



# TRANSIT DEVELOPMENT PLAN 2022

CITY OF BILLINGS MET TRANSIT



December 2022

# TRANSIT DEVELOPMENT PLAN BILLINGS, MONTANA

December 2022



# TRANSIT DEVELOPMENT PLAN REVIEWS AND ACTIONS

Organization/Jurisdiction	Action Date	Action
Billings-Yellowstone County MPO Technical Advisory Committee	September 22, 2022	Recommend for Approval
Billings City Council (Work Session)	October 3, 2022	Presentation
Billings City Council	November 14, 2022	Approved
Yellowstone County Commission	November 1, 2022	Presentation
Yellowstone County Commission	November 7, 2022	Approved
Yellowstone County Planning Board	November 9, 2022	Public Hearing
Yellowstone County Planning Board	November 22, 2022	Approved
Billings-Yellowstone County MPO Policy Coordinating Committee	December 13, 2022	Approved

## Contents

List of Figures .....	iii
List of Tables .....	v
Introduction .....	1
Billings MET .....	1
Organization .....	1
Project Purpose and Scope .....	2
Project Team .....	3
Recommendations .....	4
Overview .....	4
Fixed-Route Redesign .....	4
Route by Route Changes .....	7
Airport (1 MET-Link Replacement) .....	7
Crosstown (Route 3) .....	9
Grand (Route 5) .....	10
Broadwater (Route 7) .....	11
Central (Route 9) .....	12
Southside (Route 10) .....	13
Westend (Route 13) .....	14
Route 19 .....	15
Billings Heights Routes .....	16
Increased Funding Service Additions .....	18
Filling Driver Break Schedule Gaps .....	21
Scheduled Fleet Replacement .....	22
Transit System Overview .....	26
Fixed-Route Service .....	26
Fares .....	28
Fleet .....	28
Facilities .....	28
Downtown Transfer Center .....	28
Stewart Park Transfer Center .....	29
METroplex .....	30
Funding .....	30

Non-MET Services in Region .....	32
Policy Guidance .....	33
Market and Needs .....	35
Transit-Supportive Areas .....	35
Demographics .....	36
Existing Service Review.....	44
Peer Performance Analysis .....	49
Performance Measures: Results.....	50
MET Transit Fixed-Route Five-Year Summary .....	50
MET Transit Performance Relative to Peer Groups.....	51
Summary .....	59
Public Engagement.....	61
Overview.....	61
Community Survey.....	62
Public Meetings.....	62
Public Meeting #1 – Public Library .....	62
Public Meeting #2 – Community and Senior Center .....	63
Public Meeting #3 – Public Library .....	63
Email Input.....	64
Considered Alternatives.....	65
Service to Lockwood .....	65
Appendix – Coordinated Plan Agencies	
Appendix – Network Redesign and Demographics	
Appendix – Community Survey Questionnaire	
Appendix – Public Meeting Material	
Appendix – Public Comments Received	

# List of Figures

Figure 1. Billings MET Organizational Structure .....	2
Figure 2. Recommended Redesign MET Transit Network.....	6
Figure 3. Airport Route (MET-Link Replacements).....	8
Figure 4. Redesign Network Crosstown (Route 3) .....	9
Figure 5. Redesign Network Grand (Route 5 A/B) .....	10
Figure 6. Redesign Network Broadwater (Route 7) .....	11
Figure 7. Redesign Network Central (Route 9).....	12
Figure 8. Redesign Network Southside (Route 10).....	13
Figure 9. Redesign Network Westend (Route 13).....	14
Figure 10. Redesign Network Josephine (Route 19).....	15
Figure 11. Redesign Network Height Rapid (Route 16) .....	17
Figure 12. Redesign Network Heights Circulator (Route 18) .....	18
Figure 13. Northwest Circulator Route Path.....	19
Figure 14. Proposed Service Frequency for Modified MET Network .....	20
Figure 15. Example schedule for hourly route .....	21
Figure 16. Current MET Transit Network.....	27
Figure 17. MET Transit Downtown Transfer Center.....	29
Figure 18. MET Transit Stewart Park Transfer Center .....	29
Figure 19. METropolex.....	30
Figure 20. MET Funding sources (2019).....	31
Figure 21. MET Funding Sources, 2017-2021.....	31
Figure 22. Transit Supportive Areas .....	36
Figure 23. Low-Income Population by Block Group.....	37
Figure 24. Zero-Vehicle Households by Block Group .....	38
Figure 25. Population Ages 15-19 by Block Group .....	39
Figure 26. Population Ages 65+ by Block Group .....	40
Figure 27. Population of Color by Block Group .....	41
Figure 28. Hispanic/Latino Population by Block Group .....	42
Figure 29. Limited English Proficiency by Block Group .....	43
Figure 30. Average 2021 Weekday Boardings by Route .....	45
Figure 31. Average 2021 Saturday Boardings By Route.....	46

Figure 32. Boardings per Service Hour July-December 2021.....	47
Figure 33. Operating Cost Per Passenger Trip, 2019.....	51
Figure 34. Operating Expenses Per Passenger Trip Compared to Peer Average, 2015-2019 .....	52
Figure 35. Operating Cost per Revenue Hour, 2019.....	52
Figure 36. Operating Cost per Revenue Hour Compared to Peer Average, 2015-2019.....	53
Figure 37. Passenger Trips per Revenue Hour, 2019.....	53
Figure 38. Passenger Trips per Revenue Hour Compared to Peer Average, 2015-2019 .....	54
Figure 39. Average Fare per Passenger Trip, 2019.....	55
Figure 40. Average Fare per Passenger Trip Compared to Peer Average, 2015-2019 .....	55
Figure 41. Operating Ratio, 2019.....	56
Figure 42. Operating Ratio Compared to Peer Average, 2015-2019.....	56
Figure 43. Subsidy per Passenger Trip, 2019.....	57
Figure 44. Subsidy per Passenger Trip Compared to Peer Average, 2015-2019.....	57
Figure 45. Passenger Trips Per Capita, 2019 .....	58
Figure 46. Passenger Trips Per Capita Compared to Peer Average, 2015-2019.....	58
Figure 47. Investment per Capita, 2019 .....	59
Figure 48. Lockwood – Number of Commuter Coming In/Leaving Town for Work (2019 Data).....	65
Figure 49. Lockwood Fixed Route Concept.....	67

# List of Tables

Table 1. Summary of Recommended Redesign Route Changes .....	7
Table 2. Vehicle arrangement assumptions .....	22
Table 3. Fleet Replacement Timing and Cost .....	24
Table 4. Description of Current MET Transit Service .....	26
Table 5. Fare Structure .....	28
Table 6. MET Transit Funding Sources .....	31
Table 7. Previous Plans and Policies .....	33
Table 8. Boardings and Service Hours by Month and Route, July-December 2021.....	48
Table 9. 2019 Operating Statistics – Billings Peer Group .....	49
Table 10. Metrics for evaluating peer systems.....	50
Table 11. MET Transit Operating Statistics over 5-Year Period .....	50
Table 12. MET Transit Performance Statistics over 5-Year Period.....	50
Table 13. Public engagement schedule.....	61
Table 14. Lockwood Service Alternatives Summary.....	66

# INTRODUCTION AND RECOMMENDATIONS

# Introduction

## Billings MET

Billings MET Transit (MET) is the local designated recipient for Federal Transit Administration (FTA) 5307 operating funds to provide public transit service. As a department of the City of Billings, MET offers fixed route bus service and Americans with Disabilities Act (ADA) complementary paratransit covering approximately 43.52 square miles almost exclusively within city limits. MET has been providing public transportation since 1973 and currently provides both fixed route (The MET) and paratransit services<sup>1</sup> (MET Plus). Paratransit service was originally established in 1977 by Special Transportation, Inc, which was assumed by the City of Billings MET in 1997.

In 2019, MET provided more than 400,000 passenger trips and MET Plus approximately 46,000 trips, using a fleet of 25 buses and 15 paratransit vehicles. Many of the fixed routes are focused on providing service to students as well as daily peak commuters. Annual fixed-route ridership in 2019 was 427,913; due to the COVID-19 health crisis, ridership fell to 373,146 in 2020 and 284,306 in 2021.

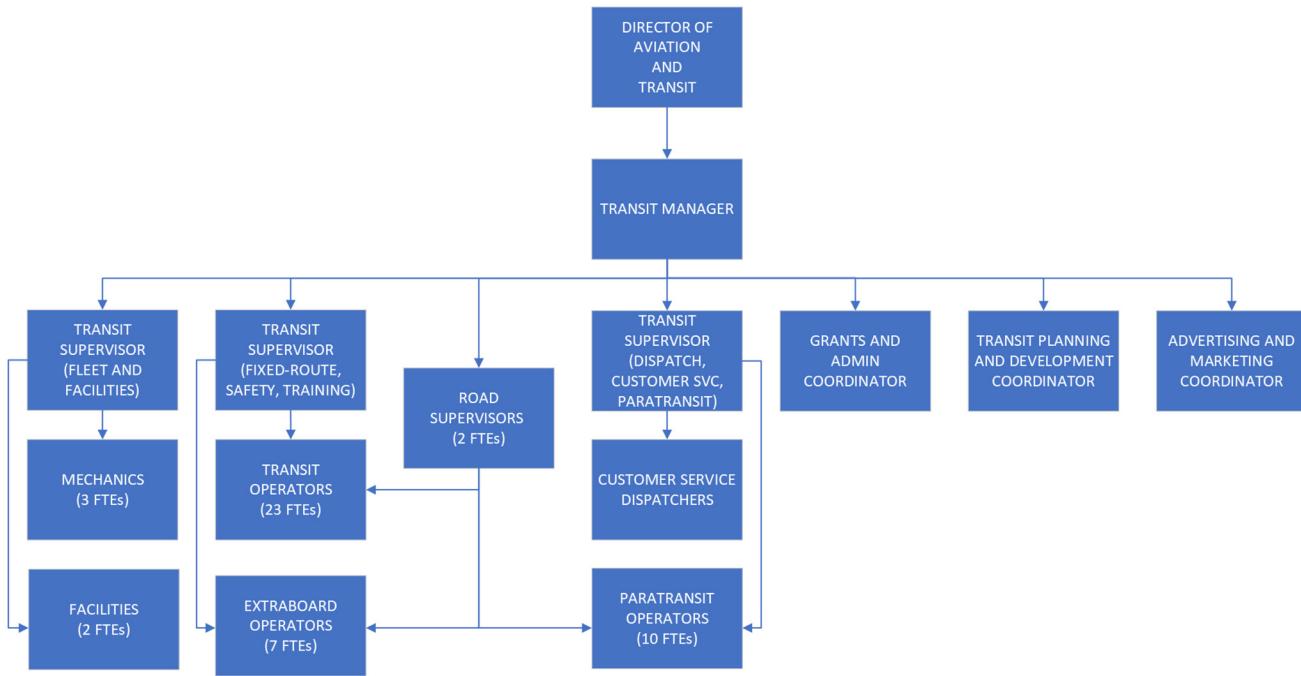
## Organization

Currently, MET staff and operations are a division within the Billings Aviation and Transit Department. The head of the transit division is the Transit Division Manager. All roles and organizational structure within the Division are listed in the organization chart in Figure 1. Billings MET Organizational Structure below.

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<sup>1</sup> Fixed Route is defined as service provided on a designated route on a regular schedule. Paratransit service is on-demand, door-to-door service provided for qualifying individuals within a defined service area.

Figure 1. Billings MET Organizational Structure



MET recently implemented structural changes within the organization. The first change was replacing a vacant supervisor position with two positions to create Road Supervisors; current Transit Supervisors have little time to be on the road for direct supervision of operators. The second was to hire a planner for the division. The road supervisors and planner positions were added in Summer 2022.

MET has recently focused its recruitment efforts on individuals without commercial driver's licenses and who have experience in healthcare, customer service, and other human centric jobs; this has resulted in improved recruitment for vacant operator positions. MET is currently in the process of constructing a dedicated training lot and is fulfilling the requirements of the new FMCSA Entry Level Driver training regulations.

## Project Purpose and Scope

In 2016, MET addressed findings of its previous Transit Development Plan (TDP) through elimination of redundant fixed-route services and expansion of all day service on various routes. However, these realignments did not have the immediate intended effect of growth in ridership and overall improvement of convenience of the system. The 2022 TDP provides strategic guidance for a sustainable transit system to serve the community. The overall desired outcome for the TDP is to provide a public transit system that offers travel options to residents, employees, and visitors who cannot or choose not to drive. Other outcomes for the TDP are to:

- Improve the efficiency of the existing service
- Assess opportunities to serve areas where requests for service have been received through other public involvement programs
- Meet needs expected from future regional growth
- Develop operating and capital cost estimates to serve future growth areas

The project scope includes the following:

- Identification of travel needs and gaps between needs and the service provided
- Service evaluation, including performance indicator evaluation and comparison with peer agencies
- Development of recommended fixed-route service plans
- Community engagement
- Exploration of additional service concepts to address current and/or anticipated future gaps

## **Project Team**

The TDP project team was led by the Transit Manager at Billings MET. Staff from SRF Consulting provided technical expertise and content creation. A Study Review Committee (SRC) met periodically over the course of the project to provide input and oversight.

# Recommendations

## Overview

The core goal of the transit development plan (TDP) is to assess current service, determine whether adjustments are warranted, and identify service improvement opportunities that fill gaps and address any issues with current service. Improvements to service may include right-sizing how often routes run (frequency), hours of service each day, the service area and/or the range of services provided across the city. As needs and conditions vary across the city, solutions provided as recommendations include a mix of the ideas mentioned above.

Passage of the [Bipartisan Infrastructure Law \(BIL\)](#) has created opportunities for MET to implement added service as federal funding in the law reflects an average of a 30 percent increase over FAST Act levels. An increase of 30 percent in federal operating funds, that will be matched with local funding, opens to MET the potential to develop scenarios that would:

- Add service reflective of about three new or expanded routes. These could include expanding the area of the community covered with transit, adding to the number of routes in the current service area decreasing the walk distance for customers, or extending service to surrounding communities where it makes sense.
- Convert two to three routes from 60-minute frequency to 30-minute.
- Add up to two hours of service each weekday.
- Adding service on Sunday.
- Providing new service types such as microtransit that is a demand response type service supporting same day trips.

The TDP also provides an opportunity to address the cost-effectiveness of services provided. A key area MET has identified to review is the flag stop type of service provided. In this service, customers can "flag down" a bus anywhere along a route that is considered safe to either get on or off. This type of operation, while providing customers a choice as to where to get on or off, adds to their travel time once on a bus as it typically results in more stops (adding dwell time) on each run relative to service with pre-set or designated stops. Under a designated stops format, bus stop signs identify where customers can get on and off. Signs would be located about three blocks apart, which still allows for a short walk to/from a stop. The benefits of fixed stops are two-fold: First, MET can better plan and stay on schedule as they have a much better understanding of where they need to stop along each route and second, the system would be easier to understand for new and existing riders.

## Fixed-Route Redesign

As a first step, this plan proposes to redesign the existing fixed-route network through a combination of:

### BIL Provides More Federal Funding

The law, covering the period from 2022 through 2026, includes an average of

**30%**

more transit funding

- Relocating segments of selected routes to reduce redundancy.
- Removing/relocating unproductive segments on a number of routes and reapplying the service to other corridors expected to increase use. Productivity was measured as the number of people boarding at stops along a segment over a year.
- Taking parts of multiple routes and combining them to develop a new route anticipated to better serve areas of the community.
- Eliminating the downtown circulation parts of Route 1 MET-Link and replacing transit supportive areas served by MET-Link with other fixed-route service to retain connectivity.

The goal of the route redesign is to provide a better rider experience across the service area without requiring more funding. The redesigned network would achieve this by revising parts of the current route network so that buses spend more time on corridors with high demand, by reducing or eliminating loops, and by providing improved connectivity between transit oriented land uses. Redesign route changes include adding service in areas that need more coverage, while reducing coverage in areas that are currently over-served (reflected in a lower number of boardings at stops along route segments).

The changes are shown in Figure 2 as a system-wide overview and in

Figure 3 through Figure 12 on a route level. The most important elements and benefits are summarized in Table 4.

Figure 2. Recommended Redesign MET Transit Network

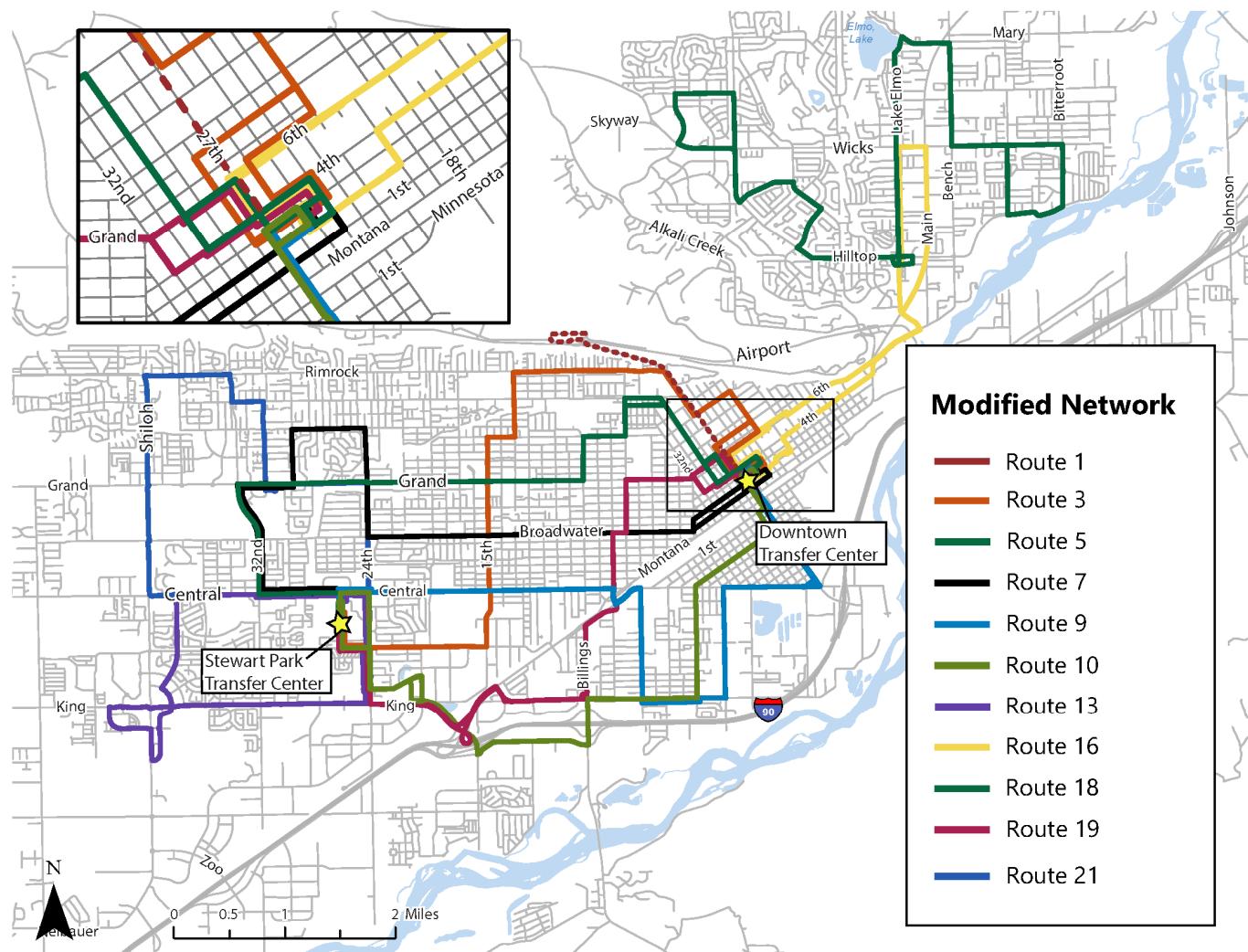


Table 1. Summary of Recommended Redesign Route Changes

Route(s)	Changes
Airport	Becomes Airport Route operated as part of extra drivers added to fill break gaps in schedule. The actual service schedule will be determined as the Redesign is refined through route assignments. The route will not operate as a circulator through downtown Billings.
3	The new Route 3 would be almost identical to the existing route with small routing changes through downtown to provide coverage.
5 A/B	Becomes singular, bidirectional Route 5 to improve legibility. Route 5 would no longer run in Shiloh Rd corridor, but travel on Zimmerman Trail and 32 St W. Access to/from downtown would be through the medical corridor on N 30 <sup>th</sup> Street.
7	Route 7 (Broadwater) would follow mostly the same route. It would not travel as far west as Shiloh Rd and provide some service north of Broadwater Ave on Colton Blvd and Grand Ave. to access Will James Middle School.
9	The new Route 9 (Central) would cover the same area as the old route with bidirectional service, with the exception of some rerouting in the South Central neighborhood to provide adequate coverage.
10	The new route 10 (Southside) would cover generally the same area as the current Route 10 but it would serve part of the South Central neighborhood where Route 19 currently covers. West of Laurel Road, the new Southside would take a more direct route to Stewart Park Transfer Center.
13	The new Route 13 (Westend) is a simplified and shorter version of the existing route. It would travel in a clockwise loop starting from Stewart Park Transfer Center and serve Shiloh's Crossing and other retail locations West of S Shiloh Rd.
14	Route 14 (Alkali) would suspend service. Most of the service area would be replaced by other modified routes.
15	Route 15 (Hilltop) would suspend service. Most of the service area would be replaced by other modified routes.
16	The new Route 16 would be one of two routes serving Billings Heights. The new route would be much shorter than routes currently traveling between downtown and the Heights. Proposed Route 16 provides the opportunity for fast and frequent (every 30 minutes) trips from The Heights to downtown Billings, and connections to the rest of the city.
17	Route 17 (Bench) would suspend service. Most of the service area would be replaced by other modified routes.
18	Route 18 (Heights) would change to a bidirectional "circulator" that travels across Billings Heights without returning to downtown Billings. Access to other routes in the network would be provided through the higher frequency Route 16.
19	Route 19 (The Loop) would change significantly. The new route would provide more service south and southwest of downtown. It would also expand west and end at Stewart Park Transfer Center.
24	Route 24 (Poly) would suspend service. The new system would continue to provide service to the high activity destinations of Route 24.

## Route by Route Changes

### Airport (1 MET-Link Replacement)

The MET-Link (Route 1) in its current configuration provides three primary functions:

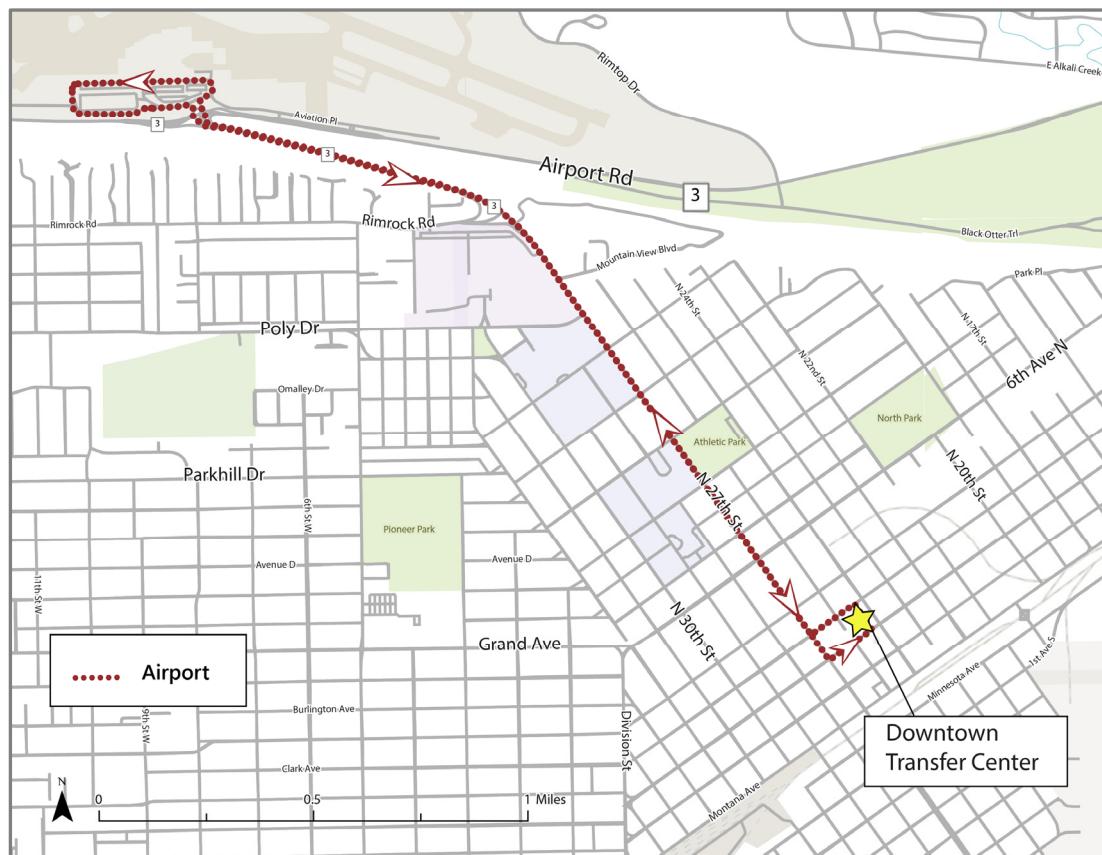
- Connects the medical corridor, including St Vincent Hospital with the downtown transit center that provides connectivity to the remainder of the city.
- Provides a downtown circulator.
- Provides a service connection to Billings Logan International Airport.

The area of downtown circulator coverage is relatively easily/conveniently walkable. Thus, as part of the Redesign, the cost associated with this function was scrutinized relative to the benefit provided. The result was a recommendation to eliminate the circulator function provided through the MET-Link (Route 1), while retaining the airport service element. The other two functions (medical corridor connectivity and access to the airport) are retained in the Redesign through:

- Routing the Grand (Route 5) along N 30<sup>th</sup> Street to serve the medical corridor from the west side.
- Operating the Crosstown (Route 3) in the N 27<sup>th</sup> street corridor to provide walkable service to the medical corridor from the east.

In the base Redesign network, both the Grand (Route 5) and the Crosstown (Route 3) would run on a 30-minute schedule from/to the downtown transit center. The proposed changes as part of the Redesign would provide more opportunities for connectivity to the Stewart Park Transit Center, while retaining convenient service to/from downtown. Service to the airport would be retained as part of the "Extras" trips whose primary function is to fill in schedule gaps resulting from scheduled, required driver breaks. The route for the "Extras" trips is displayed in Figure 3. Using Extras drivers, there would be time to both the fill in the schedule gaps and retain service to the airport.

Figure 3. Airport Route (MET-Link Replacements)



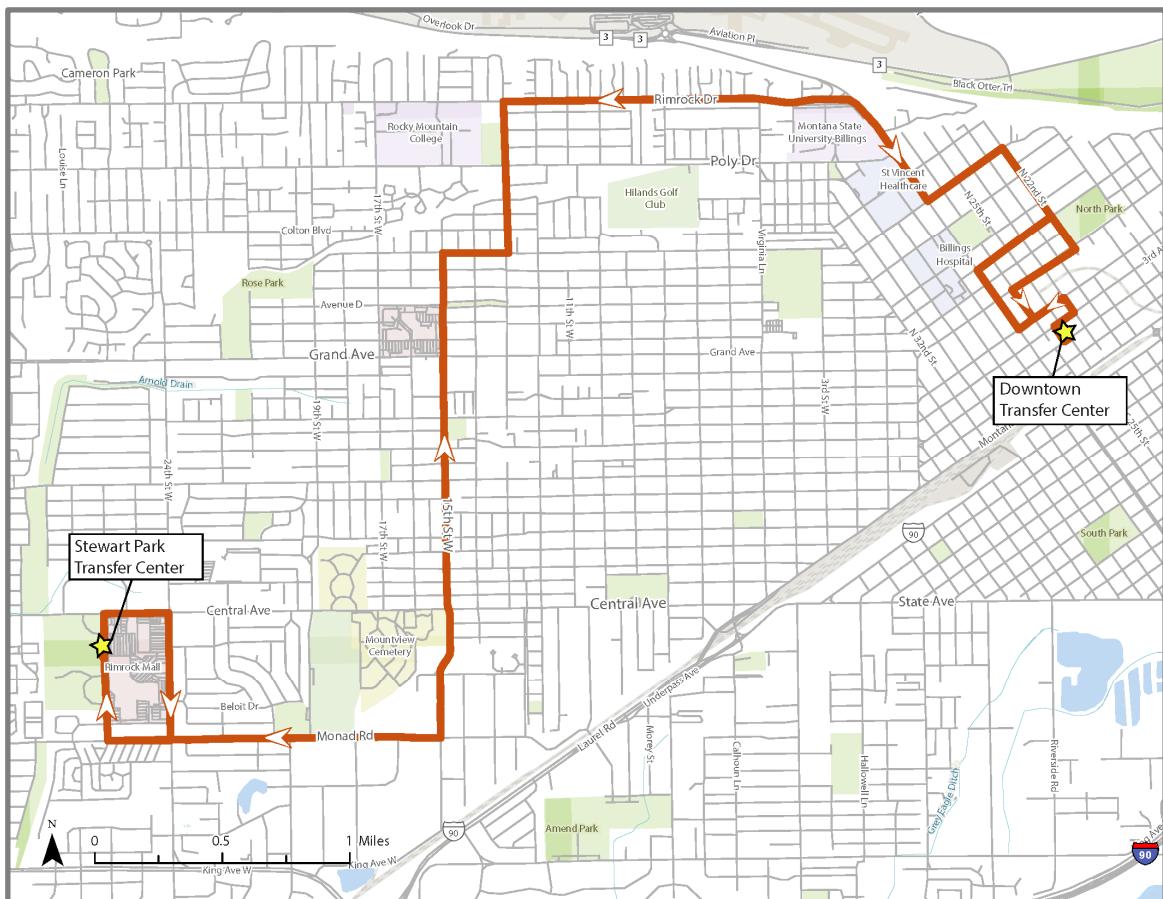
## Crosstown (Route 3)

In the Redesign, the general service area of the Crosstown (Route 3) is retained; however, there are several locational adjustments to the routing, including:

- Travel in/out of downtown on N 27<sup>th</sup> Street from N 30<sup>th</sup> Street (Note: Grand Route is changed to replace the N 27<sup>th</sup> Street service area)
- Rimrock Drive rather than Poly Drive from N 27<sup>th</sup> to Rocky Mountain College (Note: Grand Route is changed to provide some Poly Drive service)

The more significant change/improvement provided through the Redesign concept is that frequency of service for the Crosstown (Route 3) doubles to 30 minutes from the current 60-minute service.

Figure 4. Redesign Network Crosstown (Route 3)

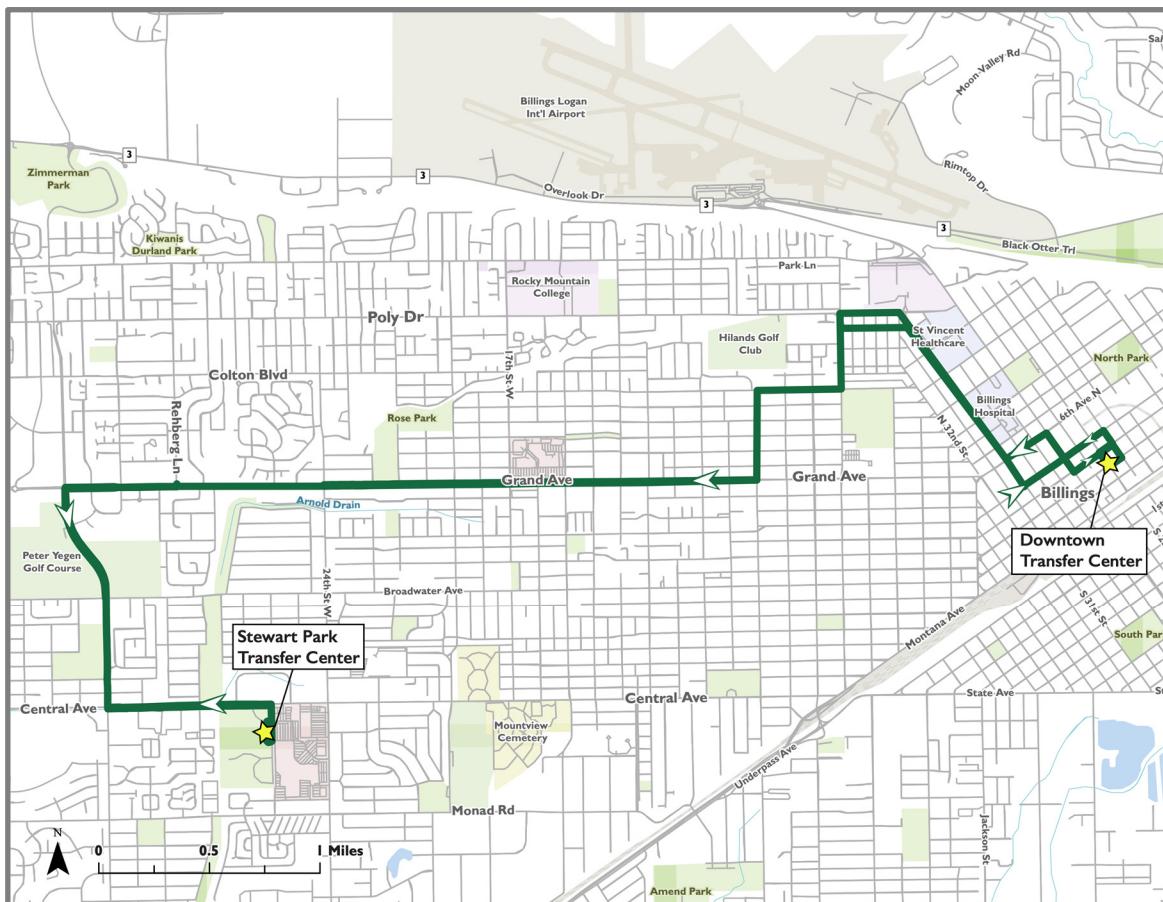


## Grand (Route 5)

Primary revisions to the Grand Routes (A and B) result in removing the loop operations on the west end, truncating the western reach of the route from Shiloh Road to 32<sup>nd</sup> Street W and adjusting the route to serve the medical corridor outside downtown. Routing changes establish a completely bidirectional path that would continue to be operated with two buses running opposite time schedules from Stewart Park and the downtown transit center. Critical to the route is retaining a 30-minute service frequency.

Changes made to the route in/out of downtown ensure walkable access to medical uses along N 30<sup>th</sup> Street, including Billings Hospital and St. Vincent Healthcare. Modifying the route to include the medical corridor also provides a logical connection to the Pleasant View Apartments area, which is a higher density residential area that does not have very direct service with the current network.

Figure 5. Redesign Network Grand (Route 5 A/B)



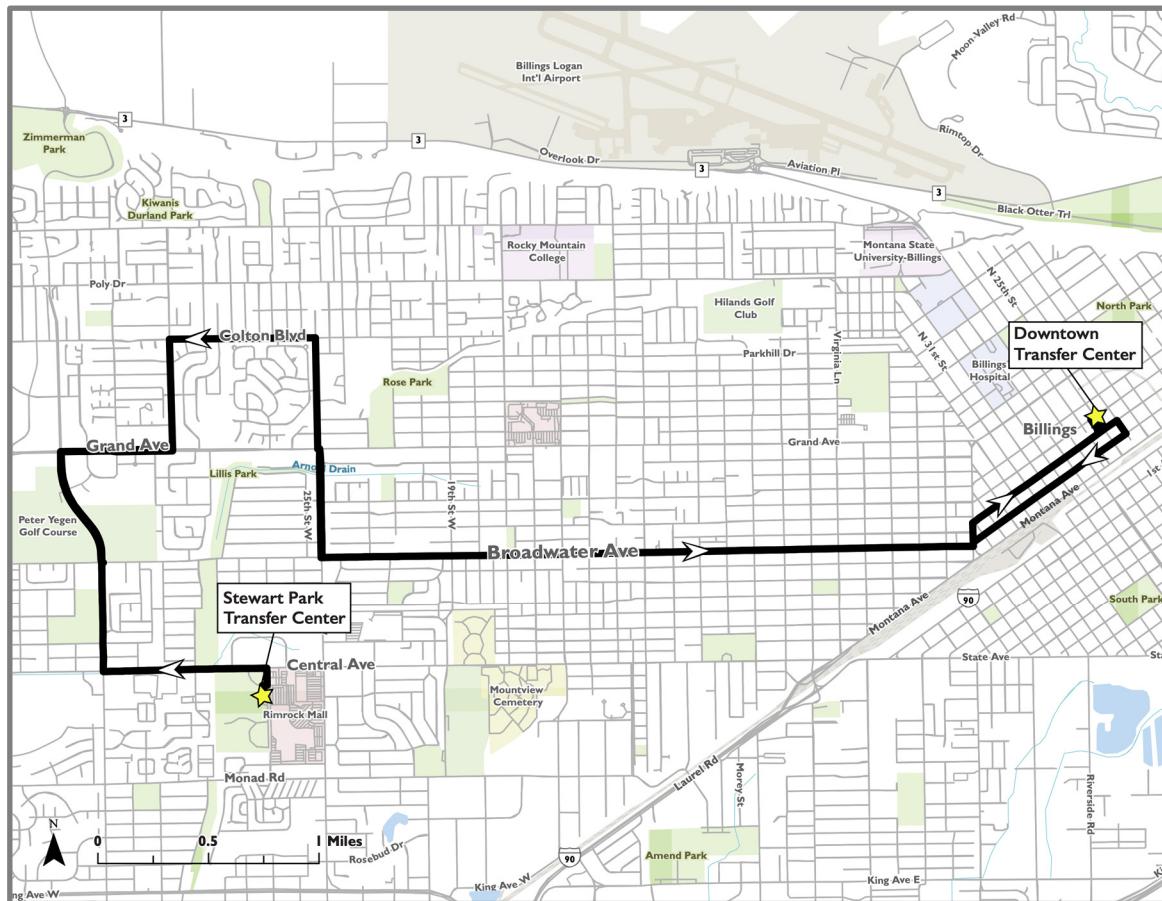
## Broadwater (Route 7)

Modifications to Broadwater (Route 7) proposed as part of the Redesign network support the following:

- Reallocation of relatively unproductive service on Shiloh Road to 32<sup>nd</sup> Street W. The drainageway running along the west side of Shiloh Road interferes with the ability to provide a west side walkway as there is on the east. The arterial nature of the roadway creates a barrier to the convenient street crossing needed to support boardings and alightings in this area. These conditions along with how far uses are set back from Shiloh Road on the west side result in poor productivity. Thus, relocating the service to another path (32<sup>nd</sup> Street) has the potential to improve use and productivity of the route.
- A final key element of the route change is to provide convenient all-day access to Will James Middle School via the 24<sup>th</sup> Street-Colton Boulevard-Rehberg Lane segment. Through all-day access, the need to operate a separate school tripper in the morning and afternoon is eliminated. The need for a deviation to provide a closer morning drop-off and afternoon pick-up can be determined as the more detailed route analysis is completed. The key is the deviation would be a minor service relative to continuing the school tripper service.

Service frequency on Broadway (Route 7) would be consistent with today at 60 minutes.

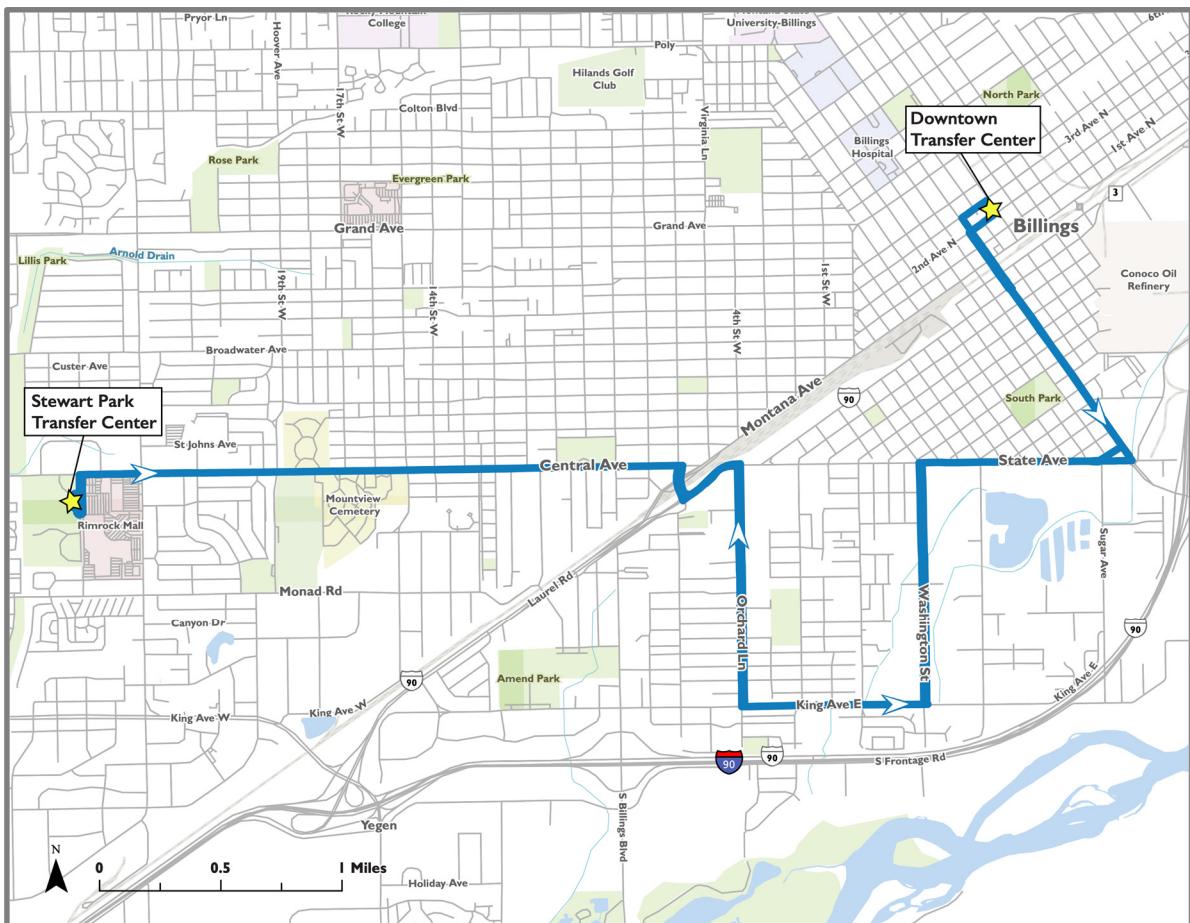
Figure 6. Redesign Network Broadwater (Route 7)



## Central (Route 9)

Changes to the Central Route (Route 9) proposed in the Redesign represent a hybrid of the current Central Route and the Southside Route. From the downtown transit center to the Fraser Tower area near S 27<sup>th</sup> Street/State Avenue, the Redesign concept reflects the current Southside Route path. From S 27<sup>th</sup> Street/State Avenue, the route generally follows the current Central Route, with the exception of running on Washington Street rather than Hallowell Lane as it does today. The Southside Redesign fills the gap created by shifting the Central Route to Washington Street. The current 60-minute frequency would be retained in the Redesign.

Figure 7. Redesign Network Central (Route 9)

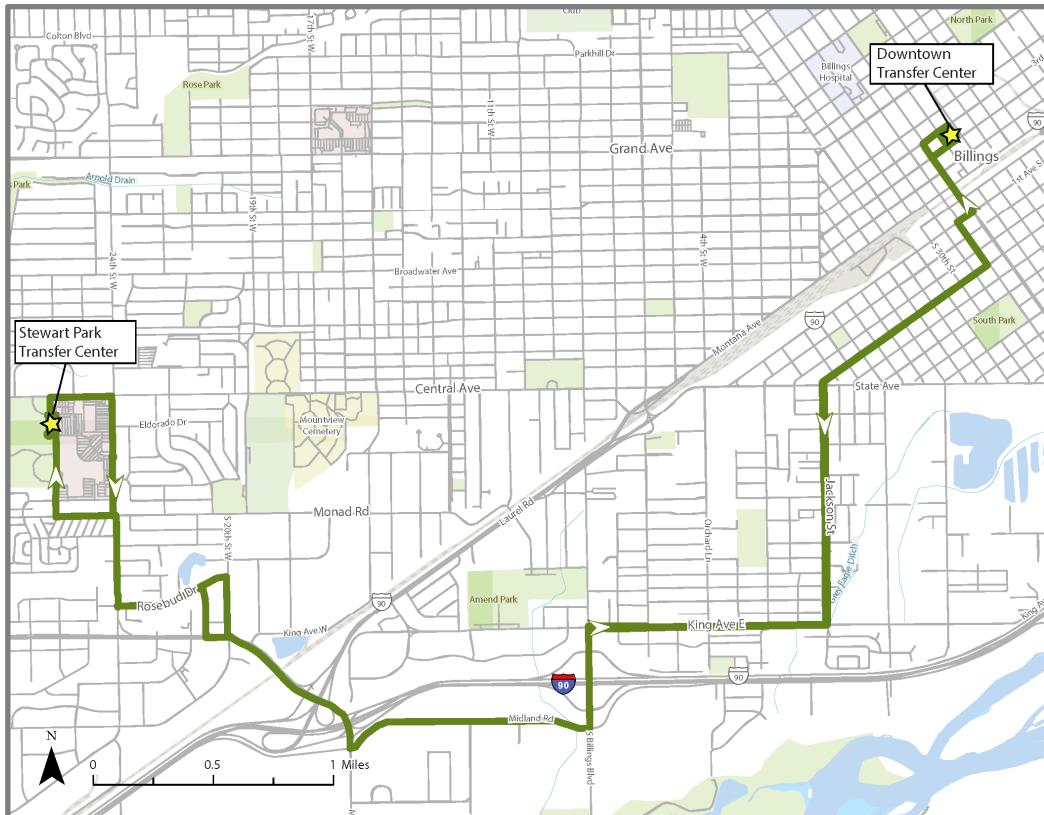


## Southside (Route 10)

Changes to the Southside Route (Route 10) proposed in the Redesign connect some areas that today are served by the Central Route and the Southside Route, while also introducing service along King Avenue E and Midland Road north and south of I-90, respectively. The Redesign concept provides a direct connection from areas around Ponderosa Elementary School to retail areas at King Avenue W/S 24<sup>th</sup> Street, which connects complementary uses that do not have direct service today. In addition to providing the south side residential-to-retail connection, the route also provides a second connection to the Stewart Park Transfer Center and other routes in the Westend.

In the Redesign, it is proposed to provide 30-minute frequency service on the Southside Route (Route 10), an improvement over the 60-minute service today. Figure 8 displays the proposed path for the Southside (Route 10).

Figure 8. Redesign Network Southside (Route 10)

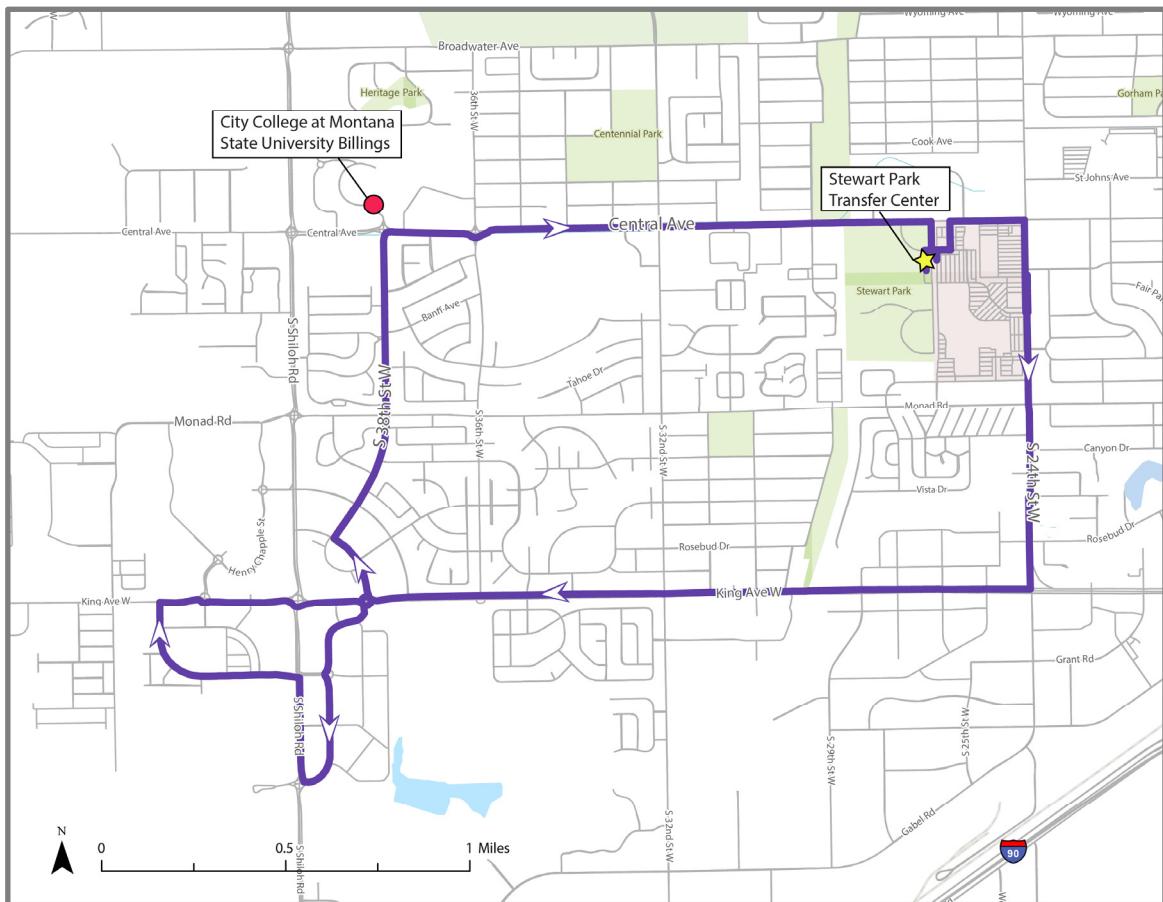


## Westend (Route 13)

The Redesign Westend (Route 13) is a shorter version of the existing route; it eliminates the Shiloh Road-Pierce Parkway-32<sup>nd</sup> Street W loop. The loop portion of the route has typically carried few riders, which could be due to the loop routing that is not very convenient, low density development along this portion of the route and the more auto-oriented uses along the path. Retained in the Redesign is service on King Avenue W to provide connectivity between growing residential areas west of Shiloh Road and retail uses along King Avenue W. Additionally, the redesign maintains service to the City College at Montana State University Billings, as indicated on the map in Figure 9.

While the Westend (Route 13) Redesign provides a loop, which is generally less convenient for customers, 30-minute service frequency provides some offsetting benefit to travelers.

Figure 9. Redesign Network Westend (Route 13)



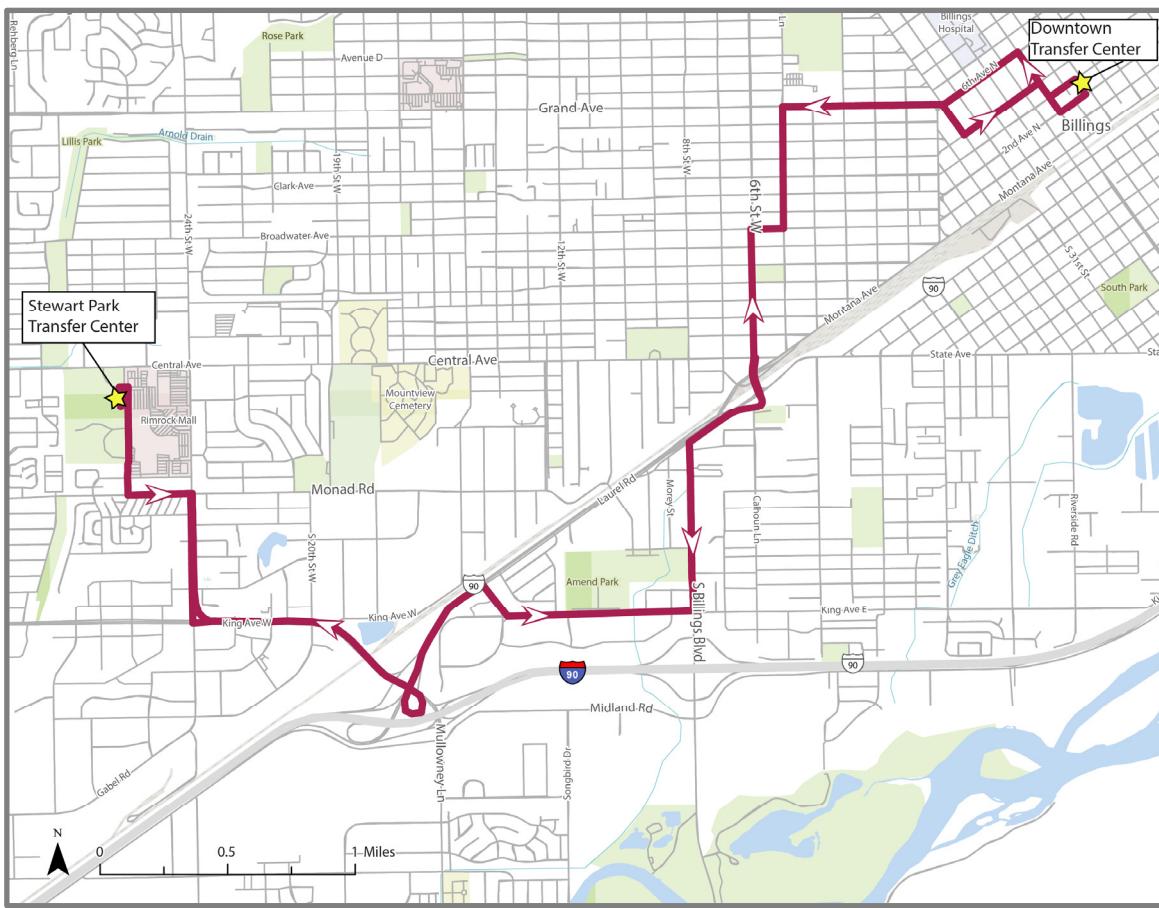
## Route 19

Josephine (Route 19) in the Redesign combines elements of the Loop and the Westend into a route that fills a substantial north-south service gap in the near west side. The Redesign network route retains the downtown transit center to hotel employment opportunities and Amend Park at King Ave E north of I-90. Throughout the south side, Josephine (Route 19) supports/complements parts of the Southside Route (Route 10). Desired in the south side area is more direct access between residential area east of Laurel Road to retail commercial areas at King Avenue/24<sup>th</sup> Street W. This connection is provided through redesigned Loop (Route 19).

Redesign Josephine (Route 19) would fill the north-south service gap created through the Southside (Route 10) redesign along 4<sup>th</sup> Avenue S and Jackson Street.

In the Redesign, Josephine (Route 19) would operate on a 60-minute frequency, consistent with current service.

Figure 10. Redesign Network Josephine (Route 19)



## Billings Heights Routes

The five current routes that cover the Heights have been consolidated to two routes providing all-day service along key corridors. The service concept is made up of two components:

- **Heights Rapid Service (Route 16):** The Rapid (Route 16) provides higher frequency connector service between the downtown transit center and the center of Billings Heights retail areas at Main Street/Wicks Lane. Northbound the route would use Main Street to get from downtown Billings, while on the southbound return, travel would occur along Lake Elmo Road. Running along Lake Elmo Road provides direct access to pockets of apartments and manufactured houses. The two-lane section along Lake Elmo Road with sidewalk on either side and bike lanes provides a higher-level multimodal corridor complementary to transit service relative to Main Street, while retaining a continuous corridor south of Wick Lane.

The Redesign Heights Rapid traverses approximately 5.5 miles in the round trip from downtown to Wicks Lane. Thus, a 30-minute route can be provided with one driver/bus.

- **Heights Circulator (Route 18):** The Circulator (Route 18) represents a crosstown route that does not go through a transit center while it stays within Billings Heights. The route provides service within Billings Heights with convenient access and connections between Billings Heights residential and commercial and school areas.

The route is proposed to operate on a 60-minute frequency in off-peak periods and on a 30 minute frequency in the morning and afternoon school peaks to replace school trippers.

The combination of the Heights Rapid (Route 16) and the Circulator (Route 18) provides transfer opportunities along Lake Elmo Road to facilitate transfers to/from the Circulator (Route 18) and other routes in the network through the Heights Rapid (Route 16) that travels to the downtown transit center.

Figure 11. Redesign Network Height Rapid (Route 16)

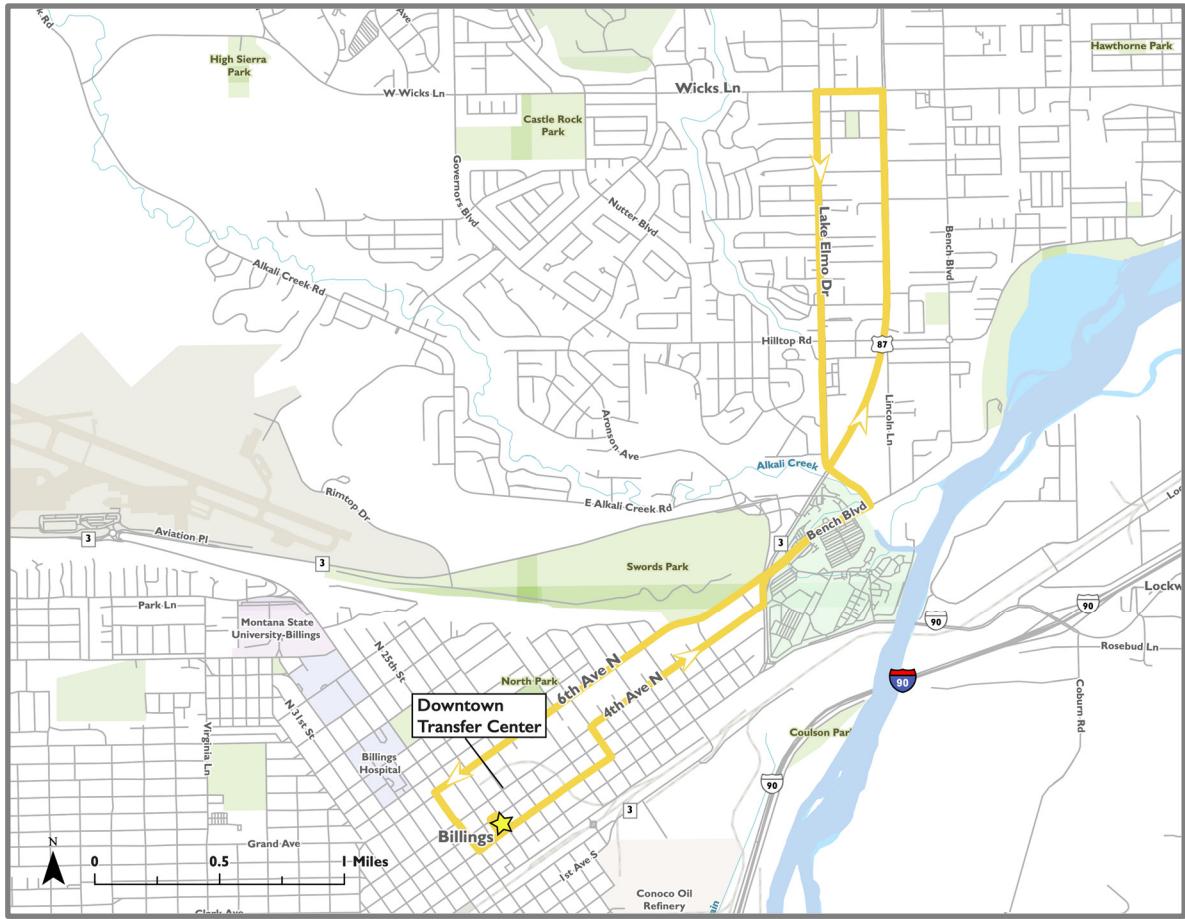
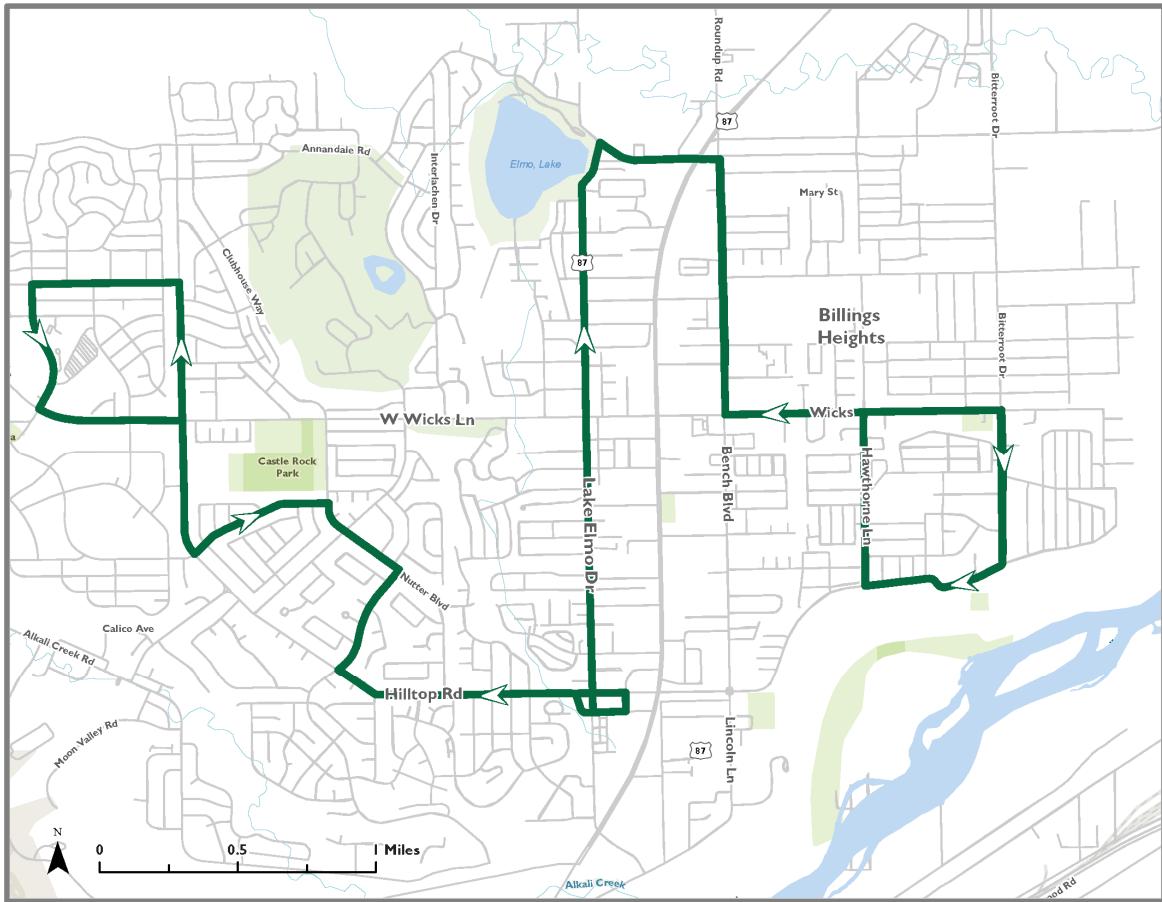


Figure 12. Redesign Network Heights Circulator (Route 18)



## Increased Funding Service Additions

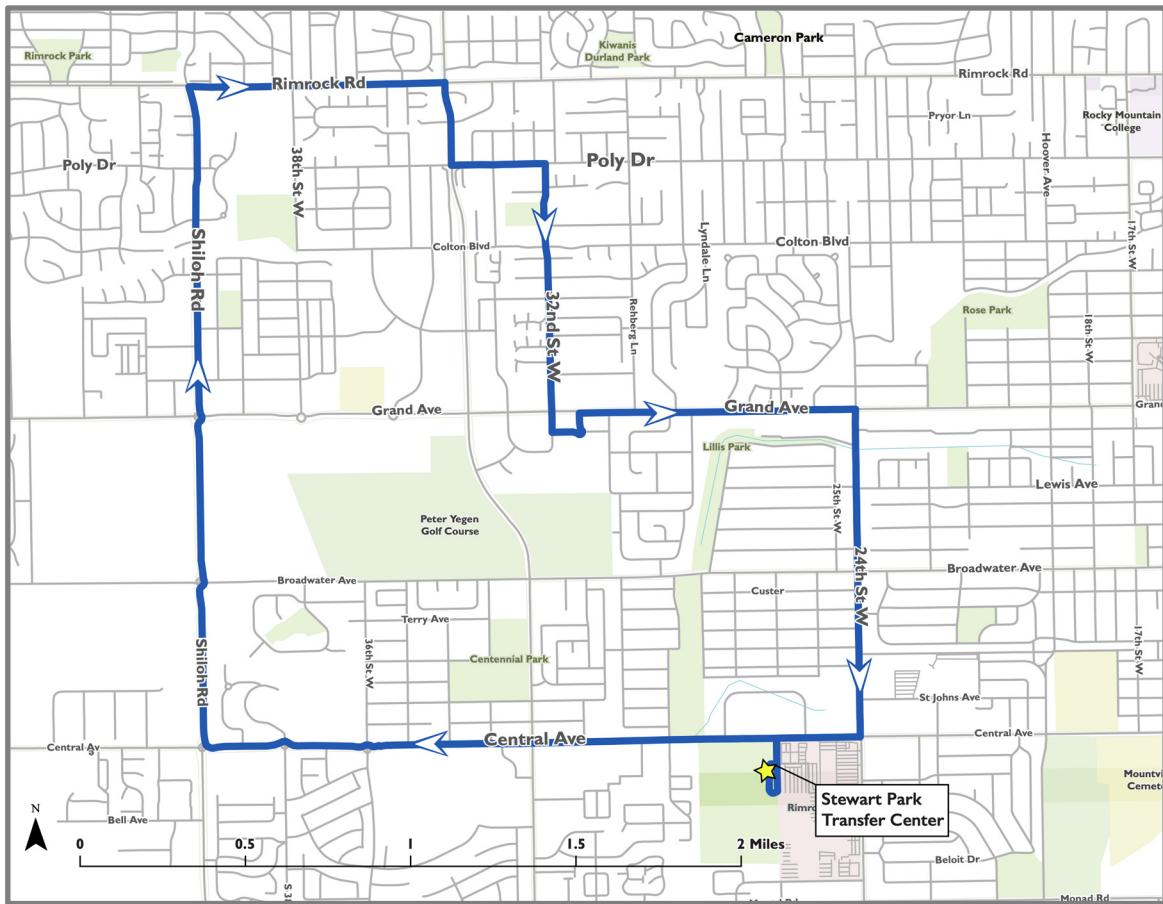
The proposed Redesign service plan adds approximately 10 percent to current operating costs. Thus, with the anticipated 30 percent funding increase through added BIL funding and local match, MET has the capacity to implement additional service expansion.

A significant amount of the feedback MET received from the survey and public engagement conducted as part of this study pointed to a need for more service hours and frequency. This feedback had a strong influence on what improvements have been incorporated into the recommendations. Combining input received through engagement efforts and from analysis of the benefits to the community of various alternatives, recommended additions to the Redesign include:

- Extending the weekday service day by one hour.
- Adding the Northwest Circulator Route that would provide 30-minute service from the Stewart Park Transfer Center and on-route connections to:
  - Grand Route (Route 5)
  - Broadwater Route (Route 7)

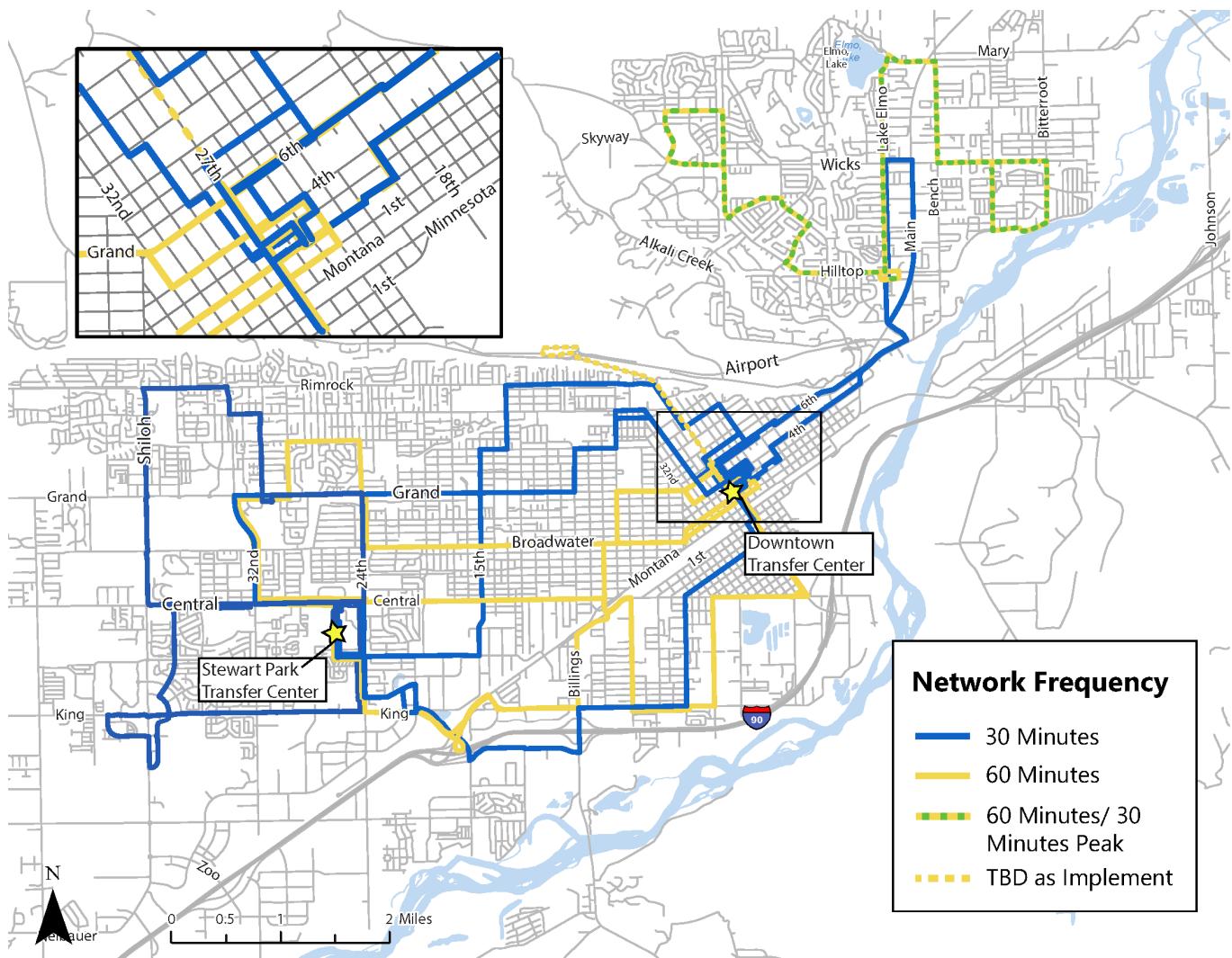
Figure 13 displays the Northwest Circulator Route.

Figure 13. Northwest Circulator Route Path



The expanded federal and local funding would also be used to increase frequency on Crosstown (Route 3) and Southside (Route 10) from 60 minutes to 30 minutes. Grand (Route 5) would continue to provide service every 30 minutes, but as one route rather than a pair that run every 60 minutes. A map with proposed service frequency is shown in Figure 14.

Figure 14. Proposed Service Frequency for Modified MET Network



# Filling Driver Break Schedule Gaps

The current schedule includes two 15-minute driver breaks in the morning, two driver breaks in the afternoon and an hour break over lunch. The impact on the schedule is that the departure time from either of the transit centers shifts ahead by either 15 minutes for the breaks or 25 minutes for lunch. Shifting the schedule creates confusion for customers as they need to understand when the schedule on each route shifts and by how much as there is some variability over the range of routes.

MET is proposing to address the driver break schedule issues through assigning extra drivers whose role will be to rotate through the route schedule filling in for regular route drivers as they complete the breaks included in their labor agreement. MET has accounted for the extra drivers in their budgeted full-time employee headcount. Thus, implementing this improvement will not require additional resources and will be implemented following completion of the TDP. The result will be a consistent schedule for each route throughout the service day.

Figure 15. Example schedule for hourly route

## Departure Schedule from Downtown

Current	Redesign
6:20 AM	6:20 AM
7:20 AM	7:20 AM
8:35 AM	8:20 AM
9:35 AM	9:20 AM
10:50 AM	10:20 AM
11:50 AM	11:20 AM
1:15 PM	12:20 PM
2:30 PM	1:20 PM
3:35 PM	2:20 PM
4:50 PM	3:20 PM
5:50 PM	4:20 PM
	5:20 PM
	6:20 PM

### Schedule Differences

Fill in Current Breaks  
(Adds 2 Trips/Day/Per Route)  
(Minor Budget Impact)

# Scheduled Fleet Replacement

Purchase of replacements for fixed route, paratransit and other service vehicles that have met their useful life is an important MET priority. Through replacement of 17 fixed route vehicles in 2021, MET was able to upgrade their fleet, but there are another eight vehicles (22 percent of the fixed route fleet) that will shortly reach or have reached their useful life. Additionally, as paratransit vehicles generally have a useful life of seven years a continuous annual replacement program is needed to keep the fleet of 15 in a state of good repair.

Table 2 highlights the current fleet summary, the anticipated year of replacement and assumptions regarding current replacement cost and annual inflation (escalation) factored into the fleet replacement assessment. While MET was able to replace a substantial number of vehicles in one year, the preference would be to plan on replacing the fleet over several years to better manage the process and the expense of adding new vehicles. Thus, a program based on the following assumptions was established:

- The fixed route buses received in 2021 would be replaced over a three-year period beginning at the first year they are eligible to be replaced. Six vehicles would be replaced per year.
- The eight older fixed route vehicles in the fleet would be replaced when they reach their useful life of 12 years.
- Three paratransit vehicles would be included in the annual budget for replacement every year.

Table 2 documents the replacement schedule and budget requirements for a continual program of replacing fleet vehicles, including non-revenue service vehicles.

Table 2. Vehicle arrangement assumptions

Vehicle ID	FTA Useful Life (Years)	Eligible Replacement Year	Replacement Cost Current Yr.	Annual Escalation Rate
<b>Fixed Route</b>				
1826	12	2033	\$420,000	3.00%
1827	12	2033	\$420,000	3.00%
1828	12	2033	\$420,000	3.00%
1829	12	2033	\$420,000	3.00%
1830	12	2033	\$420,000	3.00%
1831	12	2033	\$420,000	3.00%
1832	12	2033	\$420,000	3.00%
1833	12	2033	\$420,000	3.00%
1834	12	2033	\$420,000	3.00%
1835	12	2033	\$420,000	3.00%
1836	12	2033	\$420,000	3.00%
1837	12	2033	\$420,000	3.00%
1838	12	2033	\$420,000	3.00%
1839	12	2033	\$420,000	3.00%
1840	12	2033	\$420,000	3.00%

Vehicle ID	FTA Useful Life (Years)	Eligible Replacement Year	Replacement Cost Current Yr.	Annual Escalation Rate
1841	12	2033	\$420,000	3.00%
1842	12	2033	\$420,000	3.00%
1818	12	2021	\$420,000	3.00%
1819	12	2021	\$420,000	3.00%
1820	7	2023	\$420,000	3.00%
1821	7	2023	\$420,000	3.00%
1822	7	2023	\$420,000	3.00%
1823	7	2023	\$420,000	3.00%
1824	7	2023	\$420,000	3.00%
1825	7	2023	\$420,000	3.00%
<b>Paratransit</b>				
1878	7	2027	\$90,000	3.00%
1886	7	2018	\$90,000	3.00%
1879	7	2027	\$90,000	3.00%
1888	7	2021	\$90,000	3.00%
1889	7	2022	\$90,000	3.00%
1890	7	2022	\$90,000	3.00%
1891	7	2022	\$90,000	3.00%
1892	7	2024	\$90,000	3.00%
1893	7	2024	\$90,000	3.00%
1872	7	2025	\$90,000	3.00%
1873	7	2025	\$90,000	3.00%
1874	7	2025	\$90,000	3.00%
1875	7	2025	\$90,000	3.00%
1876	7	2025	\$90,000	3.00%
1877	7	2026	\$90,000	3.00%
<b>Support Vehicle</b>				
1			\$45,000	3.00%
2			\$45,000	3.00%
3			\$45,000	3.00%

Table 3. Fleet Replacement Timing and Cost

Replacement Year	FIXED ROUTE BUSES			PARATRANSIT			SUPPORT VEHICLES			Annual Total
	Replacement Cost (YOE)	Cost Share (Replaces 3 Per Year at UL)	Replacement Cost (YOE)	Cost Share (Replace 3 per Year)	Replacement Cost (YOE)	Cost Share (5 Year Placement)	Local	Federal	Total	
Local (15%)	Federal (85%)	Total	Local (15%)	Federal (85%)	Total	Local	Federal	Total	Local	Federal
2022	\$1,835,781	\$275,400	\$1,560,400	\$1,835,800	\$270,000	\$40,500	\$229,500	\$270,000		\$40,500
2023	\$1,460,685	\$219,100	\$1,241,600	\$1,460,700	\$273,100	\$None Eligible				\$229,500
2024					\$286,443	\$43,000	\$243,500	\$286,500		\$43,000
2025					\$295,036	\$44,300	\$250,800	\$295,100		\$263,400
2026					\$303,887	\$45,600	\$258,300	\$303,900	\$46,350	\$54,900
2027					\$313,004	\$47,000	\$266,100	\$313,100	\$47,741	\$56,500
2028					\$322,394	\$48,400	\$274,000	\$322,400	\$49,173	\$58,200
2029					\$332,066	\$49,800	\$282,300	\$332,100		\$49,800
2030					\$342,028	\$51,300	\$290,700	\$342,000		\$51,300
2031					\$352,289	\$52,800	\$299,400	\$352,200	\$58,715	\$58,700
2032					\$362,857	\$54,400	\$308,400	\$362,800	\$60,476	\$64,500
2033					\$373,143	\$56,100	\$317,700	\$373,800	\$62,291	\$66,500
2034					\$384,956	\$57,700	\$327,200	\$384,900		\$62,300
2035					\$396,504	\$59,500	\$337,000	\$396,500		\$64,400
Analysis Period Totals	\$14,734,976	\$2,210,300	\$12,524,800	\$14,735,100	\$4,613,308	\$650,400	\$3,684,900	\$4,335,300	\$324,745	\$64,900
									\$259,800	\$2,650,200
									\$324,700	\$14,909,100

# BACKGROUND

# Transit System Overview

## Fixed-Route Service

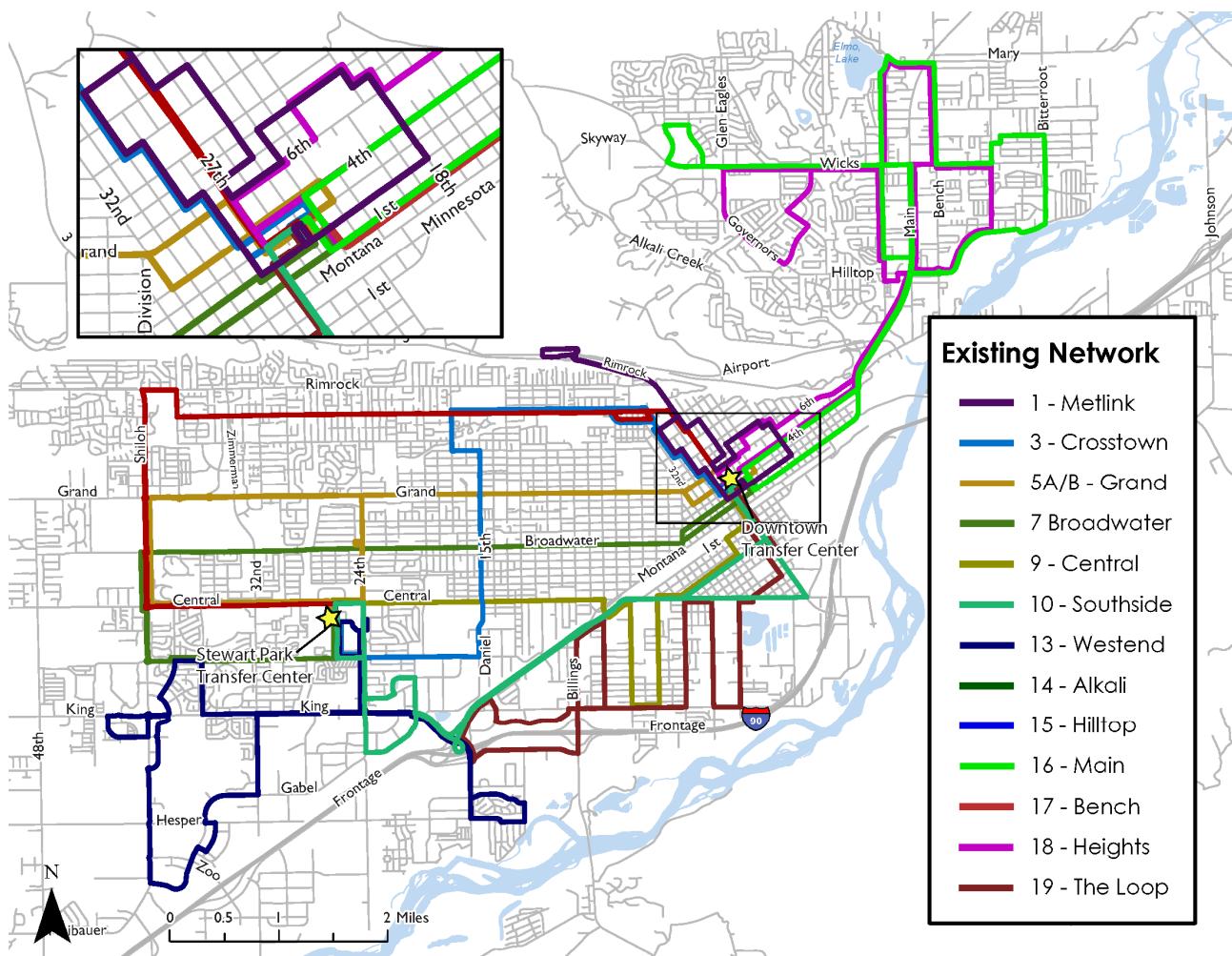
Billings MET operates 19 regular fixed routes and one school tripper from 5:50 a.m. to 7:00 p.m. weekdays and operates seven variations of the weekday fixed routes from about 8:10 a.m. to about 5:45 p.m. on Saturdays. Most routes operate at one-hour service frequency in a "pulse" setup with buses simultaneously arriving to and departing from the two MET Transit Transfer Center locations. Each route is described below and illustrated in Figure 16.

Table 4. Description of Current MET Transit Service

Route	Description
1	Route 1 – <b>MET-Link</b> serves Downtown Billings and Billings-Logan International Airport. The route travels counter-clockwise around downtown and out and back to the airport along 27 <sup>th</sup> Street. It operates Monday through Friday with 25 trips per day.
3	Route 3 - Crosstown provides service from the Downtown Transfer Center to Stewart Park Transfer Center. Destinations served along the route include the Billings Clinic, Rocky Mountain College, West Park Plaza, and Rimrock Mall. It operates Monday through Friday with 13 trips per day and Saturdays with eight trips per day.
5 A/B	Routes 5A/B - Grand is a primarily east-west route that runs along Grand Avenue and provides service from the Downtown Transfer Center to Stewart Park Transfer Center. The route also serves destinations west of Stewart Park along Shiloh Road including City College. The west end of the route is also a loop along Grand Ave, Shiloh Rd, Central Ave, and 27 <sup>th</sup> St W. Route 5A operates along the loop counterclockwise and 5B operates clockwise. 5A/B operates Monday through Friday with 26 trips per day and Saturdays with eight trips per day.
7	Route 7 - Broadwater is a primarily east-west route that runs along Broadwater Ave and provides service from the Downtown Transfer Center to Stewart Park Transfer Center. The western end of the route runs north-south along Shiloh Road and east-west along Monad Road. It operates Monday through Friday with 13 trips per day and Saturdays with four trips per day.
9	Route 9 - Central is a primarily east-west route that runs along Central Avenue and provides service from the Downtown Transfer Center to Stewart Park Transfer Center. At the eastern end, route 9 provides service southwest of downtown in the South Central neighborhood to destinations including the Boys and Girls Club of Billings. It operates Monday through Friday with 13 trips per day and Saturdays with four trips per day.
10	Route 10 - Southside is a primarily east-west route that runs along State Avenue and Laurel Road. It provides service from the Downtown Transfer Center to Stewart Park Transfer Center. At the eastern end, south of downtown it serves destinations including Riverstone Health, the DMV, and Fraser Tower. On the western end, between 20 <sup>th</sup> St W and Stewart Park, it serves various retail destinations. It operates Monday through Friday with 13 trips per day.
13	Route 13 – Westend, as the name implies, provides service around the west end of Billings. The route includes a loop serving Shiloh Crossing, ZooMontana and the V.A. Clinic. It also has bidirectional service along King Avenue W from 36 <sup>th</sup> St W across I-90 to Songbird Drive. At 24 <sup>th</sup> St W, Route 13 loops north to serve Rimrock Mall on Central Avenue. It operates Monday through Friday with 13 trips per day and Saturdays with eight trips per day.
14	Route 14 – Alkali provides service from the Downtown Transfer Center to Skyview High School in The Heights, traveling through neighborhoods west of Main Street in The Heights. Alkali operates only weekday mornings, making three trips per day.
15	Route 15 – Hilltop provides service along the same route as Alkali. It operates only weekday evenings. It makes four trips per day.
16	Route 16 – Main provides service from the Downtown Transfer Center to The Heights. In The Heights, Main travels north on Main Street, out and back on Wicks Lane to Skyview High School, then loops clockwise east of Lake Elmo Road. It operates Monday through Friday with seven trips per day.

Route	Description
17	Route 17 – Bench provides service along the same route as Main, but in the opposite direction in The Heights (counterclockwise east of Lake Elmo Road, out and back on Wicks Lane to Skyview High School, and south on Main Street). It operates Monday through Friday with six trips per day.
18	Route 18 – Heights provides service from the Downtown Transfer Center to The Heights. In The Heights, the route serves neighborhoods east and west of Main Street. Destinations served include Bitterroot Elementary and Elite Dental northeast of Main and Heights Family Practice and Castle Rock west of Main. The route operates Monday through Friday with seven trips per day and Saturdays with eight trips per day.
19	Route 19 – The Loop provides service southwest of downtown in the South Central neighborhood. Contrary to what the name implies, the route is mostly bidirectional from downtown to the intersection of King Avenue E and Calhoun Lane. It then travels clockwise primarily on Midland Road, Laurel Road, and Southgate Drive. It operates Monday through Friday with 13 trips per day and Saturdays with eight trips per day.
24	Route - 24 – <b>Poly</b> is a primarily east-west route that runs along Poly Drive and provides service from the Downtown Transfer Center to Stewart Park Transfer Center. It travels north-south on N 27 <sup>th</sup> Street to get to Poly Drive. At the western end, the route runs north-south along Shiloh Road and east-west along Central Avenue. It operates Monday through Friday with 10 trips per day.
T3	Route T3 – <b>Will James</b> is a school tripper route that runs between Stewart Transfer Center and Will James Middle School. It has two runs a day on weekdays to serve students in the morning and afternoon.

Figure 16. Current MET Transit Network



## Fares

Riders can pay cash for single-ride fares and request free transfer slips on all Billings MET buses. Single-ride fares and multi-trip passes can be purchased in person at the MET office, over the phone, or online through the UMO website or UMO Mobility Mobile App. Passengers may opt to use their smartphone to pay transit fares or may use a TouchPass/UMO smartcard obtained from MET.

All passengers age six or older must either pay the appropriate fare, or use a ride pass or transfer. Citizens who are age 62 and above or who have a disability or who are a student may qualify to ride by paying a discounted fare. A full breakdown of MET fare structure is located below in Table 5.

**Table 5. Fare Structure**

<b>MET Transit One-Way Fares</b>		<b>Unlimited Ride Monthly Passes</b>	
Description	Fees	Description	Fees
Adults (age 19-61 yrs)	\$2.00	Adult 31-Day pass (19-61 yrs)	\$28.00
Youth (6-18 years)	\$1.50	Youth (age 6-18 yrs) and Student 31-Day pass	\$21.00
Senior Citizens (age 62 and up) and Disabled Citizens	\$1.00	Senior Citizens (age 62 and up) and Disabled Citizens	\$12.00
Pre-School (under 6 yrs)	Free	Single day pass	\$4.00/day
Transfers	Free	10-ride ticket	\$18.00

Source: MET

## **Fleet**

MET directly owns and operates a fleet of 25 buses to provide service on its 19 fixed routes. Seventeen of MET's fixed-route fleet are recently purchased new 32-foot buses to replace the aging fleet using federal grants and other sources. MET's fleet also includes 15 body-on-chassis small buses to provide service on 10 paratransit demand-response routes. Of the 15 paratransit vehicles, 5 vehicles exceed the identified usable life standard of 7 years or 100,000 miles<sup>2</sup>.

## **Facilities**

MET has three facility locations including two transfer centers as well as the main operations/administration facility which houses fleet maintenance and storage and administrative offices.

### Downtown Transfer Center

All fixed routes except for Westend depart from and return to the Downtown Transfer Center at 220 N 25<sup>th</sup> Street. The structure, displayed in Figure 17, was constructed in 2016 and includes 15 bus parking spaces, sheltered waiting areas with benches, maps, and route information.

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<sup>2</sup> FY22/23 Billings Area Transportation Coordination Plan Update

Figure 17. MET Transit Downtown Transfer Center



Source: MET Transit

### Stewart Park Transfer Center

The Stewart Park Transfer Center is located on Stewart Park Road between Central Avenue and Monad Road. It consists of a large bus parking area with unsheltered and sheltered seating for riders transferring between buses (shown in Figure 18). There is also a small building that serves as a driver break area.

Figure 18. MET Transit Stewart Park Transfer Center



## METroplex

Located at 1705 Monad Rd, METroplex is the main operations facility and consists of a large building hosting administrative offices, bus storage and fueling bays, fleet maintenance bays, and general inventory storage. MET's bus wash bays are located in a smaller building that is part of METroplex.

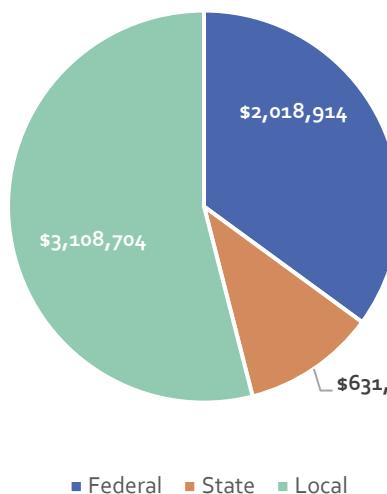
Figure 19. METroplex



## Funding

MET operates using several funding sources including FTA grants, Montana Department of Transportation grants generally passed through from FTA funding sources, local mills, advertising, and fare revenues. The annual operating expense budget is approximately \$5.9 million. MET is set up as an "enterprise" fund, meaning MET does not receive funding from the City of Billings general fund; similarly, other City departments and operations do not have access to the transit division funds as the operating mills and revenue are designated specifically for transit use only. In 2021, federal funding made up about 35 percent of MET's operating and capital expenditures. The remainder included 50 percent local funding – including fare revenue, advertising revenue, and allocations from the city's general fund – with less than one percent in state contributions (Figure 20). Table 5 and Figure 21 document funding by source over the 2017 to 2021 period.

Figure 20. MET Funding sources (2019)



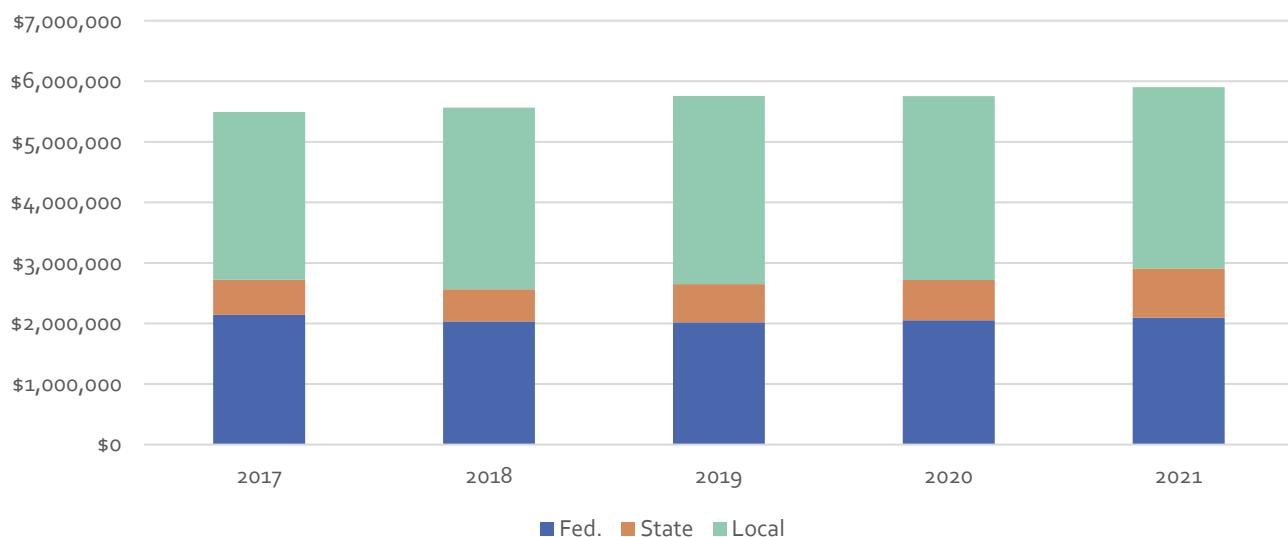
Source: City of Billings

Table 6. MET Transit Funding Sources

Source	2017	2018	2019	2020	2021
Fed.	\$2,141,999.86	\$2,034,677.24	\$2,018,914.38	\$2,051,593.43	\$2,097,651.42
State	\$579,782.80	\$531,843.96	\$631,195.09	\$665,999.75	\$811,065.06
Local	\$2,772,795.15	\$2,998,455.57	\$3,108,704.04	\$3,038,579.71	\$2,995,711.04
Total (rounded)	\$5,496,594.81	\$5,566,994.77	\$5,760,832.51	\$5,758,192.89	\$5,906,448.52

Source: City of Billings

Figure 21. MET Funding Sources, 2017-2021



Source: City of Billings

## Non-MET Services in Region

Apart from MET, there are additional agencies that provide transportation services to distinct groups in the Billings area. They are identified in the Billings Area Transportation Coordination Plan and include, but are not limited to:

- The **Adult Resource Alliance of Yellowstone County** provides a comprehensive range of services which promote the overall well-being of the county's seniors. They provide a limited transportation program to help non-driving adults aged 60 and above travel to and from appointments, social events, and shopping.
- Anaconda-based **A.W.A.R.E (Anaconda Work and Residential Enterprises)** provides transportation services throughout the region to their clients who reside at their group homes. Clients are transported on a daily basis to and from their respective residential settings for a number of reasons which include but are not limited to work, school, after school activities, medical visits, community events, and family visits. Many of the individuals participating in the A.W.A.R.E program utilize MET Special Transit.
- **Big Sky Senior Services** provides comprehensive support services to help seniors and adults with developmental disabilities. These services include personal care, nursing services, safety from senior abuse, transportation to medical appointments and staying connected to the community.
- **COR Enterprises, Inc.** provides vocational rehabilitation and developmental services for persons with disabilities in Yellowstone County and Billings area. COR provides rides for their clients primarily Monday through Saturday. The agency does provide rides on Sundays for special events and services needed by their clients. Most rides are provided between the hours of 7:00 am and 4:30 pm; however, a number of rides are also provided during evening hours depending on the client's need.

Many more agencies were identified in the Coordination Plan. A full list of agencies can be found in the Appendix.

# Policy Guidance

Transit service in the Billings area is informed by preceding policies and plans created by the City of Billings, Yellowstone County, and unincorporated communities within the County. Table 7 summarized key policies from complementary documents.

Table 7. Previous Plans and Policies

Policy Document	Description	Themes & Connection to Transit
2018 Billings Urban Area Long-Range Transportation Plan	Framework to guide the development and implementation of multimodal transportation system projects for the Billings urban area.	<p>Goal 5: Public Transit and Transportation – Create a transportation system that supports the practical and efficient use of transit</p> <p>Nine percent of public comments referenced transit. Themes include:</p> <ul style="list-style-type: none"><li>• better frequency</li><li>• longer service spans</li><li>• new service to Laurel, Briarwood, and schools</li><li>• more stops and shelters</li><li>• better schedule coordination for transfers</li><li>• better schedule advertisement</li><li>• right-sized buses</li><li>• sustainable fuel sources for buses</li></ul> <p>One key need identified was to implement designated stops by 2025. Other needs, e.g. automatic vehicle location, have been fulfilled since 2018.</p> <p>The LRTP identified a need for MET and the MPO to work together to find funding sources so the service can expand.</p>
<a href="#"><u>2016 Billings Growth Policy Statement and Guidelines</u></a>	Non-regulatory statement of public values and priorities for future growth within and adjacent to the City of Billings.	Guidelines state that public transit and commercial air service are critical to ensure access to and around the city. They also state a desire for: <ul style="list-style-type: none"><li>• Affordable public transit</li><li>• Development oriented to transit routes</li><li>• Construction of interconnected sidewalks and trails</li><li>• Infill development</li></ul>

Policy Document	Description	Themes & Connection to Transit
<a href="#"><u>Lockwood Growth Policy</u></a>	Non-regulatory document meant to inform consideration of land use applications and infrastructure investment proposals in the unincorporated community of Lockwood. Required by Montana state law. Includes a preferred land use map.	Sets an intention to evolve with a Main Street-style town center. Provides context for proposals to extend transit service to Lockwood by identifying predominant land uses and safe/unsafe roads for pedestrians. Identifies challenges such as large lot development, dispersed commercial/industrial uses, and lack of sewer infrastructure.
<a href="#"><u>MET Transit Public Participation Plan (2019)</u></a>	Developed to ensure that all members of the public, including minorities and Limited English Proficient (LEP) populations, have meaningful opportunities to participate in the decision-making process for the transit system.	In addition to basic goals and principles of public participation, the plan defines major services changes (affect 25 percent or more of the system's revenue hours or revenue miles) and defines minimum public involvement opportunities for major service changes and fare increases. Sets intention to survey customers every two years beginning in 2019. Describes media and methods for MET to communicate with the public and for members of the public to be involved in decision-making.
<a href="#"><u>Billings Area Public Transportation Coordination Plan FY 22/23</u></a>	Provides an overview of the structure and practices of the Billings Area Public Transportation Coordination Group and Technical Advisory Committee along with a summary of current and anticipated coordination efforts in the Billings area, including prioritized projects for the fiscal year 2023 funding cycle. The group is open to all entities that provide health care, human services, senior services, private transportation, and/or public transportation.	The plan contains lists of the providers that currently coordinate with MET Transit and additional stakeholders who might in future.  It also identifies a need to replace paratransit vans, possibly with smaller vehicles than the current bus chassis.
<a href="#"><u>Community Wide Transit Survey</u></a>	Approximately 600 people responded to a transit survey in 2019. It included questions on transit use, preferences/priorities, and demographics.	Establishes baseline for comparison with 2022 community survey.
<a href="#"><u>2015 Route and Schedule Analysis</u></a>	The most recent report on transit routes prior to the current study. Analyzes system performance, boarding and alighting, onboard survey results, and transit demand. Explores service scenarios.	Provides context for current study, including recurring themes in survey responses and known issues.

# Market and Needs

Analyzing trends and patterns in Billings is a critical task in assessing the community's transportation needs. The following section uses socioeconomic data to develop a baseline understanding of community demographics. Cumulatively, this information is used to:

- Identify locations that can potentially generate the highest levels of transit use
- Identify areas to which transit services should be expanded or introduced
- Inform what type of transit service is best suited for an area

## Transit-Supportive Areas

Several factors are often correlated with and suggest the need for public transit service. Among the most important are job locations, density of job locations, and density of housing.

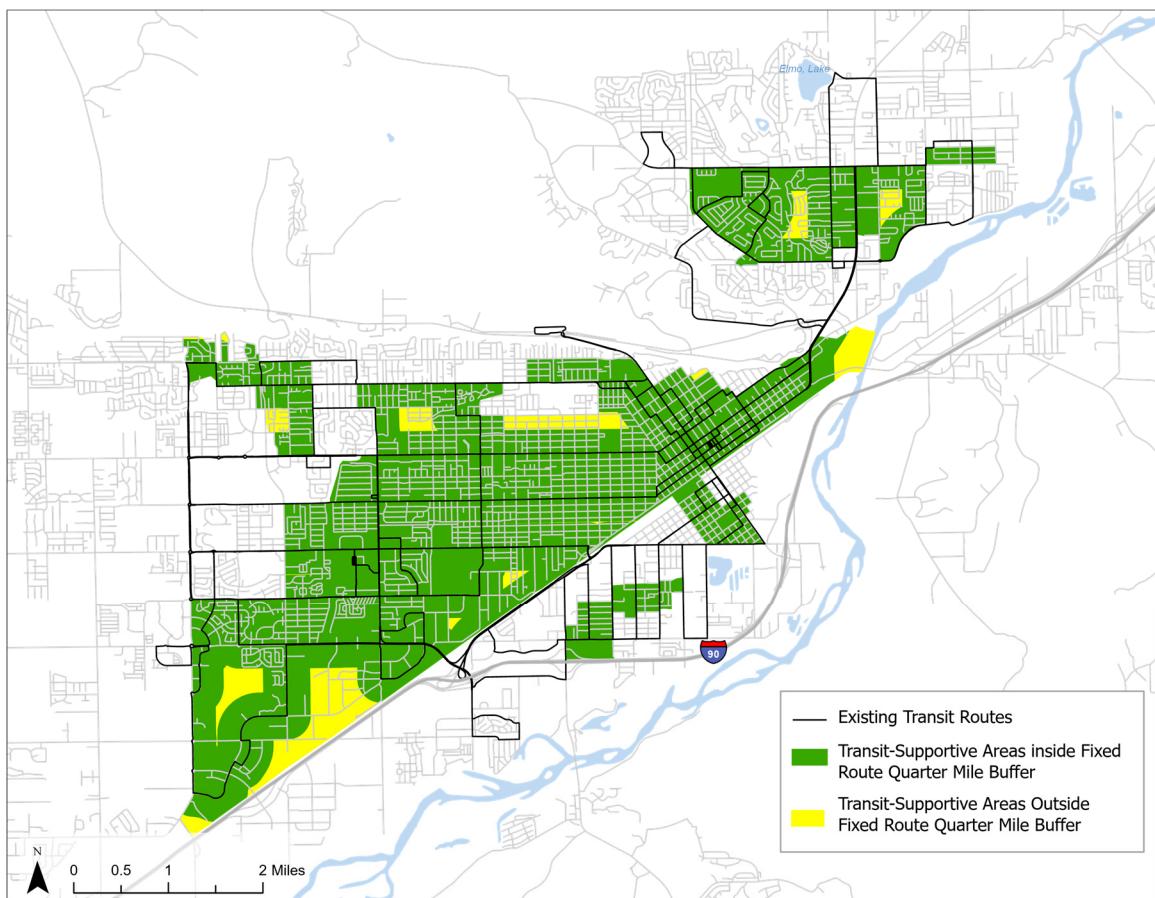
Figure 22 identifies census blocks that are transit-supportive (Transit-Supportive Areas, or TSAs) on the basis of their housing density, their job density, or both. For this purpose, a TSA is defined as having residential density of at least three households per acre or employment density of at least four jobs per acre. This service planning rule of thumb assumes low service frequency (approximately 60 minutes) and partial farebox recovery.<sup>3</sup>

Comparison of TSAs to the MET network shows that most of the TSAs within Billings city limits are served by transit. However, there are exceptions throughout the city, either at the edge of the bus system or in neighborhoods located between widely spaced bus routes. There are also long segments of the existing network that serve low-density areas. One of the goals of the TDP is to rebalance service allocation so that higher-density neighborhoods can be served, enhancing ridership opportunities.

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<sup>3</sup>For more detailed discussion, see TCRP Report 165, *Transit Capacity and Quality of Service Manual*, Third Edition, pp. 3-19 to 3-20.

Figure 22. Transit Supportive Areas



## Demographics

Two of the top demographic factors correlated with transit demand are income and vehicle ownership. People with lower incomes are more likely to ride public transit, as are those whose households do not have access to a vehicle.

The age of residents can also be a predictor of transit use. Children and older adults may benefit from access to transit, and it is typical for young adults of student age to use transit at a higher rate than other groups.

Additionally, it is critical to consider racial equity in the allocation of transit service. Looking at the spatial distribution of race, ethnicity, and English proficiency in relationship to existing transit routes can identify potential equity gaps in service. Figure 23 through Figure 29 show density maps of the demographic

groups in Billings overlayed with the existing MET network. Versions of these maps overlayed with the redesign can be found in the Appendix.

Figure 23 shows the percentage of households in each block group that reported possessing no functioning vehicles in the 2015-2019 American Community Survey. In several block groups, more than 25 percent of households are zero-vehicle. Although many of these block groups are concentrated in the urban core and therefore well-served by transit, two are located partially or entirely outside the quarter-mile walkshed of existing bus service. One notable gap is bounded by Virginia Lane, Avenue D, 10<sup>th</sup> Street West, and Parkhill Drive north of Grand Avenue. Service to this location would be improved by the final plan recommendations.

Figure 23. Low-Income Population by Block Group

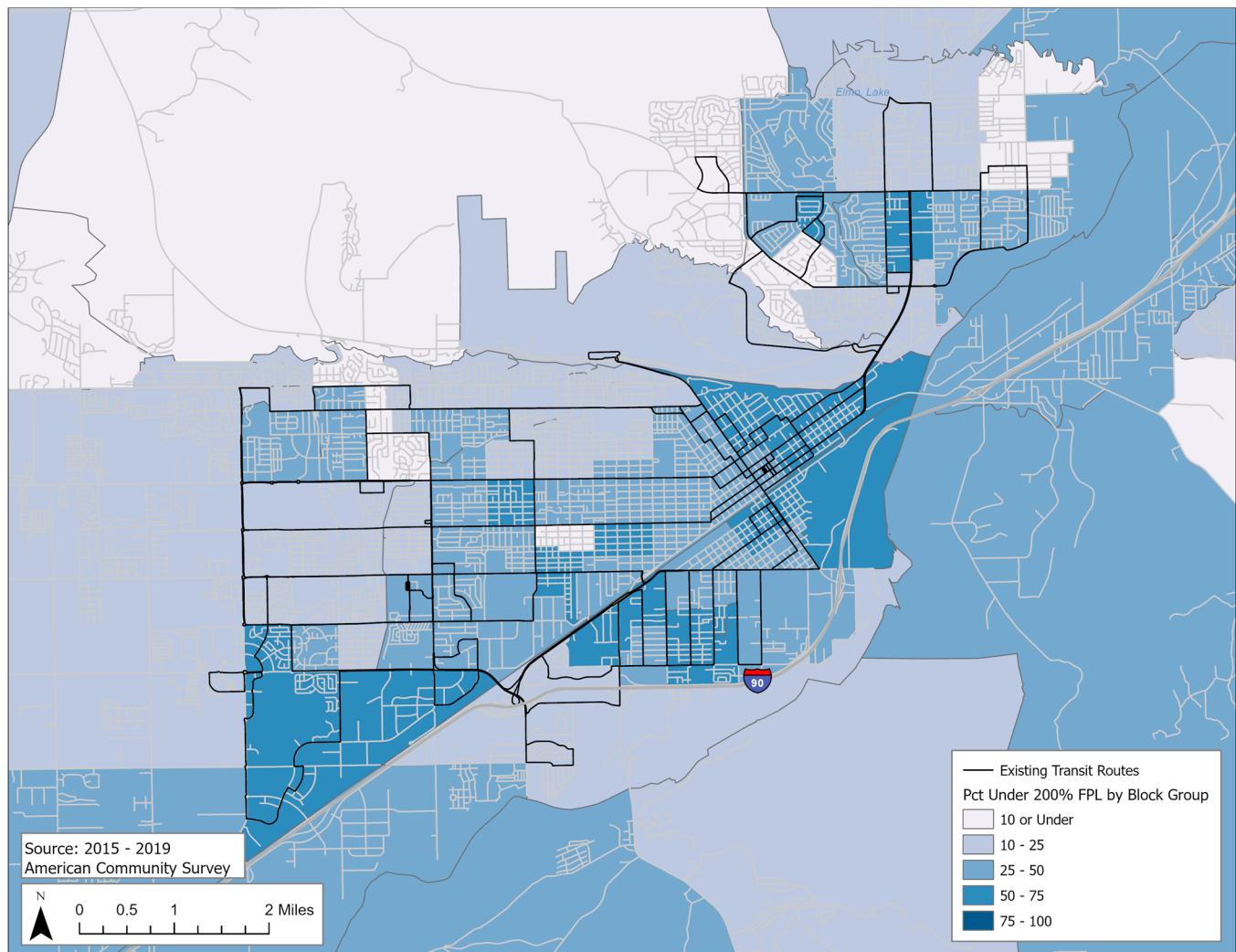


Figure 24. Zero-Vehicle Households by Block Group

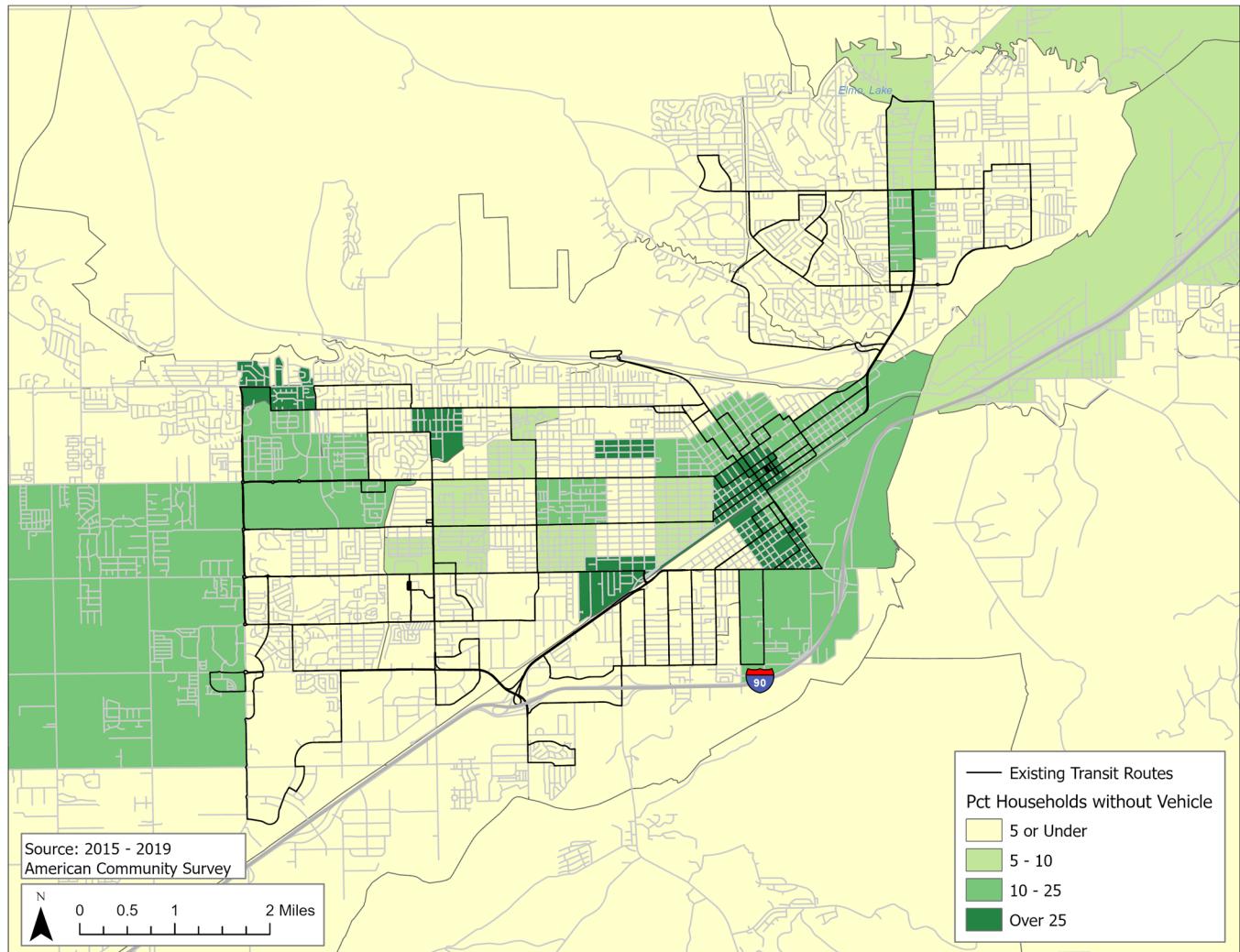
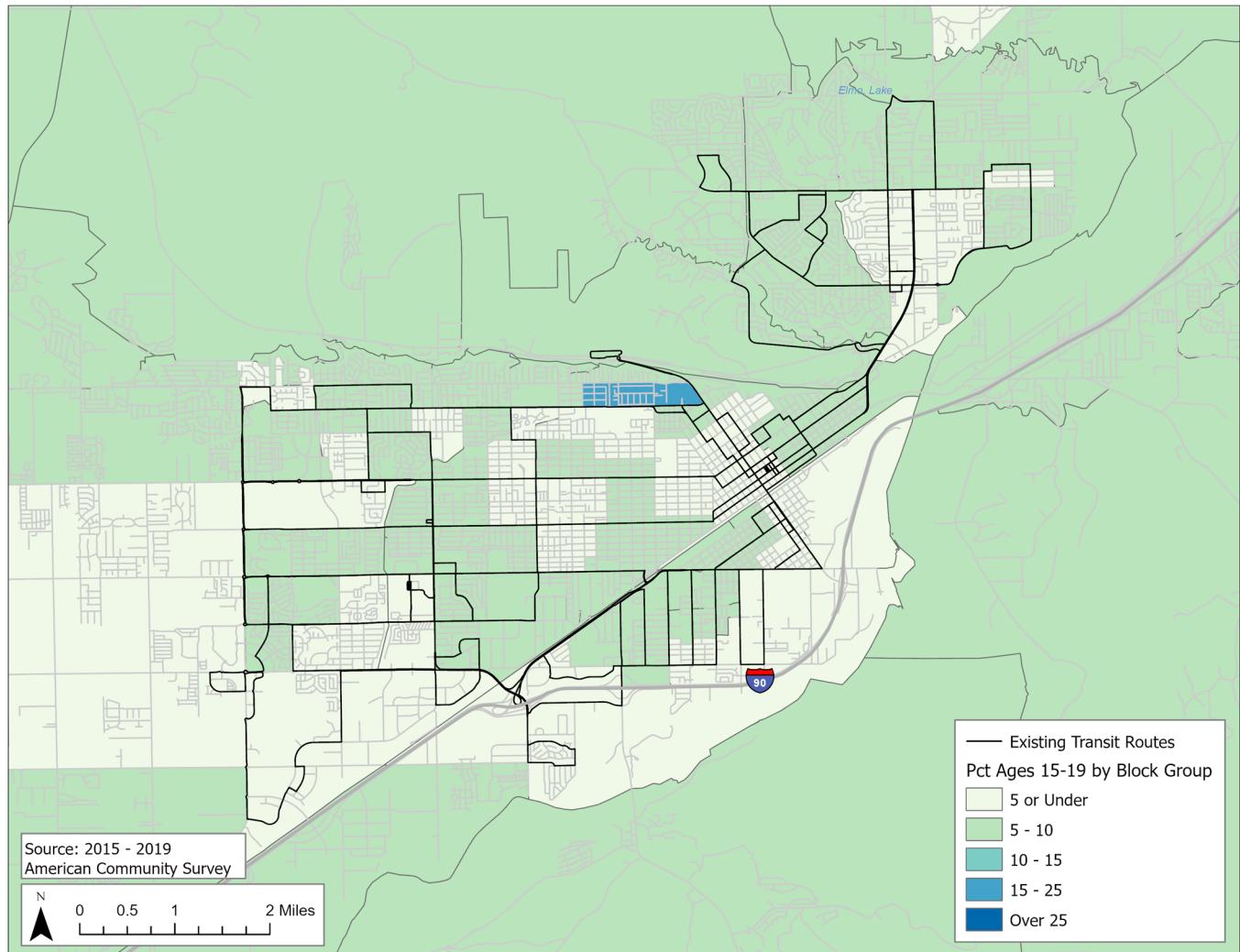


Figure 25 shows each block group's population of children and youth between the ages of 15 and 19. At 10 percent or fewer in almost every block group, the map suggests that children in this age range are evenly distributed throughout the city and surrounding areas. The one exception is the block group containing the Montana State University campus, which likely houses a large number of 17-to-19-year-olds.

Figure 25. Population Ages 15-19 by Block Group



The distribution of adults 65 or older (Figure 26) is less even, with block groups in the city ranging from under 10 percent to more than 25 percent. The map does not suggest that older adults are disproportionately served or unserved by MET. That said, there is some overlap between underserved block groups with high zero-vehicle household counts and underserved block groups with somewhat high older adult populations, which indicates that there are concentrated pockets of non-driving seniors who rely on alternatives to fixed-route bus service.

Figure 26. Population Ages 65+ by Block Group

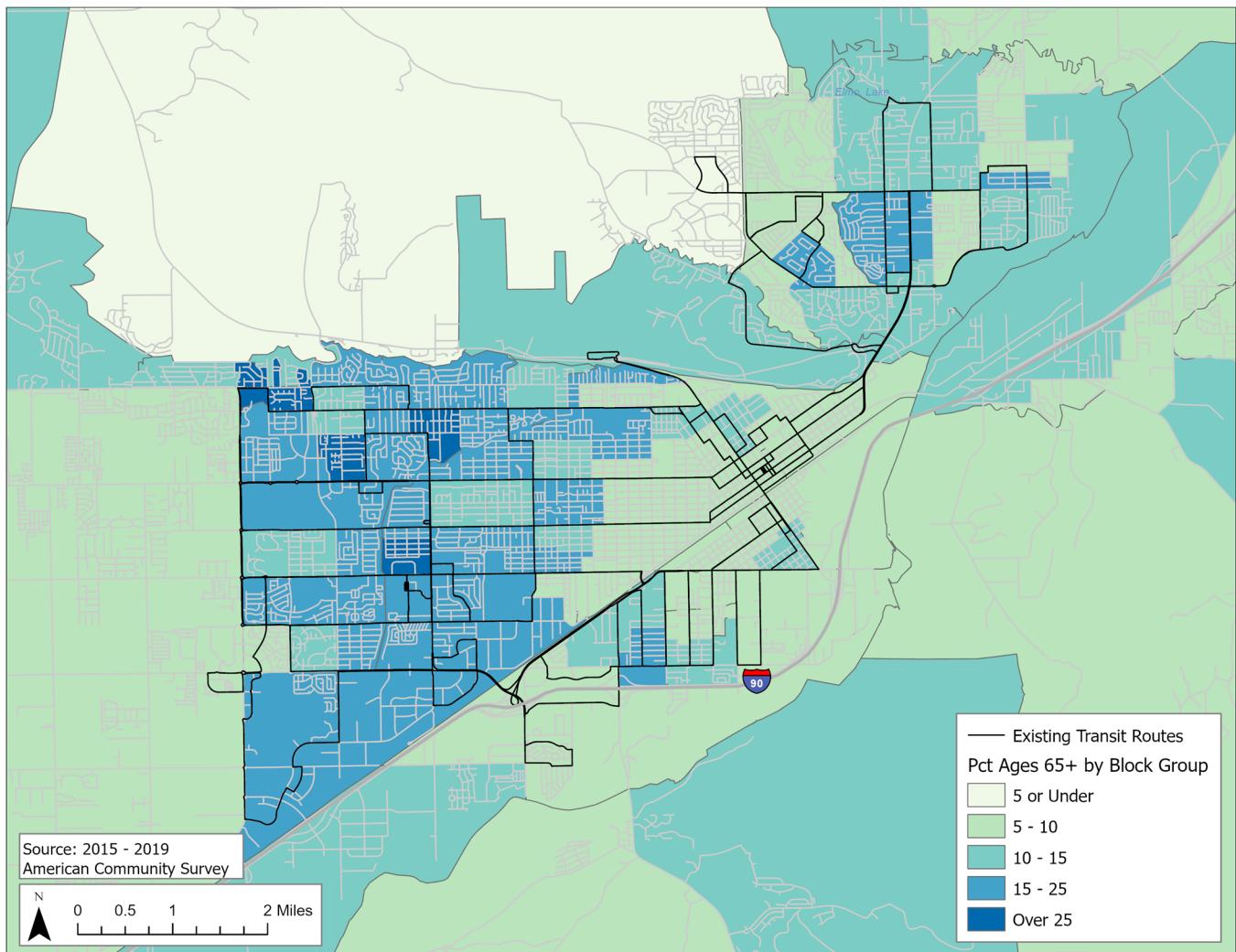


Figure 27 shows the percentage of each block group's residents who are people of color, here defined as those who self-identified in the 2015-2019 American Community Survey as a race other than White Alone. It therefore includes all racial minorities and mixed-race residents. There is a clear concentration of people of color in the city center, although percentages of 10 or greater are also seen throughout the Billings area. Overall, there are fewer service gaps in neighborhoods with higher percentages of color.

Figure 27. Population of Color by Block Group

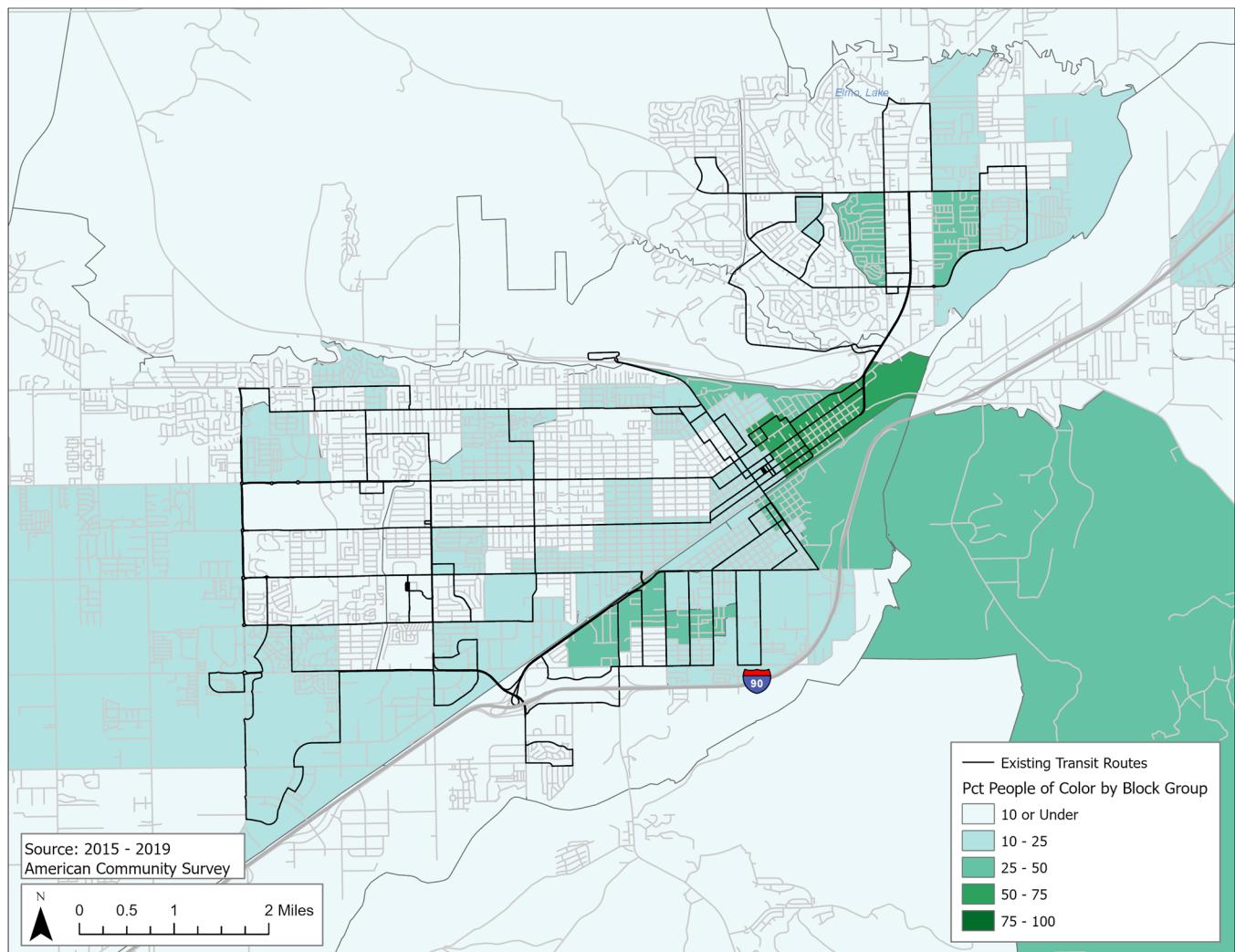


Figure 28 shows the percentage of each block group with Hispanic or Latino origin, according to the 2015-2019 American Community Survey. It includes those who consider themselves both white and Latino. Lockwood has one of the highest Latino populations.

Figure 28. Hispanic/Latino Population by Block Group

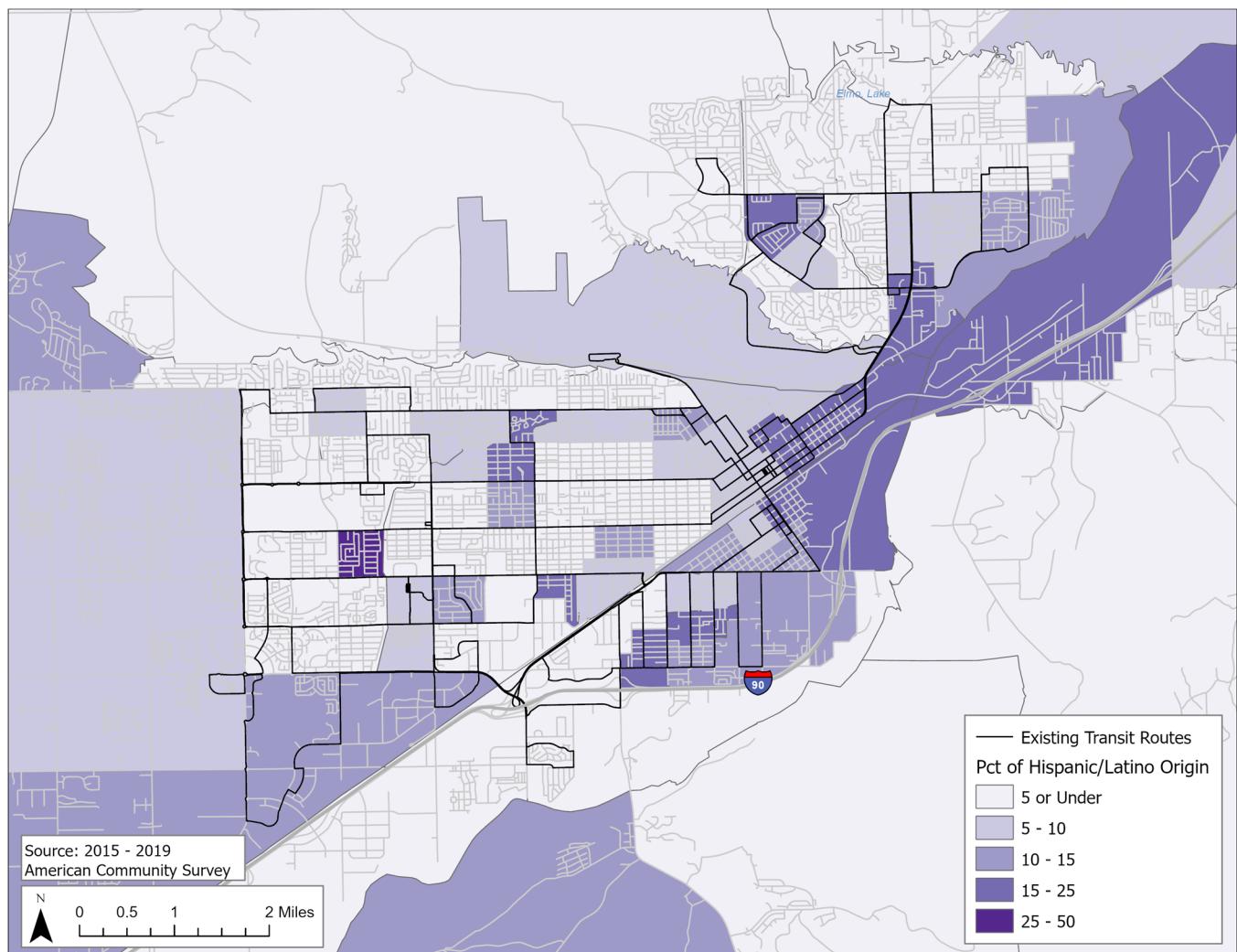
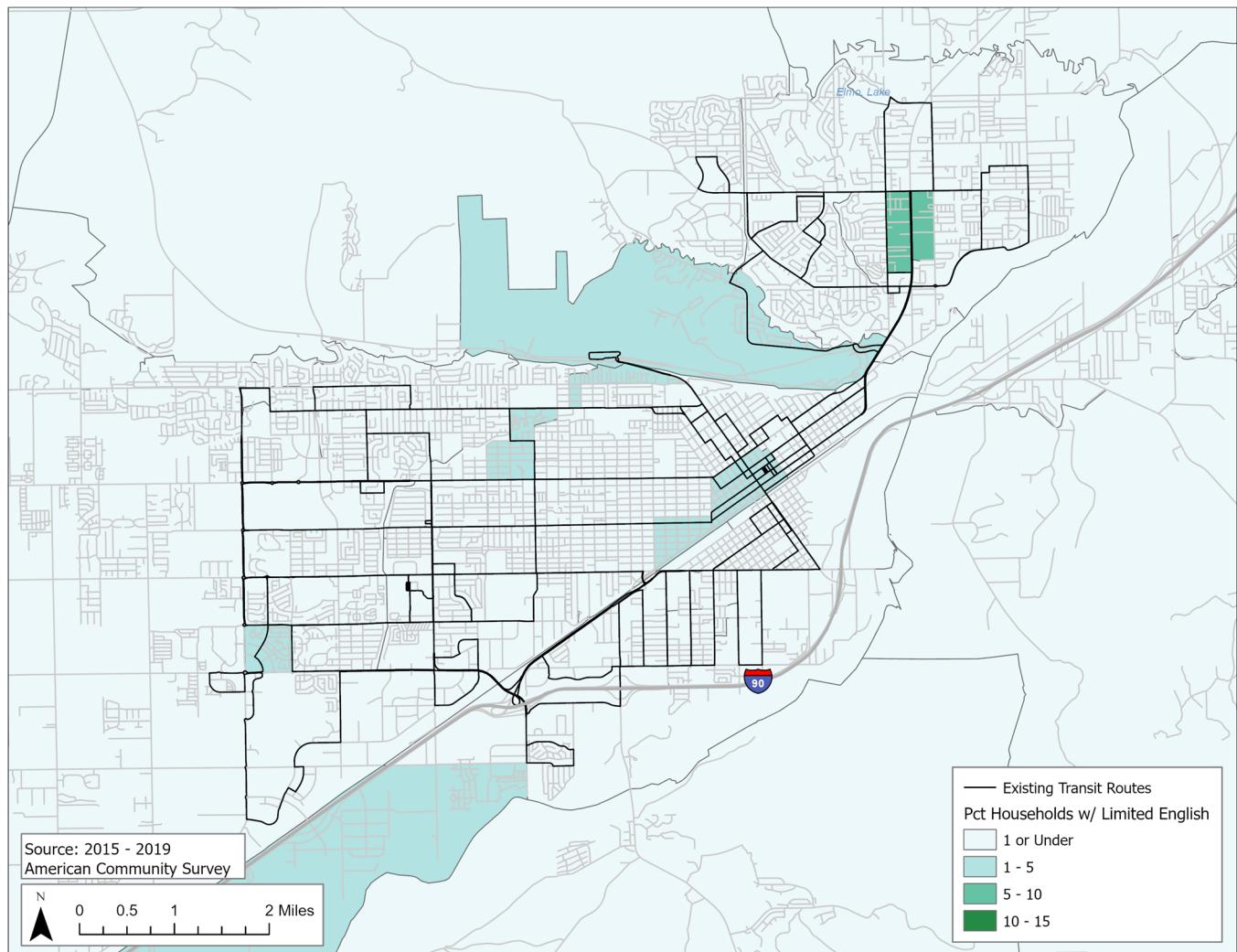


Figure 29 shows the percentage of households with limited English proficiency (LEP). Overall, there is a low number of LEP households and they are fairly evenly distributed through the metro area. One notable exception is in the Heights, where one block group is an estimated 11.8 percent LEP.

Figure 29. Limited English Proficiency by Block Group



## Existing Service Review

The following section summarizes existing fixed-route performance at the route level.

One way to assess the performance of a fixed route is to look at the overall usage of the route over the course of a year. Figure 30. Average 2021 Weekday Boardings by Route Figure 30 shows the average number of boardings per day in each month of 2021 for each of the weekday routes (excluding trippers). At a glance, it demonstrates that the system saw its highest use levels September to December – a schedule that suggests schools make a large contribution to ridership. Routes 14 through 18 particularly stand out as routes whose population swelled with school schedules and contracted during the summer.<sup>4</sup> Throughout the year, the system saw its highest overall ridership on 5A and 5B.

Figure 31 examines the Saturday routes in the same way. Taken altogether, the Saturday routes saw their highest use (more than total 350 boardings per day) in March, July, October, and November. This is not unexpected for Saturday service. The distribution of riders across routes remained roughly constant throughout the year. Again, Route 5 had the best performance in terms of total ridership, followed by Route 18.

However, looking only at total boardings does not paint a complete picture, as some routes run more trips per day than others. Figure 32 takes the weekday ridership data from July through December 2021 and compares it with the number of weekday service hours in that same six-month time frame.

In this analysis, Routes 14 and 16 outperform Route 5. Route 14 offered between 45 and 55 hours of service each month, but its ridership numbered in the hundreds (Table 8). The lowest ratio of boardings to service hours was found on Route 24, one of the better-performing routes in terms of overall numbers.

What this suggests is that certain routes have untapped potential. At least, they are more productive than they might seem at first glance.

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<sup>4</sup> One important caveat in interpreting these data is that transit ridership has been in a gradual recovery from its abrupt, pandemic-related plunge in spring of 2020. The ridership numbers from autumn of 2021 are higher than the ridership numbers from autumn of 2020; thus, some of the apparent growth in ridership going into autumn might be due to rider recovery in addition to the return of students.

Figure 30. Average 2021 Weekday Boardings by Route

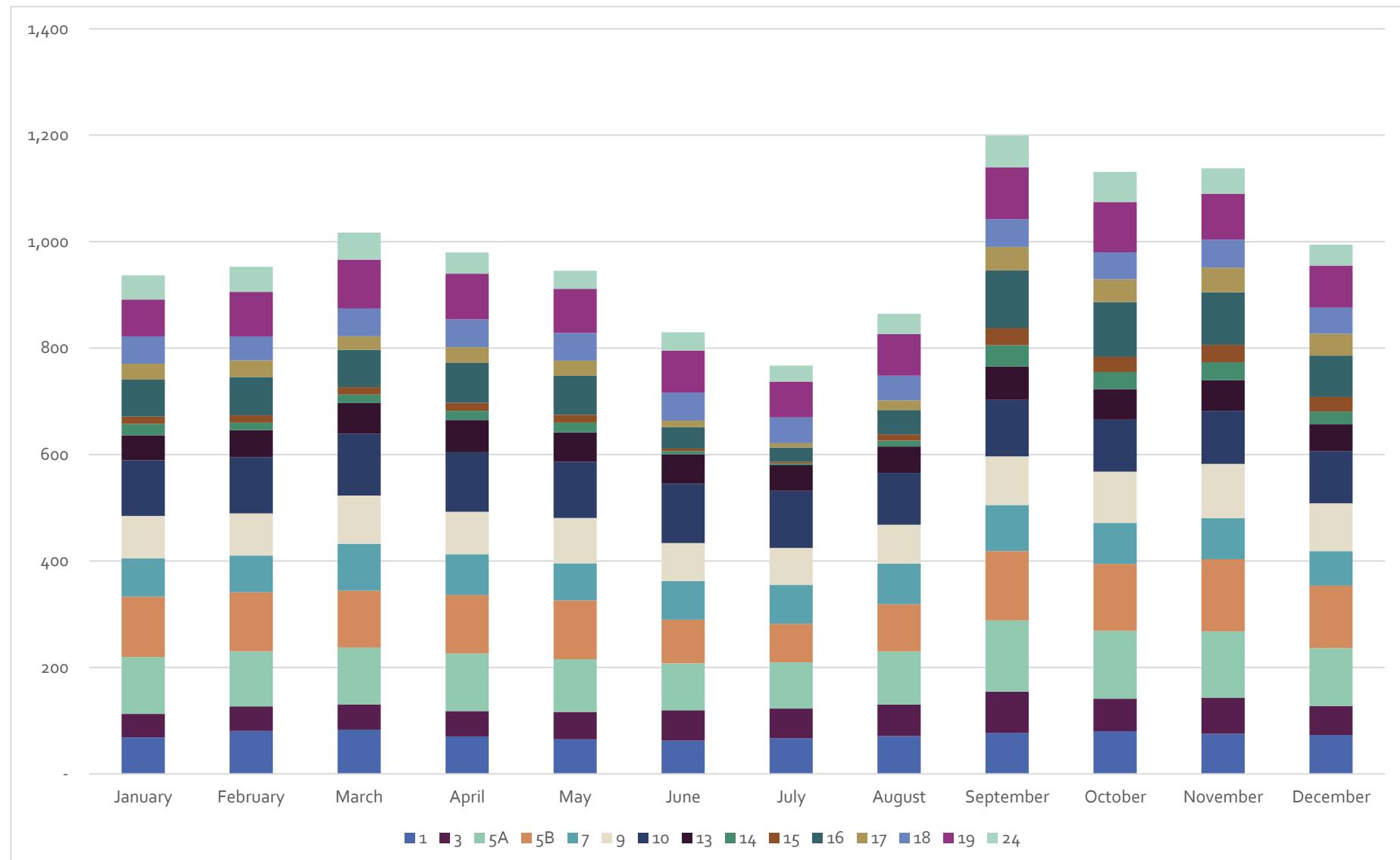


Figure 31. Average 2021 Saturday Boardings By Route

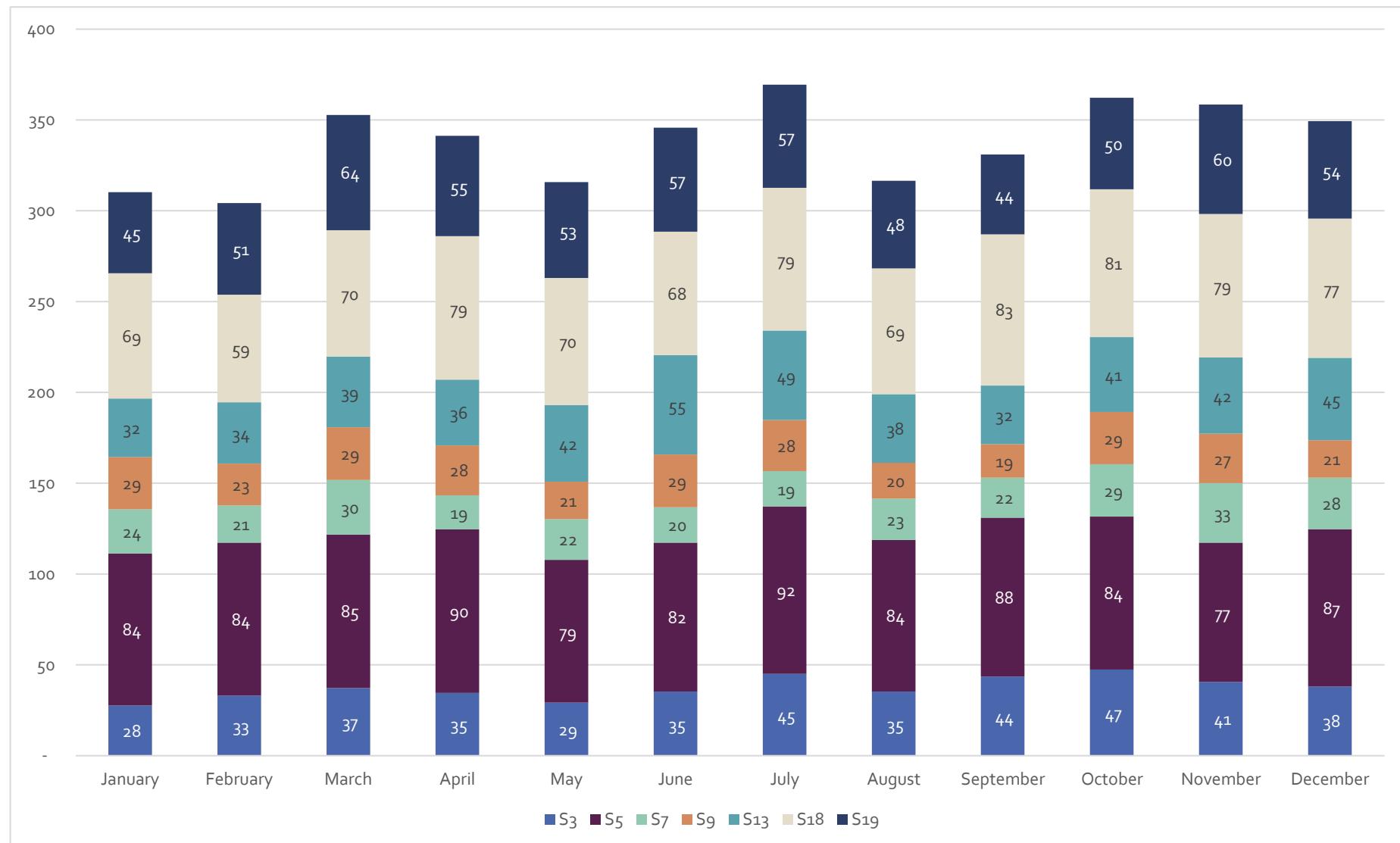


Figure 32. Boardings per Service Hour July-December 2021

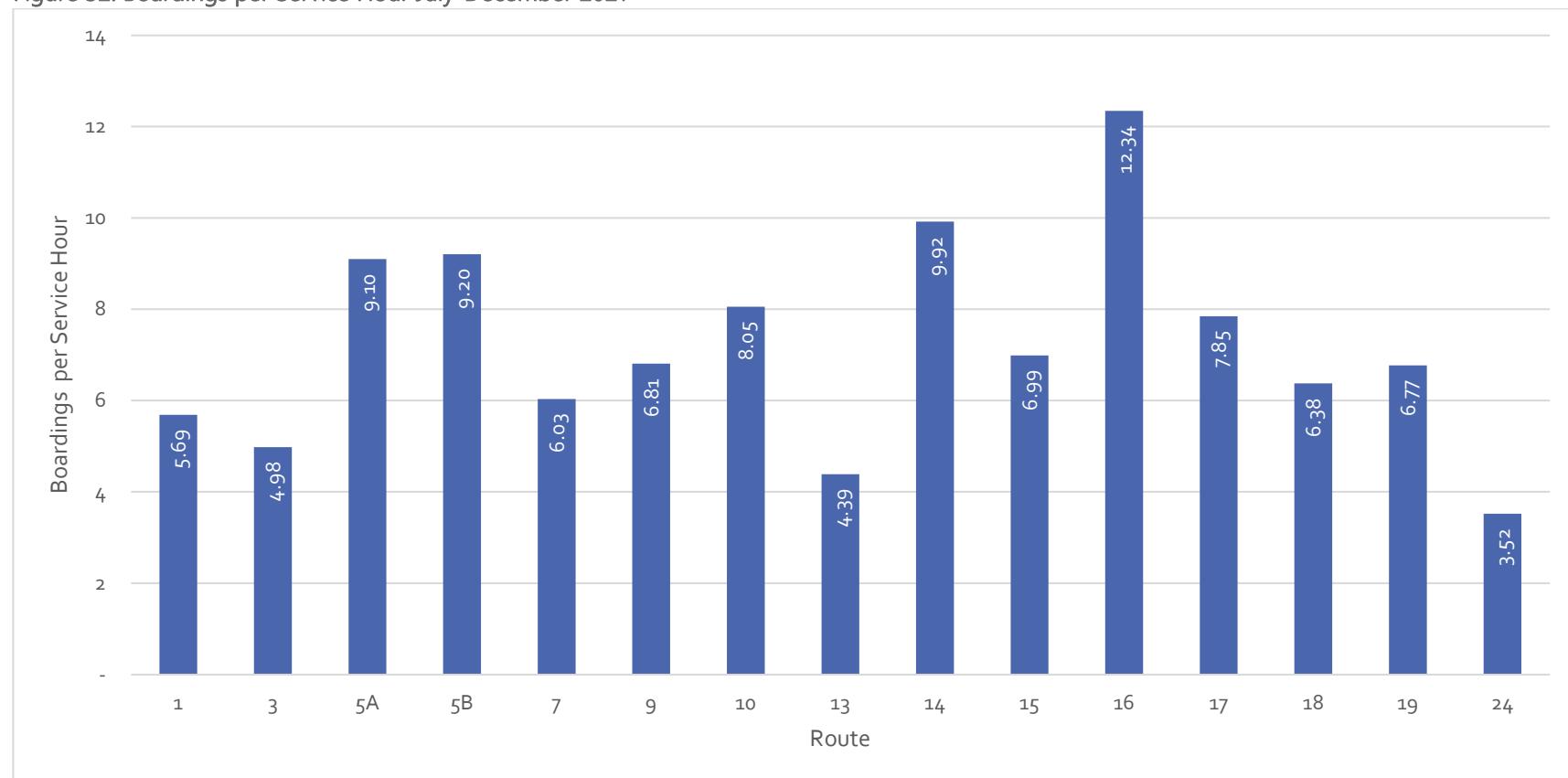


Table 8. Boardings and Service Hours by Month and Route, July-December 2021

Route		July		August		September		October		November		December	
Name	No.	Hours	Boardings	Hours	Boardings	Hours	Boardings	Hours	Boardings	Hours	Boardings	Hours	Boardings
MET Link	1	285	1468	285	1568	276	1621	272	1680	272	1580	297	1679
Crosstown	3	268	1230	268	1299	262	1622	264	1283	271	1416	294	1252
Grand 5A	5A	277	1909	273	2195	261	2811	264	2681	262	2621	281	2505
Grand 5B	5B	271	1597	269	1952	252	2735	252	2641	252	2853	277	2698
Broadwater	7	274	1603	270	1677	264	1818	268	1616	264	1616	289	1496
Central	9	285	1533	280	1607	262	1918	268	2021	270	2144	293	2063
Southside	10	270	2360	276	2143	264	2232	262	2056	267	2097	292	2246
Westend	13	265	1055	273	1094	257	1315	260	1202	263	1210	286	1161
Alkali	14	52	72	55	238	54	843	53	677	45	708	53	557
Hilltop	15	74	77	70	264	68	673	66	596	67	682	73	629
Main	16	137	587	133	1002	130	2281	131	2162	129	2077	142	1791
Bench	17	93	177	91	397	92	924	89	902	87	971	98	945
Heights	18	178	1067	174	1026	163	1093	161	1059	161	1103	179	1131
The Loop	19	271	1481	265	1719	255	2045	260	1984	264	1812	288	1810
Poly	24	286	660	286	834	259	1249	268	1194	270	1000	290	902

# Peer Performance Analysis

The peer analysis examined the performance of the Billings MET fixed-route network relative to that of peer systems. Since there are no recognized industry standards for most measures of transit system performance, widespread practice is to compare the performance of a system to the average values of a peer group of systems. Data used in this report come from the FTA's National Transit Database (NTD), a repository of data about American public transit systems. NTD was used because its data are readily available and consistently reported.

The following peer analysis compares MET performance to a peer group of six other fixed-route bus systems (listed in Table 9). The selection of the peer groups for MET was based on a list of peer agencies generated using the Urban Integrated National Transit Database (iNTD). The tool considers operational, economic, and population data to rate transit agencies on their similarity to the agency of choice (MET Transit). Using this list, along with input from MET agency staff, and additional operational metrics from the NTD, a list of six peer agencies was generated. The analysis was conducted using performance measures listed in

Table 10.

Table 9. 2019 Operating Statistics – Billings Peer Group

System Name	Location	Service Area Population	Service Area Population Density	Passenger Trips	Revenue Miles	Revenue Hours	Operating Expenses	Passenger Revenues
<i>RoadRUNNER Transit</i>	La Cruces	107,025	1,946	543,333	555,893	42,778	\$3,338,114	\$693,220
<i>Amarillo City Transit</i>	Amarillo, TX	190,695	2,577	266,361	646,784	49,636	\$3,825,032	\$108,566
<i>Sioux City Transit System</i>	Sioux City, IA	122,128	2,304	834,379	599,361	42,820	\$4,280,835	\$675,803
<i>City of Pueblo Transit</i>	Pueblo, CO	112,398	2,882	775,512	541,407	38,442	\$4,178,829	\$535,016
<i>Metropolitan Transit Authority of Black Hawk County</i>	Waterloo, IA	108,519	2,128	351,264	574,954	35,892	\$3,171,115	\$240,014
<i>Concho Valley Transit District</i>	San Angelo, TX	92,984	1,978	211,728	343,417	19,187	\$1,584,665	\$96,336
<i>Missoula Urban Transit District<sup>5</sup></i>	Missoula, MT	73,340	1,048	1,556,774	686,258	50,193	\$5,543,103	\$413,088
<i>MET Transit</i>	Billings, MT	110,323	2,507	424,671	606,184	41,735	\$3,893,242.00	\$369,856.00
<i>Peer Average (Excluding Missoula)</i>		-	2,332	486,750	552,571	38,641	3,467,405	\$388,402

<sup>5</sup> While Missoula Urban Transit District was included in this table and considered as a peer, it is not included in the remainder of this analysis. Missoula has characteristics that make it a fundamental outlier in the peer group. It was considered for comparison and data were collected for it only because it is the closest comparable fixed route system to MET in the state.

<b>MET as Percent of Average</b>	-	96%	108%	87%	110%	108%	112%
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Table 10. Metrics for evaluating peer systems

Performance Objective	Performance Measure
Cost Effectiveness	Operating Expenses Per Passenger Trip
Cost Efficiency	Operating Expenses Per Revenue Hour
Service Effectiveness	Passenger Trips Per Revenue Hour
Passenger Revenue Effectiveness	Average Fare Per Passenger Trip
	Operating Ratio (Passenger Revenues Per Operating Expenses)
	Subsidy Per Passenger Trip
Community Investment	Passenger Trips Per Capita
	Total Investment Per Capita
	Local Investment Per Capita

## Performance Measures: Results

### MET Transit Fixed-Route Five-Year Summary

Table 11 and Table 12 show MET operating statistics and performance measures, respectively, for 2015 through 2019. The average annual rate of change for the five-year period is calculated for each statistic and measure.

Table 11. MET Transit Operating Statistics over 5-Year Period

Operating Statistic	2015	2016	2017	2018	2019	Annual Rate of Change
Revenue Hours	38,850	38,794	39,814	41,735	41,735	1.8%
Passenger Trips	549,210	516,800	455,583	424,671	424,671	-6.1%
Operating Expenses	\$3,982,010	\$3,578,127	\$3,497,440	\$3,893,242	\$3,893,242	-0.3%
Passenger Revenue	\$160,051	\$306,906	\$360,464	\$369,856	\$369,856	28.0%

Source: National Transit Database

Table 12. MET Transit Performance Statistics over 5-Year Period

Performance Measure	2015	2016	2017	2018	2019	Annual Rate of Change
Operating Expense Per Passenger Trip	\$7.25	\$6.92	\$7.68	\$9.17	\$9.17	6%
Operating Expense Per Revenue Hour	\$102.50	\$92.23	\$87.84	\$93.91	\$93.28	-2%
Passenger Trips Per Revenue Hour	14.14	13.32	11.44	10.18	10.2	-8%
Average Fare Per Passenger Trip	\$0.29	\$0.59	\$0.79	\$0.87	\$0.87	37%
Operating Ratio	4%	9%	10%	9%	9%	31%
Subsidy Per Passenger Trip	\$6.96	\$6.33	\$6.89	\$8.30	\$8.30	5%

Source: National Transit Database

## MET Transit Performance Relative to Peer Groups

This section summarizes the results of the single-year (2019) and multi-year (2015-2019) analyses of the performance measures. MET is compared to its peer group for each of the performance measures.

### **Cost Effectiveness**

Cost effectiveness addresses transit use in relation to the level of resources expended. The primary measure for comparison in this category is **operating cost per passenger trip**. The lower the cost per passenger trip, the more cost effective the service.

MET is on the higher end of the peer group operating costs (Figure 33). The 2019 costs range from \$3.56 per trip (MUTD) to \$14.36 (ACT). The highest value is a bit of an outlier in the group and the second highest cost is \$9.17 per trip which is MET. Since MET's cost per trip is higher than most of the peer group, it is useful to see how they performed over a five-year period from 2015 to 2019. Figure 34 shows how MET's costs per trip have trended compared to the peer group's average. MET and the peer group both increased about the same amount over the time period, but at slightly different rates so MET's increase was slightly less than its peers and its cost held steady from 2018-2019. While the higher cost may appear to be cause for concern, it has improved over the years and it is trending closer to the peer average over time.

Figure 33. Operating Cost Per Passenger Trip, 2019

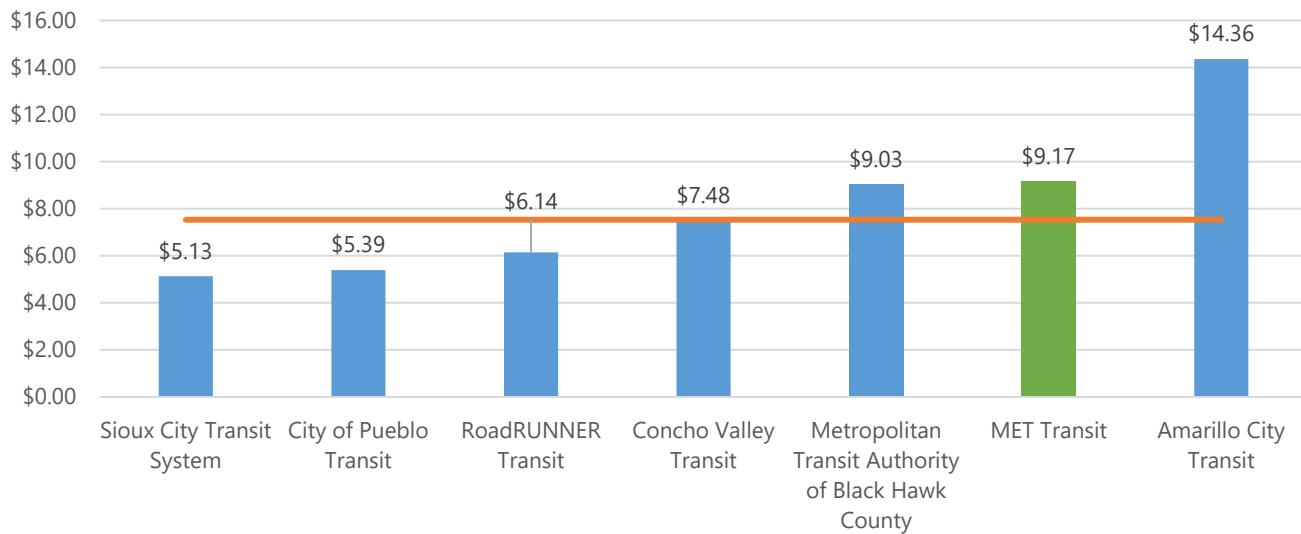
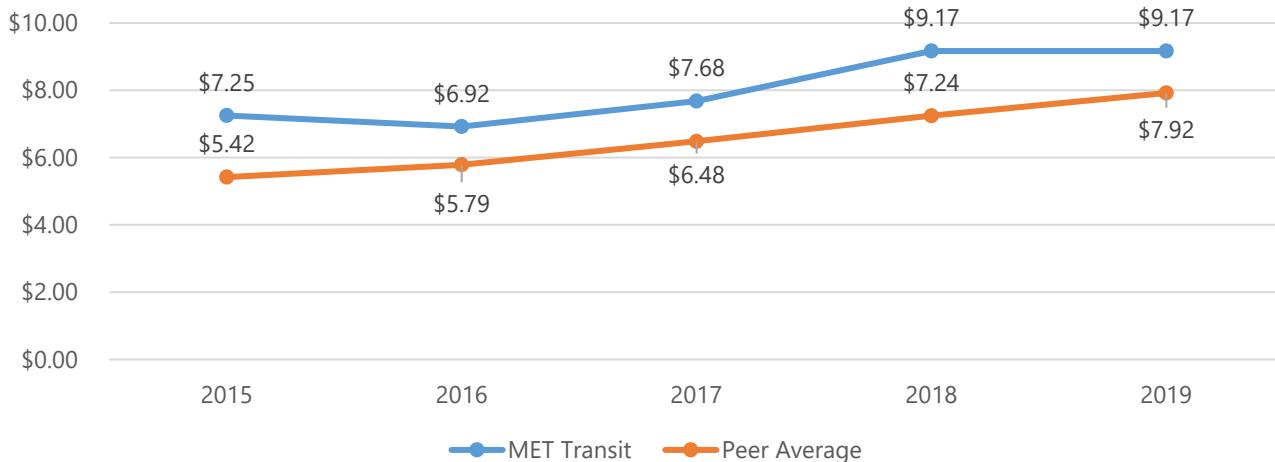


Figure 34. Operating Expenses Per Passenger Trip Compared to Peer Average, 2015-2019



## Cost Efficiency

Cost efficiency examines the amount of service produced in relation to the amount of resources expended. **Operating cost per revenue hour** is often a primary measure of a service's cost efficiency.

Figure 35 displays MET's 2019 cost per revenue hour in comparison with peers. At \$93.28, it was about average among the peer agency group. MET's average used to be higher than the peer group but MET costs had a downward trend and peers had an upward trend, ending up in almost the same spot for 2019. Overall, this trend (Figure 36) is positive and means that MET operating costs per hour are on par with its peers in the industry.

Figure 35. Operating Cost per Revenue Hour, 2019

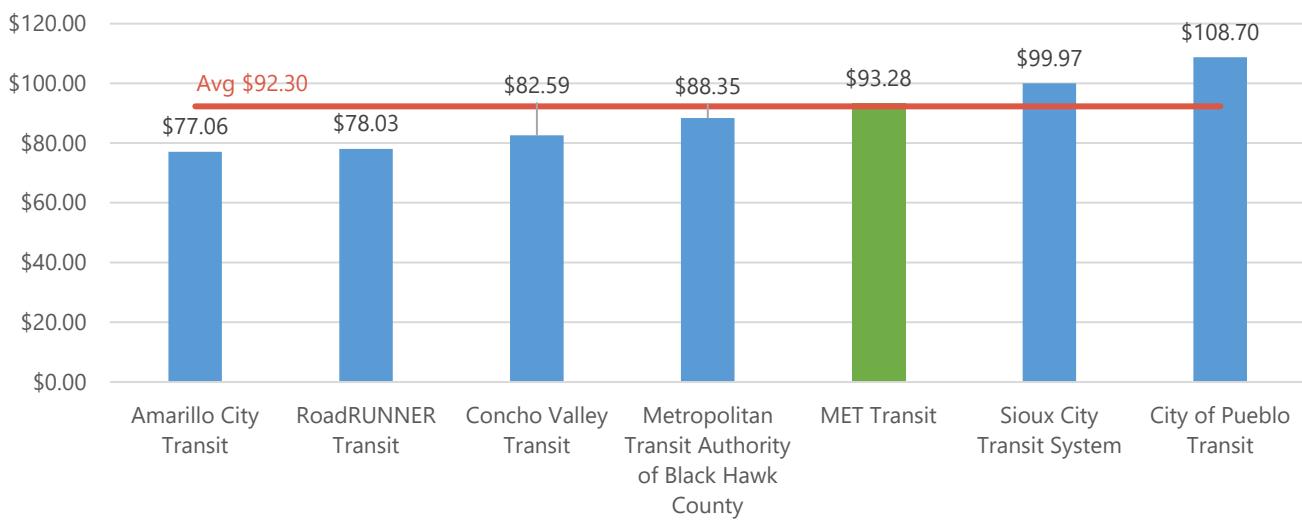
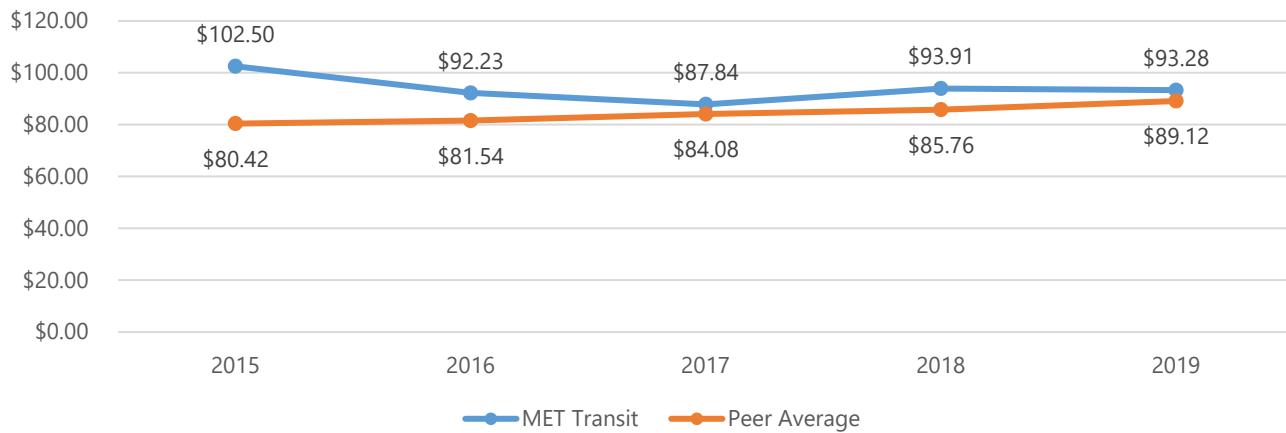


Figure 36. Operating Cost per Revenue Hour Compared to Peer Average, 2015-2019



## Service Effectiveness

Service effectiveness is a measure of the consumption of public transportation service in relation to the amount of service available. **Passenger trips per revenue hour** is the measure used to assess service effectiveness.

As shown in Figure 37 MET is below the average for 2019, but if MUTD, an upper outlier, is removed, the average becomes 12 trips per hour which is very close to MET's 10 trips per hour. Therefore, MET's passenger trips per hour is average among its peers and not a measure to cause concern. Over the last five years MET and the peer agencies average trips per hour rates have dropped. Figure 38 documents that from 2016-2018 MET's number dropped at a faster rate, but it stabilized by 2019.

Figure 37. Passenger Trips per Revenue Hour, 2019

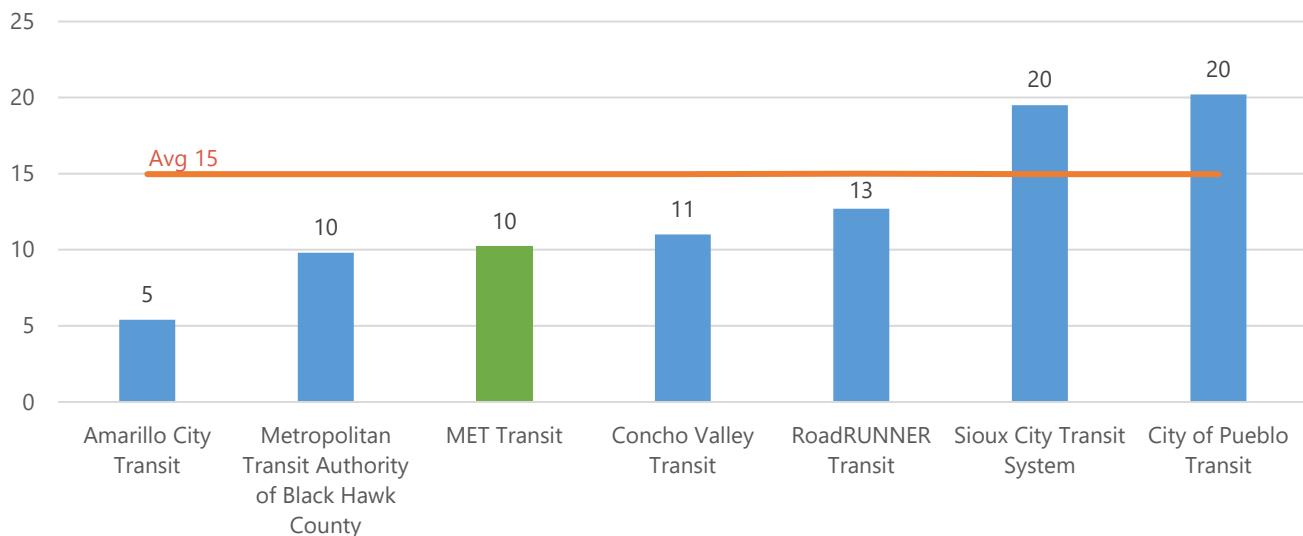
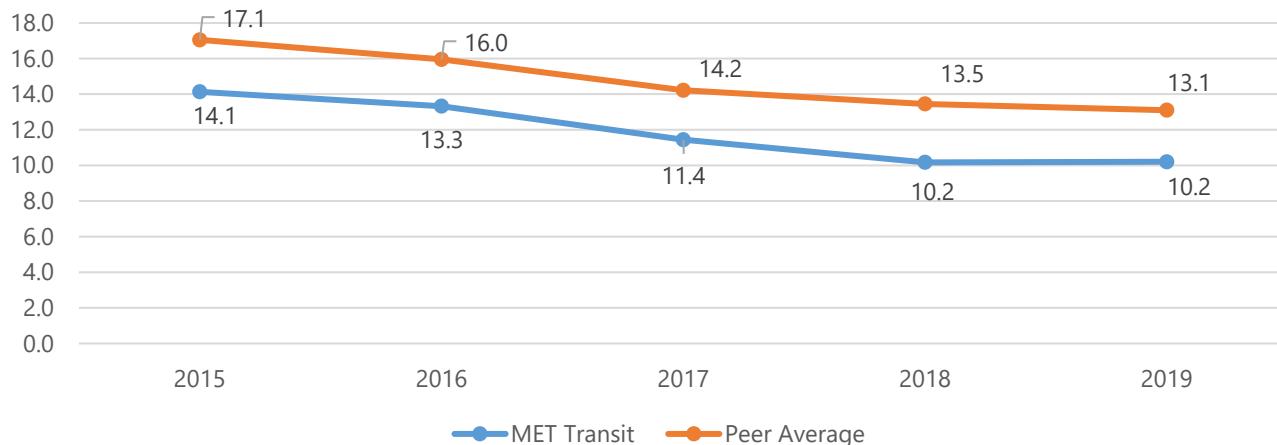


Figure 38. Passenger Trips per Revenue Hour Compared to Peer Average, 2015-2019



### Passenger Revenue Effectiveness

Passenger revenue effectiveness is measured with three metrics in this analysis: passenger revenue per passenger trip, operating ratio, and net expense (subsidy) per passenger trip.

**Passenger revenue per passenger trip**, or average fare per passenger trip, measures the amount each passenger is paying to use the service. The higher the average fare, the more cost is being borne by the passenger.

When looking at average fare per passenger trip, as well as all other measures involving fares, MUTD was removed because they have been fare free since 2015. As shown in Figure 39, in 2019 fare per passenger trip for MET was close to the average fare among the peer agencies. However, only one peer agency had a higher fare; this was RoadRUNNER Transit, which had a very high fare that brought the average up. This means that MET's average fare may be a little high for its peer group.

From 2016 to 2019, both MET and the peer average fares rose from 2015-2017, but MET rose at a higher rate (Figure 40). After 2016, MET's average fare rose slightly and the peer average decreased slightly.

Figure 39. Average Fare per Passenger Trip, 2019

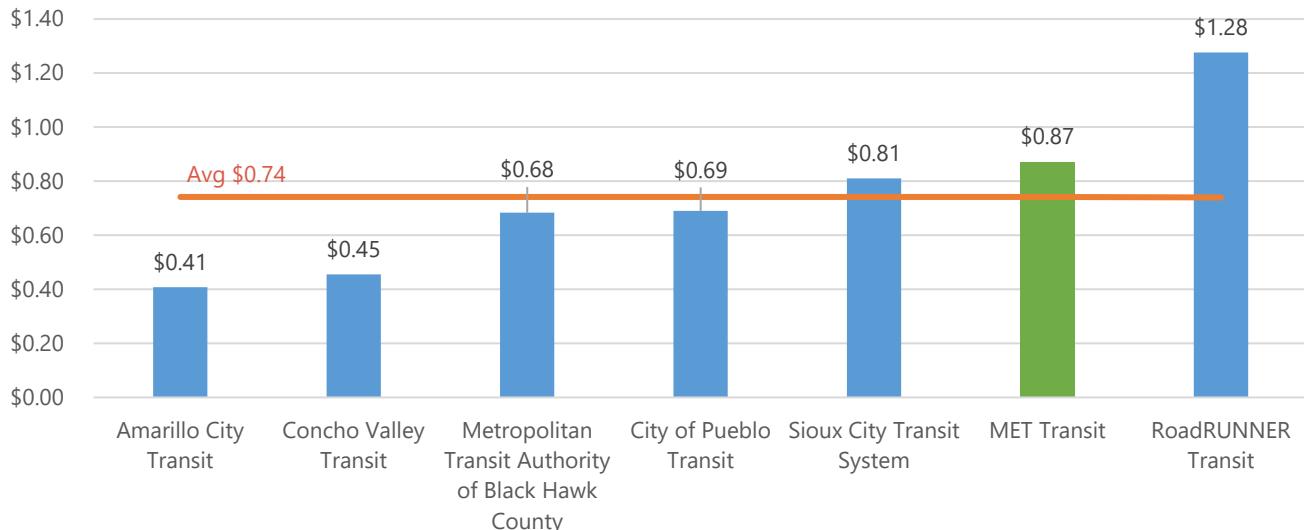
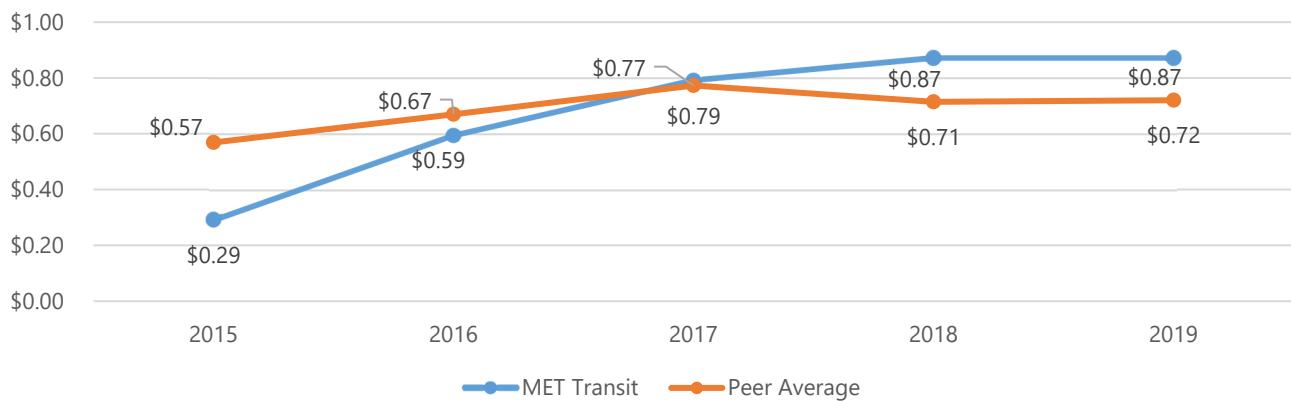


Figure 40. Average Fare per Passenger Trip Compared to Peer Average, 2015-2019



A system's **operating ratio** is the **ratio of revenues to operating expenses** and measures the level of operating expenses that are recovered through passenger fare payment. This measure is also referred to as the **operating ratio or farebox recovery**. It is expressed as a percentage to represent what percent of operation expenses are recovered through fare revenue.

Among its peers, (excluding MUD) MET's operating ratio of 9% is just below the 11% average. Peer ratios for 2019 were evenly spread out from 3% to 21% with MET landing right in the middle, indicating fair performance in this measure for 2019.

From 2016-2019, the peer average operating ratio increased slightly from 2015-2016 and then decreased slowly to a lower ratio than 2015 by 2019. MET's ratio was much lower than its peers in 2019, but it rose rapidly from 2015-2017, becoming closer to the peer group average. After 2017 it decreased slightly but remained just below the peer average.

Figure 41. Operating Ratio, 2019

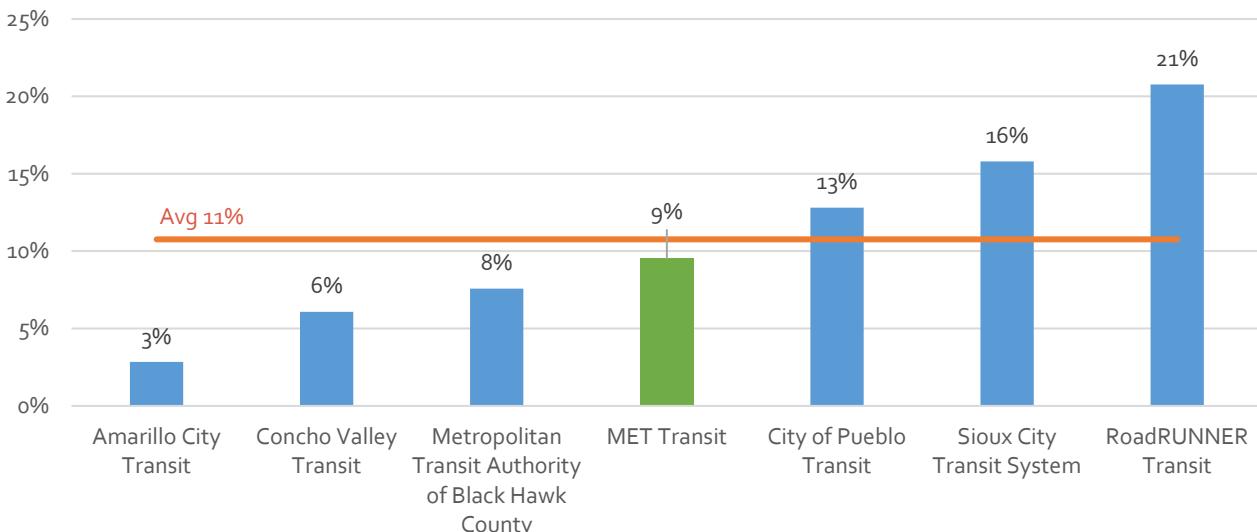
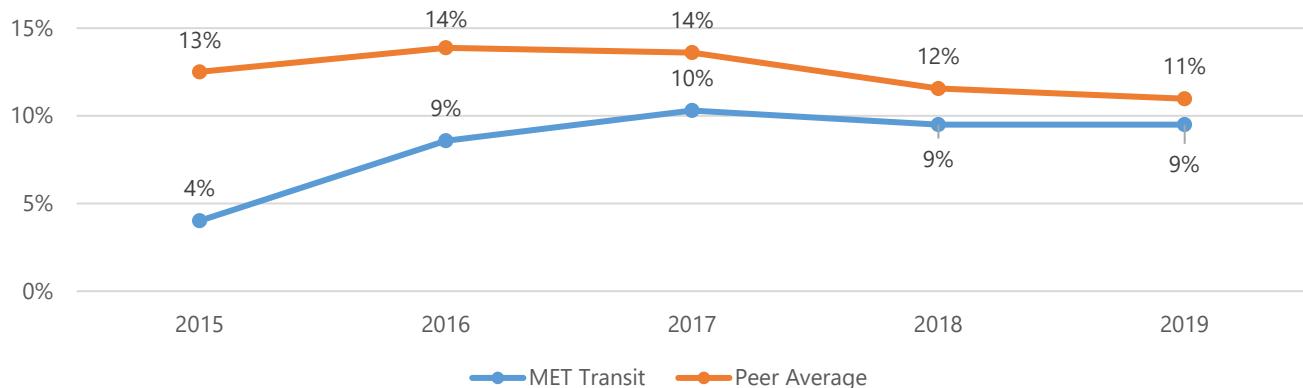


Figure 42. Operating Ratio Compared to Peer Average, 2015-2019



**Net expense (subsidy) per passenger trip** is used to measure the cost of each passenger trip that is paid for by public operating subsidy. Subsidy per passenger trip is calculated by subtracting passenger revenues from total operating expenses and dividing by total trips. The higher the operating subsidy, the more local, state, and federal resources are required to cover expenses.

The amount that MET subsidized for each transit trip in 2019 was just above the average in the peer agency group. The difference between MET's subsidy per trip and the peer average is noteworthy and is a measure that the agency might seek to improve.

Over the past five years both MET's and the peer group's per trip subsidies have increased steadily. This means that while the increasing subsidy is not necessarily a positive marker, MET's subsidy trends are lined up with its peers in the industry.

Figure 43. Subsidy per Passenger Trip, 2019

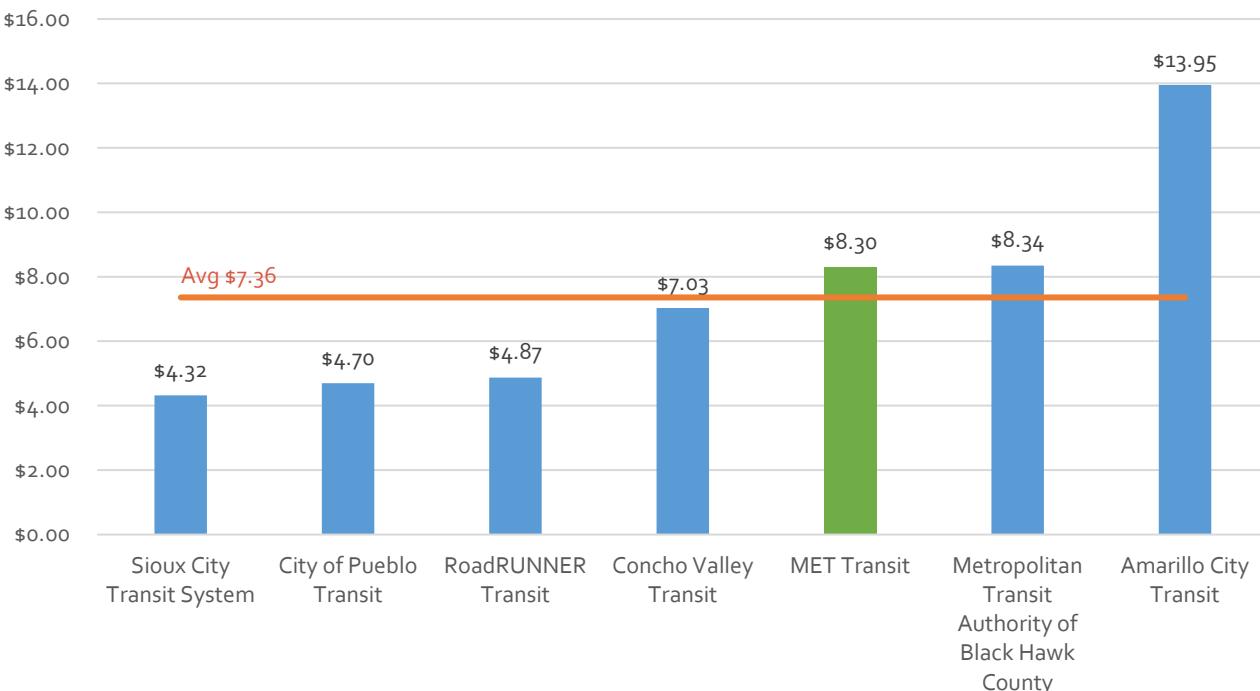
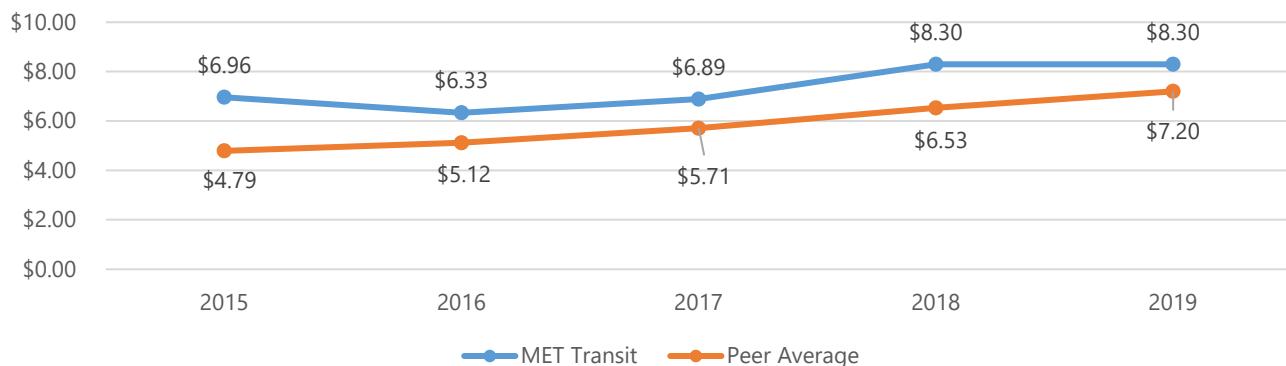


Figure 44. Subsidy per Passenger Trip Compared to Peer Average, 2015-2019



## Community Investment

Two performance metrics use the total population of the transit service area to identify the degree to which the community is invested in public transit. This category includes market penetration, as measured by **passenger trips per capita**, but it also includes the degree of funding allocated to transit by decision-makers, as measured by **total investment per capita**.

MET falls just below the average for passenger trips per capita among most of the peer group. In this measure, Missoula was, again, an outlier among the peer group with a trip number three times higher than the next highest agency. Because of the difference, the average was calculated for all the agencies (orange lines) and all agencies except MUTD (grey lines) in Figure 45 and Figure 46.

Figure 46 shows the change over time for trips per capita, and the effect MUTD has on the peer average is even more visible. The orange line, which represents the peer average including MUTD increases then decreases slightly. The grey line (peer average without MUTD) and blue line (MET) follow very similar trends in trips per capita from 2015-2019 with MET just a little below the peer agency group.

Figure 45. Passenger Trips Per Capita, 2019

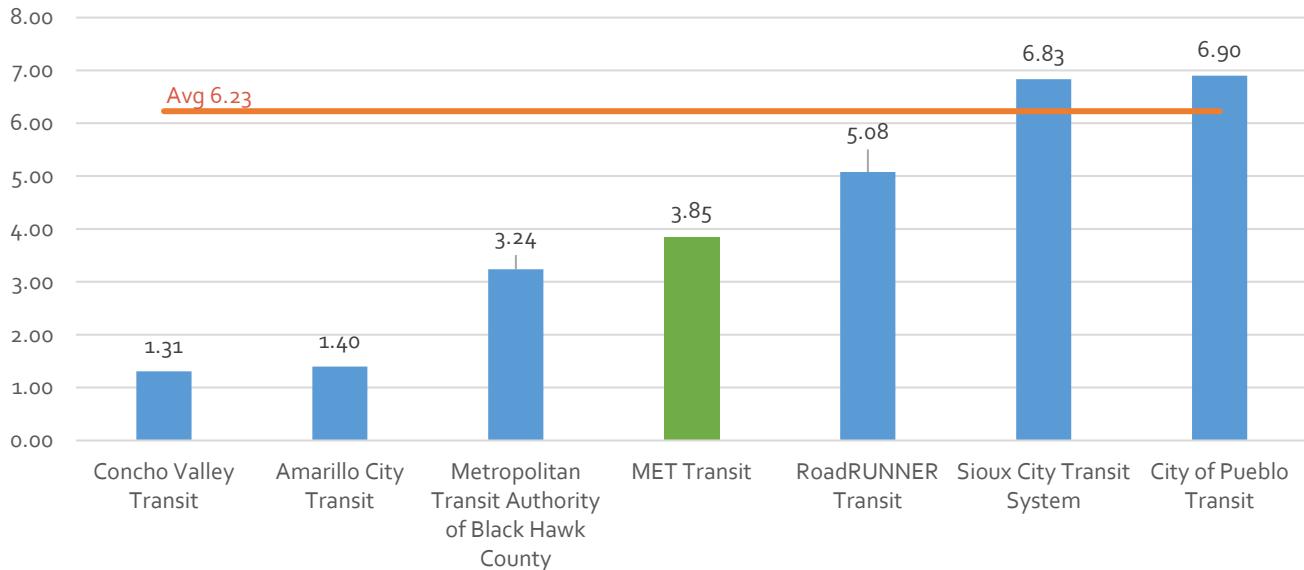
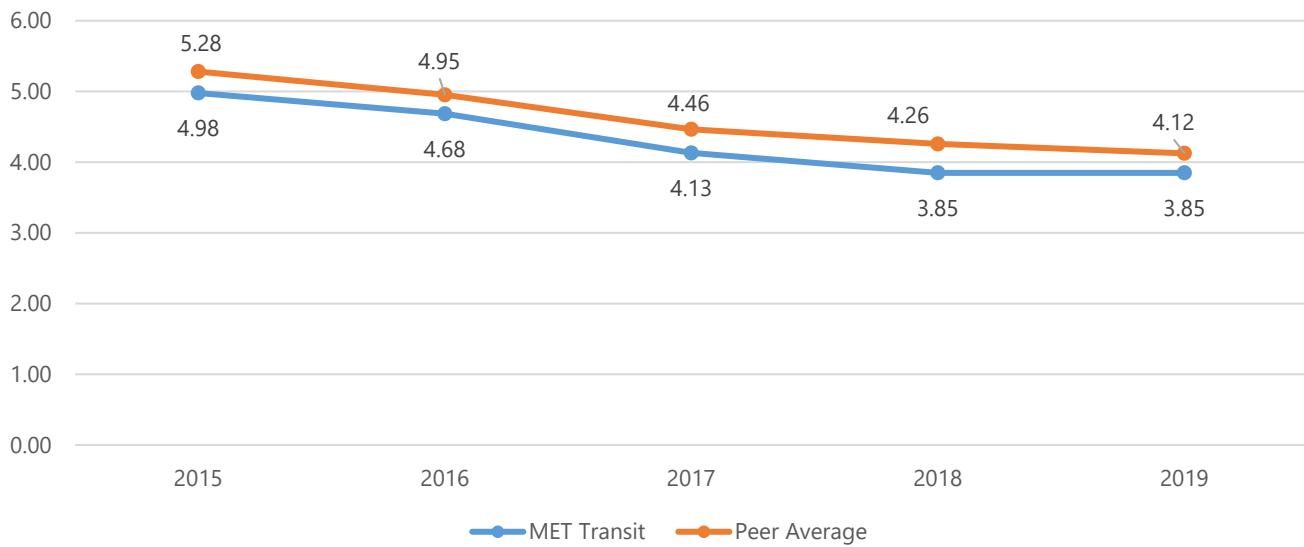


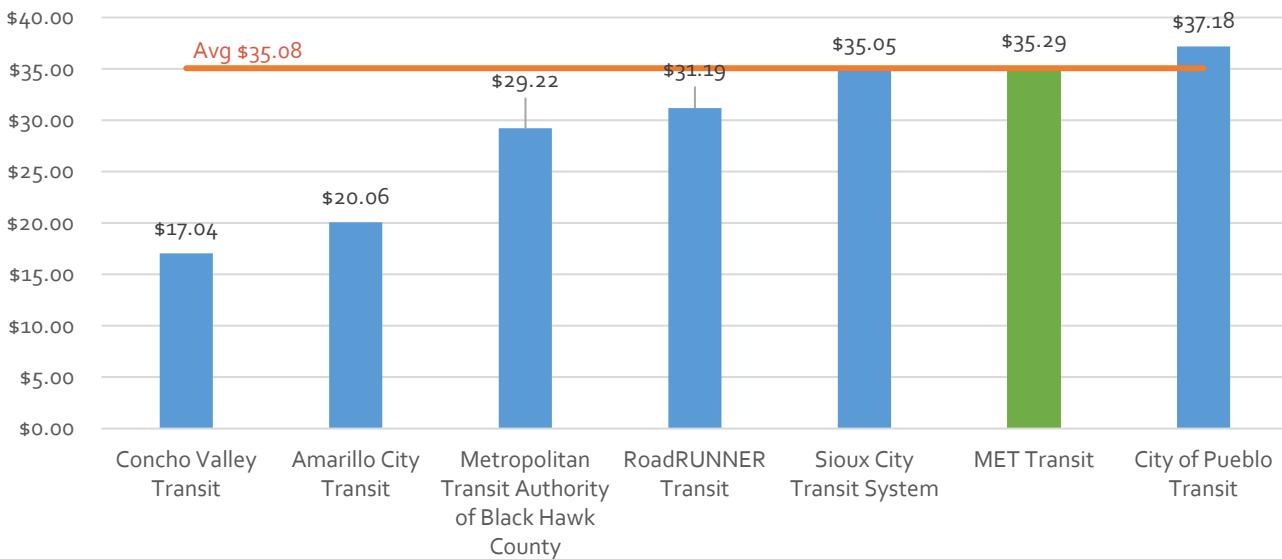
Figure 46. Passenger Trips Per Capita Compared to Peer Average, 2015-2019



The second measurement of community investment was investment per capita for fixed route service, which is the operating budget for fixed route divided by population. Once again, MUTD was an outlier with an investment level that was double the next highest agency. This makes sense because MUTD's operating expenses were by far the highest reported and their service area population was by far the smallest. Therefore, for this measurement it is more useful to look at how MET performs among its peers excluding

MUTD. In this context, MET is among the higher end of the peer group, but not the highest, which is a positive marker when measuring investment in community

Figure 47. Investment per Capita, 2019



## Summary

Running an analysis of effectiveness, efficiency, and community investment measures has allowed the consultant team to assess how MET performs relative to peer transit agencies. The key findings are summarized below:

- Overall MET's performance in the peer analysis was average in most measurements it fell in the middle of its peers and just above or below the average value
- For multiple measures including subsidy per passenger trip, operating ratio, fare per passenger trip, and operating cost per hour, MET has trended closer to the peer average over time.
  - Three of these measures (subsidy per passenger trip, operating ratio, fare per passenger trip) measure passenger revenue effectiveness. Though MET is trending towards the average in these three measures, it slightly underperforms in all three.

# PUBLIC INPUT AND ALTERNATIVES SELECTION PROCESS

# Public Engagement

## Overview

Opportunities for interested stakeholders to provide input to the plan were available throughout the approximately nine months of the study. Outlined below in Table 13 is a timeline of surveys completed, events held in the community to present milestone information proposed for the plan and gather input and public meetings held.

Table 13. Public engagement schedule

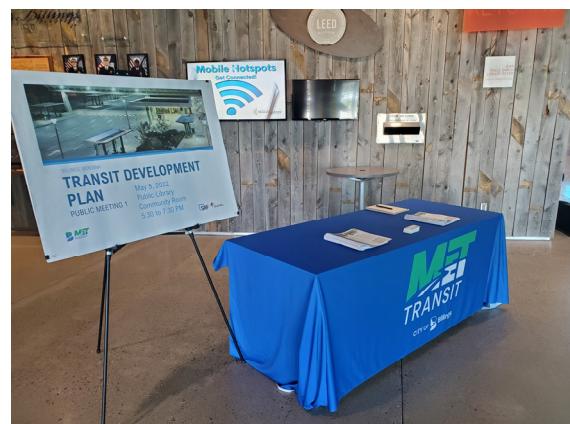
Date	Description
March 2022	Community Transit Survey
March 16, 2022	Informal Discussions at Jobs Jamboree, Metra Park
April 6, 2022	Informal Discussions at Walkable Cities presentation, Babcock Theater
April 7, 2022	Informal Discussions at Chamber Breakfast, Metra Park
May 4, 2022	Informal Discussions at Billings Public Library
May 4-5, 2022	MET Driver Meetings
May 5, 2022	Public Information Meeting 1 – Public Library (Presentation Slides in Appendix)
May 31, 2022	Informal Discussions at Commuter Challenge Kickoff, Rose Park
June 27, 2022	Informal Discussions at Downtown Transit Center
June 28, 2022	Public Meeting #2 – Community and Senior Center (Open House Meeting – No Presentation)
August 11, 2022	Informal Discussions at Southside Gardener's Market
August 17, 2022	Informal Discussions at Downtown and Stewart Park Transfer Centers
August 18, 2022	Public Meeting #3 – Public Library (Presentation Slides in Appendix)



Public Meeting #1 – Public Library



Public Meeting #3 – Public Library



May 2022 – Public Library Tabling

## Community Survey

The community survey was designed to enable participation from as many users as possible. The survey collected information on the use of transit, the use and perception of transit, potential improvements, and demographic information, such as the number of vehicles in the household, income, age, race, and gender. The survey was conducted in both online and paper formats during Winter and Spring of 2022. The paper survey included a QR code link to the online version, which was also advertised on the project website and on social media. A copy of the paper survey is provided in the Appendix.

The community survey addressed transit use, future travel patterns, and overall interest and willingness to support additional transit services in the community. The survey revealed some important findings about the community's priorities and values regarding public transit:

- Most of respondents have had a direct or indirect experience with MET
- A minority use transit regularly
- Most respondents commute to, from, or within Billings
- Expanded service hours were revealed to be a top priority across every question set
- Weekday service hour expansion was a higher priority than Saturday service expansion
- Factors that are outside of MET's control were less likely to discourage or encourage transit use
- High gas prices were not a high factor for riding transit and preference for other modes was not ranked as a high deterrent
- Stop amenities, while viewed in a positive light, were not seen as important investments as increased service hours and frequency. This could either be due to the fact that MET currently uses a flag stop system or that the majority of respondents were not regular transit users and do not interact with the amenities and infrastructure provided by system as often.

Based on these consistent results, MET should first give strong consideration to recommendations that increase service hours and frequency. MET may also want to consider improvements to bus stop infrastructure and amenities as they were also considered priorities by the community survey. It may be useful for MET to target regular transit users when determining how to improve stop amenities and infrastructure in the future.

## Public Meetings

Each study milestone included a public information meeting at which information about the plan update was presented, questions from meeting participants were addressed and informal discussion about transit in the Billings were held. The next sections summarize information from the meetings.

### Public Meeting #1 – Public Library

Through this meeting the plan update was introduced, including:

- Content of the transit development plan

- Current background of MET relative to peer transit agencies
- Information provided through the community survey
- Plan update schedule

MET staff and the consultant presented the planning process and summarized the initial service planning through a presentation, which was followed by a questions and answer session. After the presentation, informal discussions were held to explain in more detail findings from the service reviews and address questions participants had about the MET system and/or the plan.

The meeting was broadcast through Facebook Live and recorded to provide interested people the opportunity to gather information at times more convenient.

Slides with presentation information are included in the Appendix.

### **Public Meeting #2 – Community and Senior Center**

The focus of this open house meeting was the range of ideas MET and the consultant team were evaluating to improve current service and to support expansion. A series of informational boards were available for review with a member of the consultant team and/or MET staff. Ideas for improvement and/or expansion of the system included:

- Updating the current route network to:
  - Reduce overlap in the path routes travel – In some cases overlap is good as routes can support each other, while in other cases, the overlap results in inefficiencies. Balancing the conditions was the focus of the initial service improvement analysis.
  - Provide more coverage of areas of the community where employment and/or residential development support transit.
  - Reduce or eliminate service breaks that exist, which result in run times changing over the course of the day. These breaks can be confusing to new users and inconvenient to all users.
  - Create more north-south service in the community.
- Opportunities being reviewed to expand service to take advantage of increased federal and local funding.
- Evaluation criteria being used to evaluate expansion opportunities.

### **Public Meeting #3 – Public Library**

The purpose of this meeting was to present preliminary recommendations for improving and expanding service in Billings. Through the formal presentation updates to the network (identified as the Redesign Network) were presented, opportunities for expanding service associated with increased funding available, and ideas to make service more effective in the form of converting to designate transit stops (from the current flag stop system) were detailed. Following the presentation, there was an extended period of discussion with audience participants regarding the details of proposed service changes.

Similar to the other public meetings, MET and consultant staff were available for one-on-one discussion of current service and/or the proposed changes following the formal presentation.

Slides with presentation information are included in the Appendix.

## **Email Input**

Interested stakeholders were able to send emails with comments or questions about current services and/or proposed changes to address needs and funding opportunities. Emails received throughout the study period are included in the Appendix.

# Considered Alternatives

## Service to Lockwood

Conversations locally over the years have included the potential for adding transit service between Billings and Lockwood. The proximity to Billings and Lockwood's demographics establish the logic for the conversation. While there are both live and work opportunities in the community, there are few retail or service businesses to support live-work-recreate-shop opportunities. Thus, the level of daily travel between Lockwood and Billings is substantial. To support the statement, journey to work information from the US Census Bureau's On the Map tool was reviewed for where Lockwood resident jobs were located. Figure 48 displays the results of the mapping. From analysis of the census data for 2019, approximately 2,200 of the 3,600 of the employed residents of Lockwood work in Billings and represent a key potential customer group to consider in assessing opportunities for extending transit. The second image of the figure displays, in more detail, where people living in Lockwood commute for work.

With confirmation there is some level of travel between Lockwood and Billings for a primary trip purpose for which people use transit, alternatives for supporting demand were developed. As the level people would choose to use transit is not known through surveys or past experience, a range of service alternatives were identified. For each, information regarding service parameters, potential ridership, and cost were developed. The results are displayed in Table 14

Figure 48. Lockwood – Number of Commuter Coming In/Leaving Town for Work (2019 Data)

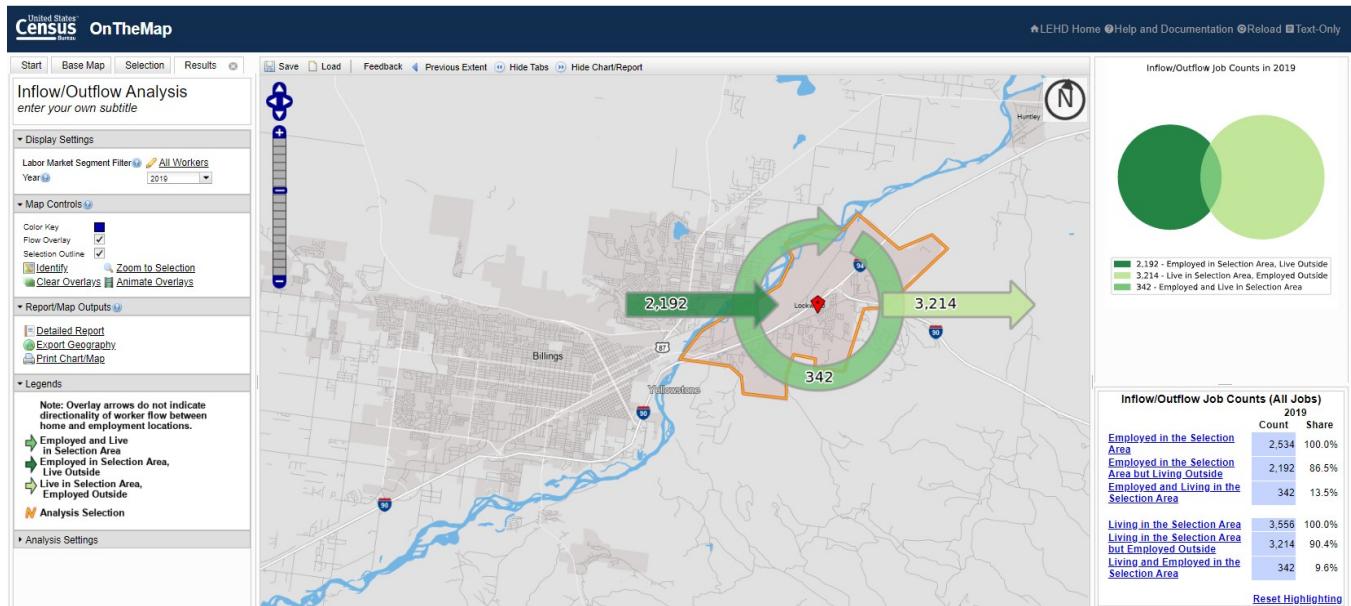


Figure 48 (Cont.) Detailed Commuting Patterns (Where People Living in Lockwood Work)

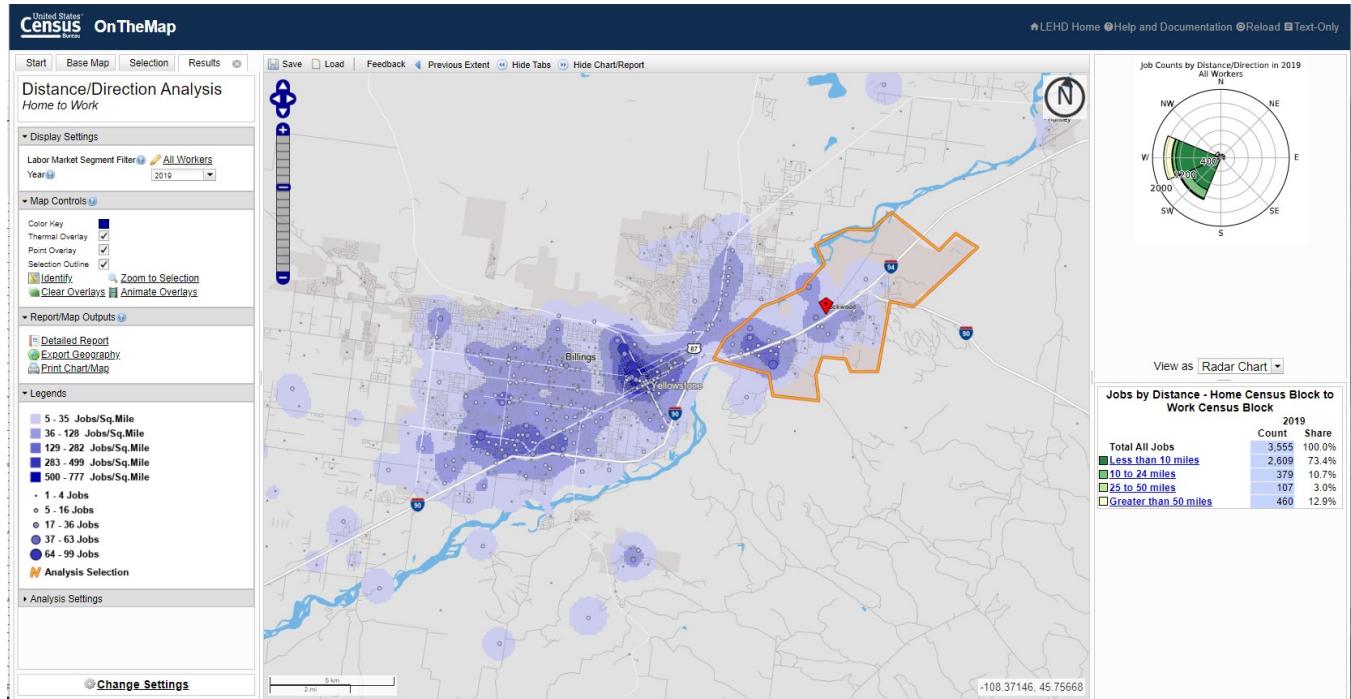


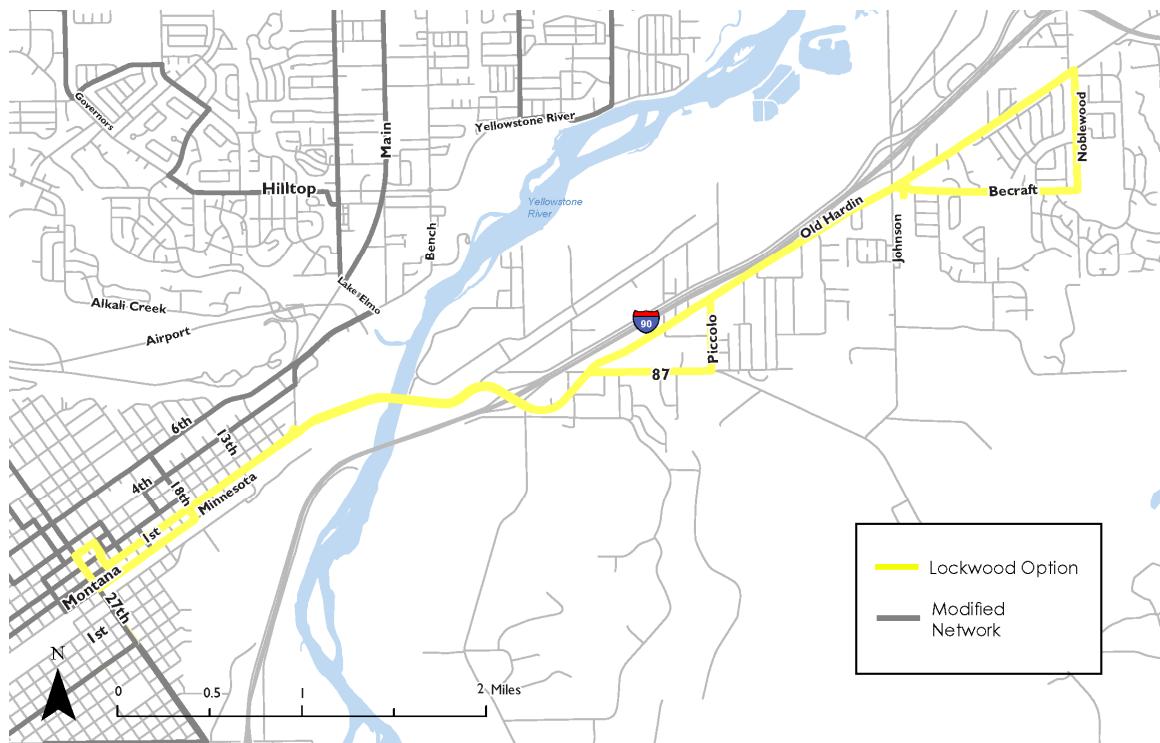
Table 14. Lockwood Service Alternatives Summary

Service Concept	Annual Hours	Cost Per Hour	Annual Ridership (Estimated)	Annual Operating Cost
<b>Fixed Route</b>				
All Day (Monday through Saturday)	3,700	\$66.34	26,100	\$245,000
Weekday Peak Only (4 Hours/Weekday)	1,280	\$66.34	9,000	\$84,900
Service Concept	Annual Hours	Cost per Hour	Annual Capacity Range	Annual Operating Cost
<b>Demand response</b>				
Full Time (Active 13 Hours/Day)	3,800	\$81.46	10,720 - 17,380	\$309,600
Active 3.4 Time (9.75 Hours/Day)	2,860	\$81.46	8,040 - 13,040	\$232,000
Active ½ Time ((6.5 Hours/Day)	1,900	\$81.46	5,360 - 8,690	\$154,800
Active ¼ Time (3.25 Hours/Day)	950	\$81.46	2,680 - 4,347	\$77,400
<b>Flex Route</b>				
Full Time (Active 13 Hours/Day)	3,800	\$81.46	12,200 - 19,970	\$309,600
Active 3.4 Time (9.75 Hours/Day)	2,860	\$81.46	9,150 - 14,980	\$232,000
Active ½ Time ((6.5 Hours/Day)	1,900	\$81.46	6,100 - 9,990	\$154,800
Active ¼ Time (3.25 Hours/Day)	950	\$81.46	3,050 - 4,990	\$77,400

Note: Fixed route hourly service cost reflects only the incremental labor cost, not the fully apportioned rate that includes administration and maintenance. Similarly, the demand response and flex hourly rates reflect incremental labor cost reflective of a paratransit starting point.

The initial alternative for Lockwood service was fixed route. Figure 49 displays a logical route for serving higher population areas of the community and the path anticipated to get to/from the downtown Billings transit center.

Figure 49. Lockwood Fixed Route Concept



Key assumptions incorporated into the analysis and Table 14 include:

- Regular daily service assumes 13 hours per day and 10 on Saturday for 305 service days per year.
- Ridership for fixed-route service option is based on current riders per capita observed in Billings.
- Flex Zone service ridership per capita range is from a range observed in other cities.
- Demand response ridership per capita starts with Flex Zone numbers and reduces by 10 percent to account for added restrictions on same day service and potentially no phone reservation application.

Recommendations regarding advancing the concept are not addressed in the TDP. MET will continue to review the option and if there is interest on the part of Lockwood leadership, the alternatives review will be updated and funding options will be discussed.