

**APPENDIX A
INSTALLATION COSTS (1994 Figures)**

Fully-Lighted Interchange

1.	Diamond:	Conventional	\$324,000
		Tower and Conventional	280,000
2.	Cloverleaf:	Conventional	\$416,000
		Tower and Conventional	350,000
3.	Partial Cloverleaf:	Conventional	\$208,000
		Tower and Conventional	175,000

Partially-Lighted Interchange (Conventional Devices Only)

1.	Diamond:	\$50,000
2.	Cloverleaf:	104,000
3.	Partial Cloverleaf:	50,000

Continuous and Intersection Lighting

1.	Continuous, per kilometer	4 Lanes	\$95,000
		2 Lanes	47,000
	Continuous, per mile	4 Lanes	\$153,000
		2 Lanes	76,000
2.	4-Way Intersection	4 Lanes	\$40,000
		2 Lanes	25,000
3.	T-Intersection		\$20,000

**APPENDICES FOR HIGHWAY LIGHTING
ACCIDENT WARRANT ANALYSIS WORKSHEET**

Figure 78-2C

APPENDIX B
ANNUAL OPERATION AND MAINTENANCE COSTS (1994 Figures)

Fully-Lighted Interchange

1.	Diamond:	Conventional	\$25,700
		Tower and Conventional	19,300
2.	Directional:	Conventional	\$52,700
		Tower and Conventional	37,800
3.	Cloverleaf:	Conventional	\$51,200
		Tower and Conventional	37,400
4.	Partial Cloverleaf:	Conventional	\$31,300
		Tower and Conventional	19,500

Partially-Lighted Interchange

1.	Diamond:	\$12,100
2.	Directional:	30,800
3.	Cloverleaf:	35,300
4.	Partial Cloverleaf:	8,800

Continuous and Intersection Lighting

		Per Kilometer	Per Mile	
1.	Continuous	4 Lanes	\$12,700	\$20,400
		2 Lanes	5,800	9,300
2.	4-Way Intersection	4 Lanes / 4 Lanes	\$5,600	
		4 Lanes / 2 Lanes	4,200	

APPENDICES FOR HIGHWAY LIGHTING
ACCIDENT WARRANT ANALYSIS WORKSHEET

Figure 78-2C (Cont'd.)

3.	T-Intersection	4 Lanes / 4 Lanes	\$3,300
		4 Lanes / 2 Lanes	2,700
		2 Lanes / 2 Lanes	2,300

**APPENDIX C
COST OF MOTOR VEHICLE ACCIDENTS (1994 Figures)**

Cost per Vehicle Involved:	\$1,400
Cost per Injured Person:	\$11,000
Cost Per Each Death	\$450,000

**APPENDIX D
ACCIDENT REDUCTION FACTORS**

<u>Improvement</u>	<u>Factor</u>
Install New Lighting at Intersection / Interchange	0.37
Modernize Lighting at Intersection / Interchange	0.25
Install New Lighting at Bridge	0.59
Install New Lighting at Underpass	0.10

**APPENDIX E
TRAFFIC GROWTH FACTORS**

Determination of factor assumes 4% interest rate and 20-year service life.
Unless otherwise specified, assume a traffic growth rate of 2%.

<u>Traffic Growth Rate</u>	<u>Traffic Growth Factor</u>
1%	1.075
2%	1.150
3%	1.225
4%	1.300
5%	1.375

**APPENDICES FOR HIGHWAY LIGHTING
ACCIDENT WARRANT ANALYSIS WORKSHEET**

Figure 78-2C (Cont'd.)