

**THE BILL BLACKWOOD
LAW ENFORCEMENT MANAGEMENT INSTITUTE OF TEXAS**

Cost Benefit Analysis
Of Implementing a Fleet Take-
Home Car Program

A Policy Research Project
Submitted in Partial Fulfillment
of the Requirements for the Professional Designation
Graduate, Management Institute

by

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ABSTRACT

Approximately twenty-five years ago law enforcement in this nation was faced with the challenge of developing new programs to combat a rising crime rate. Among the community programs that were developed, was the vehicle fleet program. The theory of the vehicle fleet program was researched by numerous agencies around the country, including but not limited to, law enforcement agencies. Independent studies, as well as research done by fleet commanders, and law enforcement officials have shown that local governments currently operating the vehicle pool system were experiencing significant problems. Some of the problems found in the pool system include the vehicles life expectancy, safety operations, return on capital investments, employee satisfaction, and citizens concerns involving the rise in crime are a few of the problems.

This research finds that the vehicle fleet program in conjunction with other community programs currently operated in Dalhart like D.A.R.E., and crime stoppers would have a dramatic effect on our crime rate by increasing police visibility around our city. Other benefits would include the eventual reduction in the problems associated with pool vehicles such as breakdowns and the high cost of repairs associated with them. As with most programs there is a negative aspect associated with this program which is the up front cost of starting the program. The research shows noticeable cost savings the longer the program is in use, which eventually covers the cost of the initial purchase of the vehicles.

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The purpose of this research project is to thoroughly examine the benefits and disadvantages of implementing a police vehicle take home program for the city of Dalhart, Texas. The focus will be primarily on the benefits to the community and police department versus the cost to implement and maintain the program.

The issues and problems to be examined are current problems the Dalhart police department encounters; for example is the difficulty in officers attempting to answer calls for service while trying to pick up the relieving officer. The second concern is the unavailability of police cruisers during an all officer call out situation like a natural disaster or major crime. Issues researched are the advantages, and disadvantages of direct ownership of vehicles compared with leasing. Moreover there are questions such as, when should vehicles be replaced, and what are the effects of this program on officer moral and recruitment of new officers.

The intended audience for this project research paper is: the chief of police, city manager, mayor and city council of Dalhart, Texas. Information for this study was obtained through interviews and correspondence with other agencies that presently operate a similar program. Also included are periodicals, journals, and other research papers written on this subject.

The expected outcome is to demonstrate a significant trend by numerous other agencies across the United States towards the fleet program, and the reduced crime rate they have sustained due to this shift. It is recommended that the city of Dalhart implement the take home program to alleviate the problems of disaster readiness, increased crime rate, and the recruitment of new employees.

In researching the history on this subject it was found that numerous agencies across the Country with a total combined experience of over two hundred years operating a vehicle fleet program. The New Hampshire state patrol started their program in the late 1970's. Captain McCarthy of the New Hampshire state patrol said that when they introduced this program, the first thing they were confronted with was having to explain to the citizens why every officer needed their own patrol vehicle. After explaining that although it was a system with moderately high cost to initiate, the cars tend to be more efficient, thus saving the taxpayers money in the long run. In addition they have doubled their visibility during certain hours, decreases maintenance cost, made vehicles last longer, made citizen's feel more secure, and improved officer moral. (Yates, 1992)

In 1991, the Indiana highway patrol issued a report in reference to their assigned vehicle program. Lt. Colonel Larry Delaney of the Indiana highway patrol said that he believes that assigned vehicles are especially important to rural communities. Delaney stated that as important as handling situations going on and off duty, or in their own neighborhoods, is the speed in responding to an emergency that take home cars can give a department. The Indiana State police also discovered that during a civil disturbance or natural disasters a department only has to call their officers and have them almost immediately en route, in uniform, equipped, and in their patrol units. (Yates,1992)

Arizona Department of Public Safety's Jim McMorris stated that back in 1992, they discovered that when they adopted their vehicle take home policy, officers took much better care of the patrol units. McMorris said that there was almost a sense of

ownership by the officers because it wasn't unusual for officers to wash their cars at home, and off duty so it would look nice while on patrol. (Yates,1992)

The last State police agency looked at is the Missouri Highway Patrol. The Missouri highway patrol has had its program for a number of years. Captain Bill Turner when asked about their program, had this to say. "the officers tend to compete with each other to see whose car is the cleanest or shiniest." Turner also mentioned that another intangible benefit of a vehicle take home policy, is that officers get to know their vehicles specific limits and capabilities and are not reckless with the vehicles. Turner went on to add that their vehicles accumulate fewer miles, resulting in decreased maintenance cost, resulting in higher resale value. Lastly Turner remarked, that if you were to look in one of their three-year old fleet cars, you would find that it looks much better than an average six-month old pool car. (Yates, 1992)

When Officer Thomas Williams of the Keller police department was researching fleet vehicles for his department, he made contact with the city of Hobbs New Mexico. Williams wrote that the city of Hobbs, had implemented their assigned vehicle program in 1978, and that the program was started by the city manager in his hopes to enhance officer moral, and to increase police coverage during peak hours. Williams said that the program achieved the desired goals, and is considered a success by both the city, and the citizens. The visibility and effectiveness of the Hobbs police department was improved while giving the citizens of Hobbs an enhanced feeling of security. (Williams, 1990)

In 1978, R. T Ruegg with the United States Department of Commerce, initiated a study, and wrote a 112 page publication titled "The Police Car: Economic Efficiency in Acquisition, Operation, and Disposition". The purpose of his research was focused on examining, and finding answers to a series of questions regarding fleet vehicles in the police community. Three questions I thought most relevant to this study were:

1. What are the cost effects of purchasing different sizes of patrol cars?
2. How often should vehicles be replaced?
3. What method of vehicle disposition is most efficient?

Question one, although smaller less expensive cars can be bought, the wear and tear normally associated with police driving may have financial impacts in the form of mechanical breakdowns. This is due to that the smaller models of cars are not usually equipped to handle these conditions. Question two, it was found, that the longer a department can operate the vehicle by responsible driving and regular maintenance, vehicles should be kept for as long as it is mechanically sound. Question three, has two possible theories on this matter. Ruegg stated that the size of the department could have impact on which method would be best. For the larger departments he found that a public auction usually yielded higher prices, but smaller agencies might fare better in trading the vehicle in on new purchases. (Ruegg, 1978)

While researching history on vehicle fleets, it was difficult to find any variances from what the current trend is today. Of all the law enforcement agencies researched it was found that only one department had the fleet program and returned to the pool system, although the current administration wished that they still operated the fleet.

Current programs that utilize fleet vehicle programs include: Jackson, Wyoming; Tucumcari, New Mexico; Oklahoma City, Oklahoma, and Mesquite, Texas.

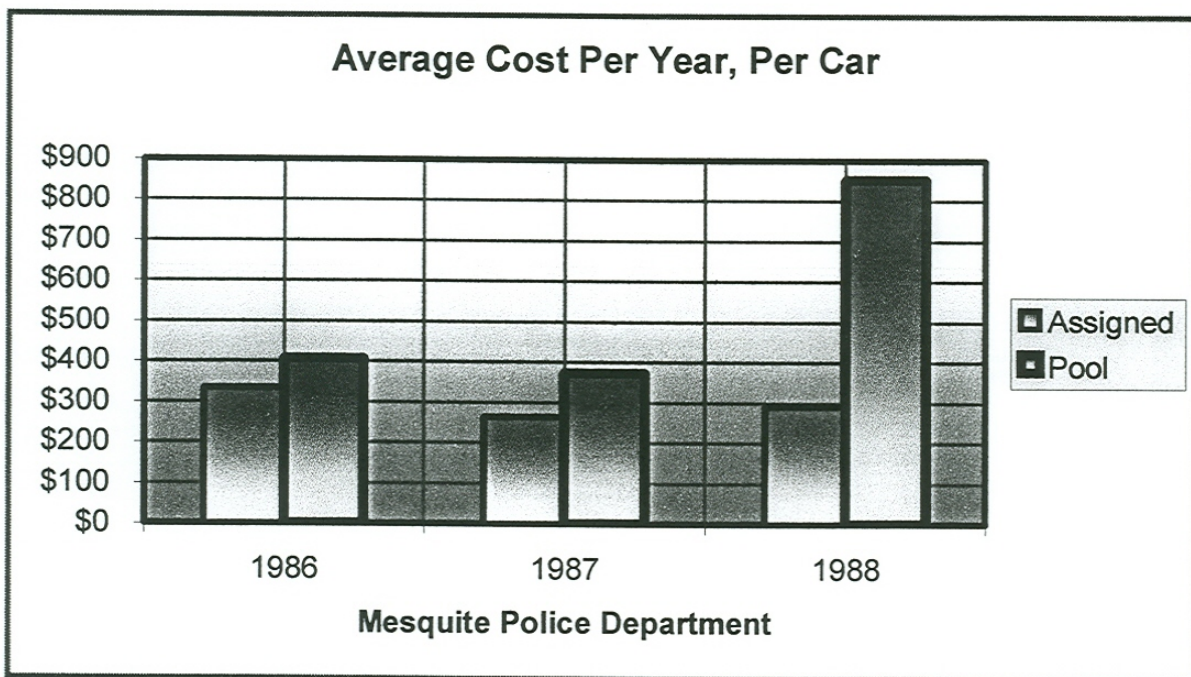
Jackson, Wyoming, a city of six thousand people, is comprised of twenty-three sworn officers. Jackson started their take home car program in 1985, as a way to help reduce the crime rate by significantly increasing in police visibility. All twenty three sworn officers are assigned patrol vehicles for normal shift assignments, and are also encouraged to use these vehicles in their off duty time to further promote the police presence around the city. Though no current statistics were available for study because of the length of time that they have operated this program it is felt by the community as well as the city administration that the program has been a success. (Lewis, 1999)

The city of Tucumcari, New Mexico also currently utilizes the take home car program. Tucumcari, a city of 6,675 people employs twenty-one officers and has the same number of patrol vehicles. Even though the city does not keep and maintain records on their program, it is felt that since the adoption of the program they have seen a substantial decrease in vehicle maintenance, employee turn around, and some types of crimes. They also said that their officers have a sense of pride in their cars, and have done an excellent job of keeping and maintaining their vehicles in top shape. They do this by driving more responsibly and insuring that all maintenance is done regularly.

Starting in 1986, the city of Mesquite, Texas did a three-year study to determine if there were savings by implementing a vehicle take home program. The study was done by placing five vehicles in both programs (assigned and pool). The maintenance records were followed on all ten cars and then averaged over the three-year period. In table I you can see that they show a significant difference in the operation costs between the two programs.

Table I

Mesquite Police Department



the pool vehicles begin to age and their mileage increases. In the third year the pool cars have reached almost 80,000 miles, while the fleet vehicles are only at 35,000 miles. In theory, the operational cost of the pool vehicles would continue to increase every year until the vehicle was taken out of service.

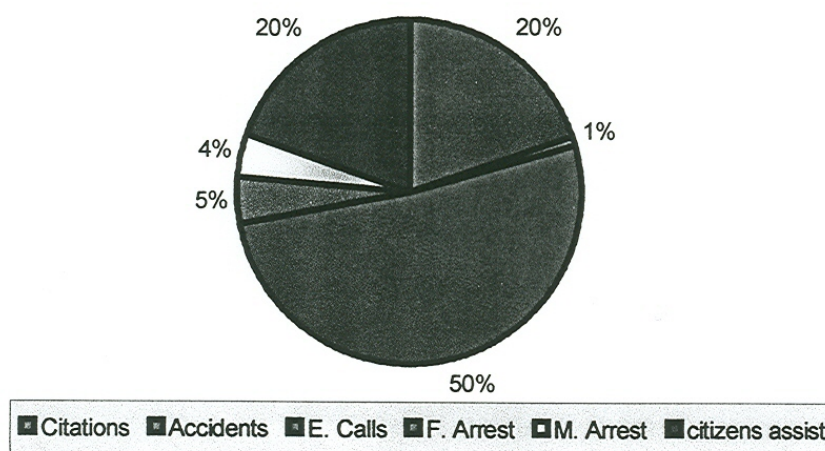
The city of Oklahoma City, Oklahoma started their current program in 1987, also as a way to increase police visibility to combat the rising crime rate in their city. The administration opted to start the program by implementing three different phases. Phase one and two involved having the evening and midnight shifts assigned cars first. The day shift was then issued their cars the following year. Only officers who resided within the city limits are allowed into the program, and if needed must respond to certain types of calls. The Oklahoma City officers may also make traffic stops while off duty if needed.

From August of 1987, to June of 1990, off duty officers in Oklahoma City have performed the following activities indicated in Table II:

Table II

Oklahoma City Police Department

Off Duty Officer Activity



The administration of Oklahoma City police department says that they have accomplished the desired outcome by adopting this program. Their Primary goal was to

lower crime by increasing police visibility and presence. Their second goal was to reduce the maintenance cost and increase the resale value of the cars thus making the program an overall success. (williams, 1992)

In 1999 The Texas Commission on Law Enforcement Standards and Education (TCLEOSE), conducted a study of over 2,381 law enforcement agencies across Texas. The study was done to help law enforcement agencies find a benchmark so as to compare their own agency to other departments in their region, or statewide. One question asked to these departments was did they issue their police officers take home patrol units. The results showed that 76% of all law enforcement agencies in the Panhandle region did indeed provide their officers take home vehicles. Although the report did not specify the Panhandle, it reported that out of the 349 municipal police agencies surveyed, 127 of these cities also took part in the program. Of these 349 agencies 229, or 47.8% of them were departments that employed less than 25 officers. (TCLEOSE,1999)

Is operating our current vehicle pool program cost effective? Does it meet the needs of our citizens by deterring crime? Is the assigned vehicle program more able to meet these demands for the future while still remaining cost effective?

The driving force behind this research, are the serious problems that have arisen due to the greater demands that have been placed on police departments by society.

The first and foremost problem that we at the Dalhart Police Department incur is that of delivering police service in a safe, effective, and timely manner, especially in extreme emergencies. Several incidents have taken place over the last five years where it was necessary to call every officer from home to help in the investigation of a case, security of a crime scene or in locating felons evading police capture. In all these instances officers were required to utilize their personal vehicles to achieve success in the operation. On one instance, an officer's personal vehicle sustained substantial damage on an emergency call out, involving two officers being assaulted. Other problems encountered are vehicles that, from being driven 24- 7 are at times unsafe to drive at higher speeds. This is due to the vehicles vital mechanisms being wore out from constantly being driven in situations such as, catching a speeder or responding to a fight in progress. The result in this is also that vehicles are unable to be used because of constant breakdowns. These breakdowns not only cause problems in answering calls for service quickly, because officers are forced to ride two to a vehicle. They also take a tremendous hit on our department's budget because of the inflated price of after market replacement parts. One automobile engineer sat down with a parts manual and built a car, strictly from the parts book and found that the car would cost about 6.25 as much as

the dealer price. The \$20,000 base priced crown Victoria would cost the department \$125,000.

Other cost associated with operating a patrol fleet such as fuel cost, and oil changes rise only marginally due to the fact that only two to three vehicles are on active patrol at any given time. This translates to nine patrol units absorbing the mileage and wear & tear of only three patrol units, resulting in a rise in fuel cost and oil changes of only one fourth.

The problems currently encountered by law enforcement agencies, including the Dalhart police department such as increased crime rate, disaster readiness, officer satisfaction and retention, cost of replacement parts, and loss of vehicle use do to breakdowns is a serious problem unless action is taken on this matter.

The purpose of this research paper is to help identify any and all possible solutions to these problems. The main research question is what program offers the city of Dalhart and its citizens the better financial solution, while still meeting our objectives. The research shows that if an organization will support the up front cost of implementing the assigned vehicle program, the final result will more than make up for the initial expenditure. These results include citizens feeling safer, marked decrease in repair cost of vehicles, eventual operational cost savings, higher officer moral and the ability to retain officers.

Keeping officers from leaving our department to go to other departments because of better benefits is also a financial loss. When these officers leave, they take the years of training and the knowledge of schools that they attended at the cost of the city.

It is widely known that Police Officers consider an assigned vehicle program a benefit just as they consider medical insurance or retirement programs a benefit. In the last five years alone the Police Department has lost approximately six officers who left for other departments. This translates into thousands of dollars spent on training and over 25 years of Dalhart policing lost.

In determining whether a program is beneficial to an organization and if the programs benefits out way the cost the organization must set forth strict objectives that the program must meet before any further consideration is spent. Seven objectives were obtained before the research on this paper was begun and they are:

1. Promote the sense security of the citizens of Dalhart.
2. Improve community relations by increasing contacts and service.
3. Deter crime by limiting the opportunity for crime by the presence of more police vehicles.
4. Provide quicker responses of off duty personnel in emergencies.
5. Reduce maintenance cost of vehicles thus saving tax payers money.
6. Increase incentive and improve officer moral within the department.
7. The decrease in traffic violators by the increase in police visibility around the city.

This research finds that this program clearly meets these objectives, and if an organization is willing and able to invest in the program the rewards will meet and exceed the cost of implementation within a reasonable amount of time.

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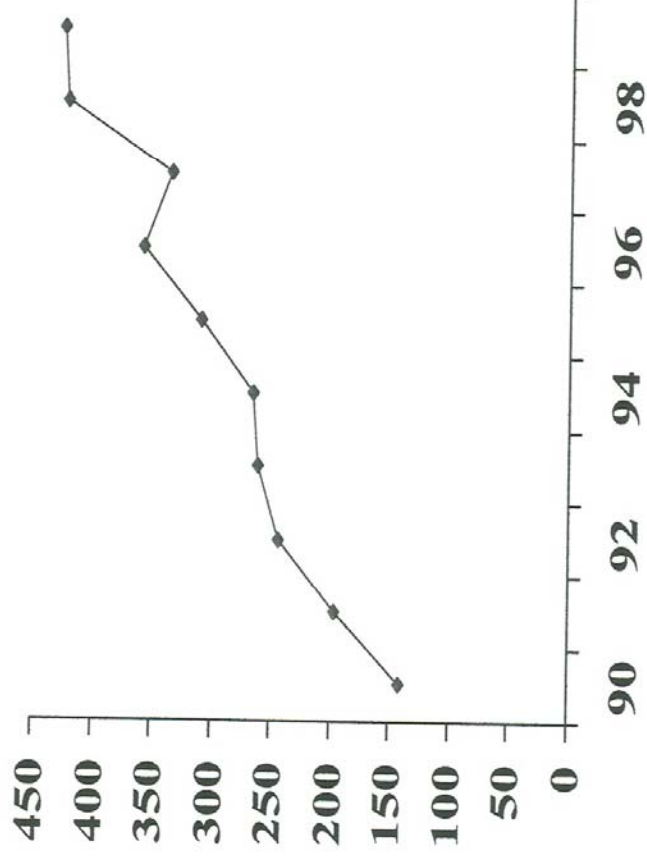
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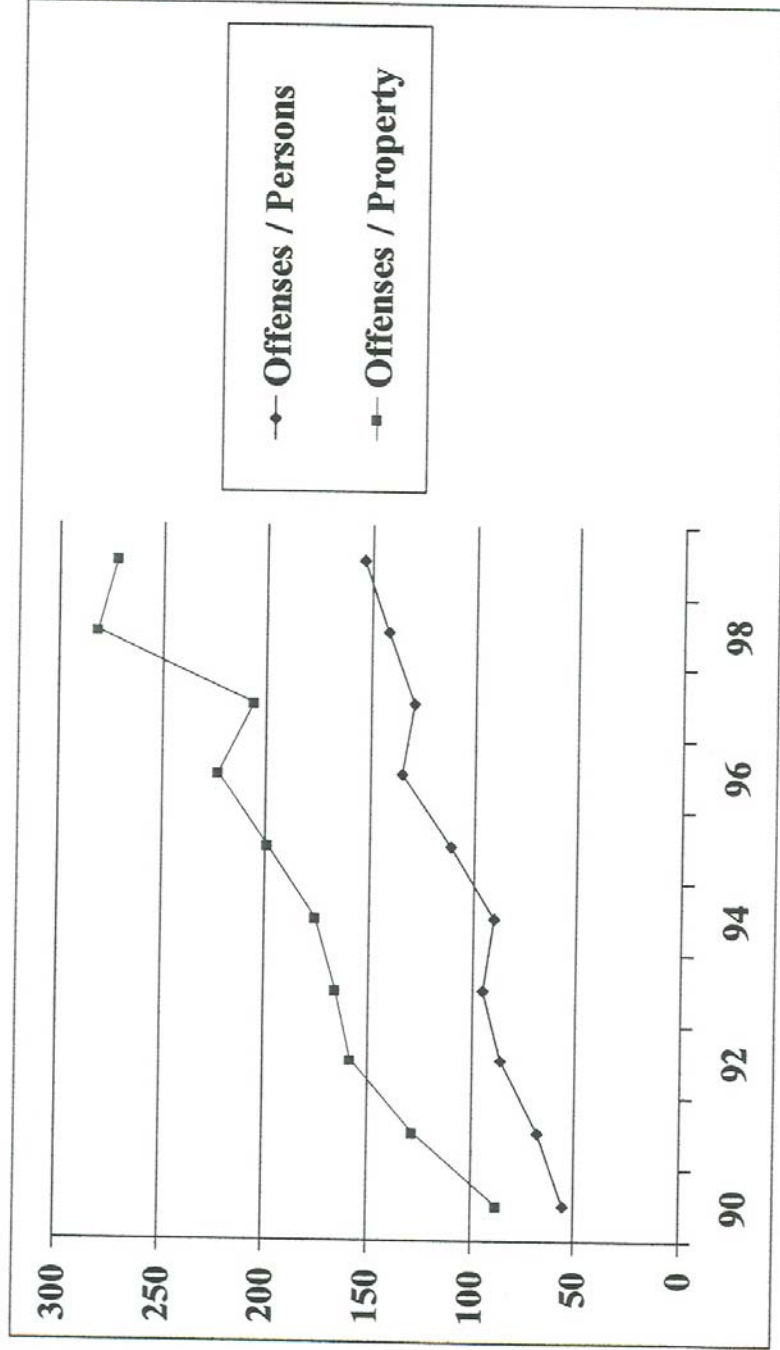
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All Crime Combined

- Murder
- Robbery
- Burglary
- Assaults on P.O.
- Assaults
- Resisting Arrest
- Stolen Vehicles
- Drug Offenses
- Evading Arrest
- Thefts



1990 To 1999



2000 FORD TAURAS	PATROL	2000 FORD CROWN VIC	PATROL	
STANDARD PRICE	\$13,910.00	STANDARD PRICE	\$19,291.00	
VEHICLE GRAPHICS	\$500.00	VEHICLE GRAPHICS	\$500.00	
LIGHTBAR	\$1,500.00	LIGHTBAR	\$1,500.00	
UNIT RADIO	\$550.00	UNIT RADIO	\$550.00	
UNIT RADAR	\$1,200.00	UNIT RADAR	\$1,200.00	
SECURITY SCREEN	\$200.00	SECURITY SCREEN	\$200.00	
L.B. CONTROL BOX	\$100.00	L.B. CONTROL BOX	\$100.00	
SIREN CONTROL BOX	\$120.00	SIREN CONTROL BOX	\$120.00	
SIREN	\$100.00	SIREN	\$100.00	
VEHICLE CAMERA	\$3,500.00	VEHICLE CAMERA	\$3,500.00	
TRUNK ORGANIZER	\$100.00	TRUNK ORGANIZER	\$100.00	
3 TIER RACK SYSTEM	\$60.00	3 TIER RACK SYSTEM	\$60.00	
INSTALATION	\$250.00	INSTALATION	\$250.00	
SHOTGUN HOLDER	\$150.00	SHOTGUN HOLDER	\$150.00	
SHOTGUN 12 GAGE	\$300.00	SHOTGUN	\$300.00	
TOTAL	\$22,540.00	TOTAL	\$27,921.00	DIFFERENCE
				\$5,381.00

2000 FORD TAURAS	221,225&231	2000 FORD CROWN VIC	221,225&231	
STANDARD PRICE	\$13,910.00	STANDARD PRICE	\$19,291.00	
UNIT RADIO	\$550.00	UNIT RADIO	\$550.00	
FRONT LIGHTS	\$200.00	FRONT LIGHTS	\$200.00	
REAR LIGHTS	\$200.00	REAR LIGHTS	\$200.00	
SIREN CONTROL BOX	\$120.00	SIREN CONTROL BOX	\$120.00	
SIREN	\$100.00	SIREN	\$100.00	
TOTAL	\$15,080.00	TOTAL	\$20,401.00	DIFFERENCE
				\$5,321.00

FORD TAURAS	GAS MILAGE	FORD CROWN VICTORIA GAS MILAGE	
21 MPG IN CITY 30 MPG HIGHWAY		16 MPG IN CITY 23 MPG HIGHWAY	
6,600 MILES PER YEAR	\$COST	6,600 MILES PER YEAR	\$COST
YEAR ONE	\$376.80	YEAR ONE	\$495.60
YEAR TWO	SAME	YEAR TWO	SAME
YEAR THREE	SAME	YEAR THREE	SAME
YEAR FOUR	SAME	YEAR FOUR	SAME
YEAR FIVE	SAME	YEAR FIVE	SAME
YEAR SIX	SAME	YEAR SIX	SAME
YEAR SEVEN	SAME	YEAR SEVEN	SAME
TOTAL EST. COST	\$2,637.60	TOTAL EST. COST	\$3,469.20
			DIFFERENCE
			\$831.60

11 FORD TAURAS AT 21 MPG IN CITY		11 CROWN VICS AT 16 MPG IN CITY		
72,600 MILES PER YEAR	\$COST	72,600 MILES PER YEAR	\$COST	DIFFERENCE
YEAR ONE	\$4,144.80	YEAR ONE	\$5,451.60	\$1,306.80
YEAR TWO	SAME	YEAR TWO	SAME	
YEAR THREE	SAME	YEAR THREE	SAME	
YEAR FOUR	SAME	YEAR FOUR	SAME	
YEAR FIVE	SAME	YEAR FIVE	SAME	
YEAR SIX	SAME	YEAR SIX	SAME	
YEAR SEVEN	SAME	YEAR SEVEN	SAME	
TOTAL EST. COST	\$29,013.60	TOTAL EST. COST	\$38,161.20	DIFFERENCE
				\$9,147.60

TOTAL COST OF OPERATING 11 FORD TAURASE'S FOR 7 YEAR LIFE SPAN OF CAR		TOTAL COST OF OPERATING 11 FORD CROWN VICTORIA'S FOR 7 YEAR LIFE SPAN OF CAR		
	\$COST		\$COST	
PRICE OF 11 VEHICLE'S	\$153,010.00	PRICE OF 11 VEHICLE'S	\$212,201.00	
TOTAL PRICE OF EQP.	\$72,550.00	TOTAL PRICE OF EQP.	\$72,550.00	
TOTAL OPERATING \$	\$29,013.60	TOTAL OPERATING \$	\$38,161.20	
TOTAL PREV. MAINT.	\$6,435.00	TOTAL PREV. MAINT.	\$6,435.00	
TOTAL EST. COST	\$261,008.60	TOTAL EST. COST	\$329,337.20	TOTAL
				DIFFERENCE
				\$68,328.60