



Preferred Transit Service Alternative

INTRODUCTION

Chapter XIII reviews the details of the preferred transit service alternative including the levels of service, route schedules, operational costs, capital needs, and capital costs. The preferred service alternative will be developed in three phases, each of which will increase the level of service. The three phases were created in order to facilitate the coordination and development of transit service in the study area and a new Transit Program (TP) that will operate the preferred transit service alternative.

PREFERRED TRANSIT SERVICE ALTERNATIVE

At the June 2007 Stakeholders Committee meetings, the members discussed that the Alternative V concept should be developed as the future transit system for the regional service and that the system should be developed over the next five years in phases. Alternative V includes three regional routes, two commuter routes, and a vanpool program. At the July 2007 Stakeholders Committee meeting, the members agreed that Alternative V will be the preferred transit service alternative. The preferred transit service plan includes coordination strategies with the existing human service agencies/programs which will assist in linking the preferred regional transit service developed in this planning process with the local transportation services in each county within the study area.

Phase I (2009 - 2011)

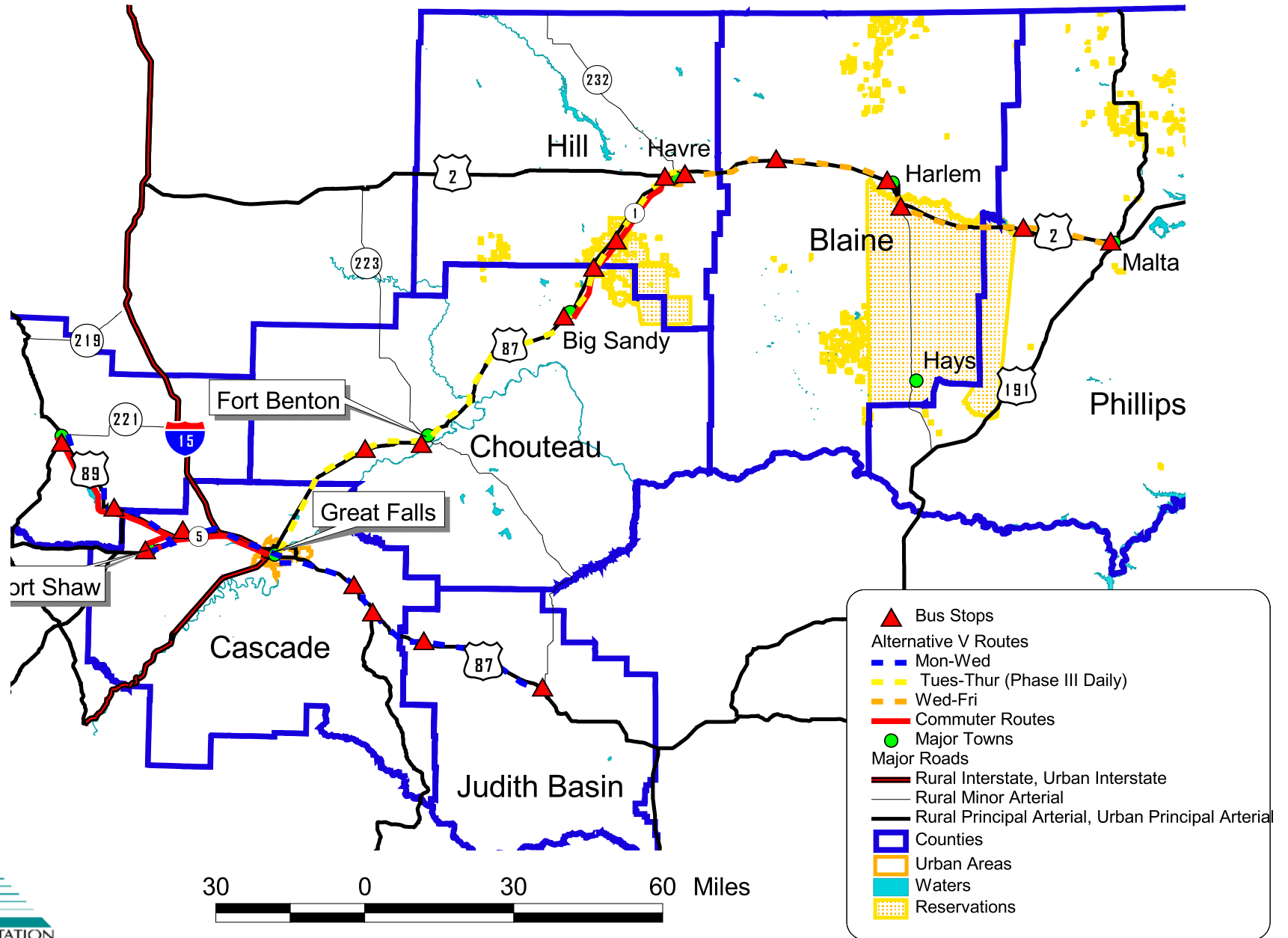
As presented in Table XIII-1 and Figure XIII-1, Phase I includes one regional route operating up to ten revenue-hours per day, one commuter route operating four revenue-hours per day, and a regional vanpool program operating two vanpools.

**Table XIII-1
Phase I (2009-2011)**

Phase I (2009-2011)		Total Daily		Total Annual			Operating Days	Annual Ridership	Pass. per Hour	Operating Cost Annual	Cost (\$) per Pass.
		# of Veh.	Vehicle-Miles	Vehicle-Hours	Vehicle-Miles	Vehicle-Hours					
Vanpool Program	Peak Hours	2	180	4	45,900	1,020	255	2,040	2.00	\$19,829	\$9.72
Regional Route 1	Monday-Wednesday	1	450	10	46,800	1,040	104	4,162	4.00	\$46,371	\$11.14
Commuter Route 5	AM and PM Peak	1	180	4	45,900	1,020	255	1,780	1.75	\$45,480	\$25.55
Total Avg		4	810	18	138,600	3,080		7,982	2.59	\$111,680	\$13.99

Cost based on peer community analysis.

Figure XIII-1
Preferred Service Plan



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The total annual estimated cost of Phase I is \$111,700 without inflation. The hourly cost will be \$34.57 based on a \$16.11 cost per revenue-hour, \$.36 cost per mile, and 1.38 overhead factor. The 18 total revenue-hours per day were multiplied by 255 operating days per year in calculating the total estimated cost of \$111,700. The costs were based on the peer community analysis conducted earlier in the planning process.

Regional Route Service

Phase I includes one regional route operating along State Highway (SH) 89 from Choteau to Great Falls and Stanford. The regional route will operate from 6:00 a.m. to 12:10 p.m. and 3:00 to 7:00 p.m. The regional route will operate as express service between the communities and as flex/demand-response service in the rural communities. In Great Falls, the regional route will function as fixed-route service stopping at the transit transfer station. The purposes of the regional route are to link the communities together in a more direct manner and to create an economy of scale to improve the efficiency and overall cost-effectiveness of the transit service. The estimated annual cost of the regional route service is \$46,400. The estimated annual ridership for the regional route service is 4,160 passengers, at a cost per passenger-trip of about \$11.

Commuter Route Service

Phase I includes one commuter route operating along SH 89 from Choteau to Great Falls. The commuter route will run twice per day from 6:00 to 7:30 a.m. and 5:30 to 7:00 p.m. The commuter route will operate as express service between the communities and flex/demand-response service in the rural communities. In Great Falls, the commuter route will function as fixed-route service stopping at the transit transfer station. The purpose of the commuter route is to link commuters with employment centers in Great Falls. The estimated annual cost of the commuter route service is \$45,500. The estimated annual ridership for the commuter route service is 1,800 passengers, at a cost per passenger-trip of about \$25. The LSC team programmed an additional revenue-hour of operational time to allow deadhead time on the commuter route.

Vanpool Program

Phase I includes a vanpool program operating two vans from the region's rural communities to the major employment centers of Great Falls, Havre, and Malta. The region will need to create a dispatch office which residents could call to be matched with a vanpool that serves the appropriate major employment city. The van drivers will be volunteer participants traveling to the major employment centers who normally participate in the vanpool program at no cost. The actual schedule and operations of each van are determined by the individuals participating in the vanpool program. The estimated annual cost of the vanpool program is \$19,800. The estimated annual ridership for the vanpool program is 2,040 passengers, at a cost per passenger-trip of about \$10.

Summary

The estimated total annual cost of Phase I service is \$111,700. The estimated annual ridership for Phase I service is 8,000 passengers, at a cost per passenger-trip of about \$14. Following is a summary of the estimated costs and passengers for Phase I service:

- \$14 cost per passenger-trip
- \$111,700 annual cost
- 2.6 passengers per hour
- 8,000 annual passengers

The total number of vehicles needed to operate Phase I service is estimated to be six vehicles (four regular vehicles plus two spare vehicles). Additional details on the capital needs are presented later in Chapter XIII.

Draft Schedules

Table XIII-4 (at the end of Chapter XIII) presents the draft schedules for the regional route and commuter route services.

Phase II (2012 - 2013)

As presented in Table XIII-2 and Figure XIII-1, Phase II includes two regional routes each operating up to 10 revenue-hours per day for a total of 20 hours per

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day, two commuter routes each operating between three to four revenue-hours per day, and a regional vanpool program operating three vanpools.

The total annual estimated cost of Phase II is \$202,075 without inflation. The hourly cost will be \$34.57 based on a \$16.11 hourly cost, \$.36 cost per mile, and 1.38 overhead factor. The 33 total revenue-hours per day were multiplied by 255 operating days per year in calculating the total estimated cost of \$202,075. The costs were based on the peer community analysis conducted earlier in the planning process.

Regional Route Service

Phase II includes two regional routes operating along SH 89 and SH 87. The regional routes will run twice per day from 8:00 a.m to 12:10 p.m. and 2:00 to 7:00 p.m. The regional routes will operate as an express service between the communities and as flex/demand-response service in the rural communities. In Havre and Malta, the regional route will function as deviated-route service. In Great Falls, the regional route will function as fixed-route service, stopping at the transit transfer station. The purposes of the regional routes are to link the communities together in a more direct manner and to create an economy of scale to improve the efficiency and overall cost-effectiveness of the transit service. The estimated annual cost of the regional route service is \$92,700. The estimated annual ridership for the regional route service is 6,500 passengers, at a cost per passenger-trip of about \$14.

**Table XIII-2
Phase II (2012-2013)**

Phase II (2012-2013)		Total Daily		Total Annual			Operating Days	Annual Ridership	Pass. per Hour	Operating Cost Annual	Cost (\$) per Pass.
		# of Veh.	Vehicle-Miles	Vehicle-Hours	Vehicle-Miles	Vehicle-Hours					
Vanpool Program	Peak Hours	3	270	6	68,850	1,530	255	3,060	2.00	\$29,743	\$9.72
Regional Route 1	Monday-Wednesday	1	450	10	46,800	1,040	104	4,162	4.00	\$46,371	\$11.14
Regional Route 2	Tuesday - Thursday	1	450	10	46,800	1,040	104	2,346	2.26	\$46,371	\$19.77
Commuter Route 1	AM and PM Peak	1	135	3	34,425	765	255	1,700	2.22	\$34,110	\$20.06
Commuter Route 5	AM and PM Peak	1	180	4	45,900	1,020	255	1,780	1.75	\$45,480	\$25.55
Total Avg		7	1,485	33	242,775	5,395		13,048	2.42	\$202,075	\$15.49

Cost based on peer community analysis.

Commuter Route Service

Phase II includes two commuter routes operating along SH 89 from Choteau to Great Falls and along SH 87 from Big Sandy to Havre. The commuter routes will run twice per day from 6:00 to 8:30 a.m. and 4:30 to 7:00 p.m. The commuter routes will operate as an express service between the communities and as flex/demand-response service in the rural communities. In Havre and Malta, the commuter route will function as deviated-route service. In Great Falls, the commuter route will function as fixed-route service, stopping at the transit transfer station. The purpose of the commuter routes is to link the commuters with employment centers in Great Falls and Havre. The estimated annual cost of the commuter route service is \$79,600. The estimated annual ridership for the commuter route service is 3,500 passengers, at a cost per passenger-trip of about \$23.

Vanpool Program

Phase II includes a vanpool program operating three vans from the region's rural communities to the major employment centers of Great Falls, Havre, and Malta. The region will need to create a dispatch office which residents could call to be matched with a vanpool that serves the appropriate major employment city. The van drivers will be volunteer participants traveling to the major employment centers who normally participate in the vanpool program at no cost. The actual schedule and operations of each van are determined by the individuals participating in the vanpool program. The estimated annual cost of the vanpool program is \$29,700. The estimated annual ridership for the vanpool program is 3,000 passengers, at a cost per passenger-trip of about \$10.

Summary

The estimated total annual cost of Phase II service is \$202,075. The estimated annual ridership for Phase II service is 13,000 passengers, at a cost per passenger-trip of about \$16. Following is a summary of the estimated costs and passengers for Phase II service:

- \$16 cost per passenger-trip
- \$202,075 annual cost
- 2.42 passengers per hour
- 13,000 annual passengers

The total number of vehicles needed to operate Phase II service is estimated to be nine vehicles (seven regular vehicles plus two spare vehicles). Additional details on the capital needs are presented later in Chapter XIII.

Draft Schedules

Table XIII-4 (at the end of Chapter XIII) presents the draft schedules for the regional route and commuter route services.

Phase III (2014)

As presented in Table XIII-3 and Figure XIII-1, Phase III includes three regional routes each operating up to 10 revenue-hours per day for a total of 30 hours per day, two commuter routes each operating three to four revenue-hours per day, and a regional vanpool program operating four vanpools.

The total annual estimated cost of Phase III is \$325,700 without inflation. The hourly cost will be \$34.57 based on a \$16.11 hourly cost, \$.36 cost per mile, and 1.38 overhead factor. The 45 total revenue-hours per day were multiplied by 255 operating days per year in calculating the total estimated cost of \$325,700. The costs were based on the peer community analysis conducted earlier in the planning process.

**Table XIII-3
Phase III (2014-Future)**

Phase III (2014-Future)		Total Daily		Total Annual			Operating Days	Annual Ridership	Pass. per Hour	Operating Cost Annual	Cost (\$) per Pass.
		# of Veh.	Vehicle-Miles	Vehicle-Hours	Vehicle-Miles	Vehicle-Hours					
Vanpool Program	Peak Hours	4	360	8	91,800	2,040	255	6,120	3.00	\$39,658	\$6.48
Regional Route 1	Monday-Wednesday	1	450	10	46,800	1,040	104	4,162	4.00	\$46,371	\$11.14
Regional Route 2	8:00 am to 7:00 pm (M-F)	1	450	10	114,750	2,550	255	5,738	2.00	\$113,699	\$19.82
Regional Route 3	Wednesday-Friday	1	450	10	46,800	1,040	104	3,179	3.06	\$46,371	\$14.59
Commuter Route 1	AM and PM Peak	1	135	3	34,425	765	255	1,700	2.22	\$34,110	\$20.06
Commuter Route 5	AM and PM Peak	1	180	4	45,900	1,020	255	1,780	1.75	\$45,480	\$25.55
Total Avg		9	2,025	45	380,475	8,455		22,679	2.68	\$325,688	\$14.36

Cost based on peer community analysis.

Regional Route Service

Phase III includes three regional routes operating along SH 89, SH 87, and US Highway 2. The regional routes will run twice per day from 8:00 a.m. to 12:10 p.m. and 2:00 to 7:00 p.m. In Phase III, the regional route along SH 87 will operate daily. The regional routes will operate as an express service between the communities and as flex/demand-response service in the rural communities. In Havre and Malta, the regional routes will function as deviated-route service. In Great Falls, the regional route will function as fixed-route service stopping at the transit transfer station. The purposes of the regional routes are to link the communities together in a more direct manner and to create an economy of scale to improve the efficiency and overall cost-effectiveness of the transit service. The estimated annual cost of the regional route service is \$206,400. The estimated annual ridership for the regional routes service is 13,000 passengers, at a cost per passenger-trip of about \$16.

Commuter Route Service

Phase III includes two commuter routes operating along SH 89 from Choteau to Great Falls and along SH 87 from Big Sandy to Havre. The commuter routes will run twice per day from 6:00 to 8:30 a.m. and 4:30 to 7:00 p.m. The commuter routes will operate as an express service between the communities and as flex/demand-response service in the rural communities. In Havre and Malta, the commuter route will function as deviated-route service. In Great Falls, the commuter route will function as fixed-route service stopping at the transit transfer station. The purpose of the commuter routes is to link commuters with employment centers in Great Falls and Havre. The estimated annual cost of the commuter route service is \$79,600. The estimated annual ridership for the commuter route service is 3,500 passengers, at a cost per passenger-trip of about \$23.

Vanpool Program

Phase III includes a vanpool program operating four vans from the region's rural communities to the major employment centers of Great Falls, Havre, and Malta. The region will need to create a dispatch office which residents could call to be matched with a vanpool that serves the appropriate major employment city. The van drivers will be volunteer participants traveling to the major employment

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centers who normally participate in the vanpool program at no cost. The actual schedule and operations of each van are determined by the individuals participating in the vanpool program. The estimated annual cost of the vanpool program is \$39,700. The estimated annual ridership for the vanpool program is 6,120 passengers, at a cost per passenger-trip of about \$6.

Summary

The estimated total annual cost of Phase III service is \$325,700. The estimated annual ridership for Phase III service is 22,700 passengers, at a cost per passenger-trip of about \$14. Following is a summary of the estimated costs and passengers for Phase III service:

- \$14 cost per passenger-trip
- \$325,700 annual cost
- 2.68 passengers per hour
- 22,700 annual passengers

The total number of vehicles needed to operate Phase III service is estimated to be 12 vehicles (nine regular vehicles plus three spare vehicles). Additional details on the capital needs are presented later in Chapter XIII.

Draft Schedules

Table XIII-4 presents the draft schedules for the regional route and commuter route services.

Table XIII-4 Draft Regional Service Schedules									
Route 1- Blue Route (Southern Route)									
Runs	Choteau	Fort Shaw	Great Falls	Armington	Stanford	Armington	Great Falls	Fort Shaw	Choteau
1	8:00 AM	8:51 AM	9:27 AM	9:59 AM	10:49 AM	11:38 AM	12:10 PM		
2			3:00 PM	3:32 PM	4:22 PM	5:11 PM	5:43 PM	6:19 PM	7:09 PM
Monday and Wednesday									
Route 2- Yellow Route (Central Service)									
Runs	Havre	Big Sandy	Fort Benton	Great Falls	Fort Benton	Big Sandy	Havre		
1	8:00 AM	8:45 AM	9:35 PM	10:28 PM	11:21 PM	12:11 AM	12:56 AM		
2	2:00 PM	2:45 PM	3:35 AM	4:28 AM	5:21 AM	6:11 AM	6:56 AM		
Phase II (Tuesday and Thursday), Phase III (Daily)									
Route 3 - Brown Route (Hi-Line)									
Runs	Havre	Chinook	Fort Belknap	Malta	Fort Belknap	Chinook	Havre		
1	9:00 AM	9:30 AM	10:03 AM	10:58 AM	11:53 AM	12:26 PM	12:55 PM		
2	2:00 PM	2:30 PM	3:03 PM	3:58 PM	4:53 PM	5:26 PM	5:55 PM		
Wednesday and Friday									
Commuter Route 1 - Great Falls									
Runs	Choteau	Fort Shaw	Great Falls	Fort Shaw	Choteau				
1	6:00 AM	6:51 AM	7:27 AM						
2			5:30 PM	6:06 PM	6:56 PM				
Commuter Route 2 - Havre									
Runs	Big Sandy	Rocky Boys	Havre	Rocky Boys	Big Sandy				
1	7:00 AM	7:15 AM	7:47 AM	8:19 AM	8:34 AM				
2	4:30 PM	4:45 PM	5:17 PM	5:49 PM	6:04 PM				
Source: LSC, 2007.									

Capital Costs and Needs

Each phase of the transit system will require the purchase of new buses. In Phase I, three small buses and three modified vans will need to be purchased. In Phase II, two small buses and one van will need to be purchased. For Phase III, one bus and two vans will need to be purchased.

The transit system will need a transit facility to store and maintain the vehicles, as well as house the administrative staff of the TP. It is estimated that it will cost about \$300,000 for a bus storage facility in Choteau and a vehicle storage and administrative office facility in Havre. Federal Transit Administration (FTA) grant funding could be used to pay for 87 percent of the transit facility cost. This equates to \$261,000 in FTA funding and \$39,000 in local match funding.

In Phases I through III, the TP will need to install bus stops with shelters at locations in each of the communities that the regional and commuter routes serve. The cost of the bus stops will depend upon the amenities installed at each bus stop and could range from \$10,000 to \$15,000. Figure XIII-1 shows the locations of the major bus stops that need to be installed for the regional route service.

The TP will also need to purchase office and administrative equipment and a communications system. Additional details on these capital needs are presented in Chapter XIV.