

COMO Bus Service Evaluation Transit Service Alternatives

City of Columbia City Council

March 20th, 2017



COMO Bus Service Evaluation




Study Purpose

*The City of Columbia is carrying out the **COMO Bus Service Evaluation** to ensure that the COMO bus system provides efficient service and meets the needs of community members*

- Study funded 100 percent by City of Columbia



3-Step Evaluation Process & Schedule



Step	Timing	Activity
1	Winter to Summer '16	<ul style="list-style-type: none">• Community engagement• Data collection, including comparisons to other college communities• Route analysis and evaluation• Initial alternatives development
2	Summer to Fall '16	<ul style="list-style-type: none">• Community engagement• Development of service design guidelines that support the community vision, budget, and other standards
3	Fall '16 to Winter '17	<ul style="list-style-type: none">• Community engagement• Develop a plan for short-, medium-, and long-term recommendations

Study Elements

- Comprehensive Operations Analysis on existing service
- Visioning and Outreach
- Develop Service Guidelines and Standards
- Develop transit system alternatives



Spring 2016 Stakeholder Meetings

- Route familiarity
- Perceptions of transit support
- Important elements of the COMO Connect Project (Vision)
- Service priority
- Potential improvements
- Priority challenges and opportunities
- Funding

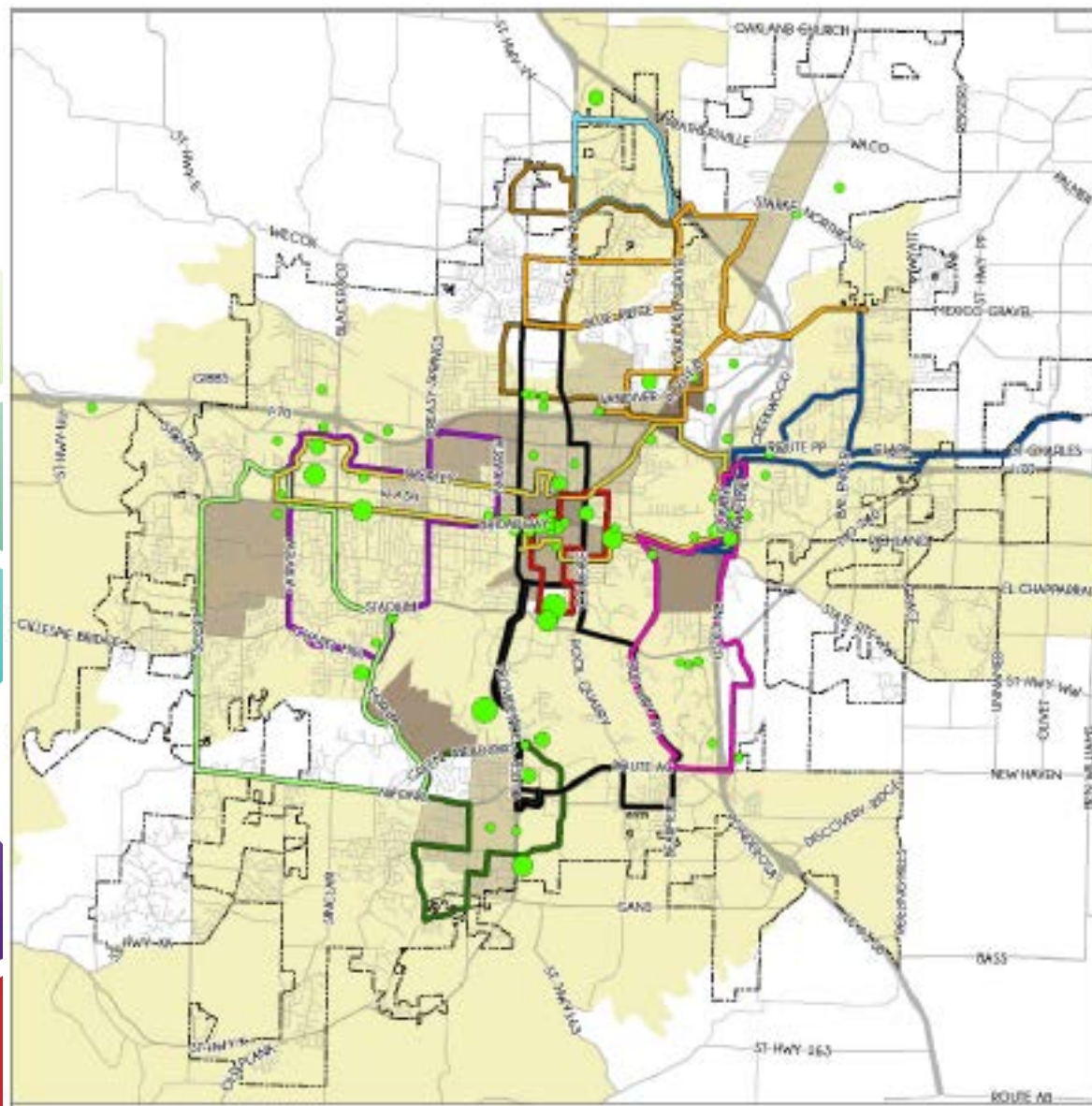
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Market Findings

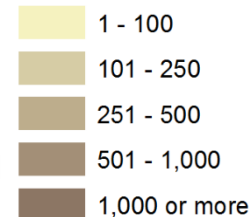
- Existing and Future population
- Existing and Future Employee Density
- Youth (<17), College-age, and Senior populations
- Persons with Disabilities
- Minority population
- Limited English Proficiency
- Zero & One Car Households





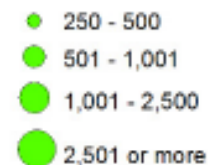
Employee Density (Demographic Aggregate)

Employees per Square Mile



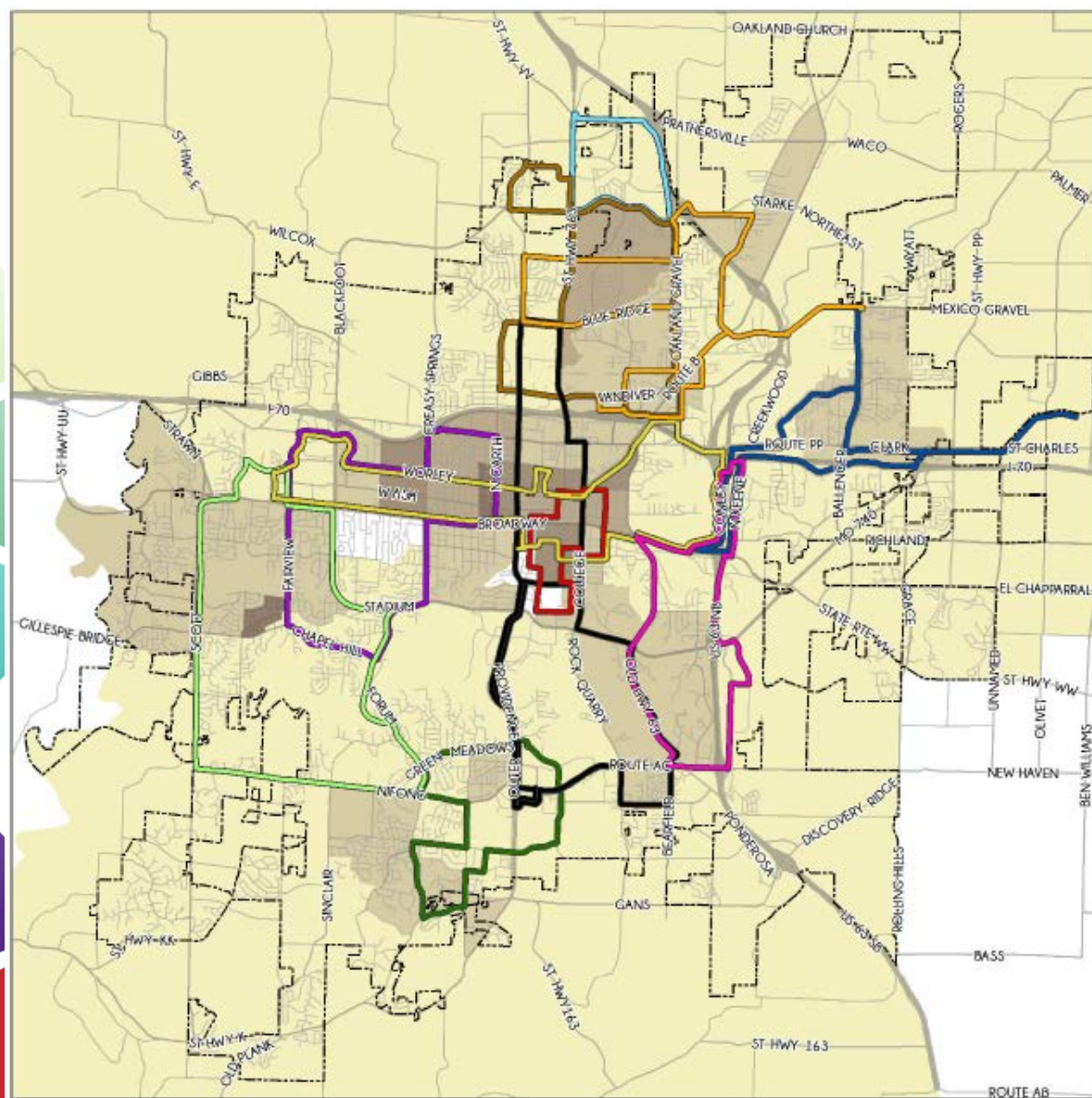
* Excludes zero values

Major Employer Locations



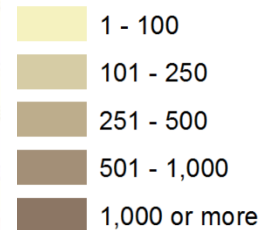
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Individuals with One or More Disabilities

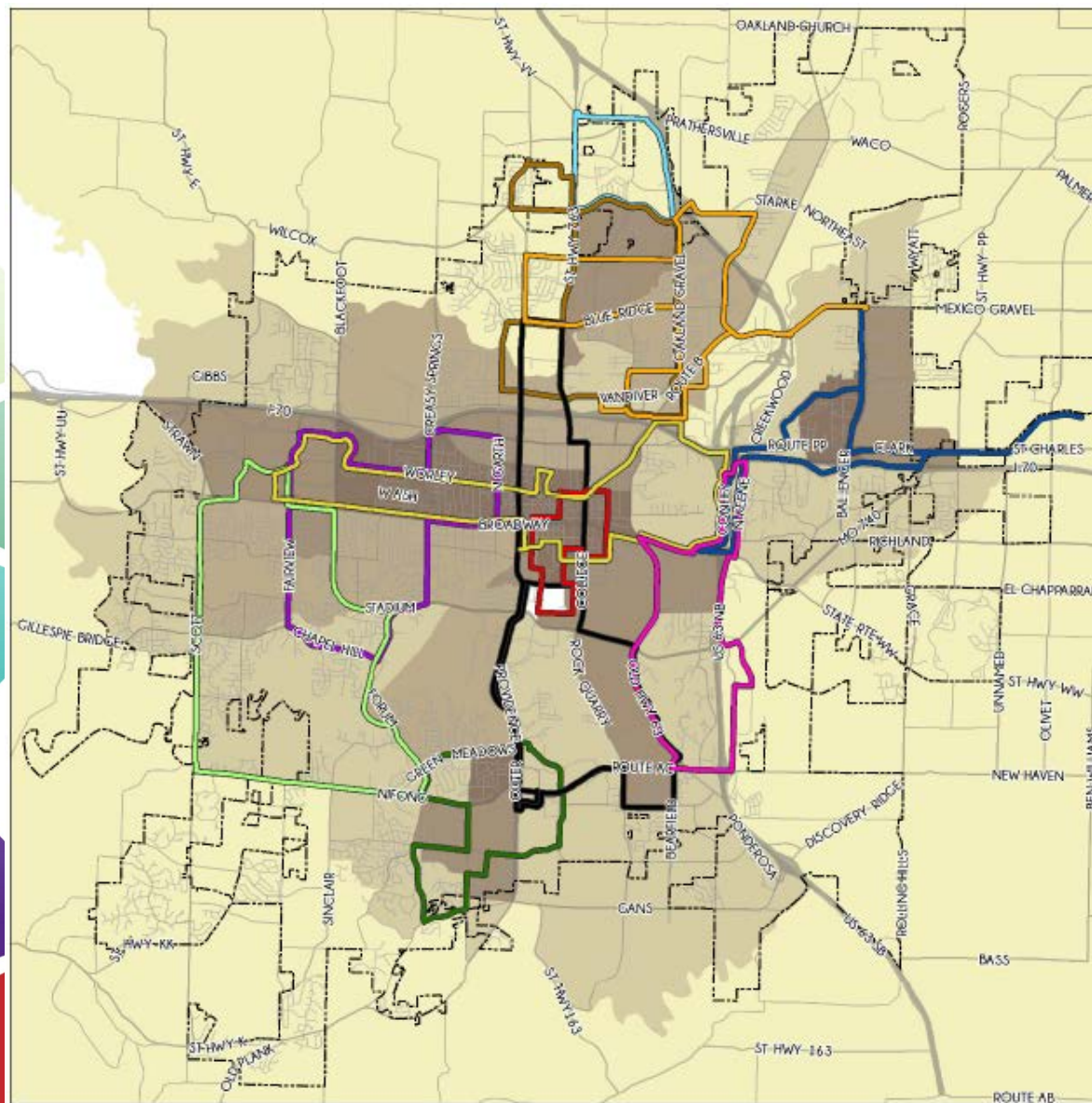
Persons per Square Mile



* Excludes zero values

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Zero & One Car Household Density

Households per Square Mile

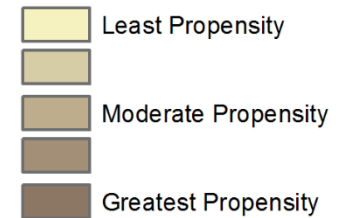
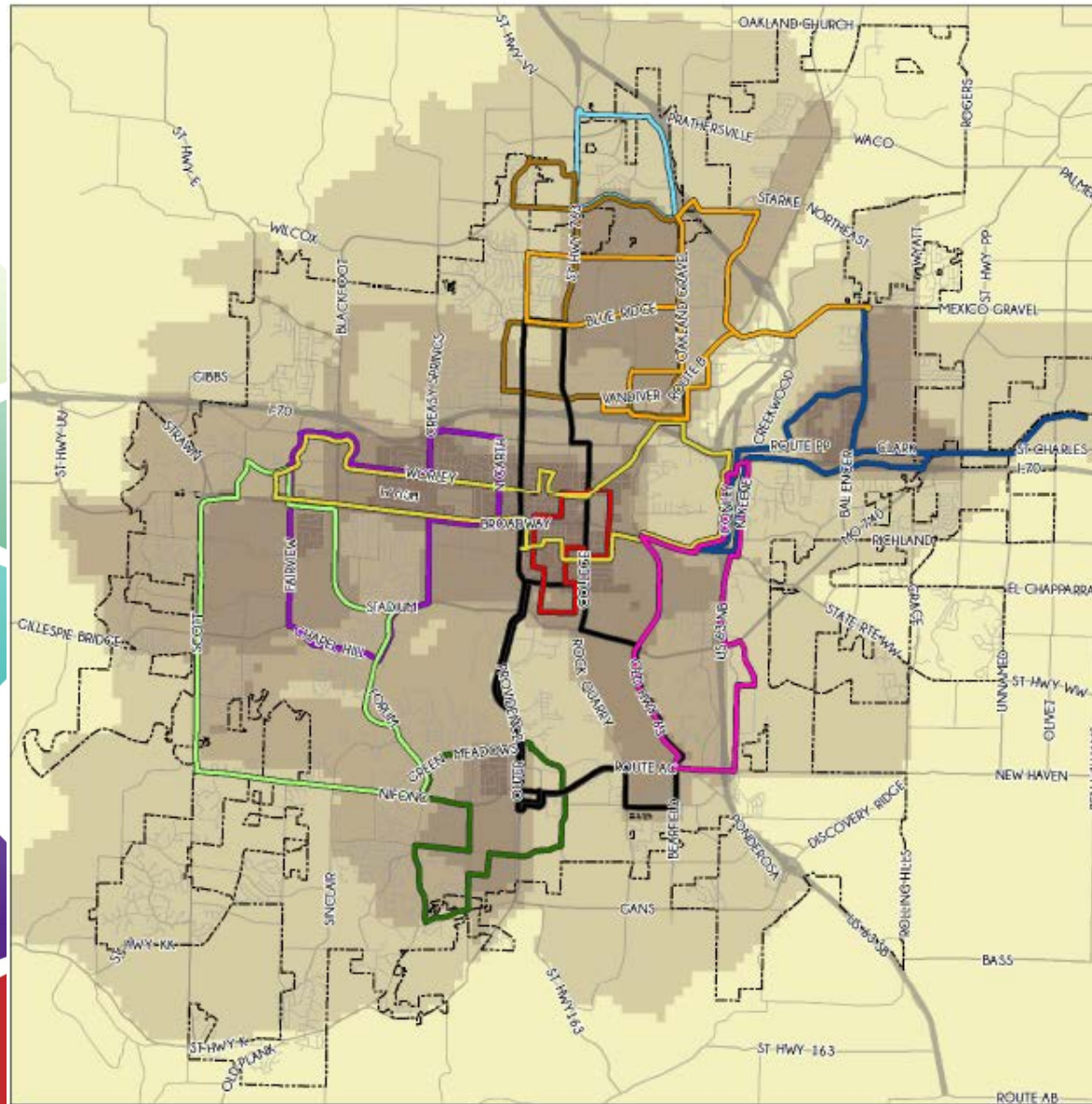
- 1 - 100
- 101 - 250
- 251 - 500
- 500 - 1,000
- 1,001 or more

* Excludes zero values

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Transit Propensity (Demographic Aggregate)



Composed of the following populations

- Elderly
- People with disabilities
- Low Income
- Youth
- College Age
- Minorities
- Limited English Proficiency
- 1 or fewer vehicle households

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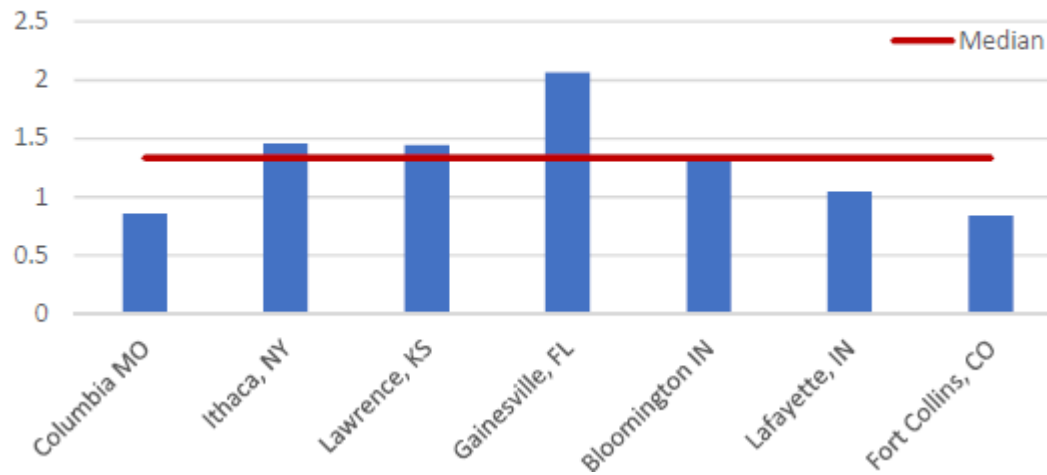
Peer Cities



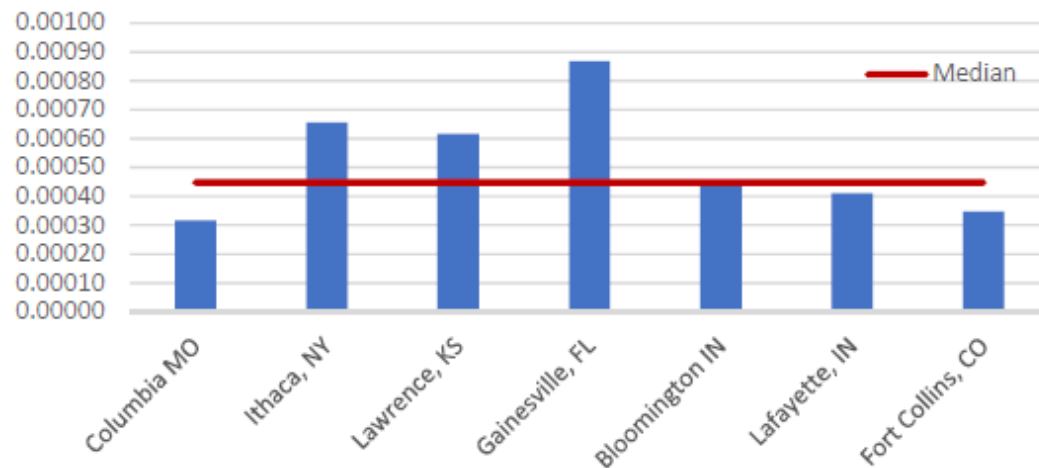
Agency	Service Area Population	Service Area (sq. miles)	Service Area Population Density	Annual Operating Funds	Enrolled Students Ages 18 to 24	Persons with Disabilities per Capita
Columbia, MO (University of Missouri)	117,381	62	2,012	\$6,419,850	24,486	0.089
Ithaca, NY (Cornell University)	103,617	476	217	\$13,099,935	15,893	0.022
Lawrence, KS (University of Kansas)	87,643	30	2,932	\$8,105,320	19,952	0.094
Gainesville, FL (University of Florida)	160,000	76	2,105	\$24,641,027	38,361	0.073
Bloomington, IN (Indiana University)	80,405	21	3,828	\$7,212,619	31,215	0.093
Lafayette, IN (Purdue University)	134,333	74	1,815	\$11,074,678	18,584	0.067
Fort Collins, CO (Colorado State University)	143,986	54	2,666	\$11,453,778	24,880.	0.076

Source: NTD Transit Agency Profiles 2014, 2014 American Community Survey 5 – Year Estimate

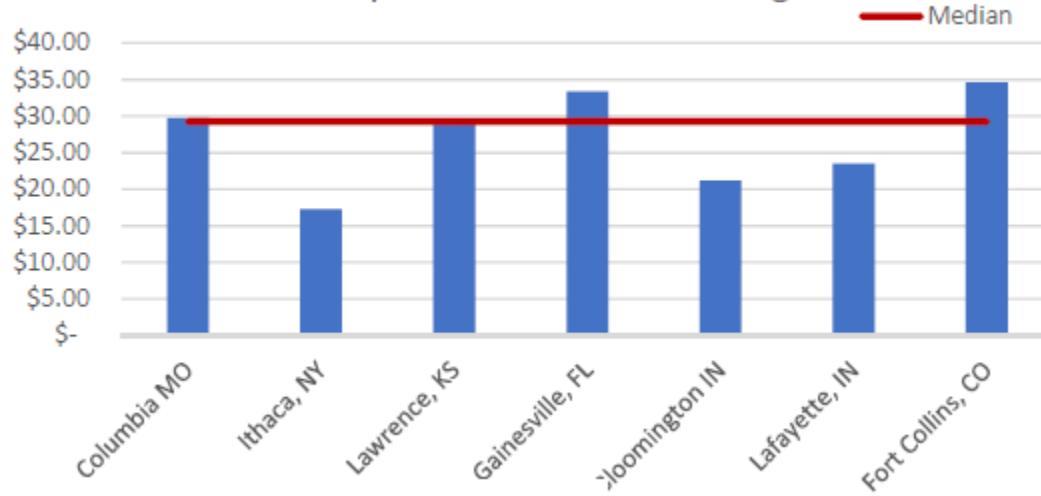
Annual Revenue Hours per Capita



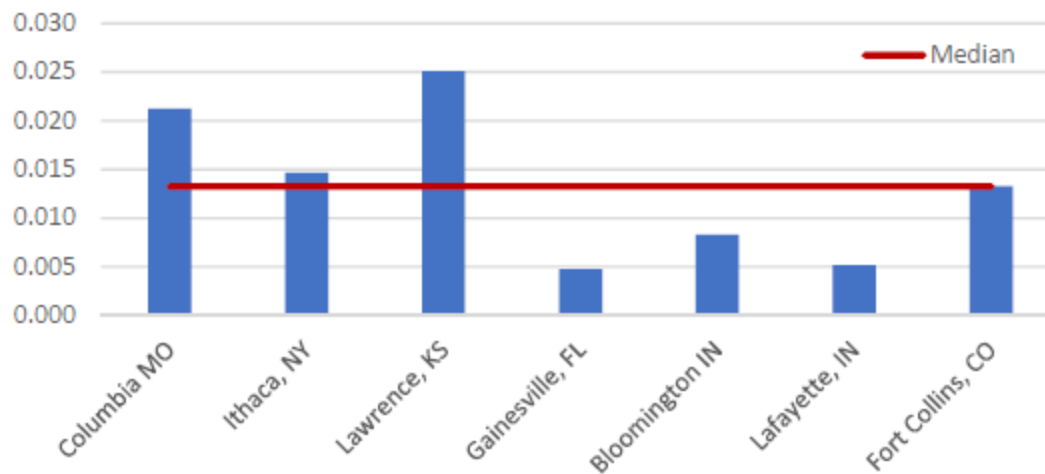
Vehicles Operated in Peak Service per Capita



Cost per Paratransit Boarding



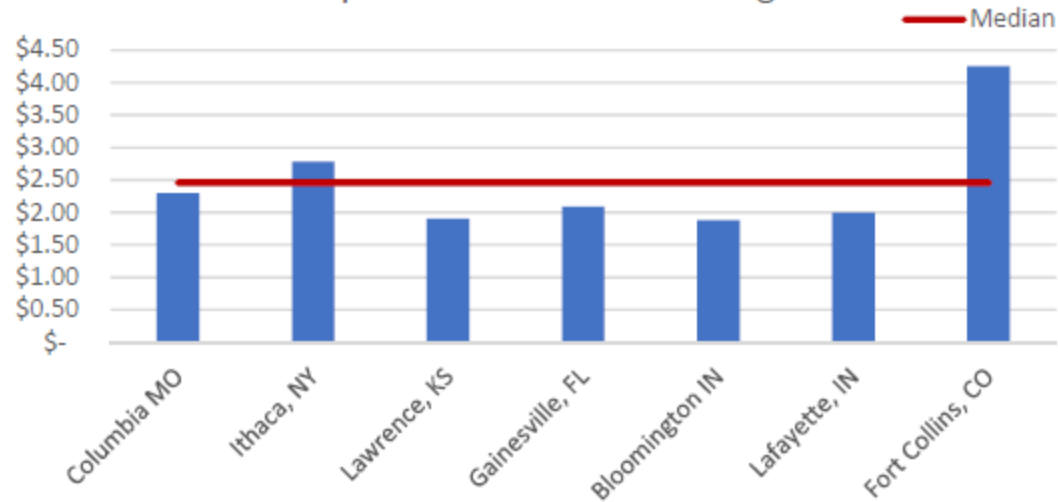
Paratransit Riders per Fixed Route Rider



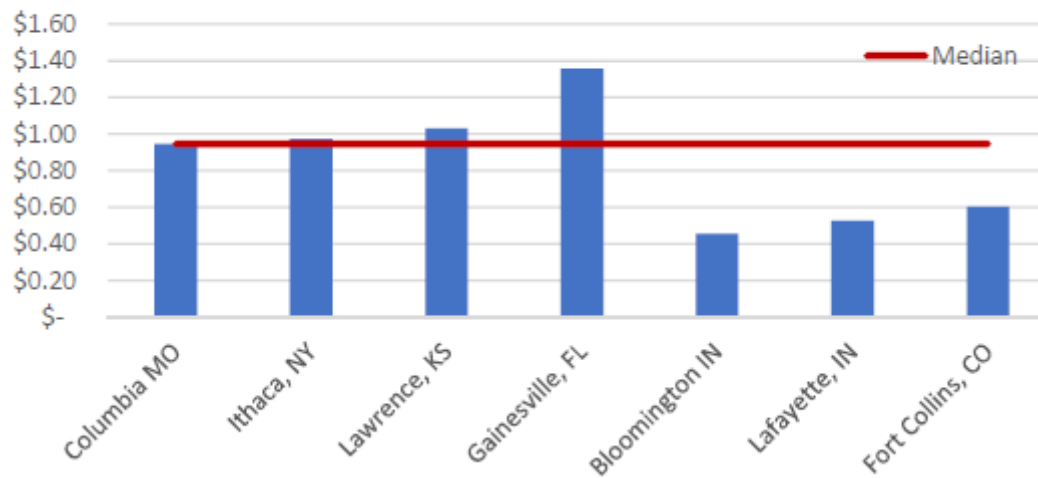
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Cost per Fixed Route Boarding



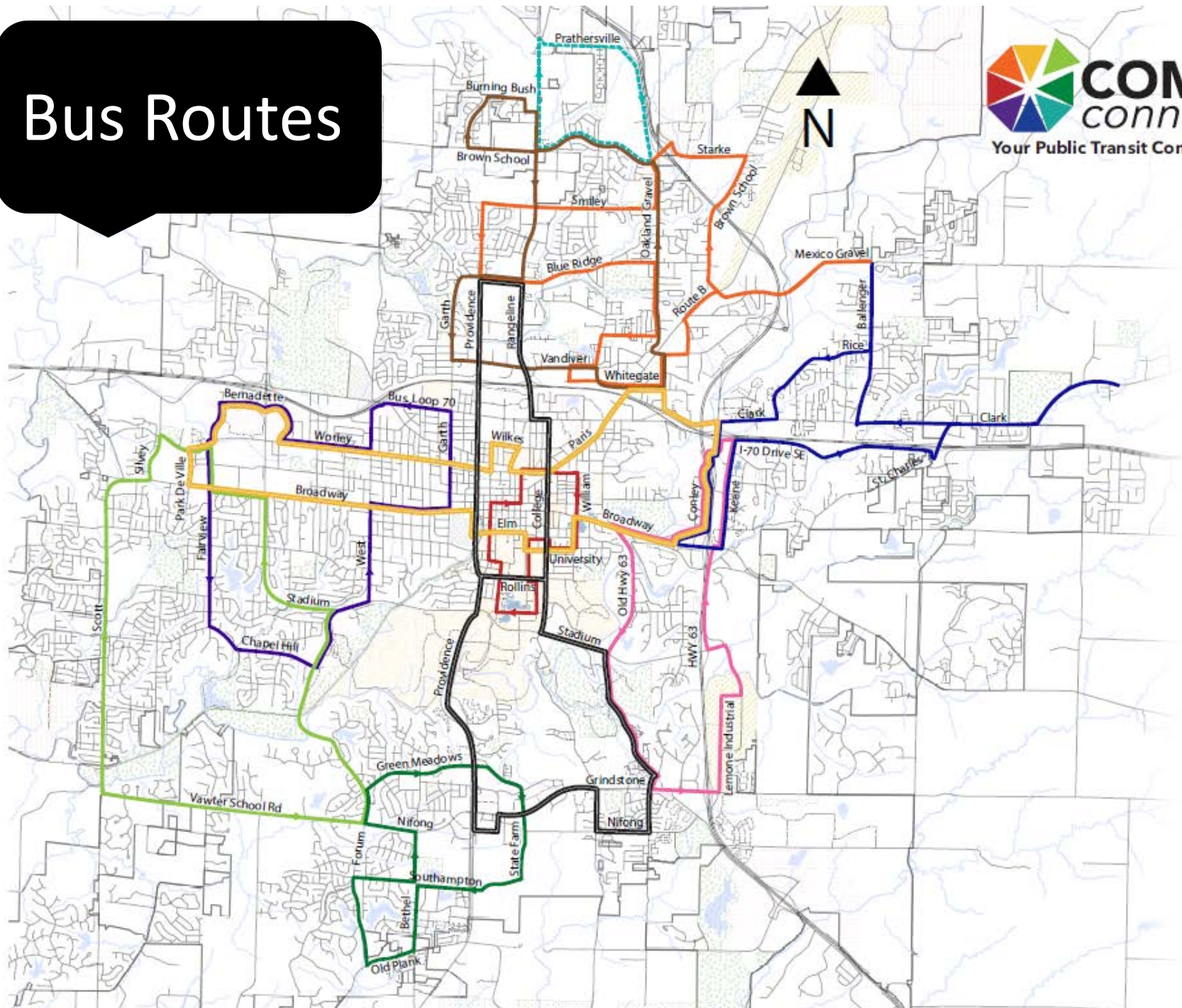
Revenue Per Passenger Boarding



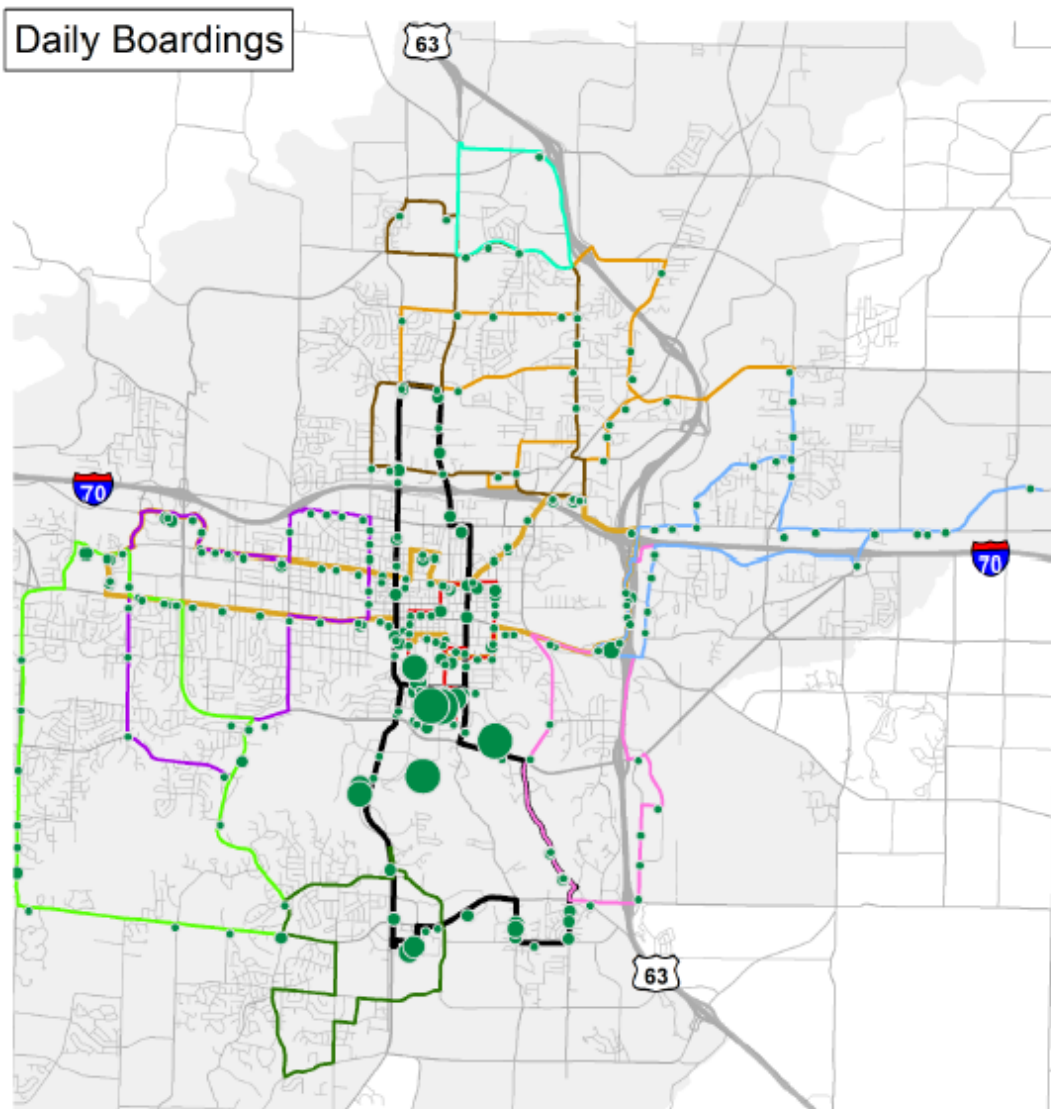
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Bus Routes



Daily Boardings



Total Boardings per Day

- 1 to 10
- 11 to 50
- 51 to 100
- 101 to 300
- 301 to 600
- 600 and above

Route Name

- | | |
|---------------------|--------------------------|
| — #1 - Black Route | — #6 - Pink Route |
| — #2 - Gold Route | — #7 - Dark Green Route |
| — #3 - Brown Route | — #8 - Light Green Route |
| — #4 - Orange Route | — #9 - Purple Route |
| — #5 - Blue Route | — #10 - Red Route |
| | — #11 - Aqua Route |

0 1 2 4 Miles

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Figure 18: FY 2015 COMO Connect Weekday Ridership by Route

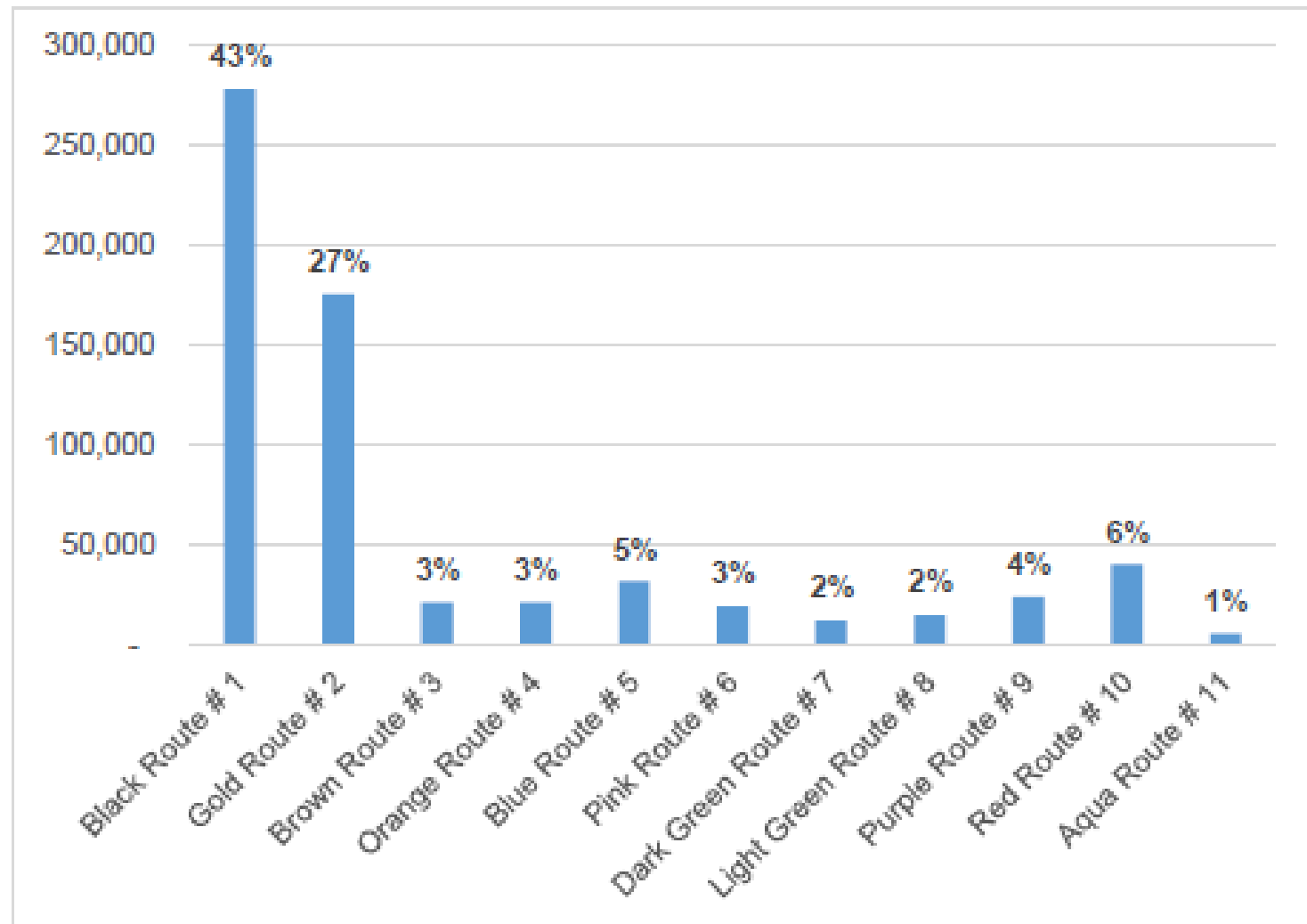


Figure 30: Operating Cost by System Route

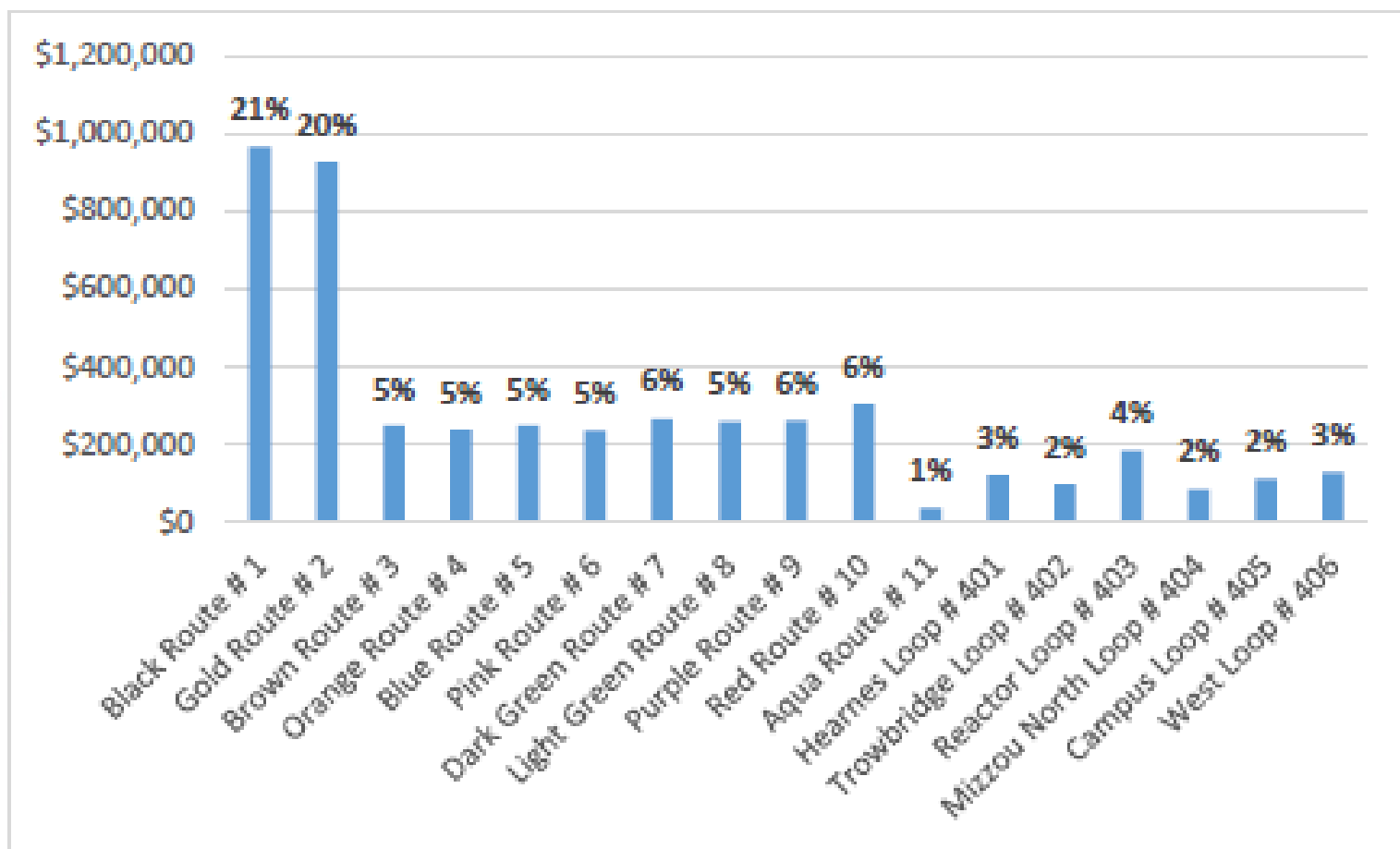


Figure 13: Subsidy per Weekday Passenger

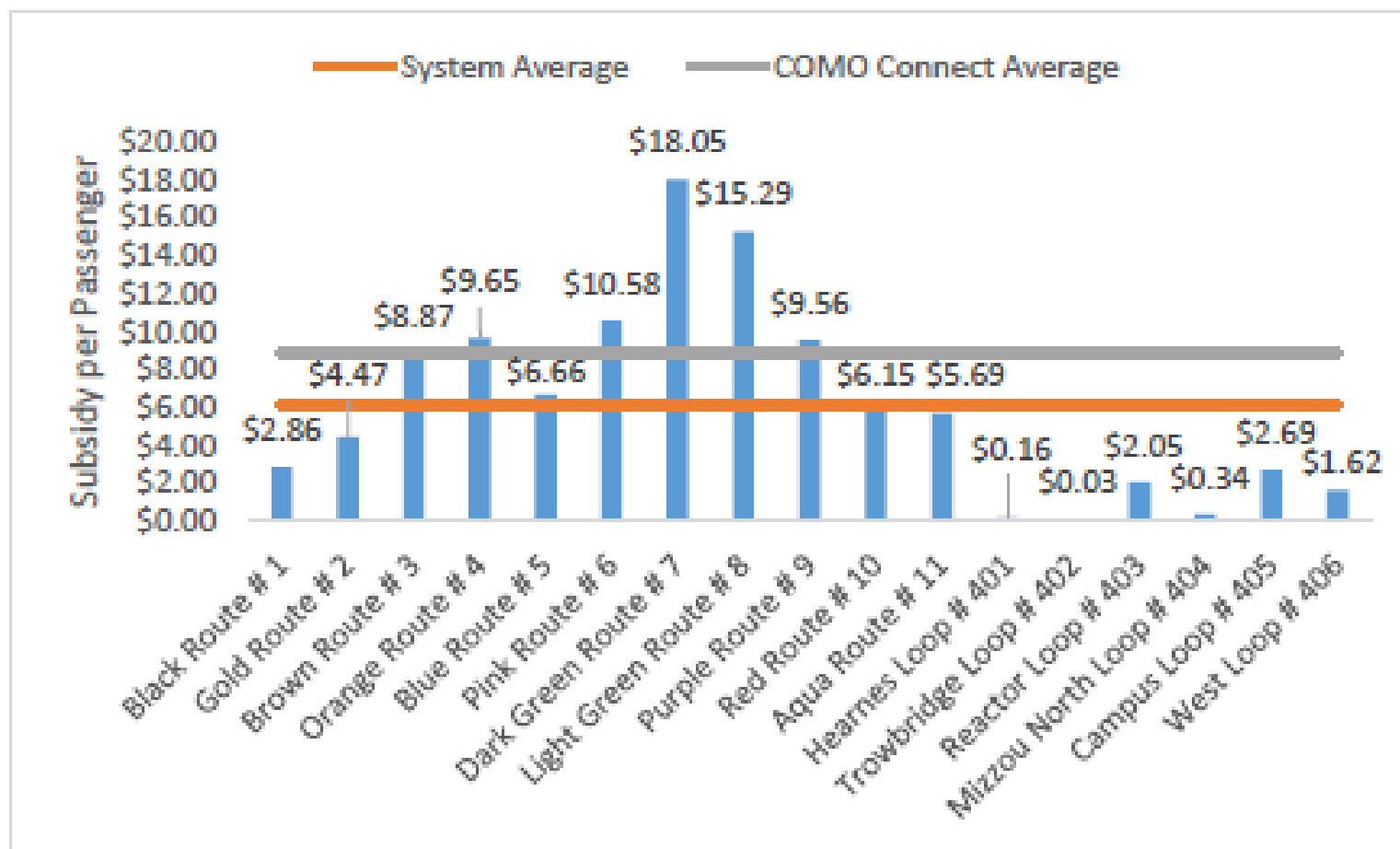
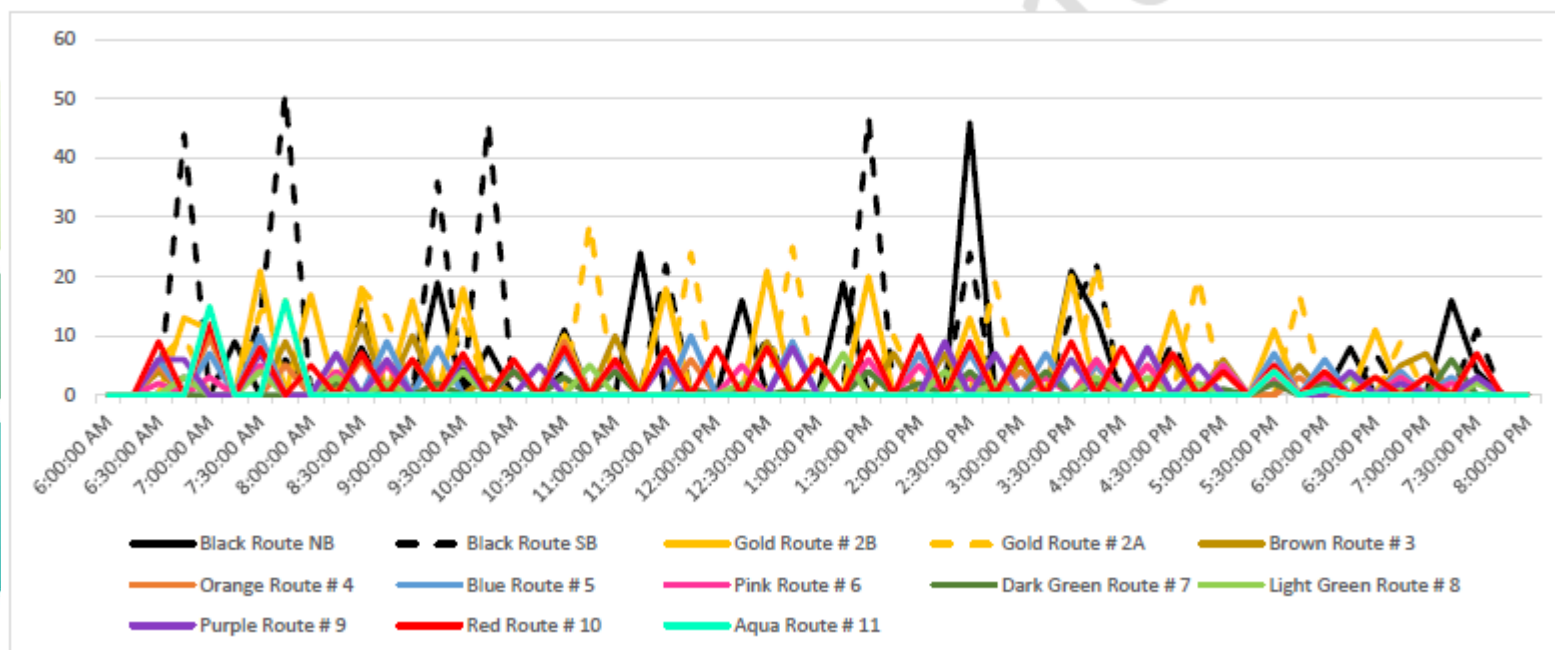


Figure 22: COMO Connect Ridership by Time of Day



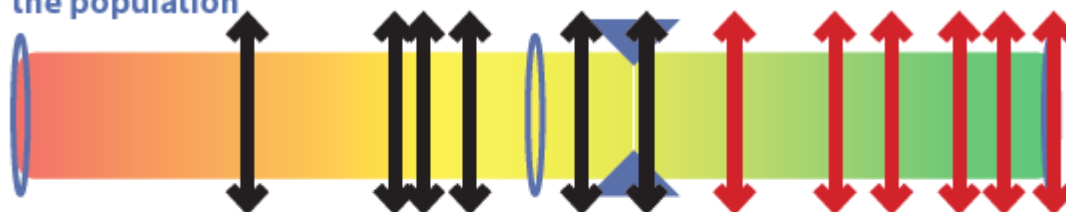
Visioning Session and Public Outreach

- Vision Session October 11th, 2016
- Online Survey September 27th, 2016 – January 13th, 2017.
 - 392 Responses



a Coverage and Accessibility

Ensure bus and paratransit service is fully accessible to all members of the population



Service is available to the portion of the city with the highest population density



Service is available within a 1/4-mile of the city's denser areas



Service is available to most people but gaps still exist



Service is available to people within 1/4-mile of their home, work, or other destinations

alkins

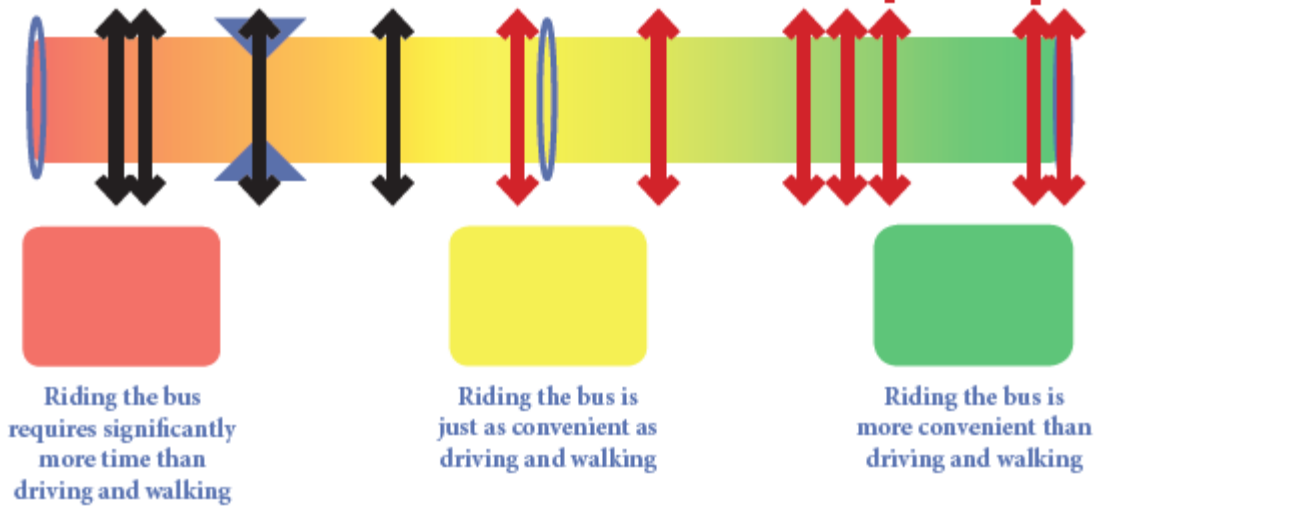
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b

Performance

Provide effective transportation service for all bus and paratransit riders

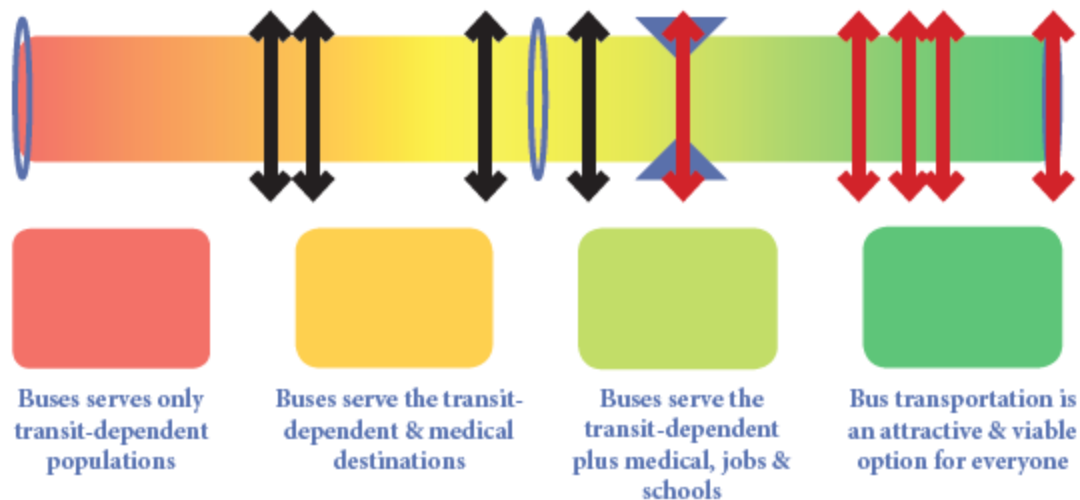


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C Resources

Provide sufficient resources for bus and paratransit service in the community

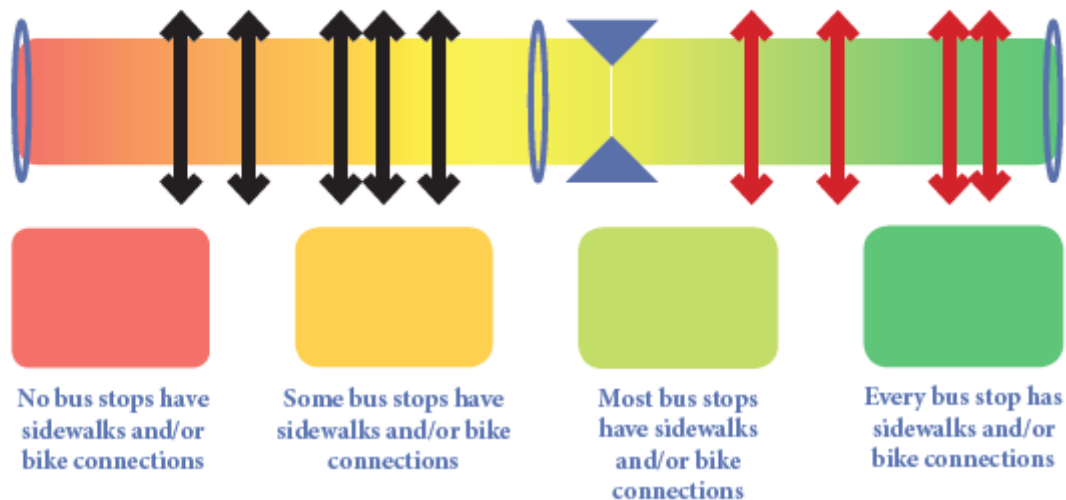


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d Integration

Integrate the transit system into Columbia's overall transportation network, including sidewalk and bike connections between destinations and bus stops

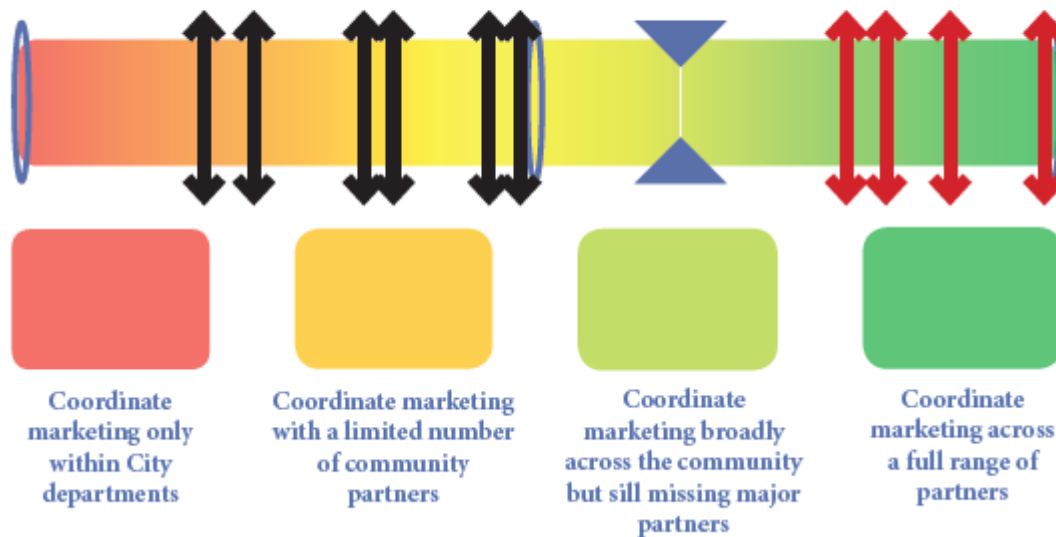


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e Marketing

Partner with stakeholders to promote and market the bus system



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Safety



Major gaps exist
in safety with
paratransit and
drivers







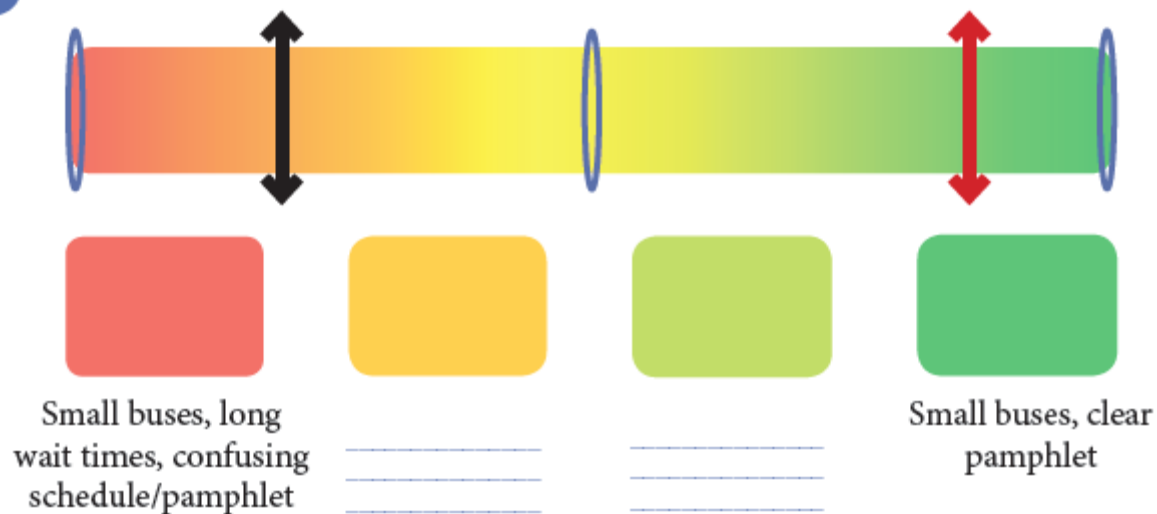
All stops are safe
& drivers are
professional &
safe

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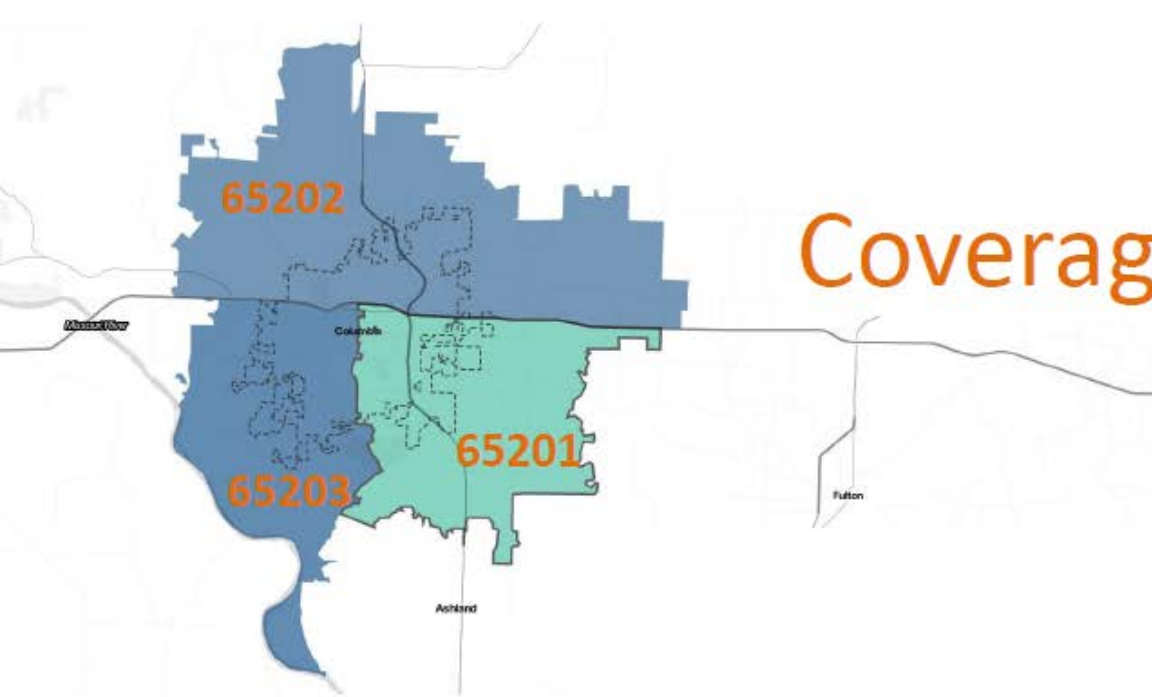


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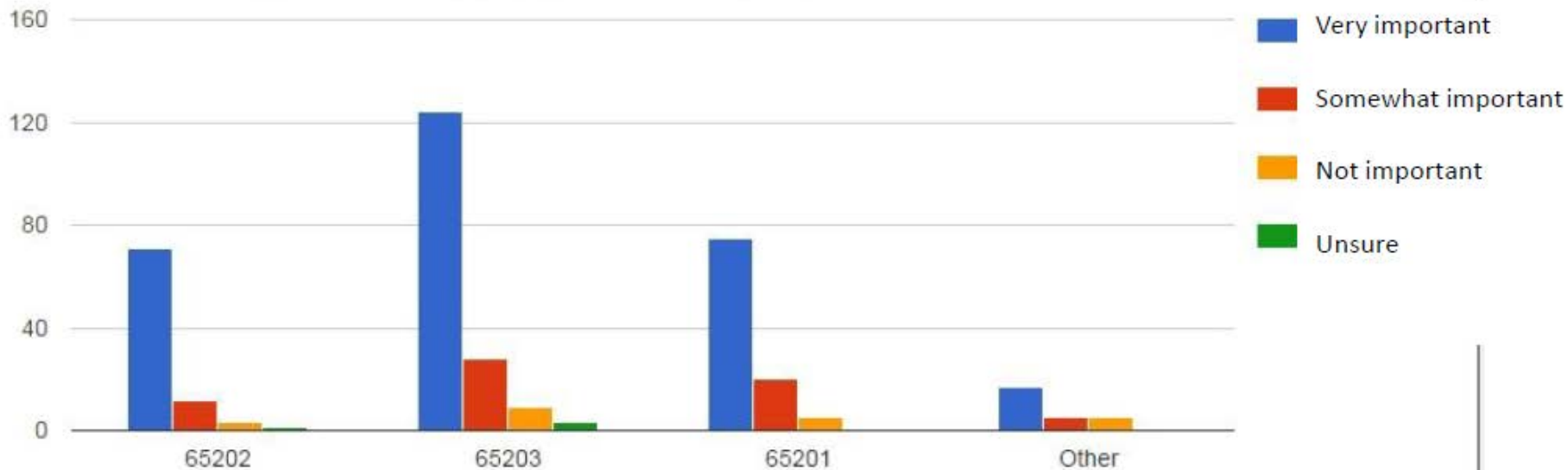
Small Buses & Clear Bus Schedule/Pamphlet



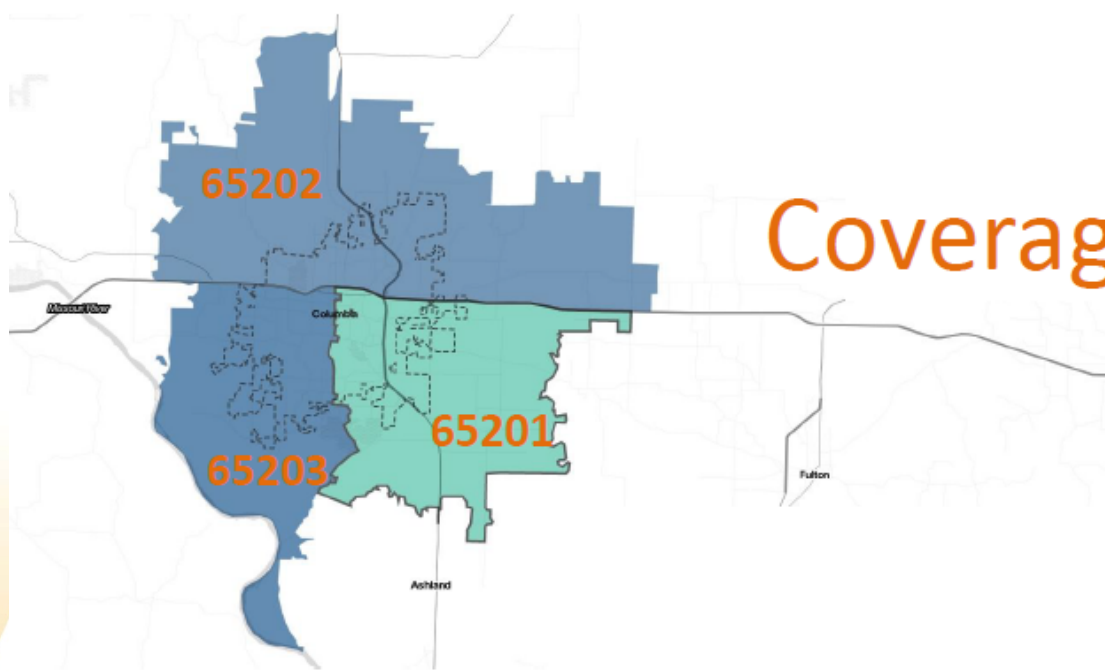
Importance of Coverage & Accessibility



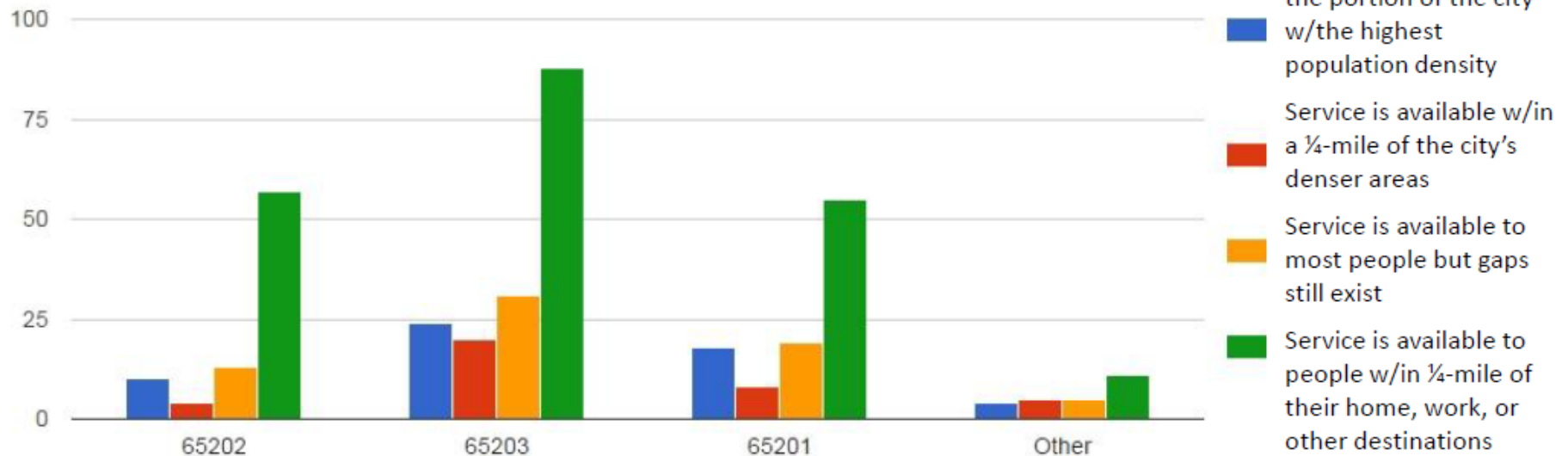
Coverage and Accessibility: How important is it to ensure that bus and paratransit service is fully accessible to all members of the population? Select one opinion.



Vision for Coverage & Accessibility

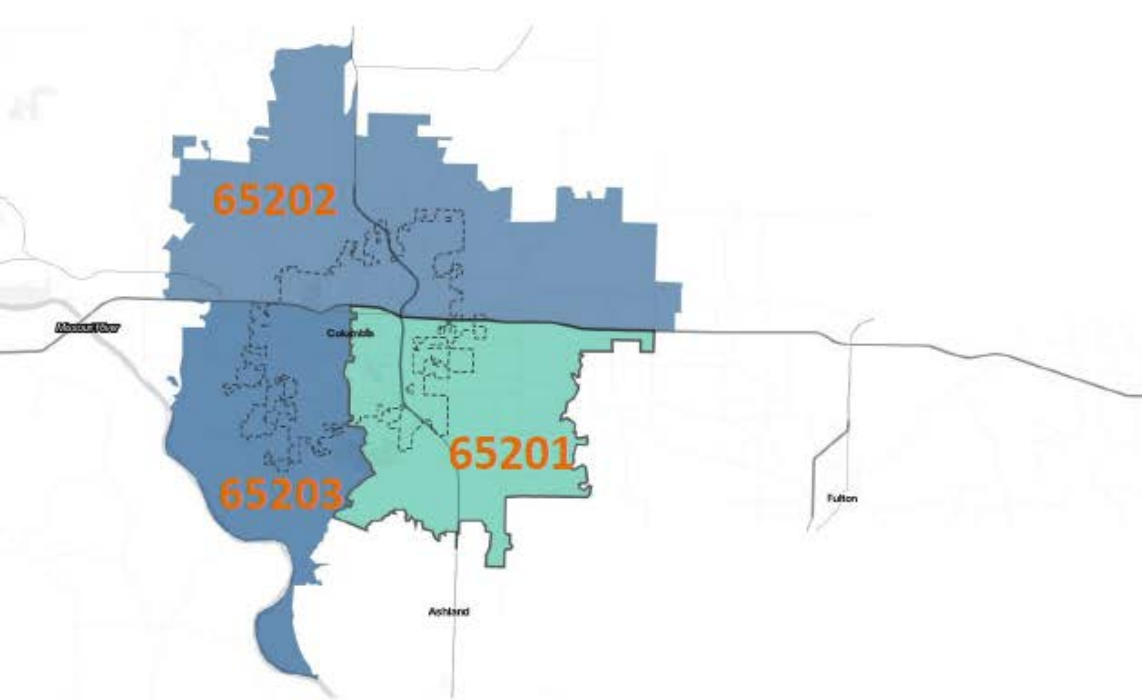


Coverage and Accessibility (continued): In the future, which type of coverage and accessibility do you envision? Select one opinion.

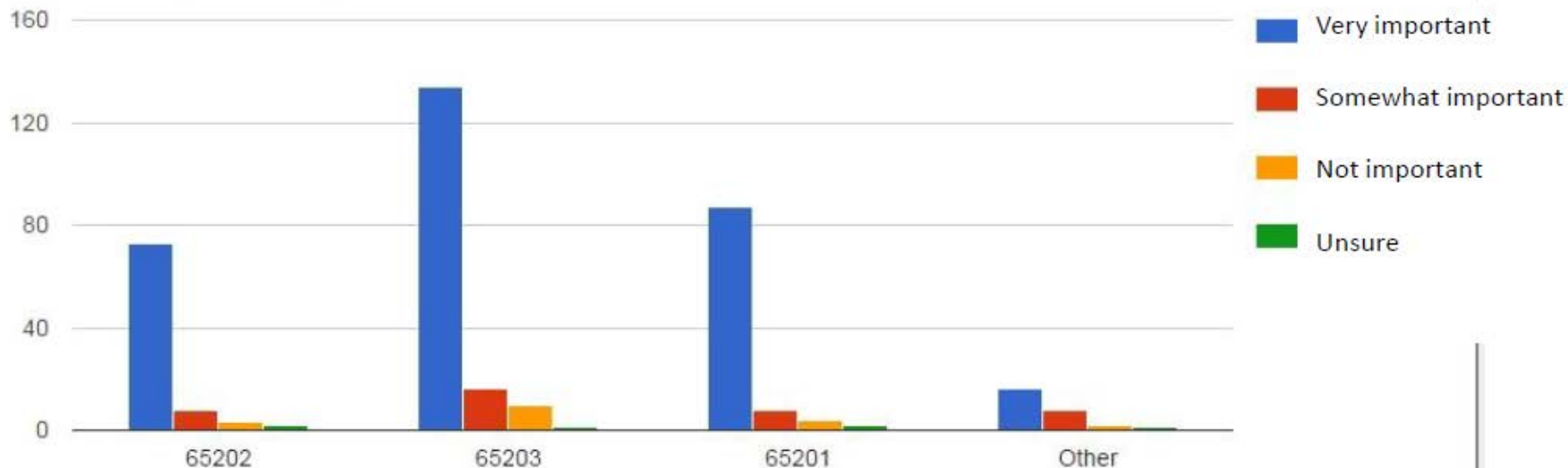


Response counts by community

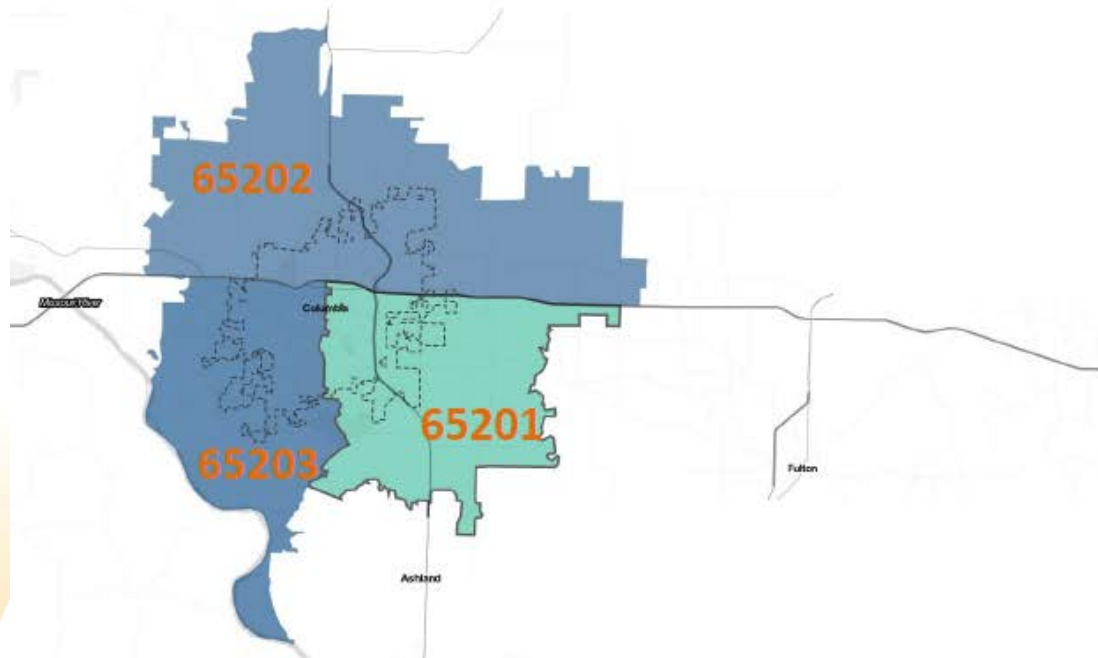
Importance of Performance



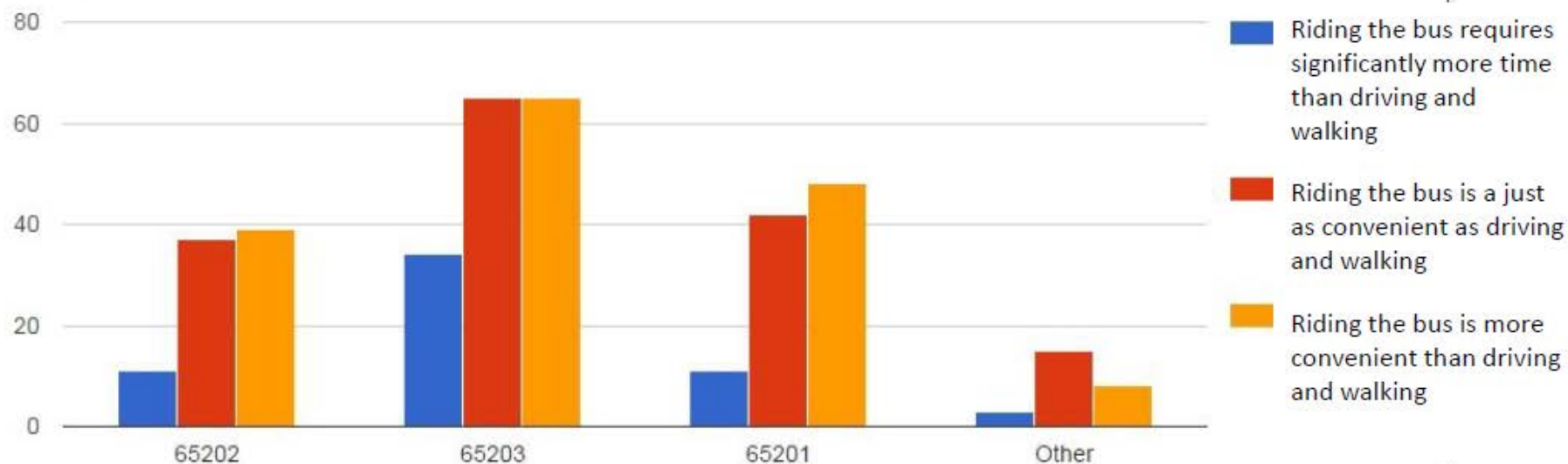
Performance: How important is it to provide effective transportation service for all bus and paratransit riders? Select one opinion.



Vision for Performance

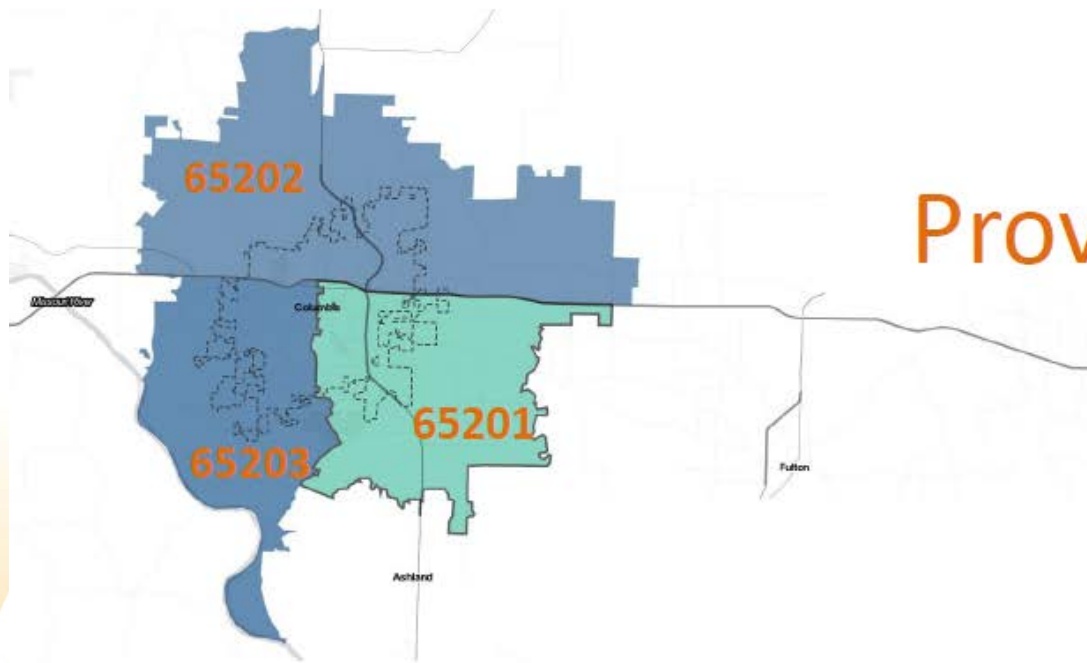


Performance (continued): In the future, which type of performance do you envision? Select one opinion.

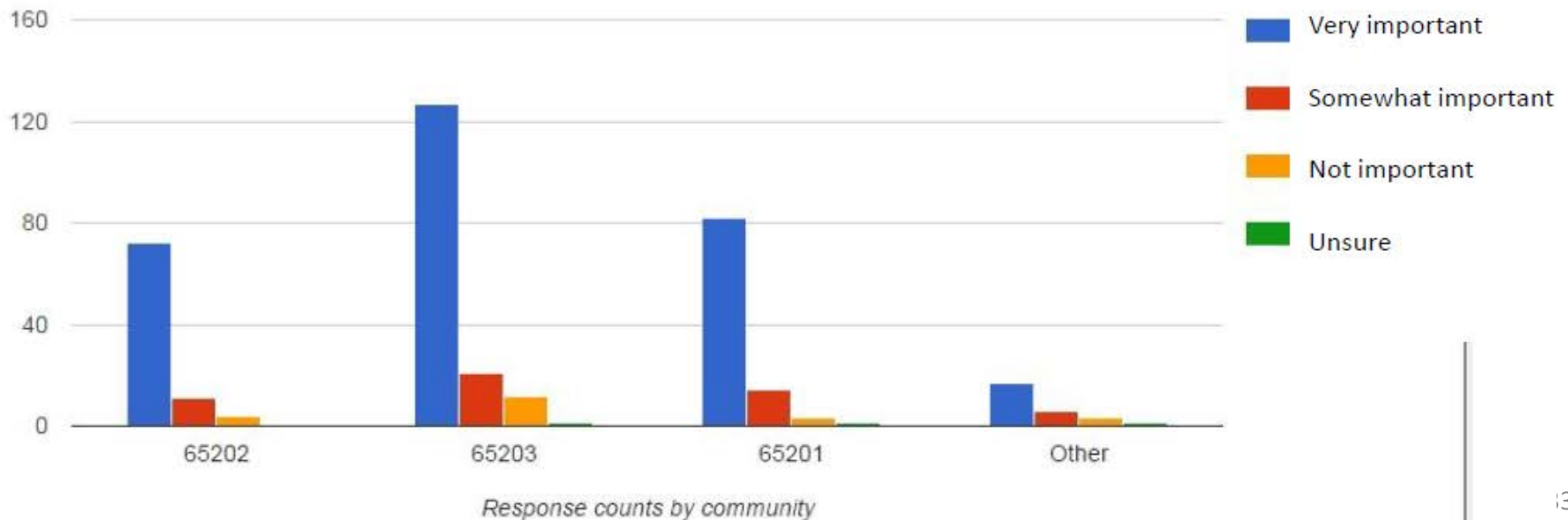


Response counts by community

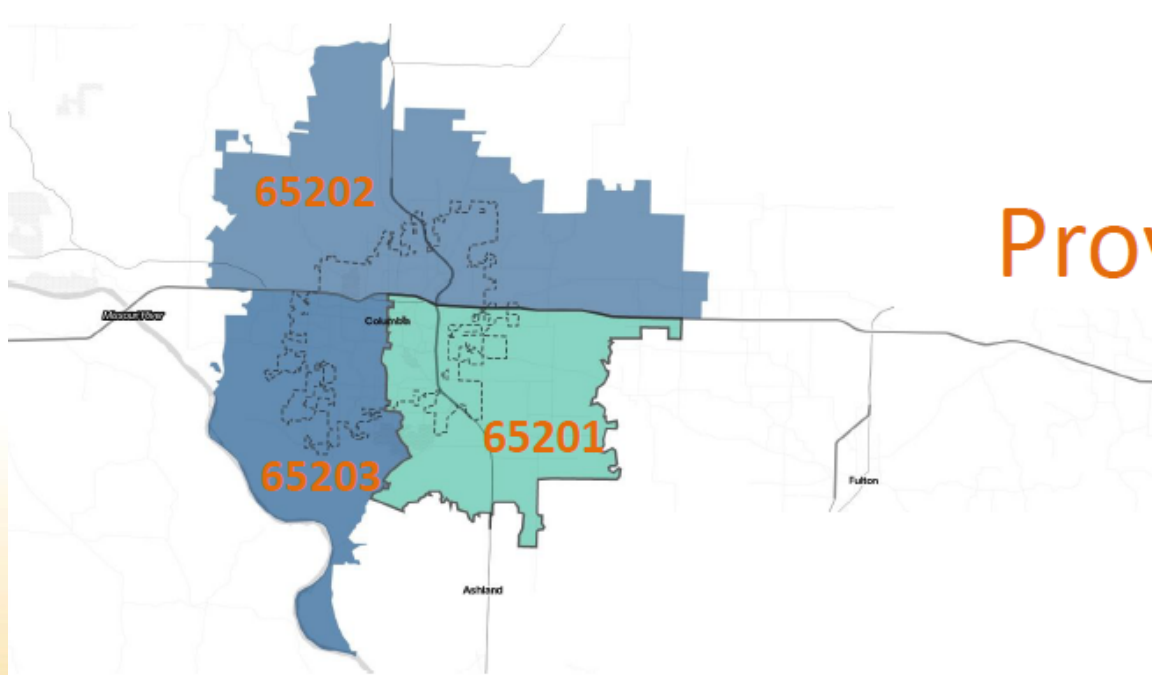
Importance of Providing Resources



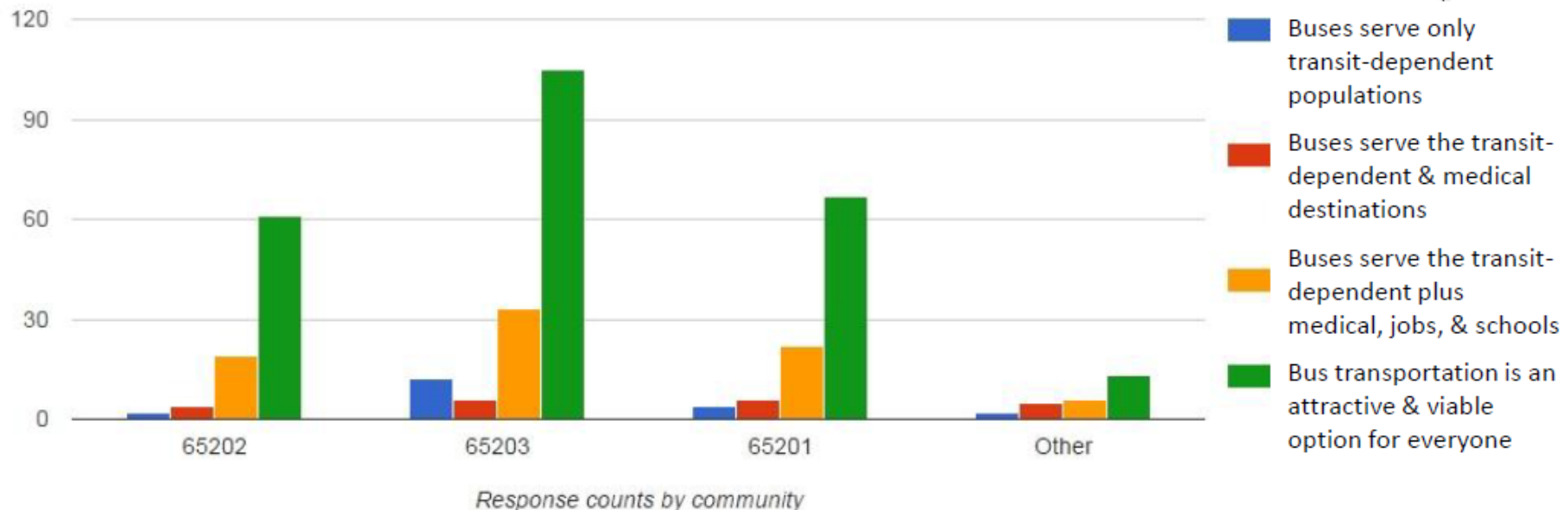
Resources: How important is it to provide sufficient resources for bus and paratransit service in the community? Select one opinion.



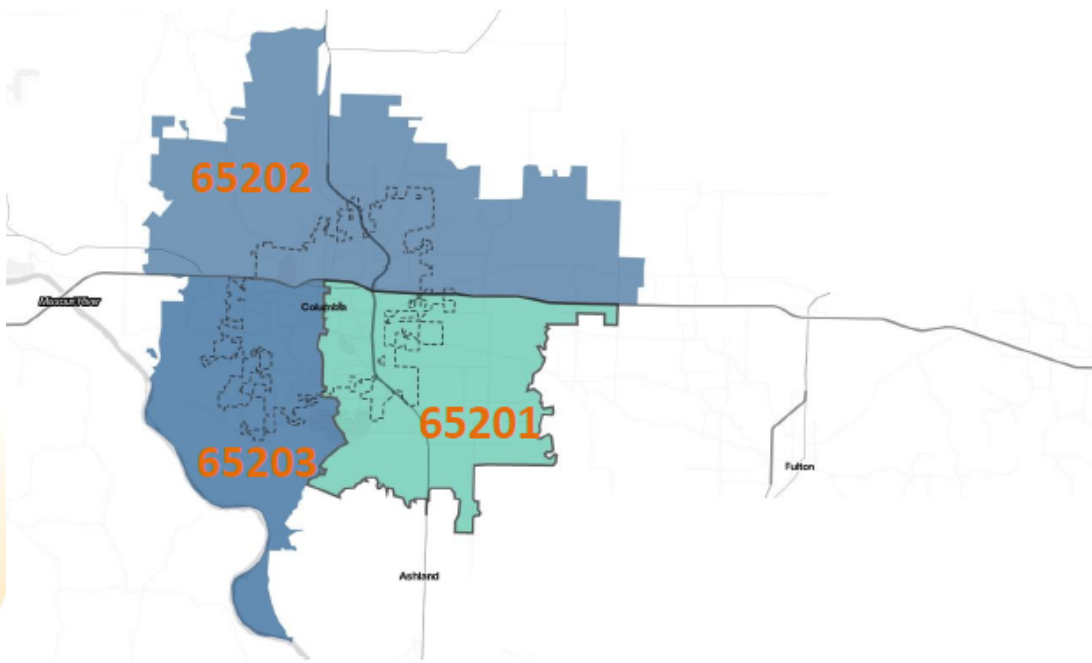
Vision for Providing Resources



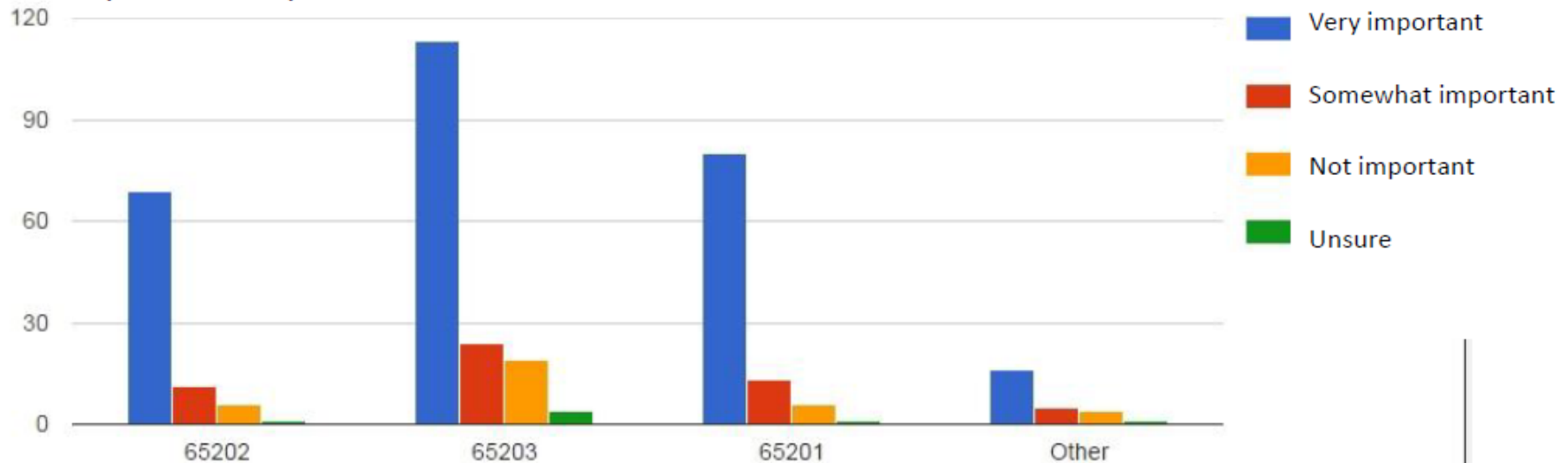
Resources (continued): In the future, what type of bus and paratransit resources do you envision?
Select one opinion.



Importance of Integration

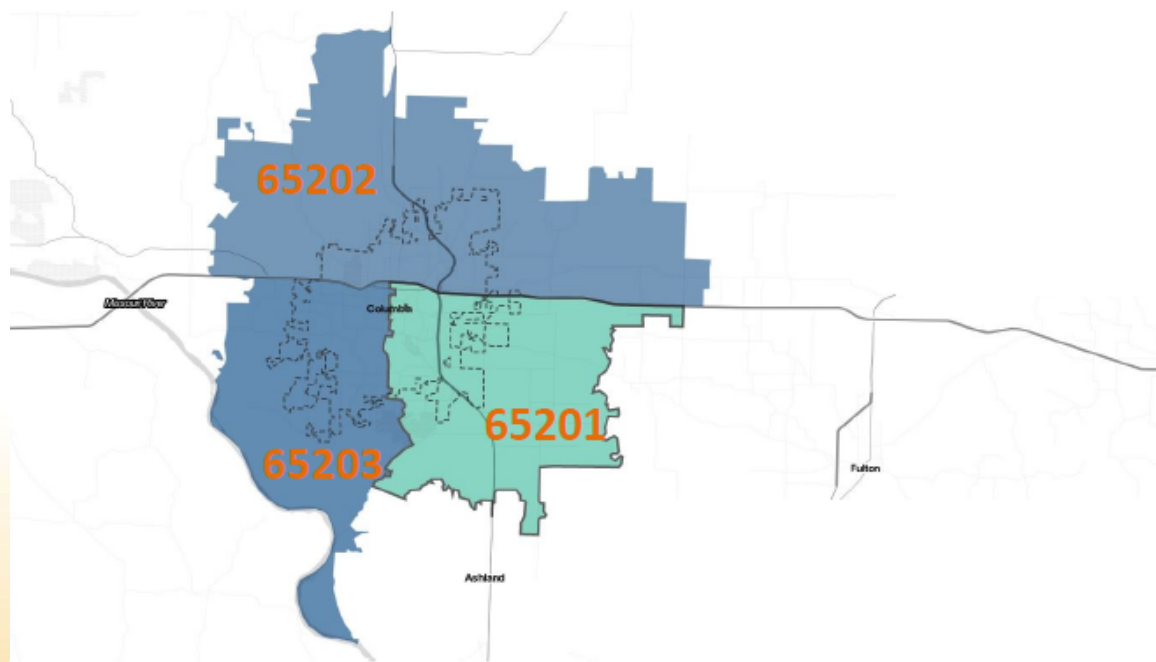


Integration: How important is it to integrate the transit system into Columbia's overall transportation network, including sidewalk and bike connections between destinations and bus stops? Select one opinion.

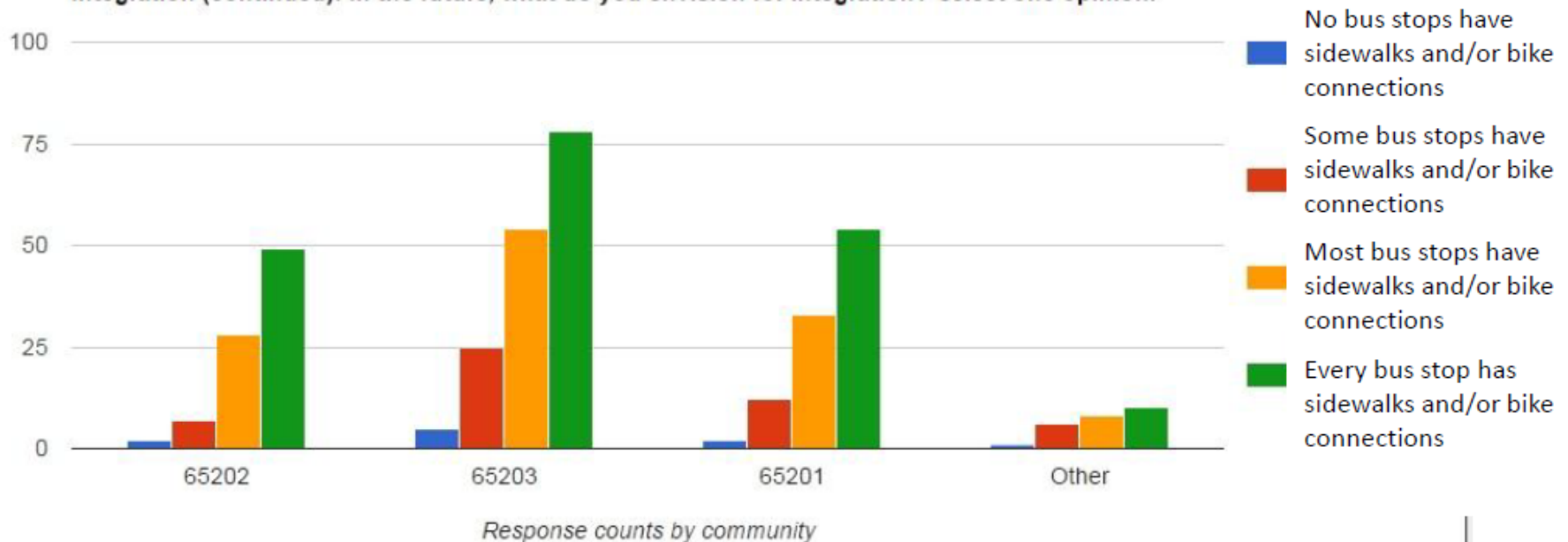


Response counts by community

Vision for Integration



Integration (continued): In the future, what do you envision for integration? Select one opinion.



Design Guidelines – Stop Spacing

Environment	Spacing Range	Typical Spacing
Central Core Areas of CBDs	300 to 1,000 feet	600 feet
Urban Areas	500 to 1,200 feet	750 feet
Suburban Areas	600 to 2,500 feet	1,000 feet
Rural Areas	650 to 2,640 feet	1,250 feet

	Key Corridor - <BRT>	Key Corridor - Other	Urban Local	Suburban Local	Commuter	Lifeline
Minimum Stop Spacing (Feet)						
Moderate to High Density Areas	1,100	900	660	660	900	900
Low Density Areas	1,300	1,300	900	1,100	1,100	1,100
Maximum Stops per Mile						
Moderate to High Density Areas	5	6	8	8	6	6
Low Density Areas	4	4	6	5	5	



Density Characteristics	Population and Employment Characteristics	Spacing Dimensions
High Density	16+ persons or jobs per acre	Approx. every 800 feet
Moderate Density	8-16 persons or jobs per acre	Approx. every ¼-mile
	4-8 persons or jobs per acre	Approx. every ¼- to ½-mile
Low Density	0-4 persons or jobs per acre	As needed

Source: Kansas City Area Transportation Authority. KCATA Bus Stop G

Source: Lincoln Transit Development Plan, Final Report, April 2016

Design Guidelines – Bus Stop Amenities

Feature	Daily Boardings				
	<10	10-24	25-50	51-150	150+
Bus Stop* Sign	Standard	Standard	Standard	Standard	Standard
Route Designation	Standard	Standard	Standard	Standard	Standard
Benches			Standard	Standard	Standard
Shelter			Standard	Standard	Standard
Information Display			Standard	Standard	Standard
Trash Receptacle			Standard	Standard	Standard
Bus Stop Pad			Standard	Standard	Standard
Lighting				Standard	Standard
Bicycle Rack				Standard	Standard
Landscaping				Standard	Standard
Leaning Rails				Standard	Standard
Bollards				Standard	Standard

Source: Lawrence Kansas



Recommended Service Standards

Criteria	Neighborhood Route		Connector Route		TIGER Line Routes (day time)	
	Current	Future	Current	Future	Current	Future
Peak Frequency (minutes)	30, 35, or 40	30, 40, or 45	30	20-30	10, 15, or 30	10, 15, 20, or 30
Off Peak Frequency (minutes)	30, 35, 40	30, 40, or 45	60	30	10, 15, or 30	10, 15, 20, or 30
Hours of Service	6:30 am to 8:00 pm	6:00 am to 7:30 pm or later	6:30 am to 8:00 pm	6:00 am to 7:30 pm or later	7:00 am to 5:30 pm or 6:00 pm	7:00 am to 5:30 pm or 6:00 pm
Span of Service (hrs)	13-14	13-14	13-14	13-14	6-16	6-16
Stop Spacing	800' to 1,200'		800' to 1,200'		800' to 1,200'	800' to 1,200'
Bus stop amenities	N/A	>25 ADR	N/A	>25 ADR	N/A	N/A

ADR: Average Daily Ridership

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Recommended Standards – Passengers Per Revenue Hour

	Type	Weekday Pass / Rev Hr	% of Route Type Average
Black	Connector	25.3	120%
Gold	Connector	16.8	80%
Aqua	Neighborhood	13.4	152%
Red	Neighborhood	12.4	140%
Blue	Neighborhood	11.5	131%
Brown	Neighborhood	8.8	100%
Orange	Neighborhood	8.1	92%
Purple	Neighborhood	8	91%
Pink	Neighborhood	7.4	84%
Light Green	Neighborhood	5.2	59%
Dark Green	Neighborhood	4.4	50%
Connector Route Average			21.1
Neighborhood Route Average			8.8

No Change	Increase route marketing	Evaluate Route Realignment
75% to 125% of standard	50% to 75% of standard	25% to 50% of standard
75% of 125% of standard	50% to 75% of standard	25% to 50% of standard
75% to 125% of standard	50% to 75% of standard	25% to 50% of standard

Evaluate Deviated Fixed Route	Evaluate Public Demand Response	Evaluate Eliminate Service
4 – 6 pph	2 – 4 pph	Less than 2 pph
4 – 6 pph	2 – 4 pph	Less than 2 pph
N/A	N/A	Less than 6 pph

Standard: 110% of median passengers per revenue hour among peer group
pph: Passengers per revenue hour

Scenarios

Table 1 Existing System and Scenarios Comparison

Scenario	Description	Frequency	Flex Routes	Cost	Increase (Decrease) over Current Cost*
Existing	Loops	30, 35, 40, 60 minute	No	\$3,727,572	N/A
Scenario A	Modified Loops	30 minute	Yes	\$3,745,784	+\$18,212
Scenario B	Trunk Routes	30 Minute	Yes	\$3,689,264	(\$38,308)
Scenario C	High freq. Trunks	20 Minute	No	\$4,521,660	+\$794,088
Scenario D	High Freq. Trunks + Flex	20 Minute	Yes	\$5,076,591	+\$1,349,019
*Costs calculated only for annual weekday service.					



Elements Common to All Scenarios

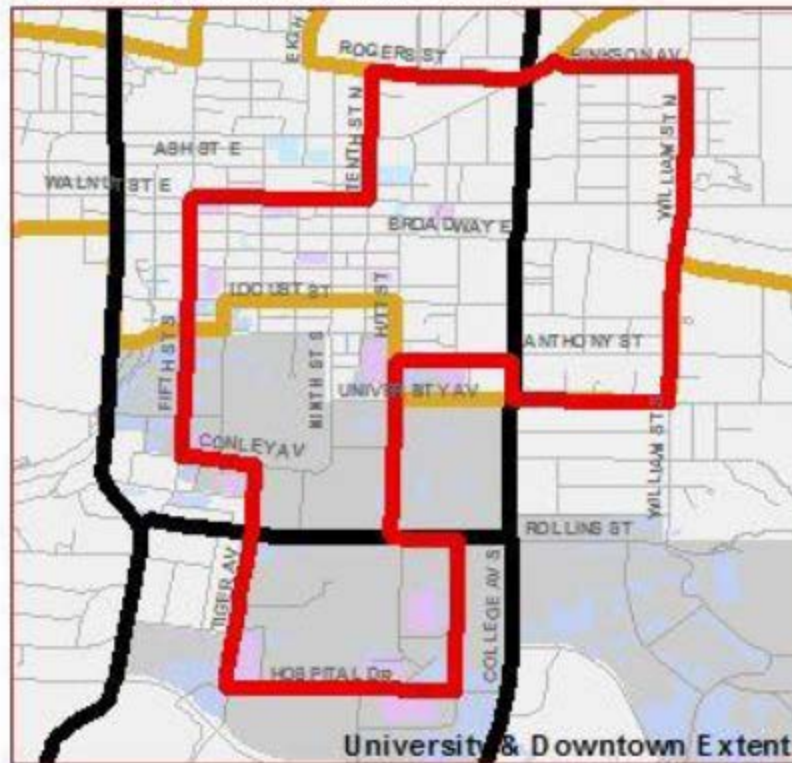
- Flex Routes
 - Zones of lower densities of population, employment, and ridership, with on-demand, general public transportation service.
 - Currently used in Lee's Summit, MO; Kansas City, MO; Raymore, MO; Des Moines, IA.
 - Provides ridership data for possible fixed routes



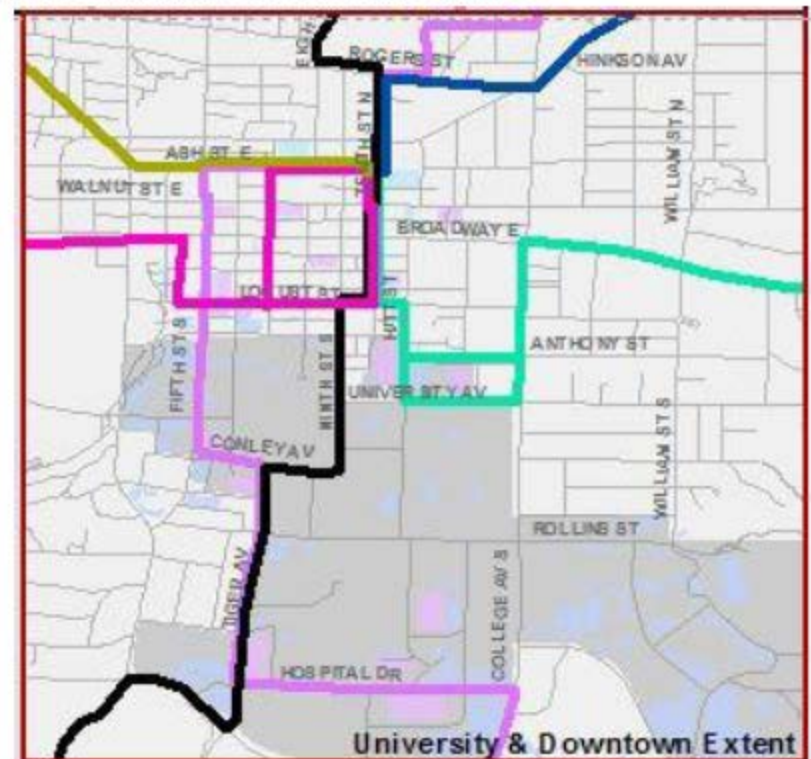
Elements Common to All Scenarios

- Transit network through MU

Current Alignment through Campus



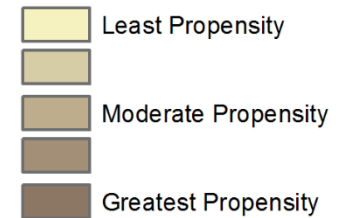
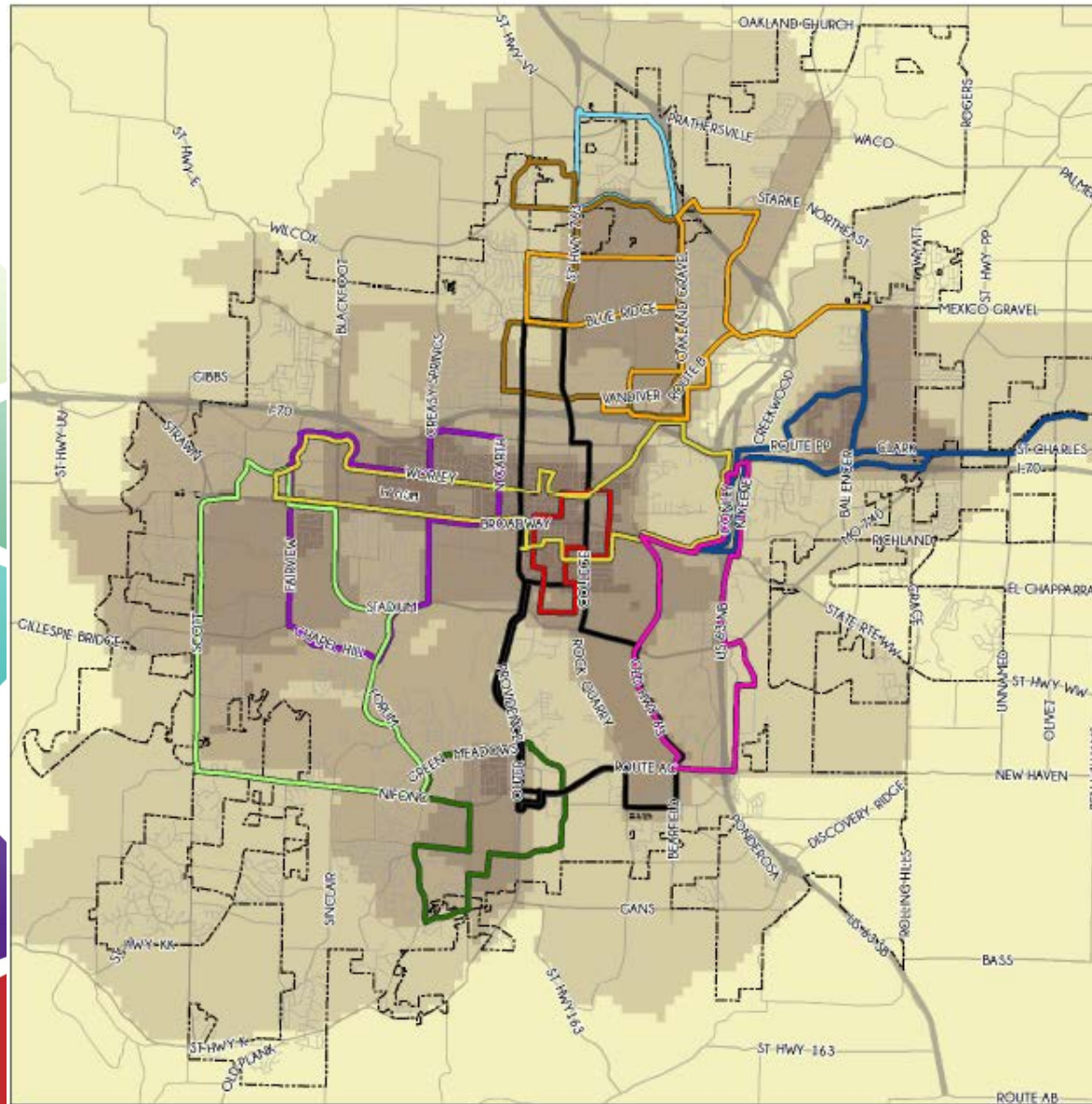
Revised Alignment through Campus



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Transit Propensity (Demographic Aggregate)



Composed of the following populations

- Elderly
- People with disabilities
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- Youth
- College Age
- Minorities
- Limited English Proficiency
- 1 or fewer vehicle households

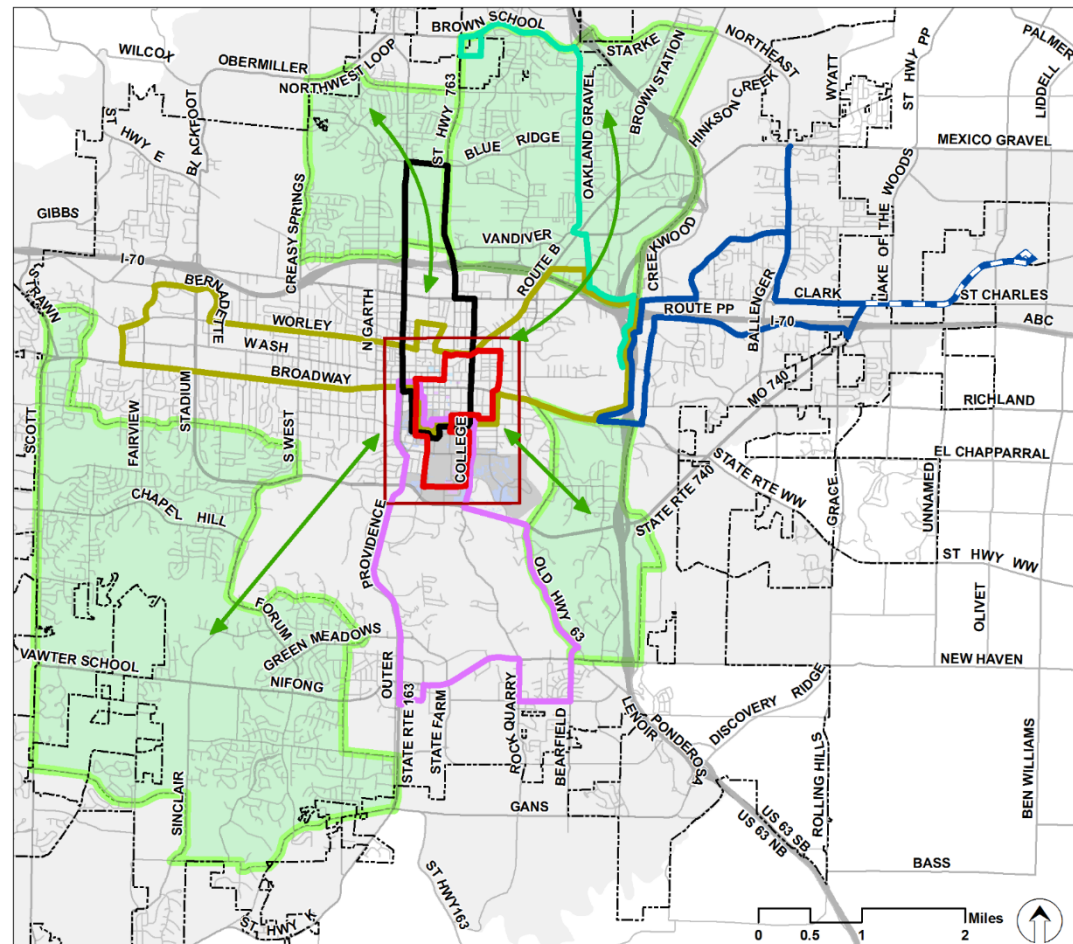
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Scenario A

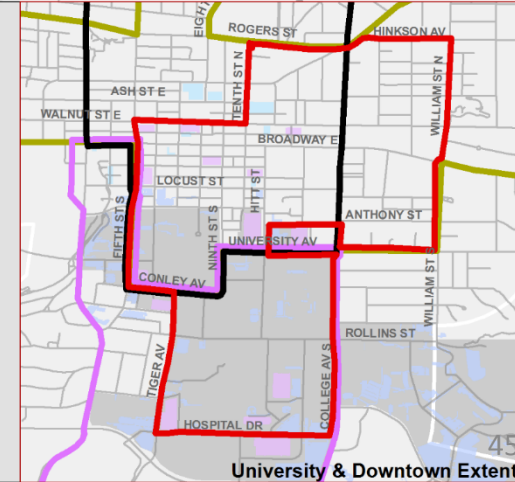
Table 5 Scenario "A" Characteristics

Scenario A	Frequency	Buses	Avg. Wkday Revenue Miles	Avg. Wkday Revenue Hours
Route #1 Lavender	30 minute	2	270	27.0
Route #2 Black	30 minute	1	189	13.5
Route #3 Gold	30 minute	2	378	27.0
Route #4 Aqua	30 minute	2	297	27.0
Route #5 Blue	30 minute	2	228	19.0
Route #5 Blue Pk	30 minute	1	112	8.0
Red Route	30 Minute	1	135	13.5
Flex Routes	N/A	3.5	756	47.25
Total:		13.5	2,365	182.3
Scenario "A" Annual Weekday Operating Cost				\$3,745,785
Current Weekday Operating Cost				\$3,727,572
Increase (Decrease) over Current Cost				+\$18,213



Proposed Routes - Scenario A

- Red Circulator - 5 Miles
- Route #1 - 10.0 Miles
- Route #2 - 7.0 Miles
- Route #3 - 14.0 Miles
- Route #5 Peak Service - 14.0 Miles
- Route #5 - 12.0 Miles
- Route #4 - 11.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary
- Flex Route Coverage Area - 20.40 Sq. Miles



Scenario A

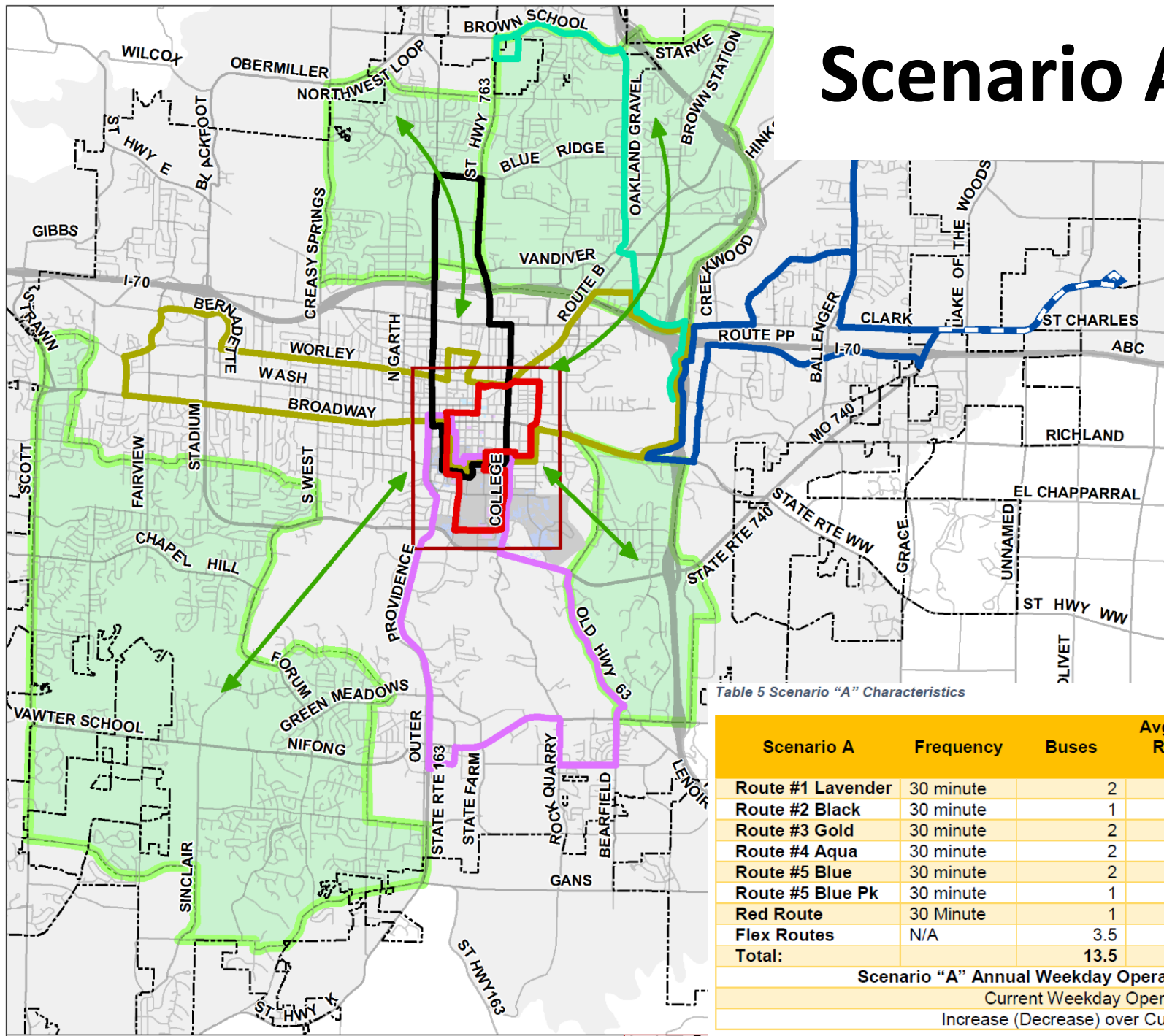


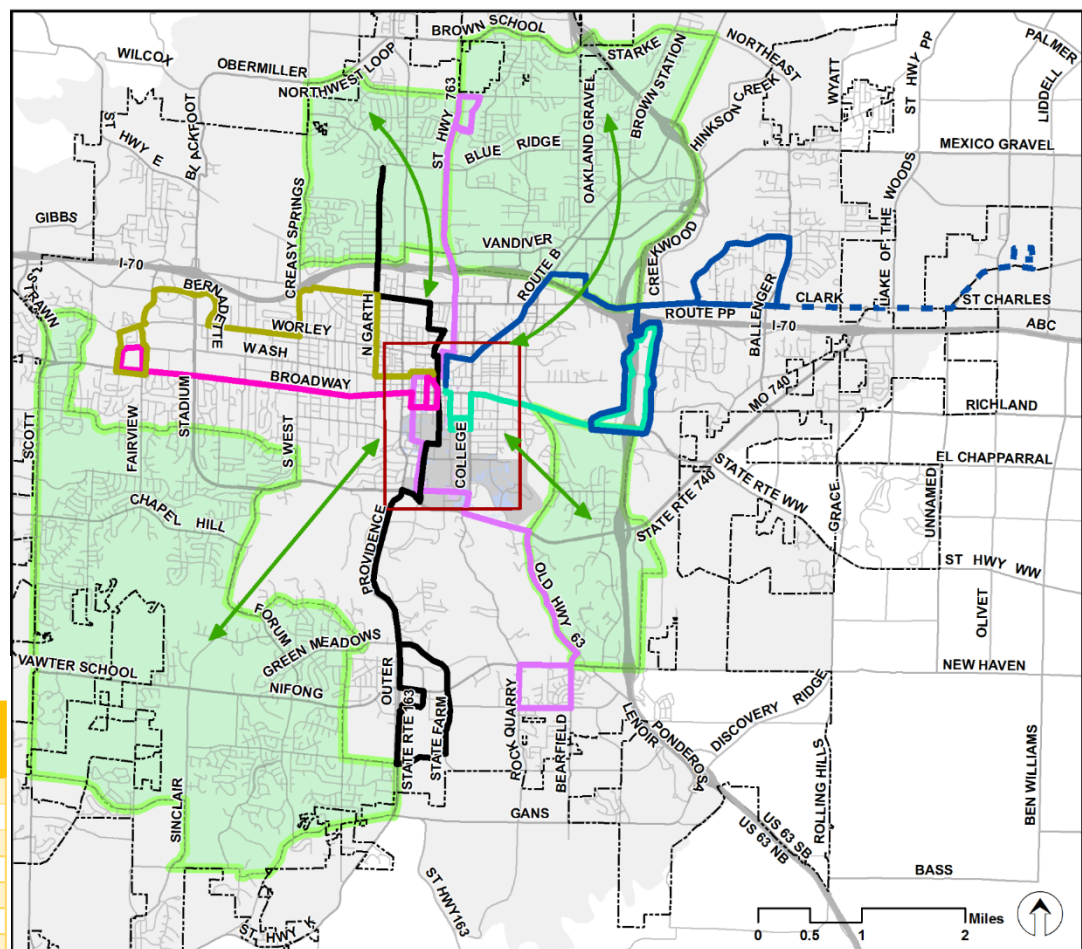
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Route #5 Blue	30 minute	2	228	19.0
Route #5 Blue Pk	30 minute	1	112	8.0
Red Route	30 Minute	1	135	13.5
Flex Routes	N/A	3.5	756	47.25
Total:		13.5	2,365	182.3
Scenario "A" Annual Weekday Operating Cost				\$3,745,785
Current Weekday Operating Cost				\$3,727,572
Increase (Decrease) over Current Cost				+\$18,213

Scenario B

Table 6 Scenario "B" Characteristics

Scenario B	Frequency	Buses	Avg. Wkday Revenue Miles	Avg. Wkday Revenue Hours
Route #1 Lavender	30 minute	3	432	40.5
Route #2 Black	30 minute	2	405	27.0
Route #3 Gold	30 minute	2	270	27.0
Route #4 Pink	30 minute	1	216	13.5
Route #5 Blue	30 minute	2	323	19.0
Route #5 Blue Pk	30 minute	3	184	12.0
Route #6 Aqua	30 Minute	1	216	13.5
Flex Routes	N/A	2	432	27
Total:		16	2,478	179.5
Scenario B Annual Weekday Operating Cost			\$3,689,264	
Current Weekday Operating Cost			\$3,727,572	
Increase (Decrease) over Current Cost			(\$38,308)	



Proposed Routes - Scenario B

- Route #1 -16.0 Miles
- Route #2 -15.0 Miles
- Route #3 -10.0 Miles
- Route #4 -8.0 Miles
- Route #5 -17.0 Miles
- Route #5 Peak Service - 23.0 Miles
- Route #6 - 8.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary
- Flex Route Coverage Area - 20.40 Sq. Miles

Scenario B

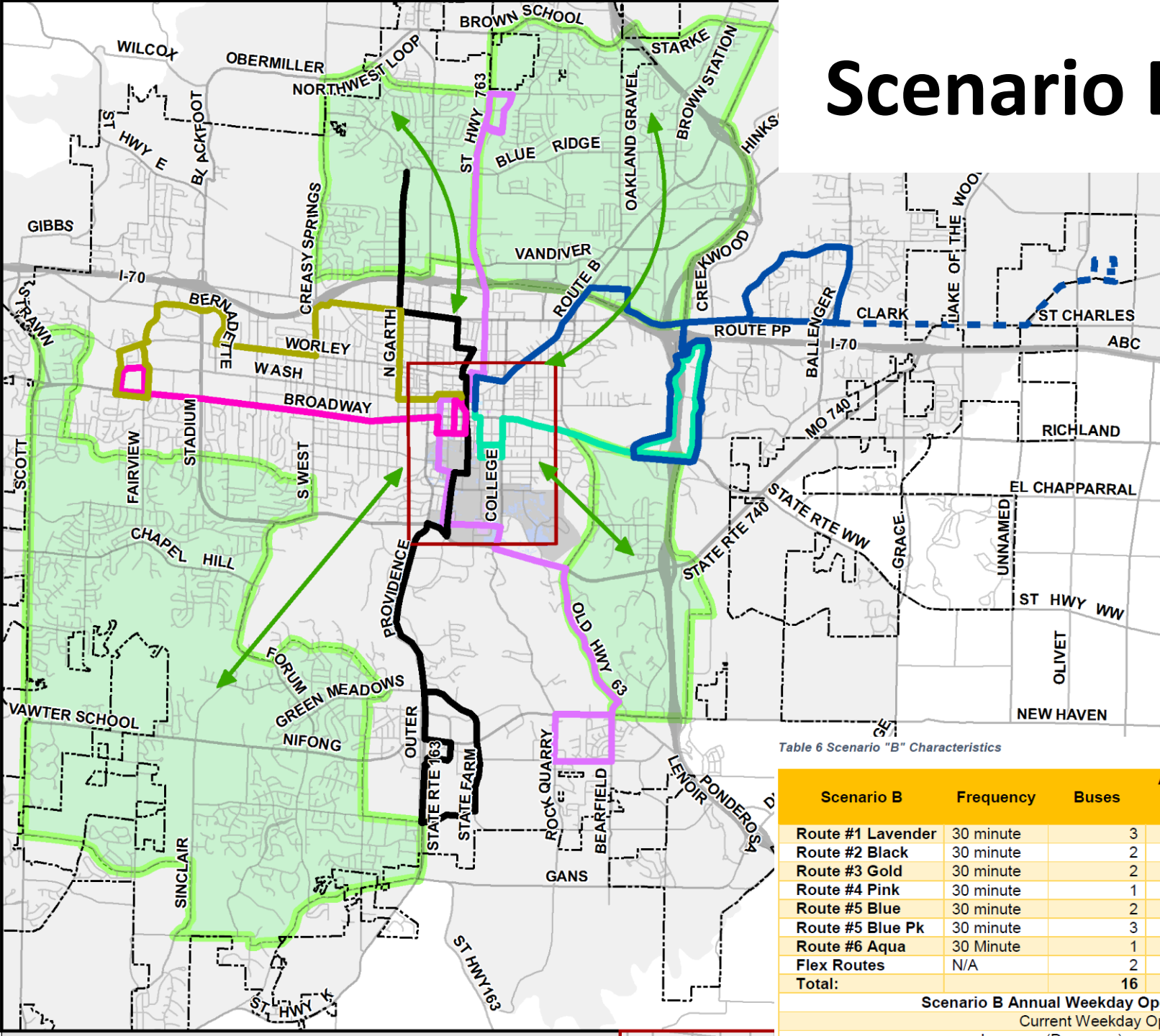
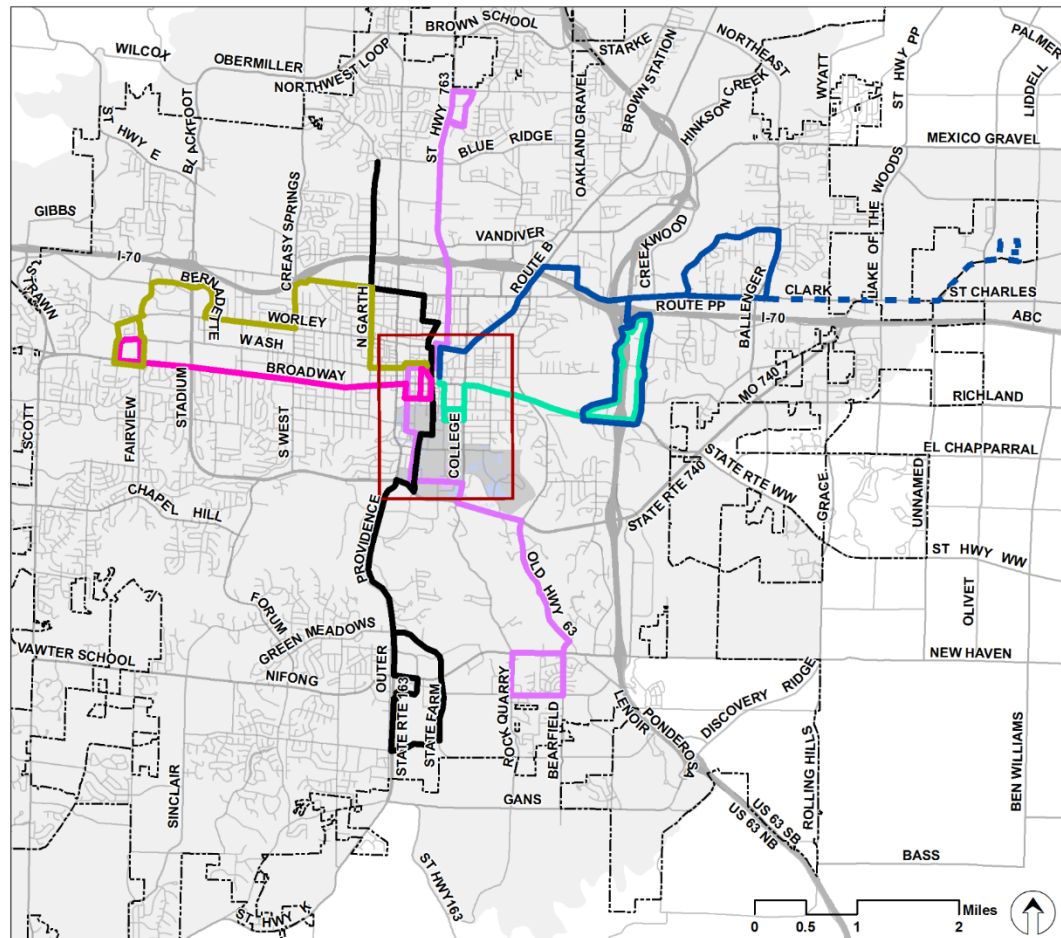


Table 6 Scenario "B" Characteristics

Scenario B	Frequency	Buses	Avg. Wkday Revenue Miles	Avg. Wkday Revenue Hours
Route #1 Lavender	30 minute	3	432	40.5
Route #2 Black	30 minute	2	405	27.0
Route #3 Gold	30 minute	2	270	27.0
Route #4 Pink	30 minute	1	216	13.5
Route #5 Blue	30 minute	2	323	19.0
Route #5 Blue Pk	30 minute	3	184	12.0
Route #6 Aqua	30 Minute	1	216	13.5
Flex Routes	N/A	2	432	27
Total:		16	2,478	179.5
Scenario B Annual Weekday Operating Cost				\$3,689,264
Current Weekday Operating Cost				\$3,727,572

Scenario C



Proposed Routes - Scenario C

- Route #1 -16.0 Miles
- Route #2 -15.0 Miles
- Route #3 -10.0 Miles
- Route #4 -8.0 Miles
- Route #5 -17.0 Miles
- Route #5 Peak Service - 23.0 Miles
- Route #6 - 8.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary

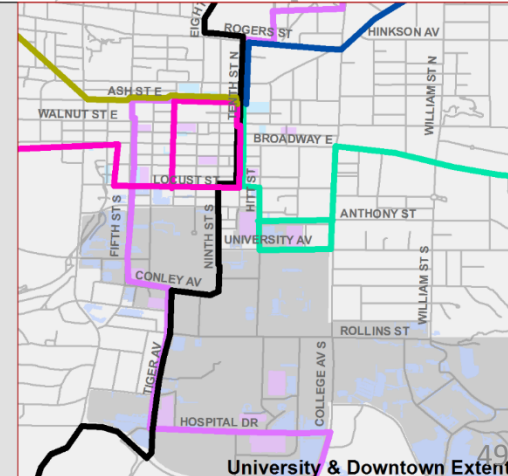


Table 7 Scenario "C" Characteristics

Scenario C	Frequency	Buses	Avg. Wkday Revenue Miles	Avg. Wkday Revenue Hours
Route #1 Lavender	20 minute	4	648	54.0
Route #2 Black	20 minute	3	608	40.5
Route #3 Gold	20 minute	2	405	27.0
Route #4 Pink	20 minute	2	324	27.0
Route #5 Blue	20 minute	3	485	28.5
Route #5 Blue Pk	20 minute	4	276	16.0
Route #6 Aqua	20 minute	2	324	27.0
Total:		20	3,069	220.0
Scenario C Annual Weekday Operating Cost			\$4,521,660	
Current Weekday Operating Cost			\$3,727,572	
Increase (Decrease) over Current Cost			+\$794,088	

Scenario C

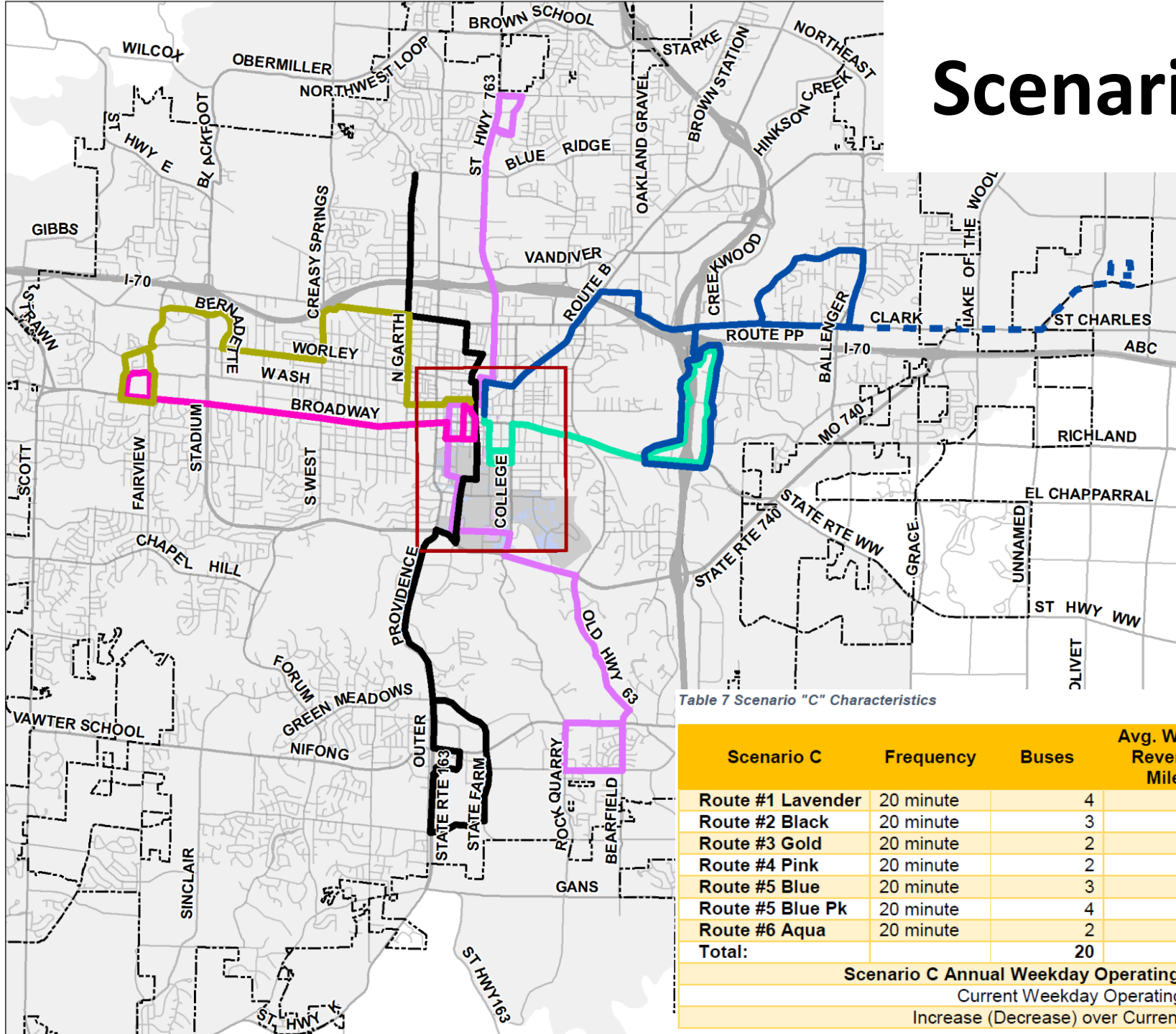


Table 7 Scenario "C" Characteristics

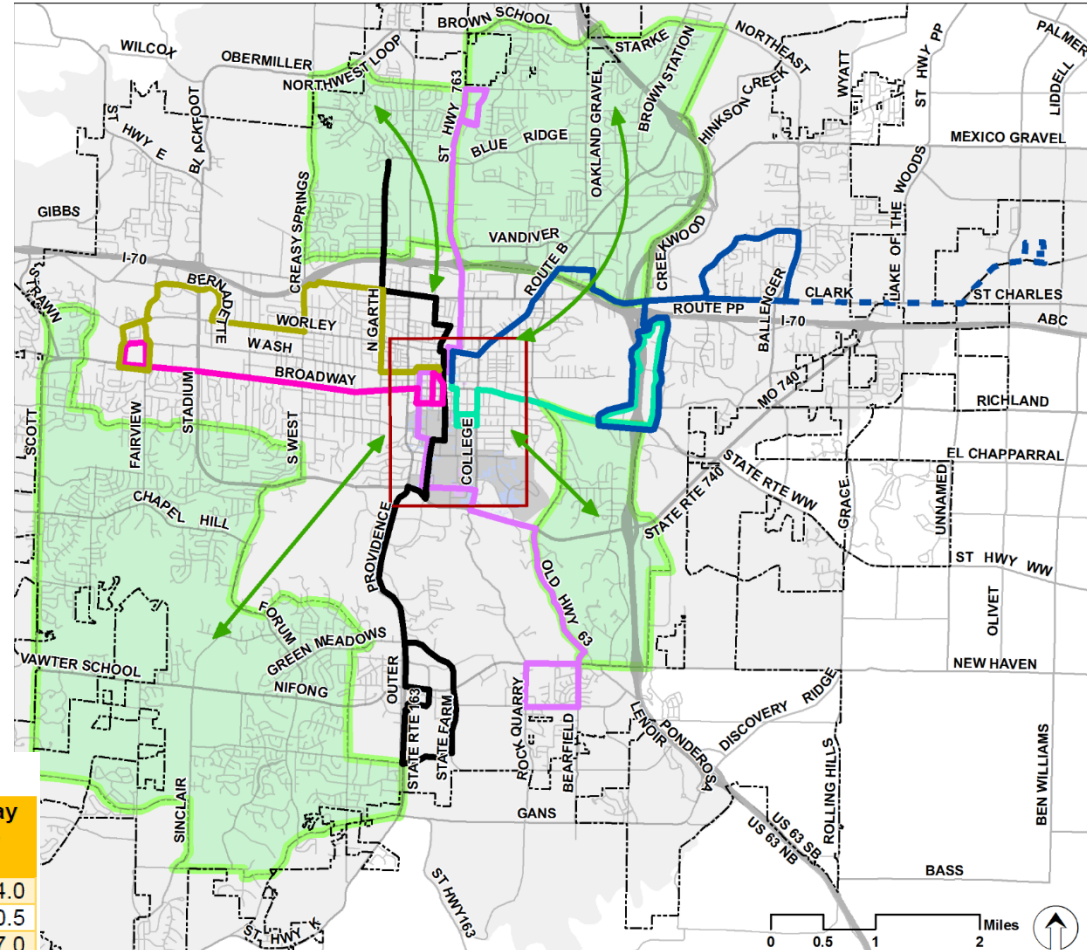
Scenario C	Frequency	Buses	Avg. Wkday Revenue Miles	Avg. Wkday Revenue Hours
Route #1 Lavender	20 minute	4	648	54.0
Route #2 Black	20 minute	3	608	40.5
Route #3 Gold	20 minute	2	405	27.0
Route #4 Pink	20 minute	2	324	27.0
Route #5 Blue	20 minute	3	485	28.5
Route #5 Blue Pk	20 minute	4	276	16.0
Route #6 Aqua	20 minute	2	324	27.0
Total:		20	3,069	220.0
Scenario C Annual Weekday Operating Cost				\$4,521,660
Current Weekday Operating Cost				\$3,727,572
Increase (Decrease) over Current Cost				+\$794,088

Scenario D



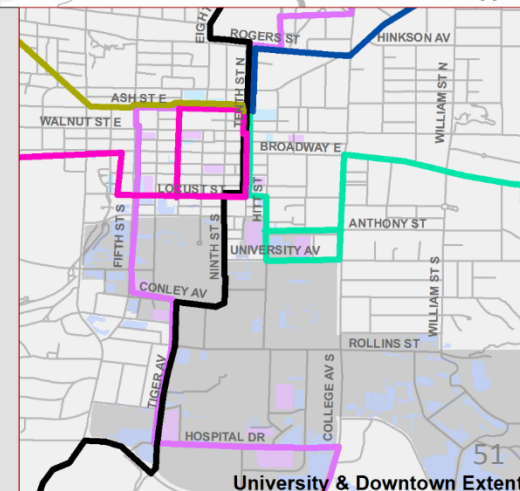
Table 8 Scenario "D" Route Characteristics

Scenario D	Frequency	Buses	Avg. Wkday Revenue Miles	Avg. Wkday Revenue Hours
Route #1 Lavender	20 minute	4	648	54.0
Route #2 Black	20 minute	3	608	40.5
Route #3 Gold	20 minute	2	405	27.0
Route #4 Pink	20 minute	2	324	27.0
Route #5 Blue	20 minute	3	485	28.5
Route #5 Blue Pk	20 minute	4	276	16.0
Route #6 Aqua	20 minute	2	324	27.0
Flex Routes	N/A	3.5	432	27
Total:		22.5	3,501	247.0
Scenario D Annual Weekday Operating Cost				\$5,076,591
Current Weekday Operating Cost				\$3,727,572
Increase (Decrease) over Current Cost				+\$1,349,019



Proposed Routes - Scenario D

- Route #1 -16.0 Miles
- Route #2 -15.0 Miles
- Route #3 -10.0 Miles
- Route #4 -8.0 Miles
- Route #5 -17.0 Miles
- Route #5 Peak Service - 23.0 Miles
- Route #6 - 8.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary
- Flex Route Coverage Area - 20.40 Sq. Miles



Scenario D

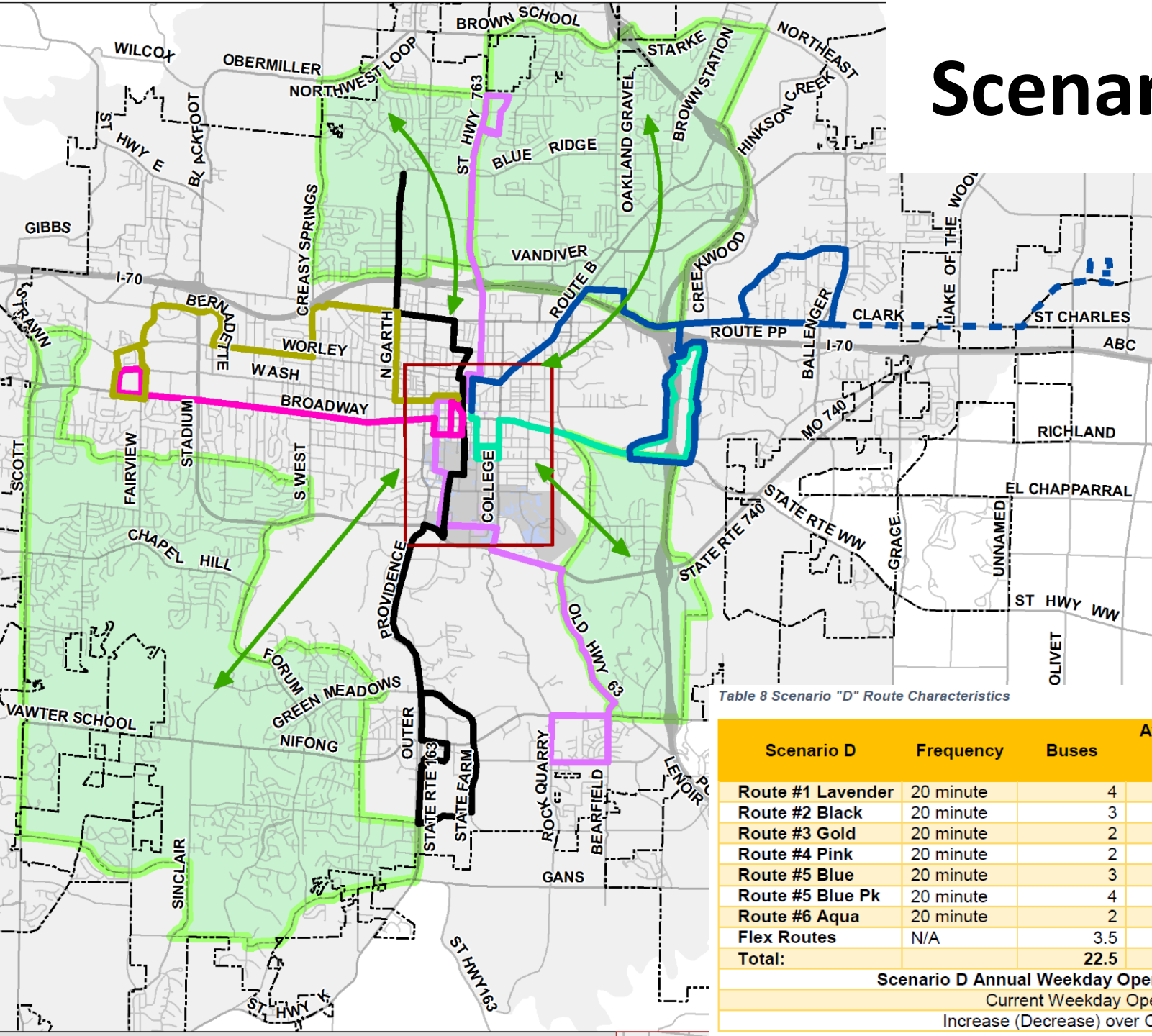


Table 8 Scenario "D" Route Characteristics

Scenario D	Frequency	Buses	Avg. Wkday Revenue Miles	Avg. Wkday Revenue Hours
Route #1 Lavender	20 minute	4	648	54.0
Route #2 Black	20 minute	3	608	40.5
Route #3 Gold	20 minute	2	405	27.0
Route #4 Pink	20 minute	2	324	27.0
Route #5 Blue	20 minute	3	485	28.5
Route #5 Blue Pk	20 minute	4	276	16.0
Route #6 Aqua	20 minute	2	324	27.0
Flex Routes	N/A	3.5	432	27
Total:		22.5	3,501	247.0
Scenario D Annual Weekday Operating Cost				\$5,076,591
Current Weekday Operating Cost				\$3,727,572
Increase (Decrease) over Current Cost				+\$1,349,019

Table 9 Existing System and Scenarios Comparison

Scenario	Description	Frequency	Flex Routes	Cost	Increase (Decrease) over Current Cost*
Existing	Loops	30, 35, 40, 60 minute	No	\$3,727,572	N/A
Scenario A	Modified Loops	30 minute	Yes	\$3,745,784	+\$18,212
Scenario B	Trunk Routes	30 Minute	Yes	\$3,689,264	(\$38,308)
Scenario C	High freq. Trunks	20 Minute	No	\$4,521,660	+\$794,088
Scenario D	High Freq. Trunks + Flex	20 Minute	Yes	\$5,076,591	+\$1,349,019
*Costs calculated only for annual weekday service.					



Table 9 Existing System and Scenarios Comparison

Scenario	Description	Frequency	Flex Routes	Cost	Increase (Decrease) over Current Cost*
Existing	Loops	30, 35, 40, 60 minute	No	\$3,727,572	N/A
Scenario A	Modified Loops	30 minute	Yes	\$3,745,784	+\$18,212
Scenario B	Trunk Routes	30 Minute	Yes	\$3,689,264	(\$38,308)
Scenario C	High freq. Trunks	20 Minute	No	\$4,521,660	+\$794,088
Scenario D	High Freq. Trunks + Flex	20 Minute	Yes	\$5,076,591	+\$1,349,019
*Costs calculated only for annual weekday service.					

Scenario	Within ¼ Mile of Fixed Route Service	Outside ¼ Mile of Fixed Route Service but Within Flex Area	Outside both ¼ Mile of Fixed Route Service and Flex Area
Scenario A	9,422 (91%)	787 (7%)	137 (1%)
Scenario B	9,366 (90%)	787 (7%)	193 (2%)
Scenario C	9,366 (90%)	0 (0%)	980 (9%)
Scenario D	9,366 (90%)	787 (7%)	193 (2%)

Next Steps

- Community engagement

Thursday, April 20th 2017

- Public meeting
- Mobile meetings
- Online commenting
- Social media

Questions

Drew Brooks, drew.brooks@como.gov

Tom Worker-Braddock,
tworkerbraddock@olssonassociates.com

COMO Bus Service
Evaluation

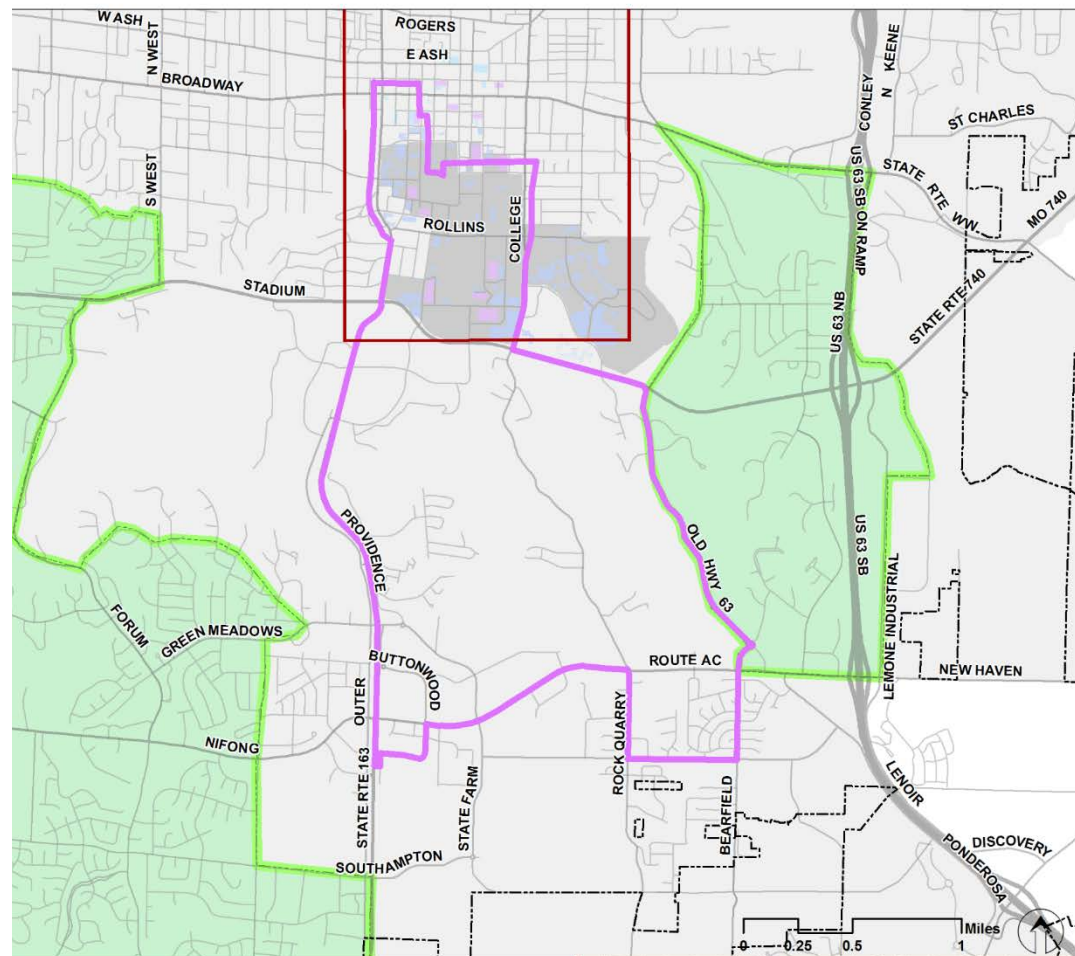


Scenario A Routes



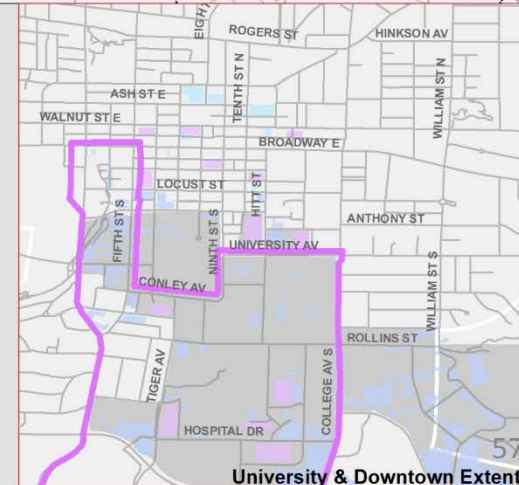
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Evaluation

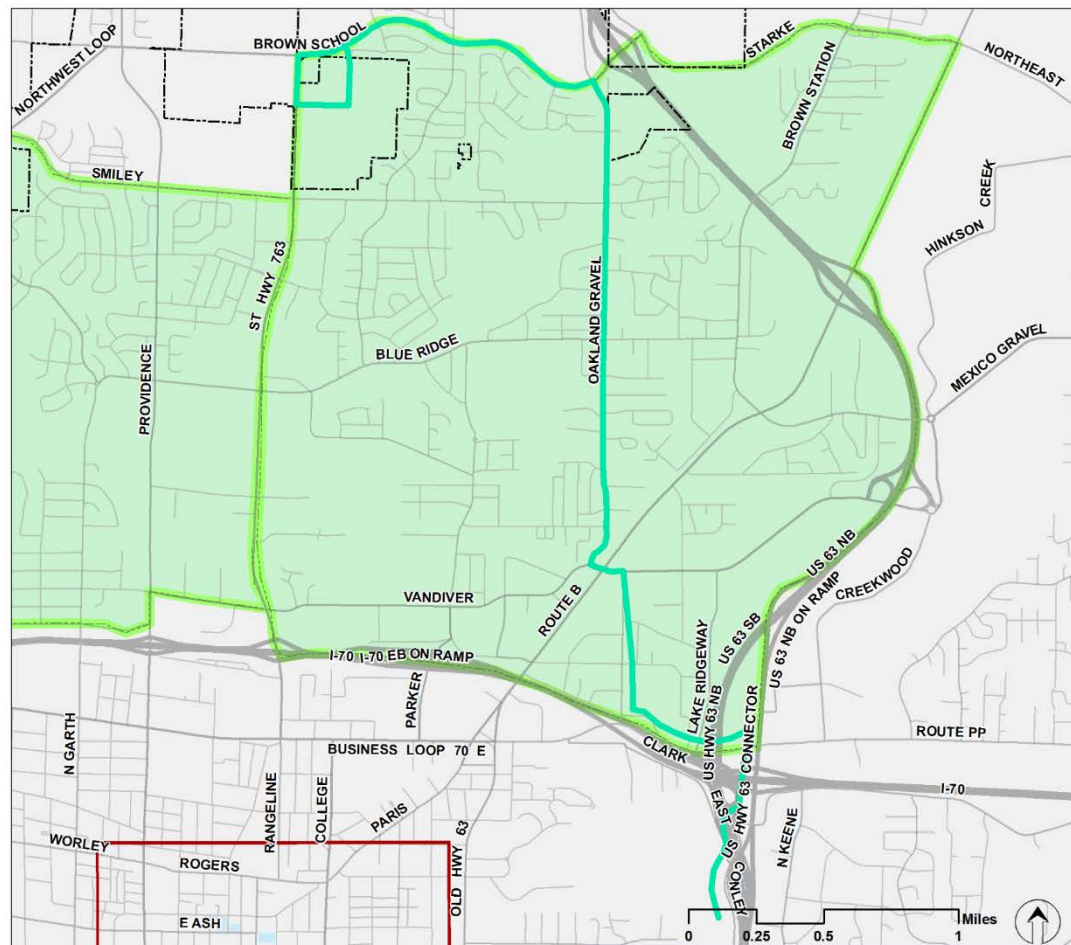




Proposed Routes - Scenario A

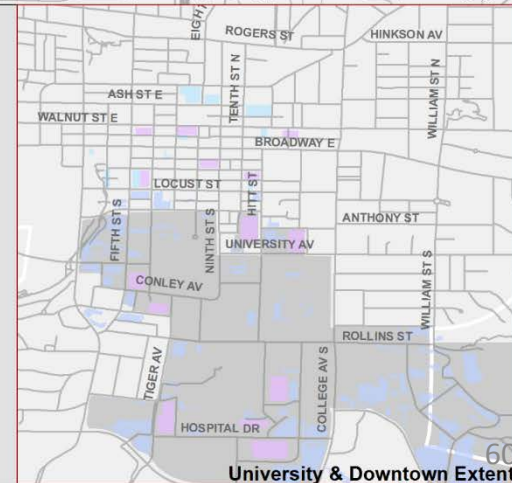
- Route #1 - 10.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary
- Flex Route Coverage Area - 20.40 Sq. Miles

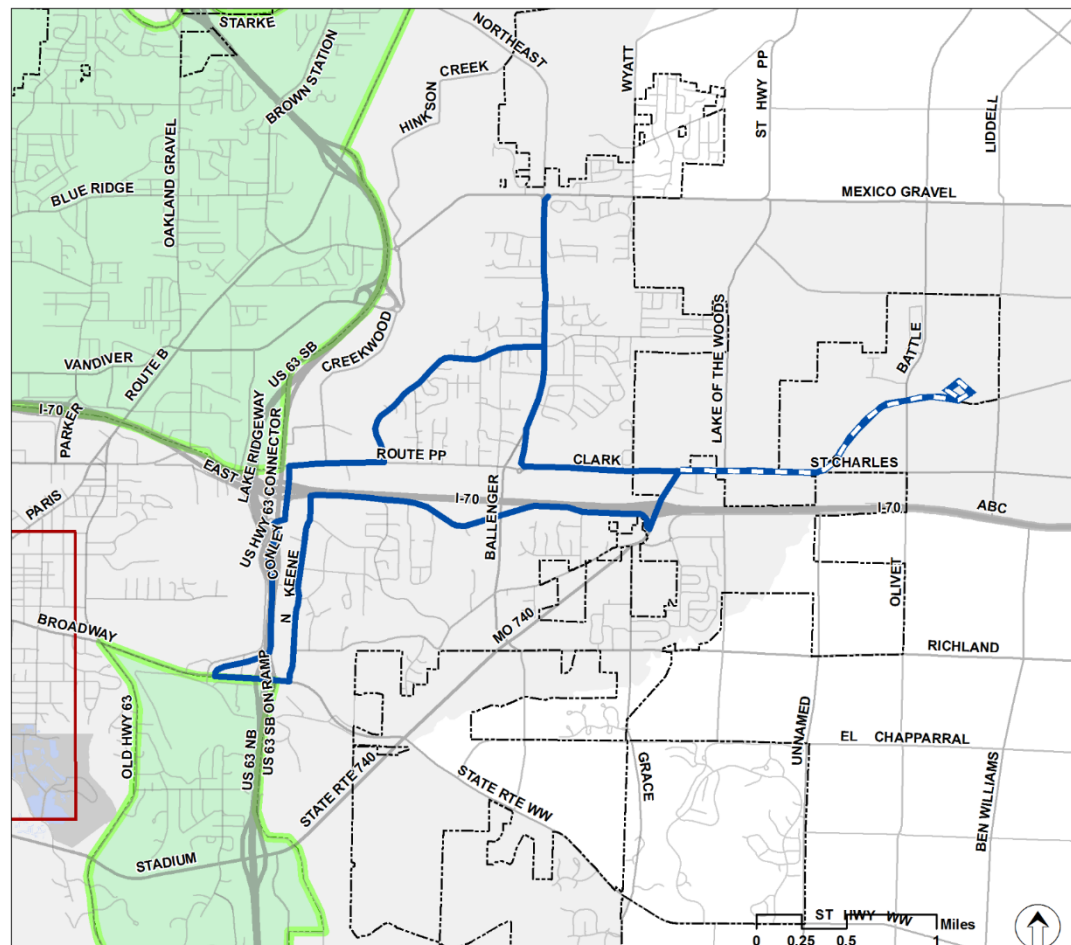




Proposed Routes - Scenario A

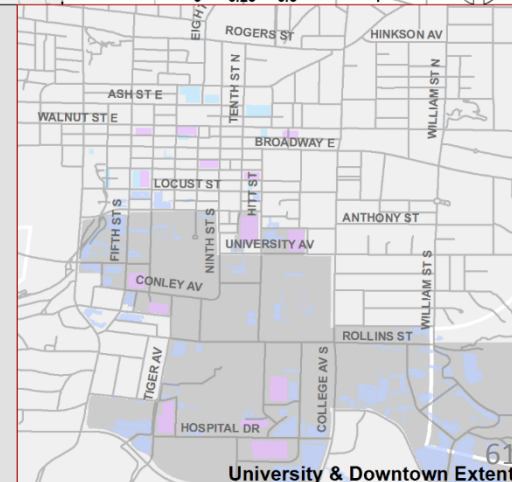
- Route #4 -11.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary
- Flex Route Coverage Area - 20.40 Sq. Miles





Proposed Routes - Scenario A

- Route #5 Peak Service - 14.0 Miles
- Route #5 - 12.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary
- Flex Route Coverage Area - 20.40 Sq. Miles

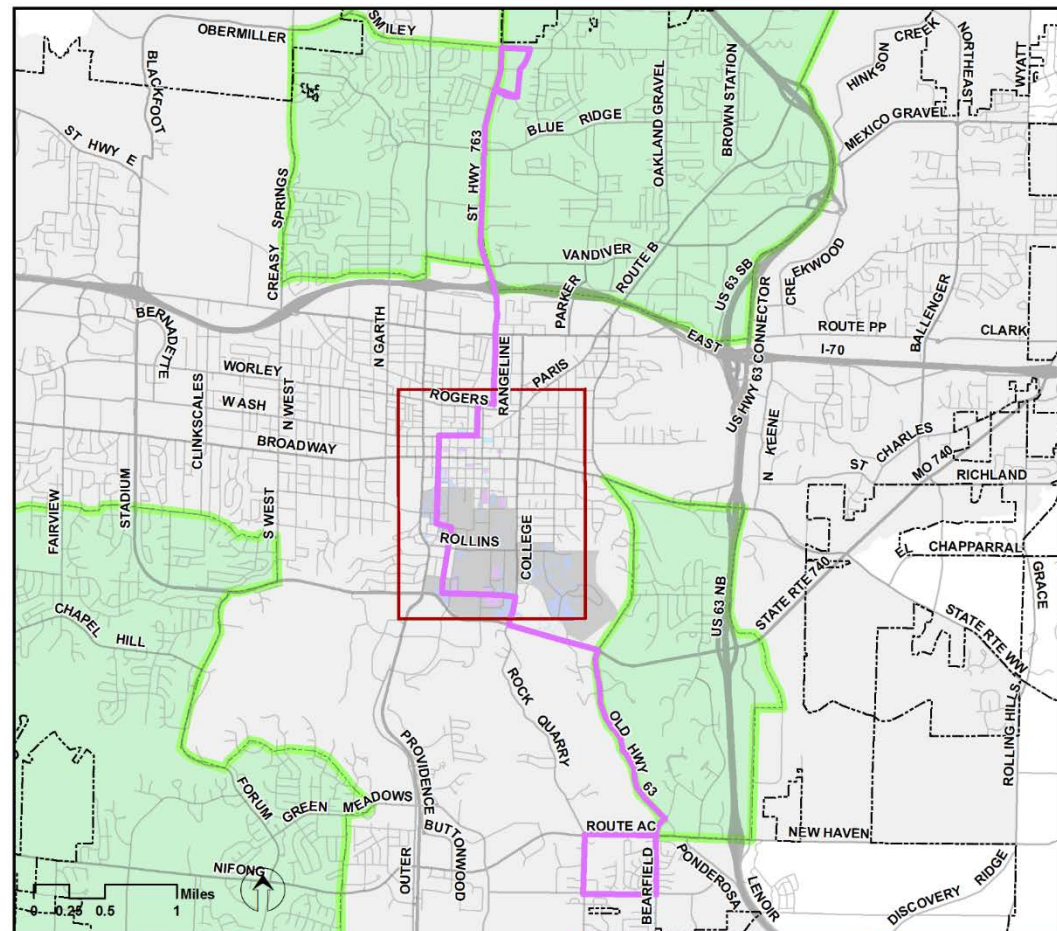


Scenario B, C, D Routes



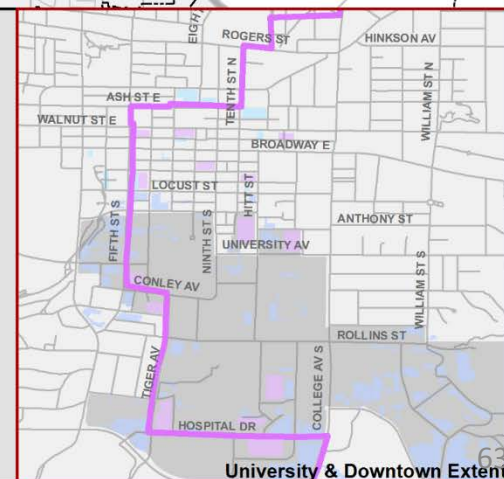
COMO Bus Service
Evaluation

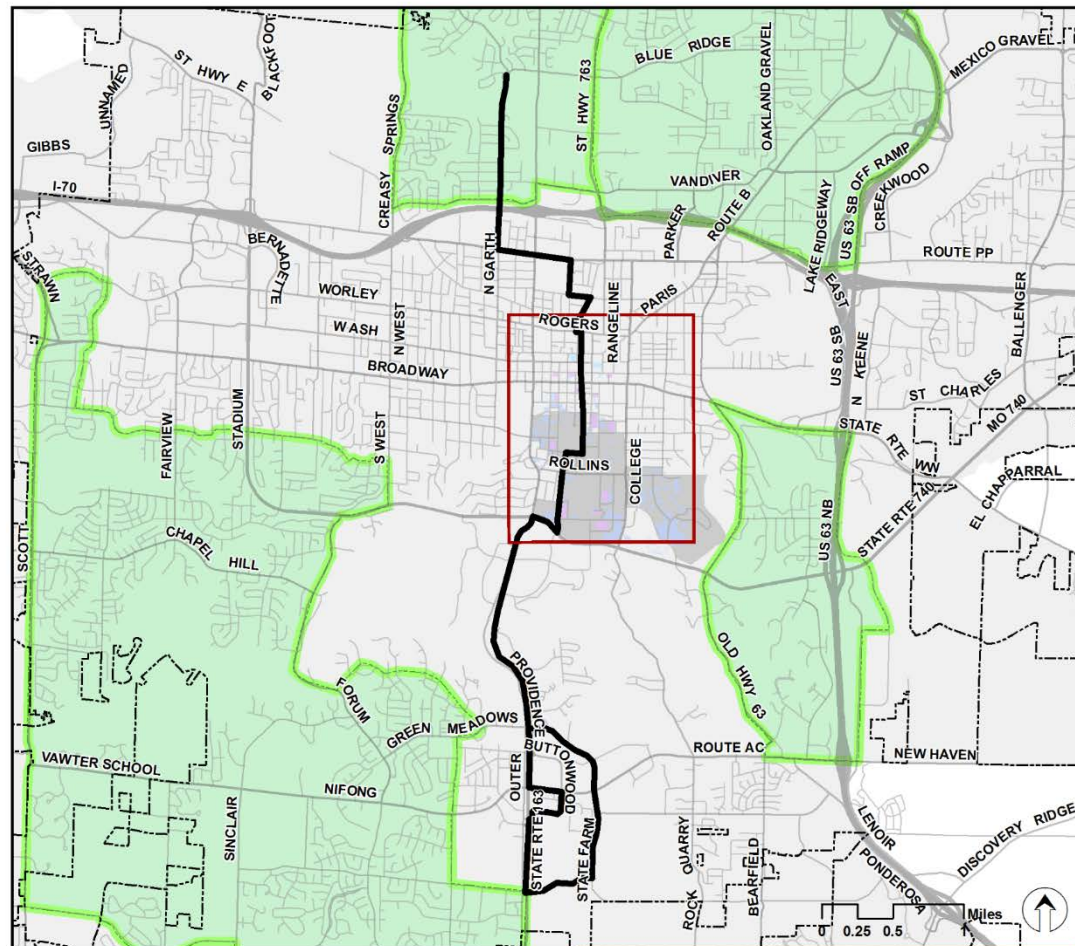




Proposed Routes - Scenario B

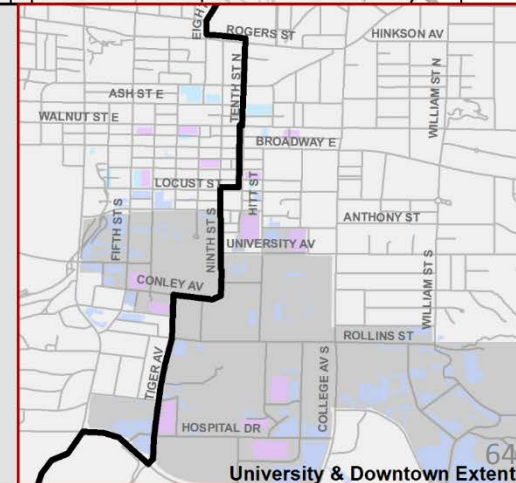
- Route #1 - 16.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary
- Flex Route Coverage Area - 20.40 Sq. Miles

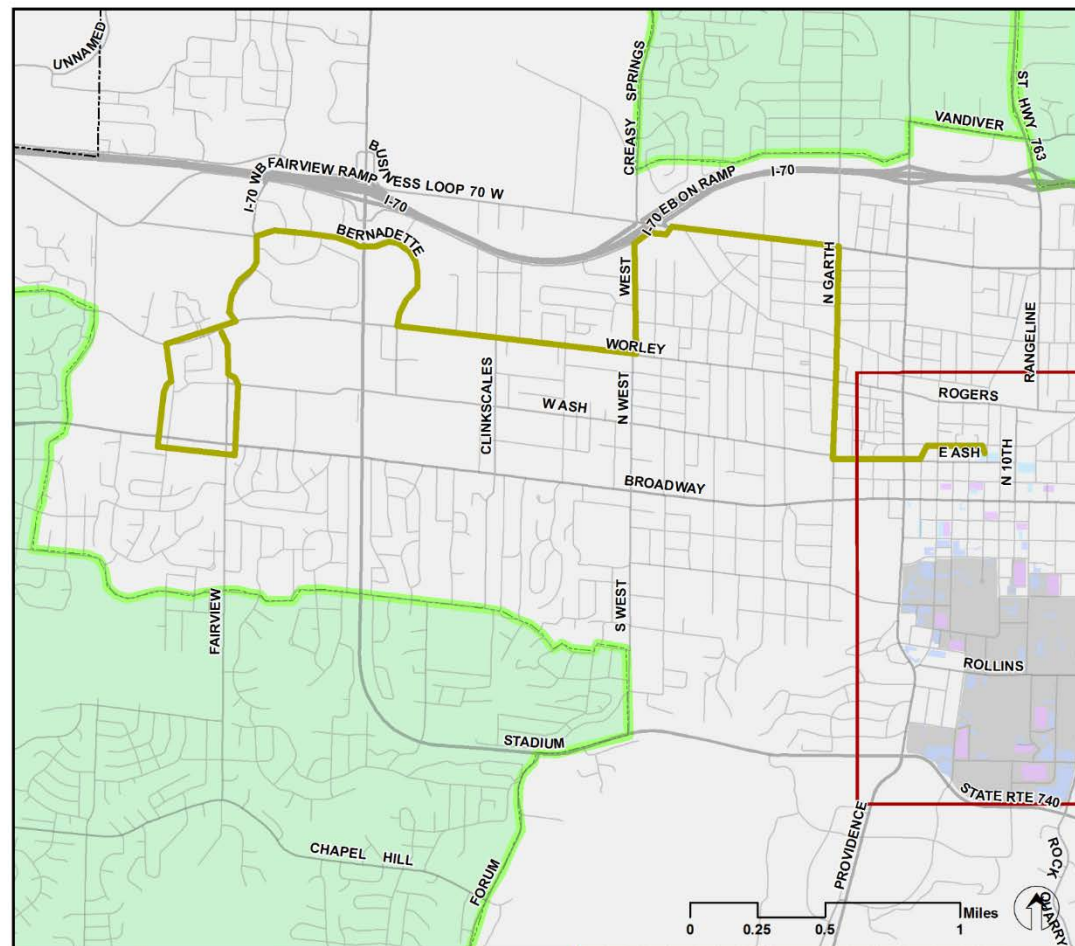




Proposed Routes - Scenario B

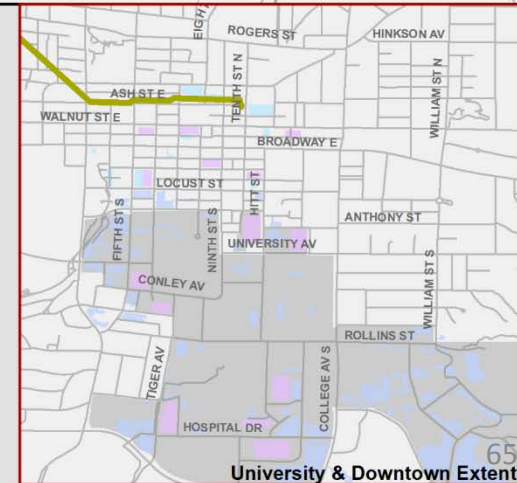
- Route #2 - 15.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary
- Flex Route Coverage Area - 20.40 Sq. Miles

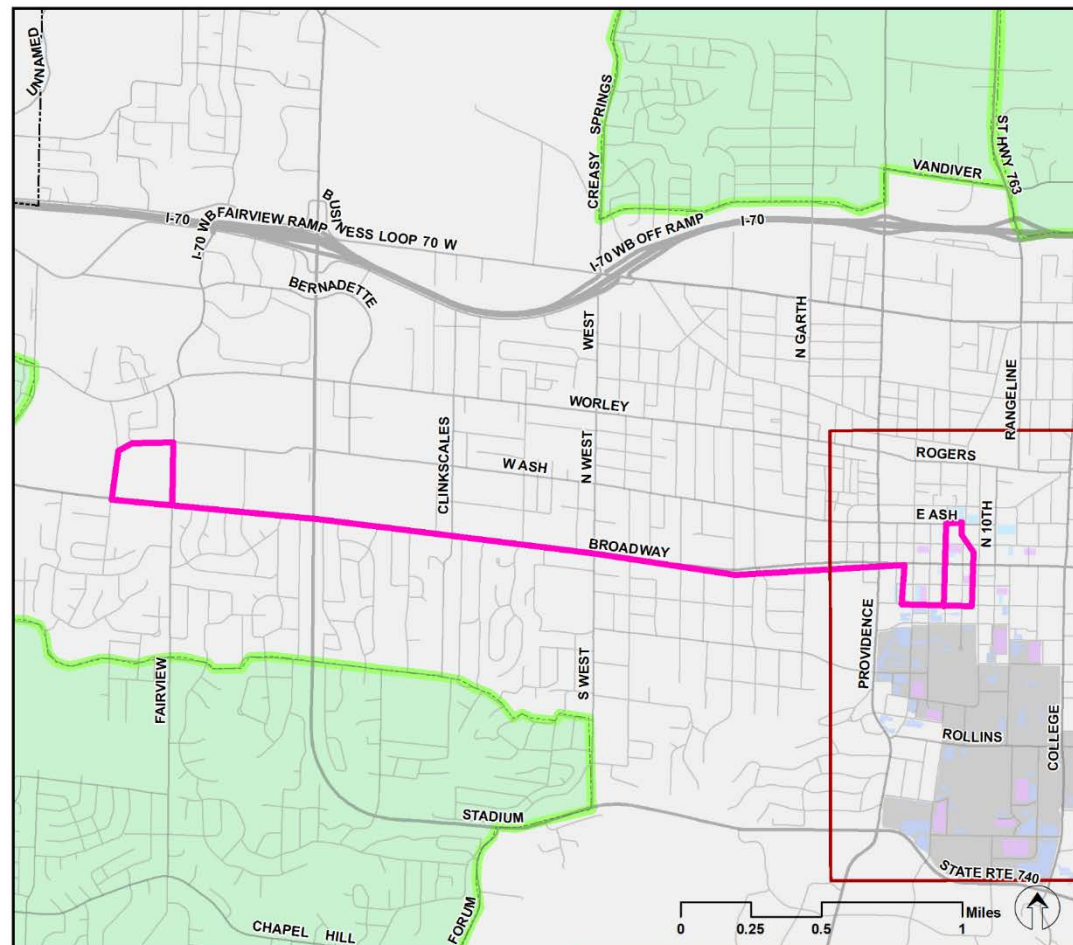




Proposed Routes - Scenario B

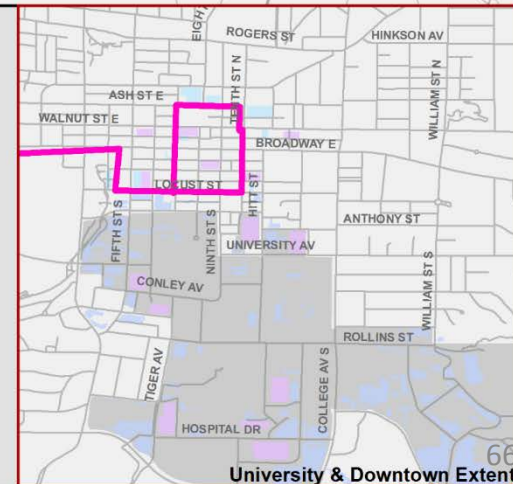
- Route #3 - 10.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary
- Flex Route Coverage Area - 20.40 Sq. Miles

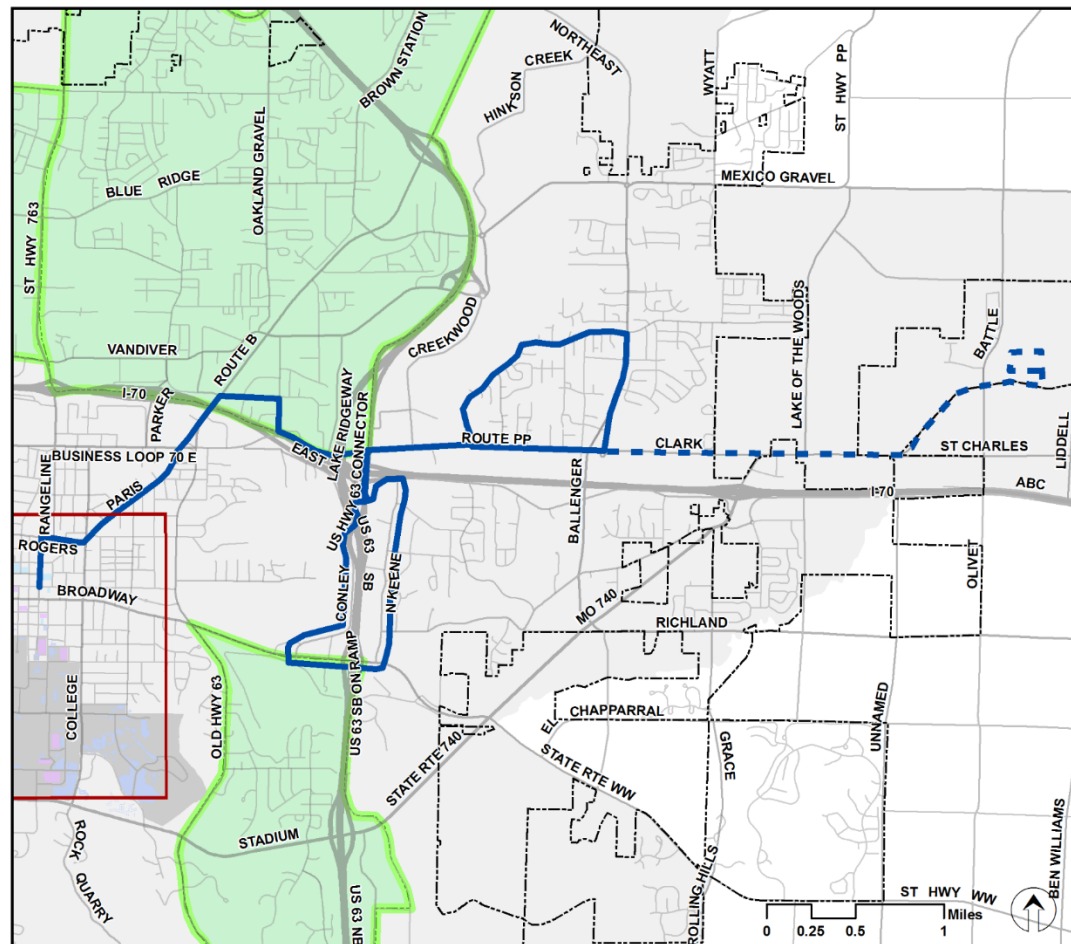




Proposed Routes - Scenario B

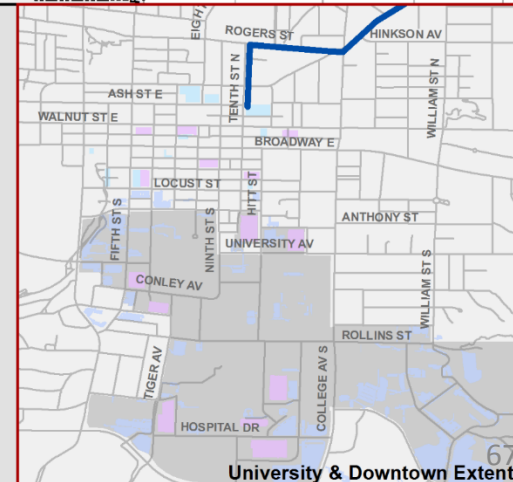
- Route #4 - 8.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary
- Flex Route Coverage Area - 20.40 Sq. Miles

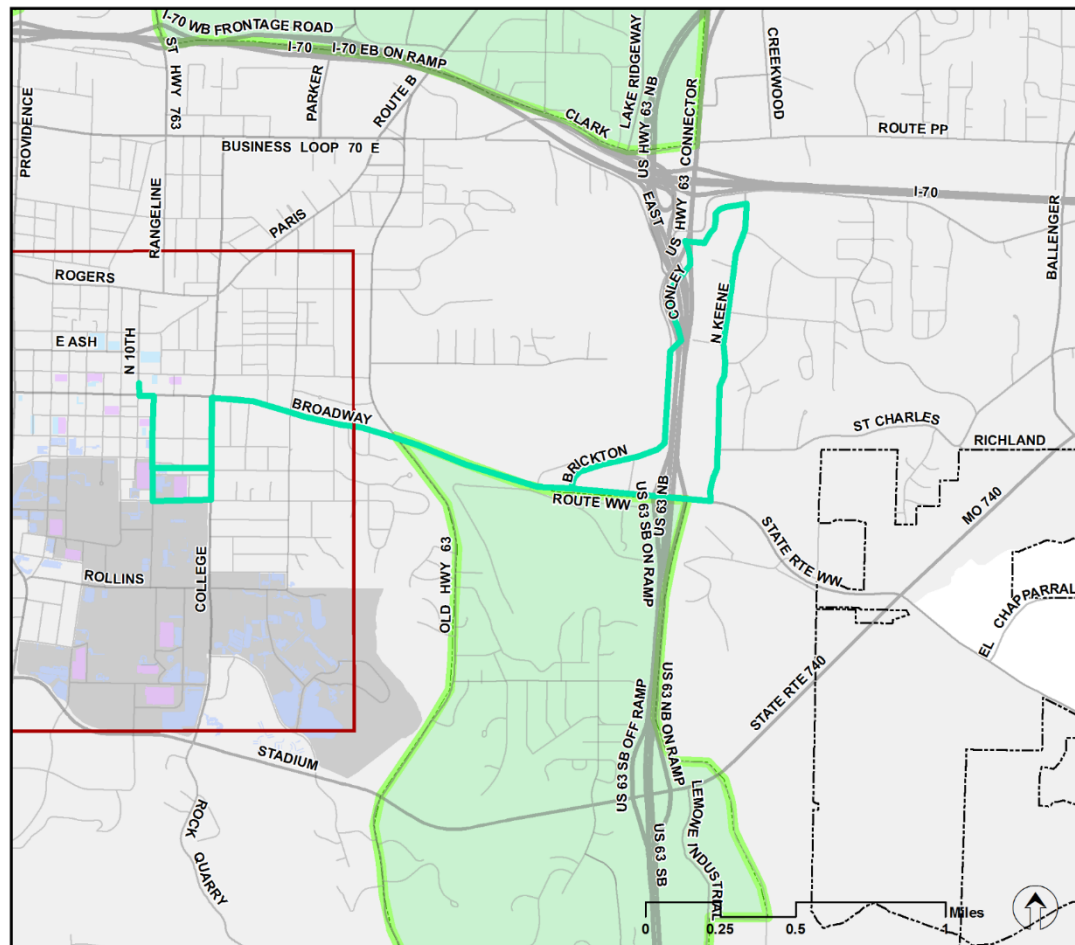




Proposed Routes - Scenario B

- Route #5 - 17.0 Miles
- Route #5 Peak Service - 23.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary
- Flex Route Coverage Area - 20.40 Sq. Miles





Proposed Routes - Scenario B

- Route #6 - 8.0 Miles
- Parking Garage
- Surface Lot
- University of Missouri Boundary
- Flex Route Coverage Area - 20.40 Sq. Miles

