

Appendix B.8.4

Travel Costs for EJ and Non-EJ Communities

The Louisville- Southern Indiana Ohio River Bridges (LSIORB) Time of Day (TOD) model was used to help put in perspective the potential effects of travel costs on environmental justice (EJ) and non-EJ communities. Three EJ communities were identified based on census data: minority, low income, and minority plus low income populations. The first step was to identify all the EJ populations within the five-county MPO region and cross-reference them to the Traffic Analysis Zones (TAZs) that the TOD model uses. The next step was to differentiate the EJ TAZs from the Non-EJ TAZs in the model so they could be evaluated and compared. For the purposes of this analysis it was assumed that all people living in the EJ TAZs were classified as EJ although this may not be the case. This provides a conservative estimate of the number of EJ households in the region. In addition, the model was used to identify the following:

- Trips that stayed within their home state (Regional) (EJ and non-EJ)
- Trips that cross the river (Bridges) (EJ and non-EJ)
- External trips (those that had origins and/or destinations outside the five county MPO region)
- Trucks

Once the TOD Model was run, vehicle miles of travel (VMT) and vehicle hours of travel (VHT) were extracted for each of these categories. Using vehicle operating cost (VOC) and value of time (VOT) assumptions from the model, trip costs were calculated.

2030 VEHICLE OPERATING COSTS—TIME—TOLLS NO ACTION ALTERNATIVE

		2030 Travel Costs Per Day (2010 Dollars) Vehicle Operating Cost + Time + Tolls				
		EJ Community Cars	Non EJ Community Cars	External Cars	Trucks	Total
Operating Costs	Region	443,000	3,026,000	1,114,000	1,769,000	6,352,000
	Bridge	59,000	310,000	549,000	917,000	1,835,000
	Total	502,000	3,336,000	1,663,000	2,686,000	8,187,000
Cost of Time	Region	982,000	7,791,000	2,021,000	2,516,000	13,310,000
	Bridge	127,000	655,000	932,000	971,000	2,685,000
	Total	1,109,000	8,446,000	2,953,000	3,487,000	15,995,000
Toll	Bridge	0	0	0	0	0
Subtotal	Region	1,425,000	10,817,000	3,135,000	4,285,000	19,662,000
	Bridge	186,000	965,000	1,481,000	1,888,000	4,520,000
	Total	1,611,000	11,782,000	4,616,000	6,173,000	24,182,000

2030 VEHICLE OPERATING COSTS—TIME—TOLLS

FEIS SELECTED ALTERNATIVE

		2030 Travel Costs Per Day (2010 Dollars Vehicle Operating Cost + Time + Tolls)				
		EJ Community Cars	Non EJ Community Cars	External Cars	Trucks	Total
Operating Costs	Region	452,000	3,006,000	1,099,000	1,769,000	6,326,000
	Bridge	74,000	372,000	575,000	907,000	1,928,000
	Total	526,000	3,378,000	1,674,000	2,676,000	8,254,000
Cost of Time	Region	975,000	7,239,000	1,935,000	2,465,000	12,614,000
	Bridge	140,000	688,000	912,000	901,000	2,641,000
	Total	1,115,000	7,927,000	2,847,000	3,366,000	15,255,000
Toll	Bridge	0	0		0	0
Subtotal	Region	1,427,000	10,245,000	3,034,000	4,234,000	18,940,000
	Bridge	214,000	1,060,000	1,487,000	1,808,000	4,569,000
	Total	1,641,000	11,305,000	4,521,000	6,042,000	23,509,000

2030 VEHICLE OPERATING COSTS—TIME—TOLLS

MODIFIED SELECTED ALTERNATIVE

		2030 Travel Costs Per Day (2010 Dollars Vehicle Operating Cost + Time + Tolls)				
		EJ Community Cars	Non EJ Community Cars	External Cars	Trucks	Total
Operating Costs	Region	452,000	3,009,000	1,099,000	1,769,000	6,329,000
	Bridge	74,000	374,000	577,000	912,000	1,937,000
	Total	526,000	3,383,000	1,676,000	2,681,000	8,266,000
Cost of Time	Region	981,000	7,336,000	1,944,000	2,477,000	12,738,000
	Bridge	148,000	716,000	932,000	906,000	2,702,000
	Total	1,129,000	8,052,000	2,876,000	3,383,000	15,440,000
Toll	Bridge	50,000	190,000	160,000	200,000	600,000
Subtotal	Region	1,433,000	10,345,000	3,043,000	4,246,000	19,067,000
	Bridge	272,000	1,280,000	1,669,000	2,018,000	5,239,000
	Total	1,705,000	11,625,000	4,712,000	6,264,000	24,306,000

2030 VEHICLE OPERATING COSTS—TIME—TOLLS SUMMARY

2030 Travel Costs Per Day (2010 dollars)										
Vehicle Operating Cost + Time + Tolls										
		Cost			Percentage of Respective Cost Type Totals			Percentage of Overall Combined Cost		
		No Action Alt.	FEIS Selected Alt.	Modified Selected Alt. (with Tolls)	No Action Alt.	FEIS Selected Alt.	Modified Selected Alt. (with Tolls)	No Action Alt.	FEIS Selected Alt.	Modified Selected Alt. (with Tolls)
Operating Costs	Region	6,352,000	6,326,000	6,329,000	78%	77%	77%	26%	27%	26%
	Bridge	1,835,000	1,928,000	1,937,000	22%	23%	23%	8%	8%	8%
	Total	8,187,000	8,254,000	8,266,000	100%	100%	100%			
Cost of Time	Region	13,310,000	12,614,000	12,738,000	83%	83%	82%	55%	54%	52%
	Bridge	2,685,000	2,641,000	2,702,000	17%	17%	18%	11%	11%	11%
	Total	15,995,000	15,255,000	15,440,000	100%	100%	100%			
Toll	Bridge	0	0	600,000				0%	0%	3%
Subtotal	Region	19,662,000	18,940,000	19,067,000	81%	81%	78%			
	Bridge	4,520,000	4,569,000	5,239,000	19%	19%	22%			
	Total	24,182,000	23,509,000	24,306,000	100%	100%	100%	100%	100%	100%

2030 TRAVEL COSTS PER DAY (2010 DOLLARS)

Vehicle Operating Cost + Time + Tolls						
	No Action	FEIS Selected Alternative	Modified Selected Alternative (with Tolls)	No Action Alternative	FEIS Selected Alternative	Modified Selected Alternative (with Tolls)
Region	\$19,662,000	\$18,940,000	\$19,067,000	81%	81%	78%
Bridges	\$4,520,000	\$4,569,000	\$5,239,000	19%	19%	22%
Total	\$24,182,000	\$23,509,000	\$24,306,000	100%	100%	100%