

management center (TMC)/video control, and transponders. Table 7.3 summarizes the necessary equipment, respective quantities, and unit costs for each element. The CTE will be required to purchase 20,000 transponders to initiate the system; therefore these costs are also included.

Table 7.3
Toll Equipment Capital Costs

Item Description	Quantity	Unit	Unit Price \$	Total Cost \$
Toll Lane Equipment	24	System Miles	200,000.00	4,800,000 .00
Gantries	10	Ea	300,000.00	3,000,000.00
Toll/VES Data Host	1	LS	1,000,000.00	1,000,000.00
Host Servers and Functions	1	LS	300,000.00	300,000.00
Workstations	4	Ea	10,000.00	40,000.00
TMC/Video Control	1	LS	500,000.00	500,000.00
Transponders	20,000	Ea	30.00	600,000.00
Total (2004 Dollars)				10,240,000.00
Total (2006 Dollars)				10,863,616.00

7.2.3 Operations Costs

The operations costs associated with the express lane facility include liability Insurance, highway patrol, roadside assistance, ITS equipment operation, toll audit and system inspection, toll transaction process, and video enforcement. A description of each is listed below.

- Liability insurance is based on the number of system miles along the express lane system using a national average for similar facilities.
- The highway patrol quantity assumes four full-time officers at an annual cost of \$125,000. The roadside assistance item assumes one vehicle will be on call six hours per day, typically during the AM and PM peak hours.
- The annual cost for ITS equipment operation is based on national averages for similar facilities.
- The toll audit and system inspection element assumes five CTE staff members would be monitoring the tolling system and processing account information and billings from E-470. It is assumed that this cost will be distributed over five corridors; therefore the cost attributed to any one corridor is one fifth of this amount.
- The CTE is in negotiations with E-470 to process the toll transactions at a rate of \$0.12 per transaction. This amount will include processing the transaction, general account maintenance, and mailing and processing bills.
- It is also assumed that E-470 will provide violation processing and video tolling of express toll customers when transponders fail or are not present in their vehicles. Operation unit costs are shown in Table 7.4.