



Omaha Metro
2222 Cuming Street
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2019-2024 Transit Development Plan

May 2019

Prepared by:



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Executive Summary

Introduction

The Metro Transit Development Plan outlines the priorities of the agency for the six-year period from 2019 through 2024. The plan incorporates many of the goals and strategies outlined in regional transportation planning efforts and reflects on their implementation. Central to the 2019 TDP is to focus a broad range of service concepts in transit supportive areas and to refine service to address feedback from the 2017 on-board survey with the expectation these efforts will provide a positive return on the investment. It is Metro's goal to provide useful service for customers and provide options for people living in, working in, and/or visiting the greater Omaha region.

As the plan addressed, localized improvements are feasible within the current operational budget, however, substantial service improvements or expansion beyond the current network requires enhanced funding streams that consider added buses and operators, expanded maintenance staff, additional administrative staff, and on-going capital investments into expansion.

Framework for Transit Development Plan

The Transit Development Plan preparation process started in the spring of 2018 following the 2017 on-board survey. The process included:

- An extensive review of the current range of service relative to peers and internally established performance measures, an overview of the region including demographic and socioeconomic conditions, and definition of transit supportive areas.
- An analysis of metrics characterizing the impacts of 2015 system changes, which was the result of recommendations from the 2013 Regional Transit Vision.
- Community partner questionnaires and internal feedback, working groups and SWOT analysis.
- Exploration of service plan alternative, route alignment changes, service level changes, and transit product alternatives and their ridership impacts.
- Setting route design, service level, service performance, and customer service performance standards.
- Financial analysis of operational and capital needs for service expansion.
- Overview of supplemental funding streams.

Purpose

To address needs identified through review of the current system, recommendations outlined in regional planning efforts, and known short-term plans, three strategy themes were developed to improve productivity and expand service. The strategies followed the three goals of the project:

- Enhance access to transit for residents within Metro's service area.
- Engage regional partners in planning current and future transit service.
- Educate our community about transit planning and funding opportunities.

While strategies and service alternatives focused principally on surveys and analyses conducted as part of the TDP effort, which addressed funding constraints of the region, goals of the effort are reflective of ideas discussed as part of the following (regional) planning efforts:

- Heartland 2050
- Close the Gap
- Sarpy County Transit Feasibility Study
- Omaha Chamber's Greater Omaha 2040
- Smart Cities Initiative
- Regional Transit Vision of 2013.

Existing Services Analysis – Key Findings

The TDP includes detailed analysis of the existing range of services Metro services, including performance trends relative to peers and industry benchmarks. Central to the current services analysis was a review of the impacts associated with system changes implemented in 2015.

Prior to the 2015 system changes there had not been a significant modification in routing and schedules for almost 20 years. In the period there were numerous changes in the paths selected routes travel and to timetables, however, these were incremental and route specific. Changes implemented in 2015 focused on adding service to high ridership routes that represented the core of the system. Service enhancement were to provide more 15-minute service to the best performing routes, not just during the peak travel times, but also during midday periods to create an all-purpose transportation option. The improvement in weekend ridership and performance following the service changes shows the importance of offering service beyond commute to work purposes.

Key findings of the existing conditions analysis include:

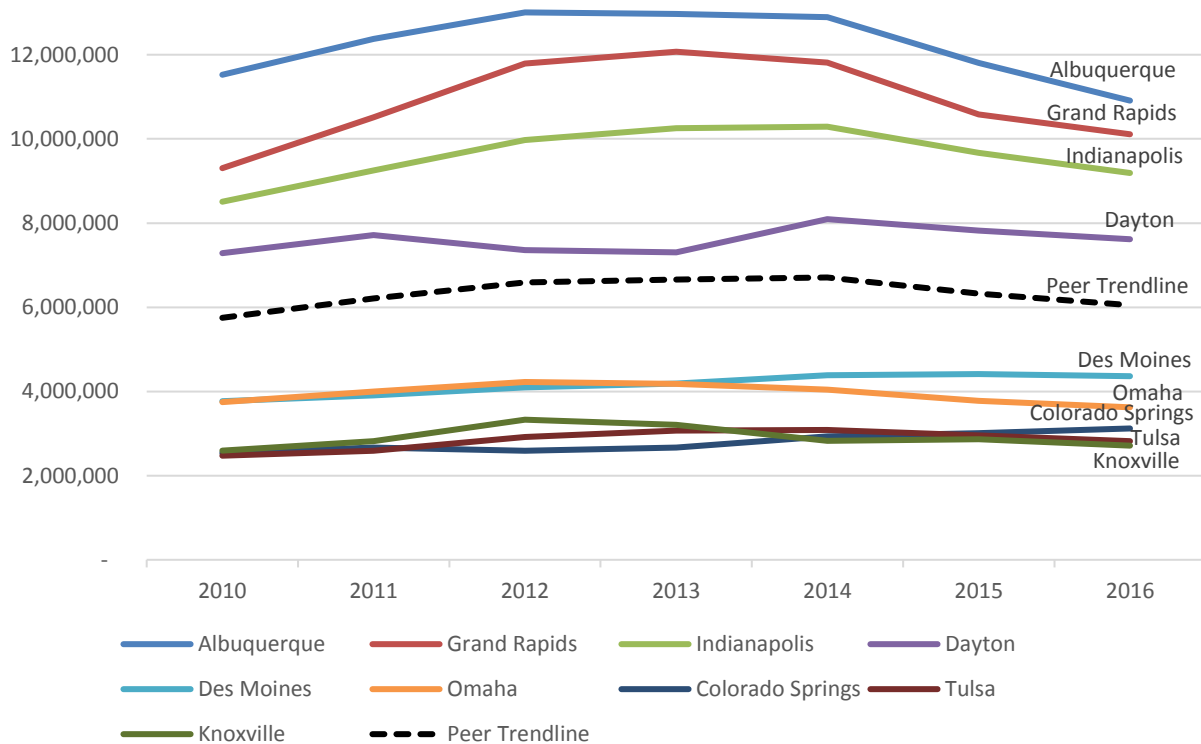
- The existing conditions report identified Transit Supportive Areas (TSAs) for metropolitan areas of Omaha's size are defined as areas with at least four households or five jobs per acre. Within the urbanized area of the Omaha-Council Bluffs metropolitan region, 66 percent of the transit supportive areas are covered by Metro's service. Within the city of Omaha, 81 percent of transit supportive areas have access to Metro's services. While most residents and employees within TSAs have walk access to Metro service, only 28 percent of people and 38 percent of jobs in the metro area have walk access to 15-minute service, which is defined as high-frequency service.
- Development of a density that could support transit is being located outside, and in many cases, well outside Metro's service area. These higher density development nodes create a service challenge because the area between them is typically lower density residential or commercial development that generates little ridership, which negatively impacts productivity of routes serving the higher density nodes. The distributed nodal development pattern connected using transit is less efficient because the lower density areas generate little activity, however, represent much of the mileage.
- Frequency generates use. Analysis of ridership on routes where frequency was added (to enhance service from 30 minute frequency to 15 minute) resulted in ridership increases that outpaced the expected based on typical elasticity estimates. Over the period since 2015, system-wide ridership has declined (approximately 11 percent), however, use of new 15-minute service routes increased in the period (Route 2, Route 18, Route 4, Route 15).
- Funding allocated to Metro's services on a per capita basis is much lower than metro areas Omaha generally aspires to be like – Minneapolis, Denver or Kansas City. Funding for transit in Omaha is more comparable to metro areas such as Tulsa, OK or Albuquerque, NM. Table ES-1 documents funding levels for a range of similar and aspirational metro areas.

Table ES-1. Operational Transit Funding & Ridership per Capita

Type	City	Operational Transit Funding per Capita	Annual Ridership per Capita	Funding Difference with Omaha	Ridership Difference with Omaha
Aspirational Cities	Denver	\$279.19	41.3	\$241.59	36.2
	Minneapolis	\$142.62	30.9	\$105.03	25.8
	Salt Lake City	\$366.94	44.1	\$329.34	39.0
	Kansas City	\$60.26	8.9	\$22.66	3.8
Aspirational Peer Systems	Des Moines	\$62.95	10.2	\$25.35	5.1
	Grand Rapids	\$77.11	19.3	\$39.51	14.1
	Indianapolis	\$47.38	6.1	\$9.78	1.0
Similar Peer Systems	Dayton	\$102.46	12.5	\$64.86	7.4
	Tulsa	\$29.13	4.5	(\$8.47)	- 0.6
	Albuquerque	\$70.03	14.2	\$32.43	9.1
	Knoxville	\$35.00	4.9	(\$2.60)	- 0.2
	Colorado Springs	\$37.45	6.1	(\$0.15)	1.0
	Omaha	\$37.60	5.1	-	-

Source: National Transit Database, 2017. Funding and Ridership per Capita based on Urbanized Area. Denver, Minneapolis, and Salt Lake City have light rail systems. Kansas City has a separate transit authority for its streetcar, not included in these statistics.

Figure ES-1. Peer Systems Ridership Trends, Fixed Route



Source: National Transit Database.

Service Improvement Strategies – Six Years and Beyond

Two general directions were followed in developing potential improvements to the current service concept:

1. **Fine Tune within the Current Budget:** 2015 service changes streamlined operations and added frequency to the most productive areas of the city. In the two-plus years since changes were implemented additional minor changes to reassign revenue hours have been identified. Implementation of these additions and reductions would be within the current budget constraints, which is referred to as revenue neutral.
2. **Strengthen the Core of the Network:** A key finding from analysis of the 2015 service changes was that adding frequency in the higher density areas of Omaha generates more use of the system, which is measured in ridership. Building from the experience of the 2015 changes, Metro has placed high importance on identifying new funding to allow adding frequency to routes in the heart of the city, where it will do the most good.
3. Following implementation of these two strategies, Metro will set sights on **Supporting Regional Growth:** Omaha is a growing metro area and transit needs to be an active mode in promoting that growth in a sustainable manner. Thus, regional and community plans for growth need to be coordinated with Metro budgeting and service planning for transit to be a tool in a healthy community.

Table ES-2 highlights the key elements of each of the strategies for service in the region.

Table ES-2. Transit Service Improvement Strategies – Six Years and Beyond

Strategy	Element Description
Fine Tune the Current System (Within Current Budget)	Add Frequent Service to Route 24 (Off-Peak)
	Combine Routes 35/36
	Remove Route 30 from Downtown
	Interline Routes 4/13
	Interline Routes 8/14
	Reduce Night Service by One Hour (Daily)
	Discontinue Route 94 (Express)
Strengthen the Core (Requires Increased Operating and Capital Funding)	Add Frequent Service (15 Minute) to 4, 13, 15 and 24 (All Day)
	Add Frequent Service (15 Minute) to 3 and 30 (Peak Period)
	Add Frequent Service (15 Minute) to Route 18 (Saturday)
	Run Saturday Level of Service on Sunday

Strategy	Element Description
Support Regional Growth (Requires Increased Operating and Capital Funding)	Council Bluffs BRT (Broadway Corridor)
	North Omaha 24 th Street BRT
	South Omaha/Fort Crook/Bellevue BRT
	72 nd Street BRT
	Express Route – All Provide Four Trips in Each Peak

Guiding Research and Related Planning Documents

The Metro Transit Development Plan outlines the priorities of the agency for 2019 through 2024. The plan builds off previous (regional) transportation planning documents and reflects on their implementation. By establishing where transit supportive areas are located, feedback from the 2017 on-board survey, and an operations analysis, the plan prioritizes strategies for Metro to improve transit service for the customer in the greater Omaha region.

This chapter presents and evaluates past planning efforts of Metro, specifically the implementation of the Regional Transit Vision of 2013 and the resulting 2015 system change. It then identifies transit supportive areas in the region.

Introduction

This Transit Development Plan (TDP) presents the short-term service and operations plan. The recommendations will provide a higher level of service by improving the overall efficiency and productivity of the service. Additionally, it includes a capital plan, and a financial and staffing plan outlining the needs to improve and enhance service in the community. Later sections include discussions on possible improvements in technology, accessibility, and safety, as well as the impact of regional land use patterns and development on transit.

While improvements can be made within the current operational budget, substantial service improvements within the current network or beyond will require supplementary funding streams. Expanded service will also require additional administrative staff and one-time capital investments.

The TDP process included an analysis of the existing conditions of Metro services, including data and information about service performance trends, a community assessment, the transit development vision, comparisons to peer systems, and field observations. It also includes an analysis of the 2015 system and service level changes, transit product alternatives, route design and performance standards, a financial analysis, and an overview of supplemental funding streams.

Metro will need to continue to provide equitable service that meets the requirements of the Title VI Civil Rights Act of 1964 (Title VI). Title VI ensures that no person shall be excluded from participation in, denied benefits of, or be subjected to discrimination on the basis of race, color, or national origin under any program receiving federal financial assistance. Any major service change or route alignment change will need to go through a Title VI analysis before implementation.

It is important to develop performance measures to address standards within the categories of efficiency, service quality, and route design. These standards will be used to guide future service evaluation; set standards for future service changes including expansion and reduction of service; and ensure compliance with the American with Disabilities Act (ADA) and other local, state, and federal requirements.

Service quality standards help staff evaluate system performance pertaining to reliable and high-quality service which encourages ridership. Service standards for Metro to define and track should include key metrics such as passengers per hour, passengers per mile, on-time performance, and missed trips, as well as measures of high-frequency transit accessibility, such as the population within ½ mile of Metro's 15-minute service network. This will help Metro expand service where deemed necessary, while consolidating duplicate services elsewhere to best allocate Metro's limited resources.

RTV Implementation Evaluation

The 2013 Regional Transit Vision (RTV) implemented in May of 2015 led to major changes in route alignments, service frequency, and service span. The RTV realigned Metro's service provision focus from area coverage to service frequency in an effort to boost ridership along its most successful routes. The overall number of routes decreased from 34 to 28, while the number of routes offering 15-minute service during peak periods increased from two to five. The changes followed four guiding principles for service planning:

- Right Size Service to Market
- Strengthen Network Structure
- Improve the Customer Experience
- Build Financial Sustainability

While the changes constituted the largest overhaul of Metro's bus network in decades, not all recommendations from the RTV were implemented. This section will examine the consistency of the system changes to the RTV plan. It will first look at the Institutional Strategies and Best Practices technical memorandum of May 2013, followed by the Network Evolution Plan of June 2013.

A productivity analysis of the system changes was provided to Metro in the Omaha Metro Transit Development Plan – 2015 Service Change Analysis Memo of July 11, 2018. Highlights of the memo will be presented in this section as well.

Institutional Strategies and Best Practices

The Institutional Strategies and Best Practices Memo reviewed Metro's institutional arrangements and identified best practices to improve performance through opportunities for efficiencies and cost savings, strategies to maximize revenue, and marketing strategies. Most of the strategies identified in the Regional Transit Vision process are still implemented by Metro today.

Expense Reduction Initiatives

The RTV identified the following expense reduction efforts by Metro. The strategies in bold are currently implemented:

- **Staffing changes consistent with service level changes and a focus on efficient vehicle and operator scheduling**
- Implementation of part-time workers where practical (building and grounds for example)
- **A focus on core vehicle maintenance activities and contracting out specialized functions** (rebuild of major bus components, maintenance of building sub systems – HVAC – for example)
- Cross-trained personnel by making use of “step up” capabilities (maintenance supervision/operator training)
- **Participating in “joint procurement” opportunities with city and state agencies where practical**
- Reduction of bus parts inventory
- **Fuel purchasing program**
- Self-insurance in key areas where shown to be cost effective

Most of these on-going expense management practices are still in place today. Metro entered a joint procurement of new buses in 2018 with Grand Forks to purchase 39 new buses.

Organizational Efficiency Strategies

The Memo recommended Metro to focus on its two largest cost categories: operations and maintenance. The strategies recommendations included:

- Improving system service performance
- Optimizing operator and mechanic overtime
- Expanding maintenance performance indicators

- Expanding key financial/resource utilization performance indicators
- Educating the work force on performance indicators
- Addressing workers compensation costs
- Focusing on local market levels and conditions relative to positions and programs
- Maximizing operator availability

While performance improved on the routes with expanded 15-minute service, ridership and performance decreased systemwide. Driver and staffing shortages still lead to high levels of overtime utilization and high labor costs. The driver shortage also affects Metro's ability to execute its scheduled services, leading to reduced dependability for the customer. The new performance standards and service level guidelines of this TDP will need to be shared with staff and the community to make transit effective.

System Marketing Strategies

The marketing approach for Metro to cover awareness, incentive, and advocacy included:

- Identifying Metro's role in community
- Identifying a theme and consistently message the theme to promote that role
- Emphasizing that theme through media/social media, web, speaker bureau, special events
- Building on system strengths, especially with the new RTV plan (best service corridor, major generators served)
- Developing and sharing future vision

Metro completed a Communications Strategy Plan for 2017 - 2019, which states Metro is "at a prime moment to capture interest in transit by telling the story of who we are, what we do, and where we're going." The focus on the plan is to promote service, ORBT, system improvements, and Metro basics. It outlines the branding strategy and outlets to be used for marketing, along with measurements for effectiveness. The ongoing strategic planning efforts establish an internal vision for the organization.

Network Evolution Plan

The RTV Network Evolution Plan outlined route alignment changes and service levels, divided in three phases based on available operational funding. The new route

alignments were based on an existing conditions study, including regional demographics, an on-board survey, and Metro performance and quality.

Phase one included the major near-term system changes, while phase two built on the new network by adding frequency in the long term. Phase three provided a visionary network. The plan recognized that in the near term:

“Existing market conditions such as scattered density, dispersed travel patterns, and non-linear nature of land use present a challenging environment in which to generate high ridership. Limited ridership generation on otherwise efficient routes limits the effectiveness of the system as a result of low volumes of passengers carried. Some market conditions (low densities, disperse destinations) will not respond to any level of transit service. The existing near-term conditions warrant a focus on reinforcing and refining service along current productive corridors while scaling additional investment appropriately. Additional near-term opportunities include addressing the lack of high frequency transit services and improving network connectivity.”¹

For the long term, improvements of the system to achieve the goal of increased transit mobility:

“will depend on a paradigm shift in development patterns, necessitating participation of both the city and county to develop mutually supportive land use patterns that emphasize sustainable mobility. If transit is to become a part of the mobility solution, then a commitment to sustainable development patterns is necessary.”²

The guiding principles for the network redesign followed four guiding design principles for service planning:

- Right Size Service to Market
 - Match service levels with market demand for transit.
 - Invest resources in areas where transit will have a better chance of succeeding. Routes have been more productive when operating in areas of high population or employment density.
- Strengthen Network Structure
 - Invest improvements in key corridors rather than coverage.
 - Reshape urban core structure from radial to grid to support a many-to-many sustainable transit lifestyle.

¹ Page 22 of RTV Network Evolution Plan, 2013.

² Ibid.

- Ensure consistency between individual recommendations with overall network design decisions.
- Improve the Customer Experience
 - Create all week network which provides customers the opportunity to use transit throughout the week.
 - Implement spontaneous use frequency for highest-performing routes.
- Build Financial Sustainability
 - Reduce circuitous alignments and reconfigure routes to have more direct travel patterns.
 - Consolidate duplicative services where market does not warrant current level of service and reinvest resources into single effective route.
 - Consider operating cost, efficiency, and effectiveness when making route design decisions.
 - Consider non-fixed route service alternatives in low-demand areas.

Recommendations Overview

Through the Network Evolution Plan service restructuring was recommended to reallocate unproductive route resources to other corridors where higher development density better supports transit service. These resources would then be used to increase frequencies on Routes 2, 4, 13, 15, 18, and 30. The higher frequencies on these urban core routes could facilitate ad hoc street corner transfers. Improving weekend service would create an all-week network, useful for more than just work commuting trips.

The recommendations included service tiers to classify routes based on their network roles and allocate the amount of service appropriately. Phase One would reallocate the existing resources to streamline the network, while phase two and three could be implemented with additional resources. Phase one was based on a \$22 million annual operating budget, while Phase Two would require a \$32 million operating budget, in 2013 dollars. Areas losing service under the recommendations included Grover Street and Southwest Omaha.

2015 System Change Implementation

A majority of the recommended route and service level changes were implemented. The new route map showed off straight lines, with thicker lines for routes offering 15-minute service. However, not all phase one recommendations were implemented, while phase two and three recommendations are still facing budgetary constraints.

The RTV Network Evolution plan had a more aggressive plan to eliminate underperforming services. In phase one, routes 16, 94, and 96 were slated for

removal, while the proposed Route 14 alignment was extended to the North Omaha Transit Center and now includes the Old Mill area near the Social Security Office and TD Ameritrade. Route 8 was extended to continue service to the Omaha Housing Authority off 60th and Sorenson, and Route 55 extends further west today than originally planned. Route 34 was shortened from the initial proposal serving to Boulder Creek to serve to 120th & I Street today, as the reverse commute trip of Route 97. Some alignment changes, such as limiting Route 95 to Fort Crook Boulevard and Route 98 to 120th and Fort Street were not implemented.

A major recommendation included establishing the Farnam Street Busway, which would result in five minute headways between UNMC and downtown by rerouting Routes 2 and 4 down Farnam Street. A new route, Route 44 between Benson Park and downtown, was to replace the Route 4 service on Cuming Street. A new transit district would function as an additional operational revenue source. The initial plan for ORBT included the Farnam Street Busway as well.

This Transit Development Plan recommends some of the service level improvements proposed in the RTV recommendations that were not implemented, listed in Table 1. Some of these recommendations were initially slated for implementation under Phase I of the RTV. See the Recommended Service Alternatives chapter of this TDP for detailed descriptions of these and other proposed service level changes.

Table 1. RTV Network Evolution Plan Recommendations Included in the TDP Recommendations

Route	Recommendation	RTV Network Evolution Plan Phase	TDP Strategy
2	10-Minute All Day	Phase 2	Strategy 1 (ORBT)
3	15-Minute Peak	Phase 2	Strategy 2
4	15-Minute All Day	Phase 2	Strategy 2
13	15-Minute All Day	Phase 2	Strategy 2
15	15-Minute All Day	Phase 2	Strategy 2
24	15-Minute All Day	Phase 3	Strategy 2
30	15-Minute Peak	Phase 1	Strategy 2
93	Core Four	Phase 2	Strategy 3
95	Core Four	Phase 3	Strategy 3

Performance Analysis

The 2015 system change improved performance and ridership on core routes offering 15-minute service. However, system wide ridership declined. A detailed analysis of the ridership and performance of the system change is included in the

2015 Service Change Analysis Memo of July 11, 2018 and are summarized in Table 4 and Table 5.

The system changes projected to increase ridership by 14.6 percent, from 4.2 million passengers in 2012 to 4.8 million after implementation.³ This goal was not met. National bus transit ridership declined seven percent between 2014 and 2017 for urban areas between 200,000 and one million, while ridership declined by 11 percent in Omaha. Ridership in Omaha declined more than the national average, as shown in Table 2.⁴

Table 2. Fixed Route Performance Trends, 2014 to 2017

	2014	2017	Percent Change	Percent Change UAZs 200,000 - 1 Million
Unlinked Trips	4,043,610	3,589,795	-11%	-7%
Operating Expense	\$24,699,703	\$25,141,261	2%	14%
Total Fixed Route Revenue*	\$4,336,495	\$4,067,008	-6%	3%
Operating Expense to Revenue Ratio**	5.70	6.18	8%	10%
Average Expense Recovery Ratio***	0.18	0.16	-11%	-9%
Expenses per Passenger Trip	\$6.11	\$7.00	15%	22%
Revenue per Passenger Trip	\$1.07	\$1.13	6%	11%

Source: Metro. * Includes the contract fares from Council Bluffs, Bellevue, Ralston, La Vista, Papillion and others, minus reimbursements.

** Operating Expenses divided by Total Fixed Route Revenue.

*** Total Fixed Route Revenue divided by Operating Expenses.

Urbanized Areas with populations of 50,000 to 1,000,000. National Transit Summary - 2014: <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/2014%20NTST%20Storylines.pdf>
2017: <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/ntd/130636/2017-national-transit-summaries-and-trends.pdf>

Overall, the service change increased revenue miles and hours by five and four percent. It lowered the expenses per revenue mile and revenue hour. Due to the decline in ridership, performance measures such as the number of passengers per mile and passengers per hour declined, as shown in Table 3. The decline in ridership and performance is in line with national trends. Among other factors, a decline in gas prices, lower unemployment, and an increase in TNC ridership decreased ridership nationwide since 2014.

³ Heartland Regional Transit Vision: Metro Fixed-Route Operations Analysis. Network Evolution Plan, June 2013. Page 53.

⁴ TransitCenter; National Transit Database. <http://transitcenter.org/2018/05/01/transitcenters-ntd-transit-ridership-analysis-2002-2017/>

Table 3. Revenue Mile and Revenue Hour Performance, 2014 to 2017

	2014	2017	Percent Change
Revenue Miles	3,864,817	4,064,066	5%
Revenue Hours	280,426	290,348	4%
Operating Expenses per Revenue Mile	\$6.39	\$6.18	-3%
Expenses per Revenue Hour	\$88.08	\$86.59	-2%
Passengers per Mile	1.04	0.88	-15%
Passengers per Hour	14.36	12.36	-14%

Source: Metro.

The 2015 service changes added Routes 4, 13, and 15 to the routes offering 15-minute service during peak hours, in addition to Routes 2 and 18. Routes 2 and 18 increased its frequencies to 15 minutes during the day time, while 30-minute service was extended to Route 4 during the day time. The alignment of these routes changed minimally. Route 2 and 18 no longer loop around Crossroads Mall, Route 13 no longer serves Crossroads, and Route 15 now terminates at Oakview Mall instead of Lakeside Hospital.

Table 4 shows the weekday performance of the five routes with frequent peak hour service and the expected ridership based on the system wide ridership decline from 2014 to 2017. Ridership increased on four of the five routes, with only Route 13 seeing a decline in ridership. Route 18 saw the greatest gain in ridership. Route 13 terminates at the Bob Kerry Pedestrian Bridge, and makes lower frequency trips between MCC South and Bergan Mercy. Route 13 may have declined in performance due to the extension of Route 24 to South Omaha, providing a direct connection between North and South Omaha.

Table 4. System and Frequency Change Effect on Ridership

Route	2		4		13		15		18	
	2014	2017	2014	2017	2014	2017	2014	2017	2014	2017
Ridership	374,279	381,359	181,019	223,671	255,941	169,840	169,256	241,800	419,027	546,220
Percent of Total Ridership	10%	12%	5%	7%	7%	5%	5%	8%	12%	17%
Expected Ridership Based on System-wide Ridership Decline between 2014 & 2017		323,580		156,498		221,272		146,329		362,266
Difference between Actual and Expected Ridership		57,779		67,173		-51,432		95,471		183,954
Ridership Change Attributed to System Change		15.2%		30.0%		-30.3%		39.5%		33.7%

Accessibility to frequent transit is essential to make spontaneous trips. Table 5 shows the increase in population, jobs, TSAs, and the Metro service area served within half a mile of frequent, 15-minute transit during peak hours. Transit supportive areas have at least four households or five jobs per acre. All indicators show expanded transit access is now available to more people and jobs.

Table 5. Access to 15-Minute Frequent Service, One-Half Mile

	2014	2017	Change
Population	124,983	157,241	25.8%
Jobs	133,446	153,745	15.2%
Percent of TSAs within Service Area	29.9%	36.4%	+6.5%
Percent of Service Area	18.9%	24.4%	+5.5%

Source: Metro; U.S. Census 2010 Population and LODES 7 Work Area Characteristics (2015).

Weekend Performance 2014 - 2017

As displayed in Table 8, weekend service saw a substantial increase in revenue hours and miles, distributed among fewer routes, and increased frequencies among the routes. This increased weekend ridership by 13 percent from 2014 to 2017. The increase in weekend ridership and performance from 2014 to 2017 is one of the most successful improvements of the 2015 system change.

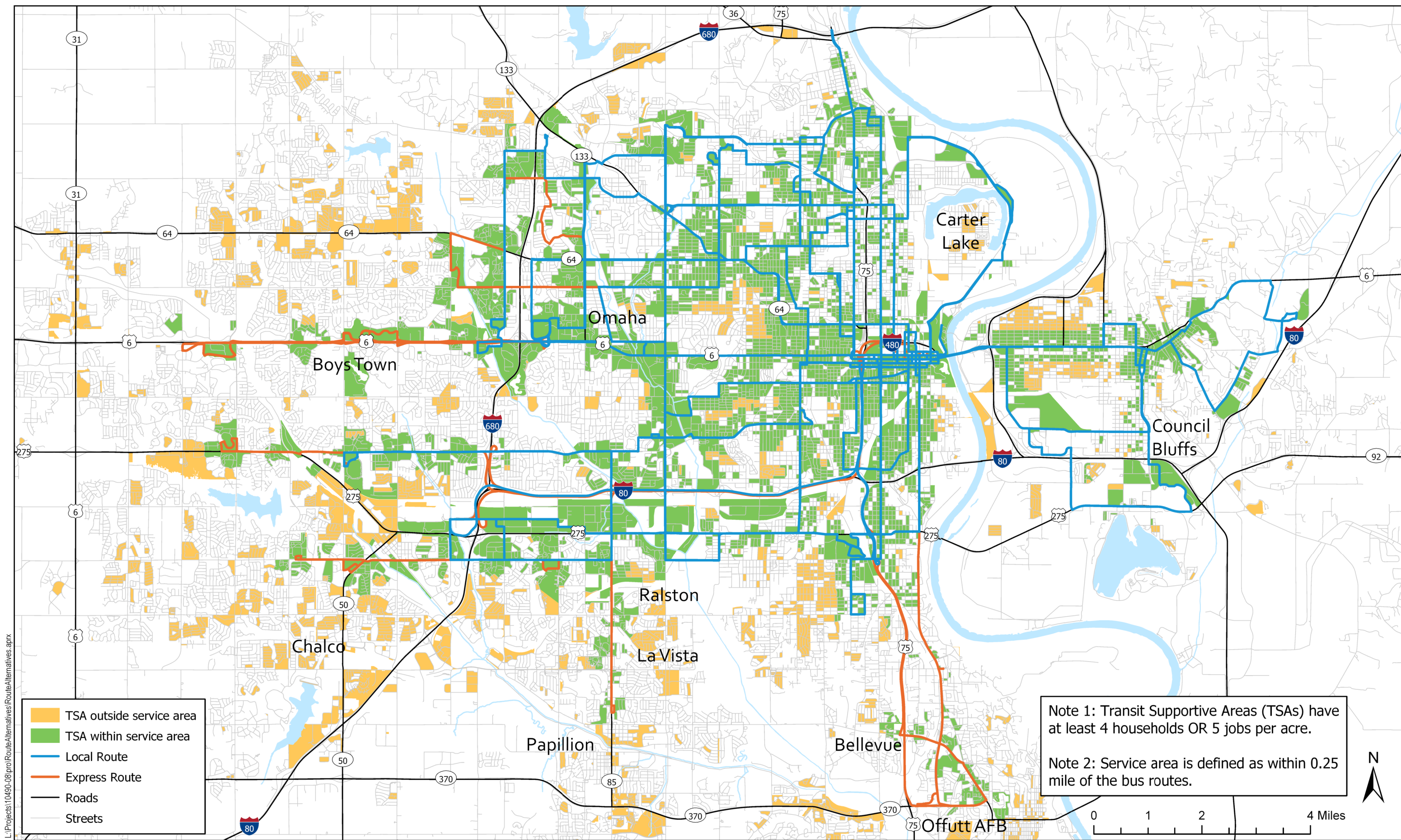
Table 6. Weekend Performance Trends

	2014	2017	Change
Unlinked Trips	410,857	462,245	13%
Saturday Routes in Service	20	17	-3
Sunday Routes in Service	16	12	-4
Revenue Miles	449,597	583,114	30%
Revenue Hours	34,912	43,436	24%
Passengers per Mile	0.91	0.79	-13%
Passengers per Hour	11.77	10.64	-10%

Source: Metro.

Transit Supportive Areas

Transit Supportive Areas (TSAs) for metropolitan areas of Omaha's size are defined as areas with at least four households or five jobs per acre. Figure 1 shows the transit supportive areas served by Metro's fixed route service and those that fall outside the service area. Within the urbanized area of the Omaha – Council Bluffs metropolitan region, 66 percent of the transit supportive areas are covered by Metro's service.



Within the city of Omaha, 81 percent of transit supportive areas have access to Metro's bus service. Most of the TSAs not served by Metro currently are on the periphery of the system, with long distances between them, making these areas inefficient to serve.

2017 On-Board Survey

While technical analysis can go a long way in explaining the quality of transit service, it is helpful to examine feedback from people who use the system. In the fall of 2017, Metro conducted an on-board survey, providing insights from the users about experiencing the system.

The 2017 survey received 2,192 completed responses to 23 questions in simple, easy-to-understand language. The questions collected the required information from riders while keeping the survey short. The survey collected information on a trip's origin and destination, bus stops used for boarding and alighting, trip purpose, and bus transfer information. Demographic questions asked about the passenger's vehicles in the household, income, age, race, and gender. The survey further asked about the passenger experience, and which potential improvements would be preferred by the riders.

For complete results, please consult the [Omaha Metro 2017 Data Collection – On-Board Survey and Boarding and Alighting Survey Results](#) document, delivered to Metro in February 2018.

Operations Analysis

This chapter includes a detailed analysis of the Metro bus routes to highlight the strengths and weaknesses of each, and includes tables and charts ranking the routes for each service type. An analysis of coverage and congruency was conducted for this chapter to show areas where there are likely to be needs that are currently unserved. This analysis shows highlights, and expands on the Metro Existing Conditions Report of July 2018.

These analyses taken together form the picture of transit issues and opportunities, which are summarized at the end of this chapter. This summary will be used to inform the route planning process and service plan that builds upon the strengths and addresses the weaknesses of Metro's network.

Service Baseline - Existing Conditions Report

The service operated by Metro was reviewed in the Metro Existing Conditions Report on operating and financial data, capital assets, and staffing and organization. A diagnostic analysis was provided for each route using selected quantitative measures of performance the route's performance metrics. This identified any significant trends and general findings to aid in the development of recommendations for service improvement. Below is an overview of some key findings of the Existing Conditions report.

Performance

Metro's services can be divided in four types: its core bus network, regular routes providing coverage, express routes offering peak hour service to suburban areas, and MOBY paratransit services in Omaha. Table 7 shows the average performance of each service. The core network carries 74 percent of Metro's ridership with just over half of all dedicated revenue hours. The core network has the highest frequencies and run through the most transit supportive areas.

Table 7. Metro Service Performance Overview, 2017

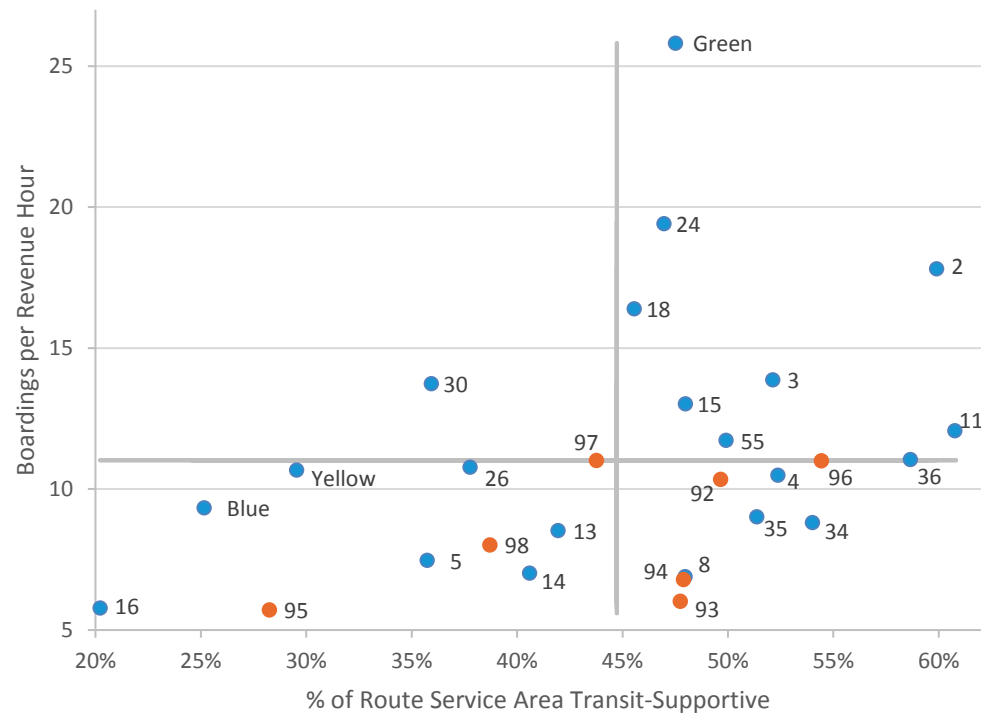
Core Routes	Regular Routes	Express	Paratransit
2, 3, 4, 11, 13, 15, 18, 24, 30, Green	5, 8, 14, 16, 26, 34, 35, 36, 55, Blue, Yellow	92, 93, 94, 95, 96, 97, 98	MOBY
Percent of Overall Ridership			
74%	20%	3%	3%
Percent of Revenue Hours			
56%	24%	4%	16%
Passengers per Revenue Hour			
14.2	8.6	8.9	1.8
Expenses per Trip			
\$6.11	\$10.10	\$9.69	\$28.85
Percent of Stops in Transit Supportive Area			
49%	41%	44%	

Source: Metro; US Census 2010 Population and LODES 7 Work Area Characteristics (2015), and Metro

Transit Supportive Areas by Route

Figure 2 shows the percentage of transit supportive areas near bus stops and the boardings per revenue hour. The percentage of transit supportive areas near bus stops reflects the percentage of land within a quarter mile of all bus stops along a route being transit supportive. The average percentage of TSA acres near bus stops is 44.7 percent.

Figure 2. Boardings per Revenue Hour in Transit Supportive Areas and Non-Transit Supportive Areas

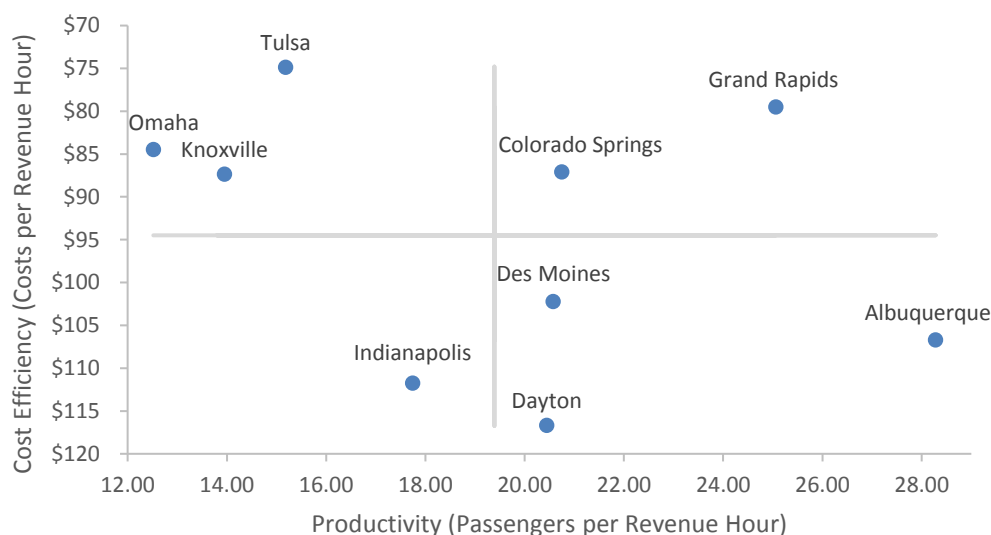


Source: Source: US Census 2010 Population and LODES 7 Work Area Characteristics (2015), and Metro.

Peer System Comparison

Transit service in the Omaha-Council Bluffs area generally falls in line with service offered in peer cities, Metro performs well in costs per revenue mile and cost per revenue hour, while lags slightly in expenses per passenger trip, boardings per revenue mile, and boardings per revenue hour. Figure 3 shows the system efficiency versus productivity, by comparing the cost per revenue hour to the number of passengers per revenue hour.

Figure 3. Costs per Revenue Hour vs. Passengers per Revenue Hour, Fixed Route



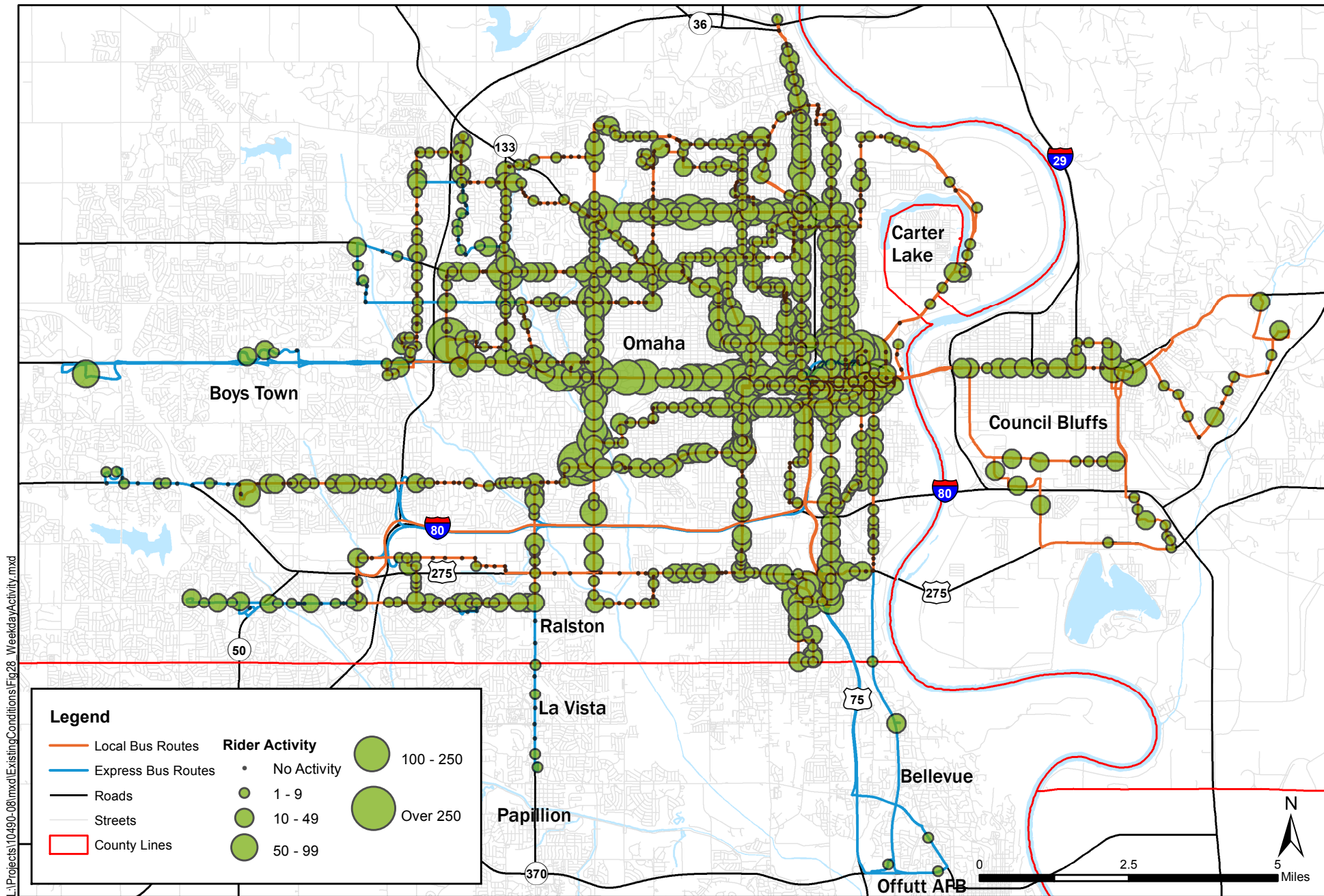
Source: National Transit Database, 2016

Service Congruency Analysis

The service coverage analysis looks at Metro's system in comparison to the distribution of the population and socioeconomic characteristics in the region and major generators to determine if any areas of the community that should have transit service do not.

The findings of this analysis show Metro serving almost all the generators within the Interstate 80 - 680 loop. East of Interstate 680, the only gap of service is between Southwest Omaha and Westroads, but this is a low density, wealthy suburban area with few transit supportive areas. Connections between these two areas may have to occur further west, along 120th and Pacific, through Regency Parkway.

While overall service coverage is good, there may be issues with span and frequency of service as well as long travel times due to indirect services. The level of service at some major destinations is just one bus per hour, such as the Immanuel Hospital on North 72nd street. The Recommended Service Strategies chapter outlines increased service to major destinations that fall within the service guidelines and budget constraints.



L:\Projects\10490-08\mxd\ExistingConditions\Fig28 Weekday Activity.mxd



Fixed Route Average Weekday Activity by Intersection, Fall 2017

Omaha Metro Transit Development Plan
Source: 2017 On-Board Count Survey.



Figure 4

Areas with Redundant Service

Based on the service standards established for this TDP (explained in the next chapter), some areas of Omaha have redundant service. The first reason for service duplication is the result of timed transfers: as buses depart transit centers at the same time and serve portions of the same corridor, they are duplicating each other. Routes coming through downtown and getting to the North Omaha Transit Center provide examples of route duplication. Routes 11 and 36 provide overlapping service from downtown to Park Avenue, along Leavenworth Street and St. Mary's Avenue. Routes 30 and 35 overlap with Route 2 along Dodge Street from downtown to 30th Street.

Routes 18 and 24 are only four blocks apart between downtown and North Omaha, and Routes 2 and 15 are only two blocks apart between downtown and 42nd Street. However, both pairs of routes use the most logical alignment to get to and from downtown, as alternative parallel streets are less transit supportive in their built environment.

Based on route performance, it appears Route 13 was negatively affected by the realignment of Route 24 as a direct connection between North Omaha and South Omaha. Despite an increase in frequency, the route saw a decline in ridership, while all other routes with increased frequency saw increased ridership. However, the route runs through a very transit supportive area of the city and near key destinations such as the Omaha South High School, the Henry Doorly Zoo, and Vinton Street. Redevelopment efforts along 13th Street south of downtown will provide better passenger options and hopefully increase ridership. The TDP recommends Routes 4 and 13 be interlined as part of Strategy One, providing a through service in downtown and providing a direct connection between South Omaha and Benson.

Areas with Deficient Service

Within Metro's service area, certain destinations do not receive an adequate amount of service. Destinations such as the Immanuel Hospital on North 72nd Street, for example. While Route 13 provides 15 or 30-minute service between downtown and MCC South, for a majority of the day there is just 60-minute service between MCC South and Bergan Mercy, leaving the L, Q, and 72nd Street corridors of South Omaha without adequate service. Route 24 has the highest productivity per revenue hour of the system, suggesting there is demand for additional frequency of service along the route. The TDP recommends increased frequency on Route 24 as part of Strategy One.

Route Ratings by Service Type

The route ratings section by service type looks at the financial efficiency and service effectiveness of each route, comparing the routes based on service types. Four service types are presented in this section; local routes (core and regular), express

routes, night service, and weekend service. The same indicators that were used in the existing conditions report are presented in this section.

The average performance for each indicator is presented below in Table 8. This table shows that the highest cost per passenger services are for night service. One interesting point is the most productive services per revenue hour are the core routes, while the weekend service is outperforming the regular routes and express routes.

Table 8. Overall Performance by Service Type

Core Routes	Regular Routes	Express	Night Service (After 9 PM)	Saturday Service	Sunday Service
2, 3, 4, 11, 13, 15, 18, 24, 30, Green	5, 8, 14, 16, 26, 34, 35, 36, 55, Blue, Yellow	92, 93, 94, 95, 96, 97, 98	2, 3, 4, 11, 13, 15, 18, 24, 26, 30, 35	2, 3, 4, 5, 8, 11, 13, 14, 15, 18, 24, 26, 30, 35, 36, 55, Yellow	2, 3, 4, 11, 13, 15, 18, 24, 26, 30, 35, 36
Passengers per Revenue Hour					
14.2	8.6	8.9	5.7	10.5	11.0
Cost per Passenger					
\$6.11	\$10.10	\$9.69	\$15.19	\$8.25	\$7.89

Source: Metro.

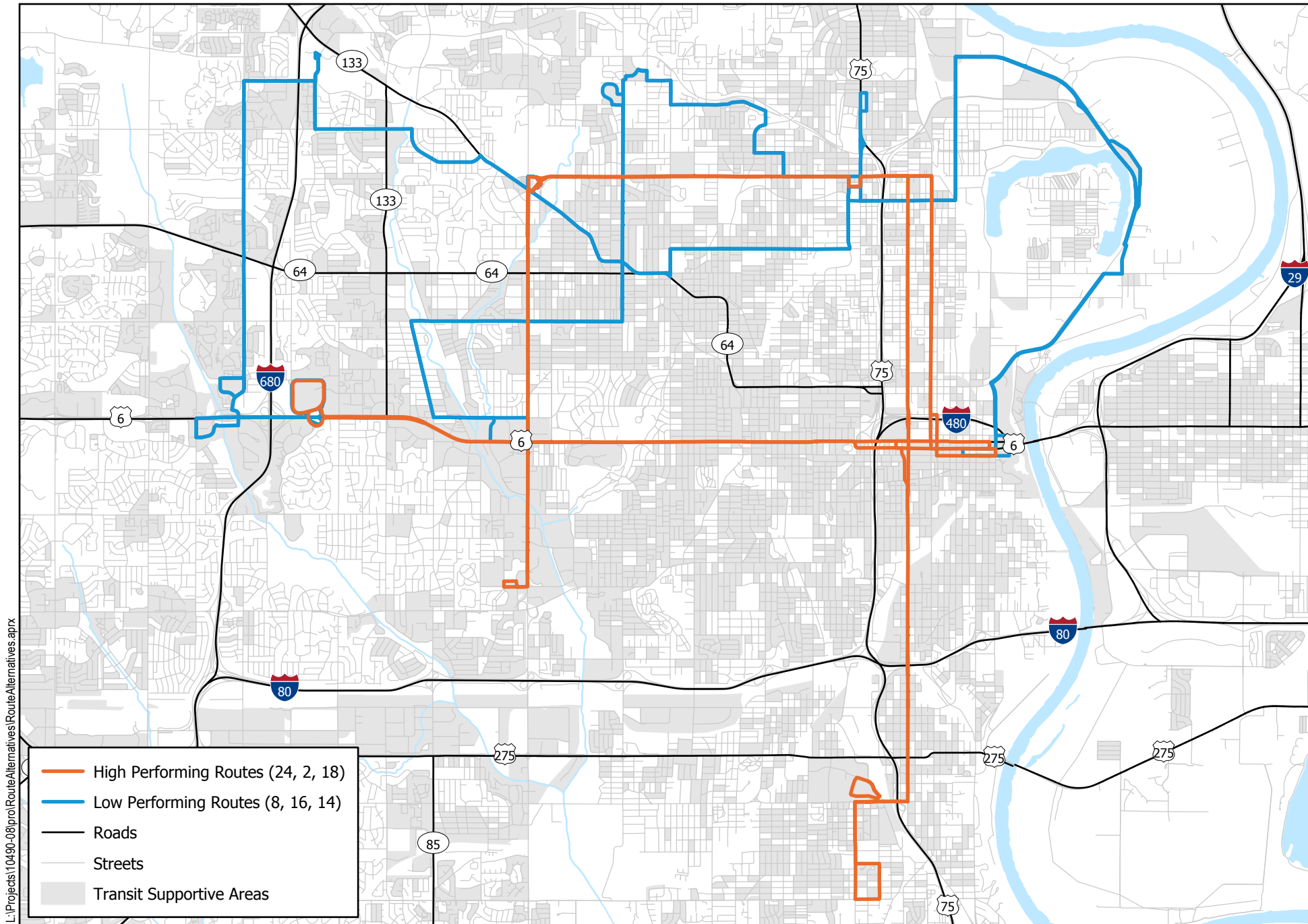
Local Routes

Based on the existing conditions report, route rankings can be established from performance measures, such as passengers per revenue hour, expenses per trip, and passengers per mile. The rankings for local routes are shown in Table 9. The top routes in Metro's system are Routes 2, 18, 24, and Green, while the lowest rankings fall on Routes 8, 13, 14, and 16. Figure 5 shows the three highest and lowest ranking routes and their relationship to transit supportive areas.

Table 9. Route Ranking by Performance, Local Routes

Route	Cost per Mile (Financial Efficiency)	Cost Per Mile Rank	Cost per Passenger (Cost Effectiveness)	Cost per Passenger Rank	Passengers per Rev. Hour (Service Effectiveness)	Passengers Per Rev. Hour Rank	Overall Rank
2	\$6.38	12	\$4.86	3	17.8	3	2
3	\$6.77	16	\$6.24	5	13.9	5	8
4	\$6.37	11	\$8.26	13	10.5	13	14
5	\$5.06	2	\$11.60	18	7.5	18	16
8	\$8.43	21	\$12.75	20	6.8	20	21
11	\$6.82	19	\$7.17	8	12.1	8	13
13	\$6.78	18	\$10.15	17	8.5	17	18
14	\$6.71	14	\$12.34	19	7.0	19	19
15	\$6.10	6	\$6.65	7	13.0	7	5
16	\$6.74	15	\$14.97	21	5.8	21	20
18	\$6.26	10	\$5.28	4	16.4	4	2
24	\$6.15	8	\$4.46	2	19.4	2	1
26	\$5.83	4	\$8.04	11	10.8	11	8
30	\$6.38	13	\$6.30	6	13.7	6	7
34	\$3.34	1	\$9.83	16	8.8	16	12
35	\$6.93	20	\$9.60	15	9.0	15	17
36	\$6.13	7	\$7.83	10	11.1	10	10
Blue	\$6.21	9	\$9.27	14	9.3	14	14
Yellow	\$5.90	5	\$8.12	12	10.7	12	11
55	\$5.16	3	\$7.38	9	11.7	9	6
Green	\$6.78	17	\$3.35	1	25.8	1	4
Average	\$6.35		6.92		12.52		

Source: Metro. Green notes top three routes for each measure, red notes bottom three routes for each measure.



Three Highest and Lowest Ranking Routes
Omaha Metro Transit Development Plan

Express Routes

Similarly, the express routes are ranked in Table 10. Route rankings are established based on the performance measures of passengers per revenue hour, expenses per trip, and passengers per mile. The most successful routes are Route 96 and 97, connecting Southwest Omaha and Millard to downtown.

Table 10. Route Rankings by Performance, Express Routes

Route	Cost per Mile (Financial Efficiency)	Cost Per Mile Rank	Cost per Passenger (Cost Effectiveness)	Cost per Passenger Rank	Passenger per Rev. Hour (Service Effectiveness)	Passenger Per Rev. Hour Rank	Overall Rank
92	\$4.35	6	\$8.38	3	10.3	3	3
93	\$3.55	2	\$14.38	6	6.0	6	5
94	\$3.58	3	\$12.54	5	6.9	5	4
95	\$3.95	5	\$15.16	7	5.7	7	7
96	\$3.51	1	\$7.87	2	11.0	2	1
97	\$3.75	4	\$7.86	1	11.0	1	2
98	\$4.95	7	\$10.81	4	8.0	4	6
Average	\$3.98		\$9.69		8.9		

Source: Metro.

Time of Day and Night Service

Using daily farebox data, the number of passengers can be broken down by time of day. Analysis is based on the ridership during the period of October 15 through November 15, 2017. The highest number of passengers per hour board Metro's system during the afternoon peak period from 3:30 to 6 PM. This is also when Metro deploys most buses on the streets, indicating that more service leads to higher ridership. The local route network holds steady ridership during the midday. Table 11 shows the average number of passengers per hour per bus.

Table 11. Metro Performance per Hour, by Time of Day (October-November 2017)

	Before 6 AM	6 AM to 8:30 AM	8:30 AM to 3:30 PM	3:30 PM to 6 PM	6 PM to 9 PM	After 9 PM
System Ridership per Hour	426	1,015	805	1,129	310	119
Local Route Ridership per Hour	426	929	805	1,043	310	119
Buses in Service	58	83	53	83	44	21
Local Route Buses in Service	58	67	53	68	44	21
Ridership per Hour per Bus	7.4	12.2	15.2	13.6	7.0	5.7
Local Route Ridership per Hour per Bus	7.4	13.9	15.2	15.3	7.0	5.7

Source: Metro.

Weekend Performance

Table 12 shows the 2017 performance of Saturday and Sunday Service. In general, the same routes performing well during weekdays perform well on weekends. The Yellow Route is one of the best performing routes on Saturdays, yet does not offer Sunday service.

Table 12. Saturday and Sunday Revenue Hours and Passengers per Revenue Hour

Route	Saturday				Sunday			
	2017 Saturday Ridership	Annual Saturday Revenue Hours	Passengers per Revenue Hour	% of System Average	2017 Sunday Ridership	Annual Sunday Revenue Hours	Passengers per Revenue Hour	% of System Average
2	43,764	2,741	16.0	152%	25,872	1,597	16.20	148%
3	19,555	2,365	8.3	79%	8,637	907	9.52	87%
4	26,529	2,772	9.6	91%	14,937	1,316	11.35	103%
5	8,188	1,480	5.5	53%				
8	7,133	1,356	5.3	50%				
11	10,677	891	12.0	114%	6,332	631	10.04	91%
13	21,008	2,498	8.4	80%	10,793	1,373	7.86	72%
14	9,716	1,934	5.0	48%				
15	26,014	2,524	10.3	98%	13,232	1,319	10.03	91%
18	60,829	3,819	15.9	152%	36,485	3,092	11.80	108%
24	30,900	2,324	13.3	127%	13,849	946	14.63	133%
26	3,156	448	7.0	67%	1,924	318	6.05	55%
30	18,352	2,102	8.7	83%	8,151	999	8.16	74%
35	5,728	891	6.4	61%	3,678	631	5.83	53%
36	4,667	446	10.5	100%	2,530	316	8.00	73%
Yellow	9,902	756	13.1	125%				
55	6,294	642	9.8	93%				
System Total	314,677	29,989	10.5	100%	147,568	13,446	10.97	100%

Source: Metro.

Paratransit Service

MOBY operates from 3:59 AM to 1:09 AM (next day) on weekdays, from 4:58 AM to 11:59 PM on Saturdays, and from 5:54 AM to 9:47 PM on Sundays. Table 13 below is an overview of the efficiency and effectiveness of MOBY's paratransit services. Metro does not currently track on-time performance for MOBY services. Compared to peer systems, MOBY has low expenses per passenger trip, low cost per revenue mile, and low cost per revenue hour. However, it does have fewer boardings per revenue hour.

Table 13. MOBY Efficiency and Productivity, 2017

Ridership		97,334	
Operating Expenses	\$2,808,177	Revenue Miles	781,969
Fare Revenue	\$274,034	Revenue Hours	55,303
Operating Expense to Revenue Ratio	10.25	Passengers per Revenue Mile	0.12
Average Farebox Recovery Ratio	0.10	Passengers per Revenue Hour	1.76
Expenses Per Passenger Trip	\$28.85	Expenses per Revenue Mile	\$3.59
Revenue per Passenger Trip	\$2.82	Expenses per Revenue Hour	\$50.78

Source: Metro

Peer System Performance

Funding for transit per capita is much lower compared to other cities Omaha aspires to be like, such as Minneapolis, Denver or Salt Lake City. Metro is more similar to Tulsa and Knoxville with the existing funding structure. The result is having similar ridership per capita as these cities. Table 16 displays the results of a peer system comparison

Table 14. Operational Transit Funding & Ridership per Capita

Type	City	Operational Transit Funding per Urbanized Area Capita	Annual Ridership per Urbanized Area Capita	Funding Difference with Omaha	Ridership Difference with Omaha
Aspirational Cities	Denver	\$279.19	41.3	\$241.59	36.2
	Minneapolis	\$142.62	30.9	\$105.03	25.8
	Salt Lake City	\$366.94	44.1	\$329.34	39.0
	Kansas City	\$60.26	8.9	\$22.66	3.8
Aspirational Peer Systems	Des Moines	\$62.95	10.2	\$25.35	5.1
	Grand Rapids	\$77.11	19.3	\$39.51	14.1
	Indianapolis	\$47.38	6.1	\$9.78	1.0
Similar Peer Systems	Dayton	\$102.46	12.5	\$64.86	7.4
	Tulsa	\$29.13	4.5	(\$8.47)	-0.6
	Albuquerque	\$70.03	14.2	\$32.43	9.1
	Knoxville	\$35.00	4.9	(\$2.60)	-0.2
	Colorado Springs	\$37.45	6.1	(\$0.15)	1.0
	Omaha	\$37.60	5.1	-	-

Source: National Transit Database, 2017. Denver, Minneapolis, and Salt Lake City have light rail systems. Kansas City has a separate transit authority for its streetcar, not included in these statistics.

Summary of Operational Issues and Opportunities

Metro runs an efficient transit service, with an increased focus on high ridership routes as of 2015. The operational analysis warrants continued focus on expanding 15-minute service to its best performing routes, not just during the peak travel times, but also during midday to create an all-purpose transportation option. The improvement in weekend ridership and performance since 2014 shows the importance of offering service beyond employment purposes.

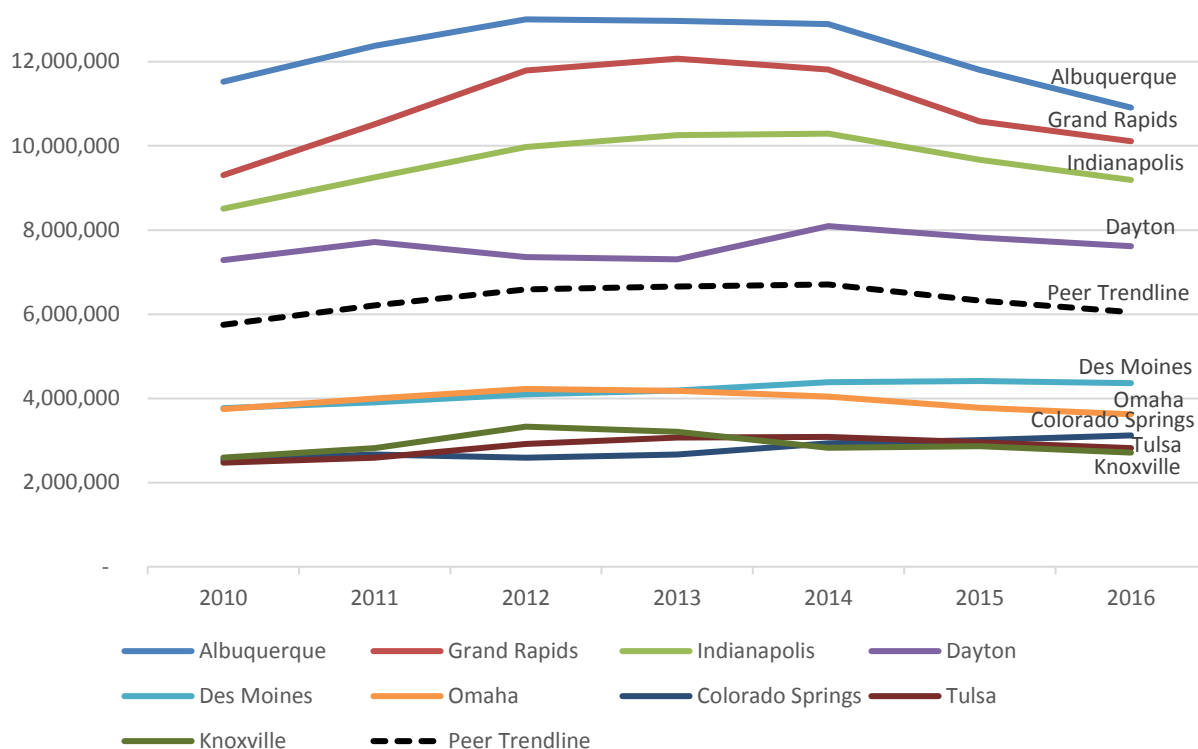
The coverage and congruency analysis shows Metro reaches most destinations east of Interstate 680 in the city of Omaha. There is a gap of service between southwest Omaha and Westroads, but this would require a route through a low transit supportive area. West of Interstate 680, transit supportive areas are far and few in between, while pockets of density are off the major thoroughfares. Sidewalk availability is limited in West Omaha as well. While many new developments happen here, service in West Omaha would require major changes to the built environment, land use and walkability for Metro to effectively serve the area.

Passengers expect on-time service and reliable service. Late and early buses diminish the perception of service quality. Overall, 27 percent of trips are not on-time, with 22 percent being more than one minute early, and five percent being more than five minutes late. Metro currently does not experience overcrowding on its buses. The decline in overall ridership, and low performance on community service routes and night service are points of concern.

While ridership declined overall, ridership increased on most routes offering frequent, 15-minute service between 2014 and 2017. The top five routes in terms of ridership (Routes 18, 2, 24, 15, and 4) generate 54 percent of total network ridership. The decline in ridership is not completely within Metro's control, as external factors such as the economy and gas prices have been shown to affect ridership too. Gas prices declined sharply in 2014, and there was a decline in Metro's ridership during the same period. When gas prices are above \$3.00 per gallon, studies have shown additional increases in gas prices to be a significant, but small, contributor of rising transit ridership.⁵ Ridership declined among most of Metro's peer systems since 2014, as shown in Figure 6.

⁵ <https://transweb.sjsu.edu/research/net-effects-gasoline-price-changes-transit-ridership-us-urban-areas>

Figure 6. Peer Systems Ridership Trends, Fixed Route



Source: National Transit Database.

While most of the community is served, all day service may not be available to all generators and neighborhoods, especially during the weekend and night periods. Community service routes such as Routes 5, 8, 14 and 16 are the lowest performing routes in the system, but do provide essential neighborhood services. These routes are also among the lowest in terms of transit supportive areas served. If performance continues to decline, however, the reallocation of resources from these routes to more productive routes should be considered. The TDP recommends route reviews every six months with planned adjustments where and when necessary.

Routes with poorer performance are candidates for redesign and service adjustments. The market for transit may not be strong enough along some routes and parts of the city to generate high ridership, no matter what level of transit service is operated. Population or commercial activity densities are too low to make transit the preferred mode choice. In these cases, Metro should consider alternative mobility options that can be provided cost effectively or eliminating underperforming routes or segments. Strategies to address low productivity could include flexible services or utilizing taxi or TNC vouchers to supplement the transit network. Building upon the strengths of the network and particularly the strength of ridership along key arterials, a greater concentration of services to these locations could be highly beneficial in improving headways and encouraging better on-time performance. Metro should provide the

board with updates on poorly performing routes every six months, and recommend service adjustments or route changes for poorly performing routes based on all available data and the route design guidelines.

Route 13 was negatively affected by the realignment of Route 24 as a direct connection between North Omaha and South Omaha. Despite an increase in frequency, the route saw a decline in ridership, while all other routes with increased frequency saw increased ridership. However, the route runs through a very transit supportive area of the city and near key destinations such as the Omaha South High School, the Henry Doorly Zoo, and Vinton Street. Redevelopment efforts along 13th Street south of Downtown may also increase ridership in the future. The TDP recommends Routes 4 and 13 be interlined, providing a through service in Downtown and a direct connection between South Omaha and Benson.

Route 24 has the highest productivity per revenue hour and should be the first route considered for increased frequency. By expanding the 15-minute frequency network to more routes, and beyond peak service, an all-day useful service can give customers the freedom to use the bus for multiple trip purposes. Customers would no longer have to plan their lives around the bus schedule, but could go wherever they wanted in the frequent service network and know a bus to take them to the next destination would only be minutes away.

The resources required to create an expanded all-day frequent service network could partially come from underperforming resources today, but it would also require additional operating funding. To create an all-day frequent service network of ORBT and Routes 4, 13, 15, 18, and 24 would require an additional 11.6 percent in operating funding, while offering 15-minute peak service on Routes 3 and 30 would require an additional 2.5 percent. These investments would get the current network up to its full potential with the current land use patterns. Increased productivity will increase farebox recovery, resulting in a stronger case for ongoing financial sustainability. Additional BRT lines, express buses, or regular routes beyond the current network would require additional operational resources, as well as higher intensity land use corridors. This would continue the course set under the RTV 2013 plan, which recognized:

“An element of building transit success will be the identification, reinforcement, and development of corridors into network subareas where frequent service can foster the emergence of active mode lifestyle corridors. Building a frequent [and fast] network that carries a majority of system ridership simplifies connections between routes, will reduce the need for close service coordination and complicated operations. A frequent network that

supports reliable and convenient route connections is the fundamental building block of transit network success.”⁶

As Metro continues to expand the Intelligent Transportation (ITS) Infrastructure future system analysis will become more informed. As has been seen in other transit systems, rider appreciate having access to real-time information at bus stops and accessible through smartphones. The real-time information can also help Metro staff monitor the system by providing information on on-time performance, bus bottlenecks, and allow for real-time supervision of routes. Automatic Passenger Counters (APC) can help track ridership by stop and trip. Also, certain ITS applications can be used to improve bus travel speeds and improve on-time performance, such as Transit Signal Priority (TSP). Some of these technology improvements are coming in 2019, with automatic vehicle location (AVL) and APC technology on all buses, and TSP on ORBT.

⁶ RTV: Evaluation of Existing Services, Page 47, May 2013.

Service Guidelines

Fixed Route Service

Service Guidelines are divided into four categories: route design, service level, service performance, and customer service. Route design guidelines describe strategies to make bus routes as effective as possible. These include attributes such as coverage, stop spacing, sidewalk and bus connectivity, and roadway and corridor characteristics. Route design guidelines can also be shared with city partners and developers to inform them about Metro’s considerations for service warrants.

Service level guidelines include frequency, span of service, and recovery goals. These attributes affect the success of transit performance along corridors the route serves, and establish thresholds necessary to consider transit expansion beyond the current service area.

To assess the performance and adequacy of the public transportation system and guide the formulation of route improvement proposals, it is necessary to establish a set of transit service performance criteria. Performance guidelines evaluate fixed route service productivity based on passengers per revenue hour, maximum loading capacity, on-time performance, and dependability. It allows a route to be evaluated against other routes in the system and to be held up to industry standards. As a system, Metro can use performance guidelines to test its performance against those of its peers. Dependability measures ensure quality of service by tracking the percentage of scheduled service executed by Metro.

Customer service guidelines improve the customer experience and satisfaction by outlining amenities at bus stops, providing rider alerts, setting marketing targets, providing travel training, and expanding pass programs with major employers and institutions.

These guidelines help shape the recommended service alternatives and will help service planners determine the nature and extent of potential service improvements. These guidelines subsequently become the basis for formulating route improvement proposals to “close the gap” between actual and desired performance.

Considerations

The recommended service guidelines for Metro’s fixed route service were developed by considering several key factors, including:

- Suitability to the characteristics of development and land uses in the Metro service area.

- Recognition of the cost implications that certain guidelines may entail and the availability of funding.
- Benchmarks set by existing service levels and performance.
- “Ease of use” in that the parameters defined in each guideline can be measured utilizing data Metro can easily gather and track.
- Prevailing practice in the transit industry.
- The service guidelines prepared for the prior Regional Transit Vision Plan.

Several points should be made with respect to the development and subsequent application of the service guidelines:

- Reasonable judgment must be utilized in applying the service guidelines to assess current Metro service. In applying the guidelines, it should be kept in mind that although they are quantitative for the most part, they nonetheless do not represent absolute conditions that must be met in all cases. The guidelines should be viewed as providing technical guidance for Metro service planners and should not be viewed as rigorous “standards” or “warrants”. The guidelines are designed to be used in combination with the best judgment and experience of Metro service planners and operations personnel.
- The recommended guidelines may sometimes appear to conflict with one another since some relate to the benefits derived from transit service while others relate to the costs. Nonetheless, the guidelines permit the tradeoffs to be delineated and an informed decision made to resolve differences.
- The guidelines have been developed to reflect the current Metro funding conditions. This does not preclude revisions to respond to new policy guidelines and prospective changes in operating and funding conditions.
- The comparison of actual performance with the guidelines should not be made on a strict “pass/fail” basis. Instead, results should be viewed in terms of the proportion of the time that the guideline is met or the level of attainment. Put simply, it should be recognized that there are times when the “intent of the guideline” is being satisfied.

Table 17 outlines key service design guidelines considered.

Table 15. Transit Service Design Guidelines

Theme	Factor	Target
Route Design	Serve Areas with Appropriate Density	Employment – 5 Employees per Acre (for Census Block) Residential – 4 Households per Acre (for Census Block)
		Unique Employers of 400 in Single Location (Adjacent TSA >50%)
		Following Uses (Require Pre-Location Coordination): <ul style="list-style-type: none"> Hospitals (Regional) Shopping Centers (>100,000 Ft²) Social Service & Government Centers Colleges & High Schools
	Straightforward & Direct	Direct Paths Between generators (Minimize Deviation) <ul style="list-style-type: none"> Deviation from Direct Path < ¼ of Route Length
		Symmetrical Routes (Same Path in both Directions) – Exception for One-way Pair Streets
	Maximize Ridership Potential of Corridor	Only One Route in Any Corridor <ul style="list-style-type: none"> If Multiple Routes, Schedule to Avoid Bunching
Service Level	Transit Route Roadway Characteristics	Sidewalk Connectivity Between Bus Stops and Adjacent Uses
		Surface Type – Prefer Concrete or Asphalt Overlay on Concrete
	Stop Spacing	<ul style="list-style-type: none"> BRT: ½ to 1 Mile Express: ¼ to ½ Mile Local: 2 to 4 Blocks
Service Level	Span of Service	<ul style="list-style-type: none"> BRT & Core: 4:15 AM – 11 PM Weekday, 6 AM – 10 PM Saturday, 7 AM – 7 PM Sunday Regular: 6 AM – 7 PM Weekday, 6 AM – 7 PM Saturday, 7 AM – 7 PM Sunday Express: 4 Morning, 4 Afternoon Trips
	Service Frequency	<ul style="list-style-type: none"> BRT: 10 Minutes Core: 15 Peak/30 Off-Peak – 15 All Day Preferred Regular: 30 Minutes Express: Arrive DT Every 30 Minutes 6:45 – 8:15 AM, Depart DT Every 30 Minutes 4 PM – 5:30 PM
	Provide Adequate Run Time	Recovery Goal of 10 Percent
Service Performance	Productivity	<p>Passengers per Revenue Hour:</p> <ul style="list-style-type: none"> BRT: 25 Core: 20 Regular: 15 <p>Route Below 50% of System Average Productivity, Consider Adjustments to Improve. Including Targeted Outreach.</p> <p>Route Above 150% of System Average, Consider Adding More Frequency.</p>

Theme	Factor	Target
Service Performance	Maximum Loading	Percent of Seating Capacity: 125% for 2+ Miles
	On-Time Performance	Over 85% within 1 Minute Early to 5 Minutes Late
	Scheduled Service Executed	99.5% of Scheduled Service Executed (199/200)
Customer Service	Amenities	By Daily Stop Level Activity <ul style="list-style-type: none"> • Real Time Information - 300 • Shelter & Lighting - 200 • Maps & Schedules - 100
	Rider Alerts	Phone, App, Website, Detour Maps
	Marketing	1% of Operating Budget Target Outreach for Underperforming Routes
	Travel Training	Provide Travel Training at Social Service Agencies and Schools
	Expand Pass Programs	Contact Large Employers within Service Area

ADA Complementary Paratransit Guidelines

The Americans with Disabilities Act has several guidelines for paratransit services. The following guidelines will be used to ensure that MOBY, the ADA program, is meeting the requirements of the ADA and, second, that it is being operated effectively with regard to productivity, financial performance, and customer satisfaction.

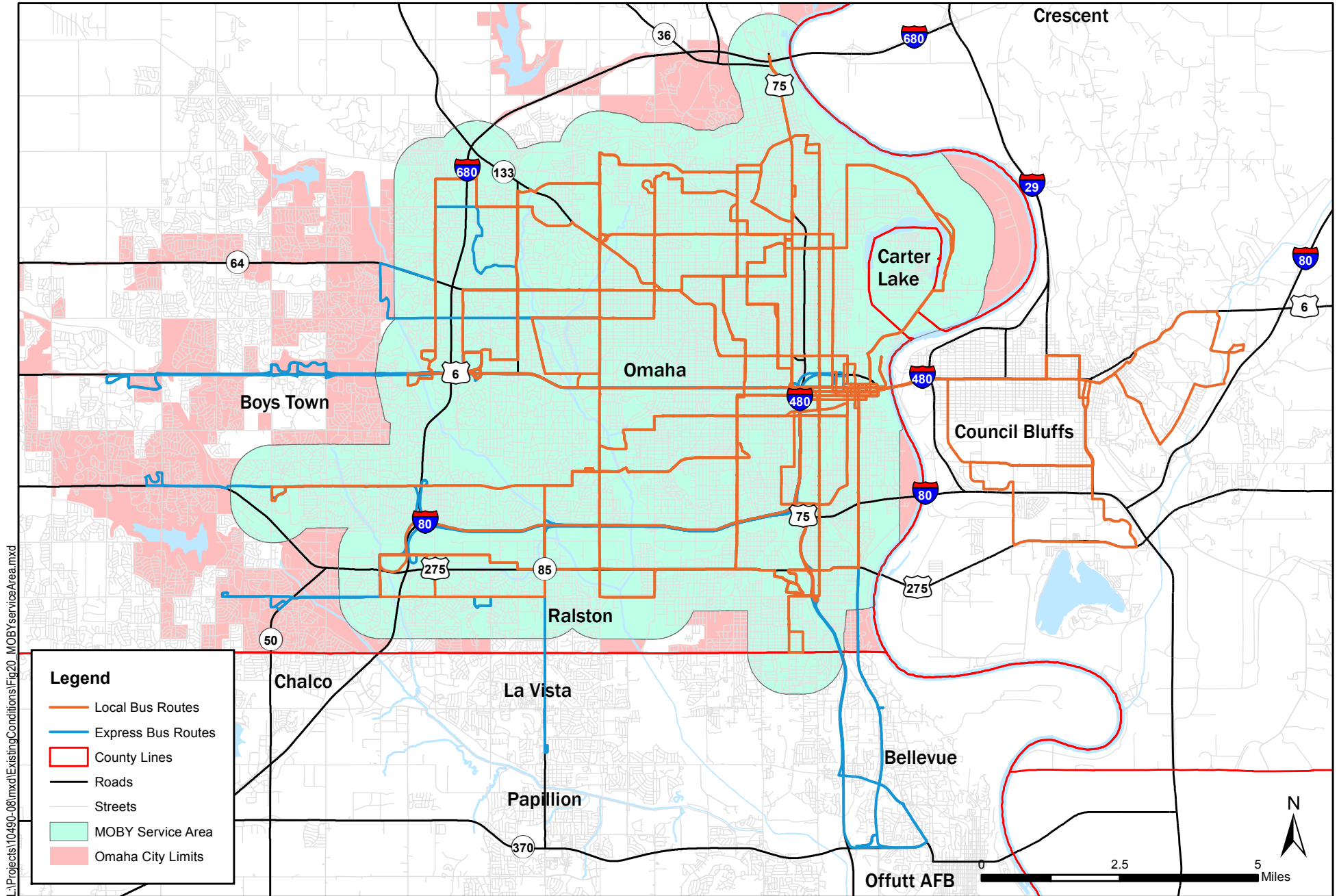
Coverage and Hours of Service

ADA service must be provided to all areas within $\frac{3}{4}$ of a mile of a local fixed route, but is not required to be provided in an area outside the boundaries of the jurisdiction if it does not have authority to operate in that area. ADA service must be provided for all days and hours that local fixed route bus service is provided. Figure 7 shows the MOBY service area.

Trip Purpose

There can be no restrictions or priorities based on trip purpose. There is no restriction on the number of trips that an eligible individual can take. Reservation service must be available during at least all normal business hours as well as during times comparable to normal business hours on a day when the offices are not open before a service day. Negotiated pickup times are allowable but not to begin more than one hour before or after the individual's desired departure time.

Advance reservations made up to 14 days in advance of an ADA paratransit eligible individual's desired trips are allowable.



Metro MOBY Paratransit Service Area

Omaha Metro Transit Development Plan
Source: Metro.



Figure 7

Fares

ADA fares cannot exceed twice that of the fixed route system's base fares for a trip of similar length, at a similar time of day, on the Metro's fixed route system. A personal care attendant shall not be charged for complementary paratransit service. The fares for individuals accompanying ADA paratransit eligible individuals is the same as for the ADA paratransit eligible individuals they are accompanying.

Eligibility

Eligibility for MOBY service is defined as being for individuals who cannot access a fixed route bus and/or cannot board a fixed route bus that is not wheelchair accessible. Because Metro's entire fixed route fleet is wheelchair accessible (low floor buses), the eligibility requirement pertains to those who cannot access the bus stops due to environmental considerations.

Conditional eligibility, particularly due to weather conditions, is encouraged by the ADA. Conditional eligibility is useful during the winter—for some all winter, for others during only the harshest days, and for all if sidewalk and pathway conditions are impassable due to heavy snowfall or icing.

Many agencies have tightened their eligibility by using functional testing and in-person interviews in addition to standard forms and medical provider reviews; provide fixed route training; and use the aforementioned conditional eligibility as means of targeting their services to those who otherwise have no other means to travel and controlling overall demand.

ADA systems can set a No-Show and Cancellation Policy to penalize frequent abusers of the system who fail to show up for their scheduled trip and who do not call in cancellations in an appropriate timeframe. Most commonly, systems use a policy that an individual gets two warnings with the third failure resulting in a suspension of service, again most commonly for one month. The system must have a policy in place for riders to contest the suspensions if they wish.

Service Denials

There should be no systematic denials per the ADA. The system cannot, on a regular basis, deny services to individuals who require them. As far as overall denials, the rate should be no more than three percent of all requests for service. Managing trip requests by offering reasonable alternative times is not considered a denial if the customer is flexible.

Performance Measures

Industry standards, particularly with regard to service effectiveness and productivity, and previous standards used by MOBY defining the performance criteria, were used

to set the range and targets for the set of performance criteria recommended. These guidelines, shown in Table 18, provide the means for completing a detailed assessment of the quality of the ADA complementary paratransit program. Paratransit services of MOBY should comply with the standards set in Metro's Title VI Plan.

Table 16. MOBY Performance Targets

Theme	Factor	Target
Service Performance	Productivity	Passenger Trips per Revenue Hour • 1.7 – 2.2
Operational Standards	On-Time Performance	90% within ± 15 Minutes of Scheduled Pick-up and Drop-off Time
	Customer Time in Vehicle	Maximum 45 Minutes
Customer Service	Satisfaction	Complaints per 100 Trips • Zero Average Telephone Wait Time • Maximum 2 Minutes on Hold

Recommended Service Strategies

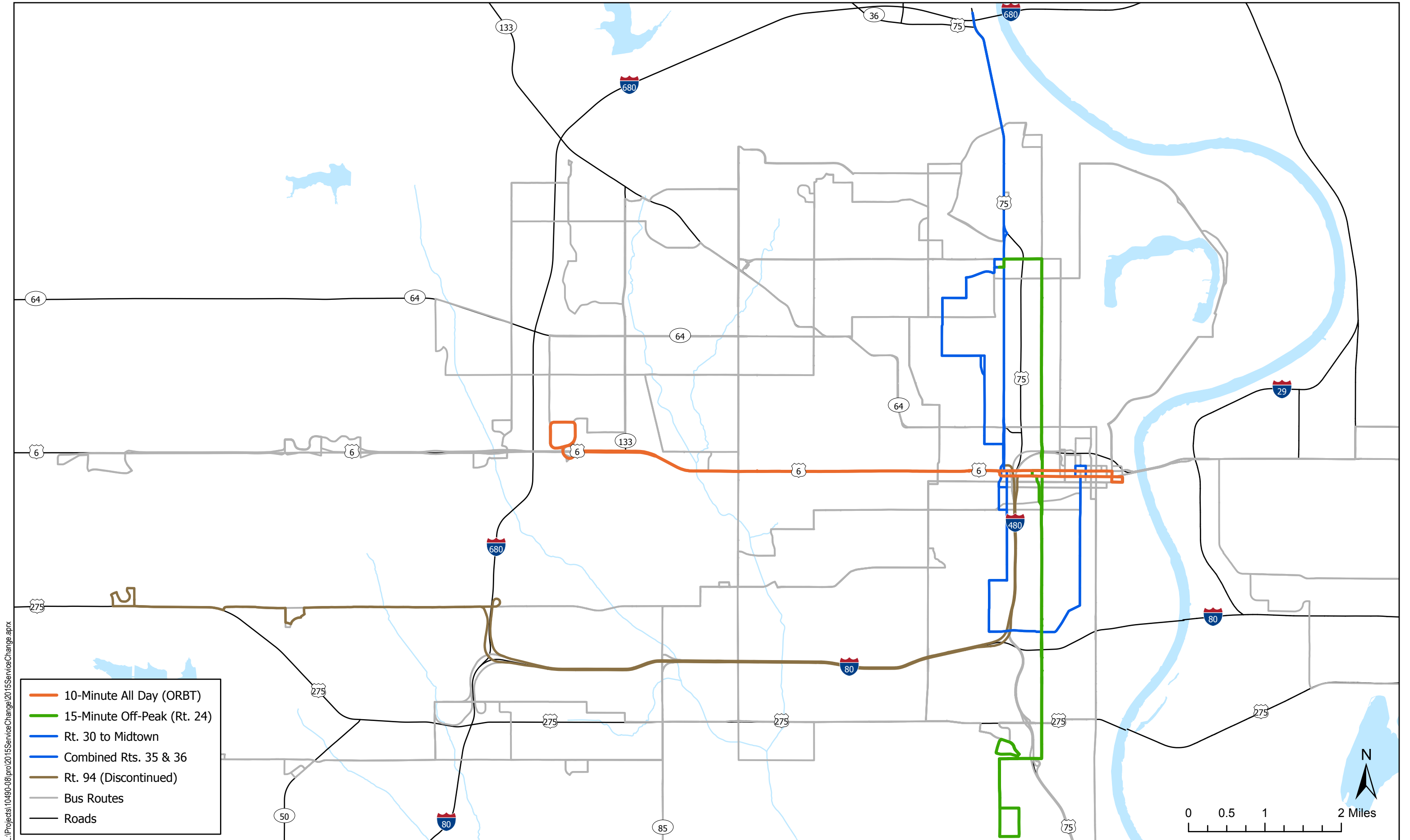
The development of the service strategies took advantage of all the data collected for the study and presented in previous chapters and the existing conditions report. This includes data on the greater Omaha region, analyses of the public transit network and individual routes, and service guidelines. The strategies were presented to the Metro operations committee in January 2019, and at the March 2019 Metro board meeting. This chapter presents the comprehensive strategies for improving Metro's network.

Strategy I - Fine Tune Existing Service

The first strategy, documented in Table 17, builds on the major route overhaul of 2015 by taking advantage of the current strengths in the network and reducing weaknesses. By reallocating unproductive revenue hours to the most productive ones in the network, Metro will increase ridership and productivity systemwide. The changes are estimated to increase ridership by 1,341, which would be a 10.8 percent increase over current daily weekday ridership. Daily revenue hours increase slightly, with 930.6 proposed versus the current 921.7 executed daily. Proposed changes are shown in Figure 8.

Table 17. Strategy I Overview – Fine Tune Existing Service

Options	Revenue Hours		Percent Change	Estimated Annual Cost	Additional Peak Buses Required	Estimated Weekday Ridership Impact
	Daily	Annual				
ORBT	+121.5	43,740	+15.2%	\$3,936,600	+8	+2,700 (+100%)
• Convert Rt. 2	-82.0	-29,520	-10.3%	-\$2,656,800	-5	-1,496 (-100%)
Add Frequent, 15-Minute Service						
Rt. 24 (7am – 5:30pm)	+32.8	8,518	3.56%	\$766,620		+275 (+27.7%)
Streamline Service						
Combine Rts. 35 & 36	-13.8	-3,583	-1.50%	-\$322,470	-1	Slight decrease, transfer ORBT
Rt. 30 to Midtown	-9.4	-3,380	-1.2%	-\$304,200	-1	Slight decrease, transfer ORBT
Interline Rts. 4 & 13	-7.6	-2,740	-1.0%	-\$246,600		Slight increase, through service
Address Underperforming Service						
Interline Rts. 8 & 14	-10.2	-3,297	-1.11%	-\$296,730		-8 (-1.2%)
Discontinue Rt. 94	-5.8	-1,480	-0.60%	-\$133,200	-2	-40 (-100%)
Reduce One Hour of Late Night Service*	-16.6	-5,689	-1.80%	-\$512,010		-90
TOTAL	+8.9	+2,569	+1.0%	+\$231,210	-1	+1,341



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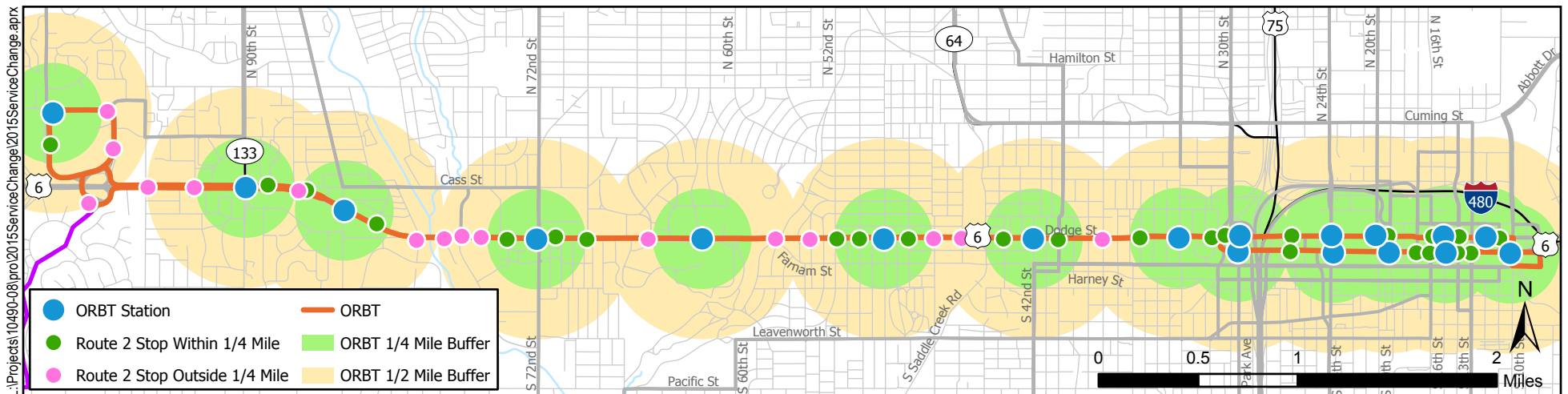
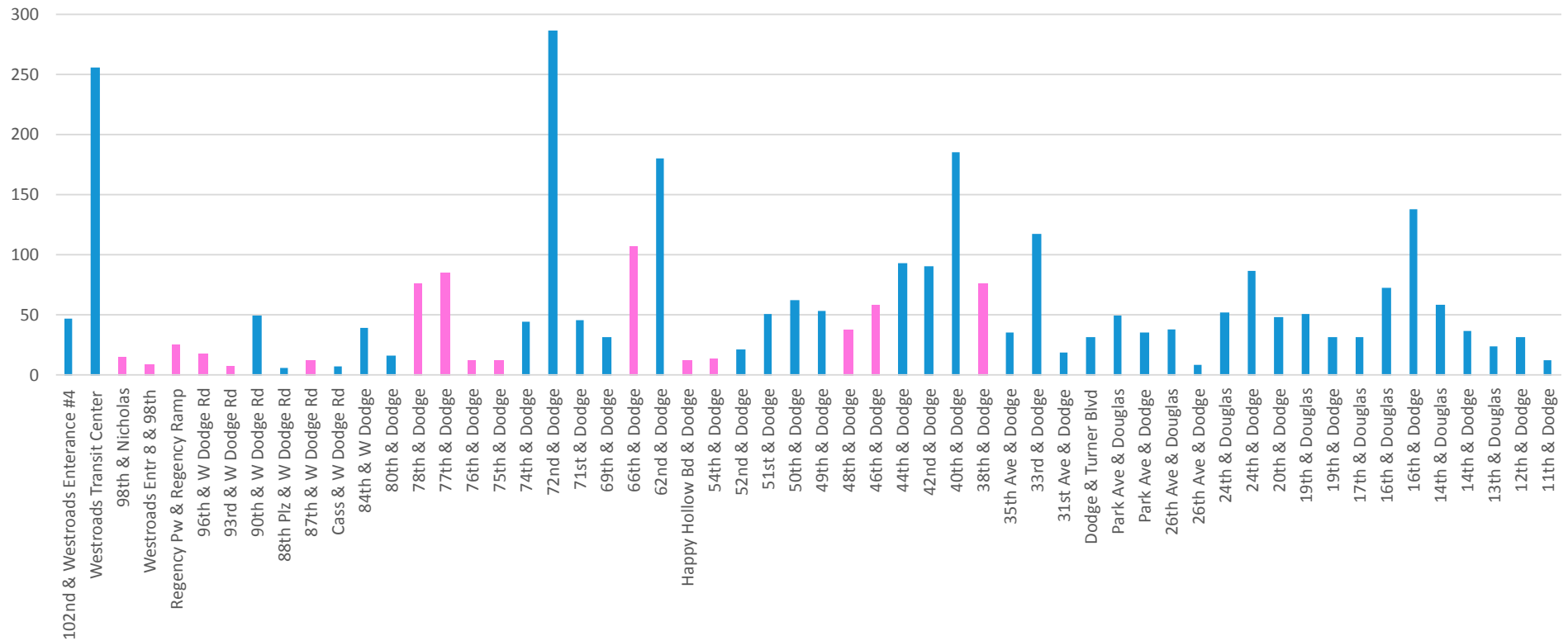
Dodge Street ORBT

The main change in Metro's near-term operations is the implementation of ORBT, the first new service product offered by Metro since MOBY paratransit in the 1980s. This limited stop service on Dodge Street will have 10-minute frequency from 6 AM to 7 PM on weekdays, with enhanced stations, enhanced buses, off-board fare collection, real time information displays and audio announcements. ORBT is slated to become the backbone of Metro's system, and the proposed changes in Strategy I will allow for easier transfers between regular bus routes and the new ORBT service.

Convert Route 2 Local Service

The enhanced service on the Dodge Street corridor is mostly covered by converting the Route 2 bus service into ORBT. Most ORBT stations are within a quarter mile of Route 2 stops, with only 16 stops located between a quarter and a half-mile from the station, representing 18.2 percent of the total Route 2 ridership. None of the proposed stops are more than a half mile away from an ORBT station. Figure 9 shows the coverage of Route 2 demand compared to the ORBT station locations.

Combined Activity, Weekday, Route 2



Expand Metro's Strengths

Metro's strengths lie in its 15-minute service network, with direct routes serving the densest parts of Omaha. Metro should work towards expanding its 15-minute service network. The implementation of ORBT will allow for minimal wait times between transfers to and from local routes. This allow Metro to remove redundant service into downtown, straightening out crosstown services, and encourage transfers onto ORBT instead.

Route 24 15-Minute Off-Peak Service

Route 24 is the best performing route based on ridership per revenue hour. It connects North and South Omaha along 24th street and allows for street corner transfers to Routes 2, 4, 11, 13, 15, 30, 35, 36 and most express routes. Major destinations along the route include various social service agencies, retail and commercial areas, the south 24th street commercial area, historic 24th and Lake, the Joslyn Art Museum, Creighton University, and schools.

Providing 15-minute service (approximately 7:30 AM to 5:30 PM), will increase access to these destinations, while the higher frequencies will reduce wait times for transfers to other routes. Currently, 124,983 people and 133,446 jobs are served within a half-mile of 15-minute service. Expanding this service to Route 24 will add 15,827 people and 2,407 jobs to 15-minute service area. Based on the average change in ridership per revenue hour on the routes that saw increased service in 2015, it is estimated to add 275 daily riders to Route 24, a 27.7 percent increase over ridership today.

Combine Routes 35-36

Route 35 serves between the North Omaha Transit Center and downtown, along 40th, Lake and 33rd streets serving mainly residential areas. Heading into downtown, it overlaps service with Routes 2 and 30 along Dodge and Douglas streets.

Route 36 is a circulator route, taking only 30 minutes to complete a loop between downtown, Vinton Street, and Park Avenue. It serves in both clockwise and counterclockwise directions. It overlaps service with Route 11 between downtown and Park Avenue, along Leavenworth Street and St. Mary's Avenue.

The implementation of ORBT will shorten the wait times for transfers between the proposed combined route at Park Avenue and Dodge. The combined route will provide a new crosstown service and reduce redundancy going into downtown.

Route 30 to Midtown Crossing

Route 30 serves Florence, NOTC, Midtown crossing and then heads into downtown along Dodge and Douglas streets. The implementation of ORBT will shorten the

wait times for transfers between the proposed shortened route at Park Avenue and Dodge. The shortened route will reduce redundancy going into downtown. The route is currently interlined with Route 4. Shortening the route allows for Route 4 to be interlined with Route 13.

Interline Routes 4 – 13

ORBT allows Route 30 to be shortened, which in turn allows Routes 4 and 13 to interline in downtown, creating a new through service in downtown along 13th and 14th streets. The new interlined service will allow for one-seat service between South Omaha and Benson, and provides better service to the new developments in north downtown and the TD Ameritrade Park baseball stadium. The interlining of the service allows for a shorter run time on Route 13, and eliminates service to the Bob Kerrey Pedestrian Bridge. However, reconstruction of the Omaha waterfront would likely interrupt service to the pedestrian bridge in the next five years. Construction of the proposed “Little Bob” bridge would connect the pedestrian bridge to the baseball stadium and the newly interlined route, preserving access to the waterfront.

Address Underperforming Service

Some routes serve a community purpose, providing coverage to low density, higher poverty residential areas of the city where it is difficult to achieve high ridership. While this is an important part of Metro’s mission, Metro must strike a careful balance between community service or using those resources more effectively in higher density areas of the city with more ridership potential. The proposed changes to underperforming service are minimal and affected riders should be able to find alternatives relatively easily.

Interline Routes 8 – 14

Routes 8 and 14 are among the lowest performing routes in the system. Route 8 has much slack time in its schedule. By making a few changes to Route 14, its schedule can be shortened to interline the routes and save one bus for service elsewhere in the system. Route 14 can be sped up by eliminating service to the Metro Community College Fort Campus, which is also served by Route 30. An additional speed improvement for the route will be eliminating service to the Benson Park Transit Center, encouraging street corner transfers instead near 72nd Street & Military Avenue.

Discontinue Route 94

Route 94 is a commuter express service along West Center Road, linking a park-and-ride at Lakeside Hospital to downtown with two trips in the morning, and two return trips in the afternoon. It is one of the lowest performing express service routes and

was slated for removal in 2015. West Center will benefit from the increased service on Route 15 in Strategy II, which serves Oakview Mall, just two miles east of Lakeside. Both Routes 92 and 97, serving Village Pointe and Millard offer four trips every morning and afternoon, and are within a short driving distance from the Lakeside hospital.

Eliminate One Hour of Night Service

Late night service was expanded in 2015, with most routes running until midnight on weekdays. While the intent of the expansion was good, the ridership numbers do not justify continuing service past 11 PM. Late night service has the fewest riders per revenue hour, approximately 5.7 riders per bus after 9 PM, with the fewest after 11 PM. The reduction in late night service removes 16.6 revenue hours on weekdays. Table 20 outlines potential late night service end time changes.

Table 18. Proposed Late Night Service Reduction – Return Time to Garage

Route	Weekday		Saturday		Sunday	
	Current	Proposed	Current	Proposed	Current	Proposed
2	12:42	12:12	11:42	11:12	9:42	8:42
18	12:43	11:50	11:43	10:50	9:13	8:20
4	12:42	11:42	11:42	10:42	9:00	8:00
15	12:20	11:20	11:26	10:26	8:50	7:50
13	12:15	11:15	11:45	10:45	8:45	8:15
30	12:13	11:13	11:13	10:13	9:08	8:08
11	12:12	11:12	11:12	10:12	7:12	7:12
24	11:59	11:12	10:59	10:12	7:01	7:01
35	12:13	11:10	11:13	7:10	7:13	7:10
3	11:55	10:55	10:55	9:55	6:55	6:55
26	11:43	10:43	10:43	6:43	6:43	6:43
36	11:42	10:43	10:42	6:43	6:42	6:43
55	7:35	7:35	7:20	7:20		
5	7:13	7:13	6:43	6:43		
14	7:30	7:30	7:00	7:00		
8	7:10	6:52	7:10	6:52		

Changed Return Times in Blue.

Strategy II - Strengthen the Core

The core of Metro's system is roughly defined as Ames Avenue in the north, L Street in the south, 72nd Street on the west side, and the Missouri River on the east side.

This is the part of the city with the densest neighborhoods and highest trip

generators accessible by transit. By investing in Metro's current system, it can reach the full ridership potential through an increase in fast, frequent 15-minute service to and through the core. This proved to be the most successful improvement following the 2015 service change. Metro sees it as a priority to improve the experience of current riders and get the most ridership out of its current system before new route expansions or additional rapid transit line expansions. The service will become more reliable and consistent in the core by adding frequency.

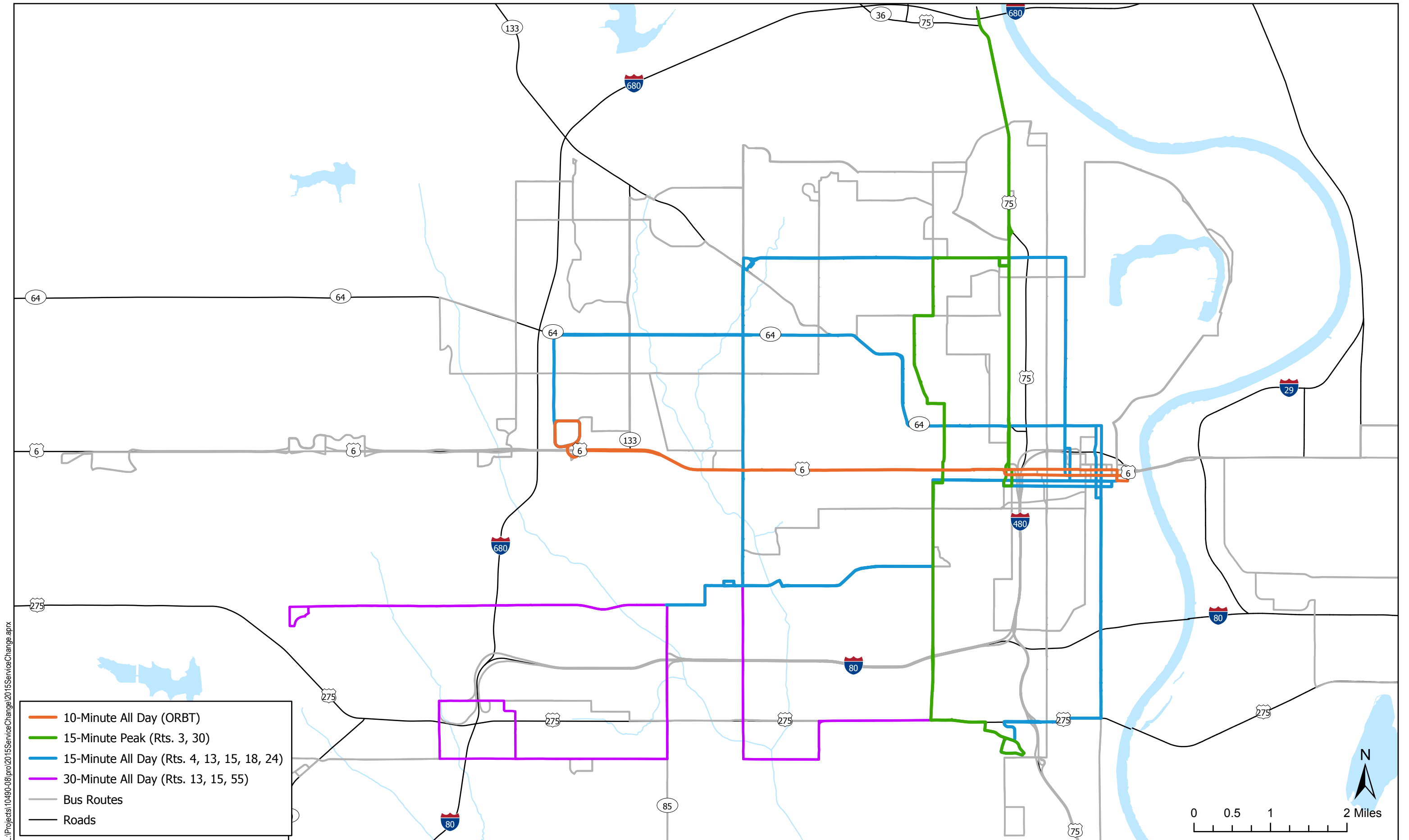
The 15-minute frequency enhancements focus on Routes 4, 13, 15, 24 for all day service, Routes 3 and 30 for peak service, and Route 18 for Saturday service. Sunday service would be improved by providing the same service level as currently offered on Saturdays. These improvements require an expansion in the number of revenue hours executed by 20.4 percent, as outlined in Table 19 and shown in Figure 10.

These core frequency enhancements will require additional funding and resources beyond the three percent annual increase, which only enables Metro to maintain the current level of service. To implement the proposed frequency enhancement, Metro will require a 20.4 percent increase in annual operational funding, or approximately \$5,303,000 (2018 dollars). It will also require an additional eight to ten buses and 30-35 operators beyond the current team.

Table 19. Strategy II Overview – Enhanced Service to Our Core

Options	Revenue Hours				Percent Change	Estimated Annual Cost	Additional Peak Buses Required	Estimated Weekday Ridership Impact
	Weekday	Saturday	Sunday	Annual Total				
Expand Frequent, 15-Minute Service								
Rts. 4, 13, 15 & 24 All Day	130.5			33,410	11.6%	\$3,007,000	+3	+826 (23.7%)
Rts. 3 & 30 Peak	28.5			7,300	2.5%	\$657,000	+5	+165 (11.8%)
30-Minute Complementary Service								
Rts. 13, 15 & 55	Included Above – Western Extensions of Routes of Rts. 13 and 15							
Weekend Service								
15-Minute Saturday Rt. 18		56.0		2,910	1.0%	\$262,000		+649 (55.4%)*
Saturday Service on Sunday			300.0	15,300	5.3%	\$1,377,000		+1,400 (49.3%)**
TOTAL	159.0	56.0	300.0	58,920	20.4%	\$5,303,000	+8	+1,400***

*Saturday ridership impact only. **Sunday impact only. ***Weekend estimates divided by five to create daily impact



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Expand Frequent, 15-Minute Service

Expanding access to frequent, 15-minute service on Routes 24, 3, and 30 will add 38,909 people and 7,587 jobs within half a mile of frequent service, on top of today's 157,241 people and 153,745 jobs covered by Routes 2, 4, 13, 15, and 18.

15-Minute All Day

Routes 4, 13, and 15 currently have 15-minute peak service, while 15-minute off-peak service is proposed for Route 24 in Strategy I. These routes serve the core of Metro's system and have the highest ridership overall, after Routes 2 and 18 which already offer all day 15-minute service.

30-Minute Route Extensions

Route 13 offers 15-minute peak frequency between Metro Community College South Campus and downtown, while only 30-minute service in the peak between MCC South and Aksarben. During the off peak, this drops to 30-minute service between MCC South and downtown and 60-minute service between MCC South and Aksarben currently. Routes 15 and 55 similarly only offers 60-Minute service west of Aksarben during the off-peak currently. The proposed change would make the current peak service for both segment available during the off-peak as well.

15-Minute Peak

After Route 24, Routes 3 and 30 are the most productive routes currently not offering 15-minute service. These routes serve the core of Metro's service area and connect to ORBT, providing important north-south connections in eastern Omaha.

15-Minute All Day Saturday

Route 18 is the highest performing route on Saturdays, outperforming many weekday routes. By providing 15-minute service on Saturdays, Route 18 and ORBT will form the backbone of Metro's system on Saturdays, as they do on weekdays with the current system. It would make the system more useful for as an all-purpose trip network, with customer convenience beyond business hours.

Saturday Service on Sunday

Weekend service saw a big increase in ridership following the 2015 service change by allocating more hours to fewer routes, thus being able to offer more frequent service. By extending Saturday service to Sundays, Metro can offer a convenient service to people enjoying their weekend off, as well as for service workers who work beyond regular Monday - Friday business hours.

Strategy III – Support Regional Growth

Once Metro’s current network is improved through frequency enhancements, Metro can pursue opportunities for growth both within and outside the current service area. Serving more people, destinations, and high-level trip generators will require changes in land use and the built environment of Omaha and the partner communities. Based on the route design service guidelines, Metro can pursue additional rapid transit routes, new or enhanced express service, or new routes beyond the current system boundaries.

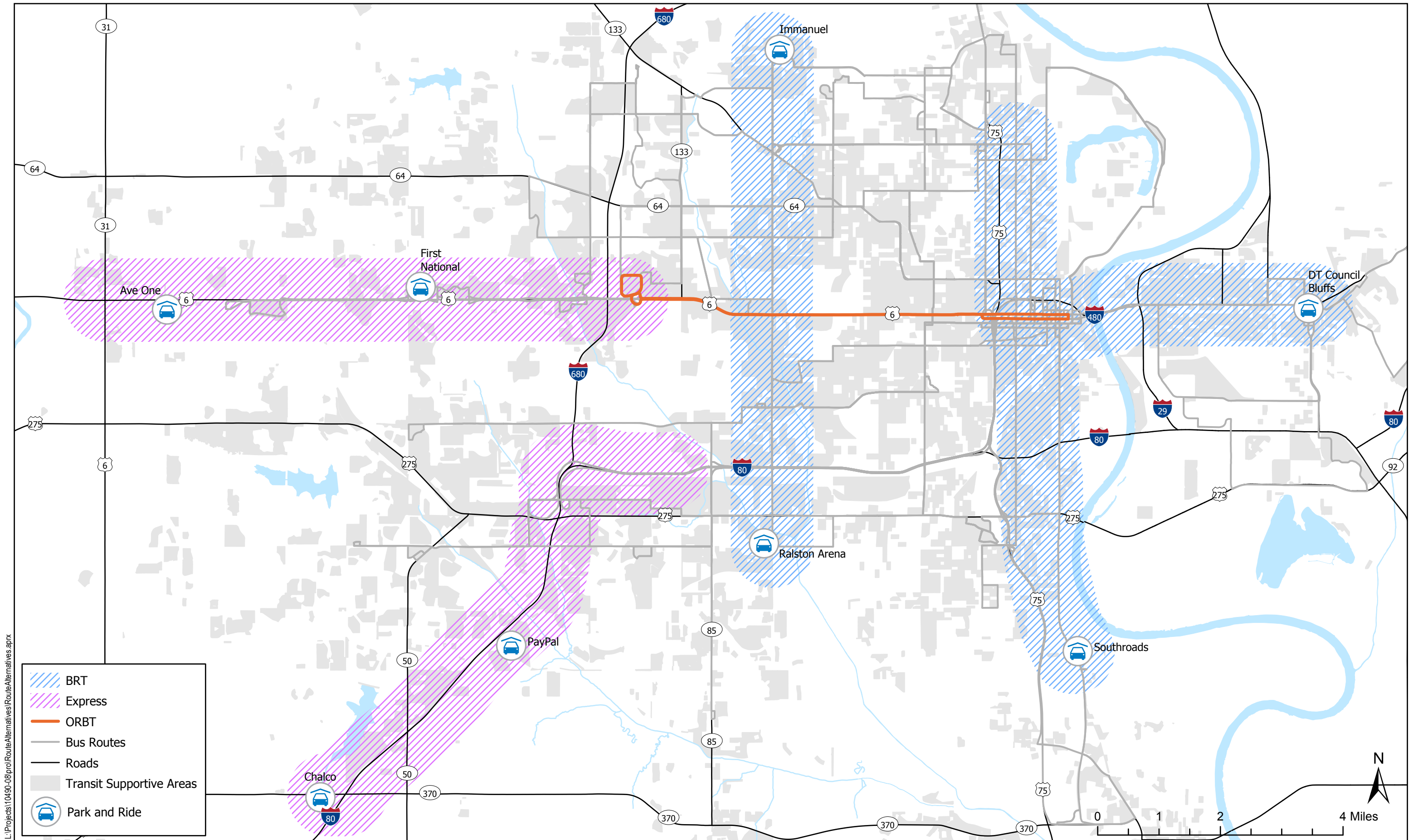
Establishing the corridors with the best ORBT expansion potential will require Metro to work together with its regional partners today to change the built environment and create more transit supportive land uses. Pedestrian access must be improved in these corridors as well. Development in these corridors must change today for Metro to add enhanced service products in the future, as it takes time for a corridor to develop to a higher level of density necessary for rapid transit service. Figure 11 shows and Table 22 documents the potential BRT and express service corridors. Implementing BRT on all four corridors and expanding express service would require an additional 26 to 28 buses and 65 to 68 operators beyond the current team and any additions necessary for Strategy II.

BRT service to Council Bluffs, North 24th Street, South Omaha/Fort Crook, or 72nd Street corridors would require additional capital and operational funding. While capital funding includes one-time expenses that could be funded through grants and fundraising, operational funding must be committed on an annual basis.

Enhancing current express service on Routes 93, 95, 96, and 98 to four trips in the morning and four in the afternoon would require an additional 17 revenue hours a day, a 1.5 percent increase in annual operating cost. Additional express service to growth areas along West Dodge or southwest along Interstate 80 into Sarpy county would require additional operational revenue as well.

Table 20. Strategy III – Support Regional Growth

Options	Revenue Hours				Percent Change	Estimated Annual Cost	Additional Peak Buses Required
	Weekday	Saturday	Sunday	Annual Total			
Council Bluffs BRT	+90	0	0	23,040	8.00%	\$2,074,000	+4.5
North 24th Street BRT	+90	0	0	23,040	8.00%	\$2,074,000	+4.5
Fort Crook (13/16/20/24 Street in Omaha) BRT	+120	0	0	30,720	10.70%	\$2,765,000	+6.0
72nd Street (Immanuel to Ralston Arena) BRT	+150	0	0	38,400	13.40%	\$3,456,000	+7.5
Express Four-Trip Standard	+17	0	0	4,350	1.50%	\$392,000	+4 - 6
TOTAL	+467	0	0	119,550	41.60%	\$10,761,000	± 27



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TDP Strategy III - Support Regional Growth

Omaha Metro Transit Development Plan
Source: Metro; U.S. Census 2010. and LODES 7 Work Area Characteristics (2015)



Figure 11

Set the Stage for Future Transit Corridors

A large part of the TDP strategy is focused on engaging with Metro's community partners to understand their growth expectations and how Metro can work with them to support mobility improvement across our region. To further this end, Metro can share the route design standards with partners and developers to incorporate in their planning efforts and design templates to enhance the transit supportive areas in Omaha and the partner cities, promoting Transit Oriented Development (TOD). This strategy proposes that future land use maps reflect a priority towards development supporting transit along designated corridors. Coordinating plans to support job and residential growth along priority corridors, will ensure development happens in a way to support a transit-friendly lifestyle and provide the necessary densities for future ORBT expansion.

Service Standards

The service guidelines chapter, particularly the route design guidelines, will give community partners an idea of the ingredients necessary for successful transit service. While the guidelines show the minimums necessary for regular local route service, BRT corridors must go beyond them to be viable for future ORBT growth. Higher levels of transit supportive area densities are necessary for bus rapid transit service to work and support transit based lifestyles. Figure 12 shows a potential BRT supportive area map of Omaha, at six households and seven jobs per acre, along with potential BRT corridors.

Enhancing Regional Connectivity

As the key components of this plan are implemented, Metro will determine the best possible way to reach to the edges of our community and create mobility options for residents of the greater Omaha area. This part of the effort is a lot bigger than can be achieved in a six-year plan, but Metro is committed to establishing pathways toward a future of a well-connected regional transit plan. Any expansion beyond the current service area will require additional operating funding, as well as an increase in the intensity of land uses and sidewalk connectivity to be transit supportive.

Expand BRT Corridors

As with ORBT along Dodge, corridors with existing high ridership have the most potential to be upgraded to BRT service. Below is an overview of corridors with the most potential for BRT service, building off existing service, TSA areas, and connections to other routes in the system.

72nd Street

72nd Street has high ridership on Route 18 and a BRT line could be extended along the segments currently covered by Routes 5 and 13. This would create continuous service from Immanuel Hospital to Ralston Arena. 72nd Street crosses multiple existing routes such as Routes 2, 4, 5, 8, 11, 13, 14, 15, 34 and 55. A BRT service along this corridor would serve as the north-south spine, building off the east-west Dodge street ORBT spine to create a cross. The street will need pedestrian focused improvements, moving buildings closer to the street and enhancing sidewalks. This corridor was identified for BRT service in the 2013 RTV and 2017 Close the Gap planning efforts.

Council Bluffs

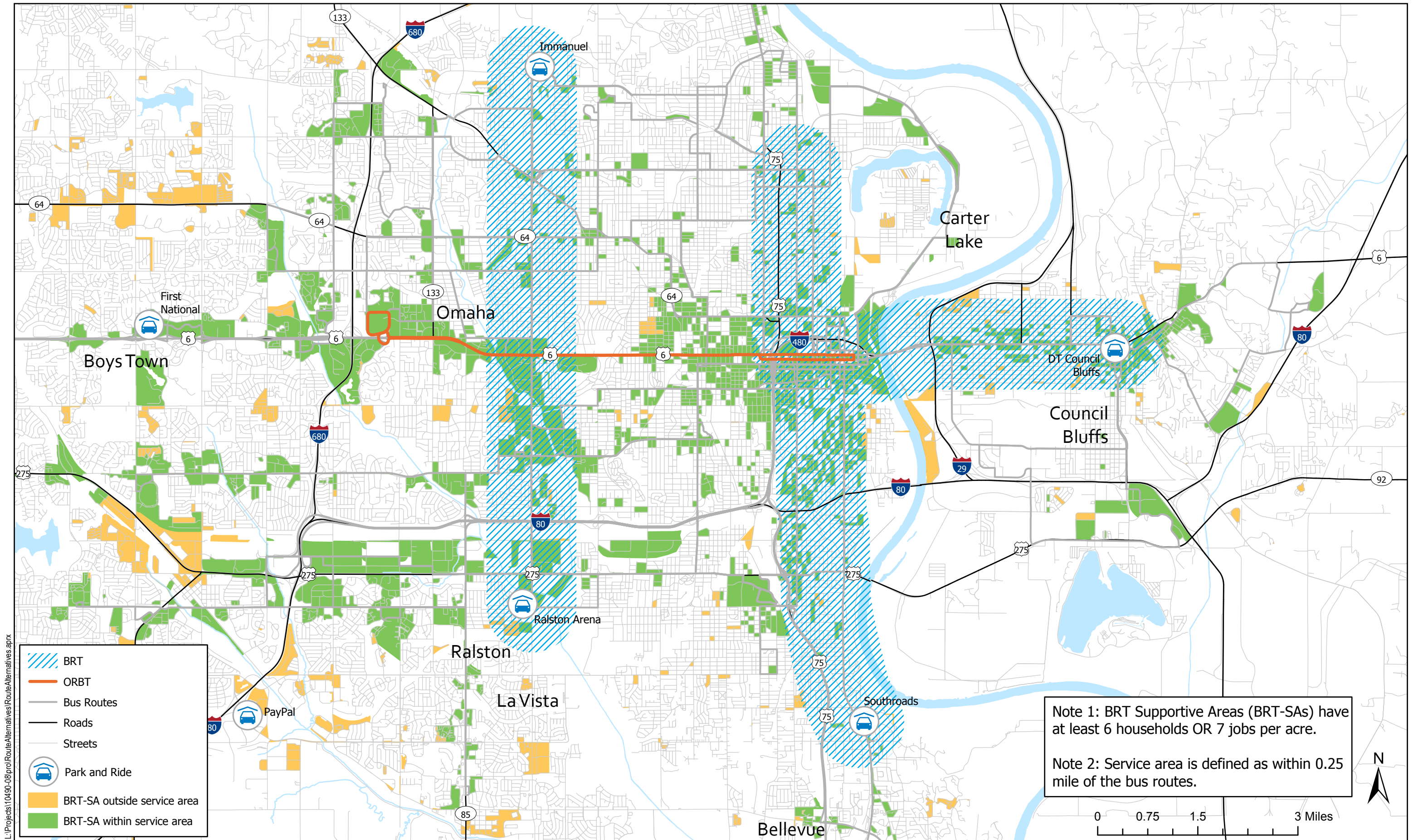
Broadway is an extension of the Dodge Street corridor, and connects to the rehabilitated downtown of the city. The city also has the right of way to a majority of the First Avenue corridor, one block south of Broadway. This could potentially be a dedicated bus way and the city is currently studying this possibility, along with other transit options. As a bonus, BRT service to Council Bluffs could potentially leverage funding sources from Iowa. This corridor was identified for BRT service in the 2013 RTV and 2017 Close the Gap planning efforts.

North Omaha

North Omaha has some of the highest ridership areas in Metro's system. A BRT service between downtown and the North Omaha Transit Center could be considered along 20th, 24th, or 30th Street, or along Highway 75. This BRT line could connect or be extended to South Omaha. This corridor was identified for BRT service in the 2013 RTV and 2017 Close the Gap planning efforts.

South Omaha/Bellevue

In South Omaha, BRT service could be considered for 13th, 16th, 20th, or 24th Street, and extended into Bellevue. This would not connect the service with the transit center at MCC South. In Bellevue, the service could end at the former Southroads mall, or continue further south on Fort Crook to the Offutt Air Force Base. Alternatively, the route could take Galvin Road to downtown Bellevue. This corridor was identified for BRT service in the 2013 RTV and 2017 Close the Gap planning efforts.



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BRT Supportive Areas Served by Metro Fixed Route Service and Future BRT Corridors

Omaha Metro Transit Development Plan
Source: Metro; U.S. Census 2010. and LODES 7 Work Area Characteristics (2015)



Figure 12

New Routes

New routes beyond the current system would require meeting most of the service guidelines, and a need should be identified. A new local route connecting Southwest Omaha to Westroads would fill a gap in the system. This route could be an extension of Route 55 from 120th & I Street, heading north on 120th to Pacific, east to Regency Parkway, and then North through Regency to Westroads. The route would intersect with Route 15 at Center Street, and serve the commercial area there, as well as at 120th & Pacific, and Regency.

Express Four-Trip Standard

Enhancing current express service on Routes 93, 95, 96, and 98 to four trips in the morning and four in the afternoon would require an additional 17 revenue hours a day, a 1.5 percent increase in annual operating cost. Additional express service to growth areas along West Dodge or southwest along Interstate 80 into Sarpy County would require additional operational revenue as well. Both the West Dodge and southwest Sarpy county express expansions were identified in the 2013 RTV and 2017 Close the Gap planning efforts, with the southwest corridor also identified in the 2017 Sarpy County Transit Study.

Changes to current express route alignment could include changing Route 98 to serve from 144th & Maple to Westroads to feed into ORBT. Route 93 could be extended further south to the Sarpy County courthouse, which was the original alignment before the 2015 system change.

Future Park-and-Ride Demand

Park-and-ride demand may increase further west along Dodge Street, as well as southwest along I-80 towards Chalco and Gretna in Sarpy County. These are the fastest growing frontier areas of suburban development in the region. Demand for the park-and-ride services comes from both local Omaha commuters as well as regional commuters from nearby communities.

Park-and-ride is currently focused on downtown Omaha employment, but future park-and-ride services could be considered to the UNMC and Westroads areas as well, to connect to ORBT. Potential riders should be intercepted before entering the denser and congested areas of the city.

Future improvements to park-and-ride locations could include formal contracts with the parking lot owners and setting up basic amenities at the terminus of the route, such as a shelter and schedules. This is currently done for the ORBT park-and-ride at Westroads. For routes traveling along I-80, bus on shoulder improvements would allow express buses to pass congested traffic, providing a visibly faster service to single occupancy cars.

Alternative Local Service Products

The TNCs and Flex Route Service Memo of July 2018 discussed alternative service products Metro could offer, specifically for lower density areas. The memo also discussed TNCs as a possible revenue source, which will be discussed in the Organizational and Fiscal Forecast chapter. The following services could expand Metro's reach beyond the current service area.

Vanpool

The state of Nebraska offers vanpool services through its GoNEWhere program, offering a \$400 monthly subsidy to each vanpool, significantly reducing the out-of-pocket costs for riders. Metro could be the administrator for the program in the Omaha area.

Flex-Route

Flex routes deviate from the designated route to pick up and drop off passengers near their destinations, usually within half a mile of the designated route and at a higher fare rate. Des Moines offers flex route service on three routes in suburban areas of Clive, Urbandale, West Des Moines and Windsor Heights. Requests would need to be made through dispatch.

TNC Partnerships

Partnerships between transit agencies and Transportation Network Companies (TNCs) can consist of direct monetary investments in subsidized rides or sharing of travel data.⁷ Subsidized rides can apply to the general population, disadvantaged riders, or riders or trips within certain geographic areas. This can be done through discount codes within ridesharing apps or with agreements with local taxi providers. The most common application of discounted TNC rides involve solving the last mile problem to improve connectivity to transit hubs. Patrons would still need to purchase a transit ticket in addition to purchasing their TNC trip.

Partnerships between transit agencies and TNCs does raise equity and accessibility issues, as TNCs are not required to be wheelchair accessible. In addition, providers such as Uber, Lyft, and VIA are only accessible through a smartphone device.

Ridership Impacts

The improved high frequency network will affect ridership for Metro. The assumptions used for estimating ridership are based on the improved ridership per revenue hour on four of the five routes with frequency improvements applied in

⁷ <https://nytransit.org/resources/transit-tncs/2015-transit-tncs>

2015. On average, productivity per revenue hour went down 16 percent. The average change in productivity per revenue hour was applied to current productivity levels to project ridership on the routes with proposed service level improvements.

The ridership projections do not include growth related to system synergy – the improved transit network from making transfers easier and attractive. The projection is just a sum of route by route projections. The projection also does not include population growth, but increased population, commercial and job density through land use reform along routes would be beneficial for ridership.

Overall, this analysis provides a conservative estimate of ridership impacts for Metro for strategies one and two. Strategy III ridership will depend on which corridor is picked for a second ORBT line, the extend of regional service enhancements, and the success of strategies one and two. Annual ridership projections can be found in Table 21. These ridership figures are used to calculate fare revenue presented in the Financial Plan subsection of the Organizational and Fiscal Forecast chapter.

Table 21. Metro Ridership Impacts

	2017	Strategy I	Strategy II
Annual Ridership	3,589,795	3,931,750	4,291,003
Percent Change from 2017		9.5%	19.5%

Ridership at Metro has been in decline since 2014. The increase in service levels on Metro's most productive routes will halt and then reverse this negative trend. These conservative estimates suggest major investments are necessary to significantly increase Metro's ridership beyond the 2014 peak. Strategy I reallocates low performing revenue hours to higher performing ones, raising the system average productivity.

The number of current weekday customers seeing increased frequencies equals 2,489 for Strategy I (Routes 2 and 24), and 4,872 current customers will see improved frequencies in Phase II (Routes 3, 4, 13, 15, 24 and 30), as well as 1,170 Saturday riders on Route 18.

Improved frequencies reduce wait times and allows transit to be a more spontaneous mode of travel. A customer will save an average of 7.5 minutes when frequencies improve from 30 to 15 minutes, as the average wait time is halved.

Capital Assets & Improvement Strategy

Table 22 shows an overview of the operational, capital, vehicle, and staffing needs for each of the three strategies. Strategies two and three will require additional funding for capital improvements on top of the bus replacement schedule. Not included in the table is the capital cost for BRT expansion station planning, design, and construction. This chapter covers the capital and technology improvement needs, both for existing service and expanded service under strategies two and three.

Table 22. TDP Strategies Operational, Staffing and Vehicle Requirements

	Strategy I	Strategy II		Strategy III	
	Buses	Staff	Buses	Staff	Buses
ORBT	+8 Articulated CNG			+63 Operators +10 Admin	+22 Articulated Buses (CNG or Electric)
Regular Service		+33 Operators +6 Admin	+8 Standard Buses (CNG or Electric)	+3 Operators +1 Admin	+ 5 Standard Buses (CNG or Electric)
Operational & Capital Cost Increase	\$231,210 (annual)	\$5,303,000 (annual)	\$4,000,000 (one-time)	\$10,761,000 (annual)	\$17,900,000 (one-time)
Annual Revenue Hour Increase	+2,569	+58,920		+119,550	

Capital cost for buses: \$500,000 per regular bus, \$700,000 per BRT bus.

Capital cost for BRT expansion does not include stations and route planning, estimated at \$5,000,000 per mile in 2018 dollars.

Transit Asset Management Plan

Metro prepared a Transit Asset Management (TAM) Plan for fiscal year 2018 to improve safety, reliability, reduce costs, provide better customer service, and to optimize resource allocation. The plan outlines Metro's policy, approach, and actions to improve its asset management practices moving forward. The 2018 update to the TAM reflects the purchase of new Compressed Natural Gas (CNG) buses. This section provides a summary of the TAM and context for the TDP service alternatives. With the service expansions proposed in strategies two and three, additional capital needs will need to be fulfilled beyond those outlined in the TAM.

Vehicles

Buses are the main capital need of Metro to provide its services. Metro has its own fleet of vehicles for fixed route and MOBY paratransit service. Metro has 105 buses for fixed route service and 23 vans and four cars for MOBY services. There are also

four “retro” buses from the 1950s and 1960s which are not a part of daily service. All fixed route vehicles have a bike rack and a wheelchair lift. All MOBY vehicles have wheelchair lifts.

New buses are a continuous capital need to replace existing buses that have reached the end of their useful life, as well as expansion buses to support new services, such as ORBT or service expansions requiring fleet expansion. The Federal Transit Administration (FTA) requires transit vehicles to meet minimum service-life standards before vehicles are eligible for replacement without penalty. Metro uses a 13-year or 500,000-mile schedule for bus replacements and MOBY uses a seven-year schedule for its vans, consistent with FTA policy.

The vehicle replacement and expansion need is based on looking at the service needs for each year and comparing it to the current fleet list and the projected replacement dates for each vehicle. ORBT introduces higher capacity articulated buses, while this TDP recommended service expansion will require an increase in the number of buses on the streets during peak service. Standard buses are the 35 and 40-foot long buses Metro currently operates. Articulated buses are 60-foot long buses that have an articulated joint in the center of the bus that allows the bus to bend. The purpose of having different types of buses is to better match vehicle type to service area and ridership levels. The 45 total buses by 2024 consist of ten ORBT buses in Strategy I and an additional 13 standard size buses and 22 articulated buses in strategies two and three. Additional buses may be necessary for spares.

While Metro is starting to incorporate CNG vehicles into its fleet, other agencies are incorporating electric buses, including agencies in cold weather climates such as Duluth and Minneapolis. Metro should learn from these agencies and see if electric vehicles would be an attractive option in the future. This would create the need to hire mechanics with electric vehicle backgrounds, and require the purchase of electric bus charging stations. These would need to be included at both Metro’s main building, as well as fast-charging overhead chargers at transit centers.

Metro Building

Metro stores and maintains its vehicles at its main facility at 2222 Cuming Street. This facility is where the transit program administration is located, a building shared with the Metropolitan Area Planning Agency (MAPA) of Greater Omaha. The facility can currently store and maintain up to 200 standard size buses. There would be room to expand the current building on the west and southeast sides if necessary, at the expense of employee parking.

The projected fleet is to expand by 45 total buses by 2024, consisting of ten ORBT buses in Strategy I and an additional 13 standard size buses and 22 articulated buses in strategies two and three. This brings the total number of buses to 154, up from

109 today. Articulated buses are longer and take up approximately twice as much space as regular buses. Metro should plan enough storage capacity for 184 buses, which is still well under the maximum capacity of 200 buses in the Metro building.

MOBY vans are also stored in the bus garage, along with a few cars. These are parked along the southern end of the garage space and do not impact the storage capacity for standard buses.

These plans do not consider the additional space required to add washing bays, fueling stations, or maintenance bays. If operations get expanded to the levels desired in Strategy III of this plan, it will require additional administrative personnel and administrative space.

Transit Centers

Metro’s five transit centers are served on pulse schedules to allow for quick transfers between routes. All transit centers, except for the new Aksarben transfer point, have expansive shelter space and dedicated bus bays. Future improvements such as real-time route information monitors, and potential Ticket Vending Machines (TVMs), will improve the customer experience. Metro should place route maps at the transit stations, provide Wi-Fi, and consider upgrading Aksarben to a full-service transit center, outlined in the transit center design checklist in Table 23.

The Benson Park Transit Center future is uncertain, as foundation drainage issues have severely impacted the concrete surface. Major capital expenditures would be required to repair the foundation drainage problem. Nevertheless, the intersection of Ames, Military, and 72nd Street is a prime location for a transit center, potentially to be integrated with a future 72nd street BRT route.

Table 23. Transit Center Design Checklist

Bus Bays for Peak Service	Shelters / Covered Waiting Area	Driver Restroom Facilities	Real Time Arrivals
Information Kiosks with Maps & Schedules	Audible Schedule Announcements	Ticket Machines	ADA Accessible
Benches/Seating	Sidewalk Connectivity	Trash Receptacles	Lighting and Safety Features

Bus Stop Access and Enhancements

Access to bus stops and the bus stop waiting environment is an important element for transit riders. Without a safe and accessible path to a bus stop, existing, and potential, rider swill not be able to access Metro’s fixed route services. Bus stops should be easily accessible on foot and with mobility devices, such as walkers and wheelchairs. It is critical bus routes and bus stops serve places with well-established sidewalk networks that connect to locations passengers are coming from or going to.

Highly used stops should have extra amenities, such as shelters, benches, maps, and schedules, as outlined in the service guidelines chapter. With the integration of AVL, electronic displays should be installed with real time information at the most used stops in the system. With the launch of ORBT, Ticket Vending Machines (TVMs) should be placed at ORBT stations and transit centers. Once smartcards are implemented, readers should be placed at both doors of the stops to allow for all-door boarding, speeding up the boarding process.

Metro should work with the cities it serves to make sure the streets it serves are in a state of good repair. Bus pullouts should be discouraged, as they make it difficult to merge back into traffic. Metro currently does not manage bus benches and does not receive the advertising revenue from the benches. The placement of bus benches should be discouraged in locations where no stops are present. Bus stop locations should be placed on the far side of intersections, minimizing delays for operations.

Shelters

Metro recently installed 50 shelters to replace existing shelters and will add additional shelters based on stop level activity. As part of the capital plan, it is recommended Metro identifies ten stops per year for improvements, focusing on ADA accessibility improvements and installation of shelters. Metro's capital expenditures have a line item for Capital Support/Facilities Equipment. The funds identified for this line item will cover the estimated costs for bus stop access and enhancements.

Besides providing access to bus stops, the waiting environment at the bus stop is also important. These include the need for bus stops to have signage that conveys information regarding the bus system such as phone numbers and web addresses. Amenities should be installed at bus stops based on these guidelines. Lighting at the most used stop will enhance the perception of safety for passengers as they wait for the bus in the evening. Placement of shelters and amenities should be based on the guidelines presented in the service guidelines chapter, and priority bus stop enhancements should be based on ridership and major destinations.

Park-and-Ride

Park-and-Ride stops are located along the express bus routes. Metro should consider establishing standard park-and-ride contracts with current and future park-and-ride lot property owners. The new official park-and-ride at the Westroads Transit Center could be a template, while Metro should also consider property developers with a willingness to pay for transit services.

Intelligent Transportation Systems (ITS)

Technology improvements are vital to support growth in the transit network. Automated Vehicle Locator (AVL) systems provide real time bus location information both to transit managers as well as the public. Metro plans to roll out AVL in the spring of 2019, including a smartphone app and real-time information at the transit centers and ORBT stops. AVL will also allow for audible announcement of the next bus stop location onboard the bus. The AVL system will also include Automated People Counters (APC) to keep track of boardings and alightings at each stop, which will allow for better data analysis and planning in the future.

Transit Signal Priority (TSP) is proposed Dodge Street for ORBT. The investment in TSP should be expanded as part of the implementation of a second BRT line. Other high frequency corridors or intersections should be considered for the deployment of TSP as well.

Ticket Vending Machines (TVMs) will be located at all ORBT stops and transit centers, which is the first step for a systemwide smartcard fare payment system. Once smartcards are introduced, readers should be placed at both doors of the bus to allow for all-door boarding, which will speed up the boarding process. Alternatively of smartcards, Metro could use a smartphone payment system where passengers load a code on their phone which will be scanned upon boarding. ORBT will have off-board payment to speed up the boarding process even further, with proof of payment conducted through random fare checks.

Dedicated transit lanes could be considered on future ORBT routes or on streets where buses carry high percentage of the people throughput capacity. For the express bus services, Metro should partner with local roadway improvement plans to promote the future option for bus-on-shoulder on interstate highways. It would allow express buses to drive past gridlocked traffic, making them a visibly more attractive alternative to long-distance commuters.

Service Change Implementation Plan

The Transit Development Plan will be implemented over a period of five years. This will allow for manageable growth of Metro's services. Implementation of the strategies will depend on funding levels and on monitoring the performance of the service improvements of Strategy I. Adjustments to future service expansions should be made based on ridership and performance, as well as commitment by the community to transit corridors.

This will also manage capital costs and the procurement process for obtaining vehicles. The strategy implementation process is presented in the following section. Table 24 presents the overall impact, in terms of revenue hours and bus requirements for ORBT and fixed route service.

Table 24. Implementation Plan Revenue Hours and Vehicles per Year

Year	Revenue Hours	Peak Buses	Metro Spare Buses	Total Buses	Spares Ratio
Current	287,105	88	17	105*	19.3%
Strategy I	289,674	87	To be determined; spares ratio not to exceed 20 percent.		
Strategy II	348,594	95			
Strategy III	468,144	122			
Total Change	+181,039	+34			

*Four retro buses are not included, so 109 minus four equals the current 105 fixed route fleet.

Strategy I

ORBT will be operational by early 2020. With this operational change, the route alignment and service level changes of Strategy I will also be implemented to fine tune existing services. This includes providing 15-minute off peak service on Route 24, combining Routes 35 and 36, rerouting Route 30 to Midtown, interlining Routes 4 and 13, and 8 and 14. It will also include discontinuing the Route 94 express service to West Center Road and eliminating one hour of night service. The alignment and service level changes will make ORBT the spine of the transit system.

Metro will work with its community partners to identify and make the case for enhanced local funding for operations. A successful implementation of ORBT and the service changes will make a strong case for further quality service improvements. Successful implementation will require an expansive community outreach effort to inform current and potential riders of the service changes for ORBT and regular routes.

Strategy II

Depending on the level of operational funding increase, Metro will support its core by increasing its all-day 15-minute service network for Routes 4, 13, 15, and 24, as well as add peak service to Routes 3 and 30. Weekend service on Route 18 should be improved to 15-minutes, and the Saturday schedule will be expanded to Sunday. In case the full 20.4 percent of additional operational funding is not achieved, Metro should implement a more limited service level increase based on the productivity of the aforementioned routes.

During this timeframe, Metro should continue to monitor productivity of the service level changes implemented in Strategy I and adjust service if necessary based on the service guidelines. It should also work with the City of Omaha and community partners to improve land use in future enhanced transit corridors.

While Strategy II is rolled out, a second ORBT corridor should be determined, including implementing land use changes, preparing planning and environmental documentation, and securing operational and capital funding for service. Most likely corridors include: to downtown Council Bluffs, North 24th Street, Fort Crook in Bellevue (with 13th, 16th, 20th, or 24th leading to downtown Omaha), or 72nd Street from the Ralston Arena to Immanuel Medical Center.

Strategy III

While this Transit Development Plan covers a period of five years, it will set the stage for further growth in the region. Supporting regional growth will require higher intensity land use, and providing high frequency, quality service giving customers the freedom to use transit for multiple trip purposes every day. A second ORBT line will build on the success of the first line, expanding high quality transit access and making transit more visible in the community.

Local routes could see enhanced frequencies, but current land use patterns do not create enough demand beyond the service improvements proposed for Strategy II. One or two new local routes could be considered in West Omaha or Sarpy County if land use and socio-economic conditions change, and areas meet the established service standards. Closing the gap between Southwest Omaha and Westroads should be one of the first local route expansions to consider.

To feed into the two ORBT spines, regional service can be enhanced by adding express service to the level of four inbound trips in the morning and four outbound trips in the afternoon to and from park-and-ride locations. New express service should be considered into Sarpy county and further west along the Dodge expressway. This could also feed into ORBT at Westroads, instead of downtown.

Below are some of the growth areas Metro will need to monitor determine the need for service growth:

Downtown and Midtown

Additional infill development in Downtown, North Downtown, Midtown, and Blackstone will increase residential, employment, and commercial densities. Land use changes on the horizon with the Transit Oriented Development guidelines for ORBT, reduced parking requirements and increased parking fees will make Metro a more attractive option. This may also increase the demand for park-and-ride service outside this area.

West Omaha and Sarpy County

Continued development and annexation in West Omaha expand the city westward in a suburban development pattern. Walkability is limited in this area and street patterns do not allow for effective delivery of transit services. New higher density employment, shopping, and residential developments will need to include Metro early in the development process to ensure park and ride demand can be adequately served in the future. Similar trends are happening in Papillion and along Interstate 80 towards Gretna.

Redevelopment Sites

Outside the Downtown to Midtown core, redevelopment sites could add significant densities elsewhere in the community. Past redevelopments, such as Aksarben Village, could be replicated in locations such as Crossroads, Florence and near MCC South Omaha. Some may be corridor redevelopments too, such as Saddle Creek, North 24th Street, North 30th Street, and Ames Avenue. Corridor developments have the benefit of being linear, which makes transit more useful. Metro should be engaged in conversations with the city and business groups to encourage development near existing high frequency transit service.

Public Involvement

As with the RTV recommended changes, successfully implementing the recommendations will require buy-in from the local community, key decision makers, and the customer base. Providing the constituency with justifications supported by data will bolster the recommendations and help the plan move forward, particularly during the transition between each phase. When proceeding with the recommendations, Metro should employ the following outreach methods to engage the community on the proposed changes:

- Publicize changes on website
- Post information in buses

- Hold public meetings in various parts of the Metro service area, particularly near affected routes
- Provide notices to public officials, key stakeholders, and community groups
- Place “ambassador” personnel at key bus stops and transit hubs to discuss service changes with customers

Successful implementation of service changes and the frequency improvements can bolster the case for future operational funding level increases.

Changes in ADA Coverage Area

The ADA coverage area is mostly affected by the alignment structure of the outermost regular fixed routes of a transit system, as Metro is required to provide ADA paratransit service within three-quarters of a mile from fixed route service. MOBY provides this service within the Nebraska portion of its service area, plus Carter Lake. Phase one and two of the TDP do not affect the MOBY coverage area. Potential expansion of regular fixed route service into West Omaha or Sarpy County would require an expansion of the paratransit service area.

Need for Title VI Analysis of Proposed Service Changes

The Title VI plan established for the 2015 system changes identified routes with high minority populations requiring program monitoring. These routes were identified if one third or more of the revenue miles travel through census blocks where the percentage of the minority population exceeds the percentage minority population in the service area. These routes include 3, 8, 13, 18, 24, 26, 30, 35, and 36. All of these routes will see minor changes in Strategy I due to the reduction of one hour of night service and some also due to interlining.

Before implementing a major service change, Metro is required to perform a Title VI analysis of the proposed service changes. The 2019 - 2024 Transit Development Plan (TDP) proposes service changes to existing routes and several new fixed bus routes.

For transit agencies operating 50 or more fixed-route vehicles in peak-hour service in urbanized areas with a population of 200,000 or more, the Federal Transit Administration (FTA) requires the completion of Title VI Service Equity Analyses for proposed service changes that meet the agency’s major service change threshold. Metro meets this criterion.

A Service Equity Analysis for all three phases would be appropriate to ensure that the benefits and burdens of the proposed changes are shared equitably between all population groups. This analysis would include Modeling Current and Proposed Service Levels, Assigning Transit Trips to Census Blocks, Calculating the Change in Service Level by Census Block, Determining Average Percent Change in Service,

Comparing the Change in Service for each Population Group, and an Evaluation of Impacts.

Title VI Principles and Definitions

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin in programs receiving federal financial assistance. Title VI states, “no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

In 1994, President Clinton issued Executive Order 12898, which states that each federal agency “shall make achieving environmental justice part of its mission by identifying and addressing disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” Through this Executive Order, Title VI was identified as one of several Federal laws that should be applied “to prevent minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects.”

To provide direction to recipients of federal funding, the FTA issued Circular 4702.1B, Title VI Requirements and Guidelines for Federal Transit Administration Recipients, in 2012, which replaced Circular 4702.1A issued in 2007. This document outlines Title VI evaluation procedures for recipients of FTA-administered transit program funds and includes guidance for a variety of equity evaluations.

Minority

The FTA defines a minority person as one who self-identifies as American Indian/Alaska Native, Asian, Black or African American, Hispanic or Latino, and/or Native Hawaiian/Pacific Islander. For the purposes of a future evaluation, Metro should define non-minority persons as those who self-identify as white and not Hispanic or Latino. All other persons, including those identifying as two or more races and/or ethnicities, should be defined as minority persons.

Low Income

While low-income populations are not an explicitly protected class under Title VI, the FTA recognizes the inherent overlap between Title VI and Environmental Justice principles and requires transit providers to evaluate the impact of service and fare changes to low-income populations and to identify any disproportionate burden placed on those populations by the proposed changes. The FTA defines a low-income person as one whose household income is at or below the poverty guidelines set by the Department of Health and Human Services (DHHS). DHHS poverty

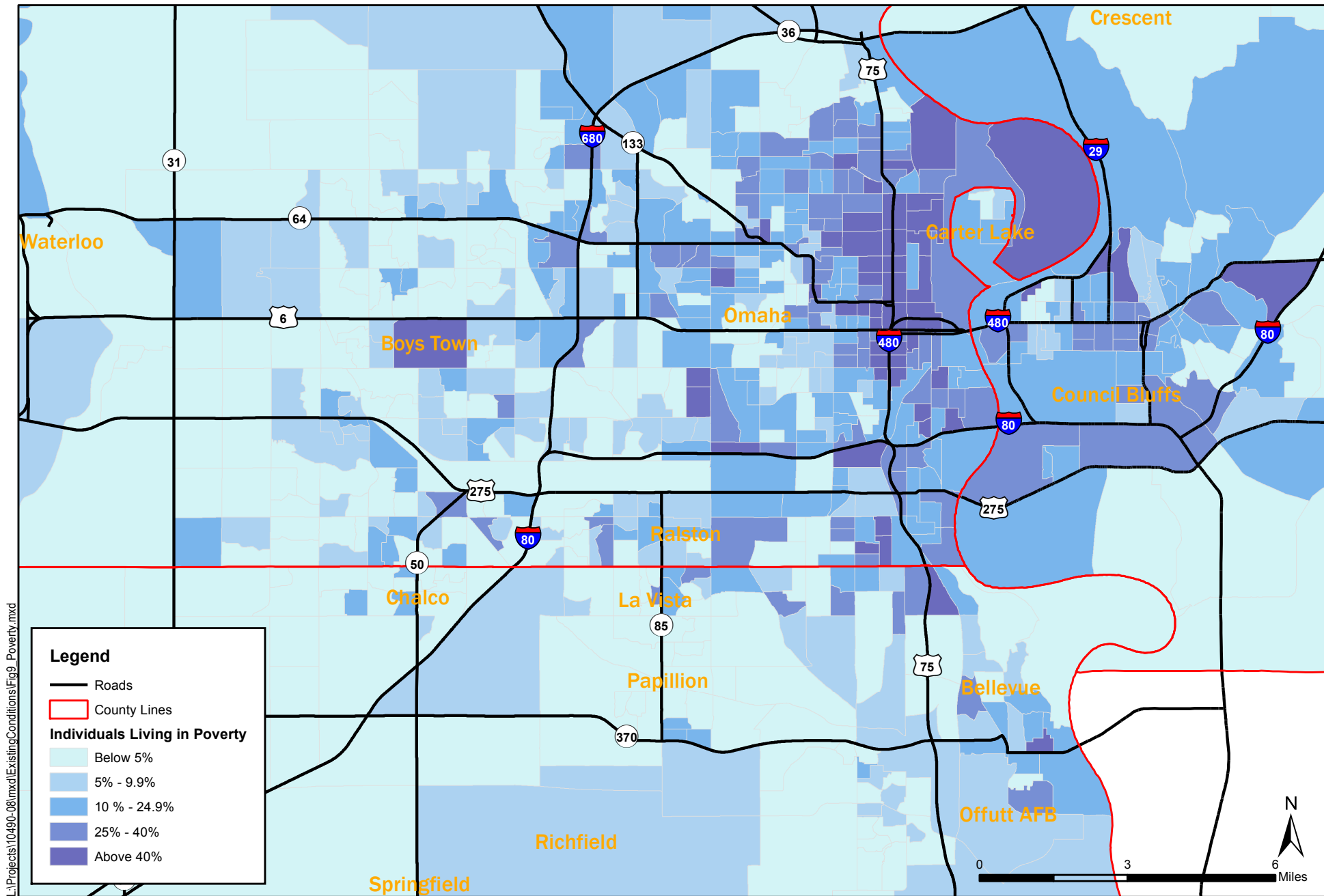
guidelines are based on household size and the number of related children less than 18 years of age.

However, FTA Circular 4702.1B also allows for low-income populations to be defined using other established thresholds that are at least as inclusive as those developed by DHHS. Correspondingly, Metro can use U.S. Census Bureau poverty thresholds, a more sophisticated measure of poverty that considers not only family size and the number of related children present, but also, for one and two-person units, whether elderly or not. The U.S. Census Bureau's poverty thresholds are used for statistical purposes, while DHHS's poverty guidelines are used for administrative purposes.⁸ The existing conditions report identifies the population distribution by poverty level by census block. It also identifies areas of concentrated poverty and minority populations in the Omaha - Council Bluffs region.

Title VI Summary and Next Steps

Federal funding recipients such as Metro are required to follow the guidance and requirements under FTA Circular 4702.1B to ensure an equitable distribution of benefits and burdens to protected and non-protected populations groups. While the completion of service equity analyses for major service changes are not strictly required for Metro, it would be appropriate to conduct a service equity analysis for the proposed changes outlined in strategy one and three.

⁸ The distinctions between poverty thresholds and poverty guidelines are described further at <https://aspe.hhs.gov/frequently-asked-questions-related-poverty-guidelines-and-poverty#programs>; and <http://www.irp.wisc.edu/faqs/faq1.htm>.



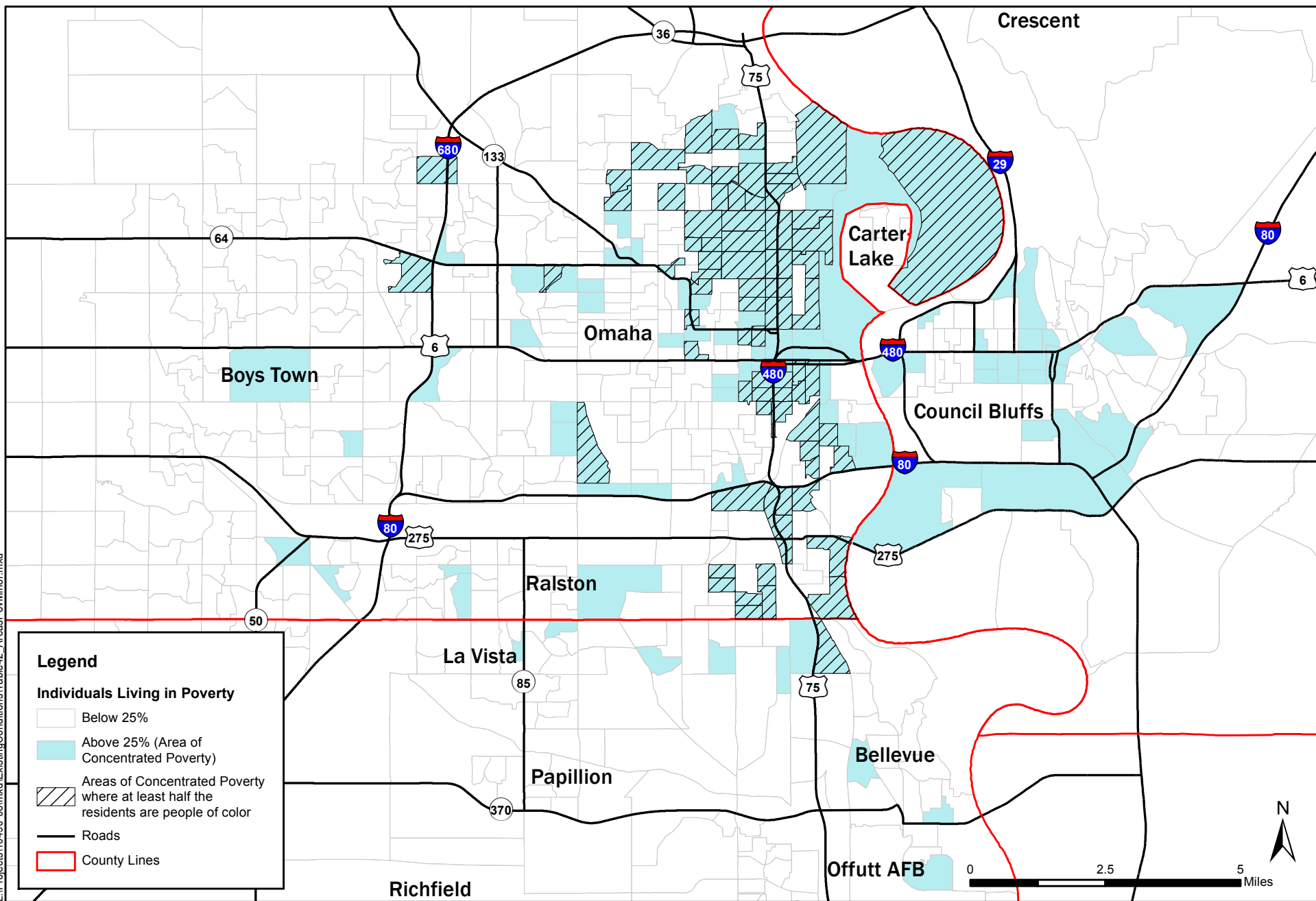
Poverty Status

Omaha Metro Transit Development Plan
Source: Source: U.S. Census Bureau, 2012 - 2016 American Community Survey.



Figure 13

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Areas of Low Income or Minority Populations, Omaha-Council Bluffs Region

Omaha Metro Transit Development Plan
Source: Source: U.S. Census Bureau, 2012 - 2016 American Community Survey.



Figure 14

Organizational and Fiscal Forecast

Organizational and Staffing Plan

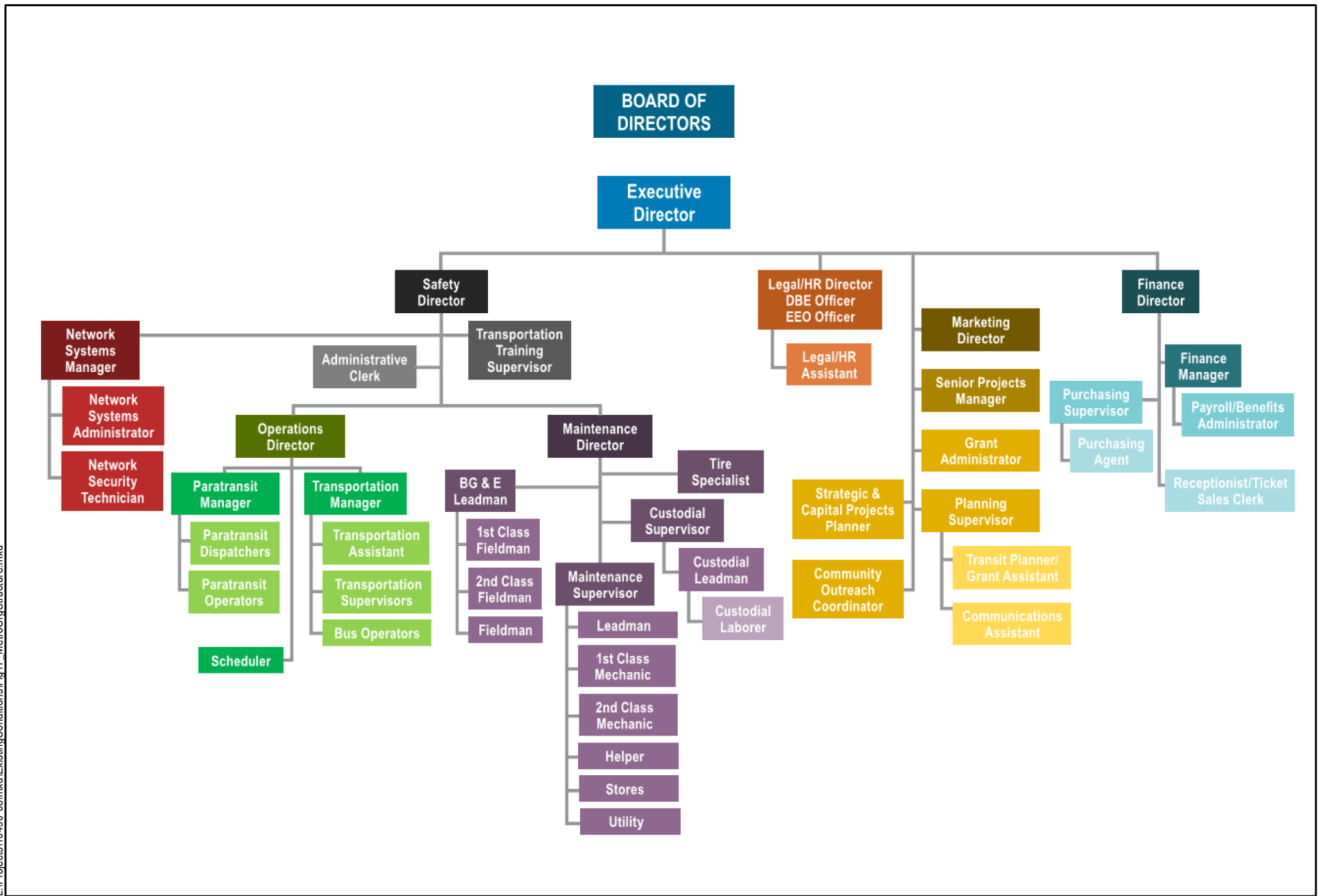
Public transportation service in Omaha is provided through Metro. Planning, administration, operations, and maintenance are done by Metro, while MOBY transit and dispatching is provided through contractors. Table 25 documents current estimates of Metro staffing. Metro employs 267 people to provide transit service, with operators and mechanics making up the largest work group with 158 employees. Metro's organizational structure is shown in Figure 15.

Metro staff covers the administration, contract oversight, planning, and management of grants for the system, headed by the marketing director. A clear understanding of the organization's mission, vision, and goals by all staff members will help improve the execution of strategies to achieve those goals. To accomplish this, Metro is currently working on internal strategic vision planning.

Administrative staff is sufficient for current service levels but would need to be increased for strategies two and three. One operator should be hired for every 1800 hours of service added to the current service. The administrative staff should be expanded at approximately the current one-to-six administrative staff to operator ratio.

Table 25. Staffing Needs

	Strategy I	Strategy II	Strategy III
Operators	158	191	257
Paratransit	30	35	47
Maintenance	36	44	58
Administrative	43	50	67
Total	267	320	429



Metro Organizational Structure

Omaha Metro Transit Development Plan
Source: Metro.



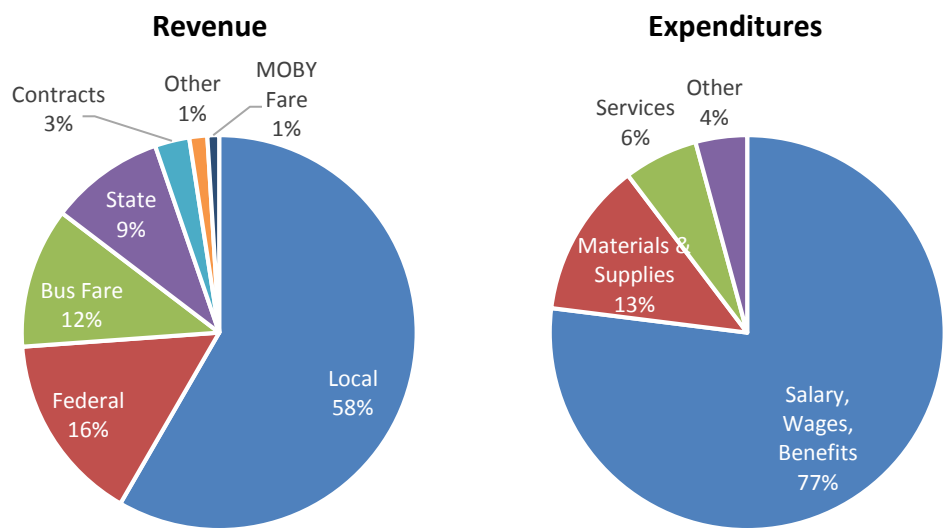
Figure 15

Financial Plan

The financial plan presents the costs and revenues for Metro fixed route services, MOBY paratransit service, and the capital program. The operating costs include cost for operating services along with costs incurred to administer the transit programs. Capital costs are based on projects identified in the Capital Assets and Improvements chapter, such as Metro’s building, transit centers, buses, shelters, and ORBT stations. Revenues present the expected funding from each revenue source including fares, federal sources, state sources, and local sources.

Metro’s local share of funding contributes just over 61 percent of its operational expenses and is directly funded by property taxes in the City of Omaha and separate service contract agreements with Council Bluffs, Bellevue, Ralston, La Vista, and Papillion. The state of Nebraska contributes just under ten percent of the operational revenue, while fares cover over 12 percent.

Figure 16. Operational Revenue and Expenditures by Source, 2017



Source: Metro. 2017 Operating Revenue: \$28,416,077. 2017 Operating Expenditures: \$27,949,438.

Operating Costs and Revenues by Strategy

There are two categories of operating costs: fixed route costs and MOBY costs. Fixed route costs in 2017 equaled \$86.59 per revenue hour, while MOBY operating costs equaled \$50.78 per revenue hour. For near term financial planning purposes, this TDP assumes future fixed route costs at \$90 per revenue hour for fixed route service and \$55 per revenue hour for MOBY paratransit service.

Fixed route operational costs are based on three factors; revenue hours of service, revenue miles, and total buses. Revenue hour projections are presented in the Recommended Service Alternatives chapter, which shows a substantial increase in revenue hours for strategies two and three. The operating cost per revenue hour include the operator salary and benefits, administrative overhead, maintenance items, fuel costs, and insurance and vehicle registration. MOBY paratransit costs are based on a similar calculus to the fixed routes.

Operating revenues are divided into five categories: fares and passes, advertising, state funding sources, Federal Section 5307 sources, and local sources. Fares and passes are based on ridership and include agency fares and partner pass programs. Contracts with partner communities make up three percent of operating revenue.

Advertising is revenue the transit program receives for advertising on buses and public information, such as shelters, which is approximately \$219,548 per year. State sources, which are approximately 9.9 percent of operating revenues, are funds received from the State of Nebraska. Federal Section 5307 formula urbanized funding covers approximately 16 percent of fixed route operating costs. Local sources, which come from the property taxes in the City of Omaha, cover most of the operational funding revenue.

Table 26 shows the estimated operating revenues and expenses for each strategy. Highlighted in green, fare revenue will increase as ridership increases. Despite fare revenue increases, strategies two and three will require additional funding. Highlighted in blue are the revenue sources most likely to increase funding: local funding, contracts (BRT to Council Bluffs in Strategy III), and advertising.

Table 26. Projected Operating Costs and Revenues

	Current	Strategy I	Strategy II	Strategy III
Operating Cost				
Fixed Route Cost	\$25,096,548	\$25,327,758	\$30,630,758	\$41,391,758
MOBY Cost	\$2,852,890	\$2,852,890	\$2,852,890	\$2,852,890
Total Cost	\$27,949,438	\$28,180,648	\$33,483,648	\$44,244,648
Operating Revenue				
Local Sources	\$16,578,847	\$16,578,847	\$16,578,847	\$16,578,847
Federal Section 5307	\$4,409,467	\$4,409,467	\$4,409,467	\$4,409,467
Fixed Route Fares	\$3,265,248	\$3,576,287	\$3,903,061	\$4,683,673
State Funding	\$2,669,383	\$2,669,383	\$2,669,383	\$2,669,383
Contracts	\$801,760	\$801,760	\$801,760	\$801,760
MOBY Fares	\$274,034	\$274,034	\$274,034	\$274,034
Advertising	\$219,548	\$219,548	\$219,548	\$219,548
Other	\$197,790	\$197,790	\$197,790	\$197,790
Total Revenue	\$28,416,077	\$28,727,116	\$29,053,890	\$29,834,502
Budget Surplus/Shortfall	\$466,639	\$546,468	\$(4,429,758)	\$(14,410,146)

Source: Metro. Highlighted in blue are the revenue sources most likely to increase funding: local funding, contracts (BRT to Council Bluffs in Strategy III), and advertising.

Capital Costs

The costs and revenues associated with additional capital improvements for strategies one, two and three are presented below in Table 27. The projects listed are presented in the Capital Assets & Improvement chapter, which highlights the number of bus purchases each year.

Capital projects are funded by a combination of federal and local funding sources. The local sources include the local tax levy, grant funding, reserve funding, retained earnings, and an operating transfer. Capital costs vary from year to year based on projects that are proposed to be funded that year.

Not included in the capital costs projection is the cost for planning and constructing additional BRT stations and routes, currently estimated at \$5 million per mile.

Table 27. Projected Capital Costs

	Strategy I	Strategy II	Strategy III
Additional Buses	+8 Articulated CNG	+8 Standard Buses (CNG or Electric)	+22 Articulated Buses (CNG or Electric) + 5 Standard Buses (CNG or Electric)
Capital Cost	Included in ORBT Grant	\$4,000,000 (one-time)	\$17,900,000 (one-time)

Capital cost estimates for buses: \$500,000 per regular bus, \$700,000 per BRT bus.

New and Enhanced Revenue Sources

With a limited farebox revenue growth forecast, Metro relies on local, state, and federal operational revenue increases to expand service. Federal funding for operations is formula based and is out of Metro's control. At the state and local level, there are opportunities to expand operational funding, but Metro will need to work with its community partners and transit advocates. As Metro rolls out service improvements, it can point to its increased productivity and ridership to build a case for better transit in Omaha.

Local Funding

Local funding is currently provided through property taxes from the City of Omaha and service contracts with Council Bluffs, Bellevue, Ralston, La Vista, and Papillion. Below is an overview of potential local funding sources.

Property Tax

The current property tax levy dedicated to transit in Douglas County is 0.05101 per \$1,000 of assessed value, split 50-50 between the county and the city. Under state law, this levy is only allowed to grow 2.5 percent per year. An additional one percent can be added with county and city approval. For FY 2019, Metro requested a 2.8 percent increase. Metro could alternatively ask for a portion of general fund dollars from the city of Omaha.

Transit Assessment District

The Regional Transit Vision of 2013 proposed establishing a transit assessment district along a Farnam busway between 42nd street and the Old Market. Buses would run every five minutes along this stretch, with additional operating revenue from a transit assessment district.

The Kansas City Streetcar uses a transit assessment district stretching one-half mile from the route, which charges additional property and sales taxes. There is also a \$100 fee per surface parking spot per year in the district, which encourages the land along the streetcar line to be developed to a more productive use with higher property taxes.

Sales Tax

A local sales tax increase in the city of Omaha for transportation could raise significant funding for transit and other transportation projects in the city. Such an increase would likely need to be approved in a local election. Showing improvements in the system and having a clear vision for future improvements and expansion of transit helps build a case for additional funding to voters. Pairing a ballot initiative

with other transportation improvements in the city would increase the chances of success. Atlanta was successful passing a transit ballot measure through its “Some Use It, We All Need It” campaign.

Sales taxes can fluctuate significantly during the year and depending on the economy. During an economic downturn, sales tax receipts may slow down, which may reduce the amount of service Metro would be able to provide. Metro historically has an increased need for service during an economic slowdown. Denver rapidly expanded its transit network in the past decade through sales tax revenue, but recently cut service and increased fares due to an operational budget deficit.

TNC Fee

The TNCs and Flex Route Service Memo of July 2018 discussed how a few large metro areas started adding taxes on trips taken by Transportation Network Companies (TNCs) such as Uber, Lyft, and VIA. Chicago implemented a 67-cent fee per rideshare trip, with 52 cents being allocated to the city’s general fund and 15 cents to transit. The 15-cent increase is expected to generate an additional 16 million dollars, all dedicated to the Chicago Transit Authority. In addition, TNCs in Chicago are required to pay a \$10,000 fee to provide unlimited rides in the city

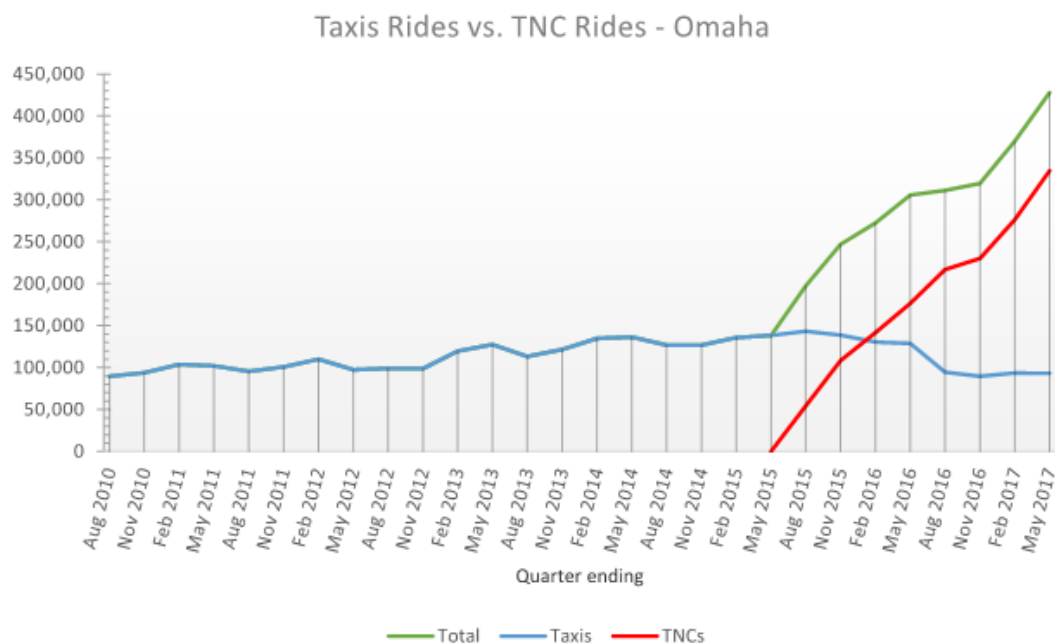
Washington, DC has a one percent ride-hailing fee, generating approximately 4.5 million dollars in 2017, up from \$875,570 in 2015. As TNCs charge based on distance and demand, it is unknown how many trips these receipts represent.

Figure 17 below is from the annual report to the legislature on the status of the implementation of LB 629, which regulated TNCs in 2015. As of May 2017, 1.4 million trips are provided through TNCs annually in Omaha, according to the Nebraska Public Service Commission.⁹ Implementing a fee in Omaha could range from 10 to 50 cents per trip, with annual revenue ranging from \$140,000 to \$700,000. Alternatively, Omaha could charge an additional sales tax on TNCs, similar to the Omaha restaurant tax of 2.9 percent.

⁹ANNUAL REPORT TO THE LEGISLATURE ON THE STATUS OF THE IMPLEMENTATION OF LB 629 [2015]

https://nebraskalegislature.gov/FloorDocs/105/PDF/Agencies/Public_Service_Commission/556_20171229-121706.pdf

Figure 17. Taxi Rides vs. TNC Rides – Omaha



Source: Nebraska Public Service Commission, 2017.

Community Partnerships

By encouraging pass programs for employers and agencies, Metro can secure a stable revenue source and patronage. Downtown institutions and large employers should be encouraged to provide pass programs, providing an alternative to parking contracts.

Utility Tax

Some cities raise operational funding through charging a fee on utility bills. Corvallis, Oregon is a college town with a \$2.75/month fee on utility bills, which allows the city to offer free public transit. For Metro to pursue this funding stream, it would need to collaborate with the Metropolitan Utility District and create a clear connection between utilities and the need for transit.

County Income Tax

In 2016, Indianapolis voters approved a countywide 0.25 percent income tax to fund transit. The tax allowed IndyGo to expand their frequent transit network to cover 65 percent of all residents and expand revenue hours by 70 percent. More revenue allowed for more service, which led to higher ridership. This would likely require state enabling legislation.

Other Fees and Taxes

- Additional parking fees make transit more appealing, while the additional revenues could be used to boost transit service.
- The city of Omaha collects a wheel tax of \$50, depending on the type of vehicle. An increase in this tax could fund transit.
- A local gas tax, which may require state enabling legislation.

State Funding

Metro currently receives approximately 2.6 million dollars of Nebraska's six-million-dollar public transit budget. The remainder is spent on other fixed route systems in Lincoln and Scottsbluff, and on rural transit throughout the state. Nebraska ranks 37th in the U.S. for state support for transit, and 30th in state transit support per capita. While Metro should encourage local state senators to increase the state's transit funding share, transit currently ranks low on state budget priorities.

Table 28. Federal and State Funding by State, 2012

State	2012 Population (in Millions)	Federal Funding (in Thousands of \$)	State Funding (in Thousands of \$)	State Funding per Capita
Minnesota	5.376	195,772	309,427	\$57.56
Wyoming	0.576	9,233	2,522	\$4.38
Iowa	3.074	38,947	12,899	\$4.20
Colorado	5.193	254,446	12,350	\$2.38
Kansas	2.885	28,193	6,000	\$2.08
Nebraska	1.855	24,190	2,900	\$1.56
South Dakota	0.833	14,562	770	\$0.92
Missouri	6.024	86,501	2,994	\$0.50

SOURCE: American Association of State Highway and Transportation Officials, Survey of State Funding for Public Transportation 2014, as of July 2015. Retrieved from Bureau of Transportation Statistics, <https://www.bts.gov/content/federal-and-state-funding-public-transit>

Integrate Development Guidelines

The route design guidelines should be shared with city officials and property developers to create an understanding of the minimum characteristics necessary for transit to successfully serve new developments. Area developers, and those who rent, lease or buy may assume transit services are available without confirming route alignments and frequency. While Metro staff does not keep track of the frequency of inquiries of “when will transit be provided or can a route be changed to provide service,” a proactive preventative measure is to incorporate confirmation of a developer’s understanding of transit into the project review process.

Adding transit service confirmation to the review process would be beneficial at several levels of this development review process, because each step may involve different applicants, who may have different needs and expectations. For example, the applicant for a zoning and subdivision application may be a different entity than the applicant for a building permit.

This chapter addresses the range of opportunities for inquiries regarding the need for and understanding of where transit is located relative to the proposed development. Metro should encourage transit design guidelines to be included in city developmental review guidelines, making city staff and developers aware of transit accommodating needs early in the land development process.

Comprehensive Plan Amendments

The land use planning stage is the most conceptual, broad based level of planning. These plans serve as the basis for zoning and subdivision decisions. If an applicant is requesting an amendment to the future land use plan, it is most likely due to the desire to request a zoning change or subdivision that is not consistent with the current adopted plan. To make a change to the area plan, it must show the proposed use can adequately be served with existing or planned streets or utilities.

This criterion could be expanded to bring awareness to the proximity of transit services. Adding this as a review criterion, both in the city’s zoning ordinance and on the application form, would generate discussion about transit availability early on, during the review and approval phase of growth plan amendments.

The application form could be expanded upon to include a criterion such as:

Will the proposed land use lead to development that would be used by residents or employees who are transit dependent? ____Yes ____No
If yes, I am aware that transit services currently ____do ____do not exist within 1,320 feet (1/4 mile) of the land included in this application.

Future comprehensive plan and area plan updates should encourage job growth near the transit centers and high frequency transit corridors. In new suburban development, it should make sure new high density and commercial development is proposed "on the way" of extensions of current high frequency routes.

Zoning Map Amendments

The city of Omaha is currently working on Transit Oriented Development (TOD) guidelines for opt-in zoning changes near ORBT stops. The process proposes four typologies up to a half-mile from the station, with different intensities of housing and commercial development and lower parking requirements.

For developments elsewhere in the city, standard criteria for zoning map amendments considered by staff, the Planning Commission and the City Council include references to the city's ability to provide necessary public services, facilities, and programs to serve the development allowed by the new zoning classification at the time the property is developed. This criterion could be expanded to add transit services by adding a line item to the zoning map amendment application forms stating the following:

Will the proposed zoning map amendment lead to development that would be used by residents or employees who are transit dependent? ☐ Yes
☐ No

If yes, I am aware that transit services currently ☐ do ☐ do not exist within 1,320 feet (1/4 mile) of the land included in this application.

Ideally, developments that are specifically aimed at serving transit dependent populations, such as students, low income, or people with disabilities, should be encouraged to locate adjacent to existing transit routes, or in areas where transit service has been identified within the very near future in the TDP.

Subdivision Applications

Subdivision applications are often made in conjunction with zoning map amendments, but sometimes the platting process comes later, or replats are completed to rearrange parcels, change parcel sizes, or amend public elements of a plat such as right of way. Subdivision review is largely focused on meeting the minimum lot sizes and dimensional requirements of the applicable zoning district. However, there are a number of other factors that could pertain to transit. Street, sidewalk and trail characteristics are typically decided at the subdivision stage. Pedestrian easements between lots can be incorporated into a plat. Subdivision considerations can address the following questions, for example:

- Are the streets within or adjacent to the plat currently part of a transit route or are they designated as part of a future transit route?

- Will the proposed land use lead to development that would be used by residents or employees who are transit dependent?
- Could features of the subdivision be improved upon to provide transit dependent residents, employees or customers improved access to transit routes?

Building Permit Applications

A building permit application is typically reviewed and approved by staff, with a range of departments involved in the review process. One option to ensure that the applicant is aware of transit route proximity to the site would be to add a line to the building permit application form that, if checked, certifies that the applicant is aware of the proximity and frequency of transit service to the site. A contractor frequently submits the permit application rather than the owner. Thus, verification should come from the project owner.

Another approach would be to add a submittal requirement that consists of a letter from the **owner** stating their awareness of transit service proximity and frequency. The requirement for a letter could be added to the Planning Department site plan review checklist. The letter could be provided in the format of a form letter, into which the owner/developer inserts 1) the address of the site, 2) the distance to the closest transit route(s), and 3) the frequency of service of those routes. The form letter could state that that the owner acknowledges that transit services located more than 1,320 feet (1/4 mile) from the site are not considered close enough for most potential users of transit. A link to the transit route map and Metro contact information could be provided with the form letter.