

## Transit Implementation Plan (2006 - 2011)

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### INTRODUCTION

Following the analysis of the alternatives presented in the previous chapters, LSC has prepared the following Transit Implementation Plan. The Transit Implementation Plan identifies the steps to be taken within the next five years, as well as the long-term actions to meet the future transportation needs. Chapter XIII includes a timeline and illustrates the projects and programs that could be implemented over the planning horizon (next five years) and over the long term (10 to 20 years).

### ORGANIZATIONAL PLAN

#### **PanTran Remains Primary Provider**

PanTran, under the direction of PanTran Board, should remain the primary general public transportation provider in the short term (next five years). PanTran has the legal and financial capabilities to ensure the stability of public transportation services within the community.

#### **Work to Improve the Status of Public Transportation at the State Level**

As home to one of West Virginia's small urban/rural transportation providers, PanTran should work toward a leadership role in increasing the status of public transportation (particularly rural public transportation) among the state's decision-makers. One obvious area that merits particular focus is funding. Every session of the State Legislature considers measures that would either help rural transit programs or harm them (such as measures to restrict transportation funding for highway use only). The local jurisdictions within the Eastern Panhandle Region should use the success of local services as an example of transit's effectiveness in the region and work to improve the climate for multimodal transportation solutions in West Virginia.

## SERVICE PLAN

The proposed service changes for PanTran include restructuring the current system to a hub-and-spoke system with demand-response service, expanding weekday service-hours, decreasing headways, creating a Charles Town shuttle, creating commuter service, and developing a rideshare broker program for the region. The financial details are shown in Table XIII-8 (at the end of Chapter XIII).

### Hub-and-Spoke with Demand-Response Service

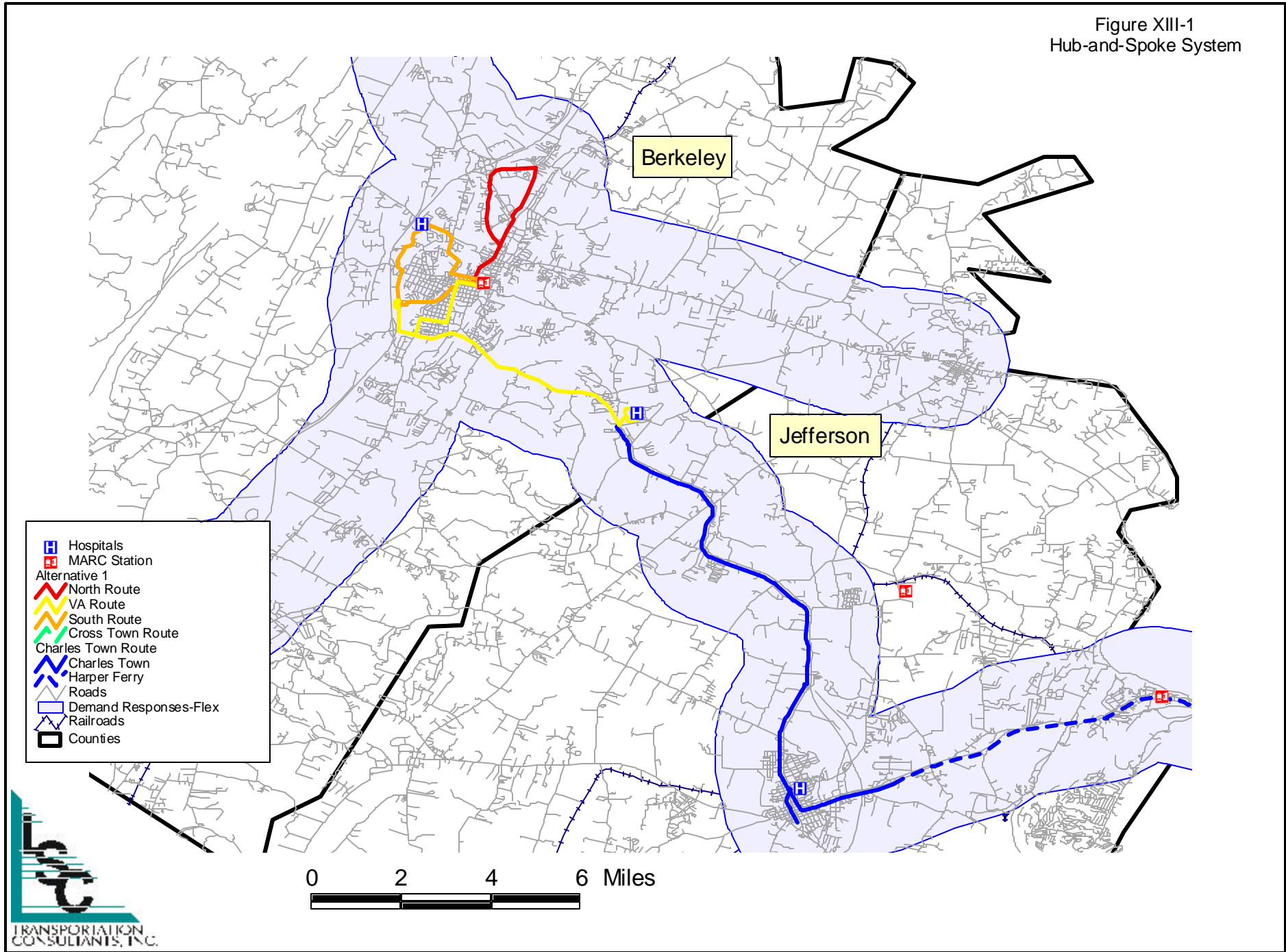
The first service recommendation is for PanTran to restructure the existing service into a hub-and-spoke system with demand-response service. In this system, as detailed in Chapter IX, the routes interconnect at a major point. For PanTran, this would be the Martinsburg MARC train station. The critical element of a hub-and-spoke system is that the system operates on a pulse. The buses all come together at the transfer point (the train station) at the same time. The buses arrive and depart from this transfer location. This allows the transit users to easily transfer between routes. The route structure is presented in Figure XIII-1. The fixed routes in the hub-and-spoke system would deviate from the fixed route, depending upon time allowances, up to three-fourths a mile from the fixed route.



PanTran should also operate a demand-response service that would serve the existing 1.5 miles of buffer area off the fixed route. The demand-response service would be by appointment and on a first-come/first-served basis. The demand-response service would also serve Inwood, Shepherdstown, and Hedgesville. LSC has included demand-response guidelines in Appendix H.

Tables XIII-1a through XIII-1h present the final schedules for each route in the recommended alternative. Table XIII-2 presents the summary of the recommended system (including the number of annual revenue-hours, annual costs, and headways on each route).

Figure XIII-1  
Hub-and-Spoke System



- Hospitals
- MARC Station
- Alternative 1
- North Route
- VA Route
- South Route
- Cross Town Route
- Charles Town Route
- Harper Ferry
- Roads
- Demand Responses-Flex
- Railroads
- Counties

0 2 4 6 Miles



Table XIII-1a Example Schedule - Martinsburg North Loop								
Runs	Train Station	Big Lots	Berkeley Plaza	Mid-Atlantic	DMV	Old Courthouse Square	Food Lion	Train Station
1	6:30 AM	6:34 AM	6:37 AM	6:42 AM	6:46 AM	6:49 AM	6:50 AM	6:54 AM
2	7:30 AM	7:34 AM	7:37 AM	7:42 AM	7:46 AM	7:49 AM	7:50 AM	7:54 AM
3	8:30 AM	8:34 AM	8:37 AM	8:42 AM	8:46 AM	8:49 AM	8:50 AM	8:54 AM
4	9:30 AM	9:34 AM	9:37 AM	9:42 AM	9:46 AM	9:49 AM	9:50 AM	9:54 AM
5	Break							
6	11:30 AM	11:34 AM	11:37 AM	11:42 AM	11:46 AM	11:49 AM	11:50 AM	11:54 AM
7	12:30 PM	12:34 PM	12:37 PM	12:42 PM	12:46 PM	12:49 PM	12:50 PM	12:54 PM
8	1:30 PM	1:34 PM	1:37 PM	1:42 PM	1:46 PM	1:49 PM	1:50 PM	1:54 PM
9	2:30 PM	2:34 PM	2:37 PM	2:42 PM	2:46 PM	2:49 PM	2:50 PM	2:54 PM
10	3:30 PM	3:34 PM	3:37 PM	3:42 PM	3:46 PM	3:49 PM	3:50 PM	3:54 PM
11	4:30 PM	4:34 PM	4:37 PM	4:42 PM	4:46 PM	4:49 PM	4:50 PM	4:54 PM
12	5:30 PM	5:34 PM	5:37 PM	5:42 PM	5:46 PM	5:49 PM	5:50 PM	5:54 PM
13	6:30 PM	6:34 PM	6:37 PM	6:42 PM	6:46 PM	6:49 PM	6:50 PM	6:54 PM
14	7:30 PM	7:34 PM	7:37 PM	7:42 PM	7:46 PM	7:49 PM	7:50 PM	7:54 PM
15	8:30 PM	8:34 PM	8:37 PM	8:42 PM	8:46 PM	8:49 PM	8:50 PM	8:54 PM

Table XIII-1b Example Schedule - South Martinsburg Route												
Runs	Train Station	King / Raleigh	Rocky / Winchester	Mall	Wal-Mart	Old Mill / King	Hospital	Shenandoah Center	Tavern / Rock Cliff	Baltimore/ Randolph	Race/ Raleigh	Train Station
1	6:00 AM	6:03 AM	6:05 AM	6:07 AM	6:09 AM	6:12 AM	6:17 AM	6:19 AM	6:21 AM	6:24 AM	6:26 AM	6:28 AM
2	7:00 AM	7:03 AM	7:05 AM	7:07 AM	7:09 AM	7:12 AM	7:17 AM	7:19 AM	7:21 AM	7:24 AM	7:26 AM	7:28 AM
3	8:00 AM	8:03 AM	8:05 AM	8:07 AM	8:09 AM	8:12 AM	8:17 AM	8:19 AM	8:21 AM	8:24 AM	8:26 AM	8:28 AM
4	9:00 AM	9:03 AM	9:05 AM	9:07 AM	9:09 AM	9:12 AM	9:17 AM	9:19 AM	9:21 AM	9:24 AM	9:26 AM	9:28 AM
5	10:00 AM	10:03 AM	10:05 AM	10:07 AM	10:09 AM	10:12 AM	10:17 AM	10:19 AM	10:21 AM	10:24 AM	10:26 AM	10:28 AM
6	11:00 AM	11:03 AM	11:05 AM	11:07 AM	11:09 AM	11:12 AM	11:17 AM	11:19 AM	11:21 AM	11:24 AM	11:26 AM	11:28 AM
7	12:00 PM	12:03 PM	12:05 PM	12:07 PM	12:09 PM	12:12 PM	12:17 PM	12:19 PM	12:21 PM	12:24 PM	12:26 PM	12:28 PM
8	1:00 PM	1:03 PM	1:05 PM	1:07 PM	1:09 PM	1:12 PM	1:17 PM	1:19 PM	1:21 PM	1:24 PM	1:26 PM	1:28 PM
9	2:00 PM	2:03 PM	2:05 PM	2:07 PM	2:09 PM	2:12 PM	2:17 PM	2:19 PM	2:21 PM	2:24 PM	2:26 PM	2:28 PM
10	3:00 PM	3:03 PM	3:05 PM	3:07 PM	3:09 PM	3:12 PM	3:17 PM	3:19 PM	3:21 PM	3:24 PM	3:26 PM	3:28 PM
11	4:00 PM	4:03 PM	4:05 PM	4:07 PM	4:09 PM	4:12 PM	4:17 PM	4:19 PM	4:21 PM	4:24 PM	4:26 PM	4:28 PM
12	5:00 PM	5:03 PM	5:05 PM	5:07 PM	5:09 PM	5:12 PM	5:17 PM	5:19 PM	5:21 PM	5:24 PM	5:26 PM	5:28 PM
13	6:00 PM	6:03 PM	6:05 PM	6:07 PM	6:09 PM	6:12 PM	6:17 PM	6:19 PM	6:21 PM	6:24 PM	6:26 PM	6:28 PM
14	7:00 PM	7:03 PM	7:05 PM	7:07 PM	7:09 PM	7:12 PM	7:17 PM	7:19 PM	7:21 PM	7:24 PM	7:26 PM	7:28 PM
15	8:00 PM	8:03 PM	8:05 PM	8:07 PM	8:09 PM	8:12 PM	8:17 PM	8:19 PM	8:21 PM	8:24 PM	8:26 PM	8:28 PM

Source: LSC 2005

Table XIII-1c Example Schedule - VA Route															
Runs	Train Station	Judicial Center	Mall	Kmart	State Highway 9	County Jail	Nahkeeta Campsite	VA Medical Center	Nahkeeta Campsite	County Jail	State Highway 9	Kmart	Mall	Judicial Center	Train Station
1	6:00 AM	6:04 AM	6:10 AM	6:14 AM	6:16 AM	6:18 AM	6:23 AM	6:30 AM	6:37 AM	6:42 AM	6:44 AM	6:46 AM	6:52 AM	6:56 AM	6:59 AM
2	7:00 AM	7:04 AM	7:10 AM	7:14 AM	7:16 AM	7:18 AM	7:23 AM	7:30 AM	7:37 AM	7:42 AM	7:44 AM	7:46 AM	7:52 AM	7:56 AM	7:59 AM
3	8:00 AM	8:04 AM	8:10 AM	8:14 AM	8:16 AM	8:18 AM	8:23 AM	8:30 AM	8:37 AM	8:42 AM	8:44 AM	8:46 AM	8:52 AM	8:56 AM	8:59 AM
4	9:00 AM	9:04 AM	9:10 AM	9:14 AM	9:16 AM	9:18 AM	9:23 AM	9:30 AM	9:37 AM	9:42 AM	9:44 AM	9:46 AM	9:52 AM	9:56 AM	9:59 AM
5	10:30 AM	10:34 AM	10:40 AM	10:44 AM	10:46 AM	10:48 AM	10:53 AM	11:00 AM	11:07 AM	11:12 AM	11:14 AM	11:16 AM	11:22 AM	11:26 AM	11:29 AM
6	11:30 AM	11:34 AM	11:40 AM	11:44 AM	11:46 AM	11:48 AM	11:53 AM	12:00 PM	12:07 PM	12:12 PM	12:14 PM	12:16 PM	12:22 PM	12:26 PM	12:29 PM
7	12:30 PM	12:34 PM	12:40 PM	12:44 PM	12:46 PM	12:48 PM	12:53 PM	1:00 PM	1:07 PM	1:12 PM	1:14 PM	1:16 PM	1:22 PM	1:26 PM	1:29 PM
8	1:30 PM	1:34 PM	1:40 PM	1:44 PM	1:46 PM	1:48 PM	1:53 PM	2:00 PM	2:07 PM	2:12 PM	2:14 PM	2:16 PM	2:22 PM	2:26 PM	2:29 PM
9	2:30 PM	2:34 PM	2:40 PM	2:44 PM	2:46 PM	2:48 PM	2:53 PM	3:00 PM	3:07 PM	3:12 PM	3:14 PM	3:16 PM	3:22 PM	3:26 PM	3:29 PM
10	3:30 PM	3:34 PM	3:40 PM	3:44 PM	3:46 PM	3:48 PM	3:53 PM	4:00 PM	4:07 PM	4:12 PM	4:14 PM	4:16 PM	4:22 PM	4:26 PM	4:29 PM
11	4:30 PM	4:34 PM	4:40 PM	4:44 PM	4:46 PM	4:48 PM	4:53 PM	5:00 PM	5:07 PM	5:12 PM	5:14 PM	5:16 PM	5:22 PM	5:26 PM	5:29 PM
12	5:30 PM	5:34 PM	5:40 PM	5:44 PM	5:46 PM	5:48 PM	5:53 PM	6:00 PM	6:07 PM	6:12 PM	6:14 PM	6:16 PM	6:22 PM	6:26 PM	6:29 PM
13	6:30 PM	6:34 PM	6:40 PM	6:44 PM	6:46 PM	6:48 PM	6:53 PM	7:00 PM	7:07 PM	7:12 PM	7:14 PM	7:16 PM	7:22 PM	7:26 PM	7:29 PM
14	7:30 PM	7:34 PM	7:40 PM	7:44 PM	7:46 PM	7:48 PM	7:53 PM	8:00 PM							

Source: LSC 2005

Table XIII-1d Example Schedule - Charles Town Route													
Runs	VA Medical Center	Lee Town Rd	Fox Glenn	City Hall	Race Track	Wal-Mart CT	Harper's Ferry Train	Wal-Mart CT	Race Track	Court House CT	Fox Glenn	Lee Town Rd	VA Medical Center
1	6:00 AM	6:06 AM	6:10 AM	6:26 AM	6:28 AM	6:31 AM	6:43 AM	6:55 AM	6:57 AM	7:00 AM	7:16 AM	7:20 AM	7:26 AM
2	7:30 AM	7:36 AM	7:40 AM	7:56 AM	7:58 AM	8:01 AM	8:13 AM	8:25 AM	8:27 AM	8:30 AM	8:46 AM	8:50 AM	8:56 AM
3	9:10 AM	9:16 AM	9:20 AM	9:36 AM	9:38 AM	9:41 AM	-	9:42 AM	9:44 AM	9:47 AM	10:03 AM	10:07 AM	10:13 AM
4	10:40 AM	10:46 AM	10:50 AM	11:06 AM	11:08 AM	11:11 AM	-	11:12 AM	11:14 AM	11:17 AM	11:33 AM	11:37 AM	11:43 AM
5	11:50 AM	11:56 AM	12:00 PM	12:16 PM	12:18 PM	12:21 PM	-	12:22 PM	12:24 PM	12:27 PM	12:43 PM	12:47 PM	12:53 PM
6	1:00 AM	1:06 AM	1:10 AM	1:26 AM	1:28 AM	1:31 AM	1:43 AM	1:55 AM	1:57 AM	2:00 AM	2:16 AM	2:20 AM	2:26 AM
7	2:30 PM	2:36 PM	2:40 PM	2:56 PM	2:58 PM	3:01 PM	3:13 PM	3:25 PM	3:27 PM	3:30 PM	3:46 PM	3:50 PM	3:56 PM
8	4:00 PM	4:06 PM	4:10 PM	4:26 PM	4:28 PM	4:31 PM	-	4:32 PM	4:34 PM	4:37 PM	4:53 PM	4:57 PM	5:03 PM
9	5:30 PM	5:36 PM	5:40 PM	5:56 PM	5:58 PM	6:01 PM	-	6:02 PM	6:04 PM	6:07 PM	6:23 PM	6:27 PM	6:33 PM
10	6:40 PM	6:46 PM	6:50 PM	7:06 PM	7:08 PM	7:11 PM	7:23 PM	7:35 PM	7:37 PM	7:40 PM	7:56 PM	8:00 PM	8:06 PM
11	8:15 PM	8:21 PM	8:25 PM	8:41 PM	8:43 PM	8:46 PM	8:58 PM	9:10 PM	9:12 PM	9:15 PM	9:31 PM	9:35 PM	9:41 PM

Table XIII-1e Example Schedule - South Martinsburg Route												
Runs	Train Station	King / Raleigh	Rocky / Winchester	Mall	Wal-Mart	Old Mill / King	Hospital	Shannanoah Center	Tavern / Rock Cliff	Baltimore/ Randolph	Race/ Raleigh	Train Station
1	8:00 AM	8:03 AM	8:05 AM	8:07 AM	8:09 AM	8:12 AM	8:17 AM	8:19 AM	8:21 AM	8:24 AM	8:26 AM	8:28 AM
2	9:00 AM	9:03 AM	9:05 AM	9:07 AM	9:09 AM	9:12 AM	9:17 AM	9:19 AM	9:21 AM	9:24 AM	9:26 AM	9:28 AM
3	10:00 AM	10:03 AM	10:05 AM	10:07 AM	10:09 AM	10:12 AM	10:17 AM	10:19 AM	10:21 AM	10:24 AM	10:26 AM	10:28 AM
	Break											
4	11:00 AM	11:03 AM	11:05 AM	11:07 AM	11:09 AM	11:12 AM	11:17 AM	11:19 AM	11:21 AM	11:24 AM	11:26 AM	11:28 AM
5	12:00 PM	12:03 PM	12:05 PM	12:07 PM	12:09 PM	12:12 PM	12:17 PM	12:19 PM	12:21 PM	12:24 PM	12:26 PM	12:28 PM
6	1:00 PM	1:03 PM	1:05 PM	1:07 PM	1:09 PM	1:12 PM	1:17 PM	1:19 PM	1:21 PM	1:24 PM	1:26 PM	1:28 PM
7	2:00 PM	2:03 PM	2:05 PM	2:07 PM	2:09 PM	2:12 PM	2:17 PM	2:19 PM	2:21 PM	2:24 PM	2:26 PM	2:28 PM
	Break											
8	4:00 PM	4:03 PM	4:05 PM	4:07 PM	4:09 PM	4:12 PM	4:17 PM	4:19 PM	4:21 PM	4:24 PM	4:26 PM	4:28 PM

Source: LSC 2005

Table XIII-1f Example Schedule - Martinsburg North Loop								
Runs	Train Station	Big Lots	Berkeley Plaza	Mid-Atlantic	DMV	Old Courthouse Square	Food Lion	Train Station
1	8:30 AM	8:34 AM	8:37 AM	8:42 AM	8:46 AM	8:49 AM	8:50 AM	8:54 AM
2	9:30 AM	9:34 AM	9:37 AM	9:42 AM	9:46 AM	9:49 AM	9:50 AM	9:54 AM
3	Break							
4	11:30 AM	11:34 AM	11:37 AM	11:42 AM	11:46 AM	11:49 AM	11:50 AM	11:54 AM
5	12:30 PM	12:34 PM	12:37 PM	12:42 PM	12:46 PM	12:49 PM	12:50 PM	12:54 PM
6	1:30 PM	1:34 PM	1:37 PM	1:42 PM	1:46 PM	1:49 PM	1:50 PM	1:54 PM
7	2:30 PM	2:34 PM	2:37 PM	2:42 PM	2:46 PM	2:49 PM	2:50 PM	2:54 PM
	Break							
8	3:30 PM	3:34 PM	3:37 PM	3:42 PM	3:46 PM	3:49 PM	3:50 PM	3:54 PM

Table XIII-1g Example Schedule - VA Route														
Runs	Train Station	Judicial Center	Kmart	State Highway 9	County Jail	Nahkeeta Campsite	VA Medical Center	Bus To Charles Town	Nahkeeta Campsite	County Jail	State Highway 9	Kmart	Judicial Center	Train Station
1	9:00 AM	9:03 AM	9:08 AM	9:11 AM	9:14 AM	9:19 AM	9:27 AM		10:52 AM	10:58 AM	11:01 AM	11:04 AM	11:09 AM	11:12 AM
2	11:15 AM	11:18 AM	11:23 AM	11:26 AM	11:29 AM	11:34 AM	11:42 AM		12:54 PM	1:00 PM	1:03 PM	1:06 PM	1:11 PM	1:14 PM
3	Break													
3	1:45 PM	1:48 PM	1:53 PM	1:56 PM	1:59 PM	2:04 PM	2:12 PM		3:24 PM	3:30 PM	3:33 PM	3:36 PM	3:41 PM	3:44 PM
4	3:45 AM	3:48 AM	3:53 AM	3:56 AM	3:59 AM	4:04 AM	4:12 AM		5:49 PM	5:55 PM	5:58 PM	6:01 PM	6:06 PM	6:09 PM

Source: LSC 2005

Table XIII-1h Example Schedule - Charles Town Route											
Runs	VA Medical Center	Lee Town Rd	Fox Glenn	City Hall	Wal-Mart CT	Harper's Ferry Train	Wal-Mart CT	Court House CT	Fox Glenn	Lee Town Rd	VA Medical Center
1	9:30 AM	9:30 AM	9:34 AM	9:50 AM	9:55 AM	10:07 AM	10:19 AM	10:24 AM	10:40 AM	10:44 AM	10:44 AM
2	11:43 AM	11:49 AM	11:53 AM	12:09 PM	12:14 PM	-	12:15 PM	12:20 PM	12:36 PM	12:40 PM	12:46 PM
3	2:13 PM	2:19 PM	2:23 PM	2:39 PM	2:44 PM	-	2:45 PM	2:50 PM	3:06 PM	3:10 PM	3:16 PM
4	4:15 PM	4:21 PM	4:25 PM	4:41 PM	4:46 PM	4:58 PM	5:10 PM	5:15 PM	5:31 PM	5:35 PM	5:41 PM

**Table XIII-2  
Summary of Proposed Service Plan**

Routes	Buses	Distance	Direction	Total Distance	Speed	Running Time	Time in Mins	Cost per Hour	Cost per Mile	Runs	Cost per Day	Annual Cost	Actual Headways (Mins)	Daily Hours	Annual Hours	Daily Miles	Annual Miles
Martinsburg North	1	6.7	1	6.7	17	0.4	24	\$ 17.96	\$ 0.15	15	\$ 121.07	\$ 28,572	60	5.9	1,393	100	23,683
Martinsburg South	1	7.1	1	7.1	15	0.5	28	\$ 17.96	\$ 0.15	15	\$ 142.48	\$ 33,625	60	7.1	1,664	106	24,957
VA Route	1	7.4	2	14.8	15	1.0	59	\$ 17.96	\$ 0.15	14	\$ 278.41	\$ 65,705	60	13.8	3,251	207	48,767
Charles Town	1	17.9	2	35.7	25	1.1	67	\$ 17.96	\$ 0.15	11	\$ 268.53	\$ 63,374	60/90	15.0	3,533	309	72,978
Demand Response	1							\$ 20.79				\$ 34,636		7.1	1,666	92	21,658
Saturday Service	2											\$ 29,500					
Fixed Cost												\$ 161,681					
<b>Total</b>										<b>55</b>	<b>\$ 810.50</b>	<b>\$ 417,094</b>		<b>48.8</b>	<b>11,507</b>	<b>814</b>	<b>192,042</b>

Source: LSC, 2005

PanTran should continue to focus on stable transit-user markets, such as the elderly and disabled. It would be difficult for transit to become a competitor of the automobile in the near future since the automobile continues to play a key role in the Eastern Panhandle Region (particularly in developments with low density).

The annual cost for the increased service is approximately \$36,000 in the year 2006. The annual cost for existing transit service in the year 2006 is approximately \$389,000. With the restructuring of the service, the annual cost would be approximately \$426,000. By using federal transit funding, the local annual cost would only be 50 percent of the \$36,000 (which equates to \$18,000). Local funding could be generated from contracts and local business agreements.

If additional dedicated funding becomes available through intergovernmental agreements, PanTran should implement the expanded version of the hub-and-spoke system recommendation. The first phase of implementation would be the commuter routes detailed later in Chapter XIII. The expanded system would be the second phase of implementation. The expansion of the fixed-route service increases the number of revenue-hours for weekday service, by adding about 25 additional revenue-hours per day for a total of 5,900 annual hours. The total cost of this service expansion is estimated at \$653,000, which is about a \$264,000 additional cost annually. The additional cost of the expansion in the implementation year (2011) will be \$324,000 due to inflation.

### Benefits

- The residents of the Eastern Panhandle Region would obtain increased connectivity and mobility.

### Timing

- The restructured service should be implemented in fiscal year 2006 to 2007 depending upon the availability of local match funding and the marketing of the new service.

### Responsibility

- The PanTran staff would be responsible for planning and implementing the restructured service-hours for PanTran.

### Implementation Steps

- PanTran should educate the public about the new hub-and-spoke system and how to use the new service.
- PanTran should work with the local government entities to secure the additional funding.
- Copies of the new schedules and brochures should be printed off and distributed throughout the service areas.
- PanTran should advertise the new hub-and-spoke system with the local newspaper, radio, and television stations.
- PanTran should apply for the appropriate operating funding for the service.
- PanTran should continue to collect passenger ridership data and evaluate service on a monthly basis.

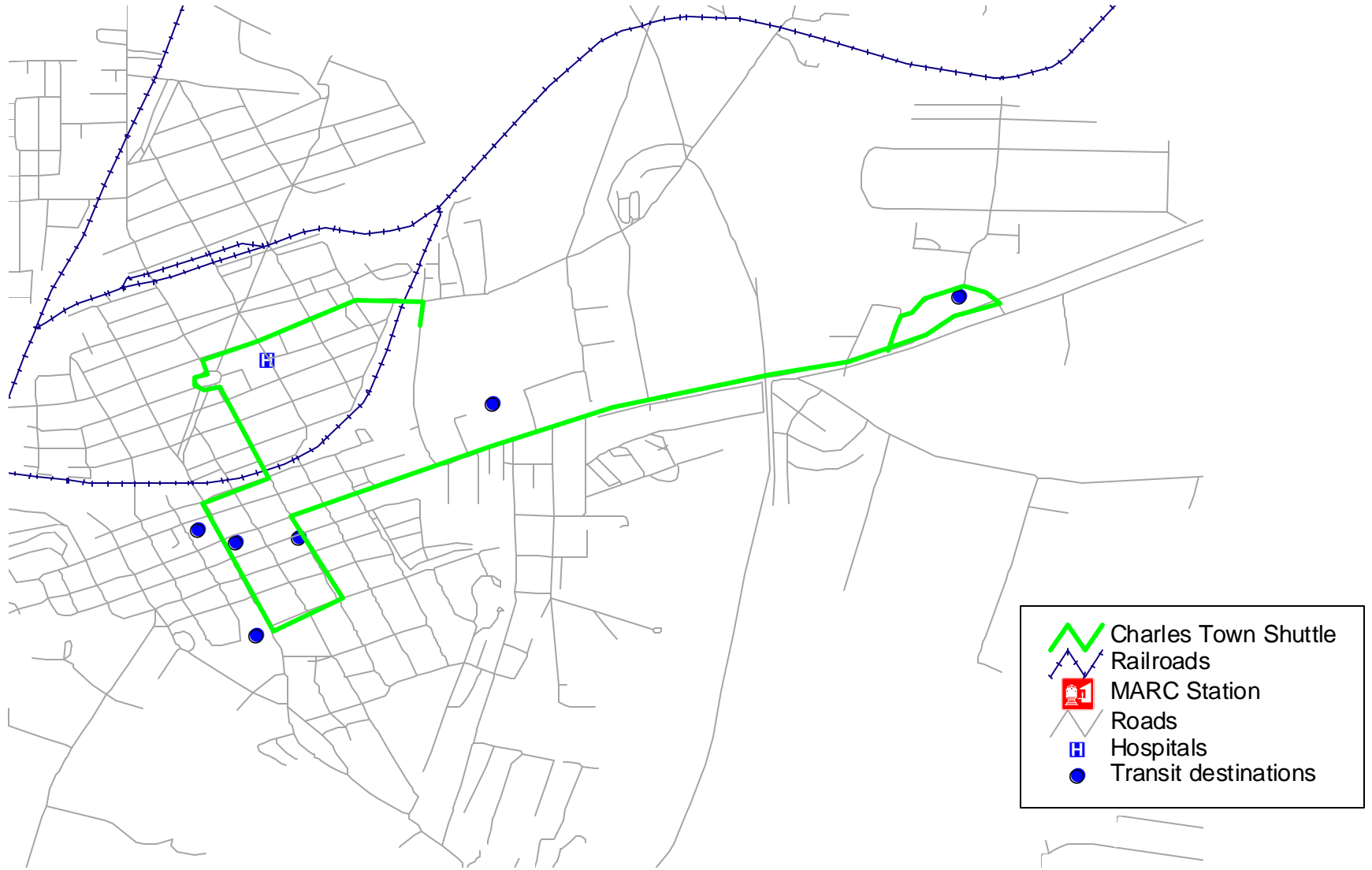
### **Charles Town and Ranson Shuttle Service**

The second service recommendation is for PanTran to develop a shuttle service, in cooperation with local businesses. The goal of the shuttle service is to improve connectivity into and throughout the communities of Charles Town and Ranson. The service would allow choice riders to use PanTran and understand the benefits that PanTran can provide the community.

Figure XIII-2 presents the proposed route structure for the shuttle route. The route is designed to link the important destinations in order to reduce the number of vehicle-trips into and throughout the area. The route starts at the Charles Town Races and ends at the Charles Town Wal-Mart. The route also serves the downtown areas of Charles Town and the Jefferson Hospital. Table XIII-3 presents the recommended schedule for the shuttle service. The service would operate on a 20- to 30-minute headway throughout Charles Town and Ranson from 8:00 a.m. to 6:00 p.m.

The annual cost of the shuttle service is estimated at \$59,000 in the year 2007. The annual cost for the existing service is approximately \$401,000 in the year 2007. With the shuttle service, the annual cost for service would be approximately \$460,000. By using federal transit funding, the local annual cost would only be 50 percent of the \$59,000 (which equates to \$29,500). Local funding could be generated from contracts with the downtown businesses and the Chamber of Commerce.

Figure XIII-2  
Charles Town Shuttle



	Charles Town Shuttle
	Railroads
	MARC Station
	Roads
	Hospitals
	Transit destinations

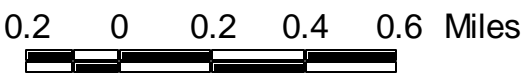


Table XIII-3 Charles Town Shuttle									
Runs	Charles Town Races	Jefferson County Hospital	Court House	Save-a-Lot	Wal-Mart	Save-a-Lot	Court House	Jefferson County Hospital	Charles Town Races
1	8:00 AM	8:02 AM	8:05 AM	8:07 AM	8:14 AM	8:21 AM	8:24 AM	8:27 AM	8:29 AM
2	8:30 AM	8:32 AM	8:35 AM	8:37 AM	8:44 AM	8:51 AM	8:54 AM	8:57 AM	8:59 AM
3	9:00 AM	9:02 AM	9:05 AM	9:07 AM	9:14 AM	9:21 AM	9:24 AM	9:27 AM	9:29 AM
4	9:30 AM	9:32 AM	9:35 AM	9:37 AM	9:44 AM	9:51 AM	9:54 AM	9:57 AM	9:59 AM
5	10:00 AM	10:02 AM	10:05 AM	10:07 AM	10:14 AM	10:21 AM	10:24 AM	10:27 AM	10:29 AM
6	10:30 AM	10:32 AM	10:35 AM	10:37 AM	10:44 AM	10:51 AM	10:54 AM	10:57 AM	10:59 AM
7	11:00 AM	11:02 AM	11:05 AM	11:07 AM	11:14 AM	11:21 AM	11:24 AM	11:27 AM	11:29 AM
8	12:00 PM	12:02 PM	12:05 PM	12:07 PM	12:14 PM	12:21 PM	12:24 PM	12:27 PM	12:29 PM
9	12:30 PM	12:32 PM	12:35 PM	12:37 PM	12:44 PM	12:51 PM	12:54 PM	12:57 PM	12:59 PM
10	1:00 PM	1:02 PM	1:05 PM	1:07 PM	1:14 PM	1:21 PM	1:24 PM	1:27 PM	1:29 PM
11	1:30 PM	1:32 PM	1:35 PM	1:37 PM	1:44 PM	1:51 PM	1:54 PM	1:57 PM	1:59 PM
12	2:00 PM	2:02 PM	2:05 PM	2:07 PM	2:14 PM	2:21 PM	2:24 PM	2:27 PM	2:29 PM
13	2:30 PM	2:32 PM	2:35 PM	2:37 PM	2:44 PM	2:51 PM	2:54 PM	2:57 PM	2:59 PM
14	3:00 PM	3:02 PM	3:05 PM	3:07 PM	3:14 PM	3:21 PM	3:24 PM	3:27 PM	3:29 PM
15	3:30 PM	3:32 PM	3:35 PM	3:37 PM	3:44 PM	3:51 PM	3:54 PM	3:57 PM	3:59 PM
16	4:00 PM	4:02 PM	4:05 PM	4:07 PM	4:14 PM	4:21 PM	4:24 PM	4:27 PM	4:29 PM
17	4:30 PM	4:32 PM	4:35 PM	4:37 PM	4:44 PM	4:51 PM	4:54 PM	4:57 PM	4:59 PM
18	5:00 PM	5:02 PM	5:05 PM	5:07 PM	5:14 PM	5:21 PM	5:24 PM	5:27 PM	5:29 PM
19	5:30 PM	5:32 PM	5:35 PM	5:37 PM	5:44 PM	5:51 PM	5:54 PM	5:57 PM	5:59 PM

Source: LSC 2005

### Benefits

- The residents of the Eastern Panhandle Region would have public transportation available in the Charles Town and Ranson areas with a frequent service of 20- to 30-minute headways. This would allow the residents to park once and then ride the bus to locations throughout the downtown areas and improve service for the traditional transit user in the Charles Town area.

### Timing

- The shuttle service should be implemented in fiscal year 2007 to 2008, depending upon the availability of local match funding.

### Responsibility

- The Transit Manager and the PanTran Board would be responsible for planning and implementing the shuttle service for PanTran.

### Implementation Steps

- PanTran should work with the downtown businesses and the Chamber of Commerce to develop the steps needed in order to implement the shuttle service within the next two years.
- PanTran and the West Virginia Department of Transportation (WVDOT) should work with the downtown businesses and the Chamber of Commerce to generate local funding for the shuttle service.
- PanTran, with cooperation from WVDOT, should apply for CMAQ funding for the shuttle's first three years of operational funding and the capital cost of the shuttle buses.
- PanTran should continue to collect passenger ridership data and evaluate service on a monthly basis, particularly the late afternoon ridership.

### **Commuter Service**

Once a funding source has been developed for PanTran, the next level or phase of service development that should be implemented is commuter service. This phase would be the development of a commuter service that links the park-and-ride lots with the MARC train station in Berkeley and Jefferson Counties. The commuter service would operate in the morning before the trains depart from the stations, and again in the evening when the trains return. The commuter routes in Berkeley County would begin service at 4:45 a.m. while the commuter routes in Jefferson County would begin service at 5:10 a.m. In the evening, the routes would end service at the park-and-ride lots about 8:00 or 9:00 p.m.

Figure XIII-3 presents the proposed route structure for the commuter routes. The routes are designed to link commuters to the MARC train stations. Figure XIII-3 also presents the second phase of the commuter service development. Table XIII-4 presents the recommended schedule for the commuter service.

The annual cost of the commuter service is estimated at \$187,000 in the year 2009. The annual cost for the existing service is approximately \$426,000 in the year 2009. With the commuter service, the annual cost for service would be approximately \$613,000. By using federal transit funding, the local annual cost would only be 50 percent of the \$187,000 (which equates to \$94,000).

In the long term, PanTran could implement additional routes as presented in Figure XIII-3. These routes could be implemented in the 2012 to 2020 timeframe depending upon funding availability and are labeled in Figure XIII-3 with dashed lines.

The commuter routes include service from Martinsburg to Williamsport, Maryland; Martinsburg to Brunswick, Maryland through either Charles Town and/or Harper's Ferry; Mountain Mission to Charles Town and Harper's Ferry; and Kearneysville to Duffields. The service from Martinsburg to Williamsport will need to coordinate with the Washington County transit system in Maryland in order to link the route through to Hagerstown several times. This will allow a link to the Maryland DOT bus service and the national Greyhound service along Interstate 70. The Phase I services will also improve the linkage between the PanTran service area and the MARC train that serves the Washington, DC and Baltimore regions.

LSC recommends the following priority for the implementation of Phase I and II of the commuter service.

**Phase I (2006-2011)**

1. Duffields to Brunswick, Maryland
2. Falling Waters to Martinsburg
3. Hedgesville to Martinsburg
4. Inwood to Martinsburg

**Phase II (2012-2020)**

5. Martinsburg to Charles Town and Duffields
6. Martinsburg to Williamsport and Hagerstown
7. Mountain Mission to Charles Town and Duffields

Benefits

- The residents of the Eastern Panhandle Region would obtain increased connectivity and modal choice.

Timing

- The commuter service should be implemented in fiscal year 2009 depending upon the availability of local match funding.

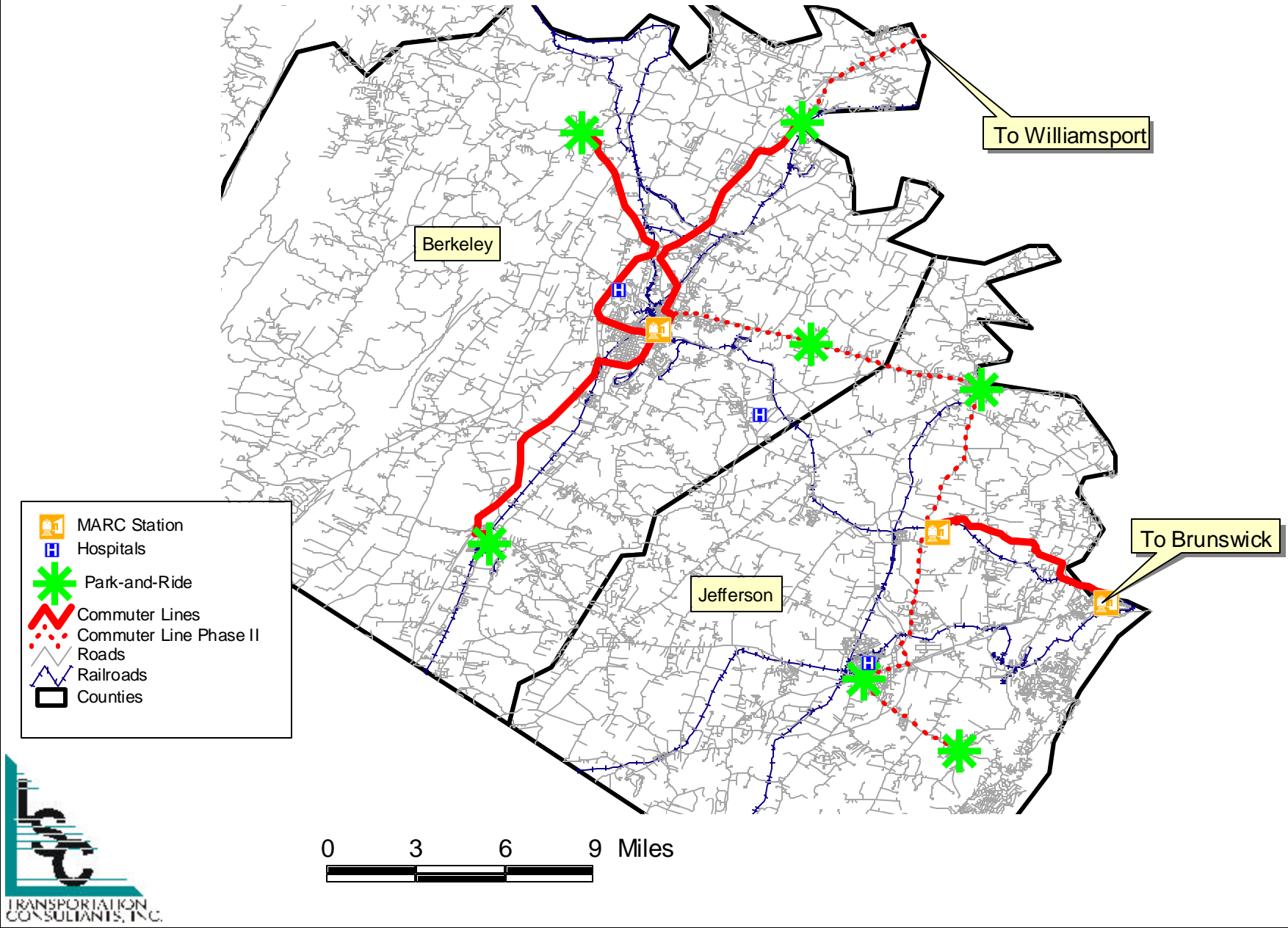
Responsibility

- The Transit Manager and the PanTran Board would be responsible for planning and implementing the commuter service for PanTran.

Implementation Steps

- PanTran should aid in the development of a transportation coalition that will work toward the approval of a dedicated funding source for transit. This should be done over the next three years.
- The coalition should work with the area's governmental entities, Chamber of Commerce, Eco Development Corporations, key stakeholders, residents, and the State of West Virginia.
- The coalition should develop a public education program to present the benefits of the commuter service and all PanTran services.
- PanTran should plan the route and the park-and-ride lots. This should be done by working with the local businesses and land owners, WVDOT, and MARC Train.

Figure XIII-3  
Commuter Service



<b>Table XIII-4 Commuter Schedule</b>				
<b>Names Inwood to Martinsburg</b>	<b>Runs</b>	<b>Inwood</b>	<b>Train Station'</b>	<b>Inwood</b>
	1	4:40 AM	5:00 AM	5:20 AM
	2	5:55 AM	6:15 AM	
		<b>Train Station'</b>	<b>Inwood</b>	<b>Train Station'</b>
	3	6:50 PM	7:10 PM	7:30 PM
	4	7:45 PM	8:05 PM	
<b>Hedgesville to Martinsburg</b>	<b>Runs</b>	<b>Hedgesville</b>	<b>Train Station'</b>	<b>Hedgesville</b>
	1	4:40 AM	5:00 AM	5:20 AM
	2	5:55 AM	6:15 AM	
		<b>Train Station'</b>	<b>Hedgesville</b>	<b>Train Station'</b>
	3	6:50 PM	7:10 PM	7:30 PM
	4	7:45 PM	8:05 PM	
<b>Falling Waters to Martinsburg</b>	<b>Runs</b>	<b>Falling Waters</b>	<b>Train Station'</b>	<b>Falling Waters</b>
	1	4:45 AM	5:05 AM	5:25 AM
	2	5:35 AM	5:55 AM	
		<b>Train Station'</b>	<b>Falling Waters</b>	<b>Train Station'</b>
	3	6:55 PM	7:15 PM	7:35 PM
	4	7:45 PM	8:05 PM	
<b>Duffields to Brunswick</b>	<b>Runs</b>	<b>Duffields</b>	<b>Brunswick</b>	<b>Duffields</b>
	1	5:10 AM	5:32 AM	5:54 AM
	2	6:05 AM	6:27 AM	6:49 AM
	3	7:00 AM	7:22 AM	
		<b>Brunswick</b>	<b>Duffields</b>	<b>Brunswick</b>
	4	3:10 PM	3:32 PM	3:54 PM
	5	5:00 PM	5:22 PM	5:44 PM
	6	6:00 PM	6:22 PM	6:44 PM
7	7:30 AM	7:52 AM	8:14 AM	
8	8:40 PM	9:02 PM		
<i>Source: LSC 2005.</i>				

## **Rideshare Program**

The last short-term service recommendation is the development of a rideshare program through which the different transportation providers in the Eastern Panhandle Region could coordinate transit trips. A rideshare program would allow the transportation providers to create an economy of scale. The program involves a call center where trips are routed to the transportation provider that can best serve the individual trip. The service would also function as the central location for carpooling and vanpooling for the region.

The annual cost of a rideshare program is estimated at \$25,000 in the year 2006. The annual cost for the existing service will be approximately \$390,000 in the year 2007. With the rideshare program, the annual cost would be approximately \$415,000.

### Benefits

- The residents of the Eastern Panhandle Region and the nearby counties would have public transportation that provides increased integration and mobility throughout the region.

### Timing

- The rideshare program should be implemented in fiscal year 2008 to 2009, depending upon the availability of local match funding.

### Responsibility

- PanTran would be responsible for planning and implementing the rideshare program for PanTran.

### Implementation Steps

- PanTran should develop a coordination committee to develop the rideshare program. The committee should represent all of the counties in the service area. A kick-off meeting should be held one year before the program begins.
- Federal and/or state funding should be identified.
- Computer software and a telephone system should be purchased in order to route the transit calls to the appropriate transportation providers. If software is unavailable, then the various providers' dispatchers should create a coordinating dispatch system or share the trip logs on a daily basis.

## **CAPITAL PLAN**

### **Bus Stops**

In order to improve the PanTran fixed-route service, bus stops and shelters should be installed at key locations. The bus stops would allow the public to easily identify the transit pick-up locations and the routes that serve that location. Bus stops would reduce the barriers to using the system and increase the public profile of the service. Based on the recommended fixed-route service, LSC has estimated a bus stop every 1,000 feet (on average). Those routes that are bi-directional would need a bus stop on each side of the roadway. The total number of bus stops that should be implemented is estimated at 400 to 410 for the entire service area. The following is a short list of the major locations where shelters should be installed.

- Unemployment Office in Martinsburg
- Berkeley Square Apartments
- Wal-Mart in Martinsburg
- Martinsburg Mall
- VA Medical Center
- Charles Town Wal-Mart
- Charles Town City Hall
- Charles Town Races
- The Corner of Martins and Queen
- Public Library in Martinsburg

Of these bus stops, LSC recommends that 40 to 42 shelters be installed at key locations. These key locations are normally placed at major employment, shopping, and medical destinations. Shelters should also be placed at locations where there is an identified high number of riders with no building shelter near the bus stop.

The estimated cost for the bus stops is \$300,000. The estimated cost of the shelters at key locations is \$420,000. The total estimated cost for the bus stops and shelters is \$720,000. LSC has estimated that PanTran could implement about \$65,000 worth of bus stops and shelters per year. This would complete the installation in about 10 to 12 years.

Each bus stop should include a sign on a pole. On the pole, there should be a carousel that displays the schedule and route that serves that location. Each bus stop should also have a concrete pad for the transit users to stand on. A bench is optional depending upon if PanTran can obtain an agreement with an outdoor advertising firm to share the cost of the benches. The cost is estimated at \$700 to \$1,000 for each standard bus stop. The bus stops with shelters would have all of the amenities that the standard bus stop has, but would include a shelter and a larger concrete pad. The average cost for the implementation of a shelter ranges from \$10,000 to \$15,000 depending upon the level of amenities at the bus stop. Bus stop diagrams are presented in Appendix F.

**Vehicle Replacement**

LSC recommends that PanTran purchase 8 vehicles over the short term and 56 vehicles over the long term (25 years). In the short term, the total cost is estimated at \$577,000. The funding breakdown is \$461,000 in federal transit funding and \$115,000 in local funding. Details on the recommendations for replacement vehicle purchases are shown in Table XIII-5 and Table XIII-6. LSC recommends that PanTran purchase 63 vehicles over the long term. Table XIII-6 details the recommendations for vehicle replacement purchases over the next 25 years.

<b>Table XIII-5</b>						
<b>Vehicle Replacement (6-Year Plan)</b>						
	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Replacement Buses</b>	2		2			
<b>Replacement Body-on-Chassis</b>		2		2		
<b>New Buses</b>			2		4	
<b>New Body-on-Chassis</b>	1					
<i>Source: LSC, 2005.</i>						

Table XIII-6 Vehicle Replacement (25-Year Plan)					
	Replacement Buses	Replacement Body-on-Chassis	New Buses 25"	New Body on chassis	Total
2006	2			1	3
2007		2			2
2008	2		2		4
2009		2			2
2010			4		4
2011					
2012	2				2
2013	2	2			4
2014		2			2
2015	2	4			6
2016		2			2
2017					
2018					
2019	2				2
2020	2	2			4
2021		2			2
2022	2	4			6
2023		2			2
2024					
2025					
2026	2				2
2027	2	2			4
2028		2			2
2029	2	4			6
2030		2			2
<b>Total</b>	<b>22</b>	<b>34</b>	<b>6</b>	<b>1</b>	<b>63</b>

Source: LSC, 2005.

### Fleet Expansion

Based on the recommendations, PanTran would need to purchase seven vehicles for expansion of service over the next six years depending upon implementation and funding for the new and expanded transit services. The new vehicles would include one body-on-chassis and six small transit buses (20- to 25-foot). The body-on-chassis bus would be used for the shuttle service. The remaining buses would be used for the expansion of the hub-and-spoke system and the commuter service. The bus for the VA route and Cross-Town route can also operate two of the commuter routes (the Inwood to Martinsburg route and the Falling Water to Martinsburg route). The cost of the new vehicles is estimated at \$612,000 over the

next six years. The Federal Transit Administration (FTA) would pay for 80 percent (\$490,000) of the vehicle cost. The Eastern Panhandle Region would need to pay \$123,000 for the local match.

## **Bicycle Racks**

LSC recommends that PanTran install bicycle racks on all of the buses in the current and future fleet. Each bicycle rack should have enough room for two bicycles. The bicycle rack should be installed on the front of the bus for safety reasons so that the bus driver can see the individual loading or off-loading the bicycle.

The cost of a bicycle rack ranges from \$500 to \$1,000. LSC has included the bicycle rack implementation costs for all PanTran vehicles in the five-year financial plan presented in Table XIII-8. LSC has estimated \$3,000 for the purchase and installation of the bicycle racks starting in the year 2006 and running through the year 2011. This should cover the cost of 15 bicycle racks for the existing buses and the new buses (used for additional services). The total estimated cost will be about \$19,000 over the five- to six-year time period. The bicycle rack costs are eligible for FTA funding at an 80/20 split. Therefore, the local share equates to about \$4,000 over the next five years.

## **New Fuel Storage and System**

PanTran is very interested in installing fuel storage tanks for the implementation of bio-diesel fuel vehicles. PanTran would need to alter the fleet vehicles in order to use the bio-diesel fuel. The cost of this fuel change includes the cost of the storage tank, refueling station, and vehicle upgrades. Depending upon the size of the fuel facility, the cost could range from \$2,000 for a small 300-gallon tank to \$25,000 for a 12,000-gallon tank. The vehicle upgrades could cost about \$500 to \$1,000 per vehicle, for a total of about \$5,000 to \$10,000. The cost of the fueling facility cost be funded by FTA and FHWA funding. With CMAQ funds, the local match for the facilities and vehicle upgrades would be 20 percent.

## Park-and-Ride Lots

LSC has recommended that PanTran (in cooperation with WVDOT, the West Virginia Rail Authority, and the local communities) implement shared park-and-ride lots for the commuter service in the short term. For the long term, LSC recommends the implementation of formal park-and-ride lots to replace the shared/informal park-and-ride lots. The formal park-and-ride lots should be implemented based on the success of the commuter service. Funding for the formal park-and-ride lot could be obtained from CMAQ and West Virginia. Depending upon the commitment of the state, the local communities may not need to fund the construction of the park-and-ride lots. The local agencies would already be committed to the commuter service by an intergovernmental agreement that supports the operations of the commuter service.

## Administrative and Maintenance

The administrative and maintenance capital includes the purchase of office equipment, hardware, software, dispatching software, and maintenance equipment. LSC has estimated a total of \$80,000 to \$100,000 over the next six years. The FTA would cover 80 percent of the cost (\$64,000 to \$80,000). The local share is estimated at \$16,000 to \$20,000 over the next six years. The annual cost is estimated at \$3,200.

## FUNDING PLAN

The following section presents the proposed budget for the next five years. Table XIII-8 (at the end of Chapter XIII) presents the expenditures and revenues for PanTran for the years 2006 through 2011 with the assumption of a three percent inflation rate.



## Federal Funding

LSC recommends that PanTran continue to apply for federal funding in order to support public transportation services in the Eastern Panhandle Region. Federal funding is expected to remain relatively stable over the next few years. PanTran should also continue to work toward establishing new revenue sources. Additional

funds may be generated by pursuing grants from agencies and foundations other than the WVDOT or FTA.

### **Eastern Panhandle Region Funding**

LSC also recommends that, in the short term, the Eastern Panhandle Region communities contribute revenue to cover the local match costs of general public transportation services. Federal funding is available for 50 percent of the operating costs for general public service. The remaining operating costs should be divided among the cities, counties, and private organizations of the Eastern Panhandle Region.

The 2006 to 2011 Transit Plan anticipates \$390,000 in fiscal year 2006, with an increase in each of the following years. Additional funds will allow PanTran to provide increased transit service to residents. The \$62,000 over the planning horizon (years 2006 to 2011) is the inflated cost of service without any additional service provided. PanTran would need to obtain about \$31,000 of the \$62,000 in order to maintain the existing level of service. The remainder of the inflated costs can be covered by FTA 5307 operational funding.

As mentioned before, the communities in the region could each contribute to the annual funding of the transit service. This could be done by developing an inter-governmental agreement between the local governmental body and the PanTran Board. The level of contribution could be based on a formula that equitably shares the cost of transit service among the communities.

The formula consists of the following steps:

- 1)  $(\text{Distance of route} * \text{number of bus runs per day}) * \text{cost per mile} = \text{marginal cost per mile}$
- 2)  $(\text{Distance of route} * \text{number of bus runs per day}) / \text{average speed of vehicle} * \text{cost per hour} = \text{marginal cost per hour}$
- 3)  $\text{Marginal cost/ hour} + \text{marginal cost/ mile} = \text{total marginal cost}$
- 4)  $\text{Total marginal cost} * \text{fixed cost factor } 1.75 = \text{total annual cost}$
- 5)  $\text{Total annual cost} - \text{fare revenue} - \text{FTA operational funding} = \text{local match}$
- 6)  $\text{Local match} * \text{community percentage of service-hours and miles} = \text{community fair share cost for transit service.}$

Community percentage = the cost of each route servicing that community/ by the total cost of operations.

Note that fare revenue was developed by using the farebox return ratio of 20.5 percent to determine the local match.

Based on the above formula and Table XIII-7, each community would pay a fair share of the operational and capital costs of the PanTran service. The formula is based on the amount of service-hours and miles that each of the communities receive.

In the long term (2012-2020), the PanTran Board should examine the possibility of developing a more sustainable revenue source. At this time, the PanTran Board does not feel that a dedicated funding source (tax) for transit is possible. The transit improvements over the next five years will aid in marketing the transit system to the region's voters, thereby improving the chances that a dedicated funding source for transportation could be implemented in the long term. A dedicated funding source will provide more stability for the continuation of transit services.

### Benefits

- Local funding displays a level of commitment on the part of the local governments and citizens.
- The local match funds are needed to help secure matching federal funds.
- The funding helps to provide a service needed by the local citizens.

### Timing

- The Transit Manager and the PanTran Board should begin the process of obtaining local funds from the Eastern Panhandle Region immediately.
- The communities' budgetary offices should be prepared to incorporate local transit funding when the transit budget is presented in the year 2006 and 2007 budget cycle.

**Table XIII-7  
Community Fair Share**

Community	Route	Cost per Hour	Cost per Mile	Daily Hours	Daily Miles	Marginal Daily Cost/Hour	Marginal Daily Cost/Mile	Fixed Cost	Daily Total Cost	Fully Allocated Costs	Local Share
<b>Fixed Route</b>											
City of Martinsburg	Martinsburg North	\$ 17.96	\$ 0.15	6	100	\$ 106.02	\$ 15.05	\$ 158.90	\$ 211.87	\$ 50,425	\$ 20,044
City of Martinsburg	Martinsburg South	\$ 17.96	\$ 0.15	7	106	\$ 126.62	\$ 15.86	\$ 187.01	\$ 249.34	\$ 59,343	\$ 23,589
Berkeley County	VA Route	\$ 17.96	\$ 0.15	14	207	\$ 247.42	\$ 31.00	\$ 365.42	\$ 487.22	\$ 115,959	\$ 46,094
Jefferson County	Charles Town	\$ 17.96	\$ 0.15	15	309	\$ 268.85	\$ 46.38	\$ 413.74	\$ 551.65	\$ 131,293	\$ 52,189
Berkeley County	Demand Response	\$ 17.96	\$ 0.15	8	151	\$ 143.68	\$ 22.63	\$ 218.28	\$ 291.05	\$ 69,269	\$ 27,534
Charles Town / Ranson	Charles Town Shuttle	\$ 17.96	\$ 0.15	10	100	\$ 179.60	\$ 15.00	\$ 255.41	\$ 340.55	\$ 81,051	\$ 32,218
Berkeley / Jefferson County	Saturday Demand Response	\$ 17.96	\$ 0.15	27	405	\$ 484.92	\$ 60.75	\$ 426.65	\$ 568.86	\$ 29,581	\$ 11,758
<b>Commuter Service</b>											
Berkeley County	Inwood to Martinsburg	\$ 17.96	\$ 0.15	3	80	\$ 57.47	\$ 12.00	\$ 91.18	\$ 121.58	\$ 31,002	\$ 12,323
Berkeley County	Hedgesville to Martinsburg	\$ 17.96	\$ 0.15	3	80	\$ 57.47	\$ 12.00	\$ 91.18	\$ 121.58	\$ 31,002	\$ 12,323
Berkeley County	Falling Waters to Martinsburg	\$ 17.96	\$ 0.15	3	80	\$ 57.47	\$ 12.00	\$ 91.18	\$ 121.58	\$ 31,002	\$ 12,323
Jefferson County	Duffields to Brunswick	\$ 17.96	\$ 0.15	7	176	\$ 126.44	\$ 26.40	\$ 200.60	\$ 267.47	\$ 68,204	\$ 27,111

Source: LSC, 2005.

## Responsibilities

- The Transit Manager and the PanTran Board would be responsible for presenting the initial information to the Eastern Panhandle Region governmental bodies and for building support for local transit funding.
- The Transit Manager would be responsible for developing the transit budget and presenting the budget to the local governments.
- The PanTran Board members should assist in the presentations to the local governments.
- The PanTran Board members should also work with the Transit Manager to educate the public on the benefits of the PanTran services in order to obtain political support for the development of the intergovernmental agreements.



## Implementation Steps

- The Transit Manager and the PanTran Board should meet with the local government officials to present the need for local funding.
- The Transit Manager should prepare the detailed transit operating budget for approval.
- The Transit Manager and the PanTran Board should present the approved transit budget to the local governments which would be asked to financially support the transit service.
- The local governments would need to agree to provide the local funding for transit services.
- A grassroots group should be created and should meet every month. The grassroots group should develop the public educational programs regarding the benefits of supporting the intergovernmental agreements and about the level of local commitment to transit service.

## **MANAGEMENT PLANS**

### **Transit Coordination**

PanTran should begin the process of developing coordination with several other local agencies within the Eastern Panhandle Region. There is currently no formal mechanism for this coordination. The existing PanTran Board is an appropriate representative to develop the coordinated efforts. Local government and private entities should be encouraged to provide staff time and financial support for the coordination activities in order to cover some of the local match requirements. This plan includes several recommendations for coordination activities among the existing local agencies. A significant element to coordination is the implementation of the rideshare program.

PanTran should coordinate services with the senior centers in Berkeley and Jefferson Counties, Head Start, Eastern Panhandle Region Welfare Department (WoRC/EduFAIM), and other agencies/organizations within the region. The existing transportation provider services have worked well and provide a high level of service for the clients of each program. The agencies should also coordinate passenger and driver training annually for all drivers, dispatchers, and administration who deal directly with passengers. Training costs should be distributed evenly among the agencies.

The second area of coordination is the marketing, promotional, and public education programs. Additional PanTran promotional efforts would allow residents and visitors to obtain information on all available transit services within the Eastern Panhandle Region. Information should be provided in such a way that the public sees an integrated transit system. PanTran may want to consider developing a new brochure. A marketing plan for presentations to local agencies regarding local transit service would need to be implemented. With the development of a transportation coalition, PanTran could begin the process of informing the communities about the improved transit system.

### Implementation Steps

- PanTran should distribute transit brochures to the local agencies. The social service agencies should use PanTran to promote client independence and self-sufficiency.
- PanTran's hours of operations and services should continue to be publicized regularly.
- Local governments and private entities should continue and increase financial support for the transit services.
- The PanTran Board should continue to meet on a minimum of a monthly basis in order to stay informed on transportation options within the Eastern Panhandle Region.
- The purchase of vehicles or office equipment should continue to be consolidated into a cooperative effort with the WVDOT.
- The development of coordinated marketing, public education, and promotional materials should be continued and expanded.
- A transit coalition should be developed in order to increase the political support for additional local funding from all of the regional communities to improve the transit services. This should include the senior centers, social

service agencies, VA Medical Center, Chambers of Commerce, and major employers.

### **Enhance the Marketing Programs**

PanTran should enhance its marketing programs. Short-term marketing efforts should focus on the existing transit services and the restructuring of the service into a hub-and-spoke system. PanTran should continue to print and distribute improved schedules throughout the community based on the new system. PanTran should particularly focus on organizations that may want to contract special event service, such as school programs or social service trips.

The second focus of the marketing program is on residents and visitors. A new brochure should be created and introduced as soon as possible reflecting all of the transportation resources available to the Eastern Panhandle Region. Schedules should be displayed at the local hotels, Chambers of Commerce, schools, medical offices, major employers, and grocery stores.

Marketing should be viewed as a management philosophy focusing on identifying and satisfying customers' wants and needs. The basic premises of successful marketing are providing the right product or service, offering it at the right price, and adequately promoting or communicating the existence and appropriateness of the product or service to potential customers. Unfortunately, the word "marketing" is often associated only with advertising and promotional efforts that accompany "selling" the product or service to a customer. Instead, such promotional efforts are only a part of an overall marketing process. Without a properly designed and developed product or service offered at the right price, the expenditure of promotional funds is often ill-advised.

Obviously, the marketing program must fit within the budgetary limitations of any organization. According to the American Public Transit Association, transit providers typically budget between 0.75 and 3.0 percent of their gross budget on marketing promotions (excluding salaries). Although this is less than most private sector businesses, public sector organizations can rely more heavily upon media support for their public relations programs.

The best marketing approach is to provide services that people want. Enhancing service is an element of marketing because it provides a desirable service to those who will utilize it. In order to provide good service, it is essential to have information which may be used by management for evaluation of the service and for continuous improvement of the service. PanTran must maintain a customer orientation in every part of the Transportation Development Plan.

Several specific promotional activities have been identified which would enhance the overall implementation and marketing efforts. PanTran should work with the local newspaper and radio stations to provide periodic human interest stories. Human interest stories



can be used to reinforce the benefit of transit service for the communities and the Eastern Panhandle Region. Examples of good stories would be individuals who are able to work or attend school because of the availability of public transportation. Another example is someone with a disability who is able to make a contribution within the community because of public transportation or who is able to obtain medical treatment because of the coordinated efforts between PanTran and the social service agencies.

One of the best marketing efforts the PanTran could begin is to reach out to the commuters. This would mean developing elements in the new brochure and advertisement which are focused on the commuters that travel from the Eastern Panhandle Region to the Washington, DC metro area for work. The brochures would need to promote the benefits of transit in term of the economic and environmental benefits of commuter service and the overall transit service.

PanTran should also make use of news advisories for significant events and employee accomplishments. The most cost-effective way to reach large groups of the general population is via the news media. A system should be developed to disseminate news advisories to the media announcing new schedules, fares, services, community involvement activities, outstanding employees, safety records, major management changes, or awards. It is important to keep in mind, however, that the media should not be overwhelmed with too much information that is not

meaningful and which might otherwise dilute the attention paid to other more important communications.

The most essential, and most often overlooked, element of a marketing plan is an evaluation effort. Evaluations should be performed in terms of the stated marketing objectives. The process should provide the data and procedures by which the success of the marketing program can be determined. In addition to statistical data (such as ridership) collected over the year, the data should include a survey of the general public in order to establish the level of public awareness and image regarding the service. The evaluation process is crucial because it allows future objectives and strategies to be refined.

PanTran should improve the marketing efforts and should create a transit marketing and education strategy which includes the following:

- Distribution of schedules and posters at major facilities, retail outlets, doctors' offices, social service agencies, lodging facilities, and restaurants.
- Regular radio advertisements that emphasize any current promotions which are underway.
- Regular newspaper advertisements that emphasize the same promotions as the radio announcements.
- Presentations at key community organizations.
- PanTran program that promotes communication between passengers and drivers.
- Clean bus program where the interior and exterior of each vehicle are cleaned daily. During the course of the day, drivers should clean up litter in the aisle and under the seats.
- Coordinate with the West Virginia Rail Authority and the MARC Train to promote new commuter bus service that links with the commuter rail service.
- PanTran (in coordination with the West Virginia Rail Authority, MARC Train, and local Chambers of Commerce) should develop a study of the economic benefits of improving the transit services in Berkeley and Jefferson Counties. This study would examine the economic benefits of the return on the investment. FTA and APTA state that for every one dollar invested in transit, the community has a return in benefits of three dollars. This study should determine the rate of return that the Eastern Panhandle Region could achieve.

Recent research has cataloged the marketing efforts that have helped transit systems around the country increase their public exposure and ridership. Some of these successful initiatives may be useful for PanTran. Many systems have found print advertising (newspapers, flyers, and direct mail) to be the most effective use of advertising dollars. Examples of successful marketing strategies are listed below.

- ***Volunteers to assist potential riders:*** A volunteer is used to explain the transit system to the potential patron and to accompany the person on a round-trip ride. Such programs have resulted in a newfound independence for residents, particularly elderly persons and persons with disabilities who are now able to travel throughout the community without relying on friends and family to provide them with mobility.
- ***Publish transit schedules and service-hours in the newspaper:*** The publication of the transit system's schedule and basic information in the local newspaper twice a year would be a cost-effective way to ensure that the residents are familiar with the transit service. PanTran should look into the local newspaper printing the schedule as a public service. Alternatively, some transit systems have covered the cost of such an initiative through a reciprocal agreement to carry advertising for the newspaper on the buses.
- ***Direct mail program:*** If new neighborhoods are added to the transit service area, it may be advantageous to institute a direct mail campaign to households within the new areas. Such a campaign will ensure that the residents know about the transit service. It would be useful to include coupons in the mailing to encourage residents to make their first transit trip. At this time, PanTran does send a \$5 coupon to all new residents in the Welcome Wagon mailing.
- ***Cooperation with utility company:*** A good way for PanTran to keep abreast of new residents is to pursue an arrangement with the utility companies to be notified of requests for new utility service. The new residents could then be targeted for direct mailing.

- **Shopping center underwriting:** Some transit systems have developed arrangements with shopping centers that provide coupons for riders. The coupons would provide an incentive for riders and would be beneficial to both the transit system and the shopping center.

### **Support and Improve Service Quality**

LSC recommends continuous efforts to support and improve PanTran's service quality. A key precept of marketing is to provide a quality "product." In the case of public transit, a reputation of providing quality service both encourages increased ridership and increases public support for transit. Both tax-based funding and fares become more acceptable when service quality is high. A key marketing effort, therefore, is to begin other measures to improve on-time performance, passenger amenities, and peak-time service. This effort is undoubtedly the most important marketing strategy available to PanTran.

### **Enhance the Public Education Programs**

Public education programs inform the public on the benefits of the existing transit services that are available in the region. Public education programs focus on the benefits of transit to the community and the individual. Such benefits include improved mobility and access for the transit-dependent population, decreased congestion and improved air quality for the whole community, and reduced fuel and energy consumption for the community and individual households. There are significant studies and reports that detail the benefits for an improved transit system. According to the FTA and APTA, for every dollar invested in transit, the community could generate three dollars in return. This applies to both capital and operations. Also per APTA, improved transit usage can save the transit system anywhere from \$.50 to \$2 in transportation cost savings per mile.

The point of forming a coalition is to identify these benefits and first present them to the key stakeholders and community leaders. The strategy of first presenting this information to the key stakeholders and community leaders is to develop financial and political support for funding of the transportation system. This can be achieved by setting up a task force that would include all stakeholders in the community. Through these efforts, public education materials (such as presenta-

tions and brochures) should be developed to inform the community how the transit system could help solve many of the community's problems (such as congestion, pollution, energy costs, and urban sprawl). With the coalition's support, the materials regarding the improved transportation system can then be presented to the general public. The end goal of the public education program is the development of community support to share in the operational and capital costs of the transit system that will allow for the expansion of the transit system.

## **Monitor Service**

LSC recommends that PanTran continue to monitor service performance measures for the transit system. The service performance measures should track service quality. A monitoring program is essential to determine the efficiency and effectiveness of the service being provided. Monthly reports (including information on productivity measures) should continue to be prepared by PanTran and presented to the PanTran Board. In addition, a rider survey should be conducted every other year.

Productivity measures should indicate the number of passengers per revenue-hour and passengers per revenue-mile by service area. The actual productivity should be compared with system standards. In order to monitor productivity, it is essential that passenger ridership data continue to be collected on an ongoing basis. The simplest approach for collecting the ridership data is to equip each bus with manual counting devices that allow the drivers to register each passenger who boards by the appropriate fare category. The ridership data should be collected by route and not buses. This is done so that each route can be compared to the whole system. When a bus moves from route to route, the count should return to zero. Hence, runs should also be counted individually. This would allow PanTran to track the demand for the service not only by route, but also by hours (peak and off-peak services).

The data should be entered into a spreadsheet or database for analysis and presentation to the PanTran Board. The data will help PanTran staff establish ridership patterns and characteristics. As ridership data is collected and appropriate changes are made as part of the Transit Implementation Plan, better

methods may be developed to project ridership changes based upon service changes. Note that the recommended approach for projecting ridership was discussed in Chapter IX.

Cost information should also be reported monthly by PanTran staff to the PanTran Board. Such information includes the cost per passenger, cost per revenue-mile, ridership, and average fare. These data should also be collected and tracked based on each route of the system. The monthly reports should continue to be prepared in a spreadsheet format for continuing analysis of data and trends. The Transit Manager and PanTran Board could then determine the appropriate policy direction and recommend funding decisions to the County Commissioners.

### **Provide Comment Cards and Boxes**

LSC recommends that PanTran provide comment cards and comment boxes on each transit vehicle so that passengers have an opportunity to provide input.

## **LAND USE PLANNING**

PanTran should be included in the review of development proposals for facilities which will generate transit trips. PanTran should comment on their ability to provide transit service based upon the development's location and design. The review should be handled by the PanTran administrative staff in conjunction with Berkeley and Jefferson Counties; the cities of Martinsburg, Charles Town, Ranson; and Region 9 Planning on a case-by-case basis. An initial meeting with these agencies should be set up in order for the PanTran administrative staff to discuss PanTran's participation in the development review process. During the initial meeting, PanTran needs to show that many transit needs can be fulfilled by adjusting a few development requirements, as detailed in Chapter XII.

Community leaders should be educated about the characteristics of transit service. Services are improved and costs are lowered when transit trips to and from developments can be concentrated. Changes in development patterns occur very slowly and will require a long-range vision to direct the growth, so that transit service may be provided when and where it is needed in the future.

## **IMPLEMENTATION TIMELINE**

Figure XIII-4 presents a timeline of the information from Table XIII-8. LSC has also included the planning phase for each recommended project and program in order to aid in the development of the projects and programs. The planning phase is conducted the year before implementation. LSC recommends that PanTran evaluate each project or program after implementation.

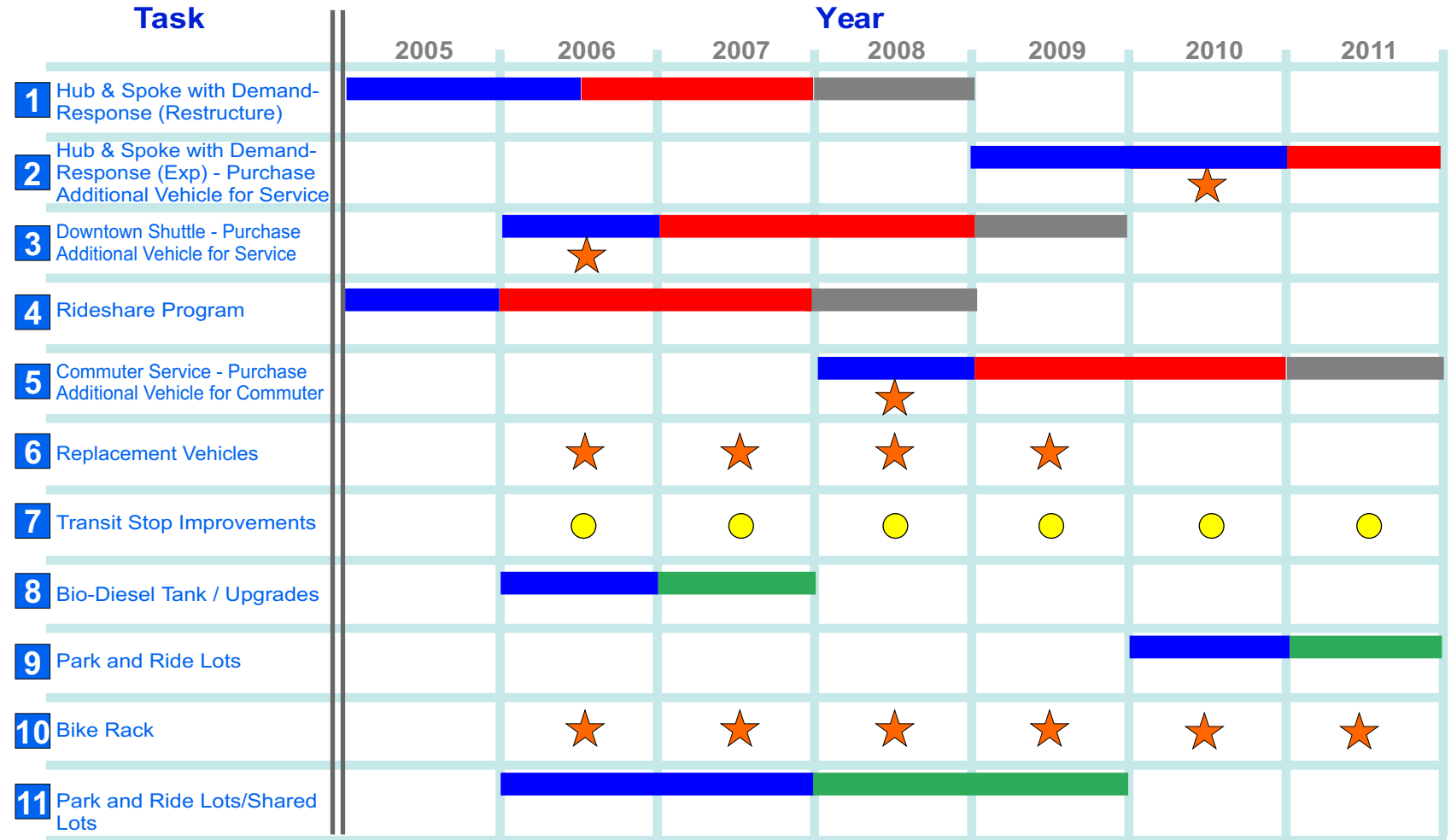
In the timeline, the existing system is restructured to the hub-and-spoke system with demand-response service. The second phase is the implementation of the rideshare program in the year 2006. The coordination of the rideshare program and the purchase of scheduling software should begin in the year 2005 at the latest. The third phase is the implementation of the shuttle service in either Charles Town or Martinsburg, depending upon the availability of local funding. The fourth service to be implemented would be the commuter service. Planning for the commuter service should begin in the years 2007 and 2008, with vehicles purchased in the year 2008 and implementation in the year 2009. The last phase would be the expansion of the hub-and-spoke system. The expansion planning should occur in the years 2010 and 2011, with additional vehicles purchased in the year 2010 and implementation in the year 2011. There may be a need, based on funding availability, to implement the commuter service before the expansion of the hub-and-spoke system.

Funding through the intergovernmental agreements will need to be coordinated during the planning phase of each planned service.

The timeline also presents the implementation of the capital investments over the next six years. The first capital investments are the replacement of the existing rolling stock and the construction of new bus stops throughout the Eastern Pan-handle Region. Planning for the bus stops should begin in the year 2005, with implementation beginning in the year 2006. Based on funding and if PanTran can receive a CMAQ grant, the next capital project should be shifting the system to bio-diesel fuel. The bio-diesel fuel shift should be planned in the years 2005 and 2006, with implementation of the fuel tanks and fleet upgrades in the year 2007. New

buses will be the largest capital cost for PanTran over the next six years. Buses should be purchased in the year 2006 for the shuttle service, the year 2010 for the expanded hub-and-spoke service, and the year 2008 for the commuter service. LSC has included one traditional park-and-ride lot in the year 2010 if the commuter service is very successful, as shown in Table XIII-8. LSC has also allocated \$5,000 annually for the purchase of office hardware, software, and administration office equipment.

# Figure XIII-4 Short-Term Plan Timeline



**LEGEND**

- Planning Phase / Inter-governmental Agreements
- Implementation/Construction Year
- Operations
- Feedback
- ★ Purchase Vehicles/Racks
- Install Bus Stops



**Table XIII-8  
Transit Plan, 2006-2011 (assumed 3% inflation)**

	2006	2007	2008	2009	2010	2011	Total
<b>EXPENSES</b>							
<b>OPERATING</b>							
PanTran Existing Service Level	\$ 389,982	\$ 401,681	\$ 413,732	\$ 426,144	\$ 438,928	\$ 452,096	\$ 2,522,561
<b>SERVICE CHANGES</b>							
Hub-and-Spoke w/DR (Existing)	\$ 35,876	\$ 36,952	\$ 38,061	\$ 39,203	\$ 40,379	\$ 41,590	\$ 232,061
Hub-and-Spoke w/Demand Response (Exp)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 324,678	\$ 324,678
Downtown Shuttle	\$ 0	\$ 59,679	\$ 61,469	\$ 63,313	\$ 65,213	\$ 67,169	\$ 316,843
Rideshare Program	\$ 24,600	\$ 25,338	\$ 26,098	\$ 26,881	\$ 27,688	\$ 28,518	\$ 159,123
Commuter Service	\$ 0	\$ 0	\$ 0	\$ 186,887	\$ 192,493	\$ 198,268	\$ 577,648
Marketing Program	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 24,000
<b>Subtotal</b>	<b>\$ 454,458</b>	<b>\$ 527,650</b>	<b>\$ 543,360</b>	<b>\$ 746,427</b>	<b>\$ 768,700</b>	<b>\$ 1,116,319</b>	<b>\$ 4,156,914</b>
<b>CAPITAL</b>							
Replacement Vehicles	\$ 160,000	\$ 120,000	\$ 169,600	\$ 127,200	\$ 0	\$ 0	\$ 576,800
New Vehicles (Additional)	\$ 50,000	\$ 0	\$ 180,081	\$ 0	\$ 382,097	\$ 0	\$ 612,178
Bus Bike Racks (15)	\$ 3,000	\$ 3,090	\$ 3,183	\$ 3,278	\$ 3,377	\$ 3,478	\$ 19,405
Transit Stop Improvements (over 10 years)	\$ 62,400	\$ 64,272	\$ 66,200	\$ 68,186	\$ 70,232	\$ 72,339	\$ 403,629
Bio-Deisel Tank / Upgrades	\$ 0	\$ 10,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 10,000
Office / Administration / Maintenance Eq.	\$ 5,000	\$ 55,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 80,000
Park-and-Ride Lots						\$ 1,500,000	\$ 1,500,000
<b>Subtotal</b>	<b>\$ 280,400</b>	<b>\$ 252,362</b>	<b>\$ 424,064</b>	<b>\$ 203,664</b>	<b>\$ 460,705</b>	<b>\$ 1,580,817</b>	<b>\$ 3,202,012</b>
<b>TOTAL EXPENSES</b>	<b>\$ 734,858</b>	<b>\$ 780,012</b>	<b>\$ 967,424</b>	<b>\$ 950,091</b>	<b>\$ 1,229,405</b>	<b>\$ 2,697,135</b>	<b>\$ 7,358,926</b>
<b>REVENUES</b>							
FTA 5307 Program (operating)	\$ 187,700	\$ 181,788	\$ 188,367	\$ 195,144	\$ 120,124	\$ 278,653	\$ 1,151,776
FTA 5310 Program (capital)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
FTA 5311 Program (operating Intercity)	\$ 0	\$ 0	\$ 0	\$ 93,443	\$ 96,247	\$ 99,134	\$ 288,824
CMAQ		\$ 47,743	\$ 49,175	\$ 50,651	\$ 0	\$ 0	\$ 147,569
State Grant/ WVDOT	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Planning 5303	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
<b>Subtotal</b>	<b>\$ 187,700</b>	<b>\$ 229,531</b>	<b>\$ 237,543</b>	<b>\$ 339,238</b>	<b>\$ 216,371</b>	<b>\$ 377,787</b>	<b>\$ 1,588,169</b>
FTA 5307 Program (capital)	\$ 58,480	\$ 80,854	\$ 87,176	\$ 43,077	\$ 94,466	\$ 18,468	\$ 382,521
FTA 5309 Program (capital)	\$ 126,000	\$ 72,000	\$ 209,809	\$ 76,320	\$ 229,258	\$ 0	\$ 713,387
FTA 5311 Program (capital)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CMAQ	\$ 0	\$ 8,000	\$ 0	\$ 0	\$ 0	\$ 1,200,000	\$ 1,208,000
State	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 300,000	\$ 300,000
STD Enhancement	\$ 37,440	\$ 38,563	\$ 39,720	\$ 40,912	\$ 42,139	\$ 43,403	\$ 242,177
<b>Subtotal</b>	<b>\$ 221,920</b>	<b>\$ 199,418</b>	<b>\$ 336,705</b>	<b>\$ 160,309</b>	<b>\$ 365,863</b>	<b>\$ 1,561,871</b>	<b>\$ 2,846,086</b>
<b>Local Revenues</b>							
Local Match for Capital	\$ 1,100	\$ 0	\$ 0	\$ 1,300	\$ 900	\$ 1,500	\$ 4,800
Advertising	\$ 1,375	\$ 1,375	\$ 1,375	\$ 1,375	\$ 1,375	\$ 1,375	\$ 8,250
Local Match (City/Fares/Contracts)	\$ 79,058	\$ 79,058	\$ 79,058	\$ 79,058	\$ 79,058	\$ 79,058	\$ 474,348
<b>IGA's (Operations)</b>							
Berkeley County	\$ 88,219	\$ 94,196	\$ 97,506	\$ 141,096	\$ 203,507	\$ 283,574	\$ 908,099
Jefferson County	\$ 45,048	\$ 65,718	\$ 68,028	\$ 98,439	\$ 141,981	\$ 197,842	\$ 617,057
City of Martinsburg	\$ 54,433	\$ 35,050	\$ 36,281	\$ 52,501	\$ 75,723	\$ 105,516	\$ 359,504
Cities of Charles Town & Ranson	\$ 0	\$ 26,287	\$ 27,211	\$ 39,376	\$ 56,793	\$ 79,137	\$ 228,804
<b>IGA's (Capital)</b>							
Berkeley County	\$ 24,114	\$ 21,703	\$ 36,470	\$ 17,515	\$ 39,621	\$ 6,950	\$ 146,373
Jefferson County	\$ 16,824	\$ 15,142	\$ 25,444	\$ 12,220	\$ 27,642	\$ 4,849	\$ 102,121
City of Martinsburg	\$ 8,973	\$ 8,076	\$ 13,570	\$ 6,517	\$ 14,743	\$ 2,586	\$ 54,464
Cities of Charles Town & Ranson	\$ 6,730	\$ 6,057	\$ 10,178	\$ 4,888	\$ 11,057	\$ 1,940	\$ 40,848
<b>Subtotal</b>	<b>\$ 325,874</b>	<b>\$ 352,662</b>	<b>\$ 395,121</b>	<b>\$ 454,286</b>	<b>\$ 652,399</b>	<b>\$ 764,327</b>	<b>\$ 2,944,668</b>
<b>TOTAL REVENUES</b>	<b>\$ 735,493</b>	<b>\$ 781,611</b>	<b>\$ 969,369</b>	<b>\$ 953,833</b>	<b>\$ 1,234,633</b>	<b>\$ 2,703,985</b>	<b>\$ 7,378,923</b>
<i>Source: LSC, 2005.</i>							