2016 CORRIDOR MPO TRANSIT STUDY

CORRIDOR MPO

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2016 Corridor MPO Transit Study

Existing Conditions Analysis and Final Recommendations

July 2016

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Corridor MPO

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The preparation of this study was financed in part through federal funds provided by the U.S. Department of Transportation, Federal Highway Administration, and/or Federal Transit Administration.

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Executive Summary

In 2015, the Corridor MPO began a major effort to coordinate transportation planning in the Cedar Rapids metro region via its Passenger Transportation Plan (PTP). The plan was multi-modal in its scope and identified needs and developed strategies for improving auto, transit, pedestrian, and bicycle infrastructure in the region. The plan also included recommendations and funding for various studies and plans to create a vision, set goals, and identify priorities for the future regional transportation network. For transit, the PTP recommended that a metro-wide comprehensive study be completed to assess the existing transit services in the region and provide recommendations to improve the system in the short term and identify priorities for growth and expansion in medium and long term. This study, the 2016 Corridor MPO Transit Study, is a product of the PTP. The timing for the MPO's recommendation to study and improve the transit system is impeccable as the region is on track to reach 200,000 residents by the 2020 US Decennial Census which would change CR Transit's classification with the Federal Transit Administration and, with that, its governing and funding guidelines.

The 2016 Corridor MPO Transit Study aimed to examine all of the components of transit service in the MPO region which included fixed-route, paratransit, and specialized demand response, identify new markets and areas for transit service, and study the various paths CR Transit can take as an entity in the future. The overall objective of the study is to develop a number of alternatives and scenarios that would create the most effective and efficient public transit system for the region that adequately meets the needs of the existing users, residents, and visitors. The goals of the study include the following: take a "fresh look" at the various components of the transit system, develop strategies to improve service on the most popular routes, improve passenger amenities and experience, identify ways to expand the reach of the system, gather public and stakeholder input to guide future of transit service in region, study the creation of a regional transit authority, and develop roadmap to expansion for proposed alternatives and scenarios.

Existing Conditions

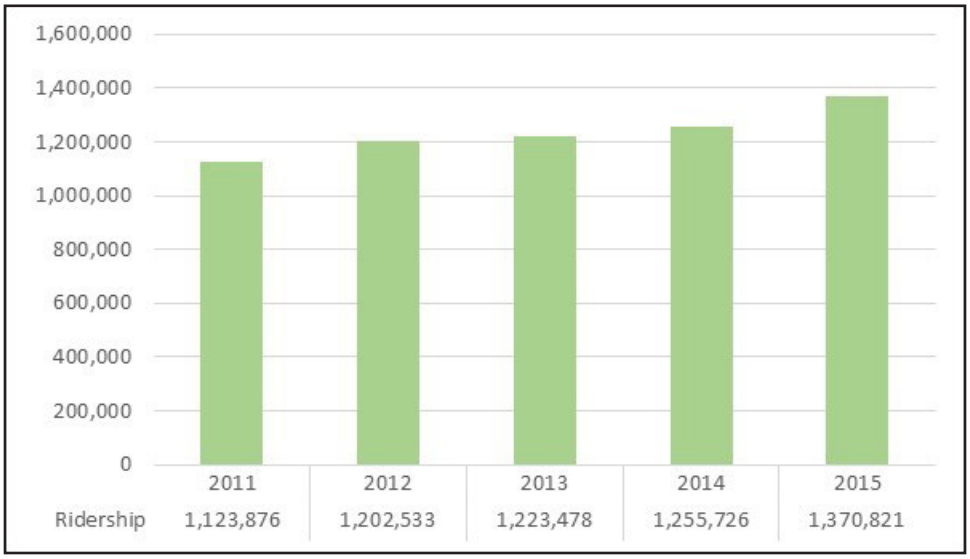
CR Transit is directly operated by the City of Cedar Rapids and provides fixed-route transit service to Cedar Rapids, Hiawatha, and Marion. CR Transit operates 14 fixed-routes during weekdays and Saturdays. There is no fixed-route transit service operated on Sundays. Service is provided from 5:15AM to 7:00PM Monday through Friday and from 7:55AM to 5:00PM on Saturday. The transit system is designed as a hub-and-spoke pulse operation where all routes meet at the Ground Transportation Center (GTC) to facilitate connections to all other routes at the same time each hour with some routes pulsing every half-hour during AM/PM peak times to meet rider demand.

In FY 2015, CR Transit carried 1.37 million riders with an operating budget of $8.0 million. Ridership has increased by 22 percent since FY 2011 with a 9.2 percent increase between FY 2014 and FY 2015 alone. Much of this increase is attributed to the fare-free Saturdays program which has resulted in a 25.7 percent increase in ridership on Saturdays however, weekday ridership has also increased by 7.3 percent during the same period.

Linn County Intra-County Facilitating Transportation System (LIFTS), contracted by the City of Cedar Rapids, provides door-to-door paratransit service as required by the American Disabilities Act (ADA) for residents in Cedar Rapids, Hiawatha, and Marion. The ADA requires that complementary paratransit services be provided to persons with disabilities that prevent them from using general fixed-route service within a service area defined by a ¾ mile buffer around the existing fixed-route system, however, LIFTS provides paratransit service to both seniors and persons with ADA eligibility outside of the CR Transit service area to all Linn County residents. LIFTS service is provided during the same days and hours as CR Transit fixed-route service.

In FY 2015, LIFTS transported approximately 76,500 riders with an operating budget of $611,500 provided by CR Transit/City of Cedar Rapids. Since FY 2011, there has been a gradual decline in total ridership on LIFTS with the exception of the time between FY 2014 and FY 2015 where ridership increased by 2.7 percent but still under total riders carried prior to FY 2014.

Cedar Rapids Transit Annual Ridership (FY 2011 - FY 2015)



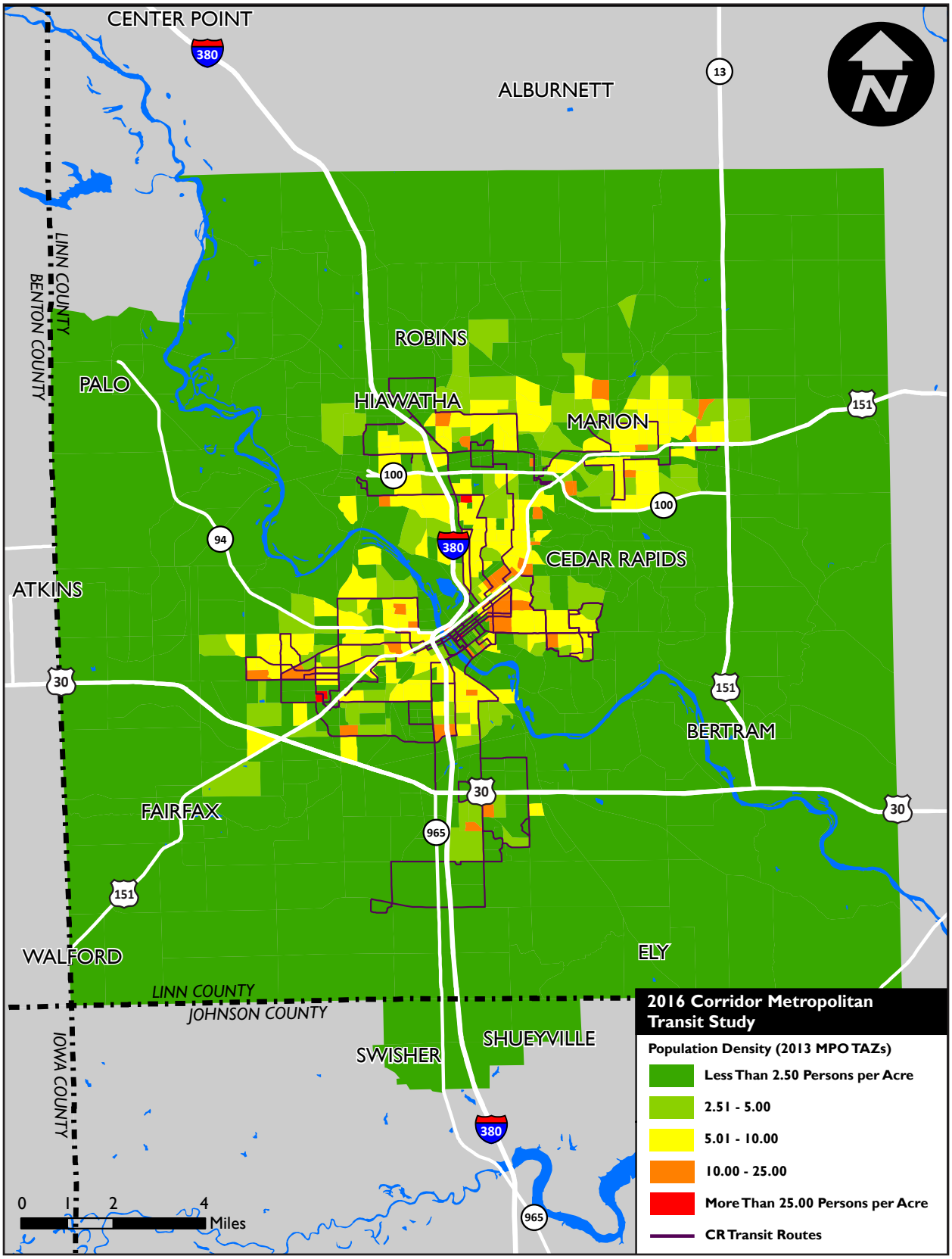
Neighborhood Transit Services (NTS) provides specialized demand response service for eligible work, school, and life skills trips for residents of Cedar Rapids, Hiawatha, and Marion. Service is provided at all times outside of CR Transit operating hours including late nights and Sundays. In FY 2015, NTS operated approximately 38,800 trips with an operating budget of $408,000 provided by CR Transit/City of Cedar Rapids. Ridership has generally grown since FY 2011 when it operated 35,600 trips and reached a peak of almost 41,000 trips in FY 2013.

As part of the existing conditions analysis, demographic patterns of the region were also studied to better understand the market and operating environment for transit. Demographic characteristics including population density, employment density, household income, and automobile access were all studied as they generally provide some indicators for transit propensity.

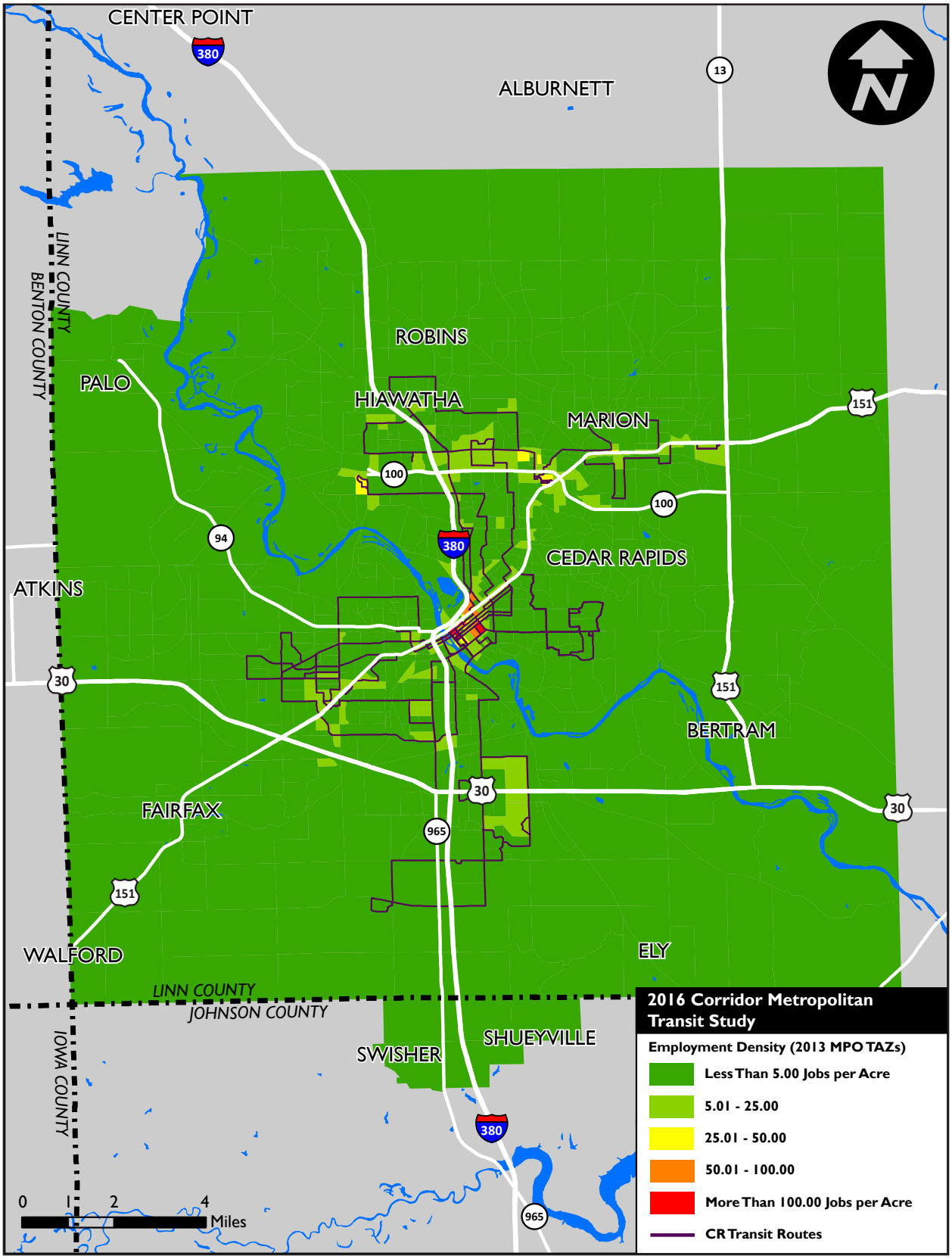
The population density of a place is an important characteristic to consider as areas of higher density generally means there are more people living within a certain distance of a transit stop or corridor and also suggests that these areas of high population density exhibit some form of urban design that promote transit use such as walkability and mixed land uses. In the region, areas of high population density are sprinkled around the core areas of Cedar Rapids, Hiawatha, and Marion that exceed 10 persons per acre. Additionally, two areas within the downtown of Cedar Rapids also report population densities exceeding 25 persons per acre. CR Transit has a good grasp of serving all of these areas of high population density with at least one fixed-route. Outside of Cedar Rapids, Hiawatha, and Marion, and the CR Transit network, population density is low with many areas reporting a population density between 2.5 and 5.0 persons per acre but most reporting a population density less than 2.5 persons per acre which is generally too low for any type of transit service.

Employment density is another important factor to consider as areas with concentrated employment, or a high level of jobs in a small area, suggest a high demand for travel to that area and could be easily served by transit service at these elevated levels. The highest levels of employment density are located in the downtown core of Cedar Rapids with a number of areas reporting an employment density exceeding 50 jobs per acre with some reporting employment density over 100 jobs per acre. The downtown core is well served by CR Transit as their GTC is located in Downtown Cedar Rapids. Some areas in Hiawatha and Marion report elevated levels of employment density between 25 and 50 jobs per acre which are the clusters of commercial and retail centers in those cities. Outside of these areas, employment density is very low at less than five jobs per acre.

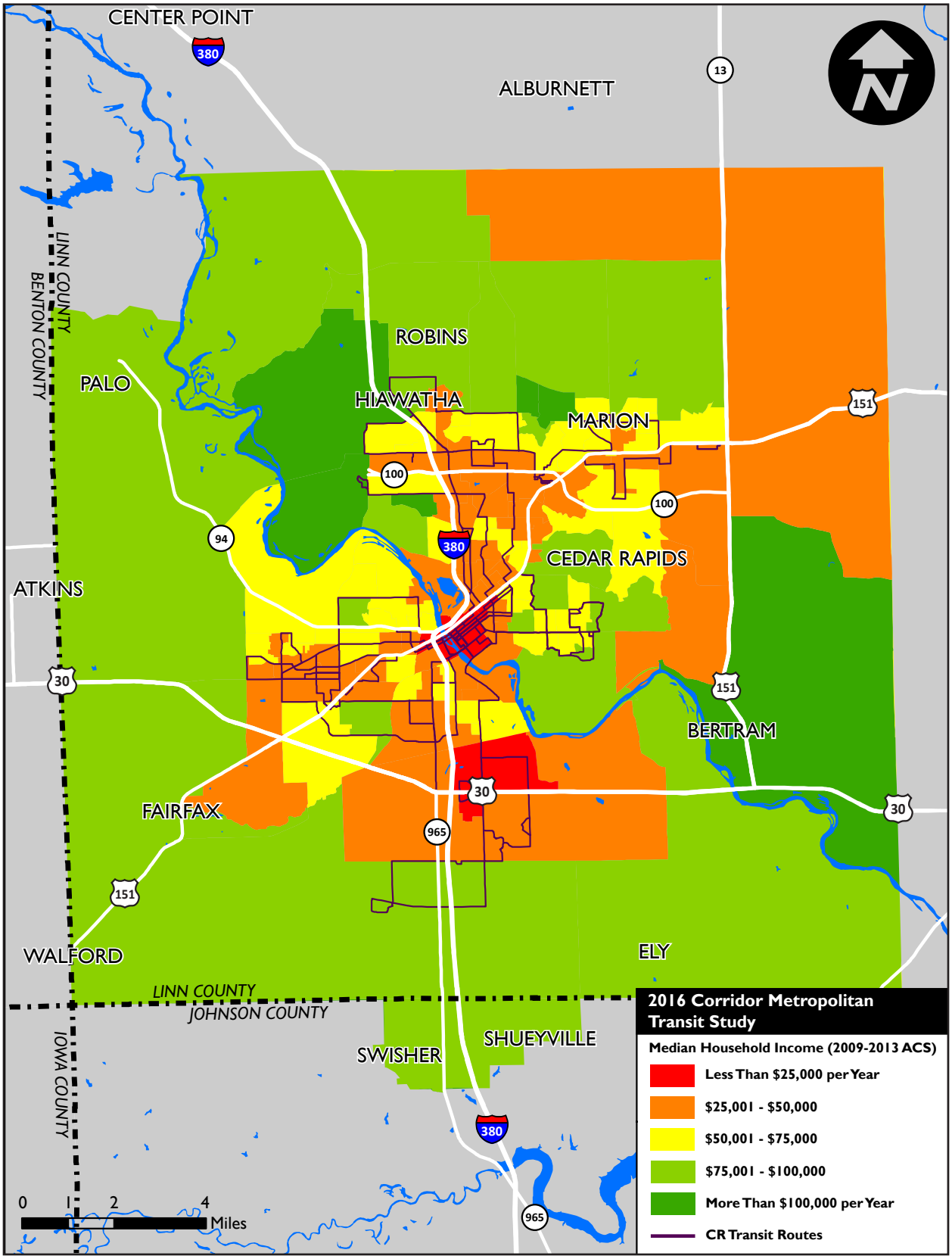
Study Area Population Density



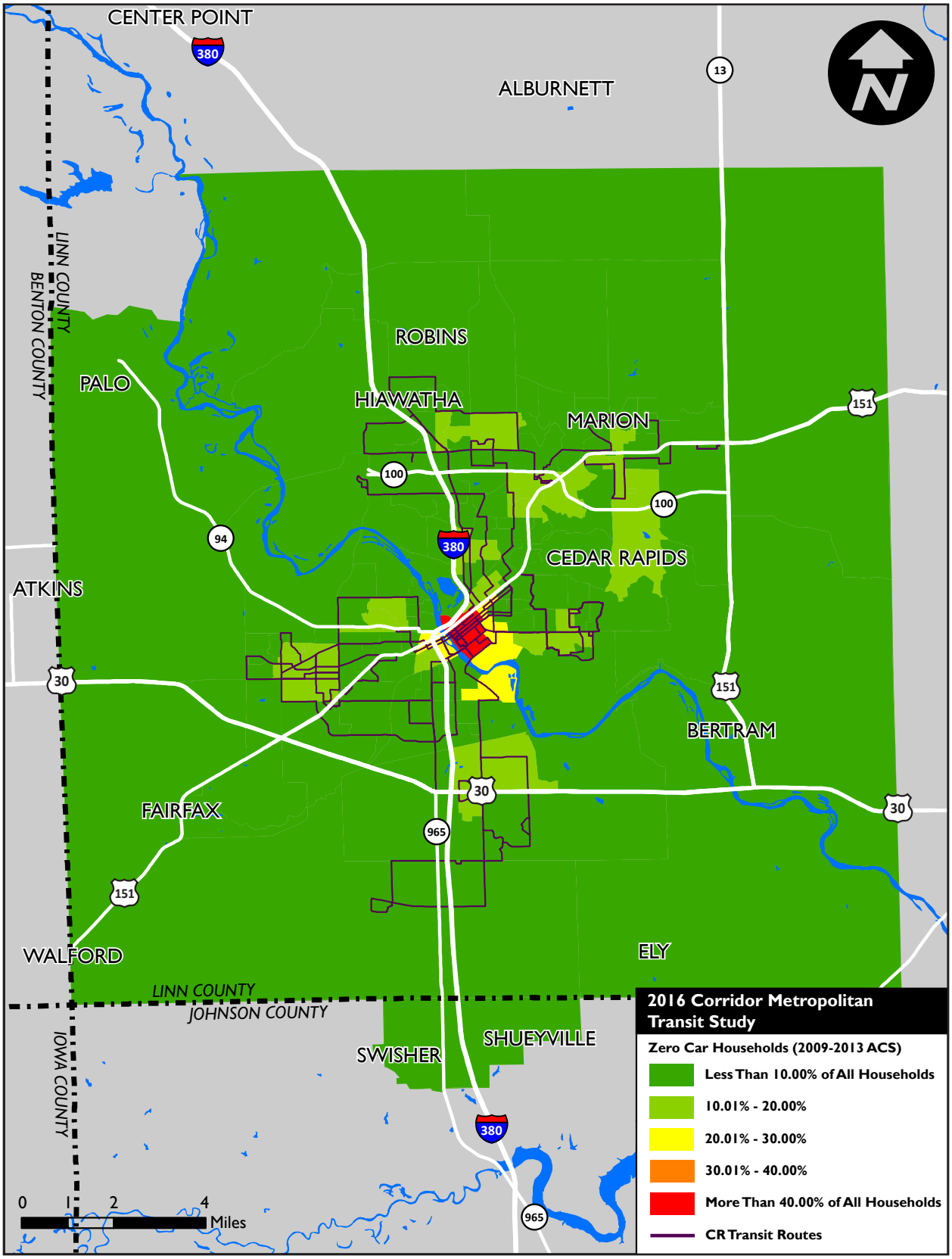
Study Area Employment Density



Study Area Median Annual Household Income



Study Area Zero Car Households



Households with low income(s) and zero access to an automobile are also strong indicators of a propensity to use public transit or use transit as their primary means of transportation. Areas with a high concentration of these type of households help indicate where transit would vital. Areas with the lowest level median household incomes are located in Downtown Cedar Rapids, the adjacent neighborhoods, and to the south along Bowling Street SW and 41st Avenue SW all reporting median annual household incomes of less than $25,000. Areas characterized by zero access to an automobile are less wide spread and concentrated to Downtown Cedar Rapids and adjacent neighborhoods on both sides of the Cedar River. The downtown core reports that over 40 percent of households do not have access to an automobile with the adjacent neighborhoods reporting anywhere between 20 and 30 percent of households not having access. Like the other two characteristics above, the existing CR Transit network generally serve all of the areas characterized by a low median household income and/or zero access to an automobile. Outside of these areas, households not having access to an automobiles is generally less than 10 percent of all households.

Public Input and Engagement

The public involvement process for the 2016 Corridor MPO Transit Study included an extensive number presentations and discussions with the general public, riders, CR Transit staff, and stakeholders including staff from the cities of Cedar Rapids, Hiawatha, and Marion, representatives from various neighborhoods in the region, area hospitals and shelters, and transportation advocacy groups (e.g. Riders Club of America). Additionally, an online survey and forum were created to gather ideas and encourage dialogue about transit service in the region and feedback on recommendations. Public input and stakeholder engagement were vital to the development of the initial and final recommendations of this study and presented in this report.

Two sets of open houses were held for the study. The first open house was held on February 16, 2016 and used to present the study to the public and gather input from riders and residents about transit service in the region. The open house was held at the GTC from early morning to early evening where existing conditions and initial findings of the study was presented to the public. Throughout the day, consultant and MPO staff were available to discuss the project, answer questions, and collect input from the public about the study. Comments and requests from the public during this initial open house include: longer service hours on weekdays and Saturdays; Sunday service, more direct options without having to transfer at the GTC; loops cause longer trips and confusion to riders; consistent overcrowding on Route 5 buses; and general improvement to passenger amenities including bus shelters and stops.

The second open house was held on April 28th, 2016 at the GTC during the day and at the Downtown Cedar Rapids Public Library during the early evening. The open house was held to present the initial transit service alternatives and recommendations to the public and gather feedback and input to the changes that would later be incorporated into the final recommendations. The alternatives and recommendations were presented on boards at the GTC and the public was welcome to review the boards and provide comments and feedback to any of the staff present. At the public library, a more formal presentation was provided that discussed all of the alternatives and highlighted the changes at each level.

Comments to the alternatives and recommendations presented at the second open house include the following: **Alternative 1** – alternative better utilizes existing resources, Route 5X will help relieve existing overcrowding, alternative represents bare minimum of improvements needed, Walmart as a secondary hub is a great idea; **Alternative 2** – taking away AM peak service may hurt some groups, need to better understand impact of losing AM peak service, evening service would be good at getting people to/from jobs; **Alternative 3** – funding increase needed for this alternative may be an issue, concept is closer to what city needs, night service should be until 11PM; **Alternative 4** – alternative is transit system that city needs, this level of funding needed for alternative will be difficult to find, morning service should start earlier.

An online survey was also created to allow another medium for riders and residents to provide input about the study and transit service in the region. The survey consisted of 21 questions and was advertised via the Corridor MPO's website with paper copies also made available onboard buses and vehicles as well as the GTC. A total of 339 surveys were collected over a two month period between February and March 2016. Some key findings to the online survey include the following: 49 percent of the respondents did not have a car or access to reliable

transportation, 27 percent were unable to drive a car, Route 5B and 5N were the most frequently used routes by respondents, and the average satisfaction score for the transit system was 1.90 (0-4 scale).

Five sets of stakeholder interviews were conducted to discuss transit service in the region and how transit is meeting or not meeting the needs of stakeholders and how transit could be improved in the region to better serve the community. Stakeholder groups that were identified included major employers, social service providers, education organizations, convention and tourism organizations, and municipal and regional staff. The stakeholder meetings were held on February 16th and 17th at the Cedar Rapids City Hall.

The first stakeholder meeting was focused on municipal and regional staff and included five participants from the Cedar Rapids Planning Commission, the City of Marion, City of Cedar Rapids, and the City of Robins. Top issues with this initial group of stakeholders included: transit trips are too long and service span is too short to attract choice riders, vital destinations are likely bypassed or unserved due to constraints of hub and spoke/ pulse system, and how to get transit to play vital role in steering development. Ideas or solutions to some of the issues that CR Transit faces that were offered at this meeting included operating a route from the Lindale Mall direct to Kirkwood Community College, designing the system to attract choice riders that will increase transit ridership, and providing Marion with its own route.

The second stakeholder meeting was focused on paratransit and other transportation providers in the area. There were four participants in this group and included representatives from LIFTS, NTS, Special K's Transport, and Riders Club of America. Top issues with this group of stakeholders included: geographic area and area population is not transit friendly or transit oriented, the built environment is not conducive to good transit outside of the main cores of cities (i.e. sidewalk network), and the costs required to improve transit are a concern. Ideas or solutions that were provided at this meeting included: focus on attracting choice riders, turning CR Transit into an RTA would be a good idea as it would provide an opportunity to generate additional funding that transit needs in this region, and improve future built environment to include needs of transit and transit users.

The third stakeholder meeting included social service providers in the region. A total of seven participants were included in this meeting from the United Way of East Central Iowa, NTS, Goodwill Industries, Mercy Medical Center, Willis Dady Emergency Shelter, ADA Advisory Committee, and the City of Cedar Rapids. Top issues raised in this meeting included: need for improvement at bus stops and shelters, difficulty for riders with disabilities to use any of the transit services in the region, need for more transit travel training in the region, transit trips are too long, persons with vision impairments often have difficulty using system (e.g. smart phone app), and increase in demand for transit trips outside of CR Transit hours becoming a major issue. Ideas or solutions that were raised in this meeting include the following: shorten transit trip times by adding mini-hub in northern area of transit system (e.g. Lindale Mall), improvement to transit system should be progressive and inclusive of those with disabilities, and expand night service.

The next stakeholder meeting included representatives from education providers in the region. One representative was available for the meeting from the Marion Independent School District. Top issues for raised in this meeting included: transit trip times tend to be too long for students, more students are arriving by car which causes congestion in school areas, and that the City of Marion has considered ceasing providing bus service for students. Ideas and solutions raised in this meeting included collaboration between school districts and CR Transit to provide adequate service for students and increase transit marketing and advertising to improve image and knowledge of CR Transit to region.

The final stakeholder meeting included representatives from economic development and tourism organizations. A total of four participants attended the meeting from the Czech Village/New Bohemia Main Street District, the Cedar Rapids Economic Alliance, the City of Cedar Rapids, and the Marion Economic Development Company. Top issues raised in this meeting included: some focus on transit needs of visitors should be considered, more service to Kirkwood Community College is needed, NewBo area not well served, improvements to pedestrian and bicycle infrastructure to complement transit service in southwest Cedar Rapids is needed, I-380 transit study is looking at subscription bus service for employers. Ideas and solutions offered at this meeting included the following: make buying transit tickets easier (e.g. not only at GTC), potential mini-hub at Lindale Mall, and develop a downtown circulator to attract choice riders and visitors.

Transit System Recommendations and Alternatives

A series of four alternatives were created for the study. **Alternative 1** – Cost Neutral Day Service includes a number of recommendations that would change alignments on a number of routes but would not increase the operational cost of operating the system compared to the existing CR Transit system. **Alternative 2** – Cost Neutral Night Service recommends operating limited night service to 10PM on weekdays while also not increasing the operational cost of operating the system compared to the existing CR Transit system. **Alternative 3** – Maximum Service recommends a number of service improvements and expansion that would could be afforded through a recommended increase in funding from a property tax levy initiative. **Alternative 4** – Ideal Service includes an expanded number of service improvements that incorporate some of the most frequent requests from riders and the region but much more than the additional revenue projected in Alternative 3.

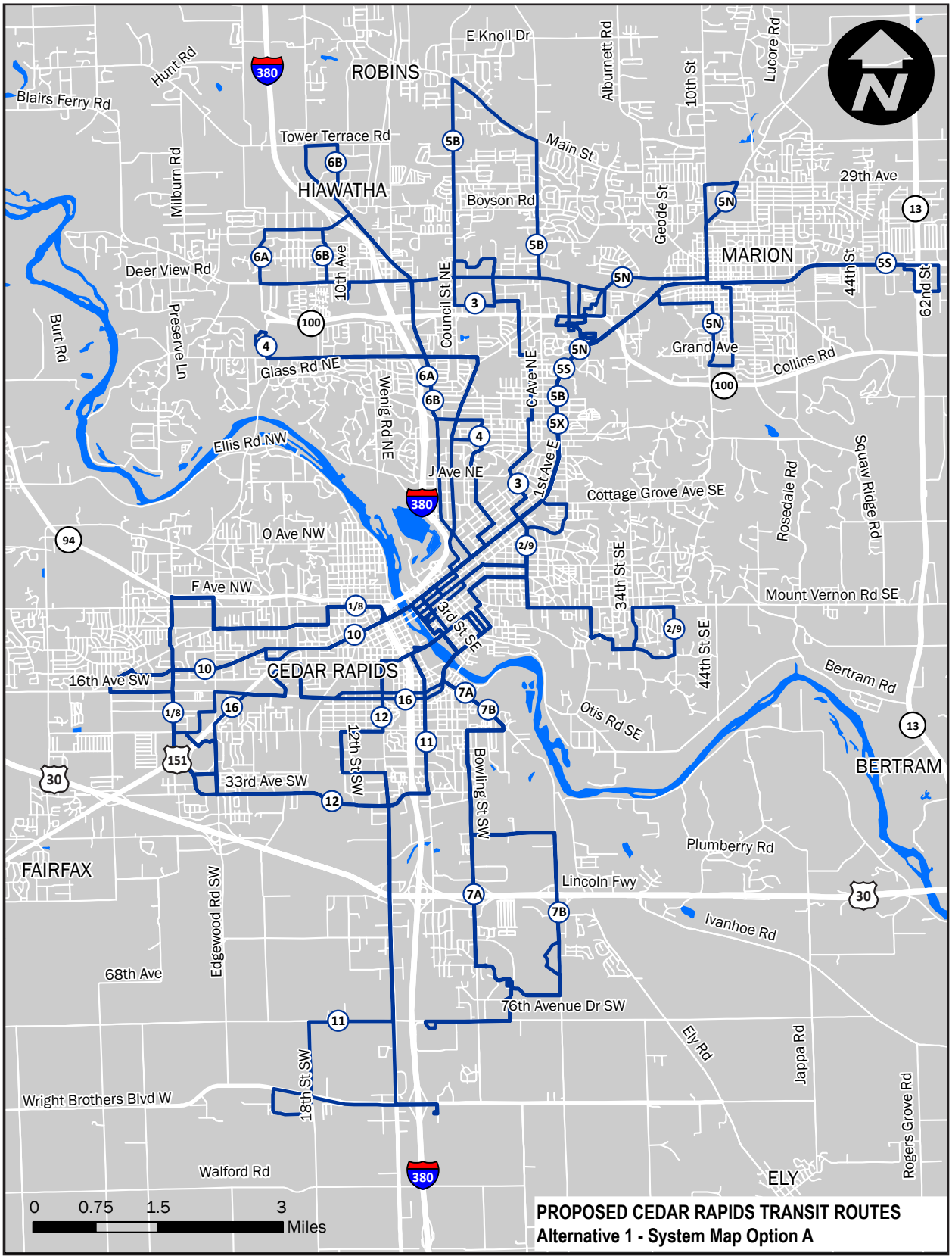
The recommendations were formed keeping three key principles of best practices in transit planning and operations in mind. The first principle was to shift resources from less productive routes or areas to more productive ones. The second principle was to realign routes to operate bi-directionally when possible thereby eliminating long-single directional loops or segments. The final principle was to reinforce service on key corridors and to key destinations as they have already proven their importance to the existing network. In addition to the key principles, the recommendations were also shaped by demographic data, historical ridership and stop activity data, input from CR Transit staff and operators, stakeholder and public input and feedback, rider requests and comments, and input from the public received from the various public engagement initiatives.

Recommended changes in **Alternative 1**, in which existing routes are realigned and the cost of operating the system remains constant, include the following:

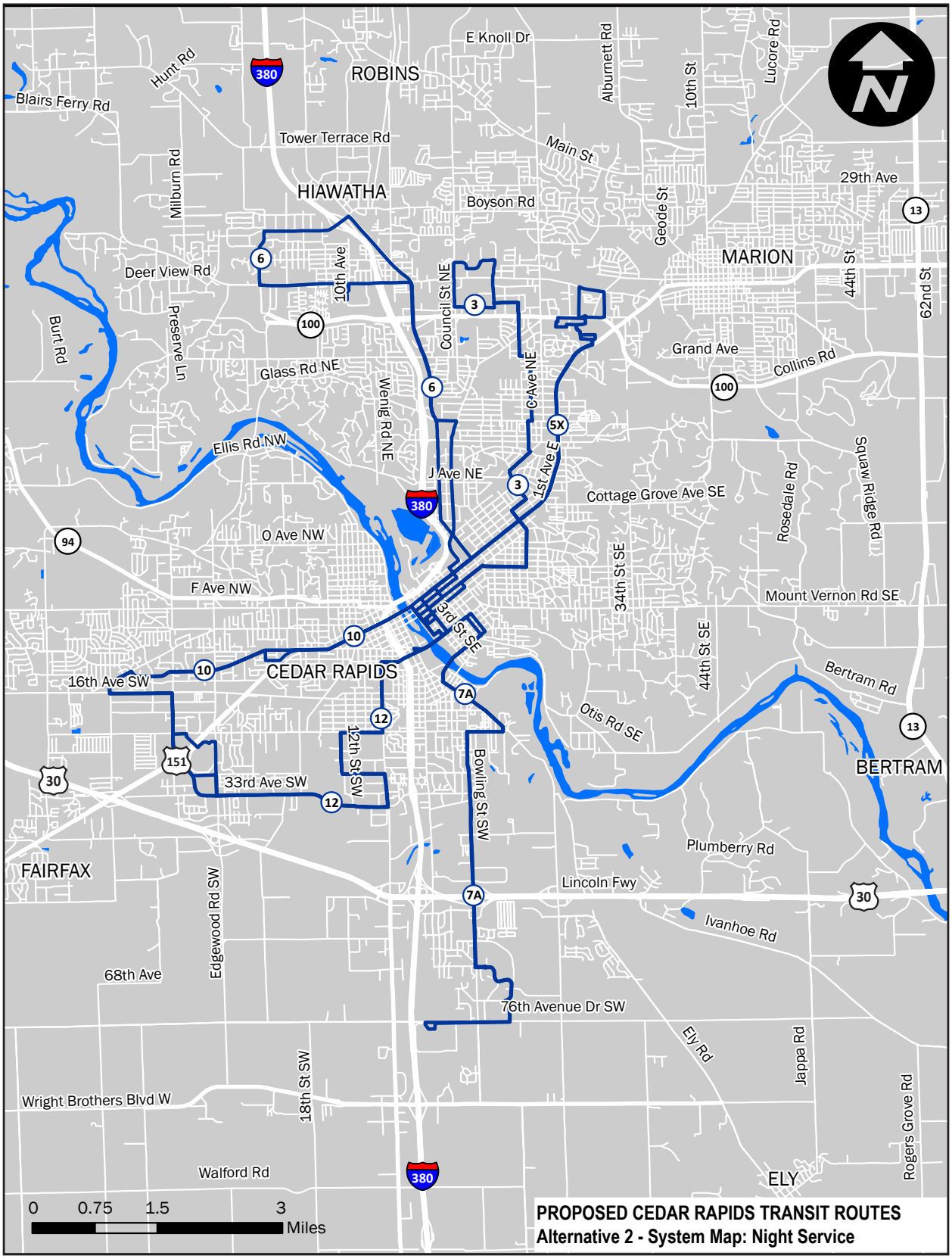
- Route 1/8 combined to provide service on the most productive (i.e. high ridership) segments of both routes and to provide bi-directional service on Johnson Avenue NW
- Route 2/9 combined to provide service on the most productive (i.e. high ridership) segments of both routes and to provide bi-directional service on the route
- Route 3 has no recommended changes from existing alignment
- Route 4 is slightly modified to provide service on Oakland Road NE rather than Prairie Road NE after service Mt Mercy College
- Route 5B realigned to provide service to Robins along Main Street
- Route 5N realigned to serve as a neighborhood circulator for Marion and provide service to Linn-Mar High School
- Route 5S realigned to provide more direct service to the Marion Walmart along US-151
- Route 5X a new route that would operate between the GTC and Lindale Mall along 1st Avenue
- Route 6A would operate the exact same alignment as the existing Route 6
- Route 6B would continue to provide additional peak service during the AM/PM peak periods along most of the exiting Route 6 alignment expect serve Hiawatha along Tower Terrace Road from the Walmart on Blairs Ferry Road
- Route 7A would provide direct service along Bowling Street SW/Kirkwood Boulevard SW to Kirkwood Community College and terminate at Prairie High School
- Route 7B would now terminate at Kirkwood Community College via C Street Road SW
- Route 10 realigned to provide bi-directional service along 1st Avenue SW
- Route 11 realigned to provide bi-directional service on J Street SW/6th Street SW and operate a smaller loop by Eastern Iowa Airport
- Route 12 realigned to provide bi-directional service along 33rd Avenue SW
- Route 16 is a new route to serve the 15th Avenue SW corridor
-

In Alternative 1, there is also an Option B that continues to provide service along O Avenue NW via Route 8 and Route 1 is slightly modified to provide bi-directional service on Johnson Avenue NW. However, Route 16 would not have the resources to also operate and is, therefore, not available in Option B.

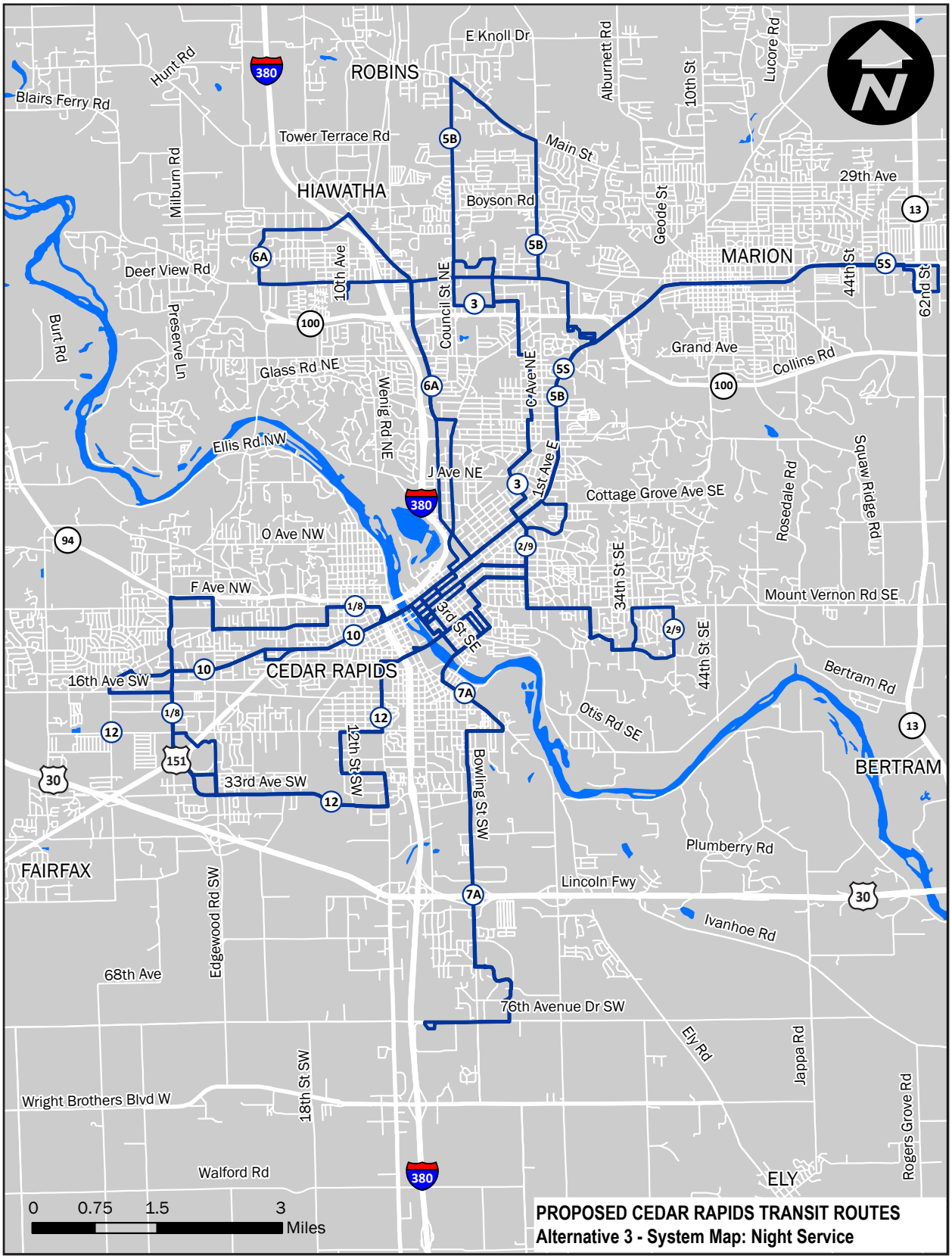
Alternative 1 System Map



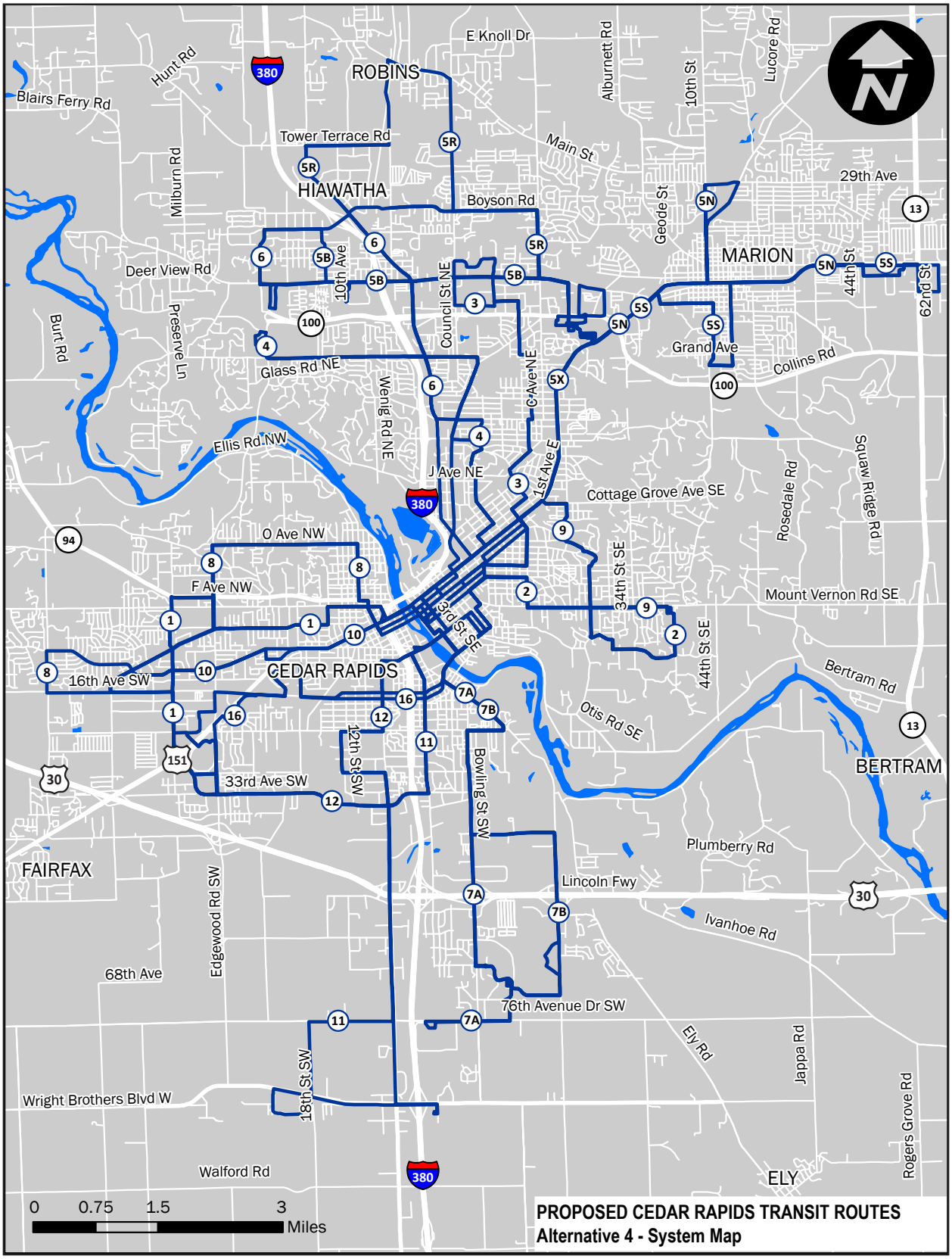
Alternative 2 System Map - Night



Alternative 3 System Map - Night



Alternative 4 System Map



The recommended changes in Alternative 1 would provide more bi-directional service on most of the routes, facilitate transfers at the Walmart on 29th Avenue SW for intra-southwest Cedar Rapids trips as well as the GTC, and spread out resources to provide service along the major corridors of the existing system. The cost of operating Alternative 1 is $9.2 million. This is similar to the existing system as Alternative 1 was designed to be cost neutral. In fact, it is 3 percent less to operate than the existing CR Transit system.

Recommended changes in **Alternative 2**, in which night service is provided and the cost of operating the system remains constant, include the following:

- All of the route alignment changes in Alternative 1 are included in this alternative
- AM peak service suspended to provide night service until 10PM
- Routes 3, 5X, 6A, 7A, 10, and 12 would operate until 10PM

The recommended changes in Alternative 2 would also include all of the benefits presented in Alternative 1 as the only additional changes to the alternative is the suspension of AM peak service in order to provide night service. The cost of operating Alternative 2 is $9.3 million which is 2 percent less than the existing CR Transit system.

Recommended changes in **Alternative 3**, in which service is improved and expanded using additional revenues generated from a recommended property tax levy increase, include the following:

- All of the route alignment changes in Alternative 1 are included in this alternative
- AM and PM peak service provided on four routes (Routes 2/9, 3, 10, and 12)
- Night service expanded to nine routes (Routes 1/8, 2/9, 3, 5B, 5S, 6A, 7A, 10, and 12)

The cost of operating Alternative 3 is $10.4 million or 9 percent more than the existing CR Transit system.

Recommended changes in **Alternative 4**, in which service is improved and expanded and based on a wish-list of services and requests from riders and residents, include the following:

- All of the route alignment changes in Alternative 1 are included in this alternative unless discussed below
- Service on the 1st Avenue Corridor would be simplified and served solely by Route 5X every 15 minutes all day
- Route 5B (Blairs Ferry NCC) would be based at the Lindale Mall and serve northwest Cedar Rapids and Hiawatha via the Walmart on Blairs Ferry Road
- Route 5R (Hiawatha/Robins NCC) would also be based at the Lindale Mall and serve Hiawatha and Robins
- Route 5N (Marion North NCC) would be realigned to serve the residential areas north of Marion Boulevard/7th Avenue and the Walmart on US-151
- Route 5S (Marion South NCC) would be realigned to serve the residential areas south of Marion Boulevard/7th Avenue and the Walmart on US-151
- Routes 1/8 and separated to serve the O Street NW and Johnson Avenue NW corridors in southwest Cedar Rapids
- Route 2/9 are separated to better serve eastern Cedar Rapids
- Improved service frequencies on most routes during the AM and PM peaks and some routes during the midday/evening
- Extended weekday night service to 11PM on most routes
- Saturday night service to 11PM on most routes
- Sunday service on most routes

Alternative 4 was designed to be implemented in stages as the recommendations are not dependent on one another. The recommendations in this alternative can be prioritized and implemented as additional funding becomes available. The cost of operating Alternative 4 is over double the existing CR Transit budget at $21.8 million.

Policy and Financial Recommendations

CR Transit's existing service extends to both Hiawatha and Marion from Cedar Rapids. A portion of the agency's operational budget comes from local funding generated by a property tax levy. Cedar Rapids provides the largest share of local funding providing over $7.4 million but also receives the largest share of CR Transit service at 93 percent of revenue miles and hours. Marion, who receives 5 percent of CR Transit revenue miles and hours, provides $195,000 from its property tax levy. Hiawatha, who receives only 2 percent of CR Transit revenue miles and hours, currently doesn't have a property tax levy but provides $75,600 to the CR Transit budget via its general fund. Based on these levels of local funding, the City of Cedar Rapids currently subsidizes the transit service to Hiawatha and Marion by approximately $100,000 and $73,000, respectively. Based on these funding deficits, Hiawatha and Marion would have to raise their property tax levy rates to $0.22/$1000 and $0.23/$1000, respectively, in order to fully fund the amount of transit service they receive from CR Transit. Similar increases to the property tax levy would need to be implemented in Alternatives 1 and 2 to fully fund the proposed level of transit service to Hiawatha, Marion, and Robins. Robins currently does not have a property tax levy to fund transit as they currently do not have existing transit service. In Alternatives 3 and 4, the property tax levies for all of the municipalities would need to be increased drastically to be able to fully fund the level of service proposed in both of those alternatives.

Transit-Dedicated Property Tax Rates and Amounts by Municipality, 2015

Municipality	Total Value of Taxable Property	Current Transit Levy	Transit Levy Collected
Cedar Rapids	$5,867,857,446	0.00080787	$4,740,466
Marion	$1,253,132,832	0.00015561	$195,000
Hiawatha	$329,444,906	0	$0
		Total	$4,954,052

An analysis of CR Transit's fare policy was also included in the transit study. Compared to CR Transit's peer agencies (6 medium sized agencies throughout the Midwest), the single ride fare was well in line with the fares charged with the other peer agencies. However, when reviewing the average collected fare, CR Transit only collected an average $0.66 per rider or 44 percent of the one-way cash fare ($1.50). This was due to the high number of discounts and discount programs that CR Transit provides to its customers. For example, CR Transit provides discounted fares to lower-income residents and also provides fare free Saturdays which are both unorthodox for a transit agency and greatly reduces the amount of income that CR Transit would be able to yield. Additionally, the fare for a day and monthly pass ($3.00 and $40.00, respectively) appear to both be underpriced.

A number of fare policy changes that CR Transit could consider implementing include the following:

- Set policy to price day pass at 2.5 times the one-way cash fare rounded to nearest 25 cents
- Set policy to price monthly pass at 40 times the one-way cash fare
- Suspend free fare Saturday program
- Eliminate the low income discount or make the income level to qualify for the discount lower (e.g. 100-125 percent of poverty level)
- Consider fare increases when operating and maintenance costs or inflation increases exceed 15 percent

The existing local funding agreements between Cedar Rapids and both Hiawatha and Marion raises a number of issues (e.g. political, planning, and operational) that make providing transit service in the region less than efficient. As Cedar Rapids and the surround communities continue to grow and as the demand for inter-municipal travel increases, the process of planning, funding, and operating an adequate and efficient of transit service becomes increasingly complicated. Additionally, as the metro region is projected to reach FTA's 200,000 population benchmark, it is important to consider all options that make these tasks more manageable such as the formation of a regional transit authority or RTA. The formation of an RTA would allow the regional governance of planning, funding, and operations all under one entity making it more efficient to provide transit service beyond the City of Cedar Rapids. The formation of an RTA is permitted under Iowa Code Chapter 28E: Joint Exercise of

Governmental Powers and Iowa Code Chapter 28M: Regional Transit Districts.

With only three cities currently being served by CR Transit and the region's population nearing the tipping point for a change in FTA classification, it appears to be the appropriate time for CR Transit and the region to consider the prospects of forming an RTA and the impacts it may have for Cedar Rapids and the region. Advantages to forming an RTA would include the following:

- An RTA has the ability and authority to tax and bond providing new opportunities for local funding sources
- Provide service more efficiently as all transit services in the region would be under the same organization
- Reduced jurisdictional boundaries
- Better representation across the community and Board of Commissioners from across region
- Stronger representation as RTA to State and FTA

Disadvantages to forming an RTA would include the following:

- Loss of direct control of transit operation by City of Cedar Rapids
- Fully allocated cost of transit service would be borne by new RTA – no shared staff resources as currently exists
- New facilities/offices would need to be obtained increasing costs
- Questions of service equitability among participating communities could arise

With this, if there is significant support of municipalities in Linn County (including those that currently do not receive CR Transit service) and potential revenues are projected to be sufficient to operate an expanded transit system under an RTA umbrella, it is recommended that the creation of an RTA be further explored and pursued if its makes sense for the region to do so.

Capital Improvements and Issues

A full bus stop inventory of the CR Transit system is included in this study. In the inventory process, each bus stop was located and assessed in terms of its current condition and any passenger amenities that existed at the stop. The state of any pedestrian (e.g. sidewalks) and bicycle (e.g. bike racks) infrastructure was also included in the inventory. This will enable CR Transit to have a full inventory of their property and infrastructure and be aware of its current state to be able to manage and prioritize any improvements or maintenance requirements for each stop.

CR Transit's main offices and garage is located at 427 8th Street in southwest Cedar Rapids – just over the river from downtown. Its close proximity (1.2 miles) to the GTC is convenient as it reduces that amount of deadhead time and mileage needed to get buses to/from revenue operations. The existing facility includes several offices and a conference room for CR Transit administrative staff with most of the site dedicated to bus storage and maintenance. With a fleet of 30 vehicles, the bus garage is at the limit of its capacity in terms of both storage and maintenance capabilities. This will become a major issue and hurdle when CR Transit begins to expand.

Any options for expanding its garage are few, difficult, and far from desirable. Additionally, having two different sites that would split the fleet would also be undesirable and inefficient to the agency. The anticipated connection of 6th Street NW to Ellis Boulevard could allow for a taking of the parcels in the immediate area that may afford CR Transit some expansion opportunities that would enable growing fleet size and maintenance capabilities by up to 50 percent. Another option would be for both CR Transit and LIFTS to co-locate and find a new site that would enable both agencies to store their vehicles and share maintenance capabilities thereby improving internal operations.

Currently CR Transit operates one formal transit center that facilitates transfers and provides a comfortable waiting environment for its riders when waiting for a bus at the GTC in Downtown Cedar Rapids. In the recommendations of this study, opportunities to transfer beyond the GTC are provided and include the Walmart on 29th Street SW in southwest Cedar Rapids and the Lindale Mall. This allows additional locations for riders to transfer between routes that allows for transit trip times to be reduced and for riders to have options based on

preference and schedule. At both these sites, a logical and safe location to facilitate transfers and for passengers to comfortably wait should be identified. The site should include a large enough area for up to six buses to layover simultaneously, provide passenger and driver bathroom facilities, and additional passenger amenities including shelters, benches, real time information, etc.

Capital improvements can also be made along major corridors or important routes within the CR Transit system. The 1st Avenue Corridor has proven to be the most important corridor in the system with all three routes (Routes 5B, 5N, and 5S) being in the top six routes in terms of total ridership and passengers per revenue hours – metrics used to determine route productivity. With the recommendation that additional services be operated to help alleviate overcrowding issues on the corridor, it is apparent that some improvements can be made along the corridor to improve operational performance on the corridor as well as the passenger experience. The 1st Avenue Corridor could be a strong candidate for upgrade to a Bus Rapid Transit (BRT) service in the future. Generally, transit corridors become strong options for BRT enhancement when corridors reach average daily ridership exceeding 2,000 to 3,000 riders. Currently, the 1st Avenue Corridor is not experiencing ridership at those levels. However, with the recommendations included in this study and the option to create a mini-hub at the Lindale Mall, it is likely that sometime in the future, the corridor will surpass those ridership thresholds.

One opportunity for improvement along the corridor involves setting up the corridor for a BRT type operation already in operation in many US cities including Cleveland, OH (HealthLine) and Kansas City, MO (MAX). BRT is a high capacity high level of transit service that features many of the amenities and operational characteristics and improvements that are often associated with light rail or streetcar services. BRT services often operate at high speeds and fewer stops that help reduce trip time combined with more frequent service with the help of transit signal prioritization (TSP) and/or dedicated lanes or guideways. Additionally, passenger environment and amenity improvements are also included in BRT service that include real time information, level boarding stations, and off-board fare vending/collection that helps speed up boarding.

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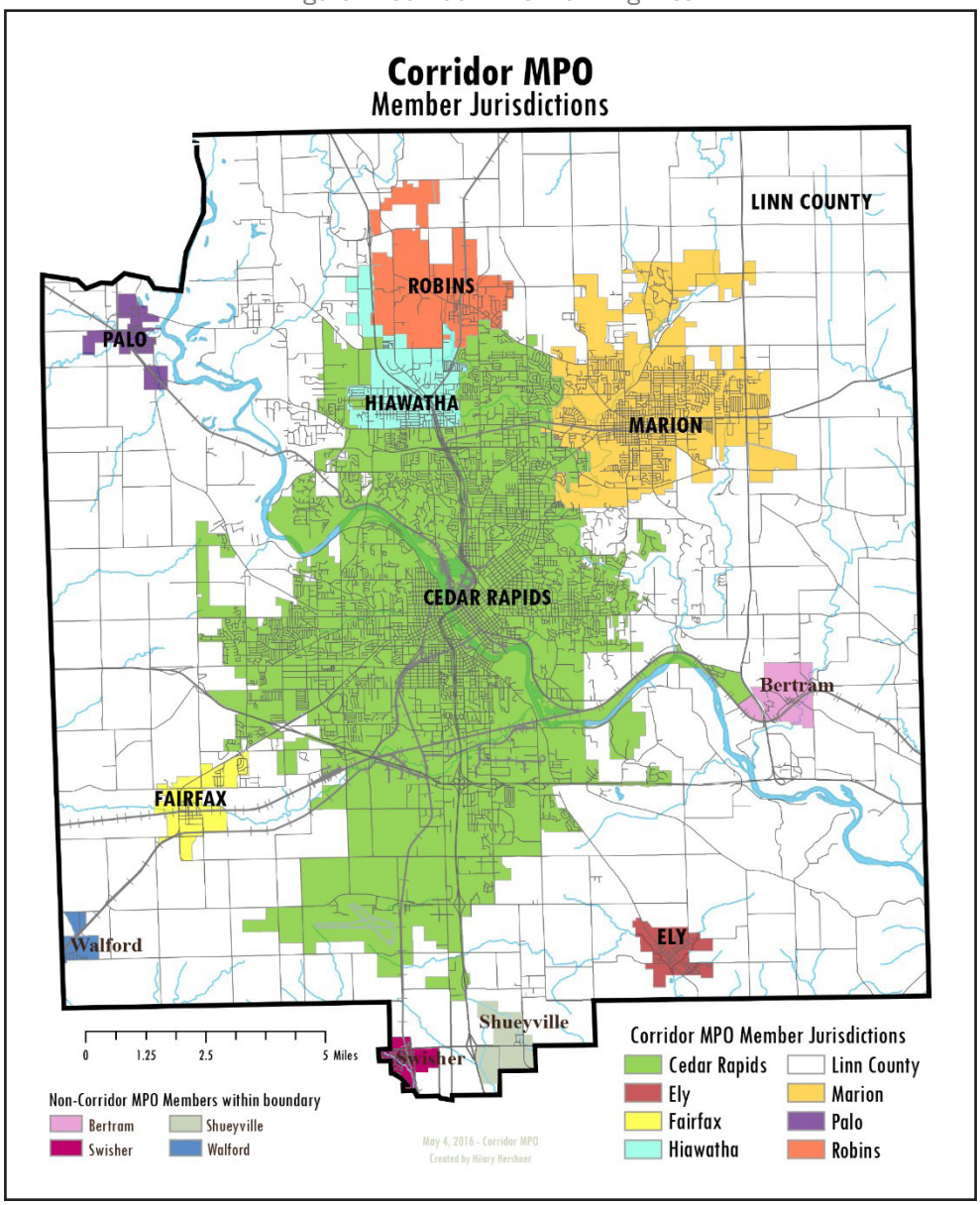
Introduction and Background

The Corridor Metropolitan Planning Organization (MPO) is the federally designated regional transportation planning body tasked with reviewing and approving transportation investments in the Linn County/Cedar Rapids area. MPOs were established as part of the 1962 Federal-Aid Highway Act and required for urbanized areas with populations in excess of 50,000 residents. The Corridor MPO is comprised of representatives from the various municipalities of Linn County and strives to create policies and set priorities for the planning and development of a safe, accessible and sustainable transportation system for all users in the MPO planning area. The Corridor MPO's planning boundary is displayed in Figure 1.

The Corridor MPO planning area includes the cities of Cedar Rapids, Ely, Fairfax, Hiawatha, Marion, Palo and Robins. Also included in the planning area are some of the unincorporated portions of Linn County.

Figure 1: Corridor MPO Planning Area



As part of its responsibilities the Corridor MPO is charged with planning and programming federal transportation funds for road, bicycle, pedestrian, and public transit projects. In 2015 the MPO completed the Passenger Transportation Plan (PTP) to promote coordinated public transportation planning in the Cedar Rapids metro region. The PTP identified unmet transit needs and strategies to improve the public transit services offered in the MPO area. Following a detailed inventory of existing public transit services in the region and engagement with the public the PTP developed a series of priorities and strategies to enhance transit services. These priorities included funding, capital and operating projects. The PTP concluded that a Cedar Rapids Metro-wide comprehensive transit study should be completed in 2016. The following assessment of public transit services in the Corridor MPO region fulfills the PTP's recommendation.

Study Goals and Objectives

Connections 2040 is the Long Range Transportation Plan (LRTP) for the Corridor MPO region. In 2015 the LRTP was updated to reflect the most current state of transportation vision, goals and priorities. The update to Connections 2040 established that between 2021 and 2024 public transit funding emanating from the Corridor MPO would increase from a negligible amount currently to a consistent twenty percent. These funds which may only be expended for capital projects and would equate to approximately $4.1 million over those four years. In conjunction with the PTP's recommendation, this new infusion of funding for the transit system increased the need for a comprehensive review of transit services. The comprehensive transit service analysis will identify the most critical needs of riders and how best to prioritize new MPO capital funds targeted for transit.

This 2016 Corridor MPO Transit Study assesses transit services in the Cedar Rapids region including fixed-route, paratransit and other mobility options that are currently operated. The last comprehensive assessment of the transit system was conducted in 2009. Since that time, 2008 flood recovery efforts and many other changes have occurred across the region and a new comprehensive assessment of transit services is needed to determine where gaps in services are occurring, and how the transit system is serving rider's mobility. The overall objective for this study is to develop alternatives to create the most effective public transit system for the Cedar Rapids Metro region that provides service to the greatest number of patrons with the resources available.

Several goals were identified at the outset of the 2016 Corridor MPO Transit Study which included:

- Taking a 'fresh look' at the entire transit system
- Developing strategies to improve headways (i.e. the amount of time between scheduled departures on the same route) on the most utilized routes
- Planning for improvement of bus stops and passenger amenities
- Examining alternatives to expand the reach of the transit system
- Using data and public input to guide decision making process
- Investigating the potential for creation of a new Regional Transit Authority
- Developing a clearly defined roadmap of operating and capital projects to guide improvement of transit services in the region

The study also was to identify potential transit priority corridors that could serve as a spine of the developing transit system in Cedar Rapids. This corridor could one day be a candidate for a higher capacity, premium transit service for the metro area such as Bus Rapid Transit (BRT).

Study Process Overview

The study process was divided into distinct steps including: data collection, analysis, existing conditions assessment, community outreach, development of improvement alternatives, alternative refinement and final recommendations.

The Transit Study kicked off in early 2016 with a review of the existing conditions of fixed route transit services provided by Cedar Rapids Transit (CR Transit), paratransit services operated by Linn County Intra-county Facilitating Transportation System (LIFTS) and other specialty transit service providers such as Neighborhood Transportation

Service (NTS). This assessment looked at recent ridership trends, boarding and alighting locations for fixed route service, financial information and other critical operating metrics. As a bulk of the existing public transit ridership is carried on the fixed-route CR Transit system, much of the analysis is focused on that system, but coordination with the other operators and services are integral for the enhancement of the complete transit system.
Included in the existing conditions assessment is a demographic analysis of the Corridor MPO area that helps determine locations of populations more likely to use public transit services. The demographic review looks at population density, employment density, rates of automobile ownership by household, household income and other factors.

To better understand the complete context of the existing transit conditions, the study team reached out to current riders of the transit system and the general public to help identify the most critical areas in need of improvement and to provide feedback on transit system enhancement alternatives. Two open houses were held, as well as the dissemination of a ridership survey, to obtain feedback. Throughout the course of the Transit Study, an online virtual town hall was established on the Corridor MPO's website that posed questions concerning different aspects of the transit system. This provided another opportunity for citizens to give their thoughts on transit services and how the system could be improved.

Following the examination of existing conditions and initial input from the public identifying needed system enhancements, the study began the process of service enhancement alternative development. The study team created four alternatives that would adjust and enhance the transit system. These alternatives were vetted by community leaders and by the public at a second open house. Adjustments were made to the initial alternatives before finalization and presentation to the MPO Policy Board for approval in June, 2016.

As a final component to the 2016 Transit Study a full inventory of all bus stops in the CR Transit system was completed. The inventory assessed each stop for several items including the presence or absence of benches, shelters, concrete waiting pads, connections to sidewalks, the presence of trash receptacles and bicycle racks. Information collected from the inventory will be used to help the Corridor MPO and CR Transit prioritize passenger amenities and other capital improvements at bus stops in the future.

Each of the project phases outlined are discussed in specific detail in the following sections.

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Existing Conditions

Cedar Rapids Metro Region Demographics

Demographic patterns are used to better understand the existing and potential transit market in a region. A review of the demographic characteristics in a region can identify areas with the greatest potential transit demand, or areas where a high percentage of the population has demographic characteristics that often correlate with transit ridership, including high population density, low household incomes, and low rates of auto ownership. The patterns of several demographic indicators are described below for Linn County and the CR Transit service area.

Population Density

Population density is often one of the most important, if not the most important, indicators of potential transit use, so much so that it is often used to identify the level of transit service that an area or corridor is likely to be able to support. There are many reasons that population density serves as a reliable indicator of transit use. Higher density neighborhoods by definition have more people living within walking distance of a transit stop or corridor than lower density neighborhoods. Higher density areas are also more likely to exhibit other characteristics of urban form that contribute to more people using transit, including higher development density, less available parking, improved walkability, smaller lots and setbacks, and a greater mix of land uses. Although there are many factors that can influence the transit level of service that is appropriate for an area, a common rule of thumb is that areas with population above 5 people per acre can support hourly bus service, and areas with a population density above 10 people per acre can support bus service with headways between 30 and 60 minutes.

As shown in Figure 2, population density in Downtown Cedar Rapids is generally quite low, with the exception of a few blocks with high rise residential development near the Cedar River. Outside of Downtown Cedar Rapids, there are only two other traffic analysis zones (TAZs) in Linn County where the population density exceeds 25 persons per acre, and both contain large apartment complexes – the Westdale Court Apartments, located just north of the Westdale Mall on the southwest side of Cedar Rapids, and the Pointe at Cedar Rapids apartments, located south of 42nd Street NE and west of Sherman Street NE on the northeast side of Cedar Rapids. Apart from these isolated zones of very high residential density, the largest continuous areas of high population density (in the 10-25 persons per acre range) are located immediately east and northeast of Downtown Cedar Rapids, in the Wellington Heights and Mound View neighborhoods, and to the north of 16th Street SW and west of Wiley Boulevard in the Cedar Hills neighborhood. Most other developed areas within the cities of Cedar Rapids, Marion, Hiawatha, and Robins have population densities in the range of 2.5 to 10 persons per acre. Outside of these municipalities, and in the industrial and undeveloped areas of Cedar Rapids (primarily west of I-380 between 33rd Avenue SW and the airport), the population density is almost uniformly less than 2.5 persons per acre.

Traffic analysis zones (TAZs) are a basic spatial unit of analysis that are most commonly used in transportation planning models. TAZs allow transportation planners to forecast changes in commuting patterns, trip volumes, and modes of travel, and to develop plans to meet the changing demands for transportation facilities and capacities. There are many different methods for determining the appropriate number, size, and delineation of TAZs, but typically each TAZ represents an area containing similar kinds of land use and commuter travel.

As shown by the depiction of CR Transit service in Figure 3, nearly all TAZs with a population density greater than 10 persons per acre are currently served by fixed route service. The only exceptions are two TAZs within the city of Marion, which are located just beyond walking distance (approximately ¼ mile) of the existing 5N and 5S routes. These areas include the neighborhood west of Linn-Mar High School and the cluster of multi-family homes south of 29th Avenue and east of 44th Street. Similarly, most areas with a population density greater than 5 persons per acre are also within walking distance of a fixed route, and the largest unserved areas where the population density is greater than 5 persons per acres are also located within the city of Marion.

Figure 2: Downtown Cedar Rapids Population Density

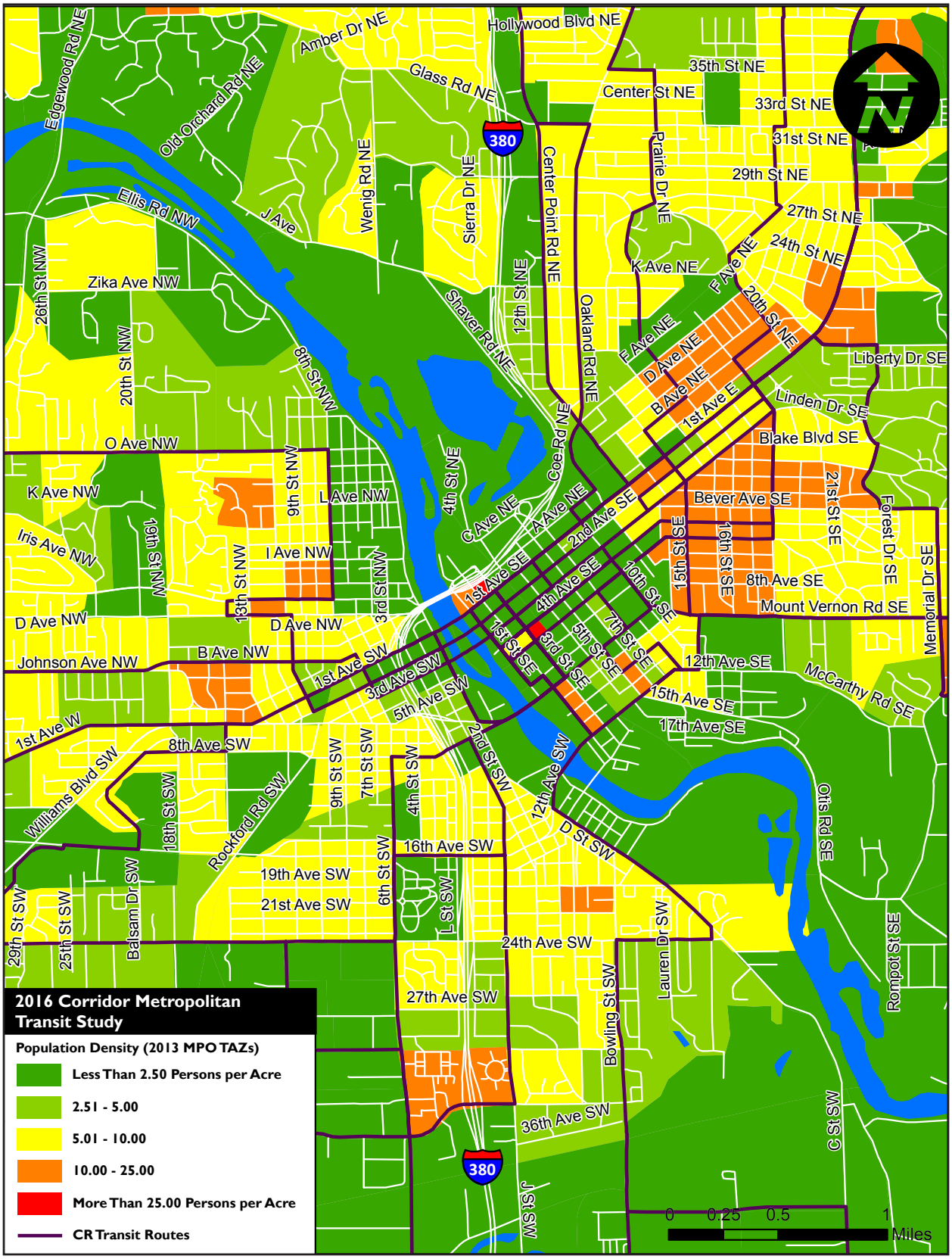
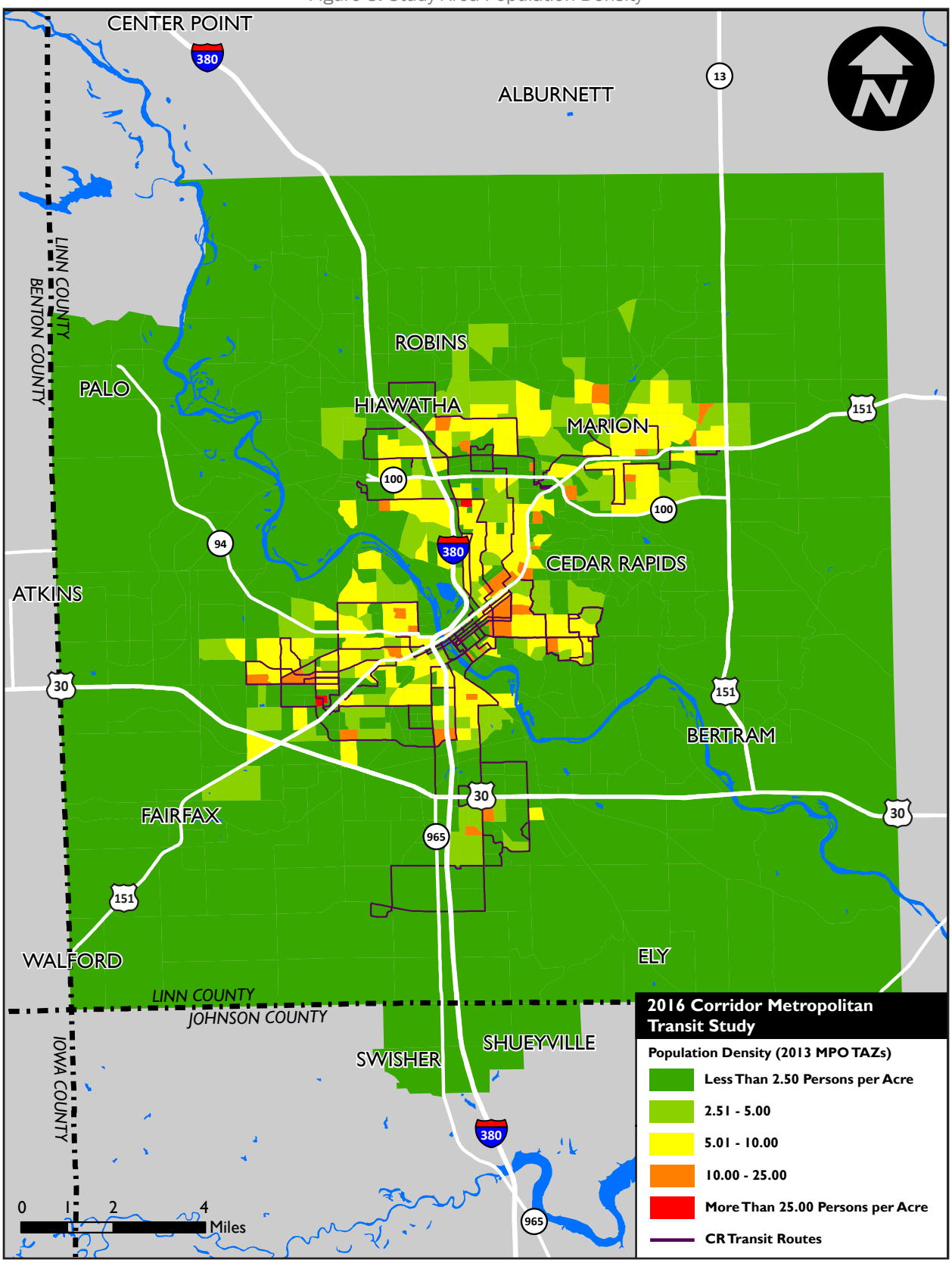


Figure 3: Study Area Population Density



Employment Density

In addition to population density, employment density also serves as a strong indicator of potential transit use because a high number of transit trips are made by people traveling to and from work. Areas with concentrated employment, or a large number of people traveling to work in a small area, can be served most effectively by fixed route bus service and are more likely to exhibit other characteristics, such as higher levels of traffic congestion and constrained parking conditions that make transit a more desirable mode of transportation.

As shown in the Figure 4, the TAZs with the highest employment density in the Cedar Rapids region are all concentrated in Downtown Cedar Rapids. In particular, the Mercy Medical Center, St. Luke's Hospital/Coe College area, and the blocks nearest to the river in downtown have the highest employment densities in the region. Outside of the downtown area, there are a few other zones farther north with employment densities in the 25 to 50 jobs per acre range, including the Lindale Mall area, the Rockwell Collins and Transamerica campuses, and the Marion Square area. Aside from these nodes of highly concentrated employment, several corridors within the CR Transit service area have more moderate, but continuous, levels of employment density (Figure 5). These include 1st Avenue NE between downtown and Cottage Grove Avenue, C Street SW between 41st Ave SW and Kirkwood Parkway, Blairs Ferry Road between Lindale Drive and the Walmart west of I-380, US-151 Business between 1st Avenue and Highway 13 in Marion, and US-151/Williams Boulevard SW near the Westdale Mall area.

Minority Population

Minority population is used as an indicator of propensity to use transit because minority populations tend to ride public transportation in numbers that are disproportionately larger than their population share, even when controlling for socio-economic status, age, disability status and other factors that correlate with high transit use. Concentrations of minority population in the Cedar Rapids region are shown in Figure 6. For the purposes of this analysis, the minority population is the total population decreased by the non-Hispanic White population, as defined by the US Census.

As shown in Figure 6, there are very few areas with high, or even moderate, concentrations of minorities within Linn County. There are only three block groups where the minority population is greater than 20 percent, and two of these have very low total populations, meaning that a small number of people are elevating the percentages in these block groups. The most densely populated area where the minority population is greater than 20 percent is located just east of Downtown Cedar Rapids, in the Wellington Heights neighborhood. The other two areas are located along the Blairs Ferry Road corridor and north of Cedar Lake and west of I-380. Development within the identified block group along Blairs Ferry Road is primarily industrial and big-box commercial retail, with a small amount of residential development concentrated near the I-380 interchange. The area located north of Cedar Lake and west of I-380 is characterized by very low density single family housing. This is the only identified block group with a high percentage of minorities that is not served by one or more fixed routes.

Figure 4: Downtown Cedar Rapids Employment Density

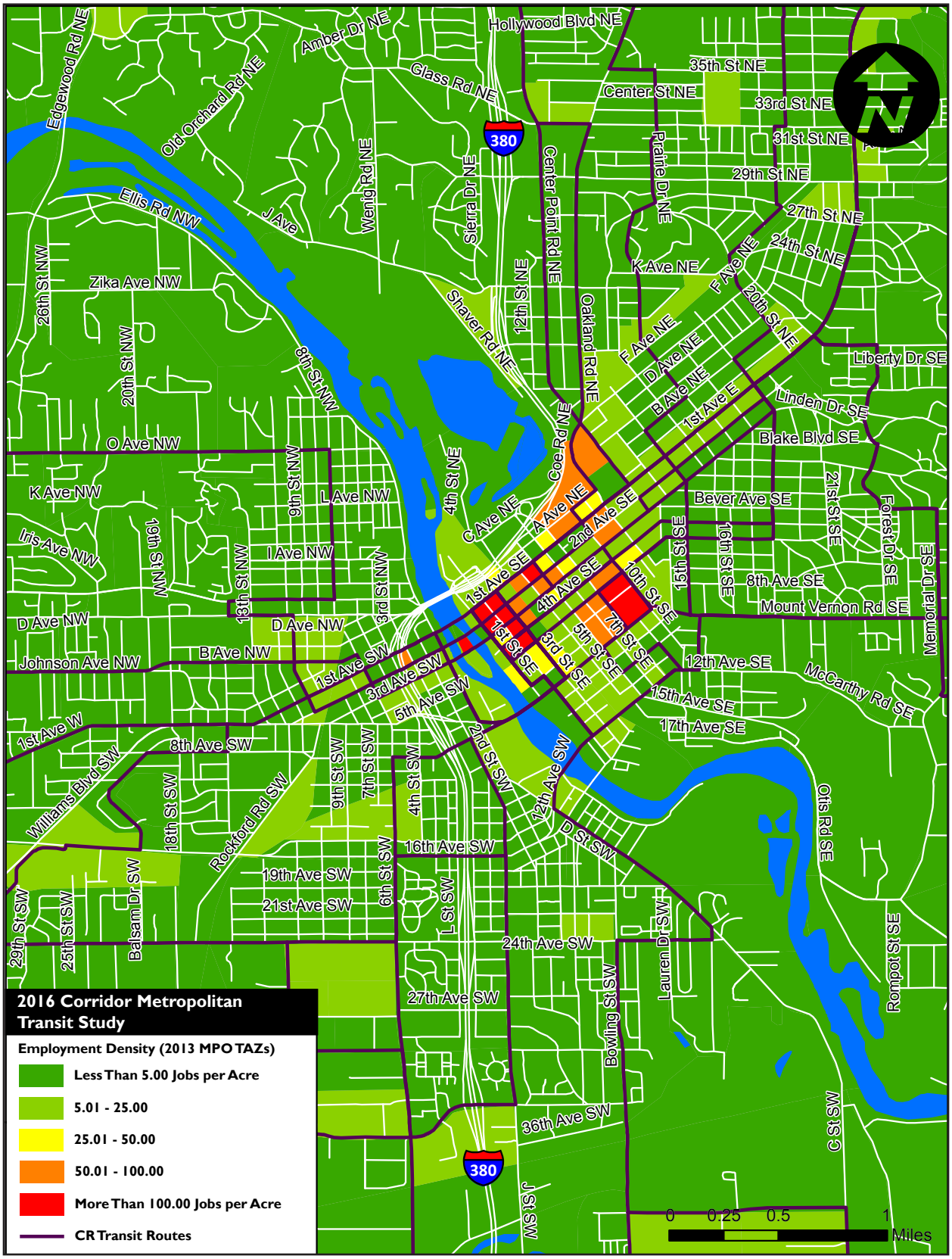


Figure 5: Study Area Employment Density

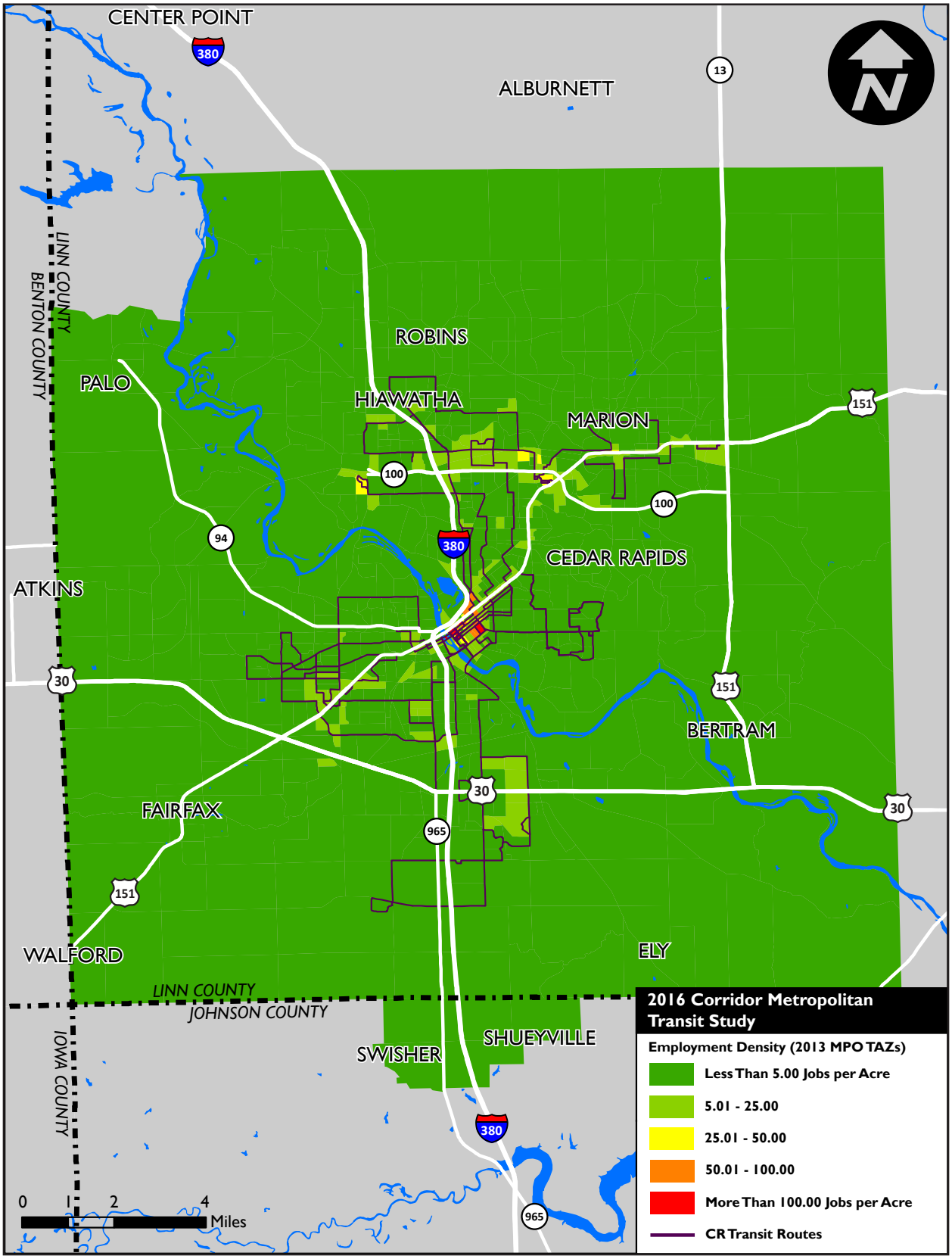
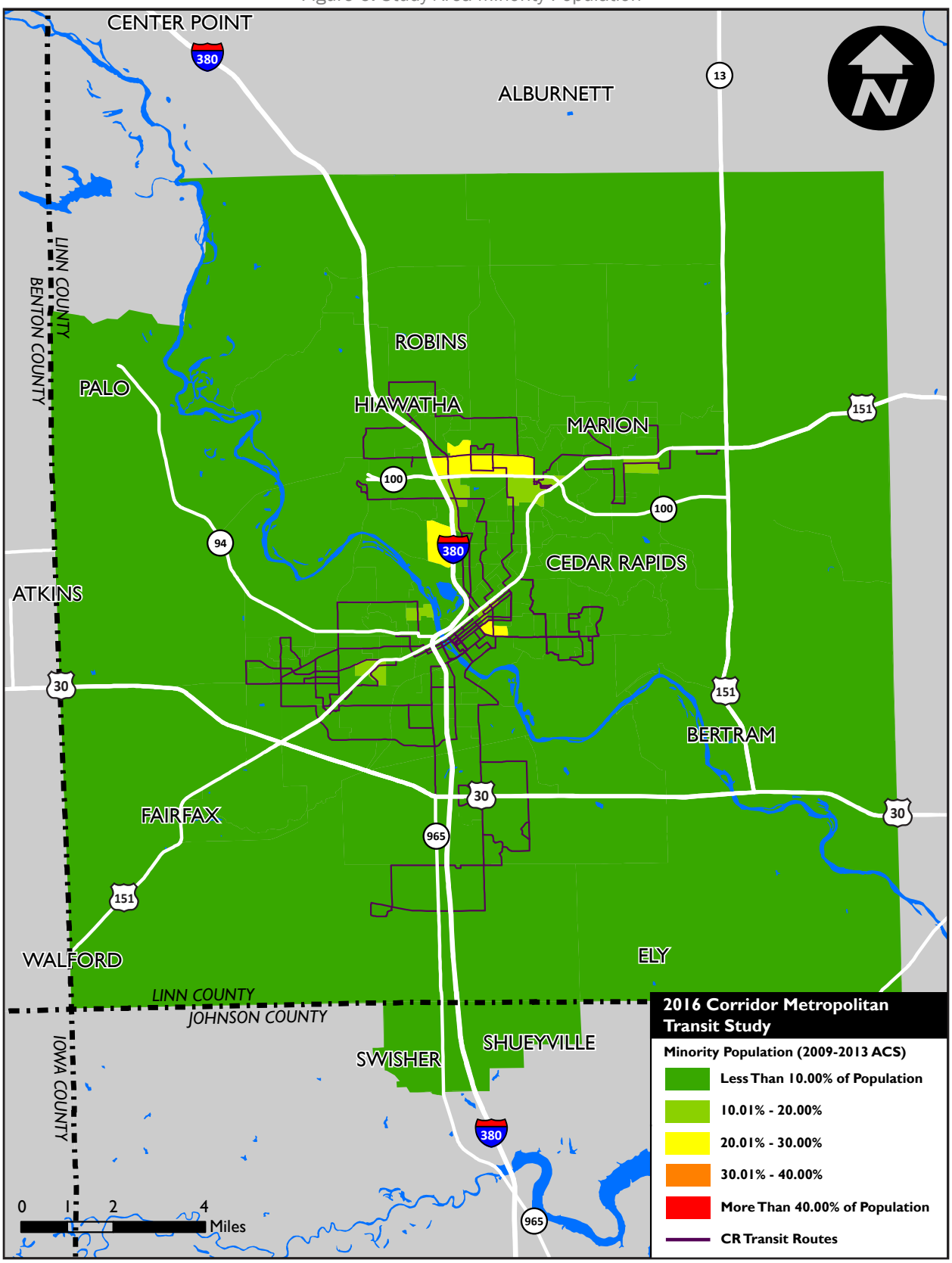


Figure 6: Study Area Minority Population



Household Income and Automobile Access

Households with low incomes and low rates of access to an automobile are also strong indicators of propensity to rely on public transit as a primary means of transportation. Both indicators help to identify populations for whom the cost of owning, operating, and maintaining a car may represent a financial hardship, and are therefore more inclined to use public transit.

As shown in Figure 7, the areas with the lowest median household incomes are located in Downtown Cedar Rapids and its adjacent neighborhoods, including block groups located across the river and to the south of downtown in the Oakhill Jackson neighborhood, and a block group that encompasses a large area around the intersection of Bowling Street SW and 41st Avenue SW. Development in this rather large block group is primarily industrial, but also includes several manufactured housing and mobile home parks. Block groups with more moderate median household income levels, in the $25,000 to $50,000 range, are not concentrated in any one part of the metro area or county, but rather are dispersed throughout the metro area and county. Block groups with median household incomes greater than $50,000 are primarily located in eastern, northern, and northwest Cedar Rapids, the cities of Marion, Hiawatha, and Robins, and the outer parts of Linn County. As shown in Figure 8, Downtown Cedar Rapids and the adjacent section of the Oakhill Jackson neighborhood have the highest concentrations of households without access to a vehicle (Figure 9), with more than 40 percent of all households not having access to an automobile. The areas immediately east and south of downtown, including sections of the Wellington Heights, Oakville Jackson, and Czech Village neighborhoods, have automobile access rates in the range of 20 to 30 percent. Outside of these inner neighborhoods, rates of automobile access are very high (Figure 9).

Figure 7: Study Area Median Household Income

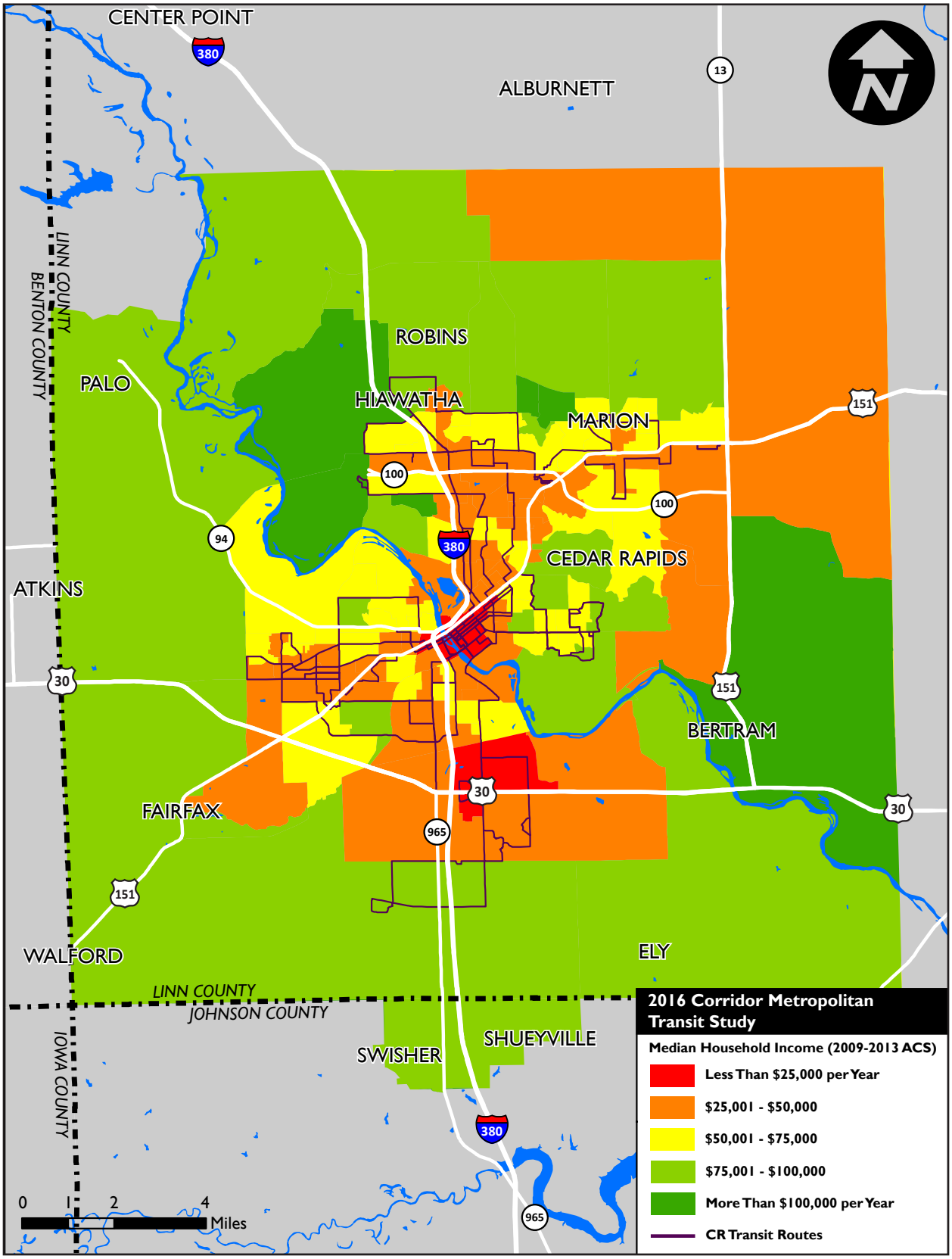


Figure 8: Downtown Cedar Rapids Car Accessibility

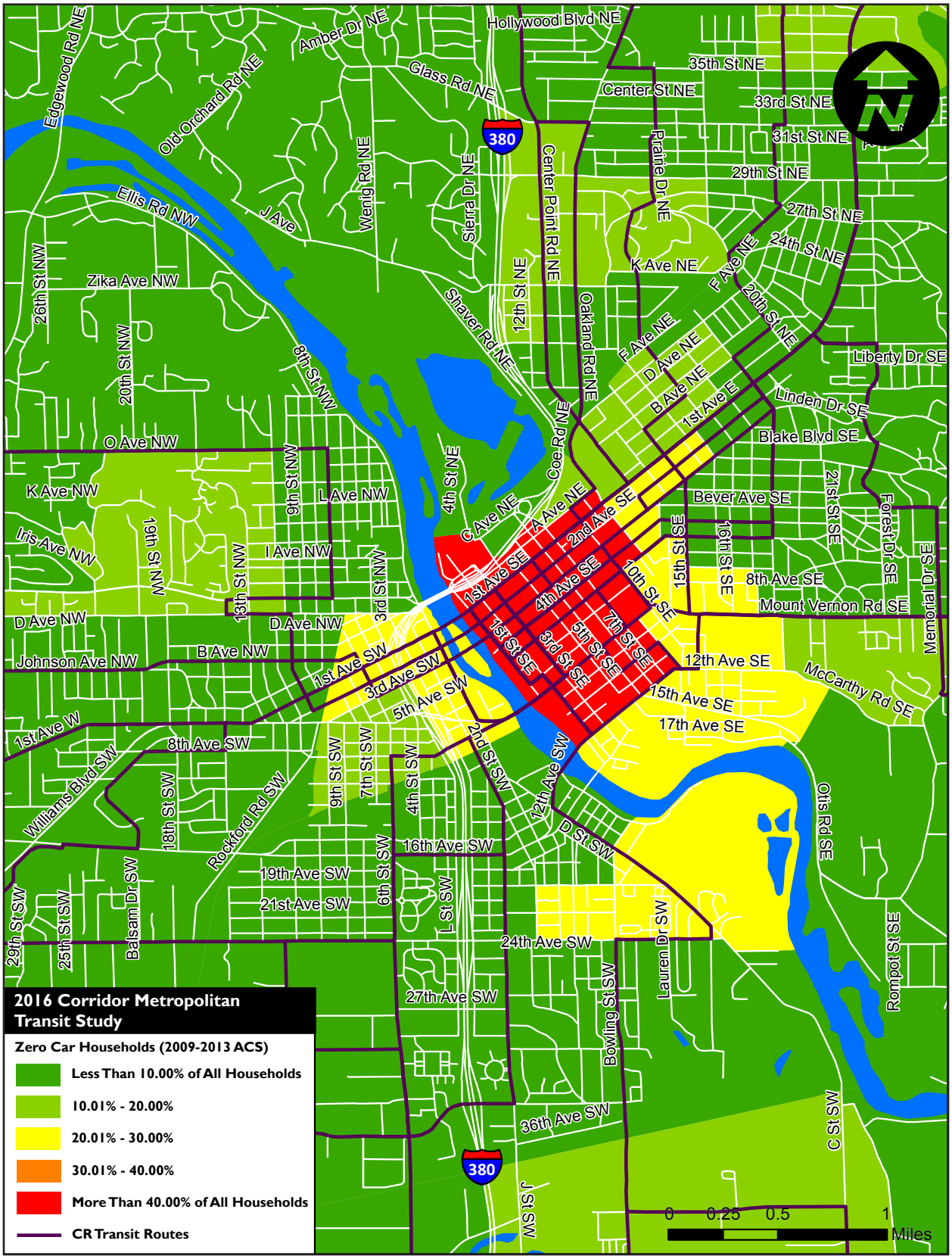
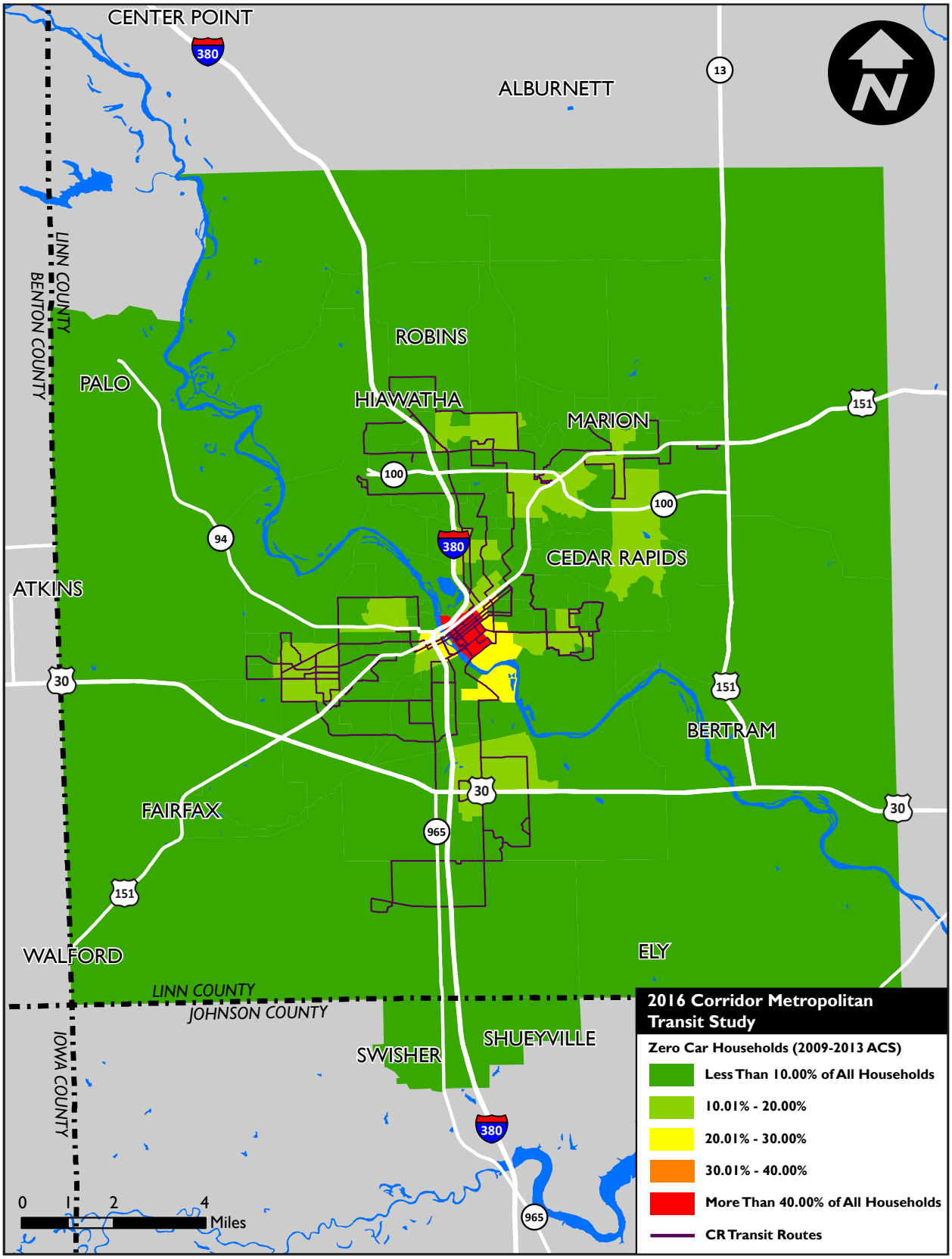


Figure 9: Study Area Car Accessibility



Previous Transit Studies

Over the past several years multiple transit studies or surveys have been conducted in the Cedar Rapids metropolitan area. The results and outcomes of these reports served as a backdrop and history of how the transit service has evolved and gave the 2016 Corridor MPO Transit Study direction in identifying goals. This section provides a brief overview of these studies and their most significant findings.

Connections 2040 Long Range Transportation Plan

Study Purpose and Summary

Connections 2040 is the Long Range Transportation Plan (LRTP) for the Corridor Metropolitan Planning Area. The central purpose of the document is to serve as a guide for how transportation dollars should be spent on projects for all modes over a 25 year period including roadway, transit, bicycle, intermodal and pedestrian facilities. The vision for the LRTP is to:

'Create a pre-eminent integrated land use and multi-modal transportation system that meets sustainable regional growth expectations, supports economic vitality and quality of life, efficiently moves people and goods while sustaining and improving the regions' livability and environment in the Corridor MPO Region.'

Goals for the Connections 2040 LRTP are:

1.) Maintain Existing Transportation System
2.) Maximize Efficiency of Existing Transportation System
3.) Minimize Cost of Transportation
4.) Offer Travel Choices
5.) Provide Safe and Secure Transportation
6.) Support Economic Vitality
7.) Minimize Travel Time
8.) Protect the Environment and Conserve Resources

Funding for transit is to increase from less than 1 to 20 percent of total MPO funding over the coming years. To determine how these new funds are to be best utilized, Connections 2040 called for completion of this Metro-Wide Transit Study. As an element of the Metro-Wide Transit Study, specific project evaluation criteria were proposed for transit capital projects that may include vehicles, transfer centers, passenger amenities or other transit capital related equipment.

Key Findings / Recommendations

Goals anticipated of the Metro-Wide Transit Study:

- Increased Transit Frequency: Improvement of headways on key routes will make transit more appealing transportation alternative to new choice riders. Seek to increase peak headways from one hour to 30 or 15 minutes.
- Extend Service Hours: Currently transit service is available from 5:15 a.m. to 7:00 p.m. on weekdays and 8:00 a.m. to 5:00 p.m. on Saturday, with no Sunday service. Many employment opportunities in the region begin before service is available or end later than transit service is available. The desired span of service for weekdays is 5:00 a.m. to 10:00 p.m. Extending hours to midnight of Friday and Saturday is also desired.
- Transit Support Facilities: Every transit trip begins with a pedestrian trip to arrive at the bus stop. In many places throughout the Cedar Rapids region, sidewalks do not exist or do not adequately connect to the bus stop. Many bus stops lack basic amenities such as concrete waiting pads, benches, shelters, schedule information, etc. Improvement to these facilities will be important to the Metro-Wide Transit Study, as well as Connections 2040.

- Capital Improvements: In order for transit service to improve headways and/or expand its reach to other parts of the region the existing bus fleet and appropriate number of spare vehicles will be required to operate the service. The average age of the bus fleet has lowered in recent years, but could be improved. As fleets age, reliability issues arise and ongoing maintenance costs increase. An expanded fleet will also require a larger staff of operators and maintenance staff.

Passenger Transportation Plan (PTP) 2016-2020: April, 2015

Study Purpose and Summary

Passenger Transportation Plans are developed to outline passenger transportation improvement projects within Iowa's metropolitan areas. The PTP inventories all mobility services available in the Cedar Rapids Metropolitan Area including CR Transit, Linn Intra-county Facilitating Transportation System (LIFTS), Neighborhood Transportation Service (NTS) and others in terms of types of transportation service provided, agency clientele, service operating information and fleet details.

The 2016-2020 PTP analyzes the current and projected population and demographics of the community to help identify areas of the public transportation system that are in need of improvement. To supplement the needs assessment, a passenger survey was conducted in 2015 to directly identify the transit riders' priorities for transportation system improvement. Lastly the PTP addresses sources of funding and a prioritized list for transportation improvement projects for each fiscal year between 2016 and 2020.

Key Findings / Recommendations

2015 Passenger Survey found that:

- More than any other enhancement project, riders wanted improvements to bus stops as well as better connections to bus stops. Bus stop improvement was rated number one of twenty total needs that were presented
- The next most important need identified was to increase the frequency of service in the urban areas of Cedar Rapids, followed by longer hours of service in the evenings/night
- Improving transportation services to low-income workers scored highly
- Some needs presented in the survey that did not rank highly amongst riders were: free WIFI on buses, lower fares, more comfortable vehicle interiors and more bus stops

Priorities and Strategies Identified:

- Conduct Metro-Wide Transit Study: examine strategies to expand and enhance transit service from both a cost neutral and expanded funding scenario
- Improve Accommodations at Bus Stops: assess condition of all bus stops in the transit system in terms of concrete waiting pads, connections to sidewalks, ADA accessibility, and passenger amenities to create a prioritized plan for improvement
- Marketing of Services Available: more advertising to increase awareness of transit services available to reach out to existing and choice riders
- Development of Transit App: creation of online application to provide trip planning capabilities to riders as well as other forms of transit information
- Increase quality and reach of paratransit: need for new buses to replace aging fleet, along with need for indoor bus garage to lower maintenance costs
- Provide More Travel Training: increase efforts to reach out to new riders to educate them on how to use transit in the Cedar Rapids Region
- Consideration of Free Pass Program for paratransit Customers: seek ways to encourage more use of CR Transit fixed route system by paratransit users to help lower costs

Iowa Commuter Transportation Study - December, 2014

Study Purpose and Summary

At the direction of the Iowa Legislature, the Iowa Department of Transportation conducted a study of one of the busiest commuter corridors in the state, Interstate-380 between Cedar Rapids and the Iowa City/Coralville area. The purpose of the study was to identify the commuter market and its needs, inventory existing commuter services in the corridor, develop transportation alternatives to serve unmet needs, estimate needed capital and operating costs of new service alternatives and identify funding sources for new commuter transportation services.

The study assessed several modes and other types of public transportation service alternatives. These included public commuter bus service supported by limited stop park and ride locations, car and van pools, subscription based or employer based bus shuttle service, car share, and others.

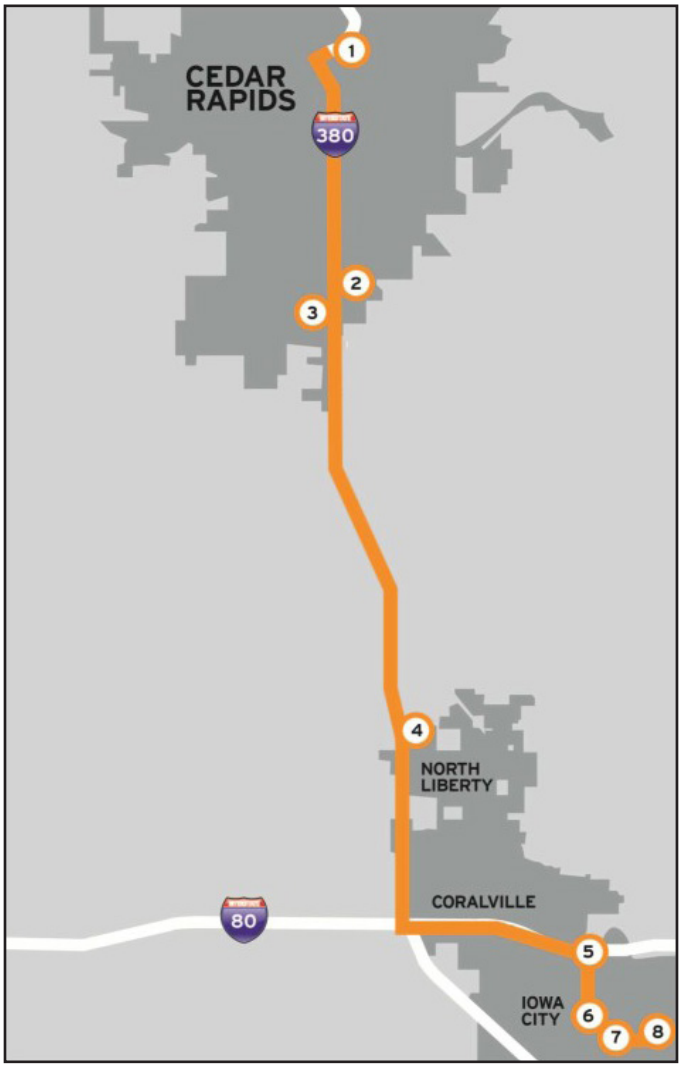
Key Findings / Recommendations

- Over 7,000 daily commuter trips occur in the corridor on weekdays
- The majority (89 percent) of trips are being made in single occupant vehicles. Only 2 percent used bus transit
- Major destinations for transit trips identified in the study include the GTC, Kirkwood Community College, Eastern Iowa Airport, North Liberty, Coralville Intermodal Facility, UI Hospitals and Clinics and Iowa City Court Street Transportation Center
- In a survey, 63 percent said they would consider using public bus transportation to commute, with a desired peak frequency of 30 minutes
- Congestion and safety were two of the top concerns addressed along with mobility options and economic development

The study recommended a package of commuter transportation improvements as part of a coordinated program of improvements that could be implemented individually as funds became available. These improvements included:

- Public Inter-regional Express Bus Service: a two-way inter-regional fixed route bus service connecting Cedar Rapids, North Liberty, Coralville and Iowa City supported by several park and rides. The preferred peak headway was set at 30 minutes. Eight stop locations were identified in the conceptual service scenario. The service would be operated using 40 foot conventional low floor heavy-duty transit vehicles

Figure 10: Conceptual Commuter Bus



Source: Iowa Commuter Transportation Study

- Subscription Bus Service: an alternative that can be specifically tailored to commuter needs at a given location or a single employer such as UI Hospitals
- Public Vanpool Program: to be used in conjunction with inter-regional commuter bus service to extend the reach of transit services and address gaps in service coverage. Could be operated by an existing transit agency in the region
- Public Carpool Program: formal sharing of rides making use of one of the participant's automobile

Next Steps Identified:

- Define Lead Agency for Implementation
- Form Study Implementation Committee
- Identify and Pursue Preferred Funding Options for Implementation
- Create and Implementation Plan
- Define Project Phasing Based on Available Funding and Priorities

2009 Cedar Rapids Fixed-Route Transit Study

Study Purpose and Summary

The 2009 Fixed-Route Transit Analysis, conducted by the Corridor MPO, focused on reviewing the existing transit network to determine areas of the system that were working well and areas that were in need of improvement. Primary goals for the study sought to develop strategies to improve the public transit system that would:

- Improve service to key locations
- Extend service hours
- Improve downtown circulation
- Enhance pedestrian access
- Develop better marketing materials

Following examination of the existing transit services in the Cedar Rapids area and meetings with the public and city staff a series of improvement recommendations were presented. Service redesign options were developed and analyzed to create two sets of options, one with minimal changes to routes and another with more moderate adjustments. Final recommendations were reviewed with staff and citizens were allowed to give their opinions prior to the study's completion.

Key Findings / Recommendations

Generally recommendations focused on reducing travel times, expanding the service area, and increasing ridership.

As part of the public engagement effort for the 2009 Cedar Rapids Fixed Route Transit Study a web based survey was conducted with a total of 677 responses received. The key results from this survey found that:

- Only 36 percent of current bus riders felt the system met most or all of their needs
- The most frequent trip purpose for current bus users was to/from work (53 percent)
- More than 75 percent of respondents supported the addition of a downtown circulator bus service
- 59 percent believed that high quality transit service is very important to the community
- 41 percent would consider using transit if it was substantially expanded
- 31 percent would use transit if a fast commuter service were provided to downtown

The final recommendations for the overall transit system consisted of a weekday decrease in total route miles of three percent from 220.9 miles to 214.4 miles. Daily weekday trips would increase 11 percent from 198 to 219. Peak buses would increase from 21 to 22 buses with the additional bus going to Route 4. Daily miles would increase 10 percent from 3,048 to 3,343.9 miles. Daily hours would also increase 4 percent from 220.75 to 229.7 hours. Saturday changes would see a decrease in route mileage from 220.9 to 214.4 miles. Saturday

daily hours would decrease 2 percent from 126 to 123. The recommended system changes are summarized in Table 1 below.

Along with the specific transit route recommendations, several other areas of operational improvements were suggested across several areas that included marketing, operations, fleet, training/safety, infrastructure, finances and planning.

Marketing:

- Improve appearance of route/schedule information
- Produce new system map
- Improve website with trip planner providing origin-destination capability
- Develop monthly newsletter for passengers

Table 1: 2009 Transit Study Recommendations Summary

	Weekday Service	Saturday Service			Weekday Service	Saturday Service
Route Miles				**Daily Miles**		
Current	220.9	220.9		Current	3,048	1,801.5
Proposed	214.4	214.4		Proposed	3,343.9	1,763.7
Daily Trips				**Daily Hours**		
Current	198	117		Current	220.75	126
Proposed	219	117		Proposed	229.7	123
Peak Buses						
Current	21	14				
Proposed	21.9	14				

Source: 2009 Cedar Rapids Fixed Route Transit Study

Operations:

- Add fixed route trippers at high ridership schools where main bus schedule is inconvenient
- Provide real-time bus arrival information to cell phone or computer users
- Develop email list for detours and significant announcements
- Use Twitter for immediate detour announcements
- Arrange schedule to reach end of line of all routes before 7:00 a.m. to expand opportunities for commuters (starting 15-20 minutes earlier would allow all route connections through downtown to reach end of the line before 7:00 a.m.)

Fleet:

- Provide destination signs with route number, route name and destination on all buses
- Pursue earmark for 12 new low floor buses
- Install improved public address system on all buses
- Evaluate cost of automatic voice enunciator system

Training / Safety:

- Formalize training program using Transportation Safety Institute guidelines
- Develop Save Driver Award program based on National Safety Council standards

Infrastructure:

- Public Works and MPO should develop sidewalk installation plan along bus routes
- Public Works and MPO should prioritize bus stop pad program with a goal of all paved bus stops within 10 years
- Public works should develop a plan to clear high priority bus stops of snow and ice within 36 hours of the end of a snow/ice event
- Shelters should be installed in open areas with high ridership and wide variations of bus arrival times
- Improve level of shelter maintenance and cleaning

Survey of Livable Communities - 2009

Study Purpose and Summary

This survey and study was conducted by the American Association of Retired Persons (AARP) in 2009 to examine if older residents of the Cedar Rapids area were aware of various services available to them such as transportation, health, housing, leisure and recreation. Out of a pool of three thousand individuals 50 years and older were identified to take the survey, over nine hundred responded.

Key Findings / Recommendations

Directly related to transportation issues the survey found that:

- 89 percent drive, only 2 percent take public transit
- Very few respondents said they had trouble getting where they were going due to lack of transportation options
- 76 percent of respondents said they were aware of public transit options in their community, only 5 percent had used public transit in the last month
- Respondents said that convenient spots for pick up and drop off would make them more likely to use public transportation
- Linn County respondents learned about public transportation from the phone book (43 percent) or from friends/family (42 percent)
- Speedy snow removal and transportation services for people with disabilities or the elderly are of top importance to Linn County residents

Transit Agency and Background Information

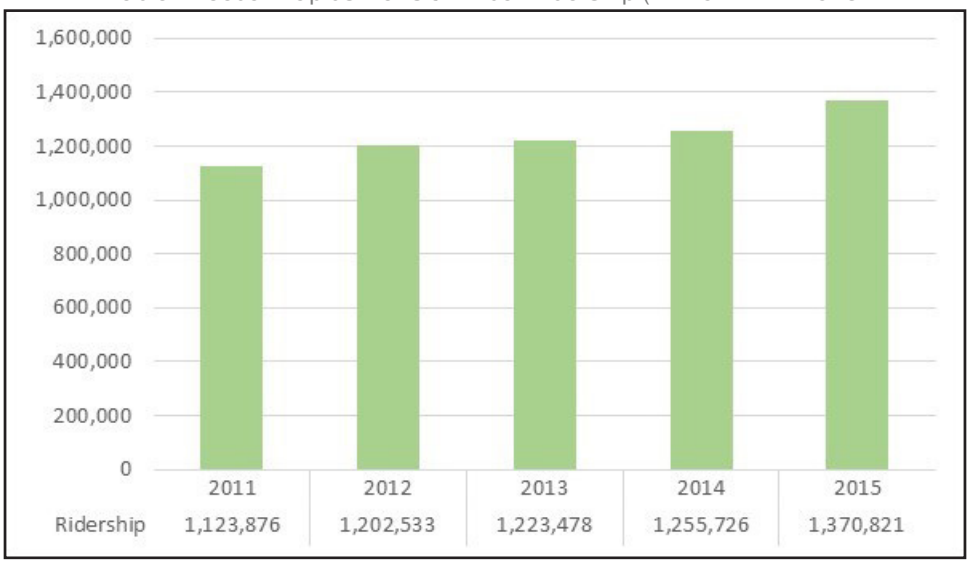
There are three major entities providing transit service in the Cedar Rapids region, each of which is operated independently, but in close coordination with the others. CR Transit is the only provider of fixed route transit in the region, while LIFTS and NTS provide demand responsive services to qualifying passengers.

Cedar Rapids Transit

Cedar Rapids Transit (CR Transit) is directly operated by the City of Cedar Rapids and provides fixed route transit service to the cities of Cedar Rapids, Marion, and Hiawatha. In FY 2015, CR Transit carried 1.37 million riders and had an operating budget of approximately $8.0 million, discounting the $850,000 in contract services to LIFTS and NTS.

As shown in Table 2, CR Transit ridership has grown in each of the last four years. Ridership has increased by 22 percent since 2011 and increased by 9.2 percent from FY 2014 to FY 2015, bolstered in part by a 25.7 percent increase in Saturday ridership as a result of implementing fare-free Saturdays. Weekday ridership increased by 7.3 percent over the same time period.

Table 2: Cedar Rapids Transit Annual Ridership (FY 2011 - FY 2015



CR Transit operates 14 fixed routes from 5:15AM to 7:00PM on weekdays and on Saturdays from 8:25AM to 5:00PM for all other routes, except Route 5S which starts at 7:55AM. There is no service on Sundays. The system is operated as a hub-and-spoke, with all routes meeting, or pulsing, at the Ground Transportation Center (GTC) at approximately the same time each hour. Five routes are operated hourly all day, six routes are operated every half hour during peak periods in the morning and afternoon, and the 5-series routes are operated once every 90 minutes, providing service every 30 minutes between the GTC and Lindale Mall all day.

The full cash fare for adults is $1.50. Students, seniors, passengers with disabilities, and Medicare and income-based passengers qualify for half-price cash fare with proof of eligibility, and children five years and under are free. CR Transit offers day passes ($3.00), 10-ride passes ($15.00 full fare/$7.50 half fare), and 31-day passes ($40.00 full fare/$20.00 half fare). No fare is charged on Saturdays.

CR Transit's fleet consists of 30 heavy-duty buses, all of which are wheelchair accessible and equipped with bike racks.

CR Transit staff consists of 55 full-time equivalent (FTE) employees, including 42 operators, four service workers, three information booth clerks, three supervisors, two administrative coordinators, and one manager.

Linn County LIFTS

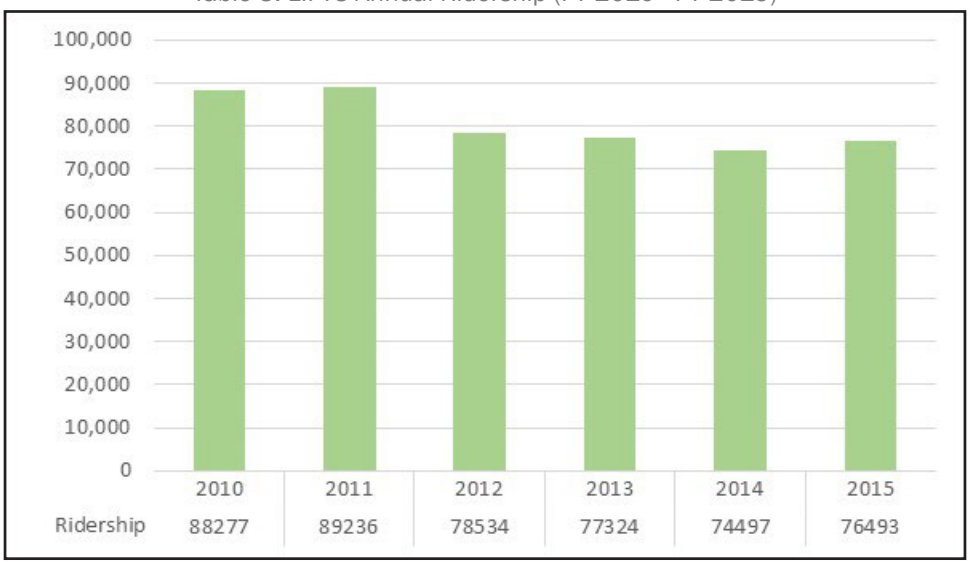
Linn County Intra-County Facilitating Transportation System (LIFTS) provides accessible door-to-door public transportation for all Linn County residents outside of the cities of Cedar Rapids, Marion, and Hiawatha. The City of Cedar Rapids contracts with LIFTS to provide paratransit service to complement its fixed route service within the cities of Cedar Rapids, Marion and Hiawatha. The Americans with Disabilities Act (ADA) requires that complementary paratransit service be provided to persons with disabilities that prevent them from using the fixed route service within a service area defined as a ¾ mile buffer around the fixed route system. LIFTS exceeds the minimum ADA transportation requirements by providing paratransit service to both seniors and persons with ADA-eligible disabilities within the cities of Cedar Rapids, Marion, and Hiawatha. Outside of these cities, all county residents are eligible for LIFTS service.

LIFTS service is available during the same days and hours as the CR Transit fixed route service. Passengers are required to make reservations at least one day in advance between the hours of 7:00AM and 5:00PM, but may reserve a trip up to seven days in advance.

The LIFTS fare for seniors (age 65 and older) and persons with ADA-eligible disabilities is $3.00 for a one-way trip. Outside of the cities of Cedar Rapids, Marion, and Hiawatha, the fare for the general public is $6.00 for a one-way trip.

In FY 2015, Linn County LIFTS carried approximately 76,500 passengers. As shown in Table 3, LIFTS ridership experienced a gradual decline from FY 2011 to FY 2014, but increased by 2.7 percent from FY 2014 to FY 2015.

Table 3: LIFTS Annual Ridership (FT 2010 - FY 2015)



In FY 2016, the City of Cedar Rapids contracted with LIFTS to provide paratransit service within the cities of Cedar Rapids, Marion, and Hiawatha for approximately $611,500. The FY 2017 budget anticipates a 4 percent increase to $636,000.

The LIFTS fleet consists of 18 medium-duty buses, five light-duty buses, and one minivan.

The LIFTS staff includes two full-time administrative staff, 15 full-time operators, and two part-time operators.

Neighborhood Transportation Services

Neighborhood Transportation Services (NTS) provides curb-to-curb demand responsive transportation service for eligible work, school, and life skills. NTS originated in 1994 as a grass-roots initiative to provide after-hours transportation to and from work for the residents of Wellington Heights. Since then, the service has grown rapidly, and the City of Cedar Rapids now contracts with NTS to provide evening and Sunday service for work, school and life skills trips to all of Cedar Rapids, Marion, and Hiawatha.

NTS service is available during the hours in which CR Transit fixed route service is not operated. On weekday evenings, the service begins operating at 6:30PM and continues until the fixed route service begins operating the next morning – 5:30AM on weekdays and 8:00AM on Saturdays. On Saturday evenings, the service begins operating at 5:00PM and continues until 5:30AM on Monday morning.

The fare for NTS service is $5.00 for a one-way trip. Trips must be reserved on weekdays between 9:00AM and 4:00PM and must be made at least 24 hours in advance.

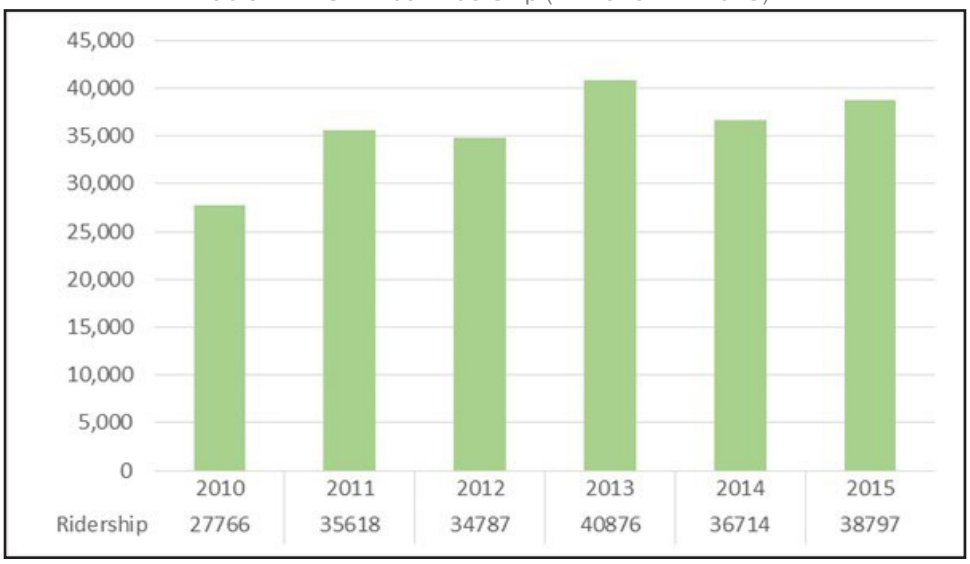
As shown in Table 4, NTS ridership peaked in FY 2013 with approximately 40,900 passengers. Ridership fell by about 4,000 passengers in FY 2014, but increased again in FY 2015 to approximately 38,800 passengers.

In FY 2016, the City of Cedar Rapids contracted with NTS to provide the after-hours service for $408,000. No increase is anticipated in the FY 2017 budget.

The NTS fleet consists of ten vehicles, including six minivans, three full sized vans, and three light duty buses. The light duty buses are all wheelchair accessible.

The NTS staff includes three full-time administrators, three part-time administrators, four full-time operators, and eight part-time operators.

Table 4: NTS Annual Ridership (FT 2010 - FY 2015)



Cedar Rapids Transit Fixed-Route System Analysis

The CR Transit system consists of 14 fixed routes serving the cities of Cedar Rapids, Marion, and Hiawatha (Figure 11). All routes are operated Monday through Saturday with the same span of service. All routes run from 5:15AM to 7:00PM Monday through Friday, and from 8:25AM to 5:00PM on Saturdays. There is one exception to this which is that Route 5S starts at 7:55AM on Saturdays.

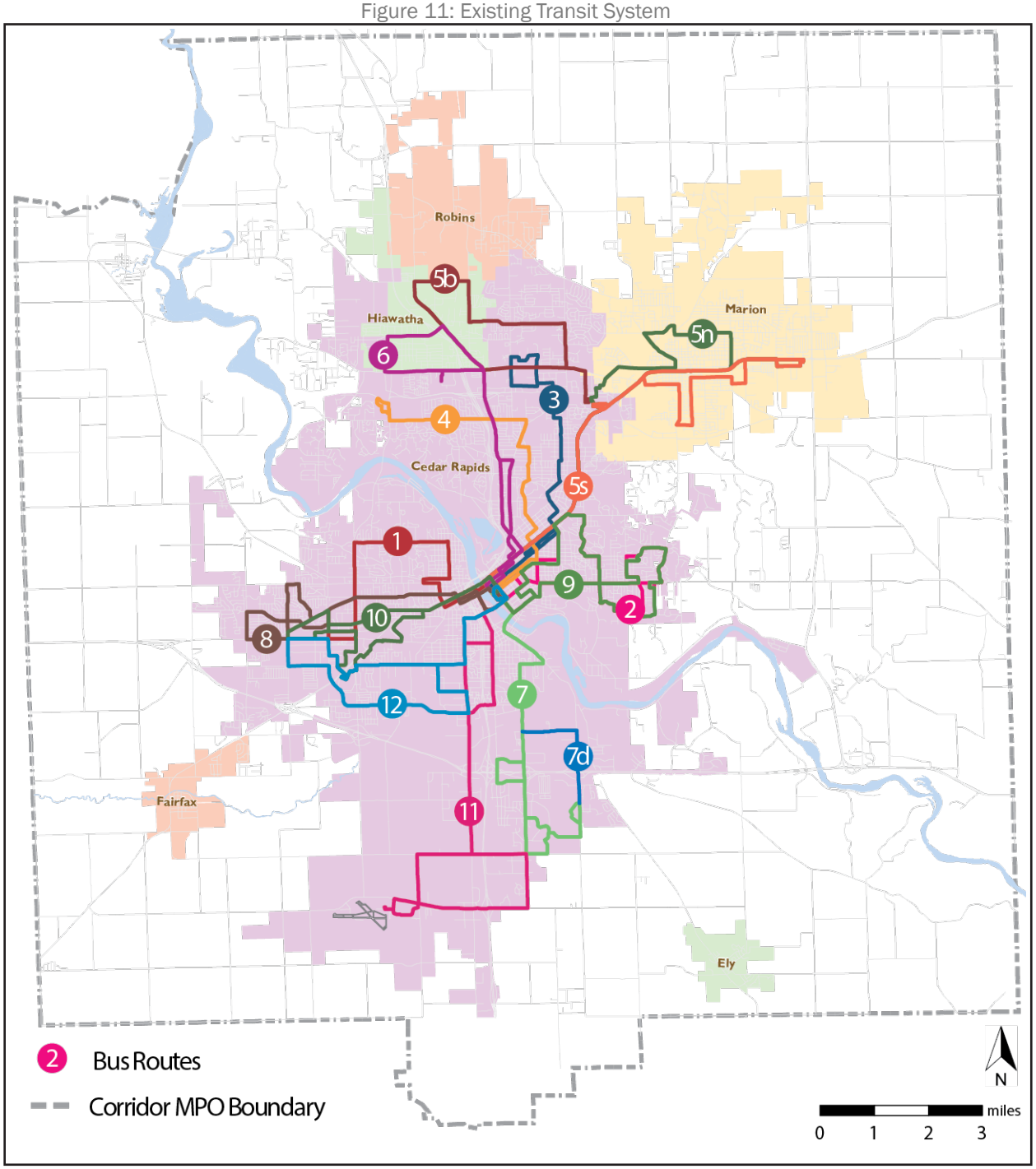
The system is structured as a hub and spoke, with the GTC in Downtown Cedar Rapids serving as the single centralized hub of the system. Most routes in the system meet, or pulse, at the GTC at approximately the same time every hour. The drawback of this structure is that it requires passengers whose trip origins and destinations are not on the same route to travel to Downtown Cedar Rapids to transfer to another route in the system. The advantage of a hub and spoke structure, however, is that it minimizes transfers and transfer waiting times because most routes meet at the GTC at the same time each hour. This allows passengers to travel anywhere in the system with only a single transfer and minimal waiting time at the GTC.

Four routes in the system – Routes 1, 2, 4, and 8 – are operated hourly all day. The three 5-series routes, which extend beyond the boundaries of Cedar Rapids to serve Marion and Hiawatha, are operated every 90 minutes, but are staggered to create a composite 30 minute headway on 1st Avenue between the GTC and Lindale Mall. Six routes in the system – Routes 3, 6, 7, 10, 11, and 12 – are operated every 30 minutes during the morning and afternoon peak periods and hourly during the rest of the day. Route 9 is also operated every 30 minutes during the afternoon peak and hourly during the rest of the day. Peak period times vary from route to route, but are generally from 5:15AM to 7:45AM in the morning and 1:20PM to 5:20PM in the afternoon. The PM peak periods for Routes 3 and 9 are significantly shorter. On Saturdays, all routes are operated hourly, with the exception of the 5-series routes, which are operated every 90 minutes as on weekdays. Table 5 provides a summary of the headways for each route by time period and day of week.

Table 5: Summary of Headways by Route and Time Period

	Weekday Headways			Saturday Headways
Routes	AM Peak	PM Peak	Off-Peak	
1	60 min	60 min	60 min	60 min
2	60 min	60 min	60 min	60 min
3	30 min	30 min	60 min	60 min
4	60 min	60 min	60 min	60 min
5B	90 min	90 min	90 min	90 min
5N	90 min	90 min	90 min	90 min
5S	90 min	90 min	90 min	90 min
6	30 min	30 min	60 min	60 min
7	30 min	30 min	60 min	60 min
8	60 min	60 min	60 min	60 min
9	60 min	30 min	60 min	60 min
10	30 min	30 min	60 min	60 min
11	30 min	30 min	60 min	60 min
12	30 min	30 min	60 min	60 min

Figure 11: Existing Transit System



The following route profiles provide a more detailed look at each of the routes in the system, including service statistics, ridership trends on weekdays and Saturdays, and stop-level boarding and alighting activity. The stop-level activity was compiled from passenger count data collected on individual trips from 2013 to 2015. The count data was aggregated for weekdays by including only the most recently surveyed trip, regardless of the month or weekday on which the trip was surveyed. In some instances, certain trips had not been surveyed on a weekday at any time during the past three years; these trips were omitted from the aggregation. In other instances, the trip was most recently surveyed during the summer months, which means that the aggregations may include some below-average counts, particularly for those routes that serve the various high schools in the region. Despite the unavoidable flaws in aggregation, the stop-level counts still provide valuable information about how the route is performing, which segments of the route are most and least productive, and what the major origins and destinations are on the route.

Existing Conditions Workshop

The route profiles and other significant information related to the existing conditions of public transit in the Cedar Rapids region were presented to a key group of stakeholders in an Existing Conditions Workshop on February 18, 2016. The findings of the transit system assessment were discussed including demographics of the region, peer transit system comparisons and the route-by-route breakdown of the fixed-route system assessing the effectiveness and efficiency of current transit services at the bus stop level.
In attendance at this workshop were:

- Chuck Heinz — Mayor – City of Robins
- Tom Hardecopf — Director - LIFTS
- Mike Barnhart — Executive Director - NTS
- Brad DeBrower — Manager - Cedar Rapids Transit
- Carletta Knox-Seymour — Commissioner - Cedar Rapids Planning Commission
- Barbra Solberg — Public Policy Strategist – Cedar Rapids Economic Alliance
- Nick D'Amico — Mobility Manager - Linn County
- Brandon Whyte — Multimodal Transportation Planner - Corridor MPO
- Hilary Hershner — Regional Transportation Planner - Corridor MPO

At the workshop, participants provided insight and context about how the system operates and why routes are structured in their current configuration. Relationships between the various transportation providers, including CR Transit, LIFTS, NTS and others, were discussed to better understand how each worked together to form a more complete transportation service for the community. The workshop gave the consultant team a better understanding of transit service needs, gaps in service, challenges faced and critical areas in need of service. The workshop also confirmed the findings of the transit system assessment as well as the goals for the study moving forward.

ROUTE 1

Route Profiles

Route 1 serves northwest Cedar Rapids and is operated primarily on 1st and 2nd Streets NW, 10th Street NW, Ellis Boulevard, O Avenue NW, and Edgewood Road. Unlike most routes in the CR Transit system, Route 1 is largely bidirectional, with only a small one-way loop to turn the bus around at the western end. However, it is also one of the lower performing routes in the system. In FY 2015, Route 1 carried approximately 55,600 passengers and 14 passengers per revenue hour. It carried 4.1 percent of the ridership on the total system but required 6.1 percent of the system's revenue hours to operate. Route 1 ranked 11th in the system in both ridership and passengers per revenue hour.

Despite the low overall ridership, the route has been gaining passengers, particularly over the past two years. Weekday ridership increased by more than 3,000 annual passengers from FY 2014 to FY 2015, or a 7.0 percent increase. Saturday ridership has more than doubled since FY 2013, and the route has far outpaced the system-wide increase on Saturdays (25.7 percent) with a 45.6 percent increase over the past year.

Table 6: Route 1 FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
1	55,638	4.1%	11	3,966	6.1%	14.0	11

Table 7: Route 1 Weekday Ridership (FY 2011 - FY 2015)

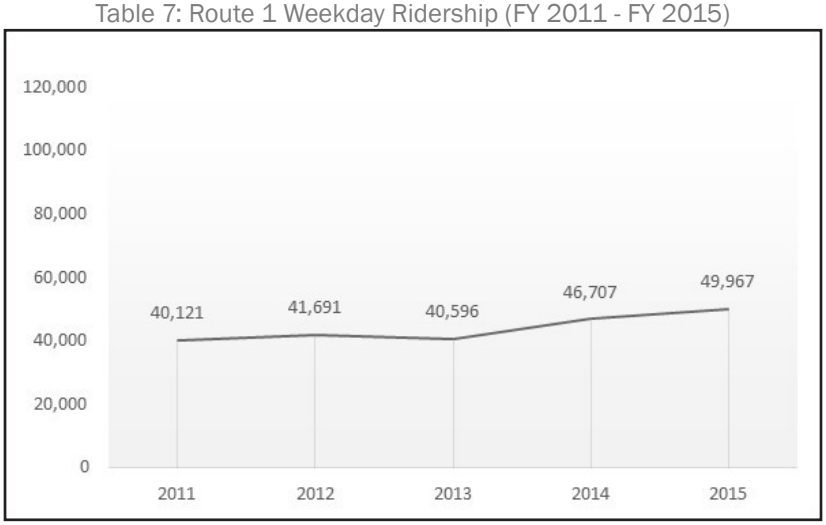
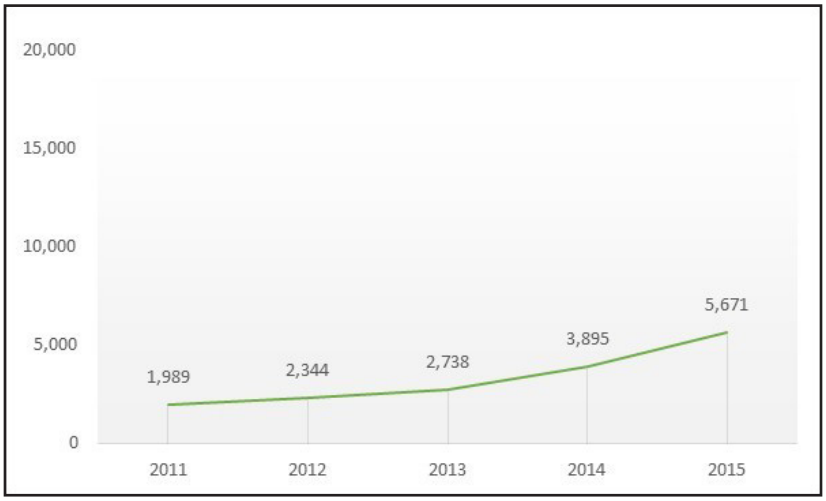


Table 8: Route 1 Saturday Ridership (FY 2011 - FY 2015)

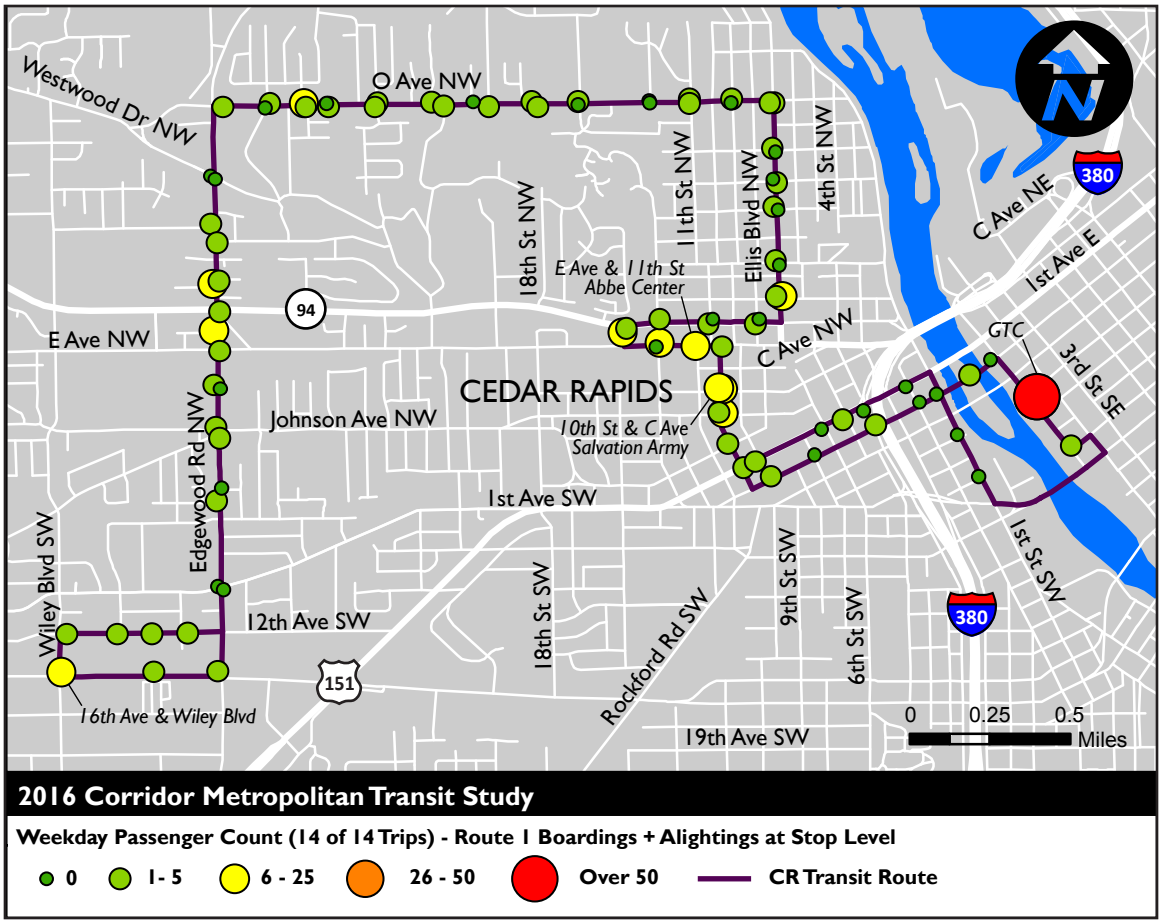


The most productive segments of Route 1 are the segments of 10 Street NW and E Avenue NW that are closest to downtown and the segment of Edgewood Road just north of E Avenue. The stops with the highest number of boardings and alightings are:

- 10th Street & C Avenue (Salvation Army)
- E Avenue & 11th Street (Abbe Center)
- 16th Avenue & Wiley Boulevard
- 10th Street & B Avenue
- E Avenue & 13th Street

In contrast, there is very little ridership on the route anywhere north of H Avenue, including along the entire stretch of O Avenue NW. Only one stop in this area -- O Avenue NW and 30th Street NW -- has more than 5 boardings + alightings per day.

Figure 12: Route 1 Stop Activity



ROUTE 2

Route 2 serves the east side of Cedar Rapids, including the Wellington Heights neighborhood, Washington High School, and the Mount Vernon Road corridor. The route is operated in the counter-clockwise direction, which, in combination with Route 9, provides bidirectional service along most of the route's alignment. Route 2 is the lowest performing route in the system in both ridership and passengers per revenue hour. The route carried approximately 45,600 passengers and 11.5 passengers per revenue hour in FY 2015. Route 2 carried only 3.3 percent of the ridership on the total system but required 6.1 percent of the system's revenue hours to operate.

Weekday ridership has remained fairly level on Route 2 over the past five years. Weekday ridership increased by 7.4 percent from FY 2014 to FY 2015, but the FY 2015 ridership was roughly equivalent to FY 2013. Saturday ridership has increased, particularly over the past two years, but Route 2 still carries fewer passengers on Saturdays than any other route in the system.

Table 9: Route 2 FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
2	45,615	3.3%	14	3,966	6.1%	11.5	14

Table 10: Route 2 Weekday Ridership (FY 2011 - FY 2015)

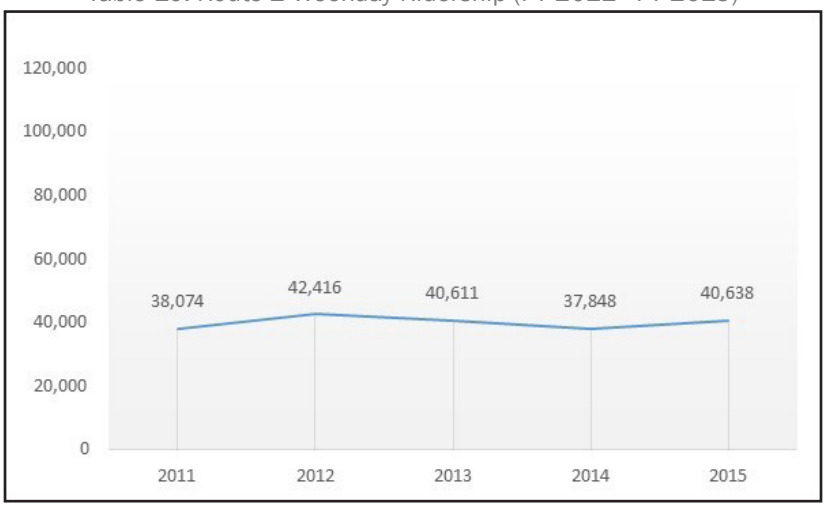
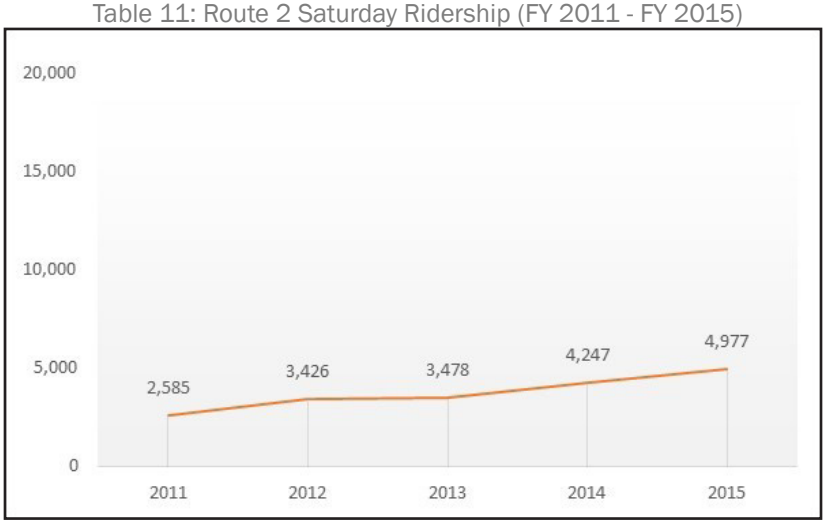


Table 11: Route 2 Saturday Ridership (FY 2011 - FY 2015)

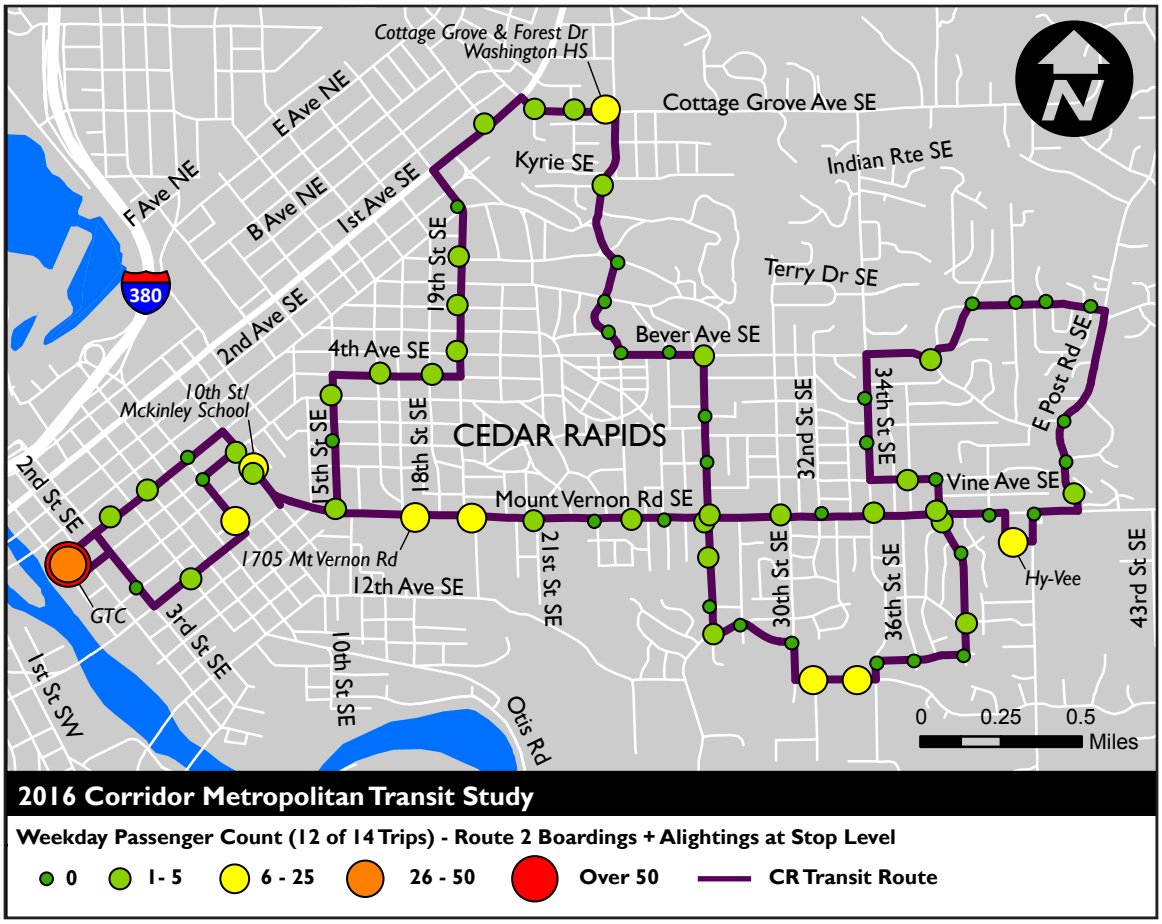


The segments along Mount Vernon Road and the loop south of Mount Vernon are the most productive parts of the route. Washington High School is the highest ridership stop on the route, but it is the only major trip generator on the loops north of Mount Vernon. The segment along Forest Drive and the East Post Road loop are the least productive segments of the route.

The stops with the highest number of boardings and alightings are:

- Cottage Grove Avenue & Forest Drive (Washington HS)
- 1705 Mt Vernon Road (cemetery driveway)
- Mount Vernon Road Hy-Vee
- 10th Street past McKinley School
- Mt Vernon Road & 19th Street (second intersection)

Figure 13: Route 2 Stop Activity



ROUTE 3

Route 3 serves northeast Cedar Rapids, including the northern boundary of Wellington Heights, Kenwood Park, the Rockwell Collins main campus, and the cluster of retail, hotel, and other commercial destinations to the north and south of Blairs Ferry Road between Council Street and Rockwell Drive. Route 3 is the lowest performing of the routes that are operated every 30 minutes during the morning and afternoon peak periods. The route carried approximately 87,000 passengers and 17.0 passengers per revenue hour in FY 2015. Route 3 carried 6.3 percent of the ridership on the total system but required 7.9 percent of the system's revenue hours to operate. The route ranked 9th in the system in both ridership and passengers per revenue hour.

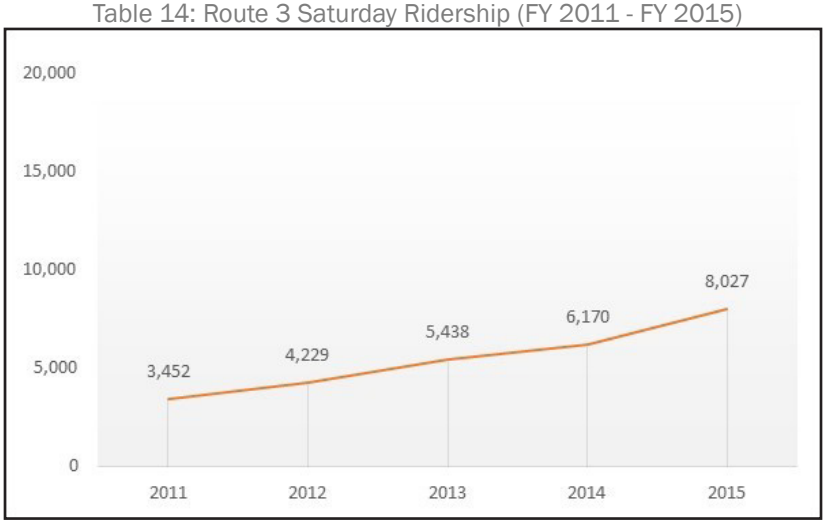
Both weekday and Saturday ridership experienced continual growth over the past five years. Weekday ridership increased by 14.4 percent and Saturday ridership increased by 30.1 percent from FY 2014 to FY 2015.

Table 12: Route 3 FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
3	86,982	6.3%	9	5,116	7.9%	17.0	9

Table 13: Route 3 Weekday Ridership (FY 2011 - FY 2015)

Table 14: Route 3 Saturday Ridership (FY 2011 - FY 2015)

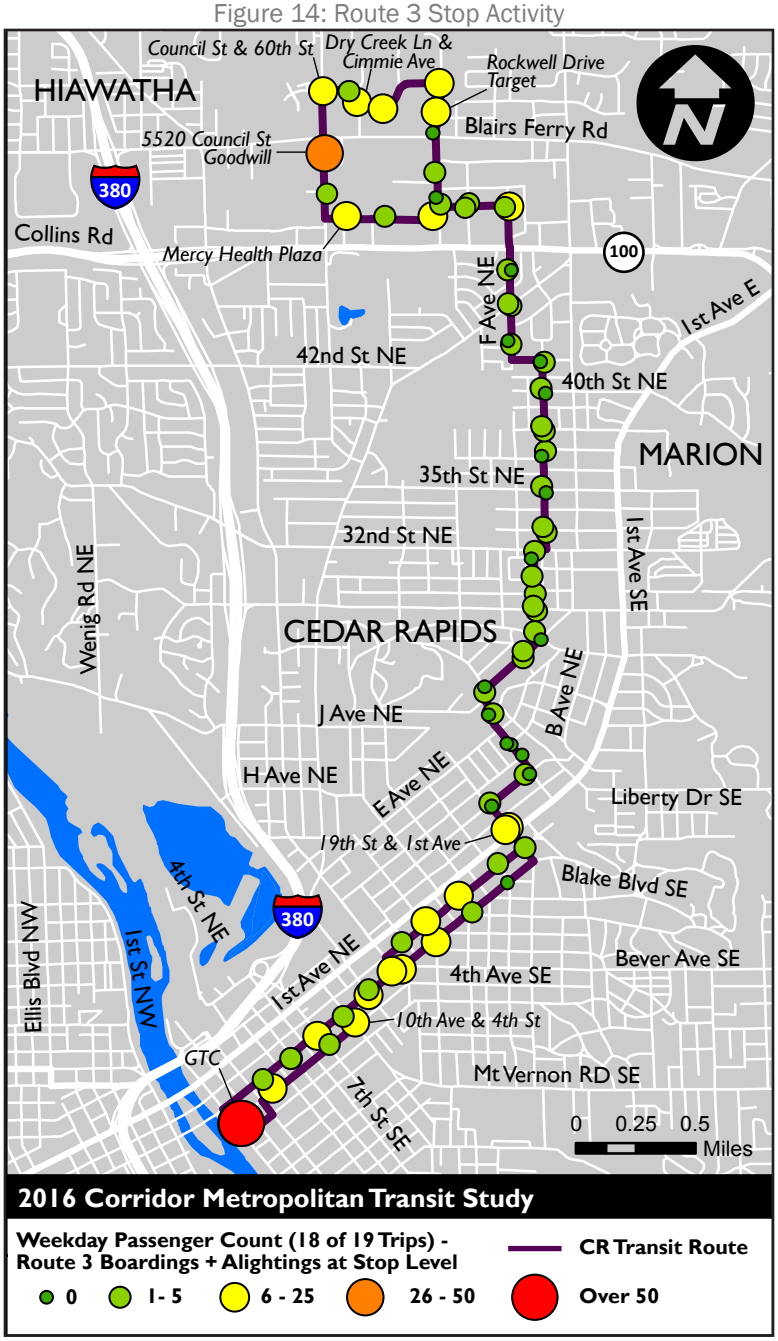


The most productive segments of Route 3 are on the one-way loop that forms the northern terminus of the route and on 2nd, 3rd and 4th Avenues in Downtown Cedar Rapids and Wellington Heights. The middle section of the route, from 19th Street NE north to the Rockwell Collins main campus, produces very little ridership. No stops in this section have more than 5 boardings + alightings per day.

The stops with the highest number of boardings and alightings are:

- 5520 Council Street (Goodwill)
- Council Street & 60th Street
- Rockwell Drive @ Target driveway
- Dry Creek Lane & Cimmie Avenue
- Cimmie Avenue @ Target driveway

Figure 14: Route 3 Stop Activity



ROUTE 4

Route 4 also serves northeast Cedar Rapids, including the Mound View neighborhood, Mount Mercy College, 42nd Street NE corridor, and the Transamerica campus. Route 4 is among the lower performing routes in the system. The route carried approximately 62,500 passengers and 15.7 passengers per revenue hour in FY 2015. Route 4 carried 4.6 percent of the total system ridership but required 6.1 percent of the system's revenue hours to operate. The route ranked 10th in the system for both ridership and passengers per revenue hour.

Weekday ridership on Route 4 remained nearly flat between FY 2012 and FY 2014, but increased by almost 12,000 annual passengers, or 26.4 percent, between FY 2014 and FY 2015. Saturday ridership grew steadily from FY 2011 to FY 2014, but experienced a much greater increase (51.4 percent) between FY 2014 and FY 2015.

Table 15: Route 4 FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
4	62,453	4.6%	10	3,966	6.1%	15.7	10

Table 16: Route 4 Weekday Ridership (FY 2011 - FY 2015)

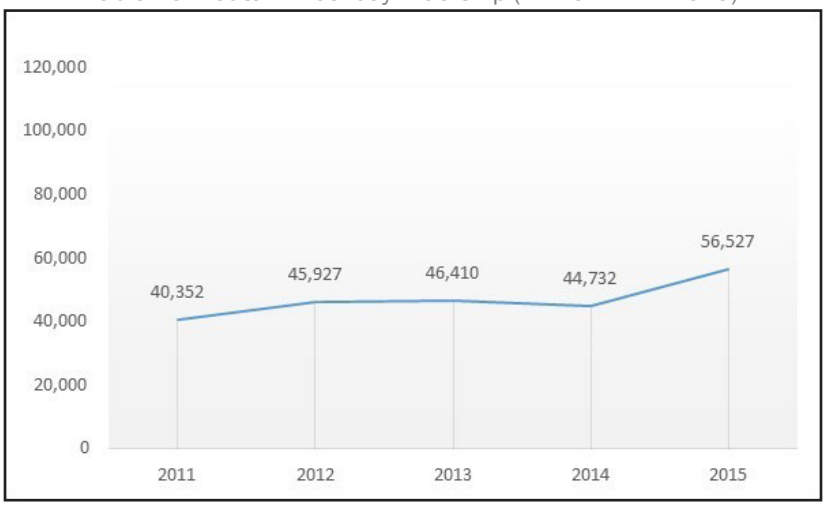
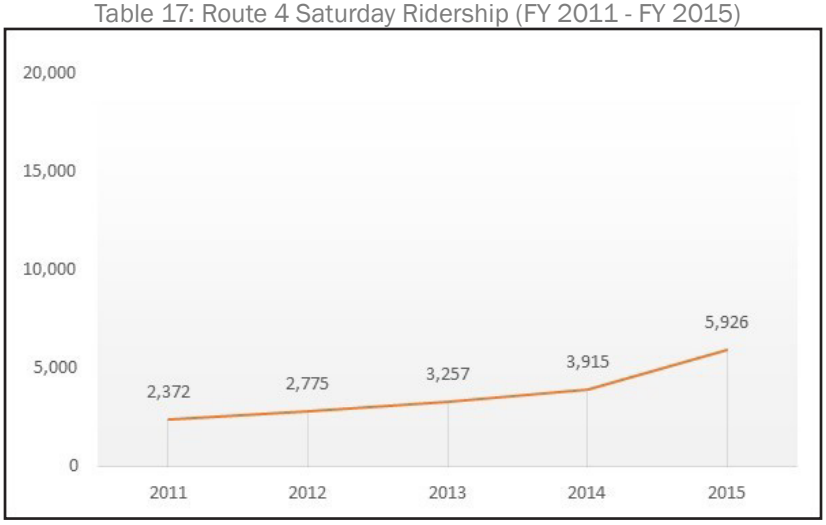


Table 17: Route 4 Saturday Ridership (FY 2011 - FY 2015)



The most productive section of Route 4 is along the 42nd Street NE corridor from Center Point Road west to the Transamerica campus. The stops on 15th Street NE in the Wellington Heights and Mound View neighborhoods also produce a fair amount of ridership. As with Route 3, the middle section of the route, from 17th Street NE north to 42nd Street NE, produces very little ridership. No stops in this section have more than 5 boardings + alightings per day.

The stops with the highest number of boardings and alightings are:

- 1622 42nd Street (Alliance Church)
- Transamerica shelter
- B Avenue & 17th Street
- 42nd Street & Wenig Road (Kennedy H.S.)
- 15th Street & Bever Avenue

Figure 15: Route 4 Stop Activity

ROUTE 5B

Route 5B is one of three routes that operate along 1st Avenue between Downtown Cedar Rapids and the Lindale Mall. After serving the mall, Route 5B continues to the northwest to serve destinations in the City of Hiawatha, as well as along Blairs Ferry Road, Boyson Road, and C Avenue NE in Cedar Rapids. The outer end of Route 5B is operated as a large one-way loop in the clockwise direction.

Route 5B is among the better performing routes in the system, but carries slightly fewer riders than the other two 5-series routes operating on 1st Avenue. Route 5B carried approximately 127,500 passengers and 33.2 passengers per revenue hour in FY 2015. The route carried 9.3 percent of the ridership on the total system, but required only 5.9 percent of the system's revenue hours to operate. Together the 5-series routes account for nearly 30 percent of the system ridership, but less than 18 percent of the revenue hours.

Weekday ridership on Route 5B barely fluctuated at all between FY 2011 and FY 2014, but increased by more than 10,000 annual riders (an 11.2 percent increase) between FY 2014 and FY 2015. In contrast, Saturday ridership had been increasing steadily even prior to the introduction of fare-free Saturdays. From FY 2014 to FY 2015, Saturday ridership increased by 3,700 annual riders, or 26.2 percent.

Table 18: Route 5B FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
5B	127,501	9.3%	6	3,839	5.9%	33.2	3

Table 19: Route 5B Weekday Ridership (FY 2011 - FY 2015)

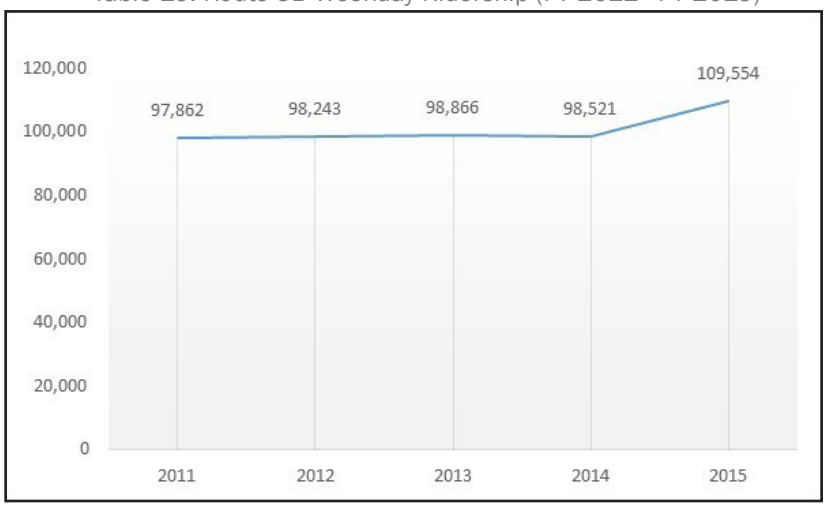
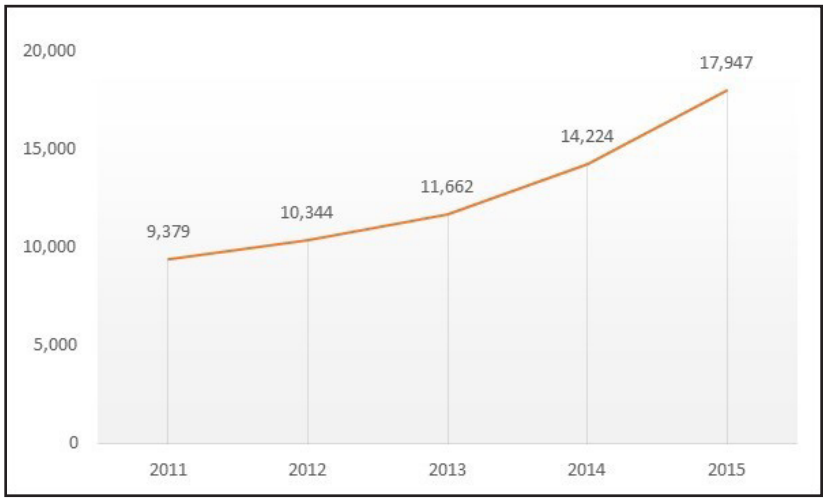


Table 20: Route 5B Saturday Ridership (FY 2011 - FY 2015)

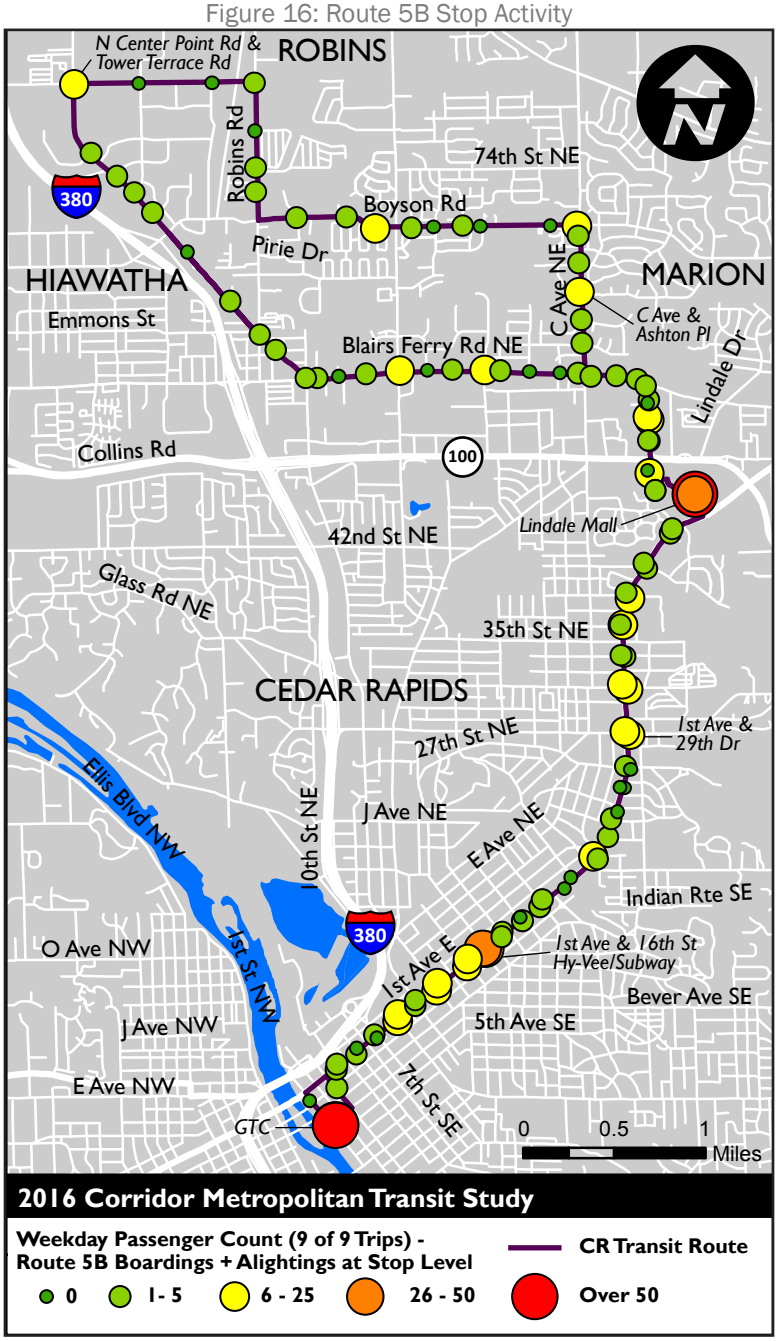


Almost all sections of Route 5B can be considered productive, but the segment along 1st Avenue between the GTC and Lindale Mall is slightly more productive than the one-way outer loop. The North Center Point Road, Tower Terrace Road, and Robins Road segments are the least productive segments of the route, however, the CCB stop at the corner of North Center Point Road and Tower Terrace Road is among the highest ridership stops on the route.

The stops with the highest number of boardings and alightings are:

- Lindale Mall
- 1st Avenue & 16th Street (Hy-Vee)
- North Center Point Road & Tower Terrace Road (CCB)
- 1st Avenue & 29th Street Drive (Walgreens)
- C Avenue & Ashton Place

Figure 16: Route 5B Stop Activity



ROUTE 5N

Route 5N is one of three routes that operate along 1st Avenue between Downtown Cedar Rapids and the Lindale Mall. After serving the mall, Route 5N continues to the northeast to serve the City of Marion. The outer end of the route is operated as one-way loop in the clockwise direction. The route serves the neighborhoods north of US-151 Business first, then continues to the Walmart and returns to the mall via US-151 Business.

Route 5N carried approximately 131,500 passengers and 34.4 passengers per revenue hour in FY 2015. The route carried 9.6 percent of the ridership on the total system, but required only 5.9 percent of the system's revenue hours to operate. Together the 5-series routes account for nearly 30 percent of the system ridership, but less than 18 percent of the revenue hours. The route ranked 4th in the system in total ridership and 2nd in passengers per revenue hour.

Weekday ridership on Route 5N grew steadily from FY 2012 to FY 2015, increasing by 5.5 percent between FY 2014 and FY 2015. Saturday ridership experienced the same steady growth from FY 2011 to FY 2013, but increased more dramatically from FY 2013 to FY 2015. Between FY 2014 and FY 2015, Saturday ridership increased by nearly 4,000 annual passengers, or 26.6 percent.

Table 21: Route 5N FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
5N	131,393	9.6%	4	3,818	5.9%	34.4	2

Table 22: Route 5N Weekday Ridership (FY 2011 - FY 2015)

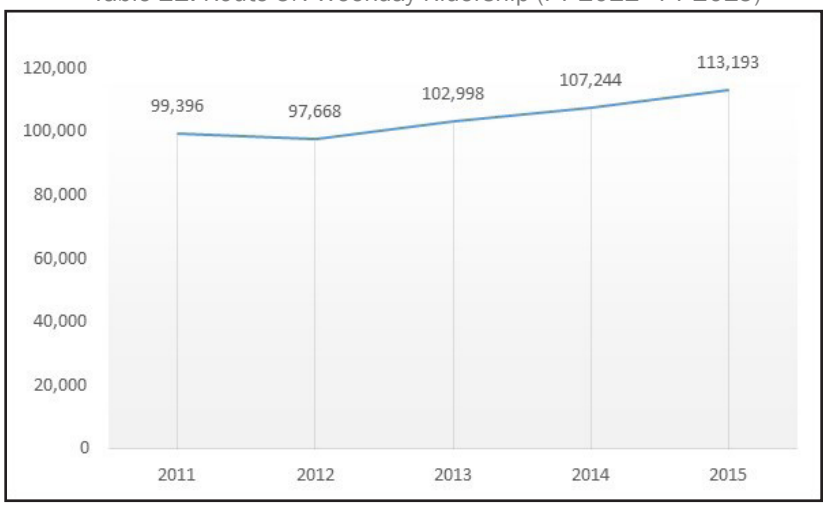
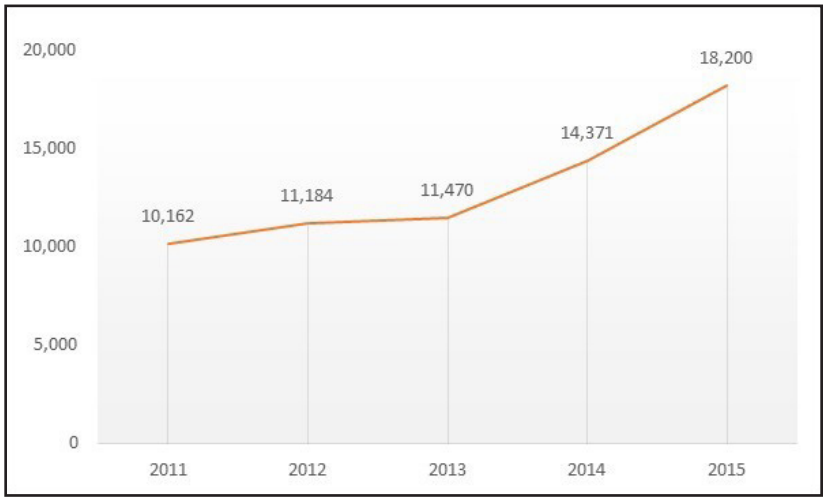


Table 23: Route 5N Saturday Ridership (FY 2011 - FY 2015)

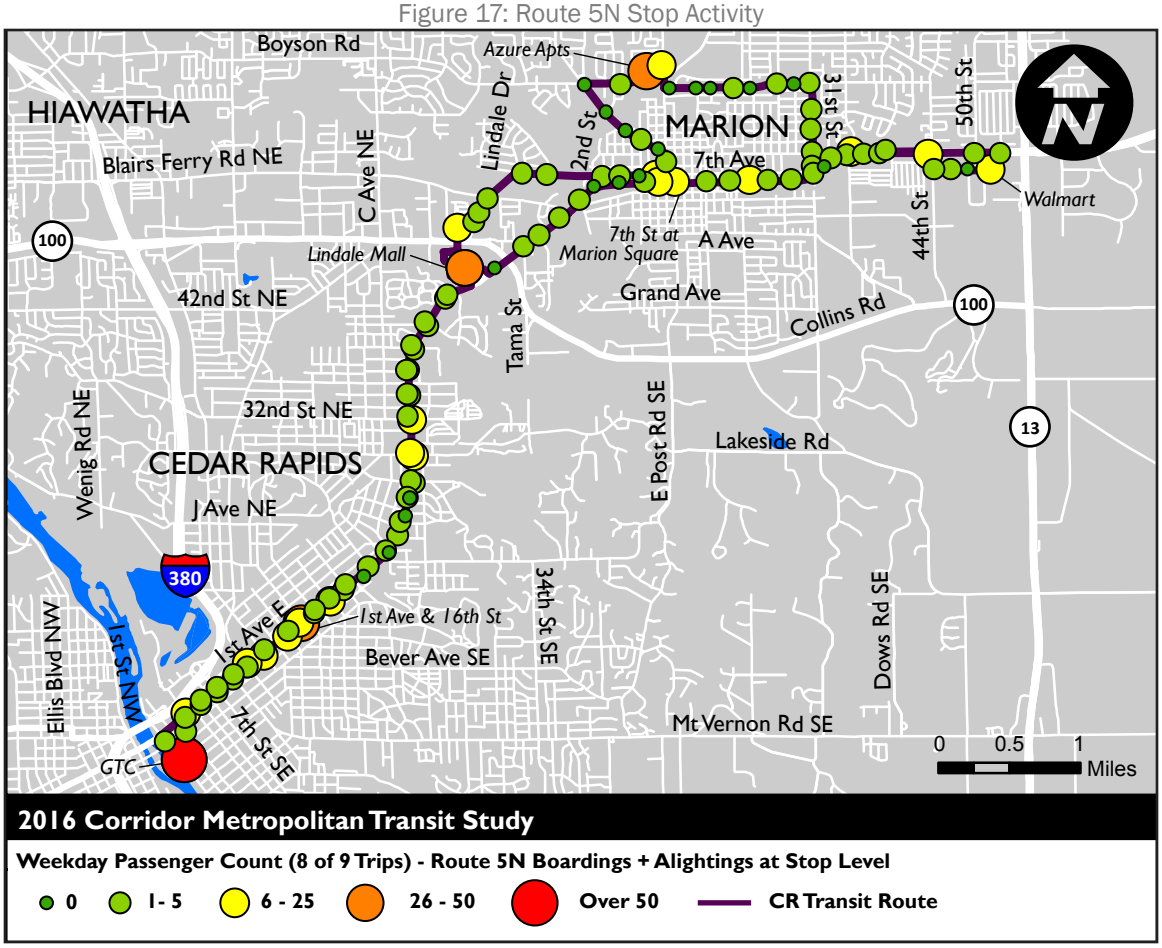


Almost all sections of Route 5N can be considered productive, but the segment along 1st Avenue between the GTC and Lindale Mall is slightly more productive than the one-way outer loop. The segments serving the neighborhoods north of US-151 Business are the least productive of the route, with the exception of the apartment complex at the intersection of Boyson Road and 10th Street, which is the highest ridership stop on the route.

The stops with the highest number of boardings and alightings are:

- Boyson Road across from Bentley Drive (Azure Apartments)
- Lindale Mall
- 1st Avenue & 16th Street (Subway)
- Marion Walmart
- 7th Avenue @ Marion Square

Figure 17: Route 5N Stop Activity



ROUTE 5S

Route 5S is one of three routes that operate along 1st Avenue between Downtown Cedar Rapids and the Lindale Mall. After serving the mall, Route 5S continues to the northeast to serve the City of Marion. The outer end of the route is operated as one-way loop in the counter-clockwise direction. The route serves the neighborhoods south of US-151 Business first, then continues to the Walmart and returns to the mall via US-151 Business.

Route 5S carried approximately 133,000 passengers and 34.6 passengers per revenue hour in FY 2015. The route carried 9.7 percent of the ridership on the total system, but required only 5.9 percent of the system's revenue hours to operate. Together the 5-series routes account for nearly 30 percent of the system ridership, but less than 18 percent of the revenue hours. The route ranked 3rd in the system in total ridership and 1st in passengers per revenue hour.

Table 24: Route 5N FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
5S	133,102	9.7%	3	3,844	5.9%	34.6	1

Weekday ridership on Route 5S remained flat from FY 2011 to FY 2013, but has increased in each of the past two years. Weekday ridership increased by approximately 6,700 annual passengers between FY 2014 and FY 2015 (a 6.4 percent increase). Saturday ridership on Route 5S was also flat from FY 2011 to FY 2013, but has grown dramatically over the past two years. Saturday ridership increased by nearly 5,000 annual passengers (a 31.8 percent increase) from FY 2014 to FY 2015.

Table 25: Route 5S Weekday Ridership (FY 2011 - FY 2015)

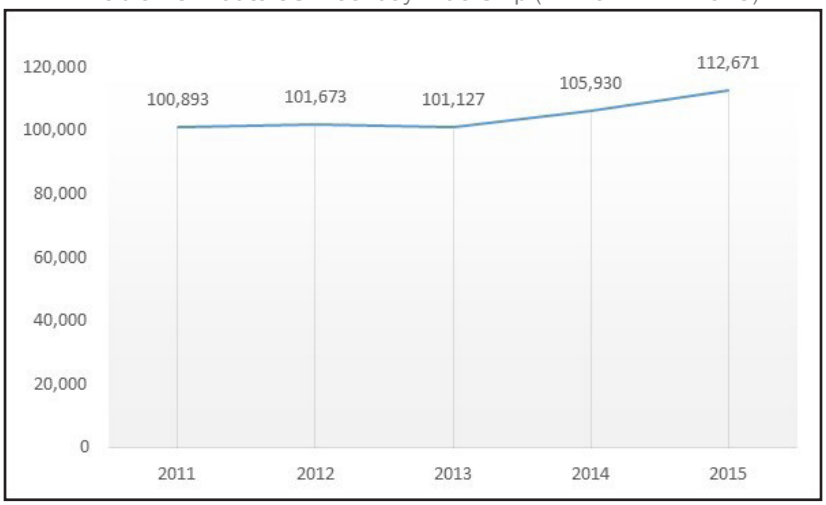
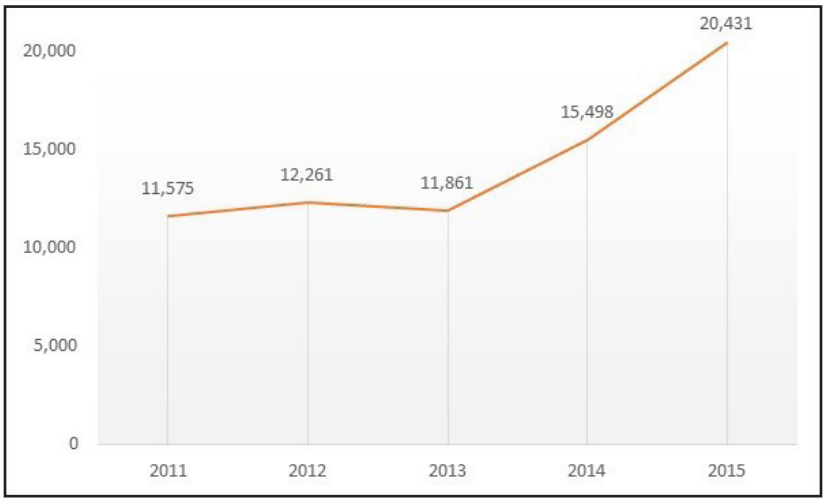


Table 26: Route 5S Saturday Ridership (FY 2011 - FY 2015)

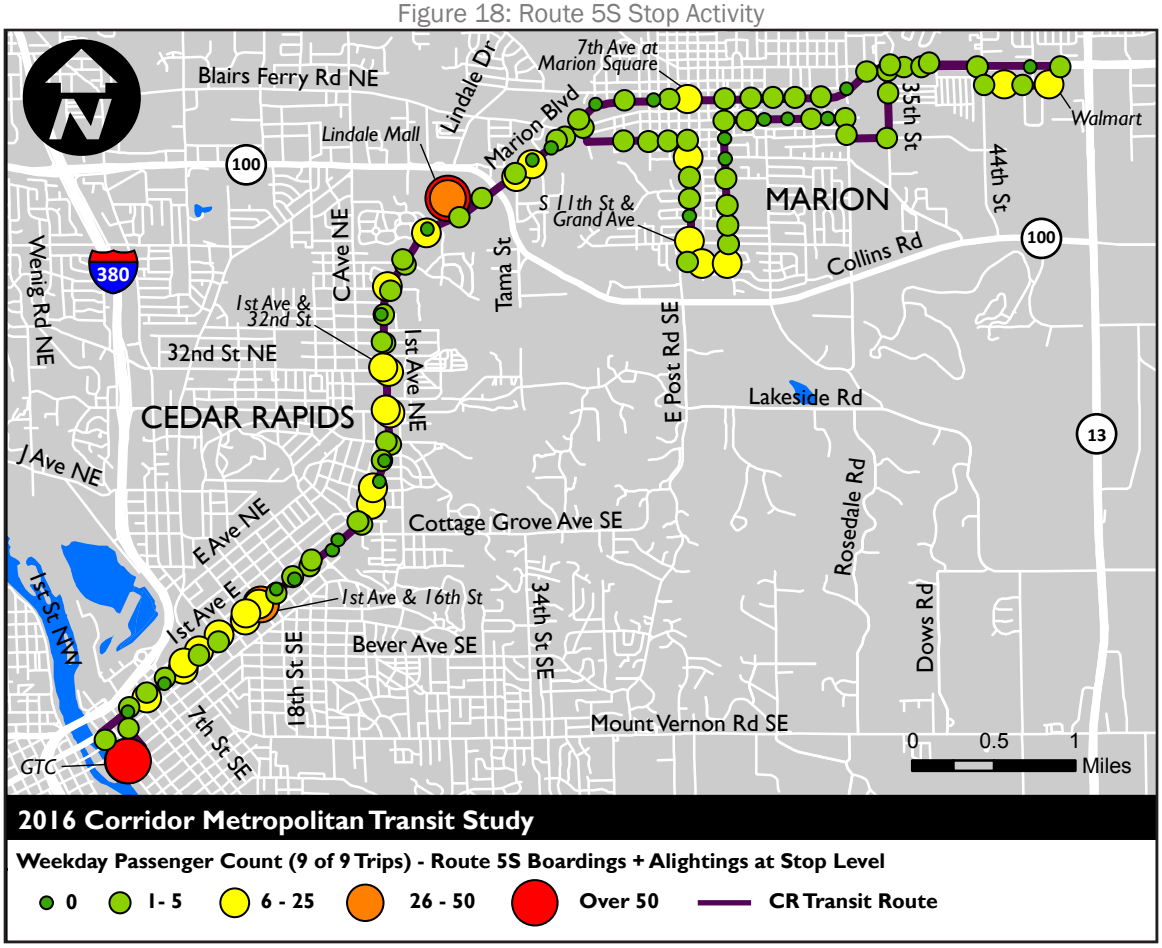


Almost all sections of Route 5S can be considered productive, but the segment along 1st Avenue between the GTC and Lindale Mall is slightly more productive than the one-way outer loop in Marion. The 15th Street and 5th Avenue segments and the segment of US-151 Business between the Walmart and Marion Square are among the least productive sections of the route.

The stops with the highest number of boardings and alightings are:

- Lindale Mall
- 1st Avenue & 16th Street (Subway)
- S 11th Street & Grand Avenue
- 1st Avenue & 29th Street Drive (Walgreens)
- Marion Walmart

Figure 18: Route 5S Stop Activity



Route 6 serves northeast Cedar Rapids and the City of Hiawatha. Within Cedar Rapids, the route operates primarily on Oakland Road and Center Point Road. The outer end of the route is operated as a large one-way loop in the clockwise direction, serving Blairs Ferry Road, Miller Road, and Boyson Road before returning to Center Point Road. Route 6 is the 2nd highest ridership route in the system and ranks 5th in passengers per revenue hour. In FY 2015, the route carried approximately 137,000 passengers and 24.4 passengers per revenue hour. Route 6 carried 10 percent of the total system ridership, but required only 8.6 percent of the system's revenue hours to operate.

Weekday ridership on Route 6 has exhibited an overall upward trend over the past five years. After declining slightly in FY 2014, weekday ridership increased by approximately 9,000 annual passengers between FY 2014 and FY 2015 (a 8.0 percent increase). Saturday ridership on Route 6 also declined in FY 2014, but increased by over 6,000 annual passengers (a 58.5 percent increase) from FY 2014 to FY 2015.

Table 27: Route 6 FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
6	137,007	10.0%	2	5,616	8.6%	24.4	5

Table 28: Route 6 Weekday Ridership (FY 2011 - FY 2015)

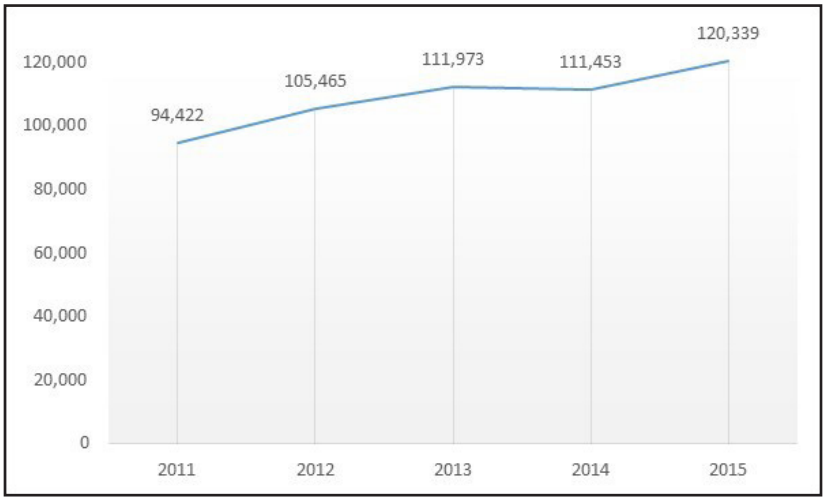
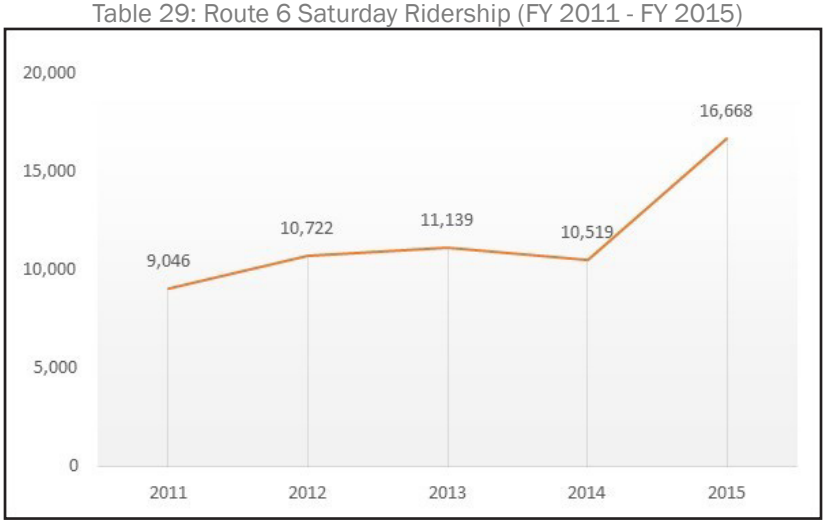


Table 29: Route 6 Saturday Ridership (FY 2011 - FY 2015)



Almost all segments of Route 6 can be considered productive, but the most productive sections are actually on the one-way loop operating on Blairs Ferry Road, Boyson Road, and Center Point Road.

The stops with the highest number of boardings and alightings are:

- Blairs Ferry Road Walmart
- 180 College Drive (Coe College shelter)
- 1300 Oakland Road (Oakland Gardens Apartments)
- 32nd St & Oakland Road (Hy-Vee)
- Oakland Rd & O Avenue

Figure 19: Route 6 Stop Activity

Route 7 serves southwest Cedar Rapids to the east of I-380, including the C Street SW, Bowling Street SW, and Kirkwood Boulevard SW corridors; Kirkwood Community College; and the Yellow Book and Transamerica offices to the west of C Street SW. During off-peak periods, the route is operated as a predominately bidirectional route that serves Kirkwood Boulevard in both directions. During the morning and afternoon peak periods, when the route is operated every 30 minutes, a B pattern is operated every other trip that continues north after serving Hibu to serve the various industrial and commercial destinations on C Street SW and 41st Avenue SW.

Route 7 is the 5th highest ridership route in the system and ranks 6th in passengers per revenue hour. In FY 2015 the route carried approximately 129,000 passengers and 23.0 passengers per revenue hour. Route 7 carried 9.4 percent of the total system ridership, but required only 8.6 percent of the system's revenue hours to operate.

Table 30: Route 7 FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
7	128,791	9.4%	5	5,596	8.6%	23.0	6

Weekday ridership on Route 7 grew steadily from FY 2011 to FY 2014, but in divergence with almost every other route in the system, weekday ridership declined by more than 6,000 annual passengers from FY 2014 to FY 2015 (a 5.0 percent decrease). Saturday ridership, however, has continued its steady growth trend with a 14.0 percent increase from FY 2014 to FY 2015.

Table 31: Route 7 Weekday Ridership (FY 2011 - FY 2015)

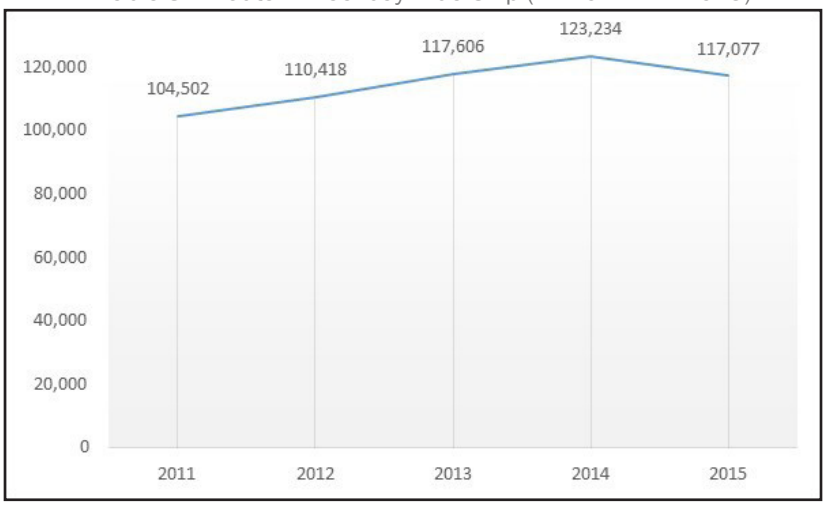
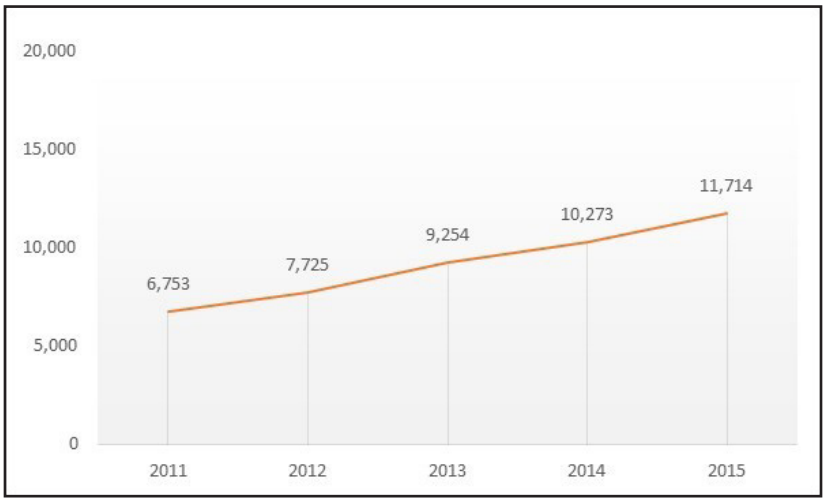


Table 32: Route 7 Saturday Ridership (FY 2011 - FY 2015)

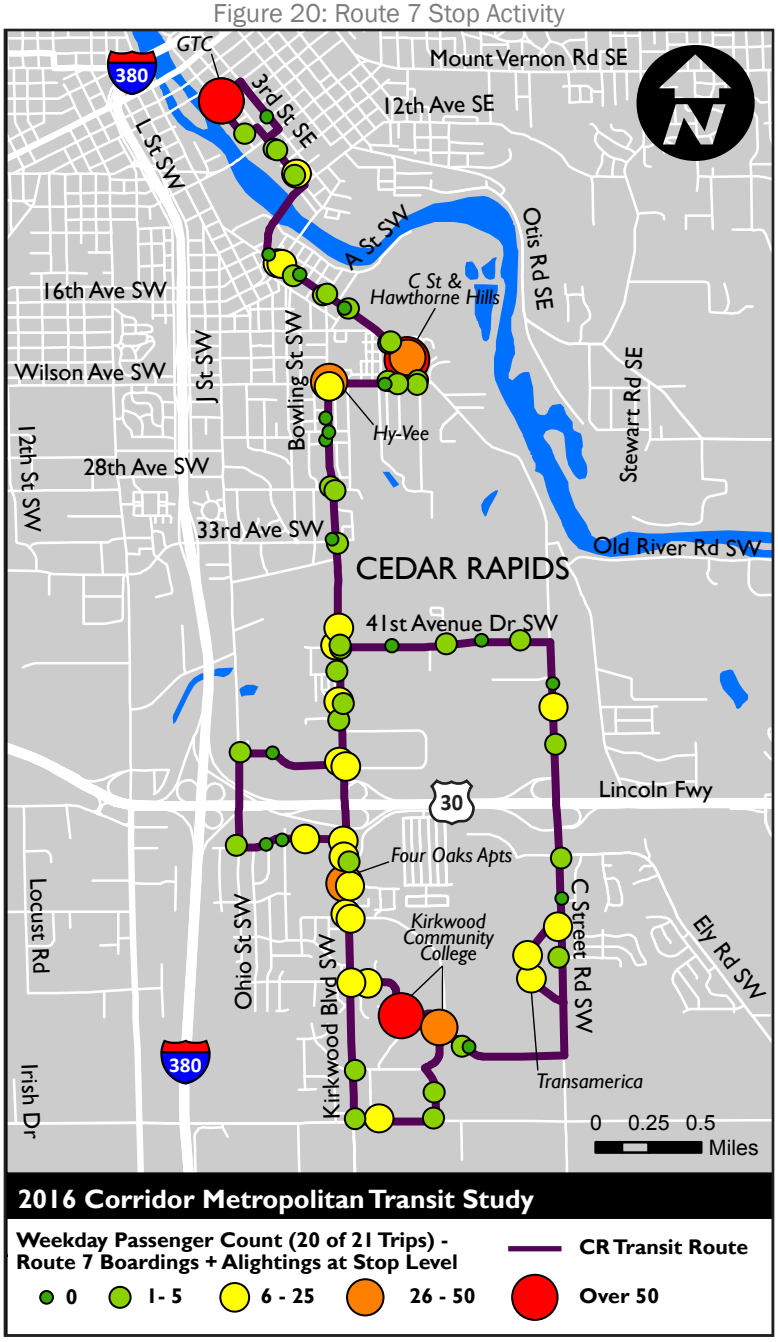


The most productive segments of Route 7 are between Hawthorne Hills Apartments on C Street SW and the Hy-Vee on Bowling Street SW, and the segment of Kirkwood Boulevard between Miller Avenue and Kirkwood Community College. The least productive segments of the route include the section of Bowling Street SW between Wilson Avenue and 41st Avenue SW; the small one-way loop operating on 50th Avenue SW, J Street SW, and Miller Avenue SW; and the segments of C Street SW and 41st Avenue SW served by the "B" pattern during peak periods.

The stops with the highest number of boardings and alightings are:

- Kirkwood Community College Linn Hall
- C Street across from Hawthorne Hills shelter
- Kirkwood Boulevard & Kirkwood Court (Four Oaks)
- 2247 C Street (Hawthorne Hills)
- 2300 Bowling Street (Hy-Vee gas station)

Figure 20: Route 7 Stop Activity



ROUTE 8

Route 8 serves northwest Cedar Rapids. The eastern half of the route is operated as a bidirectional route on B Avenue and Johnson Avenue NW. The western half of the route is operated in a figure-eight pattern that provides coverage within the Cedar Hills neighborhood and serves the YMCA on Stoney Point Road.

Route 8 is among the lowest performing routes in the system. In FY 2015 the route carried approximately 55,000 passengers and 13.9 passengers per revenue hour. Route 8 carried 4.0 percent of the total system ridership, but required 6.1 percent of the system's revenue hours to operate. It ranked 13th in total ridership and 12th in passengers per revenue hour.

Weekday ridership on Route 8 has remained almost flat over the past five years. From FY 2014 to FY 2015, weekday ridership increased by almost 2,000 annual passengers (a 3.7 percent increase), but was still lower than in FY 2012. Saturday ridership has increased over the past two years. From FY 2014 to FY 2015, Saturday ridership increased by 15.0 percent.

Table 33: Route 8 FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
8	55,083	4.0%	13	3,966	6.1%	13.9	12

Table 34: Route 8 Weekday Ridership (FY 2011 - FY 2015)

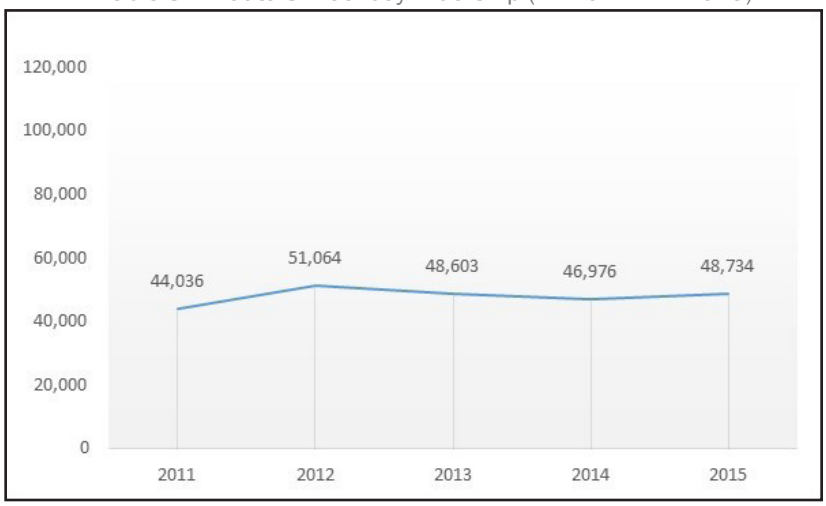
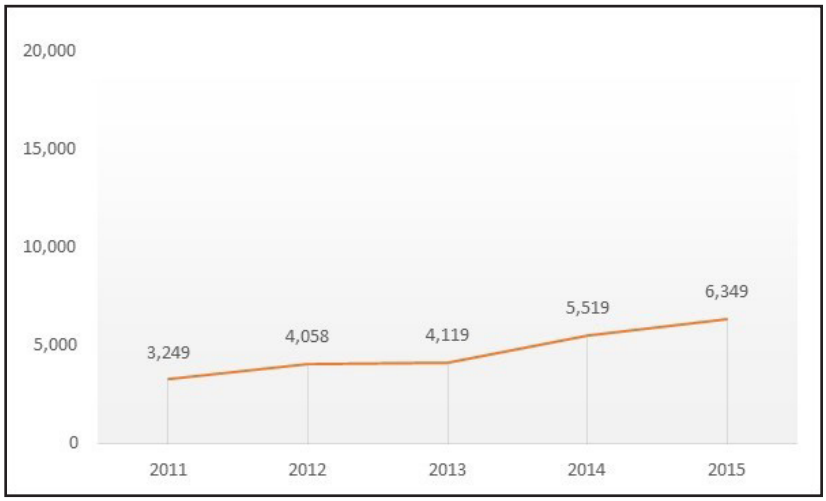


Table 35: Route 8 Saturday Ridership (FY 2011 - FY 2015)

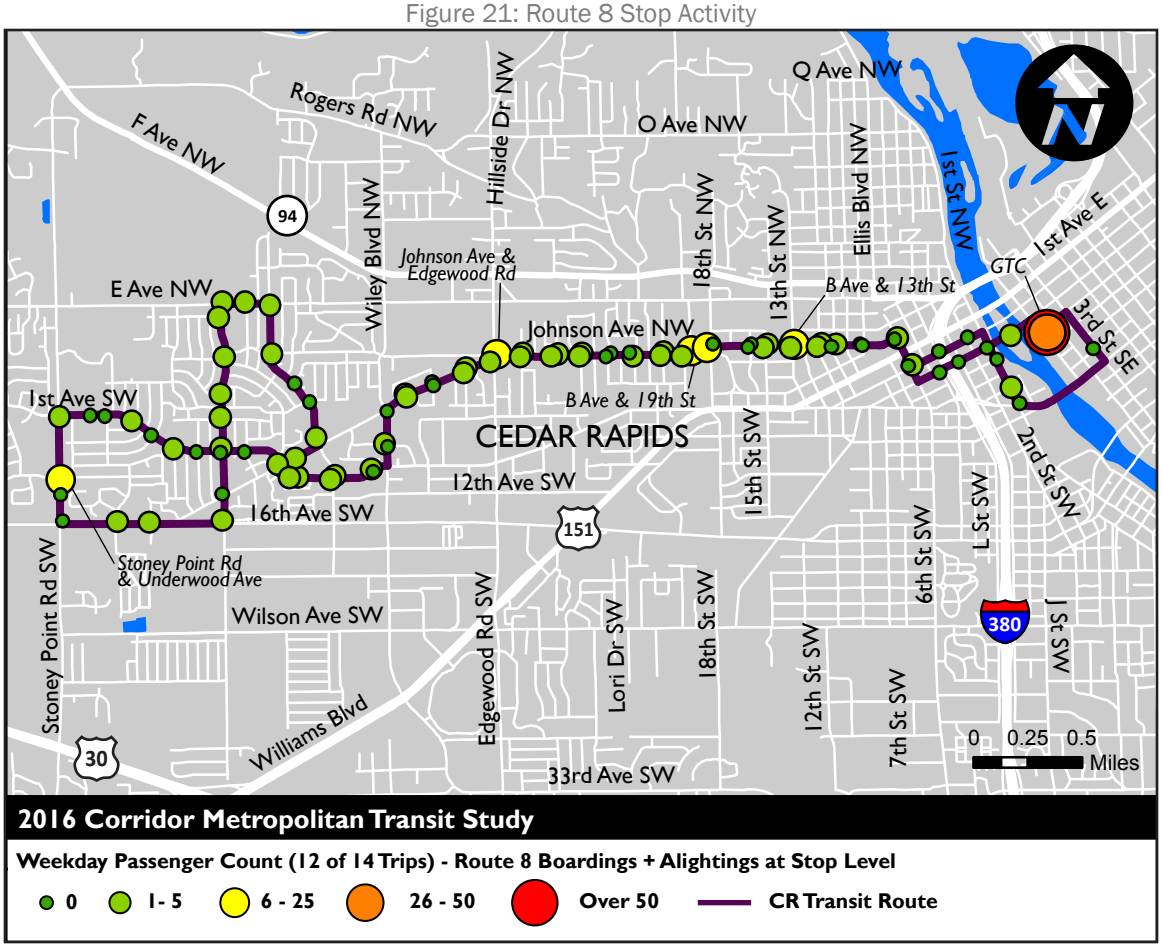


The most productive segment of Route 8 is along B Avenue/Johnson Avenue between 13th Street NW and Edgewood Road, but even this section of the route has a number of stops where no boardings or alightings were observed. Most segments of the route produce very little ridership.

The stops with the highest number of boardings and alightings are:

- Johnson Avenue & Edgewood Road
- B Avenue & 13th Street
- B Avenue & 19th Street
- Stoney Point Road & Underwood Avenue
- Johnson Avenue & 29th Street

Figure 21: Route 8 Stop Activity



ROUTE 9

Route 9 serves the east side of Cedar Rapids, including Metro High School, Wellington Heights, Washington High School, and the Mount Vernon Road corridor. The route is operated in the clockwise direction, which in combination with Route 2, provides bidirectional service along most of the route's alignment. While Route 2 is the lowest performing route in the system, Route 9 follows closely behind. It is ranked 12th in ridership and 13th in passengers per revenue hour. Route 9 carried approximately 55,500 passengers and 12.6 passengers per revenue hour in FY 2015. The route carried only 4.0 percent of the ridership on the total system but required 6.8 percent of the system's revenue hours to operate.

Weekday ridership on Route 9 increased slightly from FY 2011 to FY 2014, and more rapidly over the past year. From FY 2014 to FY 2015, weekday ridership increased by approximately 6,600 annual passengers, or a 15.1 percent increase. Saturday ridership has followed a similar trajectory. From FY 2014 to FY 2015, Saturday ridership increased by nearly 1,400 annual passengers, or a 36.1 percent increase.

Table 36: Route 9 FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
9	55,469	4.0%	12	4,416	6.8%	12.6	13

Table 37: Route 9 Weekday Ridership (FY 2011 - FY 2015)

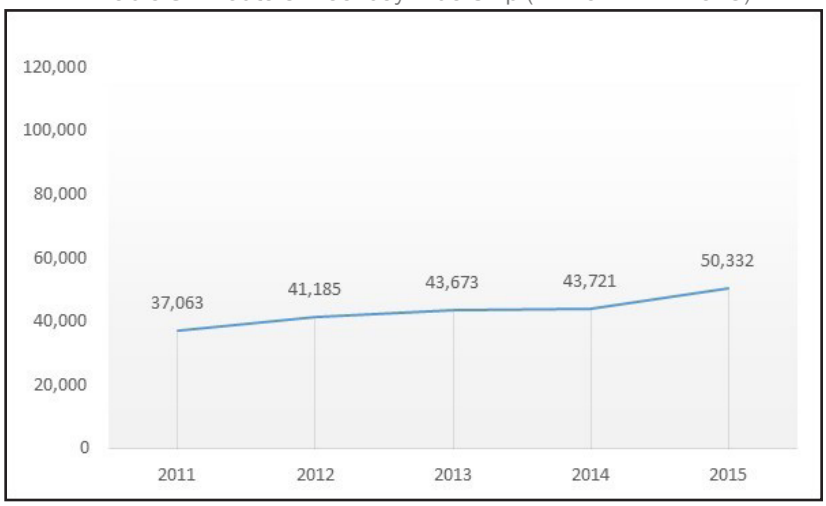
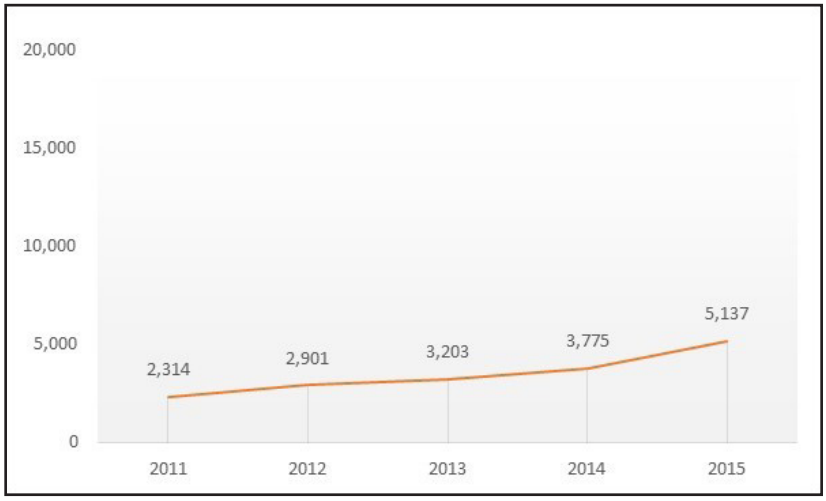


Table 38: Route 9 Saturday Ridership (FY 2011 - FY 2015)



The most productive segments of Route 9 are those nearest to Downtown Cedar Rapids: along 5th Avenue from 10th Street SE to 19th Street SE and along 12th Avenue and 15th Street SE from Mount Vernon Road to 2nd Street SE. While Washington High School and the Hy-Vee on Mount Vernon Road are among the highest ridership stops on the route, they are the only major trip generators east of 19th Street SE. The Forest Drive segment and the East Post Road loop are the least productive segments of the route.

The stops with the highest number of boardings and alightings are:

- Cottage Grove Ave & Forest Drive
- 5th Avenue SE and 16th Street SE
- Mount Vernon Road Hy-Vee
- 12th Avenue across from 8th Street (Metro High School)
- 8th Avenue & 7th Street

Figure 22: Route 9 Stop Activity

ROUTE 10

Route 10 serves the southwest side of Cedar Rapids, including the 1st Avenue SW and Williams Boulevard corridors. To the east of 15th Street SW on 1st Avenue, the route is linear and bidirectional. To the west of 15th Street SW, Route 10 is operated as large one-way loop in the clockwise direction. This section of the route serves a number of destinations, including the cluster of apartment complexes near the intersection of Wiley Boulevard and 12th Avenue SW, the Westdale Mall and its surrounding retail and commercial uses, and Thomas Jefferson High School.

In FY 2015 Route 10 carried approximately 109,500 passengers and 19.5 passengers per revenue hour. The route's share of the total system ridership, at 8.0 percent, was only slightly lower than its share of the system's revenue hours, at 8.6 percent. Route 10 was ranked 7th in the system for both ridership and passengers per revenue hour, placing it in the middle of the pack for performance.

Table 39: Route 10 FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
10	109,579	8.0%	7	5,616	8.6%	19.5	7

Unlike most other routes in the system, weekday ridership on Route 10 has been in decline over the past five years. From FY 2014 to FY 2015, weekday ridership decreased by nearly 4,500 annual passengers, or a 4.4 percent decrease. In contrast, Saturday ridership remained mostly flat from FY 2011 to FY 2013, but has grown over the past two years. From FY 2014 to FY 2015, Saturday ridership increased by nearly 4,000 annual passengers, or an 11.5 percent increase.

Table 40: Route 10 Weekday Ridership (FY 2011 - FY 2015)

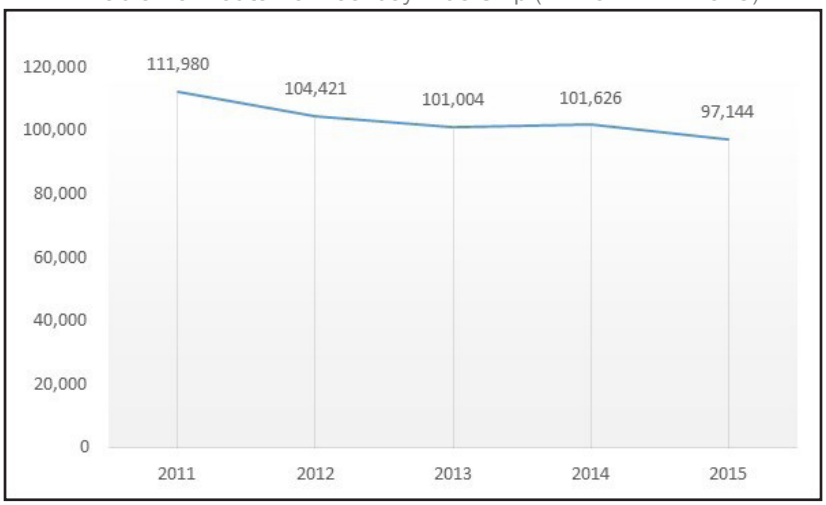
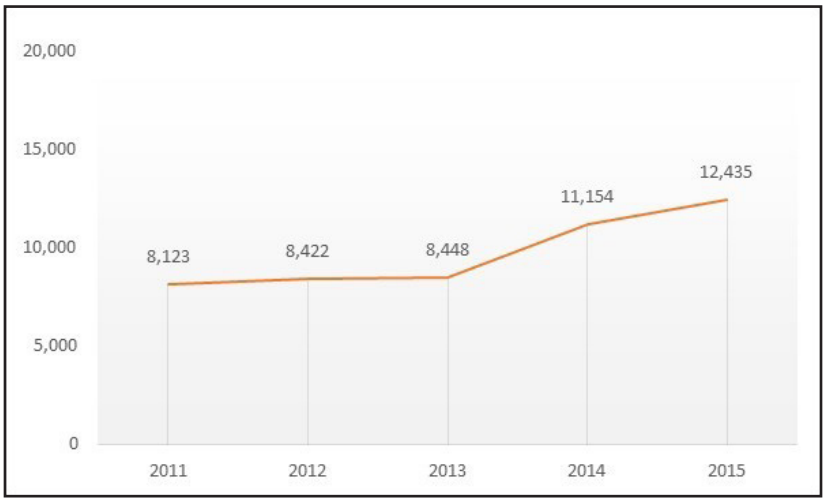


Table 41: Route 10 Saturday Ridership (FY 2011 - FY 2015)

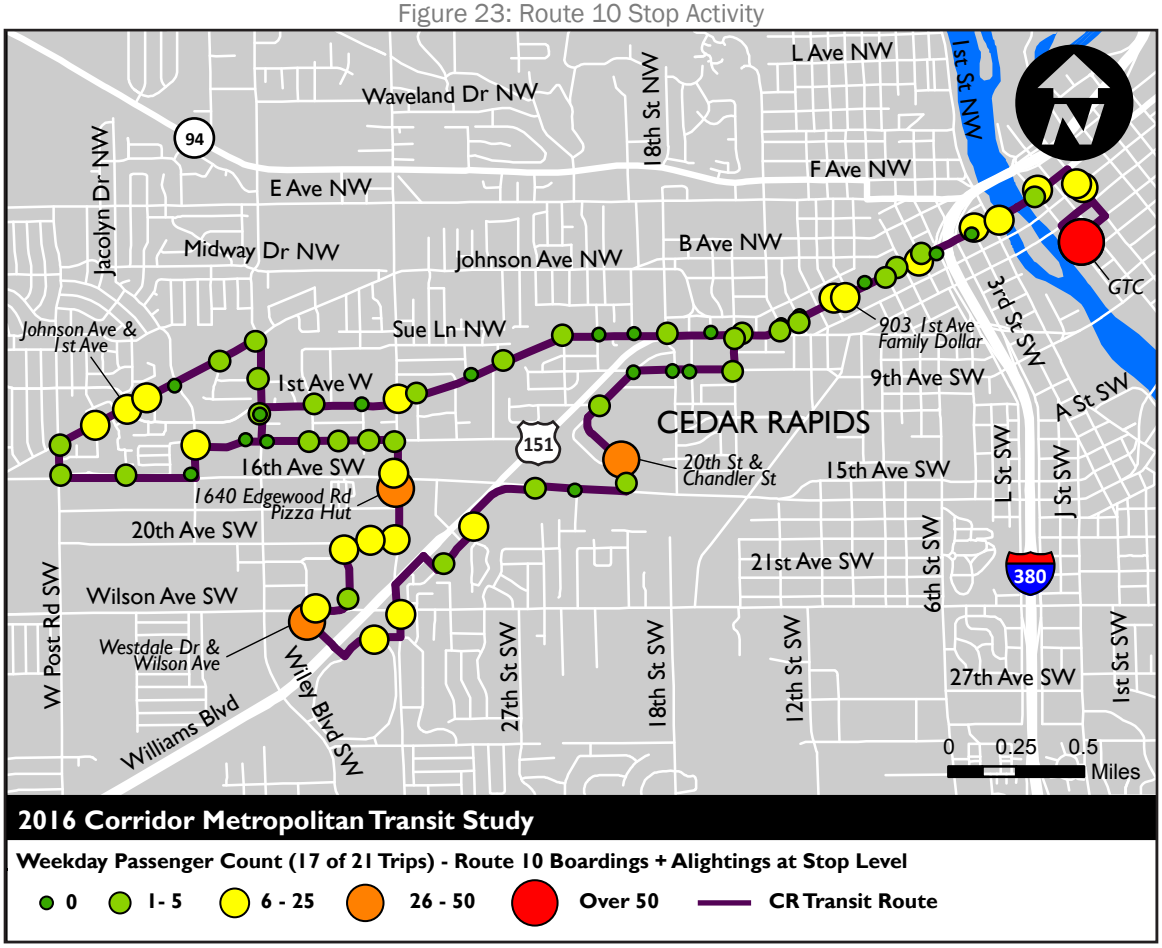


The most productive segments of Route 10 are along 1st Avenue between the GTC and 10th Street SW, along Johnson Avenue SW, and along the segment beginning at Edgewood Drive and 16th Street SW and continuing through the surrounding Westdale area development to Thomas Jefferson High School. The least productive segment of the route is along 1st Avenue to the west of 10th Street SW.

The stops with the highest number of boardings and alightings are:

- Westdale Drive & Wilson Avenue
- 20th Street across from Chandler Street (Jefferson)
- 1640 Edgewood Road (Pizza Hut)
- 2000 Scotty Drive (Goodwill)
- 903 1st Avenue (Family Dollar)

Figure 23: Route 10 Stop Activity



Route 11 serves the section of southwest Cedar Rapids that parallels I-380, including neighborhoods to the north of 33rd Avenue SW, the commercial and industrial uses further south, the Eastern Iowa Airport and the nearby warehousing industries, and Prairie High School. The northern part of the route is split between 16th Avenue SW and 33rd Avenue SW, with the route operating southbound on J Street SW and northbound on 6th Street SW. The northbound service on 6th Street SW serves as the counterpart to the southbound service provided by Route 12 on this segment. The southern end of the route is operated as a large one-way loop in the counter-clockwise direction.

In FY 2015, Route 11 carried approximately 100,000 passengers and 17.8 passengers per revenue hour. The route carried 7.3 percent of the total system ridership, but required 8.6 percent of the system's revenue hours to operate. It was ranked 8th for both ridership and passenger per revenue hour, placing it in the middle of the pack for performance.

Table 42: Route 11 FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
11	99,993	7.3%	8	5,616	8.6%	17.8	8

Weekday ridership on Route 11 has fluctuated over the past five years. Weekday ridership declined from FY 2012 to FY 2014, but increased by 6.6 percent from FY 2014 to FY 2015. Meanwhile, Saturday ridership remained nearly level from FY 2011 to FY 2014, but increased by 2,200 annual riders, or a 31.4 percent increase, from FY 2014 to FY 2015.

Table 43: Route 11 Weekday Ridership (FY 2011 - FY 2015)

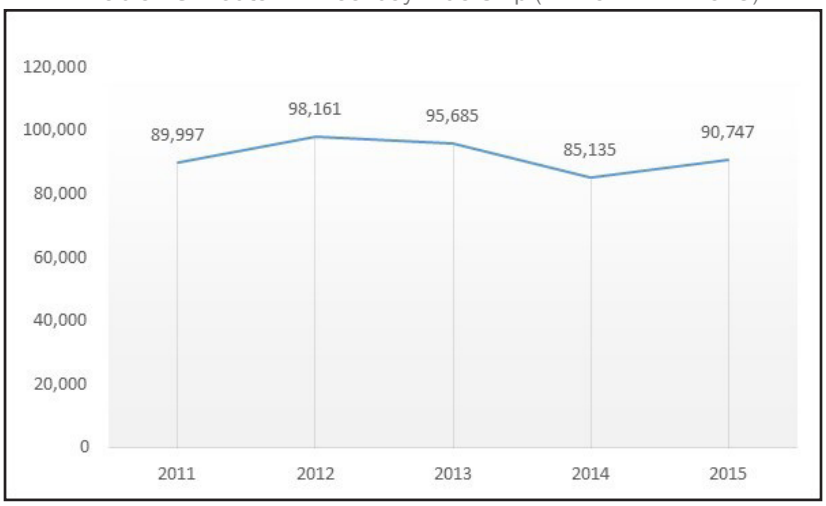
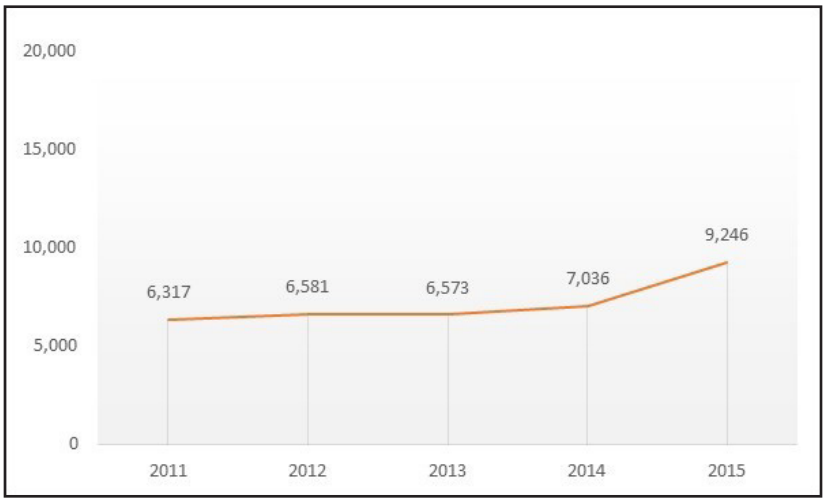


Table 44: Route 11 Saturday Ridership (FY 2011 - FY 2015)

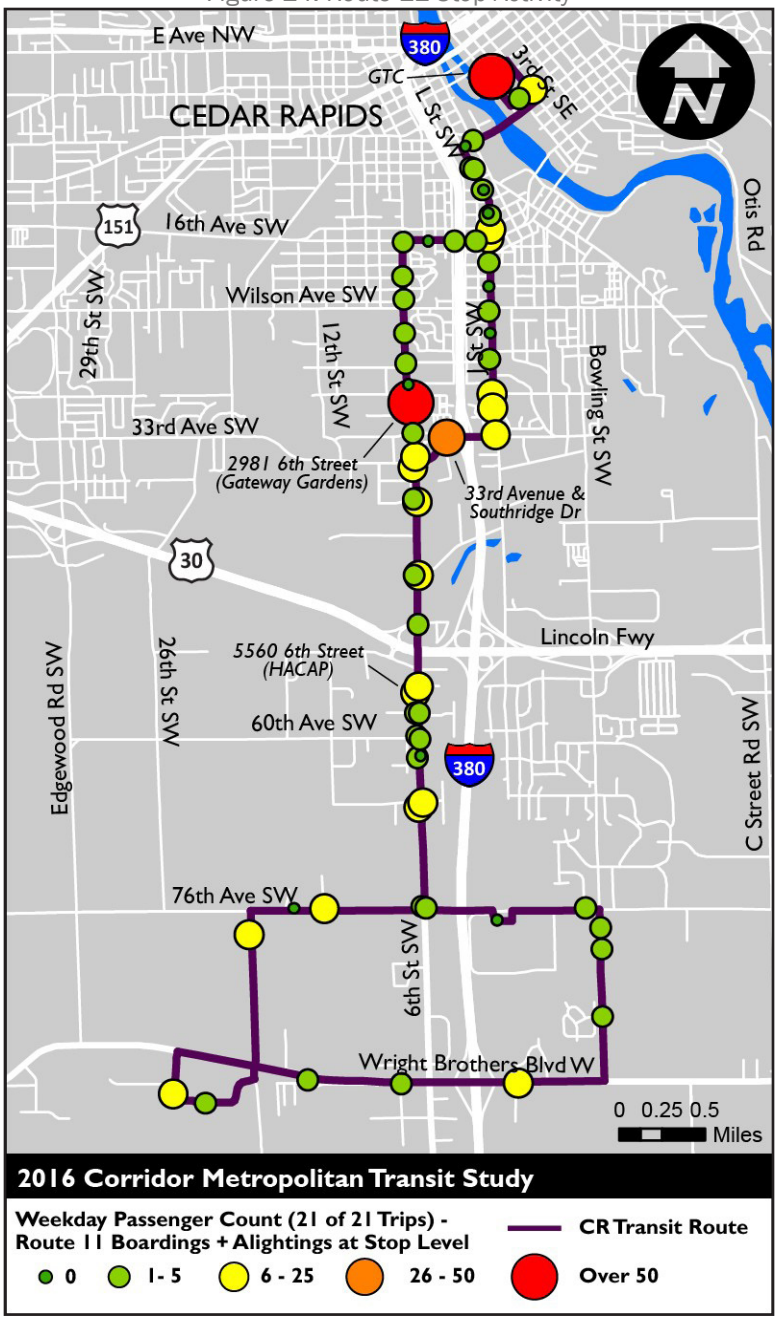


The most productive segments of Route 11 are along J Street SW and 6th Street SW between 33rd Avenue SW and 16th Avenue SW. The least productive segment of the route is location along the large loop at the south end of the route that serves Eastern Iowa Airport, Prairie High School, and the various commercial and retail developments along Wright Brothers Boulevard.

The stops with the highest number of boardings and alightings are:

- 2981 6th Street (Gateway Gardens)
- 33rd Avenue and Southridge Drive
- 5560 6th Street (HACAP)

Figure 24: Route 11 Stop Activity



ROUTE 12

Route 12 serves southwest Cedar Rapids, operating primarily on 6th Street SW, 33rd Avenue SW, Wiley Boulevard, and 22nd Avenue SW. The route is operated as a large one-way loop in the clockwise direction.

Route 12 is among the highest performing routes in the system, ranked 1st for ridership and 4th for passengers per revenue hour. In FY 2015 the route carried approximately 142,000 passengers and 25.3 passengers per revenue hour. It carried 10.4 percent of the total system ridership but required only 8.6 percent of the system's revenue hours to operate.

Weekday ridership on Route 12 has experienced continual growth over the past five years. From FY 2014 to FY 2015, weekday ridership increased by more than 19,000 annual passengers, or a 17.7 percent increase. In contrast with the tremendous growth in weekday ridership on Route 12 and with the Saturday ridership trends on nearly every other route in the system, Route 12 experienced a slight decline in Saturday ridership from FY 2014 to FY 2015. Nevertheless, Route 12 still carried more passengers on Saturdays in FY 2015 than all other routes in the system, other than the 5-series routes.

Table 45: Route 12 FY 2015 Ridership, Revenue Hours, and Passengers per Revenue Hours

	Ridership			Revenue Hours		Passengers per Revenue Hour	
Route	FY 2015	Percent of Total System	Rank	FY 2015	Percent of Total System	FY 2015	Rank
12	142,215	10.4%	1	5,616	8.6%	25.3	4

Table 46: Route 12 Weekday Ridership (FY 2011 - FY 2015)

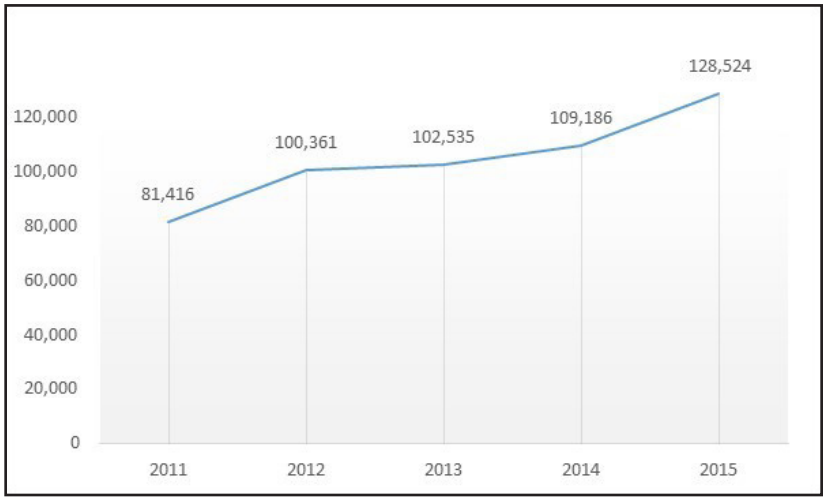
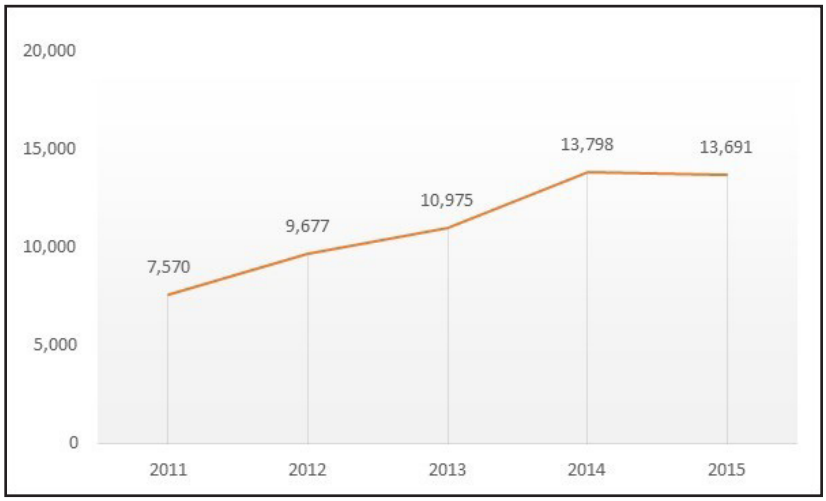


Table 47: Route 12 Saturday Ridership (FY 2011 - FY 2015)

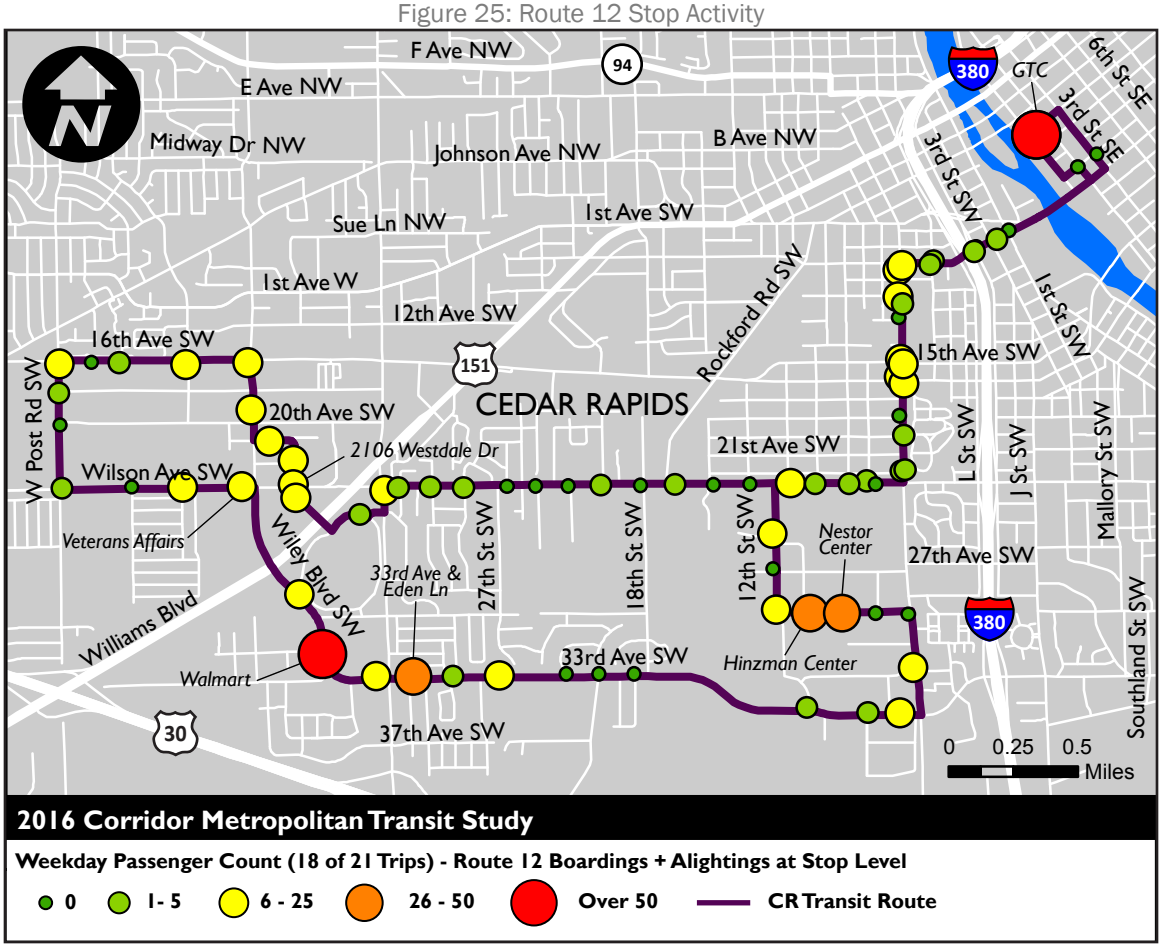


The ridership pattern on Route 12 consists of two very productive areas surrounding 6th Street SW on the eastern half of the route and the Westdale mall area on the western half of the route, separated by two segments of fairly low productivity – 33rd Avenue SW and 22nd Avenue SW.

The stops with the highest number of boardings and alightings are:

- Wiley Boulevard across from 31st Avenue (Walmart)
- 1051 29th Avenue (Hinzman Center steps)
- 901 29th Avenue (Nelson Center)
- 33rd Avenue & Eden Lane
- 2106 Westdale Drive

Figure 25: Route 12 Stop Activity



Route Profiles - Summary

A summary of the FY 2015 annual ridership and productivity, defined as passengers per revenue hour, for each route is shown in Tables 48 and 49 below. Together these two metrics provide an overview of the performance of each route by evaluating the total riders on the route and the number of riders relative to the amount of service that is operated on each route.

Table 48: FY 2015 Ridership by Route

Route	FY 2015 Ridership	Percent of Total System	Rank
12	142,215	10.4%	1
6	137,007	10.0%	2
5S	133,102	9.7%	3
5N	131,393	9.6%	4
7	128,791	9.4%	5
5B	127,501	9.3%	6
1	109,579	8.0%	7
11	99,993	7.3%	8
3	86,982	6.3%	9
4	62,453	4.6%	10
1	55,638	4.1%	11
9	55,469	4.0%	12
8	55,083	4.0%	13
2	45,615	3.3%	14

Table 49: FY 2015 Passengers per Revenue Hour by Route

Route	FY 2015 Passengers per Revenue Hour	Rank
5S	34.6	1
5N	34.4	2
5B	33.2	3
12	25.3	4
6	24.4	5
7	23.0	6
10	19.5	7
11	17.8	8
3	17.0	9
4	15.7	10
1	14.0	11
8	13.9	12
9	12.6	13
2	11.5	14

Public Input and Engagement

Public input and stakeholder engagement played a critical role in the development of transit system enhancement alternatives in this Transit Study. The study team reached out to current riders of the transit system, potential riders and the general public to solicit their thoughts on how transit services could be improved.

To gather input and feedback from the community several engagement methods were employed throughout the study including a survey, virtual town hall, stakeholder interviews and two public open houses. The two open houses were scheduled to coincide with key points in the Transit Study process to inform riders and the public of the study, as well as gain feedback.

The central goals for the public engagement effort was to identify the critical issues in need of improvement, develop a better understanding of how riders were using the service and to have a more complete understanding of how effectively public transit was serving the metro area.

Transit Survey

The transit survey was conducted over a two month period in February and March, 2016. The survey instrument consisted of twenty-one questions with a combination of multiple choice response options and open response. The survey was administered digitally from the Corridor MPO's website as well as paper copies distributed on transit vehicles and at the GTC. The survey was intended for both current transit riders as well as the general Cedar Rapids metro community not currently using the service. In total the survey received 339 responses. Results from the survey helped to identify transit service needs as well as confirm findings from the study's examination of the existing conditions. The survey was taken mostly by transit users. Seventy-eight percent of survey respondents identified as using transit at least 'a few times a year.' Forty-four percent responded that they ride transit '5 or more days a week.' The high percentage of survey respondents with transit experience gave the issue identification a higher level of validity as the study team developed transit system improvement alternatives. The full report of survey responses is presented in Appendix A.

Summary of Key Findings

- 49 percent of respondents do not have a car or access to reliable transportation
- 27 percent are unable to drive
- 90 percent use CR Transit
- Top 3 trip purposes identified were: Work, Shopping and Medical trips
- Routes 5N and 5B were the two most highly utilized routes by respondents
- Average transit system satisfaction scored 1.90 on a scale from 0 – 4 (0 lowest)
- Top 3 transit system improvements were: Longer service hours, extension of routes and improved frequency/headways

Online Town Hall - MySidewalk

Throughout the 2016 Transit Study the Corridor MPO hosted an 'Online Virtual Town Hall' on its webpage using MySidewalk. MySidewalk is an online civic engagement tool to provide another way for citizens and transit riders to participate in the planning process, ask questions and submit their own ideas. The virtual town hall was used to pose open ended questions to transit riders or other members of the public interested in the transit study to solicit their input and feedback. Along with open ended questions, materials that were presented at the open houses were also made available to review and comment on the MySidewalk site. During the Transit Study the MySidewalk online town hall website had over 2,000 views and multiple comments on the transit service concepts presented. A complete list of online responses is included in Appendix B.

Public Open Houses

Figure 26: Existing Conditions Presentation at Open House

Two open houses were held during the Transit Study to inform riders and the public about the study and engage riders in an open dialogue to see how the existing transit services could be altered to create a more useful and convenient way to move throughout the Cedar Rapids metro region. The first open house was held on February 16. The focus of this initial public engagement was to present the public with findings of the transit system's existing conditions assessment. Two presentations were made to the public, one at noon and the other after 5:00PM, both at the GTC. This location proved ideal to reach out to as many transit system users as possible in a way that was easily accessible. Throughout the day staff from the consultant team was at the GTC speaking with transit riders and other members of the public and handing out surveys. The consultant team and Corridor MPO staff spoke with over one hundred individuals and received valuable input on the existing conditions of the transit network. Many of the comments heard at the public meetings or written on the surveys included:

- Longer service hours were riders' main concern
- Later service on Saturday was desired along with new service on Sunday
- Most riders dislike having to transfer at the GTC and want more direct options
- Many routes have large one-way loops causing out of direction travel
- Loop routes cause confusion for newer riders
- Route 5 is overcrowded most of the day between the GTC and Lindale Mall on 1st Avenue
- Improvement to bus stop passenger amenities (Shelters, benches, concrete pads etc.) was desired
- Snow removal at bus stops and lack of sidewalks in areas of the metro needs attention

The second public open house was hosted April 28th at the GTC with an evening presentation at the Downtown Cedar Rapids Public Library. These open houses presented initial transit service improvement alternatives discussed in detail in the *Transit System Recommendations Alternatives* section. Four alternatives were presented to the public to gain feedback and discover if any alternatives contained fatal flaws that would require adjustment before the recommendations were finalized. The four alternatives included a Cost-Neutral Daytime Service Alternative, a Cost-Neutral with Evening Service Alternative, a Maximum Service Scenario Alternative, and an Ideal Transit Service Scenario.

Each of the alternatives were displayed on boards with service details for transit riders and the public to review. Both consultant and Corridor MPO staff were present at the GTC to answer questions about the proposed service alternatives and take comments from open house attendees.

This second open house provided the study team an opportunity to engage with nearly two hundred transit users and members of the public interested in transit services in the Cedar Rapids metro area. At the open house comment forms were distributed. Each comment card provided brief descriptions of each of the four proposed transit service alternatives and space for attendees to provide their thoughts or concerns.

Figure 27: Recommendations Presentation at Library

Figure 28: Corridor MPO Staff Taking Comments on Transit Service Alternatives

Summary of Service Recommendation Comments

Approximately thirty written comment forms were collected during the day long open house at the GTC and evening presentation at the Public Library. A brief summary of the comments gathered for each of the four service alternatives is provided below. All comment forms received may be found in Appendix C.

Alternative 1: Cost Neutral Day Service – Reorganization of daytime fixed route system to provide more service in more productive areas such as the 1st Avenue Corridor on the '5 Routes'

- Alternative 1 better utilized existing resources
- Route 5X options between GTC and Lindale Mall will relieve overcrowding
- Alternative 1 seemed to represent the bare minimum of transit system improvements needed
- 5 Route should be extended to the mobile home park past Highway 13 in Marion
- This alternative appears to be a good way to increase ridership

- Need to understand that Alternative 1 removes service from O Avenue on Route 1
- Westdale/Walmart area as a secondary transfer hub is a good idea

Alternative 2: Cost Neutral with Night Service – Reorganization of the existing fixed route system without any new resources. AM peak service reallocated to provide night time service for six routes until 10:00PM on weekdays. There would be no AM peak service on any routes for this alternative.

- Taking away AM peak service may hurt ridership for some groups
- More ridership counts of how many use the AM peak service would be good to have to have to understand the impact of the a change
- PM service is much needed for restaurant and retail hubs
- Several commenters preferred this alternative
- Loss of peak service would be an inconvenience
- Evening service would be good getting people to and from their jobs

Alternative 3: Maximum Service Scenario – This concept involves a 20 percent increase in transit operations funding from a property tax levy allowing for more comprehensive night service. This scenario would not take away AM peak service as proposed in Alternative 2. Night service would be provided on 12 routes (except Routes 5N, 5X, 6B, and 7B) until 10:00PM.

- Revenue increase needed for this alternative very high and may be a non-starter
- This concept is closer to what transit riders need
- Good idea for many riders, including disabled
- Look at including Sunday service
- Night service should run to 11:00PM to help 2nd shift workers

Alternative 4: Ideal Service Scenario – This concept incorporates many of the service proposal recommendations and requests for service that CR Transit receives, including: evening service to 11:00PM on weekdays and Saturday, development of Sunday service, and improvement of peak frequency on all routes. This alternative would require additional operating funding beyond what local transit levies could support. New revenue sources would be required to fund this service option.

- Many commented that this alternative represented the transit system that the metro region needed
- The changes provided in this Alternative could be implemented in stages over time
- Would be great if funding could be found
- Morning service should start earlier

Figure 29: Open House 2: Service Recommendations at GTC

Stakeholder Outreach

Several critical groups of stakeholders were identified to provide input on how existing transit services are or are not supporting their clients, students, employees or other groups and how they believe the system could be improved for the benefit of the community. Stakeholder groups that were identified included; major employers, social service providers, educational organizations, convention/tourism, municipal staffs from the region and transit operators. Stakeholder interviews were conducted at Cedar Rapids City Hall on February 16th and 17th. Major employers were contacted on multiple occasions but did not respond to requests to provide input for the Transit Study. Below is a summary of stakeholder interview participants and comments provided in each group interview session.

Municipal Group

Attendees:

Samantha Dahlby	Commissioner - Cedar Rapids Planning Commission
Carletta Knox-Seymour	Commissioner - Cedar Rapids Planning Commission
Tom Treharne	Planning Director - City of Marion
Eric Holthaus	Sustainability Coordinator - City of Cedar Rapids
Chuck Heinz	Mayor – City of Robins

Comments:

- How to benchmark success from social, environmental, and value-based perspectives.
- What are the breaking points before diminishing returns become an issue?
- What are creative funding models/strategies for transit?
- Don't want to have to pass up our destinations just because the route has to go by the hub.
- Downtown being changed by new retail areas, such as NewBo, and bus service will need to adjust.
- Poor bus system forces people to have to buy an automobile.
- Need implementation steps to be part of this study.
- What are the trade-offs in terms of riders served, locations/destinations served, future land use decisions, zoning decisions?
- How to integrate study recommendations into other plans, e.g. Envision CR?
- What role can transit play in steering development and how is it marketed within each of the cities in a proactive way? For example, low cost video that answers riding questions like how to pay, how to get the buses to stop, etc.

Top Issues:

- Non-choice riders
  - Transit trips are too long for many to complete necessary errands or tasks.
  - Hours of transit service availability are too short to get shopping done after work in the evenings.
- Choice riders
  - Most routes are too infrequent (60 minutes) to fit into daily schedules. Headways would need to be 10 to 15 minutes to attract choice riders.
  - Technology improvements can help attract new choice riders.
  - Google Transit will help with trip planning and frequency concerns for choice riders.
- Length of time
  - 6:20/7:00PM end time is challenging because it makes it very hard to get to work, especially for late shift workers.
  - Don't like having to use paratransit to get home because you're a tax payer so the city should work for you.
  - Could possibly solve this with an east-west express route.
  - Kirkwood students need to get from outer areas where they live to the Kirkwood Campus

- City of Marion
  - Funding for transit service is "maxed out" and paying $100K less than what's needed to pay for the little service that's available.
  - Employers are approaching the city about worker transit needs. The city is telling employers that they can't provide service.
  - Need plan for how to address transit needs in the intermediate and whether there are interim solutions available to healthy people who can take advantage of the town's small size.
  - Need to discuss alternatives to transit, e.g. Bike trips and locker storage for bikes, etc.
- City of Hiawatha
  - Need similar concept for Hiawatha as discussed for Marion.
- Bus stop issues
  - Improve stops with shelters, benches, lighting, etc.
  - Create a shelter improvement schedule that begins with high priority shelter locations.
  - Snow clearing of all bus stops needs to happen faster following a snow event.

Solutions:

- Possible solution for issues in Marion is for area to have its own route.
- Like idea of transfer or mini-hub at Lindale Mall, but need to explore another Marion area transfer location.
- Develop direct route from Lindale transfer hub to Kirkwood Community College.
- Consider zoning codes from other communities that address zoning concerns related to density, and other factors, to see how they could be applied to the metro area.
- Entice choice riders to continue to increase transit system ridership.
- Think of transportation system as an integrated system.
- Reference the trails map we created and invested in over the last 5 years.
- Partner with shopping destinations for park-and-ride lots, for example.

Paratransit and Other Transportation Providers Group

Attendees:

Mike Barnhart	Executive Director - Neighborhood Transportation Service
Amy Kahler	Owner - Special K's Transport
Tom Hardecopf	Director - LIFTS
Martin Weissenberg	Riders Club of America

Comments:

- Transportation providers have a varied mix of fleet vehicles.
- Riders Club is a charitable organization that uses personal vehicles
  - They do not transport wheel chairs
  - They do not compete with other paratransit or taxi services
- Transporting wheel chairs is a big issue because of the weight of the vehicle and person.
- Department of Justice Americans with Disabilities Act (ADA) says you must transport people if you can physically get them into vehicles.
- Transit is a service; it is a safety net that covers the whole city and available whenever you need it for work, etc.

Top Issues:

- Area population is not transit-friendly or transit-oriented
  - This makes it difficult to attract choice riders.
  - Area population is too spread out and not very dense.

    - When people are planning for their home after retirement or at old age, they plan with a car in mind so they can easily access food, faith-based services, and medical services. However, if they are unable to drive anymore, they then have to call paratransit to reach these destinations.
- Built environment
    - Design of transportation network is an issue. For instance, you may have to cross 6 lanes of traffic to reach a hospital.
    - There is not a complete sidewalk network, even by schools.
    - Bike safety has been improved with new bike lanes. This wasn't a safe city for bikes not too long ago because there were bike vs. car accidents.
    - Headways are prohibitive to making transit an effective service. A stop may be a block from someone's house but it would take over an hour to reach work using transit whereas it would only be 15 minutes away by car.
    - Need to bring transit to the forefront.
- Politics
    - The cost needed to advance transit in the region is a concern for officials.
    - Transit education needed for community overall.
- Mill levy is not maximized in Cedar Rapids

Solutions:

- Chicken and egg scenario
    - Improvements to headways could be done through funding improvements which would help create system that choice riders will use, but what comes first?
- Focus on choice riders
    - Think about the next generation. What will people need after they move into community once they graduate college or after they receive a job offer?
    - Make it possible for them to drop kids off at day-care, get to work, etc.
    - Focus on where people work first, and then where they live; analyze this in a bi-directional way.
    - Potential political side effects to route changes.
- Regional Transit Authority idea is a good idea
    - Would need to work with Iowa City, Coralville, and Cambus because the Iowa City area has a robust transit system.
    - Would provide an opportunity to generate additional funding.
    - Should not combine paratransit and fixed route services; however, there are duplicative services, such as maintenance needs, which could be addressed with the formation of an RTA.
    - Rural vs. city transit service coordination could be explored because relationships could be negatively impacted with a regional transit agency, so local agency might be better.
- Incorporate preferred parking spaces for paratransit providers
    - Paratransit providers, like Special K, provide trips to medical appointments, dialysis, weddings, funerals, church services, and social events.
    - Currently in a specially zoned area with restrictive parking and there needs to be more parking areas.
    - Opportunity to share parking and maintenance space with other paratransit providers.

Social Service Provider Group

Attendees:

Ashely Zitzner	Manager of Financial Stability - United Way of East Central Iowa
Kay Fisk	Development Director - Neighborhood Transportation Service
Karen Van Zee	Goodwill Industries
Melissa Cullum	Manager of Community Benefit - Mercy Medical Center
Phoebe Trepp	Executive Director - Willis Dady Emergency Shelter
Jared Nylin	ADA Advisory Committee
LaSheila Yates	Civil Rights Director - City of Cedar Rapids

Comments:

- Hospitals have a high need for accessibility.
- Neighborhood Transportation Service (NTS) runs all night, beginning at 6:30PM.
- Transportation is a barrier in the region (United Way).
- Evening and weekend transportation is an issue, along with underserved geographic areas (Goodwill).
- CR Transit is not easily accessible for the vision-impaired (National Federation of the Blind).
- Access related to employment and housing search are issues (Willis Dady).
- Office hours are during regular business hours (8:00AM to 5:00PM) but there are issues with night service, cost-effective transit options, and adverse effect on low-income family (Civil Rights Commission).
- People needing help getting to doctor's appointments and to other medical appointments or services (Heritage Center on Aging).

Top Issues:

- Facilities at bus stops
  - Landing pads need to be cleared.
  - There is a lack of sidewalk connections to transit stops.
  - Cold weather is an issue for riders. More shelters would be helpful.
- Auditory stop announcements
  - Drivers don't always announce them, making it hard for the visually impaired to orient themselves along routes.
- Ridesystems app (new transit app for CR Transit)
  - Is not accessible for the visually impaired.
  - Unsure about Google Transit accessibility for visually-impaired.
- Riders with disability
  - These riders have to be on up-to-date on annual Medicaid Waiver and it can be difficult to keep track of status.
  - LIFTS has priority lists that riders need to be on and if they're not on the LIFTS list, they can miss someone and delay their service.
  - Pre-scheduled rides to temporary employment areas are an issue because it is hard for temporary or on-call workers, or people who work longer hours, to reserve rides.
- Taxis and ride-hailing apps
  - Cab fares are high. It costs 3.50 to get in cab and then it's an additional $3 per mile.
  - Uber can be cheaper than a taxi; however it requires smartphone and credit card.
  - Families are not always comfortable with younger people (youth) riding in a cab or an Uber, as opposed to NTS or standard transit.
- Travel training needs to be made more widely available
- Trips take too long
  - 1.5-hour routes are an issue.
  - Need to consider transit needs on major holidays when transit service is not operating.
  - Need to extend hours or transit service in the evening and on weekends.

    - Sometimes people need to sit down but can't due to length of trip and number of people on the ride.
- Funding is an issue
    - Impacts expanded service (days operating, routes being driven, etc.)
    - 2am to 6am sees very high NTS ridership from workers in cafeterias, as janitorial staff, and other similar jobs.
    - NTS demand is very high, which sometimes results in people calling-in and being placed on waiting lists.
- Several NTS customers come from Goodwill, Salvation Army, Foundation 2, and Wilk Rehab
    - Need subsidy source to create a program for new riders as these riders don't have $5 when they start a new job. They need at least a week's worth of free transit from CR Transit or NTS vouchers.
- Service for veterans is important
- Discounted fares and ID
    - Providing low-income ID card for those wanting discounted fares, especially if they have a physical disability or difficulty in communicating, which adds to the burden of accessing transit services communication.

Solutions:

- Shorten long commutes by adding mini-hub on north side to provide access to Hiawatha, Marion, and Cedar Rapids.
- Research transit solutions that work best for low-income residents and then communicate to those residents about what is available in their community
    - Do not treat people differently based on language spoken, disability, etc. Create strategic communications plan to address these issues/concerns.
    - No one at CR Transit is specifically tasked with communications. A staff position could be developed to manage advertising, ridership alerts, social media presence, etc.
- Include info on available bike and wheelchair space on buses via the new app, if possible.
- Expanded service to reach jobs, night life, and recreational destinations beyond only work and medical trips.
- Shorten trip lengths.
    - Consider express bus service like Des Moines.
    - Consider mini-hubs.
- Talk with Amanda Thompson at Kirkwood's Learning Services Department's (recommended by Jared Nylin with National Federation of the Blind)
    - Discuss accessibility issues for people with visual issues.
    - Auditory call-out of stops is very important to the visually impaired. Drivers must be consistent in calling out stops.

Education Group

Attendees:

Ken Cook Transportation Manager - Marion Independent School District

Comments:

- Marion Independent School District (3.5 square miles within Marion city limits) operates 5 school buses and asks students to pay for buses. It costs $420 per year, or some may be eligible for a 60 percent discount or free rides if they meet certain criteria.
- Yearly issue with inconsistent ridership.
- City helps with funding ($300,000-400,000 per year) but 60-70 percent of riders qualify for free and reduced.

Top Issues:

- Bus maintenance
- Funding
- More people are driving kids to school
  - Causes traffic congestion at school entries
  - Marion has considered ceasing bus services for students
  - No one in the Marion Independent School District has to be bused. District provided bussing as a service.
  - Most riders are from 4th to 10th grades
- Bus rides are long, which is an inconvenience.

Solutions:

- Potential for CR Transit and schools to collaborate on bus funding
  - Decrease transportation costs to keep more money in classrooms.
  - Collaborate on maintenance activities and other things which could save money.
  - Most districts have own fleet, drivers, and maintenance.
  - Fleet maintenance is high ($100K at a minimum).
  - 15 to 17-year vehicle rotation (vehicles must "rust out" before they're replaced).
- Take advantage of Iowa City to Cedar Rapids commuters
  - Provide transit for them.
  - Coordinate with Iowa City.
  - Make it more convenient.
- Greater promotional efforts
  - Present cost comparisons, like money saved per year taking the bus instead of driving, plus others.
  - Promote transit to businesses, like large employers such as Rockwell-Collins, Cedar Rapids School District, Transamerica, and others.
  - Promote transit via news media coordination (which also could be free advertising.)
  - Marion is a Blue Zone, which means it is a healthy living community. Tie transit to Marion health initiative and their Blue Zone status via newsletters, emails, etc.

Economic Development and Tourism Group

Attendees:

Jennifer Pruden	Executive Director - Czech Village/New Bohemia Main Street District
Barbra Solberg	Public Policy Strategist - Cedar Rapids Economic Alliance
Jasmine Almoayed	Economic Development Liaison - City of Cedar Rapids
Nick Glew	President - Marion Economic Development Company

Comments:

- Need to connect visitors to destinations.
- Important to connect to various areas within districts.
- Need for inner city connection and mobility, especially for commuters who do not have a car with them.
- Need viable transportation solution, especially if you have to do something during the day.
- Need inner city complement and "after hours" services for employees and low-income people who cannot afford taxi service.
- Transit needs to "extend" to work: the last leg of an employee's commute needs to have some sort of

connection to their workplace because no sidewalks or trails may exist between closest bus stop and their employer.

Top Issues:

- Cost of extending transit service
  - Need more funding to expand system.
  - Going to reduce service elsewhere to provide employers with service now.
- Getting across US-151 is an issue from a safety perspective for pedestrians.
- Have at least one stop to reach Rapids Wholesale and Legacy Manufacturing, etc.
  - Most people don't live near neighborhoods close by and a bus trip to Rapids Wholesale or Legacy Manufacturing likely requires a transfer to reach their job.
  - Employers near General Mills in Cedar Rapids have commented about stop locations; can they be moved closer and or respond to work shifts?
- Not enough service to Kirkwood
  - Buses are overcrowded.
  - Not enough frequency.
- I-380 Commuter Study is looking at subscription bus service for employers.
- Could have better coordination with universities and colleges to help students reach developing areas near Downtown Cedar Rapids
  - 8th Avenue separates NewBo from downtown. People don't want to cross 8th Avenue.
  - There is "nothing" along 3rd Street between downtown and NewBo.
  - NewBo is becoming an established new district and it needs to draw college students to the area.
  - Safety is concern for general public, and is likely a concern for college students, as well.
  - Students want to leave campus at night; however the bus is not available after 7:00PM, so they cannot get to districts by bus for fun or work.
- A casino in Downtown Cedar Rapids is on an indefinite hold
  - If the casino were to develop, there could be an opportunity to develop a downtown circulator service.
- The highest traffic counts are on 1st Avenue, Collins Road, and Edgewood Road.
  - Mt Vernon Road also has higher traffic counts.
- Southwest Cedar Rapids
  - Area has seen an increase in the number of available services, like the Ladd Library.
  - The area has few sidewalks between bus stops.
  - The number of housing vouchers has increased in southwestern Cedar Rapids.
- It is likely that very few airline passengers are using local CR Transit for transportation.
  - Most hotels are going in around airport.

Solutions:

- Improve ease of buying tickets
  - Make available beyond just GTC to attract choice riders.
  - Vending stations at grocery stores.
  - Apps via Apple Pay.
- Potential secondary hub at Lindale Mall
- Develop downtown circulator
  - There is a perception that it's too far to walk from downtown to the City Market, Kingston Village, etc.
  - Bus circulator could serve three audiences: event audience (people who want to go from an event location to other destinations), attraction audience (people who want to go to several different venues and districts), and lunch audience (people who work in one area but want to eat at a restaurant in a different district).
  - Circulator would not help to solve hotel issues because hotel shuttles go to airport. There are 3,000 hotel rooms in area serving conventions, delegates, etc., and we want to engage those people to take them to destinations within the community and have them spend their money.

Over the course of the two days of stakeholder interviews, many new transit system issues and solutions were brought forth by the participants. In many cases, transit issues identified in these interviews aligned very closely with input received at the first open house and closely matched the survey results. Some of these overlapping areas of concern between the public and stakeholder groups were improving existing headways, shortening overall trip times, expanding the hours of transit service later in the evenings, enhancements to bus stops, and making transit routes more direct.

Transit System Recommendation Alternatives

The alternatives presented below include recommendations that were shaped by a number of factors. These include demographic data, historical ridership and stop activity, input from CR Transit bus operators, stakeholder input from CR Transit and the cities of Cedar Rapids, Marion, Hiawatha, and Robins, rider requests, and input from the public received during the advertised public meetings. The recommendations were formed keeping three key principles in mind. The first principle was to shift resources from less productive to potentially more productive areas. By shifting resources to more productive parts of the system, the routes can better serve the community by improving service where there is an existing or growing demand for transit. The second principle was to realign routes to operate bi-directionally and reduce or eliminate long-single direction loops or segments. Reducing the amount of one-way operations allows the system to be better understood from the rider perspective and reduces out-of-direction travel and rider travel time. The final principle was to reinforce service on key corridors (e.g. 1st Avenue) and to key destinations (e.g. Lindale Mall). Reinforcing service where it is already well utilized can help to reduce passenger loads on overcrowded routes and generate additional ridership on corridors which may have latent demand. Improving service to key destinations not only provides more opportunities to access that destination, but also provides additional transfer opportunities when two or more routes terminate at a common destination.

Four alternatives were developed for the study. Alternative 1 – Cost Neutral Day Service recommends a number of route changes that would not increase the operational cost compared to the existing CR Transit system. Alternative 2 – Cost Neutral Night Service also would not increase the operational cost compared to the existing system, but unlike Alternative 1, would extend weekday service on a limited number of routes to 10:00PM. Alternative 3 – Maximum Service presents a number of service improvements that would exceed the existing cost of operating the system, but is in line with the recommended increase in funding from the property tax levy initiative. Alternative 4 – Ideal Service provides numerous service improvements to the transit system, including some of the most frequent requests from riders and the community; it serves as the wish list of CR Transit. The four alternatives, and the process by which they were developed, are described in greater detail below.

Recommendations Workshop

Initial transit service enhancement alternatives were presented to a group of critical stakeholders during an all-day Recommendations Workshop on April 14 and 15, 2016. Those who attended the workshop included:

- Kay Fisk — Development Director - NTS
- Brad DeBrower — Manager - CR Transit
- Andres Gomez — Manager - Corridor MPO
- Brandon Whyte — Multimodal Transportation Planner - Corridor MPO
- Hilary Hershner — Regional Transportation Planner - Corridor MPO
- Barbra Solberg — Public Policy Strategist – Cedar Rapids Economic Alliance
- Nick D'Amico — Mobility Manager - Linn County
- Brock Grenis — Transit Planner - ECICOG
- Tom Treharne — Planning & Development Director - City of Marion
- Kim Downs — City Administrator - City of Hiawatha

The purpose of the workshop was to further refine system improvement alternatives by incorporating the local knowledge and experience of the stakeholders in attendance. In this meeting each of the four alternatives were presented and discussed. Adjustments to every route in the fixed-route system were shown to the group. Proposed route alignments were adjusted as they were presented with input from workshop participants to develop alternatives that would better serve the community, be easier for riders to use and safer for bus drivers to operate. Once each of the individual route proposals in each of the four improvement alternatives had been refined, the results were presented to the public for their input. The refined system improvement recommendation alternatives are presented below.

Figure 30: Recommendations Workshop - April, 2016

Alternative 1 - Cost Neutral Day Service

Alternative 1 proposes a number of changes to the existing system that could be implemented within the current operational budget. In other words, the operation of the proposed system would not be any more expensive than the operation of the existing system as it is today. In this alternative, CR Transit's existing service span would remain unchanged. The bulk of the recommendations involve realigning routes to provide more bi-directional service, eliminating low-ridership segments and diversions, and reinforcing service on key corridors, as shown in Figure 31. The changes to the system are detailed below and are presented in four geographic groups: west region, south region, north and east region, and the 5 Routes. Table 50 provides a summary of the headways for each route by time period and day of week for Alternative 1.

West Region

The west region includes the area to the west of Downtown Cedar Rapids and the Cedar River. The west region is served by existing CR Transit Routes 1, 8, 10, and 12. Important transit destinations in this region include the Westdale Mall, the Walmart located on 29th Avenue SW, and Jefferson High School. The recommendations in the west region are intended to refocus service along the major corridors by providing more bi-directional service and eliminating many of the large loops and diversions that are common on the existing routes serving this region (Figure 32).

The proposed changes to the routes also allow for improved intra-region travel within the west by providing another location outside of downtown Cedar Rapids where riders would have the opportunity to make a timed transfer. This is accomplished by having the Walmart serve as the western terminus point for all routes in the west region.

Route 1/8

Route 1 is proposed to be combined with Route 8 to provide service on the most productive segments of both routes while maintaining bi-directional service on the route. The route would operate between the GTC and Walmart via Johnson Avenue NW and Wiley Boulevard. The route would operate from 5:00AM to 7:00PM at hourly headways on weekdays and from 8:30AM to 5:30PM at hourly headways on Saturdays.

Route 10

Route 10 is realigned to provide bi-directional service along the important 1st Avenue corridor and would operate between the GTC and Walmart along 1st Avenue and Wiley Boulevard SW. A number of important segments that

Table 50: Summary of Headways by Route and Time Period for Alternative 1 Option A

	Weekday Headways			Saturday Headways
Routes	AM Peak	PM Peak	Off-Peak	
1/8	60 min	60 min	60 min	60 min
2/9	30 min	30 min	60 min	60 min
3	30 min	30 min	60 min	60 min
4	60 min	60 min	60 min	60 min
5B	90 min	90 min	90 min	90 min
5N	90 min	90 min	90 min	90 min
5S	90 min	90 min	90 min	90 min
5X	60 min	60 min	60 min	60 min
6A	60 min	60 min	60 min	60 min
6B	60 min	60 min	-	-
7A	60 min	60 min	60 min	120 min
7B	60 min	60 min	-	120 min
10	30 min	30 min	60 min	60 min
11	60 min	60 min	60 min	60 min
12	30 min	30 min	60 min	60 min
16	60 min	60 min	60 min	60 min

would no longer be served by the proposed Route 10 would be served by the new Route 16 (presented below). The route would operate from 5:00AM to 7:00PM at 30-minute headways during AM and PM peak times and 60-minute headways during all other times on weekdays. On Saturdays, the route would operate at 60-minute headways between 8:30AM and 5:30PM.

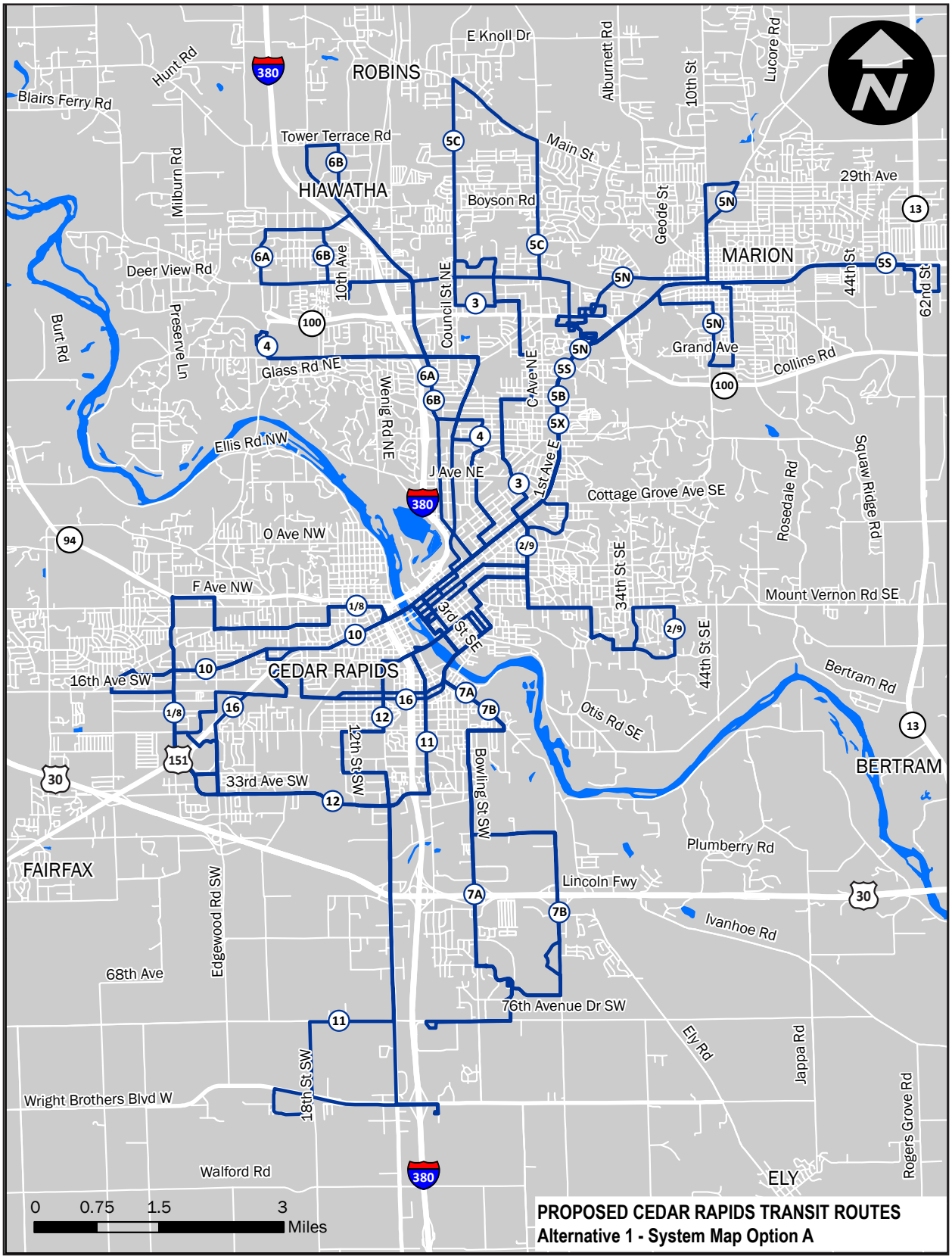
Route 12

Route 12 is also realigned to provide bi-directional service along most of the route including the important industrial areas along 6th Street SW and 33rd Avenue SW. The route would operate between the GTC and Walmart via the Westdale Mall and 33rd Avenue SW. Similar to Route 10, the new Route 16 would serve many of the important segments that were omitted from Route 12 in order to make the route more bi-directional. The route would also operate from 5:00AM to 7:00PM at 30-minute headways during AM and PM peak times and 60-minute headways during all other times on weekdays. On Saturdays, the route would operate at 60-minute headways between 8:30AM and 5:30PM.

Route 16

Route 16 is a new proposed route that incorporates a number of the segments that were eliminated from Routes 10 and 12 to provide bi-directional service on both of those routes. The route would also provide new service to the 16th Avenue SW corridor and would operate between the GTC and Walmart via 16th Avenue SW, Jefferson High School, and the Westdale Mall. The route would operate from 5:00AM to 7:00PM at hourly headways on weekdays and from 8:30AM to 5:30PM at hourly headways on Saturdays.

Figure 31: Alternative 1 System Map



Option B

In the realignment of routes in the west region discussed above, service along O Avenue NW is eliminated due to low ridership and those resources being used to provide more bi-directional service on the other routes in the west region and new service along the 16th Avenue SW corridor. However, it may prove difficult to eliminate service along O Avenue NW despite the low ridership because of the reduction of CR Transit's service coverage – with the elimination of service to O Avenue NW, F Avenue NW/Johnson Avenue NW would be the northern limit of service in the west region. Therefore a second option for the west region was developed which would retain service along O Avenue NW. Option B includes many of the realignment recommendations discussed above, including increased bi-directional service and additional opportunities to transfer at the Walmart on 29th Avenue SW, as show in Figure 33. The changes to the realignments discussed above in Option B include the following:

- Route 1 and 8 separated into two distinct routes:
  - Route 1 would continue to provide service along O Avenue NW and continue to Edgewood Road SW to the Walmart.
  - Route 8 is slightly realigned to serve the residential neighborhoods along 1st Avenue SW west of Wiley Boulevard SW and continues to the Walmart.
- Route 10 is slightly realigned from 1st Avenue SW to serve Jefferson High School and continue on 16th Avenue SW to the Westdale Mall and the Walmart.
- Route 12 is unchanged from the recommendation described above.

Table 51 provides a summary of the headways for each route by time period and day of week for Alternative 1 Option B.

Table 51: Summary of Headways by Route and Time Period for Alternative 1 Option B

	Weekday Headways			Saturday Headways
Routes	AM Peak	PM Peak	Off-Peak	
1	60 min	60 min	60 min	60 min
2/9	30 min	30 min	60 min	60 min
3	30 min	30 min	60 min	60 min
4	60 min	60 min	60 min	60 min
5B	90 min	90 min	90 min	90 min
5N	90 min	90 min	90 min	90 min
5S	90 min	90 min	90 min	90 min
5X	60 min	60 min	60 min	60 min
6A	60 min	60 min	60 min	60 min
6B	60 min	60 min	-	-
7A	60 min	60 min	60 min	120 min
7B	60 min	60 min	-	120 min
8	60 min	60 min	60 min	60 min
10	30 min	30 min	60 min	60 min
11	60 min	60 min	60 min	60 min
12	30 min	30 min	60 min	60 min

Figure 32: West Region Recommendations (Option A)

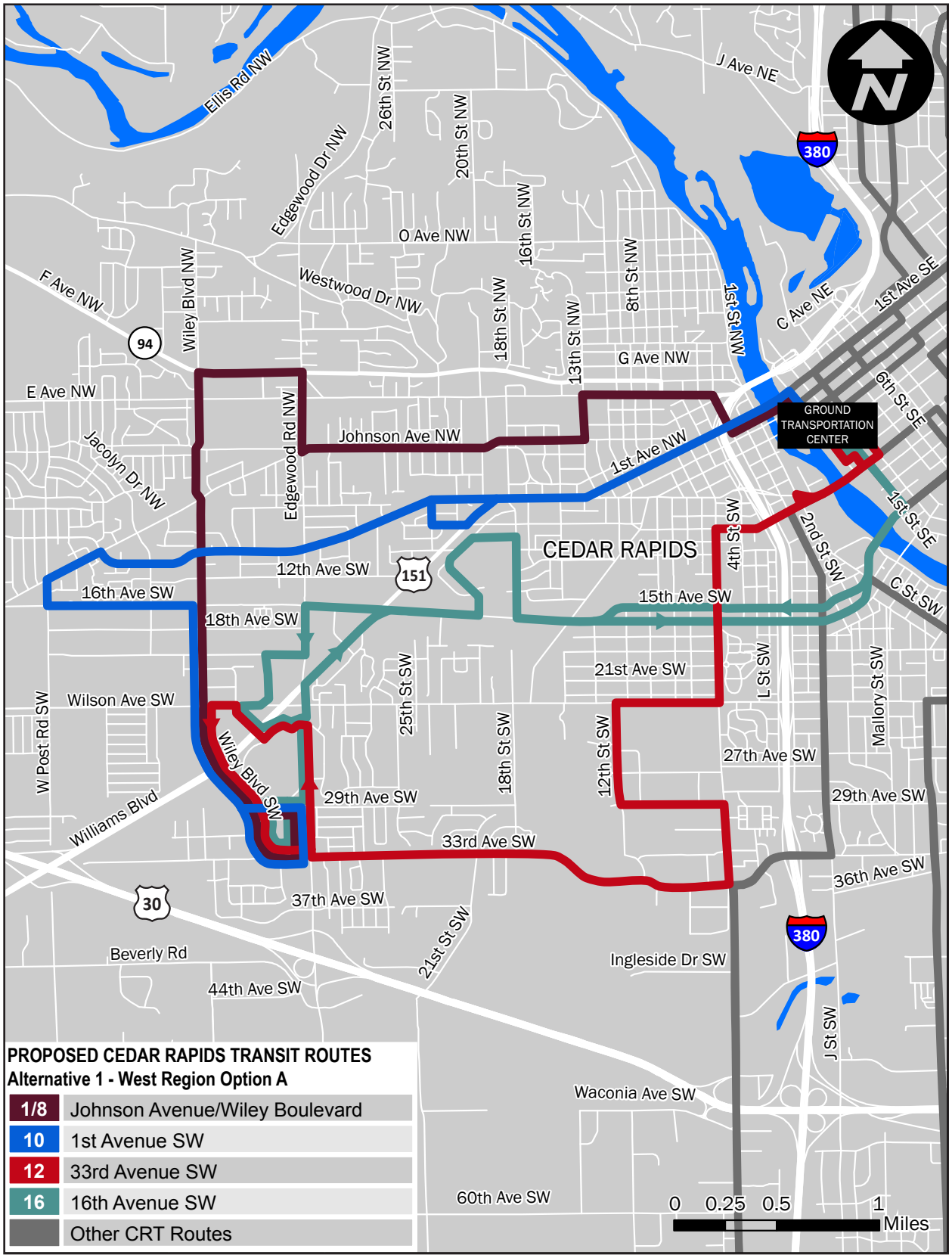
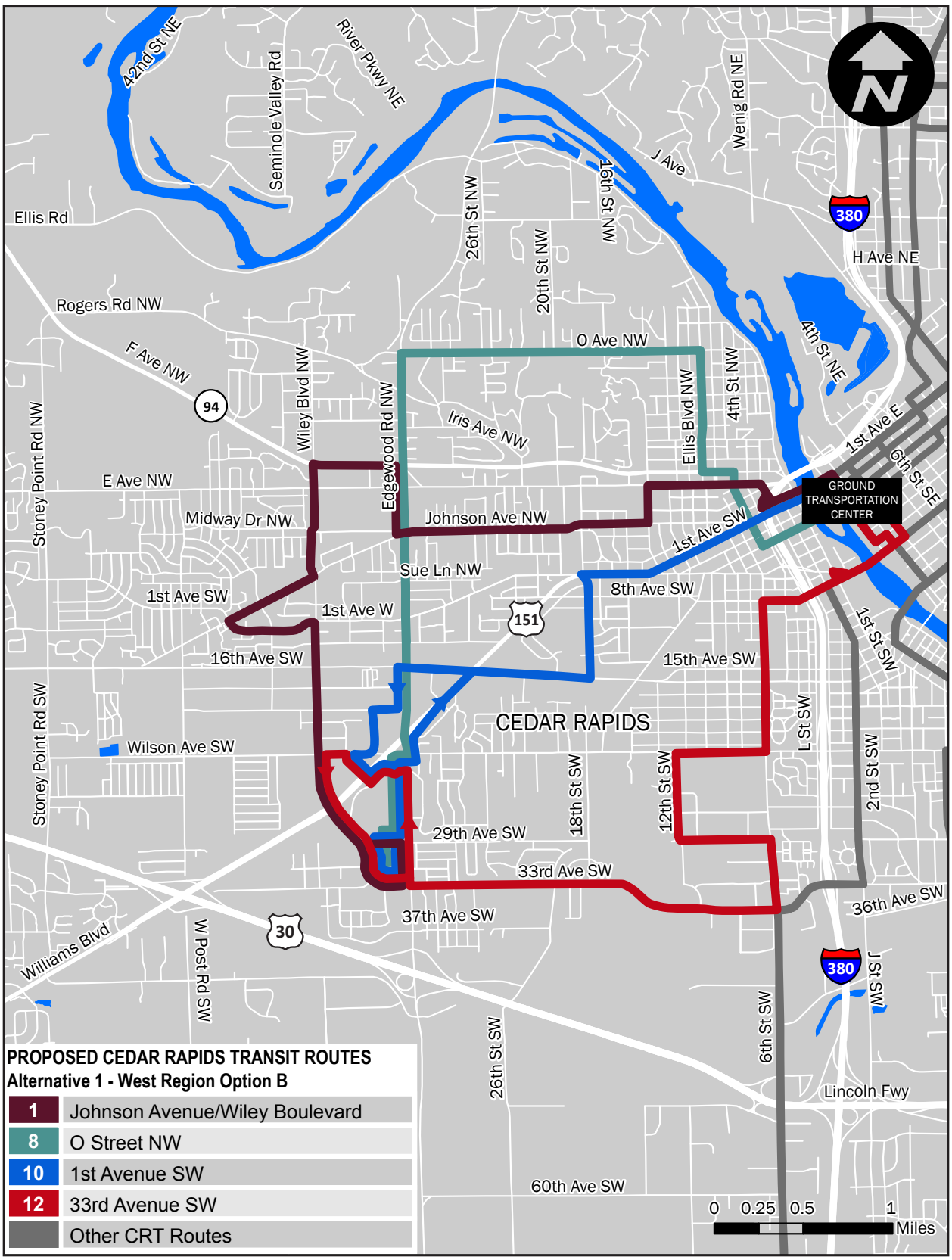


Figure 33: West Region Recommendations (Option B)



South Region

The south region includes the area to the south of Downtown Cedar Rapids and west of the Cedar River surrounding I-380. The region is served by existing CR Transit Routes 7A, 7B, and 11. Important transit destinations in this region include the Eastern Iowa Airport, Kirkwood Community College, Prairie High School, and the employment destinations along C Street Road SW south of 41st Avenue Drive SW. The recommendations in the south region are intended to provide bi-directional service along most of the route segments and remove a number of large loops that create confusion and increase rider travel time (Figure 34).

Route 7A

Route 7A is modified only slightly from its existing alignment to provide more direct access from Downtown Cedar Rapids to Kirkwood Community College. From the north along Bowling Street SW/Kirkwood Boulevard SW, the route is proposed to operate directly to Kirkwood Community College, eliminating the existing diversion along 50th Avenue SW/J Street SW/Miller Ave SW. From Kirkwood Community College, the route would continue to Prairie High School, which is currently served by Route 11. The route would operate from 5:00AM to 7:00PM at hourly headways on weekdays and from 8:30AM to 5:30PM every two hours on Saturdays – the same level of service operated on the existing Route 7A.

Route 7B

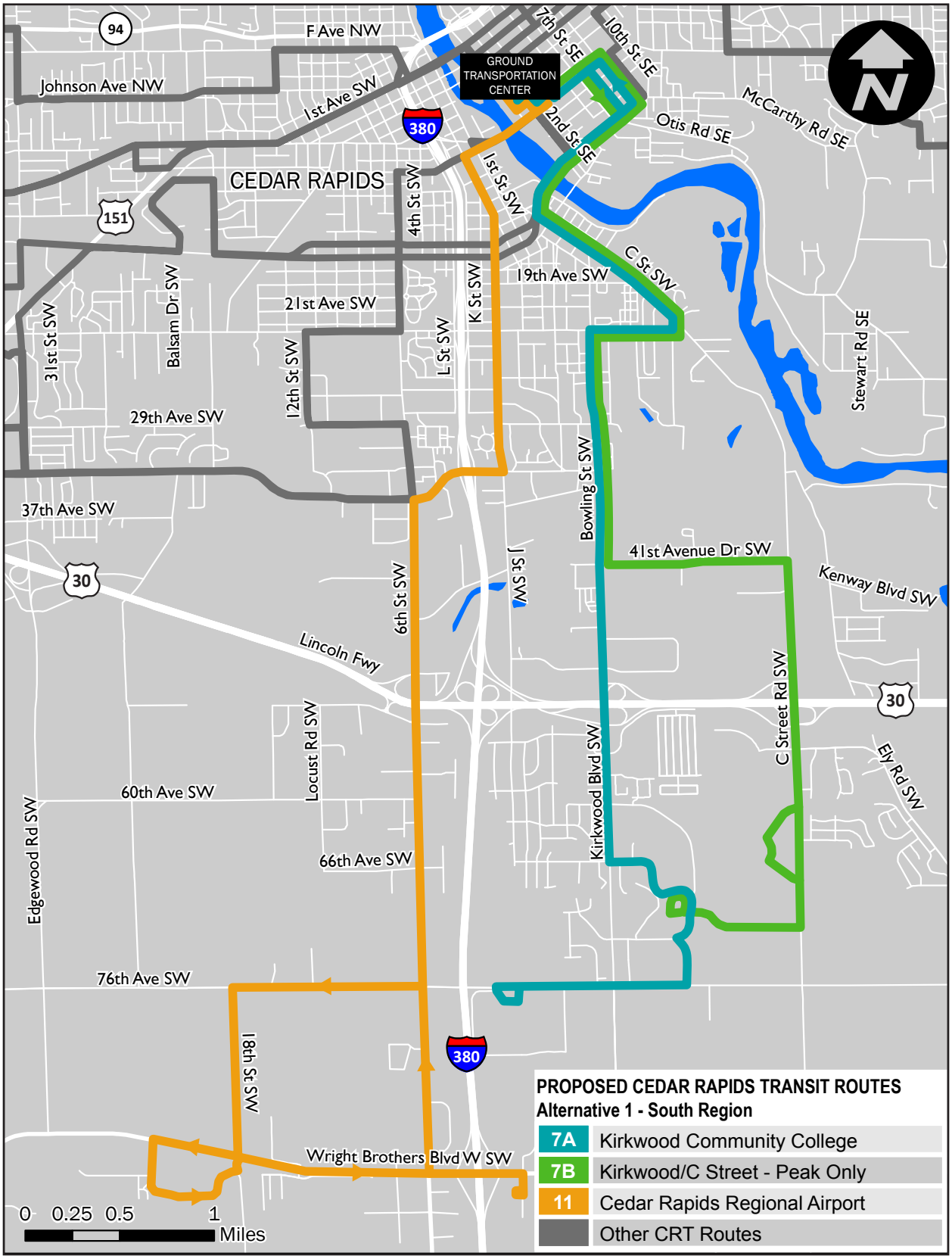
Route 7B is realigned to provide bi-directional service along the C Street Road SW corridor and avoid the large one-way loop that includes Kirkwood Boulevard SW, C Street Road SW, and 41st Avenue Drive SW. The route would operate between the GTC and Kirkwood Community College via C Street SW/NW. The route would operate hourly on weekdays but only during AM and PM peak times. There would be no midday or evening service on the route. Route 7B is proposed to operate 30 minutes off of the main pulse of the system, or staggered to Route 7A, which operates on the pulse. Segments that are served by both Routes 7A and 7B (e.g. C Street SW and Kirkwood Community College), would receive service every 30-minutes on weekdays during the AM/PM peak times. On Saturdays, service would be provided from 9:30AM to 4:30PM every two hours – service on the common trunk of both Routes 7A and 7B would receive hourly service. This is the same level of service operated on the existing Route 7B.

Routes 7A and 7B would also both serve Metro High School (12th Avenue SE) near Downtown Cedar Rapids. In combination with Route 2/9 (discussed below), Metro High School would be served with four buses per hour during the AM and PM peak times and two buses per hour during all other times.

Route 11

Route 11 is realigned to provide more bi-directional service along the route and to provide more direct access to and from the Eastern Iowa Airport. The route would operate between the GTC and the Eastern Iowa Airport via J Street SW and 6th Street SW. Service along 6th Street SW between 33rd Avenue SW and 5th Street SW would be eliminated to provide more bi-directional service along the J Street SW corridor. The high ridership segments of 6th Street SW are still served by the proposed Route 12 (discussed above). The route would operate from 5:00AM to 7:00PM at hourly headways on weekdays and from 8:30AM to 5:30PM every hour on Saturdays.

Figure 34: South Region Recommendations



North and East Regions

The north and east regions include the area to the north and east of Downtown Cedar Rapids and the Cedar River. The east region is served by existing Routes 2 and 9 and the north region is served by Routes 3, 4 and 6. Important transit destinations in the east region include Washington High School, Mercy Hospital, and the Wellington Heights neighborhood. In the north, importation destinations include Coe College, Mt. Mercy University, the Walmart on Blairs Ferry Road, and Transamerica. The recommendations in the north and east regions are intended to refocus service along the major corridors and eliminate large loops and diversions to provide more bi-directional service (Figure 35).

Route 2/9

Route 2 is proposed to be combined with Route 9 to provide bi-directional service on the most productive segments of both routes. Many of the segments on the existing Routes 2 and 9 have little to no rider activity. The highest ridership segments of the existing routes are mainly located on Mt. Vernon Road, at the Hy-Vee on Mt. Vernon Road, in the Wellington Heights neighborhood, and at Washington High School. The proposed route would travel between the GTC and the Hy-Vee via Mt. Vernon Road and Washington High School. The route would operate from 5:00AM to 7:00PM at 30-minute headways during AM and PM peak times and 60-minute headways all other times on weekdays. On Saturdays, the route would operate at 60-minute headways between 8:30AM and 5:30PM.

Route 2/9 would also serve Metro High School (12th Avenue SE) in Downtown Cedar Rapids. In combination with Routes 7A and 7B (discussed above), Metro High School would be served with four buses per hour during the AM and PM peak times and two buses per hour during all other times.

Route 3

Route 3 was not modified from its existing alignment as it already provides bi-directional service along most of its alignment. With the proposed realignment of Route 4 (discussed below), these two routes provide evenly distributed service coverage in the area north of downtown between 1st Avenue NE and Center Point Road NE. Route 3 operates between the GTC and the commercial/industrial areas to the north along Blairs Ferry Road NW via Lindale Avenue NE and E Avenue NE. The route would operate from 5:00AM to 7:00PM at 30-minute headways during AM and PM peak times and 60-minute headways during all other times on weekdays. On Saturdays, the route would operate at 60-minute headways between 8:30AM and 5:30PM.

Route 4

Route 4 is also only slightly modified from its existing alignment, which includes moving the alignment from Prairie Road NE to Oakland Road NE after serving Mt. Mercy College. This minor adjustment was made to provide more evenly distributed service coverage between Routes 3 and 6 and to provide service to the Hy-Vee located on Oakland Road NE and 32nd Street NE. The route would operate between the GTC and the Transamerica Campus near Edgewood Road NE via 1st Avenue NW, Elmhurst Drive NE, Oakland Road NE, and 42nd Street NE. The route would operate from 5:00AM to 7:00PM at hourly headways on weekdays and from 8:30AM to 5:30PM every hour on Saturdays.

Route 6A

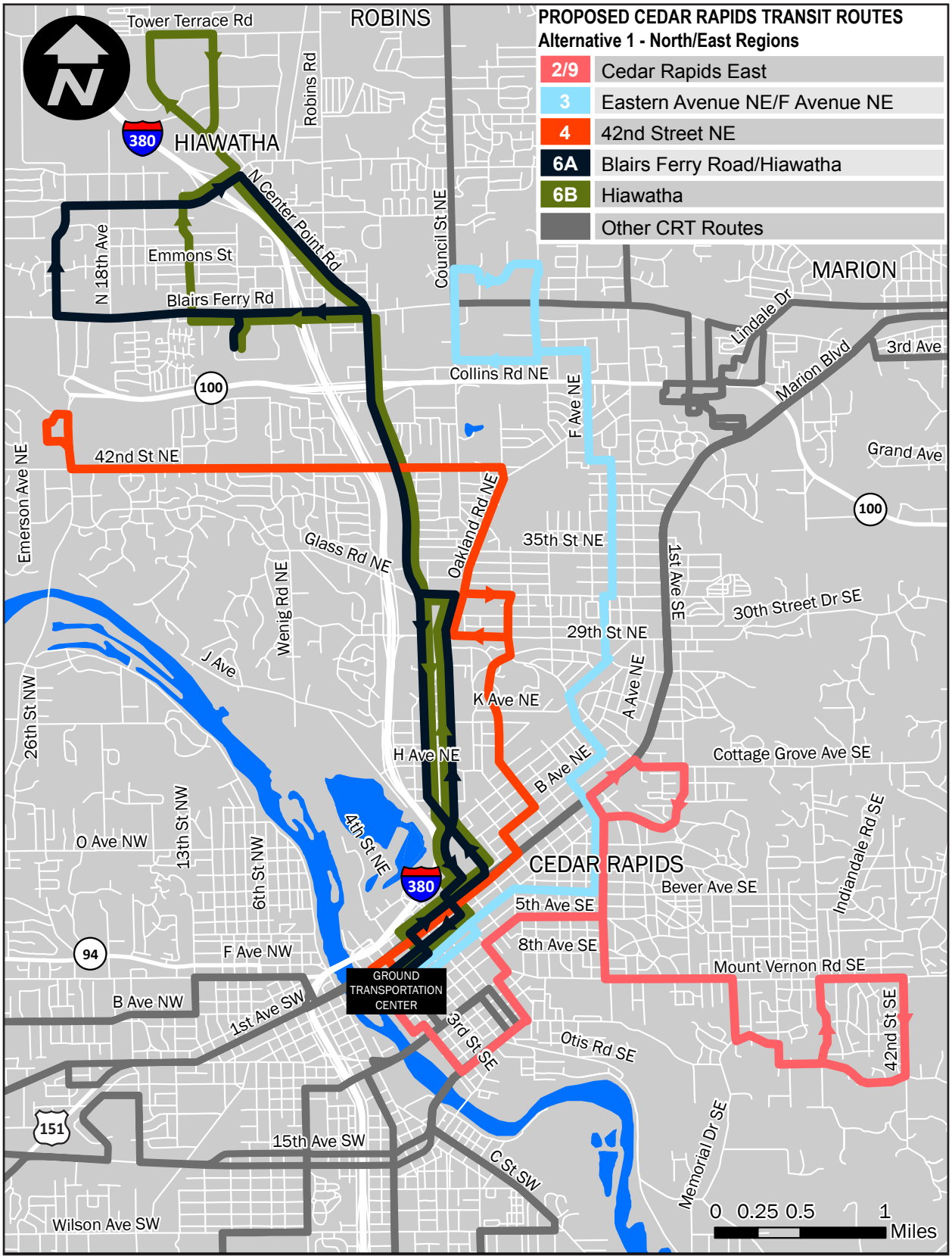
Route 6A is operated along the same alignment as the existing Route 6, which provides bi-directional service along most of its alignment, with the exception of the large one-way loop that extends to the north in Hiawatha. The one-way loop remains unchanged, as it was not possible to continue to serve all of the destinations along that section of the route with bi-directional service without allocating more resources to the route. The route would operate between the GTC and the Walmart on Blairs Ferry Road via Center Point Road NE and Blairs Ferry Road with continuing service to Hiawatha/Center Point Road. The route would operate from 5:00AM to 7:00PM at hourly headways on weekdays and from 8:30AM to 5:30PM every hour on Saturdays. The existing Route 6

operates with 30-minute headways during AM/PM peak times. The common trunk of the route would still be served every 30 minutes during peak periods by Routes 6A and 6B (discussed below), which would be operated similar to Routes 7A and 7B.

Route 6B

Route 6B would operate along much of the same alignment as Route 6A. From the Walmart on Blairs Ferry Road, the route would head north on 12th Avenue and into Hiawatha to serve the CCB Packaging Campus on Tower Terrace Road. From there it would travel along N Center Point Road where it would re-join the Route 6A alignment. The route would operate from the GTC to the CCB Packaging Campus via N Center Point Road and the Walmart. Route 6B is proposed to operate 30 minutes off the main pulse of the system, or staggered to Route 6A, to provide service every 30 minutes on the common sections of both routes during the peak. The route would be operated hourly during the AM and PM peak periods only and would not operate on Saturdays.

Figure 35: North and East Regions Recommendations



The 5 Routes

Together the 5 Routes (5B, 5S, and 5N) provide frequent service along the heavily utilized 1st Avenue corridor and to the Lindale Mall. With the exception of Route 6, the 5 Routes are the only routes that provide service beyond the borders of the City of Cedar Rapids. Route 5B currently provides service to Hiawatha, Route 5N provides service to Marion and the neighborhoods north of Marion Boulevard/7th Avenue, and Route 5S provides service to Marion and the neighborhoods south of Marion Boulevard/7th Avenue. Important destinations served by the 5 Routes include Lindale Mall and the surrounding commercial and retail centers, Downtown Hiawatha, the Uptown area of Marion, and the Marion Walmart. The recommendations on the 5 Routes are intended to provide additional service along the 1st Avenue corridor between the GTC and Lindale Mall, further expand service beyond Cedar Rapids, and provide more direct service to the Marion Walmart, as depicted in Figure 36.

Route 5B

Route 5B is realigned to serve Robins rather than the existing service to Hiawatha. Hiawatha is proposed to be served by Routes 6A and 6B (discussed above), which would allow resources to be reallocated to include Robins in the CR Transit service area. The route would operate between the GTC and Robins via 1st Avenue, Lindale Mall, and E Main Street. This route would provide transit service to the City of Robins along Main Street, serving the city's central business district and the future Hy-Vee to be located on the extension of Tower Terrace Road to Council Street NE. The route would operate from 5:45AM to 6:45PM every 90 minutes on weekdays and from 8:30AM to 4:30PM every 90 minutes on Saturdays. Route 5B is one of four routes that would provide frequent service (three trips per hour) along the 1st Avenue corridor between the GTC and the Lindale Mall.

Route 5N

Route 5N is realigned as a circulator for the residential neighborhoods of Marion. The high ridership stops and segments in the residential areas served by the existing Routes 5N and 5S were combined to provide the new alignment for the route, which would serve the cluster of apartment complexes at Grand Avenue near Starry Park, the Uptown neighborhood of Marion, and Linn-Mar High School. The route would operate between the GTC and Linn-Mar High School via the Lindale Mall, and Marion Boulevard/7th Avenue. The route would operate from 5:15AM to 6:15PM every 90 minutes on weekdays and from 8:00AM to 4:00PM every 90 minutes on Saturdays. Route 5N is the second of four routes that would provide frequent service (three trips per hour) along the 1st Avenue corridor between the GTC and the Lindale Mall.

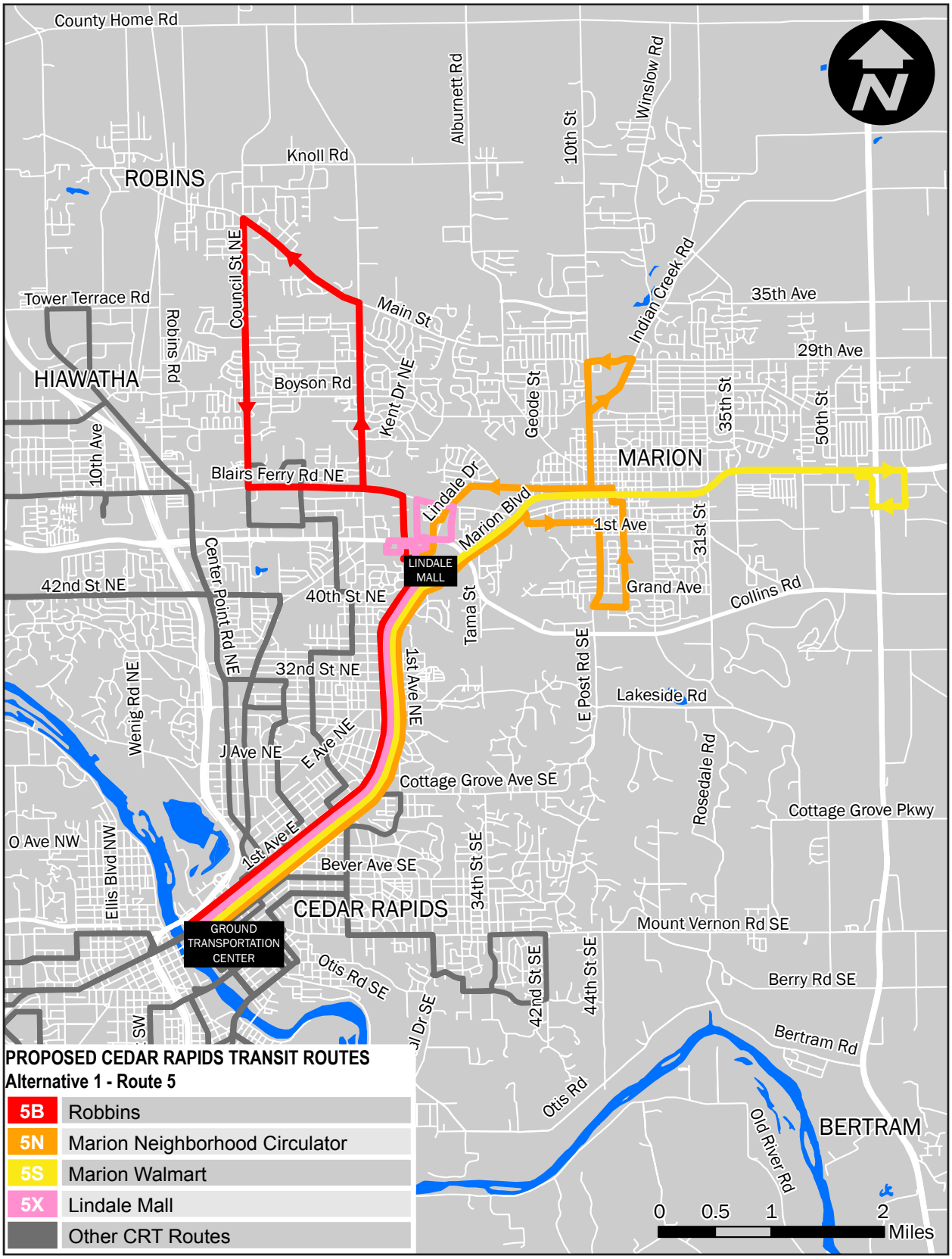
Route 5S

Route 5S is realigned to provide direct service to the Marion Walmart located on US-151. The route would operate between the GTC and the Marion Walmart via 1st Avenue, Lindale Mall, and Marion Boulevard/7th Avenue, serving the Uptown neighborhood of Marion, and the Marion City Police Department and its surrounding development. The residential segments to the south of 7th Avenue would now be served by Route 5N (discussed above) rather than Route 5S. The route would operate from 6:15AM to 7:15PM every 90 minutes on weekdays and from 9:00AM to 5:00PM every 90 minutes on Saturdays. Route 5S is the third of four routes that would provide frequent service (three trips per hour) along the 1st Avenue corridor between the GTC and the Lindale Mall.

Route 5X

Route 5X is a new route proposed that would provide additional service and capacity along the heavily utilized 1st Avenue corridor. The route would operate between the GTC and the Lindale Mall, with service to a number of the other retail destinations that are located adjacent to the mall. The route would operate from 5:00AM to 7:00PM at hourly headways on weekdays and from 8:30AM to 5:30PM every hour on Saturdays. It would operate off the scheduled pulse of the other 5 Routes to provide additional service between the existing trips. Route 5X is the final route that would provide frequent service along the 1st Avenue corridor.

Figure 36: Route 5 Recommendations



Comparison of Existing and Proposed Networks

The proposed changes or realignments of most routes in Alternative 1 will result in some areas that are currently served by the CR Transit system, to lose service, while other areas will gain access to one or more routes. However, overall, most of the existing service area will continue to have access to the proposed fixed route system. Figure 37 depicts the existing and proposed service areas for Alternative 1. A quarter-mile buffer, which is generally considered to be the distance passengers are willing to walk to a bus route, was used to define the service areas for the existing and proposed networks. The service area of the existing CR Transit network is shown in yellow and the service area for the proposed system is shown in blue. Any areas that are served by both the existing and proposed systems are shown in green. Therefore, yellow areas represent a loss of service and blue areas represent an expansion of service in the proposed network. Figure 38 depicts the existing and the proposed system where the O Avenue NW service (Option B) is maintained.

Figure 37: Option A Service Area Analysis

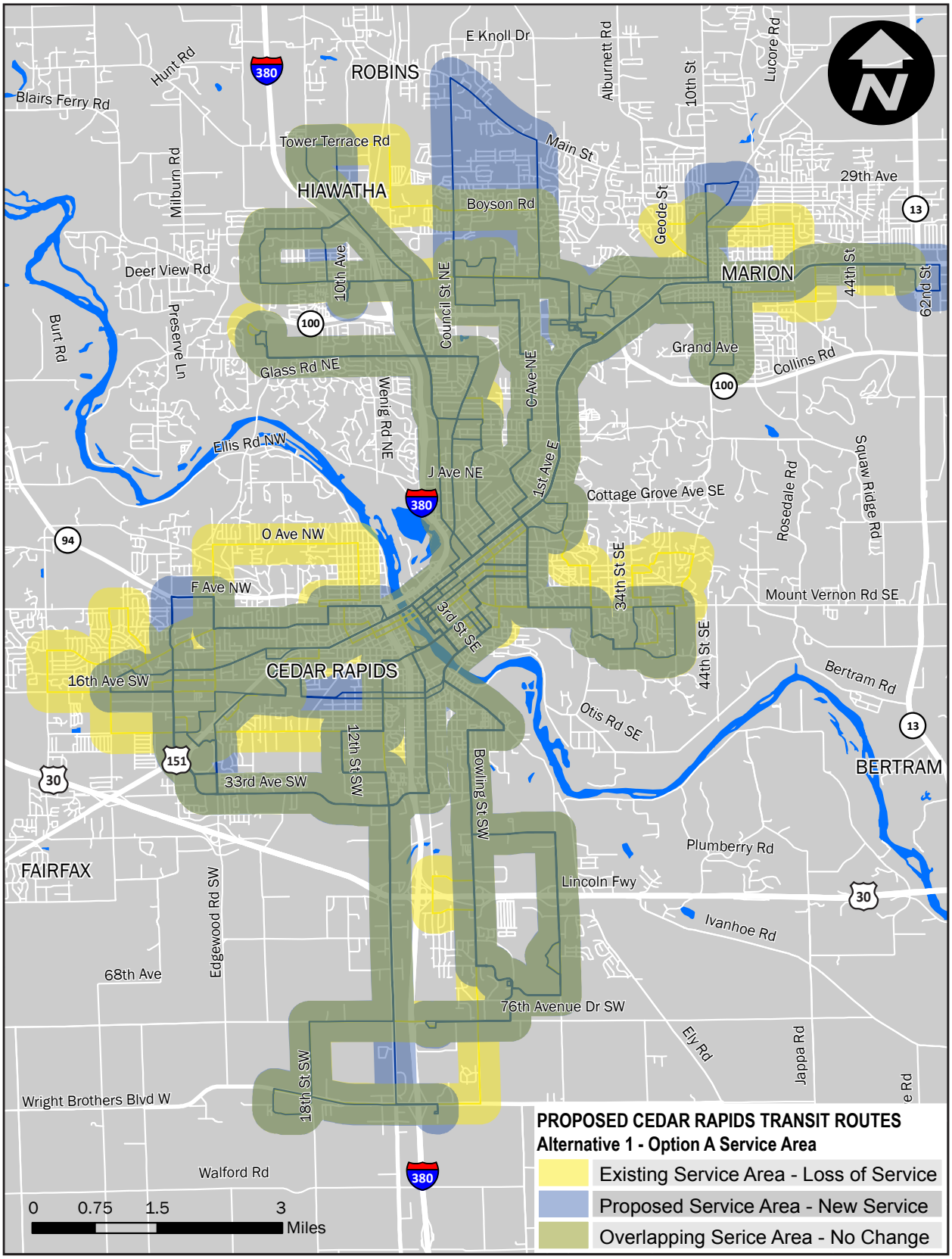
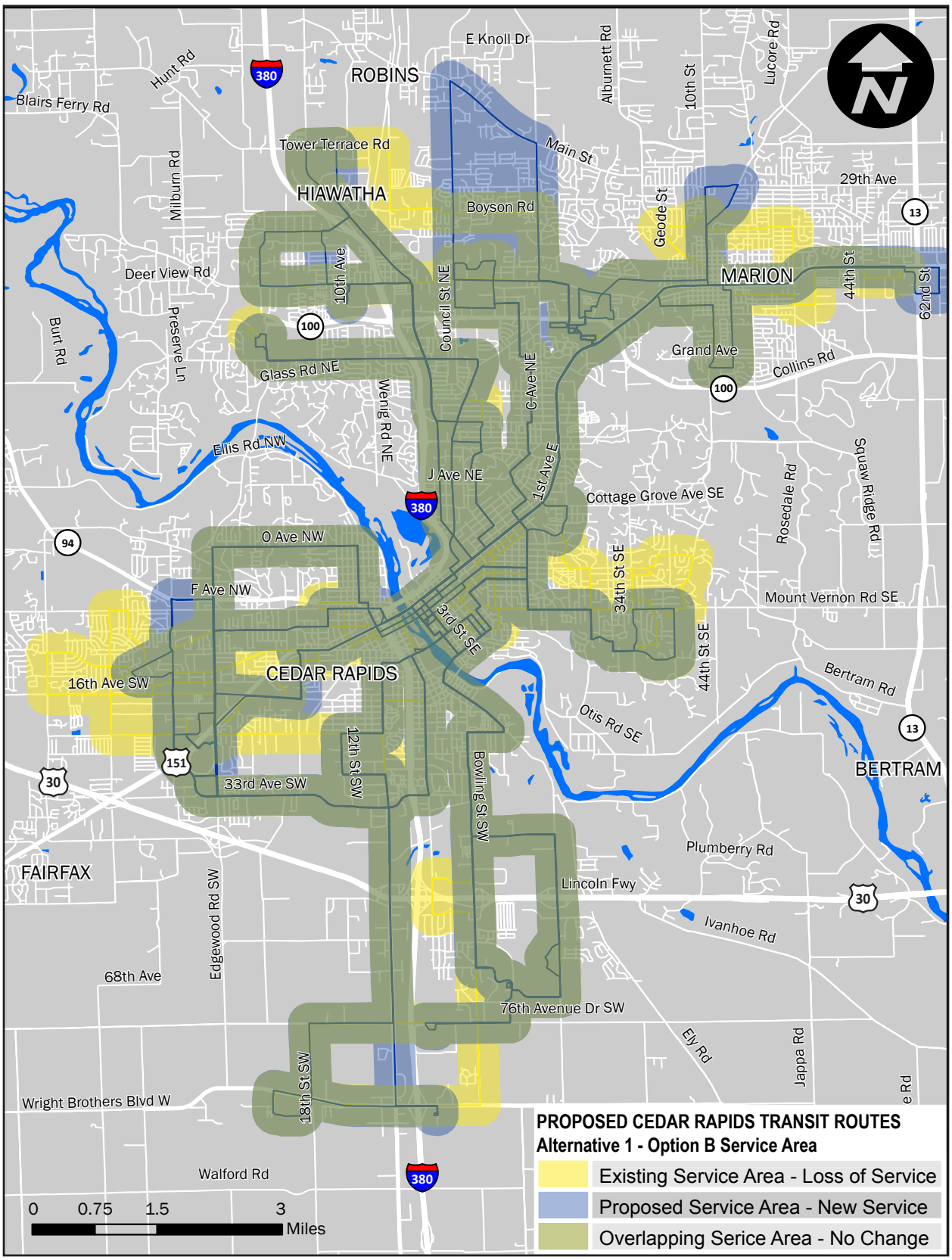


Figure 38: Option B Service Area Analysis



Alternative 2 - Cost Neutral + Night Service

Alternative 2 is very similar to Alternative 1. Like Alternative 1, Alternative 2 is a cost neutral proposal that would not require any additional resources to implement. Alternative 2 also includes all of the alignment changes proposed for daytime service in Alternative 1 (Figure 39). The main difference between the two alternatives is that Alternative 2 would include a limited amount of night service on weekdays, with several routes continuing to operate until 10:00PM. In order to operate the night service, however, there would be no additional service operated on 1st Avenue between the GTC and Lindale Mall during the daytime, and peak service would be significantly reduced or completely eliminated, depending on the number of routes operated at night.

Two different options for providing some level of night service are described below. The options offer a trade-off between providing a more robust level of service at night or providing peak service during the day. However, the addition of any amount of service at night will require that at least some peak service be cut during the day, and will eliminate the possibility of providing additional service on the 1st Avenue corridor via Route 5X during the day. Both of these daytime service reductions will result in increased passenger loads and potentially overcrowded conditions on some routes during the day.

Option A

In Option A, all of the route alignment changes proposed in Alternative 1 would be carried forward to Alternative 2. However, in this option, nearly all routes in the system would be operated with 60 minute headways all day. In other words, peak service (or 30 minute headways during AM/PM peak periods) would be eliminated on Routes 2/9, 3, 10, and 12. The 5 Routes would continue to operate as they do now, with 90 minute headways on each of the three branching routes providing a composite 30 minute headway on the 1st Avenue corridor between the GTC and Lindale Mall, but Route 5X would not be operated during the day as proposed in Alternative 1. Routes 6A/6B and 7A/7B would be operated as proposed in Alternative 1, with Routes 6A and 7A operating every 60 minutes all day and pulsing with the majority of other routes in the system. Routes 6B and 7B would be operated 30 minutes off of the main pulse during AM/PM peak periods only.

The elimination of most peak service in Option A would allow six routes to be operated until 10:00PM on weekdays. It is recommended that Routes 3, 6A, 5X, 7A, 10, and 12 be operated hourly to provide night service on the most productive routes in the system (Figure 40). Table 52 provides a summary of the headways for each route by time period and day of week for Alternative 2 Option A.

Option B

In Option B, all of the route alignment changes proposed in Alternative 1 would be carried forward to Alternative 2. However, in this option, only the AM peak service would be eliminated on Routes 2/9, 3, 10, and 12. In other words, these routes would be operated every 30 minutes during the PM peak and every 60 minutes during the rest of the day. The 5 Routes would continue to operate as they do now, with 90 minute headways on each of the three branching routes providing a composite 30 minute headway on the 1st Avenue corridor between the GTC and Lindale Mall, but Route 5X would not be operated during the day as proposed in Alternative 1. Routes 6A/6B and 7A/7B would be operated as proposed in Alternative 1, with Routes 6A and 7A operating every 60 minutes all day and pulsing with the majority of other routes in the system. Routes 6B and 7B would be operated 30 minutes off of the main pulse during the AM and PM peak periods only.

The elimination of AM peak service in Option B would allow only three routes to be operated until 10:00PM on weekdays. If this option were to be implemented, it is recommended that Routes 5X, 7A, and 10 be operated hourly at night to provide a base level of coverage on all sides of the city. Table 53 provides a summary of the headways for each route by time period and day of week for Alternative 2 Option B.

Table 52: Summary of Headways by Route and Time Period for Alternative 2 Option A

	Weekday Headways				Saturday Headways
Routes	AM Peak	PM Peak	Off-Peak	Night	
1/8	60 min	60 min	60 min	-	60 min
2/9	60 min	30 min	60 min	-	60 min
3	60 min	30 min	60 min	60 min	60 min
4	60 min	60 min	60 min	-	60 min
5B	90 min	90 min	90 min	-	90 min
5N	90 min	90 min	90 min	-	90 min
5S	90 min	90 min	90 min	-	90 min
5X	-	-	-	60 min	60 min
6A	60 min	60 min	60 min	60 min	60 min
6B	60 min	60 min	-	-	-
7A	60 min	60 min	60 min	60 min	120 min
7B	60 min	60 min	-	-	120 min
10	60 min	30 min	60 min	60 min	60 min
11	60 min	60 min	60 min	-	60 min
12	60 min	30 min	60 min	60 min	60 min
16	60 min	60 min	60 min	-	60 min

Table 53: Summary of Headways by Route and Time Period for Alternative 2 Option A

	Weekday Headways				Saturday Headways
Routes	AM Peak	PM Peak	Off-Peak	Night	
1/8	60 min	60 min	60 min	-	60 min
2/9	30 min	30 min	60 min	-	60 min
3	30 min	30 min	60 min	-	60 min
4	60 min	60 min	60 min	-	60 min
5B	90 min	90 min	90 min	-	90 min
5N	90 min	90 min	90 min	-	90 min
5S	90 min	90 min	90 min	-	90 min
5X	-	-	-	60 min	60 min
6A	60 min	60 min	60 min	-	60 min
6B	60 min	60 min	-	-	-
7A	60 min	60 min	60 min	60 min	120 min
7B	60 min	60 min	-	-	120 min
10	30 min	30 min	60 min	60 min	60 min
11	60 min	60 min	60 min	-	60 min
12	30 min	30 min	60 min	-	60 min
16	60 min	60 min	60 min	-	60 min

Figure 39: Alternative 2 System Map

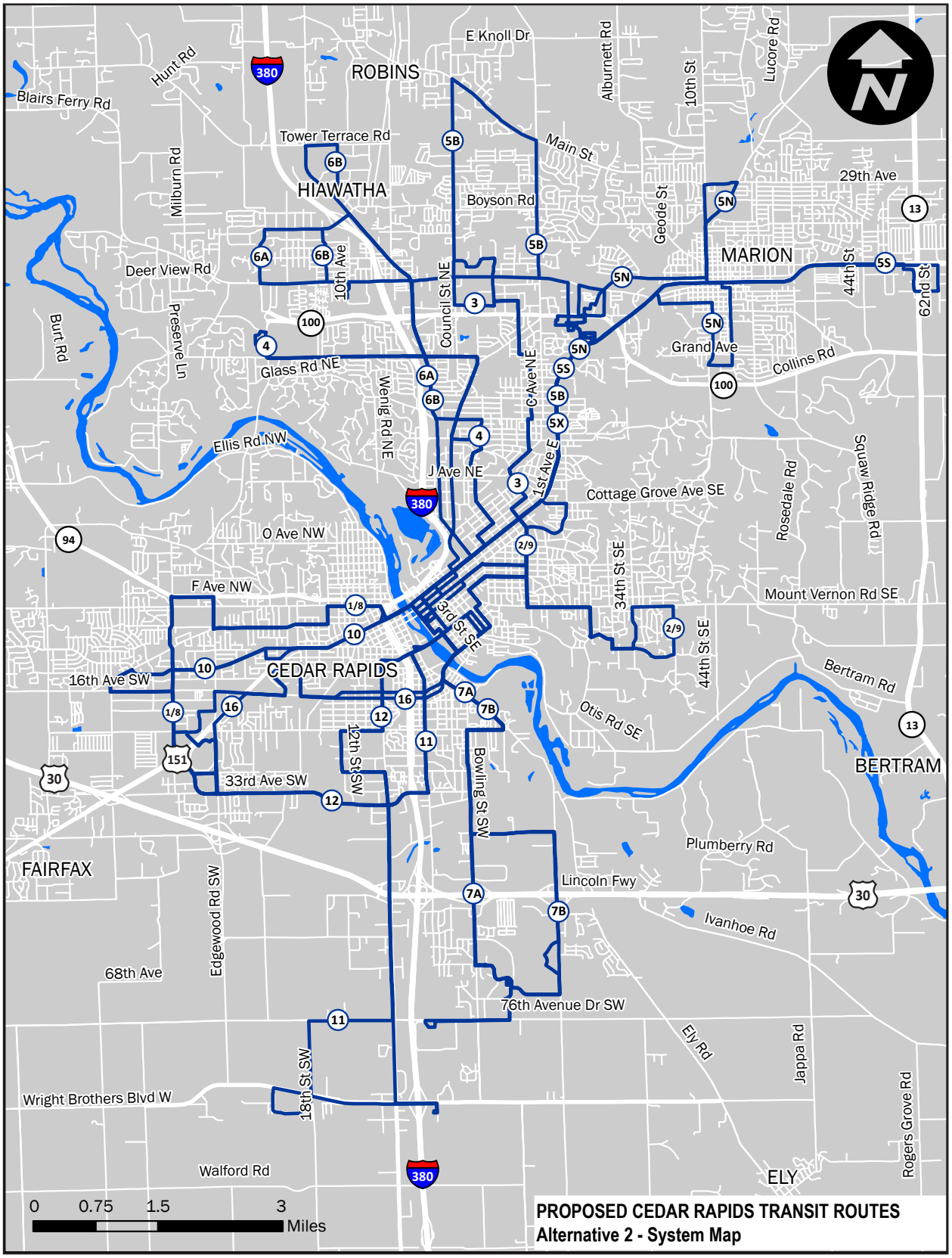
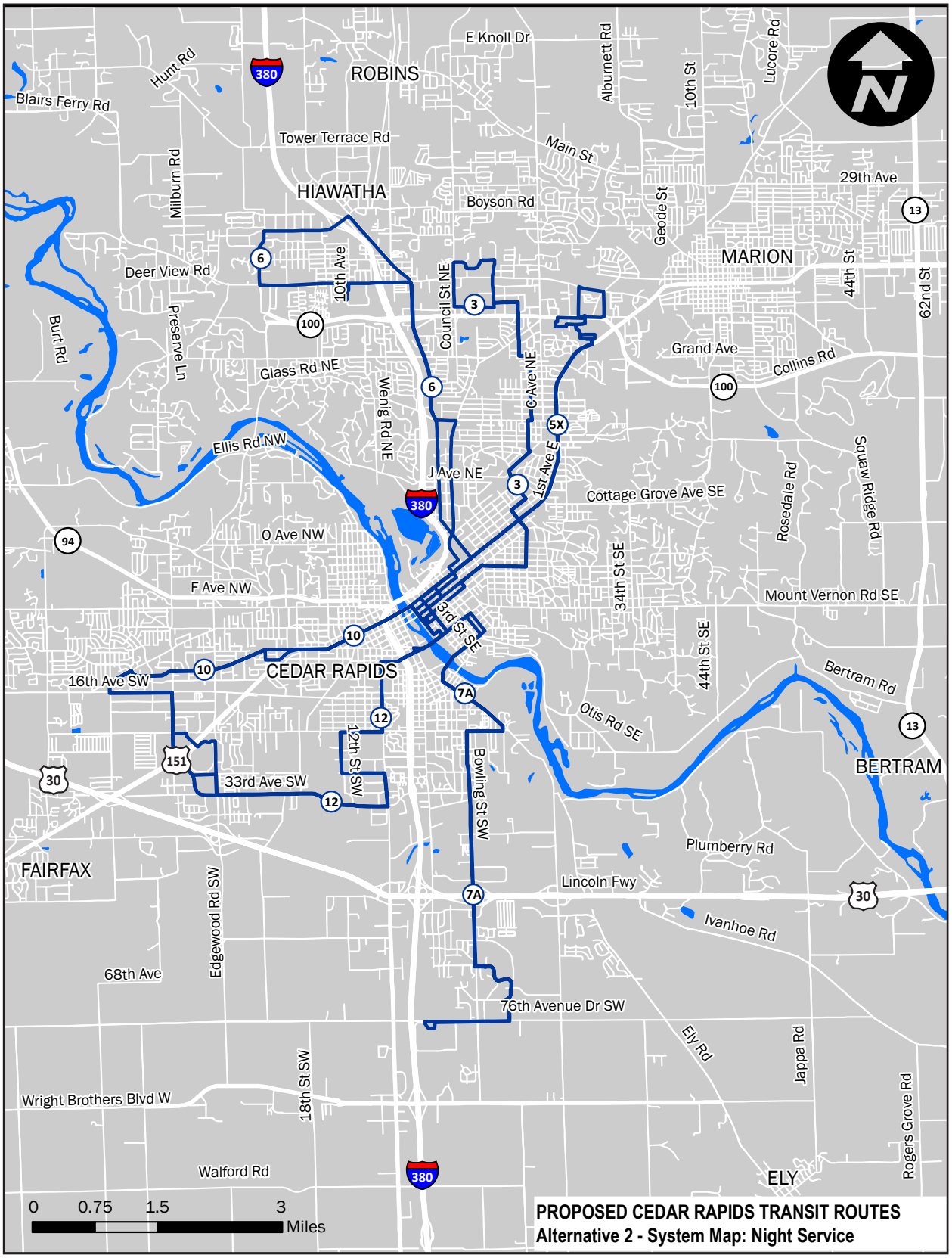


Figure 40: Alternative 2 System Map - Night



Alternative 3 - Maximum Service

Alternative 3 assumes that additional sources of funding, provided in part by a recommendation to increase the property tax levy in Cedar Rapids, Marion, and Hiawatha, would provide up to a 20 percent increase over the current operating budget. This additional funding would allow for a more comprehensive night service to be operated than was possible within the cost neutral constraints of Alternative 2.

In Alternative 3, all of the proposed route alignment changes and peak service recommendations are carried forward from Alternative 1, as shown in Figure 41. Routes 2/9, 3, 10, and 12 would be operated every 30 minutes during both the AM and PM peak periods and every 60 minutes during the rest of the day. The 5 Routes would continue to operate as they do now during the day, with 90 minute headways on each of the three branches providing a composite 30 minute headway on the 1st Avenue corridor between the GTC and Lindale Mall. As in Alternative 1, Route 5X would be operated hourly during the day, departing the GTC 15 minutes off of the main pulse. Routes 6A/6B and 7A/7B would also be operated as proposed in Alternative 1, with Routes 6A and 7A operating every 60 minutes all day and pulsing with the majority of other routes in the system. Routes 6B and 7B would be operated 30 minutes off of the main pulse during the AM and PM peak periods only. Routes 1/8, 4, 11, and 16 would be operated with 60 minute headways all day. Table 54 provides a summary of the headways for each route by time period and day of week for Alternative 3.

Most of the assumed additional funding would be used to expand night service on weekdays. In contrast with Alternative 2, where at most six routes would be operated at night, a majority of routes in the system would continue to operate until 10:00PM in Alternative 3. As shown in the night network map in Figure 42 below, only Routes 4, 5X, 5N, 11, and 16 would stop service at 7:00PM. (Routes 6B and 7B, which are only operated during the peak, would also not operate at night.) Routes 1/8, 2/9, 3, 6A, 7A, 10, and 12 would be operated hourly until 10:00PM. Routes 5B and 5S would also operate hourly but provide service every 30 minutes along the 1st Avenue corridor between the GTC and Lindale Mall, with hourly service extending beyond Lindale Mall to Hiawatha and Robins on Route 5B and Marion on Route 5S.

Table 54: Summary of Headways by Route and Time Period for Alternative 3

	Weekday Headways				Saturday Headways
Routes	AM Peak	PM Peak	Off-Peak	Night	
1/8	60 min	60 min	60 min	60 min	60 min
2/9	30 min	30 min	60 min	60 min	60 min
3	30 min	30 min	60 min	60 min	60 min
4	60 min	60 min	60 min	-	60 min
5B	90 min	90 min	90 min	60 min	90 min
5N	90 min	90 min	90 min	-	90 min
5S	90 min	90 min	90 min	60 min	90 min
5X	60 min	60 min	60 min	-	60 min
6A	60 min	60 min	60 min	60 min	60 min
6B	60 min	60 min	-	-	-
7A	60 min	60 min	60 min	60 min	120 min
7B	60 min	60 min	-	-	120 min
10	30 min	30 min	60 min	60 min	60 min
11	60 min	60 min	60 min	-	60 min
12	30 min	30 min	60 min	60 min	60 min
16	60 min	60 min	60 min	-	60 min

Figure 41: Alternative 3 System Map

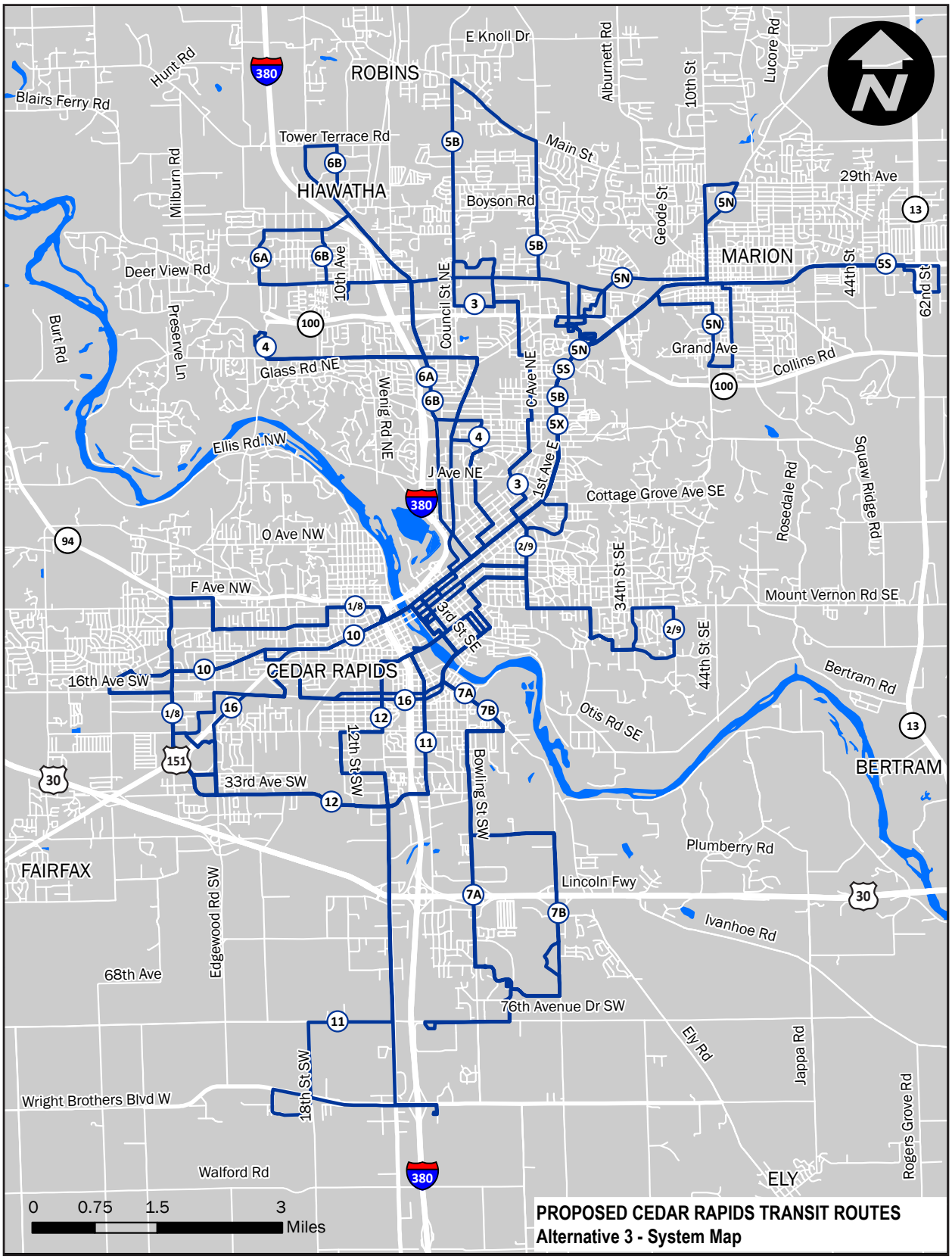
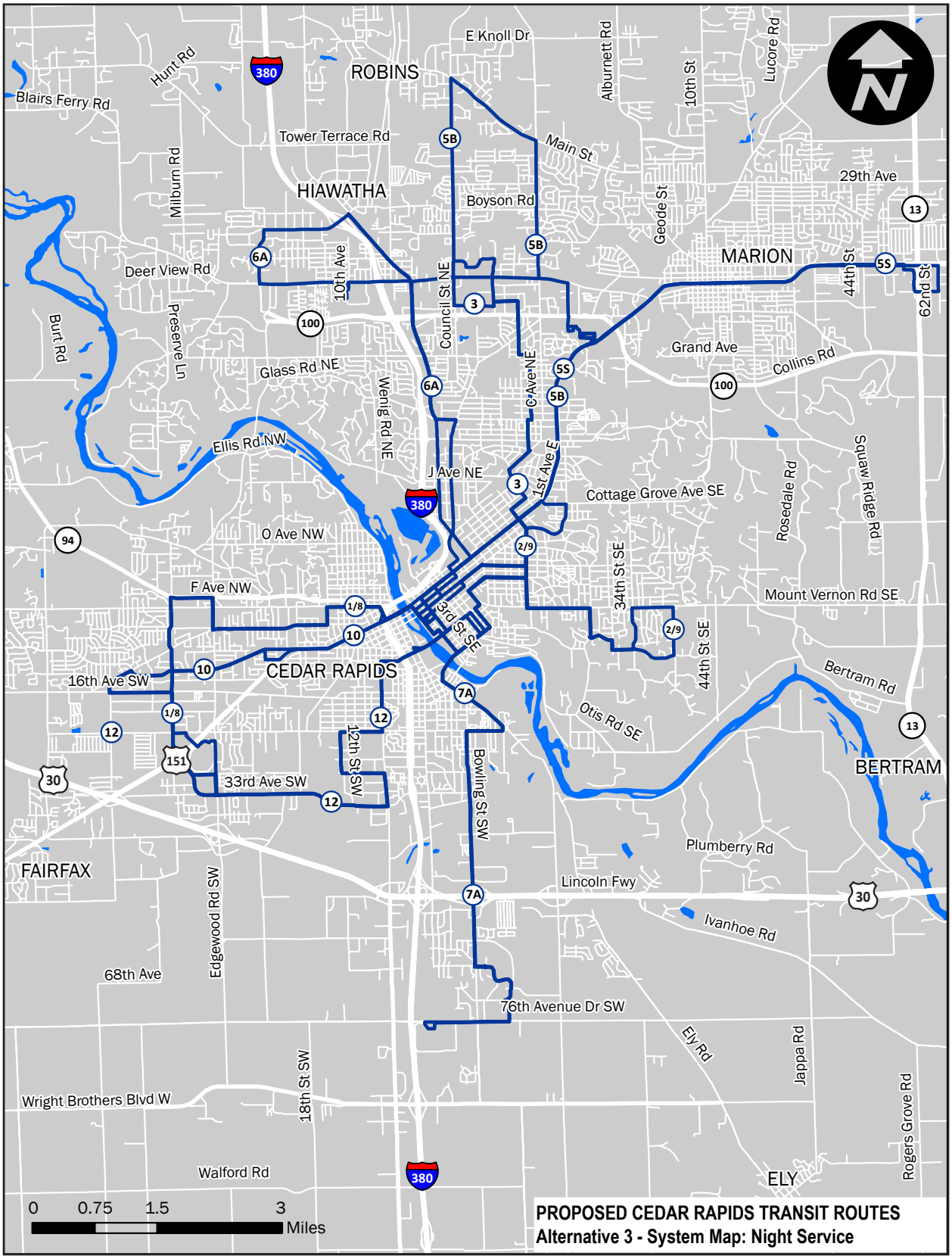


Figure 42: Alternative 3 System Map - Night



Alternative 4 - Ideal Service

Alternative 4 is presented as the ideal level of service that CR Transit would operate if it had fewer financial constraints that would allow it to respond to the numerous service requests and comments about its service that it often receives from riders and residents in the region. This alternative would require additional funding beyond the recommended increase in the property levy for the region's municipalities that was assumed in Alternative 3. In contrast with the previous three alternatives, these recommended service improvements are not dependent on one another and could be prioritized and implemented in a series of steps or phases. This alternative follows through on the recommendations presented in Alternatives 1 through 3 and builds off of the route network presented in Alternative 3. The various service improvements to the system are detailed below and are presented in Figure 43.

1st Avenue Corridor

In this alternative, it is recommended that transit service along the 1st Avenue corridor between the GTC and the Lindale Mall be simplified. Route 5X would be the only route operating along the corridor between the GTC and Lindale Mall and would replace the service currently provided on 1st Avenue by Routes 5B, 5S, and 5N. The route would be operated every 15 minutes between 5:15AM and 11:00PM on weekdays, between 8:00AM and 11:00PM on Saturdays, and between 8:30AM and 5:30PM on Sundays (Table 55). The other 5 Routes (5B, 5S, and 5N) would be truncated at the Lindale Mall (discussed below), but would continue to provide service to the communities of Marion, Hiawatha and Robins as distinct routes from the 1st Avenue corridor.

Table 55: Summary of Headways by Route and Time Period for Route 5X

	Weekday Headways				Saturday Headways	Sunday Headways
Routes	AM Peak	PM Peak	Off-Peak	Night		
5X	15 min	15 min	15 min	15 min	15 min	30 min

Northern Community Circulators (NCCs)

With Route 5X providing service every 15 minutes along the 1st Avenue corridor between the GTC and Lindale Mall, it is recommended that the other 5 Routes serving the communities of Marion, Hiawatha, and Robins be truncated at the Lindale Mall. In this alternative, the Lindale Mall would serve as a mini-hub (with improved passenger amenities) that would provide timed transfers between Route 5X and the truncated routes serving the northern communities. In order to highlight these truncated routes as independent routes serving the northern communities, it is recommended that they be renamed as the Northern Community Circulators (NCC). There are four proposed NCCs that would operate hourly (Table 56) from the Lindale Mall that would provide timed transfers with the Route 5X. The four new NCCs are presented below.

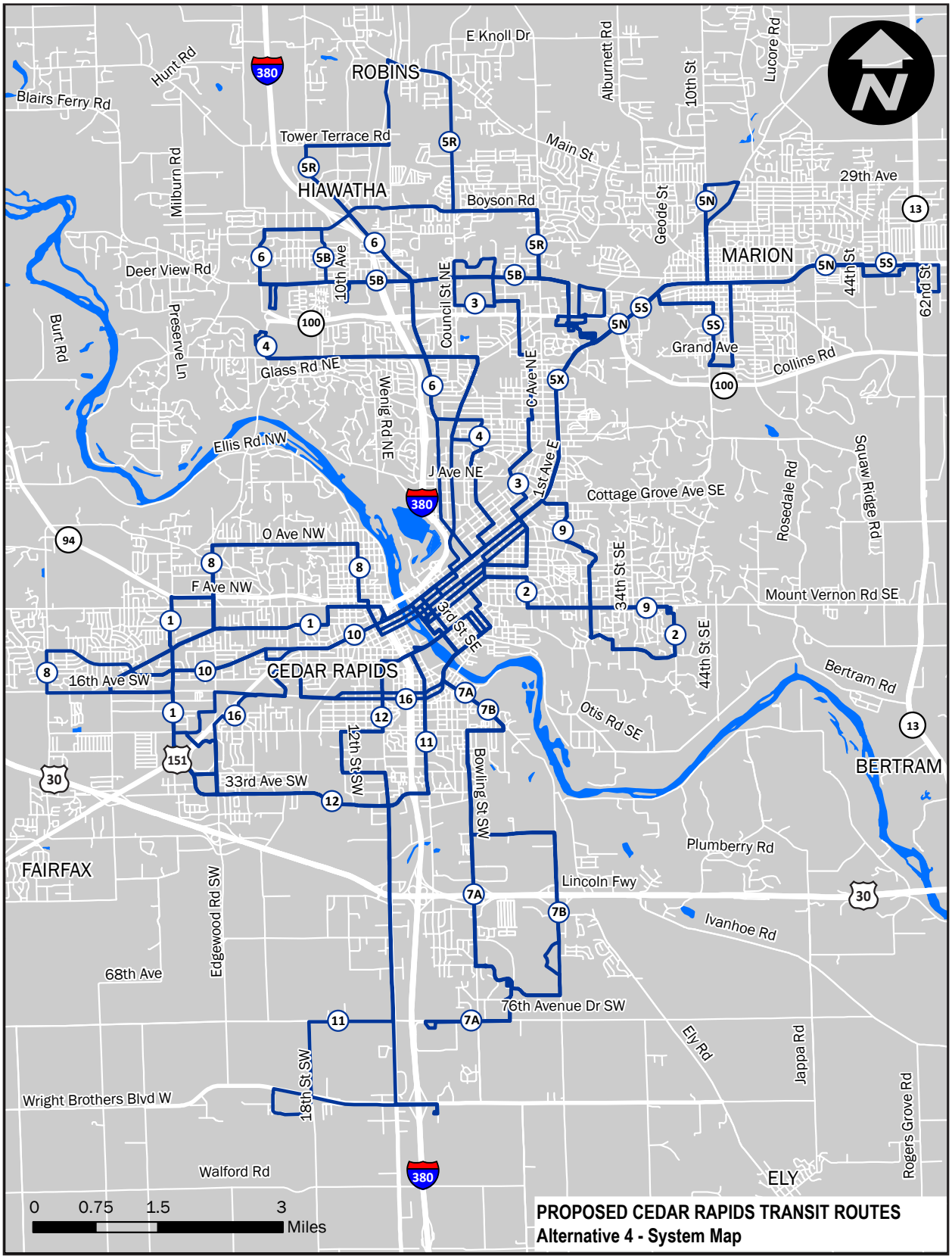
<u>Blairs Ferry NCC</u>

NCC Blairs Ferry (Route 5B) is a new route that would operate between the Lindale Mall and Hiawatha via Blairs Ferry Road. This new route would serve the various commercial, industrial, and retail areas along Blairs Ferry Road, including the Walmart on Blairs Ferry, and the growing retail/shopping center on Edgewood Road NE/ Blairs Ferry Road which includes a Hy-Vee. The route would operate hourly between 5:15AM and 11:00PM on weekdays, Saturdays between 8:00AM and 11:00PM, and Sundays between 8:30AM and 5:30PM. The NCC Blairs Ferry would be timed to meet the Route 5X at the Lindale Mall to provide connections to/from the GTC and the greater CR Transit network.

<u>Hiawatha/Robins NCC</u>

NCC Hiawatha/Robins (Route 5R) is similar to the proposed Route 5B presented in Alternatives 1-3 that provides service to Robins. The route would operate between the Lindale Mall, Robins, and Hiawatha, with service along Boyson Road, Main Street, and Tower Terrace Road. This new route would serve the various residential communities, and commercial, industrial, and retail areas in both Hiawatha and Robins. The route would operate hourly between 5:15AM and 11:00PM on weekdays, Saturdays between 8:00AM and 11:00PM, and Sundays

Figure 43: Alternative 4 System Map



between 8:30AM and 5:30PM. The NCC Hiawatha Robins would also be timed to meet Route 5X at the Lindale Mall to provide connections to/from the GTC and the greater CR Transit network.

Marion North NCC

NCC Marion North (Route 5N) differs from the Route 5N presented in Alternatives 1-3 that provides service to the residential neighborhoods of Marion. This route would serve the residential areas north of Marion Boulevard/7th Avenue and the Linn-Mar High School, but would also include service to the Walmart on 10th Avenue. This service extension is made possible by the truncation at Lindale Mall which provides a little more travel time on the hourly route. The route would operate between the Lindale and the Walmart along Marion Boulevard/7th Avenue/10th Avenue, with a diversion to serve Lin-Mar High School on 10th Street. This route would serve the various residential communities and commercial and retail areas in Marion, including those located along Marion Boulevard/7th Street/10th Street and Uptown Marion. The route would operate hourly between 5:15AM and 11:00PM on weekdays, Saturdays between 8:00AM and 11:00PM, and Sundays between 8:30AM and 5:30PM. The NCC Marion North would also be timed to meet Route 5X at the Lindale Mall to provide connections to/from the GTC and the greater CR Transit network.

Marion South NCC

NCC Marion South (Route 5S) differs from the Route 5S presented in Alternatives 1-3 that provides service along the Marion Boulevard/7th Avenue/10th Avenue corridor. This route would continue to serve that corridor, but would also provide bi-directional service to the residential area south of Marion Boulevard that was omitted by the NCC Marion North. The route would operate between the Lindale and the Walmart along Marion Boulevard/7th Avenue/10th Avenue, with a diversion to serve 3rd Avenue, South 11th Street, South 15th Street and the Grand Avenue Apartments. This route would serve the various residential communities south of Marion Boulevard and commercial and retail areas in Marion, including those located along Marion Boulevard/7th Avenue/10th Avenue and Uptown Marion. The route would operate hourly at all times between 5:15AM and 11:00PM on weekdays, Saturdays between 8:00AM and 11:00PM, and Sundays between 8:30AM and 5:30PM. The NCC Marion South would also be timed to Route 5X trips at the Lindale Mall to provide connections to/from the GTC and the greater CR Transit network.

Table 56: Summary of Headways by Route and Time Period for Route 5X

	Weekday Headways				Saturday Headways	Sunday Headways
Routes	AM Peak	PM Peak	Off-Peak	Night		
5B	60 min	60 min	60 min	60 min	60 min	60 min
5N	60 min	60 min	60 min	60 min	60 min	60 min
5R	60 min	60 min	60 min	60 min	60 min	60 min
5S	60 min	60 min	60 min	60 min	60 min	60 min

Reinstate Routes

In Alternative 1, the alignments of Routes 1 and 8 and Routes 2 and 9 were combined to retain the most productive segments of both routes as two new route alignments. This consolidation of service was intended to reallocate resources to potentially more productive areas of the system and improve service frequencies along the 1st Avenue NE corridor. In this alternative, where there are more resources available, it is no longer recommended that these routes be consolidated, but rather that they be modified from their existing alignments.

Route 1 and 8

The proposed Route 1 in Alternative 4 is identical to the Route 1/8 alignment in Alternative 1. This route would operate between the GTC and Walmart on 29th Avenue SW via Johnson Avenue NW and Wiley Boulevard SW. Route 8 would operate along a new alignment via O Avenue NW, Edgewood Road NW, and Johnson Avenue NW,

providing service to the YMCA on Stoney Point Road. Proposed headways for Routes 1 and 8 are highlighted in Table 57.

Route 2 and 9

In Alternative 4, Routes 2 and 9 are structured as separate routes that would provide more linear and bi-directional service than the circuitous patterns on the existing routes serving eastern Cedar Rapids. Route 2 would operate between the GTC and the Hy-Vee on Mt. Vernon Drive via 12th Avenue SW in Downtown Cedar Rapids, Wellington Heights, Mt. Vernon Road, and Pioneer Avenue. It would primarily serve the residential neighborhoods of eastern Cedar Rapids and Metro High School. Route 9 would also operate between the GTC and the Hy-Vee on Mt. Vernon Road, but would operate via 4th/5th Avenue SE in Downtown Cedar Rapids, Wellington Heights, Forest Drive, Memorial Drive, and Mt. Vernon Road. It would serve the residential neighborhoods of eastern Cedar Rapids, Washington High School, and the commercial and retail centers along Mt. Vernon Road. Proposed headways for Routes 2 and 9 are presented in Table 57.

Table 57: Summary of Headways by Route and Time Period for Routes 1, 2, 8, and 9

	Weekday Headways				Saturday Headways	Sunday Headways
Routes	AM Peak	PM Peak	Off-Peak	Night		
1	30 min	30 min	60 min	60 min	60 min	60 min
2	30 min	30 min	60 min	60 min	60 min	60 min
8	30 min	30 min	60 min	60 min	60 min	60 min
9	30 min	30 min	60 min	60 min	60 min	60 min

Improved Service Frequencies

In this alternative, service frequencies would be vastly improved to provide a network of high-frequency routes that would provide service every 15 minutes during the peak times on the highest ridership corridors in the system. Five routes are recommended to be operated every 15 minutes during the AM/PM peak periods and every 30 minutes during the midday and evening. These include Routes 3, 5X, 6, 10, and 12. The combination of Routes 5X and 10 would provide service every 15 minutes along 1st Avenue between the Westdale and Lindale Malls, which would lay the groundwork for implementing a BRT type service along this corridor (discussed below).

The remaining routes that serve the GTC would also benefit from improved service frequencies during the peak periods, with service every 30 minutes during the peak and every 60 minutes during the midday and evening. With these improvements, all routes that serve the GTC would operate either every 15 minutes or every 30 minutes during the AM and PM peak times. The NCC routes would operate every 60 minutes at all times to/from the Lindale Mall. Table 58 provides a summary of the headways for each route by time period and day of week for this service improvement.

Extended Weekday Night Service

Alternatives 2 and 3 recommended the extension of service on select routes to 10:00PM. In Alternative 2, at most six routes (Routes 3, 5X, 6A, 7A, 10, and 12) would be operated as the CR Transit night network. In Alternative 3, nine routes (Routes 1/8, 2/9, 3, 5B, 5S, 6A, 7A, 10, 12) would be operated as the CR Transit night network. In the Alternative 4, the night network would be expanded to include 18 routes—all routes except 7B—and service would be extended to 11:00PM on weekdays. All routes would be operated hourly at night (Table 58), with the exception of Route 5X, which would be operated every 30 minutes. This service expansion will greatly improve the night service coverage area of the CR Transit system, which will benefit workers in the region, particularly those working in retail, food service, or other service industry jobs that often have shifts that end at 9:00 or 10:00PM.

Saturday Night Service

In Alternative 4, Saturday evening service is also proposed until 11:00PM on all routes, with the exception of Route 7B, which serves the commercial and industrial areas along C Street SW south of Lincoln Highway and wouldn't necessarily be a good source of transit ridership on Saturday evenings. Saturday service would therefore be provided hourly from 8:00AM until 11:00PM (Table 58), which represents a six hour service expansion over the existing system.

Sunday Service

The final component of the recommendations in Alternative 4 is the implementation of Sunday service. Sunday service is one of the most frequent requests that CR Transit receives from its riders and the community. On Sundays, it is recommended that all routes be operated at hourly frequencies (every 30 minutes on Route 5X) between 8:30AM and 5:30PM (Table 58). No evening/night service is recommended on Sundays at this time.

Table 58: Summary of Headways by Route and Time Period for Alternative 4

	Weekday Headways				Saturday Headways	Sunday Headways
Routes	AM Peak	PM Peak	Off-Peak	Night		
1	30 min	30 min	60 min	60 min	60 min	60 min
2	30 min	30 min	60 min	60 min	60 min	60 min
3	15 min	15 min	30 min	60 min	60 min	60 min
4	30 min	30 min	60 min	60 min	60 min	60 min
5B	60 min	60 min	60 min	60 min	60 min	60 min
5R	60 min	60 min	60 min	60 min	60 min	60 min
5N	60 min	60 min	60 min	60 min	60 min	60 min
5S	60 min	60 min	60 min	60 min	60 min	60 min
5X	15 min	15 min	15 min	15 min	15 min	30 min
6	15 min	15 min	30 min	60 min	60 min	60 min
7A	30 min	30 min	30 min	60 min	60 min	60 min
7B	30 min	30 min	-	-	-	-
8	30 min	30 min	60 min	60 min	60 min	60 min
9	30 min	30 min	60 min	60 min	60 min	60 min
10	15 min	15 min	30 min	60 min	60 min	60 min
11	30 min	30 min	60 min	60 min	60 min	60 min
12	15 min	15 min	30 min	60 min	60 min	60 min
16	30min	30min	60 min	60 min	60 min	60 min

Financial Impacts

Alternative 1

It is not anticipated that Alternative 1 would generate any financial impacts for the CR Transit operating budget, as this alternative was designed to be cost neutral. In other words, the estimated cost of implementing the proposed realignments of most routes, consolidation of services on Routes 1/8 and 2/9, and introduction of additional service on Routes 5X and 16. In fact, there is a projected 1 percent and 2 percent savings in annual revenue hours and miles, respectively, when compared to the existing CR Transit network. The route model and its calculations for of all of the presented alternatives are provided in Appendix D.

Alternative 2

Alternative 2 is not projected to have any financial impacts on the Cedar Rapids Transit operating budget, as this alternative was also designed to be cost neutral. In this alternative, the extension of service to 10:00PM on some routes is off-set by the reduction or elimination of peak service during the day. However, as mentioned in the discussion of Alternative 2 above, the trade-off between peak and night service is not a one-to-one ratio because the cost of operating an additional revenue hour of service during Cedar Rapids Transit's existing service hours is less than the cost of operating an additional revenue hour of service in the evening. The addition of night service to the Cedar Rapids Transit system will necessarily generate inefficiencies in the way that employee shifts are scheduled and utilized, and will also generate additional paratransit and non-labor related costs. Estimates of the additional labor, non-labor, and paratransit costs associated with operating service later into the evening were developed in order to ensure that Alternative 2 remained a truly cost neutral proposal. The methodology for developing these cost estimates is described in Appendix D.

Alternative 3

Unlike Alternatives 1 and 2, Alternative 3 was not designed to be cost neutral, but rather to incorporate a possible increase in funding (up to 20 percent) as a result of the recommended increase in property tax levies. As such, the financial impacts of this alternative are substantial. With the extension of service to 10:00PM on nine routes in Alternative 3, and with no reduction in peak service and the retention of daytime service on Route 5X, it is estimated that Alternative 3 will require a 9 percent increase in Cedar Rapids Transit's operating budget to implement. As with Alternative 2, this estimate includes the additional costs associated with the implementation of night service. The projected costs for operating Alternative 3 are presented in Table 59.

Table 59: Alternative 3 Operational Costs

	Projected Cost Based on Revenue Hours, Revenue Miles, and Peak Vehicles	Projected Non-Labor Costs	Projected Additional Labor Costs	Projected Additional Paratransit Costs	Total
Alternative 3	$9,827,223	$106,652	$272,260	$177,274	$10,383,409

Alternative 4

Alternative 4 represents a wish list of the most frequently requested improvements to the Cedar Rapids Transit system. There were no financial constraints on the development of this alternative, and therefore the financial impacts of implementing all of the recommended service improvements in this alternative would be considerable. However, in contrast with the other alternatives, all of the service improvements recommended in Alternative 4 would not have to be implemented simultaneously, and in fact, it is very unlikely that they would be. Therefore, the cost estimates for Alternative 4 are presented as line item costs that represent the incremental cost of implementing each service improvement. As with Alternatives 2 and 3, these estimates include the additional costs associated with the implementation of night service on both weekdays and Saturdays, as well as the introduction of Sunday service.

Weekday and Saturday Improvements

The majority of service improvements recommended in Alternative 4 apply to weekday and Saturday operations. These include improvements to the 1st Avenue Corridor (Route 5X), the four NCCs, reinstatement of the routes previously cut in Alternative 1 (Routes 1/8 and 2/9), and the increase in service frequencies on most routes during the AM/PM peak periods. The cost of providing all of these service improvements during weekdays and Saturdays would be approximately $17.6 million or an incremental cost of $8 million over the existing budget (Table 60). The operating costs associated with providing night service also on weekdays and Saturdays are not included in this calculation and will be included in their respective section below.

Table 60: Weekday and Saturday Operational Costs

	Projected Cost Based on Revenue Hours, Revenue Miles, and Peak Vehicles	Projected Non-Labor Costs	Projected Additional Labor Costs	Projected Additional Paratransit Costs	Total
Weekday and Saturday Day Service	$17,554,619	-	-	-	$17,554,619

Weekday Night Service

The operational costs for weekday night service from 7:00PM to 11:00PM are presented in Table 61. This includes operating 17 routes (including Route 5X) an additional hour on weekdays. The cost of operating service until 11:00PM would cost approximately $2.4 million and includes provisions made to extend paratransit services also until 11:00PM, additional staff for the extended hour (e.g. supervisor, dispatchers, cleaning crew), and keeping the garage open until service ends.

Table 61: Weekday Night Service Operational Costs

	Projected Cost Based on Revenue Hours, Revenue Miles, and Peak Vehicles	Projected Non-Labor Costs	Projected Additional Labor Costs	Projected Additional Paratransit Costs	Total
Weekday Night Service	$1,446,880	$140,331	$555,196	$221,822	$2,364,229

Saturday Night Service

The operational costs for Saturday night service from 5:00PM to 11:00 PM are presented in Table 62. This includes operating 17 routes (including Route 5X) an additional six hours on Saturdays. The cost of operating service until 11:00PM would cost approximately $765,000 and includes provisions made to extend paratransit services also until 11:00PM, additional staff for the extended hour (e.g. supervisor, dispatchers, cleaning crew), and keeping the garage open until service ends.

Table 62: Saturday Night Service Operational Costs

	Projected Cost Based on Revenue Hours, Revenue Miles, and Peak Vehicles	Projected Non-Labor Costs	Projected Additional Labor Costs	Projected Additional Paratransit Costs	Total
Saturday Night Service	$505,726	$44,906	$169,825	$44,089	$764,546

Sunday Service

The operational costs for implementing Sunday service are presented in Table 63. This includes operating 17 routes (including Route 5X) from 8:30AM to 5:30PM (nine hours) on Sundays. The cost of operating Sunday service would cost approximately $1.1 million and includes provisions made to also operate paratransit service on Sundays, a full team of staff (e.g. supervisor, dispatchers, cleaning crew), and opening/closing the garage.

Table 63: Sunday Night Service Operational Costs

	Projected Cost Based on Revenue Hours, Revenue Miles, and Peak Vehicles	Projected Non-Labor Costs	Projected Additional Labor Costs	Projected Additional Paratransit Costs	Total
Sunday Night Service	$686,912	$61,746	$254,737	$104,844	$1,108,239

Policy and Financial Recommendations

Transit Tax Levy

The largest part of CR Transit's locally-funded operating budget is generated by a dedicated tax levied against the value of real property in Cedar Rapids with a smaller portion provided by the City of Marion and City of Hiawatha. The State of Iowa permits cities to levy property taxes up to 9.5 mils ($0.95 on every $1,000 of assessed value of property). Currently, the City of Cedar Rapids levies 8.078 mils ($0.8078 on every $1,000), which generated approximately $4.75 million in annual operating revenue in 2015. The City of Marion levies 1.5561 mils ($0.15561 on every $1,000), which generated about $195,000 (4% of local funding) in annual operating revenue in 2015. The two tax levies together generated nearly $5 million in operating funds in 2015. The City of Hiawatha levies no tax dedicated to public transit but does provide limited funding through its general fund ($75,600 or 1% of local funding). The funds raised under the property taxes are used to support operation of the transit agency, and are used to fulfill local match requirements for Federal Capital Grants, which are used primarily to purchase buses. The rates and amounts generated are indicated in Table 64.

Table 64: Transit-Dedicated Property Tax Rates and Amounts by Municipality, 2015

Municipality	Total Value of Taxable Property	Current Transit Levy	Transit Levy Collected
Cedar Rapids	$5,867,857,446	0.00080787	$4,740,466
Marion	$1,253,132,832	0.00015561	$195,000
Hiawatha	$329,444,906	0	$0
		Total	$4,954,052

Table 65 estimates the hypothetical limits of transit funding in the three communities where CR Transit now operates. As noted above, the State of Iowa permits municipalities to levy up to $0.95 out of $1,000 in valuation to support public transit services. The City of Cedar Rapids is currently levying $0.080787, the City of Marion $0.15561, and the City of Hiawatha is not levying property taxes to support transit. Table 51 calculates how much each community could contribute to public transit operating funds if they were to levy the full $0.95 permitted under Iowa law.

Table 65: Estimate of Property Tax Revenues Dedicated to Public Transit at Maximum Rate Permitted under Current Iowa Statutes, by Municipality, based on 2015 Property Valuations

Municipality	Total Value of Taxable Property	Transit Levy at $0.95/$1,000 Revenue	Transit Revenue Increase
Cedar Rapids	$5,867,857,446	$5,574,465	$833,999
Marion	$1,253,132,832	$1,190,476	$995,476
Hiawatha	$329,444,906	$312,973	$312,973
	Total	$7,077,914	$2,142,448

Increasing the property tax in Cedar Rapids to the statutory limit would allow the Cedar Rapids property owners to contribute an additional $834,000 to public transit. Levying the maximum allowable tax in Marion would allow that city's property owners to contribute $995,000 to transit operations, over $800,000 more than Marion is currently contributing. Levying property taxes at the maximum allowable level in Hiawatha would allow that municipality to contribute more than $310,000 to transit. Overall, levying the maximum dedicated transit tax on all three communities would allow them to levy a total just over $7.0 million, more than $2.1 million more than the $4.95 million currently levied in the region. This would represent an increase in transit funding of more than 45 percent, and would allow CR Transit to substantially improve transit service in the region, increasing service frequency on many corridors, extending service into under-served areas, expanding service in Marion and offering more evening, Saturday, and perhaps even Sunday service.

Transit Service Operational Cost Analysis

Given the existing levels of transit service in the region, the City of Cedar Rapids is subsidizing service in Marion and Hiawatha. As shown in Table 66, about 93 percent of the revenue miles of service operated by CR Transit is operated in Cedar Rapids, while about 5 percent is operated in Marion and 2 percent in Hiawatha. However, Cedar Rapids generates 96 percent of the transit funding generated by dedicated property taxes, owing to their much larger tax base and higher millage rate for transit. Marion generates about 4 percent of the tax revenues dedicated to transit, while Hiawatha generates no tax revenues dedicated to transit however they are providing financial assistance via their general fund. As indicated in Table 68, this means that the City of Cedar Rapids is providing nearly $671,000 per year in transit service to Marion and Hiawatha, for which it is receiving only $195,000 in tax revenues from the City of Marion and $75,600 from the City of Hiawatha's general fund. In other words, Cedar Rapids is subsidizing transit service to the cities of Marion and Hiawatha in the amount of about $173,000 or about $100,300 and $72,800 per year for each city, respectively, after federal and state subsidies and fare revenues are allocated to each city based on service levels (i.e. revenue hours and miles).

Table 66: Revenue Hours of Service, Transit Funding Levels and Inter-Municipal Subsidy of Service by Cedar Rapids, by Municipality, 2015

Municipality	Percentage of Revenue Hours/ Miles Operated in Municipality	Estimated Transit Service Cost by Municipality	Current Subsidies/ Fare Revenue Allocations by Municipality	Current Transit Funding Generated by Municipality	Total Annual Subsidy Provided by Cedar Rapids
Cedar Rapids	93%	$9,237,546	$3,687,886	-	-
Marion	5%	$461,101	$165,831	$195,000	($100,270)
Hiawatha	2%	$209,694	$61,283	$75,600	($72,811)
	Total	$9,908,341	$3,915,000	-	($173,081)

Table 67 provides an estimate of the millage rate for dedicated transit tax that would be required in Marion and Hiawatha for those communities to generate sufficient revenue from the tax to fully support the service being operated in their communities.

As the table shows, the City of Marion would need to increase their property tax levy dedicated to public transit from $0.15561 to $0.2356 for that tax to cover the $100,270 currently being expended on their behalf by the City of Cedar Rapids. Hiawatha, which is now not levying a property tax for transit, would need to levy a tax of $0.2210 per $1,000 in assessed of the property in its community in order to cover the $72,811 that CR Transit expends on service in their community.

Table 67: Estimated Millage Rates Required for Marion and Hiawatha to Recover Existing Transit Operating Costs using Dedicated Transit Tax, 2015

Municipality	Total Value of Taxable Property	Current Transit Levy	Transit Levy Collected
Marion	$1,253,132,832	0.0002356	$100,270
Hiawatha	$329,444,906	0.0002210	$72,811
		Total	$173,081

Alternative Operational Cost Analysis

Given the proposed levels of transit service in the region, an analysis of the projected costs for each municipality was conducted to determine each city's relative contribution to CR Transit's local funding relative to the volume of service that each city receives. The number of projected revenue miles operated in each municipality was estimated, and the percentage of total CR Transit service that would be operated in each city was calculated. This percentage was then multiplied by the total local tax funding that CR Transit receives from all of the city's combined to determine the level of funding that each city would provide were the funding levels that each city provides equal to the volume of service it receives. This was then compared to the amount of funding each city actually provides to CR Transit. By subtracting the level of funding that each city would provide were its funding proportional to the volume of service it receives from the actual amount of funding each city provides, an estimate can be made of the amount of over-or under-payment each community would make towards service under each scenario. These estimates are based on FY 2016 projections provided by CR Transit and take into account funding from the Federal Government, State of Iowa and other sources (i.e. fare revenues). The results of the analysis are presented in Tables 68 through 72.

An analysis of the municipal share for Alternative 4 was not conducted since it is a collection of independent service improvements rather than an alternative where all of the service improvements would be implemented simultaneously. Prioritization of the various service improvements and implementation at various phases would change the percentage of revenue miles for each municipality at every stage, making it difficult to project the respective municipality's share.

Table 68: Alternative 1 Option A Cost per Municipality

Municipality	Percentage of Revenue Hours/ Miles Operated in Municipality	Estimated Transit Service Cost by Municipality	Current Subsidies/ Fare Revenue Allocations by Municipality	Current Transit Funding Generated by Municipality	Total Annual Subsidy Provided by Cedar Rapids
Cedar Rapids	92.3%	$8,519,755	$3,604,949	-	-
Hiawatha	2.0%	$183,482	$76,093	$75,600	($31,789)
Marion	5.3%	$492,965	$218,536	$195,000	($79,429)
Robins	0.4%	$35,500	$15,422	-	($20,078)
	Total	$9,231,702	$3,915,000	-	($131,296)

Table 69: Alternative 1 Option B Cost per Municipality

Municipality	Percentage of Revenue Hours/ Miles Operated in Municipality	Estimated Transit Service Cost by Municipality	Current Subsidies/ Fare Revenue Allocations by Municipality	Current Transit Funding Generated by Municipality	Total Annual Subsidy Provided by Cedar Rapids
Cedar Rapids	92.3%	$8,491,423	$3,604,455	-	-
Hiawatha	2.0%	$183,482	$76,214	$75,600	($31,668)
Marion	5.3%	$492,965	$218,884	$195,000	($79,081)
Robins	0.4%	$35,500	$15,446	-	($20,053)
	Total	$9,231,702	$3,915,000	-	($130,802)

Table 70: Alternative 2 Cost per Municipality

Municipality	Percentage of Revenue Hours/ Miles Operated in Municipality	Estimated Transit Service Cost by Municipality	Current Subsidies/ Fare Revenue Allocations by Municipality	Current Transit Funding Generated by Municipality	Total Annual Subsidy Provided by Cedar Rapids
Cedar Rapids	91.6%	$8,546,456	$3,576,662	-	-
Hiawatha	2.5%	$230,139	$93,884	$75,600	($60,655)
Marion	5.5%	$516,738	$227,527	$195,000	($94,211)
Robins	0.4%	$37,724	$16,927	-	($20,798
	Total	$9,331,057	$3,915,000	-	($175,664)

Table 71: Alternative 3 Cost per Municipality*

Municipality	Percentage of Revenue Hours/ Miles Operated in Municipality	Estimated Transit Service Cost by Municipality	Current Subsidies/ Fare Revenue Allocations by Municipality	Current Transit Funding Generated by Municipality	Total Annual Subsidy Provided by Cedar Rapids
Cedar Rapids	92.1%	$9,563,257	$3,657,823	-	-
Hiawatha	2.0%	$207,353	$78,049	$75,600	($53,704)
Marion	5.5%	$569,737	$225,747	$195,000	($148,990)
Robins	0.4%	$43,062	$17,751	-	($25,282)
	Total	$10,383,409	$3,979,400	-	($227,976)

*Fare revenues increased by 8 percent ($64,400) to account for equal level increase in service (miles/hours)

Table 72: Alternative 3 Cost per Municipality – Projected Increase in Funding

Municipality	Percentage of Revenue Hours/ Miles Operated in Municipality	Estimated Transit Service Cost by Municipality	Current Subsidies/ Fare Revenue Allocations by Municipality	Current Transit Funding Generated by Municipality	Total Annual Subsidy Provided by Cedar Rapids
Cedar Rapids	92.1%	$9,563,257	$3,657,823	-	-
Hiawatha	2.0%	$207,353	$78,049	$312,973	$183,669
Marion	5.5%	$569,737	$225,747	$1,190,476	$846,486
Robins	0.4%	$43,062	$17,751	$0	($25,282)
	Total	$10,383,409	$3,979,400	-	$1,004,873

As the table shows, in all of the alternatives and at current local funding levels, Cedar Rapids would continue to subsidize service to the other three municipalities at various levels depending on the level of service provided respective to the alternative just as it does today. However, were local funding to be maximized by levying the maximum dedicated property tax levy in Cedar Rapids, as shown in Scenario 3 (Table 72), both Cedar Rapids and Robins could be subsidized by Hiawatha and Marion due to the large increase in funding that such a large increase in tax funding be received from those cities. In this case, it is likely that tax levies would be tied to the level of service that Hiawatha and Marion would be likely to receive from CR Transit, either by reducing the level of tax collected to match the level of service currently proposed, or by increasing the volume of service (by adding routes or adding service to existing routes) to match the level of tax collected in the community.

Fare and Revenue Policy

CR Transit's nominal full cash fare is $1.50 for a single ride, single trip. CR Transit's current fare structure is shown below in Table 73.

Table 73: Cedar Rapids Transit Fare Structure (as of May 2016)

Passenger Type	Single Cash Fare	Day Pass	10-Ride Pass	31-Day Pass
Adult, Full Fare	$1.50	$3.00	$15.00	$40.00
Students	$0.75	$3.00	$7.50	$20.00
Seniors	$0.75	$3.00	$7.50	$20.00
Disability Pass	$0.75	$3.00	$7.50	$20.00
Low-Income Pass	$0.75	$3.00	$7.50	$20.00
Children Ages 5 & Under (accompanied by customer 13 years and older)	Free			

A comparison of the fare policies of the peer transit agencies presented in Table 74 indicates that this cash fare is in line with that charged by transit providers in similar communities. However, CR Transit's average fare (the total fare revenue collected on the system divided by the number of trips provided) for 2015 was only $0.66, or only 44 percent of the nominal one way cash fare. The low average fare collected relative to the nominal cash fare contributes to CR Transit's relatively low farebox recovery rate (12.1 percent in 2014).

Table 74: Peer City FareComparison

	Cedar Rapids	Peer Average	Appleton, WI	Evansville, IN	Green Bay, WI	Sioux Fall, SD	Topeka, KS	Youngstown, OH
One-Way Cash Fare	$1.50	$1.46	$2.00	$1.00	$1.00	$1.50	$2.00	$1.25
Day Pass	$3.00	$3.25	$4.00	-	$3.00	$3.00	-	-
Monthly Pass	$40.00	$45.29	$60.00	$60.00	$35.00	$30.00	$50.00	$42.00

CR Transit's low average fare relative to its nominal fare is due to the many discounts that it provides to its customers. Many of these discounts are typical in the transit industry. For example, CR Transit extends half-fare discounts ($0.75) to students, seniors, disabled customers, and customers that receive Medicare. Virtually every US public transit operator provides these same discounts. However, CR Transit offers two discounts that are relatively unusual. First, the agency offers a half-fare discount to lower-income residents. Customers that wish to receive income-based discounts must apply with CR Transit for an identification card and must have household income below 160 percent of the Federal poverty level. In 2016, this means that a single person with an income below $18,384, or members of a household with an income below $37,680 qualifies for the program. The second unusual discount that reduces fare collections is the offer of free service on Saturday. This practice began as a promotion for the transit system in 2013, and has resulted in a significant increase in transit use on Saturdays, particularly by teens and students.

Besides offering discounts that are typical, some of the volume discounts that CR Transit offers are atypically generous. CR Transit offers a day pass for $3.00, twice its nominal single trip fare. This fare instrument allows transit users to make unlimited trips within a single day. Such passes are popular among regular transit customers, particularly among tourists and others who make multiple trips within a single service day. Many transit agencies introduced day passes when they withdrew free transfers, which were often abused by customers who gave them away or sold them to other customers, defrauding the transit agency and reducing fare revenues. In some transit systems, bus operators experienced confrontations with customers over the validity of transfer tickets, which were usually time limited to trips made within one or two hours and often limited to certain routes or directions

of travel. Eliminating transfers and charging customers for each discrete boarding within a trip eliminated these abuses. However, in a radial, pulse system like Cedar Rapids, where a high percentage of customers must transfer between routes to complete their trips, withdrawing transfers and requiring a new fare for each discrete trip, would create a hardship for many passengers, effectively doubling the price of the trip. Some transit agencies have addressed this issue by charging a small fee (up to $1.00) for transfers. This practice mitigated, but did not fully eliminate, the problems of customers selling or giving away transfers, or arguing with operators about their validity. Day passes allowed the transit agency to provide discounts to customers making one or more transfers to complete their trips, and to encourage passengers to make more trips using the system, while reducing the potential for abuses associated with transfers.

Day passes are common among transit agencies, but while two of three agencies in the selected peer group also price their day pass at twice the nominal single trip cash fare (the equivalent of the price of two trips), many transit agencies charge more than twice the single cash fare rate. Day passes priced at 2.5 to 3.5 times the nominal single trip cash fare is not uncommon, and remains a relative bargain for customers compared to paying the full fare for each discrete segment of a transit trip that requires one or more transfers in each direction. Pricing the day pass at more than the price of two trips—even if it is only slightly more—reinforces to the customers that transit service has a value and that each transit trip represents a cost to the transit agency and the taxpayers that fund it.

Similarly, like CR Transit, many transit providers sell monthly passes, or passes good for 30 or 31 days from their first use. Monthly passes are convenient for customers, and provide regular customers with a volume discount that encourages them to use transit for their regular work or school trip. However, the price of these passes usually bears some relationship to the number of transit trips that a transit user typically makes in an average month. A customer who uses the service each weekday to travel to work or school would make at least 40 linked trips in a typical month. Many transit agencies price their monthly passes at the price of 40 trips, or 20 two-way trips. Customers who use transit to travel to work or school more than 20 days per month (an average month has 22 weekdays), or who make more than two daily trips, or use transit on weekends, receive a significant discount by purchasing a monthly or 30-31 day pass priced at the rate of 40 trips. Given CR Transit's current fares, 40 trips would cost the customers $60 if paid in cash, or with day passes if he or she took two trips each day. However, CR Transit prices its 31 day passes at only $40 – less than the price of 27 trips or 14 day passes. A review of Table 4.3.2 shows that several of the average price of a day pass for the peer agencies is about $45, and most of the peer agencies charge rates for monthly passes that represent the equivalent of a higher number of cash trips. For example, Appleton prices monthly passes at $60, the equivalent of 30 cash fares or 15 day passes, while Youngstown charges $42, the equivalent of nearly 34 cash fares. Evansville charges $60, the equivalent of 60 cash fares on their transit system.

In all but the largest cities, public transit is predominately used by people with low incomes and people with disabilities. Even relatively small fare increases can be a significant hardship for people who are dependent on transit and use if frequently. However, there are political and customer relations risks in offering discounts that are too generous, or in failing to increase transit fares to keep pace with inflation and increasing costs. Low fares and large discounts can be difficult to change if left in place too long, leaving the transit provider vulnerable should the time come that additional fare revenue is needed or desired by political leadership. Excessively low fares or deep discounts also can cause the public to under-value the service, diminishing its public support. Finally, fares that are excessively low reduce the funding available to the transit provider to expand and improve transit services for which customers are willing to pay.

CR Transit has several opportunities to increase its revenue while maintaining its pricing within the range of the fare structures of other Midwestern transit systems of similar size:

- Increase the price of a day pass to $3.75 and set a CR Transit policy that the day pass will be priced at 2.5 times the one way cash fare, rounded up to the nearest 25 cents.
- Increase the price of a monthly pass to $60 (perhaps in annual increases of $5, to reduce the impact on lower income customers) and set a policy going forward that the monthly pass will be priced at 40 times the one-way cash fare.

- Charge full fare or a reduced fare (at least half fare) on Saturdays, instead of offering free rides. Offering the service for free, even on a limited or temporary basis, devalues public transit in the public's mind and contributes to a public impression that the cost of providing the service is very low and the level of fare charged, indeed whether a fare is charged at all, is essentially an arbitrary decision determined by the transit provider, with no relationship to the value of the service or the cost of providing it.
- Eliminate or reduce the low income discount, or set the income level to qualify for the discount to a lower income level (perhaps 100 percent or 125 percent of the poverty level). Given that the majority of public transit users in smaller and mid-sized cities have lower household incomes, the majority of CR Transit's regular users probably qualify for this discount, rendering the nominal full cash fare meaningless while effectively overcharging those customers who are unaware of the discount or who have not made the effort to qualify for it.

In addition, CR Transit should make a policy to revisit its fare policy at least every third year, and to increase fares in increments of 25 cents, every five years or whenever the following conditions are met:

- The operating and maintenance cost per hour of service has increased by 15 percent since the last fare increase, or
- The level of inflation (as measured by the Consumer Price Index for the Midwest Region) has increased by 15 percent since the last fare increase, and
- It has been at least one year since the last fare increase.

Indexing CR Transit's fare to its operating and maintenance costs and to inflation, setting policies establishing the relationship among the prices of various discounted fare instruments, keeps fare revenue rising alongside costs while protecting customers from the hardships of large, overdue fare increases. Such policies create for the agency a mechanism for maintaining fare levels in line with cost increases that reduces the impression that fare levels and fare increases are arbitrary or are pursued for any reason other than maintaining revenue levels to support transit service and limiting the increase in transit costs to the governmental entities that support it.
Along with the recommendations and policies outlined above, CR Transit should seek out new partnerships to increase the number of locations where monthly passes may be purchased. Currently the GTC is the only location to purchase a monthly pass. CR Transit should look for opportunities to partner with local retail stores, grocery stores or other public agencies, such as city halls or public libraries, where transit passes may be acquired.

Regional Transit Authority Analysis and Recommendations

Fixed-route public transit services in the Cedar Rapids Metropolitan area are currently operated by the City of Cedar Rapids' Transit Division. Transit routes operated by CR Transit extend outside the municipal boundaries of the City of Cedar Rapids to the cities of Marion and Hiawatha. The City of Marion imposes a transit levy and provides the funds to CR Transit to help offset the cost of operating transit service within the community. However, these funds do not cover the full cost of the service that CR Transit extends to Marion. The City of Hiawatha is not currently collecting a transit levy but is contributing approximately $75,600 of the cost of the public transit services provided in its community from its general fund. The majority of Hiawatha's operational cost is being subsidized by the City of Cedar Rapids.

The current subsidy of service in Hiawatha and Marion by the City of Cedar Rapids raises political, planning and operational issues in the provision of transit service in the Cedar Rapids region. As the region grows in population and employment, demand for transit service, including inter-municipal transit service, will continue to grow. Travel patterns in the region already extend beyond the city limits of Cedar Rapids to include several nearby towns and suburban communities. As demand for inter-municipal service grows, demand for adjacent communities to pay their full share of the cost will increase, and planning these inter-municipal services in fragmented governance and funding environment will become increasingly complicated. For this reason, the communities of the region must review the options for integrating public transit operations and funding available to it under Iowa law, how these options might improve the equitable provision and funding of transit service in the Cedar Rapids region, and whether other options should be pursued at the state level to allow the region to develop governance and funding solutions that optimally meet its transit service needs.

This section will review the existing governance structures operating and managing public transit services in Cedar Rapids and assess alternative governance models that are permissible under the State of Iowa Code. This analysis will assess the costs and benefits of the current system and potential new governance structures, such as the formation of a Regional Transit Authority that could be developed to manage, plan operate and maintain public transit services for the region and will provide a recommendation for future action.

Existing Iowa Statutes for Regional Transit Authority Formation

Currently there are two primary statues in the State of Iowa Code that provide for the formation and operation of Regional Transit Authorities (or Districts); Iowa Code Chapter 28E: Joint Exercise of Governmental Powers and Iowa Code Chapter 28M: Regional Transit Districts.

28E Agreements

The Joint Exercise of Governmental Powers provided in Chapter 28E of the Iowa Code is used by governmental entities of all sizes to provide services for various functions. Chapter 28E allows any governmental agency to jointly conduct any activity with another governmental agency so long as each has the power to undertake the particular activity. The Iowa Code grants this basic authority stating:

> "Any public agency of this state may enter into an agreement with one or more public or private agencies for joint or cooperative action pursuant to the provisions of this chapter, including the creation of a separate entity to carry out the purpose of the agreement. Appropriate action by ordinance, resolution or otherwise pursuant to law of the governing bodies involved shall be necessary before any such agreement may enter into force." Iowa Code, section 28E.4.

28E agreements have been used across Iowa to provide services such as fire protection, law enforcement, libraries, city utilities and public transit. These types of agreements have been at the center of the formation of public transit agencies in the Des Moines, Ames and the Waterloo / Cedar Falls areas.

28E Section 17

Chapter 28E Section 17 offers specific details related to inter-governmental agreements for the provision of public transit services:

28E.17 TRANSIT POLICY -- JOINT AGREEMENT – CITY DEBT

1. It is the public policy of this state to encourage the establishment or acquisition of urban mass transit systems and the equipment, maintenance and operation thereof by public agencies in cooperation with, and with the assistance of the urban mass transportation administration of the United States department of transportation, pursuant to the provisions of the Urban Mass Transportation Act of 1964, as amended, Title 49, sections 1601 et seq., United States Code, which requires unification or official coordination of local mass transportation services on an area-wide basis as a condition of such assistance.

2. An agreement between one or more cities and other public agencies for this purpose may be made and carried out without an election and the agency created thereby may jointly exercise through a board of trustees as provided by the agreement all the rights, powers, privileges and immunities of cities related to the provision of mass transportation services, except the authority to incur bonded indebtedness.

3. a. A city which is a party to a joint transit agency may issue general corporate purpose bonds for the support of a capital program for the joint agency in the following manner:

(1) The council shall give notice and conduct a hearing on the proposal in the manner set forth in section 384.25. However, the notice must be published at least ten days prior to the hearing, and if a petition valid under section 362.4 is filed with the clerk of the city prior to the hearing, asking that the question of issuing the bonds be submitted to the registered voters of the city, the council shall either by resolution declare the proposal abandoned or shall direct the county commissioner of elections to call a special election to vote upon the question of issuing the bonds. Notice of the election and its conduct shall be in the manner provided in section 384.26.

(2) If no petition is filed, or if a petition is filed and the proposition of issuing bonds is approved at the election, the council may proceed with the authorization and issuance of the bonds.

b. An agreement may provide for full or partial payment from transit revenues to the cities for meeting debt service on such bonds.

c. This subsection shall be construed as granting additional power without limiting the power already existing in cities, and as providing an alternative independent method for the carrying out of any project for the issuance and sale of bonds for the financing of a city's share of a capital expenditures project of a joint transit agency, and no further proceedings with respect to the authorization of the bonds shall be required.

The preparation of a cooperative agreement for any governmental service merits a comprehensive review process. The following is a step by step process that may be utilized in the preparation of a 28E written agreement or any cooperative agreement.

1. Clearly define the governmental service or cooperative effort to be undertaken.
2. Statement of Intent
3. Approval/Authorization: signatures by the representatives of the respective parties confirm that the agreement has been approved and its execution authorized by the respective duly authorized officers or governing bodies of the parties.
4. Statutory Authority/Governing Law: the agreement shall be governed by, construed and enforced in accordance with the laws of the State of Iowa; the agreement is made pursuant to statutory authority granted to the parties pursuant to Iowa Code section 28E.4 and other relevant Iowa.
5. Identify the governmental entities that will participate in the cooperative arrangement.
6. Prepare a "working draft" of the agreement that can be copied to all the governmental entities and request comments, suggestions, and questions.

7. Make the recommended changes and schedule a meeting with one representative from each governmental entity to review the "working draft", make additional changes, and discuss the approval process.
8. Present the proposed agreement to legal counsel for review and comment.
9. Send copies of the agreement to the governing bodies, along with a model resolution approving the agreement.
10. Circulate the approved agreement among all the entities for the appropriate signatures.
11. File and record the agreement with the county recorder as stipulated in 28E.8 of the Iowa Code. Iowa Code § 28E. 8
12. File a copy with the Secretary of State at the Capitol Building in Des Moines.
13. Provide one originally signed copy to all the entities that participated.
www.ipa-uiowa.org/uploads/1/3/1/5/13150637/agreements.html

28M Regional Transit Districts

Iowa Code Chapter 28M outlines the creation and function of Regional Transit Districts (RTD) in the state. RTDs are formed through a 28E agreement by one or more contiguous counties and participating cities to provide public transit services. RTDs may be formed in a county with a total population in excess of 175,000. Two or more counties may, through a Chapter 28E Agreement, form an RTD if one of the counties has a population in excess of 175,000. According to the US Bureau of the Census as of 2013 Linn County had a total population of 216,111, qualifying Linn County and the Cedar Rapids metro region to form an RTD if desired. RTDs have all the same powers and rights of a county governmental entity and RTDs represent a new governmental body. RTDs have the power to issue revenue bonds, or general obligation bonds for the construction repair, equipping, repair, vehicles and facilities needed for the operation of a Transit District. The formation of an RTD does not require voter approval, but as a district's formation may have direct impact to the operation of daily transit services, it is highly important to inform and seek input from the public in the process of creating an RTD.

Chapter 28M details how a new RTD shall be managed and governed by an appointed commission and outlines the powers and responsibilities of that commission. Members of the RTD commission are to be appointed by the member communities participating in the RTD, serving staggered six year terms, unless otherwise stated in the 28E Agreement. The RTD commission has the duty and power to adopt annual budgets, establish a fare schedule, and collect fares and control and tax revenues paid to the RTD for the operation of the district. An RTD commission may levy an annual tax not to exceed ninety-five cents per thousand dollars of the assessed value of all taxable property in the regional transit district. Proceeds of this tax levy are to be used for the operation and maintenance of the RTD, payment of debt obligations, and creation of a reserve fund.

Iowa Examples of 28E/M

While several communities across the State of Iowa have entered into 28E agreements to provide transportation service through inter-governmental agreements including; Ames/Iowa State University (CyRide) and Waterloo/ Cedar Fall (Metropolitan Transit Authority of Black Hawk County) only the Des Moines region has similar characteristics as the Cedar Rapids context in terms of population and geographic area. Under existing Iowa statutes only Polk and Linn Counties are eligible to enact Chapter 28M of the Iowa Code to create a Regional Transit District. For that reason this analysis will focus on the Des Moines / Polk County experience.

Des Moines Area Regional Transit Authority

The primary example of the use of Chapters 28 E and M of the Iowa Code for the Joint Use of Governmental Authority and the creation of a Regional Transit District can be found in the Polk County / Des Moines area. On May 25, 2006 an agreement went into effect to create the Des Moines Regional Transit Authority (DMRTA) using the powers and rights granted through 28E Agreements and 28M which amended and existing inter-governmental agreement and reorganized the Metropolitan Transit Authority that had been operating public transit in the Des Moines region since the 1970s. This was the first Regional Transit Authority in the State of Iowa. The participating communities for this initial agreement were the Cities of Des Moines, West Des Moines,

Windsor Heights, Urbandale, Clive, Ankeny, Altoona and Polk County. The Des Moines Regional Transit Authority was established by this agreement as a separate legal entity, governed by a Commission of representatives appointed by the participating communities for the purpose of operating public transit service in the RTD service area as defined in the agreement. In the following years after the DMRTA was formed several other communities in the region joined the agreement and the RTD including; Elkhart, Grimes, Johnston, Pleasant Hill, Mitchellville, Polk City, Runnells and Sheldahl. In 2008 the DMRTA negotiated with participating communities on an equitable funding formula that would allow for the expansion of transit services throughout the region. Today the DMRTA is known as the Des Moines Area Regional Transit Authority (DART). DART directly plans, operates and manages fixed route transit, commuter express routes, flex/demand response routes, downtown shuttle, paratransit, rideshare and a vanpool program.

The RTA agreement outlines the roles, responsibilities, powers of DART and establishes how the organization will be managed and overseen. DART is managed by a volunteer board of commissioners that sets policy and approves annual budgets. Commissioners represent seven districts that are based on pairs of state house districts in Polk County. They are appointed by mayors within that district and those appointments are approved by city councils in each district. Commissioners serve four year terms. The full DMRTA agreement can be found in Appendix E as an example resource document.

Potential Governance Models for Cedar Rapids Metropolitan Area

Assessing the management and governance of the public transit system in the Cedar Rapids region there are three primary avenues that leaders in the region may wish to pursue including; A) maintaining the system's existing governance and funding structure , B) adopting more formalized inter-governmental agreements or community contracts to provide for expanded transit services in adjacent communities such a Robins, Ely or Fairfax and C) creating a new governmental agency in the form of an independent Regional Transit Authority.

Status Quo

The Status Quo governance scenario would see very little change in the funding, governance and operation to the CR Transit System. The services would continue to be a sub-unit of the City of Cedar Rapids with the Transit Manager reporting to the Assistant City Manager, and policy direction would be provided by the nine members on the Cedar Rapids City Council. Complementary paratransit service would continue to be provided through contract with LIFTS with overnight service to education or employment opportunities provided by NTS.

Formalized Agency / Municipal Coordination

A second option for organizations or governance change for the CR Transit system would be accomplished through formalized coordination amongst the various municipalities of the Cedar Rapids metropolitan area. Improved transit service coordination would be achieved through formal contractual arrangements for transit serviced provided in each community that wishes to financially support transit operations within their municipal boundaries. Today agreements exist between the City of Marion whereby funds from that city's Transit Levy are transferred to the City of Cedar Rapids to pay for the operation of Route 5N and 5S. While such arrangements are in place, the funding levels provided by the City of Marion do not cover the full cost of transit operations in the city. In this scenario, formalized community service contracts could be employed that would require participating communities with transit services to pay for the fully allocated cost of the services provided in their community (including a pro-rated estimate of the cost of capital investments such as bus maintenance and storage facilities, and the local share of bus purchase costs) on a per mile and per hour basis. This alternative would require further negotiation between the City of Cedar Rapids and each of the surrounding municipalities that would receive public transit services on a case-by-case basis.

The formalized municipal coordination scenario would represent only a moderate adjustment from the current way in which transit services are operated and provided in the Cedar Rapids area. In this alternative, the City of Cedar Rapids would still manage the operations of transit, with the transit manager reporting to the Assistant City Manager and policy set by the Cedar Rapids City Council. Other communities receiving service on a contractual basis would have no formal, ongoing influence on the governance of the agency beyond the agency's requirement to meet the terms of the operating contract.

The advantage of this option is that it would put in place a standard mechanism for formalizing the financial and operating arrangements for the City of Cedar Rapids to provide transit services to other communities. Through contractual agreements, the City of Cedar Rapids would receive what it perceives as equitable payment for the services it provides, while the contract mechanism would allow the other communities to outline the provisions under which the service is provided and can be changed or discontinued. The disadvantage of this option relative to a regional transit agency, however is that it is a potentially cumbersome and rigid process that limits the transit agency's ability to respond to short- to mid-range changes to transit demand or funding.

Formation of Regional Transit Authority

The most significant and impactful change in the management and governance of transit service operations in the Cedar Rapids metropolitan area would come from the formation of a Regional Transit Authority. The creation of a Regional Transit Authority would transfer the ownership of all transit assets (vehicles, facilities, maintenance equipment, bus stops, passenger amenities and other real property) from the control of the City of Cedar Rapids to the newly created governmental entity. Current City of Cedar Rapids employees would likely become employees of the new organization.

Creation of a new RTA could present an opportunity for a sizable expansion of the service area for transit services in the region if municipalities adjacent to Cedar Rapids were to join the Regional Transit District and support transit services through their community's Transit Levy. A financial capacity assessment would need to be conducted to establish the level of transit service that could be supported given the revenue generated by the transit levy from all participating communities in the RTA.

The composition of transit services offered by a new Transit Authority may also be a significant change for the region. Currently paratransit services are provided by Linn County LIFTS through an annual service contract between the City of Cedar Rapids and Linn County. If desired, the creation of a Transit Authority could investigate the consolidation these two services into one organization managing and operating public transit services for the region. Consolidation of services could lead to increased efficiencies and improved service coordination. Other services that could be operated by a Transit Authority might include the pilot vanpool and ride sharing program known as RideConnect being operated by the Eastern Iowa Council of Governments or other multi-modal service offered in the future such as bike sharing.

Chapter 28M allows for counties directly adjoining the primary county with population in excess of 175,000 to form an RTD. With this provision there may be potential for even greater expansion in partnership with Johnson County and the Iowa City / Coralville / North Liberty region. This expanded, multi-county RTD could work to operate services like the inter-city commuter express bus services between Cedar Rapids and the Iowa City along the Interstate 380 Corridor as planned for in the Iowa Commuter Transportation Study. Overall the creation of a Transit Authority would be a considerable shift in the way transit services are offered in the Cedar Rapids area currently.

Advantages and Disadvantages of Regional Transit Authority in Cedar Rapids Area

The development of a new transit authority would have several benefits and costs that would need to be weighed against one another. Leaders and partnering communities considering joining a Regional Transit District would need to work through the costs and benefits provided below, along with others.

Pros:

1. Independent transit authority may plan and operate transit service with greater focus on customer service and needs of the system in the region
2. RTA has ability and authority to tax and bond
3. Expanded service from potentially to expanded revenue base

4. Establishes a more stable funding stream that can facilitate better long term planning for the transit system
5. Better efficiency, potentially bring all transit services into the same organization (fixed route and paratransit) and allow for closer coordination
6. Reduced jurisdictional barriers
7. Better representation across the community with Board of Commissioners from across the region

Cons:

1. Loss of direct control of transit operations in the City of Cedar Rapids
2. Transit Levy for all communities capped at $.95/$1,000 of taxable property value, could limit funding needed to operate expanded network
3. Fully allocated cost of transit service borne by the Transit Authority, no shared staff resources with the City of Cedar Rapids
4. Communities may question whether costs and benefits of transit are equitably distributed, with some communities perceiving that they are subsidizing others.
5. Space would become an issue for administrative staff since existing space to add additional support staff is limited.

RTA Formation Process and Considerations

If it is the desire of leaders in the Cedar Rapids metro region to create a new governance structure and Regional Transit Authority to manage and operate public transit services for the area many distinct and sequential steps would be necessary to move from the current system operated as a department within the City of Cedar Rapids to an independent transit authority. The following section outlines many of the critical issues that would need to be addressed to facilitate a shift in governance structure from city operated transit to an RTA, and is depicted in Figure 44. The outline is not an all-inclusive list but draws out some of the most significant items that should be considered as the process is advanced. A critical starting point would be to clearly define why governance reorganization is needed and if the desired changes can be achieved with or without the development of an RTA. If the vision for transit service cannot be realized without governance reorganization then community leaders should begin the process described below.

Figure 44: Transition Process to Form Regional Transit Authority

A. Regional Transit Goals

- Define regional transit need and preferences
- Establish transit system long term vision for the metro region
- Answer why change is desired

B. Identify Champions and Stakeholders

- Leaders that can 'carry the water' and bring positive attention to the effort
- Elected leaders: Mayors, Council Members
- Municipal Staff: City Manager, Assistant City Manager, Transit Manager

- Business Community
- Form RTA Exploratory Committee

C. Define Partner Communities

- Determine at the outset which municipalities and county/counties wish to be included in RTD
- Before investing time and effort, it is important to know if there is interest in the community for RTA formation to be a viable alternative
- Investigate if sufficient funding could be generated to operate the envisioned system

D. Agreement on Governance Structure

- Partnering communities arrive at a consensus of governance structure to be created in the form of an RTD
- Board of Commissioners representation
- Roles and responsibilities of RTD Commission
- Define other governing rule, powers, procedures

E. Funding and Costs

- Determine funding needs for expanded transit system
- Fixed Route
- Paratransit
- Estimation of Fully Allocated Cost to Independently Operate Service
- Staff (planning, grants administration, Human Resources, etc.)
- Maintenance
- Insurance
- Benefits
- Utilities
- IT
- Marketing
- Communications
- Costs associated with governance transition
- Establish fully allocated cost of service operations: staffing, maintenance, insurance, legal, utilities, etc.
- Identify office space requirements/new headquarters

F. Engage Public

- Planned outreach to both inform the public of the need for change and solicit feedback
- Builds support across Cedar Rapids Region for approval of RTA within each partnering community
- Transparent process to build trust in system and gain buy-in of larger community

G. Draft Chapter 28 E/M Documents

- Develop draft Joint Governmental Authority Agreement (28 E) and Regional Transit District (28M) document to be vetted by all participating communities in the eventual RTA.
- Negotiate financial commitments and equitable funding for operation of transit operations in the region

H. Approvals and Reviews

- Receive all appropriate final approval of negotiated agreements with each participating community's legislative body
- When all agreements finalized, 28 E/M agreements to be filed with Secretary of State.

I. Planning for Transition to Regional Transit Authority

- Property and assets transition ownership from City of Cedar Rapids to RTA as specified in agreements
- Transit staff transition from City of Cedar Rapids employees to RTA employees
- Appoint Board of Commissioners
- Plan for expanded services in partnering communities, if outside current service area of CR Transit
- Branding / Name change for new RTA is desired

Recommendations

The formation of a Regional Transit Authority through Chapter 28E and M appears to be a feasible option for the future governance and operation of public transit services in the greater Cedar Rapids metropolitan region and should be advanced. It is recommended that leaders from the City of Cedar Rapids, Corridor MPO and others form an exploratory committee to begin the formal process of reaching out to adjoining municipalities such as Marion, Hiawatha, Robins, Fairfax, Ely, and others to gage the level of interest in joining a Regional Transit District. After willing partnering communities are initially committed a financial assessment should be conducted by a knowledgeable agency to determine potential operating revenues that may be generated by all partnering communities' Transit Levy (if a levy is in place). Several Transit Levy rate scenarios should be presented to determine if enough revenue could be generated to operate and expanded transit route network to service all partnering communities in an equitable way.

If there is significant support of municipalities in Linn County and potential operating revenues are sufficient to sustainably operate an expanded transit system, it is recommended that the creation of a Regional Transit Authority be further explored and pursued.

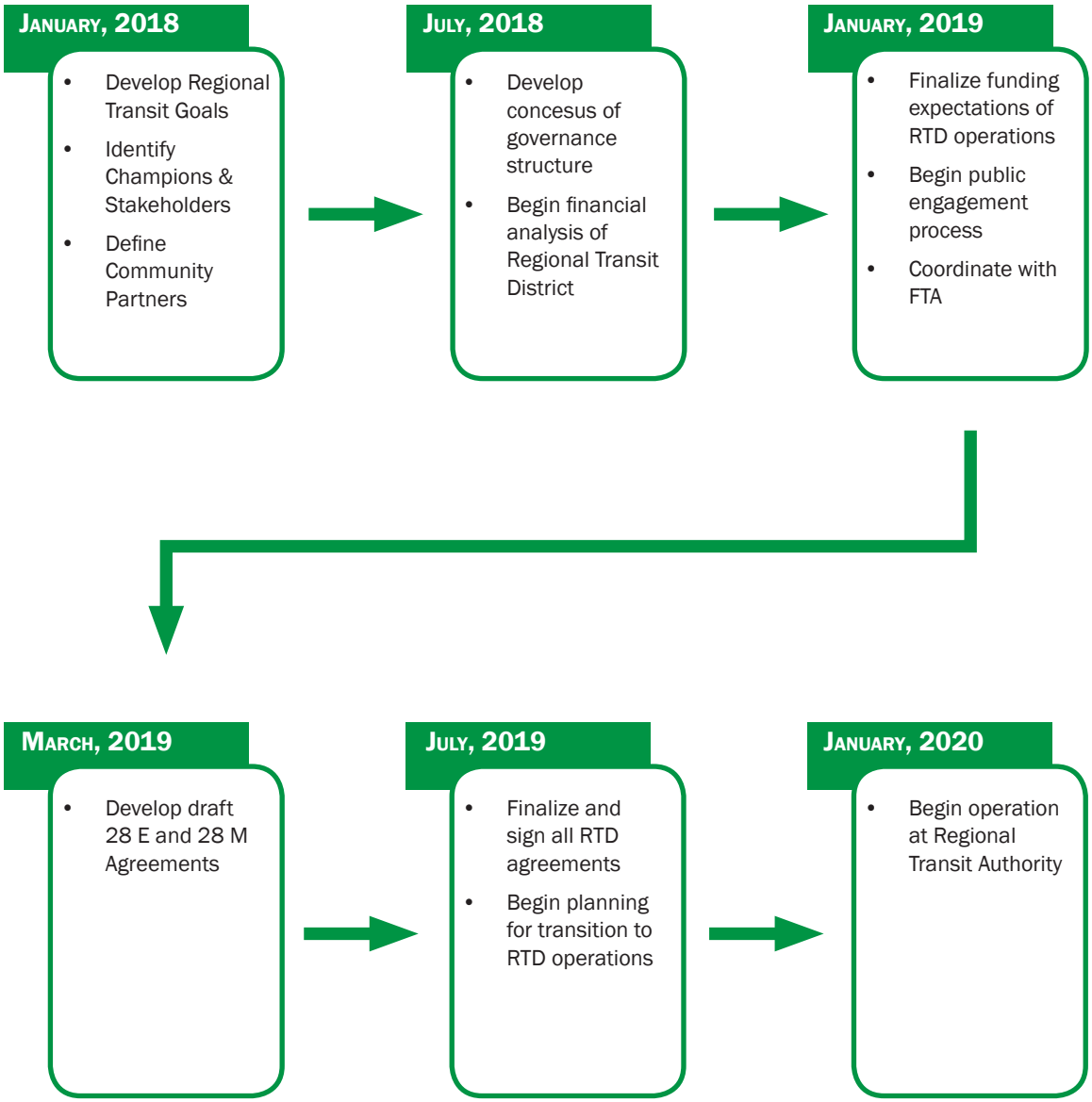
Conceptual Timeline for RTA Formation

It is anticipated following the 2020 decennial census the Cedar Rapids metropolitan area will exceed a total population of 200,000 residents. If the region's population does exceed the 200,000 population threshold it will change CR Transit's classification as part of the FTA's 5307 Urbanized Area Formula Grant Program. This program provides federal funds for areas with populations greater than 50,000 for transit capital projects and operating assistance. FTA classifies urbanized areas into two groups based on populations, the first between 50,000 – 199,999 the second 200,000 and greater. Today CR Transit's 5307 funds flow through the Iowa Department of Transportation. Once the region surpasses 200,000 residents CR Transit would become the direct designated recipient of these federal formula funds.

Another significant change would occur in how the federal funding formula is calculated and how the funds may be expended. The 5307 funding formula for urbanized areas between 50,000 – 199,999 is based on population and population density. For areas greater than 200,000 the funding formula is based on a combination of bus revenue miles, bus passenger miles, fixed guideway revenue vehicle miles and fixed guideway route miles, as well as population and population density. As the Cedar Rapids region grows beyond 200,000 Cedar Rapids would no longer be eligible to use all of its 5307 funds for transit operating assistance. Under current federal rules urbanized areas with populations in excess of 200,000 that operate 75 or fewer buses may use up to 75 percent of their 5307 formula funds for operating assistance. It is recommended that as 2020 approaches CR Transit should coordinate directly with FTA's regional office to determine the precise impacts the anticipated population change would have on operating budgets and plan for the transition to a direct recipient.

If the Cedar Rapids region is reclassified under FTA's 5307 Urbanized Area Formula program following the 2020 Census that year would be an appropriate time to target for the creation of a new Regional Transit Authority. As region would become a direct recipient of FTA formula and other grant funds this would be an opportunity for the region to assess the governance and operational models for transit services in the Cedar Rapids Metro. Figure 45 below is a conceptual timeline of the tasks outlined above that would align with the creation of an RTA in 2020. Official results of the 2020 U.S. Census would not be available until 2022 and would give the Cedar Rapids region time to transition in its operation and management ahead of any change to their FTA status.

Figure 45: Regional Transportation Authority Conceptual Timeline



Capital Improvements and Issues

Bus Stops

The final component of the 2016 Transit Study will be a comprehensive inventory of each bus stop in the CR Transit fixed-route system. Each existing stop will be located and assessed in terms of current condition and passenger amenities available (bench, shelter, bike rack, trash receptacle, sidewalk, concrete landing pad, schedule/route information, etc.). Information collected in this inventory will be used to identify bus stops in need of improvement and to prioritize future capital investment in transit stop infrastructure.

Bus Garages

CR Transit is managed and operated out of a single story building 427 8th Street in Cedar Rapids. The building, measuring about 150 by 220 feet, contains up to 33,000 gross feet of interior space and covers more than 3/4ths of an acre. With outdoor driveways and parking areas, the property is slightly above one acre in size. Figures 46 and 47 show the location of the bus garage and the surrounding area. The facility is about 1.2 miles travel, or about a five minute drive, from CR Transit's downtown hub at the GTC on 1st Street. The proximity of the bus garage to the transit hub minimizes unproductive deadhead travel time and miles on the CR Transit System, making the system more efficient.

Figure 46: Cedar Rapids Transit Bus Garage Location

CR Transit's storage and maintenance facility was destroyed in the 2008 flood and was rebuilt on the same site, opening in 2012. The current bus storage and maintenance facility includes several offices and a conference room for administrative staff. More than 80 percent of the facility is dedicated to bus storage and maintenance activities. The facility includes bus wash bays and an area where light maintenance is performed (more complicated maintenance activities are performed at the city's services center at 500 15th Avenue SW).

CR Transit's current fleet of 30 vehicles is at the limit of the capacity of the current storage and maintenance facility, and potentially limits the growth of the region's fixed-route transit system. CR Transit's options for expanding its maintenance and storage capacity are few, difficult, and far from desirable. The current bus facility is surrounded by privately occupied parcels and thus cannot be expanded on adjacent land. The relatively recent construction of the facility would mean that constructing a new, larger facility at a new location would be financially complicated given the federal participation (by both FEMA and FTA) in the funding of the existing facility. Replacing the facility so soon after its construction could require the facility to not only fund the new facility out of non-Federal funds, but to repay a large portion of the Federal contribution to the construction of the existing facility. Even if a new, larger facility were to be constructed, given the lack of large available parcels near

Downtown Cedar Rapids, a new facility is likely to be located a greater distance from the downtown transit hub, lengthening deadhead runs and reducing the efficiency of the bus system.

The anticipated connection of 6th Street NW to Ellis Boulevard NW may result in a complete property taking of the parcel immediately north of the existing CR Transit storage and maintenance facility across D Avenue NW on a parcel currently occupied by MidAmerican Energy. The remaining portion of the parcel west of the new right-of-way of 6th Street NW would be about half the size of the current storage and maintenance facility which could be potentially large enough to allow CR Transit to expand its fleet by more than 50 percent on or adjacent to its existing site. However, the new site would need to meet environmental requirements before it could be acquired by the city for use by CR Transit if federal funding is used for its purchase. Additionally, the funding would need to be identified by the city to secure the site.

Building a second facility at another location would divide the bus fleet and separate it from the administrative function. This would result in the duplication of some capital facilities and would require duplicative supervision and staffing, which would increase operating costs. Larger transit systems operate from multiple bus garages, but this is unusual for systems with fewer than 100 vehicles.

Locating some buses at a second existing facility, such as at the City's services center or at Linn County LIFTS, whose small garage is located at 625 31st Avenue SW, is unlikely due to space constraints and limited adjacent parcels for expansion at those sites. Locating vehicles at a second location would also generate the same concerns related to division of the fleet, separation from the administrative function and duplication of facilities and staffing that a second CR Transit Facility could raise.

CR Transit's best opportunity may be to join with Linn County LIFTS in constructing a new combined facility at a third site. The current LIFTS facility is an older, second hand facility that is nearing the end of its useful life. The facility was adapted for use as a maintenance and storage facility for buses but was not built for that purpose. It is functionally inadequate to serve as a modern bus maintenance facility, and is too small to allow LIFTS to expand its fleet of 12 paratransit vehicles. Like CR Transit, LIFTS is surrounded by occupied parcels and cannot practically expand or build a significantly larger facility on the same site.

Figure 47: Cedar Rapids Transit Bus Garage Street View

Given the region's population growth and recent growth in both fixed route and paratransit services, it is likely that both CR Transit and LIFTS will need to expand significantly in coming years. As a result, CR Transit and LIFTS must identify a short-term solution for storing and maintaining additional vehicles in the near future, while jointly planning and designing a storage and maintenance facility to accommodate its long-term growth. Funding and complications related to Federal Funding will need to be worked out, and a parcel of adequate size and in a location as near to the GTC as possible will need to be identified and secured in order to allow CR Transit and LIFTS to continue their growth as they serve the growing transit needs of Cedar Rapids and Linn County.

Mini-Hub/Transfer Locations

CR Transit currently serves and has small off-street bus stop within the region's two most important shopping areas, the Lindale Mall area on Cedar Rapids' north side, near the communities of Hiawatha and Marion, and the Westdale Mall area, on the southwestern side of Cedar Rapids.

At Lindale Mall, CR Transit has a bus stop along the edge of the mall building on its south side, at the Mall entrance to the west of the Von Maur department store (Figure 48).

With the potential for both future expansion of bus service, perhaps to Bus Rapid Transit levels on 1st Avenue North, and for additional service to Hiawatha, Marion, and possibly other nearby communities, CR Transit could require the capacity to lay over up to 4-6 vehicles in this area at once. The Lindale Mall area is well located to serve as a mini hub facility for CR Transit activities in that area of the region. Other than the capacity to allow up to six buses to layover, and for operators to use washroom facilities nearby, the potential elements of a mini-hub facility are flexible, and could include bus shelters, dedicated bus operator washroom and lunchroom, and indoor passenger waiting space. CR Transit should assess the adequacy of its current arrangements with Lindale Mall in light of future plans for expansion of service and, if necessary, identify a new site where a purpose-built facility could be located and developed.

Westdale Mall, located in the southwestern corner of the city, is currently undergoing a redevelopment as a mixed use center, incorporating a smaller retail footprint with expanded outparcels that include restaurants, housing, office space and a hotel. There is both a Super Walmart and a Super Target store adjacent to the mall property. CR Transit currently has a layover point along the periphery of the mall building in the northwestern portion of the site, and existing bus routes serve a number of bus stops within the mall and along Edgewood Road, Wiley Boulevard and other roads in the area.

Figure 48: Lindale Mall Transit Stop

With the proposed reconfiguration of bus services in the southwestern area of the city, as many as four bus routes would terminate near Westdale Mall, while the redevelopment of the mall property could result in increased transit demand in the area, which could result in more frequent transit service in the future. As a result, CR Transit should endeavor to identify a site where a bus layover site capable of serving as many as six vehicles could be located in this area. As in the Lindale Mall area, the facility could include driver and passenger comfort facilities in addition to a convenient place to park the vehicles.

Some potential areas where a layover facility could be developed are shown below in Figure 49 and Figure 50.

Figure 49: Existing and Proposed Facilities at Lindale Mall

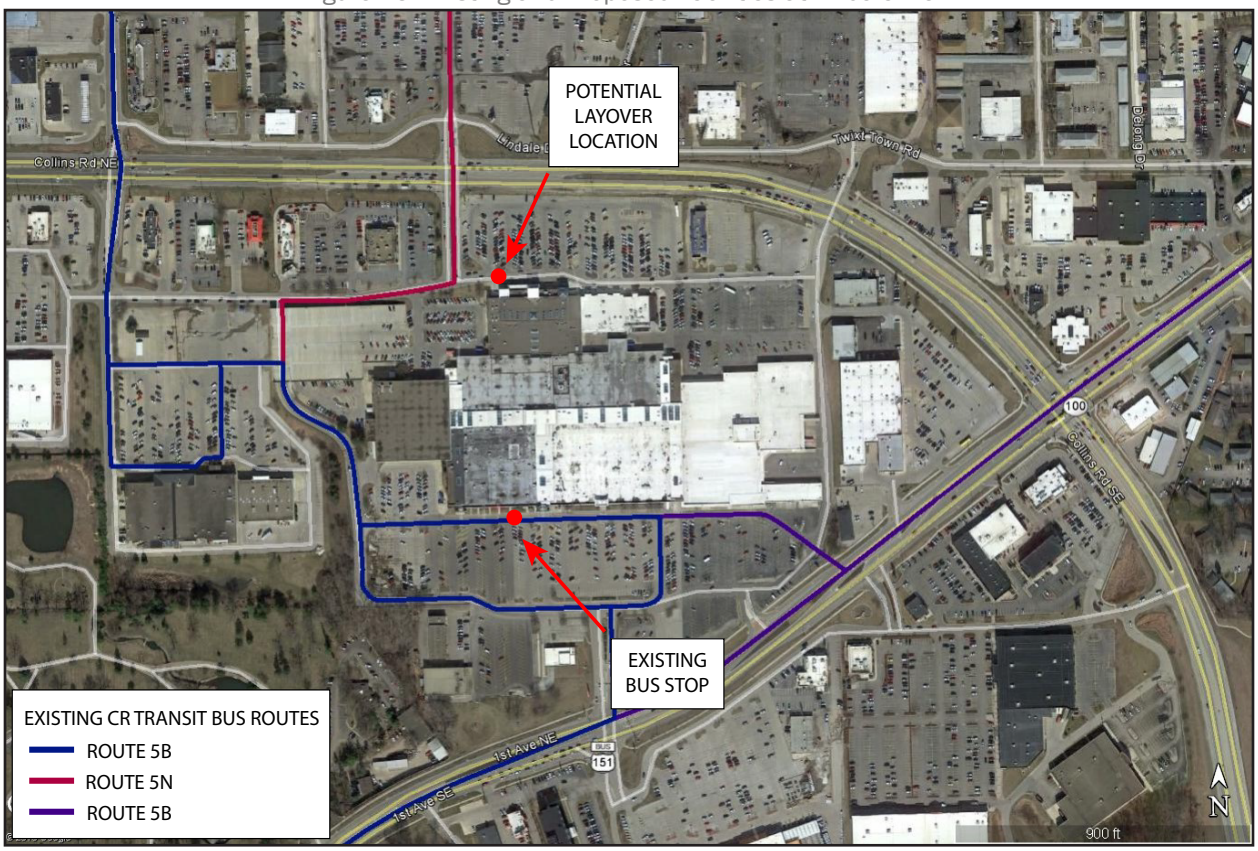
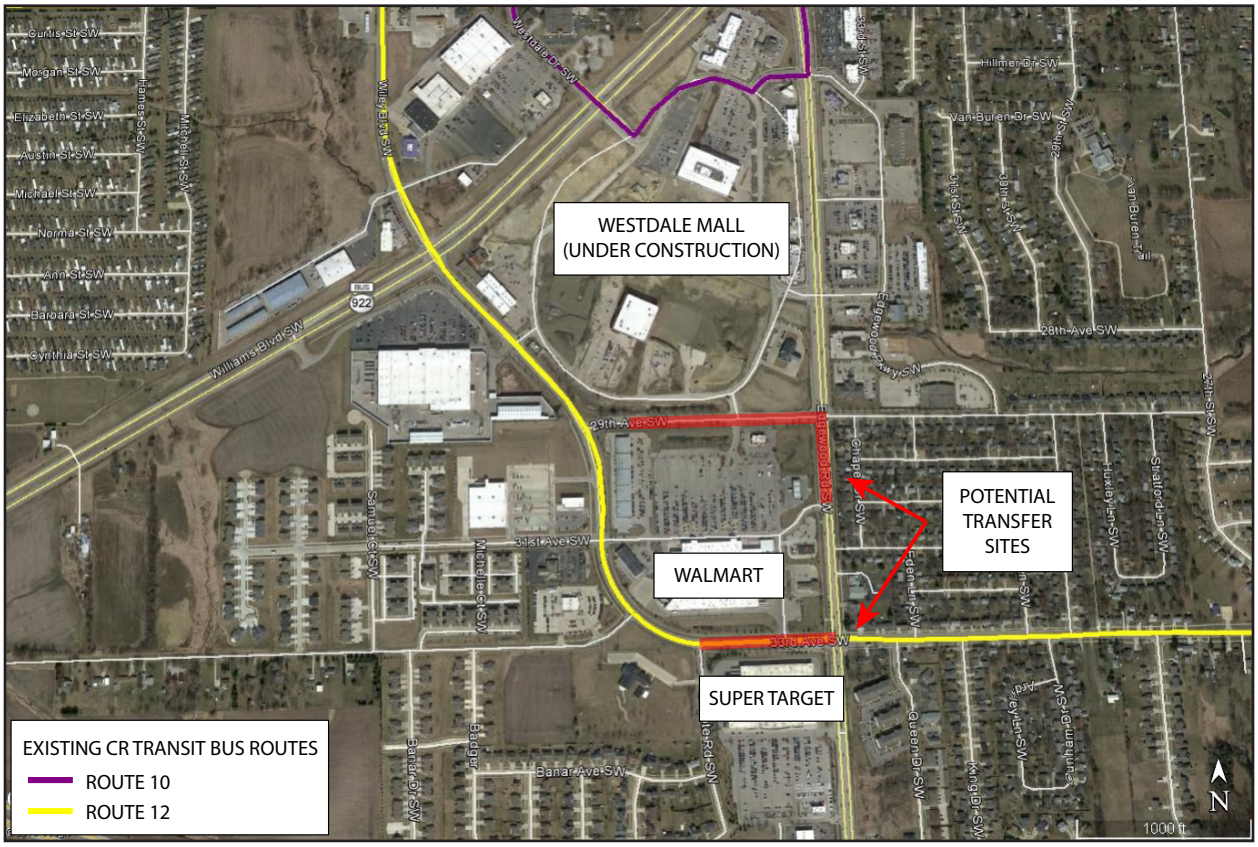


Figure 50: Proposed Facilities at Westdale Mall and Edgewood Walmart



Transit Priority Corridors and Bus Rapid Transit

It is anticipated that transit ridership in the Cedar Rapids area will continue to grow in the coming years as the region's population increases, baby boomers retire and rely less on automobiles, and younger generations who look more favorably on public transit come to dominate the workforce. As the CR Transit network changes and evolves the development of a central transit corridor to serve as the spine of the system should be developed over time. Given current ridership trends, the spatial layout of the city and street grid, the 1st Avenue / U.S. 151 Corridor appears to be the most appropriate candidate in which to focus a higher level of transit service to better connect the metro region.

US-151/1st Avenue/Williams Boulevard/Marion Boulevard

The complete U.S. Business Route 151 from U.S. Highway 30 on the southwest side of Cedar Rapids to Iowa State Highway 13 on the northeast side of Marion is a key corridor for the region. The full length of this corridor is approximately 13 miles with a mix of major commercial, medical and education centers along with residential uses. The corridor is classified as a Major Urban Arterial and consists of 5 to 6 travel lanes. The corridor sees moderate traffic volumes with little congestion. Much of the corridor operates at a Level of Service (LOS) A or B. The corridor is anchored by downtown Marion and Lindale Mall to the north and Westdale Mall to the south, with Downtown Cedar Rapids in the center. Other major destinations in the corridor include U.S. Cellular Center St. Luke's Hospital, Coe College and Washington High School.

Both the redeveloping Westdale Mall area and Lindale Mall area are two of the largest retail destinations in the Cedar Rapids Metropolitan region and are important destinations for public transit riders for shopping and employment. The most highly utilized portion of this corridor is the 4.25 mile portion of 1st Avenue SE between

Downtown Cedar Rapids and Lindale Mall. This portion of the corridor is served by three overlapping routes; 5B, 5N and 5S. During many parts of the day overcrowding is reported on these buses. To help alleviate overcrowding and to help grow ridership through improved headways and capacity, this study has recommended the creation of a new Route 5X that would provide trips along 1st Avenue only between the GTC and Lindale Mall. Initially this 4.25 mile segment of 1st Avenue SE in Cedar Rapids should be developed as a prioritized transit corridor, with land use and zoning changes to promote higher-density, mixed use development. As ridership demand grows in the 1st Avenue Corridor a more premium level of transit service should be planned and operated. The U.S. 151/1st Avenue Corridor appears to be suitable for the development of a Bus Rapid Transit service in the future.

Bus Rapid Transit

Bus Rapid Transit (BRT) is a high capacity public transit service that works to emulate many of the same features and benefits of light rail or streetcar but at a much lower overall project cost. BRT lines typical offer faster travel speeds compared to limited stop bus service and can help to increase ridership by providing faster and more frequent service. BRT systems typically consist of some combination of the following improvements: dedicated lanes or running ways, level boarding stations with high levels of passenger amenities, wider stop spacing, specially branded bus vehicles, off-board fare vending/collection, Integrated Transportation Systems (ITS) for transit signal priority/preemption and typical peak headways of 10 minutes or less. BRT systems have been developed and operated in the United States over the past two decades. The design and implementation of BRT systems is very flexible and able to incorporate the major BRT features as needed to fit the specific context of the community or corridor.

BRT corridors range in level of amenity and capital costs from high end systems such as the “HealthLine” BRT system in Cleveland, Ohio (Figure 51) with a dedicated running way for buses separated from auto traffic similar to a light rail or streetcar line, to more streamlined BRT applications like the MAX BRT system in Kansas City, Missouri (Figure 52).

The HealthLine BRT incorporates nearly all of the significant components of BRT projects. Stations have large center island platforms and architecturally designed shelters, ticket vending machines to help speed boarding times, real time next bus arrival information and wayfinding. The guideway for the specially branded articulated BRT vehicles helps to speed up travel times by removing the bus from congestion caused by auto traffic. Carrying approximately 14,000 average daily riders on a weekday the HealthLine is considered to be one of the United States’ best examples of a BRT corridor service. The HealthLine represents the high end of what BRT projects can entail. High-level BRT projects carry a much greater capital cost as well. The HealthLine’s capital cost to construct was nearly $200 Million or almost $28 Million per mile (for the 7 mile corridor).

In contrast the MAX BRT system developed in the Kansas City area incorporated many, but not all of the major elements of BRT projects. One of the major differences between the MAX system and the HealthLine is the absence of a fully dedicated fixed guideway. The MAX BRT operates in mixed traffic with autos for most parts of the day. Dedicated bus lanes are provided in the peak direction during peak commute times of the day. Due to lower traffic volumes and congestion the MAX BRT system did not require the fully dedicated guideway, which helped to significantly lower capital costs. Other elements that were not included in the MAX BRT were off-board ticket vending equipment. Kansas City’s MAX BRT helped to define what can be known as “BRT-Lite” and became a national model for BRT systems that operated low headway service (maximum 10 minutes) with branded vehicles and high passenger amenity stations, but at a significantly lower capital cost. The Main Street MAX BRT line carries approximately 5,000 average daily rides and cost $21 Million, or $3.5 Million per mile to construct.

Typically the highest capital cost items for MAX-style BRT systems are the vehicle fleet and station construction. BRT vehicles may range from $400,000 to $600,000 or more per vehicle and station costs vary between $50,000 to more than $100,000 per station. In the recent past similar BRT project have benefited from Federal Transit Administration (FTA) programs that have helped communities fund BRT projects with FTA covering up to eighty percent (more typically, fifty percent) of capital costs.

Figure 51: HealthLine BRT: Cleveland, OH

Figure 52: Troost Avenue MAX BRT: Kansas City, MO

Since the development of the MAX system, transit providers have experimented with even lower levels of physical improvements along BRT alignments, which translates to even lower levels of initial capital investment. Several lines recently completed or under development, such as the Cleveland State line in the Clifton Boulevard corridor in Cleveland Ohio, and the CMAX line in the Cleveland Avenue corridor in Columbus, Ohio, have minimal capital improvements, consisting of little more than higher end bus shelters with roadway paint markings and signage costing between $36,000 and $46,500 depending on the amenities offered at each bus stop and shelter location. The benefits of these lines lies in non-infrastructure based elements such as higher frequency service, higher travel speeds, and branding. Higher travel speeds generating faster trips are achieved through peak period bus-only lane restrictions, wider stop spacing, and bus signal priority systems. A branding scheme that encompasses bus wraps and paint schemes, shelters, signage, public timetables and other printed materials, and web presence, creates a strong image for the corridor and its services that sets it apart from the local bus system and attracts travelers who wouldn't normally consider using bus service.

In the case of Cedar Rapids and the 1st Avenue Corridor it would seem that a BRT-Lite application similar to the MAX system would be appropriate given the low level of congestion and high LOS in the corridor. A BRT system could be planned and implemented at a relatively low capital cost as a dedicated guideway and off-board fare collection would not be necessary. Generally BRT systems begin to become a valid option when average ridership nears 2,000 - 3,000 in the corridor during the weekday. Today the 1st Avenue Corridor is not experiencing ridership levels meeting that threshold, but with service improvements to the corridor, such as the implementation of Route 5X and improvement to headways, ridership may continue to grow over the coming years making development of a BRT line a viable alternative.

It is recommended that the U.S. 151, in particular the 1st Avenue SE, Corridor begin the planning process that could set the stage for the construction and operation of the Cedar Rapids Region's first BRT line in the future. Planning should define route alignment alternatives and termini, station locations, operating plans, annual operating cost estimates, capital cost estimates, passenger amenities needed at stations, traffic signal priority system needs, and many other significant items. Perhaps most importantly, the City and region should consider this corridor to be the focus of transit improvements in coming years, and begin to modify land use plans to encourage higher-density, mixed-use, transit-oriented development in this corridor that can support and make good use of improved transit service. This critical corridor to the Cedar Rapids area could be developed into the backbone of an expanded public transit system in the years ahead and be a great asset for transit riders in the community.

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2016 CORRIDOR MPO TRANSIT STUDY - APPENDICES

CORRIDOR MPO

APPENDIX A – SURVEY AND SURVEY RESPONSES

2016 Corridor Metropolitan Transit Study

Survey

Help Plan the Metro Area's Transit Future!

The Corridor Metropolitan Planning Organization is conducting the *2016 Corridor Metropolitan Transit Study* to develop strategies to enhance the public transit services offered for all citizens of the region. This survey will help inform the study by providing insights into how people use the transit system, assess levels of satisfaction, and allow citizens the opportunity to suggest areas in greatest need of improvement. Your participation is greatly appreciated and information provided will help guide the future of public transit improvements in the metropolitan region.

You may also complete this survey online at:

https://pbworld.typeform.com/to/LBRrWq

CORRIDOR MPO

For more information visit: CorridorMPO.com

or contact: Brandon Whyte
Corridor MPO Multimodal Transportation Planner
(319) 286-5299 b.whyte@cedar-rapids.org

CEDAR RAPIDS Transit

Please circle the most applicable answer, unless otherwise noted.

1.) How often do you use public transit in the metropolitan region?

a) 5 or more days a week
b) 1-4 days a week
c) A few times a month
d) A few times a year
e) Do not use public transportation

2.) Why did you choose public transit?

a) Do not have a car or reliable transportation
b) Unable to drive
c) Convenience of routes/services
d) High cost of gas
e) Do not use public transportation
f) Other: _____

3.) What public transit service(s) do you use? (Circle all that apply)

a.) Cedar Rapids Transit
b.) Neighborhood Transportation Service (NTS)
c.) Linn Intracounty Facilitating Transportation System (LIFTS)
d.) Other: _____

4.) For what purpose do you use public transit? (Please circle all that apply)

a.) Work
b.) School
c.) Medical
d.) Shopping
e.) Seeking employment
f.) Entertainment
g.) Other: _____

5.) If you ride **Cedar Rapids Transit**, what route do you use most frequently?

a.) Route 1
b.) Route 2
c.) Route 3
d.) Route 4
e.) Route 5B
f.) Route 5N
g.) Route 5S
h.) Route 6
i.) Route 7
j.) Route 8
k.) Route 9
l.) Route 10
m.) Route 11
n.) Route 12

6a.) If you use **Cedar Rapids Transit**, where do you most often get on the bus? (Nearest street intersection)

_____

6b.) If you use **Cedar Rapids Transit**, where is your most frequent destination? (Nearest street intersection)

_____

You may also complete this survey online at:

https://pbworld.typeform.com/to/LBRrWq

7.) How satisfied are you with public transit services in the metropolitan area?

a.) Very satisfied
b.) Somewhat satisfied
c.) Somewhat dissatisfied
d.) Dissatisfied
e.) Have not used

8.) What strategies could improve public transit services in the metropolitan area?

a.) More frequent trips
b.) Longer hours of service
c.) More weekend service
d) Extend routes to other areas
e.) More benches or shelters at bus stops
f.) Buses arriving on time reliably
g.) Other: _____

9.) Have you used the new live bus route tracking website **RideCRT.com** and/or the **Ride Systems** app?

a.) Yes
b.) No

10.) If you have used the new **Ride Systems** app, how satisfied are you?

a.) Very satisfied
b.) Somewhat satisfied
c.) Somewhat dissatisfied
d.) Dissatisfied
e.) Have not used

11.) If you have used the new website **RideCRT.com**, how satisfied are you?

a.) Very satisfied
b.) Somewhat satisfied
c.) Somewhat dissatisfied
d.) Dissatisfied
e.) Have not used

12.) What would make the new **RideCRT.com** more useful to you?

a.) Trip planning
b.) Ability to remember frequently used routes
c.) Better accuracy for bus times/arrivals
d.) Updates to fix bugs
e.) Other: _____

13.) Please provide any other comments you have about public transportation services in the metropolitan area:

_____
_____
_____
_____
_____
_____
_____
_____

Please turn the survey over for additional questions

For demographic purposes only:

14.) What is your age?

a) Under 18
b) 18-25
c) 26-35
d) 36-45
e) 46-55
f) 55-65
g) Over 65

15.) What is your Ethnicity (or Race):

a.) Asian or Pacific Islander
b.) Black or African American
c.) Hispanic or Latino
d.) Middle Eastern/North African
e.) Native American or American Indian
f.) White or Caucasian
g.) Other

16.) What is your gender?

a.) Male
b.) Female
c.) Choose not to answer

17.) What language do you speak at home?

a.) English
b.) Spanish
c.) Other, Please specify: _____

18.) How many vehicles are available in your household?

a.) None
b.) One
c.) Two
d.) Three or more

19.) Where do you live?

a.) Cedar Rapids
b. Ely
c.) Fairfax
d.) Hiawatha
e.) Marion
f.) Palo
g.) Robins
h.) Linn County

20.) What is the annual gross income of your household?

a.) Less than $15,000
b.) $15,001 - $24,999
c.) $25,000 - $34,999
d.) $35,000 - $49,000
e.) $50,000 - $74,999
f.) $75,000 or more

21.) How would you describe yourself? (pleases select all that apply)

a.) Part-time student
b.) Full-time student
c.) Part-time employee
d.) Full-time employee
e.) Retired
f.) Not currently employed or in school

For further information please attend one of two Public Open Houses

Where:
Ground Transportation Center

When:
February 16, 2016
12:00 p.m. (noon) – 1:00 p.m. and
5:00 p.m. – 7:00 p.m.

You may also complete this survey online at:
https://pbworld.typeform.com/to/LBRrWq

How often do you use public transit in the metropolitan region?

336 out of 339 people answered this question

1	5 or more days a week	147 / **44%**
2	Do not use public transit	75 / **22%**
3	1-4 days a week	47 / **14%**
4	A few times a year	41 / **12%**
5	A few times a month	26 / **8%**

Why did you choose public transit?

254 out of 339 people answered this question

1	Do not have a car or reliable transportation	124 / **49%**
2	Unable to drive	68 / **27%**
3	Prefer to use public transportation	20 / **8%**
4	Convenience of routes/services	19 / **7%**
5	Other	13 / **5%**
6	High cost of gas	7 / **3%**
7	Do not use public transportation	3 / **1%**

What public transit service(s) do you use?

291 out of 339 people answered this question

1	Cedar Rapids Transit	262 / **90%**
2	Neighborhood Transportation Service (NTS)	56 / **19%**
3	Linn Intracounty Facilitating Transportation System (LIFTS)	23 / **8%**
4	Other	23 / **8%**

For what purpose do you use public transit?

287 out of 339 people answered this question

1	Work	170 / **59%**
2	Shopping	152 / **53%**
3	Medical	136 / **47%**
4	Entertainment	117 / **41%**
5	School	58 / **20%**
6	Seeking employment	58 / **20%**
7	Other	23 / **8%**

Do you ride Cedar Rapids Transit?

324 out of 339 people answered this question

1	Yes	252 / **78%**
2	No	72 / **22%**

What route do you use most frequently?

252 out of 339 people answered this question

1	Route 5N	58 / **23%**
2	Route 5B	35 / **14%**
3	Route 1	26 / **10%**
4	Route 6	25 / **10%**
5	Route 5S	20 / **8%**
6	Route 3	15 / **6%**
7	Route 10	12 / **5%**
8	Route 7	12 / **5%**
9	Route 12	10 / **4%**
10	Route 2	10 / **4%**
11	Route 4	10 / **4%**

12	Route 9	8 / **3%**
13	Route 8	7 / **3%**
14	Route 11	4 / **2%**

How satisfied are you with public transit services in the metropolitan area?

302 out of 339 people answered this question

Average: 1.90

0	1	2	3	4
Very Dissatisfied		Satisfied		Very satisfied

1		89 / **29%**
2		71 / **24%**
4		55 / **18%**
0		46 / **15%**
3		41 / **14%**

What strategies could improve public transit services in the metropolitan area?

315 out of 339 people answered this question

1	Longer hours of service	232 / **74%**
2	Extend routes to other areas	159 / **50%**
3	More frequent trips	150 / **48%**
4	Add Sunday service	125 / **40%**
5	More benches or shelters at bus stops	117 / **37%**
6	Buses arriving on time reliably	66 / **21%**
7	Other	46 / **15%**

Have you used the new live bus route tracking website/mobile application, *RideCRT*?

327 out of 339 people answered this question

1	No	249 / **76%**
2	Yes	78 / **24%**

How satisfied are you with our RideCRT mobile app?

76 out of 339 people answered this question

Average: 2.72

0	1	2	3	4
Dissatisfied		Satisfied		Very satisfied

2		26 / **34%**
4		26 / **34%**
3		15 / **20%**
1		6 / **8%**
0		3 / **4%**

What would make the *RideCRT* tool more useful to you?

70 out of 339 people answered this question

1	Ability to remember frequently used routes	36 / **51%**
2	Trip planning	28 / **40%**
3	Better accuracy for bus times/arrivals	24 / **34%**
4	Updates to fix bugs	23 / **33%**
5	Other	0 / **0%**

Have you used *RideCRT* website?

325 out of 339 people answered this question

1	No	249 / **77%**
2	Yes	76 / **23%**

How satisfied are you with our RideCRT website?

76 out of 339 people answered this question

Average: 2.76

0	1	2	3	4
Dissatisfied		Satisfied		Very satisfied

2		30 / **39%**
4		24 / **32%**
3		17 / **22%**
1		3 / **4%**
0		2 / **3%**

What is your age?

312 out of 339 people answered this question

1	26 - 35	90 / **29%**
2	36 - 45	66 / **21%**
3	55 - 65	58 / **19%**
4	46 - 55	45 / **14%**
5	18 - 25	31 / **10%**
6	Over 65	18 / **6%**
7	under 18	4 / **1%**

What is your Ethnicity (or Race):

308 out of 339 people answered this question

1	White or Caucasian	252 / **82%**
2	Black or African American	26 / **8%**
3	Native American or American Indian	11 / **4%**
4	Hispanic or Latino	8 / **3%**

5	Asian or Pacific Islander	5 / **2%**
6	Middle Eastern/North African	3 / **1%**
7	Other	3 / **1%**

What is your gender?

313 out of 339 people answered this question

1	Female	162 / **52%**
2	Male	145 / **46%**
3	Skip question	6 / **2%**

What language do you speak at home?

310 out of 339 people answered this question

1	English	308 / **99%**
2	Other	1 / **0%**
3	Spanish	1 / **0%**

How many vehicles are available in your household?

312 out of 339 people answered this question

1	None	131 / **42%**
2	One	78 / **25%**
3	Two	74 / **24%**
4	Three or more	29 / **9%**

Where do you live?

309 out of 339 people answered this question

1	Cedar Rapids	246 / **80%**
2	Marion	38 / **12%**

3	Hiawatha	8 / **3%**
4	Other	8 / **3%**
5	Unincorporated Linn County	3 / **1%**
6	Ely	2 / **1%**
7	Palo	2 / **1%**
8	Robins	2 / **1%**
9	Fairfax	0 / **0%**

What is the annual gross income of your household?

298 out of 339 people answered this question

1	Less than $15,000	113 / **38%**
2	$75,000 or more	61 / **20%**
3	$15,000 - $24,999	43 / **14%**
4	$25,000 - $34,999	39 / **13%**
5	$50,000 - $74,999	25 / **8%**
6	$35,000 - $49,000	17 / **6%**

How would you describe yourself?

312 out of 339 people answered this question

1	Full-time employee	139 / **45%**
2	Part-time employee	73 / **23%**
3	Not currently employed or in school	59 / **19%**
4	Retired	32 / **10%**
5	Full-time student	25 / **8%**
6	Part-time student	14 / **4%**

As a thank you for completing this survey, would you like to be entered to win one free 31-day CR Transit bus pass?

321 out of 339 people answered this question

1	No	257 / **80%**
2	Yes	64 / **20%**

APPENDIX B – ONLINE RESPONSES

SUMMARY OF ROUND 2 ENGAGEMENT

2016 Corridor Metropolitan Transit Study

Engagement Period: April - May 2016

Planning & Design
vireo
BeVireo.com

Kansas City
929 Walnut Suite 700
Kansas City MO 64106
816-756-5690

Omaha
1111 N. 13th Street Suite 116
Omaha, NE 68102
402-553-5485

Overview

Via two public meetings and an online town hall meeting, the study team shared possible transit route changes with public during April and May of 2016. Engagement activities appear in the table below. A series of e-mail blasts, press releases, and social media posts provided meeting notice.

Activity	Date and Time	Location	Number Engaged
Online town hall meeting	On-going from project initiation	corridormpo.org	2,035 views; 9 responses; and 9 interactions
Public Meeting No. 1	April 28 from 8 a.m. to 4:30 p.m.	Ground Transportation Center (GTC)	142 (most attended the GTC meeting)
Public Meeting No. 2	April 28 from 5:30 to 7 p.m.	Cedar Rapids Public Library - Downtown	

Online Commenting

Throughout the planning process, the study team collected comments via the mySidewalk online town hall meeting platform at corridormpo.org. The polling and discussion questions on the site generated the following verbatim comments from registrants.

Type	Content
Discussion Question	**If you could do one thing to INCREASE transit use in the Cedar Rapids Metro, what would it be?** Note: To see a map of transportation data for the Cedar Rapids Metro, click https://d.mysidewalk.com/dashboards/13744b2a37?center=41.9890981202133 4,-91.7138671875&zoom=10. Use your mouse to click on the cities shown on the map and see the differences and similarities among them. Notice the charts that appear below the map and how they change with each click of your mouse. - From Kelly Halvorson: Sunday - From Charlie Chase: My name is Charlie and I was born and raised in CR. I have been living in Munich Germany the past 3.5 years and am fascinated with their lovely mass transit here. We have U-bahns (underground trains). A few years ago I made a system for CR based loosely on what we have here and sent it to my mom (who works for the county) and the Mayor or CR for fun. I think trains are the future, not buses. They are faster, hold more people and are not subject to traffic. I have uploaded a picture of the plan here that I made back then, there is also a corresponding word file that outlines the stops along each line as well and the name of the lines, which I am unable to upload here

	it seems. We also have an app here called MVV (Munchner verkers verein) that allows you to input a starting point and destination and it plans a route for your as well as tells you the cost of that trip. In addition to the U-bahns I have proposed in the image I would also suggest a tram (light rail) from St. Luke's up to the orange line (U3) that goes along 380. A nice side effect of all of this is that people will walk more and ride their bikes more to get to these areas. - From Kevin Kilsdonk: We need a route that goes from Linn-Mar to Kirkwood during peak morning and afternoon hours. I live in Mario but work just south of Kirkwood, and taking the existing busses takes way too long, so I driver every day. If we had a route that went around town (13 to 30) instead of through it, it would be so much faster than even an express route. I would take a route like this every day if it were available, and I know a number of others that would as well.
Discussion Question	CONVENIENCE: If riding transit in the Cedar Rapids Metro were convenient, what would the experience involve, e.g. shorter wait times, special amenities for transit riders, bicyclists, and pedestrians, or other items? - From Jeremy Murphy: A way to input your destination address into a phone app and have an itinerary sent. Route books and piecing a route together right now is too cumbersome. (1 person liked the comment)
Discussion Question	COST EFFECTIVENESS: If riding transit in the Cedar Rapids Metro were cost effective, what would the experience involve, e.g. lower fares? - No comments
Poll Question	IMPORTANCE: Which is most important to you: - Convenient transit service (4 responses) - Cost-effective transit service (0 responses)
Discussion Question	RIDERS: Who should transit in the Cedar Rapids Metro serve? - From Kelly Halvorson: Maybe I don't understand that question, otherwise everyone – dummass question
Poll Question	COVERAGE: How important is it to improve the coverage area of the transit system? - Very important (3 responses) - Somewhat important (1 response) - Not important (0 responses) - Unsure (0 responses)
Discussion Question	IMPROVEMENT LOCATIONS: What locations need transit improvements? - From Kelly Halvorson: Side of town hubs, having to come back downtown to get around is time consuming and plugs up 5 route, unless I have to I won't use 5 route (1 person liked this comment)

Discussion Question	SERVICE AREAS: Are there areas in the Metro that receive transit service that should not and those that are not that should? ☐ From Kelly Halvorson: That is the question that could easily be answered by your own bus d rivers- and it's different for everyone
Discussion Question	PERFORMANCE: What improvements, e.g. different vehicles, schedules, and hours of operation, are needed to improve the performance of transit in the Cedar Rapids Metro? ☐ From Kelly Halvorson: I have no love for your bathrooms and really no bathroom for your drivers
Poll Question	FUNDING: How supportive would you be of increasing funding by raising fees and/or taxes to fund needed transit improvements? ☐ Very supportive (1 response) ☐ Somewhat supportive (3 responses) ☐ Not supportive (0 responses) ☐ Unsure (1 response)
Discussion Question	MESSAGING: What message do you think is most important to communicate to the general public about transit? ☐ From Jeremy Murphy: Timeliness, cleanliness, safety affordability
Discussion Question	TRANSIT CONCEPT 1: This concept involves reorganizing the system without any additional resources or funding. In this alternative, resources have been allocated within the daytime system to provide more service in potentially more productive areas, while maintaining service to most areas that are served by the current system. What questions, comments or concerns do you have about Concept 1 ☐ No comments
Discussion Question	TRANSIT CONCEPT 2: This concept also involves reorganizing the system without any additional resources or funding. In this alternative, AM peak service has been reallocated to provide night time service on six routes until 10PM on weekdays. There would be no AM peak service on any routes in this alternative in favor of providing a limited nighttime service. What questions, comments or concerns do you have about Concept 2? ☐ No comments
Discussion Question	TRANSIT CONCEPT 3: This concept involves allocating an additional projected 20 percent increase in funding from a property tax levy that would allow for more comprehensive night service. Day service will remain similar to existing service with both AM and PM peak service maintained on five routes. Night service would be provided on weekdays until 10PM on 12 routes. What questions, comments or concerns do you have about Concept 3? ☐ No comments

Discussion Question	TRANSIT CONCEPT 4: This concept incorporates many of the service requests and recommendations that CR Transit receives from riders and residents in the Cedar Rapids Region and assumes additional funding beyond the property tax levy and serves as the ideal CR Transit system. What questions, comments or concerns do you have about Concept 4? ☐ No comments
Discussion Question	OTHER COMMENTS: What other comments do you have about the 2016 Corridor Metropolitan Transit Study? ☐ No comments

In Person Meetings

The study team organized two public meetings during the second round of engagement. Information about the overall study and the four recommended transit improvement concepts were presented at the meetings. The team provided comment forms to meeting participants that included questions about the concepts. Participants returned 28 comment forms during the weeks that followed the meetings. Verbatim comments include those on pages 4-7 of this report.

Transit Concept 1: What questions, comments or concerns do you have about Concept 1?

- I think it's the bare minimum necessary.
- Better utilizes resources to cover peak ridership and meet largest community need. Are there alternate resources available for those that will lose service?
- I like the 5x option, the proposed changes.
- I would contact business clusters like PMX Industries is serviced by route 1, General Mills, All Sides Windows. Business clusters along Center Point Road etc. Get input into staffing needs, number of employees, will they be expanding.
- Can you explain this concept as to is it keeping the times the same or changing.
- No concerns about this concept.
- A good way to increase ridership.
- Westdale as transfer hub us a good idea. Better arrangement for transfers at other sites than GTC would improve service for many riders.
- I like this one the best.
- That is ok.
- Need more buses every half hour, not every hour and a half, it's hard for the disabled people.
- Strengthens some routes, meaning it would be more rational for people to choose the bus for transportation. Express bus along with busy Route 5 is intriguing. What do we lose by keeping the route along O Ave. NW?

Transit Concept 2: What questions, comments or concerns do you have about Concept 2?

- Yes I agree.
- I have concerns about taking away AM peak services. It would in my opinion reduce ridership in some groups.

- Would be interesting to get more accurate counts of AM use before cutting down on this service. The PM service is much needed especially for the retail/restaurant hubs.
- This sounds like a good option, I like nights and peak routes.
- This is a good idea.
- The no peak hours if they stopped it's an inconvenience because it is good when you have to be at work in the morning and miss your first bus when the bus comes half an hour later you still have time to be at work.
- What's the latest nighttime service would run?
- Like nighttime service option!
- I have concerns about Route 11 and that the peak routes would be taken away.
- Good for riders needing transportation during the evening to possibly start a new job
- Route 4.
- Yes, need night buses and need benches at every bus stop for the disabled people to be able to sit down.
- I like this a lot. But I don't have enough data to judge whether loss of peak time routes is worth the tradeoff. Real cities don't have buses that shut down at 7:00pm anyhow.

Transit Concept 3: What questions, comments or concerns do you have about Concept 3?

- I think this concept is closer to what we need but would like even more expanded services.
- Great if the levy could pass. Wonder if it would make sense to have a trial period of Concept 2 to get more data about ridership before campaigning for levy increase.
- I like the idea of night routes. However I do not believe the tax payers would get behind an increase for the service.
- This is a good idea for many people. Disabled or not. My main concern is Sunday transit is real important.
- Would smaller transit vehicles help offset the cost to counter the potential financial impact of a property tax levy.
- If that helps and people agree this would be good and convenient for a lot of people especially of you don't drive or have to be out a little later and some people can't really afford $5 per ride for NTS everyday.
- Would this include Sunday's also? If so, what would be the time frame?
- Will the CMPO be asking for an increase in the property tax levy? Concerned about how that will affect the drivers and working later or longer hours.
- Switch from property tax levy to gas tax in local region.
- 3 major traffic arteries (approx. 25,000 vehicles/day) still get no routes that serve long distances on these arterials. I guess all those drivers are wrong.
- Yes, we need more buses.
- Need benches at every stop for the disabled to be able to sit down.
- Love it.
- I am agreeable to nighttime service until 10pm on the 12 Route.
- Revenue increase may be a non-starter, but I like the direction/intent of this option.

Transit Concept 4: What questions, comments or concerns do you have about Concept 4?

- This is what is needed in our community! I would love to see this kind of system working in CR. I hope we can get this concept for CR and people see the value in investing in public transportation.
- I think this could be approached in stages that build on each other once the need is proven.
- Based on what I hear in the community regarding the need for expanded service on nights and weekends, this appears to be the ideal choice, if funding can be found.
- Like all of the options, would like to know cost and funding suggestions.
- Self service kiosks, more shelters and (again) smaller vehicles to help offset tax levy.
- Are they able to start a little earlier in the mornings for person who leaves early.
- Nationwide oil corporation tax to cover development of light rail and increase in bus routes.
- 3 major traffic arteries (approx. 25,000 vehicles/day) still get no routes that serve long distances on these arterials. I guess all those drivers are wrong.
- We need benches at every bus stop for the disabled people that can't stand very long.
- Love it.
- I totally agree with transit concept 4.
- It's useful as a vision of how transit could contribute to the quality of life in some. future, walkable version of Cedar Rapids, but we're not there yet.

Other: What other comments do you have about the *2016 Corridor Metropolitan Transit Study*?

- Add Fairfax.
- Add Robins.
- Route 6 (run as 6W & 6N) could alternate between west Hiawatha (the existing route) and the north Hiawatha loop served by 5B. This would give one hour headways at rush hour to N. Hiawatha and allow 6N to meet the before 7:00am service while 5S could meet the before 7:00am arrival at 50th Street Marion. If 6W were to not have an additional bus for peak service and 6N ran all day, it would require one additional shift 5 days a week. (one added shift on Saturday would change most of route 6 to 30 minute headways).
- Increased energy in revisiting light rail between Cedar Rapids and Iowa City.
- All routes need to run on time (getting there like 15-20 mins late).
- 7 day a week bus service.
- Saturdays should run like weekday (start at same time as weekdays).
- Run until 10 every night.
- Pass options longer than 30 days (2 month pass at least for disabled people). $20 right now, got to $25/2 months for disabled people.
- More benches at J St. SW and 15th.
- Route 5 should go out to Airport Road (church our there gives out clothes to homeless people).
- I like all of the plans because they're making changes for the right reasons: better services more attractive to potential riders with more efficient use of the budget. I like

the small steps of options 1 and 2; I am less inclined to support option 3 or 4 until they're justified by increased ridership.

- Route needs to go to Fairfax (lots of disabled people have to take cabs into Cedar rapids, which costs more than a bus pass).
- Disabled only paratransit buses (like NTS for handicapped people).
- Ok with losing day service on Alternates 2 & 3 as long as Sunday service is added and longer evening service everyday (until at least 10pm).
- Sunday run until 4 or 5pm.
- Can Ride Systems App show where you are in the map?
- Either needs more wheelchair tie downs or adding more buses to 5.
- 5x option is awesome.
- Go Oakhill Manor has a lot of disabled people.
- ROMPOT transit users in this area (near Prairie Park Fishery).
- How would it be on Saturdays as far as the transportation services?
- Wonder if transit could be extended to mobile home park on NE side of Hwy 13 & Business 151? I feel like this is another LMI neighborhood that could benefit from not crossing busy highways.
- Night service to help 2nd shift workers (so they can go to work and back on the bus). Run until at least 11pm or 12am.
- Sunday service (like 8am-5pm)- I could work Sundays at my job at Tyson's but I can't because I have no transportation (NTS is too expensive).
- Route 12 used to go to Casey's on Edgewood (near Hwy 30)- this was much helpful/easy for transit riders going to General Mills south of Hwy 30.
- Night service until 11:30pm (for 2nd shift workers) on routes with factories- but maybe not weekends because some factories don't have 2nd shifts then, also this would work well for 3rd shift workers (4pm-7am)- could take bus to and from work.
- Stop at 15th St. & 12th Ave. SE (by beauty shop)- lots of people get on there, also 9th St. SE & 12th Ave. SE.
- Like old 2 & 9 Routes (where one was going out and the other bus was coming in).
- Sunday service would be awesome.
- Night service until at least 9 or 10pm.
- Seeing the maps with the proposed changes was very helpful and illustrates the thoughts and planning that went into this effort.
- I think concept 4 is a great goal for Cedar Rapids. I hope we can get the rest of the community on board and they see the value in transportation.
- Please implement nighttime service at the earliest possible time.
- I don't use the bus at this time but did for a 2 year period after the flood. It's great that more comprehensive service is being proposed. I am happy to help pay for it. At nights? Sundays? Bring it on!
- Picking a Sunday for the bus to run to get the disabled to church at least one Sunday a month.
- All bus drivers should use febreeze so the bus will smell fresh.

APPENDIX C –

OPEN HOUSE MATERIALS

WELCOME

Transit Service Recommendations Open House

April 28, 2016

2016 Corridor Metropolitan Transit Study

2016 Transit Study Project Introduction

2016 Corridor Metropolitan Transit Study

2016 Transit Study

This study was commissioned by the Corridor Metropolitan Planning Organziation to study the Cedar Rapids Transit System and make recommendations on how it can be improved and operate more efficiently.

The goals of the study include the following:

- Take a "fresh look" at the transit system
- Identify areas of improvement such as on-time performance, passenger amenities, service reach, infrastructure, etc.
- Identify new and potential markets for transit service
- Develop alternatatives that improve public transit in the Cedar Rapids Metro area that lower headway, expand system, improve passenger amenities, and provide efficient and effective transit service

For more infomation about this study, please contact:
Brandon Whyte, Multimodal Transportation Planner
Corridor Metropolitan Planning Organization
101 First Street SE Cedar Rapids, IA 52401
Email: b.whyte@cedar-rapids.ord
Phone: 319-286-5299

Development of Alternatives

Four alternatives were developed included the goals of the study as well as the comments and suggestions provided during the public engagement and stakeholder outreach sessions.

The four alternatives developed for the study include the following:

- Alternative 1: Cost Neutral - This alternative involves reorganizing the system without any additional resources or funding. In this alternative, resources have been allocated within the daytime system to provide more service in potentially more productive areas, while maintaining service to most areas served by the current system.
- Alternative 2: Cost Neutral + Night Service: - This alternative also involves reorganizing the system without any additional resources or funding. In this alternative, there would be no AM peak service on any routes in favor of providing limited night time service.
- Alternative 3: Maximum Service - This alternative involves allocating an additional projected 20 percent increase in funding that would be used to provide a more comprehensive night time service and some improvements to day time service.
- Alternative 4: Ideal Service - This alternative incorporates many of the service requests and recommendations that CR Transit receives from riders and residents in the Cedar Rapids region, assumes additional funding beyond the property tax levy, and serves as the ideal CR Transit system.

To provide further comment, please visit:
www. corridormpo.com
Click on 'Join the Conversation' to share your thoughts.

CORRIDOR MPO

2016 Transit Study Schedule

2016 Corridor Metropolitan Transit Study

January
- Data collection
- Review existing system

February/March
- Survey
- Public engagement
- Stakeholder outreach

April
- Develop improvement recommendations
- Public outreach and comments

May/June
- Review public input
- Revise system recommendations
- Finalize transit system recommendations

Corridor MPO

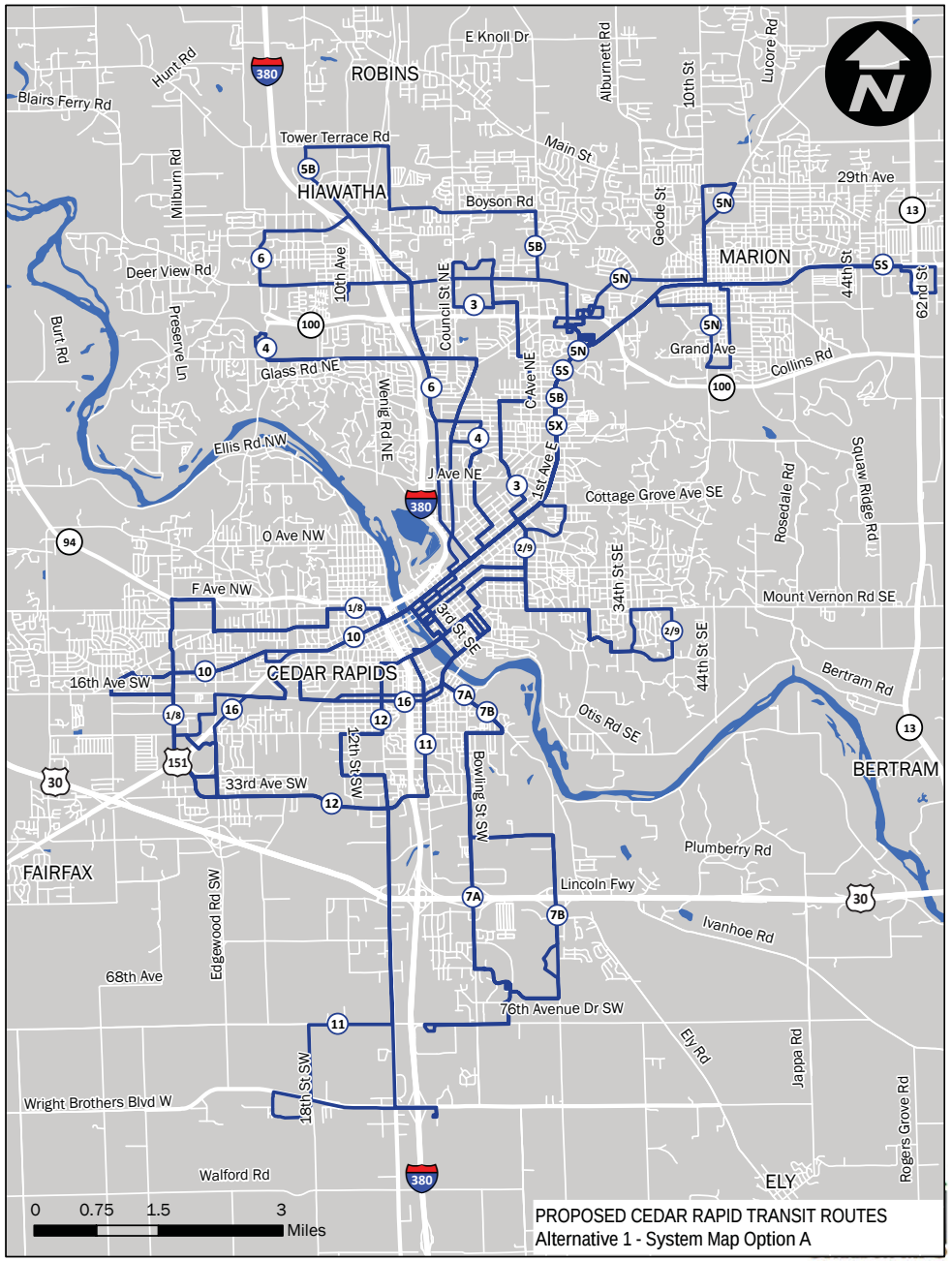
Alternative 1: Cost Neutral

2016 Corridor Metropolitan Transit Study

Proposed Day Service

Alternative 1 is a cost neutral solution which could be implemented without any additional resources. In this alternative, resources have been reallocated within the daytime system to provide more service in potentially more productive areas, while maintaining service in most areas that are served by the current system. Routes have been streamlined so that they provide more direct, two-way service with fewer large loops and time-consuming diversions. Additional service has been provided to the major destinations in the region, including Westdale Mall, Lindale Mall, and the Walmarts in the region. Finally, service along the busiest corridor in the system, 1st Avenue NE, has been reinforced with a new route that will operate hourly between the GTC and Lindale Mall. Other recommendations include:

- End all routes serving the west side of Cedar Rapids at Walmart/ Westdale Mall to facilitate transfers at locations other than the GTC
- Increase service to Kirkwood Community College from two to three buses per hour during peak times
- Maintain peak service to most of region's public high schools and expand service to area universities/colleges

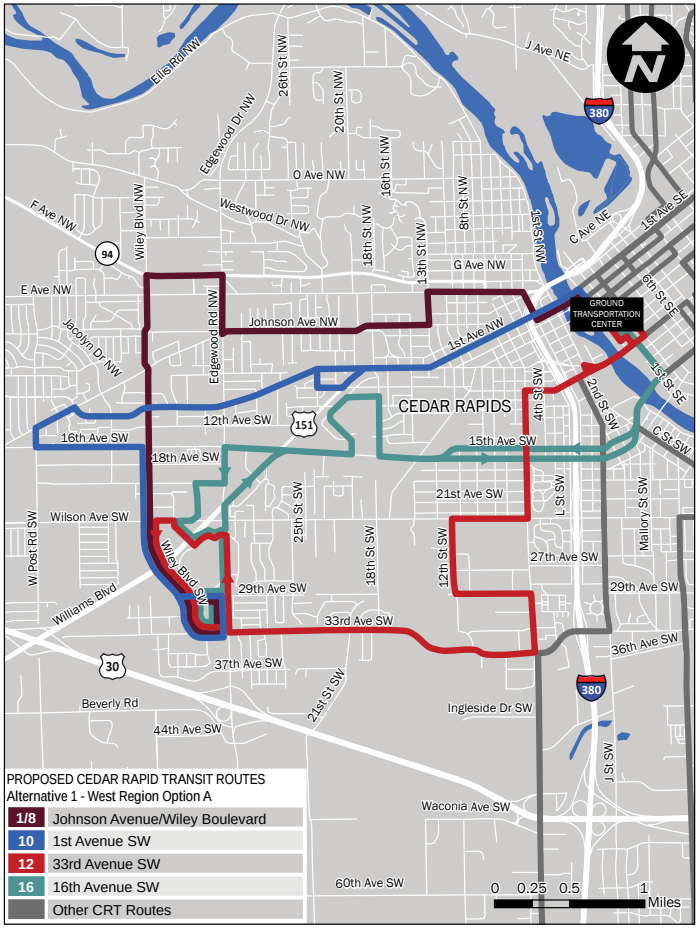


Alternative 1: West Region

2016 Corridor Metropolitan Transit Study

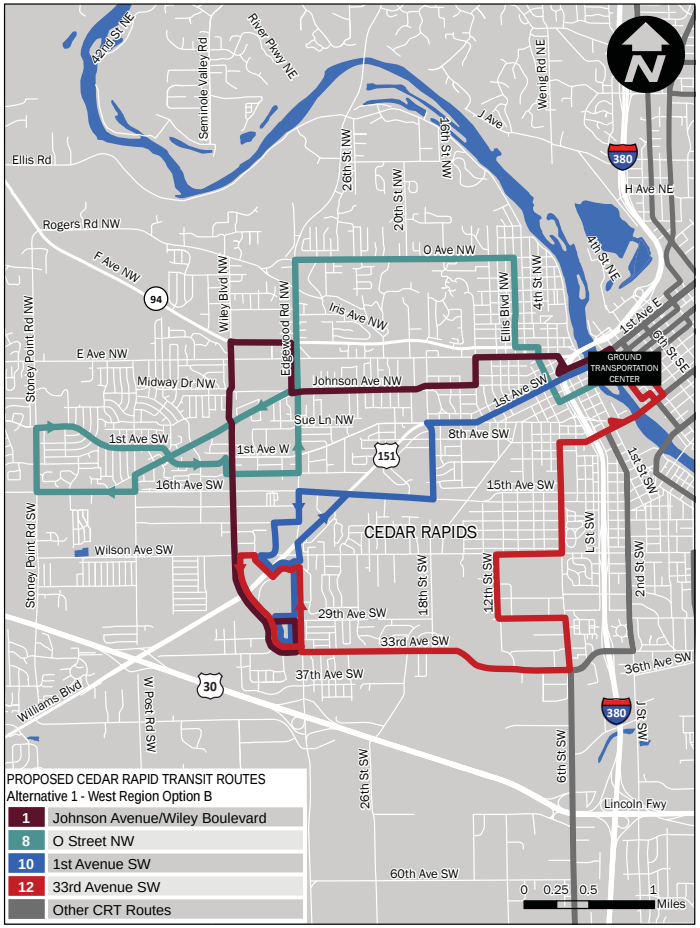
Proposed Changes for the West: Option A

Two options are proposed for serving the west side of Cedar Rapids in Alternative 1. In Option A, all four routes serving the west side would share a common end point at the Walmart off of Edgewood Road. Areas that are currently served by Routes 1 and 8 would be served by a single route, which would allow for more two-way service to be provided on 1st Avenue SW, 15th/16th Avenue SW, and 6th Street SW. Underutilized service to O Avenue NW and the neighborhood west of Post Road would be eliminated in Option A.



Proposed Changes for the West: Option B

In Option B, three of the proposed routes serving the west side of Cedar Rapids would share a common end point at the Walmart off of Edgewood Road. In this option, service to O Avenue NW and the neighborhood west of Post Road (including the Stoney Point YMCA) would be retained, but service on the section of 1st Avenue SW between Wiley Boulevard and 18th Street SW would be eliminated. In contrast with Option A, there would be no continuous service along 1st Avenue SW or 15th/16th Avenue SW in Option B.



CORRIDOR MPO

Alternative 1: South and North/East Regions

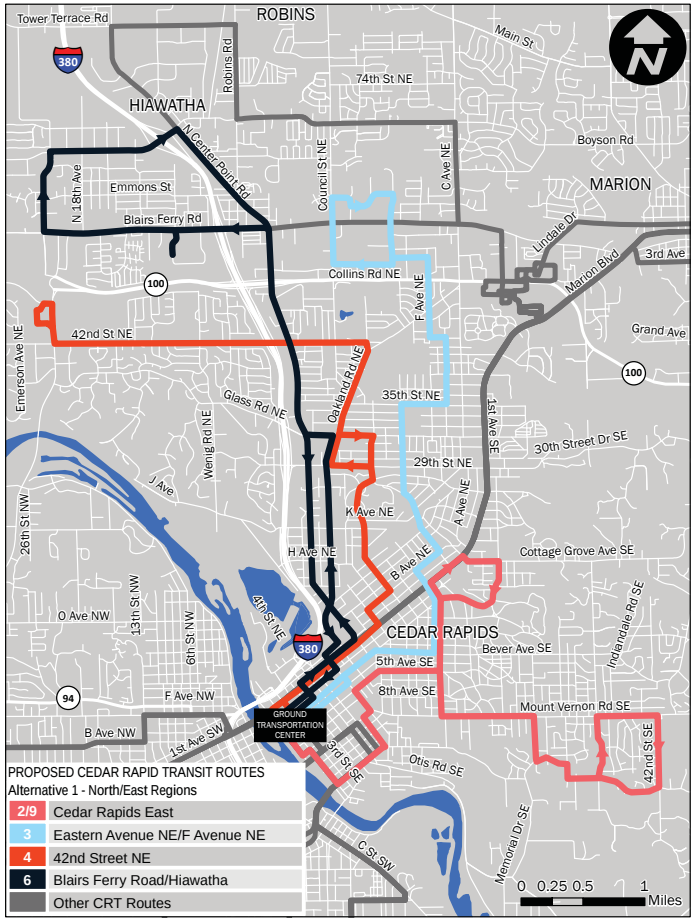
2016 Corridor Metropolitan Transit Study

Proposed Changes for the South

The proposed changes include a streamlining of Routes 7 and 11 and a reallocation of peak service to increase service to Kirkwood Community College. In the proposed network, Route 7 would be operated as two routes, 7A and 7B. Route 7A would be operated every 30 minutes during peak periods and hourly during the rest of the day. Route 7B would be operated hourly during peak periods only. Route 11 would be operated hourly all day and would provide two-way service on J Street SW. 6th Street SW would be served bidirectionally by the proposed Route 12.

Proposed Changes for the North and East

There proposed changes for the north side are relatively minor, with no changes proposed for Route 6 and only minor adjustments proposed for Routes 3 and 4 to serve the Hy-Vee on 32nd Avenue NE and the Rockwell Collins campus. The proposed changes for the east side are more substantial, with Routes 2 and 9 being replaced by a single route. This proposed route would serve the Mount Vernon Road and 19th Street SE corridors, as well as Metro and Washington High Schools, but would eliminate service to the neighborhoods east of 19th Street where transit ridership is low.



CORRIDOR MPO

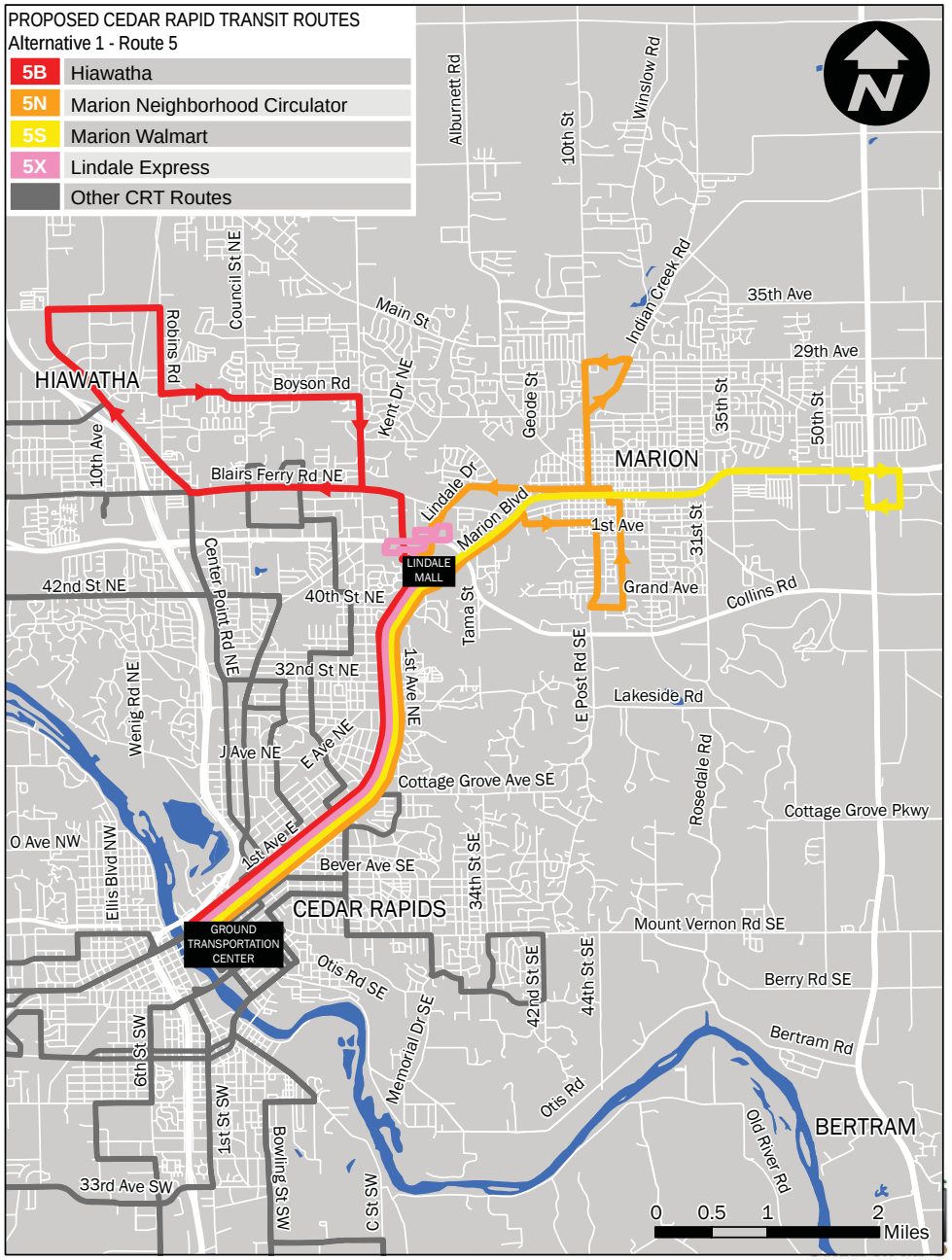
Alternative 1: 1st Avenue NE Routes

2016 Corridor Metropolitan Transit Study

Route 5s: Serving 1st Avenue NE, Marion, and Hiawatha

In order to alleviate the overcrowding that often occurs on Route 5 buses between downtown Cedar Rapids and the Lindale Mall, the proposed changes in Alternative 1 include an increase in service along 1st Avenue NE. This increase in service would be provided by a new route, Route 5X, which would be operated hourly between downtown and the Lindale Mall area. The other three routes in the Route 5 family of services – 5B, 5N, and 5S – would continue to operate similarly to how they do now, with each route operating every 90 minutes.

In this alternative there are no proposed changes to the Route 5B alignment serving City of Hiawatha. A few alignment changes are proposed for Routes 5N and 5S at the outer ends of the routes which operate within the City of Marion. The proposed changes to Route 5N would provide more north-south circulation between neighborhoods north and south of 7th Avenue. Route 5N would continue to serve Marion High School, but would also be extended north to serve Linn-Mar High School. The proposed changes to Route 5S would streamline the route, eliminating most deviations from Marion Boulevard/7th Avenue, and would extend service east of SR-13 to the new Marion Police Department.

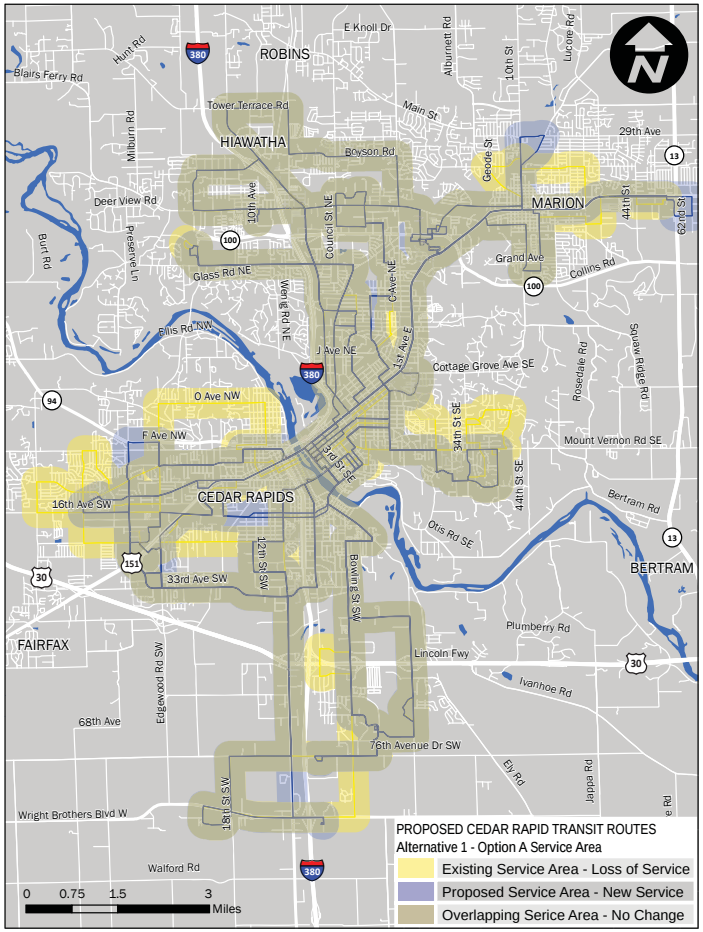


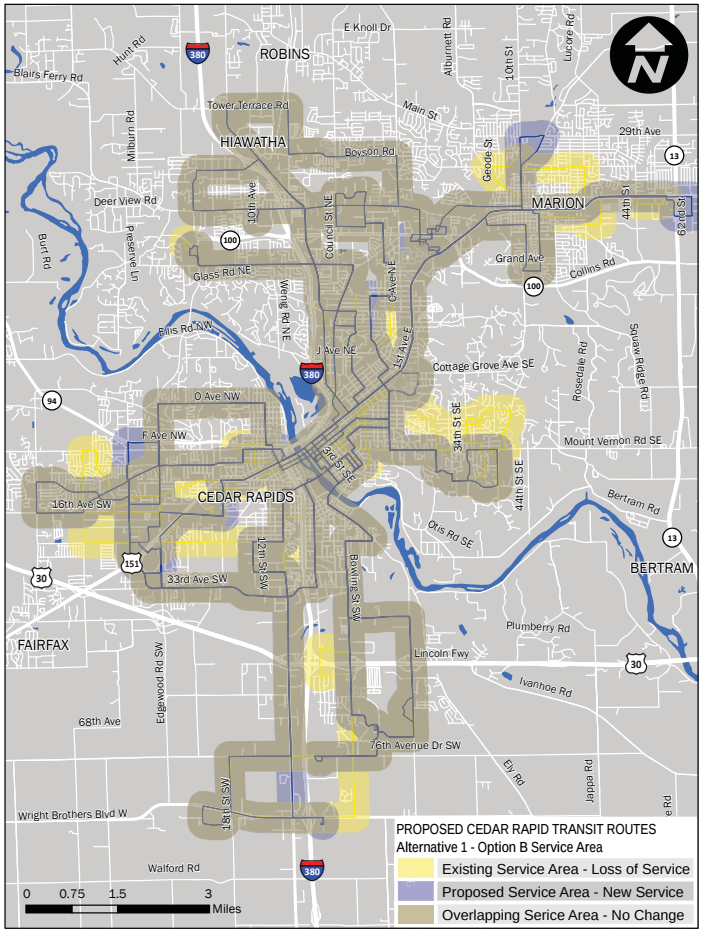
Alternative 1: Service Area Comparison

2016 Corridor Metropolitan Transit Study

Comparison of Existing and Proposed Service Areas

The service area of the existing system, defined as anywhere within 1/4 mile of an existing route, was compared with the service area of the proposed system in Alternative 1. The comparison was conducted for both the A and B options for the west side of Cedar Rapids. The service area of the existing system is shown in yellow in the maps below, and the service area for the proposed system is shown in blue. Any areas that are served by both the existing and proposed systems are shown in green. Therefore, yellow areas represent a loss of service and blue areas represent an expansion of service in the proposed network.





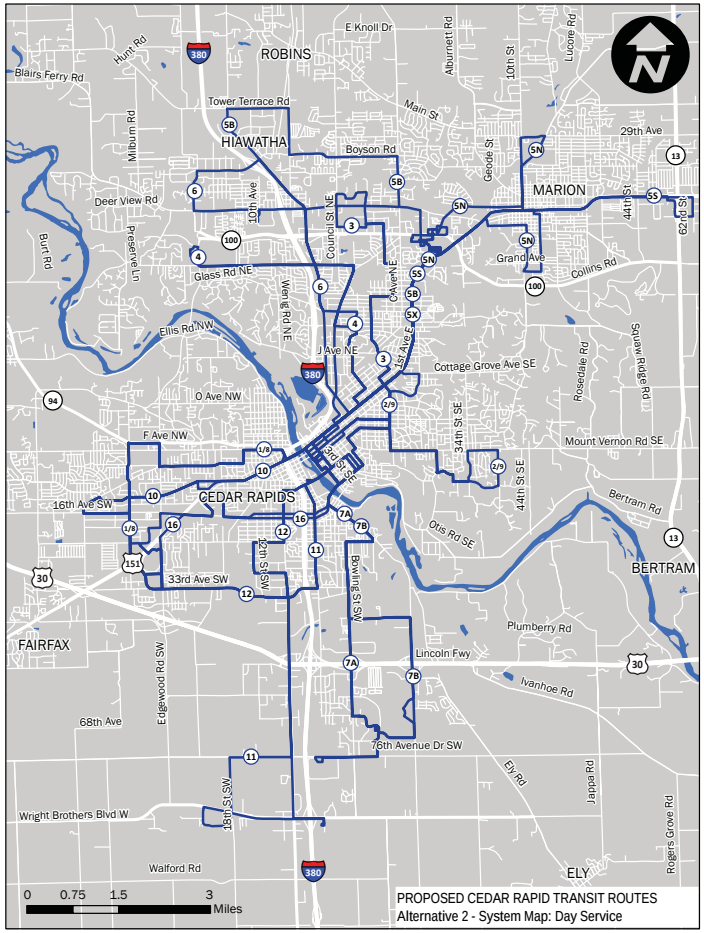
CORRIDOR MPO

Alternative 2: Cost Neutral + Night Service

2016 Corridor Metropolitan Transit Study

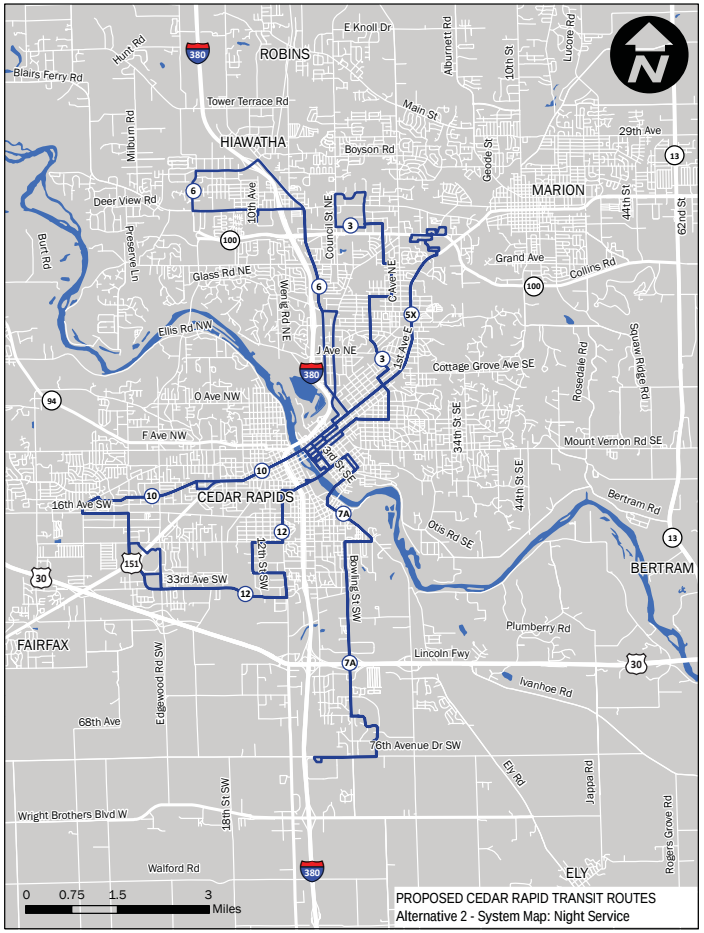
Proposed Day Service

Alternative 2 is also a cost neutral solution which would not require any additional resources to implement. Alternative 2 is very similar to Alternative 1, with all of the route alignment changes proposed for daytime service in Alternative 1 carried forward to Alternative 2. However, in order to provide a limited amount of night service on weekdays, Routes 3, 6, 7A, 10 and 12 would only be operated hourly during the peak morning hours, rather than every half hour, and no additional service would be provided on 1st Avenue NE during the day.



Proposed Night Service

The difference between Alternatives 1 and 2 is that a limited amount of night service would be provided in Alternative 2 on weekdays. The reduction of service during the morning peak hours on Routes 3, 6, 7A, 10, and 12 would allow these routes to be operated hourly in the evening from 7PM to 10PM. In addition, Route 5X would be operated hourly along 1st Avenue NE between the GTC and Lindale Mall from 7PM to 10PM.



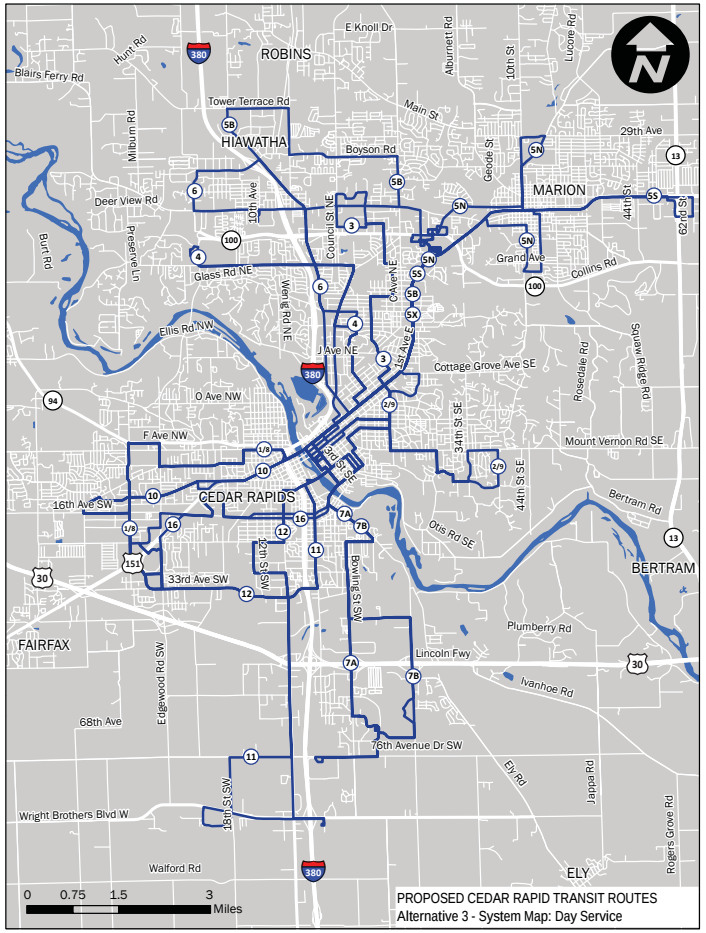
CORRIDOR MPO

Alternative 3: Maximum Service

2016 Corridor Metropolitan Transit Study

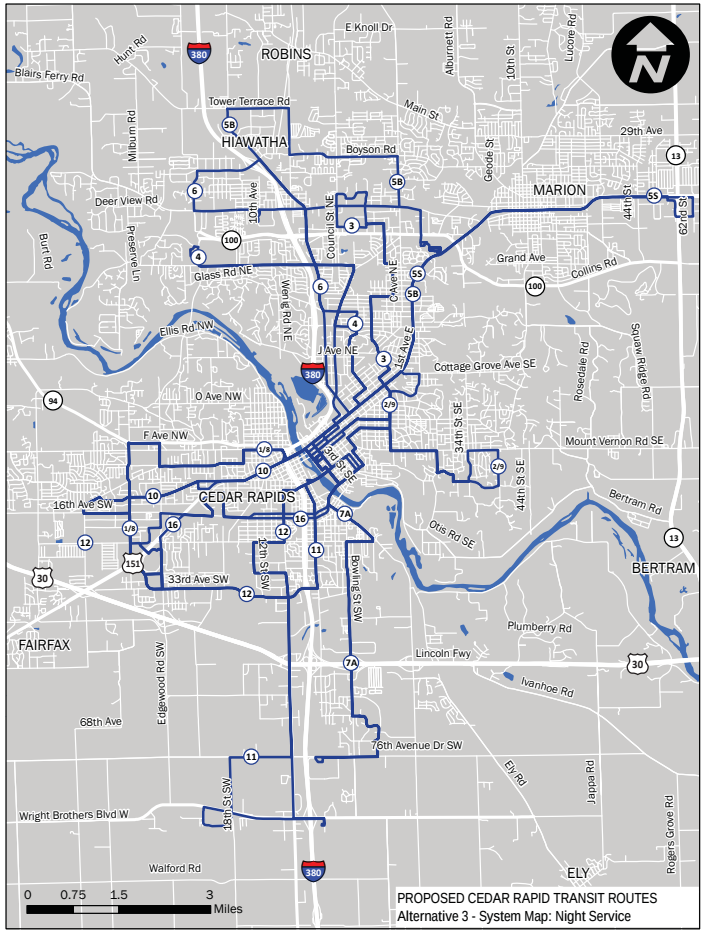
Proposed Day Service

Alternative 3 assumes that additional sources of funding, provided in part by an increased property tax levy in Cedar Rapids, Marion, and Hiawatha, would provide up to a 20 percent increase over the current operating budget. This additional funding would allow for a more comprehensive night service in addition, without any proposed cuts to morning peak service proposed in Alternative 2. Routes 3, 6, 7A, 10, and 12 would continue to be operated every half hour during AM/PM peak periods, and the proposed Route 5X would provide additional service along 1st Avenue NE to Lindale Mall.



Proposed Night Service

Most of the assumed additional funding would be used to expand night service on weekdays. In contrast with Alternative 2, where only six routes would be operated past 7PM, Alternative 3 would operate almost all routes in the system until 10PM in additional to existing day service, as shown in the night network map below. All routes would be operated hourly at night, with the exception of Routes 5N, 5X, and 7B. Routes 5B and 5S would provide service every 30 minutes between the GTC and Lindale Mall, with hourly service extending beyond the mall to Marion and Hiawatha.



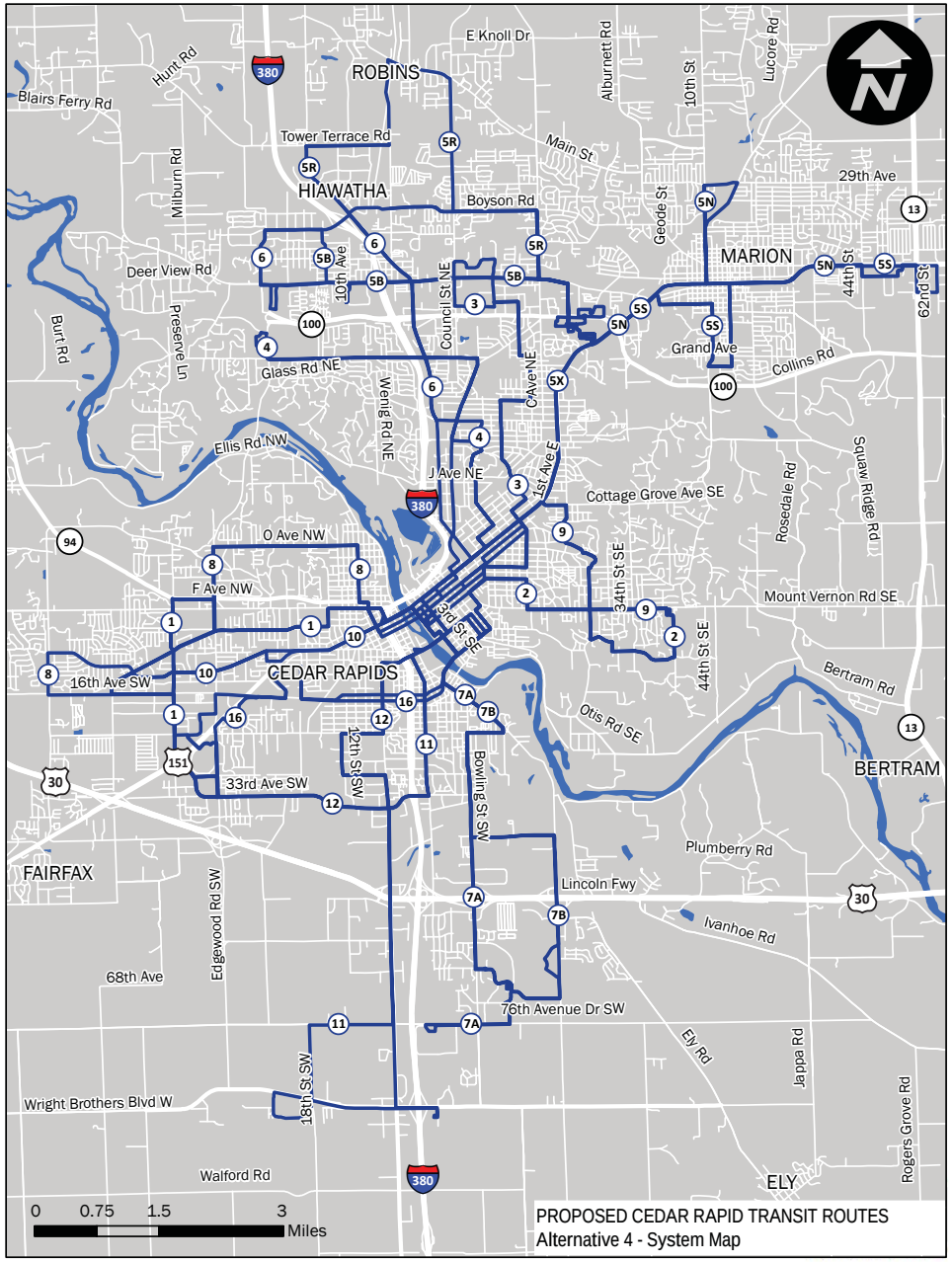
CORRIDOR MPO

Alternative 4: Ideal Service

Proposed Service

Alternative 4 is the ideal service that CR Transit would operate if it had fewer financial constraints that would allow it to respond to more of the service requests and recommendations that it receives from riders and residents in the Cedar Rapids region. This alternative would require additional funding beyond the increased in property tax levy assumed in Alternative 3. In contrast with the previous alternatives, these improvements are not dependent on one another, and could be prioritized and implemented in a series of steps or phases. The possible service improvements in Alternative 4 include:

- Increase service on the 1st Avenue NE corridor between the GTC and Lindale Mall to every 15 minutes during the day via Route 5X.
- Establish a mini-hub in the Lindale Mall area, which would serve as a transfer point between Route 5X and four proposed circulators serving the communities of Marion, Hiawatha and Robins – Routes 5N, 5S, 5B, and 5R.
- Increase service on routes that currently operate every 30 minutes during peak periods to every 15 minutes during peak periods and every 30 minutes during other times. Increase service on all other routes to every 30 minutes during peak periods and every 60 minutes during other times.
- Expand service in eastern Cedar Rapids with Routes 2/9 and in western Cedar Rapids with Routes 8/10/16
- Extend weekday and Saturday night service to 11PM
- Provide Sunday service (eg. 8:30AM to 5:30PM)



Comments

2016 Corridor Metropolitan Transit Study

April 28, 2016 | Public Open House

What would an improved transit system include? The Corridor Metropolitan Planning Organization (MPO) is moving forward with the ***2016 Corridor Metropolitan Transit Study*** to uncover the answer. Concepts 1-4 describe various route changes. Use this comment form to share your opinions about them.

1 **Transit Concept 1:** This concept involves reorganizing the system without any additional resources or funding. In this alternative, resources have been allocated within the daytime system to provide more service in potentially more productive areas, while maintaining service to most areas that are served by the current system. What questions, comments or concerns do you have about Concept 1?

2 **Transit Concept 2:** This concept also involves reorganizing the system without any additional resources or funding. In this alternative, AM peak service has been reallocated to provide night time service on six routes until 10PM on weekdays. There would be no AM peak service on any routes in this alternative in favor of providing a limited night time service. What questions, comments or concerns do you have about Concept 2?

3 **Transit Concept 3:** This concept involves allocating an additional projected 20 percent increase in funding from a property tax levy that would allow for more comprehensive night service. Day service will remain similar to existing service with both AM and PM peak service maintained on five routes. Night service would be provided on weekdays until 10PM on 12 routes. What questions, comments or concerns do you have about Concept 3?

4 **Transit Concept 4:** This concept incorporates many of the service requests and recommendations that CR Transit receives from riders and residents in the Cedar Rapids Region and assumes additional funding beyond the property tax levy and serves as the ideal CR Transit system. What questions, comments or concerns do you have about Concept 4?

5 Other: What other comments do you have about the ***2016 Corridor Metropolitan Transit Study***?

(Fold)

Thanks for giving us your feedback!

Your responses will assist with the development of the ***2016 Corridor Metropolitan Transit Study***.

(Fold)

2016 Corridor Metropolitan Transit Study
c/o Vireo
929 Walnut, Suite 700
Kansas City, Missouri 64106

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APPENDIX D –

ROUTE MODEL AND COST METHODOLOGY

EXISTING SERVICE

WEEKDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	AM Peak Hours	Midday Hours	PM Peak Hours	Evening Hours	AM Peak Frequency	Midday Frequency	PM Peak Frequency	Evening Frequency	AM Peak Vehicles	Midday Vehicles	PM Peak Vehicles	Evening Vehicles	AM Peak Trips	Midday Trips	PM Peak Trips	Evening Trips	Weekdays	Annual Revenue Hours	Annual Revenue Miles
Route 1	14.8	50	60	17.7	05:15	18:58	13:43	3.0	5.0	3.0	3.0	60	60	60	60	1	1	1	1	3	5	3	3	255	3,570	52,694
Route 2	13.0	50	60	15.6	05:15	18:57	13:42	3.0	5.0	3.0	3.0	60	60	60	60	1	1	1	1	3	5	3	3	255	3,570	46,344
Route 3	12.8	50	60	15.3	05:15	19:00	13:45	3.0	6.0	2.0	3.0	30	60	30	60	2	1	2	1	6	6	4	3	255	4,845	61,858
Route 4	14.6	50	60	17.5	05:15	19:01	13:46	3.0	5.0	3.0	3.0	60	60	60	60	1	1	1	1	3	5	3	3	255	3,570	52,070
Route 5B	19.8	80	90	14.9	05:45	18:53	13:08	2.5	5.0	3.0	3.0	90	90	90	90	1	1	1	1	2	3	2	2	255	3,443	45,452
Route 5N	20.6	80	90	15.4	05:15	18:23	13:08	3.0	5.0	3.0	2.5	90	90	90	90	1	1	1	1	2	3	2	2	255	3,443	47,196
Route 5S	20.2	80	90	15.1	06:15	19:23	13:08	2.5	5.0	3.0	3.0	90	90	90	90	1	1	1	1	2	3	2	2	255	3,443	46,298
Route 6	14.5	50	60	17.4	05:15	19:01	13:46	3.0	5.0	4.0	2.0	30	60	30	60	2	1	2	1	6	5	8	2	255	5,355	77,514
Route 7A	16.6	50	60	19.9	05:15	18:58	13:43	3.0	5.0	4.0	2.0	60	60	60	60	1	1	1	1	3	5	4	2	255	3,570	59,140
Route 7B	16.8	50	60	20.2	05:45	17:40	11:55	3.0	0.0	4.0	0.0	60	0	60	0	1	0	1	0	3	0	4	0	255	1,785	30,020
Route 8	13.5	50	60	16.2	05:15	18:57	13:42	3.0	5.0	3.0	3.0	60	60	60	60	1	1	1	1	3	5	3	3	255	3,570	48,282
Route 9	13.9	50	60	16.7	05:15	19:00	13:45	3.0	5.0	2.0	4.0	60	60	30	60	1	1	2	1	3	5	4	4	255	4,080	56,777
Route 10	12.1	50	60	14.5	05:15	18:59	13:44	3.0	5.0	4.0	2.0	30	60	30	60	2	1	2	1	6	5	8	2	255	5,355	64,606
Route 11	19.0	50	60	22.8	05:15	18:58	13:43	3.0	5.0	4.0	2.0	30	60	30	60	2	1	2	1	6	5	8	2	255	5,355	101,710
Route 12	14.5	50	60	17.4	05:15	19:01	13:46	3.0	5.0	4.0	2.0	30	60	30	60	2	1	2	1	6	5	8	2	255	5,355	77,501
															Total	**20**	**14**	**21**	**14**					**Total**	**60,308**	**867,464**

SATURDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	Saturday Hours	Saturday Frequency	Saturday Peak Vehicles	Saturday Trips	Saturdays	Annual Revenue Hours	Annual Revenue Miles
Route 1	14.8	50	60	17.7	08:25	16:53	08:28	9.0	60	1	9	52	468	6,908
Route 2	13.0	50	60	15.6	08:25	16:52	08:27	9.0	60	1	9	52	468	6,075
Route 3	12.8	50	60	15.3	08:25	16:55	08:30	9.0	60	1	9	52	468	5,975
Route 4	14.6	50	60	17.5	08:25	16:56	08:31	9.0	60	1	9	52	468	6,826
Route 5B	19.8	80	90	14.9	08:55	17:18	08:23	9.0	90	1	6	52	468	6,179
Route 5N	20.6	80	90	15.4	08:25	16:53	08:28	9.0	90	1	6	52	468	6,416
Route 5S	20.2	80	90	15.1	07:55	16:23	08:28	9.0	90	1	6	52	468	6,294
Route 6	14.5	50	60	17.4	08:25	16:56	08:31	9.0	60	1	9	52	468	6,774
Route 7A	16.6	50	60	19.9	08:25	16:53	08:28	9.0	120	0.5	5	52	234	4,307
Route 7B	16.8	50	60	20.2	09:20	16:10	06:50	7.0	120	0.5	4	52	182	3,498
Route 8	13.5	50	60	16.2	08:25	16:52	08:27	9.0	60	1	9	52	468	6,329
Route 9	13.9	50	60	16.7	08:25	16:55	08:30	9.0	60	1	9	52	468	6,513
Route 10	12.1	50	60	14.5	08:25	16:54	08:29	9.0	60	1	9	52	468	5,646
Route 11	19.0	50	60	22.8	08:25	16:53	08:28	9.0	60	1	9	52	468	8,889
Route 12	14.5	50	60	17.4	08:25	16:56	08:31	9.0	60	1	9	52	468	6,773
									Total	**14**		**Total**	**6,500**	**93,404**

MILEAGE ASSIGNMENTS

Route	Route Length (miles)	Cedar Rapids (mileage)	Cedar Rapids (percentage)	Hiawatha (mileage)	Hiawatha (percentage)	Marion (mileage)	Marion (percentage)
Route 1	14.8	14.8	100%	0.0	0%	0.0	0%
Route 2	13.0	13.0	100%	0.0	0%	0.0	0%
Route 3	12.8	12.8	100%	0.0	0%	0.0	0%
Route 4	14.6	14.6	100%	0.0	0%	0.0	0%
Route 5B	19.8	15.5	78%	4.3	22%	0.0	0%
Route 5N	20.6	10.4	51%	0.0	0%	10.2	50%
Route 5S	20.2	10.3	51%	0.0	0%	9.9	49%
Route 6	14.5	11.5	79%	3.0	21%	0.0	0%
Route 7A	16.6	16.6	100%	0.0	0%	0.0	0%
Route 7B	16.8	16.8	100%	0.0	0%	0.0	0%
Route 8	13.5	13.5	100%	0.0	0%	0.0	0%
Route 9	13.9	13.9	100%	0.0	0%	0.0	0%
Route 10	12.1	12.1	100%	0.0	0%	0.0	0%
Route 11	19.0	19.0	100%	0.0	0%	0.0	0%
Route 12	14.5	14.5	100%	0.0	0%	0.0	0%
Total	236.5	209.1	88%	7.3	3%	20.1	9%

Annual Reveue Hours	Cedar Rapids (mileage)	Hiawatha (mileage)	Marion (mileage)
4,038	4,038	0	0
4,038	4,038	0	0
5,313	5,313	0	0
4,038	4,038	0	0
3,911	3,060	842	0
3,911	1,978	0	1,940
3,911	1,997	0	1,919
5,823	4,626	1,207	0
3,804	3,804	0	0
1,967	1,967	0	0
4,038	4,038	0	0
4,548	4,548	0	0
5,823	5,823	0	0
5,823	5,823	0	0
5,823	5,823	0	0
66,808	60,914	2,049	3,859
Percentage	**0.91**	**0.03**	**0.06**

Annual Reveue Miles	Cedar Rapids (mileage)	Hiawatha (mileage)	Marion (mileage)
59,602	59,602	0	0
52,419	52,419	0	0
67,833	67,833	0	0
58,896	58,896	0	0
51,631	40,409	11,117	0
53,612	27,113	0	26,591
52,593	26,852	0	25,809
84,289	66,965	17,469	0
63,447	63,447	0	0
33,518	33,518	0	0
54,611	54,611	0	0
63,290	63,290	0	0
70,252	70,252	0	0
110,599	110,599	0	0
84,274	84,274	0	0
960,868	880,081	28,586	52,401
Percentage	**0.92**	**0.03**	**0.05**

ALTERNATIVE 1: OPTION A

WEEKDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	AM Peak Hours	Midday Hours	PM Peak Hours	Evening Hours	AM Peak Frequency	Midday Frequency	PM Peak Frequency	Evening Frequency	AM Peak Vehicles	Midday Vehicles	PM Peak Vehicles	Evening Vehicles	AM Peak Trips	Midday Trips	PM Peak Trips	Evening Trips	Weekdays	Annual Revenue Hours	Annual Revenue Miles
Route 1/8 - Walmart	13.7	46.4	55.7	17.7	05:15	18:58	13:43	3.0	5.0	3.0	3.0	60	60	60	60	1	1	1	1	3	5	3	3	255	3,570	48,909
Route 2/9	14.0	51.9	57.0	16.2	05:15	18:57	13:42	3.0	5.0	3.0	3.0	30	60	30	60	2	1	2	1	6	5	6	3	255	5,100	71,400
Route 3	13.4	52.5	57.7	15.3	05:15	19:00	13:45	3.0	6.0	2.0	3.0	30	60	30	60	2	1	2	1	6	6	4	3	255	4,845	64,923
Route 4	14.5	49.7	54.7	17.5	05:15	19:01	13:46	3.0	5.0	3.0	3.0	60	60	60	60	1	1	1	1	3	5	3	3	255	3,570	51,765
Route 5B - Robins	18.2	73.5	80.9	14.9	05:45	18:53	13:08	2.5	5.0	3.0	3.0	90	90	90	90	1	1	1	1	2	3	2	2	255	3,443	41,769
Route 5N - Marion	18.6	72.4	79.6	15.4	05:15	18:23	13:08	3.0	5.0	3.0	2.5	90	90	90	90	1	1	1	1	2	3	2	2	255	3,443	42,687
Route 5S - Walmart	19.4	76.9	84.6	15.1	06:15	19:23	13:08	2.5	5.0	3.0	3.0	90	90	90	90	1	1	1	1	2	3	2	2	255	3,443	44,523
Route 5X - Lindale	12.6	54.0	59.4	14.0	06:45	19:45	13:00	2.5	5.0	3.0	2.5	60	60	60	60	1	1	1	1	3	5	3	3	255	3,315	44,982
Route 6A	14.5	50.1	55.1	17.4	05:15	19:01	13:46	3.0	5.0	4.0	2.0	60	60	60	60	1	1	1	1	3	5	4	2	255	3,570	51,765
Route 6B	15.4	53.1	58.4	17.4	05:15	19:00	13:45	3.0	0.0	3.0	0.0	60	0	60	0	1	0	1	0	3	0	3	0	255	1,530	23,562
Route 7A	16.5	49.8	54.8	19.9	05:15	18:58	13:43	3.0	5.0	4.0	2.0	60	60	60	60	1	1	1	1	3	5	4	2	255	3,570	58,905
Route 7B	16.7	49.6	54.6	20.2	05:45	17:40	11:55	3.0	0.0	4.0	0.0	60	0	60	0	1	0	1	0	3	0	4	0	255	1,785	29,810
Route 10 - 1st Ave SW	13.3	54.3	59.7	14.7	05:15	18:59	13:44	3.0	5.0	4.0	2.0	30	60	30	60	2	1	2	1	6	5	8	2	255	5,355	71,222
Route 11	18.0	47.4	52.1	22.8	05:15	18:58	13:43	3.0	5.0	4.0	2.0	60	60	60	60	1	1	1	1	3	5	4	2	255	3,570	64,260
Route 12	14.6	50.4	55.5	17.4	05:15	19:01	13:46	3.0	5.0	4.0	2.0	30	60	30	60	2	1	2	1	6	5	8	2	255	5,355	78,183
Route 16 - 16th Ave SW	12.9	48.7	53.5	15.9	05:15	19:00	13:45	3.0	5.0	4.0	2.0	60	60	60	60	1	1	1	1	3	5	4	2	255	3,570	46,053
															Total	**20**	**14**	**20**	**14**					**Total**	**59,033**	**834,717**

SATURDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	Saturday Hours	Saturday Frequency	Saturday Peak Vehicles	Saturday Trips	Saturdays	Annual Revenue Hours	Annual Revenue Miles
Route 1/8 - Walmart	13.7	46.4	51.0	17.7	08:25	16:53	08:28	9.0	60	1	9	52	468	6,412
Route 2/9	14.0	51.9	57.0	16.2	08:25	16:52	08:27	9.0	60	1	9	52	468	6,552
Route 3	13.4	52.5	57.7	15.3	08:25	16:55	08:30	9.0	60	1	9	52	468	6,271
Route 4	14.5	49.7	54.7	17.5	08:25	16:56	08:31	9.0	60	1	9	52	468	6,786
Route 5B - Robins	18.2	73.5	80.9	14.9	08:35	16:58	08:23	9.0	90	1	6	52	468	5,678
Route 5N - Marion	18.6	72.4	79.6	15.4	08:15	16:43	08:28	9.0	90	1	6	52	468	5,803
Route 5S - Walmart	19.4	76.9	84.6	15.1	07:55	16:23	08:28	9.0	90	1	6	52	468	6,053
Route 5X - Lindale	12.6	54.0	59.4	14.0	08:55	17:23	08:28	9.0	60	1	9	52	468	5,897
Route 6A	14.5	50.1	55.1	17.4	08:25	16:56	08:31	9.0	60	1	9	52	468	6,786
Route 7A	16.5	49.8	54.8	19.9	08:25	16:53	08:28	9.0	120	0.5	5	52	214	4,290
Route 7B	16.7	49.6	54.6	20.2	09:20	16:10	06:50	7.0	120	0.5	4	52	166	3,474
Route 10 - 1st Ave SW	13.3	54.3	59.7	14.7	08:25	16:54	08:29	9.0	60	1	9	52	468	6,224
Route 11	18.0	47.4	52.1	22.8	08:25	16:53	08:28	9.0	60	1	9	52	468	8,424
Route 12	14.6	50.4	55.5	17.4	08:25	16:54	08:29	9.0	60	1	9	52	468	6,833
Route 16 - 16th Ave SW	12.9	48.7	53.5	15.9	08:25	16:53	08:28	9.0	60	1	9	52	468	6,037
									Total	**14**		**Total**	**6,463**	**91,520**
											Scenario Total		**65,496**	**926,237**
											Net Change		**-0.02**	**-0.04**

MILEAGE ASSIGNMENTS

Route	Route Length (miles)	Cedar Rapids (mileage)	Cedar Rapids (percentage)	Hiawatha (mileage)	Hiawatha (percentage)	Marion (mileage)	Marion (percentage)	Robins (mileage)	Robins (percentage)
Route 1/8 - Walmart	13.7	13.7	100%	0.0	0%	0.0	0%	0.0	0%
Route 2/9	14.0	14.0	100%	0.0	0%	0.0	0%	0.0	0%
Route 3	13.4	13.4	100%	0.0	0%	0.0	0%	0.0	0%
Route 4	14.5	14.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 5B - Robins	18.2	17.0	93%	0.0	0%	0.0	0%	1.2	7%
Route 5N - Marion	18.6	10.6	57%	0.0	0%	8.0	43%	0.0	0%
Route 5S - Walmart	19.4	10.8	56%	0.0	0%	8.6	44%	0.0	0%
Route 5X - Lindale	12.6	11.8	94%	0.0	0%	0.8	6%	0.0	0%
Route 6A	14.5	11.5	79%	3.0	21%	0.0	0%	0.0	0%
Route 6B	15.4	11.0	71%	4.4	29%	0.0	0%	0.0	0%
Route 7A	16.5	16.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 7B	16.7	16.7	100%	0.0	0%	0.0	0%	0.0	0%
Route 10 - 1st Ave SW	13.3	13.3	100%	0.0	0%	0.0	0%	0.0	0%
Route 11	18.0	18.0	100%	0.0	0%	0.0	0%	0.0	0%
Route 12	14.6	14.6	100%	0.0	0%	0.0	0%	0.0	0%
Route 16 - 16th Ave SW	12.9	12.9	100%	0.0	0%	0.0	0%	0.0	0%
Total	246.3	220.3	89%	7.4	3%	17.4	7%	1.2	0%

Annual Revenue Hours	Cedar Rapids (mileage)	Hiawatha (mileage)	Marion (mileage)	Robins (mileage)
4,038	4,038	0	0	0
5,568	5,568	0	0	0
5,313	5,313	0	0	0
4,038	4,038	0	0	0
3,911	3,653	0	0	258
3,911	2,229	0	1,682	0
3,911	2,177	0	1,734	0
3,783	3,543	0	240	0
4,038	3,203	835	0	0
1,530	1,093	437	0	0
3,784	3,784	0	0	0
1,951	1,951	0	0	0
5,823	5,823	0	0	0
4,038	4,038	0	0	0
5,823	5,823	0	0	0
4,038	4,038	0	0	0
65,496	60,310	1,273	3,656	258
Percentage	**0.921**	**0.019**	**0.056**	**0.004**

Annual Revenue Miles	Cedar Rapids (hours)	Hiawatha (hours)	Marion (hours)	Robins (hours)
55,321	55,321	0	0	0
77,952	77,952	0	0	0
71,194	71,194	0	0	0
58,551	58,551	0	0	0
47,447	44,319	0	0	3,128
48,490	27,634	0	20,856	0
50,576	28,156	0	22,420	0
50,879	47,648	0	3,230	0
58,551	46,437	12,114	0	0
23,562	16,830	6,732	0	0
63,195	63,195	0	0	0
33,283	33,283	0	0	0
77,446	77,446	0	0	0
72,684	72,684	0	0	0
85,016	85,016	0	0	0
52,090	52,090	0	0	0
926,237	857,756	18,846	46,507	3,128
Percentage	**0.926**	**0.020**	**0.050**	**0.003**

ALTERNATIVE 1: OPTION B

WEEKDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	AM Peak Hours	Midday Hours	PM Peak Hours	Evening Hours	AM Peak Frequency	Midday Frequency	PM Peak Frequency	Evening Frequency	AM Peak Vehicles	Midday Vehicles	PM Peak Vehicles	Evening Vehicles	AM Peak Trips	Midday Trips	PM Peak Trips	Evening Trips	Weekdays	Annual Revenue Hours	Annual Revenue Miles
Route 1 - O Street	13.9	47.1	56.5	17.7	05:15	18:58	13:43	3.0	5.0	3.0	3.0	60	60	60	60	1	1	1	1	3	5	3	3	255	3,570	49,623
Route 2/9	14.0	51.9	57.0	16.2	05:15	18:57	13:42	3.0	5.0	3.0	3.0	30	60	30	60	2	1	2	1	6	5	6	3	255	5,100	71,400
Route 3	13.4	52.5	57.7	15.3	05:15	19:00	13:45	3.0	6.0	2.0	3.0	30	60	30	60	2	1	2	1	6	6	4	3	255	4,845	64,923
Route 4	14.5	49.7	54.7	17.5	05:15	19:01	13:46	3.0	5.0	3.0	3.0	60	60	60	60	1	1	1	1	3	5	3	3	255	3,570	51,765
Route 5B - Robins	18.2	73.5	80.9	14.9	05:45	18:53	13:08	2.5	5.0	3.0	3.0	90	90	90	90	1	1	1	1	2	3	2	2	255	3,443	41,769
Route 5N - Marion	18.6	72.4	79.6	15.4	05:15	18:23	13:08	3.0	5.0	3.0	2.5	90	90	90	90	1	1	1	1	2	3	2	2	255	3,443	42,687
Route 5S - Walmart	19.4	76.9	84.6	15.1	06:15	19:23	13:08	2.5	5.0	3.0	3.0	90	90	90	90	1	1	1	1	2	3	2	2	255	3,443	44,523
Route 5X - Lindale	12.6	54.0	59.4	14.0	06:45	19:45	13:00	2.5	5.0	3.0	2.5	60	60	60	60	1	1	1	1	3	5	3	3	255	3,315	44,982
Route 6A	14.5	50.1	55.1	17.4	05:15	19:01	13:46	3.0	5.0	4.0	2.0	60	60	60	60	1	1	1	1	3	5	4	2	255	3,570	51,765
Route 6B	15.4	53.1	58.4	17.4	05:15	19:00	13:45	3.0	0.0	3.0	0.0	60	0	60	0	1	0	1	0	3	0	3	0	255	1,530	23,562
Route 7A	16.5	49.8	54.8	19.9	05:15	18:58	13:43	3.0	5.0	4.0	2.0	60	60	60	60	1	1	1	1	3	5	4	2	255	3,570	58,905
Route 7B	16.7	49.6	54.6	20.2	05:45	17:40	11:55	3.0	0.0	4.0	0.0	60	0	60	0	1	0	1	0	3	0	4	0	255	1,785	29,810
Route 8 - Johnson Ave	14.5	52.7	58.0	16.5	05:15	19:00	13:45	3.0	5.0	3.0	3.0	60	60	60	60	1	1	1	1	3	5	3	3	255	3,570	51,765
Route 10 - 1st Ave SW	10.2	41.6	45.8	14.7	05:15	18:59	13:44	3.0	5.0	4.0	2.0	30	60	30	60	2	1	2	1	6	5	8	2	255	5,355	54,621
Route 11	18.0	47.4	52.1	22.8	05:15	18:58	13:43	3.0	5.0	4.0	2.0	60	60	60	60	1	1	1	1	3	5	4	2	255	3,570	64,260
Route 12	14.6	50.4	55.5	17.4	05:15	19:01	13:46	3.0	5.0	4.0	2.0	30	60	30	60	2	1	2	1	6	5	8	2	255	5,355	78,183
															Total	**20**	**14**	**20**	**14**					**Total**	**59,033**	**824,543**

SATURDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	Saturday Hours	Saturday Frequency	Saturday Peak Vehicles	Saturday Trips	Saturdays	Annual Revenue Hours	Annual Revenue Miles
Route 1 - O Street	13.9	47.1	51.8	17.7	08:25	16:53	08:28	9.0	60	1	9	52	468	6,505
Route 2/9	14.0	51.9	57.0	16.2	08:25	16:52	08:27	9.0	60	1	9	52	468	6,552
Route 3	13.4	52.5	57.7	15.3	08:25	16:55	08:30	9.0	60	1	9	52	468	6,271
Route 4	14.5	49.7	54.7	17.5	08:25	16:56	08:31	9.0	60	1	9	52	468	6,786
Route 5B - Robins	18.2	73.5	80.9	14.9	08:35	16:58	08:23	9.0	90	1	6	52	468	5,678
Route 5N - Marion	18.6	72.4	79.6	15.4	08:15	16:43	08:28	9.0	90	1	6	52	468	5,803
Route 5S - Walmart	19.4	76.9	84.6	15.1	07:55	16:23	08:28	9.0	90	1	6	52	468	6,053
Route 5X - Lindale	12.6	54.0	59.4	14.0	08:55	17:23	08:28	9.0	60	1	9	52	468	5,897
Route 6A	14.5	50.1	55.1	17.4	08:25	16:56	08:31	9.0	60	1	9	52	468	6,786
Route 7A	16.5	49.8	54.8	19.9	08:25	16:53	08:28	9.0	120	0.5	5	52	214	4,290
Route 7B	16.7	49.6	54.6	20.2	09:20	16:10	06:50	7.0	120	0.5	4	52	166	3,474
Route 8 - Johnson Ave	14.5	52.7	58.0	16.5	08:30	17:00	08:30	7.0	60	1	7	52	364	5,278
Route 10 - 1st Ave SW	13.3	54.3	59.7	14.7	08:25	16:54	08:29	9.0	60	1	9	52	468	6,224
Route 11	18.0	47.4	52.1	22.8	08:25	16:53	08:28	9.0	60	1	9	52	468	8,424
Route 12	14.6	50.4	55.5	17.4	08:25	16:54	08:29	9.0	60	1	9	52	468	6,833
									Total	**14**		**Total**	**6,359**	**90,854**
											Scenario Total		**65,392**	**915,397**
											Net Change		**-0.02**	**-0.05**

MILEAGE ASSIGNMENTS

Route	Route Length (miles)	Cedar Rapids (mileage)	Cedar Rapids (percentage)	Hiawatha (mileage)	Hiawatha (percentage)	Marion (mileage)	Marion (percentage)	Robins (mileage)	Robins (percentage)
Route 1 - O Street	13.9	13.9	100%	0.0	0%	0.0	0%	0.0	0%
Route 2/9	14.0	14.0	100%	0.0	0%	0.0	0%	0.0	0%
Route 3	13.4	13.4	100%	0.0	0%	0.0	0%	0.0	0%
Route 4	14.5	14.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 5B - Robins	18.2	17.0	93%	0.0	0%	0.0	0%	1.2	7%
Route 5N - Marion	18.6	10.6	57%	0.0	0%	8.0	43%	0.0	0%
Route 5S - Walmart	19.4	10.8	56%	0.0	0%	8.6	44%	0.0	0%
Route 5X - Lindale	12.6	11.8	94%	0.0	0%	0.8	6%	0.0	0%
Route 6A	14.5	11.5	79%	3.0	21%	0.0	0%	0.0	0%
Route 6B	15.4	11.0	71%	4.4	29%	0.0	0%	0.0	0%
Route 7A	16.5	16.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 7B	16.7	16.7	100%	0.0	0%	0.0	0%	0.0	0%
Route 8 - Johnson Ave	14.5	14.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 10 - 1st Ave SW	10.2	10.2	100%	0.0	0%	0.0	0%	0.0	0%
Route 11	18.0	18.0	100%	0.0	0%	0.0	0%	0.0	0%
Route 12	14.6	14.6	100%	0.0	0%	0.0	0%	0.0	0%
Total	245.0	219.0	89%	7.4	3%	17.4	7%	1.2	0%

Annual Reveue Hours	Cedar Rapids (mileage)	Hiawatha (mileage)	Marion (mileage)	Robins (mileage)
4,038	4,038	0	0	0
5,568	5,568	0	0	0
5,313	5,313	0	0	0
4,038	4,038	0	0	0
3,911	3,653	0	0	258
3,911	2,229	0	1,682	0
3,911	2,177	0	1,734	0
3,783	3,543	0	240	0
4,038	3,203	835	0	0
1,530	1,093	437	0	0
3,784	3,784	0	0	0
1,951	1,951	0	0	0
3,934	3,934	0	0	0
5,823	5,823	0	0	0
4,038	4,038	0	0	0
5,823	5,823	0	0	0
65,392	60,206	1,273	3,656	258
Percentage	**0.921**	**0.019**	**0.056**	**0.004**

Annual Reveue Miles	Cedar Rapids (hours)	Hiawatha (hours)	Marion (hours)	Robins (hours)
56,128	56,128	0	0	0
77,952	77,952	0	0	0
71,194	71,194	0	0	0
58,551	58,551	0	0	0
47,447	44,319	0	0	3,128
48,490	27,634	0	20,856	0
50,576	28,156	0	22,420	0
50,879	47,648	0	3,230	0
58,551	46,437	12,114	0	0
23,562	16,830	6,732	0	0
63,195	63,195	0	0	0
33,283	33,283	0	0	0
57,043	57,043	0	0	0
60,845	60,845	0	0	0
72,684	72,684	0	0	0
85,016	85,016	0	0	0
915,397	846,916	18,846	46,507	3,128
Percentage	**0.925**	**0.021**	**0.051**	**0.003**

ALTERNATIVE 2

WEEKDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	AM Peak Hours	Midday Hours	PM Peak Hours	Evening Hours	Night Hours	AM Peak Frequency	Midday Frequency	PM Peak Frequency	Evening Frequency	Night Frequency	AM Peak Vehicles	Midday Vehicles	PM Peak Vehicles	Evening Vehicles	Night Vehicles	AM Peak Trips	Midday Trips	PM Peak Trips	Evening Trips	Night Trips	Weekdays	Annual Revenue Hours	Annual Revenue Miles
Route 1/8 - Walmart	13.7	46.4	51.0	17.7	05:15	18:58	13:43	3.0	5.0	3.0	3.0	0.0	60	60	60	60	0	1	1	1	1	0	3	5	3	3	0	255	3,570	48,909
Route 2/9	14.0	51.9	57.0	16.2	05:15	18:57	13:42	3.0	5.0	3.0	3.0	0.0	60	60	60	60	0	1	1	1	1	0	3	5	3	3	0	255	3,570	49,980
Route 3	13.4	52.5	57.7	15.3	05:15	22:00	16:45	3.0	6.0	2.0	3.0	3.0	60	60	60	60	60	1	1	1	1	1	3	6	2	3	3	255	4,335	58,089
Route 4	14.5	49.7	54.7	17.5	05:15	19:01	13:46	3.0	5.0	3.0	3.0	0.0	60	60	60	60	0	1	1	1	1	0	3	5	3	3	0	255	3,570	51,765
Route 5B - Robbins	18.2	73.5	80.9	14.9	05:15	18:23	13:08	3.0	5.0	3.0	2.5	0.0	90	90	90	90	0	1	1	1	1	0	2	3	2	2	0	255	3,443	41,769
Route 5N - Marion	18.6	72.4	79.6	15.4	06:15	19:23	13:08	2.5	5.0	3.0	3.0	0.0	90	90	90	90	0	1	1	1	1	0	2	3	2	2	0	255	3,443	42,687
Route 5S - Walmart	19.4	76.9	84.6	15.1	05:45	18:53	13:08	2.5	5.0	3.0	3.0	0.0	90	90	90	90	0	1	1	1	1	0	2	3	2	2	0	255	3,443	44,523
Route 5X - Lindale	12.6	54.0	59.4	14.0	19:00	22:00	03:00	0.0	0.0	0.0	0.0	3.0	0	0	0	0	60	0	0	0	0	1	0	0	0	0	3	255	765	9,639
Route 6A	14.5	50.1	55.1	17.4	05:15	22:00	16:45	3.0	5.0	4.0	2.0	3.0	60	60	60	60	60	1	1	1	1	1	3	5	4	2	3	255	4,335	62,858
Route 6B	15.4	53.1	58.4	17.4	05:15	19:00	13:45	3.0	0.0	3.0	0.0	0.0	60	0	60	0	0	1	0	1	0	0	3	0	3	0	0	255	1,530	23,562
Route 7A	16.5	49.8	54.8	19.9	05:15	22:00	16:45	3.0	5.0	4.0	2.0	3.0	60	60	60	60	60	1	1	1	1	1	3	5	4	2	3	255	4,335	71,528
Route 7B	16.7	49.6	54.6	20.2	05:45	17:40	11:55	3.0	0.0	3.0	0.0	0.0	60	0	60	0	0	1	0	1	0	0	3	0	3	0	0	255	1,530	25,551
Route 10 - 1st Ave SW	13.3	54.3	59.7	14.7	05:15	22:00	16:45	3.0	5.0	4.0	2.0	3.0	60	60	60	60	60	1	1	1	1	1	3	5	4	2	3	255	4,335	57,656
Route 11	18.0	47.4	52.1	22.8	05:15	18:58	13:43	3.0	5.0	4.0	2.0	0.0	60	60	60	60	0	1	1	1	1	0	3	5	4	2	0	255	3,570	64,260
Route 12	14.6	50.4	55.5	17.4	05:15	22:00	16:45	3.0	5.0	4.0	2.0	3.0	60	60	60	60	60	1	1	1	1	1	3	5	4	2	3	255	4,335	63,291
Route 16 - 16th Ave SW	12.9	48.7	53.5	15.9	05:15	19:00	13:45	3.0	5.0	4.0	2.0	0.0	60	60	60	60	0	1	1	1	1	0	3	5	4	2	0	255	3,570	46,053
																	Total	**15**	**13**	**15**	**13**	**6**						**Total**	**53,678**	**762,119**

SATURDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	Saturday Hours	Saturday Frequency	Saturday Peak Vehicles	Saturday Trips	Saturdays	Annual Revenue Hours	Annual Revenue Miles
Route 1/8 - Walmart	13.7	46.4	51.0	17.7	08:25	16:53	08:28	9.0	60	1	9	52	468	6,412
Route 2/9	14.0	51.9	57.0	16.2	08:25	16:52	08:27	9.0	60	1	9	52	468	6,552
Route 3	13.4	52.5	57.7	15.3	08:25	16:55	08:30	9.0	60	1	9	52	468	6,271
Route 4	14.5	49.7	54.7	17.5	08:25	16:56	08:31	9.0	60	1	9	52	468	6,786
Route 5B - Robbins	18.2	73.5	80.9	14.9	08:35	16:58	08:23	9.0	90	1	6	52	468	5,678
Route 5N - Marion	18.6	72.4	79.6	15.4	08:15	16:43	08:28	9.0	90	1	6	52	468	5,803
Route 5S - Walmart	19.4	76.9	84.6	15.1	07:55	16:23	08:28	9.0	90	1	6	52	468	6,053
Route 6A	14.5	50.1	55.1	17.4	08:25	16:56	08:31	9.0	60	1	9	52	468	6,786
Route 7A	16.5	49.8	54.8	19.9	08:25	16:53	08:28	9.0	120	0.5	5	52	214	4,290
Route 7B	16.7	49.6	54.6	20.2	09:20	16:10	06:50	7.0	120	0.5	4	52	166	3,474
Route 10 - 1st Ave SW	13.3	54.3	59.7	14.7	08:25	16:54	08:29	9.0	60	1	9	52	468	6,224
Route 11	18.0	47.4	52.1	22.8	08:25	16:53	08:28	9.0	60	1	9	52	468	8,424
Route 12	14.6	50.4	55.5	17.4	08:25	16:54	08:29	9.0	60	1	9	52	468	6,833
Route 16 - 16th Ave SW	12.9	48.7	53.5	15.9	08:25	16:53	08:28	9.0	60	1	9	52	468	6,037
									Total	**13**		**Total**	**5,995**	**85,623**
											Scenario Total		**59,673**	**847,742**
											Net Change		**-0.11**	**-0.12**

MILEAGE ASSIGNMENTS

Route	Route Length (miles)	Cedar Rapids (mileage)	Cedar Rapids (percentage)	Hiawatha (mileage)	Hiawatha (percentage)	Marion (mileage)	Marion (percentage)	Robins (mileage)	Robins (percentage)
Route 1/8 - Walmart	13.7	13.7	100%	0.0	0%	0.0	0%	0.0	0%
Route 2/9	14.0	14.0	100%	0.0	0%	0.0	0%	0.0	0%
Route 3	13.4	13.4	100%	0.0	0%	0.0	0%	0.0	0%
Route 4	14.5	14.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 5B - Robbins	18.2	17.0	93%	0.0	0%	0.0	0%	1.2	7%
Route 5N - Marion	18.6	10.6	57%	0.0	0%	8.0	43%	0.0	0%
Route 5S - Walmart	19.4	10.8	56%	0.0	0%	8.6	44%	0.0	0%
Route 5X - Lindale	12.6	11.8	94%	0.0	0%	0.8	6%	0.0	0%
Route 6A	14.5	11.5	79%	3.0	21%	0.0	0%	0.0	0%
Route 6B	15.4	11.0	71%	4.4	29%	0.0	0%	0.0	0%
Route 7A	16.5	16.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 7B	16.7	16.7	100%	0.0	0%	0.0	0%	0.0	0%
Route 10 - 1st Ave SW	13.3	13.3	100%	0.0	0%	0.0	0%	0.0	0%
Route 11	18.0	18.0	100%	0.0	0%	0.0	0%	0.0	0%
Route 12	14.6	14.6	100%	0.0	0%	0.0	0%	0.0	0%
Route 16 - 16th Ave SW	12.9	12.9	100%	0.0	0%	0.0	0%	0.0	0%
Total	246.3	220.3	89%	7.4	3%	17.4	7%	1.2	0%

Annual Reveue Hours	Cedar Rapids (mileage)	Hiawatha (mileage)	Marion (mileage)	Robins (mileage)
4,038	4,038	0	0	0
4,038	4,038	0	0	0
4,803	4,803	0	0	0
4,038	4,038	0	0	0
3,911	3,653	0	0	258
3,911	2,229	0	1,682	0
3,911	2,173	0	1,738	0
765	716	0	49	0
4,803	3,809	994	0	0
1,530	1,093	437	0	0
4,549	4,549	0	0	0
1,696	1,696	0	0	0
4,803	4,803	0	0	0
4,038	4,038	0	0	0
4,803	4,803	0	0	0
4,038	4,038	0	0	0
59,673	54,516	1,431	3,468	258
Percentage	**0.914**	**0.024**	**0.058**	**0.004**

Annual Reveue Miles	Cedar Rapids (hours)	Hiawatha (hours)	Marion (hours)	Robins (hours)
55,321	55,321	0	0	0
56,532	56,532	0	0	0
64,360	64,360	0	0	0
58,551	58,551	0	0	0
47,447	44,319	0	0	3,128
48,490	27,634	0	20,856	0
50,576	28,103	0	22,472	0
9,639	9,027	0	612	0
69,644	55,235	14,409	0	0
23,562	16,830	6,732	0	0
75,818	75,818	0	0	0
29,025	29,025	0	0	0
63,880	63,880	0	0	0
72,684	72,684	0	0	0
70,124	70,124	0	0	0
52,090	52,090	0	0	0
847,742	779,532	21,141	43,940	3,128
Percentage	**0.920**	**0.025**	**0.052**	**0.004**

ALTERNATIVE 3

WEEKDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	AM Peak Hours	Midday Hours	PM Peak Hours	Evening Hours	Night Hours	AM Peak Frequency	Midday Frequency	PM Peak Frequency	Evening Frequency	Night Frequency	AM Peak Vehicles	Midday Vehicles	PM Peak Vehicles	Evening Vehicles	Night Vehicles	AM Peak Trips	Midday Trips	PM Peak Trips	Evening Trips	Night Trips	Weekdays	Annual Revenue Hours	Annual Revenue Miles
Route 1/8 - Walmart	13.7	46.4	51.0	17.7	05:15	22:00	16:45	3.0	5.0	3.0	3.0	3.0	60	60	60	60	60	1	1	1	1	1	3	5	3	3	3	255	4,335	59,390
Route 2/9	14.0	51.9	57.0	16.2	05:15	22:00	16:45	3.0	5.0	3.0	3.0	3.0	30	60	30	60	60	2	1	2	1	1	6	5	6	3	3	255	5,865	82,110
Route 3	13.4	52.5	57.7	15.3	05:15	22:00	16:45	3.0	6.0	2.0	3.0	3.0	30	60	30	60	60	2	1	2	1	1	6	6	4	3	3	255	5,610	75,174
Route 4	14.5	49.7	54.7	17.5	05:15	19:00	13:45	3.0	5.0	3.0	3.0	0.0	60	60	60	60	0	1	1	1	1	0	3	5	3	3	0	255	3,570	51,765
Route 5B - Robins	18.2	73.5	80.9	14.9	05:45	22:00	16:15	2.5	5.0	3.0	3.0	3.0	90	90	90	90	60	1	1	1	1	1.3	2	3	2	2	3	255	4,474	55,692
Route 5N - Marion	18.6	72.4	79.6	15.4	05:15	18:23	13:08	3.0	5.0	3.0	2.5	0.0	90	90	90	90	0	1	1	1	1	0	2	3	2	2	0	255	3,443	42,687
Route 5S - Walmart	19.4	76.9	84.6	15.1	06:15	22:00	15:45	2.5	5.0	3.0	3.0	3.0	90	90	90	90	60	1	1	1	1	1.4	2	3	2	2	3	255	4,521	59,364
Route 5X - Lindale	12.6	54.0	59.4	14.0	06:45	19:45	13:00	2.5	5.0	3.0	2.5	0.0	60	60	60	60	0	1	1	1	1	0	3	5	3	3	0	255	3,315	44,982
Route 6A	14.5	50.1	55.1	17.4	05:15	22:00	16:45	3.0	5.0	4.0	2.0	3.0	60	60	60	60	60	1	1	1	1	1	3	5	4	2	3	255	4,335	62,858
Route 6B	15.4	53.1	58.4	17.4	05:15	19:00	13:45	3.0	0.0	3.0	0.0	0.0	60	0	60	0	0	1	0	1	0	0	3	0	3	0	0	255	1,530	23,562
Route 7A	16.5	49.8	54.8	19.9	05:15	22:00	16:45	3.0	5.0	4.0	2.0	3.0	60	60	60	60	60	1	1	1	1	1	3	5	4	2	3	255	4,335	71,528
Route 7B	16.7	49.6	54.6	20.2	05:45	17:40	11:55	3.0	0.0	4.0	0.0	0.0	60	0	60	0	0	1	0	1	0	0	3	0	4	0	0	255	1,785	29,810
Route 10 - 1st Ave SW	13.3	54.3	59.7	14.7	05:15	22:00	16:45	3.0	5.0	4.0	2.0	3.0	30	60	30	60	60	2	1	2	1	1	6	5	8	2	3	255	6,120	81,396
Route 11	18.0	47.4	52.1	22.8	05:15	19:00	13:45	3.0	5.0	4.0	2.0	0.0	60	60	60	60	0	1	1	1	1	0	3	5	4	2	0	255	3,570	64,260
Route 12	14.6	50.4	55.5	17.4	05:15	22:00	16:45	3.0	5.0	4.0	2.0	3.0	30	60	30	60	60	2	1	2	1	1	6	5	8	2	3	255	6,120	89,352
Route 16 - 16th Ave SW	12.9	48.7	53.5	15.9	05:15	19:00	13:45	3.0	5.0	4.0	2.0	0.0	60	60	60	60	0	1	1	1	1	0	3	5	4	2	0	255	3,570	46,053
																	Total	**20**	**14**	**20**	**14**	**10**						**Total**	**66,498**	**939,981**

SATURDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	Saturday Hours	Saturday Frequency	Saturday Peak Vehicles	Saturday Trips	Saturdays	Annual Revenue Hours	Annual Revenue Miles
Route 1/8 - Walmart	13.7	46.4	51.0	17.7	08:25	16:53	08:28	9.0	60	1	9	52	468	6,412
Route 2/9	14.0	51.9	57.0	16.2	08:25	16:52	08:27	9.0	60	1	9	52	468	6,552
Route 3	13.4	52.5	57.7	15.3	08:25	16:55	08:30	9.0	60	1	9	52	468	6,271
Route 4	14.5	49.7	54.7	17.5	08:25	16:56	08:31	9.0	60	1	9	52	468	6,786
Route 5B - Robins	18.2	73.5	80.9	14.9	08:35	16:58	08:23	9.0	90	1	6	52	468	5,678
Route 5N - Marion	18.6	72.4	79.6	15.4	08:15	16:43	08:28	9.0	90	1	6	52	468	5,803
Route 5S - Walmart	19.4	76.9	84.6	15.1	07:55	16:23	08:28	9.0	90	1	6	52	468	6,053
Route 5X - Lindale	12.6	54.0	59.4	14.0	08:55	17:23	08:28	9.0	60	1	9	52	468	5,897
Route 6A	14.5	50.1	55.1	17.4	08:25	16:56	08:31	9.0	60	1	9	52	468	6,786
Route 7A	16.5	49.8	54.8	19.9	08:25	16:53	08:28	9.0	120	0.5	5	52	214	4,290
Route 7B	16.7	49.6	54.6	20.2	09:20	16:10	06:50	7.0	120	0.5	4	52	166	3,474
Route 10 - 1st Ave SW	13.3	54.3	59.7	14.7	08:25	16:54	08:29	9.0	60	1	9	52	468	6,224
Route 11	18.0	47.4	52.1	22.8	08:25	16:53	08:28	9.0	60	1	9	52	468	8,424
Route 12	14.6	50.4	55.5	17.4	08:25	16:54	08:29	9.0	60	1	9	52	468	6,833
Route 16 - 16th Ave SW	12.9	48.7	53.5	15.9	08:25	16:53	08:28	9.0	60	1	9	52	468	6,037
									Total	**14**		**Total**	**6,463**	**91,520**
											Scenario Total		**72,961**	**1,031,501**
											Net Change		**0.09**	**0.07**

MILEAGE ASSIGNMENTS

Route	Route Length (miles)	Cedar Rapids (mileage)	Cedar Rapids (percentage)	Hiawatha (mileage)	Hiawatha (percentage)	Marion (mileage)	Marion (percentage)	Robins (mileage)	Robins (percentage)
Route 1/8 - Walmart	13.7	13.7	100%	0.0	0%	0.0	0%	0.0	0%
Route 2/9	14.0	14.0	100%	0.0	0%	0.0	0%	0.0	0%
Route 3	13.4	13.4	100%	0.0	0%	0.0	0%	0.0	0%
Route 4	14.5	14.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 5B - Robbins	18.2	17.0	93%	0.0	0%	0.0	0%	1.2	7%
Route 5N - Marion	18.6	10.6	57%	0.0	0%	8.0	43%	0.0	0%
Route 5S - Walmart	19.4	10.8	56%	0.0	0%	8.6	44%	0.0	0%
Route 5X - Lindale	12.6	11.8	94%	0.0	0%	0.8	6%	0.0	0%
Route 6A	14.5	11.5	79%	3.0	21%	0.0	0%	0.0	0%
Route 6B	15.4	11.0	71%	4.4	29%	0.0	0%	0.0	0%
Route 7A	16.5	16.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 7B	16.7	16.7	100%	0.0	0%	0.0	0%	0.0	0%
Route 10 - 1st Ave SW	13.3	13.3	100%	0.0	0%	0.0	0%	0.0	0%
Route 11	18.0	18.0	100%	0.0	0%	0.0	0%	0.0	0%
Route 12	14.6	14.6	100%	0.0	0%	0.0	0%	0.0	0%
Route 16 - 16th Ave SW	12.9	12.9	100%	0.0	0%	0.0	0%	0.0	0%
Total	246.3	220.3	89%	7.4	3%	17.4	7%	1.2	0%

Annual Reveue Hours	Cedar Rapids (mileage)	Hiawatha (mileage)	Marion (mileage)	Robins (mileage)
4,803	4,803	0	0	0
6,333	6,333	0	0	0
6,078	6,078	0	0	0
4,038	4,038	0	0	0
4,942	4,616	0	0	326
3,911	2,229	0	1,682	0
4,989	2,773	0	2,217	0
3,783	3,543	0	240	0
4,803	3,809	994	0	0
1,530	1,093	437	0	0
4,549	4,549	0	0	0
1,951	1,951	0	0	0
6,588	6,588	0	0	0
4,038	4,038	0	0	0
6,588	6,588	0	0	0
4,038	4,038	0	0	0
72,961	67,065	1,431	4,139	326
Percentage	**0.919**	**0.020**	**0.057**	**0.004**

Annual Reveue Miles	Cedar Rapids (hours)	Hiawatha (hours)	Marion (hours)	Robins (hours)
65,801	65,801	0	0	0
88,662	88,662	0	0	0
81,445	81,445	0	0	0
58,551	58,551	0	0	0
61,370	57,324	0	0	4,046
48,490	27,634	0	20,856	0
65,417	36,350	0	29,067	0
50,879	47,648	0	3,230	0
69,644	55,235	14,409	0	0
23,562	16,830	6,732	0	0
75,818	75,818	0	0	0
33,283	33,283	0	0	0
87,620	87,620	0	0	0
72,684	72,684	0	0	0
96,185	96,185	0	0	0
52,090	52,090	0	0	0
1,031,501	953,161	21,141	53,153	4,046
Percentage	**0.924**	**0.020**	**0.052**	**0.004**

ALTERNATIVE 4

WEEKDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	AM Peak Hours	Midday Hours	PM Peak Hours	Evening Hours	Night Hours	AM Peak Frequency	Midday Frequency	PM Peak Frequency	Evening Frequency	Night Frequency	AM Peak Vehicles	Midday Vehicles	PM Peak Vehicles	Evening Vehicles	Night Vehicles	AM Peak Trips	Midday Trips	PM Peak Trips	Evening Trips	Night Trips	Weekdays	Annual Revenue Hours	Annual Revenue Miles
Route 1 - O Street SW	13.9	47.1	51.8	17.7	05:15	23:00	17:45	3.0	5.0	3.0	3.0	4.0	30	60	30	60	60	2	1	2	1	1	6	5	6	3	4	255	6,120	85,068
Route 2	11.5	42.6	46.9	16.2	05:15	23:00	17:45	3.0	5.0	3.0	3.0	4.0	30	60	30	60	60	2	1	2	1	1	6	5	6	3	4	255	6,120	70,380
Route 3	13.4	52.5	57.7	15.3	05:15	23:00	17:45	3.0	6.0	2.0	3.0	4.0	15	30	15	30	60	4	2	4	2	1	12	12	8	6	4	255	10,720	143,514
Route 4	14.5	49.7	54.7	17.5	05:15	23:00	17:45	3.0	5.0	3.0	3.0	4.0	30	60	30	60	60	2	1	2	1	1	6	5	6	3	4	255	6,120	88,740
Route 5X - Lindale	12.6	54.0	59.4	14.0	05:15	23:00	17:45	3.0	5.0	4.0	2.0	4.0	15	15	15	15	30	4	4	4	4	2	12	20	16	8	8	255	16,320	205,632
Route 6	14.5	50.1	55.1	17.4	05:15	23:00	17:45	3.0	5.0	4.0	2.0	4.0	15	30	15	30	60	4	2	4	2	1	12	10	16	4	4	255	11,730	170,085
Route 7A	16.5	49.8	54.8	19.9	05:15	23:00	17:45	3.0	5.0	4.0	2.0	4.0	30	30	30	30	60	2	2	2	2	1	6	10	8	4	4	255	8,160	134,640
Route 7B	16.7	49.6	54.6	20.2	05:45	17:40	11:55	3.0	0.0	4.0	0.0	0.0	30	0	30	0	0	2	0	2	0	0	6	0	8	0	0	255	3,570	59,619
Route 8 - Johnson Ave	14.5	49.1	54.0	17.7	05:15	23:00	17:45	3.0	5.0	3.0	3.0	4.0	30	60	30	60	60	2	1	2	1	1	6	5	6	3	4	255	6,120	88,740
Route 9	10.8	40.0	44.0	16.2	05:15	23:00	17:45	3.0	5.0	3.0	3.0	4.0	30	60	30	60	60	2	1	2	1	1	6	5	6	3	4	255	6,120	66,096
Route 10 - 1st Ave SW	10.2	41.6	45.8	14.7	05:15	23:00	17:45	3.0	5.0	4.0	2.0	4.0	15	30	15	30	60	4	2	4	2	1	12	10	16	4	4	255	11,730	119,646
Route 11	18.0	47.4	52.1	22.8	05:15	23:00	17:45	3.0	5.0	4.0	2.0	4.0	30	60	30	60	60	2	1	2	1	1	6	5	8	2	4	255	6,375	114,750
Route 12	14.6	50.4	55.5	17.4	05:15	23:00	17:45	3.0	5.0	4.0	2.0	4.0	15	30	15	30	60	4	2	4	2	1	12	10	16	4	4	255	11,730	171,258
Route 16 - 16th Ave SW	12.9	48.7	53.5	15.9	05:15	23:00	17:45	3.0	5.0	4.0	2.0	4.0	30	60	30	60	60	2	1	2	1	1	6	5	8	2	4	255	6,375	82,238
NCC Blairs Ferry	12.2	44.6	49.1	16.4	05:15	23:00	17:45	3.0	5.0	4.0	2.0	4.0	60	60	60	60	60	1	1	1	1	1	3	5	4	2	4	255	4,590	55,998
NCC Hiawatha-Robbins	13.0	47.6	52.3	16.4	05:15	23:00	17:45	3.0	5.0	4.0	2.0	4.0	60	60	60	60	60	1	1	1	1	1	3	5	4	2	4	255	4,590	59,670
NCC Marion-North	14.7	53.8	59.2	16.4	05:15	23:00	17:45	3.0	5.0	4.0	2.0	4.0	60	60	60	60	60	1	1	1	1	1	3	5	4	2	4	255	4,590	67,473
NCC Marion-South	15.0	54.5	60.0	16.5	05:15	23:00	17:45	3.0	5.0	4.0	2.0	4.0	60	60	60	60	60	1	1	1	1	1	3	5	4	2	4	255	4,590	68,850
																	Total	**42**	**25**	**42**	**25**	**18**						**Total**	**135,670**	**1,852,397**

SATURDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	Saturday Hours	Saturday Frequency	Saturday Peak Vehicles	Saturday Trips	Saturdays	Annual Revenue Hours	Annual Revenue Miles
Route 1 - O Street SW	13.9	47.1	51.8	17.7	07:55	22:55	15:00	15.0	60	1	15	52	780	10,842
Route 2	11.5	42.6	46.9	16.2	07:55	22:55	15:00	15.0	60	1	15	52	780	8,970
Route 3	13.4	52.5	57.7	15.3	07:55	22:55	15:00	15.0	60	1	15	52	780	10,452
Route 4	14.5	49.7	54.7	17.5	07:55	22:55	15:00	15.0	60	1	15	52	780	11,310
Route 5X - Lindale	12.6	43.5	47.9	17.4	07:55	22:55	15:00	15.0	15	4	60	52	3120	39,312
Route 6	14.5	62.1	68.4	14.0	07:55	22:55	15:00	15.0	60	2	15	52	1560	11,310
Route 7A	16.5	49.8	54.8	19.9	07:55	22:55	15:00	15.0	60	1	15	52	780	12,870
Route 8 - Johnson Ave	14.5	49.1	54.0	17.7	07:55	22:55	15:00	15.0	60	1	15	52	780	11,310
Route 9	10.8	40.0	44.0	16.2	07:55	22:55	15:00	15.0	60	1	15	52	780	8,424
Route 10	10.2	41.6	45.8	14.7	07:55	22:55	15:00	15.0	60	1	15	52	780	7,956
Route 11	18.0	47.4	52.1	22.8	07:55	22:55	15:00	15.0	60	1	15	52	780	14,040
Route 12	14.6	50.4	55.5	17.4	07:55	22:55	15:00	15.0	60	1	15	52	780	11,388
Route 16 - 16th Ave SW	12.9	48.7	53.5	15.9	07:55	22:55	15:00	15.0	60	1	15	52	780	10,062
NCC Blairs Ferry	12.2	44.6	49.1	16.4	07:55	22:55	15:00	15.0	60	1	15	52	780	9,516
NCC Hiawatha-Robbins	13.0	47.6	52.3	16.4	07:55	22:55	15:00	15.0	60	1	15	52	780	10,140
NCC Marion-North	14.7	53.8	59.2	16.4	07:55	22:55	15:00	15.0	60	1	15	52	780	11,466
NCC Marion-South	15.0	54.5	60.0	16.5	07:55	22:55	15:00	15.0	60	1	15	52	780	11,700
									Total	**21**		**Total**	**16,380**	**211,068**

SUNDAY SERVICE

Route	Route Length (miles)	Cycle Time (mins)	Cycle Time - Including Layover (mins)	Average Speed (mph)	Service Start	Service End	Service Span	Sunday Hours	Sunday Frequency	Sunday Peak Vehicles	Sunday Trips	Sundays	Annual Revenue Hours	Annual Revenue Miles
Route 1 - O Street SW	13.9	47.1	51.8	17.7	08:25	17:25	09:00	9.0	60	1	9	52	468	6,505
Route 2	11.5	42.6	46.9	16.2	08:25	17:25	09:00	9.0	60	1	9	52	468	5,382
Route 3	13.4	52.5	57.7	15.3	08:25	17:25	09:00	9.0	60	1	9	52	468	6,271
Route 4	14.5	49.7	54.7	17.5	08:25	17:25	09:00	9.0	60	1	9	52	468	6,786
Route 5X - Lindale	12.6	43.5	47.9	17.4	08:25	17:25	09:00	9.0	30	2	18	52	936	11,794
Route 6	14.5	62.1	68.4	14.0	08:25	17:25	09:00	9.0	60	2	9	52	936	6,786
Route 7A	16.5	49.8	54.8	19.9	08:25	17:25	09:00	9.0	60	1	9	52	468	7,722
Route 8 - Johnson Ave	14.5	49.1	54.0	17.7	08:25	17:25	09:00	9.0	60	1	9	52	468	6,786
Route 9	10.8	40.0	44.0	16.2	08:25	17:25	09:00	9.0	60	1	9	52	468	5,054
Route 10	10.2	41.6	45.8	14.7	08:25	17:25	09:00	9.0	60	1	9	52	468	4,774
Route 11	18.0	47.4	52.1	22.8	08:25	17:25	09:00	9.0	60	1	9	52	468	8,424
Route 12	14.6	50.4	55.5	17.4	08:25	17:25	09:00	9.0	60	1	9	52	468	6,833
Route 16 - 16th Ave SW	12.9	48.7	53.5	15.9	08:25	17:25	09:00	9.0	60	1	9	52	468	6,037
NCC Blairs Ferry	12.2	44.6	49.1	16.4	08:25	17:25	09:00	9.0	60	1	9	52	468	5,710
NCC Hiawatha-Robbins	13.0	47.6	52.3	16.4	08:25	17:25	09:00	9.0	60	1	9	52	468	6,084
NCC Marion-North	14.7	53.8	59.2	16.4	08:25	17:25	09:00	9.0	60	1	9	52	468	6,880
NCC Marion-South	15.0	54.5	60.0	16.5	08:25	17:25	09:00	9.0	60	1	9	52	468	7,020
									Total	**19**		**Total**	**8,892**	**114,847**
											Scenario Total		**160,942**	**2,178,312**
											Net Change		**1.41**	**1.27**

MILEAGE ASSIGNMENTS

Route	Route Length (miles)	Cedar Rapids (mileage)	Cedar Rapids (percentage)	Hiawatha (mileage)	Hiawatha (percentage)	Marion (mileage)	Marion (percentage)	Robins (mileage)	Robins (percentage)
Route 1 - O Street SW	13.9	13.9	100%	0.0	0%	0.0	0%	0.0	0%
Route 2	11.5	11.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 3	13.4	13.4	100%	0.0	0%	0.0	0%	0.0	0%
Route 4	14.5	14.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 5X - Lindale	12.6	11.8	94%	0.0	0%	0.8	6%	0.0	0%
Route 6	14.5	11.5	79%	3.0	21%	0.0	0%	0.0	0%
Route 7A	16.5	16.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 7B	16.7	16.7	100%	0.0	0%	0.0	0%	0.0	0%
Route 8 - Johnson Ave	14.5	14.5	100%	0.0	0%	0.0	0%	0.0	0%
Route 9	10.8	10.8	100%	0.0	0%	0.0	0%	0.0	0%
Route 10 - 1st Ave SW	10.2	10.2	100%	0.0	0%	0.0	0%	0.0	0%
Route 11	18.0	18.0	100%	0.0	0%	0.0	0%	0.0	0%
Route 12	14.6	14.6	100%	0.0	0%	0.0	0%	0.0	0%
Route 16 - 16th Ave SW	12.9	12.9	100%	0.0	0%	0.0	0%	0.0	0%
NCC Blairs Ferry	12.2	10.2	84%	2.0	16%	0.0	0%	0.0	0%
NCC Hiawatha-Robbins	13.0	7.5	58%	3.0	23%	0.0	0%	2.5	19%
NCC Marion-North	14.7	1.8	12%	0.0	0%	12.9	88%	0.0	0%
NCC Marion-South	15.0	1.4	9%	0.0	0%	13.6	91%	0.0	0%
Total	249.5	211.7	85%	8.0	3%	27.3	11%	2.5	1%

Annual Reveue Hours	Cedar Rapids (mileage)	Hiawatha (mileage)	Marion (mileage)	Robins (mileage)
7,368	7,368	0	0	0
7,368	7,368	0	0	0
11,968	11,968	0	0	0
7,368	7,368	0	0	0
20,376	19,082	0	1,294	0
14,226	11,283	2,943	0	0
9,408	9,408	0	0	0
3,570	3,570	0	0	0
7,368	7,368	0	0	0
7,368	7,368	0	0	0
12,978	12,978	0	0	0
7,623	7,623	0	0	0
12,978	12,978	0	0	0
7,623	7,623	0	0	0
5,838	4,881	957	0	0
5,838	3,373	1,343	0	1,123
5,838	707	0	5,131	0
5,838	537	0	5,301	0
160,942	142,851	5,243	11,726	1,123
Percentage	**0.888**	**0.033**	**0.073**	**0.007**

Annual Reveue Miles	Cedar Rapids (hours)	Hiawatha (hours)	Marion (hours)	Robins (hours)
102,415	102,415	0	0	0
84,732	84,732	0	0	0
160,237	160,237	0	0	0
106,836	106,836	0	0	0
256,738	240,437	0	16,301	0
188,181	149,247	38,934	0	0
155,232	155,232	0	0	0
59,619	59,619	0	0	0
106,836	106,836	0	0	0
79,574	79,574	0	0	0
132,376	132,376	0	0	0
137,214	137,214	0	0	0
189,479	189,479	0	0	0
98,337	98,337	0	0	0
71,224	59,548	11,676	0	0
75,894	43,843	17,456	0	14,595
85,819	10,392	0	75,427	0
87,570	8,056	0	79,514	0
2,178,312	1,924,410	68,066	171,241	14,595
Percentage	**0.883**	**0.031**	**0.079**	**0.007**

Alternative Projected O&M Costs							
	Value	Existing	Alt. 1A	Alt. 1B	Alt. 2	Alt. 3	Alt. 4
Revenue Hours		66,808	65,496	65,392	59,673	72,961	160,942
Cost per Hour	*$49.74*	$3,323,030	$3,257,771	$3,252,598	$2,968,135	$3,629,080	$8,005,255
Revenue Miles		960,868	926,237	915,397	847,742	1,031,501	2,178,312
Cost per Mile	*$2.13*	$2,046,649	$1,972,885	$1,949,796	$1,805,690	$2,197,097	$4,639,805
Peak Vehicles		22	21	21	21	21	44
Cost per Vehicle	*$190,526*	$4,191,572	$4,001,046	$4,001,046	$4,001,046	$4,001,046	$7,549,080
Support Staff Add'l Cost	-	$0	$0	$0	$272,260	$272,260	$979,758
Non-Labor Add'l Cost	-	$0	$0	$0	$106,652	$106,652	$246,983
Paratransit Add'l Cost	-	$0	$0	$0	$177,274	$177,274	$370,755
Total		$9,561,251	$9,231,702	$9,203,440	$9,331,057	$10,383,409	$21,791,636

METHODOLOGY FOR CALCULATING ADDITIONAL COSTS OF EXTENDING SERVICE HOURS

This document describes the methodology used to calculate the additional costs associated with extending Cedar Rapids Transit's existing service hours, either by extending service into the evening (as in Alternatives 2 and 3) or operating service on a new day (as in Alternative 4). As discussed in the main body of the document, the cost of adding an additional hour of revenue service outside of Cedar Rapids Transit's existing service hours would be greater than just the agency's incremental, or even fully burdened, cost per revenue hour. There are four main sources of additional costs associated with extending Cedar Rapids Transit's service hours as described below:

1. **Additional Labor Costs – Fixed Route Transit**: These costs account for the additional support staff that would be needed to operate the fixed route service in the evening, or in the case of Alternative 4, on Sundays, including additional supervisors, dispatchers, and service staff (cleaners). These costs are also intended to account for the inefficiencies that will be introduced by changing the way in which both operators and support staff are scheduled.
2. **Additional Non-Labor Costs – Fixed Route Transit**: These costs account for the additional non-labor related costs of keeping Cedar Rapids Transit's facilities open later in the evening or on Sunday, and include increased maintenance, utilities, and casualty and liability costs.
3. **Additional Labor Costs – Paratransit**: These costs account for the additional labor that will be needed to provide complementary paratransit service during the same times and hours as the fixed route service. These costs include both additional hours for LIFTS operators as well as support staff, including supervisors, dispatchers, mechanics, and service staff (cleaners). These costs are also intended to account for the inefficiencies that will be introduced by changing the way in which both LIFTS operators and support staff are scheduled.
4. **Additional Non-Labor Costs – Paratransit**: These costs account for the additional non-labor related costs of operating the paratransit service later in the evening or on Sunday. These include the costs associated with operating additional paratransit service, including increased fuel and vehicle maintenance costs, as well as the costs of keeping the LIFTS facilities open later in the evening or on Sunday, including increased maintenance, utilities, and casualty and liability costs.

The methodology for estimating the additional costs associated with each of these four categories is described in greater detail below. Wherever possible, we have relied on the most recently available operating cost data provided by Cedar Rapids Transit and Linn County LIFTS, including the Cedar Rapids Transit's 2014 NTD submittal, 2015 Year End Report, and projected 2017 annual budget. Estimates of the level of staffing that would be needed to operate night and Sunday service were made with substantial input from Cedar Rapids Transit and Linn County LIFTS management. In order to project the amount of additional paratransit service that would be needed in the evening and on Sundays, we relied on data from a slightly larger transit agency operating in a similarly sized Midwestern city – Canton, OH – which operates paratransit service for approximately the same hours as planned in Alternatives 2-4.

ADDITIONAL LABOR COSTS – FIXED ROUTE TRANSIT

The costs directly associated with operating Cedar Rapid Transit's fixed route service in the evening or on Sunday – including operator labor costs, fuel costs, and vehicle maintenance costs – have been accounted for within the fixed route operating model (included in this same appendix). The *additional* labor costs described in this document are intended to account for the support staff that would be needed to extend Cedar Rapids Transit's fixed route operations into the evening or on Sundays. The level of support staff that would be needed for each alternative was determined based on discussion with Cedar Rapids Transit management.

The cost of the additional support staff labor was estimated by first determining the number and type of support staff that would be needed to operate the extended service and the number of additional revenue hours that they

would support. Dispatchers and service staff were assigned an hourly rate equivalent to one revenue hour of service, and supervisors were assigned an hourly rate equivalent to 1.25 revenue hours of service. The cost associated with these additional labor hours was estimated by applying the agency's unburdened cost per revenue hour (total operating cost less general administration costs and divided by total revenue hours, as documented in the 2014 NTD submittal) to the total additional revenue hours that the staff would support.

For Alternatives 2 and 3, it was estimated that one supervisor, one dispatcher, and two service staff would be needed to support three additional hours of revenue service (7:00PM-10:00PM) on 255 weekdays per year.

For Alternative 4, additional labor costs were estimated for each incremental service improvement, including extension of service to 11:00PM on weekdays, extension of service to 11:00PM on Saturdays, and implementation of Sunday service. For the weekday night service, it was estimated that two supervisors, one dispatcher, and three service staff would be needed to support four additional hours of revenue service (7:00PM-11:00 PM) on 255 weekdays per year. The same staffing levels were assumed for the Saturday night service, but for six additional revenue hours (5:00PM-11:00PM) on 52 Saturdays per year. For Sundays, it was estimated that two supervisors, one dispatcher, and three service staff would be needed to support nine additional hours of revenue service (8:00AM-5:00PM) on 52 Sundays per year.

The staffing level estimates for each alternative are summarized in the table below. For each alternative, a revenue hour equivalent was calculated based on the hourly rates assigned to each staff type and the number of additional evening or Sunday revenue hours prescribed by that alternative. The cost of the additional labor were then calculated by multiplying this revenue hour summation by Cedar Rapid Transit's unburdened cost per revenue hour ($83.74).

	Number of Support Staff							
	Supervisors (Rate = 1.25 revenue hours)	Dispatchers (Rate = 1 revenue hour)	Service Staff (Rate = 1 revenue hour)	Additional Revenue Hours	Days per Year	Annual Total Revenue Hours	Cost per Revenue Hour	Annual Cost Estimate
Alternative 2 - Weekday Night Service to 10PM	1	1	2	3	255	3,251	$83.74	$272,260
Alternative 3 - Weekday Night Service to 10PM	1	1	2	3	255	3,251	$83.74	$272,260
Alternative 4 - Weekday Night Service to 11PM	2	1	3	4	255	6,630	$83.74	$555,196
Alternative 4 - Saturday Night Service to 11PM	2	1	3	6	52	2,028	$83.74	$169,825
Alternative 4 - Sunday Service (8AM-5PM)	2	1	3	9	52	3,042	$83.74	$254,737

Additional Non-Labor Costs – Fixed Route Transit

The non-labor related costs associated with extending Cedar Rapid Transit's fixed route service into the evening or on Sundays include the costs of keeping the agency's facilities open for additional service hours. These costs were estimated by applying an inflation rate equivalent to the increase in service span prescribed by each alternative to the non-vehicle maintenance costs (excluding labor), utilities, and casualty and liability costs reported in Cedar Rapid Transit's 2014 NTD submittal.

Cedar Rapids Transit currently operates for 79 service hours per week – 14 hours per day on weekdays and 9 hours per day on Saturdays. For Alternatives 2 and 3, there would be an additional three hours of service on weekdays, or 15 additional hours per week, which equates to a 19 percent increase. For Alternative 4, the extension of service to 11:00PM on weekdays would add an additional four hours of service on weekdays, or 20 additional hours per week, which equates to a 25 percent increase. The extension of service to 11:00PM on Saturdays would add an additional six hours per week, or an eight percent increase, and the addition of nine hours per week on Sundays would generate an 11 percent increase.

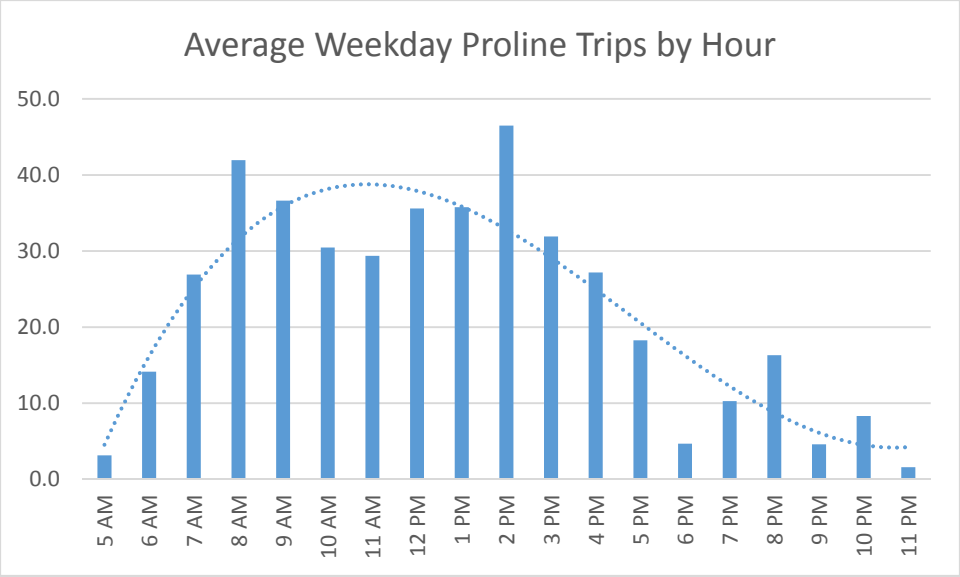
These inflation rates were applied to the non-vehicle maintenance, utility, and casualty and liability costs reported in Cedar Rapid Transit's 2014 NTD submittal, resulting in an estimate of the non-labor related costs associated with the extension of fixed route service hours. These cost calculations are shown in the table below.

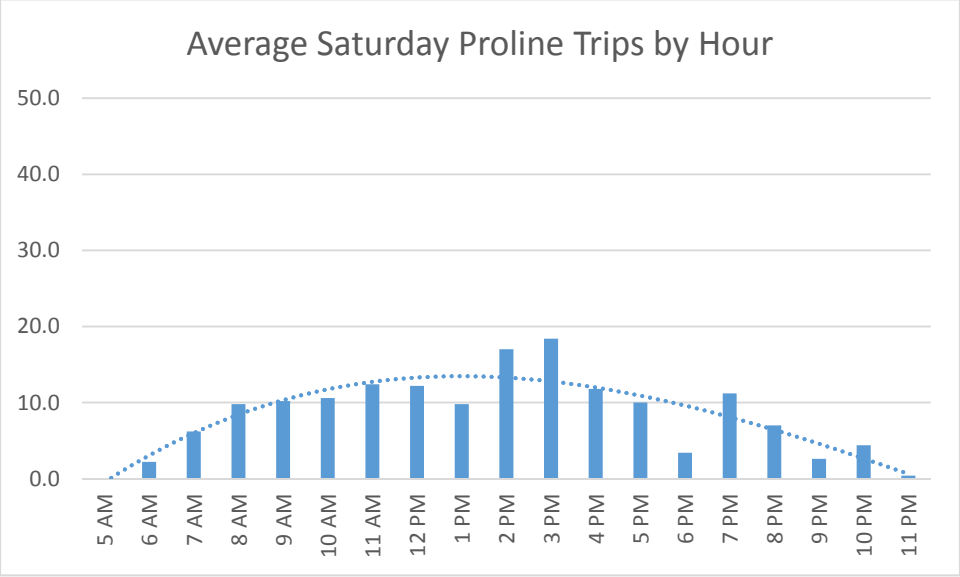
	2014 Non-Vehicle Maintenance Costs, Excluding Labor	2014 Utilities and Casualty/Liability Costs	Percent Increase in Service Hours	Annual Cost Estimate
Alternative 2 - Weekday Night Service to 10PM	$78,653	$482,671	19%	$106,652
Alternative 3 - Weekday Night Service to 10PM			19%	$106,652
Alternative 4 - Weekday Night Service to 11PM			25%	$140,331
Alternative 4 - Saturday Night Service to 11PM			8%	$44,906
Alternative 4 - Sunday Service (8AM-5PM)			11%	$61,746

Additional Labor Costs – Paratransit

The additional labor costs associated with extending the fixed route service into the evening or on Sundays did not include the cost of operator labor, as that cost is included in the fixed route operating cost model. For the extension of paratransit service hours, it was necessary to estimate the number of additional operators that would be need to provide paratransit service in the evening and on Sundays and apply a labor cost to those hours. In addition, the cost of support staff – including supervisors, dispatchers, mechanics, and service staff – that would be needed for the night and Sunday paratransit operations were also included in the labor cost estimate.

The number of operators that would be needed to provide night and Sunday service were estimated based on paratransit trip data from another, slightly larger, transit agency operating in a Midwestern city of a similar size to Cedar Rapids. The Stark Area Regional Transit Authority (SARTA) provides fixed route and paratransit service to Stark County, OH, with fixed route service focused on the City of Canton. The agency operates its fixed route and paratransit service from approximately 5:00 AM to midnight on weekdays and Saturdays, but does not operate on Sundays. Although SARTA has a larger service area population than Linn County LIFTS, and consequently provides more paratransit trips than LIFTS, their trip data was useful for determining how the demand for paratransit service declines over the course of an evening and how Saturday evening service compares to weekday evening service. As shown in the two graphs of SARTA's average weekday and Saturday paratransit trips per hour, there is a substantial drop off in weekday demand for paratransit service after about 4:00PM. And while overall demand for paratransit service is lower on Saturdays than weekdays, the drop off on Saturday evenings is less dramatic.





The demand for paratransit service, or the additional number of paratransit trips that Linn County LIFTS would likely need to provide to the Cedar Rapids metro area on weekday and Saturday evenings was estimated by applying a ratio of SARTA's evening to weekday trips to the current number of trips that LIFTS provides. According to Cedar Rapids Transit's 2015 Year End Report, Linn County LIFTS provided 34,393 paratransit trips to the Cedar Rapids metro area. Assuming that the number of trips provided on an average Saturday is 40 percent of the number of trips provided on an average weekday, the average number of trips provided on a weekday would be 127. At SARTA, the number of trips provided between 7:00PM and 10:00PM on weekdays is approximately 8 percent of the number of trips provided between 5:00AM and 7:00PM on weekdays. By applying this ratio to the average number of weekday trips that Linn County LIFTS provides between 5:00AM and 7:00PM, it was estimated that extending paratransit service to 10:00PM on weekdays would generate an additional 11 trips per evening. Using this same process, estimates were generated for the number of additional paratransit trips that would be provided on weekday and

Saturday evenings if the service were extended until 11:00PM. The demand for paratransit service on Sundays was estimated by assuming that it would be 30 percent of the average weekday daytime trips, or slightly less than the existing Saturday service.

Based on these estimates and discussion with Linn County LIFTS and Cedar Rapids Transit management, staffing plans were developed for each of the proposed alternatives. Linn County LIFTS provided its current labor costs (salary + benefits) for its operators, mechanics, dispatchers, and service staff. These costs were applied to the number of additional service hours prescribed in each alternative. Because the current staffing plan only has operators scheduled until 6:00PM on weekdays (relying on a combination of overtime, NTS, and taxi contracts to provide service until 7:00PM), four additional hours of service were assumed in order to extend the service to 10:00PM on weekdays.

The table below summarizes the estimated daily increase in paratransit trips, the proposed staffing plan and associated labor rates, the additional number of service hours, and the estimated additional labor costs of extending paratransit service hours for each alternative.

		Number of Staff						
	Estimated Daily Increase in Paratransit Trips	Dispatchers ($20 per hour)	Operators ($30 per hour)	Mechanics ($30 per hour)	Supervisors ($45 per hour)	Additional Evening or Sunday Service Hours	Days per Year	Annual Cost Estimate
Alternative 2 - Weekday Night Service to 10PM	11	1	3	1	-	4	255	$142,800
Alternative 3 - Weekday Night Service to 10PM	11	1	3	1	-	4	255	$142,800
Alternative 4 - Weekday Night Service to 11PM	13	1	3	1	-	5	255	$178,500
Alternative 4 - Saturday Night Service to 11PM	17	1	2	1	-	6	52	$34,320
Alternative 4 - Sunday Service (8AM-5PM)	38	1	3	1	1	9	52	$86,580

Additional Non-Labor Costs - Paratransit

The non-labor related costs associated with extending paratransit into the evening or on Sundays include both vehicle operations and maintenance costs, as well as the costs associated with keeping the LIFTS facilities open later in the evening and on Sundays.

The additional vehicle operations and vehicle maintenance costs were estimated based on the number of additional paratransit trips that would be provided in each alternative, as described above. The percent increase in the number of trips was applied as an inflation rate to the non-labor vehicle operations and vehicle maintenance costs in Cedar Rapids Transit's 2014 NTD submittal for demand responsive service. For the vehicle operations expenses, it was assumed that 20 percent of the total vehicle operations expenses were non-labor related. For vehicle maintenance costs, the labor costs were subtracted from the total vehicle maintenance costs.

The table below shows the calculation of the additional vehicle operations and vehicle maintenance cost estimates for each of the alternatives.

	2014 Vehicle Operations Costs, Excluding Labor	2014 Vehicle Maintenance Costs, Excluding Labor	Percent Increase in Paratransit Trips	Annual Cost Estimate
Alternative 2 - Weekday Night Service to 10PM	$74,341	$46,016	8%	$9,629
Alternative 3 - Weekday Night Service to 10PM			8%	$9,629
Alternative 4 - Weekday Night Service to 11PM			10%	$12,036
Alternative 4 - Saturday Night Service to 11PM			2%	$2,407
Alternative 4 - Sunday Service (8AM-5PM)			6%	$7,221

The costs associated with keeping the LIFTS facilities open for additional service hours in the evenings and on Sundays were estimated in the same manner as the costs of keeping the Cedar Rapids Transit facilities open later in the evening, by applying an inflation rate equivalent to the increase in service span to the non-vehicle maintenance costs (excluding labor), utilities, and casualty and liability costs reported in Cedar Rapids Transit's 2014 NTD submittal for demand responsive service.

LIFTS currently operates for 74 service hours per week – 13 hours per day on weekdays and 9 hours per day on Saturdays. For Alternatives 2 and 3, there would be an additional four hours of service on weekdays, or 20 additional hours per week, which equates to a 27 percent increase. For Alternative 4, the extension of service to 11:00PM on weekdays would add an additional five hours of service on weekdays, or 25 additional hours per week, which equates to a 34 percent increase. The extension of service to 11:00PM on Saturdays would add an additional six hours per week, or an eight percent increase, and the addition of nine hours per week on Sundays would generate a 12 percent increase.

These inflation rates were applied to the non-vehicle maintenance, utility, and casualty and liability costs reported in Cedar Rapid Transit's 2014 NTD submittal for demand responsive service. These cost calculations are shown in the table below.

	2014 Non-Vehicle Maintenance Costs, Excluding Labor	2014 Utilities and Casualty/Liability Costs	Percent Increase in Service Hours	Annual Cost Estimate
Alternative 2 - Weekday Night Service to 10PM	$38,389	$53,630	27%	$24,845
Alternative 3 - Weekday Night Service to 10PM			27%	$24,845
Alternative 4 - Weekday Night Service to 11PM			34%	$31,286
Alternative 4 - Saturday Night Service to 11PM			8%	$7,362
Alternative 4 - Sunday Service (8AM-5PM)			12%	$11,042

SUMMARY

The table below summarizes the total additional fixed route and paratransit costs, both labor and non-labor related, associated with the proposed extensions of service in the evening or on Sundays for each alternative. These costs have been applied with the fixed route operating model as part of the total operating cost of each of the proposed alternatives.

	Fixed Route: Labor Costs	Fixed Route: Non-Labor Costs	Paratransit: Labor Costs	Paratransit: Non-Labor Costs	Total Annual Cost Estimate
Alternative 2 - Weekday Night Service to 10PM	$272,260	$106,652	$142,800	$34,474	$556,185
Alternative 3 - Weekday Night Service to 10PM	$272,260	$106,652	$142,800	$34,474	$556,185
Alternative 4 - Weekday Night Service to 11PM	$555,196	$140,331	$178,500	$43,322	$917,349
Alternative 4 - Saturday Night Service to 11PM	$169,825	$44,906	$34,320	$9,769	$258,819
Alternative 4 - Sunday Service (8AM-5PM)	$254,737	$61,746	$86,580	$18,264	$421,326

APPENDIX E – DMRTA AGREEMENT

FILED
SECRETARY OF STATE
IOWA

MAY 25 10 00 AM '06

AMENDED AND RESTATED

AGREEMENT

for the

DES MOINES REGIONAL

TRANSIT AUTHORITY

M034101

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WHEREAS, the City of Des Moines, Iowa, the City of West Des Moines, Iowa, the City of Windsor Heights, Iowa, the City of Urbandale, Iowa, the City of Clive, Iowa, and the City of Ankeny, Iowa, and the City of Altoona, Iowa (the "Constituent Communities") are parties to the Intergovernmental Agreement Creating the Des Moines Metropolitan Transit Authority, filed of record in the Office of the Recorder of Polk County, Iowa, on June 1, 1973, in Book 4372, Pages 589 through 606; as amended by an Agreement filed of record in the Office of the Recorder of Polk County, Iowa, on July 27, 1973, in Book 4389, Pages 52 through 61; as further amended by an Agreement filed of record in the Office of the Recorder of Polk County, Iowa, on August 31, 1973, in Book 4397, Pages 85 and 86; as further amended by Agreement filed of record in the Office of the Recorder of Polk County, Iowa, on January 9, 1981, in Book 5066, Pages 968 through 972; as further amended by Agreement filed of record in the Office of the Recorder of Polk County, Iowa, on December 1, 1987, in Book 5797, Page 586; as further amended by Agreement filed of record in the Office of the Recorder of Polk County, Iowa on March 11, 2003, in Book 9684, Pages 17 through 26; as further amended by Agreement filed of record in the Office of the Recorder of Polk County, Iowa on December 9, 2003, in Book 10303, Pages 62 through 72; and as further amended by Agreement filed of record in the Office of the Recorder of Polk County, Iowa on January 11, 2005, in Book 10897 Pages 830 through 840 (hereinafter called the Intergovernmental Agreement");

WHEREAS, the parties to said Intergovernmental Agreement consider it desirable to amend and restate said Agreement to provide for the organization and governance of the Des Moines Regional Transit Authority pursuant to the provisions of, and with all powers provided in. Chapter 28M of the Iowa Code, and to provide for the admission of Polk County, Iowa as a member of the Des Moines Regional Transit Authority; and

WHEREAS, the Constituent Communities and Polk County (hereinafter referred to collectively as the "Participating Communities") have agreed that the Intergovernmental. Agreement shall terminate on the Effective Date of this Agreement, and that from and after the Effective Date the terms of this Agreement shall be given effect and govern the matters set forth herein.

NOW, THEREFORE, THE PARTICIPATING COMMUNITIES AGREE AS FOLLOWS:

ARTICLE I. DEFINITIONS

Section 1. Definitions. For purposes of this Agreement, the following words and phrases shall have the following meanings:

a) "Agreement" shall mean this Amended and Restated Agreement for the Des Moines Regional Transit District, as the same may be amended and supplemented from time to time.

b) "Bonds" shall mean any and all general obligation or revenue bonds, notes, loan or lease agreements, interim obligations, or other obligations issued by the RTA as authorized under Chapter 28M of the Code or any other applicable provision of law, to acquire equipment and/or to construct facilities or improvements to the RTA System.

c) "Code" shall mean the Code of Iowa, 2005, as the same may be amended and supplemented from time to time.

d) "Commission" shall mean the commission of the RTA, being the successor to the Board created under the Intergovernmental Agreement Creating the Des Moines Metropolitan Transit Authority.

e) "Effective Date" shall mean March 1, 2006.

f) "Equipment" shall mean and includes buses, bus maintenance vehicles, bus maintenance equipment and tools, office equipment and furniture, and all other items of personal property necessary or useful in the operation and maintenance of the RTA System.

g) "Improvements" shall mean buildings or other facilities constructed as part of or for the use and benefit of the RTA System.

h) "MTA" shall mean the Des Moines Metropolitan Transit Authority established under the Intergovernmental Agreement Creating the Des Moines Metropolitan Transit Authority.

i) "MTA Board" shall mean the Board established under the Intergovernmental Agreement Creating the Des Moines Metropolitan Transit Authority.

j) "RTA" shall mean the Des Moines Regional Transit Authority established and operating as described in this Agreement.

k) "RTA System" means and includes all real property, buildings and facilities, including the RTA administration buildings and bus maintenance and storage buildings at 1100 MTA Lane in Des Moines, and all equipment and transit vehicles, including buses, vans and all maintenance and service vehicles, and including bus shelters located along RTA bus routes, heretofore acquired by the RTA's predecessor agency or hereafter acquired by the RTA as herein provided, used in support of the provision of mass transit services in the Des Moines metropolitan area.

l) "Nominating Committee" shall mean the committee established under the provisions of Article V, Section 1 of this Agreement.

m) "Participating Communities" shall mean the Cities of Altoona, Ankeny, Clive, Des Moines, Urbandale, West Des Moines, Windsor Heights and Polk County, together with any other cities or counties that become Participating Communities under the provisions of this Agreement.

n) "Selection Committee" shall mean the committees established under the provisions of Article III, Section 2(b)(2) of this Agreement.

o) "Service and Budget Review Committee" shall mean the committee established under the

provisions of Article V, Section 2 of this Agreement.

ARTICLE II. PURPOSE AND STATUS AS LEGAL ENTITY

Section 1. Purpose. This Agreement is an amendment and restatement of the Intergovernmental Agreement Creating the Metropolitan Transit Authority, and is intended to provide for the continuation and expansion of the urban mass transit system (RTA System) heretofore established, acquired and operated by the RTA's predecessor agency.

The purposes of the transit authority are as follows:

Undertaking the establishment or acquisition of an urban mass transit system, or succession to the ownership of a transit system heretofore separately owned and operated by one of such governmental municipalities or any combination of such establishment, acquisition or succession, and the equipment, enlargement, extension, improvement, maintenance and operation thereof under the terms of, and subject to, the conditions of such federal assistance, if any, which may be available.

To cooperate with local, state and federal public agencies in seeking solutions for mass transit needs in the subject area which will minimize the problems of contamination and pollution of the land, water and air resources of the area.

To engage such employees and provide offices, equipment, machinery, buildings and grounds as are necessary to adequately perform the functions of the RTA.

To contract with member cities and counties, with public or private persons, firms or corporations or quasi corporations to provide or assist in providing transit services which are necessarily incidental to a full and adequate provision of mass transit services for the subject area to the full extent permissible under applicable state and federal laws, and under the rules hereinafter set forth.

Section 2. Status as Legal Entity. The RTA shall be constituted as a separate legal entity and a regional transit district, pursuant to Chapters 28E and 28M of the Code, which shall be governed by the Commission and shall be known as the "Des Moines Regional Transit Authority" or the "RTA". As so constituted, the entity may sue and be sued, contract, issue debt, acquire and hold real and personal property necessary for its corporate purposes, adopt a corporate seal and alter the seal at its pleasure and execute all the powers conferred in Chapters 28E and 28M of the Code or any successor laws.

ARTICLE III. ORGANIZATION OF COMMISSION

Section 1. Commission Shall Constitute Governing Body of the RTA. The RTA shall be governed in all matters by the Commission established in this Article. The members the MTA

Board who are in office on the Effective Date are hereby appointed to serve as the initial Commission of the RTA created pursuant to this Agreement and upon acceptance of such appointment shall serve in that capacity until July 1, 2006 when new Commission members appointed as hereafter provided shall take office.

Section 2. Composition of Commission.

(a) Commencing on July 1, 2006, the RTA Commission shall be composed of members appointed as hereafter provided.

(b) Initially there shall be nine members of the Commission of the RTA, but the number of members may be increased pursuant to Article III Section 2 (4) below.

(1) Two of such members shall be at-large, and shall be selected by the Polk County Board of Supervisors. Two alternates shall also be selected by the Polk County Board of Supervisors.

(2) The remaining members of the Commission shall be selected in the following manner: Seven districts shall be created, with the boundaries of such districts the same as each of the seven state senate districts located in Polk County, except as hereinafter provided. As of the Effective Date of this Agreement those State Senate Districts are 30, 31, 32, 33, 34 and 35, and that part of State Senate District 21 which is located within Polk County. One member of the Commission and one alternate shall be selected in each district, by a Selection Committee which shall be created in each such district. The Selection Committee in each district shall consist of the mayor of each city which is located in whole or in part within such district boundaries. Each mayor serving on the selection committee may nominate a person to serve as the member of the Commission representing such district. Any nomination of a member or alternate must be approved in advance by the city council of the mayor making such nomination before submission to the Selection Committee. The Selection Committee in each such district shall select one person to serve as a member of the Commission, and one person to serve as an alternate. The member and the alternate may be selected from different cities. In districts which consist of an area located in more than one city, any impasse by the Selection Committee in the selection of a member or an alternate shall be resolved by the use of a weighted vote, in which the mayor of each city is entitled to one vote for each person residing within that part of the city of which they are mayor which is located within the district, according to the most recent U.S. Decennial Census, or more recent U.S. Census in which sufficiently detailed population data is available to determine the population within each RTA district. In districts which are located wholly within one city,

the selection of a member and an alternate shall be made by the mayor and confirmed by resolution of the city council.

(3) To the extent that a city whose boundaries are included within a transit district in Polk County has boundaries which extend into an adjacent county or counties, the boundaries of that transit district shall be expanded to include that part of the city which is located in an adjacent county or counties.

(4) The Commission shall create a new transit district from such part of a transit district or contiguous transit districts located in part outside of Polk County when the population of that part of a transit district or contiguous transit districts located in part outside of Polk County exceeds 60,000 according to the most recent U.S. Decennial Census, or more recent U.S. Census in which sufficiently detailed population data is available to determine the population within each RTA district. An additional member of the Commission shall then be selected in the new transit district following the process described in Article III. Section 2(b)(2).

(5) If a local government entity that is located wholly outside of Polk County should become a Participating Community, then for purposes of this Article the population of such local government shall be added to the nearest transit district, and the boundaries of such transit district shall be extended to include the boundaries of such local government entity. If it is not possible to determine which transit district is "nearest", then the new Participating Community may select the transit district to which its population shall be added for the purposes of this Agreement.

(6) Under the Iowa Code, legislative redistricting is mandatory immediately following an official U.S. Decennial Census. In the year following an Iowa legislative redistricting, the Commission shall establish new boundaries for transit districts, as near as reasonably practicable to the newly established state senate districts for the boundaries of the cities and counties who are then Participating Communities under this Agreement.

(c) All members who are elected officials of Participating Communities shall serve during the time they hold office and if such member ceases to hold elected office, their term as a member of the Commission may be terminated at the election of the city council of which the elected official was a member, and the vacancy shall be filled as provided in Article III Section 2(b)(2) above. All representatives who are not elected officials of a Participating Community shall serve the regular term of appointment. The term of office of any member of the commission shall immediately terminate if such member ceases to permanently reside within the district which the member represents on the Commission.

(d) For members of the Commission taking office in July of 2006, members shall be appointed to either two year, three year or four year terms of office as follows: the initial terms of office for appointments in Districts 1, 3 and 8 shall be two years, the initial terms of office for appointments in Districts 2, 5 and 9 shall be three years, and the initial terms of office for appointments in Districts 4, 6 and 7 shall be four years. Commencing in July of 2008, new members appointed to the Commission shall be appointed to four-year terms of office. A description of the boundaries of each district is attached to this Agreement as Exhibit A.

Section 3. Voting.

(a) In the conduct of the Commission's business, each member of the Commission will have one vote, and the majority vote of those members present and voting shall decide such matters.

(b) Action to establish, relocate, or discontinue a vehicle route or any portion of a vehicle route shall require the affirmative votes of two-thirds of the members of the Commission present and voting.

(c) Action to alter the fare schedule applicable to a vehicle route or any portion of a vehicle route shall require the affirmative votes of two-thirds of the members of the Commission present and voting.

(d) The Chair, or in the Chair's absence, the Vice Chair of the Commission, may vote and participate in discussion, but shall not make or second a motion.

Section 4. Officers.

(a) The officers of the Commission shall be the Chair, the Vice Chair and the Secretary, each of whom shall be elected by vote of the Commission at the annual meeting of the Commission.

(b) The Chair shall preside at all meetings of the Commission. The Chair or the Vice Chair in the absence of the Chair shall sign any instruments which the Commission has authorized to be executed, except in cases where the signing of instruments shall be required by law or protocol to be otherwise signed or executed, or where the resolution of the Commission authorizes the signing of such instrument by another person.

(c) In the absence of the Chair, or in the event of the death, inability to act or refusal to act by the Chair, the Vice Chair shall perform the duties of the Chair, and when so acting, shall have all the powers of and be subject to all the restrictions upon that office.

(d) The Secretary shall have responsibility for (i) the taking and preservation of minutes of the proceedings of the Commission, (ii) the giving of all notices in accordance with this Agreement or any bylaws, or as otherwise directed by the Commission or required by law, (iii) acting as custodian of the records of the RTA and (iv) keeping a current registry of the

names and addresses of the members of the governing body of each Participating Community, and of each Participating Community's principal officers and of the Commission representatives and alternates.

(e) The officers of the Commission shall be elected annually by and from the members of the Commission present at the annual meeting of the Commission. The Nominating Committee shall select and offer nominations for each office at the annual meeting. Nominations shall also be accepted from the representatives present at the annual meeting. All nominees, including those offered by the Nominating Committee, must receive a second in order to be considered a candidate and voted on for office.

(f) Each officer shall hold office until his or her successor has been duly elected. Alternates shall not be eligible to serve as officers. Each of the officers shall be from different Participating Communities. A vacancy in the office of Chair, Vice-Chair or Secretary shall be filled by the Commission for the unexpired portion of the term.

Section 5. Meetings.

(a) Regular meetings shall be held at least monthly at the place, day and hour set forth in a schedule of regular meetings for the following year that is approved by the Commission by no later than the last meeting in December of each year. A copy of the agenda and all materials to be considered at the meeting shall be mailed or delivered to the members of the Commission and to an elected official and/or administrator designated by each Participating Community, at least four (4) days prior to the meeting, or as may otherwise be set forth in the bylaws.

(b) Special meetings of the Commission, for any purpose or purposes not inconsistent with this Agreement, may be called by the Chair and shall be called by the Chair at the request of any two Participating Communities. The notice requirements of subsection (a) shall apply to all special meetings.

(c) All meetings of the Commission shall be conducted in compliance with Chapter 21 of the Code or any successor laws, as the same may be amended or supplemented in the future, and in general accordance with Robert's Rules of Order.

(d) The presence of a majority of Commission members shall constitute a quorum. A quorum is required to be present to convene a meeting of the Commission and for the conduct of its business. The Chair shall determine whether a quorum exists, shall cause the names of all members present to be entered into the meeting minutes, and shall call the meeting to order if a quorum exists.

Section 6. Bylaws. The Commission may adopt bylaws relating to the notice and conduct of its meetings and those of any committees it shall establish. Such bylaws may be adopted, and may be amended or repealed, by a two-thirds vote of the members of the Commission present and voting taken at any regularly scheduled or specially called meeting as described in Article III, Section 5 hereof, provided that such bylaws or proposed amendment or

repeal of such bylaws, was presented in writing at a prior regular meeting of the Commission, and provided that notice of the impending vote thereon is contained in the meeting notice and agenda of the meeting at which such vote is to be taken.

ARTICLE IV. POWERS OF COMMISSION; AUTHORIZATION AND LIMITATION ON POWER TO LEVY TAXES

Section 1. Grant of Powers. The Commission shall have and may exercise all of the powers granted by Chapters 28E and 28M of the Code or any successor laws, as the same may be amended and supplemented in the future, for the purpose of jointly acquiring and constructing improvements and equipment comprising the RTA System on behalf of the Participating Communities, to operate and maintain the same for the benefit of all Participating Communities, and to jointly finance the acquisition and construction of Equipment and Improvements through the issuance of Bonds or other obligations as may be authorized for such purposes. Without limiting the foregoing, the Commission shall have all of the powers set forth in this Agreement, including the power to

(a) approve its own budget,

(b) contract for services and/or employ such staff as it deems necessary,

(c) approve its own capital improvement program,

(d) define parameters and benchmarks for all services,

(e) enter into agreements, contracts or other arrangements for the financing of all such equipment and improvements, including the issuance of Bonds.

(f) adopt and have a common seal and to alter the same at its pleasure,

(g) sue and to be sued,

(h) acquire, hold, use and dispose of the reserves derived from the operation of its facilities and other moneys of the RTA,

(i) acquire, hold, use and dispose of other personal property for the purposes of the RTA,

(j) acquire by purchase, gift, lease or otherwise, real property and easements therein necessary or useful and convenient for the operation of the RTA, subject to all liens thereon, if any, and to hold and use the same, and to dispose of property so acquired no longer necessary for the purposes of the RTA,

(k) accept gifts or grants of real or personal property, money, material, labor or supplies for the purposes of the RTA, and to make and perform such agreements and contracts as may be necessary or convenient in connection with the procuring, acceptance or disposition of such gifts or grants,

(l) make and enforce rules and regulations for the management and operation of its business and affairs and for the use, maintenance and operation of its facilities and any other of its properties, and to annul the same,

(m) do and perform any acts and things authorized by Chapters 28E and 28M, Code of Iowa, 2005, or any successor laws, and by this agreement, under, through or by means of its officers, agents and employees, or by contracts with any person,

(n) enter into any and all contracts, execute any and all instruments, and do and perform any and all acts or things necessary, convenient or desirable for the purposes of the Authority or to carry out any powers expressly given by this agreement,

(o) cause the provision of transit within each member municipality together and to offer transit services to other areas within the Des Moines metropolitan area,

(p) fix, establish and maintain such transit service parameters, including routes, schedules, and fares to best suit the Participating Communities and service areas,

(q) make or cause to be made studies and surveys necessary or useful and convenient to carrying out the functions of the RTA,

(r) contract with and compensate consultants for professional services including but not limited to architects, engineers, planners, lawyers, accountants, rate specialists, and all others found necessary or useful and convenient to the stated purposes of the RTA including contract management,

(s) prepare and recommend to Participating Communities local ordinances to facilitate the provision of transit services within such communities,

(t) exercise such powers relative to the efficient provision of transit services as are available under then existing laws to each Participating Community as is necessary or useful and convenient to carrying out the functions of the RTA within such Participating Community, as such functions are defined by this contract,

(u) provide for a system of budgeting, accounting, auditing and reporting of all RTA funds and transactions, for a depository or depositories, and for the bonding of employees,

(v) consult with representatives of federal, state and local agencies, departments and their officers and employees and to contract with such agencies and departments,

(w) exercise such other powers as are available to the RTA under then existing law as is necessary or useful and convenient to carrying out the functions of the RTA within each Participating Community, as such functions are defined by this contract,

(x) hire employees, fix their compensation, benefits, personnel rules and regulations, and terminate their employment, and may hire a chief executive officer, fix his/her compensation, benefits, and terminate his/her employment, and may delegate to the chief executive officer the authority to hire other RTA employees, fix their compensation, benefits, personnel rules and regulations, and terminate their employment;

(y) accept grants or contributions from, and to enter into contracts, leases, or other transactions with public or private persons, firms or corporations or quasi corporations to provide or assist in providing transit services which are necessarily incidental to a full and adequate provision of mass transit services for the subject area to the full extent permissible under applicable state and federal laws.

Section 2. Power to Levy Tax. The Commission is hereby authorized to levy a tax under Section 28M.5 of the Code to fund the budget of the RTA System, provided that said levy in any year shall not exceed the maximum levy allowed under the Iowa Code in the Participating Communities comprising the RTA. The Commission may in any fiscal year levy in excess of said rate upon amendment of this Agreement as hereafter provided, not to exceed such rate of levy otherwise authorized by the Iowa Code. For the fiscal year ending June 30, 2007, the levy rates shall not exceed those rates set forth in Exhibit B to this Agreement.

ARTICLE V. COMMITTEES

Section 1. Nominating Committee. A Nominating Committee is hereby established for the purpose of selecting and offering nominations for each office of the Commission at the annual meeting in January. Members of the Nominating Committee shall be appointed by the Chair at a regular Commission meeting held at least three (3) months prior to the annual meeting in January. The Nominating Committee shall be chaired by a representative elected by the other members of the Nominating Committee.

Section 2. Service and Budget Review Committee. A Service and Budget Review Committee is hereby established for the purpose of reviewing the three year service plan and three year budget to be annually prepared by the Commission, prior to the formal submission of the service plan and budget to the governing bodies of the Participating Communities. The Service and Budget Review Committee shall consist of one staff member from each Participating Community, who shall be designated by such Participating Community.

Section 3. Other Committees. The Commission may, by resolution, designate two or more of its representatives to constitute a committee. Such committee shall, if authorized by resolution of the Commission, provide advice and recommendations to the Commission. The designation of such committee shall not operate to relieve the Commission of any responsibility imposed by this Agreement. Meetings of all such committees may be held at such time and place as the committee members may fix from time to time.

ARTICLE VI. TRANSFER OF EXISTING FACILITIES AND ASSETS

Section 1. Acquisition of Existing Facilities. On the Effective Date, the RTA shall accede to and acquire all right, title and interest in and to the ownership and use, of all Equipment, Improvements and real property formerly owned and operated by the predecessor MTA agency established by the Intergovernmental Agreement for Creation of the Des Moines Metropolitan Transit Authority.

ARTICLE VII. OPERATION AND MAINTENANCE RESPONSIBILITIES.

Section 1. Commission Responsibilities for Operation and Maintenance. The Commission shall operate and maintain all Mass Transit System equipment and facilities for the benefit of all Participating Communities.

Section 2. Staff and Contracts. In fulfilling its responsibilities, the Commission may determine to employ such staff for such purposes and on such terms as it determines to be necessary or appropriate, and may contract with third parties for all necessary or desirable services, including operating services, and may define and enforce applicable parameters and benchmarks for the same.

ARTICLE VIII. BUDGET

Section 1. Fiscal Year. The RTA shall operate on the same fiscal year as a city under Iowa law.

Section 2. Schedule for Budget Preparation. Each year the Commission shall cause to be prepared and submitted to the Commission and to the Participating Communities a proposed preliminary RTA budget for the next fiscal year. The Commission shall establish the date, time and place for a hearing on the proposed RTA budget before the Commission, and each Participating Community shall be notified thereof in writing not less than thirty days prior to the hearing. Upon the request of any Participating Community, the Commission shall make available such reasonably accessible information, schedules, comparisons and analysis as may be deemed reasonably necessary by such Participating Community in order to fully analyze the proposed RTA budget.

Section 3. Content and Format of Annual Budget. The RTA budget shall include, among other things, (a) a budget of the costs of operation and maintenance for the upcoming fiscal year (including but not limited to administrative expense and additions to the Renewal and Replacement Fund and the reserves for operating and working capital, and insurance and claims) (b) a capital improvements program budget for the upcoming fiscal year; (c) a Debt Service schedule for the upcoming fiscal year, (d)a comparison of the budgeted and actual RTA expenditures for operation and maintenance the current fiscal year; (e) a schedule showing the allocation of operation and maintenance expenses and debt service among the Participating Communities for the upcoming fiscal year; (f) a schedule showing all projected revenues from each Participating Community for the upcoming fiscal year, including fare revenues and tax

revenues; and (e) the proposed tax levy to be levied in each Participating Community in the upcoming fiscal year necessary to generate the tax revenue required from each Community to fund the proposed budget.

Section 4. Allocation of Budget.

(a) Operating Budget Expenses.

(1) Base Transit Levy Rate. Five percent of the total operating budget expenses of the RTA shall be allocated to all Participating Communities based upon the percentage of assessed property tax valuations in each Participating Community of the total assessed property tax valuations of all Participating Communities. For purposes of this Agreement, this allocation is sometimes hereafter referred to as the "Base Transit Levy Rate." If the RTA elects to have paratransit expenses in Polk County included as a part of the operating budget expenses of the RTA, then all of such paratransit expenses shall also be allocated in all Participating Communities by the formula provided in this paragraph.[1]

(2) Operating Budget Expense Allocation. Allocation of the remaining operating budget expenses of the RTA shall be made as follows: The Commission shall determine each Participating Community's share of the anticipated difference between total transit system operation and maintenance costs for the upcoming fiscal year and the aggregate of contract payments, State and Federal grants, private contributions, and other revenues received, including payments made under Article VIII Section 4(a)(1) above, except fare box revenue credited to Participating Communities, according to the following formula:

Apportionment of operating costs shall be determined from the proportion of average anticipated vehicle miles for the upcoming fiscal year attributable to the areas of general route operation in each Participating Community to the total anticipated vehicle miles of the entire RTA System. Said operating cost shares shall be reduced by a revenue credit which shall be determined by apportioning to each Participating Community fare box revenue received according to its percent of the passenger boardings and alightings in the entire System.

These apportionments of the RTA's budget for each Participating Community shall be determined annually according to estimates of anticipated vehicles miles and system revenue certified by the RTA.

[1] For example, assume that the total RTA operating budget expense is $10,000,000. The 5% allocation to Participating Communities would total $500,000. If Participating Community A has assessed property tax valuations that are 10% of the total assessed property tax valuations of all Participating Communities, then its allocation of the total RTA operating budget expense under this paragraph would be 10% of $500,000, or $50,000. If the RTA then elected to have the paratransit expenses in Polk County included as a part of the RTA operating budget expense, and the total paratransit expense is $100,000, then Participating Community A's share of the operating expenses would increase by 10% of $100,000, or by $10,000.

Special grants received by the RTA on behalf of a member Participating Community shall be credited fully to that Participating Community as revenue.

(3) Notwithstanding Article VIII. Section 4 (a)(1) and (2) above, if, at the annual election of the RTA, the operating expenses incurred in the operation of paratransit services in Polk County are not included in the operating expenses of the RTA allocated as provided above, then Polk County may contract for transit services with the RTA at the actual cost of the service.

(b) Capital Improvement Budget Expenses. In preparing each fiscal year budget, the Commission shall determine each Participating Community's share of the anticipated difference between total transit system Capital Improvement Program costs and capital improvement revenues including but not limited to State and Federal grants and private contributions or gifts and other capital improvement revenues according to the following formula:

Costs will be assessed to a Participating Community based on its contribution rate for the RTA's operating costs under Article VIII. Section 4(a)(2)above. This rate shall be determined by the Participating Community's annual operating assessment under Article VIII. Section 4(a)(2) as a percentage of the total operating subsidy of the member Participating Communities under Article VIII. Section 4(b).

(c) The annual cost allocation procedures for Participating Communities, as described in Article VIII Sections 4(a)(1)-(3) above shall be used for the fiscal years ending June 30, 2007, June 30, 2008 and June 30, 2009. Commencing for the fiscal year beginning July 1, 2009, and continuing thereafter, the Commission may develop and adopt a new formula for cost allocation for the operating and capital improvement budgets for the RTA, using mileage, service levels, property values and similar factors. If the Commission does not adopt a new formula for cost allocation for the operating and capital improvement budget for the RTA for the fiscal year beginning July 1, 2009, then the formula described in Article VIII Sections 4(a)(1)-(3) shall be applicable until the adoption of a new formula by the Commission.

Section 5. Budget Hearing. At or before the hearing on the RTA budget, any Participating Community may file with the Secretary of the Commission such objections as it deems appropriate and at such hearing may appear and present such information as it desires in support of its objections. The Commission shall consider all such objections and upon the termination of the hearing may, but need not, modify the budget, and shall thereafter adopt the budget as submitted or as modified; provided, however, that final action on the budget shall occur each year by no later than the date by which cities must certify their budget to the county auditor.

ARTICLE IX. FUNDS AND ACCOUNTS

Section 1. Funds and Investments. The Commission shall establish and maintain appropriate funds and accounts for the purposes set forth in this Agreement including, but not limited to, separate accounts for operation and maintenance, administrative expenses, and reserves for operating and working capital, insurance and claims. All funds held by the Commission shall be accounted for, managed and invested in compliance with Iowa law, including but not limited to Chapters 12B and 12C of the Code.

Section 2. Annual Audit. Annually the audit of the financial statements of the RTA shall be conducted in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States and Chapter 11 of the Code. The annual audit shall be conducted by an independent auditing firm engaged for that year. Following the receipt of the audit report, the Commission shall deliver a copy of the same to the Participating Communities and may appoint an audit committee or schedule a meeting of the Commission for the purpose of having representatives of the independent auditing firm submit an oral presentation of the audit and answer questions as may be posed to them.

ARTICLE X. ADMISSION OF ADDITIONAL COMMUNITIES

Section 1. Admission of Additional Communities. During the term of this Agreement, additional cities or counties may be admitted to membership as a Participating Community, and thereby become entitled and subject to all of the benefits and obligations of this Agreement, except as otherwise provided or conditioned herein. Any newly admitted community may commence full participation in this Agreement as a Participating Community at the beginning of any fiscal year, upon Commission approval and execution of a supplement to this Agreement prior to November 15th of the year preceding the fiscal year in which the newly connecting community would become a Participating Community. Any such supplement shall be signed by the Chair and the Secretary on behalf of the RTA and by authorized officers of the newly admitted community. Any such supplement shall contain such terms and conditions as the Commission shall determine to be appropriate in light of the service to be provided to the newly connecting community.

Section 2. Voting Rights. All Participating Communities which allow for the implementation of a base transit levy rate as described in Article VIII. Section 4(a)(1) above, including a newly admitted community, shall be entitled to participate in the selection process for members of the Commission, as described in Article III of this Agreement, and to voting rights to the extent provided in this Agreement, with such participation and voting rights to commence on the first day of the fiscal year in which the newly admitted community becomes a Participating Community under this Agreement.

ARTICLE XI. ISSUANCE OF BONDS

Section 1. Obligations and Use of Reserves Authorized.

(a) As a means of financing the acquisition of Equipment or real property, and/or the construction of Improvements to expand, extend and/or upgrade the RTA System and/or mass transit services described in this Agreement, the Commission is authorized to issue its Bonds under the authority of Chapter 28M of the Code, or as otherwise may be authorized by law from time to time for the purposes set forth therein.

(b) The Commission also is authorized, in its sole discretion, to utilize existing RTA reserves or other available funds, not otherwise obligated or previously appropriated for another purpose, (i) to pay all or any portion of the costs associated with the acquisition of Equipment or real property, or the construction of Improvements, in lieu of issuing Bonds for the same under this Agreement, and (ii) for the purpose of advancing, on a temporary basis, all or any portion of the costs associated with the acquisition of Equipment or real property, or the construction of any Improvements, with the intent of reimbursing such advanced funds with a subsequent issuance of Bonds.

Section 2. Limited Obligations. The principal of and interest on all Bonds issued under this Agreement shall be payable solely from and secured by the net revenues of the RTA System facilities and from other funds of the RTA lawfully available therefore as provided in 28M of the Code, or other applicable provisions of law.

Section 3. Restriction on Withdrawal. The Participating Communities further agree that no Participating Community may withdraw or in any way terminate, amend or modify in any way its obligations under this Agreement to the detriment of the holders of the Bonds while any of the Bonds are outstanding and unpaid.

ARTICLE XII. ACQUISITION AND DISPOSITION OF PROPERTY

Section 1. Acquisition. As authorized by Section 28M.4 of the Code, the RTA may acquire such property as it needs to accomplish its public purposes by purchase, gift, exchange, transfer, conveyance or otherwise, and shall hold all real, personal and intangible property which it acquires in its own name. The RTA has all powers of a board of supervisors to acquire real property or an interest therein for a public use or purpose related to its function by use of the power of eminent domain, and is authorized to bring an action in eminent domain in its own name.

Section 2. Disposition. The RTA may dispose of any of its property and shall do so in the same manner as a county. All proceeds from the sale or disposition of property, no matter the origin of such property, shall be the property of the RTA.

ARTICLE XIII. TECHNICAL COOPERATION

Section 1. Participating Community Records. The Participating Communities agree to respond to reasonable requests to make local records available to the RTA's staff and its consultants or employees for the purposes of this Agreement, and to assure that engineers, architects and consultants retained by the Participating Communities release materials, data and other pertinent items paid for by public funds to the RTA's staff to aid in the efficient and effective accomplishment of such purposes.

Section 2. RTA Records. The RTA shall respond to reasonable requests to make local records available to the Participating Communities and their consultants or employees for the purposes of this Agreement, and to assure that engineers, architects and consultants retained by the RTA release materials, data and other pertinent items paid for by the RTA's funds to the Participating Communities to aid in the efficient and effective accomplishment of such purposes.

ARTICLE XIV. AMENDMENTS

Section 1. Amendments. This Agreement may be amended for any purpose upon approval by the governing bodies of all of the Participating Communities, and shall become effective upon execution of a written supplement to this Agreement incorporating such amendment(s) by the governing bodies of the Participating Communities. All amendments adopted pursuant to the provisions of this Article shall be binding upon all Participating Communities.

ARTICLE XV. REMEDIES; NOTICES

Section 1. Remedies. In addition to any other remedies available under applicable law, each Participating Community and the Commission shall have the right to the equitable remedy of specific performance to enforce compliance with any provision of this Agreement.

Section 2. Notices. All notices which the Participating Communities and the Commission are authorized or required to give one another under this Agreement shall be in writing and may be personally delivered or sent by ordinary mail (i) in the case of the Commission of the RTA, to Chair, RTA Commission, Des Moines Regional Transit Authority, 1100 MTA Lane, Des Moines, Iowa 50309, and (ii) in the case of any Participating Community, to the presiding officer of the governing body of the Participating Community at the address then on file with the Secretary of the Commission. Mailed notices shall be deemed to be received by the party to whom they are directed one business day after the date they are postmarked. Any Participating Community may designate another address or specific person to whom the notice should be directed upon written notice thereof to the Secretary of the Commission.

ARTICLE XVI. WITHDRAWAL FROM OR DISSOLUTION OF RTA

Section 1. Notice of Withdrawal. The withdrawal of any Participating Community may be accomplished by the governing body of such Community providing notice of withdrawal in writing to the Authority and the other Participating Communities given at least eighteen

months prior to the beginning of the fiscal year in which such Participating Community proposes to withdraw from membership. No lesser notice or period of notice shall excuse a Participating Community proposing to withdraw from the obligations of membership, unless the Operating Budget of the RTA shall increase by ten percent (10%) or more from the last fiscal year, in which case six months written notice, given as provided above, shall be sufficient.

Section 2. Restrictions on Withdrawal. It is recognized that a Participating Community of the RTA, operating as a county enterprise pursuant to Section 331.462 of the Code, may not withdraw or in any way terminate, amend or modify in any way its obligations under this Agreement to the detriment of the holders of any Bonds or other credit obligations while any of such Bonds or credit obligations are outstanding and unpaid.

If a Participating Community desires to withdraw or in any way terminate, amend or modify its obligations under this Agreement while any Bonds or credit obligations are outstanding and unpaid, it shall provide written notice to the Commission of the proposed withdrawal or modification as provided above, and the same shall not become effective unless and until approved by the Commission. The Commission, in its sole discretion, may require the Participating Community seeking withdrawal from this Agreement to pay over to the Commission an amount determined by the Commission to be necessary to fully fund its share of such Bonds or credit obligations issued to fund the construction of Capital Improvements or the acquisition equipment for the RTA System. Otherwise, with the approval of the Commission, a Participating Community that provides a timely, written notice to the Commission of its proposed withdrawal or modification of its obligations under this Agreement as provided above while any Bonds or credit obligations are outstanding and unpaid may be permitted to withdraw on the following conditions: (a) That the Participating Community requests that the RTA provide no further transit services to such Participating Community, (b) That the Participating Community also agrees to annually levy or to annually pay its share of the outstanding Bond or credit obligations under this Agreement until the share of such Bond or credit obligations has been fully paid, and (c) That until its share of such Bond or credit obligation has been fully paid the Participating Community further agrees to continue to make an annual payment of the Base Transit Levy Rate as provided in Article VIII, Section 4(a)(1) of this Agreement. The Commission's decision regarding withdrawal by a Participating Community and its determination of the amount, if any, which a Participating Community shall be required to pay to the Commission to fully fund its share of Bonds or credit obligations upon withdrawal, shall be final, conclusive and non-appealable.

The proposal of a Participating Community to withdraw from the RTA shall be presented to the Commission at a regular meeting of the Commission prior to the meeting at which the vote on such proposal is to be taken, and notice of the impending vote thereon shall be included in the meeting notice and agenda of the meeting at which such vote is to be taken. If so approved by the Commission, the Participating Community may withdraw from membership in the RTA and participation in this Agreement, and the RTA shall thereafter have no obligation to provide transit services to said Community.

Section 3. Entitlement on Withdrawal. In the event of such withdrawal of any Participating Community from the RTA, the withdrawing Community shall be entitled to a pro rata share of RTA System Capital Improvements and equipment, which share shall be determined as follows:

(a) An account has been maintained for each Participating Community under the Intergovernmental Agreement Creating the Des Moines Metropolitan Transit Authority. This account will be credited with all amounts paid by the members of the MTA which became a part of the fixed asset fund or the contributed capital account as of June 30, 2006. This account will be charged annually with each Participating Community's pro rata share of depreciation expense, based on the same percentage that the member contributed to the operating budget for that year. No such accounts shall be established for Participating Communities of the RTA, and no further credits shall be made to any existing accounts for members of the MTA or for Participating Communities of the RTA, whether or not they were previously members of the MTA.

(b) If a Participating Community which was a member of the MTA withdraws from this Agreement, then payment to that Participating Community of its account, computed as provided in Article XVI. Section 3(a) above, shall be made by the RTA not later than ten years from the date of approval of such withdrawal by the Commission. No interest shall be paid by the RTA on such account. If, within its initial three-year period of membership of the RTA, a Community which was a member of the MTA decides to withdraw from the RTA, that Community will forfeit all rights to capital investments made or assets acquired by the MTA during their period of membership.

(c) Other than as provided in Article XVI. Section 3(b) above, a Participating Community that withdraws from this Agreement will forfeit all rights to capital investments made or assets acquired by the RTA during the period of membership.

Section 4. Dissolution.

(a) Voting on Termination. The Commission may, up an affirmative three-quarters vote, dissolve the RTA and terminate this Agreement, which vote shall specify the date and time such dissolution shall be effective; provided that the proposal to dissolve the RTA was presented at a prior regular meeting of the Commission, and provided that notice of the impending vote thereon is contained in the meeting notice and agenda of the meeting at which such vote is to be taken; and further provided that such dissolution shall be effective only after all outstanding Bonds and other credit obligations of the RTA have been paid. In the event a motion to completely dissolve the RTA is made at any Commission meeting held subsequent to receipt by the RTA of notice of withdrawal from any one or more Participating Communities, the Commission members appointed by such withdrawing Participating Communities shall not vote upon such motion and the three-quarters fractional vote requirement shall be applied only to the vote of the remaining members of the Commission. A decision to dissolve the RTA shall override any obligation otherwise indicated by paragraph one of this Article. .

(b) Disposal of Property upon Termination. Upon termination of this Agreement, the Participating Communities shall be deemed to acquire and thereafter to possess ownership interests in all RTA System Equipment and Improvements, and in real property then owned by the RTA, with such ownership interests being held as tenants in common, and all of such property shall be disposed of and the proceeds distributed to the Participating Communities at the time of dissolution on the basis of their budget shares during the last full year of RTA operation.

ARTICLE XVII. CONTRACTING FOR TRANSIT SERVICES

Section 1. The RTA may contract for transit services with Participating Communities and with non-members. Participating Communities may contract for services at the actual cost of the service. Non-members who contract with the RTA for transit services will be required to pay the fully allocated cost of the service plus ten percent (10%). The process for contracting for transit services will be established by action of the Commission. If the RTA elects under Article VIII Section 4(a)(1) to have paratransit expenses in Polk County included as a part of the operating budget expenses of the RTA, then paratransit services will only be provided in Participating Communities, and non-members who contract with the RTA for paratransit services will be required to pay the fully allocated cost of the service plus ten percent (10%).

ARTICLE XVIII. EFFECTIVE DATE AND DURATION OF AGREEMENT

Section 1. Effective Date. This Agreement shall become effective at 12:01 a.m. on March 1, 2006.

Section 2. Duration. This Agreement shall extend for a term of fifty (50) years from the Effective Date, and shall terminate and be of no further force or effect as of midnight on March 1, 2056, unless terminated earlier by a three-fourths vote of the Commission.

ARTICLE XIX. TRANSITION MATTERS

Section 1. Prior Budget Actions. All prior actions of the MTA Board undertaken pursuant to the terms of the Intergovernmental Agreement for Creation of the Des Moines Metropolitan Transit Authority prior to the Effective Date with respect to the consideration and approval of a MTA budget for the fiscal year beginning July 1, 2006 are hereby accepted and approved.

Section 2. Assumption of Contracts. All contracts, including engineering consultant and construction contracts, entered into by MTA, and being performed on the Effective Date of this Agreement shall be and hereby are approved and accepted by the RTA under the terms of this Agreement. The Commission henceforth shall assume responsibility for administration of such existing contracts.

Section 3. Officers. The Chair and Vice-Chair elected by the MTA Board in January 2006 shall serve as the Chair and Vice-Chair of the Commission under this Agreement until their successors are elected. Following the Effective Date, the Commission may appoint a member to serve as Secretary until a successor is elected.

Section 4. Policies. All policies previously approved by the MTA Board under the Intergovernmental Agreement for Creation of the Des Moines Metropolitan Transit Authority

and in effect on the Effective Date of this Agreement shall continue in force as approved policies of the Commission until modified or rescinded by the Commission.

ARTICLE XX. SEVERABILITY

Section 1. Provisions to be Severable. If any provision of this Agreement is held to be invalid by a court of competent jurisdiction, the invalidity of any such provision shall not affect the other provisions of this Agreement which can be given effect without the provision determined to be invalid, and to that end the provisions of this Agreement are severable.

ARTICLE XXI. EXECUTION OF AGREEMENT

Section 1. Passage of Resolution. A Participating Community shall become a party hereto by the passage of a resolution approving this Agreement and authorizing execution of the same by its statutory officers. This Agreement shall become effective only upon approval and execution by all of the Participating Communities.

Section 2. Signature Pages. Each Participating Community approving this Agreement shall execute the separate signature page provided for it, and the parties hereto authorize the City Clerk of the City Des Moines to assemble the signature pages and append same to copies of this Agreement, to file the Agreement with the Secretary of State and to record with the Polk and Warren and Dallas County Recorder's Offices.

Attest:

By: Cloyd Hall
City Clerk

City of Alleman

By: William M. Bodenstiner
Mayor

STATE OF IOWA, COUNTY OF POLK, ss:

On the 13 day of February, 2006, before me, the undersigned, a Notary Public in and for the State of Iowa, personally appeared Cloyd Hall and William Bodenstiner, to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk of the City of Alleman, Iowa, a municipal corporation; that the seal affixed to the above and foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and contained in the Resolution adopted by the City Council of Alleman, on the 27th day of March, 2006, and the said City Clerk and Mayor acknowledged the execution of said instrument to be their voluntary act and deed and the voluntary act and deed of said municipal corporation, buy it and by them voluntarily executed.

RENE LOCKER
Commission Number 135300
My Comm. Exp. 4-3-09

Rene Locker
Notary Public in and for the State of Iowa

CITY OF ALTOONA, IOWA (SEAL)

By: _____
Mayor

ATTEST:

By: _____
City Clerk

STATE OF IOWA)
)SS
COUNTY OF POLK)

On this 15th day of December, 2005, before a Notary Public in and for the City, personally appeared Timothy Burget and Randy Pierce, to me personally known, who being duly sworn, did say that they are the Mayor and City Clerk, respectively of the City of Altoona, Iowa, a Municipality, created and existing under the laws of the State of Iowa, and that the seal affixed to the foregoing instrument is the seal of said Municipality, and that said instrument was signed and sealed on behalf of said Municipality by authority and resolution of its City Council and said Mayor and City Clerk acknowledged said instrument to be the free act and deed of said Municipality by it voluntarily executed.

Debra L Curry
Notary Public in and for the State of Iowa

NOTARIAL SEAL IOWA

DEBRA L. CURRY
Iowa Notarial Seal
Commission number 707426
My commission expires 12/21/06

CITY OF ANKENY, IOWA

(SEAL)

By: _____

Mayor

ATTEST:

By: _____
City Clerk

STATE OF IOWA)
)SS
COUNTY OF POLK)

On this 16th day of January, 2006 before a Notary Public in and for the City, personally appeared Steven D. Van Oort and Pamela DeMauth, to me personally known, who being duly sworn, did say that they are the Mayor and City Clerk, respectively of the City of Ankeny, Iowa, a Municipality, created and existing under the laws of the State of Iowa, and that the seal affixed to the foregoing instrument is the seal of said Municipality, and that said instrument was signed and sealed on behalf of said Municipality by authority and resolution of its City Council and said Mayor and City Clerk acknowledged said instrument to be the free act and deed of said Municipality by it voluntarily executed.

_____
Notary Public in and for the State of Iowa

DAWN GEAN
Commission Number 190958
My Commission Expires
07/03/06

28E Agreement – Regional Transit Authority

Attest:
By: Marly Anderson
City Clerk

City of Bondurant
By: Mark McCoid
Mayor

STATE OF IOWA, COUNTY OF POLK, ss:

On the 6th day of February, 2006, before me, the undersigned, a Notary Public in and for the State of Iowa, personally appeared Marla McCoid and Mark J. Arentsen, to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk of the City of Bondurant, Iowa, a municipal corporation; that the seal affixed to the above and foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and contained in the Resolution adopted by the City Council of Bondurant, on the 6th day of February, 2006, and the said Mayor and City Clerk acknowledged the execution of said instrument to be their voluntary act and deed and the voluntary act and deed of said municipal corporation, buy it and by them voluntarily executed.

Michelle Wells
Notary Public in and for the State of Iowa

MICHELLE WELLS
Commission Number 735720
My Commission Expires
7-28-08

28E Agreement – Regional Transit Authority

Attest:

By: _____
City Clerk

City of Carlisle

By: _____
Mayor

STATE OF IOWA, COUNTY OF POLK, ss:

On the 30th day of JANUARY, 2006, before me, the undersigned, a Notary Public in and for the State of Iowa, personally appeared NEIL RUDDY and RUTH RANDLEMAN, to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk of the City of Carlisle, Iowa, a municipal corporation; that the seal affixed to the above and foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and contained in the Resolution adopted by the City Council of Carlisle, on the 23rd day of January, 2006, and the said Mayor and City Clerk acknowledged the execution of said instrument to be their voluntary act and deed and the voluntary act and deed of said municipal corporation, buy it and by them voluntarily executed.

_____
Notary Public in and for the State of Iowa

6-26-06

CITY OF CLIVE, IOWA

(SEAL)

By: Les Aasheim
Mayor

ATTEST:

By: Pamela L. Shannon
City Clerk

STATE OF IOWA)
)SS
COUNTY OF POLK)

On this 31st day of January, 2006, before a Notary Public in and for the City, personally appeared Les Aasheim and Pamela L. Shannon, to me personally known, who being duly sworn, did say that they are the Mayor and City Clerk, respectively of the City of Clive, Iowa, a Municipality, created and existing under the laws of the State of Iowa, and that the seal affixed to the foregoing instrument is the seal of said Municipality, and that said instrument was signed and sealed on behalf of said Municipality by authority and resolution of its City Council and said Mayor and City Clerk acknowledged said instrument to be the free act and deed of said Municipality by it voluntarily executed.

NOTARIAL SEAL IOWA
JOYCE A. CORTUM
Commission Number 153397
My Commission Expires
October 5, 2007

Joyce A. Cortum
Notary Public in and for the State of Iowa

CITY OF DES MOINES, IOWA

(SEAL)

By: _____
Mayor

ATTEST:

By: _____
City Clerk

STATE OF IOWA)
)SS
COUNTY OF POLK)

On this 19th day of December, 2005, before a Notary Public in and for the City, personally appeared T. M. FRANKLIN COWNIE and DIANE RAUH, to me personally known, who being duly sworn, did say that they are the Mayor and City Clerk, respectively of the City of Des Moines, Iowa, a Municipality, created and existing under the laws of the State of Iowa, and that the seal affixed to the foregoing instrument is the seal of said Municipality, and that said instrument was signed and sealed on behalf of said Municipality by authority and resolution of its City Council and said Mayor and City Clerk acknowledged said instrument to be the free act and deed of said Municipality by it voluntarily executed.

KAREN MARIE HERZBERG
COMMISSION NO. 171440
MY COMMISSION EXPIRES
10-06-08

_____
Notary Public in and for the State of Iowa

28E Agreement – Regional Transit Authority

Attest:

By: Julie A. Unger
City Clerk

City of Elkhart

By: Andrew W. Cory
Mayor

STATE OF IOWA, COUNTY OF POLK, ss:

On the 17th day of March, 2006, before me, the undersigned, a Notary Public in and for the State of Iowa, personally appeared Andrew W. Cory and Julie A. Unger, to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk of the City of Elkhart, Iowa, a municipal corporation; that the seal affixed to the above and foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and contained in the Resolution adopted by the City Council of Elkhart, on the 6th day of March, 2006, and the said Andrew W. Cory and Julie A. Unger acknowledged the execution of said instrument to be their voluntary act and deed and the voluntary act and deed of said municipal corporation, buy it and by them voluntarily executed.

Judy K. Kirstein
Notary Public in and for the State of Iowa

NOTARIAL SEAL IOWA
JUDY K. KIRSTEIN
Commission Number 729462
My Commission Expires
7-13-07

28E Agreement – Regional Transit Authority

Attest:

By: Anita C. Ridlen
City Clerk

City of Granger

By: Tom Schenk
Mayor

STATE OF IOWA, COUNTY OF POLK, ss:

On the 14 day of February, 2006, before me, the undersigned, a Notary Public in and for the State of Iowa, personally appeared Tom Schenk and Anita Ridlen, to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk of the City of Granger, Iowa, a municipal corporation; that the seal affixed to the above and foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and contained in the Resolution adopted by the City Council of Granger, on the 8th day of February, 2006, and the said Mayor and City Clerk acknowledged the execution of said instrument to be their voluntary act and deed and the voluntary act and deed of said municipal corporation, buy it and by them voluntarily executed.

ROSE M. TIERNAN
Commission Number 721688
My Commission Expires
4-06

Rose M Tiernan
Notary Public in and for the State of Iowa

(SEAL)

CITY OF GRIMES, IOWA

By: _____

Mayor

ATTEST:

By: _____

Acting City Clerk / Public Works Director

STATE OF IOWA)
)SS
COUNTY OF POLK)

On this 1-1-07 day of February, 2006, before a Notary Public in and for the City, personally appeared Thomas Armstrong and Kevin Kestel, to me personally known, who being duly sworn, did say that they are the Mayor and City Clerk, respectively of the City of Grimes, Iowa, a Municipality, created and existing under the laws of the State of Iowa, and that the seal affixed to the foregoing instrument is the seal of said Municipality, and that said instrument was signed and sealed on behalf of said Municipality by authority and resolution of its City Council and said Mayor and City Clerk acknowledged said instrument to be free act and deed of said Municipality by it voluntarily executed.

_____
Notary Public in and for the State of Iowa

NOTARIAL SEAL IOWA

KELLEY L. BROWN
Commission Number 175903
My Commission Expires
September 06, 2006

28E Agreement – Regional Transit Authority

Attest:

By: Stephanie L Reynolds
City Clerk

City of Johnston

By: Brian Lawrenz
Mayor

STATE OF IOWA, COUNTY OF POLK, ss:

On the 27th day of February, 2006, before me, the undersigned, a Notary Public in and for the State of Iowa, personally appeared Brian Lawrenz and Stephanie Reynolds to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk of the City of Johnston, Iowa, a municipal corporation; that the seal affixed to the above and foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and contained in the Resolution adopted by the City Council of Johnston, on the 30 day of January, 2006, and the said Brian Lawrenz and Stephanie Reynolds acknowledged the execution of said instrument to be their voluntary act and deed and the voluntary act and deed of said municipal corporation, buy it and by them voluntarily executed.

NOTARIAL SEAL IOWA
TERESA L. OSBURNE
COMMISSION NO. 719199
MY COMMISSION EXPIRES
OCTOBER 23, 2008

Teresa L. Osburne
Notary Public in and for the State of Iowa

28E Agreement – Regional Transit Authority

Attest:

By: _____
City Clerk

City of Mitchellville

By: _____
Mayor

STATE OF IOWA, COUNTY OF POLK, ss:

On the 31 day of JANUARY, 2006, before me, the undersigned, a Notary Public in and for the State of Iowa, personally appeared DAVID WIESLANDER and ANDREW J LENT, to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk of the City of Mitchellville, Iowa, a municipal corporation; that the seal affixed to the above and foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and contained in the Resolution adopted by the City Council of Mitchellville, on the 16 day of JANUARY, 2006, and the said MAYOR and CITY CLERK acknowledged the execution of said instrument to be their voluntary act and deed and the voluntary act and deed of said municipal corporation, buy it and by them voluntarily executed.

_____
Notary Public in and for the State of Iowa

MILDRED CUNNINGHAM
Commission Number 168405
My Commission Expires
2-15-08

Attest:

Joni Haag, City Clerk/Finance Director

City of Pleasant Hill

Phil Hildebrand, Mayor

STATE OF IOWA, COUNTY OF POLK, ss:

On the 25th day of January, 2006, before me, the undersigned, a Notary Public in and for the State of Iowa, personally appeared Joni Haag and Phil Hildebrand, to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk/Finance Director of the City of Pleasant Hill, Iowa, a municipal corporation; that the seal affixed to the above and foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and contained in the Resolution adopted by the City Council of Clive, on the 24th day of January 2006, and the said City Clerk/Finance Director and Mayor acknowledged the execution of said instrument to be their voluntary act and deed and the voluntary act and deed of said municipal corporation, buy it and by them voluntarily executed.

Notary Public ~~in and~~ for the State of Iowa

NOTARIAL SEAL IOWA

RUTH E. MATTIX
Commission Number 707224
My Commission Expires
December 4, 2006

28E Agreement – Regional Transit Authority

Attest:

By: Sharon Nickles
City Clerk

City of Polk City

By: Gary Heverty
Mayor

STATE OF IOWA, COUNTY OF POLK, ss:

On the 2nd day of February, 2006, before me, the undersigned, a Notary Public in and for the State of Iowa, personally appeared Gary Heverty and Sharon Nickles, to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk of the City of Polk City, Iowa, a municipal corporation; that the seal affixed to the above and foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and contained in the Resolution adopted by the City Council of Polk City, on the 23rd day of January, 2006, and the said Gary Heverty and Sharon Nickles acknowledged the execution of said instrument to be their voluntary act and deed and the voluntary act and deed of said municipal corporation, ~~buy~~ by it and by them voluntarily executed.

GARY C. MAHANNAH
Commission Number 729896
My Commission Expires
August 6, 2007

Notary Public in and for the State of Iowa

POLK COUNTY, IOWA

(SEAL)

By: _____
Chair, Board of Supervisors

ATTEST:

By: _____
County Auditor

STATE OF IOWA)
)
SS COUNTY OF
POLK)

On this 24th day of January, 2006, before me a Notary Public in and for said
State, personally appeared Angela Connolly and Michael A. Mauro to me personally known, who being duly sworn, did say that they are the Chair of the Board of Supervisors and County Auditor, respectively, of Polk County, Iowa, a political subdivision, created and existing under the laws of the State of Iowa, and that the seal affixed to the foregoing instrument is the seal of said County, and that said instrument was signed and sealed on behalf of said County by authority and resolution of its Board of Supervisors and said Chair of the Board of Supervisors and County Auditor acknowledged said instrument to be the free act and deed of said County by it voluntarily executed.

REBECCA DEWEY
COMMISSION NO. 714859
MY COMMISSION EXPIRES
2-1-08

Rebecca Dewey
Notary Public in and for the State of Iowa

G:\USERS\CRNoah\BEB\DM Regional Transity Authority Agt - 11-29-05 doc

28E Agreement – Regional Transit Authority

Attest:

By: Linda Northway
City Clerk

City of Runnells

By: Lori A. Frel
Mayor

STATE OF IOWA, COUNTY OF POLK, ss:

On the 9 day of May, 2006, before me, the undersigned, a Notary Public in and for the State of Iowa, personally appeared Lori Frel and Linda Northway, to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk of the City of Runnells, Iowa, a municipal corporation; that the seal affixed to the above and foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and contained in the Resolution adopted by the City Council of Runnells, on the 9 day of May, 2006, and the said Lori Frel and Linda Northway acknowledged the execution of said instrument to be their voluntary act and deed and the voluntary act and deed of said municipal corporation, buy it and by them voluntarily executed.

BERT D. HUSEN
MY COMMISSION EXP. 10-21-07
COMMISSION NO. 732010

Notary Public in and for the State of Iowa

28E Agreement – Regional Transit Authority

Attest:

By: _____
City Clerk

City of Sheldahl

By: Frank L Hampton
Mayor

STATE OF IOWA, COUNTY OF POLK, ss:

On the 20th day of March, 2006, before me, the undersigned, a Notary Public in and for the State of Iowa, personally appeared Britt Jones and Frank Hampton to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk of the City of Sheldahl, Iowa, a municipal corporation; that the seal affixed to the above and foregoing instrument is the corporate seal of said municipal corporation, and that said instrument was signed and contained in the Resolution adopted by the City Council of Sheldahl, on the 8th day of March, 2006 and the said Britt Jones and Frank Hampton acknowledged the execution of said instrument to be their voluntary act and deed and the voluntary act and deed of said municipal corporation, buy it and by them voluntarily executed.

SHAUNA J WALTHER
Notarial Seal - Iowa
Commission # 189168
My Commission Expires 10-29-07

Shauna J Walther
Notary Public in and for the State of Iowa

CITY OF URBANDALE, IOWA (SEAL)

By: _____
Mayor

ATTEST:

By: Debra Mains
City Clerk

STATE OF IOWA)
)SS
COUNTY OF POLK)

On this 20th day of January, 2005, before a Notary Public in and for the City, personally appeared Robert D. Andewen and Debra Mains, to me personally known, who being duly sworn, did say that they are the Mayor and City Clerk, respectively of the City of Urbandale, Iowa, a Municipality, created and existing under the laws of the State of Iowa, and that the seal affixed to the foregoing instrument is the seal of said Municipality, and that said instrument was signed and sealed on behalf of said Municipality by authority and resolution of its City Council and said Mayor and City Clerk acknowledged said instrument to be the free act and deed of said Municipality by it voluntarily executed.

Jamie Parsons
Notary Public in and for the State of Iowa

JAMIE PARSONS
Commission Number 736286
My Commission Expires
8-23-06

CITY OF WEST DES MOINES, IOWA

(SEAL)

By: _____
Eugene T. Meyer, Mayor

ATTEST:

By: _____
Jody E. Smith, City Clerk

STATE OF IOWA)
)SS
COUNTY OF POLK)

On this 17th day of January 2006, before a Notary Public in and for the City, personally appeared Eugene T. Meyer and Jody E. Smith to me personally known, who being duly sworn, did say that they are the Mayor and City Clerk, respectively of the City of West Des Moines, Iowa, a Municipality, created and existing under the laws of the State of Iowa, and that the seal affixed to the foregoing instrument is the seal of said Municipality, and that said instrument was signed and sealed on behalf of said Municipality by authority and resolution of its City Council and said Mayor and City Clerk acknowledged said instrument to be the free act and deed of said Municipality by it voluntarily executed.

FERN E. STEWART
Commission Number 223053
My Commission Expires
June 16, 2008

_____
Notary Public in and for the State of Iowa

CITY OF WINDSOR HEIGHTS, IOWA

By: _____

David J. Sullivan, Mayor

(SEAL)

ATTEST:

By: _____

Marketa George Oliver, City Administrator/Clerk

STATE OF IOWA)
)SS
COUNTY OF POLK)

On this 3rd day of January, ~~2005~~ 2006, before a Notary Public in and for the City, personally appeared David J. Sullivan and Marketa George Oliver to me personally known, who being duly sworn, did say that they are the Mayor and City Administrator/Clerk, respectively of the City of Windsor Heights, Iowa, a Municipality, created and existing under the laws of the State of Iowa, and that the seal affixed to the foregoing instrument is the seal of said Municipality, and that said instrument was signed and sealed on behalf of said Municipality by authority and resolution of its City Council and said Mayor and City Clerk acknowledged said instrument to be the free act and deed of said Municipality by it voluntarily executed.

NOTARIAL SEAL IOWA
COLLEEN FINGREY
Commission Number 173478
My Comm. Exp. 3-16-09

_____

Notary Public in and for the State of Iowa

Exhibit A

Textual descriptions of the nine Regional Transit Districts are as follows:

Regional Transit District Number 1 shall be described as follows:
That portion of Iowa Senatorial District 21 that lies within Polk County.

Regional Transit District Number 2 shall be described as follows:
The area comprising all of Iowa Senatorial District 30 and also including those portions of the cities of Clive and West Des Moines that are located within Dallas County.

Regional Transit District Number 3 shall be described as follows:
The area comprising all of Iowa Senatorial District 31 and also including those portions of the City of Des Moines that extend into Warren County lying West of U.S. Highway 69.

Regional Transit District Number 4 shall be described as follows:
The area comprising all of Iowa Senatorial District 32 and also including those portions of the City of Urbandale that are located within Dallas County.

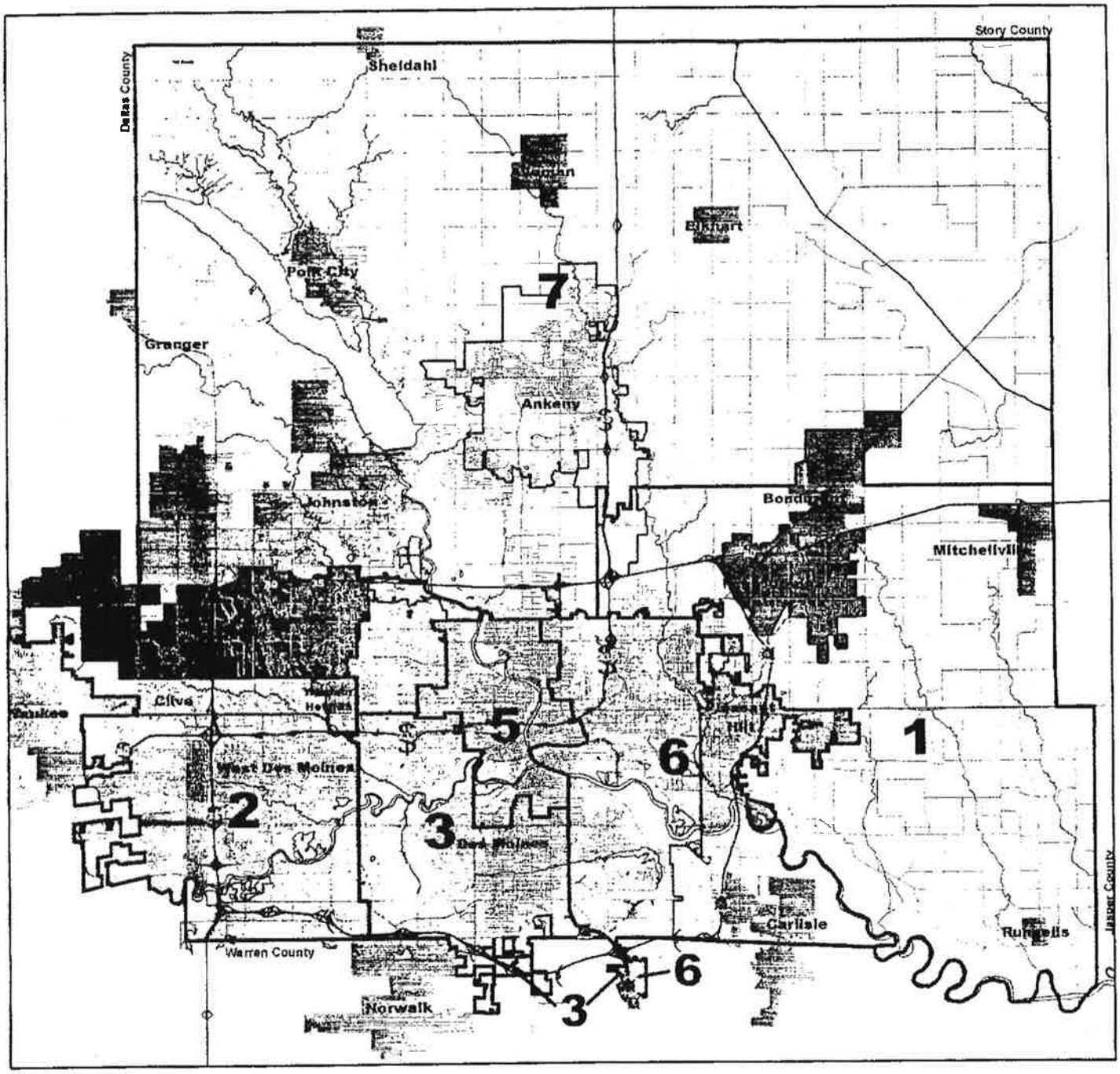
Regional Transit District Number 5 shall be described as follows:
The area comprising all of Iowa Senatorial District 33.

Regional Transit District Number 6 shall be described as follows:
The area comprising all of Iowa Senatorial District 34 and also including the portion of the City of Des Moines that extends into Warren County lying East of U.S. Highway 69.

Regional Transit District Number 7 shall be described as follows:
The area comprising all of Iowa Senatorial District 35.

Regional Transit Districts 8 and 9 are at-large districts, and are described as consisting of all of the area located within Polk County.

Regional Transit Authority



Legend

RTA Districts

Interstates

Member Communities

City

Altoona

Ankeny

Clive

Des Moines

Urbandale

West Des Moines

Windsor Heights

Non-Member Communities

Map prepared by the Information Technology Division of the City of Des Moines, Iowa - December 2005

RTA Tax Rate Allocation

Total MTA Operating Budget [redacted]
Portion Of Total Budget To Allocate On Valuation Basis [redacted]

1/1/2005 Valuations (Preliminary)	Alleman	Altoona	Ankeny	Bondurant	Carlisle*	Clive*	Des Moines*
Regular Valuation In Polk County	14,635,220	376,124,736	1,392,649,845	57,920,431	11,429,047	775,851,703	5,524,643,309
Regular Valuation Outside Polk County	-	-	-	-	74,691,301	131,989,756	452,183
Total Regular Valuation Paratransit	14,635,220	376,124,736	1,392,649,845	57,920,431	11,429,047	775,851,703	5,524,643,309
Total Regular Valuation All Other	14,635,220	376,124,736	1,392,649,845	57,920,431	86,120,348	907,841,459	5,525,095,492
Total Regular Valuation (RTA Member)	-	376,124,736	1,392,649,845	-	-	907,841,459	5,525,095,492
Rider/Mileage Allocation	0%	0.9%	1.4%	0.0%	0.0%	0.5%	76.5%
Paratransit	[redacted]						
Non-Paratransit							
Cost Participation (Current Method)							
Cost Participation (Current Method)	-	43,302	67,615	-	-	21,771	3,692,755
Cost Participation (Regional Method)							
Rider/Mileage Allocation	-	37,377	58,363	-	-	18,792	3,187,471
Valuation Allocation	-	17,294	64,033	-	-	41,742	254,039
Total Cost Participation (Regional Method)	-	54,671	122,396	-	-	60,534	3,441,511
Regional Method Increase/(Decrease)	-	11,369	54,781	-	-	38,763	(251,244)
Current Method Tax Rate	-	0.11513	0.04855	-	-	0.02398	0.66726
Park and Ride Subsidy Offset (Des Moines)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-0.19774
Total Current Tax Rate	-	0.11513	0.04855	-	-	0.02398	0.46951
Regional Method Tax Rate Allocation							
Paratransit Rate	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Rider/Mileage Allocation	0.00000	0.09937	0.04191	0.00000	0.00000	0.02070	0.57691
Valuation Allocation	0.00000	0.04598	0.04598	0.00000	0.00000	0.04598	0.04598
Total Transit Tax Rate	0.00000	0.14535	0.08789	0.00000	0.00000	0.06668	0.62289
Park and Ride Subsidy Offset (Des Moines)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-0.19774

EXHIBIT B

RTA Tax Rate Allocation

Total MTA Operating Budget [redacted]
Portion Of Total Budget To Allocate On Valuation Basis

Total Regional Tax Rate	0.00000	0.14535	0.08789	0.00000	0.00000	0.06668	0.42515
Regional Method Increase/(Decrease)	0.00000	0.03023	0.03934	0.00000	0.00000	0.04270	-0.04437

EXHIBIT B

RTA Tax Rate Allocation

Total MTA Operating Budget
Portion Of Total Budget To Allocate On Valuation

1/1/2005 Valuations (Preliminary)	Elkhart	Granger*	Grimes*	Johnston	Mitchellville	Pleasant Hill	Polk City	Runnells
Regular Valuation In Polk County	9,879,018	1,290,950	221,227,692	779,911,897	38,277,582	253,868,436	81,426,326	7,873,298
Regular Valuation Outside Polk County	-	25,291,484	35,294	-	517,368	-	-	-
Total Regular Valuation Paratransit	9,879,018	1,290,950	221,227,692	779,911,897	38,277,582	253,868,436	81,426,326	7,873,298
Total Regular Valuation All Other	9,879,018	26,582,434	221,262,986	779,911,897	38,794,950	253,868,436	81,426,326	7,873,298
Total Regular Valuation (RTA Member)	-	-	-	-	-	-	-	-
Rider/Mileage Allocation	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Paratransit								
Non-Paratransit								
Cost Participation (Current Method)								
Cost Participation (Current Method)	-	-	-	-	-	-	-	-
Cost Participation (Regional Method)								
Rider/Mileage Allocation	-	-	-	-	-	-	-	-
Valuation Allocation	-	-	-	-	-	-	-	-
Total Cost Participation (Regional Method)	-	-	-	-	-	-	-	-
Regional Method Increase/(Decrease)	-	-	-	-	-	-	-	-
Current Method Tax Rate	-	-	-	-	-	-	-	-
Park and Ride Subsidy Offset (Des Moines)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total Current Tax Rate	-	-	-	-	-	-	-	-
Regional Method Tax Rate Allocation								
Paratransit Rate	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Rider/Mileage Allocation	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Valuation Allocation	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total Transit Tax Rate	**0.00000**	**0.00000**	**0.00000**	**0.00000**	**0.00000**	**0.00000**	**0.00000**	**0.00000**
Park and Ride Subsidy Offset (Des Moines)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

EXHIBIT B

RTA Tax Rate Allocation

Total MTA Operating Budget
Portion Of Total Budget To Allocate On Valuation

Total Regional Tax Rate	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Regional Method Increase/(Decrease)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

EXHIBIT B

RTA Tax Rate Allocation

Total MTA Operating Budget
Portion Of Total Budget To Allocate On Valuation

1/1/2005 Valuations (Preliminary)	Sheldahl*	Urbandale*	West Des Moines*	Windsor Heights	Unincorp. Polk County	UPC and Cities
Regular Valuation In Polk County	2,746,872	1,682,237,761	2,287,235,432	176,642,832	1,284,959,325	14,980,831,712
Regular Valuation Outside Polk County	3,038,216	159,421,355	574,353,774	-	-	969,790,731
Total Regular Valuation Paratransit	2,746,872	1,682,237,761	2,287,235,432	176,642,832	1,284,959,325	14,980,831,712
Total Regular Valuation All Other	5,785,088	1,841,659,116	2,861,589,206	176,642,832	1,284,959,325	15,950,622,443
Total Regular Valuation (RTA Member)	-	1,841,659,116	2,861,589,206	176,642,832	1,284,959,325	14,366,562,011
Rider/Mileage Allocation	0.0%	3.8%	15.4%	1.6%	0.0%	100.0%
Paratransit						1,190,000
Non-Paratransit						4,827,579
Cost Participation (Current Method)						
Cost Participation (Current Method)	-	182,011	745,000	75,125	-	4,827,579
Cost Participation (Regional Method)						
Rider/Mileage Allocation	-	157,106	643,061	64,846	-	4,167,016
Valuation Allocation	-	84,678	131,574	8,122	59,081	660,563
Total Cost Participation (Regional Method)	-	241,784	774,634	72,967	59,081	4,827,579
Regional Method Increase/(Decrease)	-	59,773	29,634	(2,158)	59,081	-
Current Method Tax Rate	-	0.09883	0.26034	0.42529	-	
Park and Ride Subsidy Offset (Des Moines)	0.00000	0.00000	0.00000	0.00000	0.00000	
Total Current Tax Rate	-	0.09883	0.26034	0.42529	-	
Regional Method Tax Rate Allocation						
Paratransit Rate	0.00000	0.00000	0.00000	0.00000	0.00000	
Rider/Mileage Allocation	0.00000	0.08531	0.22472	0.36710	0.00000	
Valuation Allocation	0.00000	0.04598	0.04598	0.04598	0.04598	
Total Transit Tax Rate	0.00000	0.13129	0.27070	0.41308	0.04598	
Park and Ride Subsidy Offset (Des Moines)	0.00000	0.00000	0.00000	0.00000	0.00000	

EXHIBIT B

RTA Tax Rate Allocation

Total MTA Operating Budget
Portion Of Total Budget To Allocate On Valuation

Total Regional Tax Rate	**0.00000**	**0.13129**	**0.27070**	**0.41308**	**0.04598**
Regional Method Increase/(Decrease)	**0.00000**	**0.03246**	**0.01036**	**-0.01221**	**0.04598**

EXHIBIT B

CITY OF DES MOINES

CITY CLERK'S OFFICE
CITY HALL
400 ROBERT D. RAY DRIVE
DES MOINES, IOWA 50309 -1891
(515) 283-4209

May 19, 2006

TO: **SECRETARY OF STATE**
POLK COUNTY RECORDER
Warren County Recorder
Dallas County Recorder

Re: Amended and Restated Agreement for the Des Moines Regional Transit Authority

Please file and record this document and invoice this office for charges.

Amended and Restated Agreement for the Des Moines Regional Transit Authority approved at the December 19, 2005 Council meeting.

Thank you.

Sincerely,

Diane Rauh

Diane Rauh
City Clerk

Enclosure

CHESTER J. CULVER
IOWA SECRETARY OF STATE

LUCAS BUILDING, FIRST FLOOR
DES MOINES, IOWA 50319

May 25, 2006

DIANE RAUH
%CITY OF DES MOINES
CITY HALL-400 ROBERT D RAY DR
DES MOINES, IA 50309-1891

RE: Filing of 28E Agreement between the CITY OF DES MOINES and the DES MOINES REGIONAL TRANSIT AUTHORITY

Dear MS RAUH

We have received the above described agreement which you have submitted to this office for filing, pursuant to the provisions of Chapter 28E, Code of Iowa.

You may consider the same filed as of May 25, 2006.

Sincerely,

Chet Culver

Chester J Culver
Secretary of State

CJC/PK
Enclosures

TEL (515) 281-5204 FAX (515) 242-5953 www.sos.state.ia.us sos@sos.state.ia.us

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