Appendix B: Cost Estimates

For information about cost methodology, please see Appendix C.

This table breaks down operational costs by jurisdiction. Jurisdictions include all seven counties within the transit service area and the city of Kansas City, Missouri. Costs for routes that cover more than one jurisdiction were divided proportionately by miles of service within each jurisdiction.

Phase 1: 0 – 5 years

Operating Cost

TABLE 17: PHASE 1 OPERATING

	KCMO	CASS	CLAY	JACKSON	PLATTE	JOHNSON	WYANDOTTE	LEAVEN WORTH	TOTAL
RideKC General Public Transit	$69.2-76.7M	$300-500K	$3.7-5.4M	$11.4-14.9M	$300-700K	$12.3-13.9M	$6.5-6.9M	Pending outcomes of ongoing Planning Sustainable Places Study	$103.7-119M
RideKC non-ADA Paratransit	$400-450K	$0	$20-30K	$70-90K	$2-4K	$80-90K	$45-50K		$600-700K
RideKC ADA Paratransit	$8.4-9.3M	$0	$500-700K	$1.4-1.9M	$40-90K	$1.7-1.9K	$950K-1M		$13.1-14.9M
Community-based Transit Service	$0	$0	$500 600K	$2.2-2.7M	$0	$800K-1M	$0		$3.4-4.3M
TOTAL	$75.9-84.5M	$300-500K	$4.8-6.8M	$15.1-19.6M	$340-800K	$16.5-18.4M	$8.7-9.2M		**$120.7-138.8M**

Rolling Stock

In addition to existing vehicles, with their existing capital replacement cycle, the following vehicles would be needed to implement the routes in the *Smart Moves 3.0* network for years 0-5.

TABLE 18: PHASE 1 ROLLING STOCK

VEHICLE TYPE	PHASE 1 VEHICLES	EXISTING VEHICLES	ADDITIONAL VEHICLES	UNIT COST	AMOUNT
OTR Coaches	2	0	2	$550K	$1.1M
BRT Vehicles	38	30	8	$525K	$4.2M

VEHICLE TYPE	PHASE 1 VEHICLES	EXISTING VEHICLES	ADDITIONAL VEHICLES	UNIT COST	AMOUNT
Large Buses	136	144	0	$450K	$0
Small Buses	103	103	0	$385K	$0
Mini Buses	55	45	10	$75K	$750K
TOTAL	**336**	**322**	**22**		**$6,100,000**

Phase 2: 5 – 10 years

Operating Cost

TABLE 19: PHASE 2 OPERATING COST

	KCMO	CASS	CLAY	JACKSON	PLATTE	JOHNSON	WYANDOTTE	LEAVENWORTH	TOTAL
RideKC General Public Transit	$84.8-96.0M	$500-600K	$6-9.2M	$11.9-17.6M	$900,000-1.9M	$20.8-24.4M	$16.0-20M	Pending outcomes of ongoing Planning Sustainable Places Study	$140.9-169.7 M
RideKC non-ADA Paratransit	$500-600K	$0	$40-60K	$70-110K	$5-11K	$130-160K	$100-130K		$800K-1M
RideKC ADA Paratransit	$10.3-11.7M	$0	$800K-1.2M	$1.5-2.2M	$110-240K	$2.8-3.3M	$2.1-2.6M		$17.7-21.2M
Community-based Transit Service	$0	$0	$500-700K	$2.5-3.1M	$0	$880K-1.1M	$0		$3.9-4.9M
TOTAL	$93.4-106M	$500-600K	$7.3-11M	$15.9-23M	$1-2.1M	$26.2-30.6M	$19.3-23.7M		**$163.2-196.7M**

Rolling Stock

The following includes the vehicles needed for the implementation of Phase 2, and the depreciation value of mini buses from Phase 1.

TABLE 20: PHASE 2 ROLLING STOCK

VEHICLE TYPE	PHASE 1 VEHICLES	EXISTING VEHICLES	ADDITIONAL VEHICLES	UNIT COST	AMOUNT
OTR Coaches	2	2	0	$550K	$0M
BRT Vehicles	40	38	2	$525K	$1M
Large Buses	142	136	6	$450K	$2.7M
Small Buses	105	103	2	$385K	$770K
Mini Buses	90	55	35	$75K	$2.6M
TOTAL	**373**	**336**	**55**		**$7.4M**

Phase 3: 10+ years

Operating Cost

TABLE 21: PHASE 3 OPERATING COST

	KCMO	CASS	CLAY	JACKSON	PLATTE	JOHNSON	WYANDOTTE	LEAVEN WORTH	TOTAL
RideKC General Public Transit	$106.1-113.9M	$550,000-600,000	$14.2-17.6M	$28.3-36.6M	$4.8-7M	$30.0-34.6M	$21.5-22.4M	Pending outcomes of ongoing Planning Sustainable Places Study	$205.5-232.7M
RideKC non-ADA Paratransit	$600-700K	$0	$90-110K	$170-220K	$29-42K	$190-220K	$100-130K		$1.2-1.4M
RideKC ADA Paratransit	$13.1-14.1M	$0	$1.8-2.2M	$3.5-4.6M	$600-880K	$3.9-4.5M	$2.8-3M		$25.9-29.2M
Community-based Transit Service	$0	$0	$600-800K	$2.9-3.6M	$0	$1.1-1.3M	$0		$4.5-5.7M
TOTAL	$118.8-127.6M	$550-600K	$16.7-20.7M	$34.9-45M	$5.4-7.9M	$36.4-42M	$25.7-26.7M		**$236.9-268.8M**

Rolling Stock

The following includes the vehicles needed for the implementation of Phase 3, and the depreciation value of the vehicles from Phase 1-2.

TABLE 22: PHASE 3 ROLLING STOCK

VEHICLE TYPE	PHASE 1 VEHICLES	EXISTING VEHICLES	ADDITIONAL VEHICLES	UNIT COST	AMOUNT
OTR Coaches	4	2	2	$550K	$1.1M
BRT Vehicles	57	40	17	$525K	$8.9M
Large Buses	100	118	0	$450K	$0
Small Buses	110	105	5	$385K	$1.9M
Mini Buses	111	90	21	$75K	$1.6M
TOTAL	**382**	**355**	**45**		**$13.5M**
Including Depreciation				**$76.3M**	**$19.9M**

OTHER COSTS ASSOCIATED WITH TRANSIT IMPLEMENTATION

Rolling stock costs are only one element of capital outlay that is needed to provide quality transit and paratransit service. On fixed-route transit lines, there may be additional infrastructure and utility needs, such as improved sidewalks and ramps, bus pads, fiber for kiosks and real-time signage. Additionally, stops on corridors that will carry new Fast-and-Frequent service may be upgraded to transit stations with custom shelters and other new amenities. Significant capital costs will also be incurred with any future expansion of streetcar service. These additional costs will be determined through more detailed planning assessments that will be required to implement many of the service envisioned in this plan.

Upgrades to KCATA and its regional technology systems will be essential to the growth of the network. These upgrades will include dispatching and GPS technologies that connect vehicles with customer service, asset management software that optimizes maintenance of fleet and facilities, and all methods for communicating and transacting with the customer, including digital message signs, websites, mobile applications, fareboxes, media and mobile kiosks. The initial capital outlay, implementation, operating costs and replacement of these items will be a considerable cost regionally.

Mobility Hubs

Smart Moves 3.0 emphasizes frequency and predictability, resulting in passengers having to make transfers to get to their destinations. Making these transfers convenient and comfortable is essential to the success of this plan. Mobility hubs provide convenient and comfortable locations, while also serving as catalysts for transit-oriented development. Mobility hubs will be implemented iteratively, as routes are developed, and will be right-sized to meet the needs of a specific location. The following tables provide high-level, order of magnitude estimated average costs for components of mobility hubs. Additional assessment and planning will help identify the exact needs for each mobility hub. In many

cases where mobility hubs already exist as transit centers, only minimal upgrades may be needed, such as adding kiosks, bike racks, or carshare parking signage.

TABLE 23: DESTINATION MOBILITY HUB REPRESENTATIVE COSTS

ELEMENTS	CBD	URBAN CORE	URBAN EDGE	SUBURBAN
Planning, design & supervision	$1M	$800K	$500K	$200K
Land	$1.25M	$1M	$625K	$250K
Site improvements and utilities	$2M	$1.6M	$1M	$400K
Construction	$5M	$4M	$2.5M	$1M
Amenities	$750K	$600K	$375K	$150K
TOTAL	**$10M**	**$ 8M**	**$5M**	**$2M**

Destination Mobility Hubs

Destination mobility hubs will be planned for those locations where many transit routes converge, as well as other multimodal connections, such as bikeshare, carshare and rail transit. Example destination mobility hubs are planned for the following locations:

- Union Station - Kansas City, Missouri
- Truman Sports Complex - Kansas City, Missouri
- Downtown Overland Park, Kansas

TABLE 24: JUNCTION MOBILITY HUB REPRESENTATIVE COSTS

ELEMENTS	URBAN CORE	URBAN EDGE	SUBURBAN
Planning, Design and Supervision	$600K	$300K	$150K
Land	$750K	$375K	$187K
Site Improvements and Utilities	$1.2M	$600K	$300K
Construction	$3K	$1.5M	$750K
Amenities	$450K	$225K	$112K
TOTAL	**$6M**	**$3M**	**$1.5M**

Junction Mobility Hubs

Junction mobility hubs will be located in areas of higher density where two or more routes converge. This hub type will not include as many features as a destination hub, but will include mobile kiosks for ticket purchases and other traveler information, as well as potential multimodal connections. A junction

hub is planned for the KU Medical Center, as a starter project during the first five years of *Smart Moves 3.0*. Examples of junction hubs include:

- 39th and Prospect - Kansas City, Missouri
- I-35 and Shawnee Mission Parkway - Overland Park, Kansas
- State Avenue and Turner Diagonal - Kansas City, Kansas

TABLE 25: GATEWAY MOBILITY HUB REPRESENTATIVE COSTS

ELEMENTS	URBAN EDGE	SUBURBAN W/ PARK & RIDE	SUBURBAN W/O PARK & RIDE
Planning, Design & Supervision	$200K	$100K	$50K
Land	$250K	$125K	$62K
Site Improvements & Utilities	$400K	$200K	$100K
Construction	$1M	$500K	$250K
Amenities	$150K	$75K	$37K
TOTAL	**$2M**	**$1M**	**$500K**

Gateway Mobility Hubs

Gateway mobility hubs have two focuses: the end of the line for 30-minute routes, and park-and-rides. These hubs have limited amenities, but provide a gathering place for riders and parking for those who drive to their transit stop. The following are examples of gateway mobility hubs:

- 135th and K-7 - Olathe, Kansas
- I-70 and 40 Hwy - Independence, Missouri
- Parallel Parkway and I-435 - Kansas City, Kansas

TABLE 26: LOCAL MOBILITY HUB REPRESENTATIVE COSTS

ELEMENTS	W/ TRANSIT CONNECTION	W/O TRANSIT CONNECTION
Planning, Design & Supervision	$50K	$25K
Land	$62K	$31K
Site Improvements & Utilities	$100K	$50K
Construction	$250K	$125K
Amenities	$37K	$18K
TOTAL	**$500K**	**$250K**

As shown above, if implemented as described in the *Smart Moves 3.0* plan, the transit network will cost more than three times as much to operate annually as it does now. Developing a cooperative regional strategy for financing transit will be needed to make this investment.