented on these pages.

In any case, the movement of this small number of people over a relatively short distance (it's approximately 10 miles from the center of Eudora to the downtown district of Lawrence) does not require the dedication of a large transit coach or intercity bus, although those may end up being the best available options. One or two vehicles seating as few as 16 passengers may suffice. However, the demand for transit between Eudora and Lawrence appears to be greater than could be met with vanpools, or even with dedicated small vans or minivans.

Realizing, then, that CTAA's suggestions are not bounded by local conditions or restrictions, here are four options that are presented for discussion purposes:

Option 1: Independence Inc. Launches Eudora – Lawrence Connector

Administratively, this might be the easiest approach, as Independence Inc. already is the principal provider of rural transit in Douglas County. In all likelihood, the operational costs would be low, as Independence's fully loaded cost basis is less than \$30 per vehicle-hour. On the other hand, none of the vehicles in Independence's fleet are large enough for providing dedicated transit service between Eudora and Lawrence, which suggests that larger vehicles would need to be acquired. Similarly, it probably would be necessary for Independence to add the operating staff needed to support such an operation. Although operating fixed-route transit is relatively straightforward, the details of supporting a fixed-route operation sometimes can be a challenge for agencies whose only operating expertise has centered on demand-response operating modes. But if Independence is up for the challenge, and can afford to add fixed-route small buses and appropriately licensed drivers at wages comparable to what it pays its existing staff, it could be possible to operate a single vehicle Monday – Friday, with two stops in Eudora and two or three stops in Lawrence, maintaining 60-minute headways (with less frequent service in the middle of the day); if the drivers can be used to help cover some of Independence's demand-response transit, too, there may be sufficient efficiencies to use two vehicles and two drivers, running on 30-minute headways at peak commuting hours. But if the

average were 15 hours of service per weekday at \$30 per hour, the operating cost would be approximately \$112,500 per year, which is considerably more than the entirety of Independence's current operating budget. If the fare were \$1.00 per trip (comparable to the Lawrence Transit fixed-route fare), farebox receipts would provide \$12,500; this would mean that \$100,000 would have to be covered through some combination of federal, state, and local funds.

Option 2: Extend one of Lawrence Transit's Routes to Eudora

This could be administratively difficult, and could be costly, but an extension of some of the runs of Lawrence Transit's Route 1, 5 or 15 to Eudora would be attractive to the transit customers as it would afford a seamless set of connections to get Eudora residents from their home to any location served by Lawrence Transit. Such a route extension would create some scheduling challenges for Lawrence Transit, but these would not be insurmountable. Extending one of those routes to go the extra five miles from their current terminus in or near the East Hills Business Park to one or two stops in Eudora would add 30 minutes for each incidence of extension, which would add up to at least 6 additional vehicle-hours of service per weekday. At Lawrence Transit's average operating cost of nearly \$65 per hour, this cost would amount to nearly \$100,000 per year; subtracting likely fare collections of \$12,500, that leaves \$87,500 that would have to be covered through a combination of federal, state and local funds. Oh, and all of this would require some kind of administrative arrangement to provide Lawrence Transit (which is part of Lawrence's city government) with the sufficient authority to provide service to the city of Eudora.

Option 3: Add One or More Eudora Stops to the K-10 Connector

"The bus already runs through Eudora; how hard could it be to add a stop?" The K-10 Connector bus, a commuter bus that connects three stops in Lawrence with two stops in Overland Park, runs along K-10 right through Eudora. Assuming Johnson County Transit (the transit agency operating this service) were amenable to adding a stop in Eudora to the existing service, it would have a couple of options; one would be to pull off K-10 to a stop near Eudora High School, not far from the highway, which would add at least 5 minutes travel and dwell time to each run of the bus, and the other option – which would be more attractive to transit users in Eudora – would be to reroute westbound K-10 buses to exit K-10 at East 10th Street, taking East 10th to its intersection with Church Street (with one stop at or near that intersection), and then proceed south on Church Street to its interchange with K-10 (probably having a second stop at or near the intersection of Church Street with 15th St.), and then continue westbound on K-10 toward Lawrence, with the eastbound buses routed similarly through Eudora. That re-routing of the K-10 bus through Eudora probably would add at least 15 minutes to each run of the bus. At Johnson County Transit's operating cost of nearly \$120 per vehicle-hour, the approximate cost burden of adding one or two stops in Eudora would be

\$100,000 per year (if only one Eudora stop), or up to \$300,000 per year (if rerouted to have two Eudora stops). There would be some downsides to this option. One downside is that the K-10 service is designed almost exclusively for the schedules and convenience of college students, as it runs only when schools are in session, and stops only at KU's Lawrence and Edwards (Overland Park) campuses and at the Johnson County Community College campus in Overland Park. The other challenge would be the administrative challenge of seeing a way for a Johnson County service to add service to a Douglas County community. On the other hand, it's probably reasonable to imagine that Eudora passengers could be asked to pay the same \$3 fare as all other K-10 Connector passengers, and the benefit of frequent service to both Overland Park and Lawrence could be attractive, at least to those Eudora residents able to get themselves to the stop(s) that could be added in Eudora. Under the best-case scenario, the 12,500 trips per year that have been forecast for Eudora's inter-city commuting needs would yield \$37,500 in farebox receipts, which leaves either \$62,500 (for the single-stop approach) or \$262,500 (for the two-stop approach) that would need to be covered through some combination of federal, state or local funds. This service would result in the responsibility for assuring accessible transportation options, these needs are discussed below in the section, "What about Accessibility and the ADA?"

Option 4: Establish Vanpools to Connect Eudora Residents with Lawrence Destinations

Inasmuch as a primary purpose of linking Eudora with Lawrence would be to help assure job access for Eudora residents, a vanpool strategy is worth considering. Depending on specific numbers of riders and their travel patterns, the vanpooling demand between these cities could be addressed with 4 or 5 vans.

One of the key strengths of vanpool programs is their incredible elasticity: vans are added or subtracted on the basis of actual use, which maximizes the effective use of the transit assets. Another key strength of employee vanpools is that they are driven by participating workers, and do not require much dedicated labor expense (there is some staff expense associated with coordinating, promoting and overseeing a vanpool program, but the fact that there are no paid drivers is a tremendous cost savings, when compared with other options). A third strength is that vanpools typically rely on low-cost, standard production vans and minivans, which means either comparatively low vehicle acquisition costs (if purchasing these vehicles directly) or low lease/use payments if using a third-party vanpool operator (such as Enterprise RideShare or the numerous smaller vanpool companies across the country). Finally, there's the added advantage that a vanpool program doesn't have to be as geographically constrained as traditional fixed-route transit. Conceivably, vanpools could be promoted throughout Douglas County without any more risk than if launched just for Eudora or any other community.

There are programmatic weaknesses associated with vanpool programs, too. One weakness is that the transportation focus is almost wholly on getting to and from the work location, which

all but precludes transportation for non-work purposes such as social or medical services. A related weakness is that vanpools rely on their participants to be licensed drivers, which presents a participation barrier among non-drivers, such as some individuals with disabilities, or certainly among persons who do not (or cannot) hold a drivers license; this barrier is fairly easily addressed in most vanpool operations, but it nevertheless is a real challenge. Since much of the current transit need in Eudora is among people who can't drive to work, whether in their own vehicle or behind the wheel in a vanpool, it's quite possible that a vanpool program in Eudora could be successful, and still leave much of that city's current transit demand unsatisfied.

There are several ways through which such a vanpool service could become available. One could be to explore working with the State of Kansas' employee vanpool program (information on which is at <https://admin.ks.gov/offices/ofpm/kansas-van-pool-program>); the greatest barrier to utilizing this program, is it is currently limited exclusively to state employees, and there may be a number of insurmountable reasons that would prevent the user base being expanded to include persons who are not Kansas state employees. Another possible approach could be to negotiate with the Kansas City Area Transit Authority (KCATA) to include Douglas County in the scope of counties that participate in KCATA's "RideKC Van" program, which is operated for KCATA by Enterprise RideShare; information on this program is at <http://ridekc.org/rider-guide/vanpool>, and it would have the advantage of being a more-or-less turnkey operation from Douglas County's perspective, involving little risk and minimal investment of either staff time or program dollars, assuming such an agreement is allowable and acceptable among the participating governments. A third approach could be for the Lawrence-Douglas MPO, Lawrence Transit, or some other entity in Douglas County to be the sponsoring and operating entity of a vanpool program, either operating such a program directly, or entering into its own relationship with Enterprise RideShare or some other vanpool operating entity.

The cost of vanpool services is lower than directly operated transit service. Whether borne by the worker or their employer, the major price point is the dollar value of the "pre-tax" qualified transportation fringe benefit rate, set each year by the Internal Revenue Service, which is \$260 per month in 2018. If 25 employees are participating in a vanpool, the non-taxed maximum that they or their employers would be paying adds up to a total of \$78,000 for the year, but it's likely that the actual costs of operating a vanpool service in Douglas County would be less than that.

What about Accessibility and the ADA?

In any of the above options, it's important to factor in the responsibility of assuring accessible public transportation, including the requirement to provide complementary paratransit as an adjunct to any fixed-route public transit services that are provided. Within Eudora, the number

of persons whose disabilities would prevent them from using an otherwise accessible, available fixed-route bus is small. Out of Eudora's population of persons with disabilities, probably only a few dozen would satisfy an ADA paratransit eligibility standard, and it's likely that not many of those would be seeking transportation services along the corridors served by the options presented above. Nonetheless, Options "1," "2" and "3" above all would require that this paratransit service be planned and provided. It's possible that existing services could be extended to serve the ADA paratransit customer base in Eudora, probably at an additional cost to local government(s) of between \$12,000 and \$20,000. Conversely, the vanpool idea, "Option 4," does not carry any paratransit requirement, but has the disadvantage that it does little or nothing to address the mobility needs of persons with disabilities, whether they're commuting to jobs or requiring transportation to social services, health care, education, shopping or other destinations.